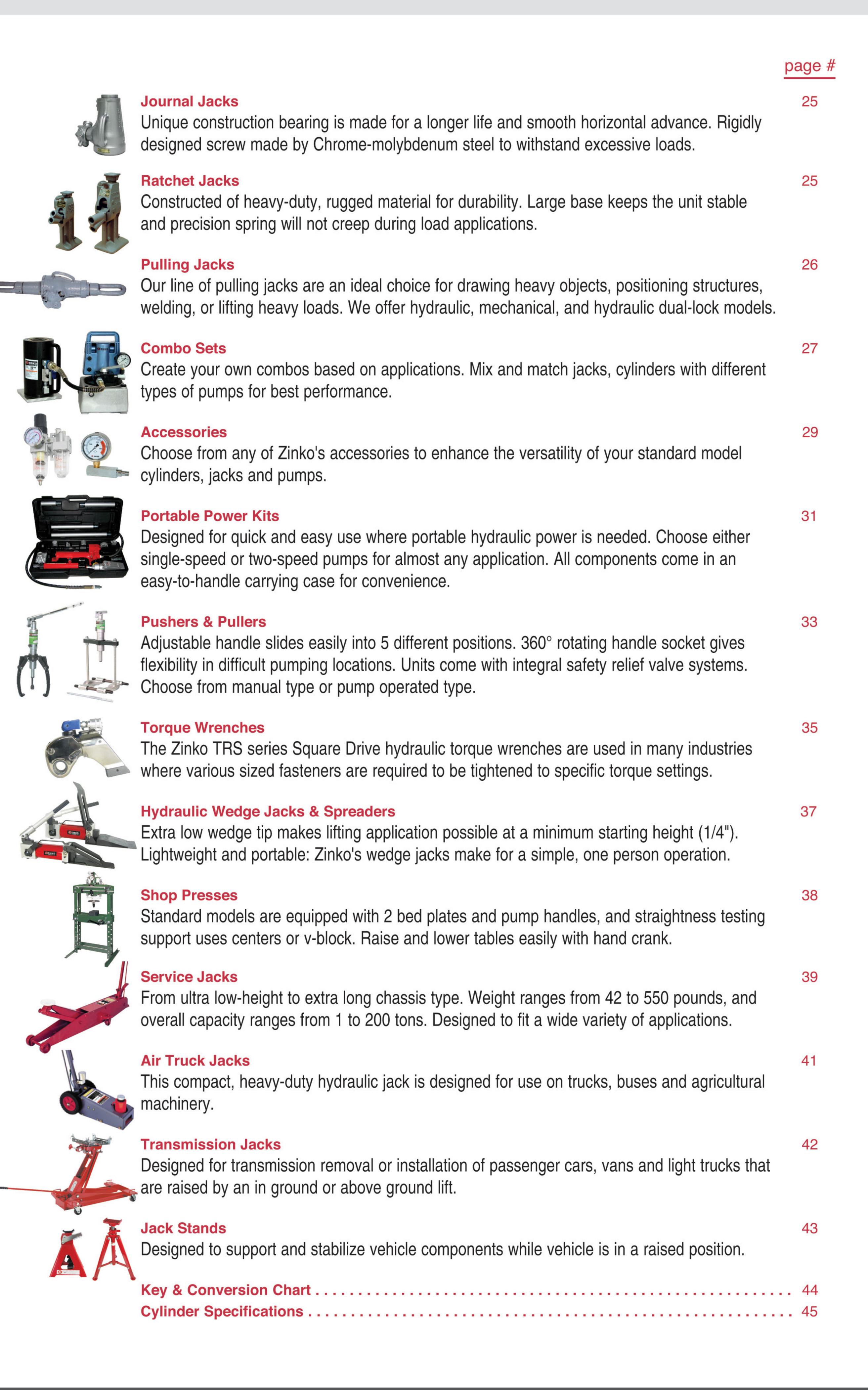
ZINKO the name you can count on for Hydraulic Jacks!

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 manufacturers 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.

		page #
TINKO TI	Bottle Jacks All models are designed for use in any position. The needle valve allows you to control the lowering of the ram.	3
	Air Hydraulic Bottle Jacks Welded steel construction reduces metal fatigue allowing for a longer life. Forged steel base increases resistance to high pressure and durability.	5
	Toe Jacks Designed for fine adjustments. Ideal for delicate work such as installation of precision machines. 360° turn lever socket for operation at any direction.	6
	Single-Acting All models are designed for use in any position and feature base mounting holes for easy attachment to almost any fixture.	7
	Double-Acting The double acting design produces greater speed and positive control for applications requiring an extra measure of strength, quality reliability, and safety.	9
ZINKO ZINKO	Aluminum Series 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.	10
	Automotive & Mini Cylinders These versatile cylinders are designed for automotive collision repair and other tasks that require hydraulic force.	11
	UR Series Cylinders The Ultra High Pressure Cylinder offers lighter weight and higher efficiency due to its higher operating pressures.	13
€ ZINKO	Hand Pumps 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.	17
A LANGTON PROPERTY OF LANGTON PROPERTY PROPERTY OF LANGTON PROPERTY PROPE	Air Pumps 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.	19
SINKO SINKO	Electric Pumps No shop air required for operation. These pumps go everywhere with electricity and provide the highest force for cylinders.	21



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.1).
- 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: ZNP-20P

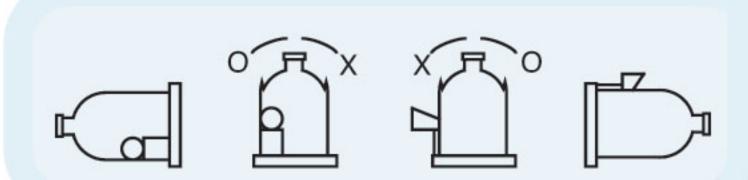


Fig.1

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

Model	Capacity			Dimension	s (in)		Ship Weight
Number	(Tons)	Min. Height	Max. Height	Ram Lift	Screw Extension	Base Area	(lbs)
Standard	& Low - Fo	orged Steel Ba	ase Bottle Jack	ks			
ZN-2	2	7.08	13.58	4.52	1.96	4.33 x 2.56	6
ZN-3	3	7.48	14.37	4.52	2.36	4.52 x 2.83	8
ZN-5	5	7.87	15.35	4.72	2.75	5.59 x 3.22	10
ZN-8	8	7.87	15.35	4.72	2.75	5.94 x 3.54	12
ZN-12	12	9.44	18.50	5.90	3.15	6.53 x 4.17	19
ZNB-12	12	6.70	13.38	3.74	2.95	6.53 x 4.17	15
ZNB-17	17	6.70	13.00	3.54	2.75	7.08 x 4.64	20
ZN-22S	22	10.63	20.13	6.25	3.25	7.16 x 5.04	31
ZNB-22	22	7.08	12.00	3.34	1.57	7.16 x 5.04	24
ZN-35	35	11.02	17.32	6.25		7.56 x 5.60	45
ZNB-35	35	7.08	10.23	3.15		7.56 x 5.60	35
ZN-60	60	12.00	18.70	6.69		9.33 x 7.40	83
Steel Base	Bottle Ja	cks					
ZNP-8	8	7.87	15.35	4.72	2.75	5.59 x 3.22	12
ZN-100	100	12.00	17.71	5.70		12.52 x 10.43	207
Bottle Jac	k with Ga	uge					
ZNP-10P	10	9.45	18.50	5.90	3.15	5.90 x 5.51	24
ZNP-20P	20	10.63	16.93	6.30		6.37 x 6.00	36
Cast Iron	Base Bottl	e Jacks					
ZT-2	2	7.88	13.63	4.50	2.00	3.75 x 3.63	6
ZT-4	4	8.00	15.38	5.00	2.38	4.00 x 3.88	8
ZT-12	12	9.50	18.63	6.00	3.13	5.25 x 5.13	15

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 can be used vertically, horizontally, or at an angle.







With base plate

(Part #: 9110-4B)

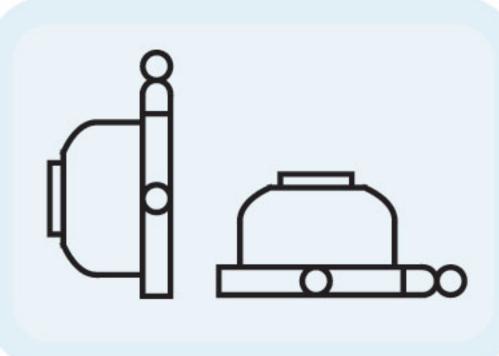


Hydraulic Telescoping Jacks

- 1. Very low clearance makes the telescoping jacks ideal for machine or forklift maintenance lifting.
- 2. ZHFD models come with 1.75" saddle (Fig.2); ZT-DL models equipped with screw extension (Fig.3) for additional height.







Model: ZT-10DL Model: ZT-03DL

Model: ZMJ-20 Model: ZMJ-10

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.4).

Model	Capacity			Dimensions	(in)		Ship Weight					
Number	(Tons)	Min. Height	Max. Height	Ram Lift	Saddle Diameter	Base Area	(lbs)					
Mini Jacks												
ZMJ-5C	5	2.36	3.15	0.78	Ø 1.10	3.70 x 3.50	5					
ZMJ-5T	5	3.34	4.92	1.57	Ø 1.10	3.70 x 3.50	6					
ZMJ-10	10	4.72	5.90	1.18	Ø 1.65	4.25 x 4.00	12					
ZMJ-20	20	5.12	6.30	1.18	Ø 2.08	4.68 x 4.41	17					
ZMJ-50	50	5.51	6.70	1.18	Ø 3.15	7.00 x 6.85	42					
Hydraulic Te	Hydraulic Telescoping Jacks											
ZT-03DL	3	5.55	15.78	10.23	Ø 1.12	6.18 x 5.35	11					
ZT-06DL	6	6.45	17.23	10.78		6.31 x 5.55	14					
ZHFD-10F	10	4.72	8.66	3.93	Ø 1.50	7.08 x 4.64	18					
ZT-10DL	10	7.63	21.73	14.10	Ø 1.82	7.08 x 6.88	22					
ZT-12DL	12	7.58	20.27	12.69		5.98 x 8.26	26					
Long Ram Ja	acks											
ZMHL-2-2	2	21.65	40.55	18.89	Ø 1.25	5.59 x 3.23	24					
ZMHL-4SP-1	4	23.03	44.88	21.85	Ø 1.00	5.98 x 4.65	30					
ZMHL-8SP-1	8	24.75	43.49	18.74	Ø 1.28	5.71 x 5.71	34					

ZABJ Series

Capacity: 12 to 35 tons.

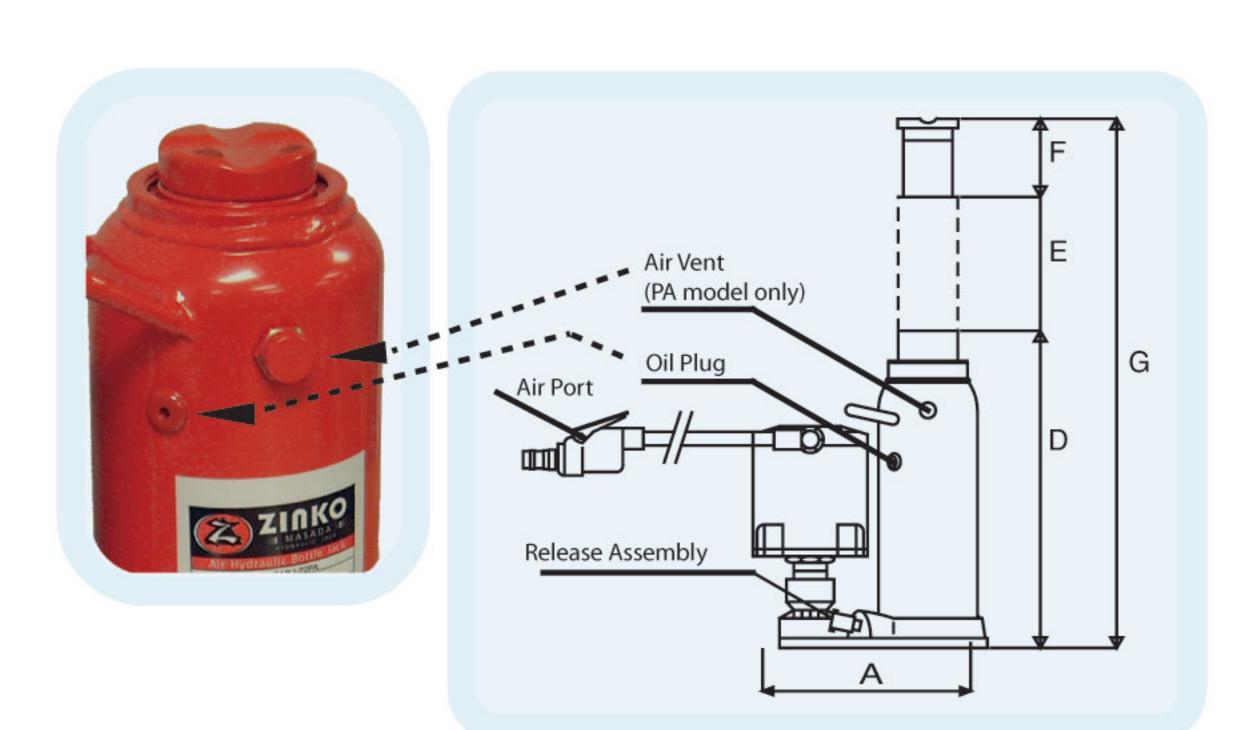


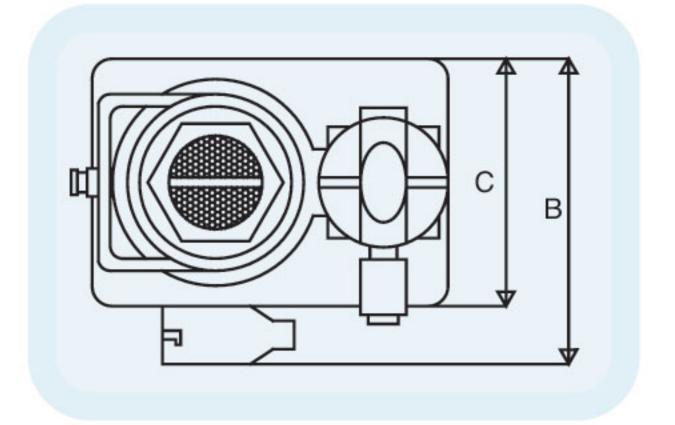
Air Hydraulic/Manual Bottle Jacks

- Operates both manually and pneumatically.
- Fast and efficient air pump saves lifting time; built-in safety valve to prevent overload.
- 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.

Air Hydraulic Bottle Jacks

- Welded steel construction reduces metal fatigue allowing for a long service life.
- Forged steel base increases resistance to high pressure and increases durability.
- Oil bypass system prevents lifting ram from overextending.
- Safety valve protects hydraulic system from over-load damage.
- 5. In-line filter screen located in air valve prohibits the entrance of contamination into the air hydraulic system.
- Comes with an air vent valve to stop pressure from bleeding in reservoir.





Hydraulic Load Cell

Capacity: 15 tons.

Usage

This hydraulic load cell and gauge system is an easy way to measure and display force in various applications. Designed to supplement existing equipment without integrated measuring device (i.e. gauge), the hydraulic load cell measures force applied in a direct, simple and cost-effective manner without the need for an external power source.



Air bottle jack on hydraulic load cell.

Features

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- 1. Compact, lightweight, and a low-profile design makes this portable set up convenient and easy to use.
- 2. Battery operated design eliminates the need for an external power source; perfect for outdoor/field jobs.
- 3. Easy-to-read digital pressure gauge comes with swivel functionality for 360° use.

N/II - I	0	Lifting Time By		Air Press.		Dimensions (in)						
	Model Capacity Number (Tons)		Air Supply Range		Base A	A Base C	Min. Ht. D	Lift E	Screw Ext. F	Max Ht. G	Weight	
Hamber	(10113)	No Load	Load	(psi)	(in)	(in)	(in)	(in)	(in)	(in)	(lbs)	
ZABJ Serie	s											
ZABJ-12C3	12	40	125	40 - 140	8.00	4.88	9.69	5.88	3.13	18.69	29	
ZABJ-20C3	20	50	153	40 - 140	8.75	6.00	9.69	5.88	3.13	18.69	40	
ZABJ-22PA	22	50	195	80 - 140	7.00	4.75	10.50	6.00	3.00	19.50	36	
ZABJ-22PB	22	35	195	80 - 140	7.00	4.50	7.25	3.75	1.50	12.50	26	
ZABJ-35M	35	60	210	40 - 140	7.75	5.59	11.00	6.25		17.25	49	

Hydraulic Toe Jacks

ZHC Series

Capacity: 2 to 15 tons.

Usage

Use our safe, dependable toe jacks to safely lift a heavy load in a low clearance situation. Super low height (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.

Features

- 1. 360° turn lever socket for operation at any direction (Fig.5).
- 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.

Model	Capacity	Min. F	łt. (in)	Max I	łt. (in)	Ram	Toe Area	Base Area	Ship Weight
	(Tons)					9000 Mary 1900	9000 0000	(in)	(lbs)
ZHC-2V	2	0.63	9.44	5.07	13.89	4.44	2.56 x 1.96	8.93 x 6.30	20
ZHC-5V	5	0.86	11.41	5.59	16.14	4.72	2.95 x 2.24	10.31 x 7.16	52
ZHC-12V	12	1.10	12.79	6.81	18.50	5.70	3.34 x 2.36	11.41 x 8.85	88
ZHC-15V	15	1.26	13.58	6.77	19.09	5.51	4.33 x 2.36	12.63 x 10.15	117



Model: ZHC-15V



Fig.5

Hydraulic Toe Cylinders

RHC Series

Capacity: 5 to 25 tons.

Usage

Model: RHC-15A

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.

eatures

- 1. These toe cylinders are designed to lift loads with a very low clearance. The toe area can pick up the load from as low as 0.87 inches, which is the lowest pick up point in the industry.
- Easily connect the port to any hand pump or air pump. These toe cylinders will give the operator full control of the lift from a distance whenever close quarters operation is not accessible. Coupler connection port can be operated at any direction.
- 3. 5 and 10 ton models come with a steel cylinder.
- 4. 10 and 25 ton models come with a lighter weight aluminum cylinder for mobility.







		Oil	Min. Ht. (in)		Max Ht. (in)					Ship
Model Number	(Tons)	Capacity (in³)	Toe	Head	Toe	Head	Ram Lift (in)	Toe Area (in)	Base Area (in)	Weight (lbs)
RHC-5	5	11.20	0.87	11.75	5.79	16.67	4.92	2.25 x 2.88	7.12 x 7.12	42
RHC-10	10	25.80	1.18	14.33	6.10	19.25	4.92	2.34 x 3.70	9.75 x 7.88	100
RHC-15A	15	32.55	1.18	14.33	6.10	19.25	4.92	2.34 x 3.70	10.92 x 9.36	63
RHC-25A	25	65.14	1.34	15.67	7.25	21.58	5.91	2.48 x 4.88	11.70 x 12.20	180

ZR & ZRH Series

Capacity: 5 to 100 tons. Max. Operating: 10,000 psi.



Features

- 1. Can be used in any positions.
- 2. Harden saddles keep top bearing and plunger from jamming while the saddle grooves help prevent slipping.
- 3. Baked enamel finish for outstanding corrosion prevention.
- 4. Threaded collar and internal threads withstand full loads for maximum flexibility in fixturing (Fig.6).
- 5. Come with a 3/8" NPT fast flow quick connection coupler and dust cap.
- 6. Collar Plunger thread and base mounting hole provide for easy fixture.
- 7. Optional adapters make it easy and cost efficient to convert our cylinders from snap-type to threaded-type for your application.
- 8. These cylinders can be paired with either hand pumps, air pumps, or electric pumps with appropriate accessories.

Electric Pump & Cylinder Sets



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 27.

Air Pump & Cylinder Sets

Industrial Quality Cylinders

and dust cap.

easy fixture (Fig.7).

truck service and construction maintenance.

with the adapters listed to the right.



These industrial quality, general purpose cylinders are designed for

holding may be required. Ideal for use in shop, agricultural, automotive/

1. All Models come with 3/8" NPT fast-flow quick-connection coupler

(Fig.7) for easy mounting on almost any fixture, and for easy set up

3. Collar plunger threads (Fig.6), and base mounting holes provides for

3/8"-18 NPT

4. Optional adapters make it super easy and cost efficient to convert

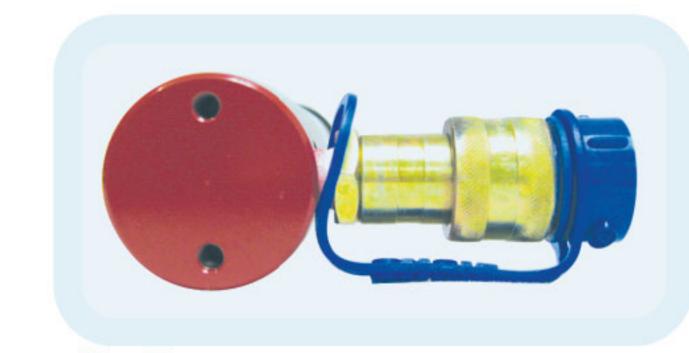
our 10 ton ram to snap-type or threaded-type applications.

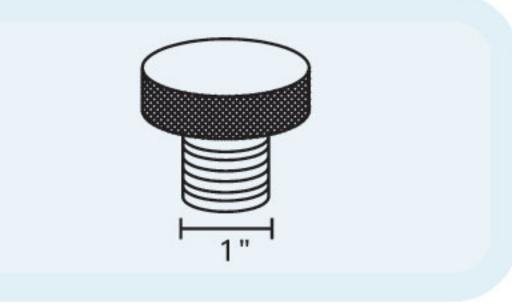
* Refer to page 30 for a wider selection of adapters.

2. All cylinders designed with base mounting holes (5/16-18 UNC)

use in a variety of applications where lifting, pushing, bending or









2110-18 Saddle (additional option)





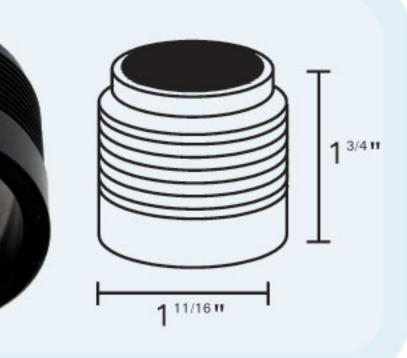
type adapter (bottom view)

⊢___

2110-19 Snap-type male connector





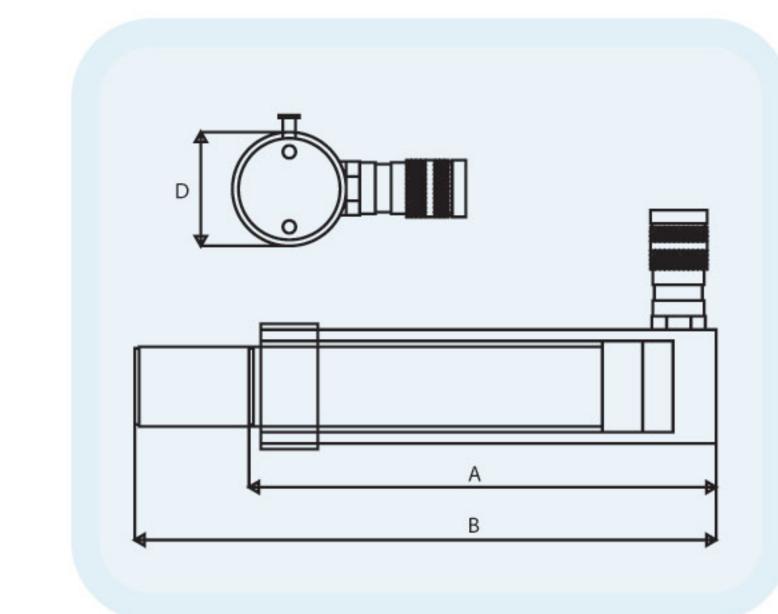


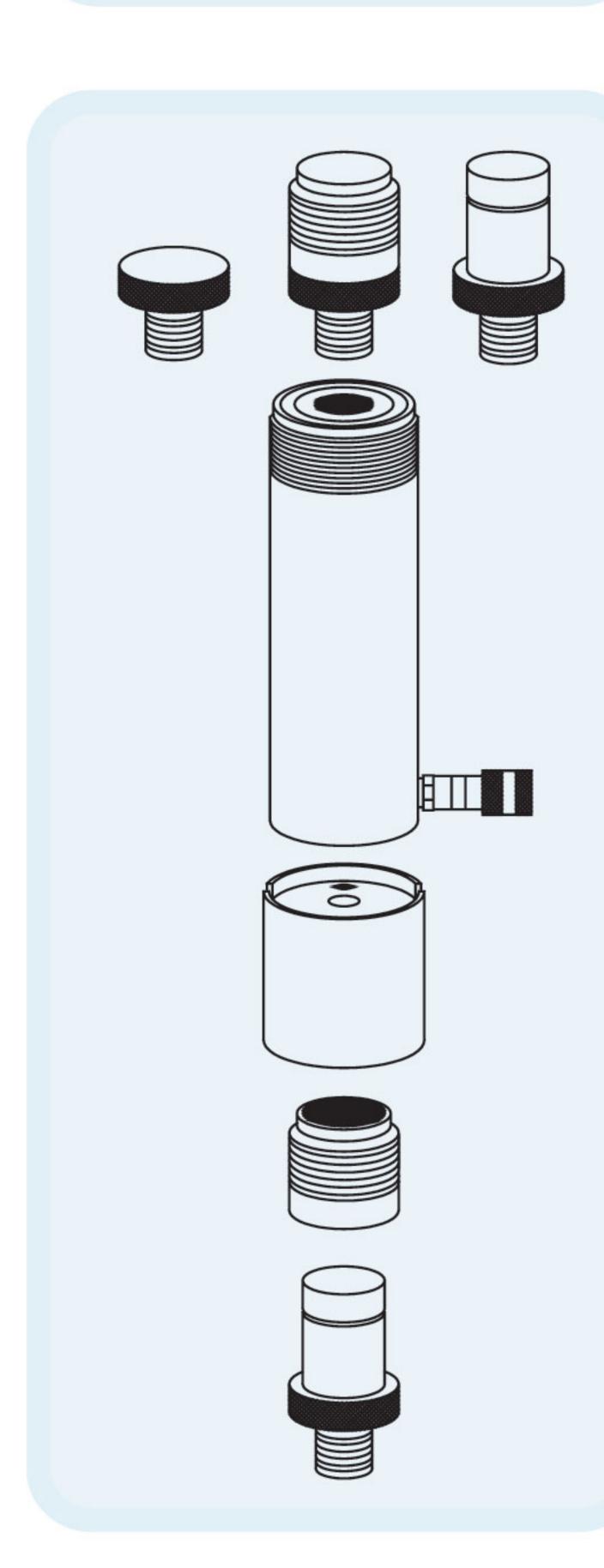
2110-20 Threaded-type male connector

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

Hand Pump & Cylinder Sets









Order online at www.zinko.com

			Cylindor	Collapsed	Extended	Outside	Shin
Model	Stroke	Oil Capacity	Cylinder Effective	Height (in)	Height (in)	Dia. (in)	Ship Weight
Number	(in)	(in³)	Area (in²)	Charles and the property of the second	В	D	(lbs)
5 Ton Capac	ity						
ZR-50	0.63	0.61	1	1.61	2.24	2.28	4
ZR-51	0.98	0.97	1	4.33	5.31	1.50	4
ZR-53	3.00	3.05	1	6.50	9.50	1.50	5
ZR-55	5.00	5.06	1	8.46	13.46	1.50	6
ZR-57	7.00	7.01	1	10.75	17.75	1.50	7
ZR-59	9.13	9.21	1	12.72	21.85	1.50	8
10 Ton Capa		4.70	0.04	4.70	0.00	0.04	
ZR-102	2.12	4.76	2.24	4.76	6.88	2.24	6
ZR-104 ZR-106	4.13	9.27 13.79	2.24	6.73 9.72	10.86 15.86	2.24	8
ZR-108	6.14 8.00	17.94	2.24	11.73	19.73	2.24	11 13
ZR-1010	10.11	22.76	2.24	13.74	23.85	2.24	15
ZR-1012	12.00	26.91	2.24	15.75	27.75	2.24	16
ZR-1014	14.00	31.48	2.24	17.71	31.71	2.24	19
12 Ton Capa							<u> </u>
ZRH-120	0.31	0.85	2.77	2.16	2.47	2.71	6
ZRH-121	1.65	4.57	2.77	4.72	6.37	2.71	9
ZRH-1211	1.65	4.57	2.77	4.72	6.37	2.71	9
ZRH-123	3.00	8.30	2.77	7.24	10.24	2.71	12
15 Ton Capa	city						
ZR-151	0.98	3.11	3.14	4.88	5.86	2.71	10
ZR-152	2.00	6.34	3.14	5.86	7.86	2.71	11
ZR-154	4.00	12.5	3.14	7.87	11.87	2.71	13
ZR-156	6.00	18.8	3.14	10.66	16.66	2.71	17
ZR-158	8.00	25.08	3.14	12.67	20.67	2.71	20
ZR-1510	10.00	31.48	3.14	14.68	24.68	2.71	24
ZR-1512	12.00	37.77	3.14	16.65	28.65	2.71	28
ZR-1514	14.00	44.12	3.14	18.66	32.66	2.71	30
20 Ton Capa	 	0.15	1 75	6.27	9.20	2.05	20
ZRH-202 ZRH-204	1.93 4.01	9.15 19.00	4.75 4.75	6.37 9.52	8.30 13.53	3.85 3.85	20 25
ZRH-204 ZRH-206	6.10	29.05	4.75	12.05	18.15	3.85	35
25 Ton Capa		23.00	4.75	12.00	10.10	0.00	1 00
ZR-251	1.00	5.15	5.15	5.50	6.50	3.34	14
ZR-252	1.96	10.13	5.15	6.50	8.46	3.34	16
ZR-254	4.00	20.68	5.15	8.46	12.46	3.34	20
ZR-256	6.22	32.03	5.15	10.75	16.97	3.34	24
ZR-258	8.26	42.53	5.15	12.71	20.97	3.34	28
ZR-2510	10.27	52.9	5.15	14.73	25.00	3.34	32
ZR-2512	12.25	63.18	5.15	16.75	29.00	3.34	38
ZR-2514	14.25	73.35	5.15	18.75	33.00	3.34	42
30 Ton Capa	T						
ZR-308	8.22	53.7	6.52	15.23	23.45	3.97	45
ZRH-302	2.52	18.18	7.22	7.00	9.52	4.50	29
ZRH-304	4.01	28.86	7.22	9.17	13.18	4.50	34
ZRH-306	6.10	44.06	7.22	13.00	19.10	4.50	45
50 Ton Capa ZR-502	2.00	22.09	11.04	6.94	8.94	5.00	33
ZR-502 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	13.26	146.39	11.04	18.13	31.38	5.00	90
60 Ton Capa		, 10.00			0 1.00	0.00	
ZRH-603	3.00	38.20	12.75	9.72	12.72	6.25	74
ZRH-606	6.02	76.82	12.75	12.71	18.73	6.25	91
100 Ton Cap	Annual Control of the						
ZRH-1003	3.00	38.2	12.75	10.00	13.00	8.35	150
ZR-1006	6.61	136.63	20.66	14.05	20.67	6.96	135
ZR-10010	10.23	211.5	20.66	17.67	27.91	6.96	165
* For complete	information o	on cylinders plea	ase refer to	page 45.			

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

Double-Acting Cylinders Standard and Hollow Type

ZRD & ZRDH Series

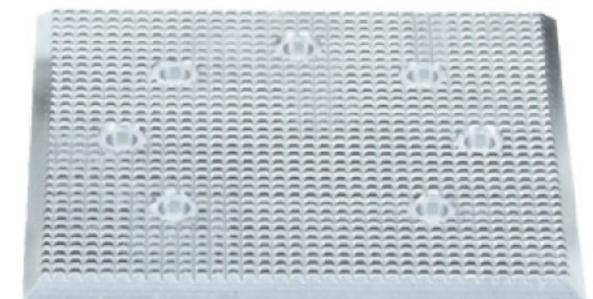
Capacity: 10 to 300 tons. Max. Operating: 10,000 psi. Stroke: 1.96" to 32.08".



