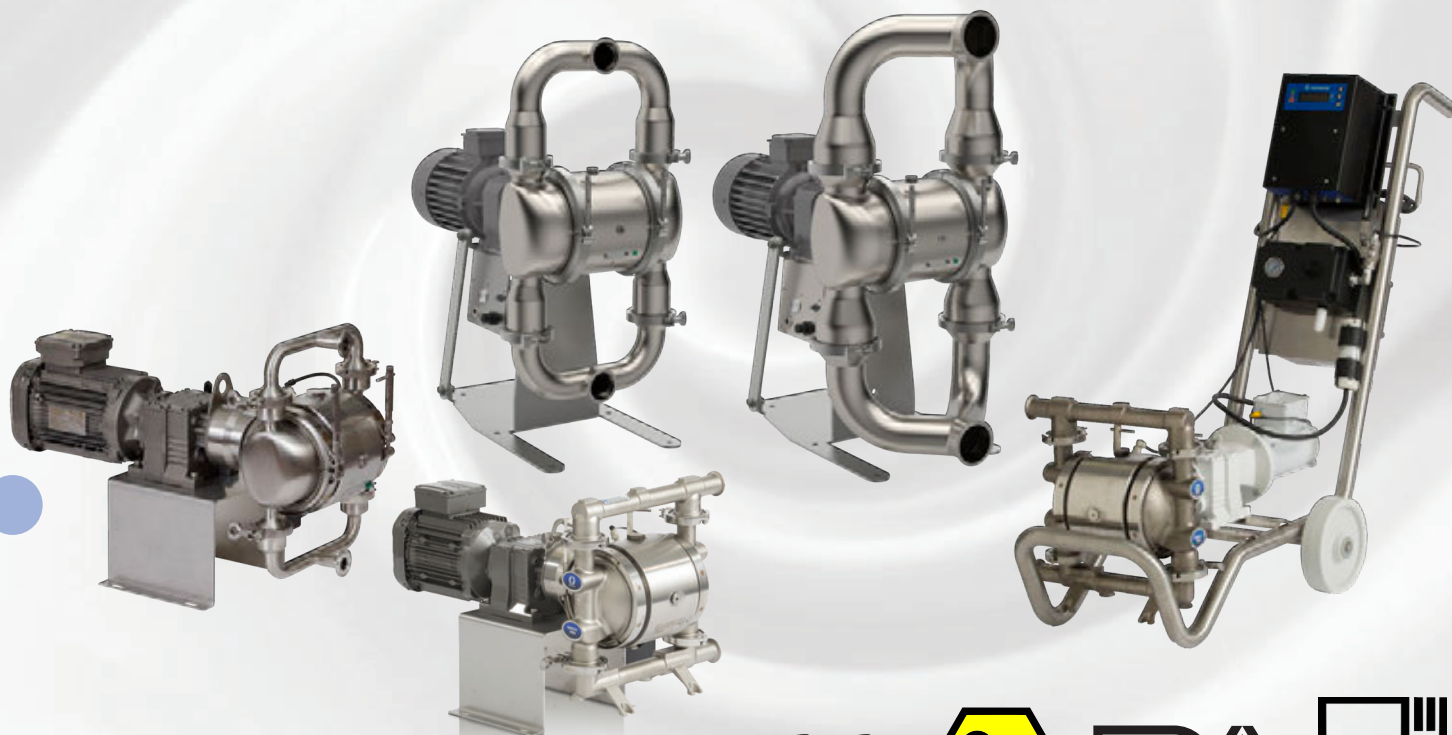


# SaniForce® 2.0

Electric Double Diaphragm Pumps for food, beverage, personal care, & pharmaceutical applications



*protect your* **PROCESS**

## Portable, easy-to-clean, quick knockdown design

- > Durable design for rigorous, continuous use
- > Maximum flow rates up to 250 gpm (567.8 lpm)
- > Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps
- > Quick knockdown for easy cleaning, sanitizing, and draining
- > All fluid contact materials are FDA-Compliant and meet CFR Title 21 with Class VI elastomers

