



## ENGINEERING DATA SHEET

# GDK18.5 TAS

50Hz

CCN: 47825235001  
Rev.: A  
ECN: 1491576  
Sheet: 4 of 5  
Date: 2023.07

Model			GDK18.5-7A TAS	GDK18.5-8A TAS	GDK18.5-10A TAS	GDK18.5-12.5A TAS
<b>GENERAL PERFORMANCE DATA</b>						
Rated discharge Pressure	(2)	bar(g)	7	8	10	12.5
Maximum Operating Pressure		bar(g)	7.2	8.2	10.2	13
Minimum Operating Pressure		bar(g)	4.5	4.5	4.5	4.5 (65)
Maximum Operating Ambient Temperature		°C	40	40	40	40(115)
Minimum Operating Ambient Temperature		°C	2	2	2	2(36)
Maximum System Temperature Setting		°C	109	109	109	109(228)
Nominal Power - Main Motor		kW	18.5	18.5	18.5	18.5(25)
Main Motor Efficiency	(3)	%	91.2%	91.2%	91.2%	91.2%
Capacity FAD	(1)	m³/min	3.10	3.00	2.61	2.15
Package Input Power with Fan - Air Cooled	(4)	kW	21.7	22.5	21.9	20.0
Package Input Power with Fan&Dryer - Air Cooled	(4)	kW	22.7	23.5	22.9	21.0
Specific Power - Air Cooled	(4)(5)	kW/m³/min	7.0	7.5	8.4	9.3
Specific Power with Dryer - Air Cooled	(4)(5)	kW/m³/min	7.3	7.8	8.8	9.8
<b>SOUND LEVEL</b>						
Noise Level Standard Package - Air Cooled	(6)	Sound Pressure - dB(A)	68	68	68	68
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	83	83	83	83
<b>OIL CARRY OVER</b>						
		mg/m³	≤5	≤5	≤5	≤5
<b>COOLING DATA (@ Maximum Ambient Temperature &amp; Maximum Discharge Pressure)</b>						
Heat Removal (Oil Cooler)		kW	17.0	17.0	17.0	17.0
Heat Removal (Oil and Aftercooler)		kW	21.3	21.3	21.3	21.3
Permitted Additional Static Pressure		Pa	30	30	30	30
Permitted Fan Motor Power		kW	0.498	0.498	0.498	0.498
Fan Air Flow		m³/min	55.0	55.0	55.0	55.0
Cooling Air Temperature Rise @ 40°C		°C	18.6	18.6	18.6	18.6
Aftercooler CTD	(7)	°C	13.8	13.8	13.8	13.8
<b>AIR END DATA</b>						
Male Rotor Speed		RPM	3998	3866	3439	2984
Tip Speed Rotor		m/sec	22.37	21.63	19.24	16.70
Full Load Shaft Power		kW	19.25	19.58	19.1	18.48
<b>COOLANT LUBRICATION DATA</b>						
Total Coolant Capacity - Air Cooled	(12)	litres	12.6	12.6	12.6	12.6
<b>PIPING CONNECTIONS</b>						
Air Discharge	(8)	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)
<b>DIMENSIONS AND WEIGHT</b>						
Length, Width, Height		mm	1596, 1246, 1855	1596, 1246, 1855	1596, 1246, 1855	1596, 1246, 1855
Net Weight - Air Cooled		kg	856	856	856	856
GA Drawing Number - Air Cooled			47825235001	47825235001	47825235001	47825235001
<b>ELECTRICAL DATA</b>						
Motor Speed	(13)	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	36	36	36	36
Main Motor Locked Rotor Current	(14)	Amps @ 380V	304	304	304	304
Package Power Factor			0.85	0.85	0.85	0.85
<b>Electrical Installation</b>						
Recommended Supply Cable Size	(10)	mm²Cu (Kcmil) @ 380V	25	25	25	25
Maximum Recommended Fuse Rating	(10)(11)	Amps @ 380V	63	63	63	63
<b>Refrigerated Dryer Data</b>						
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	42	42	42	42
Filter Data		ISO Class	Particles		Humidity and Liquid Water	
ISO Class Data	(16)	(Particles Humidity and Liquid Water, Oil)	[0.1-0.5µm]	[0.5-1µm]	[1-5µm]	Total Oil
		1,6,1	≤20000	≤100	≤10	≤+10°C
						≤0.01

## Notes:

- FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C
- Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
- IE3 efficiency motor
- Measured at rated capacity and rated pressure
- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
- Measured in free field conditions per ISO 2151 using Hemispherical Method; ducted inlet and outlet, with + 3 dB(A) tolerance
- CTD based on 100°F/38°C inlet air at 40% Relative Humidity (For alternate conditions contact Ingersoll Rand)
- Rc: Thread for domestic standard
- Maximum current includes 5% additional current due to fouled filters and elements
- 90°C copper cables, Always apply local electrical codes for sizing cables and system protection
- Time delay fuse recommended, Apply local electrical codes for fuse sizing
- Coolant volumes listed are approximate. See operator manual for coolant fill procedure
- 50Hz (±2%) motor voltage tolerance: (380V)±7% ;
- Star-Delta starting current inrush is about 33% of direct starting current
- 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
- 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°C(77°F) and RH of 60%
- Package discharge pressure=rated pressure+0.5bar(include water moisture, Hi-efficiency filter, dryer and tube pressure drop)

Product Improvement is a continuing goal at Gardner Denver. Design and specifications are subject to change without notice or obligation.