

# Process Equipment

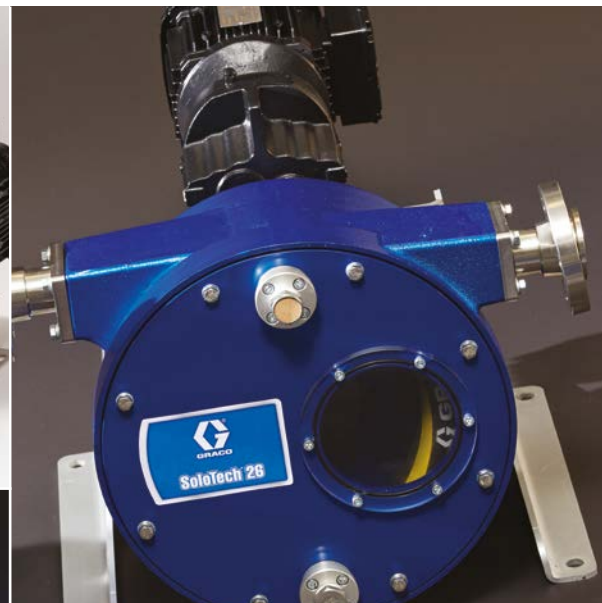
Pumping Solutions for Process Industries



# Which System is Right for You?

## Pumping Solutions for Process Industries

**Downtime is frustrating and costly.** At Graco, we provide durable pumping solutions for your applications. Every pump is manufactured with your productivity in mind – providing you with a more reliable and efficient pump. Each pump is thoroughly tested before it leaves our factories.



# GRACO Process Selector Tools

Graco pump selectors are designed to make pump selection very easy.

Once you have selected a pump, the tool will provide you with ample information:

- the configuration
- major spare parts part numbers
- accessories

The pump selectors are available for the following products on each product page on the Graco website (www.graco.com).

## A) Husky air-operated double diaphragm pumps:

## B) Husky electric-operated double diaphragm pumps:

The screenshot shows the GRACO website interface for the 'Process Pump Selector' tool. The title is 'Air-Operated Double Diaphragm Pump'. The form includes the following fields:
 

- Model/Power Source:** Air Operated
- Certification Required:** ATEX
- Fluid Section Material:** [X] Aluminum
- Pump Inlet/Outlet Size:** 1/2" - 1 inch, 50 gpm (25mm, 189 lpm)
- Center Section:** [X] Aluminum Standard Air Valve w/Buna Seals
- Pump:** [X] Aluminum Standard Pumping (NPT)
- Seals:** [X] TPE

 A 'Part Number reverse look-up' field contains '641700'. A 'Submit' button is visible. A technical drawing of the pump is shown on the right.

The screenshot shows the GRACO website interface for the 'Process Pump Selector' tool. The title is 'Electric-Operated Double Diaphragm Pump'. The form includes the following fields:
 

- Certification Required:** No Certification
- Fluid Section Material:** [X] Aluminum
- Pump Inlet/Outlet Size:** 2150e - 2 inch, 143 gpm (50 mm, 541 lpm)
- Center Section Material:** [X] Aluminum
- Pump Speed:** [X] High Speed
- Compressor:** [X] No Compressor
- Motor:** [X] Standard AC Motor

 A 'Part Number reverse look-up' field contains '85000'. A 'Submit' button is visible. A technical drawing of the pump is shown on the right.

## C) Piston pump selector tool:

## D) Hose pump selector tool:

The screenshot shows the GRACO website interface for the 'Process Pump Selector' tool. The title is 'Piston Pumps and Hazardous Location Pressure Washers'. The form includes the following fields:
 

- Type:** Piston Transfer Pump
- Power:** Air
- Max Fluid Pressure (psi):** 180 psi (12 bar)
- Flow Rate:** 4 gpm (15.1 lpm)
- Mounting:** N/A
- Drum Length:** Drum - 34.6"
- Tube Material:** Carbon Steel

 A 'Part Number reverse look-up' field contains '222040'. A 'Submit' button is visible. A technical drawing of the pump is shown on the right.

