



Installation Data Sheet
Series: 1:1 Direct Drive BSD.4
Document No.: TI-DATA-2020-BSD 40T 50T 60T
Version: 1.6
Revision Date: 12/8/25

Model Rated Pressure [psig]	BSD 40T				BSD 50T				BSD 60T							
	110	125	145	175	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	9.7				11.8				15.1							
Air Inlet Opening [sq. ft. free area] (W/C) Z	3.2				3.2				4.3							
Solution A (forced ventilation with exhaust fan) as shown in service manual																
Cooling Fan Capacity [CFM] (A/C)	7,652				9,417				11,772							
Cooling Fan Capacity [CFM] (W/C)	2,178				2,413				3,237							
Solution B (exhaust air used for space heating) as shown in service manual																
Internal Cooling Fan Capacity [CFM] (A/C)	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer	Compressor	Dryer
	4,826	1,295	4,826	1,295	4,826	1,295	4,826	1,295	4,826	1,295	4,826	1,295	4,826	1,295	4,826	1,295
Internal Cooling Fan Capacity [CFM] (W/C)	2,001				2,001				2,001							
Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C) (W/C)	0.24 / 0.16				0.24 / 0.16				0.24 / 0.16							
Exhaust Air Opening Reference Dimensions (L x W) [in]	28 x 28				28 x 28				28 x 28							
<p align="center">Model shown for reference only Actual Duct size may vary with installation</p>																
Solution A Exhaust Fan																
Solution B Exhaust Duct																
Ventilation for Compressor Room Z																
AIR COOLED DATA																
Internal Cooling Fan Capacity [CFM]	4,826				4,826				4,826							
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.				7.2	9	7.2	7.2	12.6	10.8	9					
Typical Heat Rejected [BTU / HR]	122,000				148,000				182,000							
Fan Motor [HP], oilcooler/aircooler	1				1				1							
WATER COOLED DATA																
Type of heat exchangers	stainless steel, plate-type				stainless steel, plate-type				stainless steel, plate-type							
Internal Cooling Fan Capacity [CFM]	2,001				2,001				2,001							
Approach Temp. [°F]	Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature.				1.8	1.8	1.8	1.8	1.8	1.8	1.8					
Typical Heat Rejected into Cooling Water [BTU / HR]	Based on highest input kW of machine.				108,500	134,500	134,500	134,500	171,000	171,000	171,000					
Heat Rejected into Cooling Air [BTU / HR]	10,000				11,400				13,500							
Max. outlet temperature [°F]	Discharge temperature limited for non-treated water (to prevent calcification).				120	120	120	120	120	120	120					
Examples for 2 temperature rises between water inlet and water discharge temperature [°F]	20	50	20	50	20	50	20	50	20	50						
Min./ Max. inlet water temperature [°F]	104	70	104	70	104	70	104	70	104	70						
Min. cooling water flow [gpm]	11.1	4.8	13.5	5.7	17	6.7	17	6.7	17	6.7						
Pressure drop across compressor package [psi] WITHOUT cooling water throttling valve	10.2	1.5	14.5	2.2	21.8	2.9	21.8	2.9	21.8	2.9						
Pressure drop across compressor package [psi] WITH cooling water throttling valve	11	3	15	3	21	4	21	4	21	4						



