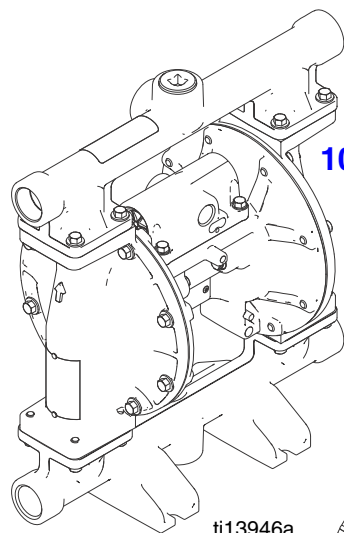


Husky[®] 1050 Air-Operated Diaphragm Pump

*1-inch pump with modular air valve for fluid transfer applications.
For professional use only.*

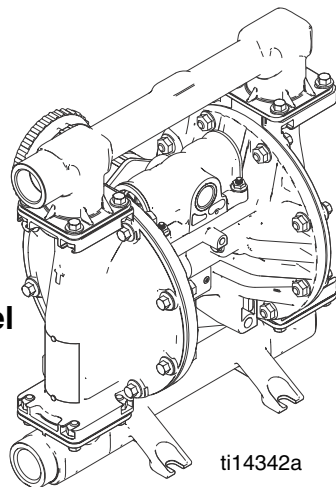
125 psi (0.86 MPa, 8.6 bar) Maximum Fluid Working Pressure
125 psi (0.86 MPa, 8.6 bar) Maximum Air Input Pressure



1050A Aluminum

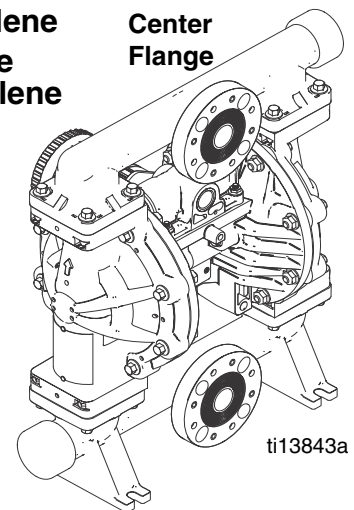
ti13946a

1050S Stainless Steel
1050H Hastelloy



ti14342a

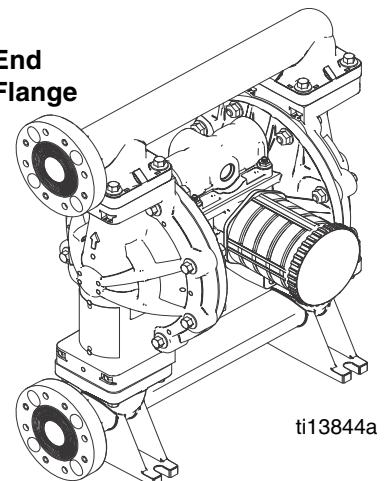
1050P Polypropylene
1050C Conductive Polypropylene
1050F PVDF



Center Flange

ti13843a

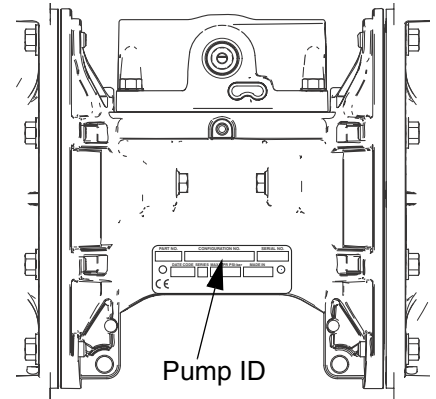
End Flange



ti13844a

Pump Matrix

Check the identification plate (ID) for the 20-digit part number of your pump. Use the following matrix to define the components of your pump. For example, pump number **1050A-A01AA1SSBNBNPT** represents a Husky 1 inch, 50 gpm aluminum pump (**1050A**), with aluminum center section (**A01**), a standard air valve (**A**), aluminum fluid covers (**A**) and manifolds with standard ports in inches (**1**). The pump has stainless steel seats (**SS**), buna-N check balls (**BN**), buna-N diaphragms (**BN**), and PTFE manifold o-rings (**PT**).



