Heavy Duty Flap Valve
For fluids containing up to line size solids.

Heavy Duty Ball Valve
For fluids containing settling, suspended & floating solids.

Containment Duty Ball Valve
The only complete line of AODD pumps featuring superior fluid containment; protecting your people, environment and pump.

**What is EVOLUTION?**

Optimized performance without sacrificing proven reliability. These pumps have undergone an engineering EVOLUTION, leveraging trusted and proven product designs to improve their performance by application of advanced engineering methods. Unlike the competition, these pumps are fully interchangeable with prior models.

**OUR SIGNATURE ENSURES YOUR SUCCESS**

SANDPIPER Signature Series AODD pumps are engineered to deliver industry leading durability and performance, even for your most severe applications and environments.

LEARN MORE AT: SANDPIPERPUMP.COM/SIGNATURE-SERIES

**WHEREVER YOU SEE THIS BADGE:**

These pumps have gone through our Evolution performance improvement. Watch for more Engineering Evolutions to come in the near future!

LEARN MORE AT: SANDPIPERPUMP.COM/EVOLUTION
For over 50 years, SANDPIPER, a Warren Rupp, Inc. brand, has been a leading global Air Operated Double Diaphragm (AODD) pump company, featuring the broadest range of products to meet the needs of a wide variety of applications. Decades of innovation, combined with world class engineering expertise, allows the SANDPIPER team to create products that meet the demand of an ever-changing marketplace. LEARN MORE AT SANDPIPERPUMP.COM
AODD pumps are air (or natural gas) operated displacement type pumps which uniquely differ from all other positive displacement pumps. As a result of air pressure acting on the entire surface of the diaphragm, the diaphragm is in a balanced condition while pumping. This measurably extends diaphragm life over that of mechanically operated diaphragm pumps. Because compressed air is limited, the maximum pressure developed by the pump is also safely limited. Thus, AODD pumps are appropriately selected for on-demand intermittent requirements.

### Unique Performance

Although the AODD pump is a displacement type, it is actually a hybrid and defies strict classification. While its pressure versus capacity characteristics resemble those of a centrifugal pump, it is best defined as a sealless, non (or semi) positive displacement pump.

### Features & Benefits

- **Dry-run without damaging the pump or system**
- **Pumps solid laden fluids without pump or product damage**
- **Self-priming, works in suction lift applications**
- **Deadheads safely, with no pump or product damage**
- **Shear sensitive, does not shear or separate product being pumped**
- **No electricity required, and can be fully grounded**
- **Low initial purchase price compared to other technologies**
- **Submersible, can be submerged completely without safety or performance issues**
- **Sealless design, no expensive mechanical seals or packing are required**
- **Variable flow and head pressures, without sophisticated controls**
- **Optional bottom discharge porting depending on fluid characteristics**

### Why Choose AODD Pumps

Performing in the most challenging applications, AODD pumps deliver unique benefits that are unrivaled by other pump technologies.
OPERATION & INSTALLATION
FIXED, MOUNTED OR PORTABLE SANDPIPER PUMPS ARE DESIGNED TO PERFORM IN THE MOST DIFFICULT CONDITIONS

AODD Pump Operation

1. Suction Cycle
   Compressed air fills left inner chamber, causing the opposing diaphragm to create suction, lifting the lower valve ball, pulling in fluid at inlet. Simultaneously, the left chamber is in “Discharge” cycle.

2. Discharge Cycle
   Compressed air fills right inner chamber, causing upper valve ball to open and discharge fluid. Simultaneously, the left chamber is in “Suction” cycle.

Installation Versatility

All installations are run-dry capable. Electricity and heat generation are not required for optimum performance.

- Suction Lift
  - Self-priming
  - High vacuum capable
  - Max lift of 32’ (9.8m)

- Flooded Suction
  - Preferred for viscous fluids
  - Most common application
  - Screened inlet option

- Submerged
  - Capable of full submersion
  - Screened inlet option

NOTE: Consult your distributor or owners manual for proper materials of construction and installation for your application.
THE SANDPIPER ADVANTAGE
WITH NEARLY 50 YEARS OF PUMPING EXPERTISE, WE PROVIDE APPLICATION DRIVEN PUMPING SOLUTIONS

All Bolted Construction
Superior reliability is defined by our all bolted pump construction that allows for instant part alignment, uniform torquing of seals, and high pressure capabilities.

Various Power Sources
SANDPIPER pumps operate at optimum performance using compressed air, but we also have pumps available for running off of your local reserve of natural gas. LEARN MORE ON PAGE 46

Superior Performance
Hinge pads exert positive pressure on the flaps allowing the pump to operate in virtually any position, helping deliver superior suction lift and flow rates.

Flap Check Valve
Flap check valves allow for maximum solids passage of up to 3” (75mm)

Superior reliability is defined by our all bolted pump construction that allows for instant part alignment, uniform torquing of seals, and high pressure capabilities.

Flap Check Valve
Flap check valves allow for maximum solids passage of up to 3” (75mm)

Hinge pads exert positive pressure on the flaps allowing the pump to operate in virtually any position, helping deliver superior suction lift and flow rates.

Tested Quality
SANDPIPER pumps are 100% wet tested after final assembly to ensure proper functionality. Testing includes, but is not limited to, deadheading, priming, and sealing.

Guaranteed Connecting Rod
Our durable, corrosion resistant 416 (Martensitic) and/or 316 (Austenitic) Stainless Steel diaphragm connecting rod is guaranteed not to yield under tension, compression, or bending.

ESADS+Plus Air Valve
Externally Serviceable Air Distribution System

ESADS+PLUS AIR DISTRIBUTION SYSTEM
Allows for quick and easy access to the pilot and spool valves.

ROBUST DIAPHRAGM CONNECTING ROD
Guaranteed not to yield under tension, compression, or bending.

5 YEAR LIMITED PRODUCT WARRANTY
5 Year Guarantee for defects in material or workmanship.

Bottom Discharge Porting
Eliminate the damage from settling solids in your pump, with the exclusive bottom discharge capabilities of our Heavy Duty Ball Valve and Heavy Duty Flap Valve pump lines.

Ensure even diaphragm wear for longevity
Prevent broken diaphragm plates
Eliminate diaphragm rod damage
See our connecting rod guarantee

Bottom Discharge
Top Discharge

5 YEAR LIMITED PRODUCT WARRANTY
5 Year Guarantee for defects in material or workmanship.

ESADS+PLUS AIR DISTRIBUTION SYSTEM
Allows for quick and easy access to the pilot and spool valves.

ROBUST DIAPHRAGM CONNECTING ROD
Guaranteed not to yield under tension, compression, or bending.
ENGINEERING CAPABILITIES

NO MATTER THE CIRCUMSTANCES, WE PROVIDE CUSTOM ENGINEERED SOLUTIONS TO MAXIMIZE THE PRODUCTIVITY OF ALL PROCESSES

Custom Engineered Systems

Some examples of our custom systems include:
- Skid systems
- High pressure, filter press feed systems
- Mobile skid systems
- Custom environmental protection packaging
- Heat jacket systems
- Nuclear industry waste handling and flushing systems

Quality Assurance

To complete the pump assembly process, the following tests are run to ensure a quality built product:

1. Dry Cycled Test
   - Checked for rhythmic cycling
   - Checked for abnormal vibrations
   - Checked for motion abnormalities

2. Wet Cycled Test
   - Checked for dry priming
   - Checked for cycling characteristics
   - Checked for abnormal noise levels

3. Vacuum Characteristics Test

4. Dead Head Characteristics Test
   - Checked for maximum fluid pressure
   - Checked for leakage
   - Checked for valving bypass

5. Visual Inspection
   - Hardware checked
   - Mating surfaces checked
   - Paint quality checked
   - Packaging checked

Some examples of our custom systems include:
- Skid systems
- High pressure, filter press feed systems
- Mobile skid systems
- Custom environmental protection packaging
- Heat jacket systems
- Nuclear industry waste handling and flushing systems

Performance Testing
Assembly cycle with hold pressure vacuum readings (standard), one-point head capacity, and dry lift

Pressure Testing
Hydro/pneumatic testing 90 psi (standard), hydro/pneumatic 1.5 times maximum operating pressure

Repair Services
Pump repair services for labor only

Material & Pump Certificates
Certificate of origin, conformance (pump) and compliance (material), material tests reports, non-certified or certified dimensional outlines (contact SANDPIPER Application Engineering to order)

Custom Coating
Epoxy, water based, two part (exterior only), customer specific, PTFE, Halar®, nickel plated midsection

Custom Products
Custom and engineered products, product dimensional outlines and systems

Custom Nameplates
Custom stainless steel nameplates (4 lines, 24 letter maximum)

Material Testing
PMI (Positive Material Identification), hardness testing, liquid penetrant testing, radiographic testing, magnetic particle testing, and others upon request

Additional Pump Testing
Impact test, seismic test, sound test, and others upon request

A plate-and-frame filter press pumping system is an example of a custom engineered project.

