

WEATHERFLO WITH FAN, TYPE 3R



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Fan with Finger Guard

INDUSTRY STANDARDS

UL 508A Listed; Type 3R; File Number E61997
cUL Listed per CSA C22.2 No 94; Type 3R; File Number E61997

NEMA/EEMAC Type 3R
IEC 60529, IP32

APPLICATION

WEATHERFLO Enclosures feature a forced-air ventilation system for cooling drives or other high-heat producing equipment in outdoor applications.

FEATURES

- White polyester powder finish with low solar absorption
- Integrated solar shield top and intake cover
- Gasket and filter
- Adjustable thermostat (70-140 F)
- Active cooling ventilation system with factory-installed fan and filter (115 VAC)
- Terminal power connection for fan
- Easily accessible and washable metal filter
- Top front hood exhaust and door
- Lift-off hinged door
- Quarter-turn latch
- External mounting brackets
- Collar studs provided to mount the optional panel
- Grounding provision on door and body
- Gasketed door

SPECIFICATIONS

- 16 and 14 gauge galvanized steel
- Largest two sizes constructed of aluminum

FINISH

RAL 9003 white polyester powder texturized finish inside and out.

ACCESSORIES

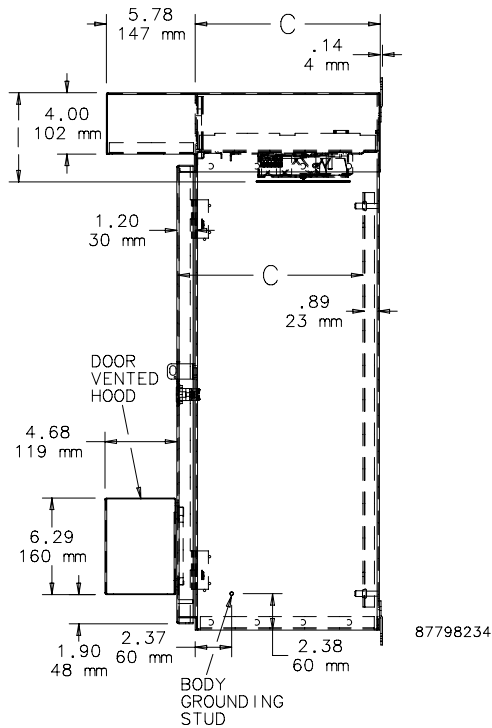
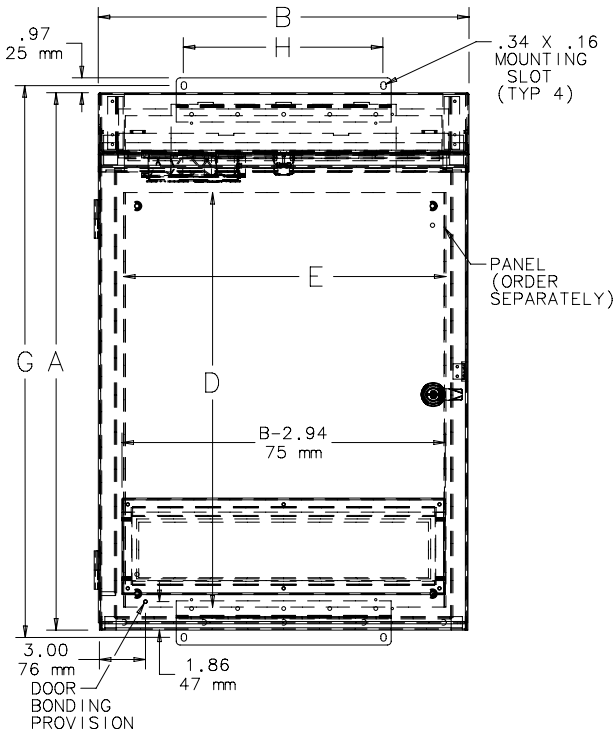
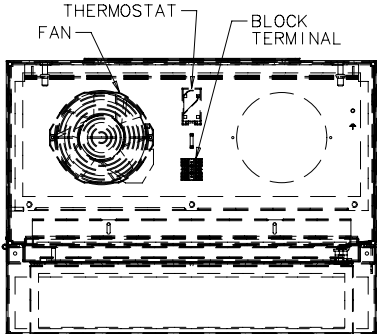
Compact Axial Fans, page 1202
Electric Heaters, page 1236
Panels for Type 3R, 4, 4X, 12 and 13 Enclosures, page 1334
Junction Box and Wall-Mount Enclosure Swing-Out Panel Kit, page 1332

