

2014 - 2015 SOLUTIONS GUIDE

For total efficiency



Ballorex

BALANCING VALVES

Comap Ballorex is a complete range of static, dynamic and automatic valves for balancing hot and cold water circuits. Easily commissioned, they guarantee the optimal balance between control and energy savings.



APPLICATIONS

PICV VALVES (Pressure Independent Control Valves, Ballorex Dynamic): Ideal for applications where constant flow is required (such as fan coils and air conditioners) or areas where intermittent operation is necessary (such as hotel rooms and shops). Suitable for cooling or heating applications.

DPCV VALVES (Differential Pressure Control Valve, or Automatic Balancing Valve): Guarantee a constant differential pressure **across the risers of heating systems** to ensure they operate at their optimum pressure range, and prevent hydraulic interference from other branches.

MANUAL BALANCING VALVES (750, 750B, Ballorex V): Variable Orifice Valves are the most economical way to compensate for **circuit construction unbalance**.

STATIC VALVES (VENTURI): Ideal for heating applications. The direct reading capability feature is very convenient for fast commissioning; whatever the valve setting, the orifice Kv for flow measuring remains constant. One can directly read the actual flow while modifying the setting without changing the flow meter value. This dramatically reduces the commissioning time.

TECHNICAL CHARACTERISTICS

| Model | Range dimensions | PN | Temperature |
|------------------|------------------|------|--|
| 750 | DN10-DN50 | PN16 | -25°C / +110°C |
| Ballorex V | DN15-DN50 | PN25 | -20°C / +120°C |
| 750B | DN15-DN400 | PN16 | -10°C / +120°C (up to DN200) -10°C / +200°C (DN250-400) |
| Venturi | DN15-DN50 | PN25 | -20°C / +120°C |
| Ballorex Dynamic | DN15-DN32 | PN25 | -20°C / +120°C |
| Ballorex DP | DN15-DN32 | PN25 | -20°C / +135°C |

BENEFITS

| Model | Installer benefits |
|------------------|--|
| 750 | Sanitary compatibility (French ACS). Multiple orientation digital display. Sealable setting memory. |
| Ballorex V | Fast shut-off and isolation without losing the setting. Easy setting (Allen key). Symmetrical design: no flow direction constraint. Super compact design. |
| 750B | Robust and accurate design |
| Venturi | Fast shut-off. Flow reading accuracy across the Venturi, without changing the flow meter value. Easy setting (Allen key). No straight upwards/downwards pipe required. |
| Ballorex Dynamic | Very accurate flow reading across the Venturi, without changing the flow meter value. Flow regulation stability. No straight pipes required. |
| Ballorex DP | Energy savings thanks to removal of overflows in the pipes and homogeneous temperature returns. Possibility to create new zones in the building without upgrading the whole heating system. Thermostatic valves always work at their best authority. Noise reduction in the installation. |

FEATURES

The fast connector prevents the pressure ports from leaking and ageing.

| Model | Venturi orifice for flow measure | Pressure port type | Principles and features |
|------------------|----------------------------------|--------------------|--|
| 750 | | Fast / Needle | Bronze, oblique seat variable orifice direct reading valve (VODRV). |
| Ballorex V | | Needle | DZR straight seat (VODRV). |
| 750B | | Fast | Cast iron flanged valves, variable orifice direct reading valve (VODRV). |
| Venturi | Yes | Needle | DZR valves, straight seat, fixed orifice direct reading valve (FODRV). Compactness and direct reading. |
| Ballorex Dynamic | Yes | Fast / Needle | DZR valve, EPDM membrane. Works with On-Off or modulating actuators. |
| Ballorex DP | | Fast / Needle | CW602N brass valve, EPDM membrane, 2 versions, 5-25 kPa (LP) and 20-40 kPa (HP). |

DYNAMIC BALANCING VALVES

PRESSURE INDEPENDANT CONTROL VALVE

NEW

BALLOREX DYNAMIC

With needle pressure test points



| Size | Size (metric) | ITEM No | Flow range (m³/h) | Qty |
|---------|---------------|-----------------|-------------------|-----|
| ½" F-F | DN15 | 4360000L-000001 | 0.036-0.118 | 1 |
| ½" F-F | DN15 | 4360000S-000001 | 0.090-0.450 | 1 |
| ½" F-F | DN15 | 4360000H-000001 | 0.300-1.400 | 1 |
| ¾" F-F | DN20 | 4460000S-000001 | 0.820-0.882 | 1 |
| ¾" F-F | DN20 | 4460000H-000001 | 0.835-2.220 | 1 |
| 1" F-F | DN25 | 4560000S-000001 | 0.835-2.340 | 1 |
| 1" F-F | DN25 | 4560000H-000001 | 1.750-3.330 | 1 |
| 1¼" F-F | DN32 | 4660000H-000001 | 1.910-4.400 | 1 |

PROPORTIONAL CONTROL THERMO-ELECTRIC ACTUATOR AND RING.

ACTUMOD

To be mounted on the Ballorex Dynamic



| Size | ITEM No | Type | Operating voltage | Control Input | Qty |
|---------|------------|-----------------|-------------------|---------------|-----|
| M30x1,5 | U620001001 | Normally closed | 24V | 0-10V | 1 |

ON/OFF CONTROL THERMOELECTRIC ACTUATOR AND RING.

ACTUONOFF

To be mounted on the Ballorex Dynamic



| Size | ITEM No | Type | Operating voltage | Control Input | Qty |
|---------|------------|-----------------|-------------------|---------------|-----|
| M30x1,5 | U620002001 | Normally closed | 230V | ON/OFF | 1 |
| M30x1,5 | U620003001 | Normally closed | 24V | ON/OFF | 1 |

DIFFERENTIAL PRESSURE AUTOMATIC BALANCING VALVES

AUTOMATIC DIFFERENTIAL PRESSURE CONTROL VALVE

NEW

BALLOREX DP- 5-25 KPA



| Size | Size (metric) | ITEM No | Qty |
|--------|---------------|-----------------|-----|
| 1/2" | DN15 | 43550010-021003 | 1 |
| 3/4" | DN20 | 44550010-021003 | 1 |
| 1" | DN25 | 45550010-021003 | 1 |
| 1 1/4" | DN32 | 46550010-021003 | 1 |
| 1 1/2" | DN40 | 47550010-021003 | 1 |
| 2" | DN50 | 98550010-021003 | 1 |

AUTOMATIC DIFFERENTIAL PRESSURE CONTROL VALVE

NEW

BALLOREX DP- 20-40KPA



| Size | Size (metric) | ITEM No | Qty |
|--------|---------------|-----------------|-----|
| 1/2" | DN15 | 43550030-021003 | 1 |
| 3/4" | DN20 | 44550030-021003 | 1 |
| 1" | DN25 | 45550030-021003 | 1 |
| 1 1/4" | DN32 | 46550030-021003 | 1 |
| 1 1/2" | DN40 | 47550030-021003 | 1 |
| 2" | DN50 | 98550010-021003 | 1 |

PARTNER VALVE FOR BALLOREX DP

750PV

With 2 pressure test points (for flow measuring) and connection to the Ballorex DP



| Size | Size (metric) | ITEM No | Flow range (m³/h) | Qty |
|--------|---------------|---------|-------------------|-----|
| 1/2" | DN15 | 754404 | 0,1-4,47 | 1 |
| 3/4" | DN20 | 754406 | 0,13-5,9 | 1 |
| 1" | DN25 | 754408 | 0,17-8,52 | 1 |
| 1 1/4" | DN32 | 754410 | 0,2-14,88 | 1 |

MANUAL BALANCING VALVES

VENTURI BALANCING VALVE

BALLOREX F

Needle pressure port, Fast shut-off and Venturi



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Ven-turi Kv (m³/h) | Qty |
|-------|---------------|-----------------|-----------------|--------------------|-----|
| 1/2" | DN15L | 4350000L-001003 | 0,062-0,226 | 0,359 | 1 |
| 1/2" | DN15S | 4350000S-001003 | 0,13-0,530 | 0,746 | 1 |
| 1/2" | DN15H | 4350000H-001003 | 0,267-1,17 | 1,566 | 1 |
| 3/4" | DN20L | 4450000L-001003 | 0,13-0,530 | 0,746 | 1 |
| 3/4" | DN20S | 4450000S-001003 | 0,267-0,17 | 1,566 | 1 |
| 3/4" | DN20H | 4550000H-001003 | 0,511-2,17 | 2,952 | 1 |
| 1" | DN25S | 4550000S-001003 | 0,511-2,17 | 2,952 | 1 |
| 1" | DN25H | 4550000H-001003 | 1,044-4,500 | 6,01 | 1 |
| 1"1/4 | DN32H | 4650000H-001003 | 1,044-4,500 | 6,01 | 1 |
| 1"1/2 | DN40H | 4750000H-001003 | 1,580-6,760 | 9,204 | 1 |
| 2" | DN50H | 4850000H-001003 | 2,952-12,63 | 17,1 | 1 |

VENTURI BALANCING VALVE - COMPRESSION

BALLOREX C

Needle pressure port, Fast shut-off and Venturi



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Ven-turi Kv (m³/h) | Qty |
|-------|---------------|-----------------|-----------------|--------------------|-----|
| 1/2" | DN15L | 4850100H-001063 | 0,062-0,226 | 0,359 | 1 |
| 1/2" | DN15S | 4850100H-001063 | 0,13-0,530 | 0,746 | 1 |
| 1/2" | DN15H | 4850100H-001063 | 0,267-1,17 | 1,566 | 1 |
| 3/4" | DN20L | 4850100H-001063 | 0,13-0,53 | 0,746 | 1 |
| 3/4" | DN20S | 4850100H-001063 | 0,267-1,170 | 1,566 | 1 |
| 3/4" | DN20H | 4850100H-001063 | 0,511-2,17 | 2,952 | 1 |
| 1" | DN25S | 4850100H-001063 | 0,511-2,17 | 2,952 | 1 |
| 1" | DN25H | 4850100H-001063 | 1,044-4,50 | 6,01 | 1 |
| 1"1/4 | DN32H | 4850100H-001063 | 1,044-4,50 | 6,01 | 1 |
| 1"1/2 | DN40H | 4850100H-001063 | 1,584-6,76 | 9,204 | 1 |
| 2" | DN50H | 4850100H-001063 | 2,952-12,63 | 17,1 | 1 |

