

Model I4I

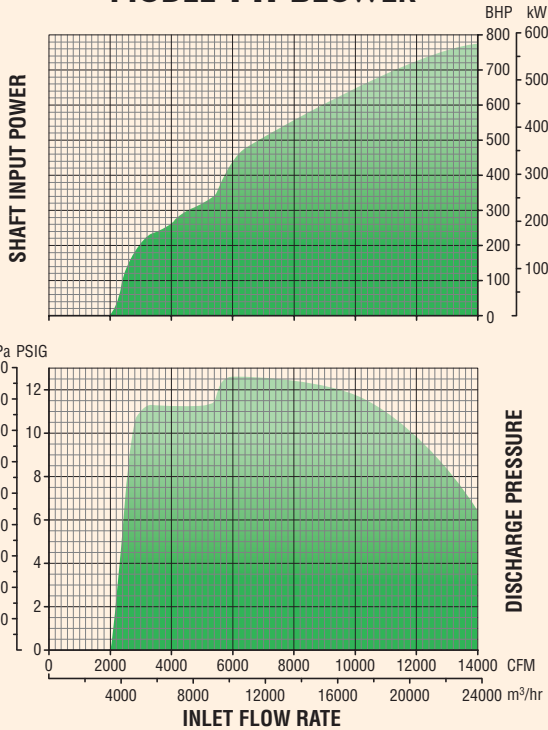
HSI MULTISTAGE
CENTRIFUGAL
BLOWERS



General Performance

Specifications Standard

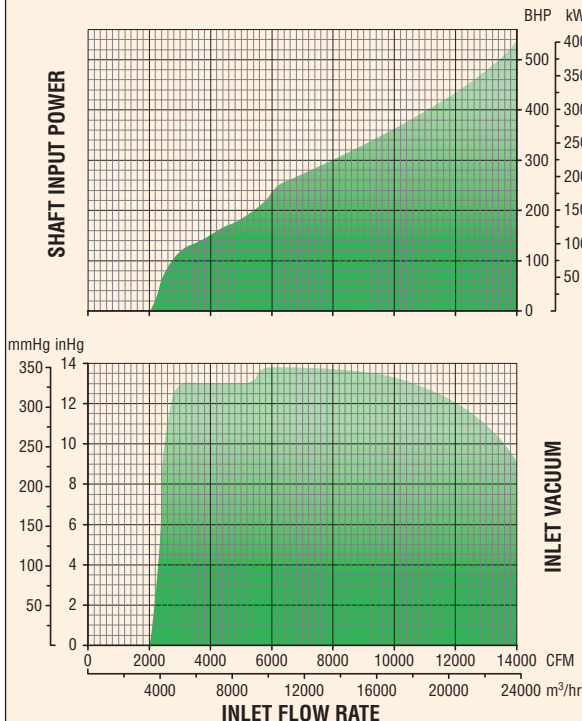
MODEL I4I BLOWER



TECHNICAL DATA

Number of Stages	1 through 8
Inlet Connection	18" (457.2 mm) flange, ASA 125# / ANSI 150# drilling
Outlet Connection	14" (355.6 mm) flange, ASA 125# / ANSI 150# drilling
Operating Speed.....	3550 RPM (60 Hz), 2960 RPM (50 Hz)
Casing Pressure.....	25 PSIG (1.76 kg/cm ²)
Seals (air).....	Labyrinth type
Seals (gas).....	Carbon ring type (four each end)/custom available
Bearings.....	Ball, 10-year minimum life per AFBMA L ₁₀ standard
Lubrication.....	Oil
Impeller Diameter.....	26.00 in (660.4 mm)
Impeller Tip Speed	403 ft/s (123 m/s) @ 3550 RPM
First Critical Speed	4524 RPM (7-stage), 3632 RPM (8-stage)
Drive Type	Direct coupled, Inlet driven (standard) or Outlet driven
Shaft End	2.875 in (73.03 mm) diameter at coupling
Vibration Tolerance25 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 I4I EXHAUSTER



MATERIALS OF CONSTRUCTION

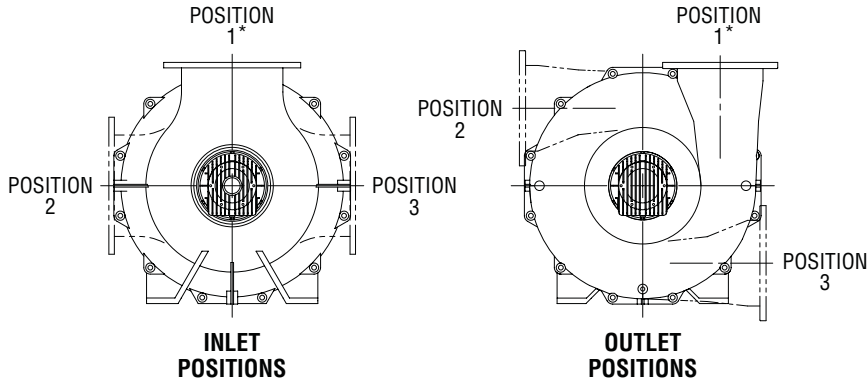
Casing	Cast iron ASTM A48 grade 25/30
Bearing Caps & Housings ...	Cast iron ASTM A48 grade 25/30
Oil Reservoir	Cast iron ASTM A48 grade 25/30
Shaft	Carbon steel AISI 4140 (stainless steel available)
Impellers	Cast aluminum ANSI AA319 AA319/356 or fabricated aluminum ANSI AA6061 with cast Al AA356 hub stainless steel/custom alloys available
Seals (air).....	Cast iron ASTM A48 grade 30 with lead babbitt insert Zinc-Alloy, ZA-12
Seals (gas)	Isostatically molded, high density, fine grain electro-graphite
Interstage Baffle Rings	Stainless steel ASTM A240 304
Tie Rods75 in (19.1 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 141 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:



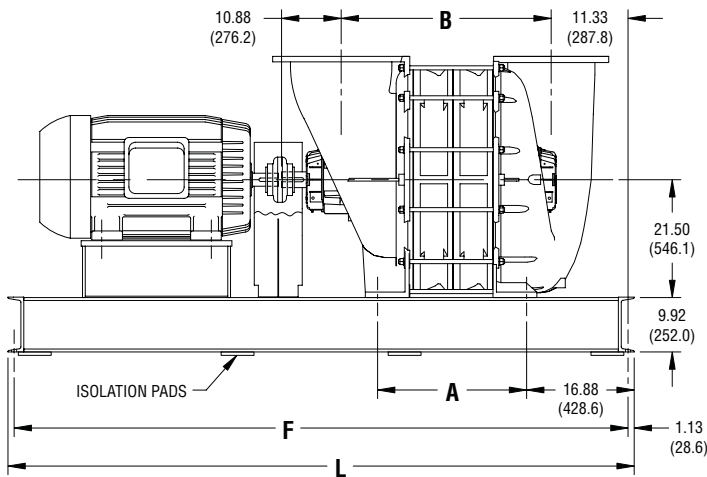
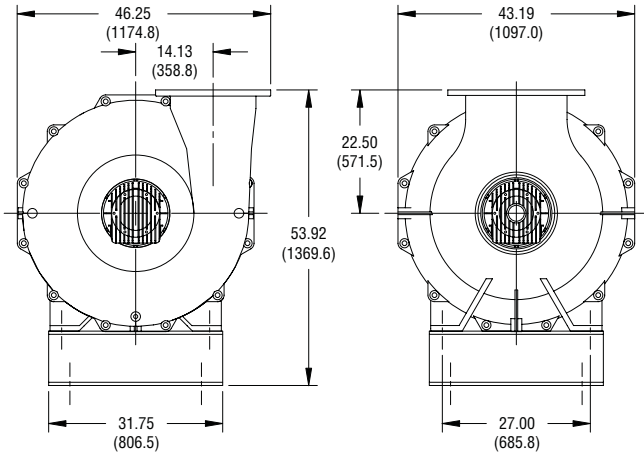
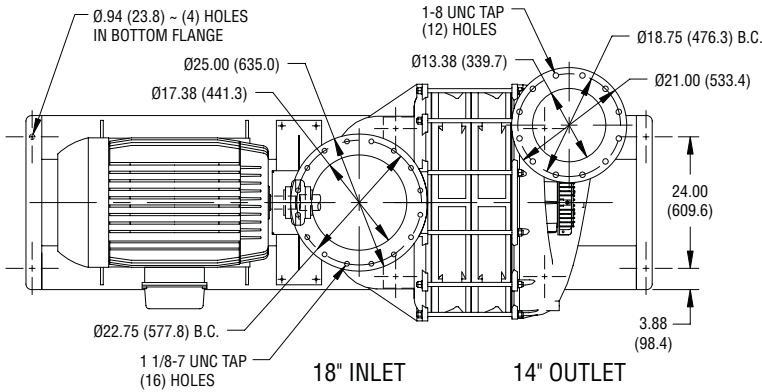
*Standard configuration.

Weight and Inertia

Model	Weight*		Wk ²	
	lb	kg	lb-ft ²	kg-m ²
14101	1732	786	23	0.99
14102	2330	1057	43	1.82
14103	2928	1328	60	2.53
14104	3526	1599	79	3.33
14105	4124	1871	98	4.14
14106	4722	2142	117	4.95
14107	5320	2413	141	5.97
14108	5918	2684	161	6.80

*Approximate weight for blower only.

General Arrangement



Model	Dimensions*			
	A	B	F [†]	L [†]
14101	12.69 (322)	23.81 (605)	88.75 (2254)	91 (2311)
14102	19.94 (506)	31.06 (789)	88.75 (2254)	91 (2311)
14103	27.19 (691)	38.31 (973)	101.75 (2584)	104 (2642)
14104	34.44 (875)	45.56 (1157)	128.75 (3270)	131 (3327)
14105	41.69 (1059)	52.81 (1341)	128.75 (3270)	131 (3327)
14106	48.94 (1243)	60.06 (1526)	143.75 (3651)	146 (3708)
14107	56.19 (1427)	67.31 (1710)	164.75 (4185)	167 (4242)
14108	63.44 (1611)	74.56 (1894)	164.75 (4185)	167 (4242)

*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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