



Industrial power tools for:

- Shipyard
- Solar Energy
- Construction
- Petrochemical
- Assembly Line
- Mining Industry
- Aviation Industry
- Casting Foundry
- Fabrication Shop
- Automotive Service
- Railway Construction

The **ZIPP GROUP** is an allied group of CPC(Taiwan) and CEI(USA), serving customers of various industries in the global marketplace. **ZIPP GROUP** supplies: assembly line air tools, professional automotive servicing air tools, industrial air tools, construction air tools, precision planetary gear reducers as well as the metal lubricant intensifier.

All of our lines are wrapped up into one innovative brand that is distributed through well selected agents worldwide, recognizable by the **ZIPP** trade-marked logo.

Our belief is that your success is our success, the **ZIPP GROUP** will keep introducing the most advanced designs of superior quality and competitive pricing that are delivered on time and backed up with our reliable customer service.

The **ZIPP GROUP** adheres to ISO 9001 standards to assure the quality of all ZIPP branded products and we also provide CE certifications for our European customers.

In order to know more about our operation or to request detailed product specifications, please feel free to email, fax or call us.

Warranty Policy

The **ZIPP** warranty is for the original user against defective material or workmanship for a period of 1 year from the date of purchase on repair parts and labor. It's limited to the repair or replacement of defective parts.

We reserves the right to determine whether the part or parts failed due to defective material, workmanship or other causes. Failures caused by accident, alteration and misuse are not covered by this warranty.

All warranty repairs must be done by **ZIPP** Authorised Service Center or by **ZIPP's** Agent / Distributor. Any repair to the equipment other than by these authorized facilities voids this warranty.

Conversion Table

PRESSURE				
Pa	Mpa	bar	psi	Kg/cm ²
1,000,000	1	10	145	10.197
100,000	0.1	1	14.5	1.0197
6,890	0.00689	0.0689	1	0.0703
98,070	0.09807	0.9807	14.223	1
620,000	0.62	6.2	90	6.3

psi>>kg/cm²:90psi x 0.0703=6.327kg/cm²
bar>>psi:7bar x 14.5=101.5psi

TORQUE				
N-m	Kg-m	Kg-cm	ft-lb	in-lb
1	0.102	10.1972	0.7376	8.8507
9.8067	1	100	7.233	86.77
0.0986	0.01	1	0.0723	0.8677
1.3558	0.1383	13.83	1	12

N-m>>ft-lb:10N-m x 0.7376=7.376 ft-lb
N-m>>kg-m:10N-m x 0.102=1.02 kg-m

FLOW RATE			
m ³ /min	cfm	l/min	l/s
1	35.317	1,000	16.668
0.0283	1	28.3168	0.4719
0.001	0.035	1	1.0165
0.061	2.1189	60.606	1

cfm>>l/min:10cfm x 28.3168=283.168 l/min
m³/min>>cfm:10m³/min x 35.317=353.17cfm

Po:PSI
SCFM=CFM*((Po+14.7)/14.7)

LENGTH			
mm	m	Inch	ft
1	0.01	0.03941	0.0033
1,000	1	39.37	3.2809
25.4	0.0254	1	0.0833
304.8	0.3048	12	1

mm>>inch:10mm x 0.0394=0.394 inch
Inch>>mm:10inch x 25.4=254mm

WEIGHT OR FORCE		
lb	kg	N
1	0.4536	4.4484
2.2046	1	9.807
0.2248	0.102	1

kg>>N:10kg x 9.807=98.07N
N>>kg:10N x 0.102=1.02kg

POWER	
KW	HP
1	1.341
0.746	1

HP>>KW:10HP x 0.746=7.46KW



My name is Brian Obiedzinski. I normally go by "Obie". I have been working on General Motors automobiles for close to 14 years. I specialize in the Cadillac brand of cars and have completed all of the General Motors factory training and assessments. My certifications include General Motors Master Technician and ASE Certified Master Technician. I also achieved the Top 20 Mark of

Excellence Award in 2016.

I have been using pneumatic tools my entire career. I started using ZIPP Air Tools in 2016 after speaking with the team in Kent, Ohio. Along with working on cars, I also race in the NASCAR Whelen All American Series at many tracks across the southeastern United States. ZIPP Air Tools USA is one of my sponsors that I stand behind. I thought my tools were performing properly, but after making the switch to ZIPP, I found that I was wrong.

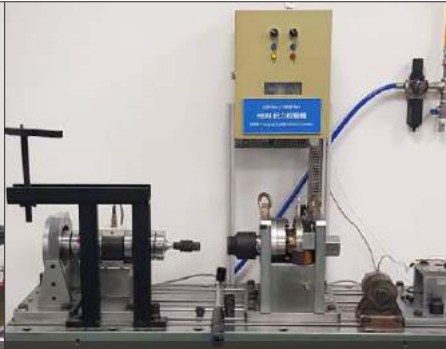
The longevity and durability of the ZIPP Air Tools line is not matched by any of the competition. These lightweight tools carry large torque and have proved time and time again to out perform other brands. Besides good performance the tools have a great sleek appearance and excellent feel in the hand of the operator. One of my favorite benefits is how quiet the tools operates. It does not have excessive vibration, hammering, and volume. In addition to the tools, the ZIPP Air Tools team is extremely knowledgeable and the product support is better then any competitor. The team will help you choose the right tool for your application, and can get it to you fast. This enables you to get your tasks done quicker.



I highly recommend the ZIPP Air Tools line to anyone in the automotive repair industry and racing industry. The pneumatic tools give me the confidence that my fasteners are tight every time, and allow me to focus on other things knowing that the tool is going to perform each time I pick it up out of my tool box.



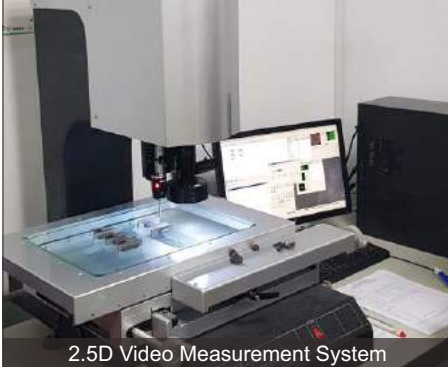
Gear Inspection Center



HBM Torque Calibration Center



Patents



2.5D Video Measurement System



3D Video Measurement System



Patents



Hardness Tester



MAGTROL Hysteresis Dynamometers



CNC Machining Center



CNC Machining Center

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ZIW1038 twin hammer mechanism
1" Impact wrench

ZIW1038-6 twin hammer mechanism
1" Impact wrench w/6" extension

- Working Torque (5 secs): 1800ft-lb(2440Nm)



ZIW1075 Pinless mechanism
1" Impact wrench

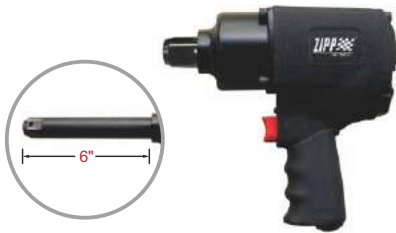
ZIW1075-8 Pinless mechanism
1" Impact wrench w/8" extension

- Working Torque (5 secs): 2300ft-lb(3118Nm)



ZIW1076 Pinless mechanism
1-1/2" Impact wrench

- Working Torque (5 secs): 2300ft-lb(3118Nm)



ZIW812 Rear Exhaust
1" Impact wrench

ZIW812L Rear Exhaust

1" Impact wrench w/6" extension

- Working Torque (5 secs): 1000ft-lb(1356Nm)



ZIW818 Rear Exhaust
1" Impact wrench

ZIW818L Rear Exhaust

1" Impact wrench w/6" extension

- Working Torque (5 secs): 1600ft-lb(2169Nm)

New Twin Hammer Design		• Adjustable 3 stages speed for Forward/Reverse
		• Use for heavy automotive and truck repair, construction or assembly line.
		• With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.

Model	Square Drive inch(mm)	Free Speed rpm	Max. Torque (15 secs) ft-lb(Nm)	Working torque (5 secs) ft-lb(Nm)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Impact mechanism
ZIW1038 ZIW1038-6	1(25)	3,600	2,300(3,118)	2,000(2,712)	11(311)	23.6(10.7) 25.8(11.7)	1/2	Twin Hammer
ZIW1075 ZIW1075-8	1(25)	3,500	2,600(3,525)	2,300(3,118)	12(339)	31.7(14.4) 35.7(16.2)	1/2	Pin Less
ZIW1076	1-1/2(37)	4,000	2,600(3,525)	2,300(3,118)	12(339)	31.3(14.2)	1/2	Pin Less
ZIW812 ZIW812L	1(25)	6,000	1,200(1,627)	1,000(1,356)	24.7(700)	9.35(4.25) 11.3(5.13)	1/4	Twin Hammer
ZIW818 ZIW818L	1(25)	4500	1,800(2,400)	1,600(2,169)	11.3(320)	11.88(5.5) 13.61(6.3)	3/8	Twin Hammer



ZIW611 Rear Exhaust

3/4" Impact wrench

ZIW611L Rear Exhaust

3/4" Impact wrench w/6" extension

- Working Torque (5 secs): 900ft-lb(1220Nm)



ZIW6511 Rear Exhaust

3/4" Impact wrench

ZIW6511L Rear Exhaust

3/4" Impact wrench w/6" extension

- Working Torque (5 secs): 850ft-lb(1153Nm)



ZIW6514 Rear Exhaust

3/4" Impact wrench

ZIW6514L Rear Exhaust

3/4" Impact wrench w/6" extension

- Working Torque (5 secs): 1100ft-lb(1492Nm)



ZIW685 Rear Exhaust

3/4" Impact wrench

ZIW685L Rear Exhaust

3/4" Impact wrench w/6" extension

- Working Torque (5 secs): 650ft-lb(881Nm)

New Twin Hammer Design



- Adjustable 3 stages speed for Forward/Reverse
- Use for heavy automotive and truck repair, construction or assembly line.
- With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.

Model	Square Drive inch(mm)	Std. Bolt Size inch(mm)	Free Speed rpm	Max. Torque (10 secs) ft-lb(Nm)	Working torque (5 secs) ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZIW611 ZIW611L	3/4(19)	1-1/2(38)	6,000	1,100(1,492)	900(1,220)	90(6.2)	24.7(700)	9.13(4.15) 10.45(4.75)	3/8(10)	1/4
ZIW6511 ZIW6511L	3/4(19)	1-1/4(32)	7,200	1,100(1,492)	850(1,153)	90(6.2)	8.12(230)	5.8(2.64) 7(3.2)	3/8(10)	1/4
ZIW6514 ZIW6514L	3/4(19)	1-1/2(38)	4,500	1,400(1898)	1,100(1,492)	90(6.2)	26.4(747)	11(5) 12.9(5.87)	3/8(10)	1/4
ZIW685 ZIW685L	3/4(19)	1-9/64(29)	7,500	850(1,153)	650(881)	90(6.2)	7.42(210)	5.61(2.55) 6.78(3.08)	3/8(10)	1/4

Air Impact Wrench

NEW
1000 FT-LB



Only!!
1.8KG

ZIW4100 Rear Exhaust

1/2" Impact Wrench

Noise: 94dB(A), Vibration: 2.5(m/s²)

ZIW4100Q Rear Exhaust

1/2" Impact wrench-Low noise

Noise: 85dB(A), Vibration: 2.5(m/s²)



ZIW4510 Rear Exhaust

1/2" Impact wrench

ZIW4510L Rear Exhaust

1/2" Impact wrench w/2" extension

- Working Torque (5 secs): 750ft-lb(1017Nm)



ZIW480 Rear Exhaust

1/2" Impact wrench

ZIW480L Rear Exhaust

1/2" Impact wrench w/2" extension

- Working Torque (5 secs): 600ft-lb(814Nm)

New Twin Hammer Design



- Adjustable 3 stages speed for Forward/Reverse
- Use for heavy automotive and truck repair, construction or assembly line.
- With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.



ZIW465R Rear Exhaust

1/2" Impact Wrench

- Working Torque (5 secs): 380ft-lb(515Nm)



ZIW465 Front Exhaust

1/2" Impact Wrench

- Working Torque (5 secs): 380ft-lb(515Nm)

New Twin Hammer Design



- Use for heavy automotive and truck repair, construction or assembly line.
- With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.



ZIW465K / ZIW465RK

- ZIW465R Impact Wrench X 1 OR ZIW465 Impact Wrench X 1
- 1/2" sockets X5 (14,16,17,19,22mm) OR (15/16,7/8,3/4,5/8,1/2inch)
- 5mm hex. wrench
- 3" extension anvil

Model	Square Drive inch(mm)	Std. Bolt Size inch(mm)	Free Speed rpm	Max. Torque (10 secs) ft-lb(Nm)	Working torque (5 secs) ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZIW4100 ZIW4100Q	1/2(12.7)	29/32(23)	9,000 7,000	1,000(1,356)	750(1,017)	90(6.2)	5.1(144)	3.89(1.8)	3/8(10)	1/4
ZIW4510 ZIW4510L	1/2(12.7)	1-9/64(29)	7,200	1,000(1,356)	750(1,017)	90(6.2)	8.12(230)	5.7(2.6) 5.94(2.7)	3/8(10)	1/4
ZIW480 ZIW480L	1/2(12.7)	1-1/16(27)	7,500	800(1,085)	600(814)	90(6.2)	7.42(210)	5.5(2.5) 5.72(2.6)	3/8(10)	1/4
ZIW465R ZIW465	1/2(12.7)	3/4(19)	7,000 8,000	450(610)	380(515)	90(6.2)	7(200) 7.7(220)	5.7(2.6)	3/8(10)	1/4



ZIW440 Rear Exhaust
1/2" Mini Impact Wrench

- Working Torque (5 secs): 258ft-lb(350Nm)



ZIW335 Rear Exhaust
3/8" Mini Impact Wrench

- Working Torque (5 secs): 221ft-lb(300Nm)

New Twin Hammer Design



- Adjustable 3 stages speed for Forward/Reverse
- Most power and compact, deliver best Power-to-Size ratio in this class
- Use for heavy automotive and truck repair, construction or assembly line.
- With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.



ZIW305 Rear Exhaust
3/8" Impact Wrench



ZIW304S Side Exhaust
3/8" Straight Impact Wrench



ZIW344 Rear Exhaust
3/8" Air Impact Wrench



Two Hammer

- Two Hammer Design
- Forward/Reverse
- Use for general automotive repair or assembly line.

- Double-Chamber 9 vanes motor provides the highest output power comparing with conventional motor for the highest productivity.
- Double Pin Hammer mechanism.
- One piece front end plate & cylinder design to improve motorefficiency.
- User friendly side reverse switch.

Model	Square Drive inch(mm)	Std. Bolt Size inch(mm)	Free Speed rpm	Max. Torque (10 secs) ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZIW440	1/2(12.7)	5/8(16)	11,000	400(543)	90(6.2)	7(200)	3.3(1.5)	3/8(10)	1/4
ZIW335	3/8(10)	9/16(14)	11,000	350(475)	90(6.2)	7(200)	3.3(1.5)	3/8(10)	1/4
ZIW305	3/8(10)	5/16(8)	8,500	1 sec. 45(61)	90(6.2)	5.6(160)	2.3(1.05)	1/4(6.35)	1/4
ZIW304S	3/8(10)	5/16(8)	8,000	1 sec. 43(58)	90(6.2)	5.6(160)	2.2(1)	1/4(6.35)	1/4
ZIW344	3/8(10)	5/16(8)	5,000	44(60)	90(6.2)	17.7(500)	2(0.93)	1/4(6.35)	1/4

Impact Wrench



ZAW-412B2

Two Hammer Type Side Exhaust

1/4" Air Wrench



ZAW-412B3

Two Hammer Type Side Exhaust

3/8" Air Wrench



ZAW-417B

Two Hammer Type Rear Exhaust

3/8" Air Wrench



ZAW-910B1

Two Hammer Type Rear Exhaust

3/8" Air Wrench-with muffler



ZAW-410B

Two Hammer Type Side Exhaust

3/8" Air Wrench



ZAW-421B3

Two Hammer Type Side Exhaust

3/8" Air Wrench



ZAW-211B

Two Hammer Type Rear Exhaust

1/2" Air Wrench



ZAW-241B

Two Hammer Type Side Exhaust

1/2" Air Wrench

Model	Bolt Size Capacity	Working Torque ft-lb(Nm)	MAX. Torque ft-lb(Nm)	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level db(A)
ZAW-412B2	M8	20(27)	26(35)	11000	127(4.5)	7.01(178)	1/4	1.5(0.68)	89
ZAW-412B3	M8	20(27)	26(35)	11000	127(4.5)	7.01(178)	1/4	1.5(0.68)	89
ZAW-417B	M10	59(80)	148(200)	8000	212(7.5)	8.86(225)	1/4	2.36(1.07)	90
ZAW-910B1	M10	59(80)	96(130)	8000	184(6.5)	9.06(230)	1/4	2.65(1.2)	80
ZAW-410B	M10	59(80)	148(200)	8300	212(7.5)	7.48(190)	1/4	2.16(0.98)	94
ZAW-421B3	M10~M12	66(90)	177(240)	8000	283(10)	7.48(190)	1/4	2.34(1.06)	97
ZAW-211B	M12~M14	118(160)	207(280)	5500	240(8.5)	10.24(260)	1/4	3.75(1.7)	85
ZAW-241B	M16~M18	236(320)	369(500)	4400	283(10)	13(330)	1/4	7.5(3.4)	95

• Recommended Gauge Air Pressure: 60~90psi



ZAW-412LB2

Two Hammer Type Handle Exhaust

1/4" Air Wrench



ZAW-412LB3

Two Hammer Type Handle Exhaust

3/8" Air Wrench



ZAW-514LB2

Two Hammer Type Handle Exhaust

1/4" Air Wrench



ZAW-514LB3

Two Hammer Type Handle Exhaust

3/8" Air Wrench



ZAW-417SL1

Two Hammer Type Side Exhaust

3/8" Air Wrench



ZAW-410LB

Two Hammer Type Side Exhaust

3/8" Air Wrench



ZAW-517LB

Two Hammer Type Handle Exhaust

3/8" Air Wrench



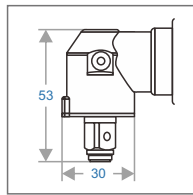
ZAW-421LB3

Two Hammer Type Side Exhaust

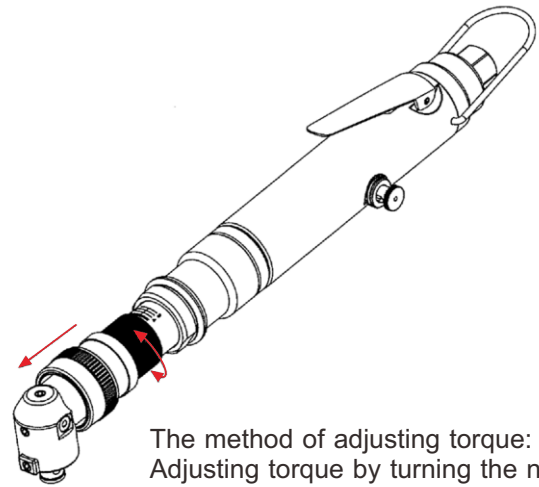
3/8" Air Wrench

Model	Bolt Size Capacity	Working Torque ft-lb(Nm)	MAX. Torque ft-lb(Nm)	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level db(A)
ZAW-412LB2	M8	20(27)	26(35)	13000	198(7)	5.71(145)	1/4	1.98(0.9)	88
ZAW-412LB3	M8	20(27)	26(35)	13000	198(7)	5.71(145)	1/4	1.98(0.9)	88
ZAW-514LB2	M8	20(27)	22(30)	11500	170(6)	6.1(155)	1/4	1.98(0.9)	87
ZAW-514LB3	M8	20(27)	22(30)	11500	170(6)	6.1(155)	1/4	1.98(0.9)	87
ZAW-417SL1	M10	59(80)	148(200)	8000	226(8)	7.2(183)	1/4	2.65(1.2)	94
ZAW-410LB	M10	59(80)	148(200)	7700	198(7)	7.28(185)	1/4	2.87(1.3)	89
ZAW-517LB	M12	74(100)	140(190)	8000	283(10)	6.3(160)	1/4	2.65(1.2)	87
ZAW-421LB3	M12	81(110)	177(240)	8000	283(10)	7.28(185)	1/4	2.89(1.34)	93

• Recommended Gauge Air Pressure: 60~90psi



UNIT: mm

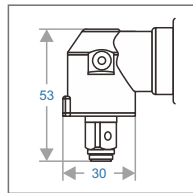


The method of adjusting torque:
Adjusting torque by turning the nut.

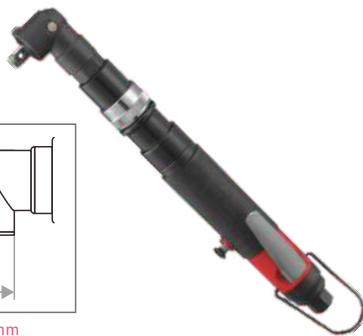
ZRAW-5CLB08/ZRAW-5CLB15

Clutch Type Rear Exhaust

3/8" Air Wrench



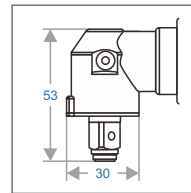
UNIT: mm



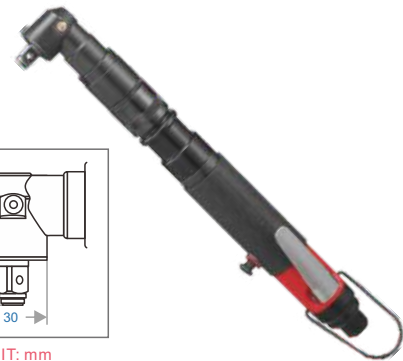
ZRAW-5SLB08/ZRAW-5SLB15

Torque Control Type Rear Exhaust

3/8" Air Wrench-Air shut off



UNIT: mm



ZRAW-5SLB03

Torque Control Type Rear Exhaust

3/8" Air Wrench-Air shut off

Model	Screw Size Capacity	MAX. Torque ft-lb(Nm)	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level db(A)
ZRAW-5CLB08	M5	3.7(5)	800	198(7)	13.15(334)	1/4	2.76(1.25)	80
ZRAW-5CLB15	M5	3.7(5)	1450	198(7)	13.15(344)	1/4	2.76(1.25)	80
ZRAW-5SLB15	M4	0.9~1.8(1.2~2.4)	1450	198(7)	13.39(340)	1/4	2.69(1.22)	80
ZRAW-5SLB08	M5	1.6~3.2(2.2~4.3)	800	198(7)	13.39(340)	1/4	2.69(1.22)	80
ZRAW-5SLB03	M6	3~7.4(4~10)	340	198(7)	13.77(350)	1/4	2.86(1.3)	80

• Recommended Gauge Air Pressure: 60~90psi

Features

- Adjustable 3 stages speed for Forward/Reverse
- Most power and compact, deliver best Power-to-Size ratio in this class
- Use for heavy automotive and truck repair, construction or assembly line.
- With new twin hammer design and hot forged alloy steel made Hammer cage & Anvil to create more torque and 3 times longer life span than traditional design.



Jumbo Hammer Design



New Twin Hammer Design



ZIW4207J Rear Exhaust
1/2" Micro Mini Air
Impact Wrench

ZIW3207J Rear Exhaust
3/8" Micro Mini Air
Impact Wrench

ZIW4206T Rear Exhaust
1/2" Micro Mini Air
Impact Wrench

ZIW3206T Rear Exhaust
3/8" Micro Mini Air
Impact Wrench

w/ 8 pcs metric sockets

ZIW4207JK-M 1/2" mini impact kit
ZIW3207JK-M 3/8" mini impact kit
ZIW4206TK-M 1/2" mini impact kit
ZIW3206TK-M 3/8" mini impact kit

w/ 8 pcs imperial sockets

ZIW4207JK-E 1/2" mini impact kit
ZIW3207JK-E 3/8" mini impact kit
ZIW4206TK-E 1/2" mini impact kit
ZIW3206TK-E 3/8" mini impact kit



[Accessories]

- Mini air impact X 1
- Oiler X 1
- 3" Extension bar X 1
- 8 pcs Metric or SAE Cr-Mo sockets
10, 13, 14, 16, 17, 19, 21, 22mm
or 5/16", 3/8", 7/16", 1/2", 9/16",
5/8", 11/16", 3/4"

Model	Square Drive inch(mm)	Std. Bolt Size inch(mm)	Free Speed rpm	Max. Torque (10 secs) ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZIW4206T	1/2(12.7)	5/8(16)	11,000	450(610)	90(6.2)	7(200)	3(1.37)	3/8(10)	1/4
ZIW3206T	3/8(10)	5/8(16)	11,000	400(542)	90(6.2)	7(200)	3(1.37)	3/8(10)	1/4
ZIW4207J	1/2(12.7)	5/8(16)	11,000	500(678)	90(6.2)	7(200)	3(1.37)	3/8(10)	1/4
ZIW3207J	3/8(10)	5/8(16)	11,000	450(610)	90(6.2)	7(200)	3(1.37)	3/8(10)	1/4

Mini Air Impact Wrench

Application:

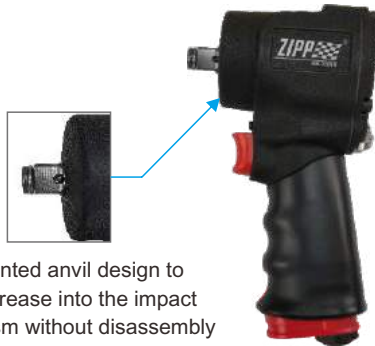
Designed for difficult work in the confined space for Transmission, Engine and Brake.



ZIW440JL
1/2" Angle Impact Wrench
Rotary Exhaust



ZIW340JLU
3/8" Adjustable Angle Mini Impact Wrench
ZIW440JLU
1/2" Adjustable Angle Mini Impact Wrench
Rotary Exhaust



New patented anvil design to add the grease into the impact mechanism without disassembly the tool.

ZIW417JA
ZIW417JAQ With Muffler
1/2" Super Light Mini Air Impact Wrench
Handle Exhaust



ZIW417J
ZIW417JQ With Muffler
1/2" Super Duty Mini Air Impact Wrench
Handle Exhaust



ZIW418T
ZIW418TQ With Muffler
1/2" Super Duty Mini Air Impact Wrench
Handle Exhaust



Model	Square Drive inch(mm)	Std. Bolt Size inch(mm)	Free Speed rpm	Max. Torque (10 secs) ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZIW340JLU	3/8(10)	5/8(16)	9,000	450(610)	90(6.2)	4.2(119)	2.78(1.26)	3/8(10)	1/4
ZIW440JLU	1/2(12.7)	5/8(16)	9,000	450(610)	90(6.2)	4.2(119)	2.78(1.26)	3/8(10)	1/4
ZIW440JL	1/2(12.7)	5/8(16)	9,000	450(610)	90(6.2)	4.12(117)	2.78(1.26)	3/8(10)	1/4
ZIW417JA	1/2(12.7)	5/8(16)	10,000	700(949)	90(6.2)	7.42(210)	3(1.37)	3/8(10)	1/4
ZIW417JAQ	1/2(12.7)	5/8(16)	8,500	700(949)	90(6.2)	7.42(210)	3(1.37)	3/8(10)	1/4
ZIW417J	1/2(12.7)	5/8(16)	9,500	700(949)	90(6.2)	7.42(210)	3.19(1.45)	3/8(10)	1/4
ZIW417JQ	1/2(12.7)	5/8(16)	8,000	700(949)	90(6.2)	7.42(210)	3.19(1.45)	3/8(10)	1/4
ZIW418T	1/2(12.7)	5/8(16)	10,000	750(1017)	90(6.2)	7.42(210)	3.3(1.5)	3/8(10)	1/4
ZIW418TQ	1/2(12.7)	5/8(16)	9,500	750(1017)	90(6.2)	7.42(210)	3.3(1.5)	3/8(10)	1/4

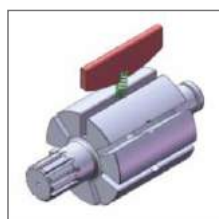
Composite Air Impact Wrench



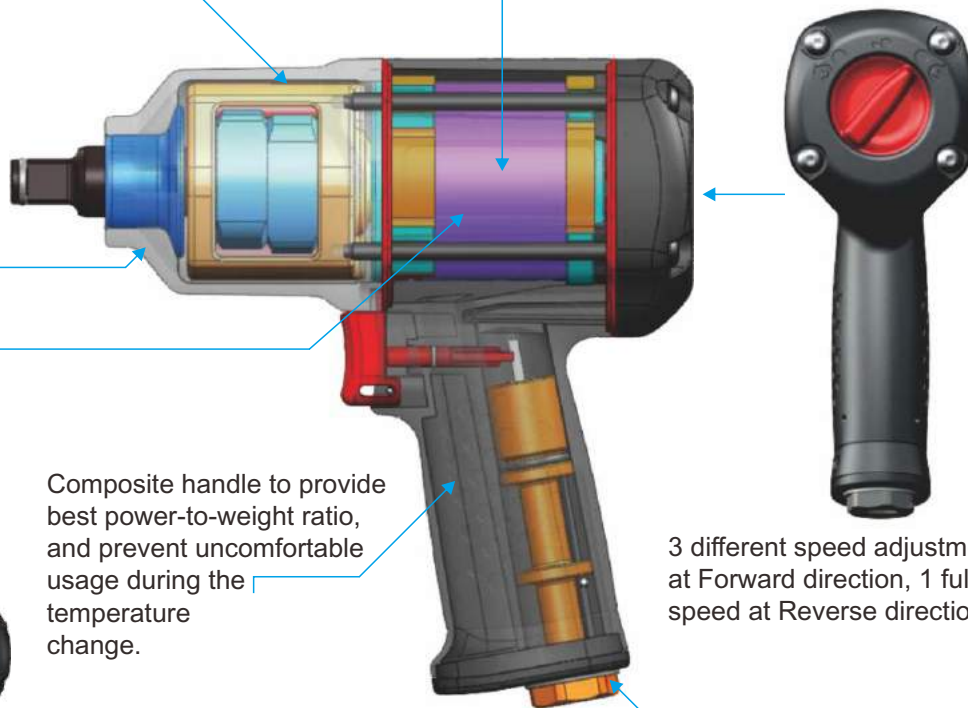
Twin hammer impact mechanism to perform best torque output, and Special Hardened-Treatment to maintain best durability.

Special Hardened Cylinder, Front plate and Rear plate to generate best durability.

Titanium clutch case to re-enforce the strength (ZIW1063CT).



Vane with spring mounted to prevent dead-lock or power-less problem.



Composite handle to provide best power-to-weight ratio, and prevent uncomfortable usage during the temperature change.

3 different speed adjustment at Forward direction, 1 full speed at Reverse direction.

360 degree swivel air inlet to prevent air hose twisted.



OPT. Pin Type Anvil

ZIW1015C
1/2" Composite Air Impact Wrench



ZIW1015CTL
1/2" Composite Torque Limited Impact Wrench



ZIW1077C
3/4" Composite Air Impact Wrench

ZIW1077C-3
w/3" extension
ZIW1077C-6
w/6" extension



ZIW1078C
1" Composite Air Impact Wrench



Titanium Case

ZIW1063CT
1/2" Composite Air Impact Wrench

Model	Square Drive inch(mm)	Free Speed rpm	Max. Torque (15 secs) ft-lb(Nm)	Working torque (5 secs) ft-lb(Nm)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Impact mechanism
ZIW1015C	1/2(12.7)	8,500	820(1,100)	650(880)	4.9(139)	4.6(2.1)	Twin Hammer
ZIW1015CTL	1/2(12.7)	8,500	820(1,111)	55~66(75~90)	5.5(158)	4.6(2.1)	Twin Hammer
ZIW1077C ZIW1077C-3 ZIW1077C-6	3/4(19)	5,500	1,500(2,030)	1,200(1,630)	4.9(139)	8.2(3.7) 9.3(4.2) 9.9(4.5)	Twin Hammer
ZIW1078C	1(25)	5,500	1,500(2,030)	1,200(1,630)	4.9(139)	8.2(3.7)	Twin Hammer
ZIW1063CT	1/2(12.7)	8,500	820(1,100)	650(880)	4.9(139)	4.8(2.2)	Twin Hammer



ZIW1200 Handle Exhaust

1" Composite Impact Wrench

- Working Torque (5 secs): 2200ft-lb(2970Nm)



ZIW1200-6 Handle Exhaust

1" Composite Impact Wrench
w/6" extension

- Working Torque (5 secs): 2200ft-lb(2970Nm)



ZIW1201 Side Exhaust

1" Composite Impact Wrench

- Working Torque (5 secs): 2200ft-lb(2970Nm)



ZIW1201-8 Side Exhaust

1" Composite Impact Wrench
w/8" extension

- Working Torque (5 secs): 2200ft-lb(2970Nm)



- Twin hammer Anvil Material
- Japan SNCM 616



- Cast iron cylinder
- Cylinder Material FCD45
- Heat treatment HRC 47~52°



- Blade auxiliary spring means Spring Material Stainless steel (304) Customized spring holder.
- 1 million tests by stretching test pass.

Model	Square Drive inch(mm)	Free Speed rpm	Max. Torque (15 secs) ft-lb(Nm)	Working torque (5 secs) ft-lb(Nm)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Impact mechanism
ZIW1200	1(25)	5,500	2400(3240)	2200(2970)	7.5(212)	12.98(5.9)	1/4	Twin Hammer
ZIW1200-6	1(25)	5,500	2400(3240)	2200(2970)	7.5(212)	14.96(6.8)	1/4	Twin Hammer
ZIW1201	1(25)	5,500	2400(3240)	2200(2970)	7.5(212)	14.3(6.5)	1/4	Twin Hammer
ZIW1201-8	1(25)	5,500	2400(3240)	2200(2970)	7.5(212)	17.16(7.9)	1/4	Twin Hammer



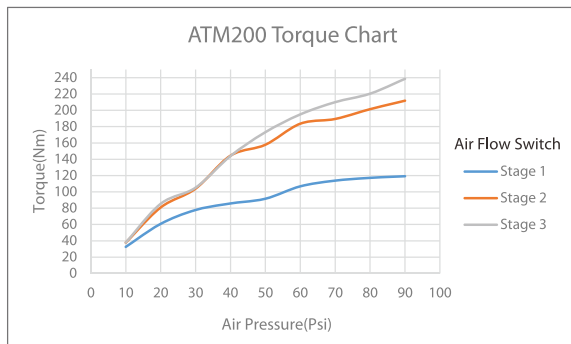
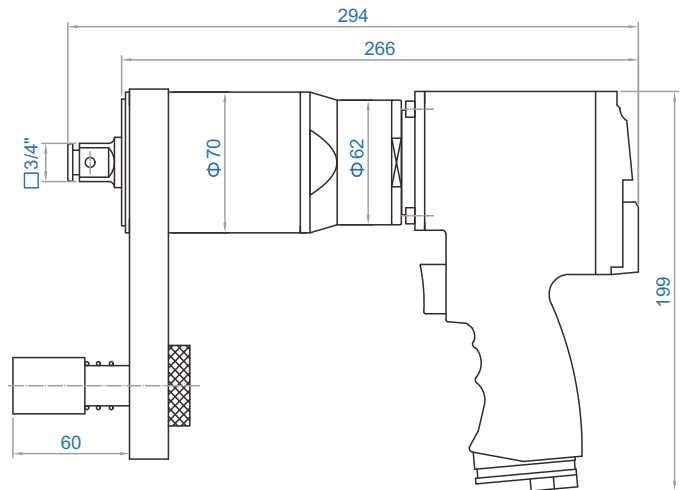
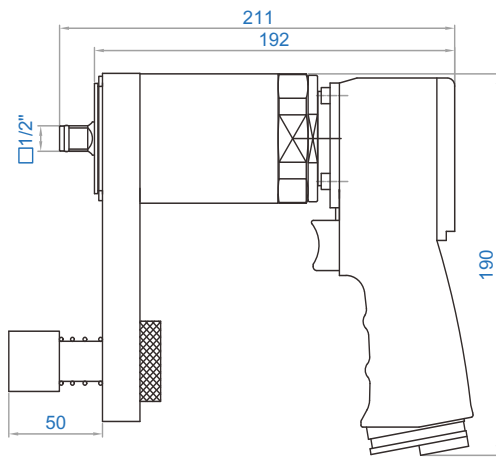
ATM200

1/2" Pneumatic Torque Multiplier

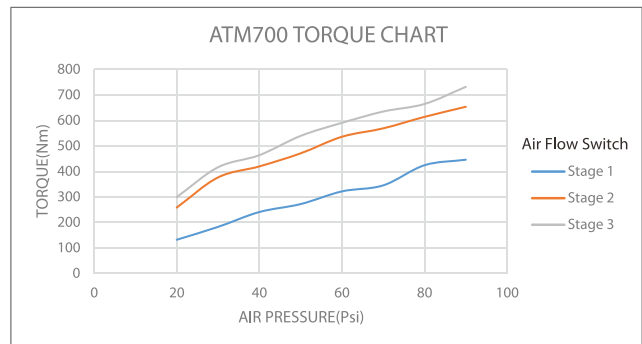


ATM700

3/4" Pneumatic Torque Multiplier



Measured on HBM torque tester: I.D. 8mm* O.D. 12mm * 3m air hose



Measured on HBM torque tester: I.D. 8mm* O.D. 12mm * 3m air hose

Model	Square Drive inch(mm)	Free Speed rpm	Max. Torque ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ATM200	1/2(12.7)	84	147.5(200)	90(6.2)	11.2(320)	10.14(4.6)	3/8(10)	1/4
ATM700	3/4(19)	18	516(700)	90(6.2)	12.25(350)	14.33(6.5)	3/8(10)	1/4

Tool Advantages:

The right air ratchet for your Hi-Lok® installation for the quality seeking airframe mechanic.

- 1/4" adapter that stays attached to the tool. (With a special designed cap).
- Adjustable throttle to control the tool speed.
- 'No-mar' rubber protection.
- Thru-hole to be used with HEX key.
- Friction ring mechanism to keep the socket on the drive.
- Hi-Lok® Capacity up to – 1/4" in Al, 3/16" in Stainless Steel.



ZHD-7728

Hi-Lok® Installation Mini-Ratchet



ZP161 0.5HP

1/2" Air Ratchet Wrench

ZP163 0.5HP

3/8" Air Ratchet Wrench



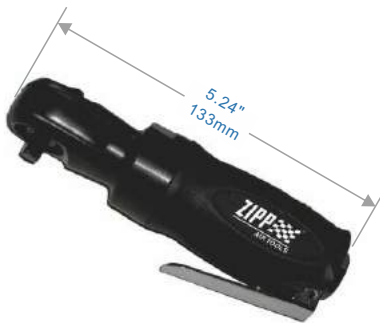
ZP161K/ZP163K

0.5HP

Air Ratchet Wrench Kit

Specifications:

- 1 pc Ratchet wrench
- 7 pcs Sockets
- 1 pc Nipple
- 1 pc Universal Joint
- 1 pc 75mm Extension Bar
- 1 pc Blow Molded Case



ZP168

1/4" Air Stubby Ratchet Wrench



ZP169

3/8" Air Stubby Ratchet Wrench

Model	Square Drive inch(mm)	Std Bolt Size inch(mm)	Free Speed rpm	Max. Torque ft-lb(Nm)	Avg. Air Cons. cfm(l/min)	Air Inlet Size inch	Net Weight lbs(kgs)	Overall Length inch(mm)	Min Hose Size inch(mm)
ZHD-7728	–	–	400	35(47.5)	3(85)	1/4	1.06(0.48)	6-17/64(159)	3/8(10)
ZP161	1/2(12.7)	1/4(6.4)	175	50(68)	3(85)	1/4	2.6(1.18)	10-13/32(265)	3/8(10)
ZP163	3/8(10)	1/4(6.4)	175	50(68)	3(85)	1/4	2.6(1.18)	10-13/32(265)	3/8(10)
ZP168	1/4(6.4)	1/4(6.4)	260	20(27)	2.5(70)	1/4	0.99(0.45)	5-1/4(133)	1/4(6.4)
ZP169	3/8(10)	1/4(6.4)	260	20(27)	2.5(70)	1/4	0.99(0.45)	5-1/4(133)	1/4(6.4)

- Recommended Gauge Air Pressure: 60~90psi

- The ratchet wrench can be used in narrow working spaces and can fasten bolts and nuts easily. This special tool can be reached tight place that other air tools can not.
- Remove: First, loosen nut by wrench then take nut out with air ratchet.
- Fasten: Push trigger to position the nut then lock it with torque wrench.



ZRW-919LS Rear Exhaust
Air Ratchet Wrench



ZRW-925LS Rear Exhaust
Air Ratchet Wrench



ZRW-925LSB Rear Exhaust
Air Ratchet Wrench



ZRW-920LS Rear Exhaust
Air Ratchet Wrench

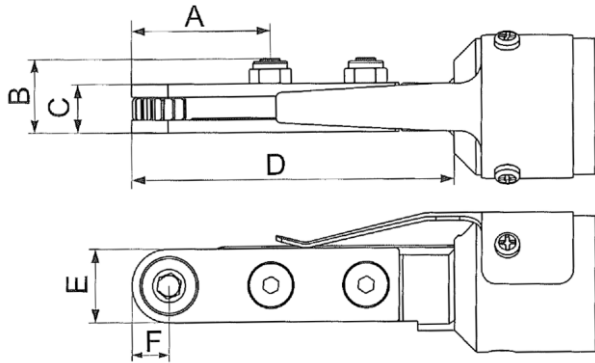


ZRW-938LS Rear Exhaust
Air Ratchet Wrench

Model	Hex Size mm	Working Torque ft-lb(Nm)	MAX. Torque ft-lb(Nm)	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level db(A)
ZRW-919LS	6, 7, 8, 10, 11, 12, 1/4", 3/8"	7(10)	7(10)	180	127(4.5)	11.81(300)	1/4	2.87(1.3)	86
ZRW-925LS	10, 11, 12, 13, 14, 1/2", 9/16"	11(15)	18(25)	250	212(7.5)	13.07(332)	1/4	4.23(1.92)	87
ZRW-925LSB	10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 11/16"	11(15)	18(25)	160	212(7.5)	13.3(338)	1/4	4.4(2)	87
ZRW-920LS	10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 11/16"	59(80)	66(90)	150	353(12.5)	15.35(390)	1/4	5.33(2.42)	92
ZRW-938LS	21, 22, 23, 24, 26, 27	59(80)	66(90)	130	353(12.5)	15.66(398)	1/4	5.46(2.48)	92

• Recommended Gauge Air Pressure: 60~90psi

Air Ratchet Wrench



Model	A	B	C	D	E	F
	mm	mm	mm	mm	mm	mm
ZRW-919LS	38.2	20	13.2	88.2	20	10.2
ZRW-925LS	44.4	26	18	109	25.2	12.2
ZRW-925LSB	51	26	18	115	33.2	16.6
ZRW-920LS	51	26	18	115	33.2	16.6
ZRW-938LS	59	26	18	123	41	20.5

Air Ratchet Wrench Order Code Reference

Model	ZRW-919LS	ZRW-925LS	ZRW-925LSB	ZRW-920LS	ZRW-938LS
Hex Size	Order Code				
6mm	ZRW-919LS-6				
7mm	ZRW-919LS-7				
8mm	ZRW-919LS-8				
9mm	ZRW-919LS-9				
10mm	ZRW-919LS-10	ZRW-925LS-10	ZRW-925LSB-10	ZRW-920LS-10	
11mm	ZRW-919LS-11	ZRW-925LS-11	ZRW-925LSB-11	ZRW-920LS-11	
12mm	ZRW-919LS-12	ZRW-925LS-12	ZRW-925LSB-12	ZRW-920LS-12	
13mm		ZRW-925LS-13	ZRW-925LSB-13	ZRW-920LS-13	
14mm		ZRW-925LS-14	ZRW-925LSB-14	ZRW-920LS-14	
15mm			ZRW-925LSB-15	ZRW-920LS-15	
16mm			ZRW-925LSB-16	ZRW-920LS-16	
17mm			ZRW-925LSB-17	ZRW-920LS-17	
18mm			ZRW-925LSB-18	ZRW-920LS-18	
19mm			ZRW-925LSB-19	ZRW-920LS-19	
21mm					ZRW-938LS-21
22mm					ZRW-938LS-22
23mm					ZRW-938LS-23
24mm					ZRW-938LS-24
26mm					ZRW-938LS-26
27mm					ZRW-938LS-27
1/4"	ZRW-919LS-1/4				
3/8"	ZRW-919LS-3/8				
1/2"		ZRW-925LS-1/2			
9/16"		ZRW-925LS-9/16			
11/16"			ZRW-925LSB-11/16	ZRW-920LS-11/16	



ZID-036 Side Exhaust
Impact Driver



ZID-040P Rear Exhaust
Impact Driver

Two Hammer



- Two hammer design with Q.C. collect
- Forward/Reverse switch
- Two stages push type trigger
- Use for general automotive industries, electric or and assembly lines

Two Hammer



ZID-350P Rear Exhaust
Impact Driver

Noise: 88dB(A), Vibration: 2.5(m/s²)

- Two hammer design with Q.C. collect
- Adjustable 3 stages speed for Forward/Reverse
- Use for general automotive industries, electric or and assembly lines

Two Hammer



ZIS-237 Rear Exhaust
1/4" Air Impact Driver

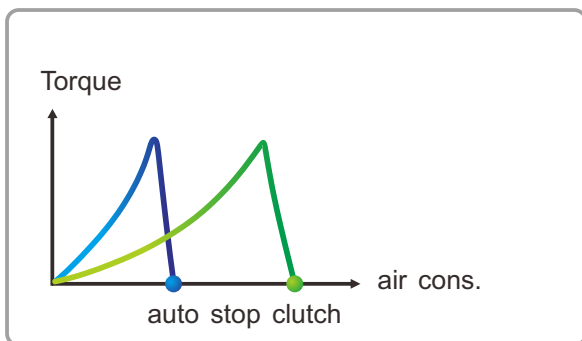
- Double-Chamber 9 vanes motor provides the highest output power comparing with conventional motor for the highest productivity.
- Double Pin Hammer mechanism.
- One piece front end plate & cylinder design to improve motorefficiency.
- User friendly side reverse switch.

Model	Hex. Drive inch(mm)	Bolt Size Capacity mm	Free Speed rpm	Max. Torque ft-lb(Nm)	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Overall Length inch(mm)	Air Inlet Size inch-NPT/PT
ZID-036	1/4(6.4)	(6-8)	8,000	41(55)	90(6.2)	4.6(130)	2.2(1)	7-13/16(198)	1/4
ZID-040P	1/4(6.4)	(6-8)	8,500	42(57)	90(6.2)	5.6(160)	2.2(1)	6-25/32(172)	1/4
ZID-350P	1/4(6.4)	(10-12)	11,000	350(474)	90(6.2)	8.12(230)	3.5(1.6)	5-25/32(147)	1/4
ZIS-237	1/4(6.4)	(6-8)	5,300	37(50)	90(6.2)	17.7(500)	1.9(0.84)	—	1/4

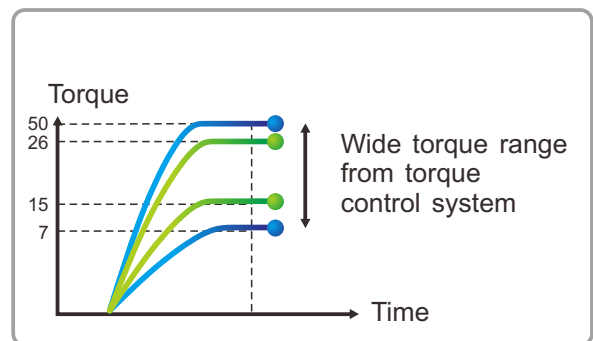
Torque Control Air Screwdriver



Motor Comparison



Torque schematic diagram





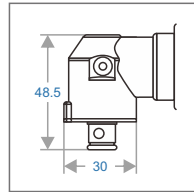
**ZB21MC/ZB31MC/ZB41MC
ZB46MC/ZB49MC/ZB51MC
ZB56MC/ZB59MC/ZB61MC
ZB66MC/ZB71MC/ZB76MC
ZB79MC**



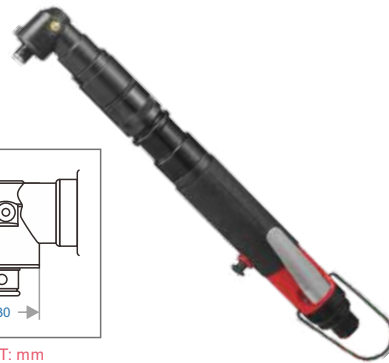
**ZB46CCQ/ZB49CCQ/ZB52CCQ
ZB58CCQ/ZB59CCQ/ZB61CCQ
ZB66CCQ/ZB71CCQ/ZB76CCQ
ZB79CCQ**

*Performance specification @ 6.0kg/cm² (90psi).
*Output torque adjusts to 50% of maximum rated torque.

Model	Free Speed rpm	Weight g	O.A.L mm	Dia. mm	High mm	Air Pressure kg/cm ²	Min. air hose bore mm	Air Consumption m ³ /min	Torque range kgf-cm	Standard Deviation %	Fastening Machine Screw Dia.	Capacity Tapping Screw Dia
ZB21MC	1,000	520	210	31	-	6.0	5.0	0.20	0.5-2	±3	M1.0-M2.2	M1.1-M1.7
ZB31MC	1,000	520	210	31	-	6.0	5.0	0.20	1-8	±3	M1.7-M3.3	M1.3-M2.7
ZB41MC	1,800	520	210	31	-	6.0	5.0	0.28	3-17	±3	M2.2-M4.2	M1.7-M3.2
ZB46MC	2,200	520	210	31	-	6.0	5.0	0.28	3-20	±3	M2.2-M4.5	M1.7-M3.5
ZB49MC	1,800	520	210	31	-	6.0	5.0	0.28	3-25	±3	M2.2-M4.7	M1.7-M3.8
ZB51MC	1,000	520	210	31	-	6.0	5.0	0.28	5-30	±3	M2.8-M5.0	M2.3-M4.0
ZB56MC	800	520	210	31	-	6.0	5.0	0.3	8-40	±3	M3.3-M5.7	M2.7-M4.4
ZB59MC	1,700	820	245	39	-	6.0	8.0	0.55	5-45	±3	M2.8-M5.8	M2.2-M4.7
ZB61MC	1,400	820	245	39	-	6.0	8.0	0.55	7-50	±3	M2.9-M6.0	M2.6-M4.9
ZB66MC	1,000	820	245	39	-	6.0	8.0	0.55	7-65	±3	M2.9-M6.4	M2.6-M5.4
ZB71MC	550	820	245	39	-	6.0	8.0	0.55	15-95	±3	M4.1-M7.0	M3.1-M6.0
ZB76MC	300	840	245	39	-	6.0	8.0	0.55	30-180	±3	M5.0-M9.3	M4.0-M7.2
ZB79MC	250	840	245	39	-	6.0	8.0	0.55	50-280	±3	M6.0-M11.0	M4.9-M8.7
ZB46CCQ	2,200	640	190	35	190	6.0	5.0	0.28	3-20	±3	M2.2-M4.5	M1.7-M3.5
ZB49CCQ	1,800	640	190	35	190	6.0	5.0	0.28	3-25	±3	M2.2-M4.7	M1.7-M3.8
ZB52CCQ	1,000	640	190	35	190	6.0	5.0	0.28	5-35	±3	M2.8-M5.2	M2.2-M4.2
ZB58CCQ	550	640	190	35	190	6.0	5.0	0.28	10-50	±3	M3.6-M6.0	M2.8-M4.7
ZB59CCQ	1,700	980	220	43	220	6.0	8.0	0.55	7-50	±3	M2.9-M6.0	M2.6-M4.9
ZB61CCQ	1,400	980	220	43	220	6.0	8.0	0.55	10-60	±3	M3.6-M6.2	M2.8-M5.1
ZB66CCQ	1,000	980	220	43	220	6.0	8.0	0.55	12-75	±3	M3.8-M6.6	M3.0-M5.6
ZB71CCQ	550	980	220	43	220	6.0	8.0	0.55	30-110	±3	M5.0-M7.3	M4.0-M6.2
ZB76CCQ	300	1100	220	43	220	6.0	8.0	0.55	30-180	±3	M5.0-M9.3	M4.0-M7.2
ZB79CCQ	250	1250	220	43	220	6.0	8.0	0.55	50-280	±3	M6.0-M11.0	M4.9-M8.7



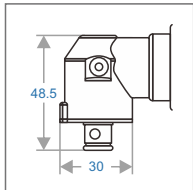
UNIT: mm



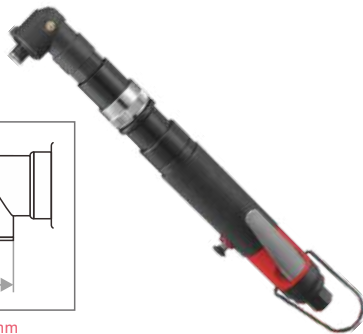
ZRAW-5SLA03

Torque Control Type Rear Exhaust

Air Screwdriver-Air shut off



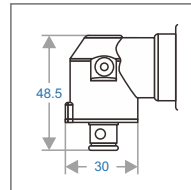
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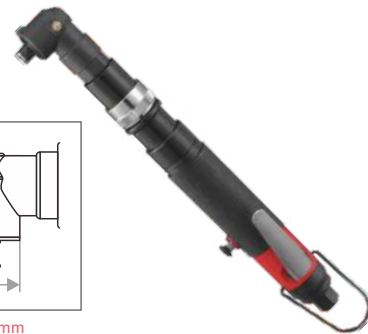
ZRAW-5SLA08

Torque Control Type Rear Exhaust

Air Screwdriver-Air shut off



UNIT: mm



ZRAW-5SLA15

Torque Control Type Rear Exhaust

Air Screwdriver-Air shut off

Model	Screw Size Capacity mm	MAX. Torque ft-lb(Nm)	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level db(A)
ZRAW-5SLA15	4	0.9~1.8(1.2~2.4)	1450	198(7)	13.39(340)	1/4	2.69(1.22)	80
ZRAW-5SLA08	5	1.6~3.2(2.2~4.3)	800	198(7)	13.39(340)	1/4	2.69(1.22)	80
ZRAW-5SLA03	6	3~7.4(4~10)	340	198(7)	13.77(350)	1/4	2.86(1.3)	80

• Recommended Gauge Air Pressure: 60~90psi

Features Of Pulse Mechanism

X-Shape Sealing improves repeatability and durability.

Twin drive roller blades reduce noise, vibration and improves impulse efficiency.

One hand reverse operation for Right or Left handed operators.

Low noise exhaust, 360° adjustable.

1 Piece design front end plate and cylinder improves motor efficiency.

Double chamber air motor
9 Vanes motor design for smallest dimensions with highest power and acceleration results in a short time to reach the set torque and highest productivity.

Easy Torque Adjustment
The required torque can be easily adjusted by turning the adjust screw through the housing.

Torque vs Time Graph:
The graph shows Torque on the y-axis and Time on the x-axis. A dashed line represents a 'Conventional Impact Wrench' which reaches a higher torque over a longer period. A solid line represents the 'Adjustable range of Oil-Pulse Wrench', which reaches a lower torque much faster, within a '0.2~1 sec' interval.

Air Intake/Exhaust Diagram:
A circular cross-section of the motor shows 9 vanes. Red arrows indicate 'Air Intake' and blue arrows indicate 'Air Exhaust' at various points around the perimeter.

Speed vs Torque Graph:
The graph shows Speed on the y-axis and Torque on the x-axis. A dashed line represents a 'Conventional Motor' with a steeper slope. A solid line represents the 'Double-Chamber Motor' with a shallower slope, indicating higher speed at lower torque levels.

Pulse Screwdriver (Pistol Type)



PS042
PS052
PS062

Pistol Type



PS072

Pistol Type

Specifications: Auto Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
PS042	1/4"HEX	M4~M6	4(3)	5(3.7)	6(4.4)	9(6.6)	10(7.4)	11(8.1)	4,500	0.4	80	1.06
PS052	1/4"HEX	M5~M8	7(5.2)	8(5.9)	9(6.6)	17(12.5)	17(12.5)	19(14)	5,800	0.4	85	1.06
PS062	1/4"HEX	M6~M8	11(8.1)	12(8.9)	13(9.6)	20(14.8)	22(16.2)	25(18.4)	5,800	0.43	85	1.08
PS072	1/4"HEX	M8~M10	20(14.8)	20(14.8)	22(16.2)	30(22.1)	32(23.6)	35(25.8)	5,500	0.45	88	1.3



PN042
PN052
PN062

Pistol Type



PN072

Pistol Type

Specifications: Non Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
PN042	1/4"HEX	M5~M8	7(5.2)	9(6.6)	11(8.1)	10(7.4)	12(8.9)	14(10.3)	5,600	0.4	80	0.95
PN052	1/4"HEX	M6~M8	13(9.6)	16(11.8)	19(14)	16(11.8)	19(14)	21(15.5)	6,000	0.4	85	0.95
PN062	1/4"HEX	M6~M8	17(12.5)	20(14.8)	23(17)	24(17.7)	27(19.9)	30(22.1)	6,000	0.43	85	0.94
PN072	1/4"HEX	M8~M10	25(18.4)	28(20.7)	31(22.9)	36(26.6)	39(28.8)	42(31)	5,500	0.45	88	1.35

- Air Inlet Size: NPT 1/4"
- Recommended Gauge Air Pressure: 60~90psi(4kg/cm²~6kg/cm²)(0.4Mpa~0.6Mpa)
- Air Hose Size: 10mm x 6.5mm (for 042~062 model), 12mm x 8mm (for 072 model)
- Above DATA Are All Measured At 4kg/cm²~6kg/cm² Gauge Air Pressure

Pulse Wrench (Pistol Type)



PS043
PS053
PS063

Pistol Type



PS073
PS084

Pistol Type



PS094

Pistol Type

Specifications: Auto Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
PS043	3/8"SD	M4~M6	5(3.7)	6(4.4)	7(5.2)	10(7.4)	11(8.1)	12(8.9)	4,500	0.4	80	1.06
PS053	3/8"SD	M6~M8	10(7.4)	11(8.1)	12(8.9)	20(14.8)	20(14.8)	23(17)	5,800	0.4	85	1.06
PS063	3/8"SD	M6~M8	11(8.1)	12(8.9)	13(9.6)	20(14.8)	22(16.2)	25(18.4)	5,800	0.43	85	1.08
PS073	3/8"SD	M8~M10	20(14.8)	20(14.8)	23(17)	36(26.6)	39(28.8)	42(31)	5,500	0.45	88	1.3
PS084	1/2"SD	M10~M12							5,500	0.5	88	1.42
PS094	1/2"SD	M10~M12							5,500	0.55	88	1.61



PN043
PN053
PN063

Pistol Type



PN073
PN084

Pistol Type



PN094

Pistol Type

Specifications: Non Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
PN043	3/8"SD	M6~M8	9(6.6)	11(8.1)	13(9.6)	13(9.6)	15(11.1)	17(12.5)	5,600	0.4	80	0.95
PN053	3/8"SD	M6~M8	15(11.1)	18(13.3)	21(15.5)	19(14)	22(16.2)	25(18.4)	5,800	0.4	85	0.95
PN063	3/8"SD	M8~M10	20(14.8)	23(17)	26(19.2)	28(20.7)	31(22.9)	34(25.1)	5,800	0.43	85	0.94
PN073	3/8"SD	M8~M10	28(20.7)	31(22.9)	34(25.1)	42(31)	45(33.2)	48(35.4)	5,500	0.45	88	1.35
PN084	1/2"SD	M10~M12	35(25.8)	38(28)	41(30.2)	51(37.6)	54(39.8)	57(42)	5,500	0.5	88	1.35
PN094	1/2"SD	M10~M12							5,000	0.55	88	1.6

- Air Inlet Size: NPT 1/4"
- Recommended Gauge Air Pressure: 60~90psi(4kg/cm²~6kg/cm²)(0.4Mpa~0.6Mpa)
- Air Hose Size: 10mm x 6.5mm (for 043~063 model), 12mm x 8mm (for 073~094 model)
- Above DATA Are All Measured At 4kg/cm²~6kg/cm² Gauge Air Pressure

Pulse Screwdriver (In Line Type)

SS042
SS052
SS062
SS072

In Line Type



Specifications: Auto Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
SS042	1/4"HEX	M4~M6	4(3)	5(3.7)	6(4.4)	9(6.6)	10(7.4)	11(8.1)	4,500	0.4	80	0.87
SS052	1/4"HEX	M5~M8	7(5.2)	8(5.9)	9(6.6)	17(12.5)	17(12.5)	19(14)	6,000	0.4	85	0.85
SS062	1/4"HEX	M6~M8	11(8.1)	12(8.9)	13(9.6)	20(14.8)	22(16.2)	25(18.4)	6,000	0.4	85	0.88
SS072	1/4"HEX	M8~M10	20(14.8)	20(14.8)	23(17)	30(22.1)	32(23.6)	35(25.8)	6,000	0.45	88	1.29

SN042
SN052
SN062
SN072

In Line Type



Specifications: Non Shut-Off Type

Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
SN042	1/4"HEX	M5~M8	7(5.2)	9(6.6)	11(8.1)	10(7.4)	12(8.9)	14(10.3)	5,600	0.4	80	0.87
SN052	1/4"HEX	M6~M8	13(9.6)	16(11.8)	19(14)	16(11.8)	19(14)	21(15.5)	6,000	0.4	85	0.85
SN062	1/4"HEX	M6~M8	17(12.5)	20(14.8)	23(17)	24(17.7)	27(19.9)	30(22.1)	6,000	0.4	85	0.88
SN072	1/4"HEX	M8~M10	25(18.4)	28(20.7)	31(22.9)	36(26.6)	39(28.8)	42(31)	6,000	0.45	88	1.29

- Air Inlet Size: NPT 1/4"
- Recommended Gauge Air Pressure: 60~90psi(4kg/cm²~6kg/cm²)(0.4Mpa~0.6Mpa)
- Air Hose Size: 10mm x 6.5mm (for 042~062 model), (for 072 model)
- Above DATA Are All Measured At 4kg/cm²~6kg/cm² Gauge Air Pressure

Pulse Wrench (In Line Type)

SS043
SS053
SS063
SS073
SS084

In Line Type

Specifications: Auto Shut-Off Type



SN043
SN053
SN063
SN073
SN084

In Line Type

Specifications: Non Shut-Off Type



Model	Square Drive	Bolt Capacity mm	Measured on Hard Joint / Nm(Lb-ft)						Free Speed rpm	Air Cons. m ³ /min	Noise Level dB(A)	Net Weight kg
			Min. Oil Pressure			Max. Oil Pressure						
			0.4MPa	0.5MPa	0.6MPa	0.4MPa	0.5MPa	0.6MPa				
SS043	3/8"SD	M4~M6	5(3.7)	6(4.4)	7(5.2)	10(7.4)	11(8.1)	12(8.9)	4,500	0.4	80	0.87
SS053	3/8"SD	M6~M8	10(7.4)	11(8.1)	12(8.9)	20(14.8)	20(14.8)	23(17)	6,000	0.4	85	0.85
SS063	3/8"SD	M6~M8	11(8.1)	12(8.9)	13(9.6)	20(14.8)	22(16.2)	25(18.4)	6,000	0.4	85	0.88
SS073	3/8"SD	M8~M10	20(14.8)	20(14.8)	23(17)	36(26.6)	39(28.8)	42(31)	6,000	0.45	88	1.29
SS084	1/2"SD	M10~M12							6,000	0.45	88	1.3
SN043	3/8"SD	M6~M8	9(6.6)	11(8.1)	13(9.6)	13(9.6)	15(11.1)	17(12.5)	5,600	0.4	80	0.87
SN053	3/8"SD	M6~M8	15(11.1)	18(13.3)	21(15.5)	19(14)	22(16.2)	25(18.4)	6,000	0.4	85	0.85
SN063	3/8"SD	M8~M10	20(14.8)	23(17)	26(19.2)	28(20.7)	31(22.9)	34(25.1)	6,000	0.4	85	0.88
SN073	3/8"SD	M8~M10	28(20.7)	31(22.9)	34(25.1)	42(31)	45(33.2)	48(35.4)	6,000	0.45	88	1.29
SN084	1/2"SD	M10~M12	35(25.8)	38(28)	41(30.2)	51(37.6)	54(39.8)	57(42)	6,000	0.45	88	1.3

- Air Inlet Size: NPT 1/4"
- Recommended Gauge Air Pressure: 60~90psi(4kg/cm²~6kg/cm²)(0.4Mpa~0.6Mpa)
- Air Hose Size: 10mm x 6.5mm (for 043~063 model), (for 073~084 model)
- Above DATA Are All Measured At 4kg/cm²~6kg/cm² Gauge Air Pressure



ZPO-1L

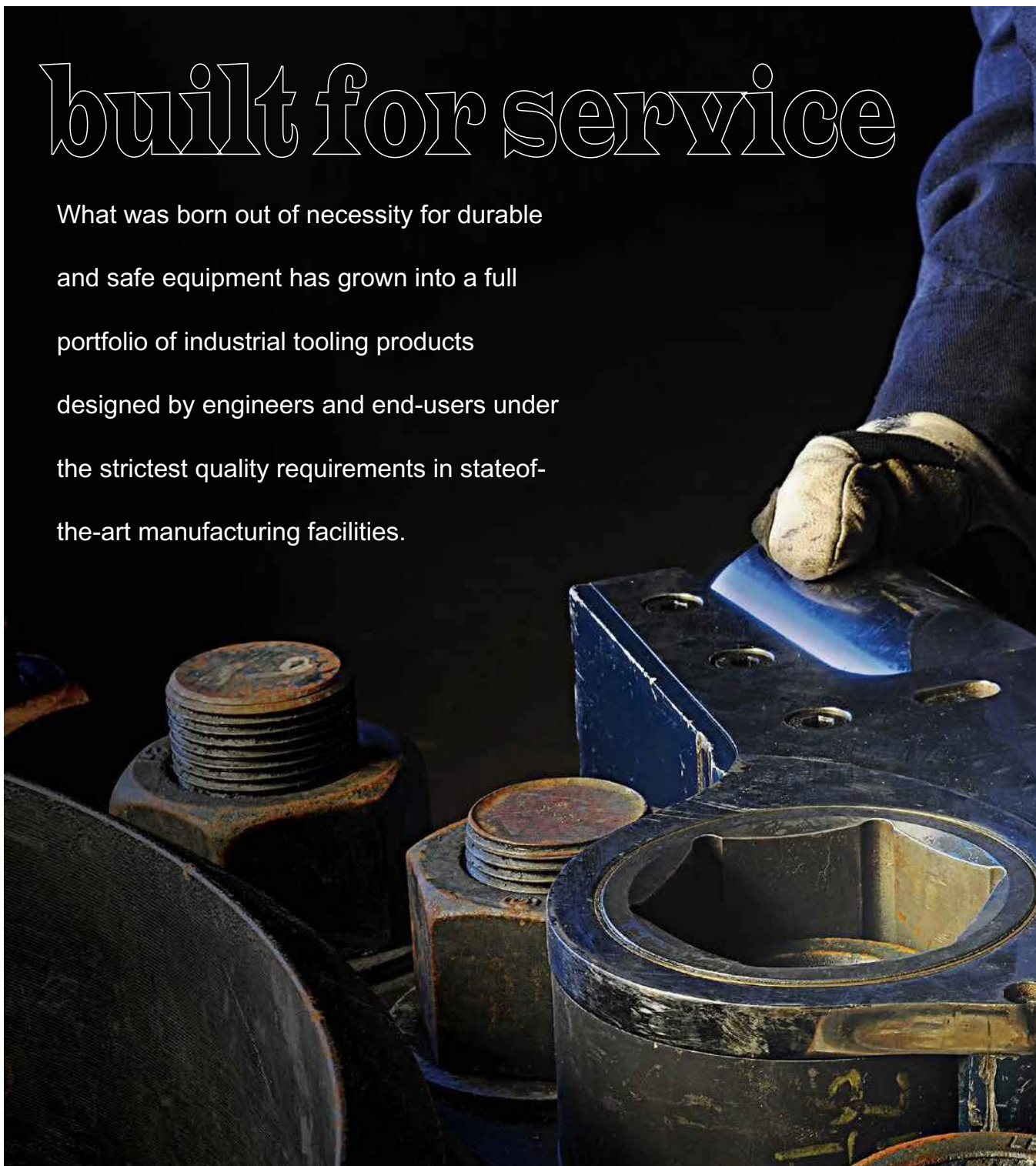
Synthetic pulse tool oil

Features

- New ZPO-1L is a fully synthetic hydraulic oil formulated with the most advanced technology and superior than other similar oils in the field.
- Applicable to all Pulse tools.
- Exceptional torque and auto shut off performance under environment temperature as low as 15°C.
- Great wear resistance to prolong the life of metal components.

built for service

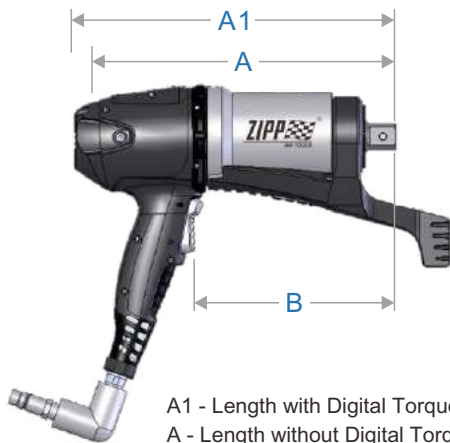
What was born out of necessity for durable and safe equipment has grown into a full portfolio of industrial tooling products designed by engineers and end-users under the strictest quality requirements in state-of-the-art manufacturing facilities.





Cyclone Magnum Pneumatic Torque Wrench

The future of pneumatic torquing is here. The Cyclone Magnum features an optional digital torque readout, purpose built motor, industry-leading gear durability and numerous ergonomic features. The Cyclone Magnum is the new leader in torque accuracy (+/-5%), durability and comfort.



A1 - Length with Digital Torque Readout
A - Length without Digital Torque Readout

**Start torquing efficiently today!
Reduce your project downtime!**



US PATENT NO. D638,682S
CANADIAN PATENT NO. 139501
EUROPEAN REGISTERED DESIGN NO. 001834300-0001
REGISTERED DESIGN NO. 001834300-0002
CHINA AND TAIWAN PATENT PENDING

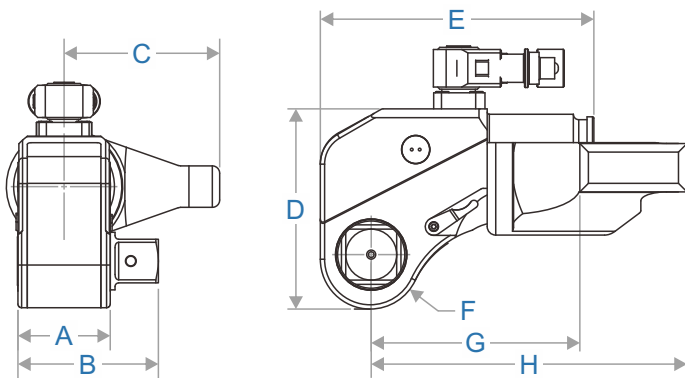
Model	Square Drive Size inch	Torque Range ft-lbs(Nm)	Dimension A1 inch(mm)	Dimension A inch(mm)	Dimension B inch(mm)	Ring Diameter inch(mm)	Net Weight lbs(kgs)
ZAT400CMPLT ZAT400DR-CMPLT	3/4	44-400(60-540)	9.85(250.3)	9.7(247.2)	5.4(136.3)	2.25(57.2)	10.2(4.6)
ZAT800CMPLT ZAT800DR-CMPLT	3/4	88-800(120-1100)	9.85(250.1)	9.7(247.1)	5.1(129.8)	2.97(75.3)	11.9(5.4)
ZAT1800CMPLT ZAT1800DR-CMPLT	1	200-1800(275-2450)	12.12(307.9)	11.7(297.5)	7.5(191.3)	3.42(86.9)	17.7(8)
ZAT3000CMPLT ZAT3000DR-CMPLT	1	333-3000(450-4070)	13(330)	12.8(326.9)	8.6(220.2)	3.8(96.5)	22.8(10.3)

Removable Drives for Low-Cost Maintenance (Note: Use of hex drives may require special reaction bars.)

Hex Size	5/8"	3/4"	7/8"	1"	1-1/4"	14 mm	17 mm	19 mm	22 mm
ZAT400	ZAT400-HX1	ZAT400-HX2				ZAT400-HX7	ZAT400-HX8	ZAT400-HX9	
ZAT800	ZAT800-HX1	ZAT800-HX2				ZAT800-HX7	ZAT800-HX8	ZAT800-HX9	
ZAT1800		ZAT1800-HX2	ZAT1800-HX3	ZAT1800-HX4			ZAT1800-HX8	ZAT1800-HX9	ZAT1800-HX10
ZAT3000		ZAT3000-HX2	ZAT3000-HX3	ZAT3000-HX4	ZAT3000-HX5			ZAT3000-HX9	ZAT3000-HX10

ZLW Series Lightweight Aluminum Square Drive Hydraulic Wrench

The ZLW square drive hydraulic wrench is the most efficient and heavily used tool in any turnaround trailer. Used for disassembly and reassembly, the ZLW offers unparalleled performance and durability for getting the job completed on time and with an accurate torque control of +/-5%



DURABILITY...
original square drive has been in service since 1991.

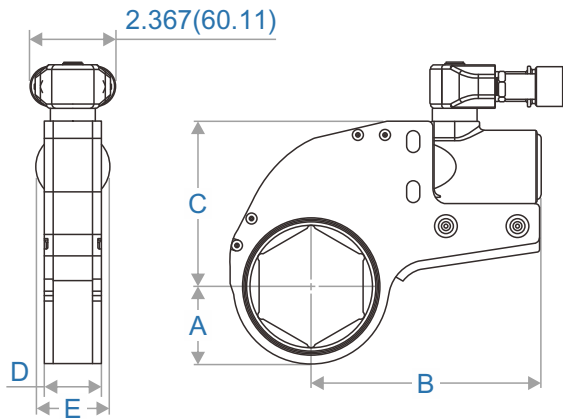
Maximum Operating Pressure 10,000 psi (700 bar)

Item Number	Drive Size inch	Max Torque ft-lbs(Nm)	Dimension A inch(mm)	Dimension B inch(mm)	Dimension C inch(mm)	Dimension D inch(mm)	Dimension E inch(mm)	Dimension F inch(mm)	Dimension G inch(mm)	Dimension H inch(mm)	Weight with Reaction Bar lbs(kgs)
ZLW1	3/4	1282(1738)	1.99(50.5)	2.86(72.6)	3.63(92.2)	3.81(96.8)	5.74(145.8)	1.03(26.2)	3.37(85.6)	6.89(175)	5.5(2.5)
ZLW3	1	3250(4406)	2.70(68.6)	3.77(95.8)	4.9(124.5)	5.04(128)	7.07(179.6)	1.35(34.3)	4.48(114)	9.09(230.9)	11(5)
ZLW5	1-1/2	5552(7528)	3.18(80.8)	4.88(124)	5.56(141.2)	5.92(150.4)	8.36(212.3)	1.55(39.4)	5.44(138.2)	10.74(272.8)	17(7.8)
ZLW8	1-1/2	7500(10169)	3.57(90.7)	5.32(135.1)	6.55(166.4)	6.63(168.4)	8.81(223.8)	1.87(47.5)	6.07(154.2)	11.63(295.4)	24(10.9)
ZLW10	1-1/2	11000(14914)	3.97(100.8)	5.64(143.3)	7.07(179.6)	7.23(183.6)	9.74(247.4)	2.02(51.3)	6.11(155.2)	12.6(320)	33(15)
ZLW20	2-1/2	19050(25828)	4.76(120.9)	7.27(184.7)	8.46(214.9)	8.73(221.7)	12.21(310.1)	2.34(59.4)	7.38(187.5)	15.22(386.6)	58(26.3)
ZLW25	2-1/2	24500(33218)	5.44(138.2)	7.94(201.7)	9.05(229.9)	9.81(249.2)	12.82(325.6)	2.62(66.5)	7.90(200.7)	15.92(404.4)	77(34.9)
ZLW35	2-1/2	34400(46640)	6.07(154.2)	8.58(217.9)	9.67(245.6)	11.2(284.4)	14.79(375.7)	3.06(77.7)	9.57(243.1)	18.48(469.4)	110(49.9)



ZTL Series Low Clearance / Direct Fit Hydraulic Wrench

Designed to fit where no other tool will go. The Torque Link low clearance torque wrench is the best solution for tightening in a constrained space environment. The TL eliminates side loading issues through in-line reaction and offers a controlled torque accuracy of +/-3%. The integrated cylinder eliminates the need to match cylinders to links and ensures that every TL in your fleet is operationally ready to perform.



Custom torque wrench solutions available D upon request.

Item Number with Swivel and Aluminum Reaction Surface	Item Number with Swivel and Steel Reaction Surface	Hexagon Size	Max Torque ft-lbs(Nm)	Dimension A inch(mm)	Dimension B inch(mm)	Dimension C inch(mm)	Dimension D inch(mm)	Dimension E inch(mm)	Weight with Swivel and Aluminum Reaction Surface Weight lbs(kgs)
ZTL210625	ZTL210625-S	1-1/16"	1336(1812)	0.96(24.2)	4.769(121.1)	2.834(72)	1.280(32.5)	1.563(39.7)	5(2.3)
ZTL227MM	ZTL227MM-S	27mm	1336(1812)	0.96(24.2)	4.769(121.1)	2.834(72)	1.280(32.5)	1.563(39.7)	5(2.3)
ZTL21250	ZTL21250-S	1-1/4"	1336(1812)	1.07(27.2)	4.775(121.3)	2.807(71.3)	1.264(32.1)	1.563(39.7)	5.1(2.3)
ZTL230MM	ZTL230MM-S	30mm	1336(1812)	1.07(27.2)	4.775(121.3)	2.807(71.3)	1.264(32.1)	1.563(39.7)	5.1(2.3)
ZTL214375	ZTL214375-S	1-7/16"	1451(1968)	1.17(29.8)	5.002(127.1)	3(76.2)	1.264(32.1)	1.563(39.7)	5.1(2.3)
ZTL234MM	ZTL234MM-S	34mm	1451(1968)	1.17(29.8)	5.002(127.1)	3(76.2)	1.264(32.1)	1.563(39.7)	5.1(2.3)
ZTL236MM	ZTL236MM-S	36mm	1451(1968)	1.17(29.8)	5.002(127.1)	3(76.2)	1.264(32.1)	1.563(39.7)	5.1(2.3)
ZTL21625	ZTL21625-S	1-5/8"	1499(2033)	1.29(32.8)	5.002(127.1)	3.097(78.7)	1.264(32.1)	1.563(39.7)	5.2(2.3)
ZTL241MM	ZTL241MM-S	41mm	1499(2033)	1.29(32.8)	5.002(127.1)	3.097(78.7)	1.264(32.1)	1.563(39.7)	5.2(2.3)
ZTL218125	ZTL218125-S	1-13/16	1543(2092)	1.39(35.3)	5.079(129)	3.162(80.3)	1.264(32.1)	1.563(39.7)	5.2(2.4)
ZTL246MM	ZTL246MM-S	46mm	1543(2092)	1.39(35.3)	5.079(129)	3.162(80.3)	1.264(32.1)	1.563(39.7)	5.2(2.4)
ZTL22000	ZTL22000-S	2"	1579(2141)	1.47(37.3)	5.073(128.9)	3.223(81.9)	1.264(32.1)	1.563(39.7)	5.3(2.4)
ZTL250MM	ZTL250MM-S	50mm	1579(2141)	1.47(37.3)	5.073(128.9)	3.223(81.9)	1.264(32.1)	1.563(39.7)	5.3(2.4)
ZTL221875	ZTL221875-S	2-3/16"	1640(2224)	1.569(39.9)	5.074(128.9)	3.279(83.3)	1.264(32.1)	1.563(39.7)	5.5(2.5)
ZTL255MM	ZTL255MM-S	55mm	1640(2224)	1.569(39.9)	5.074(128.9)	3.279(83.3)	1.264(32.1)	1.563(39.7)	5.5(2.5)
ZTL22375	ZTL22375-S	2-3/8"	1576(2137)	1.7(43.2)	5.221(132.6)	3.479(88.4)	1.264(32.1)	1.563(39.7)	5.7(2.6)
ZTL258MM	ZTL258MM-S	58mm	1576(2137)	1.7(43.2)	5.221(132.6)	3.479(88.4)	1.264(32.1)	1.563(39.7)	5.7(2.6)
ZTL260MM	ZTL260MM-S	60mm	1576(2137)	1.7(43.2)	5.221(132.6)	3.479(88.4)	1.264(32.1)	1.563(39.7)	5.7(2.6)

Specifications (continued)

Item Number with Swivel and Aluminum Reaction Surface	Item Number with Swivel and Steel Reaction Surface	Hexagon Size	Max Torque ft-lbs(Nm)	Dimension A inch(mm)	Dimension B inch(mm)	Dimension C inch(mm)	Dimension D inch(mm)	Dimension E inch(mm)	Weight with Swivel and Aluminum Reaction Surface Weight lbs(kgs)
ZTL418125	ZTL418125-S	1-13/16"	3800(5153)	1.47(37.3)	6.065(154.1)	3.929(99.8)	1.875(47.6)	2.036(51.7)	9.2(4.2)
ZTL446MM	ZTL446MM-S	46mm	3800(5153)	1.47(37.3)	6.065(154.1)	3.929(99.8)	1.875(47.6)	2.036(51.7)	9.2(4.2)
ZTL42000	ZTL42000-S	2"	3956(5364)	1.6(40.6)	6.11(155.2)	4.217(107.1)	1.625(41.3)	2.036(51.7)	10(4.5)
ZTL450MM	ZTL450MM-S	50mm	3956(5364)	1.6(40.6)	6.11(155.2)	4.217(107.1)	1.625(41.3)	2.036(51.7)	10(4.5)
ZTL421875	ZTL421875-S	2-3/16"	3989(5409)	1.72(43.7)	6.182(157)	4.209(106.9)	1.625(41.3)	2.036(51.7)	10.5(4.8)
ZTL455MM	ZTL455MM-S	55mm	3989(5409)	1.72(43.7)	6.182(157)	4.209(106.9)	1.625(41.3)	2.036(51.7)	10.5(4.8)
ZTL42375	ZTL42375-S	2-3/8"	4007(5433)	1.83(46.5)	6.186(157.1)	4.288(108.9)	1.625(41.3)	2.036(51.7)	10.6(4.8)
ZTL458MM	ZTL458MM-S	58mm	4007(5433)	1.83(46.5)	6.186(157.1)	4.288(108.9)	1.625(41.3)	2.036(51.7)	10.6(4.8)
ZTL460MM	ZTL460MM-S	60mm	4007(5433)	1.83(46.5)	6.186(157.1)	4.288(108.9)	1.625(41.3)	2.036(51.7)	10.6(4.8)
ZTL425625	ZTL425625-S	2-9/16"	3988(5408)	1.95(49.5)	6.318(160.5)	4.5(114.3)	1.625(41.3)	2.036(51.7)	10.8(4.9)
ZTL465MM	ZTL465MM-S	65mm	3988(5408)	1.95(49.5)	6.318(160.5)	4.5(114.3)	1.625(41.3)	2.036(51.7)	10.8(4.9)
ZTL42750	ZTL42750-S	2-3/4"	4057(5501)	2.04(51.8)	6.393(162.4)	4.52(114.8)	1.625(41.3)	2.036(51.7)	10.9(5)
ZTL470MM	ZTL470MM-S	70mm	4057(5501)	2.04(51.8)	6.393(162.4)	4.52(114.8)	1.625(41.3)	2.036(51.7)	10.9(5)
ZTL429375	ZTL429375-S	2-15/16"	4086(5541)	2.16(54.9)	6.374(161.9)	4.618(117.3)	1.625(41.3)	2.036(51.7)	11(5)
ZTL43125	ZTL43125-S	3-1/8"	4220(5722)	2.26(57.4)	6.574(167)	4.725(120)	1.625(41.3)	2.036(51.7)	11.1(5)
ZTL475MM	ZTL475MM-S	75mm	4220(5722)	2.26(57.4)	6.574(167)	4.725(120)	1.625(41.3)	2.036(51.7)	11.1(5)
ZTL480MM	ZTL480MM-S	80mm	4220(5722)	2.26(57.4)	6.574(167)	4.725(120)	1.625(41.3)	2.036(51.7)	11.1(5)
ZTL82000	ZTL82000-S	2"	7531(10212)	1.749(44.4)	7.578(192.5)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.6(8.9)
ZTL850MM	ZTL850MM-S	50mm	7531(10212)	1.749(44.4)	7.578(192.5)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.6(8.9)
ZTL821875	ZTL821875-S	2-3/16"	7945(10773)	1.85(47)	7.708(195.8)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.6(8.9)
ZTL855MM	ZTL855MM-S	55mm	7945(10773)	1.85(47)	7.708(195.8)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.6(8.9)
ZTL82375	ZTL82375-S	2-3/8"	8100(10984)	1.94(49.3)	7.67(194.8)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.7(8.9)
ZTL858MM	ZTL858MM-S	58mm	8100(10984)	1.94(49.3)	7.67(194.8)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.7(8.9)
ZTL860MM	ZTL860MM-S	60mm	8100(10984)	1.94(49.3)	7.67(194.8)	4.927(125.2)	2.25(57.2)	2.54(64.5)	19.7(8.9)
ZTL825625	ZTL825625-S	2-9/16"	8165(11072)	2.02(51.3)	7.67(194.8)	4.99(126.8)	2.25(57.2)	2.54(64.5)	19.9(9)
ZTL865MM	ZTL865MM-S	65mm	8165(11072)	2.02(51.3)	7.67(194.8)	4.99(126.8)	2.25(57.2)	2.54(64.5)	19.9(9)
ZTL82750	ZTL82750-S	2-3/4"	8029(10887)	2.15(54.6)	7.762(197.2)	5.11(129.8)	2.25(57.2)	2.54(64.5)	20.2(9.2)
ZTL870MM	ZTL870MM-S	70mm	8029(10887)	2.15(54.6)	7.762(197.2)	5.11(129.8)	2.25(57.2)	2.54(64.5)	20.2(9.2)
ZTL829375	ZTL829375-S	2-15/16"	8095(10977)	2.23(56.6)	7.91(200.9)	5.22(132.6)	2.25(57.2)	2.54(64.5)	20.5(9.3)
ZTL83125	ZTL83125-S	3-1/8"	7921(10741)	2.33(59.2)	7.977(202.6)	5.22(132.6)	2.25(57.2)	2.54(64.5)	21(9.5)
ZTL875MM	ZTL875MM-S	75mm	7921(10741)	2.33(59.2)	7.977(202.6)	5.22(132.6)	2.25(57.2)	2.54(64.5)	21(9.5)
ZTL880MM	ZTL880MM-S	80mm	7921(10741)	2.33(59.2)	7.977(202.6)	5.22(132.6)	2.25(57.2)	2.54(64.5)	21(9.5)
ZTL83500	ZTL83500-S	3-1/2"	8351(11324)	2.56(65)	8.039(204.2)	5.593(142.1)	2.25(57.2)	2.54(64.5)	22(10)
ZTL885MM	ZTL885MM-S	85mm	8351(11324)	2.56(65)	8.039(204.2)	5.593(142.1)	2.25(57.2)	2.54(64.5)	22(10)
ZTL83875	ZTL83875-S	3-7/8"	8093(10974)	2.78(70.6)	8.278(210.3)	5.753(146.1)	2.25(57.2)	2.54(64.5)	23(10.4)
ZTL890MM	ZTL890MM-S	90mm	8093(10974)	2.78(70.6)	8.278(210.3)	5.753(146.1)	2.25(57.2)	2.54(64.5)	23(10.4)
ZTL895MM	ZTL895MM-S	85mm	8093(10974)	2.78(70.6)	8.278(210.3)	5.753(146.1)	2.25(57.2)	2.54(64.5)	23(10.4)
ZTL1429375	ZTL1429375-S	2-15/16"	12865(17445)	2.439(62)	9.247(234.9)	6.25(158.8)	2.9(73.7)	3.1(78.7)	36.7(16.6)
ZTL143125	ZTL143125-S	3-1/8"	13091(17751)	2.537(64.4)	9.373(238.1)	6.486(164.8)	2.9(73.7)	3.1(78.7)	38.7(17.5)
ZTL1475MM	ZTL1475MM-S	75mm	13091(17751)	2.537(64.4)	9.373(238.1)	6.486(164.8)	2.9(73.7)	3.1(78.7)	38.7(17.5)
ZTL1480MM	ZTL1480MM-S	80mm	13091(17751)	2.537(64.4)	9.373(238.1)	6.486(164.8)	2.9(73.7)	3.1(78.7)	38.7(17.5)
ZTL143500	ZTL143500-S	3-1/2"	14272(19353)	2.73(69.3)	9.455(240.2)	6.486(164.8)	2.75(69.9)	3.1(78.7)	37.1(16.8)
ZTL1485MM	ZTL1485MM-S	85mm	14272(19353)	2.73(69.3)	9.455(240.2)	6.486(164.8)	2.75(69.9)	3.1(78.7)	37.1(16.8)
ZTL143875	ZTL143875-S	3-7/8"	14140(19174)	2.88(73.2)	9.561(242.9)	6.486(164.8)	2.5(63.5)	3.1(78.7)	34.9(15.8)
ZTL1490MM	ZTL1490MM-S	90mm	14140(19174)	2.88(73.2)	9.561(242.9)	6.486(164.8)	2.5(63.5)	3.1(78.7)	34.9(15.8)
ZTL1495MM	ZTL1495MM-S	95mm	14140(19174)	2.88(73.2)	9.561(242.9)	6.486(164.8)	2.5(63.5)	3.1(78.7)	34.9(15.8)
ZTL144250	ZTL144250-S	4-1/4"	14172(19217)	3.07(78)	9.667(245.5)	6.806(172.9)	2.5(63.5)	3.1(78.7)	36(16.3)
ZTL14100MM	ZTL14100MM-S	100mm	14172(19217)	3.07(78)	9.667(245.5)	6.806(172.9)	2.5(63.5)	3.1(78.7)	36(16.3)
ZTL14105MM	ZTL14105MM-S	105mm	14172(19217)	3.07(78)	9.667(245.5)	6.806(172.9)	2.5(63.5)	3.1(78.7)	36(16.3)
ZTL144625	ZTL144625-S	4-5/8"	14030(19025)	3.25(82.6)	9.667(245.5)	6.983(177.4)	2.5(63.5)	3.1(78.7)	36.4(16.5)
ZTL14110MM	ZTL14110MM-S	110mm	14030(19025)	3.25(82.6)	9.667(245.5)	6.983(177.4)	2.5(63.5)	3.1(78.7)	36.4(16.5)
ZTL14115MM	ZTL14115MM-S	115mm	14030(19025)	3.25(82.6)	9.667(245.5)	6.983(177.4)	2.5(63.5)	3.1(78.7)	36.4(16.5)
ZTL203500	ZTL203500-S	3-1/2"	18052(24479)	2.771(70.4)	10.947(278.1)	6.85(174)	2.75(69.9)	3.625(92.1)	50.2(22.8)
ZTL2085MM	ZTL2085MM-S	85mm	18052(24479)	2.771(70.4)	10.947(278.1)	6.85(174)	2.75(69.9)	3.625(92.1)	50.2(22.8)
ZTL203875	ZTL203875-S	3-7/8"	19153(25971)	3.011(76.5)	10.987(279.1)	7.092(180.1)	2.75(69.9)	3.625(92.1)	50(22.7)
ZTL2090MM	ZTL2090MM-S	90mm	19153(25971)	3.011(76.5)	10.987(279.1)	7.092(180.1)	2.75(69.9)	3.625(92.1)	50(22.7)
ZTL2095MM	ZTL2095MM-S	95mm	19153(25971)	3.011(76.5)	10.987(279.1)	7.092(180.1)	2.75(69.9)	3.625(92.1)	50(22.7)
ZTL204250	ZTL204250-S	4-1/4"	20755(28144)	3.322(84.4)	11.580(294.1)	7.46(189.5)	2.75(69.9)	3.625(92.1)	55.8(25.3)
ZTL20100MM	ZTL20100MM-S	100mm	20755(28144)	3.322(84.4)	11.580(294.1)	7.46(189.5)	2.75(69.9)	3.625(92.1)	55.8(25.3)
ZTL20105MM	ZTL20105MM-S	105mm	20755(28144)	3.322(84.4)	11.580(294.1)	7.46(189.5)	2.75(69.9)	3.625(92.1)	55.8(25.3)
ZTL204625	ZTL204625-S	4-5/8"	20132(27299)	3.455(87.8)	11.682(296.7)	7.667(194.7)	2.75(69.9)	3.625(92.1)	57.1(25.9)
ZTL20110MM	ZTL20110MM-S	110mm	20132(27299)	3.455(87.8)	11.682(296.7)	7.667(194.7)	2.75(69.9)	3.625(92.1)	57.1(25.9)
ZTL20115MM	ZTL20115MM-S	115mm	20132(27299)	3.455(87.8)	11.682(296.7)	7.667(194.7)	2.75(69.9)	3.625(92.1)	57.1(25.9)
ZTL205000	ZTL205000-S	5"	20249(27458)	3.731(94.8)	11.925(302.9)	7.837(199.1)	2.75(69.9)	3.625(92.1)	58.4(26.5)
ZTL20120MM	ZTL20120MM-S	120mm	20249(27458)	3.731(94.8)	11.925(302.9)	7.837(199.1)	2.75(69.9)	3.625(92.1)	58.4(26.5)
ZTL205375	ZTL205375-S	5-3/8"	20000(27120)	3.896(99)	11.972(304.1)	8.144(206.9)	2.75(69.9)	3.625(92.1)	59(26.8)
ZTL20135MM	ZTL20135MM-S	135mm	20000(27120)	3.896(99)	11.972(304.1)	8.144(206.9)	2.75(69.9)	3.625(92.1)	59(26.8)
ZTL304250	ZTL304250-S	4-1/4"	31690(42972)	3.367(85.5)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30100MM	ZTL30100MM-S	100mm	31690(42972)	3.367(85.5)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30105MM	ZTL30105MM-S	105mm	31690(42972)	3.367(85.5)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL304625	ZTL304625-S	4-5/8"	31690(42972)	3.56(90.4)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30110MM	ZTL30110MM-S	110mm	31690(42972)	3.56(90.4)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30115MM	ZTL30115MM-S	115mm	31690(42972)	3.56(90.4)	12.466(316.6)	8.313(211.2)	3.24(82.3)	4.25(108)	76(34.5)
ZTL305000	ZTL305000-S	5"	30329(41126)	3.82(97)	12.872(327)	8.371(212.6)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30120MM	ZTL30120MM-S	120mm	30329(41126)	3.82(97)	12.872(327)	8.371(212.6)	3.24(82.3)	4.25(108)	76(34.5)
ZTL305375	ZTL305375-S	5-3/8"	30985(42016)	3.936(100)	12.871(326.9)	8.371(212.6)	3.24(82.3)	4.25(108)	76(34.5)
ZTL30135MM	ZTL30135MM-S	135mm	30985(42016)	3.936(100)	12.871(326.9)	8.371(212.6)	3.24(82.3)	4.25(108)	76(34.5)
ZTL305750	ZTL305750-S	5-3/4"	32279(43770)	4.1(104.1)	12.871(326.9)	8.815(223.9)	3.24(82.3)	4.25(108)	78(35.4)
ZTL306125	ZTL306125-S	6-1/8"	32031(43434)	4.22(107.2)	12.871(326.9)	8.694(220.8)	3.24(82.3)	4.25(108)	79(35.8)
ZTL30150MM	ZTL30150MM-S	150mm	32031(43434)	4.22(107.2)	12.871(326.9)	8.694(220.8)	3.24(82.3)	4.25(108)	79(35.8)
ZTL30155MM	ZTL30155MM-S	155mm	32031(43434)	4.22(107.2)	12.871(326.9)	8.694(220.8)	3.24(82.3)	4.25(108)	79(35.8)



Delta Series Hydraulic Tensioners



ZBT Delta Series Hydraulic Tensioners

Hydraulic stud tensioners deliver fast, safe, accurate and direct axial load to a threaded fastener without the inaccuracy of torquing due to friction.

