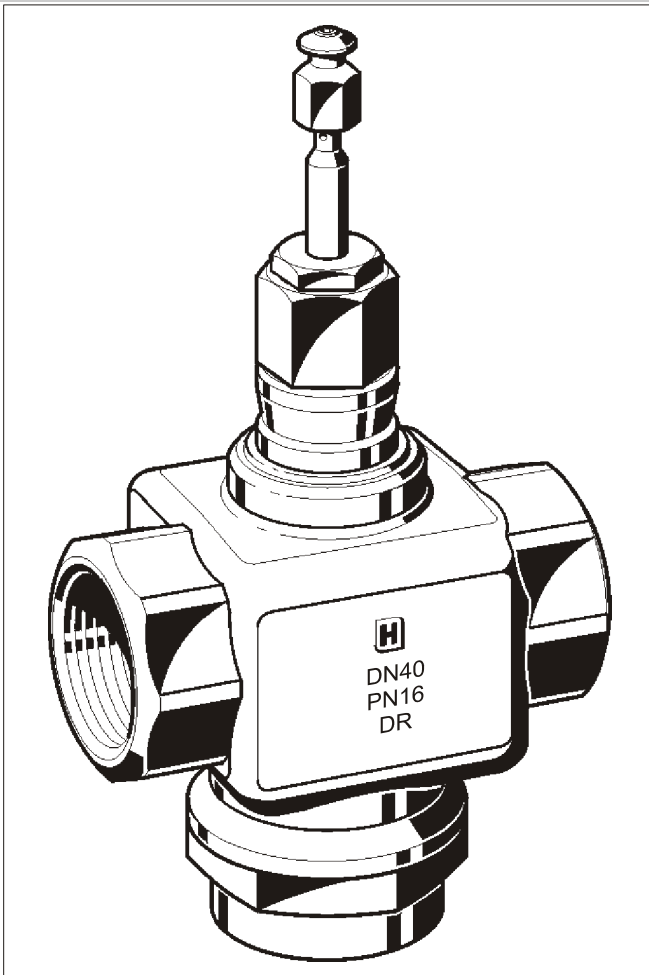


V5013R

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:	$\leq 0.05\%$ 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 and steam	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;
- saturated steam;
- superheated steam;
- 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	k _{vs} 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 0901786

DN40...50: Order number 0901787

Repair packing kit for yellow-brass models (new) – DR

DN15...50: Order number 0901787

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	--	--	--	--	--	
				1600	--	--	--	--	--	--
MP953C5027 MP953A5005	27...76 kPa			800	310	180	90	30	--	
				1150	530	350	200	100	--	
MP953C5019	55...83 kPa			1600	950	620	370	220	--	
				860	380	240	130	60	--	
MP953C5068	14...48 kPa		1550	650	420	240	130	50		
			1600	1600	1600	1600	1130	630		
MP953C5084 MP953A5039	27...76 kPa		1600	1550	1030	630	400	200		
			1600	1600	1500	950	600	320		
MP953C5076	55...83 kPa	1600	1600	1600	1470	970	520			
		1600	1600	1190	750	460	250			
MP953D5025	27...76 kPa		lower upper	1600	840	570	340	200	90	
				1600	1480	990	600	370	190	
MP953D5009 MP953B5003	55...83 kPa		1600	1050	720	440	260	130		
			1600	1490	1490	920	600	320		

DIMENSIONS

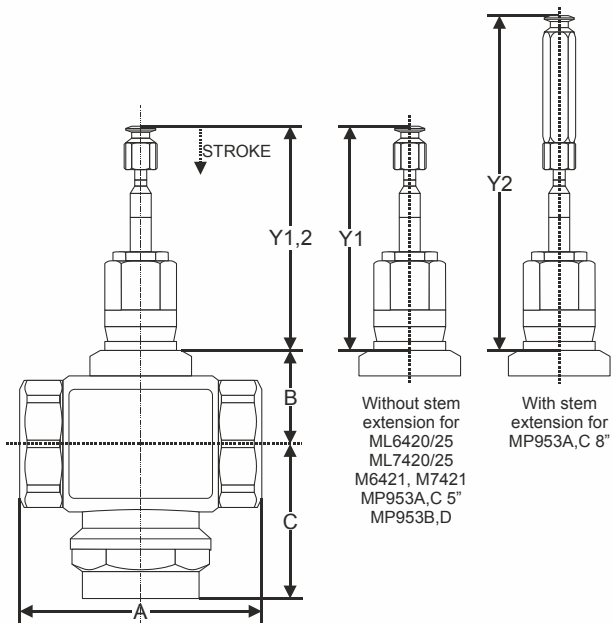


Fig. 1. Dimensions

Table 4. Dimensions (in mm)

valve size	A	B	C	Y ₁	Y ₂ *
				stem down	
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		

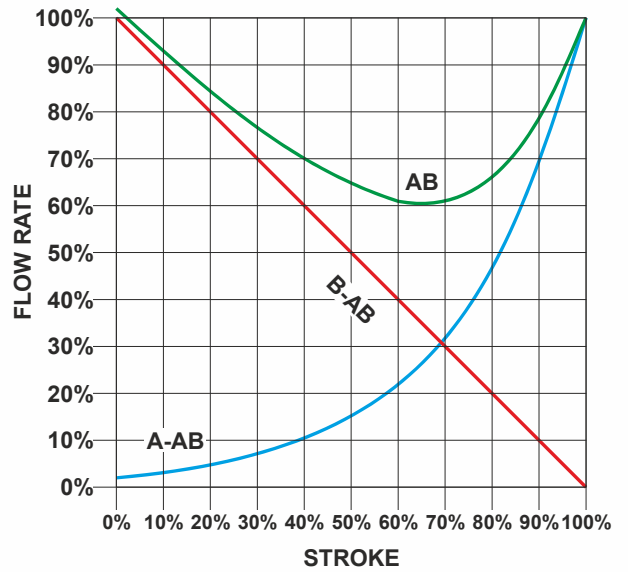


Fig. 2. Characteristic curve of V5013R

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

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