

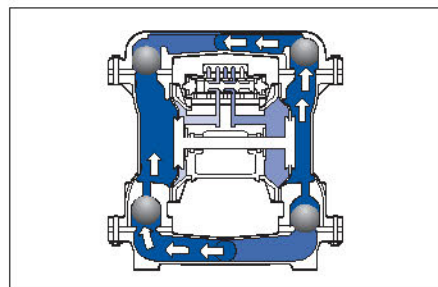


Air-operated diaphragm pumps

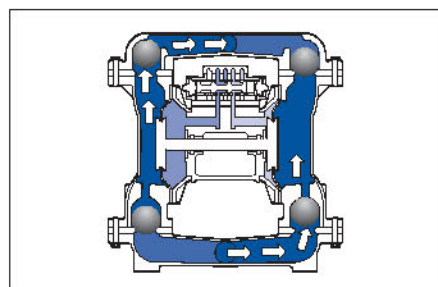
Basic design features

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 shear-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.



Right chamber – discharge
Left chamber –suction



Left chamber – discharge
Right chamber –suction

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WARNING!
The pump exhaust should be piped to an area for safe disposal of product being pumped in the event of a diaphragm failure.

1:1 air-operated diaphragm pump line

Model	Description	Pump body	Wetted or soft parts	Size inlet NPT	Size outlet NPT	Free delivery gal.	Free delivery liter	Air inlet NPT (f)	Maximum pressure psi	Maximum pressure bar	Element particle size in.	Element particle size mm	Application
–	in.	–	–	in.	in.	gal.	liter	in.	psi	bar	in.	mm	–
85630	1/4	Polyprop	PTFE	1/4	1/4	4	15,1	1/4	100	6,89	1/32	0,79	New oil, AF, windshield washer fluid
85631	1/2	Aluminum	Buna-N	1/2	1/2	15	56,8	1/4	100	6,89	1/8	3,17	New/used oil, AF
85632	1/2	Aluminum	PTFE	1/2	1/2	15	56,8	1/4	100	6,89	1/8	3,17	New oil, AF
85633	1/2	Aluminum	Hytrel	1/2	1/2	15	56,8	1/4	100	6,89	1/8	3,17	New oil
85622	1/2	Polyprop	Santoprene	1/2	1/2 ¹⁾	14	53	1/4	100	6,89	1/8	3,17	High abrasion materials
85623	1/2	Polyprop	PTFE	1/2	1/2 ¹⁾	14	53	1/4	100	6,89	1/8	3,17	New oil, AF
85626	1/2	Polyprop	Buna-N	1/2	1/2 ¹⁾	14	53	1/4	100	6,89	1/8	3,17	New oil, AF
85629	1	Aluminum	Hytrel	1	1	45	170,3	1/2	125	8,6	1/4	6,35	New oil
85628	1	Aluminum	PTFE	1	1	45	170,3	1/2	125	8,6	1/4	6,35	New oil, AF
85627	1	Aluminum	Buna-N	1	1	45	170,3	1/2	125	8,6	1/4	6,35	New/used oil, AF
85621	1 1/2	Aluminum	Buna-N	1 1/2	1 1/2	106	401,3	3/4	125	8,6	1/4	6,35	New/used oil, AF
85624	2	Aluminum	Buna-N	2	2	150	567,8	3/4	125	8,6	1/4	6,35	New/used oil, AF

¹⁾ Can be converted to dual 1/2 in. outlet.

