



SaniForce®

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!



The Williams - Carver Co., Inc.

4001 Mission Road
 Kansas City, Kansas 66103
 (913) 236-4949 FAX (913) 236-9331
 www.williamscarver.com