

# Fiable Hydraulics Pvt Ltd.

Hydraulic Professionals

Technical Information

## Hydraulic Cylinder's Catalogue





# FIABLE HYDRAULICS PVT LTD

HYDRAULIC PROFESSIONALS

## FOREWORD

Fiable Hydraulics Pvt Ltd Industrial Cylinder Division offers products that are designed to meet and exceed the most demanding application requirements. Our extensive product line offers OEM's and End Users hydraulic cylinder solutions that provide value through reduced maintenance, increased productivity, and long service life. Fiable Industrial Cylinder's wide breadth of product encompasses NFPA, ISO, and Custom designed products in a multitude of configurations and sizes.

Fiable Hydraulics Pvt. Ltd., is today a nationwide leader in the manufacturing of hydraulic Fittings, catering to almost all leading Machine Tools Manufacturers, Automobile Industries and Steel Plants. A team of dedicated technocrats, it has always grown in leaps and bounds, and has won the esteem of all the customers. In attaining this goal, the Company's objectives of meeting the customers' increasing expectations for Quality, Delivery and Value were never compromised.

The Company has always tried to keep pace with the latest technological developments. The Company has over 3500 catalogue items, besides the other product range of Shut off, Valves, Needle Valves, Minimes Couplings, Direct Acting Relief Valves, Reducing Connections, Standpipe Adaptors, Welding Nipple, Pipe Clamps and SAE split flanges.

The Company, also manufactures Hydraulic Fittings and Hydraulic Power Packs.

The Company has set up a co-ordinated and efficient distributor network all over the country.



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## INNOVATIVE MOBILE SOLUTIONS

Fiable Hydraulic Pvt. Ltd. is a Pune based manufacturer of custom and standard hydraulic solutions.

We manufacture hydraulic cylinders, hydraulic power units and pumps as well as engineer and integrate more than 100,000 other hydraulic components such as motors, valves, manifolds, and many more options.

Serving the mobile equipment industry for decades, our products are designed and supported.

We are also a certified OEM production supplier to many large India based corporations.

Our services include custom components or system design, on-site visits, continuous support, flexible delivery and stocking programs, inventory updates, many warranty options, and responsive service.

We strive to provide you the best experience and deliver high-quality merchandise faster than expected.

Fiable Hydraulic adds value through innovation, quality, respect, commitment, loyalty, and teamwork.

## OUR CAPABILITIES

1. OEM HYDRAULIC CYLINDERS
2. STANDARD HYDRAULIC CYLINDERS
3. HYDRAULIC POWER UNITS
  - a. DC
  - b. AC
4. HYDRAULIC COMPONENTS

-Pumps

-Motors

-Valves

-Tanks

-Manifolds

-Filters

-Remotes

-Cartridges

5. SYSTEM INTEGRATION



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## TECHNICAL INFORMATION

Sr	Part	Construction Details
1	Barrel	ST-52, ASTM A-106 Gr. B Flanges are welded, machined and honed to 0.4 micronfinish
2	Piston Rod	Made from medium Carbon Steel, ground, hard chrome plated and super finished
3	End Covers	Made from Steel IS 2062, Machined. CNC finish available for quantities
4	Gland	As three options, PB Bush, Cast or made from Steel directly. Bush is inserted for smooth operation of pistonrod and for suitable guidance
5	Mounting	Multiple mountings are available and correspond to as per ISO 6020-1
6	Self-Aligning Cushioning Boss	Enable accurate movement inside cushioning chamber at the end of stroke
7	Cushioning Screws	For free adjustment is available as an option
8	Air Bleed	Screw provided for releasing trapped air in cylinder

## ADDITIONAL INFORMATION

**Standards:** The installation dimensions and mounting types of the cylinders comply with standards ISO 6022

**Nominal pressure:** 250 bar (25 MPa)

**Static test pressure:** 375 bar (35 MPa) Higher operating pressures up to 450 bar on request.

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**Minimum pressure:** Depending on the application, a certain minimum pressure is required to ensure proper operation of the cylinder. If no load is applied, we recommend a minimum pressure of 10 bar for single-rod cylinders.

**Installation position:** Optional

**Hydraulic fluid:** Mineral oils DIN 51524 (HL, HLP)

**Hydraulic fluid temperature range:** -20 °C to +80 °C

**Ambient temperature range:** -20 °C to +80 °C

**Viscosity range:** 2.8 to 380 mm<sup>2</sup>/s

Permissible maximum degree of contamination of the hydraulic fluid to ISO 4406 (c) class 20/18/15.

**Primer coating:** As a standard, hydraulic cylinders are primed with one coating in a thickness max. 80 µm.

## SEALS

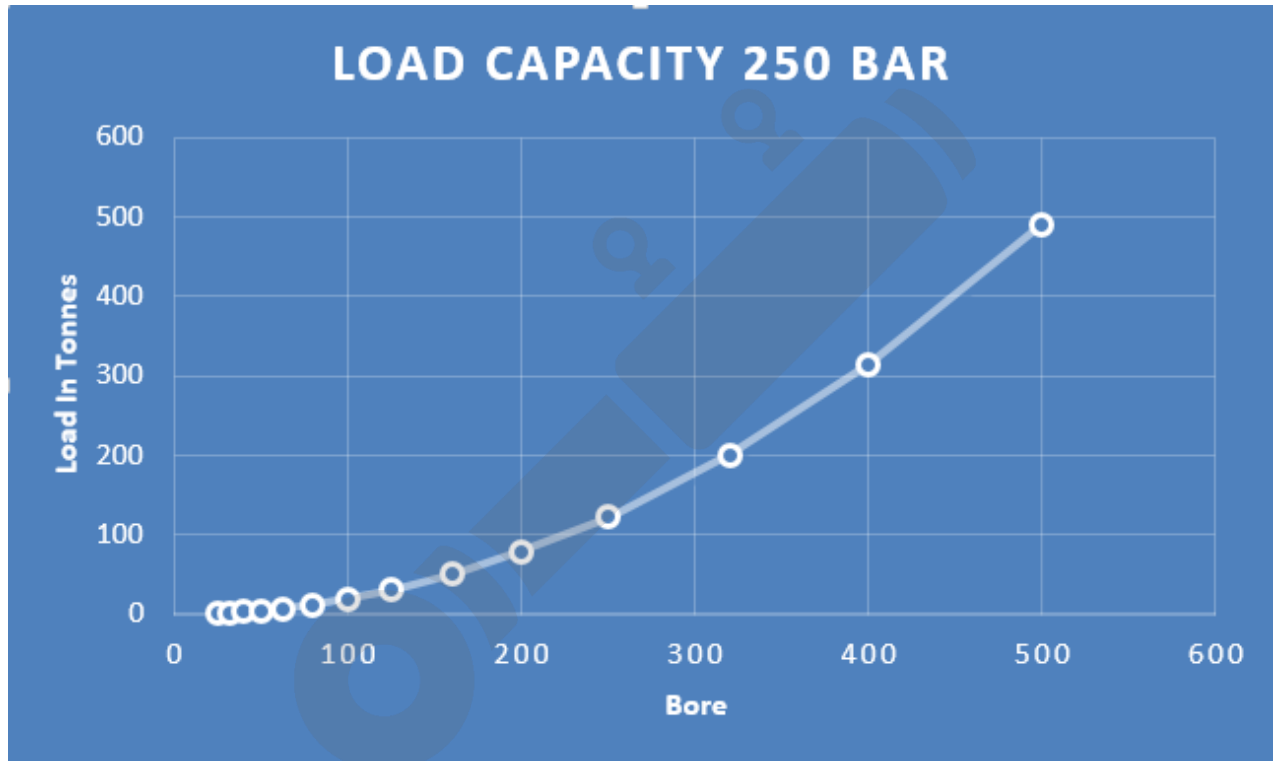
Sr No	Seal Type	Description
1	Piston Seal	Based on ISO 7425-1 and ISO 10766
2	Piston Seal	DAS™ variation for holding power
3	Gland Seal	Dimensions correspond generally to RU3 ISO 5597
4	Wiper	Dimensions correspond generally to ISO 6195. Metallic Wipers available for high temperature (+80C).
5	Static	Nitrile Rubber 'O' Rings



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## LOAD CAPACITY CHART



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## MOUNTING TYPES

Sr No	Code	Type	Image
1	MF 1	Head, rectangular flange	
2	MF 2	Cap, rectangular flange	
3	MF 3	Head, circular flange	
4	MF 4	Cap, circular flange	
5	MP 3 MP 4 MP 5 MP 6	- Cap, fixed plain eye - Cap, detachable plain eye - Cap, fixed eye with spherical bearing - Cap, detachable eye with spherical bearing	
6	MS 2	Side lugs	
7	MT 4	Intermediate fixed or movable trunnion (male)	

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## PISTON ROD CHARACTERISTICS

1. En8 or C-45 material is machined, ground and plated for maximum durability. Plating thickness kept at least 23microns.
2. IPHT Series 4 covers piston rods that have a shouldered male thread end; see Figure 1 and Table 1 for basic dimensions.
3. Rod end types based on ISO 4395.
4. Accessory mounting dimensions in accordance with ISO 8132.

## IMPORTANT PISTON AREA RATIOS

Piston	Piston rod	Area ratio	Areas			Force at 160 bar		
			Piston	Areas Rod	Annulus	Pressure	Diff	Pulling
<b>AL</b> <b>Ømm</b>	MM Ømm	$\phi$ A1/A3	A1 cm <sup>2</sup>	A2 cm <sup>2</sup>	A3 cm <sup>2</sup>	F1 kN	F2 kN	F3 kN
<b>25</b>	14	1.46	4.91	1.54	3.37	7.85	2.44	5.37
	18	2.08		2.54	2.36		4.07	3.76
<b>32</b>	18	1.46	8.04	2.54	5.5	12.8	4.07	8.78
	22	1.9		3.8	4.24		6.08	6.76
<b>40</b>	22	1.43	12.56	3.8	8.76	20	6.08	14.03
	28	1.93		6.16	6.41		9.82	10.24
<b>50</b>	28	1.46	19.63	6.16	13.47	31.3	9.82	21.55
	36	2.08		10.18	9.46		16.29	15.1
<b>63</b>	36	1.48	31.17	10.18	20.99	49.8	16.29	33.56
	45	2.04		15.9	15.27		25.4	24.41
<b>80</b>	45	1.46	50.26	15.9	34.36	80.3	25.4	54.96
	56	1.96		24.63	25.63		39.3	40.99

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100	56	1.46	78.54	24.63	53.91	125	39.3	86.22
	70	1.96		38.48	40.06		61.57	64.04
125	70	1.46	122.72	38.48	84.24	196	61.57	134.7
	90	2.08		63.62	59.1		101.8	94.49
160	90	1.46	201.06	63.62	137	321	101.8	219.8
	110	1.9		95.06	106		152.1	169.5
200	110	1.43	314.16	95.06	219.09	502.6	152.1	350.6
	140	1.96		153.94	160.2		246.3	256.3
250	140	1.46	490.87	153.94	336.93	785.39	246.3	539.08
	180	2.076		254.47	236.4		407.15	378.24
320	180	1.46	804.25	254.47	549.78	1286.8	407.15	879.64
	220	1.9		380.13	424.12		608.2	678.59
400	220	1.43	1256.6	380.13	876.47	2010.56	608.2	1402.35
	280	1.96		615.75	640.85		985.2	1025.36
500	280	1.46	1963.5	615.75	1347.15	3141.6	985.2	2155.44
	360	2.08		1017.88	945.62		1628.6	1512.99

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 <p><i>Picture 1 GARBAGE TIPPING VEHICLE</i></p>	<p>HYDRAULIC TIPPING CYLINDERS</p> <ol style="list-style-type: none"><li>1. HYD TIPPING CYLINDER FOR 3 WHEELERS B50XR36XS350</li><li>2. HYD TIPPING CYLINDER FOR 4 WHEELER 1.2 TON LOAD CAPACITY B63XR40XS550</li><li>3. HYD TIPPING CYLINDER FOR 2.5TON LOAD CAPACITY B80XR40XS550</li><li>4. HYD TIPPING CYLINDER FOR 5 TON LOAD CAPACITY B90XR50XS550</li></ol>
 <p><i>Picture 2 ADVERTISEMENT VEHICLE</i></p>	<p>HYDRAULIC ADVERTISEMENT CYLINDERS</p> <ol style="list-style-type: none"><li>1. HYD CYLINDER DOUBLE ACTING B63XR45XS1832 WITH SUPPORT RING</li></ol>



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Picture 3 TOWING VAN

## HYDRAULIC TOWING VAN CYLINDERS

- AS PER REQUIREMENT

Required details are:

1. Load Capacity
2. Mounting Style
3. Close Length
4. Stroke/ Open Length
5. Available Pressure



Picture 4 TAIL GATE

## HYDRAULIC TAIL GATE CYLINDERS

- AS PER REQUIREMENT

Required details are:

1. Load Capacity
2. Mounting Style
3. Close Length
4. Stroke/ Open Length
5. Available Pressure



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	<p>CHASIS CARRIER CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>
	<p>FLAT BED CARRIER CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>



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	<p>HYDRAULIC COLUMN LIFT CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>
	<p>HYD DOCK LEVELLER CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>



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	<p>HYD SCISSOR LIFTS CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>
	<p>HYD PARKING LIFT CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>



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	<p>HYD TWO WHEELER RAMPS CYLINDER</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>
	<p>HYD GOODS LIFT CYLINDERS</p> <ul style="list-style-type: none"><li>• AS PER REQUIREMENT</li></ul> <p>Required details are:</p> <ol style="list-style-type: none"><li>1. Load Capacity</li><li>2. Mounting Style</li><li>3. Close Length</li><li>4. Stroke/ Open Length</li><li>5. Available Pressure</li></ol>

