
























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	<u>page #</u>
	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 hydraulic dual-lock models.	

	Pumps	<u>page #</u>
	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
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Single-Acting Cylinders
Standard and Hollow Type

ZR & ZRH Series

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



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



Industrial Quality Cylinders

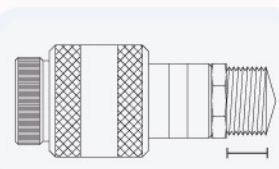
These industrial quality, general purpose cylinders are designed for use in a variety of applications where lifting, pushing, bending or holding may be required. Ideal for use in shop, agricultural, automotive/truck service and construction maintenance.

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.



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



3/8"-18 NPT

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.

Electric Pump & Cylinder Sets



Fig.1

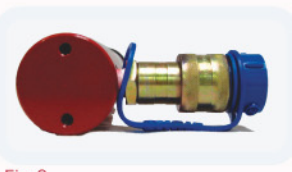
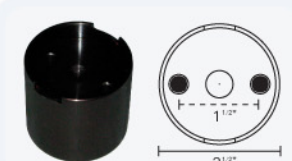


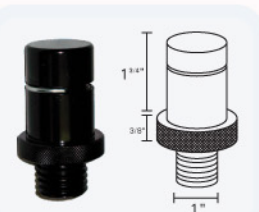
Fig.2



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

Hand Pump & Cylinder Sets

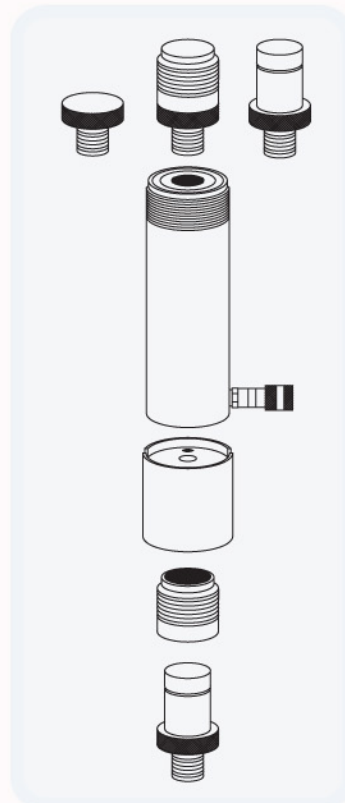
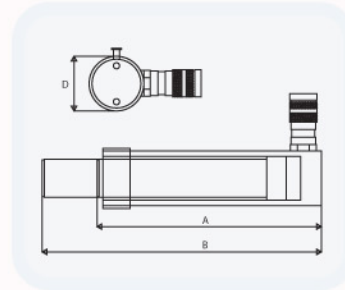


Fig.3

Model Number	Stroke (in)	Oil Capacity (in ³)	Cylinder Effective Area (in ²)	Collapsed Height (in)	Extended Height (in)	Outside Dia. (in)	Ship Weight (lbs)
				A	B		
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.

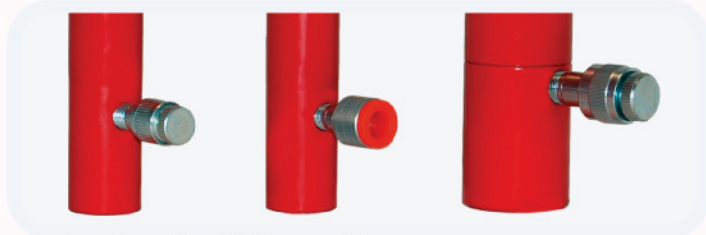
ZAR Series

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

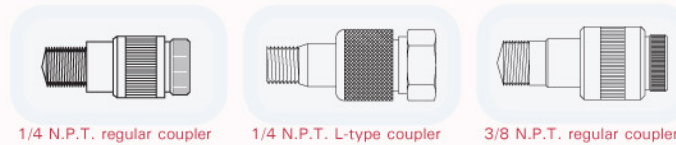
Automotive Cylinders

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 to 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.

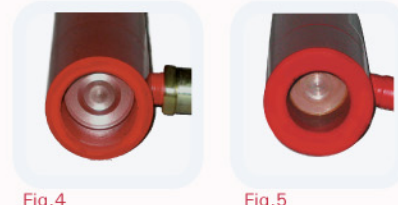
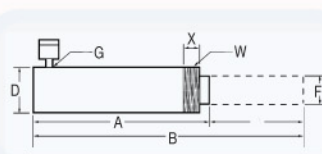
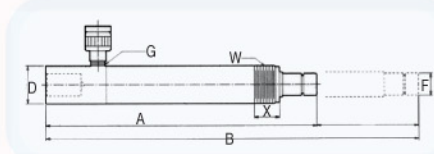


Fig.4 Fig.5

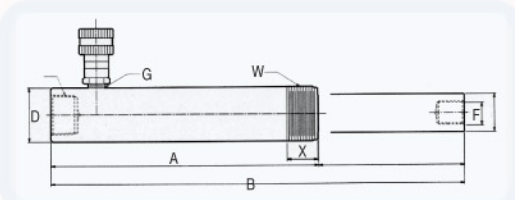
For Collision Repair, please order our snap-together components (shown above) for quick set-up for any jobs.
(CAUTION: For each attachment or component used in the set-up, the rated capacity of the hydraulic system is reduced 50%)



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.



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

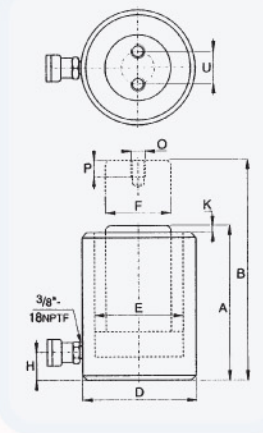


Model: ZRB-502 (top view)



Model: ZRB-502 (bottom view)

For hose and component options please refer to page 25.



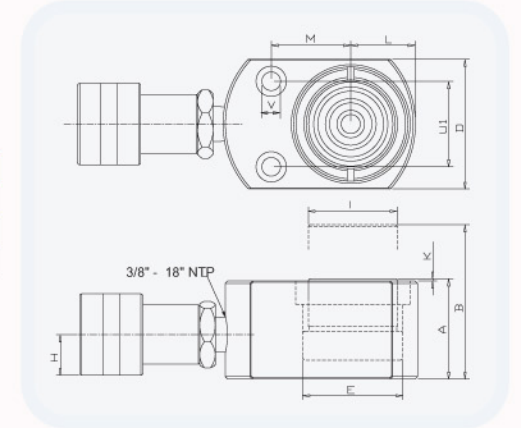
Model Number	Cylinder Capacity (tons)	Stroke (in)	Oil Capacity (in ³)	Cylinder Effective Area (in ²)	Coll. Height (in)	Extend Height (in)	Outside Dia. (in)	Weight (lbs)
					A	B	D	
ZRB Series Specifications								
ZRB-101	10	1.50	3.35	2.43	3.47	4.97	2.75	9
ZRB-201	20	1.75	7.77	4.44	3.88	5.63	3.63	11
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.



Model: ZRM-010

Model: ZRM-030



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

ZRA Series

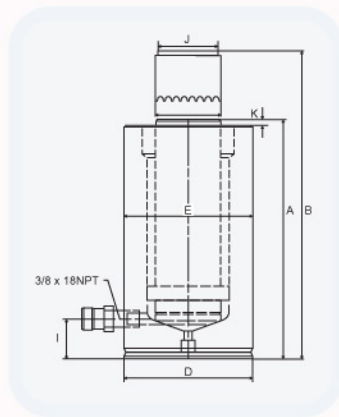
Capacity: 30 to 50 tons
Max. Operating: 10,000 psi
Stroke: 2.25" to 6.25"



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

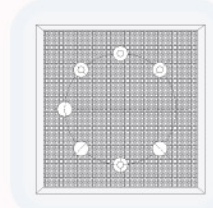


Fig.9



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

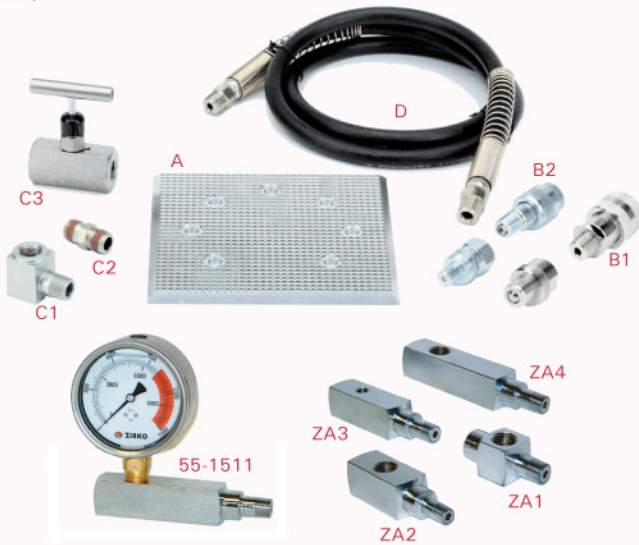
1. Fast-Flow Type: 3/8" NPT Complete P/N: 195111
Ram Half (female) P/N 195111-R
Hose Half (male) P/N 195111-H
2. Regular Type: 3/8" NPT Complete P/N: 9210308
Ram Half (female) P/N 9210308-R
Hose Half (male) P/N 9210308-H

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" NPT (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
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.	
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.

