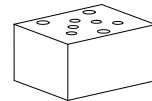


**Non-return valve
Sandwich construction**

- $Q_{\max} = 8 \text{ l/min}$
- $p_{\max} = 350 \text{ bar}$

NG3-Mini®

DESCRIPTION

Sandwich type pilot operated non-return valve NG3-Mini with interface according to Wandfluh standard. The valves allow a free flow in one direction and shut off in the opposite direction. 6 different standard versions are available. The sandwich block is in anodised aluminium for weight saving and corrosion protection.

FUNCTION

In the free flow direction, the volume flow opens the spring loaded valve seat. The spring keeps the valve closed in the opposite direction. The opening pressure required depends on the spring force.

APPLICATION

Non-return valves allow the volume flow in one direction and shuts off in the opposite direction, preventing the pressurised fluid from flowing back. Non-return valves in the P port prevents backward rotation of the pump. When installed in the T port, the spring controlled opening pressure prevents a hydraulic system from draining to the tank. Sandwich type elements NG3-Mini make this a highly flexible system and save both weight and space.

TYPE CODE

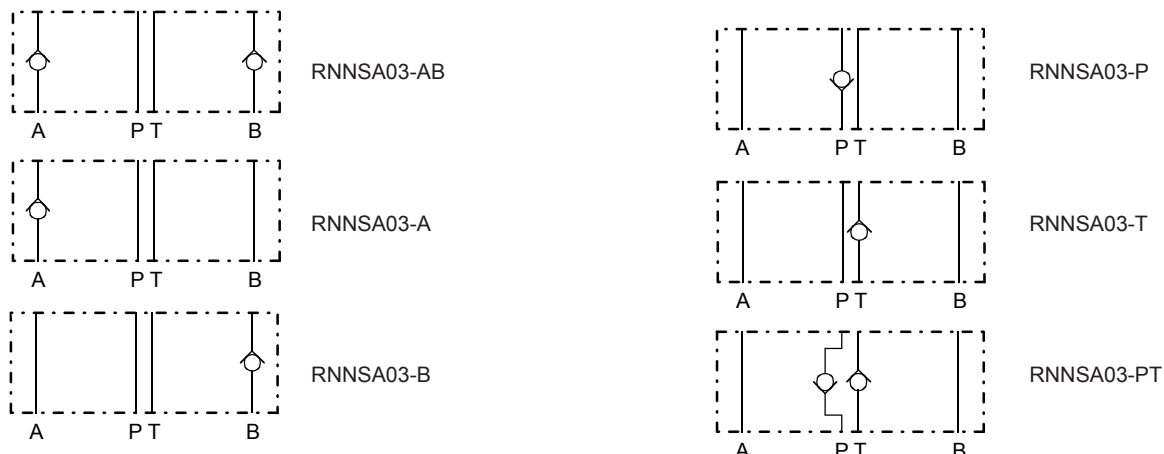
| | | | | | | | | | | | | | |
|---|--------------------------|------|--------------------------|---------|--|--------------------------|--|----------------------|--|---|--|----------------------|--|
| | | RNNS | | A03 | | - | | <input type="text"/> | | # | | <input type="text"/> | |
| Non-return valve in sandwich construction | | | | | | | | | | | | | |
| Interface NG3-Mini | | | | | | | | | | | | | |
| Non-return valve in: | | | | | | | | | | | | | |
| P | <input type="checkbox"/> | T | <input type="checkbox"/> | P and T | | <input type="checkbox"/> | | | | | | | |
| A | <input type="checkbox"/> | B | <input type="checkbox"/> | A and B | | <input type="checkbox"/> | | | | | | | |
| Design-Index (Subject to change) | | | | | | | | | | | | | |

GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Description | Non-return valve |
| Nominal size | NG3-Mini acc. to Wandfluh standard |
| Construction | Sandwich construction |
| Mounting | 3 holes for hexagon socket screw M4 or studs M4 |
| Connections | Connection plates Multi-station flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 2,8 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,06 \text{ kg}$ |

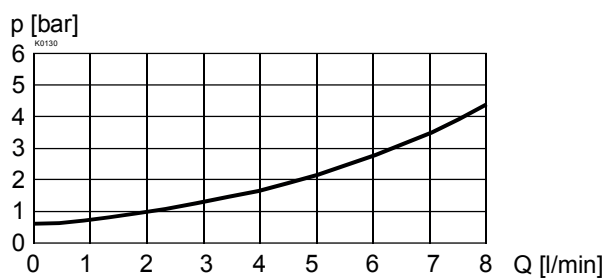
HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 350 \text{ bar}$ |
| Opening pressure | $p_o = 0,4 \text{ bar}$ |
| Max. volume flow | $Q_{\max} = 8 \text{ l/min}$ |

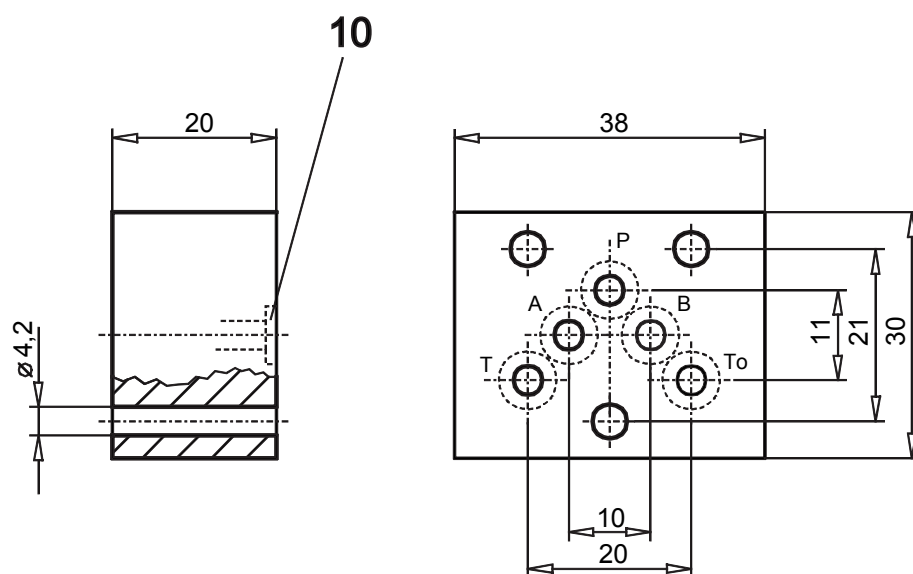
SYMBOLS/TYPES


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Performance limit



DIMENSIONS



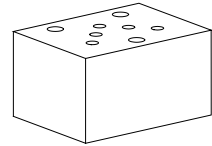
PARTS LIST

| Position | Article | Description |
|----------|----------|---------------------|
| 10 | 160.2045 | O-ring ID 4,50x1,50 |

Technical explanation see data sheet 1.0-100

**Non-return valve
Sandwich construction**

- $Q_{max} = 20 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG4-Mini[®]

DESCRIPTION

Sandwich type pilot operated non-return valve NG4-Mini with interface according to Wandfluh standard. The valves allow a free flow in one direction and shut off in the opposite direction. 6 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the spring loaded valve seat. The spring keeps the valve closed in the opposite direction. The opening pressure required depends on the spring force.

APPLICATION

Non-return valves allow the volume flow in one direction and shuts off in the opposite direction, preventing the pressurised fluid from flowing back. Non-return valves in the P port prevents backward rotation of the pump. When installed in the T port, the spring controlled opening pressure prevents a hydraulic system from draining to the tank. Sandwich type elements NG4-Mini make this a highly flexible system and save both weight and space.

TYPE CODE

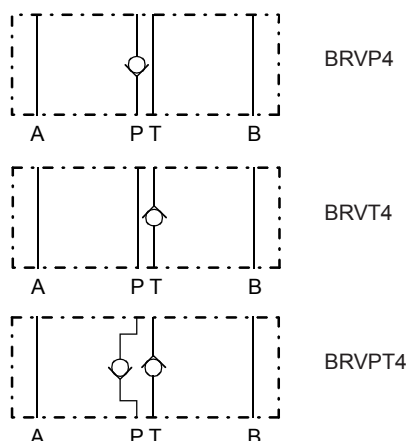
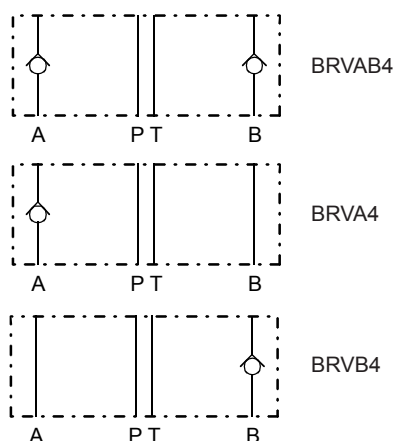
| | | | | | | | |
|---------------------------------------|-----------------------------|---|----------------------------|--------------------------|----------------------------|---|--------------------------|
| | | B | RV | <input type="checkbox"/> | 4 | # | <input type="checkbox"/> |
| Interface | | | | | | | |
| Type description for non-return valve | | | | | | | |
| Non-return valve in: | | | | | | | |
| A and B | <input type="checkbox"/> AB | A | <input type="checkbox"/> A | B | <input type="checkbox"/> B | | |
| P and T | <input type="checkbox"/> PT | P | <input type="checkbox"/> P | T | <input type="checkbox"/> T | | |
| Nominal size 4-Mini | | | | | | | |
| Design-Index (Subject to change) | | | | | | | |

GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Description | Non-return valve |
| Nominal size | NG4-Mini acc. to Wandfluh standard |
| Construction | Sandwich construction |
| Mounting | 3 holes for hexagon socket screw M5 or studs M5 |
| Connections | Connection plates Multi-station flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,46 \text{ kg}$ |

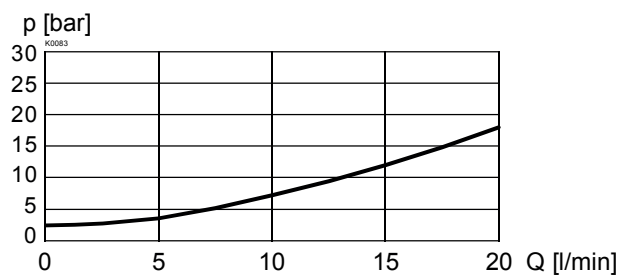
HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{max} = 350 \text{ bar}$ |
| Opening pressure | $p_o = 2,2 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 20 \text{ l/min}$ |

