

[®]
Dayton



Centrifugal Direct-Drive Upblast Exhaust Ventilators

Models 4HZ32G-4HZ59G, 5DVN6-5DVN9,
5DVP0-5DVP9, 5DVR0, 5DVR1, 5DVR2A-5DVR4A,
6KWH7, 6KWH8, 6KWH9A, 6KWJ0A, 6KWJ1A, 6KWJ3,
20FT10-20FT13, 20FT15, 36WG76-36WG83,
48C178-48C187, 52CD36-52CD41

®
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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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 and Mounting Fasteners (8)
- Sealant or Caulk
- Tachometer

Recommended Accessories:

- NEMA 1 (1H400, 1H401) / NEMA 4 (1H408, 1H409) Disconnect Switch
- Non-Ventilated (2RB75-2RB79, 2ZV82, 2ZV83) / Ventilated (4HX54-4HX57, 4HX61-4HX62) Roof Curb
- Roof Curb Adapter (3AZK1-3AZK9, 3AZL1-3AZL3)
- Round to Square Ventilator Base Adapter (6KWJ4-6KWJ8)
- Grease Collector Box (48C174)
- Hinge Kit (4HX79, 20CK47-20CK56)
- Clean-Out Port Kit (3ATV9)
- Speed Control (48C172, 48C173, 43Y140, 35YV92-35YV94)
- Damper (3TZ50, 4HX64-4HX70, 4HX72-4HX74, 4HX77)
- Birdscreen (4YY78-4YY83)

UNPACKING



Contents:

- Dayton® Centrifugal Direct-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

⚠ DANGER Do not depend on any switch as the sole means of disconnecting power when installing or servicing the ventilator. 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 ventilator, motor openings or drives while motor is connected to power source.

⚠ WARNING Do not use this equipment in explosive atmospheres unless motor and disconnect are suitable for use in hazardous environments.

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

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

UL/cUL Standards require OSHA complying guards when fan is installed within 8 feet of floor or working level.

1. Read and follow all instructions and cautionary markings. Make sure electrical power source conforms to requirements of equipment and local codes.
2. Ventilators 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), the Occupational Safety and Health Act (OSHA), and the National Fire Protection Association (NFPA) Bulletin 96 in the United States. Ground motor in accordance with NEC Article 250 (grounding). Follow the Canadian Electric Code (CEC) in Canada.
4. The rotation of the wheel is critical. It must be free to rotate without striking or rubbing any stationary objects.
5. Unit must be securely and adequately grounded.
6. Do not exceed the max cataloged fan RPM. Adjustments to fan speed significantly affects motor load. If the ventilator RPM is changed, the motor current should be checked to make sure it is not exceeding the motor nameplate amps.
7. 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.
8. Never open access door to a duct with the ventilator running.

SPECIFICATIONS

Model	130°F	300°F	130°F	300°F
	4HZ32G, 4HZ33G, 5DVN6, 5DVN8, 5DVP0, 5DVP2, 5DVP4, 5DVP06, 48C178 ^Δ , 48C179 ^Δ	20FT10, 20FT11, 4HZ40G, 4HZ41G, 4HZ44G, 4HZ45G, 4HZ48G, 4HZ49G, 4HZ52G, 4HZ53G, 4HZ56G, 4HZ57G, 5DVP8, 5DVR0, 5DVR2 ^Δ - 5DVR4 ^Δ , 6KWH7, 6KWH8, 20FT10, 20FT11, 36WG76 ^Δ - 36WG79 ^Δ , 48C180 ^Δ - 48C182 ^Δ , 52CD36 ^Δ - 52CD38 ^Δ	4HZ34G, 4HZ35G, 5DVN7, 5DVN9, 5DVP1, 5DVP3, 5DVP5, 5DVP7, 48C183 ^Δ , 48C184 ^Δ	20FT12, 20FT13, 4HZ42G, 4HZ43G, 4HZ46G, 4HZ47G, 4HZ50G, 4HZ51G, 4HZ54G, 4HZ55G, 4HZ58G, 4HZ59G, 5DVP9, 5DVR1, 6KWH9 ^Δ , 6KWJ0A ^Δ , 6KWJ1A ^Δ , 6KWJ3 ^Δ , 20FT12, 20FT13, 20FT15 ^Δ , 36WG80 ^Δ - 36WG83 ^Δ , 48C185 ^Δ - 48C187 ^Δ , 52CD39 ^Δ - 52CD41 ^Δ

Max. Inlet Temp.	130°F	300°F	130°F	300°F
Mounting Location	Roof	Roof	Wall	Wall
Housing Material	Roof	Roof	Spun Aluminum	Wall
Wheel Type	Roof	Roof	Aluminum, Backward Inclined Centrifugal	Wall
Includes	Roof	Roof	NEMA 1 Junction Box, ^Δ , [▲]	Wall
Agency Compliance	UL/cUL 705	UL/cUL 762*	UL/cUL 705	UL/cUL 762*
Agency Compliance	UL/cUL 705	UL/cUL 762*	AMCA Sound and Air	UL/cUL 762*

^Δ Electronically commutated ventilators include motor mounted potentiometer dial to adjust speed. Optional remote mount speed control kit 43Y140 can be purchased separately.

[▲] Ventilators 20FT15 and 6KWJ3 feature spark-resistant aluminum wheel, rub ring, factory mounted NEMA 7&9 disconnect switch and explosion proof motor which may be used to exhaust potential flammable particles or fumes. Motors are UL Listed for Class I, Groups C&D and Class II, Groups F&G for hazardous locations.

* Ventilators 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.



