SaniForce®

unleash the POWER

PROVEN QUALITY. LEADING TECHNOLOGY.
SaniForce®

- SaniForce®
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### SaniForce Models

- **515**
- **1040**
- **1590**
- **2150**
- **1590 HS**
- **3150 HS**
- **3-A**

#### Pump Types

- Single Cylinder System
- Diaphragm Pump
- Plunger Pump
- Tote Box Discharge System

#### Flow Rates

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow Rate Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>gpm</strong> (lpm)</td>
</tr>
<tr>
<td></td>
<td>14 (53)</td>
</tr>
<tr>
<td>5:1</td>
<td>1200 (83, 8.3 MPa)</td>
</tr>
<tr>
<td>12:1</td>
<td>1/4 in (6.4 mm)</td>
</tr>
<tr>
<td></td>
<td>100,000 (100,000)</td>
</tr>
</tbody>
</table>

#### Pressure Limits

<table>
<thead>
<tr>
<th>Model</th>
<th>Pressure Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>psi</strong> (bar, MPa)</td>
</tr>
<tr>
<td></td>
<td>100 (7, 0.7 MPa)</td>
</tr>
<tr>
<td></td>
<td>400 (28, 2.8 MPa)</td>
</tr>
</tbody>
</table>

#### Compatibility

- SaniForce pumps are suitable for a variety of applications, including food, pharmaceutical, and chemical processes.

- **Viscosity Range:**
  - **Max:** 10,000 cps
  - **Max:** 10,000 cps
  - **Max:** 15,000 cps
  - **Max:** 20,000 cps
  - **Max:** 15,000 cps
  - **Max:** 20,000 cps
  - **Max:** 25,000 cps
  - **Max:** 50,000 cps
  - **Max:** 100,000 cps
  - **Max:** 1,000,000 cps

- **Note:** Fill-in values are represented in the table for different applications.

#### Additional Features

- Self-priming
- Reduced maintenance
- Long service life
- Enhanced efficiency

**Note:** Compatibility and flow rates may vary depending on specific applications and requirements.
Common applications include:

-输送和供料低粘度流体
-食品行业应用
-化妆品和制药行业应用

Common materials include:

-浓缩果汁
-奶糖夹心料
-冰淇淋配料
-化妆品

When transporting extremely hard-to-handle materials, competing products often fall short, while the Graco powerful piston pump series excels. This series of pumps can reach a pressure ratio of 12:1, fully meeting the requirements for transporting low viscosity materials.

The series of products is equipped with easy-to-maintain air motors and high efficiency, and reduces usage costs. The lower cylinder can be quickly dismounted, and manufactured with corrosion-resistant stainless steel, ensuring durability.

SaniForce piston pumps:

- Increase efficiency, save money

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum Viscosity</th>
<th>Maximum Flow</th>
<th>Cylinder Options</th>
<th>Maximum Flow in 60 cmp</th>
</tr>
</thead>
<tbody>
<tr>
<td>SaniForce 2:1</td>
<td>50,000 cps</td>
<td>1.5 gpm (5.7 lpm)</td>
<td>Standard or Extended</td>
<td>8.5 gpm (32 lpm)</td>
</tr>
<tr>
<td>SaniForce 6:1</td>
<td>100,000 cps</td>
<td>4 gpm (15 lpm)</td>
<td>Standard or Extended</td>
<td></td>
</tr>
<tr>
<td>SaniForce 5:1</td>
<td>100,000 cps</td>
<td>14 gpm (53 lpm)</td>
<td>Standard or Extended</td>
<td></td>
</tr>
</tbody>
</table>
| SaniForce 12:1 | 1,000,000 cps     | 8.5 gpm (32 lpm) | Standard or Extended | }
输送最难处理的材料
先进的空气马达技术
下缸体可快速拆卸
FDA标准护罩
• 可轻松拆卸,清洗时有效
保护马达,便于检修空气阀模块
所有SaniForce柱塞泵下缸体皆可快速拆卸,清洗工作简单快捷!
**SaniForce 515, 1040, 1590, 2150**

- **316 Stainless Steel Casting**
- Fluid components subjected to sanitary shot peening

Surface areas in contact with fluids comply with FDA and CFR Title 21 standards.

Suitable for use with ordinary diaphragms or integral diaphragms.

**Common Applications**
- Pumping food ingredients to mixing tanks
- Pumping high volume of concentrated solutions from storage tanks
- Dividing existing vessels with fluids into smaller containers

**Common Materials**
- Concentrated fruit juice
- Sauces, pastes, and starches
- Beverages
- Jams and gels
- Edible oils

Compared to many similar PTFE diaphragm pumps, Graco SaniForce 515, 1040, 1590, and 2150 pneumatic diaphragm pumps feature a flow rate that can be increased by 25%. Moreover, Graco sanitary pumps boast industry-leading, durable, lubrication-free air valves.

As a preferred option for high flow and multi-point applications, Graco sanitary pumps are reliable. They can be equipped with Santoprene®, PTFE, or EPDM/PTFE integral diaphragms.

