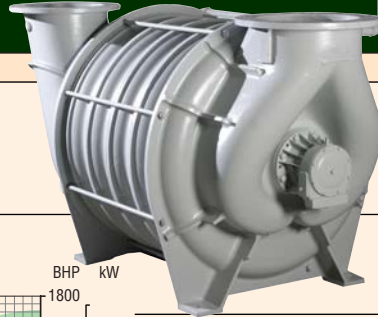


# Model 187

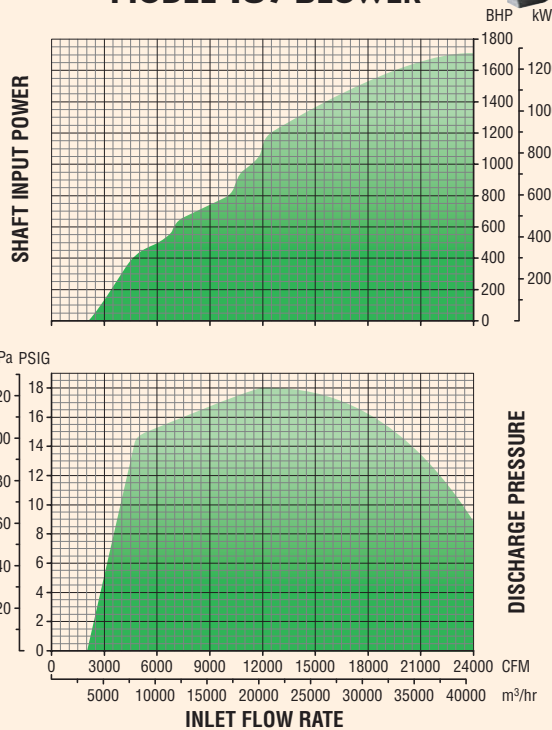
**HSI** MULTISTAGE CENTRIFUGAL BLOWERS



## General Performance

## Specifications Standard

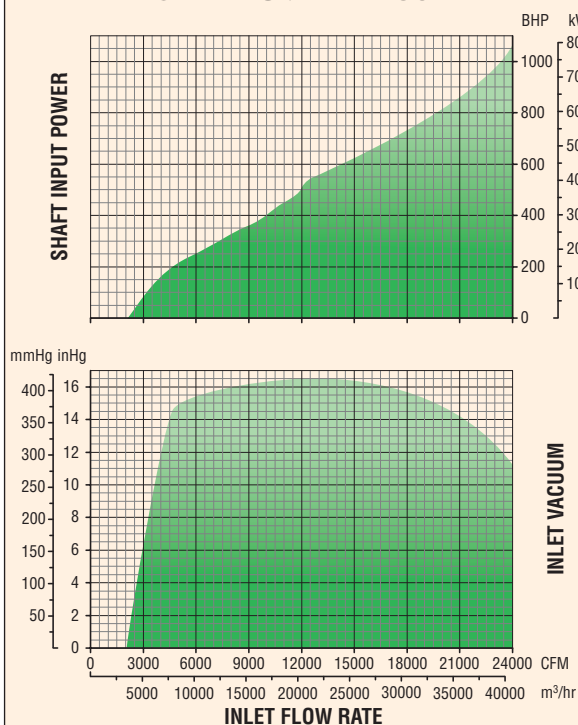
### MODEL 187 BLOWER



### TECHNICAL DATA

- Number of Stages ..... 1 through 8
- Inlet Connection ..... 20" (508.0 mm) flange, ASA 125# / ANSI 150# drilling
- Outlet Connection ..... 18" (457.2 mm) flange, ASA 125# / ANSI 150# drilling
- Operating Speed..... 3550 RPM (60Hz), 2960 RPM (50Hz)
- Casing Pressure ..... 25 PSIG (1.76 kg/cm<sup>2</sup>)
- Seals (air)..... Labyrinth type
- Seals (gas)..... Carbon ring type (four each end)/custom available
- Bearings..... Ball, 10-year minimum life per AFBMA L<sub>10</sub> standard
- Lubrication ..... Oil
- Impeller Diameter..... 29.75 in (755.6 mm)
- Impeller Tip Speed ..... 463 ft/s (141 m/s) @ 3570 RPM
- First Critical Speed ..... 4525 RPM (7-stage)
- Drive Type ..... Direct coupled, Inlet driven (standard) or Outlet driven
- Shaft End ..... 2.875 in (73.03 mm) diameter at coupling
- Vibration Tolerance ..... .25 in/s (6.4 mm/s) ISO overall specification, 1.25 mils (0.03 mm) peak to peak
- Rotor Balance..... Military standard 167-1. Individual impellers and rotating assembly dynamically balanced