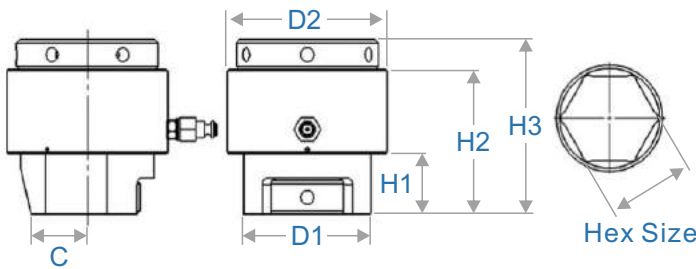
Overstroke Indicator
Piston overstroke indicator to ensure safe operation

Load Cell
Designed to maximize load and minimize OD to ensure a proper fit

Quick Connect Fittings

Durable Seals
Patented high-pressure/low-friction seals are designed to outlast the competition

Quality Materials
Made with high-strength, corrosion-resistance coated steel



Sub sea tensioners also available

- 100% water-based (no hydraulic oil)
- Quick-release reaction nut simplifies and saves the diver crucial time to engage the bolt
- Dual hydraulic ports
- Lift strap



Item Number	Standard Size Stud Diameter	Thread Pitch	Hex Size inch(mm)	Ram Area sq inch(mm)	Maximum Load lb(kN)	Stroke inch(mm)	Dimension H1 inch(mm)	Dimension H2 inch(mm)	Dimension H3 inch(mm)	Dimension D1 inch(mm)	Dimension D2 inch(mm)	Dimension C inch(mm)	Net Weight lbs(kgs)
ZBT075	3/4"	8 TPI	1.25(32)	1.276(823)	27,753(123.45)	0.25(6.4)	1.06(27)	3.3(84)	3.8(96)	2.12(54)	2.4(61)	1.01(26)	3.4(1.5)
ZBTM20	M20	2.5	1.181(30)	1.276(823)	27,753(123.45)	0.25(6.4)	1.06(27)	3.3(84)	3.8(96)	2.12(54)	2.4(61)	1.01(26)	3.4(1.5)
ZBT100	1"	8 TPI	1.625(41)	2.945(1900)	64,054(284.93)	0.35(9)	1.23(31)	4.2(107)	5.2(132)	2.66(67)	3.5(89)	0.96(24)	9.7(4.4)
ZBTM24	M24	3	1.417(36)	2.945(1900)	64,054(284.93)	0.35(9)	1.23(31)	4.2(107)	5.2(132)	2.66(67)	3.5(89)	0.96(24)	9.7(4.4)
ZBT113	1-1/8"	8 TPI	1.813(46)	2.945(1900)	64,054(284.93)	0.35(9)	1.23(31)	4.2(107)	5.2(132)	2.66(67)	3.5(89)	0.96(24)	9.7(4.4)
ZBT125	1-1/4"	8 TPI	2(51)	3.24(2090)	70,470(313.47)	0.35(9)	1.51(38)	4.475(114)	5.48(139)	3.26(83)	3.88(98)	1.36(35)	11.4(5.2)
ZBTM30	M30	3.5	1.811(46)	3.24(2090)	70,470(313.47)	0.35(9)	1.51(38)	4.475(114)	5.48(139)	3.26(83)	3.88(98)	1.36(35)	11.4(5.2)
ZBT138	1-3/8"	8 TPI	2.188(56)	4.91(3168)	106,793(475.04)	0.5(12.7)	1.48(37)	4.45(113)	5.45(138)	3.61(92)	4.38(111)	1.54(39)	14.6(6.6)
ZBT150	1-1/2"	8 TPI	2.375(60)	6.075(3919)	132,131(587.75)	0.5(12.7)	1.75(44)	5(127)	6.13(156)	4.14(105)	4.75(121)	1.73(44)	20.5(9.3)
ZBTM36	M36	4	2.165(55)	6.075(3919)	132,131(587.75)	0.5(12.7)	1.75(44)	5(127)	6.13(156)	4.14(105)	4.75(121)	1.73(44)	20.5(9.3)
ZBT163	1-5/8"	8 TPI	2.563(65)	6.075(3919)	132,131(587.75)	0.5(12.7)	1.75(44)	5(127)	6.13(156)	4.14(105)	4.75(121)	1.73(44)	20.5(9.3)
ZBT175	1-3/4"	8 TPI	2.75(70)	8.504(5486)	184,962(822.75)	0.5(12.7)	2(51)	5.25(133)	6.38(162)	4.56(116)	5.38(137)	1.95(50)	26.2(11.9)
ZBTM42	M42	4.5	2.559(65)	8.504(5486)	184,962(822.75)	0.5(12.7)	2(51)	5.25(133)	6.38(162)	4.56(116)	5.38(137)	1.95(50)	26.2(11.9)
ZBT188	1-7/8"	8 TPI	2.938(75)	8.504(5486)	184,962(822.75)	0.5(12.7)	2(51)	5.25(133)	6.38(162)	4.56(116)	5.38(137)	1.95(50)	26.2(11.9)
ZBT200	2"	8 TPI	3.125(79)	11.33(7310)	246,428(1096.17)	0.5(12.7)	2.25(57)	5.39(137)	6.5(165)	4.77(121)	6(152)	2.1(53)	30.9(14)
ZBTM48	M48	4	2.953(75)	11.33(7310)	246,428(1096.17)	0.5(12.7)	2.25(57)	5.39(137)	6.5(165)	4.77(121)	6(152)	2.1(53)	30.9(14)
ZBT225	2-1/4"	8 TPI	3.5(89)	13.24(8542)	287,970(1280.95)	0.5(12.7)	2.75(70)	5.89(149)	7.14(181)	5.86(149)	7(178)	2.65(67)	44.8(20.3)
ZBTM56	M56	5.5	3.346(85)	13.24(8542)	287,970(1280.95)	0.5(12.7)	2.75(70)	5.89(149)	7.14(181)	5.86(149)	7(178)	2.65(67)	44.8(20.3)
ZBT250	2-1/2"	8 TPI	3.875(98)	13.24(8542)	287,970(1280.95)	0.5(12.7)	2.75(70)	5.89(149)	7.14(181)	5.86(149)	7(178)	2.65(67)	44.8(20.3)
ZBTM64	M64	6	3.740(95)	13.24(8542)	287,970(1280.95)	0.5(12.7)	2.75(70)	5.89(149)	7.14(181)	5.86(149)	7(178)	2.65(67)	44.8(20.3)
ZBT275	2-3/4"	8 TPI	4.25(108)	23.45(15129)	510,038(2268.76)	0.5(12.7)	2.88(73)	6.26(159)	7.76(197)	6.9(175)	8(203)	2.74(70)	64.2(29.1)
ZBT300	3"	8 TPI	4.625(117)	25.51(16458)	554,843(2468.06)	0.5(12.7)	3.23(82)	6.63(168)	8.08(205)	7.06(179)	8.5(216)	2.99(76)	71.7(32.5)
ZBTM72	M72	6	4.134(105)	25.51(16458)	554,843(2468.06)	0.5(12.7)	3.23(82)	6.63(168)	8.08(205)	7.06(179)	8.5(216)	2.99(76)	71.7(32.5)
ZBT325	3-1/4"	8 TPI	5(127)	27.49(17735)	597,908(2659.63)	0.5(12.7)	3.96(101)	7.36(187)	8.86(225)	8.34(212)	9.5(241)	3.47(88)	93.6(42.4)
ZBTM80	M80	6	4.528(115)	27.49(17735)	597,908(2659.63)	0.5(12.7)	3.96(101)	7.36(187)	8.86(225)	8.34(212)	9.5(241)	3.47(88)	93.6(42.4)
ZBT350	3-1/2"	8 TPI	5.375(137)	27.49(17735)	597,908(2659.63)	0.5(12.7)	3.96(101)	7.36(187)	8.86(225)	8.34(212)	9.5(241)	3.47(88)	93.6(42.4)
ZBTM90	M90	6	5.118(130)	27.49(17735)	597,908(2659.63)	0.5(12.7)	3.96(101)	7.36(187)	8.86(225)	8.34(212)	9.5(241)	3.47(88)	93.6(42.4)
ZBT375	3-3/4"	8 TPI	5.75(146)	37.69(24316)	819,758(3646.47)	0.5(12.7)	4.11(104)	7.51(191)	8.39(213)	8.75(222)	11(279)	3.63(92)	109(49.4)
ZBT400	4"	8 TPI	6.125(156)	42.73(27568)	929,378(4134.08)	0.5(12.7)	4.3(109)	7.7(196)	8.58(218)	9.08(231)	11.7(297)	3.98(101)	121.4(55.1)
ZBTM100	M100	6	5.709(145)	42.73(27568)	929,378(4134.08)	0.5(12.7)	4.3(109)	7.7(196)	8.58(218)	9.08(231)	11.7(297)	3.98(101)	121.4(55.1)

Modular Components

Item Number	Pullers Part Number	Pullers Stud Diameter	Pullers Thread Pitch	Sockets Part Number	Sockets Hex Size	Bridges Part Number	Tommy Bar Part Number	Tommy Bar Dia	Load Cell Part Number
ZBT075	ZBT075-01	3/4	8 UN	ZBT075-05	1-1/4"	ZBT075-04	10-800-2000	0.375	ZBT075-06
	ZBT075-01-A	3/4	10 UN	ZBT075-05	1-1/4"				
	ZBT075-01-M20	M20	2.5	ZBT075-05-M20	30mm				
ZBT100	ZBT100-01	1	8 UN	ZBT100-05	1-5/8"	ZBT100-04	10-800-2000	0.375	ZBT100-06
	ZBT100-01-088	7/8	8 UN	ZBT100-05-088	1-7/16"				
	ZBT100-01-088-A	7/8	9 UN	ZBT100-05-088-A	1-7/16"				
ZBT113	ZBT100-01-M24	M24	3	ZBT100-05-M24	36mm	ZBT113-04	10-800-2000	0.375	ZBT113-06
	ZBT113-01	1-1/8	8 UN	ZBT113-05	1-13/16"				
	ZBT113-01-100	1	8 UN	ZBT113-05-100	1-5/8"				
	ZBT113-01-M24	M24	3	ZBT113-05-M24	36mm				
ZBT125	ZBT113-01-M27	M27	3	ZBT113-05-M27	41mm	ZBT125-04	10-800-2000	0.375	ZBT125-06
	ZBT125-01	1-1/4	8 UN	ZBT125-05	2"				
	ZBT125-01-113	1-1/8	8 UN	ZBT125-05-113	1-13/16"				
ZBT138	ZBT125-01-M27	M27	3	ZBT125-05-M27	41mm	ZBT138-04	10-800-3000	0.5	ZBT138-06
	ZBT125-01-M30	M30	3.5	ZBT125-05-M30	46mm				
	ZBT138-01	1-3/8	8 UN	ZBT138-05	2-3/16"				
	ZBT138-01-125	1-1/4	8 UN	ZBT138-05-125	2"				
ZBT150	ZBT138-01-M30	M30	3.5	ZBT138-05-M30	46mm	ZBT150-04	10-800-3000	0.5	ZBT150-06
	ZBT138-01-M33	M33	3.5	ZBT138-05-M33	50mm				
	ZBT138-01-M36	M36	4	ZBT138-05-M36	55mm				
	ZBT150-01	1-1/2	8 UN	ZBT150-05	2-3/8"				
ZBT163	ZBT150-01-A	1-1/2	6 UN	ZBT150-05	2-3/8"	ZBT163-04	10-800-3000	0.5	ZBT163-06
	ZBT163-01	1-5/8	8 UN	ZBT163-05	2-9/16"				
	ZBT163-01-M36	M36	4	ZBT163-05-M36	55mm				
	ZBT163-01-M39	M39	3	ZBT163-05-M39	60mm				
ZBT175	ZBT163-01-M42	M42	4.5	ZBT163-05-M42	65mm	ZBT175-04	10-800-3000	0.5	ZBT175-06
	ZBT163-01	1-5/8	8 UN	ZBT163-05	2-9/16"				
	ZBT150-01	1-1/2	8 UN	ZBT150-05	2-3/8"				
	ZBT150-01-A	1-1/2	6 UN	ZBT150-05	2-3/8"				
ZBT188	ZBT163-01-M36	M36	4	ZBT163-05-M36	55mm	ZBT188-04	10-800-3000	0.5	ZBT188-06
	ZBT163-01-M39	M39	3	ZBT163-05-M39	60mm				
	ZBT163-01-M42	M42	4.5	ZBT163-05-M42	65mm				
	ZBT175-01	1-3/4	8 UN	ZBT175-05	2-3/4"				
ZBT200	ZBT188-01	1-7/8	8 UN	ZBT188-05	2-15/16"	ZBT200-04	10-800-3000	0.5	ZBT200-06
	ZBT188-01-M48	M48	5	ZBT188-05-M48	75mm				
	ZBT188-01-M45	M45	4.5	ZBT188-05-M45	70mm				
	ZBT188-01-M42	M42	4.5	ZBT188-05-M42	65mm				
ZBT225	ZBT188-01	1-7/8	8 UN	ZBT188-05	2-15/16"	ZBT225-04	10-800-4000	0.625	ZBT225-06
	ZBT188-01-175	1-3/4	8 UN	ZBT188-05-175	2-3/4"				
	ZBT188-01-M48	M48	5	ZBT188-05-M48	75mm				
	ZBT188-01-M45	M45	4.5	ZBT188-05-M45	70mm				
ZBT250	ZBT188-01-M42	M42	4.5	ZBT188-05-M42	65mm	ZBT250-04	10-800-4000	0.625	ZBT250-06
	ZBT200-01	2	8 UN	ZBT200-05	3-1/8"				
	ZBT200-01-188	1-7/8	8 UN	ZBT200-05-188	2-15/16"				
	ZBT200-01-M48	M48	5	ZBT200-05-M48	75mm				
ZBT275	ZBT200-01-M52	M52	5	ZBT200-05-M52	80mm	ZBT275-04	10-800-4000	0.625	ZBT275-06
	ZBT225-01	2-1/4	8 UN	ZBT225-05	3-1/2"				
	ZBT250-01	2-1/2	8 UN	ZBT250-05	3-7/8"				
	ZBT250-01-M64	M64	6	ZBT250-05-M64	95mm				
ZBT300	ZBT250-01-M56	M56	5.5	ZBT250-05-M56	85mm	ZBT300-04	10-800-4000	0.625	ZBT300-06
	ZBT250-01-M60	M60	5.5	ZBT250-05-M60	90mm				
	ZBT250-01	2-1/2	8 UN	ZBT250-05	3-7/8"				
	ZBT225-01	2-1/4	8 UN	ZBT225-05	3-1/2"				
ZBT325	ZBT250-01-M64	M64	6	ZBT250-05-M64	95mm	ZBT325-04	10-800-4000	0.625	ZBT325-06
	ZBT275-01	2-3/4	8 UN	ZBT275-05	4-1/4"				
	ZBT275-01-250	2-1/2	8 UN	ZBT275-05-250	3-7/8"				
	ZBT275-01-M72	M72	6	ZBT275-05-M72	105mm				
ZBT350	ZBT275-01-M68	M68	6	ZBT275-05-M68	100mm	ZBT350-04	10-800-4000	0.625	ZBT350-06
	ZBT275-01-M64	M64	6	ZBT275-05-M64	95mm				
	ZBT300-01	3	8 UN	ZBT300-05	4-5/8"				
	ZBT300-01-275	2-3/4	8 UN	ZBT300-05-275	4-1/4"				
ZBT375	ZBT300-01-M72	M72	6	ZBT300-05-M72	105mm	ZBT375-04	10-800-4000	0.625	ZBT375-06
	ZBT325-01	3-1/4	8 UN	ZBT325-05	5"				
	ZBT325-01-300	3	8 UN	ZBT325-05-300	4-5/8"				
	ZBT325-01-M72	M72	6	ZBT325-05-M72	105mm				
ZBT400	ZBT325-01-M76	M76	6	ZBT325-05-M76	110mm	ZBT400-04	10-800-4000	0.625	ZBT400-06
	ZBT325-01-M80	M80	6	ZBT325-05-M80	115mm				
	ZBT350-01	3-1/2	8 UN	ZBT350-05	5-3/8"				
	ZBT350-01-325	3-1/4	8 UN	ZBT350-05-325	5"				
ZBT400	ZBT350-01-M90	M90	6	ZBT350-05-M90	130mm	ZBT400-04	10-800-4000	0.625	ZBT400-06
	ZBT350-01-M85	M85	6	ZBT350-05-M85	120mm				
	ZBT350-01-M80	M80	6	ZBT350-05-M80	115mm				
	ZBT375-01	3-3/4	8 UN	ZBT375-05	5-3/4"				
ZBT400	ZBT375-01-M90	M90	6	ZBT375-05-M90	130mm	ZBT400-04	10-800-4000	0.625	ZBT400-06
	ZBT375-01-M95	M95	6	ZBT375-05-M95	135mm				
ZBT400	ZBT400-01	4	8 UN	ZBT400-05	6-1/8"	ZBT400-04	10-800-4000	0.625	ZBT400-06
	ZBT400-01-M100	M100	6	ZBT400-05-M100	145mm				



Destroyer Nut Splitter

The ZDANS & ZQD Nut Splitters offer a fast and efficient method of getting rid of those galled, stripped or stubborn nuts. The ZDANS is the most compact high-pressure design on the market.

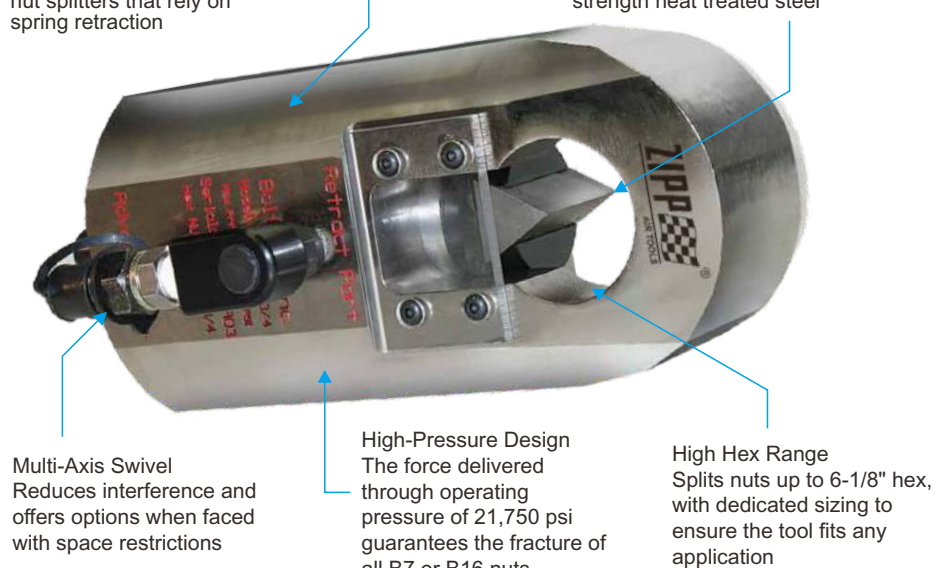
Nut Splitter Selection Chart

Nut Size inch	Nut Splitter Item Number	Chisel Item Number
7/8	ZQD4NS	ZQD4NS-3
15/16	ZQD4NS	ZQD4NS-3
1-1/16	ZQD4NS	ZQD4NS-3-1.063
1-1/4	ZQD8NS	ZQD8NS-3
1-7/16	ZQD8NS	ZQD8NS-3-1.4375
1-7/16	ZQD14NS	ZQD14NS-3
1-5/8	ZQD14NS	ZQD14NS-3-1.62
1-13/16	ZQD30NS	ZQD30NS-3
2	ZDANS2000	ZDANS2000-5
2	ZQD30NS	ZQD30NS-3
2-3/16	ZDANS2375	ZDANS2375-5
2-3/16	ZQD30NS	ZQD30NS-3
2-3/8	ZDANS2375	ZDANS2375-5
2-3/8	ZQD30NS	ZQD30NS-3
2-9/16	ZDANS2563	ZDANS2563-5
2-3/4	ZDANS2750	ZDANS2750-5
2-15/16	ZDANS3125	ZDANS3125-5
3-1/8	ZDANS3125	ZDANS3125-5
3-1/2	ZDANS3875	ZDANS3875-5
3-7/8	ZDANS3875	ZDANS3875-5
4-1/4	ZDANS4625	ZDANS4625-5
4-5/8	ZDANS4625	ZDANS4625-5
5	ZDANS5000	ZDANS5000-5
5-3/8	ZDANS5375	ZDANS5375-5
5-3/4	ZDANS5750	ZDANS5750-5
6-1/8	ZDANS6125	ZDANS6125-5

Double Acting
Advance and retract the nut splitter hydraulically. This design reduces the length of the tool >7 inches over traditional nut splitters that rely on spring retraction

Corrosion-Resistant Finish
Durable electroless nickel coating

Three-Sided, Quick Change Chisel
Rotate the chisel three times to extend the number of fractures before replacing. Change the chisel in seconds. Constructed from high-strength heat treated steel



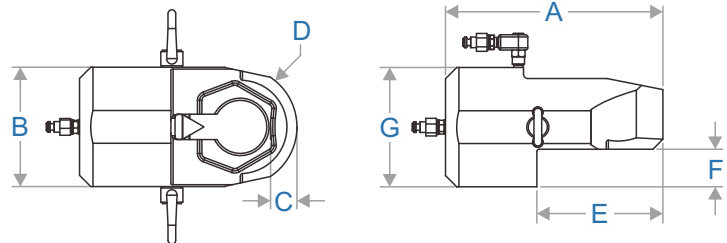
Multi-Axis Swivel
Reduces interference and offers options when faced with space restrictions

High-Pressure Design
The force delivered through operating pressure of 21,750 psi guarantees the fracture of all B7 or B16 nuts

High Hex Range
Splits nuts up to 6-1/8" hex, with dedicated sizing to ensure the tool fits any application

(ZDANS) Series — 21,750 psi Double Acting
State-of-the-Art Super Lightweight Double Acting Nut Splitter

- Powered by ZTP30K-DAN air pump
- Split nuts up to 6-1/8" hex
- Three-sided quick-change ULTRA chisel
- Fits ANSI B16.5 and API 6A flanges
- The most compact design available

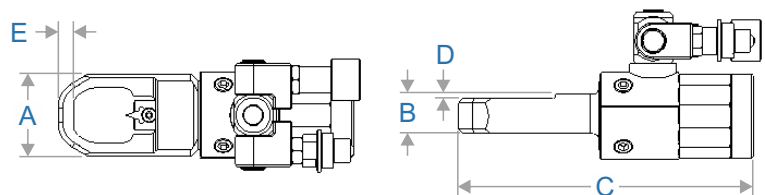


Maximum Operating Pressure 21,750 psi (1,500 bar)

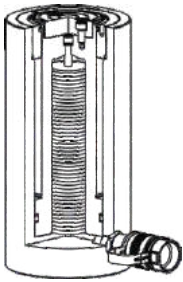
Item Number	Dimension A inch(mm)	Dimension B inch(mm)	Dimension C inch(mm)	Dimension D inch(mm)	Dimension E inch(mm)	Dimension F inch(mm)	Dimension G inch(mm)	Net Weight lbs(kgs)
ZDANS2000	8.042(204.3)	3.75(95.3)	0.625(15.9)	1.75(44.5)	4.065(103.3)	1.095(27.8)	3.75(95.3)	20(9.1)
ZDANS2375	9.195(233.6)	4.25(108)	0.895(22.7)	1.75(44.5)	4.813(122.3)	1.25(31.8)	4.25(108)	27.7(12.6)
ZDANS2563	9.252(235)	4.475(113.7)	0.75(19.1)	2.238(56.9)	4.691(119.2)	1.288(32.7)	4.475(113.7)	33.2(15.1)
ZDANS2750	9.707(246.6)	4.65(118.1)	0.879(22.3)	2.325(59.1)	4.963(126.1)	1.32(33.5)	4.7(119.4)	37.6(17)
ZDANS3125	10.36(263.1)	5.063(128.6)	1.072(27.2)	2.75(69.9)	5.628(143)	1.469(37.3)	5.063(128.6)	43.3(19.6)
ZDANS3875	12.298(312.4)	6.75(171.5)	1.367(34.7)	3.375(85.7)	7.13(181.1)	2.125(54)	6.75(171.5)	80(36.3)
ZDANS4625	13.923(353.6)	7.5(190.5)	1.57(39.9)	3.75(95.3)	8.5(215.9)	1.774(45.1)	7.121(180.9)	120(54.4)
ZDANS5000	15.652(397.6)	8(203.2)	1.622(41.2)	3.759(95.5)	8.891(225.8)	2.438(61.9)	8.125(206.4)	144(65.3)
ZDANS5375	16.89(429)	8.875(225.4)	1.978(50.2)	4.25(108)	9.53(242.1)	2.469(62.7)	8.875(225.4)	200(90.7)
ZDANS5750	17.339(440.4)	9(228.6)	2.05(52.1)	4.75(120.7)	9.978(253.4)	2.532(64.3)	9(228.6)	205(93)
ZDANS6125	19.159(486.6)	9.75(247.6)	2.264(57.5)	4.875(123.8)	11.078(281.4)	2.781(70.6)	9.75(247.7)	266(120.7)

ZQD Series - 10,000 psi Double Acting

- Powered by ZQD HydraLinks cylinder
- Quick-change chisel design
- Fits ANSI B16.5 and API 6A flanges
- Large range on nut sizes
- Multi-axis swivel for hydraulic lines
- The most compact design available



Item Number	Dimension A inch(mm)	Dimension B inch(mm)	Dimension C inch(mm)	Dimension D inch(mm)	Dimension E inch(mm)	Net Weight lbs(kgs)
ZQD4NSCMLPT	2.21(56.1)	1.08(27.4)	7.92(201)	0.13(3.2)	0.41(10.4)	6.51(3)
ZQD8NSCMLPT	2.97(75.4)	1.63(41.3)	10.52(267.2)	0.19(4.8)	0.54(13.7)	13.7(6.2)
ZQD14NSCMLPT	3.25(82.6)	1.8(45.7)	11.25(285.8)	0.24(6.1)	0.6(15.2)	18.87(8.6)
ZQD30NSCMLPT	4.56(115.9)	2.7(68.6)	15.43(391.8)	0.24(6.1)	0.85(21.6)	44.28(20.1)



ZS Series

Capacity: 10-200 ton

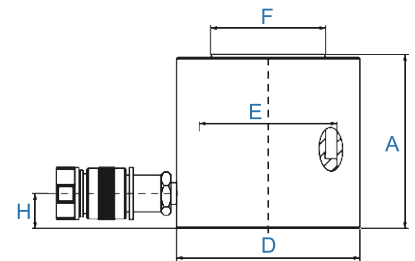
Stroke: 25-150 mm

Maximum Operating Pressure:

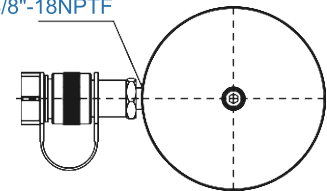
700 bar

Single-Acting, General Cylinders

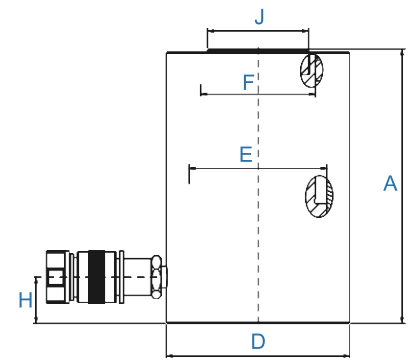
- Designed for use in all positions.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion, it also be more closed and extending cylinder life.
- Maximum sized springs speed piston return and increase spring life.
- Special soft ring reduces wear caused by off-center loads.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- All cylinders are equipped with ZSQB-3/8UF female coupler & dust cap.



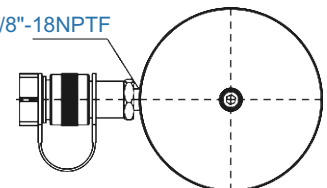
3/8"-18NPTF



Stroke 25mm model.



3/8"-18NPTF



Stroke above to 50mm model.

Single-Acting, General Cylinders

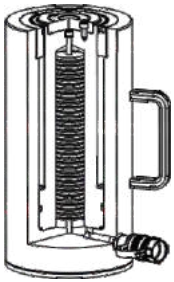
Handle type		Model Number	Cylinder Capacity	Stroke	Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outer Dimension					Weight
O	S								ton(kN)	mm	cm ²	cm ³	A(mm)	
		ZS10-25	10(101)	25	14.46	36.1	80	105	70	42.93	38.1	19.5	—	2.4
		ZS10-50		50	14.46	72.3	130	180	57	42.93	38.1	19.5	—	2.5
		ZS10-75		75	14.46	108.4	155	230	57	42.93	38.1	19.5	35	3.1
		ZS10-100		100	14.46	144.6	180	280	57	42.93	38.1	19.5	35	3.4
		ZS10-125		125	14.46	180.7	205	330	57	42.93	38.1	19.5	35	4
		ZS10-150		150	14.46	216.9	230	380	57	42.93	38.1	19.5	35	4.2
		ZS20-25	20(198)	25	28.26	70.7	80	105	90	60	50	17	—	3.7
	●	ZS20-50		50	28.26	141.3	135	185	79	60	50	22	—	4.9
	●	ZS20-75		75	28.26	212	160	235	79	60	50	22	40	5.6
	●	ZS20-100		100	28.26	282.6	185	285	79	60	50	22	40	6.3
	●	ZS20-125		125	28.26	353.3	210	335	79	60	50	22	40	7
	●	ZS20-150		150	28.26	423.9	235	385	79	60	50	22	40	7.7
		ZS30-25	30(294)	25	42	105	85	110	99	73.15	57.15	19	—	5
		ZS30-40		40	42	210	85	125	99	73.15	57.15	22.5	—	7.4
	●	ZS30-50		50	42	210	145	195	99	73.15	57.15	22.5	—	7.6
	●	ZS30-75		75	42	315	170	245	99	73.15	57.15	22.5	49.5	7.8
	●	ZS30-100		100	42	420	195	295	99	73.15	57.15	22.5	49.5	8.9
	●	ZS30-125		125	42	525	220	345	99	73.15	57.15	22.5	49.5	10
	●	ZS30-150	150	42	630	245	395	99	73.15	57.15	22.5	49.5	11	
	●	ZS30-55	30(269)	55	38.46	212	105	160	100	70	60	14	—	8
	●	ZS50-25	50(498)	25	71.21	178	95	120	127	95.25	79.5	24	—	8.8
	●	ZS50-35		35	71.21	356	85	120	127	95.25	79.5	24	—	9.5
	●	ZS50-50		50	71.21	356	120	170	127	95.25	79.5	24	—	10.5
	●	ZS50-50B		50	71.21	356	105	155	127	95.25	79.5	19	—	9.5
	●	ZS50-75		75	71.21	534	190	265	127	95.25	79.5	32	71	16.8
	●	ZS50-100		100	71.21	712	215	315	127	95.25	79.5	32	71	18.2
	●	ZS50-125		125	71.21	890.1	240	365	127	95.25	79.5	32	71	19.9
	●	ZS50-150		150	71.21	1068.1	265	415	127	95.25	79.5	32	71	21.4
▲	●	ZS100-25	100(933)	25	133.27	333.1	100	125	177	130.3	104.9	20	—	16.9
▲	●	ZS100-50		50	133.27	666.3	160	210	177	130.3	104.9	30	84	26.8
▲	●	ZS100-100		100	133.27	1332.7	204	304	177	130.3	104.9	30	84	36.8
▲	●	ZS100-125		125	133.27	1665.8	235	360	177	130.3	104.9	30	84	40.6
▲	●	ZS100-150		150	133.27	1999	260	410	177	130.3	104.9	30	84	44.3
▲	★	ZS150-50	150(1407)	50	200.96	1004.8	200	250	215	160	115	50	99	50.2
▲	★	ZS150-100		100	200.96	2009.6	250	350	215	160	115	50	99	60.6
▲	★	ZS150-150		150	200.96	3014.4	300	450	215	160	115	50	99	68.9
▲	★	ZS200-50	200(1984)	50	383.38	1416.9	200	250	255	190	135	50	115	71.6
▲	★	ZS200-100		100	383.38	2833	250	350	255	190	135	50	115	85
▲	★	ZS200-150		150	383.38	4250.7	300	450	255	190	135	50	115	98.5

S = standard equipped O = option

Handle type

- = Weldable
- ★ = Eyebolt
- ▲ = Removable strap handles
- = Thread





ZRSAC Series

Capacity: 20-150 ton

Stroke: 50-200 mm

Maximum Operating Pressure:

700 bar

Single-Acting, Aluminum Cylinders

- Lightweight, aluminum design for maximum portability.
- 7075-T6 Aluminum alloy components for maximum strength and minimum weight.
- Steel base plate and saddle for protection against piston rod damage.
- Anodizing treatment plunger, surfaces and inner of barrel resists damage and extends cylinder life.
- Maximum sized springs speed piston return and increase spring life.
- Special soft ring reduces wear caused by off-center loads.
- Composite bearings prevent metal-to-metal contact, increasing cylinder life and resistance to side-load.
- Stop ring for piston blow-out protection.
- Removable hardened saddle, handle and steel baseplate, which can be removed to use in limit space.
- All cylinders are equipped with ZSQB-3/8UF female coupler & dust cap.
- Laser carve on surface.



Saddle

- ZRSAC-Series are equipped with hardened removable "Ribbed saddles" to prevent slippage during jacking.
- For off-centre loading application, see optional tilting saddle.



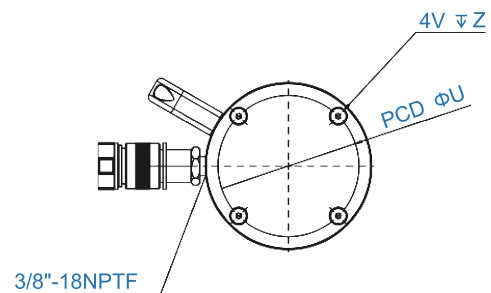
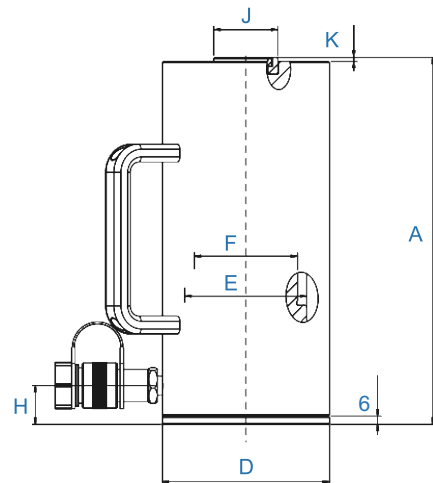
Steel Base Plate

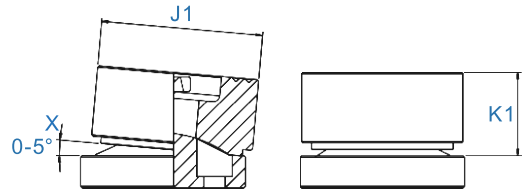
- Do not remove steel base plate in order to protect the cylinder base.
- No attachment to be used on base holes of the Aluminum cylinders.



Aluminum vs. Steel characteristic

- Due to different steel & Aluminum characteristics, it is strongly recommended not to be used for high-cycle applications





Steel Base Plate Mounting Holes			
Cylinder Model/ Capacity	Bolt Circle	Thread	Thread Depth
ton	U(mm)	V(mm)	Z(mm)
ZRSAC-20	70	M6	12
ZRSAC-30	80	M6	12
ZRSAC-50	110	M6	12
ZRSAC-100	160	M6	12
ZRSAC-150	200	M6	12

Optional Bolt Tilt Saddle Dimensions (mm)			
Cylinder Model/ Capacity	Model Number	Saddle Diameter	Saddle Protrusion from Base
ton		J1	K1
ZRSAC-50	ZXKCATRSAC-50	50	25.9
ZRSAC-100	ZXKCATRSAC-100	91.2	33
ZRSAC-150	ZXKCATRSAC-150	118.1	37

- Including Base Plate Height of 6mm.
- 4 base plate bolts: M6X1.0X0.24

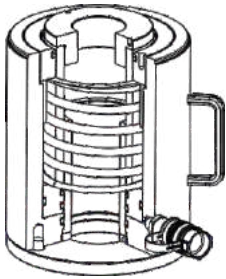
		Outer Dimension												
Handle type	Model Number	Cylinder Capacity	Stroke	Cylinder Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Saddle Dia.	Piston Rod Protrusion	Weight
S		ton(kN)	mm	cm ²	cm ³	A(mm)	B(mm)	D(mm)	E(mm)	F(mm)	H(mm)	J(mm)	K(mm)	kg
	ZRSAC-202	20(218)	50	31.2	156	174	224	85	63	50	27	40	3	2.2
■	ZRSAC-204		100	31.2	312	224	324	85	63	50	27	40	3	4.1
■	ZRSAC-206		150	31.2	468	274	424	85	63	50	27	40	3	4.6
■	ZRSAC-302	30(309)	50	44.2	221	181	231	100	75	60	33	40	3	3.2
■	ZRSAC-304		100	44.2	442	231	331	100	75	60	33	40	3	5.2
■	ZRSAC-306		150	44.2	663	281	431	100	75	60	33	40	3	5.9
■	ZRSAC-502	50(496)	50	70.9	354	186	236	130	95	80	30	50	3	8.5
■	ZRSAC-504		100	70.9	709	236	336	130	95	80	30	50	3	9.8
■	ZRSAC-506		150	70.9	1063	286	436	130	95	80	30	50	3	11.1
■	ZRSAC-1004	100(1002)	100	143.1	1431	271	371	188	135	110	46	94	3	19.6
■	ZRSAC-1006		150	143.1	2147	321	471	188	135	110	46	94	3	21.9
■	ZRSAC-1008		200	143.1	2863	371	571	188	135	110	46	94	3	24.2
■	ZRSAC-1506	150(1589)	150	227	3405	343	493	230	170	140	51	113	3	33.3

S = standard equipped O = option

Handle type

- = Weldable
- ☆ = Eyebolt
- △ = Removable strap handles
- = Thread





ZRSACH Series

Capacity: 20-100 ton

Stroke: 50-250 mm

Maximum Operating Pressure:

700 bar

Single-Acting, Hollow Plunger Aluminum Cylinders

- Maximum sized springs speed piston return and increase spring life.
- Special soft ring reduces wear caused by off-center loads.
- All cylinders are equipped with
- Lightweight, aluminum design for maximum portability.
- 7075-T6 Aluminum alloy components for maximum strength and minimum weight.
- Steel base plate and saddle for protection against piston rod damage.
- Anodizing treatment plunger, surfaces and inner of barrel resists damage and extends cylinder life.
- Composite bearings prevent metal-to-metal contact, increasing cylinder life and resistance to side-load.
- Stop ring for piston blow-out protection.
- Removable hardened saddle, handle and steel baseplate, which can be removed to use in limit space.
- Laser carve on surface.



Saddle

- ZRSACH-Series are equipped with bolt-on hardened removable steel hollow saddle.



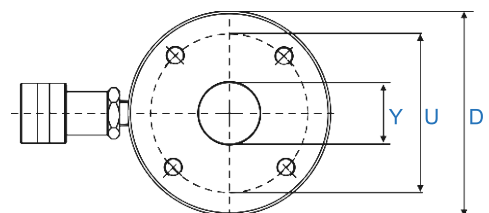
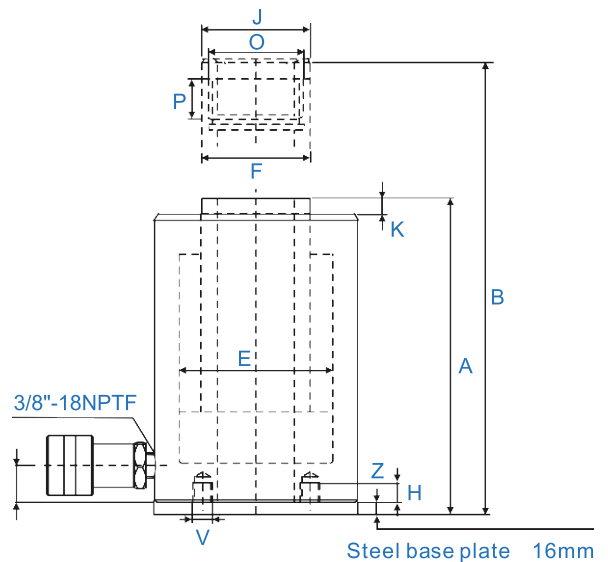
Steel Base Plate

- Do not remove steel base plate in order to protect the cylinder base.
- No attachment to be used on base holes of the Aluminum cylinders.



Aluminum vs. Steel characteristic

- Due to different steel & Aluminum characteristics, it is strongly recommended not to be used for high-cycle applications



This drawing show the base mounting holes of barrel before setting steel base plate.



Steel Base Plate Mounting Holes			
Cylinder Model/ Capacity	Bolt Circle	Thread	Thread Depth
ton	U(mm)	V(mm)	Z(mm)
ZRSACH-20	80	M6	12
ZRSACH-30	110	M6	12
ZRSACH-60	160	M6	12
ZRSACH-100	230	M6	12

- Including Base Plate Height of 6mm.
- 4 base plate bolts: M6X1.0X0.24

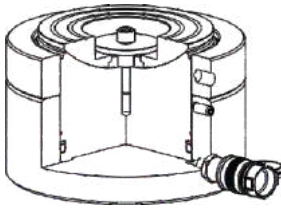
Handle type	Model Number	Outer Dimension													
		Cylinder Capacity	Stroke	Cylinder Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Saddle Dia.	Piston Rod Protrusion	Center Hole Dia.	Weight
S		ton(kN)	mm	cm ²	cm ³	A(mm)	B(mm)	D(mm)	E(mm)	F(mm)	H(mm)	J(mm)	K(mm)	Y(mm)	kg
■	ZRSACH-202	20(229)	50	32.7	163.7	188	238	100	75	55	29	55	10	27	5.2
■	ZRSACH-206		150	32.7	491	315	465	100	75	55	29	55	10	27	7.1
■	ZRSACH-302	30(358)	50	51.5	255.7	208	258	130	95	70	29	70	10	34	8
■	ZRSACH-306		150	51.1	767	333	483	130	95	70	29	70	10	34	11.2
■	ZRSACH-2010		254	51.1	1298.9	457	711	130	95	70	29	70	10	34	13.7
■	ZRSACH-604	60(596)	100	84.7	847.7	315	415	180	130	100	61.2	100	12	54	19.5
■	ZRSACH-606		150	84.7	1271.5	380	530	180	130	100	61.2	100	12	54	22.8
■	ZRSACH-1003	100(1157)	76	178.9	1360	307	383	250	182	145	51	145	14	79	44
■	ZRSACH-1006		150	178.9	2684	391	541	250	182	145	51	145	14	79	54.5

S = standard equipped O = option

Handle type

- = Weldable
- ☆ = Eyebolt
- △ = Removable strap handles
- = Thread





ZCSLP Series

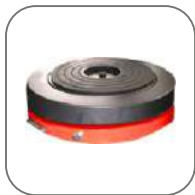
Capacity: 60-520 ton

Stroke: 45-50 mm

Maximum Operating Pressure:
700 bar

Single-Acting, Low Height, Lock Nut Cylinder

- Low height design for use in confined space.
- Special coating on thread piston and lock ring to prevent anti-seize over long period of time.
- Safety lock ring for mechanical load support even with hydraulic pressure released.
- Equipped with tilt saddle to minimize off center-load.
- Equipped with overflow port to prevent over stroke.
- Equipped with red indicate line to warn operator when cylinder reach full stroke.
- Load return type-for vertical lifting only.
- Powder coat finish for better corrosion resistance.
- All cylinders are equipped with ZSQB-3/8UF female coupler & dust cap.



Saddle

- All ZCSLP-Series come with tilt saddles to minimize off center-load damage.



Longer Stroke Lock Nut

- For lock nut applications that require longer stroke lengths, see ZCSLL-Series.



Control Valve

- Fitting needle valve such as ZSV-82 is used to control cylinder speed during lifting and lowering. (See ZSV-Series)

Longer Stroke Lock Nut



Lock ring



Piston



500 ton test

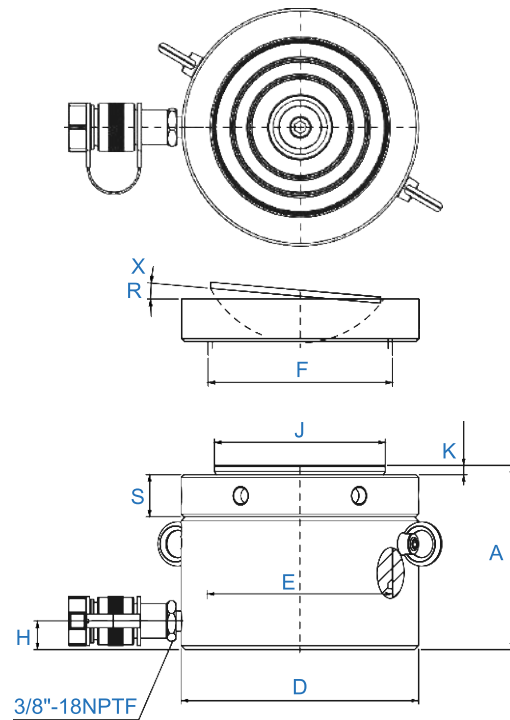
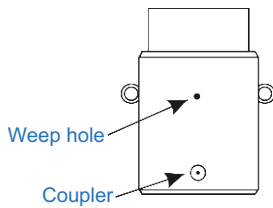
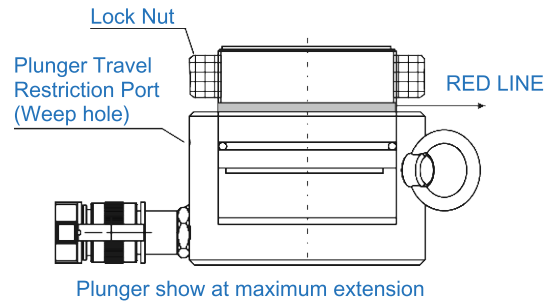
Single-Acting, Low Height, Lock Nut Cylinder



WARNING

ZCSLP, ZCSLL, ZCSLS When stroke limit is reached; overflow port ("weep hole") spurt oil to prevents piston from being overextended.

Apply to Single-acting, High tonnage cyl. ZCSLP, ZCSLL and ZCSLS series



Handle type	Model Number	Outer Dimension														
		Cylinder Capacity	Stroke	Cylinder Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Saddle Dia.	Saddle Protrusion from Plngr.	Saddle Max. Tilt Angle	Lock Nut Height	Weight
S		ton(kN)	mm	cm ²	cm ³	A(mm)	mm	D(mm)	E(mm)	F(mm)	H(mm)	J(mm)	K(mm)	R	S(mm)	kg
★	ZCSLP-602	60(606)	50	86.6	432	125	175	140	105	Tr104X4	19	96	6	5°	28	15
★	ZCSLP-1002	100(1027)	50	146.8	734	137	187	175	136.7	Tr136X6	21	126	8	5°	31	26
★	ZCSLP-1602	160(1619)	45	231.3	1040	148	193	220	171.6	Tr171X6	27	160	9	5°	40	44
★	ZCSLP-2002	200(1999)	45	285.6	1285	155	200	245	190.7	Tr190X6	30	180	10	5°	43	57
★	ZCSLP-2502	260(2567)	45	366.8	1650	159	204	275	216.1	Tr216X6	32	200	11	5°	44	74
★	ZCSLP-4002	400(3916)	45	559.5	2517	178	223	350	267	Tr266X6	39	250	11	4°	55	134
★	ZCSLP-5002	520(5114)	45	730.6	3287	192	237	400	305	Tr305X6	48	290	10	3°	62	189

S = standard equipped ○ = option

Handle type

- = Weldable
- ★ = Eyebolt
- △ = Removable strap handles
- = Thread





ZRSC Series

Capacity: 5-100 ton

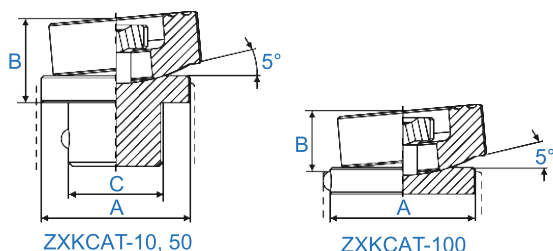
Stroke: 16-362 mm

Maximum Operating Pressure:

700 bar

Single-Acting, Spring return Collar thread Cylinders

- Equip with collar thread and base holes (on most model), for greater flexibility in mounting onto fixture.(see page 16 for details)
- Equip with inner plunger thread (5 ton to 30 ton) for greater flexibility in designing fixture.
- Bronze alloy bearing on plunger to minimize scoring due to off-centre load.
- Hard chrome plated plunger to resists wear and corrosion.
- Inner barrel wall are hard chrome plated to resists wear and corrosion in high humidity atmosphere.
- Equip with wiper seals to prevent ingress of dirt.
- Equip with stop-ring to prevent plunger blow-out and withstands full "Dead-End" load.
- Powder coated finish for greater corrosion protection.
- Equip with plastic cap to protect collar threads.
- Come with ZSQB-3/8UF female coupler & dust cap.



Optional Saddle Dimensions (mm)				
Cylinder Model/Capacity	Model Number Type: Tilt	A	B	C
ton		A	B	C
ZRSC-10, ZRSC-15(Except ZRSC-101)	ZXKCAT-10	35	20	22
ZRSC-25, ZRSC-30	ZXKCAT-50	50	21	35
ZRSC-50, ZRSC-75, ZRSC-100	ZXKCAT-100	71	24	—



Saddle

- ZRSC-Series are equipped with hardened removable "Ribbed saddles" to prevent slippage during jacking.
- For off-center loading application, see optional tilting saddle.



Single-Acting, Spring return Collar thread Cylinders

Handle type		Model Number	Outer Dimension						
			Cylinder Capacity	Stroke	Effective Area	Oil Capacity	Collapsed Height	Plunger internal Thread	Weight
O	S		ton(kN)	mm	cm ²	cm ³	A(mm)	O(inch)	kg
		ZRSC-50	5(45)	16	6.5	10	41	—*	1
		ZRSC-51		25	6.5	16	110	3/4"-16	1
		ZRSC-53		76	6.5	50	165	3/4"-16	1.5
		ZRSC-55		127	6.5	83	215	3/4"-16	1.9
		ZRSC-57		177	6.5	115	273	3/4"-16	2.4
		ZRSC-59		232	6.5	151	323	3/4"-16	2.8
		ZRSC-101	10(101)	26	14.5	38	89	#10-24UN	1.8
		ZRSC-102		54	14.5	78	121	1"-8	2.3
		ZRSC-104		105	14.5	152	171	1"-8	3.3
		ZRSC-106		156	14.5	226	247	1"-8	4.4
		ZRSC-108		203	14.5	294	298	1"-8	5.4
		ZRSC-1010		257	14.5	373	349	1"-8	6.4
		ZRSC-1012		304	14.5	441	400	1"-8	6.8
		ZRSC-1014		356	14.5	516	450	1"-8	8.2
		ZRSC-151	15(142)	25	20.3	51	124	1"-8	3.3
		ZRSC-152		51	20.3	104	149	1"-8	4.1
		ZRSC-154		101	20.3	205	200	1"-8	5
		ZRSC-156		152	20.3	308	271	1"-8	6.8
		ZRSC-158		203	20.3	411	322	1"-8	8.2
		ZRSC-1510		254	20.3	516	373	1"-8	9.5
		ZRSC-1512		305	20.3	619	423	1"-8	10.9
		ZRSC-1514		356	20.3	723	474	1"-8	11.8
		ZRSC-251	25(232)	26	33.2	86	139	1 1/2"-16	5.9
		ZRSC-252		50	33.2	166	165	1 1/2"-16	6.4
		ZRSC-254		102	33.2	339	215	1 1/2"-16	8.2
		ZRSC-256		158	33.2	525	273	1 1/2"-16	10
		ZRSC-258		210	33.2	697	323	1 1/2"-16	12.2
		ZRSC-2510		261	33.2	867	374	1 1/2"-16	14.1
		ZRSC-2512		311	33.2	1033	425	1 1/2"-16	16.3
		ZRSC-2514		362	33.2	1202	476	1 1/2"-16	17.7
		ZRSC-308	30(295)	209	42.1	880	387	—	18.1
		ZRSC-502	50(498)	51	71.2	362	176	—	15
	■	ZRSC-504		101	71.2	719	227	—	19.1
	■	ZRSC-506		159	71.2	1131	282	—	23.1
	▲	ZRSC-5013		337	71.2	2399	460	—	37.6
	▲	ZRSC-756	75(718)	156	102.6	1601	285	—	29.5
	▲	ZRSC-7513		333	102.6	3417	492	—	59
▲	●	ZRSC-1004	100(933)	102	133.3	1355	204	—	33.1
▲	★	ZRSC-1006		168	133.3	2239	357	—	59
▲	★	ZRSC-1008		203	133.3	2709	357	—	59
▲	★	ZRSC-10010		260	133.3	3466	449	—	72.6

* = ZSC-50 cylinder has non-removable grooved saddle and no collar thread.
 S = standard equipped O = option

Handle type

- = Weldable
- ★ = Eyebolt
- ▲ = Removable strap handles
- = Thread



ZRSC-25 ton rail way application



ZRSC & Pump -specific purpose

Single-Acting, Spring return Collar thread Cylinders

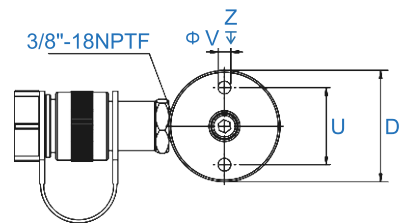
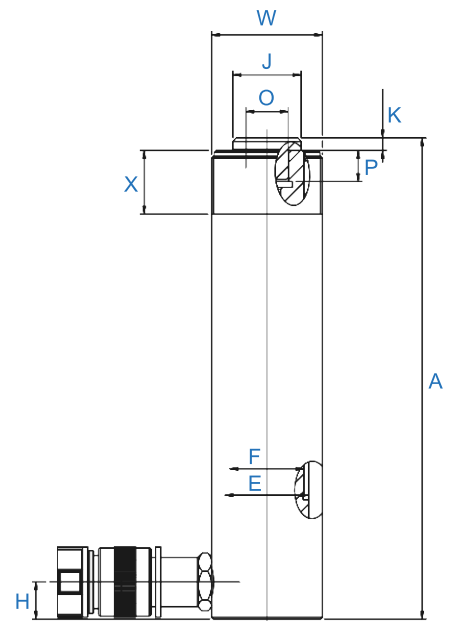
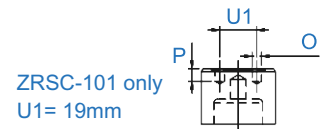
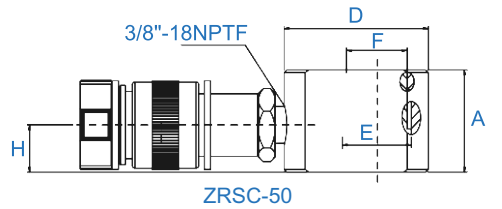
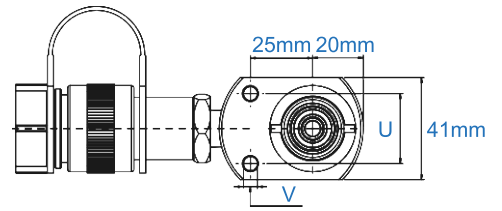
Model Number	Outer Dimension											
	Cylinder Capacity ton(kN)	Stroke mm	Cylinder Effective Area cm ²	Oil Capacity cm ³	Collapsed Height A(mm)	Extended Height mm	Outside Dia. D(mm)	Cylinder Bore Dia. E(mm)	Plunger Dia. F(mm)	Base to Adv. Port H(mm)	Saddle Dia. J(mm)	Saddle Protrusion from Plngr. K(mm)
ZRSC-50	5(45)	16	6.5	10	41	57	58	28.7	25.4	19	—*	—*
ZRSC-51		25	6.5	16	110	135	38	28.7	25.4	19	25	6
ZRSC-53		76	6.5	50	165	241	38	28.7	25.4	19	25	6
ZRSC-55		127	6.5	83	215	342	38	28.7	25.4	19	25	6
ZRSC-57		177	6.5	115	273	450	38	28.7	25.4	19	25	6
ZRSC-59		232	6.5	151	323	555	38	28.7	25.4	19	25	6
ZRSC-101	10(101)	26	14.5	38	89	115	57	42.9	38.1	19	—	—
ZRSC-102		54	14.5	78	121	175	57	42.9	38.1	19	35	6
ZRSC-104		105	14.5	152	171	276	57	42.9	38.1	19	35	6
ZRSC-106		156	14.5	226	247	403	57	42.9	38.1	19	35	6
ZRSC-108		203	14.5	294	298	501	57	42.9	38.1	19	35	6
ZRSC-1010		257	14.5	373	349	606	57	42.9	38.1	19	35	6
ZRSC-1012		304	14.5	441	400	704	57	42.9	38.1	19	35	6
ZRSC-1014		356	14.5	516	450	806	57	42.9	38.1	19	35	6
ZRSC-151	15(142)	25	20.3	51	124	149	69	50.8	41.4	19	38	9
ZRSC-152		51	20.3	104	149	200	69	50.8	41.4	19	38	9
ZRSC-154		101	20.3	205	200	301	69	50.8	41.4	19	38	9
ZRSC-156		152	20.3	308	271	423	69	50.8	41.4	25	38	9
ZRSC-158		203	20.3	411	322	525	69	50.8	41.4	25	38	9
ZRSC-1510		254	20.3	516	373	627	69	50.8	41.4	25	38	9
ZRSC-1512		305	20.3	619	423	728	69	50.8	41.4	25	38	9
ZRSC-1514		356	20.3	723	474	830	69	50.8	41.4	25	38	9
ZRSC-251	25(232)	26	33.2	86	139	165	85	65	57.2	25	50	10
ZRSC-252		50	33.2	166	165	215	85	65	57.2	25	50	10
ZRSC-254		102	33.2	339	215	317	85	65	57.2	25	50	10
ZRSC-256		158	33.2	525	273	431	85	65	57.2	25	50	10
ZRSC-258		210	33.2	697	323	533	85	65	57.2	25	50	10
ZRSC-2510		261	33.2	867	374	635	85	65	57.2	25	50	10
ZRSC-2512		311	33.2	1033	425	736	85	65	57.2	25	50	10
ZRSC-2514		362	33.2	1202	476	838	85	65	57.2	25	50	10
ZRSC-308	30(295)	209	42.1	880	387	596	101	73.2	57.2	57	50	10
ZRSC-502	50(498)	51	71.2	362	176	227	127	95.2	79.5	33	71	2
ZRSC-504		101	71.2	719	227	328	127	95.2	79.5	33	71	2
ZRSC-506		159	71.2	1131	282	441	127	95.2	79.5	35	71	2
ZRSC-5013		337	71.2	2399	460	797	127	95.2	79.5	35	71	2
ZRSC-756	75(718)	156	102.6	1601	285	441	146	114.3	95.2	30	71	5
ZRSC-7513		333	102.6	3417	492	825	146	114.3	95.2	30	71	5
ZRSC-1004	100(933)	102	133.3	1355	204	306	177	130.3	104.9	41	71	2
ZRSC-1006		168	133.3	2239	357	525	177	130.3	104.9	41	71	2
ZRSC-1008		203	133.3	2709	357	576	177	130.3	104.9	41	71	2
ZRSC-10010		260	133.3	3466	449	709	177	130.3	104.9	41	71	2

* = ZSC-50 cylinder has non-removable grooved saddle and no collar thread.

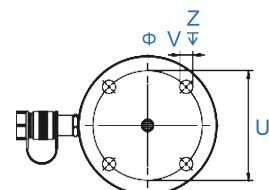
Single-Acting, Spring return Collar thread Cylinders

Model Number	Threads Dimension				Base Mounting Holes			Weight kg
	Plunger Internal Thread	Plunger Thread Length	Collar Thread	Collar Thread Length	Bolt Circle	Thread	Thread Depth	
	O(inch)	P(mm)	W(inch)	X(mm)	U(mm)	V(inch)	Z(mm)	
ZRSC-50	—*	—*	—	—	28	5.6mm	—	1
ZRSC-51	3/4"-16	14	1-1/2"-16	28	25	1/4"-20UN	14	1
ZRSC-53	3/4"-16	14	1-1/2"-16	28	25	1/4"-20UN	14	1.5
ZRSC-55	3/4"-16	14	1-1/2"-16	28	25	1/4"-20UN	14	1.9
ZRSC-57	3/4"-16	16	1-1/2"-16	28	25	1/4"-20UN	14	2.4
ZRSC-59	3/4"-16	16	1-1/2"-16	28	25	1/4"-20UN	14	2.8
ZRSC-101	#10-24UN	6	2-1/4"-14	26	39	5/16"-18UN	12	1.8
ZRSC-102	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	2.3
ZRSC-104	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	3.3
ZRSC-106	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	4.4
ZRSC-108	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	5.4
ZRSC-1010	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	6.4
ZRSC-1012	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	6.8
ZRSC-1014	1"-8	19	2-1/4"-14	26	39	5/16"-18UN	12	8.2
ZRSC-151	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	3.3
ZRSC-152	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	4.1
ZRSC-154	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	5
ZRSC-156	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	6.8
ZRSC-158	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	8.2
ZRSC-1510	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	9.5
ZRSC-1512	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	10.9
ZRSC-1514	1"-8	25	2-3/4"-16	30	47	3/8"-16UN	12	11.8
ZRSC-251	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	5.9
ZRSC-252	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	6.4
ZRSC-254	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	8.2
ZRSC-256	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	10
ZRSC-258	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	12.2
ZRSC-2510	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	14.1
ZRSC-2512	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	16.3
ZRSC-2514	1-1/2"-16	25	3-5/16"-12	49	58	1/2"-13UN	19	17.7
ZRSC-308	1-1/2"-16	25	3-5/16"-12	49	—	—	—	18.1
ZRSC-502	—	—	5"-12	55	95	1/2"-13UN	19	15
ZRSC-504	—	—	5"-12	55	95	1/2"-13UN	19	19.1
ZRSC-506	—	—	5"-12	55	95	1/2"-13UN	19	23.1
ZRSC-5013	—	—	5"-12	55	95	1/2"-13UN	19	37.6
ZRSC-756	—	—	5-3/4"-12	44	—	—	—	29.5
ZRSC-7513	—	—	5-3/4"-12	44	—	—	—	59
ZRSC-1004	—	—	6-7/8"-12	44	—	—	—	33.1
ZRSC-1006	—	—	6-7/8"-12	44	139	3/4"-10UN	25	59
ZRSC-1008	—	—	6-7/8"-12	44	139	3/4"-10UN	25	59
ZRSC-10010	—	—	6-7/8"-12	44	139	3/4"-10UN	25	72.6

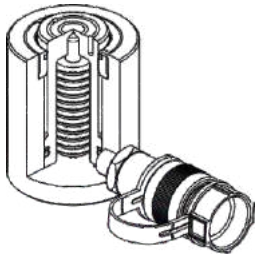
* = ZSC-50 cylinder has non-removable grooved saddle and no collar thread.



ZRSC-51 to ZRSC-5013 models (see page 16)



ZRSC-1006 to ZRSC-10010 models



ZRSCS Series

Capacity: 10-90 ton

Stroke: 38-62 mm

Maximum Operating Pressure:
700 bar

Single-Acting, Low Height Cylinders

- Maximum sized springs speed piston return and increase spring life.
- Lightweight, low profile design for use in confined spaces ,but stroke higher than ZRSSM.
- Grooved plunger end with threaded holes for mounting tilt saddles.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Plunger wiper reduces contaminant.
- Stop ring for piston blow-out protection.
- Powder coat finish for increased corrosion resistance and antirust.
- ZSQB-3/8UF coupler and dust cap are included on all models.



Hydraulic Cylinder and Pump Sets

- Basic system set-up include cylinder, male/female coupler, hose, pressure gauge, gauge accessories and pump.
- Please contact ZIPP office nearest to you for advice and technical assistance in the layout of your ideal.

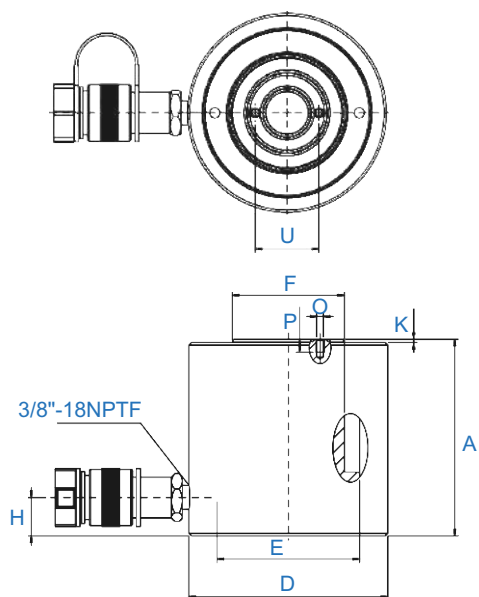


Control Valve

- Fitting needle valve such as ZSV-82 is used to control cylinder speed during lifting and lowering. (See ZSV-Series)

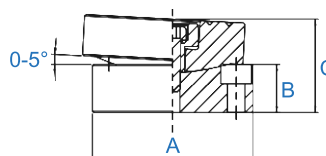


ZRSCS-502 Rapid transit system
Synchronous Lift application



Opt Tilt Saddle

- All ZRSCS-Series has plunger mounting holes for installation of tilt saddles.



Handle type	Model Number	Outer Dimension			
		Cylinder Capacity	Stroke	Cylinder Effective Area	Oil Capacity
S		ton(kN)	mm	cm ²	cm ³
	ZRSCS-101	10(101)	38	14.5	55
	ZRSCS-201	20(201)	45	28.7	129
	ZRSCS-302	30(295)	62	42.1	261
●	ZRSCS-502	45(435)	60	62.1	373
●	ZRSCS-1002	90(887)	57	126.7	722
★	ZRSCS-2503	250(2309)	76.2	329.9	2468

S = standard equipped ○ = option

Optional Bolt Tilt Saddle Dimensions (mm)				
Cylinder Model/Capacity	Model Number	A	B	*C
ZRSCS-101	ZXKCATRSCS-10	35	11	21
ZRSCS-201, ZRSCS-302, ZRSCS-502	ZXKCATRSCS-20	50	15	29
ZRSCS-1002	ZXKCATRSCS-100	71	17	35

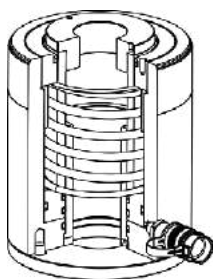
*C dimension equals saddle protrusion from plunger. Mounting screws are included.

Handle type

- = Weldable
- ★ = Eyebolt
- △ = Removable strap handles
- = Thread



Model Number	Outer Dimension								Threads Dimension		
	Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Plunger Protrusion from Base	Weight	Thresd	Thread Depth	Bolt Circle
	A(mm)	mm	D(mm)	E(mm)	F(mm)	H(mm)	K(mm)	kg	O(mm)	P(mm)	U(mm)
ZRSCS-101	88	126	69	42.9	38.1	17.5	5	4.1	M4	8	26
ZRSCS-201	98	143	92	60.5	50.8	17.5	3	5	M5	8	39
ZRSCS-302	117	179	101	73.2	66.5	19	3	6.8	M5	8	39
ZRSCS-502	122	182	124	88.9	69.8	23	2	10.9	M5	8	39
ZRSCS-1002	141	198	165	127	92.2	31	1	22.7	M8	10	55
ZRSCS-2503	290	366	257	205	139.7	46	5	100	—	—	—



ZRSCH Series

Capacity: 13-95 ton
Stroke: 8-155 mm
Center Hole Diameter: 19.6-79mm
Maximum Operating Pressure:
700 bar

Single-Acting, Hollow Plunger Cylinders

- Hollow plunger design allows for pulling and pushing application.
- Low profile and longer strokes fit in the tightest space.
- Withstands full "dead-end" loads.
- Collar threads for easy fixturing and all collar threads have a cap for protection.
- Special center tube protect plunger and inner of cylinder increases product life.
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Spring returing.
- Wiper rings protect the piston, bore & tube from contamination.
- Stop ring for piston blow-out protection.
- Come with ZSQB-3/8UF female coupler & dust cap.
- Powder coat finish for increased corrosion resistance and antirust.



ZRSCH-120

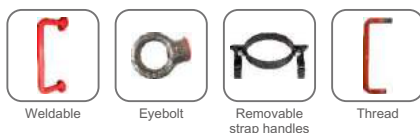
ZRSCH-120 includes ZSQB-3/8UF coupler and has 1/4 NPT port.

Handle type	Model Number	Outer Dimension								
		Cylinder Capacity	Stroke	Cylinder Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.
S		ton(kN)	mm	cm ²	cm ³	A(mm)	mm	D(mm)	E(mm)	F(mm)
	ZRSCH-120	13(125)	8	17.9	14	55	63	69	54.1	35.1
	ZRSCH-121		42	17.9	75	120	162	69	54.1	35.1
	ZRSCH-1211		42	17.9	75	120	162	69	54.1	35.1
	ZRSCH-123		76	17.9	136	184	260	69	54.1	35.1
●	ZRSCH-202	20(215)	49	30.7	150	162	211	98	73.1	54.1
●	ZRSCH-204		102	30.7	311	242	344	98	73.1	54.1
●	ZRSCH-206		155	30.7	476	306	461	98	73.1	54.1
●	ZRSCH-302	30(326)	64	46.6	298	178	242	114	88.9	63.5
●	ZRSCH-304		102	46.6	473	233	335	114	88.9	63.5
●	ZRSCH-306		155	46.6	722	330	485	114	88.9	63.5
▲	ZRSCH-603	60(576)	76	82.3	626	247	323	159	123.9	92.2
▲	ZRSCH-606		153	82.3	1259	323	476	159	123.9	92.2
▲	ZRSCH-1003	95(931)	76	133	1011	254	330	212	165.1	127

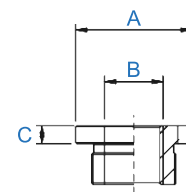
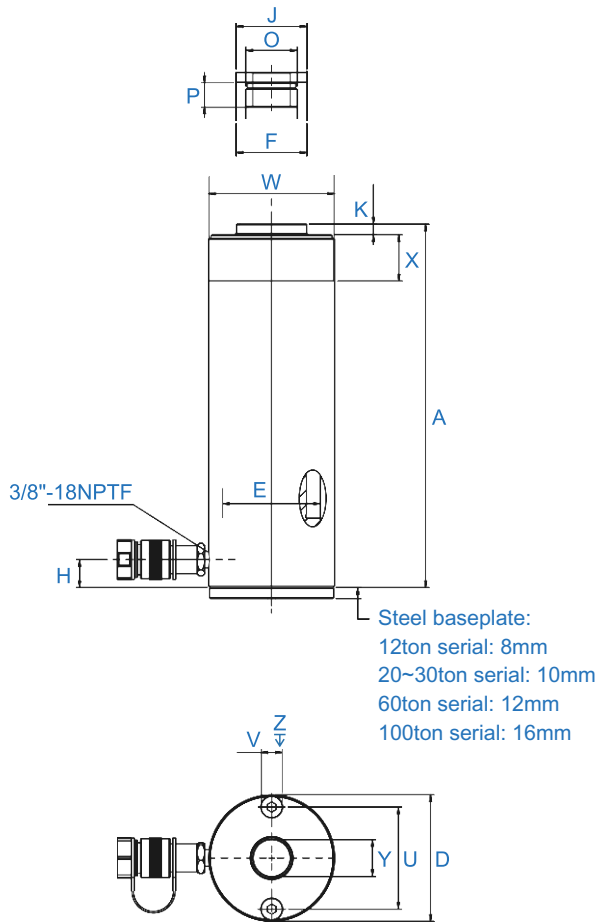
S = standard equipped ○ = option

Handle type

- = Weldable
- ☆ = Eyebolt
- ▲ = Removable strap handles
- = Thread



Single-Acting, Hollow Plunger Cylinders

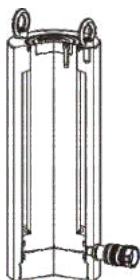


Optional Heat Treated Hollow Saddles				
Cylinder Model/Capacity	Model Number	Saddle Dimensions		
		A(mm)	B(inch)	C(mm)
ton				
ZRSCH-202, ZRSCH-206	ZXKHCH-20	53	1"-8	9
ZRSCH-302, ZRSCH-306	ZXKHCH-30	63	1-1/4"-7	9
ZRSCH-603, ZRSCH-606	ZXKHCH-60	91	1-5/8"-5-1/2"	12
ZRSCH-1003	ZXKHCH-100	126	2-1/2"-8	13

This drawing show the base mounting holes of barrel before setting steel base plate.

*Smooth hollow saddles are standard on all ZRSCH series.
(12ton models are not equipped with saddles.)

Model Number	Outer Dimension			Threads Dimension					Base Mounting Holes			Weight
	Cyl. Base to Advance Port	Saddle Dia.	Saddle Protr. from Plngr.	Plunger Internal Thread	Plunger Thread Length	Collar Therad	Collar Thread Length	Center Hole Dia.	Bolt Circle	Thread	Thread Depth	
	H(mm)	J(mm)	K(mm)	O(inch)	P(mm)	W(inch)	X(mm)	Y(mm)	U(mm)	V(inch)	Z(mm)	
ZRSCH-120	9	—	—	3/4"-16UN	16	2-3/4"-16	30	19.6	50.8	5/16"-18UNC	9	1.7
ZRSCH-121	19	—	—	—	—	2-3/4"-16	30	19.6	50.8	5/16"-18UNC	9	3
ZRSCH-1211	19	—	—	3/4"-16UN	16	2-3/4"-16	30	19.6	50.8	5/16"-18UNC	9	3
ZRSCH-123	19	—	—	—	—	2-3/4"-16	30	19.6	50.8	5/16"-18UNC	12.7	4.6
ZRSCH-202	19	54	6.9	1-9/16"-16UN	19	3-7/8"-12	38	26.9	82.6	3/8"-16UNC	9.4	8.2
ZRSCH-204	19	54	6.9	1-9/16"-16UN	19	3-7/8"-12	38	26.9	82.6	3/8"-16UNC	9.4	10.5
ZRSCH-206	19	54	6.9	1-9/16"-16UN	19	3-7/8"-12	38	26.9	82.6	3/8"-16UNC	9.4	14.6
ZRSCH-302	22	63	9.7	1-13/16"-16UN	22	4-1/2"-12	42	33.3	92.2	3/8"-16UNC	14	11.55
ZRSCH-304	22	63	9.7	1-13/16"-16UN	22	4-1/2"-12	42	33.3	92.2	3/8"-16UNC	14	14.75
ZRSCH-306	25	63	9.7	1-13/16"-16UN	22	4-1/2"-12	42	33.3	92.2	3/8"-16UNC	14	22.45
ZRSCH-603	31	91	12.7	2-3/4"-16UN	19	6-1/4"-12	48	53.8	130.3	1/2"-13UNC	14	29.7
ZRSCH-606	31	91	12.7	2-3/4"-16UN	19	6-1/4"-12	48	53.8	130.3	1/2"-13UNC	14	37
ZRSCH-1003	38	126	12.7	4-16UN	25	8-3/8"-12	60	79	177.8	5/8"-11UNC	19	53.5



ZCSLSG Series

Capacity: 50-1000 ton

Stroke: 50-300 mm

Maximum Operating Pressure:
700 bar

Single-Acting, High Tonnage Cylinders

- Base mounting holes standard on all models.
- Single-acting, load return
- Hard chrome plated plunger and inner of barrel resists wear and corrosion.
- Plunger wiper reduces contamination, extending cylinder life.
- Integral stop ring provides piston blow-out protection
- Powder coat finish for increased corrosion resistance and antirust.
- Come with ZSQB-3/8UF female coupler & dust cap.



Saddle



- ZCSLSG-Series are equipped with hardened removable "Ribbed saddles" to prevent slippage during jacking.
- For off-center loading application, see optional tilting saddle.
- For information on optional tilt saddles, see selection chart.

Cylinder Capacity



- More above 1000 tons cylinder capacity are also available.
- Please contact ZIPP office nearest to you for advice and technical assistance in the layout of your ideal Lift System.

Low Height-High Tonnage



- When low height with high force is required, load return with lock ring Cyl.
- Offer the solution to lift the first few inches.

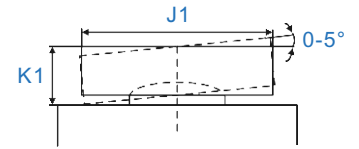


Mounting Hole Direction

- Top mounting hole orientation is maintained to port location.
- Bases mounting hole orientation is not maintained to port location.

Single-Acting, High Tonnage Cylinders

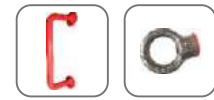
Handle type	Model Number	Cylinder Capacity	Stroke	Effective Area	Collapsed Height	Weight	Optional Tilt Saddle		
							Model Number	Dia.	Height
S		ton(kN)	mm	cm ²	A(mm)	kg	J1(mm)	K1(mm)	
★	ZCSLSG-502	50(539)	50	77	162	17	ZXKCATG-50	50	24
★	ZCSLSG-504		100	77	212	20	ZXKCATG-50	50	24
★	ZCSLSG-506		150	77	262	23	ZXKCATG-50	50	24
★	ZCSLSG-508		200	77	312	27	ZXKCATG-50	50	24
★	ZCSLSG-5010		250	77	362	31	ZXKCATG-50	50	24
★	ZCSLSG-5012		300	77	412	34	ZXKCATG-50	50	24
★	ZCSLSG-1002	100(929)	50	132.7	182	19	ZXKCATG-100	73	29
★	ZCSLSG-1004		100	132.7	232	29	ZXKCATG-100	73	29
★	ZCSLSG-1006		150	132.7	282	40	ZXKCATG-100	73	29
★	ZCSLSG-1008		200	132.7	332	50	ZXKCATG-100	73	29
★	ZCSLSG-10010		250	132.7	382	61	ZXKCATG-100	73	29
★	ZCSLSG-10012		300	132.7	432	71	ZXKCATG-100	73	29
★	ZCSLSG-1502	150(1390)	50	198.6	196	39	ZXKCATG-150	91	31
★	ZCSLSG-1504		100	198.6	246	52	ZXKCATG-150	91	31
★	ZCSLSG-1506		150	198.6	296	65	ZXKCATG-150	91	31
★	ZCSLSG-1508		200	198.6	346	78	ZXKCATG-150	91	31
★	ZCSLSG-15010		250	198.6	396	92	ZXKCATG-150	91	31
★	ZCSLSG-15012		300	198.6	446	105	ZXKCATG-150	91	31
★	ZCSLSG-2002	200(1861)	50	265.9	216	68	ZXKCATG-200	113	35
★	ZCSLSG-2006		100	265.9	316	91	ZXKCATG-200	113	35
★	ZCSLSG-20012		300	265.9	466	146	ZXKCATG-200	113	35
★	ZCSLSG-2502	250(2565)	50	366.4	235	102	ZXKCATG-250	144	46
★	ZCSLSG-2506		100	366.4	335	136	ZXKCATG-250	144	46
★	ZCSLSG-25012		300	366.4	485	207	ZXKCATG-250	144	46
★	ZCSLSG-3002	300(3193)	50	456.2	312	184	ZXKCATG-300	160	62
★	ZCSLSG-3006		100	456.2	412	232	ZXKCATG-300	160	62
★	ZCSLSG-30012		300	456.2	562	303	ZXKCATG-300	160	62
★	ZCSLSG-4002	400(3919)	50	559.9	375	270	ZXKCATG-400	193	51
★	ZCSLSG-4006		100	559.9	475	330	ZXKCATG-400	193	51
★	ZCSLSG-40012		300	559.9	625	421	ZXKCATG-400	193	51
★	ZCSLSG-5002	500(5114)	50	730.6	419	401	ZXKCATG-500	228	63
★	ZCSLSG-5006		100	730.6	519	480	ZXKCATG-500	228	63
★	ZCSLSG-50012		300	730.6	669	599	ZXKCATG-500	228	63
★	ZCSLSG-6002	600(5987)	50	855.3	429	474	ZXKCATG-600	241	76
★	ZCSLSG-6006		100	855.3	529	565	ZXKCATG-600	241	76
★	ZCSLSG-60012		300	855.3	679	701	ZXKCATG-600	241	76
★	ZCSLSG-8002	800(8234)	50	1176.3	474	741	ZXKCATG-800	287	75
★	ZCSLSG-8006		100	1176.3	574	880	ZXKCATG-800	287	75
★	ZCSLSG-80012		300	1176.3	724	1058	ZXKCATG-800	287	75
							Equipped Tilt Saddle		
★	ZCSLSG-10002	1000 (10260)	50	1465.7	564	1062	ZXKCATG-1000	311	93
★	ZCSLSG-10006		100	1465.7	664	1213	ZXKCATG-1000	311	93
★	ZCSLSG-100012		300	1465.7	814	1439	ZXKCATG-1000	311	93



S = standard equipped
O = option

Handle type

- = Weldable
- ★ = Eyebolt
- △ = Removable strap handles
- = Thread



Opt Features

To add optional features to order cylinder, add follow suffixes to the end of the model No..

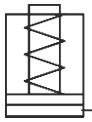
Collar Thread ZCT

Example

ZCSLSG-502 with collar thread, order: ZCSLSG-502CT.

Technical specifications for these features are available from ZIPP.

Hydraulic Nut Splitter

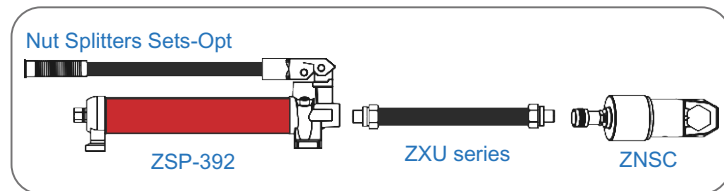
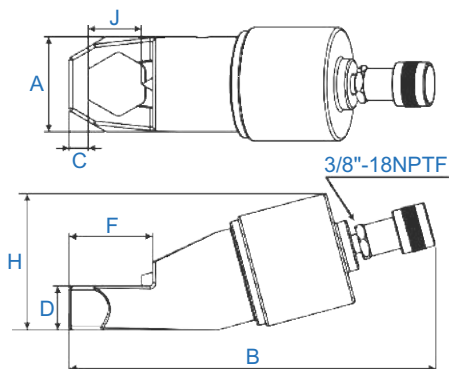


ZNSC Series

Capacity: 5-90 ton
Bolt Range: M6-M48
Hex. Nut Range: 10-75 mm
Maximum Operating Pressure: 700 bar

Hydraulic Nut Splitter

- Specially designed "tool steel" cutter blade penetrates the nut to the precise point where it cracks, stopping short of the bolt threads.
- Applications include servicing trucks, piping industry, tank cleaning, petrochemical, steel construction and mining.
- Heavy-duty chisels can be reground.
- Sing-acting, spring return cylinder.
- Unique angled head allows flush access.
- Compact and ergonomic design, easy to use.



