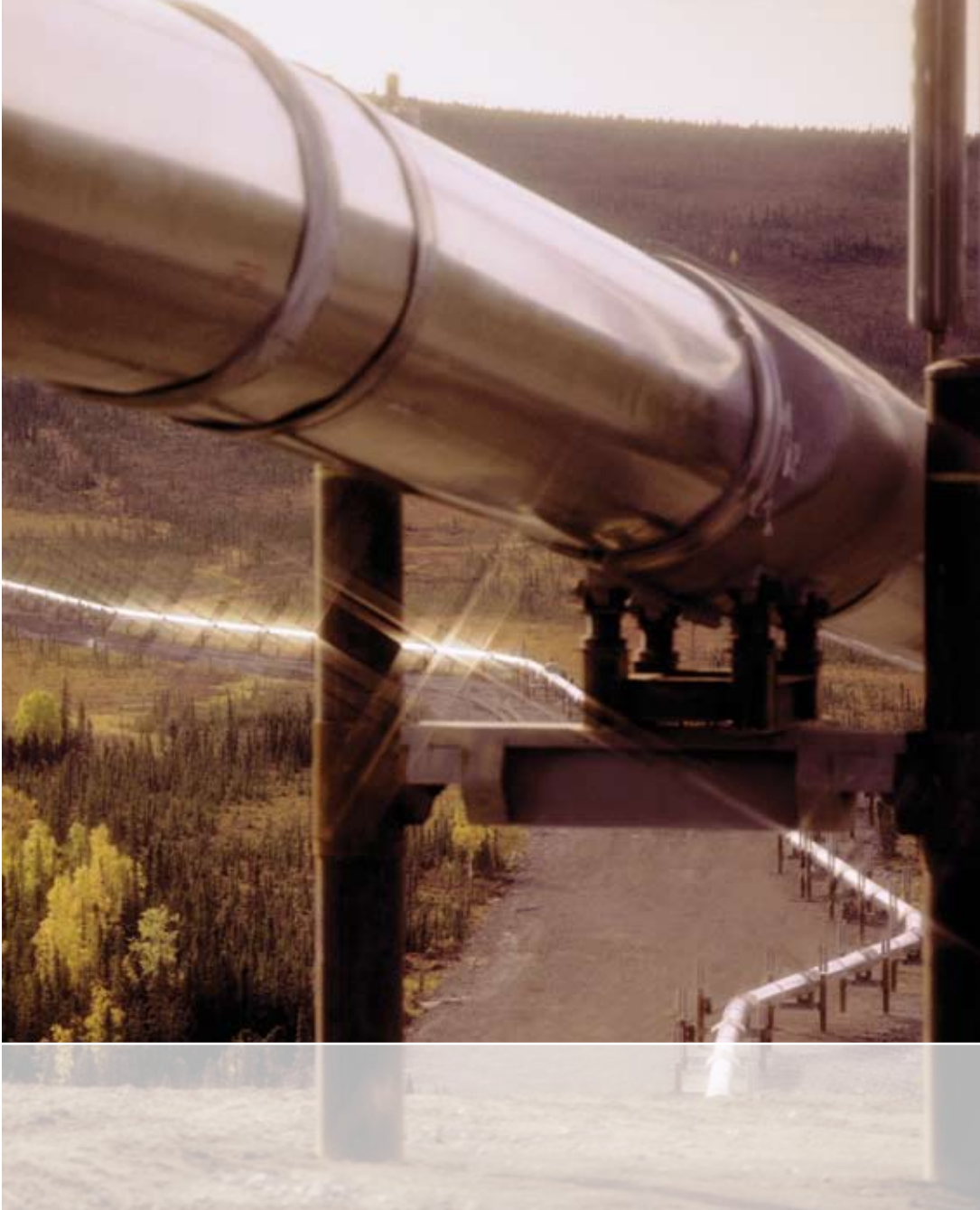


Colfax Americas



**Crude Oil
Transport Solutions**



« Colfax at a Glance »

Colfax Corporation

Colfax Corporation is a world leader in the development, engineering, manufacturing, distribution, service and support of pumping and fluid-handling systems. Specializing in positive displacement and centrifugal technologies, our products support a wide range of industries, from Power Generation and Oil & Gas to Commercial and Navy Marine to a broad range of Industrial applications. For over 10 years, Colfax has remained at the forefront of fluid-handling management by focusing on customer needs for reliable performance around the world.

Colfax Corporation has built the company on strong legacy brands, those that lead the industry with cutting edge pump technologies and fluid handling solutions. While Allweiler, Houttuin, IMO, Portland Valve, Tushaco, Warren and Zenith represent a full-spectrum of diverse pump products and extensive expertise in critical and demanding applications, they share a single-minded focus on commitment to customers.

