

FHER

TDZGroup

BHE Radial Piston Pumps

DESCRIPTION

The BHE radial piston pump range is made up of five basic models with 4, 6, 8, 10 and 12 pistons. All of them are characterized by :

- High performance from very low speed.

Therefore they are ideal for applications such as truck hydraulic drives (tipping, cranes, etc.) or agricultural machinery, where other pumps give a very reduced performance due to the low rotation speed.

- High maximum pressure.

350 Bar intermittent maximum pressure.

- Great resistance to oil contamination.

Specifically designed for this, these pumps resist dirty oil better than practically any other pump on the market.

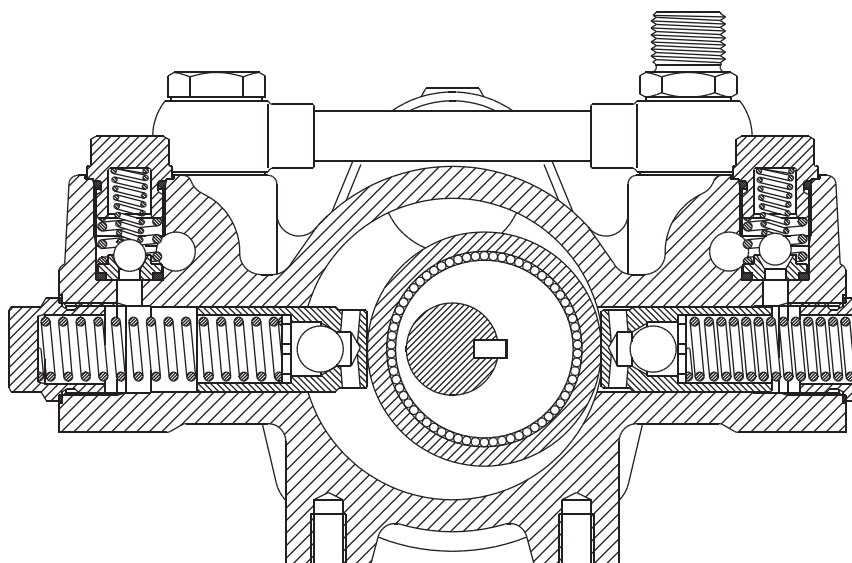
-Great strength.

Due to their original and experimented design, careful manufacture and high quality of the materials used.

-Large amount of accessories and options.

The price of each pump includes a pressure limiting valve incorporated, the outlet raccord and the oil inlet tube assembly.

Other accessories and options available. See section 3.03.





Radial Piston Pumps Description and Characteristics



TECHNICAL CHARACTERISTICS

Flow volumes :

BHE-4	: 32 cc./rev.
BHE-6	: 48 cc./rev.
BHE-8	: 64 cc./rev.
BHE-10	: 80 cc./rev.
BHE-12	: 96 cc./rev.

There are versions with reduced displacements which give approximately half the normal flow volumes.

Pressures :

Continuous maximum pressure	: 300 Bar
Intermittent maximum pressure	: 350 Bar
Standard setting pressure of the safety valve	: 350 Bar

It is possible to set the valve at other pressures.

Speeds :

Minimum speed	: 100 R.P.M.
Maximum speed	: 800 R.P.M.

Indifferent rotation direction.

Weight:

BHE-4	: 12 kg.
BHE-6	: 14.5 kg.
BHE-8	: 17.5 kg.
BHE-10	: 20.5 kg.
BHE-12	: 23.5 kg.

Assembly and drive :