Dimensions Wall-Mount (inches)

	4HZ34G	5DVP1	20FT12	48C183	5DVP7	48C184	4HZ43G	6KWH9A	20FT15	5DVP9	48C185	4HZ46G	48C186
	4HZ35G	5DVP3	20FT13	5DVP5	4HZ42G	48C184	4HZ43G	6KWH9A	20FT15	5DVP9	48C185	4HZ46G	48C186
	5DVP7	5DVP5	4HZ42G	48C183	5DVP7	48C184	4HZ43G	6KWH9A	20FT15	5DVP9	48C185	4HZ46G	48C186
	48C183	5DVP7	48C184	4HZ43G	6KWH9A	20FT15	5DVP9	48C185	4HZ46G	48C186	36WG80	48C187	36WG83
Base Dia.	14-3/4	14-3/4	17-7/8	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4	19-3/4
Wheel Dia.	8-1/4	8-1/4	11	11	11	11	11	11	11	11	12-1/2	13-1/4	13-1/4
Shaft Dia.	1/2	5/16	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	5/8
Recommended Wall Opening (Sq.)	8-1/2	8-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
Recommended Damper Size (Sq.)	8	8	10	10	12	12	12	12	12	12	12	12	12
Recommended Speed Control	43Y140	48C172	48C172	43Y140	48C172	43Y140	—	43Y140	48C172	43Y140	48C172	48C172	—
	4HZ50G	52CD40	36WG81	4HZ55G	4HZ54G	52CD41	4HZ59G	36WG83	5DVR1				
	4HZ51G	52CD40	36WG81	4HZ55G	4HZ54G	52CD41	4HZ59G	36WG83	5DVR1				
Base Dia.	22-1/8	22-1/8	22-1/8	22-1/8	22-1/8	22-1/8	22-1/8	22-1/8	27-3/4	27-3/4	27-3/4	27-3/4	
Wheel Dia.	14-3/4	14-3/4	14-3/4	16-1/2	16-1/2	16-1/2	16-1/2	16-1/2	18-1/2	18-1/2	18-1/2	18-1/2	
Shaft Dia.	1/2	1/2	5/8	1/2	5/8	5/8	5/8	5/8	1/2	5/8	5/8	5/8	
Recommended Wall Opening (Sq.)	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2	17-1/2	17-1/2	17-1/2	17-1/2	
Recommended Damper Size (Sq.)	15	15	15	15	15	15	15	15	17	17	17	17	
Recommended Speed Control	48C172	43Y140	43Y140	48C173	48C172	43Y140	—	43Y140	—	43Y140	—	—	

PERFORMANCE

Model 115V, 1-Phase	HP	Model – ECM 115V, 1-Phase	HP	RPM	Max BHP	Sones @ .125" SP @ 5 Ft.		
5DVN6, 5DVN7	1/60	—	—	1050	0.01	—		
				1300	0.01	2.5		
				1550	0.02	4.0		
4HZ32G, 4HZ34G	1/30	—	—	1050	0.01	—		
				1300	0.02	2.9		
				1550	0.03	4.1		
5DVN8, 5DVN9	1/30	—	—	1050	0.01	—		
				1300	0.02	2.4		
				1550	0.03	4.7		
—	—	48C178, 48C183	1/6	860	0.01	—		
4HZ33G, 4HZ35G	1/25			—	—	1050	0.01	—
						1300	0.02	3.4
						1550	0.04	4.9
—	—			—	—	1140	0.02	—
—	—					1725	0.06	6.1
5DVP0, 5DVP1	1/20	—	—			1050	0.02	4.2
				1300	0.03	5.5		
				1550	0.05	7.2		
5DVP2, 5DVP3	1/20	—	—	1050	0.02	4.3		
				1300	0.04	5.3		
				1550	0.06	7.4		
—	—	48C179, 48C184	1/6	860	0.02	—		
5DVP4, 5DVP5	1/15			—	—	1050	0.03	4.2
						1300	0.05	5.4
						1550	0.09	7.5
—	—			—	—	1140	0.04	4.6
—	—					1725	0.12	9.4
5DVP6, 5DVP7	1/8	—	—			1050	0.04	4.5
				1300	0.07	6.4		
				1550	0.12	8.5		
20FT10, 20FT12	1/6	—	—	1140	0.07	7.0		
20FT11, 20FT13 20FT15▲	1/4	—	—	1725	0.25	13.8		
—	—	52CD36, 52CD39	1/2	1300	0.067	—		
—	—			1900	0.21	—		
—	—			2500	0.44	—		



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								
.000"	.125"	.250"	.375"	.500"	.750"	1.00"	1.25"	1.50"
133	81	—	—	—	—	—	—	—
165	126	70	—	—	—	—	—	—
197	164	128	—	—	—	—	—	—
180	109	—	—	—	—	—	—	—
223	170	97	—	—	—	—	—	—
266	222	172	95	—	—	—	—	—
250	171	—	—	—	—	—	—	—
309	255	152	—	—	—	—	—	—
369	325	269	160	—	—	—	—	—
235	95	—	—	—	—	—	—	—
287	188	—	—	—	—	—	—	—
356	279	185	—	—	—	—	—	—
424	359	291	204	—	—	—	—	—
312	222	—	—	—	—	—	—	—
472	413	355	289	199	—	—	—	—
325	247	133	—	—	—	—	—	—
403	343	272	173	—	—	—	—	—
480	431	376	314	235	—	—	—	—
389	305	182	—	—	—	—	—	—
481	416	340	235	—	—	—	—	—
574	520	461	395	312	—	—	—	—
450	324	—	—	—	—	—	—	—
549	451	306	—	—	—	—	—	—
680	600	517	391	—	—	—	—	—
811	744	677	604	501	—	—	—	—
596	505	395	—	—	—	—	—	—
903	842	782	722	652	420	—	—	—
711	570	381	—	—	—	—	—	—
880	774	641	484	199	—	—	—	—
1049	964	861	747	616	—	—	—	—
833	754	665	565	408	—	—	—	—
1260	1209	1156	1100	1041	918	759	639	—
—	—	—	—	335	—	—	—	—
—	—	—	—	688	610	520	382	—
—	—	—	—	977	929	878	815	750

Performance certified is for installation type A: Free inlet, Free outlet. 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.

