



POWER-HYDRAULIK

Flow divider

Overview

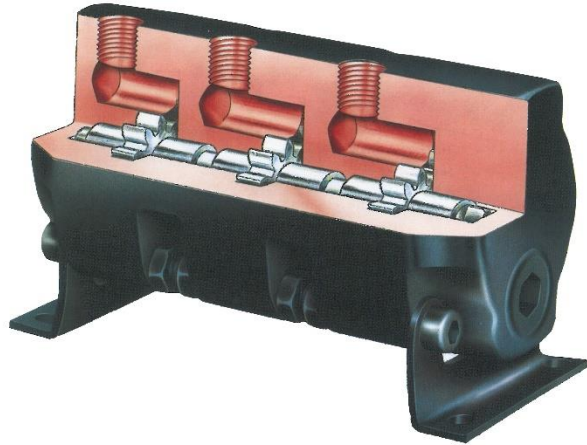
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Flow divider

The hydraulic solution for the supply of several consumers

With gear flow dividers from POWER-HYDRAULIK volumetric flow rates of 2 to 400 liters per minute can be split into 2 to max. 12 flows of equal size or into proportional flow rates. The flow divider is used as divider in one direction and combiner in another direction. Their special design means that, in 90% of applications, there is no need for additional pressure relief valves. Flow dividers can also be used to transmit pressure across individual hydraulic circuits. The design of hydraulic systems can be clearer and more compact when using flow dividers.



Perfectly synchronous cylinder operation is guaranteed

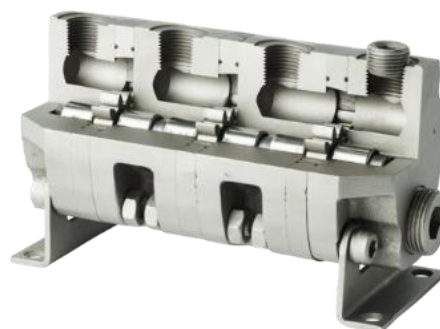
The main field of application for flow dividers involves assuring the synchronous movement of several cylinders or the supply of several consumers. Typical applications include pallet changers whereallets are raised and lowered for automatic loading and removal, or Cargo Loaders for raising and lowering a platform. For more application with hydraulic schematic, please see page 7.

Quality at its best:

- High-strength cast housing
 - Precision needle bearings
 - O-ring seals between the chambers
 - Accurately dowelled chambers
 - Hardened shafts with hardened round keys and keyways (prevent stress concentration and wear)
 - Precisely machined undercuts guarantee constant filling and displacement.
- The flow dividers work smoothly and have a long service life

Summary of the highlights

- 2 – 12 sub-flows
- Approx. 2 – 400 l/min (depending on layout)
- Max. 210 bar
- High-pressure series 240 bar at 13-170 l/min
- Low initial pressure and pressure loss
- Pressure relief units can be supplied for each range of flow dividers, also with anticavitation valves
- Approval for use in the automotive industry
- Long service life achieved through use of needle bearings and cast iron housing
- Internal final position equalization
- Easy to integrate in complete systems
- Modifications are possible: Proportional, motor-pump-unit, manifolds can be integrated
- Modular design
- Short delivery lead time due to comprehensive inventory



Dimensioning

Best efficiency and highest precision are achieved if the flow divider is operated in the ideal speed range. Therefore both inlets should be used also in case of devices with several chambers. The outlet volumetric flow rate can be adapted to the requirements by combining any chambers of a series.

The ideal speed range is at 1,500 – 2,500 rpm. Below a speed of 700 - 800 rpm, the division results will be inaccurate. The maximum permissible pressure difference must not be exceeded.

The required inlet pressure for flow dividers is calculated in the following way:

$$P \times Q = p_1 \times Q_1 + p_2 \times Q_2 + p_n \times Q_n + (10-15 \text{ bar})$$

„The product of inlet pressure and volumetric flow rate is equivalent to the sum of the products of sub-flows and pressures at the respective outlets, plus the pressure loss of 10 - 15 bar in the flow divider”.

| | |
|---------------------------------|---------------------|
| p | = inlet pressure |
| Q | = inlet flow rate |
| p ₁ – p _n | = outlet pressures |
| Q ₁ – Q _n | = outlet flow rates |

Please note the Einbau- und Betriebshinweise für Zahnradstromteiler und Steuerblöcke!

If you have any questions or differing conditions please contact POWER-HYDRAULIK!

Hydraulic oil

Hydraulic oils up to 500 cSt are used, with an oil cleanliness of 18/16/13 according to ISO 4406.

Division accuracy

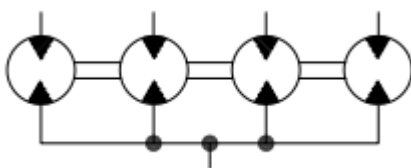
The division accuracy of geared flow dividers depends on the following parameters:

- oil viscosity and temperature
- difference in load pressures
- system pressure level
- oil flow to be divided

Division ratio

In the majority of cases a uniform division ratio is required. On request diverse division ratios can be achieved as well. This is possible without problems if different volumes are required within one size.

Symbol of a flow divider



In all control diagrams of POWER-HYDRAULIK, a symbol like the example on the left (4-section) is used for the flow divider. An overflow oil connection is not required.

Product variants and accessories

S-Version for higher pressure

Pressure continuous 210 bar, pressure intermittent 320 bar, max. pressure difference between sections 110 bar. Details can be found under the respective flow divider series.

In the S-Version of the high-pressure series a maximum pressure of 240 bar is attainable.

T-Version with increased division accuracy

Compared to the standard design which shows a dividing accuracy of $\pm 2.5\%$ (at 1,500 to 2,500 rpm and max. pressure difference between the sections of 20 – 25 bar), the T-Version achieves an accuracy up to $\pm 1.5\%$. The T-Version comprises all features of the S-Version with mounting brackets.

By request with O-Ring-seals made of Viton (FKM)

By default the flow dividers are equipped with NBR (Buna-N) seals.

Complete pressure relief units for retrofitting

Complete pressure relief units, if required also with anti-cavitation valves, can be retrofitted on the secondary side. Pressure relief units must be used wherever the maximum permissible pressure is exceeded by pressure intensification.

Optional inductive sensor

By request, possibility to install an inductive sensor to measure the speed at the flow divider.

You should provide us with the following information:

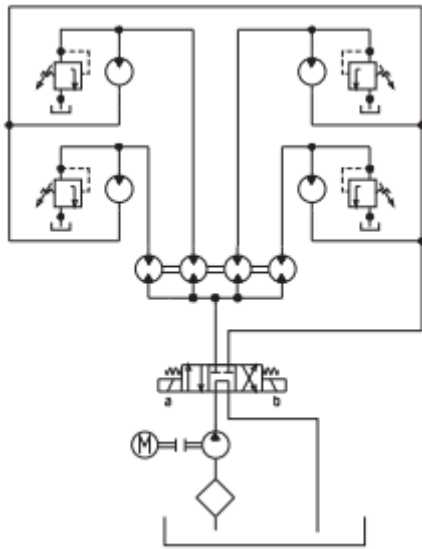
- Control diagram
- Type of application
- Inlet volumetric flow rate
- Equal or proportional division
- Operation or system pressure
- Type of medium
- Type of cylinders
- Location of the application
- Duration of use

We are happy to answer your questions and advise you on the selection of the right flow divider, even in case of deviating conditions.



