ZINKO *the name you can count on for Hydraulic Jacks!*

Established in California, Zinko is the leading manufacturer/supplier for a broad range of hydraulic fluid power tools throughout the United States and Canada. A joint venture supported by manufactures in Japan and Taiwan, Zinko designs, manufactures, sells, and distributes a variety of standard and customized products to retail and industrial customers.

Manufactured according to ANSI & JIS standards, our hydraulic tools and components have successfully been distributed internationally for over 50 years. Zinko offers a complete line of top quality, easy-to-use, and safety minded hydraulic jacks and cylinders. While the company's strength lies in hydraulic power, Zinko prides itself in developing and manufacturing new products for OEM's market. Designed for optimal safety, durability, and longevity, Zinko is the professional's choice for hydraulic tools and lifts.

Cylinders

page #

Single-Acting 3
All models are designed for use in any position and feature base mounting holes for easy attachment to almost any fixture.

Mini Cylinders 6
These lightweight, low profile cylinders are designed for use in confined spaces. The flat and compact design allows them to be used where other cylinders will not fit.

Aluminum Series 7
Easily carried around and connected to work with any 10,000 psi air over hydraulic pump. These light weight and rugged cylinders are suitable for almost every heavy lifting situation, in the shop or on the job site.

Double-Acting 8
The double acting design produces greater speed and positive control for applications requiring an extra measure of strength, quality reliability, and safety.

Jacks

Bottle Jacks 9
All models are designed for use in any position. The needle valve allows you to control the lowering of the ram.

Air Hydraulic Bottle Jacks 11
Welded steel construction reduces metal fatigue allowing for a longer life. Forged steel base increases resistance to high pressure and durability.

Toe Jacks 12
Designed for fine adjustments. Ideal for delicate work such as installation of precision machines. 360° turn lever socket for operation at any direction.

Rollers 12
Multiple selection of 3 different types of speed rollers. All models feature a free-turning top plate making it easy to rotate a heavy load.

Journal Jacks 13
Unique construction bearing is made for a longer life and smooth horizontal advance. Rigidly designed screw made by Chrome-molybdenum steel to withstand excessive loads.

Ratchet Jacks 14
Constructed of heavy-duty, rugged material for durability. Large base keeps the unit stable and precision spring will not creep during load applications.

Pulling Jacks 14
Our line of pulling jacks are an ideal choice for drawing heavy objects, positioning structures, welding, or lifting heavy loads. We offer hydraulic, mechanical, and hyrdaulic dual-lock models.

Pumps

page #

Air Pumps 15
When connected to your shop air lines, these versatile pumps can safely deliver up to 10,000 psi (700 bar) of hydraulic pressure to cylinders, small presses, and hydraulic tools.

Electric Pumps 17
No shop air required for operation. These pumps go everywhere with electricity and provide the highest force for cylinders.

Hand Pumps 21
Lightweight for maximum portability. Single & Two-speed pumps are available for use in a variety of applications. Chrome-plated piston rods resist wear and corrosion.

Power Sets & Accessories

Combo Sets 23
Create your own combos based on applications. Mix and match jacks, cylinders with different types of pumps for best performance.

Accessories 25
Choose from any of Zinko's accessories to enhance the versatility of your standard model cylinders, jacks and pumps.

Portable Power KIts 27
Designed for quick and easy use where portable hydraulic power is needed. Choose either single-speed or two-speed pumps for almost any application. All components come in an easy-to-handle carrying case for convenience.

Pushers & Pullers 29
Adjustable handle slides easily into 5 different positions. 360° rotating handle socket gives flexibility in difficult pumping locations. Units come with integral safety relief valve systems. Choose from manual type or pump operated type.

Hydraulic Wedge Jacks & Spreaders 31
Extra low wedge tip makes lifting application possible at a minimum starting height (1/4"). Lightweight, portable; Zinko's wedge jacks make for a simple, one person operation.

Shop Equipment

Shop Presses 32
Standard models are equipped with 2 bed plates and pump handles, and straightness testing support uses centers or v-block. Raise and lower tables easily with hand crank.

Service Jacks 33
From ultra low-height to extra long chassis type. Weight ranges from 42 to 550 pounds, and overall capacity ranges from 1 to 200 tons. Designed to fit a wide variety of applications.

Bead Breaker & Wheel Dolly 36
Smooth air hydraulic action that won't damage the bead or rim. Detach both the inner and outer bead without removing the tire.

Transmission Jacks 37
Highly efficient pump and plunger components gives fast and smooth lifting of transmission in a simple operation minimizing labor.

Shop Equipment 39
Zinko offers a wide variety of shop equipment for almost any automotive application.

Key & Conversion Chart 42
Cylinder Specifications 42
Index 45

Single-Acting Cylinders
Standard and Hollow Type

ZR & ZRH Series

Capacity: 5 to 100 tons
Max. Operating: 10,000 psi
Stroke: 2" to 14"

Features:

1. Designed for use in any positions.
2. Polyurethane seals and wipers reduce contamination.
3. Harden saddles keep top bearing and plunger from jamming while the saddle grooves help prevent slipping.
4. Threaded collar and internal threads withstand full loads for maximum flexibility in fixturing. (Fig.1)
5. Steel top stop ring protects against piston blow-out and allows the cylinder to be operated safely during full stroke application.
6. Heavy-duty return springs enable fast and consistent plunger retraction.
7. High-strength alloy steel construction with chrome-plated piston rods that resist wear and corrosion.
8. One piece copper ring cradles the piston rod and absorbs eccentric loading while providing side load protection.
9. Baked enamel finish for outstanding corrosion prevention.
10. With appropriate accessories, these cylinders can be paired with either hand pumps, air pumps, or electric pumps.

Increase your productivity by using pumps with larger reservoirs. These are widely recommended for production applications. *For detailed information of these Power Sets, and more combinations, please refer to page 23.

Air Pump & Cylinder Sets

Electric Pump & Cylinder Sets

Fig.1

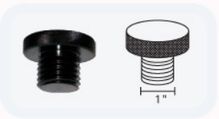
Fig.2

Industrial Quality Cylinders

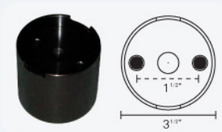
These industrial quality, general purpose cylinders are designed for use in a variety of applications where lifting, pushing, bending or holding may be required. Ideal for use in shop, agricultural, automotive/truck service and construction maintenance.

1. All Models come with 3/8" NPT fast-flow quick-connection coupler and dust cap.
2. All cylinders designed with base mounting holes (5/16-18 UNC) (Fig.2) for easy mounting on almost any fixture, and for easy set up with the adapters listed to the right (Fig.3).
3. Collar plunger threads (Fig.1), and base mounting holes provides for easy fixture. (Fig.2)
4. Optional adapters make it super easy and cost efficient to convert our 10 ton ram to snap-type or threaded-type applications. (Fig.3)

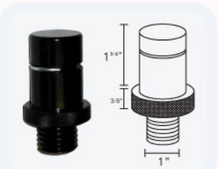
** Refer to page 28 for a wider selection of adapters.*



2110-18 Saddle (additional option)



2110-22 Rod-end threaded type adapter (top view)



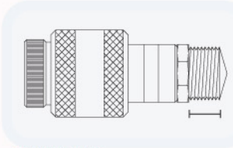
2110-19 Snap-type male connector

2110-22 Rod-end threaded type adapter (bottom view)

2110-20 Threaded-type male connector

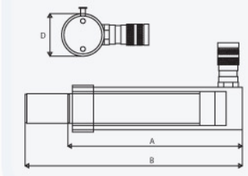
2110-21 Threaded male to snap-type female base adapter

3/8" N.P.T. fast-flow coupler



3/8"-18 NPT

Hand Pump & Cylinder Sets



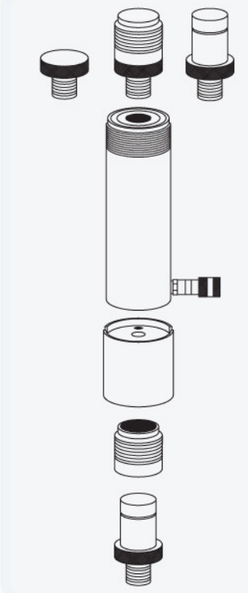


Fig.3

Model Number	Stroke (in)	Oil Capacity (in^3)	Cylinder Effective Area (in^2)	Collapsed Height (in) A	Extended Height (in) B	Outside Dia. (in) D	Ship Weight (lbs)
5 Ton Capacity							
ZR-50	0.63	0.62	0.99	1.63	2.25	2.31	3
ZR-51	1.00	0.99	0.99	4.34	5.34	1.50	3
ZR-53	3.00	2.98	0.99	6.50	9.50	1.50	4
ZR-55	5.00	4.97	0.99	8.50	13.50	1.50	5
ZR-57	7.00	6.96	0.99	10.75	17.75	1.50	6
ZR-59	9.13	9.07	0.99	12.75	21.88	1.50	7
10 Ton Capacity							
ZR-101	1.00	2.24	2.24	3.63	4.53	2.25	4
ZR-102	2.00	4.75	2.24	5.89	7.89	2.25	6
ZR-104	4.00	9.23	2.24	7.89	11.89	2.25	8
ZR-106	6.00	13.7	2.24	9.89	15.89	2.25	10
ZR-108	8.00	17.89	2.24	11.89	19.89	2.25	12
ZR-1010	10.00	22.65	2.24	13.89	23.89	2.25	14
ZR-1012	12.00	26.84	2.24	15.75	27.75	2.25	15
ZR-1014	14.00	31.31	2.24	17.75	31.75	2.25	18
12 Ton Capacity							
ZRH-120	0.31	0.86	2.77	2.19	2.50	2.75	3.2
ZRH-121	1.63	4.52	2.77	4.75	6.38	2.75	6.2
ZRH-1211	1.63	4.52	2.77	4.75	6.38	2.75	6.2
ZRH-123	3.00	8.31	2.77	7.25	10.25	2.75	9.8
15 Ton Capacity							
ZR-151	1.00	3.14	3.14	4.88	5.88	2.75	8
ZR-152	2.00	6.28	3.14	5.88	7.88	2.75	9
ZR-154	4.00	12.59	3.14	7.88	11.88	2.75	11
ZR-156	6.00	18.85	3.14	10.69	16.69	2.75	15
ZR-158	8.00	25.13	3.14	12.69	20.69	2.75	18
ZR-1510	10.00	31.42	3.14	14.69	24.69	2.75	21
ZR-1512	12.00	37.7	3.14	16.69	28.69	2.75	24
ZR-1514	14.00	43.98	3.14	18.69	32.69	2.75	26
20 Ton Capacity							
ZRH-202	2.00	9.46	4.73	6.38	8.38	3.88	17
ZRH-206	6.10	28.67	4.73	12.05	18.11	3.88	31
25 Ton Capacity							
ZR-251	1.00	5.16	5.16	5.50	6.50	3.38	13
ZR-252	2.00	10.31	5.16	6.50	8.50	3.38	14
ZR-254	4.00	20.63	5.16	8.50	12.50	3.38	18
ZR-256	6.25	32.23	5.16	10.75	17.00	3.38	22
ZR-258	8.25	42.55	5.16	12.75	21.00	3.38	27
ZR-2510	10.25	52.86	5.16	14.75	25.00	3.38	31
ZR-2512	12.25	63.18	5.16	16.75	29.00	3.38	36
ZR-2514	14.25	73.49	5.16	18.75	33.00	3.38	39
30 Ton Capacity							
ZR-302	2	12.98	6.49	4.63	7.06	4.00	15
ZR-308	8.25	53.56	6.49	15.25	23.5	4.00	40
ZRH-302	2.50	18.05	7.22	7.03	9.53	4.50	24
ZRH-306	6.13	44.23	7.22	13.00	19.13	4.50	48
50 Ton Capacity							
ZR-502	2.00	22.09	11.04	6.94	8.94	5.00	33
ZR-504	4.00	44.18	11.04	8.94	12.94	5.00	42
ZR-506	6.25	69.03	11.04	11.13	17.38	5.00	51
ZR-5013	13.25	146.74	11.04	18.13	31.38	5.00	83
60 Ton Capacity							
ZRH-603	3.00	38.2	12.73	9.75	12.75	6.25	62
ZRH-606	6.00	76.41	12.73	12.75	18.75	6.25	78
75 Ton Capacity							
ZR-756	6.13	97.41	15.90	11.25	17.38	5.75	65
ZR-7513	13.13	208.74	15.90	19.38	32.50	5.75	130
100 Ton Capacity							
ZR-1006	6.63	136.67	20.63	14.06	20.69	7.00	130
ZR-10010	10.25	211.45	20.63	17.69	27.94	7.00	160

** For complete information on cylinders please refer to page 43.*

ZAR Series

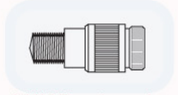
Capacity: 2 to 10 tons
Stroke: 3" to 10"

Automotive Cylinders

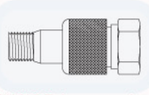
These rugged versatile cylinders are designed for automotive collision repair, and a broad range of tasks that require hydraulic force.

1. All models come with either 1/4" NPT or 3/8" NPT regular-flow quick-connection couplers and dust caps.
2. 10 ton models designed with internal threads, or snap type on rod end (Fig.4 & 5), which can be easily converted for threaded or snap-type application. Matching base is available upon request.
3. 4 ton models come with snap-type inner base (Fig.5)
4. 2 ton model comes with flat-type base and screw extension top.

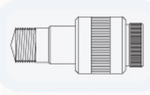
Couplers: 2 ton, 4 ton & 10 ton models



1/4 N.P.T. regular coupler



1/4 N.P.T. L-type coupler



3/8 N.P.T. regular coupler

Snap-together collision repair accessories

For spreader selections please refer to page 31.

Fig.4

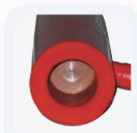
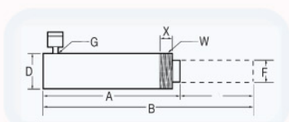
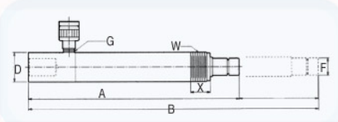


Fig.5

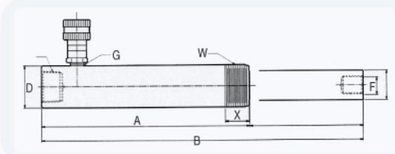
For Collision Repair, please order our snap-together components (shown above) for quick set-up for any jobs.
(CAUTION: For each attachment or component used in the set-up, the rated capacity of the hydraulic system is reduced 50%)



2 ton ram



4 ton ram



10 ton ram

Model Number	Stroke (in)	Oil Capacity (in^3)	Cylinder Effec. Area (in^2)	Coll. Height (in) A	Extend Height (in) B	Outside Dia. (in) D	Weight (lbs)
2 Ton Capacity							
ZAR-023	3.00	2.30	0.79	5.50	8.50	1.38	2
4 Ton Capacity							
ZAR-044SP	4.00	3.90	0.99	10.75	14.75	1.50	4
10 Ton Capacity							
ZAR-106SP	6.00	14.8	2.46	14.25	20.25	2.24	12
ZAR-106T	6.00	14.8	2.46	13.50	19.50	2.24	12
ZAR-1010SP	10.00	24.7	2.46	17.25	27.25	2.24	16
ZAR-1010T	10.00	24.7	2.46	16.50	26.50	2.24	16

** For complete information on cylinders please refer to page 44.*

Model: ZPK-04

Complete power sets are also available.
Please refer to page 27 for selections.

ZRB & ZRM Series

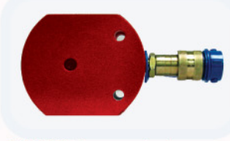
Capacity: 5 to 100 tons
Stroke: 0.25" to 2.25"

ZRM Series Single-Acting Low Height Cylinders

These low height cylinders have a flat and compact design for use where other cylinders will not fit.

1. All models come with a 3/8" NPT fast-flow coupler.
2. Mounting holes allow easy mounting on almost any fixture.
3. Grooved plunger ends require no saddle.

Model: ZRM-050
Model: ZRM-010
Model: ZRM-030

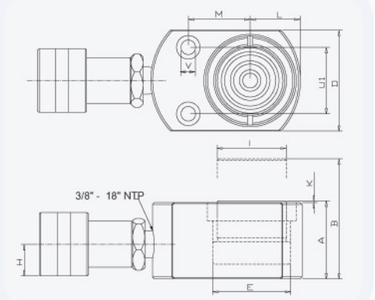


ZRM-050 (bottom view)

ZRM-050 (top view)

Model	ZRM-005	ZRM-010	ZRM-020	ZRM-030	ZRM-050	ZRM-070	ZRM-100
D (in.)	1.63	2.19	3.00	3.75	4.50	5.50	6.00
U1 (in.)	1.12	1.44	1.94	2.06	2.62	3.00	3.00
L	0.81	1.09	1.56	1.88	2.25	2.75	3

L = plunger to base



Model: ZRB-1002

Model: ZRB-302
Model: ZRB-502

Model: ZRB-502 (top view)

Model: ZRB-502 (bottom view)

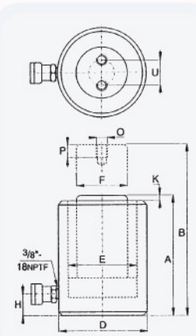
For hose and component options please refer to page 25.

Model Number	Saddle Thread	Thread Depth	Bolt Circle
	O	P	U
ZRB-101	M4	0.32	1.03
ZRB-201	M5	0.32	1.56
ZRB-302	M5	0.32	1.56
ZRB-502	M5	0.32	1.56
ZRB-1002	M8	0.40	2.19

ZRB Series Low Height Cylinders

These lightweight, low profile cylinders are designed for use in confined spaces.

1. All models come with 3/8" NPT fast-flow coupler.
2. Integral handle on 100 ton model for easy carrying.



Model Number	Cylinder Capacity (tons)	Stroke (in)	Oil Capacity (in^3)	Cylinder Effective Area (in^2)	Coll. Height (in) A	Extend Height (in) B	Outside Dia. (in) D	Weight (lbs)
ZRB Series Specifications								
ZRB-101	10	1.50	3.35	2.43	3.47	4.97	2.75	9
ZRB-201	20	1.75	7.77	4.44	3.88	5.63	3.63	11
ZRB-302	30	2.44	15.85	6.50	4.63	7.06	4.00	15
ZRB-502	50	2.38	22.91	9.63	4.81	7.19	4.88	24
ZRB-1002	100	2.25	44.25	19.67	5.56	7.81	6.50	50
ZRM Series Specifications								
ZRM-005	5	0.25	0.25	0.99	1.28	1.53	2.31x1.63	3
ZRM-010	10	0.44	0.98	2.24	1.69	2.13	3.25x2.19	4
ZRM-020	20	0.44	1.95	4.43	2.03	2.47	4.00x3.00	7
ZRM-030	30	0.50	3.25	6.51	2.31	2.81	4.63x3.75	10
ZRM-050	50	0.63	6.07	9.63	2.63	3.25	5.50x4.50	15
ZRM-075	75	0.63	10.03	15.92	3.13	3.75	6.50x5.50	25
ZRM-100	100	0.63	12.39	19.66	3.38	4.00	7.00x6.00	32

** For complete information on cylinders please refer to page 42.*

ZRA Series

Capacity: 30 to 50 tons
Max. Operating: 10,000 psi
Stroke: 2.25" to 6.25"

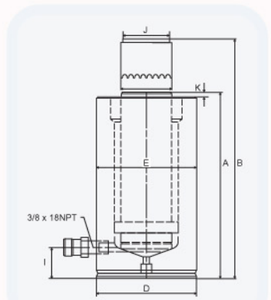
Model: ZRA-502A

Model: ZRA-506A

Aluminum Cylinders

Easily carried around and connected to work with any 10,000 psi air over hydraulic pump. These lightweight and rugged cylinders are suitable for almost every heavy lifting situation, in the shop or job site.

1. All models come with 3/8" NPT fast-flow quick-connection couplers and dust caps.
2. Made of the strongest aluminum alloys and heat-treated to provide a maximum combination of strength and fracture resistance.
3. Grooved saddles for stability. (Fig.6)
4. Steel base-plated for increased durability. (Fig.7)
5. Optional valve to control cylinder speed can also be used as shut off valve for temporary load holding. (Fig.8)
6. Optional aluminum base provides extra support and stability for the 50 tons cylinders. (Fig.9)



Model: ZRA-506
(with base plate & shut-off valve)

Fig.8

Fig.6

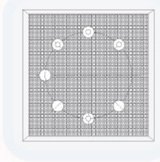


Fig.9

Fig.7

A. Aluminum Ram Base

1. Attaches directly to bottom of ram. Includes serrated holes for extra support and stability.
Size: 7" x 7" square.
For use on 50 ton ram only.
Weight: 4lbs. 6oz. P/N: 195611

B. Couplers

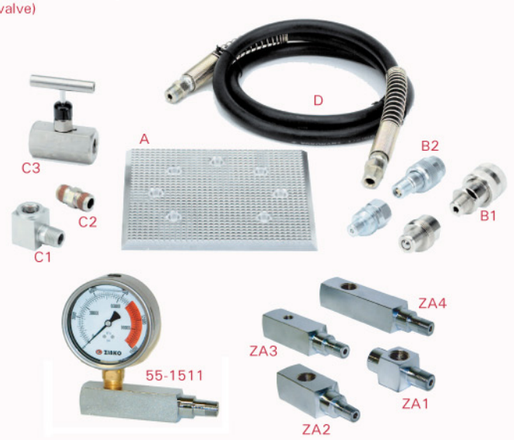
1. Fast-Flow Type: 3/8" NPT
Complete P/N: 195111
Ram Half (female) P/N 195111-R
Hose Half (male) P/N 195111-H
2. Regular Type: 3/8" NPT
Complete P/N: 9210308
Ram Half (female) P/N 9210308-R
Hose Half (male) P/N 9210308-H

C. Valves & Fittings

1. Street Elbow: 3/8" NPT (male) to 3/8" NPT (female) P/N: 195311
2. Hex Nipple: 3/8" NPT (male) to 3/8" NPT (female) P/N: 195341
3. Needle Valve: 3/8" NTP (female) ports to control cylinder speed. Also used as a shut-off valve for temporary load holding. P/N: 195411

D. Hoses

1. Lightweight and rugged (includes coupler).
2. 1/4" I.D. with 3/8" NPT end.
3. Reinforced with 2 layers of braided steel.
4. Operation pressure: 10,000 psi
Minimum burst pressure: 20,000 psi
5. Length: 6' - P/N: 195212-6,
8' - P/N:195212-8, 18' - P/N: 195212-18



For a detailed selection of gauges & fittings, please refer to page 25.

