





Installation Data Sheet
Series: 1:1 Direct Drive BSD.4 SFC
Document No.: TI-DATA-2020-SFC 37 45S
Version: 1.3
Revision Date: 04/17/2023

Model	SFC 37						SFC 45S						
	Rated Pressure [psig]	110	125	145	175	190	217	110	125	145	175	190	217
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.] (A/C) Z	13						15						
Air Inlet Opening [sq. ft.] (W/C) Z	5						5						
Solution A (forced ventilation with exhaust fan) as shown in service manual													
Cooling Fan Capacity [CFM] (A/C)	10,006						11,772						
Cooling Fan Capacity [CFM] (W/C)	1,471						1,766						
Solution B (exhaust air used for space heating) as shown in service manual													
Internal Cooling Fan Capacity [CFM] (A/C)	4,826						4,826						
Internal Cooling Fan Capacity [CFM] (W/C)	706						706						
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C) (W/C)	0.24 / 0.16						0.24 / 0.16						
Exhaust Air Opening Reference Dimensions (L x W) [in]	25 x 25						25 x 25						
<p align="center">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>													
Solution A Exhaust Fan													
Solution B Exhaust Fan													
Ventilation of Compressor Room Z													
AIR COOLED DATA													
Internal Cooling Fan Capacity [CFM]	4,826						4,826						
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.						10.8 9 12.6 10.8 9						
Typical Heat Rejected [BTU / HR]	152,500						168,500						
Fan Motor [HP], oilcooler/aircooler	1.3						1.3						
WATER COOLED DATA													
Type of heat exchangers	stainless steel, plate-type						stainless steel, plate-type						
Internal Cooling Fan Capacity [CFM]	706						706						
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.						1.8 1.8						
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.						137,000 161,000						
Heat Rejected into Cooling Air [BTU / HR]	16,000						19,000						
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).						160 160						
Temperature differential between inlet water and max. discharge water temperature [°F]	20						50 20 50						
Max. inlet water temperature [°F]	104						70 104 70						
Min. cooling water flow [gpm]	13.9						5.6 15.8 6.4						
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	14.5						2.2 18.9 2.9						
Pressure drop across compressor package [psi] WITH cooling water throttling valve	16						3 21 5						



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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	50				60							
Insulation Class	F				F							
Standard Voltage	460V/3ph/60Hz				460V/3ph/60Hz							
Type	SynRM(IES2)				SynRM(IES2)							
FAN MOTOR (A/C)												
Insulation Class	F				F							
Fan Motor [HP], oilcooler aircooler	1				1							
Full Load Amps [FLA] @ 460V/3ph/60Hz	1.76				1.76							
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF				CF							
FAN MOTOR (W/C)												
Insulation Class	F				F							
Fan Motor [HP], Single Speed	0.16				0.16							
Full Load Amps [FLA] @ 460V/3ph/60Hz	0.6				0.6							
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF				CF							
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*				50							
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz	Field installed fuse required, see below*				CF							
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	79				83							
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	CF				CF							
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				110							
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz					CF							
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.				2 AWG per phase and ground							
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz					1 AWG per phase and ground							
	CF				CF							
TOTAL PACKAGE DATA (W/C)												
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	78				82							
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	CF				CF							



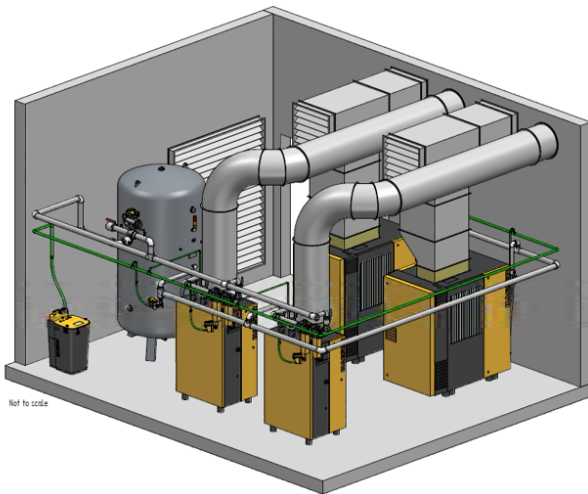
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Rated Pressure [psig]												
INSTALLATION and MAINTENANCE DATA												
A/C with Super Soundproofing [dB(A)]	SOUND PRESSURE LEVEL [Measured in dB(A) according to ISO 2151 using ISO 9614-2]						74					
W/C with Super Soundproofing [dB(A)]							71					
A/C Air Discharge [inches NPT or Flange]							1 1/2 NPT					
W/C Air Discharge [inches NPT or Flange]							1 1/2 NPT					
Cooling Water Connection [inches NPT or Flange]							1 NPT					
Power Input Conduit Opening(s) [inches]							2 1/4					
Condensate Drain Connection [NPT]							1/4					
Width [inches]							65 1/2					
Depth [inches]							40 1/2					
Height [inches]							66 7/8 A/C, 68 3/4 W/C					
Floor Space [sq. ft.]							18 3/7					
Weight (A/C) [lb]	Weight may vary based on airend selected.						2,249					
Weight (W/C) [lb]							2,249					
COMPRESSOR FLUID DATA												
Fluid Capacity (A/C) [gal]							6.9					
Fluid Capacity (W/C) [gal]							5.9					
Flow Rate [gal/min]							14.5					
Typical Oil Consumption [fl. Oz./100 h]							6.2					
Standard Fluid Type							Sigma S-460					
MAINTENANCE PARTS												
Air Inlet Filter							6.4139.0					
Filter Mat (optional)							6.1943.0					
Filter Mat for Control Cabinet							7.4519.00040 (4x)					
Fluid Filter							6.4493.0					
Fluid Separator Kit							6.3569.0					
Maintenance Kit for Optional 5-year warranty							ANAKBSD3SFCS					
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant							ANAKBSD3SFCF					

