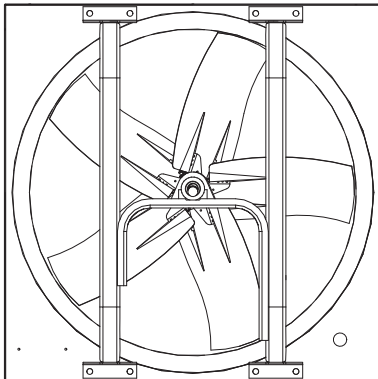


Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Medium-Duty Belt-Drive Exhaust and Supply Fans

Description

Dayton exhaust and supply fans are designed for commercial and industrial applications requiring high volume of air at low static pressures. Construction includes heavy-duty drive frame rails, bearing plate and motor plate. The propeller utilizes a five-blade reinforced galvanized steel design which provides low sound levels. Heavy-duty ball bearings are regreaseable cast pillowblock and rated for L10 – 100,000 hours. Mount in vertical position for exhaust applications and in horizontal position for supply applications. All exhaust fans are UL/cUL listed standard 705.



Optional Accessories

Description	General or UL 705 Model No.'s
-------------	-------------------------------

- NEMA 1 Dis. Switch:
 1H400 (2 pole, 115/230V, 2HP max)
 1H401 (3 pole, 230V, 7½ HP max)
 1H401 (3 pole, 460V, 10HP max)
- NEMA 4 Dis. Switch:
 1H408 (2 pole, 115/230V, 2HP max)
 1H409 (3 pole, 230V, 7½ HP max)
 1H409 (3 pole, 460V, 10HP max)



Dayton Electric Mfg. Co. certifies that the ventilators shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Optional Accessories (Continued)

Model	Prop. Dia.	Shutter Motor No.	Galvanized Wall Shutter No.	Aluminum Wall Shutter No.	Fiberglass Wall Shutter No.	Wall Housing No.	Fan Guard No.	Wall Collar No.	Weather Hood No.
EXHAUST FANS									
3FKD8	20"	2C831	1C745	4C559	5C214	3FKF7	1WBU2	3FKF3	3FKF2
1AHA1	24	2C831	1C746	3C308	5C215	3FKF8	1WBU3	1WBV1	1WBV9
1AHA2	30	2C831	1C055	3C309	5C216	3FKF9	1WBU4	1WBV2	1WBW1
1AHA3	36	2C831	4C521	3C310	5C217	3FKG1	1WBU5	1WBV3	1WBW2
1AHA4	42	2C832	1C210	3C311	5C219	3FKG2	1WBU6	1WBV4	1WBW3
1AHA5	48	2C832	1C211	3C312	5C220	3FKG3	1WBU7	1WBV5	1WBW4
1AHA6	54	4C885	3C115	3C313	5C221	3FKG4	1WBU8	1WBV7	1WBW5
1AHA7	60	4C885	3C116	3C314	5C222	3FKG5	1WBU9	1WBV8	1WBW6
SUPPLY FAN									
3FKD5	54"	—	3C732	3C188	—	3FKG4	1WBU8	1WBV7	1WBW5

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Dayton® Medium-Duty Belt-Drive Exhaust and Supply Fans

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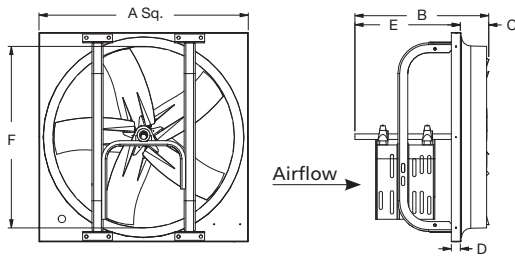


