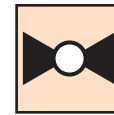


Selection		R2.. Characterized control valves, 2-way					
Kvs m ³ /h	DN		Type	Suitable rotary actuators Modulating DC 0...10 V		Suitable rotary actuators 3-point	
	mm	Imp.		Non-spring return	Spring return	Non-spring return	Spring return
0.63	15	1/2"	R209	TR24-SR AC/DC 24 V	LF24-MFT2 AC/DC 24 V	TR24-3 AC 24 V	TR230-3 AC 230 V
1	15	1/2"	R210				
1.6	15	1/2"	R211				
2.5	15	1/2"	R212				
4	15	1/2"	R213				
4	20	3/4"	R217				
6.3	15	1/2"	R214				
6.3	20	3/4"	R218				
8.6	20	3/4"	R219				
6.3	25	1"	R222				
10	25	1"	R223				
10	32	1 1/4"	R229				
16	25	1"	R224				
16	32	1 1/4"	R231				
16	40	1 1/2"	R238				
25	40	1 1/2"	R239				
25	50	2"	R248				
40	50	2"	R249				



2-way characterized control valves DN 15...50



For modulating control of cold and hot water

Equal-percentage characteristic

Applications

- Water-side control of air handling apparatus in ventilating and air conditioning systems
- Water-side control in heating systems

Mode of operation

The characterized control valve is operated by a rotary actuator. The actuators are controlled by a standard modulating or 3-point control system and move the ball of the valve - the throttling device - to the opening position dictated by the control signal.

Product features

Equal-percentage characteristic of the flow rate ensured by the integral characterizing disc.

Manual operation by lever after disengaging the gearing latch on the Type TR.., LR.., NR.., NM.. or AM.. rotary actuator (manual operation not possible with LF../AFR..).

Ordering

An order for an R2.. characterized control valve includes a suitable rotary actuator.

Ordering examples: (with NR24-SR)

- R231 characterized control valve with NR24-SR
 - Rotary actuator fitted
 - Order code: R231+NR24-SR
- R231 characterized control valve and NR24-SR
 - Rotary actuator supplied separately
 - Order code: R231/NR24-SR

Important

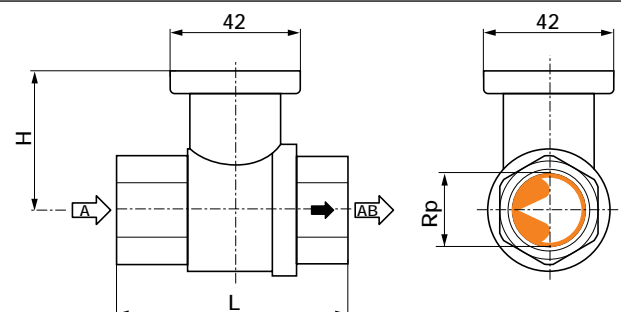
Sizing diagram for CCV: page 5
Please note the information provided on pages 2, 29 and 30 regarding use, installation, project design, commissioning and maintenance
Pipe connectors can be supplied as an accessory: page 24

Technical data		R2.. Characterized control valves, 2-way	
Flow media	Cold and hot water, water with max. 50% volume of glycol		
Temperature of medium	-5°C...100°C		
Rated pressure Ps	2760kPa DN32-DN50; 4140 kPa DN15-DN32		
Flow characteristic	Control path A-AB: equal percentage (to VDI/VDE 2173) DN15* n(ep)=3.2, optimized in opening range DN20 ...50** n(ep)=3.9, optimized in opening range		
Rangeability	DN15* Sv>50 DN20 ...50** Sv>100		
Leakage rate	Air bubble-tight (Bo 1, DIN 3230 Part 3)		
Pipe connector	Internal thread to ISO7/1		
Differential pressure Δpmax	350 kPa (200 kPa for low-noise operation)		
Closing pressure Δps	1400 kPa		
Angle of rotation	90° (Operation range 15°...90°)		
Installation position	Upright to horizontal (in relation to the stem)		
Maintenance	Maintenance-free		
Materials			
Body	Forged, nickel-plated brass body		
Ball	Stainless steel		
Seal	PTFE		
Stem	Stainless steel		
Stem seal	EPDM		
Characterizing disk	TEFZEL		

