

Explosion-Proof Natural Convection Heater - XB

The Norseman™ XB Series convection heater, with ratings up to 5000 watts, is designed for heating spaces where explosive substances are or may be present. The Norseman™ XB is available with either $cCSA_{US}$ or CE ATEX approvals. All units can be fitted with an externally adjustable thermostat.

With the Norseman™ XB, you get a safe and reliable heater with a handsome appearance and state-of-the-art design.

Applications

Typical applications for the Norseman™ XB include:

- Control cabinets and small enclosures
- Storage rooms for paints and cleaners
- Grain elevators
- Flour mills
- Spray booths
- Gas plants
- Pump houses
- Marine and offshore
- Oil platforms
- Cleaning and dyeing plants

Selection of Temperature Code

Refer to the atmospheric condition table (Table 2, page 6) at the beginning of this catalog for detailed selection data for the temperature code.

To minimize cost and physical size of the heater, select the heater with the highest temperature code that suits the environment. In Table 8 and Table 9, page 14 a check mark (✓) under the temperature code indicates that the surface temperature of the heater will not exceed the coded

value listed in the atmospheric conditions table (Table 2 page 6) at the beginning of this catalog.

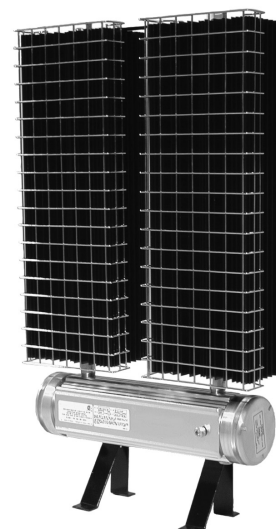
Construction & Installation

The Norseman™ XB explosion-proof convection heaters utilize Thermon's unique copper free aluminum extruded convector and patented x-Max® terminal housing. Large convector surface area and high mass fins ensure safe and efficient low temperature heat transfer to the environment. Convectors are black anodized to resist oxidation and maximize heat transfer.

The x-Max® housing can be equipped with multiple tapped conduit entries throughout its length to facilitate installation. A track and trolley system and threaded covers at each end allow easy access to internal components.

All units, except the single heat sink units, have a built-in terminal block for simplified electrical connection.

The Norseman™ XB units are intended for wall or floor mounting with the heater positioned vertically as shown. Dual purpose brackets for floor or wall mounting and wire guards are supplied as standard.



Model Coding* - $cCSA_{US}$

XB	4	-	300	T3B	3	1	T
Model Series	Heat Sink Length in (mm)	Wattage Watts x 10	Temperature Code	Heater Voltage	Phase	Options	
	1 - 5.2 (130)		T3B - 329°F (165°C)	1 - 120V	1 - 1 Phase	T - Thermostat	
	3 - 11.8 (300)		T3A - 356°F (180°C)	2 - 208V	3 - 3 Phase	R - Moisture-Resistant Design	
	4 - 18.5 (470)		T2D - 215°C (419°F)	3 - 240V		M - Special Mechanical Feature	
	6 - 25.2 (640)		T2C - 230°C (446°F)	7 - 480V		E - Special Electrical Feature	
				8 - 600V		H - High Ambient (70°C)	

*This nomenclature illustration is intended primarily to explain how a product part number is defined. Not all wattage, size and temperature code combinations are available. Please consult Table 9, page 14 for availability.

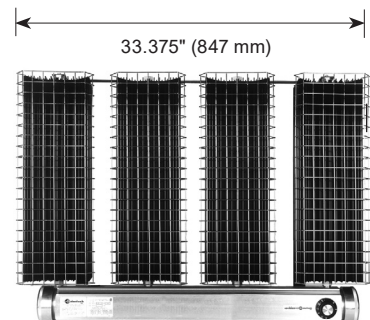
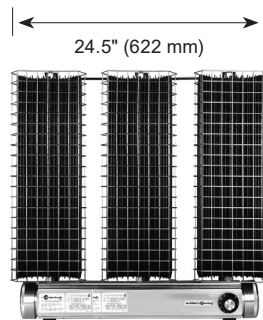
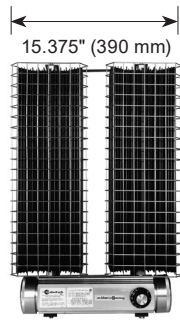
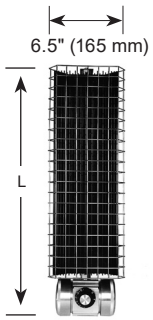


