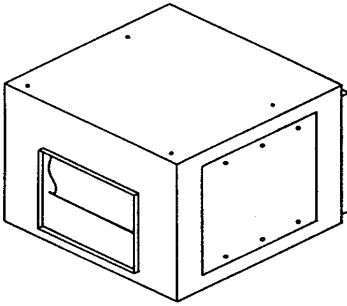


**200 SERIES - INLINE DUCT BLOWERS
OPERATION INSTRUCTIONS AND PARTS MANUAL
MODELS: 207, 209, 210, 212, 215, 218**

Read installation and operation instructions carefully before attempting to install, operate or service DELHI 200 SERIES BLOWERS. Failure to comply with instructions could result in personal injury and/or property damage. Retain instructions for future reference.

Figure 1: DELHI 200 SERIES



DESCRIPTION

DELHI 200 Series Blowers are designed as a quiet and efficient indoor inline duct blower for heating, air conditioning and ventilation systems. These forward curved, double inlet blowers are enclosed in a sturdy steel cabinet c/w reinforcing rails which are suitable for hanging bolts in applications where suspended overhead duct work is required. Motor, drive installations and servicing may be completed through access doors located on either side of the cabinet.

Prelubricated ball bearings, motor platform and a dynamically balanced wheel are standard equipment. Operating temperature range is -65 to 250 deg. F.

Maximum HP Ratings and Shaft Details

Model No.	Max. H.P.	Shaft Dia.	Shaft End
207	3/4	3/4	keyway
209	3/4	3/4	keyway
210	1-1/2	1	keyway
212	1-1/2	1	keyway
215	3	1	keyway
218	5	1	keyway

UNPACKING

Once the packaging has been removed inspect the unit carefully. Check for loose, missing, or damaged parts. Rotate the wheel by hand to ensure the wheel spins freely. Tighten all set screws.

GENERAL SAFETY INSTRUCTIONS

- 1 Always disconnect power source before working on or near a motor or its connected load. Lock the power disconnect in the open position and tag to prevent unauthorized application of power.
- 2 Follow all local and national electrical and safety codes.
- 3 Blower must be electrically grounded. This can be accomplished by using a separate ground wire connected to the bare metal of blower frame, or other suitable means.
- 4 Ensure that the power source conforms to the requirements of your equipment.
- 5 Do not put hands near or allow loose and hanging clothing to be near belts, pulleys, or blower wheel while the unit is running.

INSTALLATION

NOTE: Check the interior of the blower housing. It should be clean and free of debris.

- 1 Rotate the blower wheel by hand. It should not rub against the housing inlet. If rubbing occurs, loosen the set screws on the wheel hub and shift the wheel to obtain clearance. Retighten all set screws.

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2 **Suspension Mounting:**

Suspend the unit using 4 threaded rods through the four (4) 7/8" clearance holes located at the top of the unit or by means of an angle iron cradle (supplied by others) under the unit.

Base Mounting:

Secure the unit through the four internal (4) 7/8" clearance holes to a solid base. Ensure unit is level. Complete installation of inlet and outlet ducts.

NOTE: Flexible inlet and outlet duct collars are recommended to minimize vibration transmission.

