

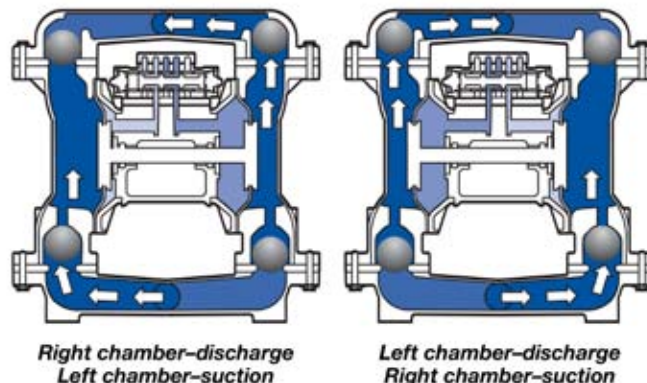
1/4" - 2" Air-Operated Pumps

Basic Design Features

Diaphragm pumps are driven by compressed air. The directional air distribution valve and pilot valve—the “air end”—are located in the center section of the pump. Liquid moves through two manifolds and outer chambers of the pump—the “wet end”. Generally, check valves are located at the top and bottom of each outer chamber or on a common manifold. The two outer chambers are connected by suction and discharge manifolds.

Lincoln’s double diaphragm self-priming design offers many advantages over other pumps.

- **Pump abrasive and sheer-sensitive materials.** Low interval velocities move abrasives easily with no damage. Gentle pumping action does not shear fragile materials.
- **Pumps viscous materials.** Even heavy or solids-laden materials can be pumped.
- **Environmentally friendly.** No motors, seals or packing to leak.
- **Self-priming.** Able to dry prime under most suction lift or flooded suction conditions.
- **Variable flow.** Regulate the inlet air supply to adjust flow.
- **Runs dry without damage.**
- **Deadheads against closed discharge.** Excessive back pressure stops operation without damage until discharge opens. Eliminates bypass systems or relief valves.
- **Explosion-proof.** Eliminates sparking concerns of other electrical or rotating pumps.



85630



85628



85622



85634

WARNING

In the event of diaphragm rupture, pumped material may enter the air end of the pump and be discharged into the atmosphere. **If pumping a product which is hazardous or toxic, the air exhaust must be piped to an appropriate area for safe disposition.**

1:1 Air-Operated Diaphragm Pump Line

Model Number	Pump Description	Pump Body	Wetted or Soft Parts	Pump Inlet/Outlet NPT	Max. Free Delivery GPM	Air Inlet NPT(F)	Max. Rec. Inlet Air Pressure	Max. Susp. Solids	Application
85630	1/4"	Polyprop	PTFE	1/4" / 1/4"	4	1/4"	100 psi	1/32"	New oil, AF, windshield washer
85631	1/2"	Aluminum	Buna-N	1/2" / 1/2"	15	1/4"	100 psi	1/8"	New/used oil, AF
85632	1/2"	Aluminum	PTFE	1/2" / 1/2"	15	1/4"	100 psi	1/8"	New oil, AF
85633	1/2"	Aluminum	Hytrel	1/2" / 1/2"	15	1/4"	100 psi	1/8"	New oil
85622	1/2"	Polyprop	Santoprene	1/2" / 1/2" *	14	1/4"	100 psi	1/8"	High abrasion materials
85623	1/2"	Polyprop	PTFE	1/2" / 1/2" *	14	1/4"	100 psi	1/8"	New oil, AF
85626	1/2"	Polyprop	Buna-N	1/2" / 1/2" *	14	1/4"	100 psi	1/8"	New oil, AF
85629	1"	Aluminum	Hytrel	1" / 1"	45	1/2"	125 psi	1/4"	New oil
85628	1"	Aluminum	PTFE	1" / 1"	45	1/2"	125 psi	1/4"	New oil, AF
85627	1"	Aluminum	Buna-N	1" / 1"	45	1/2"	125 psi	1/4"	New/used oil, AF
85621	1 1/2"	Aluminum	Buna-N	1 1/2" / 1 1/2"	106	3/4"	125 psi	1/4"	New/used oil, AF
85624	2"	Aluminum	Buna-N	2" / 2"	150	3/4"	125 psi	1/4"	New/used oil, AF