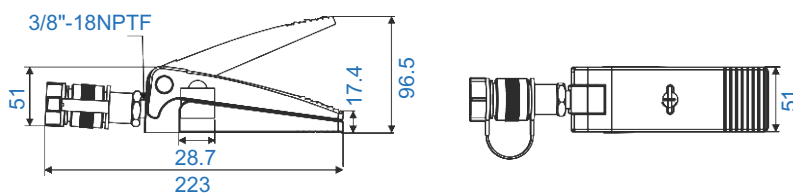
Model Number	Hex. Nut Range		Bolt Range		Capacity ton	Oil Capacity cm ³	Dimensions (mm)							Weight kg
	inch	mm	inch	mm			A	B	C	D	F	H	J	
ZNSC-1319	0.5-0.75	13-19	0.31-0.5	M8-M12	5	15	40	200	6	19	28	48	21	1.1
ZNSC-1924	0.75-0.94	19-24	0.5-0.63	M1-M16	10	20	55	227	8	25	38	71	25	2
ZNSC-2432	0.94-1.13	24-32	0.63-0.88	M16-M22	15	60	66	260	10	31	49	76	33	3.4
ZNSC-3241	1.13-1.56	32-41	0.88-1.13	M22-M27	20	80	75	286	15	35	56	89	43	5.8
ZNSC-4150	1.56-2	41-50	1.13-1.38	M27-M33	35	155	96	325	21	45	73	109	54	11.7
ZNSC-5060	2-2.25	50-60	1.38-1.5	M33-M39	50	240	106	366	27	54	92	126	60	15.4
ZNSC-6075	2.38-2.88	60-75	1.5-1.88	M39-M48	90	492	156	366	27	75	110	180	78	38.9

ZWSR Series

Capacity: 1 ton
Tip Clearance: 17.4mm
Maximum Spread: 96.5 mm
Maximum Operating Pressure: 700 bar

Hydraulic Wedgie and Spread Cylinder

- Single-acting, spring return.
- For use in very confined work areas.



Model Number	Cylinder Capacity	Tip clearance	Maximum Spread	Cylinder Effective Area	Oil Capacity	Weight
	ton(kN)	mm	mm	cm ²	cm ³	kg
ZWSR-1	1(8.9)	17.4	96.5	6.5	10	2.3

Hydraulic Spreader

ZSWR&ZSWRM Series

maximum Spread Force: 5-90 ton

Tip Clearance/ Max. Spread¹⁾: 6/81 mm

Maximum Operating Pressure: 700 bar

1)Using Stepped block.

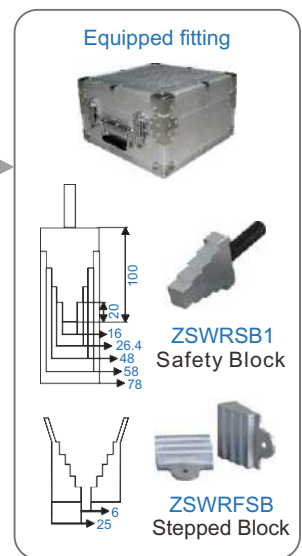
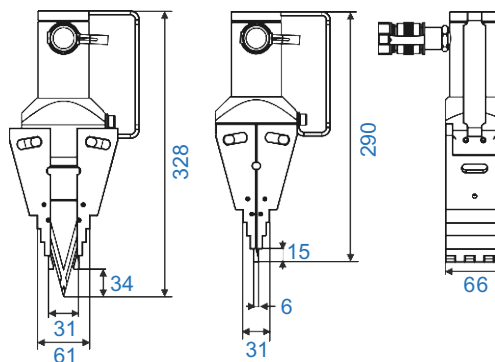
Model Number	Max. Spread Force	Tip clearance	Max. Spread	Oil Capacity	Weight
	ton(kN)	mm	mm	c.c	kg
ZSWR-40	14(125)	6	81	78	7.1
ZSWR-401	14.5(145)	6	81	152	8
ZSWR-8	8(72)	6	81	—	6.5

Hydraulic Spreader

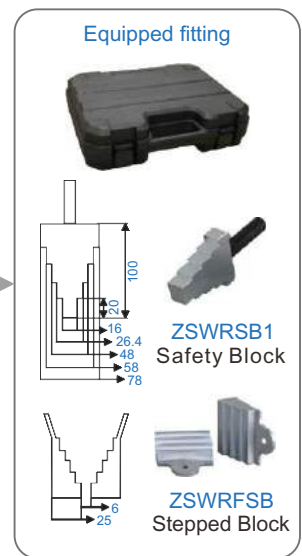
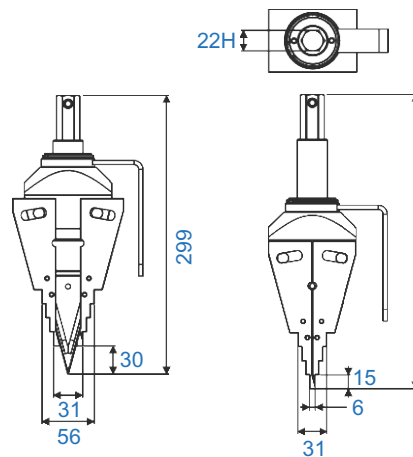
- Only requests an access gap of 0.24" (6mm).
- Automatic mechanical retraction.
- Unique interlocking: no first step bending and risk of slipping
- out of joint.



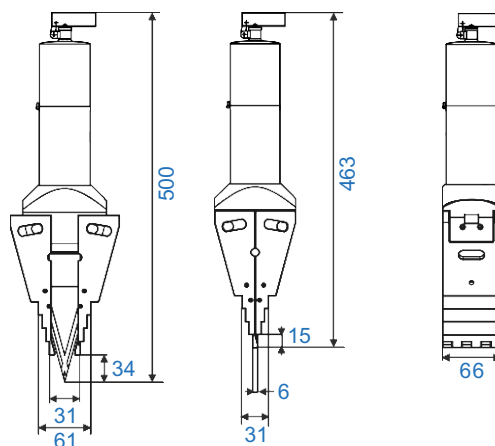
ZSWR-40



ZSWR-8



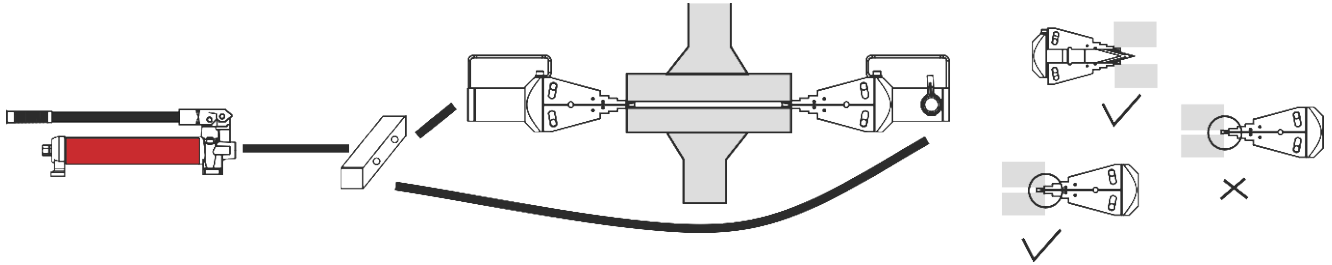
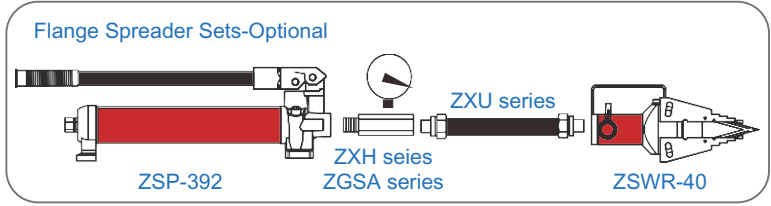
ZSWR-401



Hydraulic Spreader



- For simultaneously and even spreading of flange joints, 180° apart with ZSWR-40



ZSWF Series

Capacity: 5 ton

Tip Clearance/ Max. Spread: 23/76 mm

Maximum Operating Pressure: 700 bar

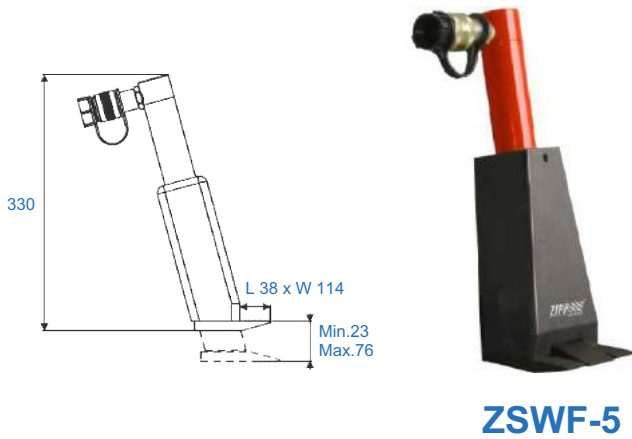
Hydraulic Spreader

- Jaws open parallel.
- Complete metal structure.

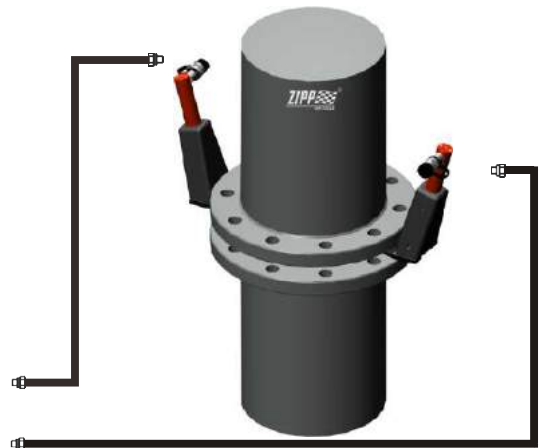
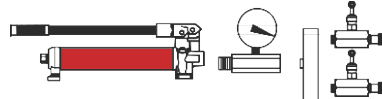
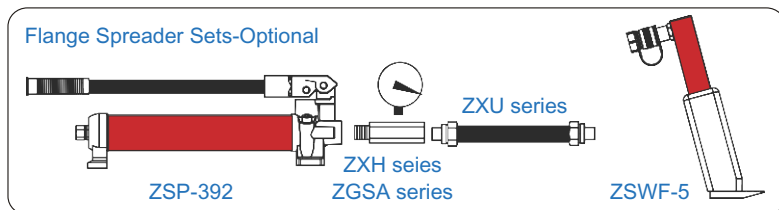
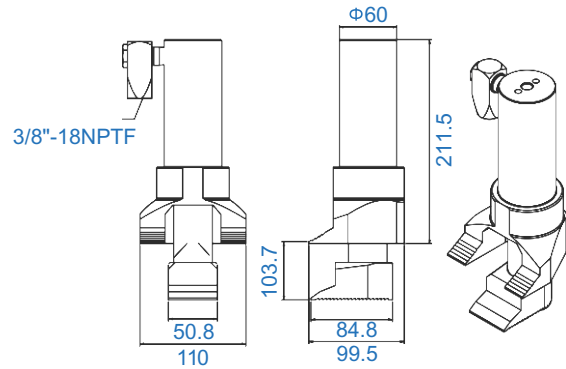
Model Number	Capacity	Spread	Oil Capacity	Weight
	ton	Min./Max. (mm)	c.c	kg
ZSWF-5	5	23/76	81.9	6.2
ZSWF-10ST	10	3.7/103.7	160	6.35



ZSWF-10ST



ZSWF-5



Hydraulic Vertical Lifting Wedge

ZLSW Series

Maximum Spread Force:

16(157) ton(kN)

Min. Clearance/ Max. Lift Ht.¹⁾:

9.9/51.3-69.1¹⁾ mm

Maximum Operating Pressure:

700 bar

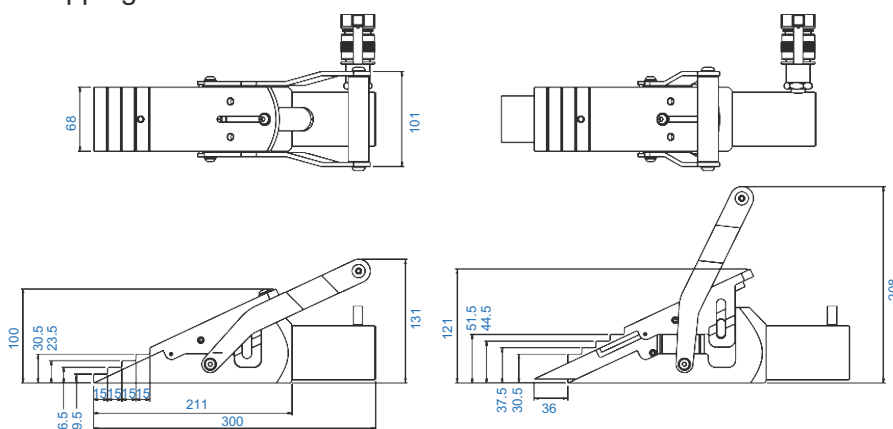
1)Using Stepped block ZSWRFSB to increase wedge lifting height 30mm.

Hydraulic Vertical Lifting Wedge

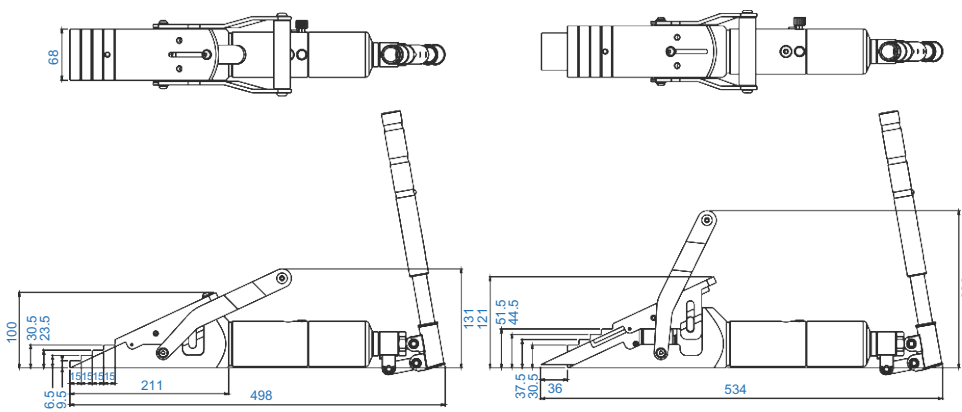
- Require 0.39" (9.9mm) access gap.
- Lifting force 16 ton at 700bar hydraulic pressure.
- Automatic mechanical retraction (single acting spring return).
- Securely raises or lowers 16 tons with no slippage.
- Lifting wedge ZLSW-16 includes safety block ZSLW-C1-16.
- Use in tandem to lift 32 tons, or 64 tons.
- 21.1mm of vertical lift from each step (maximum lift to 69.1mm with optional ZSLW-C2-16 stepped block).
- Each step can spread under full load.
- Unique interlocking wedge design, no first step bending and risk of slipping out.



ZLSW-16



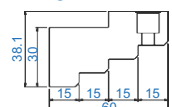
ZLSW-161



Optional fitting



ZSLW16-A07 Stepped Block



Optional ZLSW-C2-16 Stepped Block

Equipped fitting



Stock Box



ZSLW-C1-16 Safety Block



Control Manifolds

- Control Manifold to control two or four lifting wedges simultaneously.

Model Number	Max. Lifting Force	Minimum clearance Gap	Max. Lift per Stage	Max. Lift Ht.	Max. Lift Ht. Using stepped block	Oil Capacity	Weight
	ton(kN)	mm	mm	mm	mm	c.c	kg
ZLSW-16	16(157)	9.9	21.1	51.3	69.1	78	7
ZLSW-161	16(157)	9.9	21.1	51.3	69.1	152	7

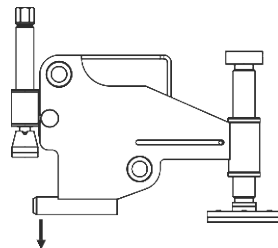


ZFSA Series

Minimum Bolt Size:
16-31.5 mm
Flange Wall Thickness:
16-31.5 mm
Capacity:
1-10(10-90) ton(kN)
Maximum Operating Pressure:
700 bar (Just for ZSFA-9TE)

Hydraulic Fixed Flange Alignment Tool

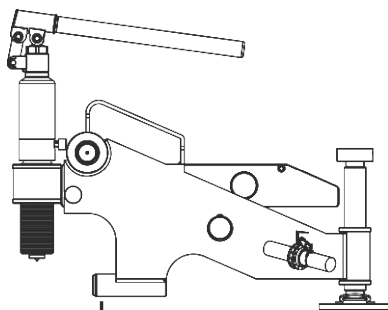
- The Flange Alignment tools can be used to align or re-align flange joints during pipework construction, commissioning or during routine maintenance.
- The tool is attached to the flange joint where misalignment is at its greatest and then simply push and pull the flanges into correct alignment (except ZSFA-9TE).
- The Flange Alignment tools rectify twist and rotational misalignment quickly, safely and without the need for an external power source.
- Appropriate for use on most ANSI, API, BS and DIN flanges.
- No slings, hooks or lifting gear required.
- Can be installed and used in any position (horizontally or vertically).
- Portable, lightweight design enables easy transport and use, even in remote locations.



MAX. LOAD 4T

ZFSA-4TM

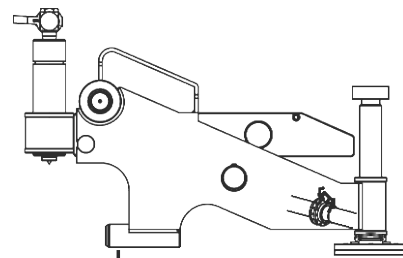
For use on medium diameter, medium pressure flanges.
Mechanical Fixed Flange and Rotational Alignment Tool.



MAX. LOAD 9T

ZFSA-9TM

For use on larger diameter, higher pressure flanges.
Mechanical Fixed Flange and Rotational Alignment Tool.

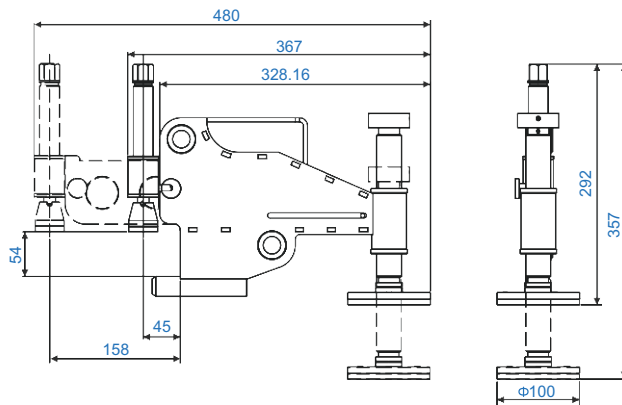


MAX. LOAD 9T

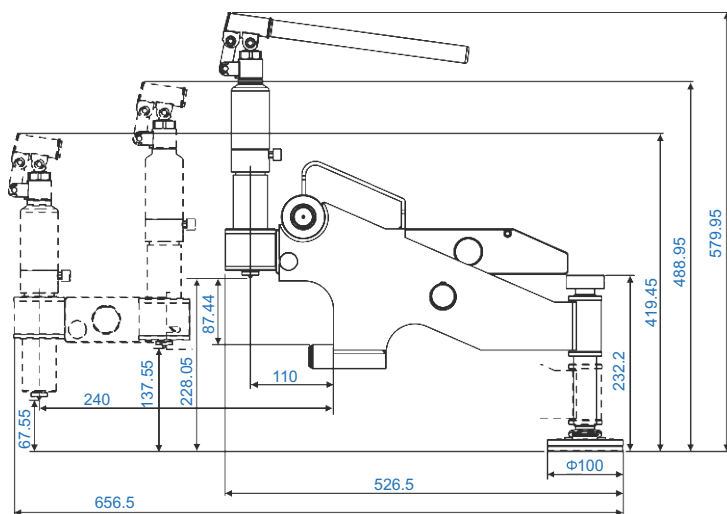
ZFSA-9TE

For use on larger diameter, higher pressure flanges.
Hydraulic Fixed Flange and Rotational Alignment Tool.

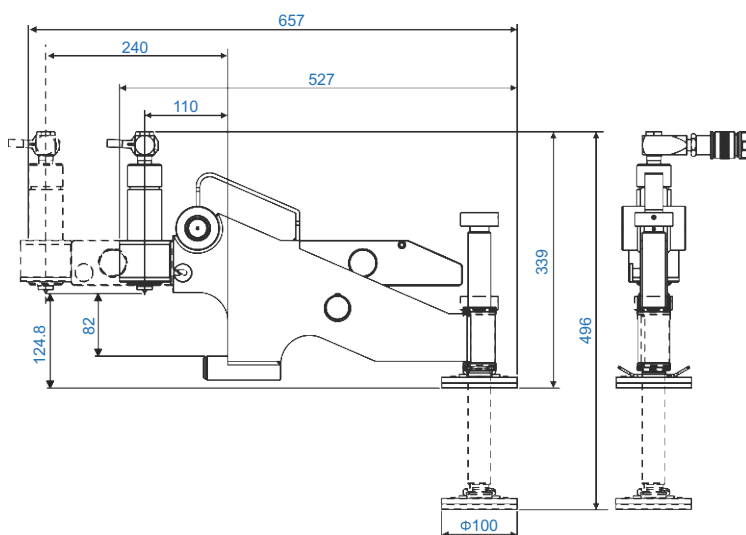
Hydraulic Fixed Flange Alignment Tool



ZFSA-4TM

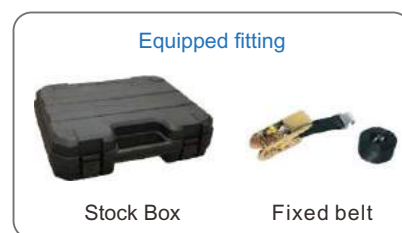


ZFSA-9TM



ZFSA-9TE

Model Number	Max. Lifting Force	Min. Bolt Size	Flange wall Thickness (including gap between flanges)	Weight
	ton(kN)	inch(mm)	inch(mm)	kg
ZFSA-4TM	4(40)	0.95(24)	1.18-5.23(30-133)	8.6
ZFSA-9TM	10(90)	1.24(31.5)	3.66-9(93-228)	16.5
ZFSA-9TE	10(90)	1.24(31.5)	3.66-9(93-228)	16.5



ZSMX

Square Drive Wrenches

Lightweight High Power Wrench for Sockets or Allen-key

- Dual Pawl Mechanism-Heavy duty.
 - 360 degree Reaction Arm-Easy to working in any position.
 - One-way Ratchet-the only way to assure hands-free and multi-tool operation.
 - Aviation material Body housing-Aluminum-Titanium alloy and high strength steel.
 - Anti-Rust Finish-Special surface treatment.
 - Small Operating Radius.
 - "Drop Hole" will protect over pressure operating.
- Torquet Accuracy $\pm 3\%$
Repeatability 100%



Opt Removable handle

Steel boot

Button change square driver



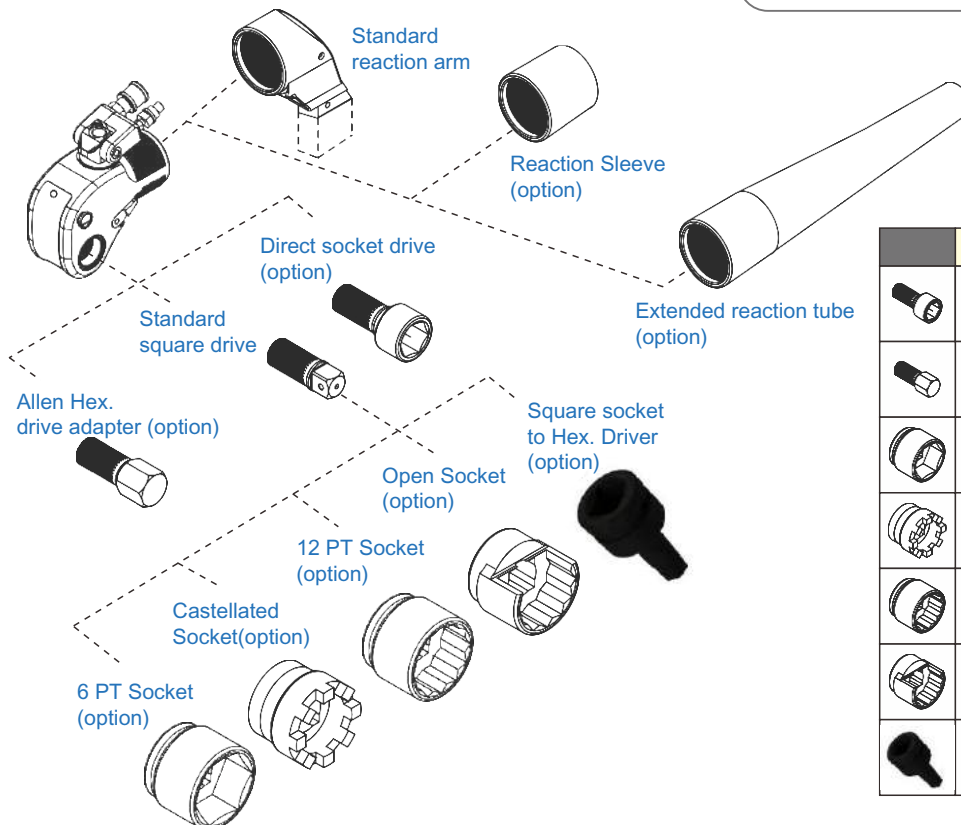
Reaction Pawl
Prevent ratchet reverse



WARNING

irring drop hole

Warning wrong coupler connect or over pressure which leaking oil.

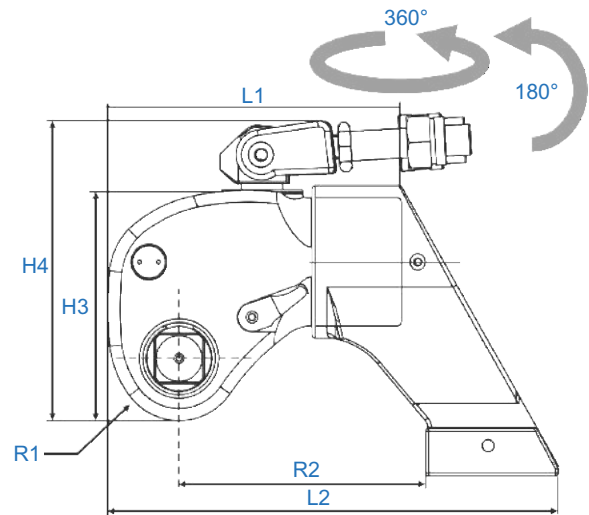
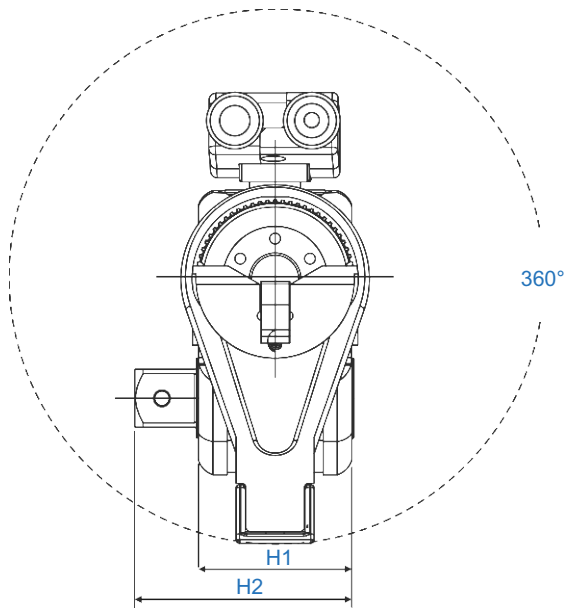


How to build Torque Wrench drive and socket	
	Model DS Hex. Socket size Example: ZSMX-3DS1-13/16"
	Model AH Hex. Drive size Example: ZSMX-3AH32mm
	Z6PTS- Drive size - Socket size Example: Z6PTS-1"-50
	ZCS- Drive size - Socket size Example: ZCS-1"-2-3/4"
	Z12PTS- Drive size - Socket size Example: Z12PTS-1"-50
	ZOPS- Drive size - Socket size Example: ZOPS-1"-6PT50
	ZSMX-4F Square socket Hex. Drive Example: ZSMX-4F1"-6M22mm

Square Drive Wrenches

Model Number	Square Drive	Min. Torque		Max. Torque		Bolt size	Motor	
	inch	lbf.ft	N.m	lbf.ft	N.m	mm	lb	kg
ZSMX-1	3/4	201	273	1409	1911	16-36	5.29	2.4
ZSMX-3	1	475	645	3328	4512	22-48	11.34	5.35
ZSMX-5	1-1/2	810	1099	5672	7690	27-56	19.5	9.08
ZSMX-8	1-1/2	1136	1540	6951	10780	30-64	28.2	13.97
ZSMX-10	1-1/2	1670	2264	11688	15847	36-72	35.9	16
ZSMX-20	2-1/2	2864	3883	20049	27183	42-90	66.98	30.41
ZSMX-25	2-1/2	3659	4961	25611	34725	48-100	85.9	39
ZSMX-35	2-1/2	5376	7289	37632	51022	64-120	95.15	43.2

Model Number	Square Drive	L1		L2		H1		H2		H3		H4		R1		R2	
	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
ZSMX-1	3/4	4.92	125	7.56	192	1.96	50	2.8	71	3.56	90.5	5.13	130.5	0.97	24.7	4.48	113.7
ZSMX-3	1	6.35	161	9.58	243	2.63	66.8	3.7	94	4.87	123.7	6.52	165.7	1.29	33	5.26	133.7
ZSMX-5	1-1/2	8.22	209	10.63	270	3.14	80	4.8	122	5.86	149	7.62	193.5	1.53	39	5.47	139
ZSMX-8	1-1/2	8.74	222	11.57	294	3.54	90	5.11	130	6.57	167	8.61	218.6	1.85	47	6.02	153
ZSMX-10	1-1/2	9.56	243	14.52	369	3.93	100	5.67	144	7.34	186.6	9.08	230.7	1.95	49.7	10.26	202
ZSMX-20	2-1/2	12.2	310	15.24	387	4.72	120	7.2	183	8.66	220	10.71	272	2.32	59	7.32	186
ZSMX-25	2-1/2	12.99	330	16.06	408	5.38	136.6	7.83	198.9	9.72	247	11.77	299	2.59	66	7.79	198
ZSMX-35	2-1/2	13.89	353	21.22	539	5.81	147.8	8.62	218.7	10.9	276.9	12.35	313.9	2.98	75.7	12.68	322.1



Reaction arm
small tooth orientation



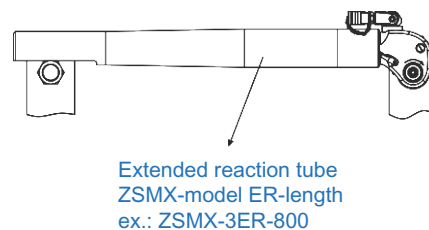
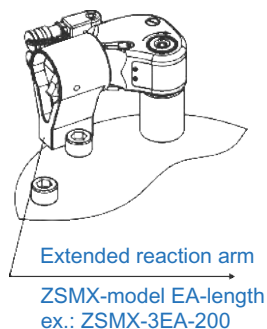
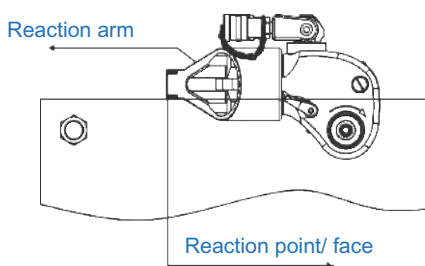
Fixed Button



Small tooth driver

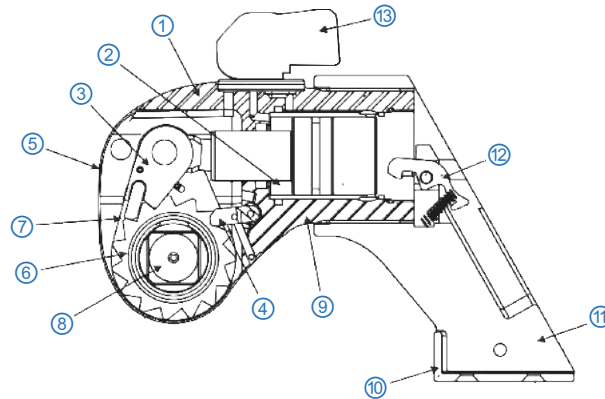
Square Drive Wrenches


SMX Series Torque Conversion Chart																						
Work pressure		ZSMX-1			ZSMX-3			ZSMX-5			ZSMX-8			ZSMX-10			ZSMX-20			ZSMX-25		
psi	bar	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n	lbf.ft	kgf.m	N.n
1450	100	201	28	273	475	66	645	810	112	1099	1136	157	1540	1670	231	2264	2864	396	3883	3659	506	4961
1740	120	242	33	328	571	79	774	972	134	1318	1363	188	1848	2004	277	2717	3437	475	4660	4391	607	5953
2031	140	282	39	382	666	92	902	1134	157	1538	1590	220	2156	2338	323	3169	4010	554	5437	5122	708	6945
2321	160	322	45	437	761	105	1031	1296	179	1758	1817	251	2464	2672	369	3622	4583	634	6213	5854	809	7937
2611	180	362	50	491	856	118	1160	1459	202	1977	2044	283	2772	3006	416	4075	5155	713	6990	6586	911	8929
2901	200	403	56	546	951	131	1289	1621	224	2197	2272	314	3080	3339	462	4528	5728	792	7766	7318	1012	9921
3191	220	443	61	601	1046	145	1418	1783	246	2417	2499	345	3388	3673	508	4980	6301	871	8543	8049	1113	10913
3481	240	483	67	655	1141	158	1547	1945	269	2637	2726	377	3696	4007	554	5433	6874	950	9320	8781	1214	11906
3771	260	524	72	710	1236	171	1676	2107	291	2856	2953	408	4004	4341	600	5886	7447	1030	10096	9513	1315	12898
4061	280	564	78	761	1331	184	1805	2269	314	3076	3180	440	4312	4675	646	6339	8020	1109	10873	10245	1416	13890
4351	300	604	84	819	1426	197	1934	2431	336	3296	3407	471	4620	5009	693	6792	8592	1188	11650	10976	1518	14882
4641	320	644	89	874	1521	210	2063	2593	358	3515	3635	503	4928	5343	739	7244	9165	1267	12426	11708	1619	15874
4931	340	685	95	928	1616	223	2192	2755	381	3735	3862	534	5236	5677	785	7697	9738	1346	13203	12440	1720	16866
5221	360	725	100	983	1712	237	2321	2917	403	3955	4089	565	5544	6011	831	8150	10311	1426	13980	13172	1821	17858
5511	380	765	106	1037	1807	250	2449	3079	426	4175	4316	597	5852	6345	877	8603	10884	1505	14756	13903	1922	18850
5802	400	805	111	1092	1902	263	2578	3241	448	4394	4543	628	6160	6679	923	9055	11457	1584	15533	14635	2023	19843
6092	420	846	117	1147	1997	276	2707	3403	471	4614	4770	660	6468	7013	970	9508	12029	1663	16310	15367	2125	20835
6382	440	886	122	1201	2092	289	2836	3565	493	4834	4998	691	6776	7347	1016	9961	12602	1742	17086	16099	2226	21827
6672	460	926	128	1256	2187	302	2965	3727	515	5054	5225	722	7084	7681	1062	10414	13175	1822	17863	16830	2327	22819
6962	480	966	134	1310	2282	316	3094	3889	538	5273	5452	754	7392	8015	1108	10866	13748	1901	18640	17562	2428	23811
7252	500	1007	139	1365	2377	329	3223	4051	560	5493	5679	785	7700	8349	1154	11319	14321	1980	19416	18294	2529	24803
7542	520	1047	145	1420	2472	342	3352	4213	583	5713	5906	817	8008	8683	1200	11772	14893	2059	20193	19026	2630	25795
7832	540	1087	150	1474	2567	355	3481	4376	605	5932	6133	848	8316	9017	1247	12225	15466	2138	20969	19757	2732	26787
8122	560	1128	156	1529	2662	368	3610	4538	627	6152	6361	879	8624	9350	1293	12678	16039	2217	21746	20489	2833	27780
8412	580	1168	161	1583	2757	381	3739	4700	650	6372	6588	911	8932	9684	1339	13130	16612	2297	22523	21221	2934	28772
8702	600	1208	167	1638	2853	394	3868	4862	672	6592	6815	942	9240	10018	1385	13583	17185	2376	23299	21953	3035	29764
8992	620	1248	173	1693	2948	408	3997	5024	695	6811	7042	974	9548	10352	1431	14036	17758	2455	24076	22684	3136	30756
9282	640	1289	178	1747	3043	421	4125	5186	717	7031	7269	1005	9856	10686	1477	14489	18330	2534	24853	23416	3237	31748
9572	660	1329	184	1802	3138	434	4254	5348	739	7251	7496	1036	10164	11020	1524	14941	18903	2613	25629	24148	3339	32740
9863	680	1369	189	1856	3233	447	4383	5510	762	7470	7724	1068	10472	11354	1570	15394	19476	2693	26406	24880	3440	33732
10153	700	1409	195	1911	3328	460	4512	5672	784	7690	7951	1099	10780	11688	1616	15847	20049	2772	27183	25611	3541	34725



Square Drive Wrenches

SMX Series Torque Conversion Chart				
Work pressure		ZSMX-35		
psi	bar	lbf.ft	kgf.m	N.n
1450	100	5376	743	7289
1740	120	6451	892	8747
2031	140	7526	1041	10204
2321	160	8601	1189	11662
2611	180	9677	1338	13120
2901	200	10752	1486	14578
3191	220	11827	1635	16035
3481	240	12902	1784	17493
3771	260	13977	1932	18951
4061	280	15053	2081	20409
4351	300	16128	2230	21866
4641	320	17203	2378	23324
4931	340	18278	2527	24782
5221	360	19353	2676	26240
5511	380	20429	2824	27697
5802	400	21504	2973	29155
6092	420	22579	3122	30613
6382	440	23654	3270	32071
6672	460	24729	3419	33528
6962	480	25804	3568	34986
7252	500	26880	3716	36444
7542	520	27955	3865	37902
7832	540	29030	4014	39359
8122	560	30105	4162	40817
8412	580	31180	4311	42275
8702	600	32256	4459	43733
8992	620	33331	4608	45190
9282	640	34406	4757	46648
9572	660	35481	4905	48106
9863	680	36556	5054	49564
10153	700	37632	5203	51022





- 


1 High-strength Aluminum Alloy Housing
ZSMX series housing processed from solid block of 7075 AQ Aluminum and anti-rust finish-special surface treatment.
- 

2 Strong piston Assembly
Smooth leak proof functioning of enclosed alloy steel piston and single seal provides required torque.
- 


3 Driving Segment
Ensures tool will never lock up.
- 


4 Anti-Back & Lock
Allows hands free working.
- 


5 Laser Engraved Torque Chart
Two sided shroud is laser engraved with the torque chart for the ZSMX series.
- 


6 Multi-Tooth Driving & Ratchet Assembly
Strong strength, high accuracy and best speed.
- 

7 Drive Plate
High strength alloy drive plate for maximum life. Allows small nose radius for the tool.
- 

8 Square Driving
"Push through" Square Drive that easily pushes through to switch from loosens to tighten.
- 

9 Direct Housing Reaction
Allows use without reaction arm.
- 

10 Steel Reaction Boot
Replaceable pad allowing on site change over. Protects costly replacement of reaction arm.
- 

11 Long Length Reaction Arm
Long length reaction arm allows multi positioning. Allows taking reaction on most applications.
- 

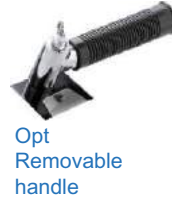
12 Reaction Arm Release Button
Housed within the reaction arm as a safety feature, protecting the arm from accidental disengagement.
- 

13 360°*180° Swivel-Hose-Free Operation

ZSRX

Double-Acting, Hexagon
Cassette Wrenches
Lightweight, Low Profile &
Slim Nose Radius

- Tool body can be Reaction Arm, easy to work.
 - Bronze bushing anti galling.
 - "Drop Hole" will protect over pressure operating.
- Output Accuracy: $\pm 3\%$, Repeatability: 100%



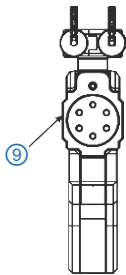
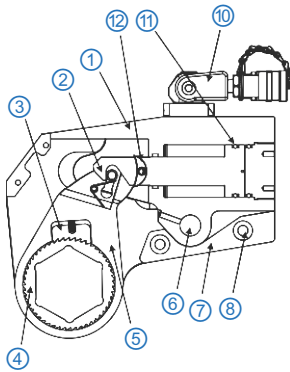


WARNING



Warning drop hole

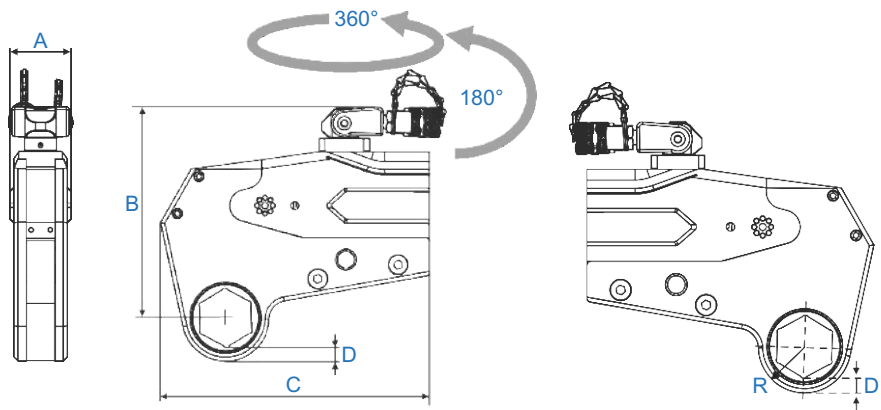
Warning wrong coupler connect or over pressure which leaking oil.



- ① **High Strength Body**
Cylinder and Link Body are manufactured from high grade and strength alloy. Rust-resistant surface finish.
- ② **Engagement Plunger**
Smooth leak proof functioning of enclosed alloy steel piston and engaged hook head.
- ③ **Never Lock Drive Segment**
Never lock drive segment does not let the wrench lock and thus eliminates the requirement of a ratchet release mechanism.
- ④ **Multi Tooth Ratchet Assembly**
Strong strength, high accuracy and best speed.
- ⑤ **Drive Plate**
Single piece high strength alloy drive plate for maximum life. Allows small nose radius for the tool.
- ⑥ **Multi-Tooth Driving & Ratchet Assembly**
Strong strength, high accuracy and best speed.
- ⑦ **Steel Link Pin**
One simple pin for cassette link to cylinder engagement without using any additional or special tool.
- ⑧ **In-line Reaction Pad**
This ensures torsion free reaction during use.
- ⑨ **Completely Flat Design Cylinder & Link**
Equal width of cylinder and link ensures tool sits flat on flange surface. Allows use in most confined areas.
- ⑩ **360°*180° Swivel-Hose-Free Operation**
- ⑪ **Piston Seal**
High temperature Polyurethane seals ensure years of maintenance free operation.
- ⑫ **Sliders**
Reduce friction and prevent wear on the piston.

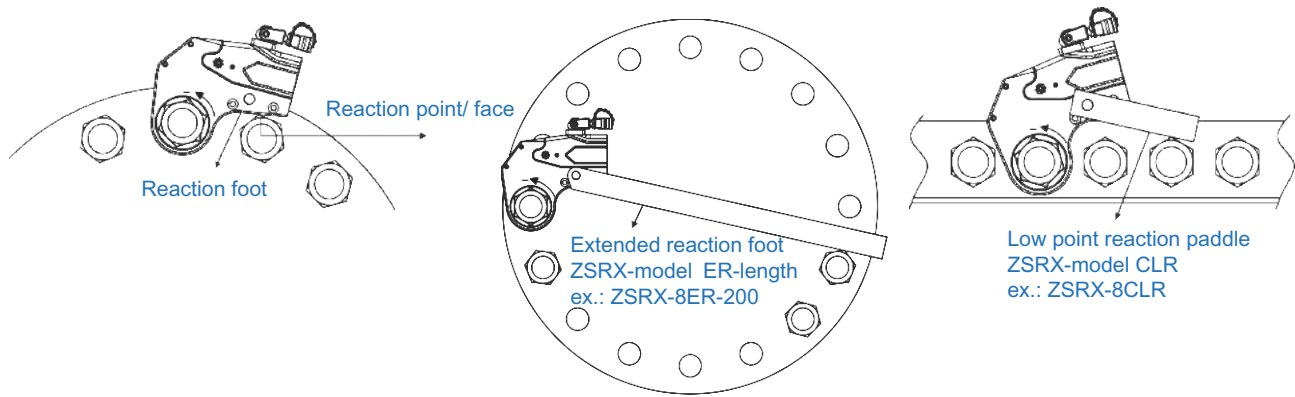
Hydraulic Direct Fit Wrench

Model Number	Hex. Size		Min. Torque		Max. Torque		Weight (kg)		Dimensions (mm)			
	inch	mm	lbf.ft	N.m	lbf.ft	N.m	Cylinder	Link	A	B	C	D
ZSRX-2	1-1/4~2-3/8	30~60	192	260	2178	2994	1.99	1.48~1.85	32	148.8~156.8	168~175.5	9.1~11.7
ZSRX-4	1-5/8~3-1/8	41~80	395	535	4732	6504	3.35	3.05~3.95	41.4	172.9~189.2	204.4~220.8	12.7~13.7
ZSRX-8	1-7/8~4-1/8	50~105	830	1125	10689	14692	6.64	6.25~8.6	52.5	210.4~235.4	268.1~283.9	13.7~19.5
ZSRX-16	2-3/4~4-5/8	70~115	1560	2115	16854	23165	8.5	11.98~14.16	64	245.7~258.3	326.7~344.7	19.5~23
ZSRX-32	3-1/8~6-1/8	80~155	3220	4365	37566	51632	16.1	25.1~30.36	82.5	287.6~313.1	422.5~442.5	23~26



Bolt Dia.	Across flat	Bolt Dia. (Imp.)	Across flat (Imp.)	ZSRX-2			ZSRX-4			ZSRX-8			ZSRX-16			ZSRX-32		
				Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)
M	mm	inch	inch															
20	30	3/4	1-1/4	ZSRX-2L30	26.6	9.1												
22	32		1-7/16	ZSRX-2L32	26.6	9.1												
24	36	7/8	1-5/8	ZSRX-2L36	33.5	10.4												
27	41	1	1-13/16	ZSRX-2L41	34.4	10.4	ZSRX-4L41	36.8	12.7									
30	46	1-1/8	2	ZSRX-2L46	37.2	10.4	ZSRX-4L46	39.5	12.7									
33	50	1-1/4	2-3/16	ZSRX-2L50	40.6	11.7	ZSRX-4L50	42.3	12.7	ZSRX-8L50	43.3	13.7						
36	55	1-3/8	2-3/8	ZSRX-2L55	43.7	11.7	ZSRX-4L55	45.2	12.7	ZSRX-8L55	45.9	13.7						
39	60	1-1/2	2-9/16	ZSRX-2L60	46.6	11.7	ZSRX-4L60	47.9	12.7	ZSRX-8L60	48.9	13.7						
42	65	1-5/8	2-3/4				ZSRX-4L65	51.7	13.7	ZSRX-8L65	5.5	13.7						
45	70	1-3/4	2-15/16				ZSRX-4L70	54.8	13.7	ZSRX-8L70	54.5	13.7	ZSRX-16L70	60.3	19.5			
48	75	1-7/8	3-1/8				ZSRX-4L75	57.3	13.7	ZSRX-8L75	57.2	13.7	ZSRX-16L75	63.1	19.5			
52	80	2					ZSRX-4L80	60.1	13.7	ZSRX-8L80	59.9	13.7	ZSRX-16L80	66	19.5	ZSRX-32L80	72	25
56	85		3-1/2							ZSRX-8L85	67.2	17.5	ZSRX-16L85	69	19.5	ZSRX-32L85	75	25
60	90	2-1/4								ZSRX-8L90	70.1	18	ZSRX-16L90	71.8	19.5	ZSRX-32L90	78	25
64	95		3-7/8							ZSRX-8L95	73.5	18	ZSRX-16L95	79.3	21	ZSRX-32L95	80.5	25
68	100	2-1/2	4-1/4							ZSRX-8L100	76.4	18	ZSRX-16L100	80	21	ZSRX-32L100	83.5	25
72	105	2-3/4								ZSRX-8L105	80.5	19.5	ZSRX-16L105	82	21	ZSRX-32L105	87.5	26.5
76	110		4-5/8										ZSRX-16L110	85	21	ZSRX-32L110	91.3	26.5
80	115	3											ZSRX-16L115	90	23	ZSRX-32L115	94.9	26.5
	117		5													ZSRX-32L117	94.9	26.5
85	120	3-1/4														ZSRX-32L120	96.5	26.5
	125		5-3/8													ZSRX-32L125	100.5	26.5
90	130	3-1/2														ZSRX-32L130	102.5	26.5
95	135		5-4/3													ZSRX-32L135	108	28.5
	140	3-3/4														ZSRX-32L140	110	28.5
100	145		6-1/8													ZSRX-32L145	113	28.5
105	150	4														ZSRX-32L150	116	28.5
110	155															ZSRX-32L155	119	28.5

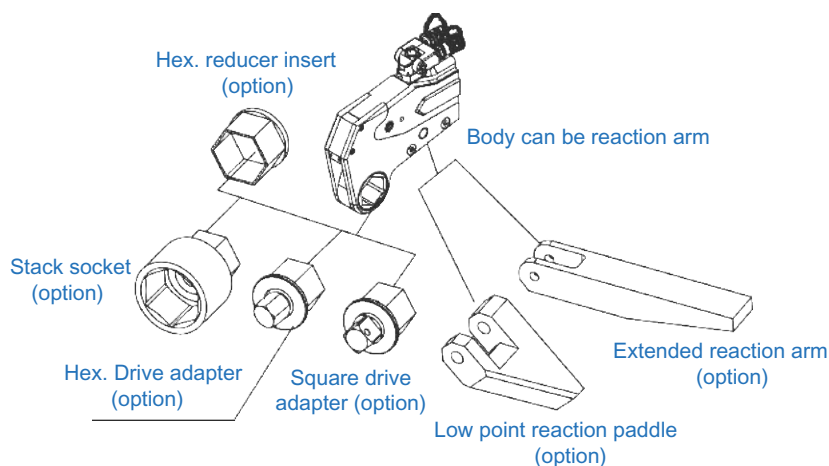
Hydraulic Direct Fit Wrench







ZSRX Series Torque Conversion Chart

Work pressure		ZSRX-2				ZSRX-4				ZSRX-8	
		1-1/4" to 1-12/16" 30 to 46mm	1-1/4" to 1-12/16" 30 to 46mm	1-7/8" to 2-3/8" 47 to 60mm	1-7/8" to 2-3/8" 47 to 60mm	1-5/8" to 2-9/16" 41 to 65mm	1-5/8" to 2-9/16" 41 to 65mm	2-3/4" to 3-1/8" 70 to 80mm	2-3/4" to 3-1/8" 70 to 80mm	1-7/8" to 3-1/8" 50 to 80mm	1-7/8" to 3-1/8" 50 to 80mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	284	384	315	428	581	788	685	929	1269	1720
1740	120	340	461	379	513	697	945	822	1115	1523	2064
2031	140	397	538	442	599	813	1103	959	1301	1776	2409
2321	160	454	615	505	684	929	1260	1097	1487	2030	2753
2611	180	510	692	568	770	1046	1418	1234	1673	2284	3097
2901	200	567	769	631	855	1162	1575	1371	1858	2538	3441
3191	220	624	846	694	941	1278	1733	1508	2044	2792	3785
3481	240	680	923	757	1026	1394	1890	1645	2230	3045	4129
3771	260	737	999	820	1112	1510	2048	1782	2416	3299	4473
4061	280	794	1076	883	1198	1626	2205	1919	2602	3553	4817
4651	300	851	1153	946	1283	1742	2363	2056	2788	3807	5161
4641	320	907	1230	1009	1369	1859	2520	2193	2973	4060	5505
4931	340	964	1307	1073	1454	1975	2678	2330	3159	4314	5849
5221	360	1021	1384	1136	1540	2091	2835	2467	3345	4568	6193
5511	380	1077	1461	1199	1625	2207	2993	2604	3531	4822	6537
5802	400	1134	1538	1262	1711	2323	3150	2741	3717	5075	6881
6092	420	1191	1614	1325	1796	2440	3308	2878	3903	5329	7226
6382	440	1247	1691	1388	1882	2556	3465	3015	4088	5583	7570
6672	460	1304	1768	1451	1967	2672	3623	3153	4274	5837	7914
6962	480	1361	1845	1514	2053	2788	3780	3290	4460	6091	8258
7252	500	1418	1922	1577	2138	2904	3938	3427	4646	6344	8602
7542	520	1474	1999	1640	2224	3020	4095	3564	4832	6598	8946
7832	540	1531	2076	1703	2309	3137	4253	3701	5018	6852	9290
8122	560	1588	2153	1766	2395	3253	4410	3838	5203	7106	9634
8412	580	1644	2230	1830	2481	3369	4568	3975	5389	7359	9978
8702	600	1701	2306	1893	2566	3485	4725	4112	5575	7613	10322
8992	620	1758	2383	1956	2652	3601	4883	4249	5761	7867	10666
9282	640	1815	2460	2019	2737	3717	5040	4368	5947	8121	11010
9572	660	1871	2537	2082	2823	3834	5198	4523	6133	8375	11354
9863	680	1928	2614	2145	2908	3950	5355	4660	6319	8628	11698
10153	700	1985	2691	2208	2994	4066	5513	4797	6504	8882	12043

Hydraulic Direct Fit Wrench



How to build Torque Wrench drive and socket	
	Link model -H Hex. Across size Example: ZSRX-8L95-H85
	Model HH Hex. Drive size - Hex. Socket size Example: ZSRX-8HH75-90
	Model HS Hex. Drive size - Square drive size Example: ZSRX-4HS46-1"
	Model HHM Hex. Drive size - Hex. Drive size Example: ZSRX-4HHM41-27

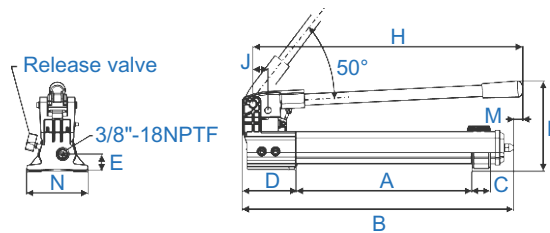
ZSRX Series Torque Conversion Chart											
Work pressure		ZSRX-8		ZSRX-16				ZSRX-32			
		3-3/8" to 4-1/8" 85 to 105mm	3-3/8" to 4-1/8" 85 to 105mm	2-3/4" to 3-15/16" 70 to 100mm	2-3/4" to 3-15/16" 70 to 100mm	4-1/8" to 4-5/8" 105 to 115mm	4-1/8" to 4-5/8" 105 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	4-11/16" to 6-1/8" 120 to 155mm	4-11/16" to 6-1/8" 120 to 155mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	1548	2293	2293	3109	2441	3309	4734	6418	5440	7376
1740	120	1858	2519	2752	3731	2929	3971	5681	7702	6528	8851
2031	140	2167	2938	3210	4353	3417	4633	6628	8986	7616	10326
2321	160	2477	3358	3669	4975	3905	5295	7574	10269	8704	11801
2611	180	2787	3778	4128	5596	4394	5957	8521	11553	9792	13277
2901	200	3096	4198	4586	6218	4882	6619	9468	12837	10880	14752
3191	220	3406	4618	5045	6840	5370	7281	10415	14120	11968	16227
3481	240	3715	5037	5504	7462	5858	7943	11361	15404	13057	17702
3771	260	4025	5457	5962	8084	6346	8604	12308	16688	14145	19177
4061	280	4335	5877	6421	8706	6835	9266	13255	17971	15233	20653
4651	300	4644	6297	6879	9327	7323	9928	14202	19255	16321	22128
4641	320	4954	6717	7338	9949	7811	10590	15149	20539	17409	23603
4931	340	5263	7136	7797	10571	8299	11252	16095	21823	18497	25078
5221	360	5573	7556	8255	11193	8787	11914	17042	23106	19585	26553
5511	380	5883	7976	8714	11815	9275	12576	17989	24390	20673	28029
5802	400	6192	8396	9173	12436	9764	13238	18936	25674	21761	29504
6092	420	6502	8815	9631	13058	10252	13900	19883	26957	22849	30979
6382	440	6812	9235	10090	13680	10740	14561	20829	28241	23937	32454
6672	460	7121	9655	10549	14302	11228	15223	21776	29525	25025	33929
6962	480	7431	10075	11007	14924	11716	15885	22723	30808	26113	35404
7252	500	7740	10495	11466	15546	12204	16547	23670	32092	27201	36880
7542	520	8050	10914	11924	16167	12693	17209	24617	33376	28289	38355
7832	540	8360	11334	12383	16789	13181	17871	25563	34659	29377	39830
8122	560	8669	11754	12842	17411	13669	18533	26510	35943	30465	41305
8412	580	8979	12174	13300	18033	14157	19195	27457	37227	31553	42780
8702	600	9288	12593	13759	18655	14645	19856	28404	38510	32641	44256
8992	620	9598	13013	14218	19276	15134	20518	29351	39794	33729	45731
9282	640	9908	13433	14676	19898	15622	21180	30297	41078	34817	47206
9572	660	10217	13853	15135	20520	16110	21842	31244	42361	35905	48681
9863	680	10527	14273	15593	21142	16598	22504	32191	43645	36993	50156
10153	700	10837	14692	16052	21764	17086	23166	33138	44929	38081	51632



ZSP-392

Light Weight, Two-speed Hand Pump

- Internal pressure relief valve for overload protection.
- Durable glass-filled nylon reservoir and nylon encapsulated aluminum pump baser for maximum corrosion resistance.
- Two speed operation reduces handle strokes by as much as 78% over single speed pumps.
- Lower handle effort to minimize operator fatigue.
- Handle lock and lightweight construction for easy carrying.
- Non-conductive fiberglass handle for operator safety.



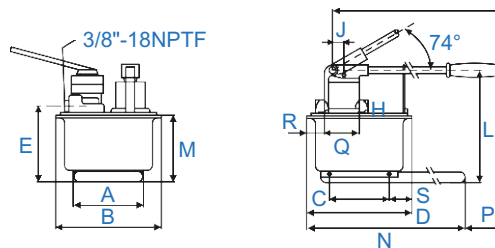
ZSP-392



ZSP-462/ZSP-464

Steel, Two-speed Hand Pump

- Internal pressure relief valve for overload protection.
- 4-Way valving on the ZSP-464 for operation of double-acting cylinder.
- Large oil capacity to power a wide range of cylinders or tools.



ZSP-462/ZSP-464

Model Number	Pump Type	Usable Oil Capacity cm ³	Pressure Rating		Oil Displacement per Stroke		Max. Handle Effort kg	Piston Stroke mm	Dimensions(mm)		
			1 st stage	2 nd stage	1 st stage	2 nd stage			A	B	C
			bar		cm ³						
ZSP-392	Two-Speed	901	13	700	11.26	2.47	42.2	25.4	344	533	36
ZSP-462		7423	14	700	126.2	4.75	50	38.1	210	308	163
ZSP-464		7423	14	700	126.2	4.75	50	38.1	210	308	163

Model Number	Dimensions(mm)											Weight
	D	E	H	J	L	M	N	P	Q	R	S	kg
ZSP-392	99	33	522	30	177	16	120	—	—	—	—	4.1
ZSP-462	320	195	671	25	270	175	650	92	—	—	80	27.7
ZSP-464	320	195	671	25	270	175	650	92	89	68	80	27.7

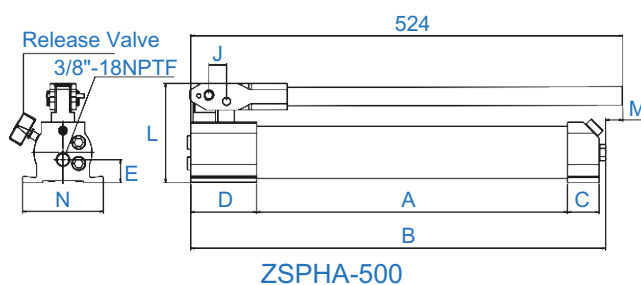
ZSPHA

Aluminum Hand Pump

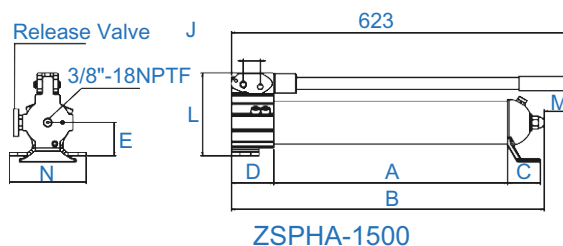
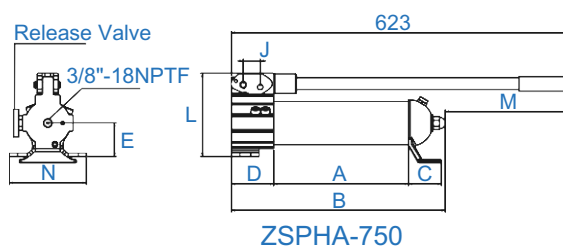
- ZIPP's hand pumps are always featured with their rugged construction and low handle efforts.
- All Aluminum Alloy construction and hand size release knobs that with anti-losing mechanism are truly suitable to industrial requirement and your daily work.
- Special design with Aluminum Alloy construction as much light weight is ideally for easy portability and maneuvering.



ZSPHA-500



ZSPHA-1500



Optional Features

To add optional features to your pump, add the follow suffixes to the end of the model number.

4 ways control Valve: Model D

Example:

ZSPHA-1500 with 4 ways control valve, order: ZSPHA-1500D.

Technical specifications for these features are available from ZIPP.

Model Number	Pump Type	Usable Oil Capacity	Pressure Rating		Oil Displacement per Stroke		Piston Stroke	Dimensions (mm)								Weight include oil	
			1 st stage	2 nd stage	1 st stage	2 nd stage		A	B	C	D	E	J	L	M		N
		cm ³	bar		cm ³		mm										kg
ZSPHA-500	Two-Speed	500	14	700	6.28	1.57	20	377	503	38	80.1	27.7	22	119.3	21	97.5	4.5
ZSPHA-750		750	14	700	12.5	2.8	21	245	389	60	76.7	60.3	31	150.3	234	140	5.6
ZSPHA-1500		1500	14	700	12.5	2.8	21	425	568	60	76.7	60.3	31	150.3	54	140	5

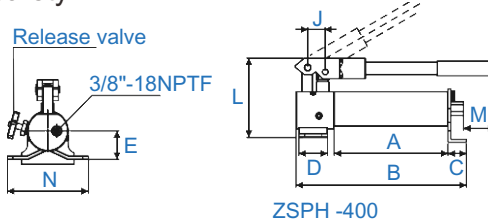
ZSPH

Steel Hand Pump

- Internal pressure relief valve for overload protection.
- Large oil capacity, suitable for wide application.
- Two speed auto-switch reduces manpower and increase efficiency.
- Non-conductive fiberglass handle for operator safety.



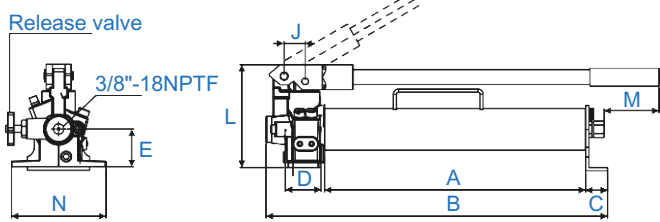
ZSPH-400



ZSPH -400



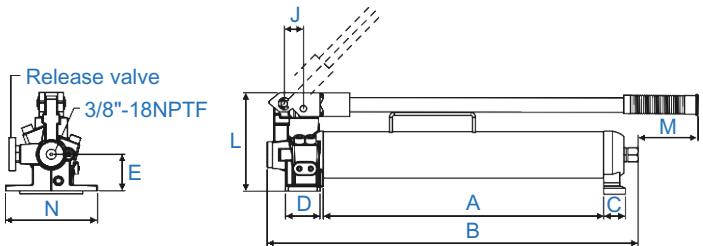
ZSPH-900



ZSPH-900/ZSPH-2000



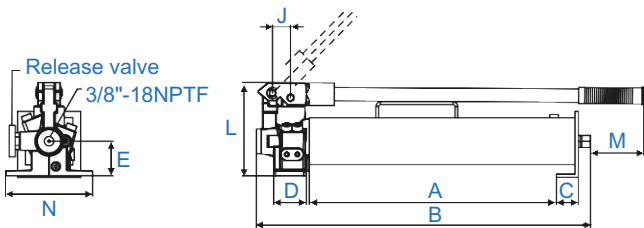
ZSPH-1200



ZSPH -1200



ZSPH-3000



ZSPH-3000



Optional Features

To add optional features to your pump, add the follow suffixes to the end of the model number.

4 ways control Valve: Model D

Example:

ZSPH-2000 with 4 ways control valve, order: ZSPH-2000D.

Technical specifications for these features are available from ZIPP.

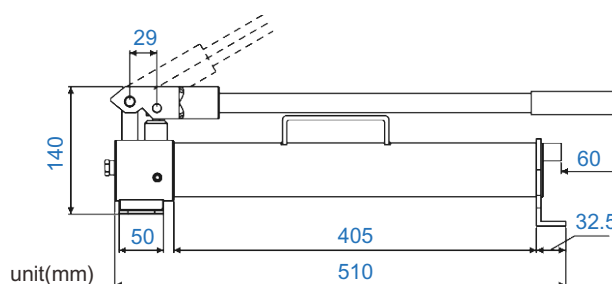
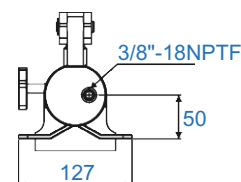
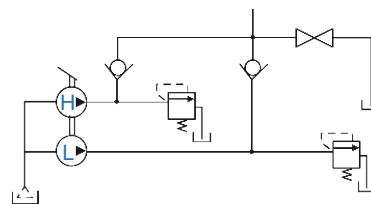
Model Number	Pump Type	Usable Oil Capacity	Pressure Rating		Oil Displacement per Stroke		Piston Stroke	Dimensions (mm)								Weight include oil	
			1 st stage	2 nd stage	1 st stage	2 nd stage		A	B	C	D	E	J	L	M		N
			bar		cm ³			mm									
ZSPH-400	S/S	400	—	700	—	1.25	22	190	292	34	50	50	31	139	57	140	5
ZSPH-900	Two-Speed	900	14	700	12.5	2.8	21	395	514	34	45	55	31	150	67	136	7.5
ZSPH-1200		1200	14	700	12.5	2.8	19	425	536	32.5	48	55	29	150	65	137	9
ZSPH-2000		2200	14	700	14.5	2.8	21	425	536	32.5	45	55	29	150	60	136	10.5
ZSPH-3000		3000	14	700	14.5	2.8	21	425	562	45	48	55	29	150	65	137	13.6

Water/ Hydraulic Manual Pump

ZSPHW

Water/ Hydraulic Manual Pump

- Manual pump whose hydraulic fluid is "water" and can increase the pressure up to 700bar.
- Special rust-proof treatment is performed to the stainless-steel materials or special steel where the pump contacts water.
- Can be used in a place where the usage of oil is hesitated.
- A safe mechanism incorporating a safety valve like other time-tested 700 bar series.
- Automatic high-low pressure switching pump for improved work efficiency.

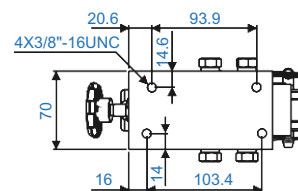


Model Number	Pressure Rating	Output flow rate	Water capacity	Weight(no water)
	psi(bar)	c.c/stroke	c.c	kg
ZSPHW-900	10000(700)	2.3	900	5.7

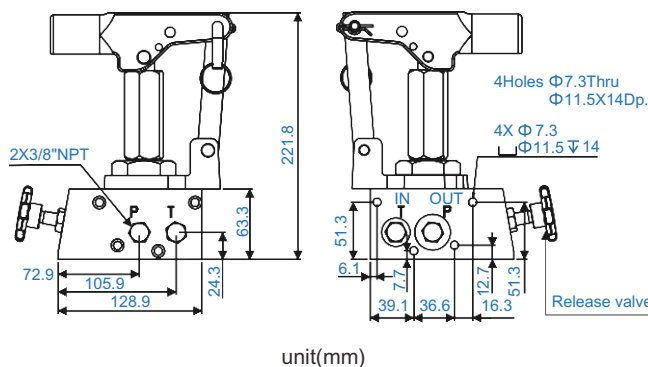
ZSPHP

Special Application Pump Head

- Adjustable linkage for reduced handle force.
- Swivel pump head for flexible fixturing.
- Wide range of operating pressures to select from.
- Design for tight mounting space, backup manual power or lower pressure and high flows.
- Design for applications when pumps oil tank need to be changed.
- ZSPHP and ZSPHH handle construct by Aluminum Alloy which dimension be



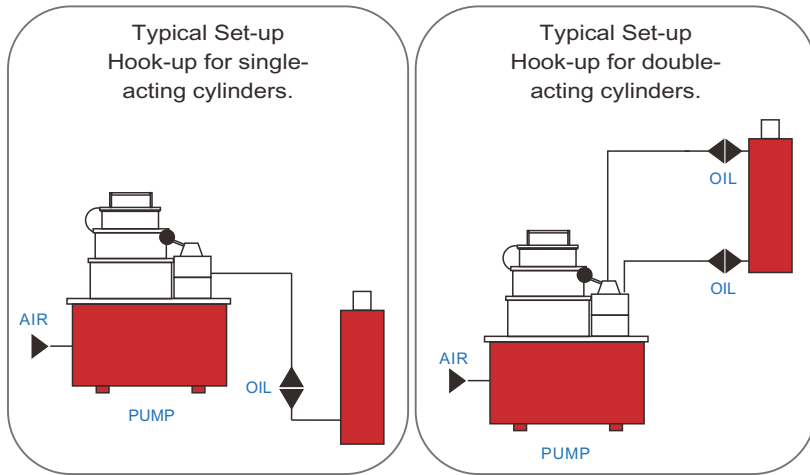
Model Number	Pressure Rating	Volume	Max. Handle Eff.	Weight
	psi(bar)	c.c/stroke	kgf	kg
ZSPHP-50	750(50)	75	36	5
ZSPHP-70	1000(70)	35	48	5
ZSPHP-210	3000(210)	22	54	4
ZSPHP-450	6500(450)	9	54	4
ZSPHP-700	10000(700)	5	54	4



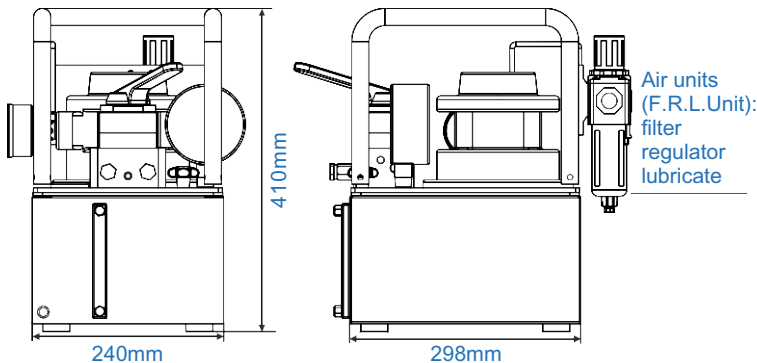
ZSPA-554TQJ

Hydraulic Air Pump

- 2-speed pump drives single -or double-acting cylinders, delivering a high volume of oil .
- Air is the preferred source of power which supply require 3~8bar.
- Max.Pressure: 700bar.
- External adjustable pressure regulator
- Powerful 4 hp motor starts under load.
- Retract side internal relief valve protects tool.
- Just use with Hydraulic lift applications.
- Stainless frame easy to carry.



Optional
G= Pressure Gauge



BASIC PUMP VALVE	Used with cylinder		Valve Function		
Manual 3 way Valve	●		●	●	●
Manual 4 way Valve		●	●	●	●

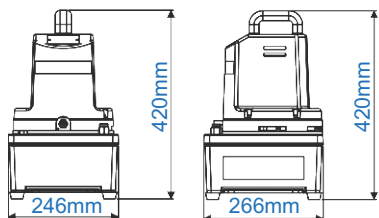
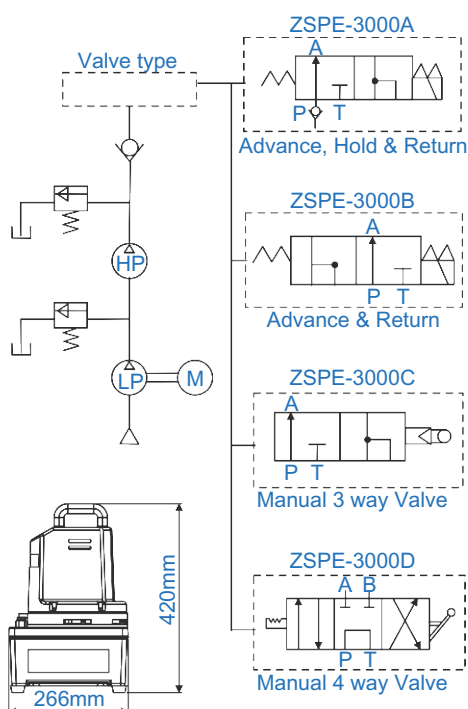
Model Number	Pump Type	dB(A) at Idle and 700bar	Motor kW(hp)	Used with cyl.	Flow rate @115VAC(l/min)				oil tank L	Weight with oil kg
					0(bar)	50(bar)	350(bar)	700(bar)		
ZSPA-554TQJ	TWO-Speed	85/90	2.2(4)	Single and Double Acting	12	7.1	2	0.9	8	27.5

Hydraulic Electric Pump



ZSPE-3000 Series

Reservoir Capacity: 3000-6000c.c
 Flow at rated pressure: 4-0.4 L
 Motor Size: 0.37kW (0.5 hp)
 Maximum Operating Pressure: 700 bar



Control Valve

- A single-acting cylinder must be powered by a pump with a 3-way solenoid (built-in) or manual valve.
- Compare Model: ZSPE-3000APS (solenoid) or ZSPE-3000CPS (manual)



- A double-acting cylinder must be powered by a pump with a 4-way valve.
- Compare Model: ZSPE-3000D

Hydraulic Electric Pump

- Requires less energy, simple and easy to operate.
- Suitable for any industrial application.
- Handle and casing built together.
- Equipped with 10ft remote line.
- Carbon brush motor, working frequently.

Custom build your Electric Pump

ZSPE-3000 **A** **1** **5** **1** **LT** **PBG**

1 2 3 4 5 6

- Valve
 - 3way/ 2position built-in Solenoid Valve: Advance Hold Return
 - Remote Release Pressure: Advance Return (Ideal for punching, crimping and cutting)
 - 3way/ 2position Manual Valve: Advance Hold Manual return
 - 4way/ 3position Manual Valve: Advance Hold Manual return
- Voltage
 - 115V/7.5A
 - 230V/2.8A
- Hz
 - 50Hz | 60Hz
- Phase
 - 1ph
- Reservoir
 - No word= 3000c.c PU reservoir
 - LT= 8000c.c Iron reservoir
 - User can order suitable reservoir.
- fitting
 - PJ= Pressure adjust switch
 - PB= Pressure adjuster
 - G= Pressure gauge



LT= Iron reservoir



G= Pressure Gauge



PJ= Pressure Adjust Switch
Part No.: ZSPG-800-CE80



PB= Pressure Adjuster Switch
Part No.: ZSPS-7A-700

Model Number	Motor	Max. Pressure	Pressure Rating		Output flow rate		dB(A) at Idle and 700bar	Weight include oil	Dimension
			1 st stage	2 nd stage	1 st stage	2 nd stage			
			psi(bar)		L(min)				
ZSPE-3000	0.37(0.5)	10000(700)	200(14)	10000(700)	4	0.4	85-90	16	250*270*400
ZSPE-3000LT	0.37(0.5)	10000(700)	200(14)	10000(700)	4	0.4	85-90	24	300*350*460



Hydraulic Electric Pump

- 2-speed pump drives single -or double-acting cylinders, delivering a high volume of oil .
- Air is the preferred source of power which supply require 3~8bar.
- Max.Pressure: 700bar.
- External adjustable pressure regulator
- Powerful 4 hp motor starts under load.
- Retract side internal relief valve protects tool.
- Just use with Hydraulic lift applications.
- Stainless frame easy to carry.

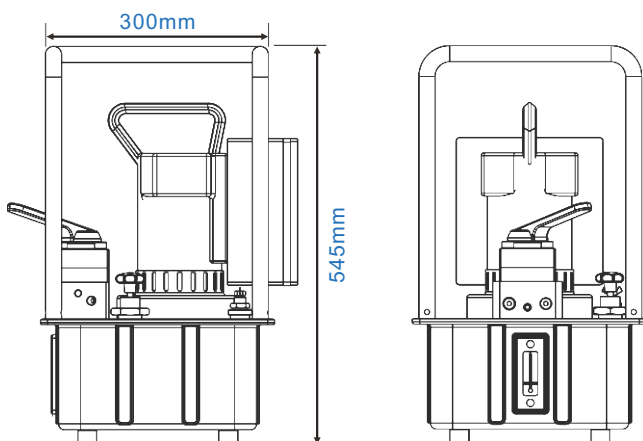
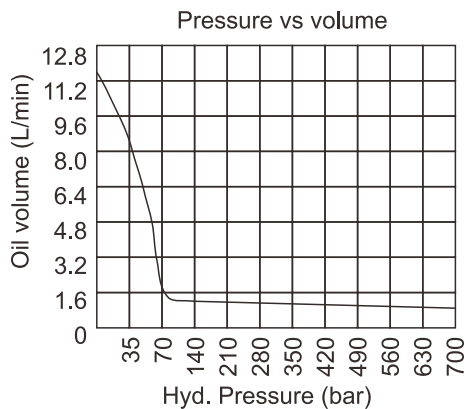
ZHEP-665 Series

Reservoir Capacity: 8-20L

Flow at rated pressure: 11.3-0.9 L

Motor Size: 0.84kW (1-1/8 hp)

Maximum Operating Pressure: 700 bar



Custom build your Electric Pump

ZHEP-665 **TQJ** **1** **5** **1** **8** **4** **WOG**

0 1 2 3 4 5 6

O.Type

TQ= use with Torque Wrench

TQH= use with hydraulic lock bolt tools.

TQJ= use in lift applications

1.Voltage

1= 115V

2= 230V

2.Hz

5= 50Hz | 60Hz

3.Phase

1= 1ph

4.Reservoir (Lx0.26= gal)

8= 8L(2.1 gal)

20= 20L(5.2gal)

*User can order suitable reservoir.

5.Valve (just use in TQJ series)

3= Manual 3Way

4= Manual 4Way

7= Check Solenoid 3Way

8= Check Solenoid 4Way

6.Optional

W= Castor wheel

O= Cool system

G= Pressure Gauge

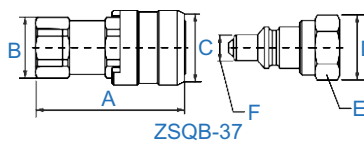
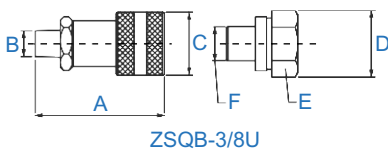
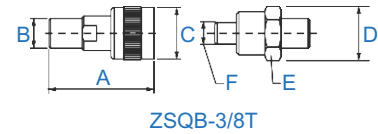
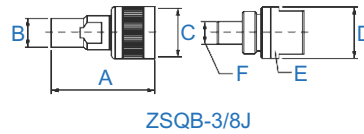
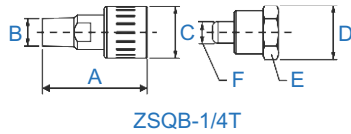
Model Number	rpm	dB(A) at Idle and 700bar	Motor kW(hp)	Amp at 700bar A	Flow rate @230VAC(l/min)				oil tank L	Usable oil L	Weight with oil kg
					0(bar)	50(bar)	350(bar)	700(bar)			
ZHEP-665	12000	80	0.84(1-1/8)	20/110V	11.3	7.2	1.2	0.95	8	7	32
				10.7/230V							

Hydraulic Couplers

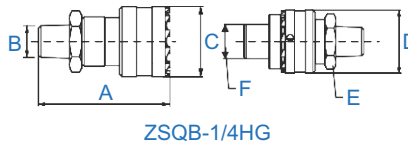
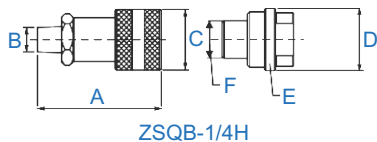
ZSQB Maximum Operating Pressure: 700 bar

Hydraulic Couplers

- High flow rate and high pressure resistance.
- Dust cap include on all models.



Model Number	Female Model	Male Model	Dimension (mm)					
			A	Thread type B	C	D	E	F
ZSQB-1/4T	ZSQB-1/4TF	ZSQB-1/4TM	58.5	1/4"-18NPT	28.6	30	26	Φ10
ZSQB-3/8J	ZSQB-3/8JF	ZSQB-3/8JM	59	3/8"-19PT	30.5	28	24	Φ12.7(1/2")
ZSQB-3/8T	ZSQB-3/8TF	ZSQB-3/8TM	58.5	3/8"-18NPT/PT	38.5	33	28	Φ12
ZSQB-3/8U	ZSQB-3/8UF	ZSQB-3/8UM	72	3/8"-18NPTF/PT	35	37	32	Φ19.05(3/4")
ZSQB-37	ZSQB-372F	ZSQB-372M	64	3/8"-18NPTF/PT	32	28.5	24H	Φ11.25(7/16")



Dust cap
Aluminum Dust cap.



ZSQB-1/4HM-1



ZSQB-1/4HF-1

Model Number	Female Model	Dust Cap Model	Male Model	Dust Cap Model	Dimension (mm)					
					A	Thread type B	C	D	E	F
ZSQB-1/4H	ZSQB-1/4HF	ZSQB-1/4HF-1	ZSQB-1/4HM	ZSQB-1/4HM-1	59.75	1/4"-18NPTF	15.88	24	28	15.88
ZSQB-1/4HG	ZSQB-1/4HGF		ZSQB-1/4HGM	ZSQB-1/4HGM-1	54.85	1/4"-18NPTF	28.2	28.4	22	15.88

ZXU

High Pressure Hydraulic Hoses

- Tube: Oil resistant synthetic rubber.
- Cover: Oil, abrasion and weather aging resistant synthetic rubber.
- Temp. Range: -40°C~+93°C
- Max. change in length: -4%~+2%(under W.P.)
- Reinforcement: Two layers of steel wire braids.

※ Operating temperature in excess of 93°C may materially reduce the service life of hose assembly.

How is a hydraulic hose model number is built up:

ZXU **2** - **1.6M** **3NM** **3NM** - **S**

1 2 3 4 5

- | | |
|--|--|
| <p>1. Tube dimension
2= 1/4inch(6.4mm)
3= 3/8inch(9.5mm)</p> <p>2. Length
1ft=0.3meter
1meter=3.3ft</p> <p>3. End one
3NM= 3/8NPTF(Male)
3PM= 3/8PTF(Male)</p> | <p>4. End two
3NM= 3/8NPTF(Male)
3NF= 3/8NPTF(Female)
3PM= 3/8PTF(Male)
3PF= 3/8PTF(Female)</p> <p>5. Springcircle
S= Springcircle</p> |
|--|--|



1/4"NPTF(Male)



1/4"NPTF(Female)



3/8"NPTF(Male)



3/8"NPTF(Female)

Model Number	Tube dimension (I.D)	Hose End Assemblies		Length	Work pressure	Broken pressure	Min B.R.	Weight
	inch(mm)	End one	End two					
ZXU2-1.6M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	1.6	700	1400	100	0.4
ZXU2-1.8M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	1.8	700	1400	100	0.4
ZXU2-2M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	2	700	1400	100	0.4
ZXU2-3M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	3	700	1400	100	0.4
ZXU2-4M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	4	700	1400	100	0.4
ZXU2-5M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	5	700	1400	100	0.4
ZXU2-6M3NM3NM-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Male)	6	700	1400	100	0.4
ZXU2-1.6M3NM3NF-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Female)	1.6	700	1400	100	0.4
ZXU2-2M3NM3NF-S	1/4(6.4)	3/8"NPTF(Male)	3/8"NPTF(Female)	2	700	1400	100	0.4
ZXU2-3M3NM3PF-S	1/4(6.4)	3/8"NPTF(Male)	3/8"PTF(Female)	3	700	1400	100	0.4
ZXU2-1.8M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	1.8	700	1400	100	0.4
ZXU2-2M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	2	700	1400	100	0.4
ZXU2-2.5M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	2.5	700	1400	100	0.4
ZXU2-3M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	3	700	1400	100	0.4
ZXU2-5.5M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	5.5	700	1400	100	0.4
ZXU2-6M3PM3PM-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Male)	6	700	1400	100	0.4
ZXU2-1.8M3PM3PF-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Female)	1.8	700	1400	100	0.4
ZXU2-2M3PM3PF-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Female)	2	700	1400	100	0.4
ZXU2-3M3PM3PF-S	1/4(6.4)	3/8"PTF(Male)	3/8"PTF(Female)	3	700	1400	100	0.4
ZXU3-2M3NM3NM-S	3/8(9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	2	700	1400	100	0.4
ZXU3-3M3NM3NM-S	3/8(9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	3	700	1400	100	0.4
ZXU3-4M3NM3NM-S	3/8(9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	4	700	1400	100	0.4
ZXU3-5M3NM3NM-S	3/8(9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	5	700	1400	100	0.4
ZXU3-6M3NM3NM-S	3/8(9.5)	3/8"NPTF(Male)	3/8"NPTF(Male)	6	700	1260	127	0.67
ZXU3-2M3PM3PF-S	3/8(9.5)	3/8"PTF(Male)	3/8"PTF(Male)	2	700	1260	127	0.67
ZXU3-3M3PM3PM-S	3/8(9.5)	3/8"PTF(Male)	3/8"PTF(Male)	3	700	1260	127	0.67

High Pressure Manual Pump

ZSPHH

High Pressure Manual Pump

- Manual Pump include internal pressure relief valve for overload protection.



Optional
G= Pressure Gauge



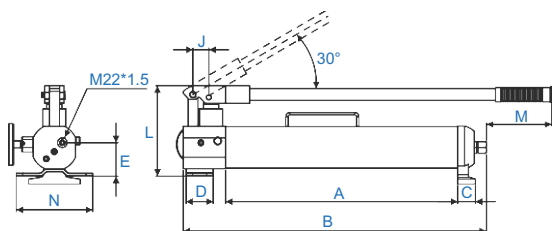
Optional Features

To add optional features to your pump, add the follows suffixes to the end of the model number.

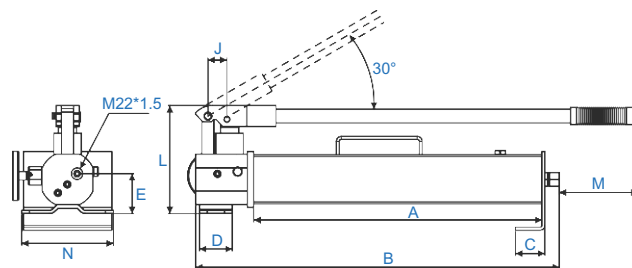
4 ways control Valve: Model D

Example:

ZSPHH-1612 with 4 ways control valve, order: ZSPHH-1612D. Technical specifications for these features are available from ZIPP.



ZSPHH-1612/2012/2512
ZSPHH-1620/2020/2520



ZSPHH-1630/2030/2530

Model Number	Pump Type	Usable Oil Capacity cm ³	Pressure Rating		Oil Displacement per Stroke		Piston Stroke mm	Dimensions (mm)								Weight kg	
			1 st stage	2 nd stage	1 st stage	2 nd stage		A	B	C	D	E	J	L	M		N
			bar		cm ³												
ZSPHH-1612	Two-Speed	1200	14	1600	15.5	1.2	16.65	425	556	32.5	50	61	29	165	120	140	9
ZSPHH-2012		1200	14	2000	15.5	0.9	16.65	425	556	32.5	50	61	29	165	120	140	9
ZSPHH-2512		1200	14	2500	15.5	0.7	16.65	425	556	32.5	50	61	29	165	120	140	9
ZSPHH-1620		2200	14	1600	15.5	1.2	16.65	425	556	32.5	50	61	29	165	120	140	11
ZSPHH-2020		2200	14	2000	15.5	0.9	16.65	425	556	32.5	50	61	29	165	120	140	11
ZSPHH-2520		2200	14	2500	15.5	0.7	16.65	425	556	32.5	50	61	29	165	120	140	11
ZSPHH-1630		3000	14	1600	15.5	1.2	16.65	440	556	45	50	61	29	165	120	140	13
ZSPHH-2030		3000	14	2000	15.5	0.9	16.65	440	556	45	50	61	29	165	120	140	13
ZSPHH-2530		3000	14	2500	15.	0.7	16.65	440	556	45	50	61	29	165	120	140	13

ZSPE-200RI

High Pressure Hydraulic Electric Pump

- The adoption of a magnet motor reduces the noise remarkably. Lightweight, compact, and easy to transport .Ideal for site work such as shipyard and civil engineering construction.
 - The durability has been improved while the performances are maintained.
 - A pressure gauge and a pressure switch are included in each model.
 - Motor auto stop working and hold pressure as reach setting pressure .
 - Automatic high-low pressure switching for improved work efficiency.
- ✘The pressure gauge and switch are exclusive to the ZSPE-200R - series. Consult us when them with other series.