MANUAL BALANCING VALVES, VODRV

NEW

BALLOREX V

Needle pressure port, Fast shut-off



| Size | Size (metric) | ITEM No | Type | Kvs (m³/h at BP 2k) | Qty | Kv range |
|--------|---------------|----------------------------|------|---------------------|-----|--------------|
| 1/2" | DN15 | 4351000S-001003 | - | 1,71 | 1 | 0,019-0,530 |
| 3/4" | DN20 | 4451000S-001003 | - | 4,4 | 1 | 0,055-1,170 |
| 1" | DN25 | 4551000S-001003 | - | 7,46 | 1 | 0,084-2,170 |
| 1 1/4" | DN32 | 4651000S-001003 | - | 13,5 | 1 | 0,310-4,500 |
| 1 1/2" | DN40 | 4751000S-001003 | - | 23,7 | 1 | 0,450-6,770 |
| 2" | DN50 | 4851000S-001003 | - | 34,5 | 1 | 0,960-12,640 |
| 1/2" | DN15 | 4351000S-001673 With Drain | | 1,71 | 1 | 0,019-0,530 |
| 3/4" | DN20 | 4451000S-001673 With Drain | | 4,4 | 1 | 0,055-1,170 |
| 1" | DN25 | 4551000S-001673 With Drain | | 7,46 | 1 | 0,084-2,170 |
| 1 1/4" | DN32 | 4651000S-001673 With Drain | | 13,5 | 1 | 0,310-4,500 |
| 1 1/2" | DN40 | 4751000S-001673 With Drain | | 23,7 | 1 | 0,450-6,776 |
| 2" | DN50 | 4851000S-001673 With Drain | | 34,5 | 1 | 0,960-12,640 |

BALANCING VALVES WITH DIGITAL HANDWHEEL

753



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|-------|---------------|---------|-----------------|-----|
| 1/2" | DN15 | 753104 | 0,1-4,47 | 1 |
| 3/4" | DN20 | 753106 | 0,13-5,9 | 1 |
| 1" | DN25 | 753108 | 0,17-8,52 | 1 |
| 1"1/4 | DN32 | 753110 | 0,2-14,88 | 1 |
| 1"1/2 | DN40 | 753112 | 0,23-21,09 | 1 |
| 2" | DN50 | 753116 | 0,55-35,48 | 1 |

BALANCING VALVES WITHOUT HANDWHEEL

1753



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|--------|---------------|---------|-----------------|-----|
| 1/2" | DN15 | 175304 | 0,09-4,52 | 1 |
| 3/4" | DN20 | 175306 | 0,12-6,01 | 1 |
| 1" | DN25 | 175308 | 0,15-8,65 | 1 |
| 1 1/4" | DN32 | 175310 | 0,25-14,97 | 1 |
| 1 1/2" | DN40 | 175312 | 0,29-21,2 | 1 |
| 2" | DN50 | 175316 | 0,76-35,73 | 1 |

BALANCING VALVES WITHOUT HANDWHEEL

1752

with one drain



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|------|---------------|---------|-----------------|-----|
| 1/2" | DN15 | 175204 | 0,09-4,52 | 1 |
| 3/4" | DN20 | 175206 | 0,12-6,01 | 1 |
| 1" | DN25 | 175208 | 0,15-8,65 | 1 |

BALANCING VALVES WITH DIGITAL HANDWHEEL

750

1 pressure test point and 1 drain



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|--------|---------------|---------|-----------------|-----|
| 3/8" | DN10 | 750403 | 0,12-1,95 | 1 |
| 1/2" | DN15 | 750404 | 0,1-4,47 | 1 |
| 3/4" | DN20 | 750406 | 0,13-5,9 | 1 |
| 1" | DN25 | 750408 | 0,17-8,52 | 1 |
| 1 1/4" | DN32 | 750410 | 0,2-14,88 | 1 |
| 1 1/2" | DN40 | 750412 | 0,23-21,09 | 1 |
| 2" | DN50 | 750416 | 0,55-35,48 | 1 |

REDUCED KV BALANCING VALVES WITH DIGITAL HANDWHEEL

750R

1 pressure test point and 1 drain



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|------|---------------|---------|-----------------|-----|
| 1/2" | DN15 | 7504041 | 0,115-1,90 | 1 |
| 3/4" | DN20 | 7504061 | 0,115-1,89 | 1 |
| 1" | DN25 | 7504081 | 0,1-5,19 | 1 |

REDUCED KV BALANCING VALVES WITH DIGITAL HANDWHEEL

751

2 pressure test points



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|--------|---------------|---------|-----------------|-----|
| 3/8" | DN10 | 751403 | 0,12-1,95 | 1 |
| 1/2" | DN15 | 751404 | 0,1-4,47 | 1 |
| 3/4" | DN20 | 751406 | 0,13-5,9 | 1 |
| 1" | DN25 | 751408 | 0,17-8,52 | 1 |
| 1 1/4" | DN32 | 751410 | 0,2-14,88 | 1 |
| 1 1/2" | DN40 | 751412 | 0,23-21,09 | 1 |
| 2" | DN50 | 751416 | 0,55-35,48 | 1 |

REDUCED KV BALANCING VALVES WITH DIGITAL HANDWHEEL

751R

2 pressure test points



| Size | Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|------|---------------|---------|-----------------|-----|
| 1/2" | DN15 | 7514041 | 0,115-1,90 | 1 |
| 3/4" | DN20 | 7514061 | 0,115-1,89 | 1 |
| 1" | DN25 | 7514081 | 0,1-5,19 | 1 |

FLANGED BALANCING VALVES

FLANGED CAST IRON BALANCING VALVE

751B

Straight through seat, VODRV



| Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|---------------|---------|-----------------|-----|
| DN15 | 751504 | 0,13-4,5 | 1 |
| DN20 | 751506 | 0,22-6,6 | 1 |
| DN25 | 751507 | 0,22-9,8 | 1 |
| DN32 | 751508 | 0,28-15,1 | 1 |
| DN40 | 751509 | 0,88-24,9 | 1 |
| DN50 | 751510 | 1,07-48,5 | 1 |
| DN65 | 751512 | 2,98-74,4 | 1 |
| DN80 | 751513 | 3,65-111 | 1 |
| DN100 | 751514 | 3,77-165 | 1 |
| DN125 | 751516 | 8,30-242 | 1 |
| DN150 | 751518 | 16,2-372 | 1 |
| DN200 | 751520 | 32,5-704 | 1 |

FLANGED CAST IRON BALANCING VALVE

750B

Straight through seat, VODRV



| Size (metric) | ITEM No | Kv range (m³/h) | Qty |
|---------------|---------|-----------------|-----|
| DN250 | 750750 | 179-812 | 1 |
| DN300 | 750800 | 411-1383 | 1 |
| DN350 | 750850 | 395-1651 | 1 |
| DN400 | 750900 | 690-2383 | 1 |

VENTURI FLANGED BALANCING VALVE

NEW

BALLOREX VENTURI

Butterfly cast iron, FODRV



| Size (metric) | ITEM No | Kvs (m³/h at BP 2k) | Flow range (m³/h) | Qty |
|---------------|----------------|---------------------|-------------------|-----|
| DN65 | 3937000-680009 | 78,2 | 6,48 - 25,2 | 1 |
| DN80 | 3937600-680009 | 169 | 12,6 - 54,0 | 1 |
| DN100 | 3938200-680009 | 360 | 22,3 - 93,6 | 1 |
| DN125 | 3938800-680009 | 502 | 32,4 - 144 | 1 |
| DN150 | 3939400-680009 | 1010 | 60,5 - 205 | 1 |
| DN200 | 3940000-680009 | 1910 | 101 - 360 | 1 |
| DN250 | 3940600-680009 | 2540 | 148 - 565 | 1 |
| DN300 | 3941200-680009 | 4850 | 258 - 814 | 1 |

ACCESSORIES

ANTI-LEAK QUICK COUPLING TEST POINT

2761

For 750 and 751 type valves



| Size | ITEM No | Qty |
|------|---------|-----|
| 1/4" | 276102 | 2 |
| 3/8" | 276103 | 2 |

50 MM TEST POINT EXTENSION

27

For 750 and 751 type valves



| Size | ITEM No | Qty |
|------|----------|-----|
| 1/4" | VBG95C00 | 2 |
| 3/8" | VBG95C01 | 2 |

DRAIN FOR BALANCING VALVES

1210

For 751 type valves



| Size | ITEM No | Qty |
|------|----------|-----|
| 1/4" | VPD00A11 | 1 |
| 3/8" | VPD00A12 | 1 |

CAP + O-RING

2754

For 750 and 751 type valves



| Size | ITEM No | Qty |
|------|----------|-----|
| 1/4" | VPD00A15 | 10 |
| 3/8" | VPD00A16 | 10 |

PRESSURE ADAPTER FOR DRAIN PORT

2762

For 750 type valves



| Size | ITEM No | Qty |
|------|---------|-----|
| 3/4" | 276200 | 2 |

BALANCING INSTRUMENT FOR COMMISSIONING

NEW

3760XBI

Includes needle and quick coupling leak-free adaptors



| ITEM No | Qty |
|---------|-----|
| 376010 | 1 |

3MM NEEDLE ADAPTER FOR COMAP MEASURER

2756

TA valves compatible



| ITEM No | Qty |
|---------|-----|
| 275631 | 2 |

PAIR OF FILTERS

3060F

For balancing instruments



| ITEM No | Qty |
|----------|-----|
| VMP07A06 | 2 |

MEASURER ADAPTER FOR COMAP VALVES

2758



| ITEM No | Measurers | Qty |
|---------|-------------------------------------|-----|
| 275802 | COMAP, Oventrop, Honeywell, Herz... | 2 |
| 275801 | TA | 2 |

