

# 3-way Control Valve type Low Leakage

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

0-2.5.14-A

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## APPLICATIONS

Control valves type Low Leakage are designed for regulating of load dependant cylinder liner (LDCL), cooling water systems.

## DESIGN

The valve components (seats and cone) are made of alubronzel, the spindle of stainless steel. 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 port AB-B is designed 100 % tight.

## FUNCTION

The valve cone is firmly connected with the actuator spindle. When the valve cone is in the one extreme position by draw on the spindle, connection A-AB is kept fully open and connection B-AB is fully closed. In the other extreme position connection A-AB is fully closed and connection B-AB is fully open. In the intermediate positions the opening degrees change proportionally.

## TECHNICAL DATA

### Materials:

- Valve body	Nodular cast iron EN-GJS-400-15
- Seats and cone	Alu Bronze CuAL10Fe5Ni5
- Spindle	Stainless steel (W.no 1.4436)
- O-ring	<b>A75H- Gasket</b> Reinz-AFM34

### Nominal pressure

- DN 80-200	PN 16 (max.150°C)
- DN 300/250-300	PN 10 (max.150°C)
- DN 80-300	JIS 10K (option)

**Seats** 2 balanced single seats

**Flow characteristic** Almost linear

**Leakage Port AB-B** 0.0%

**Flanges** According to EN 1092-2,  
PN 16 & PN 10

- **Option:** According to JIS B 2210 10K

**Regulating capability** Kvs/Kvr > 25

### Note!

Valve DN 200/175 has outer measures and flanges drilled as valve DN 200. Valve DN 300/250 has outer measures and flanges drilled as valve DN 300

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

- **DN 80-200:** DIN 2633 – PN 16

- **DN 300/250-300:** DIN 2632 – PN 10

**Soft seat with O-ring**

**Leakage class IV**

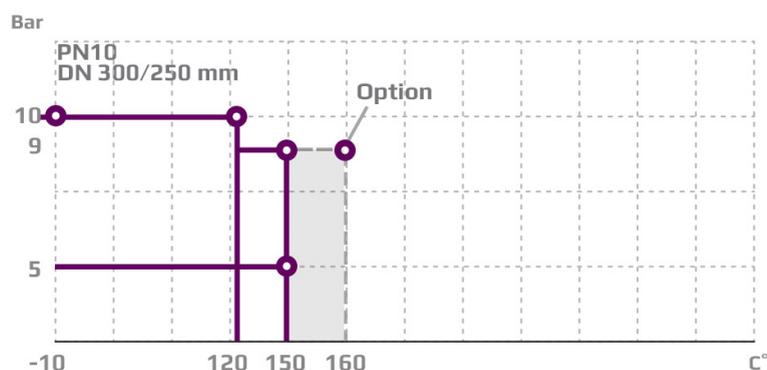
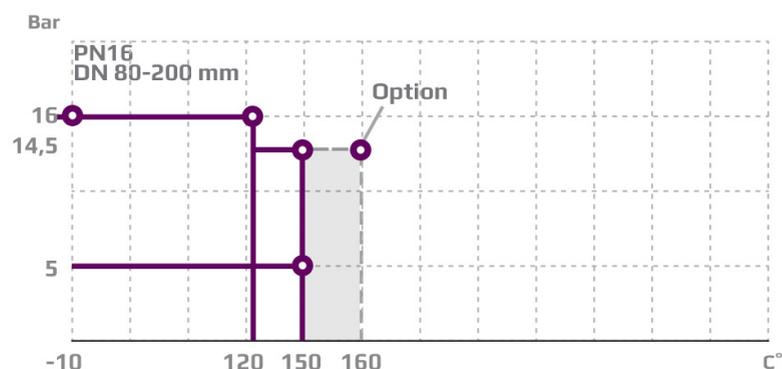
Subject to change without notice.

## 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 secures reliable controls and reduces costly downtime.

## PRESSURE/TEMPERATURE DIAGRAM

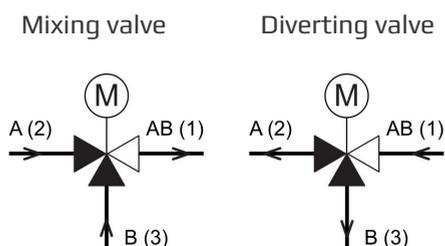
According to DIN 2401



### MOUNTING

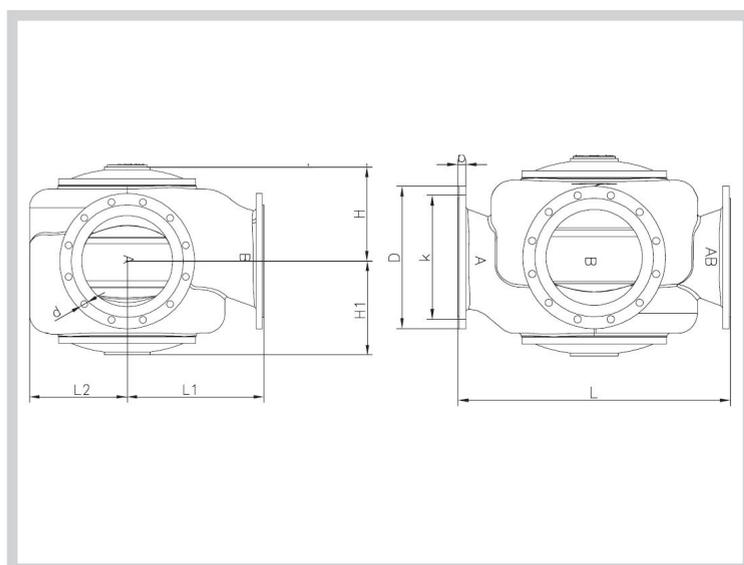
The valves can be installed vertical as well as horizontal. The valves must be mounted in a way that the valve motor will be exposed to a minimum of moisture and unnecessary vibrations. Free height above / below the valve must be minimum 400 mm for mounting and operation of the AVM/AVF 234 motor, otherwise minimum 745 mm for pneumatic actuators.

### PORT NUMBERING



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

### DIMENSION SKETCH



### SPECIFICATIONS

DN	Flange connection DN in mm	Opening (mm)	$k_{vs}$ -value $m^3/h$	Lifting height (mm)	Weight (kg)
80	80	80	80	11	35
100	100	100	125	13	44
125	125	125	215	18	72
150	150	150	310	22	111
200/175	200	200	425	23	165
200	200	200	555	29	160
300/250	300	300	865	31	306
300	300	300	1250	45	306

<sup>1)</sup>The stated  $k_{vs}$  values apply for mixing valves. Diverting valves:  $0.86 \times (k_{vs} \text{ -values for mixing valves})$

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