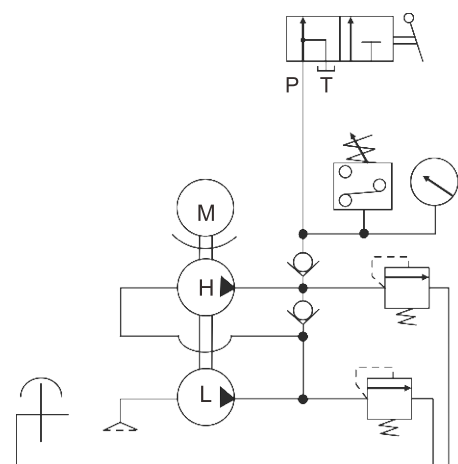
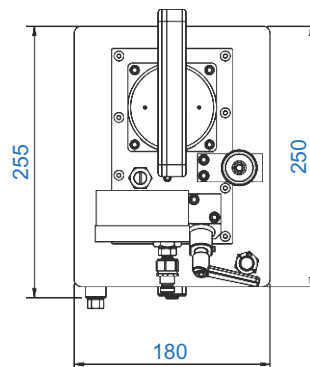
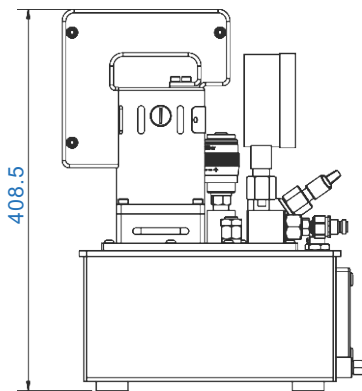


ZSPE-200RI

Custom build your Electric Pump

ZSPE-200RI - 2 1 4 3 C
1 2 3 4 5 6

- 1.Voltage
200RI= 0.625HP(0.5kw)
- 2.Voltage/A
1= 110V/12A
2= 220V/7A
- 3.Phase
1= 1ph
- 4.Reservoir
4= 4L
- 5.Valve
3= 3way/ 2position Manual Valve
- 6.fitting
C= Remote control
G= Pressure Gauge



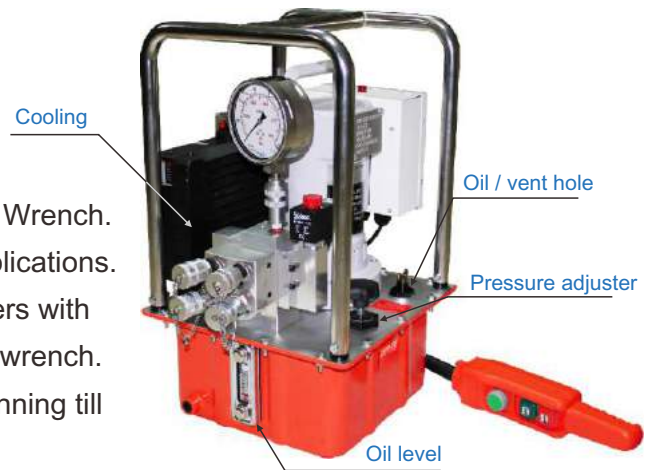
ZSPE-200RI-2143C

Model Number	Motor kW(hp)	Max. Pressure psi(bar)	Pressure Rating		Output flow rate		Weight include oil kg
			1 st stage psi(bar)	2 nd stage psi(bar)	1 st stage L(min)	2 nd stage L(min)	
ZSPE-200RI	0.5(0.625)	29000(2000)	435(30)	29000(2000)	2	0.1	19

ZSPE-554

Hydraulic Electric/Torque Wrench Pump

- External adjustable pressure regulator.
- Retract side internal relief valve protects tool.
- ZSPE-554TQ series: just use with Hydraulic Torque Wrench.
- ZSPE-554TQJ series: just use with Hydraulic lift applications.
- Opt eight 1/4" ports (include female and male couplers with dust cap), that can synchronize work for 4 hydraulic wrench.
- It can be set automatic stop moving as motor idle running till 20
- Safety start: After stopping, need to press another start button to continue.
- Heat Exchanger Kit: Design air cooling to avoid pump overheating and costly repair from long work periods.



ZSPE-554TQ

Custom build your Electric/Torque Wrench Pump:

ZSPE-554 TQJ 1 5 1 8 2 WOG

0 1 2 3 4 5 6

O.Type

TQ= just use in Torque Wrench
TQJ= using in lift applications

1.Voltage

1= 115V
2= 230V

2.Hz

5= 50Hz | 60Hz

3.Phase

1= single phase

4.Reservoir (Lx0.26= gal)

8= 8L(2.1 gal)
20= 20L(5.2gal)

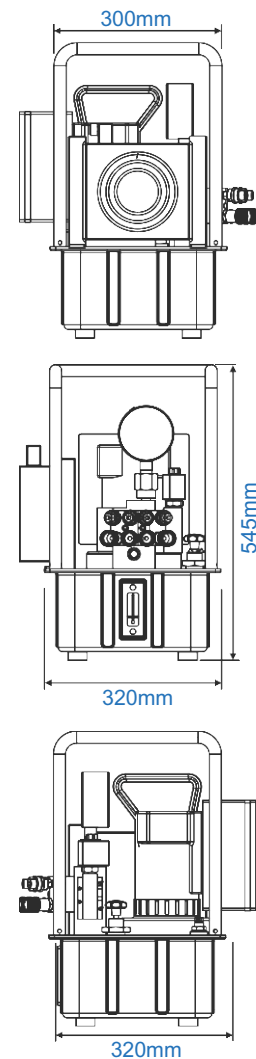
*User can order suitable reservoir.

5.Manifold (include 1/4" male-female coupler)

1= 1 manifold with 1 male and 1 female coupler
2= 1 manifold with 2 male and 2 female couplers (standard)
3= 1 manifold with 3 male and 3 female couplers
4= 1 manifold with 4 male and 4 female couplers

6.Optional

W= Wheel
O= Cool system
G= Pressure Gauge

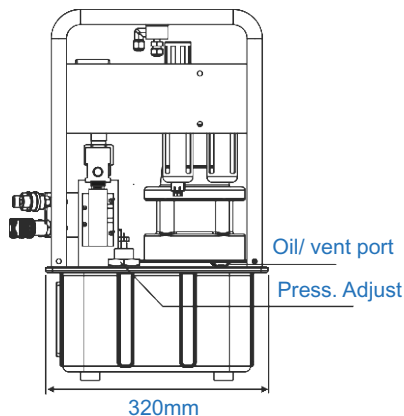
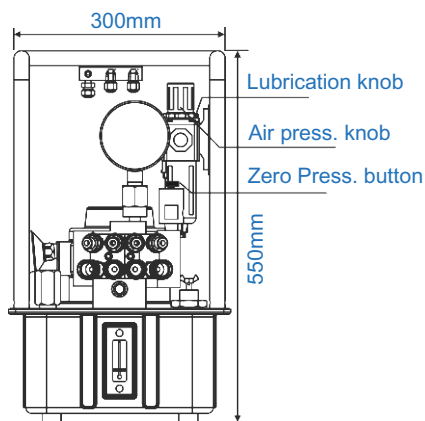


Model Number	rpm	dB(A) at Idle and 700bar	Motor kW(hp)	Amp at 700bar A	Flow rate @115VAC(l/min)				oil tank L	Usable oil L	Weight with oil kg
					0(bar)	50(bar)	350(bar)	700(bar)			
ZSPE-554	12000	80	0.84(1-1/8)	20/110V	11.3	7.1	1.2	0.9	8	7	32
				13/230V							

ZSPA-554

Hydraulic Air/Torque Wrench Pump

- Powerful 4 hp motor starts under load.
- Use where air is the preferred source of power.
- Max. Pressure: 700bar
- Two speed high performance pump.
- External adjustable pressure regulator.
- Retract side internal relief valve protects tool
- Opt eight 1/4" ports (include female and male couplers with dust cap), that can synchronize work for 4 hydraulic wrench.
- Use for Hydraulic torque Wrench
- Pneumatic remote control with 5M cord.



Optional
G= Pressure Gauge



ZSPA554TQ-A-A1
Pneumatic remote

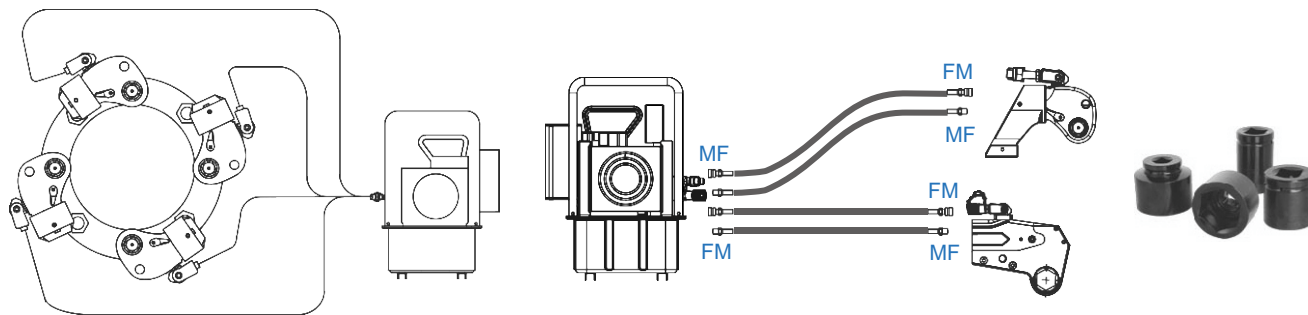
Model Number	Air Supply Req'd	rpm	dB(A) at Idle and 700bar	Motor	Flow rate (l/min)				oil tank	Weight with oil
				hp	0(bar)	70(bar)	350(bar)	700(bar)	L	kg
ZSPE-554	1.4M ³ /min @6 bar	3000	75	4	7.4	1.3	1.1	0.9	8	38.5



Torque Wrench Hoses:

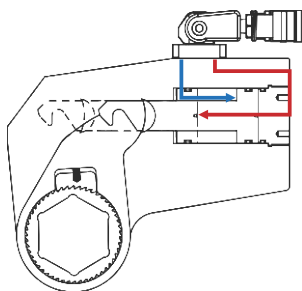
Use ZIPP ZXU22W series torque wrench hoses with every model torque wrench to ensure the integrity of your hydraulic system.

Model Number	Tube Dia.	Length		Motor		W.P	B.P
	inch	ft	m	inch	inch	bar	bar
ZXU22W-6M2NM2NM	1/4	20	6	1/4	1/4	700	2800
ZXU22W-12M2NM2NM	1/4	40	12	1/4	1/4	700	2800



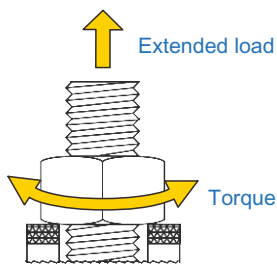
Basic System Set-up

- A. 1 Hydraulic Torque Wrench using Electric Pump +1 Square Drive Wrench +Socket +2 hoses
- B. 1 Hydraulic Torque Wrench using Electric Pump +1 Low Profile Wrench +2 hoses
- C. 1 Hydraulic Torque Wrench using Electric Pump +1~4 Square Drive Wrench (+Socket) or 1~4 Low Profile Wrench +2~8 hoses



Oil Path
← Advance
→ Return

Wrench Torque Formula
 $T = F \times r$
 Torque = Force x Lever Arm Length
 Ex.: 1000kN x 60mm = 60000 N.m



Bolt Load- Torque Formula

$T = K \times D \times N$
 T: Torque
 K: Friction Factor
 D: Bolt O.D
 N: Bolt extended Load = Stress area x Yield strength x Percent of Yield
 Ex.: M16

$$N = \frac{0.7854 \times (16 - 0.9382 \times 2)^2}{\text{Stress area mm}^2} \times \frac{896}{\text{Yield strength N/mm}^2} \times \frac{80\%}{\text{Percent of Yield}} / 1000 = 112N$$

$$T = \frac{0.14}{\text{Friction Factor}} \times \frac{16}{\text{Bolt O.D mm}} \times \frac{112N}{\text{Bolt Load}} = 252N.m$$



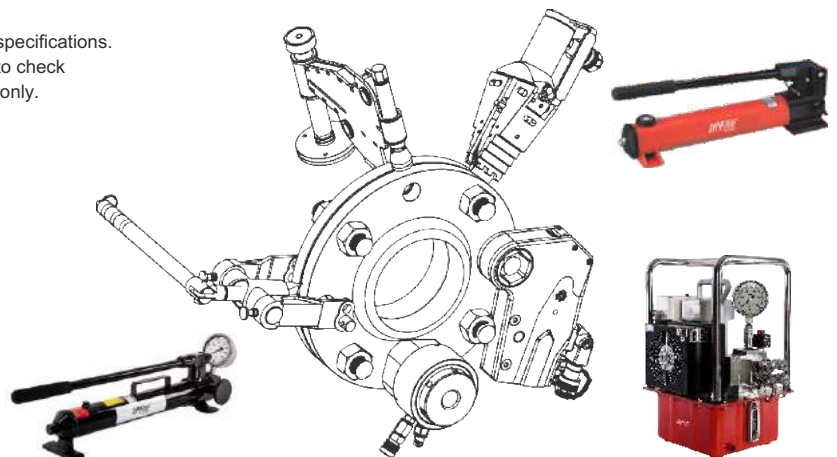
Hydraulic Air Pump for Torque Wrench

Bolt grade	Tension strength	Yield strength(90%)	Tightening moment															
	RM(N/mm ²)	Rp0.2(N/mm ²)	N.m															
6.8	600	480	μ= 0.1	110	160	220	300	390	570	770	1050	1350	1740	2160	2690	3250	4180	5190
			μ= 0.15	150	200	290	400	500	740	1000	1370	1760	2280	2820	3530	4250	5490	6800
			μ= 0.2	170	240	340	460	590	870	1180	1610	2060	2690	3320	4160	5000	6470	8020
8.8	800	640	μ= 0.1	150	210	300	410	520	760	1030	1400	1790	2320	2880	3590	4330	5570	6920
			μ= 0.15	200	270	390	530	670	990	1340	1820	2340	3040	3760	4170	5660	7320	9070
			μ= 0.2	230	320	450	630	780	1160	1570	2140	2750	3580	4430	5550	6670	8630	10700
B.7 (≤2-1/2")	min. 860	min. 720	μ= 0.1	180	250	350	470	600	880	1190	1610	2080	2690	3330	4150	5010	6440	8000
			μ= 0.15	230	320	450	610	770	1140	1550	2100	2700	3520	4350	5450	6550	8450	10490
			μ= 0.2	270	370	530	720	910	1340	1820	2480	3180	4140	5120	6420	7710	9980	12370
10.9	1000	900	μ= 0.1	220	310	440	600	760	1110	1510	2050	2640	3410	4230	5280	6360	8180	10160
			μ= 0.15	290	400	570	780	980	1450	1970	2680	3430	4460	5530	6920	8320	10740	13330
			μ= 0.2	340	470	670	920	1150	1710	2310	3150	4040	5260	6500	8150	9790	12670	15710
12.9	1200	1080	μ= 0.1	260	370	510	700	890	1300	1770	2400	3080	3990	4950	6170	7440	9570	11890
			μ= 0.15	340	470	670	920	1150	1700	2300	3130	4020	5220	6470	8090	9740	12570	15590
			μ= 0.2	400	550	780	1080	1340	2000	2700	3680	4720	6150	7610	9540	11460	14830	18380
			M	16	18	20	22	24	27	30	33	36	39	42	45	48	52	56

Bolt grade	Tension strength	Yield strength(90%)	Tightening moment															
	RM(N/mm ²)	Rp0.2(N/mm ²)	N.m															
6.8	600	480	μ= 0.1	6440	7320	8520	9920	10170	10460	11720	13250	14690	16540	19650	20900	23780	25570	
			μ= 0.15	8480	9620	11230	13100	13470	13880	15580	17660	19620	22130	26360	28080	31980	34430	
			μ= 0.2	10010	11350	13270	15510	15960	16460	18510	21000	23350	26370	31450	33530	38210	41160	
8.8	800	640	μ= 0.1	8590	9760	11360	13220	13560	13950	15620	17670	19590	22060	26200				
			μ= 0.15	11300	12830	14970	17470	17960	18510	20780	23550	26160	29510	35150				
			μ= 0.2	13350	15140	17690	20680	21280	21950	24670	28000	31140	35150	41930				
B.7 (≤2-1/2")	min. 860	min. 720	μ= 0.1	9930	11280	13130	15290	15680	16130	18060	20430	22650	25510					
			μ= 0.15	13060	14830	17310	20200	20770	21400	24020	27250	30250	34120					
			μ= 0.2	15430	17500	20460	23910	24610	25380	28530	32380	36000	40650					
10.9	1000	900	μ= 0.1	12610	14330	16680	19420	19920										
			μ= 0.15	16600	18840	21990	25660	26380										
			μ= 0.2	19600	22240	25990	30370	31260										
12.9	1200	1080	μ= 0.1	14760	16770	19520												
			μ= 0.15	19430	22050	25730												
			μ= 0.2	22940	26020	30410												
			M	60	64	68	72	76	80	85	90	95	100	110	115	120	125	

Nominal thread size [mm]

The data above is based on bolts lubricated to manufacturer's specifications. Due to a variation in friction, we recommend in extreme cases to check with the bolt manufacturer, as this chart represents a guideline only.



Hydraulic Pumps

These pumps are designed and engineered specifically for the most rigorous conditions and to work seamlessly with the full range of ZAT, ZLW, ZBT, ZDANS, ZQD tools.

Electric Powered Torquing

Air Powered Torquing



ZBTE39-10K
Light Duty,
Low Amp Draw



ZBTE2-10K
Medium Duty,
Industry Workhorse



ZBTE45-10K
Heavy Duty,
High Speed Applications



ZBTA2-10K
Medium Duty,
Industry Workhorse

4-Port manifold is now standard on all ZBCE2 & ZBTA2 Torque Wrench Pumps - allowing the use of up to four tools simultaneously!

Air Powered Tensioning / Nut Splitting

Electric Powered Tensioning

Hand Pump



ZTP30K-HN



ZTP30K-SSN & ZTP30K-DAN



ZTP30K-E2-110



Z16P80-1

Electric Powered Torquing

Item Number	Power	Amps	Fluid	Max Pressure psi(bar)	Max flow cu. In./min(l/sec)	Fluid Capacity Gal(L)	Dimension (Height x Width x Depth) inch(mm)	Weight-Filled lbs(kgs)
ZBTE39-10K	110/115 VAC	14.5	Oil	10,000(690)	225(0.061)	0.5(1.89)	23.7 x 10.8 x 13.8(600 x 274 x 350)	47(21.3)
ZBTE2-10K-4P*	110/115 VAC	25	Oil	10,000(689)	704(0.1923)	2.5(9.4)	18.1 x 17.1 x 9.5(460 x 434 x 241)	62(28)
ZBTE45-10K*	110/115 VAC	17	Oil	10,000(690)	575(0.157)	1.5(6.75)	26.6 x 14 x 17.7(675 x 356 x 450)	98(37.6)

*Special Features: 4-Port, Dual Cooling, Speeds up to 2x as fast

*Four-tool manifold allows use of up to four tools simultaneously

Air Powered Torquing

Item Number	Power	Fluid	Max Pressure psi(bar)	Max flow cu. In./min(l/sec)	Fluid Capacity Gal(L)	Dimension (Height x Width x Depth) inch(mm)	Weight-Filled lbs(kgs)
ZBTA2-10K	Air	Oil	10,000(690)	465(0.127)	2.5(9.4)	19.83 x 16.55 x 9.5(504 x 420 x 241)	74(44.4)

*Special Features: 3HP Air Motor, 50 cfm at 80 psi

*Four-tool manifold allows use of up to four tools simultaneously

Air Powered Tensioning / Nut Splitting

Item Number	Power	Fluid	Max Pressure psi(bar)	Max flow cu. In./min(l/sec)	Fluid Capacity Gal(L)	Dimension (Height x Width x Depth) inch(mm)	Weight-Filled lbs(kgs)
ZTP30K-HN	Air	Oil	30,000(2068)	17(0.0048)	2(7.6)	19.5 x 12.5 x 11.5(495 x 318 x 292)	46(20.9)
ZTP30K-SSN (Sub Sea Tensioning)	Air	Water	30,000(2068)	85(0.0232)	3(11.4)	19.5 x 12.5 x 11.5(495 x 318 x 292)	46(20.9)
ZTP30K-DAN (Nut Splitting)	Air	Oil	30,000(2068)	85(0.0232) ADV 135(0.0368) RET	2(7.6)	20.3 x 16 x 16(514 x 406 x 406)	74(33.6)

Electric Powered Tensioning

Item Number	Power	Amps	Fluid	Max Pressure psi(bar)	Max flow cu. In./min(l/sec)	Fluid Capacity Gal(L)	Dimension (Height x Width x Depth) inch(mm)	Weight-Filled lbs(kgs)
ZTP30K-E2-110	110/115 VAC	11	Oil	21,750(1500)	168(0.046)	1(3.8)	16.3 x 7.8 x 14.1(414 x 198 x 358)	53.5(24.3)

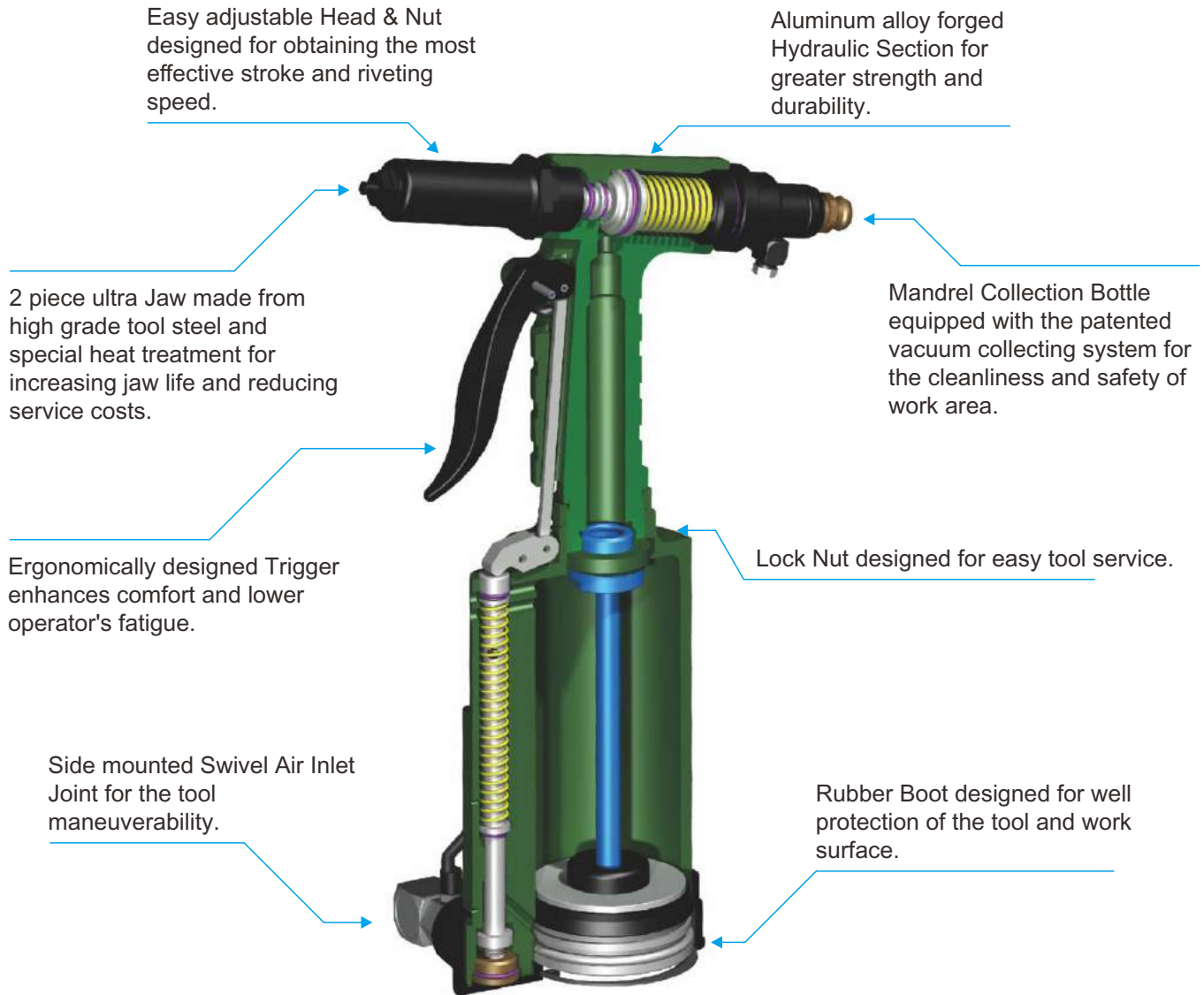
Hand Pump

Item Number	Power	Fluid	Max Pressure psi(bar)	Max flow cu. In./min(l/sec)	Fluid Capacity Gal(L)	Dimension (Height x Width x Depth) inch(mm)	Weight-Filled lbs(kgs)
Z16P80-1	Mechanical	Oil	23,206(1600)	N/A	0.6(2.3)	11 x 4.8 x 27(297 x 120 x 686)	20(9)

*Hose not included.

Full Aluminum Housing Series

Features



Applications

Wherever the fastening methods like: welding, sheet metal screw, bolt, nut, washer, tubular, semi-tubular and solid rivets and adhesives are applied, can be substituted by blind rivets. All models above are good for setting standard blind rivets and structural blind rivets.

Patent pending in other countries



R.O.C.PAT.:
092648



P.R.C.PAT.:
ZL 94 2 22569.4



U.S.A.PAT.NO.:
6,149,356



ZT0318VS

5/32" Air Hydraulic Riveter
(Vacuum type)

Max. 4.0mm blind rivet in Alum./Steel



ZT0618VS

3/16" Air Hydraulic Riveter
(Vacuum type)

Max. 4.8mm blind rivet in Steel/Steel



ZT0918VS

3/16" Air Hydraulic Riveter
(Vacuum type)

Max. 4.8mm blind rivets in all materials



[Accessories]

- Riveter X 1
- Small Wrench X 1
- Large Wrench X 1
- Collection Bottle X 1

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Air inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Nosepieces Equipped inch(mm)
ZT0318VS	770(350)	11/16(18)	2.86(1.3)	90(6.2)	1/4	3/8(10)	3/32(2.4)1/8(3.2) 5/32(4.0)
ZT0618VS	1,320(596)	11/16(18)	3.41(1.55)	90(6.2)	1/4	3/8(10)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)
ZT0918VS	1,983(900)	11/16(18)	4.07(1.85)	90(6.2)	1/4	3/8(10)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)



ZT1214VS-5

3/16" Air Hydraulic Riveter
(Vacuum type)

Max. 4.8mm blind rivets in all materials



ZT1214VS-6

1/4" Air Hydraulic Riveter
(Vacuum type)

Max. 6.4mm blind rivet in Steel/Steel



ZT1819VS

1/4" Air Hydraulic Riveter
(Vacuum type)

Max. 6.4mm blind rivets in all materials



[Accessories]

- Riveter X 1
- Small Wrench X 1
- Large Wrench X 1
- Collection Bottle X 1

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Air inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Nosepieces Equipped inch(mm)
ZT1214VS-5	2,640(1,200)	9/16(14)	4.27(1.94)	90(6.2)	1/4	3/8(10)	5/32(4.0) 3/16(4.8)
ZT1214VS-6	2,640(1,200)	9/16(14)	4.27(1.94)	90(6.2)	1/4	3/8(10)	3/16(4.8) 1/4(6.4)
ZT1819VS	3,960(1,800)	3/4(19)	5.27(2.6)	90(6.2)	1/4	3/8(10)	3/16(4.8) 1/4(6.4)



ZT0618T



ZT0918T



ZT1214T



ZT1819T



ZT0918L



ZT1214L



ZT1819L



ZT0918LV



ZT1214LV



ZT1819LV

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*T: Trigger Type, No-Vacuum. *L: Lever Type, No-Vacuum. *LV: Lever Type, With Vacuum

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT0618T	1,320(596)	11/16(18)	3.30(1.50)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	Max. 3/16"(4.8mm) blind rivets in steel/steel
ZT0918T	1,983(900)	11/16(18)	3.96(1.80)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	Max. 3/16"(4.8mm) standard & structural blind rivets in all materials
ZT1214T	2,460(1,200)	9/16(14)	4.16(1.89)	5/32(4.0)3/16(4.8) 1/4(6.4)	Max. 1/4"(6.4mm) blind rivets in steel/steel
ZT1819T	3,960(1,800)	3/4(19)	5.61(2.55)	3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) standard & structural blind rivets in all materials
ZT0918L ZT0918LV	1,983(900)	11/16(18)	3.96(1.80) 4.07(1.85)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	Max. 3/16"(4.8mm) standard & structural blind rivets in all materials
ZT1214L ZT1214LV	2,460(1,200)	9/16(14)	4.16(1.89) 4.27(1.94)	5/32(4.0)3/16(4.8) 1/4(6.4)	Max. 1/4"(6.4mm) blind rivets in steel/steel
ZT1819L ZT1819LV	3,960(1,800)	3/4(19)	5.60(2.55) 5.72(2.60)	3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) standard & structural blind rivets in all materials

*Operating Air Pressure: 90PSI/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Min. Hose Size: 3/8"(10mm)

Features

- Module unit mechanism enables more common parts to be used in similar designed tools.
- Designed with patented "Module units assembled in composite clam shell housing" for operator's comfort and ease of service.
- Ergonomic texture coated composite housing for operator's comfort.
- Build-in exhaust muffler to minimize the tool noise efficiently.
- Rocker type trigger for ease of operational control.
- Perfect tool for automotive & general industries.
- Optional Jaw Pusher & Nose Pieces for small size rivets.

Patented Vacuum Mandrel Collection System holds the rivets in the Nosepiece regardless of tool position also assure perfect shock absorption.



Aluminum alloy forged and heat treated Hydraulic Section for greater strength and durability.

The rear cap of Collection Bottle can be rotated to direct exhaust air at any direction.

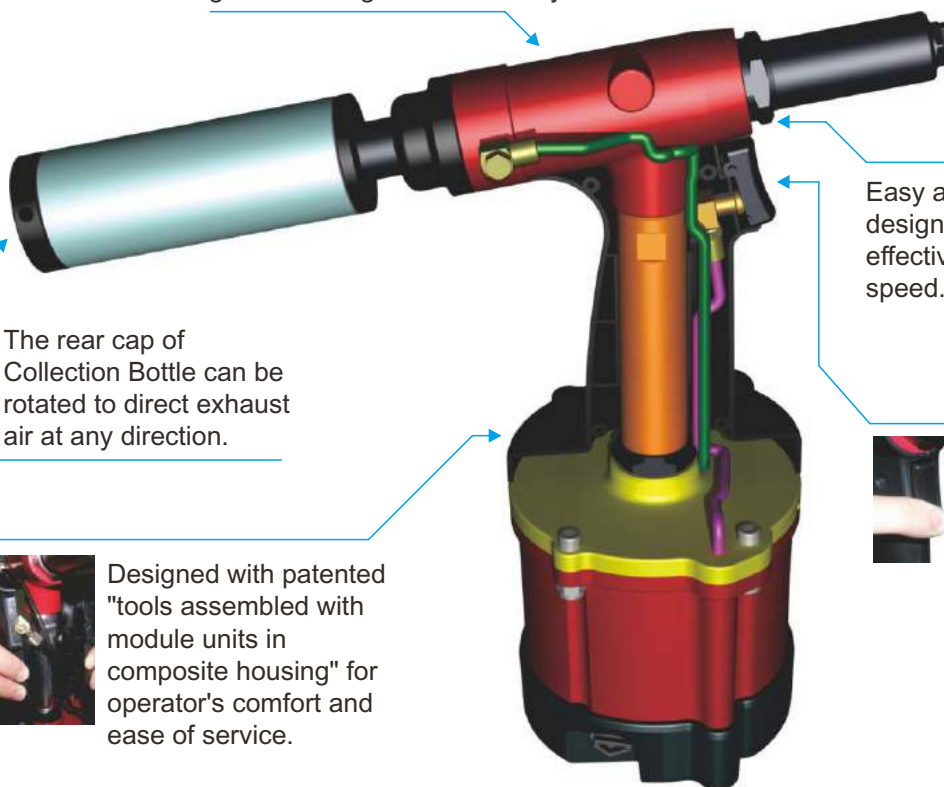


Designed with patented "tools assembled with module units in composite housing" for operator's comfort and ease of service.

Easy adjustable Head & Nut designed for obtaining the most effective stroke and riveting speed.



Rocker type Trigger, ideal for long time work.



Applications

Wherever the fastening methods like: welding, sheet metal screw, bolt, nut, washer, tubular, semi-tubular and solid rivets and adhesives are applied, can be substituted by blind rivets. All models above are good for setting standard blind rivets and structural blind rivets.

Patent pending in other countries



R.O.C.PAT.:
092648



P.R.C.PAT.:
ZL 94 2 22569.4



U.S.A.PAT.NO.:
6,149,356



DEUTSCHLAND PAT.:
Nr.20 2007 007 127.2



ZT1017VSN-5

3/16" Air Hydraulic Riveter
(Vacuum type)

Max. 4.8mm blind rivets in all materials



[Accessories]

- Riveter X 1
- Small Wrench X 1
- Large Wrench X 1
- Collection Bottle X 1

Optional

- P/N 1017VSN-1
1/4"(6.4mm) Pulling Kit
- P/N 1017VSN-2
3/32" & 1/8"(2.4mm & 3.2mm) Pulling Kit



ZT1017VSN-6

1/4" Air Hydraulic Riveter
(Vacuum type)

Max. 6.4mm blind rivets in Alum./Steel



[Accessories]

- Riveter X 1
- Small Wrench X 1
- Large Wrench X 1
- Collection Bottle X 1

Optional

- P/N 1017VSN-2
3/32" & 1/8"(2.4mm & 3.2mm) Pulling Kit
- P/N 1017VSN-3
5/32" & 3/16"(4.0mm & 4.8mm) Pulling Kit

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

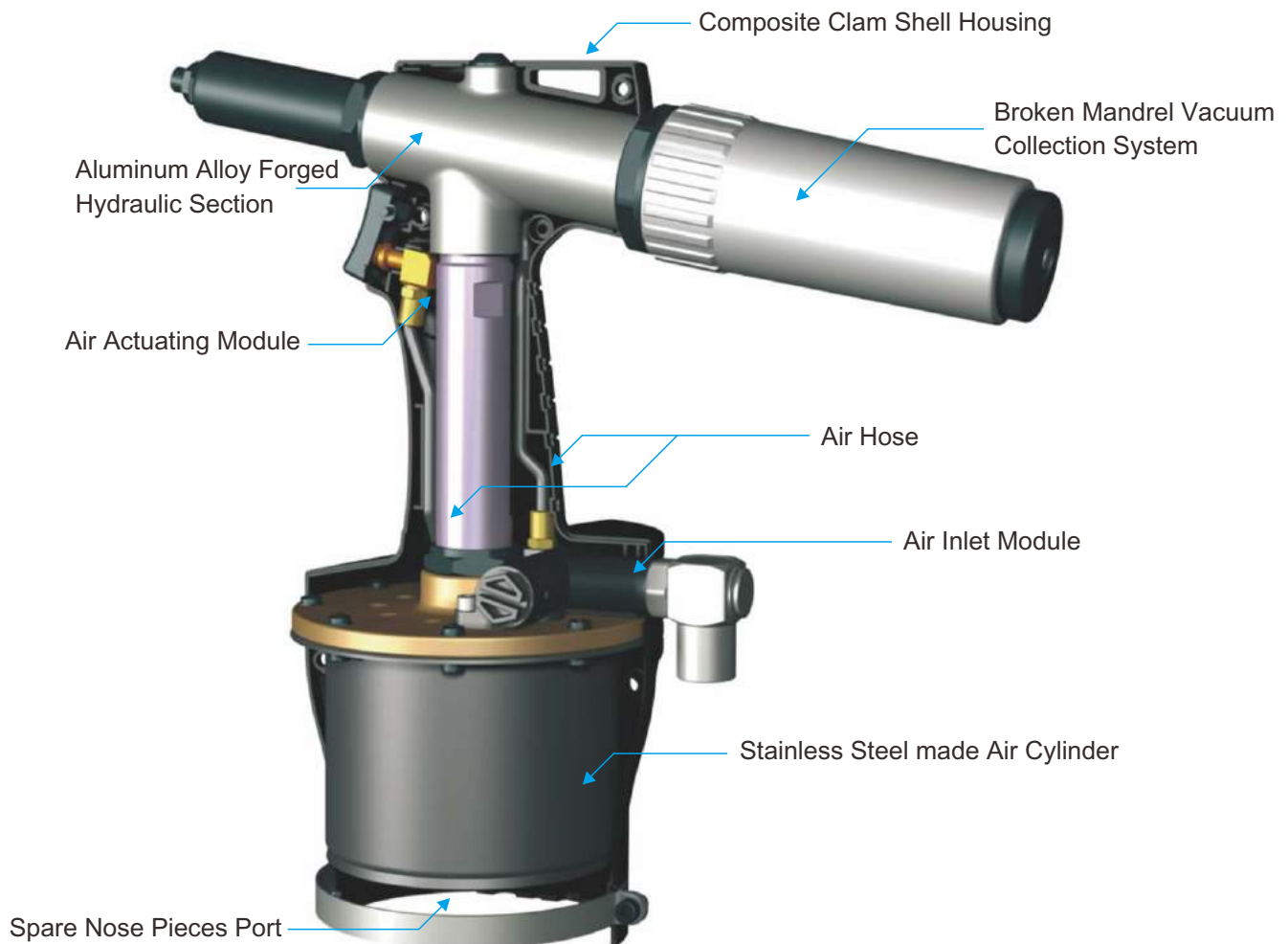
*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Air inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Nosepieces Equipped inch(mm)
ZT1017VSN-5	2,248(1,022)	43/64(17)	4.3(1.95)	90(6.2)	1/4	3/8(10)	5/32(4.0) 3/16(4.8)
ZT1017VSN-6	2,248(1,022)	43/64(17)	4.3(1.95)	90(6.2)	1/4	3/8(10)	1/4(6.4)

Full Composite Housing Series

Features

- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Patented "Broken mandrel vacuum collection system" for the cleanliness and safety of work area.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Stainless steel made Air Cylinder for the best rigidity and durability of the tool.
- Easy adjustable Head & Nut designed for obtaining the most effective stroke.
- Ergonomic texture coated composite housing for operator's comfort.
- Equipped with safety valve to avoid damage due to over pressure.
- Swivel air inlet design for maneuverability of works.
- The lightest model among compatible designs.



Patent pending in other countries



R.O.C.PAT.:
092648



P.R.C.PAT.:
ZL 94 2 22569.4



DEUTSCHLAND PAT.:
Nr.20 2007 007 127.2

Full Composite Housing Series



ZT0919VS

3/16" Composite Air Hydraulic Riveter

Max. 4.8mm standard & structural
blind rivets in all materials



ZT1821VS

1/4" Composite Air Hydraulic Riveter

Max. 6.4mm standard & structural
blind rivets in all materials

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

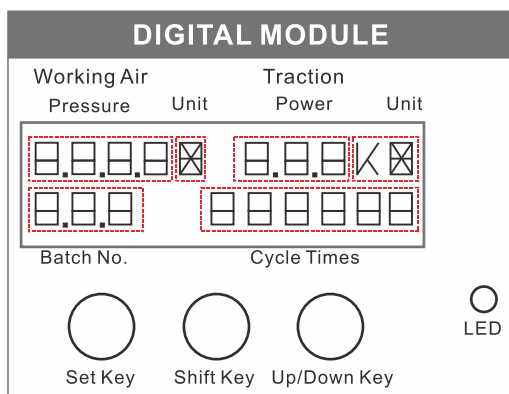
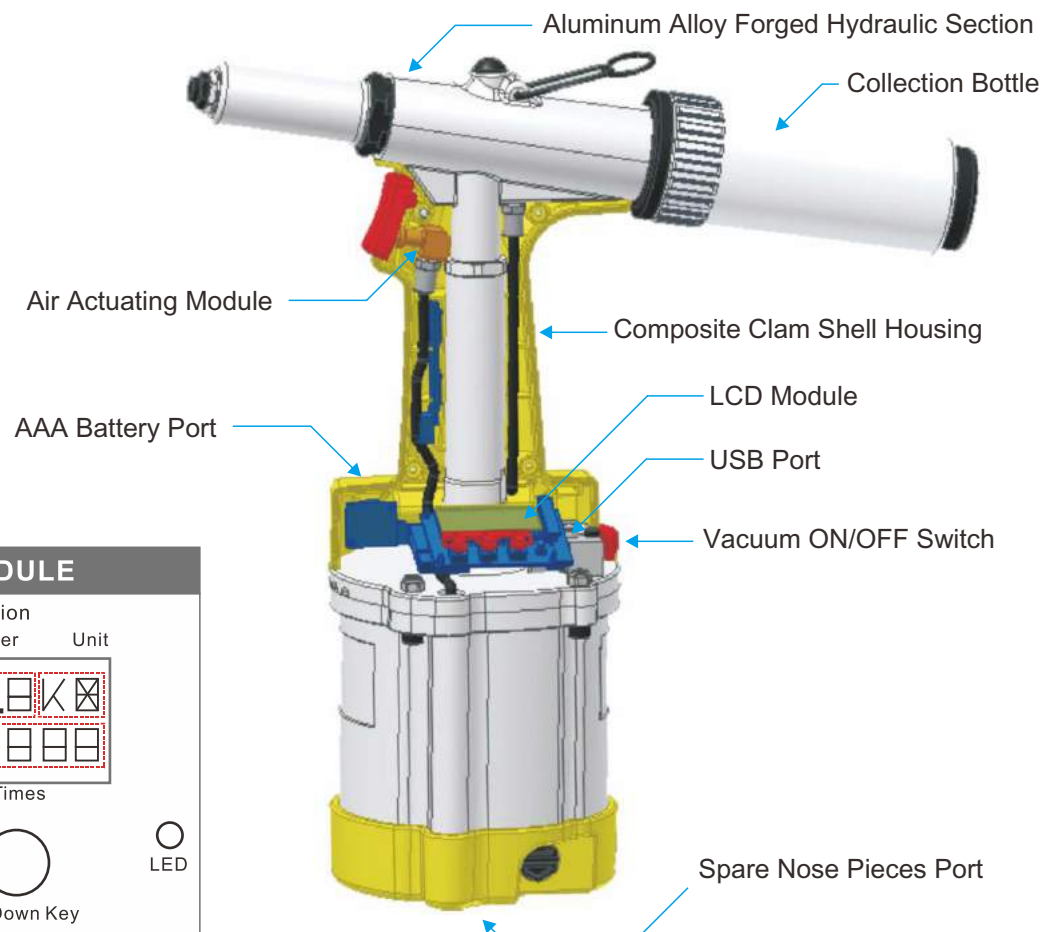
*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Nosepieces Equipped inch(mm)
ZT0919VS	1,980(900)	3/4(19)	3.3(1.5)	90(6.2)	1/4	3/8(10)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)
ZT1821VS	4,013(1,800)	13/16(21)	5.1(2.3)	90(6.2)	1/4	3/8(10)	3/16(4.8)1/4(6.4)

Air Hydraulic Blind Rivet Installation Tool

Features

- Features with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period.
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Patented "Broken mandrel vacuum collection system" for the cleanliness and safety of work area.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Easy adjustable Head & Nut designed for obtaining the most effective stroke.
- Ergonomic texture coated composite housing for operator's comfort.
- Swivel air inlet design for maneuverability works.



Patent pending in other countries



R.O.C.PAT.:
355976



R.O.C.PAT.:
092648



P.R.C.PAT.:
ZL 94 2 22569.4



U.S.A.PAT.NO.:
6,149,356



DEUTSCHLAND PAT.:
Nr.20 2007 007 127.2

Air Hydraulic Blind Rivet Installation Tool



W/Digital Module

ZT0520/ZT0520D
ZT0715/ZT0715D

5/32" Air Hydraulic Riveter
3/16" Air Hydraulic Riveter



W/Digital Module

ZT0922/ZT0922D
ZT1218/ZT1218D

3/16" Air Hydraulic Riveter
1/4" Air Hydraulic Riveter



W/Digital Module

ZT1528/ZT1528D
ZT1725/ZT1725D

1/4" Air Hydraulic Riveter



W/Digital Module

ZT2021/ZT2021D
ZT2318/ZT2318D

1/4" Air Hydraulic Riveter



W/Digital Module

ZT2021-8/ZT2021D-8
ZT2318-8/ZT2318D-8

5/16" Air Hydraulic Riveter

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT0520 ZT0520D	1,100(500)	51/64(20)	3.8(1.7)	3/32(2.4)1/8(3.2) 5/32(4.0)	Max. 5/32"(4.0mm) structural rivets in all materials
ZT0715 ZT0715D	1,500(700)	19/32(15)	3.8(1.7)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	Max. 3/16"(4.8mm) blind rivets in steel/steel
ZT0922 ZT0922D	2,000(920)	7/8(22)	4.2(1.9)	5/32(4.0)3/16(4.8) Monobolt 3/16(4.8)	Max. 3/16"(4.8mm) structural rivets in all materials
ZT1218 ZT1218D	2,523(1,150)	23/32(18)	4.2(1.9)	5/32(4.0)3/16(4.8) 1/4(6.4)	Max. 1/4"(6.4mm) blind rivets in steel/steel
ZT1528 ZT1528D	3,300(1,500)	1-1/8(28)	5.6(2.5)	3/16(4.8)1/4(6.4) Monobolt 3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) structural rivets in all materials
ZT1725 ZT1725D	3,700(1,700)	63/64(25)	5.6(2.5)	3/16(4.8)1/4(6.4) Monobolt 3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) structural rivets in all materials
ZT2021 ZT2021D	4,400(2,000)	53/64(21)	5.6(2.5)	3/16(4.8)1/4(6.4) Monobolt 3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) structural rivets in all materials
ZT2021-8 ZT2021D-8	4,400(2,000)	53/64(21)	5.6(2.5)	5/16(7.8)	Max. 5/16"(7.8mm) blind rivets in steel/steel
ZT2318 ZT2318D	5,000(2,300)	23/32(18)	5.6(2.5)	3/16(4.8)1/4(6.4) Monobolt 3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) structural rivets in all materials
ZT2318-8 ZT2318D-8	5,000(2,300)	23/32(18)	5.6(2.5)	5/16(7.8)	Max. 5/16"(7.8mm) structural rivets in all materials

*Operating Air Pressure: 90PSI/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Min. Hose Size: 3/8"(10mm)

Features

- Sets 3/32" to 3/16" rivets with up to 1983 lbs. of pulling capacity
- Tougher and durable
- Easy operation
- Aluminum housing, strong & light weight.
- Simply structure, easy to service.
- Power by air only, no need refill hydraulic oil.
- Quick cycle times, 2.0 seconds on average.



ZAR0921
3/16" Air Riveter
ZAR0921V

3/16" Air Riveter-Vacuum



ZAR0818
3/16" Air Riveter
ZAR0818V

3/16" Air Riveter-Vacuum

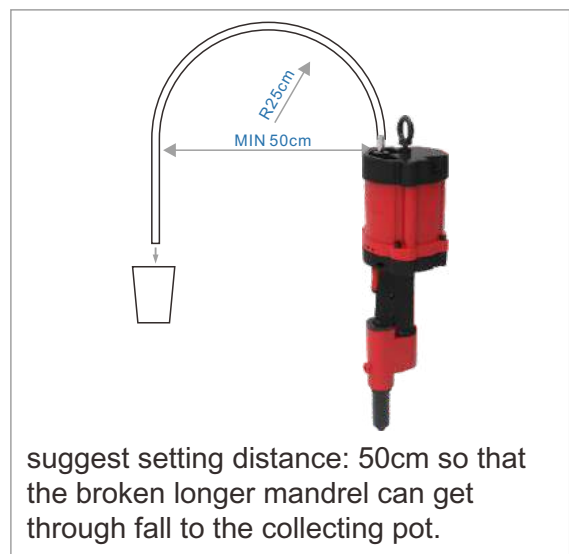
Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Avg. Air Cons. cu.ft/stroke	Min. Hose Size inch(mm)	Sound Pressure dB(A)	Vibration m/s ²	Nosepieces Equipped inch(mm)
ZAR0921 ZAR0921V	1,896(860)	3/4(19)	3.1(1.4)	60~90	0.03	3/8(10)	79	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)
ZAR0818 ZAR0818V	1,763(800)	23/32(18)	3.3(1.5)	60~110	-	3/8(10)	81	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)

Features

- Ergonomic in-line design.
- Vacuum mandrel collection system.
- Designed for assembly line with balancer approach.



ZIR0922
3/16" Air Hydraulic
In-Line Riveter-Vacuum



Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZIR0922	2,000(920)	7/8(22)	4.2(1.9)	5/32(4.0)3/16(4.8) Monobolt 3/16(4.8)	Max. 3/16"(4.8mm) structural rivets in all materials

Features

- Stronger Traction Power.
- Good Balance To Minimum Operator Fatigue.
- Trigger Is Comfortable Operation At Any Direction.
- Screw Plug Is Easy For Refilling Oil.
- Forged Aluminum Alloy For Strong Hydraulic Section.



ZT0616

5/32" Air Hydraulic Riveter

ZT0616V

5/32" Air Hydraulic Riveter-Vacuum

Max. 4.0mm standard & structural blind rivet in all material

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Min. Hose Size inch(mm)	Sound Pressure dB(A)	Vibration m/s ²	Nosepieces Equipped inch(mm)
ZT0616	1,300(600)	5/8(16)	3(1.4)	90(6.2)	3/8(10)	79	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0) all material
ZT0616V	1,500(700)	5/8(16)	3(1.4)	90(6.2)	3/8(10)	79	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0) all material

Economy Riveter



ZPR1016T

3/16" Air

Hydraulic Riveter



ZPR1016TK

3/16" Air

Hydraulic Riveter Kit



ZT1918T

1/4" Air

Hydraulic Riveter

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Avg. Air Cons. cu.ft/stroke	Min. Hose Size inch(mm)	Sound Pressure dB(A)	Vibration m/s ²	Nosepieces Equipped inch(mm)
ZPR1016T ZPR1016TK	2,304 (1,045)	5/8(16)	3.262 (1.48)	90(6.2)	0.125(3.5)	1/4(6.4)	70	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)
ZT1918T	4,200 (1,900)	23/32(18)	4.3(2)	90(6.2)	0.125(3.5)	3/8(10)	70	<2.5	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)1/4(6.4)

Features

- Reliable & compact design.
- Pure air riveter easy for service and no hydraulic fluid required.
- Max. capacity 4.8mm (3/16") aluminum blind rivets.

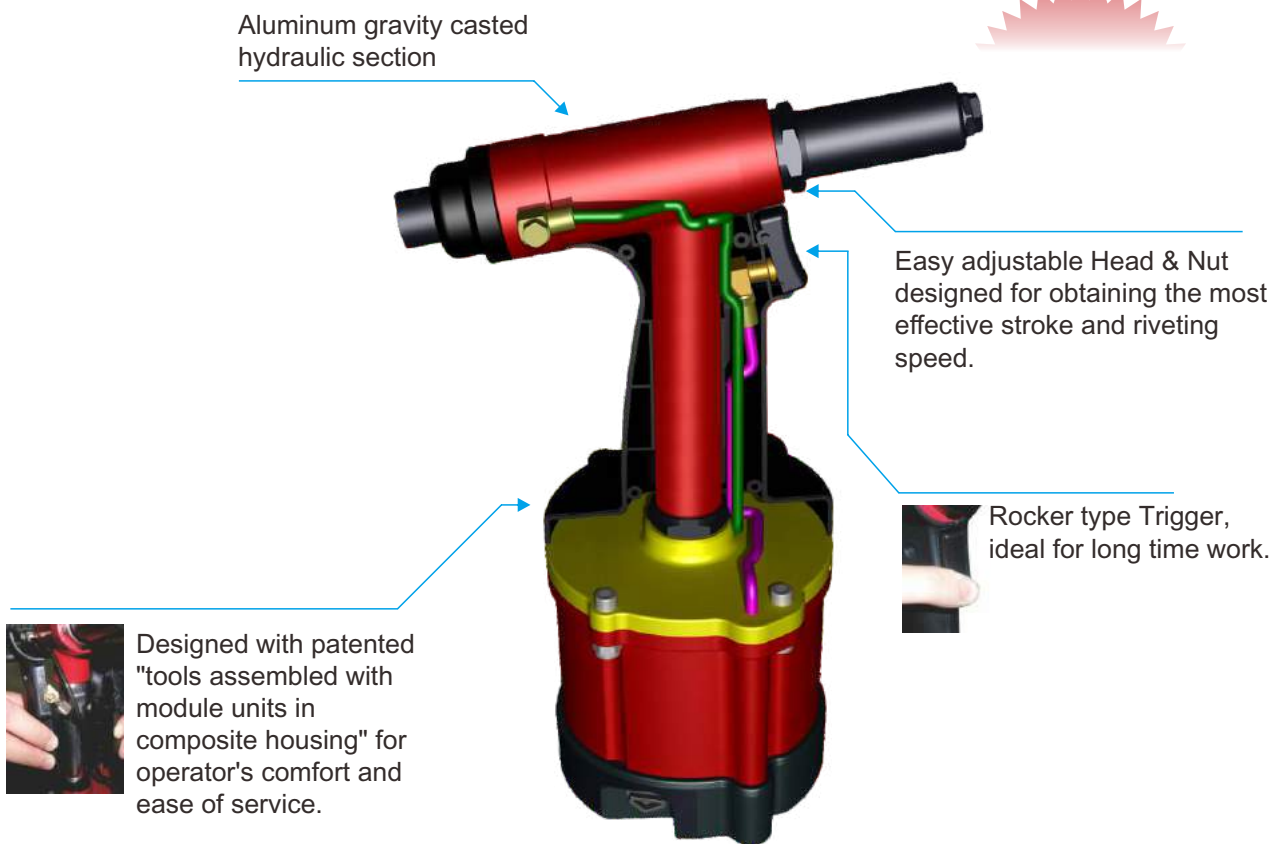


ZRG510

Model	Traction Power lbf(kgf)	Stroke Length mm	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Min. Hose Size inch(mm)	Air Inlet Size NPT	Blind Rivet Setting Capacity
ZRG510	1,000(454)	15	3.66(1.66)	90(6.2)	3/8(9.5)	1/8"	Standard blind rivets from 3/32", 1/8", 5/32" in all materials and 3/16" in Aluminum only

Features

- Module unit mechanism enables more common parts to be used in similar designed tools.
- Designed with patented "Module units assembled in composite clam shell housing" for operator's comfort and ease of service.
- Ergonomic texture coated composite housing for operator's comfort.
- Build-in exhaust muffler to minimize the tool noise efficiently.
- Rocker type trigger for ease of operational control.
- Perfect tool for automotive & general industries.
- Optional Jaw Pusher & Nose Pieces for small size rivets.



Applications

Wherever the fastening methods like: welding, sheet metal screw, bolt, nut, washer, tubular, semi-tubular and solid rivets and adhesives are applied, can be substituted by blind rivets. All models above are good for setting standard blind rivets and structural blind rivets.

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Operating Air Pressure psi(bar)	Air inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Nosepieces Equipped inch(mm)
ZT-1020 ZT-1020V	2,248(1,022)	43/64(17)	4.3(1.95)	90(6.2)	1/4	3/8(10)	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)1/4(6.4)




Aviation Blind Rivet Installation Tools






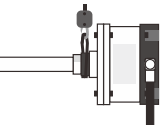
Features

- The ZT0922CM is an air hydraulic tool designed especially for installation of CherryMAX[®] and nut plate rivets.
- This tool utilizes straight, offset and right angle pulling heads, all of which can install -4, -5 and -6 diameter CherryMAX[®] bulb type rivets in all head styles, materials and grip lengths
- Features with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period. (Optional, model with " D" means with digital module)
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Patented "Broken mandrel vacuum collection system" for the cleanliness and safety of work area.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Swivel air inlet design for maneuverability works.



CherryMAX[®] is the registered trademark of Cherry Aerospace LLC.

CherryMAX [®] Straight Pulling Heads	CherryMAX [®] Compact Single Jaw Offset Pulling Heads	CherryMAX [®] Right Angle Pulling Heads
H701B-456 	H781B-456 	H753A-456 
Install: 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets	Stroke: 3/4" Weight: 0.5(0.23) lbs(kgs)	Install: 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets

Standard setup for 1M length			Standard setup for 3M length		
					
ZTXXXXX	HH1R/HH1N 1m * 1/8" I.D. hyd. hose kit w/quick release coupler	CHBT-004 Pouch	ZTXXXXX	HH3R/HH3N 3m * 1/4" I.D. hyd. hose kit w/quick change coupler	Hook on Spring balancer

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

*Below specification are measured with 1 meter length, 1/8" I.D hydraulic hose

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT0922CM ZT0922CMD	2,000(920)	7/8(22)	4.2(1.9)		
ZT1218CM ZT1218CMD	2,523(1,150)	23/32(18)	4.2(1.9)	Pulling head need to purchase separately.	Max. 3/16" (4.8mm) CherryMax Rivet
ZT0920SCM-1 ZT0920SCM-3	2,000(920)	51/64(20)	2.2(1) handle ass'y		

*Operating Air Pressure: 90PSI/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Min. Hose Size: 3/8"(10mm)



ZRA-48

3/16" Riveter Adaptor



ZRA-64

1/4" Riveter Adaptor



ZARA-48

3/16" Riveter Angle Adaptor

Model	Riveter Adaptor inch(mm)	Min. torque strength ft/lbs(Nm)	Max. rpm	Nosepiece inch(mm)	Hex shank inch(mm)	Dimension mm
ZRA-48	3/16(4.8)	8(11)	1,000	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	1/4(6.35)	59 x 158
ZRA-64	1/4(6.4)	37(50)	800	1/8(3.2)5/32(4.0) 3/16(4.8)1/4(6.4)	1/4(6.35)	59 x 173
ZARA-48	3/16"(4.8)	8(11)	1,000	3/32(2.4)1/8(3.2) 5/32(4.0)3/16(4.8)	1/4(6.35)	L195 x H185 x W58.5

Rivet Nut Adaptor Kit

Features

- A revolutionary accessory to insert rivet nuts.
- Simply attach this adaptor to your cordless, electric & pneumatic drills become a rivet nut tool.
- Can set up to max. M10 (3/8"-18) Round / Aluminum.

Applications

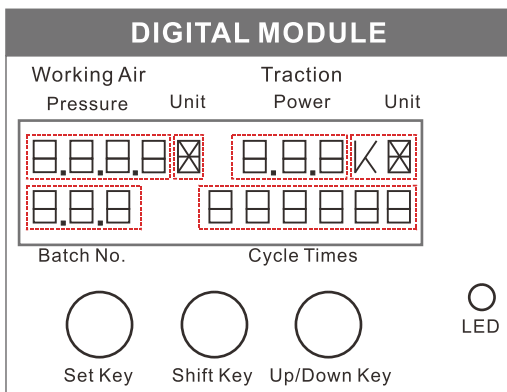
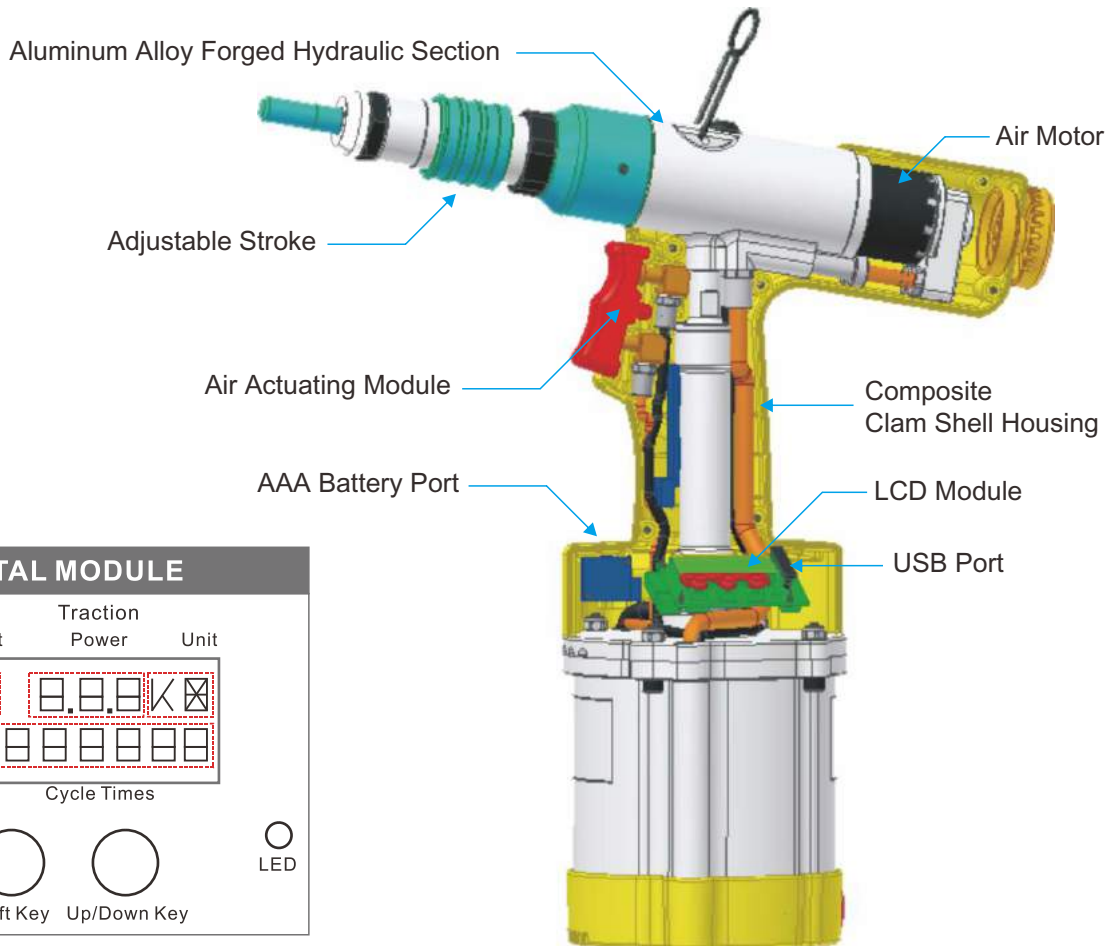
- Automotive aftermarket
- Small aircraft and boat repair
- Outdoor rivet nut insert jobs when there is no air supply.
- Residential and commercial construction
- General facility maintenance and repair



Model	Min. torque strength ft/lbs(Nm)	Max. rpm	Nut Nosepiece	Hex shank mm	Dimension mm
ZNRA-410D For Metric	73.7(100)	800	M4-M5-M6-M8-M10	8.00	59 x 180
ZNRA-410DE For Imperial	73.7(100)	800	#8-32, #10-24, #10-32 1/4"-20, 5/16"-18, 3/8"-16	8.00	59 x 180

Features

- Features with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period.
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Easy adjustable Head & Nut designed for obtaining the most effective stroke.
- Ergonomic texture coated composite housing for operator's comfort.
- Swivel air inlet design for maneuverability works.



Patent pending in other countries



R.O.C.PAT.:
355976



R.O.C.PAT.:
092648



P.R.C.PAT.:
ZL 94 2 22569.4



U.S.A.PAT.NO.:
6,149,356



DEUTSCHLAND PAT.:
Nr.20 2007 007 127.2



FOR IMPERIAL SYSTEM

Rivet Nut Tool

ZRN1606E
ZRN1606ED
W/Digital Module

ZRN1606M
ZRN1606MD
W/Digital Module

FOR METRIC SYSTEM



FOR IMPERIAL SYSTEM

Rivet Nut Tool

ZRN2508E
ZRN2508ED
W/Digital Module

ZRN2508M
ZRN2508MD
W/Digital Module

FOR METRIC SYSTEM



FOR IMPERIAL SYSTEM

Rivet Stud Tool

ZRS1606E
ZRS1606ED
W/Digital Module

ZRS1606M
ZRS1606MD
W/Digital Module

FOR METRIC SYSTEM



FOR IMPERIAL SYSTEM

Rivet Stud Tool

ZRS2508E
ZRS2508ED
W/Digital Module

ZRS2508M
ZRS2508MD
W/Digital Module

FOR METRIC SYSTEM

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

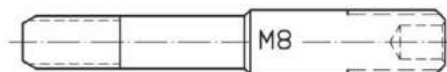
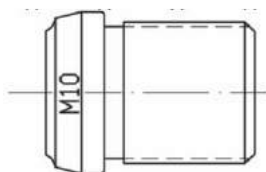
Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Rivet Nut / Rivet Stud Setting Capacity
ZRN1606E ZRN1606ED	3,500(1,600)	1/4(6)	4.9(2.2)	#8-32~3/8"-16 rivet nut in Hex./Steel 1/2"-13 need 100psi/7 bar operating pressure
ZRN1606M ZRN1606MD	3,500(1,600)	1/4(6)	4.9(2.2)	M4~M10 rivet nut in Hex./Steel M12 need 100psi/7 bar operating pressure
ZRN2508E ZRN2508ED	5,500(2,500)	5/16(8)	5.4(2.4)	#8-32~1/2"-13 rivet nut in all materials
ZRN2508M ZRN2508MD	5,500(2,500)	5/16(8)	5.4(2.4)	M4~M12 rivet nut in all materials
ZRS1606E ZRS1606ED	3,500(1,600)	1/4(6)	4.9(2.2)	#8-32~3/8"-16 rivet stud in all materials
ZRS1606M ZRS1606MD	3,500(1,600)	1/4(6)	4.9(2.2)	M4~M10 rivet stud in all materials
ZRS2508E ZRS2508ED	5,500(2,500)	5/16(8)	5.4(2.4)	#8-32~3/8"-16 rivet stud in all materials
ZRS2508M ZRS2508MD	5,500(2,500)	5/16(8)	5.4(2.4)	M4~M10 rivet stud in all materials

Parts Break Down For Rivet Nut/Rivet Stud:

Customers are welcome to order Bushing or Pull Rod separately.

Examples: order247B32+247A32= order complete set of M4 Bushing+Pull Rod
 order247B32= order M4 Bushing

Rivet Nut



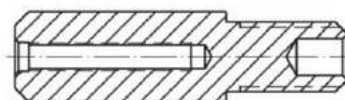
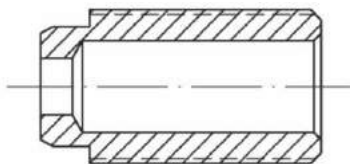
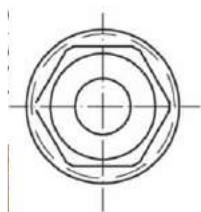
Bolt Bushing

Metric		inch	
P/N	Used For	P/N	Used For
258B11	M3	258B21	#6-32
258B12	M4	258B22	#8-32
258B13	M5	258B23	#10-24
258B14	M6	258B24	#10-32
258B15	M8	258B25	1/4"
258B16	M10	258B26	5/16"
258B17	M12	258B27	3/8"
		258B28	1/2"

Pull Rod

Metric		inch	
P/N	Used For	P/N	Used For
258A11	M3	258A21	#6-32
258A12	M4	258A22	#8-32
258A13	M5	258A23	#10-24
258A14	M6	258A24	#10-32
258A15	M8	258A25	1/4"-20
258A16	M10	258A26	5/16"-18
258A17	M12	258A27	3/8"-16
		258A28	1/2"-13

Rivet Stud



Bolt Bushing

Metric		inch	
P/N	Used For	P/N	Used For
247B32	M4	247B42	#8-32
247B33	M5	247B43	#10-24
247B34	M6	247B44	#10-32
247B35	M8	247B45	1/4"
247B36	M10	247B46	5/16"
		247B47	3/8"

Pull Rod

Metric		inch	
P/N	Used For	P/N	Used For
247A32	M4	247A42	#8-32
247A33	M5	247A43	#10-24
247A34	M6	247A44	#10-32
247A35	M8	247A45	1/4"-20
247A36	M10	247A46	5/16"-18
		247A47	3/8"-16

Features

- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Easy adjustable Head & Nut designed for obtaining the most effective stroke.
- Ergonomic composite housing for operator's comfort.
- Swivel air inlet design for maneuverability works.



Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Rivet Nut / Rivet Stud Setting Capacity
ZRN2308E	5,000(2,300)	5/16(8)	5.28(2.4)	3/8(9.5)	#8-32~3/8"-16 All materials
ZRN2308M	5,000(2,300)	5/16(8)	5.28(2.4)	3/8(9.5)	M4~M10 All materials

*Operating Air Pressure: 90PSI/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Working stroke: Variable adjustment: 1~8 mm (Max. 8mm)

Air Hydraulic Lock Bolt Installation Tool

Features

- Compatible with "ORIGINAL" HUCK® - C6L® & Magna Grip®, AVDEL® - Avdelok® & Maxlok® lock bolt and Magna-Lok® and BOM® nose assemblies.
- Features with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period.
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Ergonomic texture coated composite housing for operator's comfort.
- Swivel air inlet design for maneuverability of works.



DIGITAL MODULE				
Working Air Pressure	Unit	Traction Power	Unit	
□.□.□.□	⊗	□.□.□.□	⊗	
□.□.□		□.□.□.□.□.□.□.□		
Batch No.		Cycle Times		
○	○	○	○	LED
Set Key	Shift Key	Up/Down Key		

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT2318-HA ZT2318-HAD	5,000(2,300)	23/32(18)	5.6(2.5)	Compatible With for original HUCK® & AVDEL® nose assemblies	1/4" lock bolts

C6L®, Magna-Grip®, Magna-Lok® and BOM® are registered trademarks of Alcoa Fastening Systems & Rings.
Avbolt®, Monobolt®, Maxlok®, Avdelok® are registered trademarks of Stanley Engineered Fastening.



ZT2318H(D) W/Digital Module

1/4" Air Hydraulic Lock Bolt Tool







ZT2318B(D) W/Digital Module

1/4" Air Hydraulic Blind Bolt Tool

ZT2318HK(D) W/Digital Module

1/4" Air Hydraulic Lock Bolt Tool Kit

- ZT2318H(D) / ZT2318B(D) come with "ONE" nose assembly only.
- ZT2318HK(D) included with "FOUR" sets of lock bolt nose assemblies & 3/16", 1/4" blind rivet conversion kit.

Standard Nose Assembly	Optional Extended Nose Assembly
	
 For Fixed Grip Lock Bolts	
3/16" P/N: 202HC1 - Compatible with HUCK® tools 1/4" P/N: 231HC2 - Compatible with HUCK® tools	3/16" P/N: 202HC1L - Compatible with HUCK® tools 1/4" P/N: 231HC2L - Compatible with HUCK® tools
 For Multi Grip Lock Bolts	
3/16" P/N: 202HM1 - Compatible with HUCK® tools 1/4" P/N: 202HM2 - Compatible with HUCK® tools	3/16" P/N: 202HM1L - Compatible with HUCK® tools 1/4" P/N: 202HM2L - Compatible with HUCK® tools
 For Blind Bolts	
1/4" P/N: 202HB2	
	
Blind Rivet Conversion Kit	
P/N: 2318RS - 2pcs Jaws for 3/16" or 1/4" blind rivets	P/N: 2318RS-4 - 2pcs Jaws for 1/8" or 5/12" blind rivets P/N: 2318RS-8 - 3pcs Jaws for 5/16" blind rivets

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped	Max. Capacity
ZT2318H(D)	5,000(2,300)	23/32(18)	5.6(2.5)	Choose one of 202HM1, 202HC1, 202HM2 or 231HC2	1/4" lock bolts
ZT2318HK(D)	5,000(2,300)	23/32(18)	5.6(2.5)	Kit includes 202HM1, 202HC1, 202HM2 231HC2 & 2318RS Nose Assemblies	1/4" lock bolts
ZT2318B(D)	5,000(2,300)	23/32(18)	5.6(2.5)	P/N 202HB2	1/4" blind bolt






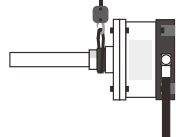
HUCK® is a registered trademark of Alcoa Fastening Systems & Rings.

Features

- The ZT1914CM is an air hydraulic Lock Bolt & Blind Bolt tool designed especially for installation of CherryMax® Lock Bolt & Blind Bolts.
- This tool utilizes straight, offset and right angle pulling heads, all of which can install -4, -5, -6 & -8 diameter CherryMax® Lock Bolt & Blind Bolt in all head styles, materials and grip lengths. (-8 diameter in Aluminum only)
- Features with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period.(Optional, model with "D" means with digital module)
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Swivel air inlet design for maneuverability works.



ZT1914CM(D)

Standard setup for 1M length				Standard setup for 3M length					
	+		+			+		+	
ZT1912CM-1		HH1R/HH1N 1m * 1/8" I.D. hyd. hose kit w/quick release coupler		CHBT-004 Pouch	ZT1912CM-3		HH3R/HH3N 3m * 1/4" I.D. hyd. hose kit w/quick change coupler		Hook on Spring balancer

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.

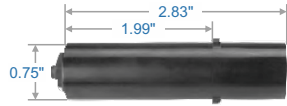
*Below specification are measured with 1 meter length, 1/8" I.D hydraulic hose

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight without nose assembly lbs(kgs)	Max. Capacity
ZT1914CM	4,200(1,900)	9/16(14)	5.7(2.6)	-4, -5, -6 & -8 diameter CherryMax® Lock Bolt & Blind Bolt in all head styles, materials and grip lengths. (-8 diameter in Aluminum only)
ZT1914CMD	4,200(1,900)	9/16(14)	5.7(2.6)	
ZT1912CM-1	4,200(1,900)	31/64(12)	2.75(1.25)	
ZT1912CM-3	4,200(1,900)	31/64(12)	2.75(1.25)	

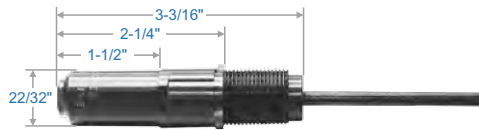
*Operating Air Pressure: 90PSI/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Min. Hose Size: 3/8"(10mm)

PULLING HEADS AVAILABLE FOR THE ZT1914CM & ZT1912CM INSTALLATION TOOLS

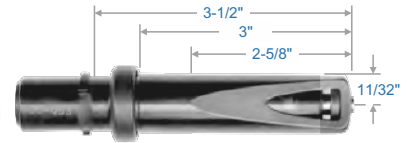
Pulling heads are not furnished with riveter and must be ordered separately.



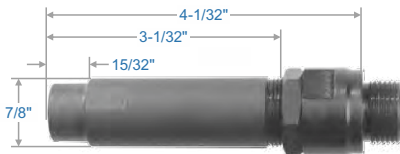
H84A-8 Straight Pulling Head



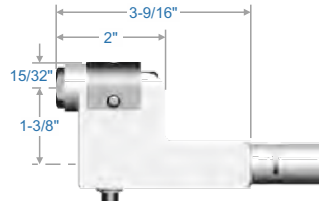
H1900-456 Straight Pulling Head



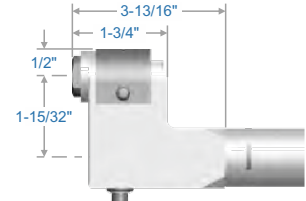
H513SRC-06-35 Straight Pulling Head



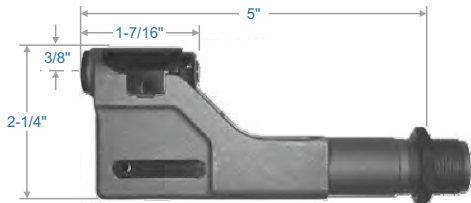
H84B-568 Straight Pulling Head



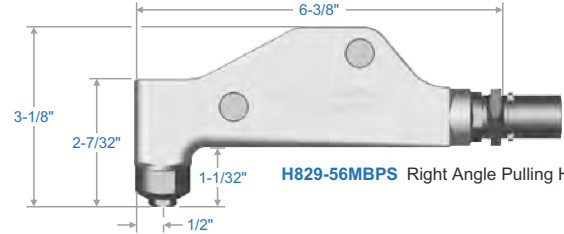
H563-4B, H563-5B, H563-6B Offset Pulling Head



H562-6B, H562-8B Offset Pulling Head



H856-6MB, Offset Pulling Head



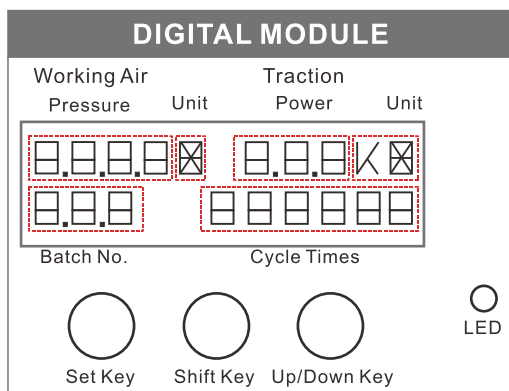
H829-56MBPS Right Angle Pulling Head

CherryMax® is the registered trademark of Cherry Aerospace LLC.

Fastener Type	Pulling Head Type	Tool Part Number		Adaptor	Diameter
		MAXIBOLT® S TYPE	MAXIBOLT® U TYPE		
MAXIBOLT®	Straight	H83B-5MB	H83B-5MBU	None	-05
		H83B-6MB	H83B-6MBU	None	-06
		H84A-8MB	H84A-8MBU	None	-08
	Offset	H856-6MB	H856-6MB+856-003	Yes	-06
	Right Angle	H829-5MB	H829-5MBU	None	-05
		H829-6MB	H829-6MBU	None	-06
H829-8MB		H829-8MBU	None	-08	
Lockbolt	Straight	H513, H513S, H513SR		None	-4, -5, -6, -8
		H563-4B/5B/6B		None	-4, -5, -6
	Offset	H562-6B/8B		Yes	-6, -8
MAXIBOLT PLUS®	Straight	H84B-568*		None	-5, -6, -8
	Right Angle	H829-56MBPS		None	-5, -6
NAS1919/1921	Straight	H1900-456		None	-4, -5, -6
CherryMAX®	Straight	H84A-8		None	-8
	Right Angle	H829-8		None	-5, -6, -8
CherryMAX® 'AB' CherryLOCK® 'A'	Straight	H84-8CLA		None	-8

Features

- Optional feature with the most advanced patented digital module to enable operators know the rivet tool setting capacity instantly under various air supply condition and the rivet setting cycles performed during their working period.
- It will also remind operators when to do service or maintenance to the tool in proper interval.
- It will help to cease the controversy about warranty issue especially if the tool has been misused or abused with abnormal high air pressure which exceeds the design specification.
- Built with patented "Module units assembled in composite clam shell housing" for the ease of tool service.
- Forged and heat treated aluminum alloy made Hydraulic Section for the best rigidity.
- Ergonomic texture coated composite housing for operator's comfort.
- Swivel air inlet design for maneuverability of works.
- 3 pulls required for Monobolt®.
- Nose assembly need to purchase separately.



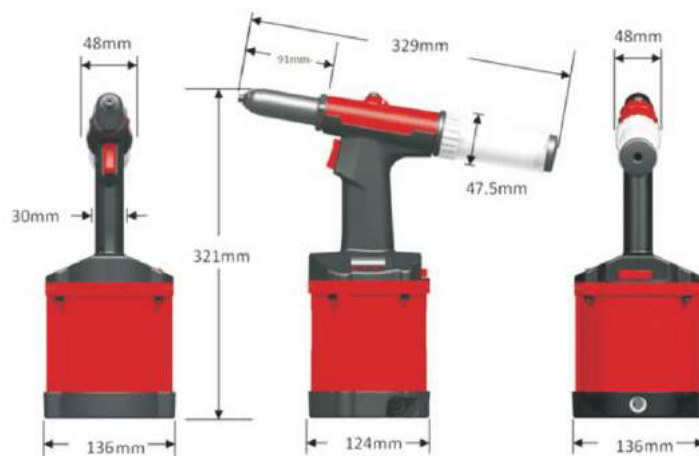
Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT3213 ZT3213D	7,050(3,200)	33/64(13)	6.4(2.9)	Need to purchase separately	3/8" (10mm) steel monobolt / C6L lock bolts

Monobolt® is the registered trademark of Stanley Engineered Fastening.



ZT0520/D | ZT0715/D

ZT0922/D | ZT1218/D



ZT1725/D | ZT1528/D | ZT2021/D | ZT2318/D | ZT2318H/HD



**ZRN1606E/ED | ZRN1606M/MD
ZRS1606E/ED | ZRS1606M/MD**

**ZRN2508E/ED | ZRN2508M/MD
ZRS2508E/ED | ZRS2508M/MD**

Features

- Forged & heat treated aluminum alloy made hydraulic section for the best rigidity.
- Light weight pistol head
- Easy to reaches inaccessible area
- Utility Pouch for Shoulder or Waist



ZT0518S / ZT0920S
ZT1626S / ZT2420-8S

Split Type Riveter w/vacuum



ZT2420HSN
ZT2420HS / ZT2420HSK

Split Type Lock Bolt Tool



ZRN1811ES / ZRN1811MS

Split Type Rivet Nut Tool

Standard setup for 1M length			Standard setup for 3M length		
ZTXXXXX ZRNXXXXX	HH1R/HH1N 1m * 1/8" I.D. hyd. hose kit w/quick release coupler	CHBT-004 Pouch	ZTXXXXX ZRNXXXXX	HH3R/HH3N 3m * 1/4" I.D. hyd. hose kit w/quick change coupler	Hook on Spring balancer

DO NOT apply air pressure over 110 psi / 7.5 bar to these tools.

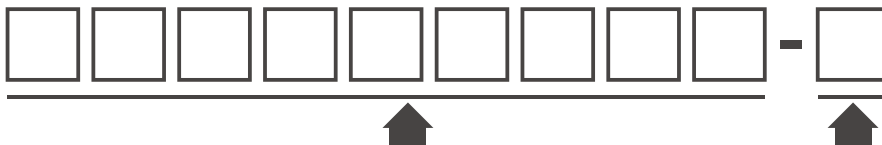
*Please refer to the blind rivet specification to ensure the tensile strength is lower than the traction power of the model you select.
*Below specification are measured with 1 meter length, 1/8" I.D hydraulic hose

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Handle Net Weight lbs(kgs)	Nosepieces Equipped inch(mm)	Max. Capacity
ZT0518S	1,100(500)	23/32(18)	2.2(1)	3/32(2.4)1/8(3.2) 5/32(4.0)	Max. 5/32"(4.0mm) structural rivets in all materials
ZT0920S	2,000(920)	51/64(20)	2.2(1)	5/32(4.0)3/16(4.8) Monobolt 3/16(4.8)	Max. 3/16"(4.8mm) structural rivets in all materials
ZT1626S	3,500(1,600)	1-1/32(26)	2.75(1.25)	3/16(4.8)1/4(6.4) Monobolt 3/16(4.8)1/4(6.4)	Max. 1/4"(6.4mm) structural rivets in all materials
ZT2420-8S	5,200(2,400)	51/64(20)	2.75(1.25)	5/16(7.8)	Max. 5/16"(7.8mm) structural rivets in all materials
ZT2420HSN	5,200(2,400)	51/64(20)	2.75(1.25)	Need to purchase separately, compatible with HUCK® & AVDEL® nose assemblies	1/4" lock bolts
ZT2420HS	5,200(2,400)	51/64(20)	2.75(1.25)	Choose one of 202HM1, 202HC1, 202HM2 or 231HC2	1/4" lock bolts
ZT2420HSK	5,200(2,400)	51/64(20)	2.75(1.25)	Kit includes 202HM1, 202HC1, 202HM2 231HC2 & 2318RS Nose Assemblies	1/4" lock bolts

HUCK® is the registered trademark of Alcoa Fastening System & Rings.
AVDEL® is the registered trademark of Stanley Engineered Fastening.

Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Handle Net Weight lbs(kgs)	Rivet Nut Setting Capacity
ZRN1811ES	3,900(1,800)	7/16(11)	3.3(1.5)	#8-32~1/2"-13 rivet nut in Hex./Steel
ZRN1811MS	3,900(1,800)	7/16(11)	3.3(1.5)	M4~M12 rivet nut in Hex./Steel

Split type tool - Product Code Creator



Fill in model number (Example: **XXZT0518S**)

length of hydraulic hose (**1or3**)

Features

- Light weight pistol handle easy to use and reach to inaccessible area.
- Designed to install a wide range of 3/8" blind fasteners also Pin & Collar Fasteners.
- Low operating hydraulic pressure design for more durable hydraulic sealing mechanism.
- Forged & heat treated aluminum alloy made hydraulic section for the best rigidity.
- Portable intensifier instead of high cost hydraulic power unit.
- Custom designs are welcome.
- 3M length hydraulic hose set is included.
- Nose assembly need to purchase separately.
- ZT4125S capable to set 3/8" C6L[®], Magna-Grip[®], Magna-Lok[®], Avdelok[®], Maxlok[®], Monobolt[®] & Avtainer[®] fasteners.



Model	Traction Power lbf(kgf)	Stroke Length inch(mm)	Handle Net Weight lbs(kgs)	Nosepieces	Max. Capacity
ZT4125S	9,039(4,100)	63/64(25)	3.86(1.75)	need to purchase separately	Max. 3/8"(9.5mm) lock bolt

C6L[®], Magna-Grip[®], Magna-Lok[®] is the registered trademark of Alcoa Fastening System & Rings.
Avdelok[®], Maxlok[®], Monobolt[®] & Avtainer[®] is the registered trademark of Stanley Engineered Fastening.

Features

ZIPP offers a range of standard fastener tools as well as high performance ZIPP hydraulic powerigs to complement the larger diameter fixed grip lock bolt fasteners is suitable for numerous assembly applications for multiple industries.

ZIPP installation equipment / tooling systems work with the fastener to pull and clamp the application together quickly and safely. A typical installation equipment system comprises a tool, nose assembly, hose set and powerig unit. The powerig drives the tool and the nose assembly provides the installation link between the fastener and the tool. Installation tools and nose assemblies are designed to install specific fastener types and diameters – the choice of the installation equipment system is determined by the fastener type, diameter, application and intended usage.

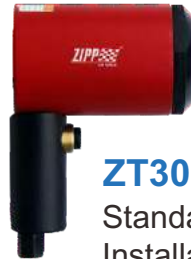
The majority of the fasteners in the system have been designed to meet or exceed SAE Grade 5 or ASTM A-325 and ISO (8.8) strength requirements, ensuring high clamp force, tensile and shear strength depending on the application.



