

XEC1 Protoktor SERIES SUBMITTAL

Explosion-proof Convection Air Heater

For Hazardous Locations



Three Phase – T3A (180°C / 356°F) Division System / T3 (200°C / 392°F) Zone System

KW	Volts ^	Ph	Cabinet Length In. (mm)	Base Model Code before Options ? = Select an Electrical Enclosure A or B or C based on availability †	Total Amps (A)	"Electrical Enclosure Code"?			☒
						Wall Mount BTX Thermostat	Wall Mount XET Thermostat	Your Own Control Device	
1.13	380^	3	31.3 (795)	XEC1-0113-3803-?-T3A-31-A	1.7	B	B	B or C	<input type="checkbox"/>
1.20	208	3	31.3 (795)	XEC1-0120-2083-?-T3A-31-A	3.3	A or B	B	A or B or C	<input type="checkbox"/>
1.20	240	3	31.3 (795)	XEC1-0120-2403-?-T3A-31-A	2.9	A or B	B	A or B or C	<input type="checkbox"/>
1.20	277	3	31.3 (795)	XEC1-0120-2773-?-T3A-31-A	2.5	A or B	B	A or B or C	<input type="checkbox"/>
1.25	400^	3	31.3 (795)	XEC1-0125-4003-?-T3A-31-A	1.8	B	B	B or C	<input type="checkbox"/>
1.35	415^	3	31.3 (795)	XEC1-0135-4153-?-T3A-31-A	1.9	B	B	B or C	<input type="checkbox"/>
1.51	440^	3	31.3 (795)	XEC1-0151-4403-?-T3A-31-A	2.0	B	B	B or C	<input type="checkbox"/>
1.80	208	3	31.3 (795)	XEC1-0180-2083-?-T3A-31-A	5.0	A or B	B	A or B or C	<input type="checkbox"/>
1.80	240	3	31.3 (795)	XEC1-0180-2403-?-T3A-31-A	4.3	A or B	B	A or B or C	<input type="checkbox"/>
1.80	277	3	31.3 (795)	XEC1-0180-2773-?-T3A-31-A	3.8	A or B	B	A or B or C	<input type="checkbox"/>
1.80	480	3	31.3 (795)	XEC1-0180-4803-?-T3A-31-A	2.2	A or B	B	A or B or C	<input type="checkbox"/>
2.26	380^	3	49.5 (1257)	XEC1-0226-3803-?-T3A-49-A	3.4	B	B	B or C	<input type="checkbox"/>
2.50	400^	3	49.5 (1257)	XEC1-0250-4003-?-T3A-49-A	3.6	B	B	B or C	<input type="checkbox"/>
2.69	415^	3	49.5 (1257)	XEC1-0269-4153-?-T3A-49-A	3.7	B	B	B or C	<input type="checkbox"/>
3.01	380^	3	49.5 (1257)	XEC1-0301-3803-?-T3A-49-A	4.6	B	B	B or C	<input type="checkbox"/>
3.03	400^	3	49.5 (1257)	XEC1-0303-4403-?-T3A-49-A	4.0	B	B	B or C	<input type="checkbox"/>
3.13	380^	3	71.8 (1824)	XEC1-0313-3803-?-T3A-71-A	4.8	B	B	B or C	<input type="checkbox"/>
3.33	400^	3	49.5 (1257)	XEC1-0333-4003-?-T3A-49-A	4.8	B	B	B or C	<input type="checkbox"/>
3.47	400^	3	71.8 (1824)	XEC1-0347-4003-?-T3A-71-A	5.0	B	B	B or C	<input type="checkbox"/>
3.59	415^	3	49.5 (1257)	XEC1-0359-4153-?-T3A-49-A	5.0	B	B	B or C	<input type="checkbox"/>
3.60	208	3	49.5 (1257)	XEC1-0360-2083-?-T3A-49-A	10.0	A or B	B	A or B or C	<input type="checkbox"/>
3.60	240	3	49.5 (1257)	XEC1-0360-2403-?-T3A-49-A	8.7	A or B	B	A or B or C	<input type="checkbox"/>
3.60	277	3	49.5 (1257)	XEC1-0360-2773-?-T3A-49-A	7.5	A or B	B	A or B or C	<input type="checkbox"/>
3.60	380^	3	49.5 (1257)	XEC1-0360-3803-?-T3A-49-A	5.5	B	B	B or C	<input type="checkbox"/>
3.60	400^	3	49.5 (1257)	XEC1-0360-4003-?-T3A-49-A	5.2	B	B	B or C	<input type="checkbox"/>
3.60	480	3	49.5 (1257)	XEC1-0360-4803-?-T3A-49-A	4.3	A or B	B	A or B or C	<input type="checkbox"/>
3.60	600	3	49.5 (1257)	XEC1-0360-6003-?-T3A-49-A	3.5	A or B	B	A or B or C	<input type="checkbox"/>
3.74	415^	3	71.8 (1824)	XEC1-0374-4153-?-T3A-71-A	5.2	B	B	B or C	<input type="checkbox"/>
4.20	440^	3	71.8 (1824)	XEC1-0420-4403-?-T3A-71-A	5.5	B	B	B or C	<input type="checkbox"/>