Figure 1 — Exhaust Dimensions

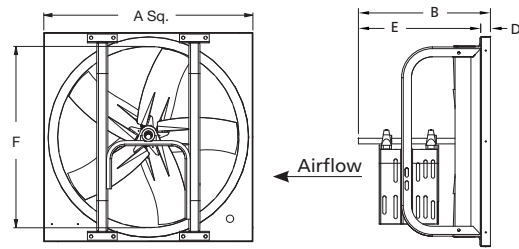


Figure 2 — Supply Dimensions

Dimensions and Specifications

Model	Prop. Dia.	Shaft Dia.	A	B	C	D	E	F
EXHAUST FANS (See Figure 1)								
3FKD8	20"	3/4"	24"	19½"	3¼"	1"	16¼"	20½"
1AHA1	24	3/4	28	18	4¾	1¼	13⅝	24⅜
1AHA2	30	3/4	34	20	5¼	1¼	14¾	30⅞
1AHA3	36	1	40	22	6	1	16	36⅜
1AHA4	42	1¼	46	23½	6	2	17½	42½
1AHA5	48	1¼	54	23½	7	2	16½	48½
1AHA6	54	1¼	60	23	6½	2	16½	55
1AHA7	60	1¼	66	26½	7⅞	2	18⅟ ₁₆	61
SUPPLY FAN (See Figure 2)								
3FKD5	54"	1¼"	60"	26⅟ ₁₆ "	—	2"	24⅟ ₁₆ "	55"

Performance

Model	Prop. Dia.	HP	Fan RPM	Max BHP	Sones @ 0.000" SP @ 5Ft.	CFM Air Delivery @ Static Pressure Shown				
						0.000"	0.125"	0.250"	0.375"	0.500"
EXHAUST FANS										
3FKD8	20"	1/4	861	0.30	14.3	4404	3672	—	—	—
		1/3	947	0.40	16.1	4844	4156	—	—	—
		1/2	1085	0.60	17.9	5550	4919	4269	—	—
		3/4	1241	0.90	22	6348	5764	5325	4479	—
1AHA1	24	1/3	643	0.38	12.7	6039	5142	—	—	—
		1/2	740	0.58	14.7	6950	6216	4806	—	—
		3/4	844	0.86	19.8	7927	7296	6514	—	—
		1	930	1.15	27	8734	8173	7507	6279	—
		1½	1065	1.73	46	10,002	9518	8984	8344	7104

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Models 1AHA1 thru 1AHA7, 3FKD5 and 3FKD8

Performance (Continued)

Model	Prop. Dia.	HP	Fan RPM	Max BHP	Sones @ 0.000" SP @ 5Ft.	CFM Air Delivery @ Static Pressure Shown				
						0.000"	0.125"	0.250"	0.375"	0.500"
1AHA2	30"	1/2	594	0.58	15.4	9829	8499	—	—	—
		3/4	675	0.86	18.3	11169	10067	8391	—	—
		1	745	1.15	21	12328	11355	9977	—	—
		1½	852	1.73	26	14098	13279	12271	10859	—
		2	936	2.30	31	15488	14742	13891	12735	11377
1AHA3	36	1/2	433	0.58	13.5	12492	10112	—	—	—
		3/4	493	0.86	15.1	14223	12197	—	—	—
		1	542	1.15	17.2	15636	13847	11288	—	—
		1½	623	1.73	22	17973	16501	14678	11697	—
		2	684	2.30	26	19733	18457	16798	14771	—
1AHA4	42	3/4	380	0.86	15.5	17709	14179	—	—	—
		1	418	1.15	18.3	19480	16358	—	—	—
		1½	479	1.73	23	22322	19801	16803	—	—
		2	524	2.30	26	24419	22147	19318	14534	—
		3	603	3.45	31	28101	26182	23819	21503	—
		5	713	5.75	38	33227	31632	29866	27693	25766
1AHA5	48	1	351	1.15	15.0	22617	18903	—	—	—
		1½	401	1.73	18.6	25839	22767	17182	—	—
		2	443	2.30	21	28545	25797	21971	—	—
		3	506	3.45	27	32605	30246	27492	22873	—
1AHA6	54	1½	343	1.73	17.3	30129	26014	—	—	—
		2	371	2.30	19.0	32589	28800	22253	—	—
		3	429	3.45	25	37683	34407	30466	—	—
		5	507	5.75	43	44535	41763	38990	35068	28159
1AHA7	60	2	290	2.30	19.7	38697	30835	—	—	—
		3	332	3.45	24	44302	37736	—	—	—
		5	393	5.75	30	52442	47037	40624	—	—
		7½	450	8.63	51	60048	55356	50229	43743	—
		10	496	11.50	70	66186	61929	57516	52318	—
SUPPLY FAN										
3FKD5	54"	1½	343	1.73	17.3	30129	26014	—	—	—
		2	371	2.30	19.0	32589	28800	22253	—	—
		3	429	3.45	25	37683	34407	30466	—	—
		5	507	5.75	43	44535	41763	38990	35068	—