The screenshot shows the GRACO website interface for the 'Process Pump Selector' tool. The title is 'Peristaltic Pumps'. The form includes the following fields:
 

- Certification Required:** No Certification
- Pump Size:** 23 mm (GPM: 0.09 to 4.73) (DPM: 5.4 to 294)
- Pump Speed:** Low Speed AC (GPM: 0.09 to 0.57) (DPM: 5.4 to 34.2)
- Motor Selection:** Standard AC Motor
- Hose Material:** Natural Rubber
- Tube Material:** Stainless Steel

 A 'Part Number reverse look-up' field contains '192D1'. A 'Submit' button is visible. A technical drawing of the pump is shown on the right.

# Air-Operated Double Diaphragm Pumps

## Husky™ Transferring a Wide Range of Fluids

Our Husky air-operated double diaphragm pumps are loaded with features to help you get the job done right, every time, and are built to save you money.

### Rugged construction

Resists corrosion for reliable performance and long life

**Heavy-duty design** - Offers long life, increased productivity and lower overall cost of ownership

**Flow rates** up to 1135 lpm (300 gpm)

**Lube-free** for cleaner operation

**DataTrak™** available to prevent pump runaway and track material usage

**Very easy & quick to repair!**



### Husky 3300

3 in (76.2 mm) connection  
Max flow: 1135 lpm (300 gpm)  
Polypropylene, aluminium,  
stainless steel



### Husky 2200

2 in (50.8 mm) connection  
Max flow: 757 lpm (200 gpm)  
Polypropylene, PVDF



### Husky 2150

2 in (50.8 mm) connection  
Max flow: 568 lpm (150 gpm)  
Polypropylene, PVDF, aluminium,  
stainless steel, iron



### Husky 15120

1-1/2 in (38.1 mm) connection  
Max flow: 454 lpm (120 gpm)  
Polypropylene, PVDF



### Husky 1590

1-1/2 in (38.1 mm) connection  
Max flow: 340 lpm (90 gpm)  
Polypropylene, PVDF, aluminium,  
stainless steel



### Husky 1050

1 in (25.4 mm) connection  
Max flow: 189 lpm (50 gpm)  
Aluminium, polypropylene, PVDF,  
conductive polypropylene,  
hastelloy, stainless steel

# Air-Operated Double Diaphragm Pumps

## The Husky Advantage

### Loaded with Options

Choose from a wide selection of materials to handle numerous applications, including corrosive and abrasive fluid transfer.

#### Key fluids

- Paints, stains, coatings, inks and dyes
- Chemicals
- Acids
- Corrosive and abrasive fluids
- Lubricants
- Ceramic glazes
- Sludge, slurry and waste fluid
- Soaps, detergents and solvents
- General and advanced mining applications

#### Balls



#### Seats



#### Diaphragms



#### Husky 1050HP

1 in (25.4 mm) connection  
Max flow: 189 lpm (50 gpm)  
Aluminium and stainless steel



#### Husky 716

3/4 in (19.1 mm) connection  
Max flow: 61 lpm (16 gpm)  
Aluminium, stainless steel



#### Husky 515

1/2 in (12.7 mm) connection  
Max flow: 57 lpm (15 gpm)  
Polypropylene, acetal, PVDF



#### Husky 307

3/8 in (9.4 mm) connection  
Max flow: 26 lpm (7 gpm)  
Polypropylene, acetal



#### Husky 205

1/4 in (6.3 mm) connection  
Max flow: 19 lpm (5 gpm)  
Polypropylene, acetal, PVDF

Available construction materials and accessories may vary depending on pump model.

# Electric Operated Double Diaphragm Pump

Graco's electric operated double diaphragm pumps are designed for **industrial, food, beverage and cosmetics** applications.