Dual Inlet

85636	1/2"	Aluminum	Buna-N	1/2" / 1/2"	15	1/4"	125 psi	1/8"	AF/Water
85637	1/2"	Polyprop	Buna-N	1/2" / 1/2"	14	1/4"	100 psi	1/8"	AF/Water
85639	1"	Polyprop	Buna-N	1"ANSI**	45	1/2"	100 psi	1/4"	AF/Water
85638	1"	Aluminum	Buna-N	1" / 1"	42	1/2"	125 psi	1/4"	AF/Water

* Can be converted to dual 1/2" outlet. ** 85639 requires 275631 Adapter and 275632 Seal Kit for Pipe Thread installations

U.L. Listed

85634	1" UL	Aluminum	Buna-N	1" / 1"	45	1/2"	50 psi *	1/4"	Used oil, diesel, kerosene
85635	1" UL	Aluminum	PTFE	1" / 1"	45	1/2"	50 psi *	1/4"	Unleaded gas, diesel, kerosene used oil

* 50 psi flammable liquids, 125 psi others.



85255

Wall Mount Brackets

Model 85255 Wall Mount Bracket

Wall mount bracket for 1/4" to 1/2" air-operated diaphragm pumps.

Model 84817 Wall Mount Bracket

Wall mount bracket for 1/2" to 2" air-operated diaphragm pumps.



84817

Other Accessories

Model 240994 Drum Adapter Kit

For use with 1/2" polypropylene AOD pumps. Includes 2" NPT(f) bung bushing, 1" x 36" suction tube and adapter.



240994

Model 275631 1" ANSI Flange To 1" NPT Adapter

Adapts 1" ANSI flange of 85639 polypropylene dual inlet pump to 1" NPT(f).PVC for low pressure installations. Three required to convert all pump inlets/outlets.

Model 275632 ANSI Bolt Kit with Seal

Attaches adapter to 85639 pump. One bolt kit required for each adapter. Three required to convert all pump inlets/outlets.

Transfer Pump Accessories

Suction Kits

Model 84945 Suction Kit

For transfer of product from drums, bulk tanks or reservoirs. Includes bung bushing suction tube, hose and coupling assembly. NOTE: 2" x 1" bell reducer required for use with Model 1914, not included.



84945

Model 85256 Suction Kit

Same as 84945 except for use with 1/4" AOD pumps.

Used-Fluid Overfill Warning Valves

Float rises with used fluid to activate "whistle" warning at prescribed level.

Model 84815 Single Wall

For single wall tanks & drums in used fluid systems and above ground tanks.



84815

Model 84824 Double Wall

Same as 84815 except for double walled tanks and above ground tanks.



84816

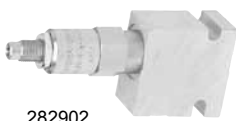
4-Way Valve

Model 84816

Four port, two position valve used in waste fluid systems. Enables one pump to pump into and out of drum or tank. 1 in. NTP female threads inlet/outlet.

Thermal Pressure Protection

Protect lube system components from high-pressure spikes caused by temperature change in a closed fluid network.



282902

Model	Description	Application	Pre-Set Relief Pressure	Port Size
282902	Valve only	AODD pumps	150 psi (10 bar)	1/2" NPT
277601-4	Kit with valve, hose, adapters	1/2 in. AODD pumps	150 psi (10 bar)	Integrated
277601-5	Kit with valve, hose, adapters	1 in. AODD pumps	150 psi (10 bar)	Integrated

Transfer Systems

Pump material from one container or reservoir to another. Typical applications involve high-volume transfer of low- to medium-viscosity fluids.

Model	Container Size	Ratio	Max. Dischrg. Pressure psi / bar	Maximum Delivery GPM/LPM	Pump Tube Construction	Packings	Pump Outlet
84080-9	55 gal.	3:1	375 / 26	2.5 / 9.5	316 Stainless Steel	PTFE	½" NPTF
84145-9	Bulk						
82230 *	16 gal. or 55 gal.	1:1	150 / 10	22 / 82	Carbon Steel	Leather	¾"-11-½" A.N.
84829	16 gal., 55 gal. or Bulk			16.5 / 66	Tube-Carbon Outlet Body Valox	Buna-N	¾" NPTF

* Accessories for 82230: 82715-PTFE kit; 91172-Hose & nozzle (see Notes: 2 below)

Model	Special Features
84080-9	2" bung bushing and ¼" NPTF return inlet.
84145-9	Wall mount kit and suction hose check (see Notes: 1 below)
82230	Built-in air control valve for throttling air supply to pump to control material output. Operates on pressure as low as 20 psi (1.4 bar). Self-adjusting bung bushing (see Notes: 2 below)
84829	Light weight and efficient. The pump will stall against pressure and can be controlled by a fluid dispensing valve.