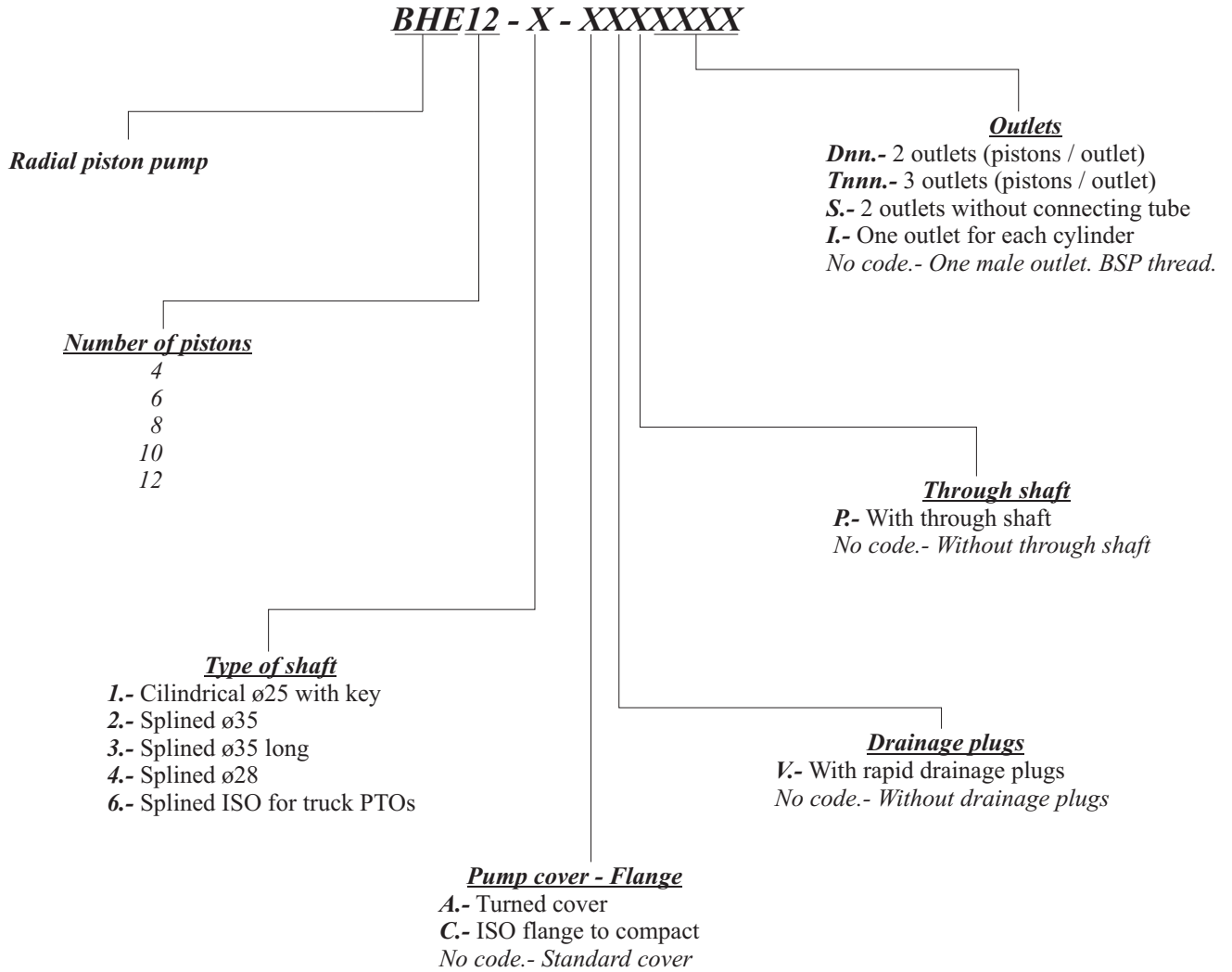
Standard : Drive with cardan transmission or elastic coupling. Consult for drive with pulleys.
Optional : Flange and shaft according with ISO 7653 standard for direct mounting on truck's P.T.O. (See page 3.03.06)
Indifferent mounting position (for vertical mounting see page 3.03.02)

Oil :

Use good quality mineral hydraulic oil, with viscosity at working temperature between 2 and 4°E (12 - 30 cSt.).
Maximum viscosity in cold start : 50°E (400 cSt.). Other fluids (even little lubricating ones) are possible, consult.

Filtering :

The BHE pumps are very resistant to oil contamination, but a good filtering will prolong their life and that of the other circuit components. We recommend a 40 micron return filter or smaller.



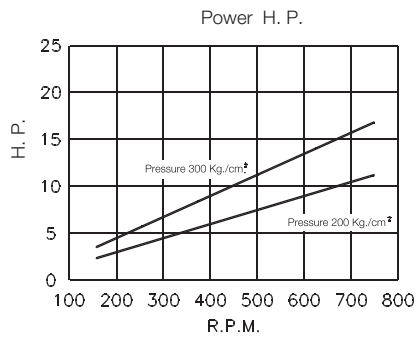
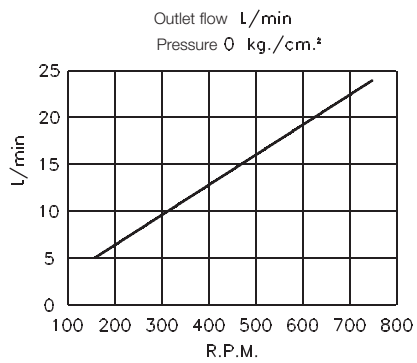
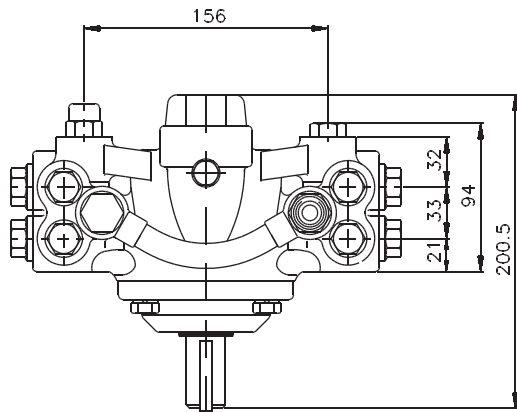
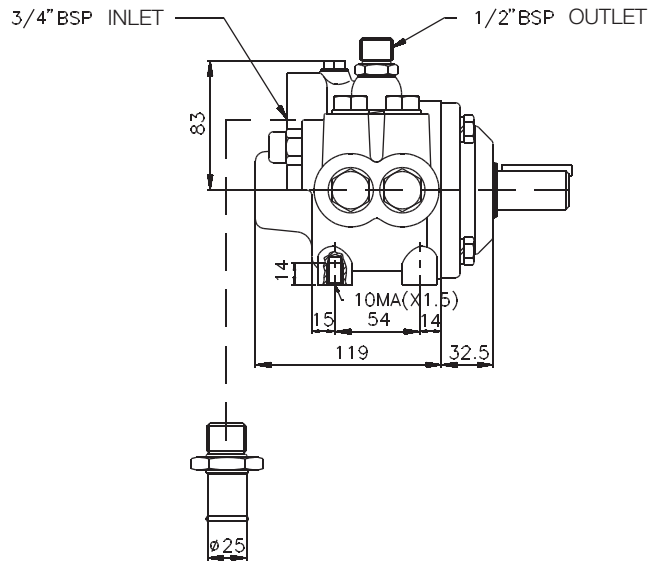
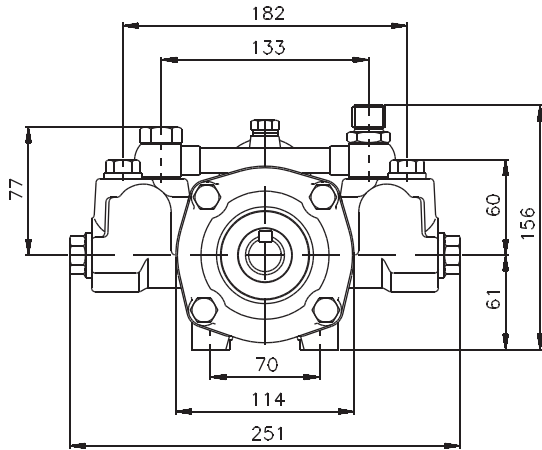
Examples:

BHE4-1: Pump BHE of 4 pistons with shaft n°1.

BHE12-2-PD84: Pump BHE of 12 pistons with shaft n° 2, through shaft and 2 outlets with 8 & 4 pistons per outlet.



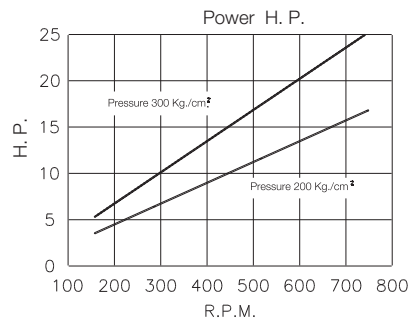
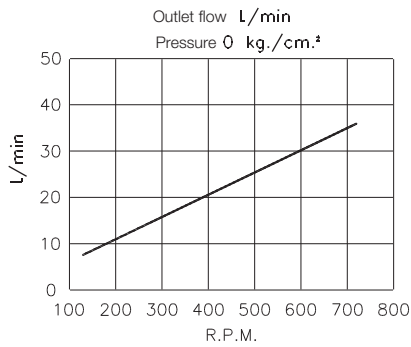
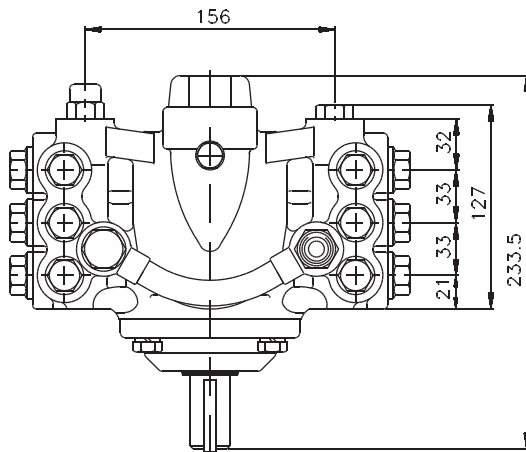
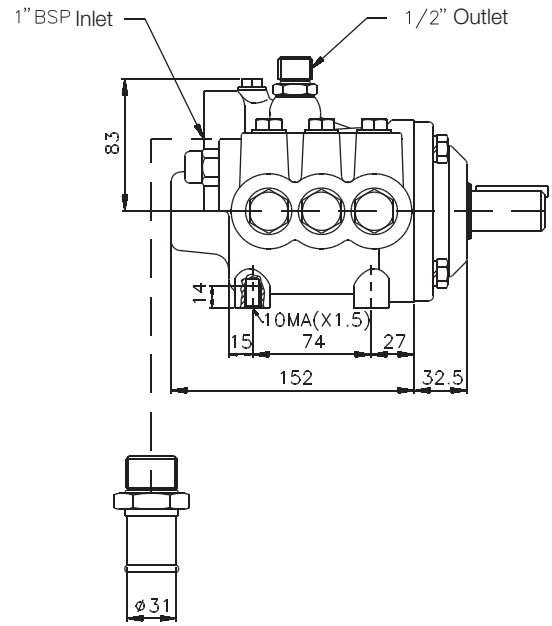
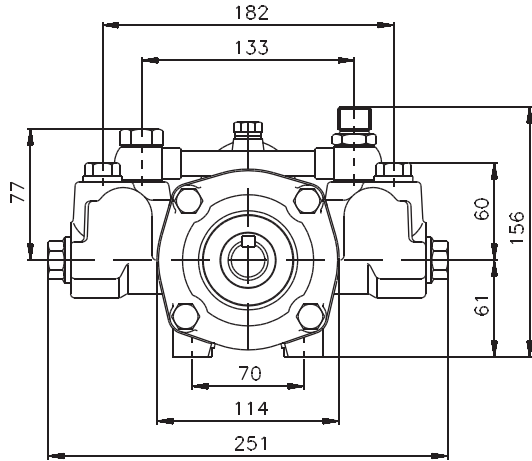
Radial Piston Pumps BHE - 4 General Dimensions



