HYDRAULIC CYLINDERS **GIDROLAST**

10 YEARS OF EXPERIENCE

GIDROLAST CORP. 2007-2017

GIDROLAST®

FOR THE OIL AND GAS FIELD AND PETROLEUM INDUSTRY

FOR THE MATERIAL HANDLING INDUSTRY

FOR MARINE AND SHIPYARD USE

FOR THE WASTE MANAGEMENT INDUSTRY

FOR HEAVY TRACKS

FOR MILITARY GRADE

FOR THE MINING INDUSTRY

FOR METALLURGICAL EQUIPMENT

TELESCOPIC HYDRAULIC CYLINDERS

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About company

Since 1993, Gidrolast capital 915 000 Euros, has confirmed its control on conceiving / manufacturing lifting equipment.

The company is established in the heart of the area of CARBONATE, COMO, ITALY, on a 12000 square meters covered site, gathering the registered office and the factory, with a manpower of 100 people.

Gidrolast has regularly invested to be able to rely on production equipment of quality.

Italian leader recognized as the expert in lifting tables and elevators manufacturing, turn-over in 2014: 9,000,000 Euros, of which 80 % at export (this means 1000 to 1200 hydraulic machine a year).

The development of this equipment goes from the simplest solution to the special equipment, answering particular operational requirements in sectors as various as chemistry, wood, the armament, car, railway, data processing, perfumery, administrative authorities, metallurgy, etc.

During these years, Gidrolast has confirmed its vocation of conceiving / manufacturing levelling equipment resting on the ground. The productions range is very wide and very diversified.

The manufacturing plant Gidrolast

Gidrolast factory is located 12 000 m² indoor and is equipped with powerful equipment of productions (machineries and numerical control tooling centres).

Gidrolast workshops are equipped with special machines necessary to the transformation of metals:

Cutting up, tooling, cylinders, assembly-welding, hydroelectric assembly, surface treatment.

They also have significant handling means:

Overhead travelling cranes, brackets, forklift trucks.

The registered purchase orders represent a 80% production of specific equipments (standard: 20%), it results from this a pattern of lifting tables and platforms being able to support up to 100 tons lifting capacity, also footbridges able to lift up to 30 meters height. At the present time, more than 20 000 lifting equipments and platforms are in operation.

Technical specifications

Cylinder type: piston;
Bore dia: to 1.500mm (59,06");
Rod dia: to 800mm (31,05");
Stroke: to 15.000mm; (590,55");
Max. pressure: 45 MPa; (6.500 PSI);
Operating temperature: -50°C...to +120°C, (-58°F...to 248°F);

Product details:

Gidrolast designs and manufactures custom designed hydraulic cylinders for all segments of industry. These areas include construction and mobile equipment; material handling; above and below ground mining; heavy trucks; rail road equipment; waste management; marine, sub-sea and shipyard machinery; cranes; oilfield equipment; miltary and naval equipment; agricultural machinery and more.

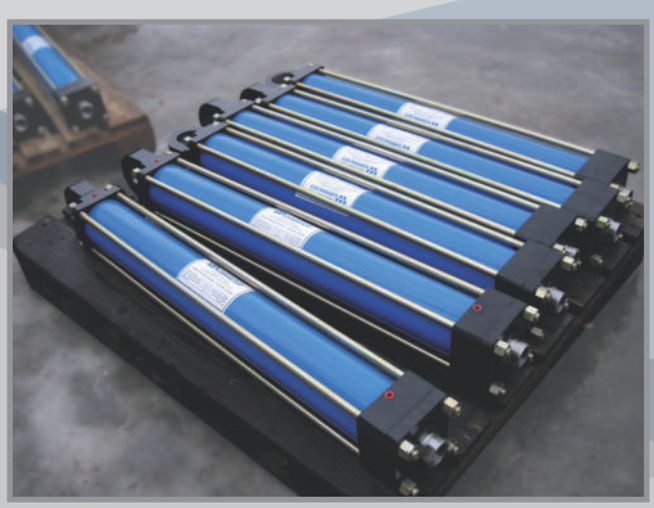
Our custom hydraulic cylinders are designed to exceed our customers exacting requirements and withstand the rigors of their particular industrial segment.

Many of these different segments of industry present very special challenges for hydraulic actuators. Yet whether its deep underground in a damp and gritty mine shaft or buried in the mast of a forklift, on an agricultural planter in the blazing sun or on an offshore oil rig enduring corrosive salt spray, Gidrolast hydraulic cylinders are designed with rugged features to give unequalled service life and performance.

www.gidrolast.com +39 02 94756257 sale@gidrolast.com

Why choose our company?

