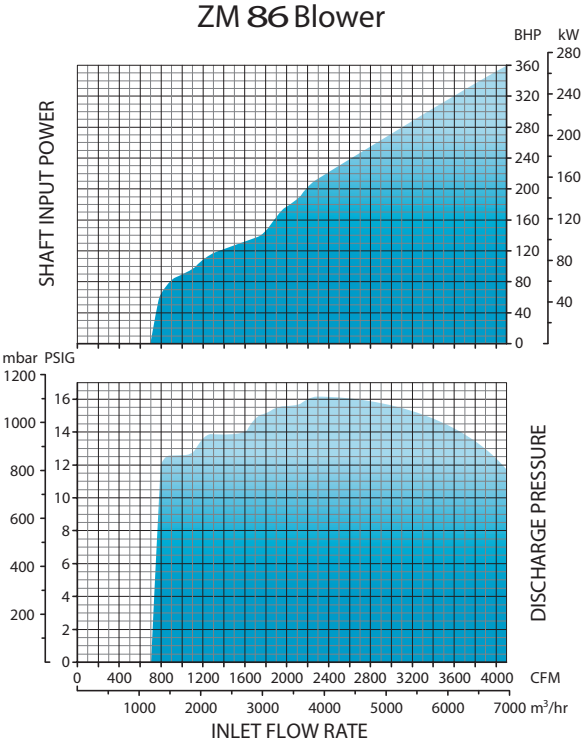
ZM 86

Atlas Copco

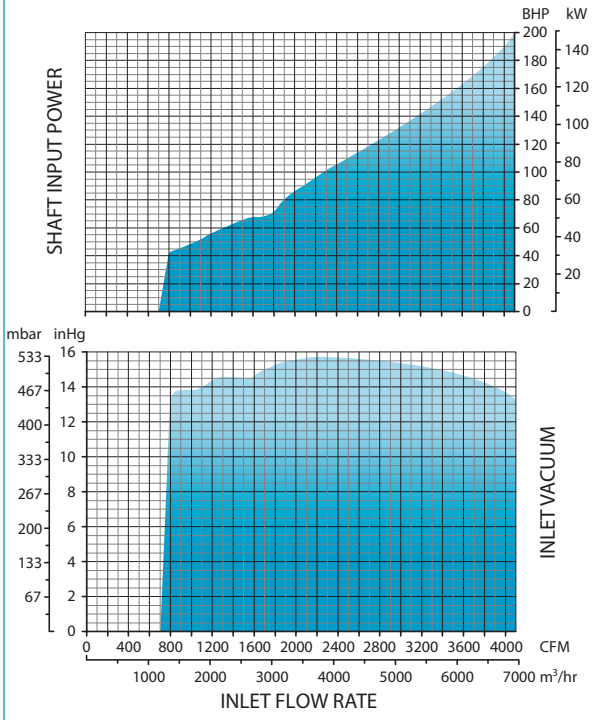
MULTISTAGE CENTRIFUGAL BLOWERS

General Performance

ZM 86 Blower



ZM 86 Exhauster



Specifications Standard

Technical Data

Number of Stages	1 to 9 (60 Hz), 1 to 10 (50 Hz)
Inlet Connection	8" flange, ASA 125# / ANSI 150# drilling Optional DIN 200 adapter flange
Outlet Connection	8" flange, ASA 125# / ANSI 150# drilling Optional DIN 200 adapter flange
Operating Speed	Fixed speed 3550 RPM (60 Hz), 2960 RPM (50 Hz) Variable speed option available
Casing Pressure	25 PSIG (1.7 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	Oil or Grease
Impeller Diameter	24.00 in (609.6 mm)
Impeller Tip Speed	372 ft/s (113 m/s) @ 3550 RPM
First Critical Speed	4323 RPM (9-stage)
Drive Type	Direct coupled or belt driven, Inlet driven (standard) or Outlet driven
Shaft End	1.875 in (47.63 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

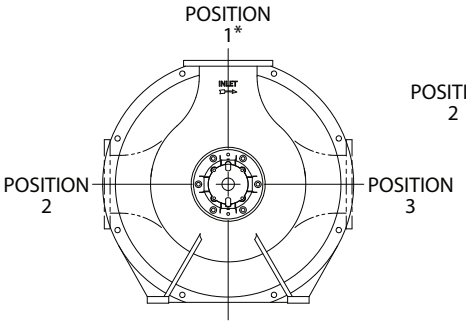
Casing	Cast iron ASTM A48 grade 25/30
Bearing Caps & Housings	Cast iron ASTM A48 grade 25/30
Oil Reservoir	Cast aluminum ANSI AA319
Shaft	Carbon steel AISI 4140 (stainless steel available)
Impellers	Cast aluminum ANSI AA319 or fabricated aluminum ANSI AA6061 with cast Al AA356 hub (stainless steel/custom alloys available)
Seals (air)	Cast iron ASTM A48 grade 30 with lead babbitt 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	.75 in (19.1 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

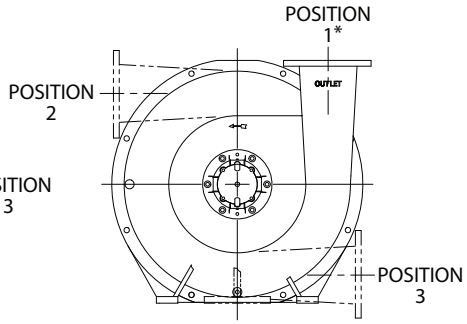
ZM86 MULTISTAGE CENTRIFUGAL BLOWER

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

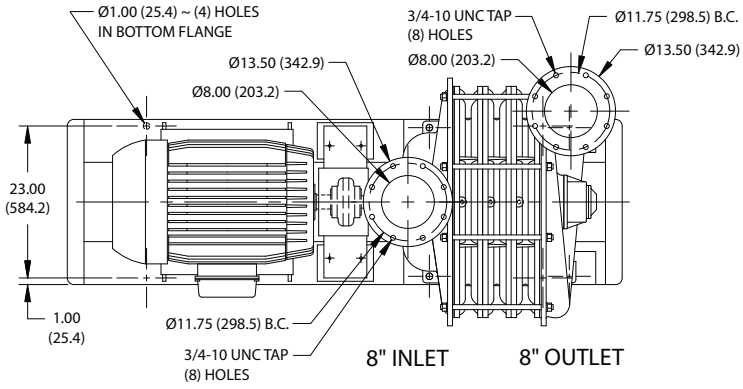
*Standard configuration.

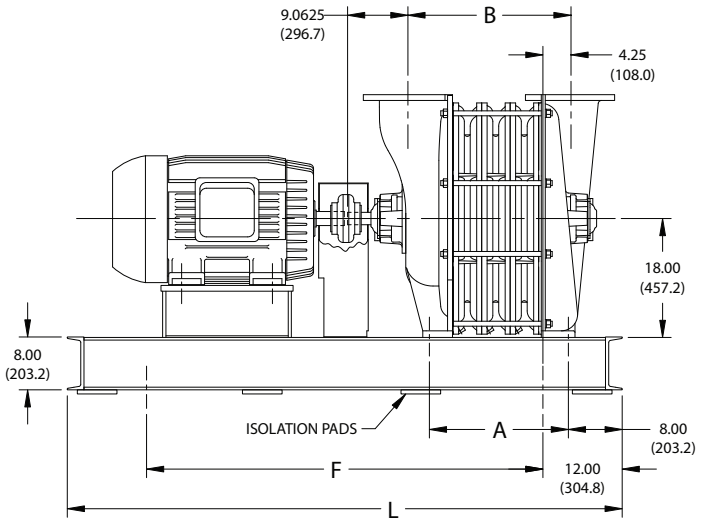
Weight and Inertia

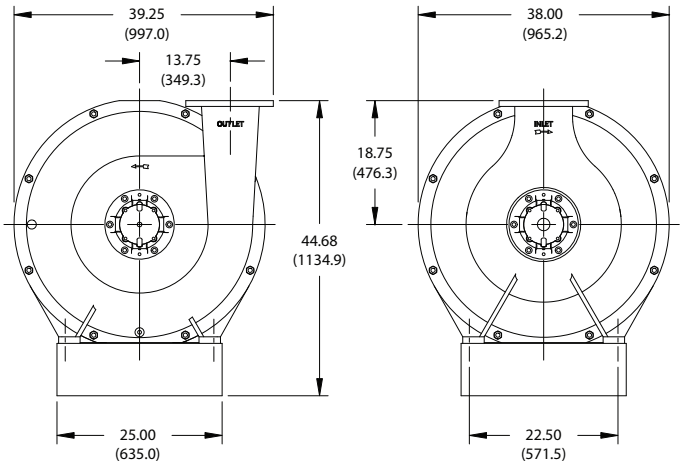
Model	Weight* lb	Weight* kg	Wk^2 lb-ft^2	Wk^2 kg-m^2
8601	1300	591	11	0.46
8602	1610	732	21	0.89
8603	1925	875	31	1.31
8604	2300	1046	42	1.77
8605	2750	1250	52	2.19
8606	3100	1409	63	2.66
8607	3450	1568	73	3.08
8608	3875	1761	38	1.60
8609	4275	1943	43	1.81
8610	4700	2132	50	2.11

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

General Arrangement







Model	A	B	F†	L†
8601	8.25 (210)	11.75 (298)	49 (1245)	73 (1854)
8602	12.56 (319)	16.06 (408)	49 (1245)	73 (1854)
8603	16.88 (429)	20.38 (518)	62 (1575)	86 (2184)
8604	21.19 (538)	24.69 (627)	62 (1575)	86 (2184)
8605	25.50 (648)	29.00 (737)	62 (1575)	86 (2184)
8606	29.81 (757)	33.31 (846)	76 (1930)	100 (2540)
8607	34.12 (867)	37.62 (956)	93 (2362)	117 (2972)
8608	38.44 (976)	41.94 (1065)	93 (2362)	117 (2972)
8609	42.75 (1086)	46.25 (1175)	93 (2362)	117 (2972)
8610	47.06 (1195)	50.56 (1284)	93 (2362)	117 (2972)

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

www.atlascopco.us
www.efficiencyblowers.com

E-TS-ZM086-001, REV 00 11/28/2012