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For Hazardous Locations



Continued (Three Phase – T3A (180°C / 356°F) Division System / T3 (200°C / 392°F) Zone System)

KW	Volts ^	Ph	Cabinet Length In. (mm)	Base Model Code before Options ? = Select an Electrical Enclosure A or B or C based on availability	Total Amps (A)	"Electrical Enclosure Code"?			☒
						Wall Mount BTX Thermostat	Wall Mount XET Thermostat	Your Own Control Device	
5.00	208	3	71.8 (1824)	XEC1-0500-2083-?-T3A-71-A	13.9	A or B	B	A or B or C	<input type="checkbox"/>
5.00	240	3	71.8 (1824)	XEC1-0500-2403-?-T3A-71-A	12.0	A or B	B	A or B or C	<input type="checkbox"/>
5.00	277	3	71.8 (1824)	XEC1-0500-2773-?-T3A-71-A	10.4	A or B	B	A or B or C	<input type="checkbox"/>
5.00	380^	3	71.8 (1824)	XEC1-0500-3803-?-T3A-71-A	7.6	B	B	B or C	<input type="checkbox"/>
5.00	400^	3	71.8 (1824)	XEC1-0500-4003-?-T3A-71-A	7.2	B	B	B or C	<input type="checkbox"/>
5.00	415^	3	71.8 (1824)	XEC1-0500-4153-?-T3A-71-A	7.0	B	B	B or C	<input type="checkbox"/>
5.00	480	3	71.8 (1824)	XEC1-0500-4803-?-T3A-71-A	6.0	A or B	B	A or B or C	<input type="checkbox"/>
5.00	600	3	71.8 (1824)	XEC1-0500-6003-?-T3A-71-A	4.8	A or B	B	A or B or C	<input type="checkbox"/>

(^) 220, 230, 254, 380, 400, 415 & 440 Volt heaters are for applications outside of Canada and the U.S.A.

(†) Refer to Page 4 of XEC1 brochure for XEC1 Model and Option Code Reference Chart.

(?) **A** = 120VAC Controls in Large Electrical Enclosure; **B** = 24VAC Controls in Large Electrical Enclosure; **C** = Line Voltage Electrical Enclosure (small Y junction box). Large Electrical Enclosure **A** & **B** include a contactor, transformer, and printed circuit board with fuses.

(Δ) **AS** = Assembly stock (approximately 1 to 2 weeks); **NS** = Non-stock (contact factory for lead time).

Supply voltage must be within +/- 10% of rated heater voltage. Actual Output (kW) = [Line voltage]² ÷ (Rated Voltage)² x Rated Unit Wattage (kW)

Note: BTX1 and XET1 thermostats are not designed to switch three-phase heaters directly. A factory built-in Electrical Enclosure (A or B), or customer supplied, remote mount, "Control Circuit" is required.