## Why would you go for a GRACO electric operated double diaphragm pump?

- Can handle a wide variety of fluids thanks to many material options
- Can handle abrasive and corrosive materials
- Gentle on shear sensitive materials
- Can run dry
- Can stall under pressure -> closing a valve or clogging a line doesn't create issues
- Self priming (no need to fill the pump to operate)
- No rotating or moving fluid seals
- Compared to an Air-Operated Double Diaphragm pump
  - o Energy savings using an electric drive can save you up to 80% of energy costs versus an air-operated pump
  - o Less noise due to the use of an electric motor
  - o Low pulsation mode, so you don't need to purchase a pulsation dampener
  - o Same lifetime on diaphragms as an air-operated pump

## Using Graco's electric diaphragm pump can lower your maintenance cost compared to using other technologies.

We can offer the advantages of an air-operated double diaphragm pump in an electric pump

Feature	Graco Electric Diaphragm Pumps	Other Electric Diaphragm Pumps	Air-Operated Diaphragm Pumps	Hose Pumps	Progressive Cavity Pumps	Rotary Lobe Pumps
Stalls under pressure	✓		✓			
Runs dry	✓	✓	✓	✓		
Self priming	✓	✓	✓	✓	✓	
No rotational shaft seal	✓	✓	✓	✓		
Low pulsation operation mode	✓				✓	✓

### Stalls =

avoid damage due to pressure overload (like a closed valve)

### Runs dry =

no damage when no fluid is pumped

### Self priming =

no need to fill pump manually

### No rotational shaft seal =

eliminate leaks and reduce maintenance costs

### Low pulsation =

avoid buying a pulsation dampener



# Graco's Unique Design Explained

To deliver the features you need, we use a Patent pending air charged drive

The pump is driven by a motor that moves a centre block sideways. By filling the centre block with air, the diaphragms are pushed out using this air. Mechanically, the centre block moves from left to right which means the air is pushing the diaphragms. We don't mechanically push the diaphragms.

We do **NOT** consume air, we only use air to charge the centre.

## Durable Pump Technology

- Handles slurries and abrasives all without damage to the pump
- Gentle on shear sensitive material

## Diaphragm Pump

- Runs dry
- No rotating or moving fluid seals
- Self priming

## Electric Drive

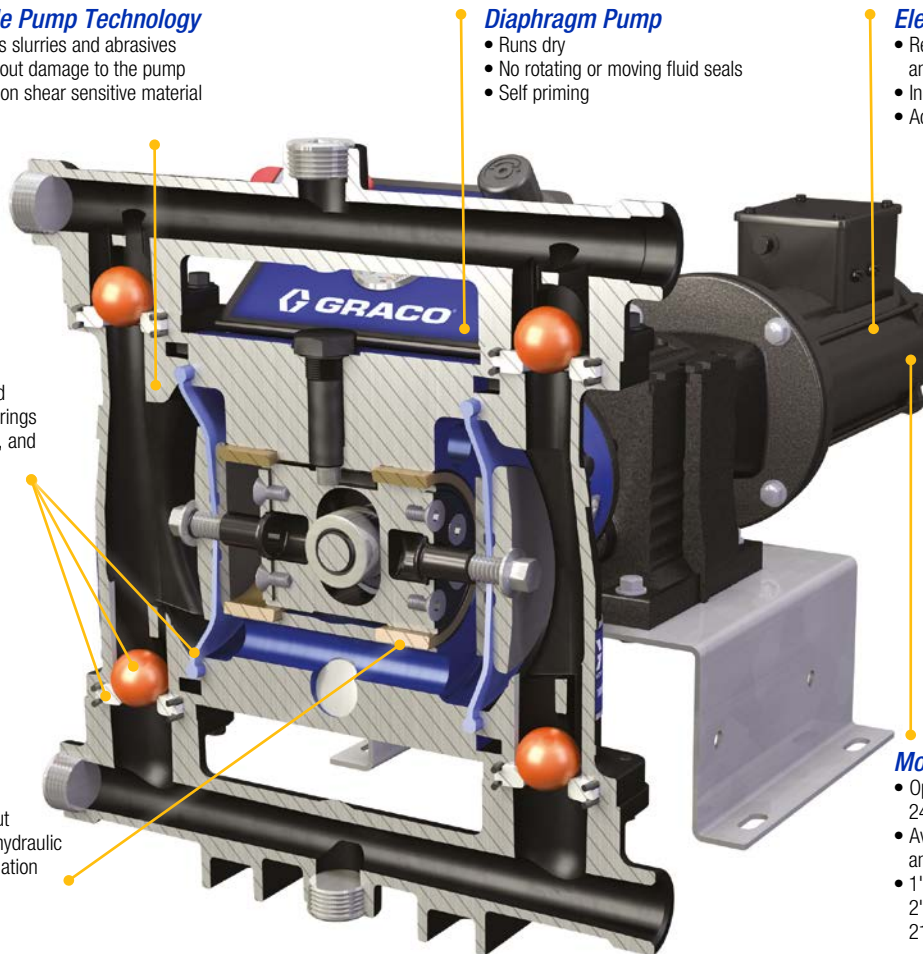
- Reduce energy consumption and operating costs
- Increase pump control
- Accurately meter fluid

