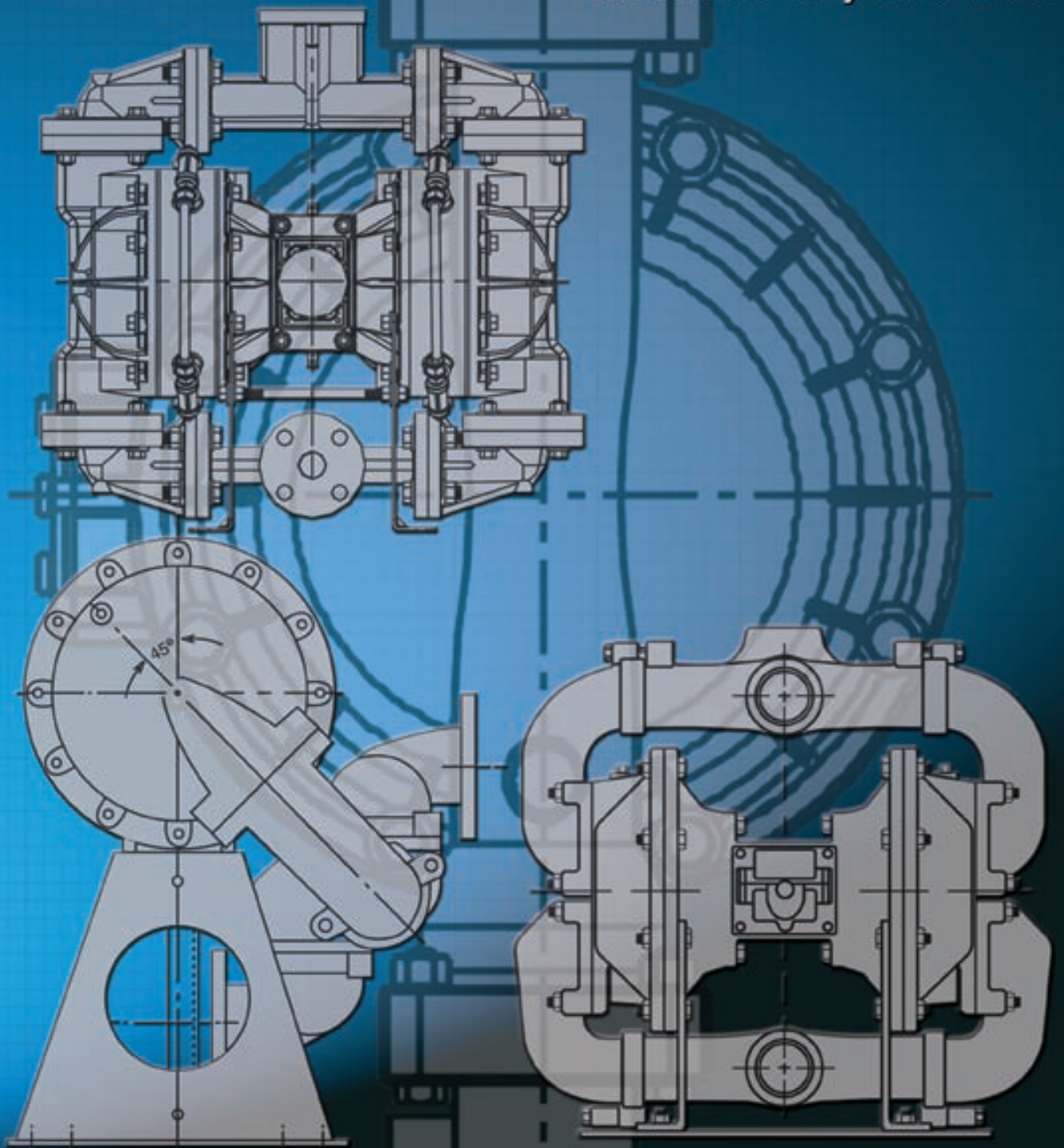


Discover

SANDPIPER[®] Pumping Solutions

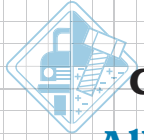
A WARREN RUPP PUMP BRAND

with more ways than one



100 PSI

HEAVY DUTY FLAP



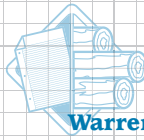
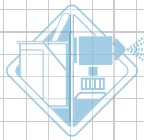
**90°-180° Manifold
Connection Rotation**

ESADS + Plus®
(Externally Serviceable
Air Distribution System)
Lube Free

**Durable Diaphragm
Connecting Rod**

**All Bolted
Construction**

**Flap Check
Valves**



VARIABLE FL

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**90°-180° Manifold
Connection Rotation**

