

# **Diaphragm Pump Selection Guide**











Husky Series	Part Number	Pump Description	Fluids	Listings	Max PSI	Reference Pages
Husky 307	D31255	Husky 307 Acetal – 3/8 in Acetal/TPE	Oil evacuation Oil transfer Water Antifreeze Windshield wash fluid	-	100 psi (6.9 bar)	193
Husky 515	243669	Husky 515 Acetal Split Inlet – 3/4 in Acetal/Buna Dual Inlet	50/50 windshield wash solution     Water     Antifreeze	-	100 psi (6.9 bar)	194
Husky 716	241906	Husky 716 Aluminum – 3/4 in Aluminum/Buna-N	Oil evacuation Oil transfer Water Antifreeze Windshield wash fluid	-	100 psi (6.9 bar)	195
Husky 1050	647016	Husky 1050 Aluminum – 1 in Aluminum/TPE	Water     Antifreeze     Fuel transfer     Gasoline (up to 10% ethanol)	UL	100 psi (6.9 bar)	191-192
Husky 1050	647731	Husky 1050 Aluminum – 1 in Aluminum/Buna-N	Oil evacuation     Oil transfer	UL	100 psi (6.9 bar)	191-192
Husky 1050	647648	Husky 1050 Aluminum – 1 in Aluminum/TPE	Fuel dispense     Gasoline (up to 10% ethanol)	UL	50 psi (3.5 bar)	191-192
Husky 1590	DB3525	Husky 1590 Aluminum – 1.5 in Aluminum/TPE	Oil evacuation Oil transfer Water Antifreeze	-	120 psi (8.3 bar)	196
Husky 2150	DF3525	Husky 2150 Aluminum – 2 in Aluminum/TPE	<ul><li>Oil evacuation</li><li>Oil transfer</li><li>Water</li><li>Antifreeze</li></ul>	-	120 psi (8.3 bar)	197
Husky 3300	652002	Husky 3300 Aluminum – 3 in Aluminum/TPE	<ul><li>Oil evacuation</li><li>Oil transfer</li><li>Water</li><li>Antifreeze</li></ul>	-	125 psi (8.6 bar)	198













## Efficiency, Performance and Best-in-Class Engineering

Husky pneumatic double-diaphragm pumps feature a stall-free, low-pulsation air valve, which provides a smooth and rapid changeover. Typical applications include oil transfer and evacuation, fuel dispense and transfer, windshield wash solution dispense, and water and antifreeze dispense. Some models UL-approved for use in pumping gasoline and gasoline/alcohol blends up to 10% ethanol, diesel fuel, fuel oil and lubricating oil.



#### Modular Air Valve

Stall-free, low-pulsation operation provides smooth and rapid changeover

#### One-Piece Center Section

Eliminates air leaks for more efficient operation

## Longer Diaphragm Life

Up to 5x longer diaphragm life for less maintenance and downtime

### Four-Bolt Joint Design

Bolted design provides even sealing pressure for leak-free operation

## Multiple Ports

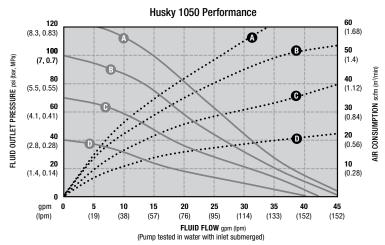
Increased number of ports for installation flexibility

#### **Typical Applications**

- Automotive dealerships
- Fast lube centers
- · Service shops
- · Heavy-duty dealerships
- · Fleet services facilities
- In-plant
- Lube trucks
- Mining

#### Typical Fluids Handled

- Oil
- Fuel
- Water
- Antifreeze
- Washer fluid







# **Husky 1050 AODD Pump**











Maximum fluid working pressure	
Transfer Pump	100 psi (6.9 bar, 0.69 MPa)
Fuel Dispense Pump	50 psi (3.5 bar, 0.35 MPa)
Air pressure operating range	
Transfer Pump	20 psi to 100 psi (1.4 bar to 6.9 bar, 0.14 MPa to 0.69 MPa)
Fuel Dispense Pump	0 psi to 50 psi (1.4 bar to 3.5 bar, 0.14 MPa to 0.35 MPa)
Air consumption at 70 psi (0.48 MPa, 4.8 bar), 20 gpm (76 lpm)	25 scfm
Air consumption at 50 psi (0.35 MPa, 3.5 bar), full flow	25 scfm
Fluid displacement per cycle	0.17 gal (0.64 l)
Maximum values with water as media under submerged inlet conditions at ambient temperature:	
Maximum air consumption	64 scfm
Maximum free-flow delivery	
Transfer Pump	50 gpm (189 lpm)
Fuel Dispense Pump	38 gpm (144 lpm)
Maximum pump speed	
Transfer Pump	275 cpm
Fuel Dispense Pump	210 cpm
Maximum suction lift (varies widely based on ball/seat selection and wear, operating speed, material properties and other variables)	16 ft (4.9 m) dry, 29 ft (8.8 m) wet
Maximum-size pumpable solids	1/8 in (3.2 mm)
Recommended cycle rate for continuous use	93 cpm to 140 cpm
Recommended cycle rate for circulation systems	20 cpm
Sound Power*	
at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm	78 dB(A)
at 100 psi (0.7 MPa, 7.0 bar) and full flow	90 dB(A)
Sound Pressure**	
at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm	84 dB(A)
at 100 psi (0.7 MPa, 7.0 bar) and full flow	96 dB(A)
Operating temperature range	10°F to 150°F (-12°C to 65°C)
Air inlet size	1/2 in NPT(F)
Fluid inlet size	1 in NPT(F)
Fluid outlet size	1 in NPT(F)
Weight	23 lb (10.5 kg)
Wetted parts	Aluminum, TPC-ET, acetal, PTFE, Buna-N
Non-wetted external parts	Aluminum, coated carbon steel
Instruction manual	313597

<sup>\*</sup>Sound power measured per ISO-9614-2.