## Fluid Section

- Create the pump you need with multiple material offerings for manifolds, seats, balls, and diaphragms

## Patent Pending Air Charged Drive

- Increase diaphragm life without compromising your fluid - no hydraulic charge, so no risk of contamination
- Ability to reduce pulsation on fluid outlet
- Stalls under pressure without additional switches and controls



## Motor Options

- Operate on 120V (only 1"), 240V or 480V power
- Available in AC, DC (only 1") and AC ATEX
- 1": one gearbox
- 2": 3 gearbox options: 130, 215 & 330 lpm

Pulsation Chart

Husky e-Series  
(in low pulse mode)



AODD

Peristaltic

## Need low pulsation? No Problem!

Another effect of our air charged drive is we can work in a "low-pulsation" mode eliminating the need for pulsation dampeners -> ideal when products are shear-sensitive, can foam, or require a smooth flow. In addition, our diaphragms are supported by air, so there is no hydraulic backing and therefore no risk of contamination.

## How much can you save?

Enter your parameters into the Husky Electric Pump ROI Calculator to compare your costs with a traditional air-operated diaphragm pump.

To calculate your ROI, go to the online product pages to find the link to our calculator.

Example of ROI Tool

# Air-Operated Double Diaphragm Pumps

## ChemSafe™ Chemical Pumps

Our ChemSafe pumps are available with 100% PTFE or UHMWPE corrosion- and abrasion-resistant fluid paths, making them ideal for even the most challenging fluids. They also have no exposed metals and can be configured with various materials to meet the majority of abrasion, temperature and chemical compatibility requirements.

### Leak-free design

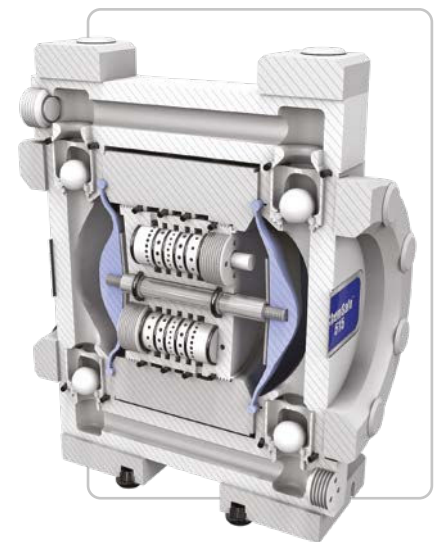
- Dual force, tie-bolt design ensures chemical containment
- Precision fit, CNC-machined design