ZT10
Standard
Installation Tool



ZV10
Standard
Installation Tool



ZT30
Standard
Installation Tool



ZV30
Standard
Installation Tool



ZT51
Standard
Installation Tool



ZV50
Standard
Installation Tool

Nose Assembly (to suit installation tool)

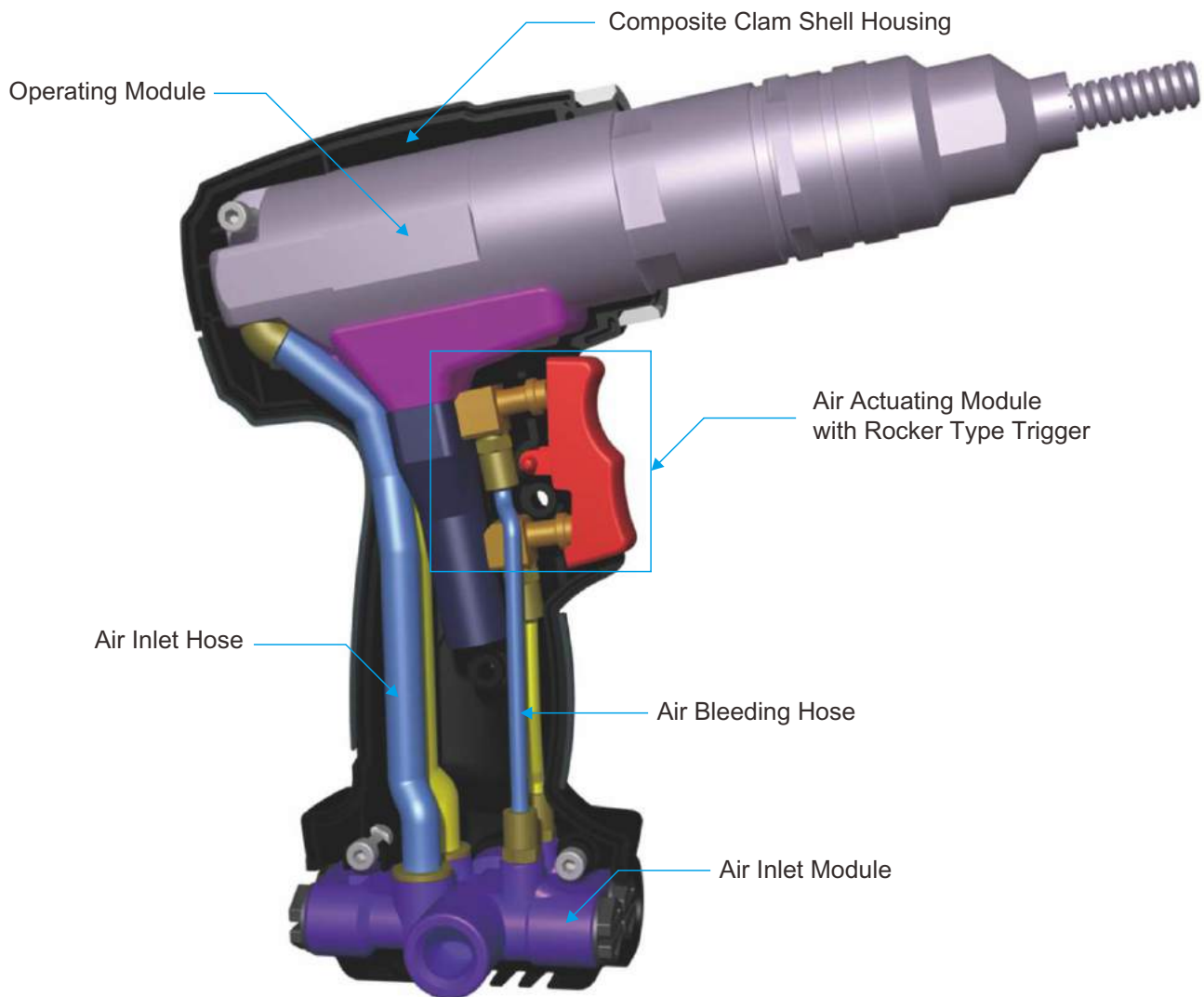
ZT10-10NA	10mm (3/8") Fixed Grip Fastener
ZT10-10MGNA	10mm (3/8") Multi Grip Fastener
ZT30-13NA	13mm (1/2") Fixed Grip Fastener
ZT30-16NA	16mm (5/8") Fixed Grip Fastener
ZT30-19NA	19mm (3/4") Fixed Grip Fastener
ZT30-19BNA	19mm (3/4") Blind Bolt Fastener
ZT51-22NA	22mm (7/8") Fixed Grip Fastener
ZT51-25NA	25mm (1") Fixed Grip Fastener
ZT51-28NA	28mm (1-1/8") Fixed Grip Fastener

Model	Stroke inch(mm)	Pull Force lbf(kN)	Pull Pressure psi(MPa)	Return Pressure psi(MPa)	Net Weight w/o Nose Assembly lbs(kgs)	Vibration m/sec
ZT10	1(25)	13,040(58)	8,000(55.2)	3,000(20.7)	7.72(3.5)	8.6
ZT30	1.6(41)	39,340(175)	8,000(55.2)	3,000(20.7)	17.6(8)	8.6
ZT51	2.56(65)	78,680(350)	8,000(55.2)	3,000(20.7)	40.78(18.5)	8.6
ZV10	0.98(25)	12,365(55)	7,400(51)	2,900(20)	7.7(3.5)	2.5
ZV30	1.6(41)	39340(175)	7,400(51)	2,900(20)	15.3(6.9)	2.5
ZV50	2.17(55)	76435(340)	7,400(51)	2,900(20)	29.8(13.5)	8.6

Clam Shell Composite Housing

Features

- Designed with patented "Module units assembled in composite clam shell housing" for easy tool service.
- Ergonomic texture coated composite housing for operator's comfort.
- Less friction loss along the air passage to increase tool power & performance.
- Module unit mechanism enables more common parts to be used in similar designed tools.
- Rocker type trigger and both left or right hand side air inlet for ease of operational control.



Patent pending in other countries



R.O.C.PAT.:
M306920 / 174032



P.R.C.PAT.:
ZL 2006 2 0131894.9

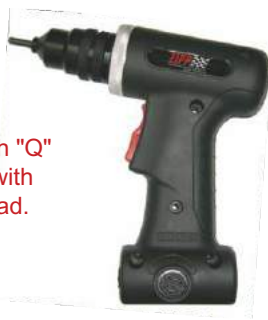


U.S.PAT.:
6,149,356



DEUTSCHLAND PAT.:
Nr.20 2007 007 127.2

Model number with "Q" means equipped with Quick Change Head.



ZRN106
ZRN106Q w/Quick Change Head
Composite Air Rivet Nut Tool-M6

Optional Nose Assembly			
Size	B-Type (Screw-On)	Q-Type (Quick Change)	Model for other sizes:
M3	P/N: 103800B	P/N: 103800Q	ZRN103 or ZRN103Q
M4	P/N: 104800B	P/N: 104800Q	ZRN104 or ZRN104Q
M5	P/N: 105800B	P/N: 105800Q	ZRN105 or ZRN105Q
M6	P/N: 106800B	P/N: 106800Q	ZRN106 or ZRN106Q
#6-32	P/N: 632800B	P/N: 632800Q	ZRN163 or ZRN163Q
#8-32	P/N: 832800B	P/N: 832800Q	ZRN183 or ZRN183Q
#10-24	P/N: 124800B	P/N: 124800Q	ZRN124 or ZRN124Q
#10-32	P/N: 132800B	P/N: 132800Q	ZRN132 or ZRN132Q
1/4"-20	P/N: 114800B	P/N: 114800Q	ZRN120 or ZRN120Q

Model number with "Q" means equipped with Quick Change Head.



ZRN508
ZRN508Q w/Quick Change Head
Composite Air Rivet Nut Tool-M8

Optional Nose Assembly			
Size	B-Type (Screw-On)	Q-Type (Quick Change)	Model for other sizes:
M6	P/N: 106800B	P/N: 106800Q	ZRN506 or ZRN506Q
M8	P/N: 208800B	P/N: 208800Q	ZRN508 or ZRN508Q
1/4"-20	P/N: 114800B	P/N: 114800Q	ZRN520 or ZRN520Q
5/16"-18	P/N: 516800B	P/N: 516800Q	ZRN518 or ZRN518Q

ZRN210
ZRN212



Composite Air Rivet Nut Tool-M10/M12

Optional Nose Assembly			
Size	B-Type (Screw-On)	Q-Type (Quick Change)	Model for other sizes:
M10	P/N: 210800B	P/N: 210800Q	ZRN210 or ZRN210Q
M12	P/N: 212800B		ZRN212
1/2"-13	P/N: 12C800B		ZRN213
3/8"-16	P/N: 238800B	P/N: 238800Q	ZRN216 or ZRN216Q
3/8"-24	P/N: 38F800B		ZRN224

* There is ONLY one size of rivet head come along with each tool, please specify the model you require when ordering.

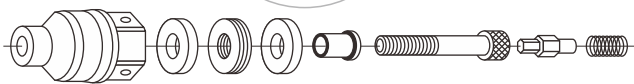
Model	Max. Rivet Nut Setting Capacity Round Rivet Nut(mm)	Free Speed rpm	Net Weight lbs(kgs)	Avg. Air Cons. cu.ft/stroke	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Sound Pressure dB(A)	Vibration m/s ²
ZRN106	M6 Round/Steel	1,500	3.06(1.39)	9.9(280)	1/4	3/8(10)	86	<2.5
ZRN106Q	M6 Round/Steel	1,500	2.42(1.10)	9.9(280)	1/4	3/8(10)	86	<2.5
ZRN508	M8 Hex./All Materials	500	3.08(1.4)	9.9(280)	1/4	3/8(10)	86	<2.5
ZRN508Q	M8 Hex./All Materials	500	2.50(1.13)	9.9(280)	1/4	3/8(10)	86	<2.5
ZRN210	M10 Hex./All Materials	280	3.08(1.4)	9.9(280)	1/4	3/8(10)	86	<2.5
ZRN212	M12 Hex./Steel	280	3.08(1.4)	9.9(280)	1/4	3/8(10)	86	<2.5

Features

- Powerful Precise Motor.
- Exclusive Quick Reversible Trigger.
- Handle Exhaust
- Lightweight
- Smooth, Direct Driver.



ZRN280 / ZRN500 / ZRN700 0.7HP
Aluminum Housing Air Rivet Nut Tool

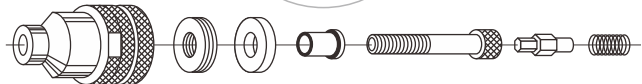


B type Nose Head

Metric System Optional Nose Assembly		
Size	B-Type (Screw-On)	Q-Type (Quick Change)
M3	P/N: 103800B	P/N: 103800Q
M4	P/N: 104800B	P/N: 104800Q
M5	P/N: 105800B	P/N: 105800Q
M6	P/N: 106800B	P/N: 106800Q
M8	P/N: 208800B	P/N: 208800Q
M10	P/N: 210800B	P/N: 210800Q



ZRN1600 0.7HP
Aluminum Housing Air Rivet Nut Tool



Quick Change type Nose Head

Imperial System Optional Nose Assembly		
Size	B-Type (Screw-On)	Q-Type (Quick Change)
#6-32	P/N: 632800B	P/N: 632800Q
#8-32	P/N: 832800B	P/N: 832800Q
#10-24	P/N: 124800B	P/N: 124800Q
#10-32	P/N: 132800B	P/N: 132800Q
1/4"-20	P/N: 114800B	P/N: 114800Q
5/16"-18	P/N: 516800B	P/N: 516800Q
3/8"-16	P/N: 238800B	P/N: 238800Q

* There is ONLY one size of rivet nut head come along with each tool, please specify the model you require when ordering.

Model	Max. Rivet Nut Setting Capacity Round Rivet Nut(mm)	Free Speed rpm	Net Weight lbs(kgs)	Avg. Air Cons. cu.ft/stroke	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Sound Pressure dB(A)	Vibration m/s ²
ZRN280 (B or Q)	M10 Round / Alum.	280	2.87(1.3)	5(141)	1/4	3/8(10)	86	<2.5
ZRN500 (B or Q)	M6 Hex. / All Materials	500	2.87(1.3)	5(141)	1/4	3/8(10)	86	<2.5
ZRN700 (B or Q)	M5 Round / Alum.	720	2.87(1.3)	5(141)	1/4	3/8(10)	86	<2.5
ZRN1600 (B or Q)	M4 Round / Steel	1,700	2.2(1)	5(141)	1/4	3/8(10)	86	<2.5

Features

- Can be used in areas with restricted operator space
- Available with in-line handle and top or bottom hose configuration - optimized ergonomic performance for improved productivity
- Average cycle time of less than 2 seconds - increased productivity - up to 1500 fasteners per hour
- High capacity, magazine fed fasteners - reduced component handling and subsequent spillage
- Lightweight construction and zero action recoil - reduced operator fatigue
- Long life, self-priming intensifier - consistent actuation and hence joint formation
- Long reach barrel - can be used in many difficult access applications
- Low maintenance hand tool - productive time is maximized - no requirement for specialist maintenance training
- Robust & durable construction - suitable for most industrial environments



ZT0430
Speed Riveter

This tool is designed for Speed Rivet as Shown on the tables below.

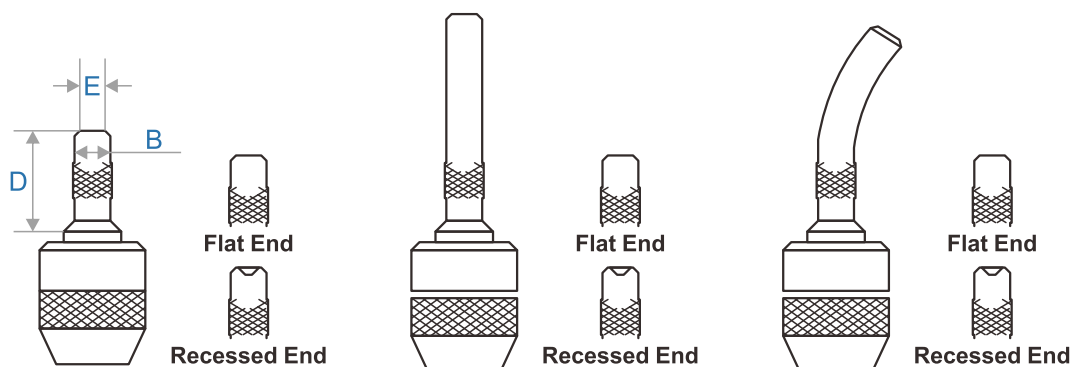
	2.4mm	3.0mm	3.5mm	3.2mm	4.0mm	4.8mm
Speed Rivet	Aluminum, Brass	N/A	N/A	Aluminum, Steel, Brass, Stainless	Aluminum, Steel, Brass, Stainless	Aluminum, Steel, Brass, Stainless
Speed Chovet	Aluminum, Brass	N/A	N/A	Aluminum, Steel	Aluminum, Steel	Aluminum, Steel
Speed Screw	N/A	Steel	Steel	N/A	N/A	N/A

Model	Air Supply Pressure Minimum/Maximum bar	Free Air Volume Required bar(liters)	Stroke inch(mm)	Pull Force lbf(kgf)	Cycle Time Approximately	Noise Level Less than dB(A)	Net Weight lbs(kgs)	Vibration Less than m/s ²
ZT0430	5~7	5.1(2.6)	1-3/16(30)	874(389)	1second	70	2.38(1.08)	2.7

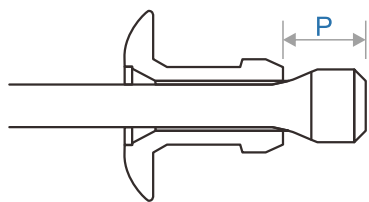
*Overall Length 475mm *Intensification Ratio: 30:1

Front Jaws

- Our speed rivet has a Bulbed tail. And it is foreshortened and expanded radially during installation.
- Because this bulbed tail will give you high vibration and good hole fill.
- We supply the speed rivet with many different material and finishes.
- So you will have various options according to your needs.
- Speed rivets are podded in a paper pod. So you can install 20 to 70 rivets with one easy loading.



Rivet Size	Item#	Size & End form	Dimensions(mm)			M/F Spring
			B	D	E	
2.4	ZNJ-3001	Standard Flat	9.5	33	3.4	Standard
	ZNJ-3002	Standard Recessed	9.5	33	3.4	
3.2	ZNJ-4001	Standard Flat	11.5	30.3	5.5	Standard
	ZNJ-4002	Standard Recessed	11.5	30.3	8.5	
	ZNJ-4003	Long Flat	9.6	59.5	5.5	Long
	ZNJ-4004	Long Recessed	9.6	59.5	8.5	
	ZNJ-4005	Long Curved Flat	9.6	59.5	5.5	
	ZNJ-4006	Long Curved Recessed	9.6	59.5	8.5	
4.0	ZNJ-5001	Standard Flat	12.5	30.3	7.0	Standard
	ZNJ-5002	Standard Recessed	12.5	30.3	10.5	
	ZNJ-5003	Long Flat	12.5	59.5	7.0	Long
	ZNJ-5004	Long Recessed	12.5	59.5	10.5	
	ZNJ-5005	Long Curved Flat	12.5	59.5	7.0	
	ZNJ-5006	Long Curved Recessed	12.5	59.5	10.5	
4.8	ZNJ-6001	Standard Flat	14.5	30.3	10.0	Standard
	ZNJ-6002	Standard Recessed	14.5	30.3	12.5	
	ZNJ-6003	Long Flat	14.5	60.5	10.0	Long
	ZNJ-6004	Long Recessed	14.5	60.5	12.5	
	ZNJ-6005	Long Curved Flat	14.5	60.5	10.0	
	ZNJ-6006	Long Curved Recessed	14.5	60.5	12.5	



SPEED RIVET



SPEED CHOVET

MANDRELS FOR SPEED RIVET					
Rivet size	Hole size	Mandrel Item#	Mandrel size	P	M.F Spring #
2.4mm(3/32inch) Aluminum, Brass	2.4(As recommended)	ZM-0183	1.83	3.02	ZS-3001
	2.4+0.1	ZM-0193	1.93	3.12	
	2.4+0.2	ZM-0201	2.01	3.20	
3.2mm(1/8inch) Aluminum, Steel, Brass	3.3(As recommended)	ZM-0234	2.34	3.05	ZS-4001
	3.3+0.13	ZM-0246	2.46	3.20	
	3.3+0.25	ZM-0259	2.59	3.38	
4.0mm(5/32inch) Aluminum, Steel, Brass	4.05(As recommended)	ZM-0279	2.79	3.45	ZS-5001
	4.05+0.13	ZM-0292	2.92	3.61	
	4.05+0.25	ZM-0305	3.05	3.78	
4.8mm(3/16inch) Aluminum, Steel, Brass	4.89(As recommended)	ZM-0358	3.58	3.99	ZS-6001
	4.89+0.13	ZM-0371	3.71	4.17	
	4.89+0.25	ZM-0384	3.84	4.32	
3.2mm(1/8inch) Stainless Steel	3.3(As recommended)	ZM-S249	2.49	2.95	ZS-4001
	3.3+0.13	ZM-S262	2.62	3.10	
4.0mm(5/32inch) Stainless Steel	4.05(As recommended)	ZM-S305	3.05	3.20	ZS-5001
	4.05+0.13	ZM-S318	3.18	3.35	
4.8mm(3/16inch) Stainless Steel	4.89(As recommended)	ZM-S389	3.89	3.81	ZS-6001
	4.89+0.13	ZM-S401	4.01	3.96	
MANDRELS FOR SPEED CHOVET					
2.4mm(3/32inch) Aluminum, Brass	2.4(As recommended)	ZCM-0184	1.84	5.00	ZS-3001
	2.4+0.04	ZCM-0188	1.88	5.00	
	2.4+0.09	ZCM-0193	1.93	5.00	
3.2mm(1/8inch) Aluminum, Steel, Brass	3.3(As recommended)	ZCM-0234	2.34	7.11	ZS-4001
	3.3+0.13	ZCM-0249	2.49	7.11	
	3.3+0.25	ZCM-0259	2.59	7.11	
4.0mm(5/32inch) Aluminum, Steel, Brass	4.05(As recommended)	ZCM-0272	2.72	8.20	ZS-5001
	4.05+0.13	ZCM-0292	2.92	8.20	
	4.05+0.25	ZCM-0310	3.10	8.20	
4.8mm(3/16inch) Aluminum, Steel, Brass	4.89(As recommended)	ZCM-0335	3.35	9.90	ZS-6001
	4.89+0.13	ZCM-0371	3.71	9.30	
	4.89+0.25	ZCM-0396	3.96	9.30	

Depend on the hole size and material of application, you can select suitable mandrel for your application. For the curved front jaws, the mandrels have to be bent by hand to match the curvature of the front jaws. Mandrels for stainless steel speed rivet, they have a "V" cut on the end of the mandrel heads.

Blind Rivet Installation Tool

Model	Page Number	Diameter							Model	Page Number	Diameter							
		3/32 (2.4)	1/8 (3.2)	5/32 (4.0)	3/16 (4.8)	1/4 (6.4)	5/16 (7.8)	3/8 (9.5)			3/32 (2.4)	1/8 (3.2)	5/32 (4.0)	3/16 (4.8)	1/4 (6.4)	5/16 (7.8)	3/8 (9.5)	
ZT0318VS	83	ST/ST	ST/ST	AL/S					ZT2021-8	91							ST/ST	
ZT0618T	85	ST/ST	ST/ST	ST/ST	S/S				ZT2318-8	91							ST/ST	
ZT0618VS	83	ST/ST	ST/ST	ST/ST	S/S				ZAR0921	92	ST/ST	ST/ST	ST/ST	S/S				
ZT0918T	85	ST/ST	ST/ST	ST/ST	ST/ST				ZAR0921V	92	ST/ST	ST/ST	ST/ST	S/S				
ZT0918VS	83	ST/ST	ST/ST	ST/ST	ST/ST				ZAR0818	92	ST/ST	ST/ST	ST/ST	S/S				
ZT0918L	85	ST/ST	ST/ST	ST/ST	ST/ST				ZAR0818V	92	ST/ST	ST/ST	ST/ST	S/S				
ZT0918LV	85	ST/ST	ST/ST	ST/ST	ST/ST				ZT0616	93	ST/ST	ST/ST	ST/ST					
ZT1214VS-5	84			ST/ST	ST/ST				ZT0616V	93	ST/ST	ST/ST	ST/ST					
ZT1214VS-6	84				ST/ST	S/S			ZPR1016T	93	ST/ST	ST/ST	ST/ST	S/S				
ZT1214T	85			ST/ST	ST/ST	S/S			ZT1918T	93	ST/ST	ST/ST	ST/ST	ST/ST	ST/ST			
ZT1214L	85			ST/ST	ST/ST	S/S			ZRG510	94	ST/ST	ST/ST	ST/ST	AL/S				
ZT1214LV	85			ST/ST	ST/ST	S/S			ZT-1020	95	ST/ST	ST/ST	ST/ST	ST/ST	AL/S			
ZT1819T	85				ST/ST	ST/ST			ZT-1020V	95	ST/ST	ST/ST	ST/ST	ST/ST	AL/S			
ZT1819VS	84				ST/ST	ST/ST			ZRA-48	97	ST/ST	ST/ST	ST/ST	S/S				
ZT1819L	85				ST/ST	ST/ST			ZARA-48	97	ST/ST	ST/ST	ST/ST	S/S				
ZT1819LV	85				ST/ST	ST/ST			ZRA-64	97		ST/ST	ST/ST	ST/ST	S/S			
ZT1017VSN-5	87			ST/ST	ST/ST				ZT0518S	106	ST/ST	ST/ST	ST/ST					
ZT1017VSN-6	87				ST/ST	AL/S			ZT0920S	106			ST/ST	ST/ST				
ZT0919VS	89	ST/ST	ST/ST	ST/ST	ST/ST				ZT1626S	106				ST/ST	ST/ST			
ZT1821VS	89				ST/ST	ST/ST			ZT2420-8S	106				ST/ST	ST/ST	ST/ST		
ZT0520	91	ST/ST	ST/ST	ST/ST					ZT0430	112	Alum.	Stainless Steel	Stainless Steel	Stainless Steel				
ZT0715	91	ST/ST	ST/ST	ST/ST	S/S				ZT3213	104						ST/ST	ST/ST	
ZT0922	91	ST/ST	ST/ST	ST/ST	ST/ST				ZT4125S	107						ST/ST	ST/ST	
ZT1218	91			ST/ST	ST/ST	S/S												
ZT1528	91				ST/ST	ST/ST												
ZT1725	91				ST/ST	ST/ST												
ZT2021	91				ST/ST	ST/ST												
ZT2318	91				ST/ST	ST/ST												

AL/AL = Aluminum head / Aluminum mandrel
 AL/S = Aluminum head / Steel mandrel
 S/S = Steel head / Steel mandrel
 S/ST = Steel head / Stainless Steel mandrel
 ST/ST = Stainless Steel head / Stainless Steel mandrel

Lock Bolt Installation Tool

Model	Page Number	Material Lock Bolt	Diameter			
			3/16(4.8)	1/4(6.4)	5/16(7.8)	3/8(9.5)
ZT2420HSN	106	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT2420HS	106	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT2420HSK	106	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT2318-HA	102	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT2318H	103	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT2318HK	103	aluminum	☆	☆		
		steel	☆	☆		
		stainless	☆			
ZT3213	104	aluminum			☆	☆
		steel			☆	☆
		stainless			☆	
ZT4125S	107	aluminum			☆	☆
		steel			☆	☆
		stainless			☆	☆

Blind Bolt Installation Tool

Model	Page Number	Material Blind Bolt	Diameter			
			3/16(4.8)	1/4(6.4)	5/16(7.8)	3/8(9.5)
ZT2318B	103	steel		☆		

Rivet Stud Installation Tool

Model	Page Number	Material Rivet Stud	Diameter							
			M3	M4	M5	M6	M8	M10	M12	
ZRS1606M	99	aluminum		○	○	○	○	○		
		steel		○	○	○	○	○*		
		stainless		○	○	○	○	○*		
ZRS2508M	99	aluminum		○	○	○	○	○		
		steel		○	○	○	○	○		
		stainless		○	○	○	○	○		
ZRS1606E	99	aluminum		○	○	○	○	○		
		steel		○	○	○	○	○*		
		stainless		○	○	○	○	○*		
ZRS2508E	99	aluminum		○	○	○	○	○		
		steel		○	○	○	○	○		
		stainless		○	○	○	○	○		

○ = Round
 ○ = Hex.
 * = need to increase pressure to 100psi

Rivet Nut Installation Tool Selection Chart

Rivet Nuts Installation Tool

Model	Page Number	Material Rivet Nut	Diameter							Model	Page Number	Material Rivet Nut	Diameter						
			M3	M4	M5	M6	M8	M10	M12				M3	M4	M5	M6	M8	M10	M12
ZRN1606M	99	aluminum	△	○	○	○	○	○	○*	ZRN2XX	110	aluminum					○	○	
		steel	△	○	○	○	○	○	○*			steel						○	●
		stainless	△	○	○	○	○	○	○*			stainless						○	●
ZRN2508M	99	aluminum	△	○	○	○	○	○	○	ZRN280	111	aluminum					○	●	
		steel	△	○	○	○	○	○	○			steel					○		
		stainless	△	○	○	○	○	○	○			stainless							
ZRN2308M	101	aluminum		○	○	○	○	○		ZRN500	111	aluminum		○	○	○			
		steel		○	○	○	○	○				steel		○	○	○			
		stainless		○	○	○	○	○				stainless		○	○	○			
ZRN1811MS	106	aluminum	△	○	○	○	○	○	○*	ZRN700	111	aluminum		○	●				
		steel	△	○	○	○	○	○	○*			steel		○					
		stainless	△	○	○	○	○	○	○*			stainless		○					
ZRN1XX	110	aluminum	○	○	○	○				ZRN1600	111	aluminum	○	○					
		steel	○	○	○	○	●					steel	○	○	●				
		stainless	○	○	○	○						stainless	○						
ZRN5XX	110	aluminum				○	○			ZNR4-410D	97	aluminum		○	○	○	○	○	●
		steel				○	○					steel		○	○	○	○		
		stainless				○	○					stainless		○	○	○	○		

Model	Page Number	Material Rivet Nut	Diameter											
			#6-32	#8-32	#10-24	#10-32	1/4"-20	5/16"-18	3/8"-16	3/8"-24	1/2"-13	1/2"-20		
ZRN1606E	99	aluminum	△	○	○	○	○	○	○	○	○	○	○*	○*
		steel	△	○	○	○	○	○	○	○	○	○	○*	○*
		stainless	△	○	○	○	○	○	○	○	○	○	●*	●*
ZRN2508E	99	aluminum	△	○	○	○	○	○	○	○	○	○	○	○
		steel	△	○	○	○	○	○	○	○	○	○	○	○
		stainless	△	○	○	○	○	○	○	○	○	○	○	○
ZRN2308E	101	aluminum		○	○	○	○	○	○	○	○			
		steel		○	○	○	○	○	○	○	○			
		stainless		○	○	○	○	○	○	○	○			
ZRN1811ES	106	aluminum	△	○	○	○	○	○	○	○	○	○*	○*	
		steel	△	○	○	○	○	○	○	○	○	○*	○*	
		stainless	△	○	○	○	○	○	○	○	○	●*	●*	
ZRN1XX	110	aluminum	○	○	○	○	○							
		steel	○	○	○	○	○	●						
		stainless	○	○	○	○								
ZRN5XX	110	aluminum					○	○						
		steel					○	○						
		stainless					○	○						
ZRN2XX	110	aluminum								○	○	○	○	
		steel								○	○	○	○	
		stainless								○	○	○	○	
ZRN280	111	aluminum							○	○	○	○	○	
		steel							○	○	○	○	○	
		stainless												
ZRN500	111	aluminum			○	○	○							
		steel			○	○	○							
		stainless			○	○	○							
ZRN700	111	aluminum		○	○	○								
		steel		○										
		stainless		○										
ZRN1600	111	aluminum	○	○										
		steel	○	○	○									
		stainless	○											
ZNR4-410DE	97	aluminum		○	○	○	○	○	○	○	○	○	○	
		steel		○	○	○	○	○	○	○	○	○	○	
		stainless		○	○	○	○	○	○	○	○	○	○	

- = Round
- = Hex.
- △ = Optional
- * = need to increase pressure to 100psi

"C" Yoke Riveters

Features

- Specially designed for airplane construction to ensure fast, economical riveting where two-man operation is impractical.
- Features strong, steady, silent squeeze action, which is easily controlled for a large variety of rivets.
- Ideal for dimpling, punching, stamping and pressing. Widely used for truck, bus and automotive applications.
- Extra powerful, portable tandem cylinder also available with double the compressive force for larger riveting capacity.



ZCR030



ZCR060

Model	Rivet Capacity Diameter		Standard Yoke Dimensions		Max Force lb(kN)	Set Holder		Overall Length inch(mm)	Weight With Yoke lbs(kgs)
	Alum	Steel	Reach	Gap		Max Travel	Stroke at Max Power		
ZCR030	1/8(3.2)	3/32(2.4)	1-1/2(38.1)	11/16(17.45)	3,000(13.35)	9/16(14.27)	0.05(1.3)	10-1/4 (260.35)	4.5(2.04)
ZCR060	3/16(4.8)	5/32(4)	1-1/2(38.1)	11/16(17.45)	6,000(26.7)	9/16(14.27)	0.05(1.3)	14(355.6)	5.4(2.49)

Note: Please specify the model no. With CXX you may require while ordering.

Applications

CP214 Compatible Yoke



C030C15



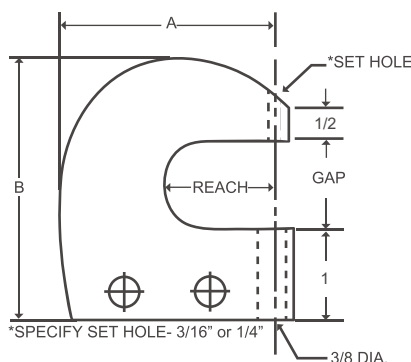
C030C30



C030C40



C030L25
(Longeron Yoke)



Model	Reach inch(mm)	Gap inch(mm)	A inch(mm)	B inch(mm)
C030C15	1.5(38.1)	1.33(33.8)	2.98(75.6)	3.38(86)
C030C30	3(76.2)	1.33(33.8)	4.43(112.6)	3.29(83.6)
C030C40	4(101.6)	1.33(33.8)	5.89(149.5)	3.76(95.4)
C030L25	2.5(63.5)	1.33(33.8)	3.66(93)	3.98(101)

"Alligator" Yoke Riveters

Features

- For squeezing a large variety of size and type of rivets.
- Strong squeeze action is easily controlled to provide uniformity and accuracy of work.
- Ideally used for dimpling, punching and pressing.
- Extra powerful, portable tandem cylinder also available with double the compressive force for large riveting capacity.



ZCR030A15 Single Cylinder



ZCR060A15 Tandem Cylinder



ZCR030A225 Single Cylinder



ZCR060A225 Tandem Cylinder



ZCR030A30 Single Cylinder



ZCR060A30 Tandem Cylinder

Model	Rivet Capacity Diameter		Standard Yoke Dimensions Reach	Max Force lb(kN)	Set Holder		Overall Length inch(mm)	Weight With Yoke lbs(kgs)
	Alum	Steel			Max Travel	Stroke at Max Power		
ZCR030A15	1/8(3.2)	3/32(2.4)	1-1/2(38.1)	3,000(13.35)	5/8(15.9)	0.05(1.3)	9-3/16(230)	3.75(1.7)
ZCR030A225	3/32(2.4)	1/16(1.6)	2-1/4(57.1)	2,200(9.79)	7/8(22.2)	0.094(2.4)	10-1/4(260)	4.25(1.9)
ZCR030A30	3/32(2.4)	1/16(1.6)	3(76.2)	1,800(8)	1-1/4(31.8)	0.05(1.3)	10-3/4(270)	4.5(2.1)
ZCR060A15	3/16(4.8)	5/32(4)	1-1/2(38.1)	6,000(26.7)	5/8(15.9)	0.05(1.3)	11-3/16(280)	4.75(2.2)
ZCR060A225	5/32(4.0)	1/8(3.2)	2-1/4(57.1)	4,300(19.1)	7/8(22.2)	0.094(2.4)	12-29/32(328)	5.25(2.4)
ZCR060A30	1/8(3.2)	3/32(2.4)	3(76.2)	3,400(15.1)	1-1/4(31.8)	0.05(1.3)	13-1/2(340)	5.5(2.5)



Model	Reach inch(mm)	Gap inch(mm)	Closed Height inch(mm)
A15	1.5(38.1)	0.89(22.6)	0.875(22.2)
A225	2.25(57.2)	0.89(22.6)	0.875(22.2)
A30	3(76.2)	0.89(22.6)	0.875(22.2)

Features

- High quality industrial grade compression rivet squeezers, for the installation of solid rivets.
- Compact size and lighter in weight compare to current pneumatic squeezers on the market.
- CONSTANT FORCE over the entire stroke range.
- Built from high quality aircraft grade materials and features held to close tolerances, for years of dependable operation.
- The reduction in weight and constant force decreases operator fatigue, and improves the quality of every riveting work.



Commercial users of these Squeezers include:

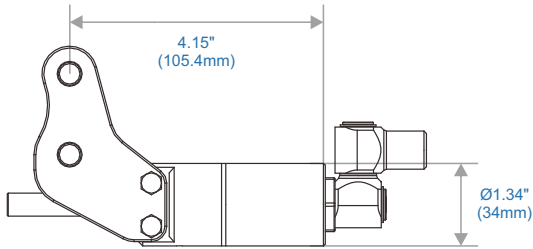
AIRBUS	MUSCO SPORTS LIGHTING
ALCOA	NORTHROP GRUMMAN
BARNES AEROSPACE	ORENDA AEROSPACE
BEECHCRAFT	ROLLS ROYCE - UK
BOEING AIRCRAFT	ROLLS ROYCE - US
CANADA NATIONAL DEFENCE	SCHILLING ROBOTICS
DELTA AIRLINES	SPIRIT AEROSYSTEMS
GE AIRCRAFT ENGINES	UTC AEROSPACE SYSTEMS
HONDA AIRCRAFT	U.S. ARMY
KOREAN AEROSPACE	U.S AIR FORCE
LODE KING INDUSTRIES	Evergreen Aviation Precision Corp. (EGAP)



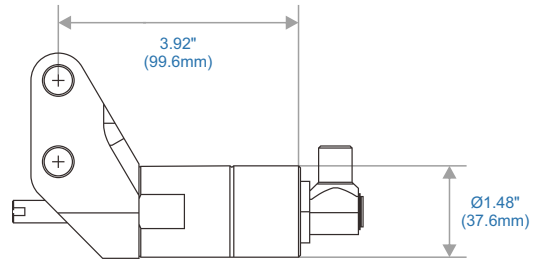
3K & 3.5K Pneudraulic C -Yoke Squeezers



Z3000C
3K FORCE



Z3500C
3.5K FORCE



ZPI-9009
Pneudraulic Intensifier



ZPI-11016
Pneudraulic Intensifier



HH18L
6'(1.8m) Hydraulic Hose Set with coupler

HH24L
8'(2.4m) Hydraulic Hose Set with coupler

HH30L
10'(3m) Hydraulic Hose Set with coupler

H18L
6'(1.8m) Hydraulic Hose Set

H24L
8'(2.4m) Hydraulic Hose Set

H30L
10'(3m) Hydraulic Hose Set



F14G
Foot Pedal, Guarded

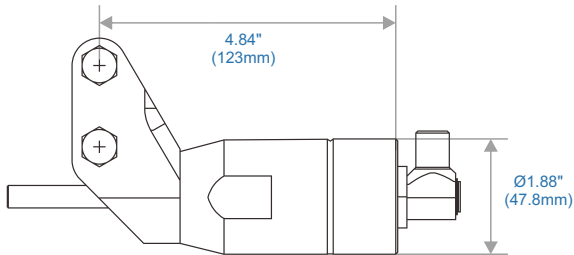
* "C" yoke need to purchase separately

Squeezer Model	Rivet Capacity Diameter		Fluid Disp Required in ³ (cc)	Force At Normal Hyd Pressure lbf(kN)	Hydraulic Pressure		Rivet Set (compression Pin) Travel inch(mm)	Weight (no Yoke) lbs(kgs)
	Alum	Steel			Normal psi(MPa)	MAX psi(MPa)		
Z3000C	1/8(3.2)	3/32(2.4)	0.39(6.4)	2,690(11.9)	3,500(24.1)	4,500(31)	0.5(12.7)	1.05(0.47)
Z3500C	5/32(4)	1/8(3.2)	0.55(9)	3,480(15.5)	3,500(24.1)	4,500(31)	0.55(14)	1.25(0.56)
C-Yoke Squeezer System		Contents included						
Z3000CK-0		Z3000C+ZPI-9009 3K SQUEEZER SYSTEM, W/O YOKE						
Z3500CK-0		Z3500C+ZPI-11016 3.5K SQUEEZER SYSTEM, W/O YOKE						

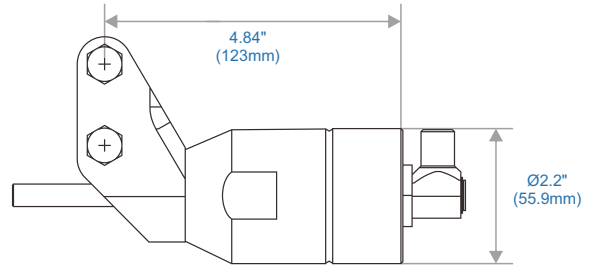
*All C-Squeezers accept industry standard CP-214 yokes. *All Squeezers accept rivet dies with 3/16" (0.187") shanks.



Z6000C
6K FORCE



Z9000C
9K FORCE



ZPI-15047F
Pneudraulic Intensifier



HH18L

6'(1.8m) Hydraulic Hose Set with coupler

HH24L

8'(2.4m) Hydraulic Hose Set with coupler

HH30L

10'(3m) Hydraulic Hose Set with coupler

H18L

6'(1.8m) Hydraulic Hose Set

H24L

8'(2.4m) Hydraulic Hose Set

H30L

10'(3m) Hydraulic Hose Set



F14G
Foot Pedal, Guarded

* "C" yoke need to purchase separately

Squeezer Model	Rivet Capacity Diameter		Fluid Disp Required in ³ (cc)	Force At Normal Hyd Pressure lbf(kN)	Hydraulic Pressure		Rivet Set (compression Pin) Travel inch(mm)	Weight (no Yoke) lbs(kgs)
	Alum	Steel			Normal psi(MPa)	MAX psi(MPa)		
Z6000C	3/16(4.8)	5/32(4)	0.97(15.9)	6,185(27.5)	3,500(24.1)	4,500(31)	0.55(14)	1.72(0.78)
Z9000C	1/4(6.4)	3/16(4.8)	0.32(21.6)	8,420(37.4)	3,500(24.1)	4,500(31)	0.55(14)	2(0.91)
C-Yoke Squeezer System		Contents included						
Z6000CK-0		Z6000C+ZPI-15047F 6K SQUEEZER SYSTEM, W/O YOKE						
Z9000CK-0		Z9000C+ZPI-15047F 9K SQUEEZER SYSTEM, W/O YOKE						

*All C-Squeezers accept industry standard CP-214 yokes. *All Squeezers accept rivet dies with 3/16" (0.187") shanks.

CP214 Compatible Yoke



C030C08



C030C09



C030C13



C030C14



C030C15



C030C30



C030C40



C030L25



Z3028-1



Z3028-2



Z3028-3



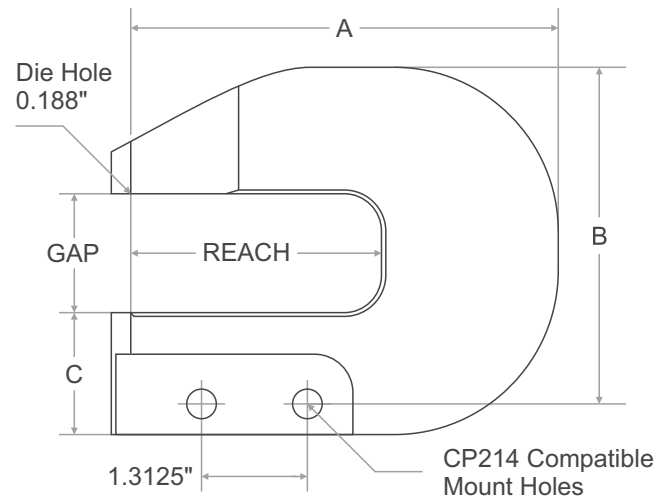
Z3028-4



Z3028-5



Z3028-6



Model	Reach	Gap	"A"	"B"	"C"	Thickness
C030C08	0.78"	1.1"	2.72"	2.16"	1.12"	0.57"
C030C09	0.9"	1.02"	3.27"	2.69"	1.12"	0.75"
C030C13	1.33"	1.41"	2.72"	2.87"	1.4"	0.57"
C030C14	1.4"	1.02"	3.73"	3.02"	1.4"	0.75"
C030C15	1.5"	1.25"	2.98"	3.39"	1.12"	0.57"
C030C30	3"	1.25"	4.44"	3.29"	1.12"	0.57"
C030C40	4"	1.25"	5.89"	3.76"	1.12"	0.83"
C030L25	2.5"	1.25"	3.67"	3.98"	1.12"	0.57"
Z3028-1	1.32"	1.5"	3.23"	3.72"	1.4"	1"
Z3028-2	2.07"	1.5"	4.23"	4.22"	1.4"	1"
Z3028-3	3.07"	1.5"	5.23"	4.22"	1.4"	1"
Z3028-4	4.07"	1.5"	6.35"	4.22"	1.4"	1"
Z3028-5	1.49"	1.92"	3.46"	5.68"	1.12"	1.18"
Z3028-6	3.53"	3.93"	6.77"	7.09"	1.5"	1.38"

*Please confirm the length of die holder when ordering.



Z4000A

14" Alligator Squeezer

Z5000A

10" Alligator Squeezer

Z7000A

8" Alligator Squeezer

Z9000A

6" Alligator Squeezer



ZPI-15047F

Pneudraulic Intensifier



F14G

Foot Pedal, Guarded



HH18L

6'(1.8m) Hydraulic Hose Set with coupler

HH24L

8'(2.4m) Hydraulic Hose Set with coupler

HH30L

10'(3m) Hydraulic Hose Set with coupler

H18L

6'(1.8m) Hydraulic Hose Set

H24L

8'(2.4m) Hydraulic Hose Set

H30L

10'(3m) Hydraulic Hose Set

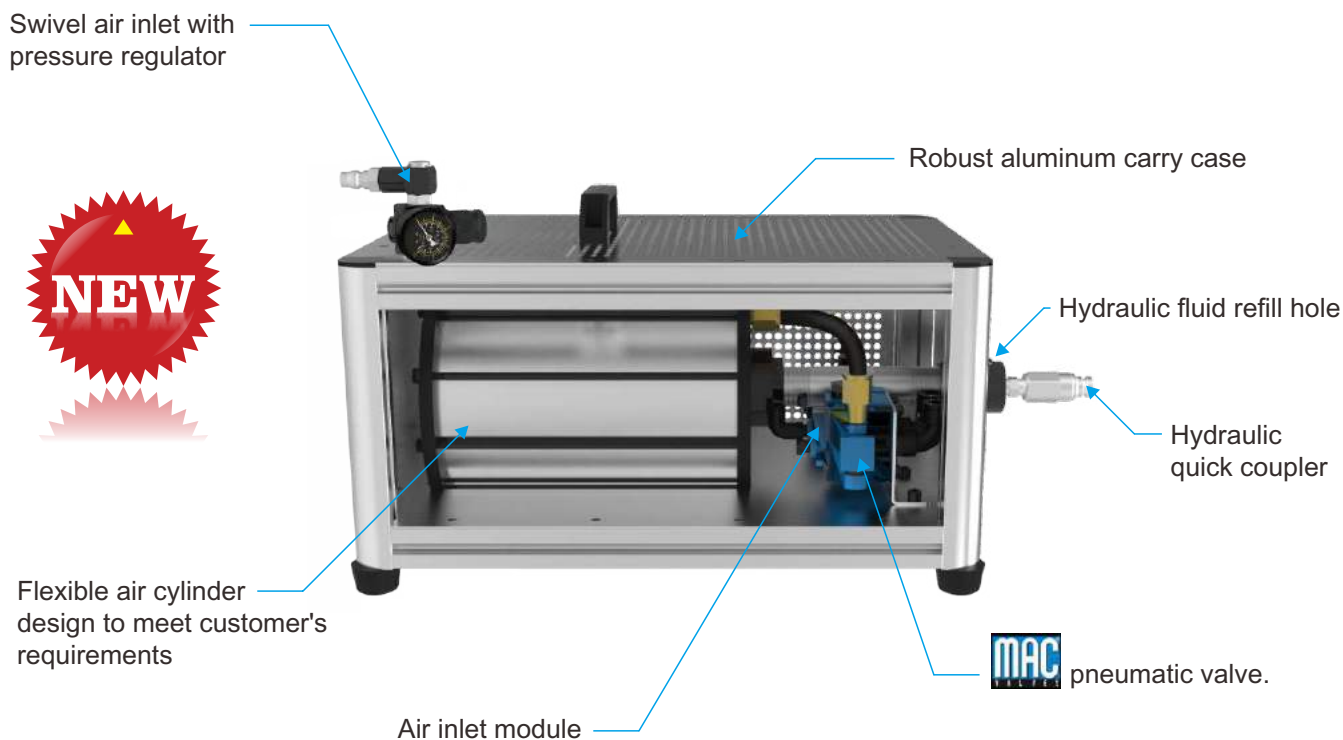
Model	Rivet Capacity Diameter		Force lbf(kN)	Reach inch(mm)	Jaw Tip Gap closed inch(mm)	Jaw Tip Gap open inch(mm)	Jaw Tip Gap extended inch(mm)	Net Weight lbs(kgs)
	Alum	Steel						
Z9000A	1/4(6.4)	3/16(4.8)	10,100(44.9)	6(152.4)	1.38(35.1)	2.05(52.1)	2.81(71.4)	13.8(6.26)
Z7000A	1/4(6.4)	3/16(4.8)	7,862(34.9)	8(203.2)	1.38(35.1)	2.25(57.2)	3.23(82)	15.7(7.12)
Z5000A	3/16(4.8)	5/32(4)	6,416(28.5)	10(254)	1.38(35.1)	2.45(62.2)	3.65(92.7)	18.3(8.3)
Z4000A	3/16(4.8)	5/32(4)	6,416(28.5)	14(355.6)	1.38(35.1)	2.45(62.2)	3.65(92.7)	25.6(11.61)
Alligator System	Contents included							
Z9000AK	Z9000A 6" ALLIGATOR+ZPI-15047F INTENSIFIER							
Z7000AK	Z7000A 8" ALLIGATOR+ZPI-15047F INTENSIFIER							
Z5000AK	Z5000A 10" ALLIGATOR+ZPI-15047F INTENSIFIER							
Z4000AK	Z4000A 14" ALLIGATOR+ZPI-15047F INTENSIFIER							

*Alligator tip gaps are without dies installed. *All Squeezers accept rivet dies with 3/16" (0.187") shanks.

Pneudraulic Intensifiers

Features

- The ZIPP Pneudraulic Intensifier is designed to operate ZIPP Rivet C-Squeezers, such as the Model Z6000C (6K force) and Model Z9000C (9K force), as well as the Model Z5000A, Z7000A, and Z9000A Alligator Squeezers. It can also operate other devices requiring a small volumetric output of high pressure fluid. The unit is a "one shot" intensifier, meaning it will fully displace the hydraulic fluid with one stroke of the air piston in the cylinder. These types of intensifiers tend to be faster than pumping type air operated intensifiers of similar size. These models also allows for "feathering" of the riveter (subtle positioning of the squeezer rivet set), when controlled by a foot operated valve.
- Optional electrical module. upgrade are available upon request.
- Portable intensifier instead of high cost hydraulic power unit.
- Low operating hydraulic pressure design for more durable hydraulic sealing mechanism.
- Custom design are welcome.
- Before using these Intensifier, please fully read and understand this operation manual.



Model	Max. Inlet Air Pressure psi(kg/cm ²)	Max. Output Hydraulic Pressure psi(kg/cm ²)	Delivered Hyd. Fluid Volume CC
ZPI-10017	90(6.3)	5556(389)	17
ZPI-12525	90(6.3)	5493(385)	25
ZPI-15047 *ZPI-15047F	90(6.3)	5062(354)	47
ZPI-18081 *ZPI-18081F	90(6.3)	5062(354)	81
ZPI-20098	90(6.3)	5760(403)	98
ZPI-300377	90(6.3)	5062(354)	377
ZPI-400785	90(6.3)	5760(403)	785

*ZPI-15047F, ZPI-18081F For use with hydraulic squeezers w/ foot valve.

Features

- These Pneudraulic Intensifier is designed to operate the Model Z3000C and Z3500C C-yoke Rivet Squeezer, or other devices requiring a small volumetric output of high pressure fluid. The unit is a "one shot" intensifier, meaning it will fully displace the hydraulic fluid with one stroke of the air piston in the cylinder. These types of intensifiers tend to be faster than pumping type air operated intensifiers of similar size. The models also allows for "feathering" of the riveter (subtle positioning of the squeezer rivet set), when controlled by a foot operated valve.
- Before using these Pneudraulic Intensifier, please fully read and understand this operation manual.



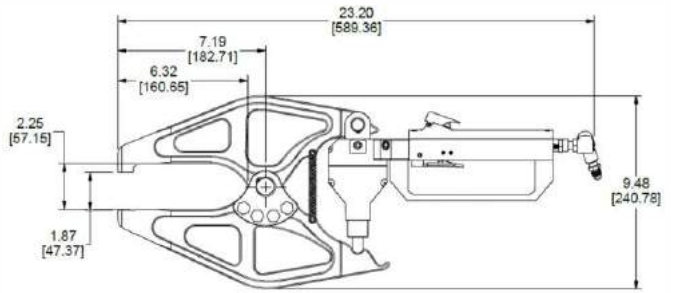
ZPI-9009
Pneudraulic Intensifiers

ZPI-11016
Pneudraulic Intensifiers

Model	Max. Inlet Air Pressure psi(kg/cm ²)	Max. Output Hydraulic Pressure psi(kg/cm ²)	Delivered Hyd. Fluid Volume CC
ZPI-9009	90(6.3)	4978(350)	9
ZPI-11016	90(6.3)	4267(300)	16

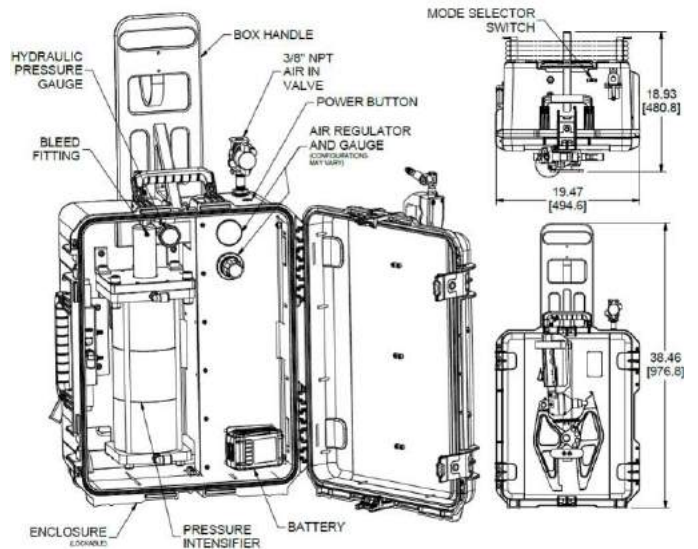
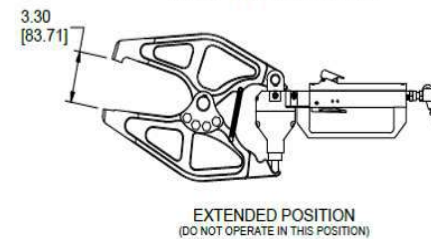
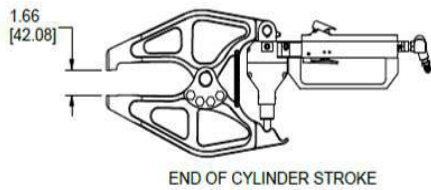
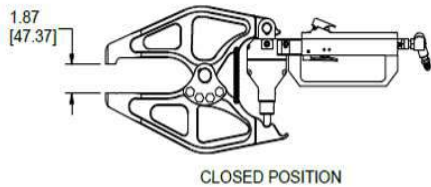
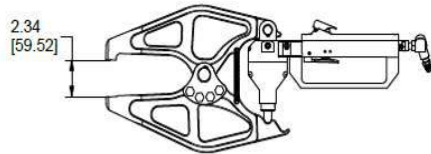


Pneudraulic Alligator Squeezers



Z10AH-6

6" Alligator Squeezer



Feature	Z10AH-6
Cycle Time (seconds)	3.5
Force Generated (lbf.)	10,000@80psi
Constant Force Over Entire Stroke	Yes
Weight (lbs.)	14.7
Sound Pressure(dB(A))	94
	Sound at Intensifier Cart
Adjustable Electronic Force Setting	Yes
Adjustable Electronic Feathering Control	Yes
Possible Future Electronic Features	Cycle Counts, Force History per Cycle
Overall Dimensions(approx.)	8.75"H x 3.187"W x 22.28"L

DIMPLE PUNCH & DIE SET



RS426-3
3/32"



RS426-4
1/8"



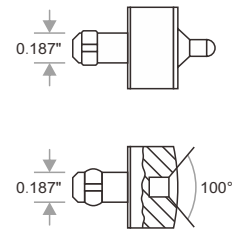
RS426-5
5/32"



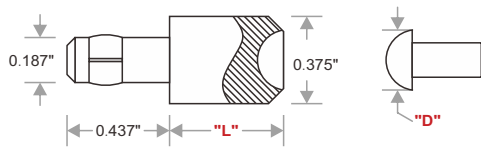
RS509-4
#6



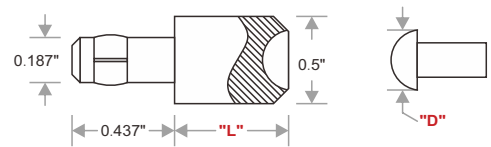
RS509-5
#8



ROUND HEAD



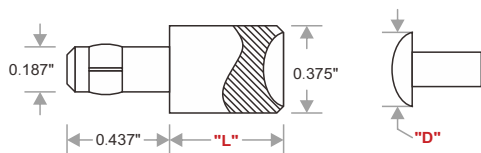
RS-1000



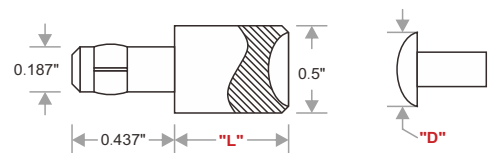
RS-2000/RS-2100

Rivet Head Diameter							
RS-1000		RS-2000		RS-2100			
"D" 0.187"(4.75mm)		"D" 0.250"(6.35mm)		"D" 0.219"(5.57mm)		"D" 0.273"(6.94mm)	
NO.	L	NO.	L	NO.	L	NO.	L
-1X	1/8(3.2mm)	-8X	1/8(3.2mm)	-01X	1/8(3.2mm)	-01XA	1/8(3.2mm)
-1	1/4(6.4mm)	-8	1/4(6.4mm)	-01	1/4(6.4mm)	-01A	1/4(6.4mm)
-2	3/8(9.5mm)	-9	3/8(9.5mm)	-02	3/8(9.5mm)	-02A	3/8(9.5mm)
-3	1/2(12.7mm)	-10	1/2(12.7mm)	-03	1/2(12.7mm)	-03A	1/2(12.7mm)
		-11	5/8(15.9mm)				
		-12	3/4(19mm)				

BRAZIER HEAD



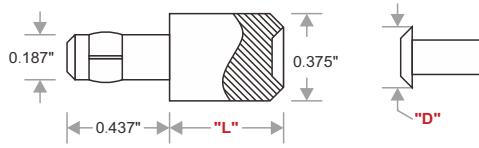
RS-1001



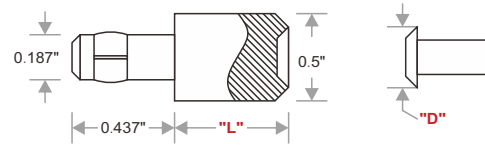
RS-2001

Rivet Head Diameter					
RS-1001		RS-2001			
"D" 0.312"(7.93mm)		"D" 0.312"(7.93mm)		"D" 0.391"(9.94mm)	
NO.	L	NO.	L	NO.	L
-8X	1/8(3.2mm)	-8X	1/8(3.2mm)	-15X	1/8(3.2mm)
-8	1/4(6.4mm)	-8	1/4(6.4mm)	-15	1/4(6.4mm)
-9	3/8(9.5mm)	-9	3/8(9.5mm)	-16	3/8(9.5mm)
-10	1/2(12.7mm)	-10	1/2(12.7mm)	-17	1/2(12.7mm)
-11	5/8(15.9mm)	-11	5/8(15.9mm)		
-12	3/4(19mm)	-12	3/4(19mm)		
-13	7/8(22.2mm)	-13	7/8(22.2mm)		
-14	1(25.4mm)	-14	1(25.4mm)		

UNIVERSAL HEAD



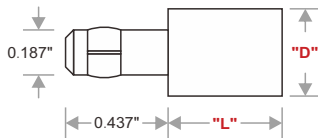
RS-1002



RS-2002

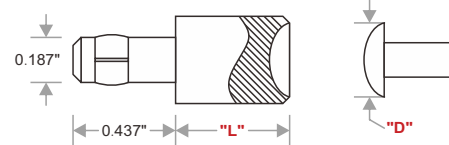
Rivet Head Diameter									
RS-1002				RS-2002					
"D" 0.187"(4.75mm)		"D" 0.250"(6.35mm)		"D" 0.187"(4.75mm)		"D" 0.250"(6.35mm)		"D" 0.312"(7.93mm)	
NO.	L	NO.	L	NO.	L	NO.	L	NO.	L
-1X	1/8(3.2mm)	-8X	1/8(3.2mm)	-1X	1/8(3.2mm)	-8X	1/8(3.2mm)	-15X	1/8(3.2mm)
-1	1/4(6.4mm)	-8	1/4(6.4mm)	-1	1/4(6.4mm)	-8	1/4(6.4mm)	-15	1/4(6.4mm)
-2	3/8(9.5mm)	-9	3/8(9.5mm)	-2	3/8(9.5mm)	-9	3/8(9.5mm)	-16	3/8(9.5mm)
-3	1/2(12.7mm)	-10	1/2(12.7mm)	-3	1/2(12.7mm)	-10	1/2(12.7mm)	-17	1/2(12.7mm)
-4	5/8(15.9mm)	-11	5/8(15.9mm)	-4	5/8(15.9mm)	-11	5/8(15.9mm)	-18	5/8(15.9mm)
-5	3/4(19mm)	-12	3/4(19mm)	-5	3/4(19mm)	-12	3/4(19mm)	-19	3/4(19mm)
-6	7/8(22.2mm)	-13	7/8(22.2mm)	-6	7/8(22.2mm)	-13	7/8(22.2mm)	-20	7/8(22.2mm)
-7	1(25.4mm)	-14	1(25.4mm)	-7	1(25.4mm)	-14	1(25.4mm)	-21	1(25.4mm)

FLUSH STYLE



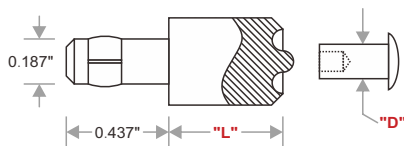
Rivet Head Diameter	
RS-2003	
"D" 0.5"(12.7mm)	
NO.	L
-16	1/8(3.2mm)
-18	1/4(6.4mm)
-20	3/8(9.5mm)
-22	1/2(12.7mm)
-24	5/8(15.9mm)
-26	3/4(19mm)
-28	7/8(22.2mm)

OVAL/TRUSS HEAD



Rivet Head Diameter	
RS-2004	
"D" 0.375"(9.53mm)	
NO.	L
-23	3/8(9.5mm)

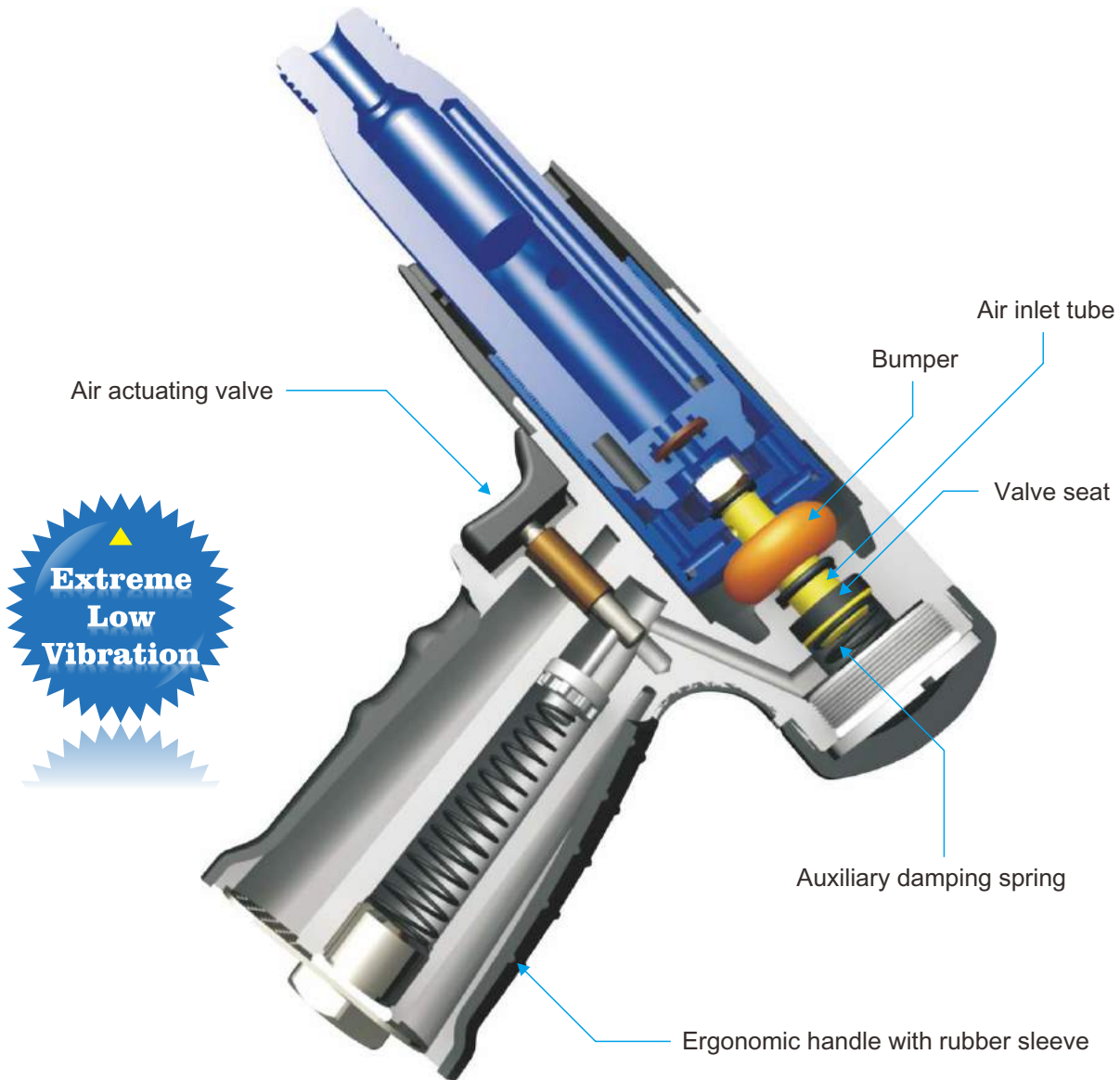
TUBULAR RIVETS



Rivet Head Diameter	
RS-2005	
"D" 0.187"(4.75mm)	
NO.	L
-24	1/2(12.7mm)

Features

- Designed with following patents for assuring the best shock reduction and operator's comfort.
 - 1) Portable pneumatic tool assembled with module units.
 - 2) Suspension vibration-reducing means for portable pneumatic tools.
- Alloy steel made impact parts, heat-treated for durability.
- Quick Change Retainer for simple accessory changes.
- Ergonomic handle with rubber made exhaust muffler for added operator's comfort.
- Optional patented universal swivel air inlet joint for the best maneuverability of the tool.



Patent pending in other countries



R.O.C.PAT.:
174,032
184,745



U.S.A.PAT.:
6,149,356
5,615,746



P.R.C.PAT.:
ZL 00 2 53627.7

Extreme Low Vibration

ZAH-392 -Round
ZAH-392H -Hex.



ZAH-393 -Round
ZAH-393H -Hex.



ZAH-394 -Round
ZAH-394H -Hex.



ZAH-592 -Round
ZAH-592H -Hex.



ZAH-593 -Round
ZAH-593H -Hex.



ZAH-594 -Round
ZAH-594H -Hex.



ZAH-392K
ZAH-392HK
ZAH-592K
ZAH-592HK

ZAH-393K
ZAH-393HK
ZAH-593K
ZAH-593HK

ZAH-394K
ZAH-394HK
ZAH-594K
ZAH-594HK

[Accessories]

- Shock Reduced Air Hammer X 1
- 192913 Retainer Spring
- CH641RL 7" Single End Cutter X 1
- CH645RL 7" Cut Off Chisel X 1
- CH649RL 7" Rivet Cutter Chisel X 1
- CH672RL 7" Special Panel Cutter X 1
- CH627RL 7" Shear Chisel X 1

*ZAH-393H, ZAH-593H, ZAH394H, ZAH594H chisel shank size are 0.410"(10.4mm) Hex. shank.



ZNS-392
Shock Reduced
Needle Scaler



CA2321

*No. of Needles: 19 pcs

Needle Scaler Attachment



ZCH-394B
Shock Reduced
Construction Air Hammer



ZCH-394BK



294903



CA132910

[Accessories]

- Shock Reduced Air Hammer X1
- 294903 Retainer Spring
- CA132910 7" Moil Point Chisel

Model	Chisel Shank Opening inch(mm)	Bore Diameter inch(mm)	Stroke Length inch(mm)	Blow Per Minch bpm	Avg. Air Cons cfm(l/min)	Net Weight lbs(kgs)	Minch Hose Size inch(mm)	Vibration m/s ²
ZAH-392 ZAH-392H	0.401(10.2) 0.410(10.4)	3/4(19)	1-31/32(50)	4,000	15.2(430)	3.4(1.5)	3/8(10)	2.5
ZAH-393 ZAH-393H	0.401(10.2) 0.410(10.4)	3/4(19)	2-5/8(66)	3,000	4.95(140)	4(1.8)	3/8(10)	10
ZAH-394 ZAH-394H	0.401(10.2) 0.410(10.4)	3/4(19)	3-1/2(89)	2,100	5.65(160)	4.6(2.1)	3/8(10)	5.5
ZAH-592 ZAH-592H	0.401(10.2) 0.410(10.4)	3/4(19)	1-31/32(50)	4,000	15.2(430)	3.4(1.5)	3/8(10)	2.5
ZAH-593 ZAH-593H	0.401(10.2) 0.410(10.4)	3/4(19)	2-5/8(66)	3,000	4.95(140)	4(1.8)	3/8(10)	10
ZAH-594 ZAH-594H	0.401(10.2) 0.410(10.4)	3/4(19)	3-1/2(89)	2,100	5.65(160)	4.6(2.1)	3/8(10)	5.5
ZNS-392	0.401(10.2)	3/4(19)	1-31/32(50)	4,000	15.2(430)	3.4(1.5)	3/8(10)	2.5
ZCH-394B	0.401(10.2)	3/4(19)	3-1/2(89)	2,100	6(170)	4.6(2.1)	3/8(10)	5.3

*(H)-Chisel Shank Opening 0.410"(10.4mm) *Operating Air Pressure: 90psi/6.2bar. *Air Inlet Size: 1/4" PT/NPT




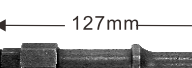

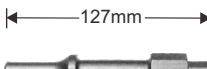

Features

- Designed with following patents for assuring the best shock reduction and operator's comfort.
 - 1) Portable pneumatic tool **assembled with module units.**
 - 2) **Suspension vibration-reducing** means for portable pneumatic tools.
- Alloy steel made impact parts, heat-treated for durability.
- Quick Change Retainer for simple accessory changes.
- **Ergonomic handle with rubber** made exhaust muffler for added operator's comfort.
- Optional patented universal swivel air inlet joint for the best maneuverability of the tool.



ZAH-393S / ZAH-394S
Shock Reduced Air Hammer
With Special Chassis Chisel Sets

Accessories

 113mm CA193901	 113mm CA193902	 100mm CA193903	 127mm CA193904	 178mm CA193909	 127mm CA193910 Optional	 110mm CA193911 Optional
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Model	Chisel Shank Opening inch(mm)	Bore Diameter inch(mm)	Stroke Length inch(mm)	Blow Per Minch bpm	Avg. Air Cons cfm(l/min)	Net Weight lbs(kgs)	Minch Hose Size inch(mm)	Vibration m/s ²
ZAH-393S	0.401(10.2)	3/4(19)	2-5/8(66)	3,000	4.95(140)	4(1.8)	3/8(10)	10
ZAH-394S	0.401(10.2)	3/4(19)	3-1/2(89)	2,100	5.65(160)	4.6(2.1)	3/8(10)	5.5



ZRH-131P
1X Air Riveting Hammer
-Pistol



ZRH-132P
ZRH-132PAP
2X Air Riveting Hammer
-Pistol



ZRH-133P
ZRH-133PAP
3X Air Riveting Hammer
-Pistol



ZRH-134P
ZRH-134PAP
4X Air Riveting Hammer
-Pistol



ZRH-131S
1X Air Riveting Hammer
-Straight



ZRH-132S
2X Air Riveting Hammer
-Straight



ZRH-133S
3X Air Riveting Hammer
-Straight



ZRH-134S
4X Air Riveting Hammer
-Straight



ZRH-195P
5X Air Riveting Hammer-Pistol



ZRH-197P
7X Air Riveting Hammer-Pistol



ZRH-199P
9X Air Riveting Hammer-Pistol

Use for aero space & general automotive industries, etc.

Model	Chisel Shank Opening inch(mm)	Bore Diameter inch(mm)	Stroke Length inch(mm)	Blows Per Minute bpm	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Minch Hose Size inch(mm)	Rivet Size Steel Alum	
ZRH-131P	0.401(10.2)	9/16(14.3)	1-3/8(35)	2,850	90(6.2)	6.4(180)	2.3(1.0)	3/8(10)	1/8	5/32
ZRH-132P	0.401(10.2)	1/2(12.7)	2-1/4(57.2)	2,580	90(6.2)	7.8(221)	2.7(1.2)	3/8(10)	3/32	1/8
ZRH-133P	0.401(10.2)	1/2(12.7)	2-7/8(73)	2,160	90(6.2)	7.78(220)	2.9(1.3)	3/8(10)	5/32	3/16
ZRH-134P	0.401(10.2)	1/2(12.7)	3-1/16(77.8)	1,740	90(6.2)	7.78(220)	3.1(1.4)	3/8(10)	3/16	1/4
ZRH-132PAP	0.401(10.2)	9/16(14.3)	2-1/4(57.2)	2,580	90(6.2)	5.7(160)	2.7(1.2)	3/8(10)	3/32	1/8
ZRH-133PAP	0.401(10.2)	9/16(14.3)	2-7/8(73)	2,160	90(6.2)	4.9(140)	2.9(1.3)	3/8(10)	5/32	3/16
ZRH-134PAP	0.401(10.2)	9/16(14.3)	3-1/16(77.8)	1,740	90(6.2)	6.4(180)	3.1(1.4)	3/8(10)	3/16	1/4
ZRH-131S	0.401(10.2)	9/16(14.3)	1-3/8(35)	2,850	90(6.2)	6.4(180)	1.9(0.86)	3/8(10)	1/8	5/32
ZRH-132S	0.401(10.2)	1/2(12.7)	2-1/4(57.2)	2,580	90(6.2)	6(170)	2.4(1.06)	3/8(10)	3/32	1/8
ZRH-133S	0.401(10.2)	1/2(12.7)	2-7/8(73)	2,160	90(6.2)	6(170)	2.6(1.16)	3/8(10)	5/32	3/16
ZRH-134S	0.401(10.2)	1/2(12.7)	3-1/16(77.8)	1,740	90(6.2)	6.4(180)	2.8(1.27)	3/8(10)	3/16	1/4
ZRH-195P	0.498(12.6)	3/4(19.1)	2-11/16(68.3)	1,560	90(6.2)	7.78(220)	4.6(2.1)	3/8(10)	3/16	1/4
ZRH-197P	0.498(12.6)	3/4(19.1)	5-13/16(132)	900	90(6.2)	9.19(260)	5.5(2.5)	3/8(10)	5/16	3/8
ZRH-199P	0.498(12.6)	3/4(19.1)	3-7/8(98.4)	1,140	90(6.2)	7.78(220)	5(2.3)	3/8(10)	1/4	5/16

Features

- The new ZRH riveting hammer is designed to minimize the vibration while maintaining high tool performance. Vibration is reduced by an effective air cushion behind the hammer piston.
- Parts are interchangeable with RRH series.
- Streamline profile & adjustable power.
- Equipped with universal swivel air inlet joint for the best maneuverability.



ZRH-04

Shock Reduced
Air Riveting Hammer



ZRH-06

Shock Reduced
Air Riveting Hammer



ZRH-08

Shock Reduced
Air Riveting Hammer

Use for aero space & general automotive industries, etc.

Model	Chisel Shank Opening	Bore Diameter mm	Piston Stroke mm	bpm	Overall Length mm	Air Hose (I.D) mm	Weight kg	Air Consumption cfm	Vibration m/s ²	Max. Rivet Diameter Capacity	
										Dural inch(mm)	Steel inch(mm)
ZRH-04	0.401	15.24	40	3,960	180	9.5	1	6	2.5	3/32~3/16 (2~5)	3/21~5/32 (1~4)
ZRH-06	0.401	15.24	102	2,160	225	9.5	1.33	19	3.9	5/32~1/4 (4~7)	1/8~1/4 (3~6)
ZRH-08	0.401	15.24	137	1,440	280	9.5	1.33	21	4.8	3/16~5/16 (5~8)	5/32~1/4 (4~7)

*Air Inlet Size: 1/4" PT/NPT

Features

An efficient riveting system consists of shock reduced bucking bar with shock reduced riveting hammers.

- Self-adjustable - SA models feature a self-adjusting shock reducing system with compressed air supply. SP models use a spring as shock reducing element and consequently do not require the air supply.
- Flexible - The bucking bars can fitted with serval different interchangeable dolly configurations via a quick change retainer for maximum flexibility.



ZBB10SP

Shock Reduced Bucking Bars



ZBB16SP

Shock Reduced Bucking Bars



ZBB10SA

Shock Reduced Bucking Bars



ZBB16SA

Shock Reduced Bucking Bars

Model	Net Weight lbs(kgs)	Diameter inch(mm)	Air Consumption l/s(cfm)
ZBB10SP	2.4(1.1)	2.0(48)	—
ZBB10SA	2.9(1.3)	2.0(48)	0.5(1.1)
ZBB16SP	3.7(1.7)	2.0(48)	—
ZBB16SA	4.2(1.9)	2.0(48)	0.5(1.1)

Features

- Designed with following patents for assuring the best shock reduction and operator's comfort.
 - 1) Portable pneumatic tool **assembled with module units**.
 - 2) **Suspension vibration-reducing** means for portable pneumatic tools.
- Alloy steel made impact parts, heat-treated for durability.
- Spool valve allows slow heavy blows needed to drive rivets.
- **Ergonomic handle with rubber** made exhaust muffler for added operator's comfort.
- Optional patented universal swivel air inlet joint for the best maneuverability of the tool.



Patent pending in other countries



R.O.C.PAT.:
174,032
184,745



U.S.A.PAT.:
6,149,356
5,615,746



P.R.C.PAT.:
ZL 00 2 53627.7

Features

- Patented Shock Reduced Mechanism.
- Low vibration design to prevent operator's injury after long time use.
- Ergonomic handle with rubber made exhaust muffler for added operator's comfort.
- Optional patented Universal Swivel Air Inlet Joint for the best maneuverability of the tool.

Use for aero space & general automotive industries, etc.



ZRH-132N
ZRH-132NP Low Vibration

2X Shock Reduced
Air Riveting Hammer



ZRH-133N
ZRH-133NP Low Vibration

3X Shock Reduced
Air Riveting Hammer



ZRH-134N
ZRH-134NP Low Vibration

4X Shock Reduced
Air Riveting Hammer



- [KIT Contents]
- CA132901 X1
 - CA132902 X1
 - CA132903 X1
 - CA132904 X1
 - CA132905 X1
 - 192902 Retainer Spring X1



- [KIT Contents]
- CA132901 X1
 - CA132902 X1
 - CA132903 X1
 - CA132904 X1
 - CA132905 X1
 - 192902 Retainer Spring X1



- [KIT Contents]
- CA132901 X1
 - CA132902 X1
 - CA132903 X1
 - CA132904 X1
 - CA132905 X1
 - 192902 Retainer Spring X1

ZRH-132NK
ZRH-132NPK

ZRH-133NK
ZRH-133NPK

ZRH-134NK
ZRH-134NPK

Patent pending
in other countries



R.O.C.PAT.:
184,745



P.R.C.PAT.:
ZL 00 2 53627.7



U.S.A.PAT.NO.:
5,533,579

Model	Chisel Shank Opening inch(mm)	Bore Diameter inch(mm)	Stroke Length inch(mm)	Blows Per Minute bpm	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Vibration m/s ²	Rivet Size Steel Alum
ZRH-132N	0.401(10.2)	1/2(12.7)	2-1/4(57.2)	2,580	90(6.2)	6.71(190)	2.9(1.3)	6	3/32 1/8
ZRH-132NP	0.401(10.2)	9/16(14.3)	2-1/4(57.2)	2,580	90(6.2)	6.71(190)	2.9(1.3)	6	3/32 1/8
ZRH-133N	0.401(10.2)	1/2(12.7)	2-7/8(73)	2,164	90(6.2)	7.42(210)	2.9(1.3)	6	5/32 3/16
ZRH-133NP	0.401(10.2)	9/16(14.3)	2-7/8(73)	2,164	90(6.2)	7.42(210)	2.9(1.3)	6	5/32 3/16
ZRH-134N	0.401(10.2)	1/2(12.7)	3-1/16(77.8)	1,740	90(6.2)	7.42(210)	3.7(1.7)	6	3/16 1/4
ZRH-134NP	0.401(10.2)	9/16(14.3)	3-1/16(77.8)	1,740	90(6.2)	7.42(210)	3.7(1.7)	6	3/16 1/4

Rivet Chisels / Retainers

**For ZRH-131P
ZRH-131PA, ZRH-131S**

- Round 10.08mm
- Material SCM440 Alloy
- Hardness: 48~51°



**For ZRH-132P, ZRH-132PAP, ZRH-132S
ZRH-133P, ZRH-133PAP, ZRH-133S
ZRH-134P, ZRH-134PAP, ZRH-134S
ZRH-132N, ZRH-133N, ZRH-134N**

- Round 10.18mm
- Material SCM440 Alloy
- Hardness: 48~51°



For ZRH-195P, ZRH-197P, ZRH-199P

- Round 12.6mm
- Material SCM440 Alloy
- Hardness: 48~51°



131901

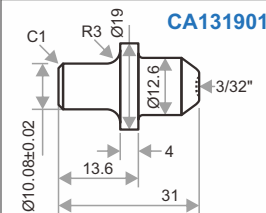


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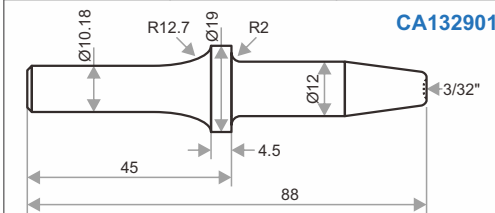
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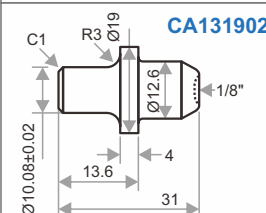
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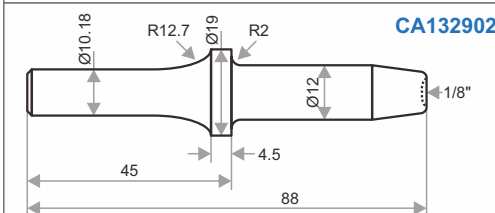
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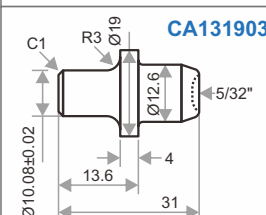
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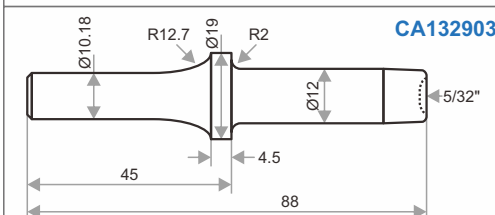
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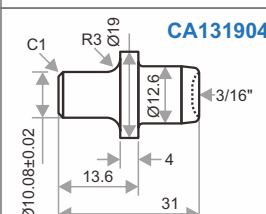
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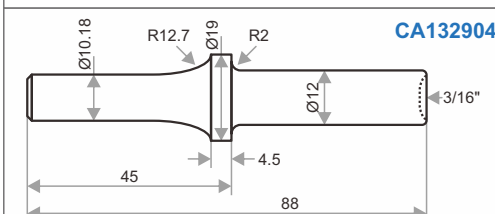
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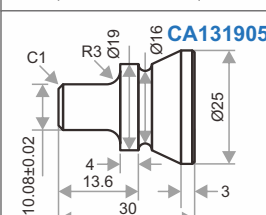
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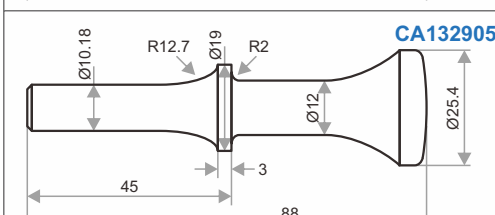
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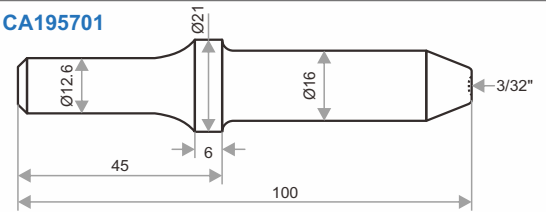
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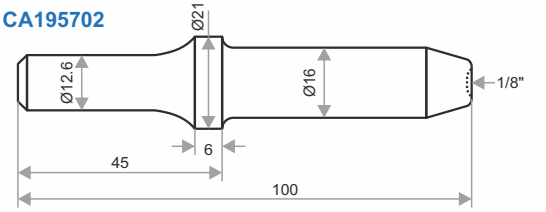
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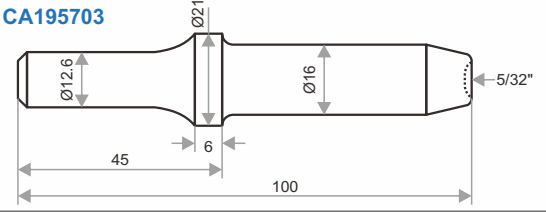
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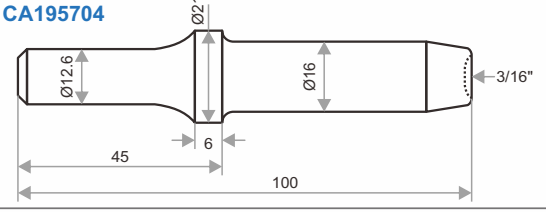
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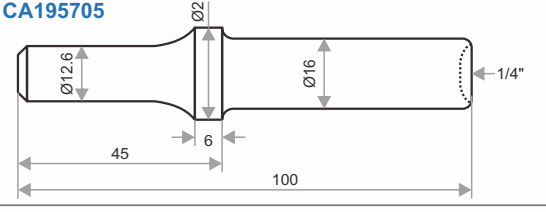
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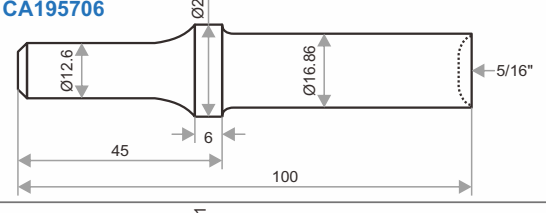
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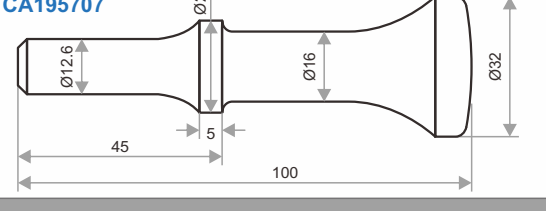
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CA195705



CA195706



CA195707

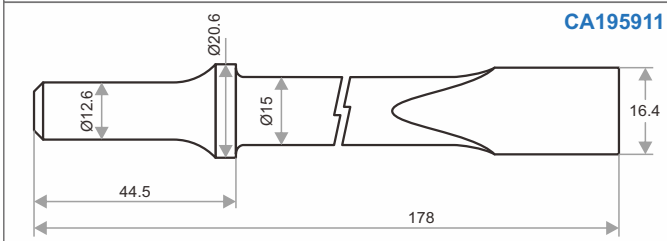
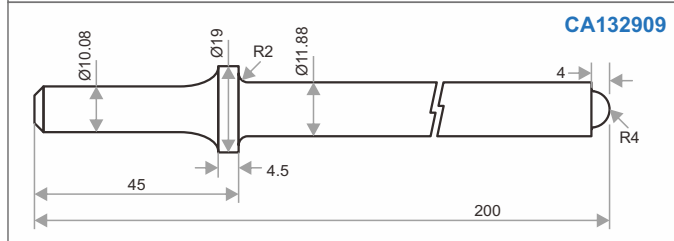
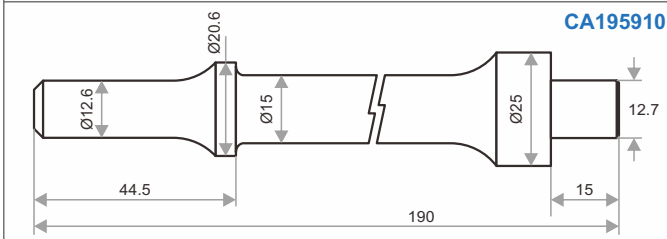
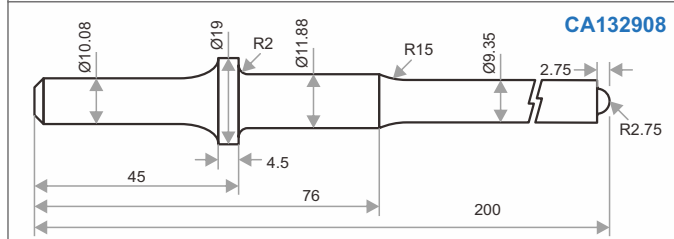
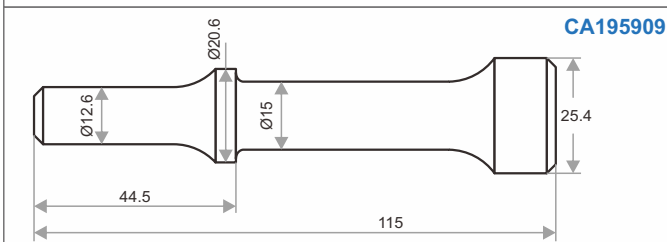
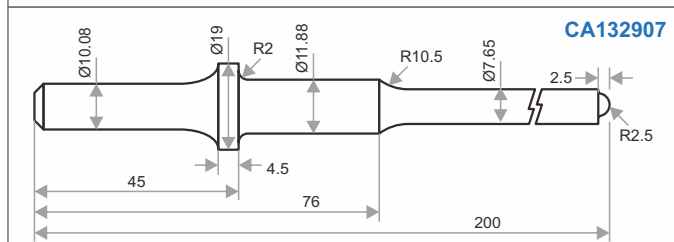
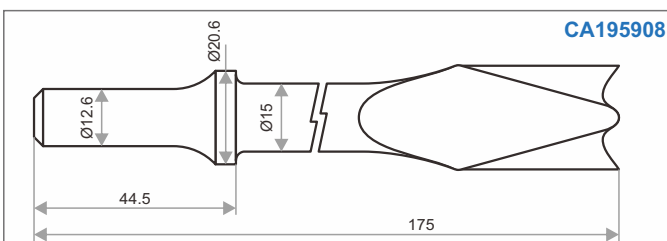
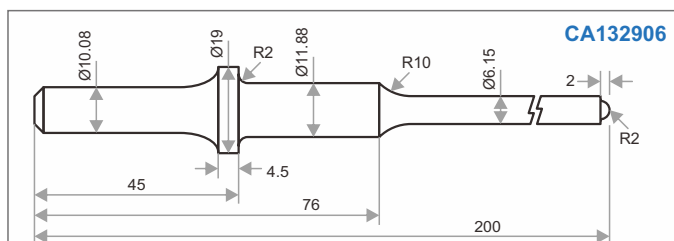
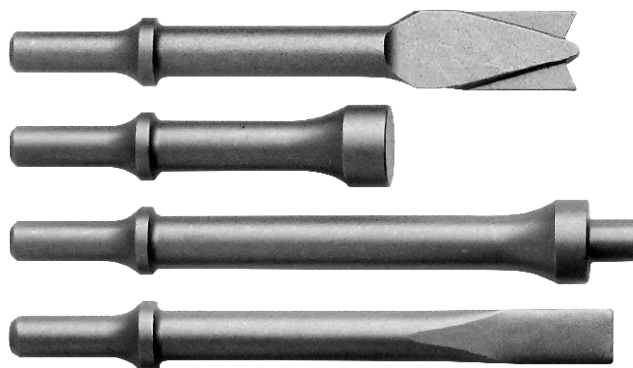
For ZRH-132P, ZRH-132PAP, ZRH-132S
ZRH-133P, ZRH-133PAP, ZRH-133S
ZRH-134P, ZRH-134PAP, ZRH-134S
ZRH-132N, ZRH-133N, ZRH-134N

- Round 10.18mm
- Material SCM440 Alloy
- Hardness: 48~51°



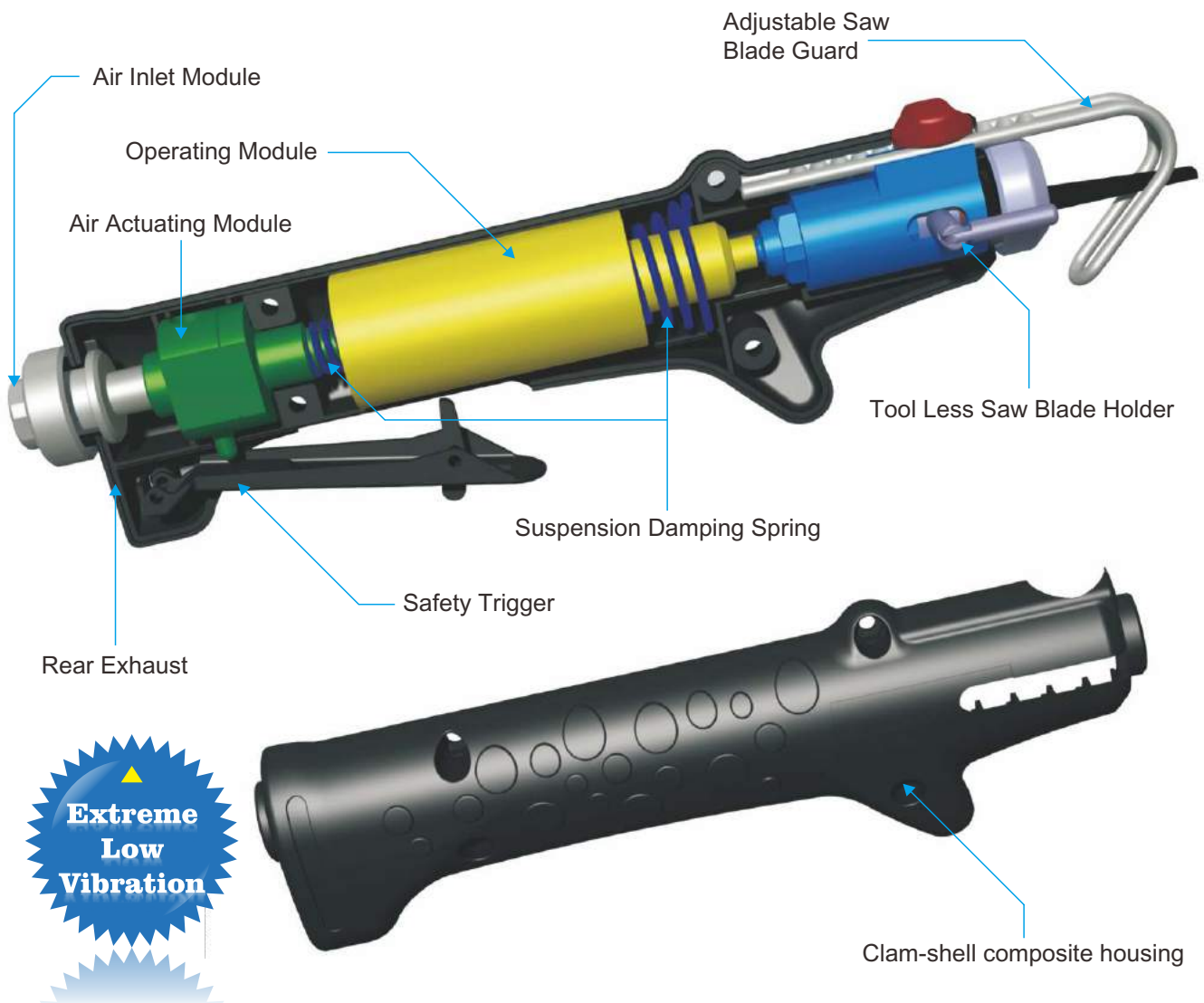
For ZRH-195P, ZRH-197P, ZRH-199P

- Round 12.6mm
- Material SCM440 Alloy
- Hardness: 48~51°



Features

- Designed with following patents to assure extreme low vibration and operator's comfort.
 - 1) Portable pneumatic tool assembled with module units in clam shell composite housing.
 - 2) Suspension vibration-reducing means for portable pneumatic tools.
- Engineering plastic made clam-shell housing designed for easy service.
- Patented universal swivel air inlet joint for the best maneuverability of the tool.
- Safety trigger to prevent accidental start ups and provide operator's comfort.
- Rear exhaust directs air away from work-piece.



