

## **Dry-running Screw Compressor Installation Data Sheet**

Doc: TI-IDS-2019-FSG SFC RD Version: 1.3 Rev. Date: 02/04/2022

Model	FSG 4	420-2 SFC	i.HOC	FSG 5	500-2 SFC	i.HOC
Rated Pressure [psig]	100	125	145	5 100 125 145		
I. Cooling Data						
Cooling System Available [Std., Opt.]		A/C, W/C			A/C, W/C	
Standard Ambient Temp. Range [°F]		40 - 115			40 - 105	
Ventilation Inlet Air Opening [sq. ft. free area] (A/C) Z		75.3			86.1	
Ventilation Inlet Air Opening [sq. ft. free area] (W/C) Z		10.8			10.8	
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C)   (W/C)	0.3	32 (0.08) / 0	.32	0.3	32 (0.08) / 0	.32
Exhaust Air Opening Reference Dimensions (L x W) [in.]		S	ee Dimensi	onal Drawi	na	

- A Exh
- B Addi
- V Exh

Standard Ambient Temp. Range [ F]		40 - 113	40 - 105	
Ventilation Inlet Air Opening [sq. ft. free area] (A/C) Z		75.3	86.1	
Ventilation Inlet Air Opening [sq. ft. free area] (W/C) Z		10.8	10.8	
Max. Additional Pressure Drop for Ducts [inch Water Colum	nn] (A/C)   (W/C)	0.32 (0.08) / 0.32	0.32 (0.08) / 0.32	
Exhaust Air Opening Reference Dimensions (L x W) [in.]		See Dimens	ional Drawing	
Model shown for reference only Actual Duct size may vary with installation  A Exhaust Air Duct	z B A V		· ·	
B Additional Exhaust Duct for Option D2  V Exhaust Fan	9000			
Z Ventilation Inlet Air Opening	80 1201 60 60 50*			
*minimum clearance, if no crane is availa				
Air-cooled Data			1	
Internal Cooling Fan Capacity [CFM]		23,543	23,543	
Water-cooled Data				
Internal Cooling Fan Capacity [CFM]		6,474	6,474	
Cooling Water Connection [inches NPT]		2	2	
Cooling Water Flow f. Heating Up ΔT=27°F [gal/min]		70.4	88.1	
Cooling Water Pressure Loss at ΔT=27°F [psi]		2.9	4.4	
II. Electrical Data				
Do NOT operate package on any unsymmetrical power supply. A three-phase (open) delta or three-phase star with non-grounded The machine requires a symmetrical three-phase power supply to a symmetrical three-phase supply, the phase angles and volta	neutral. ransformer with a WYE configuration output as shown on the right.	three-phase star (wye); 4-wire; grounded neutral	three-phase star (wye); 3-wire; grounded neutral	
Drive Motor				
Motor [hp]	Electrical data may vary in accordance with motor manufacturer's specifications. Motors are EISA compliant. Main power supply and overcurrent protection must be installed by a qualified electrician in accordance with NEC, OSHA, and any applicable local codes.	350	450	
NEMA Nominal Efficiency %		96.80%	96.80%	
Enclosure Type		IP55 (TEFC)	IP55 (TEFC)	
Insulation Class		F	F	
Standard Voltage		460V/3ph/60Hz	460V/3ph/60Hz	
Full Load Amps [FLA]		380	485	
Fan Motor (A/C)				
Insulation Class		F	F	
Fan Motor [hp]		15	15	
Nominal Efficiency %		91.70%	91.70%	
Full Load Amps [FLA]		20	20	
Fan Motor (W/C)				
Insulation Class		F	F	
Fan Motor [hp]		2	2	
Nominal Efficiency %		88.50%	88.50%	
Full Load Amps [FLA]		2.9	2.9	



