



The Williams - Carver Co., Inc.
4001 Mission Road
Kansas City, Kansas 66103
(913) 236-4949 FAX (913) 236-9331
www.williams-carver.com



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

SaniForce Solutions

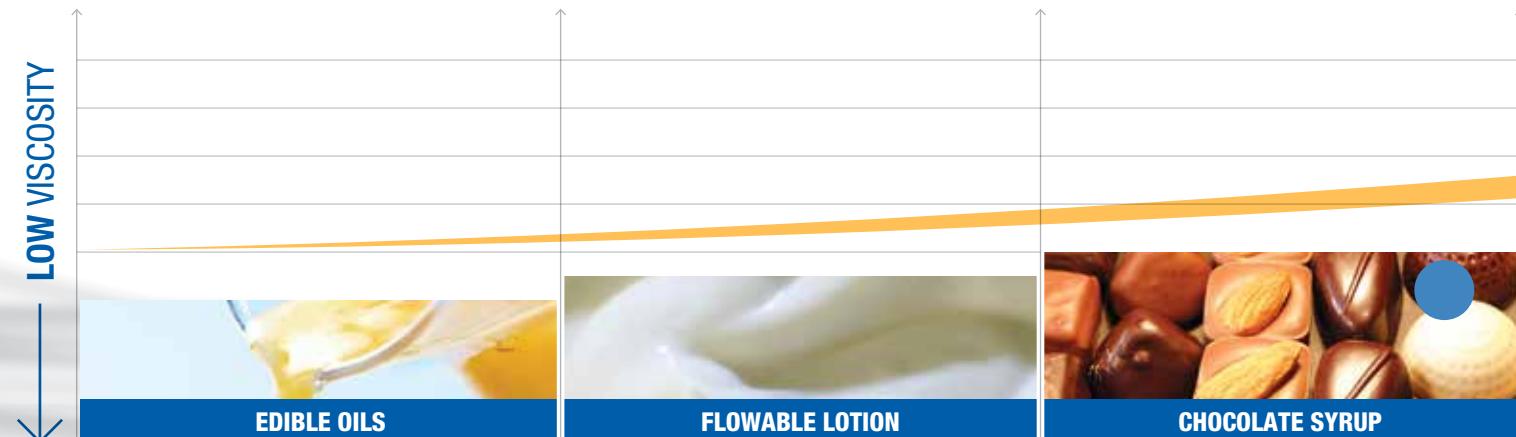
Improve plant efficiency, safety and ergonomics