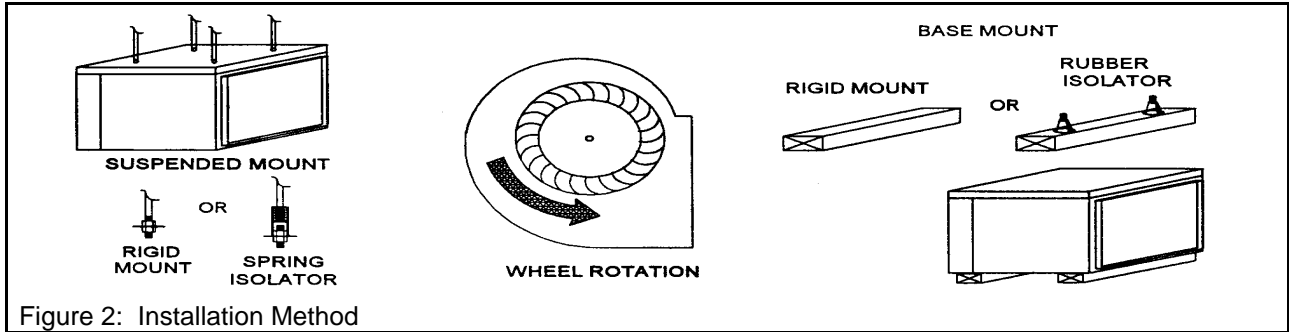


Figure 2: Installation Method

- 3 Mount the blower sheave on the blower shaft and tighten its set screw securely on the key of the shaft. (See Table 1 for Drive Data)
- 4 Mount the motor sheave on the motor shaft. Leave some clearance between the pulley and the motor end bell. Tighten the set screws on the key of the motor shaft.
- 5 Slide the square head bolts into the channel provided in the motor bracket. Place the motor into position, finger tighten the nuts to temporarily secure the motor. Attach the motor adjustment (belt tension) assembly.
- 6 With the motor adjusting bolt in its minimum position install the V belt within the sheave grooves. Slide the motor within the motor bracket to ensure proper pulley alignment (see Figure 3). A straight edge across the face of the driven pulley should be parallel to the belt once proper alignment has been achieved. Tighten the nuts on the motor base to anchor the motor position within the bracket.

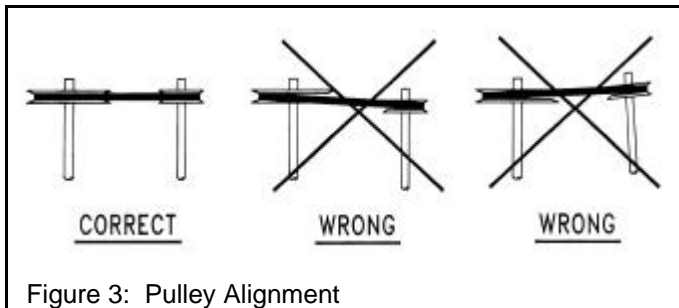


Figure 3: Pulley Alignment

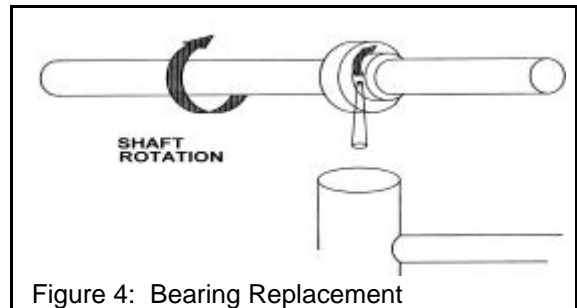


Figure 4: Bearing Replacement

NOTE: Pulley alignment may change when adjusting variable pitch pulleys.

- 7 Adjust belt tension by turning the motor adjustment hook bolt. Ideal belt tension is the lowest tension at which the belt will not slip during start up. A rule of thumb suggests that 3/4" of deflection mid span under medium finger pressure (2-3 lbs.) for every foot of span is approximately proper belt tension. Lock the motor adjustment (belt tension) assembly once proper belt tension has been achieved.

WARNING: EXCESSIVE BELT TENSION IS THE MOST FREQUENT CAUSE OF BEARING WEAR AND RESULTING NOISE

- 8 Before connecting the motor to the electrical supply, check the electrical characteristics and wiring instructions as indicated on the motor nameplate or inside the conduit box cover to ensure proper voltage and phase. Make your electrical connections.

WARNING: A GROUND WIRE MUST BE CONNECTED FROM THE MOTOR HOUSING TO A SUITABLE ELECTRICAL GROUND

Table 1: Drive Table

NOTE TO CONVERT:
 A) 48 FRAME TO 56/143T/145T FRAME ADD 1" TO BELT LENGTH
 B) 56/143T/145T FRAME TO 182T/184T FRAME ADD 2" TO BELT LENGTH
 C) 4L TO B BELTS SUBTRACT 3" FROM THE BELT LENGTH
 (eg.: 4L48 EQUIVALENT TO A B45 - RPM WILL VARY SLIGHTLY)

