

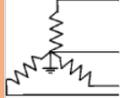
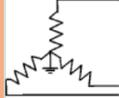


Installation Data Sheet
 Series: 1:1 Direct Drive FSD.3
 Document No.: TI-DATA-2017-FSD 350 450
 Version: 1.8
 Revision Date: 04/17/2023

Model Rated Pressure [psig]	FSD 350				FSD 450						
	110	125	145	175	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. free area] (A/C) Z	64.6				75.3						
Air Inlet Opening [sq. ft. free area] (W/C) Z	10.7				12.9						
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 at the cooling air outlet										
Cooling Fan Capacity [CFM] (W/C)	7,652				9,417						
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>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>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 [CFM]	20,600				23,543						
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.				12.6	10.8	14.4	12.6	10.8		
Typical Heat Rejected [BTU / HR]	909,500				1,151,500						
Fan Motor [HP], oilcooler aircooler	10 / 4				10 / 4						
WATER COOLED DATA											
- Please also refer to the Cooling Water Inquiry data sheet and the service manual for Water-cooled rotary screw compressor											
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	1.8					
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.				872,000	1,106,500					
Heat Rejected into Cooling Air [BTU / HR]					49,000	61,000					
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).				131	131					
Temperature differential between inlet water and max. discharge water temperature [°F]	27	54			27	54					
Min./ Max. pressure	15	145			15	145					
Max. inlet water temperature [°F]	104	77			104	77					
Min. cooling water flow [gpm]	66	33.9			83	41.4					
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	7.5	2.9			9	3.6					
Pressure drop across compressor package [psi] WITH cooling water throttling valve	12	5			15	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		400				485					
Full Load Amps [FLA] @ 575V/3ph/60Hz		320				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		11				11					
FAN MOTOR (A/C) Aircooler											
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		4.8				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		1.2				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*				50				50	
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz		Field installed fuse required, see below*				50				50	
Package Full Load Amps @ 460V/3ph/60Hz [FLA]						415				524	
Package Full Load Amps @ 575V/3ph/60Hz [FLA]						338				427	
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				600				700	
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz						500				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.				2 x 350 kcmil per phase and ground				3 x 250 kcmil per phase and ground	
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz						2 x 250 kcmil per phase and ground				2 x 350 kcmil per phase and ground	
TOTAL PACKAGE DATA (W/C)											
Package Full Load Amps @ 460V/3ph/60Hz [FLA]						401				510	
Package Full Load Amps @ 575V/3ph/60Hz [FLA]						321				411	



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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]				79				80			
W/C with Super Soundproofing [dB(A)]					74				75			
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				3 x 3			
Condensate Drain Connection [NPT]					1/2				1/2			
Width [inches]					137 5/8				137 5/8			
Depth [inches]					84 1/2				84 1/2			
Height [inches]					92 7/8				92 7/8			
Floor Space [sq. ft.]					80 5/7				80 5/7			
Weight (A/C) [lb]					13,735				14,551			
Weight (W/C) [lb]					12,566				13,382			
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]					133.4				133.4			
Typical Oil Consumption [fl. Oz./100 h]					39.7				50.5			
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					7.4519.00040 (4x)							
Fluid Filter					6.4693.0 (4x)							
Fluid Separator Kit					6.3765.0							
Maintenance Kit for Optional 5-year warranty					ANAKFSD3S							
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant					ANAKFSD3F							

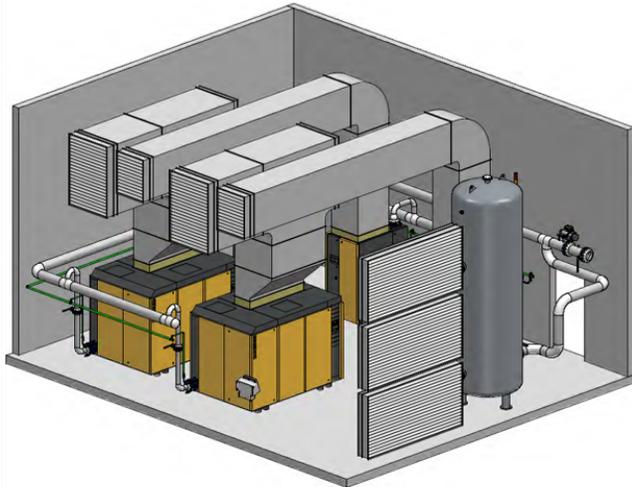


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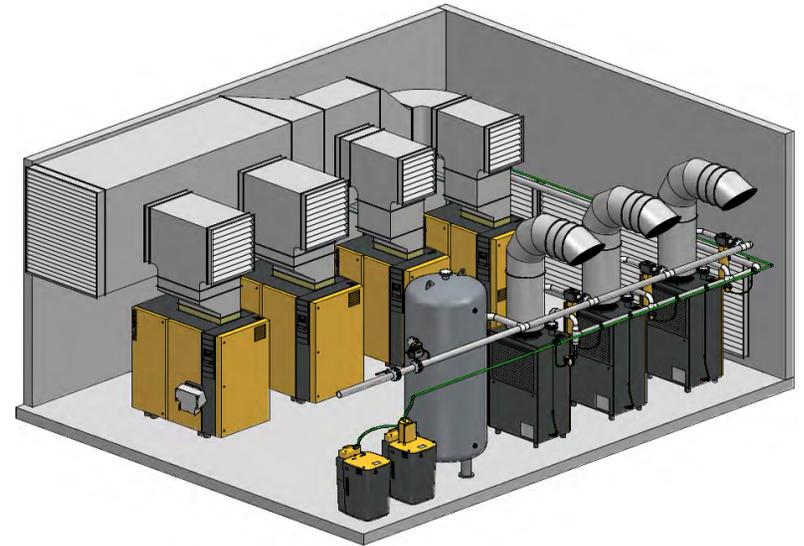
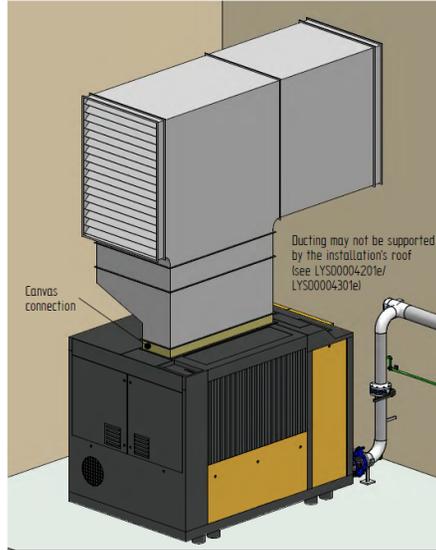
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SAMPLE SKETCHES

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



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Example designs only, not for construction purposes.