

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

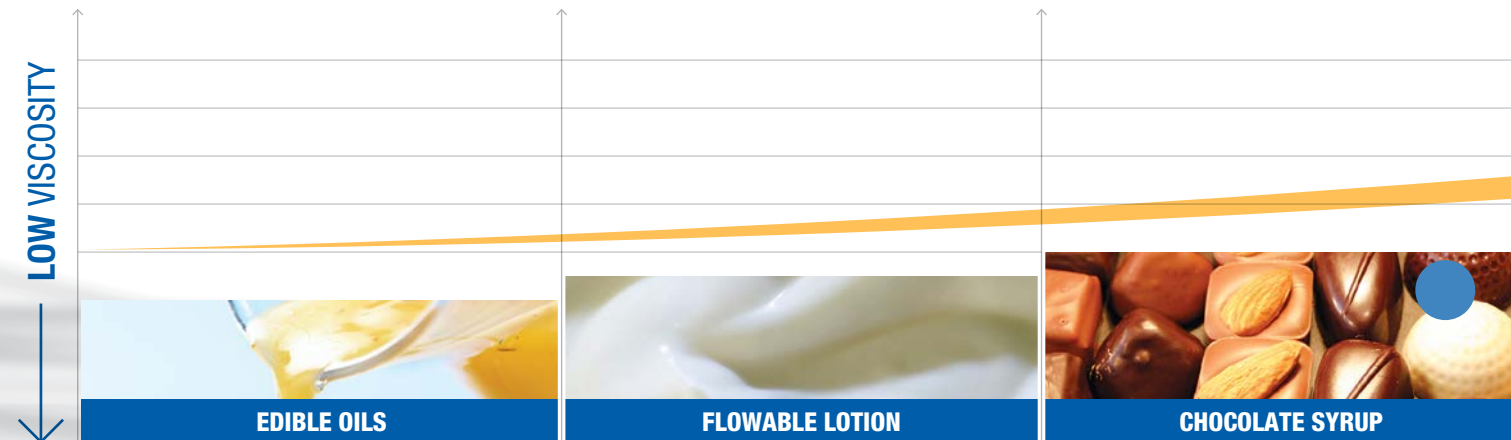
Improve plant efficiency, safety and ergonomics

CONTAINER EVACUATION



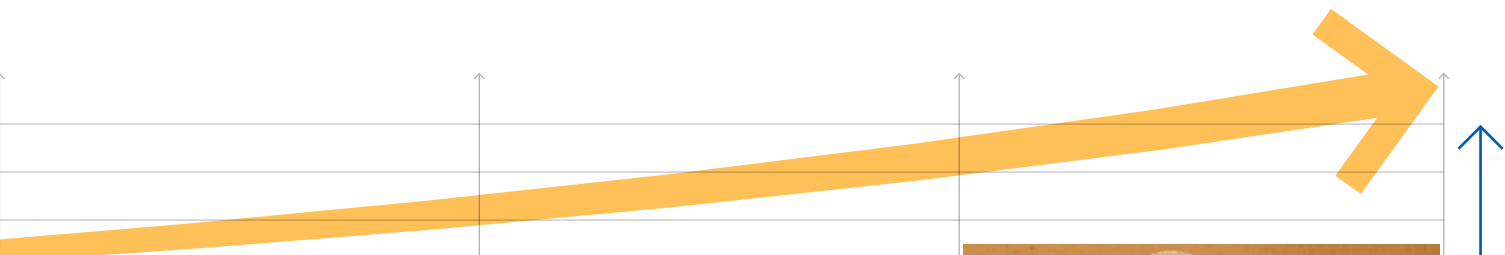
SaniForce FG 515 Diaphragm Pump	SaniForce Drum Pump	SaniForce Piston Pumps	SaniForce Elevator	SaniForce Pail Unloader
Up to 5,000 cps	Up to 50,000 cps	Up to 100,000 cps	Up to 150,000 cps	Up to 100,000 cps
16 gpm (60 lpm)	7 gpm (26 lpm)	4 gpm (15 lpm)	14 gpm (53 lpm)	4 gpm (15 lpm)
Includes Drum Kit			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



