KAESER COMPRESSORS®

Installation Data Sheet - Screw Blower

Series: HBS.1
Document Number: TI.BIDS-036
Version: 1.4
Revision Date: 04/24/2023

Package Model	HBS 1600 SFC (L & M)			
Electrical Data				
Horsepower	**175**	**200**	**250**	**335**
Voltage (3ph/60Hz)	460	460	460	460
Short Circuit Current Rating (SCCR) [kA] 460V/3ph/60Hz	50	50	50	50
Package FLA +/- 10%	219.7	260.3	324.1	365
Disconnect Fuse [Amp]	250	300	400	450
Recommended Wire Size (75°C or higher) [AWG]	2x4x3/0	2x4x4/0	2x4xMCM 300	2x4xMCM 400
Maximum Feed Terminal [AWG]	See wiring diagram			
Motor Data				
Insulation Class	F	F	F	F
Enclosure Type	TEFC	TEFC	TEFC	TEFC
Type	ASM (IES2)	ASM (IES2)	ASM (IES2)	ASM (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

External Speed Control
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

Fixed Speed
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

Pressure Regulation
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.]	4.2			
Gear End Capacity [qt.]	6.3			
Oil Type (Synthetic)	G-680			
Working Pressure				
HBS 1600 L SFC pr	Continued working pressures below 2.2 psig are not permitted			
HBS 1600 M SFC pr	Continued working pressures below 4.4 psig are not permitted			
Package Connections				
HP	**175**	**200**	**250**	**335**
Width [in.]	81	81	81	81
Depth [in.]	131 5/8	131 5/8	131 5/8	131 5/8
Height [in.]	91 3/8	91 3/8	91 3/8	91 3/8
Floor [sq.ft.]	74	74	74	74
Weight [lb.]	12,753	12,952	12,996	13,095
Connection Size [inlet (optional) and outlet]	12" ANSI 125/150	12" ANSI 125/150	12" ANSI 125/150	12" ANSI 125/150

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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

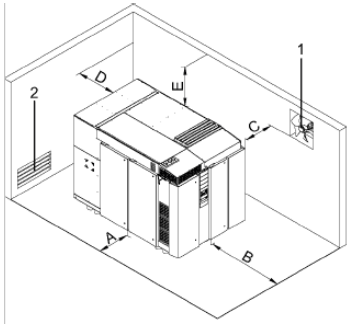
Air Inlet Opening	22 sq. ft.
Cooling Fan Capacity (forced ventilation)	7,500 cfm
Max Heat Rejection	161,195 BTU/HR

Ventilation values based on 5573cfm @ 15 psig ΔP, 335Hp 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

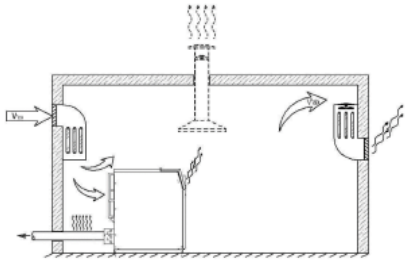


Recommended machine placement and dimensions:

		Inches
A	Left side clearance =	32
B	Front clearance =	78.7
C	Right side clearance =	32 / 78.7*
D	Back clearance =	39.4
E	Height clearance =	59.1

*32.0 in. with hoist above machine Or 78.7 in. for hoist at side of machine

*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).