

# ChemSafe™

## Chemical Air-Operated Double Diaphragm Pumps

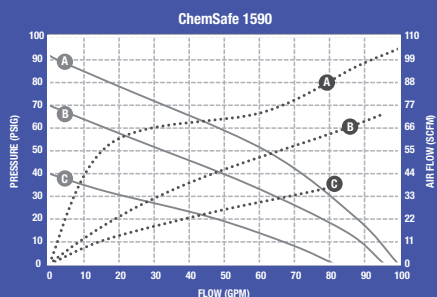
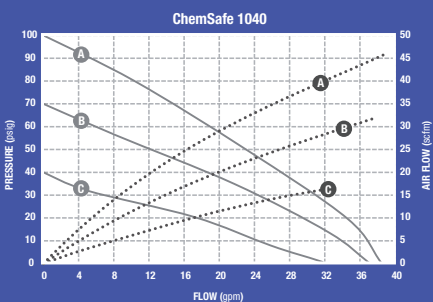
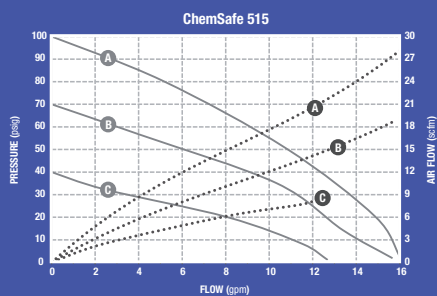
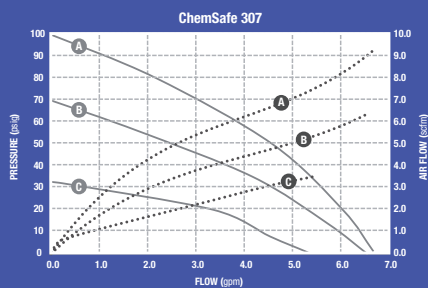
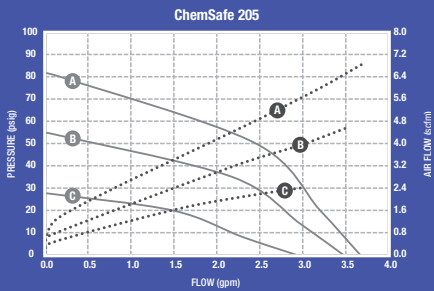


- CNC machined design ensures precision fit and superior chemical containment compared to molded pumps
- Corrosion-resistant exterior with no exposed metal reduces maintenance, extends pump life and offers clean, safe operation
- Removable air motor offers easy and intuitive maintenance, reducing downtime
- Available in 1/4 inch (6.3 mm), 3/8 inch (9.5 mm), 1/2 inch (12.7 mm), 1 inch (25.4 mm) and 1.5 inch (38.1 mm) models

PROVEN QUALITY. LEADING TECHNOLOGY.

# Pumping Solutions for Corrosive Chemicals

## Performance



AIR PRESSURE	LEGEND
A = at 100 psi	Air Consumption.....
B = at 70 psi	Fluid Pressure ———
C = at 40 psi	

## Safe and Reliable. Machined Design. No Exposed Metal.

Chemical transfer applications demand maximum performance and superior chemical containment. ChemSafe pumps feature 100% PTFE and UHMWPE fluid paths and are chemically safe. You can use these pumps with a variety of materials, plus they deliver unmatched chemical compatibility with challenging corrosive acids and destructive abrasive slurries. The precision-machined body features a tie-bolt design that ensures reliable sealing surfaces free of leaking.

## Applications and Materials

- Acid & Solvent Transfer
- Ceramic Finishing
- Electroplating
- Filter Press
- Steel Production
- Pharmaceutical
- Pickling Baths
- Printing Inks
- Silicone Carbide & Lime Slurries
- Wastewater Treatment



