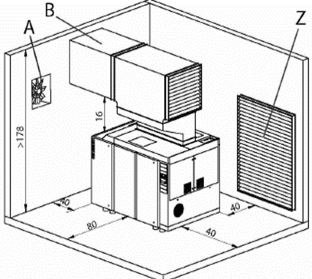


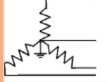



Installation Data Sheet
Series: 1:1 Direct Drive ESD.4
Document No.: TI-DATA-2017-ESD 250 300
Version: 2.7
Revision Date: 04/17/2023

Model	ESD 250						ESD 300					
	110	125	145	175	190	217	110	125	145	175	190	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	45						56					
Air Inlet Opening [sq. ft. free area] (W/C) Z	7.5						8.6					
Solution A (forced ventilation with exhaust fan) as shown in service manual												
Cooling Fan Capacity [CFM] (A/C)	35,315						44,143					
Cooling Fan Capacity [CFM] (W/C)	5,886						7,063					
Solution B (exhaust air used for space heating) as shown in service manual												
Internal Cooling Fan Capacity [CFM] (A/C)	17,657						20,012					
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						0.32 / 0.16					
Exhaust Air Opening Reference Dimensions (L x W) [in]	68 x 68						68 x 68					
<p style="text-align: center;">Model shown for reference only Actual Duct size may vary with installation</p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 10px; font-size: 8px;"> <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> </div> </div>												
Solution A Exhaust Fan												
Solution B Exhaust Duct												
Ventilation of Compressor Room Z												
AIR COOLED DATA												
Internal Cooling Fan Capacity [CFM]	17,657						20,012					
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.						12.6 10.8 9 14.4 12.6 10.8					
Typical Heat Rejected [BTU / HR]	737,000						929,500					
Fan Motor [HP], oilcooler/aircooler	7.5 / 4.0						7.5 / 4.0					
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 1.8					
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.						701,500 890,500					
Heat Rejected into Cooling Air [BTU / HR]	41,000						49,000					
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).						130 130					
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]	54.6		27.3		67		33.5					
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	10.2		3.6		14.5		5.1					
Pressure drop across compressor package [psi] WITH cooling water throttling valve	14		5		20		7					



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Model	ESD 250						ESD 300								
Rated Pressure [psig]	110	125	145	175	190	217	110	125	145	175	190	217			
II. ELECTRICAL DATA <i>Electrical data may vary in accordance with motor manufacturer's specifications. Motors are EISA compliant.</i>															
DRIVE MOTOR															
Motor HP	250						350								
Insulation Class	F						F								
Standard Voltage	460V/3ph/60Hz						460V/3ph/60Hz								
Full Load Amps [FLA] @ 460V/3ph/60Hz	285						400								
Full Load Amps [FLA] @ 575V/3ph/60Hz	228						320								
FAN MOTOR (A/C) Oilcooler															
Insulation Class	F						F								
Fan Motor [HP]	7.5						7.5								
Full Load Amps [FLA] @ 460V/3ph/60Hz	11						11								
Full Load Amps [FLA] @ 575V/3ph/60Hz	8.2						8.2								
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								
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz	Field installed fuse required, see below*						50								
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	334						420								
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	284						352								
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						500								
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz							400								
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 250 kcmil per phase and ground			2 x 350 kcmil per phase and ground					
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz							2 x 4/0 AWG per phase and ground			2 x 250 kcmil per phase and ground					
TOTAL PACKAGE DATA (W/C)															
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	323						409								
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	274						343								



