

PENTAIR HYGIENIC PROCESS VALVES (FORMERLY KEYSTONE)

F269B+ HYGIENIC BALANCED DOUBLE SEAL VALVES REVERSIBLE ACTUATOR TYPE

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TAIR

PROCESS VALVE TECHNOLOGY

PENTAIR HYGIENIC PROCESS VALVES (Formerly Keystone) HYGIFNIC, BALANC DOUBLE SFAL VALVES

The F269B+ is a balanced double seal mix-proof valve, used for product isolation, where safe separation of process and C.I.P. fluids is required.

GENERAL APPLICATIONS

TECHNICAL DATA

FEATURES

Butt weld end connections (standard).

Swage/Crimp type fluid connectors to CIP

Other end connections available on

poppet valves provided with valve.

request.

 Dairy factories Lower balancer for increased product Working temperature: -5 to +100°C (-5 security and reduced water hammer to 120°C for static • Breweries and beverage plants effect. condition) • Wineries Product contact parts manufactured from high quality 316L or 304L S/S bar. Sterilizing temperature: Up to 140°C for • Canneries and food processing plants 30 min's (steam for Heavy walled body construction. • Pharmaceutical static position) • Semi-bright external surface finish. • Chemical processing • Compact, light weight design. Maximum pressure, 10bar fluid pressure valve body: • Heavy duty cast body clamps (bolted type). Maximum pressure. See separate plug • Various sealing options available. valve seat: lifting chart Seat material FPM Full vacuum Minimum pressure: Metal plug stop, protects seat seals from wear or damage. Op • Resilient seated for positive isolation. Free draining design, eliminates product Ai • puddling and air pockets. Su Ra, Smooth ball shaped bodies, reduces line/ turbulence and improves flow. Smooth internal surfaces for ease of cleaning. Le)mm Maintenance friendly design. • be • Reversible actuator. Pa • Leakage chamber between seals. sq Clamped body style offers full 360° orientation of actuator.

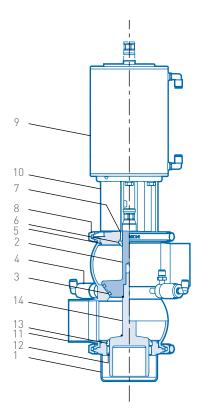
OPTIONS

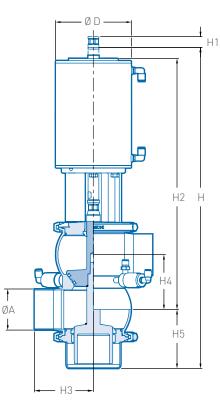
- Upper balancer
- Mirror polished internals
- Clamp and thread end connections
- Booster / Damper / 3-Position actuator
- Quick release body clamps

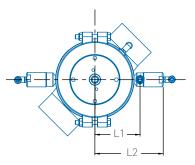
perating air pressure:	4 to 8bar max
r connections:	R1/8" (BSP)
urface finish:	Internal < 0.8 external hairli buffed
ength tolerance etween ends:	0.5mm ~ ±1.0
arallelism or quareness of ends:	0.5° or less

PENTAIR BALANCED DOUBLE SEAL VALVES F269B+ (REVERSIBLE) HYGIENIC PROCESS VALVES

TECHNICAL SPECIFICATIONS







PARTS LIST

No.	Description	Material	Standards
1	Body	316L S/S, 304L S/S	ASTM A276
2	Plug/shaft	316L S/S	ASTM A276
3	Seat seal	EPDM, NBR, PTFE, FKM	FDA
4	CIP/leak detect valves	316L S/S	ASTM A276
5	Body seal	EPDM, NBR, FKM	FDA
6	Stem seal	Santoprene® EPDM, NBR, FKM	FDA
7	Shaft bush	PTFE, UHMWPE	Commercial
8	Body clamp	304 CF8 S/S	ASTM A743 CF8
9	Actuator assembly	304 S/S	Various
10	Sight housing	304 CF8 S/S	ASTM A743 CF8
11	Bottom cover	T304	ASTM A276
12	Balancer guide	PETP	Commercial
13	Balancer seal	EPDM, NBR, FKM	FDA
14	Balancer shaft	316L S/S	ASTM A276

DIMENSIONS (mm)

Size	Size	ØA x t	ØA x t					H3	H3				
Inch OD	Metric	Inch OD	Metric	ØD	н	H1	H2	Inch OD	Metric	H4	H5	L1	L2
1.0"	025	25.4 x 1.6	29.5 x 1.6	102	352	6.0	277	55.0	54.0	46.0	45.5	55	98
1.5″	040	38.1 x 1.6	41.5 x 1.6	102	389	14.0	314	74.5	73.5	58.7	75.0	68	112
2.0"	050	50.8 x 1.6	53.5 x 1.6	102	436	25.3	336	77.0	76.0	75.0	81.3	68	112
2.5″	065	63.5 x 1.6	69.5 x 1.6	141	557	38.0	436	92.5	91.5	86.7	103.0	84	127
3.0"	080	76.2 x 1.6	84.5 x 1.6	141	586	38.0	458	109.0	108.0	102.0	107.0	84	127
4.0"	100	101.6 x 1.6	103.5 x 1.6	168	700	39.0	558	141.0	140.0	130.5	123.0	99	142
5.0"	125	129.0 x 2.0	130.0 x 2.0	219	762	50.0	413	156.0	155.0	185.0	150.0	128	171
6.0"	150	152.4 x 2.0	155.0 x 2.0	219	762	50.0	413	156.0	155.0	185.0	150.0	128	171

NOTE:

Metric bodies are created from standard Inch OD bodies by fitting eccentric reducers. Santoprene® is the registered trademark of Exxon Mobil.

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WORKING PRINCIPLE

The PENTAIR F269B+ valve is driven by an all stainless steel spring return linear actuator and is configured as standard Spring-To-Close although it can easily be switched to Spring-To-Open if required. The valve is designed with a robust one piece fully machined stainless steel body*. Along with heavy duty cast body clamps, the valve is capable of withstanding pressure spikes well beyond the recommended maximum 10 bar pressure rating - conventional mix proof valves are vulnerable to uncontrollable pressure spikes within the process.

When air pressure is applied to the cylinder, two small pneumatic normally open (NO) poppet valves (a leak detecting and a CIP valve) instantly close and the main valve plug moves through its entire stroke changing the valve from the closed to open position.

When the air is removed or vented from the cylinders the main valve closes, causing the two smaller valves to open, thereby venting and draining the leakage chamber to atmosphere. With the main valve in the closed position the leakage chamber can be flushed with water or CIP to clean away product residues.

While the valve is in the closed position, one side of the valve can be CIP cleaned while product remains on the other side fully protected from possible contamination by the double seals and leakage chamber.

* Larger sizes can be fabricated on special request.

AIR CONSUMPTION FOR SINGLE ACTING ACTUATORS (litres of free air)

	Valve size (actuator size)									
Supply pressure	025-040	050-065	080-100	100*	125-150					
bar/(psi)	(100S)	(100)	(140)	(170)	(200)					
4.1 (60)	0.89	1.23	3.28	4.71	8.94					
6.2 (90)	1.25	1.72	4.60	6.60	12.54					
8.3 (120)	1.61	2.21	5.92	8.50	16.14					

* (Option)

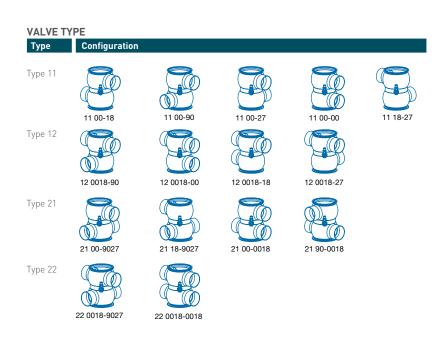
100 size valves can also be fitted with the Model 170 actuator as an option. This will boost the pressure holding power if required.

RECOMMENDED SEAT FLUSHING CIP FLOW/VELOCITY INFORMATION

With the main valve in the closed position, it is recommended the leakage chamber be flushed with water or CIP solutions to clean away any product residues after each valve operation. Also for most effective clean, the main valve should be pulsed open during entire systems cleaning cycle.

CIP flow rate: 3.5 - 4.0l/min at 1.5bar inlet pressure

CIP velocity: 1.5m/s (minimum)



PENTAIR BALANCED DOUBLE SEAL VALVES F269B+ (REVERSIBLE) HYGIENIC PROCESS VALVES

3-POSITION ACTUATOR

The 3-position actuator can be used to provide a mid-position for an adjusted flow control at any position throughout the valves entire stroke.

For example on dosing or filling to give optional full flow or partial flows, for topping up, or varying flow between product or CIP duties.

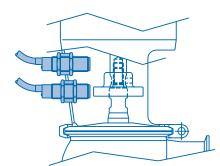
BOOSTER ACTUATOR

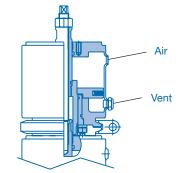
The booster/damper actuator can be used where extra force is required to hold seal tightness under extra high line pressures, or for opening valves against high line pressures.

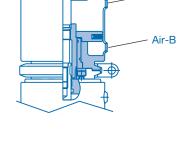
POSITION SENSORS

Standard \emptyset 18mm barrel type proximity sensors can be center mounted, in the special slot provided within the sighthousing cone, and a target can be easily fitted to the plug shaft.

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Air-A

PENTAIR BALANCED DOUBLE SEAL VALVES F269B+ (REVERSIBLE) HYGIENIC PROCESS VALVES

Example: A. F249B- A. SE SSE L M. 65 V V Upper/Lower body size Inch 0D Metric A 10" M. 025 0 0.000 0	SELECT	TION GUIDE													
Inch oD Metric A 1.0" M 025 B 1.5" O 0.40 C 2.0" P 050 D 2.5" Q 0.65 E 3.0" R 080 F 4.0" S 100 G 5.0" T 125 H 6.0" U 150 Figure T 125 H 6.0" U 150 Figure T 125 H 6.0" U 150 Figure T T 125 H 6.0" U 150 Figure T T 150 Obter T 150 T SR String Extend fold SK SK SDA Obube Atr/Acting SK SK SSR Spring Retract E Other I Nale thread DF D Male thread SM C Clanu toticonnard E Oth	Exampl	e:		AA -	F269B+	Α	SE	SSE	L	М	6S	٧	٧	٧	Х
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F 4.0° S 100 G 5.0° T 125 H 6.0° U 150 Figure FX Balancel Double Seal valve U Valve style:															
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V FKM															
Stem seal materials															
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V FKM Wiper type E EPDM					ig type										
D Diaphram (only available on some sizes) N NBR															
Optional extras															
T 3-Position actuator D Damper actuator			D	Damner a	ctuator										
U Booster actuator X None															



PENTAIR FLOW CONTROL PACIFIC PTY LTD

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