



Installation Data Sheet
Series: 1:1 Direct Drive DSD.3 SFC
Document No.: TI-DATA-2016-SFC 75T 90T 110T 132ST
Version: 2.3
Revision Date: 04/17/2023

Model	SFC 75T		SFC 90T			SFC 110T					SFC 132ST						
	Rated Pressure [psig]		110	125	110	125	145	110	125	145	175	217	110	125	145	175	217
I. COOLING DATA																	
Cooling System Available [Std., Opt.]	A/C, W/C		A/C, W/C			A/C, W/C					A/C, W/C						
Standard Ambient Temp. Range [°F]	40 - 115		40 - 115			40 - 115					40 - 115						
VENTILATION OF COMPRESSOR ROOM																	
Air Inlet Opening [sq. ft. free area] (A/C) Z	21.5		23.7			30.1					34.5						
Air Inlet Opening [sq. ft. free area] (W/C) Z	4.3		5.4			6.5					7.5						
Solution A (forced ventilation with exhaust fan) as shown in service manual																	
Cooling Fan Capacity [CFM] (A/C)	16,480		18,835			25,543					26,846						
Cooling Fan Capacity [CFM] (W/C)	4,120		4,120			5,297					5,886						
Solution B (exhaust air used for space heating) as shown in service manual																	
Internal Cooling Fan Capacity [CFM] (A/C), do not duct the dryer cooling air, exhaust fan required	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	
	6,475	2,825	7,652	2,825	10,006	2,825	1,472	2,825	1,472	2,825	1,472	2,825	1,472	2,825	1,472	2,825	
Internal Cooling Fan Capacity [CFM] (W/C)	1,472		2,825			1,472					2,825						
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C) (W/C)	0.40 / 0.16		0.40 / 0.16			0.40 / 0.16					0.32 / 0.16						
Exhaust Air Opening Reference Dimensions (L x W) [in]	54 x 54		54 x 54			54 x 54					54 x 54						
<p align="center">Model shown for reference only Actual Duct size may vary with installation</p>																	
Solution A Exhaust Fan																	
Solution B Exhaust Duct																	
Ventilation of Compressor Room Z																	
AIR COOLED DATA																	
Internal Cooling Fan Capacity for duct (without dryer) [CFM]	6,475		7,652			10,006					11,772						
Internal Cooling Fan Capacity (dryer) [CFM]	2,825		2,825			2,825					2,825						
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.																
	10.8		12.6			14.4		12.6			16.2		14.4		12.6		
Typical Heat Rejected (Compressor without dryer) [BTU / HR]	320,500		379,500			432,500					496,500						
Typical Heat Rejected (Frequency-Controller) [BTU / HR]	10,000		12,000			13,500					15,500						
Fan Motor [HP], oilcooler aircooler	4 / 1		4 / 1			4 / 1					4 / 1						
WATER COOLED DATA																	
Type of heat exchangers	stainless steel, plate-type		stainless steel, plate-type			stainless steel, plate-type					stainless steel, plate-type						
Internal Cooling Fan Capacity (compressor) [CFM]	1,472		1,472			1,472					1,472						
Internal Cooling Fan Capacity (dryer) [CFM]	2,825		2,825			2,825					2,825						
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.																
	1.8		1.8			1.8					1.8						
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.																
	309,500		369,000			416,500					482,000						
Heat Rejected into Cooling Air (Compressor without dryer) [BTU / HR]	20,000		24,000			27,000					31,000						
Heat Rejected into Cooling Air (Frequency-Controller) [BTU / HR]	10,000		12,000			13,500					15,500						
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).																
	132		132			132					132						
Temperature differential between inlet water and max. discharge water temperature [°F]	27	54	27	54	27	54	27	54	27	54	27	54	27	54	27	54	
Max. inlet water temperature [°F]	105		77			105					77						
Min. cooling water flow [gpm]	22.9	11.4	27.3	13.6	30.8	15.4	35.7	17.6									
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	4.5	2.9	6	2.9	6	3.6	7.3	4.4									
Pressure drop across compressor package [psi] WITH cooling water throttling valve	5	4	7	4	9	5	11	5									



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II. ELECTRICAL DATA *Electrical data may vary in accordance with motor manufacturer's specifications. Motors are EISA compliant.*

