



**EXCHANGER  
INDUSTRIES**

Exchanger Industries designs and manufactures heat transfer equipment for the global oil, natural gas and petrochemical industries. Since our incorporation in 1961, we have grown to be recognized as a world leader in heat transfer technology and the largest manufacturer of heat exchangers in Canada.

Our engineered products include:

## SHELL AND TUBE HEAT EXCHANGERS



### Types

- All TEMA styles and variations thereof. API 660
- Helixchangers™ (under license of CBI Lummus)
- EMbaffle™
- Rod Baffle Exchangers
- Sulphur Plant Equipment: Condensers, Reheaters

### Size

- Outside Diameter: 6 inches up to 192 inches
- Length: 4 feet up to 100 feet
- Weight: 2,000 lbs up to 500,000 lbs

### Materials

- Carbon steel
- Low Alloy (1.25 Cr, 2 Cr, 5 Cr, 9 Cr, 13 Cr)
- Austenitic 300 series stainless (304, 316, 317, 321, etc)
- Duplex stainless steels
- High alloy (600, 800, 825 series)
- C276
- Monel
- Brass, 70-30 Cu-Ni, 90-10 Cu-Ni
- Titanium (limited)
- Weld overlay (300 series, high-alloy)

### Pressures

- Atmospheric up to 6,000 psig (welding up to 5 inches thick)

### Design

- HTRI – Category III member
- HTFS
- AspenTech TEAMS, Compress
- FE/Pipe and Nozzle/Pro
- Customized software
- AutoCad, Inventor
- FEA – ANSYS (sub-contracted)

### Quality

- ASME Certified and Audited Quality Program
- Project Management Systems and Team

### Certifications

- ASME 'U', 'S', 'R'
- National Board



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**EMbaffle™**



## AIR COOLER HEAT EXCHANGERS



### Cooler Types (API 661)

- Forced Draft
- Induced Draft
- Natural Draft

### Header Types

- Header box/plug
- Cover plate
- Billet

### Size

- Width 26 feet
- Length 70 feet
- Weight 20,000 lbs up to 150,000 lbs

### Materials

- Carbon steel
- Low Alloy (1.25 Cr, 2 Cr, 5 Cr, 9 Cr, 13 Cr)
- Austenitic 300 series stainless (304, 316, 317, 321, etc)
- Duplex stainless steels
- High alloy (600, 800, 825 series)
- Weld overlay (300 series, high-alloy)

### Pressures

- Atmospheric up to 6,000 psig (welding up to 3 inches thick)

### Design

- HTRI – Category III member
- HTFS
- Aspentech TEAMS, Compress
- FE/Pipe and Nozzle/Pro
- Customized software
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- FEA – ANSYS (sub-contracted)

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## CLIENT LIST

Acres Parsons  
Aerial Solutions & Refinery Services Ltd.  
Agrium  
Air Liquide  
Aker Process Systems  
Alberta Envirofuels  
Alberta Pacific  
AltaGas Ltd.  
AMEC Americas Ltd.  
AMEC BDR Limited  
Amec Black & McDonald  
Anadarko Canada Corp.  
Anvil Corporation  
Apache Canada Ltd.  
APEX  
Apex Distribution Inc.  
Ascent Consulting Ltd.  
Aspire Energy Resources Ltd.  
AT Plastics  
Atco Gas  
ATCO Midstream Ltd.  
ATCO Power  
Athabasca Oil Sands Company  
AUX Sable Canada Ltd  
Aux Sable Liquid Products  
B and R Echels  
BA Energy Inc.  
Babcock Wilcox Canada  
Bantrel  
Banyan Engineering Ltd.  
Bar Engineering Co. Ltd.  
Baron Oilfield Supply Ltd.  
BC Bearing Engineers Ltd.  
BC Gas Utility Ltd.  
BDR Engineering Ltd.  
Bechtel Canada Co.  
Bermac  
BG Group Canada  
Bilton Welding & Manufacturing Ltd.  
BlackRock Ventures Inc.  
Blaze Energy Ltd.  
Bonavista Petroleum Ltd  
Bower Damberger Rolseth Engineering Ltd.  
BP Amoco  
BP Canada Energy Company  
Braskem PP Americas\_ Inc. (formerly Sunoco)  
C.E.Franklin Ltd.  
Calc Engineering Inc.  
Caltech Senex Oil & Gas Group  
Canadian 88 Energy  
Canadian Fertilizers  
Canadian Hunter Exploration Ltd.  
Canadian Natural Resources Limited  
Canadian Nexen Petroleum Yemen  
Canatech Enterprises  
Caribou Resources Corp  
Carmel Olefins Ltd.  
Cascade Management  
CCS Energy Services  
CE Franklin Ltd.  
Cenovus Energy Inc.  
Central Alberta Midstream  
CH2M Hill Canada Ltd.  
Chevron Air Liquide  
Chevron Canada Limited