‡ 208-230V, 1-Phase

† 208-230/460V, 3-Phase

▲ Motors are UL Listed for use in hazardous locations.

PERFORMANCE CONTINUED

Model 115V, 1-Phase	HP	Model – ECM 115V, 1-Phase	HP	RPM	Max BHP	Sones @ .125" SP @ 5 Ft.
—	—	—	—	860	0.04	0.6
4HZ40G, 4HZ42G	1/6	5DVR2A, 6KWH9	1/4	1140	0.09	6.5
4HZ41G, 4HZ43G, 6KWJ3▲	1/4	—	—	1725	0.29	12.5
—	—	—	—	1275	0.17	—
—	—	52CD37, 52CD40	3/4	1725	0.38	—
—	—	—	—	2200	0.75	—
—	—	—	—	860	0.06	5.6
—	—	48C180, 48C185	1/2	1140	0.14	8.2
5DVP8, 5DVP9	1/2	—	—	1725	0.48	16.7
4HZ44G, 4HZ46G	1/8	—	—	860	0.07	7.7
—	—	36WG76‡, 36WG80‡, 48C181, 48C186	3/4	1140	0.17	11.8
4HZ45G, 4HZ47G	3/4	—	—	1725	0.60	18.4
4HZ48G, 4HZ50G	1/8	—	—	860	0.12	7.1
4HZ49G, 4HZ51G	1/4	—	—	1140	0.29	11.0
4HZ52G, 4HZ54G	1/4	—	—	860	0.25	9.9
—	—	—	—	1050	0.22	9.8
—	—	5DVR3A, 6KWJ0, 36WG77‡, 36WG81‡	3/4	1300	0.43	12.8
—	—	—	—	1550	0.72	17.5
—	—	—	—	550	0.07	—
—	—	5DVR4A, 6KWJ1A, 36WG78‡, 36WG82‡	3/4	860	0.25	9.9
4HZ53G, 4HZ55G, 6KWH7†	—	—	—	1140	0.58	14.8
—	—	—	—	1065	—	—
—	—	52CD38, 52CD41	1	1340	—	—
—	—	—	—	1725	—	—
—	—	—	—	745	0.26	8.1
4HZ56G, 4HZ58G	1/2	36WG79‡, 36WG83‡, 48C182, 48C187	1	860	0.40	11.1
—	—	—	—	1000	0.63	14.7
4HZ57G, 4HZ59G, 6KWH8†	1	—	—	1140	0.93	16.5
5DVR0†, 5DVR1†	2	—	—	1140	1.74	23

‡ 208-230V, 1-Phase

† 208-230/460V, 3-Phase

▲ Motors are UL Listed for use in hazardous locations.

CFM Air Delivery @ Static Pressure Shown								
.000"	.125"	.250"	.375"	.500"	.750"	1.00"	1.25"	1.50"
732	625	481	—	—	—	—	—	—
970	897	806	707	—	—	—	—	—
1468	1422	1373	1315	1255	1129	970	—	—
—	—	—	—	833	700	492	—	—
—	—	—	—	1256	1178	1098	999	879
—	—	—	—	1669	1617	1557	1496	1434
1015	905	781	581	—	—	—	—	—
1346	1261	1180	1091	981	—	—	—	—
2037	1979	1923	1869	1816	1710	1571	1406	1176
1180	1057	914	675	—	—	—	—	—
1564	1471	1379	1280	1144	—	—	—	—
2366	2305	2244	2183	2122	1994	1838	1646	1365
1558	1427	1264	1034	—	—	—	—	—
2065	1973	1864	1745	1605	1167	—	—	—
2472	2315	2126	1918	1680	—	—	—	—
1902	1800	1680	1540	1372	—	—	—	—
2355	2277	2186	2086	1979	1717	1269	—	—
2808	2743	2671	2594	2509	2329	2110	1823	1349
1581	1303	—	—	—	—	—	—	—
2472	2315	2156	1918	1680	—	—	—	—
3277	3161	3035	2896	2745	2421	1983	—	—
—	—	—	—	1487	1252	—	—	—
—	—	—	—	2053	1897	1724	1513	—
—	—	—	—	2787	2680	2560	2439	2310
2815	2617	2448	2143	1763	—	—	—	—
3249	3074	2922	2732	2474	—	—	—	—
3778	3625	3486	3362	3190	2738	—	—	—
4307	4173	4045	3927	3822	3470	3072	2477	—
6412	6224	6036	5855	5674	5283	4837	4276	3445

Performance certified is for installation type A: Free inlet, Free outlet. 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.

INSTALLATION INSTRUCTIONS

▲ WARNING Installation, troubleshooting and parts replacement are to be performed only by qualified personnel. Consult and follow NFPA 96 recommendations. NFPA 96 instructions supersede this document.

▲ CAUTION Do not raise unit by its windband. Avoid lifting ventilator in a way that will bend or distort fan parts. Never pass slings or timbers through the venturi of unit.

UL-705 Roof-Mount Installation

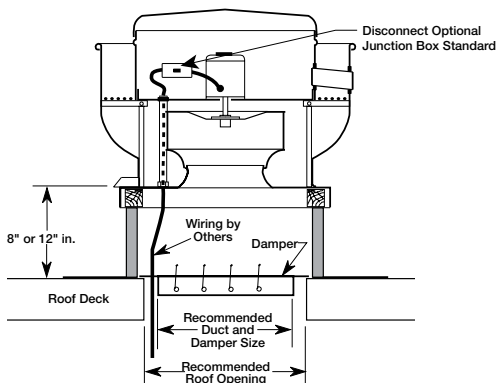


Figure 3

NOTE: Mount unit with a Dayton® roof curb (purchased separately).