Model: ZRDH-307 Model: ZRH-306

Valves & Fittings

- 1. Street Elbow: 3/8" NPT (male to female) P/N: 195311
- 2. Hex Nipple: 3/8" NPT (male to male) P/N: 195341
- 3. Needle Valve: 3/8" NTP (female) ports to control cylinder speed. Also used as a shut-off valve for temporary load holding. P/N: 195411
- * For a detailed selection of gauges & fittings, please refer to page 29.



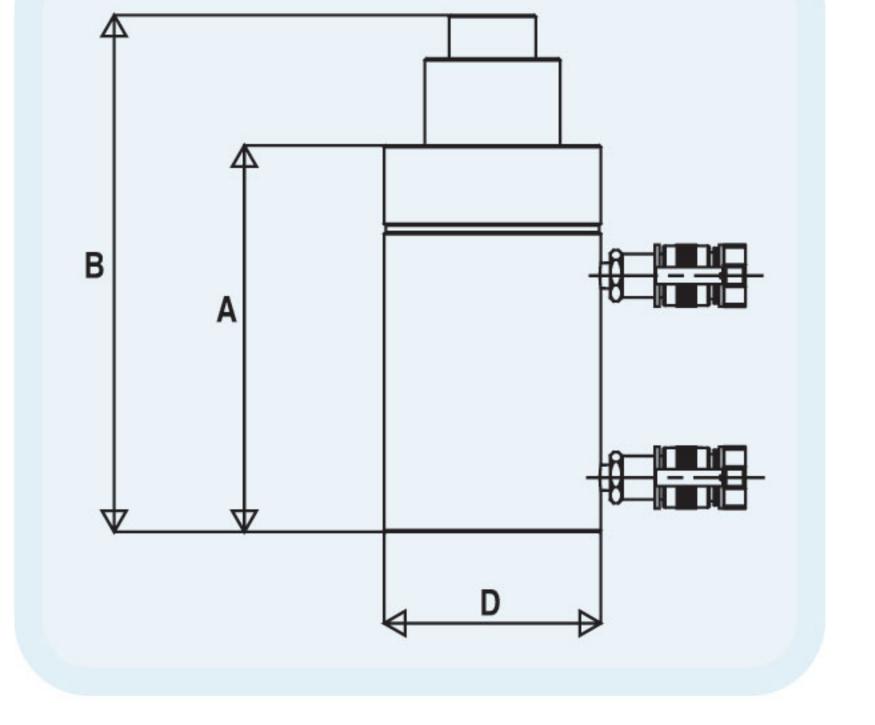
Features

- 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.8).
- 6. Hollow type cylinders (Fig.9) 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 300 tons and above are available upon request.





Fig.8





100	SHOW THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO PARTY.								D				
	ē.	se plate for 5 ylinder Part #			Nodel: ZR-506/ with base plate	A e & shut-off va	ılve)		*1				
			Dimensions (in)										
Model Number	Stroke (in)	Oil Capacity (in³)	Collapsed Height	Extended Height	Outside Diam eter	Cylinder Bore Dia.	Plunger Dia.	Base to Adv. Port	Saddle Dia.	Ship Weight (lbs)			
		()	Α	В	D	E	F	Н	J				
Single-Act	ing Alur	ninum Cyli	inders										
30 Ton Ca	pacity												
ZR-302A	2.00	13	7.12	9.09	3.93	2.95	2.36	1.29	1.57	17			
ZR-304A	4.00	26	9.09	13.03	3.93	2.95	2.36	1.29	1.57	21			
ZR-306A	6.00	40	11.06	16.96	3.93	2.95	2.36	1.29	1.57	24			
50 Ton Ca	pacity												
ZR-502A	2.25	21	7.32	9.29	5.11	3.74	3.15	1.18	1.96	25			
ZR-504A	4.25	43	9.29	13.22	5.11	3.74	3.15	1.18	1.96	29			
ZR-506A	6.25	64	11.25	17.16	5.11	3.74	3.15	1.18	1.96	35			
100 Ton Ca	apacity												
ZR-1004A	4.00	87	10.66	14.60	7.40	5.31	4.33	1.81	3.70	45			
ZR-1006A	6.00	131	12.63	18.54	7.40	5.31	4.33	1.81	3.70	50			
ZR-1008A	8.00	174	14.60	22.48	7.40	5.31	4.33	1.81	3.70	55			
150 Ton Ca	apacity												
ZR-1506A	6.00	207	13.50	19.40	9.05	6.69	5.51	2.00	4.44	80			

^{*} For complete information on cylinders please refer to page 45.

Aluminum Cylinders Single & Double-Acting Cylinders

ZR-A & ZRD-A Series

Capacity: 30 to 150 tons.



Usage

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

Features

- 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.
- Grooved saddles for stability.
- 4. Steel base-plated for increased durability.
- 5. Optional valve to control cylinder speed can also be used as shut off valve for temporary load holding.
- 6. Optional aluminum base provides extra support and stability for the 50 tons cylinders.

Model	Stroke		pacity 1 ³)		Effective (in²)	Management of the Control of the Con	ylinder y (Tons)	Coll. Height	Extended Height (in)	Outside Dia. (in)	Ship
Number	(in)							(in)			Weight (lbs)
Daubla Action	Aluminum	Adv.	Ret.	Adv.	Ret.	Adv.	Ret.	Α	В	D	(IDS)
Double-Acting		Cylinaers									
50 Ton Capacit ZRD-502A	1.96	21.60	8.17	10.99	4.13	50	19	7.91	9.88	5.70	25
ZRD-502A ZRD-504A	3.93	43.26	16.29	10.99	4.13	50	19	9.88	13.81	5.70	28
ZRD-504A	5.90	64.86	24.47	10.99	4.13	50	19	11.85	17.75	5.70	32
100 Ton Capaci		04.00	24.47	10.99	4.13	30	19	11.05	17.75	3.70	32
ZRD-1004A	3.93	87.32	48.51	22.18	12.32	102	56	11.85	15.78	7.28	43
ZRD-1004A	5.90	131.00	72.80	22.18	12.32	102	56	13.81	19.72	7.28	49
ZRD-1008A	7.87	174.71	97.00	22.18	12.32	102	56	15.78	23.66	7.28	56
150 Ton Capaci	100 0.000000	17-7.71	37.00	22.10	12.02	102		10.70	20.00	7.20	30
ZRD-1506A	5.90	207.78	120.82	3518	20.45	162	94	13.70	19.60	9.05	74
Double-Acting		ACTION AND AND APPEAR	100 000 000 000 000 000 000 000 000 000	0.0000000000000000000000000000000000000	20.40	102	<u> </u>	10.70	10.00	0.00	, -
10 Ton Capacit		otandara a	TIOTION TYPE	•							
ZRD-1010	10.00	22.45	7.45	2.24	0.74	10	3	16.10	26.10	2.88	30
ZRD-1010	12.00	27.00	9.00	2.24	0.74	10	3	18.00	30.00	2.88	35
30 Ton Capacit	ALCOHOLOGO AND ALCOHO		3.33	America de la companya del la companya de la compan				10.00	30.00		
ZRD-308	8.25	53.64	24.40	6.52	2.96	30	13	15.25	23.50	4.00	44
ZRD-3014	14.50	94.52	42.90	6.52	2.96	30	13	21.63	36.10	4.00	64
ZRDH-307	7.00	50.58	33.00	7.22	4.71	30	21	13.00	20.00	4.48	54
ZRDH-3010	10.15	73.35	47.84	7.22	4.71	30	21	16.96	27.12	4.48	67
50 Ton Capacit							21-101			A. J. 1880.	
ZRD-502A	1.96	21.60	8.17	10.99	4.13	50	19	7.91	9.88	5.70	25
ZRD-504A	3.93	43.26	16.29	10.99	4.13	50	19	9.88	13.81	5.70	28
ZRD-506A	5.90	64.86	24.47	10.99	4.13	50	19	11.85	17.75	5.70	32
ZRD-506	6.14	67.80	20.44	11.03	3.33	50	15	13.03	19.17	5.00	67
ZRD-5013	13.15	145.11	43.81	11.03	3.33	50	15	20.06	33.19	5.00	115
ZRD-5020	20.11	222.00	67.06	11.03	3.33	50	15	28.85	49.00	5.00	150
60 Ton Capacit											
ZRDH-603	3.50	44.57	29.21	12.75	8.40	60	40	9.72	13.22	6.25	74
ZRDH-606	6.53	82.77	54.24	12.75	8.40	60	40	12.71	19.25	6.25	93
ZRDH-6010	10.12	128.94	84.49	12.75	8.40	60	40	17.25	27.36	6.25	115
75 Ton Capacit			AB-								
ZRD-756	6.14	97.70	29.90	15.90	4.86	72	22	13.66	19.80	5.75	92
ZRD-7513	13.11	208.51	63.83	15.90	4.86	72	22	20.67	33.78	5.75	150
100 Ton Capaci	ity		on.								
ZRD-1004A	3.93	87.32	48.51	22.18	12.32	102	56	11.85	15.78	7.28	43
ZRD-1006A	5.90	131.00	72.80	22.18	12.32	102	56	13.81	19.72	7.28	49
ZRD-1006	6.61	136.57	63.77	20.66	9.65	94	44	14.05	20.67	7.00	135
ZRD-1008A	7.87	174.71	97.00	22.18	12.32	102	56	15.78	23.66	7.28	56
ZRD-10013	13.11	270.88	126.38	20.66	9.65	94	44	20.63	33.75	7.00	205
ZRD-10018	18.11	374.20	174.58	20.66	9.65	94	44	27.04	45.15	7.00	260
150 Ton Capaci	ity										
ZRD-1502	2.24	68.90	33.20	30.70	14.80	139	67	7.71	9.96	8.00	110
ZRD-1506	6.14	188.56	90.80	30.70	14.80	139	67	15.15	21.30	8.00	206
ZRD-1506A	5.90	207.78	120.82	3518	20.45	162	94	13.70	19.60	9.05	74
ZRD-15013	13.11	402.57	193.87	30.70	14.80	139	67	22.16	35.31	8.00	275
ZRD-15032	32.08	985.22	474.45	30.70	14.80	139	67	43.94	76.02	8.00	525
200 Ton Capaci	ity										
ZRD-2006	6.00	264.35	134.80	44.18	22.52	200	102	16.93	22.91	9.75	325
ZRD-20013	13.00	574.00	292.60	44.18	22.52	200	102	23.94	36.94	9.75	440
300 Ton Capaci	ity										
ZRD-3006	6.00	427.00	227.00	70.88	38.00	300	188	19.09	25.11	12.25	545
* For complete	informati	on on cyling	dere nlease	refer to na	ge 46						

^{*} For complete information on cylinders please refer to page 46.

Model: ZRM-030

Capacity: 2 to 20 tons. Stroke: 3" to 10".



Automotive Cylinders

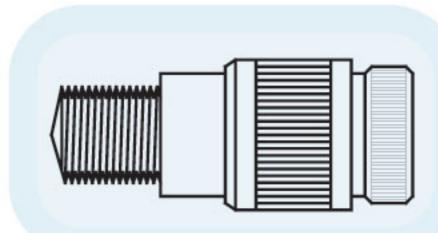
These rugged versatile cylinders are designed for automotive collision repair, and a broad range of tasks that require hydraulic force.

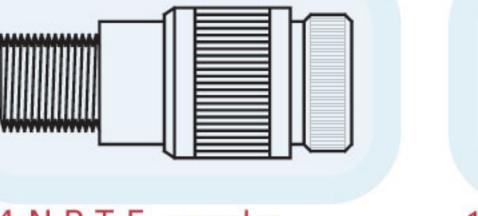
- 1. All models come with either 1/4" NPT or 3/8" NPT regular-flow quick-connection couplers and dust caps.
- 2. 10 ton models designed with internal threads on rod end, which can be easily
- converted for threaded or snap-type application. Matching base is available upon request.
- 3. 4 ton models come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

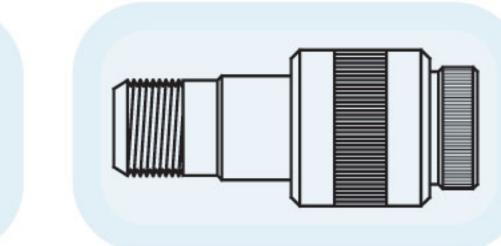


9210104-R 9210308-R

9210104L-R 9210308L-R







1/4 N.P.T.F. coupler

1/4 N.P.T.F. L-type coupler 3/8 N.P.T.F. fast flow coupler



For Collision Repair, please order our snap-together

components (shown above) for quick set-up for any jobs.

the rated capacity of the hydraulic system is reduced 50%)

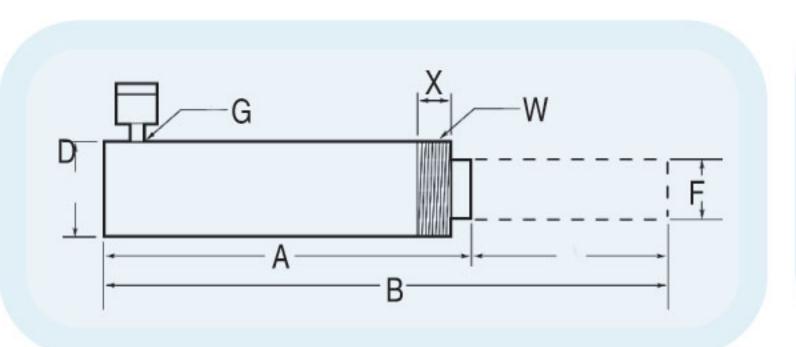
(CAUTION: For each attachment or component used in the set-up,

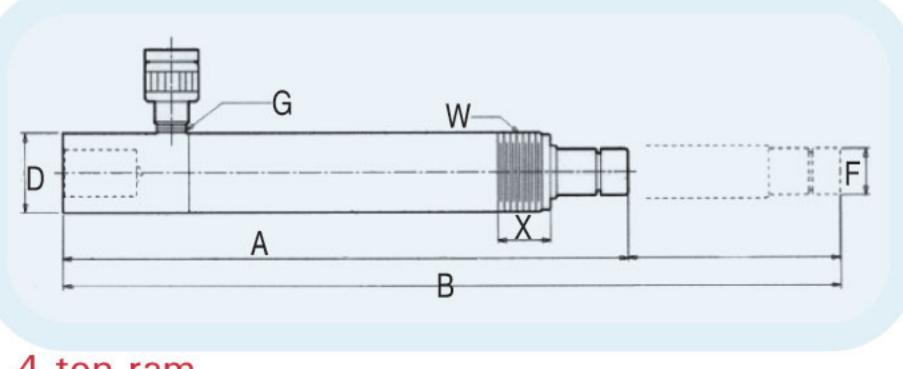


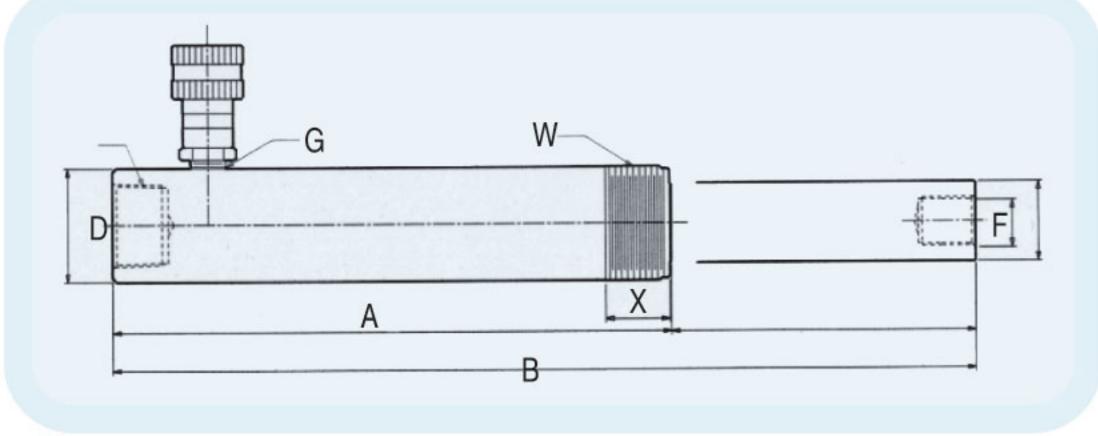
refer to page 37.



Complete power sets are also available. Please refer to page 31 for selections.







Order & Information desk (800) 579-8088

on	ram		

4 ton ram

10 ton ram

Model Number	Coupler Type	Cylinder Capacity (Tons)	Stroke (in)	Oil Capacity (in³)	Cylinder Effec. Area (in²)	Coll. Height (in)	Extend Height (in) B	Outside Dia. (in) D	Ship Weight (lbs)
ZAR-023	9210101L-R	2	3.00	2.35	0.79	5.51	8.46	Ø 1.30	3
ZAR-045SP	9210104L-R	4	4.00	3.96	0.99	10.59	14.56	Ø 1.77	5
ZAR-106SP-1	195112-R	10	6.00	14.80	2.46	14.52	20.55	Ø 2.24	13
ZAR-106T	195112-R	10	6.00	14.80	2.46	12.25	19.50	Ø 2.24	12
ZAR-1010T	195112-R	10	10.00	24.70	2.46	16.12	26.50	Ø 2.24	17
ZAR-1510T	195112-R	15	10.00	31.42	2.46	16.12	26.25	Ø 2.75	26
ZAR-205T	195112-R	20	5.00	25.69	4.73	8.93	13.93	Ø 3.46	22

^{*} For complete information on cylinders please refer to page 45.

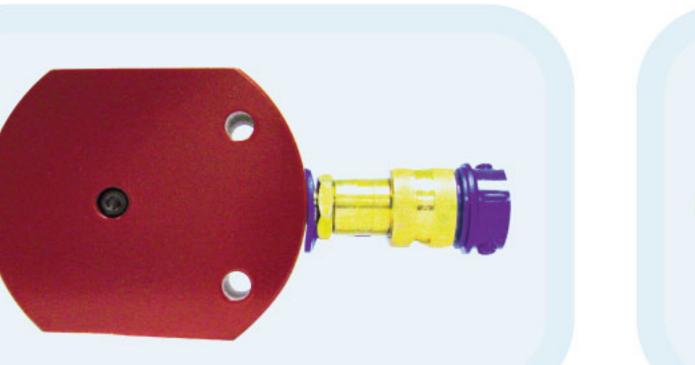
ZRB & ZRM Series

Capacity: 5 to 100 tons. Stroke: 0.25" to 2.44".

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.

- Designed for use in all positions.
- 2. Come with a 3/8" NPT fast flow coupler.
- 3. Mounting holes allow easy mounting on to almost any fixture.
- 4. Grooved plunger ends do not require saddle.





ZRM-050 (bottom view)

ZRM-050 (top view)

lodel	ZRM-005	ZRM-010	ZRM-020	ZRM-030	ZRM-050	ZRM-070	ZRM-100
) (in.)	1.63	2.19	3.00	3.75	4.50	5.50	6.00
J1 (in.)	1.12	1.44	1.94	2.06	2.62	3.00	3.00
	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 (bottom view)

For hose and component

Model

Number

ZRB-101

ZRB-201

ZRB-302

ZRB-502

ZRB-1002

ZRB Series Low Height Cylinders

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

Model: ZRB-502

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

U	
_o	2
K	2
A B	2
	2

del for easy	carrying.				options p	lease refer to	page 29.					
Model Number	Cylinder Capacity (Tons)	ISTICKE	Oil Capacity (in³)	Cylinder Effective Area (in²)		Extend Height (in) B	Outside Dia. (in) D	Ship Weight (lbs)				
ZRM Seri	es Specifi	cations										
ZRM-005												
ZRM-010	10	0.47	1.09	2.24	1.69	2.16	3.22 x 2.16	5				
ZRM-020	20	0.44	1.95	4.44	2.00	2.44	4.00 x 3.00	7				
ZRM-030	30	0.51	3.35	6.52	2.28	2.79	4.63 x 3.75	10				
ZRM-050	50	0.63	6.04	9.62	2.59	3.22	5.50 x 4.50	16				
ZRM-075	75	0.63	10.00	15.90	3.11	3.74	6.50 x 5.50	27				
ZRM-100	100	0.63	12.39	19.63	3.34	3.97	7.00 x 6.00	34				
ZRB Serie	es Specifi	cations										
ZRB-101	10	1.50	3.35	2.24	3.46	4.96	2.71	9				
ZRB-201	20	1.77	7.87	4.44	3.85	5.62	3.62	12				
ZRB-302	30	2.44	15.92	6.52	4.60	7.04	3.97	17				
ZRB-502	50	2.36	22.96	9.62	4.80	7.16	4.88	24				
ZRB-1002	100	2.24	44.05	19.64	5.55	7.79	6.50	47				
* For com	alata infar	motion	n ovlindo	ro places re	for to nome	15						

^{*} For complete information on cylinders please refer to page 45.

Ultra High Pressure Single-Acting Cylinders **UR Series Series**

Capacity: 25 to 150 tons. Stroke: 1.97" - 7.87".

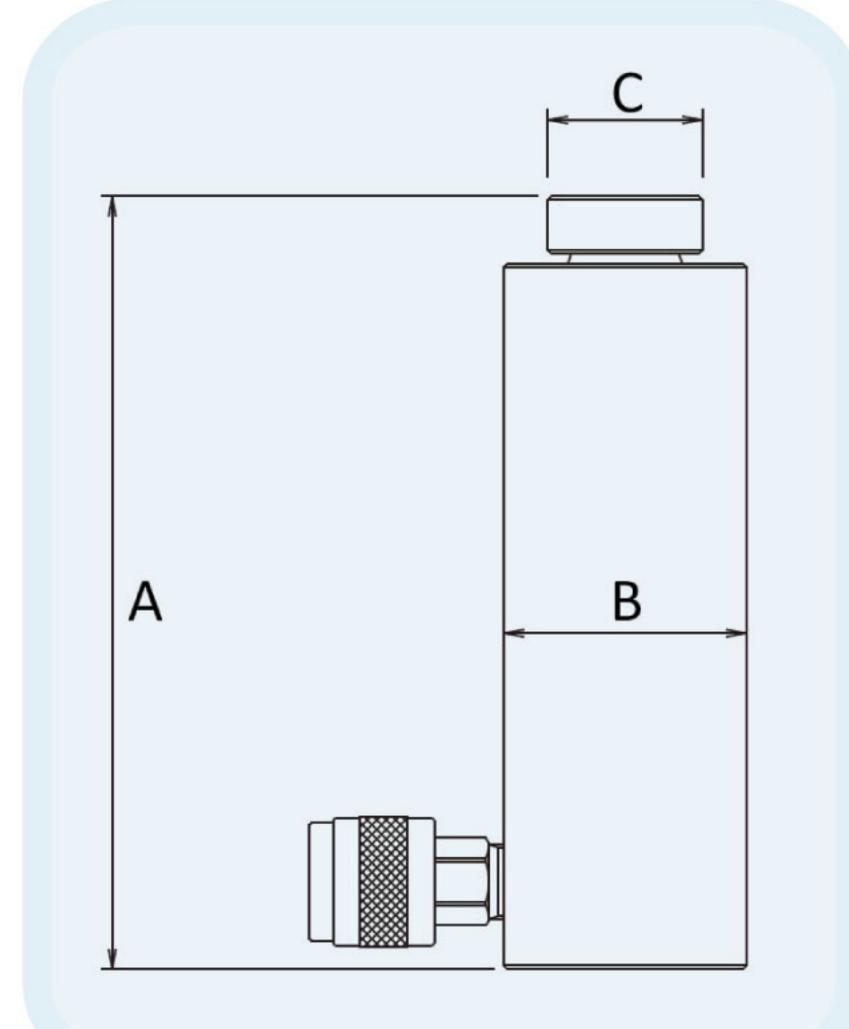
Max. Operating Pressure: 30,000 psi.



The ultra high pressure single-acting cylinders offer lighter weight and higher efficiency due to their higher operating pressures excellent replacement cylinders for tight spaces and in situations where weight is critical. These units can be found operating in nuclear power plants, diamond processing plants and shipyards around the world.

Features

- 1. Manufactured from extremely high strength lighweight alloy to endure high operating pressures while keeping weight to the bare minimum.
- 2. Hard chrome plated ram to endure harsh environments and extend cylinder useful life.
- 3. Designed with high lateral load tolerance of up to 50% of lifting capacity.
- 4. Single acting with spring return design perfect for lifting applications and to cut down cost utilizing more economical single acting pumps.
- 5. Larger units are equipped with carrying handles to ease transport and placement of cylinders.



Model Number	Stroke (in)	Oil Capacity (in³)	Cylinder Effective Area	Collapsed Height (in)	Outside Dia. (in)	He ad Dia. (in)	Ship Weight
rtani 501	()	()	(in²)	Α	В	С	(lbs)
25 Ton Capacity							
UR-25S5	1.97	4.02	2.05	6.69	2.83	1.81	12
UR-25S10	3.94	8.05	2.05	9.06	2.83	1.81	16
30 Ton Capacity							
UR-30S5	1.97	4.88	2.46	6.69	3.35	1.96	18
50 Ton Capacity							
UR-50S5	1.97	7.81	4.10	7.48	3.94	2.44	25
UR-50S10	3.94	16.17	4.10	10.24	3.94	2.44	34
UR-50S20	7.87	32.34	4.10	14.96	3.94	2.44	49
75 Ton Capacity							
UR-75S5	1.97	11.77	5.96	7.87	4.41	2.95	34
100 Ton Capacity							
UR-100S5	1.97	15.38	7.79	7.87	5.00	3.35	38
UR-100S10	3.94	30.70	7.79	11.02	5.12	3.35	58
UR-100S20	7.87	61.63	7.79	16.54	5.12	3.35	90
150 Ton Capacity							
UR-150S5	1.97	24.00	12.17	9.06	6.30	4.13	72

Ultra High Pressure Double-Acting Cylinders **URD Series**

Capacity: 30 to 500 tons. Stroke: 1.97" - 7.87".

Max. Operating Pressure: 30,000 psi.



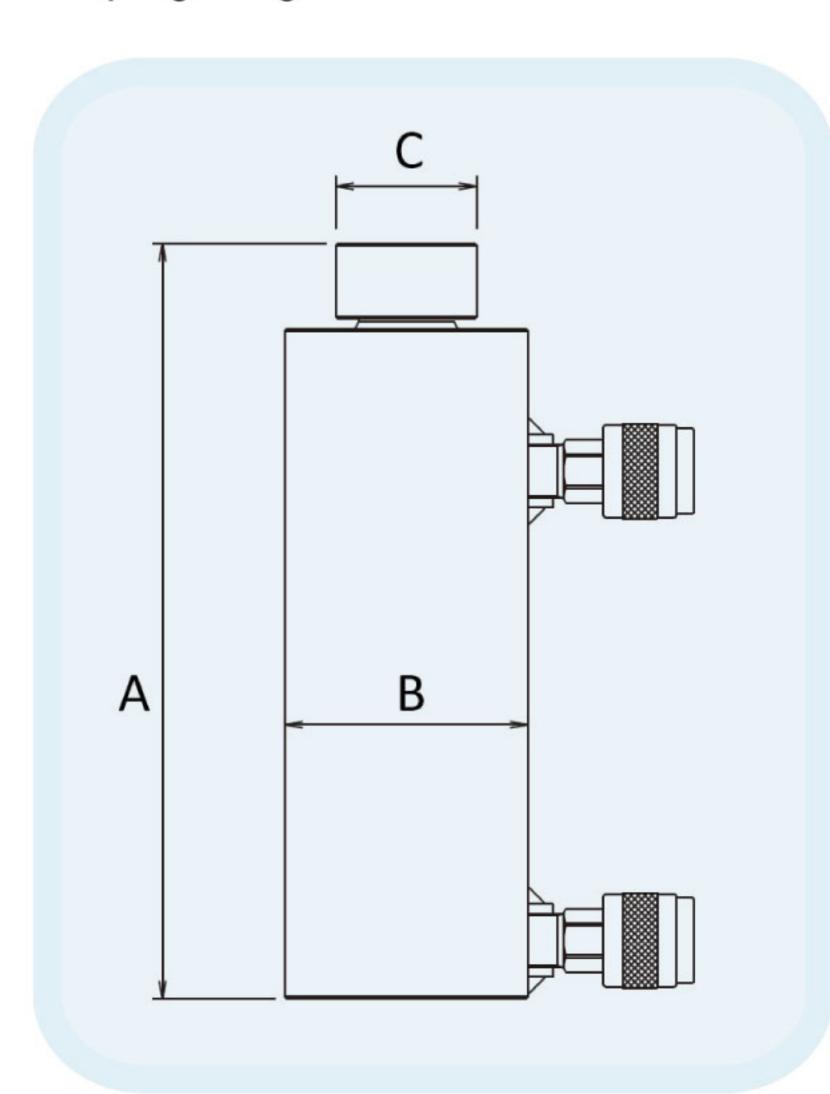
Order online at www.zinko.com

Usage

The ultra high pressure double-acting cylinders offer lighter weight and higher efficiency due to their higher operating pressures excellent replacement cylinders for tight spaces and in situations where weight is critical. These units can be found operating in nuclear power plants, diamond processing plants and shipyards around the world.

Features

- 1. Manufactured from extremely high strength lighweight alloy to endure high operating pressures while keeping weight to the bare minimum.
- 2. Hard chrome plated ram to endure harsh enviroments and extend cylinder useful life.
- 3. Designed with high lateral load tolerance of up to 50% of lifting capacity.
- 4. Double acting design increases controllability of cylinders allowing smooth operation of equipment.
- 5. Larger units are equipped with carrying handles to ease transport and placement of cylinders.



Model Number	Stroke (in)	Oil Capacity (in³)	Effective Area	Collapsed Height (in)	Outside Dia. (in)	He ad Dia. (in)	Ship Weight
			(in²)	Α	В	С	(lbs)
30 Ton Capacity							
URD-30H10	3.94	9.76	2.46	9.45	3.35	1.77	20
50 Ton Capacity							
URD-50H15	5.91	24.40	4.10	12.20	3.94	2.28	38
75 Ton Capacity							
URD-75H15	5.91	35.40	5.96	13.00	4.41	2.75	54
100 Ton Capacity							
URD-100H10	3.94	30.70	7.79	11.42	5.00	3.15	56
URD-100H15	5.91	46.02	7.79	13.39	5.00	3.15	62
150 Ton Capacity							
URD-150H10	3.94	48.00	12.17	12.60	6.30	3.94	98
URD-150H15	5.91	72.00	12.17	14.57	6.30	3.94	115
200 Ton Capacity	,						
URD-200H5	1.97	31.73	16.10	11.42	7.28	4.53	125
URD-200H10	3.94	63.46	16.10	13.39	7.28	4.53	147
URD-200H15	5.91	95.20	16.10	15.35	7.28	4.53	167
URD-200H20	7.87	128.15	16.10	17.32	7.28	4.53	190
250 Ton Capacity	•						
URD-250H20	7.87	162.32	20.57	17.52	8.27	5.12	235
300 Ton Capacity							
URD-300H20	7.87	187.95	23.86	18.11	8.86	5.51	280
500 Ton Capacity							
URD-500H20	7.87	311.22	39.44	21.26	11.42	6.70	540

Ultra High Pressure Low Profile Cylinders **URM Series**

Usage

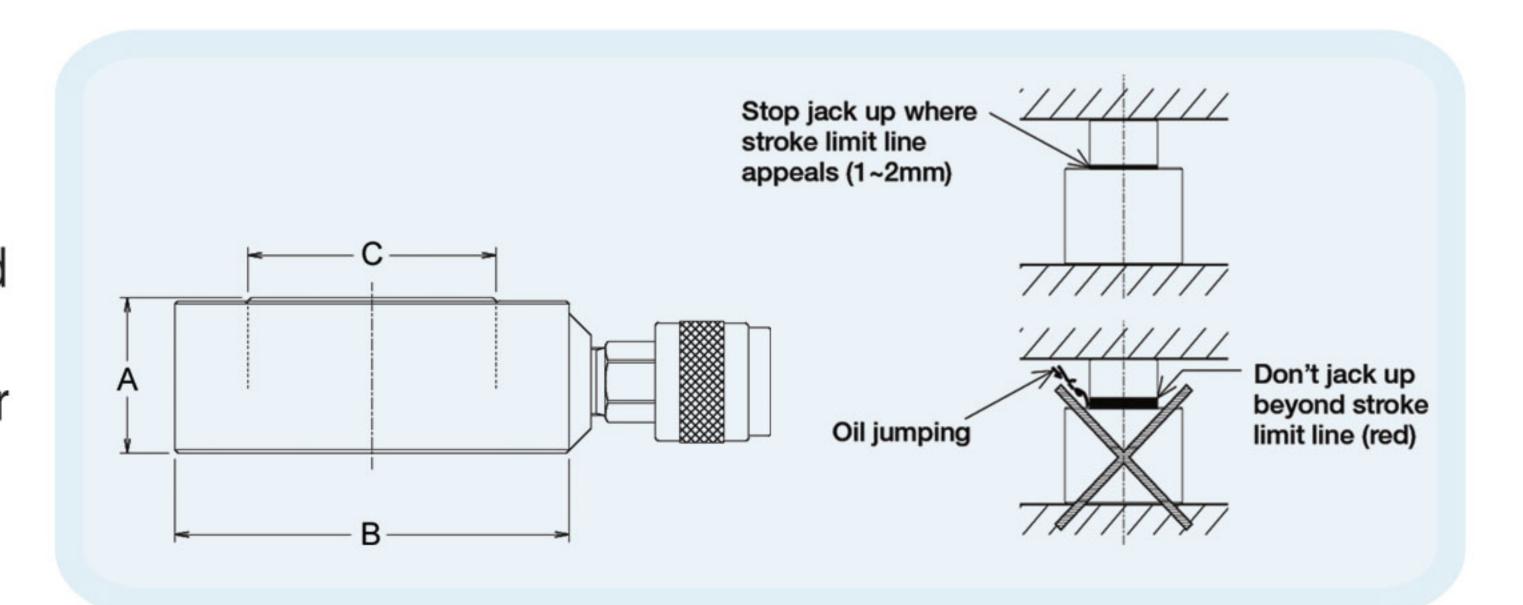


These ultra-high pressure low profile cylinders are perfect for any situation the requires a lightweight cylinder to fit where a lower pressure equivalent force unit cannot. The high pressure design allows the units to apply large amounts of force in tight places, perfect as a propeller positioning tool or for bearing press-in and extraction.

Model: URM-100G1

Features

- 1. Made from steel designed to withstand the high pressures exerted within the cylinder while keeping the units light and extremely durable.
- 2. A limit line on the piston informs the user when the cylinder has reached full stroke.
- 3. A full line of single acting (UR) and double acting (URD) cylinders are also available upon request.



Model Number	Capacity (Tons)	Stroke (in)	Oil Capacity (in³)	Cylinder Effective Area (in²)	Collapsed Height (in) A	Outside Dia. (in) B	Head Dia. (in) C	Ship Weight (lbs)
URM-75G1	75	0.40	2.38	5.96	1.97	4.41	2.75	10
URM-100G1	100	0.40	3.11	7.79	1.97	5.00	3.15	13
URM-150G1	150	0.40	4.82	12.17	2.17	6.30	3.93	20
URM-200G1	200	0.40	6.35	16.10	2.36	7.28	4.53	29

Ultra High Pressure Hand Pumps

Model: UHP-42

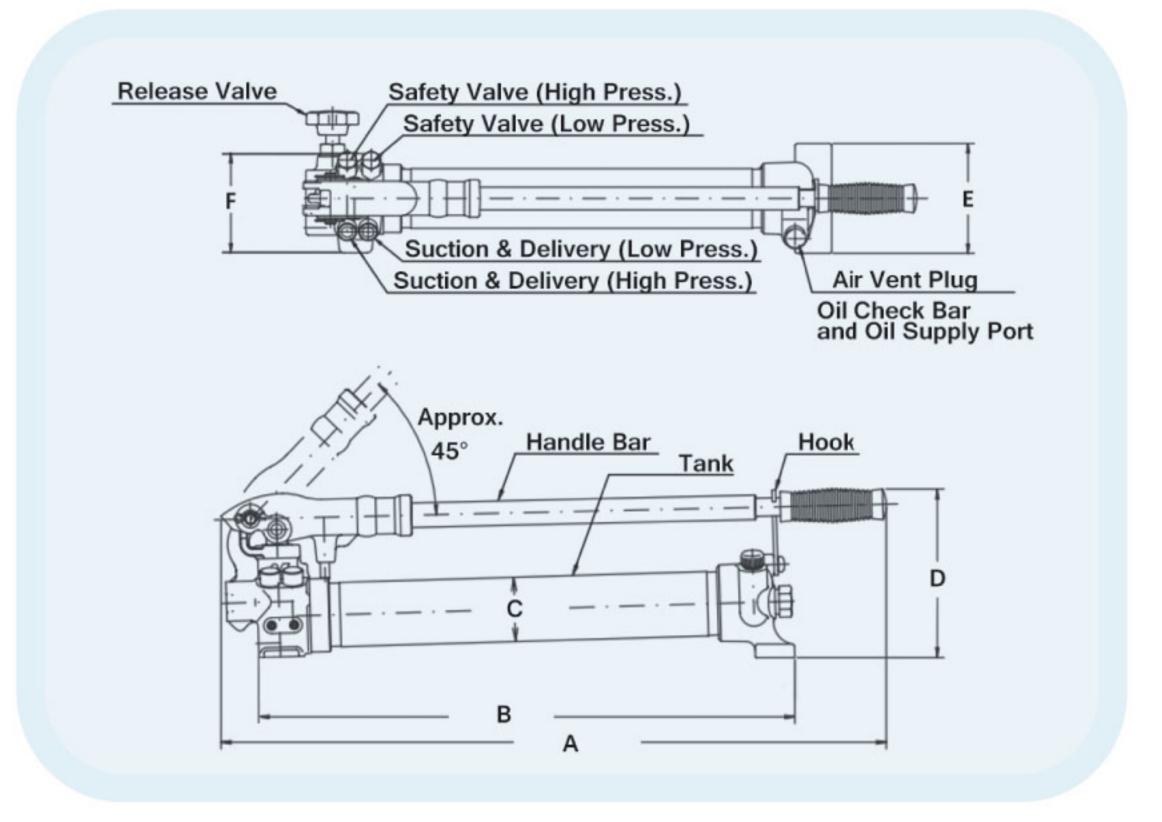
UHP Series

The UHP hand pumps are designed to be used with any URM low profile cylinders, or UR type spring return single acting cylinders. Can be used with any application that requires the ability to provide oil pressures of up to 30,000 psi. Available with various control valves and pressure switches to properly control the pump.

Features

- 1. Pumps provide working pressures of up to 30,000 psi.
- 2. Two stage operation provides higher flow rate at lower pressures.
- 3. Lightweight design, and pump handle locks for easy transport to the work site.
- 4. The durable steel body resists harsh operating conditions.





Model Number	Usable Oil Capacity (in³)		ure Rating psi)	Flow Rate Per Stroke (in³)			Ship Weight					
	(III's)	Low	High	Low	High	Α	В	С	D	Е	F	(lbs)
UHP-42	42	435	30,000	0.67	0.03	23.23	18.70	Ø 2.24	5.90	4.13	3.74	20
UHP-80	80	435	30,000	0.67	0.06	27.95	23.62	Ø 2.67	8.27	5.12	6.30	25
UHP-110U	110	435	43,500	0.67	0.06	34.25	29.92	Ø 2.67	5.90	4.13	3.74	32
UHP-140	140	435	30,000	1.89	0.09	35.43	26.57	Ø 3.25	8.27	5.12	6.30	33

Stainless Steel Single-Acting Cylinders **ZR-S Series**

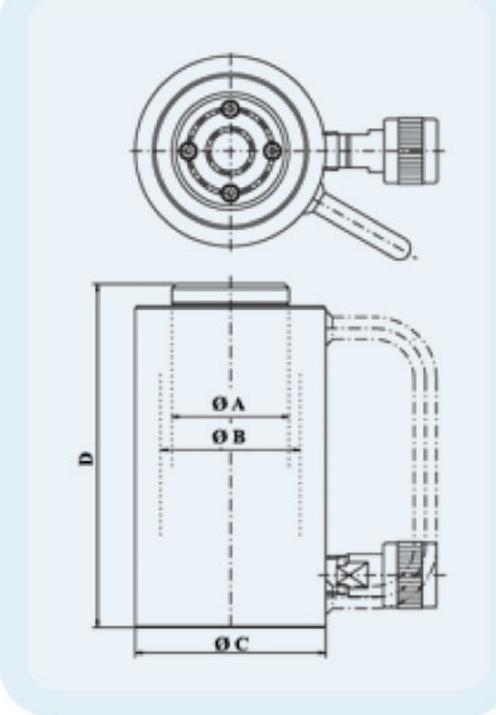
Usage

These stainless steel cylinders operate with water pressure rather than hydraulic fluid and are a perfect fit for any application that connot support the accidental leakage of hydraulic fluid. Excellent choice for cleanrooms, shipbuilding, and medical applications.

Features

- 1. Cylinders utilize water as the operational fluid.
- 2. Lightweight and compact design based on durable stainless steel material.
- 3. There are no flamable materials used in the operation of these cylinders.
- 4. There is no risk of contamination of the environment that these cylinders are used in.





Model Number	Capacity (Tons)	Stroke (in)	Water Capacity (in³)	Cylinder Effective Area (in²)	Rod Dia. (in)	Bore Dia. (in)	Outside Dia. (in)	Closed Ht. (in)	Ship Weight (lbs)
			(333)		Α	В	С	D	
ZR-102S	10	1.96	4.45	2.25	1.50	2.36	5.59	5.59	7
ZR-104S	10	3.93	8.91	2.25	1.50	2.36	7.76	7.76	9
ZR-222S	22	1.96	9.52	4.83	2.09	3.39	6.10	6.10	15
ZR-224S	22	3.93	19.04	4.83	2.09	3.39	8.27	8.27	20
ZR-502S	50	1.96	21.66	11.00	3.35	5.12	6.89	6.89	40

Stainless Steel Double-Acting Hand Pump **WHP-42**

Capacity: 42 in³ water capacity.

Usage

This stainless steel pump is the perfect complement to Zinko's Stainless Steel Cylinders. The pump contains 42 in³ of water and provides up to 10,000 psi of working pressure. It can also be utilized as a water pressure testing pump.

Features

- 1. The pump body is made from forged stainless steel material.
- 2. Extremely durable material and design provides excellent service life.
- 3. Two speed design reduces handle strokes and operator fatigue.







Release Valve Safety Valve (High Press.) Safety Valve (Low Press.) 3.74" Suction & Delivery (Low Press.) Suction & Delivery (High Press.) Air Vent Plug Water Check Bar and Water Supply Port
Approx. 45° Handle Bar Tank 5.9" 18.7" 23.23"

Model Number	I Speed I Capacity		33	e Rating si)		acement troke 1 ³)	Max. Handle Effort (lbs)	Ship Weight (lbs)	
		(1117)	1 st Stage	2 nd Stage	1 st Stage	2 nd Stage	(IDS)	(IDS)	
WHP-42	2	42	145	10,000	0.67	0.12	71.5	37	

ZHP Series

Max. Operates: Capable up to 10,000 psi (70 Mpa). Flow At Rated Pressure: 0.08 - 7.69 cubic inches/stroke.

Reservoir Capacity: 18 to 453 cubic inches.



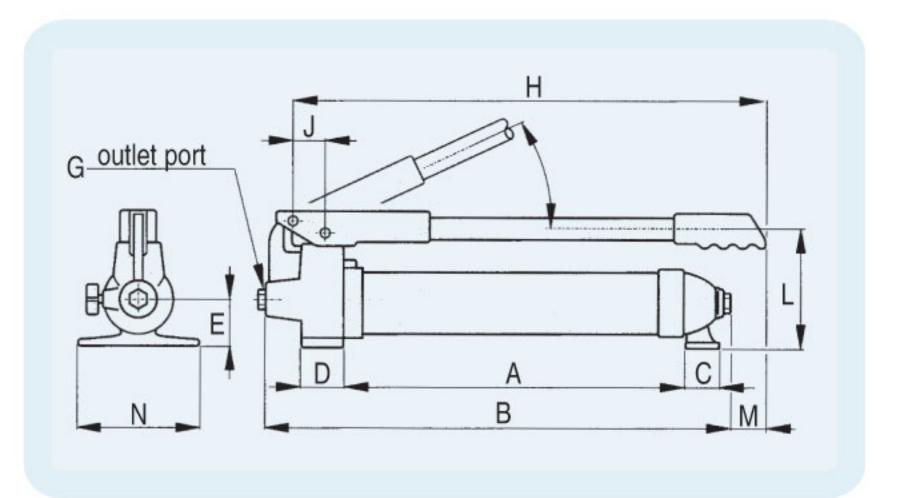
Industrial Grade Hand Pumps

- 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
- 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 (Refer to page 30 for accessories).
- 9. Pump, cylinder, and pressure gauge can be assembled as a set to fit any special application (Fig.10). (Refer to page 27 for order options).
- 10. All steel body for durability and long life. 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.



Automotive Grade Hand Pumps

- 1. Threaded cast iron pump head with steel reservoir and all-metal construction for durability.
- 2. Comes with 1/4" NPTF 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		e Rating si)		acement oke (in³)
Mullibel		(in³)	1 st Stage	2 nd Stage	1 st Stage	2 nd Stage
Aluminum I	Hand Pul	mp				
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
Industrial G	rade Hai	nd 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 I	Hand Pul	mp				
ZHP-462	2	453	200	10,000	7.69	0.29
ZHP-464	2	453	200	10,000	7.69	0.29
Automotive	Applica	tion Hand P	ump			
ZHP-18	1	18	N/A	10,000	N/A	0.19
ZHP-28	1	30	N/A	10,000	N/A	0.19

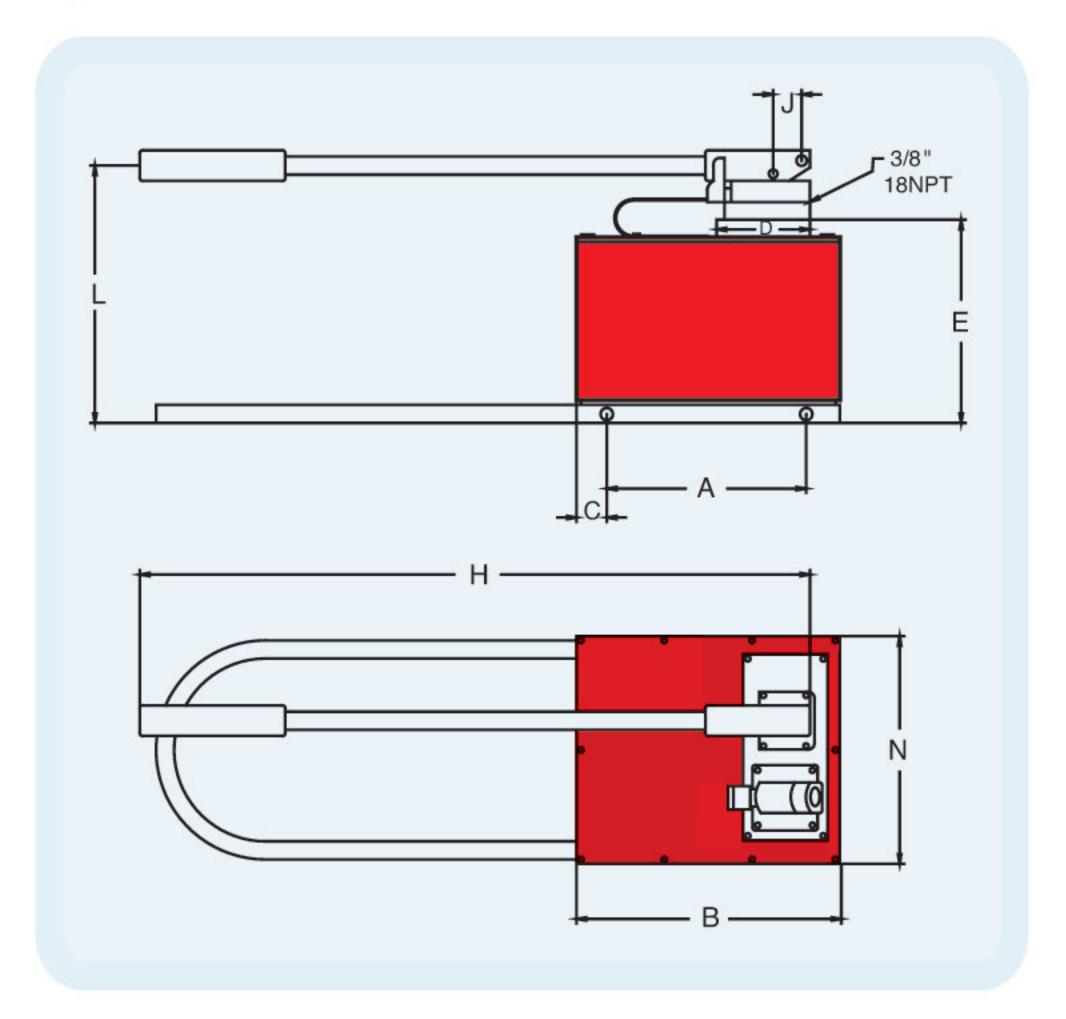
"A" for lightweight alloy construction.

Aluminum Hand Pumps

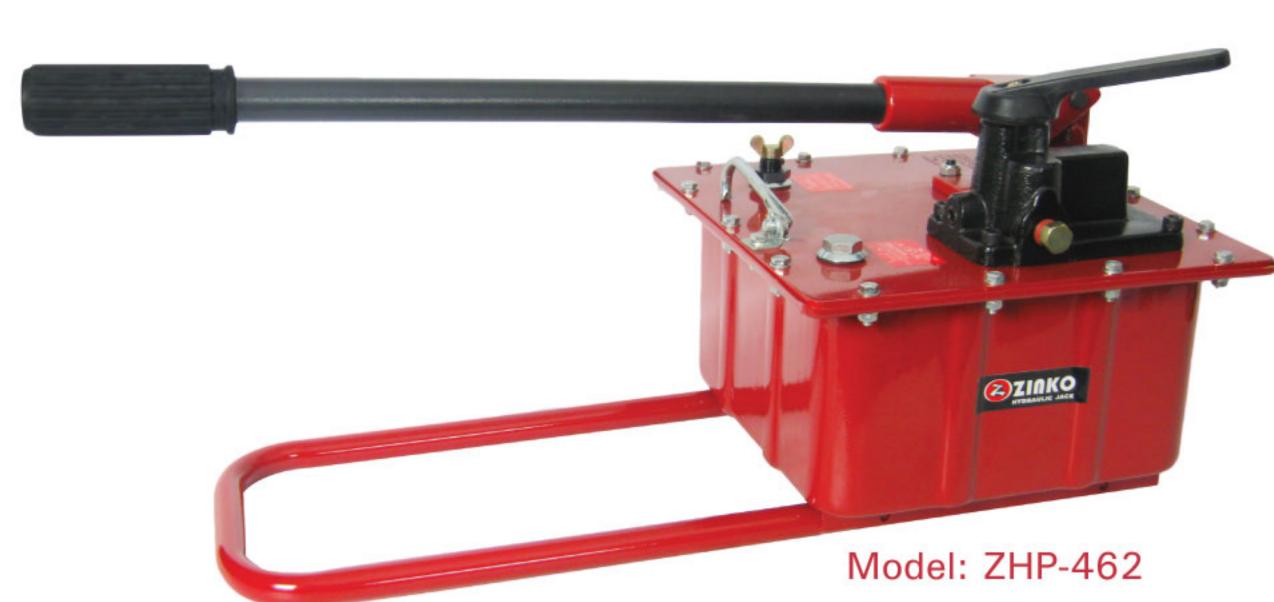
- 1. The strongest aluminum alloys are used and heat treated to provide the maximum combination of strength and fracture resistance.
- 2. Super lightweight aluminum reservoir for portability.
- 3. The best choice for applications where composite reservoirs may not be suitable.
- 4. Large oil capacity to power a wide range of cylinders.
- 5. 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.



High Flow Hand Pumps



These two-speed high flow hand pumps provide large oil capacity to power a large range of cylinders. The pumps also come with a lightweight aluminum reservoir for portability and provide internal pressure relief valve for overload protection.



Max Handle	Piston Stroke					D	imensions (i	n)					Ship Weight
Effort (lbs)	(in)	Α	В	С	D	E	G	Н	J	L	M	N	(lbs)
Aluminum H	land Pump	כ											
100	1.00	9.76	13.11	1.85	1.61	1.48	3/8" NPT	12.13	0.95	5.63		4.04	9
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	13
93	1.00	19.80	23.14	1.85	1.61	1.48	3/8" NPT	22.17	0.95	6.42		4.04	14
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	18
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
Industrial Gr	ade 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	12
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	14
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	15
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	17
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	19
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	21
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	27
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	31
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	32
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	33
High Flow H	land Pump	י											
110	1.50	6.42	12.63	3.13		7.68	3/8" NPT	26.44	0.98	10.63	3.63	12.13	70
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	70
Automotive	Application	on 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	14
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	16

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

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).



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.11), these pumps can easily connect and work with 2 to 4 cylinders.

ZAP-101

- 1. This model beats the leading competitors in oil flow delivery by as much as 2 to 1, doing more work in less time.
- 2. Two stage release mechanism for fast ram return while reducing hydraulic shock.
- 3. Operates easily by hand or foot.
- 4. Shipped with shipping screw for leak protection, switch to air vent before use to increase performance (Fig.12).
- 5. Standard size comes with heavy-duty anodized aluminum reservoir. Aluminum reservoir with see through window (Fig.13), or plastic reservoir (Fig.14) will be available upon request. These reservoirs are interchangeable.

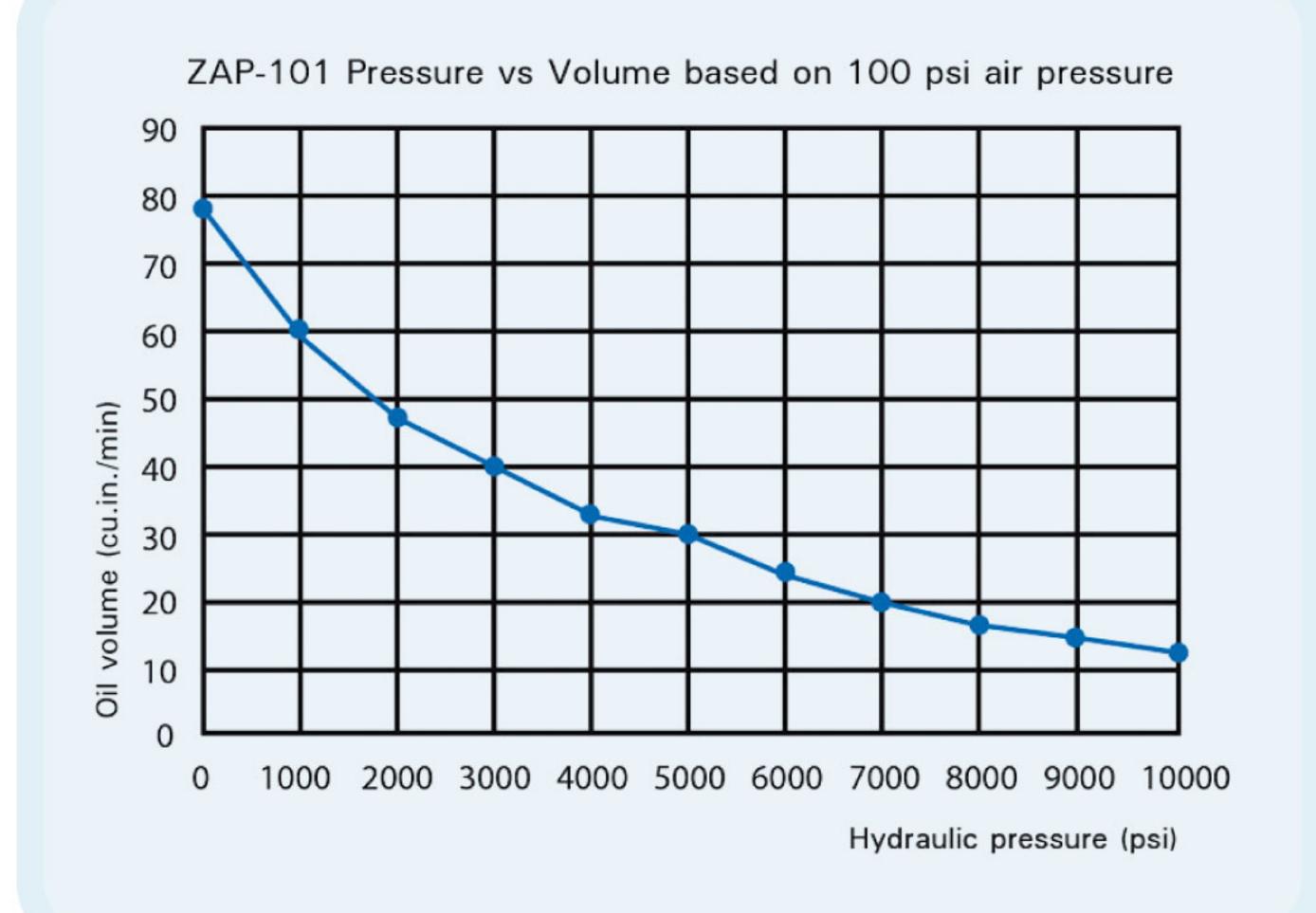






Fig.12







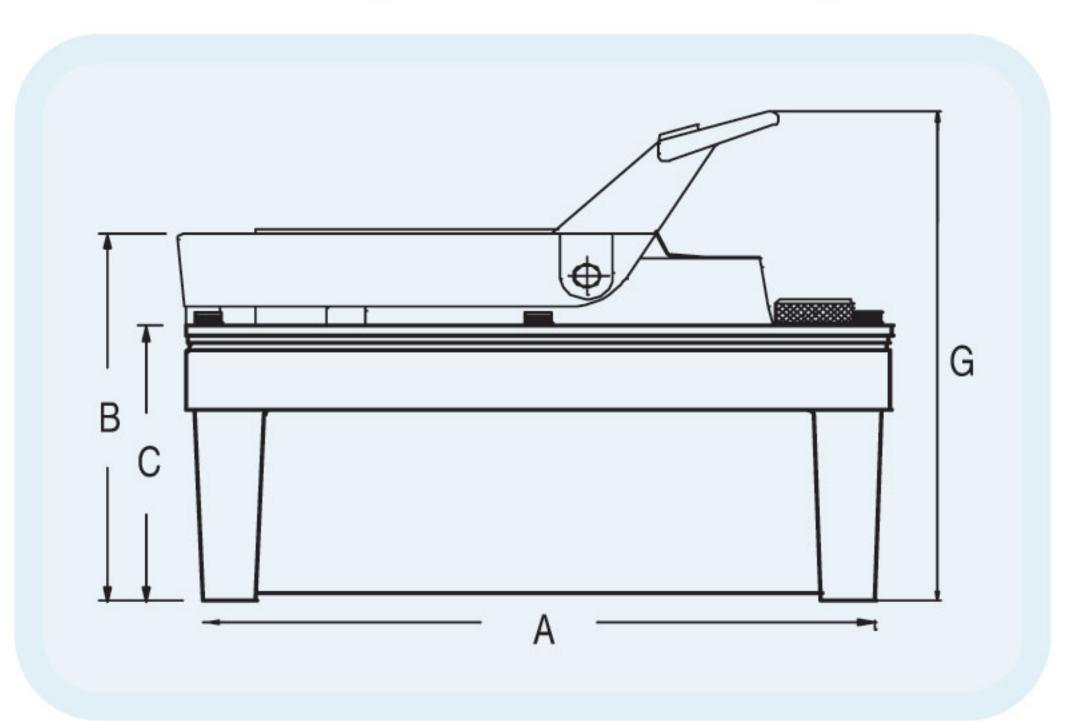
Fig.11

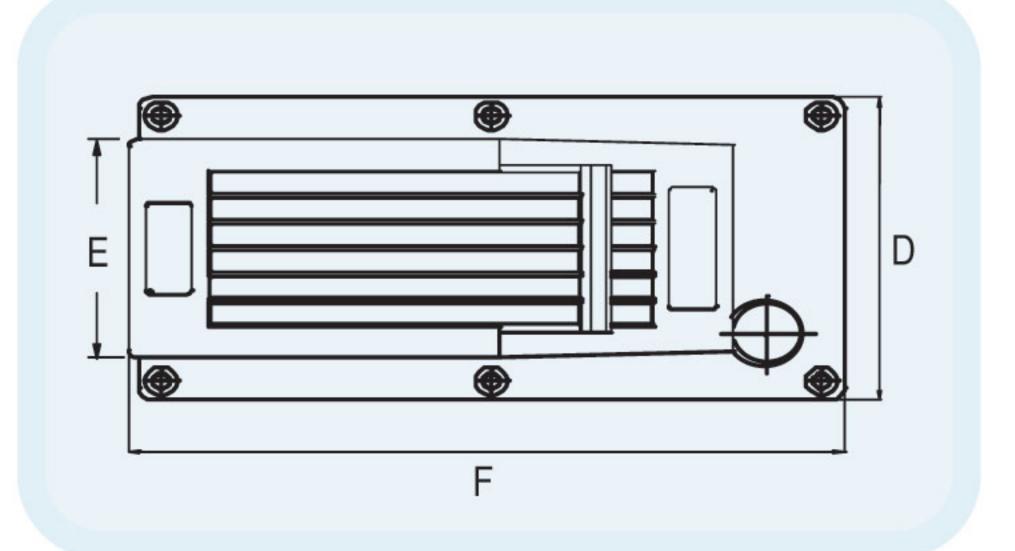
In order to provide lightweight and oil consumption mobility, our plastic reservoir comes in three interchangeable sizes. Each comes in one kit which includes the reservoir along with all necessary

components to convert these pumps to your desired application.

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

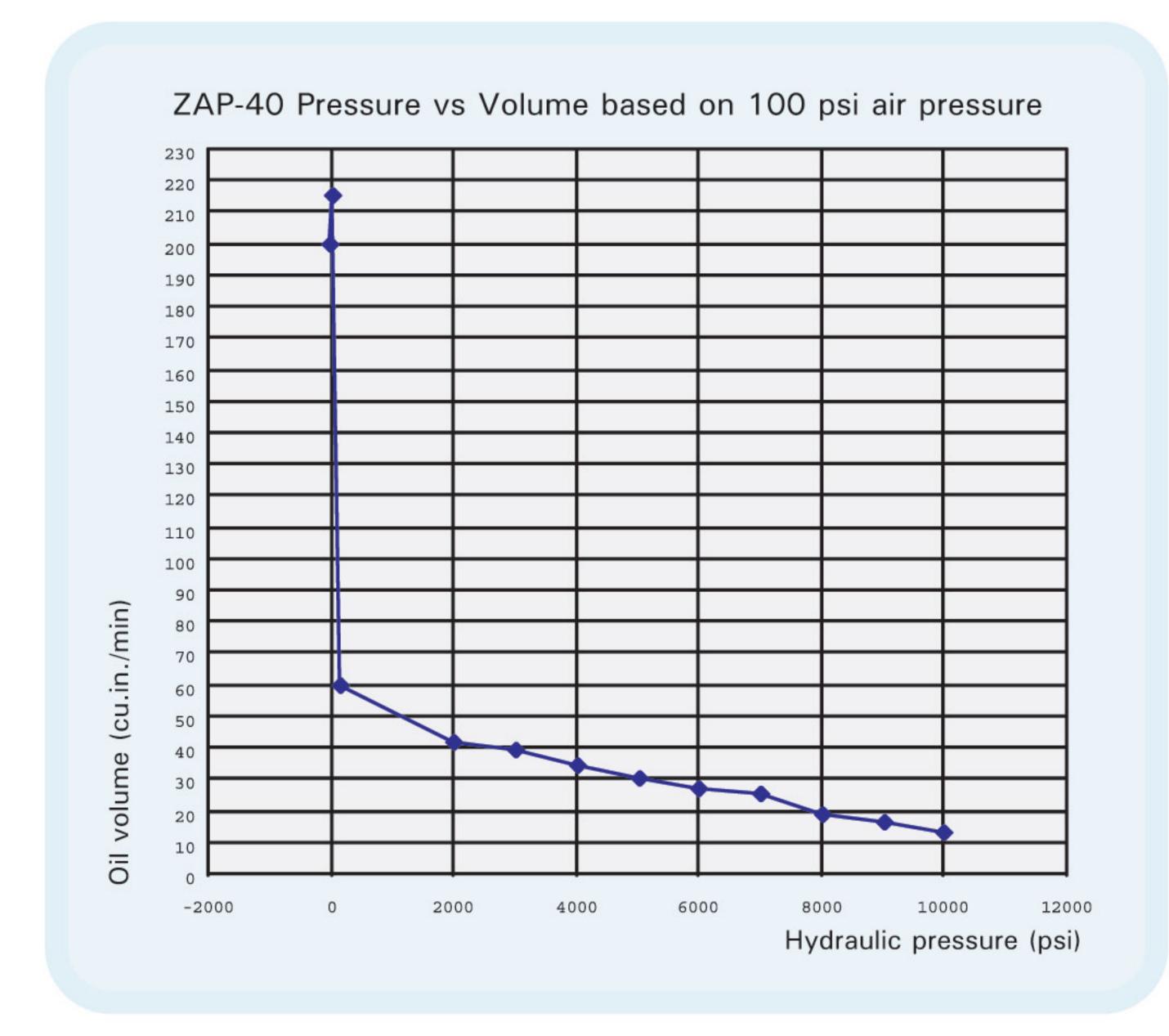
Top mounting plate, reservoir, bolts, and fittings.





