KAESER COMPRESSORS ®

Installation Data Sheet
Series: 1:1 Direct Drive CSD.5
Document No.: TI-DATA-2018-CSD 60 75 100S

(B)	Version: 1.2			
	Revision Date: 06/	01/2020		
	Model	CSD 60	CSD 75	CSD 100S
	Rated Pressure [psig]	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		12.9	15.1	19.4
Air Inlet Opening [sq. ft. free area] (W/C) Z		2.2	2.2	3.2
Solution A (forced ventilation with exhaust fan) as shown	in service manual			
Cooling Fan Capacity [CFM] (A/C)		10,006	11,772	14,714
Cooling Fan Capacity [CFM] (W/C)		1,471	1,766	2,354
Solution B (exhaust air used for space heating) as shown	in service manual			
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)	0.32 / 0.16	0.32 / 0.16	0.24 / 0.16
Exhaust Air Opening Reference Dimensions (L x W) [in]	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.	32 x 32	32 x 32	32 x 32
Model shown for reference only			Recommended machine place	ement and
Actual Duct size may vary with installation	A B Z		dimensions	inches
			Compressor to d	uct clearance = 15
A Exhaust Fan			L Left s	ide clearance = 15
B Exhaust Air Duct	15	74	R Right s	ide clearance = 40
Z Inlet Air Opening			ont clearance = 50	

			н	eight clearance = 140
AIR COOLED DATA				
Internal Cooling Fan Capacity [CFM]		5,709	5,709	6,474
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.	9	9	12.6
Typical Heat Rejected [BTU / HR]		175,500	210,500	259,500
Fan Motor [HP]		1.5	1.5	1.7
WATER COOLED DATA				

Back clearance = 40

1 of 3

Typical neal Rejected [BTU / nR]	178	9,500	210	,500	259,	300	
Fan Motor [HP]		1.5		.5	1.	7	
WATER COOLED DATA							
Type of heat exchangers	stainless steel, plate type		stainless ste	el, plate type	stainless steel, plate type		
Internal Cooling Fan Capacity [CFM]		1,001		001	1,001		
Approach Temp. [°F] Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.	1.8		1	.8	1.8		
Heat Rejected into Cooling Water [BTU / HR]		175,500		,000	260,500		
Heat Rejected into Cooling Air [BTU / HR]		15,034		097	21,033		
Max. outlet temperature [°F] Discharge temperature limited for non-treated water (to prevent calcification).	120		120		12	20	
Temperature differential between inlet water and max. discharge water temperature [°F]		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	

KAESER COMPRESSORS ®

Installation Data Sheet Series: 1:1 Direct Drive CSD.5 Document No.: TI-DATA-2018-CSD 60 75 100S Version: 1.2 Revision Date: 06/01/2020

