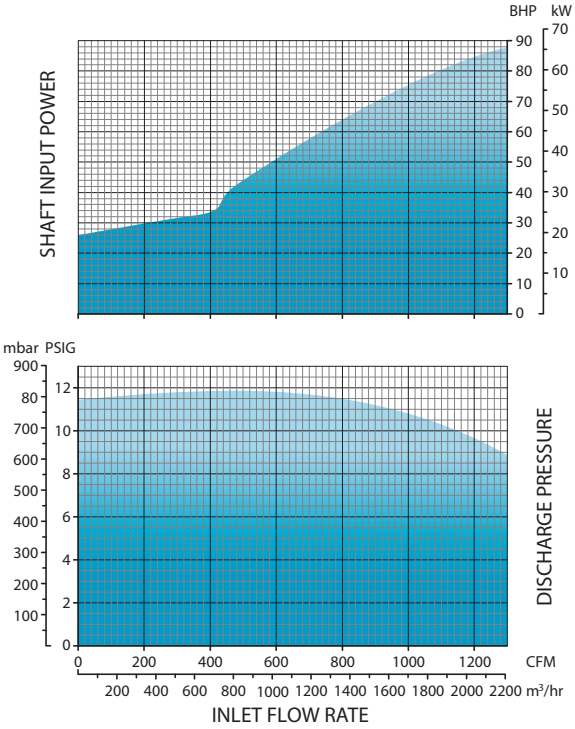
ZM 52

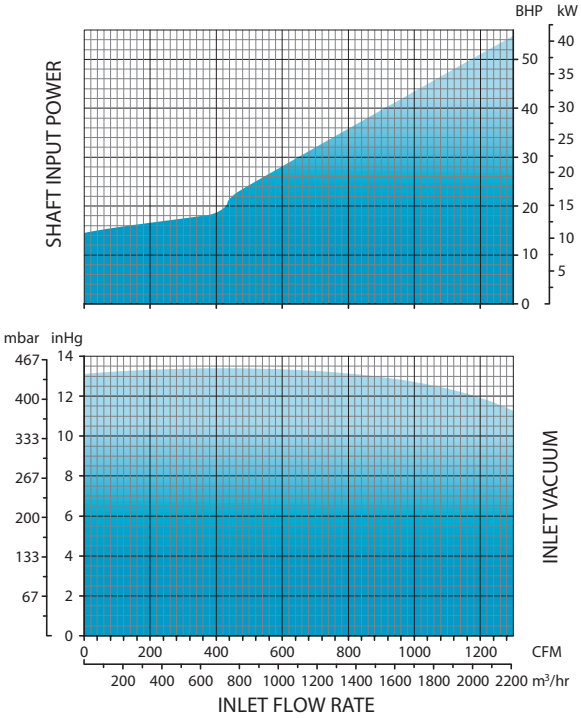
MULTISTAGE CENTRIFUGAL BLOWERS

General Performance

ZM 52 Blower



ZM 52 Exhauster



Specifications Standard

Technical Data

Number of Stages	1 to 10
Inlet Connection	6" flange, ASA 125# / ANSI 150# drilling Optional DIN 175 adapter flange
Outlet Connection	5" flange, ASA 125# / ANSI 150# drilling Optional DIN 150 adapter flange
Operating Speed	Fixed speed 3550 RPM (60 Hz), 2960 RPM (50 Hz) Variable speed option available
Casing Pressure	20 PSIG (1.4 bar)
Seals (air)	Labyrinth type
Seals (gas)	OPTi Seal/ Stuffing box type/ Carbon ring type/ Custom available
Bearings	Ball, 10-year minimum life per AFBMA L_{10} standard
Lubrication	Standard Grease/ Oil option available
Impeller Diameter	22.00 in (558.8 mm)
Impeller Tip Speed	341 ft/s (104 m/s) @ 3550 RPM
First Critical Speed	4505 RPM (10-stage)
Drive Type	Direct coupled or Belt driven, Inlet driven (standard) or Outlet driven
Shaft End	1.625 in (41.28 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

Materials of Construction

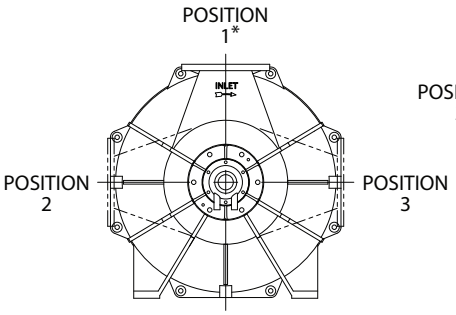
Casing	Cast iron ASTM A48 grade 25/30
Bearing Caps & Housings	Cast iron ASTM A48 grade 25/30
Oil Reservoir	Cast iron ASTM A48 grade 25/30
Shaft	Carbon steel AISI 4140 (stainless steel available)
Impellers	Cast aluminum ANSI AA319/356 (stainless steel/custom alloys available)
Seals (air)	Cast iron ASTM A48 grade 30 with lead babbitt insert Zinc-Alloy, ZA-12
Seals (gas)	Stainless Steel with Viton Elastomer, isostatically molded high density fine grain electro-graphite
Interstage Baffle Rings	Stainless steel ASTM A240 304
Tie Rods	.50 in (12.7 mm) diameter, high strength steel ASTM A193-B7/B7M available
Blower Base	Welded structural steel ASTM A36 ASME/AWS D1.1
Motor Pedestal	Welded steel plate ASTM A36
Joint Sealing Compound	RTV silicone
Base Isolation Pads	Neoprene rubber
Finish	Standard 2 part epoxy, 7011 Atlas Copco Dark Gray

