

ROTARY MOTORIZED VALVES

MIXING VALVE SERIES VRG130

The compact rotary 3-way mixing valve series VRG130 is available in DN 15–50, and is made of DZR brass, PN10. Three types of connections are available; internal thread, external thread and compression fittings.

OPERATION

The ESBE series VRG130 is a range of compact low leakage mixing valves made of a special brass alloy (DZR) allowing use in both 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 a wide choice of mounting positions. Together with actuator series ESBE ARA600 the VRG130 valves are also easily automated and have extraordinary regulating accuracy thanks to the unique valve-to-actuator interface. For more advanced control functions, the ESBE series 90 controllers allows even more applications.

ESBE VRG130 valves are available in dimensions DN 15 – 50 with internal thread, in DN 15 – 50 with external thread and with compression fittings for pipe O.D. 22 and 28 mm.

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 installations 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.



Mixing

Diverting



VALVE VRG130 DESIGNED FOR

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

SUITABLE ACTUATORS

The valve series VRG130 may most easily be fitted with ESBE actuators:

- Series ARA600
 - Series 90C
 - Series 90*
 - 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*: _____ Mixing < 0.05%
 _____ Diverting < 0.02%
 Working pressure: _____ 1 MPa (10 bar)
 Max. differential pressure drop: _____ Mixing, 100 kPa (1 bar)
 _____ Diverting, 200 kPa (2 bar)
 Close off pressure: _____ 200 kPa (2 bar)
 Rangeability Kv/Kv^{min}, A-AB: _____ 100
 Connections: _____ Internal thread, ISO 7/1
 _____ External thread, ISO 228/1

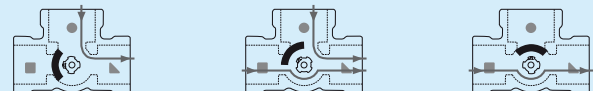
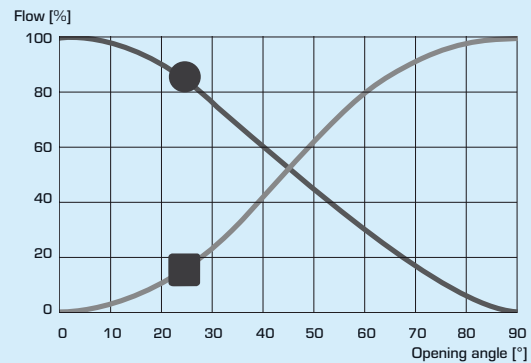
* Differential pressure 100kPa (1 bar)

Material

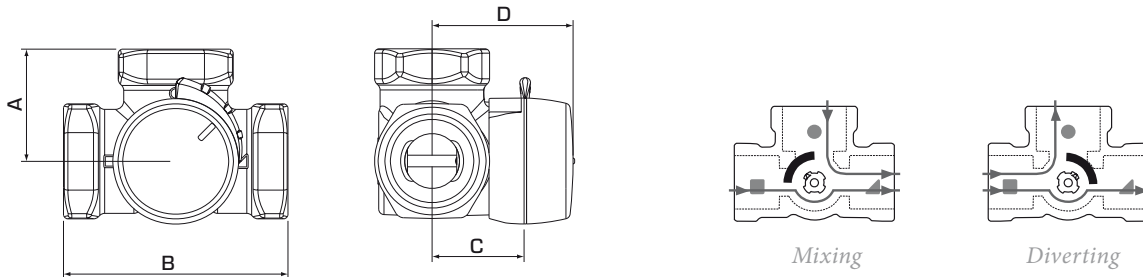
Valve body and slide: _____ Brass DZR, CW 602N
 Shaft and bushing: _____ PPS composite
 O-rings: _____ EPDM

