



Installation Data Sheet
Series: 1:1 Direct Drive FSD.3 SFC
Document No.: TI-DATA-2017-SFC 315S 315
Version: 1.9
Revision Date: 04/17/2023

Model	SFC 315S				SFC 315				
	110	125	145	175	110	125	145	175	217
Rated Pressure [psig]									
I. COOLING DATA									
Cooling System Available [Std., Opt.]	A/C, W/C				A/C, W/C				
Standard Ambient Temp. Range [°F]	40 - 115				40 - 115				
VENTILATION OF COMPRESSOR ROOM									
Air Inlet Opening [sq. ft. free area] (A/C) Z	70				80.7				
Air Inlet Opening [sq. ft. free area] (W/C) Z	16.1				18.3				
Solution A (forced ventilation with exhaust fan) as shown in service manual									
Cooling Fan Capacity [CFM] (A/C)	You cannot use an air-cooled FSD without ducting the cooling air outlet				14,126				
Cooling Fan Capacity [CFM] (W/C)									
Solution B (exhaust air used for space heating) as shown in service manual									
Internal Cooling Fan Capacity [CFM] (A/C)	20,600				23,543				
Internal Cooling Fan Capacity [CFM] (W/C)	2,943				2,943				
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C) / (W/C)	0.40 / 0.16				0.40 / 0.16				
Exhaust Air Opening Reference Dimensions (L x W) [in]	86 x 86				86 x 86				
<p>Model shown for reference only Actual Duct size may vary with installation</p>			<p>See drawing for actual dimensions. The actual individual duct dimension will vary for every installation based on actual length, number and type of bends, accessories etc.</p>						
<p>Solution A Exhaust Fan</p>									
<p>Solution B Exhaust Duct</p>									
<p>Ventilation of Compressor Room Z</p>									
AIR COOLED DATA									
Internal Cooling Fan Capacity [CFM]	20,600				23,543				
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.				14.4	12.6	16.2	14.4	12.6
Typical Heat Rejected [BTU / HR]	1,010,500				1,178,500				
Fan Motor [HP], oilcooler aircooler	10 / 4				10 / 4				
WATER COOLED DATA									
Type of heat exchangers	stainless steel, plate-type				stainless steel, plate-type				
Internal Cooling Fan Capacity [CFM]	2,943				2,943				
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.				1.8				
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.				987,500				
Heat Rejected into Cooling Air [BTU / HR]	79,000				96,000				
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).				130				
Temperature differential between inlet water and max. discharge water temperature [°F]	27		54		27		54		
Min./ Max. pressure [psi]	15		145		15		145		
Max. inlet water temperature [°F]	105		77		105		77		
Min. cooling water flow [gpm]	73		36.5		85		42.7		
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	7.5		3.6		10		3.6		
Pressure drop across compressor package [psi] WITH cooling water throttling valve	13		6		16		6		



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II. ELECTRICAL DATA <i>Electrical data may vary in accordance with motor manufacturer's specifications. Motors are EISA compliant.</i>									
DRIVE MOTOR									
Motor HP	350			450					
Insulation Class	F			F					
Standard Voltage	460V/3ph/60hz			460V/3ph/60hz					
Full Load Amps [FLA] @ 460V/3ph/60Hz	380			485					
Full Load Amps [FLA] @ 575V/3ph/60Hz	unit not available			390					
FAN MOTOR (A/C) Oilcooler									
Insulation Class	F			F					
Fan Motor [HP]	10			10					
Full Load Amps [FLA] @ 460V/3ph/60Hz	12.9			12.9					
Full Load Amps [FLA] @ 575V/3ph/60Hz	unit not available			11					
FAN MOTOR (A/C)									
Insulation Class	F			F					
Fan Motor [HP]	4			4					
Full Load Amps [FLA] @ 460V/3ph/60Hz	6.0			6.0					
Full Load Amps [FLA] @ 575V/3ph/60Hz	unit not available			4.8					
FAN MOTOR (W/C)									
Insulation Class	F			F					
Fan Motor [HP], Single Speed	0.5			0.5					
Full Load Amps [FLA] @ 460V/3ph/60Hz	0.6			0.6					
Full Load Amps [FLA] @ 575V/3ph/60Hz	unit not available			1.2					
TOTAL PACKAGE DATA (A/C)									
Do NOT operate package on any unsymmetrical power supply. Also do NOT operate package on power supplies like, for example, a three-phase (open) delta or three-phase star with non-grounded neutral. The machine requires a symmetrical three-phase power supply transformer with a WYE configuration output as shown on the right. In a symmetrical three-phase supply the phase angles and voltages are all the same. Other power supplies are not suitable.					 three-phase star (wye); 4-wire; grounded neutral		 three-phase star (wye); 3-wire; grounded neutral		
Continuous Duty [Hours per day]	24			24					
Control Cabinet Class (NEMA)	12			12					
Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60Hz	Field installed fuse required, see below*			65					
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz	Field installed fuse required, see below*			unit not available					
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	492			574					
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	unit not available			437					
Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz	*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 Fuse Size [Amps] @ 575V/3ph/60Hz				unit not available			600		
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz	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.			3 x 250 kcmil per phase and ground			3 x 300 kcmil per phase and ground		
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz				unit not available			2 x 400 kcmil per phase and ground		
TOTAL PACKAGE DATA (W/C)									
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	478			560					
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	unit not available			420					