Contact our Application Engineering Team today:
WRM.APPTECH.SP@IDEXCORP.COM
MARKETS & APPLICATIONS
SANDPIPER PUMPS ARE BUILT TO EXCEED THE DEMANDS OF YOUR SUMP WASTE TREATMENT AND OTHER APPLICATIONS LISTED BELOW

Automotive
Applications include oil transfer, fuel transfer, machine coolant, auto wash, auto lube and much more

Ceramics
Applications include batching, mixing, casting machines, day tank transfer, mold filling / cleaning, glaze spray, slip transfer / recirculation and much more

Chemical
Applications include packaging, drum / tote, processing, injection, mixing and much more

Coatings
Applications include pigment milling, paint filtration, mixing tanks, filling machines, tank transfer, low shear requirements and much more

Construction
Applications include portable utility, oil transfer, fuel transfer, site dewatering, seal coating, road striping, municipal utility and much more

Food Processing
Applications include food packaging, product transfer, wine tank over, FDA compliance, low degradation requirements, wine fermentation / pumpover and much more

Marine
Applications include oil transfer, fuel transfer, cargo cleanup, deck dewatering, cargo oil transfer, lubricants transfer and much more

Mining
Applications include oil transfer, fuel transfer, water evacuation, mine face dewatering, drift dewatering and much more

Pharma / Personal Care
Applications include day tank transfer, batching, chemical feed, FDA compliant, personal hygienic / cosmetics and much more

Pulp & Paper
Applications include bulk transfer, day tank transfer, batching, bleaching, converter / packaging, adhesives / ink and much more

Oil & Gas
Applications include natural gas fields, service rigs, offshore platform requirements, settling pond transfer, diesel fuel transfer, spill clean-up, salt water transfer / disposal, flare knockout and much more

Wastewater
Applications include municipal portable utility, neutralize wastewater, waste activated sludge, return activated sludge, thickened sludge, belt press feed and much more

Coatings
Applications include pigment milling, paint filtration, mixing tanks, filling machines, tank transfer, low shear requirements and much more

Marine
Applications include oil transfer, fuel transfer, cargo cleanup, deck dewatering, cargo oil transfer, lubricants transfer and much more

Mining
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Wastewater
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Pump Selection

**A Fundamental Review of Fluid Characteristics, Intended Installation & Duty Requirements Are Recommended for “Best Fit” Design Selections**

### Pump Characteristics

Whether measuring mean time between failures, repairs, changes or maintenance, this design selection best practice will ensure the longest pump life.

<table>
<thead>
<tr>
<th>SIGNATURE CONFIGURATIONS</th>
<th>Heavy Duty Single Stage</th>
<th>Heavy Duty Multi Stage</th>
<th>Containment Duty Single Stage</th>
<th>Standard Duty Single Stage</th>
<th>Standard Duty Multi Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suction / Discharge Port Sizes</td>
<td>1” through 4”</td>
<td>1” through 4”</td>
<td>1” through 3”</td>
<td>1” through 3”</td>
<td>1” through 3”</td>
</tr>
<tr>
<td>Max Flow Rate Per Minute</td>
<td>300 Gal. (1,133 L)</td>
<td>300 Gal. (1,133 L)</td>
<td>200 Gal. (757 L)</td>
<td>200 Gal. (757 L)</td>
<td>200 Gal. (757 L)</td>
</tr>
<tr>
<td>Max Discharge Heads</td>
<td>20 psi (138 kPa) of water</td>
<td>20 psi (138 kPa) of water</td>
<td>20 psi (138 kPa) of water</td>
<td>20 psi (138 kPa) of water</td>
<td>20 psi (138 kPa) of water</td>
</tr>
<tr>
<td>Max Displacement Per Stroke</td>
<td>1.82 Gal. (6.6 L)</td>
<td>1.0 Gal. (3.7 L)</td>
<td>1.25 Gal. (4.7 L)</td>
<td>0.84 Gal. (3.1 L)</td>
<td>0.89 Gal. (3.3 L)</td>
</tr>
<tr>
<td>Max Dry Prime</td>
<td>24” (610 mm)</td>
<td>20” (508 mm)</td>
<td>18” (457 mm)</td>
<td>20” (508 mm)</td>
<td>20” (508 mm)</td>
</tr>
<tr>
<td>Max Solids Handling</td>
<td>3” (76 mm)</td>
<td>.80” (20 mm)</td>
<td>.44” (11 mm)</td>
<td>.38” (10 mm)</td>
<td>.71” (18 mm)</td>
</tr>
</tbody>
</table>

### Pump Performance

**Select Flow Rate (GPM)**
- Example: 80 GPM

**Determine Discharge Head (PSI)**
- Example: 45 PSI

**See Inlet Air Pressure (PSI)**
- Example: 78 PSI

**See Air Consumption (SCFM)**
- Example: 60 SCFM

### Selection Tip: Size-Up

See the MTBF section below to learn the impact of sizing up your pump to increase energy savings and reduce wear on the pump to measurably reduce total cost of ownership.

**Sizing to Extend Mean Time Between Failures**

Pumping requirements (flow & head) for most applications can be met by multiple sizes of pumps. Talk to SANDPIPER’s application engineers to assist you with a size selection which best fits your total cost of ownership budget. An appropriately sized-up pump will lower the consolidated initial investment, repair, labor and energy costs. This BEST PRACTICE ensures desirable returns on the initial investment frequently measurable in weeks.

Experienced application engineers are available to help you determine the best fit pump size for your application. Call our factory or email: WRM.APPTECH.SP@IDEXCORP.COM

### Additional Resources

- **Chemical Guide**
  - Available through our mobile app (sandpiper.aoddpumponline.com) or online, this chemical compatibility guide will help you zero-in on the pump that fits your process best. CHEMGUIDE.SANDPIPERPUMP.COM

- **Technical Resources**
  - Find further information on sizing and selection of SANDPIPER products at SANDPIPERPUMP.COM/TECH_RESOURCES
EXCLUSIVE PUMP CONFIGURATIONS

WITH THE BROADEST RANGE OF CONFIGURATIONS, SANDPIPER HAS A SOLUTION FOR YOUR PUMPING PROBLEM, WITH MORE WAYS THAN ONE

HEAVY DUTY FLAP VALVE

Unique features for this configuration include:
- Pumps up to line size solids
- Bottom discharge porting, discharges settling solids
- Superior suction lift of up to 24 ft.
- Easy access to serviceable components
- Thick manifold and chamber walls
- Diaphragm wear pads extend service life

HEAVY DUTY BALL VALVE

Unique features for this configuration include:
- Down ported option, discharges settling solids
- Weighted check balls for handling viscous fluids
- Top ported option, discharges floating solids, suspended solids or entrained gases
- Side ported option for use in confined spaces
- Thick manifold and chamber walls
- Diaphragm wear pads extend service life

CONTAINMENT DUTY BALL VALVE

Unique features for this configuration include:
- Containment chamber with leak detection
- Hydraulically balanced / coupled pumping and driver diaphragm assemblies
- Solids range +.25" (6mm) to .71" (18mm)
- Dry primes up to 18' of water
- Free standing support base

STANDARD DUTY BALL VALVE

Unique features for this configuration include:
- Solids range +.03" (1mm) to .71" (18mm)
- Dry primes up to 20' of water
- ESADS+ Air Distribution System

ALL SANDPIPER PUMPS feature the exclusive ESADS+Plus performance guaranteed, in-line serviceable, air valve system.

ALL SANDPIPER PUMPS come with a guaranteed diaphragm connecting rod.
HEAVY DUTY FLAP VALVE PUMPS
FOR FLUIDS CONTAINING UP TO LINE SIZE SOLIDS

HDF Pumps are recommended for abrasive slurries, suspended and non-suspended solids and line-size solids requirements. All SANDPIPER Heavy Duty Flap Valve Pumps are configured in bottom discharge porting arrangements and provide superior suction lift. HDF pumps are thick wall constructed of Sand Casted Aluminum, Cast Iron and Stainless Steel with elastomer, TPE (thermal plastic elastomers) and PTFE options in diaphragms and check valves. HDF pumps are enhanced with an extended wear package.