1. Cut an appropriate sized hole in the roof surface. Refer to Dimensions on page 4. Follow curb manufacturer's installation instructions. Caulk and flash curb to ensure a water tight seal.
2. Install optional backdraft damper. Secure damper flange to curb damper tray.
3. Remove motor compartment cover by removing fasteners. Place cover on a flat surface in an area protected from strong winds.
4. Lift and place the unit on top of roof curb.
5. Secure ventilator to roof curb using a minimum of eight fasteners.
6. Rotate the wheel by hand to ensure that it does not rub and rotates freely. Wheel position is preset and the unit is test run at the factory. Movement may occur during shipment and realignment may be necessary. Refer to Figure 4 and chart for proper overlap dimensions.

	4HZ240G, 4HZ241G, 4HZ244G, 4HZ245G, 4HZ248G, 4HZ249G,	4HZ256G,	
	4HZ252G, 4HZ253G, 5DVP8,	4HZ257G,	
	5DVN6, 5DVN8,	5DVR0,	
	5DVP0, 5DVP2,	6KWH7,	
	5DVP4, 5DVP6,	20FT10, 20FT11, 36WG76-	
	48C178, 48C179	36WG78, 48C180, 48C181,	
		52CD36-52CD38	
Model		48C182	
Overlap (inches)	–	1/4	1/2
Gap (inches)	3/32	–	–

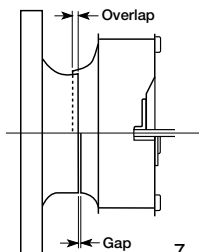


Figure 4

- a. Centering can be accomplished by loosening the fasteners holding the drive frame to the shock mounts and repositioning the drive frame.
 - b. Wheel and inlet cone overlap can be adjusted by loosening the set screws in the wheel and moving the wheel to the desired position. Tighten all fasteners and set screws securely.
7. Check all fasteners for tightness.
 8. The motor's amperage and voltage rating must be checked for compatibility to the supply voltage prior to final electrical connection. Mount and wire safety disconnect switch under ventilator cover and wire motor per connection wiring diagram. See Electrical Connection. Consult local code authorities for your specific requirements. Wire control switches at ground level.

NOTE: For non-flammable applications, the electrical supply can be routed through the conduit chase between the ventilator base and the bottom of the motor compartment.

9. Replace motor cover.

UL-705 Wall-Mount Installation

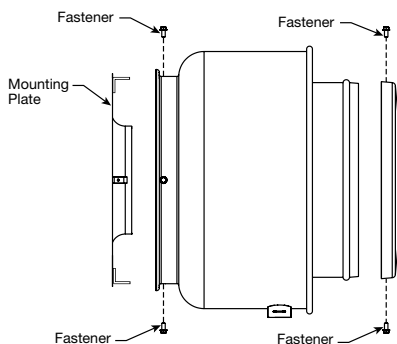


Figure 5

1. Remove mounting plate from unit by removing the fasteners shown in Figure 5.
2. Remove motor compartment cover by removing fasteners shown in Figure 5. Place cover on a flat surface in an area protected from strong winds.
3. Locate the mounting plate at the desired position and check to avoid unit clearance problems. Cut the appropriate size square opening in the wall. Refer to Specifications on page 5.
4. Install optional backdraft damper with directional arrow pointing up.
5. The top of the mounting plate is labeled, attach to the wall structure using appropriate fasteners (by others). The fasteners must pass through the holes provided in the mounting angle clips on the mounting plate. For uneven surfaces, shims may be required. See Figure 6.

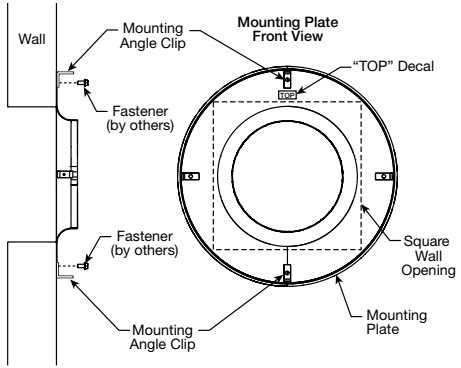


Figure 6

6. Sealant or caulking should be applied in the groove formed by the mounting plate and the wall to prevent moisture leakage into the building.
7. Rotate the wheel by hand to ensure that it does not rub and rotates freely. Wheel position is preset and the unit is test run at the factory. Movement may occur during shipment and realignment may be necessary. Refer to Figure 7 and chart for proper overlap dimensions.

Model	4HZ34, 4HZ35, 5DVN7, 5DVN9, 5DVP1, 5DVP3, 5DVP5, 5DVP7, 48C183, 48C184	4HZ42, 4HZ43, 4HZ46, 4HZ47, 4HZ50, 4HZ51, 4HZ54, 4HZ55, 5DVP9, 6KWH9, 6KWJ0, 6KWJ1, 6KWJ3, 20FT12, 20FT13, 20FT15, 36WG80-36WG82, 48C185, 48C186, 52CD39-52CD41	4HZ58, 4HZ59, 5DVR1, 36WG83, 48C187
Overlap (inches)	–	1/4	1/2
Gap (inches)	3/32	–	–

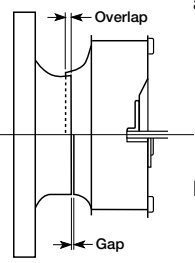
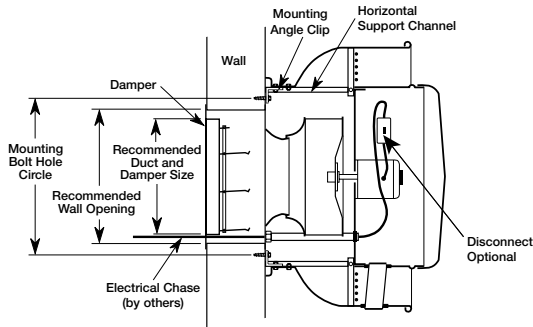


Figure 7

- a. Centering can be accomplished by loosening the fasteners located in the motor compartment. Additional vertical alignment can be accomplished by loosening the four fasteners on the drive frame support angles, and the two fasteners that hold the L-brackets to the support angles on top. Horizontal alignment can be made by loosening the bearings from the bearing plate.
 - b. Wheel and inlet cone overlap can be adjusted by loosening the set screws in the wheel and moving the wheel to the desired position. Tighten all fasteners and set screws securely.
8. Re-attach ventilator to the mounting plate. The unit should be aligned with the breather tube pointing down. See Figure 8.

NOTE: For non-flammable applications, the electrical supply can be routed through the conduit chase between the mounting plate and the bottom of the motor compartment.

9. Guide the electrical chase through the hole in the motor compartment. The horizontal support channels should slide over the mounting angle clips on the mounting plate until the holes in the windband and clips are aligned. Replace fasteners removed in Step 1 and tighten. See Figure 8.


Figure 8

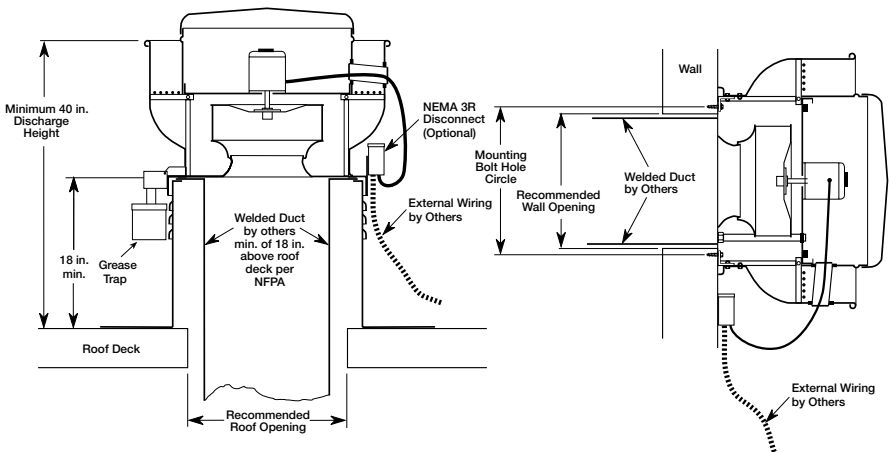
10. The motor's amperage and voltage rating must be checked for compatibility to the supply voltage prior to final electrical connection. Mount and wire safety disconnect switch under ventilator cover and wire motor per connection wiring diagram. See Electrical Connection. Consult local code authorities for your specific requirements. Wire control switches at ground level.
11. Replace motor cover.

UL-762 Installation

NOTE: UL/cUL 762 Installations are for Restaurant Applications.

▲ WARNING Minimum duct velocities must be maintained in kitchen exhaust applications. If a speed controller is used, ensure compliance with all applicable codes.

NOTE: Location and placement should be analyzed for ventilators mounted on building wall, exhausting directly away from the building. Proximity to nearby buildings and people must be considered.


Figure 9

1. Install per NFPA 96 requirements for restaurant exhaust appliances.

NOTE: For NFPA Restaurant Applications, the electrical supply must enter the motor compartment through the breather tube. Consult local code authorities for your specific requirements.

2. Duct size must be equal to or larger than inlet opening. Some local codes require a continuous weld between duct and inlet.
3. Keep motor cooling tube clear from obstructions.
4. The following accessories may be required by NFPA-96 depending upon installation; Grease Collector Box, Hinge Kit, Clean-out Port, Vented Roof Curb and External Junction Box.

NOTE: A drain trough is provided on all Dayton roof mount upblast ventilators. Collection for grease and residue must be provided.

▲ WARNING Do not use a damper in any kitchen exhaust application.

Electrical Connection

▲ CAUTION Comply with all local codes including the National Electrical Code (NEC) and National Fire Protection Act (NFPA).

▲ CAUTION Install in accordance to NEC 70 and NFPA requirements.

IMPORTANT: Exhaust ventilators used in kitchen ventilation applications must have external wiring.

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

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

NOTE: Motor and disconnect must be classified as hazardous for 20FT15 and 6KWJ3 ventilators to be suitable for use in hazardous environments. Installation must be performed by qualified personnel with suitable motor and disconnect for application.

2. Wire motor for desired voltage per wiring diagram on motor, refer to Figure 10 for connection wiring diagram.

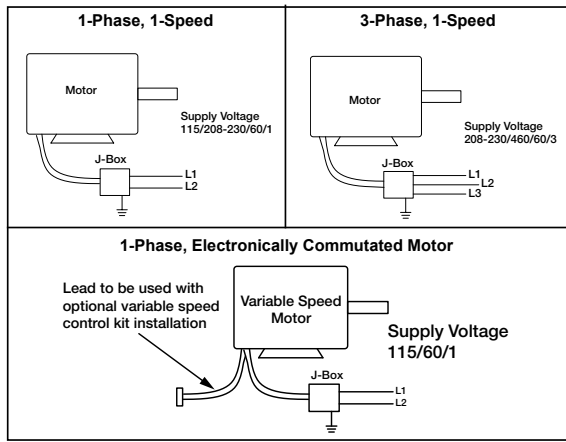


Figure 10

1. Before starting up or operating the unit, check all fasteners for tightness. In particular, check set screws in wheel hub. While in the OFF position, or before connecting the ventilator to power, turn the ventilator wheel by hand to be sure it is not striking the orifice or any obstacle.
2. Check wheel rotation (viewing from the shaft side) by momentarily energizing the unit. Rotation should be clockwise and correspond to the rotation decal on the unit.