# >>> Ordering Information

## **Husky 1050 AODD Pumps**

Part Number	Description	Maximum Fluid Working Pressure	Fluids Handled
647016	Husky 1050 Aluminum Pump – 1 in, Aluminum/TPE	100 psi (6.9 bar)	Water / antifreeze / fuel transfer
647731	Husky 1050 Aluminum Pump – 1 in, Aluminum/Buna-N	100 psi (6.9 bar)	Oil evacuation / oil transfer
647648	Husky 1050 Aluminum Pump – 1 in, Aluminum/TPE	50 psi (3.5 bar)	Fuel dispense

<sup>\*\*</sup>Sound pressure was tested 3.28 ft (1 m) from equipment.











### **Husky 307 AODD Pump**

- 3/8 in fluid connections
- Fluid delivery up to 7 gpm (26.5 lpm)
- Operate as low as 20 psi up to 100 psi for max flow
- Maximum working pressure of 100 psi for long line runs
- End porting available
- High-efficiency air valve operates at maximum of 6 scfm
- Groundable to reduce risk of static and electric shock

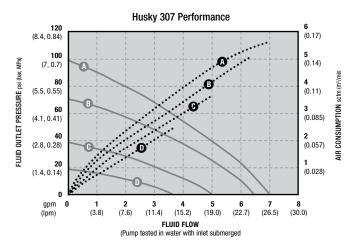
echnical Specifications		
Maximum fluid working pressure	100 psi (6.9 bar, 0.69 MPa)	
Maximum free-flow delivery*	7.0 gpm (26.5 lpm)	
Maximum pump speed	330 cpm	
Fluid displacement per cycle**	0.02 gal (0.076 l)	
Maximum suction lift	12 ft (3.7 m) dry	
Maximum-size pumpable solids	0.06 in (1.5 mm)	
Maximum ambient operating temperature***	180°F (82.2°C)	
Maximum diaphragm operating temperature***	150°F (65.6°C)	
Typical sound level at 50 psi (3.5 bar, 0.35 MPa) air @ 50 cpm	75 dB(A)	
Maximum air consumption	6 scfm (0.17 m³/min)	
Air pressure operating range	20 psi to 100 psi (1.4 bar to 6.9 bar, 0.14 MPa to 0.69 MPa)	
Air inlet size	1/4 NPT(F) or BSPT(F)	
Fluid inlet size	3/8 NPT(F)	
Fluid outlet size	3/8 NPT(F)	
Weight	5.2 lb (2.4 kg)	
Wetted parts	Acetal with stainless steel fibers, PTFE	
Instruction manual	308553	
*Flow rates are with muffler and do not vary based on diaphragm material, **Displacement per cycle may vary based on suction		

\*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.

## Ordering Information

## **Husky 307 AODD Pump**

Part Number	Description
D31255	Husky 307 Acetal Pump – 3/8 in, Acetal/TPE













### **Husky 515 AODD Pump**

- 1/2 in fluid connections
- Fluid delivery up to 15 gpm (56.7 lpm)
- Operate as low as 30 psi up to 100 psi for max flow
- Maximum working pressure of 100 psi for long line runs
- Center and end porting options available
- High-efficiency air valve operates at maximum of 28 scfm
- Groundable to reduce risk of static and electric shock

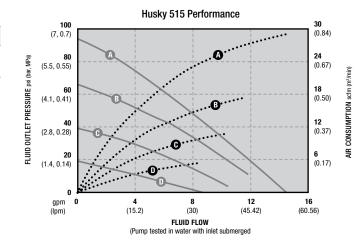
Technical Specifications			
Maximum fluid working pressure	100 psi (6.9 bar, 0.69 MPa)		
Maximum free-flow delivery*	15 gpm (57 l/min)		
Maximum pump speed	400 cpm		
Fluid displacement per cycle**	0.04 gal (0.15 l)		
Maximum suction lift	15 ft (4.5 m) dry, 25 ft (7.6 m) wet		
Maximum-size pumpable solids	3/32 in (2.5 mm)		
Maximum ambient operating temperature***	180°F (82.2°C)		
Maximum diaphragm operating temperature***	180°F (82.2°C)		
Typical sound level at 70 psi (4.8 bar, 0.48 MPa) air @ 50 cpm	77 dB(A)		
Maximum air consumption	28 scfm (0.672 m³/min)		
Air pressure operating range	30 psi to 100 psi (2.1 bar to 6.9 bar, 0.21 MPa to 0.69 MPa)		
Air inlet size	1/4 NPT(F)		
Fluid inlet size	3/4 in NPT(F)		
Fluid outlet size	1/2 and 3/4 in NPT(F)		
Weight	7.8 lb (3.5 kg)		
Wetted parts	Groundable acetal, Buna-N, PTFE		
Instruction manual	309204		
*Flow rates are with muffler and do not very based on displacem materi	al. **Diaplacement per avale may yany beend an ay-+!		

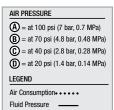
\*Flow rates are with muffler and do not vary based on diaphragm material. \*\*Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type. \*\*\*Actual pump performance may be affected by prolonged usage at temperature.