DRIVE MOTOR

Motor HP	100	125	150	175
Insulation Class	F	F	F	F
Standard Voltage	460V/3ph/60Hz	460V/3ph/60Hz	460V/3ph/60Hz	460V/3ph/60Hz
Full Load Amps [FLA] @ 460V/3ph/60Hz	117	143	177	205
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF	CF	CF	CF

FAN MOTOR (A/C) Oilcooler

Insulation Class	F	F	F	F
Fan Motor [HP]	4	4	4	4
Full Load Amps [FLA] @ 460V/3ph/60Hz	6.0	6.0	6.0	6.0
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF	CF	CF	CF

FAN MOTOR (A/C) Aircooler

Insulation Class	F	F	F	F
Fan Motor [HP]	1	1	1	1
Full Load Amps [FLA] @ 460V/3ph/60Hz	1.76	1.76	1.76	1.76
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF	CF	CF	CF

FAN MOTOR (W/C)

Insulation Class	F	F	F	F
Fan Motor [HP], Single Speed	0.4	0.4	0.4	0.4
Full Load Amps [FLA] @ 460V/3ph/60Hz	0.6	0.6	0.6	0.6
Full Load Amps [FLA] @ 575V/3ph/60Hz	CF	CF	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	24	24
Control Cabinet Class (NEMA)	12	12	12	12
Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60Hz	65	65	65	65
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz	CF	CF	CF	CF
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	184	210	254	254
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	CF	CF	CF	CF
Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz	250	300	350	350
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz	CF	CF	CF	CF
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz	2 x 1/0 AWG per phase and ground	2 x 1/0 AWG per phase and ground	2 x 3/0 AWG per phase and ground	2 x 3/0 AWG per phase and ground
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz	CF	CF	CF	CF

TOTAL PACKAGE DATA (W/C)

Package Full Load Amps @ 460V/3ph/60Hz [FLA]	180	206	250	250
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	CF	CF	CF	CF



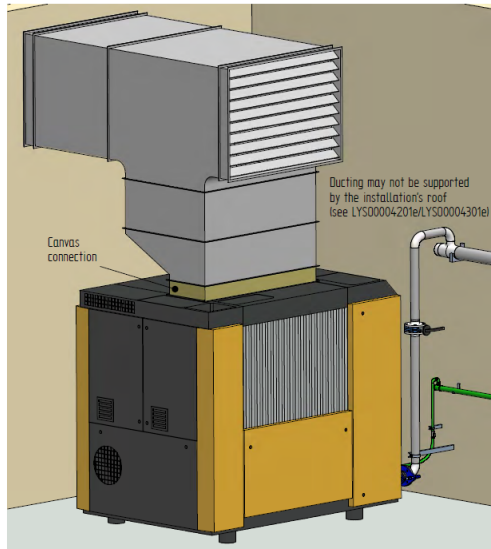
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INSTALLATION and MAINTENANCE DATA																	
A/C with Super Soundproofing [dB(A)]	SOUND PRESSURE LEVEL [Measured in dB(A) according to ISO 2151 using ISO 9614-2]		71		72			74					75				
W/C with Super Soundproofing [dB(A)]			69		69			70					71				
A/C Air Discharge [inches NPT or Flange]			2 1/2 ASME B16.5 class 150														
W/C Air Discharge [inches NPT or Flange]			2 1/2 ASME B16.5 class 150														
Cooling Water Connection [inches NPT or Flange]			1 1/2 ASME B16.5 class 150														
Power Input Conduit Opening(s) [inches]			2 x 3 in.														
Condensate Drain Connection [NPT]			1/2														
Width [inches]			117 3/4														
Depth [inches]			68 1/8														
Height [inches]			84 1/2														
Floor Space [sq. ft.]			55 5/7														
Weight (A/C) [lb]	Weight may vary based on airoend selected.		7,650		7,959			7,981					8,708				
Weight (W/C) [lb]			7,650		7,959			7,981					8,708				
COMPRESSOR FLUID DATA																	
Fluid Capacity (A/C) [gal]			18.5														
Fluid Capacity (W/C) [gal]			15.3														
Flow Rate [gal/min]			35.7		35.7			35.7					35.7				
Typical Oil Consumption [fl. Oz./100 h]			14.6		17.3			19.8					22.7				
Standard Fluid Type			Sigma S-460														
MAINTENANCE PARTS																	
Air Inlet Filter			4E0303.0														
Filter Mat (optional)			6.1943.00040 (x4)														
Filter Mat for Control Cabinet			7.4519.00010 (x4) + 7.4519.00040 (x1) + 5.3353.00050 (x1)														
Fluid Filter			6.4493.0 (x2)														
Fluid Separator Kit			6.4272.2														
Maintenance Kit for Optional 5-year warranty			ANAKDSDSFC3S														
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant			ANAKDSDSFC3F														
DRYER DATA - FOR T MODELS																	
Dryer Model			ABT 250		ABT 250			ABT 250					ABT 250				
Maximum Inlet Air Pressure (Compressed Air at Inlet to Dryer) [psig]			232		232			232					232				
Nominal Pressure Drop at Rated Flow [psid]			1.75														
Rated Pressure Dewpoint [°F] at Standard Conditions	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.		37.4		37.4			37.4					37.4				
Pressure Dewpoint per ISO 8573-1			Class 4 - 6 based on ambient conditions.														
REFRIGERATION SYSTEM DATA - FOR T MODELS																	
Compressor Type			MLZ 30 (Danfoss)		MLZ 30 (Danfoss)			MLZ 30 (Danfoss)					MLZ 30 (Danfoss)				
BTU/Refrigeration ASHRAE			36,640		36,640			36,640					36,640				
Outlet Air Temperature (Nominal at Rated Conditions) [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.		80		80			80					80				
Refrigerant Type			R-513A		R-513A			R-513A					R-513A				
GWP (Global Warming Potential)			631		631			631					631				
CO2 equivalent [t]			1.08		1.08			1.08					1.08				
Refrigerant Charge [lb]			3.77		3.77			3.77					3.77				
Air Flow Across Condenser [CFM]			2,825		2,825			2,825					2,825				

