

# Dayton®



## **Centrifugal Belt Drive Upblast/ Sidewall Exhaust Ventilators**

**Models 56MW60-56MW71, 56JP01-56JP13,  
56JN91-56JN96, 16D522-16D524, 1MBE7, 1MBE8,  
2RB65, 2RB66, 3ATT8A, 3ATT9A, 56JN99, 20FT09,  
20FT14, 4YY14, 4YY15, 4YY22, 5DVL4,  
60KT20, 56JN98, 6KWJ9, 52CD35**



# Dayton

**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.**

**PLEASE REFER TO BACK COVER  
FOR INFORMATION REGARDING  
DAYTON'S WARRANTY AND OTHER  
IMPORTANT INFORMATION.**

**Model #:** \_\_\_\_\_

**Serial #:** \_\_\_\_\_

**Purch. Date:** \_\_\_\_\_

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04632 Version 6 9/2020*

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## BEFORE YOU BEGIN

### **⚠ WARNING**

*Installation, troubleshooting and parts replacement are to be performed only by qualified personnel.*



### **Electrical Requirements:**

- The motor amperage and voltage ratings must be checked for compatibility to supply voltage prior to final electrical connection. Wiring must conform to local and national codes.



### **Tools Needed:**

- Dayton® Roof Curb
- Mounting Fasteners (8)
- Sealant or Caulk
- Tachometer

### **Recommended Accessories:**

- NEMA 1 (1H400, 1H401) / NEMA 4 (1H408, 1H409) Disconnect Switch
- Roof Curb (2RB75-2RB77, 2RB79-2RB82, 24Y860, 2ZV82-2ZV85)
- Ventilated Roof Curb (4HX54-4HX60, 4HX61-4HX63)
- Roof Curb Adapter (3AZK1-3AZK9, 3AZL1-3AZL3)
- Grease Collector Box (48C174)
- Sidewall Grease Collector Kit (56JN65, 56JN66, 56JN67, 56JN68, 56JN69)
- Roof Mount Curb Hinge Kit (20CK53-20CK56, 4HX79, 56JN70, 56JN71, 56JN72)
- Sidewall Curb Hinge Kit (56JN70-56JN75)
- Wall Mounting Bracket (56JN59, 56JN60, 56JN61, 56JN62, 56JN63, 56JN64)
- Clean-Out Port Kit (3ATV9)
- Damper (4HX64-4HX70)

## UNPACKING

### **Contents:**



- Dayton® Centrifugal Belt-Drive Upblast Exhaust Ventilator (1)
- Operating Instructions and Parts Manual (1)

### **Inspect:**



- After unpacking unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. Shipping damage claim must be filed with carrier.
- Check all bolts, screws, set-screws, etc. for looseness that may have occurred during transit. Retighten as required. Rotate wheel by hand to be sure it turns freely.
- **See General Safety Instructions on page 2, and Cautions and Warnings as shown.**



## GENERAL SAFETY INSTRUCTIONS

Ventilators (excluding 6KWJ9, 56JP04, 56MW63, 56MW64, 56MW65) are UL/cUL Listed Subject 762 (YZHW) and comply with all requirements set forth in NFPA 96 Standard for Ventilation Control and Fire Protection Commercial Cooking Operations.

**NOTE:** When used with explosion proof motor, ventilators 6KWJ9, 56JP04, 56MW63, 56MW64, 56MW65 may be used to exhaust potential flammable particles or fumes. Ventilators feature spark-resistant aluminum wheel and rub ring for hazardous locations.

**⚠ DANGER** *Always disconnect, lock and tag power source before installing or servicing. Failure to disconnect power source can result in fire, shock or serious injury.*

**⚠ WARNING** *When servicing the fan, motor may be hot enough to cause pain or injury. Allow motor to cool before servicing. Precaution should be taken in explosive atmospheres.*

Only qualified personnel should install this fan. Personnel should have a clear understanding of these instructions and should be aware of general safety precautions. Improper installation can result in electric shock, possible injury due to coming in contact with moving parts, as well as other potential hazards. Other considerations may be required if high winds or seismic activity is present. If more information is needed, contact a licensed professional engineer before moving forward.

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the National Fire Protection Agency (NFPA), where applicable. Follow the Canadian Electrical Code (CEC) in Canada.
2. The rotation of the wheel is critical. It must be free to rotate without striking or rubbing any stationary objects.
3. Motor must be securely and adequately grounded.
4. Do not spin fan wheel faster than max cataloged fan RPM. Adjustments to fan speed significantly affects motor load. If the fan RPM is changed, the motor current should be checked to make sure it is not exceeding the motor nameplate amps.
5. Do not allow the power cable to kink or come in contact with oil, grease, hot surfaces or chemicals. Replace cord immediately if damaged.
6. Verify that the power source is compatible with the equipment.
7. Never open access doors to a duct while the fan is running.

## SPECIFICATIONS

Max. Inlet Temp.	300°F
Mounting Location	Roof/Sidewall
Housing Material	Spun Aluminum
Wheel Type	Aluminum, Backward Inclined Centrifugal
Includes	NEMA 1 Junction Box
Agency Compliance	UL/cUL 762, AMCA Sound and Air



### Dimensions (inches)

	20FT09 20FT14	16D522	16D523	4YY14 2RB65 6KWJ9 1MBE7	5DVL4	4YY15 1MBE8 56MW63
Base Size (Sq.)	19	19	19	22	22	22
Wheel Dia.	11	11-1/4	12-1/2	11-1/4	12-1/2	13-1/4
Shaft Dia.	3/4	3/4	3/4	3/4	3/4	3/4
Recommended Roof Opening (Sq.)	14-1/2	14-1/2	14-1/2	17-1/2	17-1/2	17-1/2
Recommended Damper Size (Sq.)	12	12	12	15	15	15
	16D524	56MW60	2RB66 3ATT8A 3ATT9A 56MW66 56JN91 56MW64 60KT20	56MW62 56MW61 56MW67 56MW68 56JN92 56MW65	56JP02 56JN99 56JP01 56JN93 56JN98 56JP04	56JP03
Base Size (Sq.)	22	22	26	26	30	30
Wheel Dia.	14-3/4	16-1/2	14-3/4	16-1/2	18-1/2	18-1/2
Shaft Dia.	3/4	3/4	3/4	3/4	3/4	3/4
Recommended Roof Opening (Sq.)	17-1/2	17-1/2	21-1/2	21-1/2	25-1/2	25-1/2
Recommended Damper Size (Sq.)	15	15	19	19	23	23
	56JP08 56JP05 56JP07 56JN94 56JP06	56JP09	56JP11 56JP10 56JP12 56JN95 56JP13	56JN96 52CD35	ROOF MOUNT ONLY	
Base Size (Sq.)	30	34	34	40	42	46
Wheel Dia.	21-1/4	21-1/4	24-1/2	30-1/2	30-1/2	36
Shaft Dia.	3/4	1	1	1	1	1-1/4
Recommended Roof Opening (Sq.)	25-1/2	29-1/2	29-1/2	29-1/2	37-1/2	41-1/2
Recommended Damper Size (Sq.)	23	27	27	27	35	39

## PERFORMANCE

Model High Pressure,  
Without Drive Package

HP

RPM

Max  
BHPSones @ .50"  
SP @ 5 Ft.

