SaniForce® 2.0
Container Evacuation Solutions

Transfer thick and viscous materials, without heat or dilution, from containers

> SaniForce pump line is designed to evacuate low to high viscosity food, beverage, and personal care products

> FDA-compliant, quick knock-down designs for applications requiring frequent sanitation

> 99% evacuation rate from most containers

> Process automation

protect your PROCESS
SaniForce Solutions

Improve plant efficiency, safety and ergonomics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 5,000 cps</td>
<td>Up to 50,000 cps</td>
<td>Up to 100,000 cps</td>
<td>Up to 150,000 cps</td>
<td>Up to 100,000 cps</td>
</tr>
<tr>
<td>16 gpm (60 lpm)</td>
<td>7 gpm (26 lpm)</td>
<td>4 gpm (15 lpm)</td>
<td>14 gpm (53 lpm)</td>
<td>4 gpm (15 lpm)</td>
</tr>
<tr>
<td>Includes Drum Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use with SaniForce 2:1, 5:1 and 6:1 Piston Pumps

Typical Materials

- **EDIBLE OILS**
- **FLOWABLE LOTION**
- **CHOCOLATE SYRUP**
<table>
<thead>
<tr>
<th>SaniForce Diaphragm Pump Drum Unloaders</th>
<th>SaniForce Piston Pump Drum Unloaders</th>
<th>SaniForce BES (Bin Evacuation Systems)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 100,000 cps</td>
<td>Up to 1,000,000 cps*</td>
<td>Up to 1,000,000 cps</td>
</tr>
<tr>
<td>150 gpm (568 lpm)</td>
<td>14 gpm (53 lpm)</td>
<td>17 - 300 gpm (64 to 1,135 lpm)</td>
</tr>
<tr>
<td>Available with SaniForce 1590, 2150, or 3150 HS Diaphragm Pumps</td>
<td>Available with SaniForce 5:1, 6:1 or 12:1 Piston Pumps</td>
<td>Available with SaniForce 5:1 or 12:1 Piston Pumps, or SaniForce 3150 HS Diaphragm Pump</td>
</tr>
</tbody>
</table>

HIGH VISCOSITY

RICOTTA CHEESE          TOMATO PASTE          PEANUT BUTTER
Reduce downtime with the lightweight, easy to use, portable SaniForce Electric Drum pump.

- **Easy cleaning and product changeover** - with this simple knockdown design, cleaning between drums or product changeovers has never been easier
- **Operational flexibility throughout facility** - with electric pump operation, simply plug in the pump to transfer material in minutes
- **Easy mobility** - lightweight design allows operators to move pumps between drums to increase output

**Common Applications**
Fluid transfer and supply of low to medium viscosity fluids. Ideal for most food, beverage, cosmetic, or personal care applications

**Common Materials**
- Fruit juice concentrates
- Edible oils
- Condiments & dressings
- Personal care: lotions & creams
SaniForce® Piston Pumps

Graco’s powerful line of piston pumps move extremely difficult materials when others cannot. SaniForce piston pumps have fluid pressures up to 1,200 psi and are ideal for low to medium viscosity materials.

- Air motors improve serviceability, increase efficiency and offer a lower cost of ownership
- Quick knockdown lowers are made with corrosion resistant stainless steel for long-lasting durability

<table>
<thead>
<tr>
<th>SaniForce 2:1</th>
<th>SaniForce 6:1</th>
<th>SaniForce 5:1</th>
<th>SaniForce 12:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Viscosity</td>
<td>Up to 50,000</td>
<td>Up to 100,000</td>
<td>Up to 100,000</td>
</tr>
<tr>
<td>Maximum Flow Rate</td>
<td>Up to 1.5 gpm (5.7 lpm) at 60 cpm</td>
<td>Up to 4 gpm (15 lpm) at 60 cpm</td>
<td>Up to 14 gpm (53 lpm) at 60 cpm</td>
</tr>
<tr>
<td>Length</td>
<td>Standard and long lengths</td>
<td>Stubby, drum and bin lengths</td>
<td>Stubby and drum lengths</td>
</tr>
</tbody>
</table>

Common Applications: Fluid transfer and supply of low to medium viscosity fluids. Ideal for most food, beverage, cosmetic, or personal care applications

Common Materials:
- Fruit juice concentrates
- Dressings & sauces
- Ice cream variegates
- Cosmetics
SaniForce® Elevators

The SaniForce Elevator is ideal for small to medium sized companies that currently unload less than two containers per hour by either scooping or dumping.

