



PENTAIR SÜDMO



F269B+ HYGIENIC BALANCED DOUBLE SEAL VALVES REVERSIBLE ACTUATOR TYPE

PENTAIR SÜDMO

HYGIENIC BALANCED DOUBLE SEAL 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

- Dairy factories
- Breweries and beverage plants
- Wineries
- Canneries and food processing plants
- Pharmaceutical
- Chemical processing



TECHNICAL DATA

| | |
|------------------------------------|--|
| Working temperature: | -5 to +100°C (-5 to 120°C for static condition) |
| Sterilizing temperature: | Up to 140°C for 30 min's (steam for static position) |
| Maximum pressure, valve body: | 10bar fluid pressure |
| Maximum pressure, valve seat: | See separate plug lifting chart |
| Minimum pressure: | Full vacuum |
| Operating air pressure: | 4 to 8bar max. |
| Air connections: | R1/8" (BSP) |
| Surface finish: | Internal < 0.8 Ra, external hairline/ buffed |
| Length tolerance between ends: | 0.5mm ~ ±1.0mm |
| Parallelism or squareness of ends: | 0.5° or less |

FEATURES

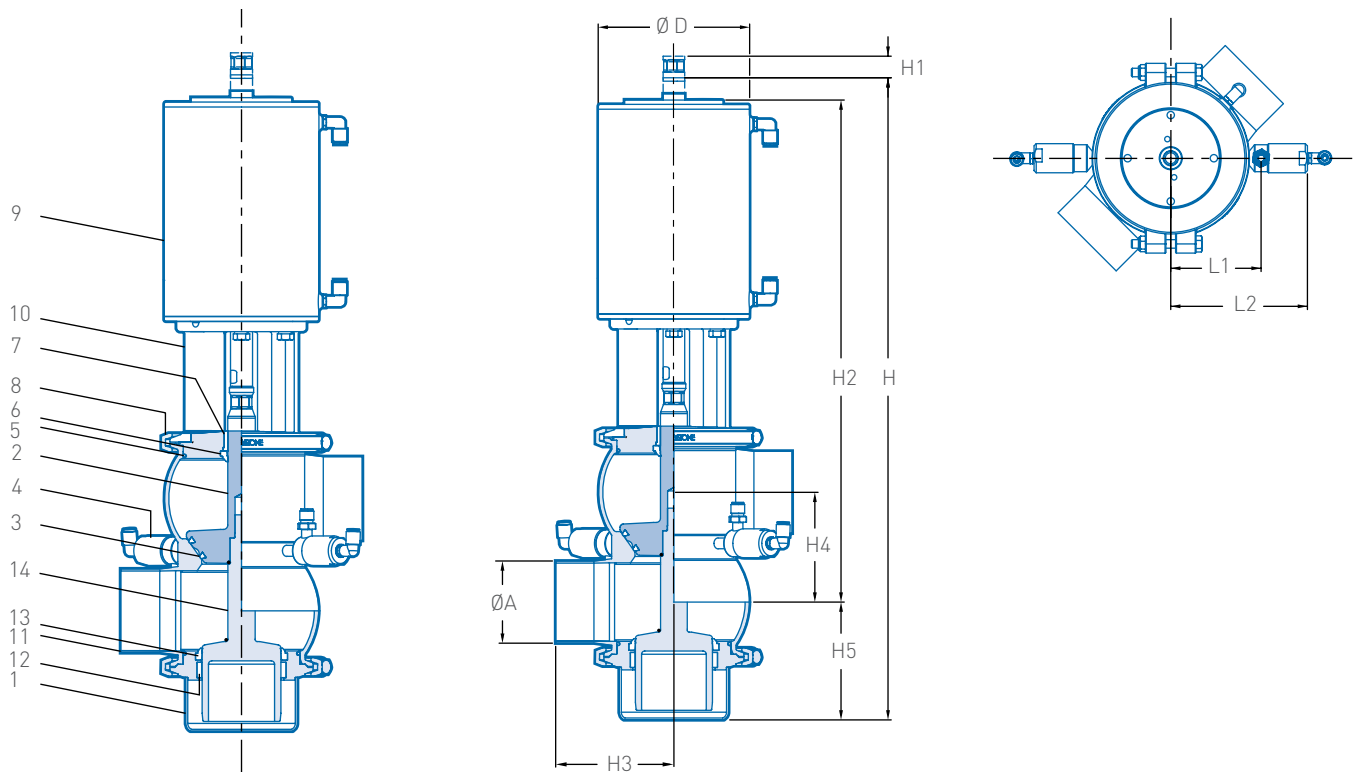
- Lower balancer for increased product security and reduced water hammer effect.
- Product contact parts manufactured from high quality 316L or 304L S/S bar.
- Heavy walled body construction.
- Semi-bright external surface finish.
- Compact, light weight design.
- Heavy duty cast body clamps (bolted type).
- Various sealing options available.
- Seat material FPM.
- Metal plug stop, protects seat seals from wear or damage.
- Resilient seated for positive isolation.
- Free draining design, eliminates product puddling and air pockets.
- Smooth ball shaped bodies, reduces turbulence and improves flow.
- Smooth internal surfaces for ease of cleaning.
- Maintenance friendly design.
- Reversible actuator.
- Leakage chamber between seals.
- Clamped body style offers full 360° orientation of actuator.
- Butt weld end connections (standard). Other end connections available on request.
- Swage/Crimp type fluid connectors to CIP poppet valves provided with valve.