- **Durable Diaphragm Connecting Rods**
  Reliable and consistent diaphragm control

- **Lightweight & Portable**
  Weights range from 48 lbs (21 kg)

- **ESADS+Plus Air Valve**
  Externally Serviceable Air Distribution System

- **Bottom Discharge**
  For pumping out of tough areas

- **Flap Check Valves**
  Provide large solid abilities

- **All Bolted Construction**
  Durable and high pressure capable

- **Dynamic Manifold Connections**
  90° - 180° rotation options

- **Solids Range**
  +1” (25mm) to 3” (75mm)

- **Superior Dry Prime**
  Up to 24’ (7m) of water

- **Certifications Available**

<table>
<thead>
<tr>
<th>PUMP CHARACTERISTICS</th>
<th>Metallic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid/Dynamics</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>+</td>
</tr>
<tr>
<td>Suspended Solids</td>
<td>+</td>
</tr>
<tr>
<td>Non-Suspended Solids</td>
<td>+</td>
</tr>
<tr>
<td>Line Size Solids</td>
<td>+</td>
</tr>
<tr>
<td>Sludge / Slurry</td>
<td>+</td>
</tr>
<tr>
<td>High Viscosity (Flowable Fluids)</td>
<td>+</td>
</tr>
<tr>
<td>Erosion / Abrasive Fluids</td>
<td>+</td>
</tr>
<tr>
<td>Corrosion</td>
<td></td>
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<tr>
<td>Installation</td>
<td></td>
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<tr>
<td>Permanent</td>
<td>+</td>
</tr>
<tr>
<td>Portable</td>
<td>+</td>
</tr>
<tr>
<td>Containment / Prevention</td>
<td>+</td>
</tr>
<tr>
<td>Flooded Suction</td>
<td>+</td>
</tr>
<tr>
<td>Suction Lift</td>
<td>+</td>
</tr>
<tr>
<td>Submerged</td>
<td>+</td>
</tr>
<tr>
<td>Duty</td>
<td></td>
</tr>
<tr>
<td>Continuous</td>
<td>+</td>
</tr>
<tr>
<td>Intermittent / On-Demand</td>
<td>+</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>COMPOSITE PERFORMANCE CURVE</th>
</tr>
</thead>
</table>

Certifications Available: [ISO 9001], [UL], [CE]
The robust, yet lightweight design allows for ease of maintenance and movement, and is ideal for handling solids and corrosive fluids. This unique pump has been engineered to fully function in any position, includes lifting handles and hanging points, and has durable mounting feet. This is an ideal solution for numerous applications.

- **Lightweight & Durable**: The non-metallic, lightweight design makes it easily portable at 53 lbs (24 kg).
- **Reliability Guarantee**: Strongest diaphragm connecting rod in the industry is guaranteed to not bend or yield in operation.
- **Rugged Design**: Stainless steel seats prevent abrasion when pumping solids laden fluids.
- **Optimum Solids Handling**: Hinge pads exert positive pressure on the flaps, allowing the pump to operate in virtually any position; they help deliver superior suction lift and flow rates.
- **Long Life**: A proven diaphragm design in conjunction with exclusive wear pads reduce plate abrasion, delivering extended life.
- **Purpose Built Base**: The threaded version features stainless steel mounting feet and the flanged version features Polypropylene mounting feet.
- **Industrial Mounting Capabilities**: Addition of stainless steel hanging points located on the manifold allow for multiple mounting options.
- **Strong Manifold Connections**: Optional flanged or threaded connection for additional flexibility; Stainless steel reinforcing rings help protect the threaded manifold connections from being damaged.
- **Ergonomic Handle**: Lifting handles come standard, allowing for easy pump transport; handles can be rotated 90 degrees for proper ergonomics, depending on desired use.
- **Unsurpassed Performance**: Industry leading flow rates, suction lift, air efficiency and displacement per stroke.
- **Versatile Design**: This pump will function in any position, including uneven surfaces.
- **Simple Maintenance**: With our signature ESADS+Plus (Externally Serviceable Air Distribution System) air valve design and externally serviceable flap valve modules, in-field service is quick and easy, saving you from unnecessary downtime.
- **Optimum Solids Handling**: Hinge pads exert positive pressure on the flaps, allowing the pump to operate in virtually any position; they help deliver superior suction lift and flow rates.
- **Long Life**: A proven diaphragm design in conjunction with exclusive wear pads reduce plate abrasion, delivering extended life.
- **Purpose Built Base**: The threaded version features stainless steel mounting feet and the flanged version features Polypropylene mounting feet.

Visit [SANDPIERPUMP.COM/ESADSVIDEO](http://SANDPIERPUMP.COM/ESADSVIDEO) to see how easy the ESADS air valve makes maintaining the 2” Non-Metallic Flap Valve.
HD20F Non-Metallic Performance

MAX FLOW
• 150 GPM (567 LPM)

PORTING
• NPT / BSPT

AIR END
• Polypropylene

WET END
• Polypropylene
• Stainless Steel (seats only)

PERFORMANCE & SPECIFICATIONS

HD20F Non-Metallic Performance

EASE OF VALVE MAINTENANCE

To help increase productivity and reduce downtime, the 2" Non-Metallic Flap Valve Pump was engineered with ease of maintenance in mind.

1. **Remove Clean-Out Cap**
   By simply removing six bolts securing the clean-out cap in place, it allows access to clear simple clogs without disassembling the entire pump.

2. **Modular Check Valve Access**
   With the clean-out cap removed, the flap valves can be inspected and / or replaced as needed. Four bolts hold the modular flap valves in place for quick maintenance and repair.

3. **ESADS+ Plus**
   Proven air distribution system allows for maintenance and / or repair of both pilot valve and air valve components without removing the pump from service.

Visit SANDPIPERPUMP.COM/ESADSVIDEO to see how easy the ESADS air valve makes maintaining the 2" Non-Metallic Flap Valve.

SPECIFICATIONS

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<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>C</th>
<th>Connection Style</th>
<th>Flex Stem</th>
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<td>17.56 (446)</td>
<td>2 (50)</td>
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<td>3 (80)</td>
<td>(0.1 0.6)</td>
<td>158 (567)</td>
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ESADS+ Plus

Proven air distribution system allows for maintenance and / or repair of both pilot valve and air valve components without removing the pump from service.

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ESADS+ Plus

Proven air distribution system allows for maintenance and / or repair of both pilot valve and air valve components without removing the pump from service.

Visit SANDPIPERPUMP.COM/ESADSVIDEO to see how easy the ESADS air valve makes maintaining the 2" Non-Metallic Flap Valve.

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</tr>
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</table>
HDB Metallic Pumps are ideal for thin to highly viscous and small solids-laden fluids, while providing excellent suction lift capability and exclusive variable porting options (side, top, bottom and dual). HDB pumps are thick wall constructed of Sand Casted Aluminum, Cast Iron, Stainless Steel or Alloy C with elastomer, TPE (thermal plastic elastomers) and PTFE options in diaphragms and check valves. HDB pumps are enhanced with an extended wear package.

**Bottom or Top Porting Positions**
Greater process connection flexibility

**All Bolted Construction**
Durable and high pressure capable

**Lightweight & Portable**
Weights as low as 31 lbs (14 kg)

**Ball Check Valves**
Provide powerful, high flow pumping

**Diaphragm Connecting Rods**
Reliable and consistent diaphragm control

**ESADS+Plus Air Valve**
Externally Serviceable Air Distribution System

**Dynamic Manifold Connections**
Can be vertically or horizontally mounted

**Certifications Available**

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**PUMP CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Fluid Characteristics</th>
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</tr>
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<tbody>
<tr>
<td>Water</td>
<td>+</td>
</tr>
<tr>
<td>Suspended Solids</td>
<td>+</td>
</tr>
<tr>
<td>Non-Suspended Solids</td>
<td>+</td>
</tr>
<tr>
<td>Line Size Solids</td>
<td>(\times)</td>
</tr>
<tr>
<td>Sludge / Slurry</td>
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</tr>
<tr>
<td>High Viscosity (Flowable Fluids)</td>
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</tr>
<tr>
<td>Erosion / Abrasive Fluids</td>
<td>+</td>
</tr>
<tr>
<td>Erosion / Abrasive Fluids</td>
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<tr>
<td>High</td>
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<td>Moderate</td>
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<td>Corrosion</td>
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<td>Installation</td>
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<tr>
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<td>Duty</td>
<td>Intermittent / On-Demand</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**HDB Metallic Pumps**

- **FOR FLUIDS CONTAINING SETTLING, SUSPENDED & FLOATING SOLIDS**

- **COMPOSITE PERFORMANCE CURVE**

---

**Bottom Porting Position**

**Down Porting Position**

---

**HEAVY DUTY BALL VALVE PUMPS**

**ENGINEERED PUMPING SOLUTIONS WITH MORE WAYS THAN ONE**
HEAVY DUTY BALL VALVE PUMPS

PERFORMANCE & SPECIFICATIONS

HDB1½ Metallic Performance

MAX FLOW
• 125 GPM (462 LPM)

PORTING
• NPT / BSP

AIR END
• Aluminum
• Cast Iron

WET END
• Aluminum
• Stainless Steel
• Alloy C

D

C

1½" NPT/BSP

15.5 (419)

20.75 (527)

16.81 (427)

13.28 (337)

11.75 (298)

HDB2 Metallic Performance

MAX FLOW
• 135 GPM (511 LPM)

PORTING
• NPT

AIR END
• Aluminum
• Cast Iron

WET END
• Aluminum
• Stainless Steel
• Alloy C

HDB3 / HDB4 Metallic Performance

MAX FLOW
• 300 GPM (1,136 LPM)

PORTING
• ANSI Flange

AIR END
• Stainless Steel

WET END
• Stainless Steel

SPECIFICATIONS

<table>
<thead>
<tr>
<th>PUMP MODELS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
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<tr>
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<td>Per Stroke</td>
<td>Per Stroke</td>
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<td>Max Flow</td>
<td>1,100 (169.9)</td>
<td>600 (94.3)</td>
<td>300 (50.8)</td>
<td>150 (24.1)</td>
<td>50 (8.1)</td>
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<tr>
<td>Max Pressure</td>
<td>200 (339.8)</td>
<td>150 (24.1)</td>
<td>100 (16.9)</td>
<td>75 (12.5)</td>
<td>50 (8.1)</td>
</tr>
</tbody>
</table>

