Gardner Denver

GDK07 TAS

50Hz

ENGINEERING DATA SHEET

CCN: 47825235001
Rev.: A
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Sheet: 1 of 5
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Model			GDK07-7A TAS	GDK07-8A TAS	GDK07-10A TAS	GDK07-12.5A TAS
GENERAL PERFORMANCE DATA						
Rated discharge Pressure	(2)	barg	7.0	8.0	10.0	12.5
Maximum Operating Pressure		barg	7.2	8.2	10.2	12.7
Minimum Operating Pressure		barg	4.5	4.5	4.5	4.5
Maximum Operating Ambient Temperature		°C	40	40	40	40
Minimum Operating Ambient Temperature		°C	2	2	2	2
Maximum System Temperature Setting		°C	109	109	109	109
Nominal Power - Main Motor		kW	7.5	7.5	7.5	7.5
Main Motor Efficiency	(3)	%	90.1%	90.1%	90.1%	90.1%
Capacity FAD	(1)	m^3/min	1.22	1.14	1.0	0.81
Package Input Power with Fan - Air Cooled	(4)	kW	9.3	9.2	9.4	8.7
Package Input Power with Fan & Dryer - Air Coo	(4)	kW	10.0	9.9	10.1	9.5
Specific Power - Air Cooled	(4)(5)	kW/m^3/min	7.6	8.1	9.4	10.8
Specific Power with Dryer - Air Cooled	(4)(5)	kW/m^{3min}	8.2	8.7	10.1	11.7
SOUND LEVEL	(6)					
Noise Level Standard Package - Air Cooled		Sound Pressure - dB(A)	66	66	66	66
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	81	81	81	81
OIL CARRY OVER		mg/m^3	≤5	≤5	≤5	≤5
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)						
Heat Removal (Oil Cooler)		kW	7.4	7.4	7.4	7.4
Heat Removal (Oil and Aftercooler)		kW	8.84	8.84	8.84	8.84
Permitted Additional Static Pressure		Pa	30	30	30	30
Fan Air Flow		m^3/min	24.6	24.6	24.6	24.6
Cooling Air Temperature Rise @ 40°C		°C	17	17	17	17
Aftercooler CTD	(7)	°C	10	10	10	10
AIR END DATA						
Male Rotor Speed		RPM	4780	4450	3950	3525
Tip Speed Rotor		m/sec	18.58	17.30	15.36	13.70
Full Load Shaft Power		kW	7.73	7.6	7.59	7.7
COOLANT LUBRICATION DATA	(12)					
Total Coolant Capacity - Air Cooled		litres	4.5	4.5	4.5	4.5
PIPING CONNECTIONS	(8)					
Air Discharge		Inches Rc	0.75 INCH (FEMALE)	0.75 INCH (FEMALE)	0.75 INCH (FEMALE)	0.75 INCH (FEMALE)
Coolant Drain - Hose Size		Inches UNF	0.562 (FEMALE)	0.562(FEMALE)	0.562(FEMALE)	0.562(FEMALE)
Diameter of Power Inlet		mm (Inches)	25 (1)	25 (1)	25 (1)	25 (1)
DIMENSIONS AND WEIGHT						
Length, Width, Height		mm	1576, 844,1644	1576, 844,1644	1576, 844,1644	1576, 844,1644
Net Weight - Air Cooled		kg	457	457	457	457
GA Drawing Number - Air Cooled			47825235001	47825235001	47825235001	47825235001
ELECTRICAL DATA	(13)					
Motor Speed		rpm	2935	2935	2935	2935
Motor Protection			TEFC IP55	TEFC IP55	TEFC IP55	TEFC IP55
Starting Model			Y-△	Y-△	Y-△	Y-△
Insulation Grade			F	F	F	F
Full Load Package Current - Air Cooled	(9)					
		Amps @ 400V	14	14	14	14
Main Motor Locked Rotor Current	(14)					
		Amps @ 400V	117	117	117	117
Package Power Factor			0.87	0.87	0.87	0.87
Electrical Installation						
Recommended Supply Cable Size	(10)					
		mm^2/Cu (Kcmil) @ 400V	4	4	4	4
Maximum Recommended Fuse Rating	(10)(11)					
		Amps @ 400V	32	32	32	32
Refrigerated Dryer Data						
Refrigerant Type-Domestic			R134a	R134a	R134a	R134a
Refrigerant Type-Export			R404a	R404a	R404a	R404a
Refrigerant Quantity		kg	0.25	0.25	0.25	0.25
Fan Air Flow		m^3/min	33	33	33	33

Filter Data		ISO Class (Particles Humidity and Liquid Water. Oil)	Particles [0.01-0.5μm]	Particles [0.5- 1μm]	Particles [1- 5μm]	Humidity and Liquid Water	Total Oil
ISO Class Data	(16)	1.6.1	≤20000	≤400	≤10	≤+10℃	≤0.01

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. 'Rc' 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% ;
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
16 TAS units deliver ISO Class1-4-2 quality air measured at steady state conditions in accordance with ISO 8573-1:2010, with inlet air to package of 25℃(77℉) and RH of 60%
17 Package discharge pressure=rated pressure-0.5bar(include water moisture,Hi-efficiency filter, dryer and tube pressure drop)