Notes: 1) Suction hose or tube (not included) should be compatible with pumped product and not exceed 10' (3 m) long nor less than ¾" (19 mm) I.D.

2) 91172 transfer pump j. 8 feet (2.5 m) ¾" (19 mm) I.D. standard hose and curved spout, with inlet threaded ¾" - 11 - ½" A.N. to fit outlet of 82230 pump.

3) For transfer systems involving long supply lines, PowerMaster III stub pumps are available. Consult Lincoln for your application needs.

Value Series Pump Models

Model No.	Application	Mounting	Down Tube Length
4490	16-55 gallon	2" NPT male bung adapter	36.5"
4491	250-275-gallon oval tank	2" NPT male bung adapter	47.0"
4492	Stub	1.5" NPT male	N/A

Specifications

Pump Ratio	Output/Stroke	Delivery Output	Pneumatic Inlet Pressure		Operating Temp. Range	Weight (Empty)	Pneum. Port Inlet	Material Port Outlet	Rec'd. Fluids
			Max	Min					
3.5:1	5.6 in ³ / 91 cm ³	6 GPM	120 psig 8.3 bar	20 psig 1.4 bar	30°F - 120°F -1°C - 49°C	14 lbs.	¼-18 NPTF	½ NPTF	Motor oils, transmission fluid, petroleum-based fluids
			120 psig 8.3 bar	20 psig 1.4 bar					
			120 psig 8.3 bar	20 psig 1.4 bar					

Features and Benefits—Designed for Value

- Proven horizontal, valved-piston motor design for simplicity and reliability
- Motor's single-stroke action delivers quick dispense, fill or transfer with high-volume output
- Built-in muffler for quiet operation
- Available as stub pump, 16-/55-gallon pump or 250- to 275-gallon tank pump

Model 4475 Series Pump

The model 4475 pump is a reciprocating-piston, low-pressure, single-action pump. Air powers the pump's piston on the dispensing, or working, stroke. An internal spring returns the piston and resets it for the working stroke. It pumps continuously when the dispensing (fluid outlet) valve is open and 20-120 psig air is supplied to the pump.

Specifications

Model No.	Description	Material Outlet	Operation	Pump Tube Length	Attachment
4475	Bare Pump	½" NPTF	Pneum. pressure delivery stroke, spring return stroke	34" (86 cm)	2" Bung, adj. for 55- & 16-gal. drums, bench & portable tank
4480	Spigot Pump	Spigot extension with on/off valve			

Model No.	Effective Pump Ratio	Inlet Air Pressure	Output/Stroke	Free Delivery
4475	Approx. 0.7:1 to 0.8:1 depending on inlet air pressure	Max: 120 psi (8.3 bar)	2.9 in ³ (48 cm ³)	Up to 4 gpm (15 lpm)
4480		Min: 20 psig (1.4 bar)		



Model 84080-9

Model 84145-9



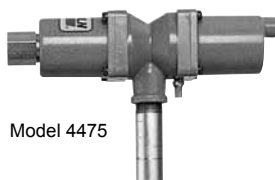
Model 82230



Model 4490



Model 4480



Model 4475



Model 2390



Model 2360



Model 83496

Ultra High-Pressure Pumps for Pressure Control Applications

Designed specifically for oil well services such as wireline and plug valve applications. In wireline applications, these pumps are used to seal against the well-head pressure as the well is being logged or perforated. In plug valve applications, they are used to pump heavy grease into the valve or "Christmas tree valves" to seal any gas leaks.