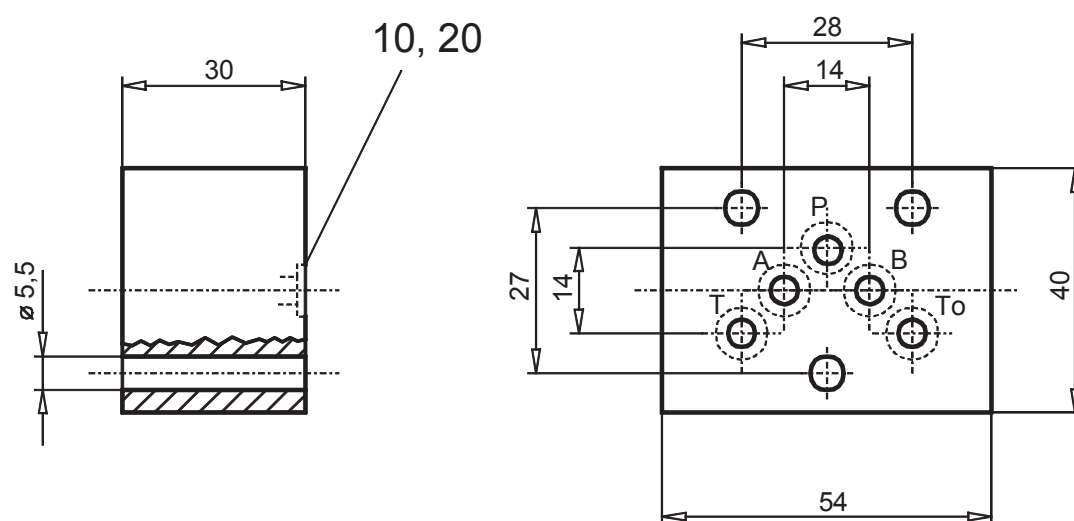
SYMBOLS/TYPES


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Performance limit



DIMENSIONS



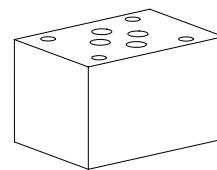
PARTS LIST

| Position | Article | Description |
|----------|----------|--|
| 10 | 160.2052 | O-ring ID 5,28x1,78 |
| 20 | 160.2067 | O-ring ID 6,75x1,78 (in A and B when RV in A, B or AB) (in T when RV in T) |

Technical explanation see data sheet 1.0-100

**Non-return valve
Sandwich construction**

- $Q_{\max} = 80 \text{ l/min}$
- $p_{\max} = 350 \text{ bar}$

NG6
ISO 4401-03

DESCRIPTION

Sandwich type pilot operated non-return valve NG6 with interface according to ISO 4401-03. The valves allow a free flow in one direction and shut off in the opposite direction. 6 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the spring loaded valve seat. The spring keeps the valve closed in the opposite direction. The opening pressure required depends on the spring force.

APPLICATION

Non-return valves allow the volume flow in one direction and shuts off in the opposite direction, preventing the pressurised fluid from flowing back. Non-return valves in the P port prevents backward rotation of the pump. When installed in the T port, the spring controlled opening pressure prevents a hydraulic system from draining to the tank. Sandwich type elements NG6 make this a highly flexible system.

TYPE CODE

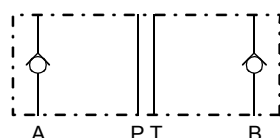
| | | | | | | | |
|---|--------------------------|------|--------------------------|---------|--------------------------|---|----------------------|
| | | RNNS | A06 | - | <input type="text"/> | # | <input type="text"/> |
| Non-return valve in sandwich construction | | | | | | | |
| International mounting interface ISO, NG6 | | | | | | | |
| Non-return valve in: | | | | | | | |
| P | <input type="checkbox"/> | T | <input type="checkbox"/> | P and T | <input type="checkbox"/> | | |
| A | <input type="checkbox"/> | B | <input type="checkbox"/> | A and B | <input type="checkbox"/> | | |
| Design-Index (Subject to change) | | | | | | | |

GENERAL SPECIFICATIONS

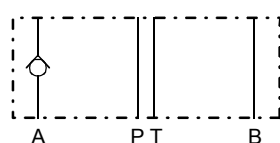
| | |
|---------------------|--|
| Description | Non-return valve |
| Nominal size | NG6 acc. to ISO 4401-03 |
| Construction | Sandwich construction |
| Mounting | 4 holes for hexagon socket screw M5 or studs M5 |
| Connections | Connection plates Multi-station flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,85 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

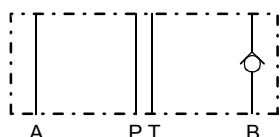
| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10} \dots 16 \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 350 \text{ bar}$ |
| Opening pressure | $p_o = 2 \text{ bar}$ |
| Max. volume flow | $Q_{\max} = 80 \text{ l/min}$ |

SYMBOLS / TYPES


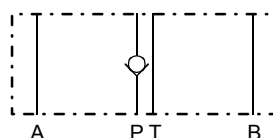
RNNSA06-AB



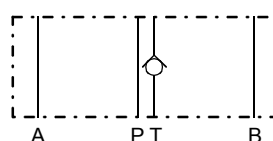
RNNSA06-A



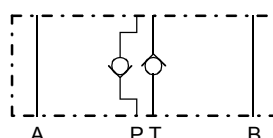
RNNSA06-B



RNNSA06-P



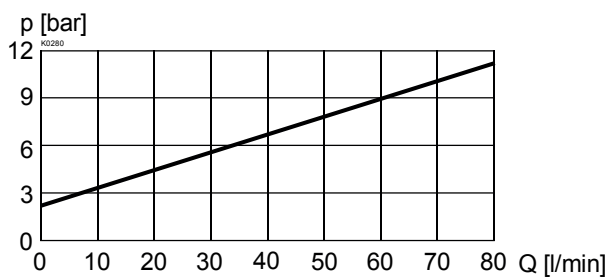
RNNSA06-T



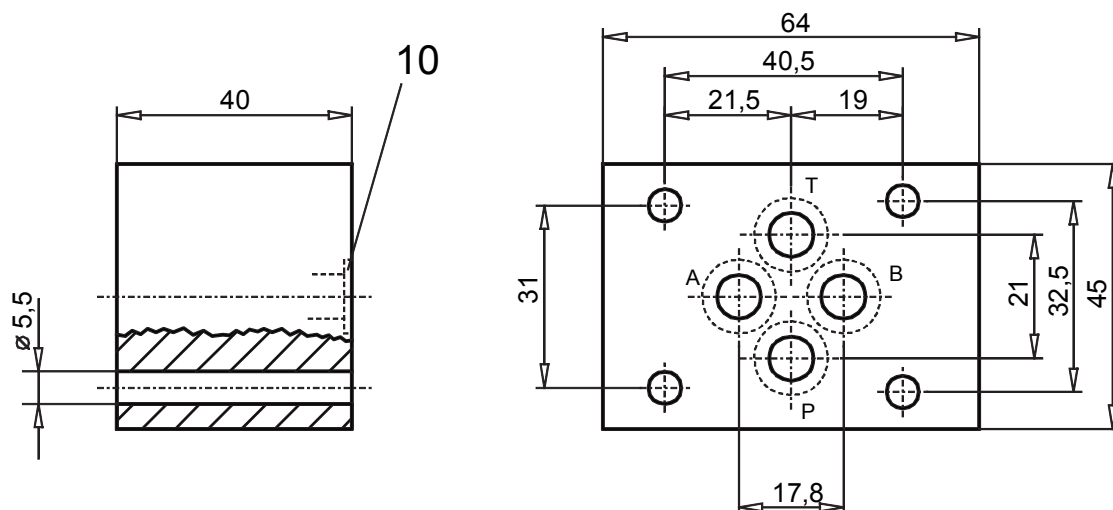
RNNSA06-PT

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Performance limit



DIMENSIONS



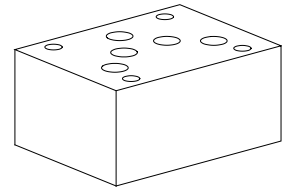
PARTS LIST

| Position | Article | Description |
|----------|----------|---------------------|
| 10 | 160.2093 | O-ring ID 9,25x1,78 |

Technical explanation see data sheet 1.0-100

**Non-return valve
Sandwich construction**

- $Q_{max} = 100 \text{ l/min}$
- $p_{max} = 315 \text{ bar}$

NG10
ISO 4401-05

DESCRIPTION

Sandwich type pilot operated non-return valve NG10 with interface according to ISO 4401-05. The valves allow a free flow in one direction and shut off in the opposite direction. 6 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the spring loaded valve seat. The spring keeps the valve closed in the opposite direction. The opening pressure required depends on the spring force.

APPLICATION

Non-return valves allow the volume flow in one direction and shuts off in the opposite direction, preventing the pressurised fluid from flowing back. Non-return valves in the P port prevents backward rotation of the pump. When installed in the T port, the spring controlled opening pressure prevents a hydraulic system from draining to the tank. Sandwich type elements NG10 make this a highly flexible system.

TYPE CODE

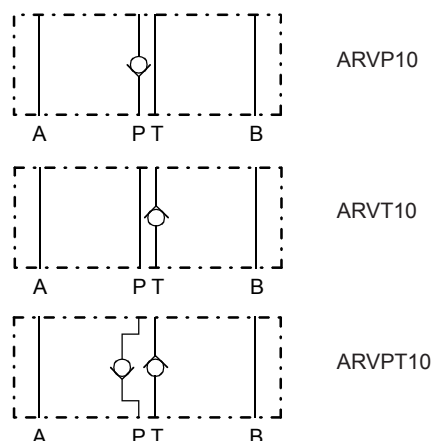
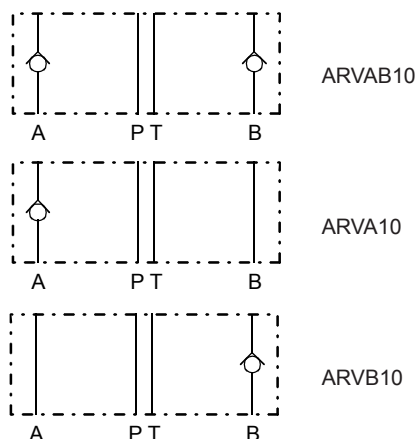
| | | | | | |
|---------------------------------------|----|---|----|---------|----|
| A | RV | | 10 | # | |
| International Interface ISO | | | | | |
| Type description for non-return valve | | | | | |
| Non-return valve in: | | | | | |
| P | P | T | T | P and T | PT |
| A | A | B | B | A and B | AB |
| Nominal size 10 | | | | | |
| Design-Index (Subject to change) | | | | | |

GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Description | Non-return valve |
| Nominal size | NG10 acc. to ISO 4401-05 |
| Construction | Sandwich construction |
| Mounting | 4 holes for hexagon socket screw M6 or studs M6 |
| Connections | Connection plates Multi-station flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 9,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 1,2 \text{ kg}$ |

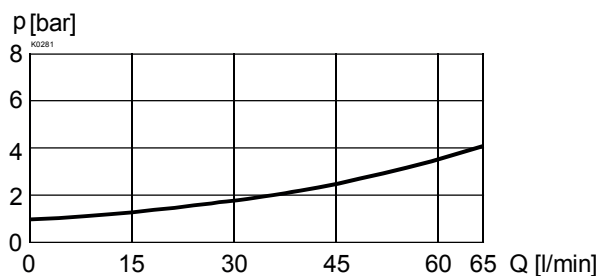
HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{max} = 315 \text{ bar}$ |
| Opening pressure | $p_o = 0,8 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 100 \text{ l/min}$ |