# INGREDIENTS TRANSPORT

## SaniForce Solutions

Improved cleanability, safety, and ease of use

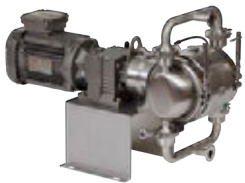
*protect your* **PROCESS**

### Food Grade Solutions



SaniForce FG 1040e Diaphragm Pump	SaniForce FG 2150e Diaphragm Pump
40 gpm	180 gpm
up to 10,000 cps	up to 25,000 cps
Includes Drum Kit	Includes Drum Kit

### High Sanitation



SaniForce HS 1040e	SaniForce HS 2150e	SaniForce HS 3250e	SaniForce HS 4150e
40 gpm	100 gpm	180 gpm	250 gpm
up to 10,000 cps	up to 15,000 cps	up to 20,000 cps	up to 25,000 cps

### Typical Materials

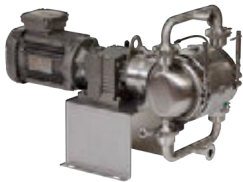


## Large Particle



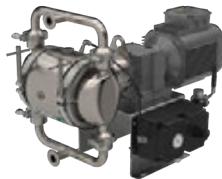
SaniForce 2150e	SaniForce 3150e	SaniForce 4150e
80 gpm	130 gpm	90 gpm
up to 15,000 cps	up to 25,000 cps	up to 25,000 cps

## 3A



SaniForce 3A 1040e	SaniForce 3A 2150e	SaniForce 3A 3250e
100 gpm	180 gpm	250 gpm
up to 15,000 cps	up to 25,000 cps	up to 25,000 cps

## Pharmaceutical



SaniForce PH 1040e	SaniForce PH 2150e
40 gpm	180 gpm
up to 10,000 cps	up to 25,000 cps



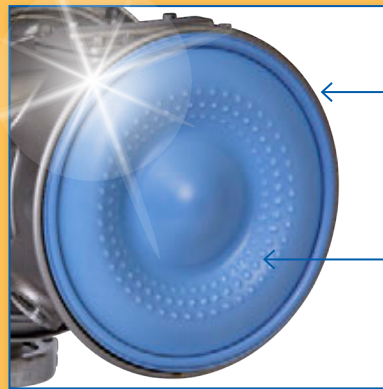
# SaniForce® Diaphragms & Electric Drive

All SaniForce diaphragm pumps are available with our signature overmolded diaphragms and externally servicable air valves for cleaner and smoother operations.

With PTFE on the fluid side and EPDM on the air side on our PTFE/EPDM diaphragms, SaniForce diaphragm pumps are one of the easiest to clean in the market. This overmolded fluid side diaphragm plate improves wear, durability and cleanability.

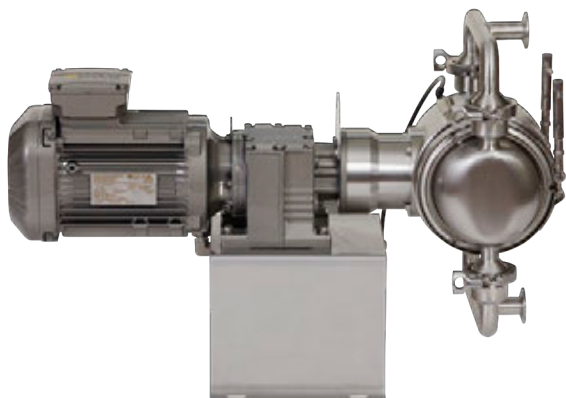
## Prevent bacteria growth with the Graco overmolded diaphragm.

- > Improve wear and diaphragm life with no exposed diaphragm plate on the fluid side
- > Longer diaphragm life in moderately abrasive applications that still require PTFE



EDPM backer

PTFE overmolded fluid side diaphragm



## Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps.

