

V A L V E

2- and 3-way regulation and ON/OFF ball valves 4.50

Application

The ball valves are used for the constant water regulation of air treatment systems in ventilation and air conditioning units as well as in heating systems.

Ball valves are positioned by means of a JOVENTA actuator.

For a 3-point adjustment signal a BAS control is used or for DCO...10V adjustment signal a BMS control is used. See data sheet 4.20 and 4.25.

The actuator can also be used with an emergency regulation function.

The motors are equipped with a manual release button for manual operation.

For the assembly of the actuator on the ball valve control device the ZAK consoles are used. See data sheet 6.50.

Order-examples

Ball-valve, Bracket and Actuator individual:

Order-code

- BAS... or BMS...
- ZAK2
- JV...

Ball-valve with Actuator grown:

Order-code

- BAS... or BMS... + JV...
(The order-code of the bracket must not be presented)

Nomenclature/Specification/Technical data

JV205...	2-way control devices with receptor thread connection
JV305...	3-way control devices with receptor thread connection
Means	Hot and cold water -30...140°C Water with glycol to max. 50% volume Steam to max. 100 kPa at 120°C
Permitted pressure	PN 40
Close-off pressure Δp_s	1380 kPa
Differential pressure Δp_{max}	600 kPa at 2-way valves without regulation diaphragm 340 kPa at 2- and 3-way valves with regulation diaphragm 240 kPa at 2- and 3-way valves with regulation diaphragm for noiseless operation
Flow characteristics	Same percentage at 2-way valve (A – B) Same percentage at 3-way valve (A – C) Linear at 3-way valve in bypass (B – C)
Leakage rate	< 0.01% from the Kvs
Adjustment ratio	> 500 : 1
Angle of rotation	90°
Maintenance	Maintenance-free
Material	Control device Forged brass body Closing body Stainless steel Spindle Stainless steel Valve seat PTFE with graphite part and EPDM O-ring Spindle gasket 2 x EPDM O-ring Regulation diaphragm AMODEL® AS 1145HS

Legende

— Δp_{max} = Maximum permitted pressure difference for a long service life referred to the whole range of opening.

- · - Δp_{max} = For low-noise operation.

Δp_{v100} = Pressure difference with ball valve fully open.

V_{100} = Nominal flow rate with Δp_{v100}

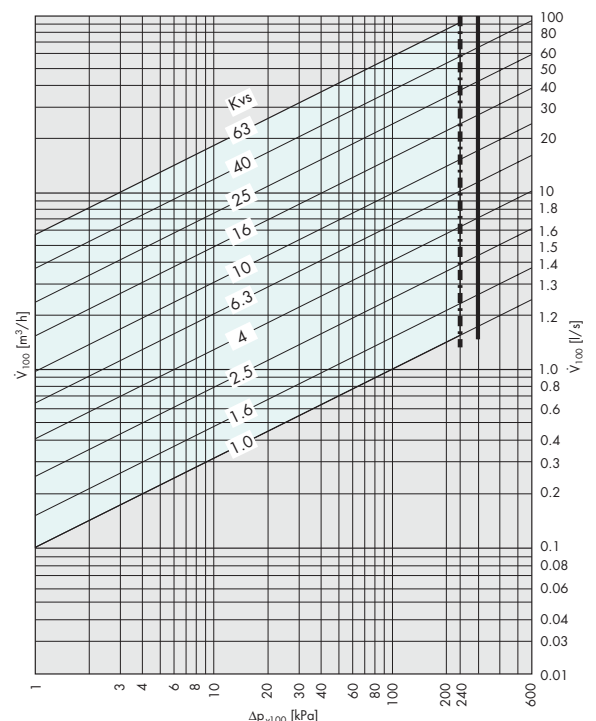
Formula k_{vs} for water

$$k_{vs} = \sqrt{\frac{V_{100}}{\Delta p_{v100} \cdot 100}}$$

k_{vs} [m³/h]
 V_{100} [m³/h]
 Δp_{v100} [kPa]