SB1 / SB25 Metallic Performance

MAX FLOW
• 42 GPM (159 LPM)

PORTING
• NPT / BSP

AIR END
• Aluminum
• Cast Iron

WET END
• Aluminum
• Stainless Steel
• Alloy C

Air Inlet Pressure
0

100 PSI (6.8 Bar)
80 PSI (5.44 Bar)
60 PSI (4.08 Bar)
40 PSI (2.72 Bar)
20 PSI (1.36 Bar)

Bottom Ported

Front View of Bottom Ported

End view of HDB4
Containment Duty Metallic and Non-Metallic Pumps are ideal for highly corrosive and hazardous chemical fluid requirements. All containment duty pumps are exclusively designed with containment chambers, hydraulically balanced/coupled pumping diaphragm and driver diaphragm assemblies. All containment chambers are designed to accommodate visual, mechanical and low voltage leak detection devices. CD pumps are constructed of Aluminum, Cast Iron, Stainless Steel, Alloy C, Polypropylene and PVDF with TPE (thermal plastic elastomers), PTFE options in diaphragms and check valves.

- **All Bolted Construction**
  Durable and high pressure capable

- **Top Discharge**
  For pumping out of tough areas

- **Diaphragm Connecting Rods**
  Reliable and consistent diaphragm control

- **Ball Check Valves**
  Provides powerful, high flow pumping

- **ESADS+Plus Air Valve**
  Externally Serviceable Air Distribution System

- **Dynamic Manifold Connections**
  90° - 180° rotation options

- **Certifications Available**

### PUMP CHARACTERISTICS

<table>
<thead>
<tr>
<th>Fluid Characteristics</th>
<th>Non-Metallic</th>
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<tbody>
<tr>
<td>Water</td>
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<tr>
<td>Suspended Solids</td>
<td>+</td>
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<tr>
<td>Non-Suspended Solids</td>
<td>X</td>
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<tr>
<td>Line Size Solids</td>
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<tr>
<td>Sludge / Slurry</td>
<td>X</td>
</tr>
<tr>
<td>High Viscosity (Flowable Fluids)</td>
<td>+</td>
</tr>
<tr>
<td>Erosion / Abrasive Fluids</td>
<td>High</td>
</tr>
<tr>
<td>Corrosion</td>
<td>+</td>
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<td>Permanent</td>
<td>+</td>
</tr>
<tr>
<td>Portable</td>
<td>+</td>
</tr>
<tr>
<td>Flooded Suction</td>
<td>+</td>
</tr>
<tr>
<td>Suction Lift</td>
<td>+</td>
</tr>
<tr>
<td>Submerged</td>
<td>X</td>
</tr>
<tr>
<td>Duty</td>
<td></td>
</tr>
<tr>
<td>Intermittent / On-Demand</td>
<td>+</td>
</tr>
<tr>
<td>Continuous</td>
<td>+</td>
</tr>
</tbody>
</table>

**COMPOSITE PERFORMANCE CURVE**
CONTAINMENT DUTY BALL VALVE PUMPS

ST1 / ST25 Metallic Performance

- MAX FLOW: 42 GPM (159 LPM)
- PORTING: NPT / BSP
- AIR END: Aluminum
- WET END: Stainless Steel

ST1½ / ST40 Metallic Performance

- MAX FLOW: 106 GPM (391 LPM)
- PORTING: NPT / BSP
- AIR END: Cast Iron
- WET END: Stainless Steel

S1F Non-Metallic Performance

- MAX FLOW: 33 GPM (125 LPM)
- PORTING: ANSI Flange
- AIR END: Polypropylene
- WET END: Polypropylene

S15 Non-Metallic Performance

- MAX FLOW: 100 GPM (378 LPM)
- PORTING: ANSI Flange
- AIR END: Polypropylene
- WET END: Polypropylene

S20 Non-Metallic Performance

- MAX FLOW: 160 GPM (602 LPM)
- PORTING: Universal Flange
- AIR END: Polypropylene
- WET END: Polypropylene

S30 Non-Metallic Performance

- MAX FLOW: 280 GPM (1,061 LPM)
- PORTING: ANSI Flange
- AIR END: Glass Filled Polypropylene
- WET END: Polypropylene

Genuine Parts Service Videos

We make it easy for you to repair your pump with detailed service videos that teach you how to maintain your SANDPIPER pump right, from the advice of our experienced and certified support team.

LEARN MORE AT SANDPIPERPUMP.COM/VIDEOS
STANDARD DUTY BALL VALVE PUMPS
OFFERING THE WIDEST RANGE OF PERFORMANCE AND APPLICATION CAPABILITIES

Standard Duty Metallic Pumps are ideally suited for intermittent / on-demand, portable, moderately abrasive fluids, and suspended solids. Standard duty pumps are constructed in Aluminum, Cast Iron, Stainless Steel and non-metallic materials such as PTFE, Polypropylene, and PVDF with elastomer TPE (thermal plastic elastomers) and PTFE options in diaphragms and check valves.

- **Lightweight & Portable**
  - Weights as low as 4 lbs (1.8 kg)

- **All Bolted Construction**
  - Durable and high pressure capable

- **Top Discharge**
  - For pumping out of tough areas

- **Ball Check Valves**
  - Provide powerful, high flow pumping

- **Diaphragm Connecting Rods**
  - Reliable and consistent diaphragm control

- **ESADS+ Plus Air Valve**
  - Externally Serviceable Air Distribution System

- **Dynamic Manifold Connections**
  - 90° - 180° rotation options

- **Certifications Available**

---

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>Metallic</th>
<th>Non-Metallic</th>
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</thead>
<tbody>
<tr>
<td>Fluid Characteristics</td>
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<tr>
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<td>++</td>
<td>+</td>
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<tr>
<td>Suspended Solids</td>
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<td>++</td>
</tr>
<tr>
<td>Non-Suspended Solids</td>
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<td>X</td>
</tr>
<tr>
<td>Line Size Solids</td>
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<td>X</td>
</tr>
<tr>
<td>Sludge / Slurry</td>
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<td>High Viscosity (Flowable Fluids)</td>
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<td>Erosion / Abrasive Fluids</td>
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<tr>
<td>Installation</td>
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</tr>
<tr>
<td>Portable</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Flooded Suction</td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>Suction Lift</td>
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<tr>
<td>Submerged</td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermittent / On-Demand</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Continuous</td>
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<td></td>
</tr>
</tbody>
</table>

- **Optimized performance** without sacrificing proven reliability.
- These pumps have undergone an engineering **EVOLUTION**, leveraging trusted and proven product designs to improve their performance by application of advanced engineering methods.
- Unlike the competition, these pumps are fully interchangeable with prior models.

Check out the S20 & S30 Metallic updates on page 39. Watch for more Engineering Evolutions to come in the near future!
STANDARD DUTY BALL VALVE PUMPS
PERFORMANCE & SPECIFICATIONS

**X02 Metallic Performance**
- **MAX FLOW**: 4.75 GPM (17.6 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**S05 Metallic Performance**
- **MAX FLOW**: 15 GPM (57 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**S1F Metallic Performance**
- **MAX FLOW**: 45 GPM (170 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**S15 Metallic Performance**
- **MAX FLOW**: 106 GPM (401 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**S20 Metallic Performance**
- **MAX FLOW**: 200 GPM (758 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**S30 Metallic Performance**
- **MAX FLOW**: 295 GPM (1,100 LPM)
- **PORTING**: NPT / BSP
- **AIR END**: Aluminum
- **WET END**: Stainless Steel

**Genuine Parts Service Kits**
- Everything in One Place.
- Reduce Frequency of Repairs.
- Increase Uptime.
- Save Time and Money.

Performance based on water at ambient temperature.

