

20.900 - 21.900 系列



软密封闸阀
Soft seated gate valve

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软密封闸阀 / *Soft seated gate valve*

20.900/21.900系列软密封闸阀阀体材质为球铁，严格按照相关产品质量标准生产，符合EN ISO 9001标准。该系列可分为以下几类：

20.900>扁平阀体（短结构）

21.900>椭圆阀体（长结构）

适用于供热和空调系统、水处理和供水系统、污水系统、工业、农业系统。闸板包覆NBR橡胶时（20.901系列）可用于污水处理系统。（请确保您的选择与适用范围一致）

可安装ISO5210标准的连接装置，用于扩展驱动执行器的适用范围。

NO: 不适用于蒸汽系统，不能用于流量调节。不适用于含油和碳氢化合物的流体。

附件

- 用于给水总管系统的连接方头
- 阀杆延长装置
- ISO 5210标准上法兰，可安装执行器（仅20.900系列DN40-300）
- 开关位置指示器，可配限位开关（仅20.900系列DN40-300）

驱动器

- 电动执行器

认证 / *Certifications*

符合2014/68/UE (ex 97/23/CE PED) 标准
适用于饮用水系统，符合D.M. 174标准 (仅20.900系列DN40-300)

结构及检测标准：

结构长标准：EN558/1 ISO5752
法兰标准：EN1092 ISO 7005
设计标准：EN1074, EN1171, ISO7259, EN12516, ISO 5210, EN12570
标识标准：EN19
检测标准：EN 1074

The valves in series 20.900/21.900 are soft seated gate valves, made of ductile iron, manufactured in accordance with severe product norms and relevant norms, and in conformity to EN ISO 9001; They are available in the following versions:

20.900> flat body (reduced face to face)

21.900> oval body (long pattern face to face)

These valves are suitable for heating and conditioning (HVAC), water treatment and water distribution, waste water, industrial applications, agricultural purposes. Also available with NBR coated soft seat (20.901); suitable for sewage. (Please ensure the choice of the corresponding item)

They allow the fitting of an ISO 5210 adaptor kit for a wide range of actuators to be fitted.

NO: for steam, for chocking and regulation of the flow. Not suitable for fluids containing oils and hydrocarbons.

Accessories

- Square cap for water main system connection
- Stem extension
- Kit: ISO 5210 flange for mounting actuators (only Series 20.900 DN40-300)
- ON/OFF position indicator on request with limit switches (only Series 20.900 DN40-300)

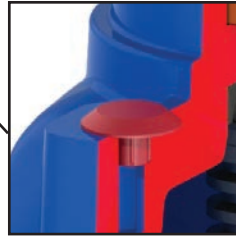
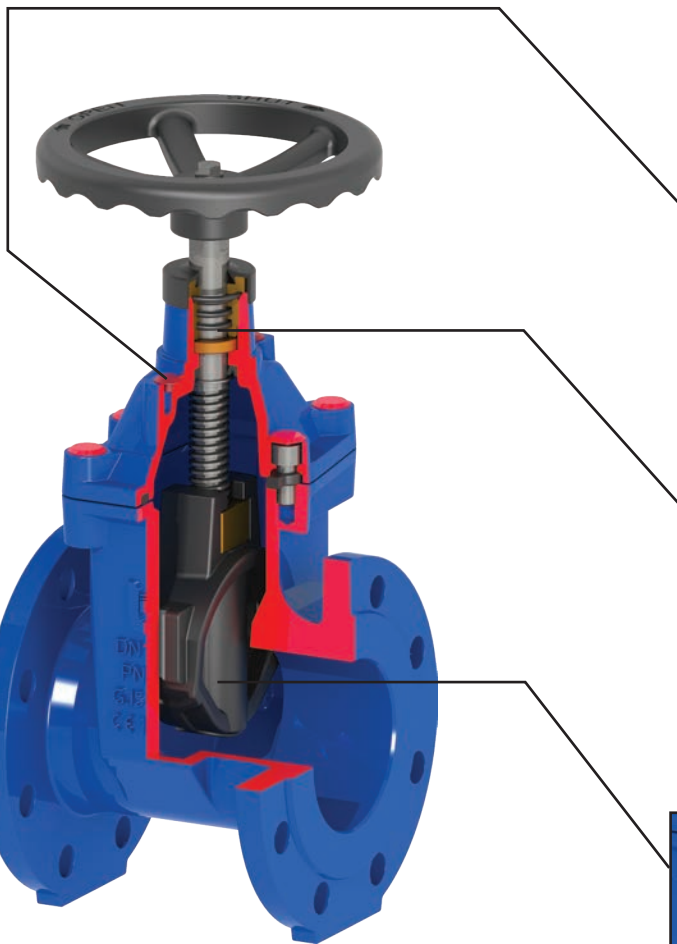
Actuators

- Electric actuators

In conformity with directive 2014/68/UE (ex 97/23/CE PED)
Suitable for drinking water application, comply with Italian regulation D.M.174 (only for series 20.900 DN40-300)

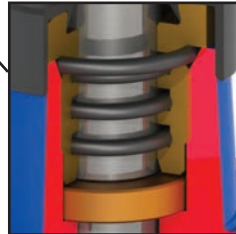
Design and testing standards (correspondences):

Face-to-face: EN558/1 ISO5752
Flanges: EN1092 ISO 7005
Design: EN1074, EN1171, ISO7259, EN12516, ISO 5210, EN12570
Marking: EN19
Testing: 100% testing in accordance with EN 1074



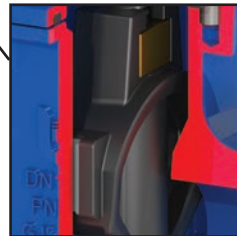
阀门安装好后仍可以安装ISO 5210标准上法兰和位置指示器。仅适用于DN300以下的20.900系列。

Predisposed for ISO 5210 flange and position indicator to be fitted, and for valves already installed. Only for series 20.900 up to DN 300.



阀杆密封处有4个O型圈，在阀门开启并承压的情况下，O型圈也可更换。仅适用于DN 300以下的20.900系列。

Stem seal with 4 O-rings, to be exchangeable while valve is in the open position, and the line is under pressure. Only for series 20.900 up to DN 300.

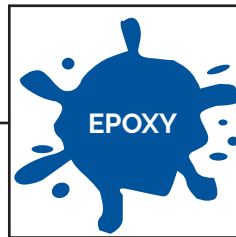


闸板全部覆盖EPDM或NBR橡胶。带通孔，防止积水。

塑料导板，降低摩擦。

Wedge fully coated with EPDM or NBR. With trough step hole, to prevent stagnant water.

Low friction wedge, plastic cap.



阀体内外均为环氧树脂喷涂，厚度在250 μm以上。

所有与介质接触的零件均满足饮用水标准。

Internal and external epoxy coating, minimum thickness 250 μm.

All parts in contact with water are suitable for drinking water treatment.

全通径。

Completely free and full bore.

软密封闸阀 / Soft seated gate valve

EPDM 阀座



20.900

阀体: EN GJS 500
 阀板: EN GJS 400-15 + EPDM
 阀杆: AISI 420
 工作温度: -10 + 85 °C

Body: ductile iron
 Soft seat: ductile iron + EPDM
 Stem: AISI 420
 Temp: -10 +85°C

NBR 阀座



20.901

阀体: EN GJS 500
 阀板: EN GJS 400-15 + NBR
 阀杆: AISI 420
 工作温度: -10 + 85 °C

Body: ductile iron
 Soft seat: ductile iron + NBR
 Stem: AISI 420
 Temp: -10 +85°C

EPDM 阀座



21.900

阀体: EN GJS 500
 阀板: EN GJS 400-15 + EPDM
 阀杆: AISI 420
 工作温度: -10 + 85 °C

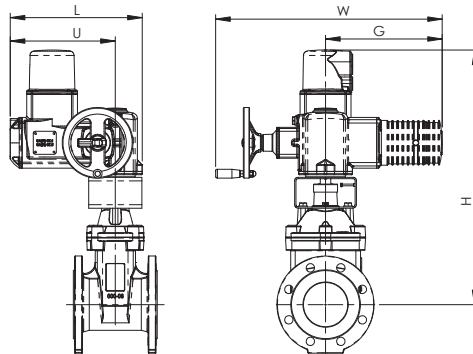
Body: ductile iron
 Soft seat: ductile iron + EPDM
 Stem: AISI 420
 Temp: -10 +85°C

驱动器和附件 / Actuators and accessories



20.900 + Attuatore elettrico

电动执行器
 Electric actuators

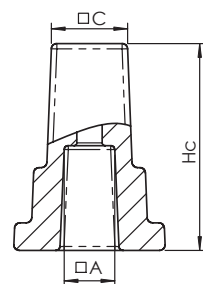


DN	40	50	65	80	100	125	150	200	250	300
L	299	299	299	299	299	312	312	375	375	375
U	237	237	237	237	237	247	247	285	285	285
H	452	466	492	538	560	609	648	796	895	954
W	514	514	514	514	514	536	536	713	713	713
G	265	265	265	265	265	282	282	384	384	384
重量 Weight	28,7	30,1	33,8	35,6	40,4	50,4	58,9	105,6	135,1	166



KCAP20

用于给水总管系统的连接方头
 Square cap for water main system connection

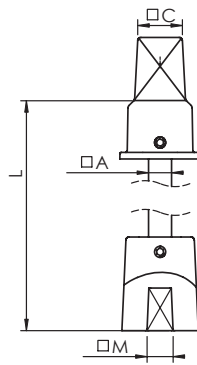


DN	40-50-65	80-100-125-150	200-250-300
Hc	53	75	100
C	27	27	27
A	14	19	27



AMF

阀杆延长装置
Stem extension

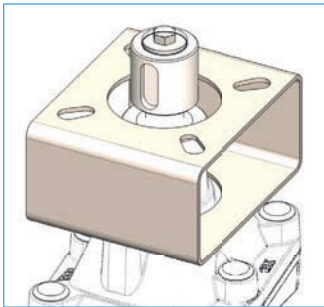


20.900系列

DN	40 - 65	80 - 150	200 - 300
Mod	AMF1000X14X15	AMF1000X16X21	AMF1000X18X28
L	1000	1000	1000
A	14	16	18
M	15	21	28
C	26	26	26

21.900系列

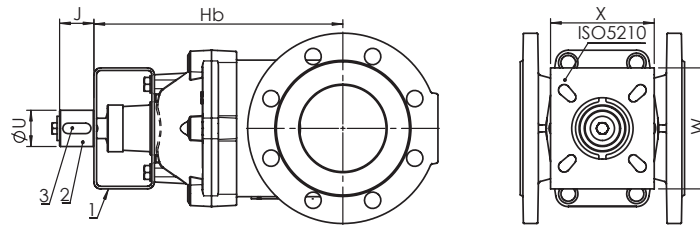
DN	50 - 65	80 - 100	125 - 200	250 - 300
Mod	MF1000X16X17	AMF1000X16X21	AMF1000X18X23	AMF1000X18X26
L	1000	1000	1000	1000
A	16	16	18	18
M	26	26	26	26
C	26	26	26	26



KISO20(20.900系列)

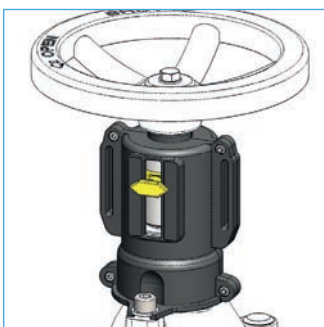
ISO 5211法兰装置, 用于安装驱动
执行器

Kit ISO flange actuator
mounting



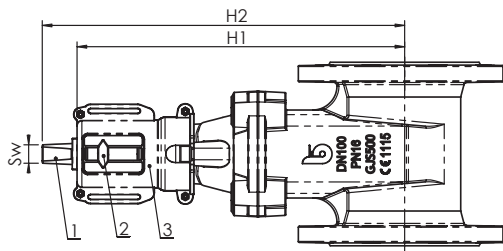
- 1) 支架 (镀锌钢)
 - 2) 接头 (镀锌钢)
 - 3) 普通平键BxL ISO R773 / DIN 6885A
- 1) Bracket (galvanized steel)
2) Joint (galvanized steel)
3) BxL ISO R773 / DIN 6885A parallel key

DN	40	50	65	80	100	125	150	200	250	300
ISO 5210	F10	F10	F10	F10-12	F10-12	F10-12	F10-12	F14	F14	F14
Hb	179	193	219	265	287	334	373	481	560	639
X	100	100	100	120	120	120	120	140	140	140
W	120	120	120	140	140	140	140	180	180	180
J	41	41	41	42	42	42	42	63	63	63
U	42	42	42	42	42	42	42	60	60	60
BxL	12x32	12x32	12x32	12x32	12x32	12x32	12x32	18x50	18x50	18x50
该件重量 - Kit Weight	1.25	1.25	1.25	1.5	1.5	1.5	1.5	3.1	3.1	3.1



KPOS20 (20.900系列)

开关位置指示器
ON/OFF position indicator



- 1) 中继块 (镀锌钢)
- 2) 指示器 (DN40-150 POM / DN200-300 镀锌钢)
- 3) 盖子 (DN40-150 POM / DN200-300 镀锌钢)

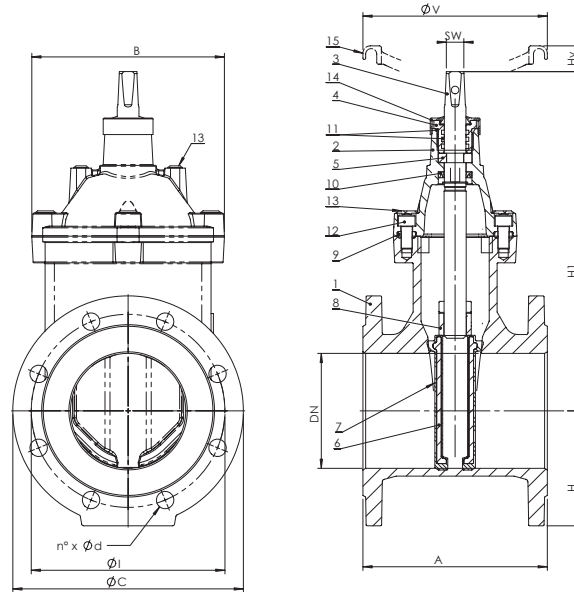
- 1) Hub (galvanized steel)
2) Indicator (DN40-150 POM / DN200-300 galvanized steel)
3) Cover (DN40-150 POM / DN200-300 galvanized steel)

DN	40	50	65	80	100	125	150	200	250	300
H1	244	258	283	320	343	389	428	564	660	721
H2	271	285	310	358	381	427	466	617	713	774
SW	14	14	14	19	19	19	19	27	27	27
该件重量 - Kit Weight	1.15	1.15	1.15	1.11	1.11	1.11	1.11	2.67	2.67	2.67

可配限位开关

On request with limit switches

20.900系列



尺寸 (mm) / Dimensions (mm)

DN		40	50	65	80	100	125	150	200	250	300			
A	EN558/1 14	140	150	170	180	190	200	210	230	250	270			
H1		208	222	247	300	322	369	408	531	610	689			
H		75	82,5	92,5	100	110	125	142,5	170	202,5	230			
B		128	128	145	162	181	209	239	305	362	422			
V		160	160	160	200	200	250	250	300	380	450			
Hv	近似值 / approx.	20	20	20	30	30	36	36	38	38	38			
SW		14	14	14	19	19	19	19	27	27	27			
法兰 Flanges	EN 1092-2	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10	PN16	PN10	PN16	PN10	PN16
C		150	165	185	200	220	250	285	340	405	460			
I		110	125	145	160	180	210	240	295	350	355	400	410	
n° x d		4x19	4x19	4x19	8x19	8x19	8x19	8x23	8x23	12X23	12X28	12x23	12X28	
闭合圈数 Turns for closing		11	13	17	17	21	26	31	34	42	51			

重量 (kg) / Weight (kg)

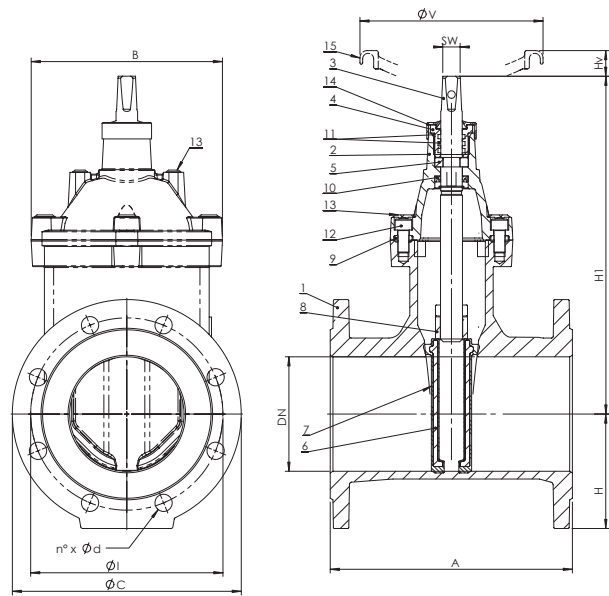
20.900	带手轮时 with handwheel	9,7	11,1	14,8	16,6	21,4	27,4	35,9	58,6	88,1	119
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扭矩 (Nm) / Operating torque (Nm)

Dp 16 bar	48	48	48	70	70	100	100	120	180	225
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符合EN1074标准的最大扭矩MOT, 包含执行机构选型的安全系数在内。

Maximum operating torque MOT according to EN1074, safety factor for actuator sizing included.



尺寸 (mm) / Dimensions (mm)

DN		40	50	65	80	100	125	150	200	250		
A	EN558/115	240	250	270	280	300	325	350	400	450		
H1		268	268	296	340	367	424	515	550	685		
H		75	82.5	92.5	100	110	125	142.5	170	202.5		
V		150	150	150	175	200	250	250	280	300		
Hv	近似值 / approx.	20	20	20	30	30	36	36	38	38		
SW		15	15	15	17	17	19	19	24	24		
法兰 Flanges	EN 1092-2	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10/16	PN10	PN16	PN10	PN16
C		150	165	185	200	220	250	285	340	405		
l		110	125	145	160	180	210	240	295	355	350	
n° x d		4x18	4x19	4x19	8x19	8x19	8x19	8x23	12x28	12x23	12x28	12x23
闭合圈数 Turns for closing		11	13	17	17	21	26	31	34	42		

重量 (kg) / Weight (kg)

21.900	光杆时 Free shaft	-	13.7	17.5	22.8	30.6	43	53	88	118.5
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扭矩 (Nm) / Operating torque (Nm)

Dp 16 bar	41	41	45	55	89	158	169	210	245
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注意：请将扭矩数值乘以1.5倍作为选择驱动装置的依据。

N.B.: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1.5

材质 / Materials

组件 - Component	材质 - Material		
	20.900	20.901	21.900
1 阀体 - Body	球铁 - Ductile iron EN GJS500-7 EN1563		
2 阀盖 - Bonnet	球铁 - Ductile iron EN GJS500-7 EN1563		
3 阀杆 - Stem	不锈钢 - Stainless steel X20Cr13 EN10088 (AISI 420)		
4 圆环 - Ring	黄铜 - Brass CW614 EN12164		
5 止推轴承 - Thrust bearing	青铜 - Bronze		
6 楔块 - Wedge + 楔块涂层 - wedge coating	球铁 - Ductile iron EN GJS500-7 EN1563 EPDM	NBR	EPDM
7 楔块滑帽 - Wedge sliding caps	PA66		
8 楔块螺母 - Wedge nut	黄铜 - Brass CW614 EN12164		
9 阀盖密封 - Bonnet seal	EPDM	NBR	EPDM
10 唇形密封 - Lip seal	EPDM	NBR	NBR
11 O型圈 - O-ring	EPDM	NBR	NBR
12 螺栓 - Screws	镀锌钢 - Galvanized steel		
13 螺栓罩盖 - Screw cover cap	聚乙烯 - Polyethylene		
14 防尘盖 - Dust guard	NBR		
15 手轮 - Hand Wheel	碳钢 (表面环氧树脂喷涂) - Carbon steel epoxy coated		

软密封闸阀 / Soft seated gate valve

20.900-20.901系列最大工作压力 Maximum pressure 20.900-20.901

介质 * - Fluids *	安装位置 - Mounting	
	法兰中间 BETWEEN FLANGES	管路末端 END OF LINE
危险性气体 Hazardous gases	NO	NO
非危险性气体 Non-hazardous gases	16 bar	
危险性液体 Hazardous fluids	16 bar	
非危险性液体 Non-hazardous fluids	16 bar	
水** Water**	16 bar	

21.900系列最大工作压力 Maximum pressure 21.900

介质 * - Fluids *	安装位置 - Mounting	
	法兰中间 BETWEEN FLANGES	管路末端 END OF LINE
危险性气体 Hazardous gases	NO	NO
非危险性气体 Non-hazardous gases	NO	
危险性液体 Hazardous fluids	NO	
非危险性液体 Non-hazardous fluids	16 bar	
水** Water**	16 bar	

* 危险性气体、液体的认证以2014/68/EU e 1272/2008 (CLP) 标准为准

** 是指供水和排水系统的水 (PED 2014/68/EU 1.12b)

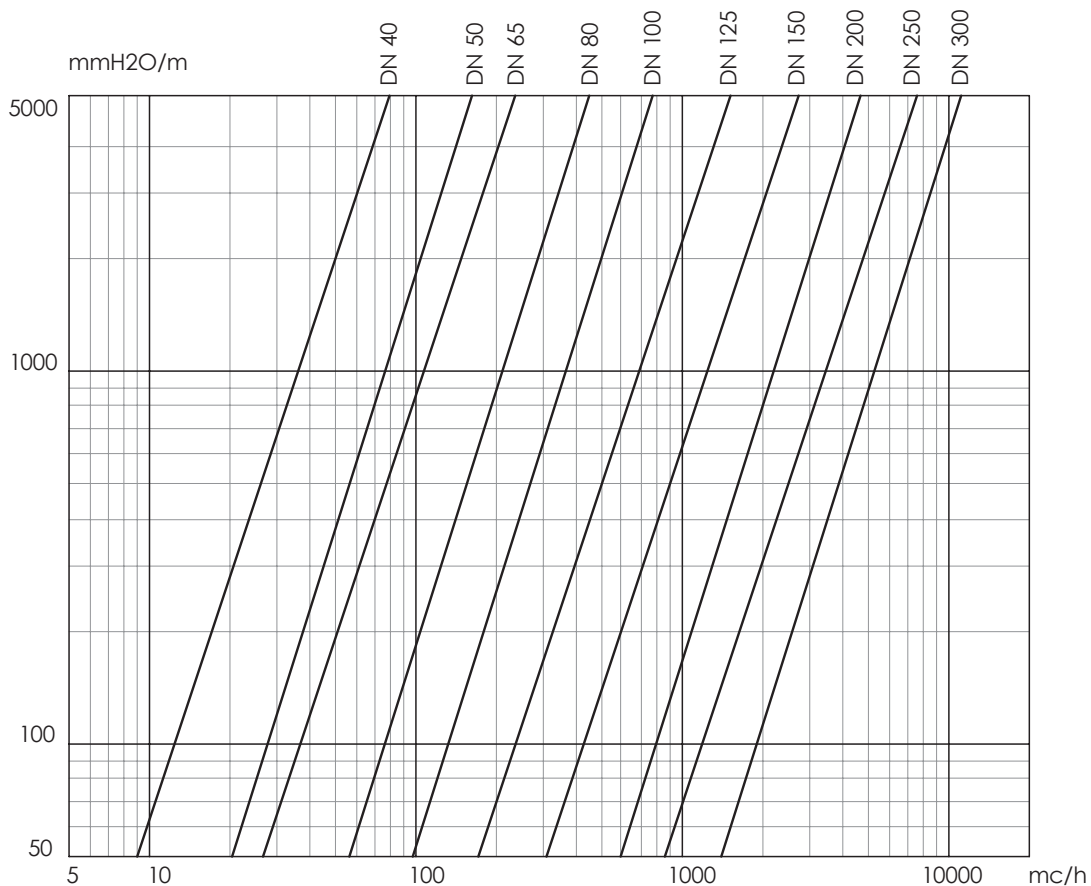
* hazardous gas, liquids acc. 2014/68/EU e 1272/2008 (CLP)

** For supply, distribution and discharge of water (PED 2014/68/EU 1.12b)

工作温度 / Temperature (°C)

温度 Temperature	最低 Min	最高 Max
		长期 - continuous
EPDM	-10	85
NBR	-10	85

水头损失 介质: 水 (1m H₂O = 0,098bar) / Head loss Fluid: water (1m H₂O = 0,098bar)



20.900-21.900系列建议及说明

储存

请保存在密闭干燥的环境中。

维护 (仅20.900-20.901系列)

布朗多尼克密封闸阀符合ISO 7259标准, 因此允许在不拆卸阀门正常压力下更换阀杆处O型圈。

1. 完全打开阀门
2. 旋下螺栓, 取下手轮 (如图1中的NO.1)
3. 取下防尘罩 (如图1中的NO.2)
4. 取下轴套 (如图1中的NO.3)
5. 更换O型圈
6. 重新组装

即使在部分卸下压力降低时也可对内部部件进行更换。

建议

阀门进行任何维修或拆卸前, 请确保:

阀门、管路中的流体已冷却; 阀门、管路中的压力已卸去; 有毒、易燃、有腐蚀性的流体已排净。

50°C以上及0°C以下的流体可能会对人体造成伤害。

Instructions and Recommendations for series 20.900-21.900

STORING

Keep in dry and closed place.

MAINTENANCE ONLY FOR 20.900-20.901

Brandoni's soft seated gate valves conform to ISO 7259 norms and therefore allow replacement of the stem O-ring seals without dismantling the valve, with the line under pressure.

1. Open the valve completely
2. Remove bonnet/hand wheel by loosening the screws (fig.1 n°1)
3. Remove the dust protection (fig.1 n°2)
4. Take out the bushing (fig.1 n°3)
5. Replace the O-ring
6. Reassemble

It is possible to work on other internal parts by sectioning off the line and depressurizing but without dismantling the body of the valve.

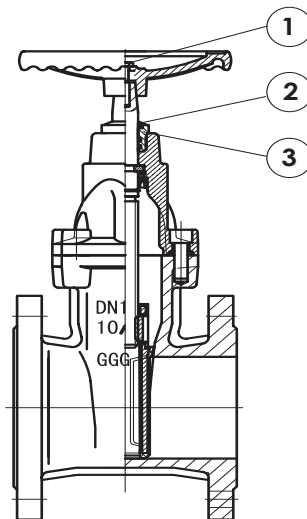
RECOMMENDATIONS

Before carrying out maintenance or dismantling the valve:

Ensure that the pipes, valves and fluids have cooled down, that the pressure has decreased, and that the lines and pipes have been drained in case of toxic, corrosive, inflammable or caustic liquids.

Temperatures above 50°C and below 0°C might cause damage to people.

图1/FIG.1



安装

- 小心装卸。
- 阀门安装时需处于全开或全关状态。
- 移动阀门时必须使用吊带及安全吊钩来操作 (如图2所示)。
- 不能先将阀门与法兰连接后, 再去将法兰与管道进行焊接。
- 安装阀门前请确保管路中的残余物已排空, 如沙土、小石头等。
- 安装在井中时, 请确保具备适当的排水装置。

INSTALLATION

- Handle with care
- The valve must be installed in an open or closed position.
- The lifting of the valve must be done using belts and safety hooks (fig.2).
- Do not weld the flanges to the piping after installing the valve.
- Prior to installing the valve, ensure that the piping has been carefully cleaned and is free of any residual particles, such as soil, small stones, etc.
- In case of installation in wells, ensure there is suitable drainage.

软密封闸阀 / *Soft seated gate valve*

- 当口径大于DN200时，建议使用松套法兰连接，以利于安装和拆卸。
- 将阀门放置在管路法兰之间，并在中间对正放置密封垫圈。检查密封垫圈放置是否正确。
- 对接法兰间的距离需与阀门结构长相同。
- 不能用螺栓强行将管路法兰向阀门拉近。
- 需交叉旋紧螺栓。
- 不能先将阀门与法兰连接后，再去将法兰与管道进行焊接。
- 水锤作用会使阀门损坏或破裂。倾斜、扭转、阀门管路中心线与管路未对准会使阀门受力。建议安装弹性接头等来尽量减少管路的震荡。

使用

当系统暴露于可使介质结冻的环境时，需及时将阀门和管路介质排空。

处置

对于输送危险介质（有毒、腐蚀性……）的阀门，如果阀门中可能残留残余物，请采取适当的安全预防措施并进行必要的清洁。负责人员必须经过培训并配备适当的防护装置。在处置之前，请按照不同材料拆卸阀门并分离组件。请参考产品资料获取更多信息。根据当地和现行有效的法规并在考虑环境的情况下，将分类的物料送交回收利用（例如金属材料）或进行处置。

- In case of installation of valves of diameter greater than DN 200, it is recommended that a dismantling joint be installed, in order to facilitate the installation/disassembly.
- Place the valve between the flanges of the tube and put liners between the flanges of the valve and the flanges of the tube. Check that the liners are positioned correctly.
- The distance between the counter flanges must be the same as the face to face distance of the valve.
- Do not use the bolts of the counter flanges to close the piping. The bolts must be tightened crosswise.
- Do not weld the flanges to the pipe after installing the valve.
- Water hammers might cause damage and ruptures. Inclination, twisting and misalignments of the piping may subject the valve to stress, once it has been installed. It is recommended that elastic joints be used, in order to reduce these effects as much as possible.

USE

In environments exposed to frequent freezing, drain the piping and the valve of stagnant water.

DISPOSAL

For valve operating with hazardous media (toxic, corrosive...), if there is a possibility of residue remaining in the valve, take due safety precaution and carry out required cleaning operation. Personnel in charge must be trained and equipped with appropriate protection devices. Prior to disposal, disassemble the valve and separate the component according to various materials. Please refer to product literature for more information. Forward sorted material to recycling (e.g. metallic materials) or disposal, according to local and currently valid legislation and under consideration of the environment.

图2/FIG.2

