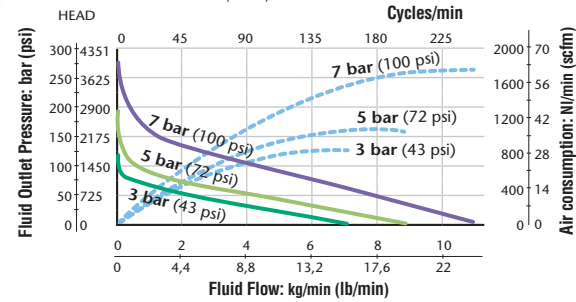


GREASE PUMP PERFORMANCE CURVES



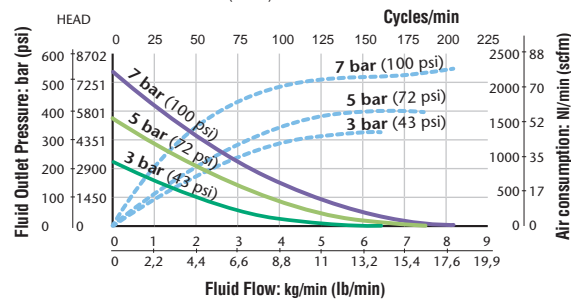
PM45 40:1 RATIO Flow Rate 11 kg/min (24,3 lb/min)
Test Fluid: NLGI-1 at 21 °C (70 °F)



PM 45 - 40 A



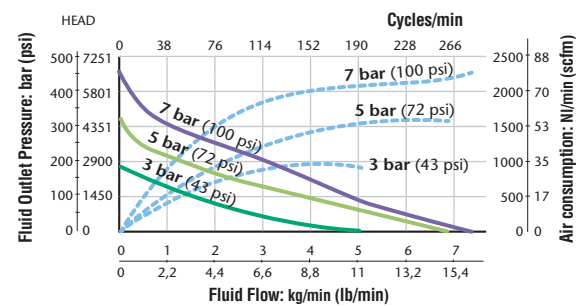
PM60 80:1 RATIO Flow Rate 8 kg/min (17,6 lb/min)
Test Fluid: NLGI-1 at 21 °C (70 °F)



PM 60 - 80 A



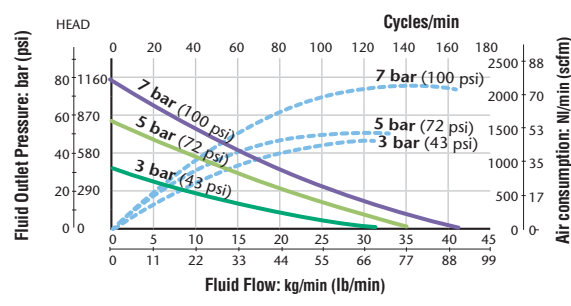
PM45 70:1 RATIO Flow Rate 7,5 kg/min (16,5 lb/min)
Test Fluid: NLGI-1 at 21 °C (70 °F)



PM 45 - 70 T



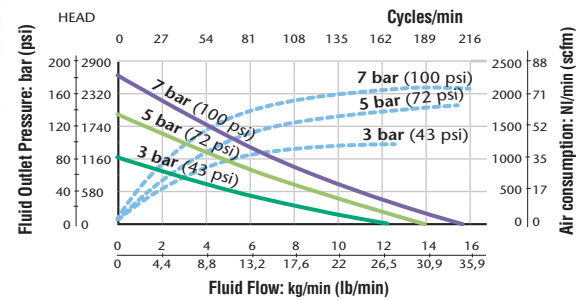
PM60 12:1 RATIO Flow Rate 40 kg/min (88,2 lb/min)
Test Fluid: NLGI-1 at 21 °C (70 °F)



PM 60 - 12 T



PM45 25:1 RATIO Flow Rate 16 kg/min (35,3 lb/min)
Test Fluid: Gear Oil 140 at 21 °C (70 °F)



