HEAVY DUTY
FLAP VALVE PUMPS
For Fluids Containing up to Line Size Solids
KEY ADVANTAGES OF SANDPIPER HEAVY DUTY FLAP VALVE PUMPS

AN IDEAL SOLUTION FOR ABRASIVE SLURRIES, SUSPENDED, NON-SUSPENDED & LINE SIZE SOLIDS REQUIREMENTS

**LINE SIZE SOLIDS**
**FLAP VALVE VS. BALL VALVE PUMPS**

**Flap Check Valve Pumps**
Have a large flow area to allow up to line size solids to pass directly through the pump. Additionally, the bottom discharge design helps prevent these solids from settling in the unit.

**Ball Check Valve Pumps**
Have much less flow area for solids to pass through. Large solids get stuck in the suction manifold and small solids can settle in the outer chamber, affecting pump performance.

**SUPERIOR SUCTION LIFT**
**FLAP VALVE VS. BALL VALVE PUMPS**

**Suction Lift Advantage**
SANDPIPER’s Flap Valve design provides for superior suction lift capabilities up to 24 feet in water. Diaphragm placement and flap valve seating combine to create a unit capable of suction lifts 15% greater than Ball Valve pumps.

These capabilities are from a dry prime, making the SANDPIPER Flap Valve Pump an excellent solution, in situations where limited choices are available for pump priming.

**EASE OF MAINTENANCE**
**METALLIC PUMPS**

**Quick Access to Serviceable Components**
To help increase productivity and reduce downtime.

- **Removable Elbows**
  By removing the bolts that secure the elbows, it allows access to clear simple clogs without disassembling the entire pump.

- **Flap Check Valves**
  With the elbows removed, the flap valves can be inspected and / or replaced as needed.

**EASE OF MAINTENANCE**
**NON-METALLIC PUMPS**

**Quick Access to Serviceable Components**
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- **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.

- **Flap Check Valves**
  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.
FEATURES & BENEFITS - METALLIC

**Thick Manifold & Chamber Walls**
Greater wear resistance when pumping solids and solid laden slurries, providing extended service life.

**Stainless Steel Seats**
Provide long-lasting abrasion resistance and solids handling durability.

**Robust Diaphragm Connecting Rod**
Guaranteed not to bend or break; assures reliable and consistent diaphragm operation.

**Cross-Drilled Directional Spool Valve**
Guarantees the pump will not stall and ensures on/off reliability.

**Easy Access To Flap Valves**
Check Valve Flaps can be quickly cleaned or replaced without removing the pump from service.

**Heavy Duty Actuator Plungers**
Ensures reliable pilot valve operation.

**Dynamic Manifold Connections**
Allow suction and discharge manifolds to be positioned in various directions.

**Flap Valve Construction**
Can pass up to line size solids, enabling higher suction lift.

**Diaphragm Wear Pads**
Extend the life of the diaphragm by reducing the frictional stresses associated with the outer diaphragm plate during operation.

**All Bolted Construction**
Ensures sealing forces are applied evenly across the pump for leak-free operation.

**Externally Serviceable Air Distribution System**
Allows for quick and easy access to the main air drive components without disassembly of the entire pump and/or removing it from service.

**Top Suction, Bottom Discharge Porting**
Easier evacuation of fluids containing large solids and settling materials.

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FEATURES & BENEFITS - NON-METALLIC

**Lightweight & Durable**
The non-metallic, lightweight design makes it easily portable at 53 lbs (24 kg).

**Stainless Steel Hanging Brackets**
Stainless steel hanging points located on the manifold allow for multiple mounting options.

**Robust Diaphragm Connecting Rod**
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**Dynamic Manifold Connections**
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**Stainless Steel Seats**
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**Ergonomic Handle**
Lifting handles come standard, allowing for easy pump transport; handles can be rotated 90 degrees for proper ergonomics, depending on desired use.

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**Purpose Built Base**
The threaded port version features stainless steel mounting feet and the flanged port version features Polypropylene mounting feet.

**Versatile Design**
This pump will function in most positions, including uneven surfaces.

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HEAVY DUTY FLAP VALVE PUMPS - METALLIC & NON-METALLIC

PERFORMANCE & SPECIFICATIONS

What is E\nVOLUTION?

OPTIMIZED PERFORMANCE

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.