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

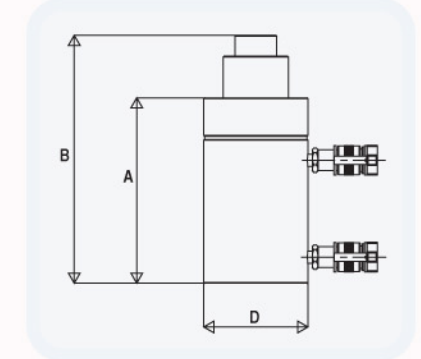
1. The double acting is designed to produce greater speed and positive control for applications requiring an extra measure of strength, quality, reliability and safety.
2. Interfaces with automated operations while providing both powered push and pull cycles.
3. All models come with 3/8" NPT fast-flow 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	3.40	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).



Model: ZN-12

Model: ZNB-12



Model: ZN-100



Model: ZT-2



Model: ZT-4

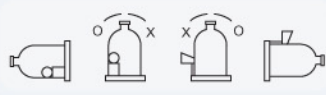


Model: ZT-6



Model: ZNP-12

Model: ZNP-8



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

Fig.10

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)



Model: ZMHL-2



Model: ZMHL-4SP



Model: ZMHL-8SP



Model: ZMHL-20



Model: ZHFD-10F



Fig.11

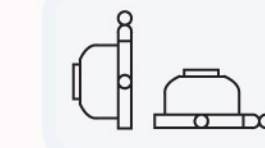


Fig.12

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)



Model: ZMJ-10



Model: ZMJ-5T



Model: ZMJ-5C

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)

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.

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 9 1/2	114

ZABJ & ZAPJ Series

Capacity: 12 to 35 tons



Model: ZABJ-20C3

Air Hydraulic Bottle Jacks

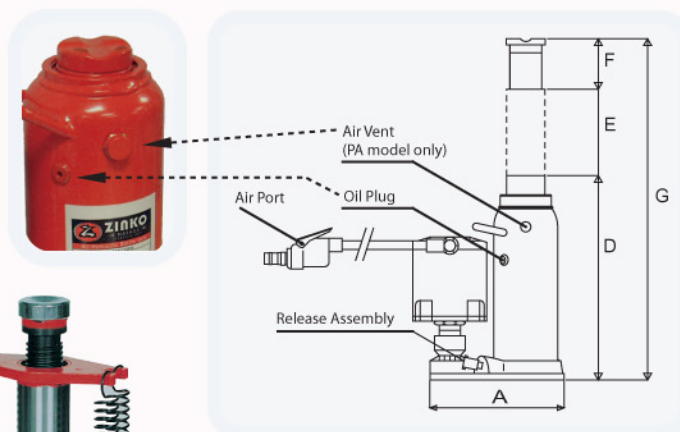
1. Welded steel construction reduces metal fatigue allowing for a longer life.
2. Forged steel base increases resistance to high pressure and increases durability.
3. Oil bypass system prevents the lifting ram from overextending.
4. Safety valve device protects hydraulic system from overload damage.
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.



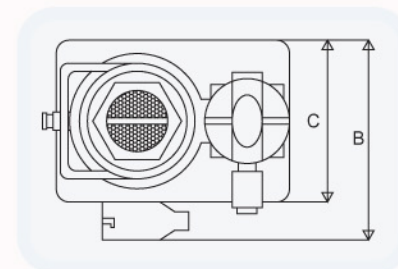
ZABJ-22PA

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.

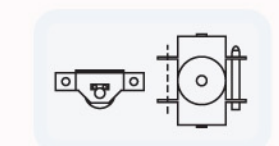
ZDUW-1P (top view)



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

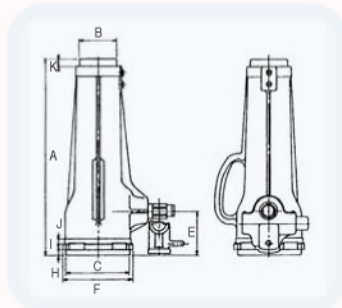
Features:

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.



Model: ZJJ-2513

Model: ZJJ-3535



Model: ZAJ-1510

Fig.14

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

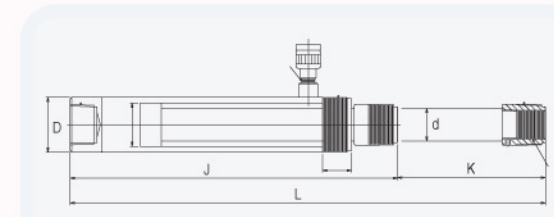
The Pulling Jack is ideal for drawing heavy objects, positioning structures, welding, or lifting heavy loads.

Hydraulic Pulling Jack

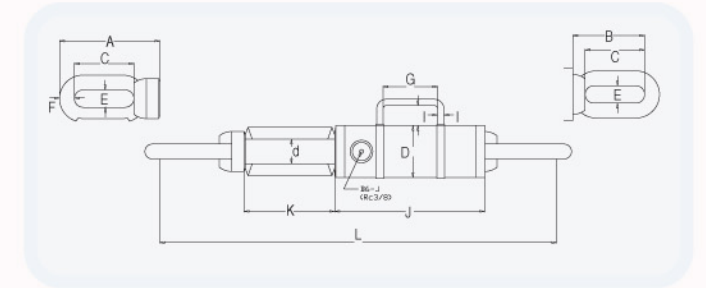
The Hydraulic Pulling Jack is designed for use with single acting pumps. The remote operation makes setting direction easier, and is ideal for use in a limited clearance area.



Model: ZPR-106



Model: ZPL-2015



Model: ZPL-2510

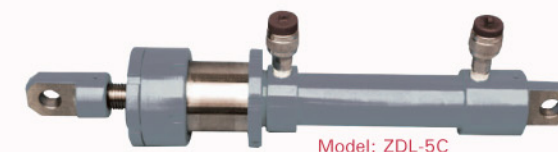
Mechanical Pulling Jack

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

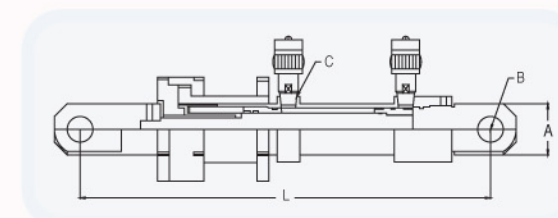
Model Number	Cylinder	Push Force (ton)	Pulling Force (Ton)	Stroke (in)	Pressure (psi)	Usable Oil Cap (in ³)
ZPR-056	S	5	5	6	10000	15
ZPR-106	S	10	10	6	10000	22
ZPL-1015	S	10	10	5 7/8	10000	42
ZPL-2015	S	20	20	5 7/8	10000	42
ZPL-3015	S	30	30	5 7/8	10000	42
ZPL-2510	G	25	25	3 15/16	---	---

Model 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

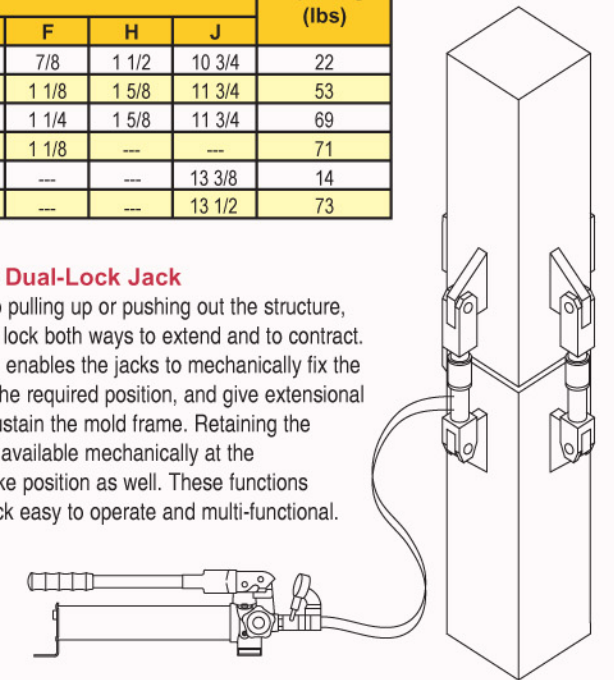


Model: ZDL-5C



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

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

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.