Model Number	Stroke (in)	Oil Capacity (in^3)	Dimensions (in)							Ship Weight (lbs)
			Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Saddle Dia.	
			A	B	D	E	F	H	J	
30 Ton Capacity										
ZR-302A	2.00	13	6.49	8.50	4.45	2.56	2.55	2.27	2.24	14
ZR-304A	4.00	26	8.50	13.22	4.45	2.56	2.55	2.27	2.24	18
ZR-306A	6.00	39	10.79	16.96	4.45	2.56	2.55	2.27	2.24	21
50 Ton Capacity										
ZR-502A	2.25	25	6.93	9.17	5.90	3.74	3.15	1.80	2.81	22
ZR-504A	4.25	47	8.93	13.18	5.90	3.74	3.15	1.80	2.81	27
ZR-506A	6.25	69	10.93	17.16	5.90	3.74	3.15	1.80	2.81	32

* For complete information on cylinders please refer to page 42.

CYLINDERS

Double-Acting Cylinders
Standard and Hollow Type

ZRD & ZRDH Series

Capacity: 10 to 500 tons
Max. Operating: 10,000 psi
Stroke: 6" to 20.13"

Model: ZRH-306

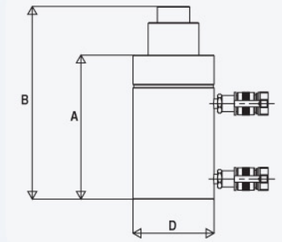
Model: ZRDH-307

Features

1. The double acting is designed to produce greater speed and positive control for applications requiring an extra measure of strength, quality, reliability and safety.
2. Interfaces with automated operations while providing both powered push and pull cycles.
3. All models come with 3/8" NPT fast-flow quick-connect couplers and dust caps.
4. Standard come with threaded collar along with a threaded plunger. The removable hardened saddles protect the plunger during lifting and pressing.
5. Base mounting holes allow easy mounting on almost any fixture. (Fig.10).
6. Hollow type cylinders (Fig.11) - The hollow going through the rod can be used for tensioning such as wire, strand, bolt, rods, etc. When used with head cap on, these hollow cylinders can be used as an ordinary cylinders.
7. Capacities of 400 tons and above are available upon request.

Fig.11

Fig.10



Model Number	Stroke (in)	Oil Capacity (in^3)		Cylinder Effective Area (in^2)		Max. Cylinder Capacity (tons)		Coll. Height (in)	Extended Height (in)	Outside Dia. (in)	Ship Weight (lbs)
		Adv.	Ret.	Adv.	Ret.	Adv.	Ret.	A	B	D	
10 Ton Capacity											
ZRD-1010	10.00	22.33	8.00	2.23	0.80	10	4	16.13	26.13	2.88	28
ZRD-1012	12.00	26.80	9.00	2.23	0.80	10	4	18	30	2.88	31
30 Ton Capacity											
ZRD-308	8.25	53.67	25.00	6.51	3.00	30	15	15.25	23.5	4	40
ZRD-3014	14.50	92.70	43.00	6.51	3.00	30	15	21.63	36.13	4	64
ZRDH-307	7.00	50.51	33.00	7.22	4.71	30	23	13.00	20.00	4.5	48
ZRDH-3010	10.13	73.10	47.70	7.22	4.71	30	23	17.00	27.13	4.5	60
50 Ton Capacity											
ZRD-506	6.13	67.77	21.00	11.06	3.40	50	10	13.06	19.19	5	67
ZRD-5013	13.13	145.17	44.00	11.06	3.40	50	10	20.06	33.19	5	115
ZRD-5020	20.13	222.56	68.00	11.06	34.00	50	10	28.88	49.00	5	150
60 Ton Capacity											
ZRDH-603	3.50	44.57	29.21	12.73	8.37	60	40	9.75	13.25	6.25	62
ZRDH-606	6.50	82.77	54.24	12.73	8.37	60	40	12.75	19.25	6.25	78
ZRDH-6010	10.12	128.94	84.49	12.73	8.37	60	40	17.25	27.38	6.25	101
75 Ton Capacity											
ZRD-756	6.13	97.58	29.00	15.92	4.90	75	17	13.69	19.81	5.75	92
ZRD-7513	13.13	209.00	64.00	15.92	4.90	75	17	20.69	33.81	5.75	150
100 Ton Capacity											
ZRD-1006	6.63	136.93	63.00	20.65	9.60	100	48	14.06	20.69	7	135
ZRD-10013	13.13	271.17	126.00	20.65	9.60	100	48	20.63	33.75	7	205
ZRD-10018	18.13	374.44	174.00	20.65	9.60	100	48	27.06	45.19	7	260
150 Ton Capacity											
ZRD-1502	2.25	69.11	33.00	30.71	14.80	150	74	7.72	9.96	8	110
ZRD-1506	6.13	188.28	91.00	30.71	14.80	150	74	15.19	21.31	8	205
ZRD-15013	13.13	403.27	194.00	30.71	14.80	150	74	22.20	35.31	8	275
ZRD-15032	32.13	986.84	475.00	30.71	14.80	150	74	43.94	76.06	8	525
200 Ton Capacity											
ZRD-2006	6.00	265.28	135.00	44.21	22.50	200	112	16.94	22.94	9.75	325
ZRD-20013	13.00	574.78	293.00	44.21	22.50	200	112	23.94	36.94	9.75	440
300 Ton Capacity											
ZRD-3006	6.00	425.56	228.00	70.93	38.00	300	188	19.13	25.13	12.25	441

* For complete information on cylinders please refer to page 44.

ZN, ZNB, ZNP & ZT Series

Capacity: 2 to 100 tons

Features:

1. Welded steel construction throughout reduces metal fatigue allowing for a longer life.
2. Unique base forging method increases resistance to high pressure and gives a degree of durability and performance not found in any other comparable product.
3. ZN models are usable in multiple positions: upright, angled, or horizontal. (Fig.10)
4. Special grade steel results in high durability and helps to prevent rust.
5. Casting, cylinder, and base are jointed by an electric welding method for high strength and to prevent leaking.
6. Needle valve allows you to control the lowering of the ram.
7. Heat-treated extension screws provide a low pickup height adjustment and maximum lift height.
8. Safety valve device protects the hydraulic system from overload damage (for 35 ton model and above).

Fig.10

1. When used in horizontal position, pump must be in the position as illustrated.
2. When used horizontally, hydraulic stroke falls to about 70%

Model Number	Capacity (Tons)	Dimensions (in)					Ship Weight (lbs)
		Min. Height	Max. Height	Ram Lift	Screw Extension	Base Area	
Standard & Low - Forged Steel Base Bottle Jacks							
ZN-2	2	7 1/8	13 1/2	4 1/2	2	2 1/2 x 4 1/4	6
ZN-3	3	7 1/2	14 3/8	4 1/2	2 3/8	2 7/8 x 4 1/2	6
ZN-5	5	7 7/8	15 3/8	4 3/4	2 3/4	3 x 5 1/8	8
ZN-8	8	7 7/8	15 3/8	4 3/4	2 3/4	3 1/2 x 6	12
ZN-12	12	9 1/2	18 1/2	5 7/8	3 1/8	4 1/8 x 6 1/2	18
ZNB-12	12	6 3/4	13 3/8	3 3/4	3	4 1/8 x 6 1/2	15
ZN-17	17	10 3/8	20	6 1/2	3 1/8	4 5/8 x 7	23
ZNB-17	17	6 3/4	13	3 1/2	2 3/4	7 1/8 x 4 5/8	18
ZN-22S	22	10 5/8	20 1/8	6 1/4	3 1/4	5 x 7 1/8	30
ZNB-22	22	7 1/8	12	3 3/8	1 1/4	5 x 7 1/8	27
ZN-35	35	11	17 1/4	6 1/4	--	5 5/8 x 7 1/2	45
ZNB-35	35	7 1/8	10 1/4	3 1/8	--	7 9/16 x 5 9/16	41
ZN-60	60	12	18 3/4	6 3/4	--	9 5/16 x 7 3/8	82
Steel Base Bottle Jacks							
ZNP-8	8	7 7/8	15 3/8	4 3/4	2 3/4	3 1/2 x 4 3/4	10
ZNP-12	12	9 1/2	18 1/2	5 7/8	3 1/8	4 1/8 x 5	16
ZN-100	100	12	17 3/4	5 3/4	--	12 1/2 x 10 7/16	207
Cast Iron Base Bottle Jacks							
ZT-2	2	7 7/8	13 5/8	4 1/2	2	3 3/4 x 3 5/8	6
ZT-4	4	8	15 3/8	5	2 3/8	4 x 3 7/8	8
ZT-6	6	8 5/8	16 5/8	5	3	4 3/8 x 4	10
ZT-12	12	9 1/2	18 5/8	6	3 1/8	5 1/4 x 5 1/8	12

ZMJ, ZHFD & ZMHL Series

Capacity: 2 to 50 tons

Long Ram Jacks

1. Extra long chrome-plated ram for work with long travel.
2. SP models have a hole and are designed to be used with a crane.
3. Models ZMHL-2 & ZMHL-20 can be used vertically, horizontally, or at an angle.

Flat top design

SP model

With base plate (Part #: 9110-4B)

Fig.11

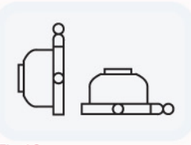


Fig.12

Hydraulic Telescoping Jack

1. Very low clearance makes the ZHFD-10F ideal for machine or forklift maintenance lifting.
2. Add extra height by using the 1.75" saddle. (Fig.11)

All of Zinko's bottle style jacks can be fitted with accessories upon request such as a foot pedal or pressure gauge as shown here.

Mini Jacks

1. Compact, and powerful with a very low profile.
2. Small size is ideal for centering heavy equipment or making fine adjustments.
3. Can be used in conjunction with a mechanical gear puller to create a hydraulic puller with over 5 ton capacity.
4. Can also be used as a spreader to apply force with just over 2-1/2" of clearance needed.
5. Use in either an upright or horizontal position. (Fig.12)

Model Number	Capacity (Tons)	Dimensions (in)					Ship Weight (lbs)
		Min. Height	Max. Height	Ram Lift	Saddle Diameter	Base Area	
Mini Jacks							
ZMJ-5C	5	2 1/2	3 1/2	3/4	1 1/8	3	7
ZMJ-5T	5	3 3/8	4 7/8	1 1/2	1 1/8	3	10
ZMJ-10	10	4 3/4	5 7/8	1 1/8	1 5/8	4 3/8	16
ZMJ-20	20	5 1/8	6 1/4	1 1/8	2	4 3/4	16
ZMJ-50Y	50	5 5/8	6 3/4	1 1/8	3 1/8	7	22
Hydraulic Telescoping Jacks							
ZHFD-10F	10	4 3/4	10 1/4	4	1 1/2	5 5/8 x 7 1/2	15
Long Ram Jacks							
ZMHL-2-2	2	21 5/8	40 1/2	18 7/8	1 1/8	3 x 5 1/4	20
ZMHL-2SP	2	23	41 7/8	18 7/8	3/4	3 x 5 1/2	20
ZMHL-4SP	4	24 1/4	45	20 3/4	1	4 5/8 x 6	26
ZMHL-8SP	8	24 1/4	45	20 3/4	1 1/2	4 3/8 x 6 5/8	39
ZMHL-20	20	27	46 1/4	19 1/4	2 3/8	5 3/4 x 91/2	114

ZABJ & ZAPJ Series

Capacity: 12 to 35 tons

Model: ZABJ-20C3

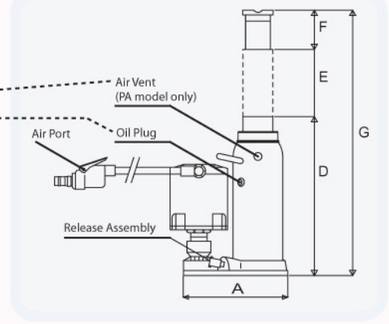
Air Hydraulic Bottle Jacks

1. Welded steel construction reduces metal fatigue allowing for a longer life.
2. Forged steel base increases resistance to high pressure and increases durability.
3. Oil bypass system prevents the lifting ram from overextending.
4. Safety valve device protects hydraulic system from overload damage.
5. In-line screen attached for convenient air valve prohibits contaminations from entry into the air hydraulic system.
6. The PA model comes with an air vent to bleed air from the jack.

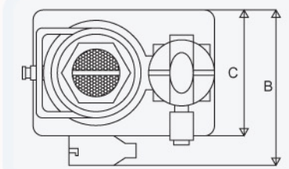
ZABJ-22PA

Air Hydraulic/Manual Bottle Jacks

1. Operates both manually and pneumatically.
2. Fast and efficient air pump saves lifting time; has its own built-in safety valve to prevent overload.
3. Heat treated extension screw and release valve adds extra strength and life span.
4. Extremely strong and well designed swivel head bolt with 360° movement to prevent hose binding.
5. Spring coil protectors on both ends to prevent punctures.
6. Rust preventive coating on ram and extension screw.
7. Convenient push button flap type air operation valve.
8. Durable ductile iron base with 3 piece zinc plated handle.
9. Properly placed welded carrying handle for easy transport.



Model: ZAPJ-22



Air Hydraulic Portable Jacks

1. Ram retracts by self-retracting spring.
2. Forged steel base increases resistance to high pressure and increases durability.
3. Standard attachment wheels with handle and carriage bar enables continuous maneuverability underneath the working area.
4. Extension screw and optional adapters ensure maximum lift in closing the gap to the jacking point.

Model Number	Capacity (Tons)	Lifting Time By Air Supply		Air Press. Range (psi)	Dimensions (in)							Ship Weight (lbs)
		No Load	Load		Base A	Base B	Base C	Min. Ht. D	Lift E	Screw Ext. F	Max Ht. G	
ZAPJ Series												
ZAPJ-22	22	60	210	40 - 140	7 3/4	--	5 1/8	8 1/4	4 5/8	4 1/8	19 3/8	36
ZAPJ-25	25	52	150	40 - 140	7 9/16	--	5 5/8	9	4 5/8	4 1/8	17 3/4	47
ZABJ Series												
ZABJ-12C2	12	40	125	40 - 140	8	6	4 7/8	9 11/16	5 7/8	3 1/8	18 11/16	24
ZABJ-20C3	20	50	153	40 - 140	8 3/4	6 3/4	6	9 11/16	5 7/8	3 1/8	18 11/16	33
ZABJ-12M	12	40	159	40 - 140	6 1/2	--	4	9 1/2	5 1/4	3 1/4	18	24
ZABJ-22M	22	50	195	40 - 140	7 1/4	--	5	10 1/2	6	3	19 1/2	34
ZABJ-22PA	22	50	195	40 - 140	7 1/4	--	5	10 1/2	6	3	19 1/2	34
ZABJ-22MB	22	40	153	40 - 140	7 1/4	--	5	7 1/4	3 1/4	1 3/4	12 1/2	26
ZABJ-35M	35	60	210	40 - 140	7 9/16	--	5 5/8	11	6 1/4	--	17 1/4	48

ZHC & ZDUW Series

Capacity: 1 to 25 tons

Quality Rigging & Machinery Moving Supply

Use the safe dependable toe jacks and speed rollers to safely lift and move a heavy load in a low clearance situation. Super low height (the lowest in the industry) toe jacks, ease operation under the most difficult situations. These are the best choice for lifting heavy machinery and cargo, especially when installing industrial machinery, relocating shipyard equipment, or during bridge and plant construction. Range in capacity. Used these toe jacks with the "industrial strength" speed roller for moving heavy, oversized equipment and cargo safely. All-steel rollers securely support and transport extra heavy loads in a safe, worker-wise manner. They come in sizes to easily handle 1 to 25 tons.

Combo: ZHC-5VP w/ ZAP-40 air pump

Fig.12

Fig.13

Model: ZHC-2V

Model: ZHC-12VP

Model: ZHC-5V

Toe Jacks

1. 360° turn lever socket for operation at any direction. (Fig.12)
2. Low toe height is ideal for use where clearance is tight.
3. Designed for fine adjustments. Ideal for delicate work such as installation of precision machines.
4. Welded steel construction prevents oil leakage and a special heat treatment that reduces metal fatigue.
5. Optional coupler connection port available upon request for 5-25 tons toe jacks, which make these toe jacks ready to be used with any air pump. (Fig.13)

Model Number	Capacity (Tons)	Min. Ht. (in)		Max Ht. (in)		Ram Lift (in)	Toe Area (in)	Base Area (in)	Ship Wt. (lbs)
		Toe	Head	Toe	Head				
ZHC-2V	2	5/8	7 7/8	5 1/16	12 3/8	4 7/16	2 x 2	5 x 7	21
ZHC-5V	5	7/8	9 3/8	5 1/2	14 1/4	4 3/4	2 1/4 x 3	7 1/2 x 10 1/2	53
ZHC-12V	12	1 1/8	12 7/8	6 3/4	18 1/2	5 5/8	2 1/8 x 4	9 1/2 x 11 1/2	84
ZHC-15V	15	1 1/8	13 1/4	6 5/8	18 3/4	5 1/2	2 3/8 x 3 3/8	9 1/2 x 11 1/2	93
ZHC-25V	25	1 1/4	14 3/4	6 3/4	21 1/4	5 1/2	2 3/8 x 4 3/4	12 x 12	165

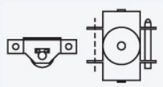
Speed Rollers

1. Selection of 3 different types of speed rollers.
2. Low-profile type (P series) are lightweight with a low overall height, assuring user safety while transferring heavy loads with a low center of gravity.
3. Standard type rollers contain single and double rows of rollers for straight forward movements.
4. Swing rollers (Bogie type) can turn up to 35°, enabling an easy change of direction while loaded.
5. Urethane rollers made of high-strength elastic are used to reduce the starting force. In addition, they are oil resistant and extremely durable.
6. All models feature a free-turning top plate making it easy to rotate a heavy load.
7. Special heavy-duty aluminum alloy casted versions are available upon request.

ZDUW-1P (top view)

ZDUW-1P (bottom view)

ZDUB (bottom view)



Model Number	Capacity (Tons)	Overall Height (in)	Overall Width (in)	Overall Length (in)	Table	Roller (Pcs)	Ship Wt. (lbs)
ZDUW-1P	1	2 5/8	7 3/4	10 1/4	6 1/8	4	11
ZDUW-3P	3	3 1/8	8 5/8	10 1/4	6 1/8	4	20
ZDUW-5P	5	4 1/8	8 5/8	12	7	4	32
ZDUW-10P	10	5	12 1/2	14	9	4	72
ZDUW-1.5	1.5	4 1/8	8 1/2	8 1/4	4 1/8	2	18
ZDUW-2.5	2.5	5	12 3/8	9 7/8	6	2	42
ZDUW-2	2	3 1/8	8 1/2	9 7/8	6	4	24
ZDUW-3	3	4 1/8	8 1/2	11 5/8	7 7/8	4	33
ZDUW-5	5	5	12 3/8	14	9 1/2	4	79
ZDSW-10	10	3 1/8	8 1/2	9 7/8	6	4	29
ZDSW-15	15	4 1/8	8 1/2	11 5/8	7 7/8	4	44
ZDSW-20	20	5	12 3/8	14	9 1/2	4	90
ZDUB-2	2	4 1/8	9 7/8	11 7/8	7 7/8	2.2	78
ZDUB-3	3	5	12 1/8	14	9 1/2	2.2	86
ZDUB-5	5	4 1/8	9 7/8	11 7/8	7 7/8	2.2	44
ZDUB-10	10	5	12 1/8	14	9 1/2	2.2	90

ZJJ & ZAJ Series

Capacity: 10 to 100 tons

Model: ZJJ-3535

Model: ZJJ-2513

Features:

1. Unique construction bearing is made for longer life and smooth horizontal advance.
2. Rigidly designed screw made by Chrome-molybdenum steel to withstand excessive load.
3. Beveled gear construction combines the precision forge pinion to provide shifted tooth form for strong and excellent interlocking. (Fig.14)
4. Special ratchet handle interior design with nickel-chrome wheel and plunger enables strong rotation for any easy, smooth operation. (Fig.14)
5. Buttress threads will not creep down under load. (Fig.14)
6. Operable vertically or laterally to move materials by integrated with traversing bed.
7. ZAJ series are constructed of aluminum alloy, reducing overall weight.

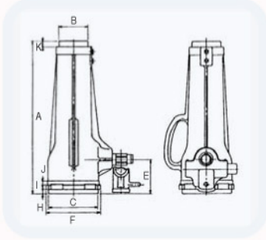


Fig.14

Model: ZAJ-1510

Model Number	Capacity (Tons)	Stroke (in)	Operation Force (Ft./ lb.)	Dimensions (in)									Ship Wt (lbs)
				A	B	C	E	F	H	I	J	K	
Steel Journal Jack													
ZJJ-1015	10	6	185	11	2 1/2	4 1/4	3	4 3/4	5/16	7/16	3/8	9/16	26
ZJJ-1513	15	5	310	10	2 1/2	4 3/8	3	5	3/8	3/8	3/8	5/8	27
ZJJ-2513	25	5	520	10	3	5	3 1/2	5 1/2	1/2	7/16	3/8	9/16	35
ZJJ-2525	25	10	520	15 1/2	3	5	3 1/2	5 1/2	1/2	7/16	3/8	9/16	46
ZJJ-2533	25	13	520	19	3	5	3 1/2	5 1/2	1/2	7/16	3/8	9/16	55
ZJJ-3020	30	8	630	13 3/4	3 3/4	5 7/8	3 7/8	6 3/8	1/2	1/2	3/8	9/16	57
ZJJ-3513	35	5	740	11	3 3/8	5 3/4	4	6 3/8	1/2	1/2	9/16	3/4	53
ZJJ-3525	35	10	740	16	3 3/8	5 7/8	4	6 3/8	1/2	1/2	9/16	3/4	70
ZJJ-3535	35	13 3/4	740	21	3 3/8	5 3/4	4	6 3/8	1/2	1/2	9/16	3/4	84
ZJJ-5013	50	5	1030	11 3/8	4 1/8	6 1/2	4 3/16	7 3/16	5/8	9/16	5/8	3/4	68
ZJJ-5025	50	10	1030	17 1/2	4 1/8	6 1/2	4 3/16	7 3/16	5/8	19/32	5/8	3/4	95
ZJJ- 5035	50	13 3/4	1030	21 7/8	4 1/4	6 1/2	4 3/16	7 3/16	5/8	9/16	5/8	3/4	108
ZJJ-10011	100	4	740	12 1/4	5	9 1/4	--	--	--	--	--	--	165
Aluminum Journal Jack													
ZAJ-1008	10	3	185	6 15/16	7	2 1/2	4 1/4	3	4 3/4	1/4	1/4	1 1/8	14
ZAJ-1510	15	4	310	7 7/8	8	2 1/2	5 3/8	3	5	1/4	3/8	5/8	15
ZAJ-2510	25	4	520	7 7/8	8	2 7/8	5 1/2	3 1/2	5 1/2	1/2	3/8	4/7	21

** Traversing Bed, Safety Bed, or Toe with Traversing Bed are also available upon request.*

ZTU Series

Capacity: 5 to 10 tons

Ratchet Jacks

1. Constructed of heavy-duty, rugged material for durability.
2. Double-lever sockets for jacking in close quarters.
3. Special steel made pawl adds strength and safety.
4. Large base keeps the unit stable and precision spring will not creep up during load applications.
5. Supports full rated capacity on the toe as well as the cap.

