



L18RS - 110 PSIG ENGINEERING DATA SHEET

Eng Data Sheet: 47848859001

Revision: C

Config. Number: LRS15-22D

Date: 6/18/2024

Supersedes 8/2/2023

Variable Speed – 60 Hz

PRODUCT DATA		Units	L18RS-110 PSIG					
Performance (1)								
Working Pressure	Package Pressure (Configurator Pick)	110 psig	Operating Speed					
		7.6 bar g	min	50%	60%	70%	85%	100%
Airend Model at configurator pressure / Sheave Ratio		EK100NK / 1.286						
75 psig 5.2 bar g	Capacity (2)	acfm (m ³ /min)	46.9 (1.33)	51.9 (1.47)	63.1 (1.79)	74.3 (2.1)	90.9 (2.57)	107.3 (3.04)
	Package Input Power (3)	kW	8.74	9.52	11.36	13.28	16.34	19.65
	Specific Power	kW/100 cfm	18.62	18.35	18.00	17.88	17.98	18.31
	Male Rotor Speed	rpm	2055	2251	2701	3152	3827	4502
85 psig 5.9 bar g	Capacity (2)	acfm (m ³ /min)	46.8 (1.33)	51.8 (1.47)	63.0 (1.78)	74.2 (2.1)	90.8 (2.57)	107.2 (3.04)
	Package Input Power (3)	kW	9.25	10.06	11.97	13.98	17.16	20.59
	Specific Power	kW/100 cfm	19.76	19.44	19.01	18.84	18.90	19.21
	Male Rotor Speed	rpm	2055	2251	2701	3152	3827	4502
100 psig 6.9 bar g	Capacity (2)	acfm (m ³ /min)	46.5 (1.32)	51.4 (1.46)	62.7 (1.77)	73.8 (2.09)	90.4 (2.56)	106.8 (3.02)
	Package Input Power (3)	kW	10.04	10.90	12.92	15.04	18.40	21.96
	Specific Power	kW/100 cfm	21.59	21.19	20.62	20.37	20.34	20.56
	Male Rotor Speed	rpm	2055	2251	2701	3152	3827	4502
110 psig 7.6 bar g	Capacity (2)	acfm (m ³ /min)	46.2 (1.31)	51.1 (1.45)	62.4 (1.77)	73.5 (2.08)	90.1 (2.55)	106.4 (3.01)
	Package Input Power (3)	kW	10.56	11.45	13.55	15.74	19.20	22.83
	Specific Power	kW/100 cfm	22.88	22.41	21.74	21.41	21.30	21.46
	Male Rotor Speed	rpm	2055	2251	2701	3152	3827	4502

Unloaded Package Input Power	kW	3.4
Maximum Operating Pressure	psig (bar g)	113 (7.8)
Minimum Operating Pressure	psig (bar g)	75 (5.2)
Airend Data		
Drive Type	n/a	V-Belt
Airend Speed (male rotor, Maximum)	rpm	4502
Male / Female Rotor Diameter	mm	101 / 83
Male / Female Rotor Tip Speed	m/s	24 / 16
General Package Data		
System Capacity - oil	gal (l)	2.5 (10)
Oil Cooler Heat Rejection @ Configured Pressure	btu/min	1040
Aftercooler Heat Rejection @ 100 psig	btu/min	260
Nominal Oil Temp. Rise Across Airend @100% Load	°F (°C)	26 (14)
Approximate oil carryover rate	ppm	< 3
Min / Max Operating Temperature	°F (°C)	34 / 113 (1 / 45)
Noise Level Data (4)		
Free Field Noise Level - AC / WC	dB(A)	74 @ 100% Load / 68 @ 70% Load

NOTES:

(1) Capacity and Power measured in accordance with ISO 1217 Annex C.

Air Intake: 1 bar(a) / 14.5 psia and 20°C / 68°F

Humidity: 0% (dry)

(2) acfm is actual cubic feet per minute at inlet conditions

(3) Package Input Power includes main motor, fan power and control input power

(4) Sound level measurement in accordance with ISO 2151.



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Supersedes 8/2/2023

PRODUCT DATA	Units	L18RS-110 PSIG				
Main Drive Motor Data						
Drive Motor Nominal Power	hp (kW)	25 (18.5)				
Drive Motor Speed Min. / Max.	rpm	1614 / 3536				
Drive Motor Service Factor	n/a	1.2				
Drive Motor Minimum Nameplate Efficiency	%	91.7%				
Drive Motor Min. Insulation Class	n/a	F				
Nominal Voltage [+/- 10%]	Vac	200V / 208V / 230V / 380 / 460V / 575V				
Nominal Full Load Package Current (6)	Amps @ Vac	71A@200V / 61A@230V / 37A@380V / 31A@460V / 25A@575V				
Minimum Supply Circuit Ampacity Rating (6)	n/a	Refer to document BP-39 available on GD Inside				
Starting current (Max. % of Full Load Current)	%	100				
Air Cooled Package Data						
Cooling Fan Motor Speed	rpm	N/A				
Cooling Fan Motor Power	hp (kW)	N/A				
Fan Motor Nameplate Efficiency	%	N/A				
Total Ventilation Flow Rate (Max)	cfm (m ³ /min)	2057 (58.2)				
Max Total Added Static Pressure, 95°F/113°F	in H ₂ O (Pa)	0.12 / 0.08 (30 / 20)				
Size Of Cooling Air Inlet Aperture	inch (mm)	Diameter 14 (355)				
Size Of Cooling Air Outlet Aperture	inch (mm)	22.2 x 15.6 (564 x 396)				
Cooling air temp above ambient, approximate	°F (°C)	47 (26)				
Aftercooler Approach Temperature - above amb	°F (°C)	27 (15)				
Connections						
Discharge Connection Size	Inches NPT	1				
Oil Drain Connection Size	Inches NPT	1/2				
Condensate Drain Connection Size	Inches NPT	1/4				
Dimensions and Weights						
Package type	Units	Base Mounted	120 Gallon Receiver		240 Gallon Receiver	
			Less Dryer	With Dryer	Less Dryer	With Dryer
Length	in (mm)	32.3 (820)	75.0 (1905)	74.8 (1899)	91.6 (2328)	91.2 (2318)
Width	in (mm)	34.7 (881)	35.0 (889)	35.0 (889)	35.0 (889)	35.0 (889)
Height	in (mm)	50.2 (1274)	76.3 (1938)	76.3 (1938)	82.9 (2106)	82.9 (2106)
Weight	lbs (kg)	945 (429)	1417 (643)	1821 (826)	1715 (778)	2116 (960)
Outline Drawing - standard package	n/a	47763994	47749763			

NOTES:

(6) Wiring, wire sizes, and over current protective devices utilized to power the compressor should be selected and installed in accordance with all applicable local electrical codes. Form BP-39 can be utilized as a reference guide in determining wire ampacity for variable speed compressors, however local electrical codes always take precedence and should be consulted prior to sizing and running wire to operate the compressor.

(7) Gardner Denver policy is one of continuous improvement and we therefore reserve the right to alter specifications without prior notice.