

M-SERIES 1/3 HP (.25 kw) PUMPS

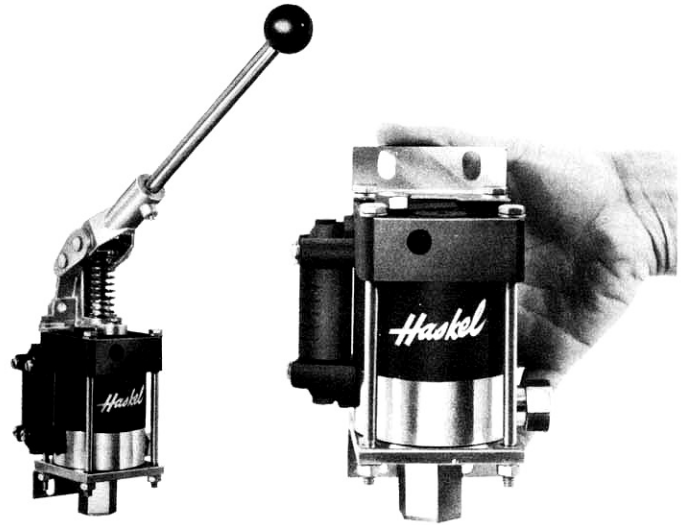
Incorporating 21 different models and a choice of output pressures, up to 15,000 psi (1030 bar), this series is the smallest in the Haskel liquid pump range.

Available in a choice of wetted part materials, the M-series range provides output flow of up to 3 gpm (12 l/min.).

A noise reduction modification is available for applications where noise level is an important criteria.

All models operate on an air drive pressure of between 25 and 125 psi (1.8 and 9 bar) and a hand pump option is available for applications requiring precision pressure control or where no air drive is available.

Hand pump optional.



Maximum Air Supply 125 psi, Single Air Head											
MODEL	RATIO DASH NO.	ACTUAL AREA RATIO	MAXIMUM RATED OUTPUT PRESSURE				DISPLACEMENT/CYCLE		CONNECTION PORTS		
			CONTINUOUS		INTERMITTENT						
			PSI	BAR	PSI	BAR	CU. IN.	M.L.	AIR DRIVE	INLET	OUTLET
M, MS	-5	-5.6	625	43	625	43	0.83	13.6	1/4"	3/4"	1/2"
	-7	7.8	900	62	900	62	0.60	9.8	1/4"	3/4"	1/2"
	-12	14	1,500	103	1,500	103	0.36	5.9	1/4"	3/4"	1/2"
M, MS, 29723 ⁽¹⁾	-21	25	2,600	179	2,600	179	0.20	3.3	1/4"	3/8"	1/4"
	-36	41	4,500	310	4,500	310	0.12	2.0	1/4"	3/8"	1/4"
	-71	82	8,800	607	8,800	607	.060	1.0	1/4"	3/8"	1/4"
	-110	126	13,500	931	13,500	931	.039	0.6	1/4"	3/8"	1/4"
	-188	217	15,000	1,034	15,000	1,034	.023	0.4	1/4"	3/8"	1/4"

(1) Maximum intermittent pressure for stainless steel in MS and 29723 series pumps is 10,000 psi (690 bar).
All port sizes are female NPT (National Pipe Tapered) unless otherwise noted.

Wetted Materials of Construction and Services				
MODEL	SERVICES (Refer to pg. 5)	WETTED MATERIALS		NON METALLICS
		PUMP SECTION	PLUNGERS	
M	[1]	Cad plated steel, Aluminum & SS	416 SS	Urethane, PTFE, Buna
MS	[1] [2]	All SS	316 SS	UHMWPE, PTFE, Buna
29723	[1] [2] [3] [5] [6]	Separation - All SS	Hard Chrome Plated 15.5PH SS + Dichronite	UHMWPE, PTFE, Ryton

