## HEAVY DUTY FLAP VALVE PUMPS

For Fluids Containing up to Line Size Solids



OUR SIGNATURE ENSURES YOUR SUCCESS



# 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**

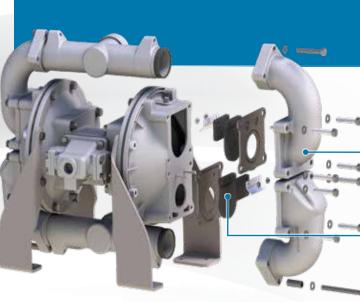
Have much less flow area for solids to pass through. Large solids get stuck in the suction manifold and small solids can settle in the outer chamber, affecting pump performance.

## 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**

To help increase productivity and reduce downtime.

#### 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.







UP TO 24 FT. (7.3M) SUCTION FLAP VALVE PUMPS

UP TO 24 FT. (6.1M) SUCTION BALL VALVE PUMPS





# FEATURES & BENEFITS - METALLIC

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

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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

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**Dynamic Manifold Connections** 

Allow suction and discharge manifolds to be positioned in various directions



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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





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)

**Robust Diaphragm Connecting Rod** – Guaranteed not to bend or break; assures reliable

and consistent diaphragm operation



Stainless Steel Seats Provide long-lasting abrasion resistance and solid handling durability



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

#### **Diaphragm Wear Pads -**

Extend the life of the diaphragm by reducing the frictional stresses associated with the outer diaphragm plate during 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



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



**Dynamic Manifold Connections** 

Allow suction and discharge manifolds to be positioned in various directions





- Ergonomic Handle

Lifting handles come standard, allowing for easy pump transport; handles can be rotated 90 degrees for proper ergonomics, depending on desired use

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



This pump will function in most positions, including uneven surfaces



Purpose Built Base

The threaded port version features stainless steel mounting feet and the flanged port version features Polypropylene mounting feet





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## **HEAVY DUTY FLAP VALVE PUMPS - METALLIC & NON-METALLIC**

**SPECIFICATIONS** 

1 - 4" (25.4 - 101.6mm)

1 - 3" (25.4 - 75mm)

NON-METALLIC

**SOLIDS HANDLING** 

**SOLIDS HANDLING** 

**MAX FLOW** 

**MAX FLOW** 

150 GPM (568 LPM)

DISPLACEMENT

0.50 gallon (1.9 liter)

DISPLACEMENT

70 - 310 GPM (265 - 1173 LPM)

0.10 - 1.6 gallon (0.37 - 6.06 liter)

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DISPLACEMENT

0.10 gallon (.37 liter)

METALLIC

SIZES

SIZES

2" (50mm)

1.8" (46mm)

**PERFORMANCE & SPECIFICATIONS** 



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 **1**"

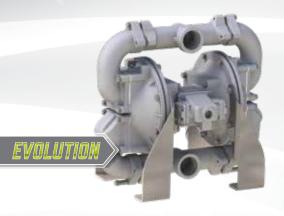


SOLIDS HANDLIN Up to 1" (25.4 mm)	G MAX FLC 70 GPM (2	 MAX PRESSURE 125 psi (8.6 bar)	
OPTIONS			
Porting	Wet End	Flastomers	

Porting	Wet End	Elastomers		Air End
1" NPT / BSP Threaded	Aluminum	Nitrile (Buna)	Fluorocarbon (FKM)	Aluminum
	Stainless Steel	Neoprene	EPDM	Cast Iron
		Hytrel®	Urethane	
		Santoprene®		

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## 2" HDF2 Metallic



SOLIDS HANDLING	MAX FLOW
Up to 2" (50 mm)	208 GPM (787 LPM)

Up to 2" (50 mm)

MAX PRESSURE DISPLACEMENT 125 psi (8.6 bar) 0.47 gallon (1.8 liter)

OPTIONS				
Porting	Wet End	Elast	omers	Air End
2" NPT / BSP Threaded	Aluminum Cast Iron Stainless Steel	Nitrile (Buna) Neoprene Hytrel®	Fluorocarbon (FKM) EPDM Urethane	Aluminum Cast Iron
		Santoprene®		

## 3-4" HDF3-A / 4-A Metallic

SOLIDS HANDLING Up to 3" (75 mm)	i	MAX FLOV 310 GPM (1,	-	MAX P 125 psi	
OPTIONS					
Porting		Wet End		Elasto	omers
3" ANSI Flange 4" ANSI Flange		Aluminum	Nitrile (I Neopi Santop	rene	