3.02.01



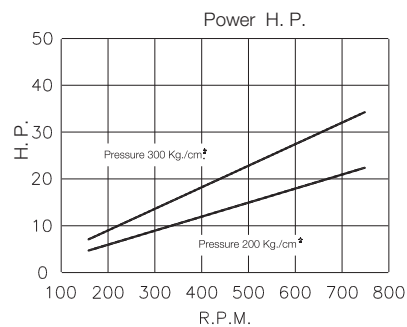
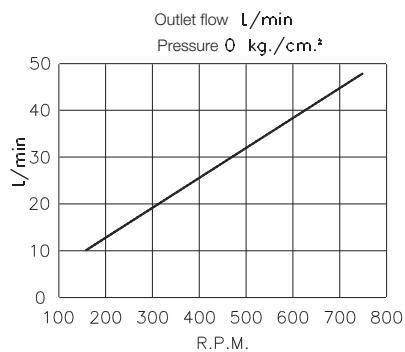
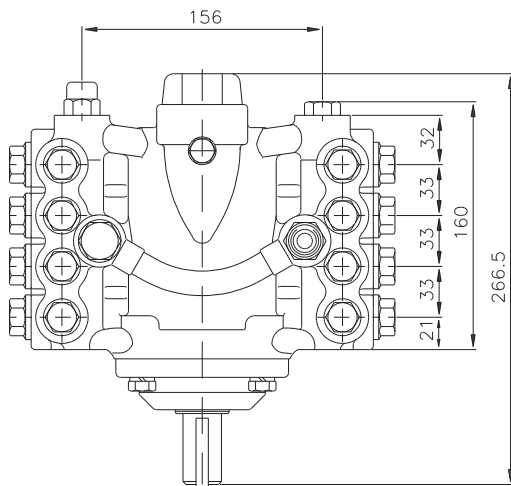
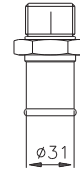
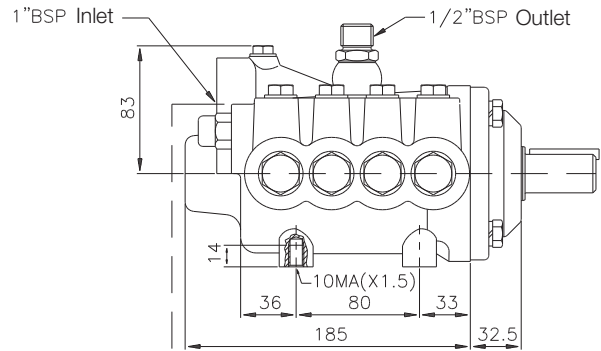
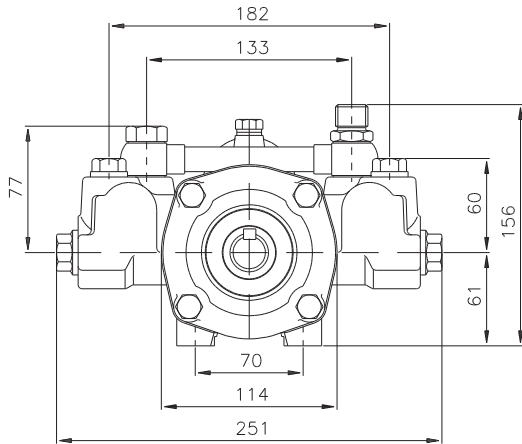
Radial Piston Pumps BHE - 6 General Dimensions