Series III PowerMaster 4, 6, 8

Pump Model	Ratio	Pump Tube	Air Motor	Max. Delivery Press. psi / bar	Max. Air Pressure psig (bar)	Pump Tube Length
2390	250:1	85304	84808	20,000 (1380)	80 (5.5)	33 ³ / ₄ " 85.70cm
2392	140:1		84806		100 (6.9)	
2394	70:1		84804		200 (13.8)	
2391	250:1	85305	84808		80 (5.5)	27 ¹ / ₈ " 68.90cm
2393	140:1		84806		100 (6.9)	
2395	70:1		84804		14,000 (965)	

Max. Delivery Pressure psig (bar)	Average Output/Cycle	Output at 75 cycles/min	Operating Temperature Range	Wetted Part Materials	Pump Stroke	Material Outlet	Gauge Port
20,000 (1380)	2 in ³ (33cc)	0.67 GPM (2.5 LPM)	-40°F to +180°F / -40°C to +82°C	Carbon Steel, Brass, Polyurethane	6" (152 mm)	Autoclave Engineers Medium Pressure Port for 3/16" Tube, 13/16-16 Thread	Autoclave Engineers Medium Pressure Port for 1/4" Tube, 7/16-20 Thread

Series II PowerMaster 6

Max. Delivery	Avg. Output	Piston Packing	Gland Packing	Pump Type	Mat'l. Outlet
.42 gal/min 1.6 l/min	1.4 in ³ /cycle 23 cc/cycle	Bushing & Plunger	Molybdenum Disulfide Urethane Stacked V	Shovel	1/2" NPTF (F)

Model No.	Pump Tube	Air Motor	Drum Size	Air Motor Size	Max. Discharge Press.	Air Inlet
2360	84304	82736	55 gal.	6 in 150 mm	14000 psi / 952 bar	3/4" NPTF(F)
2361	84604	82736	16 gal.			

Supply Line Booster Pump Tube

Ensures proper supply line pressure over long distances. The booster pump picks up low material pressure and "boosts" it back up to the desired pressure in the line. Pumping distance, pipe size and material viscosity determines number and spacing of booster pumps.

Max. Delivery	Gland Packing	Material Inlet & Outlet
1 gal/min 3.8 l/min	Polyurethane U-cup	3" NPTF(M)

Booster Pump Model	Air Motor Model	Pump Ratio	Air Motor Size in. / mm	Max. Discharge Pressure psi / bar	Air Inlet NPTF(F)
83496	82737	7.5:1	2 1/2 / 65	1500 / 102	1/4"
	82895	10.5:1	3 / 75	2100 / 142.8	1/2"
	82730	21.5:1	4 1/4 / 110	4300 / 292.4	
	82736	43:1	6 / 150		3/4"



Model 85801

Dispense Pak #1 Model 85801

For 5-gallon pail, single-gun applications not exceeding 26 cu. in. (426 cc) per minute.

Air Inlet	Material Outlet	Control Valve Inlet	Control Valve Outlet
¼" NPTF	½" NPTF	¼" NPTF	⅛" NPTF ¹

Extrusion volume per linear foot (beads)			
Diameter in. / mm	cu. in. / cc	Gallons / Liters	Ft. per Gal.
⅛" / 3.2	.1473 / 2.41	.00064 / .0024	1565
¼" / 6.35	.5891 / 9.65	.00255 / .0096	392
⅜" / 9.525	1.3562 / 22.2	.00574 / .021	174
½" / 12.7	2.3562 / 38.6	.01020 / .038	98
⅝" / 15.875	3.8612 / 63.3	.01592 / .060	63
¾" / 19.05	5.3005 / 86.8	.02295 / .086	44

85801 consists of 1725 pump assy., 67176 coupling, 83586 flow gun, 83594 universal swivel, 85817 20' x ½" ID moisture-lok hose assy.

¹ For additional nozzle selections refer to page 22.



Model 1725

Model 1725

Portable package designed for original 5-gallon pails. Portable pressure primer includes reversible steel cleats for securing both straight-sided and tapered pails. Follower with wiper blade cleans sides of pail as material is dispensed. Air-assisted follower extraction.

Model No.	Pump Ratio	Drum Size	Max. Del. gal./min. l./min.	Max. Discharge Pressure psi / bar	Hose Description	Standard Accessories
1725	25:1	5 gal.	0.25 / 0.95	5000 / 340	NA	NA

Note: Order hose, flow gun, etc. separately.



Model 252

Model 252

For dispensing heavy greases, NLGI #3. Includes a screw prime follower.

Note: Model includes 7 ft. of ¼" high-pressure hose, 81387 universal swivel and 740 control valve. Pressure switch is factory set to shut-off pump at 5,000 psi lubricant pressure and to start pump when pressure drops to 2,500 psi.

Dimensions	Output	Power Requirements	Lubricant Capacity
36¼" x 28" x 17½" 921 x 711 x 445 mm	6 oz. / min. 177.6 cc / min	115/230 volt 5.4 / 2.7 amp	30 lbs. 13.6 kg.