

WEATHERFLO WITH FAN, TYPE 3R



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
- 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
- Gasketed door with lift-off hinge design
- Quarter-turn latch(es); Disconnect solutions feature SS padlocking handle operating 3-pt latch mechanism
- External enclosure mounting brackets present
- Collar studs provided to mount optional panel, panel sold separately
- Grounding provision on door and body
- Lifting lug assembly included on largest size disconnect solution to facilitate movement/installation
- Disconnect solutions feature preferred cutout, reference Spec-00247 for additional details

SPECIFICATIONS

- 16 and 14 gauge galvanized steel
- Largest two sizes, coded 75 and 100, constructed of aluminum

FINISH

RAL 9003 white polyester powder texturized finish inside and out.

ACCESSORIES

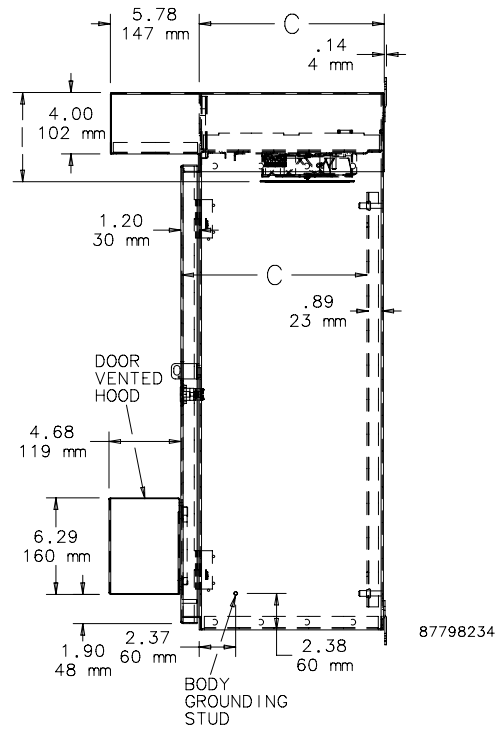
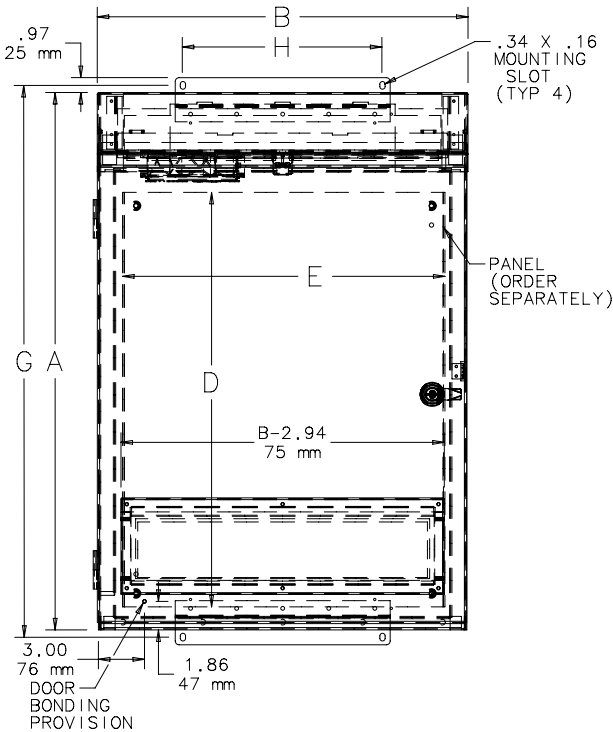
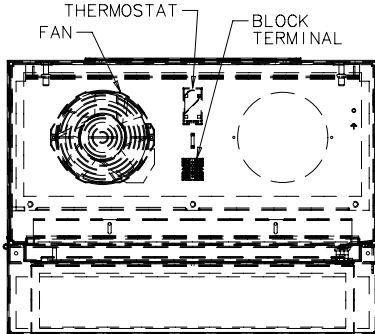
- See also Accessories.*
- Compact Cooling Fans
 - Electric Heater
 - Panels for Type 3R, 4, 4X, 12 and 13 Enclosures
 - Junction Box and Wall-Mount Enclosure Swing Out Panel Kit