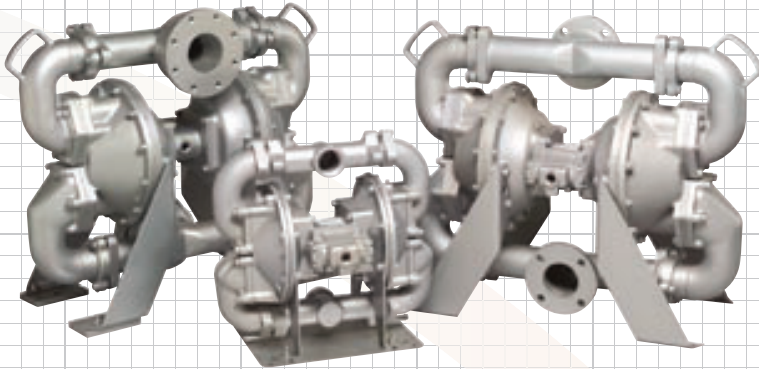
**Free Standing
Support Base**

**Thick Wall
Construction**

Warren Rupp Signature Features - in BLUE

VARIABLE FL

CONFIGURATION FEATURES



HEAVY DUTY FLAP

ESADS + Plus®

All Bolted Construction

Bottom Discharge

Flap Check Valves

HD Extended Wear Package (2" to 4")

Thick Wall Construction

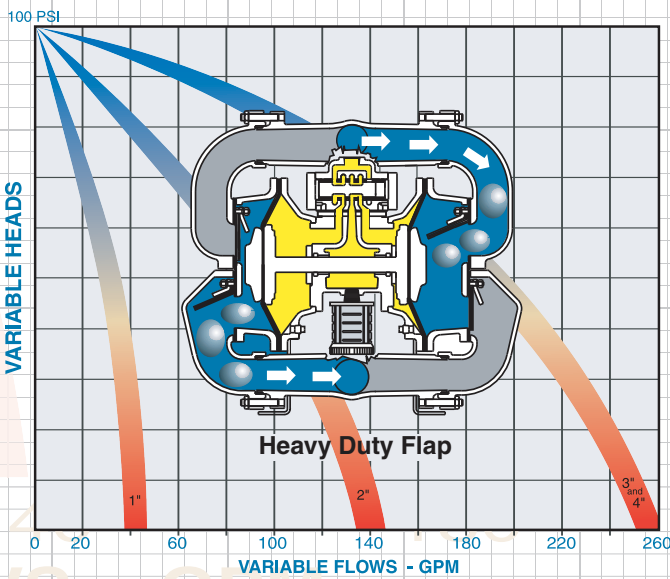
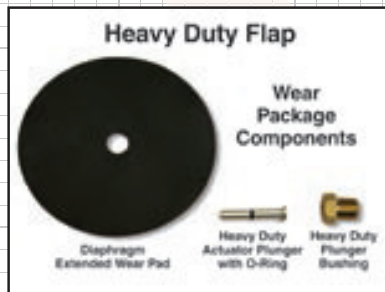
Durable Diaphragm Connecting Rod

90° - 180° Manifold Connection Rotation

Solids Range + 1" (25mm) to 3" (76mm)

Dry Primes up to 24 Feet of Water

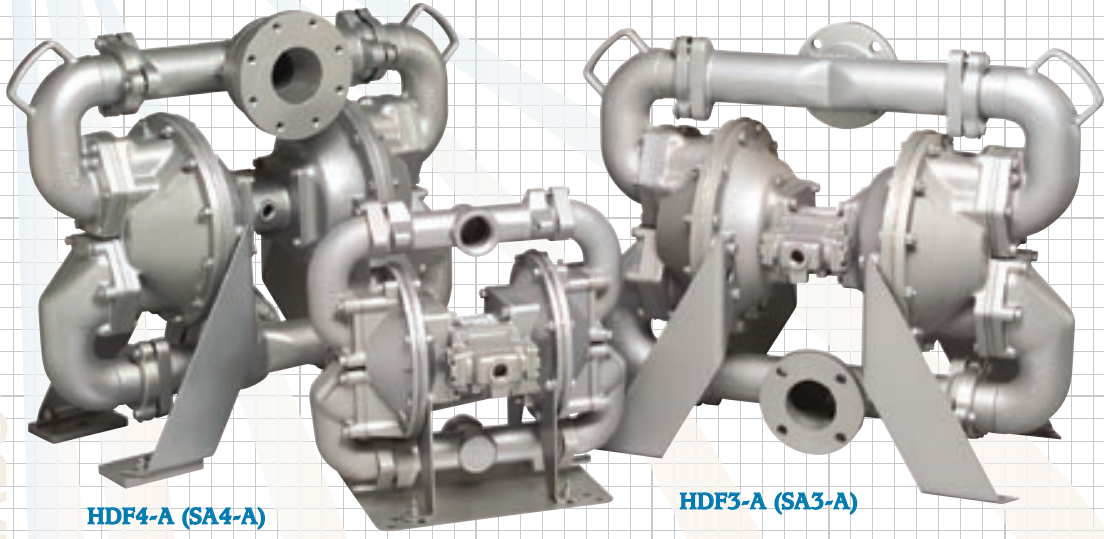
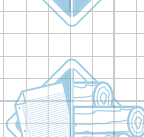
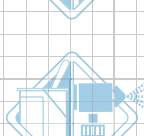
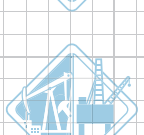
Free Standing Support Base