ti14103a

NOTE: Available options for seats, check balls, diaphragms, and seals vary based on pump model (**1050A-1050S**). To build a pump, use the selector tool at www.graco.com or talk to your distributor.

| Pump (1 inch ports, 50 gpm) | Center Section and Air Valve Material | Air Valve/Monitoring | Fluid Covers and Manifolds |
|--|--|--------------------------|---|
| 1050A ★ Aluminum 1050C ★ Conductive Polypropylene 1050F PVDF 1050H ‡ Hastelloy 1050P Polypropylene 1050S ‡ Stainless Steel | Aluminum | A01A Standard | A1 Aluminum, standard ports, inch |
| | | A01B Pulse Count✳ | A2 Aluminum, standard ports, metric |
| | | A01C DataTrak✳ | C1 Conductive polypropylene, center flange |
| | | A01D Remote | C2 Conductive polypropylene, end flange |
| | Conductive Polypropylene | C01A Standard | F1 PVDF, center flange |
| | | C01B Pulse Count✳ | F2 PVDF, end flange |
| | | C01C DataTrak✳ | H1 Hastelloy, standard ports, inch |
| | | C01D Remote | H2 Hastelloy, standard ports, metric |
| | Polypropylene | P01A Standard | P1 Polypropylene, center flange |
| | | P01B Pulse Count✳ | P2 Polypropylene, end flange |
| | | P01C DataTrak✳ | S1 Stainless steel, standard ports, inch |
| | | P01D Remote | S2 Stainless steel, standard ports, metric |
| ★, ‡, or ✳: See ATEX Certifications below. | | | |

| Check Valve Seats | | Check Valve Balls | | Diaphragm | | Manifold O-Rings | |
|-------------------------------|------------------------------------|------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|------------------|----------------|
| AC Acetal | AC Acetal | BN Buna-N | BN Buna-N | CO Polychloroprene Overmolded | CO Polychloroprene Overmolded | — None | PT PTFE |
| AL Aluminum | BN Buna-N | CR Polychloroprene Standard | CR Polychloroprene Standard | FK FKM Fluoroelastomer | FK FKM Fluoroelastomer | | |
| BN Buna-N | CW Polychloroprene Weighted | FK FKM Fluoroelastomer | FK FKM Fluoroelastomer | GE Geolast | GE Geolast | | |
| FK FKM Fluoroelastomer | FK FKM Fluoroelastomer | PO PTFE/EPDM Overmolded | PO PTFE/EPDM Overmolded | PT PTFE/EPDM Two-Piece | PT PTFE/EPDM Two-Piece | | |
| GE Geolast® | GE Geolast | SP Santoprene | SP Santoprene | TP TPE | TP TPE | | |
| PP Polypropylene | PT PTFE | | | | | | |
| PV PVDF | SP Santoprene | | | | | | |
| SP Santoprene® | SS 316 Stainless Steel | | | | | | |
| SS 316 Stainless Steel | TP TPE | | | | | | |
| TP TPE | | | | | | | |

ATEX Certifications

★ All **1050A** (Aluminum) and **1050C** (Conductive Polypropylene) pumps are certified:



‡ **1050S** (Stainless Steel) and **1050H** (Hastelloy) pumps with aluminum or conductive polypropylene centers are certified:



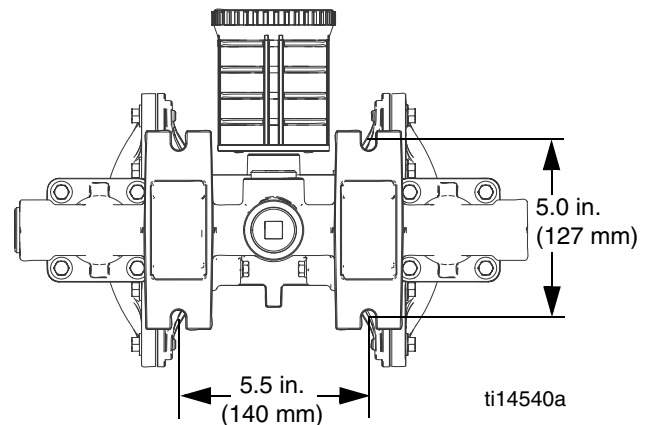
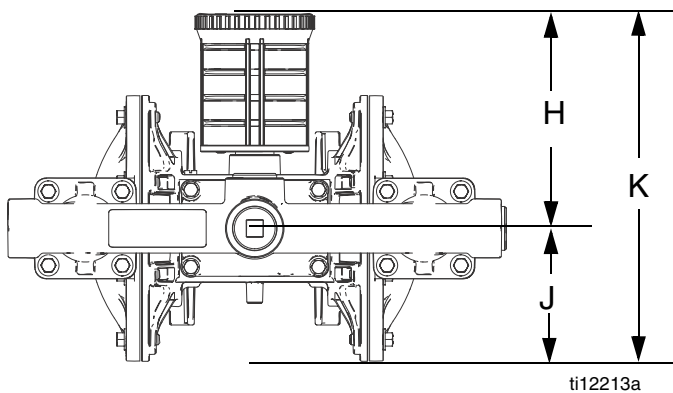
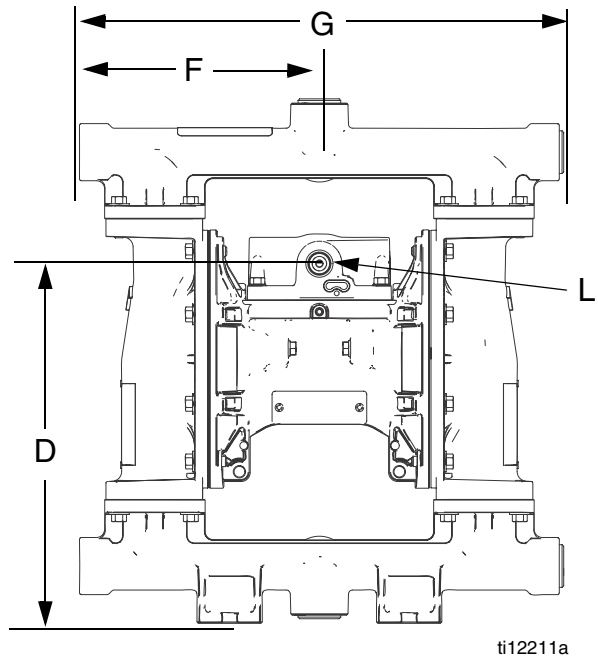
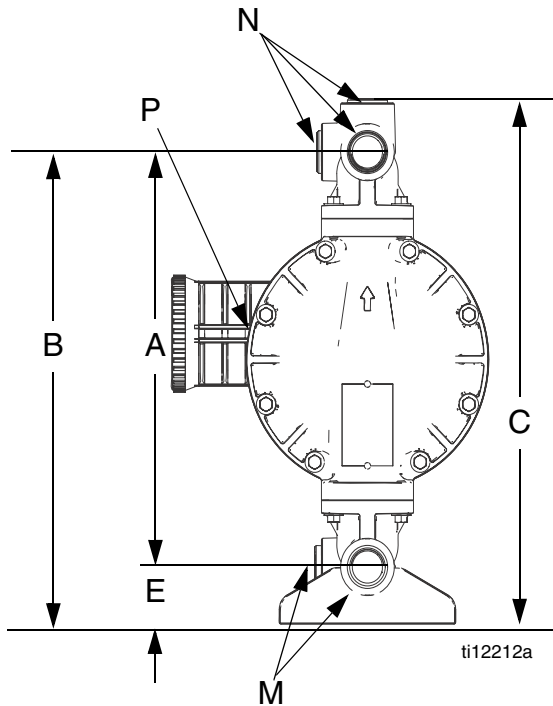
✳ **DataTrak** and **Pulse Count** are certified:



EEx ia IIA T3
Nemko
06ATEX1124

Dimensions and Mounting

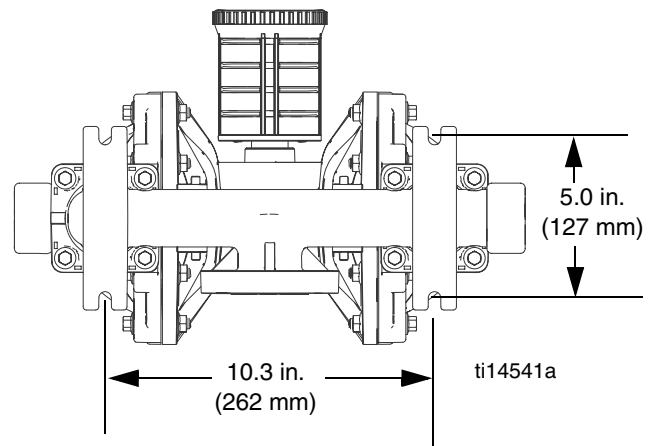
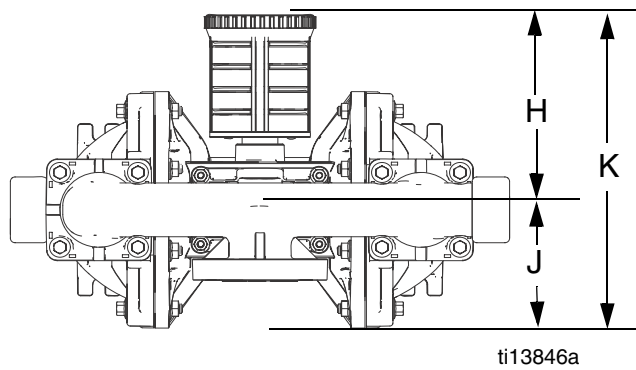
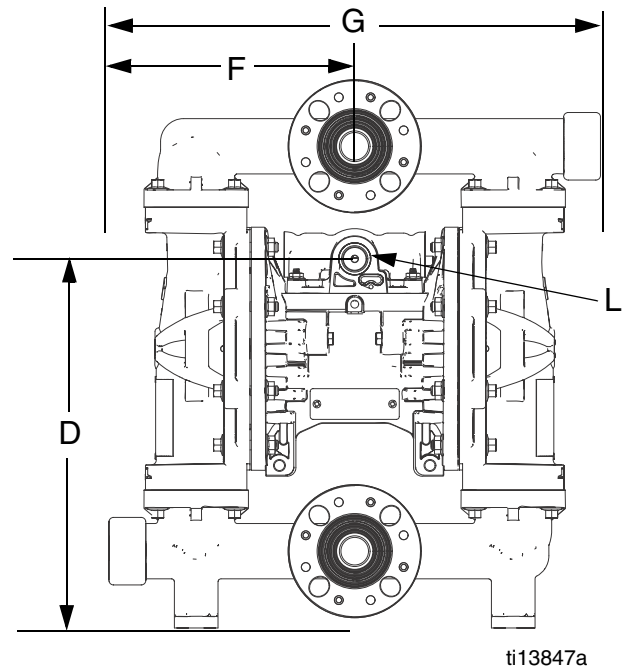
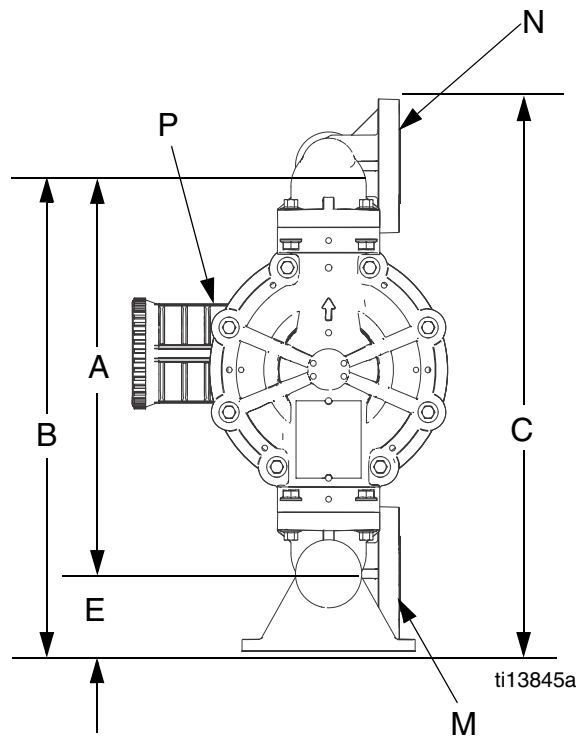
Aluminum (1050A)



