



# SaniForce<sup>®</sup>

## Bin Evacuation Systems for the Sanitary Industry



unleash the  
**POWER**

**Evacuate viscous products from 300-gallon (1,135 l) containers without dilution**

- Extremely fast evacuation with flow rates up to 300 gpm (1,135 lpm)
- Designed with inflatable wiper seals for increased efficiency and faster change-out of bins
- Unique floating ram plate eliminates the need for exact positioning of bin under the ram plate
- Available in manual and electronic control options

PROVEN QUALITY. LEADING TECHNOLOGY.

# Ordering Information

## SANIFORCE BES

BES Part No.	Max. Working Fluid Pressure per pump psi (bar, MPa)	Pump Part No.	Pump Quantity	Pump Description	Control Type	BIN Manuf.
BESA4C	400 (28, 2.8)	24G742	2	SaniForce 5:1	Manual	Pallecon
BESA7A	400 (28, 2.8)	24G742	2	SaniForce 5:1	Electronic	Plywood
BESA7C	400 (28, 2.8)	24G742	2	SaniForce 5:1	Manual	Plywood
BESA7F	400 (28, 2.8)	24G742	2	SaniForce 5:1	Electronic	Plywood
BESB7B	400 (28, 2.8)	24G742	4	SaniForce 5:1	Electronic	Plywood
BESB7D	400 (28, 2.8)	24G742	4	SaniForce 5:1	Manual	Plywood
BESAAC	410 (28.3, 2.8)	24G742	2	SaniForce 5:1	Manual	Buckhorn
BESE1A	1200 (83, 8.3)	24F625	2	SaniForce 12:1	Electronic	Arena
BESE1C	1200 (83, 8.3)	24F625	2	SaniForce 12:1	Manual	Arena
BESE5C	1200 (83, 8.3)	24F625	2	SaniForce 12:1	Manual	Pallecon
BESF6B	1200 (83, 8.3)	24F625	4	SaniForce 12:1	Electronic	Arena
BESF6D	1200 (83, 8.3)	24F625	4	SaniForce 12:1	Manual	Arena
BESF9B	1200 (83, 8.3)	24F625	4	SaniForce 12:1	Electronic	TNT
BESF9D	1200 (83, 8.3)	24F625	4	SaniForce 12:1	Manual	TNT
BESE7C	1450 (100.4, 10.1)	24F625	2	SaniForce 12:1	Manual	Plywood
BESEAC	1450 (100.4, 10.1)	24F625	2	SaniForce 12:1	Manual	Buckhorn
BESF7D	1450 (100.4, 10.1)	24F625	4	SaniForce 12:1	Manual	Plywood

Note: Systems can be special ordered for bin types other than plywood. Contact your sales rep for additional information.

## SANIFORCE 3150 BES

Part No.	Type	Bin Manuf.	Control Type	Outlet Size	Diaphragm /Ball Material**
BES3P3	Ball	Plywood	Manual	3 in (76 mm)	Santoprene/ PTFE
BES3P1	Ball	Plywood	Electronic	3 in (76 mm)	Santoprene/ PTFE
BES4P3	Flapper	Plywood	Manual	3 in (76 mm)	Santoprene/ N/A
BES8B3	Ball	Pallecon	Manual	3 in (76 mm)	Overmolded EPDM
BES3A1	Ball	Arena	Electronic	3 in (76 mm)	Santoprene/ PTFE
BES4A1	Flapper	Arena	Electronic	3 in (76 mm)	Santoprene/ N/A
BES3F3	Ball	Tetrapak	Manual	3 in (76 mm)	Overmolded EPDM/PTFE

Note: Contact marketing for ordering information on non-plywood bins. \*\*3A Approved EPDM diaphragm is available for heavy duty applications.

# Technical Specifications

## SANIFORCE BES

BES Part No.	BESAxx	BESBxx	BESExx	BESFxx
Max. working fluid pressure	400 psi (28 bar, 2.8 MPa)		1200 psi (83 bar, 8.3 MPa)	1200 psi (83 bar, 8.3 MPa)
Compressed air requirement	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)
Pneumatic control panel specifications				
Max. inlet air pressure	80 psi (5.5 bar, 0.5 MPa)		100 psi (7 bar, 0.7 MPa)	100 psi (7 bar, 0.7 MPa)
Air inlet size	3/4 in npt(f)		3/4 in npt(f)	3/4 in npt(f)
Air inlet pump	1/2 in npt(f)		1/2 in npt(f)	1/2 in npt(f)
Fluid Displacement (each pump)	0.23 gal/cycle (0.87 liter/cycle)		0.14 gal/cycle (0.52 liter/cycle)	0.14 gal/cycle (0.52 liter/cycle)
Max. Flow @ 60 cpm*	28 gpm (106 lpm)	54 gpm (204 lpm)	17 gpm (64 lpm)	34 gpm (128 lpm)
Pressure ratio	5:1		12:1	12:1
Air consumption @ 40 psi (each pump)	~2.95 scfm per gpm (2.8 bar, 0.28 MPa)		~7.5 scfm per gpm (2.8 bar, 0.28 MPa)	~7.5 scfm per gpm (2.8 bar, 0.28 MPa)
Pump outlet	2 in tri-clamp		2 in tri-clamp	2 in tri-clamp
Communication	RS232 Serial		RS232 Serial	RS232 Serial
Electrical requirements	110 VAC (60 Hz), 15A		110 VAC (60 Hz), 15A	110 VAC (60 Hz), 15A
Overall dimensions in (m)	69 W x 60 D x 118.8 H (1.72 W x 1.52 D x 3.0 H)		69 W x 60 D x 118.8 H (1.72 W x 1.52 D x 3.0 H)	78 W x 60 D x 118.8 H (1.98 W x 1.52 D x 3.0 H)
Evacuation efficiency	2 pumps: 98% 4 pumps: 99%		N/A	N/A
Instruction manual	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 Graco at 1-800-543-0339 for more information.

## SANIFORCE 3150 BES

3150 BES Part No.	BES3xx	BES4xx
Max. working fluid pressure	120 psi (8.4 bar, 0.84 MPa)	
Compressed air requirement	80-120 psi (5.5-8.4 bar, 0.55-0.84 MPa)	
Pneumatic control panel specifications		
Max. inlet air pressure	120 psi (8.4 bar, 0.84 MPa)	
Air inlet size	3/4 in npt(f)	
Air inlet pump	1/2 in npt(f)	
Fluid Displacement (each pump)	1.03 gal/cycle (3.89 liter/cycle)	
Max. Flow @ 145 cpm*	300 gpm (1,135 lpm)	
Pressure ratio	1:1	
Air consumption @ 70 psi (each pump)	~0.8 scfm per gpm (4.8 bar, 0.48 MPa)	
Pump outlet	3 in tri-clamp	
Max. suction lift	18 ft (5.5 m) wet	10 ft (3.0 m) wet
Max. diaphragm operating temperature (Santoprene, 3A Approved EPDM)	180°F (82.2°C), 275°F (135°C)	
Typical sound level at 70 psi (4.9 bar) air @ 50 cpm	85 dBA	
Weight	3,000 lb (1,360 kg)	
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.

## Additional Pumps and Packages

Graco offers the most complete range of pumps, packages and systems to meet all of your application and cleaning requirements. Whether the material you use comes in pails, drums, bins, totes or tankers, Graco pumps and cleaning systems are designed to provide years of reliable service!

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.

Call today for product information or to request a demonstration.

**877.84GRACO** (1-877-844-7226) or visit us at [www.gracosaniforce.com](http://www.gracosaniforce.com)

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