HEC1 Protoktor SERIES SUBMITTAL

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Hazardous location rating for heater:

Division System

Class I, Division 1 & 2, Groups B, C & D, T3A

Zone System

Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², Gb

Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², Gb

Ta = -50°C to +40°C, IP66, Type 4, T3

Factory Built-in Options

Code	Description	<input checked="" type="checkbox"/>
LC	Left Side Electrical Enclosure (standard location is on the right side)	<input type="checkbox"/>

Electrical Enclosure (must select at least one)

Code	Description	<input checked="" type="checkbox"/>
A*	120VAC, Large Electrical Enclosure	<input type="checkbox"/>
B*	24VAC, Large Electrical Enclosure (safer) (Required with XET1 wall thermostat)	<input type="checkbox"/>
C	Line Voltage, Small Electrical Enclosure (Y Junction Box). Not suitable for wall mount XET1 electronic thermostats.	<input type="checkbox"/>

* Our wall mount thermostats require Electrical Enclosure A or B on all 600V models, all 3-phase models, or 1-phase heater models with a line current exceeding 22 Amps.



Electrical Enclosure "C" using line voltage



Electrical Enclosure "A" (120VAC) or "B" (24VAC)



Left Side Electrical Enclosure Option Code "LC"

Wall Mount Accessories

Catalog	Description	<input checked="" type="checkbox"/>
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Number		
BTX1-N-B *	<p>Wall mount SPDT <u>bi-metal</u> hazardous location thermostat. <i>Requires XEC1 heater electrical enclosure A or B or C depending on heater model selected.</i></p> <p>Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom; Ship wt - 3.5 lbs (1.6 kg)</p> <p>22 Amps Resistive Load, 480 VAC Max; 1/2 HP@125 VAC; 1 HP@ 250 VAC (suitable for 24 volt or 120 volt control circuit)</p> <p>Class I, Division 1 & 2, Groups B, C & D Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², T6, Gb Class II, Division 1, Groups E, F & G Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², T6, Gb Class II, Division 2, Groups F & G; Class III; T6 Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db</p> <p>-50°C ≤ T amb ≤ +40°C, IP66, Type 4 Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db</p>	<input type="checkbox"/>
XET1-1-W-N-A*	<p>Wall mount <u>electronic</u> hazardous location thermostat.</p> <p><i>Requires XEC1 heater electrical enclosure B.</i></p> <p>Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" – NPT conduit opening on top and bottom; Ship wt – 3.4 lbs (1.5 kg)</p> <p>20 to 36 VAC 50/60Hz; 1 Amp max continuous (suitable for 24 volt control circuit only)</p> <p>Class I, Division 1 & 2, Groups B, C & D Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², T6, Gb Class II, Division 1, Groups E, F & G Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², T6, Gb Class II, Division 2, Groups F & G; Class III; T6 Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db</p> <p>-50°C ≤ T amb ≤ +40°C, IP66, Type 4 Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db</p>	<input type="checkbox"/>
XDC-01	<p>Wall mount hazardous location disconnect switch. <u>Not suitable for Hydrogen gas atmosphere</u></p> <p>600V, 50A max; 15 HP@208/240V, 3 phase; 30 HP@480/600V, 3 phase; 2 HP@120V, 1 phase; 7.5 HP@240V, 1 phase</p> <p>Class I, Division 1 & 2, Groups C & D; Class II, Division 1, Groups E, F & G; Class II, Division 2, Groups F & G; Class III</p> <p>Class I, Zone 1 & 2, Grp IIA & IIB, T5</p>	<input type="checkbox"/>

* Our wall mount thermostats require Electrical Enclosure A or B on all 600V models, all 3-phase models, or 1-phase heater models with a line current exceeding 22 Amps.

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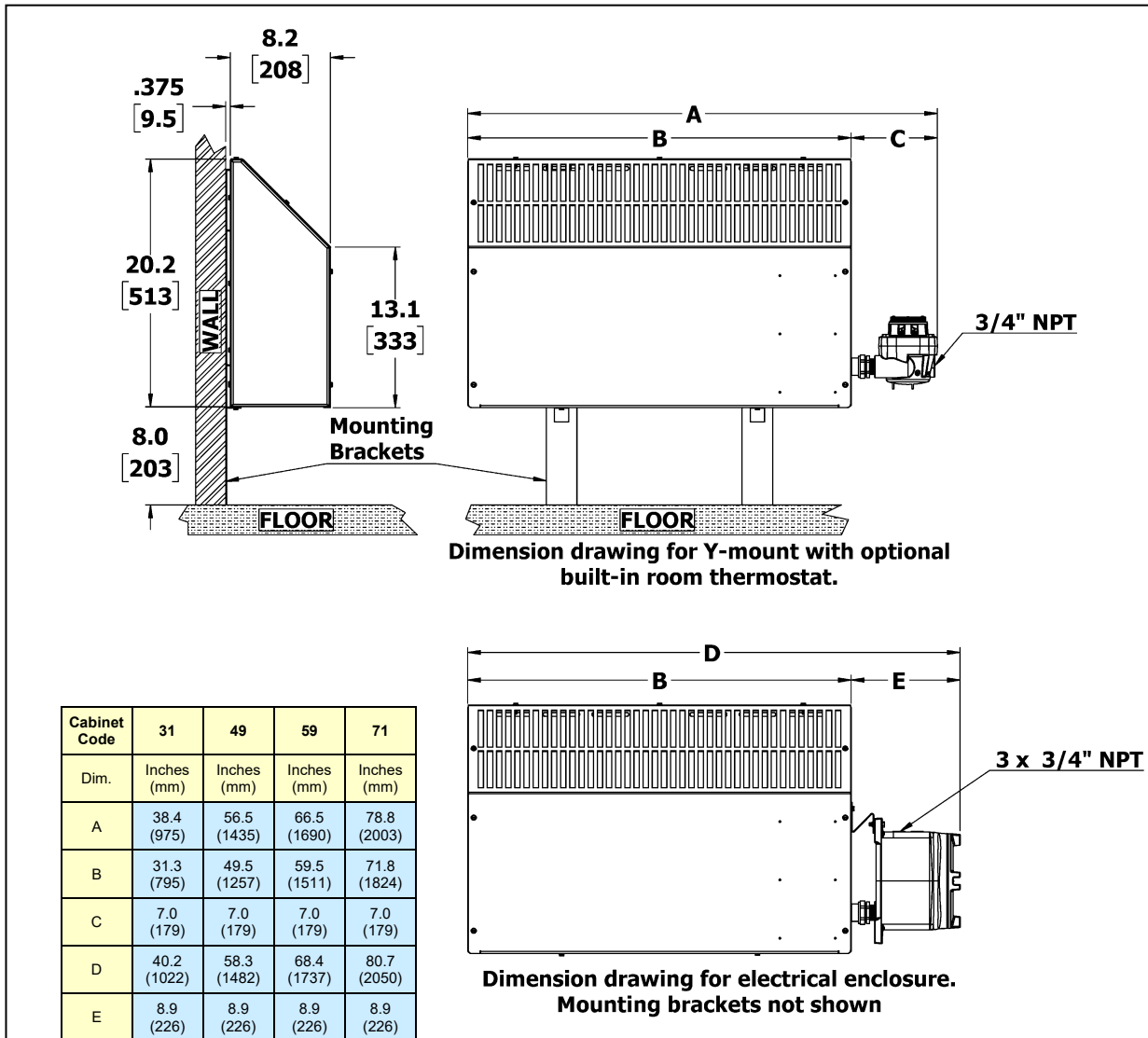


XEC1 Weights by Model Size

XEC1 Cabinet Length in. (mm)		31.3 (795)	49.5 (1257)	59.5 (1511)	71.8 (1824)
Approximate Net Weight Lbs (kg)	Heater with Electrical Enclosure "C"	54 (24.5)	81 (36.7)	93 (42.2)	110 (49.9)
	Heater with Electrical Enclosure "A or B"	70 (31.7)	97 (44.0)	109 (49.4)	126 (57.1)
Approximate Shipping Weight* Lbs (kg)	Heater with Electrical Enclosure "C"	72 (32.5)	104 (47.2)	118 (53.7)	140 (63.4)
	Heater with Electrical Enclosure "A or B"	88 (39.7)	120 (54.5)	134 (60.9)	156 (70.6)

* All heaters are individually packed in cardboard packaging and then strapped to a wooden pallet.

XEC1 Physical Dimensions



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XEC1 Model Coding

Model and Option Code Reference Chart