QUICK COUPLING HEAD FOR COMAP VALVES

2764

Adapts on 2759



| ITEM No | Qty |
|---------|-----|
| 276400 | 2 |

ADAPTER BODY

2759

With ball valve



| ITEM No | Qty |
|---------|-----|
| 275900 | 2 |

NOTES

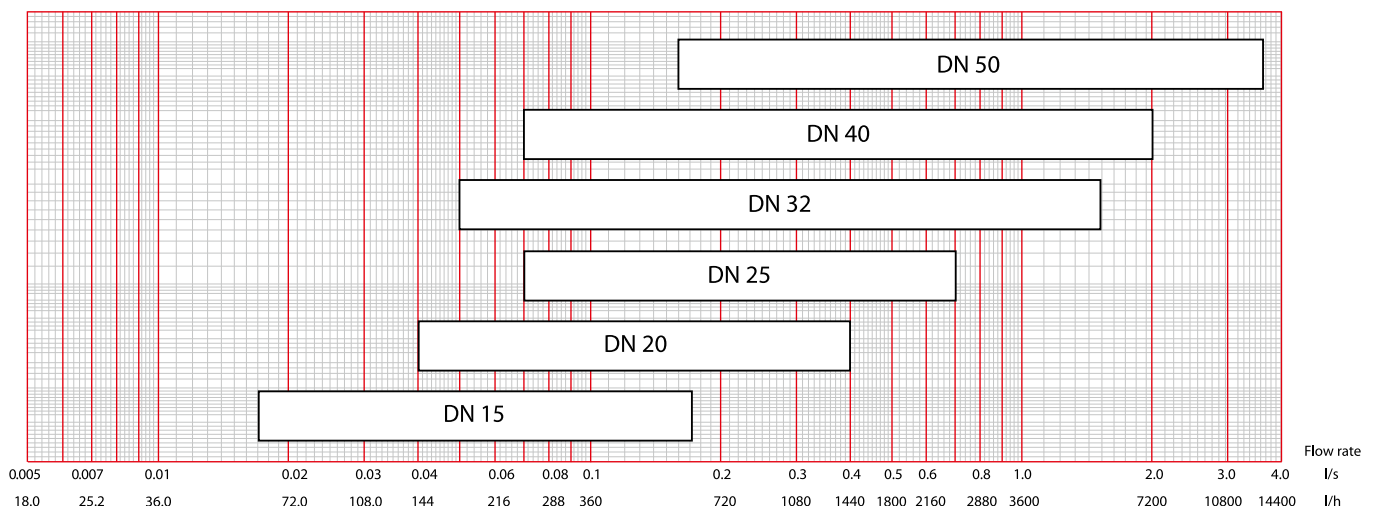


BALLOREX V

SELECTION

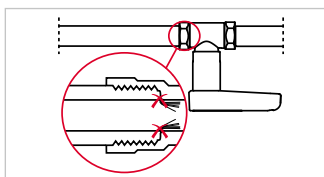
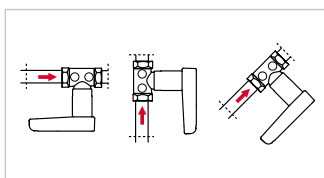
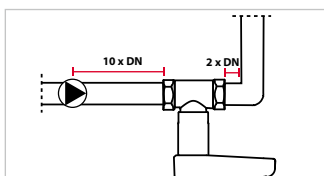
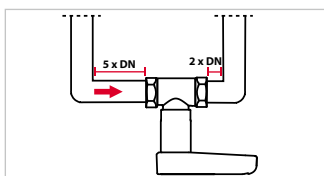
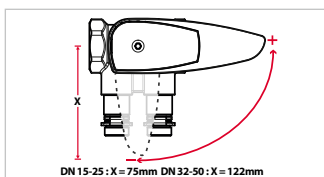
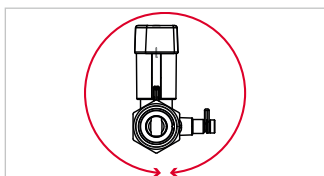
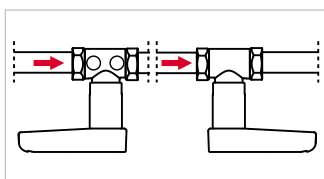


| | |
|------------------------|-----------------|
| Temperature range | -20°C to +120°C |
| Pressure class | PN25 |
| Valve housing material | CW602N |



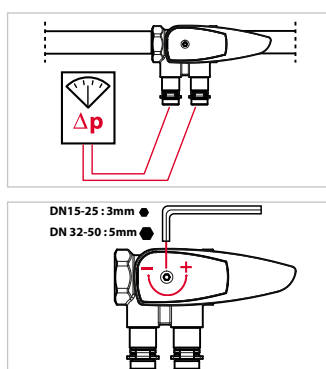
| Flow range | | kVs m ³ /h | Dimension |
|--------------|-------------|--------------------------|-----------|
| l/s | l/h | | |
| 0.017 – 0.17 | 60 – 610 | 1.71 | DN 15 |
| 0.04 – 0.4 | 145 – 1440 | 4.40 | DN 20 |
| 0.07 – 0.7 | 250 – 2520 | 7.46 | DN 25 |
| 0.05 – 1.5 | 180 – 5400 | 13.48 | DN 32 |
| 0.07 – 2 | 250 – 7200 | 23.68 | DN 40 |
| 0.16 – 3.6 | 580 – 12960 | 34.52 | DN 50 |

INSTALLATION



- The Ballorex V can be installed regardless of flow direction.
- The Ballorex V can be oriented 360° around the pipe axis.
- Installation space is required to ensure 90° isolation.
- 5 x DN straight piping is required when the valve is mounted directly before the bend.
- 10 x DN piping is required when the pipe is mounted directly after the pump.
- The Ballorex V can be installed on pipes regardless of their inclination.
- Loose hemp must not hang into the pipe.
- Deburring of pipe ends should be carried out to avoid system clogging.

SETTING

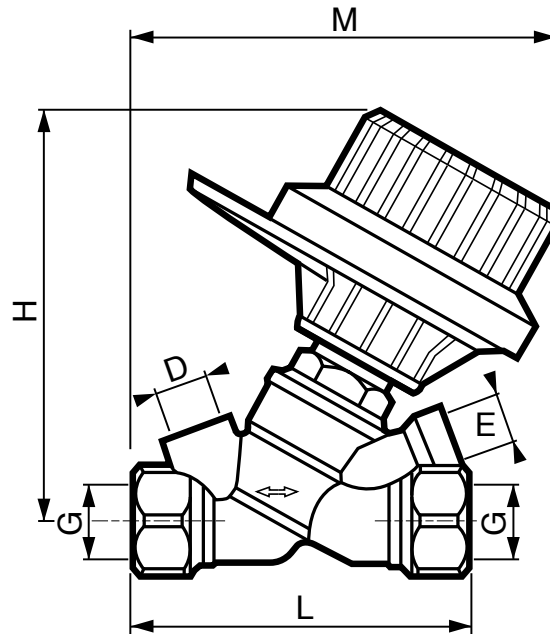


- Comap balancing computer is used for flow verification.
- The Ballorex V should be selected in the menu and the valve's setting entered on the balancing computer to obtain the flow reading.
- When connecting a device other than a Comap balancing computer, the Kvm value of the valve should be entered to obtain the flow reading.
- Setting the valve is easily done with an Allen key.
- Adjust the valve until the required flow is obtained.



BALLOREX 750 STATIC BALANCING VALVE

SELECTION



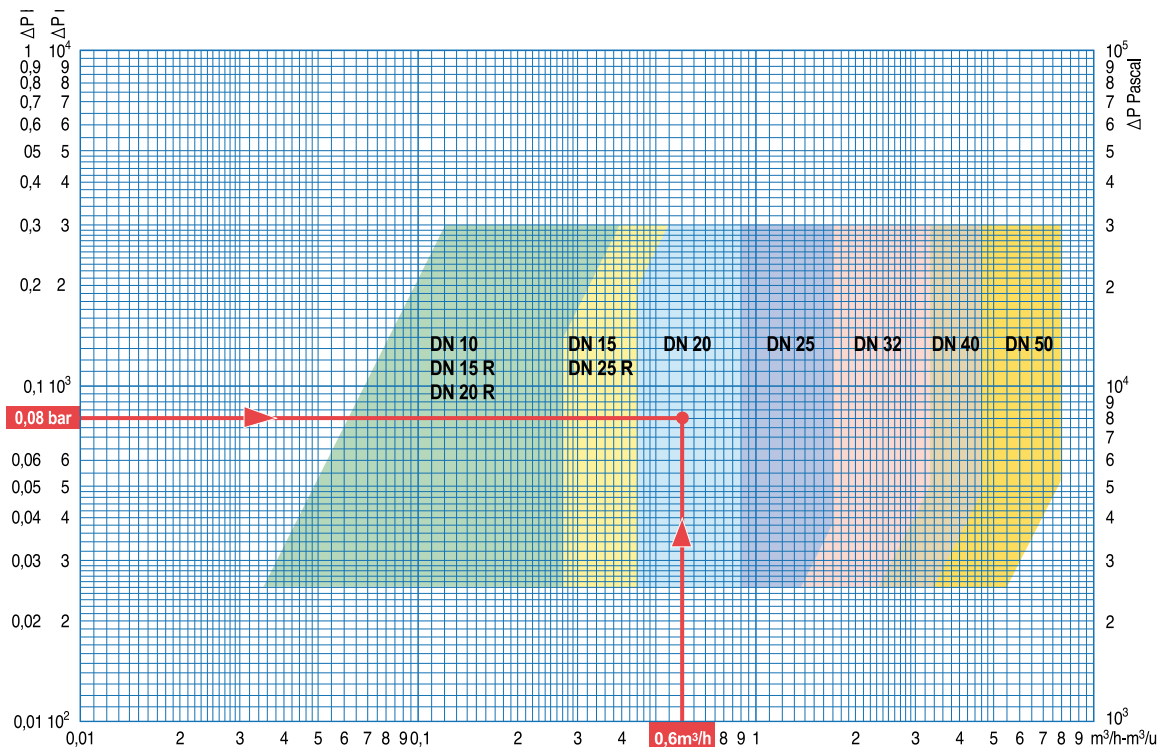
Size, features and material

| DN | G | D | E | H | L | M |
|--------|------|------|------|-----|------|-----|
| 10 | 3/8" | 1/4" | 1/4" | 104 | 88.5 | 106 |
| 15/15R | 1/2" | 1/4" | 1/4" | 104 | 88.5 | 106 |
| 20/20R | 3/4" | 1/4" | 1/4" | 104 | 95.5 | 112 |
| 25/25R | 1" | 1/4" | 1/4" | 108 | 96 | 116 |
| 32 | 5/4" | 3/8" | 1/4" | 117 | 117 | 127 |
| 40 | 6/4" | 3/8" | 1/4" | 122 | 125 | 133 |
| 50 | 2" | 3/8" | 1/4" | 126 | 149 | 146 |

| | |
|------------------------|----------------|
| Temperature range | -25°C / +110°C |
| Pressure class | PN16 |
| Valve housing material | Bronze |

QUICK SELECTION CHART

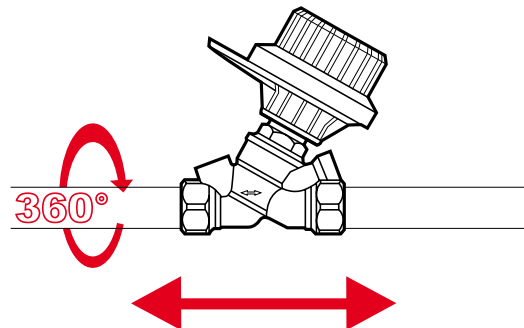
Quickly select the valve by crossing the nominal flow and associated pressure loss.



INSTALLATION

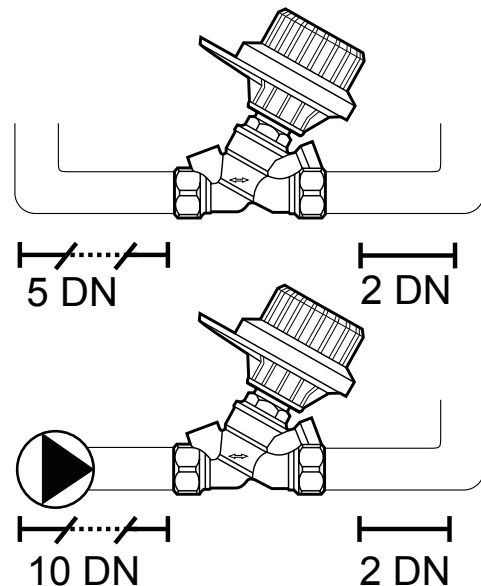
Valve orientation

- Can be mounted in both flow directions, though preferred flow direction is A \rightarrow B (marked on the body).
- Can be mounted 360° around pipe axis.
- Can be installed in either the supply or the return pipe, although installation in the return pipe is recommended.



