



Application

Single seat double seal are used in automated piping systems where product mixing from water hammer or seat failure are a concern. Designed for leak detection and for safe media separation in hygienic process applications.

Working Principle

The 870 series Single seat double seal consists of a single seat with two seals, conical as well as radial. The space between the two seals form a chamber where product is trapped during pressure surge or seat failure. The radial seal remains in contact with the valve body at all times preventing any mixing of the two different liquids. Then any media trapped in the leakage chamber is flushed from the valve body by means of a cleaning valve, further the chamber can be cleaned by flushing CIP solution through the cleaning valve and drain port.

Standard Design

The self draining machined and polished valve body is made from acid resistance stainless steel. The round shape offers minimum resistance to flow. The valve body, yoke, and pneumatic actuator are connected by clamps enabling easy and quick assembly and disassembly. The Open yoke design ensures easy cleaning of the valve plug. The plug is concave forming a leakage chamber which facilitates easy and thorough cleaning of the valve plug. The lower body consists of two cleaning ports with pneumatic valves for leak detection and CIP of valve plug and chamber. All Seats and Seals are made from FDA approved materials.

Available Sizes

1", 1½", 2", 2½", 3", 4"

DN25, DN40, DN50, DN65, DN80, DN100

Options

Material : 304L or 316L

End connections: Sanitary Clamp, Butt-Weld.

*offer end connections upon request
please consult the factory.

Electrical control unit with proximity switches, AS-Interface.



**Technical Specification :****Material :**

Product wetted steel parts.....AISI 316L

Other steel parts..... AISI 304

FDA Seals :

Seat seal(s).....EPDM

Optional..... SILICONE

VITON

BUNA

Lip seal & Seal ring.....EPDM

Optional.....VITON

SILICONE

BUNA

Others Seals.....EPDM

Nominal Pressure :

Maximum product pressure.....10 bar maximum (150 PSI)

Supply pressure for air actuator..... 70 - 115 PSI (Dry Air)

Temperature & Chemical Compatibility :

Please refer to the temperature and chemical compatibility charts located in the General Information section of the catalog. Temperature and chemical compatibility are limited by the seal material.

Surface Finish :

Surface in contact with product..... Ra <= 23 µ in (Grit 180g)

Optional.....Ra <= 16 µ in (Grit 240g)

Ra <= 10 µ in (Grit 320g)

*Electropolishing available upon request

Connections Sanitary Clamp (ISO 2852 / BS 4825-3 / DIN 32676)

Optional Butt Weld (ISO 2037 / BS 4825-01 / DIN 11850)

I-Line, Threaded Union End

Intermediate Flange

Other connections on request

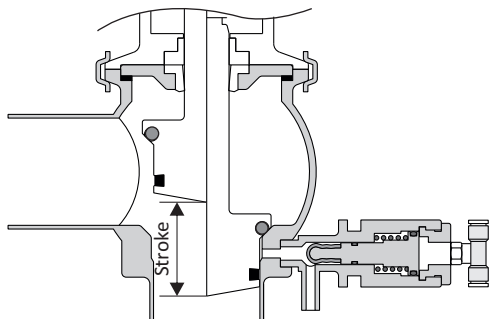
Closing Time 870 Series

		Closing times in seconds control air pressure 6 bar
		Hose length 1 meter
DIN	Inch	
40	1.5"	1.4
50	2"	2
65	2.5"	2
80	3"	3





Valve Stroke 870 Series



DIN	INCH	Stroke in mm
40	1.5"	0
50	2"	43
65	2.5"	48
80	3"	59

Pneumatic air consumption at 6 bar corol pressure

Actuator	Per stroke NL
Ø110mm	2.3
Ø130mm	4.6

Compressed air quality

Compressed air quality : quality class according to ISO 8573-1

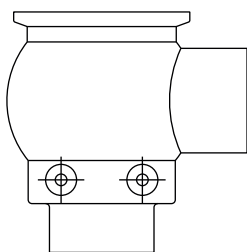
Content of solid particles : quality class 3,
max. number of particles per m³
10000 of 0,5 µm < d ≤ 1,0 µm
500 of 1,0 µm < d ≤ 5,0 µm

Content of water : quality class 3,
max. dew point temperature - 20 °C For installations at
lower temperatures or at higher altitudes, additional
measures must be considered to reduce the pressure
dew point accordingly.