Usage

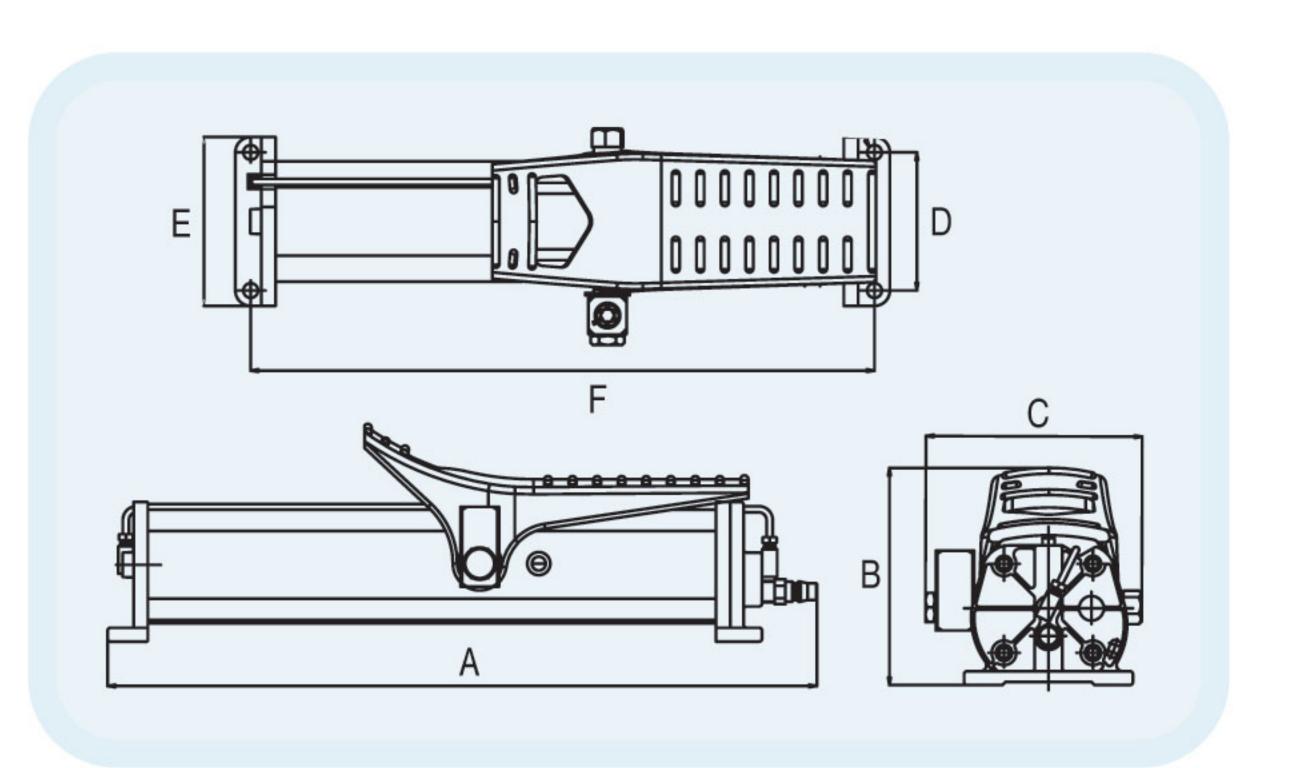
The ZAP-40 is used for tools and smaller cylinders and the model that we recommend to be used with ZHC Toe jack with air port.





ZAP-40

- 1. Exclusive "air-thrust" design rapidly takes up slack, putting the cylinder rod or tool in work position within seconds.
- 2. Convenient 360° 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.



Madal	Oil	Pressure	Output	Flow	Air Press.				Oil Port	Ship				
Model Number	Capacity	Rating	Rate (in	³/m in.)	Range	Α	В		c D	Е	F	G	(in)	Weight
Hamber	(in³)	(psi)	No Load	Load	(psi)	D)	ם	_)	(111)	(lbs)	
ZAP-40	37	10000	215	12	40 - 140	18.14	5.51	5.70	3.54	4.33	15.98	I	3/8" NPT	15
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	18
ZAP-101P	98	10000	77	13	40 - 140	8.05	6.04	4.53	9.53	9.36	4.36	3.56	3/8" NPT	17
ZAP-102	183	10000	77	13	40 - 140	8.30	6.29	4.78	12.00	12.00	5.63	3.87	3/8" NPT	24
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	36
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	35

Foot Pumps Model: ZHP-30FPA

Oil Usage: 30 in³.

This 30 in³ foot pedal pump with 3/8" NPT threads is designed for use in shop, agricultural, automotive/truck service, and construction maintenance. Foot operation reduces operator fatigue that is associated with manual

hand pumps.

Usage

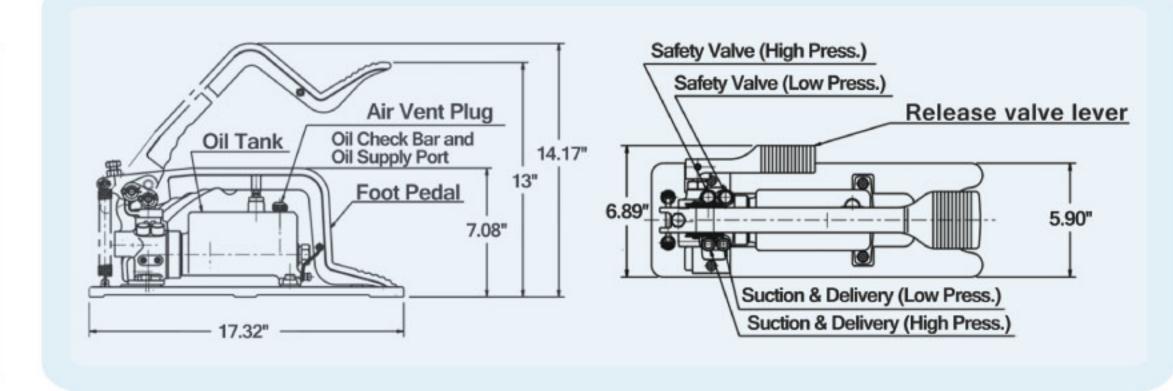
Model: ZHP-30FPA

Order online at www.zinko.com

Features

- 1. Two-speed hydraulic foot pump provides rapid cylinder advance at low pressure and automatically switch to second stage when load is applied to reduce cycle times and operator effort.
- 2. Foot pump handle locks into down position when not in use for easy transportation.
- 3. Completely foot operated, separate foot operated release mechanism allow contoled pressure release.
- 4. Separate drain and fill plugs allow easy hydraulic oil change.

Model Number	Speed	Capacity (Tons)	Pressure Rating (psi)		Per S	acement troke n³)	Ship Weight (lbs)
			1 st Stage	2 nd Stage	1 st Stage	2 nd Stage	(IDS)
ZHP-30FPA	2	30	145	10442	0.67	0.12	21



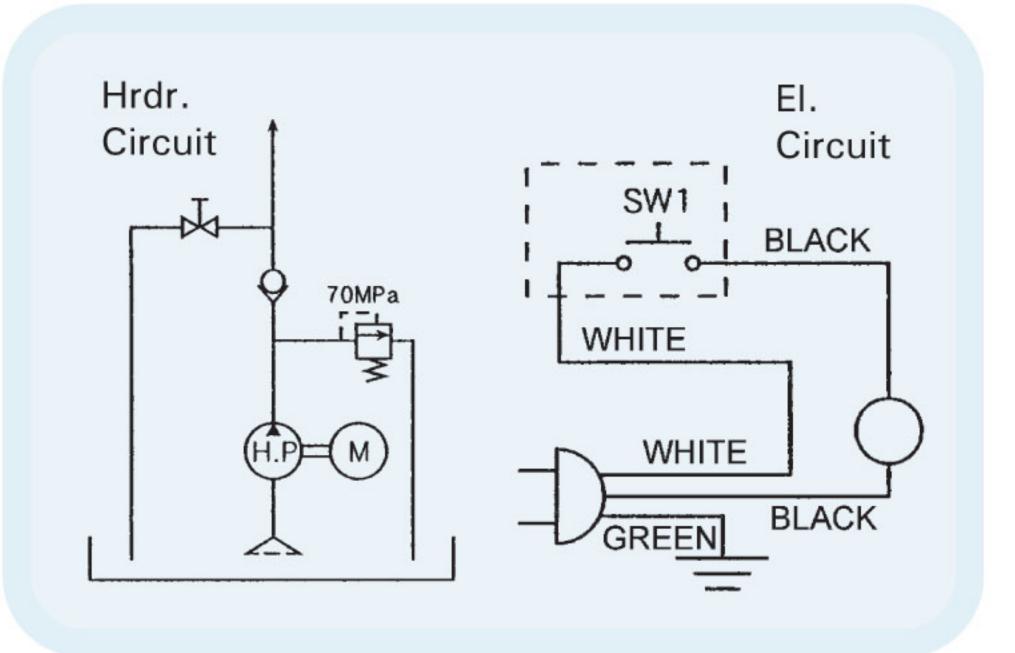
ZPE-35 Series

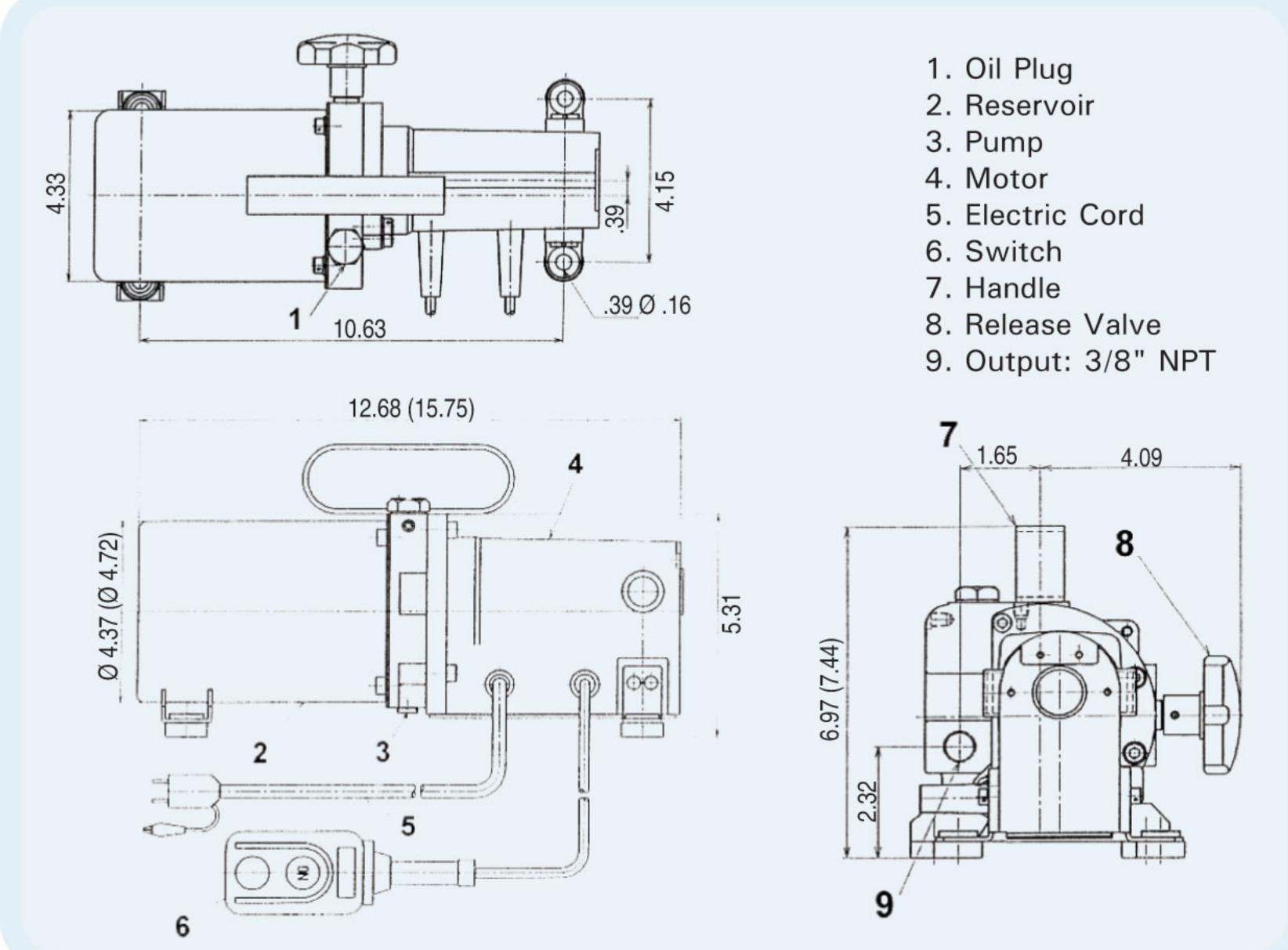
Max. Operates: Capable up to 10,000 psi (70 Mpa).

Power by: 1/3HP, 2000 rpm commutator motor.

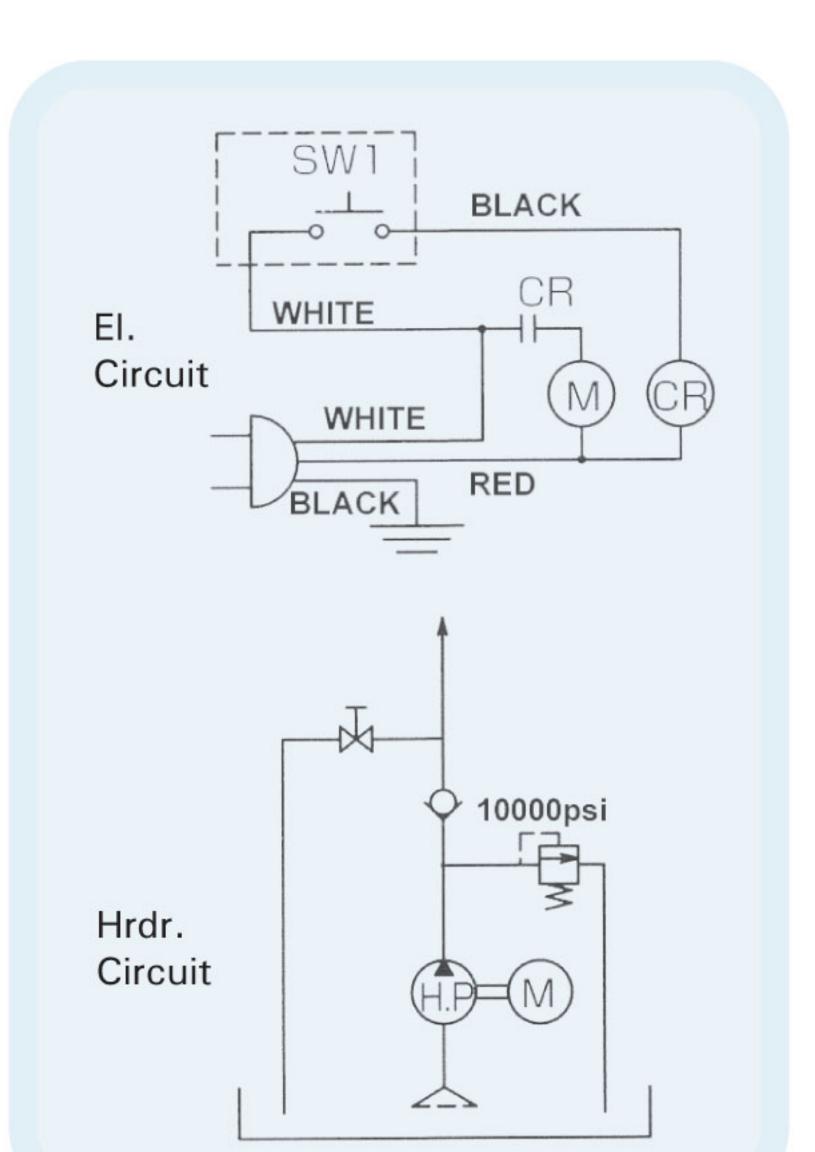


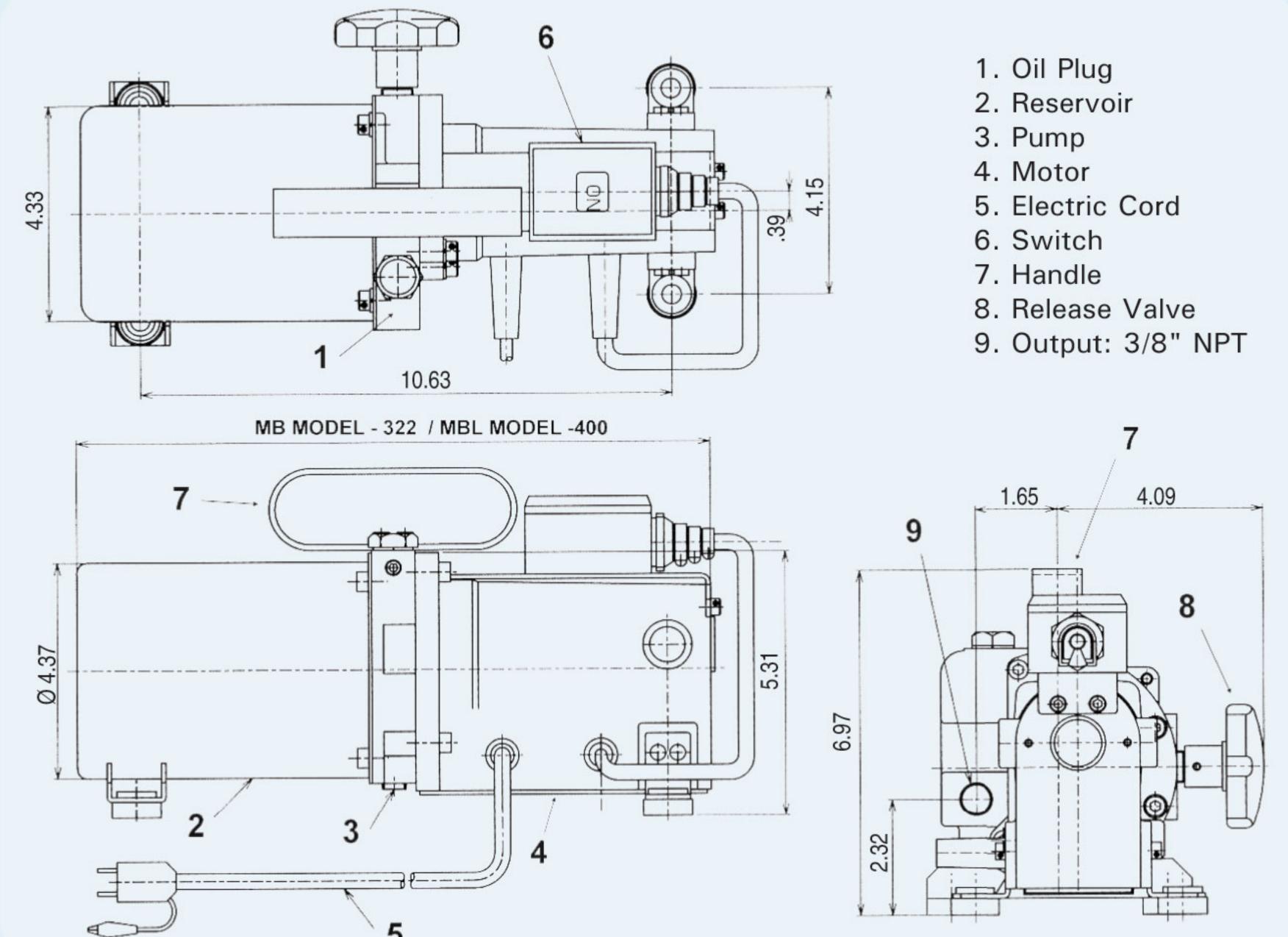
- 1. All models come equipped with either a convenient easy carrying handle or a shoulder strap.
- 2. Except for model ZPE-35RH-1 MB and ZPE-35RH-1 MBL which are designed with the control switch attached to pumps, all models have remote pendant switches.
- 3. Super lightweight and compact for portability. 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 operable 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 29 for details.



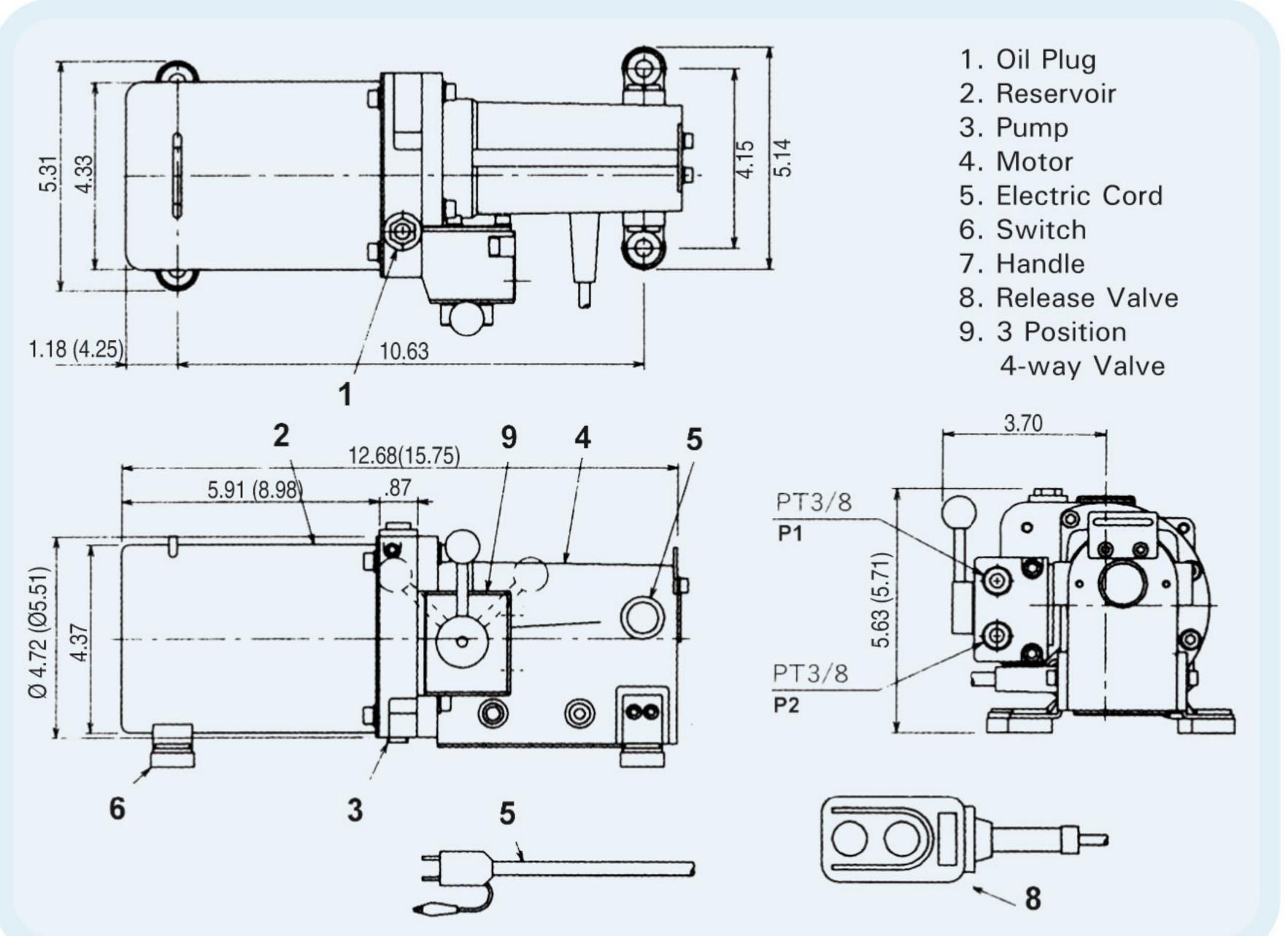








The 4M & 4ML models are specially designed to work with a double acting cylinder. The 4-way, 3 position valve has "advance", "hold", and "return" positions. Cylinder ports are locked in "hold" position, and pump flow is directed back to the reservoir.





		Motor (50/60Hz)				Perfor	Rese	Reservoir Oil Usable Capacity (in³) 61 49 120 98 61 49		
Model			0-11	5	Max. Pre	ss (psi)	Output (in³/m in.)		Oil	Usable Capacity (in³) 49 98
Number	Type	AC (V)	Output (HP)	Revolution (rpm)	2 nd Stage 1 st Stage 2 nd Stage	1 st Stage	Capacity			
			(1111)	(i piii)	High	Low	High	Low	(in³)	(in³)
ZPE-35RH-1M	E	110	1/3	2,000	10,000	145	18	37	61	49
ZPE-35RH-1ML	Е	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	Е	110	1/3	2,000	10,000	145	18	37	120	98

ZPE-35RH Portable Electric Pump Order Options

For Use		Reservoir		Valve	Ship				
With	Model No. ZPE	Cap. (in³)	Туре	Function	Weight (lbs)				
	ZPE-35RH-1M	60	2 Way Manual	Remote pendant switch provided.	18				
	ZPE-35RH-1ML	120	Standard	When pump "ON", close valve to hold load, open valve to return.	24				
	ZPE-35RH-1MB	60	2 Way Manual Switch attached to pump.						
	ZPE-35RH-1MBL	120	Standard	Standard When pump "ON", close valve to hold load, open valve to return.					
	* ZPE-35RH-NC	60	Normally Closed	Pressure hold type.	20				
	* ZPE-35RH-NCL	120	2 Way Manual	Valve remains close during operation.	27				
	* ZPE-35RH-NC-D12	60	Solenoid	To be operated by 12V Battery.	20				
Single Acting	* ZPE-35RH-NC-D24	60	Soleriola	To be operated by 24V Battery.	27				
Cylinder	* ZPE-35RH-NO	60		Auto return type.	20				
	ZI L-331XI I-IVO		Normally Open 2 Way Manual	Valve remains open during operation.					
	* ZPE-35RH-NOL	120	Solenoid	With optional pressure switch cylinder can be stopped at set	27				
	ZI L-JJINIT-NOL	120		pressure and return automatically.	21				
	* ZPE-35RH-IN	60		Pressure hold type.	18				
	* ZPE-35RH-INL	120	2 Way Manual	Cylinder can be stopped on both advance & return positions.	24				
	* ZPE-35RH-IN-D12	60	Solenoid	To be operated by 12V Battery.	20				
	* ZPE-35RH-IN-D24	60		To be operated by 24V Battery.	27				
Double Acting	ZPE-35RH-4M	60	4 Way, 3 Position	Switch control pump "ON" and release for "OFF".	17				
Cylinder	* ZPE-35RH-4ML	120	Manual Solenoid	4 different designed valves available for varies applications.	18				

^{*} Available upon request.

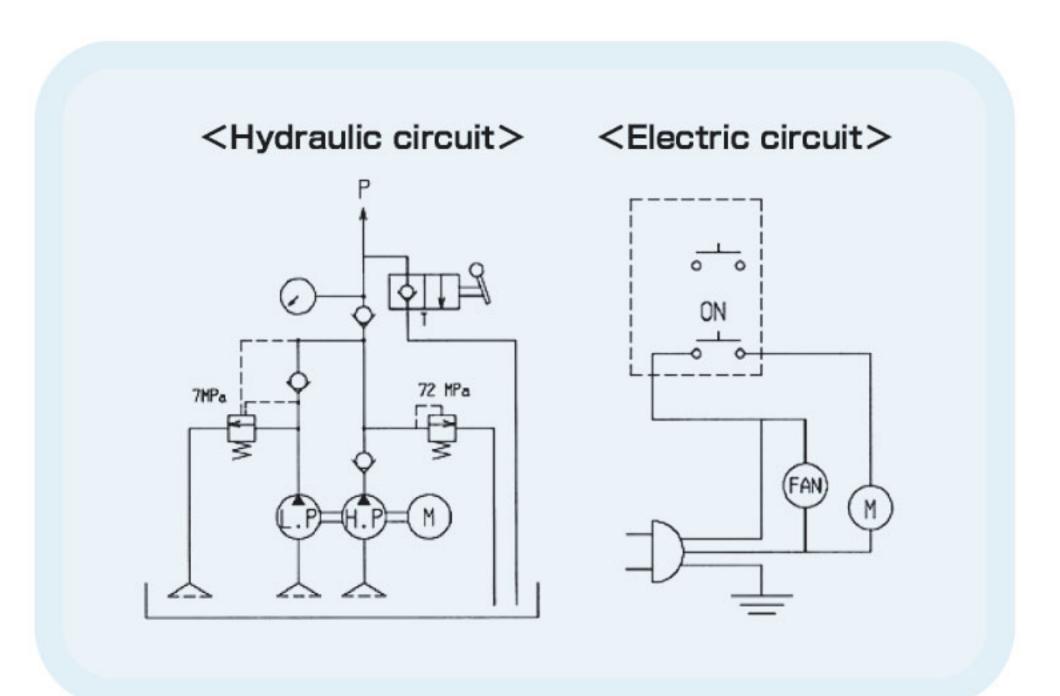
ZPE-65 Series

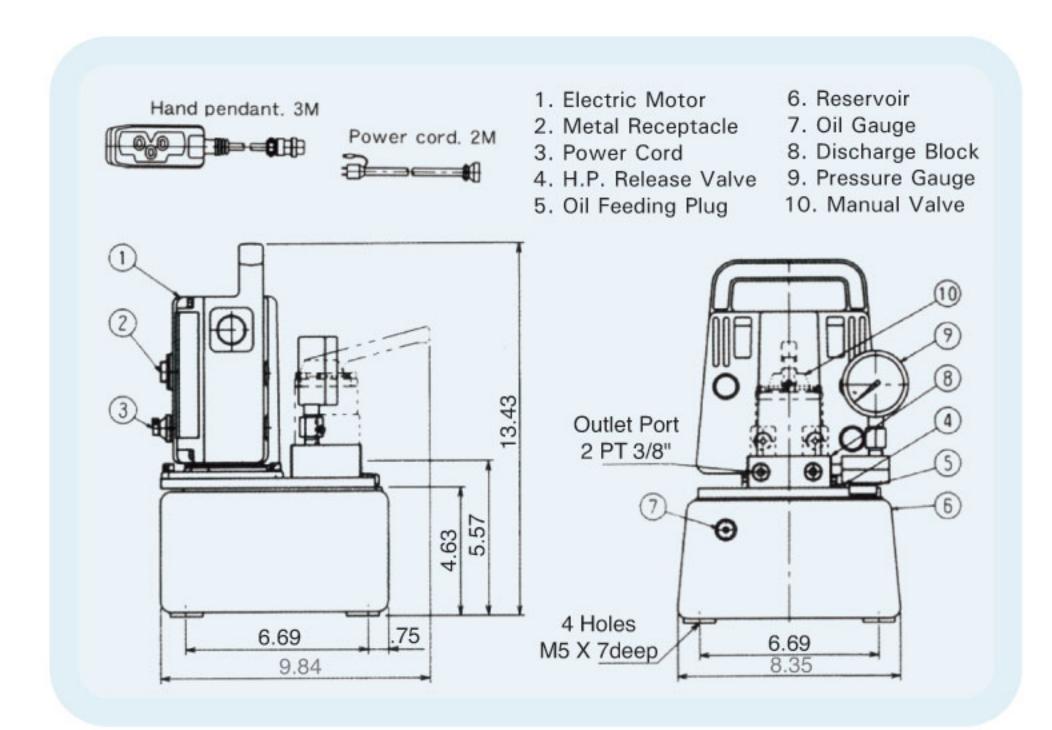
Max. Operates: Capable up to 10,000 psi (700 bar). Power by: 0.87 HP single-phase commutator, insulation "E" type motor.