Recommended pipe length

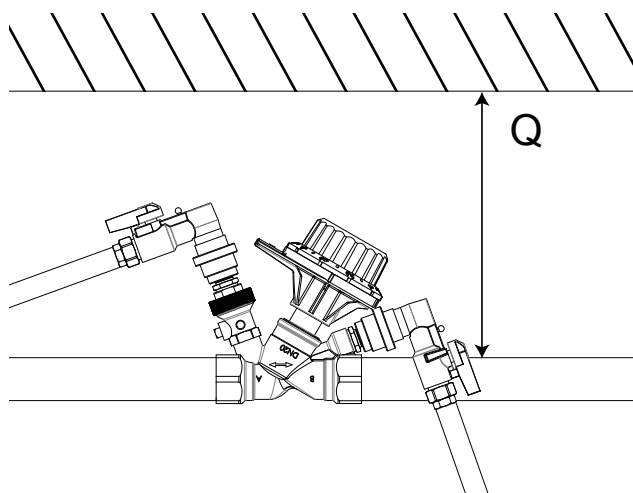
- For optimum measuring results, inlet and outlet pipe lengths of 15 x DN are recommended.
- Minimum length of straight pipe on inlet:
 - Downstream from a pump: 10 x DN
 - Downstream from valves or fittings: 5 x DN
- The minimum length of the outlet section should be at least 2 x DN.



Reserved space for accessibility

- For easy connection of the measurer on the balancing valve, a comfort distance (Q) is recommended.

| Size | Q (mm) |
|----------------|--------|
| DN 15 – 1/2" | 165 |
| DN 20 – 3/4" | 165 |
| DN 25 – 1" | 170 |
| DN 32 – 1 1/4" | 180 |
| DN 40 – 1 1/2" | 185 |
| DN 50 – 2" | 190 |



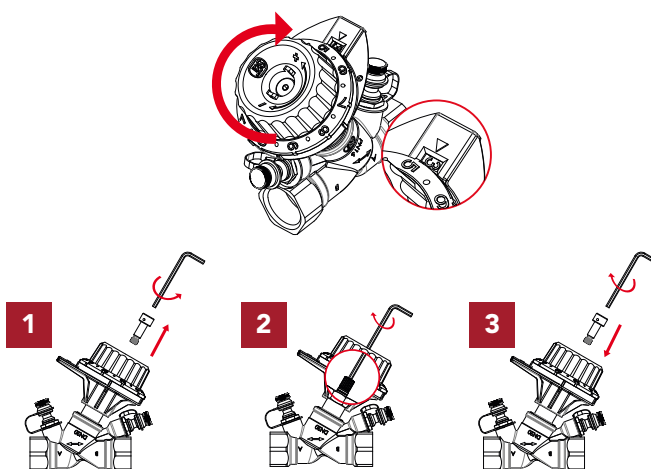
SETTING

Setting position

- The valves close when the handwheel is turned clockwise.
- The setting position is shown in the digital display.

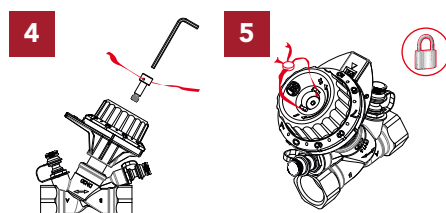
Setting memorisation

- Remove the protection screw.
- Screw the setting memorisation screw until its stop limit. The setting is memorised.
- Unscrew the protection screw. The setting is memorised and protected.



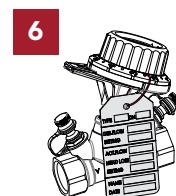
Setting sealing

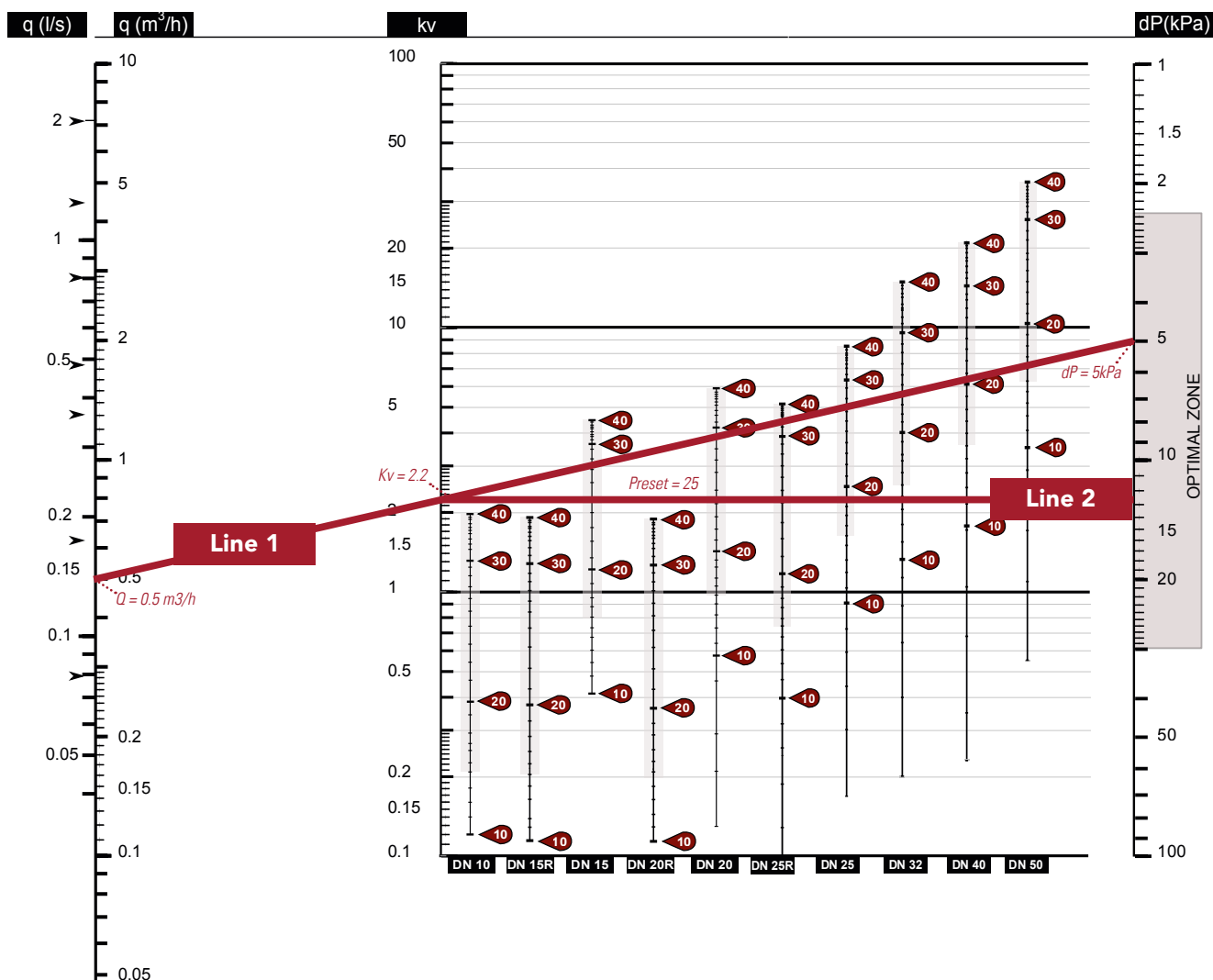
- Insert the protection screw in which the sealing wire will be inserted.
- Unscrew the protection screw and pass the wire through the eyes of the handwheel.



Control sealing

- Insert the ring of the plate into the hole in the graduated collar of the handwheel. The control is sealed.



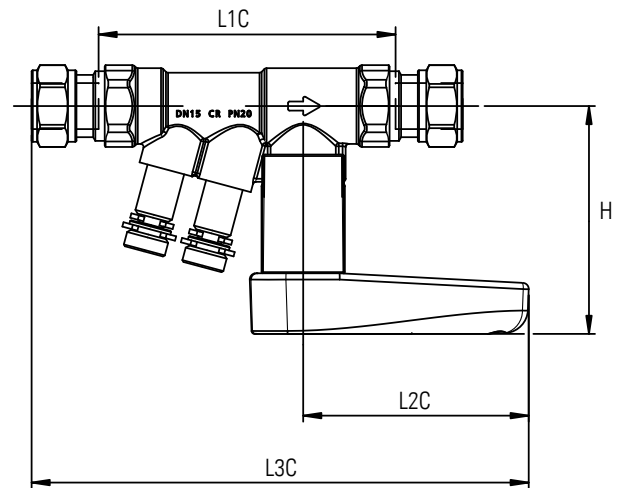
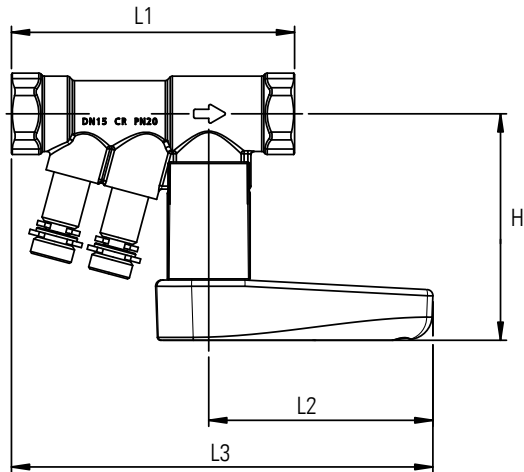


- 1 Draw a line (line 1) between the required flow (here $q=0.5$ m³/h) and the pressure drop (here $dP=5$ kPa).
- 2 The intersection of this line and the K_v -axis indicates the K_v setting required (here $K_v=2.2$).
- 3 Draw a horizontal line (line 2) on the valves selection chart.
- 4 Select the most appropriate valve (here DN 15) with corresponding pre-setting (here 25).