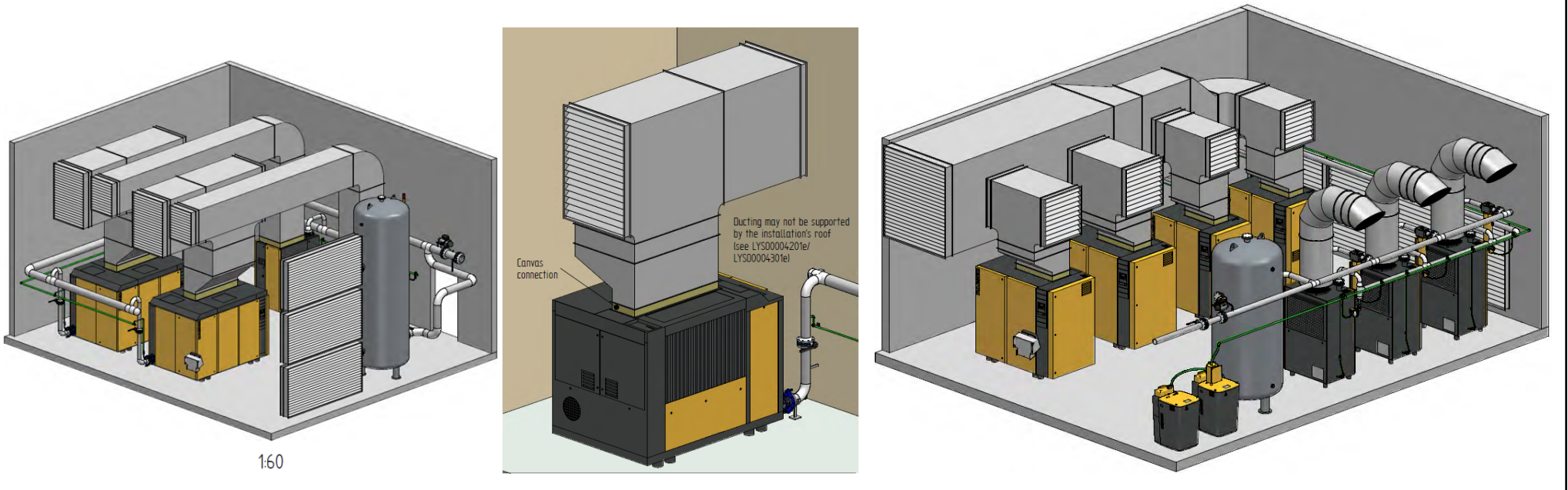
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INSTALLATION and MAINTENANCE DATA										
A/C with Super Soundproofing [dB(A)]	SOUND PRESSURE LEVEL [Measured in dB(A) according to ISO 2151 using ISO 9614-2]				80		81			
W/C with Super Soundproofing [dB(A)]					75		76			
A/C Air Discharge [inches NPT or Flange]					6 ASME B16.5 class 150					
W/C Air Discharge [inches NPT or Flange]					6 ASME B16.5 class 150					
Cooling Water Connection [inches NPT or Flange]					2 ASME B16.5 class 150					
Power Input Conduit Opening(s) [inches]					3 x 3 in					
Condensate Drain Connection [NPT]					1/2					
Width [inches]					147 1/4		147 1/4			
Depth [inches]					84 1/2		84 1/2			
Height [inches]					92 7/8		92 7/8			
Floor Space [sq. ft.]					86 2/5		86 2/5			
Weight (A/C) [lb]					15,278		16,094			
Weight (W/C) [lb]					14,110		14,925			
COMPRESSOR FLUID DATA										
Fluid Capacity (A/C) [gal]					47.6		47.6			
Fluid Capacity (W/C) [gal]					45.7		45.7			
Flow Rate [gal/min]					133.41		133.41			
Typical Oil Consumption [fl. Oz./100 h]					45.21		53.63			
Standard Fluid Type					Sigma S-460		Sigma S-460			
MAINTENANCE PARTS										
Air Inlet Filter					4E0305.0					
Filter Mat (optional)					6.1943.00060 (3x)					
Filter Mat for Control Cabinet					7.4519.00010 (6x) + 7.4519.00040 (1x) + 5.3353.00060 (1x)					
Fluid Filter					6.4693.0 (4x)					
Fluid Separator Kit					6.3765.0					
Maintenance Kit for Optional 5-year warranty					ANAKFSD3SFCS					
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant					ANAKFSD3SFCF					

Model	SFC 315S				SFC 315				
	110	125	145	175	110	125	145	175	217
Rated Pressure [psig]									

SAMPLE SKETCHES

Sample Installation Planning
Examples of room ventilation and ductwork
 Please note the upsizing required for compressor exhaust ducts



Example designs only, not for construction purposes.