

The MP-T and MP-C Hydraulic Pressure Intensifiers

The MP-T



Features:

- In-Line Intensifier
- Rating to 800 bar
- Multiple intensifications
- Reciprocating
- Automatic start/stop
- High Flow Rate
- No external controls
- All valves included
- Cost effective

The MP-C



Features:

- Cetop (NG6) mounting
- Rating to 500 bar
- Multiple intensifications
- Reciprocating
- Automatic start/stop
- High Flow Rate
- No external controls
- All valves included
- Cost effective

The MP-T & MP-C Hydraulic Pressure Intensifiers

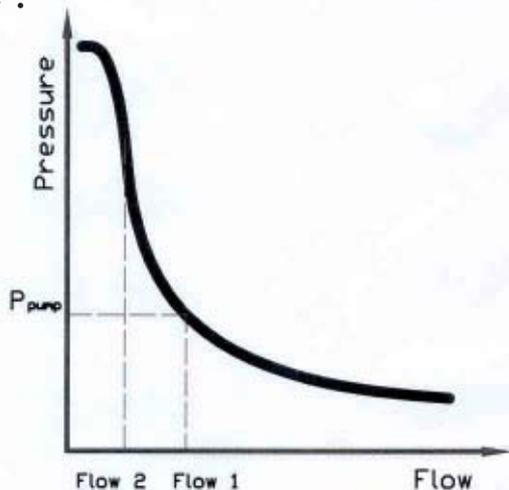
Function:

The MP-T & MP-C hydraulic pressure intensifiers are reciprocating, and will automatically increase a supplied pressure to a higher end pressure. Fig. 1 shows the basic principle of the intensifiers, consisting of a piston arrangement and a Piston Control Valve, PCV. The position of the pistons will at any time prompt a signal S to the PCV, which ensures the pistons are moving in the required direction.

The cycle:

When a hydraulic fluid is supplied to the P-connection of the intensifier and the T-connection is connected to tank, the oil will be directed over the check valves CV1 and CV2 to the high pressure connection HP. If the internal pilot operated check valve POV is incorporated the oil will go straight to the HP connection. In this situation all the flow supplied goes to the high pressure side ensuring a fast filling of the system. Once pump pressure has been reached, the intensifier pistons will deliver the flow to the high pressure side, and continue to do so until the required end pressure has been reached. The pistons then stop, and will only move to make up for a pressure loss due to leakage or consumption. A general flow curve showing how the intensifier works is shown in Fig.2.

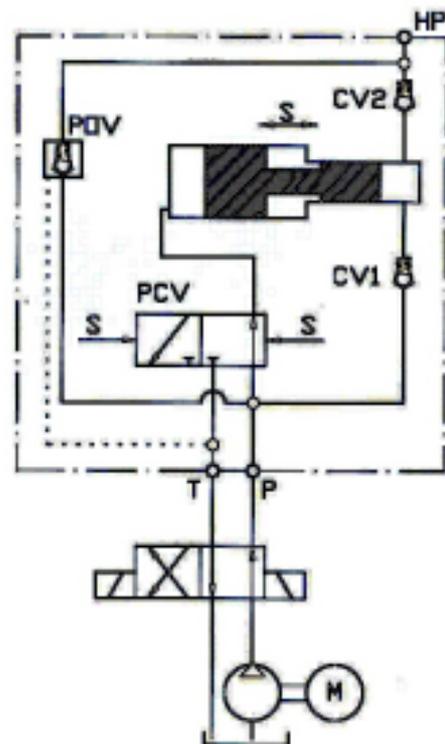
Fig.2 :



For evacuating the high pressure side the internal POV is used. This valve is opened by directing the supplied pressure to the T-port and connecting the P-port to tank. This makes the POV open, and the oil from the high pressure side can flow directly back to tank.