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Dayton® Medium-Duty Belt-Drive Exhaust and Supply Fans

Unpacking

1. Inspect for any damage that may have occurred during transit.
2. Shipping damage claim must be filed with carrier.
3. Look for hardware kit attached to drive frame of fan. Refer to page 8 for hardware contents.
4. Check all bolts, screws, set-screws, etc. for looseness that may have occurred during transit. Retighten as required. Rotate propeller by hand to be sure it turns freely.

General Safety Information

⚠ DANGER Do not depend on any switch as the sole means of disconnecting power when installing or servicing the fan. Always disconnect, lock and tag power source before installing or servicing. Failure to disconnect power source can result in fire, shock or serious injury. Motor will restart without warning after thermal protector trips. Do not touch operating motor, it may be hot enough to cause injury.

⚠ DANGER Do not place any body parts or objects in fan, motor openings or drives while motor is connected to power source.

⚠ WARNING Do not use this equipment in explosive atmospheres!

1. Read and follow all instructions and cautionary markings. Make sure electrical power source conforms to requirements of equipment and local codes.
2. Fans should be assembled, installed and serviced by a qualified technician. Have all electrical work performed by a qualified electrician.
3. Follow all local electrical and safety codes in the United States and

Canada, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA) in the United States. Ground motor in accordance with NEC Article 250 (grounding). Follow the Canadian Electric Code (CEC) in Canada.

⚠ CAUTION To reduce the risk of injury to persons, observe the following:

OSHA requires OSHA complying guards when ventilator is installed within 7 feet of floor or working level.

ULicUL Standards require OSHA complying guards when ventilator is installed within 8 feet of floor or working level.

4. Do not kink power cable or allow it to come in contact with sharp objects, oil, grease, hot surfaces or chemicals. Replace damaged cords immediately.
5. Make certain that the power source conforms to the requirements for the equipment.
6. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad race way system by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means.

Installation

⚠ CAUTION Installation, troubleshooting and parts replacement is to be performed only by qualified personnel.

NOTE: Refer to motor nameplate for wiring procedures. Refer to switch manufacturer for installation and wiring procedures.

WALL MOUNTING

1. Move fan to the desired location and determine the method by which

the fan is to be mounted as shown in Figures 3, 4, 5 and 6 on pages 4-5. Optional wall collar (Figure 4), wall collar and guard (Figure 5) or wall housing (Figure 6) provide a convenient means of mounting sidewall fans.

2. Wall opening size and propeller-to-shutter distance are two important dimensions for fan installation. Fans mounted to the wall require a different opening size than those mounted in collars or housings. See step 7, page 5, for wall opening sizes.
3. Figure 3 shows the recommended wall opening for direct to wall installations.

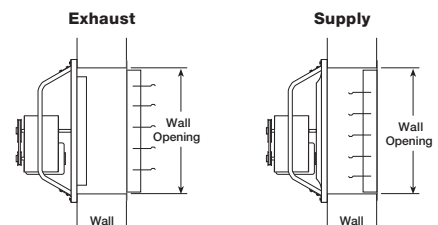


Figure 3 — Direct to Wall Installation

4. Figure 4 shows the wall opening required for installations using a wall collar.

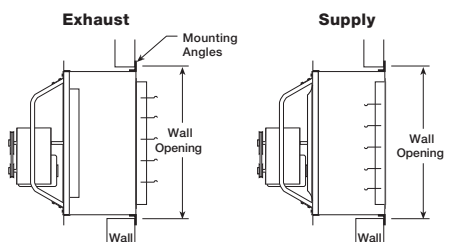


Figure 4 — Wall Collar Installation

5. Figure 5 shows the wall opening (W.O.) required for installation with a wall collar and a guard.

Models 1AHA1 thru 1AHA7, 3FKD5 and 3FKD8

Installation (Continued)