Features

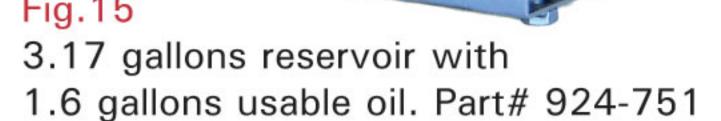
- 1. These pumps feature a special 2-stage operation that provides a high flow rate of 153 cu. in. at first stage and up to 1015 psi by means of unloading valves. Automatically matches pump performance to the job requirements.
- 2. Standard size comes with 3-way manual valve for use with single-acting 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 40-50 lbs. Pump comes with easy carrying handle and remote pendant switches.
- 5. Choose from models with options that include adjustable pressure regulator, pressure switch, and valves. Solenoid valve pumps combine maximum productivity and easy use. The ideal choice for production, lifting, and maintenance applications.
- 6. Standard size comes with 0.8 gallons reservoir, and has 0.53 gallons usable oil. Larger size reservoir also available upon request.





		Motor	(50/60H	z)		Perfori	mance		Rese	rvoir
Model			044	Davidian	Max. Pres	sure (psi)	Output (i	in³/m in.)	Oil	Usable
Number	Туре	AC (V)	(HP)	Revolution (rpm)	2nd Stage	1st Stage	2nd Stage	1st Stage	Capacity	Capacity
			(111)	(i piii)	High	Low	High	Low	(gal)	(gal)
ZPE-65SVG	E	110 / 220	0.87	2,000	10,000	1,015	26	244	0.80	0.53
ZPE-73HS	Ε	220	1	2,000	10,000	1015	27.5	244	3.17	1.6

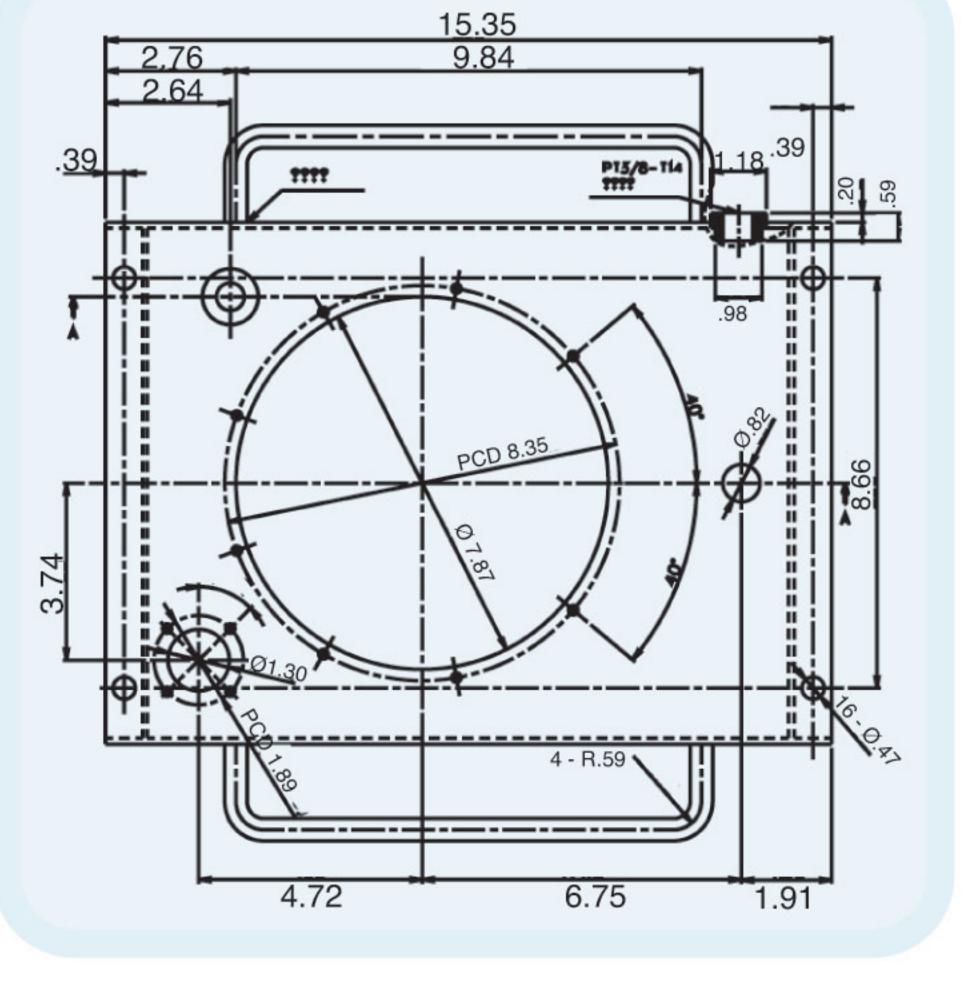






6.34 gallons reservoir with 4.49 gallons usable oil. Part# 924-752

Standard ZPE-75 models come with 3.17 gallons reservoir; it has 1.6 gallons usable oil (Fig.15). The best performance pumps for mid-range cylinders and tools. If pumps are used with several cylinders the extra-large 6.34 gallons reservoirs (Fig.16) are suggested, to provide 4.49 gallons of usable oil to permit full strokes for multiple cylinders.



ZPE-73 Series

Max. Operates: Capable up to 10,000 psi (700 bar). Power by: 1HP, triple-phase commutator,

insulation "E" type motor.

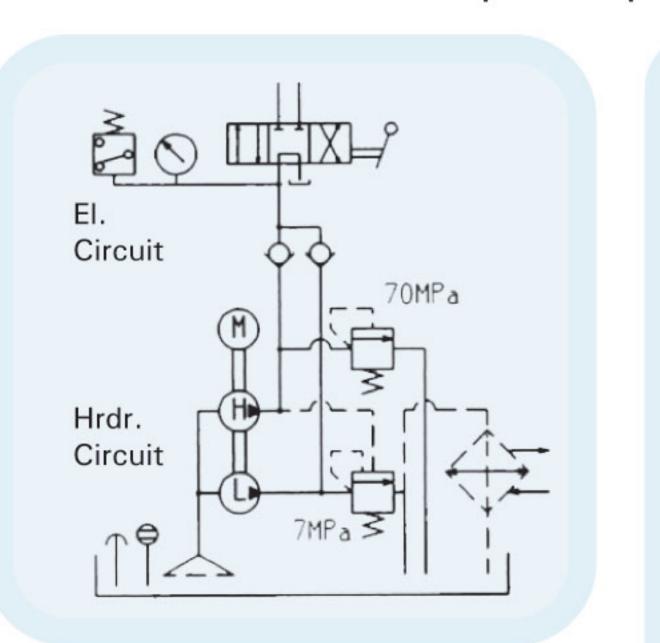


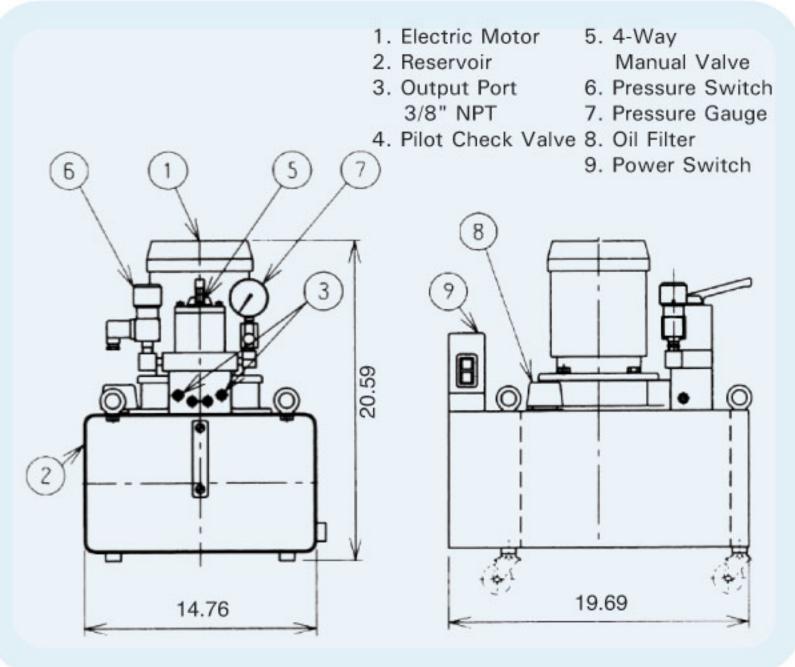
Model: ZPE-73HS-7



Features

- 1. The 73 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.





ZPE65 & ZPE-73 Portable Electric Pump Order Options

For Use	Model		Valve	Ship		
With	Number	Type	Function	Weight (lbs)		
	* ZPE-73HS-0	Basic, w/o valve	With P.T. manifold, without any valves. For applications where directional control valves are remote mounted away from the pump.	150		
	ZPE-73HS-1	3 Way manual standard.	A single acting ram is actuated by 3-w ay manual valve. Advance/Hold/Retract.			
	ZPE-65SVG-1	3 Way, 2 Position Manual	Pump is operated with single button. 3 Way valve offers Advance/Hold/Retract.	40		
Single Acting	* ZPE-65SV G-3	Manual Needle Valve	Pump is operated with single button. Needle valve offers Advance/Hold Retract. Retract speed is controlled with the needle valve.			
Cylinder	* ZPE-65SV G-2	2 Way Solenoid Normally	"Advance" w ith button depressed. Auto retract w hen button is released.	44		
	* ZPE-73HS-2	Open	"Advance" w ith ON sw itch and motor running. "Retract" w ith OFF sw itch. Advance/Auto Retract.	160		
	ZPE-65SVG-4	2 Way Solenoid Normally	"Advance" w ith top button. "Hold" w hen no buttons depressed. "Retract" w hen bottom button is depressed.	42		
	* ZPE-73HS-4	Closed	"Advance" w ith ON sw itch and motor running. "Hold" w hen motor stops and sw itch is released. "Retract" w ith OFF sw itch. Advance/Hold/Retract.	160		
	ZPE-65SVG-7	4 Way, 3 Position Manual	Pump is operated with single button. 4 Way valve offers Advance/Hold/Retracts.	38		
	ZPE-73HS-7	Valve	A double-acting ram is actuated by 4-w ay manual valve. Advance/Hold/Retract.	152		
	* ZPE-65SVG-8SP * ZPE-65SVG-8WP	4 Way, 3 Position Solenoid Valve	"Advance" with top button. "Retract" with bottom button. Hold function when no buttons depressedSP hold on "A" port only -WP hold on "A" and "B" port.	45		
Double Acting Cylinder	* ZPE-73HS-8SP * ZPE-73HS-8WP	Pilot operated check valve(s)	Advance "A" port Hold/Retract with stacking type pilot-operated check valve fitted on "A" port line. ZPE-45SVG-8WP allows pressure holding on both "A" and "B" port lines. Advance/Hold/Retract.	160		
	* ZPE-65SVG-8R	4-Way, 3 Position Solenoid Valve Relief Valve(s)	"Advance" w ith top button. "Retract" w ith bottom button. Optional Pilot operated check valves for hold function. Single or double relief valves to control max psi.	50		
	* ZPE-65SVG-8A * ZPE-65SVG-8H	4-Way, 3 Position Solenoid Valve	A model equipped w ith "A" port block solenoid valve. H model equipped w ith an open center solenoid valve. Advance/Hold/Retract.	44		
	* ZPE-73HG-8A		ZPE-45SVG is fitted with "A" port block solenoid valve. Open center type solenoid valve is mounted on model ZPE-45SVG-8H pump. Advance/Hold/Retract.	160		

^{*} Available upon request.

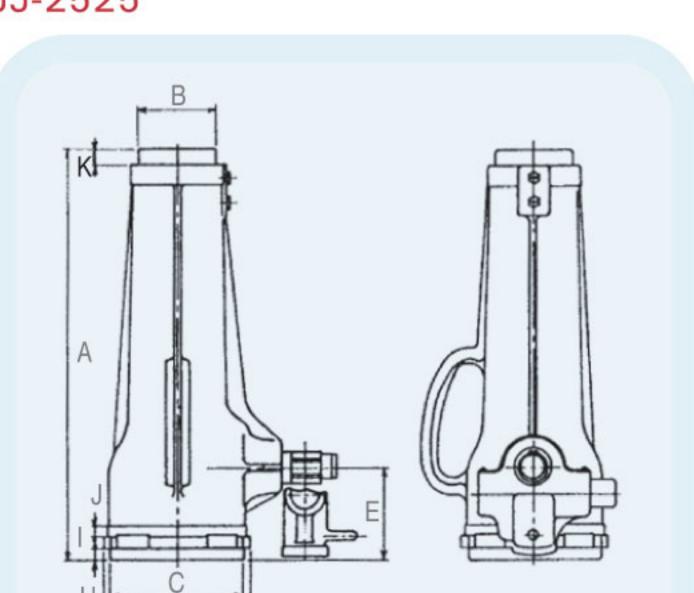
Order online at www.zinko.com

23 ZINKO

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.17).
- 4. Special ratchet handle interior design with nickel-chrome wheel and plunger enables strong rotation for any easy, smooth operation (Fig.17).
- 5. Buttress threads will not creep down under load (Fig.17).
- 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-3525	Mo	ode	1: 2	ZJJ	-3	52	5
-----------------	----	-----	------	-----	----	----	---

Model Number	Capacity (Tons)	Stroke (in)	Operation Force				Dim e n	sions	(in)				Ship Weight
Number	(Tolls)	(111)	(Ft./ lb.)	Α	В	С	Е	F	Н	- 1	J	K	(lbs)
Steel Jour	nal Jack												
ZJJ-1015	10	5.90	185	11.02	2.56	4.25	2.98	4.72	0.31	0.43	0.40	0.60	32
ZJJ-1513	15	4.92	310	10.04	2.48	4.45	3.03	5.00	0.35	0.40	0.40	0.60	35
ZJJ-2513	25	4.92	520	10.04	3.03	5.00	3.46	5.47	0.47	0.43	0.40	0.60	45
ZJJ-2525	25	9.84	520	15.55	3.03	5.00	3.46	5.47	0.47	0.43	0.40	0.60	54
ZJJ-2533	25	13.00	520	19.09	3.03	5.00	3.46	5.47	0.47	0.43	0.40	0.60	66
ZJJ-3020	30	7.87	630	13.77	3.74	5.82	3.89	6.33	0.47	0.47	0.40	0.60	66
ZJJ-3513	35	5.11	740	11.02	3.42	5.78	4.05	6.33	0.47	0.47	0.60	0.70	62
ZJJ-3525	35	9.84	740	16.14	3.42	5.78	4.05	6.33	0.47	0.47	0.60	0.70	84
ZJJ-3535	35	13.87	740	21.06	3.42	5.78	4.05	6.33	0.47	0.47	0.60	0.70	97
ZJJ-5013	50	5.11	1035	11.42	4.13	6.50	4.19	7.20	0.55	0.60	0.63	0.70	83
ZJJ-5025	50	9.84	1035	17.52	4.13	6.53	4.19	7.20	0.55	0.60	0.63	0.70	110
ZJJ- 5035	50	13.78	1035	21.85	4.13	6.53	4.19	7.20	0.55	0.60	0.63	0.70	152
ZJJ-10011	100	4.13	740	12.20	5.00	9.25					-		215
Aluminum Journal Jack													
ZAJ-1008	10	3.15	185	6.88	2.28	4.01	3.00	4.75	0.25	0.25	0.38	0.40	18
ZAJ-1510	15	3.93	310	7.87	2.28	4.01	3.00	5.00	0.25	0.38	0.38	0.40	20
ZAJ-2510	25	3.93	520	7.87	2.88	4.80	3.50	5.50	0.50	0.25	0.38	0.43	29

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

ZTU Series

Capacity: 5 to 15 tons.

Ratchet Jacks

- 1. Double-lever sockets for jacking in close quarters.
- 2. Special steel made pawl adds strength and safety.
- 3. Large base keeps the unit stable.
- 4. Precision spring will not creep up during load applications.

Model Number	Capacit He ad	y (Tons) Toe	Stroke (in)	Closed Height (in)		Handle Torque (lbs-F)	Handle Bar (ø x in)	Ship Weight (lbs)
ZTU-524	5	5	9.44	16	1.81	54	1 x 30	48
ZTU-1026	10	10	10.25	20	2.38	146	1 x 63	97
ZTU-1529	15	15	11.44	22	2.63	221	1 x 63	150



Mechanical Journal Jack Accessories

Capacity: 10 to 50 tons.

Journal Jack Accessory - Safety Bed

Safety bed is used for greater stability of jack and for lessening bottom load per unitary surface. These safety beds are not designed for use with aluminum jacks or toe jacks.

		E	Base Dimension	าร	Ship
Model Number	Used With	Length (in)	Width (in)	Thickness (in)	Weight (lbs)
ZJSB-10	ZJJ-1015	8.66	0.70	0.40	5
ZJSB-15	ZJJ-1513	9.45	0.75	0.47	12
ZJSB-25	ZJJ-25**	11.81	7.87	0.60	17
ZJSB-30	ZJJ-3020 / ZJJ-35**	11.81	8.66	0.70	22
ZJSB-50	ZJJ-50**	15.75	11.81	0.75	45

Journal Jack Accessory - Traversing Bed

Traversing bed is required when horizontal removal of loaded jack is needed. Zinko Traversing Bed performs smooth horizontal removable because loading does not bring about direct effect on traversing screw. All Zinko Journal Jacks (ZJJ Model) are specially designed to fit into Traversing Bed.

Model Number	Used With	Height up to Bottom Surface of Jack (in)	Length of Traverse (in)	Ship Weight (lbs)
ZJTB-1030	ZJJ-1015	3.35	11.80	55
ZJTB-1530	ZJJ-1513	3.35	11.80	55
ZJTB-2530	ZJJ-25**	3.54	11.80	66
ZJTB-2545	ZJJ-25**	3.54	17.70	80
ZJTB-3530	ZJJ-35**	3.82	11.80	85
ZJTB-3545	ZJJ-35**	3.82	17.70	95
ZJTB-5030	ZJJ-50**	4.25	11.80	110
ZJTB-5045	ZJJ-50**	5.04	17.70	160



ZHJ Series - Toe

Journal jack with toe is mainly used by inserting to at a narrow place. Jack detached toe can be used the same as iournal iack.

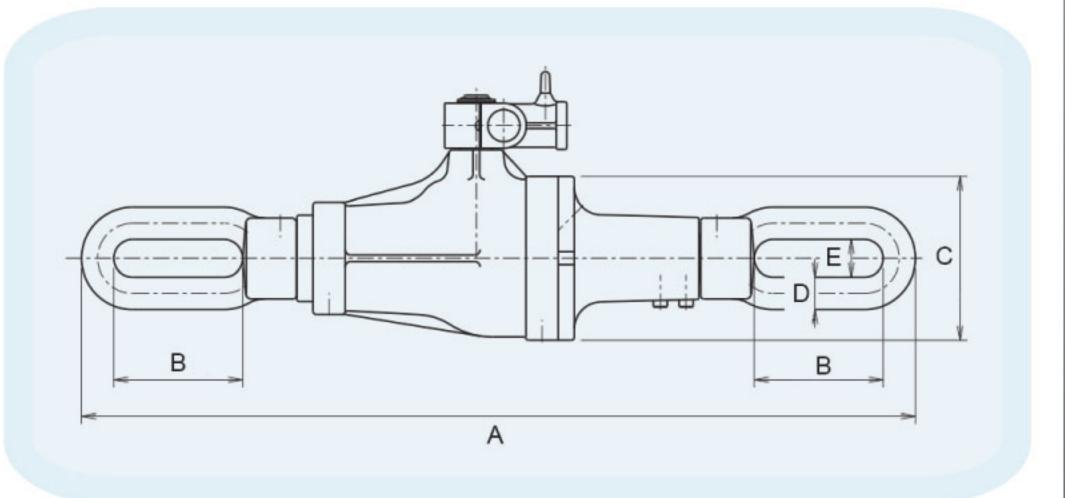
ourno do jo	arriar jaoki										
Model	Capacity	6.455.00	Min. F		AND THE PERSON NAMED IN	Height n)	Toe Length	Toe Width	Base Length	Bas e Width	Ship Weight
Number	(Tons)	(in)	Toe	Head	Toe	Head	(in)	(in)	(in)	(in)	(lbs)
ZHJ-0615	6	6	1.18	12.20	7.18	18.20	1.77	2.75	8.19	7.28	51
ZHJ-1013	10	5	1.57	11.42	6.57	16.42	1.96	2.95	8.94	8.27	64
ZHJ-1513	15	5	1.77	11.69	6.77	16.69	1.96	3.15	9.53	9.06	84
ZHJ-2513	25	5	2.16	13.07	7.16	18.07	2.16	3.54	11.02	10.83	133





ZPL Pulling Jack

This mechanical pulling jack is made from high strength alloy steel construction and ideal for use to draw a heavy object on ship building, welding or to lift a load bearing into place under the circumstance that hydraulic operation is not applicable.



Model Number	Pulling Force	Test Load	Stroke (in)	O	Outside Dimensions (in) Handle Bar We (Ø x in)					Ship Weight
Hamber	(Tons) (Ton	(Tons)	Α	В	С	D	Е	(~ //)	(lbs)	
ZPL-2510	25	30	3.94	30.51	4.72	Ø 5.98	Ø 1.18	1.37	Ø 25 x 27.55	71

^{**}Non stock item. Available upon request.

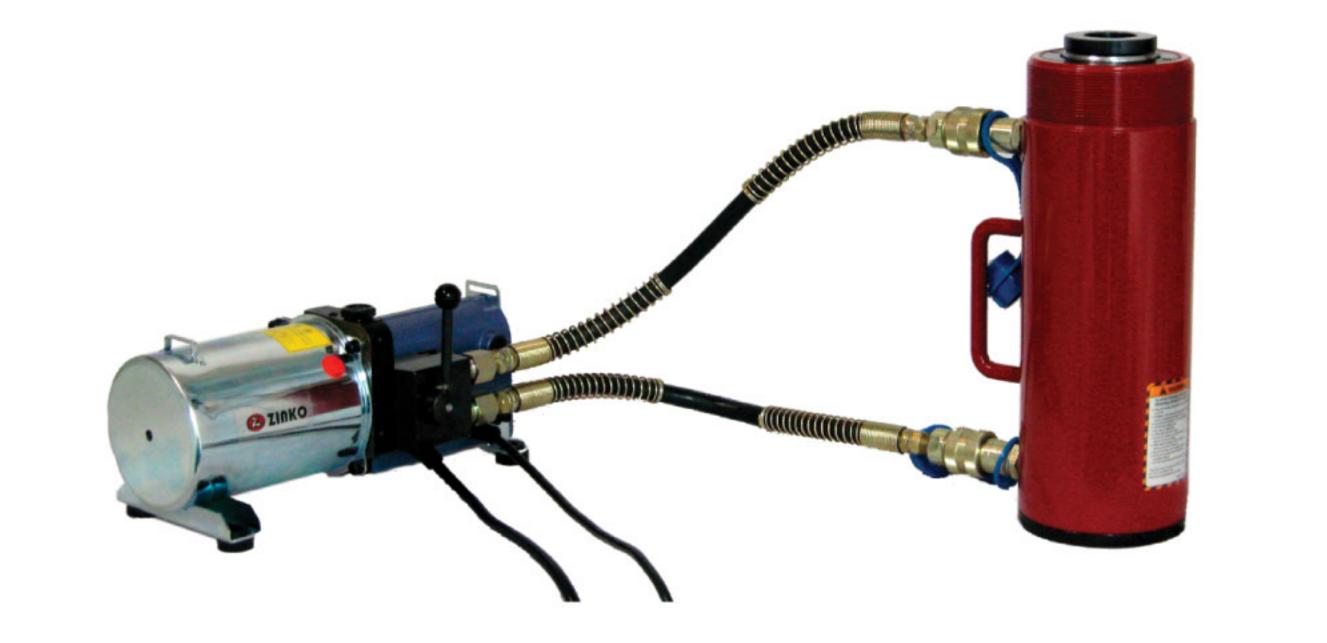
^{**}Non stock item. Available upon request.



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 create the perfect tool for your desired application.

*Larger Reservoirs are recommended for multi-cylinder operations.

Model Number	Stroke (in)	Cylinder Effective Area (in³)	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 Ca	pacity								
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 Ca	pacity								
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 Ca	pacity								
ZRB-201	1.75			ZBPS-201-19H					ZBPS-201-101A
25 Ton Ca	pacity								
ZR-251	1.00	5.16	5.16	ZPS-251-19H					ZPS-251-101A
ZR-252	2.00	5.16	10.31	ZPS-252-19H					ZPS-252-101A
ZR-254	4.00	5.16	20.63		ZPS-254-29H				ZPS-254-101A
ZR-256	6.25	5.16	32.23			ZPS-256-55H			ZPS-256-101A
ZR-258	8.25	5.16	42.55			ZPS-258-55H			ZPS-258-101A
ZR-2510	10.25	5.16	52.86				ZPS-2510-90H		ZPS-2510-101A
ZR-2512	12.25	5.16	63.18				ZPS-1512-90H		ZPS-2512-101A
ZR-2514	14.25	5.16	73.49				ZPS-1514-90H		ZPS-2514-101A
30 Ton Ca	pacity								
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 Ca	pacity								
ZR-502	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
100 Ton C	apacity								
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-65SVG-4L	Gau	ges	Gaug	es Adap	oters
ZR-102	Number	ZAP-102	ZAP-103	ZPE-33H-1W	ZPE-33H-1WL	ZPL-033VG-4L			ZA1	ZA2	ZA3
ZPS-104	10 Ton Cap	pacity									
ZPS-106 ZPS-106-1ME	ZR-102			ZPS-102-1ME							
ZPS-108 ZPS-108-1ME	ZR-104			ZPS-104-1ME							
ZR-1010	ZR-106			ZPS-106-1ME							
ZPS-1012-1ME	ZR-108			ZPS-108-1ME							
ZPS-1014	ZR-1010			ZPS-1010-1ME							
ZBPS-101 ZBPS-101-11ME	ZR-1012			ZPS-1012-1ME							
To Comparise To C	ZR-1014			ZPS-1014-1ME							
ZPS-151-1ME	ZRB-101			ZBPS-101-1ME							
ZPS-152-1ME	15 Ton Cap	pacity									
ZR-156	ZR-151			ZPS-151-1ME							
ZR-156	ZR-152			ZPS-152-1ME							
ZPS-158-1ME ZPS-158-1ME ZPS-1510-1ME ZPS-1510-1ME ZPS-1510-1ME ZPS-1510-1ME ZPS-1510-1ME ZPS-1510-1ME ZPS-1511-1ME ZPS-15	ZR-154			ZPS-154-1ME							
PR-1510	ZR-156			ZPS-156-1ME							
ZPS-1512 ZPS-1512-1ME ZPS-1514-1ME	ZR-158			ZPS-158-1ME							
ZPS-1514 March M	ZR-1510			ZPS-1510-1ME							
20 Ton Captority ZBPS-201-IME Common to the	ZR-1512			ZPS-1512-1ME							
ZRB-201 SBPS-201-1ME Image: Control of the control of	ZR-1514			ZPS-1514-1ME							
25 Ton Capacity ZPS-251-1ME Capacity ZR-251 SPS-251-1ME SPS-251-1ME SPS-252-1ME SPS-2522-1ME SPS-2522-1ME SPS-2522-1ME SPS-	20 Ton Cap	pacity									
ZR-251 ZPS-251-1ME	ZRB-201			ZBPS-201-1ME							
ZR-252 Image: Company of the company of t	25 Ton Cap	pacity									
ZR-254 Image: Created state of the color of	ZR-251			ZPS-251-1ME							
ZPS-256-1ME ZPS-258-1ME	ZR-252			ZPS-252-1ME							
ZR-258	ZR-254			ZPS-254-1ME							
ZR-2510	ZR-256			ZPS-256-1ME							
ZR-2512	ZR-258			ZPS-258-1ME							
ZR-2514 Image: Control of the control of	ZR-2510				ZPS-2510-1MLE						
Section Sect	ZR-2512				ZPS-2512-1MLE						
ZR-308 Image: Control of the control of t	ZR-2514				ZPS-2514-1MLE						
ZRB-302 Image: Control of the control of	30 Ton Cap	pacity									
50 Ton Capacity ZR-502 ZPS-502-1ME SPS-502-1ME SPS-50401ME SPS-50401ME SPS-50401ME SPS-50401ME SPS-50401ME SPS-506-1MLE SPS-506-1MLE SPS-5013-45SVG-4LE SPS-5013-45SVG-4	ZR-308			ZPS-308-1ME							
ZR-502 ZPS-502-1ME Image: Control of the control of th	ZRB-302			ZBPS-302-1ME							
ZR-502 ZPS-502-1ME Image: Control of the control of th	50 Ton Cap	pacity									
ZR-506 SPS-5013-102A ZPS-506-1MLE ZPS-5013-45SVG-4LE SPS-5013-45SVG-4LE	ZR-502			ZPS-502-1ME							
ZR-506 SPS-5013-102A ZPS-506-1MLE ZPS-5013-45SVG-4LE SPS-5013-45SVG-4LE	ZR-504										
ZR-5013 ZPS-5013-102A Image: Control of the control of	ZR-506				ZPS-506-1MLE						
ZRB-502 Image: Control of the control of		ZPS-5013-102A				ZPS-5013-45SVG-4LE					
100 Ton Capacity ZR-1006 ZPS-1006-102A ZPS-1006-45SVG4LE Image: Company of the	ZRB-502			ZBPS-502-1ME							
ZR-1006 ZPS-1006-102A ZPS-1006-45SVG4LE Image: Control of the contr		pacity									
ZR-10010 ZPS-10010-103A ZPS-10018-45SVG-4LE						ZPS-1006-45SVG4LE					
	ZR-10010		ZPS-10010-103A								
ZRB-1002 ZBPS-1002-1ME ZBPS-1002-1ME	ZRB-1002										

Air Filter, Regulator, Lubricator Units









Model: FRL-833N

Model: FRL-910N

Model Number	Port Size (NPT)	Filter Element (µ)	Pressure Adjustment Range (psi)	Max. Input Pressure (psi)	Max. Flow (SCFM)	Operating Temperature Range (°F)	Drain Capacity (in³)	Oil Capacity (in³)	Recommendable Lubricants	Ship Weight (lbs)
FRL-212N	1/4"	20	7 ~ 228	290	67.09	40 ~ 140	0.92	1.83	ISO VG-32	3
FRL-833N	3/8"	5	7 ~ 215	250	88.29	40 ~ 140	4.88	7.63	ISO VG-32	5
FRL-705N	1/2"	5	7 ~ 215	250	158.92	40 ~ 140	4.88	9.15	ISO VG-32	7
FRL-910N	1"	5	7 ~ 225	250	183.64	40 ~ 140	18.3	18.3	ISO VG-32	15

FRL Unit w/ Shutoff Valve & Oil Free Port

*Model: FRL-5926, FRL/MANIFOLD/BALL VALVE ASSY (R). P/N # 756-5926

Features

- 1. Standard units contain semi-auto-drain function when operating pressure below 7 psi.
- 2. Unit is equipped with a shutoff valve and an optional air port before lubricant dispenser to operate air tools that are incompatible with air tool oil such as air paint guns.



1	Model Number	Port Size (NPT)	Filter Element (µ)	Pressure Adjustment Range (psi)	Max. Input Pressure (psi)	Max. Flow (SCFM)	Operating Temperature Range (°F)	Drain Capacity (in³)	Oil Capacity (in³)	Recommendable Lubricants	Ship Weight (lbs)
F	RL-5962	1/4"	20	7 ~ 228	290	67.09	40 ~ 140	0.92	1.83	ISO VG-32	8

Accessories

ACCE	ssories				
	Adapters, Fittin	gs, and Accessories		Adapters, Fittin	gs, 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.	195411	ACCOUNT THEY	3/8" NPT (female) ports to control cylinder speed. Also used as a shut-off valve for temporary load holding.
195102		Swivel connector, 3/8" NPT male, 3/8" NPSM female	195414	O N	2-position push buttom switch
195103		45° fitting. Male and female 3/8" NPT end	195415	R	3 way/2 position manual solenoid valve for use with single-acting cylinders. It has "Advance" and "Hold" positions.
195104	ZINKO ZA-5 195104	Double tee adapter. Permits use of more than one ram in series with one pump. Three 3/8" NPT ports.	195416		4 way/3 position manual solenoid valve. For use with double acting cylinders. It has "Advance", "Hold" and "Retract" positions.
195311		Street Elbow. From 3/8" NPT male to 3/8"NPT female.	195611		Aluminum Ram Base. For use on 50 ton Aluminum Cylinders only. Size: 7" x 7"
195341		Hex Nipple. From 3/8" NPT male to male	195661		ZA1, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 2-3/4" Length

	Adapters, Fittin	gs, and Accessories		Adapters, Fittin	gs, and Accessories
Part #		Description	Part #		Description
			Couplers		
195662	ZINKO ZA-2 195662	ZA2, Gauge adapter 1/2" GP, 1/4" ME, 3/8" FE 4-3/8" Length	195112		Complete 3/8" NPTF quick coupler, fast flow
195663	ZINKO ZA-3 195663	ZA3, Gauge adapter 1/4" GP, 3/8" ME, 3/8" FE 5-1/4" Length	195112-R		Ram half coupler and dust cap NPTF
195664	ZINKO ZA-4 195664	ZA4, Gauge adapter 1/2" GP, 3/8" ME, 3/8" FE 6" Length	195112-H		Hose half coupler and dust cap NPTF
400744		Remote control hand pendant switch, 10 Ft	9210104		Complete 1/4" NPT automotive-style quick coupler regular flow
196711		cord. ON/OFF switch control.	9210104-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.	9210104-H		Hose half coupler
2110-19		Snap type male connector. To be used on the top or bottom of ZR-series 10 ton cylinders.	9210104L		Complete 1/4" NPT quick coupler automotive style
2110-20		Threaded-type male connector. To be used on the top / or bottom of ZR-series 10 ton	9210104L-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	9210104L-H		Hose half coupler
		snap-connect applications. Rod-end threaded type adapter. Screw on to	9210308		Complete 3/8" NPT automotive-style quick coupler, regular flow
2110-22		the base of cylinder to convert the ZR-series cylinder for threaded type applications.	9210308-R		Ram half coupler and dust cap
90620-AD1		Adapter. 1/2" height. To be used on ZAPJ & ZATJ model	9210308-H		Hose half coupler
90620-AD2		Adapter. 2-3/8" height. To be used on ZAPJ & ZATJ model	1000		rugged hose reinforced with 2 layers of 8/8" I.D. fast flow hose.
			92104-02A		6 ft length, 1/4" to 3/8" NPT end
90620-AD3		Adapter. 4" height. To be used on ZAPJ & ZATJ model	195212-6		6 ft length, 3/8" NPT end
			195212-8	troug was tool	8 ft length, 3/8" NPT end
9110-4B		Base Plate for ZMHL-4SP-1.	195212-18		18 ft length, 3/8" NPT end
				ssure Gauges: Ra Zinko's pump or cylin	ange 0-10,000 psi 2 1/2" dia. Face. iders.
0440.07		D DI	55-1111	10000 POOL 10000	Gauge 2.5" dia., 1/4" NPT
9110-8B		Base Plate for ZMHL-8SP-1.	55-1211	S ZIBIKO	Gauge 4" dia., 1/4" NPT
			55-1212		Gauge 4" dia., 1/2" NPT

Description

5 ft hose

Extension Tube

Male connector

Serrated Saddle

Plunger Base

V head

Wedge Head

Toe Lift

Threaded Coupling

Lock Pin

Steel Case

3/8" Coupler

Fast Flow

Portable Power Kits (ZPK)

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.

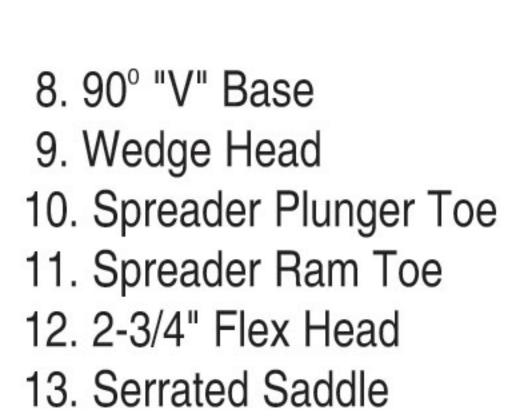
ZPK-04 Kit Includes:

- 1. Hydraulic Pump
- (ZHP-18: single speed) 8. 90° "V" Base
- 2. Hose & 1/4" Coupler
- 3. 4 Ton Ram 4" Stroke 11. Spreader Ram Toe (ZAR-044SP)
- Spreader Ram
- 5. Extension Tubes: (4", 8", 12", 16")
- Male Connector

- - 7. Flat Base
 - 9. Wedge Head
 - Spreader Plunger Toe
 - 12. 2-3/4" Flex Head
 - Serrated Saddle
 - Carrying Case
 - 15. Weight: 43 lbs.

ZPK-10 Kit Includes:

- 1. Hydraulic Pump (ZHP-28: single speed)
- 2. Hose & 1/4" Coupler (9210104L) 3. 10 Ton Ram 6" Stroke
- (ZAR-106SP)
- Spreader Ram 5. Extension Tubes:
- (5", 10", 14", 19") Male Connector
- 7. Flat Base



14. Carrying Case

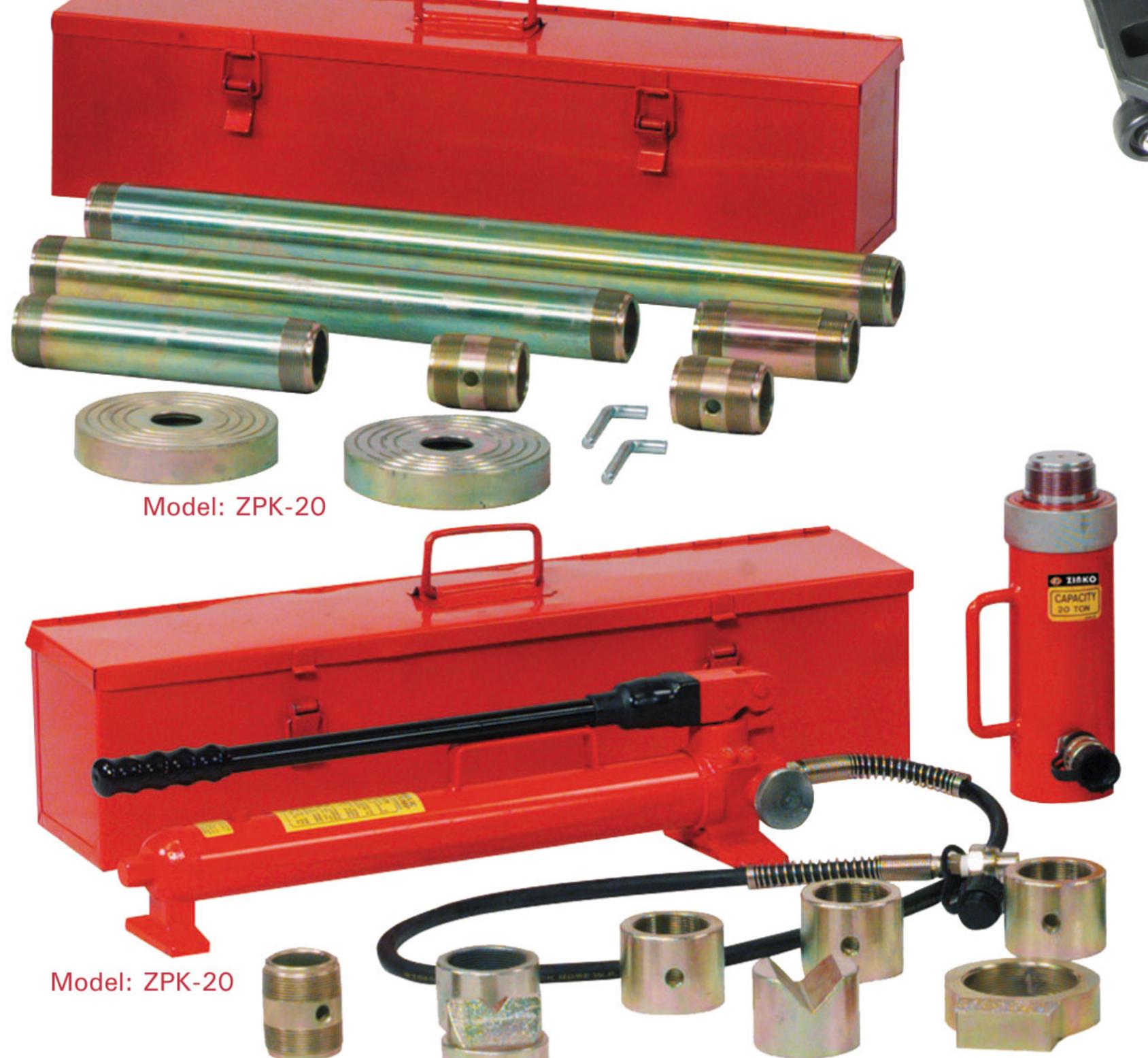
15. Weight: 82 lbs.

(with wheels)

ZINKO Hydraulic Jack

Portable Power Set





Heavy-duty Deluxe Power Kit

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

ZPK-20 Kit Includes:

- . Hydraulic Pump (ZHP-42: 2-speed)
- 2. 5' Hose & 3/8" Fast Flow Coupler (195112)
- 3. 20 Ton Ram 5" Stroke (ZAR-205) 4. 3-1/2" Dia. Saddle (x2)
- Extension Tubes: (3" (x2), 5", 10", 20", 27.5")
- 6. Threaded Coupler (x2)
- 7. Toe Lift

- 8. "V" Head
- Wedge Head Spreader Plunger Toe
- Spreader Ram Toe 12. 2-3/4" Flex Head

Model: ZPK-10

- 13. 6-1/2" Diameter Base
- Steel Carrying Case 15. Weight: 175 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 tor
Part #	Part #		Description	Part #	
92104-02 1/4" - 1/4"	92110-02 1/4" - 1/4" L-Type		6 ft hose	195212-5 3/8" - 3/8"	
92104-04	92110-04		Spreader	92120-05 27.5" 92120-06 20" 92120-07 10" 92120-08 5"	
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	92120-00 3	
92104-09	92110-09		Male connector	92120-10	
92104-10	92110-10		Serrated Saddle	92120-11	
92104-11	92110-11		Flat Base	92120-12	
92104-12	92110-12		90° V-Base	92120-13	
92104-13	92110-13		Wedge Head		
92104-14	92110-14		Plunger Toe	92120-14	
92104-15	92110-15		Ram Toe	92120-15	
0210110	0211010			00400 40	
92104-16	92110-16		Rubber Flex Head	92120-16	
92104-17	92110-17	Portable Power Set	Plastic Case	92120-17	
9210104-1/4" Automotive type	9210104L - 1/4" L-Type		Coupler	195112	
coupler	coupler				information on ponents plea

on these accessories and components please refer to page 29.

ZPM Series

Capacity: 4 to 30 tons.



Features

- 1. Adjustable handle slides easily into 5 different positions.
- 2. 360° rotating handle socket gives flexibility in difficult pumping locations.
- 3. 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.

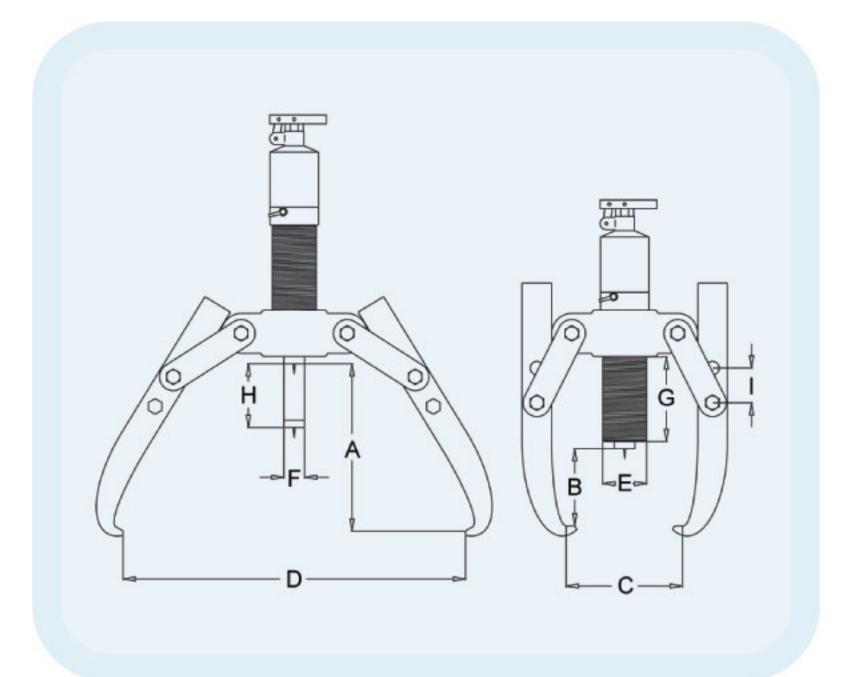
ZPM-04

7. Spring return hydraulic cylinder allows for rapid retraction of the cylinder rod upon completion of the pull.

Jaw Type Series

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



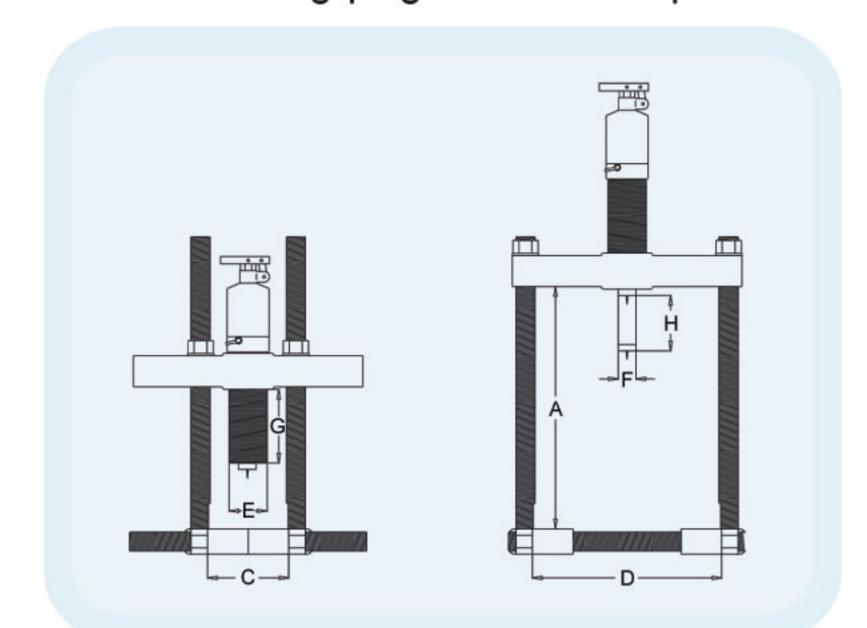


Model	Capacity	Reac	h (in)	Spread (in)		Stroke (in) Pu		Pump Tip (in)		Jaw Tip (in)				Ship
Number	to make the time of the	Α	В	C	D	Н	Е	F	G	Α	В	С	_	Weight (lbs)
ZPM-04	4	7.28	2.76	2.95	10.00	2.36	1.63	0.87	3.31	0.43	0.24	0.87	1.26	10
ZPM-08	8	9.02	2.24	3.94	13.78	3.35	1.97	0.98	4.80	0.43	0.39	0.98	2.00	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

Model: ZPM-410

Push Type Series

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



Model: ZPM-1210

Madal	Conceity	Reach	ı (in)	Spread (in)		Stroke (in)	Pump Tip (in)		(in)	Jaw Tip (in)				Ship
Model Number	(Tons)	Α	В	С	D	H	Е	F	G	Α	В	O	_	Weight (lbs)
ZPM-410	4	9.84		2.17	4.33	2.36	1.65	0.87	3.30	_		_	I	19
ZPM-810	8	10.63	1	3.74	8.65	3.35	1.97	0.98	4.80	_	1	_	ı	28
ZPM-1210	12	15.00	-	4.72	11.42	3.35	2.36	1.10	4.65	-	1	_	ı	40

Jaw & Push Sets

Capacity: 4 to 12 tons.

Usage

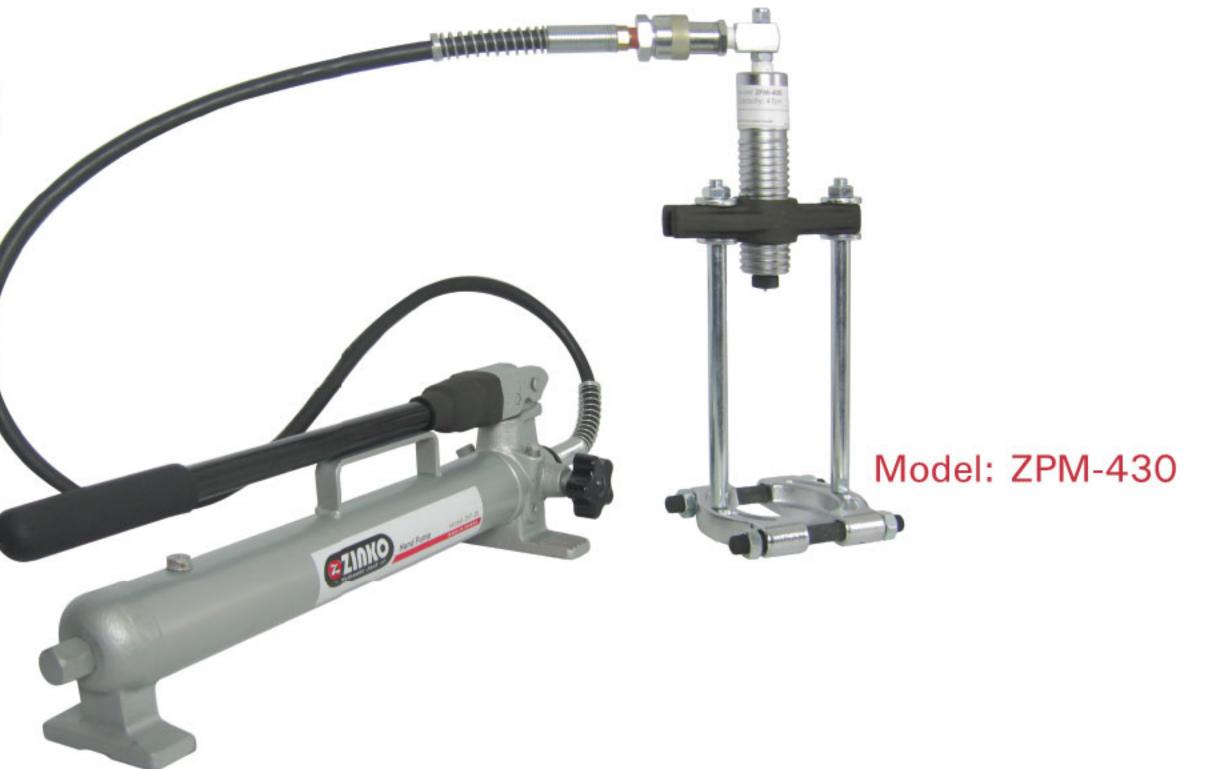
A self contained pulling system for removing a wide variety of gears, bearings, bushings, pulleys, and other press-fitted parts.

Features

- 1. Special package model includes jaw and 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 flying parts, which provides extra protection to the operator.

*For selection of hand pumps, please refer to page 17.





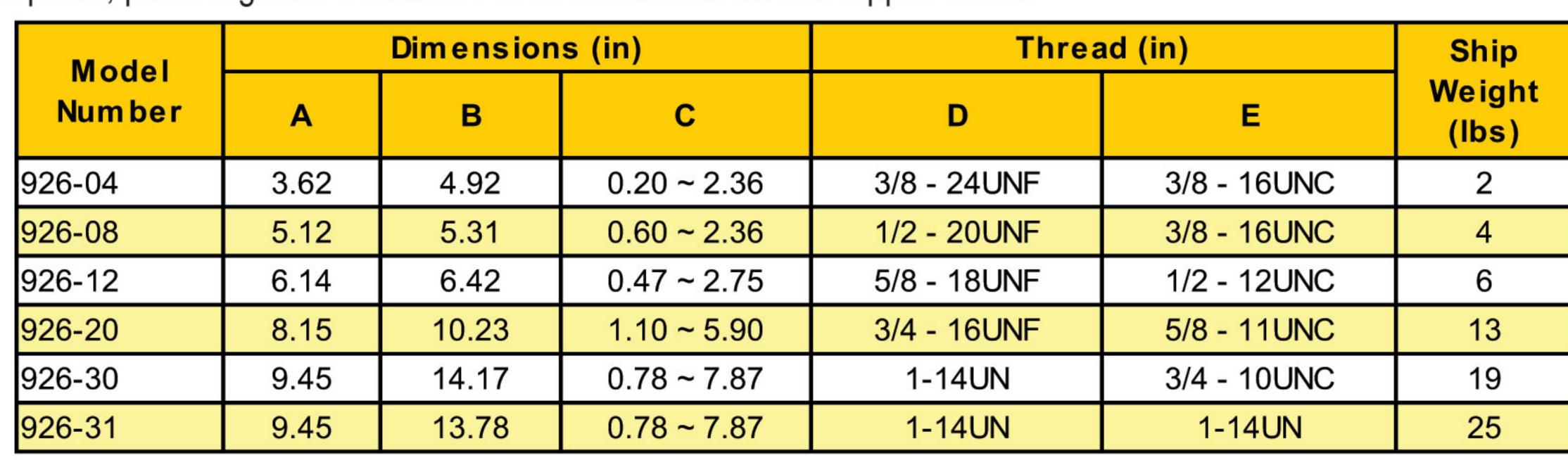
Modell	Number		Reach (i	n)	Spre	ad (in)	Stroke (in)	Pun	p Tip	(in)	J	Jaw T	ip (in	1)	Ship
Standard	Remote	Capacity (Tons)	Α	В	C	D	Н	E	F	G	Α	В	C	_	Weight (lbs)
ZPM-420	ZPM-430	4	7.28 / 9.84	2.76	2.95 / 2.17	10 / 4.33	2.36	1.63	0.87	3.31	0.43	0.24	0.87	1.26	29 / 57
ZPM-820	ZPM-830	8	9.02 / 10.63	2.24	3.94 / 3.74	13.78 / 8.66	3.35	1.97	0.98	4.80	0.43	0.39	0.98	2.00	43 / 73
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	78 / 108

Universal Bearing Attachments

Features

1. Forged of high strength steel alloy.

- 2. Wedge-shaped edges which are easily placed behind the part to secure a gripping surface, which allow removal of the most hard-to-grip components.
- 3. When used with jaws puller, the jaws grip attachments outer edge, when used with a push puller, puller legs are threaded into the attachment's two tapped holes.



TRS & TRH Series

Square Drive Hydraulic Torque Wrenches



Usage

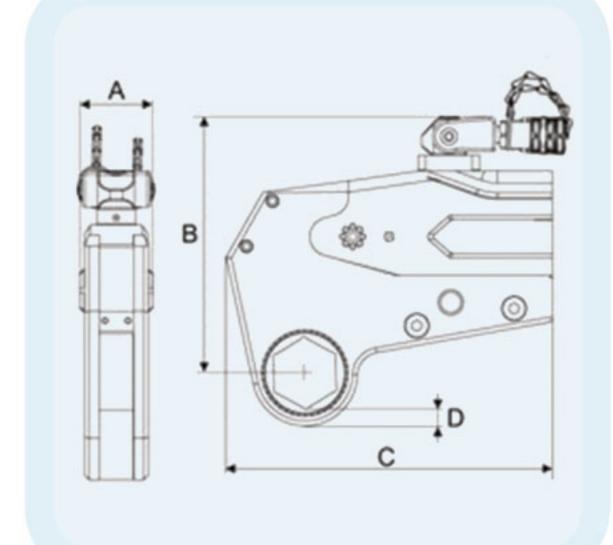
The Zinko TRS series Square Drive hydraulic torque wrenches are used in many industries where various sized fasteners are required to be tightened to specific torque settings. Consistant within +/- 3% of output and when operated correctly units maintain a repeatabilly factor of 100%. Sockets and accessories sold seperately.

Features

- 1. Constructed from aircraft quality material including aluminum titanium alloys and high strength steel keeps the tool lightweight and heavy duty.
- 2. Snap together reaction arm is easy to change and adjustable up to 360° allowing the tool to be used in many positions.
- 3. Push button release allows quick and easy exchange of sockets or allen-keys.
- 4. High quality finish resists weathering.
- 5. Small operating radius to help work in tight spaces.
- 6. Designed with overpressure safety bypass to prevent overpressurization.

Model Number	Square Drive	Min. Torque (lbs-F)	Max. Torque (lbs-F)	Nut Size (in)	Ship Weight (lbs)
TRS-1	3/4"	200	1414	0.63 ~ 1.41	5
TRS-3	1"	480	3339	0.87 ~ 1.89	12
TRS-5	1-1/2"	835	5691	1.06 ~ 2.20	19
TRS-8	1-1/2"	1185	7977	1.18 ~ 2.52	23
TRS-10	1-1/2"	1755	11727	1.42 ~ 2.83	33
TRS-20	2-1/2"	2960	20115	1.65 ~ 3.54	54
TRS-25	2-1/2"	3817	25697	1.89 ~ 3.94	71
TRS-35	2-1/2"	5235	37756	2.52 ~ 4.73	100





Hexagon Drive Hydraulic Torque Wrench

Usage

The Zinko TRH series Hexagon Cassette style hydraulic torque wrenches are used in many industries where various sized fasteners are required to be tightened to specific torque settings. Consistant within +/- 3% of output and when operated correctly units maintain a repeatability factor of 100%.







Features

- 1. Lightweight, Low Profile and Slim Nose Radius allows tool to fit where others can't.
- 2. Engaugement Rod design will not bind allowing easy tool removal.
- 3. Multi-Tooth Ratchet: Allows for 27° of movement per engagement.
- 4. Quick change design allows hex link exchange without any tools.
- 5. High quality finish resists weathering.
- 6. Completely Flat Design: Cylinder and link width are equal for tight fits.
- 7. 360° Swivel: Keeps hose out of the way while working.
- 8. Internal Slider: Prevents wear of piston or drive plate.

Model		Min Torque	Max. Torque	Dimensions (in)							
Model Number	Hex. Size	Min. Torque (lbs-F)	(lbs-F)	A	В	C	D	Weight (lbs)			
TRH-2	3/4"	192	2178	1.26	5.85 ~ 6.17	6.61 ~ 6.90	0.35 ~ 0.46	9			
TRH-4	1"	395	4732	1.63	6.80 ~ 7.45	8.05 ~ 8.69	0.50 ~ 0.54	16			
TRH-8	1-1/2"	830	10689	2.06	8.28 ~ 9.27	10.55 ~ 11.17	0.54 ~ 0.77	28			
TRH-16	1-1/2"	1560	16854	2.52	9.67 ~ 10.17	12.86 ~ 13.57	0.77 ~ 0.90	47			
TRH-32	1-1/2"	3220	37566	3.25	11.32 ~ 12.32	16.63 ~ 17.42	0.90 ~ 1.02	68			

TPE & TPA Series

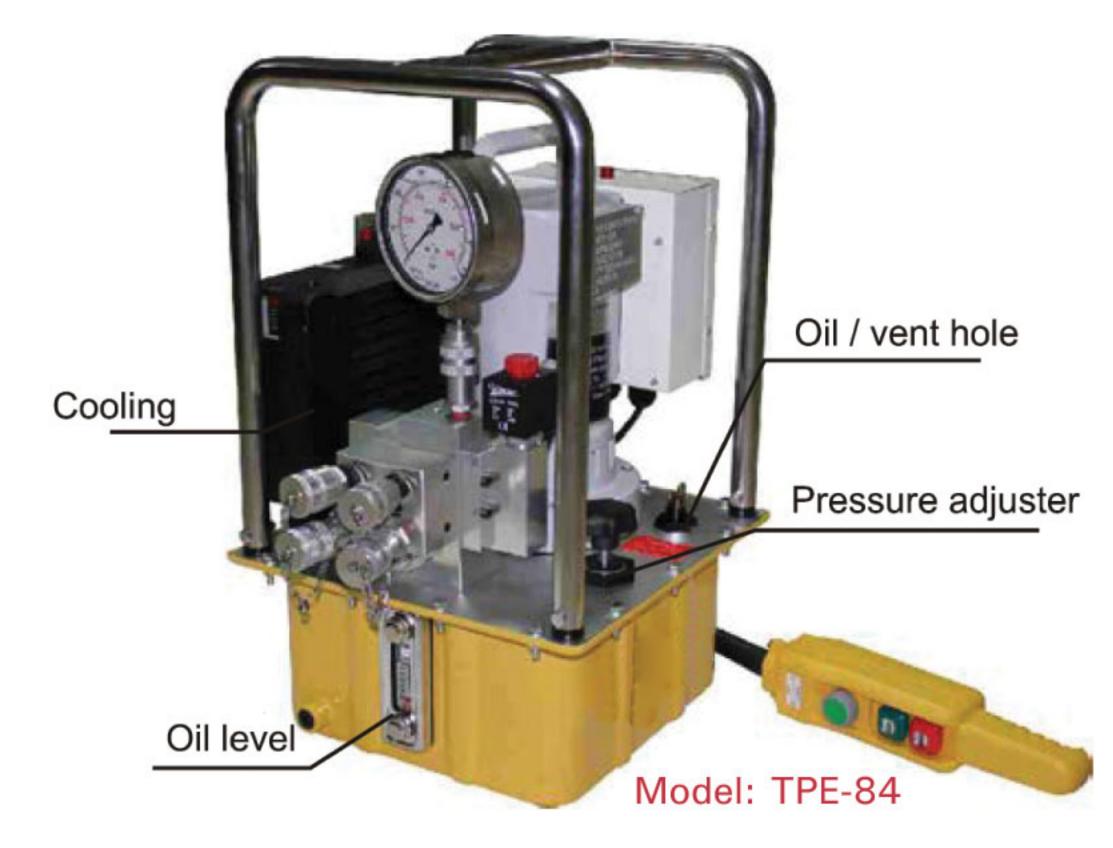
Electric Torque Wrench Pumps

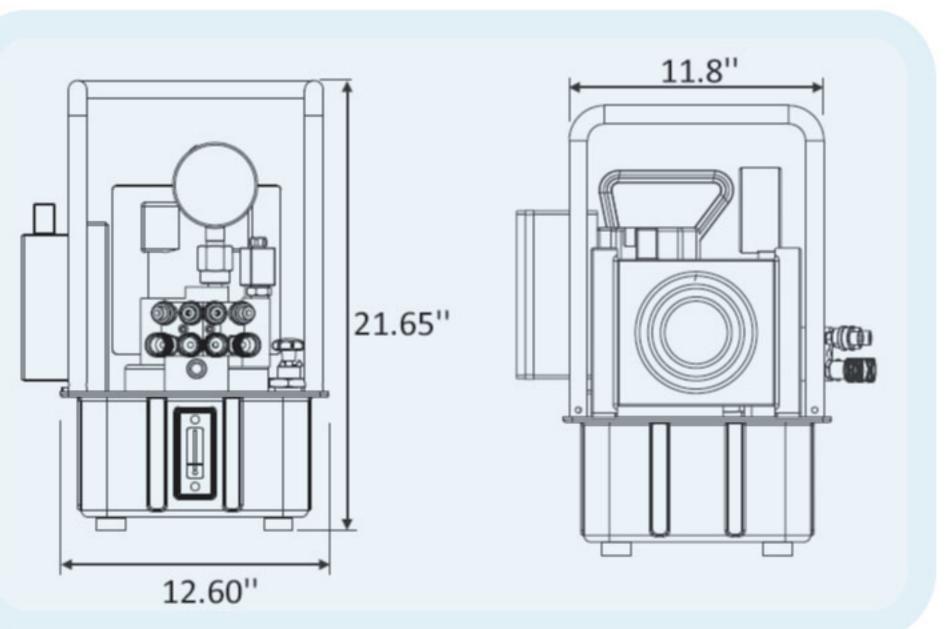
Usage

The Zinko TPE series Electric Pumps are a perfect match to the Zinko TRS and TRH series Torque Wrenches. Available in many configurations, the TPE series can operate using 115V or 230V. They come in 2.1 gallon or 5.2 gallon reservoirs and there are many options to allow the use of more than one Torque wrench at a time.