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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	40				50				60							
Insulation Class	F				F				F							
Standard Voltage	460V/3ph/60Hz				460V/3ph/60Hz				460V/3ph/60Hz							
Full Load Amps [FLA] @ 208V/3ph/60Hz	103				125				-							
Full Load Amps [FLA] @ 230V/3ph/60Hz	96				114				-							
Full Load Amps [FLA] @ 460V/3ph/60Hz	48				57				69							
Full Load Amps [FLA] @ 575V/3ph/60Hz	39				47				56							
FAN MOTOR (A/C)																
Insulation Class	F				F				F							
Fan Motor [HP], oilcooler aircooler	1				1				1							
Full Load Amps [FLA] @ 208V/3ph/60Hz	3.6				3.6				-							
Full Load Amps [FLA] @ 230V/3ph/60Hz	3.5				3.5				-							
Full Load Amps [FLA] @ 460V/3ph/60Hz	1.8				1.8				1.8							
Full Load Amps [FLA] @ 575V/3ph/60Hz	1.7				1.7				1.7							
FAN MOTOR (W/C)																
Insulation Class	F				F				F							
Fan Motor [HP], Single Speed	0.25				0.25				0.25							
Full Load Amps [FLA] @ 208V/3ph/60Hz	-				-				-							
Full Load Amps [FLA] @ 230V/3ph/60Hz	-				-				-							
Full Load Amps [FLA] @ 460V/3ph/60Hz	0.6				0.6				0.6							
Full Load Amps [FLA] @ 575V/3ph/60Hz	3				3				3							
TOTAL PACKAGE DATA (A/C)																
Do NOT operate package on an unsymmetrical power supply. Also do NOT operate package power supplies such as a three-phase WYE system with the center point not solidly grounded or on a three-phase (open) delta system. The machine requires a symmetrical three-phase power supply transformer with a WYE configuration as shown. With a symmetrical three-phase supply the phase angles and voltages are all the same. Other power supplies are not suitable.								Three-phase star circuit (WYE); 3 wire; center point solidly grounded								
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]	124				148				-							
Package Full Load Amps @ 230V/3ph/60Hz [FLA]	116				135				-							
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	58				68				83							
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	46				55				67							
Recommended Disconnect Fuse Size [Amps] @ 208V/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				175				200				-			
Recommended Disconnect Fuse Size [Amps] @ 230V/3ph/60Hz					150				200				-			
Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz					80				100				110			
Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz					60				80				100			
Recommended Disconnect Wire Size [AWG/kcmil] @ 208V/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.				3/0 AWG per phase and ground				4/0 AWG per phase and ground				-			
Recommended Disconnect Wire Size [AWG/kcmil] @ 230V/3ph/60Hz					2/0 AWG per phase and ground				3/0 AWG per phase and ground				-			
Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/3ph/60Hz					4 AWG per phase and ground				3 AWG per phase and ground				1 AWG per phase and ground			
Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz					4 AWG per phase and ground				4 AWG per phase and ground				3 AWG per phase and ground			
TOTAL PACKAGE DATA (W/C)																
Package Full Load Amps @ 208V/3ph/60Hz [FLA]	121				145				-							
Package Full Load Amps @ 230V/3ph/60Hz [FLA]	112				132				-							
Package Full Load Amps @ 460V/3ph/60Hz [FLA]	57				66				81							
Package Full Load Amps @ 575V/3ph/60Hz [FLA]	46				54				66							



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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]				72					72					73	
W/C with Super Soundproofing [dB(A)]					69					69					70	
A/C Air Discharge [inches NPT or Flange]										1 1/2 NPT						
W/C Air Discharge [inches NPT or Flange]										1 1/2 NPT						
Cooling Water Connection [inches NPT or Flange]										1 NPT						
Power Input Conduit Opening(s) [inches]										2 1/4						
Condensate Drain Connection [NPT]										2 @ 1/4						
Width [inches]										78 3/8						
Depth [inches]										40 1/2						
Height [inches]										66 7/8 A/C, 68 3/4 W/C						
Floor Space [sq. ft.]										22						
Weight (A/C) [lb]					2,359					2,458					2,524	
Weight (W/C) [lb]					2,359					2,458					2,524	
Weight may vary based on airend selected.																
COMPRESSOR FLUID DATA																
Fluid Capacity (A/C) [gal]					6.9					6.9					6.9	
Fluid Capacity (W/C) [gal]					5.9					5.9					5.9	
Flow Rate [gal/min]					14.5					14.5					14.5	
Typical Oil Consumption [fl. Oz./100 h]					4.8					5.9					7.2	
Standard Fluid Type					Sigma S-460					Sigma S-460					Sigma S-460	
MAINTENANCE PARTS																
Air Inlet Filter										6.4139.0						
Filter Mat (optional)										6.1943.0 (2x)						
Filter Mat for Control Cabinet										7.4519.0 (2x)						
Fluid Filter										6.4493.0						
Fluid Separator Kit										6.3569.0						
Maintenance Kit for Optional 5-year warranty										ANAKBSD3S						
Maintenance Kit for Optional 5-year warranty, with food-grade lubricant										ANAKBSD3F						
DRYER DATA - FOR T MODELS																
Dryer Model					ABT 83					ABT 83					ABT 83	
Maximum Inlet Air Pressure (Compressed Air at Inlet to Dryer) [psig]					232					232					232	
Nominal Pressure Drop at Rated Flow [psid]					1.5					1.5					1.5	
Rated Pressure Dewpoint [°F] at Standard Conditions					38					38					38	
Pressure Dewpoint per ISO 8573-1.															Class 4 - 6 based on ambient conditions.	
REFRIGERATION SYSTEM DATA - FOR T MODELS																
Compressor Type										ZR22K3E-TFD						
BTU/Refrigeration ASHRAE										12,400						
Outlet Air Temperature (Nominal at Rated Conditions) [°F]										73						
Refrigerant Type										R-513A						
GWP (Global Warming Potential)										629						
CO2 equivalent [t]										0.7						
Refrigerant Charge [lb]										2.4						
Air Flow Across Condenser [CFM]										1,295						