BULLETIN: A3RD

Standard Product

Catalog Number	AxBxC in./mm	Drive Horsepower (hp)	Panel	Panel Size D x E in./mm	Mounting Holes G x H in./mm	I in./mm
WF3LP	29.00 x 24.00 x 12.00 737 x 610 x 305	3	A24P24	21.00 x 21.00 533 x 533	29.94 x 13.00 760 x 330	5.59 142
WF10LP	35.00 x 24.00 x 12.00 889 x 610 x 305	10	A30P24	27.00 x 21.00 686 x 533	35.94 x 13.00 913 x 330	5.81 148
WF25LP	41.00 x 24.00 x 12.00 1041 x 610 x 305	25	A36P24	33.00 x 21.00 838 x 533	41.94 x 13.00 1065 x 330	5.81 148
WF40LP	47.00 x 24.00 x 14.00 1194 x 610 x 356	40	A42P24	39.00 x 21.00 991 x 533	47.94 x 13.00 1218 x 330	5.81 148
WF75LP	56.00 x 36.00 x 16.00 1422 x 914 x 406	75	A48P36	45.00 x 33.00 1143 x 838	55.94 x 27.00 1421 x 686	7.43 189
WF100LP	67.00 x 36.00 x 16.00 1702 x 914 x 406	100	A60P36	57.00 x 33.00 1448 x 838	67.94 x 27.00 1726 x 686	7.43 189

Purchase panels separately.



TECHNICAL INFORMATION

This information is for guidance only; user is responsible for load values to evaluate the system.