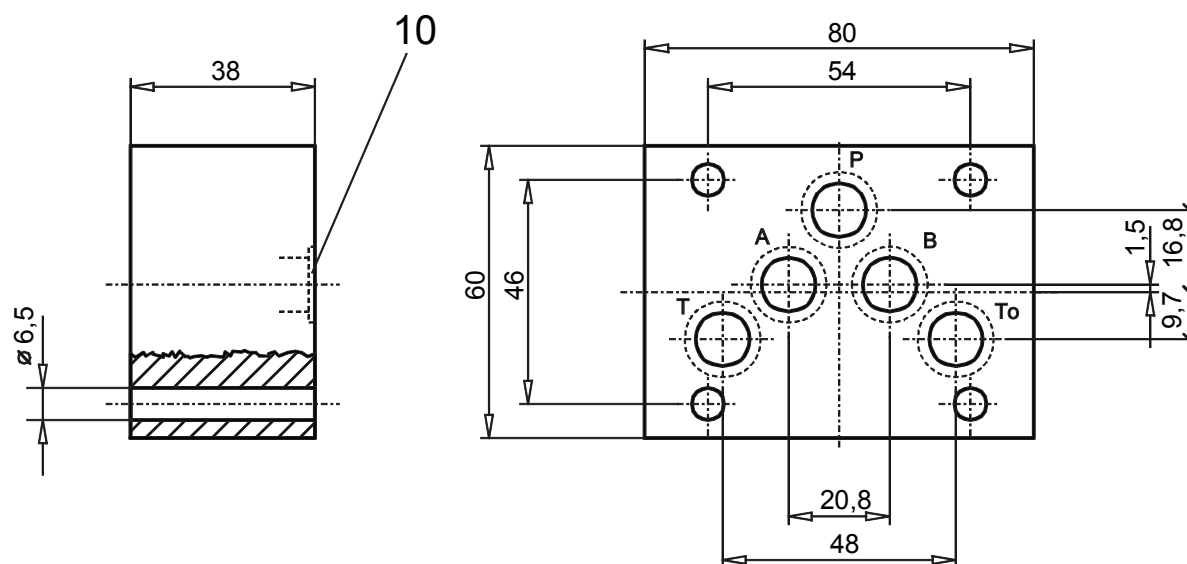
SYMBOLS / TYPES


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Performance limit



DIMENSIONS



PARTS LIST

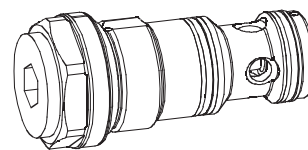
| Position | Article | Description |
|----------|----------|---|
| 10 | 160.2120 | O-ring ID 12,42x1,78 |
| | 160.2132 | O-ring ID 13,10x2,62 (in A, B and T when RV in A, B, AB, T or PT) |
| | 160.2140 | O-ring ID 14,00x1,78 (only by ARVP10) |

Technical explanation see data sheet 1.0-100

**Non-return valve
hydraulic pilot
Screw-in cartridge**

- $Q_{\max} = 150 \text{ l/min}$
- $p_{\max} = 350 \text{ bar}$

M33x2
ISO 7789



DESCRIPTION

Hydraulic pilot operated check valve. Single screw-in cartridge with M33x2 thread and cavity in accordance with ISO 7789. The valve allows free flow in one direction (2→1) and blocks in the other direction (1→2), by means of a metal-to metal seal. The one-piece cartridge body is made of steel. The external parts are in zinc coated and therefore protected from corrosion.

FUNCTION

In the free flow direction, the volume flow opens the seat cone against a spring. In the reverse direction, the spring holds the valve closed. If pressure builds up in connection x, this shifts the pilot control piston and opens the check valve. The required pilot control pressure is dependent on the pilot ratio.

APPLICATION

Pilot operated check valve are used to hold pressurised hydraulic cylinders, in for example lifting or tensioning devices, without any leakage. The hydraulic cylinder can only be moved into the closed direction if the valve has been opened via connection x. The directional valves required for cylinder control should have both service ports connected to the tank, to ensure operational safety when idle.

TYPE CODE

| | RNX | PM33 | - | | # | |
|----------------------------------|-----------------------|------|---|--|---|--|
| Non-return valve piloted | | | | | | |
| Screw-in cartridge M33x2 | | | | | | |
| Screw-in cartridge | $p_o = 2 \text{ bar}$ | | | | | |
| | $p_o = 5 \text{ bar}$ | | | | | |
| Design-Index (Subject to change) | | | | | | |

GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Description | Non-return valve hydraulic pilot |
| Construction | Screw-in cartridge for cavity acc. to ISO 7789 |
| Mounting | Screw-in thread M33x2 |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | M _D = 80 Nm |
| Weight | m = 0.37 kg |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10} \dots \beta_{75} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 350$ bar |
| Opening pressure 2 → 1 | $p_o = 2$ bar, 5 bar |
| Unblocking ratio | see characteristics |
| Max. volume flow | $Q_{\max} = 150$ l/min |
| Pilot ratio | $i = 1 : 3,2$ |

SYMBOLS



PERFORMANCE DATA Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

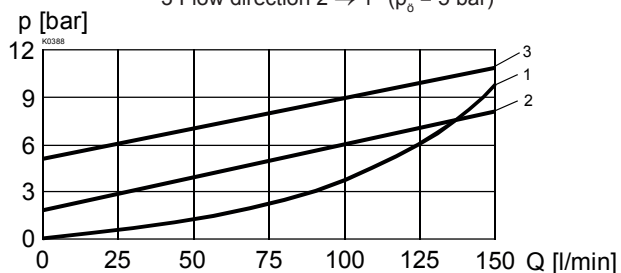
$\Delta p = f(Q)$

Pressure loss - volume flow - curve

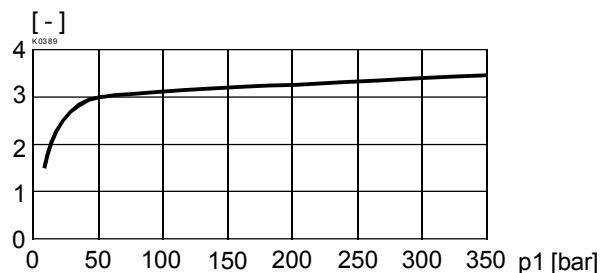
1 Flow direction 1 → 2

2 Flow direction 2 → 1 ($p_0 = 2 \text{ bar}$)

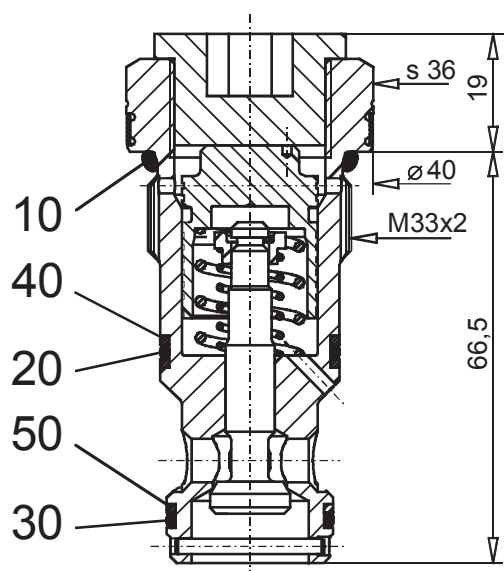
3 Flow direction 2 → 1 ($p_0 = 5 \text{ bar}$)



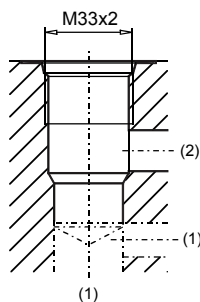
Unblocking ratio = $f(p_1)$



DIMENSIONS / SECTIONAL DRAWINGS



Cavity drawing to
ISO 7789-33-06-0-98



For detailed cavity drawing and cavity tools see
data sheet 2.13-1011.

PARTS LIST

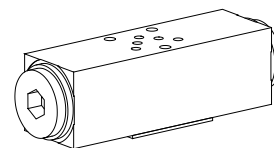
| Position | Article | Description |
|----------|----------|------------------------|
| 10 | 160.2298 | O-ring ID 29,82x2,62 |
| 20 | 160.2252 | O-ring ID 25,12x1,78 |
| 30 | 160.2236 | O-ring ID 23,52x1,78 |
| 40 | 49.3296 | Back-up RD 26,1x29x1,4 |
| 50 | 49.3276 | Back-up RD 24,1x27x1,4 |

Technical explanation see data sheet 1.0-100

Non-return valve hydraulic pilot Sandwich construction

- $Q_{\max} = 8 \text{ l/min}$
- $p_{\max} = 315 \text{ bar}$

NG3-Mini®



DESCRIPTION

Sandwich type non-return valve NG3-Mini with hydraulic pilot with interface according to Wandfluh standard. The valves allow a free flow in one direction and shut off in the opposite direction. 3 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the valve seat against a spring. The spring helps the valve close in the opposite direction. If pressure builds up in the opposite oil port, this displaces the pilot piston and opens the non-return valve of the closed port. The pilot pressure required is dependent on the pressure held by the valve seat.

APPLICATION

Pilot operated non-return valves are used to shut off pressurised hydraulic cylinders, e.g. in lifting or clamping fixtures, without leaking. The hydraulic cylinder can only be moved in the shut off direction if a directional valve directs the volume flow into the opposite port and releases the valve. Reliability in operation is increased by a directional valve which connects both oil ports to the tank in the neutral position. Sandwich type elements NG3 mean that the system is highly flexible and save both space and weight.