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.

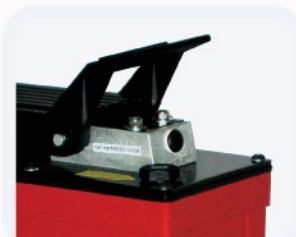


Fig. 16



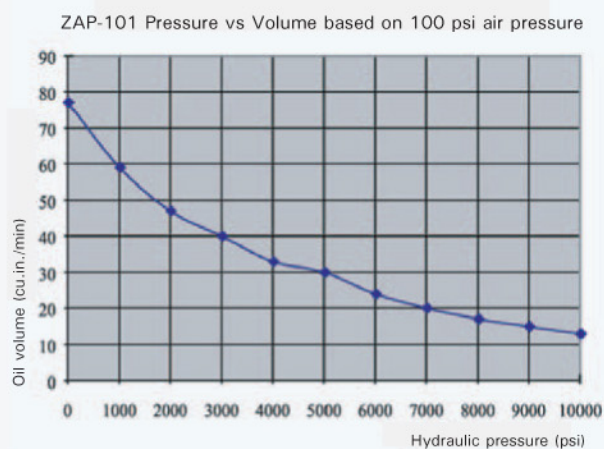
Fig. 15



Fig. 17



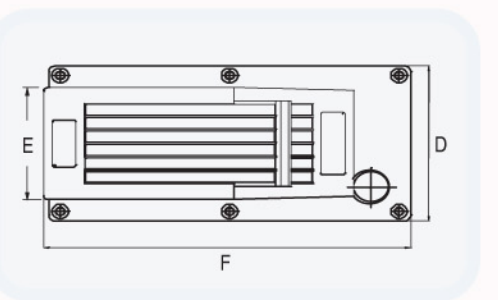
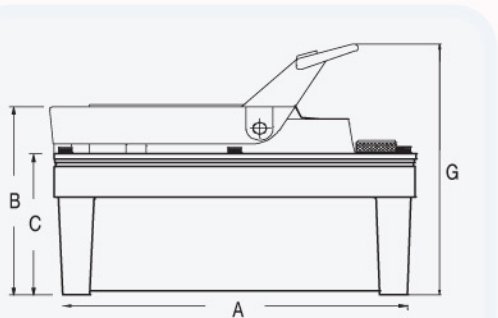
Fig. 18



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.

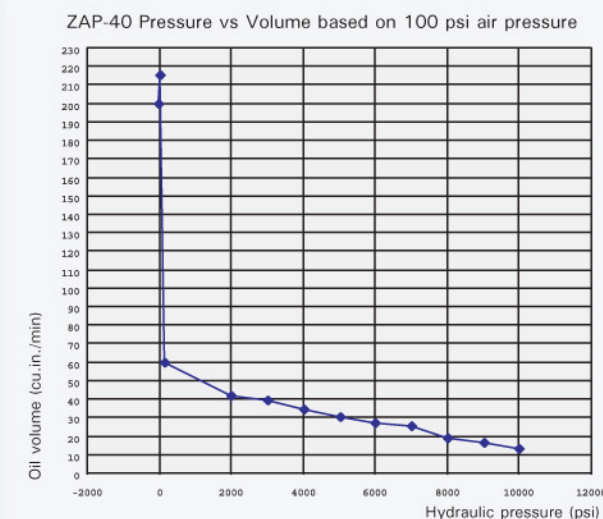
- Part # 922-101P reservoir (98 cu.in.)
- Part # 922-103P reservoir (305 cu.in.)
- Part # 922-104P reservoir (454 cu.in.)



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

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-104

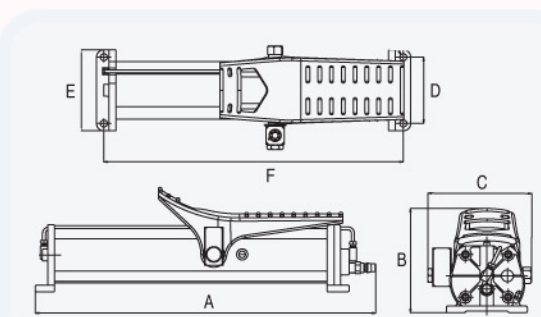
While lightweight and see through reservoir are important to the work place, the ZAP-104 is the right choice for the work place. The plastic reservoir has a 454 cu. in oil capacity.



Model:
ZAP-40 & ZAP-62

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

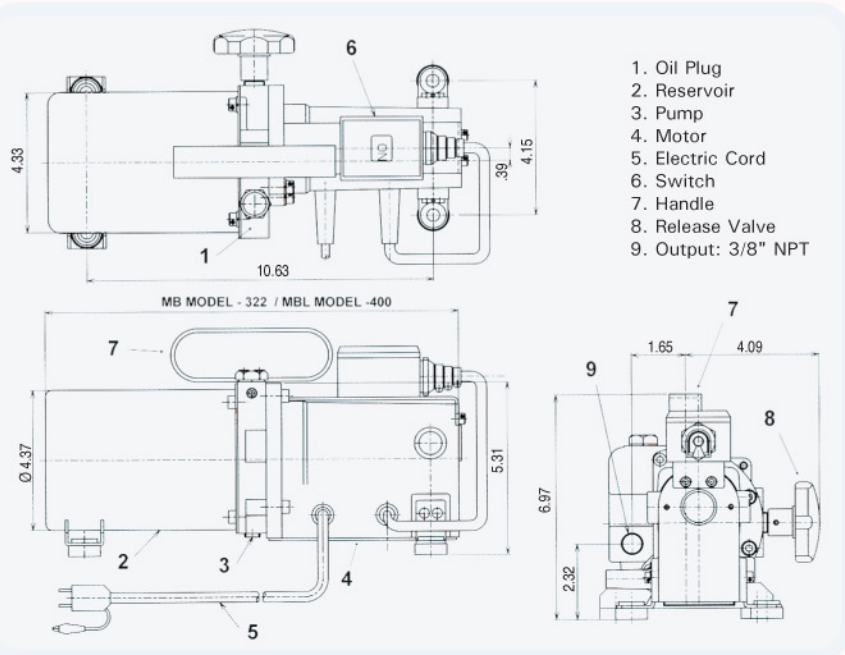
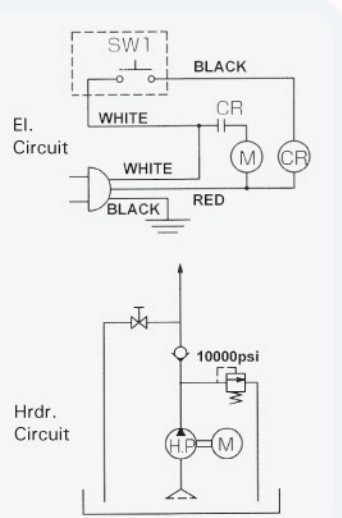
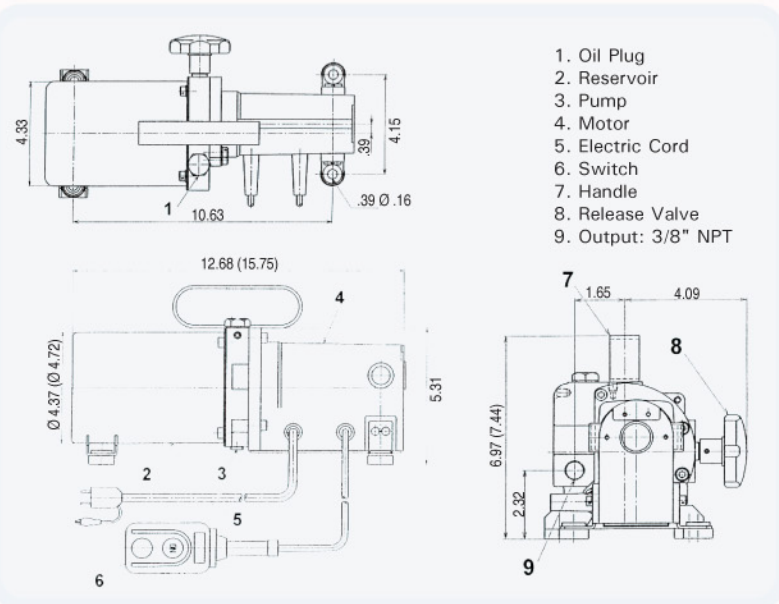
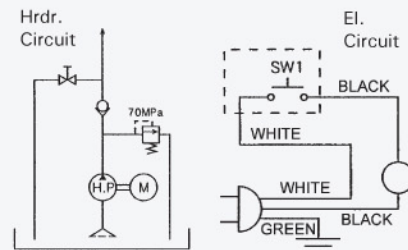
ZPE-35 Series

