

TWO-PORT BALL ZONE VALVES

PN 10 ; 5...120 °C

HMM 2.. – HGM 2.. Eng.



- Body in brass and ball in hard chromed brass
- HMM: male threaded connections with unions
- HGM: female threaded + male threaded with union connections
- Teflon and Viton seals



1. APPLICATION

HMM2 and HGM2 valves are designed to control water flow in heating and cooling systems. They are particularly suitable for zone plants, fan-coil plants and for mounting on modular manifolds. They can be operated by hand or by rotary actuators model CDK and CDR.

Permitted fluids :

- hot water max. 120 °C,
- chilled water min. 5 °C,
- water with max. 50 % glycol.

2. MODELS

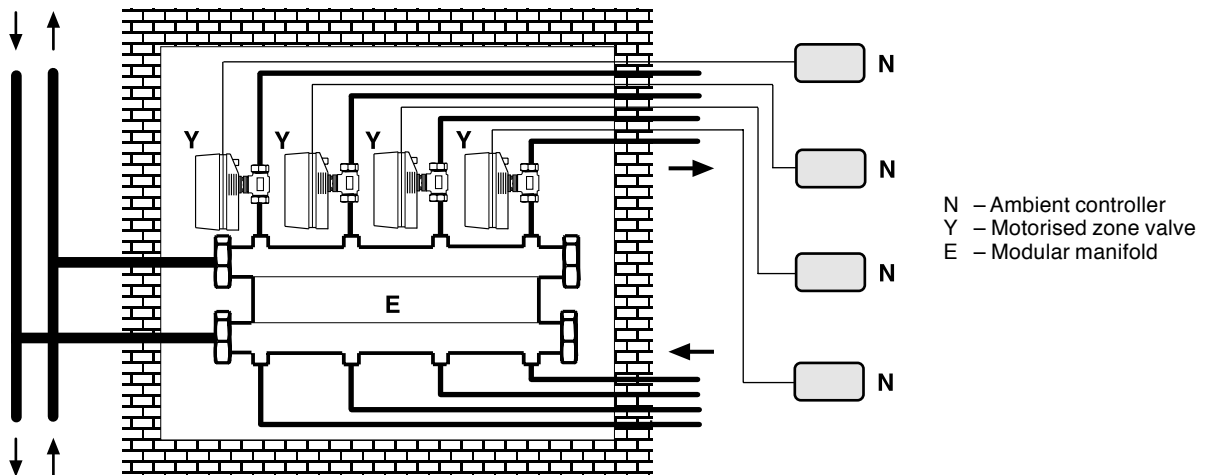
Code	DN body mm	Valve unions inches		Pipe unions inches	Kvs ⁽¹⁾ m ³ /h	Suitable actuators CDK... - CDR...	
		male	male			kPa ⁽²⁾ (bar)	sec. ⁽³⁾
2 port							
HMM 210	10	1/2"	1/2"	3/8"	5.4	600 (6)	60
HMM 215	15	3/4"	3/4"	1/2"	6	600 (6)	60
HMM 220	20	1"	1"	3/4"	11	600 (6)	60
HMM 225	25	1"1/4	1"1/4	1"	25.7	600 (6)	60
2 port		female	male				
HGM 210	10	3/8"	1/2"	3/8"	5.4	600 (6)	60
HGM 215	15	1/2"	3/4"	1/2"	6	600 (6)	60
HGM 220	20	3/4"	1"	3/4"	11	600 (6)	60
HGM 225	25	1"	1"1/4	1"	25.7	600 (6)	60

(1) Kvs = flow coefficient : flow in m³/h with valve open and pressure drop of 100 kPa.

(2) kPa = maximum differential pressure Δp max. permitted by the actuator. 100 kPa = 10 mWG = 1 bar

(3) sec. = time necessary for actuator to make complete valve run .