Model: ZTU-1026

Model: ZTU-1529

Model Number	Capacity (Tons)		Stroke (in)	Closed Height (in)	Height to Toe (in)	Handle Torque (lbs-F)	Handle Bar (ø x in)	Weight (lbs)
	Head	Toe						
ZTU-524	5	5	9 7/16	16	1 13/16	54	1 x 30	38
ZTU-1026	10	10	10 1/4	20	2 3/8	146	1 x 63	64
ZTU-1529	15	15	11 7/16	22	2 5/8	221	1 x 63	88

ZDL & ZPL Series

Capacity: 5 to 30 tons

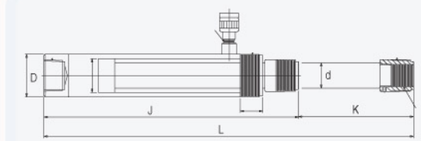
The Pulling Jack is ideal for drawing heavy objects, positioning structures, welding, or lifting heavy loads.

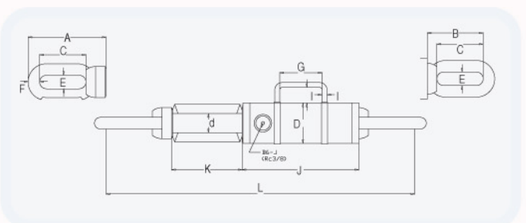
Hydraulic Pulling Jack

The Hydraulic Pulling Jack is designed for use with single acting pumps. The remote operation makes setting direction easier, and is ideal for use in a limited clearance area.

Model: ZPR-106

Model: ZPL-2015





Model Number	Cylinder	Push Force (ton)	Pulling Force (Ton)	Stroke (in)	Pressure (psi)	Usable Oil Cap (in3)
ZPR-056	S	5	5	6	10000	15
ZPR-106	S	10	10	6	10000	22
ZPL-1015	S	10	10	5 7/8	10000	42
ZPL-2015	S	20	20	5 7/8	10000	42
ZPL-3015	S	30	30	5 7/8	10000	42
ZPL-2510	G	25	25	3 15/16	---	---

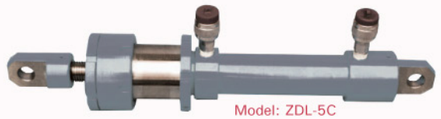
Model: ZPL-2510

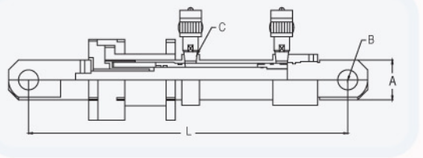
Mechanical Pulling Jack

This mechanical pulling jack is made of high strength alloy steel and is applicable in any case that hydraulic operation is not available.

Model Number	Outside Dimensions (in)										Ship Weight (lbs)
	L	A	B	C	D	d	E	F	H	J	
ZPL-1015	29 1/2	6 1/8	5 3/8	4 3/4	2 5/8	1 1/8	1 1/4	7/8	1 1/2	10 3/4	22
ZPL-2015	31 3/8	6 3/4	5 1/2	4 3/4	4 1/8	2	1 3/8	1 1/8	1 5/8	11 3/4	53
ZPL-3015	34 1/4	7 5/8	7 5/8	5 7/8	4 3/4	2 3/8	2 1/4	1 1/4	1 5/8	11 3/4	69
ZPL-2510	28 1/8	---	---	4 3/4	---	---	1 3/8	1 1/8	---	---	71
ZPR-056	19 3/8	---	---	---	2 1/4	1 3/8	---	---	---	13 3/8	14
ZPR-106	19 1/2	---	---	---	2 1/4	1 3/8	---	---	---	13 1/2	73

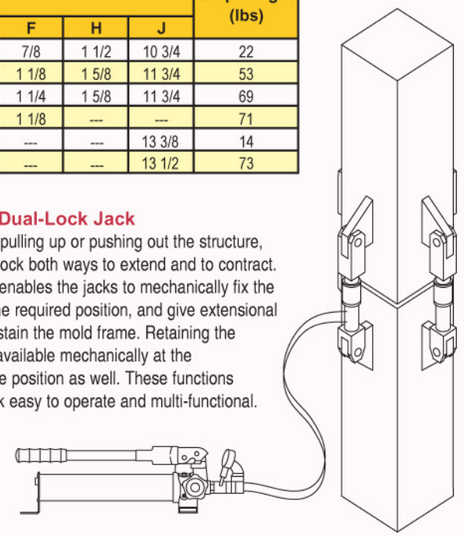
S = Single Acting, D = Double Acting, G = Gear Box


Model: ZDL-5C



Hydraulic Dual-Lock Jack

In addition to pulling up or pushing out the structure, this jack can lock both ways to extend and to contract. This function enables the jacks to mechanically fix the structure at the required position, and give extensional support to sustain the mold frame. Retaining the piston rod is available mechanically at the optional stroke position as well. These functions make this jack easy to operate and multi-functional.



Model Number	Cylinder	Push Force (ton)	Pulling Force (Ton)	Stroke (in)	Pressure (psi)	Usable Oil Cap (in^3)	Outside Dimensions (in)			Ship Wt. (lbs)
							L	A	B	
ZDL-5C	D	5	2 1/2	5 7/8	5800	11 5/8	17 1/2	1 3/4	2 - 3/4	21
ZDL-5F	D	5	2 1/2	5 7/8	5800	11 5/8	17	5	---	28
ZDL-10C	D	10	5	5 7/8	7400	18 5/8	20	2 3/8	2- 1 1/8	37.4
ZDL-10F	D	10	5	5 7/8	7400	18 5/8	18 1/2	5 7/8	---	48.4
ZDL-15C	D	15	7 1/2	5 7/8	7000	28 5/8	22	3	1- 1 1/2	55

JOURNAL/MECHANICAL JACKS

ZAP Series

Single Speed Air Pump
Operates: 40-140 psi (3-10 bar)
shop air supply relief valve
Setting: Up to 10,000 psi (700 bar)

Model: ZAP-101

Turn ordinary shop air pressure into hydraulic power.

Features:

When connected to your shop air lines, these versatile pumps can safely deliver up to 10,000 psi (700 bar) of hydraulic pressure to cylinders, small presses, and hydraulic tools for lifting, crimping, pipe cutting, pulling, and many other applications.

1. All models feature an internal relief valve to protect system components.
2. Portable to any job site equipped with compressed air. Takes the place of manual pumps, which reduces operator fatigue.
3. A reliable all-metal air motor make for easy maintenance.
4. An internal relief valve helps protect system components.
5. While connecting this pump with multiple cylinders, larger reservoir is more efficient for the applications.
6. With appropriated valves & accessories (Fig.15), these pumps can easily connect and work with 2 to 4 cylinders.

ZAP-101

1. This model beats the leading competitors in oil flow delivery by as much as 2 to 1, doing more work in less time.
2. Two stage release mechanism for fast ram return while reducing hydraulic shock.
3. Operates easily by hand or foot.
4. Shipped with shipping screw for leak protection, switch to air vent before use to increase performance (Fig.16).
5. Standard size comes with heavy-duty anodized aluminum reservoir. Aluminum reservoir with see through window (Fig.17), or plastic reservoir (Fig.18) will be available upon request. These reservoirs are interchangeable.

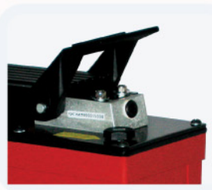
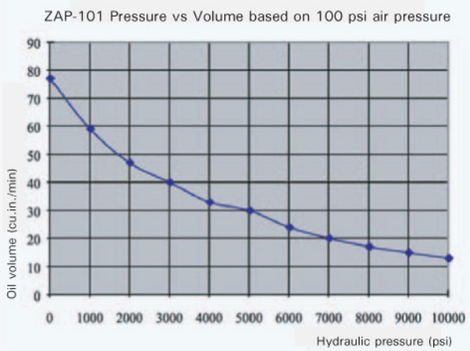


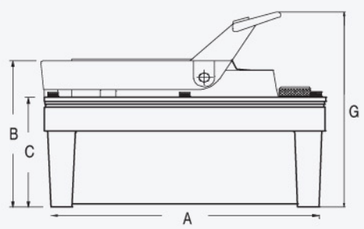
Fig.16

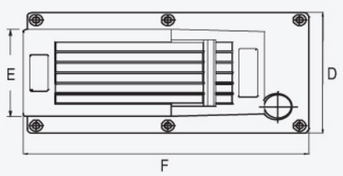
Fig.15

Fig.17

Fig.18







ZAP-102 & ZAP-103

The ZAP-102 and ZAP-103 come with all steel metal reservoir, which are not only stronger, but also increase the usable oil capacity from 183 cu.in. to 305 cu.in.

In order to provide lightweight and oil consumption mobility, our plastic reservoir comes in three interchangeable sizes. Each comes in one kit which includes the reservoir along with all necessary components to convert these pumps to your desired application.

Part # 922-101P reservoir (98 cu.in.)
Part # 922-103P reservoir (305 cu.in.)
Part # 922-104P reservoir (454 cu.in.)

Reservoir Replacement Kits Include:
Top mounting plate, reservoir, bolts, and fittings.

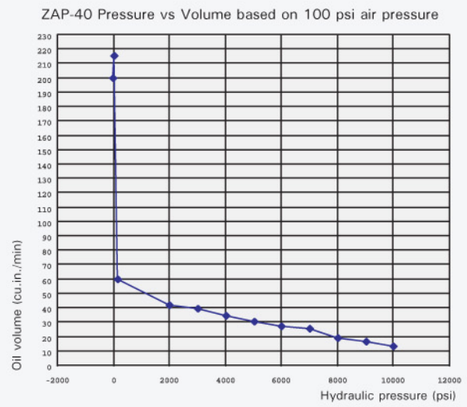
ZAP-104

While lightweight and see through reservoir are important to the work place, the ZAP-104 is the right choice for the work place. The plastic reservoir has a 454 cu. in oil capacity.

Model:
ZAP-40 & ZAP-62

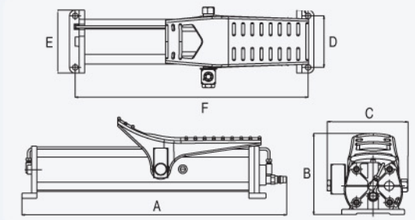
The ZAP-40 is used for tools and smaller cylinders, while the ZAP-62 is used for cylinders as large as 55-ton capacity. These are also the models that we recommend to be used with ZHC Toe Jack with air port.

For optional combinations featuring these pumps and toe jacks, please refer to page 23.



ZAP-40 & ZAP-62

1. Exclusive "air-thrust" design rapidly takes up slack, putting the cylinder rod or tool in work position within seconds.
2. Convenient 360 degree swivel hose connector for better hose control and increase the flexibility for work in any position.
3. Heavy duty anodized aluminum housing is extremely durable.
4. Compact, light-weight design for easy handling and storage.



Model Number	Oil Capacity (in^3)	Pressure Rating (psi)	Output Flow Rate (in^3/min.)		Air Press. Range (psi)	Dimensions (in)							Oil Port (in)	Ship Weight (lbs)
			No Load	Load		A	B	C	D	E	F	G		
ZAP-40	37	10000	215	12	40 - 140	18.14	5.51	5.7	3.54	4.33	15.98	0.374	3/8" NPT	16
ZAP-62	61	10000	215	13	40 - 140	22.08	5.51	5.7	3.54	4.33	19.92	0.374	3/8" NPT	17
ZAP-101	98	10000	77	13	40 - 140	8.05	6.04	4.53	9.53	9.36	4.36	3.56	3/8" NPT	21
ZAP-101V	98	10000	77	13	40 - 140	8.05	6.04	4.53	9.53	9.36	4.36	3.56	3/8" NPT	21
ZAP-102	183	10000	77	13	40 - 140	8.30	6.29	4.78	12.00	12	5.63	3.87	3/8" NPT	27
ZAP-103	305	10000	77	13	40 - 140	8.30	6.29	4.78	12.00	12.00	8.00	3.87	3/8" NPT	40
ZAP-104	454	10000	77	13	40 - 140	10.63	8.63	7.11	10.82	11.89	9.21	3.59	3/8" NPT	63

ZPE-35 Series

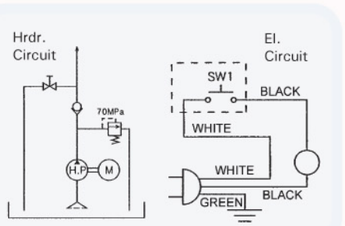
Max. Operates: Capable uo to 10,000 psi (70 Mpa)
Power by: 1/3HP, 2000 rpm commutator motor.

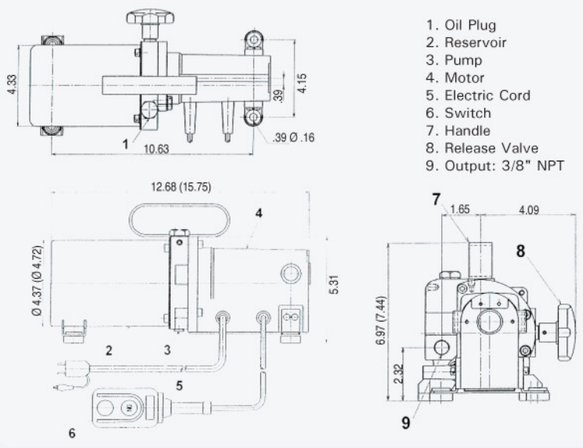
Model:
ZPE-35RH-1ML

Features:

1. All Models come equipped with either an easy carry handle or a shoulder strap.
2. Except for model ZPE-35RH-1MB & ZPE-35RH-1MBL designed with the control switch attached to pumps, all models have remote pendant switches.
3. Super lightweight and compact for portability. Ideal for use with hydraulic pullers, pipe benders, cable tools and jacks.
4. These pumps are fully sealed, making them ideal for outdoor use, and can operate in any position.
5. Optional battery operated 12V & 24V DC models are available upon request.
6. Optional solenoid and 4-way manual control valves are also available upon request.

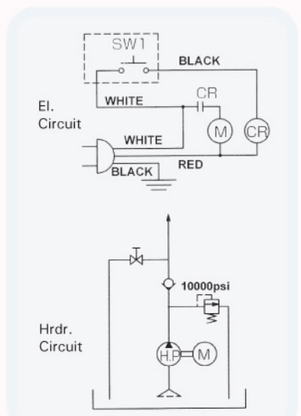
Refer to Order Options on next page & Accessories on page 25 for details.

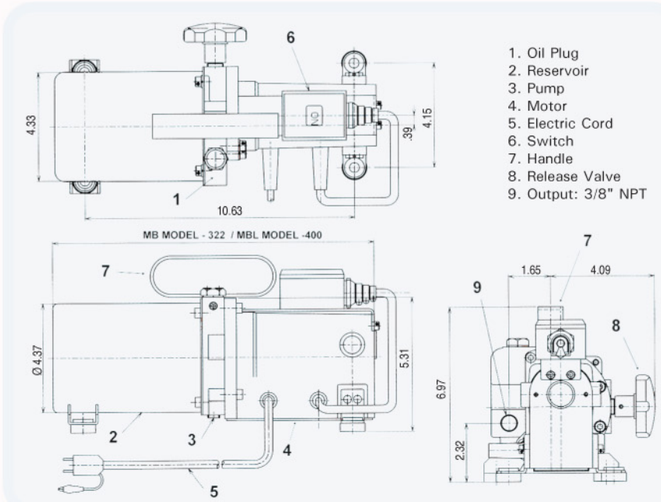




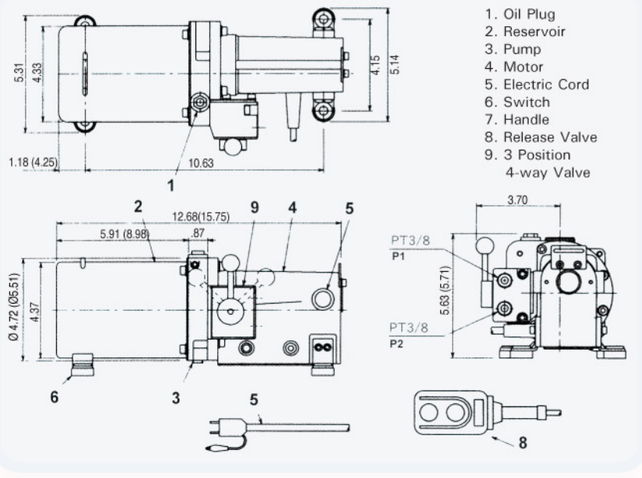
Model:
ZPE-35RH-1MBL

Model:
ZPE-35RH-1MB

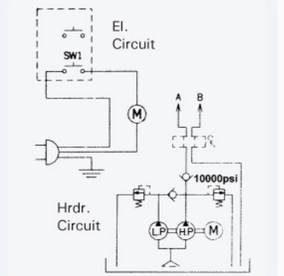




The 4M & 4ML models are specially designed to work with a double acting cylinder. The 4-way, 3 position valve has "advance", "hold", and "return" positions. Cylinder ports are locked in "hold" position, and pump flow is directed back to the reservoir.



Model: ZPE-35RH-4M



Model Number	Motor (50/60Hz)				Performance				Reservoir	
	Type	AC (V)	Output (HP)	Revolution (rpm)	Max. Press (psi)		Output (in^3/min.)		Capacity (in^3)	Capacity (in^3)
					2nd Stage High	1st Stage Low	2nd Stage High	1st Stage Low		
ZPE-35RH-1M	E	110	1/3	2,000	10,000	145	18	37	61	49
ZPE-35RH-1ML	E	110	1/3	2,000	10,000	145	18	37	120	98
ZPE-35RH-1MB	E	110	1/3	2,000	10,000	145	18	37	61	49
ZPE-35RH-1MBL	E	110	1/3	2,000	10,000	145	18	37	120	98

ZPE-35RH Portable Electric Pump Order Options

For Use With	Model No. ZPE	Reservoir Cap. (in^3)	Valve		Wt. (lbs)
			Type	Function	
Single Acting Cylinder	ZPE-35RH-1M	60	2 Way Manual	Remote pendant switch provided.	17
	ZPE-35RH-1ML	120	Standard	When pump "ON", close valve to hold load, open valve to return.	18
	ZPE-35RH-1MB	60	2 Way Manual	Switch attached to pump.	17
	ZPE-35RH-1MBL	120	Standard	When pump is "ON", close valve to hold load, open valve to return.	18
	* ZPE-35RH-NC	60	Normally Closed	Pressure hold type:	17
	* ZPE-35RH-NCL	120	2 Way Manual	Valve remains closed during operation.	18
	* ZPE-35RH-NC-D12	60	Solenoid	To be operated by 12V Battery.	17
	* ZPE-35RH-NC-D24	60		To be operated by 24V Battery.	18
	* ZPE-35RH-NO	60	Normally Open	Auto return type:	17
	* ZPE-35RH-NOL	120	2 Way Manual	Valve remains open during operation.	18
			Solenoid	With optional pressure switch, cylinder can be stopped at set pressure and return automatically.	
	* ZPE-35RH-IN	60	2 Way Manual	Pressure hold type:	17
	* ZPE-35RH-INL	120	Solenoid	Cylinder can be stopped on both advance & return positions.	18
	* ZPE-35RH-IN-D12	60		To be operated by 12V Battery.	17
	* ZPE-35RH-IN-D24	60		To be operated by 24V Battery.	18
Double Acting Cylinder	ZPE-35RH-4M	60	4 Way, 3 Position	Switch control pump "ON" and release for "OFF"	17
	* ZPE-35RH-4ML	120	Manual Solenoid	4 different designed valves available for varies applications. Refer to page 20 for valve details.	18

* Available upon request.

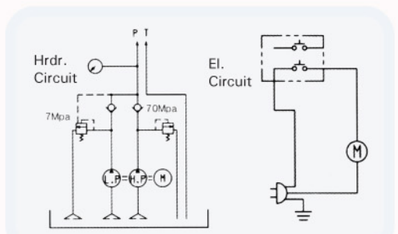
ZPE-45 Series

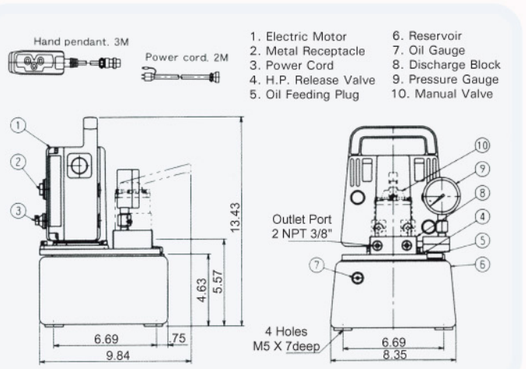
Max. Operates: Capable uo to 10,000 psi (700 bar)
Power by: 0.6HP single-phase commutator,
insulation "E" type motor.

Model: ZPE-45SVG-1L

Features:

1. These pumps feature a special 2-stage operation that provides a high flow rate of 153 cu. in. at first stage and up to 1015 psi by means of unloading valves. Automatically matches pump performance to the job requirements.
2. Standard size comes with 3 way manual valve for use with single-acting cylinders. 3 way-Advance/Hold/Retract. 2-way solenoid valves also available upon request.
3. 4 way/3 position valve for use with double-acting cylinders. Designed to easily accept various kinds of stacking valves such as solenoid valves, relief valves, and check valves.
4. Lightweight and portable, weighing between 35-44 lbs. Pump come with easy carrying handle and remote pendant switches.
5. Choose from models with options that include adjustable pressure regulator, pressure switch, and valves. Solenoid valved pumps combine maximum productivity, plus easy use, and are the ideal choice for production, lifting, and maintenance applications.
6. Standard size comes with 2 gallon reservoir, and has 1.5 gallon usable oil. Larger size reservoir also available upon request.



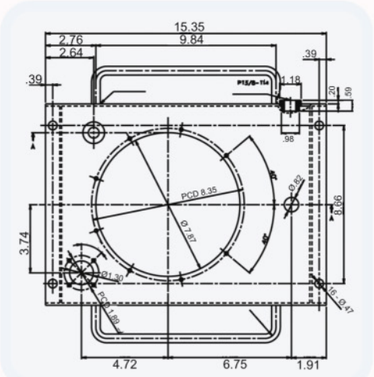


Model Number	Motor (50/60Hz)				Performance				Reservoir	
	Type	AC (V)	Output (HP)	Revolution (rpm)	Max. Press (psi)		Output (in^3/min.)		Capacity Gallons	Usable Gallons
					2nd Stage High	1st Stage Low	2nd Stage High	1st Stage Low		
ZPE-45SV	E	220	0.6	2,000	10,000	1015	21.4	153	2	1.5
ZPE-753	E	220	1	2,000	10,000	1015	27.5	244	2.3	1.6
ZPE-753L	E	220	1	2,000	10,000	1015	27.5	244	6.6	4

Fig.19
(2.64 gal. with 1.6 gal. usable oil)
Part#: 924-751

Fig.20
(6.6 gal. with 4 gal. usable oil)
Part#: 924-752

Standard ZPE-75 models come with 2.64 gallon reservoir, it has 1.6 gallon usable oil (Fig.19). The best performance pumps for mid range cylinders and tools. If pumps are used with several cylinders the extra large 6.6 gallon reservoirs (Fig.20) are suggested, these will provide 4 gallon of usable oil to permit full stroke for multiple cylinders.