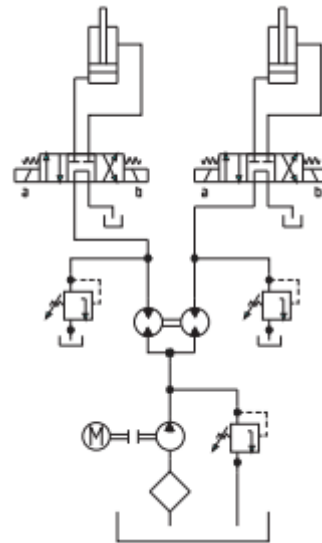
Typical applications

Supply of several stations



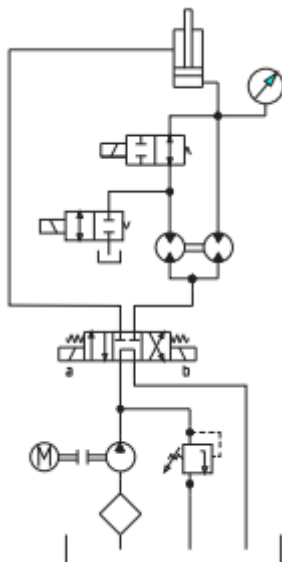
One pump supplies several stations in order to ensure sufficient lubrication: e.g. machines with hydraulic motor drive, tunneling machines, lubrication in coal/bowl mills, coolant distribution in multi-spindle deep-hole drilling machines.

Synchronism



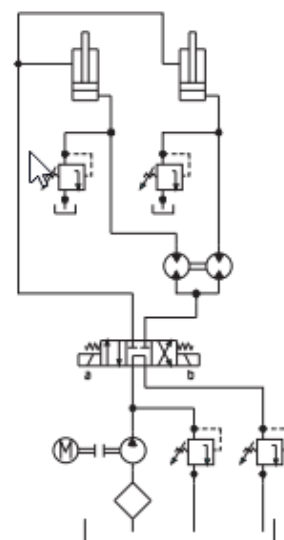
Synchronism of two or more cylinders, e.g. lifting platforms, pallet changers, ejectors in form tools, tilting stages.

Pressure intensifier



Flow dividers can also be used as pressure intensifiers by relieving one or several outlets to the tank, e.g. in waste presses and other high-/low-pressure designs.


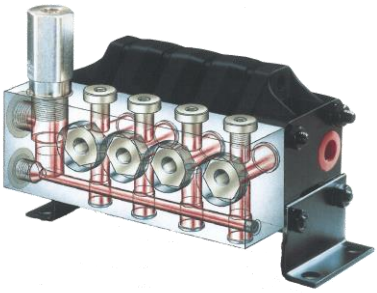

Separate control of flow rates



Two or more flow rates are controlled separately at different pressure: presses, machine tools, etc.

Type description

| | |
|---|--|
|  | <p>Series 200</p> <ul style="list-style-type: none"> ▪ From 2 to 8 sections ▪ 7 chamber sizes ▪ Max. continuous pressure 110 or 210 bar ▪ Equal and proportional flow rate ▪ Max. intermittent pressure 320 bar ▪ Inlet volumetric flow rate: 2-section devices 2-40 l/min. 8-section devices: max. 160l/min |
|  | <p>Series 300</p> <ul style="list-style-type: none"> ▪ From 2 to 8 sections ▪ 5 chamber sizes ▪ Equal and proportional flow rate ▪ Max. continuous pressure 105 or 210 bar ▪ Max. intermittent pressure 320 bar ▪ Inlet volumetric flow rate: 2-section devices: 13-170 l/min 8-section devices: max. 500 l/min |
|  | <p>Series 400</p> <ul style="list-style-type: none"> ▪ 2 sections ▪ 2 chamber sizes ▪ Equal flow rate ▪ Max. continuous pressure 105 or 210 bar ▪ Max. intermittent pressure 320 bar ▪ Inlet volumetric flow rate: 77-380 l/min |

| | |
|---|---|
|  | <p>Series H/HR</p> <ul style="list-style-type: none"> ▪ From 2 to 6 sections ▪ 5 chamber sizes ▪ Equal and proportional flow rate ▪ Max. continuous pressure 240 bar ▪ Max. intermittent pressure 420 bar ▪ Inlet volumetric flow rate: 2-section devices: 13-170 l/min. 6-section devices: max. 400 l/min ▪ With or without integrated pressure relief valves |
|  | <p>Pressure relief units - for all series</p> <ul style="list-style-type: none"> ▪ Used in case of pressure intensification if the maximum permissible pressure is exceeded ▪ Installation into the pipe by default ▪ Series 200 PR – 2-section and 4-section also flange-mounted ▪ Depending on the version, the aluminum control block is equipped with pressure relief valves, check valves and/or anti-cavitation valves ▪ On request, the pressure relief valves are set |
|  | <p>Flow divider with inductive sensor</p> <ul style="list-style-type: none"> ▪ Possibility to install an inductive sensor to measure the speed at the flow divider ▪ Further possibilities and solutions on request |

Flow dividers with two equal sub-flows

Series 200 PR

Variants

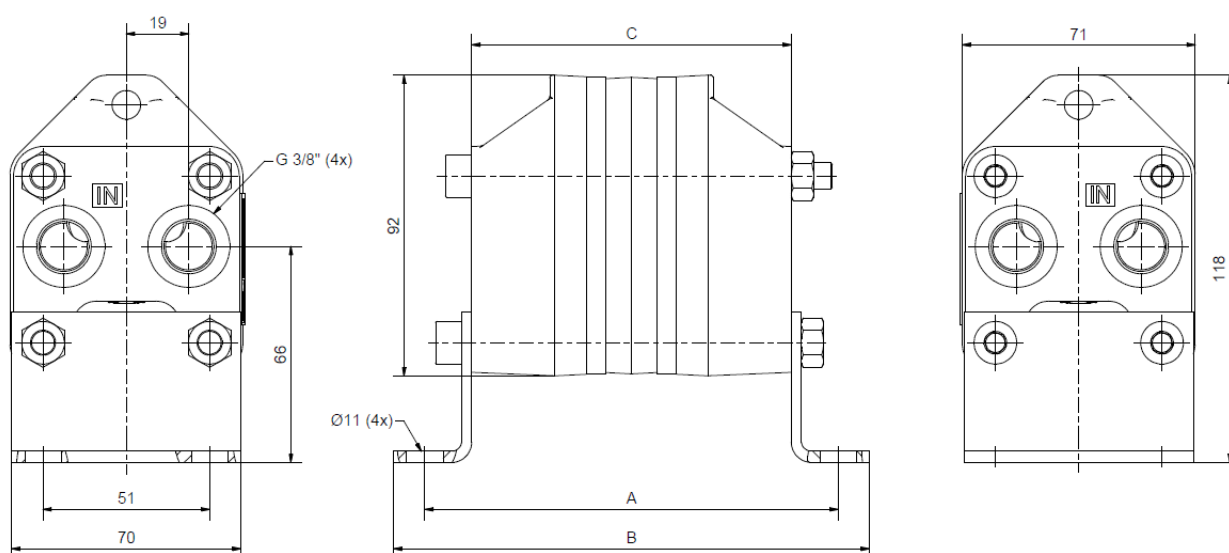
--: standard, without mounting brackets

A: standard version with mounting brackets

S: designed for higher pressure without mounting brackets

B: designed for higher pressure with mounting brackets

T: designed for higher pressure with mounting brackets and with increased division accuracy



Max. speed: temporary 3500 rpm

| model | number of sections | max. inlet flow (dm ³ /min) | displacement per section (cm ³ /rev.) | max. pressure continuous (bar) | | max. pressure intermittent (bar) | | max. pressure . diff. between sections (bar) | | dim. A ⁺² (mm) | dim. B ⁺² (mm) | dim. C (mm) |
|--------|--------------------|--|--|--------------------------------|-------|----------------------------------|-------|--|-------|---------------------------|---------------------------|-------------|
| | | | | --/A | S/B/T | --/ A | S/B/T | --/A | S/B/T | | | |
| PR 202 | 2 | 13 | 1.9 | 140 | 210 | 175 | 320 | 175 | 175 | 126 | 145 | 97.4 |
| PR 204 | 2 | 23 | 3.3 | 110 | 210 | 140 | 320 | 110 | 110 | 134 | 154 | 106.1 |
| PR 207 | 2 | 40 | 5.6 | 110 | 210 | 140 | 320 | 110 | 110 | 148 | 168 | 120.1 |