## Ordering Information

#### **Husky 515 AODD Pump**

•		•
	Part Number	Description
	243669	Husky 515 Acetal Split Inlet –















## **Husky 716 AODD Pump**

- 3/4 in fluid connections
- Fluid delivery up to 16 gpm (60.6 lpm)
- Operate as low as 30 psi up to 100 psi for max flow
- Maximum working pressure of 100 psi for long line runs
- Center and end porting options available
- High-efficiency air valve operates at maximum of 28 scfm
- · Groundable to reduce risk of static and electric shock

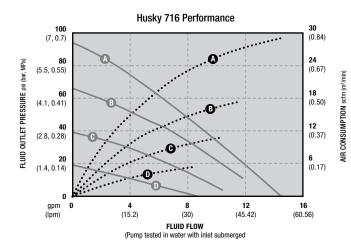
	100 1/001 00015
Maximum fluid working pressure	100 psi (6.9 bar, 0.69 MPa)
Maximum free-flow delivery*	16 gpm (61 l/min)
Maximum pump speed	400 cpm
Fluid displacement per cycle**	0.04 gal (0.15 l)
Maximum suction lift	15 ft (4.5 m) dry, 25 ft (7.6 m) wet
Maximum-size pumpable solids	3/32 in (2.5 mm)
Maximum ambient operating temperature***	180°F (82.2°C)
Maximum diaphragm operating temperature***	180°F (82.2°C)
Typical sound level at 70 psi (4.8 bar, 0.48 MPa) air @ 50 cpm	77 dB(A)
Maximum air consumption	28 scfm (0.672 m³/min)
Air pressure operating range	25 psi to 100 psi (1.8 bar to 6.9 bar, 0.18 MPa to 0.69 MPa
Air inlet size	1/4 NPT(F)
Fluid inlet size	3/4 in NPT(F)
Fluid outlet size	3/4 in NPT(F)
Weight	8.5 lb (3.9 kg)
Wetted parts	Buna-N, acetal, aluminum, stainless steel PTFE, zinc-plated steel
Instruction manual	308573

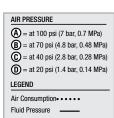
<sup>\*</sup>Flow rates are with muffler and do not vary based on diaphragm material. \*\*Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type. \*\*\*Actual pump performance may be affected by prolonged usage at temperature.

## >>> Ordering Information

## **Husky 716 AODD Pump**

Part Number	Description
241906	Husky 716 Aluminum – 3/4 in, Aluminum/Buna-N















### **Husky 1590 AODD Pump**

- 1-1/2 in fluid connections
- Fluid delivery up to 90 gpm (340.7 lpm)
- Operate as low as 20 psi up to 120 psi for max flow
- Maximum working pressure of 120 psi for long line runs
- End porting available
- High-efficiency air valve operates at maximum of 125 scfm
- · Groundable to reduce risk of static and electric shock

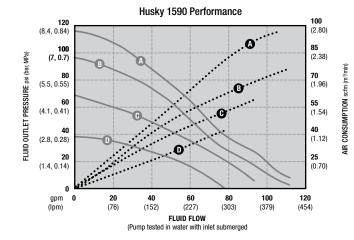
Technical Specifications			
Maximum fluid working pressure	120 psi (8.4 bar, 0.84 MPa)		
Maximum free-flow delivery*	100 gpm (378.5 l/min)		
Maximum pump speed	200 cpm		
Fluid displacement per cycle**	0.5 gal (1.96 l)		
Maximum suction lift	20 ft (6.1 m) dry		
Maximum-size pumpable solids	0.19 in (4.8 mm)		
Maximum ambient operating temperature***	150°F (65.5°C)		
Maximum diaphragm operating temperature***	150°F (65.5°C)		
Typical sound level at 70 psi (4.8 bar, 0.48 MPa) air @ 125 cpm	77 dB(A)		
Maximum air consumption	125 scfm (3.5 m³/min)		
Air pressure operating range	20 psi to 100 psi (1.4 bar to 6.9 bar, 0.14 MPa to 0.69 MPa)		
Air inlet size	1/2 NPT(F)		
Fluid inlet size	1-1/2 NPT(F) or BSPT(F)		
Fluid outlet size	1-1/2 NPT(F) or BSPT(F)		
Weight	33.5 lb (15.2 kg)		
Wetted parts	Acetal, aluminum, TPE, PTFE		
Instruction manual	308441		

<sup>\*</sup>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.

## Ordering Information

### **Husky 1590 AODD Pump**

Part Number	Description
DB3525	Husky 1590 Aluminum – 1.5 in, Aluminum/TPE















### **Husky 2150 AODD Pump**

- 2 in fluid connections
- Fluid delivery up to 150 gpm (567.8 lpm)
- Operate as low as 20 psi up to 120 psi for max flow
- Maximum working pressure of 120 psi for long line runs
- End porting available
- High-efficiency air valve operates at maximum of 175 scfm
- · Groundable to reduce risk of static and electric shock

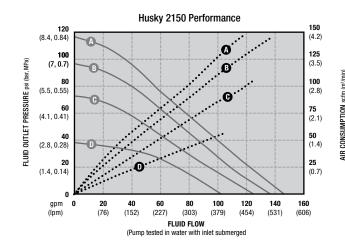
echnical Specifications		
Maximum fluid working pressure	120 psi (8.4 bar, 0.84 MPa)	
Maximum free-flow delivery*	150 gpm (568 l/min)	
Maximum pump speed	145 cpm	
Fluid displacement per cycle**	1.03 gal (3.9 l)	
Maximum suction lift	20 ft (6.1 m) dry	
Maximum-size pumpable solids	0.25 in (6.3 mm)	
Maximum ambient operating temperature***	150°F (65.5°C)	
Maximum diaphragm operating temperature***	150°F (65.5°C)	
Typical sound level at 70 psi (4.8 bar, 0.48 MPa) air @ 125 cpm	78 dB(A)	
Maximum air consumption	175 scfm (4.9 m³/min)	
Air pressure operating range	20 psi to 120 psi (1.4 bar to 8.4 bar, 0.14 MPa to 0.84 MPa)	
Air inlet size	1/2 NPT(F)	
Fluid inlet size	2 in NPT(F)	
Fluid outlet size	2 in NPT(F)	
Weight	58 lb (26.3 kg), 62 lb (28.1 kg) – Extended	
Wetted parts	Acetal, aluminum, TPE, PTFE	
Instruction manual	308368	
*Flow rates are with muffler and do not you beard an disphrage materi	-l **Dil	

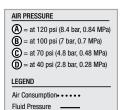
<sup>\*</sup>Flow rates are with muffler and do not vary based on diaphragm material. \*\*Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type. \*\*\*Actual pump performance may be affected by prolonged usage at temperature.

## Ordering Information

### **Husky 2150 AODD Pump**

Part Number	Description
DF3525	Husky 2150 Aluminum – 2 in, Aluminum/TPE















## **Husky 3300 AODD Pump**

- 3 in fluid connection
- Fluid delivery up to 300 gpm (1,135.6 lpm)
- Operate as low as 20 psi up to 125 psi for max flow
- Maximum working pressure of 125 psi for long line runs
- Rotatable center porting available
- High-efficiency air valve operates at maximum of 335 scfm
- · Groundable to reduce risk of static and electric shock

Technical Specifications				
Maximum fluid working pressure	125 psi (8.4 bar, 0.84 MPa)			
Maximum free-flow delivery*	300 gpm (1,135 l/min)			
Maximum pump speed	103 cpm			
Fluid displacement per cycle**	2.9 gal (11 l)			
Maximum suction lift	8 ft (2.4 m) dry, 28 ft (8.5 m) wet			
Maximum-size pumpable solids	0.5 in (13 mm)			
Maximum ambient operating temperature***	150°F (65.5°C)			
Maximum diaphragm operating temperature***	150°F (65.5°C)			
Typical sound level at 50 psi (3.4 bar, 0.34 MPa) air @ 50 cpm	92 dB(A)			
Maximum air consumption	335 scfm (9.5 m³/min)			
Air pressure operating range	20 psi to 125 psi (1.4 bar to 8.6 bar, 0.14 MPa to 0.86 MPa)			
Air inlet size	3/4 NPT(F)			
Fluid inlet size	3 in (76.2 mm) NPT or BSPT with ANSI/DIN flange			
Fluid outlet size	3 in NPT(F) or BSPT(F)			
Weight	150 lb (68 kg)			
Wetted parts	Acetal, aluminum, carbon-coated steel, TPE			
Instruction manual	3A0410			

<sup>\*</sup>Maximum values with water as media at ambient temperature. Water level is approximately 3 ft above pump inlet.

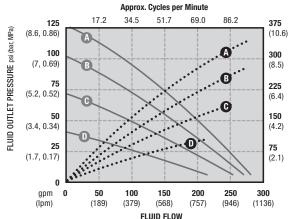
## Ordering Information

## **Husky 3300 AODD Pump**

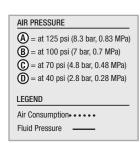
Part Number	Description
652002	Husky 3300 Aluminum – 3 in, Aluminum/TPE

#### **Pump Performance**

#### Husky 3300 Performance



FLUID FLOW (Pump tested in water with inlet submerged)



<sup>\*\*</sup>Startup pressures and displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type.

\*\*\*Sound power measured per ISO-9614-2. Sound pressure was tested 3.28 ft (1 m) from equipment.







# **Pre-Mixed Windshield Wash Solvent and Coolant Dispense**



	Package Number	237161		
	Pump Type	Husky 307		
	Pump	D31255		
	Installation Kit	237160		
	Air Filter	110146		
sapi	Air Gauge	108190		
Installation Kit Includes	Air Regulator	110318		
on Kit	Fluid Connect Hose – 4 ft	220596		
allatic	Air Connect Hose – 6 ft	109125		
Inst	Mounting Bracket	190125		
	Suction Kit	223888		
	Wall Bracket Kit	224835		
	Instruction Manual	308426		







>>> Ordering Information

## **Bulk Antifreeze and Windshield Solvent Transfer Packages**









Package Number	244679	244680	244681	244682
Pump Type	Husky 1050 – Dual Inlet	Husky 1050 – Single Inlet	Husky 515 – Dual Inlet	Husky 716 – Single Inlet
Pump	647016	647016	243669	241906
Air Regulator	244844	244844	110147	110147
Fluid Connect Hose	115042	115042	109105	109105
Air Connect Hose	205418	205418	205418 109125	
Air Shut-Off Valve	110225	110225	110225 110223	
Wall Mount Bracket	24C637	24C637	224835	224835
Dual Inlet Manifold	24D147	-	-	-
Suction Kit	(2) 236054	236054	(2) 236054	236054
Thermal Relief Kit	238428	238428	238428	238428
Instruction Manual	309353	309353	309353	309353

### **Air Line Filters**

<b>4</b>	Husky Pump	307	515/716	1050	1590	2150	3300
( or one	Part Number	110146	110146	106148	106149	106150	106150

## **Air Regulator and Gauge**

<b>6</b>	Husky Pump	307	515/716	1050	1590	2150	3300
	Part Number	110147	110147	246946	202858	206199	207651

## **Air Quick-Connect Coupler**

	Husky Pump	307	515/716	1050	1590	2150	3300
	Part Number	208536	208536	110199	110199	110199	110200

## **Air Quick-Connect Nipple**

Allina	Husky Pump	307	515/716	1050	1590	2150	3300
	Part Number	169970	169970	110196	110196	110196	110197

## **Bleed-Type Air Valve**

0 0	Husky Pump	307	515/716	1050	1590	2150	3300
	Part Number	110223	110223	110224	110225	110225	110226

### **Dual-Inlet Manifold**

- II	Husky Pump	307	515	1050	1590	2150	3300
ALC: NO.	Part Number	237211	194347	24D205	-	-	-

## **Grounding Wire and Clamp**

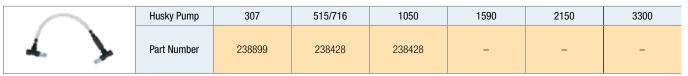
Husky Pump	307	515/716	1050	1590	2150	3300
Part Number	222011	222011	238909	222011	238909	238909

## **Suction Hose Kit**

D	Husky Pump	307	515/716	1050	1590	2150	3300
	Part Number	236054	236054	236054	222916	222916	-

# **Diaphragm Pump Accessories**

## **Thermal Relief Kit**



## Thermal Relief Valves – 150 psi (10.3 bar)

	Husky Pump	307	515/716	1050	1590	2150	3300
•	Part Number			113497 al/bn	, 112119 ss/tf		

## **Wall Bracket**

Husky Pump	307	515/716	1050	1590	2150	3300
Part Number	224835	224835	24C637	-	-	-

## **Air-Operated Double-Diaphragm Transfer Pumps Replacement Parts**

	(8.)	M			H				
Pump Number	D31255	243669	241906	647016	647731	647648	DB3525	DF3525	652002
Air Valve Replacement Kit	239952	241657	241657	24B768	24B768	24B768	236273	236273	24K860
Seats	D03200	D05200	D05200	24B634	24B632	24B634	D0B500	D0F500	24K932
Balls	D03050	D05070	D05070	24B639	24B639	24B639	D0B020	D0F020	24K937
Diaphragm Kit	D03005	D05007	D05007	24B624	24B624	24B624	D0B005	D0F005	24K901
Fluid Repair Kit (Ball, Seats, Diaphragm)	D03255	D05277	D05277	25A857	_	25A857	D0B525	D0F525	25A874





## Ideal for Undercoating and Rustproofing Application in Medium-Sized Shops

Utilizing the durable Fire-Ball® 300 pump, these kits are designed for use in medium-volume undercoating and rustproofing dispense applications. A three-inch differential air motor ensures smooth pumping, and the double-acting pump design provides reliable material flow and accurate dispense.

#### Durable

Thick cast aluminum air motor housing offers unmatched durability.

## Superior Material Handling

Double-acting pump ensures smooth fluid flow.

#### Extended Seal Life

In-line pump design aligns the air motor piston and fluid piston rods to maximize seal life.

## Wetted-Parts Options

Available in carbon steel for petroleum-based or SST for water-based materials.

#### Corrosion-Resistant

Corrosion-resistant design utilizes liquid nitriding, nickel plating, stainless steel, aluminum and chrome on key components for longer life.

## **Typical Applications**

- Undercoating, rustproofing and sound-deadening materials
- Automotive and heavy-duty vehicle dealerships
- Fast lube centers and service shops
- · Fleet service facilities

#### Typical Fluids Handled

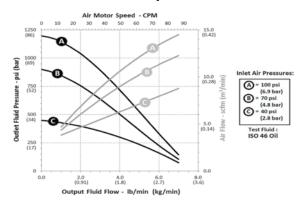
 Undercoating and rustproofing (Verify chemical compatibility for pump's wetted components with undercoating material supplier or contact Graco directly at 1-800-533-9655)

# **Undercoating and Rustproofing Pumps**



## Pump Performance

## Fire-Ball 300 15:1 Pumps



EL LID D. II	45.4
Fluid Pressure Ratio	15:1
Air Motor Effective Diameter	3 in (76.2 mm)
Annual Usage	Up to 10,000 lb (4,535 kg)
Maximum Fluid Working Pressure	2,700 psi (186 bar / 18.6 MPa)
Approximate Free-Flow Rate @ 100 psi	7.5 lb/min (3.4 kg/min)
Output per Cycle	1.29 oz (36.6 g)
Continuous-Duty Flow Rate	0.7 lb/min (0.32 kg/min)
Approximate Air Use and Flow @ 100 psi (80 cpm)	14 @ 6.5 lb/min (0.40 @ 2.9 kg/min
Air Inlet	3/8 in NPT(F)
Fluid Outlet	1/4 in NPT(F)
Air Operation Range	40 psi to 180 psi (2.8 bar to 12.5 bar
Max Recommended Pump Speed	66 cpm
Cycles per Pound	12.4 cpp
Cycles per Kg	27 cpk
Wetted Parts	CS, AL, leather, PTFE, rubber
Sound Pressure Level	77.8 dB(A)
Sound Power Level	85.6 dB(A)
Approximate Weight	22 lb (10 kg)
Instruction Manual	306531



## Ordering Information

## **Undercoating Packages**



Package Number	222077	226342	226269
Type of Package	Stationary	Portable Dolly-Mounted	Stationary
Ratio	15:1	15:1	15:1
Container Size	35 lb (16 kg)	120 lb (54 kg)	400 lb (180 kg)
Pump Part Number	206405	206699	206700
Dispense Kit*	222079	222079	222082
Tip	286517	286517	286517
Hose Length	15 ft (4.6 m)	15 ft (4.6 m)	25 ft (7.6 m)
Drum Cover	222058	204574	200326
Portable Base	_	204144	-
Instruction Manual	307879	307879	307879

<sup>\*</sup>Dispense kit includes Air Regulator (110234), Air Gauge (100960), Spray Gun (234237)

# **Undercoating and Rustproofing Pump Packages**



>>> Ordering Information

## **Spray Masking Package**



Package Number	224826
Type of Package	Bung Mounted Stationary
Ratio	15:1
Container Size	400 lb (180 kg)
Pump Part Number	224825 (SST pump)
Flexible Downtube	224022*
Dispense Kit**	224023
Tip	286211/286621
Hose Length	25 ft (7.6 m)
Instruction Manual	308069

\*224022 is long enough for 400 lb (180 kg) container, but can be trimmed to accommodate smaller containers. \*\*Dispense kit includes Flex Plus™ spray gun (235457).



## Ordering Information

## **Application Gun**

4	
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Part Number	Description
234237	Four-finger silver gun with tip guard 243161 and tip 286517. 4,500 psi (310 bar) x 3/8 NPT(f) inlet. Must order 155570 adapter and 239663 straight swivel to accommodate gun to 1/4 in (mbe) hose.

## **Bung Adapter**

(4)
-50

Part Number	Description
239966	Bung adapter compatible with Fire-Ball 300, 15:1 pump

## **Filter**



Part Number	Description
214570	60-mesh aluminum filter, 3/8 NPT(F) inlet, 1/4 NPT(F) outlet. Maximum working pressure 3,000 psi (210 bar).

## **Nozzle Extension**



	Part Number	Description
,	206496	Nozzle extension delivers 360° coating fan into blind areas. Length 30-3/4 in (99 cm) x 7/8-14(f) end. Tip 206502, size .043.

## **Replacement Screen Elements (SST)**

	Part Number		
	30 Mesh	60 Mesh	100 Mesh
3-Pack	224458	224459	224469
25-Pack	238436	238438	238440

### **Swivel**



Part Number	Description
202577	Z-swivel allows non-binding movement for hard-to-reach locations.  Order 155570 adapter separately to accommodate 234237 gun.











## **Reliable Operation in the Harshest Environments**

With its efficient, large-ported air valve, the Bulldog 43:1 air-powered pump is the highest-performing in its class. Downtime is minimized by an air motor design that has been developed and tested for more than 10 million cycles of operation.



Grounded lug prevents static buildup.

## Easy Installation

Compact, low-profile design makes installation easier.

#### Corrosion-Resistant

Lightweight aluminum construction.

## **Built-In Reliability**

Tested to 10 million cycles without failure.

### **Typical Applications**

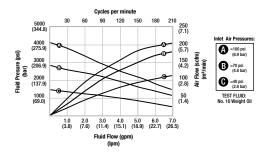
· Supplies hydraulic oil to accumulators in oil rig blowout prevention systems.

#### Typical Fluids Handled

Hydraulic oil

#### **Pump Performance**

#### **Bulldog 43:1 Pumps**













Technical Specifications		
Fluid Pressure Ratio	43:1	
Maximum Fluid Working Pressure	4,300 psi (301 bar / 30.1 MPa)	
Maximum Air Input Pressure	100 psi (7 bar)	
Air Inlet	3/4 in NPSM(F)	
Fluid Inlet	1 in NPT(F)	
Fluid Outlet	3/4 in NPT(F)	
Wetted Parts	Carbon steel, stainless steel, chrome plating, zinc plating, nickel plating, brass, Buna-N	
Instruction Manual	309966	

## Ordering Information

## **Bulldog 43:1 Pumps**

Part Number	Description
218334	43:1 Bulldog hydraulic supply pump

### **Accessories**

## **Air Pressure Regulators**

Part Number	Description
206197	1/2 in NPT inlet and outlet
207755	3/4 in NPT inlet and outlet

## **Air Line Filters**

Part Number	Description
106149	1/2 in NPT inlet and outlet
106150	3/4 in NPT inlet and outlet

### **Air Line Lubricators**

Part Number	Description
214848	1/2 in NPT inlet and outlet
214849	3/4 in NPT inlet and outlet

## **Grounding Clamp and Wire**

Part Number	Description
103538	Grounding clamp
222011	Ground wire

## **Bleed-Type Master Air Valve**

Part Number	Description
107142	1/2 in NPT inlet and outlet

## **Repair Kits**

Part Number	Description
24U227	Pump lower repair kit
24U228	Air motor repair kit
24W515	Pump and air motor repair kit













## **Used for Low-Volume Dispense** of a Variety of Fluids

This air-operated piston pump is ideal for pumping various fluids and provides a continuous-duty flow rate of up to 5 gpm.

## High-Quality Air Motor

Differential air motor ensures smooth pumping.

## Lightweight Design

Allows for easy transport and drum insertion.

## Easily Controlled Flow Rate

Simple regulation of air supply controls flow rate.

### Submersible Suction Tube

Stubby and drum length suction tubes eliminate the need for suction pipe or tube.

#### Corrosion Resistance

Available stainless steel models offer protection in harsh environments.

#### **Typical Applications**

- Low-pressure, high-volume transfer of low viscosity fluids
- · Automotive dealerships
- Heavy-duty dealerships
- · Fast lube centers
- · Fleet service facilities
- Service shops
- In-plant
- Lube trucks
- Mining

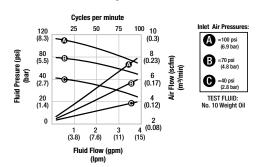
#### Typical Fluids Handled

- Water
- Antifreeze
- · Windshield wash fluid

NOTE: Use Fast-Ball® 1:1 for petroleum-based products.

#### **Pump Performance**

#### **Fast-Flo 1:1 Pumps**











hnical Specifications	
Fluid Pressure Ratio	1:1
Air Motor Effective Diameter	1.4 in (35.6 mm)
Maximum Fluid Working Pressure	180 psi (12 bar/1.2 Mpa)
Approximate Free-Flow Rate @ 100 psi (80 cpm)	5 gal/min (19 liters/min)
Output per Cycle	151 cc
Approximate Air Use and Flow @ 100 psi (80 cpm)	7 csfm @ 3.1 gpm (0.2 m³/mm @ 11.71 lpm)
Air inlet	1/4 in NPT(F)
Fluid Inlet	1-1/2 in NPT(F)
Fluid Outlet	3/4 in NPT(F)
Air Operations Range	40 psi to 180 psi (2.8 bar to 12 bar)
Maximum Pump Speed	100 cpm
Cycles per Gallon	25 cpg
Cycles per Liter	6.6 cpl
Wetted Parts	See ordering info
Sound Pressure Level	72 dB(A)
Sound Power Level	82 dB(A)
Instruction Manual	307427

# >>> Ordering Information

## **Fast-Flo 1:1 Pumps**

Includes motor and pump lower assembly.

Fluid	Length	Tube Material	Seal Material	Approvals	Part Number
Antifreeze, Windshield	Drum	Stainless Steel	Polyethylene	ETL, CE, EX	226942
Washer Solvent, ATF, Oil	Universal	Stainless Steel	Polyethylene	ETL, CE, EX	226945
			Buna-N	CE	226947
			Buna-N	CE	226951*
		Carbon Steel	Leather	CE, EX	237133
	Drum	Carbon Steer	PTFE	CE, EX	237134
	Druill		Leather	ETL, CE, EX	226940
			Polyethylene ETL, CE, EX	226941	
		Stainless Steel Buna-N PTFE	Buna-N	CE	226953
Oil			CE, EX	237129	
			Buna-N	CE	226948
			Leather	CE, EX	237130
		Carbon Steel	PTFE	CE, EX	237131
	Universal		Leather	ETL, CE, EX	226943
			Polyethylene	ETL, CE, EX	226944
		Stainless Steel	Buna-N	CE	226952
		Stairliess Steel	PTFE	CE, EX	237132

<sup>\*</sup>Adjustable downtube length between 18 in (457 mm) and 46.4 in (1,180 mm)

# **Fast-Flo 1:1 Pump Accessories**

## >>> Ordering Information

## **Hose and Fitting Kits**

	Part Number	Description	Incl	udes
	Fait Number	Description	Air Hose / Swivel Elbow	Fluid Hose / Swivel Elbow
133	222118	18 in (0.5 m) for connecting wall-mounted Fast-Flo 1:1 pumps to piping	109123 / 155541	109108 / 160327
	222119	6 ft (1.8 m) for use with drum-mounted Fast-Flo 1:1 pumps	109125 / 155541	109105 / 160327

## **Bung Adapters**

Part Number	Description
214583	Allows direct mounting of full-length Fast-Flo 1:1 pumps into standard 2 in NPT drum bung (included).
217359	Sealed bung adapter for Fast-Flo pumps; can be used with suction kit 236054.

## **Installation Kits**

Part Number	Description
218316	Includes regulator (104815), gauge (104655) and fittings (169969/114558) as necessary for normal installation.
210881	Wall mounting bracket for Fast-Flow 1:1 Pumps

## **Suction Kit**

g-	Part Number	Description		Includes	
<b>₽</b>	rait Nullibei	Description	Bung Adapter	Bushing Pipe	6 ft Hose
	236054	6 ft (1.8 m) suction kit for 55 gal (200 l) drums. For use with Fast-Ball, Mini Fire-Ball and Fire-Ball universal pumps.	188845	101496	109105

## Ordering Information

## **Drum Covers**

	Part Number	Description
	204574	Drum cover for 10 gal (40 l) and 16 gal (60 l) sized containers. Drum cover mounts on top of an open drum with mounting house for a 1:1 pump. Includes thumb screws and a rubber gasket.
•	200326	Drum cover for a 55 gal (200 l) container. Drum cover mounts on top of an open drum, with mounting for a 1:1 pump.

## **Air Line Filter**

92000	Part Number	Description
T.	106149	1/2 in NPT inlet and outlet

## **Air Line Lubricator**

*	Part Number	Description
	214848	1/2 in NPT inlet and outlet











#### **Electric Convenience**

There's an easier, more efficient way to pump fluid to your critical equipment. Graco's all-electric EGP pumps reduce operating costs without compromising the durability you expect from the industry leader in pumping solutions. Add convenience and peace of mind to your everyday operations.