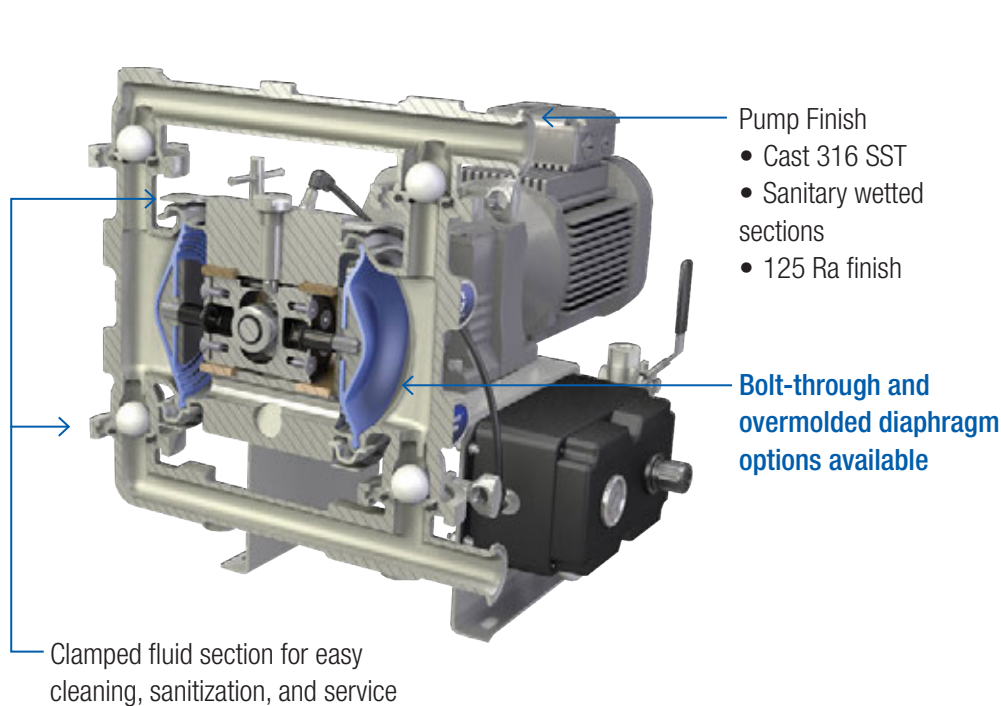
- Significant energy savings and lower cost of ownership
- Provides additional pump control
- Low pulsation for applications that need smooth flow.
- Air charge provides ability to stall pump under pressure increasing system safety and removing requirement for circulation loops.
- Less noise disturbance through less than 70 dBa compared to an air operated diaphragm pump.



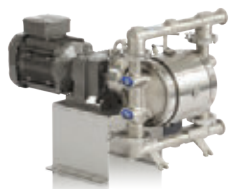
# SaniForce® Food Grade Diaphragm Pumps

Increase durability and reduce repair time with fewer moving parts.

- Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps.
- Low pulsation for applications that need smooth flow.
- Stalls under pressure.
- Tri-clamp connections allow accelerated cleaning and minimal downtime.
- Mobile cart options available for easy and quick movement.



