

ZM 187



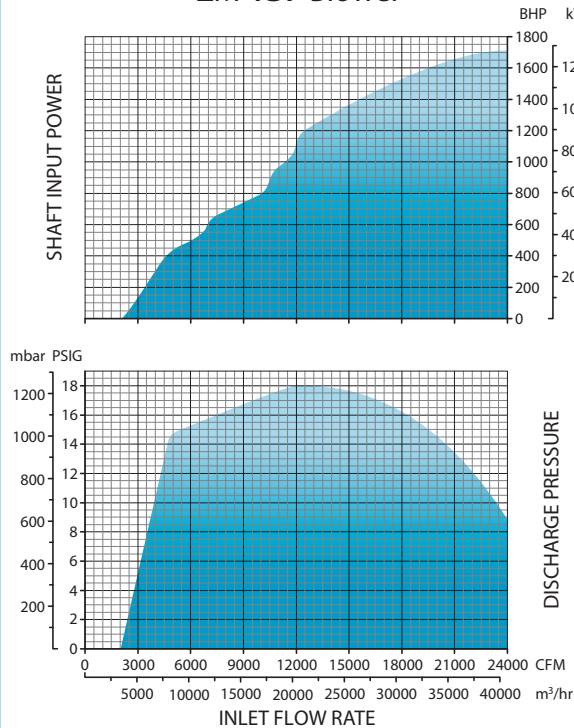
Atlas Copco

MULTISTAGE
CENTRIFUGAL
BLOWERS

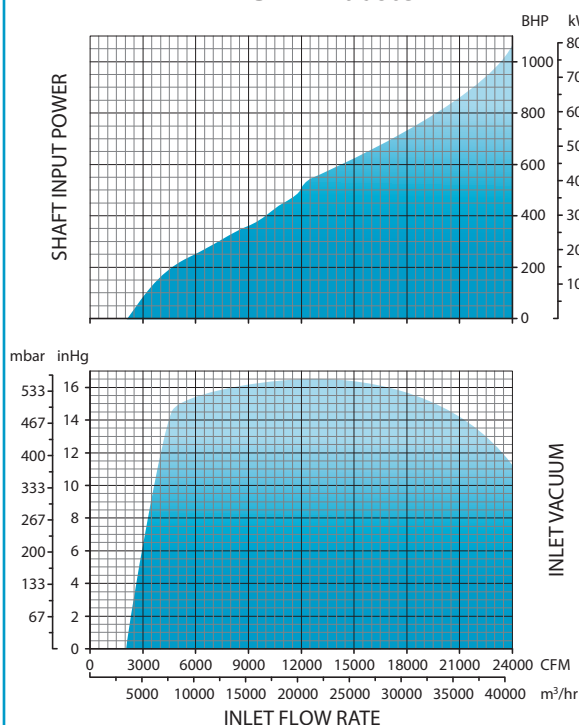
General Performance

Specifications Standard

ZM 187 Blower



ZM 187 Exhauster



Technical Data

Number of Stages	1 to 7
Inlet Connection	20" flange, ASA 125# / ANSI 150# drilling Optional DIN 500 adapter flange
Outlet Connection	18" flange, ASA 125# / ANSI 150# drilling Optional DIN 450 adapter flange
Operating Speed	Fixed speed 3550 RPM (60Hz), 2960 RPM (50Hz) Variable speed option available
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	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

Materials of Construction

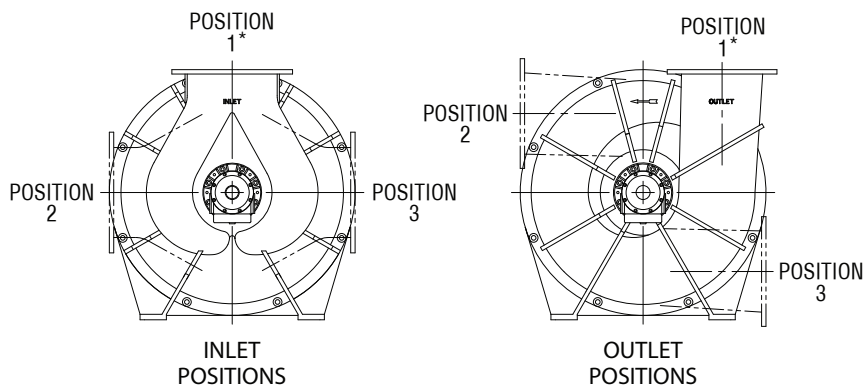
Casing	Cast iron ASTM A48 grade 25/30
Bearing Caps & Housings...	Cast iron ASTM A48 grade 25/30
Oil Reservoir	Cast iron ASTM A48 grade 25/30
Shaft	Carbon steel AISI 4140 (stainless steel available)
Impellers	Cast aluminum ANSI AA319/356 or fabricated aluminum ANSI AA6061 with cast Al AA356 hub (stainless steel/custom alloys available)
Seals (air)	Cast Aluminum ANSI AA356/319
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

ZM 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.