2RB65	1/4	2045	0.26	13.9
	1/3	2250	0.35	14.4
	1/2	2580	0.53	16.8
2RB66	1/4	1465	0.26	14.2
	1/3	1605	0.34	15.2
	1/2	1845	0.52	17.0
	3/4	2110	0.78	19.8
	1	2400	1.04	22.4
56MW62	1/4	1065	0.26	11.0
	1/3	1165	0.34	12.8
	1/2	1340	0.52	14.4
	3/4	1535	0.74	18.1
	1	1690	1.05	21
56JP03	1/3	925	0.35	10.8
	1/2	1065	0.53	14.1
	3/4	1215	0.79	15.4
	1	1335	1.04	19
	1-1/2	1530	1.57	24
	2	1685	2.08	28
56JP08	1/2	880	0.52	10.5
	3/4	1010	0.79	14.5
	1	1110	1.04	16.9
	1-1/2	1270	1.56	22
	2	1400	2.09	24
	3	1600	3.13	29
56JP09	1/2	680	0.51	9.7
	3/4	780	0.78	13.4
	1	860	1.05	15
	1-1/2	985	1.57	19.1
	2	1085	2.09	23
	3	1240	3.13	27
56JP13	1/2	675	0.52	9.4
	3/4	775	0.78	13.1
	1	850	1.04	14.5
	1-1/2	975	1.56	18.4
	2	1070	2.08	22
	3	1230	3.16	26
52CD35	1/2	485	0.52	7.9
	3/4	555	0.77	10.4
	1	610	1.03	12.4
	1-1/2	700	1.57	16.0
	2	770	2.09	18.6
	3	885	3.15	23
	5	1045	5.21	35



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.

CFM Air Delivery @ Static Pressure Shown								
0.50"	0.75"	1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.50"
761	693	615	522	346	—	—	—	—
860	804	737	665	579	456	—	—	—
1014	969	919	861	799	735	655	550	323
1016	920	798	642	—	—	—	—	—
1146	1063	965	846	704	—	—	—	—
1363	1292	1219	1137	1042	924	800	—	—
1592	1536	1473	1409	1341	1262	1178	1073	965
1487	1252	—	—	—	—	—	—	—
1697	1504	1252	—	—	—	—	—	—
2053	1897	1724	1513	—	—	—	—	—
2433	2301	2165	2015	1855	1638	—	—	—
2722	2611	2488	2365	2228	2082	1899	1664	—
2104	1688	—	—	—	—	—	—	—
2581	2323	1933	—	—	—	—	—	—
3063	2868	2626	2286	1854	—	—	—	—
3441	3261	3075	2839	2523	2156	—	—	—
4035	3884	3728	3574	3376	3135	2859	2534	—
4495	4369	4226	4085	3945	3768	3575	3325	3061
2779	2317	—	—	—	—	—	—	—
3397	3067	2637	—	—	—	—	—	—
3851	3561	3242	2806	—	—	—	—	—
4558	4312	4055	3789	3433	2944	—	—	—
5110	4898	4674	4436	4195	3880	3515	—	—
5943	5775	5581	5385	5182	4971	4760	4476	4189
3151	2405	—	—	—	—	—	—	—
3902	3427	2716	—	—	—	—	—	—
4459	4075	3578	2863	—	—	—	—	—
5281	4988	4642	4220	3674	2825	—	—	—
5920	5678	5390	5061	4679	4210	3573	—	—
6895	6684	6469	6217	5950	5637	5283	4885	4374
3405	2607	—	—	—	—	—	—	—
4233	3704	2940	—	—	—	—	—	—
4812	4367	3846	3025	—	—	—	—	—
5737	5387	4988	4539	4006	—	—	—	—
6404	6112	5775	5407	4990	4550	3625	—	—
7513	7280	7016	6730	6410	6090	5709	5326	4722
3639	—	—	—	—	—	—	—	—
4788	3651	—	—	—	—	—	—	—
5549	4731	—	—	—	—	—	—	—
6741	6149	5390	—	—	—	—	—	—
7613	7107	6535	5814	4684	—	—	—	—
9014	8603	8150	7678	7062	6353	—	—	—
10909	10570	10222	9855	9455	9054	8533	8002	7330

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.

## SAFETY / SPECIFICATIONS

## ASSEMBLY / INSTALLATION

## OPERATION

**MAINTENANCE /  
REPAIR**

## TROUBLESHOOTING

CFM Air Delivery @ Static Pressure Shown								
0.00"	0.125"	0.25"	0.375"	0.50"	0.75"	1.00"	1.25"	1.50"
833	754	665	565	408	—	—	—	—
1260	1209	1156	1100	1041	918	759	—	—
1413	1365	1313	1251	1189	1056	861	—	—
1549	1505	1459	1406	1350	1234	1106	900	—
1665	1595	1528	1463	1398	1224	968	—	—
1824	1760	1699	1639	1580	1441	1262	990	—
2037	1979	1923	1869	1816	1710	1571	1406	1176
1790	1709	1629	1547	1458	1201	—	—	—
1968	1895	1822	1749	1671	1479	1198	—	—
2256	2192	2128	2065	2001	1864	1684	1455	—
2001	1906	1793	1667	1515	998	—	—	—
2192	2106	2006	1896	1773	1443	—	—	—
2518	2445	2362	2271	2174	1949	1643	—	—
2889	2826	2757	2683	2602	2430	2225	1968	1568
3125	3066	3005	2936	2865	2711	2539	2339	2085
2515	2362	2177	1974	1744	—	—	—	—
2774	2637	2477	2300	2109	1584	—	—	—
3191	3072	2941	2796	2641	2297	1770	—	—
3636	3532	3426	3301	3172	2894	2583	2163	—
3996	3901	3806	3698	3584	3340	3078	2785	2394
2815	2617	2448	2143	1763	—	—	—	—
3098	2916	2759	2525	2257	—	—	—	—
3551	3389	3243	3115	2879	2363	—	—	—
4061	3919	3786	3666	3554	3141	2652	—	—
4477	4348	4224	4108	4005	3703	3336	2841	—
5138	5026	4913	4811	4710	4532	4232	3912	3537
5648	5546	5443	5345	5254	5082	4921	4598	4313
3403	3054	2675	2144	—	—	—	—	—
3740	3422	3096	2699	2073	—	—	—	—
4275	3994	3718	3413	3048	—	—	—	—
4922	4676	4439	4192	3922	3240	—	—	—
5400	5176	4958	4742	4508	3985	3169	—	—
6187	5992	5798	5610	5421	5006	4529	3861	—
6806	6628	6451	6279	6108	5748	5350	4892	4289

**(‡) Ventilator for use with explosion proof motor in hazardous locations.** 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.