Fluid contact areas are all FDA-compliant and meet CFR Title 21



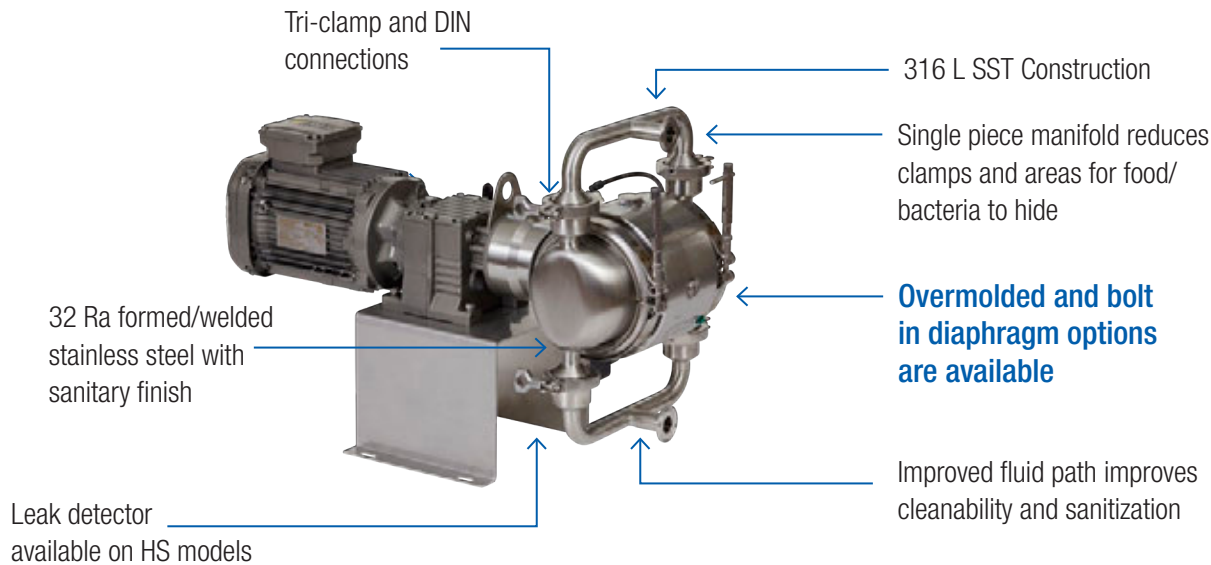
SaniForce 1040e	SaniForce 2150e
1.5 in Tri-clamp	2.5 in Tri-clamp
up to 10,000 cps	up to 25,000 cps

Common Materials	Salad dressings	Edible oils
	Condiments	Snack food flavorings
	Sauces	Light lotions and creams
	Juices and flavored drinks	Beer, wine, & more

# SaniForce® High Sanitation Diaphragm Pumps

## Easy to clean and sanitize pump for high care applications.

- Designed to meet requirements for the most rigorous food, beverage, personal care, and pharmaceutical transfer applications.
- Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps.
- Seal-less design removes common issues associated with rotary shaft seals and handles abrasive material.
- Patented air charge reduces pulsation for smooth flow.
- Stalls under pressure.
- Tri-clamp connections allow accelerated cleaning and minimal downtime.



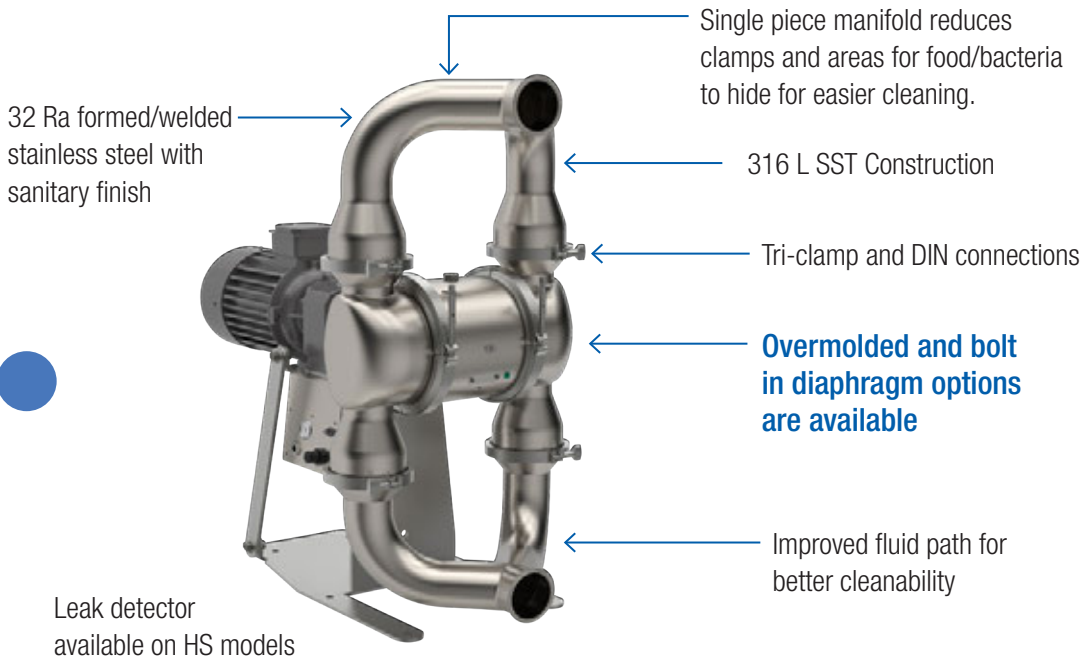
SaniForce HS 1040e	SaniForce HS 1590e	SaniForce HS 2150e	SaniForce HS 3250e
1.5 in tri-clamp	2.0 in tri-clamp	2.5 in tri-clamp	3.5 in tri-clamp
up to 10,000 cps	up to 15,000 cps	up to 25,000 cps	up to 25,000 cps