		Heavy Duty Flap Bottom Discharge
Fluid Characteristics	Water (base reference)	A
	Suspended Solids	B
	Non-Suspended Solids	A (bottom discharge porting)
	Line Size Solids	A
	Sludge / Slurry	A (bottom discharge porting)
	High Viscosity (Flowable Fluids)	B
	Erosion / Abrasive Fluids	High Moderate Low
	Corrosion	B
Installation	Permanent	A
	Portable	A
	Containment / Prevention	C
	Flooded Suction	B
	Suction Lift	A
	Submerged	B
Duty	Intermittent / On-Demand	A
	Continuous	B
A = Best Type B = Suitable C = Caution (Limitations) X = Unsuitable		

100 PSI

HEAVY DUTY FLAP



HDF4-A (SA4-A)

HDF2-A (SA2-A)

HDF3-A (SA3-A)

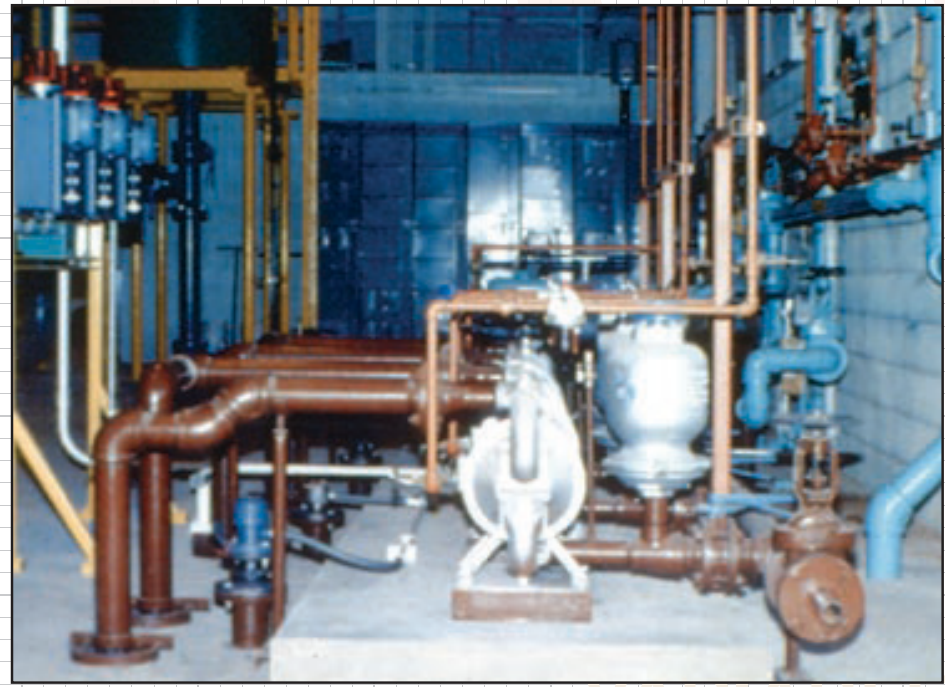


ATEX 100a
Compliant

VARIABLE HEADS

HDF (SA) Pumps are recommended for abrasive slurries, suspended and non-suspended solids and line size solids requirements. All HDF (SA) pumps are configured in bottom discharge porting arrangements. 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.