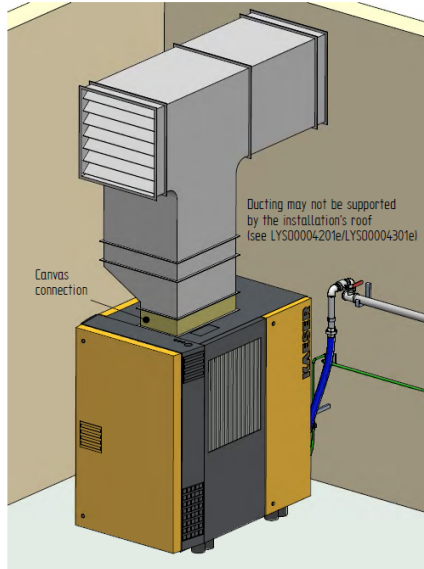
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	Rated Pressure [psig]						110	125	145	175	190	217	110	125	145	175	190

SAMPLE SKETCHES

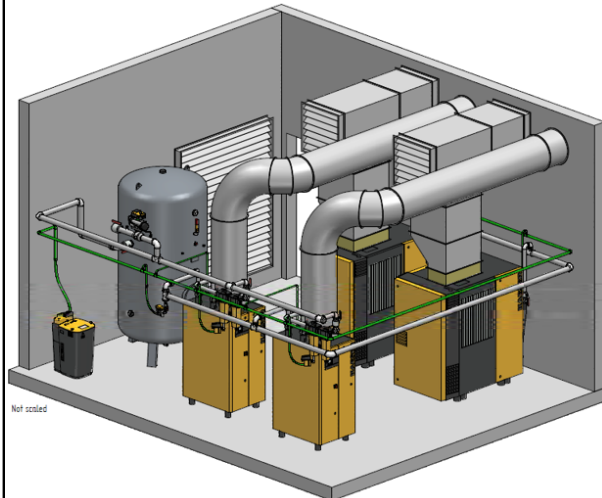
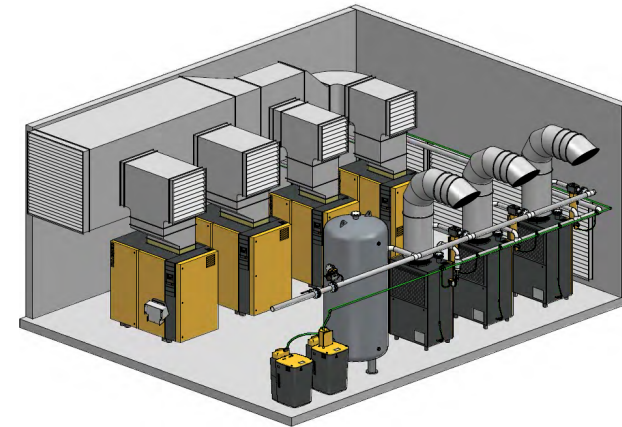
Sample Installation Planning
Examples of room ventilation and ductwork
 Please note the upsizing required for compressor exhaust ducts



2x BSD 60 / 2x TE 102 / 2x F83 KE / 2x F83 KA



Duct / pipe connection BSD



2x BSD 60 / 2x TE 142 / 2x F83KE / 2x F83 KA

Example designs only, not for construction purposes.