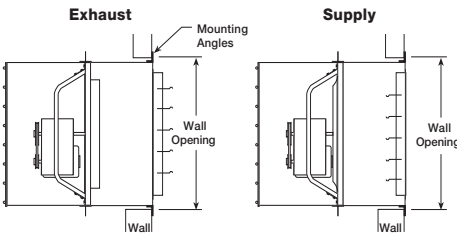


Figure 5 — Wall Collar & Guard Installation

6. Figure 6 shows the wall opening required for installation with a wall housing.

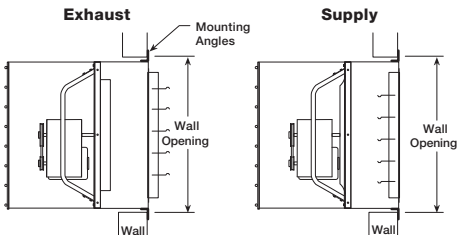


Figure 6 — Wall Housing Installation

7. Cut an appropriate sized hole in the wall using the table below.

Wall Opening Install			
Model	Prop. Dia.	Direct to Wall	Wall Collar (WC), WC & Guard, or Wall Housing
3FKD8	20"	22½ x 22½"	25⅝ x 25⅝"
1AHA1	24	26½ x 26½"	29⅝ x 29⅝"
1AHA2	30	32½ x 32½"	35⅝ x 35⅝"
1AHA3	36	38½ x 38½"	41⅝ x 41⅝"
1AHA4	42	44½ x 44½"	47⅝ x 47⅝"
1AHA5	48	50½ x 50½"	55⅝ x 55⅝"
1AHA6, 3FKD5	54	56½ x 56½"	61¾ x 61¾"
1AHA7	60	62½ x 62½"	67¾ x 67¾"

8. The fan should be securely mounted within a rigid framework to prevent flexing or movement of the fan frame during operation. The fan frame should be equally supported on all sides within the framework

and caution should be taken to avoid twisting of the fan frame during installation.

NOTE: Allowing the fan frame to flex or move during operation will create harmful vibrations which may damage the unit.

9. Fans should be mounted in opening with 1/4" clearance around perimeter. Framing should be secured to building structure utilizing corrosion resistant fasteners, supplied by others. Fasteners should be used in all pre-punched mounting holes in the fan panel.

10. Install remaining components (shutter, intake guard, etc.).
11. Check all fasteners and set screws for tightness. This is especially important for bearing set screws.

12. Rotation direction of the propeller should be checked by momentarily turning the unit on. Rotation should be in the same direction as the rotation decal affixed to the unit or as shown in Figure 7. For 3-phase installations, fan rotation can be reversed by interchanging any two of the three electrical leads. For single phase installations follow the wiring diagram located on the motor or see Figure 12.

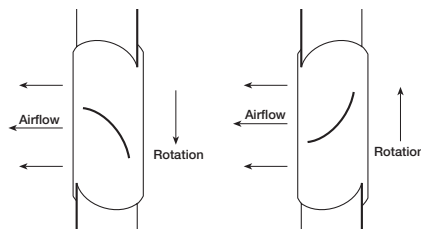


Figure 7 — Rotation Decal

MOTOR AND PULLEY MOUNTING

CAUTION Never adjust pitch of propeller blades in field. Blade pitch should only be changed by manufacturer.

NOTE: For UL/cUL listed units, the motor used with this fan must be designated as such by Dayton.

1. Secure motor to plate using hardware provided. Holes will align when the motor frame (shaft end) is flush with the edge of the motor plate. Motor mounting hardware is included in the hardware kit attached to the drive frame. Refer to Figure 8 for mounting position based on motor frame size. Refer to page 8 for contents of kit.

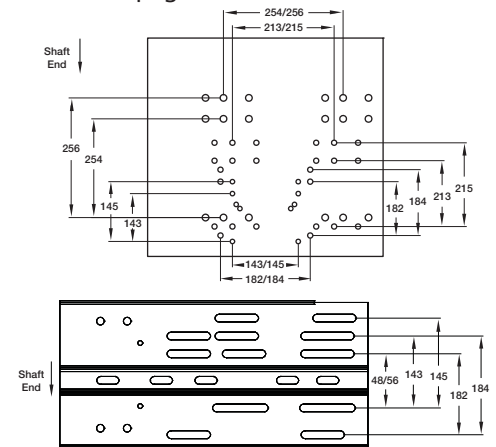


Figure 8 — Motor Mounting Positions Based on Motor Frame Size

2. Mount pulleys on shafts and secure with set screw. Check pulleys for proper alignment. Misaligned pulleys lead to excessive belt wear, vibration and noise.