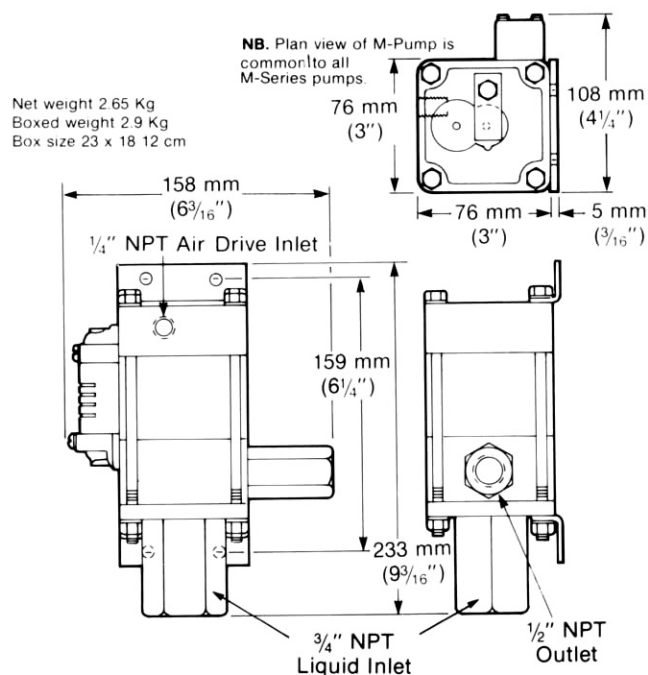
Accessories		
NUMBER	DESCRIPTION	PORTS
26065-3	Speed Control Valve	1/4 NPT
26063-3	Dead Man Valve	1/4 NPT
26064-3	Combination Air Regulator/Filter with Gauge	1/4 NPT
26065-2 plus 26064-3	-C Air Controls Installed on pump	1/4 NPT
51804	Muffler (For use with piped exhaust modifications on next page)	1/4 NPT Male

1/3 HP (.25 kw) PUMP MODELS

Optional Modifications 1/3 HP (.25) Series		
NUMBER	DESCRIPTION	
-HP	Hand Pump Attachment (with handle)	Provides manual operation of pump for precision pressure control or use without air power.
26082 26220-2 26220-3	Handle only. With handle Without handle	Kits for converting existing units.
-V	Manual release with relief valve For M & MS pumps only.	Provides high pressure needle valve with internal adjustable safety relief downstream of pump outlet checks. Tank return is 1/8 NPT in pump body.
28320	Manifold mount inlet port	Provides o-ring boss in aluminum block to enable mounting on side of tank below oil level. Modification applies to M-21 through M-188 only.
28590	Palm or foot start/stop button drive	Spring loaded shut.
28926	Remote start/stop control	Provides 1/8 NPT bleed signal port for single line remote control.
29697	Single stroke from remote air pulse	Useful for metering applications. One stroke per air pulse signal, eliminates automatic cycling 1/8 NPT signal port.
51788	Piped exhaust - standard	Provides connection ports for drive and pilot exhausts. Enables under tank top mounting and/or natural gas drive.
51794	Piped exhaust - sour gas	With hand pump (HP). Conforms to NACE MR-01-75
51794-2	Piped exhaust - sour gas	Without hand pump (HP).
51809	Normally open air operated release with relief valve	Provides highest release flow capacity. Will hold full pump psi piloted from drive air. Vents are not threaded. Ref. drawing 56643 for tank top mounting parts.
51809-1	Normally closed air operated release with relief valve	Used to hold hydraulic jacks. Will release up to 11,000 psi (using 100 psi air). Vents are not threaded. Ref. drawing 56643 for tank top mounting parts. Not available in 188:1 ratio.
51810	Safety relief valve	Relief is upstream of outlet check. Vent hole 1/16 NPT. M or MS series -21 thru -188.
51811	External air pilot	Provides 1/8 NPT port for external air to pilot for remote start/stop.
52950	Electric stroke counter provision	Micro switch (BZE6-2RQ) mounted on upper cap trips with each cycle.
53304	Superpressure outlet port	Fits 1/4" O.D. high pressure threaded and coned tube.
53784	Piped exhaust (drive only)	For field conversion of any 1/3 HP pump. Provides 1/4 NPT exhaust port.
53935	Low temperature drive	Enables operation down to 5°F. Some sacrifice of seal life at normal temperature. M or MS series.
54179	Stroke adjuster (includes 29697 above)	Useful for metering applications. Knurled knob with vertical scale on pump cap.
57905	No return spring	Provides improved fill on suction stroke pumping liquified gases, by utilizing the inlet pressure. Only available on M & MS series.
80103	Noise reduction kit	Fitted

NOTE: Not all modifications can be combined or used together. Consult factory when requiring more than one modification.

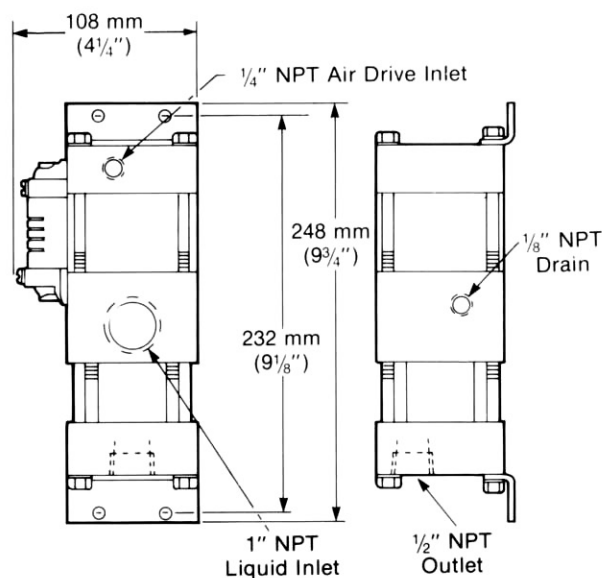
Dimensional Data 1/3 HP (.25 kw) Pumps



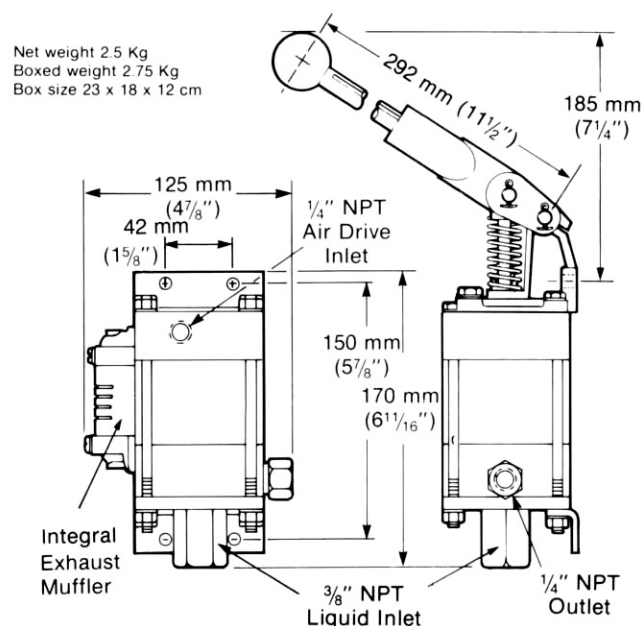
M-7, M-12
approx. wt. 9 lbs.
[4 kg]

MS-7, MS-12
approx. wt. 9 lbs.
[4 kg]

Net weight 6 Kg
Boxed weight 6.5 Kg
Box size 30 x 20 x 15 cm



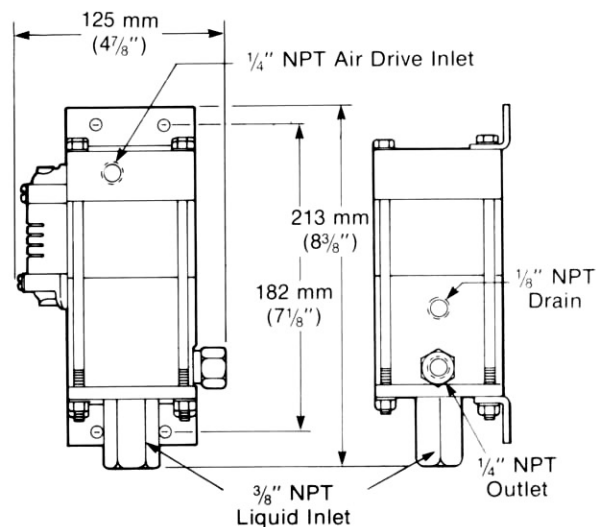
M-5
approx. wt. 9 lbs. [4 kg]