### Corrosion-resistance

- 100% PTFE and UHMWPE fluid paths
- No exposed metals

### Parallel pilot shifting

- Easy to maintain
- Stall-free design
- Reduced icing air system



ChemSafe Models: 515, 1040, 1590



ChemSafe Models: 205, 307



**ChemSafe1590**  
1-1/2 in (38.1 mm)  
376 lpm (99.5 gpm)



**ChemSafe 1040**  
1 in (25.4 mm)  
146 lpm (38.8 gpm)



**ChemSafe 515**  
1/2 in (12.7 mm)  
60.6 lpm (16 gpm)



**ChemSafe 307**  
3/8 in (9.4 mm)  
25 lpm (6.7 gpm)



**ChemSafe 205**  
1/4 in (6.3 mm)  
14 lpm (3.7 gpm)



# Hose Pumps

## SoloTech™ Peristaltic Hose Pumps

With only the hose in contact with the fluid being pumped and no check valves in the line, Graco's SoloTech peristaltic pumps are ideal for materials that other pumps cannot handle. Abrasive, corrosive, shear-sensitive, and gas-entrapped fluids can easily be pumped or administered to your application.

- **Efficient pumping action** - One hose compression per revolution extends hose life
- **Low maintenance** - No valves, seals or glands
- **Reversible** - Pumps can be used to empty lines or clear blockages
- **Extended hose life** - Only one hose compression per revolution

Our BLDC motor/gearbox can handle a very large flow rate range, avoiding the need for different gearboxes for multiple applications.

### Hose Design



Hose Materials	Stripe Colour / Inside Colour	Max. Fluid Temperature	Application Area
Natural Rubber (NR)	None / Black	71°C (160°F)	Abrasives
Chlorosulfonated polyethylene (CSM)	Orange / Black	121°C (250°F)	Highly corrosive chemicals
Nitrile	Yellow / Black	104°C (220°F)	Oils or oily products
Ethylene propylene (EPDM)	Blue / Black	121°C (250°F)	Corrosive chemicals



**SoloTech 10**  
Max flow rate of 1.5 lpm (0.67 gpm).  
Typically used for chemical metering applications.



**SoloTech 23**  
Max flow rate of 17 lpm (4.5 gpm).  
Typically used for chemical metering applications.



**SoloTech 26**  
Max flow rate of 37.1 lpm (9.8 gpm).  
Typically used for abrasive material transfer applications.



**SoloTech 30**  
Max flow rate of 59.8 lpm (15.8 gpm).  
Typically used for abrasive material transfer applications

# High-Pressure Cleaning

## Hydra-Clean™ High-Pressure Cleaning

Graco pneumatic-driven and hydraulic-driven Hydra-Clean heavy-duty pressure washers are perfect for use in a variety of in-plant cleaning applications and can be used with hot or cold water, detergents or strong chemical solutions up to 93°C (200°F). Available in wall-mount and cart-mount options.

