



Series III Air Motor Features

- These fully pneumatic Air Motors reverse stroke direction without mechanical linkages and are simpler and more reliable than older designs.
- Air motors are 3-4-6-8-10 inches (76-101-152-203-254mm) diameter.
- An air Signal Valve activates a Relay Valve at the end of each stroke.
- The shifting Relay Valve changes the Power Valve position.
- The Power Valve shifts air flow to the opposite side of the Power Piston to reverse stroke direction.
- Modular Construction: Air Motors are easy to install, maintain, and upgrade with options like AirBrake™.
- Built-in Muffler: Meets or exceeds OSHA requirements at recommended air pressures.
- AirBrake Options: Stops runaway pump, prevents product spills, damage and excess wear, and activates an optional remote alarm device. AirBrake available already installed (refer to pump specification charts) or can be ordered separately as Model 85317. For remote monitoring of AirBrake, order model 244398 signal kit.



*Model 84921



Model 84904

PileDriver Series III Pump Tube Features

- Machined inlet casting: Set screws secure the inlet assembly and permit 360° outlet adjustment to facilitate system plumbing and provide for easy pump removal/replacement.
- Cartridge type gland with scrapers and patented protection bushing: Extends the life of gland packings by protecting them from excessive material build up and pressure fluctuations. Cartridge removes easily for routine service.
- Straight through pump tube and piston port design: Reduces internal friction and the opportunity for solids entrapment.
- Load bearing, chrome-plated internal pump tube surface: Distributes forces between gland and pump tube to prolong seal life.
- Choice of inlets: Shovel type for thick material or flat check for higher flow rates.

* Air motor available separately.



Model 85400

PileDriver® III Severe Duty Pump Tube Model 85400

Lincoln has developed this severe duty pump for use in applications involving abrasive materials such as undercoating, heat-set off-set inks, etc. Internal surfaces are hard chromed for extra abrasion resistance. Check ball and seat are made of a tungsten carbide matrix material. Straight through flow design reduces erosion of internal components.

Ratio	Air Motor Size in. / mm	Air Motor Model	Maximum Discharge Pressure psig / bar
45:1	10 / 254	86810	4,500 / 311
30:1	8 / 203	84808	3,000 / 207
18:1	6 / 152	84806	1,800 / 124
8:1	4 1/4 / 108	84804	1,600 / 110
4:1	3 / 76	84803	300 / 21

Ratio	Output per Cycle cu. in. / cc	Stroke Length in. / mm	Min. Air Supply Hose in. / mm	Max. Operating Air Pressure psig / bar	Operating Temperature °F / °C
45:1	18 / 295	6 / 152	3/4 / 20	100 / 7	30° to 200° -34° to +93°
30:1			1/2 / 12		
18:1				200 / 14	
8:1					
4:1			3/8 / 10		

Note: Pump should be installed upright for operation. Use Model 83727 stand pipe for bulk material dispensing. Locate pump as close to tank as possible and use a minimum 3 inch/76mm I.D. inlet hose or pipe.

Order Air Motor and Pump Tube separately.

Industrial Pumping Equipment

PileDriver® III Pump Selection Chart



Ratio	Pump Model STD. Air Motor only	Air Motor Model & Dia. in. / mm	Pump Tube Model	Pump Tube Style	Output Per Cycle		Approximate Cycles per gal / liters	Stroke Length in. / mm
					cu. in.	cc		
75:1	2375	Std. 86810	84902	Shovel	12	196	20 / 5	6 / 152
42:1	2342	w/ AirBrake	84900	Shovel	22	360	11 / 3	
20:1	2320	94910	84921	Shovel	44	721	5 / 1	
20:1	2321	10 / 254	84922	Flat Check	46	754	5 / 1	
45:1	2322	Std. 84808	84902	Shovel	12	196	20 / 5	6 / 152
35:1	2323	w/ AirBrake	84901	Shovel	17	278	14 / 4	
25:1	2325	*94908	84900	Shovel	22	360	11 / 3	
13:1	2326		84921	Shovel	44	721	5 / 1	
6:1	2328	8 / 203	84923	Flat Check	85	1393	3 / ½	6 / 152
25:1	2349	Std. 84806	84902	Shovel	12	196	20 / 5	
20:1	2350	w/ AirBrake	84901	Shovel	17	278	14 / 4	
15:1	2352	*94906	84900	Shovel	22	360	11 / 3	
7:1	2353		84921	Shovel	44	721	5 / 1	6 / 152
3:1	2356	6 / 152	84923	Flat Check	85	1393	3 / ½	
7:1	*2367	Std. 84804 w/ AirBrake	84900	Shovel	22	360	11 / 3	6 / 152
3:1	*2368	*94904 4¼ / 108	84921	Shovel	44	721	5 / 1	

