

BULLETIN 800-B

March 1998

Twin City Fan & Blower

*COMPACT DESIGN
INDUSTRIAL FANS*

TYPE JRW



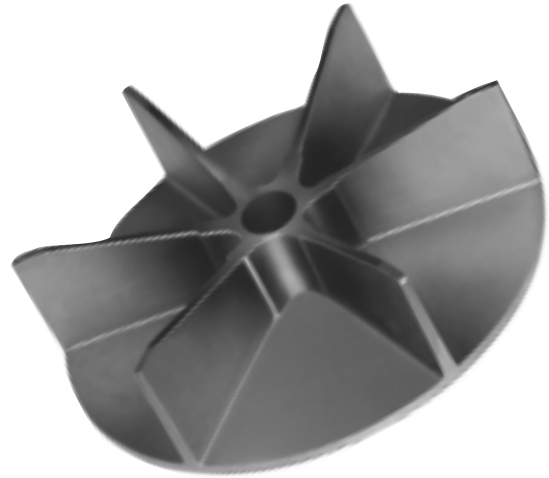
Choice of Wheel Material

Cast Aluminum

- Standard feature on all JRW fans.
- Suitable to 250°F maximum.
- Lightweight wheel suitable for gases and light particulate, such as fumehood exhaust in research lab applications.

Cast Nickel/Aluminum/Bronze Alloy

- Optional feature available at extra charge.
- Suitable to 600°F maximum.
- Heavyweight wheel suitable for material handling applications like paper-trim, wood-chip and plastic conveying.
- This wheel features ASTM alloy mixture B30-74.



Construction Features

The rugged, reliable wheel fan for industrial applications.

The type JRW fan was developed for reliability, efficiency, durability, ease of maintenance and compactness for today's most demanding industrial applications. Designed for severe duty, the type JRW features rust-proof cast nickel/aluminum/bronze or cast aluminum wheel construction, all with heavy-gauge steel housing. The result is maximum strength and rigidity to resist the wear and tear of heavy industrial use.

The radial blade design of the JRW prevents material build-up for smooth, trouble-free operation. Clogging

of airflow passages is minimized by the back plate type wheel design. Seven models are available, in wheel sizes from 8³/₄" to 15⁵/₈", to exactly meet your performance requirements. Both direct- and belt-driven fan types are available.

Cast nickel/aluminum/bronze and cast aluminum JRW fans offer a dependable solution for spark resistant applications.

All units are built with an adjustable steel discharge housing which can be field rotated to any of the eight standard positions. Special coatings are available for corrosion-resistance to a variety of chemicals in fumehood applications.

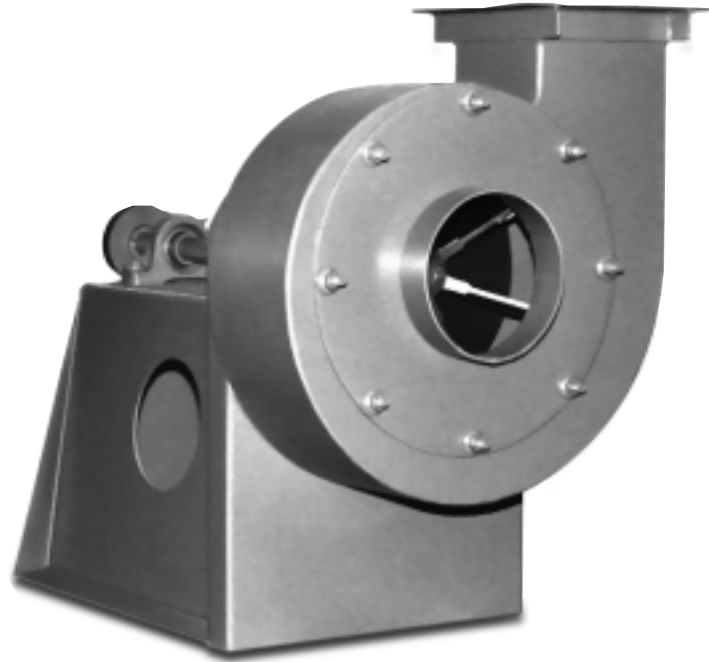
Performance Ratings

JRW fans have been tested in accordance with industry standards and are guaranteed to meet published ratings. The performance tables are based on tests with an

inlet and outlet duct. Where the inlet is not ducted, the optional inlet bell should be used. The JRW offers performance capacity up to 1500 CFM and 14" SP.

