

# 3-way Control Valve type G3FA Soft Seat/Low Leakage

Nodular Cast Iron, PN16, DN 80 – 200 mm / PN10, DN300/250 - 300 mm

O-2.5.19-B

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## TECHNICAL DATA

<b>Materials:</b>	
- Valve body	Nodular cast iron EN-GJS-400-15
- Color	RAL 7016 (anthracite grey)
- Seats and cone	Aluminum Bronze CuAL10Fe5Ni5
- Spindle	CuAL10Fe5Ni5 (W.no 1.4436)
- O-ring	A75H
- Gasket	Reinz-AFM34
<b>Nominal pressure</b>	
- 80-200 G3FA:	PN 16 (max.120/160°C)
- 300/250-300 G3FA:	PN 10 (max 120/160°C)
- 80-300 G3FA:	JIS 10K (option)
<b>Seats</b>	2 balanced single seats
<b>Flow characteristic</b>	Almost linear
<b>Leakage rate</b>	≤ 0.01%
<b>Regulating capability</b>	Kvs/Kvr > 25
<b>Flanges</b>	According to EN 1092-2, PN 16 & PN 10
- Option:	According to JIS B 2210 10K

### Note !

Valve type 200/175 G3FA has outer measures and flanges drilled as for valve type 200 G3FA. Valve type 300/250 G3FA has outer measures and flanges drilled as valve type 300 G3FA.

### Counter flanges (suggested for EN 1092-2)

- 80-200 G3FA:	DIN 2633 – PN 16
- 300/250-300 G3FA:	DIN 2632 – PN 10

### For cooling and heating purposes

#### Important note

If the valves are applied as diverting valves, the pressure drop will increase by 35% and the Kvs-value will decrease by 14% compared with mixing valves.

Subject to change without notice.

## APPLICATIONS

G3FA soft seat control valves are designed for regulating of low and high temperature cooling systems for marine engines.

## DESIGN

The valve components (seats, cone and spindle) are made of aluminum bronze. The valve body is made of nodular cast iron and the valve flanges are drilled according to EN 1092-2 (JIS B 2210 option). The valve has two balanced single seats and the design of port AB-B is 100 % tight.

## FUNCTION

The valve cone is firmly connected to the actuator spindle. When the valve cone is located in one extreme position by drawing on the spindle, port A-AB is kept fully open and port B-AB is fully closed.

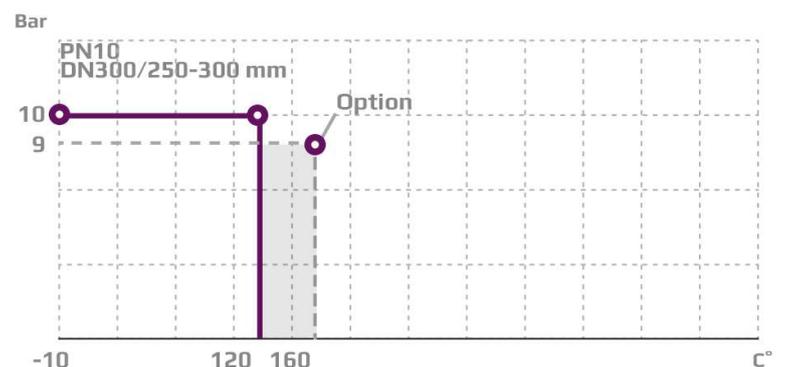
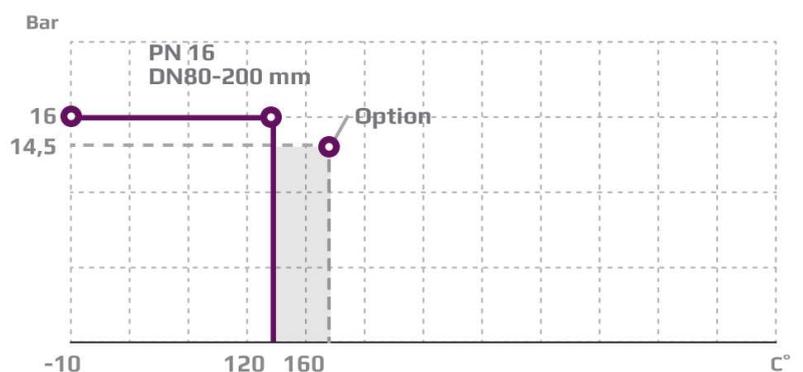
In the other extreme position port A-AB is fully closed and port B-AB is fully open. In the intermediate positions the opening degrees change proportionally.

## FEATURES

- Soft-seat makes the valve 99.99% tight between port AB-B for energy savings
- Can be used for both mixing and diverting
- Simple design endures reliable control and reduces costly downtimes
- Designed for linear electric actuators

## PRESSURE/TEMPERATURE DIAGRAM

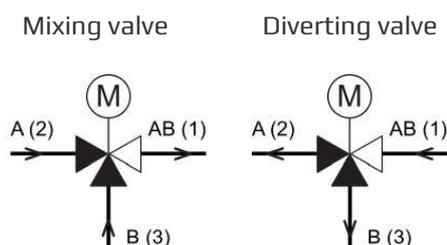
According to DIN 2401



### MOUNTING

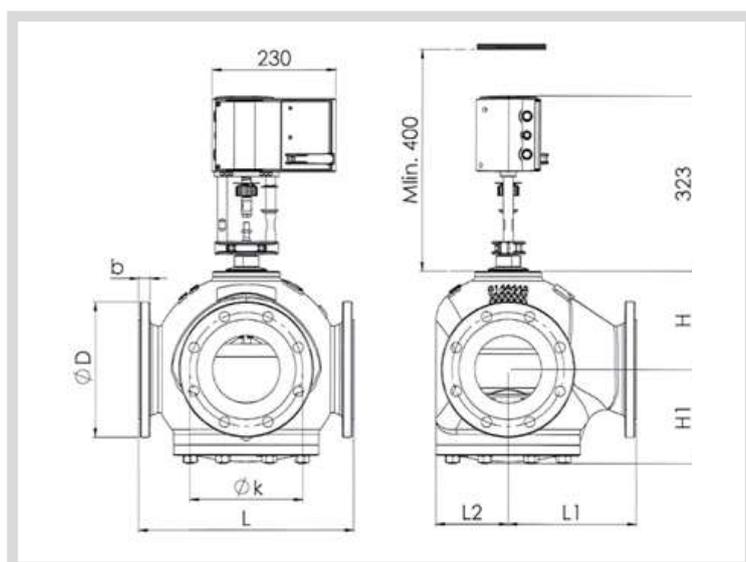
The valves can be installed both vertically and horizontally. The valves must be mounted in such a way that the valve motor is exposed to minimal moisture and unnecessary vibrations. Free height above / below the valve must be a minimum 400 mm to mount and operate of the AVM/AVF 234 motor.

### PORT NUMBERING



Port AB (1) common port always open  
 Port A (2) closes for load on spindle  
 Port B (3) opens for load on spindle

### DIMENSION SKETCH



### SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	$k_{vs}$ -value <sup>1)</sup> m <sup>3</sup> /h	Lifting height mm	Weight kg
80 G3FA	80	80	80	11	35
100 G3FA	100	100	125	13	44
125 G3FA	125	125	215	18	72
150 G3FA	150	150	310	20	111
200/175 G3FA	200	200	425	22	165
200 G3FA	200	200	555	28	160
300/250 G3FA	300	300	865	28	306
300 G3FA	300	300	1250	45	290

1) The stated kvs values apply for mixing valves. Diverting valves: 0.85 x (kvs-values for mixing valves).

Type	L mm	L1 mm	L2 mm	H mm	H1 mm	b mm	EN 1092-2			JIS B 2210 10		
							D (dia.) mm	k (dia.) mm	d mm dia. (number)	D (dia.) mm	k (dia.) mm	d mm dia. (number)
80 G3FA	310	155	102	117	127	19	200	160	19x(8)	185	150	19x(8)
100 G3FA	350	175	112	132	141	19	220	180	19x(8)	210	175	19x(8)
125 G3FA	400	240	138	181	171	19	250	210	19x(8)	250	210	23x(8)
150 G3FA	480	270	165	216	189	24	285	240	23x(8)	280	240	23x(8)
200/175 G3FA	600	325	230	238	238	20	340	295	23x(12)	330	290	23x(12)
200 G3FA	600	325	230	238	238	20	340	295	23x(12)	330	290	23x(12)
300/250 G3FA	850	450	325	305	305	25	445	400	23x(12)	445	400	25x(16)
300 G3FA	850	450	325	305	305	25	445	400	23x(12)	445	400	25x(16)