**MS-21, MS-36, MS-71,
MS-110, MS-188**
approx. wt. 6 lbs.
[2.7 kg]

**M-21, M-36, M-71,
M-110, M-188**
approx. wt. 6 lbs.
[2.7 kg]

Net weight 4 Kg
Boxed weight 4.25 Kg
Box size 23 x 18 x 12 cm



**29723-21, 29723-36,
29723-71, 29723-110**
approx. wt. 6-1/2 lbs.
[3 kg]

NOTE: Hand pump attachment will increase height by 7-1/4" (185 mm) and weight by 1/2 lb. [0.22 kg]

Performance Curves 1/3 HP (.25 kw) PUMPS

These curves show the capability of each model using 75, 100 and 125 psi drive pressures (intermediate pressures can be easily interpolated). Tests were run with the air pressure initially set at a **static** condition with a supply line equivalent to 1/4" schedule pipe. A standard 1/4" NPT filter-regulator was installed on the pump drive.

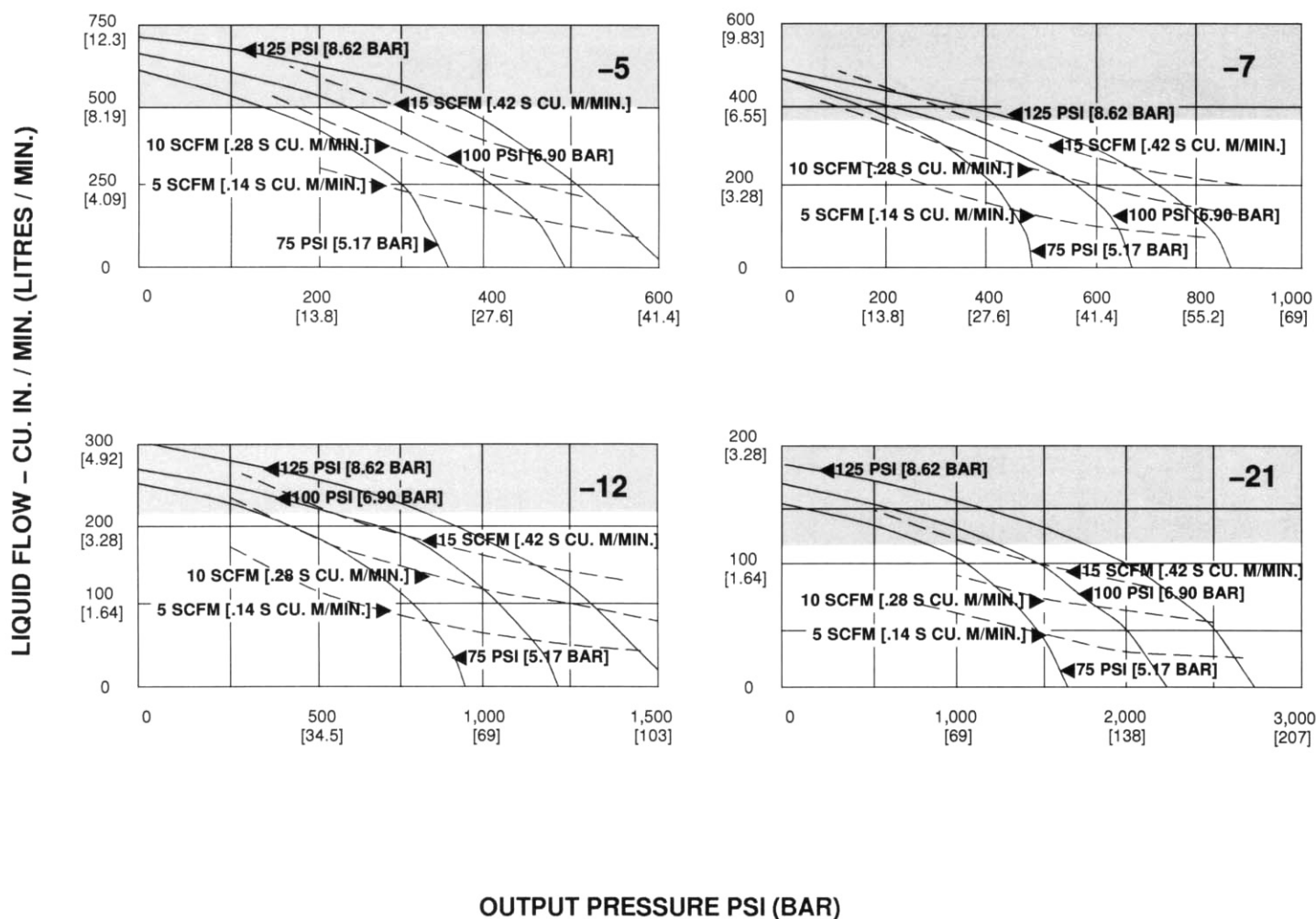
Note: "Mini" type air regulators (as supplied with -c air controls) will reduce output flow by about 25%.