BALLOREX VENTURI STATIC BALANCING VALVE

SELECTION

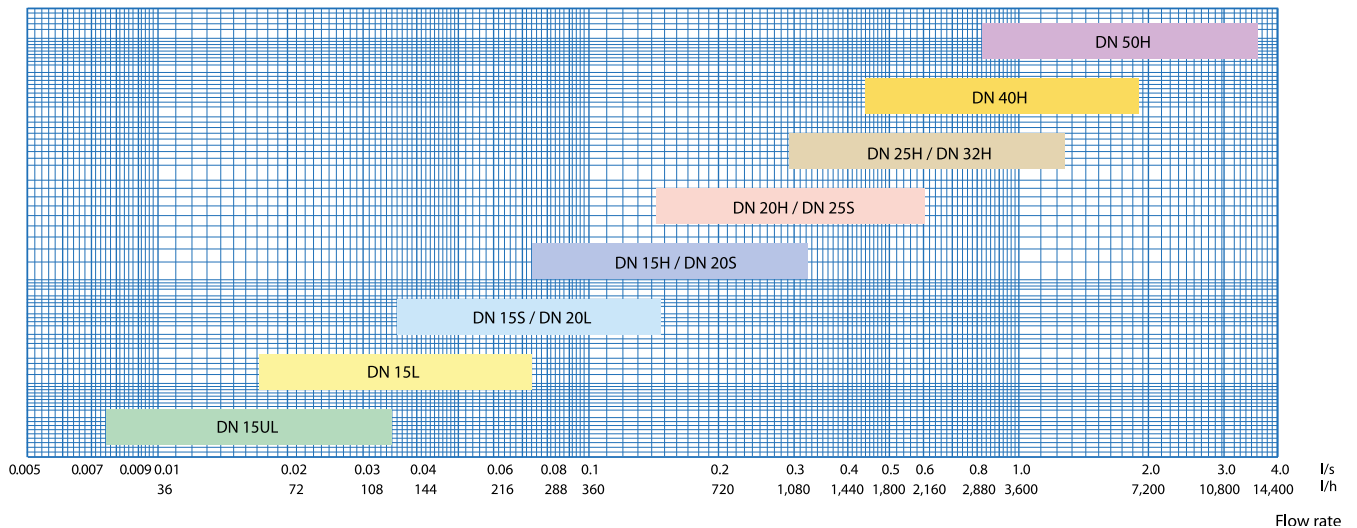


Size, features and material

| DN | H | L1 | L1C | L2 | L3 | L3C |
|-----|-----|-----|-----|-----|-----|-----|
| 15L | 76 | 94 | 99 | 75 | 100 | 164 |
| 20 | 79 | 100 | 105 | 75 | 144 | 170 |
| 25 | 83 | 112 | 118 | 75 | 150 | 177 |
| 32 | 109 | 130 | 135 | 122 | 208 | 241 |
| 40 | 113 | 140 | 149 | 122 | 213 | 253 |
| 50 | 120 | 156 | 167 | 122 | 221 | 265 |

| | |
|------------------------|---------------------------------|
| Max. temperature | 120°C |
| Min. temperature | -20°C |
| Max. pressure | 25 bar |
| Valve housing material | DR Brass CW602N CuZn36Pb2As |
| Ball & needle material | DR Brass CW602N (chrome plated) |
| Valve handle material | Polyamide (PA6.6 30%GF) |

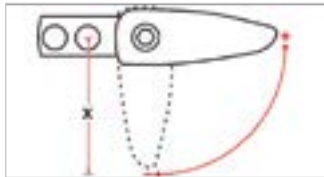
QUICK SELECTION CHART



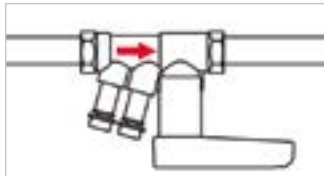
INSTALLATION AND SETTING



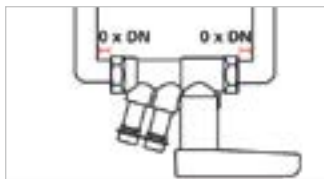
- Ballorex can be oriented 360° around the pipe axis.



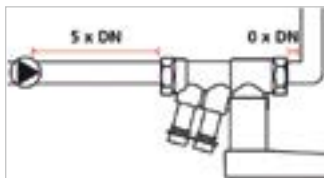
- Installation space required to ensure 90° isolation.



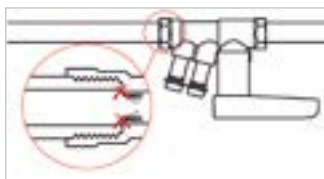
- Make sure the dimensions of the balancing valve correspond to the design flow.
- An arrow on Ballorex Venturi housing indicates the flow direction to be respected.



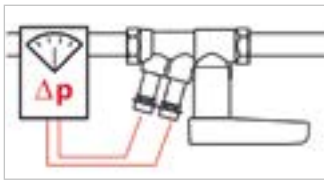
- 0x DN straight piping required.
- Bends, flexible hoses, etc. can be mounted directly on the valve.



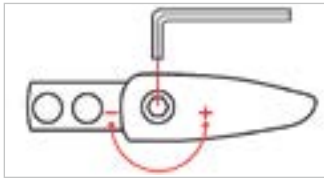
- 5 x DN straight piping is required when the valve is mounted directly after the pump.



- Make sure loose hemp is not hanging into the pipe.



- Connect the flow meter and select the valve. Enter the Venturi valve Kvm-value. The Kvm-value is printed on the handle.

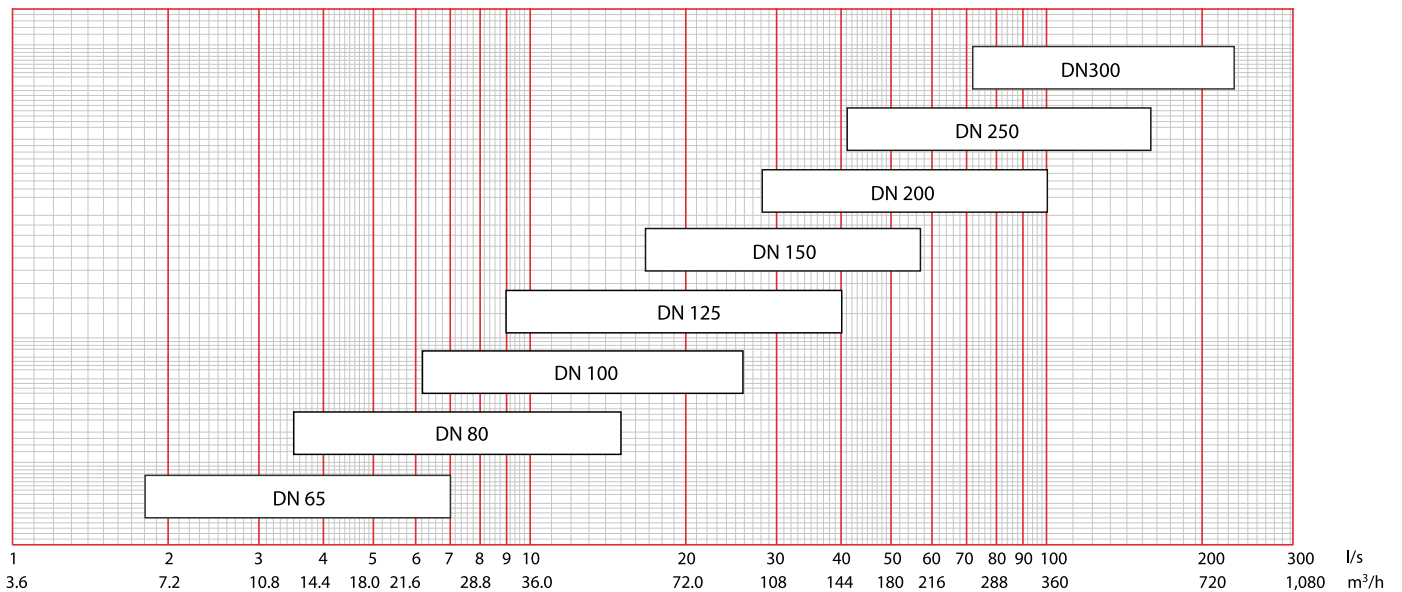


- Setting the valve is easily done with an Allen key. Adjust the valve until the required flow is displayed.



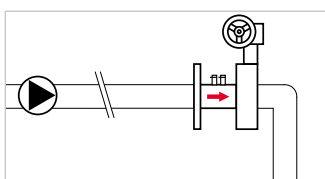
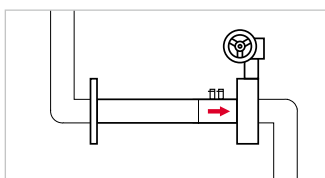
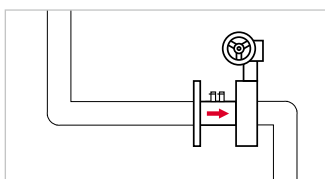
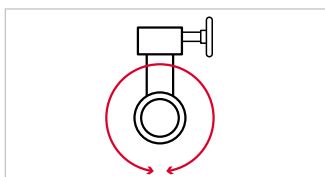
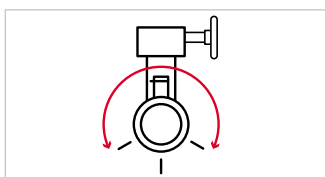
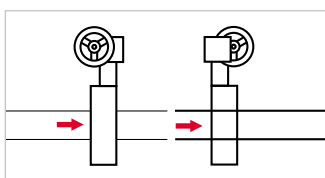
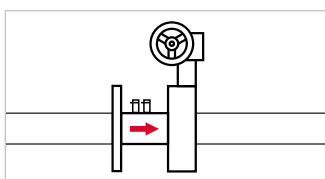
BALLOREX VENTURI FLANGED BALANCING VALVE

SELECTION



| Flow range | | Dimension |
|------------|-------------|-----------|
| l/s | m³/h | |
| 1.8 – 7 | 6.48 – 25.2 | DN 65 |
| 3.5 – 15 | 12.6 – 54.0 | DN 80 |
| 6.2 – 26 | 22.3 – 93.6 | DN 100 |
| 9 – 40 | 32.4 – 144 | DN 125 |
| 16.8 – 57 | 60.5 – 205 | DN 150 |
| 28 – 100 | 101 – 360 | DN 200 |
| 41 – 157 | 148 – 565 | DN 250 |
| 72 – 226 | 259 – 814 | DN 300 |

INSTALLATION



- Ballorex Venturi FODRV must be installed so that the flow direction is as indicated by the direction arrow on the valve body.

- Ballorex Venturi DRV can be installed regardless of the flow direction.

- Ballorex Venturi FODRV can be installed with the gearbox pointing in any direction. However, if the gearbox is mounted pointing down, it is assumed that there are no impurities in the system to affect the performance of the valve. If there is a risk of impurities, it is recommended to install the gearbox at an angle of 60 to 300 degrees.

- Ballorex Venturi DRV can be installed with the gearbox pointing in any direction.

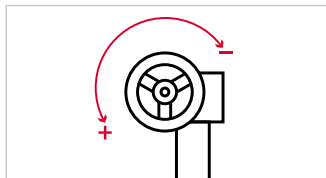
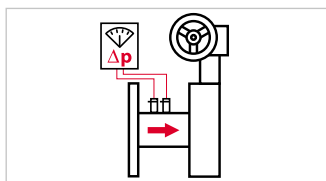
- It is recommended to have a straight pipe length of minimum 5 x pipe diameter (DN) in front of the valve (upstream).

- There are no minimum requirements for straight lengths of pipe after the valve (downstream).

- There are no minimum lengths of straight pipe in front of or after the Ballorex Venturi FODRV extended model.

