

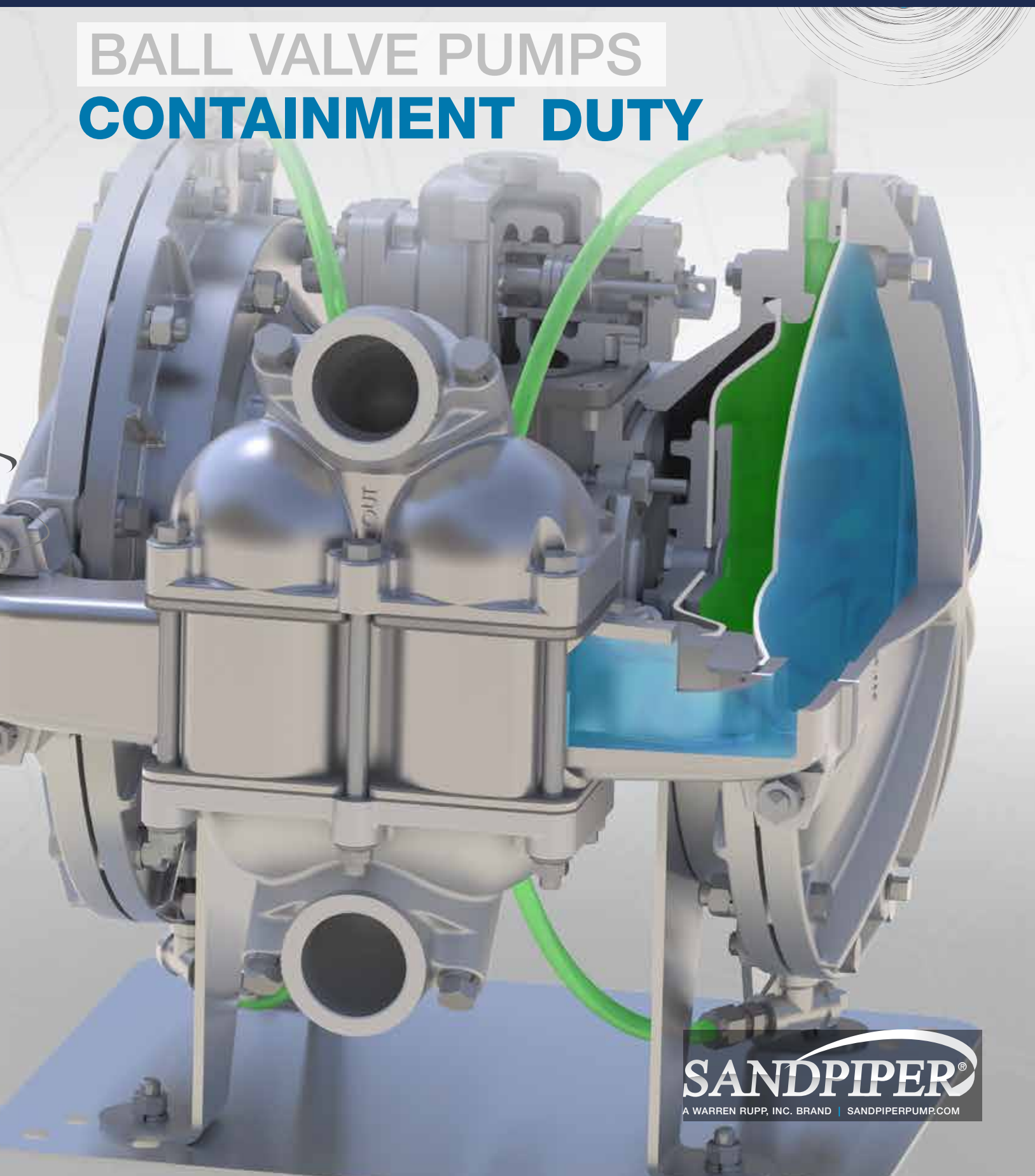


AMCAL
INDUSTRIAL PUMP SOLUTIONS

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BALL VALVE PUMPS **CONTAINMENT DUTY**



SANDPIPER®
A WARREN RUPP, INC. BRAND | SANDPIPERPUMP.COM

KEY ADVANTAGE

WHAT HAPPENS WHEN THE PUMPING DIAPHRAGM IS BREACHED

TYPICAL AODD PUMP



CONTAINMENT DUTY



When the pumping diaphragm is breached, the fluid enters the air distribution system and escapes into the environment through the muffler, requiring immediate service. This results in:

