

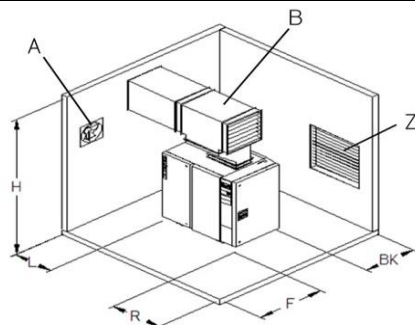


**Installation Data Sheet**  
Series: Direct Drive CSD.4 60Hz  
Document No.: TI-DATA-2015 CSD.4 60 75 100S  
Version: 1.3  
Revision Date: 09/11/15

Model	CSD 60						CSD 75						CSD 100S					
	110	125	145	175	190	217	110	125	145	175	190	217	110	125	145	175	190	217
<b>I. COOLING DATA</b>																		
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					
<b>VENTILATION OF COMPRESSOR ROOM</b>																		
Air Inlet Opening [sq. ft.] (A/C) <b>Z</b>	12.9						15.1						19.4					
Air Inlet Opening [sq. ft.] (W/C) <b>Z</b>	2.2						2.2						3.2					
<b>Solution A (forced ventilation with exhaust fan) as shown in service manual</b>																		
Cooling Fan Capacity [CFM] (A/C)	10,006						11,772						14,714					
Cooling Fan Capacity [CFM] (W/C)	1,471						1,766						2,060					
<b>Solution B (exhaust air used for space heating) as shown in service manual</b>																		
Internal Cooling Fan Capacity [CFM] (A/C)	5,709						5,709						6,474					
Internal Cooling Fan Capacity [CFM] (W/C)	1,001						1,001						1,001					
Max. Additional Pressure Drop for Ducts [inch Water Column], (A/C)   (W/C)	1/3						1/3						1/4					
Exhaust Air Opening Reference Dimensions (L x W) [in]	31x20						31x20						31x20					

Model shown for reference only  
Actual Duct size may vary with installation

- A** Exhaust Fan
- B** Exhaust Air Duct
- Z** Inlet Air Opening



Recommended machine placement and dimensions		inches
L	Left side clearance =	15
R	Right side clearance =	40
F	Front clearance =	50
BK	Back clearance =	40
H	Height clearance =	140

**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]	175,411	210,428	259,845
Fan Motor [HP]	1.5	1.5	1.75

**WATER COOLED DATA**

Type of heat exchangers	stainless steel, plate type			stainless steel, plate type			stainless steel, plate type		
Internal Cooling Fan Capacity [CFM]	1,001	1,001	1,001	1,001	1,001	1,001	1,001	1,001	1,001
Approach Temp. [°F]	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Heat Rejected into Cooling Water [BTU / HR]	162,863	162,863	162,863	196,056	196,056	196,056	242,278	242,278	242,278
Heat Rejected into Cooling Air [BTU / HR]	15,034	15,034	15,034	18,097	18,097	18,097	21,033	21,033	21,033
Max. outlet temperature [°F]	113 or 158			113 or 158			113 or 158		
Temperature differential between inlet water and max. discharge water temperature [°F]	20	40	50	20	40	50	20	40	50
Min./ Max. inlet water temperature [°F]	104	86	68	104	86	68	104	86	68
Min. cooling water flow [gpm]	17	9	7	21	11	8	25	12	10
Pressure drop across compressor package [psi] <b>WITHOUT</b> cooling water throttling valve	16	4.5	CF	24	7	CF	29	8	6
Pressure drop across compressor package [psi] <b>WITH</b> cooling water throttling valve	24	5	CF	35	10	CF	CF	11	9



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


Drive Motor	CSD 60	CSD 75	CSD 100S
Motor HP	60	75	100
Insulation Class	F	F	F
Standard Voltage	460V/3ph/60 Hz	460V/3ph/60 Hz	460V/3ph/60 Hz
Full Load Amps [FLA] @ 208V/3ph/60 Hz/YD	161	196	-
Full Load Amps [FLA] @ 230V/3ph/60 Hz/YD	148	182	-
Full Load Amps [FLA] @ 460V/3ph/60 Hz/YD	74	84	94
Full Load Amps [FLA] @ 575V/3ph/60 Hz/YD	60	72	94

FAN MOTOR (A/C)	CSD 60	CSD 75	CSD 100S
Enclosure Type	TEFC	TEFC	TEFC
Insulation Class	F	F	F
Fan Motor [HP]	1.5	1.5	1.7
Nominal Efficiency %	85.5%	85.5%	86.5%
Full Load Amps [FLA] @ 208V/3ph/60 Hz/YD	5.3	5.3	-
Full Load Amps [FLA] @ 230V/3ph/60 Hz/YD	4.8	4.8	-
Full Load Amps [FLA] @ 460V/3ph/60 Hz/YD	2.4	2.4	3.35
Full Load Amps [FLA] @ 575V/3ph/60 Hz/YD	2.0	2.0	2.7


