



VA-BQE Series

3-way flanged valve, PN 16/10



Overview

The key features of these control valves are their high reliability and precision, and they make a major contribution towards environment-friendly control. They meet demanding requirements including quick-close functions, coping with differential pressures, controlling the medium temperature and providing a shut-off function and all this is achieved with a low noise level.

An automatic and fixed connection is made between the valve stem and the drive shaft. The cone (which is made of brass) controls an equal-percentage flow in the control passage.

To compensate for the complementary characteristic of the consumer and to guarantee an identical quantity of medium regardless of the valve position, the mixing passage acts with a linear characteristic. The tightness of this valve is guaranteed by the seat which is machined in the body. The stuffing box is maintenance-free; it consists of a brass body, 2 O-rings, a wiper ring and the grease reserve. This is free of silicone grease and no silicone oil must be used for the stem.

Features and Benefits

- Continuous control of cold/hot water and low-pressure steam up to 115 °C in closed circuits
- Water quality as per VDI 2035
- Not suitable for drinking water or potentially explosive atmospheres
- Valve with flange connection as per EN 1092-2, seal form B
- Regulating valve, free of silicone grease, painted black
- Equal-percentage control passage characteristic can be set with SUT (Universal Technology) valve actuators to linear or quadratic
- Mixing passage, linear characteristic
- The control passage is closed when the spindle is moved out
- Used as control valve or as distribution valve
- Valve body and seat made of grey cast iron
- Stainless-steel spindle
- Plugs made of stainless steel with metal-to-metal seal
- Stuffing box made of stainless steel with wiper ring and double O-ring seal made of EPDM

Model Selection

Type	Nominal diameter	kvs value	Weight
VA-BQE065F300	DN 65	63 m ³ /h	19 kg
VA-BQE080F300	DN 80	100 m ³ /h	24 kg
VA-BQE100F300	DN 100	160 m ³ /h	34 kg
VA-BQE125F300	DN 125	220 m ³ /h	52 kg
VA-BQE150F300	DN 150	320 m ³ /h	76 kg

Combination of VQE with electric actuators

Warranty: The technical data and pressure differences indicated here are applicable only in combination with Distech Controls valve actuators. The warranty does not apply if used with valve actuators from other manufacturers.

Definition of Δp_s : Maximum admissible pressure drop in the event of a malfunction (pipe break after the valve) at which the actuator reliably closes the valve by means of a return spring.

Definition of Δp_{max} : Maximum admissible pressure drop in control mode at which the actuator reliably opens and closes the valve.

Pressure Differences

Actuator	VA-AVM322SF132
Actuating power	1000 N
Control signal	2-/3-pt., 0...10 V, 4...20 mA
Running time	120/80 s

Δp [bar]

As a mixing valve	Δp_{max}	Δp_{max}
VA-BQE065F300	2.5	2.5
VA-BQE080F300	1.5	1.5

As a distribution valve	Δp_{max}	Δp_{max}
VA-BQE065F300	2.5	2.5
VA-BQE080F300	1.5	1.5