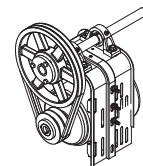


Figure 9 — Drive Package Diagram for 20 - 42" Propeller Diameter

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Dayton® Medium-Duty Belt-Drive Exhaust and Supply Fans

ENGLISH

Installation (Continued)

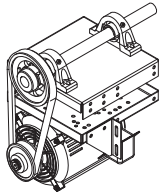


Figure 10 — Drive Package Diagram for 48" and Greater Propeller Diameter

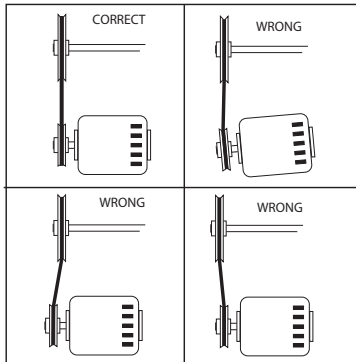


Figure 11 — Pulley Alignment

3. Install the belt and adjust the tension to allow for 1/64" of deflection per inch of span when moderate thumb pressure is applied to the belt. Too much tension will cause excess bearing wear and noise. Too little tension will cause slippage at startup and uneven wear.

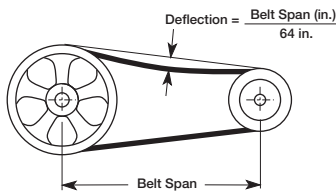


Figure 12 — Belt Tension

4. Adjust RPM to desired level using a variable pitch pulley. After adjustment, motor amperage should be checked to avoid overloading of the motor.

ELECTRICAL CONNECTION

CAUTION Motor and fan must be securely grounded (bare metal) to a suitable electric ground, such as a grounded water pipe or ground wire system.

WARNING To reduce the risk of electrical shock — do not connect to a circuit operating at more than 150V to ground.

NOTE: For UL/cUL listed units, the motor used with this fan must be designated as such by Dayton.

1. Refer to Figure 13 to ensure the motor you are wiring has been UL/cUL approved for this unit. This label will also be found on the unit.

2. Wire motor for desired voltage per wiring diagram on motor or refer to Figure 14 for connection wiring diagram.

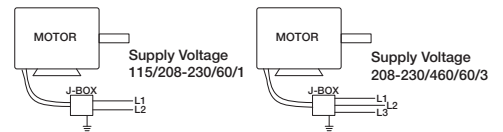


Figure 14 — Typical Wiring Diagram

3. Wire control switches at ground level.
4. Before activating fan, inspect to be sure that there are no obstructions or debris that would interfere with the propeller.

Listed for use with the following motors. Mark the motor list to indicate which motor has been installed by placing a check by it. For dual voltage motors, indicate the voltage for which the motor is connected by placing a check by it.