Production of non-standard cylinders according to your drawings and dimensions;
Branded hydraulic from Gidrolast, Italy;
Manufacture of cylinders part from 42CrMo4 and Stainless steel;
Operating temperature from -50°C...to +120°C, (-58°F...to 248°F);
Average service life - up to 5 years;
Products are certified according to requirementsй EAC and EC;
We use of standard components and parts;
Warranty 30 000 cycles.



Hydraulic cylinders by industry

Hydraulic cylinders for the oil and gas field and petroleum industry

From the sticky tar sands of Uzbekistan and the frozen wind swept waste lands of Ural to arid sun bleached Texas and the sizzling hot deserts of Saudi Arabia; from the warmth of the Caspian sea to the cold salt spray of the ocean, Gidrolast hydraulic cylinders are the actuators of choice in the grueling oil field industry both on shore and off shore.

Oil rigs are located in some of the most demanding locations in the world. Blowing sand, sticky tar, extremes of hot and cold temperature, corrosive elements, and heavy duty use. The cylinders used are often large bore and long stroke. Downtime is measured in millions of dollars. In addition to all that, the equipment is often located in remote areas far from civilization. Rugged, reliable cylinders are a must.

Gidrolast designs and builds heavy duty hydraulic cylinders, both rod style and telescopic, to withstand the tough conditions and demanding requirements of the petroleum industry.

Hydraulic cylinders for the material handling industry

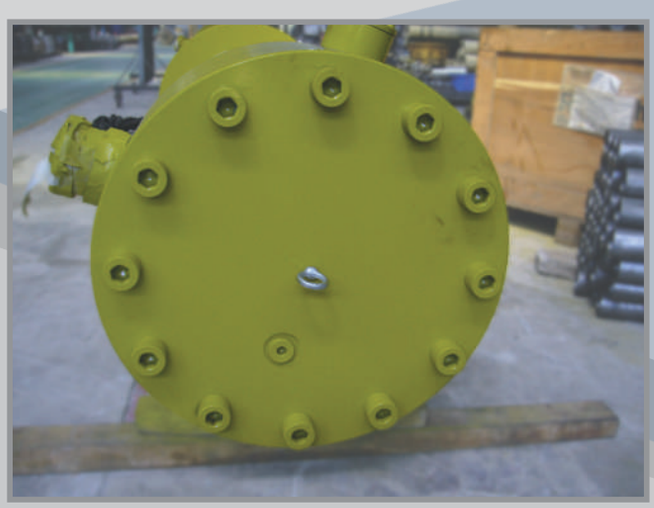
Fork lift trucks, pallet loaders, conveyors, cranes, and so on. These machines are at the heart of any facility moving materials and products.

These machines also depend on the power of hydraulic cylinders to do their work. That means that the cylinders have to be reliable. A failure means loss of production and profit.

At Gidrolast, we appreciate that. We build our cylinders to last with precision machining and using heavy duty seals and bearings. Our factory uses the latest high technology production methods including robotic welders, friction welders, and skive roller burnishing.

Our quality control methods are the best in the business. And to cap it off, all of our cylinders are 100% pressure tested before they leave our factory.

That means that our customers are 100% confident when they mount a Gidrolast mast cylinder into the bowels of their fork lift truck or assemble a lift cylinder under a heavy duty conveyor.



Hydraulic cylinders for marine and shipyard use

Hydraulic cylinders used on shipboard machinery or used in shipyards must endure very difficult conditions including hot and cold temperature extremes, exposure to salt water, driving rain, ice, as well as dirt and many other forms of contamination. That is an extremely abusive environment for hydraulic actuators. Cylinders used in the conditions must be designed and manufactured with these well in mind if they are to survive and work reliably.