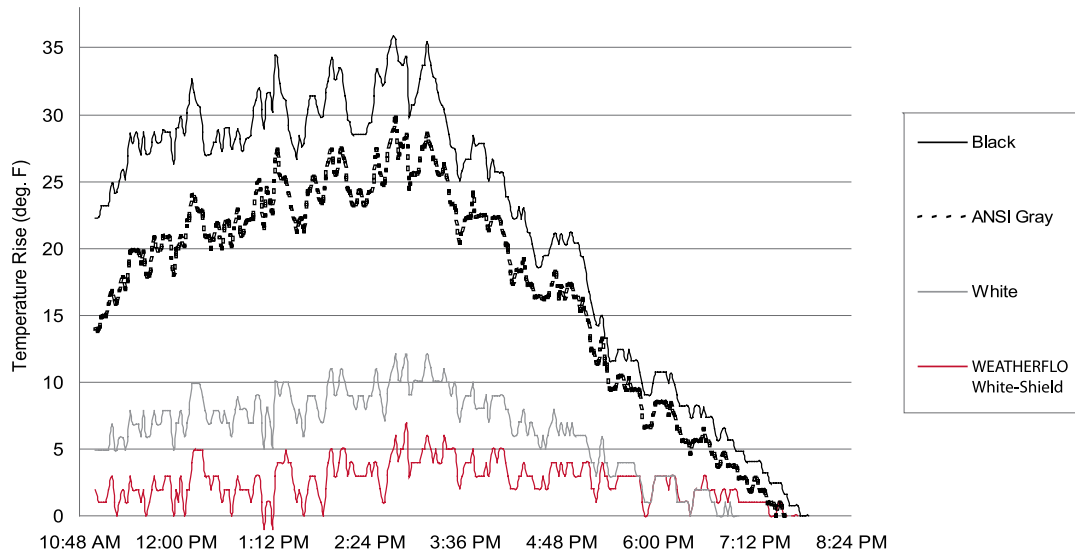


Catalog Number	Drive Horsepower (hp)	Fan	Fan Size in./mm	Fan VAC	Fan Amps (50/60 Hz)	System CFM	Replacement Filter
WF3LP	3	A4AXFN	4	115	.26/.21	75	WFF1
WF10LP	10	A6AXFN	6	115	.45/.36	160	WFF1
WF25LP	25	A6AXFN	6	115	.45/.36	160	WFF1
WF40LP	40	A6AXFN	6 (2x)	115	.90/.72	200	WFF1
WF75LP	75	A10EFN	10	115	.58/.70	400	WFF2
WF100LP	100	A10EFN	10 (2x)	115	1.16/1.40	500	WFF2

SOLAR CONSIDERATION

The WEATHERFLO Enclosure's glossy white finish and solar shield top shroud minimize the heat load caused by the sun. If the allowable temperature rise is greater than 5 F, the solar load can be neglected because the transmitted load of the illuminated sides would be equal to the energy dissipated on the sides not exposed to the sun.

Solar Load Based on Color
Average Internal Temperature Rise
Non-vented Enclosure



CRITICAL PARAMETERS (UPPER TEMPERATURE LIMITS)

Enclosure Heat Load Calculations

Drive heat:
 $W_D = [(HP \times 745.7 \text{ Watts/HP}) / E_M] \times (1 - E_D)$ [Watts]

Total heat:
Estimate an additional 25%^a for wire connections and other components.
 $W_T = W_D \times 1.25^a$ [Watts]

Required airflow:
 $CFM = (W_T \times 3.16) / (T_{int} - T_{amb})$ [ft.³ / min.]

^aThis is an estimated factor. Further investigation is necessary to obtain actual total heat dissipated in enclosure.

Variables

Variable Descriptions	Variables	Typical Values
Maximum ambient temperature	T _{amb}	104 F
Maximum internal temperature	T _{int}	122 F
Typical temperature rise	(T _{int} - T _{amb})	15 F
Full-load drive power	HP	—
Motor efficiency ^b	E _M	.80-.96
Drive efficiency ^b	E _D	.96-.98
Drive heat loss	W _D	—
Total heat loss	W _T	—
Required airflow	CFM	—

^bUse full-load efficiency. Motor and drive efficiency will vary based on HP and voltage.

Sample Values

Drive HorsePower (hp)	Typical Full Load Rating - Motor Efficiency	Typical Full Load Rating - Drive Efficiency	Drive Heat Loss W _D (W)	Additional Heat Loss ^a (W)	Total Heat Loss W _T (W)	Airflow when T _{int} - T _{amb} = 15 F (CFM)
3	.86	.97	78	20	98	21
10	.90	.97	249	62	311	65
25	.91	.97	615	154	768	162
40	.92	.98	648	162	811	171
75	.93	.98	1203	301	1503	317
100	.94	.98	1587	397	1983	418

^aAdditional Heat Loss - This is an estimated factor. Further investigation is necessary to obtain actual total heat dissipated in enclosure.

CRITICAL PARAMETERS (LOWER TEMPERATURE LIMITS)



Determine the ambient operating temperature range of the drive. A typical operating range is from 14 to 122 F (-10 to 50 C). For outdoor assemblies in northern climates, the lower operating temperature may be below the lower temperature limit. To ensure that cold starts are not below the low limit temperature, the addition of a heater is recommended.

Hoffman has 100-, 200-, 400-, and 800-W heaters available with adjustable thermostats from 0-100 F. For additional information, see the Thermal Management chapter.

WEATHERFLO Catalog Number	Recommended Heater (115 VAC)	Recommended Heater (230 VAC)	Heater Size (W)	Estimated Temperature Rise Above Ambient (°F)
WF3LP	DAH2001A	DAH2002A	200	55
WF10LP	DAH2001A	DAH2002A	200	46
WF25LP	DAH2001A	DAH2002A	200	40
WF40LP	DAH2001A	DAH2002A	200	33
WF75LP	DAH4001B	DAH4002B	400	41
WF100LP	DAH4001B	DAH4002B	400	37