	Model	HP	Enclosure	Phase	Volts	AMPS	Hz	KVA
<input type="checkbox"/>	4K252	1/3	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	6.6/3.0-3.3	60	N
<input type="checkbox"/>	5K116	1/2	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	8.8/4.4	60	L
<input type="checkbox"/>	5K117	3/4	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	12.4/6.2	60	L
<input type="checkbox"/>	6K321	1	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	13.0/6.6-6.5	60	K
<input type="checkbox"/>	6K305	1 1/2	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	20.4/10.2	60	K
<input type="checkbox"/>	6K393	2	ODP	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	21.4/12.2-10.7	60	J
<input type="checkbox"/>	5K121	1/3	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	6.6/3.3	60	L
<input type="checkbox"/>	6K122	1/2	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	9.2/4.4-4.6	60	M
<input type="checkbox"/>	6K123	3/4	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	11.4/5.7	60	L
<input type="checkbox"/>	6K562	1	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	14.0/7.1-7.0	60	K
<input type="checkbox"/>	5K565	1 1/2	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 208 <input type="checkbox"/> 230	14.4/8.0-7.2	60	K
<input type="checkbox"/>	1K067	2	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	19.0/9.5	60	J
<input type="checkbox"/>	5K967	3	TEFC	1	<input type="checkbox"/> 115 <input type="checkbox"/> 230	30.0/15.0	60	H
<input type="checkbox"/>								
<input type="checkbox"/>	3KW25	1	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	3.2-2.9/1.5	60	K
<input type="checkbox"/>	3KW28	1 1/2	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	4.4-4.0/2.0	60	L
<input type="checkbox"/>	3KW31	2	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	6.1-5.5/2.8	60	L
<input type="checkbox"/>	3KW34	3	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	9.2-8.3/4.2	60	K
<input type="checkbox"/>	3KW37	5	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	14.2-13.0/6.5	60	J
<input type="checkbox"/>	3KW40	7 1/2	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	20.6-18.7/9.3	60	H
<input type="checkbox"/>	3KW43	10	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	26.7-24.2/12.1	60	H
<input type="checkbox"/>	3KW46	15	ODP	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	38.8-35.1/17.5	60	G
<input type="checkbox"/>	2N864	1/3	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	1.4-1.5/0.75	60/50	L
<input type="checkbox"/>	2N865	1/2	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	2.0-2.0/1.0	60/50	L
<input type="checkbox"/>	2N866	3/4	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	2.7-2.8/1.4	60/50	K
<input type="checkbox"/>	3KW91	1	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	3.1-2.8/1.4	60	K
<input type="checkbox"/>	3KW94	1 1/2	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	4.5-4.1/2.0	60	L
<input type="checkbox"/>	3KW97	2	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	6.0-5.4/2.7	60	L
<input type="checkbox"/>	3KX01	3	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	8.7-7.8/3.9	60	K
<input type="checkbox"/>	3KX04	5	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	14.8-13.4/6.7	60	H
<input type="checkbox"/>	3KX07	7 1/2	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	19.8-17.9/9.0	60	H
<input type="checkbox"/>	3KX09	10	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	27.2-24.6/12.3	60	G
<input type="checkbox"/>	3KV89	15	TEFC	3	<input type="checkbox"/> 208 <input type="checkbox"/> 230 <input type="checkbox"/> 460	38.8-35.1/17.5	60	G

If the fan motor is NOT thermally protected, remote overload protection must be installed having adequate rating as to voltage, frequency, horsepower and full current per phase.

Figure 13 — UL/cUL Approved Listing

Models 1AHA1 thru 1AHA7, 3FKD5 and 3FKD8

Operation

1. Before starting up or operating your new Dayton ventilator, check all fasteners for tightness. In particular, check bearing set screws in propeller hub (and sheaves, if applicable). While in the OFF position, or before connecting the ventilator to power, turn the fan propeller by hand to be sure it is not striking the orifice or any obstacle.
 2. Start the ventilator up and shut it off immediately to check rotation of the propeller with directional arrow in the motor compartment. Refer back to Figure 7.
 3. When the ventilator is started, observe the operation and check for any unusual noises.
 4. Adjust RPM to desired level using a variable pitch pulley.
 5. Motor amperage should be checked to avoid overloading of the motor. With the system in full operation measure current input to the motor and compare with the nameplate rating to determine if the BHP is operating under safe load conditions. See performance on pages 2-3.
- IMPORTANT:** Adjust (tighten) belt tension after the first 24 hours of operation.
6. Keep inlets and approaches to fan clean and free from obstruction.

Maintenance

▲ WARNING *Disconnect and lockout power source before servicing.*

▲ CAUTION *Uneven cleaning of the propeller will produce an out of balance condition that will cause vibration in the fan.*

1. Depending on the usage and severity of the contaminated air, a regularly scheduled inspection for cleaning the fan propeller, housing and surrounding areas should be established.
2. Check for unusual noises when fan is running.
3. Periodically inspect and tighten set-screws.
4. Periodically check belts for wear and tightness.

NOTE: When replacing belts use the same type as supplied with the unit.

NOTE: For belt replacement, loosen the motor mounting hardware to allow removal of the belt by hand.