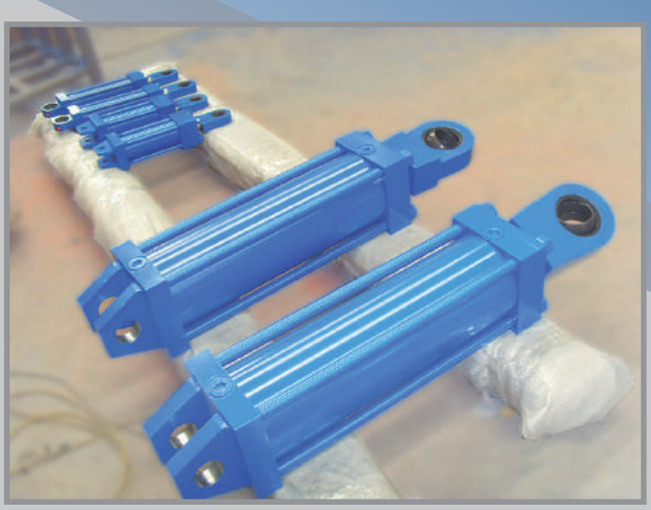
In addition, many hydraulic cylinders used on ships and harbor cranes are very large bore and very long stroke. Their large size makes frequent repair or replacement simply out of the question. Other marine cylinders are mounted in a ship's machinery that is very difficult to reach. All these factors makes reliability a primary concern for marine cylinders.

Gidrolast has a great deal of experience in building marine grade hydraulic cylinders that thrive under those trying conditions. Gidrolast marine grade cylinders are constructed with chrome plated rods that are rated to withstand a 200-1000 hour salt spray test. Marine cylinder bodies are coated with epoxy paint to maximize corrosion resistance.

For more difficult applications, Gidrolast can build marine cylinders with stainless steel piston rods for additional corrosion resistance. For maximum corrosion protection, we can even manufacture cylinders with all stainless steel construction.

We have built both standard rod cylinders and multistage telescopic cylinders for marine use. Harbor crane applications including luffing cranes, container loaders, swing cylinders, and more. Shipboard applications include shipboard luffer cranes, hatch cover cylinders, ramp cylinders, gate cylinders, steering actuators, and more.

The Gidrolast large bore, long stroke rod cylinder shown above operates as a Shipboard Crane Cylinder. The Gidrolast marine cylinders shown above are coated with white epoxy paint to resist corrosion. This will ensure a long trouble free service life under harsh marine conditions. These particular actuators operate as Gate Cylinders.



Hydraulic cylinders for the waste management industry

Gidrolast got its start in building rugged hydraulic cylinders for use on heavy trucks in the waste management industry way back in 1994. That means we know first hand what is required to build cylinders that will tough it out in this industry. So whether the cylinder is operating the gate on a garbage truck or the grapple in a scrap metal yard; the compactor on a scrap baler or lifting the blade of a bulldozer in a land fill site, Gidrolast cylinders are built to last.

Both OEM's and end users around the world appreciate the rugged reliability built into each of our cylinders. Careful, experienced design is combined with high quality manufacturing to make our Gidrolast hydraulic cylinders the cylinders of choice in waste management and recycling equipment.

It's not hard to see why tough, reliable cylinders are required in the waste management and recycling industry, as these pictures clearly testify. Hydraulic cylinders are shown in action in a scrap metal yard above. Below, hydraulic cylinders are used extensively on a landfill dozer for actuating the blade and for steering. They have to be built tough!

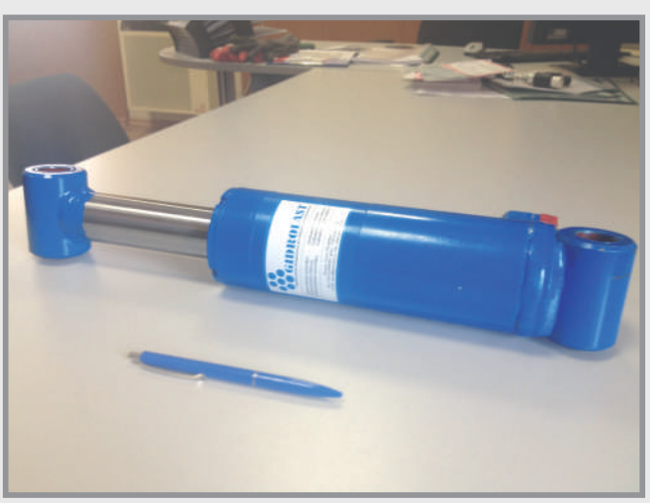
Hydraulic cylinders for heavy trucks

Gidrolast knows heavy trucks. We cut out teeth building hydraulic cylinders for heavy trucks all the way back in 1993. Hydraulic cylinders on trucks are subjected to all forms of contamination that would destroy a poorly designed cylinder. Dirt, grit, rain, salt, tar, chemicals, solvents, and cleaning agents all combine to attack the cylinder and its seals. Despite all this, the cylinders are still expected to perform. Cylinder failure means downtime, employee overtime, loss of vehicle availability, less productivity and reduced profit.