GETTING STARTED


SAFETY / SPECIFICATIONS

ASSEMBLY / INSTALLATION

OPERATION

MAINTENANCE / REPAIR

TROUBLESHOOTING



PERFORMANCE CONTINUED

Model, Assembled 115/208-230	Model, Assembled 208-230/460	Model, Without Drive Package	HP	RPM	Max BHP	Sones @ .25" SP @ 5 Ft.
—	—	56JN95	1/4	465	0.26	6.3
—	—		1/3	510	0.34	7.3
—	—		1/2	585	0.52	9.5
—	—		3/4	670	0.79	12.8
—	—		1	735	1.04	15.5
56JP10	—		1-1/2	845	1.57	18.6
—	56JP11		2	930	2.10	23
—	56JP12		3	1050	3.00	31
—	—	56MW71, 56JN96	1/3	365	0.34	5.7
—	—		1/2	420	0.52	7.5
—	—		3/4	480	0.77	9.9
—	—		1	530	1.05	12.2
—	—		1-1/2	605	1.55	15.7
—	—		2	665	2.07	18.6
—	56MW70		3	765	3.15	23
—	56MW69		5	905	5.21	32
—	—	4YY22	1/2	320	0.52	6.0
—	—		3/4	365	0.78	8.5
—	—		1	400	1.02	11.1
—	—		1-1/2	460	1.55	15.8
—	—		2	505	2.06	19.8
—	—		3	580	3.13	23
—	—		5	690	5.26	28

8

CFM Air Delivery @ Static Pressure Shown								
0.00"	0.125"	0.25"	0.375"	0.50"	0.75"	1.00"	1.25"	1.50"
4216	3768	3188	2162	—	—	—	—	—
4623	4243	3717	3134	—	—	—	—	—
5303	4961	4540	4093	3565	—	—	—	—
6074	5763	5461	5052	4659	3524	—	—	—
6663	6370	6133	5764	5409	4618	—	—	—
7660	7400	7184	6947	6615	6002	5282	—	—
8431	8194	7985	7798	7536	6953	6375	5706	4324
9519	9309	9107	8941	8775	8267	7766	7253	6672
5940	5316	4464	—	—	—	—	—	—
6835	6314	5660	4820	—	—	—	—	—
7811	7377	6844	6231	5440	—	—	—	—
8625	8231	7772	7245	6636	—	—	—	—
9845	9501	9127	8705	8226	7084	—	—	—
10,822	10,508	10,193	9808	9411	8495	7271	—	—
12,449	12,176	11,904	11,607	11,273	10,554	9743	8756	7352
14,727	14,497	14,266	14,036	13,788	13,223	12,614	11,963	11,191
8631	7820	6755	5256	—	—	—	—	—
9845	9142	8299	7286	5767	—	—	—	—
10,789	10,153	9426	8556	7575	—	—	—	—
12,408	11,862	11,281	10,587	9814	7809	—	—	—
13,621	13,125	12,602	12,022	11,359	9878	—	—	—
15,644	15,212	14,769	14,306	13,783	12,597	11,287	9381	—
18,611	18,248	17,884	17,504	17,115	16,236	15,243	14,187	12,985

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.

## RECEIVING

Upon receiving the product, check to ensure all items are accounted for by referencing the delivery receipt or packing list. Inspect each crate or carton for shipping damage before accepting delivery. Alert the carrier of any damage detected. The customer will make notation of damage (or shortage of items) on the delivery receipt and all copies of the bill of lading which is countersigned by the delivering carrier. If damaged, immediately contact your representative. Any physical damage to the unit after acceptance is not the responsibility of the manufacturer.

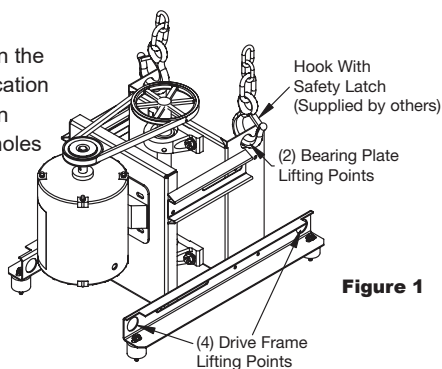
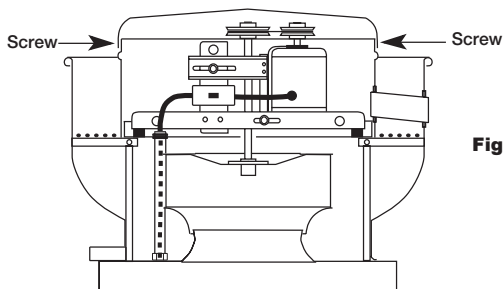
**⚠ WARNING**

*Do not lift by the fan hood. Avoid lifting fans in a way that will bend or distort fan parts. Never pass slings or timbers through the venturi of fan. Fans with special coatings or paints must be protected in handling to prevent damage.*

## HANDLING

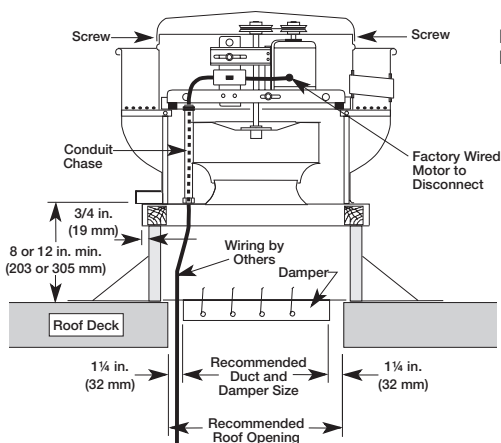
When lifting a belt drive unit onto the roof, use either the four lifting points on the drive frame or the two lifting points on the bearing plate if present, see Figure 1 for lifting points. Access to the drive frame is accomplished by removing the screws pointed out in Figure 2. The cover can then be removed and placed on a flat surface in an area protected from strong winds.

When the belt drive unit is on the roof, move fan to desired location using lifting points and fasten securely through mounting holes in base. Shims may be necessary depending upon roofing material thickness.

**Figure 1****Figure 2**

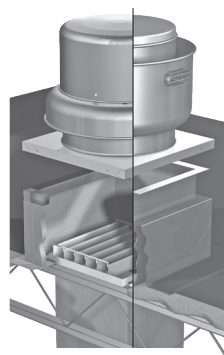
## INSTALLATION INSTRUCTIONS -

### General Ventilation Installation



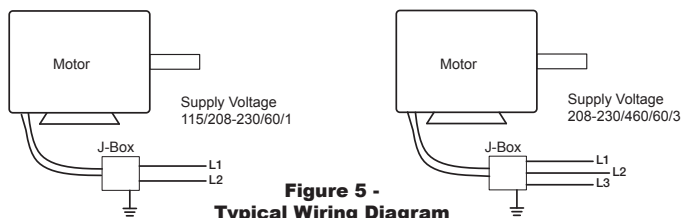
**Figure 3 Typical Roof Mounting Installation**

1. On the roof surface, cut an appropriate sized hole and follow manufacturer's instructions on curb installation. Caulk and flash the curb to ensure a water tight seal.
2. If unit is equipped with a backdraft damper, it should be installed now.
3. Remove motor cover. Access to the motor compartment is accomplished by removing the screws as shown in Figure 2, page 10.
4. On belt drive fans, use the lifting lugs on the drive frame or bearing plate to lift and place the unit on top of roof curb. Refer to Figure 1, page 10.
5. Secure fan to curb using a minimum of eight lag screws, metal screws or other suitable fasteners. Shims may be required depending upon curb installation and roofing material.
6. Verify power line wiring is de-energized before connecting fan motor to power source.
7. For commercial kitchen the electrical supply must enter the motor compartment through the breather tube. For other non-flammable applications, the electrical supply can be routed through the conduit chase between the curb cap and the bottom of the motor compartment.
8. Connect power supply wiring to the motor as indicated on the motor nameplate or terminal box cover. Check the power source for compatibility with the requirements of your equipment.
9. Check fan wheel for free rotation, re-center if necessary. Check setscrew(s) for tightness.
10. Check all fasteners for tightness.