IMPORTANT: Rotation of the wheel is critical and incorrect rotation will result in reduced air performance, increased motor loading and possible motor burnout.

3. When the ventilator is started, observe the operation and check for any unusual noises.
4. With the system in full operation and all ductwork attached, measure current (amps) input to the motor and compare with the nameplate rating (full-load amps) to determine if the motor is operating under safe load conditions.
5. Keep inlets and approaches to ventilator clean and free from obstruction.
6. Electronically commutated motors can be controlled two ways:
 - a. A motor mounted potentiometer is mounted on the case of the motor to adjust the speed manually. See Figure 11. Turn the potentiometer using a screwdriver to adjust the speed.

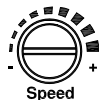


Figure 11

- b. The motor includes a capped motor lead that can be connected to a Dayton variable-speed control kit. The motor lead cap can be removed and connected to the nine-pin motor/transformer harness lead. Follow installation instructions provided with optional speed control kit.



**Remote Touch
35YV94**



**Remote Dial
43Y140**



**2-Speed
35YV92**



**Temp/Humidity
35YV93**

TROUBLESHOOTING GUIDE

Symptom	Possible Cause(s)	Corrective Action
Ventilator inoperative	<ol style="list-style-type: none"> 1. Blown fuse or breaker 2. Defective motor 3. Incorrectly wired 	<ol style="list-style-type: none"> 1. Replace or repair 2. Replace or repair 3. Shut power OFF and check wiring for proper connections
Excessive noise or vibration	<ol style="list-style-type: none"> 1. Loose wheel 2. Accumulation of material on wheel 3. Ventilator base not securely anchored 4. Motor hood loose and rattling 5. Fan wheel out of balance 	<ol style="list-style-type: none"> 1. Tighten set screws 2. Clean 3. Secure properly 4. Tighten acorn nuts securing motor hood 5. Replace wheel
Insufficient airflow	<ol style="list-style-type: none"> 1. Blocked duct or clogged filters 2. Damper closed 3. Incorrect wheel rotation 4. Loose fitting duct sections permitting air loss 	<ol style="list-style-type: none"> 1. Clean or replace 2. Inspect/repair 3. Check motor wiring 4. Check for secure connection where duct sections are joined (suggest duct tape at seams for sealed closure)
Motor overloads or overheats	<ol style="list-style-type: none"> 1. Shorted motor winding 2. Incorrect wheel rotation 3. Over/Under line voltage 	<ol style="list-style-type: none"> 1. Replace motor 2. Check motor wiring 3. Contact Power Company

GETTING STARTED

SAFETY / SPECIFICATIONS

ASSEMBLY / INSTALLATION

OPERATION

TROUBLESHOOTING

MAINTENANCE / REPAIR

MAINTENANCE

⚠ WARNING

Disconnect and lockout power source before servicing.

will produce an out of vibration in the ventilator.

⚠ CAUTION

Uneven cleaning of the wheel balance condition that will cause

1. Depending on the usage and severity of the contaminated air, a regularly scheduled inspection for cleaning the ventilator wheel, housing and surrounding areas should be established. Severe applications may require weekly inspection.

IMPORTANT: Follow NEC 70 for cleaning when ventilator is installed on restaurant exhaust appliances.

NOTE: Removal of the entire power pack (motor, support pan and wheel) for maintenance or cleaning can be accomplished by removing the breather tube and fasteners. See Figure 12.

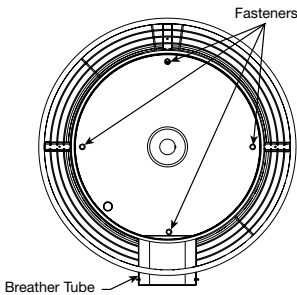


Figure 12

2. Check for unusual noises when ventilator is running.
3. Periodically inspect and tighten set-screws.
4. Follow motor manufacturer's instructions for motor lubrication.
5. Grease containers must be emptied at regular intervals to prevent overflow.
6. For critical applications, a spare motor should be available.



REPAIR PARTS ILLUSTRATION FOR LEASE 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

REPAIR PARTS LIST FOR ROOF-MOUNT VENTILATORS

Ref. No.	Description	Part Number for Models:						Qty.
		4HZ32G	4HZ33G	4HZ40G	4HZ41G	4HZ44G	4HZ45G	

1	Cover	21DY72	21DY72	21DY73	21DY73	21DY73	21DY73	1
2	Hood Assembly	21DZ07	21DZ07	21DZ09	21DZ09	21DZ09	21DZ09	1
3	Motor	4YU32	4YU33	4YU23	4YU27	4YU19	4YU29	1
4	Isolator Kit	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	1
5	Support Plate	21DY78	21DY78	21DZ33	21DZ33	21DY10	21DY10	1
6	Wheel	21DY84	21DY86	21DY91	21DY91	21DZ46	21DZ46	1
7	Birdscreen	4ZA27†	4ZA27†	4YY78	4YY78	4YY78	4YY78	1

Ref. No.	Description	Part Number for Models:						Qty.
		4HZ48G	4HZ49G	4HZ52G	4HZ53G	4HZ56G	4HZ57G	

1	Cover	21DY74	21DY74	21DY74	21DY74	21DY75	21DY75	1
2	Hood Assembly	21DZ71	21DZ71	21DZ71	21DZ71	21DZ72	21DZ72	1
3	Motor	4YU19	4YY54	4YU20	4YY55	4YU22	4YU26	1
4	Isolator Kit	21DY93	21DY93	21DY93	21DY93	21DY93	21DY93	1
5	Support Plate	21DZ53	21DZ53	21DZ53	21DZ53	21DW38	21DZ35	1
6	Wheel	21DW39	21DW39	21DZ44	21DX68	21DZ54	21DZ54	1
7	Birdscreen	4YY79	4YY79	4YY79	4YY79	4YY80	4YY80	1

† Birdscreen included on UL-705 models: 4HZ32, 4HZ33, 5DVN6, 5DVN8, 5DVPO, 5DVP4, 5DVP6, 48C178, 48C179.

