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SaniForce® 2.0

Container Evacuation Solutions



protect your **PROCESS**

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

PROVEN QUALITY. LEADING TECHNOLOGY.

SaniForce Solutions

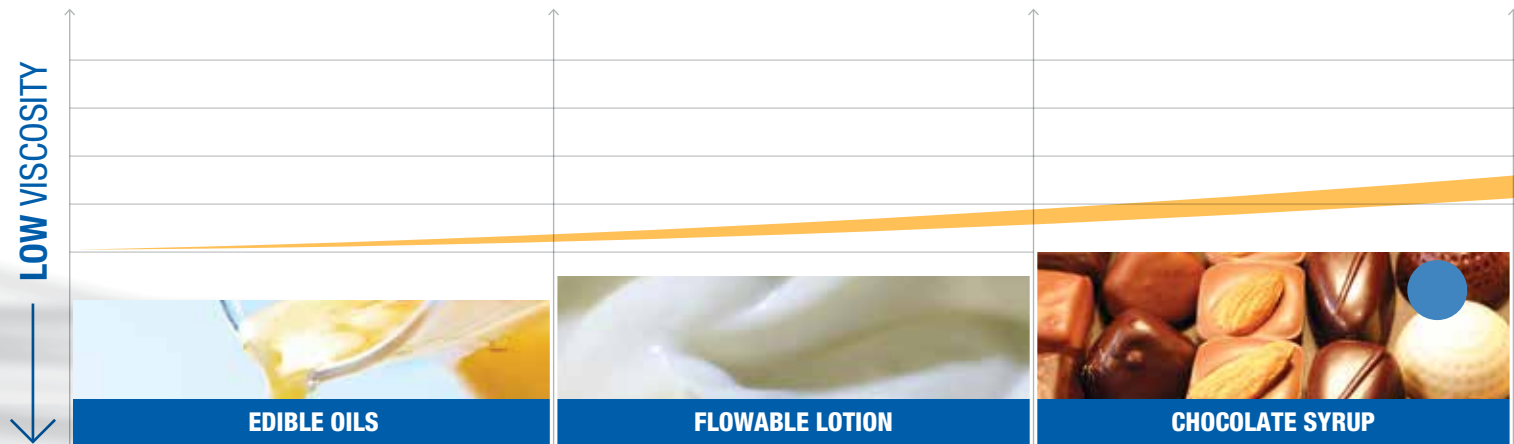
Improve plant efficiency, safety and ergonomics

CONTAINER EVACUATION



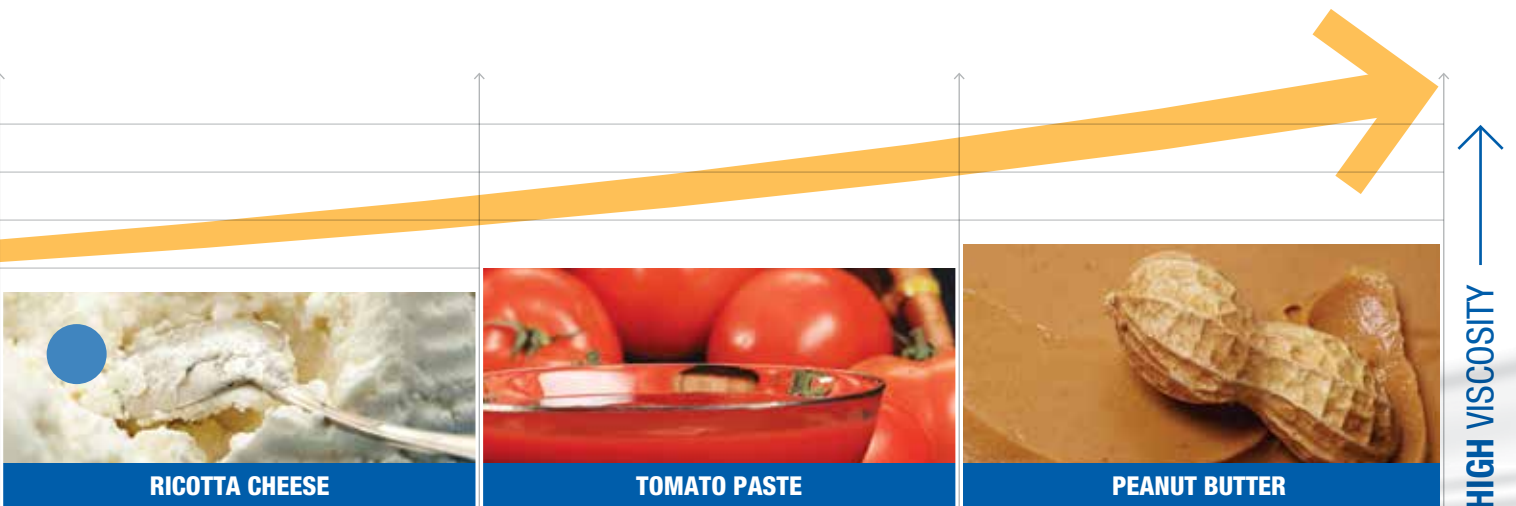
| SaniForce FG 515 Diaphragm Pump | SaniForce Drum Pump | SaniForce Piston Pumps | SaniForce Elevator | SaniForce Pail Unloader |
|---------------------------------|---------------------|------------------------|---------------------------------------------------------|-------------------------|
| Up to 5,000 cps | Up to 50,000 cps | Up to 100,000 cps | Up to 150,000 cps | Up to 100,000 cps |
| 16 gpm (60 lpm) | 7 gpm (26 lpm) | 4 gpm (15 lpm) | 14 gpm (53 lpm) | 4 gpm (15 lpm) |
| Includes Drum Kit | | | Use with SaniForce 2:1, 5:1 and 6:1 Piston Pumps | |

Typical Materials





| SaniForce Diaphragm Pump Drum Unloaders | SaniForce Piston Pump Drum Unloaders | SaniForce BES (Bin Evacuation Systems) |
|------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Up to 100,000 cps | Up to 1,000,000 cps* | Up to 1,000,000 cps |
| 150 gpm (568 lpm) | 14 gpm (53 lpm) | 17 - 300 gpm (64 to 1,135 lpm) |
| Available with SaniForce 1590, 2150, or 3150 HS Diaphragm Pumps | Available with SaniForce 5:1, 6:1 or 12:1 Piston Pumps | Available with SaniForce 5:1 or 12:1 Piston Pumps, or SaniForce 3150 HS Diaphragm Pump |



SaniForce® Drum Pumps



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

MEDIUM VISCOSITIES

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



| SaniForce 2:1 | SaniForce 6:1 | SaniForce 5:1 | SaniForce 12:1 |
|---------------------------|------------------------------|-------------------------|------------------------|
| Up to 50,000 | Up to 100,000 | Up to 100,000 | Up to 100,000 cps |
| Up to 1.5 gpm (5.7 lpm) | Up to 4 gpm (15 lpm) | Up to 14 gpm (53 lpm) | Up to 8.5 gpm (32 lpm) |
| Standard and long lengths | Stubby, drum and bin lengths | Stubby and drum lengths | Stubby length only |

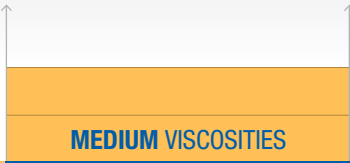
Common Applications

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

Common Materials

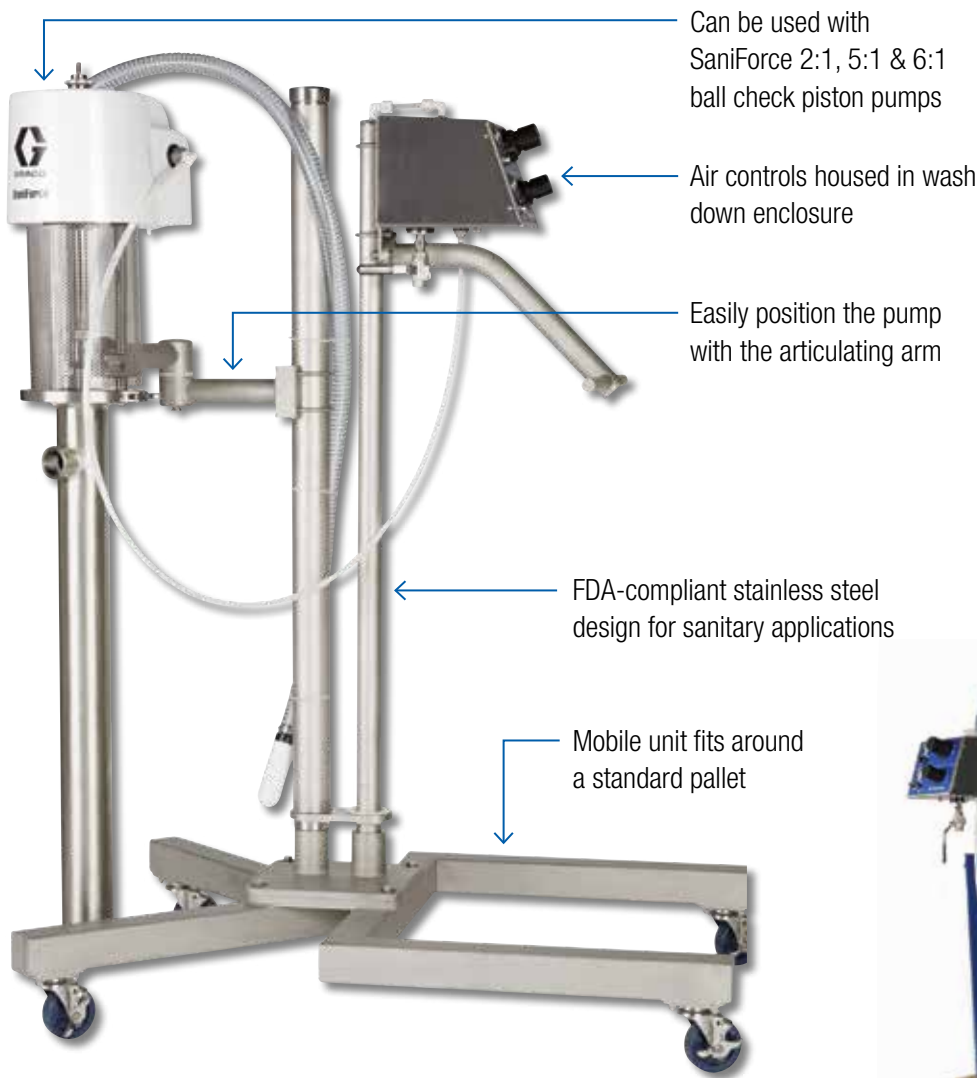
Fruit juice concentrates
Dressings & sauces
Ice cream variegates
Cosmetics