HDF1 Metallic

SOLIDS HANDLING: Up to 1” (25.4 mm)
MAX FLOW: 70 GPM (255 LPM)
MAX PRESSURE: 125 psi (8.6 bar)
DISPLACEMENT: 0.10 gallon (0.37 liter)

OPTIONS
Porting: 1” NPT / BSP Threaded
Wet End: Aluminum, Cast Iron, Stainless Steel
Elastomers: Nitrile (Buna), Neoprene, Santoprene®, Hytrel®, EPDM, Urethane
Air End: Aluminum, Cast Iron

HDF2 Metallic

SOLIDS HANDLING: Up to 2” (50 mm)
MAX FLOW: 208 GPM (787 LPM)
MAX PRESSURE: 125 psi (8.6 bar)
DISPLACEMENT: 0.47 gallon (1.8 liter)

OPTIONS
Porting: 2” NPT / BSP Threaded
Wet End: Aluminum, Cast Iron, Stainless Steel
Elastomers: Nitrile (Buna), Neoprene, Santoprene®, Hytrel®, EPDM, Urethane
Air End: Aluminum, Cast Iron

HDF3-A / 4-A Metallic

SOLIDS HANDLING: Up to 3” (75 mm)
MAX FLOW: 310 GPM (1,173 LPM)
MAX PRESSURE: 125 psi (8.6 bar)
DISPLACEMENT: 1.6 gallon (6.06 liter)

OPTIONS
Porting: 7” ANSI Flange
Wet End: Aluminum, Nitrile (Buna), Neoprene, Santoprene®, EPDM, Urethane
Air End: Aluminum

HDF3-M / 4-M Metallic

SOLIDS HANDLING: Up to 3” (75 mm)
MAX FLOW: 303 GPM (1,147 LPM)
MAX PRESSURE: 125 psi (8.6 bar)
DISPLACEMENT: 1.15 gallon (4.35 liter)

OPTIONS
Porting: 7” ANSI Flange
Wet End: Cast Iron, Nitrile (Buna), Neoprene, Santoprene®, EPDM, Urethane
Air End: Cast Iron

HD20F Non-Metallic

SOLIDS HANDLING: Up to 1.8” (46mm)
MAX FLOW: 150 GPM (568 LPM)
MAX PRESSURE: 100 psi (6.9 bar)
DISPLACEMENT: 0.50 gallon (1.9 liter)

OPTIONS
Porting: 2” NPT / BSP Threaded
Wet End: Polypropylene, Stainless Steel (Seals only)
Elastomers: Nitrile (Buna), Neoprene, Santoprene®, Hytrel®, EPDM, Urethane
Air End: Polypropylene

Santoprene® is a registered trademark of Exxon Mobil Corp. Hytrel® is a registered trademark of E.I. du Pont de Nemours and Company.

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### AIR FILTER / REGULATORS

- Adjust and lock to deliver constant air pressure
- Polyurethane bowl offers improved chemical resistance
- Include a durable liquid filled pressure gauge to dampen the effects of pulsation and vibration
- Integral mounting slots eliminate the need for mounting brackets
- Automatic drain removes condensate

### TRANQUILIZERS®

- Provide virtually surge-free flow
- Steady pressure
- Less vibration and noise
- Automatically self-charging and self-venting
- Protect other system components
- Long-life balanced diaphragm

### LIQUID LEVEL CONTROL

- Pneumatic operation requires no electricity
- Adjustable operating range from a few inches to 9 feet (2.7 meters)
- Simple design is easy to install and operate, with few moving parts
- Reversible operation capable

### SANDPIPER GENUINE PARTS SERVICE KITS

- Wet End Kits
  - Diaphragms
  - Flaps
  - Seats
- Air End Kits
  - Gaskets
  - O-Rings
  - Seals
  - Retaining Rings
  - Air Valve Sleeve and Spool
  - Pilot Valve Assembly
  - Lubricant

### 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!

### VS

**5 MINUTES FOR MAINTENANCE / CLEANING**

Accomplished in minutes without removing pump from service by removing only 4 bolts

**$**

Saves you money by minimizing downtime

**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

**$$$$**

Costs you money due to extended downtime

### COMPETITORS

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

**55 MINUTES VS 5 MINUTES FOR MAINTENANCE / CLEANING**

Costs you money due to extended downtime

**$**

Saves you money by minimizing downtime
Large Solids Easily Pass Through The Pump

Large Solids Cannot Pass Through The Pump Affecting Operation

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.

Contact Your Local Distributor to Place Your Order: