

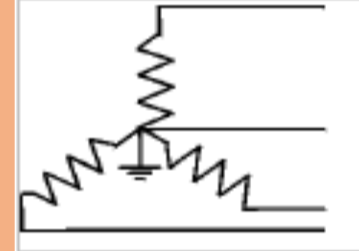
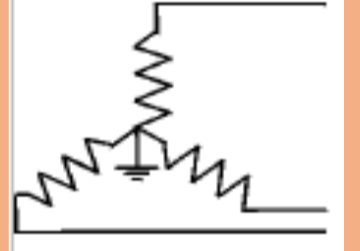


Installation Data Sheet
 Series: 1:1 Direct Drive CSD.5
 Document No.: TI-DATA-2018-CSD 60T 75T 100ST
 Version: 1.1
 Revision Date: 10/28/19

Model	CSD 60T						CSD 75T						CSD 100ST					
	110	125	145	175	190	217	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						A/C, W/C					
Standard Ambient Temp. Range [°F]	40 - 115						40 - 115						40 - 115					
VENTILATION OF COMPRESSOR ROOM																		
Air Inlet Opening [sq. ft. free area] (A/C) Z	14.0						18.3						21.5					
Air Inlet Opening [sq. ft. free area] (W/C) Z	6.5						6.5						6.5					
Solution A (forced ventilation with exhaust fan) as shown in service manual																		
Cooling Fan Capacity [CFM] (A/C)	11,772						14,126						17,069					
Cooling Fan Capacity [CFM] (W/C)	4,120						4,120						4,120					
Solution B (exhaust air used for space heating) as shown in service manual																		
Internal Cooling - Fan Capacity [CFM] (A/C)	Compressor 5,709			Dryer 1,354			Compressor 5,709			Dryer 1,354			Compressor 6,474			Dryer 2,649 / 1,354		
Internal Cooling Fan Capacity [CFM] (W/C)	2,354						2,354						3,649					
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C) (W/C)	0.32 / 0.16						0.32 / 0.16						0.24 / 0.16					
Exhaust Air Opening Reference Dimensions (L x W) [in]	32 x 32						32 x 32						32 x 32					
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>Model shown for reference only Actual Duct size may vary with installation</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>A Exhaust Fan</p> <p>B Exhaust Air Duct</p> <p>Z Inlet Air Opening</p> </div> <div style="width: 35%; text-align: center;"> </div> <div style="width: 30%;"> <p>Recommended machine placement and dimensions</p> <p>Compressor to duct clearance = 15</p> <p>L Left side clearance = 15</p> <p>R Right side clearance = 40</p> <p>F Front clearance = 50</p> <p>BK Back clearance = 40</p> <p>H Height clearance = 140</p> </div> </div>																		
AIR COOLED DATA																		
Internal Cooling Fan Capacity [CFM]	5,709						5,709						6,474					
Approach Temp. [°F]	9						9						12.6					
Typical Heat Rejected [BTU / HR]	179,000						214,000						265,000					
Fan Motor [HP]	1.5						1.5						1.7					
WATER COOLED DATA																		
Type of heat exchangers	stainless steel, plate type						stainless steel, plate type						stainless steel, plate type					
Internal Cooling Fan Capacity [CFM]	2,354						2,354						3,649					
Approach Temp. [°F]	1.8						1.8						1.8					
Heat Rejected into Cooling Water [BTU / HR]	179,000						215,000						266,000					
Heat Rejected into Cooling Air [BTU / HR]	15,034						18,097						21,033					
Max. outlet temperature [°F]	120						120						120					
Temperature differential between inlet water and max. discharge water temperature [°F]	20			50			20			50			20			50		
Max. inlet water temperature [°F]	104			68			104			68			104			68		
Min. cooling water flow [gpm]	17			7			20			8			25			10		
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	6			3			9			3			13			3		
Pressure drop across compressor package [psi] WITH cooling water throttling valve	24			CF			35			CF			CF			9		