ZPE-75 Series

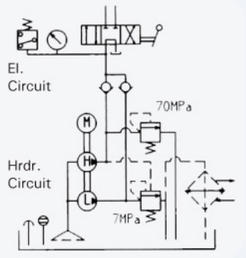
Max. Operates: Capable uo to 10,000 psi (700 bar)
Power by: 1HP, triple-phase commutator,
insulation "E" type motor.

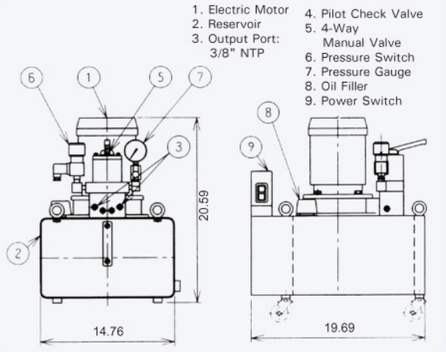
Features:

1. The 753 series come equipped with a pressure gauge and are enclosed with a cooling fan for heavy-duty operation without overheating.
2. Adjustable pressure regulator allows easy pressure adjustment.
3. Oil level indicator provides easy monitoring of oil level.
4. Eye lit holes for convenient mounting on to fixture.
5. Standard size comes with a 3-way manual valve to use with the single-acting cylinders. 3 ways-Advance/Hold/Retract, 2-way solenoid valves also available upon request.
6. 4 way/3 position valve to use with the double-acting cylinders.
7. Designed to easily accept various kinds of stacking valves such as solenoid valves, relief valves, and check valves.
8. Easy to operate mounted electrical box for on/off operation, remote pendant switches also available upon request.

Model: ZPE-753HS-7

ZPE-753HS-7
(mounted electrical box)
Part#: 195414





ZPE-45 & ZPE-75 Portable Electric Pump Order Options

For Use With	Model No. ZPE	Valve		Wt. (lbs)
		Type	Function	
Single Acting Cylinder	* ZPE-45SVG-0	Basic. Without valve.	With P.T. manifold, without any valves	32
	* ZPE-753HS-0		For applications where directional control valves are remote mounted away from the pump.	106
	ZPE-45SVG-1	3 Way manual standard	A single acting ram is actuated by	36
	ZPE-753HS-1		3-way manual valve. Advance/Hold/Retract.	110
	* ZPE-45SVG-4	2 Way solenoid	"Advance" with ON switch and motor running. "Hold"	38
	* ZPE-753HS-4	Normally Closed	when motor stops and switch is released. "Retract" with OFF switch. Advance/Hold/Retract.	110
	* ZPE-45SVG-2	2 Way solenoid	"Advance" with ON switch and motor running	41
	* ZPE-753HS-2	Normally Open	Retract" with OFF switch. Advance/auto Retract.	110
Double Acting Cylinder	ZPE-45SVG-7	4 Way, 3 Position Manual	A double-acting ram is actuated by 4-way manual	36
	ZPE-753HS-7		valve. Advance/Hold/Retract.	110
	* ZPE-45SVG-8SP	4 Way, 3 Position Solenoid	Advance/ "A" port Hold/Retract with stacking type	41
	* ZPE-753HS-8SP	with check valves)	pilot-operated check valve fitted on "A" port line.	121
	* ZPE-45SVG-8WP		ZPE-45SVG-8WP allows pressure holding on both	41
	* ZPE-753HS-8WP		A" and "B" port lines. Advance/Hold/Retract.	121
	* ZPE-45SVG-8R	4 Way, 3 Position Solenoid with relief valves)	A" and/or "B" port pressure is adjustable with stacking type double relief valves. Advance/Retract, pressure holding type pumps are available with additional check valves.	47
	* ZPE-45SVG-8A	4 Way, 3 Position Solenoid	ZPE-45SVG is fitted with "A" port block solenoid	42
	* ZPE-45SVG-8H		valve. Open center type solenoid valve is mounted	
	* ZPE-753HG-8A		on Model ZPE-45SVG-8H pump. Advance/Hold/Retract.	117

* Available upon request.

ZHP Series

Max. Operates: Capable up to 10,000 psi (70 Mpa)
Flow At Rated Pressure: 0.06 - 0.19 cubic inches/stroke
Reservoir Capacity: 18 - 150 cubic inches

Model: ZHP-19

Model: ZHP-29

Models:
ZHP-41 to ZHP-150

Industrial Grade Hand Pumps

1. Lightweight for maximum portability.
2. Chrome-plated piston rods resist wear and corrosion.
3. Plungers are hard coat anodized.
4. Single & Two-speed pumps available for use in a variety of applications.
5. Two-speed pumps are faster, reducing handle strokes and operator fatigue.
6. Internal overload valve prevents pump from being used beyond its rated capacity.
7. External adjustable relief valve with anti-losing mechanism design.
8. Optional 6 ft, 8 ft, 12 ft hose, coupler, and pressure gauge available upon request (Fig.19). (Refer to page 25 for accessories).
9. Pump, cylinder, and pressure gauge can be assembled as a set to fit any special application (Fig.20). (Refer to page 23 for order options).
10. All steel body for durability and long life. (Fig.19) Sealed body enables the pump to be used on any direction with head down position. This is designed for tough jobs.
11. Widely use for applications where composite reservoirs may not be suitable - the steel material won't burn through in welding environments.
12. Large release knob for controlled lowering speed.

Models: ZHP-20 & ZHP-30

ZHP-29 (release valve)

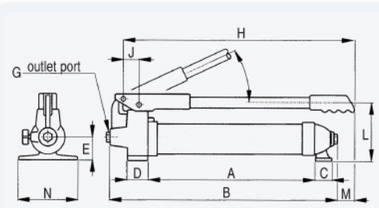
ZHP-42
(heavy-duty steel
base & oil plug)

Models:
ZHP-18 & ZHP-28

Automotive Grade Hand Pumps

1. Threaded cast iron pump head with steel reservoir and all-metal construction for durability.
2. Comes with ¼" NPT output port for use with spreader, push, puller, or cylinders where ¼" NPT coupler required.

Single-speed & two-speed models available



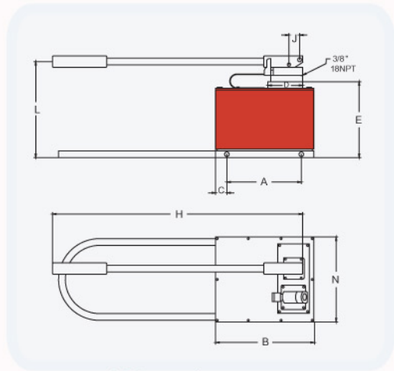
Model Number	Speed	Usable Oil Capacity (in^3)	Pressure Rating (psi)		Oil Displacement Per Stroke (in^3)	
			1st Stage	2nd Stage	1st Stage	2nd Stage
Aluminum Hand Pump						
ZHP-25A	2	25	300	10,000	0.345	0.086
ZHP-42A	2	42	300	10,000	0.345	0.086
ZHP-55A	2	55	300	10,000	0.345	0.086
ZHP-80A	2	80	300	10,000	0.345	0.134
ZHP-150A	2	150	350	10,000	0.79	0.17
ZHP-150AD	2	150	350	10,000	0.79	0.17
Industrial Grade Hand Pump						
ZHP-19	1	19	N/A	10,000	N/A	0.19
ZHP-20	1	20	N/A	10,000	N/A	0.19
ZHP-29	1	29	N/A	10,000	N/A	0.19
ZHP-30	2	30	N/A	10,000	N/A	0.19
ZHP-41	1	42	N/A	10,000	N/A	0.19
ZHP-42	2	42	200	10,000	0.79	0.17
ZHP-90	2	90	350	10,000	0.79	0.17
ZHP-120	2	120	350	10,000	0.79	0.17
ZHP-150	2	150	350	10,000	0.79	0.17
ZHP-180	2	183	200	10,000	0.95	0.17
High Flow Hand Pump						
ZHP-462	2	453	200	10,000	7.69	0.29
ZHP-464	2	453	200	10,000	7.69	0.29
Automotive Application Hand Pump						
ZHP-18	1	18	N/A	10,000	N/A	0.19
ZHP-28	1	30	N/A	10,000	N/A	0.19

"A" for lightweight aluminum alloy construction.

Aluminum Hand Pumps

1. The strongest aluminum alloys are used and heat treated to provide the maximum combination of strength and fracture resistance.
2. Super lightweight aluminum reservoir for portability.
3. The best choice for applications where composite reservoirs may not be suitable.
4. Large oil capacity to power a wide range of cylinders.
5. ZHP-150AD designed with build in 4-way valve for use with double acting cylinders. This valve allows the pump to advance or retract a double-acting cylinder at full pump pressure. (Fig. 20)
6. Two speed pumps provide rapid cylinder's stroke at 1st stage minimizing effort. At 2nd stage, the pumps automatically switch when a load is applied. This allows operation for faster fills and reduces cycle times for many testing operations.

Model: ZHP-42A



Model: ZHP-462 & ZHP-464

Fig.20

ZHP-42A (oil filter)

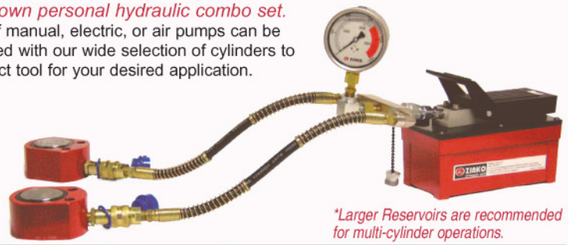
Aluminum models feature
pre-drilled holes for easy fixturing

Max Handle Effort (lbs)	Piston Stroke (in)	Dimensions (in)											Wt (lbs)
		A	B	C	D	E	G	H	J	L	M	N	
Aluminum Hand Pump													
100	1.00	9.76	13.11	1.85	1.61	1.48	3/8" NPT	12.13	0.95	5.63	---	4.04	8
71.5	1.00	16.65	20.00	1.85	1.61	1.48	3/8" NPT	19.02	0.95	6.26	---	4.04	9
93	1.00	19.80	23.14	1.85	1.61	1.48	3/8" NPT	22.17	0.95	6.42	---	4.04	10
92.4	1.00	26.00	29.44	1.85	1.64	1.48	3/8" NPT	24.50	0.95	6.65	---	4.04	12
87	1.10	16.73	25.87	1.85	1.77	2.20	3/8" NPT	26.97	1.12	6.69	2.17	5.43	27
87	1.10	16.73	25.87	1.85	1.77	2.20	3/8" NPT	26.97	1.12	6.69	2.17	5.43	28
Industrial Grade Hand Pump													
181	0.50	8.25	11.00	1.75	1.50	2.19	3/8" NPT	12.00	1.13	6.13	1.88	4.38	13
181	0.47	8.31	13.00	0.81	1.50	2.13	3/8" NPT	12.00	1.13	5.13	0.19	3.50	11
102	0.50	15.88	19.25	1.75	1.75	2.19	3/8" NPT	20.00	1.13	6.00	2.25	4.38	16
102	0.47	15.63	20.50	0.81	1.50	2.13	3/8" NPT	20.13	1.13	4.50	0.75	4.75	13
98	0.50	17.38	22.75	1.5	1.38	2.25	3/8" NPT	24.25	1.13	5.25	2.50	5.50	15
87	1.10	17.38	22.75	1.5	1.38	2.25	3/8" NPT	24.25	1.13	1.25	2.50	5.50	16
87	1.10	16.73	22.83	1.85	1.77	2.20	3/8" NPT	23.90	1.12	6.50	1.97	5.43	25
87	1.10	16.73	22.28	1.85	1.77	2.13	3/8" NPT	21.85	1.12	6.90	0.39	5.71	26
87	1.10	16.73	25.87	1.85	1.77	2.20	3/8" NPT	24.25	1.12	6.69	2.17	5.43	27
100	1.10	17.16	20.90	1.76	1.87	2.15	3/8" NPT	23.44	1.13	5.54	2.54	5.34	29
High Flow Hand Pump													
110	1.50	6.42	12.63	3.13	---	7.68	3/8" NPT	26.44	0.98	10.63	3.63	12.13	61
110	1.50	6.42	12.63	3.13	3.50	7.68	3/8" NPT	26.44	0.98	10.63	3.63	12.13	61
Automotive Application Hand Pump													
181	0.47	8.31	13.00	0.81	1.50	2.13	1/4" NPT	12.00	1.13	5.13	0.19	3.50	11
102	0.47	15.63	20.50	0.81	1.50	2.13	1/4" NPT	20.13	1.13	4.50	0.75	4.75	13

"D" for integrated 4-way valve for use with double-acting cylinder.

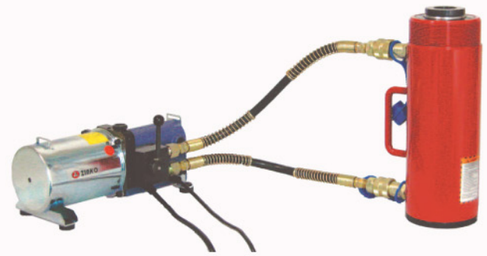
Combo Sets

Create your own personal hydraulic combo set.
Your choice of manual, electric, or air pumps can be easily combined with our wide selection of cylinders to form the perfect tool for your desired application.



**Larger Reservoirs are recommended for multi-cylinder operations.*

Model Number	Stroke (in)	Cylinder Effective Area (in^3)	Oil Cap.	Hand-Pump ZHP-19	Hand-Pump ZHP-29	Hand-Pump ZHP-55	Hand-Pump ZHP-90	Hand-Pump ZHP-150	Air-Pump ZAP-101
10 Ton Capacity									
ZR-101	1.00	2.24	2.24	ZPS-101-19H					ZPS-101-101A
ZR-102	2.00	2.24	4.75	ZPS-102-19H					ZPS-102-101A
ZR-104	4.00	2.24	9.23	ZPS-104-19H					ZPS-104-101A
ZR-106	6.00	2.24	13.70	ZPS-106-19H					ZPS-106-101A
ZR-108	8.00	2.24	17.89		ZPS-108-29H				ZPS-108-101A
ZR-1010	10.00	2.24	22.65			ZPS-1010-55H			ZPS-1010-101A
ZR-1012	12.00	2.24	26.84			ZPS-1012-55H			ZPS-1012-101A
ZR-1014	14.00	2.24	31.31			ZPS-1014-55H			ZPS-1014-101A
ZRB-101	1.50			ZBPS-101-19H					ZBPS-101-101A
15 Ton Capacity									
ZR-151	1.00	3.14	3.14	ZPS-151-19H					ZPS-151-101A
ZR-152	2.00	3.14	6.28	ZPS-152-19H					ZPS-152-101A
ZR-154	4.00	3.14	12.57	ZPS-154-19H					ZPS-154-101A
ZR-156	6.00	3.14	18.85		ZPS-156-29H				ZPS-156-101A
ZR-158	8.00	3.14	25.13		ZPS-158-29H				ZPS-158-101A
ZR-1510	10.00	3.14	31.42			ZPS-1510-55H			ZPS-1510-101A
ZR-1512	12.00	3.14	37.70			ZPS-1512-55H			ZPS-1512-101A
ZR-1514	14.00	3.14	43.98			ZPS-1514-55H			ZPS-1514-101A
20 Ton Capacity									
ZRB-201	1.75			ZBPS-201-19H					ZBPS-201-101A
25 Ton Capacity									
ZR-251	1.00	5.16	5.16	ZPS-251-19H					ZPS-251-101A
ZR-252	2.00	5.16	10.31	ZPS-252-19H					ZPS-252-101A
ZR-254	4.00	5.16	20.63		ZPS-254-29H				ZPS-254-101A
ZR-256	6.25	5.16	32.23			ZPS-256-55H			ZPS-256-101A
ZR-258	8.25	5.16	42.55			ZPS-258-55H			ZPS-258-101A
ZR-2510	10.25	5.16	52.86				ZPS-2510-90H		ZPS-2510-101A
ZR-2512	12.25	5.16	63.18				ZPS-1512-90H		ZPS-2512-101A
ZR-2514	14.25	5.16	73.49				ZPS-1514-90H		ZPS-2514-101A
30 Ton Capacity									
ZR-302	2.00	6.49	12.98	ZPS-302-19H					ZPS-302-101A
ZR-308	8.25	6.49	53.56			ZPS-308-55H			ZPS-308-101A
ZRB-302	2.44			ZBPS-302-19H					ZBPS-302-101A
50 Ton Capacity									
ZR-505	2.00	11.04	22.08		ZPS-502-29H				ZPS-502-101A
ZR-504	4.00	11.04	44.18			ZPS-504-55H			ZPS-504-101A
ZR-506	6.25	11.04	69.03				ZPS-506-90H		ZPS-506-101A
ZR-5013	13.25	11.04	146.34					ZPS-5013-150H	
ZRB-502	2.38				ZBPS-502-29H				ZBPS-502-101A
75 Ton Capacity									
ZR-756	6.13	15.90	97.41					ZPS-756-150H	
ZR-7513	13.13	15.90	208.74						
100 Ton Capacity									
ZR-1006	6.63	20.63	136.67					ZPS-1006-150H	
ZR-10010	10.25	20.63	211.45						
ZRB-1002	2.25					ZBPS-1002-55H			ZBPS-1002-101A



Model Number	Air-Pump ZAP-102	Air-Pump ZAP-103	Electric Pump ZPE-35H-1M	Electric Pump ZPE-35H-1ML	Electric Pump ZPE-45SVG-4L	Gauges		Gauges Apdapters		
								ZA1	ZA2	ZA3
10 Ton Capacity										
ZR-101			ZPS-101-1ME							
ZR-102			ZPS-102-1ME							
ZR-104			ZPS-104-1ME							
ZR-106			ZPS-106-1ME							
ZR-108			ZPS-108-1ME							
ZR-1010			ZPS-1010-1ME							
ZR-1012			ZPS-1012-1ME							
ZR-1014			ZPS-1014-1ME							
ZRB-101			ZBPS-101-1ME							
15 Ton Capacity										
ZR-151			ZPS-151-1ME							
ZR-152			ZPS-152-1ME							
ZR-154			ZPS-154-1ME							
ZR-156			ZPS-156-1ME							
ZR-158			ZPS-158-1ME							
ZR-1510			ZPS-1510-1ME							
ZR-1512			ZPS-1512-1ME							
ZR-1514			ZPS-1514-1ME							
20 Ton Capacity										
ZRB-201			ZBPS-201-1ME							
25 Ton Capacity										
ZR-251			ZPS-251-1ME							
ZR-252			ZPS-252-1ME							
ZR-254			ZPS-254-1ME							
ZR-256			ZPS-256-1ME							
ZR-258			ZPS-258-1ME							
ZR-2510				ZPS-2510-1MLE						
ZR-2512				ZPS-2512-1MLE						
ZR-2514				ZPS-2514-1MLE						
30 Ton Capacity										
ZR-302			ZPS-302-1ME							
ZR-308			ZPS-308-1ME							
ZRB-302			ZBPS-302-1ME							
50 Ton Capacity										
ZR-505			ZPS-502-1ME							
ZR-504			ZPS-50401ME							
ZR-506				ZPS-506-1MLE						
ZR-5013	ZPS-5013-102A				ZPS-5013-45SVG-4LE					
ZRB-502			ZBPS-502-1ME							
75 Ton Capacity										
ZR-756	ZPS-756-102A		ZPS-756-1ME							
ZR-7513		ZPS-7513-103A			ZPS-7513-45SVG-4LE					
100 Ton Capacity										
ZR-1006	ZPS-1006-102A				ZPS-1006-45SVG4LE					
ZR-10010		ZPS-10010-103A			ZPS-10018-45SVG-4LE					
ZRB-1002			ZBPS-1002-1ME							

COMBO SETS

Ram Toe Sets

Model: RHC-15

Features:

These toe rams are designed to lift loads with a very low clearance. The toe area can pick up the load from as low as 0.86 inches, which is the lowest pick up point in the industry. Widely used for bridge or plant construction, emergency lift for rescuer after earthquake or building corruption, and moving or installation of industrial machinery and shipyard equipment. Easily connecting the port to any hand pump or air pump. These toe rams will give the operator full control of the lift from a distance whenever close quarters operation is not accessible. Available in 5 to 25 ton capacities.

RHC-15 (pressure gauge)

Model: ZHP-55A & RHC-15

RHC-15 (rear view: toe)

Model Number	Capacity (Tons)	Min. Ht. (in)		Max Ht. (in)		Ram Lift (in)	Toe Area (in)	Base Area (in)	Ship Wt. (lbs)
		Toe	Head	Toe	Head				
RHC-5	5	0.858	14.391	5.733	19.266	4.875	2.34 x 3.925	7.02 x 7.02	38
RHC-10	10	1.17	15.366	7.02	21.216	5.85	2.34 x 3.705	9.75 x 7.8	64
RHC-15	15	1.17	15.366	7.02	21.216	5.85	2.34 x 3.705	10.92 x 9.36	82
RHC-25	25	1.326	15.366	7.716	21.216	5.85	2.34 x 4.875	11.7 x 12.09	161

Accessories

Adapters, Fittings, and Accessories		
Part #		Description
195101		Tee adapter. For installing gauge between pump and hose coupling. Has 1/4" and 3/8" NPT internal and 3/8" NPT external.
195102		Swivel connector, 3/8" NPT male, 3/8" NPSM female
195103		45° fitting. Male and female 1/4" NPT end
195104		Double tee adapter. Permits use of more than one ram in series with one pump. Three 3/8" NPT ports.
195311		Street Elbow. From 3/8" NPT male to 3/8"NPT female.
195341		Hex Nipple. From 3/8" NPT male to 3/8" NPT female

Adapters, Fittings, and Accessories		
Part #		Description
195414		2-position push button switch
195415		3 way/2 position manual solenoid valve for use with single-acting cylinders. It has "Advance" and ""Hold" positions.
195416		4 way/3 position manual solenoid valve. For use with double acting cylinders. It has "Advance", "Hold" and "Retract" positions.
195611		Aluminum Ram Base. For use on 50 ton Aluminum Cylinders only. Size: 7" x 7"
195661		ZA1, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 2-3/4" Length
195662		ZA2, Gauge adapter 1/2" GP, 1/4" ME, 3/8" FE 4-3/8" Length

Accessories

Adapters, Fittings, and Accessories		
Part #		Description
195663		ZA3, Gauge adapter 1/4" GP, 3/8" ME, 3/8" FE 5-1/4" Length
195664		ZA4, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 6" Length
196711		Remote control hand pendant switch, 10 Ft cord. ON/OFF switch control.
2110-18		Saddle - Flat type for 10 ton Cylinders. Use this to protect the top of cylinder and prevent slipping.
2110-19		Snap type male connector.To be used on the top / or bottom of ZR-series 10 ton cylinders
2110-20		Threaded-type male connector. To be used on the top / or bottom of ZR-series 10 ton cylinders
2110-21		Threaded male to Snap-type female base adapter. To be used with part# 21110-22 for snap-connect applications.
2110-22		Rod-end threaded type adapter. Screw on to the base of cylinder to convert the ZR-series cylinder for threaded type applications.
90620-W		Attachment wheel for ZAPJ-22
90620-AD1		Adapter. 1/2" height. To be used on ZAPJ & ZATJ model
90620-AD2		Adapter. 2-3/8" height. To be used on ZAPJ & ZATJ model
90620-AD3		Adapter. 4" height. To be used on ZAPJ & ZATJ model
9110-4B		Base Plate for ZMHL-4SP.
9110-8B		Base Plate for ZMHL-8SP.