More details on page 66.
SANDPIPERPUMP.COM
ENGINEERED PUMPING SOLUTIONS WITH MORE WAYS THAN ONE
SANDPIPERPUMP.COM

STANDARD DUTY BALL VALVE PUMPS
PERFORMANCE & SPECIFICATIONS

PB ⅓ Non-Metallic Performance
MAX FLOW: 4 GPM (15 LPM)
PORTING: NPT
AIR END: Polypropylene
WET END: Polypropylene / Conductive Polypropylene
WET END: PTFE / Conductive Acetal

WR10 Non-Metallic Performance
MAX FLOW: 8 GPM (30 LPM)
PORTING: NPT / BSP
AIR END: Polypropylene
WET END: PTFE / PVDF

S05 Non-Metallic Performance
MAX FLOW: 14 GPM (52 LPM)
PORTING: NPT / BSP
AIR END: Polypropylene
WET END: Polypropylene / Conductive Polypropylene
WET END: PTFE / Conductive PVDF
WET END: Conductive Acetal

S07 Non-Metallic Performance
MAX FLOW: 23 GPM (87 LPM)
PORTING: NPT / BSP
AIR END: Polypropylene
WET END: Polypropylene
WET END: PTFE

S10 Non-Metallic Performance
MAX FLOW: 23 GPM (87 LPM)
PORTING: ANSI Flange
AIR END: Polypropylene
WET END: Polypropylene
WET END: PTFE

S1F Non-Metallic Performance
MAX FLOW: 13 GPM (50 LPM)
PORTING: ANSI Flange
AIR END: Polypropylene
WET END: Polypropylene
WET END: PTFE
WET END: Conductive Polypropylene
WET END: Conductive PVDF

SANDPIPER Mobile App
The SANDPIPER Mobile App can save you time and money by allowing you to track your pump maintenance, submit quotes for kit purchasing and have instant access to many other tools and resources.
ACCESS EXCLUSIVELY AT SANDPIPER.AODDPUMPONLINE.COM

In-line ported options also available on S05 and S1F
STANDARD DUTY BALL VALVE PUMPS

PERFORMANCE & SPECIFICATIONS

S15 Non-Metallic Performance

MAX FLOW
- 100 GPM (378 LPM)
- ANSI Flange
- DIN Flange

PORTING
- Polypropylene
- Conductive Polypropylene

AIR END
- Polypropylene
- PVDF

WET END
- Polypropylene
- Conductive Polypropylene

psi (bar)
125 (8.6)
160 (605)
800
0.003 (.01)
4.75 (18)

S20 Non-Metallic Performance

MAX FLOW
- 160 GPM (605 LPM)
- Universal/Flange

PORTING
- Polypropylene
- Conductive Polypropylene

AIR END
- Polypropylene
- PVDF

WET END
- Polypropylene
- Conductive Polypropylene

psi (bar)
125 (8.6)
0.1 (2.25)
19.66 (499)
15 (57)
1 (25)
5.32 (135)
7.06 (179)
106 (401)
24.63 (625)

S30 Non-Metallic Performance

MAX FLOW
- 280 GPM (1,061 LPM)
- ANSI Flange
- DIN Flange

PORTING
- Polypropylene
- PVDF

AIR END
- Polypropylene
- Glass Filled Polypropylene

WET END
- Polypropylene
- PVDF

psi (bar)
125 (8.6)
2 (50)
45 (170)
1.22 (31)
0.75 (19)
¾" NPT

Engineered Pumping Solutions with More Ways Than One

SandpiperPump.com
SPECIAL DUTY
THE SAME QUALITY SANDPIPER PRODUCTS DESIGNED TO FIT SPECIFIC NEEDS

**NATURAL GAS PUMPS**
CSA certified to ANSI LC6 standard and Canadian Technical Letter No. R-14 for operation using sweet or sour natural gas

**UL LISTED PUMPS**
Designed to meet UL/9 standards for diaphragm pumps handling flammable liquids

**SUBMERSIBLE CENTRIFUGAL PUMPS**
Lightweight and powerful pumps great for high flow and close quarters pumping situations

**PREMIUM FDA COMPLIANT PUMPS**
Regulation 1935/2004/EC Compliant and the ultimate in leak protection and clean pumping with the paired performance of AODD technology

**FDA COMPLIANT PUMPS**
Regulation 1935/2004/EC Compliant and ideally suited for a variety of food processing, pharmaceutical and cosmetic industry applications

**HIGH PRESSURE PUMPS**
Deliver discharge pressure twice the inlet pressure, up to 250 PSI (17 BAR)

---

### WIDEST AVAILABLE RANGE

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<thead>
<tr>
<th>Size</th>
<th>Flow (GPM)</th>
<th>Flow (LPM)</th>
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<tr>
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<tr>
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<td>1½&quot;</td>
<td>106</td>
<td>401</td>
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<tr>
<td>1&quot;</td>
<td>54</td>
<td>170</td>
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<tr>
<td>½&quot;</td>
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### WIDEST TEMPERATURE RANGE

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<tr>
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</tr>
<tr>
<td>VALUE</td>
<td>32°F to 125°F (0°C to 52°C)</td>
</tr>
</tbody>
</table>

---

### BROADEST CERTIFICATIONS IN THE INDUSTRY

- CSA certified to ANSI LC6 standard
- Canadian Technical Letter No. R-14

---

### LARGEST SOLIDS PASSAGE

- TOP & BOTTOM DISCHARGE: Up to 2"
- BOTTOM DISCHARGE: For Solids-Laden Fluids

---

### EASE OF REPAIR & LESS DOWNTIME

- 5 minutes of off-site main or pilot valve repair with a variety of tools needed to remove pump from line and transport for repair

---

### ENHANCED TEMPERATURE RESISTANCE AND CHEMICAL COMPATIBILITY

- Aluminum
- Stainless Steel
- Nitrile or FKM Elastomers

---

### BEST GUARANTEE IN THE INDUSTRY

- Diaphragm Connecting Rod Guarantee
- Non-Stalling Air / Gas Valve Performance Guarantee
- 5-Year Limited Warranty

---

### SDP SERIES™ VS COMPETITOR

<table>
<thead>
<tr>
<th>Size</th>
<th>Flow (GPM)</th>
<th>Flow (LPM)</th>
</tr>
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<tbody>
<tr>
<td>3&quot;</td>
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<tr>
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<td>45</td>
<td>170</td>
</tr>
<tr>
<td>½&quot;</td>
<td>15</td>
<td>57</td>
</tr>
</tbody>
</table>

---

### SAFETY

- CSA certified to ANSI LC6 standard
- Canadian Technical Letter No. R-14
- Regulation 1935/2004/EC Compliant
- Aluminum only
- Nitrile Elastomers only

---

### GAS / AIR VALVE REPAIR

- 55 minutes of off-site main and pilot valve repair with a variety of tools needed to remove pump from line and transport for repair

---

**SUBMERSIBLE - PortaPump**

---

**Natural Gas - G20**
APPLICATIONS KEY:

A  Lube Oil Transfer (G05, G1F)
B  Glycol Recirculation / Heat Trace (G05, G1F)
C  Flare Knockout (G1F, G15, G20, ST1, ST1½)
D  Glycol Transfer / Water Make-Up (G05, G1F)
E  Sump / General Transfer (G05, G1F, G15, G10F, G20F)
F  Tank Bottom Recirculation / Transfer (G10F, G20F, G20, G30, GH2-M)
G  Utility / General Transfer (G05, G1F, G15, G10F, G20F)
H  Separators & Knockout Drums (G20, GH2-M)
I  General Duty Spill Clean-Up (G20F, G20, G30)
J  Diesel Fuel Transfer (G15)
K  Sea Water Pump for Drilling Mud Make-Up (G30)
L  Produced Water / Condensate Transfer (G1F)
M  Cellar Pump-Out & Mud Transfer (G20F, HDF2, HDF3, SMA3)
DUAL POWER NATURAL GAS OR AIR OPERATED PUMPS

ENGINEERED PUMPING SOLUTIONS WITH MORE WAYS THAN ONE

Remote Site Serviceability
ESADS+Plus Air / Gas System allows for an on-site maintenance time of only 5 minutes

Temperature Limits
-10°F (-23°C) to 180°F (82°C)

Hydrostatic Strength Test
500 PSI (3.5 BAR)

Nitrile or FKM Elastomers
Air / Gas End options for varying temperatures and chemical compatibility

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
106 GPM (401 LPM)

MAX SOLIDS
38mm (1.5") tapered

MAX PRESSURE
60 PSI (4.08 Bar)

MAX SOLIDS
50mm (2") tapered

MAX PRESSURE
80 PSI (5.44 Bar)

MAX PRESSURE
100 PSI (6.8 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
255 GPM (972 LPM)

MAX SOLIDS
2" (50mm)

MAX PRESSURE
60 PSI (4.08 Bar)

MAX PRESSURE
40 PSI (2.72 Bar)

MAX PRESSURE
20 PSI (1.36 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
50 GPM (190 LPM)

MAX SOLIDS
50mm (2") tapered

MAX PRESSURE
80 PSI (5.44 Bar)

MAX PRESSURE
60 PSI (4.08 Bar)

MAX PRESSURE
40 PSI (2.72 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
10 GPM (38 LPM)

MAX SOLIDS
7.5mm (0.3") tapered

MAX PRESSURE
20 PSI (1.36 Bar)

MAX PRESSURE
10 PSI (0.69 Bar)

MAX PRESSURE
5 PSI (0.34 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
2 GPM (7.7 LPM)

MAX SOLIDS
2.5mm (0.1") tapered

MAX PRESSURE
2 PSI (0.13 Bar)

MAX PRESSURE
1 PSI (0.069 Bar)

MAX PRESSURE
0.5 PSI (0.034 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

MAX FLOW
0.5 GPM (1.9 LPM)

MAX SOLIDS
1.25mm (0.05") tapered

MAX PRESSURE
0.25 PSI (0.017 Bar)

MAX PRESSURE
0.1 PSI (0.007 Bar)

MAX PRESSURE
0.05 PSI (0.003 Bar)

GAS / AIR PRESSURE IN PSI

GAS / AIR CONSUMPTION IN SCFM

Elastomers
• Nitrile or FKM

Check Valves
• ANSI Flange

GAS / AIR END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

WET END
• Stainless Steel
• Nitrile or FKM Diaphragm / Check Valves

PORTING
• NPT / BSP

CSA in the Canada Standards Association, an international organization for testing products to ensure public safety, and the governing agency for the Natural Gas Industry.