RICOTTA CHEESE



TOMATO PASTE



PEANUT BUTTER

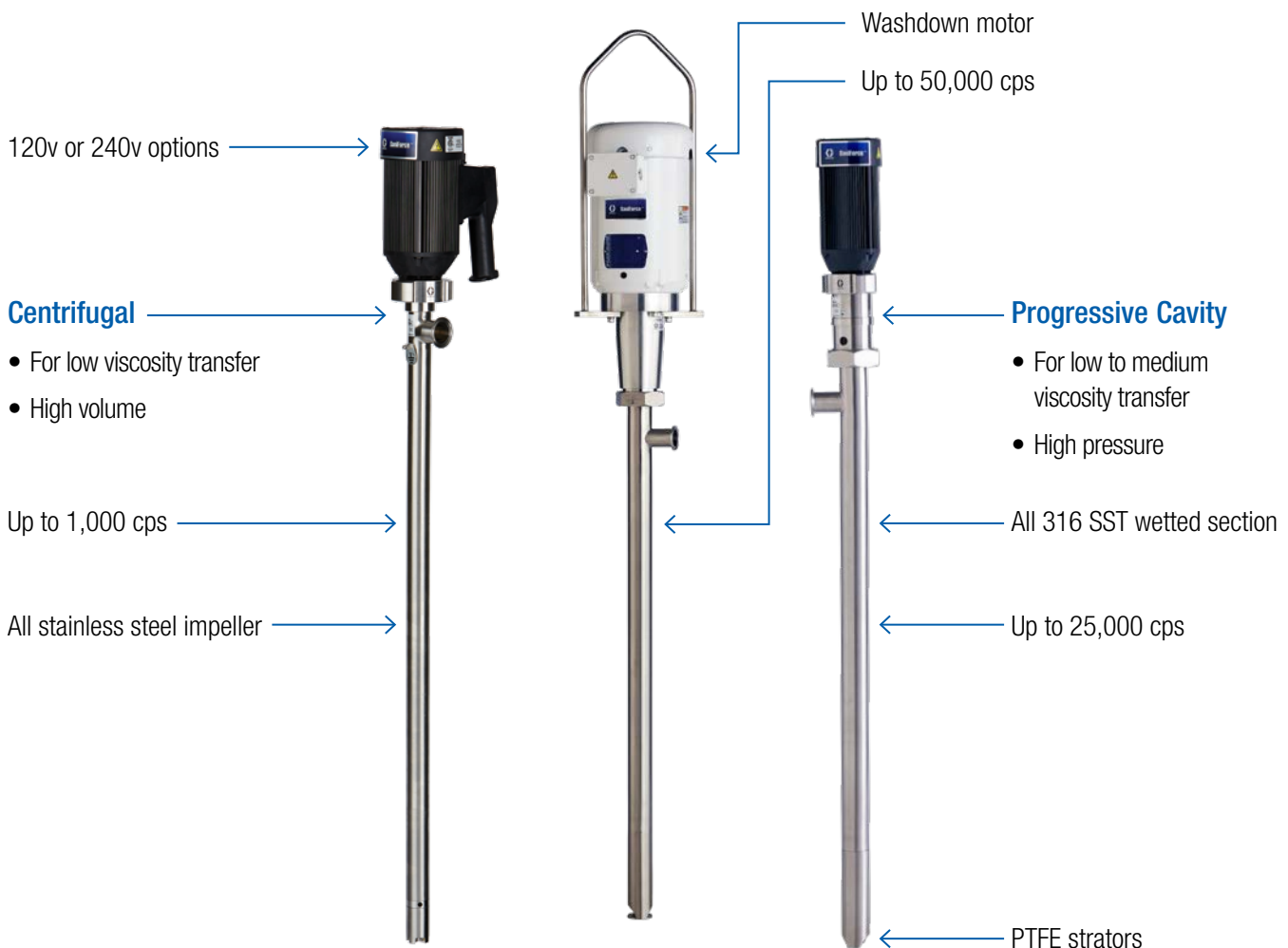
HIGH VISCOSITY ↑

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
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Common Materials	Fruit juice concentrates
	Edible oils
	Condiments & dressings
	Personal care: lotions & creams

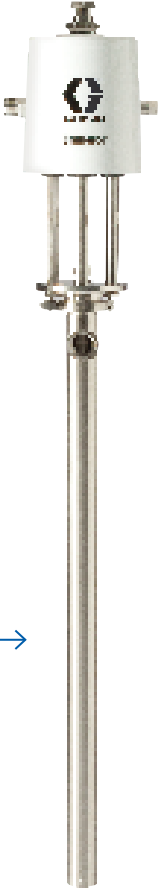
SaniForce® Piston Pumps




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


Advanced air motor technology →




SaniForce® 2:1 and 6:1 fit standard drum bung port →



FDA-Compliant Shroud
Removable, wash down safe, FDA-compliant shroud lets you easily access the air valve



All SaniForce Piston Pumps have Quick Knockdown Lower for Fast and Easy Cleaning!



