

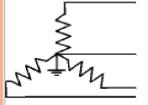
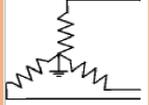


**Installation Data Sheet**  
 Series: 1:1 Direct Drive CSDX.5 SFC  
 Document No.: TI-DATA-2018-SFC 90S 110S  
 Version: 1.3  
 Revision Date: 06/01/2020

| Model<br>Rated Pressure [psig]   | SFC 90S  |     |     |     |     | SFC 110S                             |  |     |     |     |     |     |
|--|--|-----|-----|-----|-----|--------------------------------------|--|-----|-----|-----|-----|-----|
|  | 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                             |  |     |     |     |     |     |
| Standard Ambient Temp. Range [°F]  | 40 - 115   |     |     |     |     | 40 - 115                             |  |     |     |     |     |     |
| <b>VENTILATION OF COMPRESSOR ROOM</b>  |  |     |     |     |     |                                      |  |     |     |     |     |     |
| Air Inlet Opening [sq. ft. <b>free area</b> ] (A/C) Z  | 20.5   |     |     |     |     | 23.7                                 |  |     |     |     |     |     |
| Air Inlet Opening [sq. ft. <b>free area</b> ] (W/C) Z  | 5.4  |     |     |     |     | 6.5                                  |  |     |     |     |     |     |
| <b>Solution A (forced ventilation with exhaust fan) as shown in service manual</b>   |  |     |     |     |     |                                      |  |     |     |     |     |     |
| Cooling Fan Capacity [CFM] (A/C)   | 15,892   |     |     |     |     | 18,834                               |  |     |     |     |     |     |
| Cooling Fan Capacity [CFM] (W/C)   | 3,531  |     |     |     |     | 4,120                                |  |     |     |     |     |     |
| <b>Solution B (exhaust air used for space heating) as shown in service manual</b>  |  |     |     |     |     |                                      |  |     |     |     |     |     |
| Internal Cooling Fan Capacity [CFM] (A/C)  | 6,474  |     |     |     |     | 7,652                                |  |     |     |     |     |     |
| Internal Cooling Fan Capacity [CFM] (W/C)  | 1,001  |     |     |     |     | 1,001                                |  |     |     |     |     |     |
| Max. Additional Pressure Drop for Ducts [inch Water Column] (A/C)   (W/C)  | 0.24 / 0.12  |     |     |     |     | 0.24 / 0.12                          |  |     |     |     |     |     |
| Exhaust Air Opening Reference Dimensions (L x W) [in]  | 40 x 40  |     |     |     |     | 40 x 40                              |  |     |     |     |     |     |
| 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 align="center"><b>Model shown for reference only</b><br/>           Actual Duct size may vary with installation</p> <p>A Exhaust Fan<br/>           B Exhaust Air Duct<br/>           Z Inlet Air Opening</p> |  |     |     |     |     |                                      | <p align="center"><b>Recommended machine placement and dimensions</b></p> <p align="center">Compressor to Duct clearance = 15 inches</p> <p>L Left side clearance = 15 inches</p> <p>R Right side clearance = 50 inches</p> <p>F Front clearance = 50 inches</p> <p>BK Back clearance = 40 inches</p> <p>H Height clearance = 140 inches</p> |     |     |     |     |     |
| <b>AIR COOLED DATA</b>   |  |     |     |     |     |                                      |  |     |     |     |     |     |
| Internal Cooling Fan Capacity [CFM]  | 6,474  |     |     |     |     | 7,652                                |  |     |     |     |     |     |
| 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]   | 302,000  |     |     |     |     | 365,500                              |  |     |     |     |     |     |
| Fan Motor [HP]   | 1.3  |     |     |     |     | 1.9                                  |  |     |     |     |     |     |
| <b>WATER COOLED DATA</b>   |  |     |     |     |     |                                      |  |     |     |     |     |     |
| Type of heat exchangers  | stainless steel, plate type  |     |     |     |     | stainless steel, plate type          |  |     |     |     |     |     |
| Internal Cooling Fan Capacity [CFM]  | 1,001  |     |     |     |     | 1,001                                |  |     |     |     |     |     |
| Approach Temp. [°F]  | Reference conditions: 14.5 psia, 30% relative humidity and 68°F inlet air temperature. |     |     |     |     | 5.4                                  |  |     |     |     |     |     |
| Heat Rejected into Cooling Water [BTU / HR]  | 299,500  |     |     |     |     | 361,500                              |  |     |     |     |     |     |
| Heat Rejected into Cooling Air [BTU / HR]  | 24,710   |     |     |     |     | 26,417                               |  |     |     |     |     |     |
| Max. outlet temperature [°F]   | Discharge temperature limited for non-treated water (to prevent calcification).        |     |     |     |     | 122                                  |  |     |     |     |     |     |
| Temperature differential between inlet water and max. discharge water temperature [°F]   | 20   |     | 50  |     | 20  |                                      | 50   |     |     |     |     |     |
| Max. inlet water temperature [°F]  | 104  |     | 68  |     | 104 |                                      | 68   |     |     |     |     |     |
| Min. cooling water flow [gpm]  | 30   |     | 12  |     | 35  |                                      | 14   |     |     |     |     |     |
| Pressure drop across compressor package [psi] <b>WITHOUT</b> cooling water throttling valve  | 7  |     | 2   |     | 9   |                                      | 2  |     |     |     |     |     |
| Pressure drop across compressor package [psi] <b>WITH</b> cooling water throttling valve   | 28   |     | 7   |     | 38  |                                      | 8  |     |     |     |     |     |