- If a pump is installed immediately in front of the valve (commissioning valve installed on flow), a straight pipe of 10 x pipe diameter (DN) is required. No requirements for straight pipe sections after the valve.

SETTING

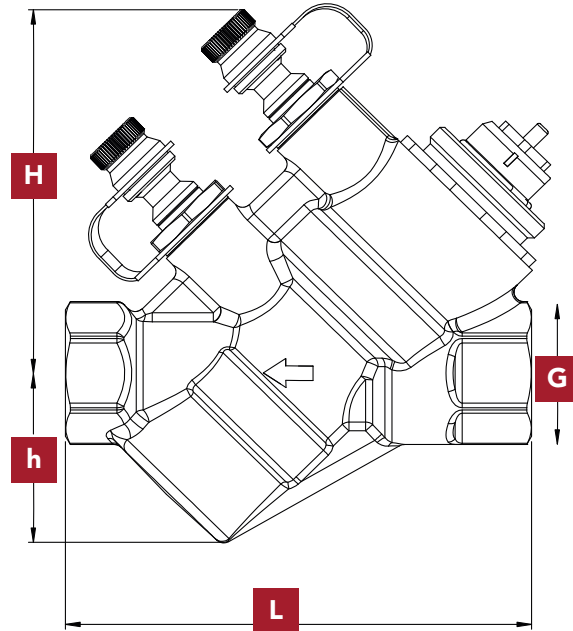


- The flow rate through the Ballorex Venturi FODRV can be measured with the BROEN Flowmeter or other types of manometers. Ballorex Venturi FODRV is supplied with two P/T plugs to measure the differential pressure across the Venturi. By measuring the differential pressure, the flow rate can be calculated.
- The flow rate can be adjusted by rotating the handle of the gearbox. The flow rate increases by rotating the handle to the left (anti-clockwise) and is reduced by rotating it to the right (clockwise).



BALLOREX DYNAMIC FLOW CONTROL BALANCING VALVE

SELECTION



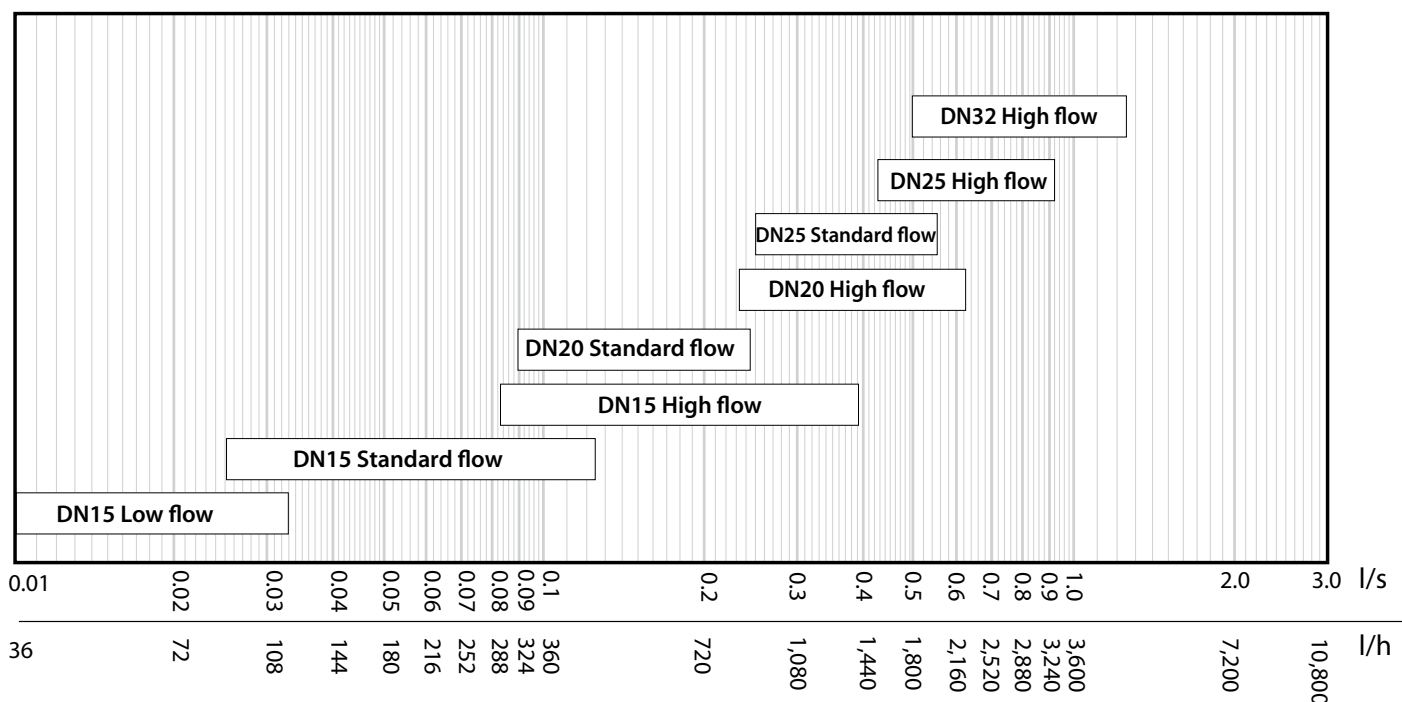
Size, features and material

| DN | G | H | h | L |
|----|-----|----|----|-----|
| 15 | 1/2 | 76 | 35 | 95 |
| 20 | 3/4 | 83 | 49 | 120 |

| | |
|------------------------|-----------------|
| Temperature range | -20°C / +120°C |
| Pressure class | PN 25 |
| Operating pressure | 30 – 400 kPa |
| Valve housing material | DR Brass CW602N |
| Cartridge material | PPS |
| Sealings material | EPDM |
| Membrane material | Reinforced EPDM |

QUICK SELECTION CHART

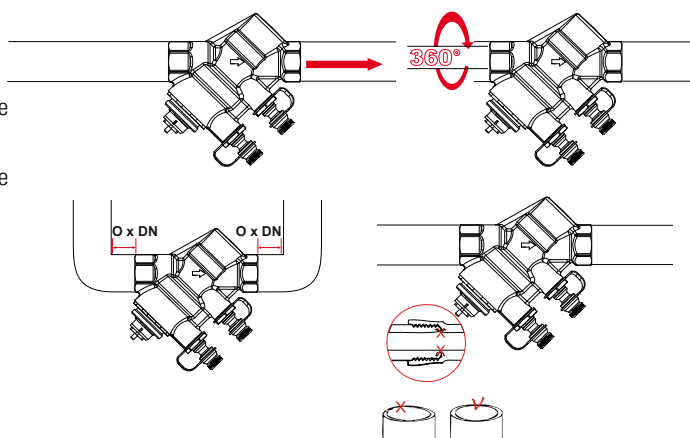
This chart will help you to quickly identify the correct valve diameter according to the required flow and differential pressure.



INSTALLATION

Valve orientation and pipe length

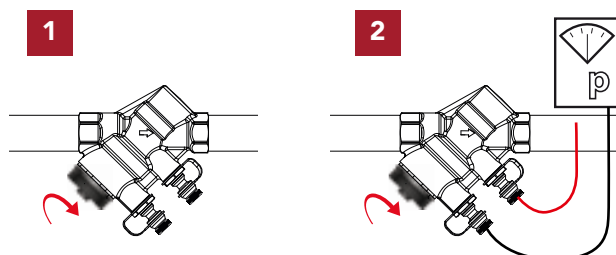
- 1 The fluid should flow as indicated on the valve.
- 2 Ballorex Dynamic can be oriented 360° around the pipe axis.
- 3 No upstream or downstream pipe lengths are required. Bends can be mounted directly onto the valve.
- 4 Deburr the pipe ends and ensure that the joints are not obstructing the flow.



SETTING

Setting the valve

- 1 The blind cap serves as a pre-setting tool.
- 2 Connect the flow meter and select the valve type / Venturi Kv. Turn the pre-set tool to set the desired flow.





Setting = 100%

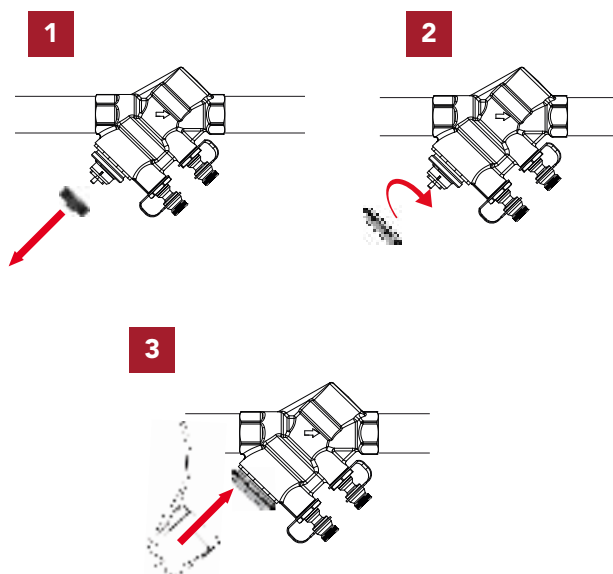


Setting = 32%

The scale on the pre-setting tool is read against the marking on the brass housing on the valve. Each marking on the scale indicates 10%.

Mounting the actuator

- 1** To use the PICV as a control valve, an actuator should be mounted.
Remove the red pre-setting tool.
- 2** Screw the connection ring onto the valve.
- 3** Lock clip the actuator.