- A** 12.7 in. (323 mm)
- B** 14.4 in. (366 mm)
- C** 15.9 in. (404 mm)
- D** 10.9 in. (277 mm)
- E**..... 1.8 in. (46 mm)
- F**..... 7.3 in. (185 mm)
- G** 14.7 in. (373 mm)
- H** 6.1 in. (155 mm)

- J** 3.9 in. (99 mm)
- K**..... 10.0 in. (254 mm)
- L** 1/2 npt(f) air inlet
- M** 1 in. npt(f) or 1 in. bspt fluid inlet ports (4)
- N**..... 1 in. npt(f) or 1 in. bspt fluid outlet ports (4)
- P** 3/4 npt(f) air exhaust port

Polypropylene (1050P), Conductive Polypropylene (1050C) and PVDF (1050F)



- A** 13.2 in. (335 mm)
- B** 15.7 in. (399 mm)
- C** 17.8 in. (452 mm)
- D** 12.0 in. (305 mm)
- E** 2.5 in. (63.5 mm)
- F** 8.0 in. (203 mm)
- G** **Center Flange:** 16.0 in. (406 mm)
End Flange: 15.2 in. (386 mm)
- H** 5.6 in. (142 mm)

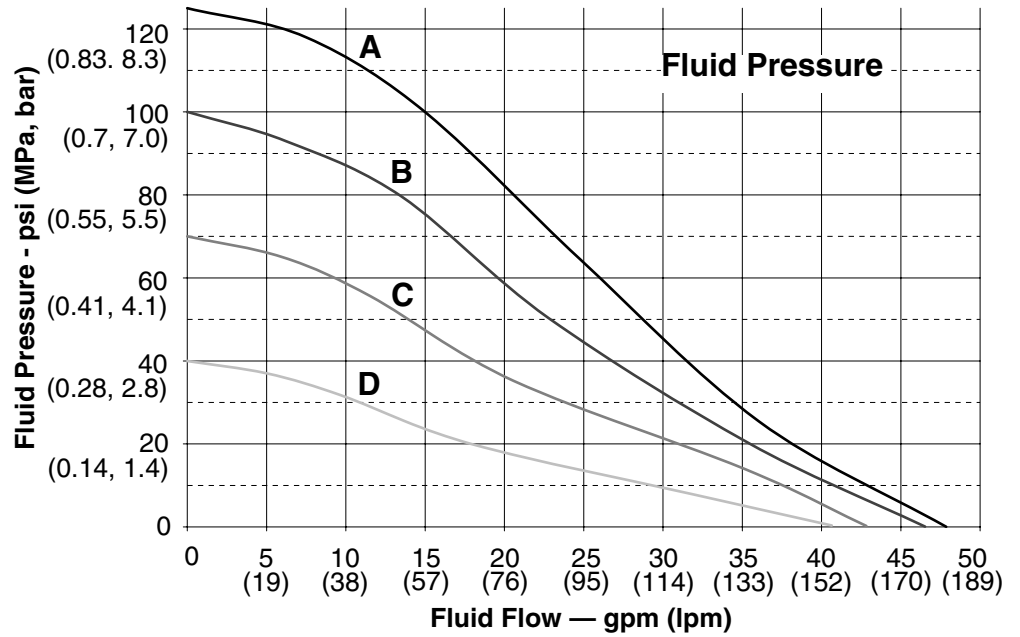
- J** 3.9 in. (99 mm)
- K** 9.6 in. (244 mm)
- L** 1/2 npt(f) air inlet
- M** 1 in. ANSI/DIN flange
- N** 1 in. ANSI/DIN flange
- P** 3/4 npt(f) air exhaust port

NOTE: Listed dimensions are accurate for both center and end flange models, except where noted.

