



Installation Data Sheet - Screw Blower

Series: FBS.2
 Document Number: TI.BIDS-043
 Version: 1.0
 Revision Date: 04/24/2023

Package Model	FBS 720 SFC (L & M)				
Electrical Data					
Horsepower	60	75	100	125	150
Voltage (3ph/60Hz)	460V	460V	460V	460V	460V
Short Circuit Current Rating (SCCR) [kA] 460V/3ph/60Hz	50	50	50	50	50
Package FLA +/- 10%	79	96.3	129.2	154.6	187.9
Disconnect Fuse [Amp]	90	110	150	175	225
Recommended Wire Size (75°C or higher) [AWG]	1 x 4 x 1/0	1 x 4 x 2/0	1 x 4 x 3/0	2 x 4 x 1/0	2 x 4 x 2/0
Maximum Feed Terminal [AWG]	See wiring diagram				
Motor Data					
Insulation Class	F	F	F	F	F
Enclosure Type	TEFC	TEFC	TEFC	TEFC	TEFC
Type	SynRM (IES2)	SynRM (IES2)	SynRM (IES2)	SynRM (IES2)	SynRM (IES2)
Notes:					
1. Time delay (dual element) fuse; Class J ≤ 600A (e.g. AJT).					
2. Fuse and wire sizes determined in accordance to NEC 240.6, 430.52 and tables 250.122, 430.248, 430.250.					
3. Breaker should be suitable for a heavy duty starting load and of inverse time delay design that complies to regulations outlines in NEC 430.52.					
4. SFC Units come standard at 460 volts.					
5. Ground wire size should be equal to conductor size.					
SFC Operating Modes					
<i>External Speed Control</i>					
The speed of the drive motor is controlled via an externally-supplied analog signal within the programmed speed range between n-min and n-max in accordance to machine design.					
<i>Fixed Speed</i>					
The speed of the drive motor is controlled by an adjustable value between 0% and 100% of machine speed which is set at the Sigma Control 2.					
<i>Pressure Regulation</i>					
When machine runs in pressure regulation mode, the frequency converter compensates for deviations between the set point pressure and the actual pressure by changing the speed of the drive motor. The variation in speed determines the air delivery of the machine to match the air consumption of system while maintaining the system pressure so long as the unit is maintained within the control range of the machine (Vmin and Vmax).					
Oil System Data					
Drive End Capacity [qt.]	2.7				
Gear End Capacity [qt.]	2.3				
Oil Type (Synthetic)	G-680				
Working Pressure					
FBS 720 L SFC pr	Continued working pressures below 2.2 psig are not permitted				
FBS 720 M SFC pr	Continued working pressures below 4.4 psig are not permitted				
Package Connections					
HP	60	75	100	125	150
Width [in.]	57 1/2	57 1/2	57 1/2	57 1/2	57 1/2
Depth [in.]	92 1/2	92 1/2	92 1/2	92 1/2	92 1/2
Height [in.]	77 15/16	77 15/16	77 15/16	77 15/16	77 15/16
Floor [sq.ft.]	36 73/78	36 73/78	36 73/78	36 73/78	36 73/78
Weight [lb.]	4370	4370	4645	4720	4841
Connection Size [Inlet (optional)]	8" Pipe	8" Pipe	8" Pipe	8" Pipe	8" Pipe
Connection Size [Outlet]	8" ANSI 125/150	8" ANSI 125/150	8" ANSI 125/150	8" ANSI 125/150	8" ANSI 125/150



Installation Data Sheet - Screw Blower

Series: FBS.2
 Document Number: TI.BIDS-043
 Version: 1.0
 Revision Date: 04/24/2023

Package Model FBS 720 SFC (L & M)

General Information

Floating Relay Contacts

Contacts:
 - X12: 1 and 2 Operation
 - X12: 3 and 4 Ready for operation
 - X12: 5 and 6 Group Alarm
 - X12: 7 and 8 Group Warning

Ambient and Intake Conditions

Permissible ambient temperature [°F]* +32 - +113
 Permissible intake temperature [°F]* +5 - +113
 Relative humidity [%] 0 - 80
 Maximum elevation [ft.asl]* 3280
**contact Kaeser about deviations in temperature or altitude*

Remote On/Off

Contacts (not floating): powered 24 VDC
 -X15: 5 and 6
 Function:
 - from open to closed: Machine switches on
 - from closed to open: Machine switches off

External Alarm

Contacts (not floating): powered 24 VDC
 DI: 1.08
 Function:
 - the machine will switch off in the event of this external fault

Ventilation of Blower Room

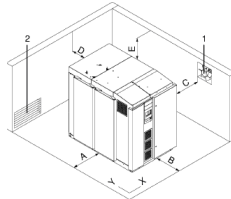
Air Inlet Opening	6.7 sq.ft.
Cooling Fan Capacity (forced ventilation)	2450 cfm
Max Heat Rejection	35,740 BTU/hr

Ventilation values based on 2524 CFM(FAD) @ 14.5 psig dP, 150 hp, maximum room ambient of 113°F, Suction temperature of 104°F, 9 ft of discharge pipe

Model shown for reference only

Actual duct size may vary with installation

- 1 Exhaust Fan
- 2 Ventilation Inlet Air Opening



Recommended machine placement and dimensions:

	Inches
A	Left side clearance = See Table 1
B	Front clearance = See Table 1
C	Right side clearance = See Table 1
D	Back clearance = 39.4
E	Height clearance = See Table 1

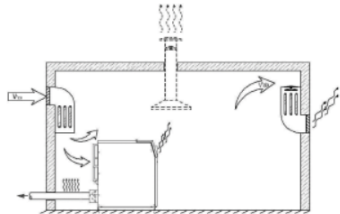
Foundation in the cross direction (X) must be level, inclination max. 0.8°

Foundation in the longitudinal direction (Y) must be level, inclination max. 2.0°

*The foundation must be firm, level and capable of bearing the weight of the machine.

Table 1

Machine	Installation Type	Clearance A	Clearance B	Clearance C	Clearance E
FBS 720 L pr, FBS 720 M pr	Beside another machine	13.8	59.1	13.8	59.1
FBS 720 L pr, FBS 720 M pr	Next to a wall	19.7	59.1	19.7	59.1



It is recommended to extract the exhaust air from the upper third of the room as this is where the heat collects. The room ventilation openings should be arranged that the current of cooling air flowing through the room passes over the blower inlet and exhaust ports and, if possible, should leave no stagnant air in the room. (A thermal short circuit must be avoided, i.e. discharged cooling air must not find its way to the cooling air inlet.)
 The blower must not be positioned so near to a wall that the inflow of cooling air is obstructed.

Pipework should be insulated against heat emission.

If the blower station is located in the middle of a large hall its exhaust air can be extracted by means of a duct positioned above the exhaust port (illustrated in broken lines).