Typical Applications

- Fume Exhaust
- Drying
- Air Pollution Control
- Combustion Air
- Pneumatic Conveying
- Grinding and Buffing Exhaust
- Aeration
- Wood-chip, Textile Fiber Stripping and Paper Handling



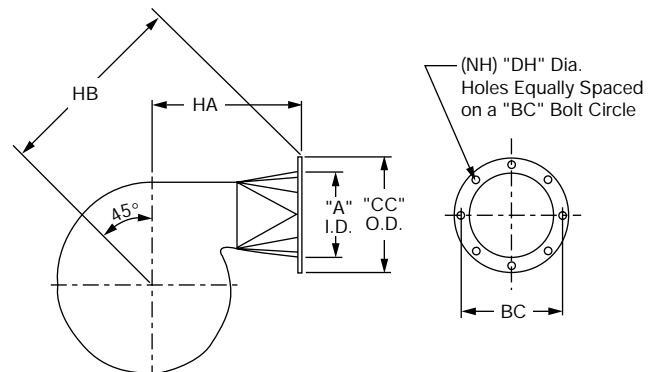
Optional Equipment and Accessories

- Access Door
- Shaft Cooler
- Shaft Seals
- Drains
- Inlet Screens
- Common Bases
- With and Without Isolation
- Square-to-Round Discharge
- Outlet Screens
- OSHA Belt Guards
- Weather Covers
- Special Coatings
- Insulation Pins

SQUARE-TO-ROUND DISCHARGE DIMENSIONS

SIZE	A	BC	CC	DH	HA	HB	NH
805F	6	9.5	11	.44	16	18.81	8
806N	6	9.5	11	.44	16	19.56	8
806F	8	11.75	13.5	.44	16	20.44	8
807N	8	11.75	13.5	.44	18	22.56	8
807F	8	11.75	13.5	.44	18	22.56	8
808N	8	11.75	13.5	.44	19.5	24.38	8
809N	8	11.75	13.5	.44	19.5	25.06	8

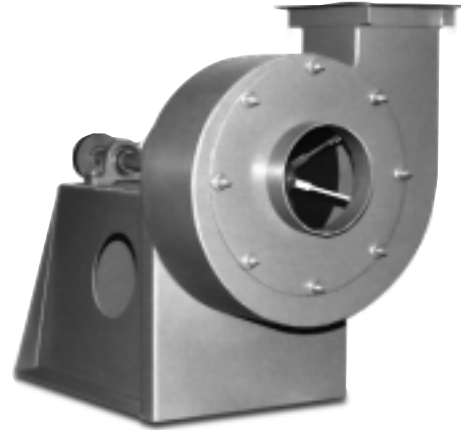
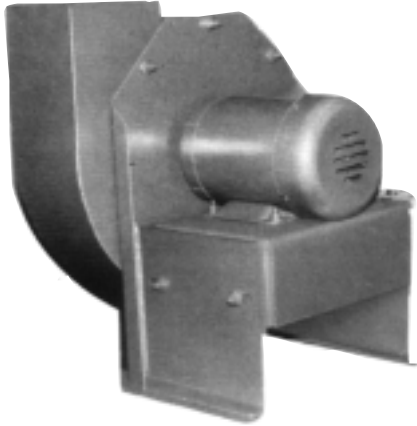
NOTE: Table illustrates changes in dimensions when units are ordered with optional round outlet.



Unit Arrangements

Arrangement #1

This arrangement has an overhung impeller with two bearings mounted on an integral pedestal base. This arrangement is suitable for belt drive with the motor separately mounted.

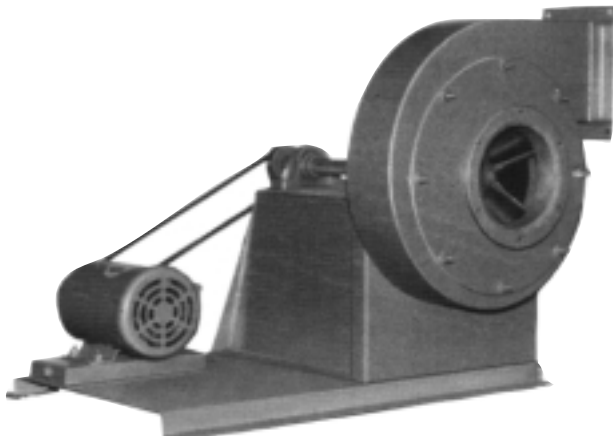
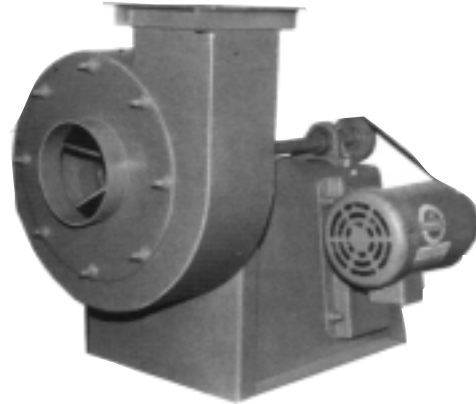