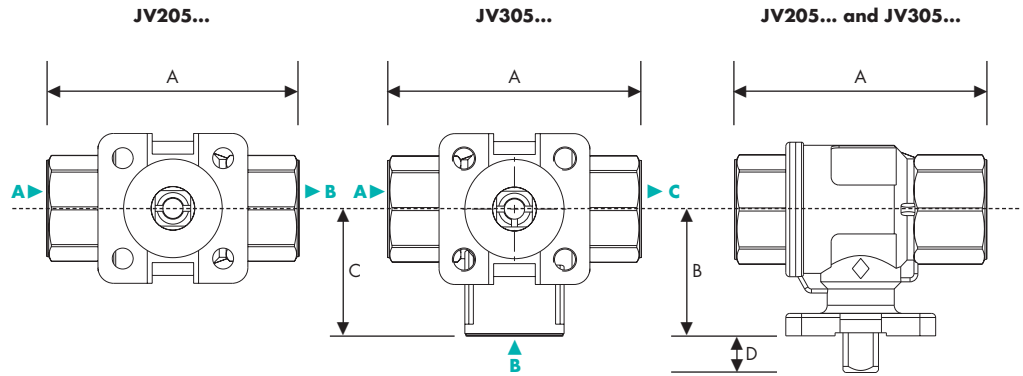
Definition of Δp_s

Closing pressure at which the actuator can still seal the valve tightly allowing for the appropriate leakage rate.



Dimensions in mm

DN	A	B	C	D
15	67	31	33	9
20	75	31	38	9
25	92	33	46	9
32	109	44	54	9
40	119	48	59	9
50	139	54	74	9



Selection table for regulating ball valves

Control devices				Standard actuators 8 Nm				Spring-return 6 Nm			Spring-return 16 Nm		
Valve type	DN	Zoll	Way	Bypass	Console	3-point	24V	24V	230V	Console	3-point	24V	24V
			Kvs (m³/h)	Kvs (m³/h)									
JV..05AD	15	1/2"	1.0	0.63	X	X	X	X	X	X	X	X	
JV..05AE	15	1/2"	1.6	1.0	X	X	X	X	X	X	X	X	
JV..05AF	15	1/2"	2.5	1.6	X	X	X	X	X	X	X	X	
JV..05AG	15	1/2"	4.0	2.5	X	X	X	X	X	X	X	X	
JV..05AL	15	1/2"	6.3	4.0	X	X	X	X	X	X	X	X	
JV..05AN	15	1/2"	10.0	5.0	X	X	X	X	X	X	X	X	
JV..05BG	20	3/4"	4.0	2.5	X	X	X	X	X	X	X	X	
JV..05BL	20	3/4"	6.3	4.0	X	X	X	X	X	X	X	X	
JV..05BN	20	3/4"	10.0	5.0	X	X	X	X	X	X	X	X	
JV..05CL	25	1"	6.3	4.0	X	X	X	X	X	X	X	X	
JV..05CN	25	1"	10.0	6.3	X	X	X	X	X	X	X	X	
JV..05CP	25	1"	16.0	8.0	X	X	X	X	X	X	X	X	
JV..05DN	32	1 1/4"	10.0	6.3	X	X	X	X	X	X	X	X	
JV..05DP	32	1 1/4"	16.0	10.0	X	X	X	X	X	X	X	X	
JV..05DR	32	1 1/4"	25.0	12.5	X	X	X	X	X	X	X	X	
JV..05EP	40	1 1/2"	16.0	10.0	X	X	X	X	X	X	X	X	
JV..05ER	40	1 1/2"	25.0	16.0	X	X	X	X	X	X	X	X	
JV..05ES	40	1 1/2"	40.0	20.0	X	X	X	X	X	X	X	X	
JV..05FR	50	2"	25.0	16.0	X	X	X	X					X
JV..05FS	50	2"	40.0	25.0	X	X	X	X					X
JV..05FT	50	2"	63.0	31.5	X	X	X	X					X

Selection table for ON/OFF ball valves

Control devices				Standard actuators 8 Nm			Spring-return 6 Nm			Spring-return 16 Nm			
Valv type	DN	Zoll	Way	Bypass	Console	2-point	230V	Console	2-point	230V	Console	2-point	24V
			Kvs (m³/h)	Kvs (m³/h)									
JV..05AN	15	1/2"	10.0	5.0	X	X	X	X	X	X	X	X	
JV..05BN	20	3/4"	10.0	5.0	X	X	X	X	X	X	X	X	
JV..05CP	25	1"	16.0	8.0	X	X	X	X	X	X	X	X	
JV..05DR	32	1 1/4"	25.0	12.5	X	X	X	X	X	X	X	X	
JV..05ES	40	1 1/2"	40.0	20.0	X	X	X	X	X	X	X	X	
JV..05FT	50	2"	63.0	31.5	X	X	X				X	X	X