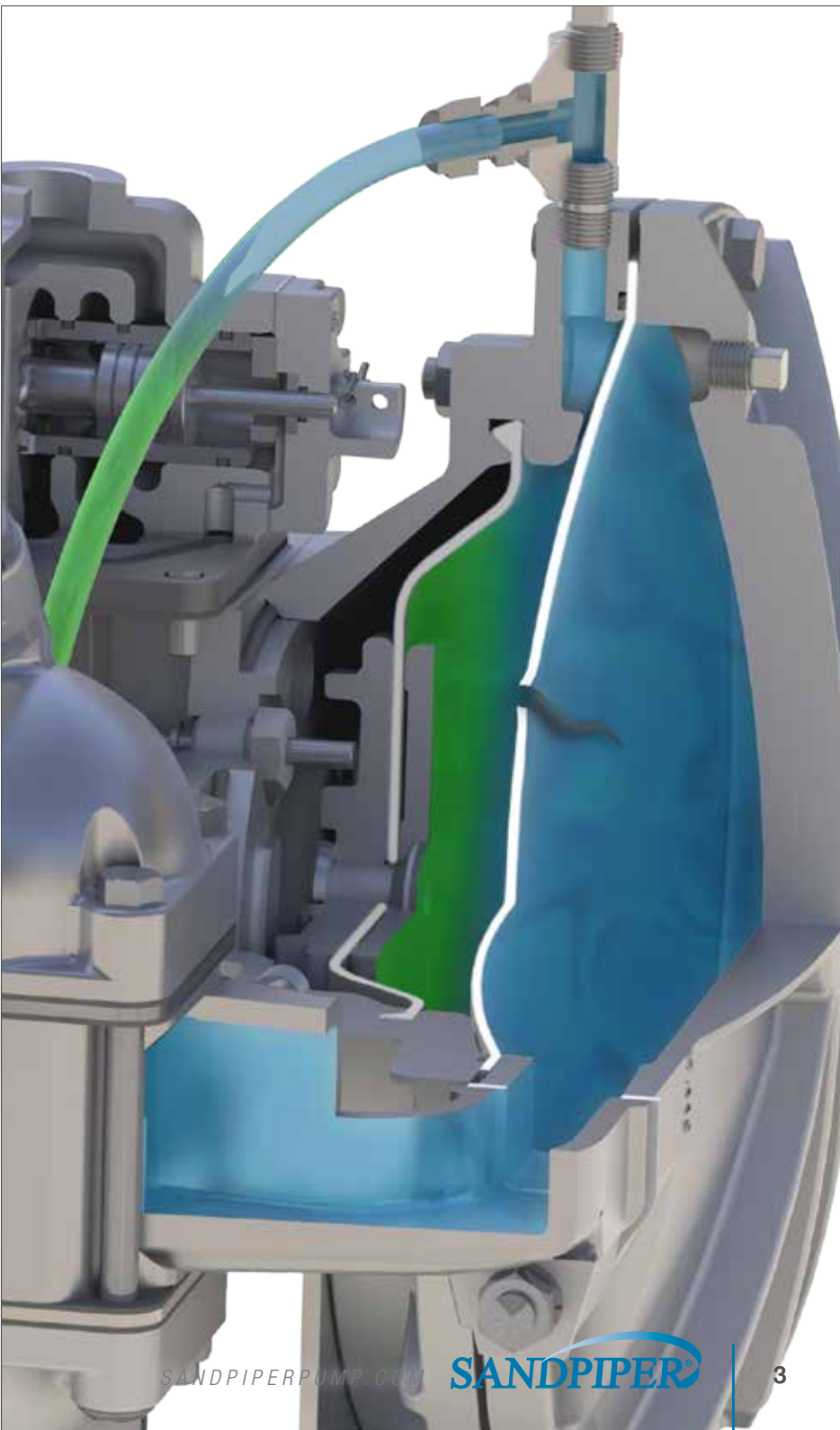
- Safety & Environmental Hazards
- Costly Clean-up & Maintenance
- Interruption of Operations
- Loss of System Fluid
- Extended Downtime
- Potential for Product / Process Contamination from Air Supply

When the pumping diaphragm is breached, the fluid enters the containment chamber and visual indicator sight tubes, alerting the user. The fluid is fully contained so the pump can continue running until the operation is complete or maintenance can be scheduled.