BULLETIN: A3RD

Standard Product

Catalog Number	AxBxC in./mm	Nominal 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

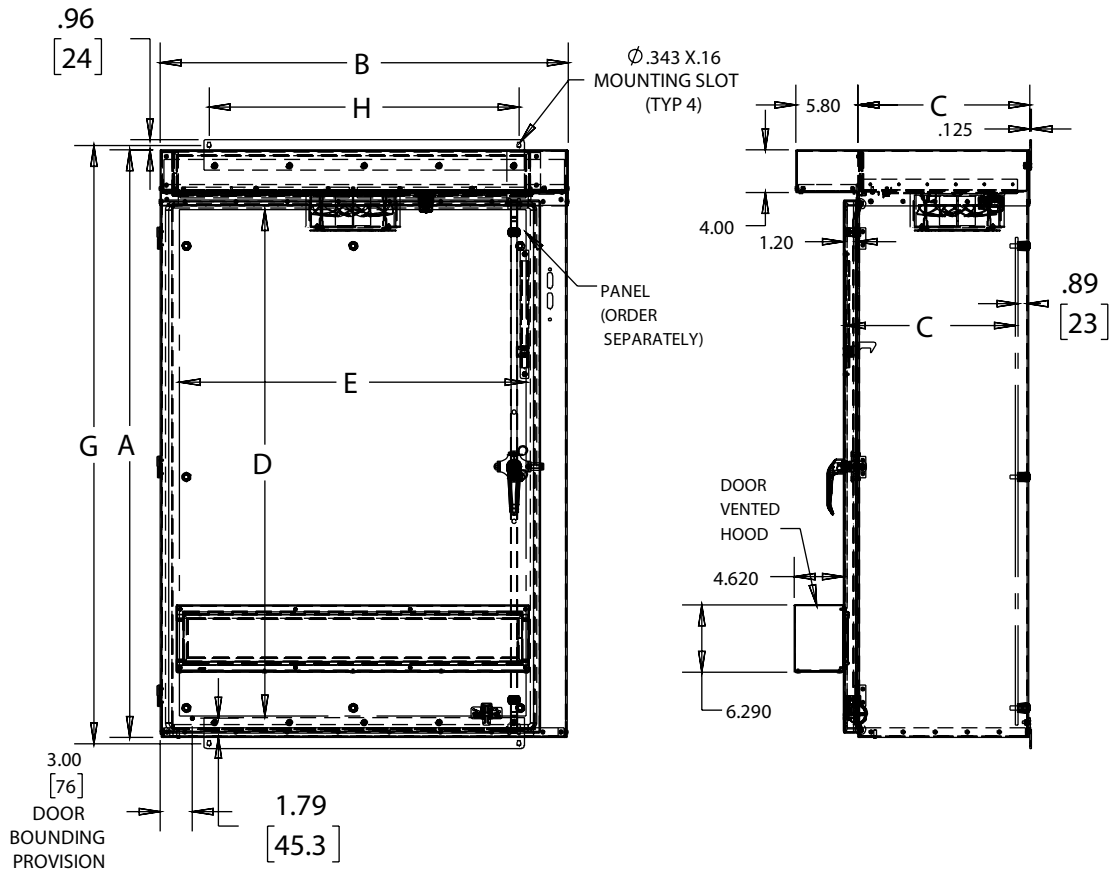
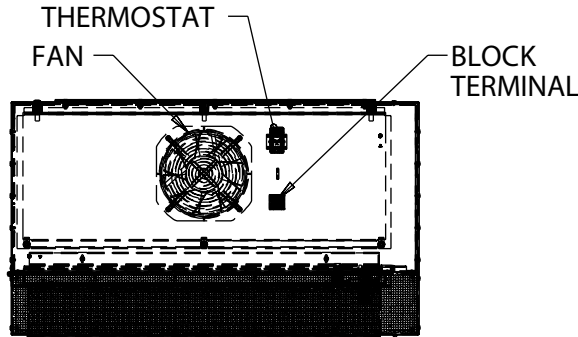
*Panel sold separately.