Adapters, Fittings, and Accessories		
Part #		Description
Couplers		
195111		Complete 3/8" NPT quick coupler, fast flow
195111-R		Ram half coupler and dust cap
195111-H		Hose half coupler and dust cap
9210104		Complete 1/4" NPT automotive-style quick coupler regular flow
9210104-R		Ram half coupler and dust cap
9210104-H		Hose half coupler
9210104L		Complete 3/8" NPT quick coupler
9210104L-R		Ram half coupler and dust cap
9210104L-H		Hose half coupler
9210308		Complete 3/8" NPT automotive-style quick coupler, regular flow
9210308-R		Ram half coupler and dust cap
9210308-H		Hose half coupler
Hydraulic Hoses: Lightweight and rugged hose reinforced with 2 layers of braided steel. Choose from 1/4" I.D. or 3/8" I.D. fast flow hose.		
92104-02		6 ft length, 1/4" NPT end
92104-02A		6 ft length, 1/4" to 3/8" NPT end
195212-6		6 ft length, 3/8" NPT end
195212-8		8 ft length, 3/8" NPT end
195212-18		18 ft length, 3/8" NPT end
Hydraulic Pressure Gauges: Range 0-10,000 psi 2 1/2" dia. Face. Use with any Zinko's pump or cylinders.		
55-1211		1/4" NPT male connection
55-1212		1/2" NPT male connection

ZPK Series *Portable Power Kits*

Capacity: 4 to 20 tons

Model: ZPK-04

Features:

1. The collision repair kits snap-together components make for quick set-ups and come in 4, 10, and 20 ton versions.
2. Designed for quick and easy use where portable hydraulic power is needed.
3. Built-in overload system assures maximum protection of operator and equipment.
4. High strength heavy wall tubing reinforces parts and extends the life of the tools.
5. Choose either single-speed or two-speed pumps for almost any application.
6. All components come in an easy-to-handle carrying case for convenience.

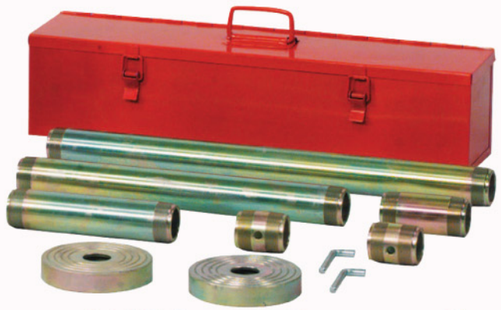
ZPK-04 *kit includes:*

1. Hydraulic Pump (ZHP-20: single speed)
2. Hose & Coupler
3. 4 Ton Ram 5" Stroke
4. Spreader Ram
5. Extension Tubes: (4, 8, 12, 16 inches)
6. Male Connector
7. Flat Base
8. 90° "V" Base
9. Wedge Head
10. Spreader Plunger Toe
11. Spreader Ram Toe
12. 2-3/4" Flex Head
13. Serrated Saddle
14. Carrying Case
15. Weight: 40 lbs.

ZPK-10 *kit includes:*

1. Hydraulic Pump (ZHP-30: 2-speed)
2. Hose & Coupler
3. 10 Ton Ram 6" Stroke
4. Spreader Ram
5. Extension Tubes: (5, 10, 14, 19 inches)
6. Male Connector
7. Flat Base
8. 90° "V" Base
9. Wedge Head
10. Spreader Plunger Toe
11. Spreader Ram Toe
12. 2-3/4" Flex Head
13. Serrated Saddle
14. Carrying Case (with wheel)
15. Weight: 75 lbs.

Model: ZPK-10



Model: ZPK-20

Model: ZPK-20

Heavy-duty Deluxe Power Kit

1. Two-speed pump quickly raises ram to load, while the secondary pump provides power stroke.
2. Choose from two steel carrying cases.

ZPK-20 *kit includes:*

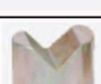
1. Hydraulic Pump (ZHP-42: 2-speed)
2. 5' Hose
3. 20 Ton Ram 5" Stroke
4. 3-1/2" Dia. Saddle (2)
5. Extension Tubes: (3 (2), 5, 10, 20, 27-1/2 inches)
6. Threaded Coupler (2)
7. Toe Lift
8. "V" Head
9. Wedge Head
10. Spreader Plunger Toe
11. Spreader Ram Toe
12. 2-3/4" Flex Head
13. 6-1/2 Diameter Base
13. Steel Carrying Case
14. Weight: 160 lbs.

Accessories for Collision Repair Kits

⚠ CAUTION

When cylinders are used with power set attachments or components, the maximum system pressure must be limited to half the rated capacity.

4 ton sets	10 ton sets		
Part #	Part #		Description
92104-02 1/4" - 1/4" 92104-02A 1/4" - 3/8"	195212-6 3/8" - 3/8"		6 ft hose
92104-04	92110-04		Spreader
92104-05 16" 92104-06 12" 92104-07 8" 92104-08 4" Dia. 0.875"	92110-05 19" 92110-06 14" 92110-07 10" 92110-08 5" Dia. 1.25"		Extension Tube
92104-09	92110-09		Male connector
92104-10	92110-10		Serrated Saddle
92104-11	92110-11		Flat Base
92104-12	92110-12		90° V-Base
92104-13	92110-13		Wedge Head
92104-14	92110-14		Plunger Toe
92104-15	92110-15		Ram Toe
92104-16	92110-16		Rubber Flex Head
92104-17	92110-17		Plastic Case
9210104-1/4" Automotive type coupler	9210308 -3/8" Automotive type coupler		Coupler

20 ton sets		
Part #		Description
195212-6 3/8" - 3/8"		6 ft hose
92120-05 27.5" 92120-06 20" 92120-07 10" 92120-08 5"		Extension Tube
92120-09		Male connector
92120-10		Serrated Saddle
92120-11		Plunger Base
92120-12		V head
92120-13		Wedge Head
92120-14		Toe Lift
92120-15		Threaded coupling
92120-16		Lock Pin
92120-17		Steel Case
9210308		3/8" Coupler

For more information on these accessories and components please refer to page 30.

PORTABLE POWER SET

ZPM Series

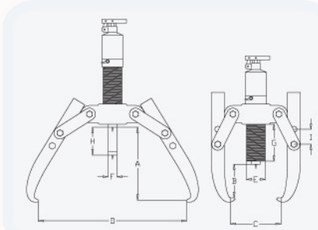
Capacity: 4 to 30 tons

Features:

1. The adjustable handle slides easily into 5 different positions.
2. 360° rotating handle socket gives flexibility in difficult pumping locations.
3. The hydraulic pump and puller body are self contained and feature a spring loaded centering cone.
4. Units come with integral safety relief valve systems.
5. Heat-treated, chrome-plated cylinder for extended durability and corrosion prevention.
6. All units use heat-treated forged alloy steel cross bolts.
7. Spring return hydraulic cylinder allows for rapid retraction of the cylinder rod upon completion of the pull.

Jaw Type Series

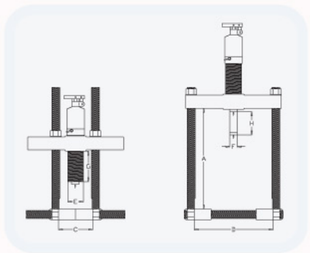
1. Spring loaded centering cone.
2. Jaws are plated with maganous-phosphate to prevent rust and corrosion.
3. 2/3-way combination puller head for 3-jaw puller, plus the 2-jaw option when space is limited.
4. Multiple cross bolt mountings for additional set up versatility.
5. ZPM-20 & ZPM-30 have 2 state stroke design. First stage is for quick connect, while second stage provides high hydraulic output for pulling.



Model Number	Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)
		A	B	C	D	H	E	F	G	A	B	C	I	
ZPM-04	4	7.28	2.76	2.95	10.00	2.36	1.63	0.87	3.31	0.43	0.24	0.87	1.26	10
ZPM-08	8	9.02	2.24	3.94	13.78	3.35	1.97	0.98	4.80	0.43	0.39	0.98	2.00	15
ZPM-12	12	10.60	4.06	4.72	14.76	3.35	2.36	1.10	4.65	0.55	0.39	1.14	2.00	18
ZPM-20	20	14.17	7.48	8.27	20.47	4.37	3.15	1.57	6.34	0.79	1.06	1.30	2.36	49
ZPM-30	30	14.17	7.48	8.86	21.65	4.37	3.86	1.97	6.10	0.79	1.06	1.50	2.36	71

Push Type Series

1. 2-jaw puller cross head and plated with manganous-phosphate to prevent rust and corrosion.
2. Impact set includes bearing size attachments for safety.
3. Optional bearing attachment available for use as replacement parts. Please refer to the facing page for more specifications.



Model Number	Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)
		A	B	C	D	H	E	F	G	A	B	C	I	
ZPM-410	4	9.84		2.17	4.33	2.36	1.65	0.87	3.30	---	---	---	---	19
ZPM-810	8	10.63		3.74	8.65	3.35	1.97	0.98	4.80	---	---	---	---	28
ZPM-1210	12	15.00		4.72	11.42	3.35	2.36	1.10	4.65	---	---	---	---	40

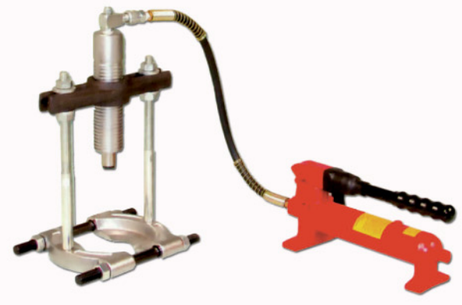
Jaw & Push Sets

Capacity: 4 to 12 tons

Jaw & Push Sets

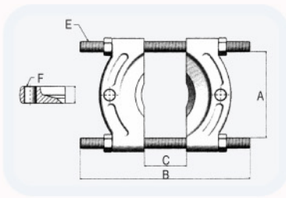
1. Special package model includes jaw and push pullers with bearing pulling attachment as a set.
2. Ideal impact package with light PE case for carrying.
3. One set with two kinds of pullers for various applications.
4. A protection nest is also included for wrapping around, pulling, pressing, and other high-force jobs to prevent injuries caused by the flying parts, which provides extra protection to the operator.
5. Long jaws and extension rods are also available upon request. These components allow the extension of the stroke according to the special applications. When use with these components, the tonnage capacity of a push-puller is reduced.
6. In addition to the standard hydraulic puller ram, Zinko has pullers that can attach to the hand pump for remote operation. These puller rams are interchangeable, you do not have to purchase a separate set of jaws, rods, or bearing attachments.

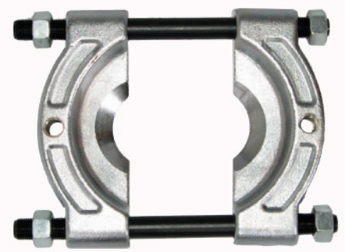
For selection of hand pumps, please refer to page 22.



Model Number		Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)
Standard	Remote		A	B	C	D	H	E	F	G	A	B	C	I	
ZPM-420	ZPM-430	4	7.28/9.84	2.76	2.95/2.17	10/4.33	2.36	1.63	0.87	3.31	0.43	0.24	0.87	1.26	29
ZPM-820	ZPM-830	8	9.02/10.63	2.24	3.94/3.74	13.78/8.66	3.35	1.97	0.98	4.80	0.43	0.39	0.98	2.00	42
ZPM-1220	ZPM-1220	12	10.6/15	4.06	3.54/4.72	14.76/11.42	3.35	2.36	1.10	4.65	0.55	0.39	1.14	2.00	58

Universal Bearing Attachments





Features

1. Forged from high strength steel alloy.
2. Wedge-shaped edges are easily placed behind the part to secure a gripping surface, which allows removal of the most hard-to-grip components.
3. When used with jaw pullers, the jaws grip the attachments on the outer edge, when used with a push puller, puller legs are threaded into the attachment's two tapped holes.

Model Number	Dimensions (in)				Thread		Weight (lbs)
	A	B	C	D	E	F	
926-04	27.3	48.75	1.95 - 23.4	6.83	3/8 - 16UNC	2/8 - 24UNC	2
926-08	39	52.65	5.85 - 23.4	8.39	3/8 - 16UNC	1/2 - 20UNC	4
926-12	50.7	63.57	4.68 - 27.3	10.73	1/2 - 13UNC	5/8 - 18UNC	6
926-20	66.3	107.25	10.92 - 58.5	13.26	5/8 - 11UNC	3/4 - 16UNC	13
926-30	93.6	136.5	7.8 - 78	15.21	3/4 - 10UNC	1 x 12UNC	19
926-31	78	140.4	7.8 - 78	14.24	7/8 - 14UNC	1 x 14UNC	25

PUSHERS & PULLERS

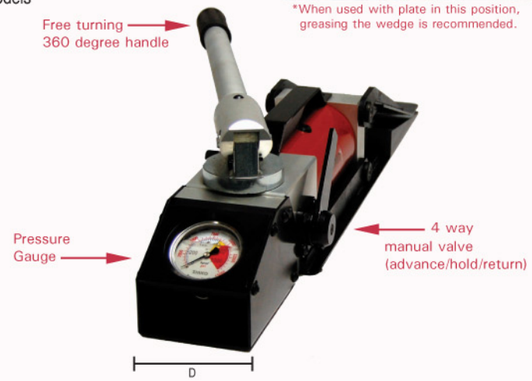
ZWF & ZWS Series
Capacity: 15 to 35 tons

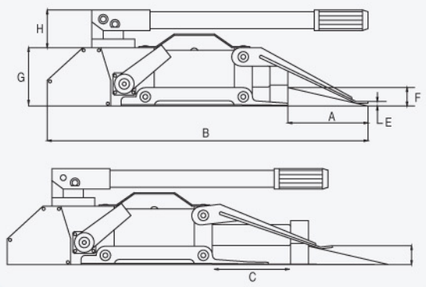
Model: ZWF-31

Wedge Jacks
These lightweight, portable, and easy-to-use wedge jacks make for a simple, one person operation and are an ideal choice for rescue operations. Designed to penetrate and open, the heavy-duty cylinder allows for an easy return. The unique interlocking wedge design eliminates first step bending and risk of slipping out of the joint. With these units, there is no need for additional tools or chainblocks. The 360° handle makes for easy usage in any position.

Features:
1. All models have a self contained reservoir and are equipped with a single plunger.
2. Built in 4-way, 3 position manual valve for easy advance and retraction.
3. Equipped with a pressure gauge for pressure readings when force is applied.
4. Two type of wedges are available: standard model (ZWF-30) or floor models (ZWF-31 or ZWF-32).

*When used with plate in this position, greasing the wedge is recommended.



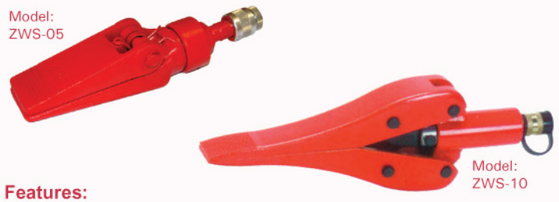


Model Number	Capacity (Tons)	Stroke (in)	Min Ht. (in)	Max Ht. (in)	Dimensions (in)								Ship Wt. (lbs)
					A	B	C	D	E	F	G	H	
ZWF-30	32	5	0.24	1.34	5.88	26.38	5	5	0.2	1.34	4.25	2.75	28
ZWF-31	32	5	0.24	1.34	5.88	26.38	5	5	0.2	1.34	4.25	2.75	28
ZWF-32	32	5	0.24	1.34	5.88	26.38	5	2.25	0.2	1.34	4.25	2.75	26

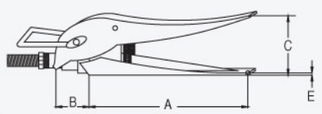
Spreaders
ZInko's spreaders can be used to lift machines, or as a clamp. Spread concrete forms or rebar, or perform straightening jobs.

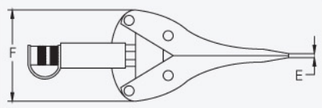
Model: ZWS-13

Model: ZWS-05



Model: ZWS-10





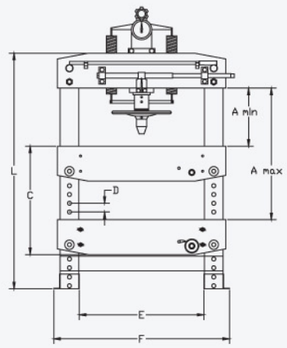
Features:
1. Extra low wedge tip makes lifting application possible at a minimum starting height (1/4").
2. Allows for fine adjustment of lifting height when lowering.
3. When pressure is released, jaws retract automatically by return springs.
4. Provides a high resistance to attach on the ground.

Model Number	Capacity (Tons)	Stroke (in)	Min Ht. (in)	Max Ht. (in)	Dimensions (in)					Ship Wt. (in)
					A	B	C	D	E	
ZWS-05	0.5	5	0.24	1.34	7.67	10.04	3.74	1.97	0.67	4
ZWS-10	1	5	0.24	1.34	14.4	21.26	11.5	2.2	1.22	22
ZWS-13	1.35	5	0.24	1.34	15.75	17.33	11.42	2.36	1.18	22

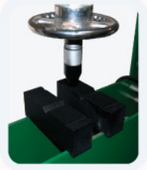
ZSP Series
Capacity: 15-100 tons

Features:
1. Easy-to-use cable winch system with pressure gauge .
2. Heavy-duty precision cable winch is for raises and lowers the table with less effort.
3. Open side frames for inserting lengthy material.
4. Fast set-up ram extension screw can be adjusted by turning the rotary handle for positioning.
5. The hand crank positions the ram laterally for added versatility without diminishing capacity.
6. Standard models are equipped with 2 bed plates and pump handles.
   Straightness testing support uses centers or v-block.

Model: ZSP-15S

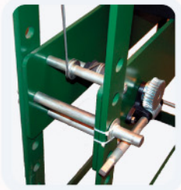


Air/Electric Pump Mounting Bracket



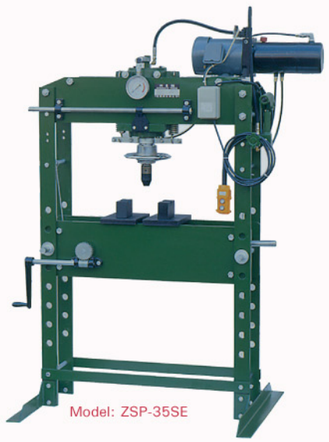
Rotary Handle & V-Block (standard)

Positioning Bar & Gauge



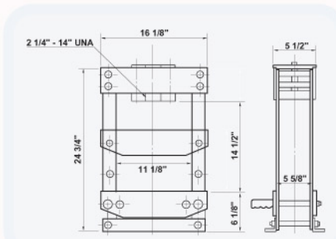
Adjustable Work Table (supported by cable winch)

Hand Crank & Rotary Handle (positions the ram laterally)



Model: ZSP-35SE

Portable Bench Press
1. This portable unit is ideal for on-site applications
2. Available with pump additions to suit your needs.
3. Table surface is vertically adjustable.



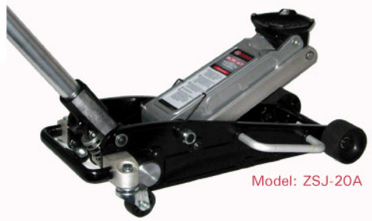
Model: ZTP-10

Model Number	Press Capacity (Tons)	H-Frame Press Dimensions (in)										Ship Weight (lbs)
		A (min)	A (max)	B Stroke	C Vertical Movement	D Spacing	E Front Clearance	F Base Length	G Base Width	H Table Width	L Overall Height	
ZSP-15S	15	12.32	33.58	3 1/8	34.65	3.54	24.61	33.78	29.13	7.40	53.58	396
ZSP-15SA	15	12.32	33.58	3 1/8	34.65	3.54	24.61	33.78	29.13	7.40	53.58	400
ZSP-35S	35	14.37	35.63	6 1/8	38.19	3.54	33.46	44.49	34.06	7.56	60.83	616
ZSP-35SA	35	14.37	35.63	6 1/8	38.19	3.54	33.46	44.49	34.06	7.56	60.83	620
ZSP-35SE	35	14.37	35.63	6 1/8	38.19	3.54	33.46	44.49	34.06	7.56	60.83	726
ZSP-60S	60	9.84	41.34	6 1/2	53.15	3.94	41.34	54.33	39.37	13.46	74.80	990
ZSP-60SE	60	9.84	41.34	6 1/2	53.15	3.94	41.34	54.33	39.37	13.46	74.80	1,100
ZSP-100SE	100	18.90	42.52	6	44.09	7.87	62.99	80.83	59.06	13.78	78.74	2,966
ZSP-50SEN	50	7.06	59.56	6	54.00	10.38	28.75	42.75	36.00	13.13	76.00	1,098
ZSP-100SEN	100	7.06	42.50	6	51.00	11.69	35.00	51.00	36.00	15.56	76.00	1,707

Model # Key: S: Standard Manual Type A: With Air Pump E: With Electric Motor Pump

ZSJ & ZASJ Series

Capacity: 1.5 to 20 tons



Model: ZSJ-20A

Ultra Lightweight Aluminum Service Jacks

1. Fast performance - rapid lifting with a minimum of 3 pumps to reach maximum height of 17 ½".
2. Low Profile with high lift - Starting height from as low as 2 ¼" to 3 ½", these jacks can easily go under any sport car without touching the side frame.
3. Light and compact - Weight less than 42 lb. for mobility and reduce operator fatigue. Fully CNC profile machined from aircraft grade billet aluminum for strength and overall weight reduction.
4. Durable - constructed of high grade die-cast aluminum combined with a patented quality hydraulic system.
5. Universal joint release mechanism combined with notched lift cup that has a removable rubber insert that fits on all types of cars, also prevents damage to the finish of the undercarriage.
6. Handle can be locked on any position. This ensures no damage to the car body.
7. Standard side mounted carrying handle for easy carrying.

ZSJ-20A (rear caster wheel)

ZSJ-20A (saddle)

Urethane front and rear wheels kits assure smooth movement and avoids squeaking. These will not damage the epoxy paint coating which were found on many shop floors.

ZSJ-20A (top view)

Standard comes with notched cast-iron saddle. Optional serrated rubber coated saddle available upon request.