### 1 Leak Free

- Tie-bolt design ensures chemical containment
- Precision fit, machined design

### 3 Parallel Pilot Shifting

- Ease of maintenance
- Stall-free design
- Reduced icing air system

### 5 Field Serviceable

- Replaceable air motor, diaphragms, checks and pilot valve

### 2 Corrosion-Resistance

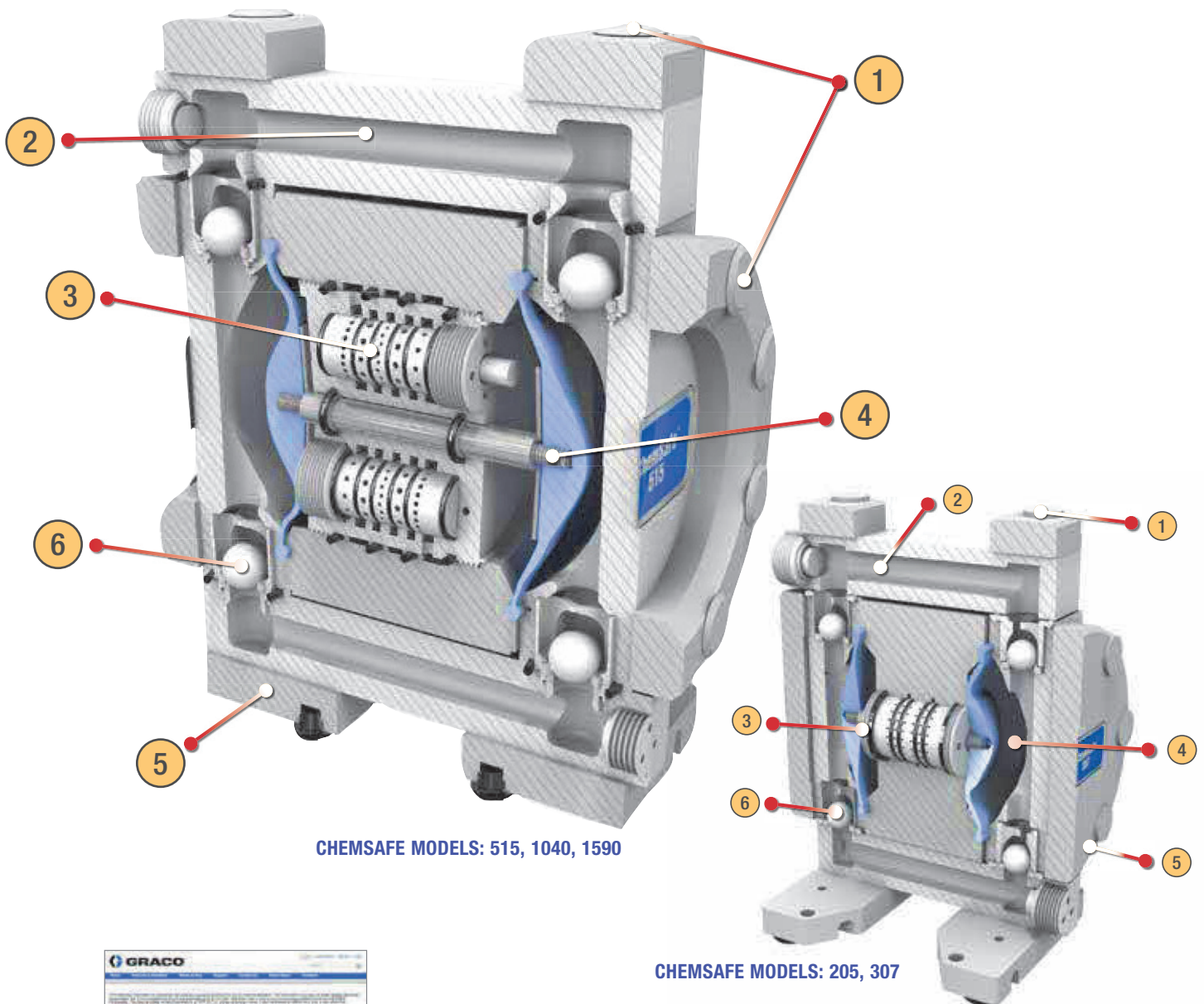
- 100% PTFE and PE fluid paths
- No exposed metals

### 4 Long Diaphragm Life

- Enhanced PTFE overmolded diaphragm improves life

### 6 Positive Seat-Check

- Improves pump performance and suction lift
- Reduces required maintenance



CHEMSAFE MODELS: 515, 1040, 1590

CHEMSAFE MODELS: 205, 307



## CHEMICAL COMPATIBILITY GUIDE

Go to our Chemical Compatibility Guide at [www.graco.com/chemicalcomp](http://www.graco.com/chemicalcomp) to see if the chemical pumping will work with our ChemSafe Pumps.

