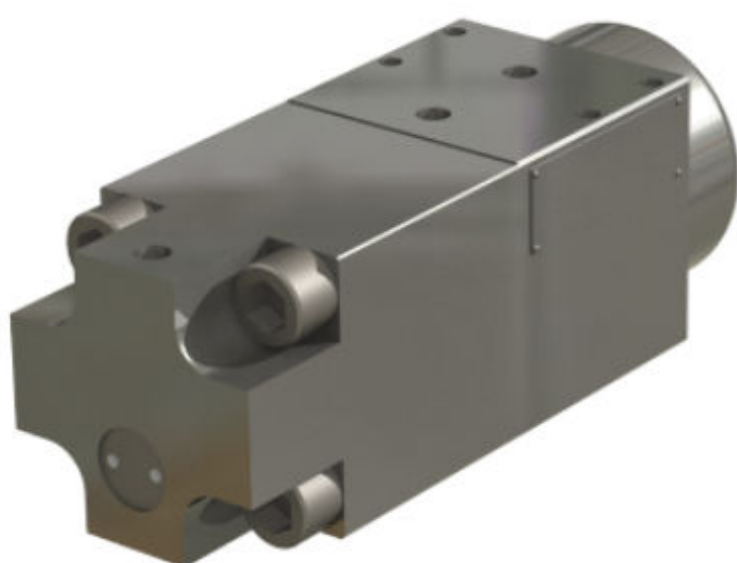


PI73-SS stainless steel pressure intensifier (subsea version)



Version without vent valve



Version with pilot-operated vent valve

- Designed to boost the pressure of any water-based or mineral/synthetic oil-based fluid.
- Boosts inlet pressure up to 7 times without external power. The maximum outlet pressure is 1380 bar.
- When system pressure is achieved, no consumption of expensive hydraulic fluid.
- Manufactured from 316 (standard), or from duplex stainless steels; – no painting required for hostile environments.
- Costs reduced – no electrical supply or controls required.
- Production quality to the stringent standards required for hostile subsea environments.
- Two versions – with and without a pilot-operated vent valve for the high pressure line.

The PI73-SS Intensifier amplifies the inlet pressure to a higher outlet pressure by a predetermined ratio for any given model.

Pressure in the high pressure line can become reduced as a result of a system leak or the use of the stored (pressure) energy. Using virtually no energy, the PI73-SS restores and maintains that pressure in such instances. Rapid adjustment of the high pressure line can be achieved by varying the inlet pressure as the high pressure is directly proportional to the inlet pressure. Check and changeover valves are integrated within the main body of the intensifier as is the pilot-operated vent valve for the versions in which it is incorporated. When the *inlet pressure x the ratio = the outlet pressure*, then the PI73-SS is in a stalled condition and there is no consumption of fluid. The maximum outlet pressure is 1380 bar.

With the model incorporating the pilot-operated vent valve, that valve is normally held closed by the input pressure. If for any reason the low pressure supply is interrupted, the system floods with zero pressure "tank" fluid. In such a circumstance, the pilot-operated vent valve is no longer held closed by the input pressure – it opens so that the high pressure is safely vented away.

Applications

The PI73-SS was designed principally for applications in the offshore oil and gas industry where the highest standards of product performance and durability are essential. The PI73-SS is manufactured from 316 stainless steel to withstand hostile environments; it can operate on all water-based glycol fluids or on mineral and

synthetic oils. This product is ideal for charging accumulators from a low pressure umbilical; it may also be used for operating several different systems from a single supply.

Material

Manufactured from 316 stainless steel with nitrile seals. Weight is approximately 26 kgs.

Fluids

Tranaqua

Suitable for use with mineral/synthetic oils and all water-based fluids such as HW540, HW443 and Tranaqua HT, plus many others. The fluids used should be to a cleanliness standard of NAS 1638 class 6.

Mounting

The pressure intensifier can be mounted vertically or horizontally.

System temperature

The PI73-SS has been qualified to operate at temperatures from -10°C to $+80^{\circ}\text{C}$ at pressures up to a maximum of 1380 bar.

Safety note

The inlet pressure of the intensifier should be carefully controlled, as the outlet pressure increases by the ratio of the pump in use. For example, if an 7:1 intensifier is being used, a rise in the inlet pressure of 125 bar will immediately increase the outlet pressure by 875 bar.

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

PI73-SS model selection charts

Go to [separate page](#) for standard model specifications

Drawing

PI73-SS-xx-02 model with pilot-operated vent valve shown.

PI73-SS-xx-00 model without vent valve dimensionally similar.