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 |

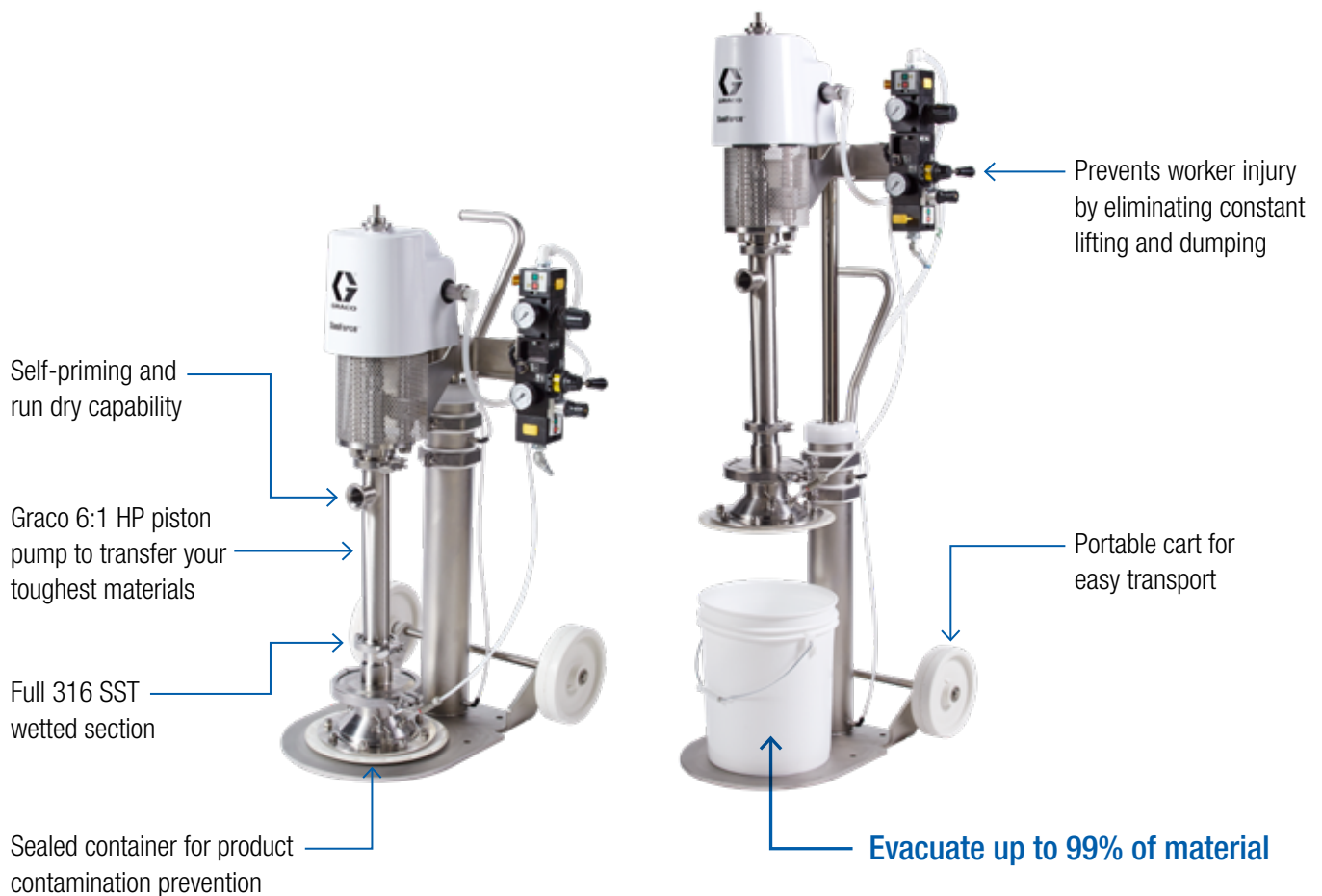
| | |
|------------------|------------------------------|
| Common Materials | Fruit juice concentrates |
| | Condiments & dressings |
| | Flowable lotions & cosmetics |