OPTIONS

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

SÜDMO 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, HNBR, PTFE, FKM | FDA |
| 4 | CIP/leak detect valves | 316L S/S | ASTM A276 |
| 5 | Body seal | EPDM, HNBR, FKM | FDA |
| 6 | Stem seal | Santoprene® EPDM, HNBR, 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 | H | 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.

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

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)

| Supply pressure bar/(psi) | Valve size (actuator size) | | | | |
|------------------------------|----------------------------|------------------|------------------|---------------|------------------|
| | 025-040 (100S) | 050-065 (100) | 080-100 (140) | 100* (170) | 125-150 (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)

VALVE TYPE

| Type | Configuration | | | | |
|---------|---|---|---|---|---|
| Type 11 |  11 00-18 |  11 00-90 |  11 00-27 |  11 00-00 |  11 18-27 |
| Type 12 |  12 0018-90 |  12 0018-00 |  12 0018-18 |  12 0018-27 | |
| Type 21 |  21 00-9027 |  21 18-9027 |  21 00-0018 |  21 90-0018 | |
| Type 22 |  22 0018-9027 |  22 0018-0018 | | | |

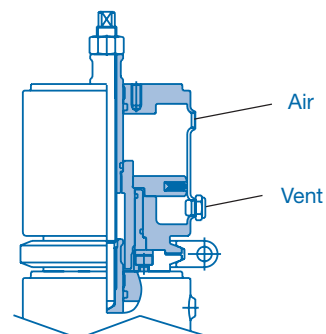
SÜDMO BALANCED DOUBLE SEAL VALVES

F269B+ (REVERSIBLE) HYGIENIC PROCESS VALVES

3-POSITION ACTUATOR

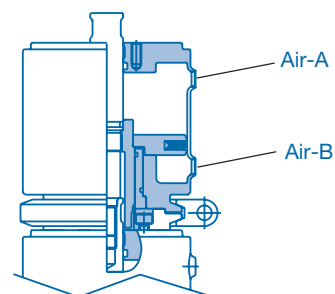
The 3-position actuator can be used to provide a mid-position for an adjusted flow control at any position throughout the valves entire stroke.

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.



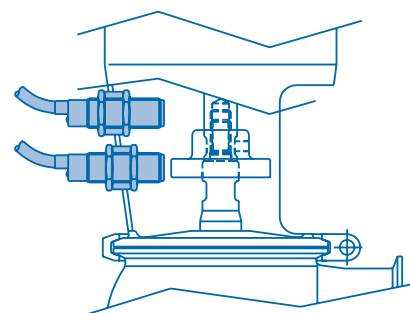
BOOSTER ACTUATOR

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 Ø18mm 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.



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

SELECTION GUIDE

| Example: | | 1.0" | F269B+ | A | SE | B | L | M | 6S | V | V | V | X |
|---|---|-----------|-----------|-----------|-----------|---|----------|--------------------------|----|---|---|---|---|
| Upper/Lower body size | | | | | | | | | | | | | |
| Inch OD | Metric | | | | | | | | | | | | |
| 1.0" | 025 | | | | | | | | | | | | |
| 1.5" | 040 | | | | | | | | | | | | |
| 2.0" | 050 | | | | | | | | | | | | |
| 2.5" | 065 | | | | | | | | | | | | |
| 3.0" | 080 | | | | | | | | | | | | |
| 4.0" | 100 | | | | | | | | | | | | |
| 5.0" | 125 | | | | | | | | | | | | |
| 6.0" | 150 | | | | | | | | | | | | |
| Figure | | | | | | | | | | | | | |
| F269B+ | Balanced Double Seal valve | | | | | | | | | | | | |
| Valve style: | | | | | | | | | | | | | |
| A | STD (std) | | | | | | | | | | | | |
| D | Other | | | | | | | | | | | | |
| Actuator type | | | | | | | | | | | | | |
| SE | Spring Extend (std) | | | | | | | | | | | | |
| DA | Double Air/Acting | | | | | | | | | | | | |
| SR | Spring Retract | | | | | | | | | | | | |
| End connection | | | | | | | | | | | | | |
| B | Butt weld (standard) | | | | | | S | Male thread SMS | | | | | |
| C | Clamp ISO | | | | | | M | Male thread RJT Modified | | | | | |
| J | Male thread RJT | | | | | | D | Male thread DIN 11851 | | | | | |
| I | Male thread IDF | | | | | | E | Other | | | | | |
| Port configuration | | | | | | | | | | | | | |
| L | T | LT | TL | LL | TT | | | | | | | | |
| Actuator accessory | | | | | | | | | | | | | |
| M | Metric 6mm Air fittings (standard) | | | | | | | | | | | | |
| I | Inch 1/4" Air fittings | | | | | | | | | | | | |
| X | None | | | | | | | | | | | | |
| Material type/finish, welded parts | | | | | | | | | | | | | |
| 6S | 316L Stainless Steel (Semi bright) (standard) | | | | | | | | | | | | |
| 6P | 316L Stainless Steel (Polished) | | | | | | | | | | | | |
| 4S | 304L Stainless Steel (Semi bright) | | | | | | | | | | | | |
| 4P | 304L Stainless Steel (Polished) | | | | | | | | | | | | |
| Body seal materials | | | | | | | | | | | | | |
| E | EPDM (standard) | | | | | | | | | | | | |
| N | HNBR | | | | | | | | | | | | |
| F | FKM | | | | | | | | | | | | |
| Plug seal materials | | | | | | | | | | | | | |
| E | EPDM (standard) | | | | | | | | | | | | |
| N | HNBR | | | | | | | | | | | | |
| F | FKM | | | | | | | | | | | | |
| Stem seal materials | | | | | | | | | | | | | |
| S | Santoprene® Wiper type (standard) | | | | | | | | | | | | |
| F | FKM Wiper type | | | | | | E | EPDM | | | | | |
| D | Diaphragm (only available on some sizes) | | | | | | N | HNBR | | | | | |
| Optional extras | | | | | | | | | | | | | |
| T | 3-Position actuator | | | | | | D | Damper actuator | | | | | |
| U | Booster actuator | | | | | | X | None | | | | | |



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