

Section: 50

Effective: October 2012
Replaces: February 2009

LG1 Series Sliding Vane Pumps for Cylinder Filling





LGF1E and LGF1PE model

Cylinder Filling

How Blackmer's sliding vane action works









LGB1E and LGB1PE model

Reliability

Durable pumps for fast and quiet operation. Sliding vane design provides sustained performance and trouble free operation.

Unique Features

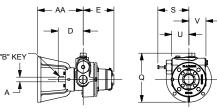
The latest 6-vane design contributes to reduced noise levels in the pumps. All models have 1-in. NPT tapped parts and use an exclusive "combination" valve that acts as both a back-to-tank bypass valve and an internal safety valve (no separate bypass valve is needed). The LGF1 pumps accept standard C-face mounted motors.

Flow Rates

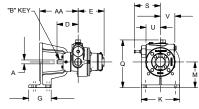
At motor speed 1,750, the LG1 Series pumps provide approximately 8.0 gpm (30.3 L/min) at 50 psi (3.4 bar) and the LG1P models provide 13 gpm (49.2 L/min) at 50 psi (3.4 bar).

Applications

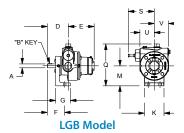
Cylinder filling, motor fueling, small vaporizers and dispensers.



*LGF Model non-footed



**LGF Model footed



Dimensions

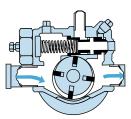
Pump Model			A	В	D	E	G	K	М	Q	S	U	V	AA	Approximate. Wt.	
															lbs.	kg
*LGF1E LGF1PE	C-Face Mount	in.	¹¹ / ₁₆	³ /16	3 ¹¹ /16	4 ¹ / ₂	_	-	_	7 ¹ /8	4 ¹ / ₂	2 ¹ /2	2 ¹ /2	6 ¹¹ /16	39	17.7
		mm	-	-	93.7	114.3	-	-	-	181.0	114.3	63.5	63.5	169.9		
**LGF1E	**LGF1E C-Face Mount	in.	¹¹ / ₁₆	³ /16	3 ¹¹ /16	4 ¹ / ₂	3 ⁷ /8	6 ⁵ /8	4 ¹ / ₂	8 ⁵ /16	41/2	21/2	21/2	6 ¹¹ /16	39	17.7
LGF1PE C-rac	C-race Mount	mm	-	-	93.7	114.3	98.4	168.3	114.3	211.1	114.3	63.5	63.5	169.9		
LGB1E LGB1PE	Bracket Mount	in.	¹¹ /16	³ /16	3 ¹¹ /16	4 ¹ / ₂	2 ⁹ /16	3 ³ /8	3 ¹ /2	7 ⁵ /16	41/2	2 ¹ /2	2 ¹ /2	-	19	8.6
		mm	-	-	93.7	114.3	65.1	85.7	88.9	185.7	114.3	63.5	63.5	-		

Performance Data

Assembled Pump Units		Pump and Motor Speed	Approx. Delivery of Propane at Diff Pressures and Pump Speeds 50 psi (3.5 bar) 100 psi (6.9 bar)				Maximum Differential Pressure		Maximum Working Pressure ²		Typical Motor ³	Motor Size for Standard Base ⁴	
Model	RV Setting	(rpm) ¹	gpm	L/min	gpm	L/min	psi	bar	psi	bar	hp	Minimum Frame	Maximum Frame
LGF1E	105 psi (7.2 bar)	1,750	8.0	30.3	6.0	22.7	125	8.6	350	24.1	1	56C	184C ⁴
LGB1E-DM	105 psi (7.2 bar)	1,750	8.0	30.3	6.0	22.7	125	8.6	350	24.1	1	56	184
LGF1PE	120 psi (8.3 bar)	1,750	13.0	49.2	10.0	37.9	125	8.6	350	24.1	1.5	56C	184C ⁴
LGB1PE-DM	120 psi (8.3 bar)	1,750	13.0	49.2	10.0	37.9	125	8.6	350	24.1	1.5	56	184

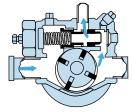
- 1 Maximum pump speed is 1,750 rpm. Slower electric motor speeds may be used with a corresponding reduction in flow rate.
- 2 Maximum rated working pressure is 350 psi (24.1 bar) for LPG and NH₃ (limited by U.L. and N.F.P.A. 58).
- Motors may be specified from dimension charts above and electric motor price list No. 10-MTRG-01 (explosion proof manual start switch for 1 and 1½ horsepower single phase motors also available).
- 4 Pump flange accepts NEMA C-face motors with 5 7/8" bolt circle diameter. Pump flange will not accept 182TC or 184TC frames.

Combination Relief/Bypass Valve



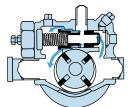
Normal Operation

Valve is completely closed during normal operation with discharge line open.



Back-to-Tank Bypassing

Discharge pressure exceeding the valve settings opens valve to second stage, returning all or part of pump flow back to supply tank.



Pressure Relief

If back-to-tank line is closed, valve opens to third stage, passing flow back to inlet side of pump.



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