#### **EGP Transfer Pumps**

Use the EGP Transfer Pump in locations where compressed air is unavailable or too cumbersome for short-distance fluid transfer.



### Electrical Flexibility

Available in 12 VDC and 115 VAC power options.

#### Smooth Fluid Flow 8 gpm (30 lpm)

Output flow is continuous and non-pulsating up to 8 gpm (30 lpm).

## Heavy-Duty Motor with Long Life

Industrial-grade electric motors with over-temperature protection on 115 VAC models.

#### Consistent Pressure

Built-in fluid bypass valve protects pump and downstream components.

### **Pump Protection**

Includes inlet strainer to keep larger debris out of pump housing and extend pump life.

#### Plug and Play

Self-priming, precision-machined pump design.

#### Typical Applications

- · Filling bulk tanks from drums
- · Lubricant transfer from remote locations
- Construction equipment
- · Agricultural equipment
- Filling in-plant machinery
- Evacuating used oil receivers
- Filling shop oil furnaces with new or used oil
- · Automotive and truck service garages
- Fleet marine and personal boat service
- · Aircraft maintenance

#### **EGP On-Demand Pumps**

Install the EGP On-Demand Pump in a variety of applications including workshops, mobile trucks and industrial plants. Use it as an energy-efficient option to standard pneumatic pumps.



#### Electrical Flexibility

Available in 12 VDC and 115 VAC power options.

#### Smooth Fluid Flow 4 gpm (15 lpm)

Output flow is continuous and non-pulsating up to 4 gpm (15 lpm).

#### Heavy-Duty Motor with Long Life

Industrial-grade electric motor with over-temperature protection on 115 VAC model.

#### Fluid Flow When Needed

On-demand pressure sensing technology starts and stops the pump during the dispense.

#### Pump Reliability

Internal inlet and outlet checks keep pump section flooded to maintain prime for reliable performance.

#### Simultaneous Dispenses

Pump long distances and supply fluid to multiple dispense points.

#### Typical Fluids Handled

- Petroleum- and synthetic-based oils (motor, gear and ATF)
- Waste oil
- Antifreeze
- · Hydraulic fluids
- Cutting oils
- Non-flammable oil-based solvents
- Oil-based herbicide carriers



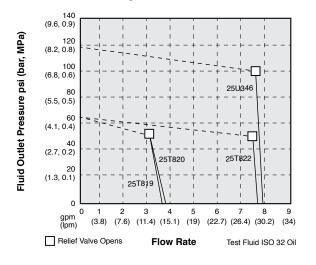




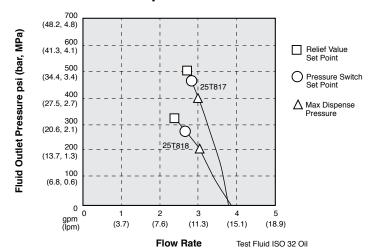




## **EGP Transfer Pumps Performance Chart**



## **EGP On-Demand Pumps Performance Chart**



## Ordering Information

	EGP Transfer Pump Models				EGP On-Deman	d Pump Models
Package Part Number	25T819	25T820	25T822	-	_	-
Pump Part Number	-	-	-	25U346	25T817	25T818
Voltage	12 VDC	115 VAC	115 VAC	115 VAC	115 VAC	12 VDC
Hertz	_	60 Hz	60 Hz	60 Hz	60 Hz	_
Motor Type	TENV	ODP	ODP	TENV - IP55	TENV - IP55	TENV
Horsepower	1/2	1/2	3/4	1.0	1.5	3/4
Maximum Current (Amps)	30	8.7	9.9	9.1	14.4	60
Maximum Free Flow Rate gpm (lpm)	3.8 (14.4)	3.9 (14.8)	7.7 (29.1)	8.0 (30.3)	3.7 (14.0)	3.8 (14.4)
Maximum Pressure psi (bar)	65 (4.5)	65 (4.5)	65 (4.5)	120 (8.3)	500 (34.5)	325 (22.4)
Automatic Relief Setting psi (bar)	65 (4.5)	65 (4.5)	65 (4.5)	120 (8.3)	500 (34.5)	325 (22.4)
Inlet	1 in NPT	1 in NPT	1 in NPT	1 in NPT	3/4 in NPT	3/4 in NPT
Outlet	3/4 in NPT	3/4 in NPT	3/4 in NPT	3/4 in NPT	1/2 in NPT	1/2 in NPT
Bung Adapter			260	061		
Dispense Kit	133376 – – –			_		
Suction Kit	133375 – – –				_	
Wetted Parts	Carbon steel with zinc plating, stainless steel, galvanized steel, aluminum, nitrile, rubber, PVC, PVC cement  Carbon steel with zinc plating, stainles galvanized steel, aluminum, nitrile, ru					
Weight Ib (kg)	25 (11)	22 (10)	25 (11)	25 (11)	36 (16.3)	36 (16.3)
Manual	3A8569	3A8568	3A8568	3A8568	3A8570	3A8571

# **EGP**<sup>™</sup> Transfer and EGP On-Demand













## Ordering Information

## **Accessories**

Part Number	Description
133412	Wall mounting bracket, fits all transfer models
260238	"Y" strainer with 3/4 in NPT female in-line strainer for used oil transfer
133377	Suction filter
260124	55 in (1.3 m) PVC suction tube with inlet check valve
133376	Dispense valve kit
133375	Suction tube kit, 3/4 in PVC