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

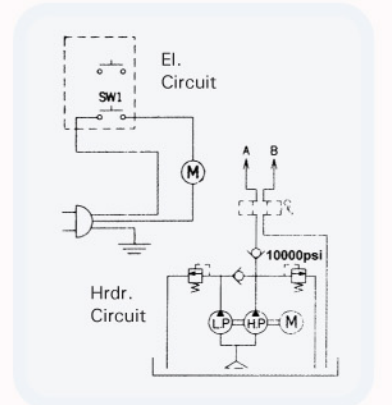
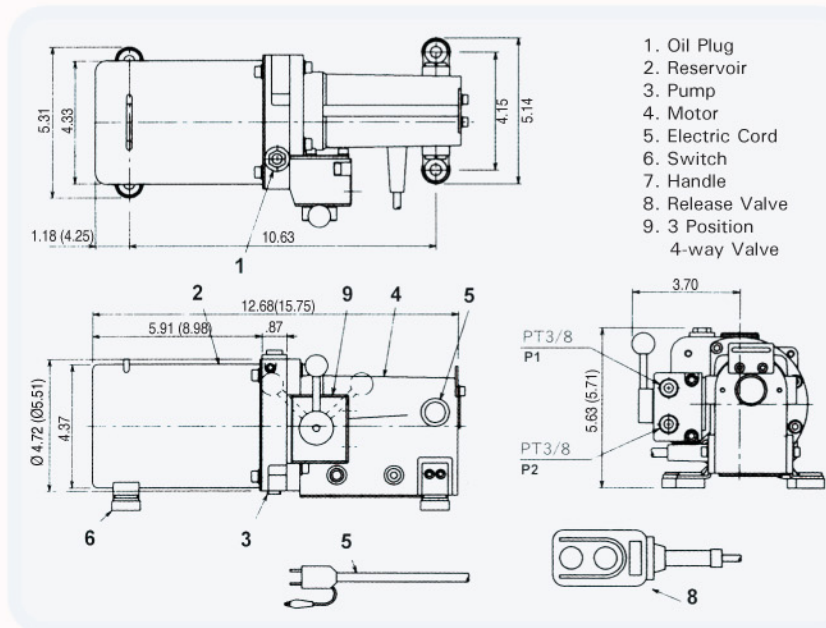
Features:

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.



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 Number	Type	Motor (50/60Hz)			Performance				Reservoir	
		AC (V)	Output (HP)	Revolution (rpm)	Max. Press (psi)		Output (in ³ /min.)		Capacity (in ³)	Capacity (in ³)
					2 nd Stage	1 st Stage	2 nd Stage	1 st Stage		
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	Solenoid	To be operated by 24V Battery.	18
	* ZPE-35RH-NO	60	Normally Open	Auto return type:	17
	* ZPE-35RH-NOL	120	2 Way Manual Solenoid	Valve remains open during operation.	18
Double Acting Cylinder	* 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	Solenoid	To be operated by 12V Battery.	17
	* ZPE-35RH-IN-D24	60	Solenoid	To be operated by 24V Battery.	18
	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

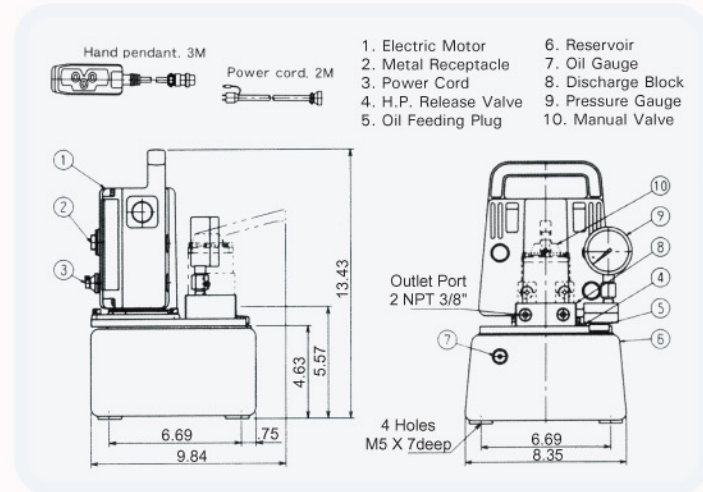
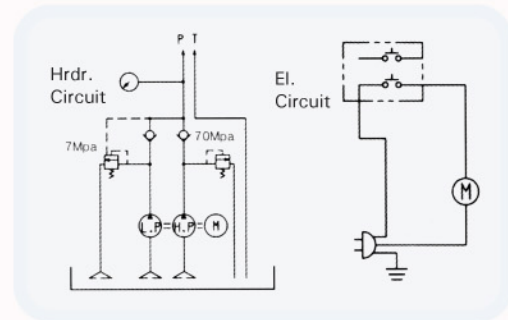
Max. Operates: Capable up to 10,000 psi (700 bar)
Power by: 0.6HP single-phase commutator, insulation "E" type motor.



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
					2 nd Stage	1 st Stage	2 nd Stage	1 st Stage		
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

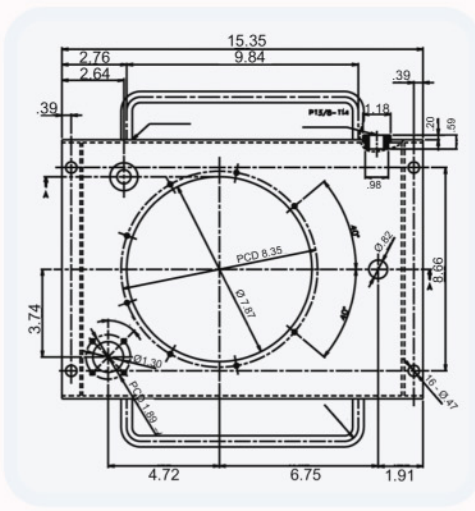


Fig.19
(2.64 gal. with 1.6 gal. usable oil)
Part#: 924-751



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



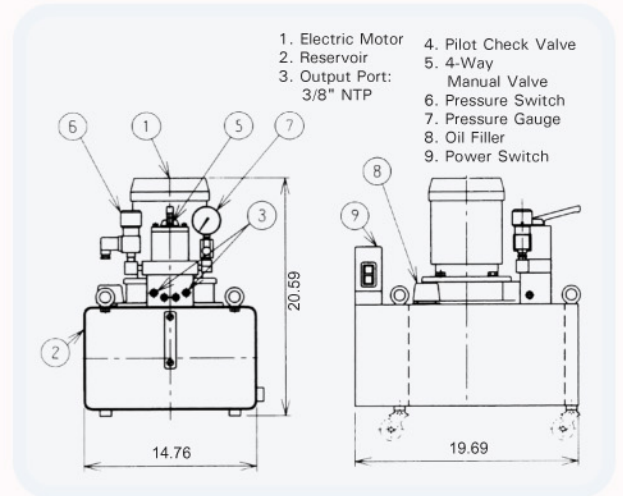
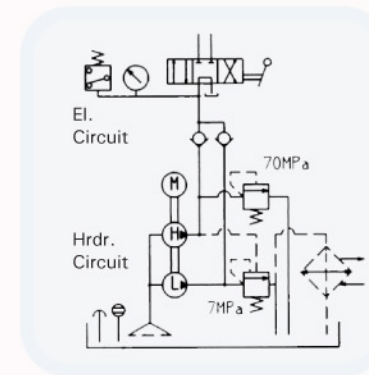
Model: ZPE-753HS-7

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.



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 Normally Closed	"Advance" with ON switch and motor running. "Hold" when motor stops and switch is released. "Retract" with OFF switch. Advance/Hold/Retract.	38
	* ZPE-753HS-4		"Advance" with ON switch and motor running. "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 valve. Advance/Hold/Retract.	36
	ZPE-753HS-7		Advance/ "A" port Hold/Retract with stacking type pilot-operated check valve fitted on "A" port line.	110
	* ZPE-45SVG-8SP	4 Way, 3 Position Solenoid with check valves)	ZPE-45SVG-8WP allows pressure holding on both	41
	* ZPE-753HS-8SP		"A" and "B" port pressure is adjustable with stacking type double relief valves. Advance/Retract, pressure holding type pumps are available with additional check valves.	41
	* ZPE-45SVG-8WP	4 Way, 3 Position Solenoid with relief valves)	ZPE-45SVG is fitted with "A" port block solenoid valve. Open center type solenoid valve is mounted on Model ZPE-45SVG-8H pump.	47
	* ZPE-753HS-8WP		Advance/Hold/Retract.	121
	* ZPE-45SVG-8A	4 Way, 3 Position Solenoid	Advance/Hold/Retract.	117
	* ZPE-45SVG-8H			
* ZPE-753HS-8A				

* 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



Models: ZHP-18 & ZHP-28

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)

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 built 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.