3.02.02



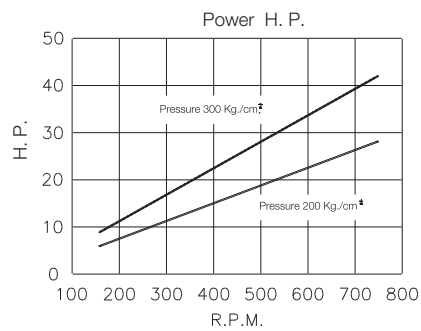
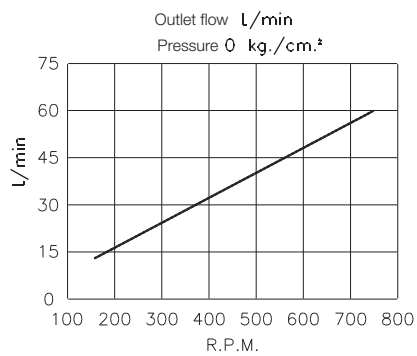
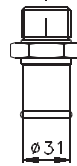
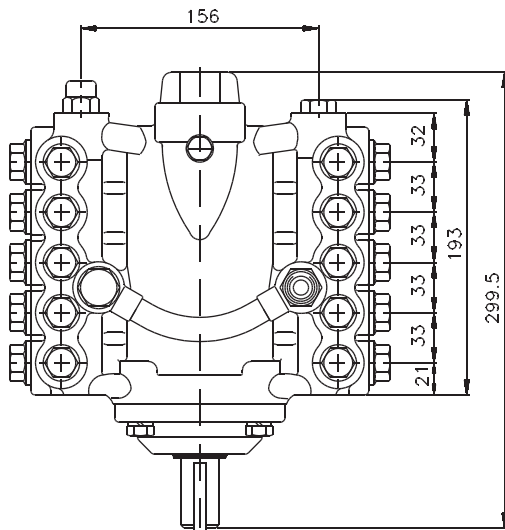
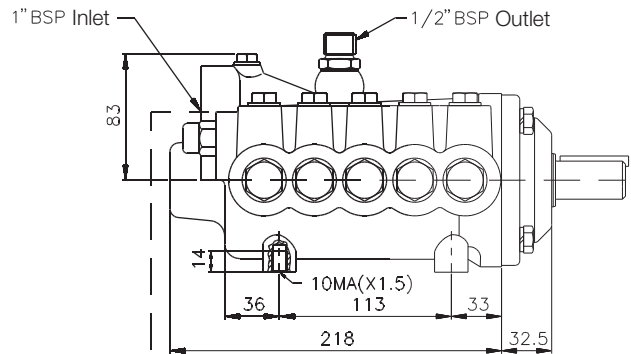
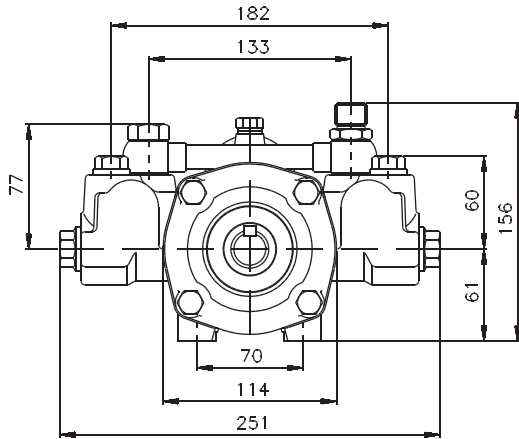
Radial Piston Pumps BHE - 8 General Dimensions



3.02.03



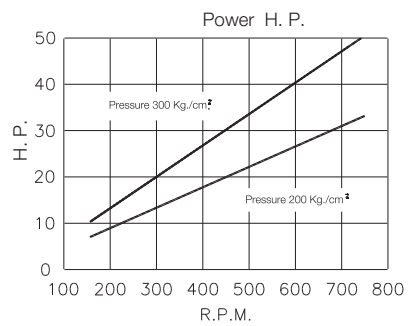
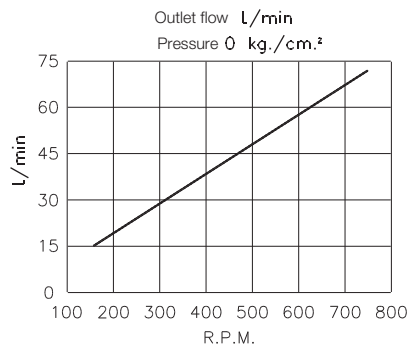
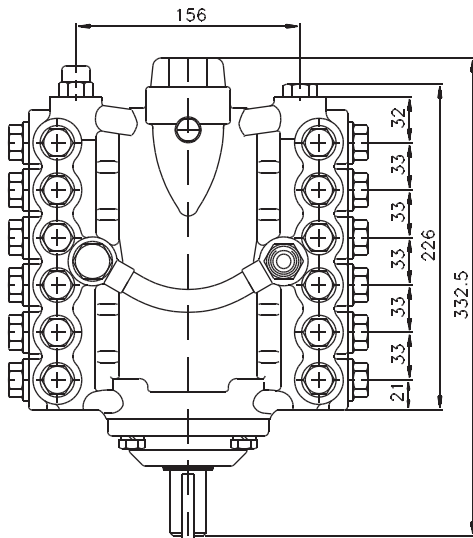
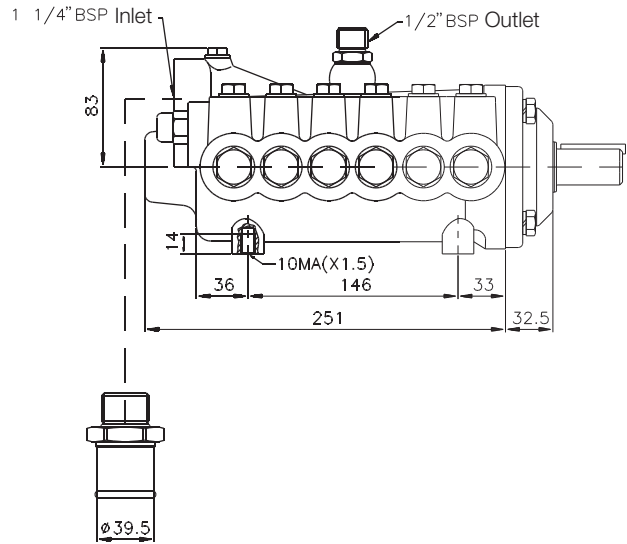
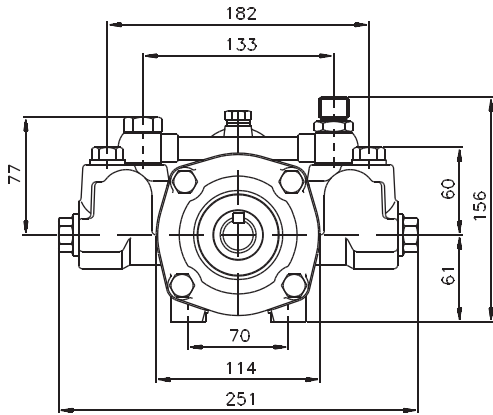
Radial Piston Pumps BHE - 10 General Dimensions