Performance Charts

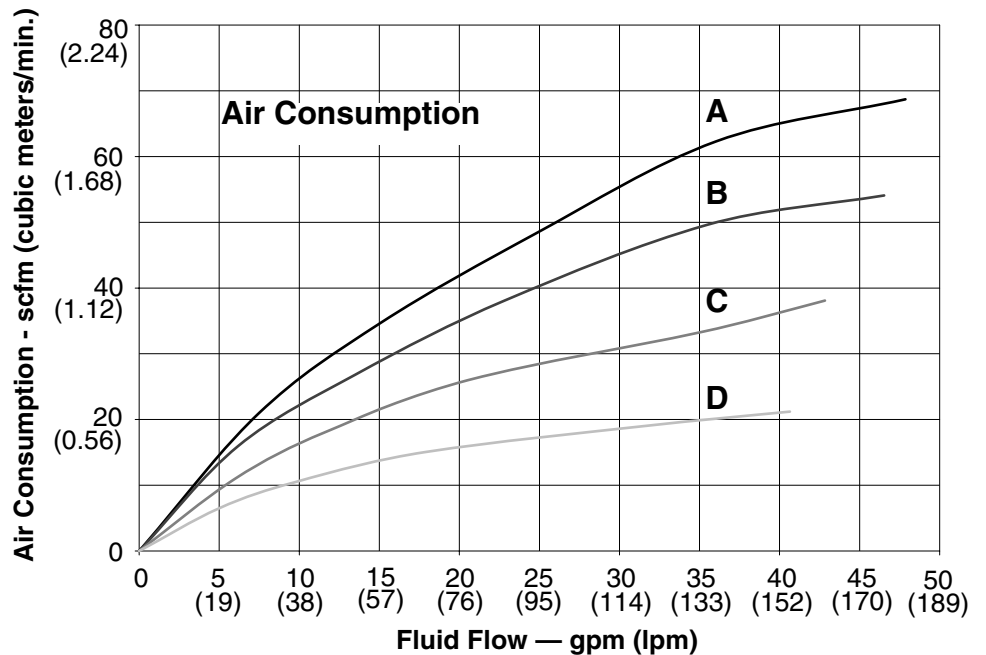
Test Conditions: Pump tested in water with inlet submerged.

- Operating Air Pressure**
- A**
125 psi (0.83 MPa, 8.3 bar)
 - B**
100 psi (0.7 MPa, 7.0 bar)
 - C**
70 psi (0.48 MPa, 4.8 bar)
 - D**
40 psi (0.28 MPa, 2.8 bar)



How to Read the Charts

1. Locate fluid flow rate along bottom of chart.
2. Follow vertical line up to intersection with selected operating air pressure curve.
3. Follow left to scale to read **fluid outlet pressure** (top chart) or **air consumption** (bottom chart).



Technical Data

| | |
|--|---|
| Maximum fluid working pressure | 125 psi (0.86 MPa, 8.6 bar) |
| Air pressure operating range | 20-125 psi (0.14-0.86 MPa, 1.4-8.6 bar) |
| Fluid displacement per cycle | 0.17 gal. (0.64 liters) |
| Air consumption at 70 psi (0.48 MPa, 4.8 bar), 20 gpm (76 lpm) | 25 scfm |
| Maximum values with water as media under submerged inlet conditions at ambient temperature: | |
| Maximum air consumption | 67 scfm |
| Maximum free-flow delivery | 50 gpm (189 lpm) |
| Maximum pump speed. | 280 cpm |
| Maximum suction lift | 16 ft (4.9 m) dry, 29 ft (8.8 m) wet |
| Maximum size pumpable solids | 1/8 in. (3.2 mm) |
| Sound Power* | |
| at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm | 78 dBA |
| at 100 psi (0.7 MPa, 7.0 bar) and full flow | 90 dBA |
| Sound Pressure** | |
| at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm | 84 dBA |
| at 100 psi (0.7 MPa, 7.0 bar) and full flow | 96 dBA |
| Fluid temperature range. | see page 23 |
| Air inlet size | 1/2 npt(f) |
| Fluid inlet size | |
| Aluminum (1050A), Hastelloy (1050H) or Stainless Steel (1050S) | 1 in. npt(f) or 1 in. bspt |
| Conductive Poly (1050C), Polypropylene (1050P), or PVDF (1050F) | 1 in. raised face ANSI/DIN flange |
| Fluid outlet size | |
| Aluminum (1050A), Hastelloy (1050H) or Stainless Steel (1050S) | 1 in. npt(f) or 1 in. bspt |
| Conductive Poly (1050C), Polypropylene (1050P), or PVDF (1050F) | 1 in. raised face ANSI/DIN flange |
| Weight | |
| Aluminum (1050A) | 23 lb. (10.5 kg) |
| Conductive Polypropylene (1050C) and Polypropylene (1050P) | 18 lb. (8.2 kg) |
| Hastelloy | 41 lb. (18.6 kg) |
| PVDF (1050F) | 26 lb (11.8 kg) |
| Stainless Steel (1050S) | |
| with conductive polypropylene center | 36.3 lb. (16.5 kg) |
| with polypropylene center | 37.3 lb. (16.9 kg) |
| with aluminum center. | 41.4 lb. (18.8 kg) |
| Wetted parts include material(s) chosen for seat, ball, and diaphragm options, plus the pump's material of construction | |
| 1050A | Aluminum |
| 1050H | Hastelloy |
| 1050C and 1050P | Polypropylene |
| 1050F | PVDF |
| 1050S | Stainless Steel |