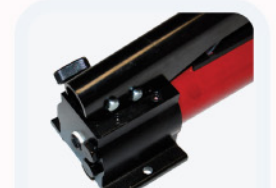
Model: ZHP-42A



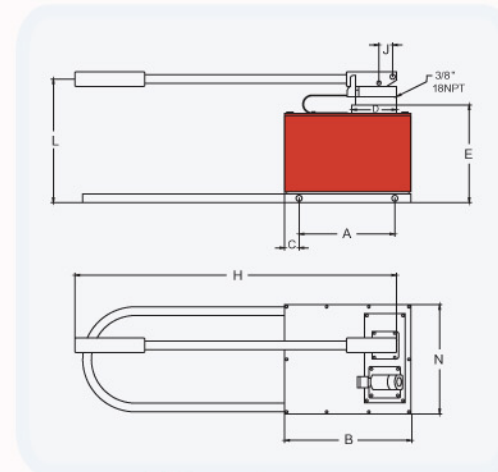
Fig. 20



ZHP-42A (oil filter)



Aluminum models feature pre-drilled holes for easy fixturing



Model: ZHP-462 & ZHP-464



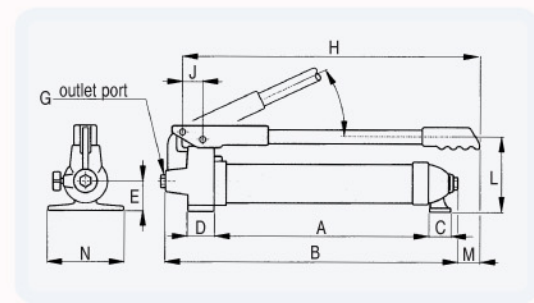
55-1511 (pressure gauge)

ZHP-55A

ZPS-258-55A (combo set)

Automotive Grade Hand Pumps

1. Threaded cast iron pump head with steel reservoir and all-metal construction for durability.
 2. Comes with 1/4" NPT output port for use with spreader, push, puller, or cylinders where 1/4" 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)	
			1 st Stage	2 nd Stage	1 st Stage	2 nd 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.

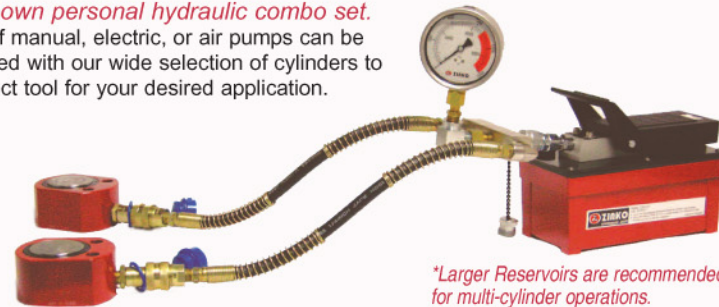
Max Handle Effort (lbs)	Piston Stroke (in)	Dimensions (in)											Wt (lbs)
		A	B	C	D	E	G	H	J	L	M	N	
Aluminum Hand Pump													
100	1.00	9.76	13.11	1.85	1.61	1.48	3/8" NPT	12.13	0.95	5.63	---	4.04	8
71.5	1.00	16.65	20.00	1.85	1.61	1.48	3/8" NPT	19.02	0.95	6.26	---	4.04	9
93	1.00	19.80	23.14	1.85	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

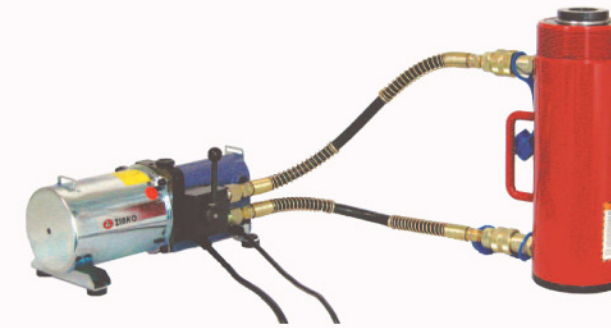


Create your own personal hydraulic combo set. Your choice of manual, electric, or air pumps can be easily combined with our wide selection of cylinders to form the perfect tool for your desired application.



*Larger Reservoirs are recommended for multi-cylinder operations.

Model Number	Stroke (in)	Cylinder Effective Area (in ²)	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-2512-90H		ZPS-2512-101A
ZR-2514	14.25	5.16	73.49				ZPS-2514-90H		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							

Ram Toe Sets



Model: RHC-15



RHC-15 (pressure gauge)



Model: ZHP-55A & RHC-15



RHC-15 (rear view: toe)

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.

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			Adapters, Fittings, and Accessories		
Part #	Description	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.	195414	2-position push button switch		
195102	Swivel connector, 3/8" NPT male, 3/8" NPSM female	195415	3 way/2 position manual solenoid valve for use with single-acting cylinders. It has "Advance" and "Hold" positions.		
195103	45° fitting. Male and female 1/4" NPT end	195416	4 way/3 position manual solenoid valve. For use with double acting cylinders. It has "Advance", "Hold" and "Retract" positions.		
195104	Double tee adapter. Permits use of more than one ram in series with one pump. Three 3/8" NPT ports.	195611	Aluminum Ram Base. For use on 50 ton Aluminum Cylinders only. Size: 7" x 7"		
195311	Street Elbow. From 3/8" NPT male to 3/8" NPT female.	195661	ZA1, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 2-3/4" Length		
195341	Hex Nipple. From 3/8" NPT male to 3/8" NPT female	195662	ZA2, Gauge adapter 1/2" GP, 1/4" ME, 3/8" FE 4-3/8" Length		

Accessories

Adapters, Fittings, and Accessories			Adapters, Fittings, and Accessories		
Part #	Description	Part #	Description		
195663	ZA3, Gauge adapter 1/4" GP, 3/8" ME, 3/8" FE 5-1/4" Length	Couplers			
195664	ZA4, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 6" Length	195111	Complete 3/8" NPT quick coupler, fast flow		
196711	Remote control hand pendant switch, 10 Ft cord. ON/OFF switch control.	195111-R	Ram half coupler and dust cap		
2110-18	Saddle - Flat type for 10 ton Cylinders. Use this to protect the top of cylinder and prevent slipping.	195111-H	Hose half coupler and dust cap		
2110-19	Snap type male connector. To be used on the top / or bottom of ZR-series 10 ton cylinders	9210104	Complete 1/4" NPT automotive-style quick coupler regular flow		
2110-20	Threaded-type male connector. To be used on the top / or bottom of ZR-series 10 ton cylinders	9210104-R	Ram half coupler and dust cap		
2110-21	Threaded male to Snap-type female base adapter. To be used with part# 21110-22 for snap-connect applications.	9210104-H	Hose half coupler		
2110-22	Rod-end threaded type adapter. Screw on to the base of cylinder to convert the ZR-series cylinder for threaded type applications.	9210104L	Complete 3/8" NPT quick coupler		
90620-W	Attachment wheel for ZAPJ-22	9210104L-R	Ram half coupler and dust cap		
90620-AD1	Adapter. 1/2" height. To be used on ZAPJ & ZATJ model	9210104L-H	Hose half coupler		
90620-AD2	Adapter. 2-3/8" height. To be used on ZAPJ & ZATJ model	9210308	Complete 3/8" NPT automotive-style quick coupler, regular flow		
90620-AD3	Adapter. 4" height. To be used on ZAPJ & ZATJ model	9210308-R	Ram half coupler and dust cap		
9110-4B	Base Plate for ZMHL-4SP.	9210308-H	Hose half coupler		
9110-8B	Base Plate for ZMHL-8SP.	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

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.



Model: ZPK-04

ZPK-04 kit includes:

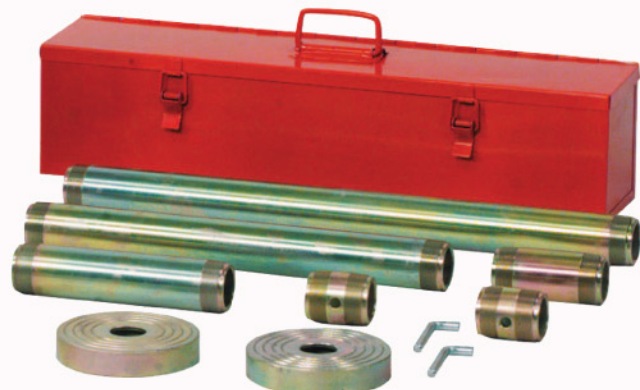
- | | |
|---|--------------------------|
| 1. Hydraulic Pump (ZHP-20: single speed) | 8. 90° "V" Base |
| 2. Hose & Coupler | 9. Wedge Head |
| 3. 4 Ton Ram 5" Stroke | 10. Spreader Plunger Toe |
| 4. Spreader Ram | 11. Spreader Ram Toe |
| 5. Extension Tubes: (4, 8, 12, 16 inches) | 12. 2-3/4" Flex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

ZPK-10 kit includes:

- | | |
|--|--------------------------------|
| 1. Hydraulic Pump (ZHP-30: 2-speed) | 8. 90° "V" Base |
| 2. Hose & Coupler | 9. Wedge Head |
| 3. 10 Ton Ram 6" Stroke | 10. Spreader Plunger Toe |
| 4. Spreader Ram | 11. Spreader Ram Toe |
| 5. Extension Tubes: (5, 10, 14, 19 inches) | 12. 2-3/4" Flex Head |
| 6. Male Connector | 13. Serrated Saddle |
| 7. Flat Base | 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) | 7. Toe Lift |
| 2. 5' Hose | 8. "V" Head |
| 3. 20 Ton Ram 5" Stroke | 9. Wedge Head |
| 4. 3-1/2" Dia. Saddle (2) | 10. Spreader Plunger Toe |
| 5. Extension Tubes: (3 (2), 5, 10, 20, 27-1/2 inches) | 11. Spreader Ram Toe |
| 6. Threaded Coupler (2) | 12. 2-3/4" Flex Head |
| | 13. 6-1/2 Diameter Base |
| | 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		20 ton sets	
Part #	Part #	Part #	Part #	Description	Description
92104-02 1/4" - 1/4" 92104-02A 1/4" - 3/8"	195212-6 3/8" - 3/8"			6 ft hose	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	Extension Tube
92104-09	92110-09			Male connector	Male connector
92104-10	92110-10			Serrated Saddle	Serrated Saddle
92104-11	92110-11			Flat Base	Plunger Base
92104-12	92110-12			90° V-Base	V head
92104-13	92110-13			Wedge Head	Wedge Head
92104-14	92110-14			Plunger Toe	Toe Lift
92104-15	92110-15			Ram Toe	Threaded coupling
92104-16	92110-16			Rubber Flex Head	Lock Pin
92104-17	92110-17			Plastic Case	Steel Case
9210104-1/4" Automotive type coupler	9210308 -3/8" Automotive type coupler			Coupler	3/8" Coupler

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

ZPM Series

Capacity: 4 to 30 tons

Model: ZPM-083-1



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 manganous-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.

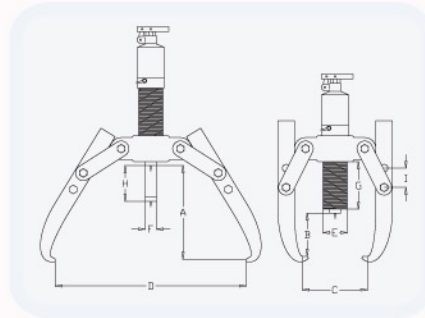
Model: ZPM-12



Model: ZPM-04



Model: ZPM-08



Model Number	Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)
		A	B	C	D		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.



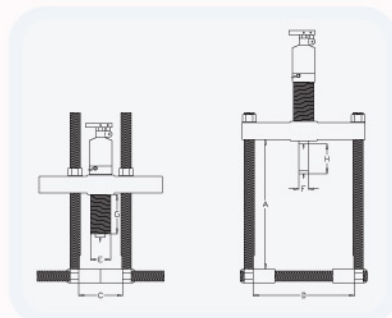
Model: ZPM-410



Model: ZPM-810



Model: ZPM-1210



Model Number	Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)
		A	B	C	D		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

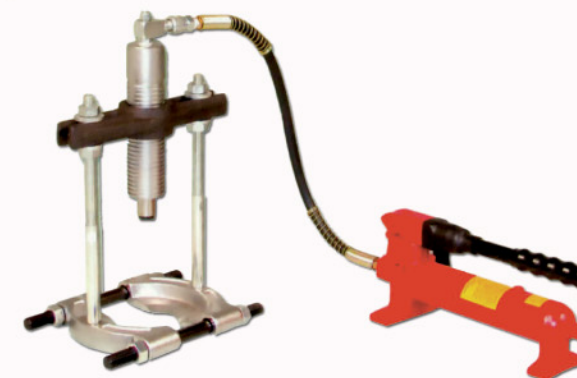
Jaw & Push Sets

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: ZPM-1220

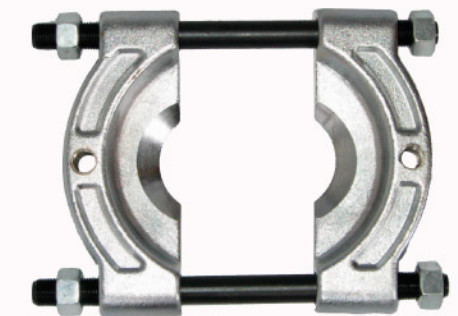
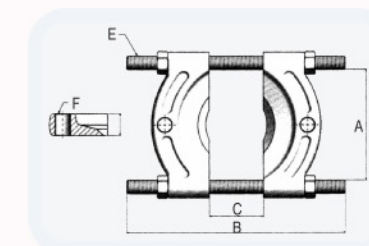


Model Number	Capacity (tons)	Reach (in)		Spread (in)		Stroke (in)	Pump Tip (in)			Jaw Tip (in)				Weight (lbs)	
		A	B	C	D		E	F	G	A	B	C	I		
ZPM-420	ZPM-430	4	7.28/9.84	2.76	2.95/2.17	10/4.33	2.36	1.63	0.87	3.31	0.43	0.24	0.87	1.26	29
ZPM-820	ZPM-830	8	9.02/10.63	2.24	3.94/3.74	13.78/8.66	3.35	1.97	0.98	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

ZWF & ZWS Series

Capacity: 15 to 35 tons

Model: ZWF-31

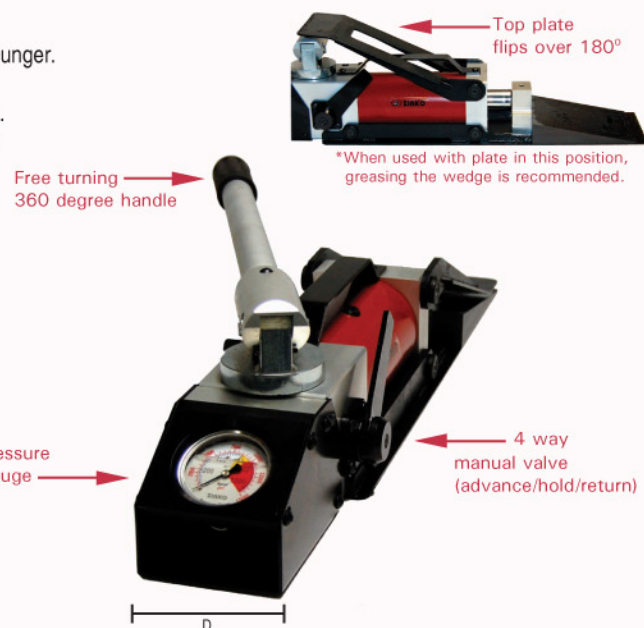


Features:

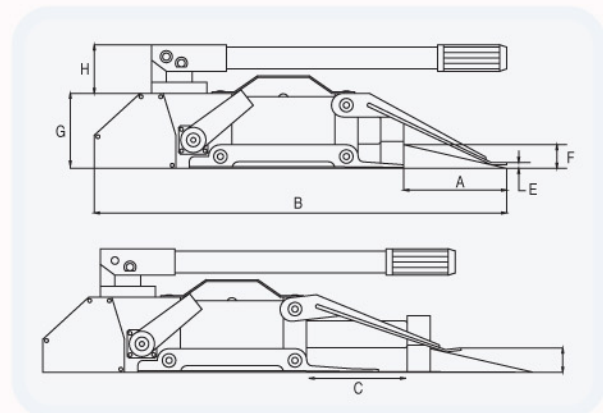
1. All models have a self contained reservoir and are equipped with a single plunger.
2. Built in 4-way, 3 position manual valve for easy advance and retraction.
3. Equipped with a pressure gauge for pressure readings when force is applied.
4. Two type of wedges are available: standard model (ZWF-30)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

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.



*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.

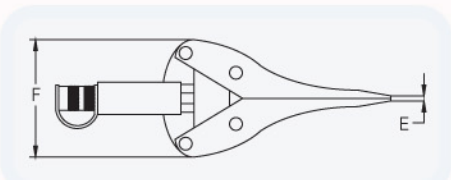
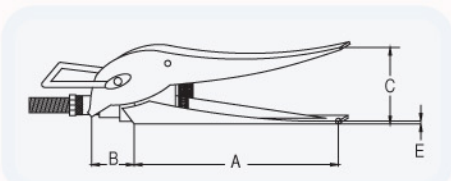
Model: ZWS-05



Model: ZWS-10



Model: ZWS-13



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.