Figure 6 – XB Single Unit (XB1)

Figure 7 – XB Double Unit (XB2)

Figure 8 –XB Triple Unit (XB3)

Figure 9 – XB Quadruple Unit (XB4)

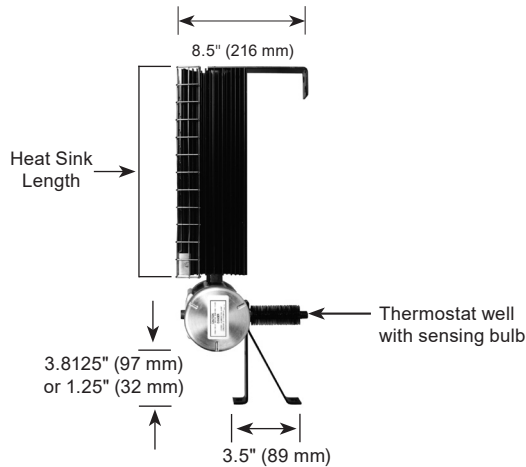


Figure 10 – XB Side View Floor Mounting

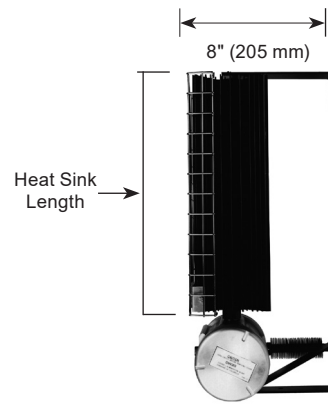


Figure 11 – XB Side View Wall Mounting

Special Wattage & Lengths

Table 10, page 14 lists the maximum design wattages for the four standard heat sink lengths and configurations.

If standard units listed in Table 8 and Table 9, page 14 do not suit your application, a special unit based on Table 10, page 14 can be supplied (check factory).

Table 7 – Norseman™ XB Explosion-Proof Natural Convection Heaters - Standard XB Heaters

W	Standard Voltages									'L' Dim.	Temperature Code				Weight	Part No.	
	120	208		240		480		600			T2D	T3B	T4A	T6		Class I Div. 1, 2, Groups A, B, C & D Class II Div. 1, Groups E, F & G Class III Div. 1	Class I Div. 1, Groups A, B, C & D
	1Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	in (mm)					lbs (kg)		
475			-		-	-	-	-	-	10.0 (254)					10 (4.5)		XB1-1047T2D
750			-		-	-	-	-	-	16.7 (424)					15 (6.8)		XB1-3075T2D
1000			-		-	✓	-	✓	-	23.4 (594)					20 (9.1)		XB1-4100T2D
1250	✓		-	✓	-	✓	-	✓	-	30.1 (765)	✓		-		25 (11.3)	-	XB1-6125T2D
1500		✓	✓		✓	✓	-	-	-	16.7 (424)					30 (13.6)		XB2-3150T2D
2000			✓		✓	✓	✓	✓	✓	23.4 (594)					40 (18.1)		XB2-4200T2D
3000			✓		✓	✓	✓	✓	✓	23.4 (594)					60 (27.2)		XB3-4300T2D
3750			✓		✓	✓	✓	✓	✓	30.1 (765)					75 (34.0)		XB3-6375T2D
4500	-		✓		✓	✓	✓	✓	✓	30.1 (765)					100 (45.4)		XB4-6450T2D

Table 8 – Norseman™ XB Explosion-Proof Natural Convection Heaters - Other Models Available