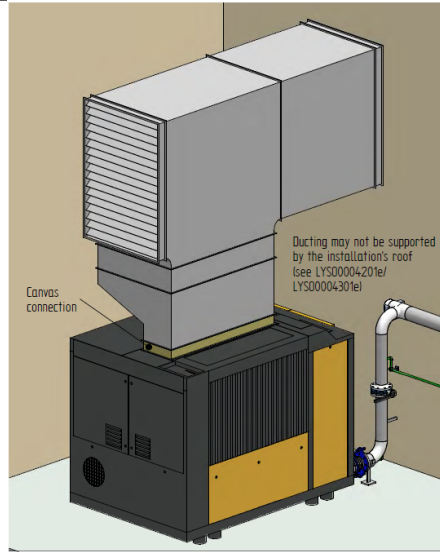
Installation Data Sheet
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Document No.: TI-DATA-2017-ESD 250 300
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Model	ESD 250						ESD 300																
	Rated Pressure [psig]						110	125	145	175	190	217	110	125	145	175	190	217					
INSTALLATION 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]											76						77					
W/C with Super Soundproofing [dB(A)]												74						74					
A/C Air Discharge [inches NPT or Flange]												4 ASME B16.5 class 150											
W/C Air Discharge [inches NPT or Flange]												4 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						2 x 3					
Condensate Drain Connection [NPT]												1/2						1/2					
Width [inches]												116 1/2						116 1/2					
Depth [inches]												79 7/8						79 7/8					
Height [inches]												84 1/4						84 1/4					
Floor Space [sq. ft.]												64 5/8						64 5/8					
Weight (A/C) [lb]												10,759						11,155					
Weight (W/C) [lb]												10,759						11,155					
COMPRESSOR FLUID DATA																							
Fluid Capacity (A/C) [gal]												35.7						35.7					
Fluid Capacity (W/C) [gal]												30.4						30.4					
Flow Rate [gal/min]												89.8						89.8					
Typical Oil Consumption [fl. Oz./100 h]												31.8						39.1					
Standard Fluid Type												Sigma S-460						Sigma S-460					
MAINTENANCE PARTS																							
Air Inlet Filter & Pre Filter for Inlet Filter												4E0304.0											
Filter Mat (optional)												6.1943.0 (4x)											
Filter Mat for Control Cabinet												7.4519.0 (4x)											
Fluid Filter												6.4693.0 (3x)											
Fluid Separator Kit												6.3559.00010											
Maintenance Kit for Optional 5-year warranty												ANAKESD4S											
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant												ANAKESD4F											

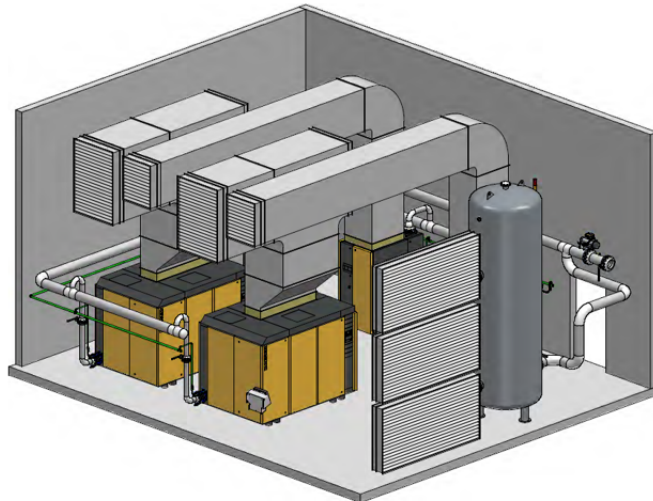
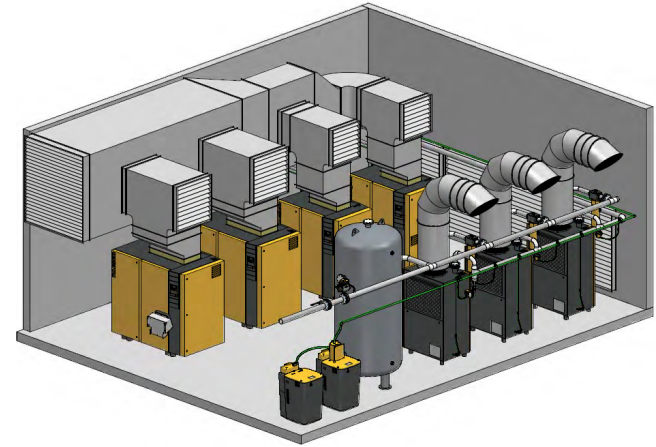
Model	ESD 250						ESD 300					
	110	125	145	175	190	217	110	125	145	175	190	217
Rated Pressure [psig]												

SAMPLE SKETCHES

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



Duct / pipe connection ESD



1:60

2x ESD 300 / 2x TG980 / 2x F530 KE,KA

Example designs only, not for construction purposes.