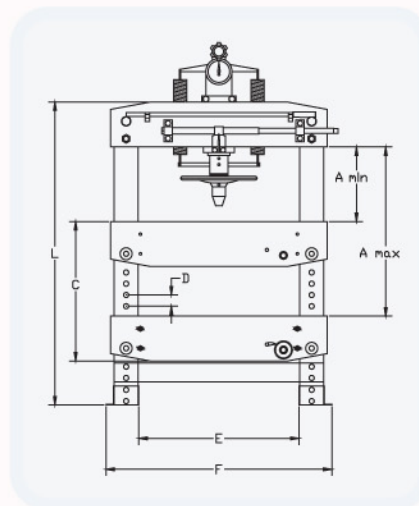
Model Number	Capacity (Tons)	Stroke (in)	Min Ht. (in)	Max Ht. (in)	Dimensions (in)						Ship Wt. (in)
					A	B	C	D	E		
ZWS-05	0.5	5	0.24	1.34	7.67	10.04	3.74	1.97	0.67	4	
ZWS-10	1	5	0.24	1.34	14.4	21.26	11.5	2.2	1.22	22	
ZWS-13	1.35	5	0.24	1.34	15.75	17.33	11.42	2.36	1.18	22	

ZSP Series

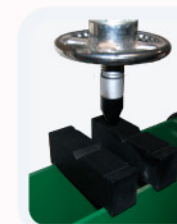
Capacity: 15-100 tons

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.



Air/Electric Pump Mounting Bracket



Rotary Handle & V-Block (standard)



Model: ZSP-15S



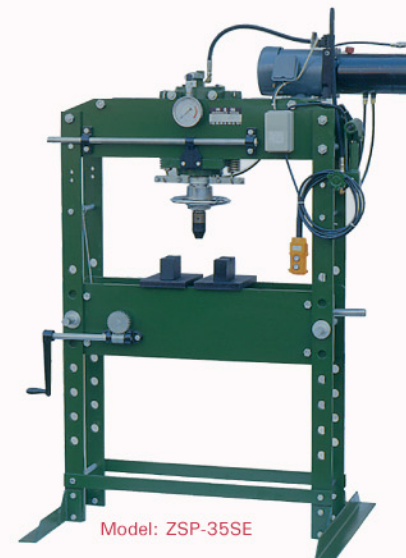
Positioning Bar & Gauge



Adjustable Work Table (supported by cable winch)



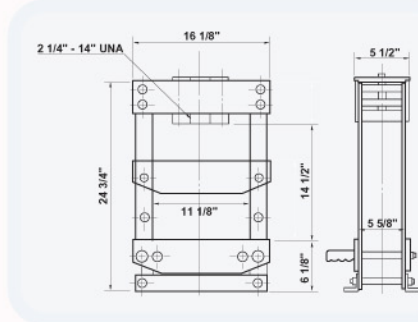
Hand Crank & Rotary Handle (positions the ram laterally)



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.



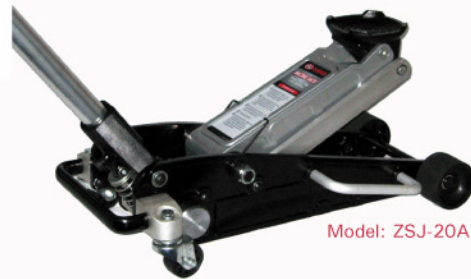
Model: ZTP-10

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 1/2".
2. Low Profile with high lift - Starting height from as low as 2 1/4" to 3 1/2", 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)

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 (saddle)



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 1/4". Long, low chassis with frame height under 3 1/2" 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 1/2" providing a travel range from as low as 3 3/4" to a maximum height of 20 1/4".
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.

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.



Model: ZPJ-800

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



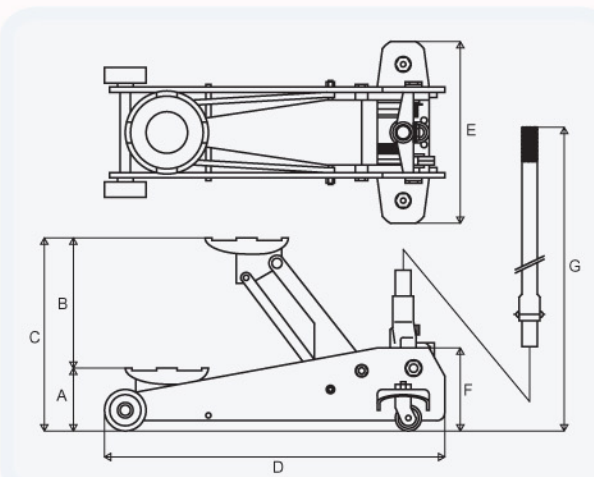
ZSJ-50H



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.

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)



Model: ZSTJ-22S-4



Fig.23



Fig.24



Flow Control Valve



Model: ZSTJ-220DL



ZTSJ-220DL (2 stage ram)



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



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.

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: 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".



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".

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.

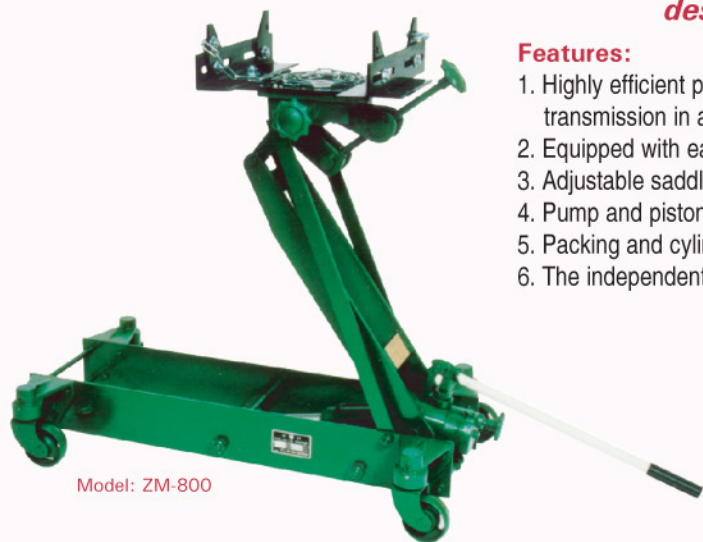
Model Number	Capacity (Tons)	Dimensions (in)				Ship Wt. (lbs)
		Lift Travel Range	Overall Length	Overall Width	Overall Height	
ZWD-1000	1	17 3/4	42 1/2	33 1/2	43 3/8	190
ZWD-1500	1.5	7 1/4	39	42	28 3/4	158

ZM & ZML Series

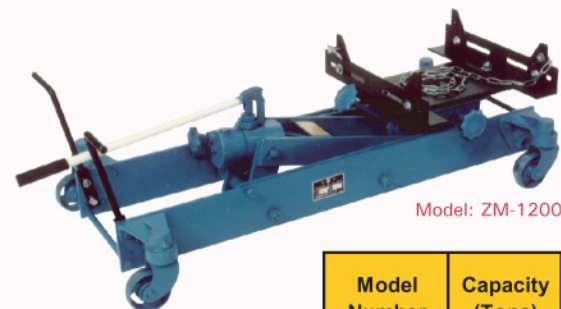
Zinko's line of transmission jacks are specially designed for medium to large-sized vehicles.

Features:

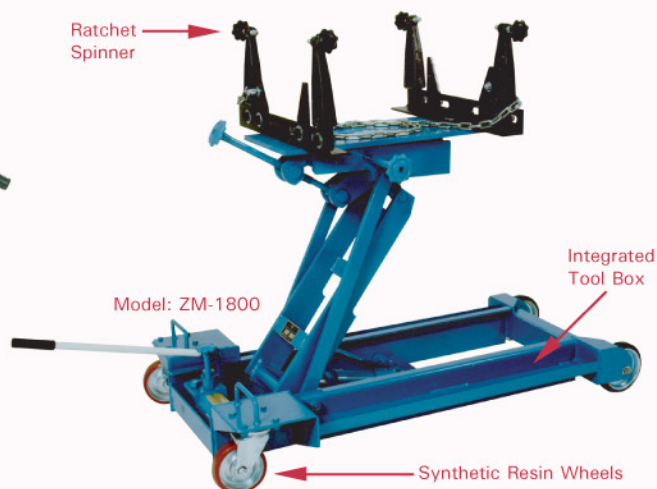
1. Highly efficient pump and plunger components give fast and smooth lifting of transmission in a simple operation, minimizing labor.
2. Equipped with easy-to-move handle.
3. Adjustable saddle moves forward, backward, side-to-side, and has tilt capabilities.
4. Pump and piston are finished to prevent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



Model: ZM-800



Model: ZM-1200



Model: ZM-1800

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.