- Designed to lower pumps into and lift pumps out of drums, bins, and totes
- Safer and more ergonomical than moving pumps by hand and cleaner than chain/hoist options

**Common Applications**
Fluid transfer and supply of medium viscosity fluids. Ideal for most food, beverage, cosmetic, or personal care applications

**Common Materials**
- Fruit juice concentrates
- Condiments & dressings
- Flowable lotions & cosmetics
SaniForce® Pail Unloader

Increase efficiency with faster change-out of containers.

- Up to 99% evacuation rate of medium to high viscosity materials
- Designed for quick disassembly and is portable with stainless steel construction
- One size follower plate and seal to accommodate 5 or 7 gallon pails
- Prevents injuries from lifting and dumping material out of containers

Common Applications
 Fluid transfer and supply of medium to high viscosity fluids. Ideal for most food, beverage, cosmetic, or personal care applications

Common Materials
 Icing, frostings & fondants
 Caramels & chocolate
 Fruit Paste & fillings
 Cosmetics
SaniForce® Drum Unloaders

Superior alternative to manual scooping for improved food and employee safety.

- Designed with a sealed system for food safety
- Available in piston pump or diaphragm pump options
- Sanitary flange connections allow easy cleaning and sanitation

Common Applications
- Unload medium to high viscosity products, up to +1,000,000 cps*, from 55-gallon containers without diluting the material

Common Materials
- Tomato paste
- Peanut butter
- Icing and frosting
- Toothpaste
- Cosmetics
- Jams and jellies
- Caramel
- Corn syrup

*Only applies to priming piston drum unloaders
It’s as easy as 1-2-3.

Choose the Ram Frame Material + Control Type + Piston or Diaphragm Pump to build your own SaniForce Drum Unloading System.

- All pumps feature an on-demand workflow capability and can also be taken apart quickly for applications that require frequent sanitation.

1. Ram Frame Material
   - Stainless Steel
   - OR Painted Carbon Steel

2. Controls Type
   - Enclosed Controls (Available with SST frame only)
   - Exposed Controls

3. SaniForce Piston Pump
   - OR SaniForce Diaphragm Pump
   - SaniForce 6:1
   - SaniForce 5:1
   - SaniForce 12:1
   - SaniForce 1590
   - SaniForce 3150

4. Static or inflatable wiper
Clean unloading of materials without introducing airborne bacteria

Save time and money in your facility by unloading materials up to 2,000,000 cps efficiently from 300-gallon (1,135 l) “bag-in-bin” containers – eliminating manual scooping or bin dumping.

Complete bin unloading saves money and provides better process control while removing the need for costly booster pumps.

Fluid outlet piping for easier installation

Bin guides include back stop for better bin positioning

Inflatable seal improves retention in plate and creates better seal for improved evacuation without the crevices and fasteners of a wiper seal

Evacuate up to 99% of material

Two pump or four pump systems available with Graco piston pumps

Pneumatic safety circuit prevents loss of air pressure in cylinders

Available with pneumatic or electronic controls

Automated controls remove unnecessary worker interaction and automate the unload process

Inflatable wiper creates a tight seal preventing contaminants from entering the container

**Common Applications**

Evacuate viscous products from their original 300-gallon containers without dilution

**Common Materials**

| Tomato paste | Cosmetics |
| Peanut butter | Jams and jellys |
| Icing and frosting | Caramel |
| Toothpaste | Corn syrup |
It’s as easy as 1-2-3.

Choose the Ram Frame Material + Control Type + Piston or Diaphragm Pump to build your own SaniForce Bin Evacuation System.

- All pumps feature an on-demand workflow capability and can also be taken apart quickly for applications that require frequent sanitation.

1. Stainless Steal Frame

2. Controls Type

3. SaniForce Piston Pump
   OR SaniForce Diaphragm Pump

4. Inflatable wiper and plate size. Neoprene (white) or EPDM (black) inflatable seal.
APPLICATIONS

Application Overview

Transfer options available for low to high viscosity materials from food to personal care to pharmaceuticals.

- **FOODS**: Low to high ingredients including juices and flavored drinks, salad dressings & condiments, sauces, edible oils, snack food flavorings, frostings, beer & wine, caramels & chocolate syrups, jams & fruit fillings, tomato paste, peanut butter, and more.

- **DAIRY**: Yogurt, cottage cheese, ice cream ingredients

- **MEAT and POULTRY**

- **PERSONAL CARE**: Lotions & creams, cosmetics, and high care food

- **PHARMA**: Medical creams & lotions, organic reagent, blood products, bio pharmaceuticals, alcohol, and solvent transfer

protect your PROCESS

Call today for product information or to request a demonstration.

800.328.0211 or visit us at www.graco.com/sanitary

©2019 Graco Inc. Form No. 345028 Rev. D 08/19 Printed in the U.S.A.

All other brand names or marks are used for identification purposes and are trademarks of their respective owners.