Self-priming and run dry ← designed for medium viscosity transfer

← Available in double ball or priming piston designs

	SaniForce 2:1	SaniForce 6:1	SaniForce 5:1	SaniForce 12:1
Maximum Viscosity	Up to 50,000	Up to 100,000	Up to 100,000	Up to 100,000 cps
Maximum Flow Rate	Up to 1.5 gpm (5.7 lpm) at 60 cpm	Up to 4 gpm (15 lpm) at 60 cpm	Up to 14 gpm (53 lpm) at 60 cpm	Up to 8.5 gpm (32 lpm) at 60 cpm
Length	Standard and long lengths	Stubby, drum and bin lengths	Stubby and drum lengths	Stubby length only

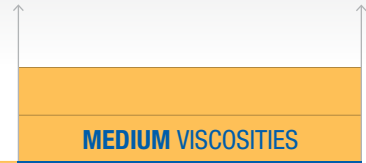
Common Applications

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

Common Materials

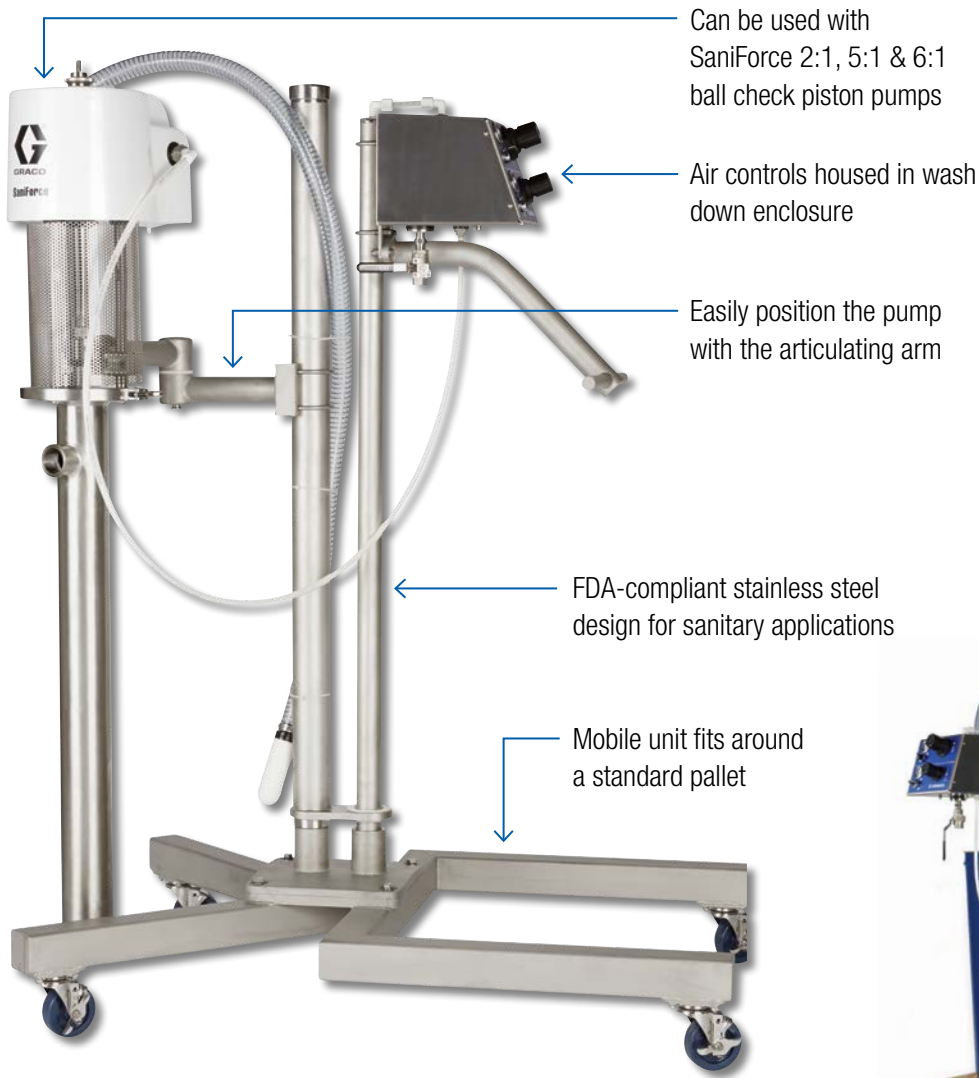
- Fruit juice concentrates
- Dressings & sauces
- Ice cream variegates
- Cosmetics