Ordering code: model – variant

Example : PR 202 – B



Flow dividers with two equal sub-flows

Series 300 PR

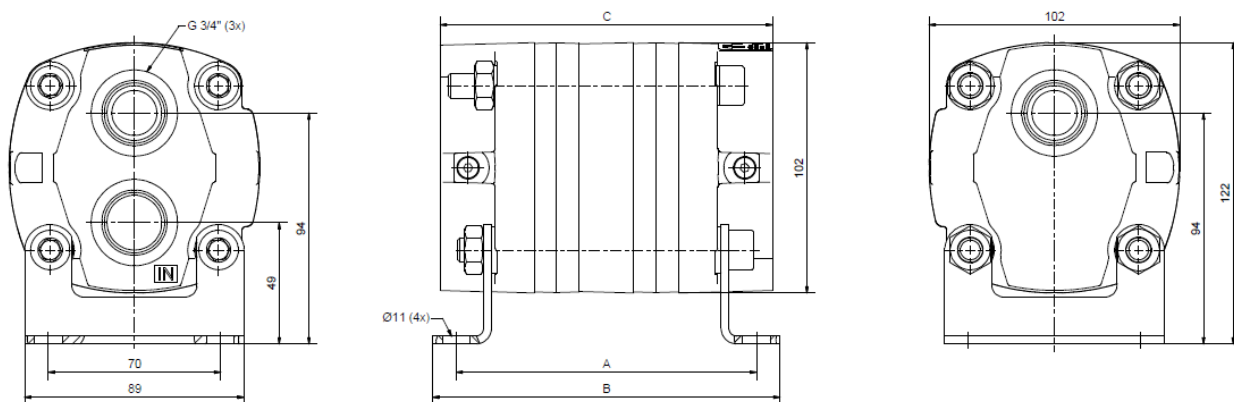
Variants

All versions by default with mounting brackets

--: standard

S: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3500 rpm

| model | number of sections | max. inlet flow (dm ³ /min) | displacement per section (cm ³ /rev.) | max. pressure continuous (bar) | | max. pressure intermittent (bar) | | max. pressure . diff. between sections (bar) | | dim. A +2 (mm) | dim. B +2 (mm) | dim. C (mm) |
|--------|--------------------|--|--|--------------------------------|-----|----------------------------------|-----|--|-----|----------------|----------------|-------------|
| | | | | -- | S/T | -- | S/T | -- | S/T | | | |
| PR 307 | 2 | 80 | 11.7 | 105 | 210 | 140 | 320 | 70 | 110 | 122 | 141 | 134.8 |
| PR 310 | 2 | 115 | 16.4 | 105 | 210 | 140 | 320 | 70 | 110 | 136 | 155 | 149.3 |
| PR 315 | 2 | 170 | 24.4 | 105 | 210 | 140 | 320 | 70 | 110 | 161 | 180 | 174.2 |

Ordering code: model – variant

Example: PR 307 – S

Flow dividers with two equal sub-flows

Series 400 PR

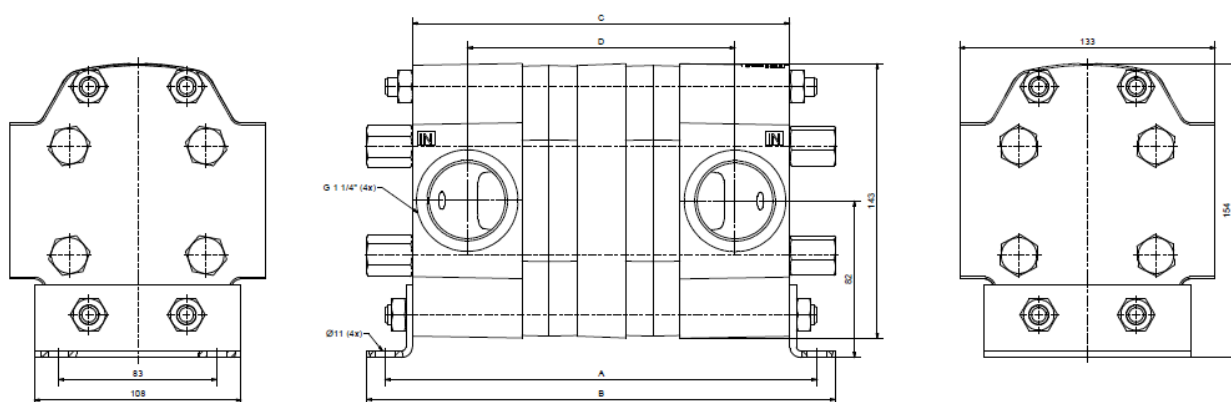
Variants

All versions by default with mounting brackets

--: standard

S: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3000 rpm

| model | number of sections | max. inlet flow (dm³/min) | displacement per section (cm³/rev.) | max. pressure continuous (bar) | | max. pressure intermittent (bar) | | max. pressure . diff. between sections (bar) | | dim. A +² (mm) | dim. B +² (mm) | dim. C (mm) | dim. D (mm) |
|--------|--------------------|---------------------------|-------------------------------------|--------------------------------|-----|----------------------------------|-----|--|-----|----------------|----------------|-------------|-------------|
| | | | | -- | S/T | -- | S/T | -- | S/T | | | | |
| PR 411 | 2 | 230 | 38.6 | 105 | 210 | 140 | 320 | 70 | 110 | 226 | 245 | 197 | 139.8 |
| PR 418 | 2 | 380 | 64.0 | 105 | 210 | 140 | 320 | 70 | 110 | 264 | 283 | 235,1 | 177.9 |

Ordering code: model – variant

Example: PR 411 - S

Flow dividers with four equal sub-flows

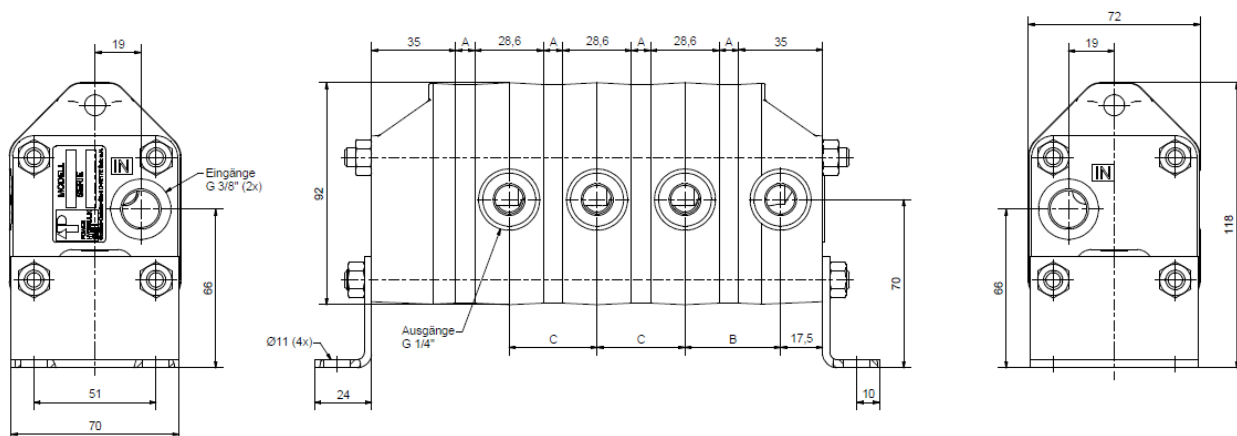
Series 200 PM

Variants

All versions by default with mounting brackets and with stub shaft (modular design)

