# **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. Four types of connections are available; internal thread, external thread, compression fitting and rotating nut. Patented + Registered design.

## **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 controllers allows even more applications.

ESBE VRG130 valves are available in dimensions DN15-50 with internal or external thread, with rotating nut in DN20 or 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.

## **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



Internal thread



External thread



Compression fitting



Rotating nut



Rotating nut/ External thread

## **VALVE VRG130 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 VRG130 may most easily be fitted with ESBE actuators:

- Series ARA600 Series 90\*
- \*Adaptor kit necessary, see product page
- Series 90C Series CRB100
- Series CRA110

PN 10

### **TECHNICAL DATA** Pressure class:

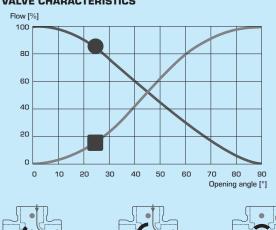
Media temperature:	max. (continuously) +110°C
	_ max. (temporarily) +130°C
	min10°C
Torque (at nominal pressure) DN1	5-32: < 3 Nm
DN4	0-50: < 5 Nm
Leakrate in % of flow*:	Mixing < 0.05%
	Diverting < 0.02%
Working pressure:	1 MPa (10 bar)
Max. differential pressure drop:	
	Diverting, 200 kPa (2 bar)
Close off pressure:	200 kPa (2 bar)
Rangeability Kv/Kvmin, A-AB:	100
Connections:	Internal thread, EN 10226-1
	External thread, ISO 228/1
Co	mpression fitting, EN 1254-2
* Differential pressure 100kPa (1 bar)	_
Differential pressure TOOKPa (T 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**



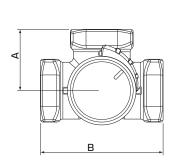


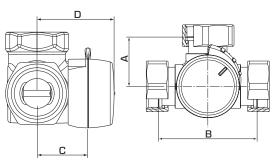


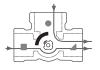




# **MIXING VALVE SERIES VRG130**







Mixing



Diverting

VRG131, VRG132, VRG133

VRG138

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

## **SERIES VRG131, INTERNAL THREAD**

Art. No.	Reference	DN	Kvs*	Connection	Α	В	С	D	Weight [kg]	Note							
1160 01 00			0.4					50	0.40								
1160 02 00	VRG131 1		0.63		36	72	2 32										
1160 03 00		45	1	Rp ½"													
1160 04 00		15	1.6														
1160 05 00			2.5														
1160 06 00			4														
1160 07 00	VRG131			2.5													
1160 08 00		20	4	Rp 3/4"	36	72	32	50	0.43								
1160 09 00			6.3														
1160 10 00	VDC404	OF	6.3	D= 4"	44	82	34	52	0.70								
1160 11 00	VRG131	25	20	25	25	25	25	25	25	10	Rp 1"	41	82	34	52	0.70	
1160 12 00	VRG131	32	16	Rp 11/4"	47	94	37	55	0.95								
1160 34 00	VRG131	40	25	Rp 1½"	53	106	44	60	1.68								
1160 36 00	VRG131	50	40	Rp 2"	60	120	46	64	2.30								

## SERIES VRG132, EXTERNAL THREAD

SERIES VRG 132, EXTERNAL THREAD																												
Art. No.	Reference	DN	Kvs*	Connection	Α	В	C	D	Weight [kg]	Note																		
1160 15 00	VRG132		0.4																									
1160 16 00			0.63	G <sup>3</sup> ⁄4"	36	72	32	50	0.40																			
1160 17 00		15	1																									
1160 18 00		15	1.6																									
1160 19 00			2.5																									
1160 20 00			4																									
1160 21 00						2.5																						
1160 22 00	VRG132	20	4	G 1"	36	72	32	50	0.43																			
1160 23 00			6.3																									
1160 24 00	VDC400	VDC400	VDC400	VDC420	VDC120	VDC100	VDC420	\/DC420	\/DC420	VRG132	VDC120	VDC420	VDC422	VDC430	\/DC420	VDC420	VDC420	VDC420	\/DC420	05	6.3	G 11⁄4"	41	82	34	52	0.70	
1160 25 00	VRG132	132 25	10	G 174	41	02	34	52	0.70																			
1160 26 00	VRG132	32	16	G 1½"	47	94	37	55	0.95																			
1160 35 00	VRG132	40	25	G 2"	53	106	44	60	1.69																			
1160 37 00	VRG132	50	40	G 21/4"	60	120	46	64	2.30																			

## **SERIES VRG133, COMPRESSION FITTING**

Art. No.	Reference	DN	Kvs*	Connection	Α	В	С	D	Weight [kg]	Note
1160 29 00	VRG133 20	20	4	CPF 22 mm	36	79	32	50	0.40	
1160 30 00		VHG133	20	6.3	GPF 22 IIIIII	30	/2	ید	30	0.40
1160 31 00	VRG133	25	10	CPF 28 mm	41	82	34	52	0.45	

## **SERIES VRG138, ROTATING NUT AND EXTERNAL THREAD**

Art. No.	Reference	DN	Kvs*	Connection	Α	В	С	D	Weight [kg]	Note
1160 38 00		00	4	2x RN 1" + G 1"	36	72	32	50	0.56	
1160 39 00	VRG138		4	3x RN 1"					0.59	
1160 40 00	VAGISO	20	6.3	2x RN 1" + G 1"					0.56	
1160 41 00		6.3	3x RN 1"					0.59		

<sup>\*</sup> Kvs-value in  $m^3/h$  at a pressure drop of 1 bar. See also flow chart on page 33. CPF = compression fitting RN = Rotating Nut