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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	60					75					100									
Insulation Class	F					F					F									
Standard Voltage	460V/3ph/60Hz					460V/3ph/60Hz					460V/3ph/60Hz									
Full Load Amps [FLA] @ 208V/3ph/60Hz	154					187					-									
Full Load Amps [FLA] @ 230V/3ph/60Hz	141					172					-									
Full Load Amps [FLA] @ 460V/3ph/60Hz	69					85					114									
Full Load Amps [FLA] @ 575V/3ph/60Hz	57					69					93									
FAN MOTOR (A/C)																				
Insulation Class	F					F					F									
Fan Motor [HP]	1.5					1.5					1.7									
Full Load Amps [FLA] @ 208V/3ph/60Hz	5.5					5.5					-									
Full Load Amps [FLA] @ 230V/3ph/60Hz	5.0					5.0					-									
Full Load Amps [FLA] @ 460V/3ph/60Hz	2.5					2.5					2.9									
Full Load Amps [FLA] @ 575V/3ph/60Hz	2.0					2.0					2.4									
FAN MOTOR (W/C)																				
Insulation Class	F					F					F									
Fan Motor [HP], Single Speed	0.13					0.13					0.13									
Full Load Amps [FLA] @ 208V/3ph/60Hz	1.45					1.45					-									
Full Load Amps [FLA] @ 230V/3ph/60Hz	1.45					1.45					-									
Full Load Amps [FLA] @ 460V/3ph/60Hz	1.45					1.45					1.45									
Full Load Amps [FLA] @ 575V/3ph/60Hz	1.45					1.45					1.45									
TOTAL PACKAGE DATA (A/C)																				
<p>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.</p>																				
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>three-phase star (wye); 4-wire; grounded neutral</p> </div> <div style="text-align: center;">  <p>three-phase star (wye); 3-wire; grounded neutral</p> </div> </div>																				
Continuous Duty [Hours per day]	24					24					24									
Control Cabinet Class (NEMA)	12					12					12									
Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60Hz	50					50					50									
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz	30					30					30									
Package Full Load Amps @ 208V/3ph/60Hz [FLA]	183					215					-									
Package Full Load Amps @ 230V/3ph/60Hz [FLA]	167					197					-									
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	82					98					120									
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	67					79					98									
Recommended Disconnect Fuse Size [Amps] @ 208V/3ph/60Hz	Dual-element time-delay fuse; based on 2017 NEC 240.6, 430.52, and Tables 430.52, 430.248, and 430.250.					250					300					-				
Recommended Disconnect Fuse Size [Amps] @ 230V/3ph/60Hz						225					250					-				
Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz						110					125					175				
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz						100					110					125				
Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz	Based on 2017 NEC 110.14(C), 220.3, 310.15, Table 310.15(B)(2)(a), 310.15(B)(3)(a), 430.6, 430.22, 430.24 and 670.4(A). Use multi-strand copper core wire. Size calculated based on 40°C ambient temperature, with 60°C insulation rated wire if package FLA x 1.25 is less than 100A or 75°C temperature rated wire for 100A and larger.					300 kcmil per phase and ground					350 kcmil per phase and ground					-				
Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz						250 kcmil per phase and ground					300 kcmil per phase and ground					-				
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz						1 AWG per phase and ground					1/0 AWG per phase and ground					3/0 AWG per phase and ground				
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz						3 AWG per phase and ground					2 AWG per phase and ground					1/0 AWG per phase and ground				
TOTAL PACKAGE DATA (W/C)																				
Package Full Load Amps @ 208V/3ph/60Hz [FLA]	177					210					-									
Package Full Load Amps @ 230V/3ph/60Hz [FLA]	162					193					-									
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	80					96					117									
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	66					78					96									



Installation Data Sheet
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Model Rated Pressure [psig]	CSD 60T						CSD 75T						CSD 100ST					
	110	125	145	175	190	217	110	125	145	175	190	217	110	125	145	175	190	217
INSTALLATION and MAINTENANCE DATA																		
A/C with Super Soundproofing [dB(A)]	71						72						73					
W/C with Super Soundproofing [dB(A)]	69						70						71					
A/C Air Discharge [inches NPT or Flange]							2 NPT											
W/C Air Discharge [inches NPT or Flange]							2 NPT											
Cooling Water Connection [inches NPT or Flange]							2 x 1 1/4 NPT											
Power Input Conduit Opening(s) [inches]							1 x 2 1/4											
Condensate Drain Connection [NPT]							2 x 1/4											
Width [inches]							85											
Depth [inches]							43 3/4											
Height [inches]							74 3/4 A/C, 76 1/8 W/C											
Floor Space [sq. ft.]							25 5/6											
Weight (A/C) [lb]	Weight may vary based on airend selected.						2,967						3,166					
Weight (W/C) [lb]							2,967						3,166					
COMPRESSOR FLUID DATA																		
Fluid Capacity (A/C) [gal]	9.5						9.5						9.5					
Fluid Capacity (W/C) [gal]	9.5						9.5						9.5					
Flow Rate [gal/min]	19.8						19.8						19.8					
Typical Oil Consumption [fl. Oz./100 h]	7.2						8.6						10.4					
Standard Fluid Type	Sigma M-460						Sigma M-460						Sigma M-460					
MAINTENANCE PARTS																		
Air Inlet Filter							6.4149.1 & 6.5993.0											
Filter Mat (optional)							6.1687.0 (2x)											
Filter Mat for Control Cabinet							7.4519.0 (2x)											
Fluid Filter							6.4493.0											
Fluid Separator Kit							6.3571.0											
Maintenance Kit for Optional 5-year warranty							ANAKCSD5S											
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant							ANAKCSD5F											
DRYER DATA - FOR T MODELS																		
Dryer Model	ABT 105						ABT 105						ABT 125		ABT 105			
Maximum Inlet Air Pressure (Compressed Air at Inlet to Dryer) [psig]	232						232						232		232			
Nominal Pressure Drop at Rated Flow [psid]	0.1						0.1						0.1		0.1			
Rated Pressure Dewpoint [°F] at Standard Conditions	38						38						38		38			
Pressure Dewpoint per ISO 8573-1													Class 4 - 6 based on ambient conditions.					
REFRIGERATION SYSTEM DATA - FOR T MODELS																		
Compressor Type	ZR24KRE-TFD						ZR24KRE-TFD						ZR28KRE-TFD					
BTU/Refrigeration ASHRAE	15,000						15,000						16,400					
Outlet Air Temperature (Nominal at Rated Conditions) [°F]	73						72						75					
Refrigerant Type	R-513A						R-513A						R-513A					
GWP (Global Warming Potential)	631						631						631					
CO2 equivalent [t]	0.91						0.91						1.04		0.91			
Refrigerant Charge [lb]	3.2						3.2						3.6		3.2			
Air Flow Across Condenser [CFM]	1,354						1,354						2,649		1,354			