FAN MOTOR (W/C)	CSD 60	CSD 75	CSD 100S
Enclosure Type	Totally Enclosed (IP44)	Totally Enclosed (IP44)	Totally Enclosed (IP44)
Insulation Class	F	F	F
Fan Motor [HP], Single Speed	0.13	0.13	0.13
Nominal Efficiency	60%	60%	60%
Full Load Amps [FLA] @ 208V/3ph/60 Hz/YD	1.29%	1.29%	-
Full Load Amps [FLA] @ 230V/3ph/60 Hz/YD	1.29%	1.29%	-
Full Load Amps [FLA] @ 460V/3ph/60 Hz/YD	1.45	1.45	1.45
Full Load Amps [FLA] @ 575V/3ph/60 Hz/YD	2.0	2.0	2.7

**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 start 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
Control Cabinet Class [NEMA]	12	12	12
Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60 Hz/YD	50	50	50
Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60 Hz/YD	CF	CF	CF
Package Full Load Amps @ 208V/3ph/60 Hz/YD (A/C) [FLA]	167	201	-
Package Full Load Amps @ 230V/3ph/60 Hz/YD (A/C) [FLA]	153	187	-
Package Full Load Amps @ 460V/3ph/60 Hz/YD (A/C) [FLA]	77	92	119
Package Full Load Amps @ 575V/3ph/60 Hz/YD (A/C) [FLA]	62	74	97
Recommended Disconnect Fuse Size [Amps] @ 208V/3ph/60Hz/YD (A/C)	250	300	-
Recommended Disconnect Fuse Size [Amps] @ 230V/3ph/60Hz/YD (A/C)	225	250	-
Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz/YD (A/C)			
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz/YD (A/C)			
Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz/YD (A/C)	250 kcmil per phase and ground	350 kcmil per phase and ground	-
Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz/YD (A/C)	4/0 AWG per phase and ground	300 kcmil per phase and ground	-
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz/YD (A/C)			
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz/YD (A/C)			
Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz/YD (A/C)	2 AWG per phase and ground	1/0 AWG per phase and ground	2/0 AWG per phase and ground
Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz/YD (A/C)	3 AWG per phase and ground	1/0 AWG per phase and ground	1/0 AWG per phase and ground
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz/YD (A/C)			
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz/YD (A/C)			

TOTAL PACKAGE DATA (W/C)	CSD 60	CSD 75	CSD 100S
Package Full Load Amps @ 208V/3ph/60 Hz/YD	163	197	-
Package Full Load Amps @ 230V/3ph/60 Hz/YD	150	183	-
Package Full Load Amps @ 460V/3ph/60 Hz/YD (W/C) [FLA]	76	91	117
Package Full Load Amps @ 575V/3ph/60 Hz/YD (W/C) [FLA]	61	73	95



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<b>INSTALLATION and MAINTENANCE DATA</b>																		
A/C with Super Soundproofing [dB(A)]	SOUND PRESSURE LEVEL [Measured in dB(A) according to ISO 2151 using ISO 9614-2]																	
W/C with Super Soundproofing [dB(A)]	71						72						73					
A/C Air Discharge [inches NPT]	69						70						71					
W/C Air Discharge [inches NPT]	2						2						2					
Cooling Water Connection [inches NPT]	1 1/4" NPT						1 1/4" NPT						1 1/4" NPT					
Power Input Conduit Opening(s) [inches]	1 x 2 1/4 & 3 x 1						1 x 2 1/4 & 3 x 1						1 x 2 1/4 & 3 x 1					
Condensate Drain Connection [NPT]	1/4						1/4						1/4					
Width [inches]	69 1/4						69 1/4						69 1/4					
Depth [inches]	43 3/4						43 3/4						43 3/4					
Height [inches]	74 3/4						74 3/4						74 3/4					
Floor Space [sq. ft.]	21.0						21.0						21.0					
Weight (A/C)[lb]	2,668						2,844						2,910					
Weight (W/C)[lb]	2,668						2,844						2,910					
Estimated Shipping Weight [lb]	2,800						2,976						3,042					
<b>COMPRESSOR FLUID DATA</b>																		
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]	23						23						23					
Typical Oil Consumption [fl. Oz./100 h]	12.1						14.3						17.3					
Standard Fluid Type	Sigma M-460						Sigma M-460						Sigma M-460					
<b>MAINTENANCE PARTS</b>																		
Air Inlet Filter							6.4149.0											
Filter Mat (optional)							6.1687.0											
Filter Mat for Control Cabinet							7.4519.0											
Fluid Filter							6.4493.0											
Fluid Separator Kit							6.3571.0											
Maintenance Kit for Optional 5-year warranty							ANAKCSD4S											
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant							ANAKCSD4F											