Model #: _____

Serial #: _____

Purch. Date: _____

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04632 Version 2 10/2014

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Ref. No.	Description	Part Number for Models:						Qty.
		5DVN6	5DVN8	5DVP0	5DVP2	5DVP4	5DVP6	
1	Cover	21DY72	21DY72	21DW30	21DW30	21DW30	21DW30	1
2	Hood Assembly	21DZ07	21DZ07	21DW41	21DW41	21DW41	21DW41	1
3	Motor	21DW27	4YU32	1AGF8	1AGF8	21DW28	4YU34	1
4	Isolator Kit	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	1
5	Support Plate	21DY78	21DY78	21DW31	21DW31	21DW31	21DW31	1
6	Wheel	21DW32	21DY85	21DW33	21DP30	21DW34	21DY87	1
7	Birdscreen	4ZA27†	4ZA27†	21DW49†	21DW49	21DW49†	21DW49†	1

Ref. No.	Description	Part Number for Models:						Qty.
		5DVP8	5DVR0	5DVR2A	5DVR3A	5DVR4A	6KWH7	
1	Cover	21DY73	21DY75	21DY73	21DY74	21DY74	21DY74	1
2	Hood Assembly	21DZ09	21DZ72	21DZ09	21DZ71	21DZ71	21DZ05	1
3	Motor	4YU28	21DW29	43Y136	43Y138	43Y138	21DV61	1
4	Isolator Kit	21DZ10	21DV98	21DZ10	21DY93	21DZ10	21DZ10	1
5	Support Plate	21DZ31	21DW38	21DZ33	21DZ53	21DZ53	21DV79	1
6	Wheel	21EC48	21DW37	21DY91	29PH76	21DZ44	21DZ44	1
7	Birdscreen	4YY78	4YY80	4YY78	4YY79	4YY79	4YY79	1

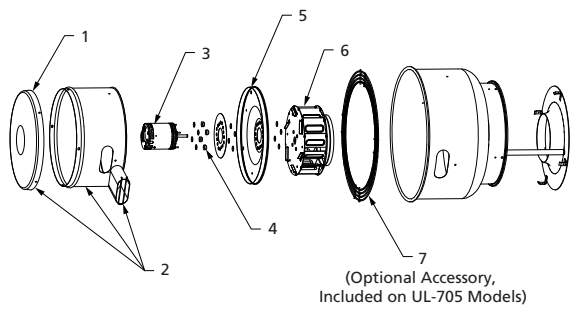
Ref. No.	Description	Part Number for Models:						Qty.
		6KWH8	20FT10	20FT11	36WG76	36WG77	36WG78	
1	Cover	21DY75	21DY73	21DY73	21DY73	21DY74	21DY74	1
2	Hood Assembly	21DV76	21DZ09	21DZ09	21DZ09	21DZ71	21DZ71	1
3	Motor	21DV66	4YU23	4YU27	41TL06	41TL06	41TL06	1
4	Isolator Kit	21DV98	21DZ10	21DZ10	21DZ10	21DY93	21DZ10	1
5	Support Plate	21DV77	21DZ30	21DZ30	21DY10	21DZ53	21DZ53	1
6	Wheel	21DV74	29PH74	29PH74	21DY09	29PH76	21DZ44	1
7	Birdscreen	4YY80	4YY78	4YY78	4YY78	4YY79	4YY79	1

Ref. No.	Description	Part Number for Models:						Qty.
		36WG79	48C178	48C179	48C180	48C181	48C182	
1	Cover	21DY75	21DY72	21DW30	21DY73	21DY73	21DY75	1
2	Hood Assembly	21DZ72	21DZ07	21DW41	21DZ09	21DZ09	21DZ72	1
3	Motor	41TL07	43Y135	43Y135	43Y137	43Y138	43Y139	1
4	Isolator Kit	21DY93	21DZ08	21DZ08	21DZ10	21DZ10	21DY93	1
5	Support Plate	21DW38	21DY78	21DW31	21DZ31	21DY10	21DW38	1
6	Wheel	21DW17	21DY77	21DW34	21EC48	21DY09	21DW17	1
7	Birdscreen	4YY80	4ZA27†	21DW49†	4YY78	4YY78	4YY80	1

Ref. No.	Description	Part Number for Models:				Qty.
		52CD39	52CD40	52CD41		
1	Cover	21DY73	21DY74	21DY74	1	
2	Hood Assembly	21DZ09	21DZ16	21DZ16	1	
3	Motor	43Y137	43Y138	43Y138	1	
4	Isolator Kit	21DZ10	21DY93	21DY93	1	
5	Support Plate	21DZ30	21DZ53	21DZ53	1	
6	Wheel	62XJ36	62XJ37	21DW36	1	
7	Birdscreen	4YY78	4YY79	4YY79	1	



REPAIR PARTS ILLUSTRATION FOR WALL-MOUNT VENTILATORS



REPAIR PARTS LIST FOR WALL-MOUNT VENTILATORS

Ref. No.	Description	Part Number for Models:						Qty.
		4HZ34G	4HZ35G	4HZ42G	4HZ43G	4HZ46G	4HZ47G	
1	Cover	21DY72	21DY72	21DY73	21DY73	21DY73	21DY73	1
2	Hood Assembly	21DZ07	21DZ07	21DZ09	21DZ09	21DZ09	21DZ15	1
3	Motor	4YU32	4YU33	4YU23	4YU27	4YU19	4YU29	1
4	Isolator Kit	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	1
5	Support Plate	21DY78	21DY78	21DZ33	21DZ33	21DY10	21DY10	1
6	Wheel	21DY84	21DY86	21DY91	21DY91	21DZ46	21DZ46	1
7	Birdscreen	4ZA27†	4ZA27†	4YY78	4YY78	4YY78	4YY78	1