* Order Pump Tube and Air Motor separately when selecting 3" and 4" air motors, and AirBrake equipped models.



Model 84913

Packing Kit Selection Chart

Pump Tube	Standard Polyurethane Kit	Teflon® Kit	UHMW Polyethylene Kit
84900	84907	84912	84913
84901	84911	84905	84906
84902	84908	84914	84915
84904	84909	—	84917
84921	84927	84928	84929
84922	84930	84931	—
84923	84924	84925	—

Note: Standard polyurethane seal kits include all soft seals. Teflon® and UHMW polyethylene seal kits include gland and piston u-cups only.

Gland Seal Kits



Model 85311

Pump Tube	Standard Polyurethane Kit	Teflon® Kit	UHMW Polyethylene Kit
84900	85311	85321	85327
84901	—	—	—
84902	—	85323	—
84904	85314	85324	—
84921	85315	85325	—
84922	85315	85325	—
84923	—	85326	—

Note: Gland seal kits include gland u-cup and o-ring only.

Industrial Pumping Equipment

PileDriver® III Pump Selection Chart



Air Inlet	Pump Output GPM / LIT/Min.			Max. Outlet Press. psi / bar	Min. I.D. of Air Supply Hose in. / mm	Material Outlet	Approximate Air Consumption per Cycle	
	@ 30 cpm**	@ 50 cpm**	@ 75 cpm**				SCFM @ 70 psig M ³ /Min @ 4.8 bar	SCFM @ 100 psig M ³ /Min @ 6.8 bar
¾" NPT Female	1.5 / 5.9	2.6 / 9.8	3.9 / 14.9	7500 / 517	¼ / 20	1½ NPT Female	2.5 / 0.071	3.6 / 0.10
	2.8 / 10.8	4.8 / 18.0	7.1 / 27.0	4200 / 290				
	5.7 / 21.6	9.5 / 36.0	14.3 / 54.0	2000 / 138				
	5.8 / 22.6	9.9 / 37.7	14.9 / 56.5	2000 / 138				
¾" NPT Female	1.5 / 5.9	2.6 / 9.8	3.9 / 14.9	4500 / 310	¼ / 20	1½ NPT Female	1.9 / 0.054	2.6 / 0.074
	2.2 / 8.3	3.7 / 13.9	5.5 / 20.8	3500 / 241				
	2.8 / 10.8	4.8 / 18.0	7.1 / 27.0	2500 / 172				
	5.7 / 21.6	9.5 / 36.0	14.3 / 54.0	1300 / 90				
¾" NPT Female	1.5 / 5.9	2.6 / 9.8	3.9 / 14.9	2500 / 172	¼ / 20	1½ NPT Female	1.1 / 0.031	1.6 / 0.045
	2.2 / 8.3	3.7 / 13.9	5.5 / 20.8	2000 / 138				
	2.8 / 10.8	4.8 / 18.0	7.1 / 27.0	1500 / 104				
	5.7 / 21.6	9.5 / 36.0	14.3 / 54.0	700 / 48				
¾" NPT Female	2.8 / 10.8	4.8 / 18.0	7.1 / 27.0	1400 / 97	½ / 12	1½ NPT Female	0.8 / 0.023	1.1 / 0.031
	5.7 / 21.6	9.5 / 36.0	14.3 / 54.0	600 / 41				
¾" NPT Female					⅜ / 10	1½ NPT Female	0.5 / 0.014	0.7 / 0.020

Note: Air motors and pump tubes shipped separately. Assembly required.