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3500 rpm

| model | number of sections | max. inlet flow (dm³/min) | displacement per section (cm³/rev.) | max. pressure continuous (bar) | max. pressure intermittent (bar) | max. pressure . diff. between sections (bar) | dim. section A (mm) | dim. section B (mm) | dim. C (mm) |
|-----------|--------------------|---------------------------|-------------------------------------|--------------------------------|----------------------------------|--|---------------------|---------------------|-------------|
| | | | | for versions B and T | | | | | |
| PM 203-59 | 4 | 36 | 2.5 | 210 | 320 | 110 | 8.0 | 39.8 | 36.6 |
| PM 205-59 | 4 | 60 | 4.3 | 210 | 320 | 110 | 13.4 | 45.1 | 41.9 |
| PM 207-59 | 4 | 80 | 5.6 | 210 | 320 | 110 | 17.2 | 49.0 | 45.8 |
| PM 210-59 | 4 | 114 | 8.2 | 210 | 320 | 110 | 25.4 | 57.2 | 54.0 |

Ordering code: model – variant

Example: PM 203-59-B



Flow dividers with four equal sub-flows

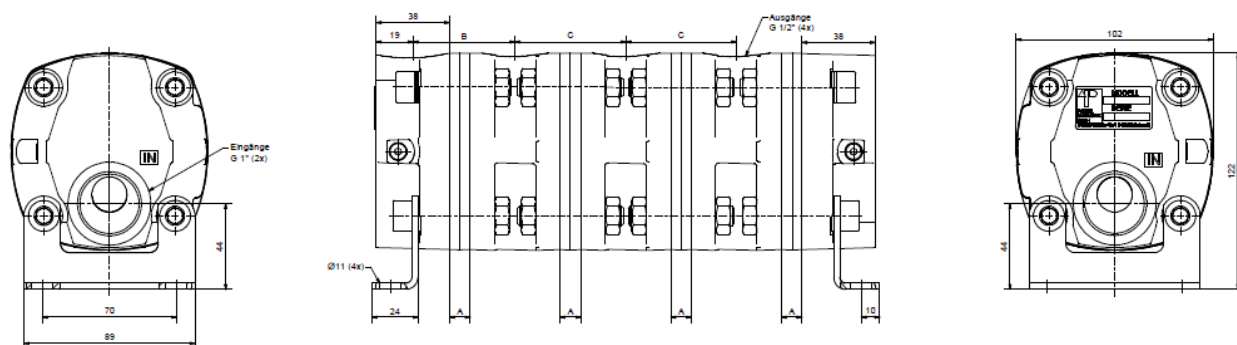
Series 300 PR

Variants

All versions by default with mounting brackets and with stub shaft (modular design)

S: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3500 rpm

| model | number of sections | max. inlet flow (dm³/min) | displacement per section (cm³/rev.) | max. pressure continuous (bar) | max. pressure intermittent (bar) | max. pressure . diff. between sections (bar) | dim. section A (mm) | dim. section B (mm) | dim. C (mm) |
|------------|--------------------|---------------------------|-------------------------------------|--------------------------------|----------------------------------|--|---------------------|---------------------|-------------|
| | | | | for versions S and T | | | | | |
| PR 304-59 | 4 | 96 | 6.8 | 210 | 320 | 110 | 10.6 | 53.1 | 57.6 |
| PR 307-59 | 4 | 160 | 11.7 | 210 | 320 | 110 | 18.2 | 60.7 | 65.2 |
| PR 310-59 | 4 | 228 | 16.4 | 210 | 320 | 110 | 25.4 | 67.9 | 72.4 |
| PR 312- 59 | 4 | 280 | 20.5 | 210 | 320 | 110 | 31.8 | 74.3 | 78.8 |
| PR 315- 59 | 4 | 332 | 24.4 | 210 | 320 | 110 | 37.8 | 80.3 | 84.8 |

Ordering code: model – variant

Example: PR 304-59-S

Flow dividers for several equal or proportional sub-flows

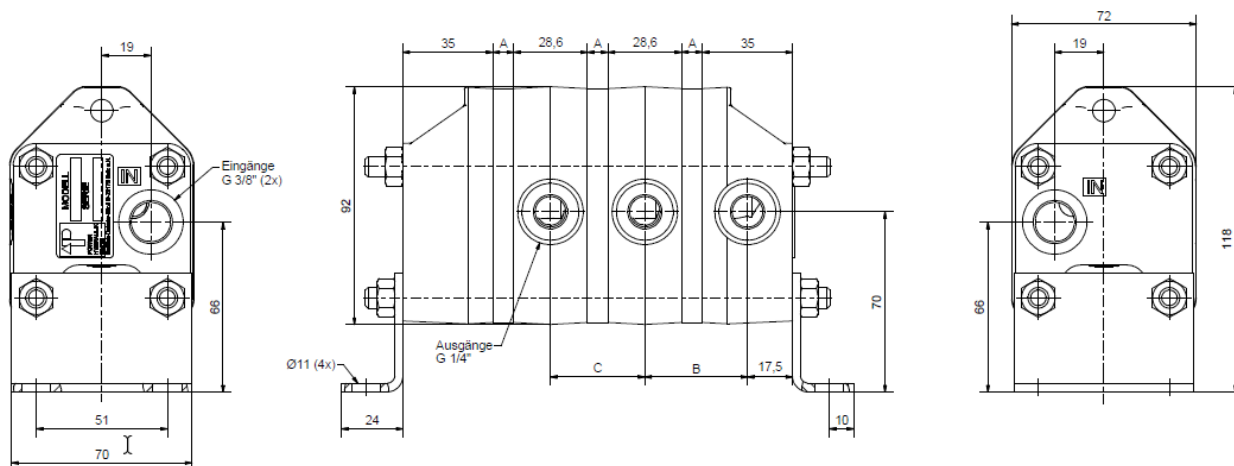
Series 200 PM

Variants

All versions by default with mounting brackets and with stub shaft (modular design)

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3500 rpm

| model | section label | max. inlet flow per section (dm ³ /min) | displacement per section (cm ³ /rev.) | max. pressure continuous (bar) | max. pressure intermittent (bar) | max. pressure . diff. between sections (bar) | dim. A (mm) | dim. B (mm) | dim. C off three-way (mm) |
|----------------------|---------------|--|--|---|---|--|-------------------|-------------------|------------------------------------|
| for versions B and T | | | | | | | | | |
| PM 201 | 201 | 4 | 1.1 | 210 | 320 | 175 | 3.6 | 35.4 | 32.2 |
| PM 202 | 202 | 6.5 | 1.9 | 210 | 320 | 175 | 5.8 | 37.6 | 34.4 |
| PM 203 | 203 | 9 | 2.5 | 210 | 320 | 110 | 8.0 | 39.8 | 36.6 |
| PM 204 | 204 | 11.5 | 3.3 | 210 | 320 | 110 | 10.2 | 42.0 | 38.8 |
| PM 205 | 205 | 15 | 4.3 | 210 | 320 | 110 | 13.4 | 45.1 | 41.9 |
| PM 207 | 207 | 20 | 5.6 | 210 | 320 | 110 | 17.2 | 49.0 | 45.8 |
| PM 210 | 210 | 28.5 | 8.2 | 210 | 320 | 110 | 25.4 | 57.2 | 54.0 |

The chambers can be combined with each other as desired!

| | | | | | | |
|------------------------------|----|----|----|----|----|----|
| number of sections | 3 | 4 | 5 | 6 | 7 | 8 |
| identification of section | 60 | 59 | 58 | 57 | 56 | 55 |

Ordering code equal sub flows :

model – identification of section – variant

Example:

PM 203-60-B

Ordering code proportional sub flows (up to 8):

model – last digit of the respective chamber – variant

Example: PM 202 – 3 – 7 – 0 – ... - T



Flow dividers for several equal or proportional sub-flows

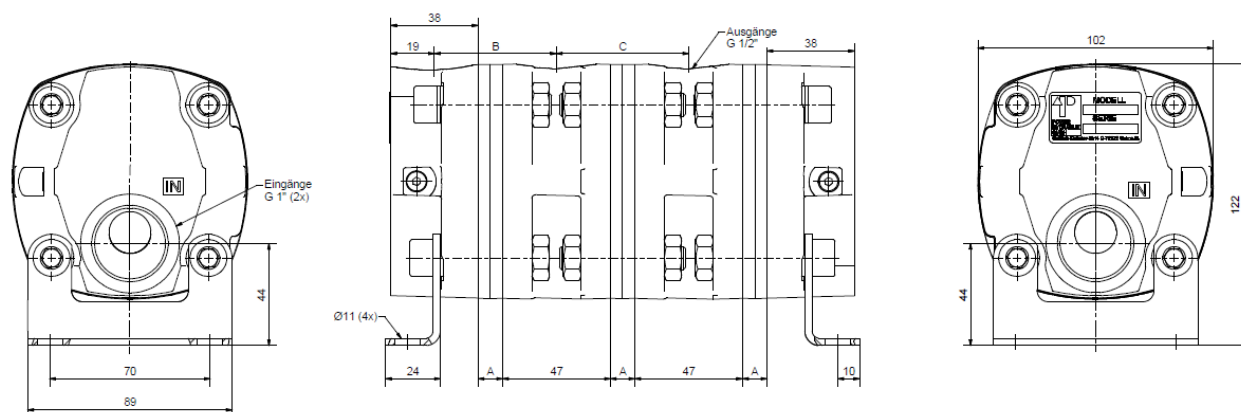
Series 300 PR

Variants

All versions by default with mounting brackets and with stub shaft (modular design)

S: designed for higher pressure

T: designed for higher pressure with increased division accuracy



Max. speed: temporary 3500 rpm

| model | section label | max. inlet flow per section (dm ³ /min) | displacement per section (cm ³ /rev.) | max. pressure continuous (bar) | max. pressure intermittent (bar) | max. pressure . diff. between sections (bar) | dim. A (mm) | dim. B (mm) | dim. C off three-way (mm) |
|----------------------|---------------|--|--|---|---|--|-------------------|-------------------|------------------------------------|
| for versions S and T | | | | | | | | | |
| PR 304 | 304 | 24 | 6.8 | 210 | 320 | 110 | 10.6 | 53.1 | 57.6 |
| PR 307 | 307 | 40 | 11.7 | 210 | 320 | 110 | 18.2 | 60.7 | 65.2 |
| PR 310 | 310 | 57 | 16.4 | 210 | 320 | 110 | 25.4 | 67.9 | 72.4 |
| PR 312 | 312 | 70 | 20.5 | 210 | 320 | 110 | 31.8 | 74.3 | 78.8 |
| PR 315 | 315 | 83 | 24.4 | 210 | 320 | 110 | 37.8 | 80.3 | 84.8 |

The chambers can be combined with each other as desired

| number of sections | 3 | 4 | 5 | 6 | 7* | 8* |
|------------------------------|----|----|----|----|----|----|
| identification of section | 60 | 59 | 58 | 57 | 56 | 55 |

* beginning from 7-fold division max. continuous pressure = 150 bar

Ordering code equal sub flows :

model – identification of section – variant

Example:

PR 304-60-S

Ordering code proportional sub flows (up to 8):

model – last digit of the respective chamber – variant

Example: PR 307 – 4 – 5 – 0 - ... - T

For devices with 2 sub flows the last two digits of the respective chamber are named

Example: PR 304 – 07 - T

High pressure flow dividers for several equal or proportional sub-flows

Series 300 - H: without integrated pressure relief valves

Series 300 - HR: with integrated pressure relief valves

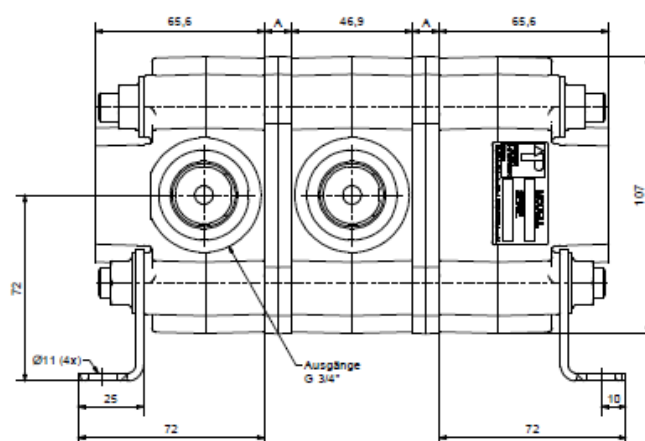
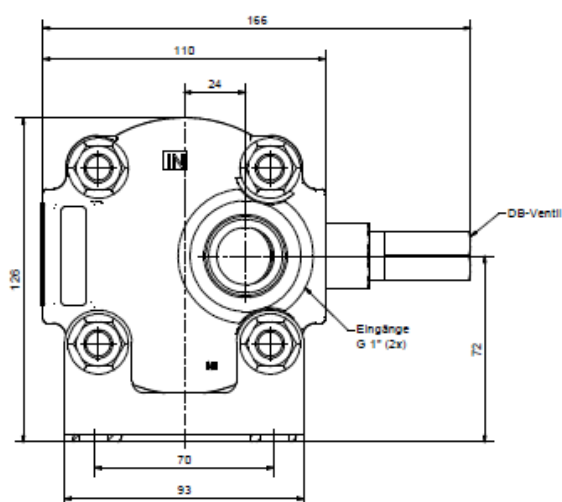
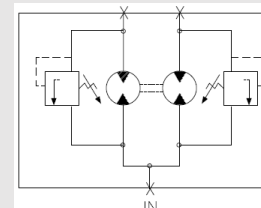
Variants

All versions of high pressure series by default with mounting brackets

S: standard

T: with increased division accuracy

hydraulic diagram:
2 chambers, optionally with
integrated pressure relief
valves, adjustment range 35-
100 bar (differential pressure)



Max. speed: temporary 3500 rpm

| model | section label | max. inlet flow per section (dm ³ /min) | displacement per section (cm ³ /rev.) | max. pressure continuous (bar) | max. pressure intermittent (bar) | max. pressure diff. between sections (bar) | Dimd A (mm) |
|----------------------|---------------|--|--|--------------------------------|----------------------------------|--|-------------|
| for versions S and T | | | | | | | |
| H/HR 304 | 304 | 24 | 6.8 | 240 | 420 | 210 | 10.6 |
| H/HR 307 | 307 | 40 | 11.7 | 240 | 420 | 210 | 18.2 |
| H/HR 310 | 310 | 57 | 16.4 | 240 | 420 | 210 | 25.4 |
| H/HR 312 | 312 | 70 | 20.5 | 240 | 420 | 210 | 31.8 |
| H/HR 315 | 315 | 83 | 24.4 | 240 | 420 | 210 | 37.8 |

The chambers can be combined with each other as desired!

| number of sections | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------------------|----|----|----|----|----|----|
| identification of section | 60 | 59 | 58 | 57 | 56 | 55 |

Ordering code for 2 equal sub flows: model – last digit of the respective chamber – variant

Example: HR 304 – 4 – S

Ordering code for 3 or more equal sub flows: model – identification of section – variant

Example: H 315 - 59 - S

Ordering code for proportional sub flows (up to 6):

model – last digit of the respective chamber – variant

Example: HR 307 – 4 – 0 – 5 - ... - T

Pressure relief units -

Security in all cases

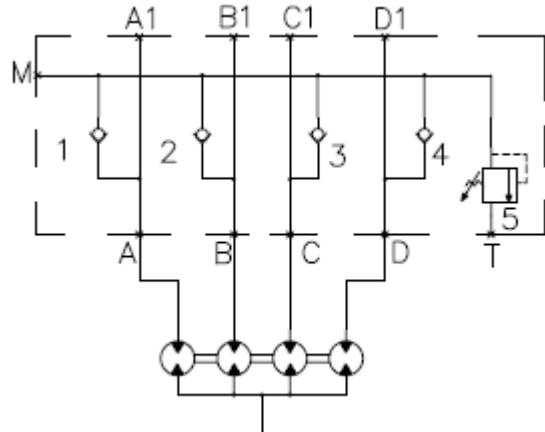
Due to their design, flow dividers by POWER-HYDRAULIK do not require additional pressure relief valves for final position equalization in many applications. If a cylinder has reached the final position, no more oil can flow on this side. The flow divider, in which all gears are located on the same shaft, keeps rotating slowly in order to bring the other cylinders into their final position. The pressure in the chamber of the cylinder which is already in the final position rises in this way.