Non-wetted external parts

| | |
|---|---|
| Aluminum (1050A) | aluminum, coated carbon steel |
| Hastelloy (1050H). | hastelloy, stainless steel, polypropylene or aluminum (if used in center section) |
| Plastic (1050P, 1050C, and 1050F) | stainless steel, polypropylene |
| Stainless Steel (1050S) | stainless steel, polypropylene or aluminum (if used in center section) |

* Sound power measured per ISO-9614-2.

** Sound pressure was tested 3.28 ft (1 m) from equipment.

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Fluid Temperature Range

NOTICE

Temperature limits are based on mechanical stress only. Certain chemicals will further limit the fluid temperature range. Stay within the temperature range of the most-restricted wetted component. Operating at a fluid temperature that is too high or too low for the components of your pump may cause equipment damage.

| Diaphragm/Ball/Seat Material | Fluid Temperature Range | | | | | |
|---|---|---------------|---|------------|--------------|---------------|
| | Aluminum, Hastelloy, or Stainless Steel Pumps | | Polypropylene or Conductive Polypropylene Pumps | | PVDF Pumps | |
| | Fahrenheit | Celsius | Fahrenheit | Celsius | Fahrenheit | Celsius |
| Acetal (AC) | 10° to 180°F | -12° to 82°C | 32° to 150°F | 0° to 66°C | 10° to 180°F | -12° to 82°C |
| Buna-N (BN) | 10° to 180°F | -12° to 82°C | 32° to 150°F | 0° to 66°C | 10° to 180°F | -12° to 82°C |
| FKM Fluoroelastomer (FK)* | -40° to 275°F | -40° to 135°C | 32° to 150°F | 0° to 66°C | 10° to 225°F | -12° to 107°C |
| Geolast® (GE) | -40° to 150°F | -40° to 66°C | 32° to 150°F | 0° to 66°C | 10° to 150°F | -12° to 66°C |
| Neoprene overmolded diaphragm (CO) or Neoprene check balls (CR or CW) | 0° to 180°F | -18° to 82°C | 32° to 150°F | 0° to 66°C | 10° to 180°F | -12° to 82°C |
| Polypropylene (PP) | 32° to 150°F | 0° to 66°C | 32° to 150°F | 0° to 66°C | 32° to 150°F | 0° to 66°C |
| PTFE overmolded diaphragm (PO) | 40° to 180°F | 4° to 82°C | 40° to 150°F | 4° to 66°C | 40° to 180°F | 4.0° to 82°C |
| PTFE check balls or two-piece PTFE/EPDM diaphragm (PT) | 40° to 220°F | 4° to 104°C | 40° to 150°F | 4° to 66°C | 40° to 220°F | 4° to 104°C |
| PVDF (PV) | 10° to 225°F | -12° to 107°C | 32° to 150°F | 0° to 66°C | 10° to 225°F | -12° to 107°C |
| Santoprene® (SP) | -40° to 180°F | -40° to 82°C | 32° to 150°F | 0° to 66°C | 10° to 180°F | -12° to 82°C |
| TPE (TP) | -20° to 150°F | -29° to 66°C | 32° to 150°F | 0° to 66°C | 10° to 150°F | -12° to 66°C |

* The maximum temperature listed is based on the ATEX standard for T4 temperature classification. If you are operating in a non-explosive environment, FKM fluoroelastomer's maximum fluid temperature in aluminum or stainless steel pumps is 320°F (160°C).