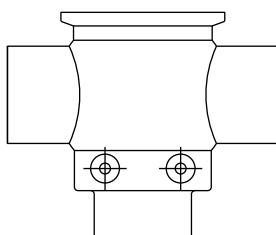
Content of oil : quality class 1, max. 0,01 mg/m³

The oil applied must be compatible with Polyurethane elastomer materials.

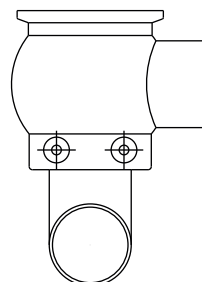
Body Configuration



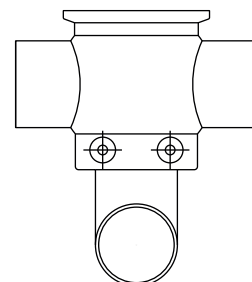
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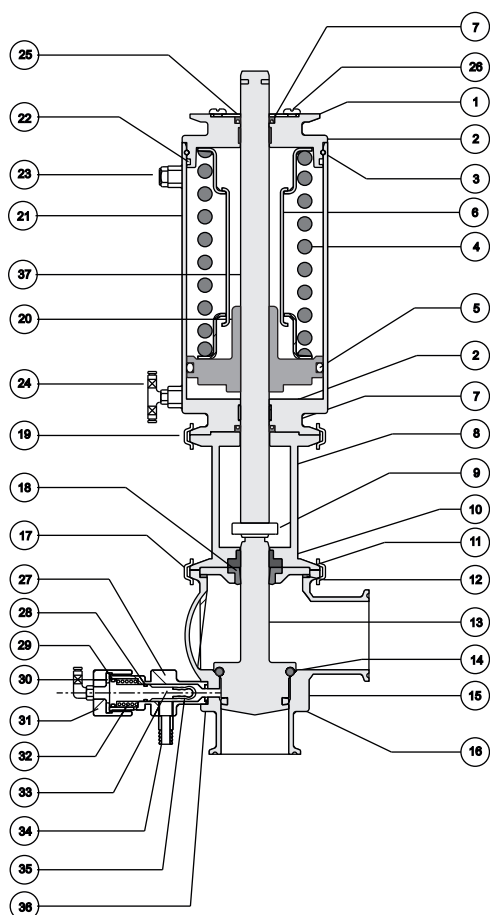


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Cross Section view of single seat double seal

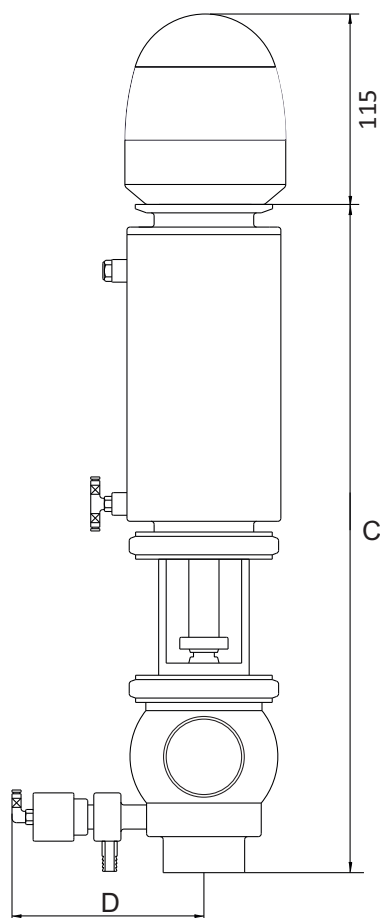


ITEM	DESCRIPTION	MATERIAL
1.	COVER	AISI 304
2.	SPLIT RING	PTFE
3.	CIRCLIP	AISI 304
4.	SPRING	SPRING STEEL
5.	ORING	EPDM
6.	SPRING HOUSING	AISI 304
7.	U SEAL	EPDM
8.	YOKE	AISI 304
9.	CLIP	AISI 304
10.	GUIDE BUSHING	PTFE
11.	LIP SEAL HOUSING	AISI 316L
12.	SEAL RING	EPDM
13.	VALVE PLUG	AISI 316L
14.	ORING	EPDM
15.	LOWER VALVE BODY	AISI 316L
16.	ORING	EPDM
17.	CLAMP	AISI 304
18.	LIP SEAL	EPDM
19.	CLAMP	AISI 304
20.	PISTON	ALUMINIUM
21.	ACTUATOR HOUSING	AISI 304
22.	ORING	EPDM
23.	AIR EXHAUST	BRASS
24.	AIR UNION	BRASS
25.	COVER	AISI 304
26.	SCREW	AISI 304
27.	VALVE BODY	AISI 316L
28.	ORING	EPDM
29.	ORING	EPDM
30.	GASKET	EPDM
31.	COVER	AISI 304
32.	SPRING	AISI 304
33.	PLUNGER	AISI 316L
34.	PURGE PORT	AISI 316L
35.	DIAPHRAGM	EPDM
36.	GASKET	EPDM
37.	PISTON ROD	AISI 304





Dimensions

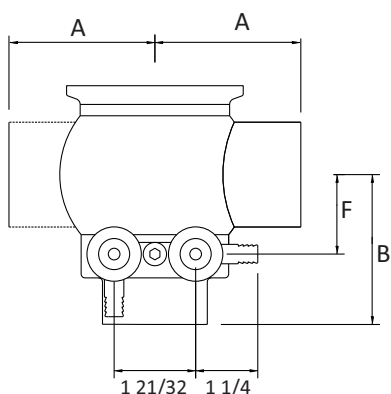


Dimensions ISO (mm)

Dimensions	A	B	C	D	F
1.5"	60	74	445	121	35
2"	70	59	456	128	41
2.5"	80	94	470	139	49
3"	89	79	522	143	56