**Figure 4 - Roof Curb Installation**

11. Mount and wire safety disconnect switch under motor cover. Wire control switches at ground level, refer to Figure 5.
12. Replace motor cover.

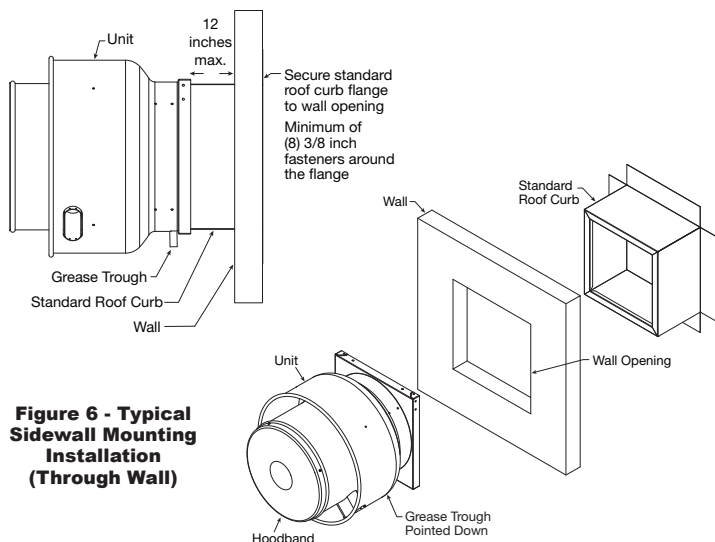


## SIDEWALL MOUNTING INSTALLATION

- 1a. **Curb:** Cut an appropriate sized hole in the wall for either through wall (recommended) or exterior face mount and follow the manufacturer's instructions on curb installation.
- 1b. **Wall bracket:** Cut an appropriate sized hole in the wall for exterior face mounting. If unit is equipped with a backdraft damper, it should be installed in the ductwork/wall opening now.
2. Mount the curb or wall bracket to the wall with a minimum of eight 3/8 inch fasteners around the flange. Caulk and flash the curb or wall bracket to ensure a watertight seal.
3. Curb only: If unit is equipped with a backdraft damper, it should be installed now.
4. Lift the fan into place. Do NOT support the unit by the hoodband during installation.
- 5a. **Curb:** Orient fan so the grease trough is downward and secure fan to curb using a minimum of eight lag screws, metal screws or other suitable fasteners.
- 5b. **Wall bracket:** Orient fan so the grease trough is downward and secure fan to bracket using the fasteners provided. Wall Mounting Bracket Skus: 56JN59, 56JN60, 56JN61, 56JN62, 56JN63, 56JN64.
6. Follow steps 6 through 12 of Installation instructions on page 11.

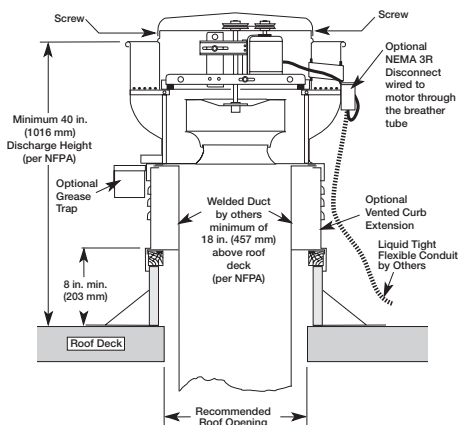
NOTE: If using any type of hinging, your fan must be a minimum of 8 inches away from the wall.

NOTE: Do not install your fan more than 12 inches away from the wall.



**Figure 6 - Typical Sidewall Mounting Installation (Through Wall)**

## COMMERCIAL KITCHEN INSTALLATION



**Figure 7 Typical Roof Mounting Installation**

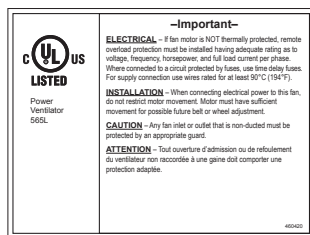
Commercial kitchen installations must comply with NFPA 96. Check local and national codes for these installations and consult local code authorities for other specific requirements.

1. On the roof surface, cut an appropriate sized hole and follow manufacturer's instructions on curb installation. Caulk and flash the curb to ensure watertight seal.
2. If unit is equipped with a backdraft damper. DO NOT install it. Perform steps 3 - 12 of General Ventilation Installation on page 11.

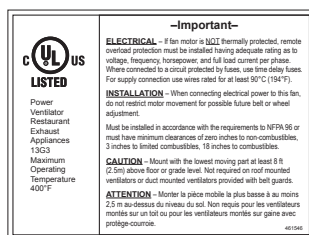
### IMPORTANT:

- The size of the duct must be equal to or larger than the inlet opening of the fan.

- To comply with NFPA 96, the fan discharge must be a minimum of 40 in. (1016 mm) above the roof surface and a minimum of 10 ft. (3048 mm) from any building air intake.
- Per NFPA 96, ductwork to an upblast discharge exhaust fan must be constructed of and supported by carbon steel not less than No. 6 MSG (1.52 mm) or stainless steel not less than No. 18 MSG (1.21 mm) in thickness. Duct must also extend a minimum of 18 in. (457 mm) above the roof surface.
- Ensure that a minimum of 500 ft/min of air velocity through the duct is maintained per NFPA 96, clause 8.2.1.1, 2014 edition and UL 762, Issue #7, clause 6.2, October 14, 2013.
- The following accessories may be required by NFPA 96 depending upon installation: Grease Trap, Hinge Kit or Hinged Base, Clean-Out Port, and Vented Curb.
- Minimum duct velocities must be maintained in kitchen exhaust applications. If a speed controller is used, ensure compliance with all applicable codes.



Representation of UL Listed  
Power Ventilator label



Representation of UL Listed  
Power Ventilator Restaurant Exhaust  
Appliances label

## GREASE TRAP INSTALLATION

The polypropylene grease trap is designed to collect grease residue and avoid drainage onto roof surface. Follow all local codes, as well as the National Fire Protection Agency (NFPA) where applicable.

**NFPA 96:** Upblast fans shall have a drain directed to a readily accessible and visible grease receptacle not to exceed 1 gal. (3.8L)

### Grease Trap Maintenance

Regular inspection of grease trap is recommended. Depending on the amount of grease discharged through the fan, the grease trap should be cleaned regularly to ensure proper operation.