BALLOREX 750DP DIFFERENTIAL PRESSURE CONTROL VALVE (DPCV)

SELECTION

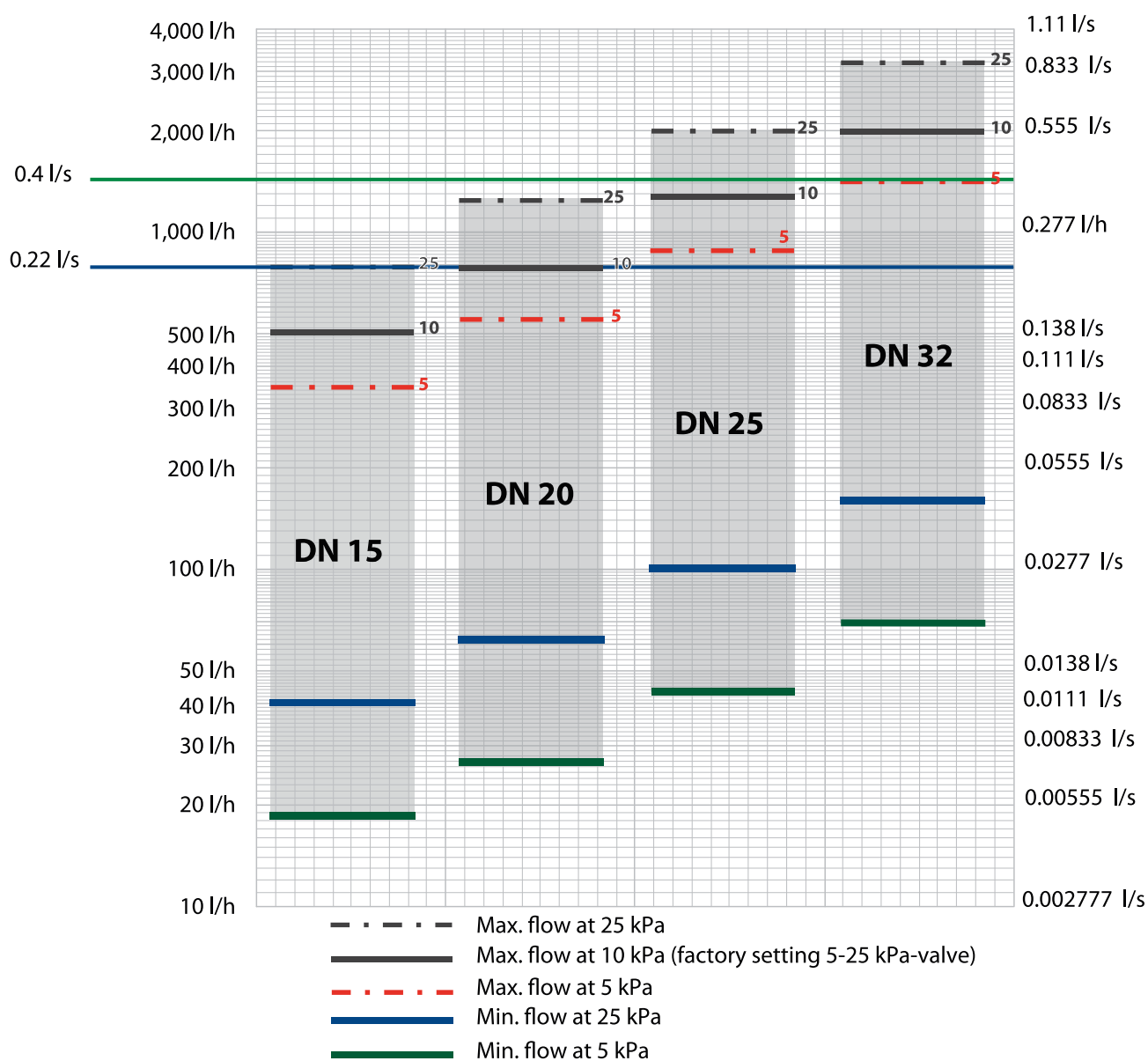


Figure 1: Selecting the correct valve according to the flow for 5-25 kPa.

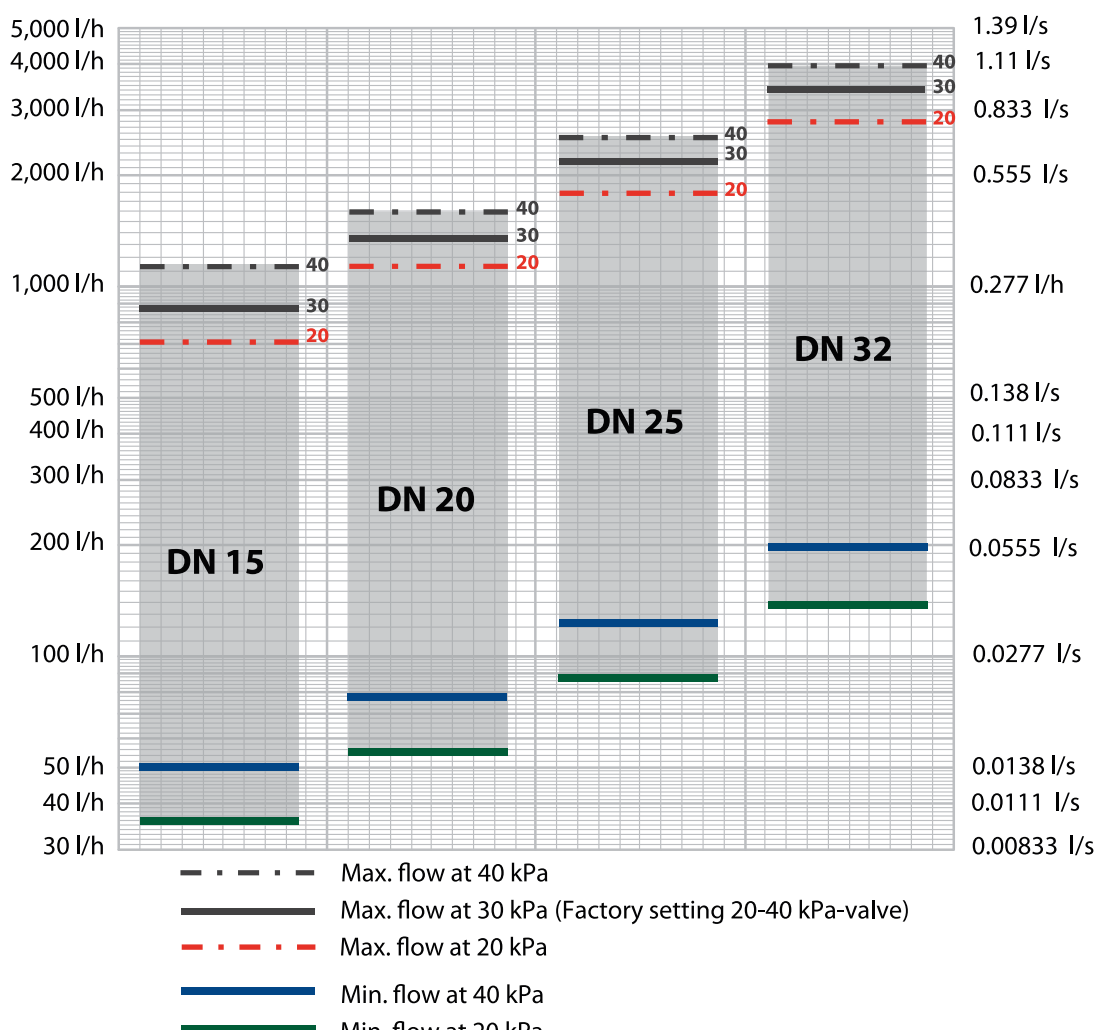


Figure 2: Selecting the correct valve according to the flow for 20-40 kPa.

Example 1: A maximum flow rate of 800 l/hr is required. A valve is selected that will support this approximately with its default factory setting.

Looking up 800 l/hr in the diagram indicates that the Ballorex DP DN 20 with a ΔP -range of 5-25 kPa will provide a maximum flow rate of roughly 800 l/h at the factory setting of 10 kPa.

Example 2: A maximum flow rate of 1400 l/h is required. A valve is selected that can provide this flow rate.

Looking up 1400 l/h in the diagram indicates that the Ballorex DP DN 25 (5-25 kPa) with a ΔP -setting of roughly interpolated 12 kPa will have a maximum flow rate of 1400 l/h.

INSTALLATION

1 Mounting

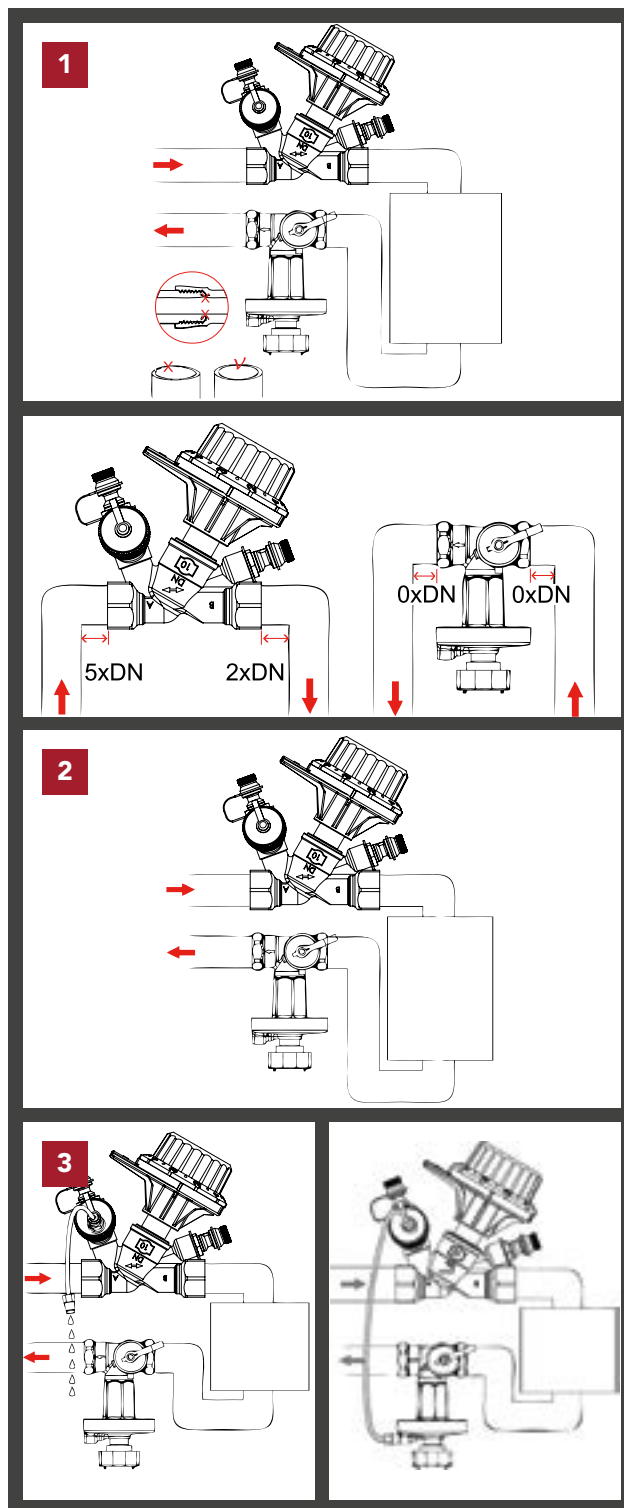
- Respect the flow direction indicated by the arrow on the body (DPCV only).
- No straight pipe length is required before or after the DPCV valve.
- Please observe the minimum mounting distance for the partner valve.

2 Cleaning

- Before connecting the capillary, clean and drain the installation.
- Set the flow before connecting the capillary by actuating the 750PV.