TYPE CODE

| | | | | | |
|--|------|----|---|------|--|
| Interface | B | | 3 | # | |
| Type description for non-return valve hydraulic pilot: | | | | | |
| In A + B | | | | | |
| In A | ERVA | in | B | ERVB | |
| Nominal size 3-Mini | | | | | |
| Design-Index (Subject to change) | | | | | |

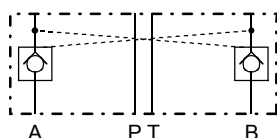
GENERAL SPECIFICATIONS

| | |
|---------------------|--|
| Description | Non-return valve hydraulic pilot |
| Nominal size | NG3-Mini acc. to Wandfluh standard |
| Construction | Sandwich construction |
| Mounting | 3 holes for hexagon socket screw M4 or studs M4 |
| Connections | Connection plates Multi-station flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 2,8 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,56 \text{ kg}$ |

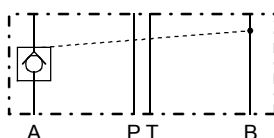
HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 315 \text{ bar}$ |
| Opening pressure | $p_o = 2 \text{ bar}$ |
| Pilot ratio | $i = 1:8$ |
| Max. volume flow | $Q_{\max} = 8 \text{ l/min}$ |

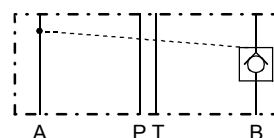
SYMBOLS / TYPES



BDERV3



Berva3



Bervb3

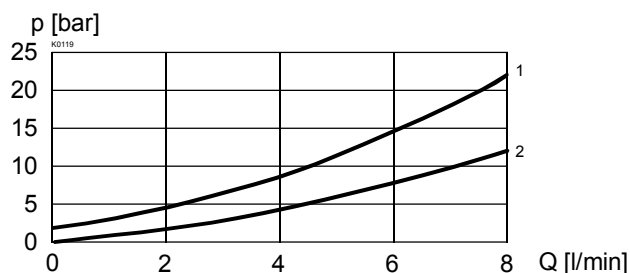
CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$

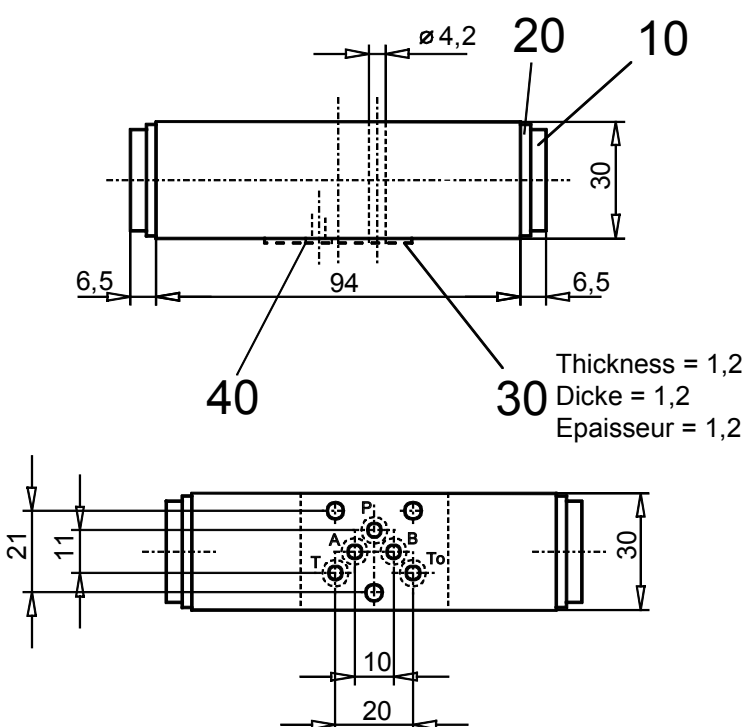
Pressure drop characteristic

1 Pressure drop A → Cyl. or B → Cyl.

2 Pressure drop Cyl. → A or Cyl. → B
with check valve fully open



DIMENSIONS



PARTS LIST

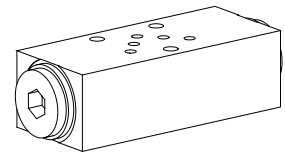
| Position | Article | Description |
|----------|----------|----------------------------|
| 10 | 239.2003 | Plug G1/2" |
| 20 | 49.2212 | Bounded seal 21,5x28,7x2,5 |
| 30 | 173.0650 | Seal plate PDSA03 |
| 40 | 160.2045 | O-Ring ID 4,5x1,5 |

Technical explanation see data sheet 1.0-100

**Non-return valve
hydraulic pilot
Sandwich construction**

- $Q_{\max} = 20 \text{ l/min}$
- $p_{\max} = 315 \text{ bar}$

NG4-Mini[®]



DESCRIPTION

Sandwich type non-return valve NG4-Mini with hydraulic pilot with interface according to Wandfluh standard. The valves allow a free flow in one direction and shut off in the opposite direction. 3 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the valve seat against a spring. The spring helps the valve close in the opposite direction. If pressure builds up in the opposite oil port, this displaces the pilot piston and opens the non-return valve of the closed port. The pilot pressure required is dependent on the pressure held by the valve seat.

APPLICATION

Pilot operated non-return valves are used to shut off pressurised hydraulic cylinders, e.g. in lifting or clamping fixtures, without leaking. The hydraulic cylinder can only be moved in the shut off direction if a directional valve directs the volume flow into the opposite port and releases the valve. Reliability in operation is increased by a directional valve which connects both oil ports to the tank in the neutral position. Sandwich type elements NG4-Mini mean that the system is highly flexible and save both space and weight.

TYPE CODE

| | | | | | | | |
|--|------|------|------|------|---|---|--|
| | | | B | | 4 | # | |
| Interface | | | | | | | |
| Type description for non-return valve hydraulic pilot: | | | | | | | |
| In A and B | | | | DERV | | | |
| In A | ERVA | in B | ERVB | | | | |
| Nominal size 4-Mini | | | | | | | |
| Design-Index (Subject to change) | | | | | | | |

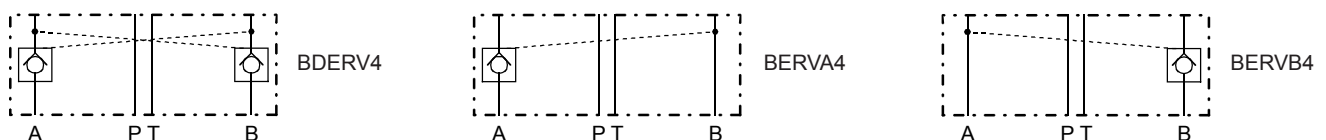
GENERAL SPECIFICATIONS

| | |
|---------------------|---|
| Description | Non-return valve hydraulic pilot |
| Nominal size | NG4-Mini acc. to Wandfluh standard |
| Construction | Sandwich construction |
| Mounting | 3 holes for hexagon socket screw M5 or studs M5 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,85 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) (refer to data sheet 1.0-50) |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 315 \text{ bar}$ |
| Opening pressure | $p_o = 2 \text{ bar}$ |
| Pilot ratio | $i = 1:8$ |
| Max. volume flow | $Q_{\max} = 20 \text{ l/min}$ |

SYMBOLS / TYPES



CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$

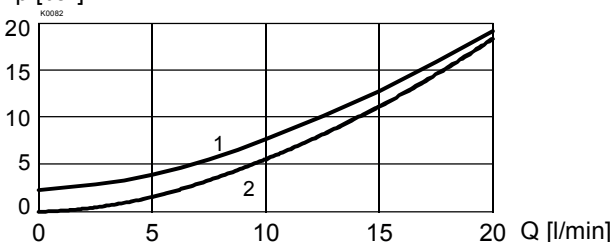
Pressure drop characteristic

1 Pressure drop A → Cyl. or B → Cyl.

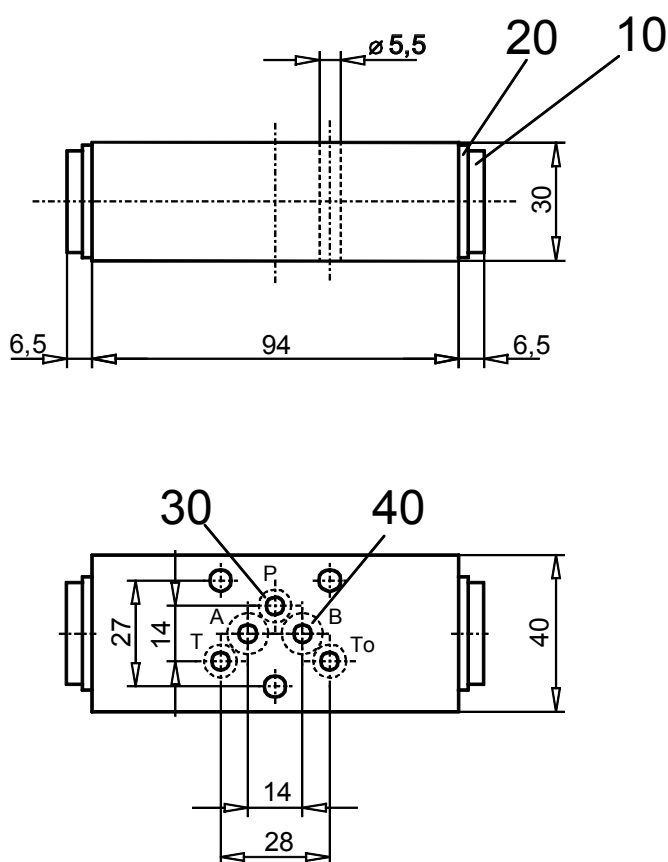
2 Pressure drop Cyl. → A or Cyl. → B

with check valve fully open

p [bar]



DIMENSIONS



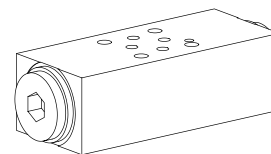
PARTS LIST

| Position | Article | Description |
|----------|----------|----------------------------|
| 10 | 239.2003 | Plug G1/4" |
| 20 | 049.2212 | Bounded seal 21,5x28,7x2,5 |
| 30 | 160.2052 | O-Ring ID 5,28x1,78 |
| 40 | 160.2076 | O-Ring ID 7,65x1,78 |

Technical explanation see data sheet 1.0-100

**Non-return valve
hydraulic pilot
Sandwich construction**

- $Q_{\max} = 20 \text{ l/min}$
- $p_{\max} = 350 \text{ bar}$

NG4
ISO 4401-02

DESCRIPTION

Sandwich type non-return valve NG3-Mini with hydraulic pilot. The valves allow a free flow in one direction and shut off in the opposite direction. 3 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the valve seat against a spring. The spring helps the valve close in the opposite direction. If pressure builds up in the opposite oil port, this displaces the pilot piston and opens the non-return valve of the closed port. The pilot pressure required is dependent on the pressure held by the valve seat.

APPLICATION

Pilot operated non-return valves are used to shut off pressurised hydraulic cylinders, e.g. in lifting or clamping fixtures, without leaking. The hydraulic cylinder can only be moved in the shut off direction if a directional valve directs the volume flow into the opposite port and releases the valve. Reliability in operation is increased by a directional valve which connects both oil ports to the tank in the neutral position. Sandwich type elements NG4-Mini mean that the system is highly flexible and save both space and weight.

