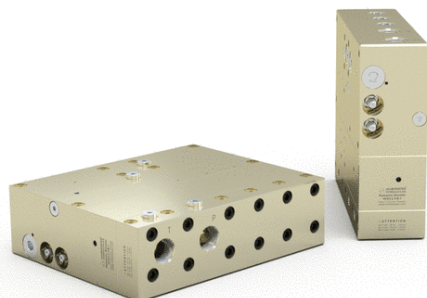




HC63-013 miniBOOSTER



Key features

- ▶ Automatic activated (sequence valve)
- ▶ High pressure – up to 800 bar (11,600 psi)
- ▶ Fast fill – system flows up to 300 l/ min
- ▶ Extended service life
- ▶ Robust design
- ▶ Flexible design— several boosters / intensification ratios
- ▶ Switch from by- pass to intensified flow
- ▶ Max inlet pressure = 345 bar
- ▶ Adjustable outlet pressure

Mounting: In-line tube or flanged

A model = no dump valve
B model = with dump valve
G model = direct proportionally controlled

Description

HC63-013 In- line Intensifier System is designed to boost the hydraulic pressure from the pump to the workload. It operates only when needed, to save energy.

The system is dynamical by means of being able to provide flow at high pressure.

The function of the system is simple, but smart. The hydraulic oil is by- passed directly from the pump to the workload at maximum flow when back pressure from the workload has reached a set point close to the maximum pressure of pump.

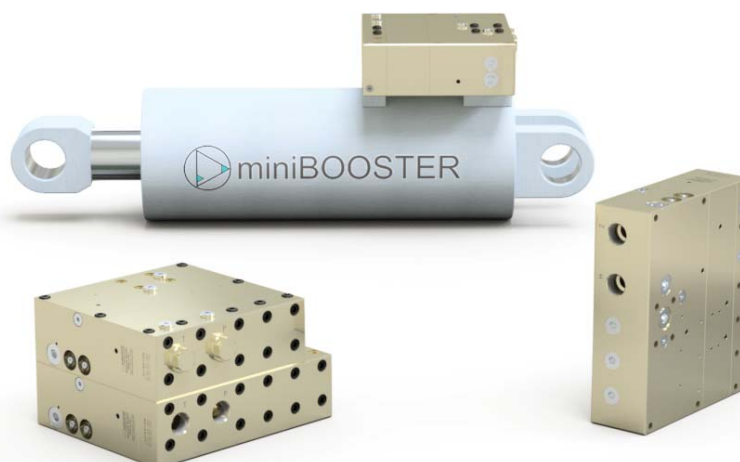
A sequence valve opens and directs the oil to the booster, which makes the pressure rise. The shift between maximum pump pressure and high pressure happens without intervention from the user and ensures that the workload at all times will be driven at a maximum speed in relation to the required high pressure.

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

Easy installation

HC63-013 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.

HP flange mounting is optional. Furthermore, it is possible to flange multiple HC63 boosters in order to achieve higher flow.