## HINGE INSTALLATION

**NFPA 96:** Upblast exhaust fans shall be supplied with a hinge.

Refer to listed Installation, Operation and Maintenance Manuals for parts list and specific installation instructions:

- Sidewall Mount Hinge Kit
- Bracket Hinge Kit - Curb Cap Sizes 34" - 46"
- Hinge Kit With Cables - Curb Cap Sizes 19" - 30"

## PRE-STARTING CHECKS

1. Check all fasteners and setscrews for tightness. The wheel should rotate freely and be aligned as shown in Figure 8.

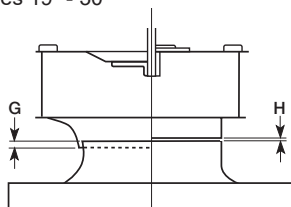


Figure 8 - Wheel Overlap and Gap Dimension

16D522-16D524, 1MBE7, 1MBE8, 20FT09, 20FT14, 2RB65, 2RB66, 3ATT8A, 3ATT9A, 4YY14, 4YY15, 56MW62-56MW68, 56JN91, 60KT20, 56JN92, 6KWJ9, 5DVL4	56JP01-56JP13, 56JN93-56JN96, 56JN98, 56JN99, 56MW69, 4YY22, 56MW70, 52CD35, 56MW71
--	--

Overlap  
(inches)

1/4

1/2

3/4

2. Wheel position is preset and the unit is test run at the factory. Movement may occur during shipment and realignment may be necessary.

Centering the wheel can be accomplished by loosening the bolts on the support pan and moving support pan until wheel is properly aligned. For units with drive frame mounting, loosen the bolts holding the drive frame to the vibration isolators and reposition the drive frame if additional movement is needed for wheel alignment.

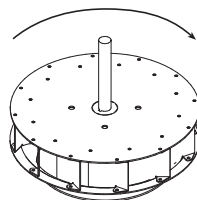


Figure 9

Wheel and inlet cone overlap can be adjusted by loosening the set-screws in the wheel hub and moving the wheel to the desired position.

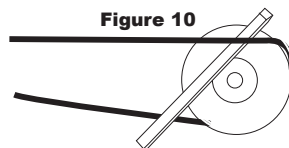
3. Check wheel rotation (viewing from the shaft side) by momentarily energizing the unit. Rotation should be clockwise as shown in Figure 9 and correspond to the rotation decal on the unit. If wheel rotation is incorrect, reverse two of the wiring leads or check motor wiring for single phase. Fan RPM should be checked and verified with a tachometer.

### **⚠ WARNING**

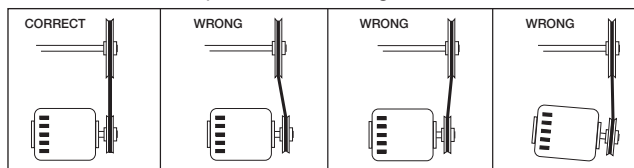
**Correct direction of wheel rotation is critical. Reversed rotation will result in poor air performance, motor overloading and possible motor burnout.**

## Belt Drive Pre-Starting Belt Tension Checks

4. Always loosen tension enough to instal belts without stretching. Do not force belt(s) see Figure 10. Forcing belts will break the cords and cause belt failure.

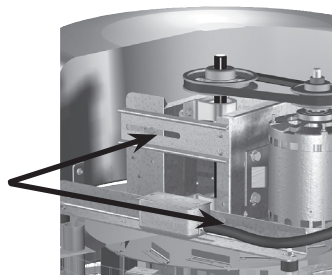


5. For units with two groove pulleys, adjust so the tension is equal in both belts.
6. If adjustments are made, it is very important to check the pulleys for proper alignment. Misaligned pulleys lead to excessive belt wear, vibration, noise and power loss, see Figure 11.



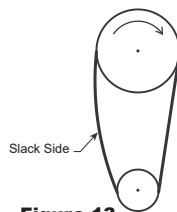
**Figure 11**

7. Belt tension can be adjusted by loosening four fasteners on the drive frame, see Figure 12. The motor plate slides on the slotted adjusting arms and drive frame angles in the same manner. Four (4) fasteners in total. Identical fasteners on opposing side must also be loosened.



**Figure 12**

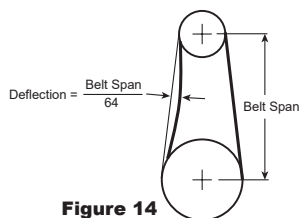
- 8a. Belts should be tensioned just enough to prevent slippage at full load. Belts should have a slight bow on the slack side while running at full load; see Figure 18a. 8b. Sizes 180-480: Belt tension should be adjusted to allow 1/64 in. (0.397 mm) of deflection per inch of belt span. For example, a 15 in. (381 mm) belt span should have 15/64 in. (5.95 mm) (or about 1/4 in. (6 mm)) of deflection with moderate thumb pressure at mid-point between pulleys, see Figure 13.



**Figure 13**

Models 2RB65, 2RB66, 3ATT8, 3ATT9, 56MW66, 56MW67, 56MW68, 4YY13, 4YY14, 4YY15, 56JN91, 56JN92, 5DVL4, 5DV06, 6KWJ9, 16D522, 16D523, 16D524, 56MW60, 20FT09, 20FT14, 56MW63, 56MW64, 56MW65: Belts should be tensioned just enough to prevent slippage at full load. Belts should have a slight bow on the slack side while running at full load. See Figure 13.

- 8b. Belt tension should be adjusted to allow 1/64 in. (0.397 mm) of deflection per inch of belt span. For example, a 15 in. (381 mm) belt span should have 15/64 in. (5.95 mm) (or about 1/4 in. (6 mm)) of deflection with moderate thumb pressure at mid-point between pulleys, see Figure 14.



**Figure 14**

Models 56JP02, 56JN99, 56JP01, 56JP05, 56JP07, 56JP10, 56JP12, 56MW69, 56JP11, 56MW70, 56JN93, 56JN94, 56JN95, 56MW71, 4YY22, 5DV07, 5DV08, 56JP04, 56JN96: Belt tension should be adjusted to allow 1/64 inch of deflection per inch of belt span when moderate thumb pressure is applied. See Figure 14.

9. The adjustable motor pulley is factory set for the RPM specified. Speed can be increased by closing or decreased by opening the adjustable motor pulley.
10. Any increase in speed represents a substantial increase in the horsepower required by the unit.
11. Motor amperage should always be checked to avoid serious damage to the motor when speed is varied.

**IMPORTANT:**

- The fan has been checked for mechanical noises at the factory prior to shipment. If mechanical noise should develop, suggested corrective actions are offered in the Troubleshooting section.
- Over tightening belts will cause excessive bearing wear and noise. Too little tension will cause slippage at startup and uneven wear.

**OPERATION**

1. Before starting up or operating fan, check all fasteners for tightness. In particular, check the setscrews in the wheel hub (or the tapered bushing and pulleys if applicable).
2. While in the OFF position or before connecting the fan to power, turn the fan wheel by hand to be sure it is not striking the venturi or any obstacle.
3. Start the fan and shut it off immediately to check rotation of the wheel with directional arrow in the motor compartment, reference Figure 14.
4. When the fan is started, observe the operation and check for any unusual noises.
5. With the system in full operation and all ductwork attached, measure current input to the motor and compare with the nameplate rating to determine if the motor is operating under safe load conditions.

6. Keep inlets and approaches to fan clean and free from obstruction.

**IMPORTANT:** Adjust (tighten) belt tension after the first 24-48 hours of operation.

## INSPECTION

Inspection of the fan should be conducted at the first 30 minute and 24 hour intervals of satisfactory operation.