General Data:	
Materials:	Body parts in cast iron, pistons and valves in steel, O-rings in NBR.
Surface Coating:	Zinck-Chrome finish, blue
Temperature Range:	- 40°C to +120°C
Fluids:	Recognized hydraulic fluids and water glycol. For other fluids contact distributor or manufacturer
Filtration:	10 micron nominal, max. 19/16 according to ISO 4406
Max. inlet flow and inlet pressure:	For MP-T see table 1, For MP-C see table 2

Fig. 1:



Applications:

- Hydraulic Workholding Equipment
- Pallette Systems for Machine Tools
- Pressure Die Casting
- Hydraulic Clamps
- Plastic Injection Moulding
- Demolition & Rescue Tools
- Hydraulic Power Packs

The MP-T intensifiers

The MP-T is an in-line pressure intensifiers designed to be positioned in a low pressure hydraulic system, and will provide the higher pressure needed right in the spot, where this is required. Having all the needed high pressure seat valves incorporated, the need for high pressure components is minimized ensuring a cost effective system. Controlling the high pressure side is done by valves on the low pressure side through the intensifier adding to safety . The intensifiers are offered with 7 different intensification ratios as standard and more on demand to meet most intensification requirements. The compact design ensures easy installation in new as well as existing circuits.

The standard MP-T will provide pressure intensification as needed. As an option a built in pilot operated check valve POV allows the high pressure side to be relieved through the intensifier.

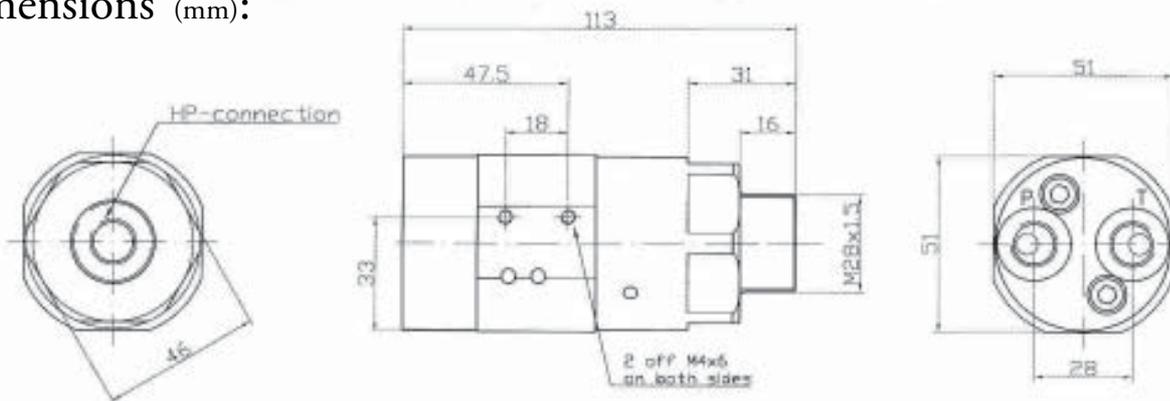
Flow & Pressure

The supplied flow and pressure to the MP-T are dependant on the intensification ratio chosen. Table 1 shows the flow and pressure for each model. Flow 1 is when the pump pressure has been reached and flow 2 is moving up the vertical part of the curve (see Fig. 2). Please notice flow values will vary with the viscosity of the fluid. Inlet values must not be exceeded.

Table 1

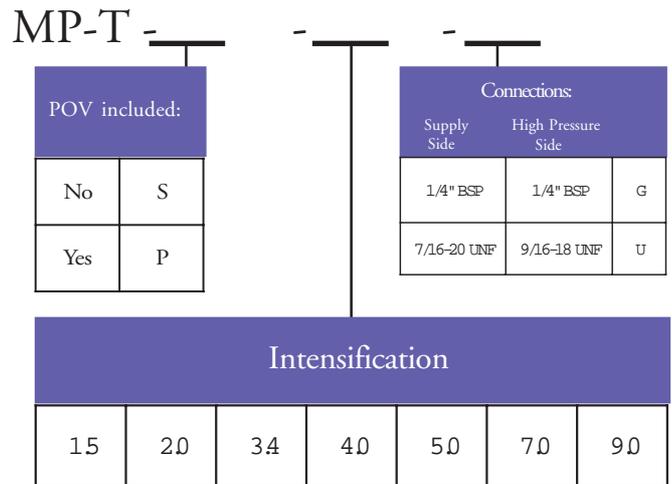
Ratio (i)	Inlet Flow (LPM)	Outlet Flow 1 (LPM)	Outlet Flow 2 (LPM)	Inlet Pressure (Bar)	Outlet Pressure (Bar)
1.5	8.0	0,8	0.3	200	300
2.0	8.0	0.8	0.2	200	400
3.4	15.0	2.2	0.5	200	680
4.0	14.0	1.8	0.4	200	800
5.0	14.0	1.4	0.3	160	800
7.0	13.0	1.1	0,2	114	800
9.0	13.0	0.7	0,1	89	800