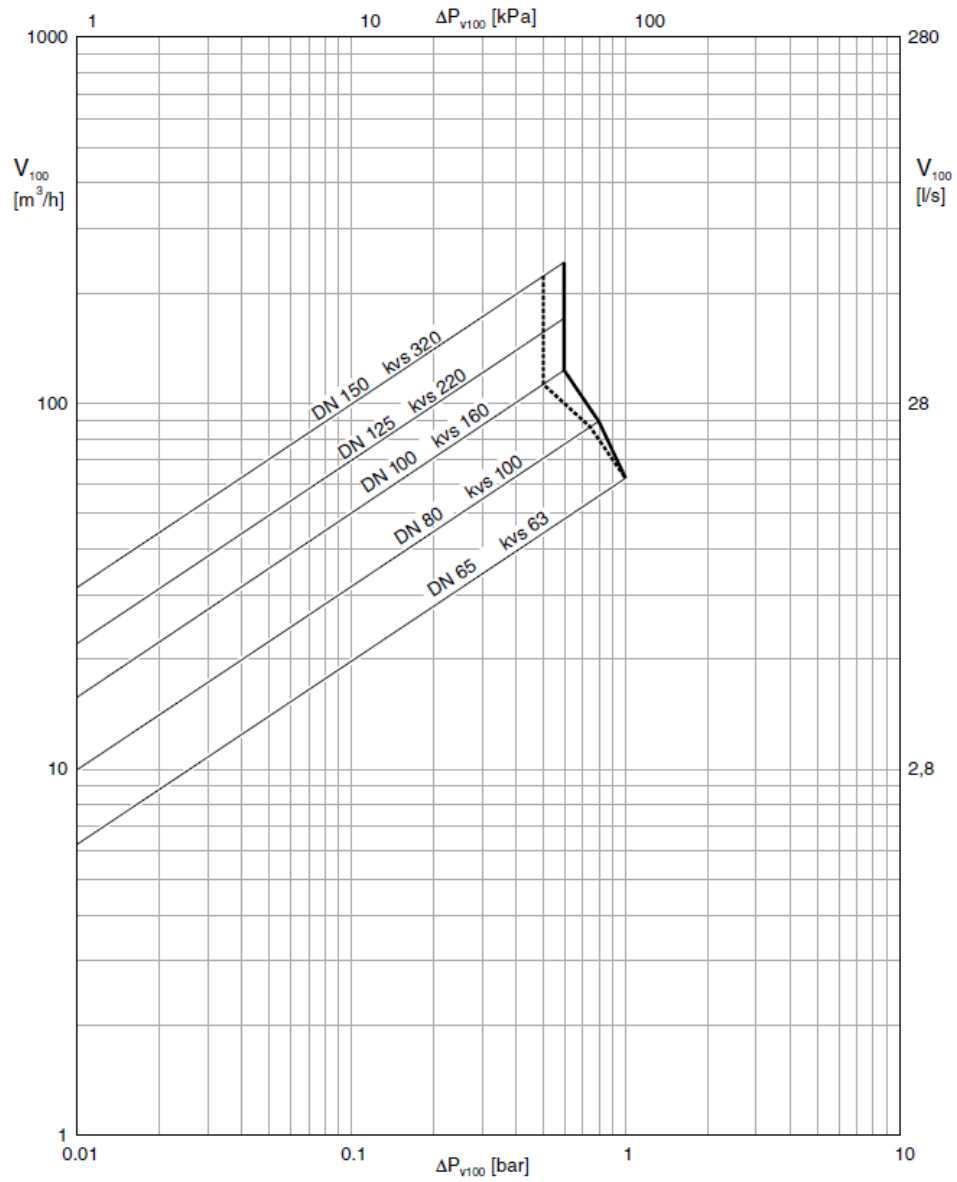
Actuator	VA-AVM234SF132
Actuating power	2500 N
Control signal	2-/3-pt., 0...10 V, 4...20 mA
Running time DN 65, DN 80	40/80/120 s
Running time DN 100...150	80/160/240 s

Δp [bar]

As a mixing valve	Δp_{max}	Δp_{max}	Δp_s
VA-BQE065F300	3.0	3.0	5.1
VA-BQE080F300	3.0	3.0	3.4
VA-BQE100F300	2.0	2.0	2.2
VA-BQE125F300	1.5	1.4	1.4
VA-BQE150F300	1.0	1.0	1.1

As a distribution valve	Δp_{max}	Δp_{max}	Δp_s
VA-BQE065F300	1.0	1.0	16.0
VA-BQE080F300	0.75	0.75	16.0
VA-BQE100F300	0.5	0.5	16.0
VA-BQE125F300			
VA-BQE150F300			

Flow Rate Chart



-----	Δp_v when used as a control valve
-----	Δp_v when used as a distribution valve

Type	Δp_v	
	Used as a control valve	Used as a distribution valve
VA-BQE065F300	1.0	1.0
VA-BQE080F300	0.8	0.75
VA-BQE100F300	0.6	0.5
VA-BQE125F300	0.6	0.5
VA-BQE150F300	0.6	0.5