- NO** Safety & Environmental Hazards
- NO** Costly Clean-up & Maintenance
- NO** Interruption of Operations
- NO** Loss of System fluid
- NO** Extended Downtime
- No** Product / Process Contamination from Air Supply



**WATCH THE VIDEO
TO LEARN MORE**
SANDPIPERPUMP.COM/CONTAINMENT



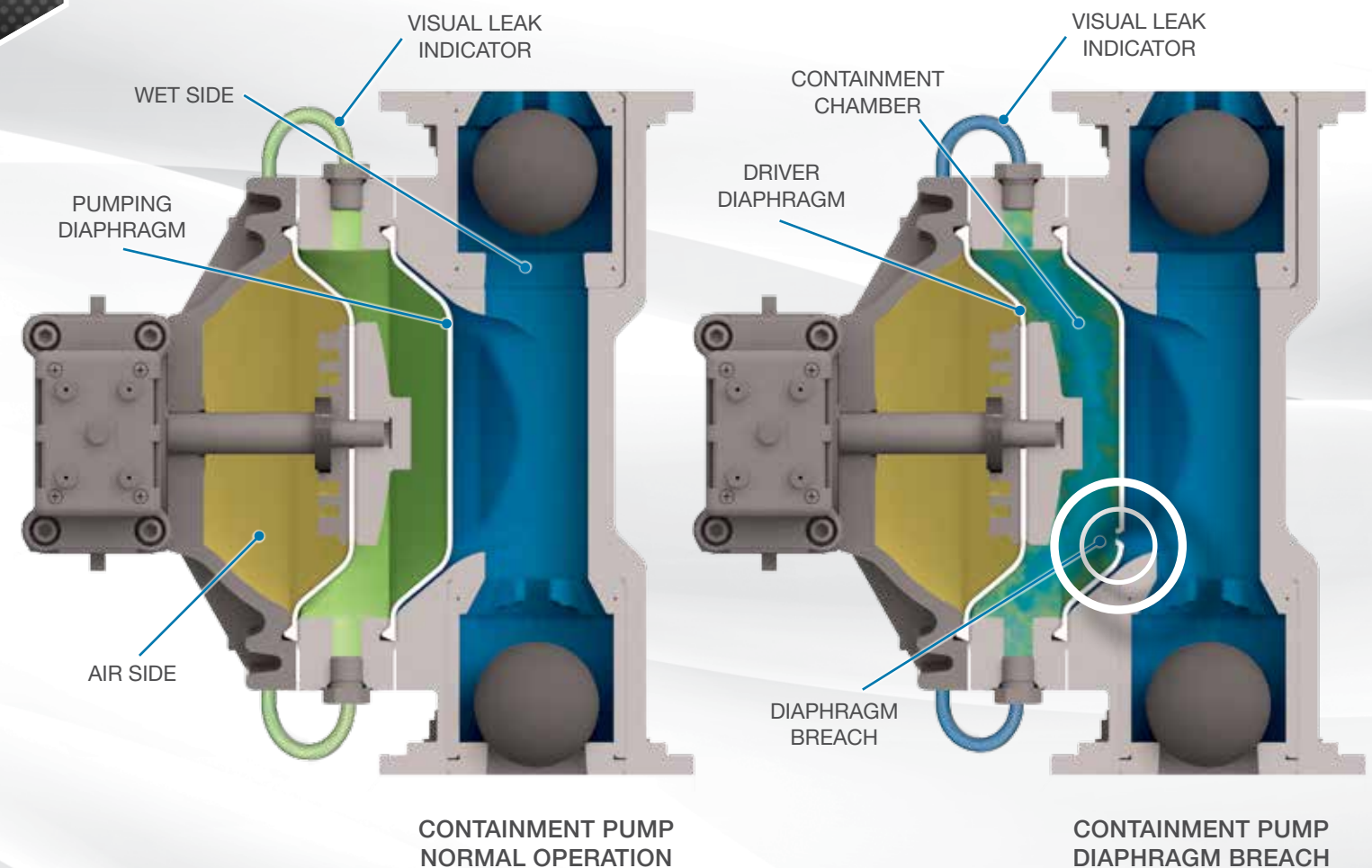
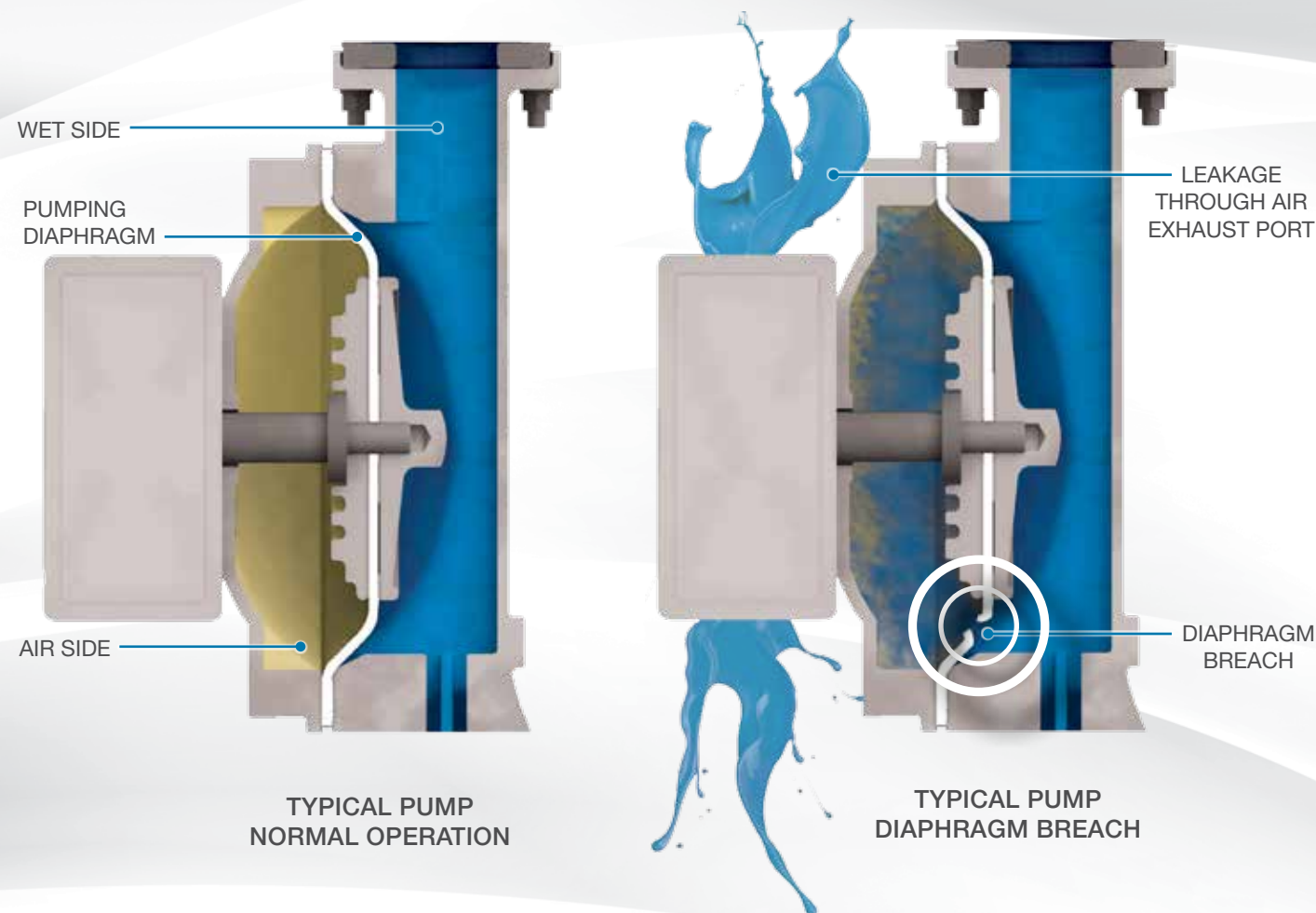
TWO DIAPHRAGMS ARE BETTER THAN ONE

HOW IT WORKS

TYPICAL AODD PUMP



CONTAINMENT DUTY



Typical AODD pump designs utilize a **single pumping diaphragm** to drive the fluid. The pumping diaphragm is the **only barrier** between the Wet Side and Air Side of the pump. This diaphragm is an elastomeric material that **will eventually wear or become breached**. When this occurs, the system fluid enters the Air Side of the pump and **escapes to the environment** through the air exhaust muffler. The pump must be **immediately repaired or replaced**.