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

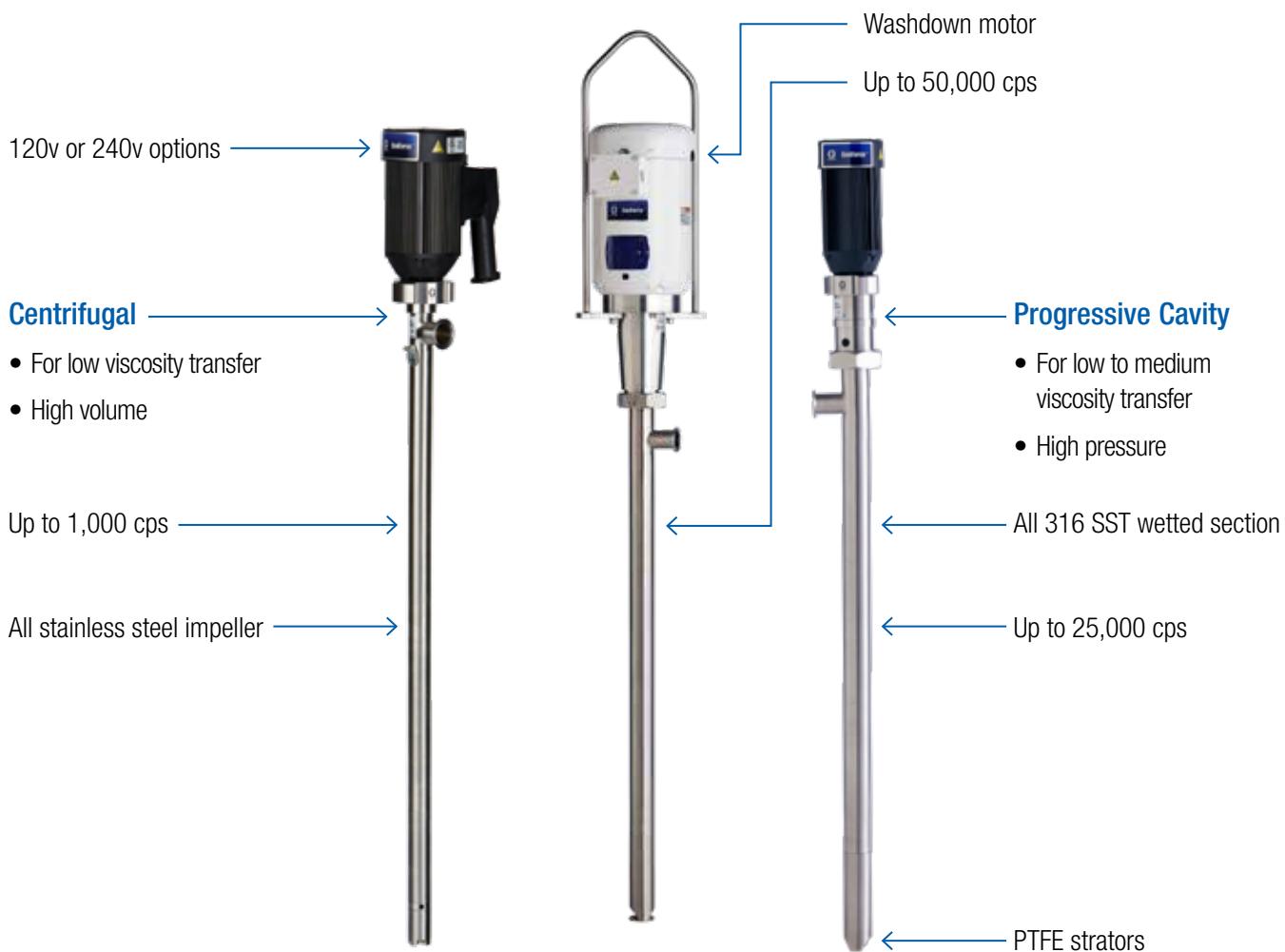


SaniForce® Drum Pumps



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