Specifications

Nominal pressure	PN16
Connection	Flange as per EN 1092-2, form B
Valve characteristic; control passage	Equal percentage
Valve characteristic; mixing passage	Linear
Control ratio of valve	> 30:1
Stuffing box	2 EPDM O-rings
Leakage rate	Class III as per DIN EN 60534-4 (0.001 x kvs)
Valve stroke	
<input type="checkbox"/> DN 65...80	20 mm
<input type="checkbox"/> DN 100...150	40 mm
Operating temperature ¹	-15...150 °C
Operating pressure	
<input type="checkbox"/> Up to 120 °C	16 bar
<input type="checkbox"/> At 150 °C	14.4 bar
<input type="checkbox"/> Between 120 °C and 150 °C	a linear interpolation can be performed
Pressure and temperature data	EN 764, EN 1333
Flow parameters	EN 60534
Pressure Equipment Directive	97/23/EC (fluid group II) With CE label
Slide rule for valve sizing	P100013496
Technical manual on control units	7 000477 001
Parameters, fitting notes, control, general information	Applicable EN, DIN, AD, TRD and UVV regulations
Fitting instructions	P100013463
VA-AVM234S assembly	MV 505919
VA-AVM322 assembly	P100011900
Declaration on materials and the environment	MD 56.117

Material numbers as per DIN

DIN material no. DIN designation

Valve body

- DIN material no. EN-JL 1040
- DIN designation EN-GJL-250 (GG25)

Valve seat; control passage

- DIN material no. EN-JL 1040
- DIN designation EN-GJL-250

Valve seat; mixing passage

- DIN material no. 1.4021
- DIN designation X20Cr13

Spindle

- DIN material no. 1.4021
- DIN designation X20Cr13

Plug

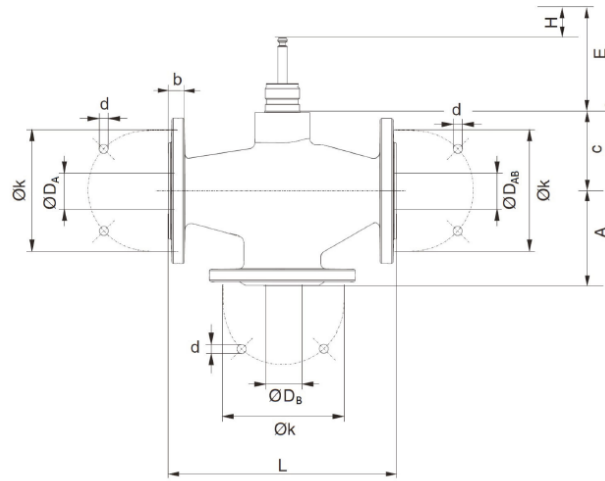
- DIN material no. 1.4021
- DIN designation X20Cr13