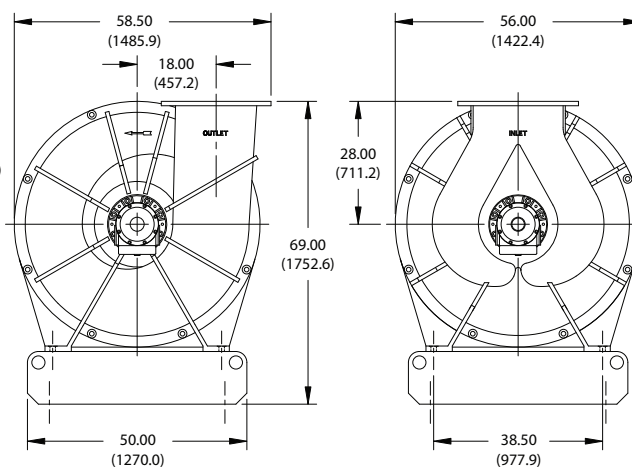
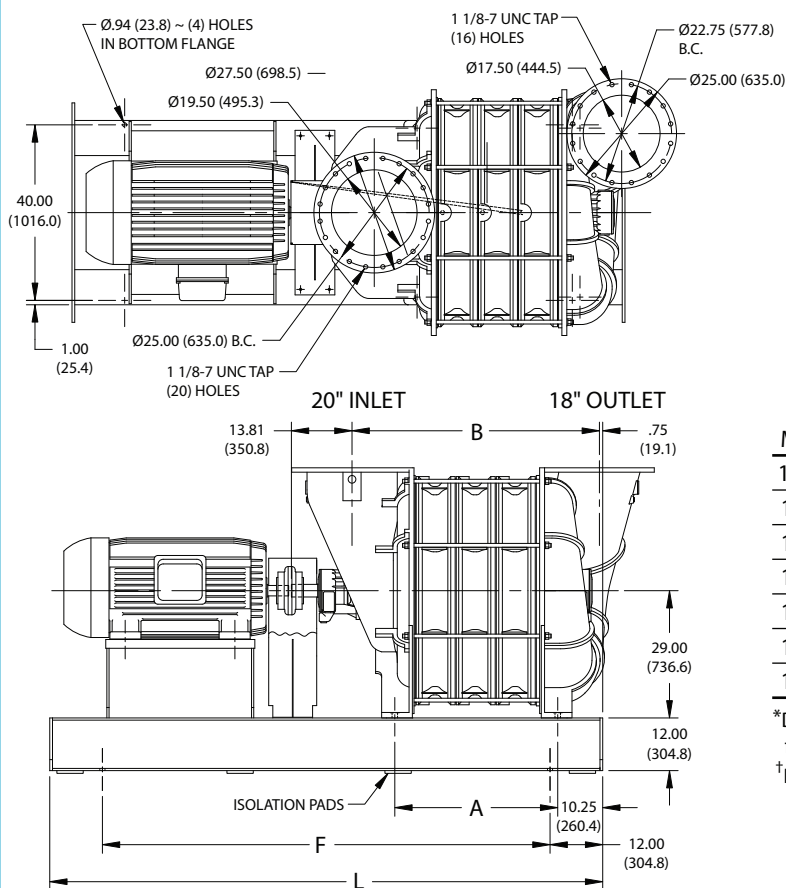
Weight and Inertia

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



Model	Dimensions*			
	A	B	F [†]	L [†]
18701	9.75 (248)	29.00 (737)	78 (1981)	102 (2591)
18702	18.88 (479)	38.13 (968)	90 (2286)	114 (2896)
18703	28.00 (711)	47.25 (1200)	102 (2591)	126 (3200)
18704	37.13 (943)	56.38 (1432)	102 (2591)	126 (3200)
18705	46.25 (1175)	65.50 (1664)	114 (2896)	138 (3505)
18706	55.38 (1407)	74.63 (1895)	114 (2896)	138 (3505)
18707	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.

Atlas Copco