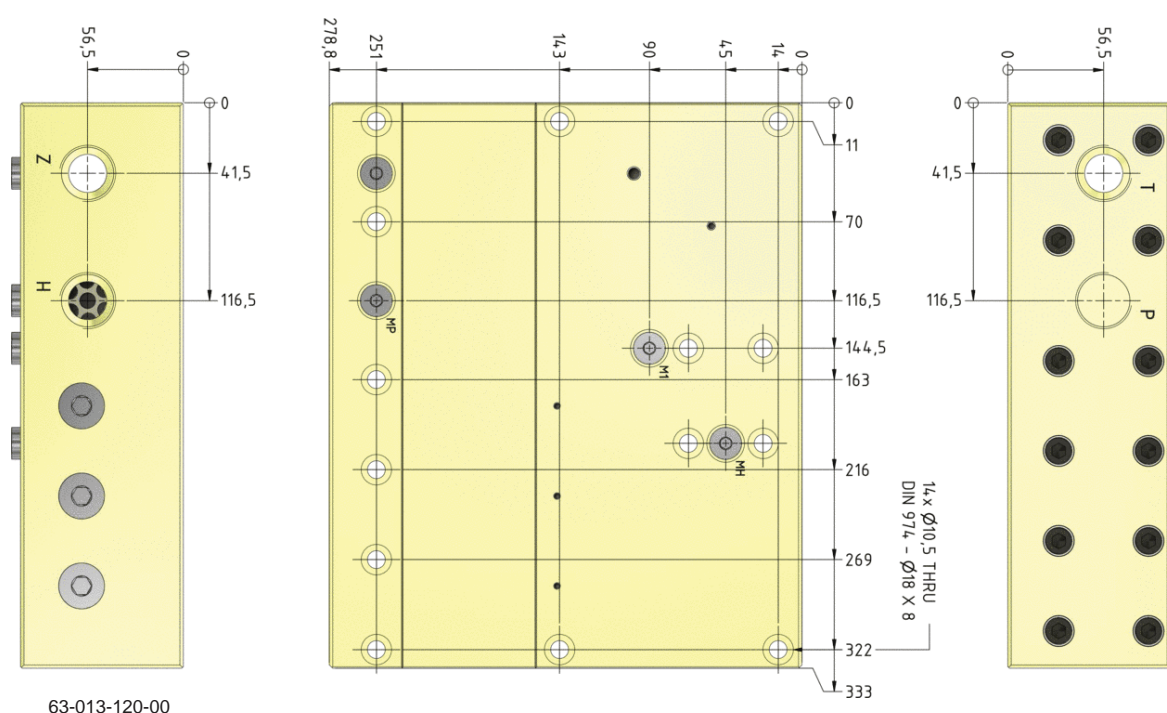
Typical Applications

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.

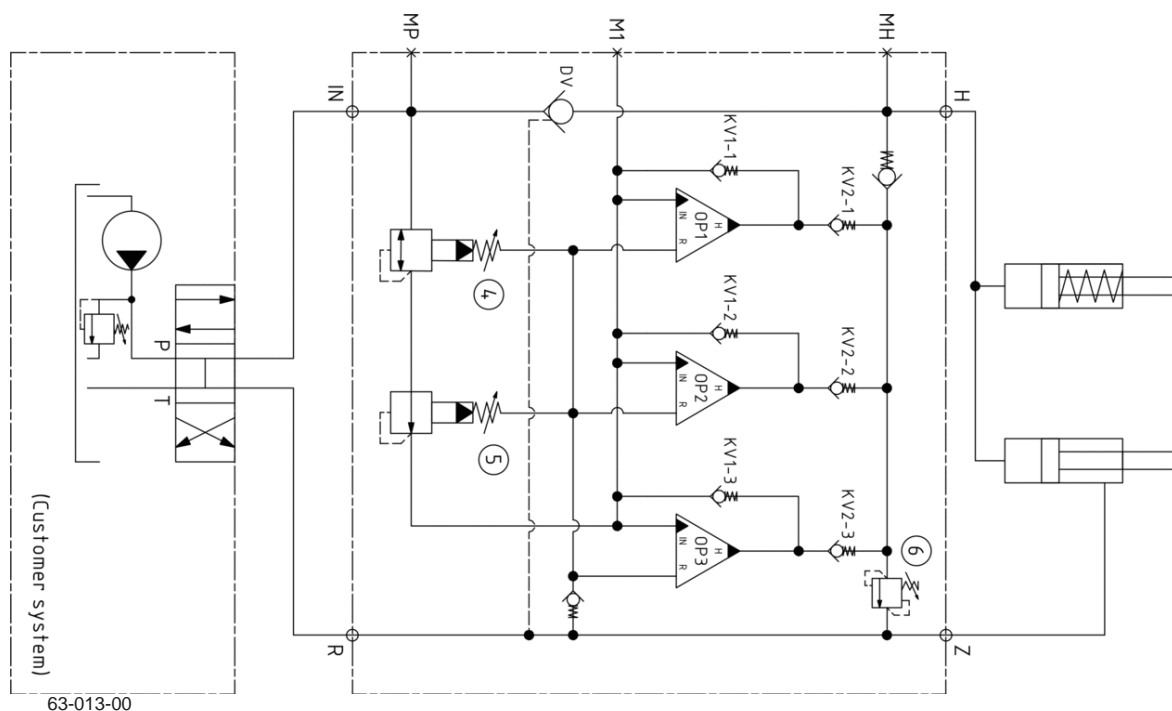
Flow rates

Intensification factor i	Max. outlet flow l/ min	Max. inlet flow l/ min
2.5	26.0	300
3.3	22.0	300
4.0	18.0	300
4.9	14.0	300
6.3	11.0	300
8.2	9.0	300

Dimensions



Function diagram



Download PDF file: [63-013-00 Function_diagram](#)

Connection types

Connection	P / T / Z	H	Drawing
1	1" BSP	1" BSP	
1	1" BSP	Flange mounting	Flange

Max. tightening torque BSP

	P / T	H / Z
	1/2" BSP	1/2" BSP
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

Max. tightening torque UNF

	P / T	H / Z
	3/4-16" UNF	3/4-16" UNF
with o- ring	3.5 da/ Nm	6.0 da/ Nm

Fluids and materials

Please see: General Specifications

Ordering an HC63-013

Ordering example of an HC63-013 with i = 4.0, DV incorporated and BSP connections: HC63 - 013 - 4.0 - B - 1

Model	Intensification, i	Dump valve	Connections
HC63-013	your selection...	your selection...	your selection...
	see flow rates	A = (no) / A model	1
		B = (yes) / B model	
		G = (proportional) / G model	

Intensification factor:

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

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

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.