Stuffing box

- DIN material no. 1.4104
- DIN designation X12CrMoS-17

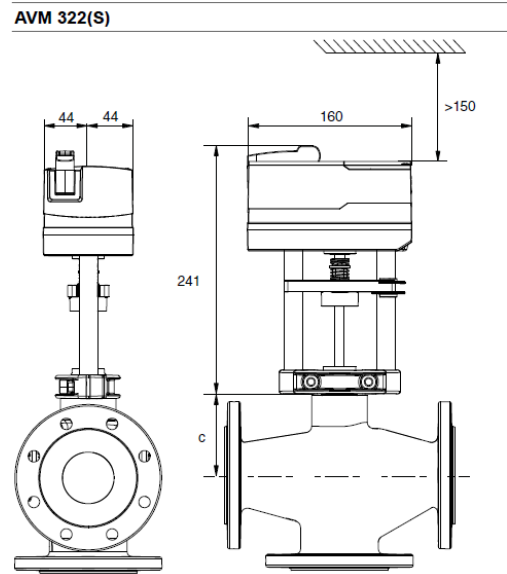
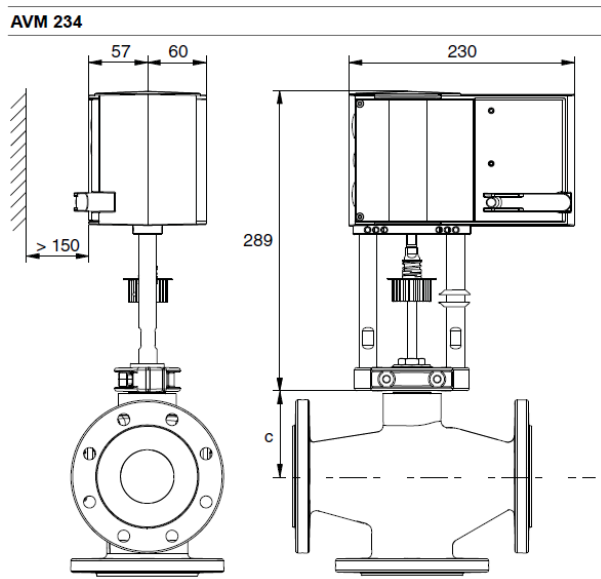
1. Use stuffing box heater at temperatures below 0 °C; use temperature adaptor (accessory) at temperatures above 100 °C

Dimensions

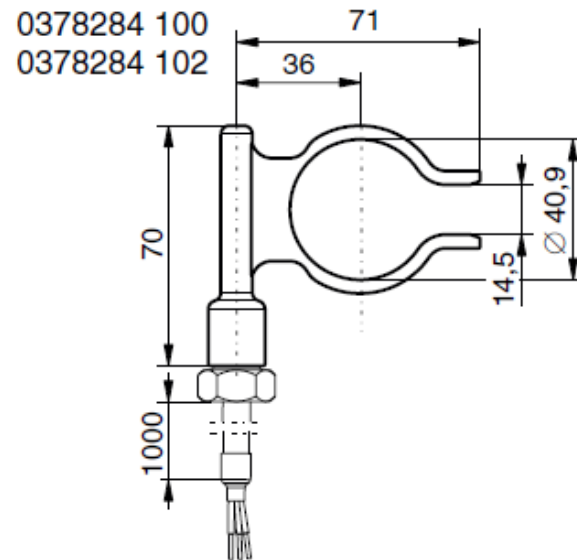


BQE	DN	DA	DB	DBB	A	c	L	H	k	d	b	E
065	65	65	84.5	65	120	102	290	20	145	4x19	20	93
080	80	80	99.6	80	130	112	310	20	160	8x19	22	93
100	100	100	121.6	100	150	127	350	40	180	8x19	24	113
125	125	125	146.6	125	200	160	400	40	210	8x19	27	113
150	150	150	176.6	150	210	181	480	40	240	8x23	27	113

Combinations

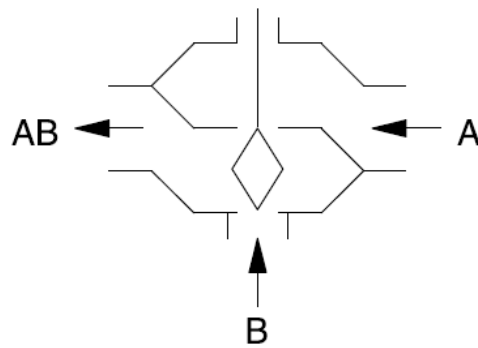


Accessories

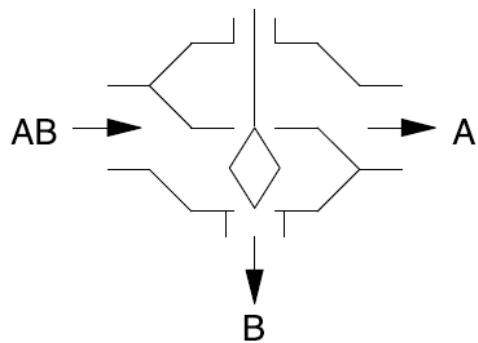


Valves

Used as a control valve



Used as a distribution valve



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