Gidrolast cylinders are built tough to meet these conditions. They can be found mounted on garbage trucks, dump trucks, belly dumpers, semi end dumpers, boom trucks, knuckle boom loaders, road pavers, concrete mixers, concrete pumps, mobile cranes, tilt beds, and tow trucks.

Applications include dump cylinders, aerial boom cylinders, compaction cylinders, outrigger cylinders, tilt cylinders, swing cylinders, plow lift cylinders, and more.

Our telescopic cylinders are available in both single and double acting, and are used in dump trucks, roll off trucks, cranes, and booms.



Military grade hydraulic cylinders

Military and Naval equipment has some of the most demanding specifications and requirements of any machinery. It has to. Lives depend on it.

From the frozen arctic tundra to hot humid jungles, from arid sand blown deserts to the wind swept salt spray of the oceans, military equipment is exposed to every conceivable environment on the planet. Military hardware is often stored unused for months or years at a time, but then must be ready to move and operate in a moments notice. The hydraulic cylinders used on this equipment must be of the very best quality. Gidrolast makes them.

Gidrolast cylinders are carefully designed and engineered, using only the finest materials of construction, and are precision manufactured with the cutting edge industrial equipment. The result is cylinders that meet the toughest military and naval specifications.

Our decades of experience and engineering expertise give us the capabilities to incorporate features and options into hydraulic cylinders to suit the demanding requirements of manufacturers of military and naval equipment all around the world. Our quality control procedures ensure that the product meets military specifications before it leaves our plant.

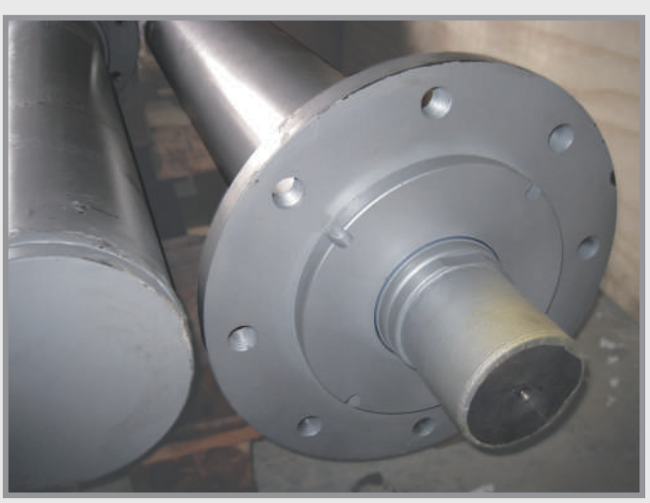
Hydraulic cylinders for the mining industry

Mining equipment is continually subjected to tortuous conditions that punish on hydraulic cylinders. These difficult conditions include dust, grit, heat, cold, and moisture. In addition the equipment is subject to slamming loads and mechanical impacts.

Gidrolast designs and manufactures heavy duty hydraulic cylinders that endure these very difficult conditions.

Gidrolast cylinders can be found on hydraulic equipment in surface and sub surface mining operations all around the globe. They are installed on dredgers, hydraulic shovels, dump trucks, over sized off road equipment, tunnel boring machines, ore haulers, ore crushers, and aggregate conveyors, to name a few. We manufacture both rod cylinders and telescopic cylinders, double and single acting, in sizes from 12mm (1/2") up to 700mm (28") bore.

Call us to find out why mining equipment OEM's around the world depend on Gidrolast cylinders.



Hydraulic cylinders for metallurgical equipment

Metallurgical equipment all endure heavy duty service under very demanding environmental conditions. Equipment is subjected to moisture, dirt, saw dust, wood chips, sap and tar, and slamming loads. The hydraulic cylinders used on that equipment must meet those challenges day after day.

Gidrolast has over 15 decades of experience building hydraulic cylinders for this rugged industry. In fact, you could say we cut our teeth in the forestry industry.

For our customers, that experience is invaluable. Gidrolast designs cylinders that are able to endure the difficult conditions that metallurgical machinery encounters on a daily basis.

Telescopic hydraulic cylinders

Gidrolast specializes in the design and manufacture of both Single Acting and Double Acting Telescopic Hydraulic Cylinders. We build both standard catalog telescopic designs as well as custom application engineered telescopic cylinders.

Often a hydraulic cylinder is required to fit into a very tight space and yet provide a stroke that is actually longer than its fully retracted length. A standard rod cylinder can not do this.