U.L. listed

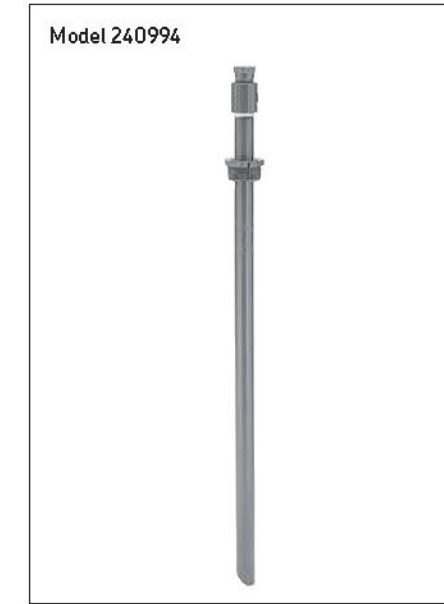
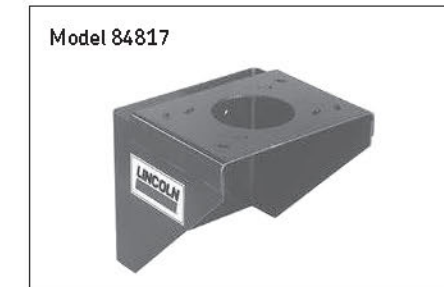
Model	Description	Pump body	Wetted or soft parts	Size inlet NPT	Size outlet NPT	Free delivery gal.	Free delivery liter	Air inlet NPT (f)	Maximum pressure psi	Maximum pressure bar	Element particle size in.	Element particle size mm	Application
–	in.	–	–	in.	in.	gal.	liter	in.	psi	bar	in.	mm	–
85634	1 U.L.	Aluminum	Buna-N	1	1	45	170,3	1/2	50 ²⁾	3,45	1/4	6,35	Used oil, diesel, kerosene
85635	1 U.L.	Aluminum	PTFE	1	1	45	170,3	1/2	50 ²⁾	3,45	1/4	6,35	Unleaded gas, diesel, kerosene used oil

²⁾ 50 psi (3,45 bar) flammable liquids, 125 psi (8,6 bar) others

Dual inlet

Model	Description	Pump body	Wetted or soft parts	Size inlet NPT	Size outlet NPT	Free delivery gal.	Free delivery liter	Air inlet NPT (f)	Maximum pressure psi	Maximum pressure bar	Element particle size in.	Element particle size mm	Application
–	in.	–	–	in.	in.	gal.	liter	in.	psi	bar	in.	mm	–
85636	1/2	Aluminum	Buna-N	1/2	1/2	15	56,8	1/4	125	8,6	1/8	3,17	AF/water
85637	1/2	Polyprop	Buna-N	1/2	1/2	14	53	1/4	100	6,89	1/8	3,17	AF/water
85639	1	Polyprop	Buna-N	1 ANSI ³⁾	–	45	170,3	1/2	100	6,89	1/4	6,35	AF/water
85638	1	Aluminum	Buna-N	1	1	42	159	1/2	125	8,6	1/4	6,35	AF/water

³⁾ Model 85639 requires model 275631 adapter and model 275632 seal kit for pipe thread installations.



Air-operated diaphragm pump accessories

Wall mount brackets

Model 85255 wall mount bracket
Wall mount bracket for 1/4 to 1/2 in. air-operated diaphragm pumps.

Model 84817 wall mount bracket
Wall mount bracket for 1/2 to 2 in. air-operated diaphragm pumps.

Other accessories

Model 240994 drum adapter kit
For use with 1/2 in. polypropylene AODD pumps. Includes 2 in. NPT (f) bung bushing, 1 x 36 in. (25,4 x 914,4 mm) suction tube and adapter.

Model 275631 1 in. ANSI flange to 1 in. NPT adapter
Adapts 1 in. ANSI flange of model 85639 polypropylene dual inlet pump to 1 in. 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 model 85639 pump. One bolt kit required for each adapter. Three required to convert all pump inlets/outlets.

Thermal pressure protection
Protect lubrication system components from high pressure spikes caused by temperature change in a closed fluid network.

Thermal pressure protection

Model	Description	Application	Pre-set relief pressure		Size NPT
–	–	–	psi	bar	in.
282902	Valve only	AODD pumps	150	10	1/2
277601-4	Kit with valve, hose, adapters	1/2 in. AODD pumps	150	10	Integrated
277601-5	Kit with valve, hose, adapters	1/2 in. AODD pumps	150	10	Integrated