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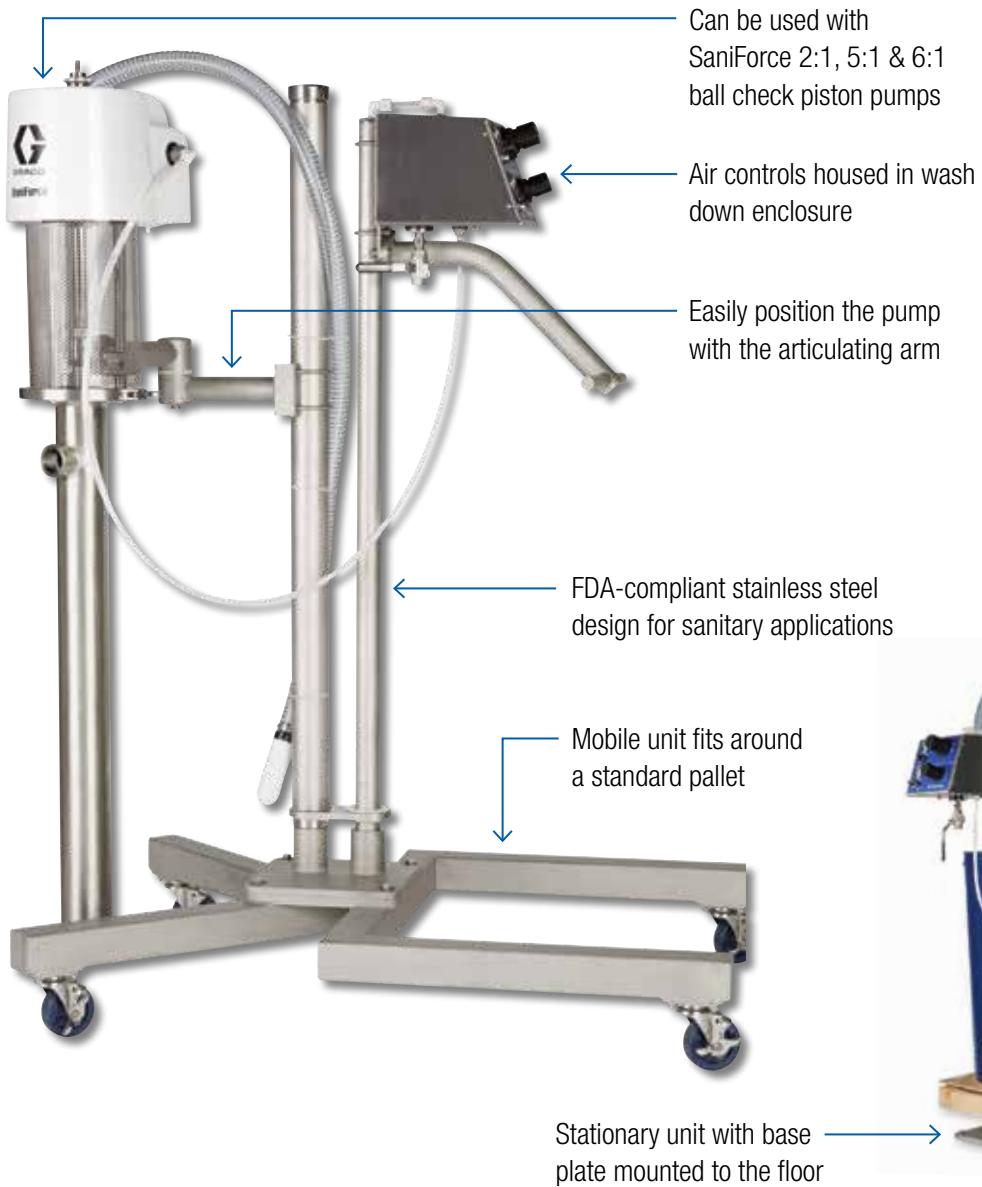
Common Materials	Fruit juice concentrates
	Dressings & sauces
	Ice cream variegates
	Cosmetics