TYPE CODE

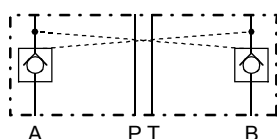
| | | | | | | |
|---|-----------------------------|-----|----------------------------|---|----------------------------|--|
| RNXS | | B04 | - | | # | |
| Sandwich type, hydraulically operated, non-return valve | | | | | | |
| International standard interface ISO, NG4 | | | | | | |
| Non-return valve in: | | | | | | |
| A und B | <input type="checkbox"/> AB | A | <input type="checkbox"/> A | B | <input type="checkbox"/> B | |
| Design-Index (Subject to change) | | | | | | |

GENERAL SPECIFICATIONS

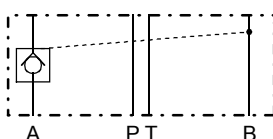
| | |
|---------------------|---|
| Description | Non-return valve hydraulic pilot |
| Nominal size | NG4 acc. to ISO 4401-02 |
| Construction | Sandwich construction |
| Mounting | 4 holes for socket cap screws M5 or studs M5 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_0 = 5,5 \text{ Nm}$ (Quality 8,8) |
| Weight | $m = 0,85 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

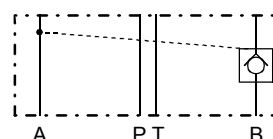
| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{\max} = 350 \text{ bar}$ |
| Opening pressure | $p_o = 2 \text{ bar}$ |
| Pilot ratio | $i = 1:8$ |
| Max. volume flow | $Q_{\max} = 20 \text{ l/min}$ |

SYMBOLS / TYPES


RNXS B04-AB



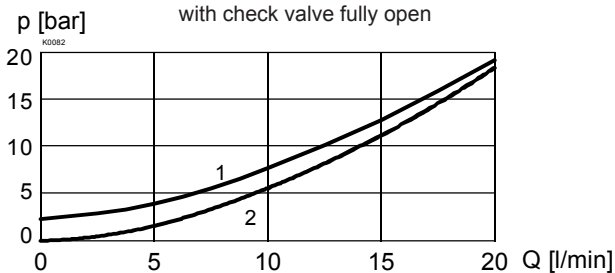
RNXS B04-A



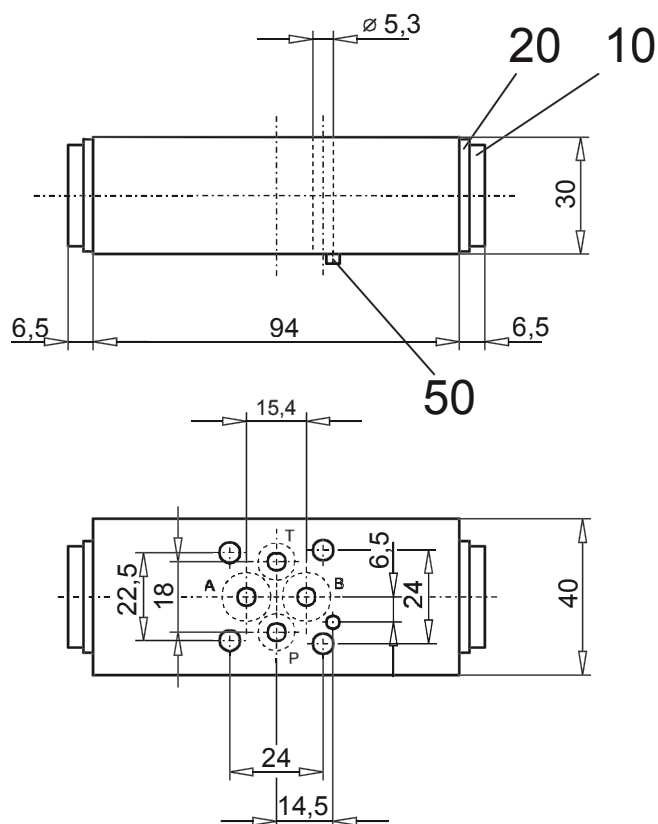
RNXS B04-B

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Pressure drop characteristic
1 Pressure drop A → Cyl. or B → Cyl.
2 Pressure drop Cyl. → A or Cyl. → B
with check valve fully open



DIMENSIONS



PARTS LIST

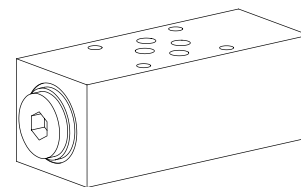
| Position | Article | Description |
|----------|----------|--|
| 10 | 239.2003 | Plug G1/2" |
| 20 | 049.2212 | Bounded seal 21,5x28,7x2,5 |
| 30 | 160.2060 | O-Ring ID 6,07x1,78 |
| 40 | 160.2093 | O-Ring ID 9,25x1,78 |
| 50 | 221.2253 | Spring tension pins $\varnothing 3 \times 6$ |

Technical explanation see data sheet 1.0-100

Non-return valve hydraulic pilot Sandwich construction

- $Q_{max} = 30 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG6 ISO 4401-03



DESCRIPTION

Sandwich type non-return valve NG6 with hydraulic pilot. The valves allow a free flow in one direction and shut off in the opposite direction. 3 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the valve seat against a spring. The spring helps the valve close in the opposite direction. If pressure builds up in the opposite oil port, this displaces the pilot piston and opens the non-return valve of the closed port. The pilot pressure required is dependent on the pressure held by the valve seat.

APPLICATION

Pilot operated non-return valves are used to shut off pressurised hydraulic cylinders, e.g. in lifting or clamping fixtures, without leaking. The hydraulic cylinder can only be moved in the shut off direction if a directional valve directs the volume flow into the opposite port and releases the valve. Reliability in operation is increased by a directional valve which connects both oil ports to the tank in the neutral position. Sandwich type elements NG6 mean that the system is highly flexible.

TYPE CODE

| | | | | |
|--|------|------|------|--|
| A | | 6 | # | |
| International standard interface ISO | | | | |
| Type description for non-return valve hydraulic pilot: | | | | |
| In A + B | DERV | | | |
| In A | ERVA | in B | ERVB | |
| Nominal size 6 | | | | |
| Design-Index (Subject to change) | | | | |

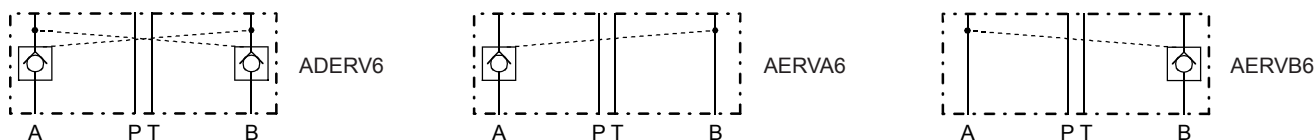
GENERAL SPECIFICATIONS

| | |
|---------------------|---|
| Description | Non-return valve hydraulic pilot |
| Nominal size | NG6 acc. to ISO 4401-03 |
| Construction | Sandwich construction |
| Mounting | 4 holes for socket cap screws M5 or studs M5 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 1,6 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{max} = 350 \text{ bar}$ |
| Opening pressure | $p_o = 3 \text{ bar}$ |
| Pilot ratio | $i = 1:5$ |
| Max. volume flow | $Q_{max} = 30 \text{ l/min}$ |

SYMBOLS / TYPES



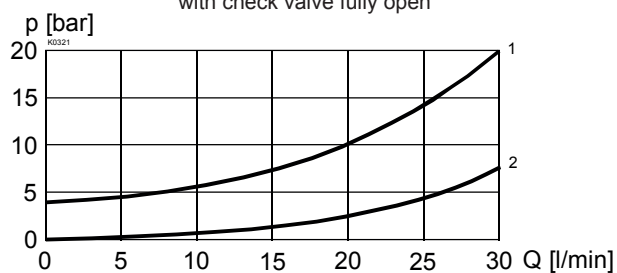
CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$

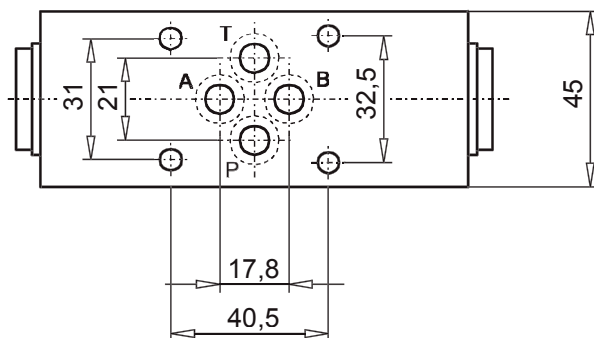
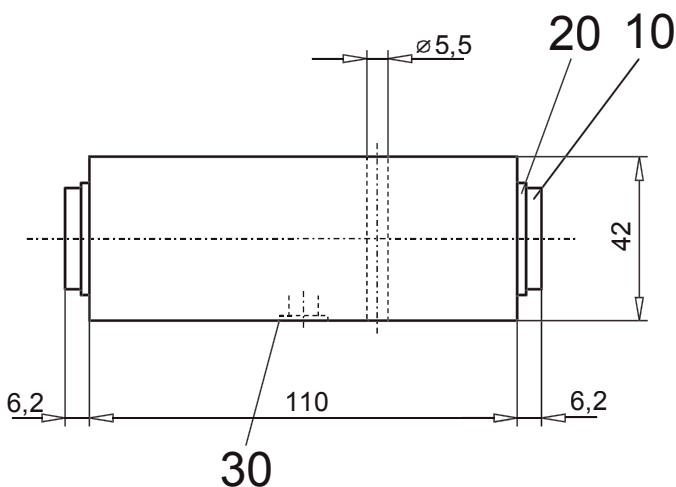
Pressure drop characteristic

1 Pressure drop A → Cyl. or B → Cyl.

2 Pressure drop Cyl. → A or Cyl. → B
with check valve fully open



DIMENSIONS



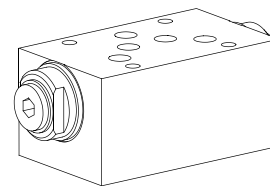
PARTS LIST

| Position | Article | Description |
|----------|----------|---------------------------|
| 10 | 239.2100 | Plug G1/2" |
| 20 | 049.2212 | Bonded seal 21,5x28,7x2,5 |
| 30 | 160.2093 | O-Ring ID 9,25x1,78 |

Technical explanation see data sheet 1.0-100

**Non-return valve
hydraulic pilot
Sandwich construction**

- $Q_{max} = 100 \text{ l/min}$
- $p_{max} = 250 \text{ bar}$

NG10
ISO 4401-05

DESCRIPTION

Sandwich type non-return valve NG10 with hydraulic pilot acc. to ISO 4401-05. The valves allow a free flow in one direction and shut off in the opposite direction. 3 different standard versions are available. The steel sandwich body is phosphatised. Good performance data and attractive design are the hall marks of this quality product.

FUNCTION

In the free flow direction, the volume flow opens the valve seat against a spring. The spring helps the valve close in the opposite direction. If pressure builds up in the opposite oil port, this displaces the pilot piston and opens the non-return valve of the closed port. The pilot pressure required is dependent on the pressure held by the valve seat.

APPLICATION

Pilot operated non-return valves are used to shut off pressurised hydraulic cylinders, e.g. in lifting or clamping fixtures, without leaking. The hydraulic cylinder can only be moved in the shut off direction if a directional valve directs the volume flow into the opposite port and releases the valve. Reliability in operation is increased by a directional valve which connects both oil ports to the tank in the neutral position. Sandwich type elements NG10 mean that the system is highly flexible.

TYPE CODE

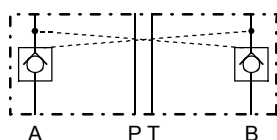
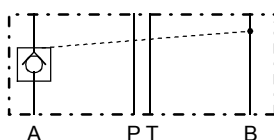
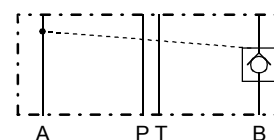
| | | | | |
|--|------|------|------|--|
| International standard interface ISO | A | 10 | # | |
| Type description for non-return valve hydraulic pilot: | | | | |
| In A + B | DERV | | | |
| In A | ERVA | in B | ERVB | |
| Nominal size 10 | | | | |
| Design-Index (Subject to change) | | | | |

GENERAL SPECIFICATIONS

| | |
|---------------------|---|
| Description | Non-return valve hydraulic pilot |
| Nominal size | NG10 acc. to ISO 4401-05 |
| Construction | Sandwich construction |
| Mounting | 4 holes for socket cap screws M6 or studs M6 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 9,5 \text{ Nm}$ (quality 8.8) |
| Weight | $m = 2,1 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|--|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} > 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure | $p_{max} = 250 \text{ bar}$ |
| Opening pressure | $p_o = 2 \text{ bar}$ |
| Pilot ratio | $i = 1:5$ |
| Max. volume flow | $Q_{max} = 100 \text{ l/min}$ |

SYMBOLS / TYPES

ADERV10

AERVA10

AERVB10

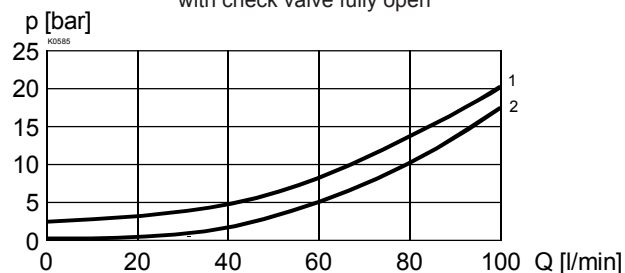
CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$

Pressure drop characteristic

1 Pressure drop A → Cyl. or B → Cyl.

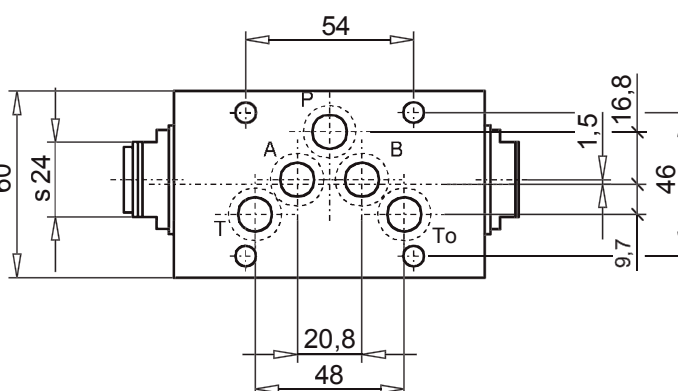
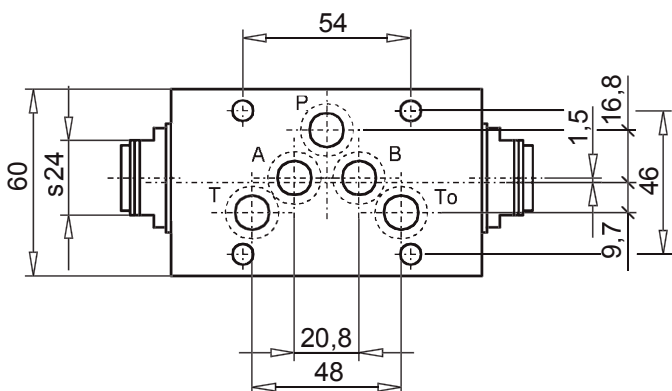
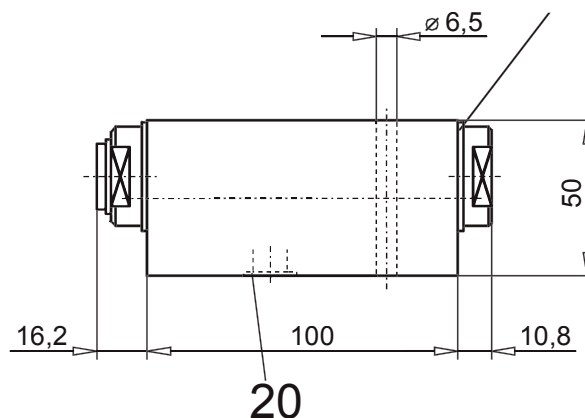
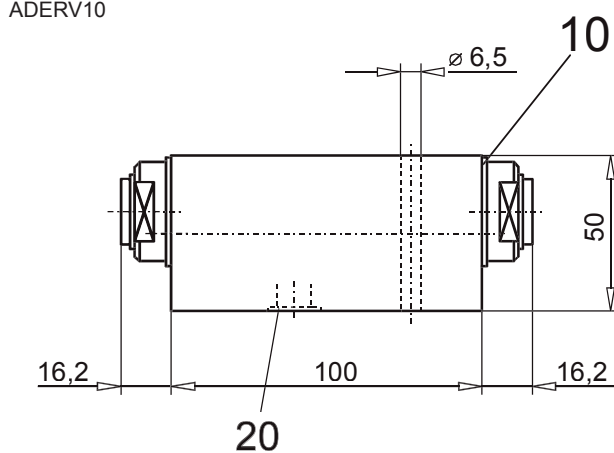
2 Pressure drop Cyl. → A or Cyl. → B
with check valve fully open



DIMENSIONS

ADERV10

AERV.10



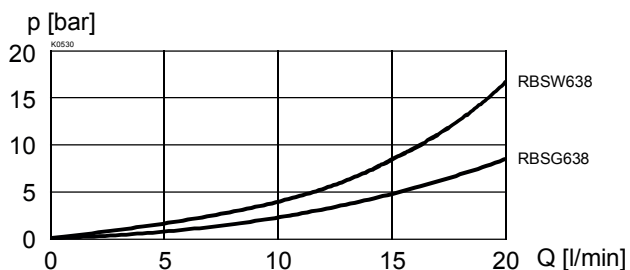
PARTS LIST

| Position | Article | Description |
|----------|----------|-----------------------|
| 10 | 049.2262 | Bonded seal 26,7x35x2 |
| 20 | 160.2140 | O-ring ID 14,00x1,78 |

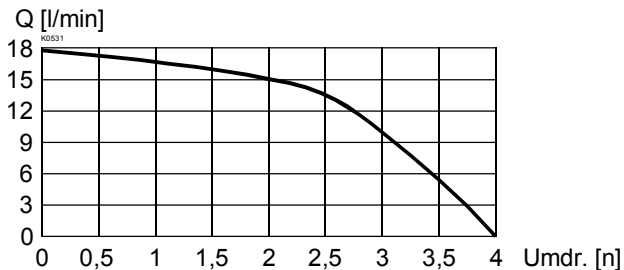
Technical explanation see data sheet 1.0-100

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Pressure drop characteristic $P \rightarrow A$

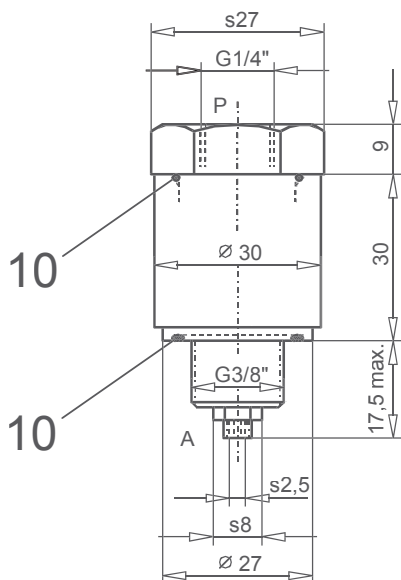


$Q = f(n)$ Cut-off volume flow characteristic $A \rightarrow P$

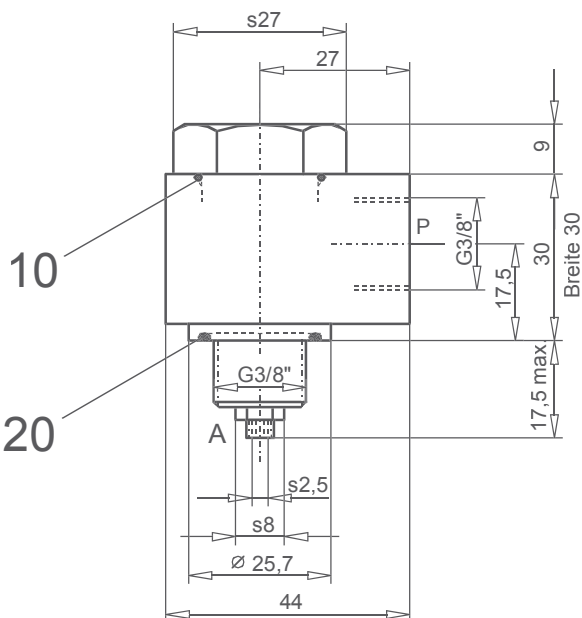


DIMENSIONS

RBSG638



RBSW638



PARTS LIST

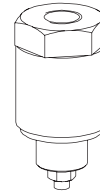
| Position | Article | Description |
|----------|----------|----------------------|
| 10 | 160.2215 | O-ring ID 21,00x1,50 |
| 20 | 160.2188 | O-ring ID 18,77x1,78 |

Technical explanation see data sheet 1.0-100

Pipe failure valve
For installation in pipes

- $Q_{max} = 30 \text{ l/min}$
- $p_{max} = 210 \text{ bar}$

NG10



DESCRIPTION

Pipe failure valve NG10 for line mounting. The valve is screwed directly into the component which has to be protected. Thread size for port A: male G1/2". For port P: female G3/8" for type RBSG1012 or female G1/2" for type RBSW1012. This pipe failure valve is available in a straight version and in a 90° version. Housing and banjo bolt are zinc coated.

FUNCTION

Fluid can pass the valve in both flow directions. In flow direction A to P the valve closes if the amount of flow exceeds the adjusted value. Amount of flow which causes the valve to close (cut-off flow) can be adjusted by means of an adjustment screw. The valve is set at 20–25 l/min (at the factory. Turning the adjustment screw clockwise reduces the cut-off flow.

APPLICATION

Pipe failure valves are used where loads must be protected against uncontrolled lowering after a line rupture, for example in scissor lifts or leveling platforms.

Caution:

Pipe failure valves are not suitable for applications where pressure and flow changes rapidly under normal working conditions.