3.02.04



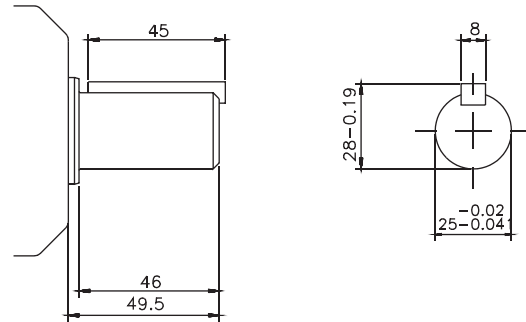
Radial Piston Pumps BHE - 12 General Dimensions



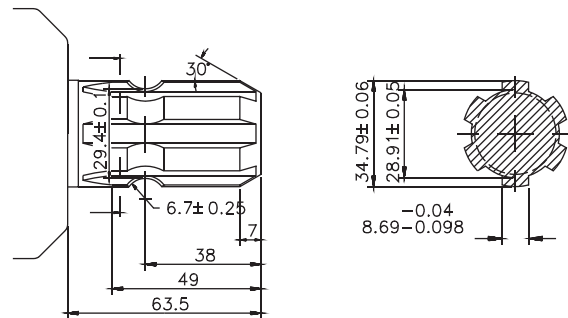
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The following types of shaft are usually available in stock.
Other types of special shafts can be manufactured if the amounts to be supplied justify this.