Chevron Canada Resources Limited  
Chevron Corporation Salt Lake  
Chevron Hawaii  
Chevron Products Company\_ Inc.  
Cimarron Engineering Ltd.  
City of Calgary  
City of Medicine Hat  
CNRL  
CNRL Wolf Lake  
Cobra Group LP  
Cochrane\_Empress V Partnership  
Collicutt Energy Services Ltd.  
Colt  
Colt Eng. Corp. A Division of  
WorleyParsons Canada  
Colt Engineering  
Commercial Solutions  
Compass  
Compression Services  
Concise Design Engineering Services  
Connacher Oil and Gas Limited  
Conoco  
Conoco Canada Limited  
Conoco Phillips Canada Limited  
ConocoPhillips  
Conсорcio Jantesa  
Consumers Co-Operative Refineries Limited  
Cord Projects Ltd.  
CORD WorleyParsons  
Cornerstone Engineering Ltd.  
Cosyn Technology  
CPC S.A. Ingenieria y Construcciones  
Crescent Point Energy Trust  
Crestar Energy Inc.  
Daishowa Marubeni  
Dakota Gasification Co.  
Dans Company  
Deer Creek Energy Limited  
Delta Hudson Engineering Ltd.  
Devon ARL Corporation  
Devon Canada Corporation  
Dexter Oilfield Inc.  
Dow Chemical Canada Inc.  
DPH Focus Corp  
Duke Energy Empress L.P.  
Duke Energy Gas Transmission  
Duke Energy Indiana\_ Inc.  
Dune Oilfield Services  
Earth Tech  
Edson Truck Lines  
Empress  
Enbridge Gas Distribution Inc.  
Enbridge Gas Storage  
Enbridge Pipelines  
Encana  
EnCana Corporation  
EnCana Facilities Integrity Group  
EnCana FCCL Oil Sands Ltd.  
Encana Midstream and Marketing  
EnCana Midstream Limited  
EnCana Oil and Gas Partnership  
Enerflex Compression Services  
Enerflex Presson Manufacturing Ltd.  
Enersul Limited Partnership  
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Enterprise Steel Fabricators Ltd.

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Epsilon Products Company  
Equinox Engineering Ltd.  
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ExxonMobil  
ExxonMobil Canada Energy  
ExxonMobil Canada Properties  
ExxonMobil Canada Pr-Sable  
Fergus Gas Industries Inc.  
Ferus Gas Industries  
Fieldco  
Flint Energy  
Fluor Canada Ltd.  
Foothills Pipe Line  
Fort Saskatchewan Cogeneration Project  
Foster Wheeler Fired Heaters Ltd.  
Frontier  
Fused Venture  
G.L. Projects  
Galax Inc.  
Gas Liquids Engineering  
GCM Consultants  
GECO  
Gemini Engineering Inc.  
GM Pearson  
GRB Engineering Ltd.  
Great Divide Oil Sands Partnership  
Gulf Midstream Services  
Hanover Maloney Inc.  
Harmattan Gas Processing LP a Sub. of AltaGas  
Hatch Energy  
HEF CORP  
Hi Hog  
Horton CBI Limited  
Howe -Baker Engineers\_ Ltd.  
Hulco Control Specialist Ltd.  
Husky Energy  
Husky Oil Operations Limited  
Hyland 2000  
I.C. Intercomplect Ltd.  
IBERDROLA Canada Energy Services Ltd.  
ICI Paint Devoe  
IKO Industries Ltd.  
IKO Pacific Inc  
Imperial Oil Resources Limited  
IMV Projects Inc.  
Industrial Galvanizing  
Industrial Projects Management of Iran  
International Alliance Group  
Interpipeline  
IRIS  
Irving Oil Ltd.  
Jacobs Canada Inc.  
Jacobs Engineering Group Inc  
Jacobs Industrial Services Ltd.  
Japan Canada Oil (JACOS)  
Jed Production (was Caribou)  
Kala Naft Company Ltd.  
Kellog Brown & Root  
Keyera Energy  
Keyspan Energy Canada Inc.  
Keywest Energy  
Kiewit APEC  
Kiewit Energy Canada



