



3. NORSEMAN™ PRODUCT OVERVIEW

Norseman™ Overview

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Product Design Characteristics

Flexibility in application and design. From panel heaters to unit heaters, the Norseman™ line provides innovative forced air or natural convection solutions to your hazardous area heating requirements.

Standard Features

- Durable construction
 - Anodized, copper-free housings and heat sinks
 - Low watt-density elements
- Simplified Wiring
 - “Track and Trolley” wiring system
- Explosion-Proof x-Max Terminal Housing
 - Five standard sizes
 - Used as control station, junction box, disconnect, thermostat



Norseman™ Sizing Tools

<http://www.ruffneck.com/heatload/ruffneck/imp/index.php>

Project Name: Company Name: Contact Name:

Basic Input Units: Building Measurements Date: 2008/02/25

Outside Temp: Length: Height: Exhaust Fan:

Inside Temp: Width: Roof Pitch: Air Changes/hr:

Wind Speed: Steading:






Opening	Unit	Width	Height	Qty	Standard Material Type	U-factor
Window1:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text" value="0.59"/>
Window2:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text" value="0.59"/>
Man Doors:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text" value="0.59"/>
Oil Doors:	<input type="text"/>	<input type="text" value="0.0"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Aluminum 1 1/2\"/>	<input type="text" value="0.59"/>
Oil Doors:	<input type="text"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="Steel Roll-up with insulation R\"/>	<input type="text" value="0.24"/>
Louvre Vent:	<input type="text"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="No insulation R\"/>	<input type="text" value="0.50"/>
Ridge Vent:	<input type="text"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="No insulation R\"/>	<input type="text" value="0.50"/>
Other:	<input type="text"/>	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>	<input type="text" value="0"/>	<input type="text" value="Single Glazed W0.90 (fixed)"/>	<input type="text" value="1.11"/>

	Standard Material Type	U-factor
Exterior Wall Types:	<input type="text" value="Fiberglass BATT 3\"/>	<input type="text" value="0.063"/>
Ceiling Types:	<input type="text" value="Fiberglass BATT 5\"/>	<input type="text" value="0.060"/>
Floor Types:	<input type="text" value="Bare 8\"/>	<input type="text" value="0.060"/>

[\(/heatload/ruffneck/imp/index.php\)](http://www.ruffneck.com/heatload/ruffneck/imp/index.php)



Product Certifications

Symbols	File No.	Location	Description/Product Class	Products Covered
	RU C- CA.ГБ05.B.00505	Edmonton	EAC Certification - Forced Air Heaters for Hazardous Locations	FE2, XGB, HP, FR, EFX
	RU C- CA.ГБ05.B.00504	Edmonton	EAC Certification – Natural Convection Heaters for Hazardous Locations	CF1, XB, XPA
	ITS 05ATEX13473	Edmonton	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC	Type XB NORSEMAN CONVECTOR HEATER. EEx II 2 G, EEx d IIC T3 or T4 -45°C Ta +40°C
	SIRA 14ATEX1141X	Edmonton	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC	Type XPA Norseman Convector Heater II 2G Ex d IIC,IIB, 215°C(T2),T3 or T4 Gb, -30°C Ta +40°C
	LR62892	Edmonton	Heaters - Air - Stationary Type - For Hazardous Locations - Certified to Canadian & U.S. Standards	XB1, XB2, XB3, XB4 & Convection Heaters for Hazardous Locations XPA Panel Heaters for Hazardous Locations XGB Unit Heaters for Hazardous Locations



Product Applications



Class I (Gas)

- Oil platforms and refineries
- Gas plants
- Control cabinets and small enclosures
- Water & sewage treatment plants
- Storage rooms for paints & cleaners
- Compressor stations

Class II (Dusts)

- Flour mills
- Grain elevators
- Cement plants
- Pulp and paper mills

Class III (Fibers)

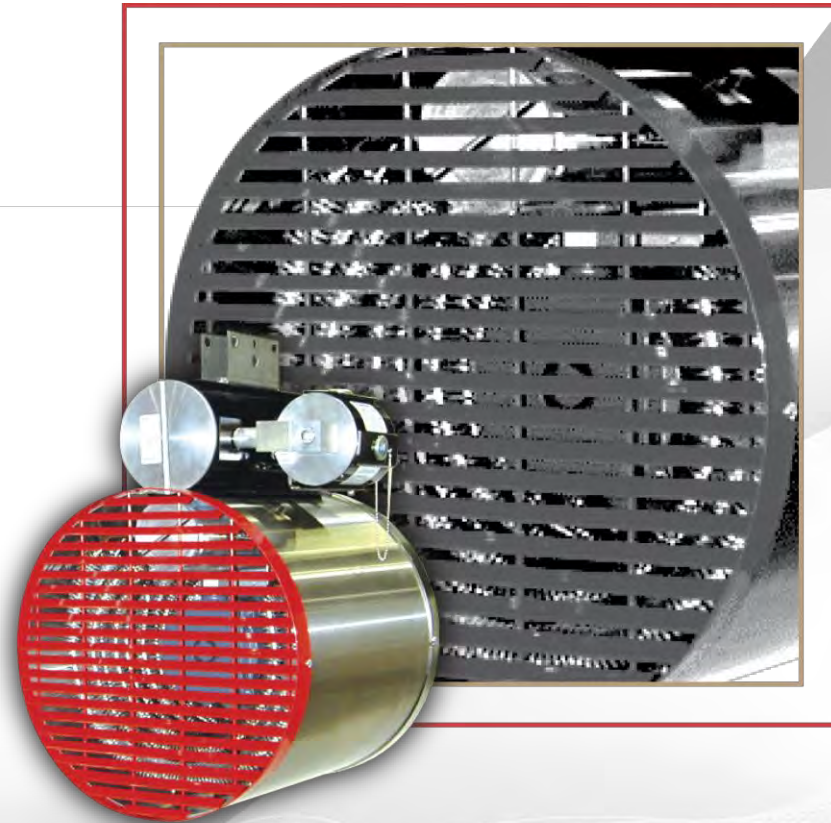
- Textile plants



Product Offerings

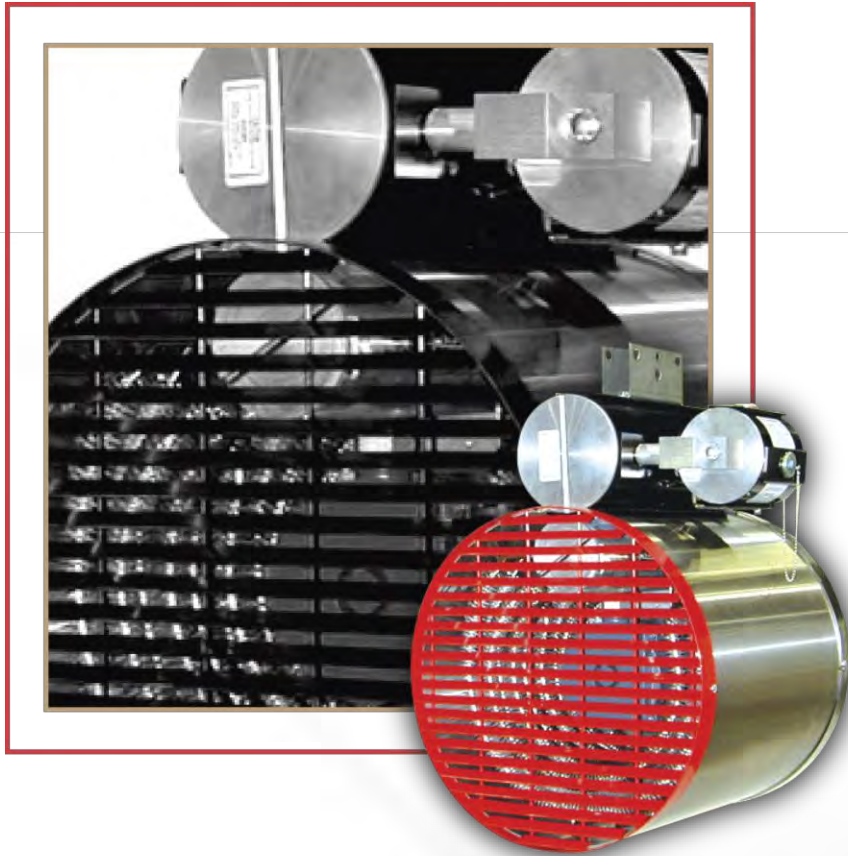
XGB Forced Air Unit Heater

- Small cabinet units
- Ranging from 3.75 to 10kW
- Approved for:
 - Class I, Division 1, Groups D, E, F & G
- Built-in thermostat, disconnect, pilot light, manual reset available.



XGB Forced Air Unit Heater

- Large cabinet units
- Ranging from 10 to 35kW
- Built-in thermostat, disconnect, pilot light, manual reset, 50 Hz and Group B motors available.
- Approved for
 - Class I, Division 1, Group C & D
 - Class II, Division 1, Group E, F & G
 - Class I, Division 2, Group B (available)



XGB Forced Air Unit Heater

Table 5 – Heater Dimensions

	in (mm)				
	A	B	C	D1	D2
Small Cabinet	16.875 (429)	8.875 (225)	25.1875 (640)	17.5 (445)	–
Large Cabinet	20.125 (511)	8.875 (225)	29.25 (743)	–	31.25 (794)

Table 6 – Heater Weight

	kW Rating	Heater Weight	Shipping Weight
		lbs (kg)	lbs (kg)
Small Cabinet	3.75 to 10	100 (45)	110 (50)
Large Cabinet	10 to 15	154 (66)	182 (83)
	20 to 35	185 (84)	222 (101)

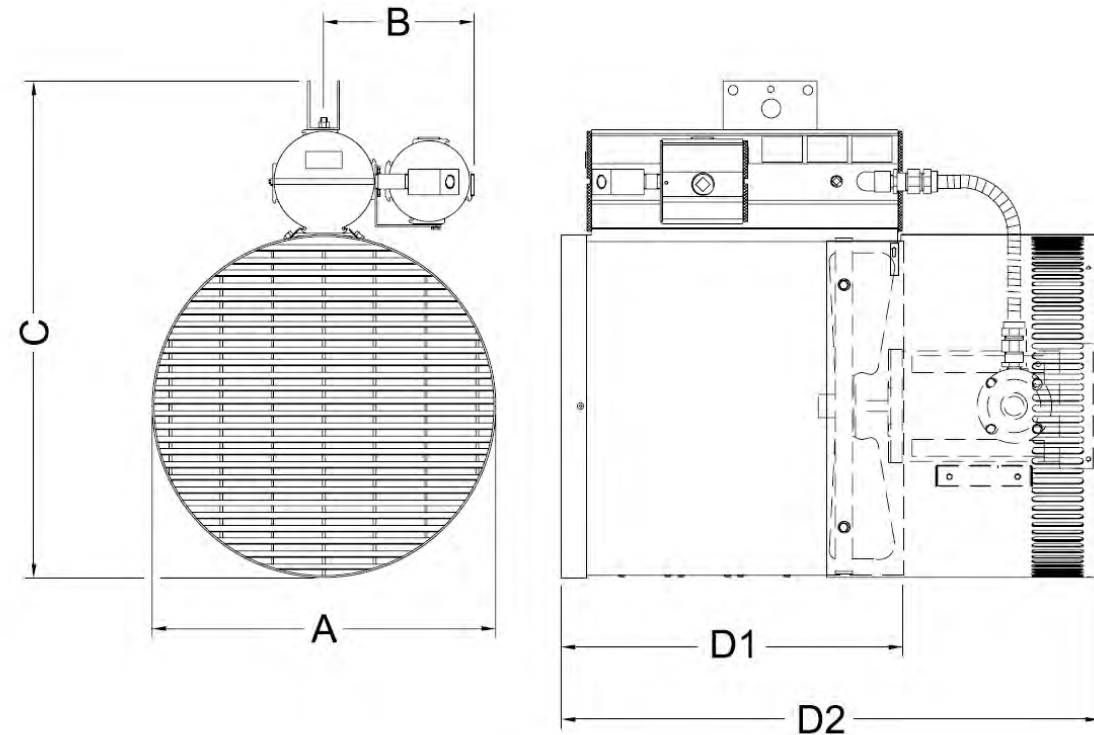


Figure 1 – XGB Dimensions



XB Convection Heater

- Ranging from 50W to 5,000W
- 120 to 600V, 1 or 3 phase
- Approved for:
 - Class I, Division 1, Groups A, B, C & D
 - Class II, Division 1, Groups E, F & G
- CSA_{C/US} & CE ATEX
- Modular heat sink design
- Built-in thermostat available



XB Convection Heater

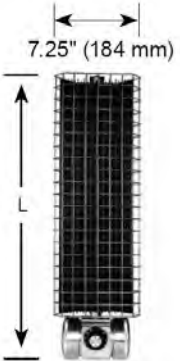


Figure 6 – XB Single Unit (XB1)

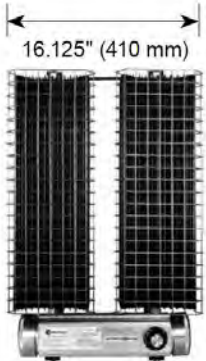


Figure 7 – XB Double Unit (XB2)



Figure 8 –XB Triple Unit (XB3)

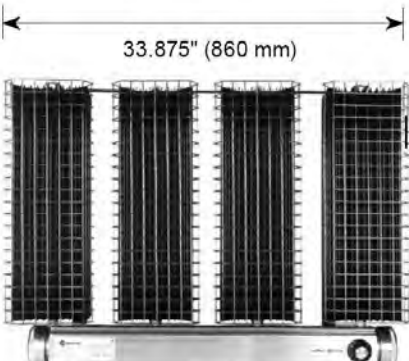


Figure 9 – XB Quadruple Unit (XB4)

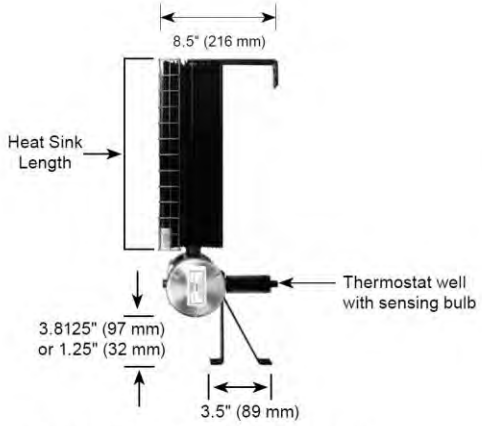


Figure 10 – XB Side View Floor Mounting

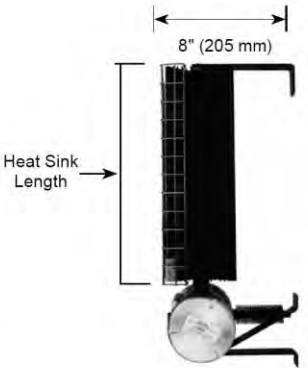


Figure 11 – XB Side View Wall Mounting



XPA Convection Heater

- Three sizes
- Ranging from 50 to 700W
- 120V, 208V, 240V, 1 phase
- Four junction box & thermostat options available
- Approved for
 - Class I, Division 1, Group A, B, C & D
 - Temp. Code T2D to T4
 - CSA Type 4



XPA Convection Heater

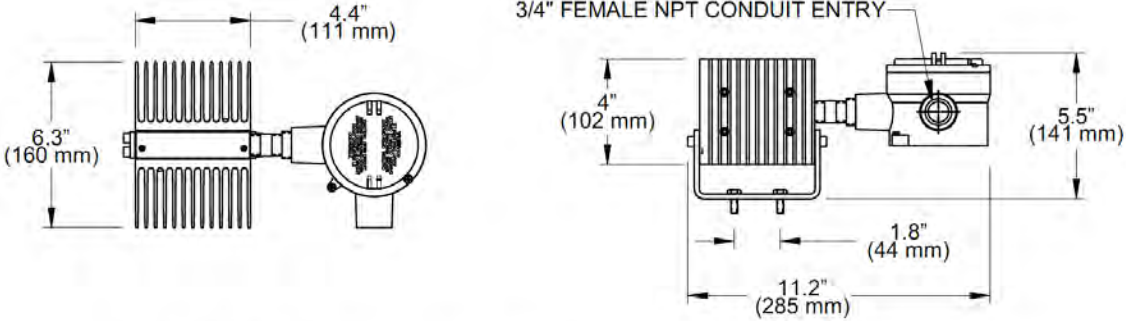


Figure 12 – XPAS with XJB-4 Junction Box

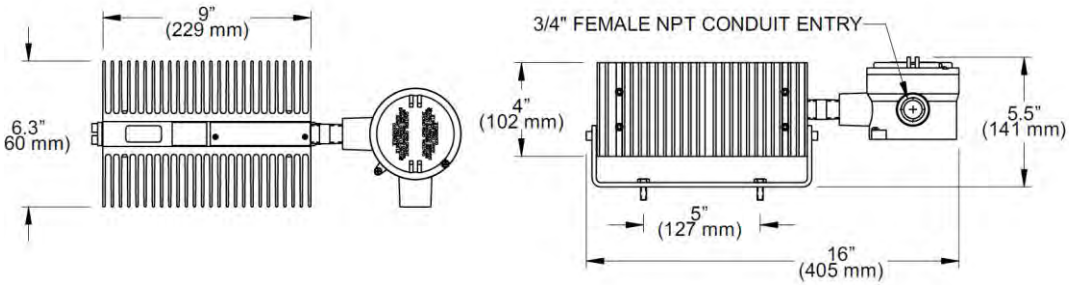


Figure 13 – XPAL with XJB-4 Junction Box

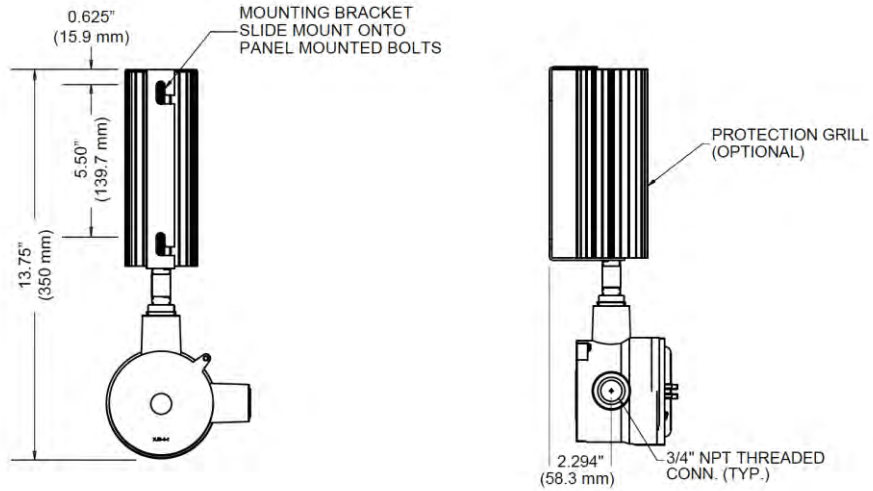


Figure 14 – XPAR with XJB-4 Junction Box



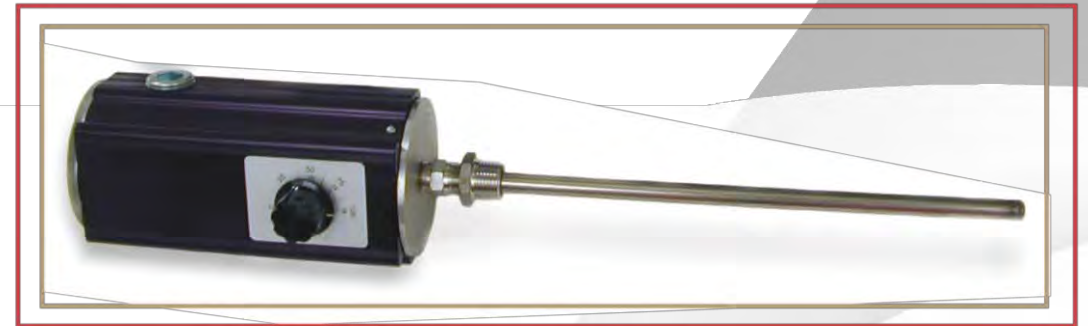
XT Thermostats – Model XTWA

- c CSA_{US} Approved for:
 - Class I, Division 1,
Groups A, B, C & D
 - Class II, Division 1,
Groups E, F & G
 - Class III
- -18 to 40°C (0 to 100°F)
- 10 to 120°C (50 to 250°F)
- SPST & DPST



XT Thermostats – Model XTWL

- $cCSA_{US}$ Approved for:
 - Class I, Division 1, Groups A, B, C & D
 - Class II, Division 1, Groups E, F & G
 - Class III
- -18 to 40°C (0 to 100°F)
- 10 to 120°C (50 to 250°F)
- SPST & DPST



XT Thermostats – Model XTB

- c CSA_{US} Approved for:
 - Class I, Division 1, Groups C & D
 - Class II, Division 1, Groups E, F & G
 - Class III
- -18 to 40°C (0 to 100°F)
- 10 to 120°C (50 to 250°F)
- SPST & DPST



Manufacturing Leadtimes

Edmonton

Products Manufactured

- XGB
- XB
- XPA
- XT Thermostats

Leadtime

- Standard product: 1 week
- Specialty voltage/kilowatt: 6-8 weeks
- XT Thermostats are stocked

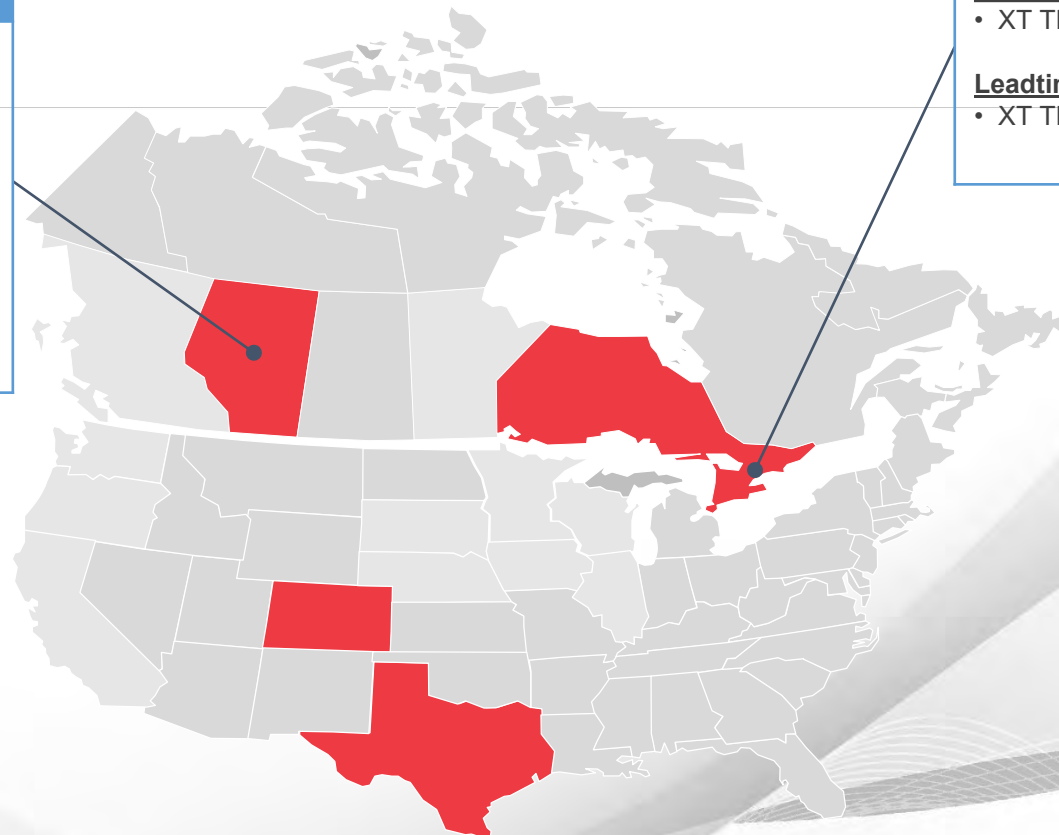
Oakville

Products Manufactured

- XT Thermostats

Leadtime





- XT Thermostats are stocked





3 G. COMPETITION AND MARKET DIFFERENTIATORS

Norseman™ Competitors

Competitor	Threat Level		
	XGB	XB	XPA
	Medium	Medium	Low
	High	Medium	
			High
			Medium



Norseman™ Differentiators

- Highly engineered with a strong barrier to entry
- Complements the Ruffneck™ line with a glycol-free unit heater
- Complements the Cata-Dyne™ line in metering and transmission package applications
- Fast delivery
- Broad certifications