In order to ensure that the maximum permissible pressure is neither exceeded in final position equalization nor in pressure intensification, pressure relief units by POWER-HYDRAULIK are used in many applications. Their task is to monitor and secure the application on the secondary side (on the load side after the flow divider). Consisting of an aluminum control block, check valves and pressure relief valves, the pressure relief units by POWER-HYDRAULIK work according to the principle of absolute safeguarding, i.e. the pressure relief valves open at a certain value and make the excess oil flow into the tank. The setpoint value is usually set on site during commissioning. On request we can also adjust the valves at our test rig.



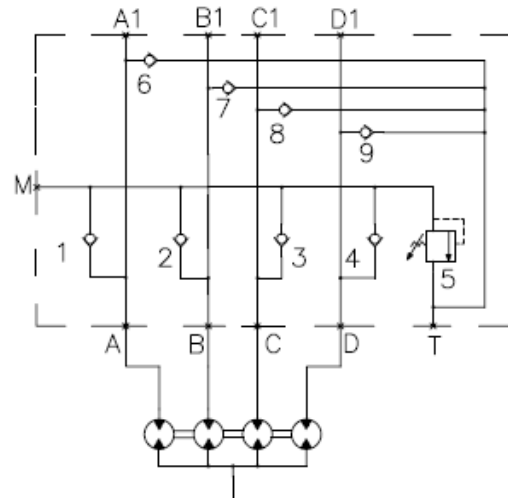
Normally the pressure relief units must be integrated into the pipe. For 2-section and 4-section flow dividers of Series 200 – PR, the pressure relief units can also be flange-mounted directly on the flow divider. If required, all pressure relief units are also available with anti-cavitation valves. These check valves prevent the formation of a vacuum in the respective pipe during the return flow by sucking oil from the tank.

Pressure relief units, integrated into the pipes



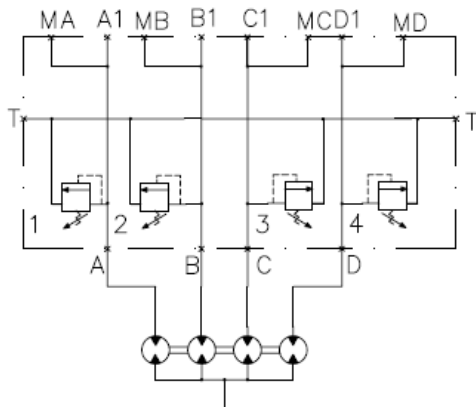
Pressure relief unit for Series 200, 4-section

Consists of an aluminum control block; each sub-flow is secured by a check valve and a pressure relief valve. In 2-section devices each sub-flow is secured by a pressure relief valve.



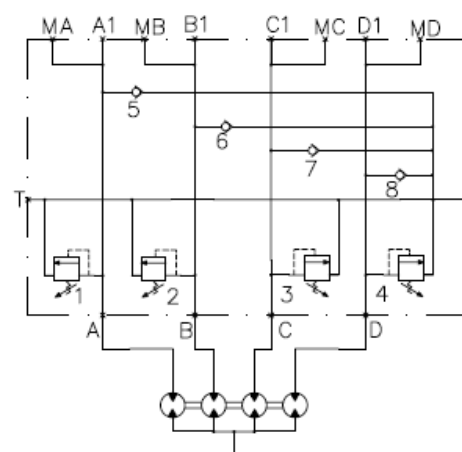
Pressure relief unit with anti-cavitation valves for Series 200, 4-section

Consists of an aluminum control block; each sub-flow is secured by a check valve and a pressure relief valve, additionally with another check valve for cavitation protection. In 2-section devices each sub-flow is secured by a pressure relief valve.



Pressure-relief unit for Series 300 and 400, 4-section (Series 400 only 2-section)

Consists of an aluminum control block; each sub-flow is secured by a pressure relief valve.



Pressure-relief unit with anti-cavitation valves for Series 300 and 400, 4-section (Series 400 only 2-section)

Consists of an aluminum control block; each sub-flow is secured by a pressure relief valve, additionally with further check valves for cavitation protection.



Pressure relief unit – flange-mounted

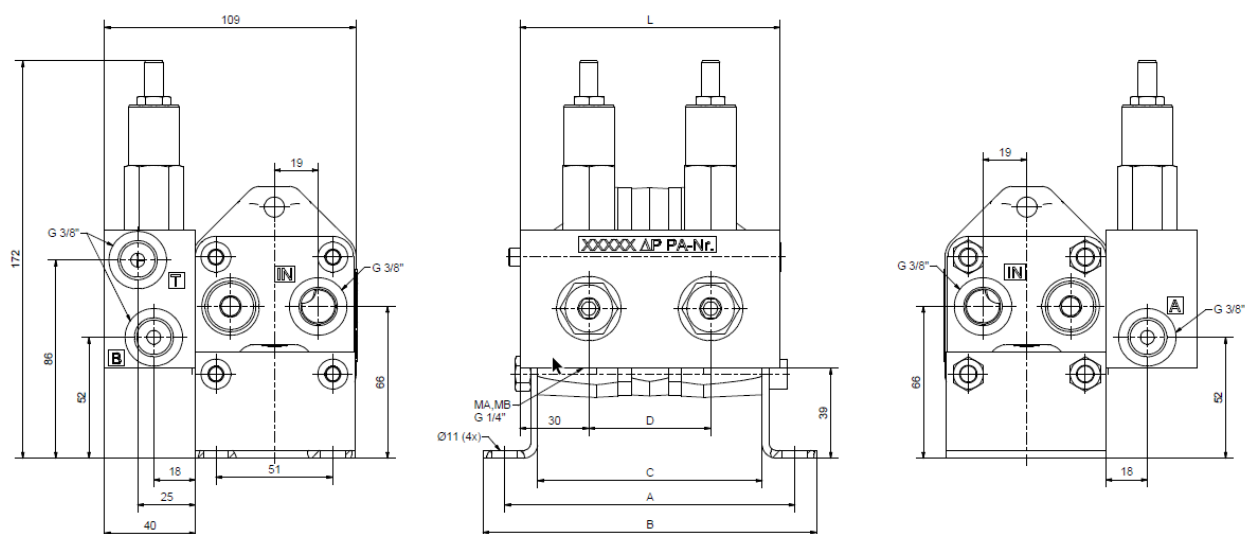
Series 200 PR – with 2 equal sub flows

Variants

All versions by default with mounting brackets

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



| flow divider model | dim. A ⁺² (mm) | dim. B ⁺² (mm) | dim. C (mm) | dim. D (mm) | dim. L (mm) |
|-----------------------|------------------------------|------------------------------|----------------|----------------|----------------|
| PR 202 | 126 | 145 | 97.4 | 53 | 113 |
| PR 204 | 135 | 154 | 106.1 | 61.5 | 121 |
| PR 207 | 149 | 168 | 120.1 | 75.5 | 135 |

Please state in your query/order whether a pressure relief unit is required.
Our team will gladly assist you.