Patent pending in other countries



R.O.C.PAT.:
174,032
184,745



U.S.A.PAT.:
6,149,356
5,615,746



P.R.C.PAT.:
ZL 00 2 53627.7




ZS311K
Kit include:
• Bi-metal blades
18T X 5
24T X 5
32T X 5

ZS311
Metal Housing

10mm stroke




ZS317K
Kit include:
• Bi-metal blades
14T X 5
18T X 5

ZS317
Metal Housing

25mm stroke

Extreme Low Vibration




ZS319K
Kit include:
• Bi-metal blades
18T X 5
24T X 5
32T X 5

ZS319
Clam-Shell Composite Housing

10mm stroke




ZS329K
Kit include:
• Bi-metal blades
14T X 5
18T X 5

ZS329
Clam-Shell Composite Housing

25mm stroke




ZS319HK
Kit include:
• Bi-metal blades
18T X 5
24T X 5
32T X 5

ZS319H
Clam-Shell Composite Housing

10mm stroke




ZS329HK
Kit include:
• Bi-metal blades
14T X 5
18T X 5

ZS329H
Clam-Shell Composite Housing

25mm stroke

*10mm stroke models are good for 2mm steel sheet cutting.

*25mm stroke models are good for 5mm steel sheet or pipe cutting.

COMPARISON CHART WITH COMPETITIVE DESIGNS IS AVAILABLE UPON REQUEST.

Model	Blow Per Min bpm	Stroke Length mm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Vibration m/s ²	Sound Pressure dB(A)
ZS311	9,500	10	3.5(100)	1.5(0.7)	1/4	3/8(10)	1.8	85
ZS317	5,000	25	3(90)	2.1(0.96)	1/4	3/8(10)	3.9	85
ZS319	9,500	10	3(90)	1.12(0.51)	1/4	3/8(10)	3.7	85
ZS329	5,000	25	2.8(80)	1.68(0.76)	1/4	3/8(10)	4.3	85
ZS319H	9,500	10	3.5(100)	1.12(0.51)	1/4	3/8(10)	3.7	85
ZS329H	5,000	25	3.5(100)	1.58(0.76)	1/4	3/8(10)	4.3	85

*Operating Air Pressure: 90psi/6.2bar



ZS319-T2B

Clam-Shell Composite Housing



ZS317M

Vibration Reduced Mini Air Pipe Saw
Metal Housing



ZS317MK

- Kit include:
- Bi-metal blades
14T X 5
18T X 5
24T X 5



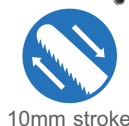
ZS311M

Vibration Reduced Mini Air Body Saw
Metal Housing



ZS311MK

- Kit include:
- Bi-metal blades
18T X 5
24T X 5
32T X 5



ZS312M

Vibration Reduced Mini Air Body Saw
Metal Housing



ZS312MK

- Kit include:
- Bi-metal blades
18T X 5
24T X 5
32T X 5

COMPARISON CHART WITH COMPETITIVE DESIGNS IS AVAILABLE UPON REQUEST.

Model	Blow Per Min bpm	Stroke Length mm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Vibration m/s ²	Sound Pressure dB(A)
ZS319-T2B	9,500	10	3(90)	1.17(0.53)	1/4	3/8(10)	3.7	85
ZS311M	10,000	10	7.6(215)	1.0(0.45)	1/4	3/8(10)	4.3	80.4
ZS312M	10,000	10	7.6(215)	1.0(0.45)	1/4	3/8(10)	4.3	80.4
ZS317M	5,800	20	6.9(195)	1.17(0.53)	1/4	3/8(10)	8.4	81.5

*Operating Air Pressure: 90psi/6.2bar

Products and specifications subject to change without prior notice 142

Vibration Reduced Pneumatic Roofing Cutter

- Designed to assure extreme low vibration for operator's comfort.
- Portable pneumatic tool assembled with module units in clam shell composite housing.
- Engineering plastic made clam-shell housing designed for easy service.
- Universal swivel air inlet joint for the best maneuverability of the tool.
- Blades offer efficient and fast cutting in cold weather to reduce down time.
- These blades cut through a variety of material including shingles, roofing paper, and asphalt roll roofing, etc.
- Blades offer seamless cutting of straight edges provides more efficient to the applications.
- Can be used on ANY ZIPP vibration reduced air saws for the best performance.



Shingles



Asphalt Roll Roofing



Roofing paper



ZRC-311
Metal Housing



ZRC-319
Composite Housing



3.5" Hook Roofing
Cutter Blade Kit



ZRC-311K

- Kit include:
- Bi-metal blades
18T X 5
24T X 5
32T X 5
 - 3.5" cutting blade X3



ZRC-319K

- Kit include:
- Bi-metal blades
18T X 5
24T X 5
32T X 5
 - 3.5" cutting blade X3

Accessories	
314990-3	3 pcs
314990-5	5 pcs
314990-10	10 pcs

Each cutter includes 3 pcs 3.5Hook Roofing Cutter Blades

Model	Blow Per Minch bpm	Stroke Length mm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Vibration m/s ²	Sound Pressure dB(A)
ZRC-311	9,500	10	3.5(100)	1.5(0.7)	1/4	3/8(10)	1.8	85
ZRC-319	9,500	10	3.5(100)	1.12(0.51)	1/4	3/8(10)	3.7	85

*Operating Air Pressure: 90psi/6.2bar

Vibration Reduced Industrial Air Saw



45mm stroke

Cutting Capacity			
Pipe Material	Steel	Steel	Steel
Wall Thickness	2.4mm	3.5mm	5mm
Pipe O.D.	22mm	34mm	80mm
Saw Blade	14T.P.I Bacho Blades		
Cut Off Time(sec.)	9	21	470
Test under same condition as:			
1) 90psi air pressure.			
2) 5kg standard load weight on the tool while testing.			



[Standard Accessories]

- Patented Universal Swivel Joint X 1
- Carrying Box X 1
- Oiler Pot X 1
- Each of 300mm 14TPI & 8/12TPI Bi-Metal BAHCO Saw Blades (1/2" W x 12" L x 0.025" T) X 1
- 3mm Hex Wrench X 1
- Hand Grip X 1

Model	Blow Per Min bpm	Stroke Length mm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Vibration m/s ²	Sound Pressure dB(A)
ZS350D	1,200	45	4.6(130)	6.17(2.8)	1/4	3/8(10)	5	85

*Operating Air Pressure: 90psi/6.2bar

Applications

The most powerful Industrial Air Saw for clean, burr-free cuts with standard hacksaw blades in serving a wide range of industries and emergency services where reliability and durability are really matter such as Petrochemicals, Oil Rigs, Power Stations, Public Transport Facilities, Coal Mines, Fire Brigades, Airways & Airport Facilities, Railway, Garages, Car Manufacturers, Commercial Vehicle Builders, Boat Building, Reinforced Fiberglass, Shipyard use, Ministry of Defense-Army, Navy, Air Force, etc.

Capacity Features

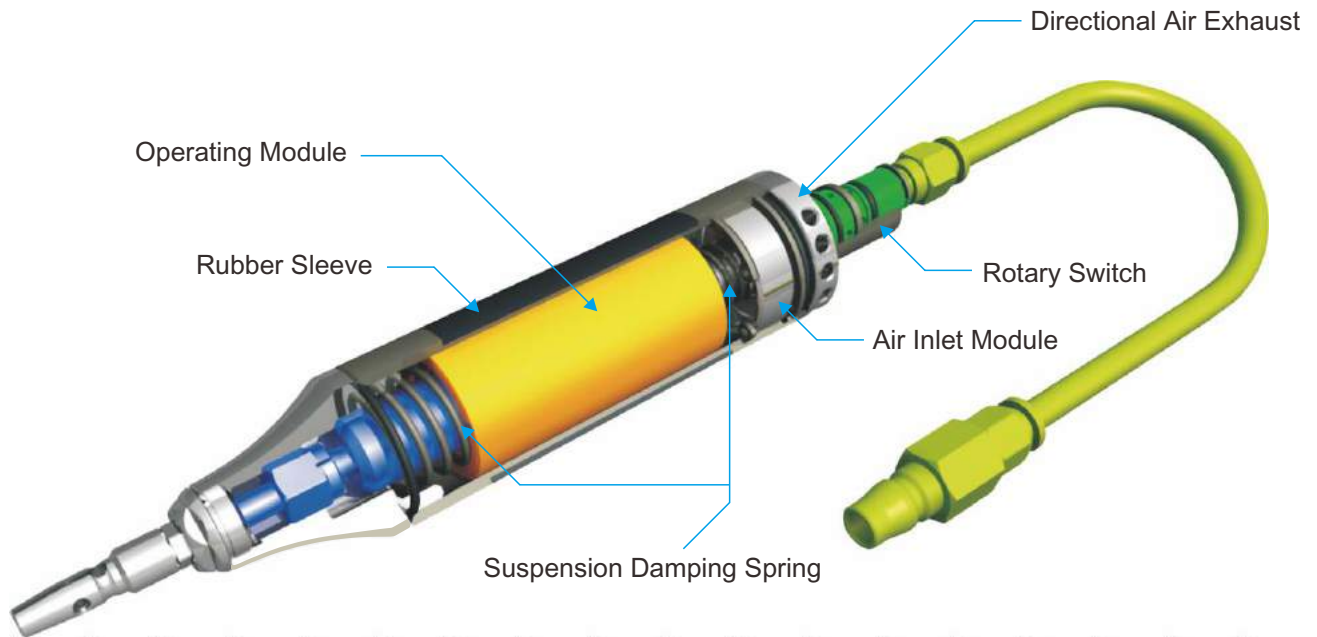
- Excellent sawing work of various materials, trims or shapes sheet metal, plastics, plates, fiberglass, plywood, or cut pipe, rod, bar in any place.
- Available anywhere in ship, in oil tank, in mining tunnel, in construction site, in plant, in water, for rescue work, in car accident, etc.
- Most versatile maintenance tool-used throughout industry.
- Clean and burr-free cuts with standard hacksaw blades.
- Adaptable for cutting a variety of materials with proper saw blades.
- Ideal for sustained usage and suitable for the most awkward places.
- Used throughout fiberglass boat building and car body repair shop industries.
- Powerful enough to easily and quickly cut through steel-flexible enough to enough to efficiently and accurately cut in even the most awkward place.

Construction Features

- Designed with a patented vibration reduced mechanism to ensure the lowest vibration and most operator comfort.
- Few moving parts means breakdowns are virtually eliminated-ensuring total reliability and long trouble-free service.
- Safety Switch-essential for when changing blades.
- Quiet in operation-enables you to use it anywhere.
- Electro-chemical treated bores giving long-wearing quality.
- Slim, compact and lightweight design for easy portability.
- Blade and work piece cooled by exhausted air and oil.
- Special alloy steel made Nosepiece ensures the highest level of durability.
- Automatic and visible lubrication.
- Extremely low air consumption. Operates on normal compressed air supply.
- Safe to use in non-flame areas.
- 45MM stroke length and ability to accept short pieces of blades making it ideal for cutting in confined spaces and "Double skin" panels.

Features

- High frequency with 1mm, 5mm & 10mm strokes for various kind of surface finishing works such as precise and delicate lapping of die & mold surface, finishing in confined area and general filing works.
- Designed with following patents to ensure extreme low vibration and operator's comfort.
 - Portable Pneumatic Tool assembled with module units.
 - Suspension Vibration-Reducing means for portable pneumatic tools.
- Throttle type flexible hose equipped for the best maneuverability of the tool.
- Adjustable side exhaust directs air away from operators.
- Rubber sleeve designed for operator's comfort.



Patent pending in other countries



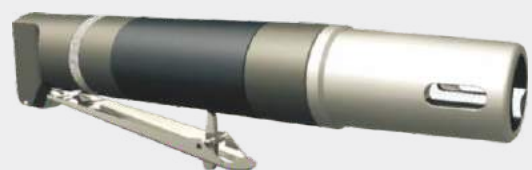
R.O.C.PAT.:
174,032
184,745



U.S.A.PAT.:
6,149,356
5,615,746



P.R.C.PAT.:
ZL 00 2 53627.7



All rotary type Switch can be converted to safety lever type Switch upon request.

Features

- Ideal for precise and delicate filing castings, also perfect for lapping die and mold surface.
- High frequency with 0.5~1mm stroke for ZF-1, ZF-1T, ZF-1M, ZF-1MT
- High frequency with 3~5mm stroke for ZF-5, ZF-5T, ZF-5M, ZF-5MT
- High frequency with 7~10mm stroke for ZF-10, ZF-10T, ZF-10M, ZF-10MT



COMPARISON CHART WITH COMPETITIVE DESIGNS IS AVAILABLE UPON REQUEST.

Model	Blows Per Minute bpm	Stroke Length mm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Vibration m/s ²	Sound Pressure dB(A)
ZF-1(T)	21,000	0.5~1	4(120)	1.26(0.57)	1/4	3/8(10)	0.8	72
ZF-5(T)	11,000	3~5	2.82(80)	1.54(0.7)	1/4	3/8(10)	3.6	83
ZF-10(T)	9,000	7~10	3.89(110)	1.65(0.75)	1/4	3/8(10)	4.6	71
ZF-1M(MT)	21,000	0.5~1	4(120)	0.73(0.33)	1/4	3/8(10)	0.8	72
ZF-5M(MT)	11,000	3~5	2.82(80)	0.73(0.33)	1/4	3/8(10)	3.6	83
ZF-10M(MT)	9,000	7~10	3.89(110)	0.73(0.33)	1/4	3/8(10)	4.6	71

*Operating Air Pressure: 90psi/6.2bar

Saw Blade

-For ZS350D



350812L(300-8/12-SL)

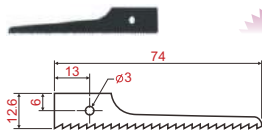


350914L(300-14-ST)

-For ZS311, ZS311M, ZS315, ZS319, ZS319H, ZS319-T2R, ZS319-T2B



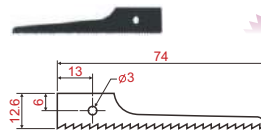
**18
T.P.I**



**314918Z-5(5 pcs)
314918Z-10(10 pcs)**



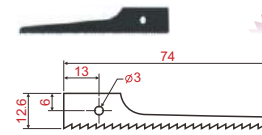
**24
T.P.I**



**314924Z-5(5 pcs)
314924Z-10(10 pcs)**



**32
T.P.I**

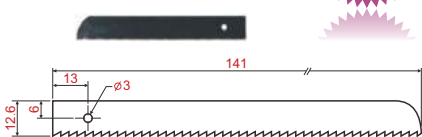


**314932Z-5(5 pcs)
314932Z-10(10 pcs)**

-For ZS317, ZS317M, ZS329, ZS329H



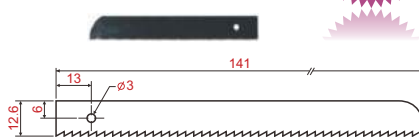
**14
T.P.I**



**317914Z-5(5 pcs)
317914Z-10(10 pcs)**



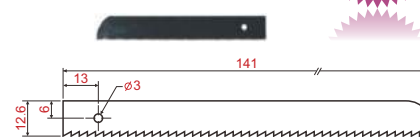
**18
T.P.I**



**317918Z-5(5 pcs)
317918Z-10(10 pcs)**



**24
T.P.I**



**317924Z-5(5 pcs)
317924Z-10(10 pcs)**

Regular File

-For ZF-5, ZF-5T, ZF-5M, ZF-5MT, ZF-10, ZF-10T, ZF-10M, ZF-10MT Type Air File, 5mm Shank Diameter



325901
Rectangular File



325902
Round File



325903
Half Round File



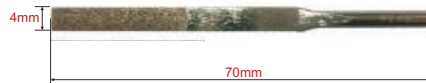
325904
Triangular File

Diamond File

-For ZF-1, ZF-1T, ZF-1M, ZF-1MT Type Air Lapper, 3mm Shank Diameter



201952
2mm Rectangular Diamond File

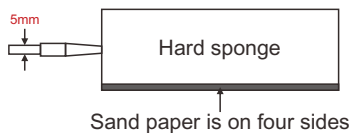


201954
4mm Rectangular Diamond File



201956
6mm Rectangular Diamond File

Hard Sponge Sandpaper block



Sand paper is on four sides



- SB120-5** #120 100mm x 70mm x 25mm
- SB180-5** #180 100mm x 70mm x 25mm
- SB220-5** #220 100mm x 70mm x 25mm
- SB280-5** #280 100mm x 70mm x 25mm

Air Metal Shear / Air Scissors

ZP226

Air Metal Shear

- The ZP226 Air Shear is ideal for the trimming, outlining and shearing of various sheet.
- The heavy-duty cutting blades make clean cut in cold rolled steel up to 18-gauge.
- The shear is ideal for body shop, sheet metal shop, and machine shop.



ZP227

Air Scissors

- The ZP227 Air Scissors is ideal for contour snip.
- The heavy duty blades make quick and clean snip.
- The scissors is ideal for body shop and machine shop.



ZP228

Pistol-Grip Air Shear

- Lightweight and durable composite pistol-grip for great control.



ZP229

Pistol-Grip Air Scissors

- Lightweight and durable composite pistol-grip for great control.



ZS-01
Shear Head



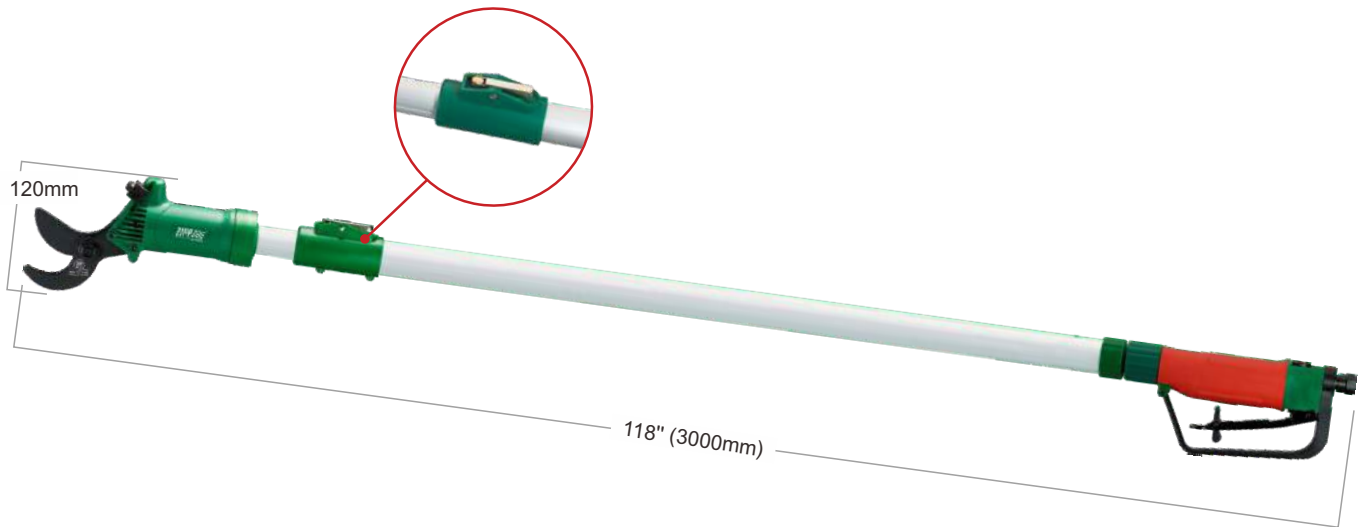
ZS-02
Scissors Head

Model	Cutting Capacity Steel	Cutting Capacity Aluminum	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZP226	1.2mm	1.6mm	2.2(1)	10(255)	2,600	1/4	3/8(10)	3.7
ZP227	1.2mm	1.6mm	2.2(1)	11.4(290)	2,600	1/4	3/8(10)	3.7
ZP228	1.2mm	1.6mm	2.2(1)	7.8(200)	2,600	1/4	3/8(10)	3.7
ZP229	1.2mm	1.6mm	2.2(1)	9.4(240)	2,600	1/4	3/8(10)	3.7

ZPS-471L

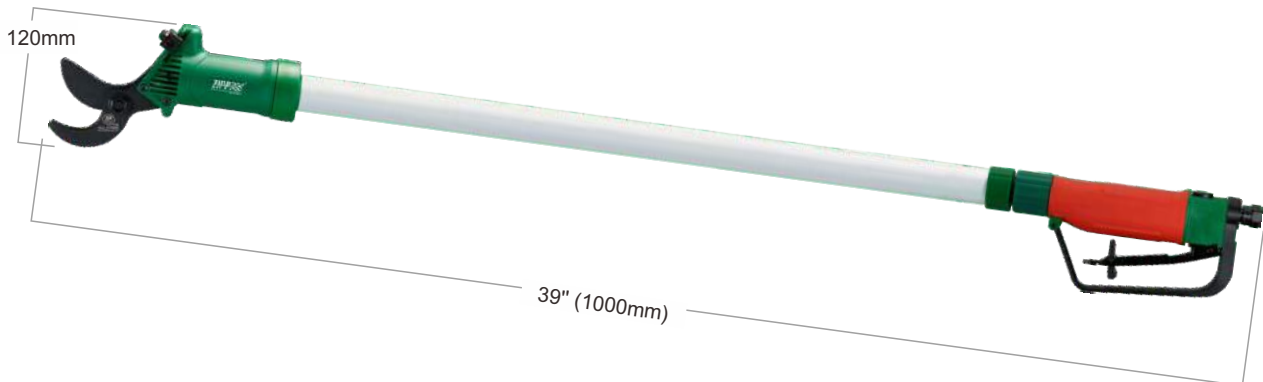
Telescopic Pneumatic Pruning Shear

- Can be extended up to 3.0M



ZPS-471M

Telescopic Pneumatic Pruning Shear



ZPS-471

Pneumatic Pruning Shear

- Durable construction delivers long hours of cutting power.
- Light Weight and easy operation.
- An unique safety lock associated with safety trigger preventing accident start-up.
- Forged blades for long last cutting.
- Telescopic extension pole for longer reach.
- Innovative tilt and rotation adjustment provides excellent reach and cutting application.

Air consumption: 0.073 Liter/Per triggering

Cutting capacity: 25 m/m

Net weight: 700 g

Working pressure: 90 psi





ZD300/ZD600/ZD900 0.7HP
1/2" Industrial Air Drill



ZD3600 0.7HP
3/8" Industrial Air Drill
ZRD1600/ZRD2400 0.7HP
3/8" Industrial Air Reversible Drill



ZRD220/ZRD400 0.7HP
ZRD700 0.7HP
1/2" Industrial Air Reversible Drill



ZRD3625C/ZRD3645C 0.7HP
1/2" Air Reversible Drill Composite Housing



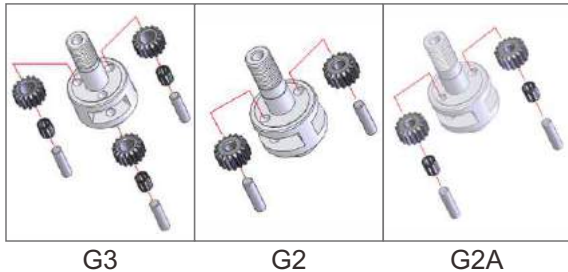
ZRD3600C 0.7HP
3/8" Air Reversible Drill Composite Housing



ZRR21 0.9HP
Blind Rivet & Rivet Nut Removal Tool
Adjustable precise shaving in 0.01mm increment.

Model	Capacity inch(mm)	Spindle Size inch	Shaver skirt & Bits dia.	Free Speed rpm	Avg. Air Cons cfm(l/min)	Net Weight lbs(kgs)	Overall Length mm	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)
ZRD220 ZRD400	1/2(13)	3/8"-24	—	220 410	5(141)	3.8(1.7)	230	1/4	3/8(10)
ZRD700	1/2(13)	3/8"-24	—	700	5(141)	3.8(1.7)	230	1/4	3/8(10)
ZD300 ZD600	1/2(13)	3/8"-24	—	300 600	5(141)	3.8(1.7)	230	1/4	3/8(10)
ZD900	1/2(13)	3/8"-24	—	900	5(141)	3.8(1.7)	230	1/4	3/8(10)
ZRD1600 ZRD2400	3/8(10)	3/8"-24	—	1,600 2,400	5(141)	2.5(1.1)	185 165	1/4	3/8(10)
ZD3600	3/8(10)	3/8"-24	—	3,500	5(141)	2.5(1.1)	185	1/4	3/8(10)
ZRD3600C	3/8(10)	3/8"-24	—	1,500	5(141)	2.2(1)	175	1/4	3/8(10)
ZRD3625C	1/2(13)	3/8"-24	—	220	5(141)	3.3(1.5)	185	1/4	3/8(10)
ZRD3645C	1/2(13)	3/8"-24	—	500	5(141)	3.3(1.5)	185	1/4	3/8(10)
ZRR21-5/16	—	—	5/16"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)
ZRR21-3/8	—	—	3/8"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)
ZRR21-7/16	—	—	7/16"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)
ZRR21-1/2	—	—	1/2"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)
ZRR21-9/16	—	—	9/16"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)
ZRR21-5/8	—	—	5/8"	21,000	17(180)	3.3(1.5)	265	1/4	3/8(10)

- The tools feature an innovative and ergonomic composite housing and textured rubber grip that insulates against cold temperature and vibration and provides great comfort and controllability.
- The ZRD324 Air Drill features one-piece gear box structure that runs smoother and lasts longer.



G3

G2

G2A

Gear box options:

- One-piece gearbox for heavy duty application.
- Combination gearbox for general application.



ZD322 0.7HP
3/8" Air Drill



ZD322P 0.7HP
3/8" Air Drill



ZD323 0.7HP
1/2" Air Drill



ZD323P 0.7HP
1/2" Air Drill

Model	Chuck Size inch(mm)	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZD322/ZD322P	3/8(10)	3/8"-24	2(0.9)	7.6(195)	2,600	1/4	3/8(10)	3.7
ZD323/ZD323P	1/2(13)	3/8"-24	2.6(1.2)	9(230)	900	1/4	3/8(10)	3.7



ZRD324 0.7HP
ZRD324D 0.7HP (Feathering Control)
3/8" Air Reversible Drill



ZRD324P 0.7HP
ZRD324DP 0.7HP (Feathering Control)
3/8" Air Reversible Drill



ZRD325 0.7HP
ZRD325D 0.7HP (Feathering Control)
1/2" Air Reversible Drill



ZRD325P 0.7HP
ZRD325DP 0.7HP (Feathering Control)
1/2" Air Reversible Drill



ZRD327 0.7HP
ZRD327D 0.7HP (Feathering Control)
1/2" Air Reversible Drill



ZRD327P 0.7HP
ZRD327DP 0.7HP (Feathering Control)
1/2" Air Reversible Drill

Model	Chuck Size inch(mm)	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZRD324/324P/324D/324DP	3/8(10)	3/8"-24	2(0.9)	7.6(195)	1,800	1/4	3/8(10)	4
ZRD325/325P/325D/325DP	1/2(13)	3/8"-24	2.6(1.2)	9(230)	450	1/4	3/8(10)	4
ZRD327/327P/327D/327DP	1/2(13)	3/8"-24	2.6(1.2)	9(230)	700	1/4	3/8(10)	4

- High-torque air motor; slow-speed start-up trigger.
- TPR grip and removable side handle.



ZD6637 0.7HP (2,600rpm)
ZD6651 0.7HP (4,000rpm)
3/8" Air Drill



ZD6681 0.7HP (700rpm)
1/2" Air Drill



ZD6637P 0.7HP (2,600rpm)
ZD6651P 0.7HP (4,000rpm)
3/8" Air Drill



ZD6681P 0.7HP (700rpm)
1/2" Air Drill



ZGD-D16-G1 Side Exhaust
5/8" Gear Type Air Drill-Outside trigger
ZGD-D19-G1 Side Exhaust
3/4" Gear Type Air Drill-Outside trigger



ZGD-D16-G1Z Side Exhaust
5/8" Gear Type Air Drill-Inside trigger
ZGD-D19-G1Z Side Exhaust
3/4" Gear Type Air Drill-Inside trigger

Model	Chuck Size inch(mm)	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZD6637/6651	3/8(10)	3/8"-24	2.8(1.3)	8.6(220)	2,600	1/4	3/8(10)	4.9
ZD6637P/6651P	3/8(10)	3/8"-24	2.8(1.3)	8.6(220)	4,000	1/4	3/8(10)	4.9
ZD6681/ZD6681P	1/2(13)	3/8"-24	2.9(1.3)	10.2(260)	700	1/4	3/8(10)	4.9
ZGD-D16-G1/G1Z	5/8(16)	—	13.98(6.34)	16.54(420)	1000	3/8	—	15
ZGD-D19-G1/G1Z	3/4(19)	—	15.52(7.04)	17.2(437)	1000	3/8	—	15

- Recommended Gauge Air Pressure: 60~90psi

ZAD-3004P **1HP**
(22,000rpm)
3/8" Air Drill



ZAD-3004 pc **1HP**
(22,000rpm)
3/8" Air Drill



ZAD-336 **0.5HP**
3/8" 90° Angle Air Drill

- The Angle Air Drill is ideal for drilling applications of restricted areas.
- The powerful air motor provides high power output and stall torque resistance.



ZAE-371 **0.5HP** (2,600rpm)
ZAE-3714 **0.5HP** (3,600rpm)
Air Eraser

- Smart Eraser is designed for every user to get rid of any kind of marks on the plastic plate or painted surface.
- The user can do the removal very fast and clear without any damages on the surface.
- The original painting will as like the original.



Z26036
Rubber Eraser
3-8/15"X7/12"



Z26036-7
Rubber Eraser
4"X7/12"



Z26036-2
Rubber Eraser
3-8/15"X7/12"

ZAD-356 **0.5HP** (2,600rpm)
ZAD-376 **0.5HP** (3,600rpm)
3/8" Air Drill

- In-Line Drill is designed for low speed/high torque applications, such as drilling, sanding, and polishing.
- Keyless chuck comes with both ZAD-356 and ZAD-376.



ZAD-356P **0.5HP** (2,600rpm)
ZAD-376P **0.5HP** (3,600rpm)
3/8" Air Drill

- In-Line Drill is designed for low speed/high torque applications, such as drilling, sanding, and polishing.
- Keyless chuck comes with both ZAD-356P and ZAD-376P.



ZTB-383 **0.5HP**
Air Tire Buffer

- The Tire Buffer is ideal for general purpose tire buffering.
- Featuring high power and stall torque resistance makes the tire buffering easy and efficient.



ZBT265A6026TB
Tire Buffer Metal Wheel

ZP384 **0.5HP** (2,600rpm)
ZP3843 **0.5HP** (3,600rpm)
Air Tire Buffer

- The Tire Buffer is ideal for general purpose tire buffering.
- Featuring high power and stall torque resistance makes the tire buffering easy and efficient.



Model	Chuck Size inch(mm)	Spindle Thread inch	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Avg. Air Cons. cfm
ZAD-3004P	3/8(10)	—	1.5(0.7)	7.2(185)	22,000	1/4	3/8(10)	4.1
ZAD-336	3/8(10)	3/8"-24	2(0.9)	7.6(195)	1,800	1/4	3/8(10)	3.7
ZAD-356/356P	3/8(10)	3/8"-24	1.8(0.8)	8.8(225)	2,600	1/4	3/8(10)	3.7
ZAD-376/376P	3/8(10)	3/8"-24	1.8(0.8)	8.8(225)	3,600	1/4	3/8(10)	3.7
ZAE-371/3714	—	5/16"-24	1.8(0.8)	8.8(225)	2,600/3,600	1/4	3/8(10)	3.7
ZTB-383	—	5/16"-24	1.8(0.8)	8.8(225)	2,600	1/4	3/8(10)	3.7
ZP384/3843	—	3/8"-24	1.8(0.8)	8.8(225)	2,600/3,600	1/4	3/8(10)	3.5



Benefits

- Superior Ergonomics.
- Easy to use & offer greater visibility on work surface.
- Safety & Convenience.
- Powerful at 1.0 hp.
- Durable.
- Specially tool developed for the removal of pinstripes, Car Decals and Stickers, double faced tapes.

Features

- High quality alloy steel's bevel gear with precision teeth design for tool performance durable & longevity.
- Spindle lock button feature allows for faster eraser wheel changeovers.
- Fully adjustable side handle.
- 4" Eraser Wheel with eraser wheel hub for secured fastened on spindle & more stable operation.
- Eraser wheel's pad as spiral oriented design as running direction for smoothly removal operation.
- 5/16"-24 spindle female thread.
- 1.0hp motor & 2,400 rpm free speed.



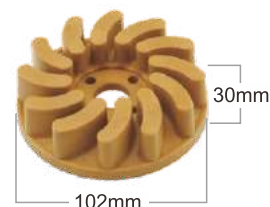
ZAE-3308E 0.5HP (2,400rpm)
Air Angle Eraser



ZAE-30836E 1HP (2,400rpm)
Air Angle Eraser



ZST-BT29756-1
Eraser Wheel Hub



ZBT29756
Eraser Wheel
4"(102mm)

Model	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZAE-30836E	5/16"-24	3.1(1.4)	8.8(225)	2,400	1/4	3/8(10)	4.1
ZAE-3308E	5/16"-24	2.2(1)	8.8(225)	2,400	1/4	3/8(10)	3.5

0.3HP Industrial Right Angle Air Drills



ZD2328 0.3HP
ZD2328L 0.3HP
90° Industrial Angle Drill
-Threaded type



ZD2329 0.3HP
ZD2329L 0.3HP
45° Industrial Angle Drill
-Threaded type



ZD2331 0.3HP
ZD2331L 0.3HP
90° Industrial Angle Drill
-Chuck type



ZD2320 0.3HP
ZD2320L 0.3HP
45° Industrial Angle Drill
-Chuck type



ZD2349 0.3HP
ZD2349L 0.3HP
90° Industrial Angle Drill
-Collect type



ZD2340 0.3HP
ZD2340L 0.3HP
45° Industrial Angle Drill
-Collect type

• 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each tool

• 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each tool

Model	Spindle Thread inch	Chuck/Collet Capacity inch(mm)	Free Speed rpm	Net Weight lbs(kgs)	Overall Length mm	Avg. Air Cons cfm(l/min)	Sound Pressuse dB(A)	Vibration Level m/s ²
ZD2328	1/4"-28	—	4,000	1.4(0.64)	240	3(84)	81.5	<2.5
ZD2328L	1/4"-28	—	4,000	1.65(0.75)	308	3(84)	81.5	<2.5
ZD2329	1/4"-28	—	4,000	1.4(0.64)	256	3(84)	81.5	<2.5
ZD2329L	1/4"-28	—	4,000	1.65(0.75)	333	3(84)	81.5	<2.5
ZD2331	—	1/8(3)	4,000	1.4(0.64)	240	3(84)	81.5	<2.5
ZD2331L	—	1/8(3)	4,000	1.65(0.75)	308	3(84)	81.5	<2.5
ZD2320	—	1/8(3)	4,000	1.4(0.64)	256	3(84)	81.5	<2.5
ZD2320L	—	1/8(3)	4,000	1.65(0.75)	333	3(84)	81.5	<2.5
ZD2349	—	(2.4~5.9)	4,000	1.4(0.64)	240	3(84)	81.5	<2.5
ZD2349L	—	(2.4~5.9)	4,000	1.65(0.75)	308	3(84)	81.5	<2.5
ZD2340	—	(2.4~5.9)	4,000	1.4(0.64)	256	3(84)	81.5	<2.5
ZD2340L	—	(2.4~5.9)	4,000	1.65(0.75)	333	3(84)	81.5	<2.5



Two Gear Mechanism

*Exhaust Type: Adjust Side Exhaust *Air Inlet Size: 1/4" PT/NPT *Minch Hose Size: 3/8(10) inch(mm)

0.5HP Industrial Right Angle Air Drills



ZD2333 0.5HP
ZD2333L 0.5HP

90° Industrial Angle Drill
-Threaded type



ZD2332 0.5HP
ZD2332L 0.5HP

45° Industrial Angle Drill
-Threaded type



ZD2335 0.5HP
ZD2335L 0.5HP

90° Industrial Angle Drill
-Chuck type



ZD2334 0.5HP
ZD2334L 0.5HP

45° Industrial Angle Drill
-Chuck type



ZD2352 0.5HP
ZD2352L 0.5HP

90° Industrial Angle Drill
-Collect type



ZD2351 0.5HP
ZD2351L 0.5HP

45° Industrial Angle Drill
-Collect type

• 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each tool

• 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each tool

Model	Spindle Thread inch	Chuck/Collet Capacity inch(mm)	Free Speed rpm	Net Weight lbs(kgs)	Overall Length mm	Avg. Air Cons cfm(l/min)	Sound Pressuse dB(A)	Vibration Level m/s ²
ZD2333	1/4"-28	—	3,600	1.9(0.86)	259	3.5(99)	82	<2.5
ZD2333L	1/4"-28	—	3,600	2.2(1)	327	3.5(99)	82	<2.5
ZD2332	1/4"-28	—	3,600	1.9(0.86)	274	3.5(99)	82	<2.5
ZD2332L	1/4"-28	—	3,600	2.2(1)	351	3.5(99)	82	<2.5
ZD2335	—	1/8(3)	3,600	1.9(0.86)	259	3.5(99)	82	<2.5
ZD2335L	—	1/8(3)	3,600	2.2(1)	327	3.5(99)	82	<2.5
ZD2334	—	1/8(3)	3,600	1.9(0.86)	274	3.5(99)	82	<2.5
ZD2334L	—	1/8(3)	3,600	2.2(1)	351	3.5(99)	82	<2.5
ZD2352	—	(2.4~5.9)	3,600	1.9(0.86)	259	3.5(99)	82	<2.5
ZD2352L	—	(2.4~5.9)	3,600	2.2(1)	327	3.5(99)	82	<2.5
ZD2351	—	(2.4~5.9)	3,600	1.9(0.86)	274	3.5(99)	82	<2.5
ZD2351L	—	(2.4~5.9)	3,600	2.2(1)	351	3.5(99)	82	<2.5



Two Gear Mechanism

*Exhaust Type: Adjust Side Exhaust *Air Inlet Size: 1/4" PT/NPT *Minch Hose Size: 3/8(10) inch(mm)



ZD90T

Thread type

- Spindle Thread: 1/4"-28



ZD90TL

Thread type

- Spindle Thread: 1/4"-28



ZD45T

Thread type

- Spindle Thread: 1/4"-28



ZD45TL

Thread type

- Spindle Thread: 1/4"-28



ZD90CH

Chuck type

- Chuck Capacity: 1/8(3) inch(mm)



ZD90CHL

Chuck type

- Chuck Capacity: 1/8(3) inch(mm)



ZD45CH

Chuck type

- Chuck Capacity: 1/8(3) inch(mm)



ZD45CHL

Chuck type

- Chuck Capacity: 1/8(3) inch(mm)



ZD90C

Collect type

- Collect Capacity: (2.4~5.9) inch(mm)
- 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each attachment



ZD90CL

Collect type

- Collect Capacity: (2.4~5.9) inch(mm)
- 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each attachment



ZD45C

Collect type

- Collect Capacity: (2.4~5.9) inch(mm)
- 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each attachment



ZD45CL

Collect type

- Collect Capacity: (2.4~5.9) inch(mm)
- 2.4, 2.5, 3.1, 3.2, 4.5, 4.6, 5.8 & 5.9 mm collect will be supply with each attachment

- Ergonomic cushion-grip handle-Insulates against cold temperature in the hand, helps ease user fatigue, and insulates against vibration.
- Power/Speed Regulator-Allows for easy rpm adjustment.
- Rear exhaust-Directs the exhaust away from the user and the working areas.
- Twin-Bearing Spindle-This quality design results in super precise spindle concentricity less than 0.05mm and minimal vibration.

ZDG-2319 0.3HP (7,600rpm) Medium Speed Mini Air Die Grinder

- Low profile for grinding restricted areas.
- Light weight for fatigue free use.
- Medium speed for specific grinding accessories.



ZDG-231AL 0.3HP

3" Extension Mini Air Die Grinder



ZDG-231L 0.3HP

5" Extension Mini Air Die Grinder



ZDG-231 0.3HP

Mini Air Die Grinder

- The ZDG-231 Mini Die Grinder is suitable for light weld grinding, porting and polishing applications. It features a spindle concentricity less than 0.05mm.



ZDG-231K 0.3HP

Mini Die Grinder Tool Kit

Specifications:

- 1 pc Die Grinder
- 2 pcs Spanners
- 5 pcs 1/4" Shank Grinding Stones
- 5 pcs 1/8" Shank Grinding Stones
- 1 pc 1/8" Collet
- 1 pc Nipple
- 1 pc Blow Case



ZDG-236 0.3HP

Mini Air Angle Die Grinder

- The ZDG-236 Mini Angle Die Grinder allows easy handling in confined areas, and is capable of using carbide burs and other attachments for polishing, porting, and light metal removal.



ZDG-236K 0.3HP

Mini Angle Die Grinder Tool Kit

Specifications:

- 1 pc Angle Die Grinder
- 1 pc 2" Roloc Pad
- 5 pcs 2" Roloc Scotch Discs
- 1 pc 1/8" Collet
- 1 pc Nipple
- 2 pcs Spanners
- 5 pcs 1/8" Shank Grinding Stones
- 5 pcs 1/4" Shank Grinding Stones
- 1 pc Blow Case



Model	Collet Size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Avg. Air Consumption cfm
ZDG-231	1/4(6)	0.9(0.4)	6.1(155)	25,000	1/4	3/8(10)	3
ZDG-236	1/4(6)	1.1(0.5)	6.1(155)	20,000	1/4	3/8(10)	3
ZDG-2319	1/4(6)	1.3(0.6)	7.3(185)	7,600	1/4	3/8(10)	3
ZDG-231AL	1/4(6)	1.3(0.5)	8.6(220)	25,000	1/4	3/8(10)	2.6
ZDG-231L	1/4(6)	1.5(0.7)	10.1(259)	25,000	1/4	3/8(10)	2.6



ZDG-S215 0.3HP

Industrial 1/4" Air Die Grinder



ZDG-S24B 0.3HP

Industrial 1/4" Air Die Grinder

- High power, efficient motor for heavy grinding works.
- Side exhaust.
- Roll type throttle.
- Compact and durable steel housing for long service life.

Model	Size of Collet inch(mm)	Free Speed rpm	Operating Air Pressure psi(bar)	Avg. Air Consumption cfm(l/min)	Net Weight lbs(kgs)	Overall Length inch(mm)	Minch Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZDG-S215	1/4(6)	24,000	90(6.2)	7.8(220)	1.46(0.66)	6-11/16(170)	3/8(10)	1/4
ZDG-S24B	1/4(6)	24,000	90(6.2)	7.8(220)	1.7(0.77)	7-3/64(179)	3/8(10)	1/4



ZAG213A 0.3HP

Air Angle Grinder



ZAG213B 0.3HP

Air Angle Grinder



ZAG213AF 0.3HP

Air Angle Grinder



ZAG213BF 0.3HP

Air Angle Grinder

Model	Grinding Wheel inch(mm)	Free Speed rpm	Operating Air Pressure psi(bar)	Avg. Air Consumption cfm(l/min)	Net Weight lbs(kgs)	Overall Length inch(mm)	Minch Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZAG213A	2(50)	15,000	90(6.2)	7.8(220)	1.46(0.66)	6-3/16(157)	3/8(10)	1/4
ZAG213B	2(50)	15,000	90(6.2)	6.7(190)	1.64(0.74)	7-13/32(188)	3/8(10)	1/4
ZAG213AF	1/4(6)	15,000	90(6.2)	7.8(220)	1.44(0.65)	6-3/16(157)	3/8(10)	1/4
ZAG213BF	1/4(6)	15,000	90(6.2)	6.7(190)	1.61(0.73)	7-13/32(188)	3/8(10)	1/4

ZP313 0.5HP

Air Die Grinder

- The ZP313 Die Grinder is suitable for Many automotive and industrial high speed grinding applications. The grinder can be used to clean dies, rotors, backing plates and brake pad mounts.
- Grind valve seats, dress welds and enlarge holes.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZP313K 0.5HP

Air Die Grinder Tool Kit

- Specifications:
- 1 pc Die Grinder
 - 2 pcs Spanners
 - 5 pcs 1/4" Shank Grinding Stones
 - 5 pcs 1/8" Shank Grinding Stones
 - 1 pc 1/8" Collet
 - 1 pc Nipple
 - 1 pc Blow Case



ZDG-356A 0.5HP (2,600rpm)

ZDG-376A 0.5HP (3,600rpm)

Low Speed Air Die Grinder

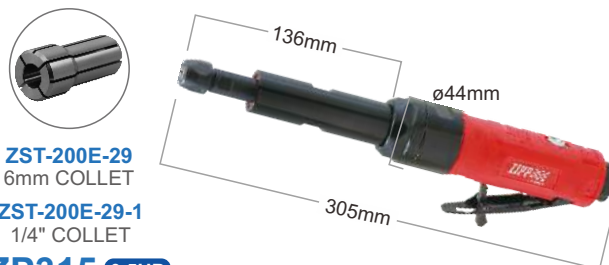
- In-Line Die Grinder is designed for low speed application.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZDG-376AL 0.5HP (3,600rpm)

Low Speed Air Extension Die Grinder

- The die grinder come with 1/4"(6mm) or 3/8"(8mm) double angle collets for industrial application.



ZST-200E-29
6mm COLLET

ZST-200E-29-1
1/4" COLLET

ZP315 0.5HP

5" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 5".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



ZP314 0.5HP

3" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 3".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



ZP319 0.5HP

Air Angle Die Grinder

- The ZP319 Angle Die Grinder is ideal for high speed grinding and polishing.
- It can be used in finishing dies and metal molds, smoothing and shaping sheet metal and cast iron, weld finishing and other high speed polishing applications.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.

ZP319K 0.5HP

Angle Die Grinder Tool Kit

- Specifications:
- 1 pc Angle Die Grinder
 - 5 pcs 2" Roloc Scotch Discs
 - 5 pcs 3" Roloc Scotch Discs
 - 1 pc 1/8" Collet
 - 1 pc Nipple
 - 2 pcs Spanners
 - 5 pcs 1/8" Shank Grinding Stones
 - 5 pcs 1/4" Shank Grinding Stones
 - 1 pc Blow Molded Case
 - 2 pcs Roloc Pad
 - 2 pcs Bolts

ZDG-3226 0.5HP

115° Air Angle Die Grinder

- The ZDG-3226 Angle Die Grinder is ideal for high speed grinding and polishing.
- It can be used in finishing dies and metal molds, smoothing and shaping sheet metal and cast iron, weld finishing and other high speed polishing applications.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZAG-341 0.5HP

2" Air Angle Grinder

- The Angle Grinder features versatile application for grinding, including depressed disc.



ZBT288544-2GD060
(#60Grit), 2"DISC WHEEL

Model	Collet Size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Avg. Air Consumption cfm
ZP313	1/4(6)	1.3(0.6)	7(178)	22,000	1/4	3/8(10)	3.7
ZDG-356A/376A	1/4(6)	1.5(0.7)	7.8(200)	2,600/3,600	1/4	3/8(10)	3.7
ZDG-376AL	1/4(6)	2.2(1)	12(305)	3,600	1/4	3/8(10)	3.5
ZP314	1/4(6)	1.5(0.7)	9.4(240)	22,000	1/4	3/8(10)	3.7
ZP315	1/4(6)	1.8(0.8)	11(280)	22,000	1/4	3/8(10)	3.7
ZP319/ZDG-3226	1/4(6)	1.5(0.7)	7(178)	18,000	1/4	3/8(10)	3.7
ZAG-341	Grinding Wheel 2"	1.5(0.7)	7(178)	15,000	1/4	3/8(10)	3.5

Super Power Air Tools

- 0.9HP and 1HP air grinders come with 1/4" (6mm) or 3/8" (8mm) double angle collets for industrial application.



ZST-200E-29
6mm COLLET

ZST-200E-29-1
1/4" COLLET



ZDG-301 **0.9HP**

Air Die Grinder

- The ZDG-301 Die Grinder is suitable for many automotive and industrial high speed grinding applications. The grinder can be used to clean dies, rotors, backing plates and brake pad mounts.
- Grind valve seats, dress welds and enlarge holes.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZDG-302 **0.9HP**

Air Angle Die Grinder

- The ZDG-302 Angle Die Grinder is ideal for high speed grinding and polishing.
- It can be used in finishing dies and metal molds, smoothing and cast iron, weld finishing and other high speed polishing application.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZDG-301AL **1HP**

3.5" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 3.5".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



ZDG-301L **1HP**

5.5" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 5.5".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



Model	Collet size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZDG-301	1/4(6)	1.4(0.5)	7(180)	23,000	1/4	3/8(10)	4.1
ZDG-302	1/4(6)	1.8(0.8)	7(180)	18,000	1/4	3/8(10)	4.1
ZDG-301AL	1/4(6)	1.8(0.8)	9.4(240)	22,000	1/4	3/8(10)	4.1
ZDG-301L	1/4(6)	2(0.9)	11(280)	22,000	1/4	3/8(10)	4.1

ZDG-301L300 1HP

ZDG-3076L300 1HP

12" Air Extension Die Grinder

ZDG-301L500 1HP

ZDG-3076L500 1HP

21-3/8" Air Extension Die Grinder

ZDG-301L800 1HP

ZDG-3076L800 1HP

31-1/2" Air Extension Die Grinder



- ZST-200E-29** 6mm COLLET
- ZST-200E-29-2** 8mm COLLET
- ZST-200E-29-1** 1/4" COLLET
- ZST-200E-29-4** 3/8" COLLET

Benefits

- Industrial extended shaft long die grinder design for high speed grinding & polishing in hard-to-reach areas
- By using 1/4" (6mm) or 3/8" (8mm) Double Angle Collets, the die grinder can be used in a wide range of grinding and polishing applications with various wheels
- 4000rpm models are excellent for grinding applications with flap sanding wheel
- High productivity
- Highest durability in demanding applications

Features

- 12" (305 mm), 21-3/8" (543 mm), 31-1/2" (800 mm) extended body by Aluminum alloy structure.
- Comfort grip over-housing
- Streamlined safety lever
- Rear exhaust
- 1/4" (6mm) & 3/8" (8mm) industrial grade Double Angle collet holder
- 1.0 hp motor
- 22,000 rpm free speed models and 3,500 rpm free speed models



* The length of extended body can be customize to extended as requirement.

Model	Collet size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZDG-301L300	1/4(6)	2.9(1.3)	17.5(445)	22,000	1/4	3/8(10)	4.2
ZDG-301L500	1/4(6)	3.9(1.8)	27(688)	22,000	1/4	3/8(10)	4.2
ZDG-301L800	1/4(6)	4.9(2.2)	37.1(943)	22,000	1/4	3/8(10)	4.2
ZDG-3076L300	1/4(6)	3.5(1.6)	18.7(477)	3,500	1/4	3/8(10)	4.2
ZDG-3076L500	1/4(6)	4.5(2)	28.3(719)	3,500	1/4	3/8(10)	4.2
ZDG-3076L800	1/4(6)	5.5(2.5)	38.3(974)	3,500	1/4	3/8(10)	4.2



ZDG-S220 0.8HP

Industrial 1/4" Air Die Grinder

- Can be used as sander for expandable / flap wheels, brushes.



ZDG-S216 0.8HP

Industrial 1/4" Air Die Grinder

- With 360° rotating rear exhaust muffler Safety Trigger.
- Use for heavy grinding works.



ZDG-S206 0.8HP

Industrial 1/4" Air Die Grinder

- Can be used as sander for expandable / flap wheels, brushes.



ZDG-S235 0.8HP

Industrial 1/4" Air Die Grinder

- Can be used as sander for expandable / flap wheels, brushes.



P/N:
24182-10 3/8"-24
24182-13 1/2"-20

Optional combo arbor (interchange with # 24182 arbor set) with 1/2"-20 or 3/8"-24 female thread for up to 3" wide wheels with 5/8" or 1" diameter center hole for use on model# **ZDG-S220**, **ZDG-S206** & **ZDG-S235** grinders.

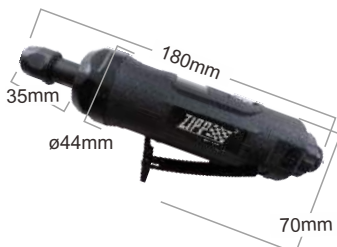
Model	Size of Collet inch(mm)	Free Speed rpm	Operating Air Pressure psi(bar)	Avg. Air Consumption cfm(l/min)	Net Weight lbs(kgs)	Overall Length inch(mm)	Minch Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZDG-S220	1/4(6)	2,200	90(6.2)	5(141)	2(0.92)	8-5/8(220)	3/8(10)	1/4
ZDG-S216	1/4(6)	15,000	90(6.2)	5(141)	1.8(0.8)	8(200)	3/8(10)	1/4
ZDG-S206	1/4(6)	600	90(6.2)	5(141)	2.6(1.2)	10(250)	3/8(10)	1/4
ZDG-S235	1/4(6)	3,500	90(6.2)	5(141)	2(0.92)	8-5/8(220)	3/8(10)	1/4



ZDGL-311 0.5HP

Low Noise Air Die Grinder

- The ZDGL-311 Die Grinder is suitable for many automotive and industrial high speed grinding applications. The grinder can be used to clean dies, rotors, backing plates and brake pad mounts.
- Grind valve seats, dress welds and enlarge holes.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding.

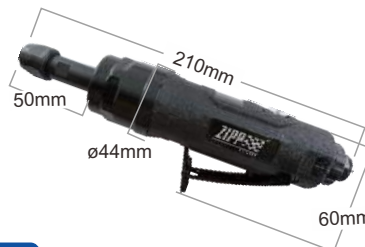


ZDGL-356A 0.5HP (2,600rpm)

ZDGL-376A 0.5HP (3,600rpm)

Low Speed, Low Noise Air Die Grinder

- In-Line Die Grinder is designed for low speed application.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZDGL-311AL 0.5HP

Low Noise 3" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 3".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



ZDGL-311L 0.5HP

Low Noise 5" Air Extension Die Grinder

- Extension Die Grinder is designed for high speed grinding and polishing in hard-to-reach areas.
- Features an extended reach of 5".
- By using 1/4"(6mm) or 1/8"(3mm) grinding accessories, the grinder can be used in a wide range of grinding and polishing applications.



ZDGL-321 0.5HP

Low Noise Air Angle Die Grinder

- The ZDGL-321 & LA-2115 Angle Die Grinders are ideal for high speed grinding and polishing.
- It can be used in finishing dies and metal molds, smoothing and shaping sheet metal and cast iron, weld finishing and other high speed polishing applications.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



ZDGL-3226 0.5HP

Low Noise 115° Air Angle Die Grinder

- The ZDGL-321 & ZDGL-3226 Angle Die Grinders are ideal for high speed grinding and polishing.
- It can be used in finishing dies and metal molds, smoothing and shaping sheet metal and cast iron, weld finishing and other high speed polishing applications.
- Can use with 1/4"(6mm) or 1/8"(3mm) grinding accessories.



Model	Collet size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZDGL-311	1/4(6)	1.3(0.6)	7(180)	22,000	1/4	3/8(10)	3.1
ZDGL-356A/376A	1/4(6)	1.5(0.7)	8.2(210)	2,600/3,600	1/4	3/8(10)	3.1
ZDGL-311AL	1/4(6)	1.5(0.7)	9.6(245)	22,000	1/4	3/8(10)	3.1
ZDGL-311L	1/4(6)	1.8(0.8)	11.2(285)	22,000	1/4	3/8(10)	3.1
ZDGL-321/3226	1/4(6)	1.5(0.7)	7(180)	18,000	1/4	3/8(10)	3.1



ZAGL-341 0.5HP

Low Noise 2" Air Angle Grinder

- The Angle Grinder features versatile application for grinding, including depressed disc.



ZASL-342A 0.5HP

Low Noise 2" Angle Sander

- Includes locking-type pad(2" diameter or 3" diameter).
- The Angle Sander is ideal for all types of sanding on small areas.



ZACL-361 0.5HP

Low Noise Air Cutter

- The 3" Cutter is ideal for a wide range of cutting applications.



ZP163-LN 0.5HP

Low Noise 3/8" Air Ratchet Wrench

ZP161-LN 0.5HP

Low Noise 1/2" Air Ratchet Wrench

- The ZP161-LN & ZP163-LN Air Ratchets are rugged, variable speed, reversible air ratchets.
- It's paddle-style trigger provides better speed control and the polyurethane handle helps maintain temperature and insulate vibration.
- Unique ratchet head design insures the wrench free of failure.



Model	Grinding Wheel	Sanding Wheel	Cutting Wheel	Square Drive	Max. Torque ft-lb(Nm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZAGL-341	2"	—	—	—	—	1.5(0.7)	7(180)	15,000	1/4	3/8(10)	3.1
ZASL-342A	—	2", 3"	—	—	—	1.5(0.7)	7(180)	15,000	1/4	3/8(10)	3.1
ZACL-361	—	—	3"	—	—	1.6(0.8)	7.6(195)	21,000	1/4	3/8(10)	3.1
ZP163-LN ZP161-LN	—	—	—	3/8" 1/2"	50(69)	2.6(1.2)	10.4(265)	175	1/4	3/8(10)	3.1



ZPD327 0.3HP
Micro Die Grinder



ZPD212 0.12HP
Micro Die Grinder



ZPD312 0.12HP
Micro Die Grinder



ZPD412 0.15HP
Micro Die Grinder



ZPD322 0.12HP
90° Air Micro Grinder



ZPD323 0.12HP
120° Air Micro Grinder

Model	Free Speed rpm	Collet Size inch(mm)	Air Inlet Size inch-NPT/PT	Air Pressure kg(cm ²)	Air Cons. l/min	Net Weight kg	Tool Dimension mm	Tool Length mm	Hose Length mm	Exhaust System
ZPD327	30,000	1/4(6)	1/4	6	300	0.3	26.5	150	1,500	Rear
ZPD212	60,000	1/8(3)	1/4	6	180	0.24	17	140	1,500	Rear
ZPD312	60,000	1/8(3)	1/4	6	180	0.24	18	125	1,500	Rear
ZPD412	70,000	1/8(3)	1/4	6	180	0.13	17	140	1,500	Rear
ZPD322	22,000	-	1/4	6	240	0.345	-	140	1,500	Rear
ZPD323	22,000	-	1/4	6	240	0.355	-	140	1,500	Rear

Angle Cutter / Air Nibbler



ZP219 0.5HP
Air Nibbler

Benefits

- Easy to operate and control
- Perfect for accurate cutting and best for tight corners and circles
- Used for nibbling plastic, tin, aluminum and others metals original
- Ideal for paint and auto body shops, tinsmiths, and sheet metal shops

Features

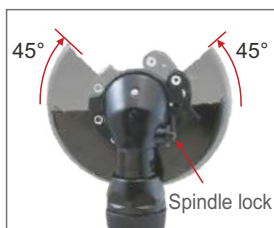
- 4.5mm diameter punch cuts rolled steel sheet up to 0.0478"/1.2mm (18 gauge) and aluminum up to 0.064"/1.628mm (14 gauge).
- The nibbler is capable of cutting 4.5mm in radius with accuracy and without distorted edges.
- Easy access to punch and die for quick replacement.
- Balanced, lightweight tool.



ZAC-354 0.5HP
3" Air Angle Cutter



ZAC-354L 0.5HP
3" Extended Air Angle Cutter



ZAC-304 1HP
3" Air Angle Cutter



ZBT25134-3GD
3" Disc Wheel (3"X3/8"X1/16")

ZP250 0.5HP
Air Cutter

- The 3" Cutter is ideal for a wide range of cutting applications.

Model	Cutting Capacity Steel	Cutting Capacity Aluminum	Grinding Wheel	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZP219	1.2mm	1.6mm	—	2.2(1)	7.2(185)	2,600	1/4	3/8(10)	3.7
ZAC-354	—	—	Cutting Wheel 3"	2.7(1.2)	8.6(220)	16,000	1/4	3/8(10)	3.5
ZAC-354L	—	—	Cutting Wheel 3"	2.9(1.3)	11.4(290)	16,000	1/4	3/8(10)	3.5
ZAC-304	—	—	Cutting Wheel 3"	2.9(1.3)	8.6(220)	16,000	1/4	3/8(10)	4.1
ZP250	—	—	Cutting Wheel 3"	1.8(0.8)	7.6(193)	21,000	1/4	3/8(10)	3.5

ZAG-306B **1HP** (Spindle Thread 5/8"-11)

ZAG-306BM **1HP** (Spindle Thread M14x2P)

4" Air Angle Grinder & Cutter

ZAG-30656B **1HP** (Spindle Thread 5/8"-11)

ZAG-30656BM **1HP** (Spindle Thread M14x2P)

4-1/2" Air Angle Grinder & Cutter

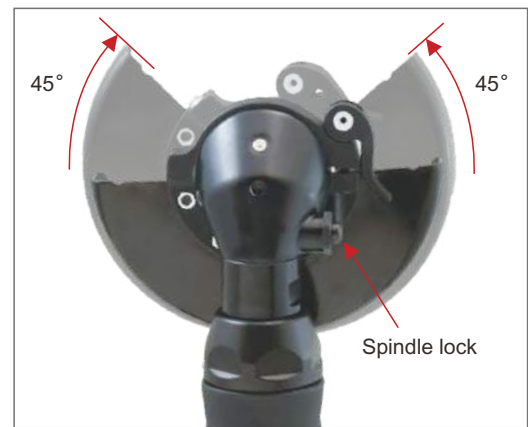


Benefits

- Compact head design.
- Superior Ergonomics.
- Easy to Use.
- Safety & Convenience.
- Powerful at 1.0 hp.
- Durable.
- Ideal for a variety of applications such as sanding with flap discs, grinding especially in tight spaces.

Features

- High quality alloy steel's bevel gear with precision teeth design for tool performance durable & longevity.
- Spindle lock button feature allows for faster grinding wheel changeovers.
- 9 position adjustable swivel guard-120° adjustable for better operator protection & greater visibility of cutting operations.
- 4" (100mm) & 4.5" (115 mm) wheel capacity.
- 5/8"-11 & M14 x 2P spindle thread.
- 1.0hp motor & 11,000 rpm free speed.



Model	Grinding Wheel	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZAG-306B	4"	2.2(1)	8.7(220)	11,000	1/4	3/8(10)	4.1
ZAG-306BM	4"	2.2(1)	8.7(220)	11,000	1/4	3/8(10)	4.1
ZAG-30656B	4-1/2"	2.2(1)	8.7(220)	11,000	1/4	3/8(10)	4.1
ZAG-30656BM	4-1/2"	2.2(1)	8.7(220)	11,000	1/4	3/8(10)	4.1

Extended Air Cutter

ZAC-30540 **1HP**

4" Extended Air Cutter

ZAC-305640 **1HP**

4-1/2" Extended Air Cutter



Benefits

- Extended Length & Compact Gear Housing at height 39mm
- Ergonomic Grip
- Easy to Use
- Safety & Convenient
- Powerful at 1.0hp
- Durable
- Ideal for cutting composite, metal, exhaust pipes, hangers, body panels, hoses, and U-bolts, ... especially in tight spaces

Features

- Cutting disc size: 4"/100mm, 4-1/2"/115 mm
- 7" = 180mm for better reach and easy access to restricted areas
- Composite ergonomic grip to reduce cold air transmission to operators
- Spindle lock system for easier wheel changing
- 9 position adjustable swivel guard - 120° adjustable for better operator protection & greater visibility of cutting operations
- Built-in speed regulator for easy adjustment
- Safety throttle lever to prevent accidental start up
- Rear exhaust with low noise
- 1 HP motor & 14000 rpm
- High quality bearing (larger bearing size) for better support internal gears
- High quality alloy steel for spiral bevels gears with precision teeth design for tool longevity

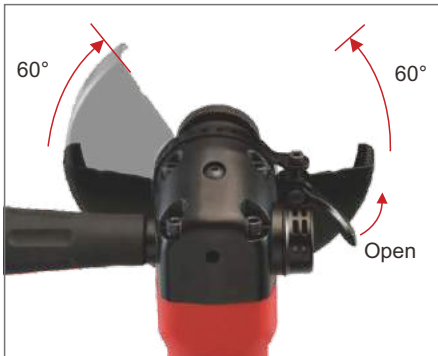


Model	Grinding Wheel	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZAC-30540	4"	3.2(1.4)	13.6(345)	14,000	1/4	3/8(10)	4.1
ZAC-305640	4-1/2"	3.2(1.4)	13.6(345)	14,000	1/4	3/8(10)	4.1

ZP321R 1.2HP 100° 4" Heavy Duty Grinder

ZP322R 1.2HP 100° 4-1/2" Heavy Duty Grinder

ZP323R 1.2HP 100° 5" Heavy Duty Grinder



ZAG-965R 1.3HP 4" Angle Grinder

ZAG-9656R 1.3HP 4-1/2" Angle Grinder

ZAG-966R 1.3HP 5" Angle Grinder

- 1.3 HP Motor for stall resistance.
- Safety lock-off throttle lever.
- One piece housing reduces maintenance costs.
- Heavy duty air cooled spiral gears and double bearings for durability.
- Ergonomic composite grip for comfort and reduced vibration.
- ANSI compliance wheel guard design.

Best for: Continuous use, heavy duty surface preparation, and material removal.

ZAG-966C 1.3HP

5" H.D. Angle Grinder With Central Vacuum Wheel Guard

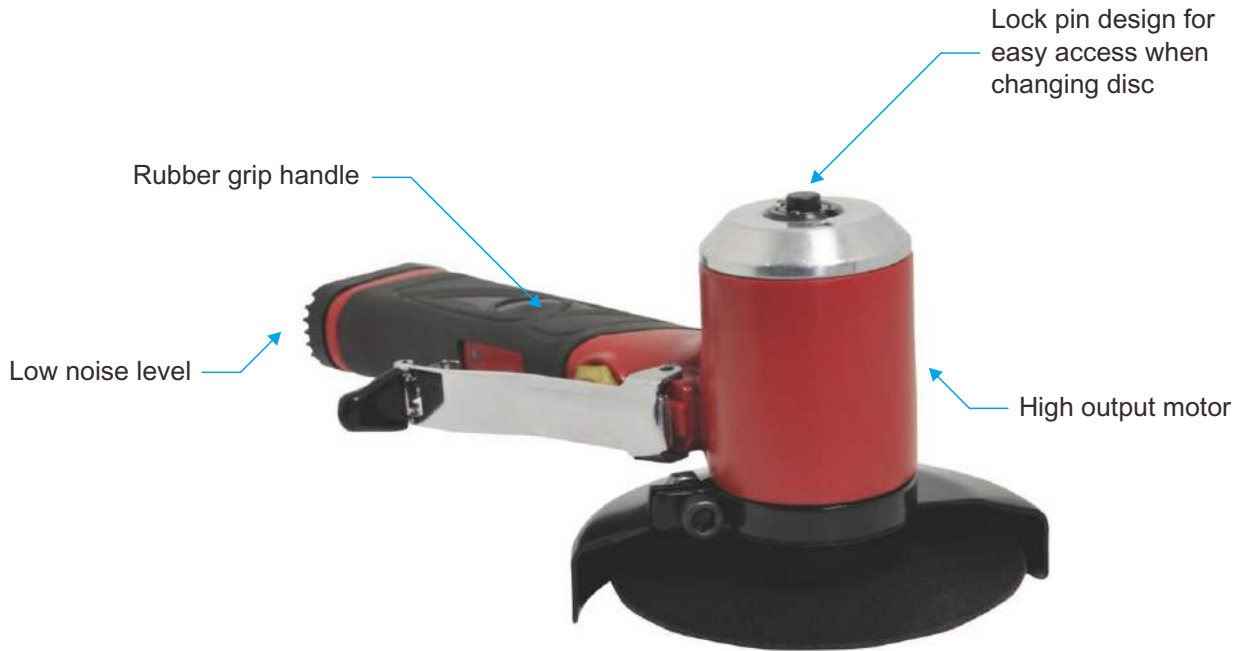


The trigger can be opened and adjust the shroud up to 55° so as to avoid from the hurt during operating

Model	Spindle Thread	Grinding Wheel	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZP321R	3/8"-24, M10x1.5	4"	3.1(1.4)	8.2(210)	10,000	1/4	3/8(10)	3.5
ZP322R	5/8"-11, M14x2	4-1/2"	3.1(1.4)	8.2(210)	10,000	1/4	3/8(10)	3.5
ZP323R	5/8"-11, M14x2	5"	3.1(1.4)	8.2(210)	10,000	1/4	3/8(10)	3.5
ZAG-965R	3/8"-24, M10x1.5	4"	4(1.8)	9(230)	11,000	1/4	3/8(10)	3.8
ZAG-9656R	5/8"-11, M14x2	4-1/2"	4(1.8)	9(230)	11,000	1/4	3/8(10)	3.8
ZAG-966R	5/8"-11, M14x2	5"	4(1.8)	9(230)	11,000	1/4	3/8(10)	3.8
ZAG-966C	5/8"-11, M14x2	5"	4(1.8)	9(230)	11,000	1/4	3/8(10)	3.8

Features

- Low Vibration & Ergonomic handle design.
- Easy access to changing discs.

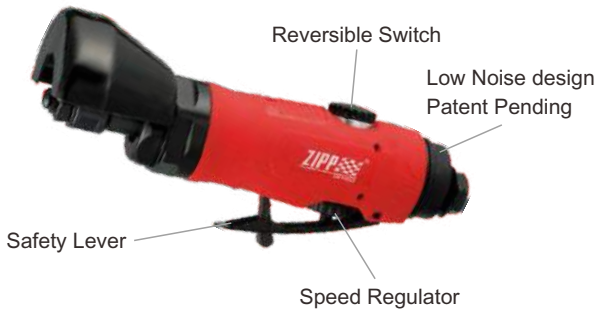


ZAG-386 0.5HP
3" Air Cut Off Tool



ZAG-387 0.7HP
4" Air Cut Off Tool

Model	Free Speed rpm	Capacity Size PAD	Horse Power HP	Air Inlet	Air Pressure kg/cm ²	Air Cons. cfm	Weight kg	Overall Length mm
ZAG-386	18,000	3"	0.82	1/4	6.3	4	0.83	225x115x105
ZAG-387	14,000	4"	0.8	1/4	6.3	4.5	0.93	240x105x125



ZRD368 0.7HP
3/8" 90° Angle Air Reversible Drill



ZRC-361R 0.7HP

3" Reversible Air Cutter

- Directs sparks away for personal safety.
- Reversible cutting providing powerful cutting application.
- Best cutting tool for restricted areas.



ZRDG-363 0.7HP

Reversible Air Die Grinder

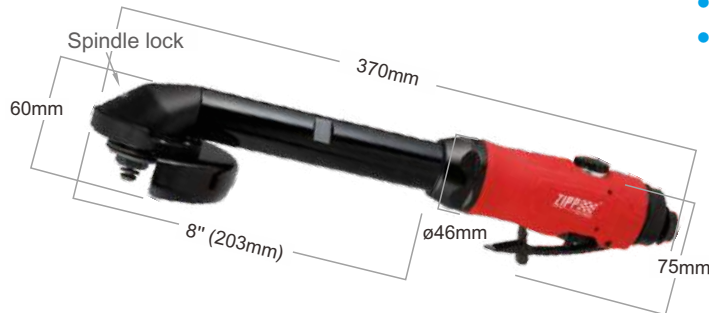
- Directs sparks away for personal safety.
- Reversible grinding for versatility.



ZRAC-365B 0.7HP

4" Extended Reversible Air Axial Cutter

- Directs sparks away for personal safety.
- Excellent for hard to reach areas.
- Low profile for restricted area applications.
- Versatile cutting applications for any cutting jobs.
- Spindle lock for disc replacement.



ZRAG-366B 0.7HP (13,000rpm)

4" Reversible Air Axial Grinder

ZRAG-367B 0.7HP (15,000rpm)

4" Reversible Air Axial Cutter

- Newly designed lower profile axial cutter providing versatile cutting applications.
- Best for restricted areas.
- Light weight ensures fatigue-free use.
- Spindle lock for disc replacement.



Model	Cutting Wheel	Collet size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZRC-361R	3"	—	2(0.9)	8(205)	18,000	1/4	3/8(10)	3.6
ZRAC-365B	4"	—	2.4(1.1)	14.5(370)	15,000	1/4	3/8(10)	3.6
ZRAG-366B/367B	4"	—	2.4(1.1)	9.4(240)	13,000/15,000	1/4	3/8(10)	3.6
ZRDG-363	—	1/4(6)	1.6(0.7)	7.6(195)	18,000	1/4	3/8(10)	3.6
ZRD368	—	3/8(10)	2.4(1.1)	8.2(210)	1,600	1/4	3/8(10)	3.6

Laser welding removal Tool



Benefits

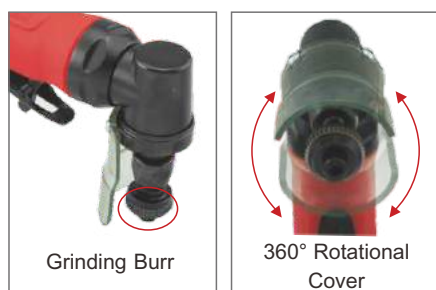
- Compact angle head housing design for quick and easy use.
- Ergonomic Grip
- 0.5hp Powerful & Durable
- Ideal tool & specifically designed to deal with the latest technique in vehicle assembly laser welding

Features

- High speed cutting wheel made of a specially hardened metal. Depth of cut limitation-optional at either 0.8-1.0mm. The depth limiter ensures that the lower panel doesn't get damaged.
- Protection guard (transparent acetate material) design for safety protection.
- High quality manufacturing and materials guarantee durability.
- High quality alloy steel for internal gears with precision gear teeth design for prolong the gear life.

ZWR-3212 0.5HP

Laser welding removal Tool



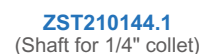
ST210145
Cutting Wheel
25 x 4mm Diameter

- Solid Tungsten Carbide Cutting wheel with TiAlNcoating.
- Superior for high speed and dry cutting

Transparent Acetate Guard



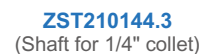
ZST210144
(Shaft for 6mm collet)



ZST210144.1
(Shaft for 1/4" collet)
Shaft for Cutting Depth
0.8mm for 25mm Cutting
Wheel



ZST210144.2
(Shaft for 6mm collet)



ZST210144.3
(Shaft for 1/4" collet)
Shaft for Cutting Depth
1.0mm for 25mm Cutting
Wheel

ZWR-3212K 0.5HP

Laser welding removal Tool Kit

[Specifications]

- 1 pc Laser welding removal Tool
- 2 pcs Spanners
- 1 pc Cutting Wheel
- 1 pc Hex
- 1 pc Depth 0.8mm Shaft
- 1 pc Depth 1.0mm Shaft
- 1 pc Blow Molded Case

Model	Collet Size inch(mm)	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZWR-3212	1/4(6)	1.5(0.7)	7(180)	11,000	1/4	3/8(10)	3.5

Non-Vacuum
ZTU-391 0.5HP
Low Noise



Central-Vacuum
ZTU-391C 0.5HP



Self-Generated Vacuum
ZTU-391S 0.5HP



HB-46-2
HOSE & BAG

- Innovative 180° rotational handle for precise leverage and control.
- Unique double side safety guards and integrated dust extraction.
- system for safe and clean operation.
- Planetary gear system for increased torque.
- Ergonomic cushion grip insulates against cold and vibration.
- Swivel exhaust outlet in rear of tool allows easy operations.
- Paddle style trigger for precise speed control.
- Increase the baffle and prevent hands from being injured.
- Integrated Safety and Dust Extraction System.



Removable Double Side Safety Guard.
(Patent Pending)



Integrate Safety and Dust Extraction System.
(Patent Pending)



180° Rotational Handle
(Patent Pending)



Model	Spindle Thread mm	Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)	Avg. Air Cons. cfm
ZTU391/391C/391S	9	2.7(1.2)	10(254)	4,000	1/4	3/8(10)	3.5

Rust & Paint Removal Tools

Non-Vacuum

ZTU-391K 0.5HP

Specifications:

- 1 pc Paint Removal Tool
- 1 pc Rubber Eraser Wheel
- 1 pc Stripping Wheel
- 1 pc Hub
- 3 pcs Wire Wheel
- 1 pc Nipple
- 1 pc Hex
- 1 pc Screw
- 1 pc Blow Molded Cast



Central-Vacuum

ZTU-391CK 0.5HP

Specifications:

- 1 pc Paint Removal Tool
- 1 pc Rubber Eraser Wheel
- 1 pc Stripping Wheel
- 1 pc Hub
- 3 pcs Wire Wheel
- 1 pc Nipple
- 1 pc Hex
- 1 pc Screw
- 1 pc Blow Molded Cast



ZST-BTRE115-30

Rubber eraser wheel
Wheel diameter 4"(103mm)
Wheel width 1.2"(30mm)



ZST-BTRE115-30A

Water based eraser
Wheel diameter 4"(103mm)
Wheel width 1.2"(30mm)



ZBT246655

Rubber eraser wheel
Wheel diameter 4"(103mm)
Wheel width 1.2"(30mm)



ZST-BT246652

Stripping wheel
Wheel diameter 4"(103mm)
Wheel width 1.2"(30mm)



ZBTWW103-23-7

Wire wheel(Coarse)
Wire diameter 0.028"(0.7mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZBTWW103-23-5.5

Wire wheel(Medium)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZBTWW103-23-5

Wire wheel(Fine)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZST-BT246655A-K03

Hub
Hub width 0.91"(23mm)



ZBTWW103-23-7ASS

Stainless steel wire(Coarse)
Wire diameter 0.028"(0.7mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZBTWW103-23-5ASS

Stainless steel wire(Medium)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZBTWW103-23-5SS

Stainless steel wire(Fine)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.91"(23mm)



ZBTWW103-11-7AM

Wire wheel(Coarse)
Wire diameter 0.028"(0.7mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



ZBTWW103-11-5AM

Wire wheel(Medium)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



ZBTWW103-11-5M

Wire wheel(Fine)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



ZST-BT28068-K03

Hub
Hub width 0.43"(11mm)



ZBTWW103-11-7ASS

Stainless steel wire(Coarse)
Wire diameter 0.028"(0.7mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



ZBTWW103-11-5ASS

Stainless steel wire(Medium)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



ZBTWW103-11-5SS

Stainless steel wire(Fine)
Wire diameter 0.019"(0.5mm)
Wheel diameter 4"(103mm)
Wheel width 0.43"(11mm)



Benefits

- Mini compact design with angle head Housing at height 75 mm
- Ergonomic Grip
- Easy to use & convenient
- 0.3hp Powerful & Durable
- Ideal for use in paint shop applications for sanding nibs or for sanding small areas and for car headlights polish.
- Dual action for provide uniform sanding surface with a superior finish , ready for buffing application as next steps.

Features

- Angle head dual action sander with 2" Velcro Pad, 1.2" Velcro Pad , Triangle mini Velcro Pad
- High quality bearing provide long tool life
- High quality alloy steel for spiral bevels gears with precision teeth design for tool longevity
- One piece balancer design for reducing vibration of dual action

ZSR-242 **0.3HP**

Spot Repair Sander



ZSR-242K **0.3HP**

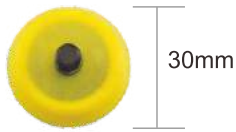
Spot Repair Sander Kit

[Specifications]

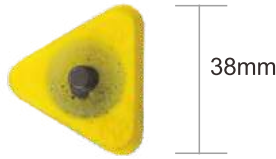
- 1 pc Spot Repair Sander
- 1 pc 2" Velcro Pad
- 1 pc 1.2" Velcro Pad
- 1 pc Triangle mini Velcro Pad
- 1 pc Nipple
- 1 pc 2" Wool Pad
- 1 pc 1.2" Wool Pad
- 1 pc 2" Polishing Pad
- 1 pc 1.2" Polishing Pad
- 10 pcs 2" 120# Sandpapers
- 10 pcs 2" 180# Sandpapers
- 10 pcs 2" 320# Sandpapers
- 10 pcs 2" 600# Sandpapers
- 10 pcs 2" 1000# Sandpapers
- 10 pcs 2" 1500# Sandpapers
- 10 pcs Triangle mini 120# Sandpapers
- 10 pcs Triangle mini 180# Sandpapers
- 10 pcs Triangle mini 320# Sandpapers
- 10 pcs Triangle mini 600# Sandpapers
- 10 pcs Triangle mini 1000# Sandpapers
- 10 pcs Triangle mini 1500# Sandpapers
- 10 pcs 1.2" 120# Sandpapers
- 10 pcs 1.2" 180# Sandpapers
- 10 pcs 1.2" 320# Sandpapers
- 10 pcs 1.2" 600# Sandpapers
- 10 pcs 1.2" 1000# Sandpapers
- 10 pcs 1.2" 1500# Sandpapers
- 1 pc Blow Molded Case



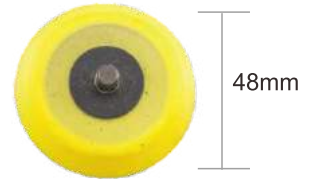
Model	Diameter Orbit mm	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	MinchHose Size inch(mm)	Avg. Air Cons. cfm
ZSR-242	2	1.1(0.5)	6.1(155)	13,000	1/4	3/8(10)	2.6



ZST13145
1.2" Velcro Pad



ZST13144
Triangle mini Velcro Pad



ZST13146
2" Velcro Pad



ZBT131-30-1
1.2" Wool Pad



ZBT131-2-1
2" Wool Pad



ZBT131-30-2
1.2" Polishing Pad



ZBT131-2-2
2" Polishing Pad



ZP-131-32-120
120# Sandpaper (32mm)



ZP-131-32-180
180# Sandpaper (32mm)



ZP-131-32-320
320# Sandpaper (32mm)



ZP-131-32-600
600# Sandpaper (32mm)



ZP-131-32-1000
1000# Sandpaper (32mm)



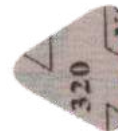
ZP-131-32-1500
1500# Sandpaper (32mm)



ZP-131-40-3-120
120# Sandpaper (40mm)



ZP-131-40-3-180
180# Sandpaper (40mm)



ZP-131-40-3-320
320# Sandpaper (40mm)



ZP-131-40-3-600
600# Sandpaper (40mm)



ZP-131-40-3-1000
1000# Sandpaper (40mm)



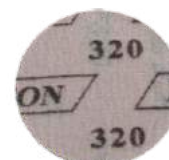
ZP-131-40-3-1500
1500# Sandpaper (40mm)



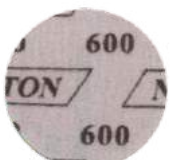
ZP-ZOS-2-120
120# Sandpaper (50.8mm)



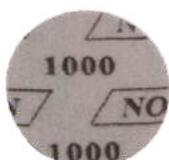
ZP-ZOS-2-180
180# Sandpaper (50.8mm)



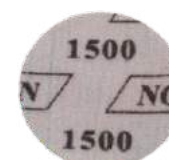
ZP-ZOS-2-320
320# Sandpaper (50.8mm)



ZP-ZOS-2-600
600# Sandpaper (50.8mm)



ZP-ZOS-2-1000
1000# Sandpaper (50.8mm)



ZP-ZOS-2-1500
1500# Sandpaper (50.8mm)

ZVP-7N-7747 0.6HP

5" Vertical Sander / Polisher

- Includes ST-231A locking-type pad (3" diameter and 2" diameter).
- The Angle Sander is ideal for all types of sanding on small areas.