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| Model<br>Rated Pressure [psig]   | SFC 90S   |     |     |     |   | SFC 110S                     |     |   |     |     |                                |     |  |  |  |
|--|---|-----|-----|-----|---|------------------------------|-----|---|-----|-----|--------------------------------|-----|--|--|--|
|  | 110   | 125 | 145 | 175 | 190   | 217                          | 110 | 125   | 145 | 175 | 190                            | 217 |  |  |  |
| <b>II. ELECTRICAL DATA</b><br><i>Electrical data may vary in accordance with motor manufacturer's specifications. Motors are EISA compliant.</i>   |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| <b>Drive Motor</b>   |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| Motor HP   | 100   |     |     |     |   | 125                          |     |   |     |     |                                |     |  |  |  |
| Insulation Class   | F   |     |     |     |   | F                            |     |   |     |     |                                |     |  |  |  |
| Standard Voltage   | 460V/3ph/60Hz   |     |     |     |   | 460V/3ph/60Hz                |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 460V/3ph/60Hz   | 156   |     |     |     |   | 186                          |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 575V/3ph/60Hz   | CF  |     |     |     |   | CF                           |     |   |     |     |                                |     |  |  |  |
| <b>FAN MOTOR (A/C)</b>   |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| Insulation Class   | F   |     |     |     |   | F                            |     |   |     |     |                                |     |  |  |  |
| Fan Motor [HP]   | 1.3   |     |     |     |   | 1.9                          |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 460V/3ph/60Hz   | 2.9   |     |     |     |   | 2.9                          |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 575V/3ph/60Hz   | CF  |     |     |     |   | CF                           |     |   |     |     |                                |     |  |  |  |
| <b>FAN MOTOR (W/C)</b>   |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| Insulation Class   | F   |     |     |     |   | F                            |     |   |     |     |                                |     |  |  |  |
| Fan Motor [HP], Single Speed   | 0.13  |     |     |     |   | 0.13                         |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 460V/3ph/60Hz   | 1.45  |     |     |     |   | 1.45                         |     |   |     |     |                                |     |  |  |  |
| Full Load Amps [FLA] @ 575V/3ph/60Hz   | CF  |     |     |     |   | CF                           |     |   |     |     |                                |     |  |  |  |
| <b>TOTAL PACKAGE DATA (A/C)</b>  |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| 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. |   |     |     |     |  <b>three-phase star (wye);<br/>4-wire;<br/>grounded neutral</b> |                              |     |  <b>three-phase star (wye);<br/>3-wire;<br/>grounded neutral</b> |     |     |                                |     |  |  |  |
| Continuous Duty [Hours per day]  | 24  |     |     |     |   | 24                           |     |   |     |     |                                |     |  |  |  |
| Control Cabinet Class (NEMA)   | 12  |     |     |     |   | 12                           |     |   |     |     |                                |     |  |  |  |
| Short Circuit Current Rating (SCCR) [kA] @ 460V/3ph/60Hz   | 50  |     |     |     |   | 50                           |     |   |     |     |                                |     |  |  |  |
| Short Circuit Current Rating (SCCR) [kA] @ 575V/3ph/60Hz   | 25  |     |     |     |   | 25                           |     |   |     |     |                                |     |  |  |  |
| Package Full Load Amps @ 460V/3ph/60 Hz [FLA]  | 150   |     |     |     |   | 178                          |     |   |     |     |                                |     |  |  |  |
| Package Full Load Amps @ 575V/3ph/60 Hz [FLA]  | CF  |     |     |     |   | CF                           |     |   |     |     |                                |     |  |  |  |
| Recommended Disconnect Fuse Size [Amps] @ 460V/3ph/60Hz  | Dual-element time-delay fuse; based on 2017 NEC 240.6, 430.52, and Tables 430.52, 430.248, and 430.250.   |     |     |     |   | 200                          |     |   |     |     | 250                            |     |  |  |  |
| Recommended Disconnect Fuse Size [Amps] @ 575V/3ph/60Hz  |   |     |     |     |   | CF                           |     |   |     |     | CF                             |     |  |  |  |
| Recommended Disconnect Wire Size [AWG/kcmil] @ 460V/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. |     |     |     |   | 4/0 AWG per phase and ground |     |   |     |     | 250 kcmil per phase and ground |     |  |  |  |
| Recommended Disconnect Wire Size [AWG/kcmil] @ 575V/3ph/60Hz   |   |     |     |     |   | CF                           |     |   |     |     | CF                             |     |  |  |  |
| <b>TOTAL PACKAGE DATA (W/C)</b>  |   |     |     |     |   |                              |     |   |     |     |                                |     |  |  |  |
| Package Full Load Amps @ 460V/3ph/60Hz [FLA]   | 148   |     |     |     |   | 176                          |     |   |     |     |                                |     |  |  |  |
| Package Full Load Amps @ 575V/3ph/60Hz [FLA]   | CF  |     |     |     |   | CF                           |     |   |     |     |                                |     |  |  |  |