▲ WARNING *Do not force belts on or off. This may cause cords to break, leading to premature belt failure.*

5. All fan bearings are pre-lubricated. Sealed pillow block bearings require no further lubrication.
6. Follow motor manufacturer's instructions for motor lubrication.
7. For disassembly refer to the parts illustration.
8. For critical applications, a spare motor and belts should be available.

RECOMMENDED RELUBRICATION FREQUENCY IN MONTHS

Operating Speed (RPM)	Bore in Inches 1/2 to 1 1/2
Up to 500	6
500 - 1000	6
1000 - 1500	5

NOTE: If unusual environmental conditions exist - high temperature, moisture, or contaminants - more frequent lubrication is recommended.

Any good quality lithium base grease conforming to NLGI Grade 2 consistency such as those listed here may be used.

Mobil 532	Texaco Multifak #2
Mobilux #2	Texaco Premium RB
B Shell Alvania #2	Unirex N2

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For Repair Parts, call 1-800-323-0620

24 hours a day – 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

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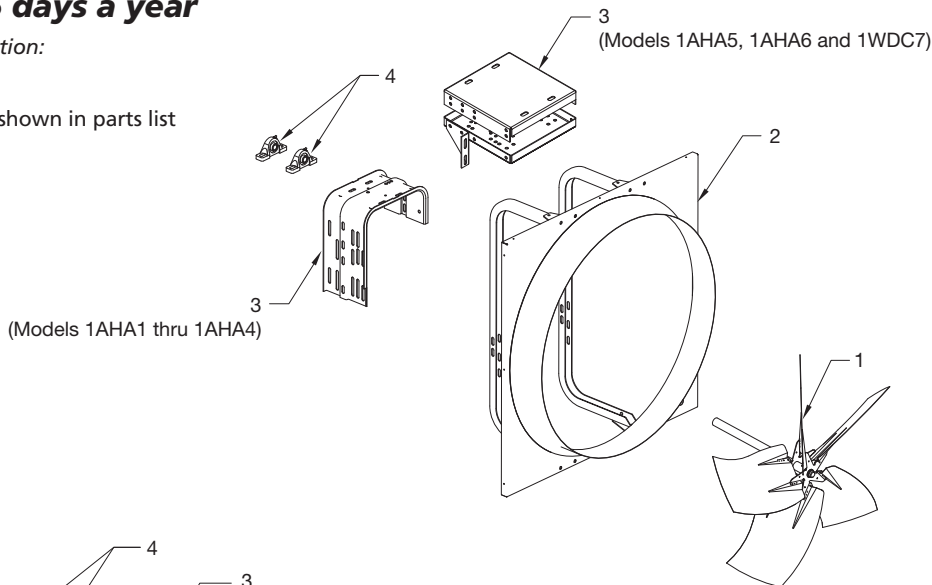


Figure 15 — Repair Parts Illustration for Medium-Duty for Belt-Drive Exhaust Fans

50K357 Hardware Kit

Description	Qty.
Spin-lock Nut, 3/8-16	4
Spin-lock Nut, 5/16-18	4
Spin-lock Bolt, 3/8-16 x 3/4	4
Spin-lock Bolt, 5/16-18 x 3/4	4
Rectangular Flat Washer, 5/16	4
Flat Washer, 3/8	4
Key Shaft, 3/16 x 3/16 x 1 1/2	1
Key Shaft, 1/4 x 1/4 x 1 1/2	1
Key Shaft, 3/8 x 3/8 x 2	1

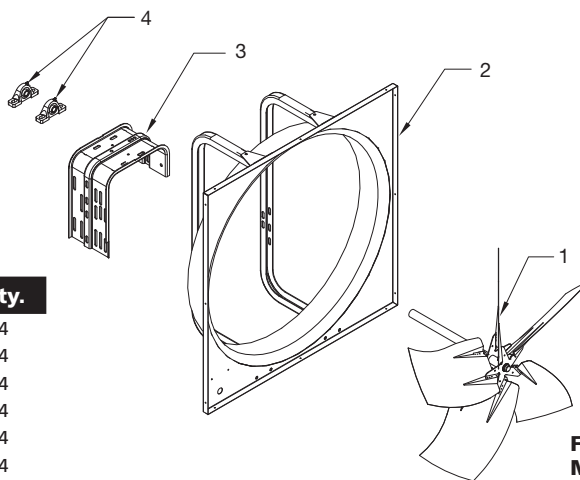


Figure 16 — Repair Parts Illustration for Medium-Duty Belt-Drive Supply Fans

Repair Parts List for Medium-Duty Belt-Drive Exhaust Fans (See Figure 15)

