



MUNICIPAL INSTITUTIONAL COMMERCIAL

Tundra Process Solutions provides solutions for the municipal, institutional and commercial marketplace. Tundra's technical and project management teams work with clients to oversee engineering, design, and project execution. Tundra offers both standardized and custom equipment packages.



SAFETY

Tundra Process Solutions ensures that the health and safety of employees is top priority. We are committed to maintaining a safety process which actively involves all employees, clients and vendors in identifying, preventing and correcting workplace safety issues to reduce accidents, injuries and illnesses.

We work safely even when no one is watching



QUALITY






Tundra Process Solutions is committed to the continual improvement of our Quality Management System. It is our belief that a quality system that is repeatable, traceable and transparent drives exceptional customer service and satisfaction. We strive for flawless execution.

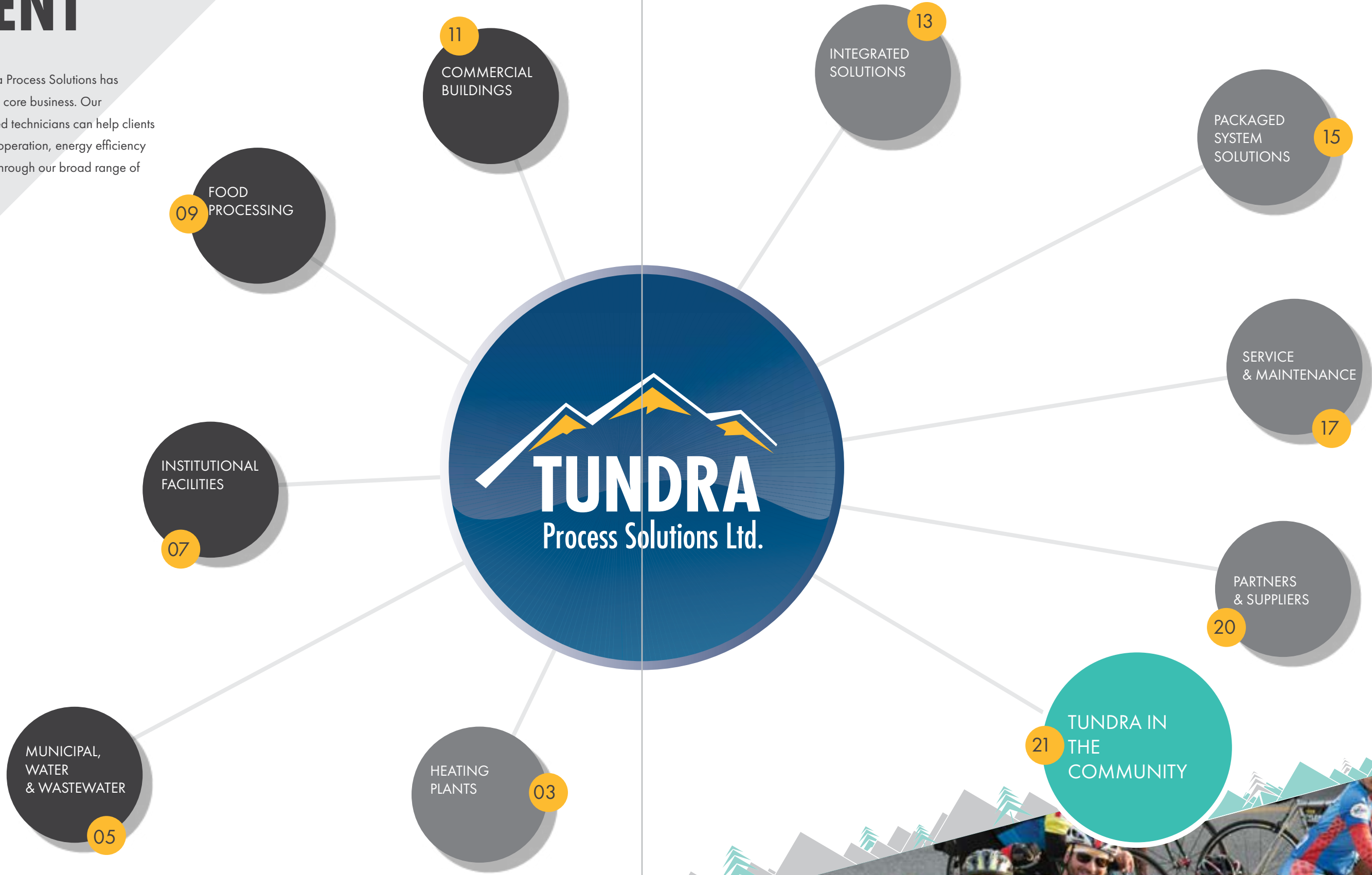
If things deviate from plan we are all empowered to make things right



CONTENT

Over eighteen years, Tundra Process Solutions has developed and extended its core business. Our engineers and factory trained technicians can help clients achieve maximum levels of operation, energy efficiency and effective maintenance through our broad range of value added solutions.

-  Boilers, Burners & Water Treatment
-  Instrumentation & Controls
-  Motors & Drives
-  Panel & Building Solutions
-  Valves & Actuation



HEATING PLANTS

Tundra Process Solutions offers steam and hot-water solutions to keep your facilities running efficiently. Products range from small, condensing units to large, industrial-strength boilers and heat-recovery steam generators.

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Boilers

- ▶ Firetube
- ▶ IWT (Drum Boiler)
- ▶ Large Mass Condensing
- ▶ Near Condensing
- ▶ Portable Boiler Systems
- ▶ Steam/Hydraulic
- ▶ Watertube

Boiler Feed & Water Treatment

- ▶ Atmospheric Tanks
- ▶ Blowdown
- ▶ Boiler Feed Water
- ▶ Chemical Injection
- ▶ Deaerators
- ▶ Reverse Osmosis
- ▶ Softening

Boiler Room Control

- ▶ Boiler Plant Controls
- ▶ Integrated Controls
- ▶ Monitoring Systems
- ▶ Water Level Controls
- ▶ Burner Management Systems
- ▶ Combustion Control Systems

Combined Heat & Power (Co Gen)

- ▶ Heat Recovery Steam Generator (HRSG)
- ▶ Selective Catalytic Reduction (SCR)
- ▶ Waste Heat Recovery Unit (WHRU)

Custom Conversions

- ▶ Burners
- ▶ Burner Management System
- ▶ Code Compliance Retrofits
- ▶ Fuel Trains

Exhaust Solutions

- ▶ Chimney Liners
- ▶ Custom Breeching
- ▶ Draft Calculation
- ▶ Freestanding Stack
- ▶ Prefabricated Exhaust

Optimization & Retrofits

The continuous advancement of technology means that your current boiler system can take advantage of retrofits, control upgrades or supplemental heat recovery equipment to increase efficiency, reduce emissions and meet government regulations. We understand the importance of this economic necessity for our clients.

Emission-Reduction Solutions

- ▶ Add Flue Gas Recirculation (FGR)
- ▶ Upgrade Controls
- ▶ Burner Upgrade
- ▶ Boiler Replacement
- ▶ Add Selective Catalytic Reduction (SCR)

Energy-Efficient Solutions

- ▶ Fuel Conversions
- ▶ Upgrade Controls
- ▶ Burner Upgrade
- ▶ Add Heat Recovery
- ▶ Boiler Replacement

Significant Impact
Maximum Impact

Contact us to see how your current boiler or burner system can benefit from an upgrade

APPLICATIONS



Featured Product
CleaverBrooks ProFire - MTH Series Burner

Featured Product
CleaverBrooks Boiler Family

Heat Recovery

- ▶ Blowdown Heat Recovery System
- ▶ Condensing Economizer
- ▶ Stack Economizer
- ▶ Flash Tank Recovery

Instrumentation

- ▶ Actuation
- ▶ Analytical Measurement
- ▶ Flow Measurement
- ▶ Gas & Flame Detection
- ▶ Level Measurement
- ▶ Positioners
- ▶ Pressure Measurement
- ▶ Temperature Measurement

Motors & Drives

- ▶ Pump Variable Speed Control
- ▶ Rotating Equipment

Valves & Actuation

- ▶ Check Valves
- ▶ Control Valves
- ▶ Isolation Valves
- ▶ Relief Valves



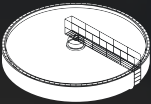
MUNICIPAL WATER & WASTEWATER

Tundra Process Solutions delivers solutions for the water industry across all areas of the treatment cycle.

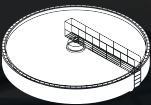
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Tundra Process Solutions understands the need to progressively improve water management by assisting those who provide water services. Tundra helps to optimize infrastructure while minimizing environmental impact and improving efficiency.

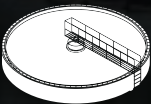
Water Treatment Facilities Served



Water Treatment



Wastewater Treatment
(The Liquid Stream)



Wastewater Treatment
(The Solid Stream)

APPLICATIONS

Boilers

- ▶ Auxiliary Boiler
- ▶ Boilers
- ▶ Boiler Feed Systems
- ▶ Exhaust Solutions
- ▶ Heating
- ▶ Heat Recovery
- ▶ High Pressure Steam
- ▶ Humidification
- ▶ Rental Boiler

Critical Fuel Systems

- ▶ Accessories
- ▶ Boilers
- ▶ Communications
- ▶ Daytanks
- ▶ Fill Stations
- ▶ Filtration
- ▶ Generators

Instrumentation

- ▶ Actuation
- ▶ Analytical Measurement
- ▶ Flow Measurement
- ▶ Gas & Flame Detection
- ▶ Level Measurement
- ▶ Positioners
- ▶ Pressure Measurement
- ▶ Temperature Measurement

Power & Electrical

- ▶ Blower
- ▶ Fan & Pump Variable Speed Control
- ▶ Harmonic Mitigation
- ▶ Power Factor Correction
- ▶ Power Transmission & Distribution
- ▶ Rotating Equipment
- ▶ Surge Protection Backup

Pressure Vessels

- ▶ Hydronic Cooling
- ▶ Hydronic Heating

Valves & Actuation

- ▶ Check Valves
- ▶ Control Valves
- ▶ Isolation Valves
- ▶ Joints/Fittings
- ▶ Relief Valves
- ▶ Pressure & Vacuum Regulation
- ▶ Flame/Detonation Arrestors

Water Treatment

- ▶ Anaerobic Digestion
- ▶ Biological Treatment (MBR/MBBR)
- ▶ Clarification
- ▶ Dewatering
- ▶ Filtration
- ▶ Hydrolysis
- ▶ Primary Solids Separation

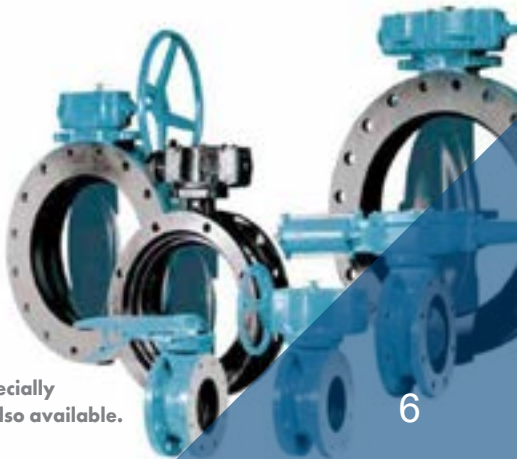
Others

- ▶ Flocculator
- ▶ High & Low Service Pump
- ▶ Sewage
- ▶ Sludge Pump
- ▶ Water Pipeline

Featured Product Dezurik AWWA Butterfly Valves

SIZE RANGE: 3 - 144" (80 - 3600mm)

AWWA butterfly valves are available in a variety of sizes. Specially designed packages for Pump Check control applications are also available.



INSTITUTIONAL FACILITIES

Tundra Process Solutions offers a custom approach and methodology to suit any delivery schedule without compromising the quality or safety of the project.

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Tundra collaborates with public and private sector clients.

Tundra leverages exclusive relationships with manufacturing partners to develop standardized packages for best price, availability and service (24/7).

Tundra is a leader in delivering solutions that help clients optimize operations for both new and existing facilities.

Institutional Facilities Served



Educational facilities (Primary Schools, Secondary Schools, Universities and Colleges)



Government & Public Works Facilities (Municipal Buildings, Police Stations, Fire Halls, Offices)



Healthcare Facilities (Hospitals, Research Laboratories, Medical Centres, Nursing Homes and Training Facilities)

APPLICATIONS

Boilers

- ▶ Auxiliary Boiler
- ▶ Boilers
- ▶ Boiler Feed Systems
- ▶ Exhaust Solutions
- ▶ Heating
- ▶ Heat Recovery
- ▶ High Pressure Steam
- ▶ Humidification
- ▶ Laundry
- ▶ Rental Boiler
- ▶ Sterilization

Critical Fuel Systems

- ▶ Accessories
- ▶ Boilers
- ▶ Communications
- ▶ Daytanks
- ▶ Fill Stations
- ▶ Filtration
- ▶ Generators

Combined Heat & Power (Co Gen)

- ▶ HRSG
- ▶ SCR
- ▶ WHRU

Instrumentation

- ▶ Actuation
- ▶ Analytical Measurement
- ▶ Flow Measurement
- ▶ Gas & Flame Detection
- ▶ Level Measurement
- ▶ Positioners
- ▶ Pressure Measurement
- ▶ Temperature Measurement

Power/Electrical

- ▶ Blower
- ▶ Fan & Pump Variable Speed Control
- ▶ Harmonic Mitigation
- ▶ Motor Control
- ▶ Power Transmission & Distribution
- ▶ Power Factor Correction
- ▶ Rotating Equipment
- ▶ Surge Protection Backup

Pressure Vessels

- ▶ Hydronic Cooling
- ▶ Hydronic Heating

Valves & Actuation

- ▶ Check Valves
- ▶ Control Valves
- ▶ Isolation Valves
- ▶ Joints/Fittings
- ▶ Relief Valves

Water Treatment

- ▶ Boiler Feed Water
- ▶ Deaeration
- ▶ Reverse Osmosis
- ▶ Softening

Featured Product CleaverBrooks CBEX ELITE 100-1,200 HP

Minimum excess air 3% O2 across operating range with 10:1 turndown

15% reduction in footprint vs. traditional firetubes



FOOD PROCESSING

Tundra Process Solutions offers packages and retrofits that will improve facility performance and ensure regulatory compliance.

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Energy Efficient Solutions
Custom Engineered Solutions
Integrated Solutions
Project Management
Service and Maintenance
Quality Assurance

Food Industries Served



Animal Food Manufacturing



Beverages



Bread & Bakery Products



Dairy Products



Grain and Oilseed Milling



Meat Products

APPLICATIONS

Boilers

- ▶ Boilers
- ▶ Boiler Feed Systems
- ▶ Cleaning
- ▶ Exhaust Solutions
- ▶ Heating
- ▶ Heat Recovery
- ▶ Humidification
- ▶ High Pressure Steam
- ▶ Moisturization

Instrumentation

- ▶ Actuation
- ▶ Analytical Measurement
- ▶ Flow Measurement
- ▶ Gas & Flame Detection
- ▶ Level Measurement
- ▶ Positioners
- ▶ Pressure Measurement
- ▶ Temperature Measurement

Power/Electrical

- ▶ Blower
- ▶ Fan & Pump Variable Speed Control
- ▶ Harmonic Mitigation
- ▶ Motor Control
- ▶ Power Transmission & Distribution
- ▶ Power Factor Correction
- ▶ Rotating Equipment
- ▶ Surge Protection Backup

Pressure Vessels

- ▶ Hydronic Cooling
- ▶ Hydronic Heating

Valves & Actuation

- ▶ Check Valves
- ▶ Control Valves
- ▶ Isolation Valves
- ▶ Joints/Fittings
- ▶ Relief Valves

Water Treatment

- ▶ Boiler Feed Water
- ▶ Filtration
- ▶ Oil Separation
- ▶ Reverse Osmosis
- ▶ Waste Water Management

Featured Product TOSHIBA VFD - AS1 & AS3 Family

The Affinity Laws: Reducing the speed on centrifugal fans and pumps can help save exponential amounts of energy.

Toshiba Drives can maintain up to 0.1% speed accuracy while our closed loop vector control algorithm can maintain up to 0.01% accuracy.



COMMERCIAL BUILDINGS

Tundra Process Solutions offers products that improve building efficiency, safety and comfort.

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Tundra understands that creating value comes from working with stakeholders early in project design phase to provide fit for purpose solutions ensuring project efficiency and success.

Tundra has a long history of providing specialized electrical, heating, valve, instrumentation & control needs for commercial buildings.

Commercial Buildings Served



Office Buildings
(Small-Scale,
Medium-Scale,
Skyscrapers)



Retail Buildings
(Retail Stores,
Shopping Malls)



Residential Buildings
(4-Storey to High-Rise
Apartment Buildings)



Leisure Buildings
(Hotels,
Public Houses,
Restaurants,
Sports Facilities)



Factory Buildings
(Office/
Warehouses
Parkades,
Distribution
Centers)



Mixed-Use
Buildings

APPLICATIONS

Boilers

- ▶ Boilers
- ▶ Boiler Feed Systems
- ▶ Complete Boiler Room Solutions
- ▶ Exhaust Solutions
- ▶ Heating
- ▶ Heat Recovery
- ▶ Humidification

Critical Fuel Systems

- ▶ Accessories
- ▶ Boilers
- ▶ Communications
- ▶ Daytanks
- ▶ Fill Stations
- ▶ Filtration
- ▶ Generators

Instrumentation

- ▶ Actuation
- ▶ Analytical Measurement
- ▶ Flow Measurement
- ▶ Gas & Flame Detection
- ▶ Level Measurement
- ▶ Positioners
- ▶ Pressure Measurement
- ▶ Temperature Measurement

Power/Electrical

- ▶ Blower
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Pressure Vessels

- ▶ Hydronic Cooling
- ▶ Hydronic Heating

Valves & Actuation

- ▶ Check Valves
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- ▶ Isolation Valves
- ▶ Joints/Fittings
- ▶ Relief Valves

Featured Product CleaverBrooks ClearFire® - LC

Fully condensing with up to 98% efficiency and 5:1 turndown

4,000 to 12,000 MBTU

Up-front capital cost is reduced by installing fewer larger-capacity boilers versus many smaller boilers



INTEGRATED SOLUTIONS

Tundra Process Solutions provides integrated solutions for the municipal, institution, and commercial marketplace. Tundra’s technical and project management teams work with clients to oversee engineering, design, and project execution.

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Optimized Integration

- ▶ Tundra leverages exclusive relationships with manufacturing partners to develop and standardize process and electrical packages for best price, availability and service (24/7)
- ▶ Tundra provides in-house project and engineering oversight
- ▶ Tundra provides review and analysis of existing systems to offer refined, cost-optimized alternatives that leverage Tundra’s volume-basis and design history
- ▶ Client-specified component options are available



Tundra recognizes that while client-needs are unique, a standard base design often exists. Standardized package availability includes:

- ▶ Electrical Buildings
- ▶ Process and Metering Skids
- ▶ Quality and Analytical Systems, including Chromatograph Packages, Auto-samplers, Quality Buildings, etc.

Featured Product Tundra Infinity Series Motor Control Center (MCC)

Low Voltage MCC

Rather than trying to integrate ongoing business operations with the challenges of dealing with different companies to facilitate procurement, installations and commissioning, Tundra’s pre-packaged, skid-mounted and optimized integrated solutions offer a simple way to start you up in less time with less effort.

Buildings

Tundra offers a full range of Turn-key buildings, packages and accessories that can be custom designed to meet your needs:

- ▶ Variable Frequency Drive (VFD) Buildings
- ▶ E-Houses (Electrical Buildings)
- ▶ MCC & Switchgear Buildings
- ▶ Generator Buildings

Skids

- ▶ Skid-mounted Substations

Panels

- ▶ VFD
- ▶ Control & Marshalling Panels
- ▶ Custom Panel Solutions



Tundra’s factory-trained technician servicing a Tundra panel

PACKAGED SYSTEM SOLUTIONS

Tundra Process Solutions and our manufacturing partners can provide pre-packaged solutions for the municipal, institution and commercial marketplace to help facilitate and improve on-site commissioning and installation requirements.

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Tundra understands the value in identifying and working with the client, design teams, and project stakeholders early on to create value and an environment for project success.

Packages

Product Features

Combined Heat & Power Packages

CleaverBrooks HRSG



Portable Steam Plant

Portable Firetube Boiler Solutions



Skid Mounted Boiler Skid

ClearFire Vertical Skid-Mounted System



Valve and Actuation

Automated Dezurik Valve



Pump & Water Treatment Packages

Actiflo Turbo Ballasted Clarifier System



SERVICE & MAINTENANCE

Tundra’s factory-trained Service Technicians are here 24/7/365 days to service all of your current and future needs. Tundra’s Service Department will ensure your equipment is running efficiently, effectively and safely.

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Energy-Efficiency Assessment

- ▶ Maximize cost savings by adding a VFD to your existing motors.
- ▶ Motor/boiler audits to suggest savings by adding high efficiency upgrades and retrofits to motors/boilers.



24/7
Services



Emergency
Response



Custom
Packages/
Solutions

Commissioning & Start-up

Tundra’s factory-trained technicians ensure complete facility & product life cycle service & support from day 1.

Training & Development

Tundra supports operations, maintenance and engineering staff with training on new products, solutions & local regulatory requirements.

Preventative Maintenance

Unscheduled outages can cost 15 times more than scheduled downtime. Tundra is here to help reduce interruptions and manage capital cost planning.



With our industry knowledge, experience and expedited technical service, we are here to help.

Steam Trap Audits

Steam traps can be found anywhere a boiler serves to provide steam for mechanical work, heating or sterilization, and are commonly the most overlooked component of a steam system.

Identifying and replacing failed steam traps will improve safety, increase production, improve heating efficiency, reduce maintenance costs and the cost associated with unexpected equipment or piping failure.

Tundra’s experienced steam team of Journeyman Steamfitter/ Pipefitters have years of experience testing, reporting, and repairing steam trap installations. Tundra performs audits utilizing the TLV Trapman technology.



TLV
Trapman TM5



Audit
Technicians



Audit
Reports

Steam Audit Example

Local Medical Care Facility

Total traps:	~150
In operation:	~150
Good traps:	~106
Failed traps:	~41
Cold traps:	~14
Annual steam losses due to failed traps:	\$20,440/yr. Local Alberta

CONTACT TUNDRA
PROCESS SOLUTIONS TO
LEARN MORE TODAY



Exclusive Partners And Preferred Package Suppliers



Boiler Solutions, Packaged Burner Systems and Controls



Low & Medium Voltage Motors, Adjustable Low & Medium Voltage Speed Drives, Stand-Alone Rig Drive, Power Apparatus & Components, Tundra Integrated Solutions



Coriolis Mass Flow Meters, Differential Pressure Products, Electromagnetic Flow Meters, Variable Area Flow Meters, Vortex & Swirl Flow Meters



Process, Steam & Specialty Relief Valves, Pressure Relief System Design & Audit



Combustible & Toxic Gas Detection, Flame Detection, Ultrasonic Gas Leak Detection, Control Systems



Municipal Valves for Water Treatment and Distribution



Comprehensive Water & Wastewater Solutions, Unique De-oiling Technologies, Evaporation & Crystallization Technology, Advanced Filtration Treatment Solutions, Full Service Water Management Solutions



Process & Moisture Metering, Pressure & Calibration Equipment



Boiler Room and Diesel Generator Support Products, Deaerators in Spray, Tray, and Packed Column Type; Boiler Feed and Condensate Systems; Oil Pumping Systems and Day Tanks



Fixed Gas & Flame Detection, Turnkey Integrated PLC based Monitoring & Control Solutions



CSA/CGA Approved Valves, Burner Management Systems (BMS)



Pre-Insulated, Heat-traced Tubing Bundles, Winterization Enclosures & Instrument Stands



Thermal Mass Flow Meters



Pump Sets, Day Tanks, Controls, Filtration Systems



Pneumatic, Hydraulic & Electro-Hydraulic Actuators & Control Systems



Rental Boilers & Equipment



General Purpose Control Valves



Triple Offset Metal Seated Process Butterfly Valves, Dual Disc Check Valves



Stacks, Chimneys



Solenoid Valves, Filter Regulators & Quick Exhaust Valves



High Performance ON/OFF Soft & Metal Seated, Rotary Control, Cageball Valves



Innovative "V-Cone" & "Water Cone" Flow Meters



Canadian Industry Approved Liquid and Gas Flow Computers & Measurement Automation Software



Flow Computers, Chromatograph, Mag Level, Laser Level Switches



High Efficiency Steam Traps, Pump-Traps, & Prefabricated Condensate Drainage Packages



Pressure Vacuum Relief Valves & Flame Arrestors



Pressure Regulators, Dump & Control Valves, Liquid Level Controller & Switches



Positioning & Position Monitoring Devices

TUNDRA IN THE COMMUNITY

Choosing Tundra Process Solutions goes beyond just ensuring excellence in client satisfaction. **Giving back to the community** and the environment is standard practice at Tundra and philanthropy is a part of our success. Thank you for supporting us so that we can support the community!

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2016 Tundra Annual Stampede BBQ Fundraiser



Imagine Canada Caring Company

Tundra is an Imagine Canada Caring Company. This recognition is given to companies that donate a minimum 1% of profits to non-profit organizations. Tundra was the 89th company recognized in Canada as a Caring Company.



The Tundra Giving Culture

Tundra is a regular contributor to local charity. Tundra and the Tundra team have contributed thousands of hours and championed many successful fundraisers, frequently donating time, money and blood to many great causes. Through flooding and wildfires, Tundra has supported the community with manpower, equipment, facility and storage.



Tree Loyalty Program

Tundra reinforces the need to care for our environment by ensuring that we include our friends in this endeavour. Friends of Tundra can also give back to the environment by choosing our products and services. Tundra keeps track of how much carbon is offset by doing business with us.

For more information, feel free to ask about our Tree Loyalty Program.



Become a friend by choosing
Tundra Process Solutions today



Tundra at the 2016 Motionball Special Olympics

NOTES

www.TundraSolutions.ca



Wellpad Manufactured
Solutions



Boilers, Burners & Water Treatment



Motors & Drives



Instrumentation & Controls



Valves & Actuation



Panel & Building Solutions

Artificial
Lift

Maintenance
& Support



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