Colfax Americas

Colfax Americas serves as the solution provider in fluid handling applications throughout North and South America. Our comprehensive network of direct salespeople, independent distributors and representatives allows us to provide our customers with the local sales support and inventory they require.

Our customers represent diverse end use markets including power generation, crude oil transport, refinery, machinery manufacture, marine, hydrocarbon processing, pulp and paper, polymer and various other process industries. Colfax products meet the strict requirements of our customers' applications and can offer precise, pulseless, and reliable performance. Our experienced engineering staff can help you solve complex design, application, and process issues. We design and develop systems to meet our customers' unique needs – in the Americas and throughout the world.



ALLWEILER®



HOUTTUIN™



Imo®
Pump



ISC
Lubrication
Systems
Company



Portland Valve



TUSHACO®
PUMPS



Warren®
Pumps



Zenith®
Pumps

« Applications »



Gathering Line Transfer

An upstream application where a number of gathering lines combine into a common flow header. This process typically requires pumps of high flow capability, to pump to either a tank farm or processing facility.

Storage Tank Transfer

An upstream, midstream or downstream application that involves moving crude oil to either a pipeline, truck loading or other sales point. Typically, crude oil that passes through this point has been exposed to some degree of processing to enhance its quality and cleanliness.

Charge

An upstream or downstream application that involves the pumping of feedstock into a processing unit.

Shipping

A mid-stream application downstream of the LACT unit. This process may involve either high or low pressure pumping. At this point, quality of the crude oil meets industry standards for sell and custody of the crude oil has been transferred to the pipeline owner.

Pipeline Injection

A mid-stream application that involves injecting crude oil from a low pressure source into a high pressure pipeline.

Suction Booster

A midstream application where it is necessary to increase system pressure from a storage vessel to meet the inlet pressure demands of rotating equipment downstream.

Pipeline Booster

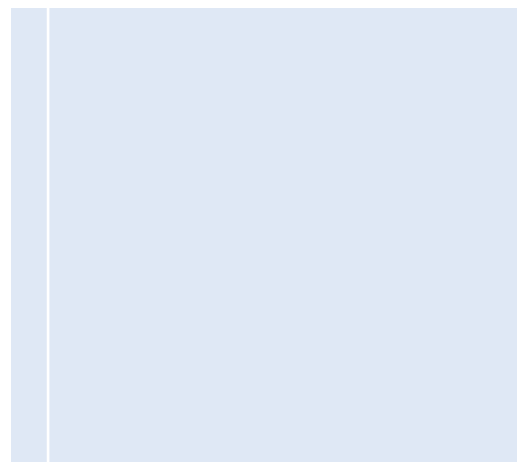
A mid-stream application that involves elevating pipeline pressure that has fallen due to long distance pumping. Typically, booster stations are located in remote areas and in most cases are not manned.