### MODEL 187 EXHAUSTER



### MATERIALS OF CONSTRUCTION

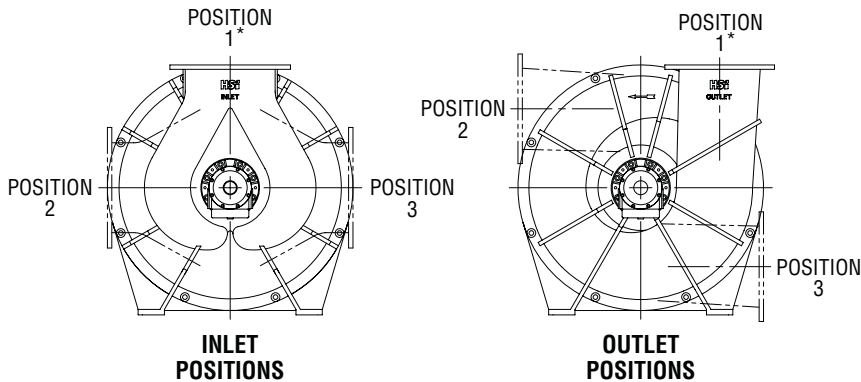
- Casing ..... Cast iron ASTM A48 grade 25/30
- Bearing Caps & Housings ... Cast iron ASTM A48 grade 25/30
- Oil Reservoir ..... Cast iron ASTM A48 grade 25/30
- Shaft ..... Carbon steel AISI 4140 (stainless steel available)
- Impellers ..... Cast aluminum ANSI AA319/356 or fabricated aluminum ANSI AA6061 with cast Al AA356 hub stainless steel/custom alloys available
- Seals (air)..... Cast aluminum ANSI AA356
- Seals (gas)..... Isostatically molded, high density, fine grain electro-graphite
- Interstage Baffle Rings ..... Stainless steel ASTM A240 304
- Tie Rods ..... .875 in (22.2 mm) diameter, high strength steel ASTM A193-B7/B7M available
- Blower Base ..... Welded structural steel ASTM A36 ASME/AWS D1.1 WPS's available
- Motor Pedestal..... Welded steel plate ASTM A36
- Joint Sealing Compound ..... RTV silicone
- Base Isolation Pads..... Neoprene rubber
- Finish ..... HSI standard

Curves are based on atmospheric conditions of 1 Atm, 68F/20C, 36% RH, and 3550 rpm

# MODEL 187 MULTISTAGE CENTRIFUGAL BLOWER

## Inlet and Outlet Orientation Options

The orientation of the inlet and outlet is selectable from any of three different positions, as viewed when facing the exterior of the part:



\*Standard configuration.

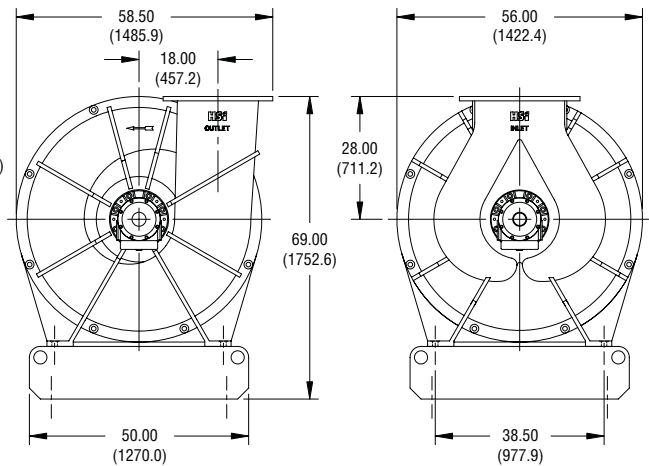
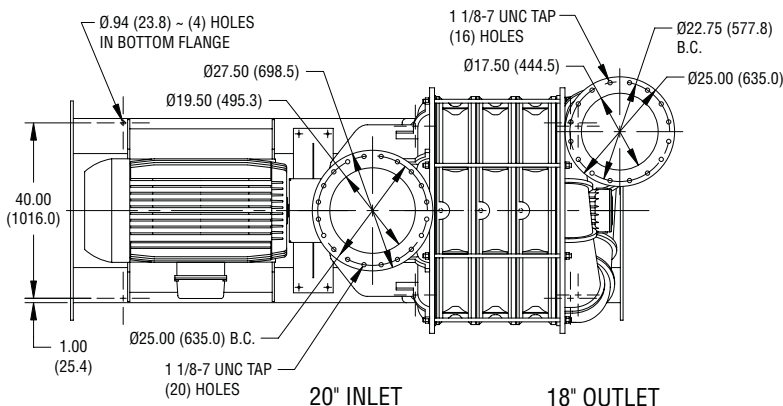
## Weight and Inertia

Model	Weight*		Wk <sup>2</sup>	
	lb	kg	lb-ft <sup>2</sup>	kg-m <sup>2</sup>
<b>18701</b>	5,035	2,284	43	1.81
<b>18702</b>	6,320	2,867	84	3.54
<b>18703</b>	7,620	3,456	124	5.23
<b>18704</b>	8,910	4,042	165	6.95
<b>18705</b>	10,145	4,602	206	8.68
<b>18706</b>	11,380	5,162	247	10.41
<b>18707</b>	12,635	5,731	165	6.95

\*Approximate weight for blower only.

† Inertia based on cast impellers through six stages and on fabricated impellers for 18707.

## General Arrangement



### Dimensions\*

Model	A	B	F†	L†
<b>18701</b>	9.75 (248)	29.00 (737)	78 (1981)	102 (2591)
<b>18702</b>	18.88 (479)	38.13 (968)	90 (2286)	114 (2896)
<b>18703</b>	28.00 (711)	47.25 (1200)	102 (2591)	126 (3200)
<b>18704</b>	37.13 (943)	56.38 (1432)	102 (2591)	126 (3200)
<b>18705</b>	46.25 (1175)	65.50 (1664)	114 (2896)	138 (3505)
<b>18706</b>	55.38 (1407)	74.63 (1895)	114 (2896)	138 (3505)
<b>18707</b>	64.50 (1638)	83.75 (2127)	126 (3200)	150 (3810)

\*Dimensions in inches and (millimeters) and are approximate. Do not use for construction purposes.

†Dimension may vary depending on motor frame size.



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