PED 97/23/EC, article 3.3

VALVE CHARACTERISTICS



MIXING VALVE SERIES VRG130



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

3-WAY MIXING VALVE SERIES VRG131, INTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	Weight [kg]	Replaces	Note
1160 01 00	VRG131	15	0.4	Rp 1/2"	36	72	32	50	0.40	—	
1160 02 00	VRG131	15	0.63	Rp 1/2"	36	72	32	50	0.40	3 MG 15-0.6	
1160 03 00	VRG131	15	1	Rp 1/2"	36	72	32	50	0.40	3 MG 15-1.0	
1160 04 00	VRG131	15	1.6	Rp 1/2"	36	72	32	50	0.40	3 MG 15-1.6	
1160 05 00	VRG131	15	2.5	Rp 1/2"	36	72	32	50	0.40	3 MG 15-2.5	
1160 06 00	VRG131	15	4	Rp 1/2"	36	72	32	50	0.40	—	
1160 07 00	VRG131	20	2.5	Rp 3/4"	36	72	32	50	0.43	—	
1160 08 00	VRG131	20	4	Rp 3/4"	36	72	32	50	0.43	3 MG 20-4	
1160 09 00	VRG131	20	6.3	Rp 3/4"	36	72	32	50	0.43	3 MG 20-6.3	
1160 10 00	VRG131	25	6.3	Rp 1"	41	82	34	52	0.70	3 MG 25-8	
1160 11 00	VRG131	25	10	Rp 1"	41	82	34	52	0.70	3 MG 25-12	
1160 12 00	VRG131	32	16	Rp 1 1/4"	47	94	37	55	0.95	3 MG 32-18	
1160 34 00	VRG131	40	25	Rp 1 1/2"	53	106	44	60	1.68	3 G 40-28	2)
1160 13 00	VRG131	40	25	Rp 1 1/2"	58	116	44	62	1.75	—	1)
1160 36 00	VRG131	50	40	Rp 2"	60	120	46	64	2.30	3 G 50-44	3)
1160 14 00	VRG131	50	40	Rp 2"	62	125	44	62	2.05	—	1)

3-WAY MIXING VALVE SERIES VRG132, EXTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	Weight [kg]	Replaces	Note
1160 15 00	VRG132	15	0.4	G 3/4"	36	72	32	50	0.40	—	
1160 16 00	VRG132	15	0.63	G 3/4"	36	72	32	50	0.40	—	
1160 17 00	VRG132	15	1	G 3/4"	36	72	32	50	0.40	—	
1160 18 00	VRG132	15	1.6	G 3/4"	36	72	32	50	0.40	—	
1160 19 00	VRG132	15	2.5	G 3/4"	36	72	32	50	0.40	—	
1160 20 00	VRG132	15	4	G 3/4"	36	72	32	50	0.40	—	
1160 21 00	VRG132	20	2.5	G 1"	36	72	32	50	0.43	—	
1160 22 00	VRG132	20	4	G 1"	36	72	32	50	0.43	—	
1160 23 00	VRG132	20	6.3	G 1"	36	72	32	50	0.43	3 MGA 20-6.3	
1160 24 00	VRG132	25	6.3	G 1 1/4"	41	82	34	52	0.70	—	
1160 25 00	VRG132	25	10	G 1 1/4"	41	82	34	52	0.70	3 MGA 25-12	
1160 26 00	VRG132	32	16	G 1 1/2"	47	94	37	55	0.95	3 MGA 32-18	
1160 35 00	VRG132	40	25	G 2"	53	106	44	60	1.69	—	4)
1160 27 00	VRG132	40	25	G 2"	58	116	44	62	1.75	—	1)
1160 37 00	VRG132	50	40	G 2 1/4"	60	120	46	64	2.30	—	5)
1160 28 00	VRG132	50	40	G 2 1/4"	62	125	44	62	2.05	—	1)

3-WAY MIXING VALVE SERIES VRG133, COMPRESSION FITTING

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	Weight [kg]	Replaces	Note
1160 29 00	VRG133	20	4	CPF 22 mm	36	72	32	50	0.40	—	
1160 30 00	VRG133	20	6.3	CPF 22 mm	36	72	32	50	0.40	3 MG 22-6.3	
1160 31 00	VRG133	25	10	CPF 28 mm	41	82	34	52	0.45	3 MG 28-8	

* Kvs-value in m³/h at a pressure drop of 1 bar. See also flow chart on page 34. CPF = compression fitting
 Note 1) Cancellation 2009-09 2) Replaces 1160 13 00 3) Replaces 1160 14 00 4) Replaces 1160 27 00 5) Replaces 1160 28 00