<b>Common Materials</b>	Personal care
	Cosmetics
	High care food

# SaniForce® Large Particle Diaphragm Pumps

**Built to handle solids up to 3.8 inches in diameter.**

- Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps.
- Seal-less design removes common issues associated with rotary shaft seals and handles abrasive material.
- Patented air charge reduces pulsation for smooth flow.
- Stalls under pressure.
- Tri-clamp connections allow accelerated cleaning and minimal downtime.



## Flapper Check

Handles solids up to 3.8 inches without crushing or damaging material



SaniForce 1590e	SaniForce 3150e	SaniForce 4150e
1.2 in max pumpable solids	2.6 in max pumpable solids	3.8 in max pumpable solids
80 gpm	130 gpm	90 gpm
up to 15,000 cps	up to 25,000 cps	up to 25,000 cps

### Common Materials

Meat & Poultry

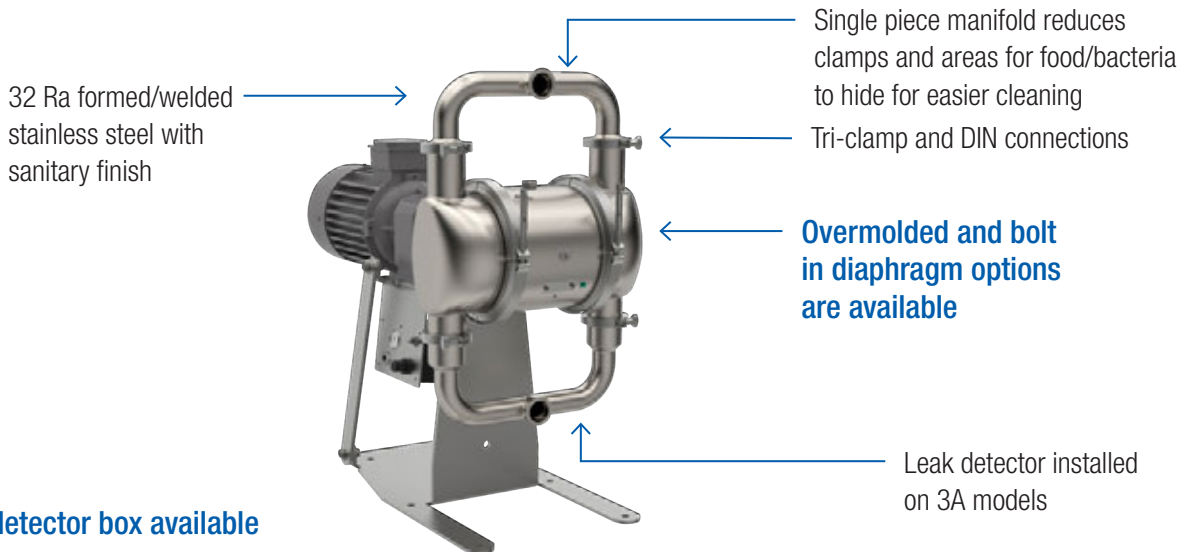
Fruit filling materials

Ice cream varigates

# SaniForce® 3A Diaphragm Pumps

## 3A Certified diaphragm pump for handling dairy safely and effectively.

- Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps and provides additional pump control.
- Seal-less design removes common issues associated with rotary shaft seals and handles abrasive material.
- Patented air charge reduces pulsation for smooth flow.
- Stalls under pressure.
- Tri-clamp connections allow accelerated cleaning and minimal downtime.