Arrangement #4

This direct drive configuration is the most compact arrangement. The impeller is mounted on the motor shaft and the motor bearing supports the wheel. With this arrangement, an integral motor base is provided and this arrangement requires less maintenance due to the absence of belts and pulleys. The motor base is adjustable to accommodate different motor frame sizes.

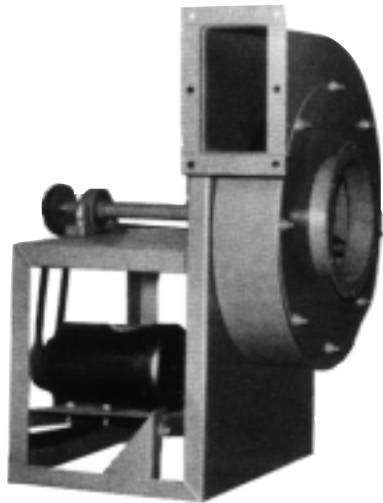
Arrangement #9

This arrangement allows motor mounting directly on the bearing pedestal. Fan motor slide bases are provided for field mounting of motor and drive. The unit can be shipped fully assembled and ready to run.



Arrangement #9F

This floor mount arrangement is recommended where a packaged unit is desired but motors are too large to be mounted on the side of the bearing pedestal. In this arrangement a subbase is provided to allow motor mounting in the horizontal position similar to an Arrangement #1. The base is suitable for direct mounting of vibration isolators or as a rigid mount.

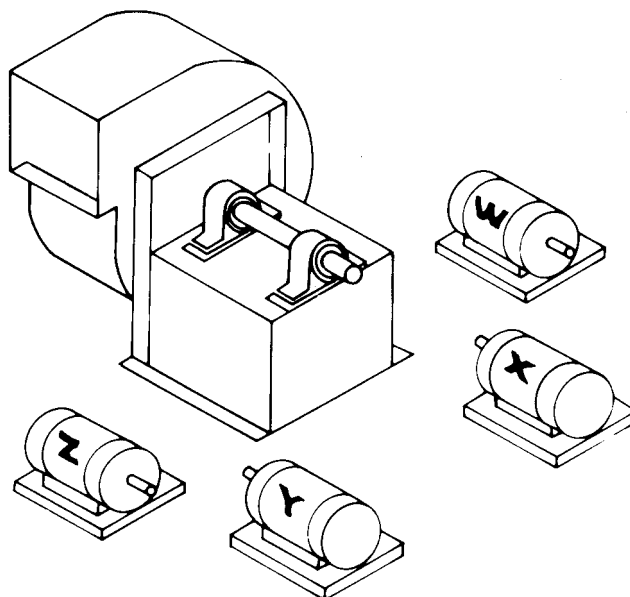


Arrangement #10

Arrangement #10 is offered in sizes 805F through 809N and is suitable for roof or outdoor installations. Weather covers (optional) provide complete protection for motor, shaft, bearings, and drives. Maximum motor sizes allowable in this arrangement are listed on the drawings in the back of this bulletin. Larger fan sizes in this arrangement or larger motor sizes for smaller fans may be available upon request from the factory. All usual accessories are available.

Motor Positions For Belt Drive Centrifugal Fans (Arr. #1 & #9F)

Location of motor is determined by facing the drive side of fan and designating the motor position by letters W, X, Y, or Z, as the case may be. Arrangement #9F is offered in positions W and Z.



Belt Centers — Arrangement #9F, #9 and #10

SIZE	48 FR	56 FR	143T-145T FR	182T-184T FR	213T FR
ARRANGEMENT #9F BELT CENTERS (IN INCHES, MIN.-MAX.)					
805F	14.6-17.3	14.1-16.7	14.2-16.8	—	—
806F & 806N	18.1-20.7	17.5-20.1	17.6-20.2	16.3-19.0	—
807F & 807N	19.2-21.8	16.6-21.3	18.7-21.3	17.4-20.1	—
808N	20.6-23.3	20.1-22.8	20.2-22.8	18.9-21.6	—
809N	23.8-26.5	23.4-26.0	23.4-26.1	22.1-24.8	21.0-23.8
ARRANGEMENT #9 BELT CENTERS (IN INCHES, MIN.-MAX.)					
805F	9.1-10.9	9.3-11.1	9.3-11.1	—	—
806F & 806N	10.0-12.1	10.3-12.4	10.3-12.4	11.3-13.1	—
807F & 807N	10.4-12.5	10.7-12.9	10.7-12.9	11.5-13.4	—
808N	10.7-13.0	11.0-13.2	11.0-13.2	11.9-14.0	—
809N	11.2-13.6	11.6-13.3	11.6-13.3	12.6-14.7	—
ARRANGEMENT #10 BELT CENTERS (IN INCHES, MIN.-MAX.)					
805F	7.5- 9.0	7.0- 8.2	7.0- 8.2	—	—
806F & 806N	7.5- 9.0	7.0- 8.2	7.0- 8.2	—	—
807F & 807N	7.5- 9.0	7.0- 8.2	7.0- 8.2	—	—
808N	10.0-11.7	9.5-11.2	9.5-11.2	8.8-10.5	—
809N	10.0-11.7	9.5-11.2	9.5-11.2	8.8-10.5	—

Typical Specifications

Furnish and install as shown on the plans and specifications, Twin City Fan & Blower Type JRW Industrial Fans.

Fan Housings

All housings shall be continuously welded and of heavy-gauge steel suitably braced to prevent pulsation. All units shall be built with adjustable discharge housing which can be field-rotated to any of the eight standard positions.

Fan Wheels

The wheels shall be cast nickel/aluminum/bronze or cast aluminum. JRW radial-bladed backplate type construction suitable for long, stringy, or fibrous materials.

Bearings

Bearings on belt drive units shall be sized and selected to have a minimum average life of 200,000 hours based on AFMBA rating designations. The bearings shall be pillow block type, heavy-duty anti-friction, self-aligning ball bearings.

Shafts

Shafting shall be per AISI C-1018, 1040, or 1045 hot rolled steel, accurately turned, ground, polished, and ring-gauged for accuracy. Shafts shall be sized so that their first critical speed will be at least 1.35 times the maximum operating speed.

Accessories

Accessories such as outlet dampers, companion inlet and outlet flanges, inlet bells, shaft guards, etc., shall be provided by the fan manufacturer maintaining one-source responsibility.

Factory Test Run Units

Prior to shipment, all fans shall be completely assembled, test run, and trim balanced as a unit at operating speed or at the maximum allowable RPM. Balance shall be taken by electronic type equipment, and records shall be maintained of the readings of axial, vertical, and horizontal direction on each of the bearings. A written copy of this record shall be available upon request by the customer.

JOB:

LOC.

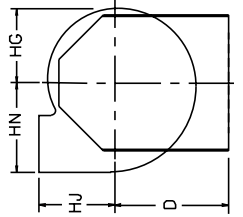
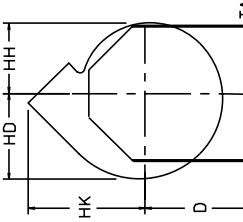
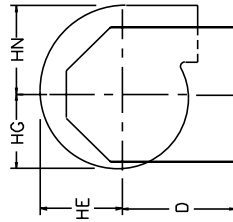
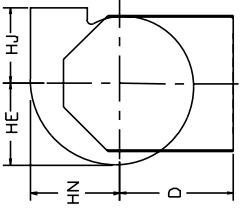
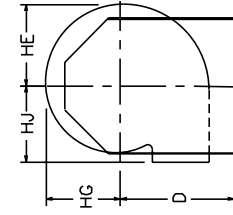
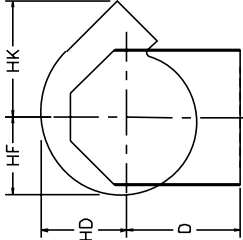
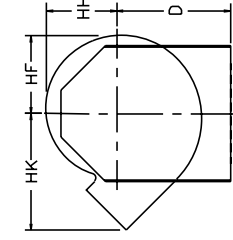
CONT.

ENG./ARCH.

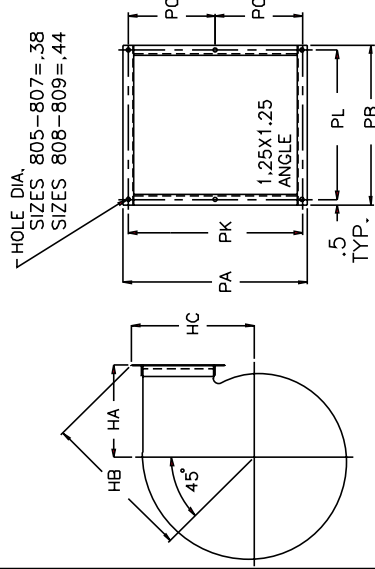
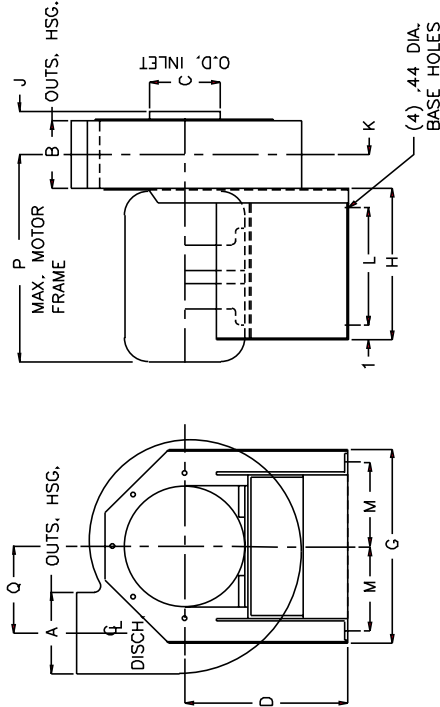
S.O. NO.

SIZE	DISCH	ROT.	MOTOR HP	UNIT NO.
CFM	SP	RPM	BHP	OV
ACCESSORIES REQ'D				
TS				

FAN DISCHARGE OPTIONS



NOTES:
01. CW ROTATION SHOWN, CCW SIMILAR BUT OPPOSITE



OPTIONAL INLET FLANGE

OPTIONAL OUTLET FLANGE

SIZE	A	B	C	D	G	H	J	K	L	M	N	P	Q	HA	HB	HC	HD	HE	HF	HG	HH	HJ	HK	HN	PA	PB	PC	PE	PF	PG	PH	PJ	PK	PL	MAX. MIR FR
805F	4.88	4.5	5.11	2.25	11.5	7.5	3.88	3.75	5	.56	14.38	5.13	9.5	13	8.81	7.25	6.94	6.63	6.31	5.38	9	11.75	7.56	7.38	7	-	4	5.06	7.06	.28	6.31	6.38	6	14.3T	
806N	5.88	4.31	6	13.5	13.5	8.5	3.81	3.69	6	.56	14.25	6.13	9.5	14	10.31	8.69	8.31	7.94	7.56	7.19	9	12.81	9.06	8.38	6.81	-	3.94	6.09	8.09	.28	7.31	7.38	5.81	14.3T	
806F	5.88	5.25	6	13.5	13.5	8.5	4.29	4.13	6	.56	18.13	6.13	9.5	14	10.31	8.69	8.31	7.94	7.56	7.19	9	12.81	9.06	8.38	7.75	-	4.38	6.09	8.09	.28	7.31	7.38	6.75	18.2T	
807N	6.81	4.31	7	13.5	16	9.75	3.81	3.69	7.25	.56	17.63	7.13	9.5	15.13	11.81	10.13	9.69	9.25	8.81	8.38	9	13.88	10.56	9.31	6.81	-	3.94	7.13	9.38	.38	8.5	8.31	5.81	18.2T	
807F	6.81	6.06	7	13.5	16	9.75	4.69	4.56	7.25	.56	18.5	7.13	9.5	15.13	11.81	10.13	9.69	9.25	8.81	8.38	9	13.88	10.56	9.31	8.56	-	4.81	7.13	9.38	.38	8.5	8.31	7.56	18.4T	
808N	7.75	4.31	8	13.75	19	11	3.81	3.69	8.5	.44	17.63	8.19	11	17.25	13.31	11.56	11.06	10.3	10.06	9.56	10.5	16	12.06	10.25	6.81	4.63	3.94	8.13	10.38	.38	9.56	9.25	5.81	18.4T	
809N	8.63	4.31	9	15.5	19	11	3.81	3.69	8.5	.44	18.5	9.19	11	18.25	14.75	12.94	12.38	11.8	11.25	10.69	10.5	17	13.50	11.13	6.81	5.06	3.94	9.13	11.63	.44	10.63	10.13	5.81	21.3T	