

Hydraulic Pressure Intensifier with Media Separation



This cylinder type uses the principle of hydraulic transmission. With the help of two hydraulically or mechanically coupled pressure chambers and the pistons working within the chambers, pressure ratios can be carried out according to the formula $p_1 / p_2 = A_2 / A_1$. Typically, a pressure intensifier is used where an existing system pressure is insufficient and requires a higher pressure for a limited area. It must be noted that the producible volume flow is inversely proportional to pressure. This means that when the pressure increases, the volume flow rate decreases by the same factor. HYDROPNEU builds various pressure intensifiers always in close cooperation with the user. Depending on the requirements and application we construct the optimal pressure intensifier and adjust it to the customer's individual needs.

Important factors when planning the project:

- ▶ Existing operating pressure primary
- ▶ Desired working pressure secondary
- ▶ Existing volume flow primarily
- ▶ Desired volume flow secondary
- ▶ Inserted medium primary and secondary
- ▶ Installation spaces
- ▶ Possibility of position detection



Precision in Motion

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- ▶ Pressure amplification
- ▶ Separation of two media
- ▶ No mixing
- ▶ Volume flow control with path recording

Example:

This pressure intensifier is used in a hydroforming system. A special feature of this pressure amplifier is the media separation. The system works with hydraulic oil on the primary side and with a biodegradable, aqueous emulsion on the secondary side. In the latter case it is particularly important to separate the two media. Furthermore, a path recording system is used in this pressure intensifier which allows an accurate determination of the outgoing volume flow.

Technical Information:

Pressure Intensifier: DU.002.00.2.3-140-110-0925-0001	
Operating Pressure Primary:	250 bar
Operating Pressure Secondary:	365 bar
Transmission Ratio:	i=1,46
Operating Mode Primary:	double-acting
Max. Volume Flow Primary:	460 l/min
Max. Volume Flow Secondary:	315 l/min
Medium Primary:	Hydraulic Oil HLP46
Medium Secondary:	Aqueous emulsion, biodegradable

Path Recording System:

Balluff BTL5-S163-M10000-B-S32

Additional Equipment:

Refill connection on secondary side

Leak-oil connection in the area of the media separation

