



Pipeline Drainage Re-Injection Systems

Your Challenge:

You need a system to pump out sump tanks and to re-inject the drained fluid back to the pipeline. You need the system to handle particulates with a simple design that requires minimal routine maintenance. Colfax Americas offers an engineered system solution for pipeline drainage re-injection.

Solution:

The system is designed for pumping crude oil from a pipeline collection tank or sump approximately once a week; and in some instances once a month.

With its PVD hardened internal surfaces, unlike standard PD pump technologies, the Emtec-A® design allows for extended operation in services with particulates.

Results:

Moving to an engineered systems solution for pipeline drainage re-injection means leaving the design and engineering to experts. From Colfax you get a system with a simple design capable of handling particulates. You also receive a system that requires minimal routine maintenance resulting in maximized cost reduction. You ultimately get a customized solution for your critical fluid-handling need.



A Colfax Americas Engineered Systems Solution

Performance capabilities for
Emtec-A® three-screw rotary PD pump:

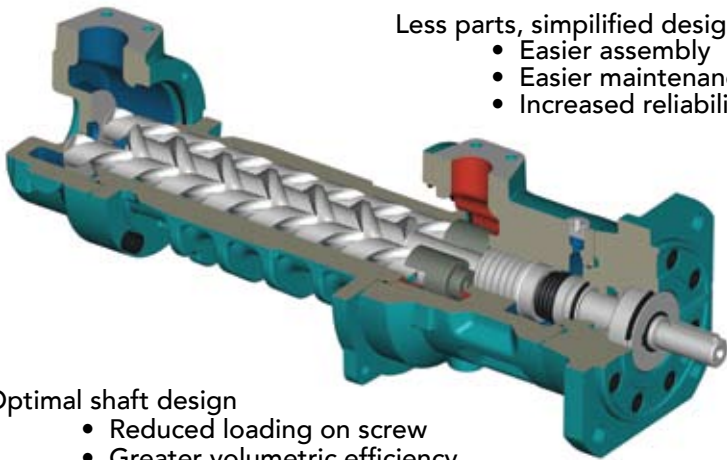
Available Models	5
Capacity range @ 0 psi differential pressure	25,40,65,85 and 110 BPH
Suction pressure	145 psig
Discharge pressure	1160 psig (up to 1450 psig with smaller screw pitches)
Fluid viscosity	down to 1 cSt
Fluid temperature	175° F

The heart of the system:

Emtec-A® three-screw pump

Less parts, simplified design

- Easier assembly
- Easier maintenance
- Increased reliability



Optimal shaft design

- Reduced loading on screw
- Greater volumetric efficiency
- Reduced internal velocities control internal wear

Physical Vapor Deposition (PVD) Process:

The special material combination used on Emtec® brings together the highest possible hardness with optimal elasticity and resistance to fracture.

Base material:
Special steel

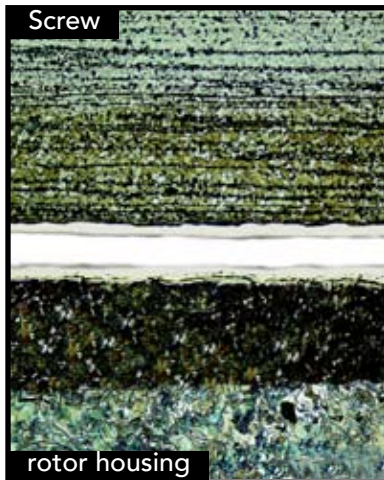
Hardened zone 62 HRC

PVD hard coating 1200 HV

Ceramic like edge layer 1200 HV

Special hardened casting
62 HRC

Base material



Basic Design:

- » Vertical motor/pump set for cartridge type installation
- » Direct coupled to constant torque, synchronous speed motor (VFD option available)
- » Typical pump rotating speed at either 4-pole or 6-pole motor speeds
- » Tank top mounted with sealing provision

Advantages:

Complete package to pump out sump tank to re-inject the drained fluid into the pipeline	<ul style="list-style-type: none"> • Simpler overall design • More reliable • Eliminates leak points to the environment
Smooth, non-pulsating pump flow	<ul style="list-style-type: none"> • Minimizes foundation requirements • Eliminates source of damaging vibration
Simple pump design with 3 rotating parts, 1 bearing and 1 mechanical seal	<ul style="list-style-type: none"> • Few parts to stock and maintain • Manufactured with highly abrasive resistant materials and components • Translate into a long MTBR
Minimal routine maintenance	<ul style="list-style-type: none"> • Pre-greased for life pump bearing coupling • Greasing only required on motor

Available scope of supply:

- » 1000 gallon (~24 barrel) vertical, foot mounted tank with removable cover for clean out provision - carbon or stainless steel
- » Re-injection pump package with integral suction drop pipe (gusset braced) and surface mounted discharge connection
- » Suction drop pipe equipped with suction strainer and suction check valve to maintain prime of pump during idle periods
- » Starter/breaker panel
- » VFD controller
- » Level switch controls
- » Discharge pressure transmitter
- » Pressure-limiting valve (external type)

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