



## Installation Data Sheet - Screw Blower

Series: FBS.1  
 Document Number: TI.BIDS-017  
 Version: 1.6  
 Revision Date: 08/22/2022

Package Model	FBS 660 SFC (L & M)				
<b>Electrical Data</b>					
Horsepower	60	75	100	125	150
Voltage (3ph/60Hz)	460	460	460	460	460
Short Circuit Current Rating (SCCR) [kA] 460V/3ph/60Hz	50	50	50	50	50
Package FLA +/- 10%	74.9	90.6	120.3	144.9	186.1
Disconnect Fuse [Amp]	90	100	150	175	225
Recommended Wire Size (75°C or higher) [AWG]	1 x 4 x 2	1 x 4 x 1/0	1 x 4 x 2/0	1 x 4 x 3/0	2 x 4 x 1/0
Maximum Feed Terminal [AWG]	See wiring diagram				
<b>Insulation Class</b>					
Insulation Class	F	F	F	F	F
Enclosure Type	TEFC	TEFC	TEFC	TEFC	TEFC
Motor Rated Current +/- 10%	70	83	111	132	160
Nominal Efficiency [%]	93.6	93.6	94.1	95.0	95.0
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.					
<b>SFC Operating Modes</b>					
<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).					
<b>Oil System Data</b>					
Drive End Capacity [qt.]	1.0				
Gear End Capacity [qt.]	2.0				
Oil Type (Synthetic)	G-680				
<b>Working Pressure</b>					
FBS 660 L SFC pr	Continued working pressures below 2.2 psig are not permitted				
FBS 660 M SFC pr	Continued working pressures below 4.4 psig are not permitted				
<b>Package Connections</b>					
HP	60	75	100	125	150
Width (in.)	87 5/8	87 5/8	87 5/8	87 5/8	87 5/8
Depth (in.)	76 7/16	76 7/16	76 7/16	76 7/16	76 7/16
Height (in.)	75 11/16	75 11/16	75 11/16	75 11/16	75 11/16
Floor (sq. ft.)	46 1/2	46 1/2	46 1/2	46 1/2	46 1/2
Weight (lb.)	4841	5293	5469	5751	5917
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

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**Package Model** FBS 660 SFC (L & M)

## General Information

Floating Relay Contacts	Ambient and Intake Conditions
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	Permissible temperature [°F]*      +32 - +113 Permissible temperature [°F]*      +5 - +113 Relative humidity [%]              0 - 80 Maximum elevation [ft.asl]*        3280 <i>*contact Kaeser about deviations in temperature or altitude</i>
Remote On/Off	External Alarm
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	Contacts (not floating): powered 24 VDC DI: 1.08 Function: - the machine will switch off in the event of this external fault

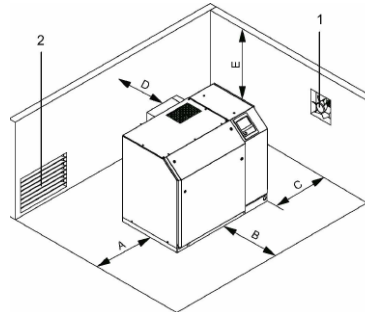
## Ventilation of Blower Room

Air Inlet Opening	10.7 sq. ft.
Cooling Fan Capacity (forced ventilation)	4,000 cfm
Max Heat Rejection	78,550 BTU/HR
Ventilation values based on 2300cfm @ 15 psig ΔP, 150Hp and ambient inlet. Max. room temp. = 113° F and cooling air temp = 100° F. Discharge piping length = 5ft.	

### Model shown for reference only

Actual duct size may vary with installation

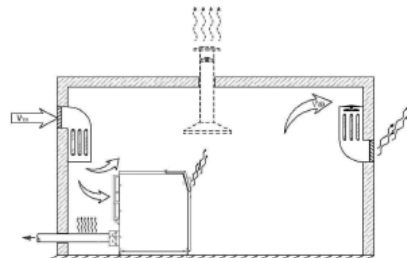
- 1 Exhaust Fan
- 2 Ventilation Inlet Air Opening



### Recommended machine placement and dimensions:

	Inches
A	Left side clearance = 2.4
B	Front clearance = 51.2
C	Right side clearance = 29.5
D	Back clearance = 39.4
E	Height clearance = 32.0

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



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).