SaniForce® Elevators

MEDIUM VISCOSITIES

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

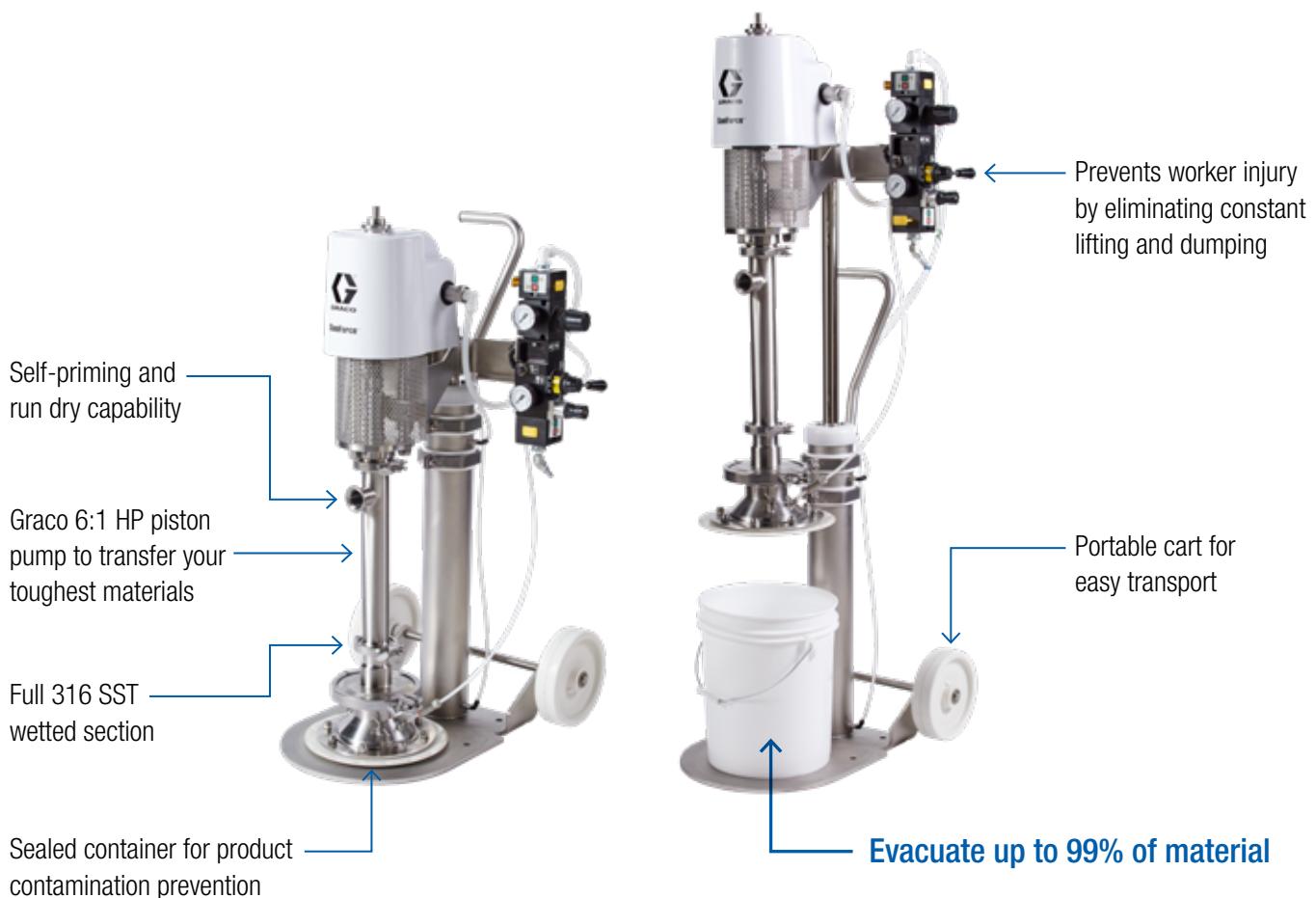
Flowable lotions & cosmetics

SaniForce® Pail Unloader

MEDIUM TO HIGH VISCOSITIES

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	Common Materials
Fluid transfer and supply of medium to high viscosity fluids. Ideal for most food, beverage, cosmetic, or personal care applications	Icing, frostings & fondants Caramels & chocolate Fruit Paste & fillings Cosmetics

SaniForce® Drum Unloaders

MEDIUM TO HIGH VISCOSITIES

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



Stainless Steel



OR

Painted Carbon Steel



Enclosed Controls
(Available with SST frame only)



Exposed Controls



SaniForce 6:1



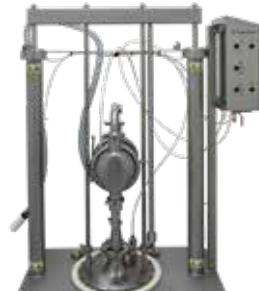
SaniForce 5:1



SaniForce 12:1



SaniForce 1590



SaniForce 3150



SaniForce® Bin Evacuation Systems

MEDIUM TO HIGH VISCOSITIES

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.



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