ZSJ-20A (optional saddle)

Serrated rubber coated saddle provides stability and prevents damage to the finish of the undercarriage. The stem on this saddle will fit jacks with lift arms measuring 1" diameter.

ZSJ-13A (2-1/4" pick-up point)

Super Low Profile Service Jack

Super low profile & light weight - the initial pick up point is only 2 ¼". Long, low chassis with frame height under 3 ½" this jack can go straight under car without touching the side frame. Form fitted saddle so slim that did not increase the height of saddle, also prevent damage to the finish of the under carriage.

Model: ZSJ-15A3

ZSJ-15A3

3 pumps to the top, the original performance service jack. Roller front wheel, and rear wheel casters help support these easily maneuverable units.

Model: ZSJ-20T

ZSJ-20T

1. Flanged steel side plates, both top and bottom to increase strength and resist twisting.
2. Low profile which can lift up to 16 ½" providing a travel range form as low as 3 ¾" to a maximum height of 20 ¼".
3. In-line pump assembly allows direct alignment of pump with the handles.
4. Universal joint type release mechanism makes for easy operation.
5. Built-in pressure relief valve helps prevent overloading.
6. Full swivel rear casters and large lifting cap allows for easy handling.

Model: ZPJ-800

Panta Graph Jacks

1. Rapidly raises a vehicle with minimum effort.
2. Lightweight, compact and very easy to operate.
3. Rugged steel base prevents leaking.
4. Low profile with long stroke for versatility.
5. High-strength rubber cap saddle to receive vehicle panel rail and avoid damage to vehicle body.
6. Special coating on the ram & body provides additional corrosion protection.

Weight: 13 lbs. Capacity: 0.8 ton Min. Ht: 4.5" Max. Ht:15"

Heavy-Duty Service Jacks

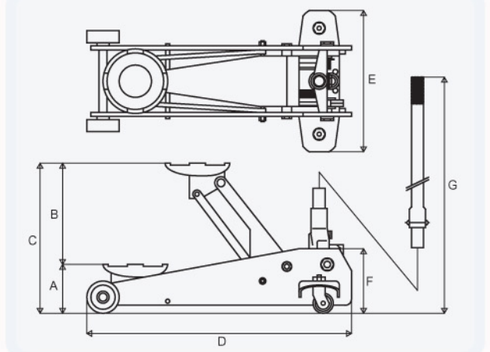
1. The lift can be operated either manually or pneumatically.
2. Overall construction of selected steel frame, full swivel rear caster wheels, and large lifting cap provide easy positioning and enable these jacks to handle the largest loads.
3. With a foot pumping device (Fig.20), you can easily lift the jack saddle up to the loading point. Air hydraulic models with air pressure ranges from 90 to 140 psi can also be operated by the push button for a quick lift. (Fig.22)
4. Push bottom control unit can be easily removed from handle which enables the operator to view the lift from the side (for all air hydraulic models).
5. T-Handle permits easier maneuvering. It can be locked in one of three positions so that it is convenient to position the jack under the load. (Fig.21)
6. Large knob provides load release control. (Fig.22)
7. Extra long chassis reaches under low overhangs.

Fig.20

Fig.21

Fig.22

ZSJ-50H



Model: ZSJ-15T

ZSJ-15T Service Jacks

1. Heavy duty welded steel lift arm with 32" maximum lifting height.
2. Ductile steel saddle for better grip and vehicle frame protection.
3. Extra two-piece long handle with rubber hand grip for easy storage and transportation, also providing a longer reach under the overhang.

Model Number	Capacity (Tons)	Min Ht. (in) A	Hydraulic Lift (in) B	Max Ht. (in) C	Chasis Length (in) D	Chassis Width (in) E	Ht. of Frame (in) F	Shipping Wt. (lbs)
ULTRA LIGHTWEIGHT ALUMINUM JACKS								
ZSJ-13A	1.5	2 1/8	15 1/4	17 3/8	24	11 3/4	6	40
ZSJ-15A6	1.5	3 1/2	14	17 1/2	23 5/8	11 3/4	6 1/8	42
ZSJ-15A3	1.5	3 1/2	14	17 1/2	23 5/8	11 3/4	6 1/8	42
ZSJ-20A	2	3 1/2	14	17 1/2	23 5/8	11 3/4	6 1/8	43
HEAVY-DUTY SERVICE JACKS								
ZSJ-15H-2	1.5	4 3/4	14 1/8	18 7/8	24 4/5	13 3/4	6 1/4	72
ZSJ-15T	1.5	5 1/8	26 7/8	32	37	16 1/8	6 1/2	123
ZSJ-20S-2	2	4 3/4	14 1/8	18 7/8	25 4/5	13 3/4	6 1/4	80
ZSJ-20T	2	3 3/4	16 1/2	20 1/4	27	11 3/4	6 3/4	92
ZSJ-30S	3	3 7/8	17 3/4	21 5/8	38 1/2	15 1/4	5 3/8	163
ZSJ-20L-2	2	4 3/4	14 1/8	18 7/8	36 1/5	13 3/4	6 1/4	99
ZSJ-30H	3	4 7/8	18 7/8	23 7/8	51 3/5	12 3/4	7 1/2	143
ZSJ-50H	5	5 7/8	16 1/4	22	55 1/2	14 3/8	7 7/8	187
ZSJ-100H	10	6 1/4	15 3/4	22	60 7/8	19 1/2	9 7/8	297
ZSJ-200H	20	7 1/2	16 1/2	24	66 7/8	19 1/2	10 1/4	505
HEAVY-DUTY LONG CHASSIS AIR SERVICE JACKS								
ZASJ-15M	1.5	4 1/2	19 7/8	24 3/8	44 1/4	15 13/16	4 3/4	155
ZASJ-20M	2	4 3/4	14 1/8	18 7/8	32 3/8	13 3/4	6 1/4	97
ZASJ-30M	3	4 7/8	18 7/8	23 7/8	53 1/8	14 3/8	7 1/2	165
ZASJ-50M	5	5 7/8	16 1/8	22	55 7/8	15 1/4	7 7/8	200
ZASJ-100M	10	6 1/4	15 3/4	22	60 7/8	19 1/2	9 7/8	310

ZATJ Series

These compact, heavy-duty hydraulic jack units are designed for use on trucks, buses and agricultural machinery.

Model:
ZSTJ-22S-4

Features:

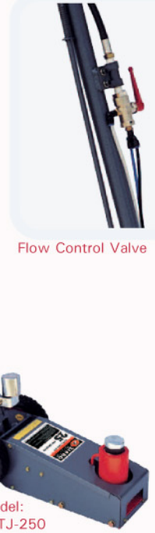
1. These units are lightweight and built for heavy-duty use.
2. All-steel welded construction makes our ZATJ series fast, smooth and efficient.
3. The quick-lift mechanism allows a substantially shortened ram lifting time without load.
4. A flow control valve prevents sudden falls of the ram on models 220, 250 and 350.
5. The built-in safety valves prevent use beyond the rated capacity or lifting limit.
6. All models feature a specially processed air pump for low noise operation.
7. An extension screw for fine adjustments is included. Extension adapters are also available upon request.
8. When connected to standard shop air which provides 90-140 psi, these jacks can quickly obtain rated lift capacity with air-actuated operation.
9. The two large rubber-tire wheels (Fig.23) and 3 position locking T-handle (Fig.24) make these jacks easy to fit into any space.
10. Extension adapters are also available as an option for extra height. When used with 4" height adapter, the maximum lift can reach up to 20". (Fig.25)

Fig.23

Fig.24

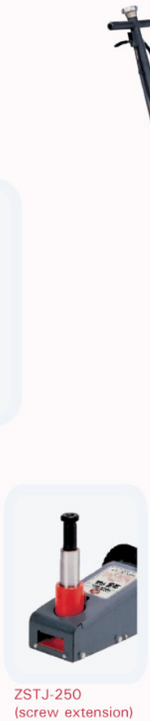
Fig.25

Part#	Height	Saddle	Weight
96220AD1	1/2"	2.7580 dia.	12oz
96220AD2	2-3/8"	2.5580 dia.	2lb 2oz
96220AD3	4"	1.96900 dia.	3lb 7oz
96250AD1	1/2"	2.3605 dia.	14oz
96250AD2	2-3/8"	2.3620 dia.	3lb 1oz
96350AD1	1/2"	2.5580 dia.	1lb 1oz
96350AD2	2-3/8"	2.5580 dia.	4lb 4oz



Model:
ZSTJ-250

Flow Control Valve



Model:
ZSTJ-220DL

ZTSJ-220DL
(2 stage ram)

ZSTJ-250
(screw extension)

Model Number	Capacity (Tons)	Min Ht. (in) A	Hydraulic Lift (in) B	Max Ht. (in) C	Chassis Length (in) D	Chassis Width (in) E	Ht. of Frame (in) F	Screw Ext. (in) G	Shipping Weight (lbs)
ZATJ-22S-4	22	8	4 1/4	15 7/8	23 7/8	12 5/8	7 1/4	3 5/8	82
ZATJ-220DL	22	6 1/4	5 1/8	11 1/4	23 3/4	12 5/8	6 3/8		99
ZATJ-220	22	8 1/4	4 1/8	15 7/8	23 3/4	12 5/8	6 3/8	3 1/2	88
ZATJ-250	25	8 1/2	4 1/8	15 7/8	23 3/4	12 5/8	6 3/8	3 1/2	94
ZATJ-350	35	8 1/4	3 7/8	14 7/8	23 3/4	12 5/8	6 3/8	2 3/4	99

ZBR & ZOTR Series

Capacity: 10 tons at 10,000 psi.

Ideal for tractor, truck, grader and farm implement tire bead breaking. Smooth air hydraulic action work on all type of rims.

Features:

1. Detached both the inner and outer bead without removing the tire, and will not damage the bead or rim.
2. Best performance when used with air hydraulic pump (such as ZAP-101), or any equivalent 10,000 psi pumps. For more selection of pumps, please refer to our pump section starting from page 15.
3. Conversion kits are available for ZBR series increasing its versatility.
4. Comes with a flush face, no-spill quick-dry coupler.
5. No screws, bolts, or attachments are required.

Model: ZBR-20A

Conversion Kits: ZBR-20B

1. Adapts to bead breaker for use with larger rim size.
2. Interchanges with a special longer adapter feet and shovel.
3. Jaw opens to 6-1/8".
4. Weight: 5 lbs.

Model	Capacity (Ton)	Tire Range	Stroke (in)	Wt. (lb)
ZBR-20A	8	R16 ~R20	4"	30
ZBR-20B	8	R24 ~ R25 (conversion kits)	4"	5
ZOTR-25B	16	R24, R25 & above	2"	17
ZOTR-25C	20	R24, R25 & above	4"	12

Model: ZAP-101
w/ air hose

Use ZAP-101 with our bead breakers to free both hands by way of foot pump.

For more information on Zinko's line of air pumps, please refer to page 15.

Model:
ZOTR-25C

Bead Push-Off Ram: ZOTR-25C

1. Pushes off earth mover tires mounted with rims away from axle by leaning against the chassis and pushing the lateral rim.
2. When applying this tool, the vehicle needs a special jack stand support for safety purposes.
3. Output pressure: 20 tons of force at 10,000 psi.
4. Cylinder bore diameter: 2". Stroke: 4". Weight: 12 lbs.

Model:
ZOTR-25B

OTR Bead Breaker: ZOTR-25B

1. Special application on large OTR tires (25" to 49" rims with pry bars pockets).
2. Output pressure: 16 tons of force at 10,000 psi.
3. Cylinder bore diameter: 2". Stroke: 2". Weight: 17 lbs.

Wheel Dolly

Capacity: 1000 or 1500 lbs.

Model: ZWD-1500

Wheel Dolly

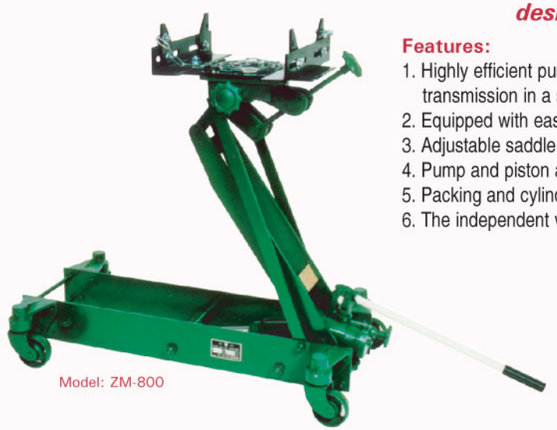
Use this dolly to remove, transport and replace tire assembly without strain or struggle.

1. Full swivel caster wheels provide smooth steering for easy positioning.
2. The four ton bottle jack provides smooth and rapid lift capability.
3. The push bar is adjustable providing unobstructed access to the hub area.
4. ZWD-1500 model features an 8" travel adjustment on rear caster wheel which matches lifting arms with spindle angle.
5. Two 8' chains are provided to hold the wheel assembly in place during removal and transport.

Model Number	Capacity (Tons)	Dimensions (in)				Ship Wt. (lbs)
		Lift Travel Range	Overall Length	Overall Width	Overall Height	
ZWD-1000	1	17 3/4	42 1/2	33 1/2	43 3/8	190
ZWD-1500	1.5	7 1/4	39	42	28 3/4	158

ZM & ZML Series

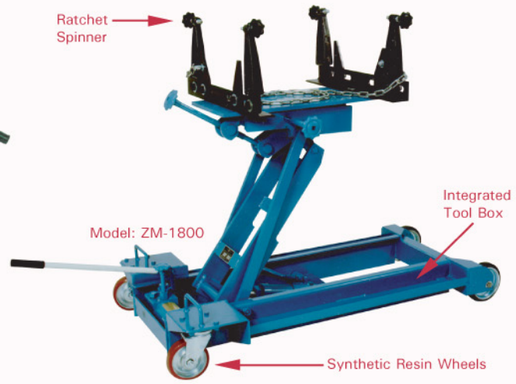
Zinko's line of transmission jacks are specially designed for medium to large-sized vehicles.



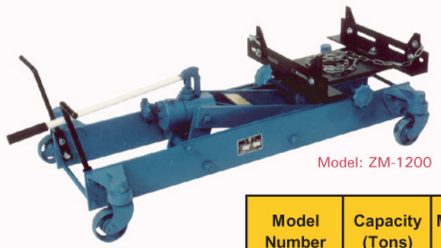
Model: ZM-800

Features:

1. Highly efficient pump and plunger components give fast and smooth lifting of transmission in a simple operation, minimizing labor.
2. Equipped with easy-to-move handle.
3. Adjustable saddle moves forward, backward, side-to-side, and has tilt capabilities.
4. Pump and piston are finished to prevent oil leakage.
5. Packing and cylinder are extensively tested and scientifically researched.
6. The independent valve enables easy interchange after extensive use.



Model: ZM-1800



Model: ZM-1200

Model Number	Capacity (Tons)	Min. Ht (in)	Max. Ht. (in)	Power Lift (in)	Chassis Length (in)	Chassis Width (in)	Saddle Cradle (deg)	Sidewise Slide (in)	Ship Wt. (lbs)
ZM-800	0.8	12 5/8	35	22 1/2	35 1/2	19 5/8	30	1 1/2	154
ZM-1200	1.2	13 3/4	36 1/4	22 3/8	43 1/3	22	30	1 1/2	198
ZM-1500	1.5	14 5/8	36 1/4	21 5/8	48	29 1/8	30	1 1/2	242
ZM-1800	1.8	20 1/2	41 3/4	21 1/4	51 1/4	28 3/8	30	1 1/2	297

Model: ZM-1500T

Low Profile Transmission Jacks

1. Flash chromed ram inhibits rust from entering the hydraulic system.
2. Adjustable universal saddle with corner brackets and safety chain included.
3. Safety by-pass and overload system prevent damage from inadvertent overload.
4. Full 360 degree rotating pump handle can operate in any position.
5. Wide chassis for efficient load distribution and stability.

Model Number	Capacity (Tons)	Min. Height (in)	Max. Height (in)	Overall Length Ext. (in)	Overall Width (in)	Ship Wt. (lbs)
ZM-500T	1/2	8 1/2	28 1/2	19 1/2	34	158
ZM-1000T	1	8	31	18 1/2	34	179
ZM-1500T	1 1/2	6 1/2	35	26	43	363

Telescopic Transmission Jacks

1. Two stage cylinder that provides a lower pick-up point with high lifting capability.
2. Universal saddle and corner brackets that are fully adjustable with a safety constraint belt to secure your load. (Fig.28)
3. Foot operated two-stage hydraulics allow for precise load control as well as rapid lifting abilities. (Fig.29)
4. Safety bypass system that prevents damage to the cylinder.
5. Equipped with two release pedals, one for fast lowering without a load and the other provides slow lowering with a load.
6. Ram, pump, and piston are specially finished to prevent oil leakage.
7. Four-wheel base with locking swivel urethane casters to ensure stability and effortless positioning.

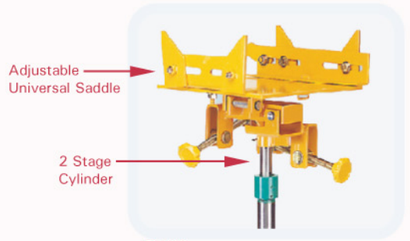


Fig.28

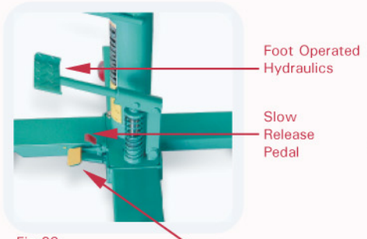


Fig.29

Model: ZML-500

Model: ZML-501

ZML & ZAML (tilting saddle)

strap

Air Hydraulic Telescopic Transmission Jacks

1. Dual performance - can be used manually or air actuated operation.
2. Safety by-pass and overload system prevents jack from being used beyond its rated capacity.
3. Foot operated release valve frees operator's hands to guide the load.
4. Special 2 stage design enables work from lower pick up point with higher reach capacity.
5. Fully adjustable universal saddle with adjustable corner brackets and safety chain.
6. Equipped with handle, easy to move in all directions.
7. Swivel caster wheels are for easy moving and positioning.
8. Chromed telescopic rams and the strong leg design provides maximum stability.

Model: ZAML-502

Model Number	Capacity (Tons)	Min. Ht (in)	Max. Ht. (in)	Power Lift (in)	Chassis Length (in)	Chassis Width (in)	Saddle Cradle (deg)	Side Tilt (in)	Ship Wt. (lbs)
ZML-500	1/2	36 1/4	72 3/4	36 1/2	29 1/2	28 3/8	42/46	12°	154
ZML-800	0.8	36 1/2	71	36 1/2	31 1/2	33 1/2	15	1 1/2	165
ZML-501	1/2	32 5/8	68 7/8	36 1/4	35 1/2 x 35 1/2	...	30	15°	180
ZAML-502	1/2	33 1/4	71	37 3/4	31 x 37	...	30	15°	180

Shop Equipment

Zinko offers a variety of different products to assist you in running a smooth operation in the auto shop.

Model: ZMK-800

Mission Carry Jack

1. Well-balanced work table with wider wheel span makes these units easy to move.
2. Work table ensures easy handling of tools with a convenient handle for mobility.
3. Quick and easy removal due to polyurethane wheels.

Model Number	Capacity (Tons)	Dimensions (in)					Ship Weight (lbs)
		Minimum Height	Maximum Height	Power Lift	Chassis Length	Chassis Width	
ZMK-800	0.8	47 1/4	67	19 5/8	46	21	187

Spring Jack

1. Designed for use in the trucking industry, especially for large-sized vehicles.
2. An efficient removal and installation tool for leaf springs on large trucks.
3. Simple operation with attached tiltable adaptor to fix spring on the cradle.

Model: ZNSL-500

Differential Gear Jacks

1. Adjustable attachment for installation of various sized differential gears.
2. Pump handle can be operated at any angle and direction.
3. Adopting "V" construction ensures operator's safety.
4. Cylinder and packing are designed to prevent oil leaks with long-term use.
5. Adjustable saddle moves forwards, backwards and side-to-side tilt.
6. Attached stopper on the cradle secures an object.

Model: ZNSD-300L

Model: ZNSD-600

Model Number	Capacity (Tons)	Dimensions (in)							Ship Wt. (lbs)
		Min. Height	Max. Height	Power Lift	Chassis Length	Chassis Width	Saddle Cradle	Sidewise Slide	
ZNSD-300	0.3	7 1/6	23 7/8	16 7/8	38 1/8	26 1/8	20	2 3/4	154
ZNSD-300L	0.3	7 7/8	31 1/2	23 7/8	52	27 1/2	20	2 3/4	164
ZNSD-600	0.6	12 1/2	38 1/2	26 3/8	73 3/8	31 7/8	20	4 3/4	400
ZNSL-500	0.5	19 5/8	22 3/8	22 1/8	81 1/8	18 1/8			187

Model: ZES-100

Engine Stands

1. These heavy-duty repair stands are an ideal choice for mounting various engines, transmissions, and rear axles.
2. ***ZES-050*** features four adjustable attachment arms for convenient mounting. The engine mounting head can also be rotated a full 360°.
3. ***ZES-100*** features a twin-post design for lateral adjustment and a gearbox that allows full rotation of the mounted unit for service, then locks into position.

Model: ZES-050

Model Number	Capacity (Tons)	Dimensions (in)				Weight (lbs)
		Width-R	Width-F	Length	Height	
ZES-050	1/2	29 1/8	13 3/8	32 3/8	35	53
ZES-100	1	40 1/2	12	53	36 3/4	163

Portable Mid-Rise Lift

This 6000 lb. mid-rise scissor lift is designed to service cars, vans and light-duty trucks. The portable motor trolley is not only a control center for the lift, but also serves as a tow handle to easily move the lift from one bay to another. Ideal for use on wheel and brake related repairs, tire and wheel changing, and collision repair work.

1. Twin hydraulic cylinders and scissor lift design provide maximum support and stability.
2. Automatic mechanical safety lock will lift in either 30" or 36-1/4" lift height. Manually operated lever releases lock.
3. Hydraulic velocity fuses allow slow release of lift in the unlikely event of hose or hydraulic component damage.
4. 3-7/8" low height for easy drive on and off.
5. Sliding radius arms easily adjust to vehicle frame lift position.
6. Portable trolley supports the pump and maneuvers the lift from one service bay to another.
7. Fast and efficient operating pump powered by a 1hp, 115V single-phase motor.
8. A set of four 2-1/8" riser plates and four swivel rubber lifting pads are included, as well as adapters with extension screw, rubber pads, and steel covered plates for higher frame clearance vehicles. (Fig.30)

Fig.30

Model: ZTCL-30

Model Number	Capacity (Tons)	Dimensions (in)						Ship Weight (lbs)
		Minimum Height	Maximum Height		Pad Min. Height	Pad Max. Height	Overall Length	Overall Width	
ZTCL-30	3	3 7/8	37		5 1/2	38 3/4	83 7/8	38 3/8	770
	Horse Power (HP)	Voltage (V)	Ph	Hz	Max. Pressure (psi)	Avg. Flow at Max Press. (in3/min.GPM)	Relief Valve (psi)	Oil Tank (gal.)	Ship Weight (lbs)
	12	115/230	1	50/60	3200	145 - 0.6	3600	1	47

Shop Equipment

Tripod Type Stands

Designed to support and stabilize components while vehicle is in a raised position.

1. Pin positions provide four different height adjustments.
2. Acme screw allows for 8 inches of exact height adjustment.
3. Quick adjust spin handle provides ease of turning under load.
4. 23 inch tripod base designed to aid stability.
5. All stands are sold in pairs and have a rated capacity.
7. Stands are not designed or intended to support vehicles. Use four stands when stabilizing vehicles on an automotive lift.

Model: ZES-150

Slim Type Stands

Designed to support vehicle components. Ideal for any task which requires relieving pressure off the component.

1. Lightweight, slim design makes handling easy in tight work spaces.
2. Acme screw allows for precise height adjustment.
3. Quick adjust spin handle provides easy turning under load.
4. Foot pedal folds for convenience.
5. All stands are sold in pairs and have a rated capacity.

Model: ZES-075

Model: ZES-075P

Model Number	Capacity (Tons)	Dimensions (in)				Ship Weight (lbs)
		Minimum Height	Maximum Height	Screw Range	Base Area	
ZHS-075	0.75	53 3/8	80	26 5/8	12 (dia)	68/PR
ZHS-075P	0.75	53 3/8	80	26 5/8	12 (dia)	76/PR
ZHP-150	1.5	48 7/8	85 3/8	36 1/2	23 (side)	80/PR

Screw Type Stands

1. Minor adjustments can be made without any lift required.
2. Formed steel welded base and frame for extra strength.
3. Easy operation type column adjusts to fit any height position.
4. Extension screw locking device for extra safety and support.
5. Large support saddles and handle for easy adjustments.
6. All stands are sold in pairs and have a rated capacity.

Model: ZJS-1218

Model: ZJS-1228

Ratchet Type Stands

1. Welded steel base for extra strength.
2. Positive lock handle can not be released under load.
3. Saddle column provides self-locking ratchet height adjustment.
4. All stands are sold in pairs and have a rated capacity.

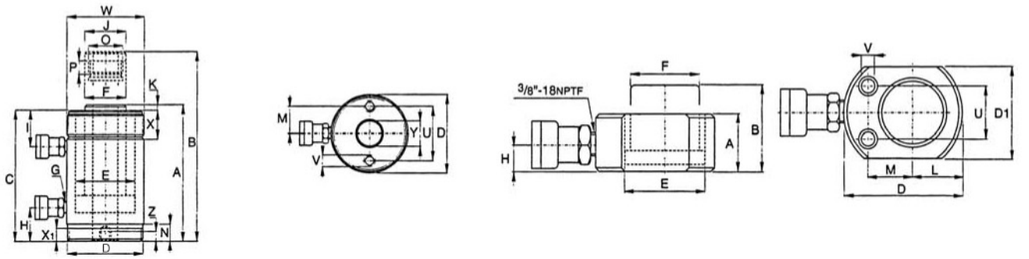
Model: ZJS-061

Model: ZJS-031

Model Number	Capacity (Tons)	Dimensions (in)				Ship Weight (lbs)
		Minimum Height	Maximum Height	Saddle Diameter	Base Area	
ZJS-031	3	10 5/8	16 1/2	10 x 2 7/8	7 x 7 5/8	15/PR
ZJS-061	6	12 1/4	18 1/2	12 x 2 7/8	8 x 9	25/PR
ZJS-1218	12	18	28	6 5/8 x 3 1/2	20 1/4	22/EA
ZJS-1228	12	28	47	6 5/8 x 3 1/2	27	26/EA

Key to Cylinder Dimensions

With Measurement Key



A : Collapsed Height
B : Extended Height
C : Cylinder Body Length
D : Outside Cylinder Diameter
D_1 : Cylinder Width
E : Cylinder Bore Diameter
F : Plunger Rod Diameter
G : Oil Inlet Thread
H : Base to Advance Port
I : Top to Retract Port
J : Saddle Diameter
K : Plunger Protrusion (from plunger)
L : Plunger Center to Side of Base
M : Mounting Holes To Plunger Center
N : Length of Smaller Cylinder Part
O : Plunger Internal Thread
P : Plunger Thread Length
Q : Plunger Outside Thread (pull cylinders only)
U : Bolt Circle Diameter of Mounting Holes
V : Thread of Cylinder Mounting Holes
W : Collar Thread
X : Collar Thread Length
Y : Center Hole Diameter (hollow cylinders only)
Z : Depth of Internal Base Thread

Imperial to Metric																
Inches	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1.00
Decimal	0.0625	0.125	0.187	0.250	0.312	0.375	0.437	0.500	0.562	0.625	0.687	0.750	0.812	0.875	0.937	1.00
mm	1.59	3.18	4.76	6.35	7.94	9.53	11.11	12.7	14.29	15.88	17.46	19.05	20.64	22.23	23.81	25.40

All capacities and measurements in the catalog are expressed in uniform values.

The conversion chart provides information for translation into equivalent systems.

Pressure	
1psi:	0.069 bar
1 bar:	14.50 psi
Weight	
1 pound (lb):	0.4536 kg
1 kg:	2.205 lbs
1 metric ton:	2,205 lbs
1 ton (short):	2,000 lbs
1 ton (short):	907.18 kg

Other Measurements	
1 in:	25.4 mm
1 mm:	0.039 in
1 in^2:	6.452 cm^2
1 cm^3:	0.155 in^2
1 hp:	0.735 Kw
1 kW:	1.359 hp
1 Nm:	0.73756 Ft.lbs
1 Ft.lbs:	1.355818 Nm

Volume	
1 in^3:	16.387 cm^3
1 cm^3:	0.061 in^3
1 liter:	61.02 in^3
1 liter:	0.264 gal
1 US gal:	3,785 cm^3 3.785 l 231 in3

Model Number	Cyl. Cap. (tons)	Stroke (in)	Cyl. Effect. Area (in^2)	Oil Cap. (in^3)	Dimensions (in)							Ship Wt. (lbs)
					Collapsed Height A	Extended Height B	Outside Diameter D	Cyl. Bore Diameter E	Plunger Diameter F	Base to Adv. Port H	Plunger Protrusion K	
ZR Series												
ZR-302A	30	2.00		13	6.49	8.50	4.45	2.56	2.55	2.27	0.02	14
ZR-304A	30	4.00		26	8.50	13.22	4.45	2.56	2.55	2.27	0.02	18
ZR-306A	30	6.00		41	10.79	16.96	7.02	2.95	2.55	2.27	0.02	21
ZR-502A		2.25		25	6.93	9.17	5.9	3.74	3.15	1.8	0.055	22
ZR-504A	50	4.25		47	8.93	13.18	5.9	3.74	3.15	1.8	0.055	27
ZR-506A		6.25		69	10.93	17.16	5.9	3.74	3.15	1.8	0.055	32
ZRM Series												
ZRM-005	5	0.25	0.99	0.25	1.28	1.53	2.31x1.63	1.13	1	0.63	0.04	3
ZRM-010	10	0.44	2.24	0.98	1.69	2.13	3.25x2.19	1.69	1.5	0.75	0.04	4
ZRM-020	20	0.44	4.43	1.95	2.03	2.47	4.00x3.00	2.38	2	0.75	0.04	7
ZRM-030	30	0.50	6.51	3.25	2.31	2.81	4.63x3.75	2.88	2.5	0.75	0.08	10
ZRM-050	50	0.63	9.63	6.07	2.63	3.25	5.50x4.50	3.5	2.75	0.75	0.08	15
ZRM-075	75	0.63	15.92	10.03	3.13	3.75	6.50x5.50	4.5	3.25	0.75	0.08	25
ZRM-100	100	0.63	19.66	12.39	3.38	4	7.00x6.00	5	3.63	0.75	0.08	32
ZRB Series												
ZRB-101	10	1.50	2.43	3.35	3.47	4.97	2.75	1.69	1.5	0.69	0.20	9
ZRB-201	20	1.75	4.44	7.77	3.88	5.63	3.63	2.38	2	0.69	0.12	11
ZRB-302	30	2.44	6.50	15.85	4.63	7.06	4	2.88	2.62	0.75	0.12	15
ZRB-502	50	2.38	9.63	22.91	4.81	7.19	4.88	3.5	2.75	0.94	0.08	24
ZRB-1002	100	2.25	19.67	44.25	5.56	7.81	6.5	5	3.63	1.25	0.06	50

Model Number	Stroke (in)	Oil Cap. (in^3)	Cylinder Effective Area (in^2)	Dimensions (in)															Ship Weight (lbs)
				Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Diameter	Base to Adv. Port	Saddle Dia.	Protrusion from Plunger	Plunger Internal Thread	Plunger Thread Legnth	Base Mounting Holes			Collar Thread	Collar Thread Length	
														Bolt Circle	Thread	Thread Depth			
				A	B	D	E	F	H	J	K	O	P	U	V	Z	W	X	
5 Ton Capacity																			
ZR-50	0.63	0.62	0.99	1.63	2.25	2.31	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.56	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	3
ZR-51	1.00	0.99	0.99	4.34	5.34	1.50	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.56	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	3
ZR-53	3.00	2.98	0.99	6.50	9.50	1.50	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.56	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	4
ZR-55	5.00	4.97	0.99	8.50	13.50	1.50	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.56	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	5
ZR-57	7.00	4.97	0.99	10.75	17.75	1.50	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.63	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	6
ZR-59	9.13	4.97	0.99	12.75	21.88	1.50	1.13	1.00	0.75	1.00	0.25	3/4 - 16	0.63	1.00	1/4 - 20 UN	0.56	1 1/2 - 16	1.13	7
10 Ton Capacity																			
ZR-101	1.00	2.24	2.24	3.63	4.53	2.25	1.69	1.50	0.77	1.38	0.36	#10-24UN	0.25	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.06	4
ZR-102	2.00	4.75	2.24	5.89	7.89	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.89	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.18	6
ZR-104	4.00	9.23	2.24	7.89	11.89	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.89	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.18	8
ZR-106	6.00	13.7	2.24	9.89	15.89	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.89	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.18	10
ZR-108	8.00	17.89	2.24	11.89	19.89	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.89	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.18	12
ZR-1010	10.00	22.65	2.24	13.89	23.89	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.89	1.56	5/16 - 18 UN	0.59	2 1/4 - 14	1.18	14
ZR-1012	12.00	26.84	2.24	15.75	27.75	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.75	1.56	5/16 - 18 UN	0.50	2 1/4 - 14	1.06	15
ZR-1014	14.00	31.31	2.24	17.75	31.75	2.25	1.69	1.50	0.77	1.38	0.36	1 - 8	0.75	1.56	5/16 - 18 UN	0.50	2 1/4 - 14	1.06	18
12 Ton Capacity																			
ZRH-120	0.31	0.86	2.77	2.19	2.50	2.75	2.13	1.38	0.38	--	--	3/4-16UN	0.63	2	5/16-18UNC	0.35	2-3/4 - 16	1.18	4
ZRH-121	1.63	4.52	2.77	4.75	6.38	2.75	2.13	1.38	0.75	--	--	--	--	--	--	--	2-3/4 - 16	1.19	7
ZRH-1211	1.63	4.52	2.77	4.75	6.38	2.75	2.13	1.38	0.75	--	--	3/4-16UN	0.63	--	--	--	2-3/4 - 16	1.19	7
ZRH-123	3.00	8.31	2.77	7.25	10.25	2.75	2.13	1.38	0.75	--	--	--	--	2	5/16-18UNC	0.50	2-3/4 - 16	1.19	10
15 Ton Capacity																			
ZR-151	1.00	3.14	3.14	4.88	5.88	2.75	2.00	1.63	0.75	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	8
ZR-152	2.00	6.28	3.14	5.88	7.88	2.75	2.00	1.63	0.75	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	9
ZR-154	4.00	12.59	3.14	7.88	11.88	2.75	2.00	1.63	0.75	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	11
ZR-156	6.00	18.85	3.14	10.69	16.69	2.75	2.00	1.63	1.00	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	15
ZR-158	8.00	25.13	3.14	12.69	20.69	2.75	2.00	1.63	1.00	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	18
ZR-1510	10.00	31.42	3.14	14.69	24.69	2.75	2.00	1.63	1.00	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	21
ZR-1512	12.00	37.7	3.14	16.69	28.69	2.75	2.00	1.63	1.00	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	24
ZR-1514	14.00	43.98	3.14	18.69	32.69	2.75	2.00	1.63	1.00	1.50	0.38	1 - 8	1.00	1.88	3/8 - 16 UN	0.50	2 3/4 - 16	1.19	26
20 Ton Capacity																			
ZRH-202	2.00	9.46	4.73	6.38	8.38	3.88	2.88	2.13	0.75	2.13	0.27	1 9/16 - 16UN	0.75	3.75	3/8"-16 UNC	0.37	3 7/8 - 12	1.5	17
ZRH-206	6.10	28.67	4.73	12.05	18.11	3.88	2.88	2.13	0.75	2.13	0.27	1 9/16 - 16UN	0.75	3.75	3/8"-16 UNC	0.37	3 7/8 - 12	1.5	31
25 Ton Capacity																			
ZR-251	1.00	5.16	5.16	5.50	6.50	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	13
ZR-252	2.00	10.31	5.16	6.50	8.50	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	14
ZR-254	4.00	20.63	5.16	8.50	12.50	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	18
ZR-256	6.25	32.23	5.16	10.75	17.00	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	22
ZR-258	8.25	42.55	5.16	12.75	21.00	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	27
ZR-2510	10.25	52.86	5.16	14.75	25.00	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	31
ZR-2512	12.25	63.18	5.16	16.75	29.00	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	36
ZR-2514	14.25	73.49	5.16	18.75	33.00	3.38	2.56	2.25	1.00	2.00	0.41	1 1/2 - 16	1.00	2.31	1/2 - 13 UN	0.75	3 5/16 - 12	1.94	39
30 Ton Capacity																			
ZR-302	2	12.98	6.51	4.63	7.06	4.00	2.88	2.62	0.75	--	0.12	--	--	--	--	--	--	--	15
ZR-308	8.25	53.56	6.49	15.25	23.5	4.00	2.88	2.25	2.25	2.00	0.41	1 1/2 - 16	1.00	--	--	--	3 5/16 - 12	1.94	40
ZRH-302	2.50	18.05	7.22	7.03	9.53	4.50	3.50	2.50	0.85	2.50	0.38	1 13/16-16UN	0.88	3.63	3/8 - 16 UNC	0.55	4 1/2-12	1.66	24
ZRH-306	6.13	44.23	7.22	13.00	19.13	4.50	3.50	2.50	1.00	2.50	0.38	1 19/16-16UN	0.88	3.63	3/8 - 16 UNC	0.55	4 1/2-12	1.66	48
50 Ton Capacity																			
ZR-502	2.00	22.09	11.04	6.94	8.94	5.00	3.75	3.13	1.31	2.81	0.11	--	--	3.75	1/2 - 13 UN	0.75	5 - 12	2.19	33
ZR-504	4.00	44.18	11.04	8.94	12.94	5.00	3.75	3.13	1.31	2.81	0.11	--	--	3.75	1/2 - 13 UN	0.75	5 - 12	2.19	42
ZR-506	6.25	69.03	11.04	11.13	17.38	5.00	3.75	3.13	1.38	2.81	0.11	--	--	3.75	1/2 - 13 UN	0.75	5 - 12	2.19	51
ZR-5013	13.25	146.74	11.04	18.13	31.38	5.00	3.75	3.13	1.38	2.81	0.11	--	--	3.75	1/2 - 13 UN	0.75	5 - 12	2.19	83
60 Ton Capacity																			
ZRH-603	3.00	38.2	12.73	9.75	12.75	6.25	4.88	3.63	1.25	3.61	0.50	2 3/4-16UN	0.75	5.13	1/2 -13 UNC	0.55	1.91	2.12	62
ZRH-606	6.00	76.41	12.73	12.75	18.75	6.25	4.88	3.63	1.25	3.61	0.50	2 3/4-16UN	0.75	5.13	1/2 -13 UNC	0.55	1.91	2.12	78
75 Ton Capacity																			
ZR-756	6.13	97.41	15.90	11.25	17.38	5.75	4.50	3.75	1.19	2.81	0.23	--	--	--	--	--	5 3/4 - 12	1.75	65
ZR-7513	13.13	208.74	15.90	19.38	32.50	5.75	4.50	3.75	1.19	2.81	0.23	--	--	--	--	--	5 3/4 - 12	1.75	130
100 Ton Capacity																			
ZR-1006	6.63	136.67	20.63	14.06	20.69	7.00	5.13	4.13	1.63	2.81	0.11	--	--	5.50	3/4 - 10 UN	1.00	6 7/8 - 12	1.75	130
ZR-10010	10.25	211.45	20.63	17.69	27.94	7.00	5.13	4.13	1.63	2.81	0.11	--	--	5.50	3/4 - 10 UN	1.00	6 7/8 - 12	1.75	160

Model Number	Stroke (in)	Oil Cap. (in^3)	Cyl. Effec. Area (in^2)	Dimensions (in)									Base Inner Thrd. (in)	Oil Inlet Port NPT (in)	Int. Press. At Cap. (psi)	Int. Spring Return	Ship Wt. (lbs)
				Coll. Height	Extend Height	Outside Dia.	Cyl. Bore Dia.	Plgr Dia.	Saddle Dia.	Plgr. Int. Thread	Collar Thread	Collar Thread Length					
				A	B	D	E	F	J	P	W	X					
2 Ton Capacity																	
ZAR-023	3.00	2.3	0.79	5.50	8.50	1.38	1	0.875	0.875	---	1 1/2 - 16	---	---	1/4	5605	N	2
4 Ton Capacity																	
ZAR-044SP	4.00	3.9	0.99	10.75	14.75	1.50	1.12	0.875	0.875	---	1 1/2 - 16	1	---	1/4	8889	Y	4
10 Ton Capacity																	
ZAR-106SP	6.00	14.8	2.46	14.25	20.25	2.24	1.77	1.5	1.30	1 - 8	2 1/4 - 14	1.26	1 - 1/4	3/8	8943	Y	12
ZAR-106T	6.00	14.8	2.46	13.50	19.50	2.24	1.77	1.5	---	1 - 8	2 1/4 - 14	1.26	1 - 1/4	3/8	8943	Y	12
ZAR-1010SP	10.00	24.7	2.46	15.25	27.25	2.24	1.77	1.5	1.30	1 - 8	2 1/4 - 14	1.26	1 - 1/4	3/8	8943	Y	16
ZAR-1010T	10.00	24.7	2.46	16.50	26.50	2.24	1.77	1.5	---	1 - 8	2 1/4 - 14	1.26	1 - 1/4	3/8	8943	Y	16

Model Number	Stroke (in)	Oil Capacity (in^3)		Cylinder Effective Area (in^2)		Maximum Cylinder Cap. (tons)		Dimensions (in)									Ship Weight (lbs)
								Collapsed Height	Extended Height	Outside Diameter	Cyl. Bore Diameter	Plunger Diameter	Base To Adv. Port	Saddle Diameter	Saddle Thread	Collar Thread	
		Adv.	Ret.	Adv.	Ret.	Adv.	Ret.	A	B	D	E	F	H	J	O	W	
10 Ton Capacity																	
ZRD-1010	10.00	22.33	8.00	2.23	0.80	10	4	16.13	26.13	2.88	1.69	1.38	1.44	1.38	1 -8	2 1/4 -14	28
ZRD-1012	12.00	26.80	9.00	2.23	0.80	10	4	18	30	2.88	1.69	1.38	1.44	1.38	1 -8	2 1/4 -14	31
30 Ton Capacity																	
ZRD-308	8.25	53.67	25.00	6.51	3.00	30	15	15.25	23.5	4	2.88	2.13	1.44	2.00	1 1/2-16	3 5/16 -12	40
ZRD-3014	14.50	92.70	43.00	6.51	3.00	30	15	21.63	36.13	4	2.88	2.13	1.56	2.00	1 1/2-16	3 5/16 -12	64
ZRDH-307	7.00	50.51	33.00	7.22	4.71	30	23	13.00	20.00	4.5	3.5	2.5	1	2.5	1 13/16 -16	4 1/2 -12	48
ZRDH-3010	10.13	73.10	47.70	7.22	4.71	30	23	17.00	27.13	4.5	3.5	2.5	1	2.5	1 13/16 -16	4 1/2 -12	60
50 Ton Capacity																	
ZRD-506	6.13	67.77	21.00	11.06	3.40	50	10	13.06	19.19	5	3.75	3.13	1.13	2.81	1 - 12	5 - 12	67
ZRD-5013	13.13	145.17	44.00	11.06	3.40	50	10	20.06	33.19	5	3.75	3.13	1.13	2.81	1 - 12	5 - 12	115
ZRD-5020	20.13	222.56	68.00	11.06	34.00	50	10	28.88	49.00	5	3.75	3.13	2.25	2.81	1 - 12	5 - 12	150
60 Ton Capacity																	
ZRDH-603	3.50	44.57	29.21	12.73	8.37	60	40	9.75	13.25	6.25	4.88	3.63	1.25	2.50	2 3/4 -16	6 1/4 - 12	62
ZRDH-606	6.50	82.77	54.24	12.73	8.37	60	40	12.75	19.25	6.25	4.88	3.63	1.25	2.50	2 3/4 -16	6 1/4 - 12	78
ZRDH-6010	10.12	128.94	84.49	12.73	8.37	60	40	17.25	27.38	6.25	4.88	3.63	1.25	2.50	2 3/4 -16	6 1/4 - 12	101
75 Ton Capacity																	
ZRD-756	6.13	97.58	29.00	15.92	4.90	75	17	13.69	19.81	5.75	4.5	3.75	1.19	2.81	1 - 12	5 3/4 - 12	92
ZRD-7513	13.13	209.00	64.00	15.92	4.90	75	17	20.69	33.81	5.75	4.5	3.75	1.19	2.81	1 - 12	5 3/4 - 12	150
100 Ton Capacity																	
ZRD-1006	6.63	136.93	63.00	20.65	9.60	100	48	14.06	20.69	7	5.13	3.75	1.5	3.00	1 3/4 -12	6 7/8 - 12	135
ZRD-10013	13.13	271.17	126.00	20.65	9.60	100	48	20.63	33.75	7	5.13	3.75	1.5	3.00	1 3/4 - 12	6 7/8 - 12	205
ZRD-10018	18.13	374.44	174.00	20.65	9.60	100	48	27.06	45.19	7	5.13	3.75	1.63	3	1 3/4 - 12	6 7/8 - 12	260
150 Ton Capacity																	
ZRD-1502	2.25	69.11	33.00	30.71	14.80	150	74	7.72	9.96	8	6.25	4.5	0.88	4.49	-	-	110
ZRD-1506	6.13	188.28	91.00	30.71	14.80	150	74	15.19	21.31	8	6.25	4.5	1.94	4.49	3 3/8 - 16	8 - 12	205
ZRD-15013	13.13	403.27	194.00	30.71	14.80	150	74	22.20	35.31	8	6.25	4.5	1.94	4.49	3 3/8 - 16	8 - 12	275
ZRD-15032	32.13	986.84	475.00	30.71	14.80	150	74	43.94	76.06	8	6.25	4.5	3	4.49	3 3/8 - 16	8 - 12	525
200 Ton Capacity																	
ZRD-2006	6.00	265.28	135.00	44.21	22.50	200	112	16.94	22.94	9.75	7.5	5.25	2.25	5.25	-	-	325
ZRD-20013	13.00	574.78	293.00	44.21	22.50	200	112	23.94	36.94	9.75	7.5	5.25	2.25	5.25	2 1/2 - 12	9 3/4 - 12	440
300 Ton Capacity																	
ZRD-3006	6.00	425.56	228.00	70.93	38.00	300	188	19.13	25.13	12.25	9.5	6.5	3.5	6.5	2 1/2 - 12	12 1/4 - 12	441