All SANDPIPER G-Series™ pumps feature Dual Power capabilities and may be safely powered by compressed air or natural gas depending on the application, which offers simplified purchasing, maintenance and training while reducing inventory.
**UL LISTED PUMPS**

PERFORMANCE & SPECIFICATIONS

UL (Underwriters Laboratories) Listed Pumps are designed to meet UL79 standards for diaphragm pumps handling flammable liquids. All Aluminum construction with approved Nitrile or Virgin PTFE UL elastomers. Fully groundable to prevent static discharge.

**U1F Metallic Performance**

<table>
<thead>
<tr>
<th>UL: Underwriters Laboratories</th>
</tr>
</thead>
</table>

**MAX FLOW**

- 45 GPM (170 LPM)

**PORTING**

- 1½" NPT / BSP

**AIR END**

- Aluminum

**WET END**

- Aluminum

**PERFORMANCE & SPECIFICATIONS**

- **Spa1**: 300 GPM (1140 LPM)
  
- **Sma3**: 3500 GPM (13450 LPM)

- **Max Flow**: Various flow rates at different pressures.

- **Head**: Ranges from 0 to 100 PSI (0 to 6.8 Bar).

- **Capacity**: Measured in GPM (LPM).

- **Max Solid Handling**: Up to 1½" (3.8cm) solids.

- **Max Discharge Pressure**: Up to 350 bars (5070 PSI).

- **Dimensional Tolerance**: ±1/8" (± 3mm).

**TO LEARN MORE**

[SCAN TO LEARN MORE](http://www.sandpiperpump.com/submersible)

**SUBMERSIBLE CENTRIFUGAL PUMPS**

PERFORMANCE & SPECIFICATIONS

The PortaPump® Submersible, Battery-Powered Pump operates using any 12-volt car or truck battery. It comes equipped with cables and battery clips. Extremely portable, the pump weighs only 33 pounds (15 kg) and can fit through openings as small as 10" (25cm). Electrically safe and whisper quiet.

**SPA1 ½ - E Metallic Performance**

- **Max Flow**: 43 GPM (163 LPM)

- **Porting**: 1½" NPT / BSP

- **Air End**: Aluminum

**WET END**

- Aluminum

**Performance based on water at ambient temperature.**

**CAPACITY**

- **Discharge Height**: From 0 to 12000 feet (3570 meters).

- **Flow Rate**: From 0 to 12000 GPM (0 to 14590 LPM).

- **Height**: From 0 to 1500 PSI (54.1 Bar).

- **Pressure**: From 0 to 100 PSI (6.8 Bar).

**Max Solids Handling**: Up to 1½" (3.8cm).

**Max Discharge Pressure**: Up to 3500 bars (50700 PSI).

**Dimensional Tolerance**: ±1/8" (± 3mm).

**TO LEARN MORE**

[SCAN TO LEARN MORE](http://www.sandpiperpump.com/centrifugal)

**SMA3 Metallic Performance**

- **Max Flow**: 300 GPM (1140 LPM)

- **Porting**: 1½" NPT / BSP

- **Air End**: Aluminum

**WET END**

- Aluminum

**Performance based on water at ambient temperature.**

**CAPACITY**

- **Discharge Height**: From 0 to 12000 feet (3570 meters).

- **Flow Rate**: From 0 to 12000 GPM (0 to 14590 LPM).

- **Height**: From 0 to 1500 PSI (54.1 Bar).

- **Pressure**: From 0 to 100 PSI (6.8 Bar).

**Max Solids Handling**: Up to 1½" (3.8cm).

**Max Discharge Pressure**: Up to 3500 bars (50700 PSI).

**Dimensional Tolerance**: ±1/8" (± 3mm).

**TO LEARN MORE**

[SCAN TO LEARN MORE](http://www.sandpiperpump.com/centrifugal)

**THE SLUDGE MASTER**

Submersible, Air-Powered Trash Pump handles mud, leaves, twigs, sand, sludge, trash-laden water and soft solids to 1½" (3.8cm). High capacity, low head. The pump weighs only 59 pounds (26kg), and can fit through an opening as small as 14" (35cm). Sturdy construction for rough handling and long life. Optional rock screen available.

**MAX FLOW**

- 43 GPM (163 LPM)

**PORTING**

- 1½" NPT / BSP

**WET END**

- Aluminum

**Performance based on water at ambient temperature.**

**CAPACITY**

- **Discharge Height**: From 0 to 12000 feet (3570 meters).

- **Flow Rate**: From 0 to 12000 GPM (0 to 14590 LPM).

- **Height**: From 0 to 1500 PSI (54.1 Bar).

- **Pressure**: From 0 to 100 PSI (6.8 Bar).

**Max Solids Handling**: Up to 1½" (3.8cm).

**Max Discharge Pressure**: Up to 3500 bars (50700 PSI).

**Dimensional Tolerance**: ±1/8" (± 3mm).

**TO LEARN MORE**

[SCAN TO LEARN MORE](http://www.sandpiperpump.com/centrifugal)
PREMIUM FDA COMPLIANT PUMPS

PERFORMANCE & SPECIFICATIONS

Our Premium FDA (Food & Drug Administration) Material Compliant Pumps are ideally suited for the ultimate in leak protection and clean pumping with the paired performance of AODD technology. Whether in a clean-in-place or clean-out-of-place application, these pumps will exceed the need for reliability and cleanability. Some of their most exceptional features include:

Leak Detection
Pair with Electronic Leak Detection LEARN MORE ON PAGE 63

Materials Of Construction
Electropolished 316 and 302/304 Stainless Steel Components

Porting Options
Rotatable manifolds

SSB1 / DSB1 Metallic Performance

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>54 GPM (204 LPM)</td>
<td>Tri-Clamp</td>
<td>Nickel Plated Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

SSB2 Metallic Performance

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 GPM (473 LPM)</td>
<td>Tri-Clamp</td>
<td>Nickel Plated Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

EC1935
Food processing plastic and elastomer food contact components meet the requirements of EU Regulation 1935/2004/EC. Refer to declaration of conformity for compliant models.

SSA2 Metallic Performance

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 GPM (567 LPM)</td>
<td>Tri-Clamp</td>
<td>Nickel Plated Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

SET1 Metallic Performance

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>54 GPM (204 LPM)</td>
<td>Tri-Clamp</td>
<td>Nickel Plated Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

SET2 Metallic Performance

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 GPM (465 LPM)</td>
<td>Tri-Clamp</td>
<td>Nickel Plated Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>
STANDARD FDA COMPLIANT PUMPS

PERFORMANCE & SPECIFICATIONS

FDA (Food & Drug Administration) Material Compliant Pumps are ideally suited for a variety of food processing, pharmaceutical and cosmetic industry applications. The pumps are available in 1" through 3" ball check valve designs and a 2" (line size solids handling) flap check valve design. Variable flow capacities across the range are 0-235 gallons per minute. These special duty pumps are constructed of FDA compliant material components of Stainless Steel (wetted castings) and a selection of FDA Santoprene®, FDA Nitrile and PTFE diaphragms, check valves and valve seats. Standard non-wetted components are white Epoxy Coated Aluminum with Stainless Steel hardware. 1", 1½", 2", 3" pumps are offered with sanitary clamp fittings and 3" pumps are offered with an ANSI flange.

Materials Of Construction

316 Stainless Steel components

Porting Options

Rotatable manifolds and top or bottom discharge available

T1F Metallic Performance

MAX FLOW
1.5 GPM (7.7 LPM)

PORTING
• Tri-Clamp

AIR END
• Epoxy Coated Aluminum

WET END
• Stainless Steel

T15 Metallic Performance

MAX FLOW
15 GPM (70 LPM)

PORTING
• Tri-Clamp

AIR END
• Epoxy Coated Aluminum

WET END
• Stainless Steel

TSA2 Metallic Performance

MAX FLOW
20 GPM (76 LPM)

PORTING
• Tri-Clamp

AIR END
• Epoxy Coated Aluminum

WET END
• Stainless Steel

T20 Metallic Performance

MAX FLOW
200 GPM (760 LPM)

PORTING
• Tri-Clamp

AIR END
• Epoxy Coated Aluminum

WET END
• Stainless Steel

T30 Metallic Performance

MAX FLOW
285 GPM (1,078 LPM)

PORTING
• Tri-Clamp

AIR END
• Epoxy Coated Aluminum

WET END
• Stainless Steel

EC1935

Food Processing plastic and elastomer food contact components meet the requirements of EU Regulation 1935/2004/EC. Refer to declaration of conformity for compliant models.
Air-Powered Single Diaphragm High Pressure Metallic Pumps deliver discharge pressure twice the inlet pressure, up to 250 PSI (17.2 BAR). Designed for filter press feed and applications requiring higher discharge pressures. Available in Aluminum, Cast Iron and Stainless Steel with various elastomer options. Equipped with elastomeric seals and components that are compatible with the various chemicals normally expected to be found in natural gas.