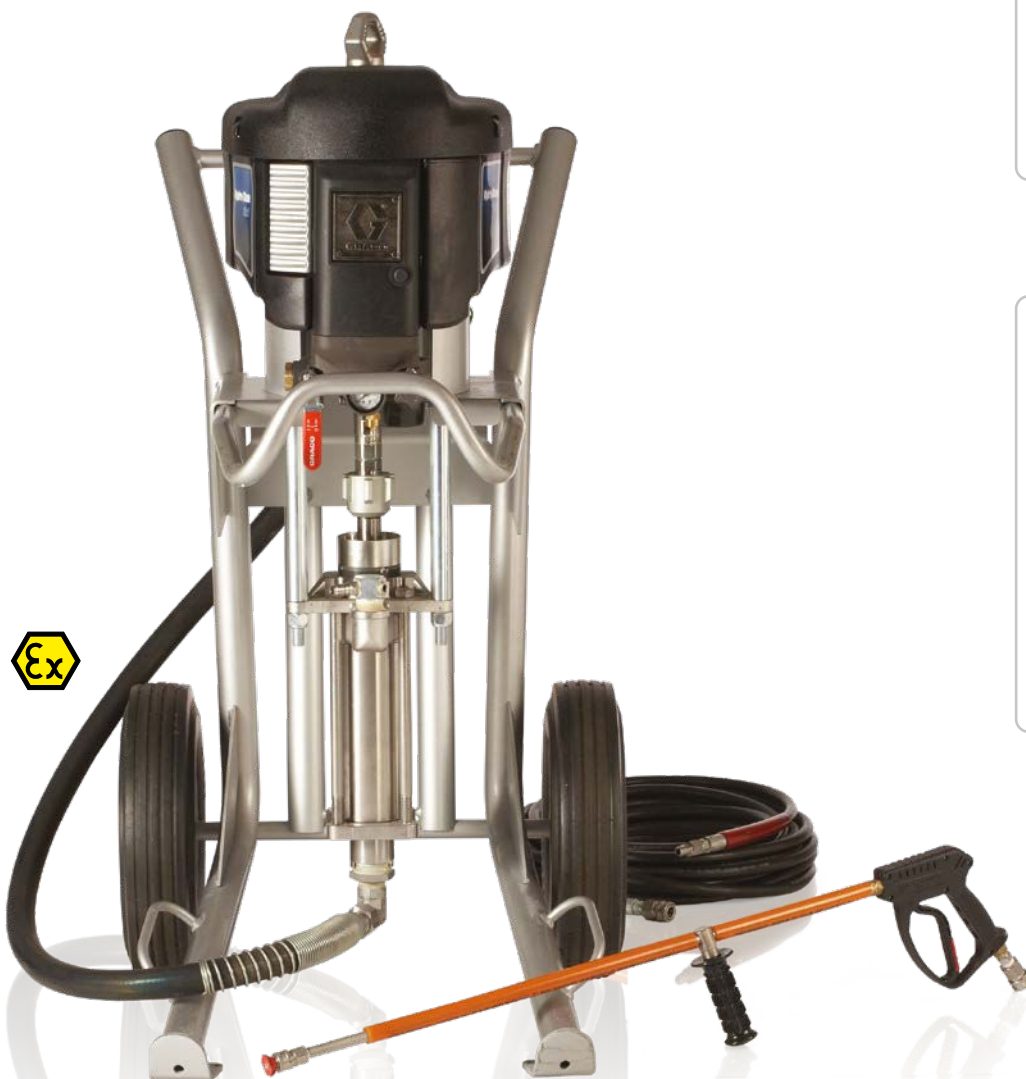
- [ATEX certified](#)
- [300 Series stainless steel lower](#) – Compatible with many extreme chemicals and ideal for use with open-head drums
- [Supports multiple guns](#)
- [Five different spray tips](#) – Standard
- [Optional hose reel](#) – Easy hose storage



Pneumatic Hydra-Clean



Hydraulic Hydra-Clean



# Transfer Pumps

## Husky Transfer Pumps

Easily pump from a 205-litre drum with flow rates up to 61 lpm (16 gpm). Available in aluminium, carbon steel, stainless steel and polypropylene.

- **Suction tube** immersed inside the drum
- **Quick-priming** and immediate product flow
- **Fluid viscosities up to 5,000 cps** and solids up to 2.5 mm (0.094 in)
- **Air-tight seal** for moisture-sensitive fluids
- **Bung adapter** fits into any 2 in (50.8 mm) bung opening



## Fast-Flo™ 1:1

Deliver a smooth, reliable flow. Drum length and stubby models are available in either carbon steel or stainless steel materials of construction. Ideal for a variety of non-corrosive and corrosive materials.

- **Flow rates** up to 15.1 lpm (4 gpm)
- **Immersed inlet** for faster priming of heavier fluids
- **Air-powered** for high reliability and low cost
- **Disc check** options for lower viscosity fluids



## Ink Pumps

Pneumatic and hydraulic ink pumps with enclosed, dual-seal wet cup design with an extended seal life - ideal for the most difficult inks.

- **Prolong seal life** with enclosed, dual-seal wet cup
- **Runaway control** with optional DataTrak™
- **MaxLife™** seal for longer life
- **Handles difficult inks**, like letterpress and lithographic





## ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

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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.

Graco is certified ISO 9001.

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