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|---|---|-----|-----|-----|-----|--------------------------------------|-----|-----|-----|-----|-------------|-----|--|
|   | 110   | 125 | 145 | 175 | 190 | 217                                  | 110 | 125 | 145 | 175 | 190         | 217 |  |
| <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] |     |     |     |     | 73                                   |     |     |     |     | 74          |     |  |
| W/C with Super Soundproofing [dB(A)]                                    |   |     |     |     |     | 72                                   |     |     |     |     | 73          |     |  |
| 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]                         |   |     |     |     |     | 1 1/4 NPT                            |     |     |     |     |             |     |  |
| Power Input Conduit Opening(s) [inches]                                 |   |     |     |     |     | 1 x 2 1/2                            |     |     |     |     |             |     |  |
| Condensate Drain Connection [NPT]                                       |   |     |     |     |     | 1/4                                  |     |     |     |     |             |     |  |
| Width [inches]  |   |     |     |     |     | 83 1/8                               |     |     |     |     |             |     |  |
| Depth [inches]  |   |     |     |     |     | 50 3/4                               |     |     |     |     |             |     |  |
| Height [inches]   |   |     |     |     |     | 76 3/4 A/C, 78 1/8 W/C               |     |     |     |     |             |     |  |
| Floor Space [sq. ft.]   |   |     |     |     |     | 29 2/7                               |     |     |     |     |             |     |  |
| Weight (A/C) [lb]   |   |     |     |     |     | 3,638                                |     |     |     |     | 3,858       |     |  |
| Weight (W/C) [lb]   |   |     |     |     |     | 3,638                                |     |     |     |     | 3,858       |     |  |
| <b>COMPRESSOR FLUID DATA</b>  |   |     |     |     |     |                                      |     |     |     |     |             |     |  |
| Fluid Capacity (A/C) [gal]  |   |     |     |     |     | 13.7                                 |     |     |     |     | 13.7        |     |  |
| Fluid Capacity (W/C) [gal]  |   |     |     |     |     | 13.2                                 |     |     |     |     | 13.2        |     |  |
| Flow Rate [gal/min]   |   |     |     |     |     | 33.0                                 |     |     |     |     | 33.0        |     |  |
| Typical Oil Consumption [fl. Oz./100 h]                                 |   |     |     |     |     | 12.8                                 |     |     |     |     | 15.3        |     |  |
| Standard Fluid Type   |   |     |     |     |     | Sigma M-460                          |     |     |     |     | Sigma M-460 |     |  |
| <b>MAINTENANCE PARTS</b>  |   |     |     |     |     |                                      |     |     |     |     |             |     |  |
| Air Inlet Filter  |   |     |     |     |     | 6.4148.1 + 6.4993.0                  |     |     |     |     |             |     |  |
| Filter Mat (optional)   |   |     |     |     |     | 6.1945.0 (x2)                        |     |     |     |     |             |     |  |
| Filter Mat for Control Cabinet  |   |     |     |     |     | 7.4519.00040 (x1), 7.4519.00010 (x4) |     |     |     |     |             |     |  |
| Fluid Filter  |   |     |     |     |     | 6.4693.0                             |     |     |     |     |             |     |  |
| Fluid Separator Kit   |   |     |     |     |     | 6.3623.0                             |     |     |     |     |             |     |  |
| Maintenance Kit for Optional 5-year warranty                            |   |     |     |     |     | ANAKCSDX5SFS                         |     |     |     |     |             |     |  |
| Maintenance Kit for Optional 5-year warranty, with food-grade lubricant |   |     |     |     |     | ANAKCSDX5SFF                         |     |     |     |     |             |     |  |