When other products encounter challenges, Graco sanitary pumps can prove their worth!
PTFE/EPDM
一体式膜片对PTFE流体端和EPDM空气端采用一次性整体模。膜片耐磨性、耐用性和清洁性随之提高，SaniForce卫生泵也因此成为市场上最易于清洗的泵之一。

- 流体端隔膜板不会暴露在外，从而减少磨损，延长隔膜寿命
- 在磨蚀性物料输送应用中隔膜的使用寿命更长
- SaniForce 515、1040、1590、2150和SaniForce 1590 HS、3150 HS可选配改进流程，减少停机
- 入口和出口处使用卡箍连接
- 运动部件少，可提高耐用性并减少维修时间
- 三向导向阀保证运行无死点
- 无需拆泵，可直接在外部进行快速维修
- 固瑞克空气阀耐用、可靠且易于维修！不再滋生细菌！
SaniForce 1590 HS
- 2.0 in (50.8 mm) 卡箍尺寸
- 1.9 in (48.3 mm) 进出管路尺寸
- 最大流量达 90 gpm (340 lpm)

SaniForce 3150 HS
- 4.0 in (101.6 mm) 卡箍尺寸
- 2.9 in (73.7 mm) 进出管路尺寸
- 最大流量达 150 gpm (568 lpm)
EPDM

- Certified for 3A applications
- Smooth, flat surface, easy to clean
- Membrane plate is not exposed, avoids contamination

SaniForce

Meat/Meat Pumps

- Can handle solids up to 2.5 in (6.3 cm)
- Wear-resistant non-lag air valve, easy to transport pork, poultry necks, hepatic, hearts, feet, and meat paste.
SaniForce

1,000,000 cps*

SaniForce can easily unload material from original 55-gallon (208 liter) containers without dilution.

The same size diaphragm and seals apply to straight and conical tanks. 

Application:

- FDA standard air-inflated pressure seal
- Faster replacement of empty containers
- Discharge rate 99%

*only applicable to piston design.
SaniForce systems configuration:

1. Select the frame material + control type + pump type to complete the configuration of the SaniForce diaphragm pump system.

2. Common applications:
   - From 55-gallon containers, directly discharge medium to high viscosity materials (up to 1,000,000 cps*) without dilution.

3. Materials:
   - Tomato sauce
   - Cosmetics
   - Peanut butter
   - Jams and jellies
   - Sugar and icing
   - Toothpaste
   - Corn syrup

All pumps can be set according to the required flow rate, and can be quickly disassembled to meet the requirements of high-frequency cleaning applications.

*Limited to ceramic models
卸出物料
最卫生的方式，将通过空气传播的细
菌拒之门外!

从300加仑(1135.6升)袋装容器中高效卸料—无需动手舀取或倾倒
料箱，从而节约时间与资金。

真正的箱式卸料可节省成本，提供更好的流程控制，无需使用成本高昂的增压泵。

SaniForce吨箱卸料系统(BES)

常见应用
将粘稠物料从其原有300加仑容器中排出，无需稀释
常见物料
番茄酱 化妆品
花生酱 果酱和果冻
糖衣与糖霜 焦糖
牙膏 玉米糖浆

配备隔膜泵的SaniForce 3150 BES
配备柱塞泵的SaniForce BES
完美卸料，无需稀释或加热！

采用独有的浮动压盘，省却在支架下精确放置料桶的麻烦

采用气动或电子控制装置

使用SaniForce吨箱卸料系统保证物料清洁、作业迅速、提升效益。

排料率可达99%
SaniForce柱塞泵单立柱系统不再需要人工卸料。

SaniForce柱塞泵单立柱系统是中小型企业的理想选择，用于代替人工舀取或倾倒卸料的传统生产方式，传统方式每小时仅能卸料一至两桶。而SaniForce柱塞泵单立柱系统的流量范围为1.5至14加仑/分钟（5.7至53升/分钟），可快速完成卸料作业。

可配置SaniForce 2:1、5:1及6:1双球柱塞泵。

移动式系统适用于标准托盘，固定式系统可将底座直接安装在地面上。内置式气动控制可被反复冲洗。伸缩臂设计便于定位柱塞泵。

符合FDA标准的不锈钢材质，适用于卫生场合。
支持多支喷枪
每台成套设备标配五只不同喷嘴
适用于敞口式水桶或溶剂桶液压驱动式清洗机
可采用壁挂式或车载式安装
不锈钢下缸体可容纳多种化学溶剂

禁止使用燃油和电力。可选择气动或液压驱动式Hydra-Clean高压清洗机作为清洁解决方案。

Hydra-Clean®高压清洗机完全适用于对食品、饮料和药品加工场所进行清洁和消毒，能够使用热水、冷水、清洗剂或高浓度化学溶剂。
Husky™ 205
- Polypropylene
- 1/4 in (6.3 mm)
- Maximum flow 5 gpm (19 lpm)

Husky™ 1050
- Stainless Steel
- 1 in (25.4 mm)
- Maximum flow 50 gpm (189 lpm)

Husky™ 515
- Polypropylene
- 1/2 in (12.7 mm)
- Maximum flow 15 gpm (57 lpm)

Husky™ 716
- Stainless Steel
- 3/4 in (19.1 mm)
- Maximum flow 16 gpm (61 lpm)

Husky™ 307
- Polypropylene
- 3/8 in (9.4 mm)
- Maximum flow 7 gpm (26 lpm)

Husky™ 1050
- Stainless Steel
- 1 in (25.4 mm)
- Maximum flow 50 gpm (189 lpm)

GRACO PUMPS

固瑞克隔膜泵使用获得专利的空气阀，是能够满足CIP要求的
安全可靠、易于维护的流体解决方案。