PM 45 - 25 A

GREASE PUMPS SELECTION

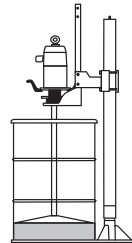
SIMULTANEOUS DISPENSING OUTLETS	TOTAL PUMP DISTANCE TO OUTLETS*	CONTAINER TYPE		
		400 lb / 180 kg (A)	120 lb / 50 kg (B)	Bulk Tote (T)
Over 3	Up to 150 ft / 50 m	PM 45 - 40 A PM 45 - 70 A	PM 45 - 40 B PM 45 - 70 B	PM 45 - 70 T
Up to 3	Over 150 ft / 50 m	PM 45 - 40 A	PM 45 - 40 B	PM 45 - 70 T
Over 3	Over 150 ft / 50 m	PM 45 - 70 A PM 60 - 80 A	PM 45 - 70 B PM 60 - 80 B	PM 45 - 70 T

* The hose length of the dispensing reels must be included in the total distance.
* The mentioned lengths refer to rigid pipelines made of at least 1" (25 mm) outside diameter and 0.125" (3 mm) thickness steel tubing with hydraulic type fittings.

GREASE PUMP MOUNTING - DRUM SYSTEMS & BULK TOTES

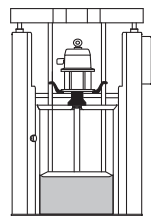
Cover-Mount with Follower Plate

- Economical.
- The follower plate adheres to the surface of the grease and drops following the pump tube as the grease level decreases.
- For viscous grease (NLGI-2).
- Suitable for drums:
A - 400 lb (180 kg)
B - 120 lb (50 kg)



Inductor Plate-Mount with Hoist

- Air operated hoist raises the pump and inductor assembly for easy drum changeover.
- Inductor is set at suction part of pump. The follower plate adheres to the surface of the grease and drops following the pump tube as the grease level decreases.
- Wiper inductor reduces waste.
- For viscous materials (NLGI-2)
- Improves pump performance.

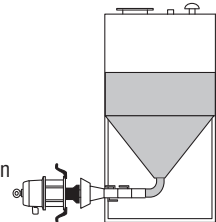
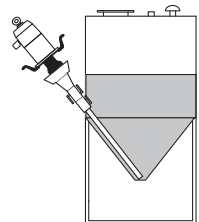


Ram Hoist-Mount

- Air operated double-post hoist with inductor plate raises and lowers the pump assembly.
- Force feed high-volume pumps.
- Extreme viscous materials (NLGI-3).
- Wiper inductor reduces waste.
- Clean and easy drum changeover.

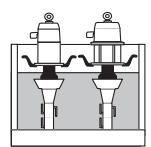
Inclined-Mount

- Long tube grease pump for inclined mounting.
- Use the male portion of a 3" camlock connection as an accessory for easy installation and tank (grease hopper) changeover.



Horizontal-Mount

- Stub grease pump for horizontal mounting and space constraints.
- Use the male portion of a 3" camlock connection for easy installation and tank (grease hopper) changeover.



Vertical-Mount

- Stubby grease pump for vertical mounting.
- Use the male portion of a 3" camlock connection for easy installation and tank (grease hopper) changeover.



