



## TECHNICAL DATA 1850 SERIES

### DESIGN

Air or gas  
Number of stages ..... 1-7 (60 & 50 Hz)  
Inlet or outlet driven ..... Inlet standard  
Inlet connection ..... 20" flange, matches 125# ANSI  
Outlet connection ..... 18" flange, matches 125# ANSI  
Operating speed ..... 3,570 RPM (60 Hz)  
2,975 RPM (50 Hz)  
Maximum casing pressure ..... 25 PSIG (1.72 bar)  
Seals (air) ..... Labyrinth, carbon ring available  
Seals (gas) ..... Carbon ring type  
Bearings ..... Ball, life per AFBMA spe. #B-10  
Lubrication ..... Oil  
Impeller diameter ..... 30.5 (774.7)  
Impeller tip speed ..... 28,506 FPM (8,689m/m)  
Direct drive ..... Shaft diameter at coupling  
1 and 2 stage ..... 1.875 (47.63)  
3, 4 and 5 stage ..... 2.875 (73.03)  
6 and 7 stage ..... 3.375 (85.73)  
Vibration tolerance ..... 1.25 mils measured in vertical  
plane at top of bearing housing (.032mm)

### CAPACITIES

Blower ..... 3,000-15,000 SCFM, 19 PSIG max  
5,100-25,500 Sm³/H, 1.31 bar  
Exhauster ..... 3,000-15,000 ICFM, 17" Hg max  
5,100-25,500 Im³/H, 432mm Hg

### MATERIALS OF CONSTRUCTION

Casing ..... Cast iron ASTM A48 grade 25/30\*  
Bearing housings ..... Cast iron with bronze insert  
Bearing caps & oil reservoirs ..... Cast iron  
Tie rods ..... Steel  
Carbon ring seals ..... Carbon-graphite rings  
with steel housing (stainless steel is optional)  
Labyrinth seals ..... Cast iron, with babbitt insert  
Joint sealing compound ..... RTV-Silicone rubber  
Baffle rings ..... Electroless nickel plated steel  
standard. Special material available.  
Shaft ..... Hot rolled carbon steel  
Impellers ..... Cast aluminum alloy  
Base & pedestal ..... Steel

**Unit Weights & Inertia Data**

Stage	Weight		WK²
	Bare Machine	Base & Motor Pedestal	
1	4,500 (2,041)	Consult Factory	39 (1.6)
2	5,795 (2,629)		74 (3.1)
3	7,135 (3,236)		119 (5.0)
4	8,425 (3,822)		154 (6.5)
5	9,715 (4,407)		189 (8.0)
6	11,010 (4,994)		224 (9.4)
7	12,300 (5,579)		259 (10.9)

### MISCELLANEOUS

Finish ..... See page 25.10.16  
Base Pads ..... Molded synthetic rubber 0.5 (13) thick;  
see page 25.23.09

#### Notes:

1. Dimensions given in inches and (mm). Weights given in lbs and (kg). WK² given in lb-ft² and (kg-m²)
2. Specifications subject to change without notice.
3. \*Under Meehanite License.