



# Multistage Centrifugal Blower 870 Series

Hoffman and Lamson presents state-of-the-art technology in Multistage Centrifugal Blowers. This model offers a wide range of design features and incorporates energy efficiency improvements, complying with the strictest operational requirements of a variety of applications. Multistage blowers are ideally suited for operations where a variable flow at constant pressure is required. Hoffman and Lamson are worldwide leaders in Multistage Centrifugal Blower technology with thousands of units installed around the globe.

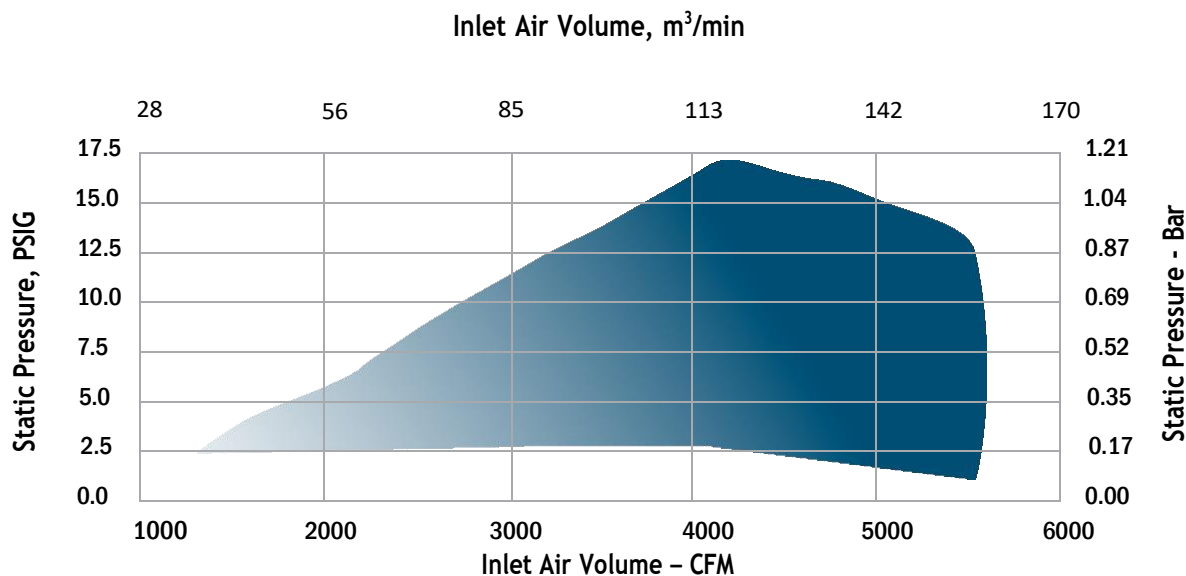
### Technical Data

- Number of Stages: 2-9 (60 Hz) 2-10 (50 Hz)
- Inlet Connection: 10" Flange, ANSI 125# Drilling
- Outlet Connection: 8" Flange, ANSI 125# Drilling
- Operating Speed: 3550 RPM (60 Hz), 2925 RPM (50 Hz)
- Casing Pressure: 25 PSIG (1.73 bar)
- Air Seals: Labyrinth Type - Carbon Ring Optional
- Bearings: Anti-friction, designed for extended L10 life
- Lubrication: AEON® CF Grease - Oil Optional
- Impeller: 25.0 inches (635 millimeters) Diameter (statically balanced)
- Impeller Tip Speed: 387 feet/second (117 meters/second)
- Drive Type: Direct Coupled (Inlet drive is standard)
- Drive Shaft: 2.25 inches (57.15 millimeters) Diameter
- Vibration: .235 in/sec. (5.97 mm/sec.) Peak Velocity
- Rotor: Balanced Per ISO 1940, ANSI S2.19

### Material Standard

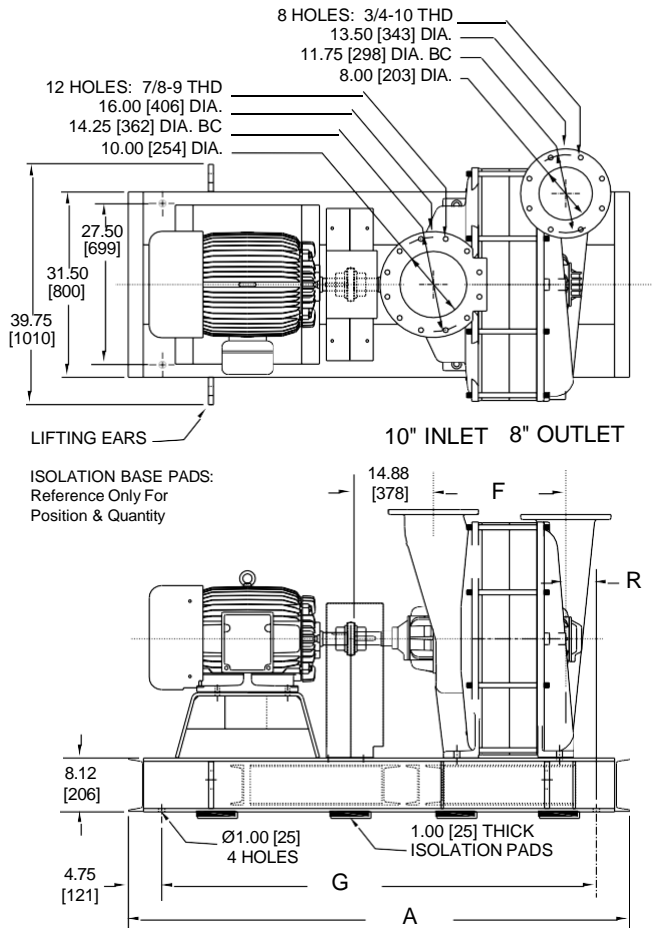
- Casing: ASTM A48 Class 30B Gray Cast Iron - HT200 equivalent
- Bearing Housings: ASTM A48 Class 30 Cast Iron
- Bearing Cap: ASTM A48 Class 30 Cast Iron
- Tie Rods: ASTM F1554 GR.36 Zinc Plated Thrd. Rod
- Labyrinth Seal: ASTM B86 Z35631 Alloy Zinc Aluminum 12
- Carbon Ring Seal Optional: ASTM C695 Fine Grain Molded Graphite
- Joint Sealing: RTV Silicone Compound
- Baffle Rings: ASTM A240 Grade 304 Stainless Steel
- Balance Piston: ASTM A36 HR Structural Steel (5-10 Stage)
- Shaft: ASTM A322 Grade 4140CT Hot Rolled Steel - Stainless Steel Optional
- Impeller: ASTM B26-78 A355-T6 Cast Aluminum
- Base & Motor Pedestal: ASTM A36 Hot Rolled Structural Steel
- Isolation Base Pads: Suitable Resilient Material
- Finish: Universal Primer - Acrylic Topcoat