W	Standard Voltages									'L' Dim.	Temperature Code				Weight	Part No.	
	120	208		240		480		600			T2D	T3B	T4A	T6		Class I Div 1, 2 Group A, B, C & D Class II Div 1 Group E, F & G Class III Div 1	Class I Div 1 Group A, B, C & D
	1Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	in (mm)					lbs (kg)		
50		-	-	-	-	-	-	-	-	10.0 (254)		✓	✓	✓	10 (4.5)	XB1-1005T6	-
100		-	-	-	-	-	-	-	-	10.0 (254)		✓	✓	-	10 (4.5)	XB1-1010T4A	-
175		-	-	-	-	-	-	-	-	10.0 (254)		✓	✓	-	10 (4.5)	XB1-1017T4A	-
200		✓	-	✓	-	-	-	-	-	30.1 (765)		✓	✓	✓	25 (11.3)	XB1-6020T6	-
300		-	-	-	-	-	-	-	-	10.0 (254)		✓	-	-	10 (4.5)	XB1-1030T3B	-
400		✓	✓	✓	✓	-	-	-	-	30.1 (765)		✓	✓	✓	50 (22.7)	XB2-6040T6	-
450		✓	-	✓	-	✓	-	✓	-	30.1 (765)		✓	✓	-	25 (11.3)	XB1-6045T4A	-
475		✓	-	✓	-	-	-	-	-	16.7 (424)		✓	-	-	15 (6.8)	XB1-3047T3B	-
600		✓	✓	✓	✓	-	-	-	-	30.1 (765)		✓	✓	✓	75 (34.0)	XB3-6060T6	-
750		-	-	-	-	-	-	-	-	10.0 (254)		-	-	-	20 (9.1)	-	XB2-1075T2D
800		✓	✓	✓	✓	-	-	-	-	30.1 (765)		✓	✓	✓	100 (45.4)	XB4-6080T6	-
850		✓	-	✓	-	✓	-	✓	-	30.1 (765)		✓	✓	-	50 (22.7)	XB2-6085T4A	-
1000		-	-	-	-	-	-	-	-	10.0 (254)		-	-	-	30 (13.6)	-	XB3-1100T2D
1000		✓	✓	✓	✓	-	-	-	-	23.4 (594)		✓	-	-	40 (18.1)	XB2-4100T3B	-
1000	✓	✓	✓	✓	✓	-	✓	-	-	16.7 (424)	✓	✓	-	-	45 (20.4)	XB3-3100T3B	-
1250		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)		✓	✓	-	75 (34.0)	XB3-6125T4A	-
1250		-	-	-	-	-	-	-	-	10.0 (254)		-	-	-	30 (13.6)	-	XB3-1125T2D
1350		✓	✓	✓	-	✓	-	✓	-	30.1 (765)		-	-	-	25 (11.3)	-	XB1-6135T2D
1500		-	-	-	-	-	-	-	-	10.0 (254)		-	-	-	40 (18.1)	-	XB4-1150T2D
1500		✓	✓	✓	✓	-	✓	✓	✓	23.4 (594)		✓	-	-	60 (27.2)	XB3-4150T3B	-
1500		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)		✓	-	-	50 (22.7)	XB2-6150T3B	-
1600		✓	✓	✓	✓	✓	✓	✓	-	30.1 (765)		✓	✓	-	100 (45.4)	XB4-6160T4A	-
2000		✓	✓	✓	✓	-	-	-	-	16.7 (424)		-	-	-	45 (20.4)	-	XB3-3200T2D
2250		✓	✓	✓	✓	-	-	-	-	23.4 (594)		✓	-	-	80 (36.3)	XB4-4225T3B	-
2250		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)		✓	-	-	75 (34.0)	XB3-6225T3B	-
2500		✓	✓	✓	✓	✓	✓	✓	-	16.7 (424)		-	-	-	60 (27.2)	-	XB4-3250T2D
2500		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)		-	-	-	50 (22.7)	-	XB2-6250T2D
3000		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)		✓	-	-	100 (45.4)	XB4-6300T3B	-
3750		✓	✓	✓	✓	✓	✓	✓	✓	23.4 (594)		-	-	-	80 (36.3)	-	XB4-4375T2D
5000	-	✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)	✓	-	-	-	100 (45.4)	-	XB4-6500T2D

Table 9 – Norseman™ Maximum Heater Wattages

Heat Sink Length	Type	Temperature Code			
		T2D	T3B	T4A	T6
5" (130 mm)	XB1	475	300	190	95
	XB2	938	-	-	-
	XB3	1314	-	-	-
	XB4	1524	-	-	-
12" (300 mm)	XB1	783	498	294	142
	XB2	1520	988	570	266
	XB3	2173	-	-	-
	XB4	2608	-	-	-
19" (470 mm)	XB1	1021	684	380	209
	XB2	2033	1282	722	342
	XB3	3049	1881	1026	456
	XB4	3780	-	-	-
25" (640 mm)	XB1	1353	831	451	237
	XB2	2688	1615	864	408
	XB3	4018	2308	1254	612
	XB4	5130	3230	1653	836

Thermostats

Thermon offers a wide variety of explosion-proof thermostats to suit most every need.

All Norseman™ XB series heaters can be fitted with integral line voltage thermostats which are available either externally adjustable or tamper-proof; factory installed or as field installed kit.

Remote thermostat mounting is also available.

Refer to Explosion-Proof Thermostats - XT, page 21 of this Norseman™ catalog when selecting the appropriate thermostat for the desired application.

Accessories

Wire Guards and Baffles: All units are equipped with wire guards.

'Gull wing' shaped bright aluminum rear baffles are standard with Norseman™ XB units rated for T2D temperature code (shipped separately).

Table 10 – High Ambient Norseman™ XB Explosion-Proof Natural Convection Heaters

W	Standard Voltages									'L' Dim.	Temperature Code			Weight	Part No.
	120	208		240		480		600			T3	T3C	T4A		
	1Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	in (mm)				Class I Div 1, 2, Group A, B, C & D Class II Div 1 Group E, F & G Class III Div 1	
50	✓	-	-	-	-	-	-	-	-	10.0 (254)	✓	✓	✓	10 (4.5)	XB1-1005T4A
100		-	-	-	-	-	-	-	-	10.0 (254)	✓	✓	-	10 (4.5)	XB1-1010T3C
175		-	-	-	-	-	-	-	-	10.0 (254)	✓	✓	-	10 (4.5)	XB1-1017T3C
200		✓	-	✓	-	-	-	-	-	30.1 (765)	✓	✓	✓	25 (11.3)	XB1-6020T4A
300		-	-	-	-	-	-	-	-	10.0 (254)	✓	-	-	10 (4.5)	XB1-1030T3
400		✓	✓	✓	✓	-	-	-	-	30.1 (765)	✓	✓	✓	50 (22.7)	XB2-6040T4A
450		✓	-	✓	-	✓	-	✓	-	30.1 (765)	✓	✓	-	25 (11.3)	XB1-6045T3C
475		✓	-	✓	-	-	-	-	-	16.7 (424)	✓	-	-	15 (6.8)	XB1-3047T3
600		✓	✓	✓	✓	-	-	-	-	30.1 (765)	✓	✓	✓	75 (34.0)	XB3-6060T4A
800		✓	✓	✓	✓	-	-	-	-	30.1 (765)	✓	✓	✓	100 (45.4)	XB4-6080T4A
850		✓	-	✓	-	✓	-	✓	-	30.1 (765)	✓	✓	-	50 (22.7)	XB2-6085T3C
1000		✓	✓	✓	✓	-	-	-	-	23.4 (594)	✓	-	-	40 (18.1)	XB2-4100T3
1000		✓	✓	✓	✓	-	✓	-	-	16.7 (424)	✓	-	-	45 (20.4)	XB3-3100T3
1250		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)	✓	✓	-	75 (34.0)	XB3-6125T3C
1500		✓	✓	✓	✓	-	✓	✓	✓	23.4 (594)	✓	-	-	60 (27.2)	XB3-4150T3
1500		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)	✓	-	-	50 (22.7)	XB2-6150T3
1600		✓	✓	✓	✓	✓	✓	✓	-	30.1 (765)	✓	✓	-	100 (45.4)	XB4-6160T3C
2250		✓	✓	✓	✓	-	-	-	-	23.4 (594)	✓	-	-	80 (36.3)	XB4-4225T3
2250	✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)	✓	-	-	75 (34.0)	XB3-6225T3	
3000		✓	✓	✓	✓	✓	✓	✓	✓	30.1 (765)	✓	-	-	100 (45.4)	XB4-6300T3

Table 11 – High Ambient Norseman™ Maximum Heater Wattages

Heat Sink Length	Type	Temperature Code		
		T3	T3C	T4A
5" (130 mm)	XB1	300	190	95
12" (300 mm)	XB1	498	294	142
	XB2	988	570	266
	XB3	1425	-	-
19" (470 mm)	XB1	684	380	209
	XB2	1282	722	342
	XB3	1881	1026	456
	XB4	2375	-	-
25" (640 mm)	XB1	831	451	237
	XB2	1615	864	408
	XB3	2308	1254	612
	XB4	3230	1653	836

High Ambient Option

The Norseman™ XB Series heater is now available with a high ambient hazardous location rating up to 70°C. This option is ideal for high ambient chemical storage facilities or gas sampling applications. Refer to Table 11, page 15 for Norseman™ XB units available in high ambient.

Thermostats

Thermon offers a wide variety of explosion-proof thermostats to suit most every need.

All Norseman™ XB series heaters can be fitted with integral line voltage thermostats which are available either externally adjustable or tamper-proof; factory installed or as field installed kit.

Remote thermostat mounting is also available.

Refer to Explosion-Proof Thermostats - XT, page 21 of this Norseman™ catalog when selecting the appropriate thermostat for the desired application.

Accessories

Wire Guards: All units are equipped with wire guards.

Norseman™ XB Explosion-Proof Natural Convection Heater Standard Features (CE ATEX)

Suitable for the following hazardous location classification:

- EX II 2G Ex db IIC T3 or T4 Gb ITS 05ATEX13473
-60°C ≤ Ta ≤ +40°C (See Table 13, page 16)
- Universal support leg for wall or floor mounting
- High surface area black anodized heat emitter with integral tubular heating elements
- Patented x-Max® housing with slide out terminal block trolley simplifies installation and servicing
- Nickel plated wire guards on all models

Table 12 – Norseman™ XB Explosion-Proof Natural Convection Heater Specifications for T3 and T4 Units, Hazardous Location Rating (CE ATEX)

W	Reference Figure (p. 22)	V	Phase	'L' Dim. in (mm)	Approx. Weight lbs (kg)	Part No.	T-Code
399	6	110	1	16.7 (424)	15 (6.8)	XB1-3040T3B	T3
475	6	120				XB1-3047T3B	T3
399	6	220				XB1-3040T3B	T3
436	6	230				XB1-3043T3B	T3
475	6	240				XB1-3047T3B	T3
840	7	110		23.4 (594)	40 (18.1)	XB2-4084T3B	T3
1000	7	120				XB2-4100T3B	T3
840	7	220				XB2-4084T3B	T3
918	7	230				XB2-4092T3B	T3
1000	7	240				XB2-4100T3B	T3
1260	8	110		23.4 (594)	60 (27.2)	XB3-4126T3B	T3
1500	8	120				XB3-4150T3B	T3
1260	8	220				XB3-4126T3B	T3
1378	8	230				XB3-4138T3B	T3
1500	8	240				XB3-4150T3B	T3
714	7	220		30.1 (765)	50 (22.7)	XB2-6071T4A	T4
781	7	230				XB2-6078T4A	T4
850	7	240				XB2-6085T4A	T4
1891	8	220		30.1 (765)	75 (34.0)	XB3-6189T3B	T3
2066	8	230				XB3-6207T3B	T3
2250	8	240				XB3-6225T3B	T3
2101	8	220	1	23.4 (594)	60 (27.2)	XB3-4210T3	T3
2296		230				XB3-4230T3	
2500		240				XB3-4250T3	
2521		220		30.1 (765)	75 (34.0)	XB3-6252T3	
2755		230				XB3-6276T3	
3000		240				XB3-6300T3	
1260		380		23.4 (594)	60 (27.2)	XB3-4126T3B	
1378		400				XB3-4138T3B	
1500		415				XB3-4150T3B	
1891		380		30.1 (765)	75 (34.0)	XB3-6189T3B	
2066		400				XB3-6207T3B	
2250		415				XB3-6225T3B	
2101		380		23.4 (594)	60 (27.2)	XB3-4210T3	
2296		400				XB3-4230T3	
2500		415				XB3-4250T3	
2521		380		30.1 (765)	75 (34.0)	XB3-6252T3	
2755		400				XB3-6276T3	
3000		415				XB3-6300T3	