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		FSG 420-2 SFC i.H	DC FSG 500	0-2 SFC i.HOC			
		100 125	145 100	125 145			
Total Package Data (A/C)	•			•			
Control Cabinet Class (NEMA)		12		12			
Short Circuit Current Rating [kA rms sym]	Field installed fuse required, see below*	65		65			
Package Full Load Amps [FLA]		501		597			
Recommended Disconnect Fuse Size [Amps]	*Time delay (dual element) fuse; Class J ≤ 600A (e.g. AJT) / Class L > 600A (e.g. A4BQ). Based on 2020 NEC 240.6, 430.52, and Tables 430.52, 430.248, and 430.250	700		800			
Recommended Disconnect Wire Size [AWG/kcmil]	The following multi-strand copper core wires are given according to 2020 NEC 310.14, 310.15, 310.16 and table 310.16 adjusted for 40°C ambient temperature. If other local conditions prevail, for example high temperature, the cross section should be checked and adjusted according to 2020 NEC 110.14(C), 220.3, 310.14, 310.15, 310.16, 430.6, 430.22, 430.24, 670.4(A) and other local codes.			ccmil per phase			
Minimum Recommended Ground Wire Size	We recommend using 1 full size conductor for the ground. The minimum ground wire size given above is per the 2020 NEC Table 250.122.			ccmil per phase			
Total Package Data (W/C)			'				
Package Full Load Amps [FLA]		484		581			
Recommended Disconnect Fuse Size [Amps]	*Time delay (dual element) fuse; Class J ≤ 600A (e.g. AJT) / Class L > 600A (e.g. A4BQ). Based on 2020 NFC 240.6, 430.52, and Tables 430.52, 430.248, and 430.250	700		800			
Recommended Disconnect Wire Size [AWG/kcmil]	The following multi-strand copper core wires are given according to 2020 NEC 310.14, 310.15, 310.16 and table 310.16 adjusted for 40°C ambient temperature. If other local conditions prevail, for example high temperature, the cross section should be checked and adjusted according to 2020 NEC 110.14(C), 220.3, 310.14, 310.15, 310.16, 430.6, 430.22, 430.24, 670.4(A) and other local codes.	2 x 500 kcmil per pha	ase 3 x 300 l	ccmil per phase			
Minimum Recommended Ground Wire Size	We recommend using 1 full size conductor for the ground. The minimum ground wire size given above is per the 2020 NEC Table 250.122.	2 x 500 kcmil per pha	3 x 300 l	ccmil per phase			
III. Basic Specifications							
Super Soundproofing [dB(A)] w/o ducting (A/C)   (W/C)	Measured in dB(A) according to ISO 2151 using ISO 9614-2.	83 / 77		84 / 77			
Super Soundproofing [dB(A)] with ducting (A/C)   (W/C)	Tolerance +/- 3 dB(A).	81 / 77		82 / 77			
A/C Air Discharge [inches NPT]		6 ASME B16.5 class	150 6 ASME	B16.5 class 150			
Total Oil Charge (A/C) [gal]		23		23			
Total Oil Charge (W/C) [gal]		22.5		22.5			
Maximum Altitude [ft.]	Higher altitudes are permissibile only after consulation with the manufacturer.	1,640		1,640			
Power Input Conduit Opening(s) [in.]		3 x Ø 3"		3 x Ø 3"			
Dimensions (W x D x H) [in.] (A/C)		182 1/4 x 81 3/4 x 107		81 3/4 x 107 7/8			
Dimensions (W x D x H) [in.] (W/C)		176 1/4 x 81 3/4 x 87		81 3/4 x 87 3/8			
Weight [lb] (A/C)		17,086		18,078			
Weight [lb] (W/C)		16,314		17,306			
IV. i.HOC System Data							
Blower Motor Nominal Power [hp]		19.4		19.4			
Blower Motor Speed [rpm]		6,010		6,010			
Blower Motor Efficiency [%]		90.10%		90.10%			
Drum Motor Nominal Power [hp]		0.16		0.16			
Drum Motor Speed [rpm]		1400		1,400			
Drum Motor Efficiency [%]		66%		66%			