Gardner Denver

GDK15 TAS

50Hz

ENGINEERING DATA SHEET

CCN: 47825235001
Rev.: A
ECN: 1491576

Date: 2023.07

Model			GDK15-7A TAS	GDK15-8A TAS	GDK15-10A TAS	GDK15-12.5A TAS
GENERAL PERFORMANCE DATA						
Rated discharge Pressure	(2)	barg	7	8	10	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	15	15	15	15
Main Motor Efficiency	(3)	%	90.6%	90.6%	90.6%	90.6%
Capacity FAD	(1)	m^3/min	2.50	2.40	2.07	1.70
Package Input Power with Fan - Air Cooled	(4)	kW	17.3	17.5	17.2	16.5
Package Input Power with Fan&Dryer - Air Cooled	(4)	kW	18.2	18.4	18.1	17.4
Specific Power - Air Cooled	(4)(5)	kW/m^3/min	6.9	7.3	8.3	9.7
Specific Power with Dryer- Air Cooled	(4)(5)	kW/m^3/min	7.3	7.7	8.7	10.2
SOUND LEVEL	(6)					
Noise Level Standard Package - Air Cooled		Sound Pressure - dB(A)	68	68	68	68
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	83	83	83	83
OIL CARRY OVER		mg/m^3	≤5	≤5	≤5	≤5
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)						
Heat Removal (Oil Cooler)		kW	14.4	14.4	14.4	14.4
Heat Removal (Oil and Aftercooler)		kW	17.3	17.3	17.3	17.3
Permitted Additional Static Pressure		Pa	30	30	30	30
Permitted Fan Motor Power		kW	0.216	0.216	0.216	0.216
Fan Air Flow		m^3/min	36.7	36.7	36.7	36.7
Cooling Air Temperature Rise @ 40°C		°C	22.6	22.6	22.6	22.6
Aftercooler CTD	(7)	°C	13.8	13.8	13.8	13.8
AIR END DATA						
Male Rotor Speed		RPM	3284	3091	2739	2300
Tip Speed Rotor		m/sec	18.38	17.30	15.33	12.87
Full Load Shaft Power		kW	15.39	15.25	14.9	14.1
COOLANT LUBRICATION DATA	(12)					
Total Coolant Capacity - Air Cooled		litres	12.6	12.6	12.6	12.6
PIPING CONNECTIONS	(8)					
Air Discharge		Inches R	1 INCH (FEMALE)	1 INCH (FEMALE)	1 INCH (FEMALE)	1 INCH (FEMALE)
Coolant Drain - Hose Size		Inches NPT	0.38(FEMALE)	0.38(FEMALE)	0.38(FEMALE)	0.38(FEMALE)
Diameter of Power Inlet		mm (Inches)	35 (1.4)	35 (1.4)	35 (1.4)	35 (1.4)
DIMENSIONS AND WEIGHT						
Length, Width, Height		mm	1596, 1246,1805	1596, 1246,1805	1596, 1246,1805	1596, 1246,1805
Net Weight - Air Cooled		kg	812	812	812	812
GA Drawing Number - Air Cooled			47825235001	47825235001	47825235001	47825235001
ELECTRICAL DATA	(13)					
Motor Speed		rpm	1500	1500	1500	1500
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 @ 380V	30	30	30	30
Main Motor Locked Rotor Current	(14)					
		Amps @ 380V	258	258	258	258
Package Power Factor			0.84	0.84	0.84	0.84
Electrical Installation						
Recommended Supply Cable Size	(10)					
		mm²/Cu (Kcmil) @ 380V	16	16	16	16
Maximum Recommended Fuse Rating	(10)(11)					
		Amps @ 380V	63	63	63	63
Refrigerated Dryer Data						
Refrigerant Type-Domestic			R134a	R134a	R134a	R134a
Refrigerant Type-Export			R404a	R404a	R404a	R404a
Refrigerant Quantity		kg	0.3	0.3	0.3	0.3
Fan Air Flow		m³/min	33	33	33	33

		ISO Class	Particles			Humidity and Liquid Water	Total Oil
Filter Data	(Particles Humidity and Liquid Water. Oil)		[01-0.5μm]	[0.5- 1μm]	[1- 5μm]		
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)