Motor Pulley	Blower Pulley	RPM Range	207	209	210	212	215	218	
			48 FRAME	48 FRAME	56T/143T/145T FRAME	56T/143T/145T FRAME	56T/143T/145T FRAME	182T/184T FRAME	
3-1/4"	12	282 - 431	---	---	---	4L55	4L59	---	
	10	340 - 519	---	4L45	4L48	4L51	4L55	---	
	9	379 - 578	4L40	4L44	4L46	4L49	4L54	---	
	3/4 HP MAX.	8	427 - 652	4L38	4L42	4L44	4L48	4L52	---
		7	490 - 749	4L36	4L40	4L42	4L46	---	---
6	575 - 878	4L34	4L38	4L41	4L44	---	---		
5	696 - 1062	4L33	4L36	4L39	4L43	---	---		
IVL34	BK160H	252 - 309	---	---	---	---	4L65	4L47	
	BK140H	310 - 356	---	---	---	---	4L61	4L67	
	BK130H	357 - 386	---	---	---	---	4L60	4L65	
	BK120H	387 - 421	---	---	4L50	4L53	4L58	B61	
	BK110H	422 - 464	---	4L45	4L48	4L52	4L56	B59	
	BK100H	465 - 515	---	4L43	4L46	4L50	4L54	B57	
	BK90H	516 - 579	4L38	4L41	4L44	4L48	4L52	B55	
	BK80H	580 - 663	4L36	4L39	4L42	4L46	4L51	B54	
	BK70H	664 - 773	4L34	4L38	4L41	4L44	4L49	B52	
	BK60H	774 - 963	4L32	4L36	4L39	4L43	B45	B50	
	BK50H	964 - 1203	4L31	4L35	4L38	4L41	B43	---	
BK40H	1204 - 1504	4L29	4L34	B34	B38	---	---		
IVP44	BK130H	491 - 543	---	---	---	---	B59	B64	
	BK120H	544 - 592	---	---	4L52	4L56	B57	B63	
	BK110H	593 - 648	---	4L47	4L50	4L54	B56	B61	
	BK100H	649 - 716	---	4L45	4L48	4L53	B54	B59	
	BK90H	717 - 802	4L39	4L43	4L46	4L51	B52	B57	
	BK80H	803 - 911	4L37	4L41	4L44	4L49	B49	B55	
	BK70H	912 - 1053	4L35	4L39	4L42	4L47	B47	B53	
	BK60H	1054 - 1281	4L34	4L38	B39	B43	B47	---	

OPERATION

- 1 After electrical connections are completed, energize the unit momentarily and ensure that the rotation of the wheel is correct (see Figure 2). Apply full power.
- 2 With the air system in full operation, all ducts attached and top cover in place, measure current input to the motor and ensure that it is less than the rated full load motor amperage.
- 3 Proper adjustment to the belt tension is critical for quiet efficient operation.

MAINTENANCE

WARNING: DISCONNECT POWER SUPPLY BEFORE SERVICING THE BLOWER

- 1 Inspect and tighten all bearing collar and wheel set screws after the first 50 to 100 hours of operation and periodically thereafter.
- 2 Follow motor manufacturer's instructions for motor lubrication. Remove any excess lubrication.
- 3 Check the drives.
 - a. Tighten set screws on sheaves, wheel and bearing locking collars.
 - b. Check belt tension and alignment.
 - c. Replace cracked or worn belts.
- 4 Check wiring to be sure it is secure and well insulated.
- 5 Blower bearings are permanently lubricated and require no further lubrication.
- 6 Inspect V-belts for wear and proper tension. If it is necessary to replace one belt on a multiple belt drive, replace all the belts with a matched set. Do not use belt dressing.
- 7 Clean the blower wheel periodically. Material build up on the blades can cause wheel imbalance which may result in wheel or bearing failure.
- 8 To reinstall replacement ball bearings press the locking collar against the inner ring of the bearing and turn in the direction of the shaft rotation until engaged. Insert a drift pin into the pin hole and tap lightly to set. Tighten set screw on locking collar firmly (see Figure 4).
- 9 Should further service to the blower be necessary, refer to the exploded view illustration. (See Figure 5).

DELHI INDUSTRIES INC. WARRANTY

Delhi Air Moving Products are guaranteed for a period of one year against manufacturing defects in material and workmanship when operating under normal conditions. Liability is limited to the replacement of defective parts. Labour and transportation costs are not included.

Figure 5: 200 Series Replacement Parts/Exploded View

PARTS LIST	
1.	CABINET
2.	ACCESS DOOR
3.	HOUSING
4.	WHEEL
5.	BAFFLE
6.	BEARING BRACKET
7.	BALL BEARING ASSEMBLY
8.	BASE SIDE
9.	SHAFT
10.	MOTOR PLATFORM
11.	RUBBER GROMMET
12.	1/4"x20 SELF TAPPING SCREW
13.	5/16"x18 HX BOLT