\*Leak detector box available

SaniForce 3A 1590e	SaniForce 3A 2150e	SaniForce 3A 3250e
up to 15,000 cps	up to 25,000 cps	up to 25,000 cps

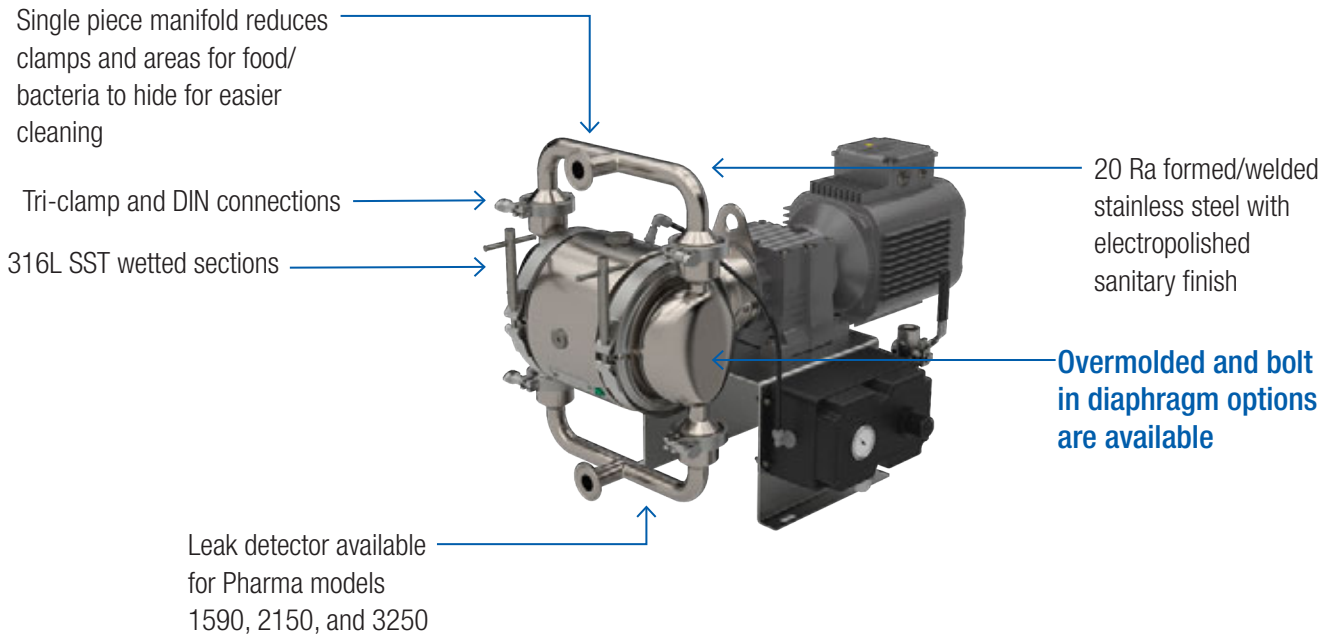
Common Materials	Dairy	Ice cream ingredients
	Yogurt	and more
	Cottage cheese	



# SaniForce® Pharmaceutical Diaphragm Pumps

## Pharmaceutical grade diaphragm pump.

- Electric drive reduces energy consumption up to 5 times compared to traditional air operated diaphragm pumps and provides additional pump control.
- Seal-less design removes common issues associated with rotary shaft seals and handles abrasive material.
- Patented air charge reduces pulsation for smooth flow.
- Stalls under pressure.
- Tri-clamp connections allow accelerated cleaning and minimal downtime.



SaniForce PH 1040e	SaniForce PH 2150e
up to 10,000 cps	up to 25,000 cps

Common Materials	Medical creams & lotions	Bio pharmaceuticals
	Organic reagent	Alcohol & Solvent Transfer
	Blood products	

# APPLICATIONS

## Application Overview

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

- > **FOODS:** Salad dressings and condiments, sauces, juices and flavored drinks, edible oils, snack food flavorings, light lotions and creams, beer and wine, and more



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

- > **MEAT and POULTRY**



- > **PERSONAL CARE:** 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](http://www.graco.com/sanitary)

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