SANDPIPER Containment Duty pumps feature an **additional driver diaphragm**. The space between the pumping and driver diaphragms is called the containment chamber. It is filled with a "system compatible" fluid and is void of air. This hydraulically locks the two diaphragms together. When the driver diaphragm is breached, the system fluid enters the containment chamber and the **indicator system alerts the user of a breach**. However, the system can **continue operating** until maintenance can be scheduled. The **system fluid does not escape** to the environment, which eliminates the cost of a major cleanup.

PUMP ANATOMY

CONTAINMENT DUTY



Containment Chamber

The area between the pumping and driver diaphragms that contains the fill fluid; This creates a barrier between the fluid and the air distribution system / environment



Leak Detection

Alerts the user of a breach in the pumping diaphragm when equipped with visual, electronic, or mechanical leak detectors



Fill Fluid

A compatible liquid that hydraulically couples the pumping and driver diaphragms, allowing them to operate in tandem



Pumping Diaphragm

This diaphragm stays in contact with the fluid and moves it through the system



Driver Diaphragm

This diaphragm stays in contact with the fill fluid and drives the pump



System Fluid

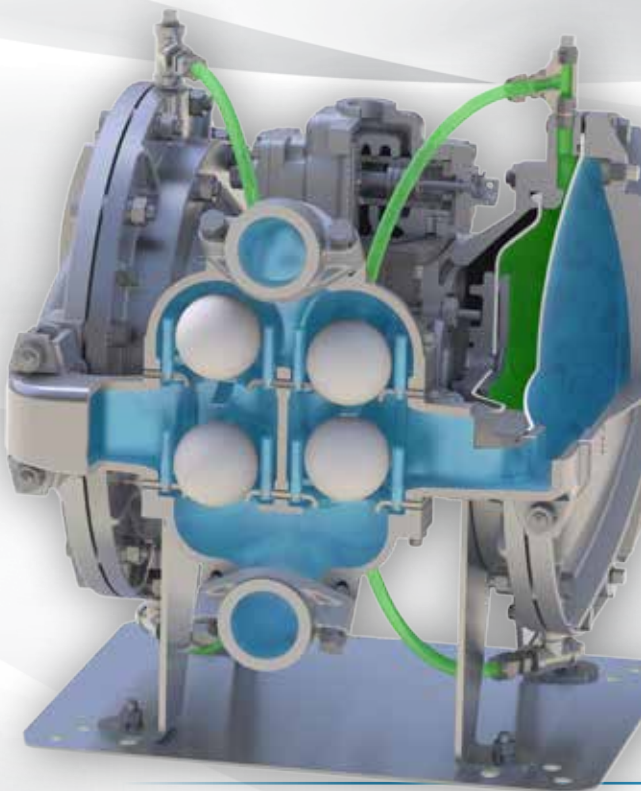
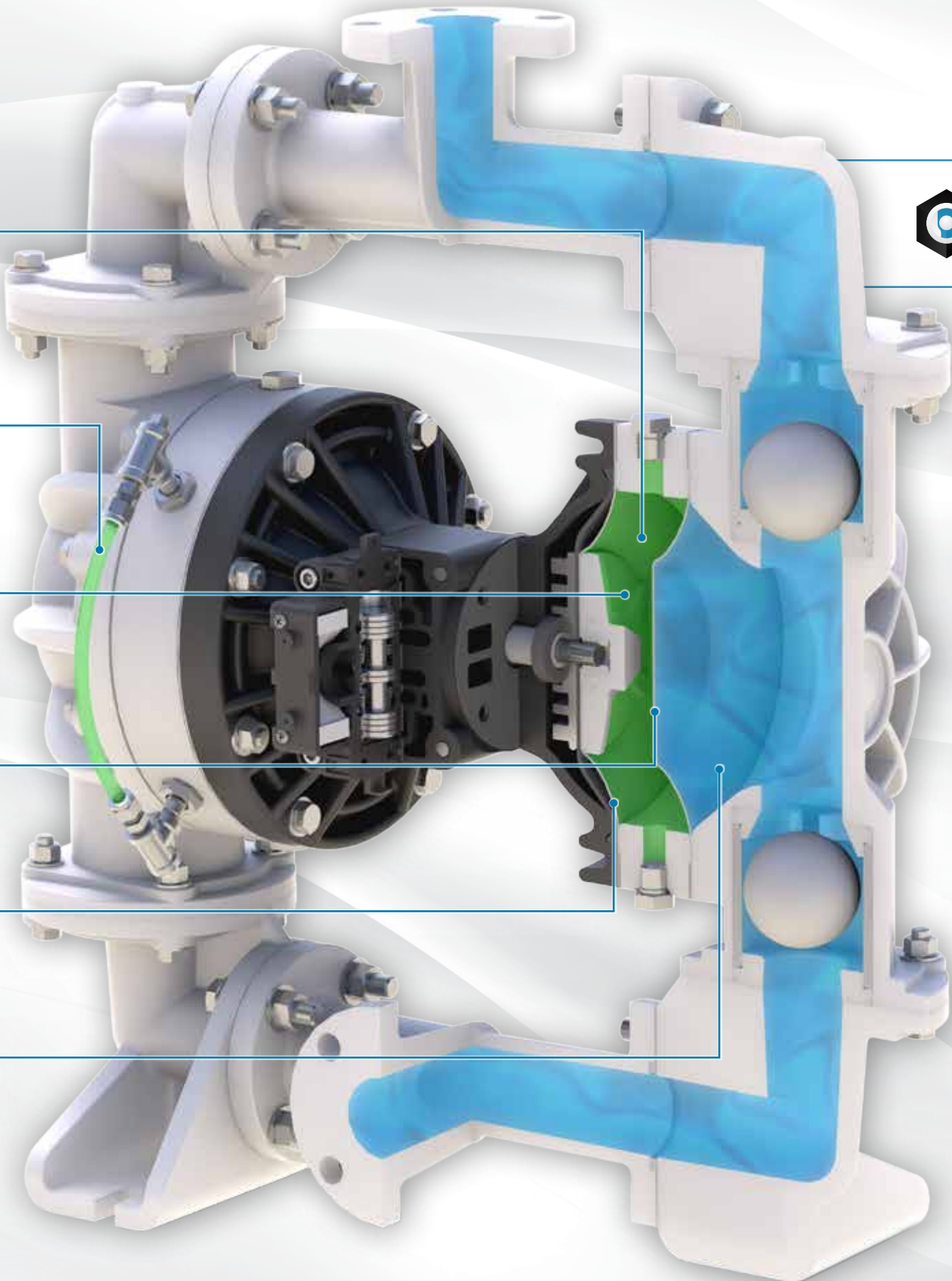
What you are pumping



