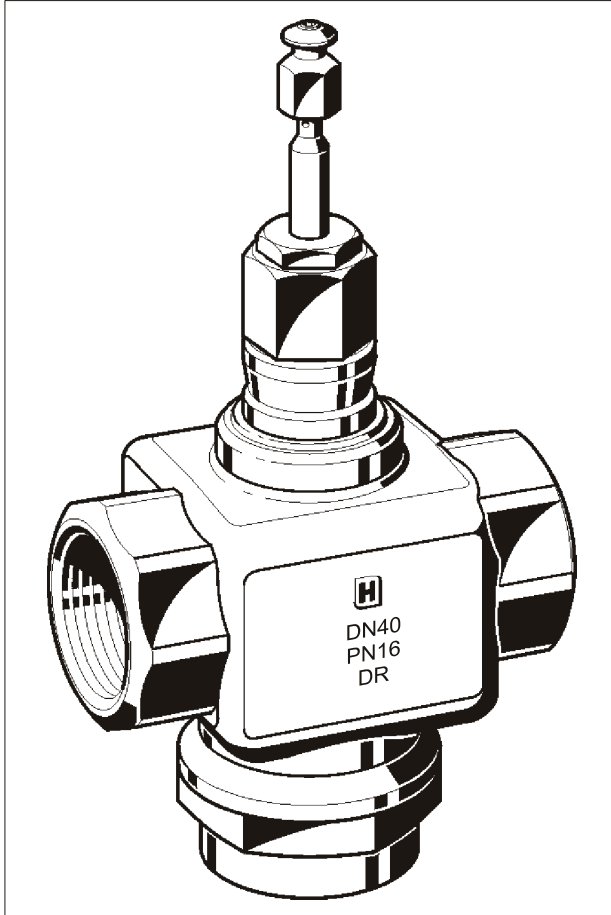


V5013R

INTERNAL THREADED END-CONNECTION LINEAR VALVE PN16

PRODUCT DATA



FEATURES

- Brass body with internal threaded end connections
- Low seat leakage rate
- Self-adjusting packing
- Accurate positioning to ensure state-of-the-art temperature control
- Directly-coupled electric and pneumatic actuators for easy mounting
- Constant total flow throughout full plug travel

SPECIFICATIONS

| | |
|--|--|
| Action: | Stem up to close port A-AB |
| Nominal pressure rating: | PN16 |
| Flow characteristic: | equal percentage: port A-AB linear: port B-AB |
| Rangeability: | 50:1 |
| Leakage rate: | ≤0.05% of k_{vs} |
| Stroke: | 20 mm |
| Valve body: | |
| Pipe connections: | Internal threading as per ISO228 |
| Material: | Brass |
| Dimensions: | See Fig. 1 on page 3 |
| Trim: | |
| Seat: | DN15: stainless steel DN20...50: body integrated |
| Plug: | Brass |
| Stem: | Stainless steel |
| Packing: | Spring-loaded carbon fiber reinforced PTFE V-rings |
| Medium temperature and pressure: | |
| Water | 2 to 120 °C max. 1600 kPa 120 to 170 °C max. 1490 kPa |
| Max. temperature differential in alternating hot/cold water use: | 60 K |

APPLICATION

Single seated control or shut-off valve for:

- hot water;
 - chilled water;
 - domestic hot water;
- in heating, ventilation, air conditioning systems, and open circuits.

Operated by

- electric linear actuators (e.g., ML6420/25, ML7420/25, ML6421, and ML7421) and
- pneumatic actuators (e.g., MP953).

SIZES AND FLOW CAPACITIES

Table 1. Size and flow capacity (in m³/h)

| order number | valve size | kvs m ³ /h |
|--------------|------------|-----------------------|
| V5013R1032 | DN15 | 2.5 |
| V5013R1040 | DN15 | 4 |
| V5013R1057 | DN20 | 6.3 |
| V5013R1065 | DN25 | 10 |
| V5013R1073 | DN32 | 16 |
| V5013R1081 | DN40 | 25 |
| V5013R1099 | DN50 | 40 |

INSTALLATION

Water should meet VDI2035 requirements.
Do not install valve with stem below the horizontal.
Fluid flow must correspond with the arrow direction on the valve body.
The installation of a strainer is strongly recommended.

SPARE PARTS

Repair packing kit for red-brass models (old) – RG5
DN15...32: Order number R43176754001
DN40...50: Order number R43176754002
Repair packing kit for yellow-brass models (new) – DR
DN15...50: Order number R43176754002

CLOSE-OFF PRESSURE RATINGS

Electric Actuators

Table 2. Close-off pressure ratings (in kPa) of electric actuators

| actuator | | valve size | | | | | |
|------------------------------------|--------|------------|------|------|------|------|------|
| type | force | DN15 | DN20 | DN25 | DN32 | DN40 | DN50 |
| ML6420 / ML6425 ML7420 / ML7425 | 600 N | 1600 | 1600 | 1000 | 700 | 460 | 260 |
| ML6421 / ML7421 | 1800 N | - | - | 1600 | 1600 | 1500 | 850 |

