

ROTARY MOTORIZED VALVES

MIXING VALVE SERIES VRG140

The compact rotary 4-way mixing valve series VRG140 is available in DN 15–50, and is made of DZR brass, PN10. Two types of connections are available; internal thread and external thread.

OPERATION

The ESBE series VRG140 is a range of compact low leakage mixing valves made of a special brass alloy (DZR) allowing use in heating, cooling and tap water installations.

For easy manual operation the valves are equipped with non-slip knobs and end stops for an operation angle of 90°. The valve position scale can be turned over and rotated, allowing many different mounting positions. Together with actuator series ESBE ARA600, the VRG140 valves are also easily automated and have good regulating accuracy thanks to the unique valve-to-actuator interface. For more advanced control functions, the ESBE series 90 controllers allow even more applications.

ESBE VRG140 valves are available in dimensions DN 15-50 with internal thread and in dimensions DN15-50 with external thread.

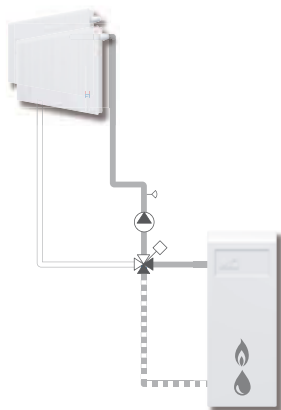
SERVICE AND MAINTENANCE

The slender and compact design of the valve allows for easy tool access when assembling and disassembling the valve.

Repair kits are available for key components. An extra O-ring can also be installed as additional shaft seal without any need for draining the system or dismantling the valve, as long as the system is depressurized.

INSTALLATION EXAMPLES

All the examples of installation can be mirrored. The valve position scale can be turned over and rotated to fit a number of installation layouts and should at the installation be fitted in the correct position as shown in the instruction for installation. The symbol markings of the valve ports (■●▲▶) minimize the risk of incorrect installation.



VALVE VRG140 DESIGNED FOR

- Heating
- Comfort cooling
- Potable water
- Floor heating
- Solar heating
- Ventilation
- Zone
- District hot water
- District heating
- District cooling

SUITABLE ACTUATORS

The valve series VRG140 may most easily be fitted with ESBE actuators:

- Series ARA600
 - Series 90*
 - Series 90C
 - Series 90K
- * Adaptor kit necessary, see product page

TECHNICAL DATA

Pressure class: _____ PN 10
 Media temperature: _____ max. (continuously) +110°C
 _____ max. (temporarily) +130°C
 _____ min. -10°C
 Torque (at nominal pressure): _____ < 5 Nm
 Leakrate in % of flow*: _____ < 1.0%
 Working pressure: _____ 1 MPa (10 bar)
 Max. differential pressure drop: _____ 100 kPa (1 bar)
 Close off pressure: _____ 100 kPa (1 bar)
 Rangeability Kv/Kv^{min}, A-AB: _____ 100
 Connections: _____ Internal thread, ISO 7/1
 _____ External thread, ISO 228/1

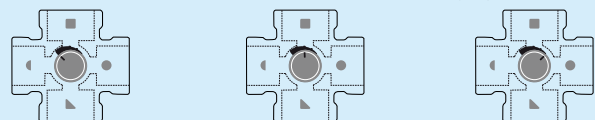
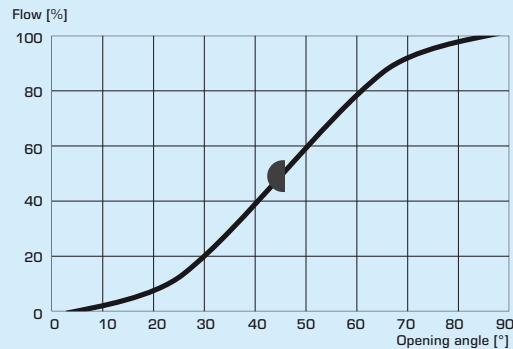
* Differential pressure 100kPa (1 bar)

Material

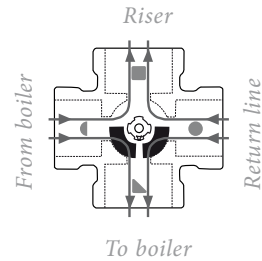
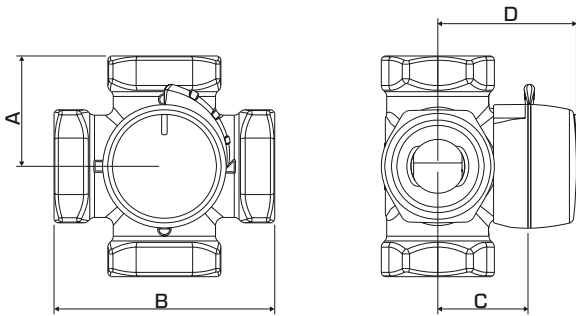
Valve body and slide: _____ Brass DZR, CW 602N
 Shaft and bushing: _____ PPS composite
 O-rings: _____ EPDM

CE PED 97/23/EC, article 3.3

VALVE CHARACTERISTICS



MIXING VALVE SERIES VRG140



The flat-sided spindle top points towards the sleeve position.

4-WAY MIXING VALVE SERIES VRG141, INTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	Weight [kg]	Replaces	Note
1164 01 00	VRG141	15	2.5	Rp 1/2"	36	72	32	50	0.40	4 MG 15-2.5	
1164 02 00	VRG141	20	4	Rp 3/4"	36	72	32	50	0.52	4 MG 20-4	
1164 03 00	VRG141	20	6.3	Rp 3/4"	36	72	32	50	0.52	4 MG 20-6.3	
1164 04 00	VRG141	25	10	Rp 1"	41	82	34	52	0.80	4 MG 25-12	
1164 05 00	VRG141	32	16	Rp 1 1/4"	47	94	37	55	1.08	4 MG 32-18	
1164 06 00	VRG141	40	25	Rp 1 1/2"	58	116	44	62	2.25	4 G 40-28	
1164 07 00	VRG141	50	40	Rp 2"	62	125	44	62	2.30	4 G 50-44	

4-WAY MIXING VALVE SERIES VRG142, EXTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	Weight [kg]	Replaces	Note
1164 08 00	VRG142	15	2.5	G 3/4"	36	72	32	50	0.40	—	
1164 09 00	VRG142	20	4	G 1"	36	72	32	50	0.52	—	
1164 10 00	VRG142	20	6.3	G 1"	36	72	32	50	0.52	4 MGA 20-6.3	
1164 11 00	VRG142	25	10	G 1 1/4"	41	82	34	52	0.80	—	
1164 12 00	VRG142	32	16	G 1 1/2"	47	94	37	55	1.08	—	
1164 13 00	VRG142	40	25	G 2"	58	116	44	62	2.25	—	
1164 14 00	VRG142	50	40	G 2 1/4"	62	125	44	62	2.30	—	

* Kvs-value in m³/h at a pressure drop of 1 bar. See also flow chart on page 35.