Read Pressure (paging)		Revision Date: 06/			00D 1000
The State Control of the State Control	Model Detail Processure Institut		CSD 60	CSD 75	CSD 100S
Part			10 125 145 175 190 217	110 125 145 175 190 217	
The color P		tor manufacturer's specifications. Motors a	are EISA compliant.		
Industrian Clarke					
Section Sec			60	<u>75</u>	<u> </u>
Fill Load Annie File 2002/2009/2009/2009 11			F (20) / (20) I	F (20) (/0 L (20) L	<u> </u>
File 147 72 73 73 73 73 73 73 7			•		460V/3ph/60Hz
File 1987 1977					_
FAIL Load Arrays (F.M. & 250%)photolytic FEATURE AND ARRAYS (F.M. & 250%)photolytic FEATURE AND ARRAYS (F.M. & 250%)photolytic FAIL Load Arrays (F.M. & 2					
Part Control (Abs) F					
F F F F F F F F F F F F F F F F F F F			5/	69	93
Fam Mobing Fig. Fam Mobing Fig. Fam Mobing Fa					
Fail Load Anning FLA 2020/Syste(0) 5.5 5			1 5	1 <i>5</i>	Г1 7
Full Load Araps [FLA] & 2309/2594950Hz 2.0					
Fall Load Amps FLA & 5400VgAph60Hz					
Facility					2.0
FAN NOTON (PMC) Single Speed 0.13 0.					
Find Housed Plane 19 2004/SyphPGONL 1.45			∠. U	∠. U	∠. 4
Full Load Amps FLA @ 2090/ScheRother Full Load Amps FLA @ 2090			0.13	0.13	 ი 13
Full Load Amps ELA @ 2000/38/19/0014_ 1.45					
Full Load Amps ELA & #500%\$ph06Hz 1.45 1.					
Total Package Fall Load Amps (ELA) at 57x/59/h60Hz 1.45 1.4					
TOTAL PACKÁGE SATA (ACO 10 10 10 10 10 10 10 1					
Do NOT coorate package on any unsymmetrical prover supply. Also do NOT operate package on power supplies are not suitable. (copen) delate of three-phase star (two); delated three-phase st			1.40	1.40	1.40
Continuous Duty Hours per day 24 24 24 24 24 24 24		olies like, for example, a three-phase			
Continuous Duty Hours per day 24				<u> </u>	ar (wye);
Supplies are not suitable. Supplies are n			4-wire;	7, =, N	
Continuit Duity Hours per day 24 24 24 24 24 24 25 12 12 12 12 12 12 12			grounded neutral	grounded neut	ral
Control Claiser (Class (NEMA) SOK (NEMB) 4869//3ph/80Hz 50 50 50 50 50 50 50 5			24	24	24
Short Circuit Current Rating (SCCR) [kA] @ 578V/3ph/60Ptz [FLA] 30 30 30 30 30 30 30 3			12	12	12
Package Full Load Amps @ 208V/3ph/60Hz [FLA] 174 206	Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60Hz		50	50	50
Package Full Load Amps @ 230W/3ph/60Hz FLA 159 190	Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz		30	30	30
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	Package Full Load Amps @ 208V/3ph/60Hz [FLA]		174	206	-
Package Full Load Amps @ 575V/3ph/60Hz FLA 64 76 94	Package Full Load Amps @ 230V/3ph/60Hz [FLA]		159	190	-
Recommended Disconnect Fuse Size [Amps] @ 208V/3ph/60Hz 250 300 -2000	Package Full Load Amps @ 460V/3ph/60Hz [FLA]		78	94	115
2081/35h/60Hz Recommended Disconnect Fuse Size [Amps] @ 2301/35h/60Hz Recommended Disconnect Fuse Size [Amps] @ 2401/35h/60Hz Recommended Disconnect Fuse Size [Amps] @ 2501/35h/60Hz 2501/35h	Package Full Load Amps @ 575V/3ph/60Hz [FLA]		64	76	94
2007/3ph/60Hz Recommended Disconnect Fuse Size [Amps] @ 2307/3ph/60Hz Recommended Disconnect Fuse Size [Amps] @ 24607/3ph/60Hz Recommended Disconnect Fuse Size [Amps] @ 250 110 125 150	Recommended Disconnect Fuse Size [Amps] @		250	300	<u> </u>
230V/3ph/60Hz Dual-element time-delay fuse; based on 2017 NEC 240.6, 430.52, and Tables 430.52, 430.248, and Recommended Disconnect Fuse Size [Amps] @ 450V/3ph/60Hz			250	300	
Dual-element time-delay fuse; based on 2017 NEC 240.6, 430.52, and labels 430.52, 430.248, and 460//3ph/60Hz			225	250	_
460V/3ph/60Hz Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz 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, 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 450V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz AWG per phase and ground AW				200	
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/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, 230V/3ph/60Hz Lemperature, with 60°C insulation rated wire if package FLM 1.25 is less than 100A or 75°C temperature rated wire for 100A and larger. AWG per phase and ground AWG pe	· ' '	430.250.	110	125	150
S75V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 240.24 and 670.4(A). Use multi-strand copper core wire. Size calculated based on 400C ambient temperature, with 60°C insulation rated wire if package FLA x 1.25 is less than 100A or 75°C 460V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz AWG per phase and ground AWG per phase and groun					
Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 2400 24 and 670.4(A). Use multi-strand copper core wire. Size calculated based on 40oC 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. TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] Package Full Load Amps @ 230V/3ph/60Hz [FLA] Package Full Load Amps @ 460V/3ph/60Hz [FLA]			90	110	125
208V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/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, 230V/3ph/60Hz 40.0 AWG per phase and ground 40.0 AWG per phase and gro					
Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 430.24 and 670.4(A). Use multi-strand copper core wire. Size calculated based on 400¢ ambient temperature, with 60°¢ insulation rated wire if package FLA x 1.25 is less than 100A or 75°¢ temperature rated wire for 100A and larger. Recommended Disconnect Wire Size [AWG/kcmil] @ 400V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 576V/3ph/60Hz Recommended Disconnect Wire Size			250 kcmil per phase and ground	350 kcmil per phase and ground	-
230V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 430.24 and 670.4(A). Use multi-strand copper core wire. Size calculated based on 400C 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. Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 3 AWG per phase and ground TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] Package Full Load Amps @ 230V/3ph/60Hz [FLA] Package Full Load Amps @ 460V/3ph/60Hz [FLA] Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) TOTAL PACKAGE DATA (W/C)					
Recommended Disconnect Wire Size [AWG/kcmil] @ temperature, with 60°C insulation rated wire if package FLA x 1.25 is less than 100A or 75°C 460V/3ph/60Hz Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] Package Full Load Amps @ 230V/3ph/60Hz [FLA] Package Full Load Amps @ 230V/3ph/60Hz [FLA] Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 230V/3ph/60Hz [FLA] Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 460V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] TOTAL PACKAGE DATA (W/C) TOTAL PAC			4/0 AWG per phase and ground	300 kcmil per phase and ground	-
460V/3ph/60Hz temperature rated wire for 100A and larger. 2 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 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) 169 202 - Package Full Load Amps @ 230V/3ph/60Hz [FLA] 155 185 - Package Full Load Amps @ 460V/3ph/60Hz [FLA] 77 92 113	•	temperature, with 60°C insulation rated wire if package FLA x 1.25 is less than 100A or 75°C		4/0.03040	
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz			2 AWG per phase and ground	1/0 AWG per phase and ground	3/0 AWG per phase and ground
575V/3ph/60Hz 3 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] 169 202 - Package Full Load Amps @ 230V/3ph/60Hz [FLA] 155 185 - Package Full Load Amps @ 460V/3ph/60Hz [FLA] 77 92 113			2 11/0	2 ANA/	1/0 A\A\O = = = = = = = = = = = = = = = = = = =
TOTAL PACKAGE DATA (W/C) Package Full Load Amps @ 208V/3ph/60Hz [FLA] 169 202 - Package Full Load Amps @ 230V/3ph/60Hz [FLA] 155 185 - Package Full Load Amps @ 460V/3ph/60Hz [FLA] 77 92 113			3 AVV G per phase and ground	∠ AvvG per phase and ground	per phase and ground
Package Full Load Amps @ 230V/3ph/60Hz [FLA] 185 Package Full Load Amps @ 460V/3ph/60Hz [FLA] 77 92 113					
Package Full Load Amps @ 460V/3ph/60Hz [FLA] 113	Package Full Load Amps @ 208V/3ph/60Hz [FLA]		169	202	-
	Package Full Load Amps @ 230V/3ph/60Hz [FLA]		155	185	-
	Package Full Load Amps @ 460V/3ph/60Hz [FLA]		77	92	113
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	Package Full Load Amps @ 575V/3ph/60Hz [FLA]		64	75	93