A telescopic cylinder, however, can achieve a very long stroke from a compact retracted length. Telescopic cylinders use a series of nested tubular segments sliding within one another (see diagram below). This enables them to provide a very long output stroke from a very short retracted length in one combined actuator. These cylinders are available in 2, 3, 4, 5, or even 6 stages.

Most telescoping cylinders are single acting. That means that they extend using hydraulic pressure but then retract using gravity and the mass of the load. A typical example is that of a telescopic cylinder on a dump truck.

Double acting telescopic cylinders are much more complicated. They incorporate internal return pistons, additional seals, and complex internal fluid passageways to enable the cylinder to retract using hydraulic power. Double acting telescopic cylinders are often used in horizontal applications where gravity is not available to retract the cylinder. Applications include waste compaction and push off cylinders.

The maximum available force output of any telescopic cylinder is limited to the effective area of its smallest stage.

Because of their long length when fully extended (see illustration above), telescopic cylinders must be very carefully designed. A poorly designed telescopic actuator will wear out quickly in the field and cause a machine failure. It may even buckle and collapse causing a dangerous catastrophic failure of the machinery. The result to the end user would be machine downtime, lost production, very expensive repairs, and perhaps even loss of lives.

At Gidrolast, we have decades of experience designing and building telescoping actuators. In addition to our standard catalog range of telescopic cylinders, we have built custom designed models with bores as large as 500mm (20"). This experience gives our customers peace of mind knowing that their actuators have been designed and built by people that truly know what they are doing. We are committed to quality and reliability.

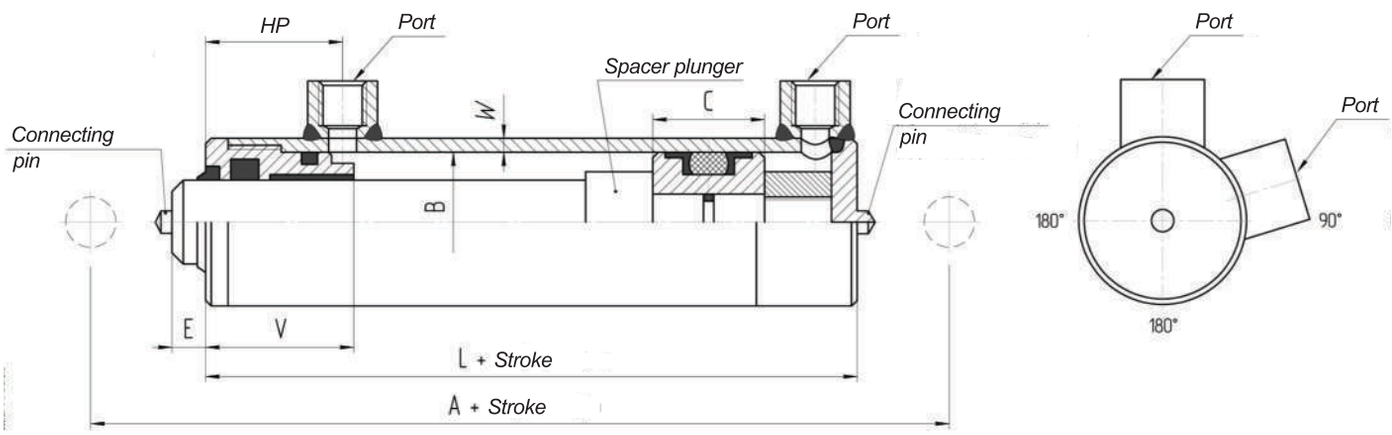
HYDRAULIC CYLINDERS / ORDER PAGE

Application number:_____ Date:_____

Company:_____ The contact person:_____

Address:_____ Fax:_____

Telephone:_____ Email:_____



Information about order:

Quantity:_____ (per month) _____ (per year) _____ (number of samples)