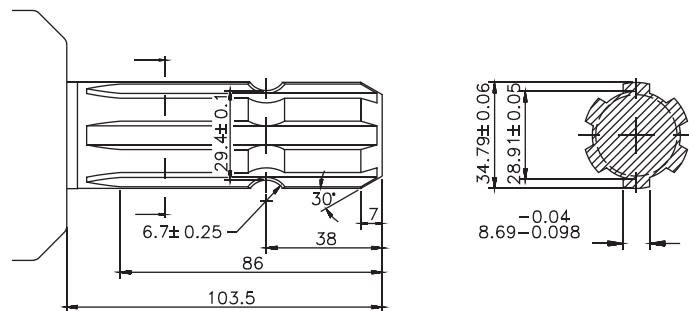
Shaft n°1



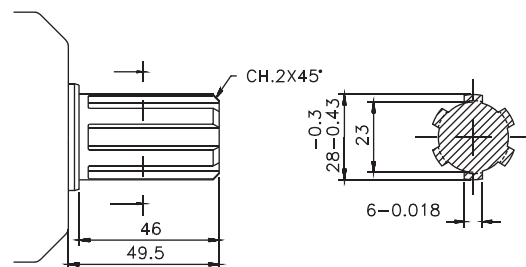
Shaft n°2



Shaft n°3

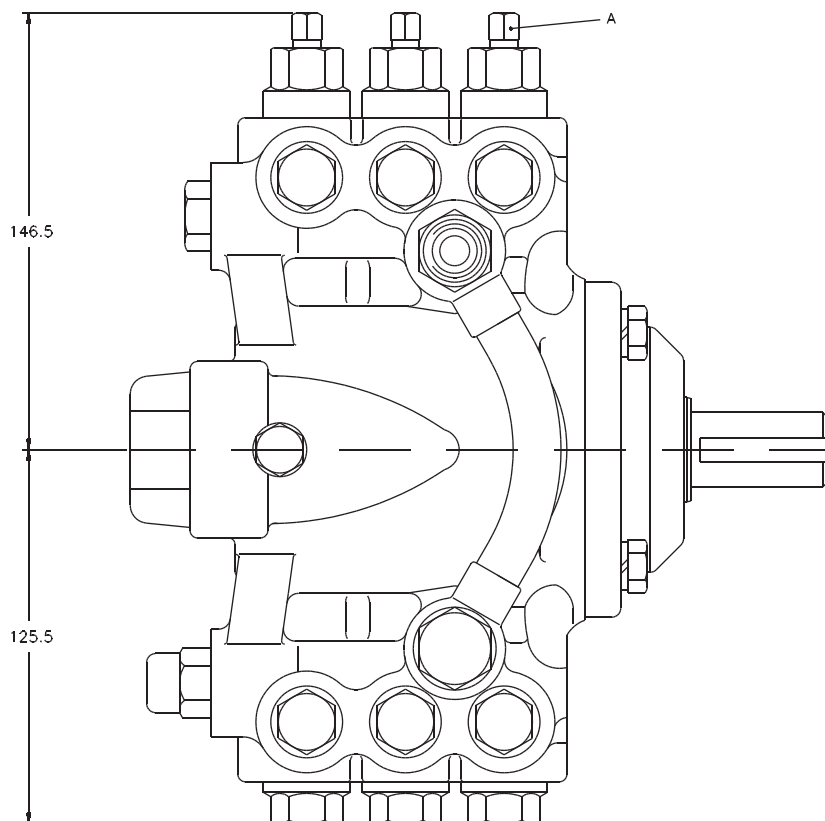


Shaft n°4



The BHE pumps can operate both in horizontal and vertical position. However, when mounted in vertical position, it may be difficult to drain out the air retained in the upper part of the body, during the initial start up.

In these cases the rapid drainage plugs mounted on the upper cylinder are very useful. It will only be necessary to slightly unscrew the small (A) plugs with the pump in operation, until the air comes out. The drainage will be immediate even with the oil tank below the pump level.





Radial Piston Pumps Options Double and Triple Pumps

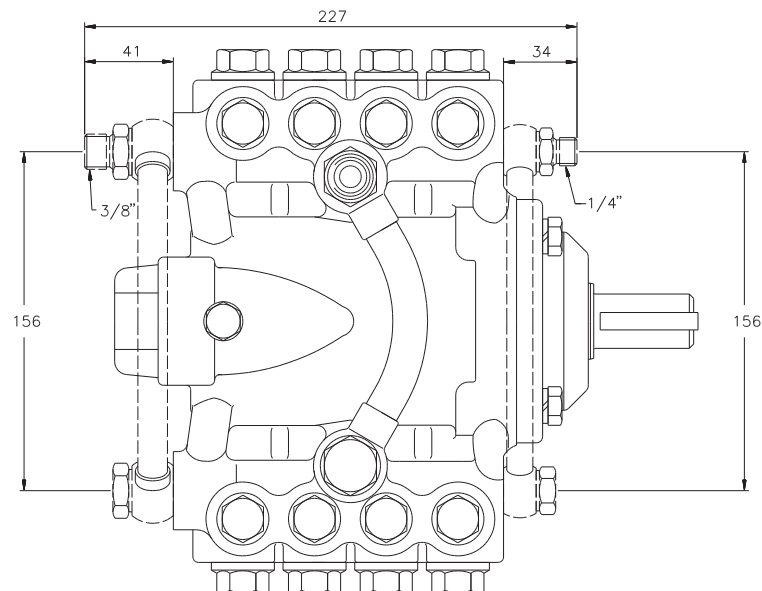


Hidráulica Fher can supply BHE pumps configured as double or triple pumps. These pumps only have one oil inlet and two or three independent outlets to feed to separate circuits. Depending on the customer's needs, the pumps can be configured with different numbers of cylinders for each outlet.

For example, with a double 12 cylinder pump the following combinations can be made :

OUTLET 1		OUTLET 2	
Number of cylinders	Flow vol (cc./rev.)	Number of cylinders	Flow vol (cc./rev.)
4	32	8	64
6	48	6	48
10	80	2	16

In the double pumps, one of the outlets will be protected by the pressure limiting valve of the pump. In triple pumps it will be necessary to get rid of this valve.