**30 Minute Interval:** Inspect bolts, setscrews and motor mounting bolts. Adjust and tighten as necessary.

**24 Hour Interval:** Check all internal components. On belt drive unit only, inspect belt alignment and tension. Adjust and tighten as necessary.

## MAINTENANCE

### **⚠ WARNING**

*Disconnect and secure to the "off" position all electrical power to the fan prior to inspection or servicing. Failure to comply with this safety precaution could result in serious injury or death.*

### **⚠ CAUTION**

*This unit should be made non-functional when cleaning the wheel or housing (fuses removed, disconnect locked off).*

**IMPORTANT:** Uneven cleaning of the wheel will produce an out of balance condition that will cause vibration in the fan.

Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations and who are experienced with this type of equipment.

Motor maintenance is generally limited to cleaning and lubrication (where applicable). Cleaning should be limited to exterior surfaces only. Removing dust buildup on motor housing ensures proper motor cooling.

Greasing of motors is only intended when fittings are provided. Many fractional horsepower motors are permanently lubricated and should not be lubricated after installation. Motors supplied with grease fittings should be greased in accordance with manufacturer's recommendations. Where motor temperatures do not exceed 104°F (40°C), the grease should be replaced after 2,000 hours of running time as a general rule.

Wheels require very little attention when moving clean air. Occasionally, oil and dust may accumulate causing imbalance. When this occurs, the wheel and housing should be cleaned to ensure smooth and safe operation.

All fasteners should be checked for tightness each time maintenance checks are performed prior to restarting unit.

- When installing fans for restaurant exhaust applications follow NFPA 96 for cleaning fans.
- Grease containers must be emptied at regular intervals to prevent overflow.

A proper maintenance program will help these units deliver years of dependable service.

## BELT AND BEARING MAINTENANCE

1. Belts tend to stretch after a period of time. They should be checked periodically for wear and tightness. When replacing belts, use the same type as supplied with the unit.
2. Matched belts should always be used on units with multi-groove pulleys.
3. For belt replacement, loosen tensioning device enough to allow removal of the belt by hand.
4. Once installed, adjust belts as shown in "Pre-Starting Checks."
5. To ensure tightness, check pulley setscrews. Proper keys must be in keyways.
6. Fan RPM should not be readjusted. Only use pulleys of identical size and type when replacing pulleys.
7. Shaft bearings can be classified in two groups: relubricating and non-relubricating. All nonrelubricating bearings on belt drive fans are factory lubricated and require no further lubrication under normal use (between -20° to 180°F (-29° to 82°C) in a relatively clean environment).
8. On belt drive fans, the standard cast pillow block bearings are factory lubricated and are provided with external grease fittings. Annual lubrication is recommended, or more frequently if needed, see Table 1. Do not over-grease. Use only one or two shots of lubricant with a hand gun. Maximum hand gun rating is 40 psi. Rotate bearings during lubrication where good safety practice permits. Caution should be employed to prevent over packing or contamination.
9. Units installed in hot, humid or dirty locations should be equipped with special bearings. These bearings will require frequent lubrication. Caution should be employed to prevent over packing or contamination.
10. Grease fittings should be wiped clean. The unit should be in operation while lubricating bearings. Extreme care should be used around moving parts.
11. Grease should be pumped in very slowly until a slight bead forms around the seal. A high grade lithium base grease, conforming to NLGI Grade 2 consistency, such as **Mobil Oil Corporation - Mobilith or Mobil 532**.
12. During the first few months of operation, check bearing set screws periodically to ensure tightness.
13. If unit is to be left idle for an extended period, remove belts and store in a cool, dry place to avoid premature belt failure.

## Recommended Re-lubrication Frequency in Months

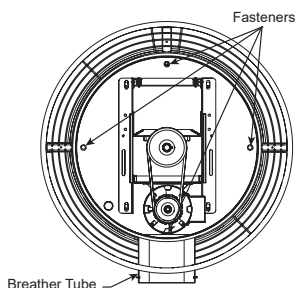
NOTE: If unusual environment conditions exist (extreme temperature, moisture or contaminants) more frequent lubrication is required.

A high grade lithium base grease, conforming to NLGI Grade 2 consistency, such as **Mobil Oil Corporation - Mobilith or Mobil 532**.

### Suggested Fan Bearing Lubrication Intervals

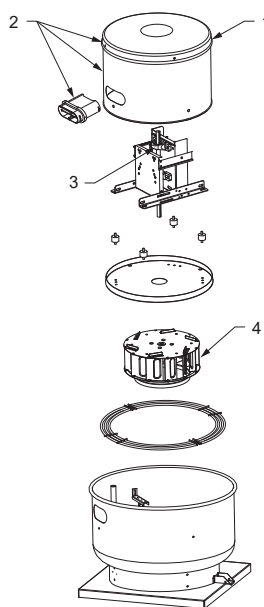
Interval (Months)	Type of Service
1 to 3	Heavy duty in dirty, dusty locations; high ambient temperatures; moisture laden atmosphere; vibration
3 to 6	12 to 24 hours per day, heavy duty, or if moisture is present
6 to 12	8 to 16 hours per day in clean, relatively dry atmosphere
12 to 18	Infrequent operation or light duty in clean atmosphere

- Do not over-grease. Use only one or two shots of lubricant with a hand gun. Maximum hand gun rating is 40 psi. Rotate bearings during lubrication where good safety practice permits. Caution should be employed to prevent over packing or contamination.



- For conditions including high temperatures, moisture, dirt or excessive vibration, more frequent lubrication is recommended.
- The use of synthetic lubricants will increase lubrication intervals by approximately 3 times.

## REPAIR PARTS ILLUSTRATION FOR LESS MOTOR/DRIVES VENTILATORS



## REPAIR PARTS LIST FOR LESS MOTOR/DRIVES VENTILATORS

Ref. No.	Description	Part Number for Models:					Qty.
		56MW62	56JP08	2RB65	2RB66	20FT14	
1	Cover	21DY74	21DY74	21DY73	21DY74	21DY73	1
2	Hood Assembly	21DZ05	21DZ56	21DZ02	21DZ05	21DZ02	1
3	Bearing	35JF72	21DT70	21DW60	21DW60	21DW60	2
4	Wheel	21DX93	21DX94	21DP32	21DP34	21DY92	1

Ref. No.	Description	Part Number for Models:					Qty.
		4YY14	4YY15	56JN91	56JN92	56JN93	
1	Cover	21DY73	21DY73	21DY74	21DY74	21DY75	1
2	Hood Assembly	21DZ02	21DZ02	21DZ05	21DZ05	21DZ56	1
3	Bearing	21DW60	21DW60	21DW60	21DW60	35JF72	2
4	Wheel	21DY90	21DZ41	21DW40	21DZ43	21DZ39	1

Ref. No.	Description	Part Number for Models:					Qty.
		56JN94	56JN95	56MW71	4YY22	5DVL4	
1	Cover	21DY75	21DY71	21DZ17	21DZ18	21DY73	1
2	Hood Assembly	21DZ56	21DZ58	21DZ60	21DZ62	21DZ02	1
3	Bearing	35JF72	21DT70	21DT70	21DW58	21DW60	2
4	Wheel	21DZ40	21DZ42	21DZ51	21DZ52	21DY82	1