PUMP MASTER 45&60
Lubrication Pumps

HIGH PERFORMANCE VOLUME DISPENSING PUMPS FOR GREASE

GREASE

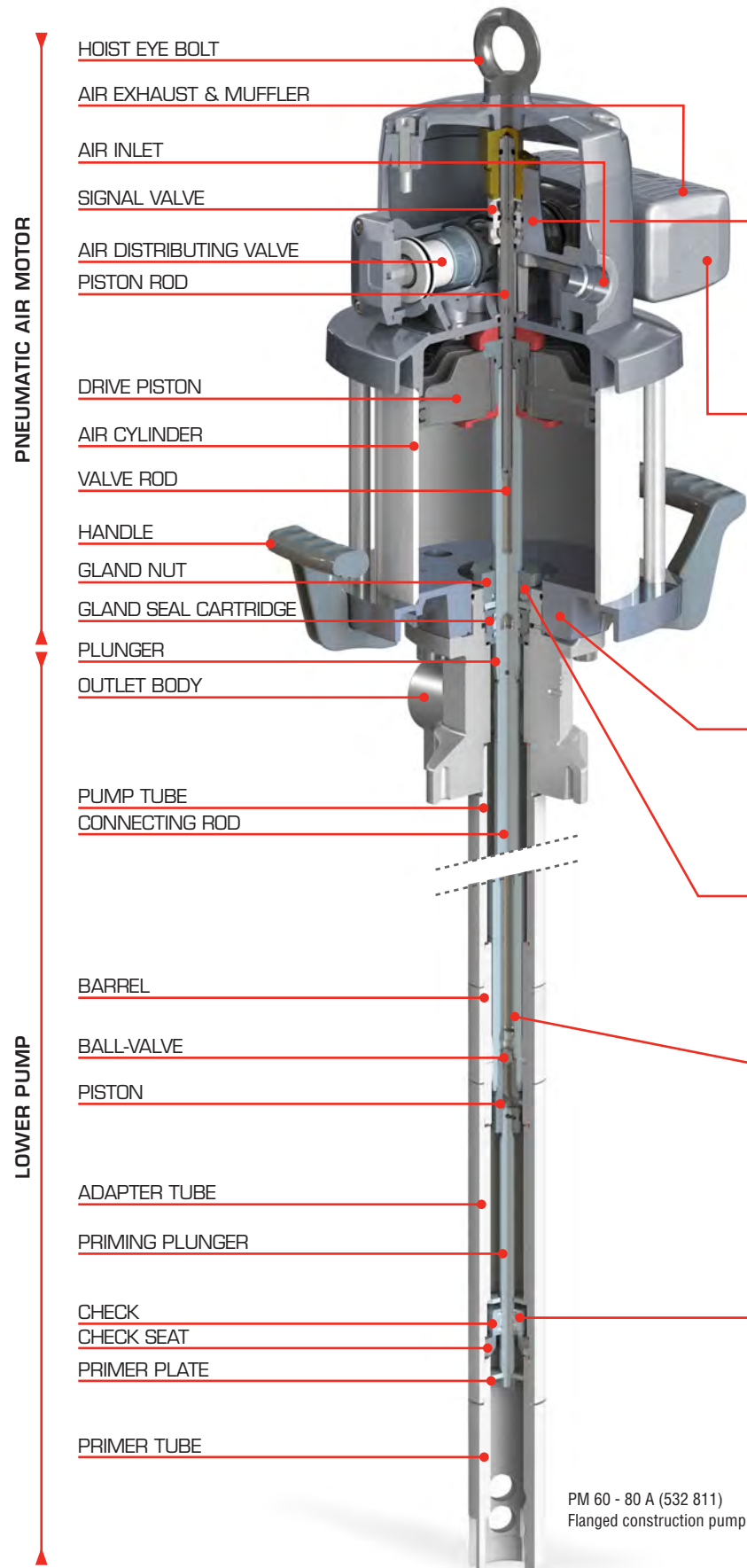
INDUSTRIAL PLANTS • OFF-ROAD EQUIPMENT • MINING & CONSTRUCTION • LARGE FLEETS SERVICE • MARINE

Pneumatically driven industrial pumps for hard to pump viscous lubricants or long delivery lines.



INDUSTRIAL LUBRICATION PISTON PUMPS: THE HEART OF A LUBRICATING SYSTEM

SAMSON industrial grease pumps have been specifically designed to pump today's high viscosity greases and viscous lubricants at high flow rates and to lead the competition in technology and innovation. SAMSON manufactures a full range of Heavy-Duty, high efficiency, air powered, double acting, positive displacement piston pumps. Our wide range of pumps provide solutions to moving large volumes of grease with confidence.



Pneumatic Air Motors: Our air motors are actuated by a mechanically linked signal valve mounted on a trip rod (piston rod) which senses when the drive piston has reached the end of a stroke. This sends an instantaneous air signal to the air distributing valve and holds it in a stable fixed position supplying air to the drive side of the piston side while simultaneously evacuating the air on the exhaust side. This system results in the fast reciprocating action of the air motor, minimizing air consumption and wasted energy due to valve overlap. This simple concept eliminates the possibility of stalling. This time-tested pneumatic air motor only has three moving parts and no springs, which could fail or consume energy and runs without external lubrication.