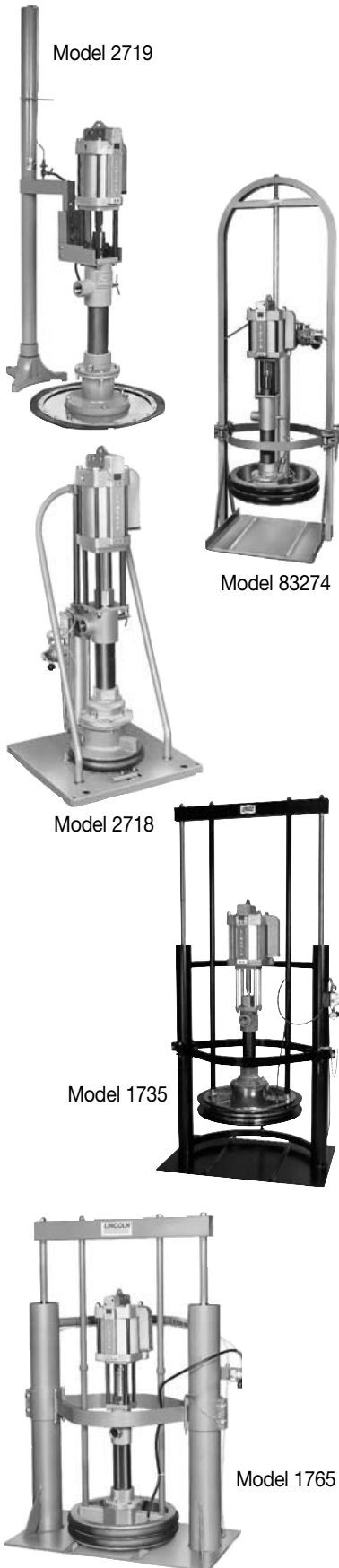
** Cycles per minute.

Other PileDriver Pump Tube/PowerMaster Air Motor Combinations

Ratio	Air Motor Model & Diameter in. / mm	Pump Tube Model	Pump Tube Style	Max. GPM / LPM Free Delivery @ 75 cpm	Max. Outlet Pressure psi / bar	
55:1	Std. 86810	84901	Shovel	5.5 / 20.8	5500 / 379	
45:1	w/ AirBrake *94910	84904	Flat Check	5.8 / 22.0	4500 / 311	
10:1	10 / 254	84923	Flat Check	27.6 / 104.5	1000 / 69	
30:1	Std. 84808	84904	Flat Check	5.8 / 22.0	3000 / 207	
13:1	w/ AirBrake *94908 8 / 203	84922	Flat Check	14.9 / 56.5	1300 / 90	
18:1	Std. 84806	84904	Flat Check	5.8 / 22.0	1800 / 124	
7:1	w/ AirBrake *94906 6 / 152	84922	Flat Check	14.9 / 56.5	700 / 48	
12:1	Std. 84804	84902	Shovel	3.9 / 14.9	2400 / 166	
10:1	w/ AirBrake *94904	84901	Shovel	5.5 / 20.8	2000 / 138	
8:1		84904	Flat Check	5.8 / 22.0	1600 / 110	
3:1		84922	Flat Check	14.9 / 56.5	600 / 41	
1.5:1	4¼ / 108	84923	Flat Check	27.6 / 104.5	300 / 41	
6:1	Std. 84803	84902	Shovel	3.9 / 14.9	1200 / 83	
4:1		84901	Shovel	5.5 / 20.8	800 / 55	
3:1		84900	Shovel	7.1 / 27.0	600 / 41	
1.5:1		84921	Shovel	14.3 / 54.0	300 / 21	
4:1		84904	Flat Check	5.8 / 22.0	300 / 21	
1.5:1		84922	Flat Check	14.9 / 56.5	300 / 21	
1:1		3 / 76	84923	Flat Check	27.6 / 104.5	200 / 14

Pressure Primer Features

- Positive priming force on the material.
Downward force of the follower forces material into the pump inlet.
This assures positive priming of high viscosity materials.
- Follower has an Elastomer seal.
Wipers, single o-rings or double o-rings seal against the material container's sides. This prevents drying and contamination of the material and wipes the container's sides clean.
- Four-way air valve control.
This directional valve controls up/down movement of the follower.
Primer unit remains coupled to the air system at all times.
(Use of an air regulator and gauge is recommended).
- Primers available for a wide range of material container sizes.
Lincoln has primers for 5, 55 and 300 gallon material containers.
You can match the primer to the container size required for your application.