TYPE CODE

| | | | | | | | |
|----------------------------------|--------------------------|-----|--------------------------|----|----|---|--------------------------|
| | | RBS | <input type="checkbox"/> | 10 | 12 | # | <input type="checkbox"/> |
| Pipe failure valve | | | | | | | |
| Straight type | <input type="checkbox"/> | | | | | | |
| 90° type | <input type="checkbox"/> | | | | | | |
| Corresponding to NG10 | | | | | | | |
| Screw-in thread G1/2" | | | | | | | |
| Design-Index (subject to change) | | | | | | | |

GENERAL SPECIFICATIONS

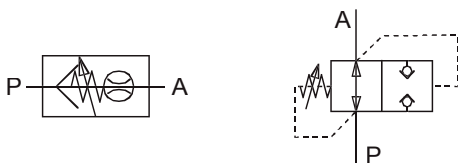
| | |
|---------------------|---------------------------------------|
| Description | Pipe failure valve |
| Construction | Threaded body |
| Mounting | Threaded port, line mounting |
| Connections | Threaded port male G1/2" |
| | Threaded port female G3/8" (RBSG1012) |
| | Threaded port female G1/2" (RBSW1012) |
| Ambient temperature | -20...+50°C |
| Mounting position | any |
| Weight RBSG1012 | m = 0,26 kg |
| RBSW1012 | m = 0,38 kg |

HYDRAULIC SPECIFICATIONS

| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade β ₁₀ ...25≥75) refer to data sheet 1.0-50/2 |
| Viscosity range | 12mm ² /s...320mm ² /s |
| Fluid temperature | -20...+70°C |
| Peak pressure | $p_{max} = 210 \text{ bar}$ |
| Max. volume flow | P → A: $Q_{max} = 30 \text{ l/min}$ A → P: $Q_{max} = 35 \text{ l/min}$ |

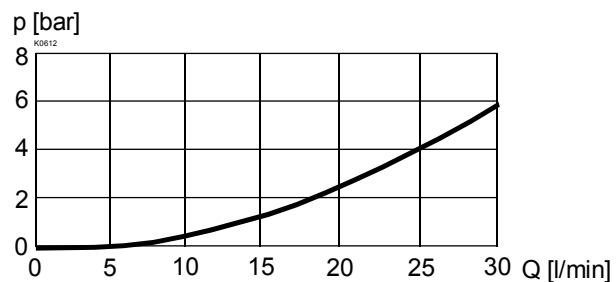
SYMBOLS

simplified detailed

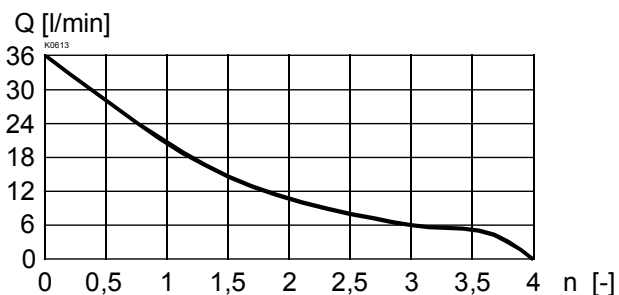


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Pressure drop characteristic $P \rightarrow A$

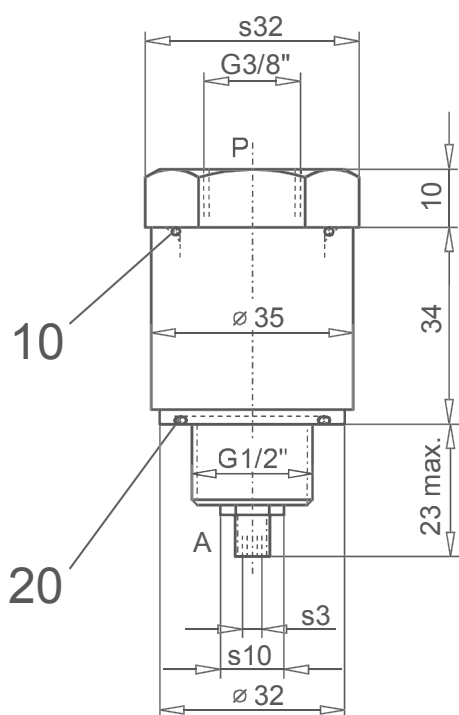


$Q = f(n)$ Cut-off volume flow characteristic $A \rightarrow P$

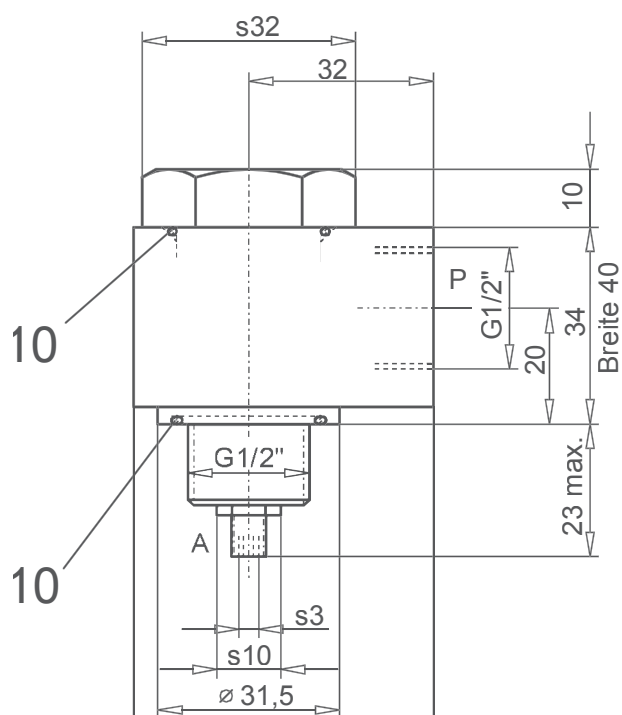


DIMENSIONS

RBSG1012



RBSW1012



PARTS LIST

| Position | Article | Description |
|----------|----------|------------------------|
| 10 | 160.2236 | O-ring ID 23,52 x 1,78 |
| 20 | 160.2253 | O-ring ID 25,00 x 2,00 |

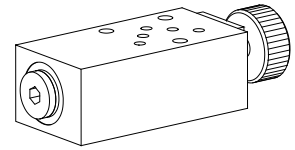
Technical explanation see data sheet 1.0-100

Drain valve

Sandwich construction

- $Q_{max} = 25 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG4-Mini®



DESCRIPTION

Drain valve NG4-Mini with interface acc. to Wandfluh standard. Sandwich design. Valves for 3 flow directions are available. The sandwich body is made from phosphated steel. The turn knob from anodised aluminium.

FUNCTION

Aspherical, hardened closing element seals the pressurised part leak free against tank port. By turning the knob the connection to tank will be opened. Knob may be blocked in any position by a set screw.

APPLICATION

Drain valves are mainly used in systems with an accumulator which need to be depressurised for revisions. Among the benefits from NG 4 Mini sandwich elements are flexibility in system lay-out, small space requirement and low weight.

TYPE CODE

| | | B | AH | | 4 | / | | # | |
|----------------------------------|--|--|----|--|---|---|--|---|--|
| Interface | | | | | | | | | |
| Type description for drain valve | | | | | | | | | |
| Drain valve: | <div>P → T</div> <div>A → T</div> <div>B → T</div> | <div>P</div> <div>A</div> <div>B</div> | | | | | | | |
| Normal size 4-Mini | | | | | | | | | |
| Threaded port open | | | | | | | | | |
| with plug | | | | | | | | | |
| with minimess screw coupling | | | | | | | | | |
| Design-Index (Subject to change) | | | | | | | | | |

GENERAL SPECIFICATIONS

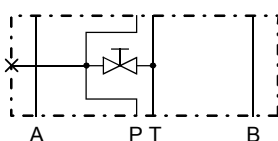
| | |
|---------------------|---|
| Description | Drain valve |
| Nominal size | NG4-Mini acc. to Wandfluh standard |
| Construction | Sandwich construction |
| Mounting | 3 holes for hexagon socket screw M5 or studs M5 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 0,75 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

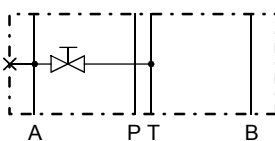
| | |
|--------------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure in ports A, B, P | $p_{max} = 350 \text{ bar}$ |
| Peak pressure port T | $p_{max} = 50 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 25 \text{ l/min}$ |

SYMBOLS / TYPES

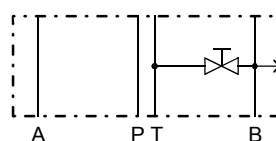
BAHP4



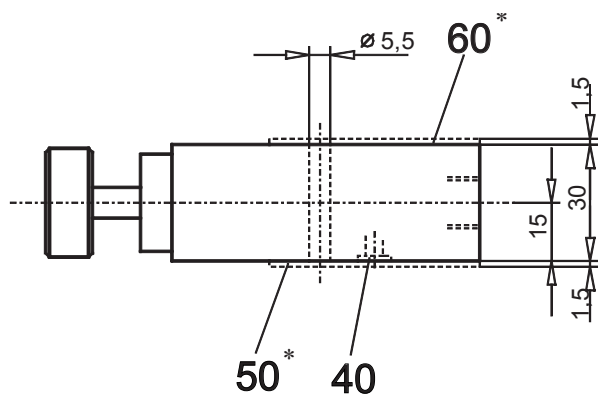
BAHA4



BAHB4

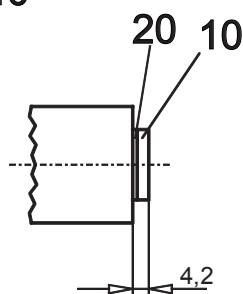


DIMENSIONS

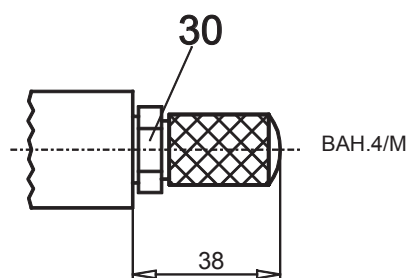


* only BAHB4/ .

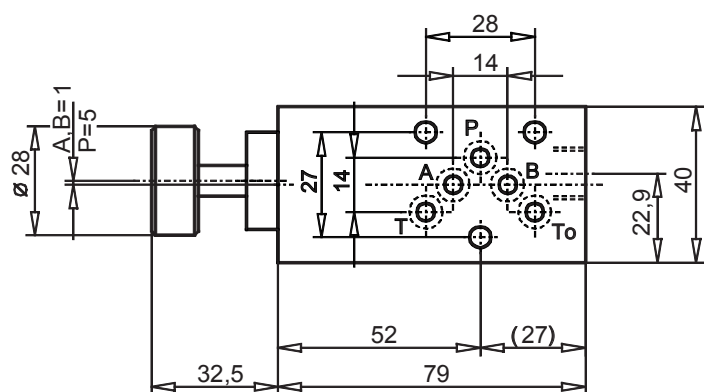
BAH.4/O



BAH.4/V



BAH.4/M



On types BAHB, P4 the adjustment is located on B-side

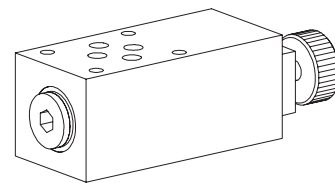
PARTS LIST

| Position | Article | Description |
|----------|----------|--------------------------------------|
| 10 | 238.2204 | Plug DIN 908 G1/4" |
| 20 | 49.1140 | Cop. seal ring NG 14x18x1,5 DIN 7603 |
| 30 | 152.9101 | Mini-mess fitting 1620/1/4" |
| 40 | 160.2052 | O-ring ID 5,28x1,78 |
| 50 | 173.1700 | Intermediate plate BZB4 |
| 60 | 173.1650 | Sealing plate BDB4 |

Technical explanation see data sheet 1.0-100

Drain valve
Sandwich construction

- $Q_{max} = 40 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG6
ISO 4401-03

DESCRIPTION

Drain valve NG6 with interface according to ISO 4401-03. Sandwich design. Valves for 3 flow directions are available. The sandwich body is made from phosphated steel. The turn knob from anodised aluminium.