Air exhaust: The aluminium air motor provides good heat transfer and incorporates high-thermal efficiency, large diameter, air exhaust manifolds together with a free-flow exhaust pathway at the distributing valve that literally opens the exhaust side of the power chamber to the atmosphere, eliminating pump performance variability caused by changing environmental conditions and icing-up. The supplied muffler element reduces the noise to meet or exceed OSHA requirements at all recommended operational air pressures. The muffler can also be removed to connect the exhaust port through a hose directly to a remote location for quieter operation.

Modular design: The robust, modular pump design permits multiple-combinations of assemblies of the air-motor and lower-pump end. This versatile pump construction allows for easy service and maintenance and provides a comprehensive range of operating output pressures and flow-rates to accommodate virtually any amount of dispensed lubricant.

Pump top gland seal: Our corrosion resistant hardened plunger and the cartridge packing arrangements are designed for low-friction to minimize wear and maximize the service life of the seals. Samson has pioneered the use of Step Seals in our industry, and proven them over decades of service to be the best solution. It is normal for our unique seals to last the life of the pump.

High quality materials: Aluminium die-cast pneumatic air motor with hard anodized aluminium cylinder; light weight drive piston and plunger with rubber-PTFE or polyurethane seals; cast outlet body, thick-wall polished tube, high tensile steel rod; barrel, piston and priming valve made of special hardened, precision fitted, ground steel for perfect seal and long life.

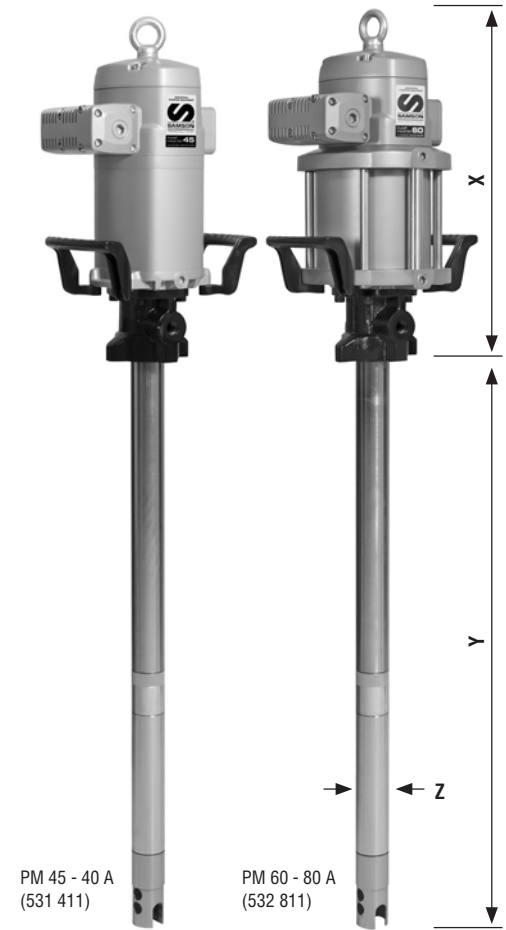
Pump inlet valve: Together with the Double-Valve style pump tube used for positive priming and pumping of heavy gear oils and lubricants up to NLGI 1 (25:1), SAMSON offers a Chop-Check priming valve that assists the entry of heavy and sticky greases up to NLGI 3 into the pump and improves pumping efficiency.



INDUSTRIAL GREASE PUMPS

PNEUMATICALLY DRIVEN GREASE PUMPS

The SAMSON PM45 and PM60 air operated lubricant pump range consists of the following models. Based on the use of two air motors combined with seven different pump piston sizes, the configuration options allow each pump to be fine-tuned providing the perfect performance to match any application and give years of trouble free, reliable operation. These pumps cover a wide range of applications whether for pumping, metering, lubricating, filling or transferring in industrial plants, off-road equipment service, feeding lubricant to a mine or a construction process, when servicing large fleets or in marine applications.