Model	For U.S. Drum Size gal	Description	Operating Air Pressure psi / bar	Priming Pressure psi / bar	
				@70/5	@100/7
2718*	5	Single Post for viscous material over 500 K centipoise	30-150 2-10	4.4 .3	6.3 .44
83274	55		40-100 3-7	5 .35	7.1 .5
2719	55	Single Post Pump Hoist & Follower for low to medium viscosity materials 100K to 200K centipoise range	40-200 3-14	**Not applicable	**Not applicable
1735	55	Twin Post (Twin 3") for viscous materials in the 200K to 500K centipoise range	40-150 3-10	2.7 .2	3.7 .26
1765	55	Twin Post (Twin 6") for viscous materials over 500K centipoise	40-100 3-7	8.5 .57	12 .8

** Gravity priming pressure

Model	Height		Base Dimensions in. / mm
	Lowered in. / cm	Raised in. / cm	
2718*	42.5 108	50.25 128	22.25 x 22.25 600 x 600
83274	89 226	89 226	26 x 26 700 x 700
2719	73 185.4	110.5 280.7	12.5 x 14 317.5 x 355.5
1735	66.125 167.6	103 261.6	24 x 36 600 x 1000
1765	66.125 167.6	103 261.6	24 x 36 600 x 1000

*Model 83943 portability kit is available for Model 2718. Includes axle and wheels.

Note: Units show pumps for illustrative purposes only. Order pump separately.

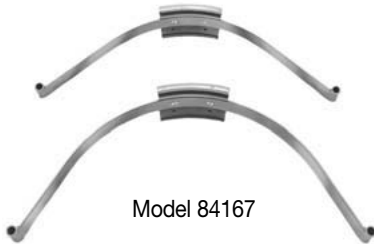


Model 83727

Model 83727 Standpipe Assembly

Mounts PileDriver III pump on floor to accept suction line from bulk tank.

Model	Inlet	Height	Diameter
83727	3" NPTF	7½" / 190 mm	8" / 200mm



Model 84167

Chimeless Drum Kits

Because some materials are supplied in straight sided or chimeless drums, Lincoln has developed hold-down kits which facilitate follower and pump extraction from these drums. Kits are available as follows:

Kit No.	For Model
84167	83274
84503	1735



Model 84722

Model 84722 Series III Air Motor Exhaust Adapter

Replaces standard muffler. Converts exhaust port to ¾" NPT female thread.



Model 84723

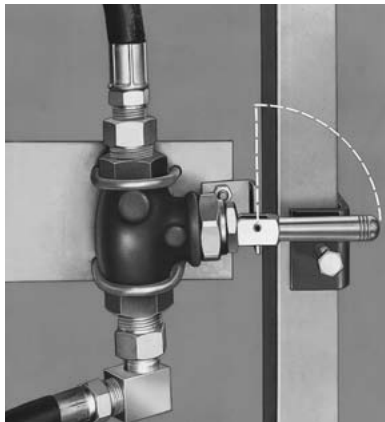
Model 84723 Series III Air Motor Cover Panel Kit

Metal cover fits over tie rods. Encloses moving plunger rod.

Low Level Air Cutoff Kits

Shuts air off when drum is empty. Prevents pump damage and introduction of air into supply line. ¾" NPT female connections.

Model	For Primer
83811	83274
83970	2719
84143	1735, 1765



Model 83811

Air Line Kits for Primers

Includes filter-lubricator-regulator-gauge, bracket and fittings for models 2719, 1735, 1765 and 83274.

Model	Description
84144	½" Air Line Kit
84141	¾" Air Line Kit



Model 85387-8
Included in 84144 Kit