Ref. No.	Description	Part Number for Models:					Qty.
		6KWJ9	56JP04	16D522	16D523	16D524	
1	Cover	21DY73	21DY75	21DY73	21DY73	21DY74	1
2	Hood Assembly	21DZ02	21DZ56	21DZ02	21DZ02	21DZ05	1
3	Bearing	21DW60	35JF72	21DW60	21DW60	21DW60	2
(*)	Aluminum Rub Ring	21DP94	21DP94	—	—	—	1
(*)	Conduit Conversion Kit	33M295	33M296	—	—	—	1
4	Wheel	21DY90	21DZ39	21DY90	21DY82	21DW40	1

Ref. No.	Description	Part Number for Models:					Qty.
		56MW60	56JN96	56MW63	56MW64	56MW65	
1	Cover	21DY74	21DZ17	21DY73	21DY74	21DY74	1
2	Hood Assembly	21DZ05	21DZ60	21DW19	21DW20	21DW20	1
3	Bearing	21DW60	21DT70	21DW60	21DW60	21DW60	2
(*)	Aluminum Rub Ring	—	—	21DP94	21DP94	21DP94	1
(*)	Conduit Conversion Kit	—	—	33M295	33M295	33M295	1
4	Wheel	21DZ43	21DZ51	21DZ41	21DW40	21DZ43	1

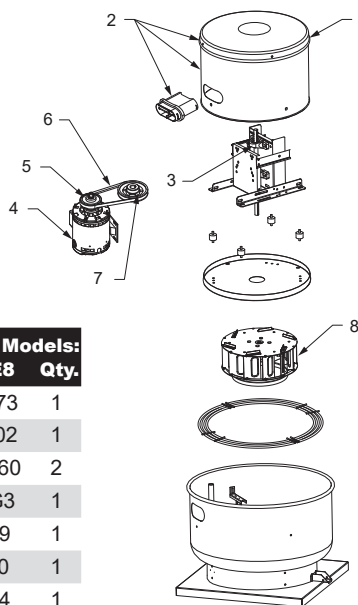
Ref. No.	Description	Part Number for Models:				Qty.
		56JP03	56JP09	56JP13	52CD35	
1	Cover	21DY75	21DY71	21DY71	21DZ17	1
2	Hood Assembly	21DZ56	62XJ30	21DZ58	21DZ60	1
3	Bearing	35JF72	21DT70	21DT70	21DT70	2
4	Wheel	21DV94	21DV95	21DV95	62XJ35	1

(\*) Not Shown.

## REPAIR PARTS ILLUSTRATION FOR ASSEMBLED VENTILATORS

### REPAIR PARTS LIST FOR ASSEMBLED VENTILATORS

Ref. No.	Description	Part Number for Models:			Qty.
		1MBE7	1MBE8		
1	Cover	21DY73	21DY73	1	
2	Hood Assembly	21DZ02	21DZ02	1	
3	Bearing	21DW60	21DW60	2	
4	Motor	1AGG2	1AGG3	1	
5	Driver Sheave	3X779	3X779	1	
6	Belt	3VU39	4L230	1	
7	Driven Sheave	3X275	3X264	1	
8	Wheel	21DY90	21DZ41	1	



Ref. No.	Description	Part Number for Models:					Qty.
		56MW61	20FT09	3ATT8A	3ATT9A	56MW66	
1	Cover	21DY74	21DY73	21DY74	21DY74	21DY74	1
2	Hood Assembly	21DZ05	21DZ02	21DZ05	21DZ05	21DZ05	1
3	Bearing	21DW60	21DW60	21DW60	21DW60	21DW60	2
4	Motor	4YU30	1AGG1	1AGG3	4YU30	4YU38	1
5	Driver Sheave	3X587	5UHP7	3X276	3X264	3X264	1
6	Belt	3VU41	3L180	4L270	3VU40	3VU40	1
7	Driven Sheave	3X264	14A167	3X589	3X583	3X583	1
(*)	Driver Bushing	3X573	—	3X573	3X573	3X573	1
8	Wheel	21DZ43	21DY92	21DW40	21DW40	21DW40	1

Ref. No.	Description	Part Number for Models:					Qty.
		56MW67	56MW68	56JP02	56JN99	56JP01	
1	Cover	21DY74	21DY74	21DY75	21DY75	21DY75	1
2	Hood Assembly	21DZ05	21DZ05	21DZ56	21DZ56	21DZ56	1
3	Bearing	21DW60	21DW60	35JF72	35JF72	35JF72	2
4	Motor	4YU35	4YU38	4YU35	4YU31	4YU39	1
5	Driver Sheave	3X276	3X438	3X276	3X276	3X276	1
6	Belt	4L290	6A139	4L310	3X697	3X697	1
7	Driven Sheave	3X591	3X591	4HZ83	3X589	3X589	1
(*)	Driver Bushing	3X573	3X573	3X573	3X573	3X573	1
8	Wheel	21DZ43	21DZ43	21DZ39	21DZ39	21DZ39	1
Ref. No.	Description	Part Number for Models:					Qty.
		56JP05	56JP07	56JP10	56JP12	56MW69	
1	Cover	21DY75	21DY75	21DY71	21DY71	21DZ17	1
2	Hood Assembly	21DZ56	21DZ56	21DZ58	21DZ58	21DZ60	1
3	Bearing	35JF72	35JF72	21DT70	21DT70	21DT70	2
4	Motor	4YU30	4YU40	4YU31	6XWJ0	53J909	1
5	Driver Sheave	3X264	3X438	3X264	3X946	2L486	1
6	Belt	6A140	6A141	6A142	6A145	6X875	1
7	Driven Sheave	4HZ83	4HZ83	4HZ85	3X600	3X607	1
(*)	Driver Bushing	3X573	3X573	3X576	3X576	3X576	1
8	Wheel	21DZ40	21DZ40	21DZ42	21DZ42	21DZ51	1
Ref. No.	Description	Part Number for Models:					Qty.
		56JP11	56MW70	60KT20	56JN98	56JP06	
1	Cover	21DY71	21DZ17	21DY74	21DY75	21DY75	1
2	Hood Assembly	21DZ58	21DZ60	21DY96	21DZ56	21DZ56	1
3	Bearing	21DT70	21DT70	21DW60	35JF72	35JF72	2
4	Motor	4YU40	6XWJ0	4YU35	4YU30	4YU31	1
5	Driver Sheave	3X264	3X945	3X263	3X264	3X264	1
6	Belt	6A116	3X471	3VU40	6A139	6A139	1
7	Driven Sheave	3X795	3X604	3X775	3X789	3X791	1
8	Wheel	21DZ42	21DZ51	21DW40	21DZ39	21DZ40	1

(\*) Not Shown.

