



SaniForce™

High Sanitation Air-Operated Double Diaphragm Pumps

POWERFUL
ADVANCED
TECHNOLOGY



Easy to clean, quick knockdown design

- Fluid contact areas are FDA-Compliant and meet CFR Title 21
- 3A Certified pump options to meet the sanitation requirements of the milk and dairy industry
- Featuring Graco's durable, lube-free, non-sticking air valve
- Available in ball and flapper designs, with 1.5" - 2" - 3" and 4" tri-clamp connections

PROVEN QUALITY. LEADING TECHNOLOGY.

Technical Specifications and Ordering Information

3150 Technical Specifications

Maximum fluid working pressure.....	8.4 bar (0.84 MPa - 120 psi)
Maximum free flow delivery*	568 l/min (150 gpm)
Maximum suction lift - ball.....	5.5 m (18 ft) wet, 2.7 m (9 ft) dry
Maximum suction lift - flapper.....	3.0 m (10 ft) wet, 1.5 m (5 ft) dry
Maximum size of pumpable solids	
Ball	25.4 mm (1")
Flapper	63.5 mm (2.5")
Maximum diaphragm operating temperature	
Santoprene	82.2°C (180°F)
Buna-N	82.2°C (180°F)
PTFE	104.4°C (220°F)
Fluoroelastomer	121°C (250°F)
EPDM.....	135°C (275°F)
Typical sound level at 4.9 bar (70 psi) air @ 50 cpm	85 dBa
Air pressure operating range.....	1.4 to 8.4 bar (0.14 to 0.84 MPa - 20 to 120 psi)
Air inlet size	1/2" npt(f)
Fluid inlet & outlet size (determined by part number).....	Tri-clamp connections
Weight.....	65.7 kg (145 lb)
Instruction manual.....	310622

* Flow rates are with muffler and do not vary based on diaphragm material. Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type.

3150 High Sanitation Pumps

3A Pump with Leak Detector

Part No.	Type	Inlet/ Outlet Size	Diaphragm	Ball Material
SA1AAA	3A Approved	1.5" x 1.5"	Overmolded EPDM	PTFE
SA2AAA	3A Approved	2" x 2"	Overmolded EPDM	PTFE
SA3AAA	3A Approved	3" x 3"	Overmolded EPDM	PTFE
SA4AAA	3A Approved	4" x 4"	Overmolded EPDM	PTFE
SA5AAA	3A Approved	3" x 2"	Overmolded EPDM	PTFE

Sanitary Ball Pump

Part No.	Type	Inlet/ Outlet Size	Diaphragm	Ball Material
SA13A1	Ball Check	1.5" x 1.5"	Overmolded PTFE/EPDM	PTFE
SA23A1	Ball Check	2" x 2"	Overmolded PTFE/EPDM	PTFE
SA3AA1	Ball Check	3" x 3"	Overmolded EPDM	PTFE
SA33A1	Ball Check	3" x 3"	Overmolded PTFE/EPDM	PTFE
SA4AA1	Ball Check	4" x 4"	Overmolded EPDM	PTFE
SA43A1	Ball Check	4" x 4"	Overmolded PTFE/EPDM	PTFE
SA53A1	Ball Check	3" x 2"	Overmolded PTFE/EPDM	PTFE
SA3361	Ball Check	3" x 3"	Overmolded PTFE/EPDM	Santoprene
SB2AA1	Ball Check	2" x 2"	Overmolded EPDM	PTFE
SB3AA1	Ball Check	3" x 3"	Overmolded EPDM	PTFE
SB2661	Ball Check	2" x 2"	Santoprene	Santoprene
SB3661	Ball Check	3" x 3"	Santoprene	Santoprene
SB2771	Ball Check	2" x 2"	Buna-N	Buna-N
SB3771	Ball Check	3" x 3"	Buna-N	Buna-N
SB2881	Ball Check	2" x 2"	Fluoroelastomer	Fluoroelastomer
SB3881	Ball Check	3" x 3"	Fluoroelastomer	Fluoroelastomer

Sanitary Flapper Pump

Part No.	Type	Inlet/ Outlet Size	Diaphragm Material
SF3AF1	Flapper	3" x 3"	Overmolded EPDM
SF4AF1	Flapper	4" x 4"	Overmolded EPDM
SF36F1	Flapper	3" x 3"	Santoprene
SF46F1	Flapper	4" x 4"	Santoprene
SF37F1	Flapper	3" x 3"	Buna-N
SF47F1	Flapper	4" x 4"	Buna-N
SF38F1	Flapper	3" x 3"	Fluoroelastomer
SF48F1	Flapper	4" x 4"	Fluoroelastomer

3150 Pump Accessories

16E975	Conversion kit: Ball to flapper, includes four flapper assemblies
15H461	Conversion kit 3A: Flapper to ball, includes four housing retainers; balls need to be ordered separately
15E285	Conversion kit: Flapper to ball, includes four housing retainers; balls need to be ordered separately
112361	Santoprene ball (order quantity four)
15B492	Buna-N ball (order quantity four)
112359	PTFE ball (order quantity four)
15B491	Fluoroelastomer ball (order quantity four)
253225	Santoprene diaphragm kit
253223	Buna-N diaphragm kit
253222	Fluoroelastomer diaphragm kit
253224	Overmolded EPDM diaphragm kit
15D990	Leak detector kit

1590 Technical Specifications

Maximum fluid working pressure.....	8.4 bar (0.84 MPa - 120 psi)
Maximum free-flow delivery	340 l/min (90 gpm)
Maximum suction lift	8.5 m (28 ft) wet, 4.57 m (15 ft) dry
Maximum size pumpable solids.....	15.9 mm (5/8")
Air pressure operating range.....	14-8 bar (014-08 MPa - 20-120 psi)
Maximum air consumption.....	125 scfm
Air consumption at 4.9 bar (70 psi) air inlet pressure/227 l/min (60 gpm).....	50 scfm
Maximum pump speed.....	200 cpm
* Liters (gallons) per cycle.....	1.96 (0.5)
**Maximum noise level at 7 bar (100 psi), full flow	90 dBa
**Sound power level	103 dBa
**Noise level at 4.9 bar (70 psi) and 50 cpm.....	85 dBa

Maximum fluid operating temperature is based on the following maximum diaphragm, ball, and seat temperature ratings.

PTFE	104.4°C (220°F)
Santoprene	82.2°C (180°F)
3A Approved EPDM	135°C (275°F)
Air inlet size	0.5" npt(f)
Weight.....	44 kg (97 lb)
Instruction manual.....	310622

* Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type

**Noise levels measured with the pump mounted on the stand. Sound power measured per ISO Standard 9614-1

1590 High Sanitation Pumps

Part Number	Type	Inlet	Diaphragm
SABAAA	3A Approved	2" x 2"	Overmolded EPDM
SBBAAA	3A Approved	2" x 2"	Overmolded EPDM
SBBA11	Ball Check	2" x 2"	PTFE
SABA13	Ball Check	2" x 2"	Overmolded EPDM/PTFE
SBBA13	Ball Check	2" x 2"	Overmolded EPDM/PTFE
SBBA22	Ball Check	2" x 2"	Santoprene

1590 Kits and Accessories

255122	Air valve repair kit 3A
255058	Overmolded EPDM diaphragm kit
255059	Santoprene diaphragm kit
255060	PTFE diaphragm kit
15D990	Leak detector
112421	Santoprene ball (quantity one)
112419	PTFE ball (quantity one)

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Graco is certified ISO 9001.

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