6N-663636-11
5" White
Compounding Pad
- Velcro
#80 Grip

6N-663637-11
5" Yellow
Compounding Pad
- Velcro
#70 Grip

6N-663638-11
5" Wool
Polishing Pad
- Velcro

ZNRS-71-6346 0.3HP

Nib Removal Sander - Orbit Dia. 3 mm

Features:

- Small Diameter Head Size for Better Visibility, Less Buffing
- Lightweight, Easy-Grip, Right Angle Tool
- Better Visibility, Less Buffing
- Precise Speed Control
- Rear Exhaust with Available Overhose



Air Regulator

ZP388 0.25HP

3" Mini Polisher - 1/4"-20 or M6x1.0

ZP389 0.25HP

3" Mini Polisher - 5/16"-24

Features:

- Composite Motor Housing
- Handle Exhaust
- Low Noise 80 dB(A)



ZP388K 0.25HP

3" Mini Polisher - 1/4"-20 or M6x1.0

ZP389K 0.25HP

3" Mini Polisher - 5/16"-24



[Accessories]

- 1 pc 3" Mini Polisher
- 1 pc Key Wrench
- 1 pc 3" Velcro Sanding Pad (Installed)
- 1 pc 3-1/2" Bonnet
- 1 pc 3-1/2" Yellow Compounding Pad
- 1 pc 3-1/2" White Compounding Pad

Model	Free Speed rpm	Pad Size inch(mm)	Orbit Diameter inch(mm)	Spindle Thread	Air Consumption l/min(cfm)	Length inch(mm)	Net Weight lbs(kgs)	Sound Level dB(A)
ZVP-7N-7747	3,500	5(125)	—	5/16"-24	110(3.9)	144x205x214mm	2.2(1)	80
ZNRS-71-6346	12,000	1-1/4(32)	1/8(3)	—	28.3(1)	7-7/8(197)	1.1(0.5)	80
ZP388	3,200	3(75)	—	1/4"-20 or M6X1.0	91(3.2)	4.6(116)	1.59(0.72)	80
ZP389	3,200	3(75)	—	5/16"-24	91(3.2)	4.6(116)	1.59(0.72)	80

*Operating Air Pressure: 90psi/6.2bar *Air Inlet Size: 1/4 inch-NPT/PT *Minch Hose Size: 3/8"(10mm)



ZP385M / ZP385A 0.3HP
Air Mini Orbital Sander



ZP385MK / ZP385AK 0.3HP
Air Mini Orbital Sander Kit

[KIT Contents]

- 2" / 3" Mini Orbital Sander (ZP385M or ZP385A) 1 pc
- 320 Grit Sanding Disc 10 pcs
- 400 Grit Sanding Disc 10 pcs
- 600 Grit Sanding Disc 10 pcs
- 2" Hook & Loop Type Pad 1 pc
- 3" Hook & Loop Type Pad 1 pc



ZP386A 0.3HP
Air Mini Sander



ZP386AK 0.3HP
Air Mini Sander Kit

[KIT Contents]

- 3" Mini Sander (ZP386A) 1 pc
- 80 Grit Sanding Disc 10 pcs
- 100 Grit Sanding Disc 10 pcs
- 120 Grit Sanding Disc 10 pcs
- Coarse Preparation Disc 1 pc
- Medium Preparation Disc 1 pc
- Fine Surface Preparation Disc 1 pc



ZP387M / ZP387A 0.3HP
Air Mini Polisher



ZP387MK / ZP387AK 0.3HP
Air Mini Polisher Kit

[KIT Contents]

- 3" Mini Polisher (ZP387M or ZP387A) 1 pc
- 3" Hard Compounding Pad 1 pc
- 3" Soft Compounding Pad 1 pc
- 3-1/2" Lambs wool Bonnet 1 pc
- 3" Hook & Loop Backing Pad 1 pc

Model	Pad Size inch(mm)	Spindle Thread inch(mm)	Free Speed rpm	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Overall Length inch(mm)	Air Inlet Size inch-NPT/PT	Minch Hose Size inch(mm)
ZP385M	2(51) or 3(76)	(M6)	16,000	4(113)	2(0.98)	4-11/16(120)	1/4	3/8(10)
ZP385A	2(51) or 3(76)	5/16-24 UNC	16,000	4(113)	2(0.98)	4-11/16(120)	1/4	3/8(10)
ZP386A	3(76)	1/4-20 UNC	18,000	4(113)	1.5(0.68)	4-11/16(120)	1/4	3/8(10)
ZP387M	3(76)	(M6)	2,000	4(113)	1.6(0.75)	5-1/4(138)	1/4	3/8(10)
ZP387A	3(76)	5/16-24 UNC	2,000	4(113)	1.6(0.75)	5-1/4(138)	1/4	3/8(10)

Air Belt Sander



- Low Vibration & Ergonomic handle design
- Easy changing sand belt
- 360° degree sanding direction



ZBS-382 0.5HP
Air Belt Sander



ZBS-383 0.5HP
Air Belt Sander



ZBS-385 0.8HP
Air Belt Sander

Model	Wheel Material	Size of Belt mm	Free Speed rpm	Overall Length inch(mm)	Air Inlet Size inch-NPT/PT	Air Hose (I.D.)	Avg. Air Cons. cfm	Net Weight lbs(kgs)
ZBS-382A	RUBBER WHEEL	10X330	17,000	12.83(326)	1/4	3/8"	4	1.94(0.88)
ZBS-382N	STEEL WHEEL	10X330	17,000	12.83(326)	1/4	3/8"	4	1.94(0.88)
ZBS-382N1	STEEL WHEEL	6X457	17,000	15.35(390)	1/4	3/8"	4	2.86(1.3)
ZBS-382N2	STEEL WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.18(0.99)
ZBS-382N3	STEEL WHEEL	13X457	17,000	15.35(390)	1/4	3/8"	4	2.07(0.94)
ZBS-382N4	STEEL WHEEL	13X610	17,000	17.72(450)	1/4	3/8"	4	2.18(0.99)
ZBS-382N5	STEEL WHEEL	13X330	17,000	12.83(326)	1/4	3/8"	4	1.98(0.9)
ZBS-382N6	STEEL WHEEL	15X475	17,000	15.35(390)	1/4	3/8"	4	1.98(0.9)
ZBS-382N7	STEEL WHEEL	8X475	17,000	15.35(390)	1/4	3/8"	4	2.86(1.3)
ZBS-383	RUBBER WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.93(1.33)
ZBS-383A	RUBBER WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.93(1.33)
ZBS-383N	STEEL WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.93(1.33)
ZBS-383A1	RUBBER WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.93(1.33)
ZBS-383A2	RUBBER WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.93(1.33)
ZBS-383N1	STEEL WHEEL	20X330	17,000	12.8(325)	1/4	3/8"	4	1.98(0.9)
ZBS-383N2	STEEL WHEEL	20X520	17,000	16.02(407)	1/4	3/8"	4	2.18(0.99)
ZBS-385A	RUBBER WHEEL	30X540	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385A1	RUBBER WHEEL	20X520	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385N	STEEL WHEEL	30X540	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385Z2A	RUBBER WHEEL	20X520	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385Z2N	STEEL WHEEL	20X520	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385Z3A	RUBBER WHEEL	30X540	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)
ZBS-385Z3N	STEEL WHEEL	30X540	13,000	16.34(415)	1/4	3/8"	5	3.3(1.5)



ZBS-3892/ZBS-3893
Air Belt Sander



ZBS-3894
Air Belt Sander



ZBS-371
Air Belt Sander



ZBS-371K
Air Belt Sander Kit



371-AA
Contact Arm Assy
for belt wide 8&10



371-AD
Contact Arm Assy
for belt wide 10&12



371-BB
Contact Arm Assy
for belt wide 3



371-BF
Contact Arm Assy
for belt wide 8&10



371-BG
Contact Arm Assy
for belt wide 3&5



371-BH
Contact Arm Assy
for belt wide 5&6



371-CC
Contact Arm Assy
for belt wide 10&12



371-DE
Contact Arm Assy
for belt wide 8&10

[KIT Contents]

- ZBS-371 1 pc
- 371-AA 1 pc
- 371-AD 1 pc
- 371-BB 1 pc
- 371-BF 1 pc
- 371-BG 1 pc
- 371-BH 1 pc
- 371-CC 1 pc
- 371-DE 1 pc
- 3 pcs Belt of Each Arm (#80, #100, #120) 24 pcs
- Blow Case 1 pc

Model	Wheel Material	Size of Belt mm	Free Speed rpm	Overall Length inch(mm)	Air Inlet Size inch-NPT/PT	Air Hose (I.D.)	Avg. Air Cons. cfm	Net Weight lbs(kgs)
ZBS-3892	STEEL WHEEL	20X640	13,000	16.34(415)	1/4	3/8"	4	3.3(1.5)
ZBS-3893A	RUBBER WHEEL	30X640	13,000	16.34(415)	1/4	3/8"	4	3.3(1.5)
ZBS-3893G	RUBBER WHEEL	30X760	3,300	16.34(415)	1/4	3/8"	4	3.3(1.5)
ZBS-3894	RUBBER WHEEL	40X750	13,000	16.34(415)	1/4	3/8"	4	3.3(1.5)
ZBS-3894G	RUBBER WHEEL	40X760	3,300	16.34(415)	1/4	3/8"	4	3.3(1.5)
ZBS-371	STEEL WHEEL	10X330	16,000	11.6(295)	1/4	3/8"	5	2.09(0.95)



ZAP-342L 0.5HP (2,600rpm)
Right Angle Buffer, 3" Diameter
(3" Rotary Right Angle Polisher)



ZAP3308 0.5HP (4,000rpm)
ZAP330825 0.5HP (2,400rpm)
Angle Sander / Polisher



Z26041 3/8"x16NC
ZBT22749 M16-x2
ZBT22750 M14-x2
ZBT22751 5/8"x11NC
Z23138 1/4"x20

ADAPTERS



ZAP308 1HP (4,000rpm)
ZAP30825 1HP (2,400rpm)
Angle Sander / Polisher



ZBT1650-05G
5" FINE GRAY
POLISHING PAD



ZBT1650-03G
3" FINE GRAY
POLISHING PAD



ZBT1650-05Y
5" COARSE YELLOW
POLISHING PAD



ZBT1650-03Y
3" COARSE YELLOW
POLISHING PAD



ZBT1650-05W
5" WOOL WHEEL



ZBT1650-03W
3" WOOL WHEEL



180° Rotational Handle



Z210K-8
3" POLOC PAD



ZBT22748
STRIPPING WHEEL



Z26036-7
RUBBER ERASER



ZBTOB-386V0Y-T10
5" PAD (Hook-up)



ZBTOB-38-3V0Y-W80
3" 80g PAD (Hook-up)

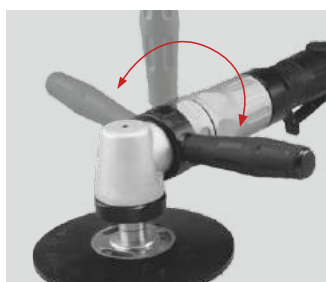
Model	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Cons. cfm
ZAP-342L	5/16"-24	2.6(1.2)	12.1(307)	2,600	1/4	3/8(10)	3.5
ZAP3308/ZAP330825	5/16"-24	2.2(1)	8.8(225)	4,000/2,400	1/4	3/8(10)	3.5
ZAP308/ZAP30825	5/16"-24	2.2(1)	8.8(225)	4,000/2,400	1/4	3/8(10)	4.1

Angle Sander / Angle Polisher

- Excellent for roughing body filler, rust removal, and smoothing welds.
- Both hands operating.
- Lightweight for easy handling.
- Outperforms than regular ones.

ZAS-982 **1.3HP** (4,500rpm)
7" Angle Sander

ZAS-983 **1.3HP** (2,500rpm)
7" Angle Polisher



180° Rotational Handle



Spindle Lock



Low noise design



ZBT871-07W
7" Wool pad



ZST77152 (5/8"-11 Thread)
ZST77152-1 (M14x2 Thread)
7" Pad Hook-up



ZST87158 (5/8"-11 Thread)
ZST87158.1 (M14x2 Thread)
7" Plastic Pad



ZST870S60 (5/8"-11 Thread)
ZST870S60.1 (M14x2 Thread)
7" Rubber Backing Pad

Model	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZAS-982	5/8"-11, M14x2	5.1(2.3)	12.9(328)	4,500	1/4	3/8(10)	3.8
ZAS-983	5/8"-11, M14x2	5.1(2.3)	12.9(328)	2,500	1/4	3/8(10)	3.8

ZAP-882 **1HP** (2,500rpm)

7" Angle Polisher

Benefits

- Powerful motor for productivity
- Maximize operator comfort
- Lightweight with side handle for easy handling
- Excellent for buffing and polishing flat and contoured surfaces

Features

- Heavy-duty angle polisher
- 1.0 hp precision motor
- Built-in air regulator
- High quality alloy steel bevel gears with well hardened and ground
- Delivered with optional 7" Pad



ZAS-883 **1HP** (4,000rpm)

7" Angle Sander

Benefits

- Powerful motor for productivity
- Low vibrations and durability
- Lightweight with side handle for easy handling
- Perfect for weld smoothing, paint, rust and stone removal

Features

- Heavy-duty angle sander
- 1.0 hp precision motor
- Built-in air regulator
- High quality alloy steel bevel gears with well hardened and ground
- Delivered with optional 7" Pad
- Muffled rear exhaust



ZBT871-07W
7" Wool pad



ZST77152 (5/8"-11 Thread)
ZST77152-1 (M14x2 Thread)
7" Pad Hook-up



ZST87158 (5/8"-11 Thread)
ZST87158.1 (M14x2 Thread)
7" Plastic Pad



ZST870S60 (5/8"-11 Thread)
ZST870S60.1 (M14x2 Thread)
7" Rubber Backing Pad

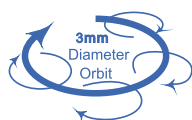
Model	Spindle Thread	Net Weight lbs(kgs)	Length inch(mm)	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZAP-882	5/8"-11, M14x2	3.9(1.7)	13.6(345)	2,500	1/4	3/8(10)	3.8
ZAS-883	5/8"-11, M14x2	3.9(1.7)	13.6(345)	4,000	1/4	3/8(10)	3.8

Air Angle Sander / Air Orbital Sander

AS-110

110° Air Angle Sander

- Rubber Sleeve for operator's comfort.
- Safety Trigger.
- 110° degree one piece housing design for longer life time.
- Adjustable Speed Regulator.
- Rear Exhaust.



AOS-90-030

90° 2" Air Angle Orbital Sander

- Rubber Sleeve for operator's comfort.
- Safety Trigger.
- 90° degree one piece housing design for longer life time.
- Adjustable Speed Regulator.
- Rear Exhaust.



ZDS-6637S 0.7HP

ZDS-6651S 0.7HP

5" Dia. Disc Sanders

- Includes ZDS-6637S Locking-Type Pad (5" diameter): pad mounts to tool spindle without adapters.
- Governor speed control maintains rpm under load.
- Gearless for reduced maintenance and down-time.
- Removable side handle.

ZOS-343 0.5HP

3" Orbital Sander

- Ideal for headlamp, windshield and small area repair and finishing.
- 2.5mm orbital diameter.



ZP351 0.25HP

*Non-vacuum.

3" Mini Orbital Palm Sander



0.25HP

ZP354-5 Non-vacuum.

ZP354-5C Central vacuum.

ZP354-5S Self-Generated Vacuum

5" Air Random Orbital Sander



0.25HP

ZP354-6 Non-vacuum.

ZP354-6C Central vacuum.

ZP354-6S Self-Generated Vacuum

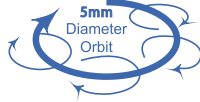
6" Air Random Orbital Sander

Model	Pad Size inch(mm)	Free Speed rpm	Avg. Air Cons. cfm(l/min)	Operating Air Pressure psi(bar)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Sound Pressure dB(A)
AS-110	2(51) or 3(76)	18,000	7.07(200)	90(6.2)	1.19(0.54)	1/4	3/8(10)	85
AOS-90-030	2(51)	15,000	7.07(200)	90(6.2)	1.43(0.65)	1/4	3/8(10)	87
ZDS-6637S/6651S	5(127)	2,600/4,000	4	90(6.2)	2(0.9)	1/4	3/8(10)	—
ZP351	3(76)	12,000	2.5(70.8)	90(6.2)	1.54(0.7)	1/4	3/8(10)	81
ZOS-343	3(76)	15,000	3.5(99.1)	90(6.2)	1.5(0.7)	1/4	3/8(10)	86
ZP354-5/6	5(127)/6(152)	12,000	2.5(70.8)	90(6.2)	1.8(0.8)	1/4	3/8(10)	82
ZP354-5C/6C	5(127)/6(152)	12,000	2.5(70.8)	90(6.2)	1.8(0.8)	1/4	3/8(10)	82
ZP354-5S/6S	5(127)/6(152)	12,000	2.5(70.8)	90(6.2)	1.7(0.78)	1/4	3/8(10)	82



ZOS-5N / ZOS-6N 0.3HP

5"/6" Non-Vac.
Random Orbital Sander



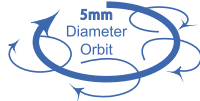
ZOS-5NF / ZOS-6NF 0.3HP

5"/6" Oil-Free Non-Vac.
Random Orbital Sander



ZOS-5C / ZOS-6C 0.3HP

5"/6" Central-Vacuum
Random Orbital Sander



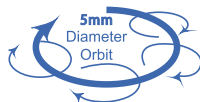
ZOS-5CF / ZOS-6CF 0.3HP

5"/6" Oil-Free Central-Vacuum
Random Orbital Sander



ZOS-5S / ZOS-6S 0.3HP

5"/6" Self-Generated
Vacuum Random Orbital Sander



ZOS-5SF / ZOS-6SF 0.3HP

5"/6" Oil-Free Self-Generated
Vacuum Random Orbital Sander



Model	Pad Size inch(mm)	Free Speed rpm	Avg. Air Cons. cfm(l/min)	Operating Air Pressure psi(bar)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Sound Pressure dB(A)
ZOS-5N ZOS-6N	5(127) 6(152)	12,000	6(170)	90(6.2)	1.86(0.84) 1.97(0.89)	1/4	3/8(10)	83
ZOS-5C ZOS-6C	5(127) 6(152)	12,000	6(170)	90(6.2)	2.01(0.91) 2.12(0.96)	1/4	3/8(10)	83
ZOS-5S ZOS-6S	5(127) 6(152)	12,000	6(170)	90(6.2)	2.01(0.91) 2.12(0.96)	1/4	3/8(10)	83
ZOS-5NF ZOS-6NF	5(127) 6(152)	12,000	6(170)	90(6.2)	1.61(0.73) 1.72(0.78)	1/4	3/8(10)	83
ZOS-5CF ZOS-6CF	5(127) 6(152)	12,000	6(170)	90(6.2)	1.77(0.8) 1.88(0.85)	1/4	3/8(10)	83
ZOS-5SF ZOS-6SF	5(127) 6(152)	12,000	6(170)	90(6.2)	1.77(0.8) 1.88(0.85)	1/4	3/8(10)	83

Random Orbital Polisher

Random Orbital Polisher

- Excellent for swirl-free polishing
- Probably the best polisher in the world!



ZOP-35 **0.3HP** (Orbital 5mm)

3" Random Orbital Polisher



ZBT1650-03W
3" WOOL WHEEL



ZBT1650-03Y
3" SPONGE WHEEL



ZBT1650-03G
3" FINE GRAY
POLISHING PAD

ZOP-55 **0.3HP** (Orbital 5mm)

5" Random Orbital Polisher



ZBT1650-05W
5" WOOL WHEEL



ZBT1650-05Y
5" SPONGE WHEEL



ZBT1650-05G
5" FINE GRAY
POLISHING PAD

ZHOP-510 **0.5HP** (Orbital 10mm)

5" Random Orbital Polisher



ZBT1650-05W
5" WOOL WHEEL



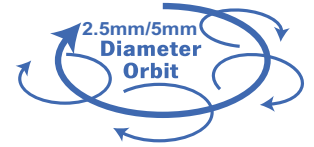
ZBT1650-05Y
5" SPONGE WHEEL



ZBT1650-05G
5" FINE GRAY
POLISHING PAD

Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit mm	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZOP-35	3(75)	1.3(0.5)	5	80	0.8	11,000	1/4	3/8(10)	1.6
ZOP-55	5(125)	1.5(0.7)	5	80	0.8	11,000	1/4	3/8(10)	1.6
ZHOP-510	5(125)	2.6(1.2)	10	80	0.8	11,000	1/4	3/8(10)	3

- Low vibration for swirl-free finishes.
- Durable, lightweight composite housing design.
- Include low profile balanced sanding pad.



2.5mm (3" 80g PAD) Random Orbital Sanders

Non-Vacuum

ZOS3-214-N3 0.3HP 3"(75mm)



Central Vacuum

ZOS3-214-C3 0.3HP 3"(75mm)



Self-Generated Vacuum

ZOS3-214-S3 0.3HP 3"(75mm)



2.5mm Random Orbital Sanders

Non-Vacuum

ZOS3-214-N5 0.3HP 5"(125mm)

ZOS3-214-N6 0.3HP 6"(150mm)



Central Vacuum

ZOS3-214-C5 0.3HP 5"(125mm)

ZOS3-214-C6 0.3HP 6"(150mm)



Self-Generated Vacuum

ZOS3-214-S5 0.3HP 5"(125mm)

ZOS3-214-S6 0.3HP 6"(150mm)



5mm Random Orbital Sanders

Non-Vacuum

ZOS-214-N5 0.3HP 5"(125mm)

ZOS-214-N6 0.3HP 6"(150mm)



Central Vacuum

ZOS-214-C5 0.3HP 5"(125mm)

ZOS-214-C6 0.3HP 6"(150mm)



Self-Generated Vacuum

ZOS-214-S5 0.3HP 5"(125mm)

ZOS-214-S6 0.3HP 6"(150mm)



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZOS-214-N5/C5/S5	5(125)	2(0.9)	3/16(5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS-214-N6/C6/S6	6(150)	2(0.9)	3/16(5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS3-214-N5/C5/S5	5(125)	2(0.9)	3/32(2.5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS3-214-N6/C6/S6	6(150)	2(0.9)	3/32(2.5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS3-214-N3/C3/S3	3(75)	1.8(0.8)	3/32(2.5)	80	0.8	11,000	1/4	3/8(10)	1.6

- Low vibration for swirl-free finishes.
- Durable, lightweight composite housing design.
- Include low profile balanced sanding pad.



2.5mm Random Orbital Sanders

Non-Vacuum

ZOS01-3-N5 0.3HP 5"(125mm)
ZOS01-3-N6 0.3HP 6"(150mm)



Central Vacuum

ZOS01-3-C5 0.3HP 5"(125mm)
ZOS01-3-C6 0.3HP 6"(150mm)



Self-Generated Vacuum

ZOS01-3-S5 0.3HP 5"(125mm)
ZOS01-3-S6 0.3HP 6"(150mm)



5mm Random Orbital Sanders

Non-Vacuum

ZOS01-N5 0.3HP 5"(125mm)
ZOS01-N6 0.3HP 6"(150mm)



Central Vacuum

ZOS01-C5 0.3HP 5"(125mm)
ZOS01-C6 0.3HP 6"(150mm)



Self-Generated Vacuum

ZOS01-S5 0.3HP 5"(125mm)
ZOS01-S6 0.3HP 6"(150mm)



10mm Random Orbital Sanders

Non-Vacuum

ZOS01-9-N5 0.3HP 5"(125mm)
ZOS01-9-N6 0.3HP 6"(150mm)



Central Vacuum

ZOS01-9-C5 0.3HP 5"(125mm)
ZOS01-9-C6 0.3HP 6"(150mm)



Self-Generated Vacuum

ZOS01-9-S5 0.3HP 5"(125mm)
ZOS01-9-S6 0.3HP 6"(150mm)



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZOS01-N5/C5/S5	5(125)	2(0.9)	3/16(5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS01-N6/C6/S6	6(150)	2(0.9)	3/16(5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS01-3-N5/C5/S5	5(125)	2(0.9)	3/32(2.5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS01-3-N6/C6/S6	6(150)	2(0.9)	3/32(2.5)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS01-9-N3/C3/S3	5(125)	2(0.9)	3/8(10)	80	0.8	11,000	1/4	3/8(10)	1.6
ZOS01-9-N3/C3/S3	6(150)	2(0.9)	3/8(10)	80	0.8	11,000	1/4	3/8(10)	1.6

ZTHS-C5 0.5HP (3/16"(5mm)Orbit) (5"(125mm)Pad)

ZTHS-C6 0.5HP (3/16"(5mm)Orbit) (6"(150mm)Pad)

Central Vacuum 2-Hand Random Orbital Sanders



Benefits

- Powerful and lightweight.
- Lube Free Design eliminates contamination of the work environment.
- 3-in-1 hose design same as FESTOOL IAS 2 Connection. supplies air, extracts dust, and provides an exhaust all through one hose.

Features

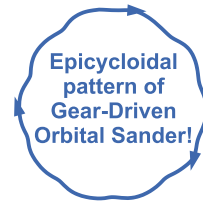
- Ergonomic housing design.
- Hardened Steel Alloy Cylinder for more durable & longevity.
- Innovative Anti-Dust Protection system.
- Lube Free Design eliminates contamination of the work environment



ZTHG-C5 0.5HP (3/16"(5mm)Orbit) (5"(125mm)Pad)

ZTHG-C6 0.5HP (3/16"(5mm)Orbit) (6"(150mm)Pad)

Central Vacuum 2-Hand Gear-Driven Sanders



Benefits

- Powerful and lightweight.
- 900 rpm motor produces excellent low speed torque.
- Unique epicycloidal pad motion generates torque-enhanced power, for consistent material removal.
- Lube Free Design eliminates contamination of the work environment.
- 3-in-1 hose design same as FESTOOL IAS 2 Connection. supplies air, extracts dust, and provides an exhaust all through one hose.

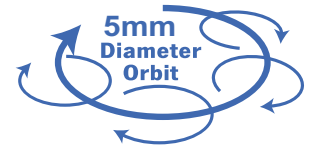
Features

- Long handle design for easy two-handed control.
- High quality alloy steel of gear driven gear with precision teeth design for durable tool life.
- Speed control lever is conveniently located for easy thumb adjustment.
- 3-in-1 hose design same as FESTOOL IAS 2 Connection.



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZTHS-C5	5(125)	2.6(1.2)	3/16(5)	10,000	1/4	3/8(10)	3
ZTHS-C6	6(150)	2.6(1.2)	3/16(5)	10,000	1/4	3/8(10)	3
ZTHG-C5	5(125)	3.3(1.5)	3/16(5)	900	1/4	3/8(10)	3
ZTHG-C6	6(150)	3.5(1.6)	3/16(5)	900	1/4	3/8(10)	3

- The 2-hand handle and low vibration combined to provide superior control and flawless finishes.
- Durable lightweight composite housing design.



5mm 2-Hand Random Orbital Sanders

Non-Vacuum

ZP347-5 0.5HP 5"(125mm)

Central Vacuum

ZP347-C5 0.5HP 5"(125mm)

Self-Generated Vacuum

ZP347-S5 0.5HP 5"(125mm)



Non-Vacuum

ZP347-6 0.5HP 6"(150mm)

Central Vacuum

ZP347-C6 0.5HP 6"(150mm)

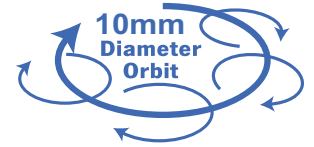
Self-Generated Vacuum

ZP348 0.5HP 6"(150mm)



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Cons. cfm
ZP347-5/C5/S5	5(125)	2.6(1.2)	3/16(5)	80	0.8	10,000	1/4	3/8(10)	3
ZP347-5/C6	6(150)	2.6(1.2)	3/16(5)	80	0.8	10,000	1/4	3/8(10)	3
ZP348	6(150)	2.6(1.2)	3/16(5)	80	0.8	10,000	1/4	3/8(10)	3

- Large orbit for removing heavy material with swirl-free finish.
- Durable lightweight composite housing design.



10mm 2-Hand Random Orbital Sanders

Non-Vacuum

ZP349-5 0.5HP 5"(125mm)



Central Vacuum

ZP349-C5 0.5HP 5"(125mm)



Self-Generated Vacuum

ZP349-S5 0.5HP 5"(125mm)



Non-Vacuum

ZP349-6 0.5HP 6"(150mm)



Central Vacuum

ZP349-C6 0.5HP 6"(150mm)



Self-Generated Vacuum

ZP350 0.5HP 6"(150mm)



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZP349-5/C5/S5	5(125)	2.6(1.2)	3/8(10)	80	0.8	10,000	1/4	3/8(10)	3
ZP349-6/C6/S6	6(150)	2.6(1.2)	3/8(10)	80	0.8	10,000	1/4	3/8(10)	3

2-Hand Gear-Driven Sanders

- The strength and power of this sander lets you remove heavy material and body filler on large, flat surfaces leaving a swirl-free finish.
- A long life, vibration-free performance



2-Hand Gear-Driven Sanders

Non-Vacuum

ZP337-5 0.5HP 5"(125mm)



Central Vacuum

ZP337-C5 0.5HP 5"(125mm)



Self-Generated Vacuum

ZP337-S5 0.5HP 5"(125mm)



Non-Vacuum

ZP337-6 0.5HP 6"(150mm)



Central Vacuum

ZP337-C6 0.5HP 6"(150mm)



Self-Generated Vacuum

ZP337-S6 0.5HP 6"(150mm)



Non-Vacuum

ZGS-N8 0.5HP 8"(200mm)



Central Vacuum

ZGS-C8 0.5HP 8"(200mm)



Self-Generated Vacuum

ZGS-S8 0.5HP 8"(200mm)



Model	Pad Dia inch(mm)	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZP337-5/C5/S5	5(125)	3.3(1.5)	3/16(5)	82	<2.5	900	1/4	3/8(10)	3
ZP337-6/C6/S6	6(150)	3.5(1.6)	3/16(5)	82	<2.5	900	1/4	3/8(10)	3
ZGS-N8/C8/S8	8(200)	3.5(1.6)	3/16(5)	82	<2.5	900	1/4	3/8(10)	3

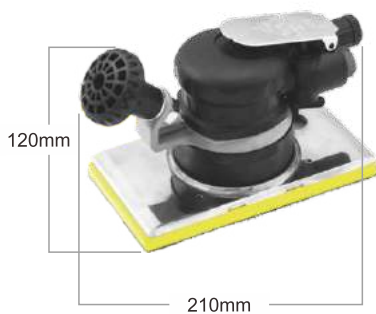
- Smooth, reliable and powerful.
- Long lasting durability with low maintenance.
- For all types of surface preparation and rapid removal of material from large areas.

Heavy Duty Jitterbug Sanders

Non-Vacuum

ZJS-NL4C 0.3HP

ZJS-NL4AC 0.3HP (Clip type)



Central Vacuum

ZJS-CL4C 0.3HP



Self-Generated Vacuum

ZJS-SL4C 0.3HP



Non-Vacuum

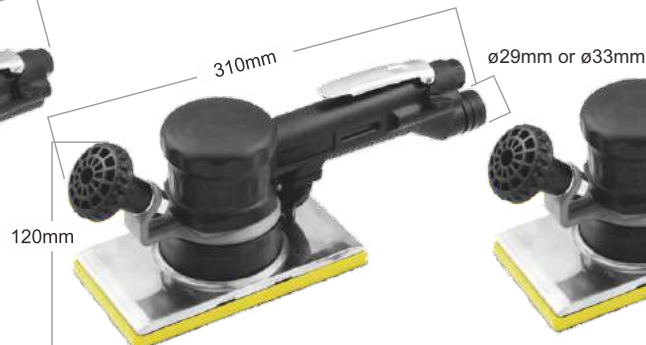
ZHS-NL4C 0.5HP

ZHS-NL4AC 0.5HP (Clip type)



Central Vacuum

ZHS-CL4C 0.5HP



Self-Generated Vacuum

ZHS-SL4C 0.5HP



Model	Net Weight lbs(kgs)	Dia. Orbit inch(mm)	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet inch	Min.Hose Size inch(mm)	Avg. Air Cons. cfm
ZJS-NL4C/NL4AC/CL4C/SL4C	2.6(1.2)	1/8(3.2)	80	0.8	8,500	1/4	3/8(10)	1.6
ZHS-NL4C/NL4AC/CL4C/SL4C	3.3(1.5)	3/16(5)	80	0.8	8,500	1/4	3/8(10)	3

- Compact design and comfortable grip.
- Heavy-duty construction for durable operations.
- Pad size: 75mm*100mm for ZP339, 100mm*110mm for ZOS-7511g a swirl-free finish.

Jitterbug Sanders

Non-Vacuum

ZP339 0.3HP



Central Vacuum

ZP339C 0.3HP



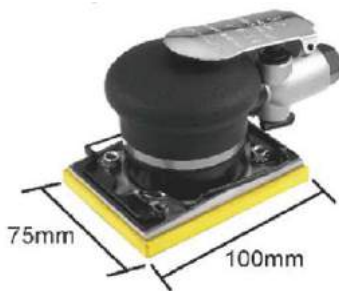
Self-Generated Vacuum

ZP339S 0.3HP



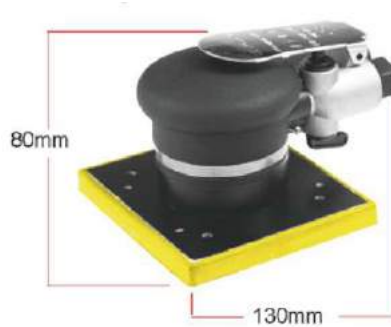
Non-Vacuum

ZP339A 0.3HP (Clip type)



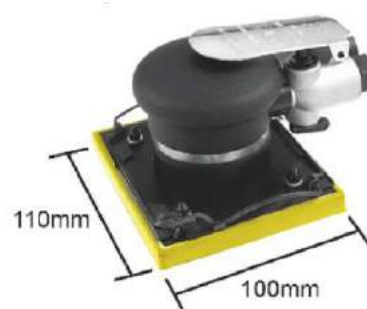
Non-Vacuum

ZOS-7511 0.3HP



Non-Vacuum

ZOS-7511A 0.3HP (Clip type)



- Compact design and comfortable grip.
- Heavy-duty construction for durable operations.
- Ideal for all types of surface sanding, polishing and scrubbing.

Delta Sanders

Non-Vacuum

ZP338 0.3HP



Central Vacuum

ZP338C 0.3HP



Self-Generated Vacuum

ZP338S 0.3HP



Model	Net Weight lbs(kgs)	Diameter Orbit	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Avg. Air Cons. cfm
ZP339/339C/339S/339A	1.5(0.7)	3.2	80	0.8	10,000	1/4	3/8(10)	1.6
ZOS-7511/7511A	1.5(0.7)	3.2	80	0.8	10,000	1/4	3/8(10)	1.6
ZP338/338C/338S	1.5(0.7)	3.2	80	0.8	10,000	1/4	3/8(10)	1.6

- Smooth, reliable and powerful.
- Long lasting durability with low maintenance.
- For all types of surface preparation and rapid removal of material from large areas.

Heavy Duty Jitterbug Sanders

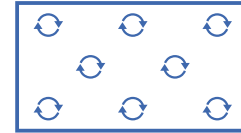
Non-Vacuum

ZOS-927 0.3HP



Non-Vacuum

ZOS-927A 0.3HP (Clip type)



5mm Dia. Orbit Motion

Non-Vacuum

ZP356 0.3HP

ZP356A 0.3HP (Clip type)



Central Vacuum

ZP356-C 0.3HP



Self-Generated Vacuum

ZP356-S 0.3HP

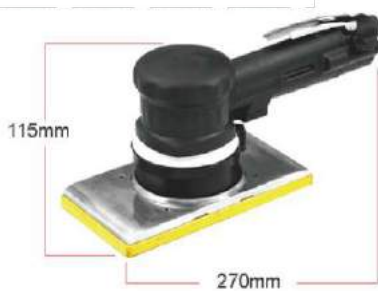


HB-46-2
HOSE & BAG

Non-Vacuum

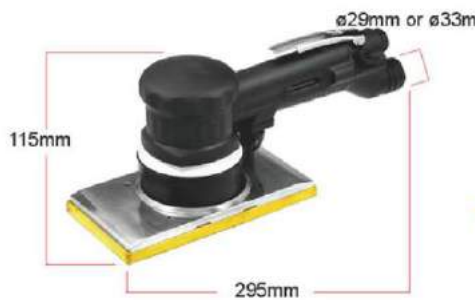
ZHS-NL4 0.5HP

ZHS-NL4A 0.5HP (Clip type)



Central Vacuum

ZHS-CL4 0.5HP



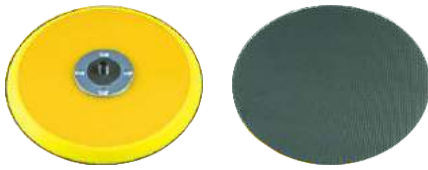
Self-Generated Vacuum

ZHS-SL4 0.5HP

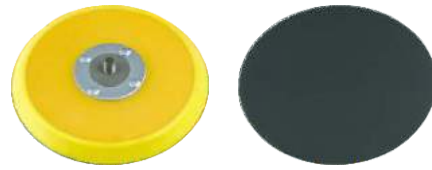


HB-46-2
HOSE & BAG

Model	Net Weight lbs(kgs)	Diameter Orbit	Noise Level dB(A)	Vibration m/s ²	rpm	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)	Avg. Air Cons. cfm
ZOS-927/927A	2.4(1.1)	3.2	80	0.8	8,500	1/4	3/8(10)	1.6
ZP356/356A	2.6(1.2)	3.2	80	0.8	8,500	1/4	3/8(10)	1.6
ZP356-C	2.6(1.2)	3.2	80	0.8	8,500	1/4	3/8(10)	1.6
ZP356-S	2.6(1.2)	3.2	80	0.8	8,500	1/4	3/8(10)	1.6
ZHS-NL4/NL4A	3.3(1.5)	5	80	0.8	7,500	1/4	3/8(10)	3.1
ZHS-CL4	3.3(1.5)	5	80	0.8	7,500	1/4	3/8(10)	3.1
ZHS-SL4	3.3(1.5)	5	80	0.8	7,500	1/4	3/8(10)	3.1



ZBTOB-38-6V0Y-T10
6" PAD Hook-up (No-Hole)



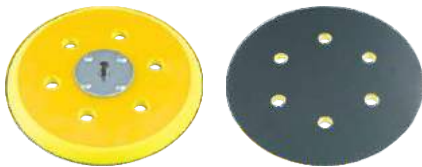
ZBTOB-38-5V0Y-T10
5" PAD Hook-up (No-Hole)



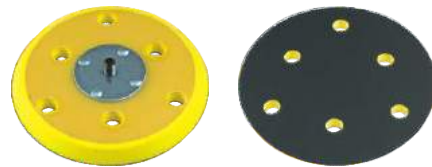
ZBTOB-38-6P0Y-T10
6" PAD PSA (No-Hole)



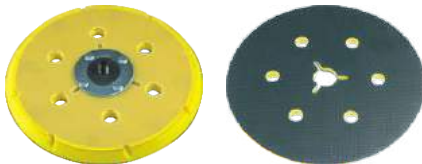
ZBTOB-38-5P0Y-T10
5" PAD PSA (No-Hole)



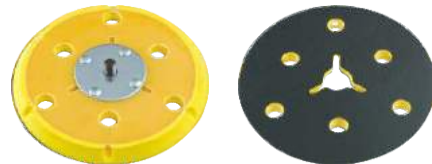
ZBTOB-38-6V6Y-T10
6" PAD Hook-up (6-Hole)



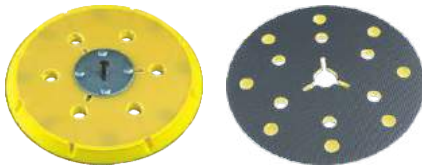
ZBTOB-38-5V6Y-T10
5" PAD Hook-up (6-Hole)



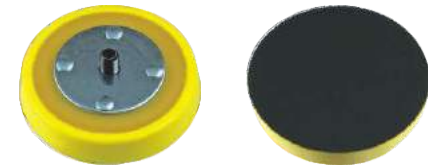
ZBTOB-38-6V7Y-T10
6" PAD Hook-up (7-Hole)



ZBTOB-38-5V7Y-T10
5" PAD Hook-up (7-Hole)



ZBTOB-38-6V15Y-T10
6" PAD Hook-up (15-Hole)



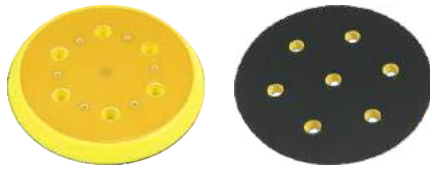
ZBTOB-38-3V0Y-W80
3" PAD Hook-up (No-Hole)



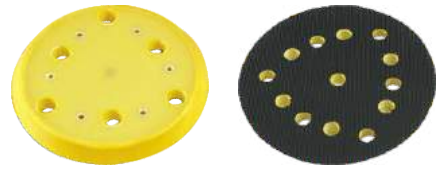
ZBTOB-38-3V0Y-W30
3" PAD Hook-up (No-Hole)



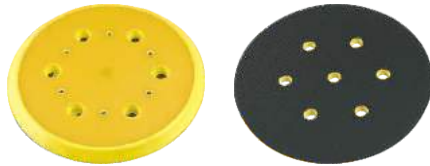
ZBTOB-38-3V3Y-W80
3" PAD Hook-up (3-Hole)



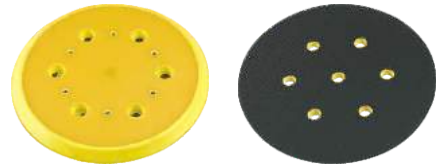
ZBT2HG-51-5V0Y
5" PAD Hook-up (No-Hole)



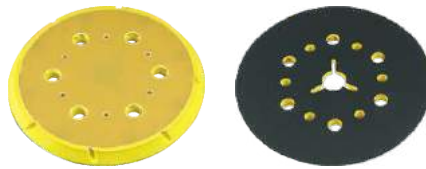
ZBT2HG-51-5V6Y
5" PAD Hook-up (6-Hole)



ZBT2HG-51-6V0Y
6" PAD Hook-up (No-Hole)



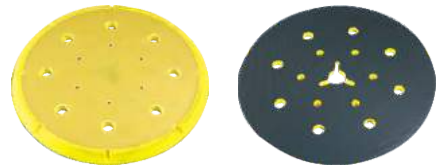
ZBT2HG-51-6P0Y
6" PAD PSA (No-Hole)



ZBT2HG4-49-6V7Y
6" PAD Hook-up (7-Hole)



ZBT2HG4-49-8V0Y
8" PAD Hook-up (No-Hole)



ZBT2HG4-49-8V9Y
8" PAD Hook-up (9-Hole)



ZBTL4-40V-100*180-Y
Hook-up (No-Hole)
95mm x 175mm PAD



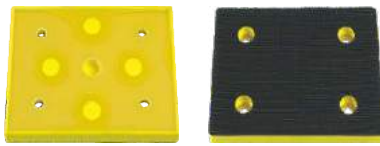
ZBTL4-40P-100*180-Y
PSA (No-Hole)
95mm x 175mm PAD



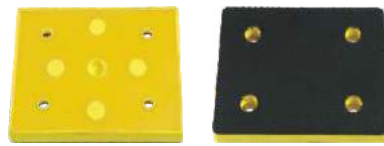
ZBTL4-40V-100*180-Y-3*2*3
Hook-up (8-Hole)
95mm x 175mm PAD



ZBTL4-40V-100*180-Y-4*4
Hook-up (8-Hole)
95mm x 175mm PAD



ZBT81339V-75*100-Y
Hook-up (No-Hole)
75mm x 100mm PAD



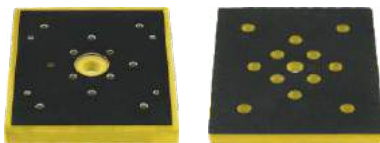
ZBT81339P-75*100-Y
PSA (No-Hole)
75mm x 100mm PAD



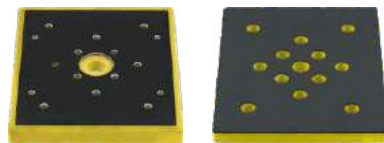
ZBT813S37V-75*100-Y
Hook-up (4-Hole)
75mm x 100mm PAD



ZBT813S37P-75*100-Y
PSA (4-Hole)
75mm x 100mm PAD



ZBT81438V-97*109-Y
Hook-up (No-Hole)
100mm x 110mm PAD



ZBT81438P-97*109-Y
PSA (No-Hole)
100mm x 110mm PAD



ZBT81539V-Y
Hook-up (No-Hole)
ZBT81539P-Y
PSA (No-Hole)
75mm x 100mm PAD



ZBT815S41-V-Y
Hook-up (No-Hole)
75mm x 100mm PAD



ZBT81642V-100*110*1.5-YV-100*110-Y
Hook-up (No-Hole)
100mm x 110mm PAD(PSA)



ZBT81642P-100*110*1.5-Y(PSA)
PSA (No-Hole)
100mm x 110mm PAD(PSA)



Sandpaper (75mm x 100mm)

- | | |
|-----------------|------------------|
| ZP-813-4-0-80# | ZP-813-4-0-400# |
| ZP-813-4-0-100# | ZP-813-4-0-600# |
| ZP-813-4-0-120# | ZP-813-4-0-800# |
| ZP-813-4-0-150# | ZP-813-4-0-1000# |
| ZP-813-4-0-180# | ZP-813-4-0-1200# |
| ZP-813-4-0-240# | ZP-813-4-0-1500# |
| ZP-813-4-0-320# | |



Sandpaper (75mm x 100mm)

- | | |
|-----------------|------------------|
| ZP-813-4-4-80# | ZP-813-4-4-400# |
| ZP-813-4-4-100# | ZP-813-4-4-600# |
| ZP-813-4-4-120# | ZP-813-4-4-800# |
| ZP-813-4-4-150# | ZP-813-4-4-1000# |
| ZP-813-4-4-180# | ZP-813-4-4-1200# |
| ZP-813-4-4-240# | ZP-813-4-4-1500# |
| ZP-813-4-4-320# | |



Sandpaper (100mm x 110mm)

- | | |
|-----------------|------------------|
| ZP-814-4-0-80# | ZP-814-4-0-400# |
| ZP-814-4-0-100# | ZP-814-4-0-600# |
| ZP-814-4-0-120# | ZP-814-4-0-800# |
| ZP-814-4-0-150# | ZP-814-4-0-1000# |
| ZP-814-4-0-180# | ZP-814-4-0-1200# |
| ZP-814-4-0-240# | ZP-814-4-0-1500# |
| ZP-814-4-0-320# | |



Sandpaper (75mm x 100mm)

- | | |
|-----------------|------------------|
| ZP-815-3-0-80# | ZP-815-3-0-400# |
| ZP-815-3-0-100# | ZP-815-3-0-600# |
| ZP-815-3-0-120# | ZP-815-3-0-800# |
| ZP-815-3-0-150# | ZP-815-3-0-1000# |
| ZP-815-3-0-180# | ZP-815-3-0-1200# |
| ZP-815-3-0-240# | ZP-815-3-0-1500# |
| ZP-815-3-0-320# | |



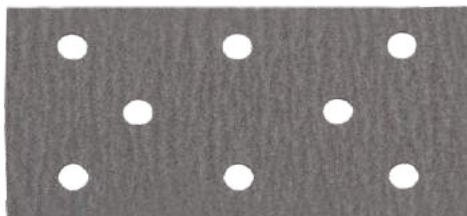
Sandpaper (75mm x 100mm)

- | | |
|-----------------|------------------|
| ZP-815-3-4-80# | ZP-815-3-4-400# |
| ZP-815-3-4-100# | ZP-815-3-4-600# |
| ZP-815-3-4-120# | ZP-815-3-4-800# |
| ZP-815-3-4-150# | ZP-815-3-4-1000# |
| ZP-815-3-4-180# | ZP-815-3-4-1200# |
| ZP-815-3-4-240# | ZP-815-3-4-1500# |
| ZP-815-3-4-320# | |



Sandpaper (95mm x 175mm)

- | | |
|----------------|-----------------|
| ZP-L4-4-0-80# | ZP-L4-4-0-400# |
| ZP-L4-4-0-100# | ZP-L4-4-0-600# |
| ZP-L4-4-0-120# | ZP-L4-4-0-800# |
| ZP-L4-4-0-150# | ZP-L4-4-0-1000# |
| ZP-L4-4-0-180# | ZP-L4-4-0-1200# |
| ZP-L4-4-0-240# | ZP-L4-4-0-1500# |
| ZP-L4-4-0-320# | |



Sandpaper (95mm x 175mm)

- | | |
|------------------|-------------------|
| ZP-L4-3X2X3-80# | ZP-L4-3X2X3-320# |
| ZP-L4-3X2X3-100# | ZP-L4-3X2X3-600# |
| ZP-L4-3X2X3-120# | ZP-L4-3X2X3-800# |
| ZP-L4-3X2X3-150# | ZP-L4-3X2X3-1000# |
| ZP-L4-3X2X3-180# | ZP-L4-3X2X3-1200# |
| ZP-L4-3X2X3-240# | ZP-L4-3X2X3-1500# |

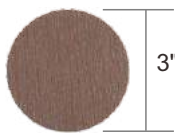


Sandpaper (95mm x 175mm)

- | | |
|----------------|-----------------|
| ZP-L4-4x4-80# | ZP-L4-4x4-400# |
| ZP-L4-4x4-100# | ZP-L4-4x4-600# |
| ZP-L4-4x4-120# | ZP-L4-4x4-800# |
| ZP-L4-4x4-150# | ZP-L4-4x4-1000# |
| ZP-L4-4x4-180# | ZP-L4-4x4-1200# |
| ZP-L4-4x4-240# | ZP-L4-4x4-1500# |
| ZP-L4-4x4-320# | |

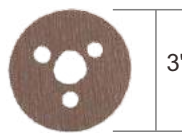
Feature & Benefit

- Premium P-graded, heat-treated aluminum oxide abrasive for superior life, fast cut rate, and consistent finish.
- Unique fiber-reinforced, B-wt latex-saturated backing provides a 50-60% improvement in tear strength.
- Flexible; can be used wet.
- Water-based stearate, non-pigmented, No-Fil coating provides maximum load resistance and extended life with no color transfer to work.
- Typical applications include preparing primed and painted surfaces for finishing, stripping primer and paint, sanding plastic and fiberglass, and bare wood sanding.



Sandpaper (3")

- | | |
|-----------------|------------------|
| ZP-ZOS-3X0-80# | ZP-ZOS-3X0-400# |
| ZP-ZOS-3X0-100# | ZP-ZOS-3X0-600# |
| ZP-ZOS-3X0-120# | ZP-ZOS-3X0-800# |
| ZP-ZOS-3X0-150# | ZP-ZOS-3X0-1000# |
| ZP-ZOS-3X0-180# | ZP-ZOS-3X0-1200# |
| ZP-ZOS-3X0-240# | ZP-ZOS-3X0-1500# |
| ZP-ZOS-3X0-320# | |



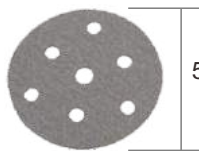
Sandpaper (3")

- | | |
|-----------------|------------------|
| ZP-ZOS-3X4-80# | ZP-ZOS-3X4-400# |
| ZP-ZOS-3X4-100# | ZP-ZOS-3X4-600# |
| ZP-ZOS-3X4-120# | ZP-ZOS-3X4-800# |
| ZP-ZOS-3X4-150# | ZP-ZOS-3X4-1000# |
| ZP-ZOS-3X4-180# | ZP-ZOS-3X4-1200# |
| ZP-ZOS-3X4-240# | ZP-ZOS-3X4-1500# |
| ZP-ZOS-3X4-320# | |



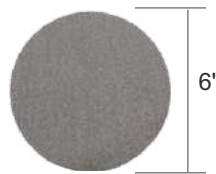
Sandpaper (5")

- | | |
|-----------------|------------------|
| ZP-ZOS-5X0-80# | ZP-ZOS-5X0-400# |
| ZP-ZOS-5X0-100# | ZP-ZOS-5X0-600# |
| ZP-ZOS-5X0-120# | ZP-ZOS-5X0-800# |
| ZP-ZOS-5X0-150# | ZP-ZOS-5X0-1000# |
| ZP-ZOS-5X0-180# | ZP-ZOS-5X0-1200# |
| ZP-ZOS-5X0-240# | ZP-ZOS-5X0-1500# |
| ZP-ZOS-5X0-320# | |



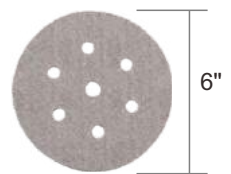
Sandpaper (5")

- | | |
|-----------------|------------------|
| ZP-ZOS-5X7-80# | ZP-ZOS-5X7-400# |
| ZP-ZOS-5X7-100# | ZP-ZOS-5X7-600# |
| ZP-ZOS-5X7-120# | ZP-ZOS-5X7-800# |
| ZP-ZOS-5X7-150# | ZP-ZOS-5X7-1000# |
| ZP-ZOS-5X7-180# | ZP-ZOS-5X7-1200# |
| ZP-ZOS-5X7-240# | ZP-ZOS-5X7-1500# |
| ZP-ZOS-5X7-320# | |



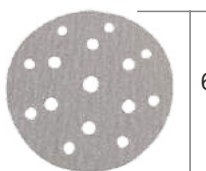
Sandpaper (6")

- | | |
|-----------------|------------------|
| ZP-ZOS-6X0-80# | ZP-ZOS-6X0-400# |
| ZP-ZOS-6X0-100# | ZP-ZOS-6X0-600# |
| ZP-ZOS-6X0-120# | ZP-ZOS-6X0-800# |
| ZP-ZOS-6X0-150# | ZP-ZOS-6X0-1000# |
| ZP-ZOS-6X0-180# | ZP-ZOS-6X0-1200# |
| ZP-ZOS-6X0-240# | ZP-ZOS-6X0-1500# |
| ZP-ZOS-6X0-320# | |



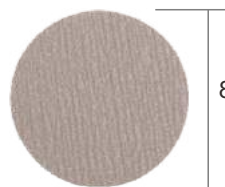
Sandpaper (6")

- | | |
|-----------------|------------------|
| ZP-ZOS-6X7-80# | ZP-ZOS-6X7-400# |
| ZP-ZOS-6X7-100# | ZP-ZOS-6X7-600# |
| ZP-ZOS-6X7-120# | ZP-ZOS-6X7-800# |
| ZP-ZOS-6X7-150# | ZP-ZOS-6X7-1000# |
| ZP-ZOS-6X7-180# | ZP-ZOS-6X7-1200# |
| ZP-ZOS-6X7-240# | ZP-ZOS-6X7-1500# |
| ZP-ZOS-6X7-320# | |



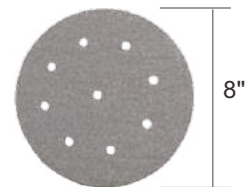
Sandpaper (6")

- | | |
|------------------|-------------------|
| ZP-ZOS-6X15-80# | ZP-ZOS-6X15-400# |
| ZP-ZOS-6X15-100# | ZP-ZOS-6X15-600# |
| ZP-ZOS-6X15-120# | ZP-ZOS-6X15-800# |
| ZP-ZOS-6X15-150# | ZP-ZOS-6X15-1000# |
| ZP-ZOS-6X15-180# | ZP-ZOS-6X15-1200# |
| ZP-ZOS-6X15-240# | ZP-ZOS-6X15-1500# |
| ZP-ZOS-6X15-320# | |



Sandpaper (8")

- | | |
|-----------------|------------------|
| ZP-ZOS-8X0-80# | ZP-ZOS-8X0-400# |
| ZP-ZOS-8X0-100# | ZP-ZOS-8X0-600# |
| ZP-ZOS-8X0-120# | ZP-ZOS-8X0-800# |
| ZP-ZOS-8X0-150# | ZP-ZOS-8X0-1000# |
| ZP-ZOS-8X0-180# | ZP-ZOS-8X0-1200# |
| ZP-ZOS-8X0-240# | ZP-ZOS-8X0-1500# |
| ZP-ZOS-8X0-320# | |

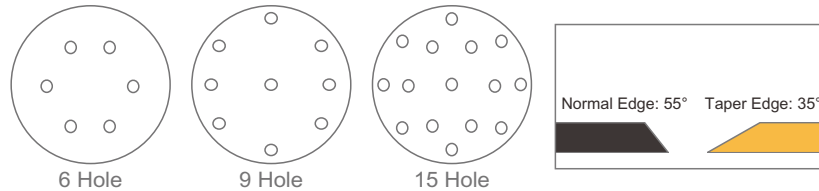


Sandpaper (8")

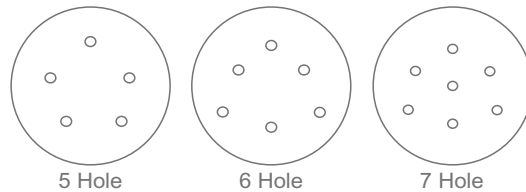
- | | |
|-----------------|------------------|
| ZP-HG4-8X9-80# | ZP-HG4-8X9-400# |
| ZP-HG4-8X9-100# | ZP-HG4-8X9-600# |
| ZP-HG4-8X9-120# | ZP-HG4-8X9-800# |
| ZP-HG4-8X9-150# | ZP-HG4-8X9-1000# |
| ZP-HG4-8X9-180# | ZP-HG4-8X9-1200# |
| ZP-HG4-8X9-240# | ZP-HG4-8X9-1500# |
| ZP-HG4-8X9-320# | |



VELCRO 12,000 rpm maximum, 5/16"-24 male thread



Model	Description	Thickness	Weight	Color
ZY-Q60-V/ZB-Q60-V	0 Hole	3/8"	130g/120g	Yellow/Black
ZY-Q66-V/ZB-Q66-V	6 Holes	3/8"	130g/120g	Yellow/Black
ZY-S66-V/ZB-S66-V	6 Holes Taper	3/8"	130g/120g	Yellow/Black
ZY-T609-V/ZB-T609-V	9 Holes	1/2"	130g/120g	Yellow/Black
ZY-T69-V/ZB-T69-V	15 Holes	1/2"	130g/120g	Yellow/Black



Model	Description	Thickness	Weight	Color
ZY-Q50-V/ZB-Q50-V	0 Hole	3/8"	130g/95g	Yellow/Black
ZY-Q55-V/ZB-Q55-V	5 Holes	3/8"	130g/95g	Yellow/Black
ZY-Q56-V/ZB-Q56-V	6 Holes	3/8"	130g/95g	Yellow/Black
ZY-Q57-V/ZB-Q57-V	7 Holes	3/8"	130g/95g	Yellow/Black



Model	Description	Thickness	Thread	Weight	Color
ZY-Q30-V6/ZB-Q30-V6	0 Hole	3/8"	M6	35g/25g	Yellow/Black
ZY-B30-V8/ZB-Q30-V8	0 Hole	3/8"	M8	35g/25g	Yellow/Black
ZB-T30-V	0 Hole	5/8"	M8	80g	Black

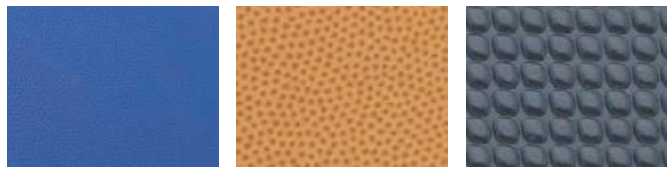


Model	Description	Thickness	Thread	Weight	Color
ZY-Q20-V6/ZB-Q20-V6	0 Hole	3/8"	M6	25g	Yellow/Black
ZY-Q20-V8/ZB-Q20-V8	0 Hole	3/8"	M8	25g	Yellow/Black

SUPER SOFT 6,000 rpm maximum



Model	Description	Thickness	Weight	Color
ZO-Q66-V	6" 6 Holes	3/8"	130g/120g	Orange
ZO-S66-V	6" 6 Holes Taper	3/8"	130g/120g	Orange
ZO-Q50-V	5" 0 Hole	3/8"	130g/95g	Orange



Blue Vinyl

Basketball Vinyl

Black Dot

PSA 12,000 rpm maximum, 5/16"-24 male thread



6" (152mm)

Model	Description	Thickness	Weight	Color
ZY-Q60-P/ZB-Q60-P	0 Hole Blue Vinyl	3/8"	130g/120g	Yellow/Black
ZY-Q60-C/ZB-Q60-C	0 Hole Basketball Vinyl	3/8"	130g/120g	Yellow/Black
ZY-Q60-D/ZB-Q60-D	0 Hole Black Vinyl	3/8"	130g/120g	Yellow/Black



5" (125mm)

Model	Description	Thickness	Weight	Color
ZY-Q50-P/ZB-Q50-P	0 Hole Blue Vinyl	3/8"	130g/95g	Yellow/Black
ZY-Q50-C/ZB-Q50-C	0 Hole Basketball Vinyl	3/8"	130g/95g	Yellow/Black
ZY-Q50-D/ZB-Q50-D	0 Hole Black Vinyl	3/8"	130g/95g	Yellow/Black



3" (75mm)

Model	Description	Thickness	Thread	Weight	Color
ZY-Q30-P6/ZB-Q30-P6	0 Hole Blue Vinyl	3/8"	M6	35g/25g	Yellow/Black
ZY-Q30-P8/ZB-Q30-P8	0 Hole Blue Vinyl	3/8"	M8	35g/25g	Yellow/Black
ZY-Q30-C6/ZB-Q30-C6	0 Hole Basketball Vinyl	3/8"	M6	35g/25g	Yellow/Black
ZY-Q30-C8/ZB-Q30-C8	0 Hole Basketball Vinyl	3/8"	M8	35g/25g	Yellow/Black



2" (48mm)

Model	Description	Thickness	Thread	Weight	Color
ZY-Q20-P6/ZB-Q20-P6	0 Hole Blue Vinyl	3/8"	M6	25g	Yellow/Black
ZY-Q20-P8/ZB-Q20-P8	0 Hole Blue Vinyl	3/8"	M8	25g	Yellow/Black
ZY-Q20-C6/ZB-Q20-C6	0 Hole Basketball Vinyl	3/8"	M6	25g	Yellow/Black
ZY-Q20-C8/ZB-Q20-C8	0 Hole Basketball Vinyl	3/8"	M8	25g	Yellow/Black

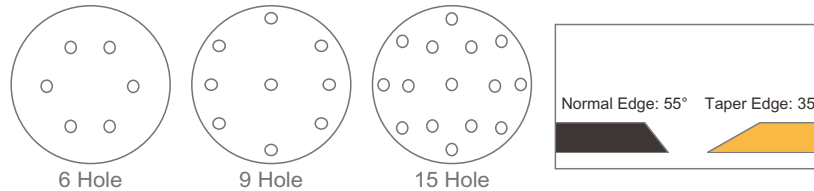
SUPER SOFT 6,000 rpm maximum



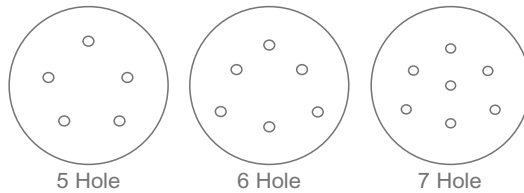
Model	Description	Thickness	Weight	Color
ZO-Q60-P	6" 0 Hole Blue Vinyl	3/8"	130g/120g	Orange
ZO-Q50-P	5" 0 Hole Blue Vinyl	3/8"	130g/95g	Orange
ZO-Q60-C	6" 0 Hole Basketball Vinyl	3/8"	130g/120g	Orange
ZO-Q50-C	5" 0 Hole Basketball Vinyl	3/8"	130g/95g	Orange
ZO-Q60-D	6" 0 Hole Black Vinyl	3/8"	130g/120g	Orange
ZO-Q50-D	5" 0 Hole Black Vinyl	3/8"	130g/95g	Orange



SHORT NAP 12,000 rpm maximum, 5/16"-24 male thread



Model	Description	Thickness	Weight	Color
ZY-Q60-E/ZB-Q60-E	0 Hole	3/8"	130g/120g	Yellow/Black
ZY-Q66-E/ZB-Q66-E	6 Holes	3/8"	130g/120g	Yellow/Black
ZY-S66-SV/ZB-S66-SV	6 Holes Taper	3/8"	130g/120g	Yellow/Black
ZY-T609-E/ZB-T609-E	9 Holes	1/2"	130g/120g	Yellow/Black
ZY-T69-E/ZB-T69-E	15 Holes	1/2"	130g/120g	Yellow/Black



Model	Description	Thickness	Weight	Color
ZY-Q50-E/ZB-Q50-E	0 Hole	3/8"	130g/95g	Yellow/Black
ZY-Q55-E/ZB-Q55-E	5 Holes	3/8"	130g/95g	Yellow/Black
ZY-Q56-E/ZB-Q56-E	6 Holes	3/8"	130g/95g	Yellow/Black
ZY-Q57-E/ZB-Q57-E	7 Holes	3/8"	130g/95g	Yellow/Black

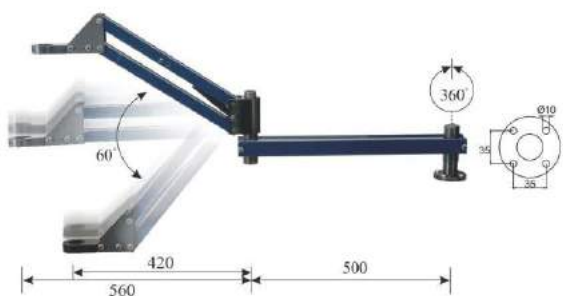


Model	Description	Thickness	Thread	Weight	Color
ZY-Q30-E6/ZB-Q30-E6	0 Hole	3/8"	M6	35g/25g	Yellow/Black
ZY-Q30-E6/ZB-Q30-E8	0 Hole	3/8"	M8	35g/25g	Yellow/Black

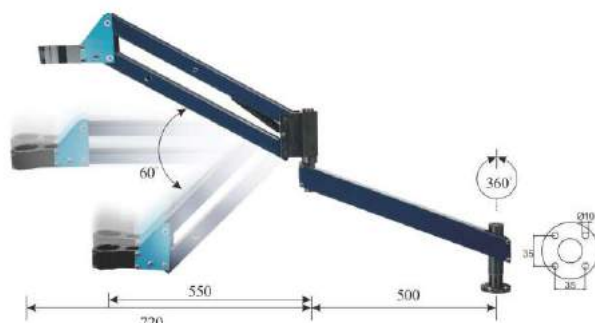


Model	Description	Thickness	Thread	Weight	Color
ZY-Q20-E6/ZB-Q20-E6	0 Hole	3/8"	M6	25g	Yellow/Black
ZY-Q20-E8/ZB-Q20-E8	0 Hole	3/8"	M8	25g	Yellow/Black



Robot Arm / Air Tapping Tools

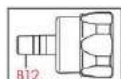


RB16 Robot Arm



RB24 Robot Arm

Model	New Weight kg	Tool Diameter mm	Clamping Jaw
RB16	5.89	38/44	
RB24	10.75	56.6	



Handle
exhaust

ZAT22AKH

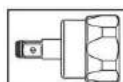
3/8" Air Tapping Tool



Push to start type
Rear exhaust

ZAT415B2

3/8" Air Tapping Tool



Handle
exhaust

ZAT712AKI

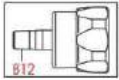
3/8" Air Tapping Tool



Model	Tapping Capacity Aluminum mm	Tapping Capacity Iron mm	Free Speed rpm	Air Consumption l/min(cf _m)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level dB(A)
ZAT22AKH	3-12	3-8	150	184(6.5)	7.87(200)	1/4	3.79(1.72)	82
ZAT415B2	1-3	1-3	1000	141(5)	11.02(280)	1/4	1.63(0.74)	77
ZAT712AKI	6-12	6-8	150	198(7)	9.65(245)	1/4	3.9(1.77)	82

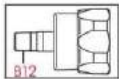
Specification(air pressure at 90psi, 6.2bar, 6.3kg/cm²)

Products and specifications subject to change without prior notice 206



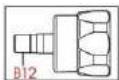
Handle exhaust

ZAT22AK
Air Tapping Tool



Rear exhaust

ZAT19AK
Air Tapping Tool



Rear exhaust

ZAT23AK
Air Tapping Tool



Please specify tapping tool code & chuck standard while ordering.

Air Tapping Tool Order Code Reference

Model	ZAT22AK	ZAT19AK	ZAT23AK
Size	Order Code		
M2		ZAT19AK-2	
M3	ZAT22AK-3	ZAT19AK-3	ZAT23AK-3
M4	ZAT22AK-4	ZAT19AK-4	ZAT23AK-4
M5	ZAT22AK-5	ZAT19AK-5	ZAT23AK-5
M6	ZAT22AK-6	ZAT19AK-6	ZAT23AK-6
M8	ZAT22AK-8	ZAT19AK-8	ZAT23AK-8
M10	ZAT22AK-10		ZAT23AK-10
M12	ZAT22AK-12		ZAT23AK-12

NOTICE:

When different sizes or standard chucks are needed, please refer to the chuck standards and size list and note on the purchase order, otherwise, the chuck will be JIS.

Chuck standards and size list

FOR TAP	JIS			ISO			DIN 371			DIN 376		
	Thread	Ød	Order Code	Thread	Ød	Order Code	Thread	Ød	Order Code	Thread	Ød	Order Code
M2	3	2.5	TCJISM2									
M3	4	3.2	TCJISM3	3.15	2.5	TCISOM3	3.5	2.7	TC DIN371M3	2.2	—	TC DIN376M3
M4	5	4	TCJISM4	4	3.15	TCISOM4	4.5	3.4	TC DIN371M4	2.8	2.1	TC DIN376M4
M5	5.5	4.5	TCJISM5	5	4	TCISOM5	6	4.9	TC DIN371M5	3.5	2.7	TC DIN376M5
M6	6	4.5	TCJISM6	6.3	5	TCISOM6	6	4.9	TC DIN371M6	4.5	3.4	TC DIN376M6
M8	6.2	5	TCJISM8	8	6.3	TCISOM8	8	6.2	TC DIN371M8	6	4.9	TC DIN376M8
M10	7	5.5	TCJISM10	10	8	TCISOM10	10	8	TC DIN371M10	7	5.5	TC DIN376M10
M12	8.5	6.5	TCJISM12	9	7.1	TCISOM12				9	/	TC DIN376M12
FOR TAP	ANSI											
Thread	Ød		Order Code									
1/2"	9.322	6.985	TCANSIW1/2									

Model	Tapping Capacity Aluminum mm	Iron mm	Free Speed rpm	Air Consumption l/min(cfm)	Overall Length inch(mm)	Air Inlet P.T	Net Weight lbs(kgs)	Sound Level dB(A)
ZAT22AK	3-12	3-8	150	184(6.5)	10.04(255)	1/4	3.81(1.73)	82
ZAT19AK	2-8	2-4	350	226(8)	11.42(290)	1/4	3.7(1.68)	87
ZAT23AK	3-12	3-10	100	226(8)	12.2(310)	1/4	4.1(1.86)	87

Specification(air pressure at 90psi, 6.2bar, 6.3kg/cm²)



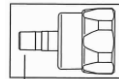
JIS, ISO, DIN371, DIS376, ANSI all standards chuck and sizes can using



ZPTC-DT6

Professional Tapping Chuck

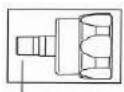
For {
 Drilling Machine
 Electric Drill
 Air Drill



B12

ZPTC-B12A

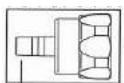
Professional Tapping Chuck



B12

ZATC-B12B

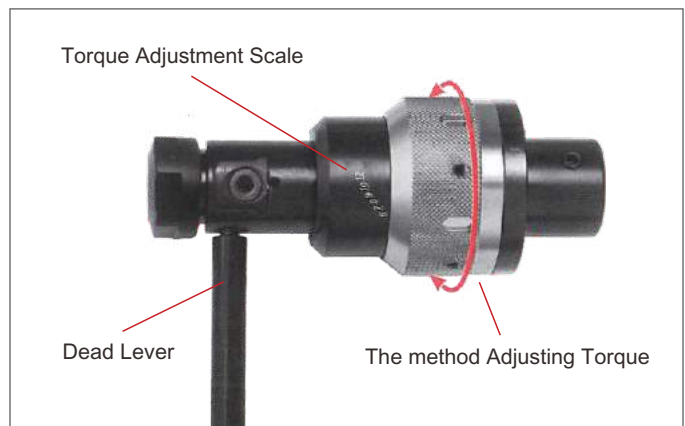
Adjustable Tapping Chuck



B16

ZATC-B16C

Adjustable Tapping Chuck



SPECIFICATION (air pressure at 90psi, 6.2bar, 6.3kg/cm²)

Model	Tapping Size mm	Overall Length inch(mm)	Net Weight lbs(kgs)
ZPTC-DT6	3~8	4.72(120)	1.32(0.6)
ZPTC-B12A	3~8	4.72(120)	1.32(0.6)
ZATC-B12B	3~12	4.72(120)	1.9(0.86)
ZATC-B16C	3~12	4.72(120)	1.9(0.86)



Torque collet Chuck

METRIC THREAD					
No.1 Torque collet Chuck		JIS		ISO	
		Handle Diameter	Opposite	Handle Diameter	Opposite
M3	P0.5	4	3.2	3.15	2.5
M4	P0.7	5	4	4	3.15
M5	P0.8	5.5	4.5	5	4
M6	P1.0	6	4.5	6.3	5
M8	P1.25	6.2	5	8	6.3
M10	P1.5	7	5.5	10	8
M12	P1.75	8.5	6.5	9	7.1

METRIC THREAD					
No.2 Torque collet Chuck		JIS		ISO	
		Handle Diameter	Opposite	Handle Diameter	Opposite
M14	P2.0	10.5	8	11.2	9
M16	P2.0	12.5	10	12.5	10
M18	P2.5	14	11	14	11.2
M20	P2.5	15	12	14	11.2
M22	P2.5	17	13	16	12.5
M24	P3.0	19	15	18	14

METRIC THREAD					
No.3 Torque collet Chuck		JIS		ISO	
		Handle Diameter	Opposite	Handle Diameter	Opposite
M30	P3.5	23	17	20	16
M32		24	19		
M33	P3.5	25	19		
M34		26	21		
M35		26	21		
M36		28	21		
M38		28	21		
M39		30	23		
M40		30	23		
M42	P4.5	32	26		

IMPERIAL THREAD		
Torque collet Chuck	JIS	
	Handle Diameter	Opposite
W 1/8	4	3.2
W 3/16	5.5	4.5
W 1/4	6	4.5
W 5/16	6.1	5
W 3/8	7	5.5
W 7/16	8	6
W 1/2	9	7
W 9/16	10.5	8
W 5/8	12	9
W 3/4	14	11
W 7/8	17	13
W 1	20	15
W 1-1/8	22	17
W 1-1/4	24	19
W 1-3/8	26	21
W 1-1/2	30	23
W 1-5/8	32	26

JIS Pipe / Tube				
PT	PS	PF	Handle Diameter	Opposite
1/8	1/8	1/8	8	6
1/4	1/4	1/4	11	9
3/8	3/8	3/8	14	11
1/2	1/2	1/2	18	14
		5/8	19	15
5/8			20	15
3/4	3/4	3/4	23	17
		7/8	24	19
1	1	1	26	21
	1-1/8	1-1/8	28	21
1-1/4	1-1/4	1-1/4	32	26
1-3/8	1-3/8	1-3/8	35	26
1-1/2	1-1/2	1-1/2	38	29

Industrial Angle Grinder



ZAG4140AF / ZAG4140AM 0.9HP
ZAG4140AN 0.9HP
ZAG5110AF / ZAG5110AN 0.75HP
ZAG5110AM / ZAG5110AC 0.75HP
ZAG5110AP 0.75HP



ZAG4140BF / ZAG4140BM 0.9HP
ZAG4140BN 0.9HP
ZAG5110BF / ZAG5110BN 0.75HP
ZAG5110BM / ZAG5110BC 0.75HP
ZAG5110BP 0.75HP



ZAG7075AC / ZAG7075AN 1.6HP
ZAG7075AP 1.6HP
ZAG9060AC / ZAG9060AM 2.5HP
ZAG9060AN 2.5HP



ZAG7075BC / ZAG7075BN 1.6HP
ZAG7075BP 1.6HP
ZAG9060BC / ZAG9060BM 2.5HP
ZAG9060BN 2.5HP



ZAG460AC 0.4HP
ZAG460AM 0.4HP



ZAG460BC 0.4HP
ZAG460BM 0.4HP

Model	Throttle Type	Grinding Wheel inch(mm)	Free Speed rpm	Spindle Thread Size	Angle Head Height inch(mm)	Overall Length inch(mm)	Net Weight kg	Max. Air Cons. cfm(m ³ /min)
ZAG4140AF	Roll	4(100)	13,600	3/8x24UNF	3(76)	8-3/16(208)	1.5	33(0.95)
ZAG4140AM	Roll	4(100)	13,600	M8x1.25P	3(76)	8-3/16(208)	1.5	33(0.95)
ZAG4140AN	Roll	4(100)	13,600	M10x1.5P	3(76)	8-3/16(208)	1.5	33(0.95)
ZAG4140BF	Lever	4(100)	13,600	3/8x24UNF	3(76)	9-11/16(246)	1.3	33(0.95)
ZAG4140BM	Lever	4(100)	13,600	M8x1.25P	3(76)	9-11/16(246)	1.3	33(0.95)
ZAG4140BN	Lever	4(100)	13,600	M10x1.5P	3(76)	9-11/16(246)	1.3	33(0.95)
ZAG5110AF	Roll	5(125)	10,900	3/8x24UNF	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110AM	Roll	5(125)	10,900	M8x1.25P	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110AC	Roll	5(125)	10,900	5/8x11UNC	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110AN	Roll	5(125)	10,900	M10x1.5P	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110AP	Roll	5(125)	10,900	M14x2.0P	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110BF	Lever	5(125)	10,900	3/8x24UNF	3(76)	9-11/16(246)	1.4	33(0.95)
ZAG5110BM	Lever	5(125)	10,900	M8x1.25P	3(76)	9-11/16(246)	1.4	33(0.95)
ZAG5110BC	Lever	5(125)	10,900	5/8x11UNC	3(76)	9-11/16(246)	1.4	33(0.95)
ZAG5110BN	Lever	5(125)	10,900	M10x1.5P	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG5110BP	Lever	5(125)	10,900	M14x2.0P	3(76)	8-3/16(208)	1.6	33(0.95)
ZAG7075AC	Roll	7(180)	7,600	5/8x11UNC	3-27/64(87)	10(253)	3.1	56(1.6)
ZAG7075AN	Roll	7(180)	7,600	M10x1.5P	3-27/64(87)	10(253)	2.9	56(1.6)
ZAG7075AP	Roll	7(180)	7,600	M14x2.0P	3-27/64(87)	10(253)	2.9	56(1.6)
ZAG7075BC	Lever	7(180)	7,600	5/8x11UNC	3-27/64(87)	11-13/16(300)	3.0	56(1.6)
ZAG7075BN	Lever	7(180)	7,600	M10x1.5P	3-27/64(87)	11-13/16(300)	2.8	56(1.6)
ZAG7075BP	Lever	7(180)	7,600	M14x2.0P	3-27/64(87)	10(253)	2.9	56(1.6)
ZAG9060AC	Roll	9(230)	5,900	5/8x11UNC	4-1/2(115)	11(280)	4.32	67(1.9)
ZAG9060AM	Roll	9(230)	5,900	M14x2.0P	4-1/2(115)	11(280)	4.32	67(1.9)
ZAG9060AN	Roll	9(230)	5,900	M10x1.5P	4-1/2(115)	11(280)	4.32	67(1.9)
ZAG9060BC	Lever	9(230)	5,900	5/8x11UNC	4-1/2(115)	12-13/64(310)	4.06	67(1.9)
ZAG9060BM	Lever	9(230)	5,900	M14x2.0P	4-1/2(115)	12-13/64(310)	4.06	67(1.9)
ZAG9060BN	Lever	9(230)	5,900	M10x1.5P	4-1/2(115)	12-13/64(310)	4.06	67(1.9)
ZAG460AC	Roll	-	6,000	5/8x11UNC	3-55/64(98)	8-3/16(208)	1.4	33(0.95)
ZAG460AM	Roll	-	6,000	M14x2.0P	3-55/64(98)	8-3/16(208)	1.4	33(0.95)
ZAG460BC	Lever	-	6,000	5/8x11UNC	3-55/64(98)	8-3/16(208)	1.4	33(0.95)
ZAG460BM	Lever	-	6,000	M14x2.0P	3-55/64(98)	8-3/16(208)	1.4	33(0.95)



ZVG5120-BC 1.4HP 5/8-11UNC
ZVG5120-BP 1.4HP M14 x 2.0P



ZVG770-BC 2HP 5/8-11UNC
ZVG784-BC 2HP 5/8-11UNC
ZVG770-BP 2HP M14 x 2.0P
ZVG784-BP 2HP M14 x 2.0P



ZVG960B 4HP
ZVG945B 3.8HP



ZVG660B 4HP
ZVG645B 3.8HP

Model	Grinding Wheel mm	Max. Dia Cup Wheel mm	Free Speed rpm	Net Weight kg	Air Hose Size inch(mm)	Max. Air Cons. cfm(m ³ /min)
ZVG5120-BC	125x6x22.2	—	12,000	2.8	1/2(12.7)	42.4(1.2)
ZVG5120-BP	125x6x22.2	—	12,000	2.8	1/2(12.7)	42.4(1.2)
ZVG770-BC	180x6x22.2	—	7,000	4	1/2(12.7)	56.5(1.6)
ZVG770-BP	180x6x22.2	—	7,000	4	1/2(12.7)	56.5(1.6)
ZVG784-BC	180x6x22.2	—	8,400	4	1/2(12.7)	56.5(1.6)
ZVG784-BP	180x6x22.2	—	8,400	4	1/2(12.7)	56.5(1.6)
ZVG960B	230x10x22.2	—	6,000	5.8	3/4(19)	98.9(2.8)
ZVG945B	230x10x22.2	—	4,500	5.8	3/4(19)	87.7(2.4)
ZVG660B	—	150x50x22.2	6,000	5.9	3/4(19)	98.9(2.8)
ZVG645B	—	150x50x22.2	4,500	5.9	3/4(19)	87.7(2.4)



ZSG-105A 1.3HP
ZSG-106A 1.3HP
 Roll Throttle Type



ZSG-105B 1.3HP
ZSG-106B 1.3HP
 Lever Throttle Type



ZSG105AH 1.4HP
ZSG106AH 1.4HP
 Roll Throttle Type



ZSG105BH 1.4HP
ZSG106BH 1.4HP
 Lever Throttle Type



ZSG206B 1.4HP
 Lever Throttle Type



ZSG306B 1.4HP
 Lever Throttle Type

Model	Throttle Type	Grinding Wheel inch(mm)	Free Speed rpm	Spindle Thread Size	Overall Length inch(mm)	Net Weight kg	HP	Air Hose Size	Air Inlet Thread Size	Max. Air Consumption scfm
ZSG-105A	Roll	5x3/4x1/2(inch) 125x19x12.7(mm)	7,600	1/2x12	15-3/4(400)	2.79	1.3	12.7	3/8	20
ZSG-105B	Lever	5x3/4x1/2(inch) 125x19x12.7(mm)	7,600	1/2x12	19-11/16(501)	2.79	1.3	12.7	3/8	20
ZSG105AH	Roll	5x3/4x1/2(inch) 125x19x12.7(mm)	7,600	1/2x12	15-3/4(400)	2.79	1.3	12.7	3/8	20
ZSG105BH	Lever	5x3/4x1/2(inch) 125x19x12.7(mm)	7,600	1/2x12	19-11/16(501)	2.79	1.3	12.7	3/8	20
ZSG-106A	Roll	6x1x5/8(inch) 150x25x15.8(mm)	6,300	5/8x11	16-47/64(425)	4.14	1.4	12.7	3/8	24
ZSG-106B	Lever	6x1x5/8(inch) 150x25x15.8(mm)	6,300	5/8x11	20-33/64(521)	4.14	1.4	12.7	3/8	24
ZSG106AH	Roll	6x1x5/8(inch) 150x25x15.8(mm)	6,300	5/8x11	16-47/64(425)	4.14	1.4	12.7	3/8	24
ZSG106BH	Lever	6x1x5/8(inch) 150x25x15.8(mm)	6,300	5/8x11	20-33/64(521)	4.14	1.4	12.7	3/8	24
ZSG206B	Lever	6x1x5/8(inch) 150x25x15.8(mm)	6,300	5/8x11	20(510)	3.27	1.4	12.7	3/8	24
ZSG306B	Lever	5/8" Cone Wheel	6,300	5/8x11	20(510)	4.1	1.4	12.7	3/8	24



High power, quality design

Features & Benefits

- Texturing concrete
- Cleaning & stress relieving weld seams and joints
- Removing coatings, corrosion & other accumulated materials
- Chisel scalars for splitting, chipping, pointing and brick raking
- Convert to chisels in seconds
- Dust shroud attachments available
- Adjustable front tube extends needle life
- Heat treated piston and cylinder ensure excellent durability and long life





ZKJ221-19 (19 pcs x Ø3)
ZKJ221-29 (29 pcs x Ø2)
ZKJ221A Vacuum Type
 Medium Duty Pistol Grip Needle Scaler



ZKJ3221-19 (19 pcs x Ø4)
ZKJ3221-28 (28 pcs x Ø3)
 Heavy Duty Pistol Grip Needle Scaler



ZKJ222
 Medium Duty Chisel Scaler



ZKJ3222
 Heavy Duty Chisel Scaler



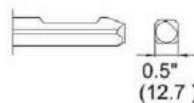
ZKJ211-2B-19 (19 pcs x Ø3)
ZKJ211-2B-29 (29 pcs x Ø2)
ZKJ211A Vacuum Type
 Medium Duty Needle Scaler



ZKJ799NS-12 (12 pcs x Ø3)
ZKJ799NS-27 (27 pcs x Ø2)
 Light Duty Needle Scaler

Vacuum System

Chisel Shank 0.5"(12.7mm)



110A025

Needle scalars can be fitted with dust shroud

Model	Blows Per Min bpm	Numbers of Needles pcs	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Needle Diameter Øinch(Ømm)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ3221-19 ZKJ3221-28	2,700	19 28	1.2(29.5)	0.86(22)	1/4	3/8(10)	3(85)	5/32x7(4x180) 1/8x7(3x180)	13.4(340)	8.6(3.9)
ZKJ3222	2,000	-	1.2(29.5)	0.86(22)	1/4	3/8(10)	2(51)	-	11.6(295)	6(2.7)
ZKJ221-19 ZKJ221-29 ZKJ221A	3,700	19 29 -	0.9(23)	1.3(33)	1/4	3/8(10)	3(85)	1/8x7(3x180) 5/64x7(2x180) -	13(330)	6(2.7)
ZKJ222	2,700	-	0.9(23)	1.3(33)	1/4	3/8(10)	3(85)	-	11.6(295)	4.8(2.2)
ZKJ211-2B-19 ZKJ211-2B-29 ZKJ211A	3,700	19 29 -	0.9(23)	1.3(33)	1/4	3/8(10)	3(85)	1/8x7(3x180) 5/64x7(2x180) -	14.8(375)	6.2(2.8)
ZKJ799NS-12 ZKJ799NS-27	4,200	12 27	0.7(18)	1(26)	1/4	3/8(10)	2(60)	1/8x7(3x180) 5/64x7(2x180)	14.2(360)	3.5(1.6)

Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).



ZKJ211
Medium Duty Chisel Scaler



ZKJ799F
Light Duty Chisel Scaler



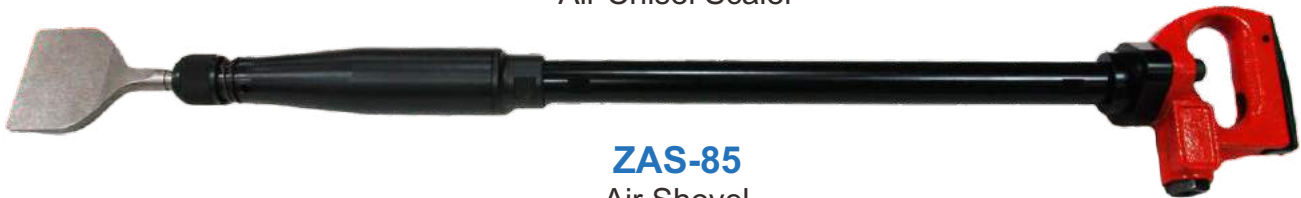
ZFC-2540
Air Chisel Scaler



ZKJ362L
Air Chisel Scaler



ZKJ372L
Air Chisel Scaler




ZAS-85
Air Shovel



ZAS-85I
Air Shovel

Model	Blows Per Min bpm	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ211	2,700	0.9(23)	1.3(33)	1/4	3/8(10)	3(85)	13.2(335)	4.8(2.2)
ZKJ799F	3,800	0.7(18)	1(26)	1/4	3/8(10)	2.5(70)	13(330)	3.5(1.6)
ZFC-2540	4,000	63/64(25)	1-11/32(34)	1/4	3/8(10)	14(392)	7-1/2(190)	3.3(1.5)
ZKJ362L	4,000	63/64(25)	1-11/32(34)	1/4	3/8(10)	14(392)	28-3/4(730)	5.7(2.6)
ZKJ372L	4,600	1(25.4)	1-1/8(28.6)	3/8	3/8(10)	14(392)	29-5/8(752)	6.4(2.9)
ZAS-85	1,700	1-3/8(35)	3-11/32(85)	3/8	1/2(12.7)	10.7(300)	35.4(900)	14.8(6.7)
ZAS-85I	1,700	1-3/8(35)	3-11/32(85)	3/8	1/2(12.7)	10.7(300)	36.6(930)	12.1(5.5)

 Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).

