miniBOOSTER Hydraulics A/S
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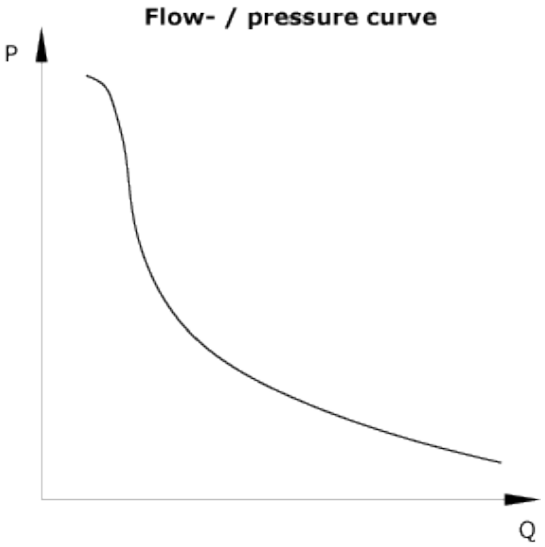
Minimum Size
Maximum Power



# General specifications for miniBOOSTER

**High flow - low pressure** · **Low flow - high pressure performance**




As shown on the chart miniBOOSTER has a dual flow/pressure feature. Initially when fluid is supplied to the booster it flows straight through to the high pressure side. At this point all the supplied flow (up to the max. allowed inlet flow) goes to the actuator allowing it to operate fast in the desired direction. As soon as inlet pressure is reached in the actuator, the flow will then be supplied via the high pressure piston until intensified pressure is reached.

**Temperature range Oil:** -40°C to +120°C
**Temperature range Water:** +3°C to +50°C

**Maximum inlet flow:** See performance data for each model.

**Inlet pressure:** Min. 20 bar (290 psi), Max. 200 Bar (2,900 psi) Note: Outlet pressure must never exceed 800 Bar (11,600 psi ), Except for the HC7, HC8 + HC9.

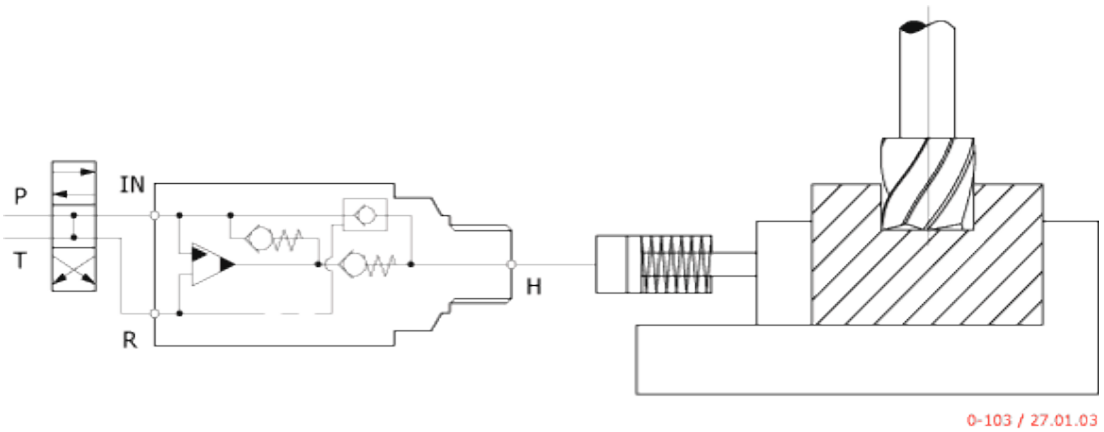
**Filtration:** 10 micron nominal; Max. 19/16 according to ISO 4406.

**Connections:** See data for each model.

**Advantages summarized:**

- Gives high pressure whenever needed
- Expensive high pressure pumps not required
- Expense saved on tubing
- Increase expensive high pressure by simply increasing inexpensive low pressure
- Low pressure is changed into high pressure with hardly any use of energy or heat generation
- Leakages on the high pressure side compensated dynamically
- System works with labyrinthine tubing which gives a longer life
- No rotating parts
- Light weight
- Small size – big performance

## Typical clamping circuit

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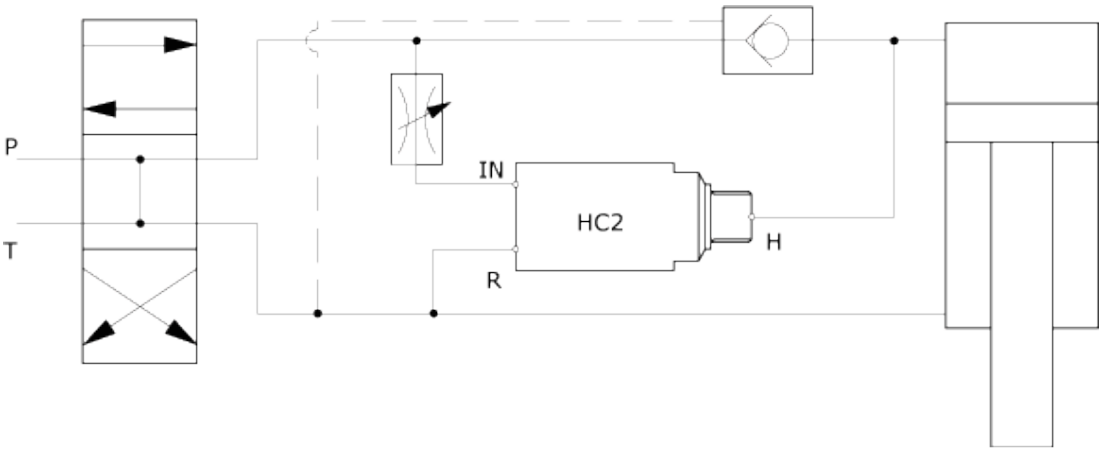
*Example with single acting cylinder.*

The HC2 is used to boost the pressure in an existing hydraulic circuit, e.g. in a machining centre to ensure a sufficient clamping force. As the HC2 can be directly fitted into the workholding system, high pressure connections can be avoided.

## Applications with larger flowrates

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*Example with external pilot operated check valve.*

In applications where the pump supplies a flow exceeding the maximum permissible supplied flow to the HC2, the HC2 is installed in parallel with a pilot operated check valve. This check valve is sized to allow for all the flow supplied from the pump. The inlet flow to the HC2 is limited to the maximum permissible flow for the particular intensification ratio.

As the cylinder moves forward, all the flow from the pump is used. When the pump pressure is established in the cylinder the check valve closes, and the end pressure is built up through the HC2. The cylinder is retracted by changing the position of the directional valve, whereby the pump is connected to the other side of the cylinder and the DV opens, allowing the fluid to return to the tank.

## Fluids

- Recognised hydraulic and transmission fluids compatible with Buna-N seals.
- Viscosity 1 to 500 cSt ($mm^2/s$)
- Water glycol mix (minimum 5% Glycol)
- Other media on request
- For other fluids please contact technical sales.

## Materials

- Oil Boosters: Body, cast iron, internal components, steel: External surface, zinc chromate finish
- Body & internal components: Stainless steel 316 W.1.4404
- Static seals, Nitrile; *No dynamic seals*