

Husky 1590 Plastic Pumps

Air-Operated Double-Diaphragm

Features

- 1-1/2 in (38.1 mm) ANSI end-porting
- High flow – 100 gpm (378 lpm) in a compact, portable size
- Fluid pressure to 120 psi (8.4 bar, 0.84 MPa)
- Patented, high-reliability closed center air valve is online serviceable
- Lube-free operation
- Epoxy-coated air section
- External controller for optional remote operation
- Stainless steel center section for corrosive applications

Typical Applications

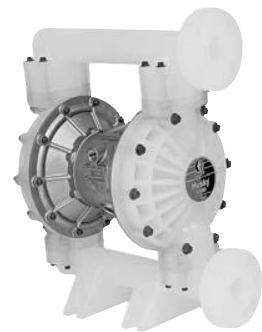
- Tank transfer
- Tank stripping
- Chemical tank plating
- Transferring high temperature acids and gases

Typical Fluids Handled

- Chemicals
- Corrosive fluids
- Acids and gases: acetic, chromic, hydrochloric, hydrofluoric, sulfuric, nitric and phosphoric



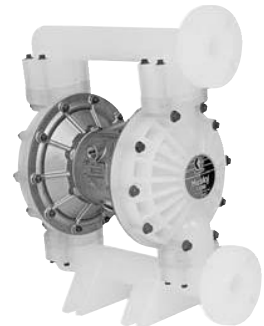
*Husky 1590 Polypropylene
DB2XXX or DC2XXX*



*Husky 1590 Polypropylene
DT2XXX or DU2XXX*



*Husky 1590 PVDF
DB5XXX or DC5XXX*



*Husky 1590 PVDF
DT5XXX or DU5XXX*

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Technical Specifications

Maximum fluid working pressure	120 psi (8.4 bar, 0.84 MPa)
Maximum free flow delivery*	100 gpm (378.5 lpm)
Maximum pump speed	200 cpm
Displacement per cycle**	0.5 gallon (1.96 liter)
Maximum suction lift (DB2366)	20 ft (6.1 m) dry
Maximum size pumpable solids	0.19 in (4.8 mm)
Maximum operating temperature***	
PTFE	220°F (104.4°C)
Santoprene	180°F (82.2°C)
Buna-N	180°F (82.2°C)
TPE	150°F (65.5°C)
Fluoroelastomer	250°F (121.1°C)
Geolast	150°F (65.5°C)
Typical sound level at 70 psi air (4.9 bar, 0.49 MPa) air @ 50 cpm	77 dBa
Maximum air consumption	125 scfm (3.5 m3/min.)
Air pressure operating range	20 to 120 psi (1.4 to 8.4 bar, 0.14 to 0.84 MPa)
Air inlet size	1/2 npt(f)
Fluid inlet & outlet size	1-1/2 in (38.1 mm) ANSI-flange
Weight	
Polypropylene	35 lb (16 kg)
Polypropylene with stainless steel center section	48.3 lb (21.9 kg)
PVDF	49 lb (22 kg)
PVDF with stainless steel center section	62.3 lb (28.2 kg)
Instruction manual	308549

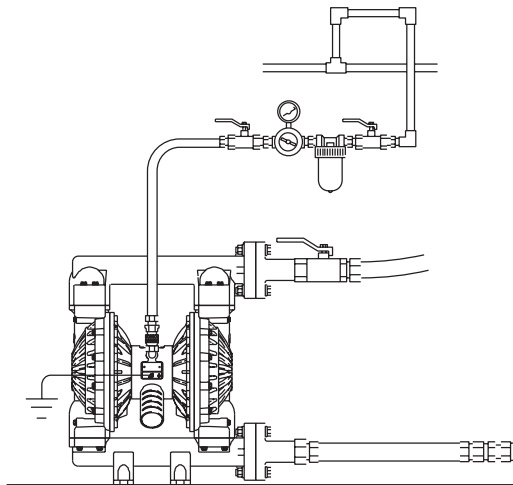
* Flow rates are with muffler and do not vary based on diaphragm material

** Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type

*** Actual pump performance may be affected by prolonged usage at temperature

System Drawings

Husky 1590 Above Ground Gravity Feed



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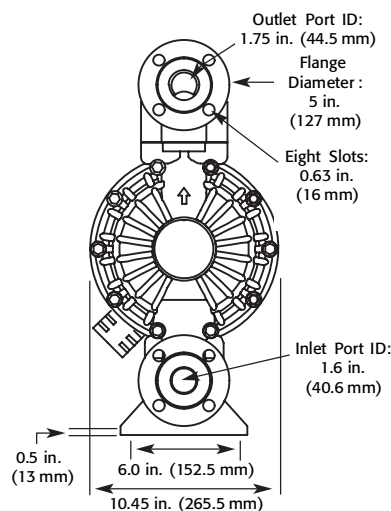
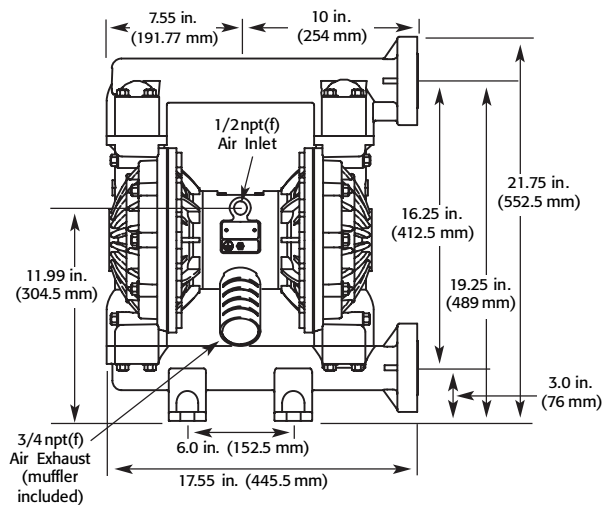
Ordering Information

The highlighted areas indicate possible configurations for the Husky 1590 plastic pumps.

PUMP SIZE (AIR MOTOR TYPE AND MATERIAL)	WETTED PARTS	SEATS	BALLS	DIAPHRAGM
1 = 1/4" (6.35 mm) Standard: polypropylene center section	1 = Acetal (npt)	0 = Seat with ball	1 = PTFE	1 = PTFE
2 = 1/4" (6.35 mm) Remote: polypropylene center section	2 = Poly (npt)	2 = Acetal	2 = Acetal	5 = TPE
3 = 3/8" (9.52 mm) Standard: aluminum center section	3 = Aluminum (npt)	3 = Stainless Steel	3 = Stainless Steel	6 = Santoprene
5 = 1/2" (12.7 mm) Standard: polypropylene center section	4 = Stainless Steel (npt)	4 = Hardened SST	4 = Hardened SST	7 = Buna N
4 = 1/2" (12.7 mm) Remote: polypropylene center section	5 = PVDF (npt)	5 = TPE	5 = TPE	8 = Fluoroelastomer
5 = 3/4" (19.05 mm) Standard: polypropylene center section	6 = Ductile Iron (npt)	6 = Santoprene	6 = Santoprene	G = Geolast
4 = 3/4" (19.05 mm) Remote: polypropylene center section		7 = Buna N	7 = Buna N	
7 = 1" (25.4 mm) Standard: aluminum center section	A = Acetal * (bsp)	8 = Fluoroelastomer	8 = Fluoroelastomer	
8 = 1" (25.4 mm) Remote: aluminum center section	B = Poly * (bsp)	9 = Polypropylene	9 = Polypropylene	
R = 1" (25.4 mm) Standard: stainless steel center section	C = Aluminum (bsp)	A = PVDF	A = PVDF	
S = 1" (25.4 mm) Remote: stainless steel center section	D = Stainless Steel (bsp)	G = Geolast	G = Geolast	
B = 1-1/2" (38.1 mm) Standard: aluminum center section	E = PVDF (bsp)			
C = 1-1/2" (38.1 mm) Remote: aluminum center section	F = Ductile Iron (bsp)	B = SST with viton seal		
T = 1-1/2" (38.1 mm) Standard: stainless steel center section		C = Santoprene with viton seal		
U = 1-1/2" (38.1 mm) Remote: stainless steel center section	H = 2 npt Alum Extended	G = 2 bsp Alum Extended		
F = 2" (50.8 mm) Standard: aluminum center section		D = Urethane Duckbill		
G = 2" (50.8 mm) Remote: aluminum center section				
V = 2" (50.8 mm) Standard: stainless steel center section				
W = 2" (50.8 mm) Remote: stainless steel center section				
K = 3" (76.2 mm) Standard: aluminum center section				

* = BSP plastic in 1/2" (12.7mm) pumps
 1" > Plastic pumps flange connections
 3" Aluminum pumps flange connections

Dimensions



Husky 1590

Plastic Pumps

Popular Models

Material	Part Number (ANSI-Flange)		Part Number (BSP Ported)		Materials for Seats	Materials for Balls	Materials for Diaphragms	Fluid Kit	Air Kit	Air Control*
	Standard Air Valve	Remote Air Valve	Standard Air Valve	Remote Air Valve						
Standard Pumps with Aluminum Center Section										
Polypropylene	DB2311				Stainless Steel	PTFE	PTFE	DOC311	236273	246947
	DB2377	DC2377			Stainless Steel	Buna	Buna	DOC377	236273	246947
	DB2777	DC2777			Buna	Buna	Buna	DOC777	236273	246947
	DB2888	DC2888			Fluoroelastomer	Fluoroelastomer	Fluoroelastomer	DOC888	236273	246947
	DB2911	DC2911			Polypropylene	PTFE	PTFE	DOC911	236273	246947
	DB2955				Polypropylene	TPE	TPE	DOC955	236273	246947
	DB2966				Polypropylene	Santoprene	Santoprene	DOC966	236273	246947
	DB2977				Polypropylene	Buna	Buna	DOC977	236273	246947
	DB2988				Polypropylene	Fluoroelastomer	Fluoroelastomer	DOC988	236273	246947
	DB29GG	DC29GG			Polypropylene	Geolast	Geolast	DOC9GG	236273	246947
PVDF	DB5311				Stainless Steel	PTFE	PTFE	DOC311	236273	246947
	DB5666				Santoprene	Santoprene	Santoprene	DOC666	236273	246947
	DB5811	D85811			Fluoroelastomer	PTFE	PTFE	DOC811	236273	246947
	DB5888	D85888			Fluoroelastomer	Fluoroelastomer	Fluoroelastomer	DOC888	236273	246947
	DB5A11	D85A11			PVDF	PTFE	PTFE	DOCA11	236273	246947
	DB5A88				PVDF	Fluoroelastomer	Fluoroelastomer	DOCA88	236273	246947
Corrosion Resistant Pumps with Stainless Steel Center Section										
Polypropylene	DT2311	DU2311			Stainless Steel	PTFE	PTFE	DOC311	236273	246947
	DT2341	DU2331			Hardened SST	Stainless Steel	PTFE	DOC331	236273	246947
	DT2377	DU2377			Stainless Steel	Buna	Buna	DOC377	236273	246947
	DT2888	DU2888			Fluoroelastomer	Fluoroelastomer	Fluoroelastomer	DOC888	236273	246947
	DT2911	DU2911			Polypropylene	PTFE	PTFE	DOC911	236273	246947
	DT2977	DU2977			Polypropylene	Buna	Buna	DOC977	236273	246947
	DT2988	DU2988			Polypropylene	Fluoroelastomer	Fluoroelastomer	DOC988	236273	246947
PVDF	DT5311	DU5311			Stainless Steel	PTFE	PTFE	DOC311	236273	246947
	DT5811	DU5811			Fluoroelastomer	PTFE	PTFE	DOC811	236273	246947
	DT5888	DU5888			Fluoroelastomer	Fluoroelastomer	Fluoroelastomer	DOC888	236273	246947
	DT5A11	DU5A11			PVDF	PTFE	PTFE	DOCA11	236273	246947
	DT5A88	DU5A11			PVDF	Fluoroelastomer	Fluoroelastomer	DOCA88	236273	246947

* Air control includes air regulator and filter with gauge

Performance Charts

See www.graco.com/process for performance charts.

Accessories

See page 76 for additional accessories.