

PI39-TS stainless steel pressure intensifier (topside version)



- Designed to boost the pressure of any water-based or mineral/synthetic oil-based fluid.
- Boosts inlet pressure up to 5 times without external power. The maximum outlet pressure is 900 bar.
- When system pressure is achieved, there is minimal consumption of expensive hydraulic fluid.
- External components manufactured from 316 (standard) no painting required for hostile environments.

The PI39-TS Intensifier amplifies the inlet pressure to a higher outlet pressure by a predetermined ratio.

Pressure in the high pressure line can become reduced as a result of a system leak or the use of the stored (pressure) energy. The PI39-TS restores and maintains that pressure in such instances. Check and changeover valves are integrated within the main body of the intensifier. When the *inlet pressure x the ratio = the outlet pressure*, then the PI39-TS is in a stalled condition and there is minimal consumption of fluid.

The maximum outlet pressure is 900 bar.

The PI39-TS does not contain a high pressure line vent valve.

Applications

The PI39-TS was designed principally for applications in the offshore oil and gas industry where the highest standards of product performance and durability are essential. The PI39-TS's external components are manufactured from 316 & 17/4 PH stainless steel to withstand hostile environments; it can operate on all water-based glycol fluids or on mineral and synthetic oils.

Material

Manufactured from stainless steel with nitrile seals as standard.

Weight: 11 kgs.

Fluids

Suitable for use with mineral/synthetic oils and all water-based fluids such as HW443 and Transaqua HT2, plus many others. The fluids used should be to a cleanliness standard of NAS 1638 class 6 or better.

Mounting

The pressure intensifier can be mounted vertically or horizontally.

System temperature

The PI39-TS has been qualified to operate at temperatures from -10°C to $+80^{\circ}\text{C}$ (Ambient) at pressures up to a maximum of 900 bar.

Safety note

The inlet pressure of the intensifier should be carefully controlled, as the outlet pressure increases by the ratio of the intensifier in use. For example, if an 5:1 intensifier is being used, a rise in the inlet pressure of 100 bar will immediately increase the outlet pressure by 500 bar.

A relief valve set at the maximum pump rating should be fitted immediately downstream of the pump delivery port.

Options - No Vent Valve

Intensifier ratio	Maximum Inlet pressure (bar)	Maximum HP output pressure (bar)	Inlet/Exh Port	HP output port	HP swept volume (cc)	Part number
2:1	345	690	1/4" NPT Female	1/4" MP Female	19.5	PI39-02001-00-01-13-TS-NIT-0345
2.5:1	345	862	1/4" NPT Female	1/4" MP Female	15.6	PI39-02501-00-01-13-TS-NIT-0345
3:1	300	900	1/4" NPT Female	1/4" MP Female	13	PI39-03001-00-01-13-TS-NIT-0300
4:1	225	900	1/4" NPT Female	1/4" MP Female	9.75	PI39-04001-00-01-13-TS-NIT-0225
5:1	180	900	1/4" NPT Female	1/4" MP Female	7.8	PI39-05001-00-01-13-TS-NIT-0180

Part Numbering System

PI39 = Pressure Intensifier 73cc LP piston swept volume	Model
02001 = 2.00:1 02501 = 2.50:1 04001 = 4.00:1	Ratio
00 = No vent Valve	Vent Valve Option
01 = 1/4" NPT Female 02 = 1/4" BSP Female Other options available on request	Inlet and Exhaust Ports
01 = 1/4" NPT Female 02 = 1/4" BSP Female 13 = 1/4" MP Female Other options available on request	HP Outlet Connection
TS = Topside Installation	Target Location
NIT = Nitrile seals -20°C to $+80^{\circ}\text{C}$ VIT = Viton seals -10°C to $+80^{\circ}\text{C}$ Other options available on request	Vent Valve Option
0270 = 270 bar	Maximum Working Pressure LP Side
PI39 - 02001 - 00 - 01 - 01 - TS - NIT - 0420	Ordering Example

Dimensional Drawing