Features

- 1. External adjustable pressure regulator and gauge allow user to easily change torque settings.
- 2. Low pressure setting on retract function protects torque wrenches.
- 3. Can be ordered with various manifolds to manage to handle 1, 2, 3, or 4 torque wrenches to operate simultaneously.
- 4. Timer function allows pump to be set automatically stop after 20, 40, or 60 seconds.
- 5. Equipped with safety start switch to help eliminate accidental pump operation.
- 6. Optional cooling kit available to keep pump within safe operating temperatures during extended operation.





Model Number	Rpm	Dba at Idle @ 10,000 PSI	Motor (HP)	Amps @ 10,000 PSI	F	Flow Rate (in³/min.) PSI		Oil Capacity	Usable Capacity	Ship Weight	
Hamber		(a) 10,000 i	(111)	@ 10,000 i Oi	0	700	5,000	10,000	(gal)	(gal)	(lbs)
TPE-84	12000	80	1.13	25 / 115 V	690	433	73	55	2.1	1.85	180
11 L-04	12000	00	1.15	13 / 230 V	090	755	13	55	۷.۱	1.00	100

Options: Voltage 115V or 230V. Reservoir size: 2.1 Gallon or 5.2 Gallon. Manifold: 1,2,3 or 4 sets of couplers. Speak with a sales representative to customize power unit.

Air Torque Wrench Pumps

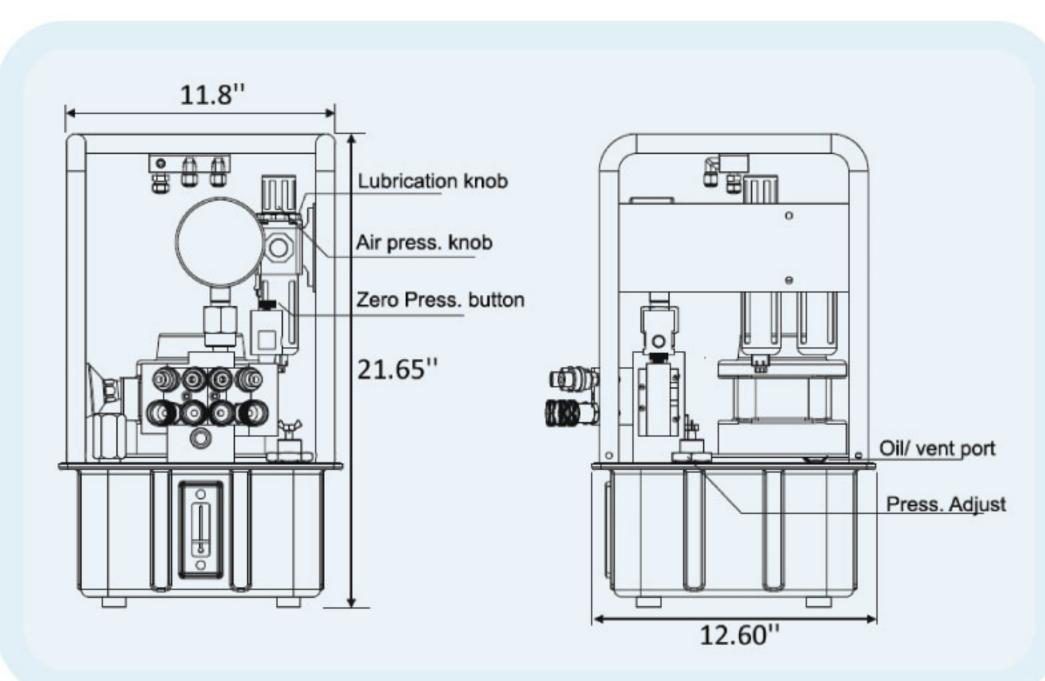
Usage

The Zinko TPA series Air Pumps are a perfect match to the Zinko TRS and TRH series Torque Wrenches when air is the preferred power source.

Features

- 1. External adjustable pressure regulator and gauge allow user to easily change torque settings.
- 2. Low pressure setting on retract function protects torque wrenches.
- 3. Can be ordered with various manifolds to manage to handle 1, 2, 3, or 4 torque wrenches to operate simultaneously.
- 4. Powerful 4 HP air motor can start even under a full load.
- 5. 15 ft long pneumatic remote control allows for easy activation of pump.





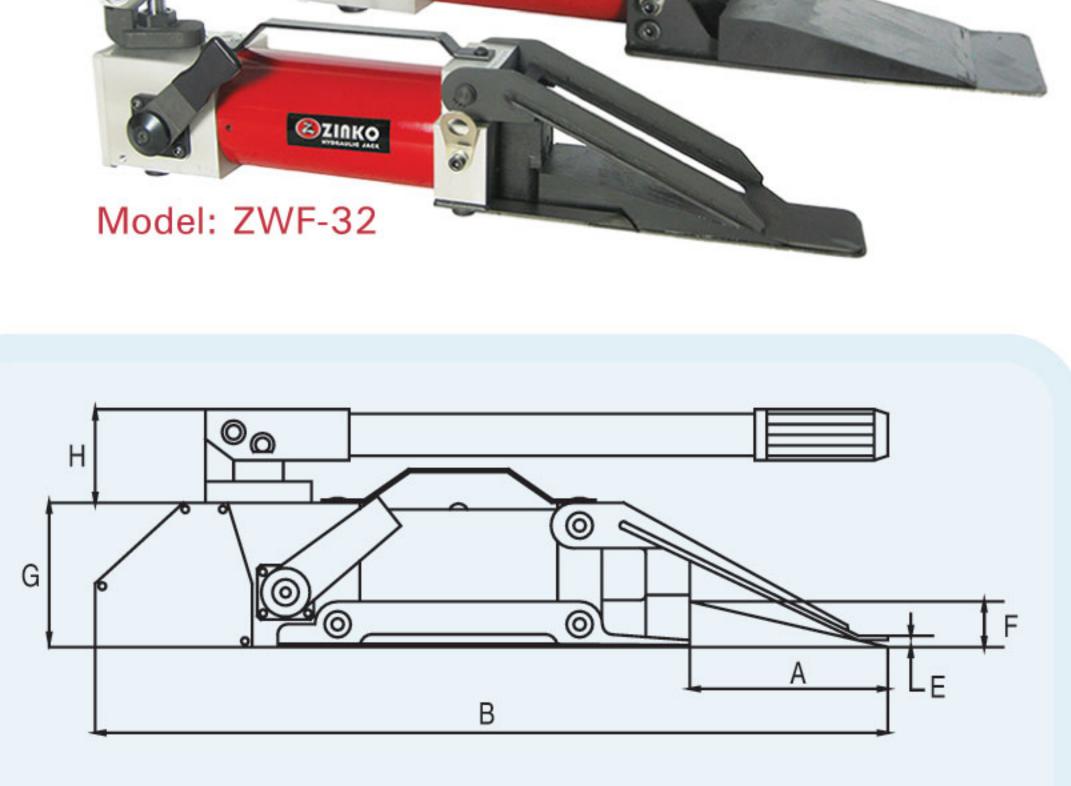
Model Number	Air Supply Req'd	Rpm	Dba at Idle @ 10,000 PSI	Motor (HP)	Flow Rate (in³/min.) PSI				Oil Capacity	Usable Capacity	Ship Weight
Hullibel	(ft³/min.)		@ 10,000 1 01	(1117)	0	700	5,000	10,000	(gal)	(gal)	(lbs)
TPA-300	12000	3000	75	4	452	79	67	55	2.1	1.85	80

Wedge Jacks & Spreaders

ZWF & ZWS Series

Capacity: 5 to 32 tons.





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 easy return. The unique interlocking wedge design eliminates first step bending and risk of slipping out of joint. With these units there is no need for additional tools or chainblocks. The 360° handle make for easy usage in any position.

Features

- 1. Powered by a built-in hydraulic hand pump, all models have self-contained reservoir and are ready to use without making or breaking hydraulic connections.
- 2. Designed with a compact frame to reduce weight for portability; it also comes with a classic wooden storage case.
- 3. Built in 4-way, 3 position manual valve allows easy advance, hold, and retract.



Model: ZWF-31

Model: ZWF-32

Model	Capacity	Min Ht	May Ht			Di	mensi	ons (iı	n)			Ship	
Number		(in)	(in)	(in)	4	В	C	D	ш	F	G	Н	Weight (lbs)
ZWF-31	32	5.50	0.24	1.34	9.75	21.75	5.50	5.00	0.20	1.34	4.25	2.75	43
ZWF-32	32	5.50	0.24	1.34	9.75	21.75	5.50	2.43	0.24	1.34	3.65	2.75	39

Spreaders

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







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 automaticlly by return springs.
- 4. Provides a high resistance to attach on the ground.

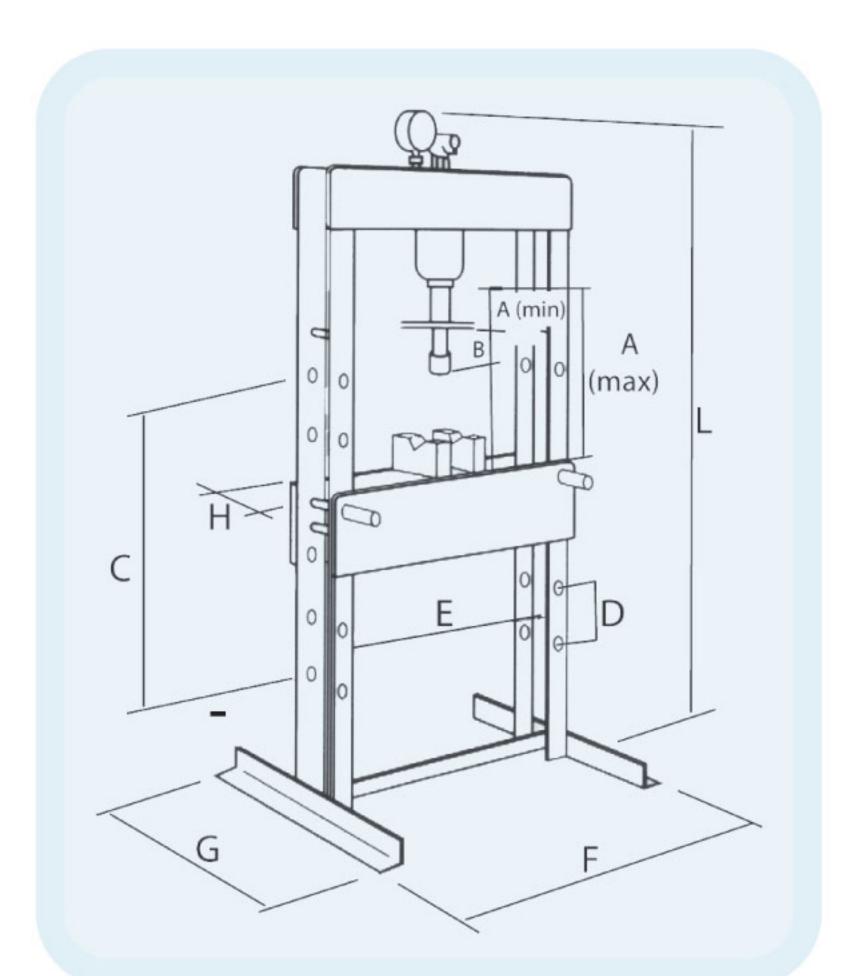
Model	Capacity	Stroko	Min Ht	May Ht	Dimensions (in)				Ship	
Number	(Tons)	(in)	(in)	(in)	A	В	С	D	Ε	Weight (lbs)
ZWS-05	0.5	5	0.24	1.34	7.67	10.04	3.74	1.97	0.67	5
ZWS-10	1	5	0.24	1.34	14.4	21.26	11.5	2.2	1.22	28

Shop Presses ZSP Series

Capacity: 15 to 100 tons.

Features

- 1. Easy to use hand operated with pressure gauge for direct pressure readings.
- 2. Tables raise and lower easily with use of hand crank.
- 3. Side frames are open for inserting long material.
- 4. Fast set-up ram extension screw.
- 5. Ram moves laterally for added versatility and will not diminish capacity.
- 6. Standard equipped with: Two bed plates and pump handles. Straightness testing support uses centers or v-block.



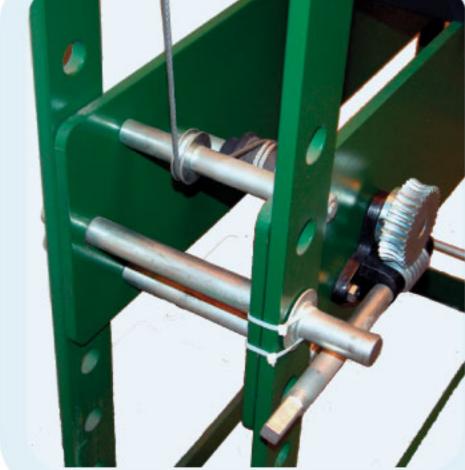


Air/Electric Pump **Mounting Bracket**



V-Block (standard)





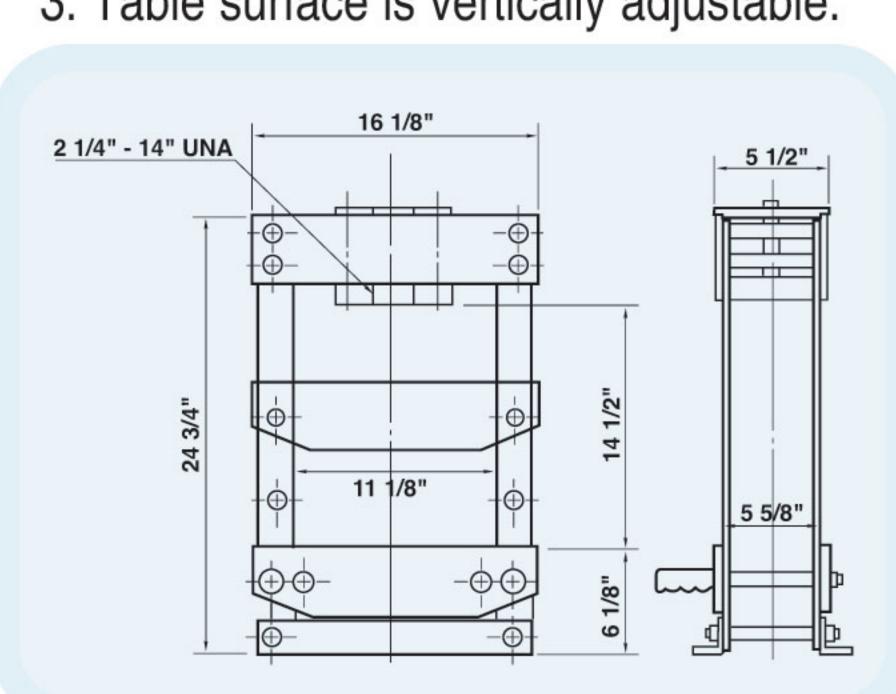
(supported by cable winch)

Positioning Bar & Gauge Adjustable Work Bed

Rotary Handle



- 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.





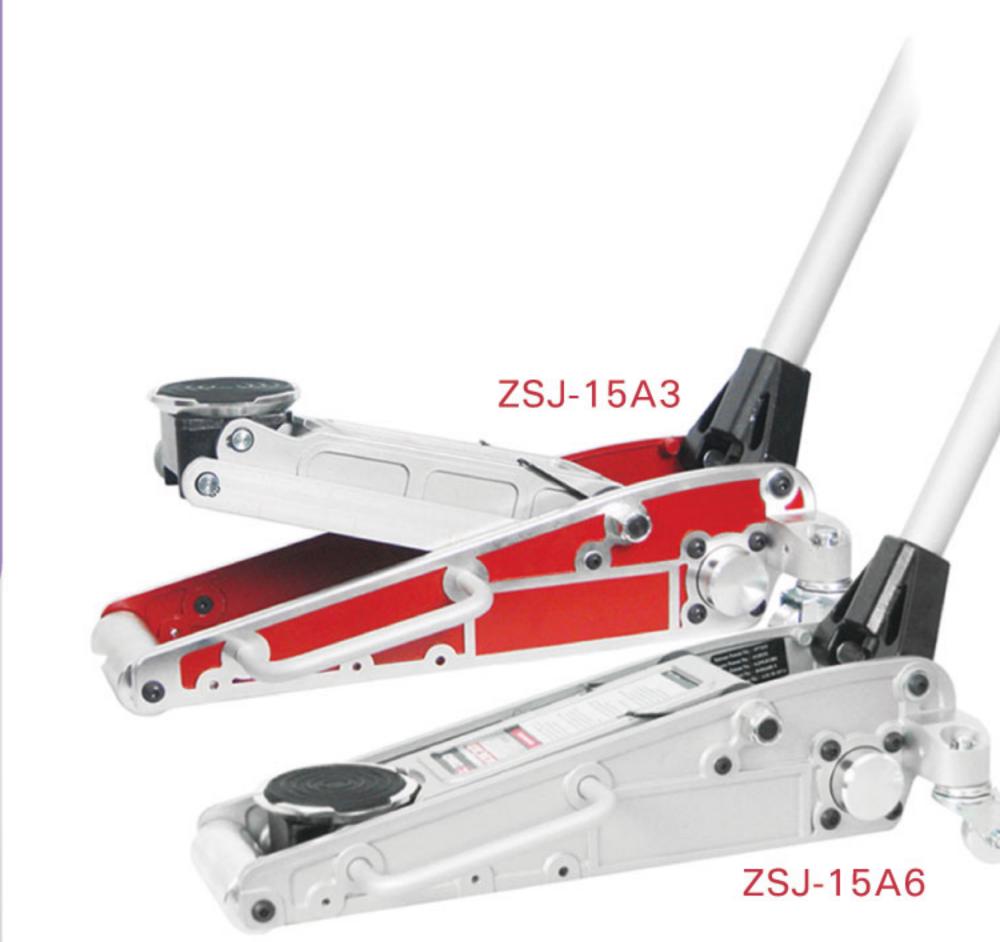
Model: ZTP-10

					H-Fran	ne Press	Dimension	ns (in)				
Model	Press	Α	Α	В	C	D	E	F	G	Н	L	Ship Weight
Number	Capacity (Tons)		(max)	Stroke	Vertical Movement	Spacing	Front Clearance	Base Length	Base Width	Table Width	Overall Height	(lbs)
ZSP-15S	15	12.32	33.58	3.13	34.65	3.54	24.61	33.78	29.13	7.40	53.58	485
ZSP-15SA	15	12.32	33.58	3.13	34.65	3.54	24.61	33.78	29.13	7.40	53.58	500
ZSP-35S	35	14.37	35.63	6.13	38.19	3.54	33.46	44.49	34.06	7.56	60.83	722
ZSP-35SA	35	14.37	35.63	6.13	38.19	3.54	33.46	44.49	34.06	7.56	60.83	730
ZSP-35SE	35	14.37	35.63	6.13	38.19	3.54	33.46	44.49	34.06	7.56	60.83	800
ZSP-60S	60	9.84	41.34	6.50	53.15	3.94	41.34	54.33	39.37	13.46	74.80	990
ZSP-60SE	60	9.84	41.34	6.50	53.15	3.94	41.34	54.33	39.37	13.46	74.80	1,100
ZSP-100SE	100	18.90	42.52	6.00	44.09	7.87	62.99	80.83	59.06	13.78	78.74	2,966
ZSP-50SEN	50	7.06	59.56	6.00	54.00	10.38	28.75	42.75	36.00	13.13	76.00	1,098
ZSP-100SEN	100	7.06	42.50	6.00	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 15 tons.



Ultra Lighweight Aluminum Service Jacks

- 1. Fast performance with 3 pumps to maximum height on model ZSJ-15A3, and 6 pumps to maximum height on model ZSJ-15A6.
- 2. Low profile with extremely low starting point designed specially for all styles of race cars.
- 3. Roller front wheel, and rear wheel casters help support these easily maneuverable
- 4. Durable the highest grade die cast aluminum combined with our patented hydraulic system while meeting all of Zinko's high standards make this jack trouble-free.
- 5. Universal 3,000 lbs. capacity, combined with a notched lift cup that has a removable rubber insert that allows for use on any type of car. No stop bracket required.
- 6. Heavy-duty full service rear caster wheels for easy maneuverability.
- 7. Standard model comes with dual carrying handle. Max Optional dirt track stabilizer for use on non-paved surfaces are available upon request.

Heavy-Duty Service Jacks

- 1. High performance all steel heavy duty construction.
- 2. Swivel rear caster wheels for easy maneuvering.
- 3. The jack can be operated by a foot pedal (Fig.18) or manually.
- 4. Hydraulically powered by a patented high quality hydraulic system engineered for many years of trouble free use.
- 5. The service jack utilizes a smooth operating universal joint release mechanism knob, and also features a notched lift cup that fits on all types of cars.
- 6. T-handle permits easier maneuvering. It can be locked in one of three positions so that is convenient to position the jack under load (Fig.20).



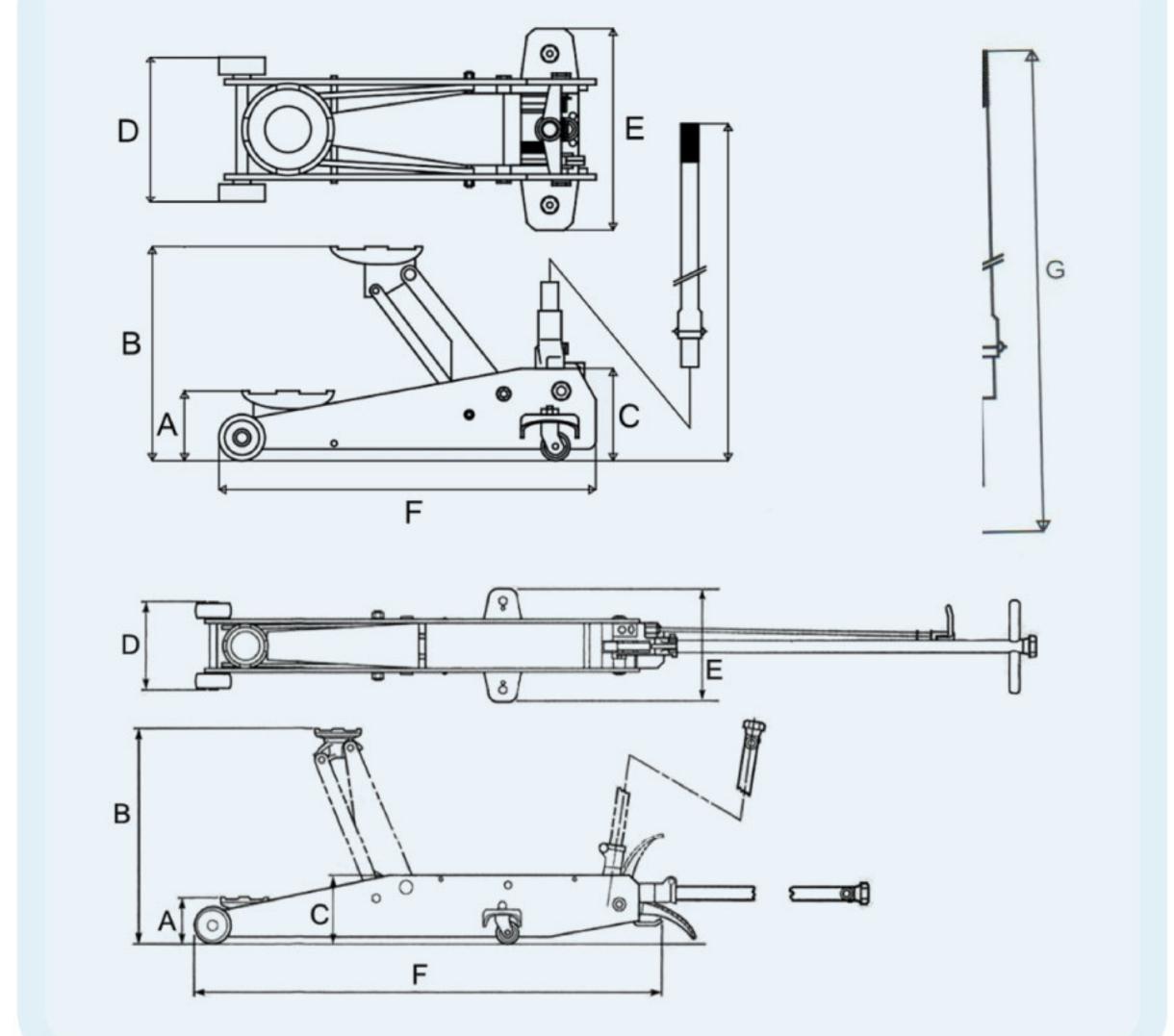


ZSJ Series Saddle



Easy to use mechanical gear assembly





Heavy-Duty Air Service Jacks

Easy to operate push-button floor jack with an air pump. Designed for use on trucks, automotive, and agricultural equipment.

Features

- 1. The lift is designed to be operated pneumatically and manually. Push button control unit can be easily removed from handle which enables the operator to view the lift from the side.
- 2. With the foot pumping device (Fig.19), you can easily lift the jack saddle up to the loading point.
- 3. All air hydraulic models can be operated with air pressure ranges from 116 to 200 psi by push button for quick lift (Fig.20).
- 4. Built-in automatic safety valve prevents overloading and also protect the ram plunger from being pushed up beyond the upper limited.
- 5. Long chassis reaches under overhang vehicles.
- 6. 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.





Panta Graph Jack

- 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 added corrosion protection.

Model Number	Capacity (Tons)	Min Ht. (in) A	Hydraulic Lift (in)	Max Ht. (in) B	Height of Frame (in)	Chasis Width (in) E	Chasis Length (in) F	Operating (psi)	Ship Weight (lbs)
Ultra Lightwe	eight Scisso	rs Jacks							
ZPJ-800	0.8	4.76	10.24	15.00		4.60	15.35		14
ZPJ-850C	0.85	4.76	10.24	15.00		4.60	15.35		17
Ultra Lightwe	eight Alumin	um Jacks							
ZSJ-15A3	1.5	3.50	14.00	17.50	6.13	11.75	23.63		47
ZSJ-15A6	1.5	3.50	14.00	17.50	6.13	11.75	23.63		49
ZSJ-20A	2	3.50	14.00	17.50	6.13	11.75	23.63		49
Heavy-Duty S	Service Jack	S							
ZSJ-15H-2	1.5	4.44	14.18	18.62	5.90	13.78	25.78		81
ZSJ-20S-3	2	4.44	14.18	18.62	5.90	13.78	25.78		80
ZSJ-20L-2	2	4.56	14.18	18.74	6.30	13.75	36.22		125
ZSJ-30H	3	4.96	18.89	23.85	7.48	12.79	51.57		195
ZSJ-50H	5	5.90	16.14	22.04	7.87	14.37	55.70	: 	241
ZSJ-100H	10	6.30	15.75	22.05	9.84	19.50	60.83	· -	350
Heavy-Duty A	Air Service J	lacks							
ZASJ-15M	1.5	4.09	19.88	23.97	4.72	14.96	41.77	116 - 145	155
ZASJ-20M-S	2	3.85	16.15	20.00	4.72	14.90	37.83	116 - 145	100
ZASJ-30M	3	4.96	18.90	23.86	7.48	14.37	53.15	116 - 145	209
ZASJ-50M	5	5.90	16.14	22.04	7.87	15.15	55.70	116 - 145	280
ZASJ-100M	10	6.30	15.75	22.05	9.84	19.48	60.82	116 - 145	325
ZASJ-150M	15	6.88	18.25	25.13	9.00	19.00	68.88	128 - 200	510

ZATJ Series

Capacity 22 to 35 tons.



Usage

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

Features

- 1. Lightweight and built for heavy-duty use.
- 2. All-steel welded construction makes our ZATJ reliable, long lasting and leak free.
- 3. The built-in safety valve prevents use beyond the rated capacity and lifting limit.
- 4. Air pump allows fast quiet operation.
- 5. An extension screw for fine adjustment is included. Extension adapters are also available separately (Fig.21).
- 6. When connected to standard shop air pressure providing 102-145 psi, these jacks can quickly obtain rated lift capacity with air-actuated operation.
- 7. The two large rubber-tire wheels (Fig.22) and 3 position locking T-handle (Fig.23) make these jacks easy to fit in many lifting situations.



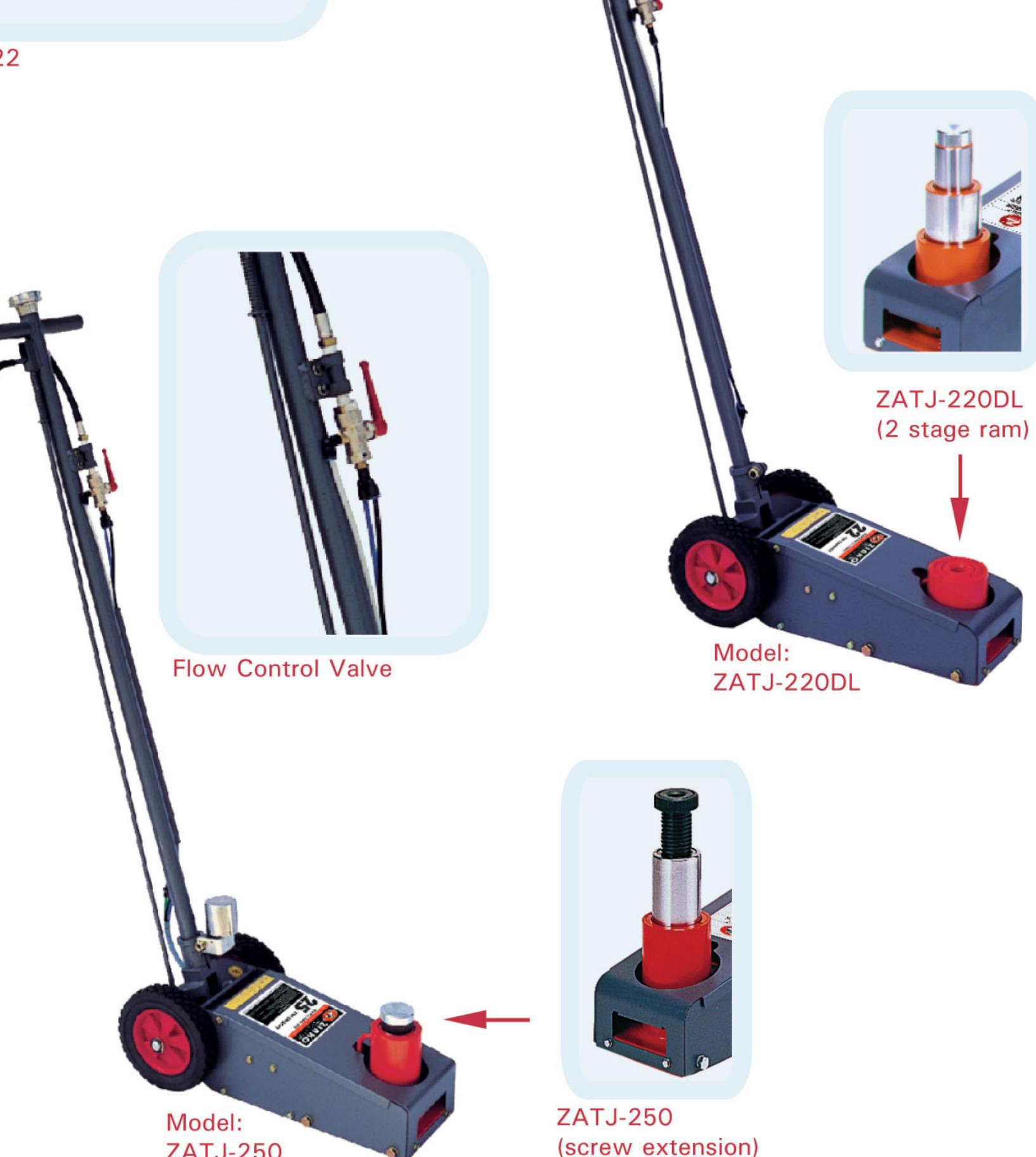


Fig.23



Fig. 21

Fig. 2 i			
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



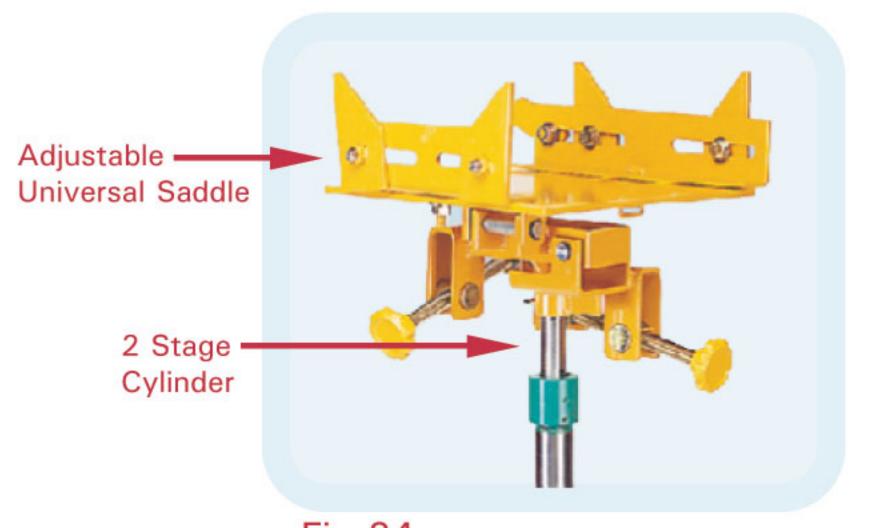
Model Number	Capacity (Tons)	Min Ht. (in)	Hydraulic Lift (in)	Max Ht. (in)	Chassis Length (in)	Chassis Width (in)	Ht. of Frame (in)	Screw Ext. (in)	Ship Weight (lbs)
ZATJ-22S-4v2	22	8.07	4.13	15.94	24.00	12.60	6.69	3.74	85
ZATJ-220DL	22	5.31	3.93	9.24	23.62	12.40	6.69		116
ZATJ-250	25	8.26	4.13	15.93	23.62	12.40	6.69	3.54	127
ZATJ-350	35	8.26	3.93	14.94	23.62	12.40	6.69	2.75	130

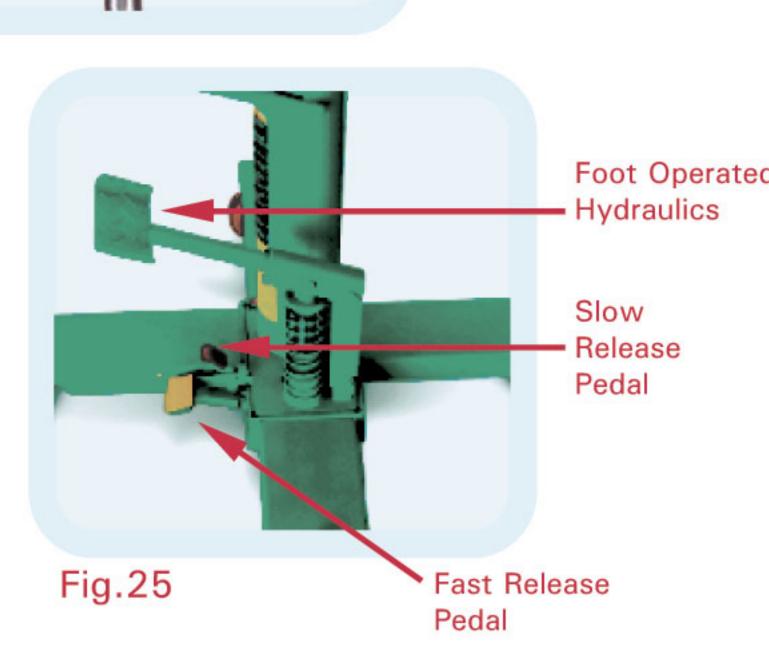
ZM, ZAML & ZML Series

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.24).
- 3. Foot operated two-stage hydraulics allow for precise load control as well as rapid lifting abilities (Fig.25).
- 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.