Chemical Injection

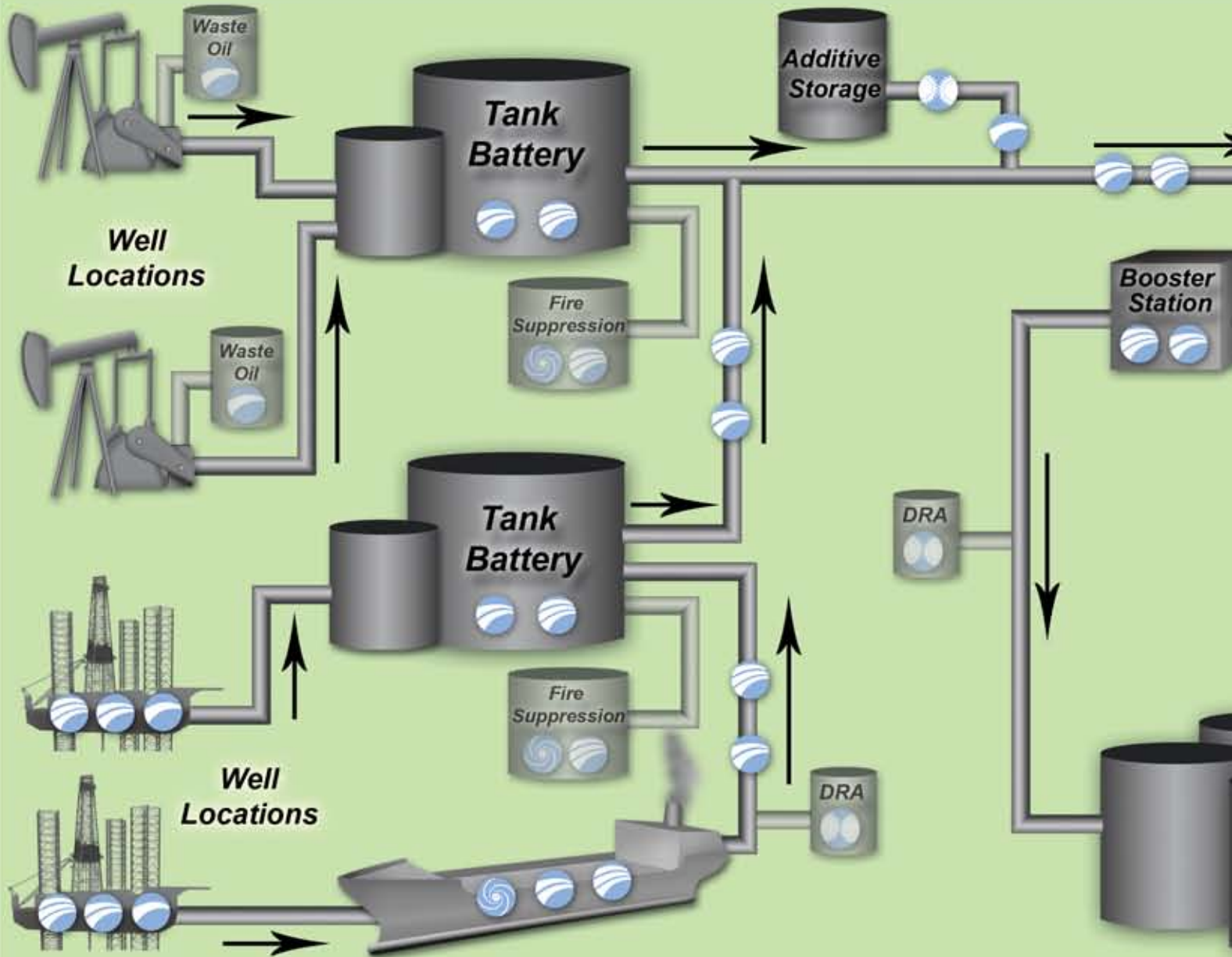
A mid-stream application involving the injection of chemicals to petroleum based products.

Loading

Typically considered a downstream application that involves either the loading or unloading of petroleum product, occasionally at elevated temperatures, for shipment by either barge, tanker, truck or train.



Crude Oil Transport Solutions



**Progressing
Cavity Pumps**



**Max Flow: 2000 gpm
Max Pressure: 600 psig**



**2-Screw
Pumps**



**Max Flow: 5000 gpm
Max Pressure: 1200 psig**

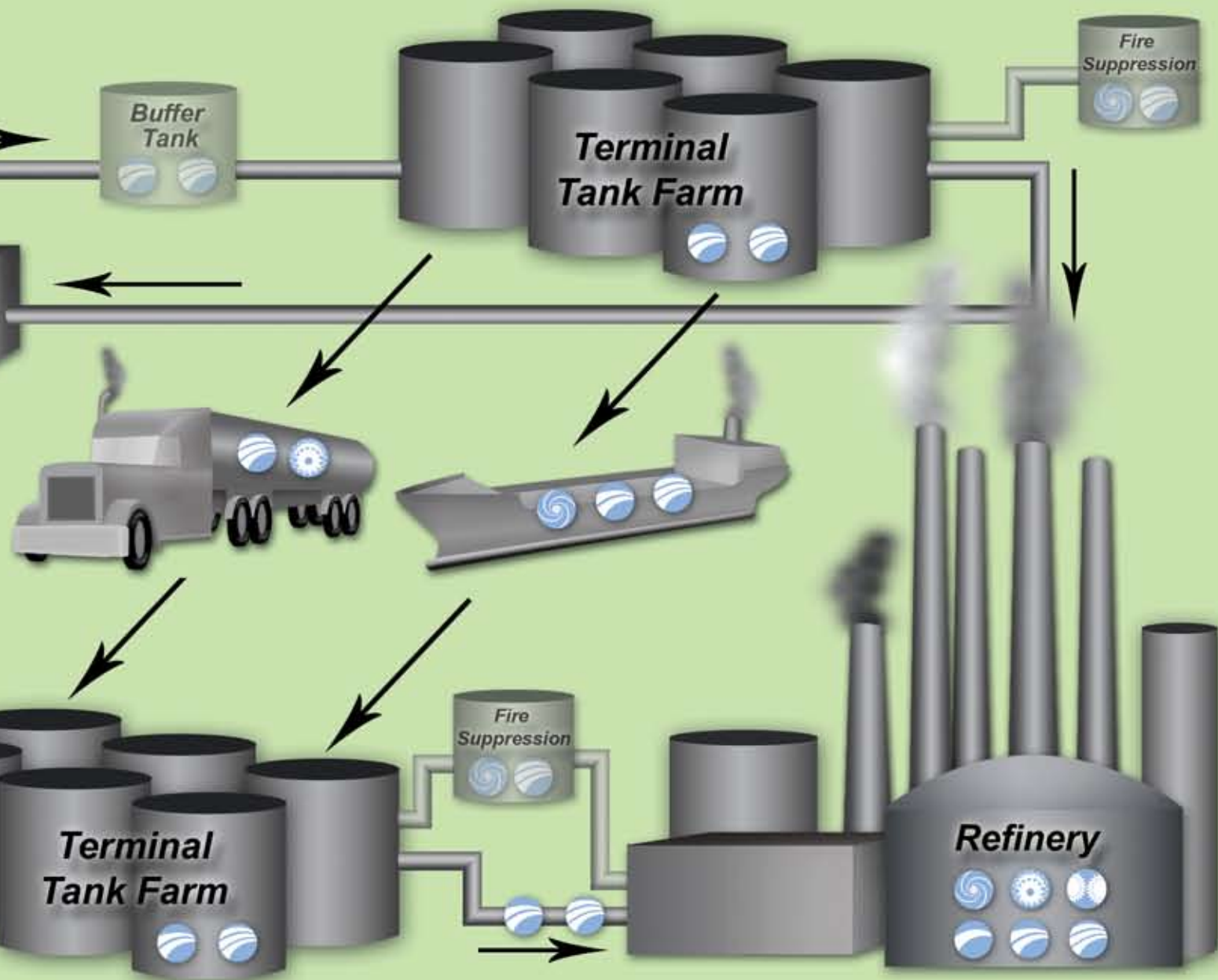


**Precision
Pumps**



**Max Flow: 230 gpm
Max Pressure: 5000 psig**

Max Flows and Max Pressures of above pumps are shown as independent ranges



 on Gear
Pumps



Max Flow: 7 gpm
Max Pressure: 2500 psig

 3-Screw
Pumps



Max Flow: 3300 gpm
Max Pressure: 4500 psig

 Centrifugal
Pumps



Max Flow: 6000 gpm
Max Pressure: 400 ft/head



« Products »

Location: Western Canada
Application: Pipeline Boost
Pump Model: 8L-462
Pressure: 1400 psig
Flowrate: 430 gpm



Location: Offshore California
Application: Pipeline Transfer
Pump Model: FSXA-655
Pressure: 400 psig
Flowrate: 100 gpm



Location: Western Canada
Application: Additive Storage
Model: AE4N
Pressure: 350 psig
Flowrate: 50 gpm



Location: Western Canada
Application: Pipeline Heating
Model: NTWH
Pressure: 300 psig
Flowrate: 600 gpm



Location: Northwestern Canada
Application: DRA* Injection
Model: Series 9000
Pressure: 1400 psig
Flowrate: 7 gpm

*Drag Reducing Agent



Features & Benefits



Feature

Benefit

3-Screw	<ul style="list-style-type: none"> • Hardened rotor set • Bimetal construction • Replaceable rotor housings • Carbide coated high velocity areas • Single seal & bearing • Axial flow design • Balanced hydraulic forces • No ball bearing (double suction design) 	<ul style="list-style-type: none"> • Long life on contaminated product • Increased pressure capability • Field repairable • Increased wear resistance • Reduced maintenance costs • Reduced NPSHR • Long bearing & seal life • High temperature operation
2-Screw	<ul style="list-style-type: none"> • Double suction • External bearings & gears • Non-contacting rotors • Very low axial velocity • Large flow cavities • High temperature materials • Hardened rotor set 	<ul style="list-style-type: none"> • Balanced forces / Low fluid velocity • High fluid contaminate capability • Dry run capability • Excellent NPSH capability • High viscosity capability • Operational capability to 600° F • Long rotor life
Progressing Cavity	<ul style="list-style-type: none"> • Ductile chrome plated rotor • Various stator elastomer materials • Oil filled & sealed con rod joint • Equal wall stator • Open hopper design available 	<ul style="list-style-type: none"> • Increased wear resistance • Increased fluid compatibility • Long life on contaminated fluid • High pressure capability • Extreme high viscosity capability
Thermal Oil	<ul style="list-style-type: none"> • Unique heat dissipating bearing frame • Large mechanical seal chamber • Inboard journal bearing • Sealed outboard ball bearing • Safety packing rings 	<ul style="list-style-type: none"> • Operational capability to 660° F • Increased seal lubrication & life • High overhung load capability • Reduced maintenance / Long life • Improved journal bearing & seal protection
Precision Gear	<ul style="list-style-type: none"> • Close tolerance dimensions • Stainless steel materials available • Through hardened abrasion resistant materials 	<ul style="list-style-type: none"> • Precision metering capability • Ability to pump aggressive fluids • Increased pump life and high pressure capability





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ALLWEILER®



HOUTTUIN™