Customer: ○ Manufacturer ○ Traiding company Targer price:_____

Delivery time:_____ Comments:_____

Hydraulic cylinder: ○ Single action ○ Double action

Working pressure:_____ *MPa (atm/10)*

Max pressure:_____ *MPa (atm/10)*

Bore dia:_____ *mm*

Rod dia:_____ *mm*

Tubes thickness (W):_____ *mm*

Pistons width (C):_____ *mm*

Tubes length (L):_____ *mm*

Outer dia:_____ *mm*

Rod port connection:_____

Bore port connection:_____

Angle of the stroke port:_____ °

Angle of the tubes port:_____ °

Rod connection:_____

Bore connection:_____

Center distance (A):_____

Push force:_____ *kg (100*kH)*

Pull force:_____ *kg (100*kH)*

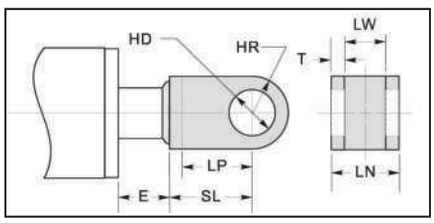
Chrome plated thickness:_____ *mkm*

Recommendation piston seals:

Recommendation rod seals:

HYDRAULIC CYLINDERS / ORDER PAGE

Client sketch:



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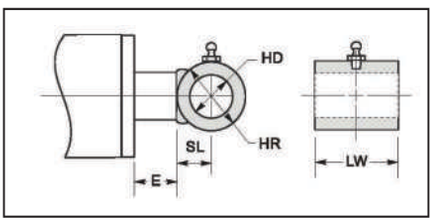

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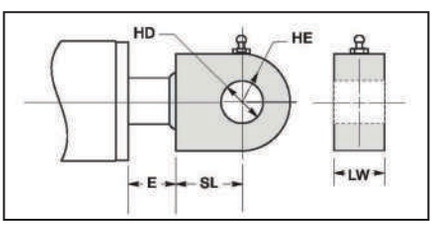

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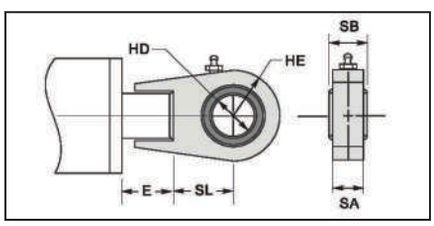

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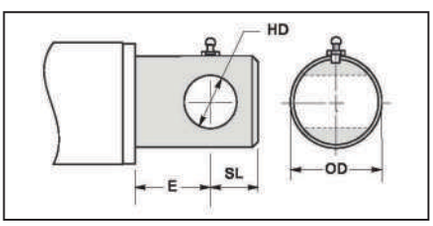

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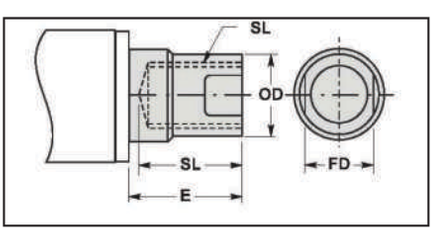

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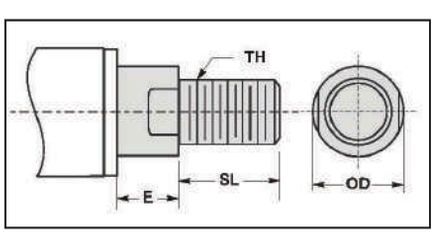

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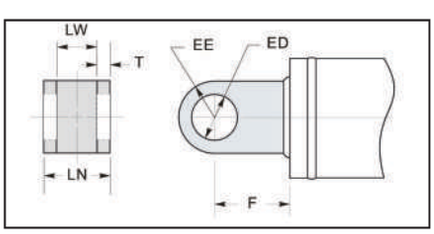

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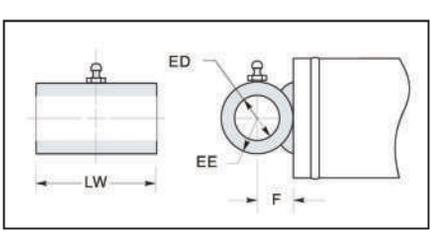

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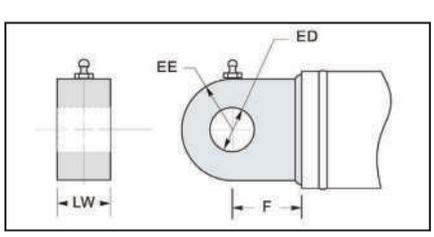

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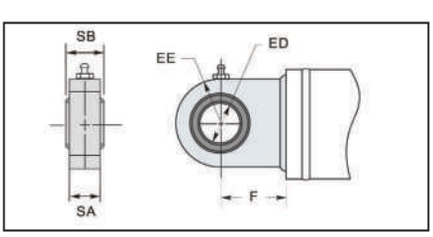

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FOR NOTES

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GIDROLAST®

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