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KOCH Exploration Canada LP  
Kvaerner Process Systems  
Kwadron Enterprises Ltd.  
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Ledcor  
Ledcor Projects  
Maccdonald Engineering Group Ltd.  
Magnate Steel  
Maloney Industries  
Mammoet Trucking  
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Midfield Supply Ltd.  
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Millenium Construction Cont.  
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Optima Engineers & Constructors Inc.  
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Pacific Northern Gas  
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Paramount Resources Ltd.  
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PennWest Petroleum  
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Petro-Canada Oil and Gas  
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Petroleum Exploration (PVT) Ltd.  
Petronas Penapisan (Melaka) SDN BHD  
Petro-Techna International  
Phillips Alaska Inc.  
Phoenixbilt Ind.  
Pillar Oilfield Projects

Poco Petroleum Ltd.  
PPM Energy Canada Ltd  
Presson Enerflex  
Presson Manufacturing Ltd.  
Prime West Energy  
Projex  
Provident Energy Ltd  
Provident Engineering  
Quality Louvers  
Quinn Contracting  
RAE Engineering and Inspection  
Rangeland Engineering  
Republic Supply  
Richmond Supply Inc.  
Rick's Nova Scotia Co.  
Rio Alta Exploration  
RIO Alto Exploration Ltd.  
Sable Offshore Energy Project  
Salym Petroleum Development  
Sandvik Standard PC  
Sandwell-HMI  
SaskEnergy Incorporated  
Saskferco Products Inc  
Seamless Steel Pipe  
SemCams  
SemCams Edson Pipelines Operation  
Shell Canada Energy  
Shell Canada Ltd.  
Shell Canada Products  
Shell Chemicals Canada  
Sherritt International Corporation  
Sherritt Power Corporation  
SIGMA 3 Engineering Limited  
Signalta Resources Limited  
Simtech Technologies Inc.  
Sincor  
SNC Lavalin Inc.  
SNC-Toronto  
Solaris Management Consultants Inc.  
Solex Gas Processing Corp.  
Southern Pacific Resources Corp.  
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Spectra Energy  
Spectra Energy Midstream  
Spectra Energy Transmission  
Spiral Fin  
Stantec  
Startec Refrigeration  
Stella Jones  
Storm Energy  
Storm Exploration Inc.  
Studon Electric and Controls  
Summit Resources  
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Suncor Voyageur Material Storage  
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Symons Valley Recreation Ltd.  
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Synergas Technologies  
T.G.S.  
Talisman Energy Inc.