Non-Metallic



Metallic



CONTAINMENT DUTY BALL VALVE PUMPS

PERFORMANCE & SPECIFICATIONS

1" 25 mm

ST1 / ST25 Metallic



SOLIDS HANDLING
Up to .25" (6.3 mm)

MAX FLOW
42 GPM (159 LPM)

MAX PRESSURE
125 psi (8.6 bar)

DISPLACEMENT
0.09 gallon (.34 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
1" NPT Threaded 25mm BSP Threaded	Aluminum Stainless Steel Alloy C	Aluminum	Neoprene Fluorocarbon (FKM) PTFE-Neoprene	PTFE	PTFE

1 1/2" 38 mm

S15 Non-Metallic



SOLIDS HANDLING
Up to .47" (12 mm)

MAX FLOW
100 GPM (379 LPM)

MAX PRESSURE
100 psi (7 bar)

DISPLACEMENT
.43 gallon (1.63 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
1-1/2" ANSI Flange 40mm DIN Flange	Polypropylene PVDF	Polypropylene	PTFE-Neoprene Santoprene®	PTFE Santoprene®	PTFE Santoprene®

1 1/2" 38 mm

ST1 1/2 / ST40 Metallic



SOLIDS HANDLING
Up to .25" (6.3 mm)

MAX FLOW
106 GPM (400 LPM)

MAX PRESSURE
125 psi (8.6 bar)

DISPLACEMENT
0.37 gallon (1.4 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
1-1/2" NPT Threaded 40mm BSP Threaded	Aluminum Cast Iron Stainless Steel Alloy C	Aluminum Cast Iron	Neoprene Fluorocarbon (FKM) EPDM	PTFE	PTFE

2" 50 mm

S20 Non-Metallic



SOLIDS HANDLING
Up to .66" (17 mm)

MAX FLOW
160 GPM (606 LPM)