Standard Product **Flange-Mount Disconnect**

Catalog Number	Dimensions	Nominal Drive Horsepower (hp)	Panel*	Panel Size D x E in./mm	Mounting Holes G x H in./mm
WFD40LP	47.00x26.00x14.00in. 1194x660x356mm	40	A42P24	39.00 x 21.00 991 x 533	47.94 x 13.00 1218 x 330
WFD75LP	56.00x38.00x16.00in. 1422x965x406mm	75	A48P36	45.00 x 33.00 1143 x 838	56.94 x 27.00 1446 x 686
WFD100LP	67.00x38.00x16.00in. 1702x965x406mm	100	A60P36	57.00 x 33.00 1448 x 838	67.94 x 27.00 1726 x 686
WFD100PLP	67.00x38.00x20.00in. 1702x965x508mm	100	A60P36	57.00 x 33.00 1448 x 838	67.94 x 27.00 1726 x 686

*Panel sold separately.



TECHNICAL INFORMATION

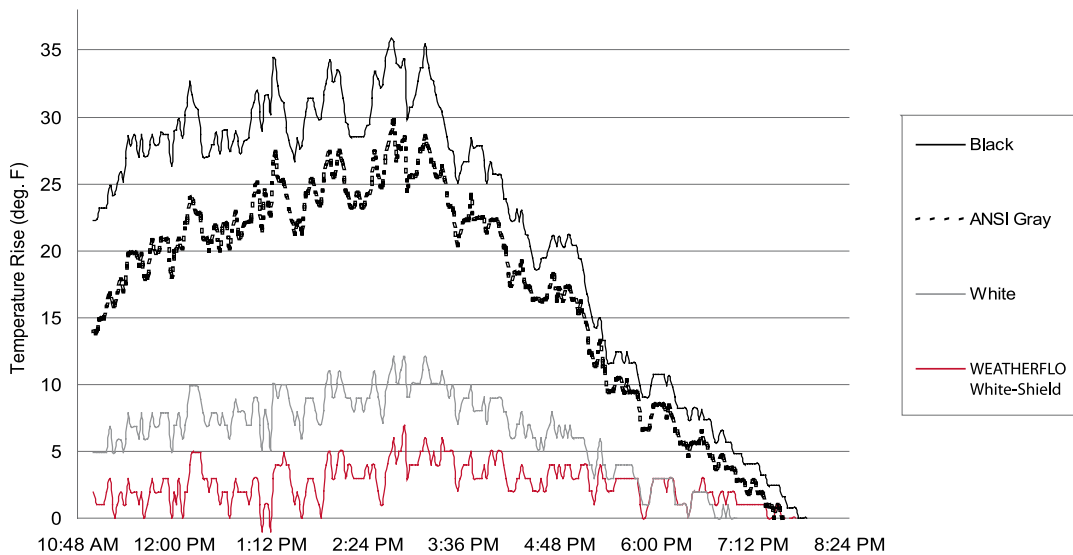
This information is for guidance only; user is responsible for load values to evaluate the system.

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/WFD40LP	40	A6AXFN	6 (2x)	115	.90/.72	200	WFF1
WF75LP/WFD75LP	75	A10EFN	10	115	.58/.70	400	WFF2
WF100LP/WFD100LP/WFD100PLP	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:

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

Total heat:

Estimate an additional 25%^a for wire connections and other components.

$$W_T = W_D \times 1.25^a \quad [\text{Watts}]$$

Required airflow:

$$\text{CFM} = (W_T \times 3.16) / (T_{\text{int}} - T_{\text{amb}}) \quad [\text{ft.}^3 / \text{min.}]$$

^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	$(T_{\text{int}} - T_{\text{amb}})$	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 Horse Power (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 $T_{\text{int}} - T_{\text{amb}} = 15 \text{ F}$ (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/WFD40LP	DAH2001A	DAH2002A	200	33
WF75LP/WFD75LP	DAH4001B	DAH4002B	400	41
WF100LP/WFD100LP/WFD100PLP	DAH4001B	DAH4002B	400	37

Notes