The Blagdon B25 and B50 High Pressure Pumps provide enhanced power in applications where pressure is paramount and flow rate is an issue. Using two air chambers to double the air per stroke, these pumps achieve discharge pressure up to 238 PSI (16 Bar) with flow rates as high as 28 GPM (106 LPM) for B25 and as high as 92 GPM (350 LPM) with B50.

**Maximum Flow Control**

High pressure capabilities allow for optimum control

**Heavy Duty**

Bolted construction and made with robust materials

**Unique Orientation**

Single end discharge and suction available

**Reliability**

Tested to ensure the long lasting performance

**Non-Freezing, Non-Stalling**

Patented air valve will never unexpectedly stop

**SH2-M Metallic Performance**

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 GPM (454 LPM)</td>
<td>NPT</td>
<td>Aluminum</td>
<td>Cast Iron</td>
</tr>
</tbody>
</table>

**B25 Metallic Performance**

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 GPM (106 LPM)</td>
<td>NPT / BSP</td>
<td>Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**B50 Metallic Performance**

<table>
<thead>
<tr>
<th>MAX FLOW</th>
<th>PORTING</th>
<th>AIR END</th>
<th>WET END</th>
</tr>
</thead>
<tbody>
<tr>
<td>92 GPM (350 LPM)</td>
<td>NPT / BSP</td>
<td>Aluminum</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**Only High Pressure Flap Valve Pump in the WORLD**
Enhanced Pump Performance and Productivity

Extended MTBF (Mean Time Between Failure)

Protection of Ancillary Equipment in Fluid Flow Path

Enhanced Safety and Environmental Responsibility

Precision Pump Control and Air Efficiency

**Electronic Speed Control**
Provides accurate control of variable flow rates, from zero flow to maximum. Operates on 110 or 220VAC with on-board, single turn potentiometer or automatic mode for remote control using the optional 4-20 mA input terminal.

**Air Filter / Regulator**
Provides clean, dry air to your AODD pump. The SANDPIPER Filter / Regulator line offers modular convenience for easy installation and service. LEARN MORE ON PAGE 64

**Stroke Counter / Batch Control**
Offers performance and repeatability with an interfaceable electronic control to program repetitive diaphragm pump operations. The complete system requires the Batch Controller, the Pulse Output Kit & the Air Line Solenoid.

**Inlet Stabilizer**
Blach® Sentry® Inlet Stabilizers reduce pressure fluctuations and assist pump head filling during each inlet stroke. In high suction applications, stabilizer will momentarily maintain the flow of the accelerated fluid.

**Air Line Solenoid**
Provides automatic on/off operation of air-driven equipment. 110/120VAC and 220/240VAC (50/60 hertz) kits operate with the SANDPIPER or customer’s control units. 12VDC and 24VDC kits operate with customer-supplied controls only.

**Muffler**
Rugged polymer or metallic housing that work as effective sound dampening for SANDPIPER pumps, meeting OSHA dB(A) requirements.

**Pulse Output Kit**
Offered in a wide variety of sizes and voltages. These controls interface with the SANDPIPER Batch Controller, or your own process controls (PLCs). Available in kits for field installation, or factory built into a new pump.

**Pulsation Dampener / Surge Suppressor**
Provides virtually pulse-free discharge flow, for steadier pressure with less system vibration and noise. Our Tranquilizer® series is self-charging and self-venting. LEARN MORE ON PAGE 61

**Water Separator**
This point-of-use water separator is designed to remove 99% of the water, rust and other contaminants commonly present in compressed air lines. Clean, dry air enhances the life and performance of pneumatically-driven equipment.

**Liquid Level Control**
Automatic, float actuated control unit that opens and closes the air supply to your AODD pump, especially useful in sump and liquid transfer situations. LEARN MORE ON PAGE 66

**Leak Detection**
Electronic versions provide a signal via warning lights, an audible alarm, and the pump can be shut down. Visual versions simply have a sight tube that fills with fluid if a diaphragm breaks. Mechanical leak detection opens an air valve, which activates a customer supplied solenoid to trigger a signal. For use with the Containment Duty Spill Containment SANDPIPER pumps only.

**Accessories**
All of the items you need to complete your system.
FILTER REGULATORS  
RELIABLE FILTER / REGULATORS SPECIFICALLY DEVELOPED FOR AIR OPERATED DOUBLE DIAPHRAGM PUMPS

- **Reduce Maintenance**: Clean, regulated air
- **Lower Operating Costs**: Reduced air consumption and less compressor demand
- **Extended Pump Life**: Reduced stress on wear components by proportioning the air pressure
- **Reliable Engineering**: To optimize pump performance
- **Protect**: Efficiently removing air line solids and liquid contaminants to protect air valves
- **Safe Operation**: Operate at the lowest required air pressure
- **Compact & Convenient**: Filter and regulate your air supply in a single, easy to install unit
- **Precise Pump Control**: Easy air pressure adjustment to vary the pump’s flow rate and operation speed

**Lubricators**

In applications with very dry air supplies or where nitrogen is being utilized to operate the pump, lubrication of the compressed air supply is required. For these situations, we offer a complete line of Lubricators that easily connect to our Filter / Regulators.

**Technical Specifications**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Size</th>
<th>Min Inlet Pressure</th>
<th>Max Inlet Pressure</th>
<th>Regulating Pressure Range</th>
<th>Pressure Gauge</th>
<th>Mounting Bracket Kit</th>
<th>Lubricator Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>020.104.000</td>
<td>3&quot; NPT</td>
<td>15 psi (1.0 bar)</td>
<td>150 psi (10.2 bar)</td>
<td>10 - 80 psi (0.7 - 5.5 bar)</td>
<td>Yes</td>
<td>Yes</td>
<td>020.113.000</td>
</tr>
<tr>
<td>020.105.000</td>
<td>3&quot; NPT</td>
<td>15 psi (1.0 bar)</td>
<td>150 psi (10.2 bar)</td>
<td>10 - 80 psi (0.7 - 5.5 bar)</td>
<td>Yes</td>
<td>Yes</td>
<td>020.113.000</td>
</tr>
<tr>
<td>020.106.000</td>
<td>3&quot; NPT</td>
<td>15 psi (1.0 bar)</td>
<td>150 psi (10.2 bar)</td>
<td>10 - 80 psi (0.7 - 5.5 bar)</td>
<td>Yes</td>
<td>Yes</td>
<td>020.113.000</td>
</tr>
<tr>
<td>020.107.000</td>
<td>3&quot; NPT</td>
<td>15 psi (1.0 bar)</td>
<td>150 psi (10.2 bar)</td>
<td>10 - 80 psi (0.7 - 5.5 bar)</td>
<td>Yes</td>
<td>N/A</td>
<td>020.113.000</td>
</tr>
</tbody>
</table>

*Up to 10" units.

**Available Wetted Materials**

- Neoprene
- Nitrile
- EPDM
- Neoprene
- PTFE Overlay
- Santoprene

**Disclaimers**

- Not available
- Available

**Temperature Ratings**

- Off to 122°F (50°C to 50°C)

**Available Models**

- TA1
- TA2
- TA3
- TA4
- TA5
- TA6
- TA7
- TA8
- DA4
- DA7
- DA10

**Part Number**

- Part Number
- Model
- Description
- Min Inlet Pressure
- Max Inlet Pressure
- Regulating Pressure Range
- Pressure Gauge
- Mounting Bracket Kit
- Lubricator Part Number

**Technical Specifications**

- Chamber
- Diaphragm

**Available Wetted Materials**

- Aluminum, Stainless Steel & Polyurethane
- Polyurethane only
- Polypropylene only
LIQUID LEVEL CONTROL
AUTOMATIC, FLOAT ACTUATED UNIT THAT OPENS AND CLOSES AIR SUPPLY TO YOUR AODD PUMP

How it Works

1. Float is raised or lowered
2. Float rod activates switch
3. Pilot valve is activated
4. Regulator turns air on/off to the pump

Common Applications

- Sumps
- Dewatering
- Fluid Transfer
- Tank Filling

Pneumatic
No electrical power required

Adjustable
Operating range from a few inches to 9 ft (2.7 m)

Simple
Easy to install & operate

Versatile
Quick reversible operation

Universal
Can be used with all AODD pumps

Reliable
Stainless steel float & connecting rod

Reversible Operation
Operation can be reversed by installing the top float rod bracket in the opposite direction from position shown.

Standard Operation
High Level = On, Low Level = Off

Reverse Operation
High Level = Off, Low Level = On

AUTOMATIC, FLOAT ACTUATED UNIT THAT OPENS AND CLOSES AIR SUPPLY TO YOUR AODD PUMP
LIQUID LEVEL CONTROL

OTHER ACCESSORIES THAT SANDPIPER OFFERS TO HELP COMPLETE YOUR PROCESS

The ONLY CSA Certified point-of-use natural gas regulators available on the market today!