## TROUBLESHOOTING GUIDE

Symptom	Possible Cause(s)	Corrective Action
Ventilator inoperative	<ol style="list-style-type: none"> <li>1. Blown fuse or breaker</li> <li>2. Defective motor</li> <li>3. Incorrectly wired</li> <li>4. Broken belts</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace or repair</li> <li>2. Replace or repair</li> <li>3. Shut power OFF and check wiring for proper connections</li> <li>4. Replace</li> </ol>
Excessive noise or vibration	<ol style="list-style-type: none"> <li>1. Belt(s) too loose/tight</li> <li>2. Loose or defective bearings</li> <li>3. Loose wheel or sheaves</li> <li>4. Accumulation of material on wheel</li> <li>5. Mis-aligned sheaves</li> <li>6. Ventilator base not securely anchored</li> <li>7. Motor hood loose and rattling</li> <li>8. Ventilator wheel out of balance</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tension</li> <li>2. Replace bearings</li> <li>3. Tighten set screws</li> <li>4. Clean</li> <li>5. Re-align</li> <li>6. Secure properly</li> <li>7. Tighten acorn nuts securing motor hood</li> <li>8. Replace wheel</li> </ol>
Insufficient airflow	<ol style="list-style-type: none"> <li>1. Blocked duct or clogged filters</li> <li>2. Speed too slow</li> <li>3. Damper closed</li> <li>4. Belt slippage</li> <li>5. Incorrect wheel rotation</li> <li>6. Loose fitting duct sections permitting air loss</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean or replace</li> <li>2. Check for correct drives</li> <li>3. Inspect/repair</li> <li>4. Replace/adjust tension</li> <li>5. Check motor wiring</li> <li>6. Check for secure connection where duct sections are joined (suggest duct tape at seams for sealed closure)</li> </ol>
Motor overloads or overheats	<ol style="list-style-type: none"> <li>1. Wheel RPM too high</li> <li>2. Shorted motor winding</li> <li>3. Incorrect wheel rotation</li> <li>4. Over/Under line voltage</li> <li>5. Belt slippage</li> </ol>	<ol style="list-style-type: none"> <li>1. Check drives</li> <li>2. Replace motor</li> <li>3. Check motor wiring</li> <li>4. Contact Power Company</li> <li>5. Tighten belt</li> </ol>

## **DAYTON ONE-YEAR LIMITED WARRANTY**

**DAYTON ONE-YEAR LIMITED WARRANTY.** All Dayton® product models covered in this manual are warranted by Dayton Electric Mfg. Co. ("Dayton") to the original user against defects in workmanship or materials under normal use for one year after date of purchase. If the Dayton product is part of a set, only the portion that is defective is subject to this warranty. Any product or part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton or Dayton's designee designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced with a new or reconditioned product or part of equal utility or a full refund given, at Dayton's or Dayton's designee's option, at no charge. For limited warranty claim procedures, see "Warranty Service" below. This warranty is void if there is evidence of misuse, mis-repair, mis-installation, abuse or alteration. This warranty does not cover normal wear and tear of Dayton products or portions of them, or products or portions of them which are consumable in normal use. This limited warranty gives purchasers specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

### **WARRANTY DISCLAIMERS AND LIMITATIONS OF LIABILITY RELATING TO ALL CUSTOMERS FOR ALL PRODUCTS**

**LIMITATION OF LIABILITY.** TO THE EXTENT ALLOWABLE UNDER APPLICABLE LAW, DAYTON'S LIABILITY FOR CONSEQUENTIAL AND INCIDENTAL DAMAGES IS EXPRESSLY DISCLAIMED. DAYTON'S LIABILITY IN ALL EVENTS IS LIMITED TO AND SHALL NOT EXCEED THE PURCHASE PRICE PAID.

**WARRANTY DISCLAIMER.** A DILIGENT EFFORT HAS BEEN MADE TO PROVIDE PRODUCT INFORMATION AND ILLUSTRATE THE PRODUCTS IN THIS LITERATURE ACCURATELY; HOWEVER, SUCH INFORMATION AND ILLUSTRATIONS ARE FOR THE SOLE PURPOSE OF IDENTIFICATION, AND DO NOT EXPRESS OR IMPLY A WARRANTY THAT THE PRODUCTS ARE MERCHANTABLE, OR FIT FOR A PARTICULAR PURPOSE, OR THAT THE PRODUCTS WILL NECESSARILY CONFORM TO THE ILLUSTRATIONS OR DESCRIPTIONS. EXCEPT AS PROVIDED BELOW, NO WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS STATED IN THE "LIMITED WARRANTY" ABOVE IS MADE OR AUTHORIZED BY DAYTON.

**PRODUCT SUITABILITY.** MANY JURISDICTIONS HAVE CODES AND REGULATIONS GOVERNING SALES, CONSTRUCTION, INSTALLATION, AND/OR USE OF PRODUCTS FOR CERTAIN PURPOSES, WHICH MAY VARY FROM THOSE IN NEIGHBORING AREAS. WHILE ATTEMPTS ARE MADE TO ASSURE THAT DAYTON PRODUCTS COMPLY WITH SUCH CODES, DAYTON CANNOT GUARANTEE COMPLIANCE, AND CANNOT BE RESPONSIBLE FOR HOW THE PRODUCT IS INSTALLED OR USED. BEFORE PURCHASE AND USE OF A PRODUCT, REVIEW THE SAFETY/SPECIFICATIONS, AND ALL APPLICABLE NATIONAL AND LOCAL CODES AND REGULATIONS, AND BE SURE THAT THE PRODUCT, INSTALLATION, AND USE WILL COMPLY WITH THEM.

**CONSUMERS ONLY.** CERTAIN ASPECTS OF DISCLAIMERS ARE NOT APPLICABLE TO CONSUMER PRODUCTS SOLD TO CONSUMERS; (A) SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU; (B) ALSO, SOME JURISDICTIONS DO NOT ALLOW A LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU; AND (C) BY LAW, DURING THE PERIOD OF THIS LIMITED WARRANTY, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO CONSUMER PRODUCTS PURCHASED BY CONSUMERS, MAY NOT BE EXCLUDED OR OTHERWISE DISCLAIMED.

**THIS LIMITED WARRANTY ONLY APPLIES TO UNITED STATES PURCHASERS FOR DELIVERY IN THE UNITED STATES.**

### **WARRANTY SERVICE**

To obtain warranty service if you purchased the covered product directly from W.W. Grainger, Inc. ("Grainger"), (i) write or call or visit the local Grainger branch from which the product was purchased or another Grainger branch near you (see [www.grainger.com](http://www.grainger.com) for a listing of Grainger branches); or (ii) contact Grainger by going to [www.grainger.com](http://www.grainger.com) and clicking on the "Contact Us" link at the top of the page, then clicking on the "Email us" link; or (iii) call Customer Care (toll free) at 1-888-361-8649. To obtain warranty service if you purchased the covered product from another distributor or retailer, (i) go to [www.grainger.com](http://www.grainger.com) for Warranty Service; (ii) write or call or visit a Grainger branch near you; or (iii) call Customer Care (toll free) at 1-888-361-8649. In any case, you will need to provide, to the extent available, the purchase date, the original invoice number, the stock number, a description of the defect, and anything else specified in this Dayton One-Year Limited Warranty. You may be required to send the product in for inspection at your cost. You can follow up on the progress of inspections and corrections in the same ways. Title and risk of loss pass to buyer on delivery to common carrier, so if product was damaged in transit to you, file claim with carrier, not retailer, Grainger or Dayton. For warranty information for purchasers and/or delivery outside the United States, please use the following applicable contact information:

**Dayton Electric Mfg. Co.,  
100 Grainger Parkway, Lake Forest, IL 60045 U.S.A.  
or call +1-888-361-8649**