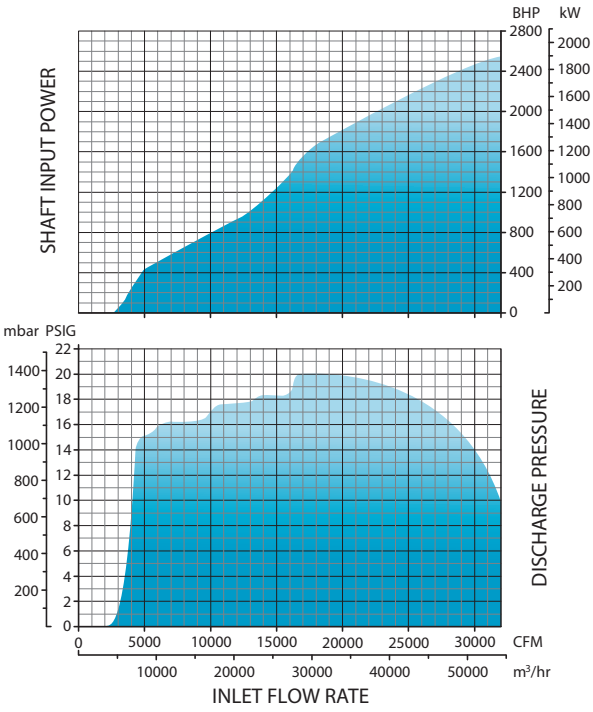
ZM 186

Atlas Copco

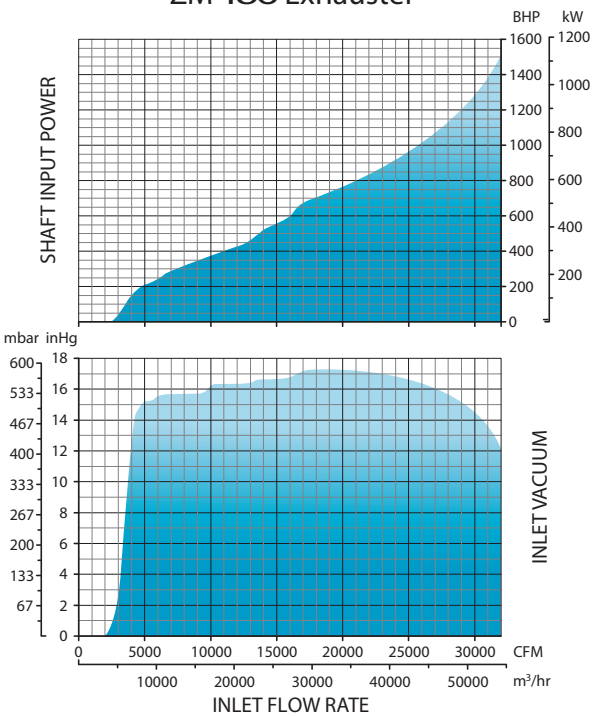
MULTISTAGE CENTRIFUGAL BLOWERS

General Performance

ZM 186 Blower



ZM 186 Exhauster



Specifications Standard

TECHNICAL DATA

Number of Stages	1 to 6
Inlet Connection	24" flange, ASA 125# / ANSI 150# drilling Optional DIN 600 adapter flange
Outlet Connection	18" flange, ASA 125# / ANSI 150# drilling Optional DIN 450 adapter flange
Operating Speed	Variable or fixed speed 3550 RPM (60 Hz), 2960 RPM (50Hz)
Casing Pressure	25 PSIG (1.7 bar)
Seals (air)	Labyrinth type
Seals (gas)	OPTi Seal/ Carbon ring type/ Custom available
Bearings	Ball, 10-year minimum life per AFBMA L_{10} standard
Lubrication	Oil
Impeller Diameter	34.00 in (863.6 mm)
Impeller Tip Speed	527 ft/s (161 m/s) @ 3550 RPM
First Critical Speed	4530 RPM (6-stage)
Drive Type	Direct coupled, Inlet driven (standard) or Outlet driven
Shaft End	3.625 in (92.08 mm) diameter at coupling
Vibration Tolerance	.25 in/s (6.4 mm/s) ISO overall specification, 1.25 mil/s (0.03 mm) peak to peak
Rotor Balance	Military standard 167-1. Individual impellers and rotating assembly dynamically balanced

MATERIALS OF CONSTRUCTION

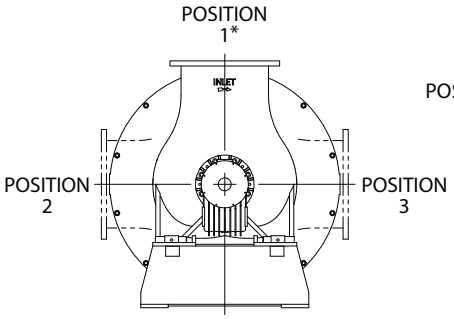
Casing	Cast iron ASTM A48 grade 25/30
Bearing Caps & Housings	Cast iron ASTM A48 grade 25/30
Oil Reservoir	Cast iron ASTM A48 grade 25/30
Shaft	Carbon steel AISI 4140 (stainless steel available)
Impellers	Fabricated aluminum ANSI AA6061 with cast Al AA356 hub (stainless steel/custom alloys available)
Seals (air)	Cast Iron ASTM A48 grade 30 with lead babbitt insert Zinc-Alloy, ZA-12
Seals (gas)	Stainless Steel with Viton Elastomer, 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
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