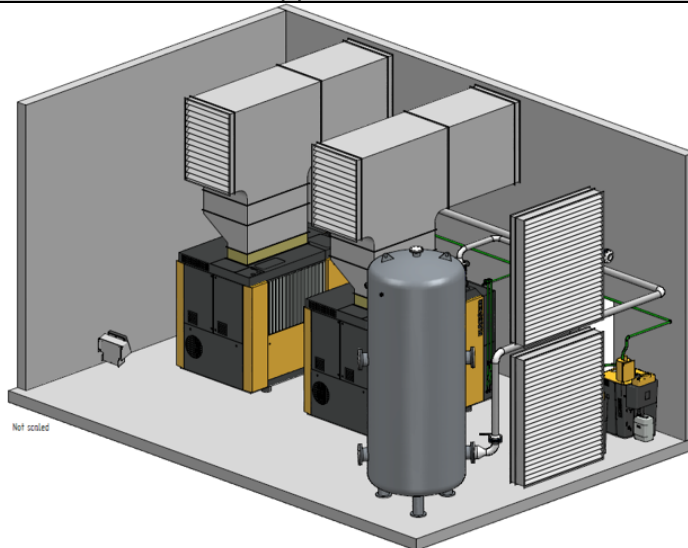
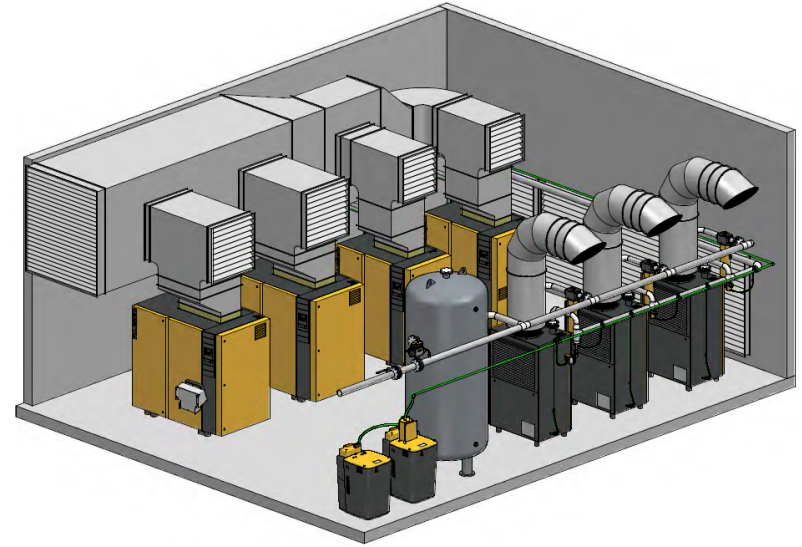
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SAMPLE SKETCHES

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



Duct / pipe connection DSD



2x DSD 175 T / FE-283D

Example designs only, not for construction purposes.