MAX PRESSURE
100 psi (7 bar)

DISPLACEMENT
.46 gallon (1.74 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
2" Universal ANSI / DIN Flange	Polypropylene PVDF	Polypropylene	PTFE-Neoprene Santoprene®	PTFE Santoprene®	PTFE Santoprene®

1" 25 mm

S1F Non-Metallic



SOLIDS HANDLING
Up to .25" (6.3 mm)

MAX FLOW
53 GPM (201 LPM)

MAX PRESSURE
100 psi (7 bar)

DISPLACEMENT
.19 gallon (.72 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
1" ANSI Flange 25mm DIN Flange	Polypropylene PVDF	Polypropylene	PTFE-Santoprene® Santoprene® One-Piece Bonded	PTFE Santoprene®	PTFE Santoprene®

Santoprene® is a registered trademark of Exxon Mobil Corp.

3" 75 mm

S30 Non-Metallic



SOLIDS HANDLING
Up to .71" (18 mm)

MAX FLOW
238 GPM (901 LPM)

MAX PRESSURE
100 psi (7 bar)

DISPLACEMENT
.9 gallon (3.41 liter)

OPTIONS					
Porting	Wet Side	Air Side	Driver Diaphragms	Pumping Diaphragms	Check Balls
3" ANSI Flange 75 mm DIN Flange	Polypropylene PVDF	Epoxy Coated Aluminum	PTFE-Santoprene® Santoprene®	PTFE Santoprene®	PTFE Santoprene®

For more detailed Performance and Specification information, please visit SANDPIPERPUMP.COM

WHAT'S THE RISK?

WHY USE CONTAINMENT DUTY PUMPS?

Environmental Concerns

When these fluids escape to the environment, significant time and effort is required to clean them up. Additionally, the costs of downtime, lost production, manpower, equipment replacement, disposal fees, and fines can be excessive.

- Paints, Inks, and Coatings
- Adhesives and Resins
- Chemicals and Petrochemicals
- Oils and Hydrocarbons
- Acids, Caustics, Corrosives
- Resins and Polymers
- Contaminated Water and Wastewater
- Pesticides and Herbicides
- Fertilizers
- Preservatives
- Mercury
- Phthalates

High Cost of Lost Fluid

When these fluids escape to the environment, the cost of losing them is significant. Lost fluid means lost profit.

- Drugs and Pharmaceuticals
- Foods
- Cyanotic Based Paints
- Precious Metal Based Fluids
- Cosmetics
- Perfumes
- Printer Inks
- Beer and Alcohol
- Blood
- Creams and Lotions

Fluids That Need Contained

Even non-toxic fluids like clean water can create hazards, annoyances and safety concerns if your people are in or around the area surrounding a pump when a diaphragm fails.

ESADS+PLUS

SANDPIPER'S EXTERNALLY SERVICEABLE AIR DISTRIBUTION SYSTEM

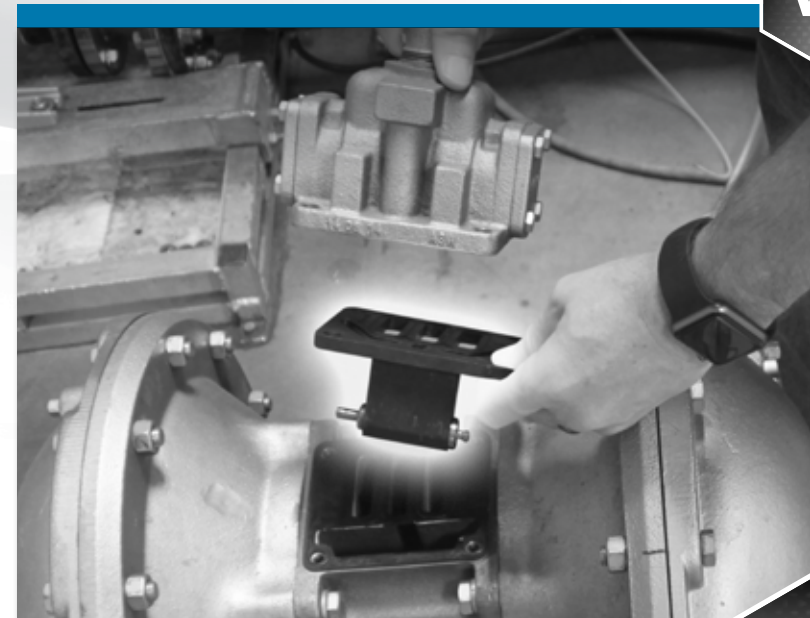
SANDPIPER's Externally Serviceable Air Distribution System (ESADS) allows for quick and easy access to the pilot and spool valves without removing the pump from service, maximizing up time!