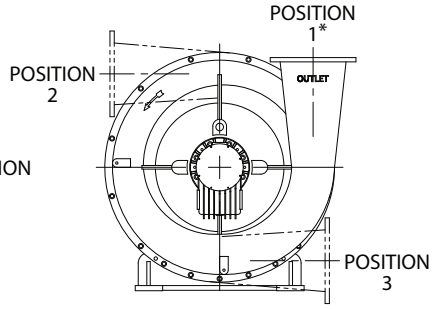
ZM186 MULTISTAGE CENTRIFUGAL BLOWER

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

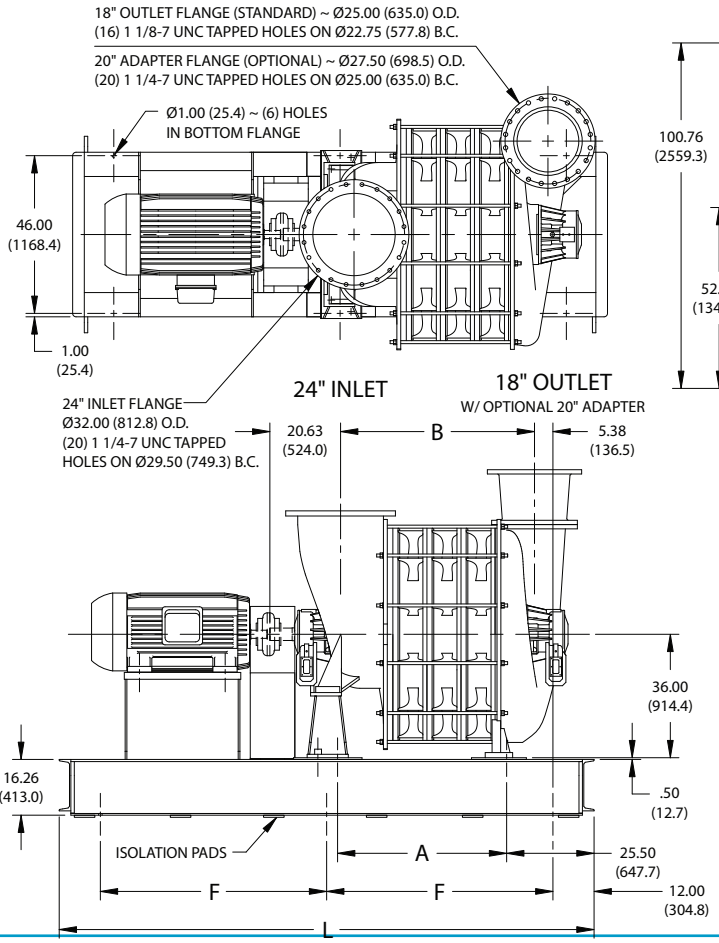
*Standard configuration.

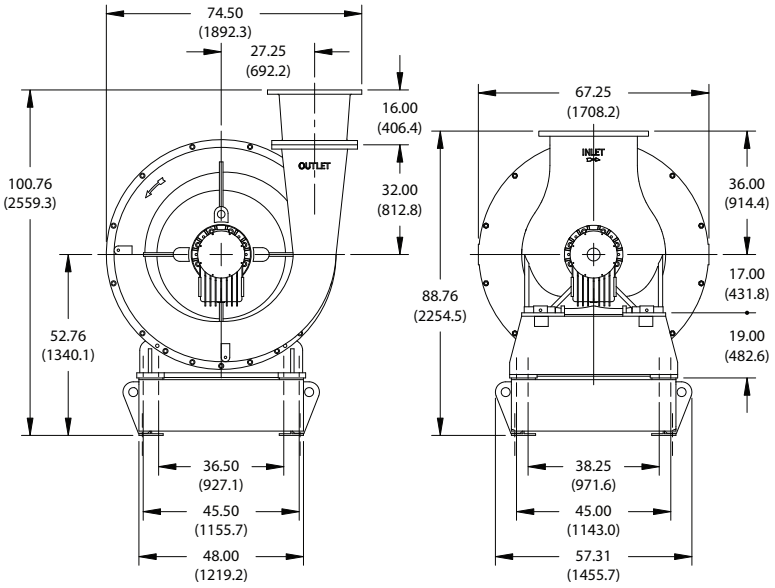
Weight and Inertia

Model	Weight* lb	Weight* kg	Wk^2 lb-ft^2	Wk^2 kg-m^2
18601	10,600	4,808	74	3.12
18602	12,700	5,761	126	5.31
18603	14,900	6,759	179	7.54
18604	17,300	7,847	232	9.78
18605	18,900	8,573	284	11.97
18606	21,100	9,571	337	14.20

*Approximate weight for blower only.

General Arrangement





Model	Dimensions* A	B	F†	L†
18601	19.50 (495)	26.75 (679)	57 (1448)	138 (3505)
18602	29.56 (751)	36.81 (935)	63 (1600)	150 (3810)
18603	39.63 (1006)	46.88 (1191)	69 (1753)	162 (4115)
18604	49.69 (1262)	56.94 (1446)	75 (1905)	174 (4420)
18605	59.75 (1518)	67.00 (1702)	81 (2057)	186 (4724)
18606	69.81 (1773)	77.06 (1957)	89 (2261)	202 (5131)

*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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