Reference Number	Description	Part Number For Models:								Qty.
		1AHA1	1AHA2	1AHA3	1AHA4	1AHA5	1AHA6	1AHA7	3FKD8	
1	Propeller & Shaft	50K384	50K386	50K388	50K390	50K391	50K393	50K394	60N501	1
2	Fan Panel & Drive Frame Assembly	50K339	50K342	50K345	50K348	50K350	50K353	50K355	60N502	1
3	Motor Bearing Plate	50K366	50K367	50K368	50K370	50K370	50K373	50K375	60N500	1
4	Bearings	4XW60	4XW61	4XW61	4XW63	4XW63	4XW63	4XW65	4XW60	2
5	Hardware Kit	50K357	50K357	50K357	50K357	50K357	50K357	50K357	50K357	1

Repair Parts List for Medium-Duty Belt-Drive Supply Fan (See Figure 16)

Reference Number	Description	Part Number For Model: 3FKD5	Qty.
1	Propeller & Shaft	60P624	1
2	Fan Panel & Drive Frame Assembly	60P626	1
3	Motor Bearing Plate	50K373	1
4	Bearings	4XW63	2
5	Hardware Kit	50K357	1

Models 1AHA1 thru 1AHA7, 3FKD5 and 3FKD8

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Fan inoperative	<ol style="list-style-type: none"> 1. Blown fuse or breaker 2. Defective motor 3. Incorrectly wired 4. Broken belts 5. Loose pulley(s) 6. Electricity turned off 	<ol style="list-style-type: none"> 1. Replace or repair 2. Replace or repair 3. Shut power OFF and check wiring for proper connections 4. Replace belts 5. Check alignment and tighten 6. Contact local power company
Airflow - Insufficient	<ol style="list-style-type: none"> 1. Damper (shutter) stuck shut 2. Speed too slow 3. Belt slippage 	<ol style="list-style-type: none"> 1. Inspect/repair damper 2. Check for correct drive combination 3. Replace/adjust tension and match belt to pulley
Airflow - Reversed air	<ol style="list-style-type: none"> 1. Propeller rotation reversed 	<ol style="list-style-type: none"> 1. Reverse motor rotation, rewire motor
Airflow - Too much air	<ol style="list-style-type: none"> 1. Insufficient static pressure 	<ol style="list-style-type: none"> 1. Check static pressure calculation, adjust VP pulleys to more turns open
Excessive noise or vibration	<ol style="list-style-type: none"> 1. Loose or defective bearings 2. Foreign material inside bearing 3. Pulley not tightened on shaft (motor and or fan) 4. Loose propeller 5. Belt(s) too loose/tight 6. Belts are worn, oily or dirty 7. Mis-aligned pulley(s) 8. Crooked or damaged propeller 9. Fan not securely anchored 10. Bent fan shaft 11. Fan propeller out of balance 	<ol style="list-style-type: none"> 1. Tighten or replace bearings 2. Replace bearing 3. Check alignment and tighten setscrews and/or bushing screws 4. Tighten set screws or taper bushing screws 5. Adjust tension 6. Clean or replace belts 7. Re-align pulley(s) 8. Replace propeller 9. Secure properly 10. Replace shaft and propeller 11. Replace propeller
Motor overloads or overheats	<ol style="list-style-type: none"> 1. Propeller RPM too high 2. Shorted motor winding 3. Incorrect propeller rotation 4. Over/Under line voltage 5. Belt slippage 	<ol style="list-style-type: none"> 1. Check drives, increase turns open on VP pulley 2. Replace motor 3. Check motor wiring 4. Contact Power Company 5. Tighten belt, match belt to pulley

Dayton® Medium-Duty Belt-Drive Exhaust and Supply Fans

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