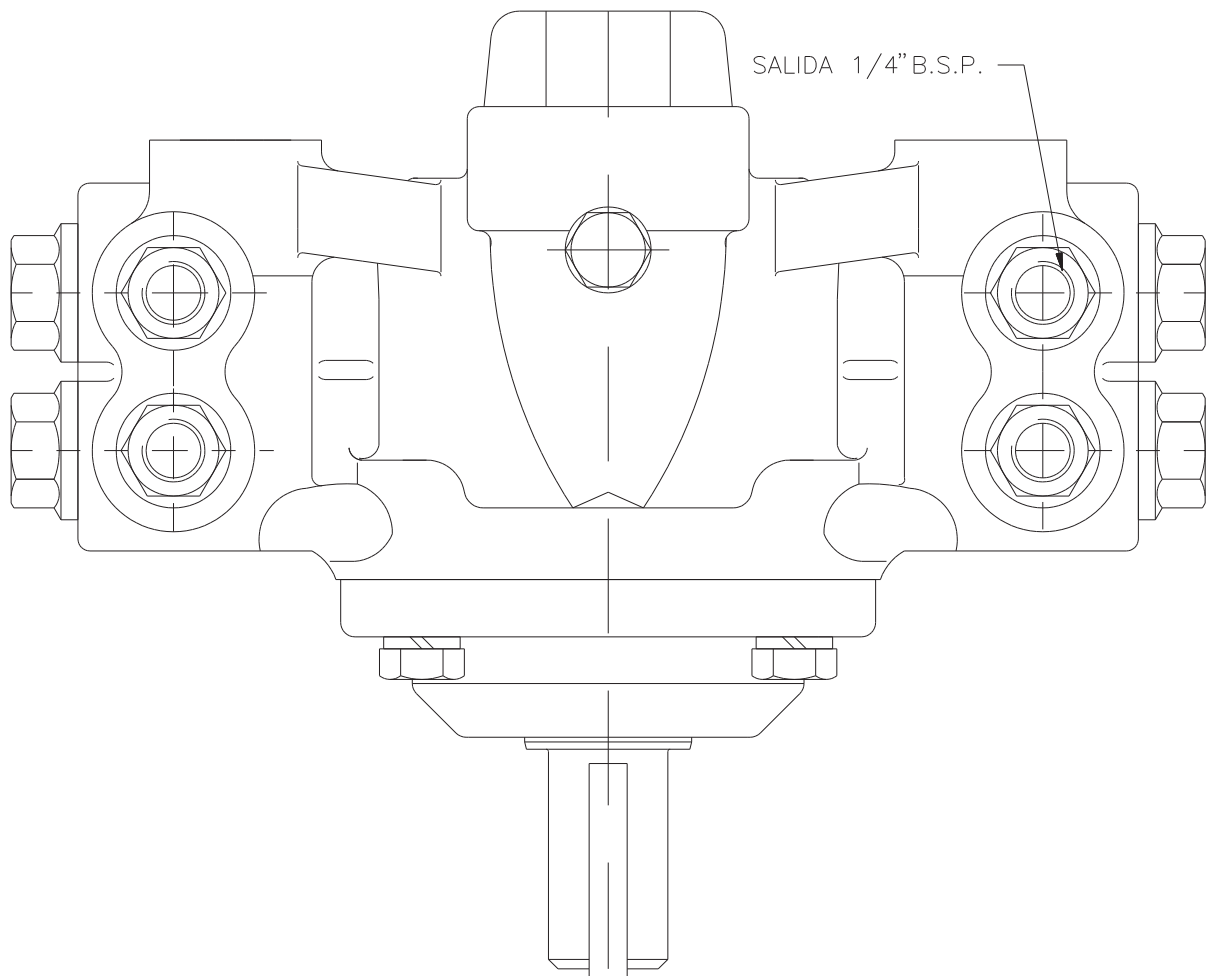
Sizes of the outlets : 1/2" BSP for the first, to be chosen between 1/4" BSP and 3/8" BSP for the second and third.



Radial Piston Pumps Options Independent Outlets



All the BHE pumps can be supplied with an independent outlet for each cylinder.

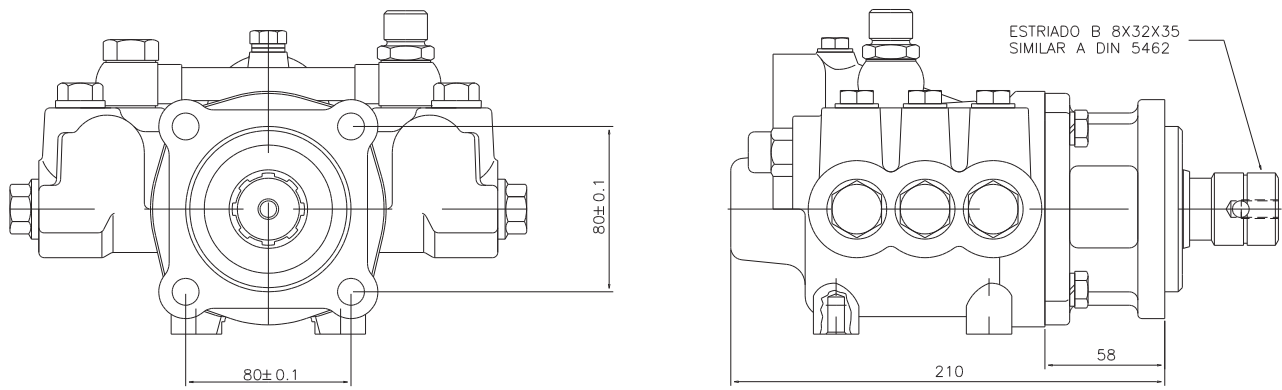




Radial Piston Pumps Options ISO PTO Direct Mounting



By using the flange and shaft according with the I.S.O. 7653 standard, the BHE pumps can be mounted directly on the power take off (P.T.O.), resulting in a compact assembly.



Depending on the space available, the pump can be mounted horizontally or vertically, the operation being identical in both cases. Only for the air drainage in the first start up, when the assembly is vertical, it is recommendable to use rapid drainage plugs (see page 3.03.02).

The BHE pumps can be mounted submerged inside the oil tank.
In this case, the pump can be supplied with the cover turned to guarantee sealing and centering.

The sealing of the O-ring will be conditioned by the flatness of the inner surface of the tank. If this cannot be guaranteed, other sealing systems must be used.

