

# 3-WAY CONTROL VALVES TYPE Soft Seated

## NODULAR CAST IRON, DN 80 – 300 mm

# 2.5.14.01-C

## GB-1



CHARACTERISTICS

- Nominal pressure
 

DN 80-200
 

PN 16 max. 150°C

DN 300/250
 

PN 10 max. 150°C

DN 80-300/250
 

JIS 10K (option)
- Regulating capability  $\frac{k_{vs}}{k_{vr}} > 25$
- Two balanced single seats
- Soft seat with O-ring
- Leakage class IV

APPLICATIONS

Control valves type soft seated are designed for regulat-  
ing of load dependant cylinder liner (LDCL), cooling water  
systems.

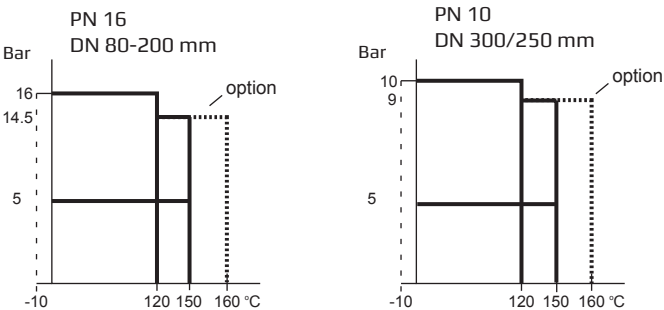
DESIGN

The valve components (seats and cone) are made of gun  
metal, 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.

QUALITY ASSURANCE

All valves are manufactured under an ISO 9001 certification,  
and are pressure and leakage tested before shipment.  
For marine applications the valves can be supplied with rele-  
vant test certificates from recognized classification societies.

PRESSURE/TEMPERATURE DIAGRAM



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

1) The stated  $k_{VS}$  values apply for mixing valves. Diverting valves:  $0.86 \times (k_{VS} \text{ -values for mixing valves})$

# 3-WAY CONTROL VALVES TYPE Soft Seated

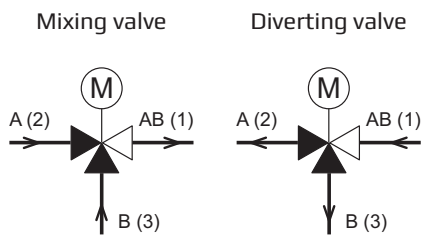
## NODULAR CAST IRON, DN 80 – 300 mm

# 2.5.14.01-C

## GB-2

PORT NUMBERING

The ports of valves type Soft Seated are marked with the letters AB, A and B.  
The letters in parentheses refer to the corresponding internationally adapted designations.



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

FUNCTION

The valve cone is firmly connected with the motor 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.

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. Free high above/below the valve must be minimum 700 mm for mounting and operation of the pneumatic actuator.

TECHNICAL DATA

Materials:	
- Valve body	Nodular cast iron EN-GJS-400-15
- Trim	Gun metal RG 5 CuSn5Zn5Pb5-C
- Valve spindle	Stainless steel (W.no. 1.4436)
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
Valve characteristic	Almost linear
Leakage Port AB-B	0.0%
Temperature range	Max. 150°C
Mounting	See below
Flanges	According to EN 1092-2, PN 16 & PN 10
- option:	According to JIS B 2210 10K
<b>Note !</b>	
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

DEFINITION OF K<sub>VS</sub>-VALUE

The k<sub>VS</sub>-value is identical to the IEC flow coefficient k<sub>v</sub> and defined as the water flow rate in m<sup>3</sup>/h through the fully open valve by a constant differential pressure, Δp<sub>v</sub>, of 1 bar.

STRAINER

It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

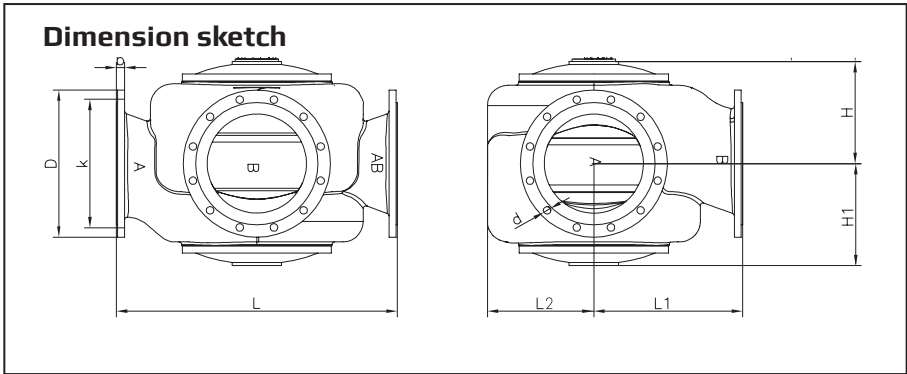
Subject to changes without notice.

3-WAY CONTROL VALVES TYPE Soft Seated

2.5.14.01-C

NODULAR CAST IRON, DN 80 – 300 mm

GB-3



DIMENSIONS							EN 1092-2			JIS B 2210 10K		
DN	L	L1	L2	H	H1	b	D (dia.)	k (dia.)	d mm dia.	D (dia.)	k (dia.)	d mm dia.
	mm	mm	mm	mm	mm	mm	mm	mm	(number)	mm	mm	(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)

THE VALVE SET:

The valve set for LDCL cooling water systems:  
Consists of:      3 way control valve type MAN Soft Seated:    300.01-B  
                         Pneumatic actuator:                                        301.01-A  
                         Filter regulator:    6.08.01-C  
                         Positioner:    Siemens SIPART PS2