	PUMPMASTER 45	PUMPMASTER 60
Air motor effective diameter	4 1/2" - 115 mm	6" - 150 mm
Stroke	4" - 100 mm	4" - 100 mm
Air pressure range	20 - 200 psi / 1.5 - 14 bar	
Air inlet port	1/2" NPT (F)	
Air exhaust	Exhaust Muffler included (3/4" (F) threaded port for remote exhaust)	
Noise level @ 100 psi - 7 bar	80 dB (A) / 3 ft (1 m)	
Air Motor & Pump Assembly	Flanged construction pump	
Wetted Materials	Cast iron, steel, copper, NBR, PTFE (Polyurethane on 12:1)	
Fluid outlet port: Grease - High Pressure 12:1 Grease Transfer	1/2" NPT (F) 1" NPT (F)	
Fluid inlet type: 40:1, 70:1 & 80:1 Grease High Pressure 12:1 Grease Transfer 25:1 Lubricant Pump	Immersed - Dynamic primer plate and Chop-check valve. Typically used with follower assembly Immersed - Dynamic primer piston for positive priming and Chop-check valve Immersed - Ball-check valve	

Description	Model Number	Air Motor Size (Ø)	Pump Ratio	Container type	Dimensions X-Y-Z	Max. Air Pressure	Max. Fluid Pressure	Displacement Per cycle	Standard* Flow rate	Maximum** Flow Rate	Weight
PM 45 - 25 A ■	531 211	4 1/2"	25:1	400 lb (A)	19,8-33,6-2 (in)	200 psi	5.000 psi	4,27 cu-in	13,5 lb/min	35,3 lb/min	53 lb
PM 45 - 40 A	531 411	4 1/2"	40:1	400 lb (A)	19,8-33,6-2 (in)	200 psi	8.000 psi	3,05 cu-in	7,5 lb/min	24,3 lb/min	55 lb
PM 45 - 40 B	531 421	4 1/2"	40:1	120 lb (B)	19,8-25,6-2 (in)	200 psi	8.000 psi	3,05 cu-in	7,5 lb/min	24,3 lb/min	49 lb
PM 45 - 70 A	531 711	4 1/2"	70:1	400 lb (A)	19,8-33,6-2 (in)	100 psi	7.000 psi	1,77 cu-in	4,5 lb/min	16,5 lb/min	55 lb
PM 45 - 70 B	531 721	4 1/2"	70:1	120 lb (B)	19,8-25,6-2 (in)	100 psi	7.000 psi	1,77 cu-in	4,5 lb/min	16,5 lb/min	49 lb
PM 45 - 70 T ★	531 731	4 1/2"	70:1	Bulk tote (T)	19,8-19,3-2 (in)	100 psi	7.000 psi	1,77 cu-in	4,5 lb/min	16,5 lb/min	46 lb
PM 60 - 80 A	532 811	6"	80:1	400 lb (A)	20,3-33,6-2 (in)	100 psi	8.000 psi	3,05 cu-in	5,5 lb/min	17,6 lb/min	60 lb
PM 60 - 80 B	532 821	6"	80:1	120 lb (B)	20,3-25,6-2 (in)	100 psi	8.000 psi	3,05 cu-in	5,5 lb/min	17,6 lb/min	53 lb
PM 60 - 12 T ▲★	532 131	6"	12:1	Bulk tote (T)	20,3-9-2,8 (in)	100 psi	1.200 psi	18,30 cu-in	33,0 lb/min	88,2 lb/min	42 lb

All Grease Pumps include a set of two handles that can be attached to the air motor base for easy pump handling.
 * Indicated Flow rates at 100 psi (7 bar) air inlet pressure.
 ** Maximum delivery with no fluid back pressure and 100 psi (7 bar) air inlet pressure. SAMSON recommends operation at 80 cycles per minute for "PM-45" series air motors and 60 cycles per minute for "PM-60" series air motors.
 ■ A Medium Pressure Lubricant Pump designed to deliver a range of heavy gear oils and light body greases up to NLGI 1 at any temperature range.
 ▲ Medium Pressure Transfer Pump designed to deliver a range of greases up to NLGI 3 from Bulk totes to small containers.
 ★ These Stubby Pumps include the male portion of a 3-inch camlock connection (length: 3.15"-80 mm) for easy installation in Bulk totes.

