Gardner Denver

GDK75

50Hz

ENGINEERING DATA SHEET

CCN:
Rev.: A
ECN:
Sheet: 1 of 1
Date: Jan-2021

Model			GDK75-7A	GDK75-8A	GDK75-10A
GENERAL PERFORMANCE DATA					
Rated discharge Pressure		barg	7.0	8.0	10.0
Maximum Operating Pressure	(2)	barg	7.2	8.2	10.2
Minimum Operating Pressure		barg	4.5	4.5	4.5
Maximum Operating Ambient Temperature		°C	40	40	40
Minimum Operating Ambient Temperature		°C	2	2	2
Maximum System Temperature Setting		°C	109	109	109
Nominal Power - Main Motor		kW	75	75	75
Main Motor Efficiency	(3)	%	94.0%	94.0%	94.0%
Capacity FAD	(1)	m^3/min	13.4	13.0	11.3
Package Input Power with Fan - Air Cooled	(4)	kW	84.5	87.0	85.8
Specific Power - Air Cooled	(4)(5)	kW/m^3/min	6.30	6.80	7.60
SOUND LEVEL	(6)				
Noise Level Standard Package - Air Cooled		Sound Pressure - dB(A)	73	73	73
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	90	90	90
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)					
Heat Removal (Oil Cooler)		kW	69.8	70.2	72.2
Heat Removal (Oil and Aftercooler)		kW	87.2	87.8	88.4
Permitted Additional Static Pressure		Pa	30	30	30
Fan Air Flow		m^3/min	175	175	175
Fan Motor Nominal Power		kW	1.4	1.4	1.4
Cooling Air Temperature Rise @ 30°C		°C	25	25	26
Aftercooler CTD	(7)	°C	12.0	12.0	12.0
AIR END DATA					
Male Rotor Speed		RPM	3262	3127	2750
Tip Speed Rotor		m/sec	30.50	29.20	12.91
Full Load Shaft Power		kW	78.1	80.5	79.3
COOLANT LUBRICATION DATA	(12)				
Total Coolant Capacity - Air Cooled		litres	48	48	48
PIPING CONNECTIONS	(8)				
Air Discharge		Inches BSPP/G	2.0 INCH (FEMALE)	2.0 INCH (FEMALE)	2.0 INCH (FEMALE)
Coolant Drain		Inches BSPP/G	0.5INCH (FEMALE)	0.5INCH (FEMALE)	0.5 INCH (FEMALE)
Diameter of Power Inlet		mm	80	80	80
DIMENSIONS AND WEIGHT					
Length, Width, Height		mm	1969X1234X1605	1969X1234X1605	1969X1234X1605
Net Weight - Air Cooled		kg	1482	1482	1482
GA Drawing Number - Air Cooled			47723423001	47723423001	47723423001
ELECTRICAL DATA	(13)				
Motor Protection			TEFC, IP55	TEFC, IP55	TEFC, IP55
Full Load Package Current - Air Cooled	(9)				
		Amps @ 380V	139	139	139
Main Motor Locked Rotor Current	(14)				
		Amps @ 380V	1200	1200	719
Package Power Factor			0.87	0.87	0.87
Electrical Installation					
Recommended Supply Cable Size	(10)				
		mm^2/Cu (Kcmil) @ 380V	70	70	70
Maximum Recommended Fuse Rating	(10)(11)				
		Amps @ 380V	350	350	350

Notes:

1. FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C
2. Maximum pressure at package discharge, value at which compressor will unload when unit operating at maximum target pressure
3. IE2 efficiency motor
4. Measured at rated capacity and rated pressure
5. Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
6. Measured in free field conditions per ISO 2151 using Hemispherical Method; ducted inlet and outlet, with + 3 dB(A) tolerance
7. CTD based on 100°F/38°C inlet air at 40% Relative Humidity (For alternate conditions contact Ingersoll Rand)
8. G for domestic standard
9. Maximum current includes 5% additional current due to fouled filters and elements
10. 90°C copper cables. Always apply local electrical codes for sizing cables and system protection
11. Time delay fuse recommended. Apply local electrical codes for fuse sizing
12. Coolant volumes listed are approximate. See operator manual for coolant fill proceedure
13. 50Hz (±2%) motor voltage tolerance: (380)-7/+7%
14. Star-Delta starting current inrush is about 33% of direct starting current
15. During the Star-Delta open-starting transition, the in-rush current value could instantaneously peak from 1.8 to 2.8 times the noted Locked-Rotor-Amperage (LRA) values

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