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 st

stability.		Mode	al: ZAML-502	
Chassis Width (in)	Saddle Cradle (deg)	Side Title (deg)	Ship Weight (lbs)	
33.26	30° / 15°	15°	193	
23.54	42° / 46°	15°	180	
	Andrews I all the second to the second	9 Jane 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	

Model Number	Capacity (Tons)	Min. Ht. (in)	Max. Ht. (in)	Power Lift (in)	Chassis Length (in)	Chassis Width (in)	Saddle Cradle (deg)	Side Title (deg)	Ship Weight (lbs)
ZML-500	0.5	39.88	68.89	29.01	33.26	33.26	30° / 15°	15°	193
ZML-501T	0.5	38.78	75.20	36.42	28.7	23.54	42° / 46°	15°	180
ZAML-501T	0.5	38.78	75.20	36.42	28.7	23.54	42° / 46°	15°	180
ZAML-502	0.5	33.25	71.00	37.75	31	37	30°	15°	180

ZM-T Series

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.
- 3. Safety by-pass and overload system prevent damage from inadvertant 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. Ht. (in)	Max. Ht. (in)	Overall Length Ext. (in)	Overall Width (in)	Ship Weight (lbs)
ZM-500T	0.5	7.75	30.40	32.28	18.78	150
ZM-1000T	1	7.87	29.50	34.05	18.89	180
ZM-1500T	1.5	6.50	35.00	43.50	25.60	370



Jack Stands

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" of exact height adjustment.
- 3. Quick adjust spin handle provides ease of turning under load.
- 4. 23" tripod base designed to aid stability.
- 5. Stands are not designed or intended to support vehicles. Use four stands when stabilizing vehicles on an automotive lift.
- 6. Sold individually and have a rate capacity.



NA I - I	C ! 1		Dimensio	ns (in)		Ship
Model Number	(Tons)	Minimum Height	Maxim um Height	Screw Range	Base Area	Weight (lbs)
ZHS-150	1.5	55.31	85.23	36.5	Ø 27.71	50

Engine Stands

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

Model: ZES-100	Model: ZES-050

	0		Dimensi	ons (in)		Ship
Model Number	Capacity (Tons)	Width-R	Width-F	Length	Height	Weight (lbs)
ZES-050	0.5	37.79	14.68	44.96	42.08	170
ZES-100	1	41.14	13.97	54.29	44.88	290

Screw Type Stands

- 1. Minor adjustments can be made with no 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. Sold individually and have a rate capacity.







Ratchet Type Stands

- 1. Welded steel base for extra strength.
- 2. Positive lock handle cannot be released under load.
- 3. Saddle column provides self-locking ratchet height adjustment.
- 4. Sold in pairs. Pricing is for two stands.





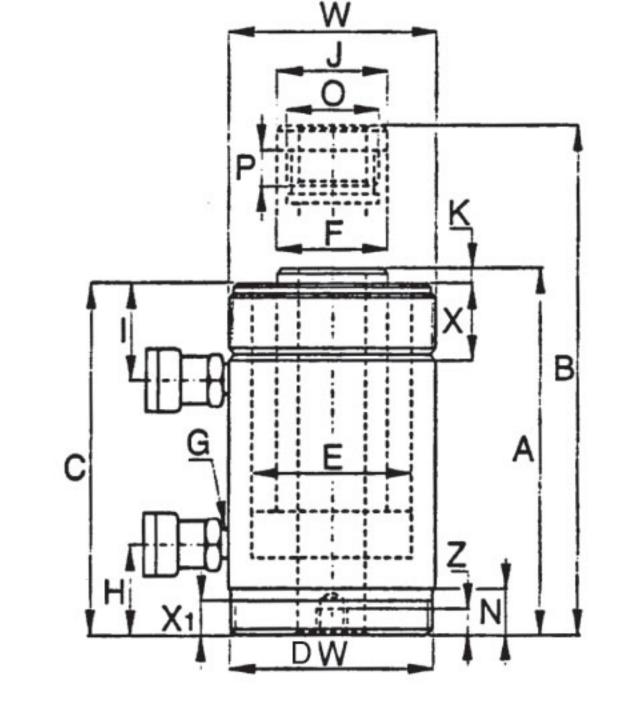
ZJS-061

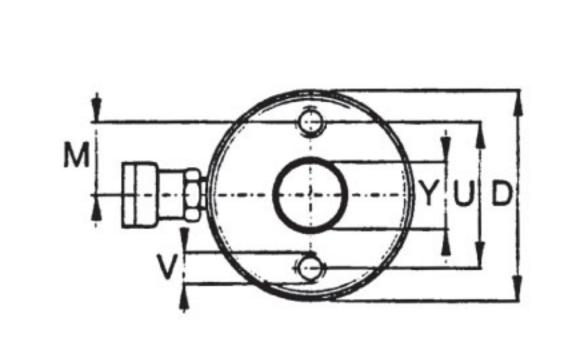
Model: ZJS-031

	O '4		Dim	ensions (in)		Ship
Model Number	Capacity (Tons)	Minimum Height	Maxim um He ight	Saddle Diameter	Base Area	Weight (lbs)
ZJS-031	3	10.63	16.53	10 x 2.88	6.96 x 7.64	17 / PR
ZJS-061	6	12.59	18.89	12 x 2.88	8.00 x 9.00	25 / PR
ZJS-1218	12	17.95	27.95	6.63 x 3.50	Ø 18.38	44
ZJS-1228	12	27.95	41.92	6.63 x 3.50	Ø 26.37	57

Key to Cylinder Dimensions

With Measurement Key





H: Base to Advance Port

I: Top to Retract Port

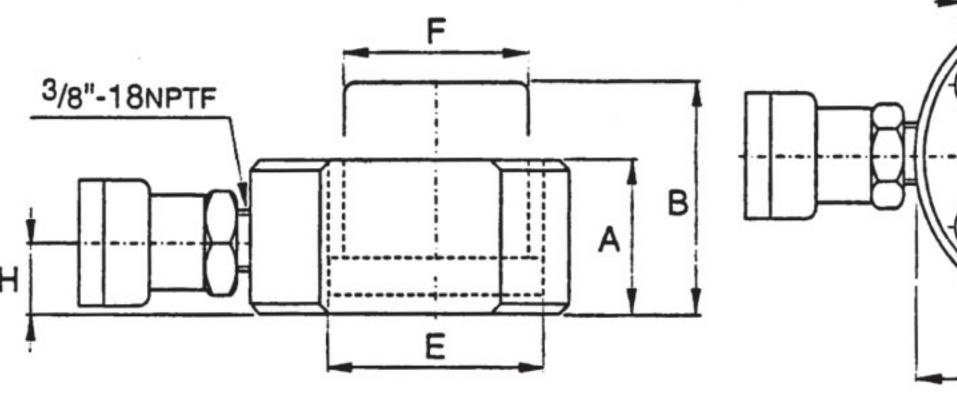
K: Plunger Protrusion (from plunger)

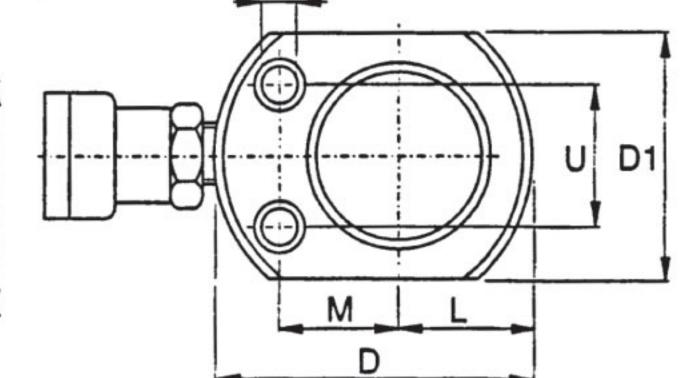
L: Plunger Center to Side of Base

J: Saddle Diameter

M: Mounting Holes To

Plunger Center





- 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
- - 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

						- 1	mperia	I to Me	tric							
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.

Press	sure
1 psi	0.069 bar
1 bar	14.50 psi
Wei	ght
1 pound (lb)	0.4536 kg
1 kg	2.205 lbs
1 metric ton	2,205 lbs
1 US ton	2,000 lbs
1 US ton	907.18 kg

1		
	Other N	/leasurement
	1 in	25.4 mm
	1 mm	0.39 in
	1 in²	0.0645 cm ²
	1 cm³	15.5 in²
	1 hp	0.735 kW
	1 kW	1.359 hp
	1 Nm	0.73756 Ft. lbs
	1 Ft. Ibs	1.355818 Nm

Vol	ume
1 in³	16.387 cm³
1 cm³	0.061 in ³
1 liter	61.02 in ³
1 liter	0.264 gal
1 US gal	3,785 cm³ 3.785 liter 231 in³

					•		-					—
								Dimensions (ir	1)			
Model Number	Cylinder Capacity (Tons)	Stroke (in)	Oil Capacity (in³)	Cylinder Effective Area (in²)	Collapsed Height	Extend Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Adv. Port	Protrusion from Plunger	Ship Weight (lbs)
					Α	В	D	E	F	Н	K	
ZRM Series S	Specification	s					San					
ZRM-005	5	0.25	0.25	1.00	1.25	1.50	2.28 x 1.61	1.13	1.00	0.63	0.04	5
ZRM-010	10	0.47	1.09	2.24	1.69	2.16	3.22 x 2.16	1.69	1.50	0.75	0.04	5
ZRM-020	20	0.44	1.95	4.44	2.00	2.44	4.00 x 3.00	2.38	2.00	0.75	0.04	7
ZRM-030	30	0.51	3.35	6.52	2.28	2.79	4.63 x 3.75	2.88	2.50	0.75	0.08	10
ZRM-050	50	0.63	6.04	9.62	2.59	3.22	5.50 x 4.50	3.50	2.75	0.75	0.08	16
ZRM-075	75	0.63	10.00	15.90	3.11	3.74	6.50 x 5.50	4.50	3.25	0.75	0.08	27
ZRM-100	100	0.63	12.39	19.63	3.34	3.97	7.00 x 6.00	5.00	3.63	0.75	0.08	34
ZRB Series S	Specification	s										
ZRB-101	10	1.50	3.35	2.24	3.46	4.96	2.71	1.69	1.50	0.67	0.20	9
ZRB-201	20	1.77	7.87	4.44	3.85	5.62	3.62	2.38	2.00	0.67	0.12	12
ZRB-302	30	2.44	15.92	6.52	4.60	7.04	3.97	2.88	2.62	0.75	0.12	17
ZRB-502	50	2.36	22.96	9.62	4.80	7.16	4.88	3.50	2.75	0.91	0.08	24
ZRB-1002	100	2.24	44.05	19.64	5.55	7.79	6.50	5.00	3.63	1.22	0.04	47

		Oil Co	nonity.	Cyli	nder	Mov C	e dim al a u				Dimensions (ii	n)			01::
Model Number	Stroke (in)	200	pacity 1³)		ctive (in²)	Accessed to the control of the contr	ylinder y (Tons)	Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Adv. Port	Protrusion from Plunger	Ship Weight (lbs)
		Adv.	Ret.	Adv.	Ret.	Adv.	Ret.	Α	В	D	E	F	Н	K	(.20)
Double-Acti	ng Alum	inum Cy	linders			_									
50 Ton Capa	city					10.5									
ZRD-502A	1.96	21.60	8.17	10.99	4.13	50	19	7.91	9.88	5.70	3.74	2.95	1.18	0.12	25
ZRD-504A	3.93	43.26	16.29	10.99	4.13	50	19	9.88	13.81	5.70	3.74	2.95	1.18	0.12	28
ZRD-506A	5.90	64.86	24.47	10.99	4.13	50	19	11.85	17.75	5.70	3.74	2.95	1.18	0.12	32
100 Ton Cap	acity														
ZRD-1004A	3.93	87.32	48.51	22.18	12.32	102	56	11.85	15.78	7.28	5.31	3.54	1.69	0.12	43
ZRD-1006A	5.90	131.00	72.80	22.18	12.32	102	56	13.81	19.72	7.28	5.31	3.54	1.69	0.12	49
ZRD-1008A	7.87	174.71	97.00	22.18	12.32	102	56	15.78	23.66	7.28	5.31	3.54	1.69	0.12	56
150 Ton Cap	acity														
ZRD-1506A	5.90	207.78	120.82	3518	20.45	162	94	13.70	19.60	9.05	6.69	4.33	1.49	0.12	74

	p t	_						T	T																																					T							T						
	Ship Weight	sqI)			4	4 1	2	9 1		Φ	(9	∞	11	13	15	16	19	-	9	6	<u>ි</u>	12	_	10	11	13	17	20	24	28	30		20	25	35		14	16	20	24	28	32	38	42	45	29	34	45		33	42	51	90	74	91		150	135
rellog	Thread	Length	×		21 23		1.10	1.10		1.10		1.02	1.02	1.02	1.02	1.02	1.02	1.02		1.18	1.18	1.18	1.18		1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19		1.50	1.50	1.50		1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1 93	1.65	1.65	1.65		2.17	2.17	2.17	2.17	1.89	1.89		2.36	1.73
	Collar		8		, I	1		1.5" - 16		1		1	1	1	-1	2.25" - 14	0	2.25" - 14		0	2.75" - 16		1		- J	-1	-1	- 1	- 0	2.75" - 16	- 1	1		1	3.88" - 12	- 1			3.32" - 12	- 1 l	-1	0	1	1	1	3 32" - 12	- "5"	5".	4.5" - 12			5" - 12	1	1	5"-	6.25" - 12		7	0.88" - 12
	Thread	0	Z		: ;	0.55	0.55	0.55	0.00	0.55	!	0.47	0.47	0.47	0.47	0.47	0.47	0.47	1000	0.35	0.35	0.35	0.35		0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47		0.37	0.37	0.37		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75		0.55	0.55	0.55		0.75	0.75	0.75	0.75	0.55	0.55		0.75	0.98
Mounting Holes	1,0		>		0.2	.25" -		1.25" - 20UN	- 62.	- "62"		1	1	1	-1	0.32" - 18UN	1	1		a	0.32" - 18UNC	10	1		- 1	-1	-1	-1	L:	0.38" - 16UN	- 1	- 1		1	0.38" - 16UNC	1		7	0.5" - 13UN	7	1	7	-	0.5" - 13UN	7		0.38" - 16UNC	1	0.38" - 16UNC		- 1	1.5" - 13UN	1	1	1	0.5" - 13UNC		0.63" - 11UNC	0.75" - 10UN 0.75" - 10UN
Base	Bolt Circle		n		1.10	0.98	0.98	0.98	0.30	0.98	,	ij	ij	ij	ιÿ	1.54	Ú	1.54		2.00	2.00	2.00	2.00		1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85		3.25	3.25	3.25			2.28							1	3.63	3.63	3.63		3.75	3.75	3.75	3.75	5.13	5.13		7.00	5.47
2	2 _ (Length	۵		: ;	0.55	0.55	0.55	0.63	0.63	1	0.75	0.75	0.75	0.75	0.75	0.75	0.75		0.63	1	0.63	1		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98		0.75	0.75	0.75		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.86	0.86	0.86		-	1	}	:	0.75	0.75		0.98	: :
7 Openio	eri	Inread	0		444	1	1	0.75" - 16		1		1	1	1	- 1	1" - 8	1	1" - 8		0.75" - 16UN	1	0.75" - 16UN	1		-	- 1	- 1	- 1	- 1	1" - 8	- 1	- 1		- "95"	1.56" - 16UN	1		- "5.	1.5" - 16	- "5"	- "5"	- "5"	- "5"	- "5.	- <u>.</u> .c.	II.'	1.82" - 16UN	.82" -	1.82" - 16UN			1	-	:	75" -	2.75" - 16UN		4" - 16UN	: :
Droteine	from	Plunger	¥		1	0.24	0.24	0.24	0.24	0.24		0.24	0.24	0.24	0.24	0.24	0.24	0.24		1	1	1	1		0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35		0.27	0.27	2.70		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.38	0.38	0.38		0.08	0.08	0.08	0.08	0.50	0.50		0.50	0.08
	Saddle Dia.		ſ		1	0.98	0.98	0.98	0.30	0.98						1.38				-	1	1	1		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		2.13	2.13	2.13		1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	2.48	2.48	2.48		2.80	2.80	2.80	2.80	3.58	3.58		4.96	2.80
	Base to Adv. Port		Ι		0.75	0.75	0.75	0.75	0.75	0.75	1	0.75	0.75	0.75	0.75	0.75	0.75	0.75		0.35	0.75	0.75	0.75		0.75	0.75	0.75	0.98	0.98	0.98	0.98	0.98		0.75	0.75	0.75		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	2.24	0.86	0.86	0.98		1.30	1.30	1.30	1.30	1.22	1.22		1.50	1.61
	Plunger Dia.		ш		1.00	1.00	1.00	1.00	00.7	1.00	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5		1.38	1.38	1.38	1.38		1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63		2.13	2.13	2.13		2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.50	2.50	2.50		3.13	3.13	3.13	3.13	3.62	3.62		2.00	4.13
	Cylinder Bore Dia.		В		7.	- ·	٠. ·	1.13	- 7	٦.		1.69	1.69	1.69	1.69	1.69	1.69	1.69		2.13	2.13	2.13	2.13		2	2	2	2	2	2	2	2		2.88	2.88	2.88		2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.88	3.50	3.50	3.50		3.75	3.75	3.75	3.75	4.88	4.88		6.50	5.13
	Outside Dia.		٥		2.28	1.50	1.50	1.50	1.30	1.50		2.24	2.24	2.24	2.24	2.24	2.24	2.24			2.71				2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71		3.85	3.85	3.85		3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.97	4.50	4.50	4.50		5.00	5.00	5.00	9.00	6.25	6.25		8.35	6.96 6.96
	Extended Height		В		2.24	5.31	9.50	13.46	04.05	21.85		6.88	10.86	15.86	19.73	23.85	27.75	31.71	!	2.47	6.37	6.37	10.24		5.86	7.86	11.87	16.66	20.67	24.68	28.65	32.66		8.30	13.53	18.15		6.50	8.46	12.46	16.97	20.97	25.00	29.00	33.00	23.45	9.52	13.18	19.10		8.94	12.94	17.38	31.38	12.72	18.73		13.00	20.67
	Collapsed Height		4		1.61	4.33	6.50	8.46	10.73	12.72		4.76	6.73	9.72	11.73	13.74	15.75	17.71		2.16	4.72	4.72	7.24		4.88	5.86	7.87	10.66	12.67	14.68	16.65	18.66		6.37	9.52	12.05		5.50	6.50	8.46	10.75	12.71	14.73	16.75	18.75	15.23	7.00	9.17	13.00		6.94	8.94	11.13	18.13	9.72	12.71		10.00	14.05
	Cylinder Effective	ea			_	,			7			2.24	2.24	2.24	2.24	2.24	2.24	2.24		2.77	2.77	2.77	2.77		3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14		4.75	4.75	4.75		5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	6.52	7.22	7.22	7.22		11.04	11.04	11.04	11.04	12.75	12.75		12.75	20.66
	Oil	(in³)			0.61	0.97	3.05	5.06	7.01	9.21	01	4.76	9.27	13.79	17.94	22.76	26.91	31.48		0.85	4.57	4.57	8.30		3.11	6.34	12.5	18.8	25.08	31.48	37.77	44.12		9.15	19.00	29.05		5.15	10.13	20.68	32.03	42.53	52.9	63.18	/3.35	53.7	18.18	28.86	44.06		22.09	44.18	69.03	146.39	38.20	76.82		38.2	136.63
	Stroke	(in)		city	0.63	0.98	3.00	2.00	7.00	9.13	acity	2.12	4.13	6.14	8.00	10.11	12.00	14.00	acity	0.31	1.65	1.65	3.00	acity	0.98	2.00	4.00	00.9	8.00	10.00	12.00	14.00	acity	1.93	4.01	6.10	acity	1.00	1.96	4.00	6.22	8.26	10.27	12.25	14.25	8.22	2.52	4.01	6.10	acity	2.00	4.00	6.25	13.20	3.00	6.02		3.00	10.23
	Model	Number		5 Ton Capa	ZR-50	ZR-51	ZK-53	ZR-55	ZR-37	ZK-59	10 Ton Cap	ZR-102	ZR-104	ZR-106	ZR-108	ZR-1010	ZR-1012	ZR-1014	12 Ton Cap	ZRH-120	ZRH-121	ZRH-1211	ZRH-123	15 Ton Cap	ZR-151	ZR-152	ZR-154	ZR-156	ZR-158	ZR-1510	ZR-1512	ZR-1514	20 Ton Cap	ZRH-202	ZRH-204	ZRH-206	25 Ton Cap	ZR-251	ZR-252	ZR-254	ZR-256	ZR-258	ZR-2510	ZR-2512	20 Ton Con	ZR-308	ZRH-302	ZRH-304	ZRH-306	50 Ton Cap	ZR-502	ZR-504	ZK-506	2K-5013	ZRH-603	ZRH-606	0.63	ZRH-1003	ZR-1006 ZR-10010

Chin	Weight	(sgi)	3	2	13	12	17	26	22		Ship Weight
-tal	Spring	III Net musik	z	Υ	Υ	Υ	Υ	Υ	Υ		_ 7
Int Droce	At Cap.	(led)	2099	8889	8943	8943	8943	8943	8943		Colla
tolal lio	Port NPT	()	1/4	1/4	3/8	3/8	3/8	3/8	3/8		Plunger Internal
Baco Innor	Thread	(IIII)	1	-	1 - 0.25	1 - 0.25	1 - 0.25	1 - 0.25	1		Saddle
	Collar Thread Length	×	1	1.00	1.26	1.26	1.26	-	-		Base to
	Collar Thread	M	1.50" - 16	1.50" - 16	2.25" - 14	2.25" - 14	2.25" - 14	2.75" - 16	:	Dimensions (in)	Plunger
	Plunger Internal Thread	Ь	1	1	1" - 8	1" - 8	1" - 8	1" - 8	1	Dime	Cylinder
Dimensions (in)	Saddle Dia.	ſ	1.00	1.00	1.30	1.60	1.60	1.57	2.08		Outside
Dimens	Plunger Dia.	Н	1.00	1.00	1.50	1.50	1.50	1.63	2.08		
	Cylinder Bore Diameter	Е	Ø 1.00	Ø 1.12	1.77	1.77	1.77	1.88	2.56		d Extended
	Outside C	Q	Ø 1.30	Ø 1.77	Ø 2.24	Ø 2.24	Ø 2.24	Ø 2.75	Ø 3.46		Collapsed
	Extend Height	В	8.46	14.56	20.55	19.50	26.50	26.25	13.93	May Cylinder	Capacity (tons)
	Coll. Height	Α	5.51	10.59	14.52	12.25	16.12	16.12	8.93	May	Cap
Villindor		Alea (III)	0.79	66.0	2.46	2.46	2.46	2.46	4.73	Cylinder	Effective Area
ë	Capacity	()	2.35	3.96	14.80	14.80	24.70	31.42	25.69	(Effe
	Stroke (in)		3.00	4.00	00.9	00.9	10.00	10.00	2.00		Oil Capacity (in³)
Vilindor	Capacity	(5001)	2	4	10	10	10	15	20		Ö Ö Ö
	Coupler		9210101L-R	9210104L-R	195112-R	195112-R	195112-R	195112-R	195112-R		Stroke
	Model		ZAR-023	ZAR-045SP	ZAR-106SP-1	ZAR-106T	ZAR-1010T	ZAR-1510T	ZAR-205T		Model

77		Ship Weight (Ibs)			30	32		44	64	54	29		29	115	150		74	93	115		92	150		135	205	260		110	206	275	525		325	440		545
0343		Collar Thread	W		2.25" - 14	2.25" - 14		3.32" - 12	1	4.5" - 12	4.5" - 12		5" - 12	1	5" - 12		1	1	6.25" - 12		1	5.75" - 12		6.88" - 12	6.88" - 12	6.88" - 12			1	8" - 12	8" - 12		1	9.75" - 12		12.25" - 12
0/0		Plunger Internal Thread	0		1" - 8	1" - 8		1	-1	1.82" - 16	- 1		1" - 12	1	1" - 12		75" -	75" -	2.75" - 16		1" - 12	1" - 12		.75" -	1.75" - 12	.75" -		ł	3.38" - 16	3.38" - 16	3.38" - 16		-	2.50" - 12		2.50" - 12
!		Saddle Diameter	J		1.38	1.38		1.97	1.97	2.48	2.48		2.79	2.79	2.79		3.58	3.58	3.58		2.79			3.00	3.00	3.00		3.66	4.48	4.48	4.48		5.24	5.24		6.50
!	(1	Base to Adv. Port	Ŧ		1.42	1.42		2.24	2.24	0.98	0.98		1.10	1.10			1.22	1.22	1.22		1.18	1.18		1.50	1.50	1.61		98.0	1.93	1.93	3.00		2.24	2.24		3.46
:	ensions (in	Plunger Diameter	Ь		1.37	1.37		2.13	2.13	2.50	2.50		3.13	Τ.	~		3.63	3.63	3.63		3.75	3.75		3.75	3.75	3.75		4.50	4.50	4.50	4.50		5.25	5.25		6.50
!	Dim	Cylinder Bore Dia.	Е		1.69	1.69		2.88	2.88	3.50	3.50		3.75		3.75		4.88	4.88	4.88		4.50	4.50		5.13	5.13	5.13		6.25	6.25	6.25	6.25		7.50	7.50		9.50
2.00 0		Outside Diameter	D		2.88	2.88		4.00	4.00	4.48	4.48		5.00	5.00	2.00		6.25	6.25	6.25		5.75	5.75		7.00	7.00	7.00		8.00	8.00	8.00	8.00		9.75	9.75		12.25
00:		Extended Height	В		26.10	30.00		23.50	36.10	20.00	27.12		19.17	33.19	49.00		13.22	19.25	27.36		19.80	33.78		20.67	33.75	45.15		96.6	21.30	35.31	76.02		22.91	36.94		25.11
S 3.40		Collapsed Height	Α		16.10	18.00		15.25	21.63	13.00	16.96		13.03	20.06	28.85		9.72	12.71	17.25			20.67		14.05	20.63	27.04		7.71	15.15	22.16	43.94		16.93	23.94		19.09
13.93	Cylinder	Capacity (tons)	Ret.		3	3		13	13	21	21		15	15	15		40	40	40		22	22		44	44	44		29	29	29	29		102	102		188
0.80	Max	Ca	Adv.		10	10		30	30	30	30		20	50	20		9	60	9		72	72		94	94	94		139	139	139	139		200	200		300
5/.4	nder		Ret.		0.74	0.74				4.71	4.71		3.33		3.33		8.40	8.40	8.40		4.86	4.86		9.62	9.62	9.65		14.80	14.80	14.80	14.80		22.52	22.52		38.00
20.03	Cyling	Effective (in ²)	Adv.		2.24	2.24		6.52	6.52	7.22	7.22		11.03	11.03	11.03		12.75	12.75	12.75		15.90	15.90		20.66	20.66	20.66		30.70	30.70	30.70	30.70		44.18	44.18		70.88
0.00		Capacity (in³)	Ret.		7.45	9.00		24.40	42.90	33.00	47.84		20.44	43.81	90.79		29.21	54.24	84.49		29.90	63.83		63.77	126.38	174.58		33.20	90.80	193.87	474.45		134.80	292.60		227.00
20		Oil Ca (ir	Adv.		22.45	27.00		53.64	94.52	50.58	73.35		67.80	145.11	222.00		44.57	82.77	128.94		97.70	208.51		136.57	270.88	374.20		68.90	188.56	402.57	985.22		264.35	574.00		427.00
193112-R		Stroke (in)		pacity	10.00	12.00	acity	8.25	14.50	7.00	10.15	acity		13.15	20.11	acity	3.50	6.53	10.12	acity	6.14	13.11	pacity	6.61	13.11	18.11	pacity	2.24	6.14	13.11	32.08	pacity	00.9	13.00	pacity	00.9
1 COZ-YYZ		Model Number		10 Ton Cap	ZRD-1010	ZRD-1012	30 Ton Cap	ZRD-308	ZRD-3014	ZRDH-307	ZRDH-3010	50 Ton Cap	ဖွ	ZRD-5013	ZRD-5020	60 Ton Cap	ZRDH-603	ZRDH-606	ZRDH-6010	75 Ton Cap	ZRD-756	ZRD-7513	100 Ton Ca	ZRD-1006	ZRD-10013	ZRD-10018	150 Ton Ca,	ZRD-1502	ZRD-1506	ZRD-15013	ZRD-15032	200 Ton Ca	ZRD-2006	ZRD-20013	300 Ton Ca	ZRD-3006