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



Can be used with SaniForce 2:1, 5:1 & 6:1 ball check piston pumps

Air controls housed in wash down enclosure

Easily position the pump with the articulating arm

FDA-compliant stainless steel design for sanitary applications

Mobile unit fits around a standard pallet



Stationary unit with base plate mounted to the floor

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

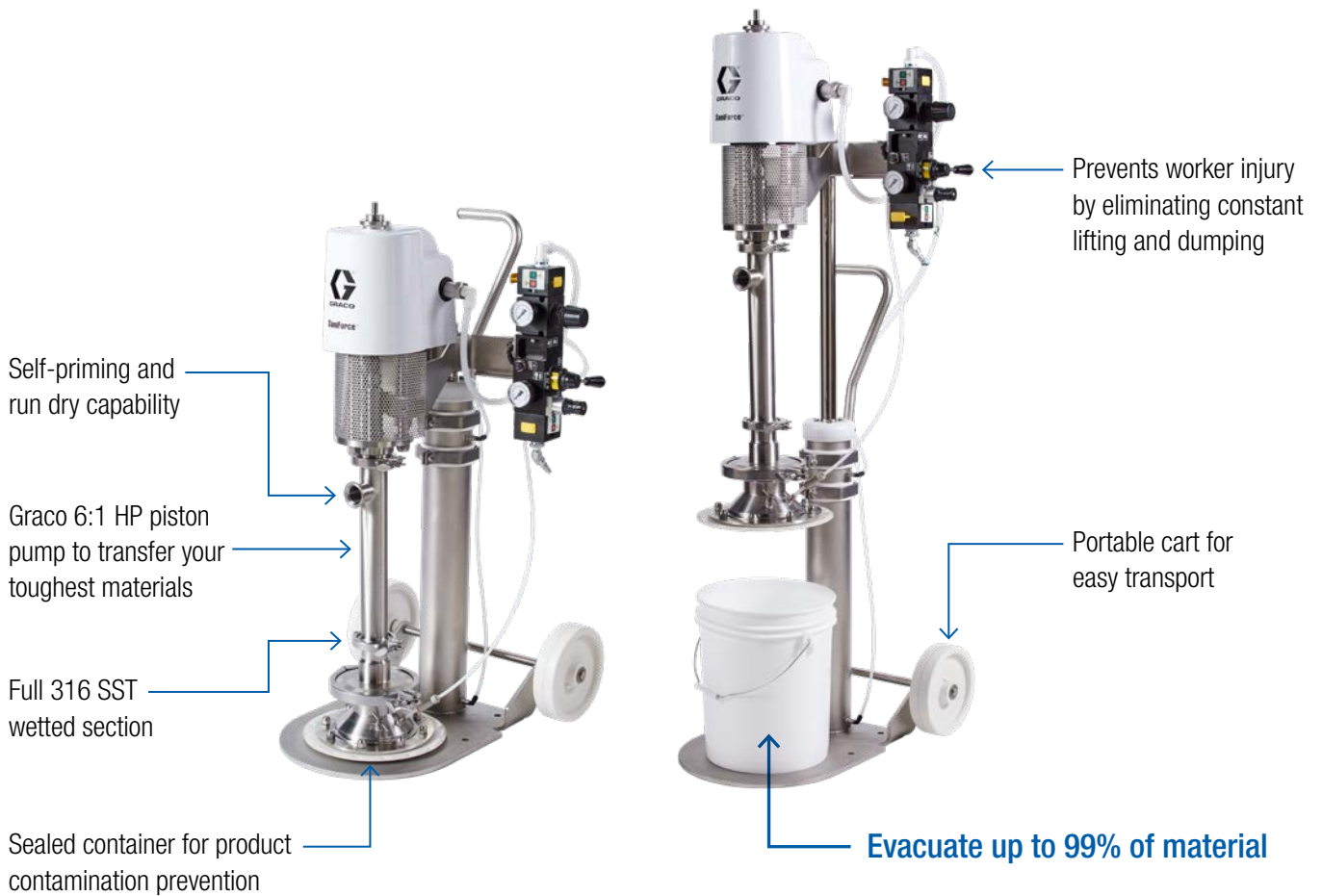
Flowable lotions & cosmetics

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
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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 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



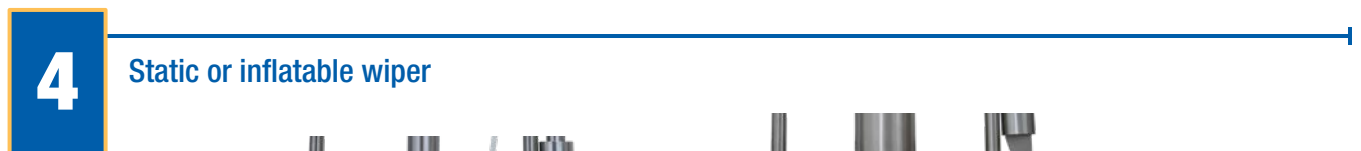
SaniForce 12:1



SaniForce 1590



SaniForce 3150



SaniForce® Bin Evacuation Systems



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
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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

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