Index

Order #	Model	Description	Page
195111	195111	3/8" Coupler - Fast Flow	7, 26
195212	195212	Hose 6', 8' or 12'	7, 26
195311	195311	3/8" Street Elbow	7, 25
195340	195340	Nipple 1/4"	7, 25
195341	195341	Hex Nipple 3/8" NPT	7, 25
195411	195411	Needle Valve	7, 25
195611	195611	Aluminum Ram Base	7, 25
195661	195661	Gauge Adapter	7, 25
195662	195662	Gauge Adapter	7, 25
195663	195663	Gauge Adapter	7, 26
195664	195664	Gauge Adapter	7, 26
4013A	ZSJ-13A	1.3 ton Suple Low Aluminum Jack	34
4015	ZSJ-15H-2	1 1/2 ton Service Jack	34
4015A	ZSJ-15A6	1 1/2 ton 6 pumps Aluminum Jack	34
4015A3	ZSJ-15A3	1 1/2 ton 3 pumps Aluminum Jack	34
4020A	ZSJ-20A	2 ton Low Height Aluminum Jack	34
4020L	ZSJ-20L-2	2 ton Long Service Jack	34
4020S	ZSJ-20S-3	2 ton Short Service Jack	34
4020T	ZSJ-20T	2 ton Short Service Jack	34
4030	ZSJ-30H	3 ton Long Service jack	34
4050	ZSJ-50H	5 ton Long Service Jack	34
40100	ZSJ-100H	10 ton Long Service Jack	34
40200	ZSJ-200H	20 ton Long Service Jack	34
4115	ZASJ-15M	1 1/2 ton Air Service Jack	34
4120	ZASJ-20M	2 ton Air Service Jack	34
4130	ZASJ-30M	3 ton Air Service Jack	34
4150	ZASJ-50M	5 ton Air Service Jack	34
41100	ZASJ-100M	10 ton Air Service Jack	34
5008	ZM-800	0.8 ton Transmission Jack	37
5012	ZM-1200	1.2 ton Transmission Jack	37
5015	ZM-1500	1.5 ton Transmission Jack	37
5018	ZM-1800	1.8 ton Transmission Jack	37
5105	ZM-500T	1/2 ton Transmission Jack	37
5106	ZM-1000T	1 ton Transmission Jack	37
5107	ZM-1500T	1 1/2 ton Transmission Jack	37
5205	ZML-500	1/2 ton Telescopic Transmission Jack	38
5206	ZML-800	0.8 ton Telescopic Transmission Jack	38
5207	ZML-501	1/2 ton Telescopic Transmission Jack	38
5208	ZAML-502	1/2 ton Air Telescopic Trani Jack	38
5209	ZMK-800	0.8 ton Mission Carry Jack	39
5210	ZNSD-300	0.3 ton Differential Gear Jack	39
5211	ZNSD-600	0.6 ton Differential Gear Jack	39
5212	ZNSL-500	1/2 ton Speing Jack	39
5213	ZES-050	1/2 ton Engine Stand	40
5214	ZES-100	1 ton Engine Stand	40
5218	ZTCL-30	3 ton Mid-Rise Scissor Lifts	40
5301	ZHS-075	3/4 ton Under Hoist Stands	41
5302	ZHS-075P	3/4 ton Under Hoist Stand (Pedal)	41
5303	ZHS-150	1 1/2 ton Tripod Type Stands	41
5304	ZJS-031	3 ton Ratchet Type Jack Stands	41
5305	ZJS-061	6 ton Ratchet Type Jack Stands	41
5306	ZJS-1218	12 ton 18" Screw Type Stands	41
5307	ZJS-1228	12 ton 28" Screw Type Stands	41
6100	ZWD-1000	1 ton Wheel Dolly	36
6122	ZATJ-220	22 ton Air Truck Jack	35
6125	ZATJ-250	25 ton Air Truck Jack	35
6135	ZATJ-350	35 ton Air Truck Jack	35
6150	ZWD-1500	1 1/2 ton Wheel Dolly	36
20023	ZAR-023	2 ton 3" Cylinder	5, 44
20044	ZAR-044SP	4 ton 4" Cylinder	5, 44
20106	ZAR-106	10 ton 6" Cylinder	5, 44
20106SP	ZAR-106SP	10 ton 6" Cylinder	5, 44
20106T	ZAR-106T	10 ton 6" Cylinder	5, 44
201010	ZAR-1010	10 ton 10" Cylinder	5, 44
201010SP	ZAR-1010SP	10 ton 10" Cylinder	5, 44
201010T	ZAR-1010T	10 ton 10" Cylinder	5, 44
21004	ZPK-04	4 ton Power Sets	27
21010	ZPK-10	10 ton Power Sets	27
21200	ZPK-20	20 ton Collision Power Sets	27
26040	ZPM-04	4 ton Jaw Type Puller	29
26042	ZPM-42	4 ton 2" Hydraulic Unit	29
26080	ZPM-08	8 ton Jaw Type Puller	29
26083	ZPM-083	8 ton 3" Hydraulic unit	29
26120	ZPM-12	12 ton Jaw Type Puller	29
26123	ZPM-123	12 TON 3" Hydraulic Unit	29
26200	ZPM-20	20 ton Jaw Type Puller	29
26204	ZPM-204	20 ton 4" Hydraulic Unit	29
26300	ZPM-30	30 ton Jaw Type Puller	29
26304	ZPM-304	30 ton 4" Hydraulic Unit	29
26410	ZPM-410	4 ton Push Type Puller	29
26420	ZPM-420	4 ton Push/Puller combo sets	30
26810	ZPM-810	8 ton Push Type Puller	29
26820	ZPM-820	8 ton Push /Puller combo sets	30
261210	ZPM-1210	12 ton Push type Puller	29
261220	ZPM-1220	12 ton Push/Puller combo sets	30
6020A	ZBR-20A	Bead Breaker	36
6020B	ZBR-20B	Conversion Kits for Bead Breaker	36
6025B	ZOTR-25B	OTR Bead Breaker	36
6025C	ZOTR-25C	Bead Push off Ram	36
9210104	9210104	1/4" Coupler	7, 26
9210308	9210308	3/8" Coupler	7, 26
92111	ZWS-05	1/2 ton Spreader	31
92112	ZWS-10	1 ton Spreader	31
92113	ZWS-13	1.35 ton Spreader	31
92114	ZWF-30	32 Ton Standard Wedge Jack	31
92115	ZWF-31	32 Ton Floor Type Wedge Jack	31
92116	ZWF-32	32 ton Floor/narrow Wedge Jack	31
10-02-2	ZMHL-2-2	2 ton Long Ram Jack (Flat)	10
10-04SP	ZMHL-4SP	4 ton Long Ram Jack (SP)	10
10-08SP	ZMHL-8SP	8 ton Long Ram Jack (SP)	10
10-20F	ZMHL-20	20 ton Long Ram Jack (Flat)	10
11-010P	ZDUW-1P	1 ton Speed Roller - Lightweight	12
11-020	ZDUW-2	2 ton Speed Roller	12
11-020B	ZDUB-2	2 ton Speed Roller- Bogie Type	12
11-030	ZDUW-3	3 ton Speed Roller	12
11-030B	ZDUB-3	3 ton Speed Roller- Bogie Type	12
11-030P	ZDUW-3P	3 ton Speed Roller - Lightweight	12
11-050	ZDUW-5	5 ton Speed Roller	12
11-050B	ZDUB-5	5 ton Speed Roller- Bogie Type	12
11-050P	ZDUW-5P	5 ton Speed Roller - Lightweight	12
20-106P	ZPR-106	10 ton 6" Pull Ram	14
20-56P	ZPR-056	5 ton 6" Pull Ram	14
21-050	ZR-50	5 ton 0.63 " Cylinder	4, 43
21-051	ZR-51	5 ton 1" Cylinder	4, 43
21-053	ZR-53	5 ton 3" Cylinder	4, 43
21-055	ZR-55	5 ton 5" Cylinder	4, 43
21-057	ZR-57	5 ton 7" Cylinder	4, 43
21-059	ZR-59	5 ton 9" Cylinder	4, 43
21-10010	ZR-10010	100 ton 10" Cylinder	4, 43
21-1006	ZR-1006	100 ton 6" Cylinder	4, 43
21-101	ZR-101	10 ton 1" Cylinder	4, 43
21-1010	ZR-1010	10 ton 10" Cylinder	4, 43
21-1012	ZR-1012	10 ton 12" Cylinder	4, 43
21-1014	ZR-1014	10 ton 14" Cylinder	4, 43
21-102	ZR-102	10 ton 2" Cylinder	4, 43
21-104	ZR-104	10 ton 4" Cylinder	4, 43
21-106	ZR-106	10 ton 6" Cylinder	4, 43
21-108	ZR-108	10 ton 8" Cylinder	4, 43
21-151	ZR-151	15 ton 1" Cylinder	4, 43
21-1510	ZR-1510	15 ton 10" Cylinder	4, 43
21-1512	ZR-1512	15 ton 12" Cylinder	4, 43
21-152	ZR-152	15 ton 2" Cylinder	4, 43
21-1524	ZR-1514	15 ton 14" Cylinder	4, 43
21-154	ZR-154	15 ton 4" Cylinder	4, 43
21-156	ZR-156	15 ton 6" Cylinder	4, 43
21-158	ZR-158	15 ton 8" Cylinder	4, 43
21-251	ZR-251	25 ton 1" Cylinder	4, 43
21-2510	ZR-2510	25 ton 10" Cylinder	4, 43
21-2512	ZR-2512	25 ton 12" Cylinder	4, 43
21-2514	ZR-2514	25 ton 14" Cylinder	4, 43
21-252	ZR-252	25 ton 2" Cylinder	4, 43
21-254	ZR-254	25 ton 4" Cylinder	4, 43
21-256	ZR-256	25 ton 6" Cylinder	4, 43
21-258	ZR-258	25 ton 8" Cylinder	4, 43
21-302	ZR-302	30 ton 2" Cylinder	4, 43
21-308	ZR-308	30 ton 8" Cylinder	4, 43
21-5013	ZR-5013	50 ton 13" Cylinder	4, 43
21-502	ZR-502	50 ton 2" Cylinder	4, 43
21-504	ZR-504	50 ton 4" Cylinder	4, 43
21-506	ZR-506	50 ton 6" Cylinder	4, 43
21-7513	ZR-7513	75 ton 13" Cylinder	4, 43
21-756	ZR-756	75 ton 6" Cylinder	4, 43
21A-302	ZR-302A	30 ton 2" Aluminum Cylinder	7, 42
21A-304	ZR-304A	30 ton 4" Aluminum Cylinder	7, 42
21A-306	ZR-306A	30 ton 6" Aluminum Cylinder	7, 42
21A-502A	ZR-502A	50 ton 2" Aluminum Cylinder	7, 42
21A-504	ZR-504A	50 ton 4" Aluminum Cylinder	7, 42
21A-506	ZR-506A	50 ton 6" Aluminum Cylinder	7, 42
21B-1002	ZRB-1002	100 ton 2" Cylinder	6, 42
21B-101	ZRB-101	10 ton 2" Cylinder	6, 42
21B-201	ZRB-201	20 ton 2" Cylinder	6, 42
21B-302	ZRB-302	30 ton 2" Cylinder	6, 42
21B-502	ZRB-502	50 ton 2" Cylinder	6, 42
21D-10013	ZRD-10013	100 ton 13" Double Acting Cylinder	8, 44
21D-10018	ZRD-10018	100 ton 18" Double Acting Cylinder	8, 44
21D-1006	ZRD-1006	100 ton 6" Double Acting Cylinder	8, 44
21D-1010	ZRD-1010	10 ton 10" Double Acting Cylinder	8, 44
21D-1012	ZRD-1012	10 ton 12" Double Acting Cylinder	8, 44
21D-3014	ZRD-3014	30 ton 14" Double Acting Cylinder	8, 44
21D-308	ZRD-308	30 ton 8" Double Acting Cylinder	8, 44
21D-7513	ZRD-7513	75 ton 13" Double Acting Cylinder	8, 44
21D-756	ZRD-756	75 ton 6" Double Acting Cylinder	8, 44
21DH-3010	ZRDH-3010	30 ton 10" Doulbe, Hollow Cylinder	8, 44
21DH-307	ZRDH-307	30 ton 7" Double, Hollow Cylinder	8, 44
21DH-6010	ZRDH-6010	60 ton 10" Double, Hollow Cylinder	8, 44
21DH-603	ZRDH-603	60 ton 3" Double, Hollow Cylinder	8, 44
21DH-606	ZRDH-606	60 ton 6" Double, Hollow Cylinder	8, 44
21H-120	ZRH-120	12 ton 0.31" Hollow Cylinder	4, 43
21H-121	ZRH-121	12 ton 1" Hollow Cylinder	4, 43
21H-1211	ZRH-1211	12 ton 1" Hollow Cylinder	4, 43
21H-123	ZRH-123	12 ton 3" Hollow Cylinder	4, 43
21H-202	ZRH-202	20 ton 2" Hollow Cylinder	4, 43
21H-206	ZRH-206	20 ton 6" Hollow Cylinder	4, 43
21H-302	ZRH-302	30 ton 2" Hollow Cylinder	4, 43
21H-306	ZRH-306	30 ton 6" Hollow Cylinder	4, 43
21H-603	ZRH-603	60 ton 3" Hollow Cylinder	4, 43
21H-606	ZRH-606	60 ton 6" Hollow Cylinder	4, 43
21M-005	ZRM-005	5 ton Mini Cylinder	6, 42
21M-010	ZRM-010	10 ton Mini Cylinder	6, 42
21M-020	ZRM-020	20 ton Mini Cylinder	6, 42
21M-030	ZRM-030	30 ton Mini Cylinder	6, 42
21M-050	ZRM-050	50 ton Mini Cylinder	6, 42
21M-075	ZRM-075	75 ton Mini Cylinder	6, 42
21M-100	ZRM-100	100 ton Mini Cylinder	6, 42
22-040	ZAP-40	Air Pumps (37 cu.in)	16
22-062	ZAP-62	Air Pumps (61 cu.in)	16
22-101	ZAP-101	Air Pumps (98 cu.in)	16
22-102	ZAP-102	Air Pumps (183 cu.in)	16
22-103	ZAP-103	Air Pumps (305 cu.in)	16
22-104	ZAP-104	Air Pumps (454 cu.in)	16
23-018	ZHP-18	Hand Pumps (18 cu.in)	16
23-020	ZHP-20	Hand Pumps (18 cu.in)	16
23-028	ZHP-28	Hand Pumps (28 cu.in)	16
23-030	ZHP-30	Hand Pumps (28 cu.in)	16
23-120	ZHP-120	Hand Pumps (120 cu.in)	16
23-150	ZHP-150	Hand Pumps (150 cu.in)	16
23-150A	ZHP-150A	Hand Pumps-Aluminum (150 cu.in)	16
23-152A	ZHP-152A	Hand Pumps-Aluminum (150 cu.in)	16
23-180	ZHP-180	Hand Pumps (180 cu.in)	16
23-19	ZHP-19	Hand Pumps (19 cu.in)	16
23-25A	ZHP-25A	Hand Pumps-Aluminum (25 cu.in)	16
23-29	ZHP-29	Hand Pumps (29 cu.in)	16
23-41	ZHP-41	Hand Pumps (42 cu.in)	16
23-42	ZHP-42	Hand Pumps (42 cu.in)	16
23-42A	ZHP-42A	Hand Pumps-Aluminum (42 cu.in)	16
23-462	ZHP-462	Hand Pumps (462 cu.in)	16
23-464	ZHP-464	Hand Pumps (462 cu.in)	16
23-55A	ZHP-55A	Hand Pumps-Aluminum (55 cu.in)	16
23-80A	ZHP-80A	Hand Pumps-Aluminum (80 cu.in)	16
23-90	ZHP-90	Hand Pumps (90 cu.in)	16
24-35RH	ZPE-35RH-1M	Electric Pumps - 1/3 HP	18
24-35RH-1ML	ZPE-35RH-4M	Electric Pumps - 1/3 HP, 4 way valve	18
24-45SVG	ZPE-45SVG	Electric Pumps - 0.6 HP	19
24-50SEN	ZSP-50SEN	50 ton Shop Presses w/electric pump	32
24-753	ZPE-753	Electric Pumps - 1 HP	19
25-015S	ZSP-15S	15 ton Shop Presses	32
25-015SA	ZSP-15SA	15 ton Shop Presses w/air pump	32
25-035S	ZSP-35S	35 ton Shop Presses	32
25-035SA	ZSP-35SA	35 ton Shop Presses w/air pump	32
25-035SE	ZSP-35SE	35 ton Shop Presses w/electric pump	32
25-060S	ZSP-60S	60 ton Shop Presses	32
25-060SE	ZSP-60SE	60 ton Shop Presses w/electric pump	32
25-100SE	ZSP-100SE	100 ton Shop Presses w/electric pump	32
25-100SEN	ZSP-100SEN	100 ton Shop Presses w/electric pump	32
29-0005	ZPL-5C	5 ton Pulling Jack	14
29-0010	ZPL-10	10 ton Pulling Jack	14
29-0020	ZPL-20	20 ton Pulling Jack	14
29-0030	ZPL-30	30 ton Pulling Jack	14
29-0524	ZTU-524	5 ton Ratchet Jack	13
29-10011	ZJJ-10011	100 ton 4" Mechanical Journal Jack	13
29-1008A	ZAJ-1008	10 ton 3" Journal Jack - Aluminum	13
29-1015	ZJJ-1015	15 ton Mechanical Journal Jack	13
29-1022	ZTU-1022	10 ton Ratchet Jack - Aluminum	13
29-1026	ZTU-1026	10 ton Ratchet Jack	13
29-1510A	ZAJ-1510	15 ton 4" Journal Jack - Aluminum	13
29-1513	ZJJ-1513	15 ton 5" Mechanical Journal Jack	13
29-1529	ZTU-1529	15 ton Ratchet Jack	13
29-2510	ZPL-3510	25 ton Pulling Jack	14
29-2510A	ZAJ-2510	25 ton 4" Journal Jack - Aluminum	13
29-2513	ZJJ-2513	25 ton 5" Mechanical Journal Jack	13
29-2525	ZJJ-2525	25 ton 10" Mechanical Journal Jack	13
29-2533	ZJJ-2533	25 ton 13" Mechanical Journal Jack	13
29-3020	ZJJ-3020	30 ton 8" Mechanical Journal Jack	13
29-3513	ZJJ-3513	35 ton 5" Mechanical Journal Jack	13
29-3525	ZJJ-3525	35 ton 10" Mechanical Journal Jack	13
29-3535	ZJJ-3535	35 ton 13 3/4" Mechanical Journal Jack	13
29-5013	ZJJ-5013	50 ton 5" Mechanical Journal Jack	13
29-5025	ZJJ-5025	50 ton 13" Mechanicl Journal Jack	13
29-5035	ZJJ-5035	50 ton 13 3/4" Mechanical Journal Jack	13
60-22P	ZAPJ-22	22 ton Air Bottle Jack	11
60-25P	ZAPJ-25	25 ton Air Bottle Jack	11
61-12C2	ZABJ-12C2	12 ton Air/Manual Bottle Jack	11
61-12M	ZABJ-12M	12 ton Air Bottle Jack	11
61-20C3	ZABJ-20C3	20 ton Air/Manual Bottle Jack	11
6122DL	ZATJ-220DL	22 ton Air 2 Stage Truck Jack	35
61-22M	ZABJ-22M	22 ton Air Bottle Jack	11
61-22MB	ZABJ-22MB	22 ton Low Air Bottle Jack	11
61-22PA	ZABJ-22PA	22 ton Air Bottle Jack	11
6122S	ZATJ-22S-4	22 ton Air/Truck Jack Short	35
61-35M	ZABJ-35M	35 ton Air Bottle Jack	11
70-05C	ZMJ-5C	5 ton Compact Mini Jack	10
70-05T	ZMJ-5T	5 ton Tall Mini Jack	10
70-10	ZMJ-10	10 ton Mini Jack	10
70-20	ZMJ-20	20 ton Mini Jack	10
70-50	ZMJ-50	50 ton Mini Jack	10
80-02	ZHC-2V	2 ton Toe Jack	12
80-05	ZHC-5V	5 ton Toe Jack	12
80-12	ZHC-12V	12 ton Toe Jack	12
80-15	ZHC-15V	15 ton Toe Jack	12
80-25	ZHC-25V	25 ton Toe Jack	12
81-02	ZN-2	2 ton Bottle Jack	9
81-03	ZN-3	3 ton Bottle Jack	9
81-05	ZN-5	5 ton Bottle Jack	9
81-08	ZN-8	8 ton Bottle Jack	9
81-100	ZN-100	100 ton Bottle Jack	9
81-10F	ZHFD-10F	2 Stages Bottle Jack	10
81-12	ZN-12	12 ton Bottle Jack	9
81-17	ZN-17	17 ton Bottle Jack	9
81-22	ZN-22S	22 ton Bottle Jack	9
81-35	ZN-35	35 ton Bottle Jack	9
81-60	ZN-60	60 ton Bottle Jack	9
82-010	RHC-10	10 ton Toe Ram	25
82-015	RHC-15	15 ton Toe Ram	25
82-025	RHC-25	25 ton Toe Ram	25
82-050	RHC-05	5 ton Toe Ram	25
82-12	ZNB-12	12 ton, Low Bottle Jack	9
82-17	ZNB-17	17 ton, Low Bottle Jack	9
82-22	ZNB-22	22 ton, Low Bottle Jack	9
82-35	ZNB-35	35 ton, Low Bottle Jack	9
83-02T	ZT-2	2 ton, Economic Bottle Jack	9
83-04T	ZT-4	4 ton, Economic Bottle Jack	9
83-06T	ZT-6	6 ton, Economic Bottle Jack	9
83-08	ZNP-8	8 ton, General Bottle Jack	9
83-12	ZNP-12	12 ton, General Bottle Jack	9
83-12T	ZT-12	12 ton, Economic Bottle Jack	9