Pressure relief unit with anti cavitation protection – flange-mounted

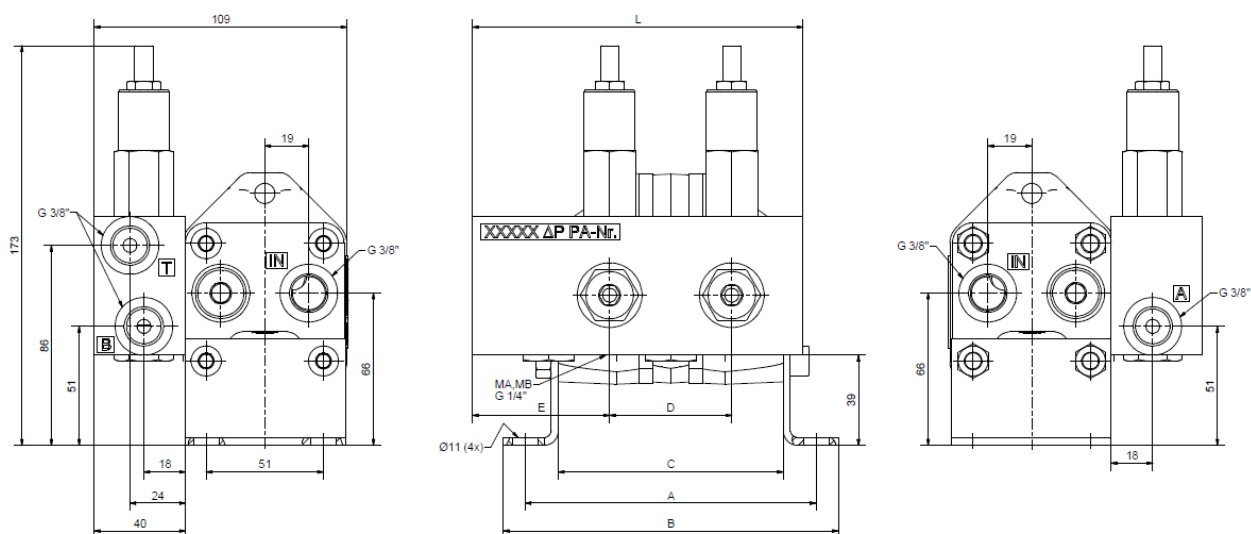
Series 200 PR – with 2 equal sub flows

Variants

All versions by default with mounting brackets

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



| flow divider model | dim. A ⁺² (mm) | dim. B ⁺² (mm) | dim. C (mm) | dim. D (mm) | dim. E (mm) | dim. L (mm) |
|-----------------------|------------------------------|------------------------------|----------------|----------------|----------------|----------------|
| PR 202 | 126 | 145 | 97.4 | 52.9 | 59.3 | 143 |
| PR 204 | 135 | 154 | 106.1 | 61.5 | 59.3 | 152 |
| PR 207 | 149 | 168 | 120.1 | 75.5 | 30 | 135 |

Please state in your query/order whether a pressure relief unit with anti cavitation protection is required.

Our team will gladly assist you.



Pressure relief unit – flange-mounted

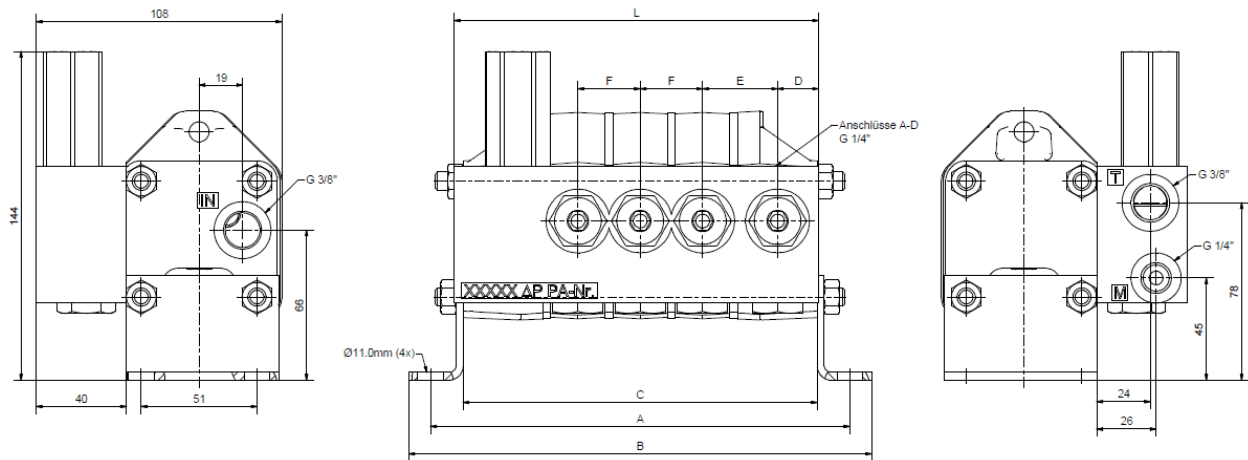
Series 200 PR – with 4 equal sub flows

Variants

All versions by default with mounting brackets

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



| flow divider model | dim. A ⁺² (mm) | dim. B ⁺² (mm) | dim. C (mm) | dim. D (mm) | Dim. E (mm) | Dim. F (mm) | Dim. L (mm) |
|-----------------------|------------------------------|------------------------------|----------------|----------------|----------------|----------------|----------------|
| PR 201-59 | 184 | 203 | 155 | 15 | 32.9 | 27.4 | 152 |
| PR 202-59 | 193 | 213 | 165 | 18 | 35.2 | 29.7 | 162 |
| PR 204-59 | 211 | 231 | 183 | 16 | 39.5 | 34.0 | 165 |

Please state in your query/order whether a pressure relief unit is required.
Our team will gladly assist you

Pressure relief unit with anti cavitation protection – flange-mounted

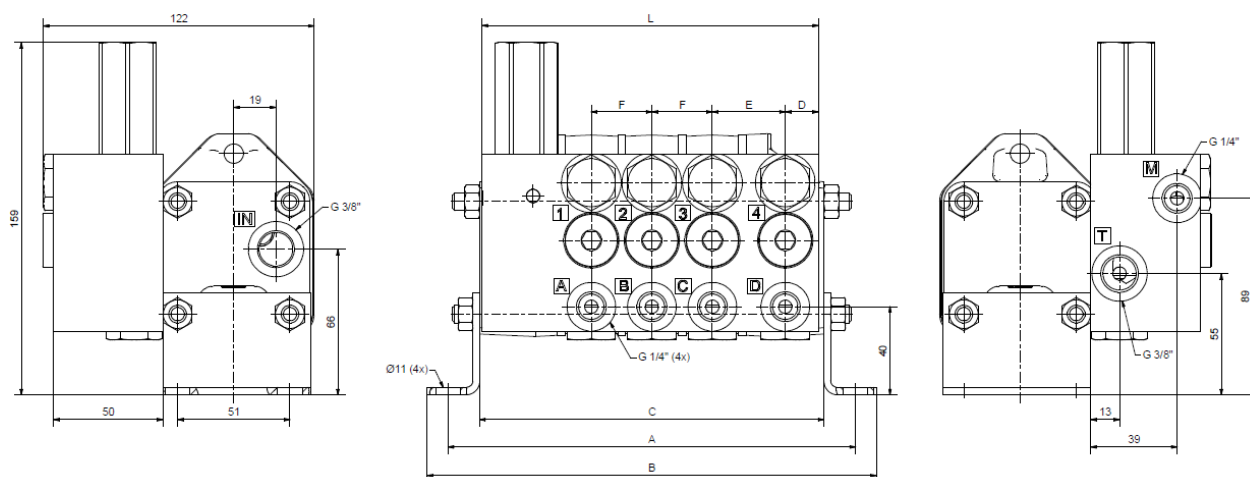
Series 200 PR – with 4 equal sub flows

Variants

All versions by default with mounting brackets

B: designed for higher pressure

T: designed for higher pressure with increased division accuracy



| flow divider model | dim. A ⁺² (mm) | dim. B ⁺² (mm) | dim. C (mm) | dim. D (mm) | dim. E (mm) | dim. F (mm) | dim. L (mm) |
|-----------------------|------------------------------|------------------------------|----------------|----------------|----------------|----------------|----------------|
| PR 201-59 | 184 | 203 | 155 | 15 | 32.9 | 27.4 | 152 |
| PR 202-59 | 193 | 213 | 165 | 18 | 35.2 | 29.7 | 162 |
| PR 204-59 | 211 | 231 | 183 | 16 | 39.5 | 34.0 | 165 |

Please state in your query/order whether a pressure relief unit with anti cavitation protection is required.