A safely port has been added to help prevent escaping gas in the case of a regulator diaphragm rupture. Simply add a pipe or hose fitting to the unit to divert or reclaim any natural gas.

SANDPIPER Natural Gas Pressure Regulators are safe, reliable and environmentally friendly. These exclusive CSA Certified and UL Listed point-of-use regulators provide superior regulation and excellent stability. All regulators include a durable gauge filled pressure gauge to dampen the effects of pulsation and vibration common in pump applications.

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Port Size</th>
<th>Max Flow (SCFM)</th>
<th>Pump Models</th>
<th>Max Inlet Pressure</th>
<th>Regulating Pressure Range</th>
<th>Temperature Rating</th>
<th>Materials of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>020.057.000</td>
<td>1/4&quot; NPT</td>
<td>25</td>
<td>G05</td>
<td>250 PSI (7.2 BAR)</td>
<td>0 - 125 PSI (0 - 8.8 BAR)</td>
<td>2°F - 110°F (17°C - 43°C)</td>
<td>Aluminum, Brass</td>
</tr>
<tr>
<td>020.058.000</td>
<td>1/2&quot; NPT</td>
<td>110</td>
<td>G1F, G10F</td>
<td>400 PSI (17.6 BAR)</td>
<td>0 - 125 PSI (0 - 8.8 BAR)</td>
<td>-40°F - 200°F (-40°C - 93°C)</td>
<td>Zinc, Aluminum, Plated Steel, Nitrile, Brass</td>
</tr>
<tr>
<td>020.059.000</td>
<td>3/4&quot; NPT</td>
<td>110</td>
<td>G15, G20</td>
<td>400 PSI (17.6 BAR)</td>
<td>0 - 125 PSI (0 - 8.8 BAR)</td>
<td>-40°F - 200°F (-40°C - 93°C)</td>
<td>Zinc, Aluminum, Plated Steel, Nitrile, Brass</td>
</tr>
<tr>
<td>020.060.000</td>
<td>3/4&quot; NPT</td>
<td>260</td>
<td>G20F, G30</td>
<td>400 PSI (17.6 BAR)</td>
<td>0 - 125 PSI (0 - 8.8 BAR)</td>
<td>-40°F - 200°F (-40°C - 93°C)</td>
<td>Zinc, Aluminum, Plated Steel, Nitrile, Brass</td>
</tr>
</tbody>
</table>

Natural Gas Filters

SANDPIPER Natural Gas Filters provide superior particulate protection from systems with high concentrations of solid contaminants. These point-of-use filters are built from durable and lightweight aluminum, feature very high dirt-holding capacity and offer lower pressure drop than other comparable products.

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Port Size</th>
<th>Max Flow (SCFM)</th>
<th>Pump Models</th>
<th>Replacement Filter Element</th>
<th>Max Inlet Pressure</th>
<th>Max Temperature</th>
<th>Materials of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>020.862.000</td>
<td>1/4&quot; NPT</td>
<td>25</td>
<td>G05</td>
<td>G05</td>
<td>500 PSI (34 BAR)</td>
<td>175°F (79°C)</td>
<td>Aluminum Housing, Nitrile Seals, Molybdenum End Seals</td>
</tr>
<tr>
<td>020.863.000</td>
<td>1/2&quot; NPT</td>
<td>42</td>
<td>G1F</td>
<td>G1F</td>
<td>500 PSI (34 BAR)</td>
<td>175°F (79°C)</td>
<td>Aluminum Housing, Nitrile Seals, Molybdenum End Seals</td>
</tr>
<tr>
<td>020.864.000</td>
<td>3/4&quot; NPT</td>
<td>133</td>
<td>G10F, G15, G20, G20F, G30</td>
<td>G20F</td>
<td>500 PSI (34 BAR)</td>
<td>175°F (79°C)</td>
<td>Aluminum Housing, Nitrile Seals, Molybdenum End Seals</td>
</tr>
</tbody>
</table>
DIAPHRAGM SELECTION
GET THE MAXIMUM LONGEVITY OUT OF YOUR SANDPIPER PUMP BY SELECTING THE APPROPRIATE DIAPHRAGM FOR YOUR APPLICATION

The Synthesis Diaphragm
A premium one-piece diaphragm that creates optimum conditions for high performance pumping and reliability. Expect longer service life and reduced maintenance costs with this premium diaphragm.

- Temperature Range
  14°F to 176°F (-10°C to 80°C)

- Torque-Free Installation
  Simply hand turned into position

- No Center Hole
  for superior leak free operation and installation

- No Outer Diaphragm Plate
  Abrasion due to trapped fluids

- Oversized Integrated Plate
  supports nearly 50% of the diaphragm through the entire dynamic motion

- Start-Up Pressure
  of less than 10 PSI on SANDPIPER Synthesis Diaphragm vs. 25 PSI on more competitive diaphragms

- One-Piece Composite Design
  with 100% PTFE on the wetted side bonded to a Feltene Rubber Backer (NRB) with an integrated diaphragm plate

- Two-piece Diaphragm
  The standard PTFE diaphragm offered with SANDPIPER pumps is the two-piece diaphragm—a cost effective solution for a large variety of pumping applications. Some of the main features of this diaphragm include:
  - Wide range of pressure capabilities
  - Variety of materials available
  - Proven performance over years of testing

Please consult your distributor or factory experts for additional details.

### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Technical Specifications</th>
<th>SANDPIPER</th>
<th>Garlock®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Cost</td>
<td>$</td>
<td>$</td>
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<tr>
<td>Installation &amp; Alignment</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Dual Plate / Diaphragm/Wear</td>
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<td>✔️</td>
</tr>
<tr>
<td>Torque Back Off - Repair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCO (Total Cost of Ownership)</td>
<td>$</td>
<td>$</td>
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</table>

### MATERIAL SELECTION GUIDE

<table>
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<tr>
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<tr>
<td>EPDM</td>
<td>✔️</td>
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<td>✔️</td>
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<td>-20°F to 195°F</td>
<td>14°F to -30°F</td>
<td>135°F to 460°F</td>
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<td>FKM</td>
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<td>✔️</td>
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<tr>
<td>Hytrel®</td>
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<td>✔️</td>
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<tr>
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<td>Santoprene®</td>
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<tr>
<td>Urethane</td>
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<tr>
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<tr>
<td>PTFE Sea Flo</td>
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</tr>
</tbody>
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For reference only, consult distributor.

*Conversion Kits include (2) Diaphragms w/Studs and (2) Inner Plates.
**Order this Inner Diaphragm Plate when ordering the One-Piece Diaphragm.

Garlock® is a registered trademark of Garlock, Inc.
Santoprene® is a registered trademark of Exxon Mobil Corp.
Hytrel® is a registered trademark of E.I. DuPont.
Save Time and Money
Ordering and repairs made easy

Wet End Wear Kit:
- Diaphragms
- Air End Wear Kit:
- Gaskets
- O-rings
- Seals
- Lubricant

Wet End Repair Kit:
- Diaphragms
- Balls
- Seats

Air End Repair Kit:
- Seals
- O-rings
- Gaskets
- Retaining Rings

Increase Uptime
Maximize your productivity with fewer repairs

Reduce Frequency of Repairs
Reliable replacement parts are guaranteed to last

Save Time and Money
Ordering and repairs made easy

SANDPIPER is pleased to offer you the trusted Genuine Parts you need, sold in convenient kits or individual parts. Whatever you need to make pump repairs, we have you covered.

USE ONLY GENUINE SANDPIPER PARTS
All certification, standards, guarantees & warranties originally supplied with this pump will be invalidated by the use of service parts not identified as Genuine SANDPIPER Parts.

SANDPIPER’S EXTERNALLY SERVICEABLE AIR DISTRIBUTION SYSTEM (ESADS+PLUS)

SANDPIPER’s Externally Serviceable Air Distribution System (ESADS) allows for quick and easy access to the pilot and spool valves without removing the pump from service, maximizing up time!

SANDPIPER VS COMPETITORS

The Air Motor’s Pilot Valve is the Most Often Serviced Part on an AODD Pump

5 MINUTES FOR MAINTENANCE / CLEANING
Accomplished in minutes without removing pump from service by removing only 4 bolts

$5

55 MINUTES OR LONGER FOR MAINTENANCE / CLEANING
The air valve components can only be accessed by removing the pump from service and taking it entirely apart

$$$

Saves you money by minimizing downtime

Costs you money due to extended downtime
SANDPIPER VS COMPEITION

HEAVY DUTY FLAP VALVE PUMP

Large solids easily pass through pump

Large solids cannot pass through pump, affecting operation

HEAVY DUTY BALL VALVE PUMP

Settling solids easily pass through pump

Settling solids collect inside pump, causing damage & affecting operation

CONTAINMENT DUTY PUMP

Normal

Breached

Contains fluid when diaphragm becomes breached

Fluid escapes to environment when diaphragm becomes breached.