FUNCTION

Aspherical, hardened closing element seals the pressurised part leak free against tank port. By turning the knob the connection to tank will be opened. Knob may be blocked in any position by a set screw.

APPLICATION

Drain valves are mainly used in systems with an accumulator which need to be depressurised for revisions.

TYPE CODE

| | A | AH | | 6 / | | # | |
|--------------------------------------|--------------------------|--------------------------|-----------|--------------------------|-------|--------------------------|--|
| International standard interface ISO | | | | | | | |
| Type description for drain valve | | | | | | | |
| Drain valve: | P → T | <input type="checkbox"/> | A → T | <input type="checkbox"/> | B → T | <input type="checkbox"/> | |
| Normal size 6 | | | | | | | |
| Threaded port open | <input type="checkbox"/> | | with plug | <input type="checkbox"/> | | | |
| with minimess screw coupling | <input type="checkbox"/> | | | <input type="checkbox"/> | | | |
| Design-Index (Subject to change) | | | | | | | |

GENERAL SPECIFICATIONS

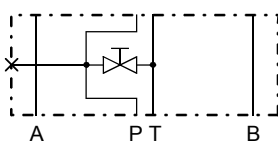
| | |
|---------------------|---|
| Description | Drain valve |
| Nominal size | NG6 acc. to ISO 4401-03 |
| Construction | Sandwich construction |
| Mounting | 4 holes for hexagon socket screw M5 or studs M5 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 5,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 1,5 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

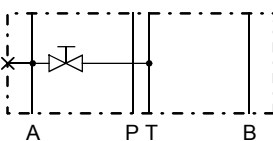
| | |
|--------------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure in ports A, B, P | $p_{max} = 350 \text{ bar}$ |
| Peak pressure in port T | $p_{max} = 50 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 40 \text{ l/min}$ |

SYMBOLS / TYPES

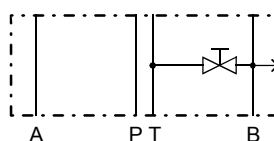
AAHP6



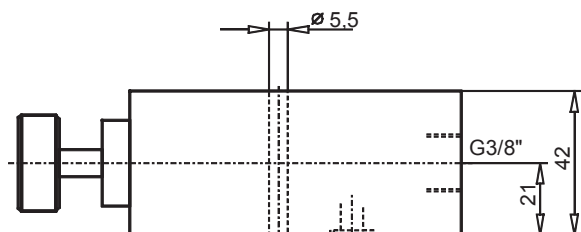
AAHA6



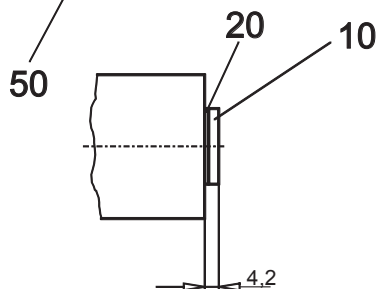
AAHB6



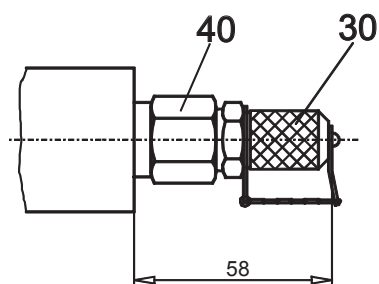
DIMENSIONS



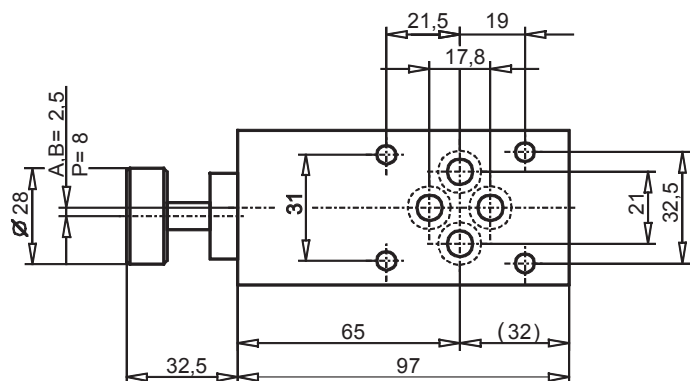
AAH.6/O



AAH.6/V



AAH.6/M



On types AAHB, P6 the adjustment is located on B-Side

PARTS LIST

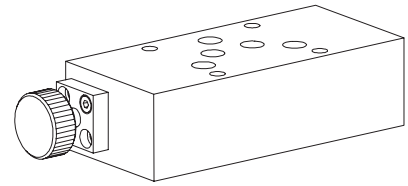
| Position | Article | Description |
|----------|----------|--------------------------------------|
| 10 | 238.3202 | Plug DIN 908 G3/8" |
| 20 | 49.1180 | Cop. seal ring NG 18x22x1,5 DIN 7603 |
| 30 | 152.9101 | Mini-mess fitting 1620/1/4" |
| 40 | 240.5311 | Fitting RI 3/8x1/4 |
| 50 | 160.2093 | O-ring ID 9,25x1,78 |

Technical explanation see data sheet 1.0-100

Drain valve Sandwich construction

- $Q_{max} = 60 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG10
ISO 4401-05



DESCRIPTION

Drain valve NG10 with interface according to ISO 4401-05. Sandwich design. Valves for 3 flow directions are available. The sandwich body is made from phosphated steel. The turn knob from anodised aluminium.

FUNCTION

A spherical, hardened closing element seals the pressurised part leak free against tank port. By turning the knob the connection to tank will be opened. Knob may be blocked in any position by a set screw.

APPLICATION

Drain valves are mainly used in systems with an accumulator which need to be depressurised for revisions.

TYPE CODE

| | A | AH | | 10 | / | | # | |
|--------------------------------------|--------------------------|--------------------------|-------|--------------------------|---|-------|--------------------------|--|
| International standard interface ISO | | | | | | | | |
| Type description for drain valve | | | | | | | | |
| Drain valve: | P → T | <input type="checkbox"/> | A → T | <input type="checkbox"/> | | B → T | <input type="checkbox"/> | |
| Normal size 10 | | | | | | | | |
| Threaded port open with plug | <input type="checkbox"/> | | | | | | | |
| with minimess screw coupling | <input type="checkbox"/> | | | | | | | |
| Design-Index (Subject to change) | | | | | | | | |

GENERAL SPECIFICATIONS

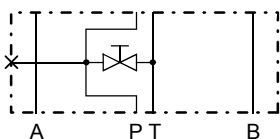
| | |
|---------------------|---|
| Description | Drain valve |
| Nominal size | NG10 acc. to ISO 4401-05 |
| Construction | Sandwich construction |
| Mounting | 4 holes for hexagon socket screw M6 or studs M6 |
| Connections | Connection plates Multistation flange subplate Longitudinal stacking system |
| Ambient temperature | -20...+50 °C |
| Mounting position | any |
| Fastening torque | $M_D = 9,5 \text{ Nm}$ (Quality 8.8) |
| Weight | $m = 2,4 \text{ kg}$ |

HYDRAULIC SPECIFICATIONS

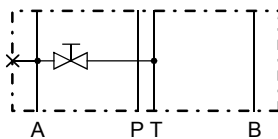
| | |
|--------------------------|---|
| Fluid | Mineral oil, other fluid on request |
| Contamination efficiency | ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 |
| Viscosity range | 12 mm ² /s...320 mm ² /s |
| Fluid temperature | -20...+70 °C |
| Peak pressure in ports | $p_{max} = 350 \text{ bar}$ |
| Peak pressure in port T | $p_{max} = 50 \text{ bar}$ |
| Max. volume flow | $Q_{max} = 60 \text{ l/min}$ |

SYMBOLS / TYPES

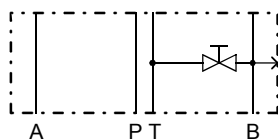
AAHP10



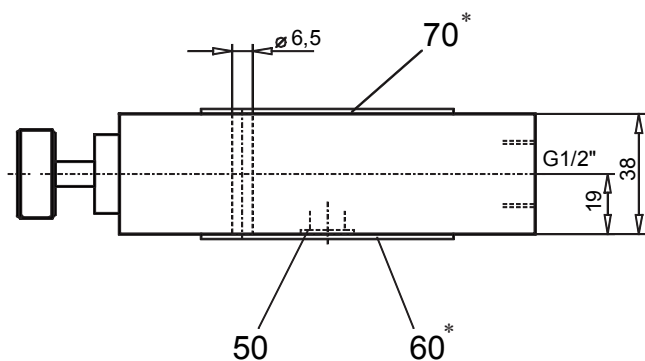
AAHA10



AAHB10

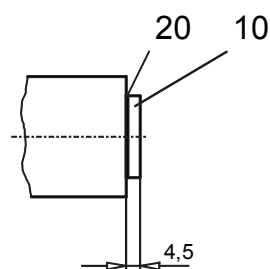


DIMENSIONS

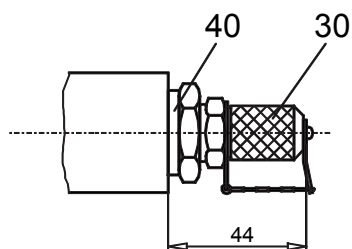


* only AAHB10/ .

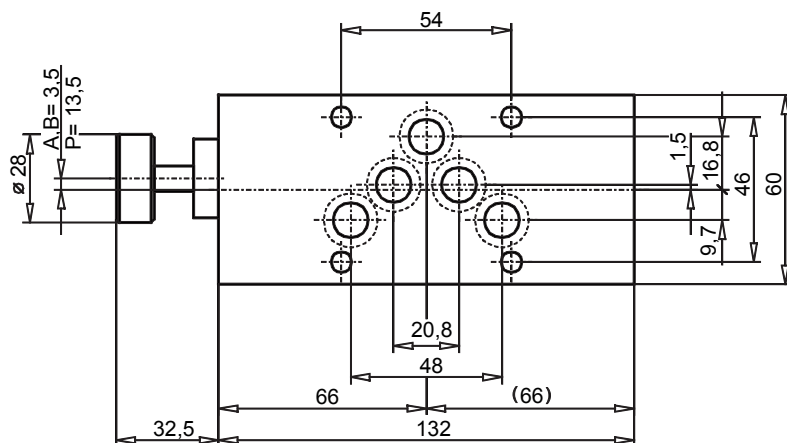
AAH.10/O



AAH.10/V



AAH.10/M



On types AAHB, P10 the adjustment is located on B-Side

PARTS LIST

| Position | Article | Description |
|----------|----------|--------------------------------------|
| 10 | 238.5203 | Plug DIN 908 G1/2" |
| 20 | 49.1220 | Cop. seal ring NG 22x26x0,8 DIN 7603 |
| 30 | 152.9101 | Mini-mess fitting 1620/1/4" |
| 40 | 240.5318 | Fitting RI 1/2x1/4 |
| 50 | 160.2140 | O-ring ID 14,00x1,78 |
| 60 | 173.4700 | Intermediate plate AZB10 |
| 70 | 173.4650 | Sealing plate ADB10 |

Technical explanation see data sheet 1.0-100