## 3-4" HDF3-M / 4-M Metallic

SOLIDS HANDLING	MAX FLOW	N
Up to 3" (75 mm)	303 GPM (1,147 LPM)	1

OPTIONS			
Porting	Wet End	Elasto	omers
3" ANSI Flange 4" ANSI Flange	Cast Iron	Nitrile (Buna) Neoprene Santoprene®	

#### HD20F Non-Metallic **2**"

SOLIDS HANDLING MAX FLOW Up to 1.8" (46mm) 150 GPM (568 LPM)

MAX PRESSURE 100 psi (7.0 bar)

OPTIONS						
Porting	Wet End	Elasto	omers	Air End		
2" NPT / BSP Threaded 2" ANSI / DIN Combination Flange	Polypropylene Stainless Steel (Seats only)	Nitrile (Buna) Neoprene Hytrel® Santoprene®	Fluorocarbon (FKM) EPDM Urethane	Polypropylene		

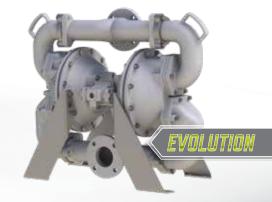
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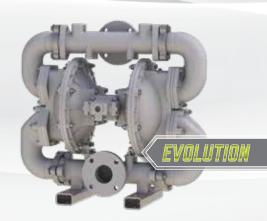


## MAX PRESSURE

125 psi (8.6 bar)

DISPLACEMENT 1.15 gallon (4.35 liter)

Air End EPDM Cast Iron Urethane



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### DISPLACEMENT

0.50 gallon (1.9 liter)



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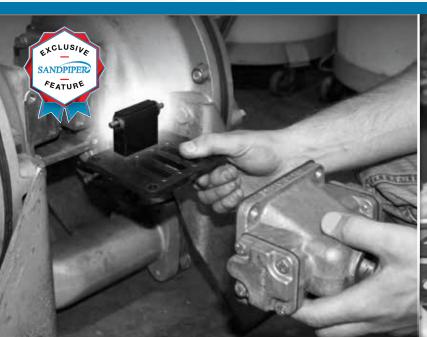
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## SANDPIPER'S EXTERNALLY SERVICEABLE **AIR DISTRIBUTION SYSTEM (ESADS+PLUS)**

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**

### **COMPETITORS** VS





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



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

## **PARTS & ACCESSORIES**

EVERYTHING YOU NEED TO COMPLETE YOUR PUMP SYSTEM

## SANDPIPER GENUINE PARTS SERVICE KITS

WET END KITS / AIR END KITS

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.

#### Wet End Kits

- Diaphragms
- Flaps
- Seats

#### **Air End Kits**

- Gaskets
- O-Rings
- Seals
- Retaining Rings
- Air Valve Sleeve and Spool
- Pilot Valve Assembly
- Lubricant

## **AIR FILTER / REGULATORS**

RELIABLE FILTER / REGULATORS SPECIFICALLY DEVELOPED FOR AODD PUMPS

- 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®**

PULSATION DAMPENERS / SURGE SUPPRESSORS

- 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

AUTOMATIC. FLOAT ACTUATED UNIT OPENS & CLOSES AIR SUPPLY TO YOUR AODD PUMP

- 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



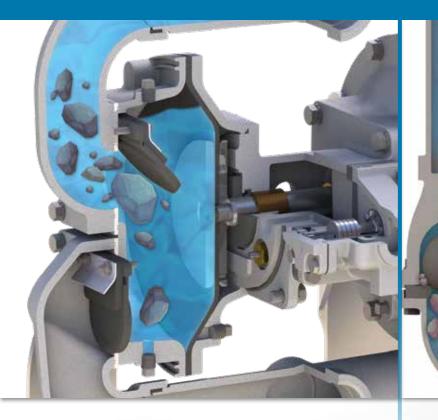
ENGINEERED PUMPING SOLUTIONS WITH MORE WAYS THAN ONE

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## SANDPIPER HEAVY DUTY FLAP VALVE PUMP

## TYPICAL TOP DISCHARGE BALL VALVE PUMP

VS



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:



Warren Rupp, Inc. | A Unit of IDEX Corporation 800 North Main Street, Mansfield, OH 44902 USA Phone: 419.524.8388 | Fax: 419.522.7867 SANDPIPERPUMP.COM





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