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Proven, Dependable Performance

361 Seat Valve

PD 66362 US1 2001-10

Application

This air-operated seat valve features the positive action of a short-stroke actuator. The 361 valve is ideal for high volume, sanitary liquid processing applications. It's heavy-duty clamps and precision-molded bonnet gaskets ensure positive alignment under severe operating conditions. The 361 valve has a sanitary and flexible design allowing it to be used in a wide range of applications, e.g. as a stop valve with two or three ports or as divert valve with three to five ports.

Working principle

The valve is remote-controlled by means of compressed air. It has few and simple moveable parts which results in a very reliable valve.

Standard design

The 361 valve features an open yoke and visible valve stem coupler to meet the requirements of a Clean-In-Place valve. The valve stem design requires only a single o-ring. The o-ring and stem groove can be thoroughly cleaned and sanitized by oscillating the valve stem during the cleaning cycle. Other features include valve porting flush to the bottom surface of the valve body to ensure full drainage. The highly polished surface areas help eliminate the crevices and "blind" areas that can hide or trap bacteria.

Other valves in the same basic design:

- Air operated seat valve, type 761.
- Sanitary Remote controlled valve, type SRC.
- Aseptic Remote controlled valve, type ARC.
- Sanitary Manual valve, type SMO.
- Sanitary Manual regulating valve, type SMO-R.

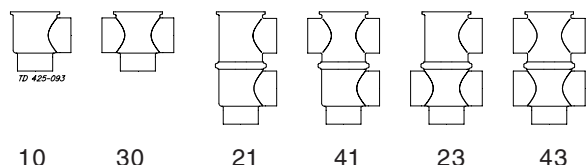
Actuator function

- Pneumatic downward movement, spring return (NO).
- Pneumatic upward movement, spring return (NC).
- Pneumatic upward and downward movement (A/A),
- Actuator for intermediate position of the valve plug as option



Fig. 1. 361 Divert valve with 21 body.

Valve body combinations

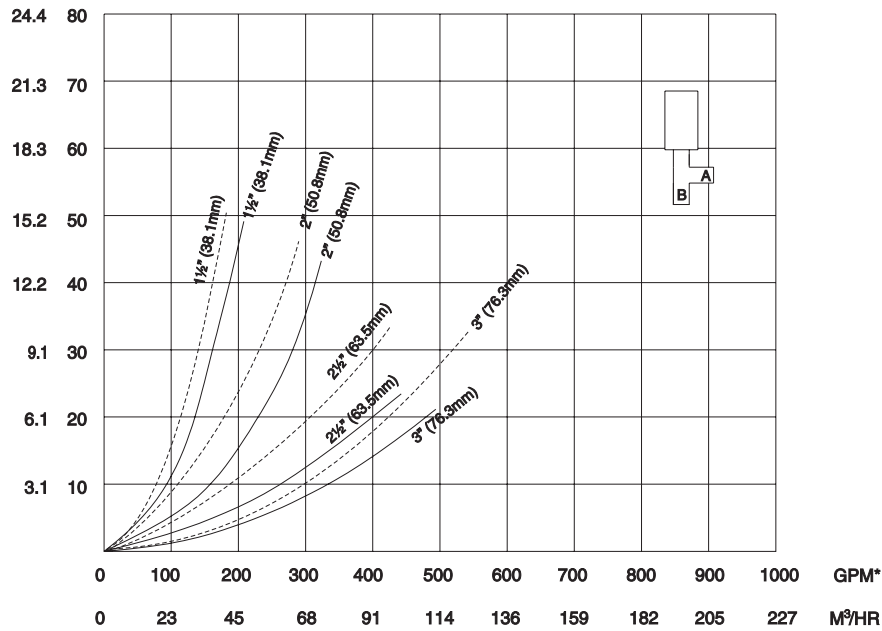


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Pressure drop/capacity diagrams

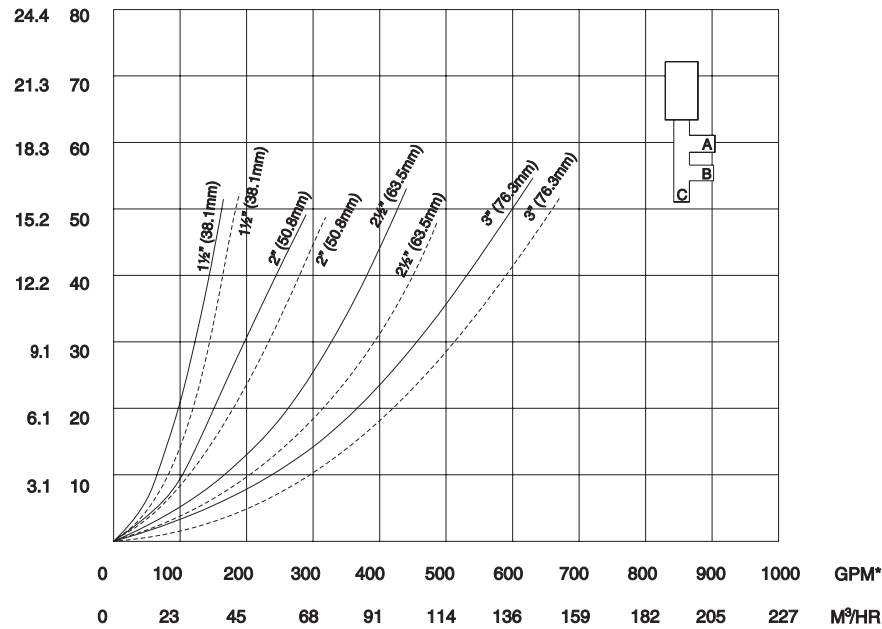
Shut-off valve

Flow Pattern: B to A (Solid Curve), A to B (Broken Curve)



Divert valve

Flow Pattern: B to A (Solid Curve), B to C (Broken Curve) - Crossbodies Only

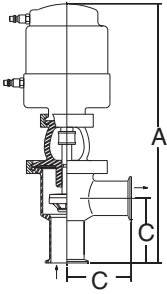


Note! For the diagrams the following applies:
 Medium: Water (68°F).
 Measurement: In accordance with VDI 2173.

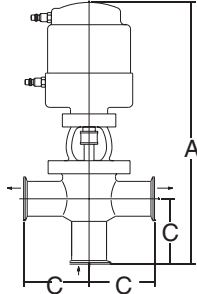
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Dimensions

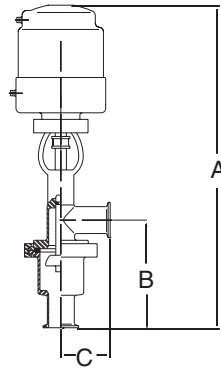
Dimensions for all 361 Shut-Off/Divert valves with standard actuators are shown.



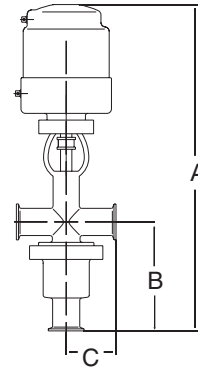
361-10



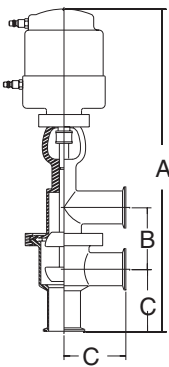
361-30



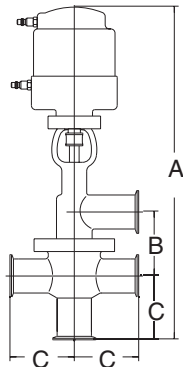
361-27
Reverse-Acting



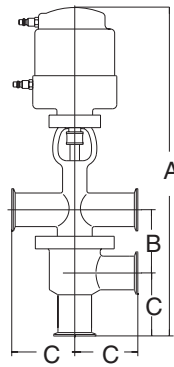
361-47
Reverse-Acting



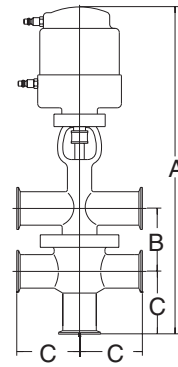
361-21



361-23



361-41



361-43

Valve Size		A				B				C	
		Shut-Off Valves		Divert & Reverse-Acting Shut-Off Valves		Divert Valves		361-27 & 47 Only			
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1	25	14	356	17.80	452	3.31	84	NA	NA	2.5	64
1 1/2	38	13.88	352	17.88	454	3.25	83	6	152	2.75	70
2	51	14.88	448	19.38	548	3.75	95	7.25	184	3.5	89
2 1/2	63.5	15.88	446	20.13	547	4.25	108	7.75	197	3.5	89
3	76	15.38	459	21.13	560	3.75	121	8.5	216	3.75	95

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Actuators

Actuator Air Supply Specifications:

- Air pressure range for sizes 1-3" is 35 to 50 psi (normal)
- Air volume required, sizes 1-3": 16 cu. inches

Type 210 (Normally-Open)

Air Supply to Actuator (standard Range)	Product Line Pressure (psi) Actuator will close against					
Tube OD	1"	1½ "	2"	2½ "	3"	
35 psi	250	135	65	33	27	
50 psi	250	250	140	78	57	

Note! Actuator can accommodate air supply pressure in excess of 50 psi to close against higher line pressures. Consult Alfa Laval for recommendations

Type 220 (Normally-Closed)

Size Tube OD	1"	1½ "	2"	2½ "	3"
Product Line Pressure (psi) Valve will hold against*	100**	150	88	48	39

* Consult Alfa Laval for valve applications where line pressure exceeds 100 psi

** Shut-Off models only. Consult Alfa Laval for info on divert valves

Air Loading for Air/Air Actuator

The following shows the additional air supply pressure required to hold each additional 10 psi of product line pressure. (Type 220)

1½ " - 1.0 psi	2½ " - 3.0 psi
2" - 2.0 psi	3" - 4.5 psi

Technical data

Max. product pressure	depending on valve specifications and size (contact Alfa Laval)
Temperature range	200° F to 285° F (EPDM)
Air pressure	35-50 PSI
Air pressure range for sizes 1-3"	35-50 PSI (normal)
Air volume required for sizes 1-3"	16 cu. inches

Materials

Product wetted steel parts	Stainless steel AISI 316L
Finish	32 Ra Standard ID (Scotch Brite OD)
Other steel parts	Stainless steel AISI 304
Plug stem	Bonded Buna or "TR" (PTFE replaceable)
Product wetted seals	Buna
Other seals	Buna
Product connections	Tri-Clamp®

Options

Equipment

- Product connections: weld, bevel seat
- Position indication: mechanical or proximity switches
- 20 Ra ID surface finish
- Three position actuator

Material Grades

- Bonded stem plug of EPDM or SFY (fluoroelastomer)
- Seals and gaskets of EPDM or SFY (fluoroelastomer)

Ordering

Please state the following when ordering:

- Size
- Product connections
- Valve body combination
- Actuator function, NC, NO or A/A
- Options

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The information contained herein is correct at the time of issue, but may be subject to change without prior notice.



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