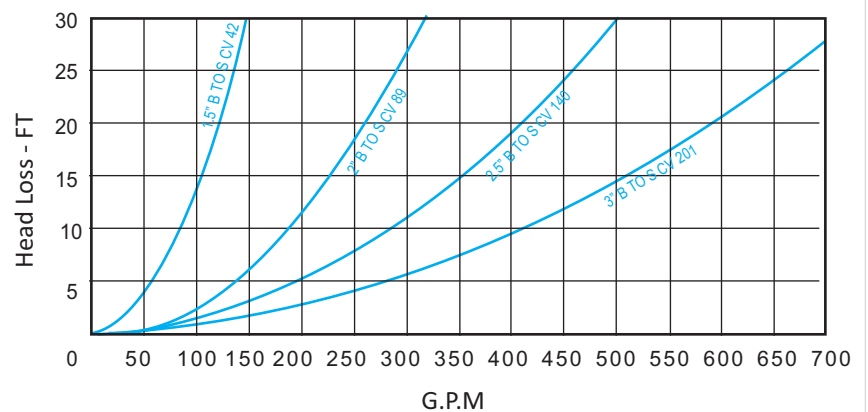
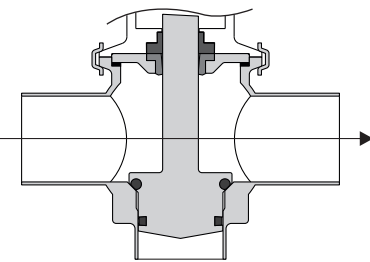
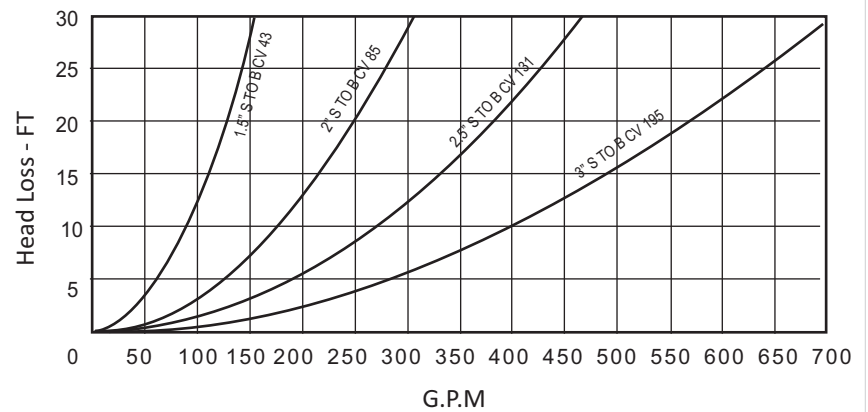
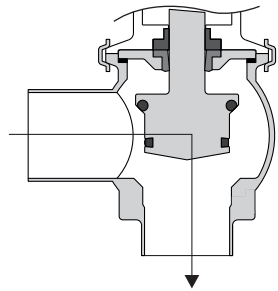
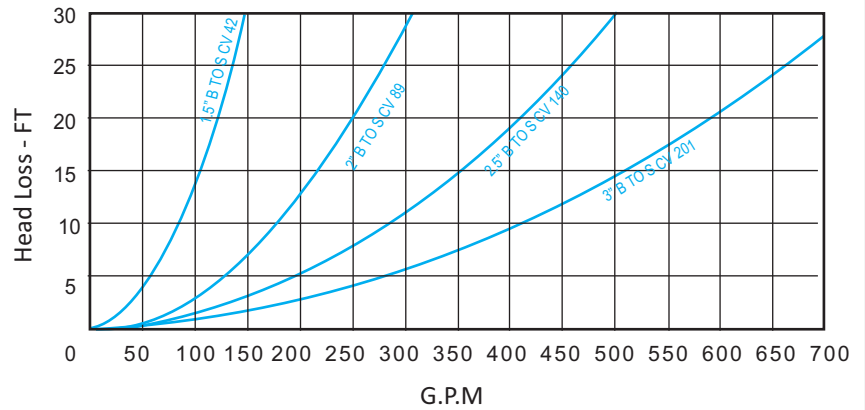
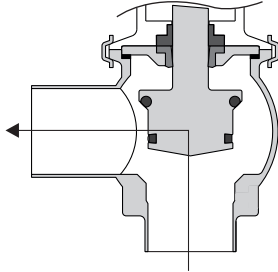
Dimensions DIN (mm)

Dimensions	A	B	C	D	F
40	68	47	440	120	37
50	80	67	450	128	42
65	90	78	465	138	52
80	98	80	540	143	60



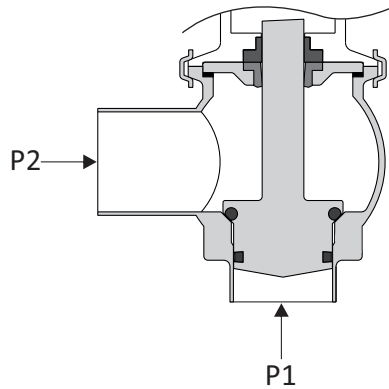


Pressure Loss Curve





Holding Pressure Chart



Standard Stroke

		Actuator Size DN/in	Valve Size - Pressure in PSI			
			40 1.5"	50 2"	65 2.5"	80 3"
Port P1, actuator spring holds closed against:		35AO	120	75	55	-
		45AO	180	95	70	70
		65AO	-	-	-	84
Port P2, Air to port A, will open against :	60 PSI	35AO	225	140	85	-
	60 PSI	45AO	270	172	105	79
		65AO	-	-	-	104





870 Series Single Seat Double Seal Valve Ordering System