### Performance Air Map

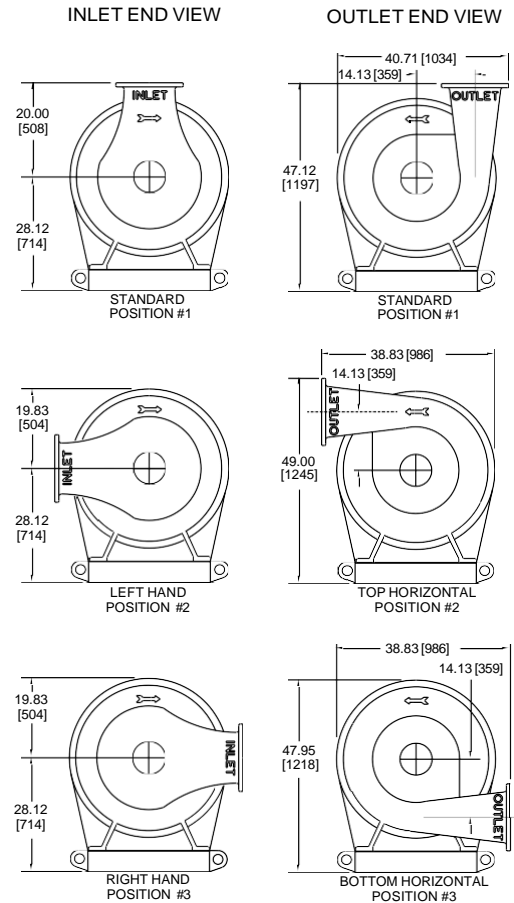


STANDARD CONDITIONS: 14.7 PSIA [1 Bar], 68°F [20°C], 36% RH, Speed: 3550 RPM

## General Arrangement



## Flange Orientation



## Dimensional Data - inches [millimeters]

FRAME	A	F	G	R
872	75.00 [1905]	18.38 [467]	65.50 [1664]	1.00 [25]
873	75.00 [1905]	23.25 [591]	65.50 [1664]	1.00 [25]
874	84.00 [2134]	28.13 [714]	74.50 [1892]	1.00 [25]
875	99.00 [2515]	33.00 [838]	89.50 [2273]	1.00 [25]
876	99.00 [2515]	37.88 [962]	89.50 [2273]	1.00 [25]
877	104.00 [2642]	42.75 [1086]	94.50 [2400]	1.00 [25]
878	115.00 [2921]	47.63 [1210]	105.50 [2680]	1.00 [25]
879	115.00 [2921]	52.50 [1334]	105.50 [2680]	1.00 [25]
8710	120.00 [3048]	57.38 [1457]	110.50 [2807]	1.00 [25]

## Weight – lb [kg] & Inertia – lb-ft<sup>2</sup> [kg-m<sup>2</sup>]

FRAME	PKG. LESS MOTOR	BARE UNIT	WK2
872	2400 [1089]	1800 [816]	25 [1.05]
873	3020 [1370]	2220 [1007]	38 [1.58]
874	3540 [1606]	2640 [1197]	50 [2.09]
875	4060 [1842]	3060 [1388]	62 [2.61]
876	4580 [2077]	3480 [1578]	74 [3.12]
877	5000 [2268]	3900 [1769]	87 [3.65]
878	5520 [2504]	4320 [1960]	99 [4.17]
879	5940 [2694]	4740 [2150]	112 [4.70]
8710	6460 [2930]	5160 [2341]	124 [5.22]

## Product Notes

- Information is approximate, subject to change without notice, and not for construction use unless certified
- Position #1 is standard inlet & outlet orientation
- A and G dimensions may vary depending on motor frame size
- Performances noted are typical and not job specific
- Consult authorized sales representative for job specific blower or exhauster performance sizing
- Factory ASME PTC-10 test offered for performance verification
- For components that exceed 4,000 lb., machined pads are used. Height of the components on the base frame increase by 0.88 inches due to the use of machined pads



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