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

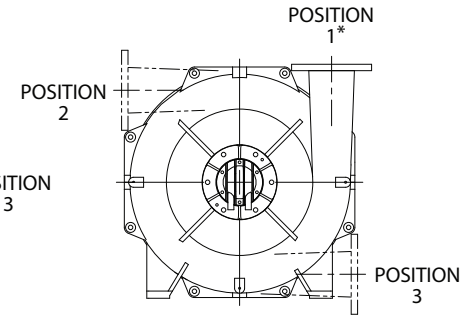
ZM52 MULTISTAGE CENTRIFUGAL BLOWER

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:



INLET POSITIONS



OUTLET POSITIONS

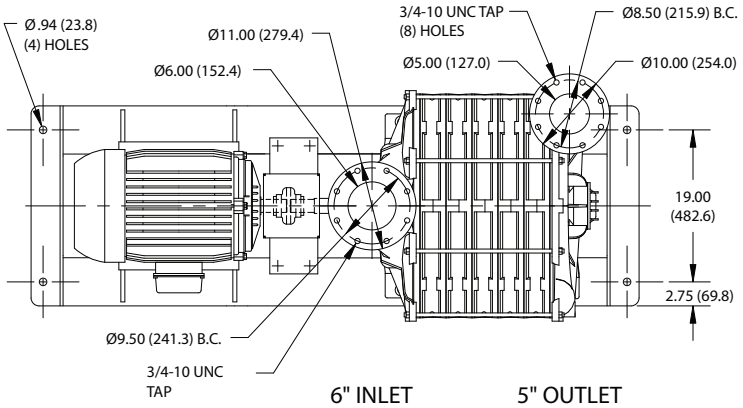
*Standard configuration.

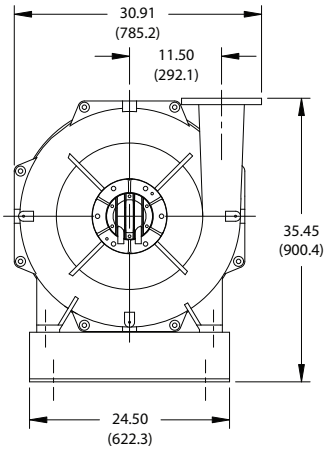
Weight and Inertia

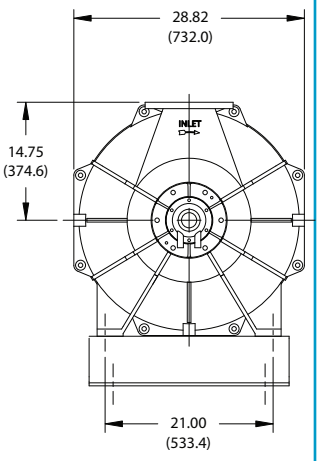
Model	Weight* lb	Weight* kg	Wk² lb-ft²	Wk² kg-m²
5201	530	240	6	0.27
5202	657	298	12	0.53
5203	780	354	19	0.78
5204	910	413	25	1.04
5205	1137	516	31	1.30
5206	1163	528	37	1.56
5207	1290	585	43	1.82
5208	1417	643	49	2.08
5209	1543	700	55	2.34
5210	1670	757	61	2.60

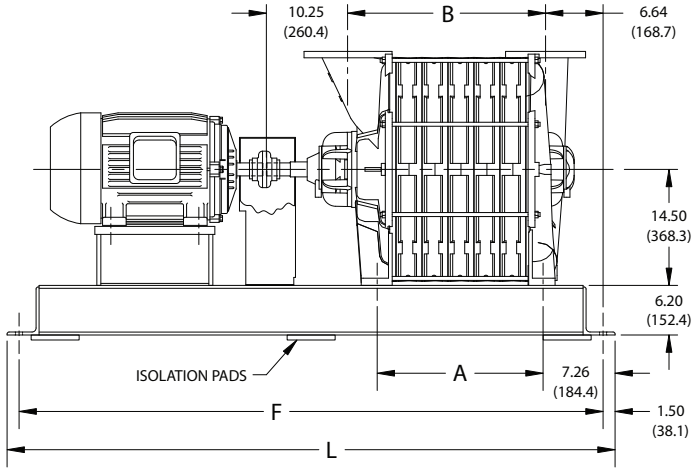
*Approximate weight for blower only.
† Inertia based on cast impellers.

General Arrangement









Model	A	B	F†	L†
5201	4.63 (117)	8.50 (216)	47 (1194)	50 (1270)
5202	7.88 (200)	11.75 (298)	56 (1422)	59 (1499)
5203	11.13 (283)	15.00 (381)	56 (1422)	59 (1499)
5204	14.38 (365)	18.25 (464)	66 (1676)	69 (1753)
5205	17.63 (448)	21.50 (546)	66 (1676)	69 (1753)
5206	20.88 (530)	24.75 (629)	77.5 (1969)	80.5 (2045)
5207	24.13 (613)	28.00 (711)	77.5 (1969)	80.5 (2045)
5208	27.38 (695)	31.25 (794)	77.5 (1969)	80.5 (2045)
5209	30.63 (778)	34.50 (876)	88 (2235)	91 (2311)
5210	33.88 (860)	37.75 (959)	88 (2235)	91 (2311)

Dimensions*

*Dimensions in inches and (millimeters) and are approximate. Do not use for construction purposes.
†Dimension may vary depending on motor frame size.

Atlas Copco

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