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



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



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.



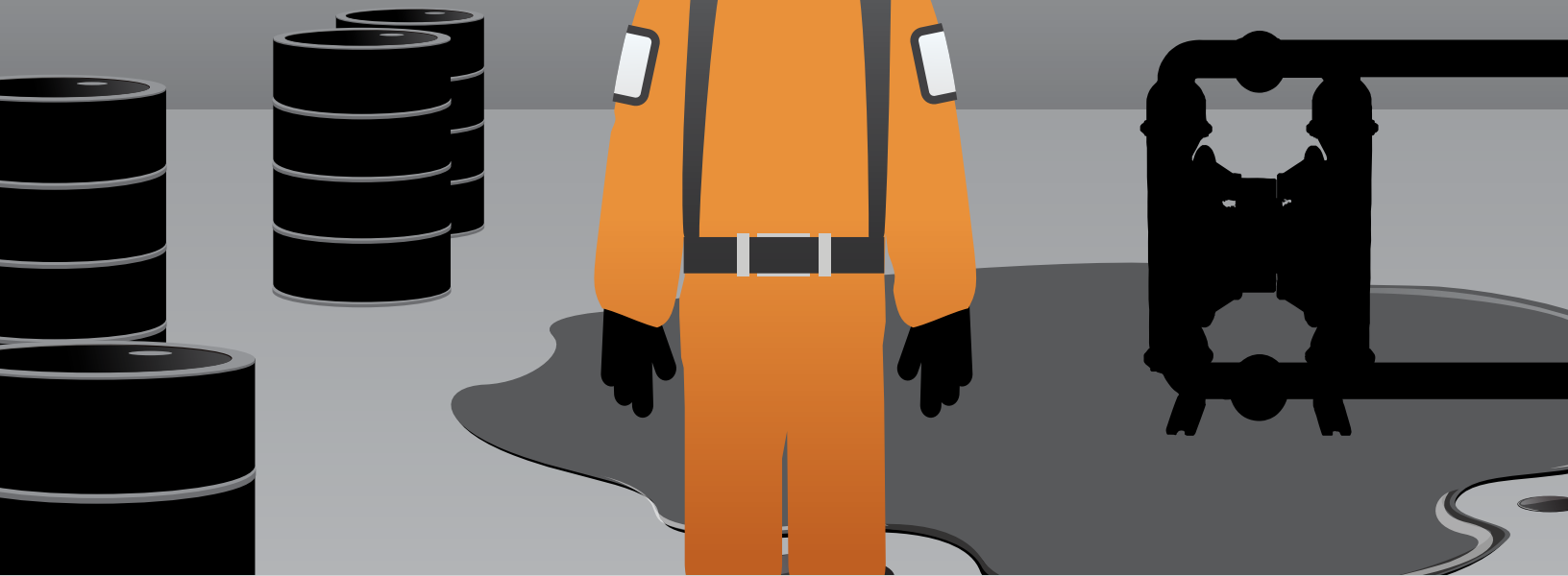
ESADS+PLUS AIR DISTRIBUTION SYSTEM

Allows for quick and easy access to the pilot and spool valves.

WHAT HAPPENS WHEN YOUR PUMP HAS A SPILL?

REPORTING **INSURANCE**
WORKER'S COMPENSATION
LOST PRODUCT
DISPOSAL
DOWNTIME
SAFETY
FINES
CLEAN-UP
EQUIPMENT
INJURIES

RESOURCES
TO HELP
**INSIDE OR
OUTSIDE**
REGULATIONS
FLUID TYPE
LOGISTICS
HOW MUCH
SPILLED
STRATEGY FOR
CLEAN-UP



HOW MUCH ARE YOU WILLING TO INVEST TO PREVENT A SPILL?

Typical 1" Stainless Steel AODD Pump	\$2,500
SANDPIPER 1" Containment Duty Pump	\$4,000
Difference*	\$1,500

*varies by size and materials of construction

SANDPIPER®

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IDEX



Contact Your Local Distributor to Place Your Order: