

SaniForce™ Equipment Catalog

Solutions for Hygienic Applications




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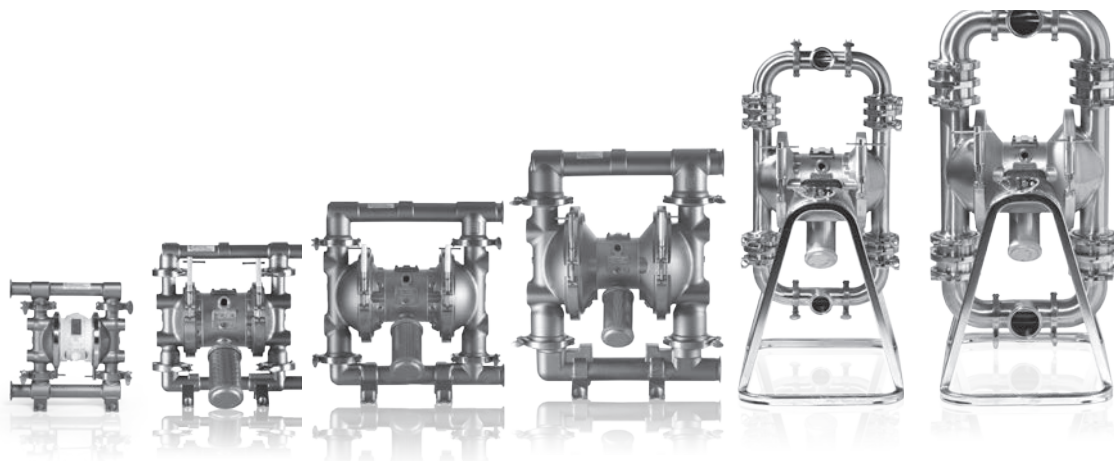
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SaniForce™ Pumps

Selection Chart

Model*	SaniForce 515	SaniForce 1040	SaniForce 1590	SaniForce 2150	SaniForce 1590 HS	SaniForce 3150 HS
Max Flow Rate	61 lpm 16 gpm	159 lpm 41 gpm	379 lpm 100 gpm	568 lpm 150 gpm	379 lpm 100 gpm	606 lpm 160 gpm
Max Fluid Pressure	7 bar 0.7 MPa 100 psi	8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi
Check Style	Ball	Ball	Ball	Ball	Ball	Ball or Flapper
Suction Lift (Wet)	7.6 m 25 ft	8.84 m 29 ft	8.84 m 29 ft	8.84 m 29 ft	8.5 m 28 ft	Ball = 5.5 m (18 ft) Flapper = 3.5 m (10 ft)
Max Pumpable Solids	2.38 mm 3/32 in	3.2 mm 1/8 in	4.8 mm 3/16 in	6.3 mm 1/4 in	15.9 mm 5/8 in	Ball = 25.4 mm (1 in) Flapper = 63.5 mm (2.5 in)
Viscosity Range	Up to 10,000 cps	Up to 10,000 cps	Up to 15,000 cps	Up to 20,000 cps	Up to 15,000 cps	Up to 20,000 cps
NEW CE1935/2004 Models available 	✓	✓	✓	✓	✓	✓
Flyer	320462	320462	320462	320462	338499	338499
Instruction Manual	3A1973	311879	311879	311879	310622	310622

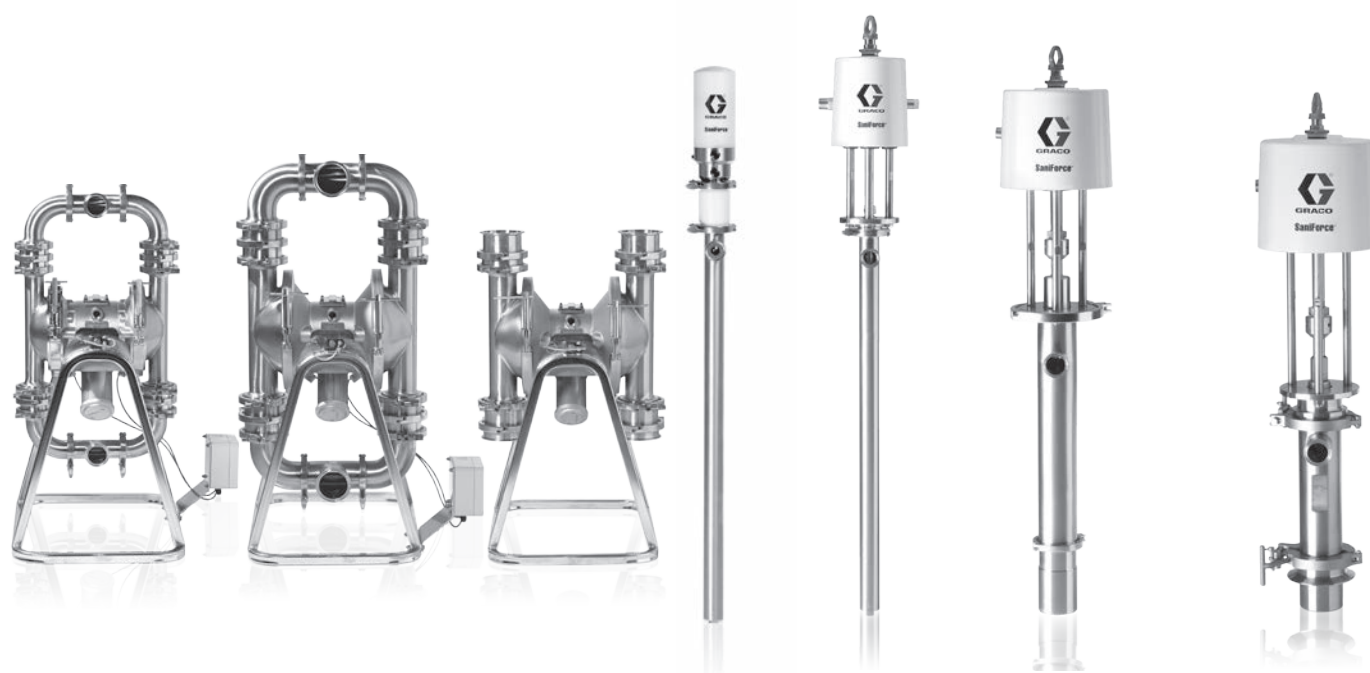
*Actual performance may vary by application



SaniForce™ Pumps Selection Chart

SaniForce 1590 3A	SaniForce 3150 3A	SaniForce Meat/Poultry	SaniForce 2:1 Piston Pump	SaniForce 6:1 Piston Pump	SaniForce 5:1 Piston Pump	SaniForce 12:1 Piston Pump
379 lpm 100 gpm	379 lpm 100 gpm	606 lpm 160 gpm	9.5 lpm 2.5 gpm	15 lpm 4 gpm	53 lpm 14 gpm	32 lpm 8.5 gpm
8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi	8 bar 0.8 MPa 120 psi	17 bar 1.7 MPa 250 psi	45 bar 4.5 MPa 650 psi	28 bar 2.8 MPa 400 psi	100 bar 10 MPa 1450 psi
Ball	Ball	Flapper	Double ball	Double ball or Priming piston	Double ball or Priming piston	Priming piston
8.5 m 28 ft	5.5 m 18 ft	3.5 m 10 ft	N/A	N/A	N/A	N/A
15.9 mm 5/8 in	25.4 mm 1 in	6.3 cm 2.5 in	3.2 mm 1/8 in	3.2 mm (1/8 in)	6.4 mm (1/4 in)	6.4 mm (1/4 in)
Up to 15,000 cps	Up to 20,000 cps	Up to 20,000 cps	Up to 50,000 cps	Up to 100,000 cps	Up to 100,000 cps	Up to 1,000,000 cps**
✓	✓	✓	-	-	-	-
338499	338499	338067	338591	338591	338591	338591
310622	310622	310622	3A2977	3A0733	3A0734	3A0735

**When mounted on drum unloader or bin evacuation system

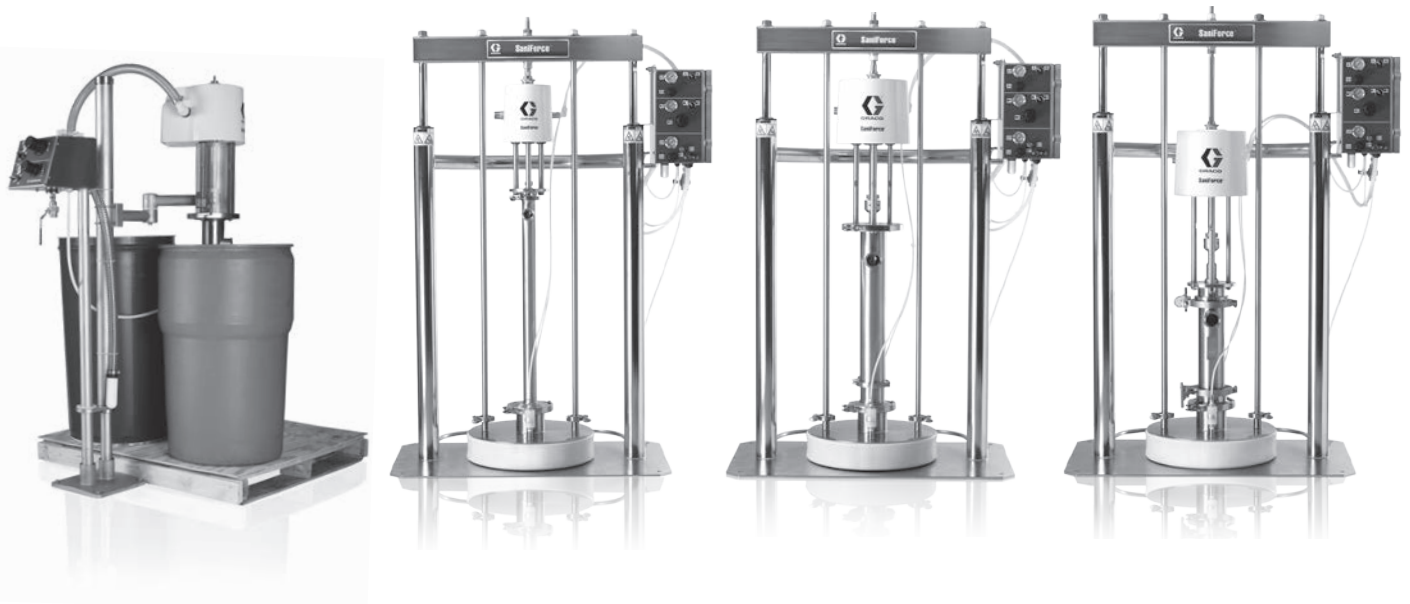


SaniForce Drum and Bin Unloaders

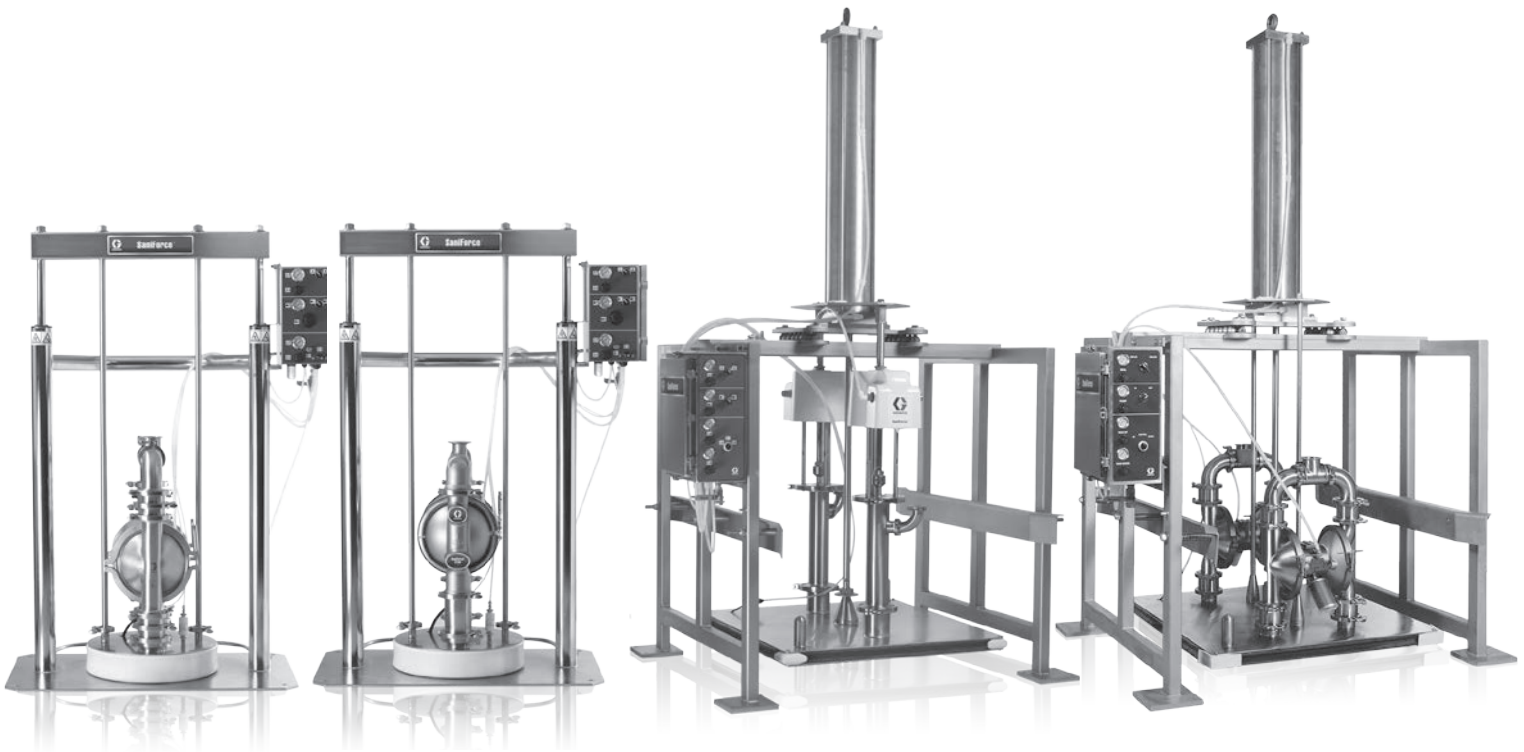
Selection Chart

Model*	Piston Pump Elevators	SaniForce 6:1 Drum Unloader	SaniForce 5:1 Drum Unloader	SaniForce 12:1 Drum Unloader
Max Flow Rate	Up to 53 lpm (14 gpm)	Up to 15 lpm (4.0 gpm)	Up to 53 lpm (14 gpm)	Up to 32 lpm (8.5 gpm)
Max Fluid Pressure	28 bar 2.8 MPa 400 psi	41 bar 4.1 MPa 600 psi	28 bar 2.8 MPa 400 psi	100 bar 10 MPa 1450 psi
Pump Style	Double ball	Double ball or priming piston	Double ball or priming piston	Priming piston
Controls	Manual	Manual	Manual	Manual
Viscosity Range				
Double Ball:	Up to 100,000 cps	Up to 75,000 cps	Up to 200,000 cps	
Priming Piston:		Up to 125,000 cps	+ 750,000 cps	+ 1,000,000 cps
Flyer	345058	338590	338590	338590
Instruction Manual	333406	3A0591	3A0591	3A0591

*Actual performance may vary by application



	SaniForce 3150 HS Drum Unloader	SaniForce 2150 Drum Unloader	SaniForce BES	SaniForce 3150 BES
	Up to 606 lpm (160 gpm)	Up to 568 lpm (150 gpm)	Up to 205 lpm (54 gpm)	Up to 455 lpm (120 gpm)
	8 bar (0.8 MPa 120 psi)	8 bar 0.8 MPa 120 psi	100 bar 10 MPa 1450 psi	8 bar 0.8 MPa 120 psi
	Ball or flapper	Ball	Double ball or priming piston	Ball or flapper
	Manual	Manual	Manual and Electronic	Manual and Electronic
	Up to 100,000 cps	Up to 100,000 cps	+ 1,000,000 cps	Up to 1,000,000 cps
	338590 3A0591	338590 3A0591	338589 311163	338589 311163



SaniForce 515, 1040, 1590 & 2150

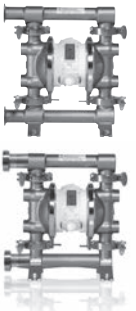
Air-Operated Diaphragm Pumps

Ordering Information

0.5 in SaniForce 515 - 25.4 mm (1.0 in) Sanitary Connection or DIN DN 25 mm

Part Number	Manifold ID	Center Section	Seats	O-rings	Balls	Diaphragms	Connection
FD5111	24.3 mm (0.96 in)	Poly	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FD5113	24.3 mm (0.96 in)	Poly	SST	PTFE	PTFE	Overmolded PTFE	Sanitary Clamp
FD5122	24.3 mm (0.96 in)	Poly	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FD5611	24.3 mm (0.96 in)	Poly	SST	EPDM	PTFE	PTFE	Sanitary Clamp
FD5613	24.3 mm (0.96 in)	Poly	SST	EPDM	PTFE	Overmolded PTFE	Sanitary Clamp
FD5622	24.3 mm (0.96 in)	Poly	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD6111	24.3 mm (0.96 in)	Poly	SST	PTFE	PTFE	PTFE	DIN DN 25
FD6113	24.3 mm (0.96 in)	Poly	SST	PTFE	PTFE	Overmolded	DIN DN 25

 — CERTIFICATE 199482



1 in SaniForce 1040 - 38.1 mm (1.5 in) Sanitary Connection or DIN DN 40 mm

Part Number	Manifold ID	Center Section	Seats	O-rings	Balls	Diaphragms	Connections
FD1111	25.4 mm (1.0 in)	SST	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FD1122	25.4 mm (1.0 in)	SST	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FD1211	25.4 mm (1.0 in)	SST	SST	EPDM	PTFE	PTFE	Sanitary Clamp
FD1222	25.4 mm (1.0 in)	SST	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD1113	25.4 mm (1.0 in)	SST	SST	PTFE	PTFE	Overmolded PTFE	Sanitary Clamp
FD1213	25.4 mm (1.0 in)	SST	SST	EPDM	PTFE	Overmolded PTFE	Sanitary Clamp
FD1132	25.4 mm (1.0 in)	SST	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FD1133	25.4 mm (1.0 in)	SST	SST	PTFE	Weighted CR	Overmolded PTFE	Sanitary Clamp
FD1232	25.4 mm (1.0 in)	SST	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA1111*	25.4 mm (1.0 in)	AL	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FA1122*	25.4 mm (1.0 in)	AL	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FA1132*	25.4 mm (1.0 in)	AL	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FA1133*	25.4 mm (1.0 in)	AL	SST	PTFE	Weighted CR	Overmolded PTFE	Sanitary Clamp
FA1222*	25.4 mm (1.0 in)	AL	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD7111	25.4 mm (1.0 in)	SST	SST	PTFE	PTFE	PTFE	DIN DN 40
FA7111*	25.4 mm (1.0 in)	AL	SST	PTFE	PTFE	PTFE	DIN DN 40
FA1231**	25.4 mm (1.0 in)	AL	SST	EPDM	Weighted CR	PTFE	Sanitary Clamp
FA1232**	25.4 mm (1.0 in)	AL	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA1233**	25.4 mm (1.0 in)	AL	SST	EPDM	Weighted CR	Overmolded PTFE	Sanitary Clamp
FD7113	25.4 mm (1.0 in)	SST	SST	PTFE	PTFE	Overmolded PTFE	DIN DN 40

 — CERTIFICATE 199479



*SaniForce Pump with Aluminium Center Section (aluminium air motor and 316 SST fluid section)

**Tested with water, not vegetable oil

NEW  — CE1935 DIN CONNECTIONS

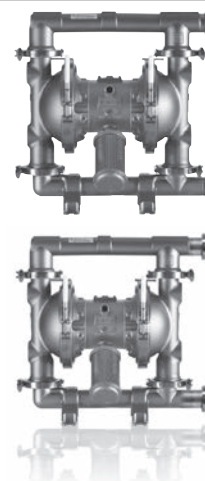
SaniForce 515, 1040, 1590 & 2150

Ordering Information

1.5 in SaniForce 1590 - 50.8 mm (2.0 in) Sanitary Connection or DIN DN 50 mm

Part Number	Manifold ID	Center Section	Seats	O-rings	Balls	Diaphragms	Connections
FD2111	38.1 mm (1.5 in)	SST	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FD2122	38.1 mm (1.5 in)	SST	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FD2211	38.1 mm (1.5 in)	SST	SST	EPDM	PTFE	PTFE	Sanitary Clamp
FD2222	38.1 mm (1.5 in)	SST	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD2113	38.1 mm (1.5 in)	SST	SST	PTFE	PTFE	Overmolded PTFE	Sanitary Clamp
FD2213	38.1 mm (1.5 in)	SST	SST	EPDM	PTFE	Overmolded PTFE	Sanitary Clamp
FD2132	38.1 mm (1.5 in)	SST	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FD2133	38.1 mm (1.5 in)	SST	SST	PTFE	Weighted CR	Overmolded PTFE	Sanitary Clamp
FD2232	38.1 mm (1.5 in)	SST	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA2111*	38.1 mm (1.5 in)	AL	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FA2113*	38.1 mm (1.5 in)	AL	SST	PTFE	PTFE	Overmolded PTFE	Sanitary Clamp
FA2122*	38.1 mm (1.5 in)	AL	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FA2132*	38.1 mm (1.5 in)	AL	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FA2222*	38.1 mm (1.5 in)	AL	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD8111	38.1 mm (1.5 in)	SST	SST	PTFE	PTFE	PTFE	DIN DN 50
FA8111*	38.1 mm (1.5 in)	AL	SST	PTFE	PTFE	PTFE	DIN DN 50
FA2231**	38.1 mm (1.5 in)	AL	SST	EPDM	Weighted CR	PTFE	Sanitary Clamp
FA2232**	38.1 mm (1.5 in)	AL	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA2233**	38.1 mm (1.5 in)	AL	SST	EPDM	Weighted CR	Overmolded PTFE	Sanitary Clamp

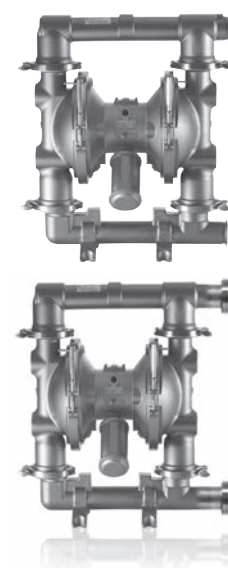
 — CERTIFICATE 199479



2 in SaniForce 2150 - 63.5 mm (2.5 in) Sanitary Connection or DIN DN 65 mm

Part Number	Manifold ID	Center Section	Seats	O-rings	Balls	Diaphragms	Connection
FD3111	50.8 mm (2.0 in)	SST	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FD3122	50.8 mm (2.0 in)	SST	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FD3211	50.8 mm (2.0 in)	SST	SST	EPDM	PTFE	PTFE	Sanitary Clamp
FD3222	50.8 mm (2.0 in)	SST	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD3113	50.8 mm (2.0 in)	SST	SST	PTFE	PTFE	Overmolded PTFE	Sanitary Clamp
FD3213	50.8 mm (2.0 in)	SST	SST	EPDM	PTFE	Overmolded PTFE	Sanitary Clamp
FD3132	50.8 mm (2.0 in)	SST	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FD3133	50.8 mm (2.0 in)	SST	SST	PTFE	Weighted CR	Overmolded PTFE	Sanitary Clamp
FD3232	50.8 mm (2.0 in)	SST	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA3111*	50.8 mm (2.0 in)	AL	SST	PTFE	PTFE	PTFE	Sanitary Clamp
FA3122*	50.8 mm (2.0 in)	AL	SST	PTFE	Santoprene	Santoprene	Sanitary Clamp
FA3132*	50.8 mm (2.0 in)	AL	SST	PTFE	Weighted CR	Santoprene	Sanitary Clamp
FA3222*	50.8 mm (2.0 in)	AL	SST	EPDM	Santoprene	Santoprene	Sanitary Clamp
FD9111	50.8 mm (2.0 in)	SST	SST	PTFE	PTFE	PTFE	DIN DN 65
FA9111*	50.8 mm (2.0 in)	AL	SST	PTFE	PTFE	PTFE	DIN DN 65
FA3231**	50.8 mm (2.0 in)	AL	SST	EPDM	Weighted CR	PTFE	Sanitary Clamp
FA3232**	50.8 mm (2.0 in)	AL	SST	EPDM	Weighted CR	Santoprene	Sanitary Clamp
FA3233**	50.8 mm (2.0 in)	AL	SST	EPDM	Weighted CR	Overmolded PTFE	Sanitary Clamp

 — CERTIFICATE 199479



*SaniForce Pump with Aluminium Center Section (aluminium air motor and 316 SST fluid section)
 **Tested with water, not vegetable oil

NEW  — CE1935 DIN CONNECTIONS

SaniForce 515, 1040, 1590 & 2150

Fluid Repair Kits

515 Kits	O-rings	Balls	Diaphragms
FK5111	PTFE	PTFE	PTFE
FK5113	PTFE	PTFE	Overmolded PTFE
FK5122	PTFE	Santoprene	Santoprene
FK5611	EPDM	PTFE	PTFE
FK5613	EPDM	PTFE	Overmolded PTFE
FK5622	EPDM	Santoprene	Santoprene
110954	PTFE	–	–

1040 Kits	O-rings	Balls	Diaphragms
FK1111	PTFE	PTFE	PTFE
FK1122	PTFE	Santoprene	Santoprene
FK1133	PTFE	Weighted CR	Overmolded PTFE
FK1211	EPDM	PTFE	PTFE
FK1222	EPDM	Santoprene	Santoprene
FK1113	PTFE	PTFE	Overmolded PTFE
FK1213	EPDM	PTFE	Overmolded PTFE
FK1132	PTFE	Weighted CR	Santoprene
FK1232	EPDM	Weighted CR	Santoprene
253626	–	–	Overmolded PTFE

1590 Kits	O-rings	Balls	Diaphragms
FK2111	PTFE	PTFE	PTFE
FK2122	PTFE	Santoprene	Santoprene
FK2133	PTFE	Weighted CR	Overmolded PTFE
FK2211	EPDM	PTFE	PTFE
FK2222	EPDM	Santoprene	Santoprene
FK2113	PTFE	PTFE	Overmolded PTFE
FK2213	EPDM	PTFE	Overmolded PTFE
FK2132	PTFE	Weighted CR	Santoprene
FK2232	EPDM	Weighted CR	Santoprene
253627	–	–	Overmolded PTFE

2150 Kits	O-rings	Balls	Diaphragms
FK3111	PTFE	PTFE	PTFE
FK3122	PTFE	Santoprene	Santoprene
FK3133	PTFE	Weighted CR	Overmolded PTFE
FK3211	EPDM	PTFE	PTFE
FK3222	EPDM	Santoprene	Santoprene
FK3113	PTFE	PTFE	Overmolded PTFE
FK3213	EPDM	PTFE	Overmolded PTFE
FK3132	PTFE	Weighted CR	Santoprene
FK3232	EPDM	Weighted CR	Santoprene
253628	–	–	Overmolded PTFE

Technical Specifications

	515 FDA	1040 FDA	1590 FDA	2150 FDA
Max. fluid working pressure	7 bar (0.7 MPa / 100 psi)	8 bar (0.8 MPa / 120 psi)	8 bar (0.8 MPa / 120 psi)	8 bar (0.8 MPa - 120 psi)
Air pressure operating range	1.4-7 bar (0.14-0.7 MPa / 20-100 psi)	1.4-8 bar (0.14-0.8 MPa / 20-120 psi)	1.4-8 bar (0.14-0.8 MPa / 20-120 psi)	1.4-8 bar (0.14-0.8 MPa / 20-120 psi)
Max. air consumption	0.8 m ³ /min (28 scfm)	1.4 m ³ /min (50 scfm)	3.7 m ³ /min (130 scfm)	5.05 m ³ /min (175 scfm)
Air consumption	0.51 m ³ at 4.8 bar/75 lpm (18 scfm at 70 psi/20 gpm)	0.51 m ³ at 4.8 bar/75 lpm (18 scfm at 70 psi/20 gpm)	1.2 m ³ at 4.8 bar/190 lpm (42 scfm at 70 psi/50 gpm)	2.0 m ³ at 4.8 bar/300 lpm (70 scfm at 70 psi/80 gpm)
Max. free-flow delivery	61 lpm (16 gpm)	151 lpm (40 gpm)	379 lpm (100 gpm)	568 lpm (160 gpm)
Gallons (liters) per cycle	0.15 (0.04) - standard diaphragms 0.11 (0.03) - overmolded diaphragms	0.57 (0.16)*	1.9 (0.5)*	0.97 (3.67)*
Max. suction lift	7.6 m (25 ft) wet, 4.6 m (15 ft) dry	8.83 m (29 ft) wet, 4.87 m (16 ft) dry	8.83 m (29 ft) wet, 4.27 m (14 ft) dry	8.83 m (29 ft) wet, 4.87 m (16 ft) dry
Max. size pumpable solids	2.38 mm (3/32 in)	3.2 mm (1/8 in)	4.8 mm (3/16 in)	6.3 mm (1/4 in)
Air inlet size	1/4 npt(f)	0.5 in npt(f)	0.5 in npt(f)	0.5 in npt(f)
Fluid inlet/outlet size	25.4 mm (1.0 in) sanitary flange or DIN DN 25	38.1 mm (1.5 in) sanitary flange or DIN DN 40	50.8 mm (2 in) sanitary flange or DIN DN 50	63.5 mm (2.5 in) sanitary flange or DIN DN 65
Weight				
FDXXXX models	10.25 kg (22.6 lb)	24.9 kg (55 lb)	40 kg (89 lb)	66.7 kg (147 lb)
FAXXXX models	N/A	22.2 kg (49 lb)	37.6 kg (83 lb)	63.9 kg (141 lb)
Flyer	320462	320462	320462	320462
Instruction manual	3A1973	311879	311879	311879

Stainless steel	121.1°C (250°F)	121.1°C (250°F)	121.1°C (250°F)	121.1°C (250°F)
PTFE	104.4°C (220°F)	104.4°C (220°F)	104.4°C (220°F)	104.4°C (220°F)
Santoprene	82.2°C (180°F)	82.2°C (180°F)	82.2°C (180°F)	82.2°C (180°F)
EPDM	135°C (275°F)	135°C (275°F)	135°C (275°F)	135°C (275°F)
Polychloroprene	N/A	93.3°C (200°F)	93.3°C (200°F)	93.3°C (200°F)
Overmolded PTFE	82.2°C (180°F)	82.2°C (180°F)	82.2°C (180°F)	82.2°C (180°F)

