

Intensifier System M- HC-012



Key features

- ▶ Pressure on demand
- ▶ Solenoid activated
- ▶ High pressure - up to 700 bar (10,000 psi)
- ▶ Fast fill - system flows up to 100 l/ min
- ▶ Extended service life
- ▶ Robust design
- ▶ Flexible design– several boosters / intensification ratios
- ▶ Max inlet pressure = 345 bar
- ▶ Adjustable outlet pressure

Description

The M- HC-012 In- line Intensifier System is designed to boost the hydraulic pressure from the pump to the workload. The system operates by solenoid activation. The operator is in full control of the system and can decide if a boosted pressure to the workload should be applied.

The system is dynamical by means of being able to provide flow at high pressure for intermittent use (< 10 min duty cycle).

A relief valve is installed to control the maximum allowable pressure that the system can output, and allowing the booster to go for a higher end pressure producing flow at the decided pressure.

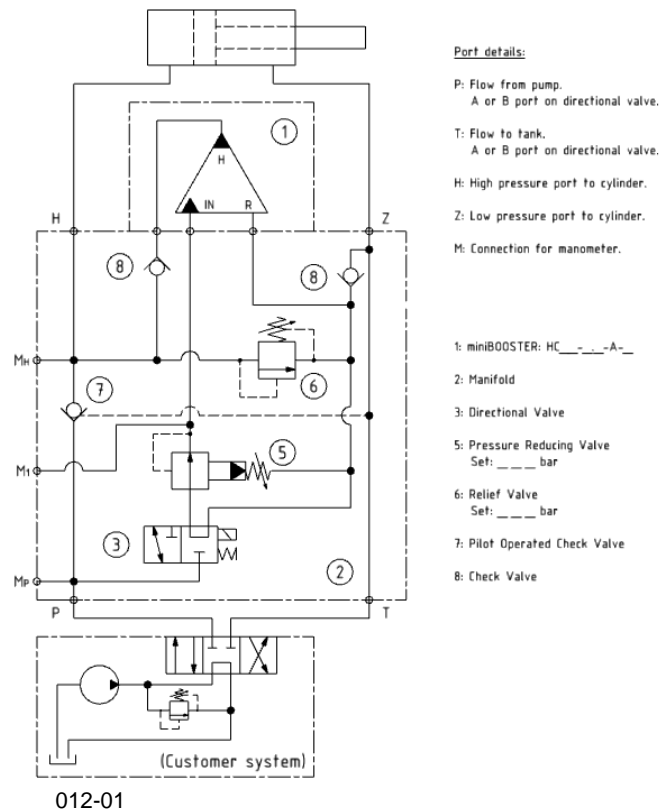
Easy installation

The M- HC-012 is provided with four mounting holes for 'through- bolt' installation. The four connection ports are placed logically in pairs and in line of each other on the HIC block. All surfaces are electroplated for good protection and fine surface finish.

Typical Applications

Mobile attachments (motors - steering systems - cutters - crushers - shears), off highway equipment, injection molding machines and hydraulic presses. Applicable to machines with insufficient pump capacity to prevent machine stoppage when peak pressures occur.

Function diagram



Download PDF file: [012-01._Function_diagram](#)

Connection types

Connection	P / T	H / Z
1	1/2" BSPP	1/2" BSPP
F	Flange mounting	HV-399-02 . Detail drawing

Max. tightening torque BSPP

	P / T	H / z
	1/2" BSPP	1/2" BSPP
with steel washer	13.0 da/ Nm	13.0 da/ Nm
with aluminium washer	7.0 da/ Nm	–
with cutting edge	13.0 da/ Nm	13.0 da/ Nm

Fluids and materials

Please see: General specifications

Ordering an M- HC-012

Type	Connection	Bypass flow	Max. pressure	Weight	Dimension drawing PDF
M- HC2D-012-1K M- HC3-012-1K	Tube: 1 = BSPP 2 = UNF	100 l/ min 100 l/ min	500 bar 500 bar	11.0 kg 9.5 kg	M- HC2D-012-1K M- HC3-012-1K
M- HC2D-012-1L55 M- HC3-012-1L55	Tube: 1 = BSPP 2 = UNF	55 l/ min 55 l/ min	700 bar 700 bar	11.0 kg 9.5 kg	M- HC2D-012-1L M- HC3-012-1L
M- HC2D-012-1L100 M- HC3-012-1L100	Tube: 1 = BSPP 2 = UNF	100 l/ min	700 bar		
M- HC6D-012-1L100		100 l/ min	700 bar		
M- HC6D-012-1L200		200 l/ min	700 bar		
M- HC6D-012-1L400		400 l/ min	700 bar		
M- HC2D-012- FL55 M- HC3-012- FL55	F = Flange	55 l/ min 55 l/ min	700 bar 700 bar		M- HC2D-012- FL M- HC3-012- FL
M- HC2D-012- FL100 M- HC3-012- FL100	F = Flange	100 l/ min	700 bar		
M- HC6D-012- FL100		100 l/ min	700 bar		
M- HC6D-012- FL200		200 l/ min	700 bar		
M- HC6D-012- FL400		400 l/ min	700 bar		

Intensification factors

HC2D	HC3	HC6D
1,6	1,5	1,5
1,9	2,0	2,0
2,2	2,8	2,5
2,6	3,2	3,3
3,2	4,0	4,0
4,0	5,0	4,9
5,0	6,6	6,3
6,6	9,0	8,2
9,0		

The intensification factor depends on available inlet and desired outlet pressure. To calculate the initial factor, use the following formular:

$i = \text{Desired high pressure} / \text{pump pressure}$

Desired pressure: **500 bar**

Pump pressure: **200 bar**

$i = 500 / 200 = 2.5$

For static use: Select an intensification factor higher or equal to the calculated value. In this case $i = 2.8$ with HC3 booster. The desired pressure of 500 bar is finally adjusted with the HP relief valve.

For dynamic use: Select an intensification factor 60% higher than the calculated value. In this case $i = 500 / 200 = 2.5 + 60\% = 4.0$. The desired pressure of 500 bar is finally adjusted with the HP relief valve.

Adjust the pressure- reducing valve to reach a pressure 40% higher than the settings at the relief valve. In this case $500 + 40\% = 700$ bar.

Ordering example

Ordering example of an M- HC_-012- _ for 700 bar, connection tube BSPP with $i = 2.8$;

M- HC3-012-1L55 mounted with HC3-2.8- A- D Also specify valve pre- settings, see [012-01._Function_diagram](#)