Air Needle Scalers

Features & Benefits

- Needle scaler for industrial application
- Sturdy and simple design for heavy and wide applications
- Superior design with internal spring components provides greater durability



ZKJ27

Pistol Grip Needle Scaler



ZNS-1228



ZKJ31-12 (12 pcs x Ø3)

ZKJ31-27 (27 pcs x Ø2)

Composite Straight Needle Scaler



ZKJ39-14 (14 pcs x Ø4)

ZKJ39-28 (28 pcs x Ø3)

ZKJ39-66 (66 pcs x Ø2)

ZKJ39A Vacuum Type
Pistol Grip Needle Scaler



ZNS1919



ZKJ35-23 (23 pcs x Ø3)

ZKJ35-53 (53 pcs x Ø2)

Pistol Grip Needle Scaler



ZNS1919C

Vacuum System



28A023


Needle scalers can be fitted with dust shroud



ZKJ831

Pistol Grip
Needle Scaler

Model	Blows Per Min bpm	Numbers of Needles pcs	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Needle Diameter Øinch(Ømm)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ27	4,000	19	0.6(16)	0.6(16)	1/4	3/8(10)	2.5(70)	5/64x7(2x180)	11.2(285)	3.5(1.6)
ZKJ31-12 ZKJ31-27	4,000	12 27	0.8(20)	1.06(27)	1/4	3/8(10)	4(115)	1/8x7(3x180) 5/64x7(2x180)	13.6(345)	5.3(2.4)
ZKJ35-23 ZKJ35-53	4,000	23 53	0.94(24)	1.06(27)	1/4	3/8(10)	7(198)	1/8x7(3x180) 5/64x7(2x180)	13.2(335)	6.2(2.8)
ZKJ39-14 ZKJ39-28 ZKJ39-66 ZKJ39A	3,500	14 28 66 -	1.1(28)	1.1(28)	1/4	3/8(10)	7.4(210)	5/32x7(4x180) 1/8x7(3x180) 5/64x7(2x180)	13.8(350)	7.9(3.6)
ZKJ831	3,500	19	0.75(19)	2.7(70)	1/4	3/8(10)	6.6(187)	1/8x7(3x180)	14.6(370)	6(2.7)
ZNS-1228	2,800	12	0.75(19)	1.6(41)	1/4	3/8(10)	2.1(60)	1/8x4.9(3x126)	11.6(295)	2.4(1.1)
ZNS1919	4,000	19	0.75(19)	1.6(41)	1/4	3/8(10)	7.4(210)	1/8x7(3x180)	12(305)	4.9(2.2)
ZNS1919C	4,000	19	0.75(19)	1.6(41)	1/4	3/8(10)	7.4(210)	1/8x7(3x180)	13(330)	4.9(2.2)

 Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).



ZKJ379F
ZKJ379FL (Locking Lever Type)
Medium Duty Chisel Scaler



ZNS-1944NS
ZNS-1944NSL (Locking Lever Type)
ZNS-1944A Vacuum Type
Medium Duty Needle Scaler



ZKJ479NS
Medium Duty Pistol
Grip Needle Scaler



ZKJ479F
Medium Duty Chisel Scaler



Scaler Kits
ZKJ379K

- 1 pc Needle Scaler
- 1 pc Moil Point Chisel
- 1 pc 20mm Flat Chisel
- 1 pc 35mm Bent Chisel
- 1 pc 1/4" Air Nipple
- 1 set Needle Attachment
- Net Weight 4 kg

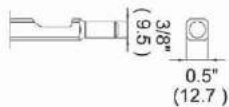


ZKJ279F
Medium Duty Chisel Scaler



ZKJ279NS
Medium Duty Pistol
Grip Needle Scaler

Chisel Shank 3/8"(9.5mm)



ZNS361

Vacuum System



268A029

Needle scalars can be fitted with dust shroud

Model	Blows Per Min bpm	Numbers of Needles pcs	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Needle Diameter Øinch(Ømm)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ279NS	4,600	19	1(25)	1.5(38)	1/4	3/8(10)	8.2(232)	1/8x7(3x180)	18.1(460)	7(3.2)
ZKJ279F	4,800	-	1(25)	1.5(38)	1/4	3/8(10)	8.2(232)	-	14.8(375)	5.3(2.4)
ZNS-1944NS ZNS-1944NSL ZNS-1944A	4,600	19	1(25)	1.5(38)	1/4	3/8(10)	8.2(232)	1/8x7(3x180)	18.1(460)	6.2(2.8)
ZKJ379F ZKJ379FL	4,800	-	1(25)	1.5(38)	1/4	3/8(10)	8.5(240)	-	15(380)	4.6(2.1)
ZKJ479NS	4,600	19	1(25)	1.5(38)	1/4	3/8(10)	8.6(243)	1/8x7(3x180)	21.3(540)	7.3(3.3)
ZKJ479F	4,800	-	1(25)	1.5(38)	1/4	3/8(10)	8(227)	-	17.3(440)	5.5(2.5)
ZNS361	4,000	-	63/64(25)	1-11/32(34)	1/4	3/8(10)	14(392)	-	16-1/4(413)	5.7(2.6)

Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).

Features & Benefits

- Needle scaler designed to tackle a wide range of surface preparation tasks in construction, marine and petrochemical.
- Heaviest in the range of scalers.
- Heavy duty semi pistol grip.
- Adjustable front tube for longer needle life.
- The heavy duty scaler for the toughest applications such as roughing and dressing concrete and aggregate exposure, also ideal for removing the hardest scale and corrosion.
- Heavy rust and scale removal from steel structures such as bridges, ships and offshore platforms.
- Stippling of plain concrete for keying and decorative finishes.



ZKJ231-35 (35 pcs x Ø4)
ZKJ231-49 (49 pcs x Ø3)
ZKJ231-66 (66 pcs x Ø2)
ZKJ231A Vacuum Type
 Heavy Duty Semi
 Pistol Grip Needle Scaler



ZKJ231-3B-19 (19 pcs x Ø4)
ZKJ231-3B-28 (28 pcs x Ø3)
 Heavy Duty Semi
 Pistol Grip Needle Scaler



ZKJ231B
 Heavy Duty Chisel Scaler



ZKJ383F
ZKJ383FL Safety lever
 Heavy Duty Chisel Scaler



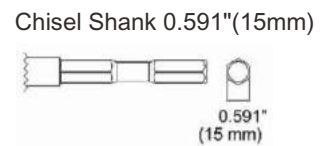
Focus on the front exhaust, effectively blocking dust, Welding slag.



The control rod installation of safety devices, to increase the user security.



ZKJ383NS
ZKJ383NSL Safety lever
 Heavy Duty Needle Scaler



Vacuum System

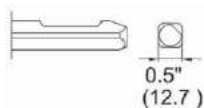


120A025
 Needle scalers can be fitted with dust shroud




ZKJ381
 Medium Duty Needle Scaler

Chisel Shank 0.5"(12.7mm)



Model	Blows Per Min bpm	Numbers of Needles pcs	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Needle Diameter Øinch(Ømm)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ231-35 ZKJ231-49 ZKJ231-66	2,500	35 49 66	1.3(33)	2(52)	1/4	3/8(10)	7.4(210)	5/32x7(4x180) 1/8x7(3x180) 5/64x7(2x180)	18.1(460)	13.2(6)
ZKJ231-3B-19 ZKJ231-3B-28	3,000	19 28	1.1(28)	1.5(39)	1/4	3/8(10)	6.2(176)	5/32x7(4x180) 1/8x7(3x180)	17.5(445)	10.4(4.7)
ZKJ383NS ZKJ383NSL	3,500	19	0.9(23)	1.06(27)	1/4	3/8(10)	6.4(182)	1/8x7(3x180)	16.9(430)	6.2(2.8)
ZKJ231B	2,000	-	1.3(33)	2(52)	1/4	3/8(10)	7.4(210)	-	17.7(450)	11(5)
ZKJ383F ZKJ383FL	4,000	-	0.9(23)	1.06(27)	1/4	3/8(10)	6.4(182)	-	14.2(360)	4.2(1.9)
ZKJ381	4600	19	1(25)	1.3(33)	1/4	3/8(10)	6(170)	1/8x7(3x180)	16.5(420)	6(2.7)

 Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).



ZKJ271
Triple Headed Scaling Hammer



ZKJ271L
Triple Headed Scaling Hammer (straight)

Features & Benefits

- Lightweight, easy to handle.
- Detachable taper fit cutter head reduces cost of replacement and extends piston life.
- Bush hammer tungsten carbide tipped pistons.
- Alternative cruciform tungsten carbide tipped pistons.
- Removal of rust, coatings, scale from steel structures and surface.
- Cleaning of cast iron, steel pipe and bell joints of gas lines maintained by utilities and gas companies.
- Removal of stubborn coatings and mastic residue from floor.
- Reduced Vibration improves operators control.



ZKJ311T
Single Headed Scaling Hammer



ZKJ311
Single Headed Scaling Hammer



Standard Side Handle
(fitted as standard)



Cruciform taper tungsten cutterhead
(fitted as standard)



Single head cruciform piston
(fitted as standard)



Single head cruciform tungsten piston
(Optional)

Model	Blows Per Min bpm	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ271	2,400	1.06(27)	1.024(26)	3/8	3/8(10)	7.8(223)	21.7(550)	8.8(4)
ZKJ271L	2,400	1.06(27)	1.024(26)	3/8	3/8(10)	7.8(223)	20.5(520)	8.8(4)
ZKJ311	7,000	1.18(30)	1.496(38)	1/4	3/8(10)	3.3(94)	22(560)	5.1(2.3)
ZKJ311T	7,000	1.18(30)	1.496(38)	3/8	3/8(10)	3.3(94)	21.7(550)	5.3(2.4)



Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).

Long Reach Air Scrapers

Applications

- Ice
- Floor tiles
- Residue
- Metal slag
- Adhesive
- Rubber coatings
- Asbestos
- Roofing materials
- Linoleum
- Chemical spillages
- Carpeting
- Bituminous

Features

- Quick change chisel release
- Unique, light weight version
- Air efficient & economical to use
- Available in 3L, 4L, 5L and 6L lengths
- Three tools in one: chipping, scraping, de-scaling



Corrosion removal for inaccessible area

One tool, multiple applications

Long Reach Scraper Kits



ZKJ241K

- 1 pc Long Reach Scraper
- 4 pcs Flat Chisel (40 / 50 / 70 / 100mm)
- 2 pcs Grip Tube 500mm
- 1 pc Grip Tube 300mm
- 1 pc Rubber Handle Grip
- 2 pcs Hex Wrench (6 / 2.5mm)
- 1 pc 1/4" Air Nipple
- Net Weight 11.5kg (241K) / 6.2kg (341K)



ZKJ341K

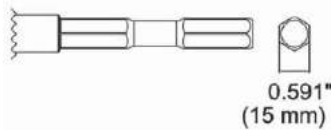
2 tools in one



Features & Benefits

- Light weight aluminium tools for flexible vertical and floor application.
- Low air consumption, will run from small 2HP compressor.
- Clean up of paint & chemical spillages.
- Rail track and infrastructure maintenance.
- Peeling Paint removal in hard to reach areas.
- Quickly clean large areas.
- Remove paint from checker plate using needle attachment.
- Removal of glue residues from carpet tiles.
- Use close to wall for finishing large areas.
- Ceramic & linoleum floor tile removal using chisel or scraper.
- "Pointing" tool for mortar removal.
- Weld seam cleaning.
- Plaster and render removal.

Chisel Shank 0.591"(15mm) Hex



ZKJ241-3L
Long Reach Scraper



ZKJ241NS
Long Reach Needle Scraper



ZKJ241-4L

Long Reach Scraper 47" (1200mm)



ZKJ2415NS

Long Reach Needle Scraper 47" (1200mm)



ZKJ241-5L

Long Reach Scraper 59" (1500mm)



ZKJ2416NS

Long Reach Needle Scraper 59" (1500mm)



ZKJ341-3L

Aluminium Long Reach Scraper



ZKJ341NS

Aluminium Long Reach Needle Scraper



ZKJ341-4L

Aluminium Long Reach Scraper 47" (1200mm)



ZKJ3415NS

Aluminium Long Reach Needle Scraper 47" (1200mm)



ZKJ341-5L

Aluminium Long Reach Scraper 59" (1500mm)



ZKJ3416NS

Aluminium Long Reach Needle Scraper 59" (1500mm)

Model	Blows Per Min bpm	Numbers of Needles pcs	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Air Inlet inch	Min. Hose Size inch(mm)	Avg. Air Consumption cfm(l/min)	Needle Diameter Øinch(Ømm)	Net Weight lbs(kgs)
ZKJ241-3L ZKJ241NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	2.8(80)	1/8x7(3x180)	10.6(4.8)
ZKJ241-4L ZKJ2415NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	3.2(90)	1/8x7(3x180)	14.3(6.5)
ZKJ241-5L ZKJ2416NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	4(114)	1/8x7(3x180)	16.1(7.3)
ZKJ341-3L ZKJ341NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	2.8(80)	1/8x7(3x180)	8.2(3.7)
ZKJ341-4L ZKJ3415NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	3.2(90)	1/8x7(3x180)	10.1(4.6)
ZKJ341-5L ZKJ3416NS	2,400	- 28	1.12(28.5)	1.5(38)	1/4	3/8(10)	4(114)	1/8x7(3x180)	10.8(4.9)

Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).

Dimensions and Accessories

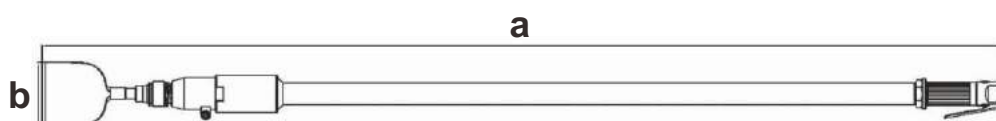
Dimensions

Long Reach Scrapers

Model	Description	
	a inch(mm)	b inch(mm)
ZKJ241-3L	23.6(600)	3.93(100)
ZKJ241-4L	47.2(1,200)	3.93(100)
ZKJ241-5L	59(1,500)	3.93(100)
ZKJ341-3L	23.6(600)	3.93(100)
ZKJ341-4L	47.2(1,200)	3.93(100)
ZKJ341-5L	59(1,500)	3.93(100)

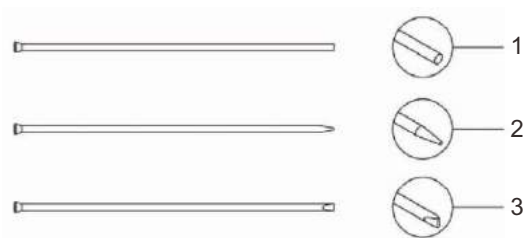
Long Reach Needle Scaler

Model	a	b
	inch(mm)	inch(mm)
ZKJ241NS	24(610)	3.93(100)
ZKJ2415NS	47.2(1,200)	3.93(100)
ZKJ2416NS	59(1,500)	3.93(100)
ZKJ341NS	24(610)	3.93(100)
ZKJ3415NS	47.2(1,200)	3.93(100)
ZKJ3416NS	59(1,500)	3.93(100)



Optional Accessories

Needle sets



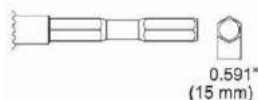
Item	Length inch(mm)	Width inch(mm)
1	7(180)	5/64(2)
1	5.9(150)	5/64(2)
1	4.9(125)	1/8(3)
1	7(180)	1/8(3)
1	7(180)	5/64(2)
2	7(180)	1/8(3)
3	7(180)	1/8(3)
3	7(180)	5/64(2)

Needle attachment



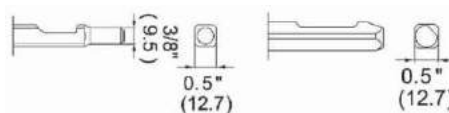
1. Needle holder for 28 needles
Ø 3mm (1/8")
2. Needle holder for 19 needles
Ø 4mm (5/32")

Chisel Shank 0.59" (15mm) Hex



Item	Model	Description	Length inch(mm)	Width inch(mm)
1	ZST-13040	1-1/2" Flat Chisel	8.7(220)	1.57(40)
2	ZST-13050	1-1/3" Flat Chisel	8.7(220)	1.96(50)
3	ZST-13070	2-3/4" Flat Chisel	8.7(220)	2.75(70)
4	ZST-130100	4" Flat Chisel	8.7(220)	3.93(100)

Chisel Shank 0.37" (9.5mm)



Item	Model	Description	Length inch(mm)	Width inch(mm)
1	ZST-26850	2" Flat Chisel	7(175)	1.96(50)
2	ZST-26835	1-1/3" Flat Chisel	7(175)	1.37(35)
3	ZST-26820	3/4" Flat Chisel	7(175)	0.78(20)
4	ZST-26801	Moil Point Chisel	7(175)	-
5	ZST-27050	2" Flat Chisel	7(175)	1.96(50)
6	ZST-27035	1-1/3" Flat Chisel	7(175)	1.37(35)
7	ZST-27020	3/4" Flat Chisel	7(175)	0.78(20)
8	ZST-27001	Moil Point Chisel	7(175)	-

Chisel Shank 0.5" (12.7mm)





ZP209

Air Engraving Stylus
Lightweight, small diameter & metal body.

Model	Stroke Length mm	Blow Per Min. bpm	Operating Air Pressure psi(bar)	Avg. Air Cons. cfm(l/min)	Net Weight lbs(kgs)	Air Inlet Size inch-NPT/PT	Min. Hose Size inch(mm)
ZP209	1.2	34000	90(6.2)	0.24(6.8)	0.53(0.24)	1/4	1/4(6.5)



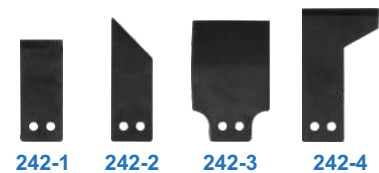
ZAS132
Air Flux Chipper



ZFC-2
Air Scraper



ZP232 0.15HP
Air Scraper



ZP232K 0.15HP
Air Scraper Kit

Model	Bore Diameter inch(mm)	Piston Diameter inch(mm)	Stroke Length inch(mm)	Blow Per Min. bpm	Operating Air Pressure psi(bar)	Avg. Air Consumption cfm(l/min)	Net Weight lbs(kgs)	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT
ZAS132	(18x14)	-	15/16(24)	2,800	90(6.2)	2.12(60)	2.0(0.9)	3/8(10)	1/4
ZCF-2	-	0.87(22)	0.87(22)	4,000	90(6.2)	8.8(250)	2.56(1.16)	3/8(10)	1/4
ZP232	1/2(12.7)	-	1/4(6.3)	4,800	90(6.2)	2.8(80)	1.59(0.72)	3/8(10)	1/4



ZSR-412



ZSR-302



ZSR-303



ZSR-302L



ZSR-303L



ZSR-304L

Model	Speed bpm	Piston Diameter mm	Stroke mm	Overall Length mm	Weight kg	Min. Hose Size inch(mm)	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /min)
ZSR-412	1,500	18	50	280~360	1.6	3/8(10)	1/4	14(0.4)
ZSR-302	1,000	22	65	380~470	2.95	3/8(10)	3/8	17(0.5)
ZSR-302L	1,000	22	65	870~980	3.75	3/8(10)	3/8	17(0.5)
ZSR-303	800	25.4	100	500~660	6	3/8(10)	3/8	24(0.7)
ZSR-303L	800	25.4	100	1060~1210	8	1/2(12.7)	1/2	24(0.7)
ZSR-304L	700	32	125	1080~1250	9.79	1/2(12.7)	1/2	30(0.85)

Air Chipping Hammer



ZCH280G-F (2.6kg)



ZP281GF (5.5kg)



ZP283GF (6.5kg)



ZCH280AG-F (2.6kg)



ZP282GF (5.9kg)



ZP284GF (7.0kg)



ZND5002 (5.4kg)



ZND5004 (8.5kg)



ZND5003 (8.04kg)



ZND5005 (8.88kg)



ZP363L (9.16kg)

Model	Chisel Shank Round inch(mm)	Chisel Shank Hex inch(mm)	Piston Diameter mm	Piston Stroke Length inch(mm)	Blows Per Minute bpm	Overall Length inch(mm)	Air Inlet Size inch-NPT/PT	Min. Hose Size inch	Avg. Air Cons. cfm
ZCH280G-F	0.55(14)	0.47(12)	20	1-3/4(45)	3,000	9-9/16(243)	1/4	3/8	14
ZCH280AG-F	0.55(14)	0.47(12)	20	1-3/4(45)	3,000	9-9/16(243)	1/4	3/8	14
ZP281GF	0.68(17.3)	0.58(14.7)	28.5	1(25.4)	2,820	12-1/8(308)	3/8	1/2	21
ZP282GF	0.68(17.3)	0.58(14.7)	28.5	2(50)	2,150	12-7/8(327)	3/8	1/2	21
ZP283GF	0.68(17.3)	0.58(14.7)	28.5	3(76)	1,900	14-7/8(378)	3/8	1/2	24
ZP284GF	0.68(17.3)	0.58(14.7)	28.5	4(102)	1,500	16-1/8(410)	3/8	1/2	28
ZND5002	0.68(17.3)	0.58(14.7)	27.9	1.81(46)	2,940	14-1/2(390)	3/8	1/2	17
ZND5003	0.68(17.3)	0.58(14.7)	28.5	3.03(77)	2,200	14(365)	3/8	1/2	34
ZND5004	0.68(17.3)	0.58(14.7)	28.5	3.7(94)	1,900	15-1/4(400)	3/8	1/2	33
ZND5005	0.68(17.3)	0.58(14.7)	28.5	4.02(102)	1,500	16-1/2(425)	3/8	1/2	30
ZP363L	0.68(17.3)	0.58(14.7)	28.5	3.7(94)	2,280	35-3/8(900)	1/2	1/2	33

Features

- Newly Patented Shock Reduced Mechanism.
- Gravity cast Aluminum Alloy 4 bolts handle withstands rugged use.
- Spline locking device prevents loosening of Handle & Cylinder. Grooved barrel for use with retainers.
- Alloy steel made Cylinder & Piston heat-treated for durability.
- Choice of Bushing- round bushing for chisel freely rotating or hexagonal Bushing for use with hexagonal Chisels.



APPLICATIONS

The New ZCH series heavy duty Chipping Hammers are designed for rugged use in foundries, shipyards, refineries, fabrication shops and construction applications.

Available in 2" thru 4" stroke versions to offer the power levels necessary for a variety of use from light to medium chipping and trimming through heavy cutting.



Model	Chisel Shank Round inch(mm)	Chisel Shank Hex inch(mm)	Piston Diameter mm	Piston Stroke Length inch(mm)	Blows Per Minute bpm	Net Weight kg	Air Consumption cfm(m ³ /min)	Vibration m/s ²	Power (Joule)
ZCH-2SRTI	0.68(17.3)	0.58(14.7)	28.5	2(50)	2150	8.71	30(0.85)	5	22.9
ZCH-2SRTO	0.68(17.3)	0.58(14.7)	28.5	2(50)	2150	8.87	30(0.85)	5	22.9
ZCH-3SRTI	0.68(17.3)	0.58(14.7)	28.5	3(76)	1900	9.54	32(0.9)	5	28
ZCH-3SRTO	0.68(17.3)	0.58(14.7)	28.5	3(76)	1900	9.51	32(0.9)	5	28
ZCH-4SRTI	0.68(17.3)	0.58(14.7)	28.5	4(102)	1500	9.55	33(0.95)	7	30.46
ZCH-4SRTO	0.68(17.3)	0.58(14.7)	28.5	4(102)	1500	9.87	33(0.95)	7	30.46

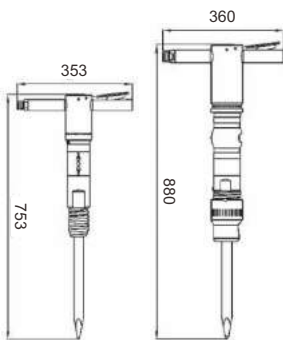
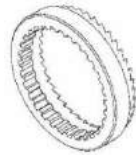
*Air Inlet Size: 3/8(10) inch-NPT/PT, Min. Hose Size: 1/2 inch

Features & Benefits

- Simple structure for less maintenance.
- Powerful hitting power and low reacting.
- Use for destroy the concretes, asphalt path, building and infrastructure.
- Medium size service/general demolition breaker.
- Long stroke cylinder provides maximum impact energy, giving a harder impact than similarly sized standard breakers.
- The best choice for applications in medium hard materials and where you need lower weight or low air consumption.



Reinforced cup retainer.



ZKJ21S

ZKJ41S



Unique Nut for (ZKJ21S ZKJ41S)



Hose Nipple 1/2", 1/4"



Hitch Cutter Retainer



Beehive Retainer Spring



ZKJ21S
Concrete Breaker



ZKJ41S
Concrete Breaker



Item	Model	Description	Length inch(mm)	Width inch(mm)
1	ZST-10S01R	Tapered Punch	17.7(450)	-
2	ZST-30S01R	Tapered Punch	17.7(450)	-
3	ZST-30S45R	Flat Chisel	17.7(450)	1.8(45)

Model	Blows Per Min bpm	Shank Size inch(mm)	Piston Diameter inch(mm)	Piston Stroke inch(mm)	Hose Int. Ø inch(mm)	Avg. Air Consumption cfm(l/min)	Overall Length inch(mm)	Net Weight lbs(kgs)
ZKJ21S	1,300	1.02(26)	1.38(35)	5.9(150)	12.7(1/2)	35(990)	28.9(753)	31.1(14.1)
ZKJ41S	1,000	1.18(30)	1.57(40)	9.2(235)	19(3/4)	42(1,189)	34.6(880)	54.2(24.6)

Warning: Facial and operation of pneumatic tools, must wear eye protection. Recommended air pressure must equal or below @90psi (6.2 bar).

Features

ZCH 2, 3, and 4" stroke chipper has a durable 4 bolt D handle and inside trigger for chipping concrete in parking garages, highway pillars and light demolition and building restoration.

- Machined from premium alloy steel
- Forged G handle
- Cast D handle with inside rubberized trigger
- High shock tool steel piston
- Rotatable exhaust deflector
- Inlet 3/8" with bushing, 7/8" with out bushing
- Available with .680 Round Chuck Model ZCH 2,3, or 4, R
- Available with .580 Hex Chuck ZCH 2,3,or 4, H
- Standard with oval collar retainer
- Optional Universal BALL retainer available
- Optional whip hose with oiler available



ZCH-02C(H)
ZCH-03C(H)
ZCH-04C(H)
"C" Type



ZCH-02D(H)
ZCH-03D(H)
ZCH-04D(H)
"D" Type Outer Trigger



ZCH-02DI(H)
ZCH-03DI(H)
ZCH-04DI(H)
"D" Type Inner Trigger

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m³/m)	Chuck Sizes inch(mm)
ZCH-02C(H) ZCH-02D(H) ZCH-02DI(H)	13(6)	14(356)	1.125(29)	2(51)	2,300	3/8(10)	29.75(0.84)	0.58(14.8) Hex 0.68(17.5) Rnd
ZCH-03C(H) ZCH-03D(H) ZCH-03DI(H)	14(6.4)	15.3(387)	1.125(29)	3(75)	2,200	3/8(10)	31.5(0.89)	0.58(14.8) Hex 0.68(17.5) Rnd
ZCH-04C(H) ZCH-04D(H) ZCH-04DI(H)	15(7)	17(432)	1.125(29)	4(102)	1,800	3/8(10)	33.23(0.94)	0.58(14.8) Hex 0.68(17.5) Rnd

Features

Designed for light demolition jobs, hardpan and digging clay. Can be used horizontally with D handle and internal trigger.

- Forged alloy construction with one piece cylinder
- 4 bolt backhead
- Internal oiler
- Removable front head with latch
- Replaceable check bushing
- Optional muffler

DO NOT apply air pressure over 100 psi / 7 bar to these tools.



ZCD-30
Clay Digger

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m³/m)	Chuck Sizes inch(mm)
ZCD-30	30(14)	23(584)	1.75(44)	3.375(86)	1,550	3/8(10)	49(1.4)	1 x 4-1/4(25 x 108) 7/8 x 3-1/4(22 x 83)

Features

Designed for light concrete demolition, all angles or confined spaces. D handle with external thumb trigger

- Rotatable exhaust muffler
- One piece machined premium alloy cylinder
- Safe bridged or stepped internal cylinder (piston will not exit bottom of tool)
- Utilizes 11X jumbo steels
- Spring held retainer
- Standard upper and lower hardened sleeves
- Urethane bumper for longer life
- Requires whip hose and oiler



ZRB-6
Rivet Buster

Features

Designed for light concrete demolition, all angles or confined spaces. D handle with external thumb trigger

- ZRB-8 designed for medium & ZRB-11 designed for heavy concrete demolition or cutting rivet heads. D handle with internal variable speed trigger.
- Rotatable rubber exhaust muffler or optional rotatable steel clip exhaust
- One piece machined premium alloy cylinder
- Safe bridged or stepped internal cylinder (piston will not exit bottom of the tool)
- Standard upper & lower hardened sleeves
- Replaceable auto valve for extened life
- Utilizes 11X jumbo steels
- Spring retainer
- Urethane bumper for longer life
- Screened 1/2" NPT inlet
- Requires whip hose and oiler



Optional Steel clip
Exhaust

ZRB-8/ZRB-11
Rivet Buster

DO NOT apply air pressure over 100 psi / 7 bar to these tools.

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /m)	Chuck Sizes
ZRB-6	23(10.5)	17(432)	1.418(36)	2.75(70)	1,560	3/4(19) 7/8(22.2)	40(1.2)	11 x JUMBO
ZRB-8	30(14)	22(572)	1.188(30)	8(203)	1,140	1/2(12)	44(1.3)	11 x JUMBO
ZRB-11	33(15)	25-1/2(648)	1.188(30)	11(279)	850	1/2(12)	50(1.41)	11 x JUMBO



ZRD-9
Hammer Drill

Features

Designed for a wide variety of construction and maintenance applications such as driving or setting masonry anchors and drilling holes in concrete, bricks or rock. As a hammer, these tools can be used for chipping, scarifying, scaling and cleaning welds.

- Excellent power-to-weight ratio helps drill holes faster and easier than comparable electric rotary hammers
- Built-in oiler provides continuous lubrication
- Teasing throttle for precise control
- Rotation release button converts tool to a hammer
- Cushioned piston for smooth operation and long life
- With an adaptor, can be used with electric hammer drill bits
- Round spline version available



ZRD-20
Light Weight Rock Drill

Features

Designed for anchoring, shallow holes. D type handle allow horizontal drilling & collaring holes.

- D type handle with thumb trigger
- Forged alloy construction
- Built-in oiler
- Replaceable chuck, 7/8" x 3-1/4" Hex.



ZRD-30
Rock Drill

Features

Designed for light construction or soft rock drill with high speed & excellent flushing ability.

- Forged alloy construction
- Requires constant feed inline oiler
- Replaceable chuck, 7/8" x 4-1/4" or 7/8" x 3-1/4"
- Single throttle with three drilling speed: Stop, Blow, 1, 2, 3. 1 or slow is for collaring holes and remove drill from drilling hole.
 - rpm: 240
- Optional wet kit available
 - Water Consumption: 4.8 l/min



ZRD-50
Rock Drill

Features

Designed for medium to heavy duty construction drill suit for drilling medium rocks.

- Forged alloy construction
- Requires constant feed inline oiler
- Replaceable chuck, 1" x 4-1/4" or 7/8" x 4-1/4" or 7/8" x 3-1/4"
- Adjustable drilling speed
 - rpm: 180
- Optional muffler & wet kit available
 - Water Consumption: 6.7 l/min
 - Performance in Granite at 85-90psi(6-7bar): 24.4"/m(62 cm/m)



ZRD-75
Rock Drill

Features

Designed for heavy duty Quarry drill suit for drill granite.

- Forged alloy construction
- Internal oiler
- Replaceable chuck, 1" x 4-1/4" or 7/8" x 4-1/4"
- Three drilling speed: Stop, Blow, 1, 2, 3. 1 or slow is for collaring holes and remove drill from drilling hole.
- Optional wet kit available
- Optional muffler
- Optional constant feed inline oiler (6' 3/4" whip)
 - rpm: 200

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /m)	Chuck Sizes inch(mm)
ZRD-9	9(4)	15(375)	1-1/4(32)	1(25.4)	3,400	3/8(10)	20(0.9)	3/4 Hex. Round spline shank
ZRD-20	16.5(7.5)	19(483)	1.94(49.18)	1.89(48)	2,900	3/8(10)	36(1.2)	7/8 x 3-1/4(22 x 83)
ZRD-30	29(13)	19.5(495)	2.44(62)	1.44(37)	2,700	3/4(19)	73(2.1)	7/8 x 4-1/4(22 x 108) 7/8 x 3-1/4(22 x 83)
ZRD-50	51(23)	20.5(521)	3(76)	2(51)	2,300	3/4(19)	92.2(2.6)	1 x 4-1/4(25 x 108) 7/8 x 4-1/4(22 x 108) 7/8 x 3-1/4(22 x 83)
ZRD-75	61(27.5)	23.75(603)	2.63(67)	3.22(82)	2,250	3/4(19)	98(2.77)	1 x 4-1/4(25 x 108) 7/8 x 4-1/4(22 x 108) 7/8 x 3-1/4(22 x 83)

Features

Designed for light demolition works. 2" to 4" concrete sidewalks, pavement and breaking asphalt.

- One piece cylinder & 4 bolt backhead
- Forged alloy construction
- Replaceable chuck bushing
- Removable front head
- Internal oiler
- Optional muffler



ZPB-30
Pavement Breaker

Features

Designed for light or medium demolition works. 2" to 4" plus hard concrete, bridge deck resurfacing and asphalt.

- 4 bolt backhead
- Forged alloy construction
- Replaceable chuck bushing
- Removable front head (bolt on)
- Tool requires inline oiler
- Optional muffler



ZPB-40
Pavement Breaker

Features

Designed for medium demolition works on rocks and 3" to 4" thick concrete pavement and asphalt.

- 4 bolt backhead
- Forged alloy construction
- Heavy duty side rod bolts and springs
- Replaceable chuck bushing
- Removable front head
- Internal oiler
- Optional muffler



ZPB-60
Pavement Breaker

Features

Designed for heavy demolition works, rocks, reinforced concrete and 5" to 6" plus thick concrete and pavement.

- 4 bolt backhead
- Forged alloy construction
- Heavy duty side rod bolts and springs
- Replaceable chuck bushing
- Removable front head
- Internal oiler
- Optional muffler



ZPB-90
Pavement Breaker

DO NOT apply air pressure over 100 psi / 7 bar to these tools.

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /m)	Chuck Sizes inch(mm)
ZPB-30	34(15)	22.5(572)	1.75(44)	3.375(86)	1,550	3/8(10)	49(1.4)	1 x 4-1/4(25 x 108) 7/8 x 3-1/4(22 x 83)
ZPB-40	39(18)	31(777)	1.69(43)	2.75(70)	1,800	3/8(10)	49(1.4)	1 x 4-1/4(25 x 108)
ZPB-60	67(30)	25.63(651)	2.25(57)	4.1(104)	1,400	3/4(19)	59(1.7)	1-1/4 x 6(32 x 154) 1-1/8 x 6(28 x 154)
ZPB-90	92.5(42)	28.75(730)	2.625(67)	6.06(154)	1,250	3/4(19)	75(2.1)	1-1/4 x 6(32 x 154) 1-1/8 x 6(28 x 154)

Features

This tamper is designed for soil compaction, temporary filling of holes or asphalt packing. Applications range from foundation and pavement repair to the installation of power or telephone poles. Comes with standard 6" cast iron butt.

- Side handle throttle
- Precision ground alloy cylinder
- Requires whip hose (oiler optional)
- Optional butts - Pole of half moon butt / 6" Aluminum butt



ZBT-6
Back Fill Tamper

DO NOT apply air pressure over 100 psi / 7 bar to these tools.

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /m)	Taper
ZBT-6	40(18)	48.25(1226)	1.5(38)	5.5(140)	800	1/2(13)	38.5(1.1)	804

Features

Designed with long rech handle for digging in trenches & foundations. Used for clay, hardpan or forzen ground.

- 4 bolt backhead & one piece cylinder
- Forged alloy long handle
- Removable front head
- Replaceable chuck bushing
- Internal oiler
- Optional muffler



ZTD-19
Trench Digger

DO NOT apply air pressure over 100 psi / 7 bar to these tools.

Model	Net Weight lbs(kgs)	Length inch(mm)	Bore inch(mm)	Stroke inch(mm)	Blows Per Minute	Air Inlet Size inch-NPT/PT	Avg. Air Cons. cfm(m ³ /m)	Chuck Sizes inch(mm)
ZTD-19	39(18)	31(777)	1.69(43)	2.75(70)	1,800	3/8(10)	49(1.4)	1 x 4-1/4(25 x 108) 7/8 x 3-1/4(22 x 83)



Features

- Patented water atomization mechanism.
- Patented 2 in 1 cap for use with regulator bottle or PET bottles.
- Easiest and fastest wet or dry cleaning tool for automotive interiors, engine bay, carpets, floor mats, etc.





plastic stainless

ZTG-1211

Storm Cleaning Gun - Plastic tube

ZTG-1211S

Storm Cleaning Gun - Stainless tube



For USA For EUROPE

ZTG3125/ZTG3127

Storm cleaning gun with brush - Ball type

ZTG3125BS

Storm cleaning gun & suction kit (large cover) - Ball type

ZTG3125BSS

Storm cleaning gun & suction kit (small cover) - Ball type



Tube type

ZTG1311A

Storm cleaning gun with brush - Tube type

ZTG1311BS

Storm cleaning gun & suction kit (large cover) - Tube type

ZTG1311BSS

Storm cleaning gun & suction kit (small cover) - Tube type



plastic stainless

ZTG-1211N

Storm Cleaning Gun - Plastic tube

ZTG-1211SN

Storm Cleaning Gun - Stainless tube



ZCCWT-1311BS

Large cover suction kit



ZCTB-3125BSS

Small cover suction kit



ZFG1411

Foam gun

Model	Free Speed rpm	Air Inlet inch	L*W*H mm	Suggested Air Pressure psi	Net Weight lbs(kgs)	Avg. Air Cons. cfm	CUP	
ZTG3125 ZTG3125BS ZTG3125BSS	8,000	1/4	330*120*240 360*120*275 360*120*275	90	1.54(0.7) 2.65(1.2) 2.4(1.1)	9	1L	for European market only.
ZTG3127	8,000	1/4	330*120*240	90	1.54(0.7)	9	1L	for USA market only.
ZTG1311A ZTG1311BS ZTG1311BSS	8,000	1/4	330*120*240 360*120*275 360*120*275	90	1.54(0.7) 2.65(1.2) 2.4(1.1)	9	1L	can't sell to USA & Japan.
ZTG1211 ZTG1211S	3,000	1/4	305*120*240	90	1.35(0.61)	6	1L	can't sell to USA
ZTG1211N ZTG1211SN	-	1/4	305*43*160	90	0.88(0.4)	6	-	can't sell to USA
ZFG1411	-	1/4	295*120*260	90	1.76(0.8)	13	1L	can't sell to Japan.

Features

- Ball screw mechanism provides highest power.
- Precision IC board control.
Alloy steel gear box for high durability.
- Brushless motor reduce the maintenance cost.
- Short cycle times at full stroke.
- Mandrel collector means no more mandrels on floor
- High capacity Li-ion battery pack delivers longer run-time.
- Balanced, ergonomic handle.







Applications

- Boat
- Construction
- Display shelves
- Furniture
- Heating, Air Conditioning
- Lighting fixtures
- Restaurant equipment
- Signs
- Trailers, Cargo container
- Vending machines



ZCR180BL

Optional

Li-ion Battery Pack	Charger	Power cord (for charger use)		
				
BB180C-340	B84192B	UL	VD	
Description	Description			
18V 4.0A.h	Input: 100~240 VAC Output: 18~19.2 VDC for Ni-MH & Li-ion	AS	UK	
Size (L x W x H)	Weight	Part No.	Description	Weight
127 x 78 x 70mm	1.41lbs(0.64kgs)	B84192B-UL	for USA region	0.13lbs(62g)
Charging Time	1.12lbs(0.51kgs)	B84192B-VD	for Europe region	0.17lbs(79g)
65min		B84192B-AS	for Australia region	0.23lbs(105g)
Weight		B84192B-UK	for England region	0.33lbs(151g)
1.41lbs(0.64kgs)				

Model	Voltage VDC	Motor Type	Rivet capacity	Stroke length inch(mm)	Traction power lbs(N)	Weight with Li-ion battery pack lbs(kgs)	Battery pack	Charge Time
ZCR180BL-2	18	Brushless motor	4.8~6.4mm all material	51/64(20)	2,900(13,000)	4.63(2.1)	Li-ion 2.0A.h	approx 40 mins
ZCR180BL-4	18	Brushless motor	4.8~6.4mm all material	51/64(20)	2,900(13,000)	5.18(2.35)	Li-ion 4.0A.h	approx 80 mins

Features



- Blind rivet capacity of 4.0mm ~ 6.4mm in all materials.
- Ideal for outdoor or off-line riveting applications where compressed air is not available.
- 18v Lithium-ion 3.0Ah battery.
- Tool stroke: 26mm.







ZCR64N

KIT INCLUDES: the tool, 4.0mm, 4.8/5.0mm & 6.4mm nose tips, 2 x 18v 3.0Ah batteries and fast charger in a blow-mold case

Optional

Li-ion Battery Pack	Description	Charger	Description
 641024	18V 3.0Ah Li-ion	 6430	Input: AC100~240V 50/60 Hz Output: DC 18V
	Charging Time		Weight
	75min		0.8lbs(0.36kgs)
	Weight		
	1.34lbs(0.6kgs)		

Power cord (for charger use)		
		
UL	VD	
		
AS	UK	
Part No.	Description	Weight
CG-DX0030-UL	for USA region	0.13lbs(62g)
CG-DX0030-VD	for Europe region	0.17lbs(79g)
CG-DX0030-AS	for Australia region	0.23lbs(105g)
CG-DX0030-UK	for England region	0.33lbs(151g)

Model	Voltage DC	Traction Power lbf(kgf)	Stroke Length inch(mm)	Max. Capacity	Weight with Li-ion battery pack lbs(kgs)	Charger
ZCR64N	18	3822(1734)	1-1/64(26)	Max. 1/4"(6.4mm) all material	4.25(1.93)	AC100V~240V

Precision Gearbox

Made in Taiwan, robust, low noise, less power consumption

LED Light

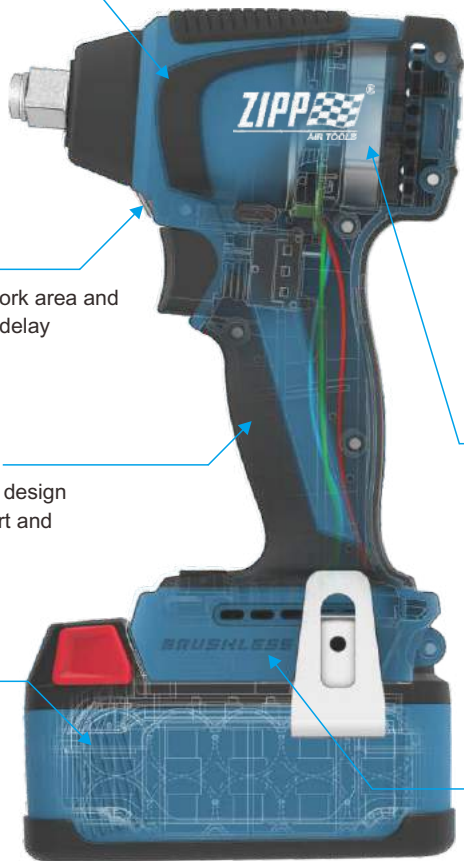
Illuminate work area and with 30 sec delay

Rubber Grip Handle

Ergonomic and slim design for maximum comfort and maneuverability

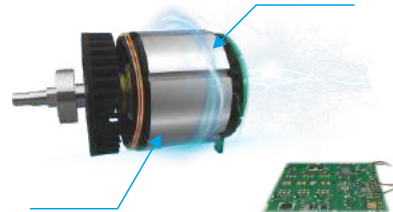
High Efficient Li-ion Battery Pack

High quality battery cells, longer cycle times, rubber protection, twin release buttons



Brushless motors

Designed and made by ZIPP TOOLS in house



Less Friction and Heat

Eliminating brushes can reduce friction and run cooler

Service Free

No need to replace brushes, commutator, and other wearable parts

Brushless Motor

Professional Brushless Motor & Controller provide more power, higher efficiency and longer lifetime

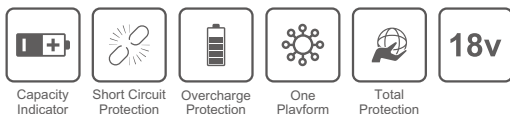
Electronic Controlled Motor

Precisely controls brushless motor and provides desired functions and protections

18V Lithium-Ion Battery Pack

Features

- High quality Li-ion battery cells
- Robust structure with rubber protection
- Twin release buttons
- 3-position capacity indicator



Battery Capacity Indicator

Battery Management

Battery Bracket

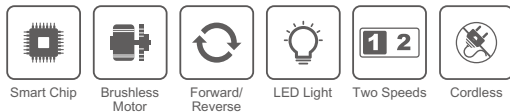
High Quality Battery Cells

Rubber Protection



Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- 135Nm high torque & 2 speed design
- 13mm (1/2") removable keyless chuck
- A built in magnetic hex bit holder is available when removing the keyless chuck
- Electronic 24 torque settings with digital display
- Auxiliary side handle increases ease of use and safety
- Variable speed switch for better control
- LED illuminates work area with 30 second delay after stopping the tool
- Ergonomics slim handle with soft grip for comfortable use



ZCHD9211

Brushless Hammer Drill

ZCHD9211-B

Brushless Hammer Drill
-Bare Tool



All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Max. Torque ft-lb(Nm)	Free speed rpm	Chuck / Shaft inch(mm)	Bump per minute bpm	Weight with Li-ion battery pack lbs(kgs)
ZCHD9211	18	100(135)	L 0~550/H 0~1650	1/2(13)	39,600	3.75(1.7)

Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- 6mm (1/4") hex bit holder and 200 Nm max, fastening torque
- 4 speed/ torque modes, including a self drilling mode for fastening self-drilling screws
- Variable speed switch for better control
- LED illuminates work area with 30 second delay after stopping the tool
- Ergonomics slim handle with soft grip for comfortable use



ZCID9411

Brushless Impact Driver

ZCID9411-B

Brushless Impact Driver
-Bare Tool

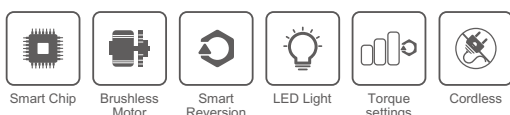


All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Max. Torque ft-lb(Nm)	Free speed rpm	Impact Per Minute ipm	Weight with Li-ion battery pack lbs(kgs)	Hex. Collet inch(mm)
ZCID9411	18	148(200)	L 0~1000/H 0~3800	L 0~2000/H 0~4300	1.98(0.9)	1/4(6)

Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- 3 speed / torque selections provide precise fastening control for a wide range of applications
- Smart reverse mode is used when the bolt / nut is loosened, the tool stops impact and rotation, then slowly removes the bolt / nut
- 135 mm short length and light Weight
- Variable speed switch for better control
- LED illuminates work area with 30 second delay after stopping the tool
- Ergonomics slim handle with soft grip for comfortable use



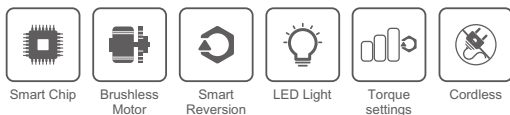
- ZCIW9561** Friction Ring Anvil 1/2" Brushless Impact wrench
- ZCIW9561-B** Friction Ring Anvil 1/2" Brushless Impact wrench-Bare Tool
- ZCIW9562** Friction Ring Anvil 3/8" Brushless Impact wrench
- ZCIW9562-B** Friction Ring Anvil 3/8" Brushless Impact wrench-Bare Tool

All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Max. Torque ft-lb(Nm)	Free speed rpm	Impact Per Minute ipm	Weight with Li-ion battery pack lbs(kgs)	Capacities inch(mm)
ZCIW9561	18	222(300)	L 0~1000/H 0~3600	L 0~2000/H 0~4400	3.64(1.65) with 4.0Ah battery	1/2(13)
ZCIW9562	18	185(250)	L 0~1000/H 0~3600	L 0~2000/H 0~4400	3.64(1.65) with 4.0Ah battery	3/8(10)

Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- 1000(ZCIW9566)/1060(ZCIW9567) Nm high torque & 4 speed/torque design
- Smart reverse mode is used when the bolt / nut is loosened, the tool stops impact and rotation, then slowly removes the bolt/nut
- Variable speed switch for better control
- LED illuminates work area with 30 second delay after stopping the tool
- Ergonomics slim handle with soft grip for comfortable use



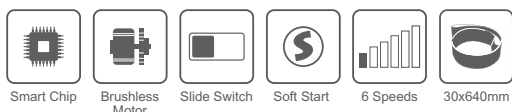
- ZCIW9566** Friction Ring Anvil 1/2" Brushless HQ impact wrench
- ZCIW9566-B** Friction Ring Anvil 1/2" Brushless HQ impact wrench-Bare Tool
- ZCIW9567** Friction Ring Anvil 3/4" Brushless HQ impact wrench
- ZCIW9567-B** Friction Ring Anvil 3/4" Brushless HQ impact wrench-Bare Tool

All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Max. Torque ft-lb(Nm)	Weight with Li-ion battery pack lbs(kgs)	Square Drive inch(mm)	Torque settings ft-lb(Nm)
ZCIW9566	18	740(1000)	7.72(3.5) with 4.0Ah battery	1/2(13)	Mode1: 50(70), Mode2: 220(300)
ZCIW9567	18	780(1060)	7.72(3.5) with 4.0Ah battery	3/4(19)	Mode3: 516(700), Mode4: 740(1000), 780(1060) Mode5: Auto Reverse Stop

Features:

- Brushless EC motor, compact, more functions, longerrun time, service free
- Vibration control auxiliary handle can be used on right or left
- Sanding head can be tilted for different positions
- 6-speed selection for different applications
- Slide switch with lock-on function for operator convenience
- Smooth start increases safety and comfort
- Anti-restart design prevents accidental startup after power supply interruption
- Removable dust screen prevents dust to get into motor



ZTBS-9641
Brushless Tube
Belt Sander

ZTBS-9641-B
Brushless Tube
Belt Sander-Bare Tool

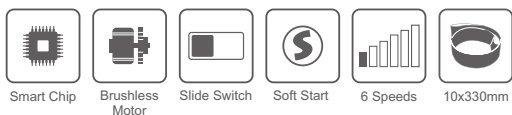


All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Dimensions of sanding belt mm	Max. pipe diameter mm	Wrap angle	Belt speeds in idle m/s	Dimension mm	Weight with Li-ion battery pack lbs(kgs)
ZTBS-9641	18	30x640	60	190°	7,11,15,18,22,26	408x202x103	6.68(3.03)

Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- Sanding head can be tilted for different positions
- Vibration control auxiliary handle for better operation (for ZBS9652 only)
- 6-speed selection for different applications
- Slide switch with lock-on function for operator convenience
- Smooth start increases safety and comfort
- Anti-restart design prevents accidental startup after power supply interruption
- Removable dust screen prevents dust to get into motor



ZBS9651 Brushless Belt Sander
ZBS9651-B Brushless Belt Sander-Bare Tool
ZBS9652 Brushless Belt Sander
ZBS9652-B Brushless Belt Sander-Bare Tool

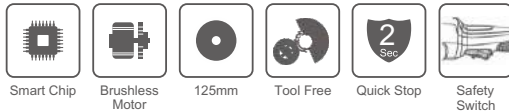


All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Useful length of sanding belt arm inch(mm)	Sanding belt width inch(mm)	Sanding belt length inch(mm)	Belt speeds in idle m/s	Dimension mm	Weight with Li-ion battery pack lbs(kgs)
ZBS9651	18	4-3/4(120)	3/8(10)	13(330)	3,5,7,8,10,12	402x103x80	4.65(2.11)
ZBS9652	18	4-3/4(120)	13/16(20)	20-1/2(520)	5,8,11,13,16,19	514x125x95	5.95(2.7)

Features:

- Brushless EC motor, compact, more functions, longer run time, service free
- Automatic speed & torque adjustment during operation
- Electronic current limit design for overload protection
- Tool free adjustment for protection guard
- Quick stop in 2 sec. for better safety
- Safety trigger switch design
- Vibration control auxiliary handle can be used on right or left
- Smooth start increases safety and comfort
- Anti-restart design prevents accidental startup after power supply interruption
- Removable dust screen prevents dust to get into motor



ZAG9611

Brushless Angle Grinder




ZAG9611-B

Brushless Angle Grinder
-Bare Tool

All models supply with 2 pcs 4.0Ah batteries, 1 pc CG-DX0030 charger in Blow Mold Case.

Model	Voltage DC	Disk dia. inch(mm)	Disk hole dia. inch(mm)	Max cutting depth inch(mm)	Arbor Size	No load speed rpm	Dimension mm	Weight with Li-ion battery pack lbs(kgs)
ZAG9611	18	5(125)	7/8(22.23)	1-1/8(29)	5/8"-11(M14)	8,500	300x230x101	5.25(2.38)





Optional

Li-ion Battery Pack	Description	Li-ion Battery Pack	Description
 BT-DX0051	18V 4.0Ah Li-ion	 BT-DX0052	18V 5.0Ah Li-ion
	Dimension		Dimension
	115x80x60mm		115x80x60mm
	Weight		Weight
	1.44lbs(0.65kgs)		1.44lbs(0.65kgs)
Charger	Description		
 CG-DX0030	Input: AC100~240V 50/60Hz Output: DC 18V Rated output current: 4A Rated input power: 100W		
	Weight	Dimension	
	0.66lbs(0.3kgs)	103x120x45mm	

CG-DX0030

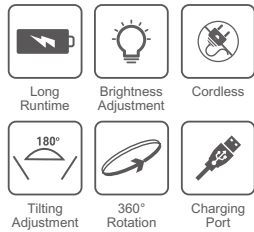
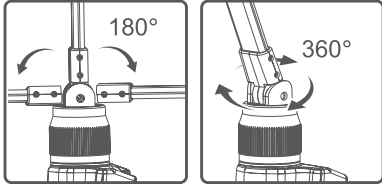
Battery Capacity 4.0Ah: 80min

Battery Capacity 5.0Ah: 100min

Power cord (for charger use)	Part No.	Description	Weight
 UL	CG-DX0030-UL	for USA region	0.13lbs(62g)
 VD	CG-DX0030-VD	for Europe region	0.17lbs(79g)
 AS	CG-DX0030-AS	for Australia region	0.23lbs(105g)
 UK	CG-DX0030-UK	for England region	0.33lbs(151g)

Features:

- Conventional portable LED light bar using 18V battery
- 180° tilting at 8 positions and 360° rotation light head adjustment
- 2 modes of brightness adjustment
- Convenient USB port for charging mobile devices

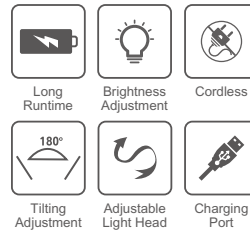
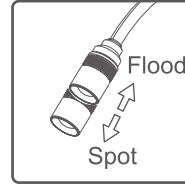


ZL-1131-B
LED Foldable Light-Bar



Features:

- Flexible gooseneck and portable LED light using 18V battery
- 180° tilting light head adjustment
- 2 modes of brightness adjustment
- Spot and flood lighting adjustment
- Convenient USB port for charging mobile devices

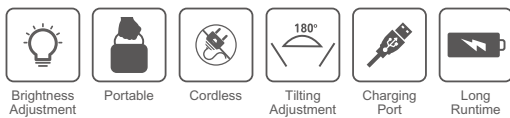


ZL-1141-B
LED Inspection Light-Bar

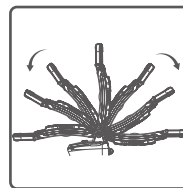


Features:

- Conventional portable LED light bar using 18V battery
- 180° tilting at 8 positions and 360° rotation light head adjustment
- 2 modes of brightness adjustment
- Convenient USB port for charging mobile devices



ZL-1151-B
LED Work Light-Bar



All model supplied bare, battery and charger need to purchase separately.

Model	Voltage DC	Low output	High output	Color temp.	USB port output	Weight with Li-ion battery pack lbs(kgs)
ZL-1131-B	18	100 Lm, Battery run time 38Hours	200 Lm, Battery run time 19Hours	6500K	5V/1A	3.42(1.55)
ZL-1141-B	18	100 Lm, Battery run time 38Hours	200 Lm, Battery run time 19Hours	6500K	5V/1A	3.42(1.55)
ZL-1151-B	18	1000 Lm, Battery run time 8Hours	2000 Lm, Battery run time 4Hours	6000K~7000K	5V/1A	3.86(1.75)



ZL-9470W
15W COB LED
Work Light - White

ZL-8800W
8W COB LED
Work Light - White

ZL-5800W
5W LED
Work Light - White

ZL-5641W
8W COB LED
Work Light - White

Model	Capacity of LED	Lithium Battery	Lighting up	Distance illumination of 50cm	Frequency	L*W*H mm	Weights g
ZL-9470W	15W COB LED	3.7V 2200mAh	2.5H(full light) 6H(micro light)	935 LUX / 458 LUM	50/60Hz	375*45*35	200
ZL-8800W	8W COB LED	3.7V 2200mAh	2.5H(full light) 6H(micro light)	450 LUX / 280 LUM	50/60Hz	445*38*33	226
ZL-5800W	5W LED	3.7V 2200mAh	2.5H(full light) 6H(micro light)	450 LUX / 260 LUM	50/60Hz	380*38*33	230
ZL-5641W	8W COB LED	3.7V 2200mAh	2.5H(full light) 6H(micro light)	450 LUX / 318 LUM	50/60Hz	210*26*28	127



Front end hook

Rear end hook

Front end magnet



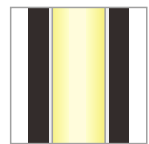
ZL-8740W
8W COB Light
3W LED TIP Light

- Use 8W light to make large area lighting.
- Use 3W lights for depth lighting.



ZL-8740WU
8W COB Light
3W LED Tip UV light

- Use 8W light to make large area lighting.
- Engine interior refrigerant detection by UV light.

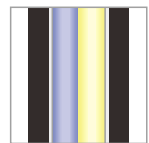


ZL-9880W
20W LED - White



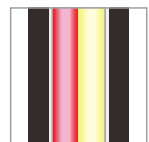
ZL-9880WY
Dual color 10W LED
- White & Yellow

- Single White color or Dual White & Yellow colors.
- Dual color model is perfect for car polishing inspection.
- Engine room lighting.



ZL-9880WU
Dual color 10W LED
- White & UV light

- Dual White color & UV light
- Engine interior refrigerant detection by UV light.
- Engine room lighting by white light.



ZL-9880WR
Dual color 10W LED
- White & Red flashing light

- Dual White color & Red flashing light
- Red flashing warning light.



Adjustable knob



USB charging port



3W white or UV light with adjustable focal length



Back hook with magnet

Color switch for Dual color model



Rear end magnet & rotatable device

Light switch

230mm

Model	Capacity of LED	Lithium Battery	Lighting up	Distance illumination of 50cm	IP	L*W*H mm	Weights g
ZL-9880W	20W	3.7V 3350mAh	3.5H(full light) 6H(micro light)	880 LUM / 1300 LUX (White)	IP54	475*50*42	280
ZL-9880WY	10W	3.7V 3350mAh	3.5H(full light) 6H(micro light)	620 LUM / 1000 LUX (White) 600 LUM / 950 LUX (Yellow)	IP54	475*50*42	280
ZL-9880WU	10W	3.7V 3350mAh	3.5H(full light) 6H(micro light)	620 LUM / 1000 LUX (White)	IP54	475*50*42	280
ZL-9880WR	10W	3.7V 3350mAh	3.5H(full light) 6H(micro light)	620 LUM / 1000 LUX (White) 142 LUM / 170 LUX (Red)	IP54	475*50*42	280
ZL-8740W	8W	3.7V/2200mAh	3H	400 LUM (8W)	IP44	230*30*40	145
ZL-8740WU	8W	3.7V/2200mAh	3H	400 LUM (8W)	IP44	230*30*40	145

- Yellow / white mixed light (ZL-9880WY): 770 LUM / 1400 LUX
- Frequency: 50/60Hz

Certified Cordless Screwdriver
Evolution-One
According to ISO 5359, VDI / VDE 2647



Clutch

- Two-Phase Clutch Design for Higher CMK
- One Million Cycle Maintenance Free

MOTOR

- Brushless, Maintenance Free
- New Patented Motor Accelerator For Better Tool Performance & The Enhancement of Efficiency



ERGONOMICS

- Anti-Slip Clamping Grip for Safe Handling
- LED Job Light
- Perfectly Balanced Tool

PCB Board

- Trouble-Shooting Display

BATTERY

- New Li-Ion Battery: Lighter & Compact
- Power Saving Mode: ECO, Normal, Sport For Longer Life and More Productive Use
- Long-Life Battery: 10.8V/4.0Ah (Order No. LBP32-02)



Certified Cordless Screwdriver Evolution-One

According to ISO 5393, VDI / VDE 2647

Evolution One Series		The bits specification: 6.35 mm(1/4" Hex) For Industrial Use.		Specification are subject to change without prior notice.	
Model	Torque Range Nm	Idle Speed rpm	Voltage	Weight w/2.0Ah battery kg	CMK Value According to VDI 2647
ZBCP051500	1.0-5.0	320-1500	10.8V	1.3	CMK>2.2±10%
ZBCP061200	1.0-6.0	320-1200	10.8V	1.3	CMK>2.2±10%
ZBCP080850	1.5-8.0	120-850	10.8V	1.3	CMK>2.2±10%
ZBCP120300	1.5-12.0	120-300	10.8V	1.3	CMK>2.2±10%
ZBCP120400	2.0-12.0	110-400	10.8V	1.3	CMK>2.2±10%
ZBCP140300	2.0-14.0	110-300	10.8V	1.3	CMK>2.2±10%

New Evolution One Series		The bits specification: 6.35 mm(1/4" Hex) For Industrial Use.		Specification are subject to change without prior notice.	
Model	Torque Range Nm	Idle Speed rpm	Voltage	Weight w/2.0Ah battery kg	CMK Value According to VDI 2647
ZBCP090900	1.5-9.0	120-900	10.8V	1.3	CMK>2.5±10%
ZBCP120750	2.0-12.0	110-750	10.8V	1.3	CMK>2.5±10%

[Custom-made] Customized models available upon request. Please contact us for further information.

More Features of New Evolution One

- New Patented Magnetic Levitation Motor
- Non-Vibration Bit Holder for A More Precise and Sensitive Tightening Process
- High Accuracy: CMK Value >2.5 ± 10%
- CMK Test Report Included(Dynamic)
- USB Interface For Parameter setting on Motor
- New pcB-Board: Diagnostic & Report

DC IN Model Are Also Available

Optional

Li-ion Battery Pack		DC-IN	Charger
			
LBP31-02	LBP32-02	CH002	6C1001
Description	Description		Description
10.8V 2.0Ah	10.8V 4.0Ah		Input: 100~240 VAC Charge Time: 60min
Weight	Weight		
265g	440g		
USB KIT		Bits	Power cord (for charger use)
			
E-6C1011		Order No. DH Series High Quality & HRC 67	CH002-02
Color Ring		Torque Adjusting Ring	CH002-03
			CH002-04
5L2023		5L2001	CH002-05
Hook		Belt Hook	CH002-06
			CH002-07
E-HK001		#The Battery Is Not Included	CH002-08
		7Q5103	
			Part No.
			Description
			CH002-02 for USA region
			CH002-03 for India (Big) region
			CH002-04 for Europe region
			CH002-05 for UK region
			CH002-06 for Australia region
			CH002-07 for India (Small) region
			CH002-08 for USA region

Features

- Brush-less motor and no external power supply.
- Available in 100~120V & 220~240V.
- Easy to operate lever to control of motor speed.
- on/off switch, for easy and safe handling.
- Longer body enables optional two-hand grip.
- Brush-less motor means no need to change brushes, less down time.



Model	Power W	Orbit inch(mm)	Size of pad inch(mm)	Max. Speed rpm	Voltage main supply VAC	Weight kg	Plug Type
ZES-6DC22	350	3/16(5)	6(150)	2,000~10,000	220~240	0.92	Please specify when ordering

Features

- Automatic syncs by both air tool and power tool.
- Lightweight and Powerful.
- Triple Filtration System.
- Light weight composite housing design.
- Use for both Electric & Air sanders.
- Two types startup control: manual or automatic startup.
- Speed adjustment for various sanding application.
- Ideal for wood furniture industry & automotive body shops.



ZVC5111ES

Industrial Vacuum Cleaner with Rack

- LxWxH: 640x465x1290mm



[Accessories]

- 5M length vacuum & air hose set X 1
- Replaceable Filter X 1
- Dust collection bag X 1



ZVC5111E

Industrial Vacuum Cleaner

- LxWxH: 640x465x500mm

* Please specify the type of plug when ordering.

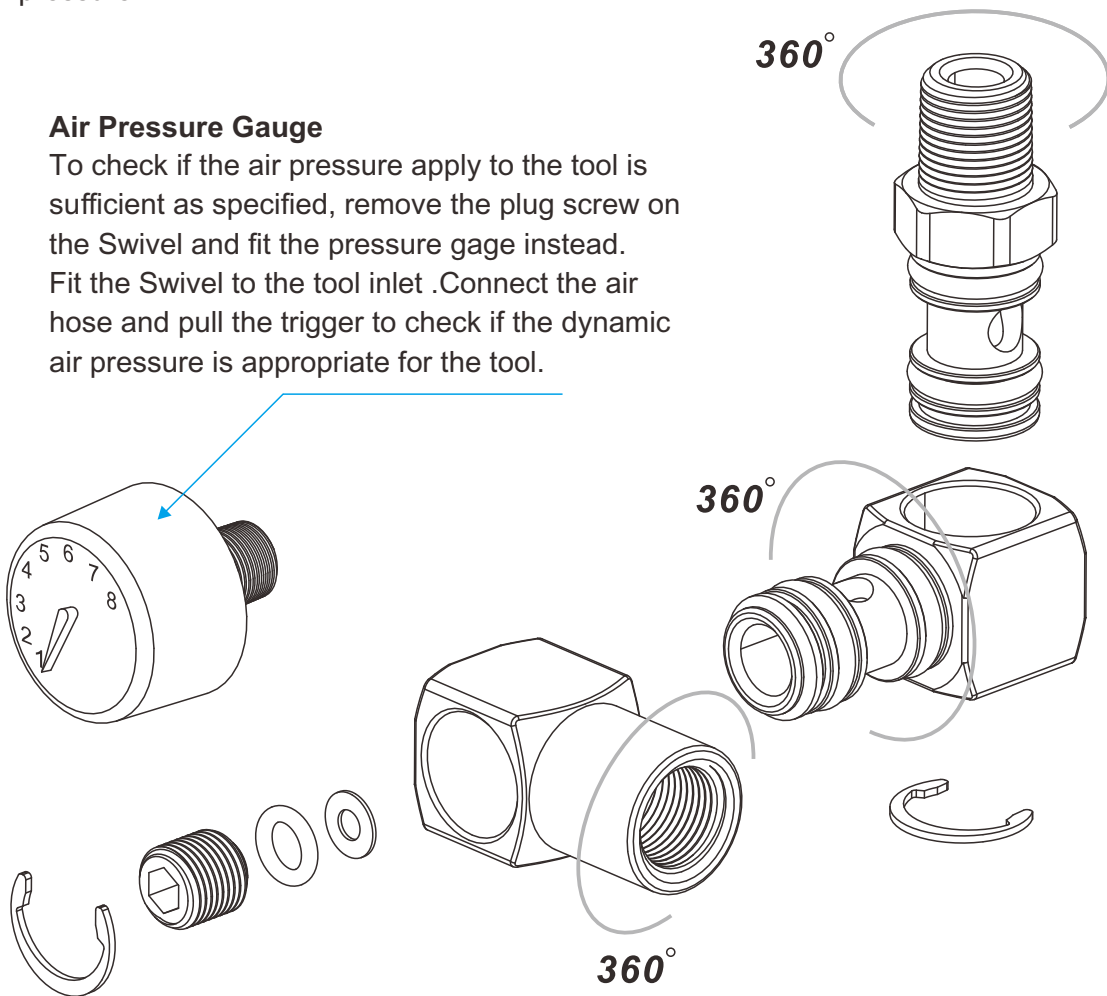
Model	Voltage	Power Consumption w	Max Vacuum mmH2O	Air Flow m ³ /min	Drum Capacity L	Weight kg
ZVC5111ES	220~240V	1200	2450	2.9	40	24.5
ZVC5111E	220~240V	1200	2450	2.9	40	16

ZIPP SWIVEL-360° Free-directional rotation air hose universal joints.

- The ZIPP SWIVEL is a patented, uniquely designed "Universal Swivel Air Inlet Joint" that connects portable air tools to an air line. it swivels 360° to allow the hose hanging straight down to the floor no matter how the tool is held.
- The ZIPP SWIVEL is available in 5 types covering most popular sizes of Air tools in the field for superior maneuverability while increasing operator comfort and productivity.
- It will increase the life of air hoses and inlet fitting as well.
- The ZIPP SWIVEL can be efficiently used on Air Drills, Grinders, Polishers, Sanders, Staplers, Spray Gun, etc. **It is applicable with percussive or impact tools.**
- All types can be attached with a miniature 1" air pressure gauge for checking the most precise dynamic working air pressure right at the tool inlet.
- Unique pressure relief valve available as an option to prevent the tool working under abnormal higher air pressure.

Air Pressure Gauge

To check if the air pressure apply to the tool is sufficient as specified, remove the plug screw on the Swivel and fit the pressure gage instead. Fit the Swivel to the tool inlet .Connect the air hose and pull the trigger to check if the dynamic air pressure is appropriate for the tool.



Patent pending in other countries



U.S.A.PAT.:
4,823,835



P.R.C.PAT.:
ZL 2006 2 0001776.6

Universal Swivel Air Inlet Joint



ZA-922P(K)

1/4" Swivel Joint Composite



ZA-922(K)

1/4" Swivel Joint-Alum.



ZA-933(K)

3/8" Swivel Joint-Alum.



ZA-944(K)

1/2" Swivel Joint-Alum.



ZA-92R2(K)

1/4" Swivel Joint w/Regulator



ZA-92S2(K)

1/4" Swivel Joint-Alum. w/Full Close type Regulator



KIT ZA-9XX(K)

Affix (K) denotes the Swivel Joint Packed with Pressure Gauge



CA-1025B

1/4" Mini Oiler



82R2

1/4" Air Regulator

[Accessories]

- Male thread: 1/4" PT/NPT
- Female thread: 1/4" PF
- Hex O.D.: 22mm



CA-1037B

3/8" Mini Oiler



AG18

Pressure gauge



ZA-5SG2

Pressure regulator w/gauge

3 units selectable:

psi, bar, Kpa



HN-G1

Digital Pressure gauge

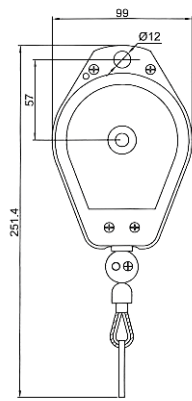
Features

- Proof pressure: 200 psi
- Burst pressure: 250 psi (5 SEC)
- Accuracy: ± 1.2 psi ± 1 digit @ 25°C
- Media: clean air or non-corrosive gases
- Display: LCD size: 11 x 21 mm
- Battery: 1.5V DC x 2, non changeable
- Battery life: 3 yrs (working 1 hour/day) ; 2,500 hrs (continue working)
- User interface: On/Off and change unit
- Operating temperature: 0~45 °C (32~115 °F)
- Storage temperature: -10~60 °C (14~140 °F)
- Face label: Toluene be able to wipe
- HN-G1 digital pressure gauge: IP63
- Auto-offtime set: 90 (SEC)
- Pressure port: brass 1/8" NPT male

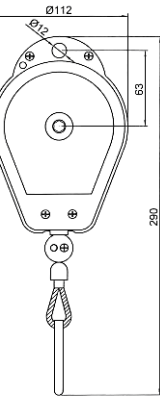
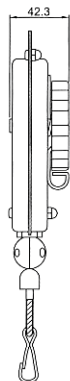
Model	Pipe Thread Size -Male PT/NPT	Pipe Thread Size -Female PF	Side Width J*: Hex mm	Side Width J*: SQ. mm	Air Flow Rate m ³ /min	Material
ZA-922P	1/4	1/4	17	19	0-0.75	Nylon+GF+Teflon
ZA-922	1/4	1/4	17	19	0-0.75	Alum. Alloy & Steel
ZA-933	3/8	3/8	17	19	0-1.35	Alum. Alloy & Steel
ZA-944	1/2	1/2	22	25.4	0-1.95	Alum. Alloy & Steel
ZA-92R2	1/4	1/4	17	19	0-0.75	Alum. Alloy Brass & Steel
ZA-92S2	1/4	1/4	17	19	0-0.75	Alum. Alloy & Steel
82R2	1/4	1/4	22	—	0-0.75	Brass & Steel

Features

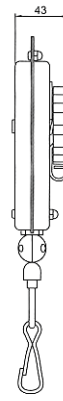
- Cost-efficient, practical and compact. It uses rotatory Adjusting Cover for easier tension adjustment without burden.
- Fast and convenient installation. In addition, anti-falling steel wire mounting holes are provided, which must be installed to avoid the failure of the original mounting location.
- The housing is made of rustproof iron shell. The steel wires and nylon ropes are available for option. Further, a ball-shape damper also can stop tool at a fixed height in its recover stroke.



ZSB600/ZSB1200/ZSB2000



ZSB3000/ZSB5000



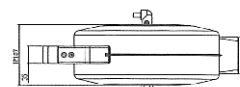
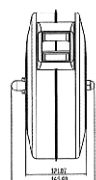
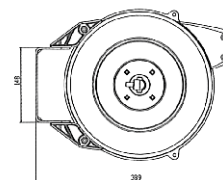
Tension Adjust Cap



Model	Capacity kg	Weight kg	Travel m	Rope option	Rope Dia mm
ZSB600	0.3~0.8	0.49	1.4	Nylon/Cable	2.5
ZSB1200	0.6~1.5	0.52	1.4	Nylon/Cable	2.5
ZSB2000	1.0~2.0	0.53	1.4	Nylon/Cable	2.5
ZSB3000	1.5~3.0	0.76	1.4	Cable	2.5
ZSB5000	3.0~5.0	0.81	1.4	Cable	2.5

Features

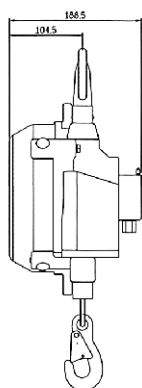
- Adopt 8mm inner dia, PU Braided hose.



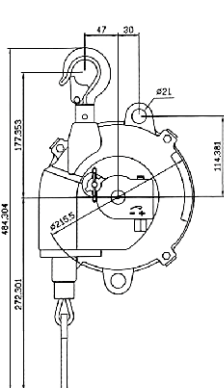
Model	Mox.pressure psi	Weight kg	Hose Length m	Hose Material	Hose Dia mm
ZHR-10	200	4.9	10	PU Braided	8*12

Features

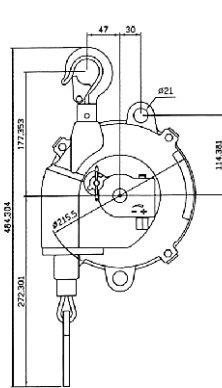
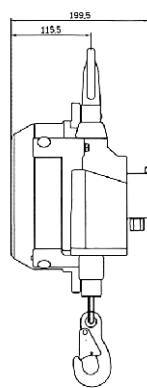
- Labor Saving: The spiral type outputs consistent suspension force.
- Productive: The user can easily drag the tool to where he wants and stop at easier access position to achieve smoother and more efficient operation.
- Efficient: The operator can handle the tool easily; thus, avoiding wasting time and consuming labor by lowering the tool and picking it again when taking the object at the same time.
- Cost-efficient: Rigid mechanism design makes the product more durable while bringing down the maintenance cost.
- Anti-Falling Device will lock the cable in case of spring breakage.



ZSB40K/ZSB50K



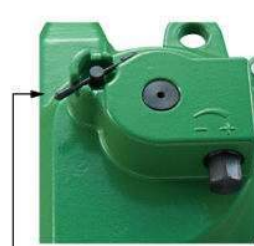
ZSB60K/ZSB70K



Tension Indicator



Tension Adjust by Worm Gear



Lock Spring Drum Position



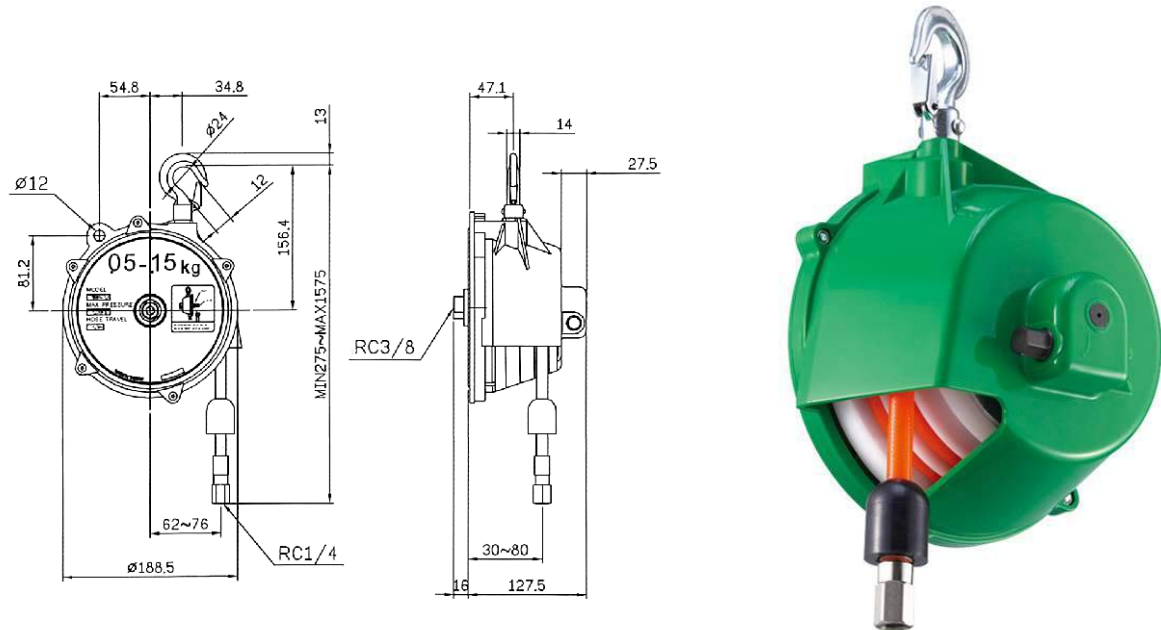
360° Swivel Hanger

Model	Capacity kg	Weight kg	Travel m	Rope option	Rope Dia mm
ZSB40K	30~40	9.7	1.5	Cable	4.8
ZSB50K	40~50	10.1	1.5	Cable	4.8
ZSB60K	50~60	11.1	1.5	Cable	4.8
ZSB70K	60~70	11.4	1.5	Cable	4.8

Spring Balancer

Features

- Adopting 8.0 mm inner diameter hose to provide enough air flow to air tool and equipment.
- It achieves neat and orderly production line for enhancing the working efficiency.
- Tool anti-falling device is provided in case of the spring breaking.
- The installation is fast and convenient with 360 degrees install hook.
- Worm gear provides more precise force adjustment.



Model	Capacity kg	Weight kg	Travel m	Hose Material	Hose Dia mm
ZTHB15	0.5~1.5	2.2	1.3	PU Braided	8*12
ZTHB25	1.5~2.5	2.3	1.3	PU Braided	8*12
ZTHB35	2.5~3.5	2.4	1.3	PU Braided	8*12
ZTHB50	3.5~5.0	2.4	1.3	PU Braided	8*12
ZTHB65	5.0~6.5	2.5	1.3	PU Braided	8*12



ZC-130-3A
3/8" F.R.L. Unit



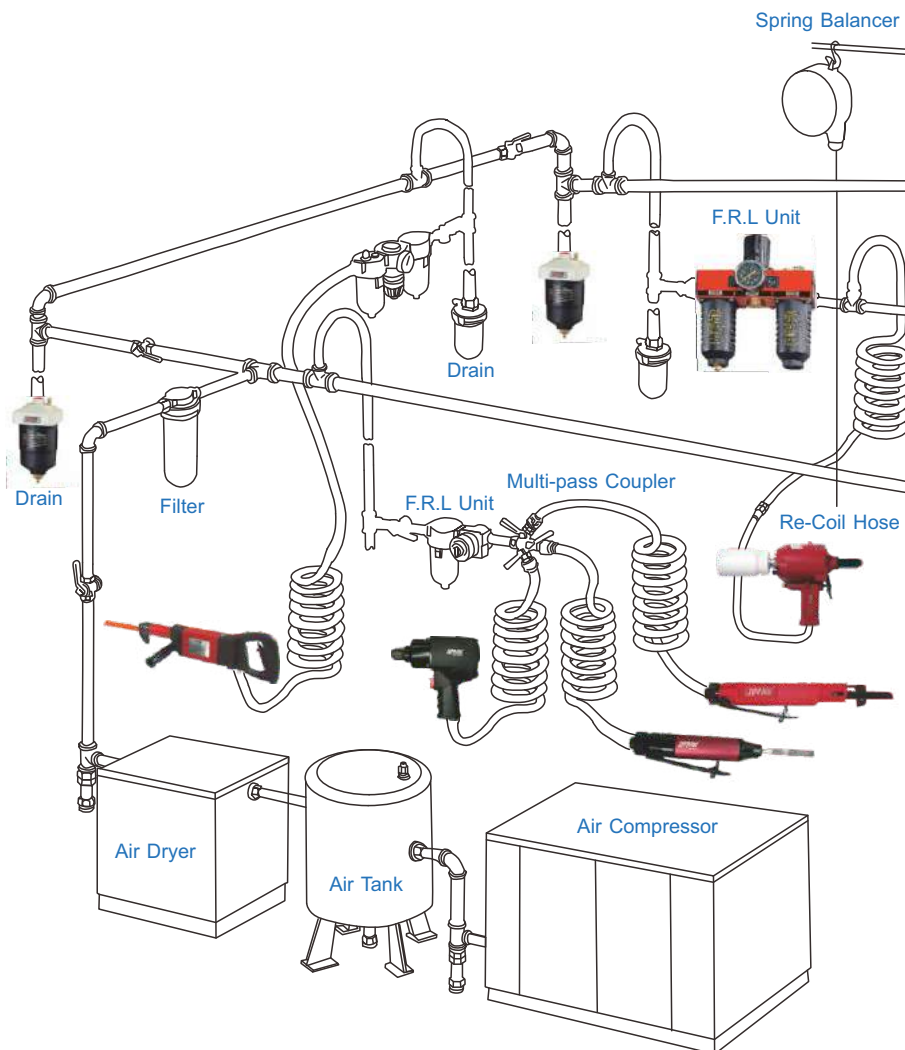
ZC-130-4A
1/2" F.R.L. Unit

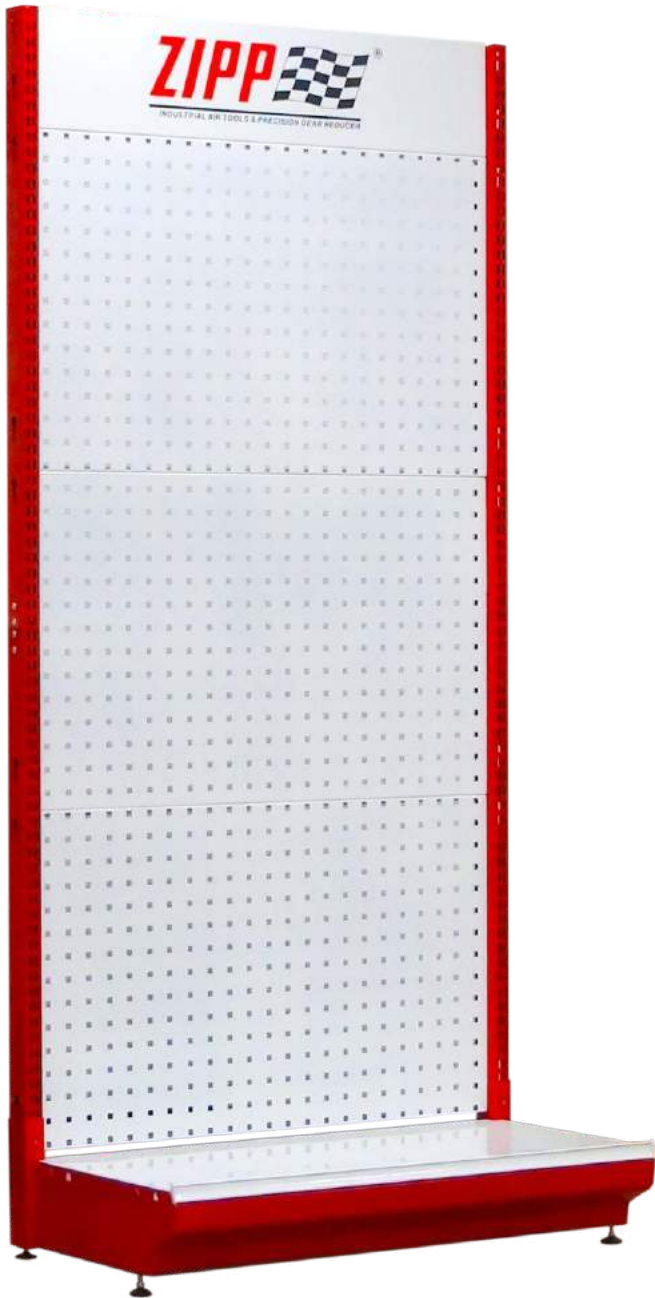


ZD-130
Auto Drain

Model	Tubing Connection inch-PT/NPT	Filter Grade μ	Pressure Range. psi	Max. Service Pressure psi	Range of Service Temperature °C	Lubricant Storing Capacity cc	Net Weight kg
ZC-130-3A	3/8	5~40	20~130	145	5~60	120	2.9
ZC-130-4A	1/2	5~40	20~130	145	5~60	120	2.9
ZD-130	1/2	-	28~130	-	10~63	-	1.3

Air Supply System





ZSH-1
1" Single Hook



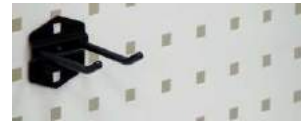
ZDH-1
1" Double Hook



ZSH-2
2" Single Hook



ZDH-2
2" Double Hook



ZSH-4
4" Single Hook



ZDH-4
4" Double Hook



ZSH-8
8" Single Hook



ZDH-8
8" Double Hook



ZUH-1
U Shape Hook



ZDS-2
Display Stand

	W inch(mm)	D inch(mm)	H inch(mm)
Over all size	37.2(945)	19.3(490)	82.7(2,100)
	N.W. kgs	G.W. kgs	Cuft
Packing	31.5	33	2.73'

ZDS-1S
Up Shelf w/ Bracket

	W inch(mm)	D inch(mm)	H inch(mm)
Over all size	35.8(910)	15(382)	7.9(20)
	N.W. kgs	G.W. kgs	Cuft
Packing	3.5	3.9	0.3'

⚠ WARNING Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the public to cause cancer, birth defects or other reproductive harm. Some products with high pressure system and the following safety precautions must be followed at all time along with any other existing safety rules.

1. Read all manuals included with each product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
2. Only persons well acquainted with these rules of safe operation should be allowed to use the air tool.
3. Do not exceed any pressure rating of any component in the system.

⚠ DANGER Do NOT exceed the maximum operating pressure of the air tool (normally 90PSI). The air tool could explode and result in death or serious injury.

4. Disconnect the air tool from air supply before changing tools or attachments and during non-operation.

⚠ WARNING Always wear approved safety glasses with shields & hearing protection.

5. Do not wear loose fitting clothing or apparel which contains loose straps or ties, etc. which could become entangled in moving parts of the tool and results in serious personal injury.
6. Do not wear jewelry, watches, identifications, necklace. etc. when operating any tool, they may be caught in moving parts and result in serious injury.
7. Do not depress trigger when connecting the air supply hose.
8. Always use attachments designed for use with air powered tools. Do not use damaged or worn attachments.

⚠ WARNING DO NOT use hand tool sockets. Use impact quality sockets only.

9. Never trigger the tool when not applied to a work object. Attachments must be securely attached. Loose attachments can cause serious injury.
10. Protect air lines from damage or puncture.
11. Never point an air tool at oneself or any other person. Serious injury could occur.
12. Check air hoses for weak or worn condition before each use. Make sure all connections are secure.
13. Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.
14. Do not put hands near or under moving parts.

⚠ WARNING Do NOT misuse the product, excessive exposure to vibration, work in awkward position and repetitive work motion.

Maintenance

Air tools require lubrication throughout the lifetime of the tools. The air motor and bearing use compressed air to power the tool, due to the moisture of the compressed air will rust the air motor and other parts inside of the tools, therefore lubrication is required air daily. Failure to lubricate the air tool properly will dramatically shorten the life of the tool and will void the warranty.

⚠ CAUTION This air tool requires lubrication BEFORE initial use. also before and after each additional use.

To lubricate the air tool manually:

1. Remove any attachment on the drive of air tools such as sockets, chisels and etc.
2. Disconnect the tool from the air supply source, place the air inlet faces up.
3. Depress the trigger or throttle and place about 5 c.c. of air tool oil into the air inlet.
(Depressing the trigger or throttle will help circulating oil in the motor.)

NOTE:

Use SAE #10 grade oil if air tool oil is not available.

Keep out of the reach of children. If taken internally, do not induce vomiting, call a doctor immediately.

4. Connect the tool to air source, cover the exhaust end with a towel and run for about 20 to 30 seconds.

⚠ WARNING Any excess oil in the motor is immediately expelled from the exhaust port. Always direct exhaust port away from people or objects.

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