Ref. No.	Description	Part Number for Models:						Qty.
		4HZ50G	4HZ51G	4HZ54G	4HZ55G	4HZ58G	4HZ59G	
1	Cover	21DY74	21DY74	21DY74	21DY74	21DY75	21DY75	1
2	Hood Assembly	21DZ16	21DZ71	21DZ16	21DZ16	21DZ72	21DZ72	1
3	Motor	4YU19	4YY54	4YU20	4YY55	4YU22	4YU26	1
4	Isolator Kit	21DY93	21DZ10	21DZ10	21DZ04	21DZ10	21DZ10	1
5	Support Plate	21DZ53	21DZ53	21DZ53	21DZ32	21DZ35	21DZ35	1
6	Wheel	21DW39	21DW39	21DZ44	21DX68	21DZ54	21DZ54	1
7	Birdscreen	4YY79	4YY79	4YY79	4YY79	4YY80	4YY80	1

† Birdscreen included on UL-705 models: 4HZ34, 4HZ35, 5DVN7, 5DVN9, 5DVP1, 5DVP5, 5DVP7, 48C183, 48C184.

* Not shown. For use with 20FT15 and 6KWJ3 in potentially hazardous locations.

▲ Motors are UL Listed for Class I, Groups C&D and Class II, Groups F&G for hazardous locations.

For Repair Parts, call 1-800-Grainger

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

Ref. No.	Description	Part Number for Models:						Qty.
		5DVN7	5DVN9	5DVP1	5DVP3	5DVP5	5DVP7	
1	Cover	21DY72	21DY72	21DW30	21DW30	21DW30	21DW30	1
2	Hood Assembly	21DZ07	21DZ07	21DW41	21DW41	21DW41	21DW41	1
3	Motor	21DW27	4YU32	1AGF8	1AGF8	21DW28	4YU34	1
4	Isolator Kit	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	21DZ10	1
5	Support Plate	21DY78	21DY78	21DW31	21DW31	21DW31	21DW31	1
6	Wheel	21DW32	21DY85	21DW33	21DP30	21DW34	21DY87	1
7	Birdscreen	4ZA27†	4AZ27†	21DW49†	21DW49	21DW49†	21DW49†	1

Ref. No.	Description	Part Number for Models:						Qty.
		5DVP9	5DVR1	6KWH9A	6KWJ0A	6KWJ1A	20FT12	
1	Cover	21DY73	21DY75	21DY73	21DY74	21DY74	21DY73	1
2	Hood Assembly	21DZ09	21DZ72	21DZ09	21DZ16	21DZ16	21DZ09	1
3	Motor	4YU28	21DW29	43Y136	43Y138	43Y138	4YU23	1
4	Isolator Kit	21DZ10	21DV98	21DZ10	21DY93	21DZ04	21DZ10	1
5	Support Plate	21DY10	21DW38	21DZ33	21DZ53	21DZ32	21DZ30	1
6	Wheel	21EC48	21DW37	21DY91	29PH76	21DZ44	29PH74	1
7	Birdscreen	4YY78	4YY80	4YY78	4YY79	4YY79	4YY78	1

Ref. No.	Description	Part Number for Models:						Qty.
		20FT13	6KWJ3	20FT15	36WG80	36WG81	36WG82	
1	Cover	21DY73	21DY73	21DY73	21DY73	21DY74	21DY74	1
2	Hood Assembly	21DZ09	20DZ09	21DZ09	21DZ09	21DZ16	21DZ16	1
3	Motor	4YU27	21DV65▲	21DV65▲	41TL06	41TL06	41TL06	1
4	Isolator Kit	21DZ10	21DZ04	21DZ04	21DZ10	21DY93	21DZ04	1
5	Support Plate	21DZ30	21DV80	21DV78	21DY10	21DZ53	21DZ32	1
*	Aluminum Rub Ring	—	21DP94	21DP94	—	—	—	1
6	Wheel	29PH74	21DV73	36FL76	21DY09	29PH76	21DZ44	1
7	Birdscreen†	4YY78	4YY78	4YY78	4YY78	4YY79	4YY79	1

Ref. No.	Description	Part Number for Models:						Qty.
		36WG83	48C183	48C184	48C185	48C186	48C187	
1	Cover	21DY75	21DY72	21DW30	21DY73	21DY73	21DY75	1
2	Hood Assembly	21DZ72	21DZ07	21DW41	21DZ09	21DZ09	21DZ72	1
3	Motor	41TL07	43Y135	43Y135	43Y137	43Y138	43Y139	1
4	Isolator Kit	21DZ10	21DZ08	21DZ08	21DZ10	21DZ10	21DZ10	1
5	Support Plate	21DZ35	21DY78	21DW31	21DZ31	21DY10	21DZ35	1
6	Wheel	21DW17	21DY86	21DW34	21EC48	21DY09	21DW17	1
7	Birdscreen	4YY80	4ZA27†	21DW49†	4YY78	4YY78	4YY80	1

Ref. No.	Description	Part Number for Models:			Qty.
		52CD39	52CD40	52CD41	
1	Cover	21DY73	21DY74	21DY74	1
2	Hood Assembly	21DZ09	21DZ16	21DZ16	1
3	Motor	43Y137	43Y138	43Y138	1
4	Isolator Kit	21DZ10	21DY93	21DY93	1
5	Support Plate	21DZ30	21DZ53	21DZ53	1
6	Wheel	62XJ36	62XJ37	21DW36	1
7	Birdscreen	4YY78	4YY79	4YY79	1

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.

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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 MERCHANTABILITY, 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.

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