Pneumatic Actuators MP953

Table 3. Close-off pressure ratings (in kPa) of pneumatic actuators MP953

| actuator | | | | valve size | | | | | |
|--------------------------|--------------|------------------|----------------|------------|------|------|------|------|------|
| type | spring range | air pressure | closed seat | DN15 | DN20 | DN25 | DN32 | DN40 | DN50 |
| MP953C5001 | 14...48 kPa | 0 kPa 115 kPa | upper lower | 150 | -- | -- | -- | -- | -- |
| MP953C5027 MP953A5005 | 27...76 kPa | | | 1600 | -- | -- | -- | -- | -- |
| | | | | 800 | 310 | 180 | 90 | 30 | -- |
| MP953C5019 | 55...83 kPa | | | 1150 | 530 | 350 | 200 | 100 | -- |
| | | | | 1600 | 950 | 620 | 370 | 220 | -- |
| MP953C5068 | 14...48 kPa | | | 860 | 380 | 240 | 130 | 60 | -- |
| | | | 1550 | 650 | 420 | 240 | 130 | 50 | |
| MP953C5084 MP953A5039 | 27...76 kPa | | 1600 | 1600 | 1600 | 1600 | 1130 | 630 | |
| | | | 1600 | 1550 | 1030 | 630 | 400 | 200 | |
| MP953C5076 | 55...83 kPa | | 1600 | 1600 | 1500 | 950 | 600 | 320 | |
| | | | 1600 | 1600 | 1600 | 1470 | 970 | 520 | |
| MP953D5025 | 27...76 kPa | | 1600 | 1600 | 1190 | 750 | 460 | 250 | |
| | | 1600 | 840 | 570 | 340 | 200 | 90 | | |
| MP953D5009 MP953B5003 | 55...83 kPa | 1600 | 1480 | 990 | 600 | 370 | 190 | | |
| | | 1600 | 1050 | 720 | 440 | 260 | 130 | | |
| | | 1600 | 1490 | 1490 | 920 | 600 | 320 | | |
| | | 1600 | 1490 | 1490 | 920 | 600 | 320 | | |

DIMENSIONS

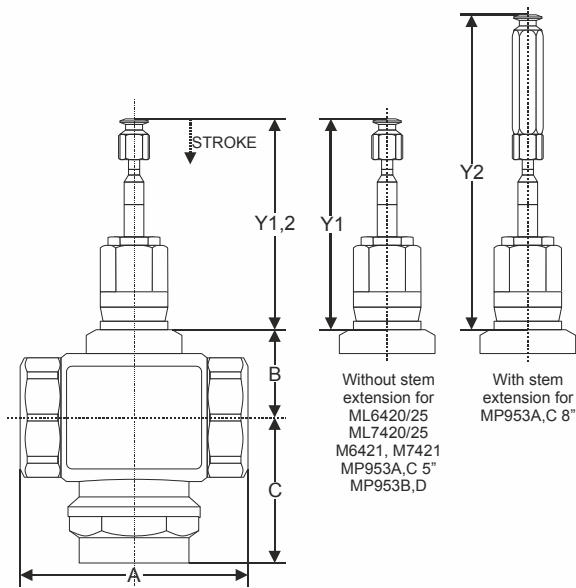


Fig. 1. Dimensions

Table 4. Dimensions (in mm)

| valve size | A | B | C | Y ₁ | Y ₂ * |
|------------|-----|------|------|----------------|------------------|
| | | | | stem up | |
| DN15 | 83 | 39.5 | 65 | 107 | 151 |
| DN20 | 83 | 39.5 | 65 | | |
| DN25 | 103 | 39.5 | 66.5 | | |
| DN32 | 106 | 39.5 | 72.5 | | |
| DN40 | 120 | 46.5 | 77 | | |
| DN50 | 134 | 46.5 | 83.5 | | |

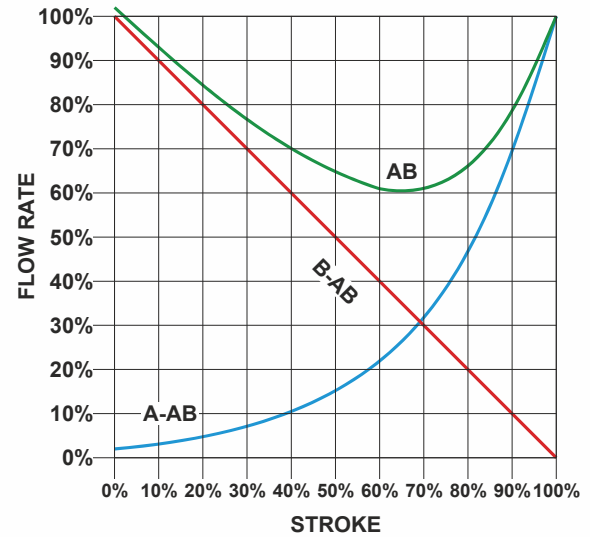


Fig. 2. Characteristic curve of V5013R

For actuator dimensions, please refer to:

- ML6420A3072 EN0B-0411GE51
- ML6420A / ML6425A,B EN0B-0351GE51
- ML7420A / ML7425A,B EN0B-0261GE51
- ML7420A6025 EN0B-0481GE51
- ML6421A,B EN0B-0414GE51
- ML7421A,B EN0B-0416GE51
- MP953A,B,C,D EN0B-0522GE51

Honeywell

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