Stall pressure: The air piston assembly is returned with a large coil spring. The Drive force varies, with position, as much as 2 psi (equivalent), thus affecting stall pressure (2 x ratio). Therefore, for precise test work the HP (hand Pump modification) is recommended.

* Curves reflect losses due to piston return spring.

AIR DRIVE PRESSURE (Solid curved lines) AIR DRIVE FLOW (Dotted curve lines)

Shaded areas indicate excessive cycle rates and should be avoided except for intermittent duty.



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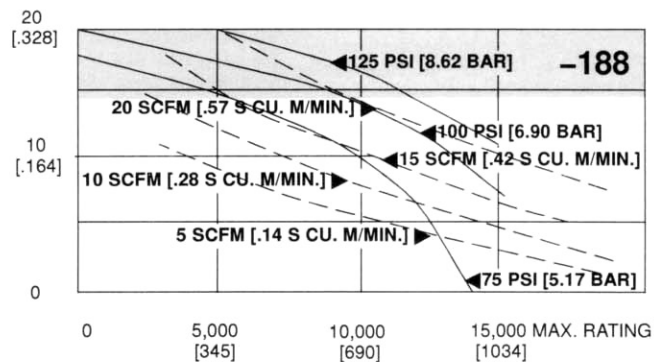
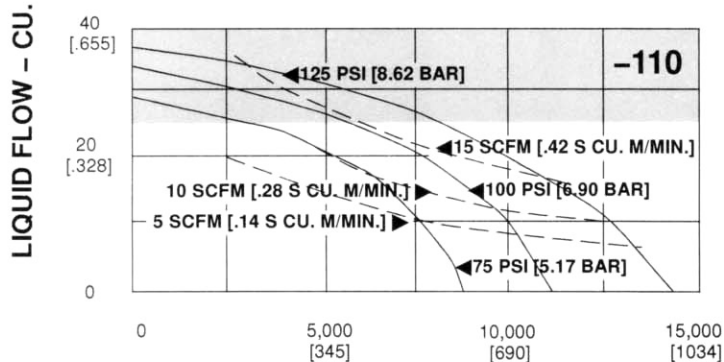
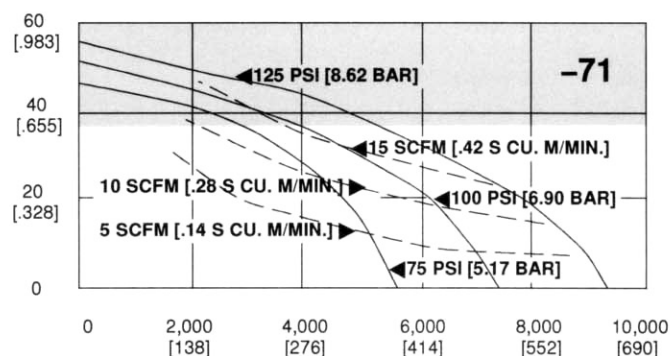
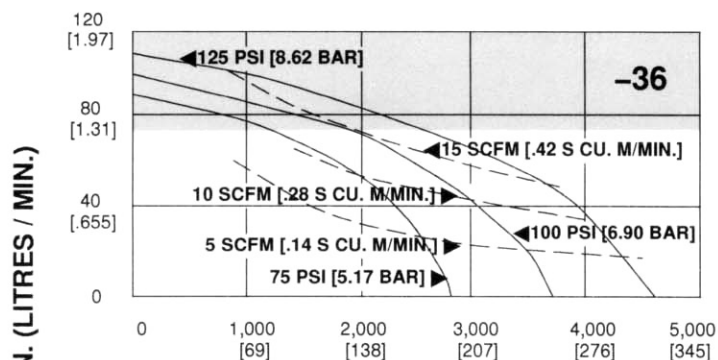
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OUTPUT PRESSURE PSI (BAR)