3. TYPICAL APPLICATION DIAGRAM

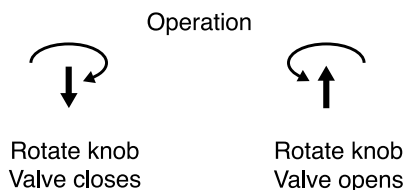
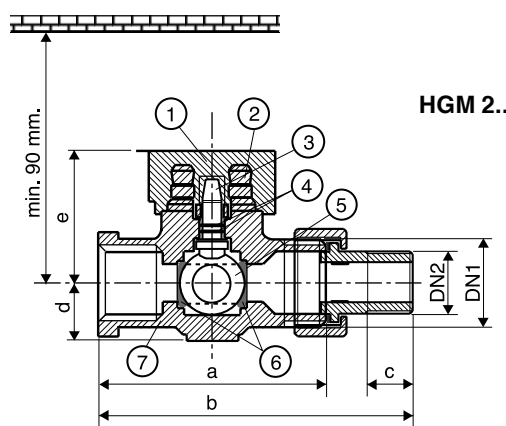
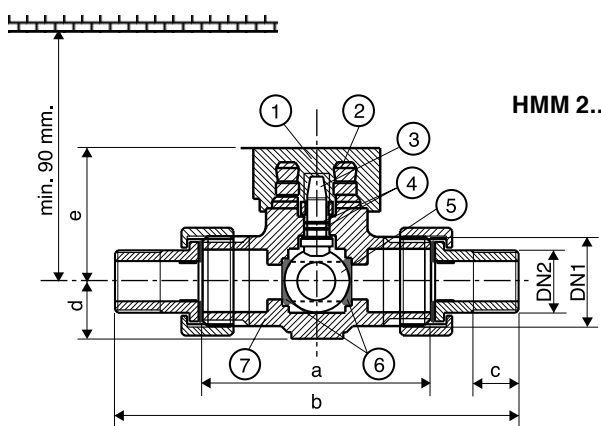


N – Ambient controller
Y – Motorised zone valve
E – Modular manifold

4. DATI TECNICI

Valve body	OT58 brass	Connections :	
Spindle	stainless steel	- HMM valves	male threaded with unions
Ball	hard chromed OT58 brass	- HGM valves	female threaded+male threaded with union
Seals :		Nominal pressure	1000 kPa (10 bar)
- ball	PTFE (teflon)	Fluid temperature	5...120 °C
- spindle	viton O-Ring	Run	90°

5. OVERALL DIMENSIONS



- 1 – Knob
- 2 – Actuator coupling
- 3 – Spindle
- 4 – Spindle O-Ring seals
- 5 – Ball
- 6 – PTFE (teflon) seals
- 7 – Valve body

Model	DN 1 inches	DN 2 inches	a mm	b mm	c mm	d mm	e mm
HMM 210	1/2"	3/8"	51	103	9	16.5	36
HMM 215	3/4"	1/2"	51	106	10	16.5	36
HMM 220	1"	3/4"	51	112	12	20	41
HMM 225	1 1/4"	1"	63	133	13	26	47

Model	DN 1 inches	DN 2 inches	a mm	b mm	c mm	d mm	e mm
HGM 210	1/2"	3/8"	51	77	9	16.5	36
HGM 215	3/4"	1/2"	51	78.5	10	16.5	36
HGM 220	1"	3/4"	51	81	12	20	41
HGM 225	1 1/4"	1"	63	98	13	26	47

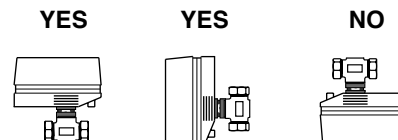
6. CONSTRUCTION

The valve body (5.7) is in OT58 brass, the spindle (5.3) is in stainless steel and the ball (5.5) is in hard chromed OT58 brass. The ball is enclosed by two seals (5.6) in PTFE (teflon) which ensure the total absence of let-by, while the spindle seal is ensured by two O-Rings in viton (5.4). At the head of the valve is a knob (5.1) which allows the manual movement of the ball.

7. MOUNTING

7.1 Mounting of the valve

Before mounting the valve make sure that there isn't any extraneous matter in the pipework (remains of welding or threading). The pipework must not be subject to vibrations and must be perfectly aligned with the valve unions in order to avoid dangerous strains. The valve can be mounted in any position except with the spindle facing downwards.



Leave enough space on the spindle side for the mounting of actuator (see section 5).

7.2 Installing the actuator on the valve

CDK actuator: set the valve in the closed position manually. Pull out the hand grip and then insert and push down the CDK actuator (factory setting: "Closed").
 CDR actuator: set the valve in closed position manually. Pull out the hand grip and then, using a suitable tool, set the valve in the open position. Then insert and push down the CDR actuator (factory setting: "Open").

8. OPERATION

The valve operates with a 90° rotary movement. When the valve is open there is full bore with very low pressure drop, whereas when is closed the seals prevent any let-by. The valve can be operate by hand, using the hand grip, or by the CDK or CDR actuator. A mark on the valve spindle, also visible when the actuator is installed, indicates the position of the valve.

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