Tartan Engineering Ltd.  
Taylor Gas Liquids Limited  
Taylor GM Proceeding  
Taylor Management Company Inc.  
Technip USA Inc.  
Teckcominco Metals  
Terasen Gas  
Tesoro Refining and Marketing  
Company  
Three Streams Engineering Ltd.  
Titan  
Titan Projects Ltd.  
Toromont Energy Services  
Toromont Process Systems  
TransAlta  
TransAlta Energy Corp  
TransCanada Energy Ltd.  
TransCanada Midstream  
TransCanada PipeLines Ltd.  
TransCanada\_ Foothills Pipelines (Sask)  
Ltd.  
TransGas- A Saskatchewan Energy  
Company  
Tri Ocean Engineering Ltd.  
Tridyne Projects Corporation  
Tri-Energy Services LTD  
TriStar Oil \_ Gas Ltd.  
Triumph EPCM Ltd.  
Trochu Meat Processors  
Tundra Engineering Ltd.  
Tuxtla Gas Engineering ltd  
Ultramar Ltd.  
UniField Engineering Inc.  
Union Gas Limited  
Universal Compression  
University of Calgary  
Unocal Limited  
Upside Engineering Ltd  
URS Corporation  
Valero Refining-New Orleans LLC  
Varsteel  
Vault Energy Inc  
Veco  
Veco Canada  
Viper Facility Services  
Vista Projects Ltd.  
W \_ W Mechanical Services Ltd.  
W W Mechanical Services Ltd.  
Wascana Energy  
Weir Canada Inc.  
Wells - Hall Manufacturing Limited  
Westcoast Energy Inc.  
Western Crating  
Western Symbiotics Ltd.  
Whitesands Insitu Partnership  
Wild rose Joint Venture  
Williams E \_ P RMT  
Williams Energy Ltd.  
WorleyParsons Canada - Sarnia Division  
WorleyParsons Canada Services Ltd.  
WorleyParsons International Inc.  
WorleyParsons MEG Ltd.  
Yara Belle Plaine Inc.



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## HELIXCHANGER EXPERIENCE LIST

Client	Year	No. of Units	Service
CNRL	2013	6	Emulsion - BFW
ConocoPhillips	2013	4	Boiler Feed Water Heater
Nexen	2012	9	Produced Emulsion/BFW, Produced Emulsion/Glycol Water
Nexen	2012	2	Produced Water Cross
Suncor Energy	2012	1	Diluent Tower PA/Diluted Bitumen
Suncor Energy	2012	1	Diluent Tower PA/Diluted Bitumen
Tesoro Refinery	2011	2	Helix Type Poly Reactor
Imperial Oil	2011	12	SRU Flash Drum , Bitumen Cooler, Dilbit Product Cooler
Suncor Energy	2011	1	Diluent Tower PA/Diluted Bitumen
Suncor Energy	2011	1	Diluent Tower PA/Diluted Bitumen
ExxonMobil	2011	4	Overhead Cooling Water Condenser
CNRL	2010	8	Emulsion - BFW, Emulsion Trim Cooler
Grizzly Oil Sands	2010	3	Dilbit/TEG Solution
Southern Pacific	2010	9	Clean Oil/Glycol Water
Petrobank	2010	1	Clean Oil/Glycol Water
Imperial Oil	2010	1	Crude Overhead Condenser
Imperial Oil	2010	1	Oil Heater
Imperial Oil	2009	12	SRU Flash Drum , Bitumen Cooler, Dilbit Product Cooler
Encana FCCL	2009	2	Sales Oil Cooler
CCRL	2009	5	Crude/Prefractionator Bottom
Irving Oil	2009	2	Stripped Water/Sour Water Feed
Saskferco	2008	2	Compressor Interstage Cooler, Final Cooler
Teroso Refining	2008	1	PolyReactor
Encana	2008	2	Blowdown Cooler
Nexen	2008	2	Product Emulsion/BFW
Imperial Oil	2008	1	Crude Preheat/V. BPA
Imperial Oil	2008	2	Crude Preheat
CNRL	2006	4	BFW/Emulsion
Devon Canada	2006	3	Emulsion/Sales Oil Coolers
Petronas Malaka	2006	10	Crude Preheat
Frontier Refining	2006	12	Crude Preheat
Dakota Gasification	2005	1	Gas Liquor Cooler
Petro-Canada	2004	4	Produced Water/Production Water
Nexen	2004	1	Dilbit Turndown Clr.
OPTI	2004	2	Vac. Residue/DAO+Solvent
Sincor C.A.	2004	4	Water/Oil Preheaters
Nexen	2003	20	Dilbit Cooler, Produced Water Cooler
Petro-Canada	2003	4	Diluted Bitumen/PA
Husky Oil	2003	4	Treater Feed
<b>166 Total Helixchangers</b>			