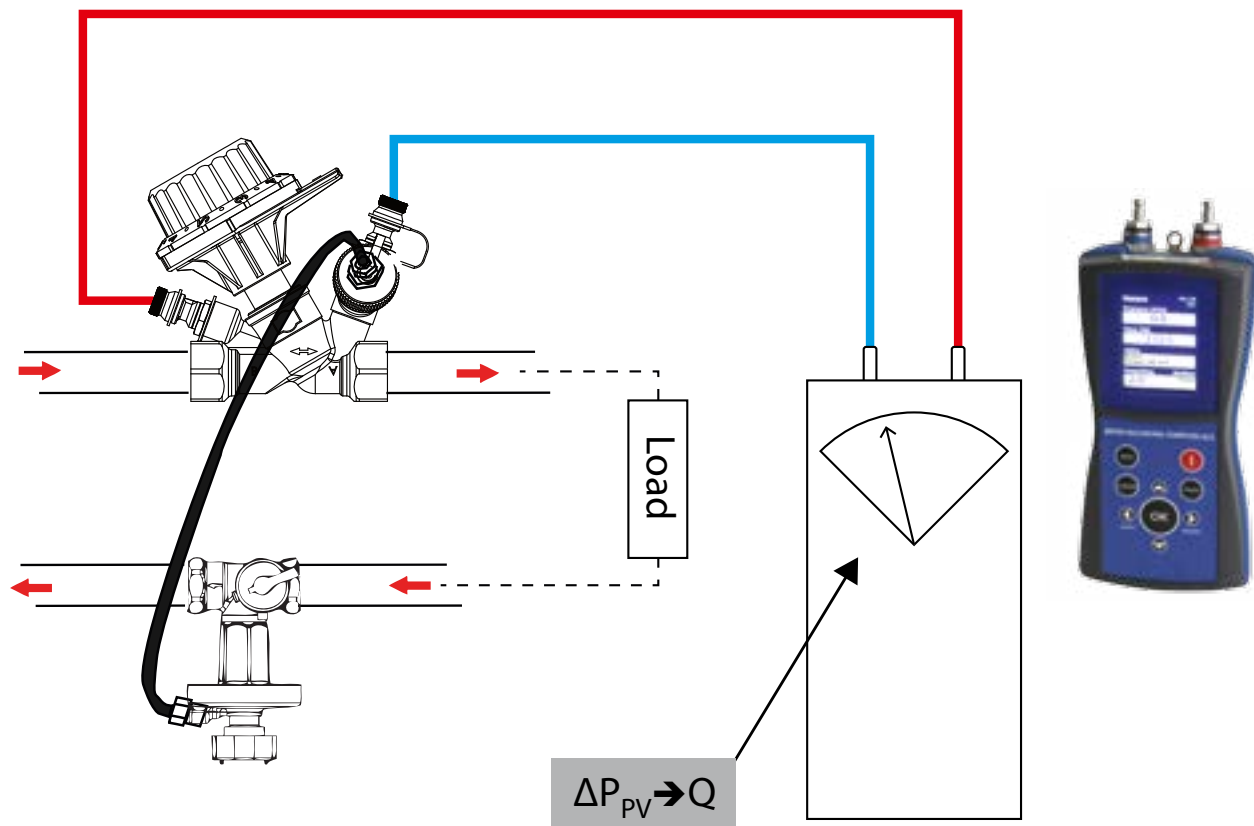
3 Connecting

- Connect the capillary to the partner valve and let some drops leak to prevent air bubbles.
- Then connect the capillary to the DPCV.

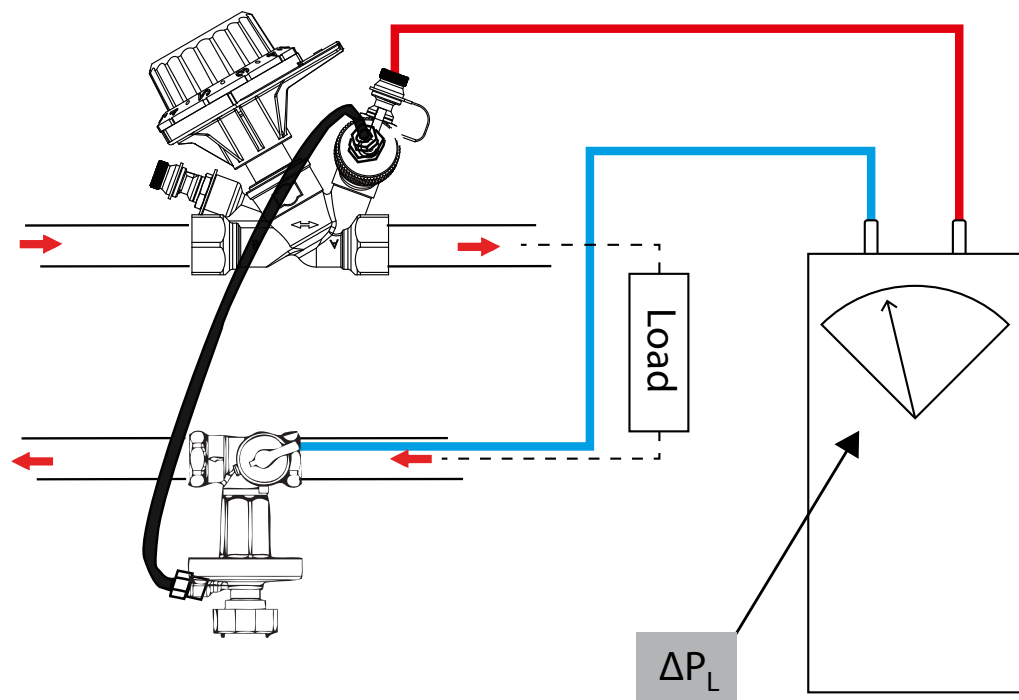


SETTING AND COMMISSIONING

Flow measuring



DP_L measuring (regulated differential pressure across the load))



Setting by standard Allen key (3 or 4mm)

- Factory preset values:

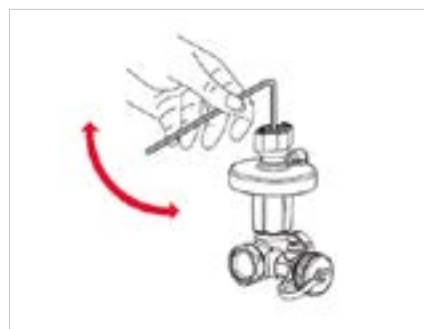
- 10 kPa (LP)
- 30 kPa (HP)

- Setting tables:

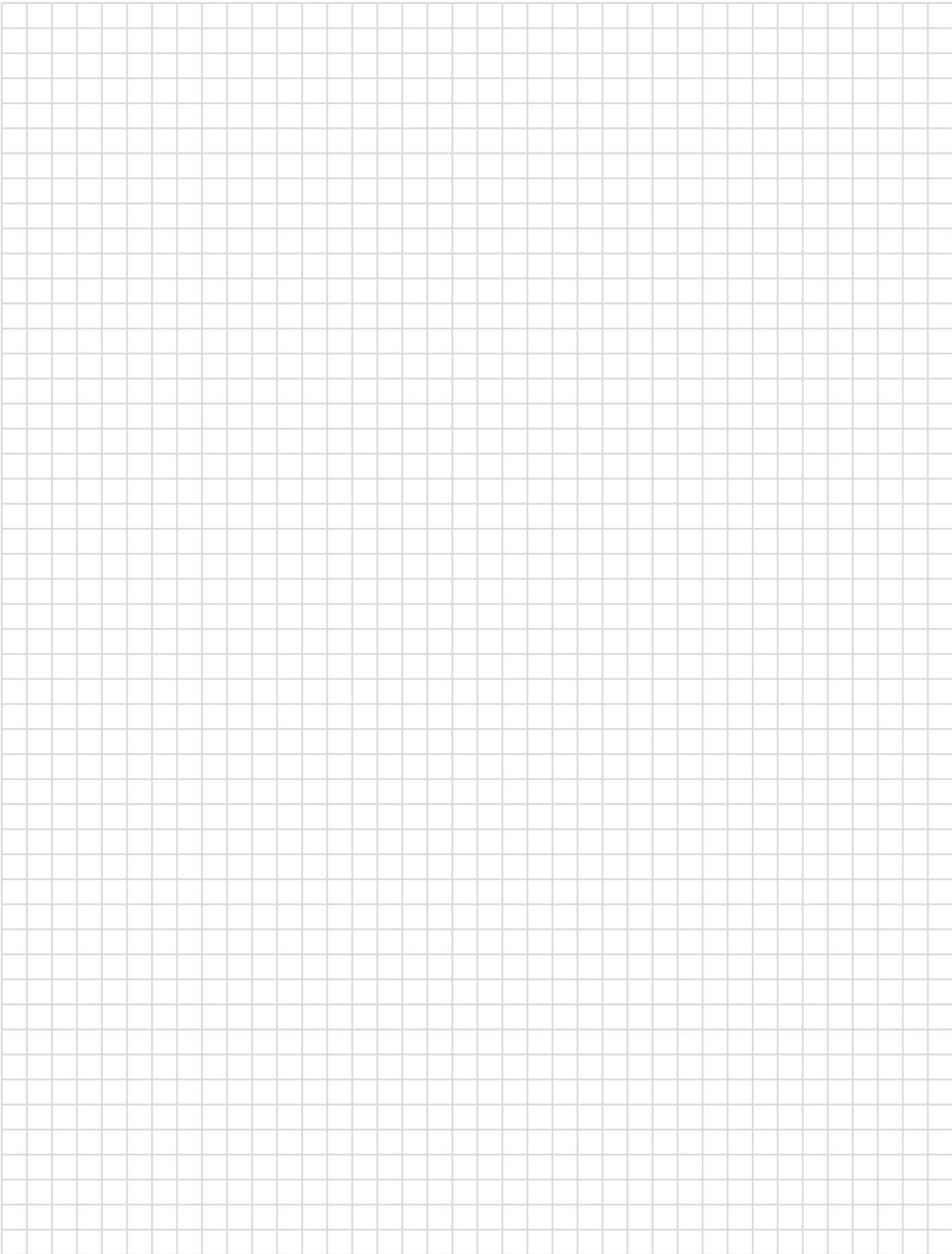
- 5 to 25 kPa (LP)
- 20 to 40 kPa (HP)

| 5-25 kPa | | 20-40 kPa | |
|----------|-----|-----------|------|
| Turns | kPa | Turns | kPa |
| 0 | 5 | 0 | 20.0 |
| 1 | 6 | 1 | 21.0 |
| 2 | 7 | 2 | 22.2 |
| 3 | 8 | 3 | 23.5 |
| 4 | 9 | 4 | 24.8 |
| 5 | 10 | 5 | 26.1 |
| 6 | 11 | 6 | 27.4 |
| 7 | 12 | 7 | 28.7 |
| 8 | 13 | 8 | 30.0 |
| 9 | 14 | 9 | 31.3 |
| 10 | 15 | 10 | 32.6 |
| 11 | 16 | 11 | 33.9 |
| 12 | 17 | 12 | 35.2 |
| 13 | 18 | 13 | 36.5 |
| 14 | 19 | 14 | 37.8 |
| 15 | 20 | 15 | 39.2 |
| 16 | 21 | 16 | 40.0 |
| 17 | 22 | - | - |
| 18 | 23 | - | - |
| 19 | 24 | - | - |
| 20 | 25 | - | - |

| Factory settings | |
|------------------|--------|
| 5-25 kPa range | 10 kPa |
| 20-40 kPa range | 30 kPa |



| | |
|----------------|-----|
| Allen key size | 3mm |
|----------------|-----|



NOTES

Contact

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