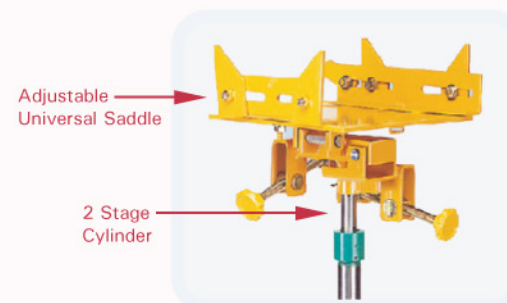


Fig.28

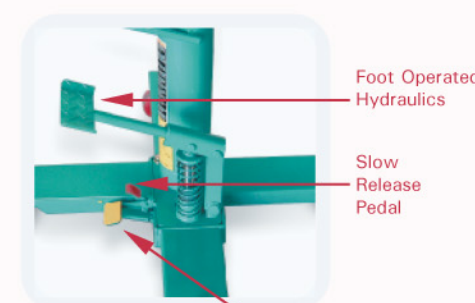


Fig.29



Model: ZML-500



Model: ZML-501



ZML & ZAML (tilting saddle)



strap



Model: ZAML-502

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 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.



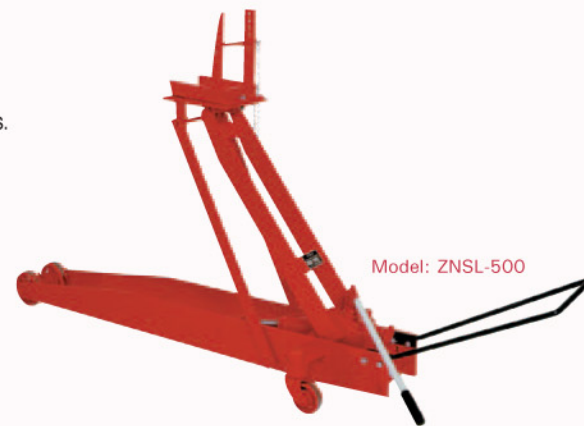
Mission Carry Jack

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.



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 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



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 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)



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.

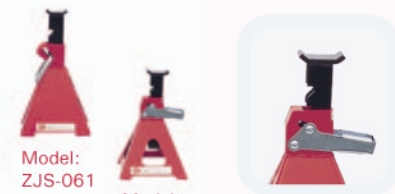


Model: ZJS-1218

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.



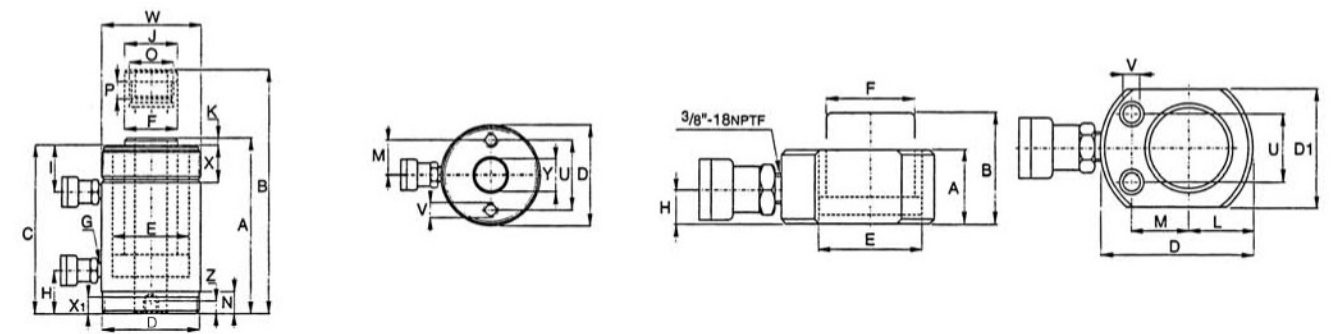
Model: ZJS-061

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
- D1 : 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		Other Measurements		Volume	
1psi:	0.069 bar	1 in:	25.4 mm	1 in ³ :	16.387 cm ³
1 bar:	14.50 psi	1 mm:	0.039 in	1 cm ³ :	0.061 in ³
Weight		1 in ² :	6.452 cm ²	1 liter:	61.02 in ³
1 pound (lb):	0.4536 kg	1 cm ³ :	0.155 in ²	1 liter:	0.264 gal
1 kg:	2.205 lbs	1 hp:	0.735 Kw	1 US gal:	3,785 cm ³
1 metric ton:	2,205 lbs	1 kW:	1.359 hp		3,785 l
1 ton (short):	2,000 lbs	1 Nm:	0.73756 Ft.lbs		231 in ³
1 ton (short):	907.18 kg	1 Ft.lbs:	1.355818 Nm		

Model Number	Cyl. Cap. (tons)	Stroke (in)	Cyl. Effect. Area (in ²)	Oil Cap. (in ³)	Dimensions (in)						Ship Wt. (lbs)	
					Collapsed Height	Extended Height	Outside Diameter	Cyl. Bore Diameter	Plunger Diameter	Base to Adv. Port		Plunger Protrusion
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		Base Mounting Holes		Collar Thread Length			
				A	B								O		P	U		V	Z	W	X
5 Ton Capacity																				
ZR-50	6.3	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	1/4-20 UN	0.56	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	1/4-20 UN	0.56	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	1/4-20 UN	0.56	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	1/4-20 UN	0.56	1/2-16	1.13	5		
ZR-57	7.00	4.87	0.99	10.75	17.75	1.50	1.13	1.00	0.75	1.00	0.25	3/4-16	0.56	1/4-20 UN	0.56	1/2-16	1.13	6		
ZR-59	9.13	4.87	0.99	12.75	21.88	1.50	1.13	1.00	0.75	1.00	0.25	3/4-16	0.63	1/4-20 UN	0.56	1/2-16	1.13	7		
10 Ton Capacity																				
ZR-101	1.00	2.24	2.24	3.63	4.53	2.25	1.88	1.50	0.77	1.38	0.36	#10-24UN	0.25	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	1.88	1.50	0.77	1.38	0.36	1-8	0.89	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	1.88	1.50	0.77	1.38	0.36	1-8	0.89	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	1.88	1.50	0.77	1.38	0.36	1-8	0.89	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	1.88	1.50	0.77	1.38	0.36	1-8	0.89	5/16-18 UN	0.59	2 1/4-14	1.18	12		
ZR-1010	10.00	22.85	2.24	13.89	23.89	2.25	1.88	1.50	0.77	1.38	0.36	1-8	0.89	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	1.88	1.50	0.77	1.38	0.36	1-8	0.75	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	1.88	1.50	0.77	1.38	0.36	1-8	0.75	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	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	5/16-18UNC	0.50	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	---	---	---	---	---	---	---	2-3/4-16	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	0.75	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	0.75	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	0.75	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	0.75	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	0.75	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	9.45	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	3/78-12	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	3/78-12	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	1/2-16	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	1/2-16	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	1/2-16	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	1/2-16	1.00	2.31	1/2-13 UN	0.75	3.5/16-12	1.94	22	
ZR-258	8.25	42.65	5.16	12.75	21.00	3.38	2.56	2.25	1.00	2.00	0.41	1/2-16	1.00	2.31	1/2-13 UN	0.75	3.5/16-12	1.94	27	
ZR-2510	10.25	52.88	5.16	14.75	25.00	3.38	2.56	2.25	1.00	2.00	0.41	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	1/2-16	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	1/2-16	1.00	2.31	1/2-13 UN	0.75	3.5/16-12	1.94	39	
30 Ton Capacity																				
ZR-302	2	12.88	6.51	4.63	7.06	4.00	2.88	2.62	0.75	2.62	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	1/2-16	1.00	---	---	---	---	3.5/16-12	1.94	40
ZRH-302	2.50	7.22	7.03	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	---	---	---	---	---	---	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	---	---	---	---	---	---	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	---	---	---	---	---	---	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	---	---	---	---	---	---	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	---	---	---	---	---	---	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	---	---	---	---	---	---	6.7/8-12	1.75	180

Model Number	Stroke (in)	Oil Cap. (in ³)	Cyl. Eff. Area (in ²)	Dimensions (in)										Ship Weight (lbs)						
				Coll. Height		Extend Height	Outside Dia.	Cyl. Bore Dia.	Plgr Dia.	Saddle Dia.	Plgr. Int. Thread	Collar Thread	Collar Thread Length		Oil Inlet Port NPT (in)	Int. Press. At Cap. (psi)	Int. Spring Return			
				A	B													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	---	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	---	---	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	1-8	2 1/4-14	1.26	1-1/4	3/8	8943	Y	12	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	12	
ZAR-1010SP	10.00	24.7	2.46	15.25	27.25	2.24	1.77	1.5	1.30											

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