Dimensions (mm):



Specifying a MP-T

First choose if the pilot operated check valve POV is required, then decide the intensification ratio (i) and finally decide the connections (BSP or UNF)



Example:

MP-T with POV, intensification 5.0 and BSP-connections: MP-T-P-5.0-G

The MP-C intensifiers

The MP-C intensifier is designed for the cetop-system (NG6/DO3), and will increase a supplied pressure to the higher end pressure required (max. 500 bar). Having high pressure valves incorporated including a pilot operated check valve for relieving the pressure on the high pressure side, the MP-C offers a cost efficient solution for intensification needs. Controlling the high pressure side is done by valves on the low pressure side through the MP-C, allowing the intensifier to be installed in most existing as well as new hydraulic circuits. The intensifier is offered with 7 different intensifications as standard and more on demand to meet most intensification requirements.



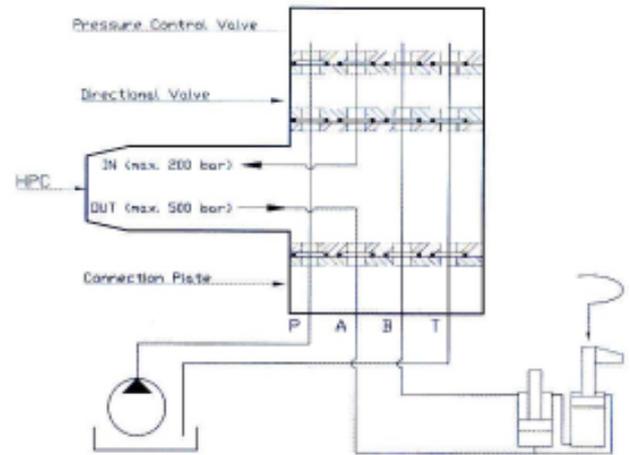
Flow & Pressure

The supplied flow and pressure to the MP-C are dependant on the intensification ratio chosen. Table 1 shows the flow and pressure for each model. Flow 1 is when the pump pressure has been reached and flow 2 is moving up the vertical part of the curve (see Fig. 2). Please notice flow values will vary with the viscosity of the fluid. Inlet values must not be exceeded.

Table 2

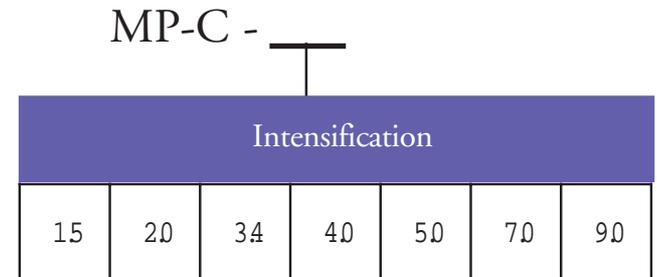
Ratio (i)	Inlet Flow (LPM)	Outlet Flow 1 (LPM)	Outlet Flow 2 (LPM)	Inlet Pressure (Bar)	Outlet Pressure (Bar)
1.5	8.0	0,8	0.3	200	300
2.0	8.0	0.8	0.2	200	400
3.4	15.0	2.2	0.5	147	500
4.0	14.0	1.8	0.4	125	500
5.0	14.0	1.4	0.3	100	500
7.0	13.0	1.1	0,2	71	500
9.0	13.0	0.7	0,1	55	500

The MP-C in a system:



Specifying a MP-C

Simply choose the intensification ratio:



Example: MP-C with intensification 5.0: MP-C-5.0

Dimensions (mm):