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 |
| | |

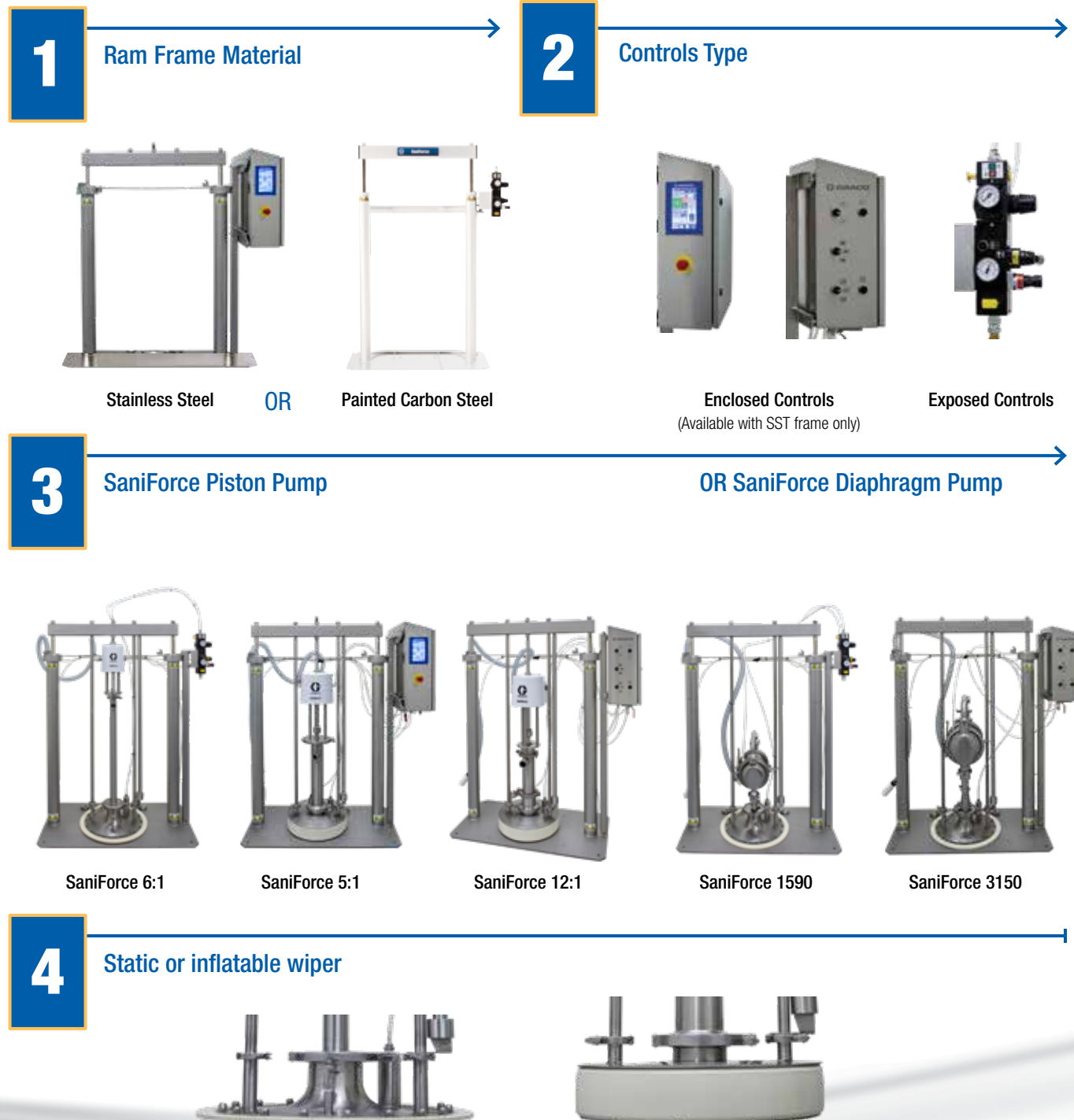
| | | |
|------------------|--------------------|------------------|
| Common Materials | Tomato paste | Cosmetics |
| | Peanut butter | Jams and jellies |
| | Icing and frosting | Caramel |
| | Toothpaste | Corn syrup |

*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



SaniForce® Bin Evacuation Systems



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



Two pump or four pump systems available with Graco piston pumps

Pneumatic safety circuit prevents loss of air pressure in cylinders

Automated controls remove unnecessary worker interaction and automate the unload process

Available with pneumatic or electronic controls

Evacuate up to 99% of material



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 jellies |
| | 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 Steel Frame



2

Controls Type



Enclosed Controls
(Available with SST frame only)

3

SaniForce Piston Pump



SaniForce 5:1

OR SaniForce Diaphragm Pump



SaniForce 3150 HS
Bin Evacuation System

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**

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.

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

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