Our team will gladly assist you.



Quick search

| Liters | Chambers | Model | Displacement | rpm |
|------------|----------|-----------|--------------|------|
| 10 | 2 | PR 204 | 3,3 | 1515 |
| | 3 | PM 202-60 | 1,9 | 1760 |
| | 4 | PR 201-59 | 1,1 | 2280 |
| | 5 | PM 201-58 | 1,1 | 1820 |
| | 6 | PM 201-57 | 1,1 | 1520 |
| | 7 | PM 201-56 | 1,1 | 1300 |
| | 8 | PM 201-55 | 1,1 | 1140 |
| 15 | 2 | PR 204 | 3,3 | 2270 |
| | 3 | PM 203-60 | 2,5 | 2000 |
| | 4 | PR 202-59 | 1,9 | 1980 |
| | 5 | PM 202-58 | 1,9 | 1578 |
| | 6 | PM 201-57 | 1,1 | 2280 |
| | 7 | PM 201-56 | 1,1 | 1950 |
| | 8 | PM 201-55 | 1,1 | 1710 |
| 20 | 2 | PR 207 | 5,6 | 1790 |
| | 3 | PM 204-60 | 3,3 | 2020 |
| | 4 | PR 204-59 | 3,3 | 1515 |
| | 5 | PM 202-58 | 1,9 | 2110 |
| | 6 | PM 202-57 | 1,9 | 1760 |
| | 7 | PM 201-56 | 1,1 | 2600 |
| | 8 | PM 201-55 | 1,1 | 2280 |
| 30 | 2 | PM 210-0 | 8,2 | 1893 |
| | 3 | PM 205-60 | 4,3 | 2330 |
| | 4 | PR 204-59 | 3,3 | 2272 |
| | 5 | PM 203-58 | 2,5 | 2400 |
| | 6 | PM 203-57 | 2,5 | 2000 |
| | 7 | PM 202-56 | 1,9 | 2260 |
| | 8 | PM 202-55 | 1,9 | 1980 |
| 40 | 2 | PR 307 | 11,7 | 1710 |
| | 3 | PM 207-60 | 5,6 | 2380 |
| | 4 | PM 205-59 | 4,3 | 2330 |
| | 5 | PM 205-58 | 4,3 | 1860 |
| | 6 | PM 204-57 | 3,3 | 2020 |
| | 7 | PM 203-56 | 2,5 | 2290 |
| | 8 | PM 203-55 | 2,5 | 2000 |
| 50 | 2 | PR 307 | 11,7 | 2140 |
| | 3 | PM 210-60 | 8,2 | 2032 |
| | 4 | PM 210-59 | 8,2 | 1524 |
| | 5 | PM 205-58 | 4,3 | 2330 |
| | 6 | PM 205-57 | 4,3 | 1937 |
| | 7 | PM 204-56 | 3,3 | 2164 |
| | 8 | PM 204-55 | 3,3 | 1893 |
| 60 | 2 | PR 310 | 16,4 | 1829 |
| | 3 | PR 307-60 | 11,7 | 1709 |
| | 4 | PR 304-59 | 6,8 | 2205 |
| | 5 | PM 207-58 | 5,6 | 2142 |
| | 6 | PM 205-57 | 4,3 | 2330 |
| | 7 | PM 205-56 | 4,3 | 1993 |
| | 8 | PM 204-55 | 3,3 | 2272 |
| 80 | 2 | PR 310 | 16,4 | 2440 |
| | 3 | PR 307-60 | 11,7 | 2280 |
| | 4 | PR 307-59 | 11,7 | 1709 |
| | 5 | PM 210-58 | 8,2 | 1951 |
| | 6 | PM 207-57 | 5,6 | 2380 |
| | 7 | PM 207-56 | 5,6 | 2040 |
| | 8 | PM 205-55 | 4,3 | 2330 |
| 100 | 2 | PR 315 | 24,4 | 2050 |
| | 3 | PR 310-60 | 16,4 | 2032 |
| | 4 | PR 307-59 | 11,7 | 2140 |
| | 5 | PR 307-58 | 11,7 | 1709 |
| | 6 | PR 304-57 | 6,8 | 2450 |
| | 7 | PM 210-56 | 8,2 | 1742 |
| | 8 | PM 207-55 | 5,6 | 2232 |

| Liters | Chambers | Model | Displacement | rpm |
|------------|----------|-----------|--------------|------|
| 125 | 2 | PR 411 | 38,6 | 1619 |
| | 3 | PR 312-60 | 20,5 | 2032 |
| | 4 | PR 310-59 | 16,4 | 1905 |
| | 5 | PR 307-58 | 11,7 | 2140 |
| | 6 | PR 307-57 | 11,7 | 1780 |
| | 7 | PR 307-56 | 11,7 | 1526 |
| | 8 | PR 304-55 | 6,8 | 2297 |
| 150 | 2 | PR 411 | 38,6 | 1950 |
| | 3 | PR 312-60 | 20,5 | 2440 |
| | 4 | PR 310-59 | 16,4 | 2290 |
| | 5 | PR 310-58 | 16,4 | 1829 |
| | 6 | PR 307-57 | 11,7 | 2140 |
| | 7 | PR 307-56 | 11,7 | 1831 |
| | 8 | PM 210-55 | 8,2 | 2286 |
| 175 | 2 | PR 411 | 38,6 | 2270 |
| | 3 | PR 315-60 | 24,4 | 2390 |
| | 4 | PR 312-59 | 20,5 | 2134 |
| | 5 | PR 310-58 | 16,4 | 2134 |
| | 6 | PR 310-57 | 16,4 | 1778 |
| | 7 | PR 307-56 | 11,7 | 2140 |
| | 8 | PR 307-55 | 11,7 | 1869 |
| 200 | 2 | PR 411 | 38,6 | 2590 |
| | 4 | PR 315-59 | 24,4 | 2049 |
| | 5 | PR 312-58 | 20,5 | 1951 |
| | 6 | PR 310-57 | 16,4 | 2032 |
| | 7 | PR 310-56 | 16,4 | 1742 |
| | 8 | PR 307-55 | 11,7 | 2140 |
| 225 | 2 | PR 418 | 64 | 1757 |
| | 4 | PR 315-59 | 24,4 | 2305 |
| | 5 | PR 312-58 | 20,5 | 2195 |
| | 6 | PR 310-57 | 16,4 | 2290 |
| | 7 | PR 310-56 | 16,4 | 1959 |
| | 8 | PR 310-55 | 16,4 | 1714 |
| 250 | 2 | PR 418 | 64 | 1960 |
| | 4 | PR 315-59 | 24,4 | 2570 |
| | 5 | PR 315-58 | 24,4 | 2049 |
| | 6 | PR 312-57 | 20,5 | 2032 |
| | 7 | PR 310-56 | 16,4 | 2180 |
| | 8 | PR 310-55 | 16,4 | 1905 |
| 300 | 2 | PR 418 | 64 | 2350 |
| | 5 | PR 315-58 | 24,4 | 2459 |
| | 6 | PR 315-57 | 24,4 | 2049 |
| | 7 | PR 312-56 | 20,5 | 2090 |
| | 8 | PR 310-55 | 16,4 | 2290 |
| 350 | 6 | PR 315-57 | 24,4 | 2390 |
| | 7 | PR 315-56 | 24,4 | 2049 |
| | 8 | PR 312-55 | 20,5 | 2134 |
| 400 | 7 | PR 315-56 | 24,4 | 2341 |
| | 8 | PR 315-55 | 24,4 | 2049 |

The stated data are exclusively intended to describe examples of speed and must not be understood as guaranteed features in the legal sense.

Please do not hesitate to contact us in case of questions.

Please note the „Einbau- und Betriebshinweise“, link on page 5!

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