*= Up to 2.5 Kvs; **= And DN15 Kvs > 4

Dimensions and flow direction

DN		Dimension[mm]		Thread Rp	Max. screwing depth [mm]	Weight [kg]
mm	Imp.	L	H			
15	1/2"	67	45	1/2"	13	0.4
20	3/4"	76	47.5	3/4"	13	0.55
25	1"	87	47.5	1"	17	0.7
32	1 1/4"	105	47.5	1 1/4"	19	0.9
32	1 1/4"	105	52	1 1/4"	19	1.05
40	1 1/2"	111	52	1 1/2"	19	1.15
50	2"	127	58	2"	22	1.8



Selection			R2.. Open-close ball valves, 2-way				
k _{vs} [m ³ /h]	DN		Type	Suitable rotary actuators			
	mm	Imp.		Non-spring return		Spring return	
8.6	15	1/2"	R215	TR24-3	TR230-3		
21	20	3/4"	R220			LR24(-S)	LR230(-S)
26	25	1"	R225				
16	32	1 1/4"	R230			NR24-3(-S) AC 24 V	NR230-3(-S) AC 230 V
32	32	1 1/4"	R232				
32	40	1 1/2"	R240				
49	50	2"	R250			AFR24(-S) AC/DC 24 V	AFR230(-S) AC 230 V



2-way open-close ball valves DN 15...50

Shut-off function and 2-point control in cold and hot water circuits

Applications

For shutting off cold and hot water circuits in heating and ventilation systems on the water side or for 2-point control of these circuits.

Mode of operation

The open-close ball valve is operated by a rotary actuator. The rotary actuators are controlled by an open-close signal.

Product features

Manual operation by lever after disengaging the gearing latch on the Type TR.., LR.. or NR.. rotary actuator (manual operation not possible with LF../AFR..).

Ordering

An order for an R2.. open-close ball valve includes a suitable rotary actuator.

Ordering examples: (with NR230-3)

- R240 open-close ball valve with NR230-3**
 - Rotary actuator fitted
 - Order code: **R240+NR230-3**
- R240 open-close ball valve with NR230-3**
 - Rotary actuator supplied separately
 - Order code: **R240/NR230-3**

Important

Sizing diagram for CCV: page 5
Please note the information provided on pages 2, 29 and 30 regarding use, installation, project design, commissioning and maintenance
Pipe connectors can be supplied as an accessory: page 24

Technical data

Flow media	Cold and hot water, Water with max. 50% volume of glycol
Temperature of medium	-5°C...100°C
Rated pressure	2760kPa DN32~DN50; 4140 kPa DN15~DN32
Leakage rate	Air bubble-tight (BO 1, DIN 3230 Part 3)
Pipe connector	Internal thread to ISO7/1
Differential pressure Δp_{max}	1000 kPa (200 kPa for low-noise operation)
Closing pressure Δp_s	1400 kPa
Angle of rotation	90°
Installation position	Upright to horizontal (in relation to the stem)
Maintenance	Maintenance-free
Materials	
Body	Forged, nickel-plated brass body
Ball	Stainless steel
Seal	PTFE
Stem	Stainless steel
Stem seal	EPDM

Dimensions and flow direction

DN	Dimension [mm]		Thread	Max. screwing depth [mm]	Weight [kg]
	L	H			
15	67	45	1/2"	13	0.4
20	76	47.5	3/4"	13	0.55
25	87	47.5	1"	17	0.7
32	102	47.5	1 1/4"	19	0.9
32	113	52	1 1/4"	19	1.15
40	113	52	1 1/2"	19	1.15
50	127	58	2"	22	1.9