Installation Data Sheet Series: 1:1 Direct Drive CSD.5 Document No.: TI-DATA-2018-CSD 60 75 100S Version: 1.2 Revision Date: 06/01/2020

Revision Date: 0													
Model	CSD 60							CSD 100S					
Rated Pressure [psig]	110 125 145 175	190 2	217 1	10 12	5 14	45 175	5 190	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	71	71 69			72 70					73 71			
W/C with Super Soundproofing [dB(A)]	69												
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	x 1 1/4 NI	PT						
Power Input Conduit Opening(s) [inches]						1 x 2 1/4							
Condensate Drain Connection [NPT]						1/4							
Width [inches]						69 1/4							
Depth [inches]						43 3/4							
Height [inches]		74 3/4 A/C, 76 1/8 W/C											
Floor Space [sq. ft.]						21							
Weight (A/C) [lb] Weight may vary based on airend selected	2,615	2,615 2,813						2,846					
Weight (W/C) [lb]	2,615	2,615				2,813					2,846		
COMPRESSOR FLUID DATA													
Fluid Capacity (A/C) [gal]	9.5	9.5			9.5					9.5			
Fluid Capacity (W/C) [gal]	9.5	9.5			9.5					9.5			
Flow Rate [gal/min]	19.8	19.8			19.8					19.8			
Typical Oil Consumption [fl. Oz./100 h]	7.2	7.2		8.6					10.4				
Standard Fluid Type	Sigma M-460				Sig	gma M-46	60				Sigma M-460		
MAINTENANCE PARTS													
Air Inlet Filter					6.4149	9.1 & 6.5	993.0						
Filter Mat (optional)					6.1	1687.0 (2	(x)						
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					AN	VAKCSD:	5S						
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant					AN	NAKCSD:	5F						