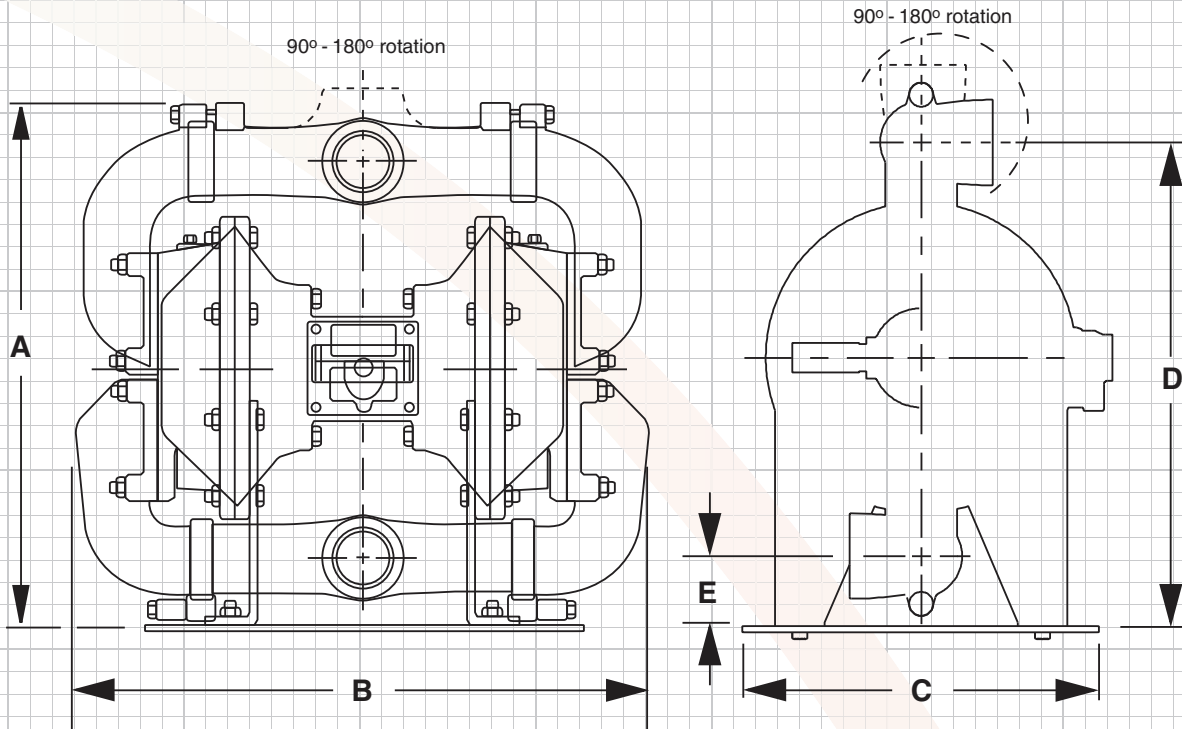
Heavy duty flap valve pumps with tranquilizers permanently installed in an automotive industrial waste treatment facility.



VARIABLE FL

with more ways than one

Dimensional Detail



Bottom Discharge Ported

PUMP MODELS	A	B		C		D		Connection Style	Pipe Size	Displacement Per Stroke	Max Flow Per Minute	Max Solids Handling	Max Discharge Pressure
	Height	Width		Depth		Bottom of Base to Center Line of:			inch (mm)	gal (liter)	gal (liter)	inch (mm)	psi (bar)
	inches (mm)	inches (mm)	inches (mm)	inches (mm)	Suction	Discharge	inches (mm)						
SA1-A/SA25A	14 7/16 (367)	11 3/4 (298)	10 13/16 (275)	3 3/16 (81)	3 3	1/16 (81)	1" NPT/BSP	1 (25)	.09 (.34)	42 (159)	1 (25)	125 (8.6)	
SA2-A HDF2-A	20 5/16 (516)	21 3/4 (552)	13 5/8 (346)	17 11/16 (449)	2 9/16 (65)	2" NPT or	ly	2 (50)	.43 (1.60)	140 (530)	2 (50)	125 (8.6)	
SA3-A HDF3-A	29 1/2 (749)	16 9/16 (929)	14 1/4 (413)	25 3/4 (654)	4 1/4 (108)	3" 125#	ANS	3 (80)	1.62 (6.15)	260 (988)	3 (76)	125 (8.6)	
SA3-M HDF3-M	30 1/4 (768)	12 5/16 (821)	16 3/16 (411)	26 1/2 (673)	5 (127)	3" 125#	ANSI	3 (80)	1.23 (4.66)	260 (988)	3 (76)	125 (8.6)	
SA4-A HDF4-A	31 (787)	16 9/16 (929)	21 1/4 (540)	26 1/2 (673)	5 (127)	4" 125#	ANSI	4 (100)	1.62 (6.15)	260 (988)	3 (76)	125 (8.6)	
SA4-M HDF4-M	31 (787)	12 5/16 (821)	16 3/16 (411)	26 1/2 (673)	5 (127)	4" 125#	ANSI	4 (100)	1.23 (4.66)	260 (988)	3 (76)	125 (8.6)	

All Dimensions $\pm .1/8 (3)$

140
GWS - GPM

180

220

260