

Diaphragm Valve

## **SISTO-10M**

PN 10  
DN 15-80 / Rp ½-3 in.

### **Type Series Booklet**



**SISTO**

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Type Series Booklet SISTO-10M

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## Diaphragm Valves

### Diaphragm Valves – No Dead Volume, Soft-seated, Glandless

## SISTO-10M



#### Main applications

- Mining
- General irrigation systems
- Industrial recirculation systems
- Air-conditioning systems
- Washing plants
- Water extraction
- Sugar industry

#### Fluids handled

- Brackish water
- Service water
- Cooling water
- Volatile fluids
- Fluids containing mineral oils
- Polymerising/crystallising fluids
- Lubricants
- Thermal oil

#### Operating data

##### Operating properties

Characteristic	Value
Nominal pressure	PN 10
Nominal size	DN 15 - 80
Nominal size [inch]	Rp ½ - 3
Max. permissible pressure [bar]	10
Min. permissible temperature [°C] <sup>1)</sup>	≥ -10
Max. permissible temperature [°C] <sup>1)</sup>	≤ +140

#### Body materials

##### Overview of available materials

Material	Material number	Temperature limit
EN-GJL-250	5.1301	-10 °C to +140 °C

#### Design details

##### Design

- Soft-seated shut-off valve in straight-way pattern
- Rising handwheel
- Shut-off and sealing to atmosphere by supported diaphragm (spiral-supported from DN 65)
- Position indicator with integrated stem protection
- Manufactured and tested to EN 13397
- Marked in accordance with DIN EN 19 (ISO 5209)
- The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 2014/68/EU (PED) for fluids in Groups 1 and 2.
- The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, Group II, category 1 (zones 0+20), category 2 (zones 1+21) and category 3 (zones 2+22) to ATEX 2014/34/EU.

##### Variants

- Actuator (electric or pneumatic)
- Diaphragm made of EPDM, temperature limit: +140 °C
- Diaphragm made of CSM, temperature limit: +100 °C
- Diaphragm made of IIR, temperature limit: +120 °C
- Diaphragm made of NBR, temperature limit: +90 °C
- Certification to customer specification

##### Product benefits

- **Reliable sealing to atmosphere and absolutely tight shut-off**  
The diaphragm provides absolutely tight shut-off as well as hermetic sealing to atmosphere and of all operating elements.
- **Extended service life and pressure limit**  
The diaphragm support increases valve life and extends the pressure limit of the diaphragm.
- **Excellent functional reliability**  
Increased functional reliability of the diaphragm thanks to balanced diaphragm suspension.
- **Smooth actuation**  
The thrust bearing minimises the closing torques.

1) The temperatures indicated are for orientation only; they are not valid for all operating conditions.

- **Optimised long-term operation**  
The stem protection integrated in the position indicator prevents ingress of contaminants.
- **Fluid purity**  
Valve hydraulics without dead volume ensure optimum conditions for high-purity fluids and protection against deposits.
- **Quick identification of valve position**  
The valve's position can be easily identified via a clear visual indicator, also visible from a distance.
- **Reliable operation**  
The stem and all internal operating elements are **not** in contact with the fluid.

### Related documents

Information/documents

Document	Reference number
Operating manual	0570.82

### Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Nominal pressure
3. Nominal size
4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet
11. Certificate

### Flow coefficients

Flow coefficients for unlined valves

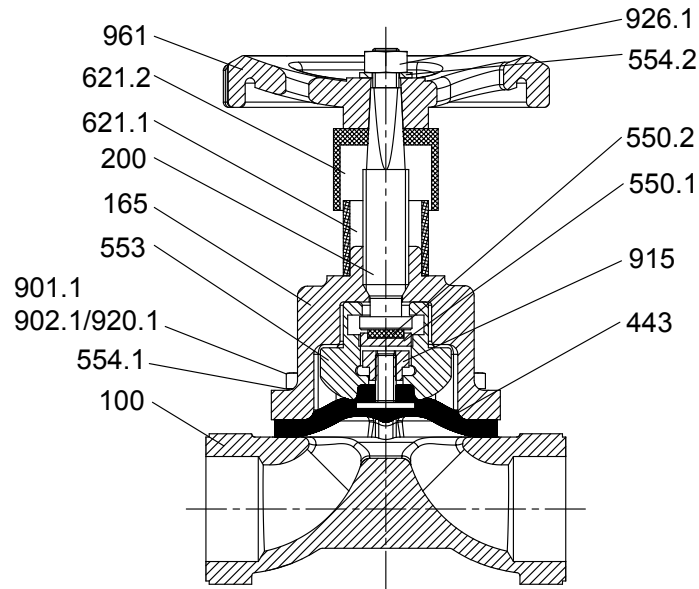
Inch	Kvs value [m <sup>3</sup> /h]	Inch	Kvs value [m <sup>3</sup> /h]
½	4,7	1½	37,0
¾	9,8	2	69,0
1	15,0	2½	109,0
1¼	23,0	3	159,0

### Pressure/temperature ratings

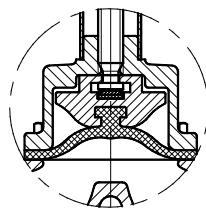
Permissible operating pressure [bar]

PN	Material		[°C]	
	Designation	Number	-10 to +120	+140
10	EN-GJL-250	5.1301	10	10

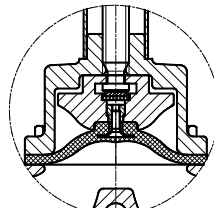
**Materials of SISTO-10M manually operated valve**



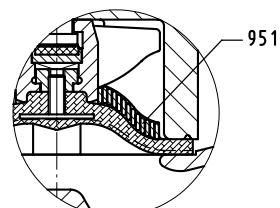
SISTO-10M



Rp 1/2-3/4 in.



Rp 1-2 in.



Rp 2 1/2-3 in.

**Parts list**

Part No.	Description	Material	Material number	Note
100	Body	EN-GJL-250	5.1301	Standard
165	Bonnet	EN-GJL-250	5.1301	Standard
200	Stem	X14CrMoS17	1.4104	-
443 <sup>2)</sup>	Diaphragm	EPDM	-	Standard
550.1	Bearing disc	11SMnPb30	1.0718	Rp 1-3 in.
550.2	PTFE disc	PTFE/graphite	-	Rp 1-3 in.
553	Compressor	EN-GJL-250	5.1301	Rp 1/2-3/4 in. = GD-ZnAl4Cu1
554.1	Washer	A2	-	For Rp 1/2-3/4 in.
554.2	Washer	A2	-	-
621.1	Position indicator, lower part	ASA Luran	-	-
621.2	Position indicator, upper part	ASA Luran	-	Rp 1-3 in.
901.1	Hexagon head bolt	A2	-	Rp 1/2-2 1/2 in.
902.1	Stud	A2	-	Rp 3 in.
915	Floating nut	11SMnPb30	1.0718	Rp 1-3 in.
920.1	Nut	A2	-	Rp 3 in.
926.1	Prevailing torque nut	A2-70	-	Rp 1-3 in.
951	Support spiral	St 2K BK	-	Rp 2 1/2-3 in.
961	Handwheel	EN-GJL-200	5.1300	Rp 1/2-3/4 in. = polycarbonate (PC)

2) Recommended spare parts





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