Gardner Denver

GDK110 HPM

50Hz

CCN: 47779295001
Rev: D
ECN: 1489453
Sheet: 4 of 8
Date: 2023.07

Model			GDK110-7W	GDK110-8W	GDK110-10W
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	46	46	46
Minimum Operating Ambient Temperature		°C	2	2	2
Maximum System Temperature Setting		°C	109	109	109
Nominal Power - Main Motor		kW	90	90	90
Main Motor Efficiency	(3)	%	96.8%	96.8%	96.8%
Main Inverter Drive Efficiency		%	97%	97%	97%
Capacity FAD@Max Speed	(1)	m³/min	21.8	20.5	18.6
Capacity FAD@Min Speed		m³/min	7.5	7.5	7.5
Package Input Power with Fan - Water Cooled	(4)	kW	124.7	127.1	133.9
Specific Power - Air Cooled	(4)(5)	kW/m³/min	5.8	6.2	7.2
SOUND LEVEL	(6)				
Noise Level Standard Package - Water Cooled		Sound Pressure - dB(A)	74	74	74
Noise Level Standard Package - Water Cooled		Sound Power - dB(A)	92	92	92
OIL CARRY OVER		mg/m³	≤3	≤3	≤3
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)					
Heat Removal (Oil Cooler)		kW	103.0	103.0	103.0
Heat Removal (Oil and Aftercooler)		kW	128.4	128.4	128.4
Permitted Additional Static Pressure		Pa	30	30	30
Fan Air Flow		m³/min	80.0	80.0	80.0
Fan Motor Nominal Power		kW	0.5	0.5	0.5
Cooling Air Temperature Rise@46℃		°C	10	10	10
Cooling Water Temperature Rise@38℃		°C	13	13	13
Cooling Water Flow		m3/h			
@ 10 ℃			4	4	4
@ 20 ℃			5	5	5
@ 30 ℃			7	7	7
@ 38 ℃			9	9	9
Cooling Water Max Pressure		Bar	4	4	4
Cooling Water Min Pressure		Bar	2	2	2
Cooling Water Pressure Drop		Bar	1	1	1
Aftercooler CTD	(7)	°C	12	12	12
AIR END DATA					
Male Rotor Speed		RPM	3425	3286	2965
Tip Speed Rotor		m/sec	34.8	33.4	30.1
Full Load Shaft Power		kW	121.5	122.4	121.2
COOLANT LUBRICATION DATA	(12)				
Total Coolant Capacity - Water Cooled		litres	83.0	83.0	83.0
PIPING CONNECTIONS	(8)				
Air Discharge		Inches G	3 INCH (FEMALE)	3 INCH (FEMALE)	3 INCH (FEMALE)
Coolant Drain - Hose Size		Inches NPT	0.5 (FEMALE)	0.5 (FEMALE)	0.5 (FEMALE)
Diameter of Power Inlet		mm (Inches)	120 (4.7)	120（4.7）	120 (4.7)
DIMENSIONS AND WEIGHT					
Length, Width, Height		mm	2300*1500*1700	2300*1500*1700	2300*1500*1700
Net Weight - Water Cooled		kg	1720	1720	1720
GA Drawing Number - Water Cooled			47775688001	47775688001	47775688001
ELECTRICAL DATA	(13)				
Motor Protection				TEOC, IP66	
Motor Number of Poles				8	
Motor Insulation Class / Temperature Rise				Class H, 180℃	
Full Load Package Current - Water Cooled	(9)				
		Amps @ 380V		219	
Package Power Factor				0.92	
Electrical Installation					
Recommended Supply Cable Size	(10)				
		mm²/Cu (Kcmil) @ 380V		185	
Maximum Recommended Fuse Rating	(10)(11)				
		Amps @ 380V		400	

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 stop when unit operating at maximum target pressure
3. IE3 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' Thread 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: (380V)±7% ;