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

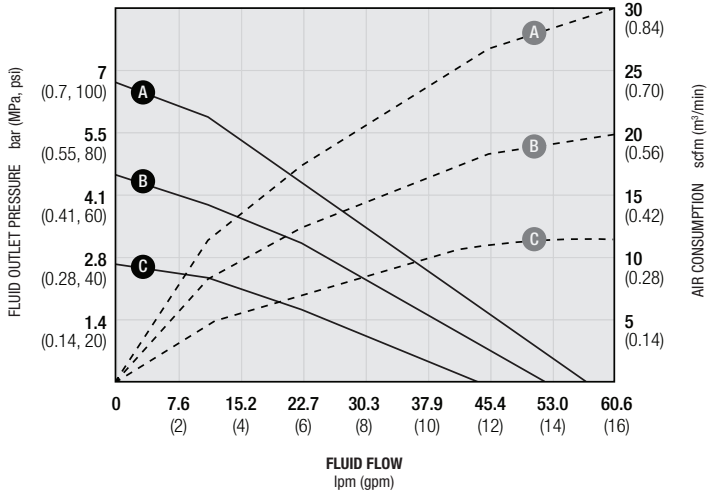
SaniForce 515, 1040, 1590 & 2150

Performance Charts

515 Performance

CYCLES PER MINUTE
Standard Diaphragms ; Overmolded Diaphragms

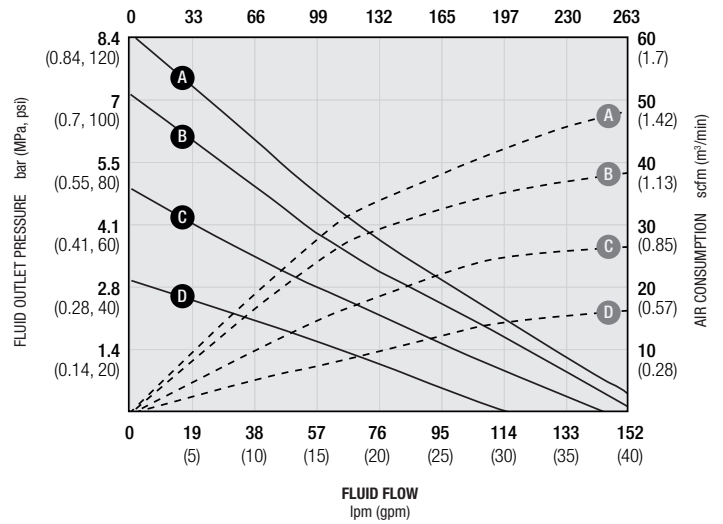
46;64 91;128 137;192 182;256 228;319 273;383 319;447 364;511



AIR PRESSURE	LEGEND
(A) = at 7 bar (0.7 MPa - 100 psi)	Air Consumption - - - - -
(B) = at 4.8 bar (0.48 MPa - 70 psi)	Fluid Flow - - - - -
(C) = at 2.8 bar (0.28 MPa - 40 psi)	

1040 Performance

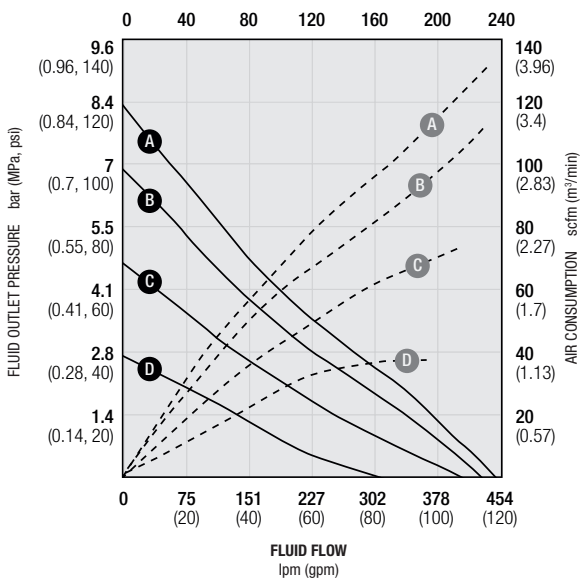
CYCLES PER MINUTE



AIR PRESSURE	LEGEND
(A) = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - - -
(B) = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - - -
(C) = at 4.8 bar (0.48 MPa - 70 psi)	
(D) = at 2.8 bar (0.28 MPa - 40 psi)	

1590 Performance

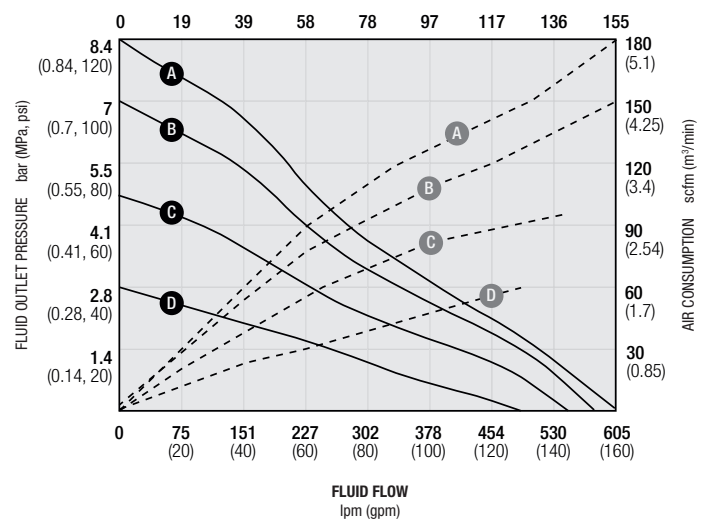
CYCLES PER MINUTE



AIR PRESSURE	LEGEND
(A) = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - - -
(B) = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - - -
(C) = at 4.8 bar (0.48 MPa - 70 psi)	
(D) = at 2.8 bar (0.28 MPa - 40 psi)	

2150 Performance

CYCLES PER MINUTE

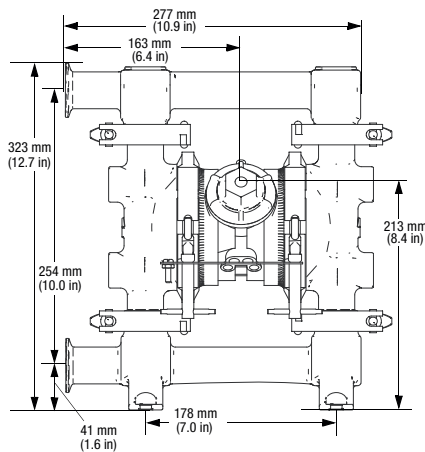


AIR PRESSURE	LEGEND
(A) = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - - -
(B) = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - - -
(C) = at 4.8 bar (0.48 MPa - 70 psi)	
(D) = at 2.8 bar (0.28 MPa - 40 psi)	

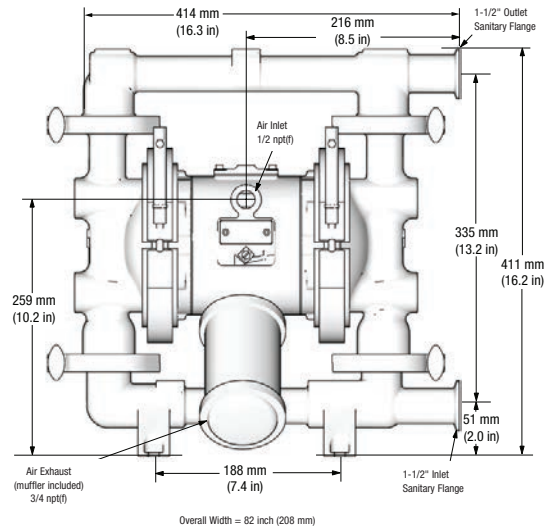
SaniForce 515, 1040, 1590 & 2150

Dimensions

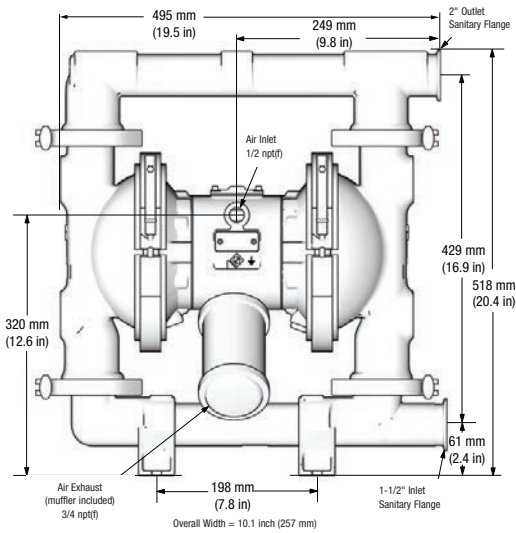
SaniForce 515



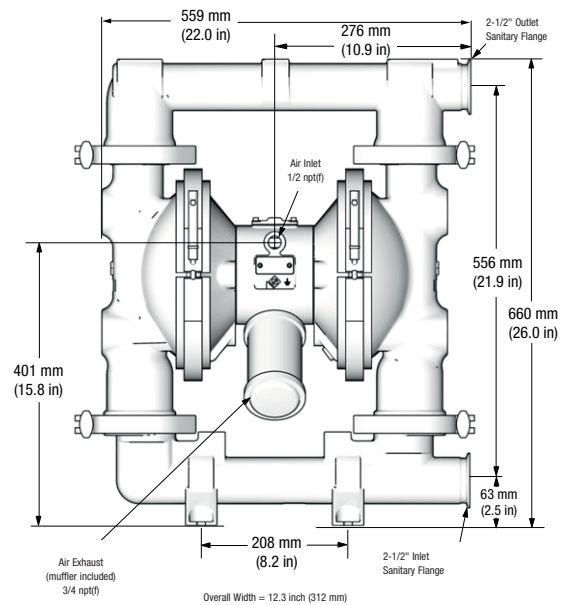
SaniForce 1040



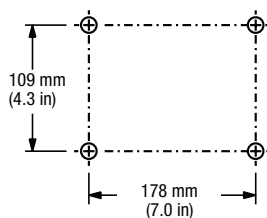
SaniForce 1590



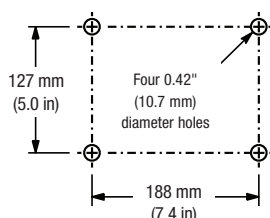
SaniForce 2150



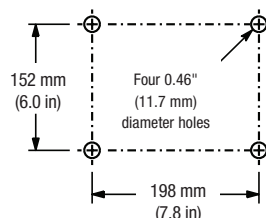
SaniForce 515
Mounting Hole Pattern



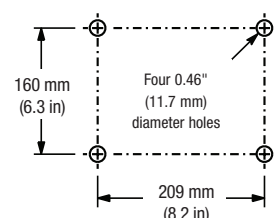
SaniForce 1040
Mounting Hole Pattern



SaniForce 1590
Mounting Hole Pattern




SaniForce 2150
Mounting Hole Pattern



SaniForce 1590 & 3150 HS High Sanitation Diaphragm Pumps

Ordering Information

SaniForce 1590 HS Ball Pumps


Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm	Ball Material		
SBBAAA	Ball	48.3 mm (1.9 in)	2 in x 2 in	Overmolded EPDM	PTFE		
SBBA11	Ball	48.3 mm (1.9 in)	2 in x 2 in	PTFE	PTFE		
SABA13	Ball	48.3 mm (1.9 in)	2 in x 2 in	Overmolded PTFE	PTFE		Includes leak detector
SBBA13	Ball	48.3 mm (1.9 in)	2 in x 2 in	Overmolded PTFE	PTFE		
SBBA22	Ball	48.3 mm (1.9 in)	2 in x 2 in	Santoprene	Santoprene		
SBDAAA	Ball	48.3 mm (1.9 in)	DIN DN 50	Overmolded EPDM	PTFE		

 — CERTIFICATE 199481

SaniForce 1590 Kits and Accessories

Part Number	Type	Part Number	Type
255058	Overmolded EPDM diaphragm kit	112421	Santoprene ball (quantity one)
255059	Santoprene diaphragm kit	112419	PTFE ball (quantity one)
255060	PTFE diaphragm kit	255122	Air valve repair kit 3A
253627	PTFE overmolded diaphragm kit	15D990	Leak detector

SaniForce 3150 HS Ball Pumps

Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm	Ball Material	
SA13A1	Ball	73.7 mm (2.9 in)	1.5 in x 1.5 in	Overmolded PTFE/EPDM	PTFE	
SA23A1	Ball	73.7 mm (2.9 in)	2 in x 2 in	Overmolded PTFE/EPDM	PTFE	
SA33A1	Ball	73.7 mm (2.9 in)	3 in x 3 in	Overmolded PTFE/EPDM	PTFE	
SA43A1	Ball	73.7 mm (2.9 in)	4 in x 4 in	Overmolded PTFE/EPDM	PTFE	
SA53A1	Ball	73.7 mm (2.9 in)	3 in x 2 in	Overmolded PTFE/EPDM	PTFE	
SA3361	Ball	73.7 mm (2.9 in)	3 in x 3 in	Overmolded PTFE/EPDM	Santoprene	
SB2AA1	Ball	73.7 mm (2.9 in)	2 in x 2 in	Overmolded EPDM	PTFE	
SB3AA1	Ball	73.7 mm (2.9 in)	3 in x 3 in	Overmolded EPDM	PTFE	
SB2661	Ball	73.7 mm (2.9 in)	2 in x 2 in	Santoprene	Santoprene	
SB3661	Ball	73.7 mm (2.9 in)	3 in x 3 in	Santoprene	Santoprene	
SB2771	Ball	73.7 mm (2.9 in)	2 in x 2 in	Buna-N	Buna-N	
SB3771	Ball	73.7 mm (2.9 in)	3 in x 3 in	Buna-N	Buna-N	
SB2881	Ball	73.7 mm (2.9 in)	2 in x 2 in	Fluoroelastomer	Fluoroelastomer	
SB3881	Ball	73.7 mm (2.9 in)	3 in x 3 in	Fluoroelastomer	Fluoroelastomer	
SA73A1	Ball	73.7 mm (2.9 in)	DIN DN 80	Overmolded PTFE/EPDM	PTFE	

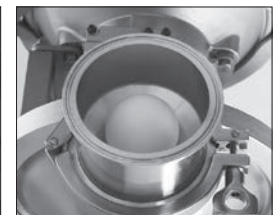
 — CERTIFICATE 199480

SaniForce 3150 HS Flapper Pumps

Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm Material
SF3AF1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Overmolded EPDM
SF4AF1	Flapper	73.7 mm (2.9 in)	4 in x 4 in	Overmolded EPDM
SF36F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Santoprene
SF46F1	Flapper	73.7 mm (2.9 in)	4 in x 4 in	Santoprene
SF37F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Buna-N
SF47F1	Flapper	73.7 mm (2.9 in)	4 in x 4 in	Buna-N
SF38F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Fluoroelastomer
SF48F1	Flapper	73.7 mm (2.9 in)	4 in x 4 in	Fluoroelastomer
SF7AF1	Flapper	73.7 mm (2.9 in)	DIN DN 80	Overmolded EPDM
SF76F1	Flapper	73.7 mm (2.9 in)	DIN DN 80	Santoprene



Flapper Check Valve



Ball Check Valve

 — CERTIFICATE 199480

NEW  — CE1935 DIN CONNECTIONS

SaniForce 1590 & 3150 HS

Ordering Information

SaniForce 3150 HS Accessories

Part Number	Type
16E975	Conversion kit: Ball to flapper, includes four flapper assemblies
15H461	3A Conversion kit: 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)
112359	PTFE ball (order quantity four)
112361	Santoprene ball (order quantity four)
253225	Santoprene diaphragm kit
15B492	Buna-N ball (order quantity four)
253223	Buna-N diaphragm kit
15B491	Fluoroelastomer ball (order quantity four)
253222	Fluoroelastomer diaphragm kit
253224	Overmolded EPDM diaphragm kit
253628	Overmolded PTFE diaphragm kit
15D990	Leak detector kit

Technical Specifications

1590	
Maximum fluid working pressure	8 bar (0.8 MPa / 120 psi)
Maximum free-flow delivery	379 lpm (100 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 in)
Air pressure operating range	14-8 bar (014-08 MPa / 20-120 psi)
Maximum air consumption	3.5 m ³ (125 scfm)
Air consumption at 4.9 bar (70 psi) air inlet pressure/227 lpm (60 gpm)	1.45 m ³ (50 scfm)
Maximum pump speed	200 cpm
*Liter (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
Air inlet size	0.5 in npt(f)
Weight	44 kg (97 lb)
Flyer	338499
Instruction manual	310622

Maximum fluid operating temperature is based on the following maximum diaphragm, ball, and seat temperature ratings	
PTFE (Overmolded diaphragm)	82.2°C (180°F)
PTFE (2-piece diaphragm)	104.4°C (220°F)
Santoprene	82.2°C (180°F)
3A Approved EPDM	135°C (275°F)

* 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

3150	
Maximum fluid working pressure	8 bar (0.8 MPa / 120 psi)
Maximum free-flow delivery*	606 lpm (160 gpm)
Maximum suction lift - ball	5.4 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 pumpable solids - ball	25.4 mm (1 in)
Maximum size pumpable solids - flapper	63.5 mm (2.5 in)
Air pressure operating range	1.4 to 8 bar (0.14 to 0.8 MPa / 20-120 psi)
Maximum air consumption	5 m ³ (175 scfm)
Air consumption at 4.9 bar (70 psi) air inlet pressure/227 lpm (60 gpm)	1.45 m ³ (50 scfm)
Maximum pump speed	145 cpm
*Liter (gallons) per cycle	3.90 (1.03)
**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
Fluid inlet & outlet size (determined by part number)	Tri-clamp connections
Air inlet size	0.5 in npt(f)
Weight	65 kg (145 lb)
Flyer	338499
Instruction manual	310622

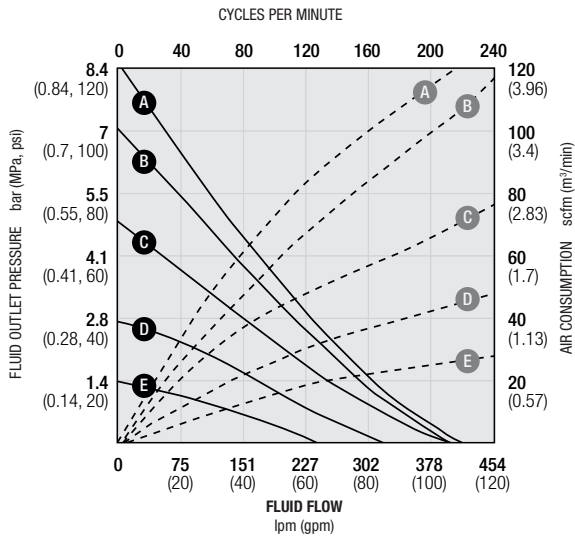
Maximum diaphragm operating temperature	
Santoprene	82.2°C (180°F)
Buna-N	82.2°C (180°F)
PTFE (Overmolded diaphragm)	82.2°C (180°F)
Fluoroelastomer	121°C (250°F)
3A Approved EPDM	135°C (275°F)

* 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

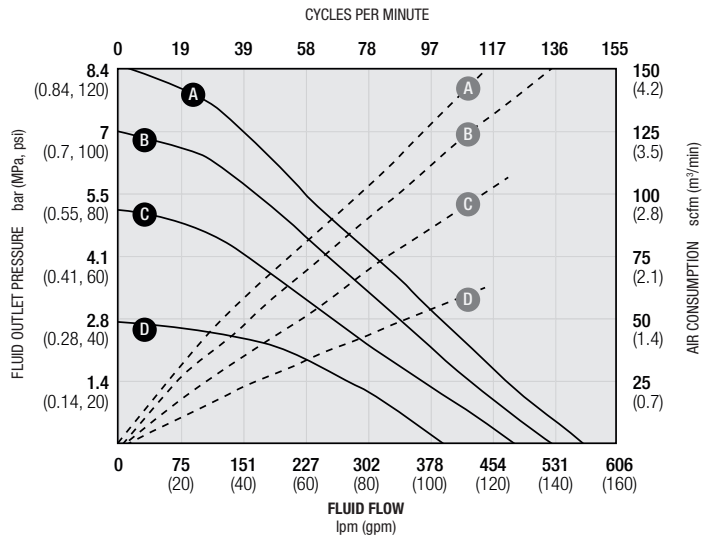
Performance Charts

1590 High Sanitation Performance



AIR PRESSURE	LEGEND
(A) = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - - -
(B) = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - - -
(C) = at 4.8 bar (0.48 MPa - 70 psi)	
(D) = at 2.8 bar (0.28 MPa - 40 psi)	
(E) = at 1.4 bar (0.14 MPa - 20 psi)	

3150 High Sanitation Performance

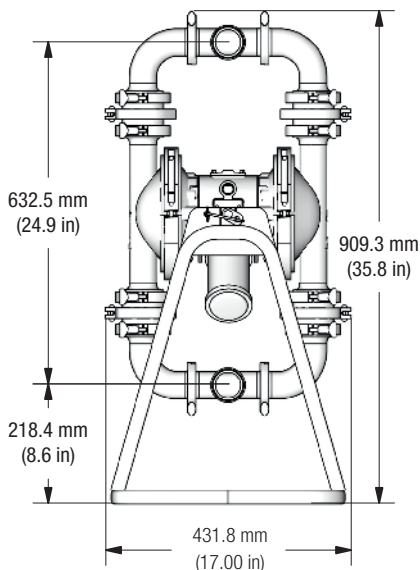


AIR PRESSURE	LEGEND
(A) = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - - -
(B) = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - - -
(C) = at 4.8 bar (0.48 MPa - 70 psi)	
(D) = at 2.8 bar (0.28 MPa - 40 psi)	

Dimensions

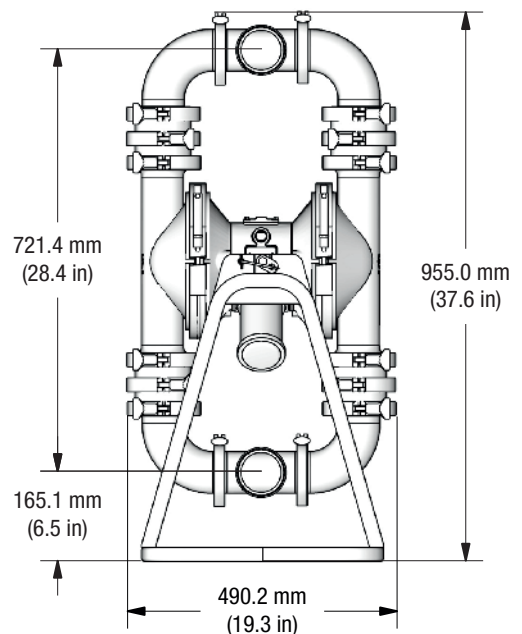
SaniForce 1590 HS

Ball Check Valve Pump



SaniForce 3150 HS

Ball Check Valve Pump



SaniForce 1590 & 3150 3A



3A Certified Diaphragm Pumps



Ordering Information

SaniForce 1590 3A Pumps







3A Pump with Leak Detector

Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm	Ball
SABAAA	 Ball	48.3 mm (1.9 in)	2 in x 2 in	Overmolded EPDM	PTFE
SADAAA	 Ball	48.3 mm (1.9 in)	DIN DN 50	Overmolded EPDM	PTFE

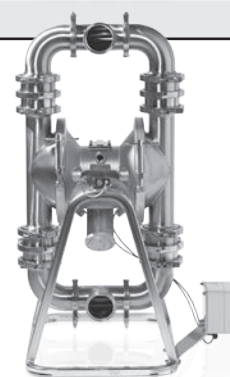
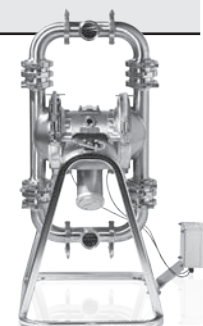
 — CERTIFICATE 199481

SaniForce 3150 3A Pumps

3A Pump with Leak Detector

Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm	Ball
SA1AAA	 Ball	73.7 mm (2.9 in)	1.5 in x 1.5 in	Overmolded EPDM	PTFE
SA2AAA	 Ball	73.7 mm (2.9 in)	2 in x 2 in	Overmolded EPDM	PTFE
SA3AAA	 Ball	73.7 mm (2.9 in)	3 in x 3 in	Overmolded EPDM	PTFE
SA4AAA	 Ball	73.7 mm (2.9 in)	4 in x 4 in	Overmolded EPDM	PTFE
SA5AAA	Ball	73.7 mm (2.9 in)	3 in x 2 in	Overmolded EPDM	PTFE
SA6AAA	 Ball	73.7 mm (2.9 in)	DIN DN 50	Overmolded EPDM	PTFE
SA7AAA	 Ball	73.7 mm (2.9 in)	DIN DN 80	Overmolded EPDM	PTFE

 — CERTIFICATE 199480



3A High Sanitation Overmolded EPDM Diaphragm Kit

Part Number	Description
255058	For HS-1590 pump, diaphragm repair kit
253224	For HS-3150 pump, diaphragm repair kit


Technical Specifications

	1590 3A Certified	3150 3A Certified
Maximum fluid working pressure	8 bar (0.8 MPa / 120 psi)	8 bar (0.8 MPa / 120 psi)
Maximum free-flow delivery**	348.5 lpm (100 gpm)	606 lpm (160 gpm)
Maximum suction lift - ball	8.5 m (28 ft) wet, 4.5 m (15 ft) dry	5.5 m (18 ft) wet, 2.7 m (9 ft) dry
Maximum size pumpable solids - ball	15.8 mm (5/8 in)	25.4 mm (1 in)
Typical sound level at 4.9 bar air (70 psi) air @ 50 cpm	85 dBa	85 dBa
Air pressure operating range	1.4 to 8 bar (0.14 to 0.8 MPa / 20-120 psi)	1.4 to 8 bar (0.14 to 0.8 MPa / 20-120 psi)
Air inlet size	0.5 in npt(f)	0.5 in npt(f)
Fluid inlet & outlet size (determined by part number)	Tri-clamp connections or DIN	Tri-clamp connections or DIN
Weight	44 kg (97 lb)	65 kg (145 lb)
Flyer	338499	338499
Instruction manual	310622	310622

Maximum diaphragm operating temperature

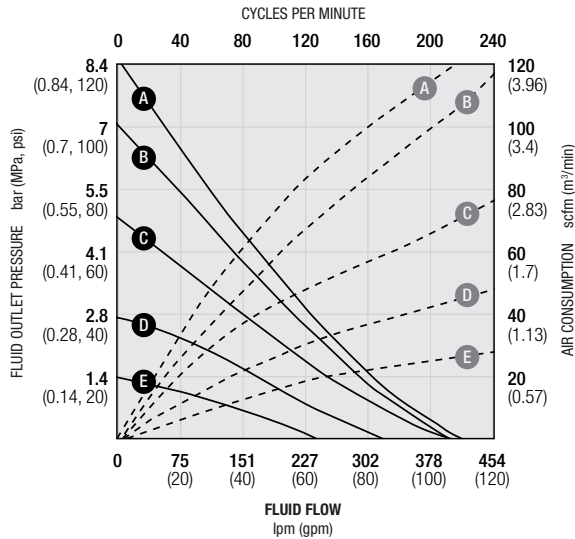
3A Approved EPDM	135°C (275°F)	135°C (275°F)
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** Flow rates are with muffler and do not vary based on diaphragm material. Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type.

NEW  — CE1935 DIN CONNECTIONS

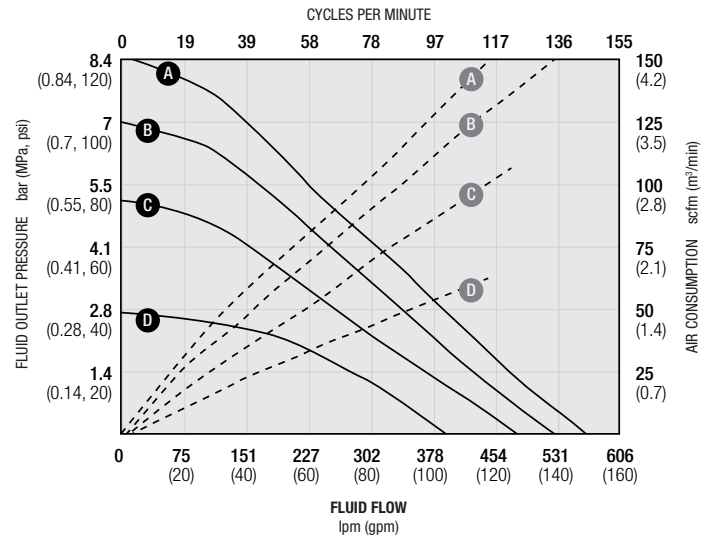
Performance Charts

1590 3A Performance



AIR PRESSURE	LEGEND
Ⓐ = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - -
Ⓑ = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - -
Ⓒ = at 4.8 bar (0.48 MPa - 70 psi)	
Ⓓ = at 2.8 bar (0.28 MPa - 40 psi)	
Ⓔ = at 1.4 bar (0.14 MPa - 20 psi)	

3150 3A Performance

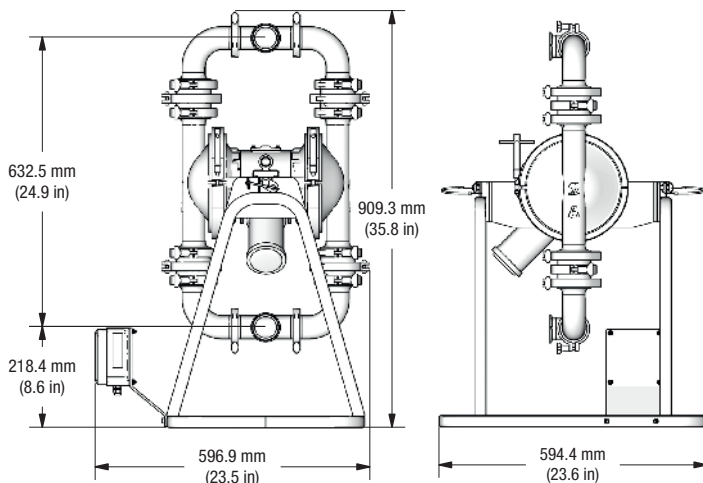


AIR PRESSURE	LEGEND
Ⓐ = at 8.4 bar (0.84 MPa - 120 psi)	Air Consumption - - - -
Ⓑ = at 7 bar (0.7 MPa - 100 psi)	Fluid Flow - - - -
Ⓒ = at 4.8 bar (0.48 MPa - 70 psi)	
Ⓓ = at 2.8 bar (0.28 MPa - 40 psi)	

Dimensions

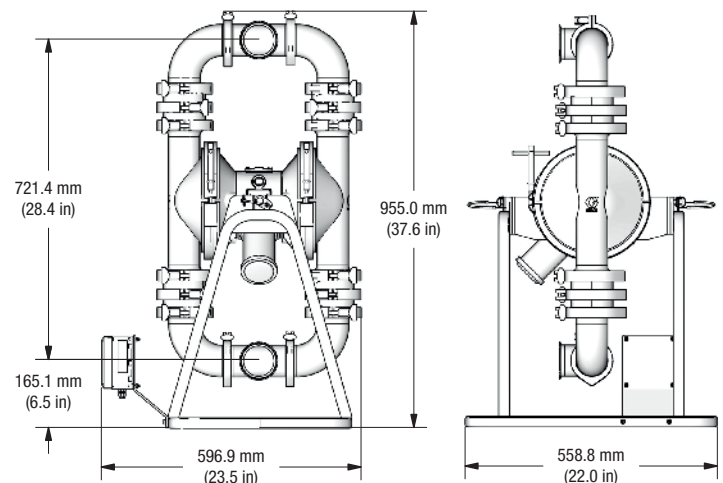
SaniForce 1590 3A

3A Ball Check Valve Pump



SaniForce 3150 3A


3A Ball Check Valve Pump



SaniForce Meat & Poultry Pumps

Air-Operated Diaphragm Pumps

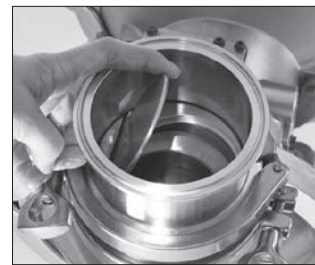
Ordering Information

Part Number	Type	Manifold ID	Sanitary Connection	Diaphragm
SFP6F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Santoprene
SFP7F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Buna-N
SFP8F1	Flapper	73.7 mm (2.9 in)	3 in x 3 in	Fluoroelastomer
SFPAF1	 Flapper	73.7 mm (2.9 in)	3 in x 3 in	Overmolded EPDM



Accessories

Part Number	Description
253225	Santoprene diaphragm kit
253223	Buna-N diaphragm kit
253222	Fluoroelastomer diaphragm kit
253224	Overmolded EPDM diaphragm kit
15D990	Leak detector kit



Flapper Check Valve

Technical Specifications

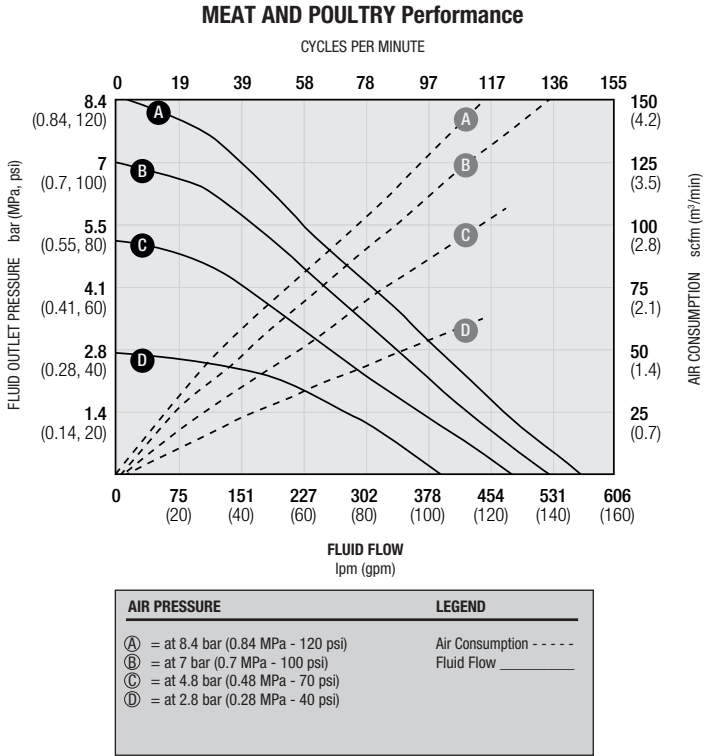
	Meat and Poultry
Maximum fluid working pressure	8 bar (0.8 MPa / 120 psi)
Maximum free-flow delivery*	606 lpm (160 gpm)
Maximum suction lift	3.5 m (10 ft) wet
Maximum size pumpable solids	63.5 mm (2.5 in)
Typical sound level at 4.9 bar (70 psi) air @ 50 cpm	85 dBa
Air pressure operating range	1.4 to 8 bar (0.14 to 0.8 MPa / 20-120 psi)
Air inlet size	0.5 in npt(f)
Fluid inlet & outlet size (determined by part number)	Tri-clamp connections
Weight	66 kg (145 lb)
Flyer	338067
Instruction manual	310622

Maximum diaphragm operating temperature	
Santoprene	82.2°C (180°F)
Buna-N	82.2°C (180°F)
Fluoroelastomer	121°C (250°F)
EPDM	135°C (275°F)

* 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.

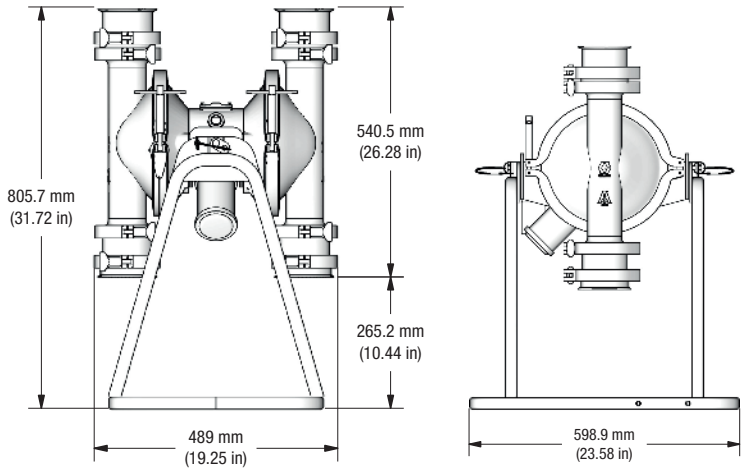
SaniForce Meat and Poultry Pumps

Performance Charts



Dimensions

SaniForce 3150 Meat and Poultry Flapper



SaniForce Piston Pumps

2:1, 6:1, 5:1 and 12:1

Ordering Information

2:1 Piston Pump

Part					
Number	Pump Type	Pump Length: Inlet to Outlet	Pump Inlet	Packings	Weight: kg (lb)
24N300	Double Ball	Long - 113 cm (44.5 in)	5.1 cm (2 in) OD	UHMWPE, Nitrile	11.8 (26)
24N344	Double Ball	Long - 113 cm (44.5 in)	5.1 cm (2 in) OD	PTFE, Nitrile	11.8 (26)
24R046	Double Ball	Standard Drum - 95.2 cm (37.5 in)	5.1 cm (2 in) OD	UHMWPE, Nitrile	10.9 (24)
24R047	Double Ball	Standard Drum - 95.2 cm (37.5 in)	5.1 cm (2 in) OD	PTFE, Nitrile	10.9 (24)

6:1 Piston Pump

Part					
Number	Pump Type	Pump Length: Inlet to Outlet	Pump Inlet	Packings	Weight: kg (lb)
24E840	Double Ball	Drum Length - 92.4 cm (36.4 in)	3.6 cm (1.44 in) Slotted	Buna, Nylon, Nitrile, & CR	16.7 (36.9)
24G740	Double Ball	Drum Length, Ram Pkg - 92.4 cm (36.4 in)	15.2 cm (6 in) Clamp	Buna, Nylon, Nitrile, & CR	17 (38)
24E839	Double Ball	Drum Length - 92.4 cm (36.4 in)	3.6 cm (1.44 in) Slotted	PTFE	16.7 (36.9)
24E838	Double Ball	Stubby - 38.3 cm (15.1 in)	6.3 cm (2.5 in) Clamp	Buna, UHMWPE & CR	13.1 (28.9)
24E837	Double Ball	Stubby - 38.3 cm (15.1 in)	6.3 cm (2.5 in) Clamp	PTFE	16.7 (36.9)
24E836	Priming Piston	Stubby - 40.6 cm (16.0 in)	5.8 cm (2.3 in) Priming Piston	Buna, Nylon, Nitrile & CR	16.8 (33.8)
24G739	Priming Piston	Stubby, Ram Pkg - 40.6 cm (16.0 in)	15.2 cm (6 in) Clamp	Buna, Nylon, Nitrile & CR	16 (35)
24F942	Double Ball	Bin Length - 124.0 cm (48.9 in)	1.44"(3.6 cm) Slotted	Buna, Nylon, Nitrile, & CR	18 (39.7)

5:1 Piston Pump

Part					
Number	Pump Type	Pump Length: Inlet to Outlet	Pump Inlet	Packings	Weight: kg (lb)
24F195	Double Ball	Drum Length - 93.4 cm (36.8 in)	10.2 cm (4 in) Slotted	Buna, PTFE, UHMWPE & FKM	54.1 (119)
24E833	Double Ball	Stubby - 51.8 cm (20.4 in)	10.2 cm (4 in) Slotted	Buna, PTFE, UHMWPE & FKM	41.4 (91.3)
24G742	Double Ball	Stubby, Ram Pkg - 51.8 cm (20.4 in)	15.2 cm (6 in) Clamp	Buna, PTFE, UHMWPE & FKM	43 (95)
24E831	Priming Piston	Drum Length - 65.7 cm (25.9 in)	10.2 cm (4 in) Priming Piston	Buna, PTFE, UHMWPE, CR, Nylon & FKM	43.2 (95.3)
24G741	Priming Piston	Drum Length, Ram Pkg - 65.7 cm (25.9 in)	15.2 cm (6 in) Clamp	Buna, PTFE, UHMWPE, CR, Nylon & FKM	45 (99)
24F196	Double Ball	Stubby with Inlet Elbow - 64.0 cm (25.2 in)	90 degree elbow 6.3 cm (2.5 in) Clamp	Buna, FKM, PTFE & UHMWPE	42.2 (93.1)
24F197	Double Ball	Stubby - 49.0 cm (19.3 in)	10.2 cm (4 in) Clamp	Buna, PTFE, Silicone, FKM & UHMWPE	41.1 (90.6)

12:1 Piston Pump

Part					
Number	Pump Type	Pump Length: Inlet to Outlet	Pump Inlet	Packings	Weight: kg (lb)
24F625	Priming Piston	Stubby, Ram Package - 40.8 m (16.1 in)	15.2 cm (6 in) Clamp	Acetal, PTFE, Nitrile and UHMWPE	55 (122)
24F626*	Priming Piston	Stubby, Ram Package - 40.8 m (16.1 in)	15.2 cm (6 in) Clamp	Acetal, PTFE, Nitrile and UHMWPE	55 (122)

OD = Outside Diameter CR = Polychloroprene *For use with viscous sticky material

Monark 5:1

Part					
Number	Pump Type	Pump Length: Inlet to Outlet	Pump Inlet	Packings	Weight: kg (lb)
207550	Double Ball	Drum Length - 93.3 cm (36.7 in)	5.3 cm (2.1 in) OD	Buna, Neoprene	15 (33)

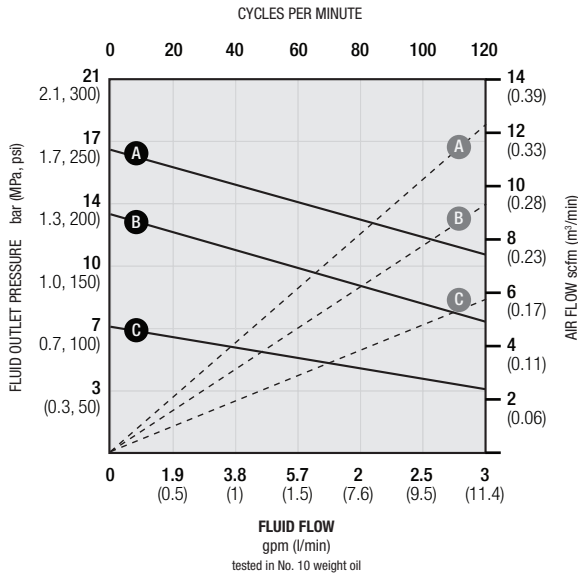
Technical Specifications

SaniForce	2:1 Piston Pump	6:1 Piston Pump	5:1 Piston Pump	12:1 Piston Pump
Fluid to air pressure ratio	2.5:1	6:1	5:1	12:1
Maximum fluid pressure	17 bar (250 psi)	45 bar (680 psi)	28.3 bar (410 psi)	100 bar (1450 psi)
Maximum fluid flow at 60 cpm	5.7 lpm (1.5 gpm)	15.1 lpm (4.0 gpm)	53 lpm (14.0 gpm)	32 lpm (8.5 gpm)
Air consumption at 60 cpm	0.17 m ³ /min (6 cfm) at 7 bar (100 psi)	0.82 m ³ /min (29 cfm) at 7 bar (100 psi)	2.1 m ³ /min (75 cfm) at 5.5 bar (80 psi)	3.6 m ³ /min (128 cfm) at 7 bar (100 psi)
Volume per cycle	0.095 l (0.025 gal)	0.25 l (0.067 gal)	0.87 l (0.23 gal)	0.53 l (0.14 gal)
Max. operating temp. (fluid)	82°C (180°F)	121°C (250°F)	60°C (140°F)	71°C (160°F)
Max. operating temp. (air motor)	48.8°C (120°F)	48.8°C (120°F)	48.8°C (120°F)	48.8°C (120°F)
Max. size pumpable solids	3.2 mm (1/8 in)	3.2 mm (1/8 in)	6.4 mm (1/4 in)	6.4 mm (1/4 in)
Max. air input pressure	7 bar (0.7 MPa / 100 psi)	7 bar (0.7 MPa / 100 psi)	5.5 bar (0.55 MPa / 80 psi)	7 bar (0.7 MPa / 100 psi)
Air inlet size	3/8 npt	1/2 npsm(f)	1/2 npsm(f)	1/2 npsm(f)
Fluid outlet size	2.5 cm (1.0 in) Tri-Clamp	3.8 cm (1.5 in) Tri-Clamp	5.1 cm (2.0 in) Tri-Clamp	5.1 cm (2.0 in) Tri-Clamp
Flyer	338591	338591	338591	338591
Instruction manual	3A2977	3A0733	3A0734	3A0735



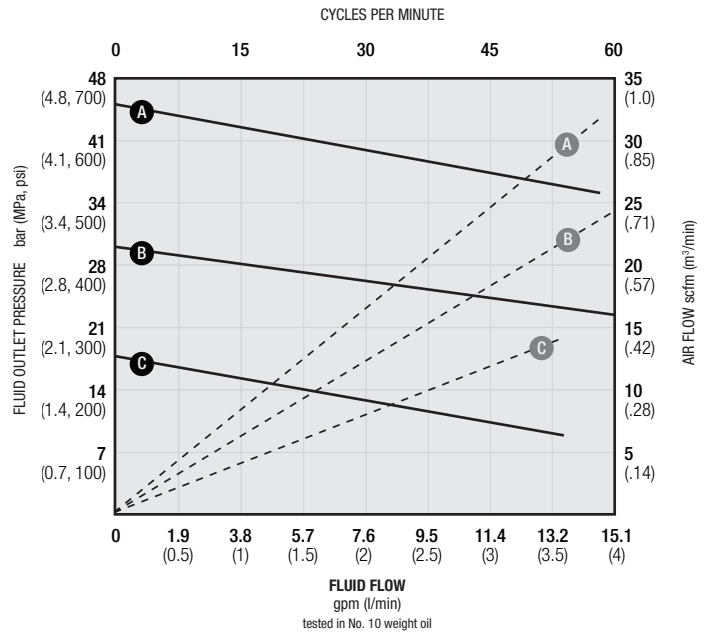
Performance Charts

2:1 Piston Pump Performance



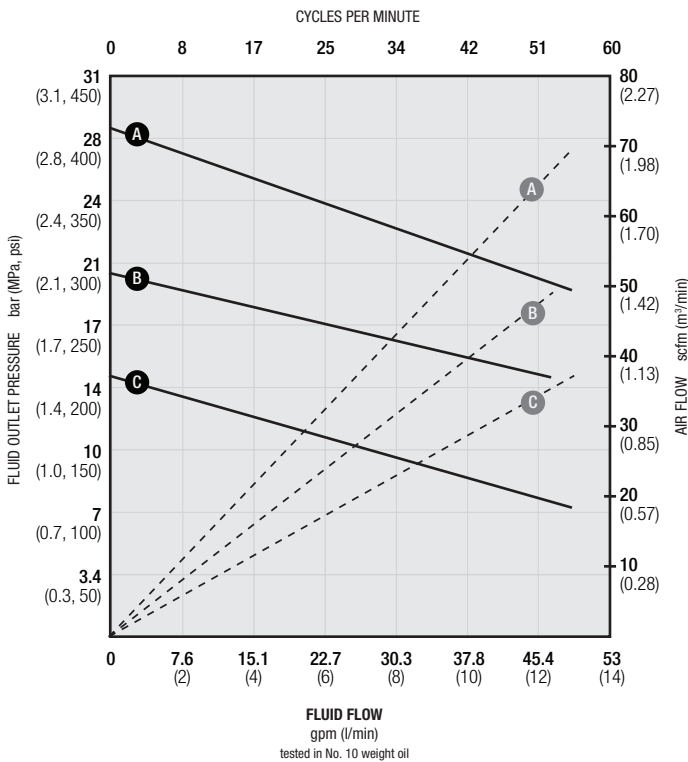
AIR PRESSURE	LEGEND
(A) = at 7 bar (0.7 MPa - 100 psi)	Air Consumption - - - - -
(B) = at 4.8 bar (0.48 MPa - 70 psi)	Fluid Flow _____
(C) = at 2.8 bar (0.28 MPa - 40 psi)	

6:1 Piston Pump Performance



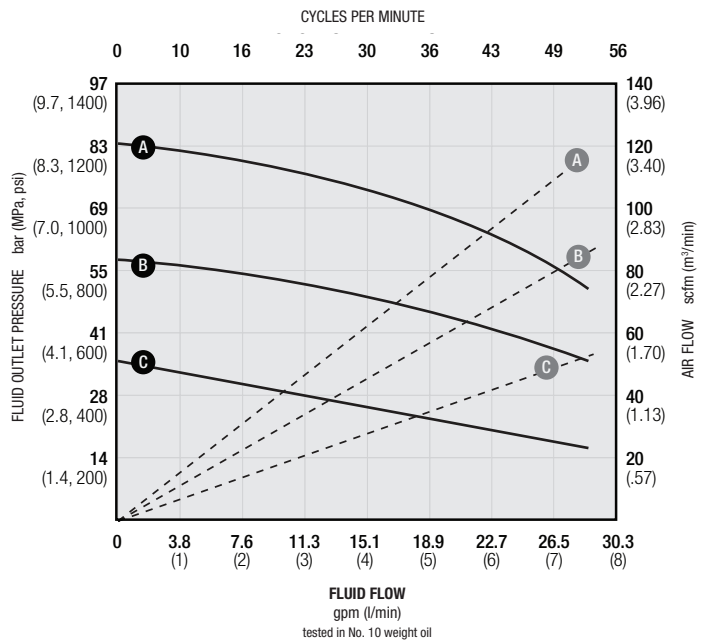
AIR PRESSURE	LEGEND
(A) = at 7 bar (0.7 MPa - 100 psi)	Air Consumption - - - - -
(B) = at 4.8 bar (0.48 MPa - 70 psi)	Fluid Flow _____
(C) = at 2.8 bar (0.28 MPa - 40 psi)	

5:1 Piston Pump Performance



AIR PRESSURE	LEGEND
(A) = at 5.5 bar (0.5 MPa - 80 psi)	Air Consumption - - - - -
(B) = at 4.1 bar (0.4 MPa - 60 psi)	Fluid Flow _____
(C) = at 2.8 bar (0.3 MPa - 40 psi)	

12:1 Piston Pump Performance

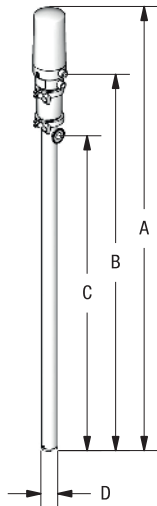


AIR PRESSURE	LEGEND
(A) = at 7 bar (0.7 MPa - 100 psi)	Air Consumption - - - - -
(B) = at 4.8 bar (0.48 MPa - 70 psi)	Fluid Flow _____
(C) = at 2.8 bar (0.3 MPa - 40 psi)	

SaniForce Piston Pumps

Dimensions

SaniForce 2:1

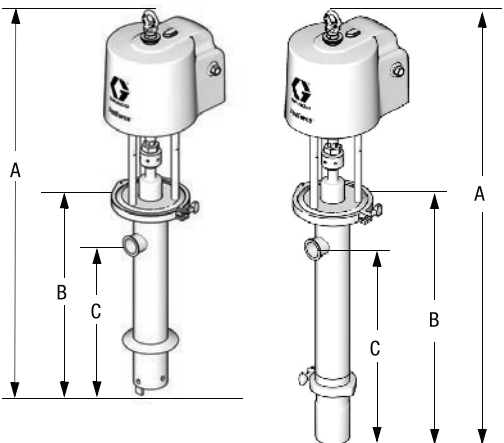


Model	A cm (in)	B cm (in)	C cm (in)	D cm (in)
24N300 and 24N344	157.2 (61.9)	136.4 (53.7)	113.0 (44.5)	5.0 (1.972)
24R046 and 24R047	139.4 (54.9)	118.6 (46.7)	95.2 (37.5)	5.0 (1.972)

SaniForce 5:1

Stubby Length

Drum and Bin Length

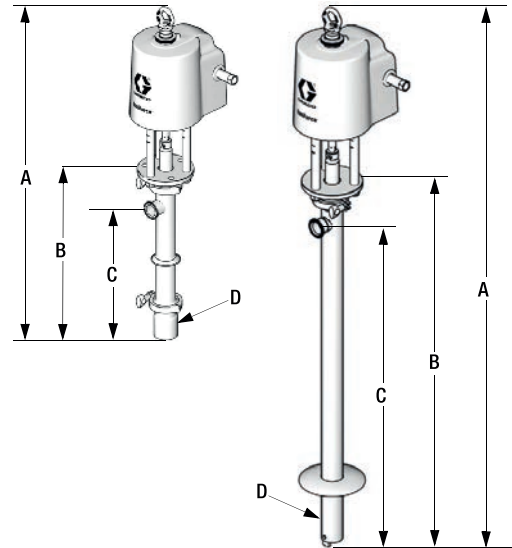


Model	Pump Style	A cm (in)	B cm (in)	C cm (in)
24G742	Double ball, stubby	131 (51.5)	66 (25.9)	52 (20.4)
24E833				
24F196	Double ball, stubby with inlet	143 (56.3)	78 (30.7)	64 (25.2)
24F197	Double ball, bin length	128 (50.4)	63 (24.8)	49 (19.3)
24G741	Priming piston, drum length	145 (57.0)	80 (31.3)	66 (25.9)
24E831				
24F195	Double ball, drum length	172 (67.9)	107 (42.3)	93 (36.8)

SaniForce 6:1

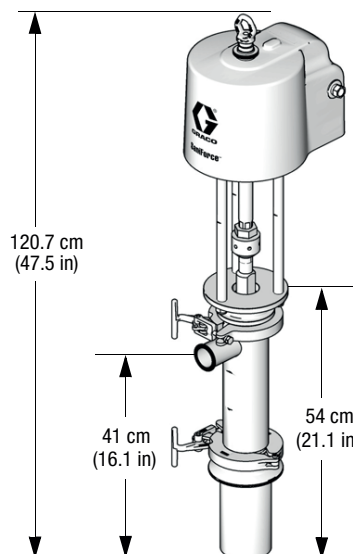
Stubby Length

Drum and Bin Length



Model	Weight kg (lb)	Pump Style	A cm (in)	B cm (in)	C cm (in)	D (OD) cm (in)
24E836	15 (34)	Priming Piston Stubby	102 (40.1)*	52 (20.6)*	41 (16)*	6.4 (2.5)*
24G739	16 (35)					
24E837	17 (37)	Double Ball, Stubby	100 (39.2)	50 (19.7)	38 (15.1)	5.1 (2.0)
24E838	13 (29)					
24G740	17 (38)	Double Ball, Drum Length	154 (60.5)	104 (41)	92 (36.4)	5.1 (2.0)
24E839	17 (37)					
24E840	17 (37)					
24F942	18 (40)	Double Ball, Bin Length	185 (73)	136 (53.5)	124 (48.9)	5.1 (2.0)

SaniForce 12:1



Model	Pump Style
24F625	Stubby ram package
24F626	

SaniForce Elevators Pump Packages

Ordering Information

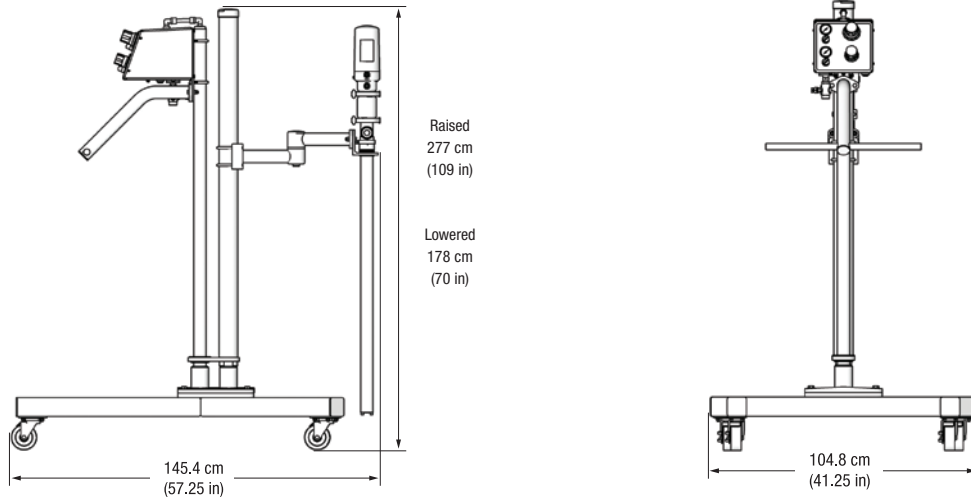
Saniforce Elevators

Model	Cart & Handle	Stationary Base	Pump	Packings	Pump Brackets	Weight
24V310	✓		–	–	24V303	138 kg (305 lb)
24V311		✓	–	–	24V303	77 kg (170 lb)
24V312	✓		–	–	24V307	138 kg (305 lb)
24V313		✓	–	–	24V307	77 kg (170 lb)
24V314	✓		–	–	24V304	138 kg (305 lb)
24V315		✓	–	–	24V304	77 kg (170 lb)
24V316	✓		2:1	UHMWPE	24V303	150 kg (330 lb)
24V317	✓		2:1	PTFE	24V303	150 kg (330 lb)
24V318		✓	2:1	UHMWPE	24V303	88 kg (195 lb)
24V319		✓	2:1	PTFE	24V303	88 kg (195 lb)
24V320	✓		6:1	Buna-N	24V307	155 kg (342 lb)
24V321	✓		6:1	PTFE	24V307	155 kg (342 lb)
24V322		✓	6:1	Buna-N	24V307	94 kg (207 lb)
24V323		✓	6:1	PTFE	24V307	94 kg (207 lb)
24V324	✓		5:1	Varied	24V304	193 kg (425 lb)
24V325		✓	5:1	Varied	24V304	132 kg (290 lb)

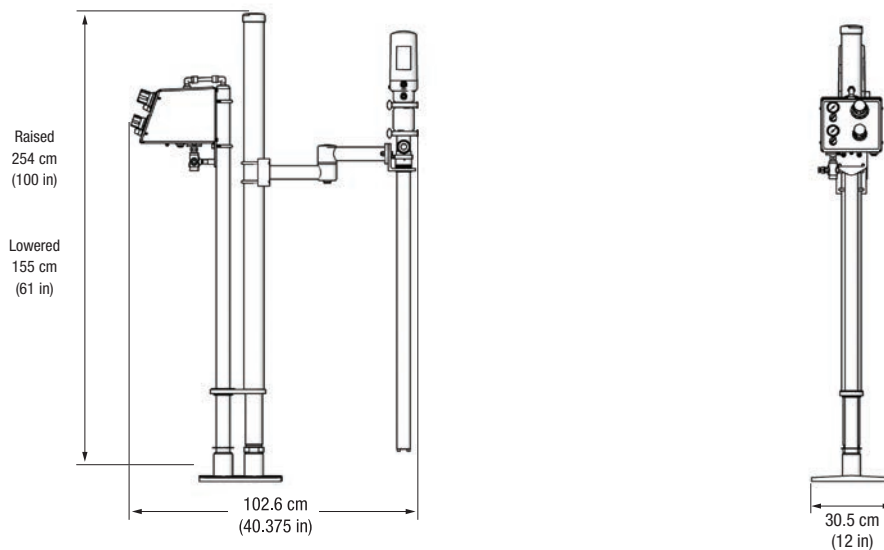


SaniForce Elevators

Mobile Model



Stationary Model



Technical Specifications

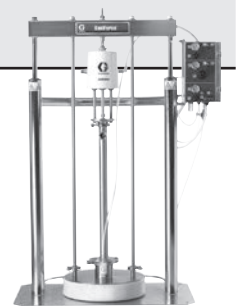
SaniForce Elevator	2:1 Piston Pump	6:1 Piston Pump	5:1 Piston Pump
Maximum weight capacity	91 kg (200 lb)	91 kg (200 lb)	91 kg (200 lb)
Maximum ambient temp. (air motor)	49°C (120°F)	49°C (120°F)	49°C (120°F)
Maximum fluid working pressure	17 bar (1.7 MPa / 250 psi)	28.3 bar (2.8 MPa / 410 psi)	44.8 bar (4.5 MPa / 650 psi)
Air inlet size	3/8 npt(f)	1/2 npt(f)	1/2 npt(f)
Maximum air inlet pressure	7 bar (0.7 MPa / 100 psi)	6.9 bar (0.7 MPa / 100 psi)	5.5 bar (0.6 MPa / 80 psi)
Sound data	See pump manual	See pump manual	See pump manual
Wetted parts	See pump manual	See pump manual	See pump manual
Flyer	338591	338591	338591
Instruction manual	3A2977	3A0733	3A0734

SaniForce Drum Unloaders Pump Packages

Ordering Information

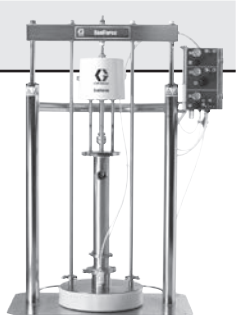
SaniForce 6:1 Drum Unloader

Part Number	Pump Number	Pump Type	Ram Material	Ram Plate No.	Inflatable Seal No.	Control Type	Weight kg (lb)
24D776	24G739	Priming Piston	SST	16G240	16G242	Exposed	160 (353)
24D780	24G739	Priming Piston	CS*	16G240	16G242	Exposed	169 (372)
24D782	24G739	Priming Piston	SST	16G240	16G242	Enclosed SST	166 (367)
24D788	24G740	Double Ball	SST	16G240	16G242	Exposed	161 (356)
24D792	24G740	Double Ball	CS*	16G240	16G242	Exposed	170 (375)
24D794	24G740	Double Ball	SST	16G240	16G242	Enclosed SST	168 (370)



SaniForce 5:1 Drum Unloader

Part Number	Pump Number	Pump Type	Ram Material	Ram Plate No.	Inflatable Seal No.	Control Type	Weight kg (lb)
24D708	24G741	Priming Piston	SST	16G240	16G242	Exposed	187 (413)
24D712	24G741	Priming Piston	CS*	16G240	16G242	Exposed	196 (433)
24D714	24G741	Priming Piston	SST	16G240	16G242	Enclosed SST	194 (428)
24D720	24G742	Double Ball	SST	16G240	16G242	Exposed	189 (417)
24D724	24G742	Double Ball	CS*	16G240	16G242	Exposed	198 (437)
24D726	24G742	Double Ball	SST	16G240	16G242	Enclosed SST	196 (432)



SaniForce 12:1 Drum Unloader

Part Number	Pump Number	Pump Type	Ram Material	Ram Plate No.	Inflatable Seal No.	Control Type	Weight kg (lb)
24D647	24F625	Priming Piston	SST	16G240	16G242	Exposed	200 (440)
24D651	24F625	Priming Piston	CS*	16G240	16G242	Exposed	208 (459)
24D653	24F625	Priming Piston	SST	16G240	16G242	Enclosed SST	206 (454)
24F188**	24F626	Priming Piston	SST	16G240	16G242	Exposed	200 (440)
24F189**	24F626	Priming Piston	CS*	16G240	16G242	Exposed	208 (459)
24F190**	24F626	Priming Piston	SST	16G240	16G242	Enclosed SST	206 (454)
24U568**†	24F626	Priming Piston	SST	16K938	16G242	Exposed	209 (460)
24F188**	24F626	Priming Piston	SST	16G240	16G242	Exposed	200 (440)
24F189**	24F626	Priming Piston	CS*	16G240	16G242	Exposed	208 (459)
24F190**†	24F626	Priming Piston	SST	17B191	16G242	Enclosed SST	206 (454)



*CS = Painted carbon steel **For use with sticky material † = Conical shaped plate

Technical Specifications

Drum Unloaders	6:1 Double Ball Pump	6:1 Priming Piston	5:1 Double Ball Pump	5:1 Priming Piston	12:1 Priming Piston	3150 High Sanitation	2150 High Sanitation
Max fluid pressure	44.8 bar (4.1 MPa / 600 psi)	44.8 bar (4.1 MPa / 600 psi)	28.3 bar (2.8 MPa / 400 psi)	28.3 bar (2.8 MPa / 400 psi)	100 bar (8.3 MPa / 1200 psi)	8.3 bar (0.83 MPa / 120 psi)	8.3 bar (0.83 MPa / 120 psi)
Max Flow at 60 cpm	15.1 lpm (4.0 gpm)	15.1 lpm (4.0 gpm)	53 lpm (14 gpm)	53 lpm (14 gpm)	32 lpm (8.5 gpm)	227 lpm (60 gpm)	227 lpm (60 gpm)
Max Flow at 100 cpm	–	–	–	–	–	378 lpm (100 gpm)	378 lpm (100 gpm)
Viscosity	Up to 75,000 cps	Up to 125,000 cps	Up to 200,000 cps	Up to 750,000 cps	Up to 1,000,000 cps	Up to 100,000 cps	Up to 100,000 cps
Max inlet air pressure	7 bar (0.7 MPa / 100 psi)	7 bar (0.7 MPa / 100 psi)	5.5 bar (0.6 MPa / 80 psi)	5.5 bar (0.6 MPa / 80 psi)	7 bar (0.7 MPa / 100 psi)	8.3 bar (0.8 MPa, 120 psi)	8.3 bar (0.8 MPa, 120 psi)
Air inlet size (enclosed, exposed controls)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)	1/2 npt(f), 3/4 npt(f)
Evacuation efficiency	Up to 99%	Up to 99%	Up to 99%	Up to 99%	Up to 99%	Up to 99%	Up to 99%
Flyer	338590	338590	338590	338590	338590	338590	338590
Instruction manual	3A0591	3A0591	3A0591	3A0591	3A0591	3A0591	3A0591

*Flow rates based on full displacement of lower and S.G. = 1

SaniForce Drum Unloaders

Ordering Information

SaniForce 3150 HS Drum Unloader

Part Number	Pump Number	Pump Type	Ram Material	Ram Plate No.	Inflatable Seal No.	Control Type	Weight kg (lb)	Diaphragm Material	Ball Material
24J364	24J389	Ball	SST	16G241	16G242	Exposed	194 (428)	PTFE/EPDM	PTFE
24J365	24J389	Ball	CS	16G241	16G242	Exposed	201 (443)	PTFE/EPDM	PTFE
24J366	24J389	Ball	SST	16G241	16G242	Enclosed SST	201 (443)	PTFE/EPDM	PTFE
24D922	24C124	Ball	SST	16G241	16G242	Exposed	194 (428)	Overmolded EPDM, 3A	PTFE
24D926	24C124	Ball	CS*	16G241	16G242	Exposed	201 (443)	Overmolded EPDM, 3A	PTFE
24D928	24C124	Ball	SST	16G241	16G242	Enclosed SST	201 (443)	Overmolded EPDM, 3A	PTFE
24D932	248273	Ball	CS*	16G241	16G242	Exposed	201 (443)	Santoprene	Santoprene
24D936	248273	Ball	SST	16G241	16G242	Enclosed SST	200 (442)	Santoprene	Santoprene
24D940	248273	Ball	SST	16G241	16G242	Exposed	194 (428)	Santoprene	Santoprene
24D944	248274	Flapper	SST	16G241	16G242	Exposed	194 (428)	Santoprene	–
24D948	248274	Flapper	CS*	16G241	16G242	Exposed	201 (443)	Santoprene	–
24D952	248274	Flapper	SST	16G241	16G242	Enclosed SST	200 (442)	Santoprene	–

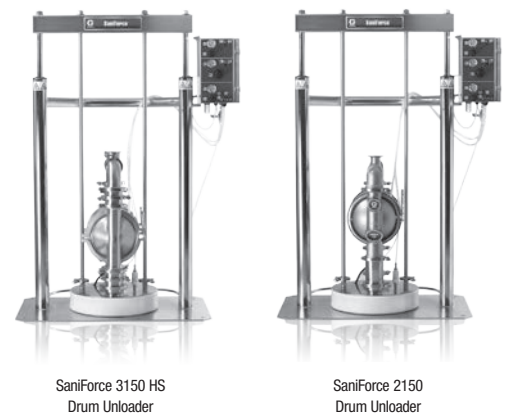
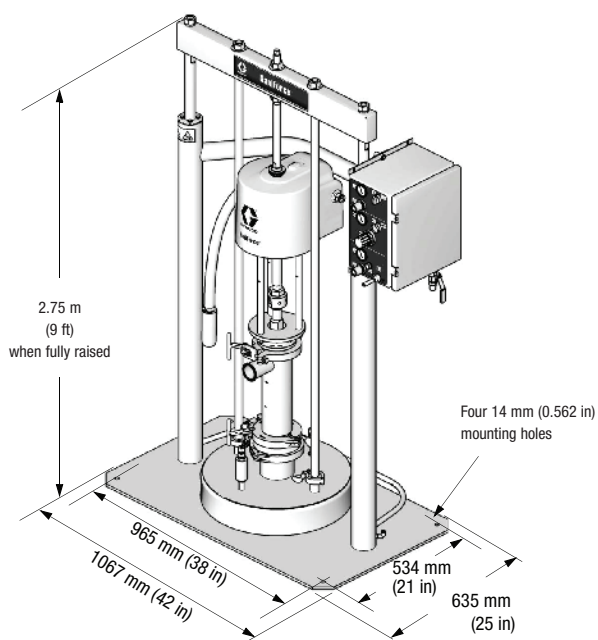
SaniForce 2150 Drum Unloader

Part Number	Pump Number	Pump Type	Ram Material	Ram Plate No.	Inflatable Seal No.	Control Type	Weight kg (lb)	Diaphragm Material	Ball Material
24G542	24G743	Ball	SST	16G241	16G242	Exposed	204 (450)	Overmolded PTFE	PTFE
24F191	24G743	Ball	CS*	16G241	16G242	Exposed	210 (464)	Overmolded PTFE	PTFE
24G543	24G743	Ball	SST	16G241	16G242	Enclosed SST	210 (464)	Overmolded PTFE	PTFE
24F192	24G744	Ball	SST	16G241	16G242	Exposed	204 (450)	Santoprene	Weighted polychloroprene
24F193	24G744	Ball	CS*	16G241	16G242	Exposed	210 (464)	Santoprene	Weighted polychloroprene
24F194	24G744	Ball	SST	16G241	16G242	Enclosed SST	210 (464)	Santoprene	Weighted polychloroprene

*CS = Painted carbon steel.

Dimensions

SaniForce Drum Unloader

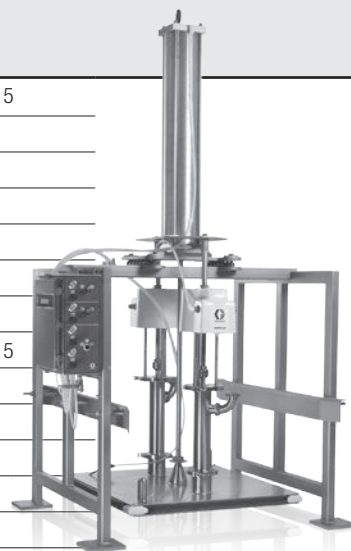


SaniForce Bin Evacuation Systems Pump Packages

Ordering Information

SaniForce BES

BES Part Number	Max. Working Fluid Pressure per pump bar (MPa / psi)	Pump Type	Pump Quantity	Pump Description	Control Type	Ram Plate BIN Manuf
BESAAC	28 (2.8 / 400)	Double Ball	2	SaniForce 5:1	Manual	Buckhorn Caliber 315
BESA4C	28 (2.8 / 400)	Double Ball	2	SaniForce 5:1	Manual	Pallecon
BESA7A	28 (2.8 / 400)	Double Ball	2	SaniForce 5:1	Electronic	Plywood
BESA7C	28 (2.8 / 400)	Double Ball	2	SaniForce 5:1	Manual	Plywood
BESA7F	28 (2.8 / 400)	Double Ball	2	SaniForce 5:1	Electronic	Plywood
BESB7B	28 (2.8 / 400)	Double Ball	4	SaniForce 5:1	Electronic	Plywood
BESB7D	28 (2.8 / 400)	Double Ball	4	SaniForce 5:1	Manual	Plywood
BESEAC	83 (8.3 / 1450)	Priming Piston	2	SaniForce 12:1	Manual	Buckhorn Caliber 315
BESE1A	83 (8.3 / 1450)	Priming Piston	2	SaniForce 12:1	Electronic	Arena
BESE1C	83 (8.3 / 1450)	Priming Piston	2	SaniForce 12:1	Manual	Arena
BESE5C	83 (8.3 / 1450)	Priming Piston	2	SaniForce 12:1	Manual	Pallecon
BESE7C	83 (8.3 / 1450)	Priming Piston	2	SaniForce 12:1	Manual	Plywood
BESF6B	83 (8.3 / 1450)	Priming Piston	4	SaniForce 12:1	Electronic	Arena
BESF6D	83 (8.3 / 1450)	Priming Piston	4	SaniForce 12:1	Manual	Arena
BESF7D	83 (8.3 / 1450)	Priming Piston	4	SaniForce 12:1	Manual	Plywood
BESF9B	83 (8.3 / 1450)	Priming Piston	4	SaniForce 12:1	Electronic	TNT
BESF9D	83 (8.3 / 1450)	Priming Piston	4	SaniForce 12:1	Manual	TNT



Note: Systems can be special ordered for bin types other than plywood, arena and pallecon. Contact your sales rep for additional information.
A BES with electronic controls is not CE approved!

Technical Specifications

SaniForce BES

Part Number	BESAxx	BESBxx	BESDxx	BESExx	BESFxx
Max. working fluid pressure	28 bar (2.8 MPa / 400 psi)		45 bar (4.1 MPa / 650 psi)	100 bar (8.3 MPa / 1450 psi)	100 bar (8.3 MPa / 1450 psi)
Compressed air requirement	5.5-7 bar (0.55-0.7 MPa / 80-100 psi)		5.5-7 bar (0.55-0.7 MPa / 80-100 psi)	5.5-7 bar (0.55-0.7 MPa / 80-100 psi)	5.5-7 bar (0.55-0.7 MPa / 80-100 psi)
Pneumatic control panel specifications					
Max. inlet air pressure	5.5 bar (0.55 MPa / 80 psi)		7 bar (0.7 MPa / 100 psi)	7 bar (0.7 MPa / 100 psi)	7 bar (0.7 MPa / 100 psi)
Air inlet size	3/4 in npt(f)		3/4 in npt(f)	3/4 in npt(f)	3/4 in npt(f)
Air inlet pump	1 in npt(f)		1 in npt(f)	1 in npt(f)	1 in npt(f)
Fluid displacement (each pump)	0.87 l/cycle (0.23 gal/cycle)		0.23 l/cycle (0.076 gal/cycle)	0.54 l/cycle (0.14 gal/cycle)	0.53 l/cycle (0.14 gal/cycle)
Max. flow @ 60 cpm*	106 lpm (28 gpm)	212 lpm (56 gpm)	30 lpm (8 gpm)	64 lpm (17 gpm)	128 lpm (34 gpm)
Pressure ratio	5:1		6:1	12:1	12:1
Air consumption (each pump) at 40 psi (2.8 bar, 0.28 MPa)	~ 0.84 m ³ /min per 3.78 lpm 2.95 scfm per gpm		~ 106.2 m ³ /min per 3.78 lpm 3.75 scfm per gpm	~ 212.4 m ³ /min per 3.78 lpm 7.5 scfm per gpm	~ 212.4 m ³ /min per 3.78 lpm 7.5 scfm per gpm
Pump outlet	2 in tri-clamp		1.5 in tri-clamp	2 in tri-clamp	2 in tri-clamp
Communication	RS232 Serial		RS232 Serial	RS232 Serial	RS232 Serial
Electrical requirements	110 VAC (60 Hz), 15A		110 VAC (60 Hz), 15A	110 VAC (60 Hz), 15A	110 VAC (60 Hz), 15A
Overall dimensions m (in)	1.75 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)		1.75 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)	1.75 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)	1.75 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)
Flyer	338589		338589	338589	338589
Instruction manual	311163		311163	311163	311163

* Flow rates based on full displacement of lower and S.G. = 1

Note: Graco's BES packages are available for a variety of manufacturers' bins and custom systems can be built upon request. Contact your sales rep for additional information.

SaniForce Bin Evacuation Systems

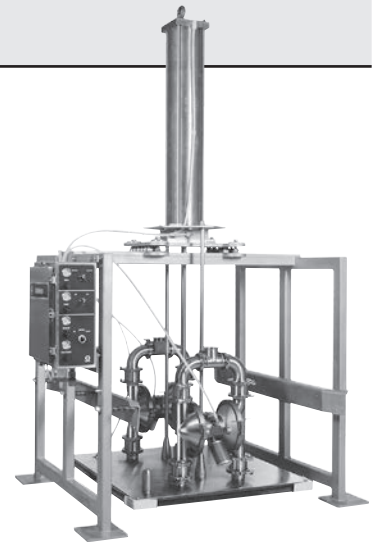
Ordering Information

SaniForce 3150 BES

Part Number	Type	Bin Manuf.	Control Type	Outlet Size	Diaphragm/Ball Material**
BES3P3	Ball	Plywood	Manual	76 mm (3 in)	Santoprene/ PTFE
BES3P1	Ball	Plywood	Electronic	76 mm (3 in)	Santoprene/ PTFE
BES4P3	Flapper	Plywood	Manual	76 mm (3 in)	Santoprene/ N/A
BES8B3	Ball	Pallecon	Manual	76 mm (3 in)	Overmolded EPDM, 3A
BES3A1	Ball	Arena	Electronic	76 mm (3 in)	Santoprene/ PTFE
BES4A1	Flapper	Arena	Electronic	76 mm (3 in)	Santoprene/ N/A

Note: Contact your sales rep for ordering information on non-plywood bins.
A BES with electronic controls is not CE approved!

** 3A Approved EPDM diaphragm is available for heavy duty applications.



Technical Specifications

SaniForce 3150 BES

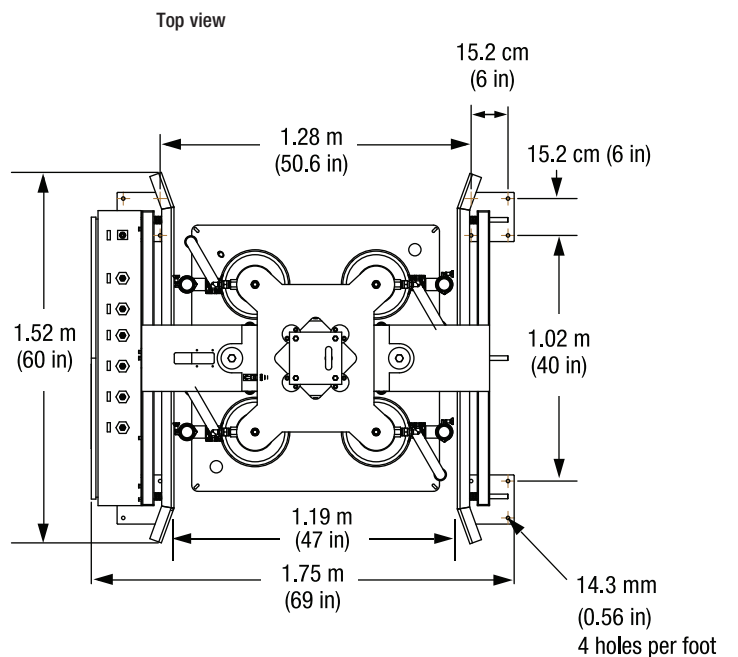
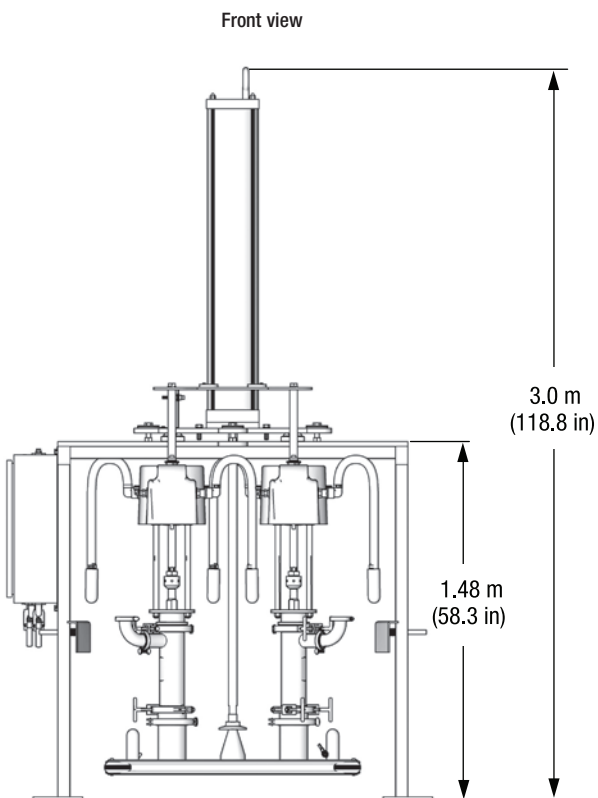
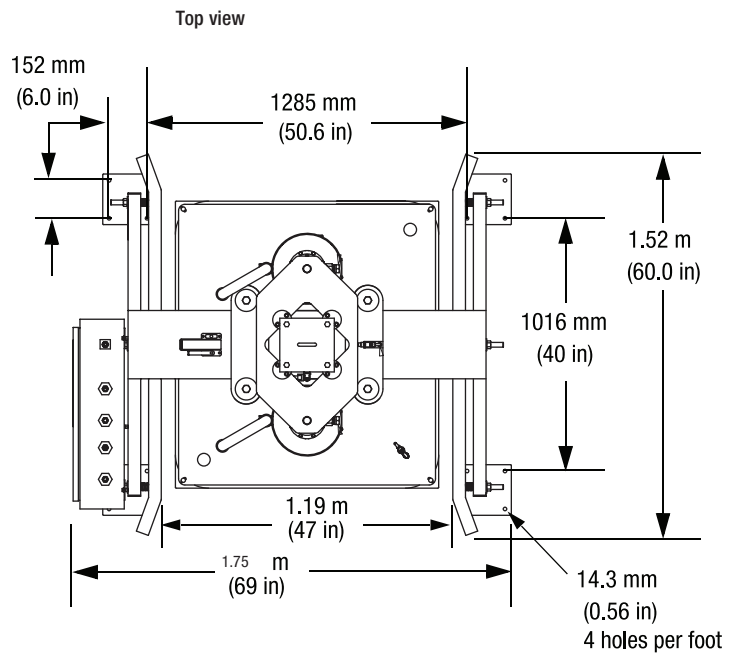
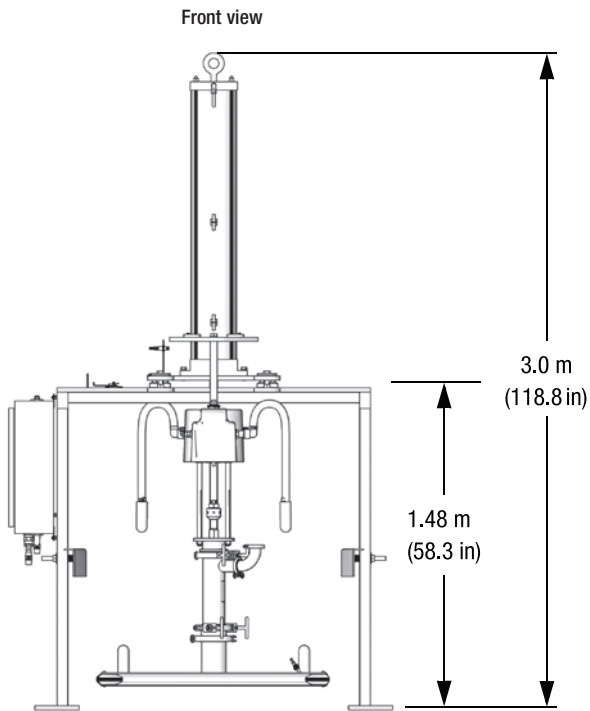
Part Number	BES3xx	BES4xx
Max. working fluid pressure	8.4 bar (0.84 MPa / 120 psi)	
Compressed air requirement	5.5-8.4 bar (0.55-0.84 MPa / 80-120 psi)	
Pneumatic control panel specifications		
Max. inlet air pressure	8.4 bar (0.84 MPa / 120 psi)	
Air inlet size	3/4 in npt(f)	
Air inlet pump	1/2 in npt(f)	
Fluid displacement (each pump)	3.89 l/cycle (1.03 gal/cycle)	
Max. flow @ 145 cpm*	1,135 lpm (300 gpm)	
Pressure ratio	1:1	
Air consumption (each pump) at 4.9 bar (0.48 MPa, 70 psi)	~0.8 scfm per gpm	
Pump outlet	3 in tri-clamp	
Max. suction lift	5.5 m (18 ft) wet	3.0 m (10 ft) wet
Max. diaphragm operating temperature (Santoprene, 3A Approved EPDM)	82.2°C (180°F), 135°C (275°F)	
Typical sound level at 4.9 bar (0.48 MPa, 70 psi) air @ 50 cpm	85 dBa	
Weight	1,360 kg (3,000 lb)	
Flyer	338589	
Instruction manual	311163	

* Flow rates are with muffler and slightly vary based on diaphragm material. Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type.

SaniForce Bin Evacuation Systems

Dimensions

SaniForce BES



Hydra-Clean Pressure Washers

High Sanitation Cleaning Packages

Ordering Information

Package Order Number.	247549 or 247550	247551 or 247552	247553 or 247554	258664 or 258665	6880119
Package Instruction Manual	312585	312585	312585	312585	306817
Air Motor Part Number	N34DN0	N65DN0	N65DN0	N65DN0	207352
Air Motor Manual	311238	311238	311238	311238	306982
Pump Lower Part number	247599	241648	687055	24B923	224341
Pump Manual	312745	311825	311825	311827	308116
Packings	PTFE/ CF-PTFE	CF-PTFE/ UHMWPE	CF-PTFE/ UHMWPE	CF-PTFE/ UHMWPE	PTFE UHMWPE
Pump Std. Repair Kit	247881	222880	See Manual	24C162	224401
Optional PTFE Repair Kit	N/A	222876	222846	237179	224889
Std. Discharge Hose 10 mm x 15.2 m (3/8 x 50 ft) 310 bar (4500 psi) Comes with M & F QD's	247878	247878	247878	247878	205753
Std. Gun/Wand Assy	247879	247879	247879	247879	237485/207299
Std. 60 Mesh Inlet Strainer	15T284	15T284	15T284	15T284	206300
Flyer	338026	338026	338026	338026	338026

Stainless Steel Tips

Part Number	Orifice Size	Fan Angle	247549 or 247550	247551 or 247552	247553 or 247554	248664 or 248665	206515
805538	0.8 mm (0.030 in)	40°	80 bar (1165 psi) 2.3 lpm (0.6 gpm)	146 bar (2120 psi) 3.0 lpm (0.8 gpm)	195 bar (2829 psi) 3.8 lpm (1.0 gpm)	275 bar (3995 psi) 4.5 lpm (1.2 gpm)	N/A
805549	1.1 mm (0.045 in)	25°	78 bar (1137 psi) 6.4 lpm (1.7 gpm)	139 bar (2020 psi) 6.8 lpm (1.8 gpm)	176 bar (2553 psi) 7.6 lpm (2.0 gpm)	242 bar (3515 psi) 12.5 lpm (3.3 gpm)	N/A
805566	1.7 mm (0.065 in)	40°	74 bar (1071 psi) 13.6 lpm (3.6 gpm)	124 bar (1803 psi) 14.0 lpm (3.7 gpm)	148 bar (2141 psi) 15.1 lpm (4.0 gpm)	201 bar (2924 psi) 15.2 lpm (4.1 gpm)	N/A
805575	2.0 mm (0.080 in)	0°	70 bar (1018 psi) 15.1 lpm (4.0 gpm)	113 bar (1634 psi) 18.1 lpm (4.8 gpm)	125 bar (1811 psi) 18.5 lpm (4.9 gpm)	172 bar (2499 psi) 19.3 lpm (5.1 gpm)	N/A
103921	1.6 mm (0.062 in)	40°	N/A	N/A	N/A	N/A	52 bar (750 psi) 9.8 lpm (2.6 gpm)

Pressure and flow rates are tested with air pressure of 7 bar (100 psi).

Other orifice sizes and fan widths available from Graco. Contact a sales representative for more information.



Hydra-Clean Wall-Mount



Hydra-Clean Cart-Mount



Hydra-Clean Drum-Mount

Hydra-Clean Pressure Washers

Accessories

Part Number	Description
Guns and Wands	
15T282	Optional replacement SST spray gun
15T279	81 cm (32 inch) SST wand
15T280	25 cm (10 inch) SST wand
247880	Gun SST quick disconnect connections

Part Number	Description
Other	
191635	10 mesh inlet strainer with 1 in npt(f) connection
15T272	Quick Coupling For adding a second hose with gun to the outlet of the pump

Technical Specifications

Part Number	Pump Package	Max. Working Pressure bar (MPa / psi)	Max. Air Input Pressure bar (MPa / psi)	Fluid Flow at 60 cpm lpm (gpm)	Vol. per Cycle cc (oz)	Air Inlet Size	Fluid Inlet Size	Fluid Outlet Size*
247549	12:1 Cart Mount	86 (8.6 / 1250)	7 (0.7 / 100)	33.0 (8.7)	550 (18.6)	3/4 npt(f)	1 in	3/8 in
247550	12:1 Wall Mount	86 (8.6 / 1250)	7 (0.7 / 100)	33.0 (8.7)	550 (18.6)	3/4 npt(f)	1 in	3/8 in
247551	23:1 Cart Mount	157 (15.7 / 2275)	7 (0.7 / 100)	34.7 (9.2)	580 (19.6)	3/4 npt(f)	1 in	3/8 in
247552	23:1 Wall Mount	157 (15.7 / 2275)	7 (0.7 / 100)	34.7 (9.2)	580 (19.6)	3/4 npt(f)	1 in	3/8 in
247553	30:1 Cart Mount	211 (21.1 / 3065)	7 (0.7 / 100)	25.9 (6.8)	430 (14.5)	3/4 npt(f)	1 in	3/8 in
247554	30:1 Wall Mount	211 (21.1 / 3065)	7 (0.7 / 100)	25.9 (6.8)	430 (14.5)	3/4 npt(f)	1 in	3/8 in
258664	40:1 Cart Mount	275 (27.5 / 4000)	7 (0.7 / 100)	17.4 (4.6)	290 (9.8)	3/4 npt(f)	1 in	3/8 in
258665	40:1 Wall Mount	275 (27.5 / 4000)	7 (0.7 / 100)	17.4 (4.6)	290 (9.8)	3/4 npt(f)	1 in	3/8 in
6880119	10:1 Drum Mount	125 (12.5 / 1800)	12.5 (1.2 / 180)	11.4 (3.0)	189 (6.4)	1/2 npt(f)	1/2 in	3/4 in

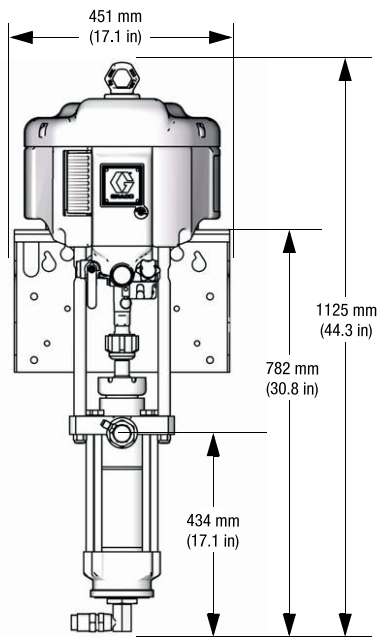
*Includes two outlet ports per unit. Part number 206515 has only one outlet port.

Hydra-Clean Pressure Washers

Dimensions

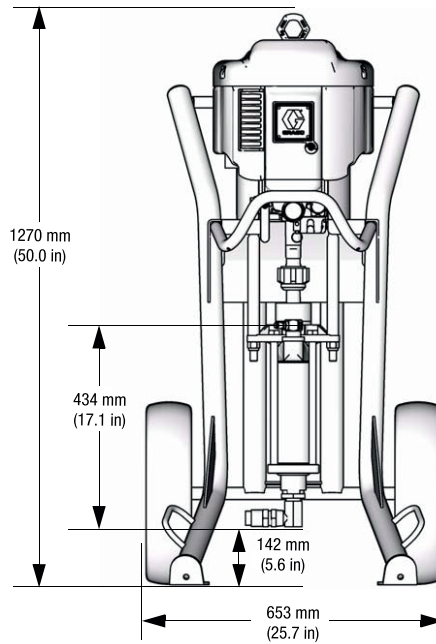
Hydra-Clean

Wall Mount Package 247550



Refer to manual 312585 for additional package dimensions.

Cart Mount Package 247549



Ordering Information

SaniForce 515 Drum Mount Kit

Part Number	Description
262828	Kit, Drum mount SaniForce 515
110954	SaniForce 515 PTFE Seal Kit



SaniForce Drum Unloader Parts

Part Number	Description
16G242	FDA Polychloroprene (CR) - Inflatable seal (white)
16M208	FDA EPDM - Inflatable seal (black)
24W825	Elbow kit - 2 in, 31 bar (elbow, 2x o-ring, 2x clamp)
24W826	Elbow kit - 2 in, 69 bar (elbow, 2x o-ring, 2x clamp)
24W827	Elbow kit - 1.5 in, 103 bar (elbow, 2x o-ring, 2x clamp)



High Sanitation and Industrial PTFE Overmolded Diaphragm Repair Kits*

Part Number	Description
253626	For 1 inch pump size, diaphragm repair kit
253627	For 1.5 inch pump size, diaphragm repair kit
253628	For 2 inch pump size, diaphragm repair kit

*To replace PTFE overmolded diaphragms

High Sanitation and Industrial Upgrade Kits to PTFE overmolded*

Part Number	Description
24N321	Upgrade kit for 0.5 and 0.75 inch pump
289224	Upgrade kit for 1 inch pump (Husky 1040)
24B626	Upgrade kit for 1 inch pump (Husky 1050)
289225	Upgrade kit for 1.5 inch pump
289226	Upgrade kit for 2 inch pump

*Includes new airside diaphragm plate for replacement of standard bolt-through diaphragm.

SaniForce 1040, 1590 & 2150 Pump Repair Kits

Part Number	Description
FK1113	For 1 inch pump size, with PTFE o-rings
FK1213	For 1 inch pump size, with EPDM o-rings
FK2113	For 1.5 inch pump size, with PTFE o-rings
FK2213	For 1.5 inch pump size, with EPDM o-rings
FK3113	For 2 inch pump size, with PTFE o-rings
FK3213	For 2 inch pump size, with EPDM o-rings

3A High Sanitation Overmolded EPDM Diaphragm Kit

Part Number	Description
255058	For 1.5 inch pump size, diaphragm repair kit
253224	For 2 inch pump size, diaphragm repair kit

SaniForce 5:1 Piston Pump Repair Kits

Part Number	Description
24W029	Packing kit with PTFE for high temperature fluids
17B449	PTFE seal only for high temperature fluids

Technical Specifications

Overmolded Diaphragms	
Material/Construction on wetted side	FDA-Compliant PTFE
Material/Construction on air side	FDA-Compliant EPDM
Temperature range	14°F to 180°F (-10°C to 82°C)
Safety	Complies to FDA21CFR 177.1550 (PTFE) and FDA21CFR 177.2600 (EPDM)

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labour, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

Equipment Misuse Hazard

General Misuse: Any misuse of Graco equipment or accessories, such as over-pressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture. Misuse of equipment can result in fluid injection, splashing in the eyes or on the skin, or other serious bodily injury, or fire, explosion or property damage. NEVER alter or modify any part of Graco equipment; doing so could cause the product to malfunction. CHECK all equipment regularly and repair or replace worn or damaged parts immediately. Always wear protective eye wear, gloves, clothing and respirator as recommended by fluid and solvent manufacturers.

System Pressure: Be sure that all equipment and accessories used are rated to withstand the applicable MAXIMUM WORKING PRESSURE. DO NOT exceed the maximum working pressure of any component or accessory used in a system.

Fluid and Solvent Compatibility: All chemicals used in a Graco sprayer must be compatible with wetted parts. Consult your chemical supplier to ensure compatibility. Do not use 1:1:1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in this equipment, which contains aluminium and/or zinc parts. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious bodily injury and/or substantial property damage.



ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

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Graco is certified ISO 9001.



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