# Popular Models

Size	Part Number	Model	Fluid Path	Seat	Ball	Port	Diaphragm
1/4 inch (6.3 mm)	24X429	ChemSafe 205	PTFE	PTFE	PTFE	NPT	Overmolded PTFE
	24X430	ChemSafe 205	PTFE	PTFE	PTFE	BSPT	Overmolded PTFE
	24X509	ChemSafe 205	UHMWPE	PTFE	PTFE	NPT	Overmolded PTFE
	24X511	ChemSafe 205	UHMWPE	PTFE	PTFE	BSPT	Overmolded PTFE
3/8 inch (9.5 mm)	24X501	ChemSafe 307	UHMWPE	PTFE	PTFE	NPT	Overmolded Buna
	24X504	ChemSafe 307	UHMWPE	PTFE	PTFE	BSPT	Overmolded PTFE
	24X427	ChemSafe 307	PTFE	PTFE	PTFE	NPT	Overmolded PTFE
	24X428	ChemSafe 307	PTFE	PTFE	PTFE	BSPT	Overmolded PTFE
1/2 inch (12.7 mm)	24X425	ChemSafe 515	PTFE	PTFE	PTFE	NPT	Overmolded PTFE
	24X426	ChemSafe 515	PTFE	PTFE	PTFE	BSPT	Overmolded PTFE
	24X497	ChemSafe 515	UHMWPE	UHMWPE	PTFE	NPT	Overmolded PTFE
	24X498	ChemSafe 515	UHMWPE	UHMWPE	PTFE	BSPT	Overmolded PTFE
1 inch (25.4 mm)	24X423	ChemSafe 1040	PTFE	PTFE	PTFE	NPT	Overmolded PTFE
	24X424	ChemSafe 1040	PTFE	PTFE	PTFE	BSPT	Overmolded PTFE
	24X491	ChemSafe 1040	UHMWPE	UHMWPE	PTFE	NPT	Overmolded PTFE
	24X492	ChemSafe 1040	UHMWPE	UHMWPE	PTFE	BSPT	Overmolded PTFE
1-1/2 inch (38.1 mm)	24X421	ChemSafe 1590	PTFE	PTFE	PTFE	NPT	Overmolded PTFE
	24X422	ChemSafe 1590	PTFE	PTFE	PTFE	BSPT	Overmolded PTFE
	24X485	ChemSafe 1590	UHMWPE	UHMWPE	PTFE	NPT	Overmolded PTFE
	24X486	ChemSafe 1590	UHMWPE	UHMWPE	PTFE	BSPT	Overmolded PTFE

## Technical Specifications

### MATERIAL

Balls: PTFE

Seats: PTFE or UHMWPE

Diaphragms: Overmolded PTFE, Overmolded EPDM\* and Overmolded Buna\*

Body Type: PTFE or UHMWPE

Center Section: Polypropylene

Model	ChemSafe 205	ChemSafe 307	ChemSafe 515	ChemSafe 1040	ChemSafe 1590
Max Flow Rate**	3.7 gpm (14 lpm)	6.7 gpm (25 lpm)	16 gpm (60.6 lpm)	38.8 gpm (146 lpm)	99.5 gpm (376 lpm)
Displacement Per Cycle	0.008 gal (0.03 l)	0.019 gal (0.07 l)	0.042 gal (0.16 l)	0.148 gal (0.56 l)	0.433 gal (1.64 l)
Connection Sizes/Types	1/4" NPT, 1/4" BSPT	3/8" NPT, 3/8" BSPT	1/2" NPT, 1/2" BSPT	1" NPT, 1" BSPT	1-1/2" NPT, 1-1/2" BSPT
Max. Pumpable Solids	0.06 in (1.5 mm)	0.08 in (2.0 mm)	0.16 in (4.1 mm)	0.24 in (6.1 mm)	0.32 in (8.1 mm)
Suction Lift Dry**	6.5 ft (2.0 m)	10 ft (3.0 m)	11 ft (3.3 m)	13 ft (4.0 m)	16 ft (4.9 m)
Suction Lift Wet**	31 ft (9.5 m)	31 ft (9.5 m)	31 ft (9.5 m)	31 ft (9.5 m)	31 ft (9.5 m)
Weight (PTFE)	4.1 lb (1.9 kg)	6.8 lb (3.1 kg)	20 lb (9.1 kg)	40 lb (18 kg)	95.2 lb (43.2 kg)
Weight (UHMWPE)	4 lb (1.8 kg)	6 lb (2.7 kg)	13.7 lb (6.2 kg)	26.4 lb (12 kg)	66 lb (30 kg)
Max Air/Fluid Temperature	PTFE 212°F (100°C) UHMWPE 158°F (70°C)				
Min/Max Air Pressure	30 psi (2 bar) minimum startup air pressure 100 psi (7 bar) maximum supply air pressure				
Max. Sound Pressure	70.6 dB(a)	66.1 dB(a)	82.0 dB(a)	83.3 dB(a)	89.8 dB(a)
Max. Sound Power	64.2 dB(a)	58.1 dB(a)	74.8 dB(a)	78.3 dB(a)	91.1 dB(a)

\*Overmolded EPDM and Overmolded Buna diaphragms are only available on UHMWPE models

\*\*May vary depending on materials.

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.

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