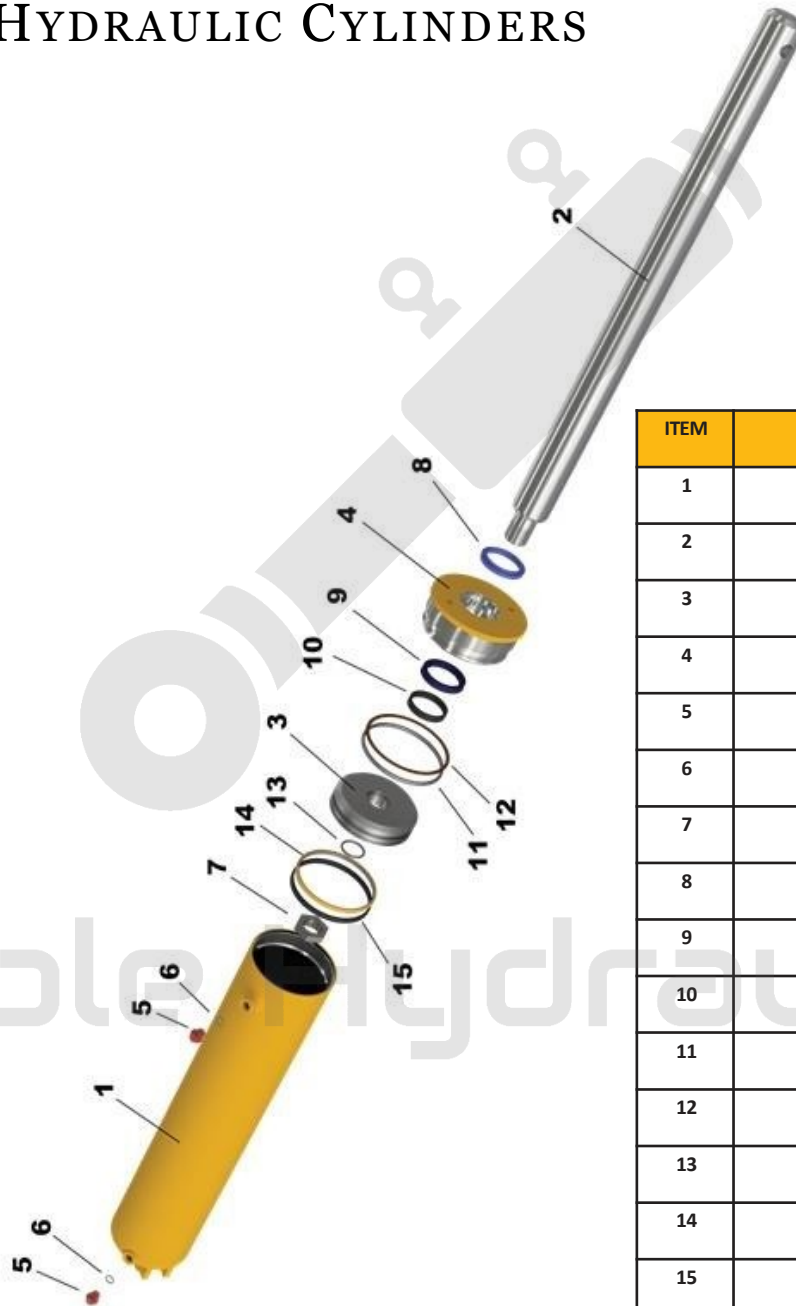




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## INSIDE HYDRAULIC CYLINDERS



ITEM	DESCRIPTION	QTY
1	Barrel	1
2	Rod	1
3	Piston	1
4	Gland	1
5	Plastic Plug	2
6	Plug O-Ring (SAE)	2
7	Stover Locknut	1
8	Wiper	1
9	Rod Seal	1
10	Wear Ring	1
11	Gland O-Ring	1
12	Gland Back-Up Ring	1
13	Rod O-Ring	1
14	Piston Seal	1
15	Piston Wear Ring	1

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## HYDRAULIC PRODUCT SAFETY



- ▶ Always wear eye protection and protective clothing when working on and around hydraulic systems.
- ▶ Never exhaust hydraulic fluid under pressure to atmosphere.
- ▶ Hydraulic fluid can reach high temperatures under normal operating conditions and can burn exposed skin.
- ▶ Fluid pressure can penetrate skin and cause death or serious injury, Wear proper protective clothing when working on hydraulics.
- ▶ Hydraulic devices should be properly “Locked-Out” or “Tagged-Out” before being worked on, including the release of any stored energy or pressure. Ensure a mechanical locking device is in place to prevent injury or death.
- ▶ Do not use any heat-producing equipment such as oxyacetylene/gas torches and angle grinders on sealed hydraulic cylinders.
- ▶ Remove hydraulic oil from the cylinder before heating the cylinder.
- ▶ Never operate a cylinder(or power unit) above recommended pressures.
- ▶ Always use properly rated hoses and fittings.
- ▶ Do not weld, add welded items, drill holes or otherwise modify the cylinder from its original design.
- ▶ The hydraulic power unit may heat up during operation. The solenoids in the hydraulic power unit become sohot during operation that you may sustain burns. You should wear heat-proof gloves or protective clothing.

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## Products we offer:

- Hydraulic Power Pack
- Hydraulic Cylinders
- Hydraulic Valves
- Hydraulic Pumps
- Hydraulic Motors
- Hydraulic Fittings



**Fiable Hydraulics**

## About Us :

FIABLE HYDRAULICS PVT LTD - Top Hydraulic Power Packs & Hydraulic Cylinders Manufacturer

Looking for reliable hydraulic power packs manufacturers? Fiable Hydraulics Pvt Ltd offers high-quality hydraulic power packs and hydraulic cylinders for various industrial applications.

FIABLE HYDRAULICS PVT. LTD is a Pune's well known company in the field of hydraulics. We are backed by a decade of experience in field of hydraulics, We have a state of art manufacturing facility of hydraulic fittings, hydraulic power units & hydraulic cylinders situated in BHOSARI, PUNE.

We have also developed compact AC & DC hydraulic power units and hydraulic cylinders widely used in garbage tippers.

We provide a one stop solutions for all hydraulic components needs of our customers.

## Fiable Hydraulics Pvt Ltd

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