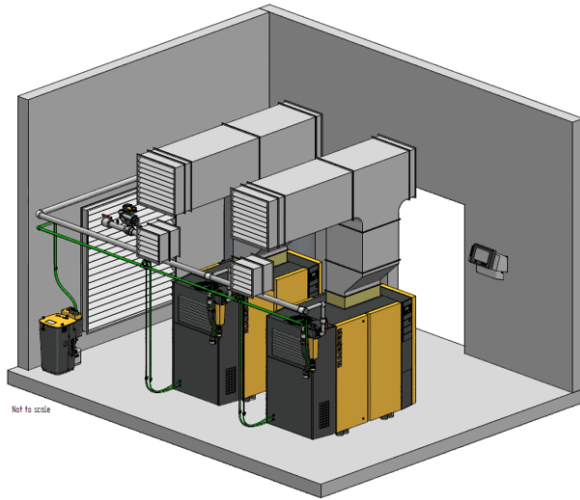


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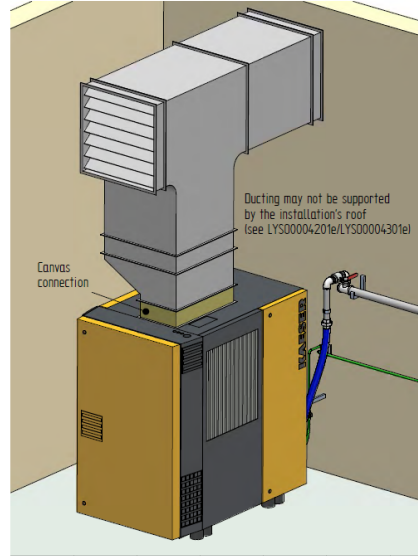
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Rated Pressure [psig]																

SAMPLE SKETCHES

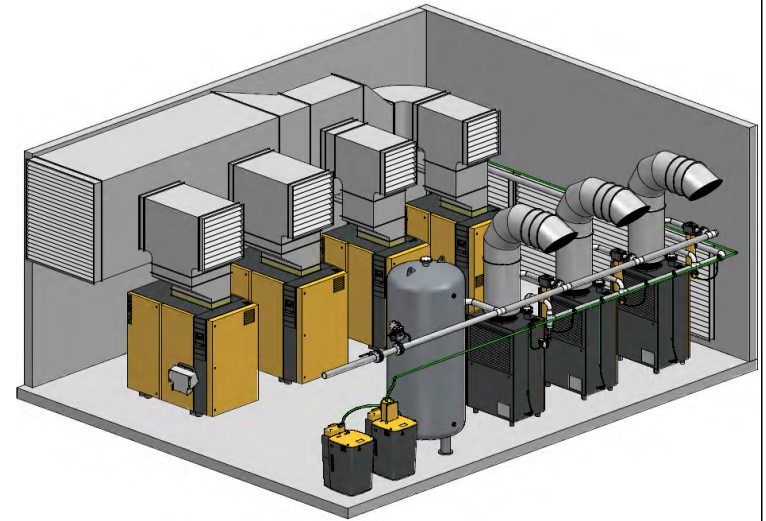
Sample Installation Planning
Examples of room ventilation and ductwork
Please note the upsizing required for compressor exhaust ducts



2x BSD 60 T / 2x F83 KE



Duct / pipe connection BSD



Example designs only, not for construction purposes.