

>> When failure is not an option



No matter what your market, no matter what industry you serve, no matter where you are in the world, Colfax provides three-screw pumping solutions that are engineered, manufactured, installed, serviced and supported to make sure your specific requirements are met.

The Imo and Allweiler lines of three-screw pumps and systems deliver the features that matter most to you. Longer life, lower pressure ripple, lower contamination sensitivity and maximum energy savings result in the highest “Total Savings of Ownership” across the entire life-cycle of your pumping equipment solution.

The pump is only part of the total fluid transport solution that helps meet the needs of your demanding market. With Colfax, you also get deep expertise that ensures even your most critical applications are handled efficiently and effectively with short-term / long-term results that go straight to your bottom line.

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>> Products and Applications



PUMP SERIES	APPLICATIONS							Quick Reference Guide			
	TRANSFER	FUEL	LUBE	CRUDE OIL	HYDRAULIC	HIGH PRESSURE MACHINE TOOL COOLANT	CORROSIVE WATER				
								(USGPM)	(L/MIN)	(PSIG)	(BAR-G)
ACE	●	●	●					3-44	11-166	150	10
3E	●	●	●					1-100	4-379	150	10
UCF	●	●	●					120-800	454-3028	175	12
3G	●	●	●					2-210	8-795	250	17
UCG	●	●	●					30-280	14-1060	250	17
C323F	●	●	●	●				400-3300	1514-12491	300	21
3D	●	●	●	●	●			5-400	19-1514	500	34
C324A	●	●	●	●				50-900	189-3407	500	34
SN	●	●	●					300-1000	1136-3800	500	34
T324	●	●	●	●	●			300-800	1136-3028	700	48
4VKC			●		●			21-258	83-978	1160	80
EMTEC						●		4-260	15-984	1300	90
4SFC			●		●			2-15	8-57	1450	100
6D	●	●	●	●	●			5-400	19-1514	1500	103
4T			●		●			10-200	38-757	1500	103
8L	●	●	●	●				100-1100	379-4164	1500	103
12D	●	●	●	●	●			5-400	19-1514	2200	152
6T			●		●			5-200	19-757	2500	172
6U			●		●			5-200	19-757	2500	172
12L	●	●	●		●			10-100	38-379	4500	310

>> Real World Benefits

Smooth Operation

The pumping element geometry for Colfax 3-screw pumps provides virtually pulsation-free flow. This eliminates the requirement for pulsation dampeners often found in systems employing other pumping technologies. Pulsation free flow readily allows output condition management critical to applications such as precision hydraulic controls and fuel metering for gas turbine atomization.

Long Service Life

Non-contacting pumping elements by means of hydrostatic and hydrodynamic fluid films, axially balanced rotors and top notch metallurgy are just a few of the factors contributing to the unparalleled service life of Colfax 3-screw pumps.

High Contamination Tolerance

Colfax 3-screw pumps are highly resistant to wear from particulate contaminants that might be present in synthetic and/or petroleum-based fluids. We even offer special pump versions which incorporate proprietary bi-metal materials expressly designed for contaminated services such as for pumping crude oil and heavy fuel.

Low Noise

The rotor profile in the screw pump provides a smooth and continuous output flow that greatly reduces pressure pulsations. The result is lowered air-borne, fluid-borne and structure-borne noise, typically less than 75 db(A).

>> Three-screw pumps reliably move millions of gallons of fluid per day all over the world in a wide variety of industries including commercial marine.



>> Since 1931, literally millions of three-screw pumps have been installed around the world in thousands of challenging applications.



Excellent Suction Lift

The small peripheral diameter of the rotors and low axial velocity of the fluid provide excellent suction lift performance compared to other pump designs with similar output flows. This provides the three-screw pump an inherent advantage in negative suction pressure applications, allowing the pumping of higher viscosity fluids at much higher speeds than other pumping technologies.

Low Horsepower Consumption

The small peripheral diameters of the rotors and low fluid axial velocities reduce fluid shearing within the pump, resulting in a reduction of horsepower consumption while operating on high viscosity fluids.

Three-screw pumps are the largest class of multiple screw pumps in service.

This proven technology delivers literally millions of gallons of fluid per day all over the world in a wide variety of demanding applications and industries including:

- Crude oil transport
- Power generation
- Hydraulic elevator
- Fuel oil transport & burner service
- Machinery lubrication
- Commercial marine and Navy
- Refinery processes
- Chemical processing

>> Rotary (Three-Screw) Pumps

A proven design: precision, long life, and maximum energy efficiency

The three-screw pump from Colfax comes from the leading technology brands in the pump industry today: Imo and Allweiler. It incorporates a positive displacement rotary design consisting of a housing which envelops the drive screw (power rotor) and the sealing screws (idler rotors).

The intermeshing of the threads of these rotors, along with the close fit of the surrounding housing creates a moving labyrinth seal which captures the valuable fluid and transports it axially. The enclosed area containing the fluid is referred to as a fluid closure (see figure A). The pumping element does not pre-compress the fluid, but rather transports it from the suction

side of the pump to the discharge port in a smooth, continuous manner. It is this fluid closure concept that provides the three-screw pump with its positive displacement capability.

Symmetrical pressure loading on the power rotor eliminates the need for bearings to absorb radial forces. The idler rotors generate a hydrodynamic film which provides radial support similar to journal bearings (see figure B). Axial loads on the power rotor and idler rotors, created by differential pressure, are hydrostatically balanced. This dramatically increases the life of the pump.

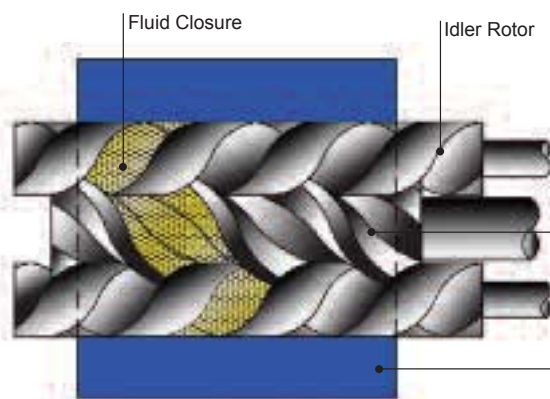


Figure A

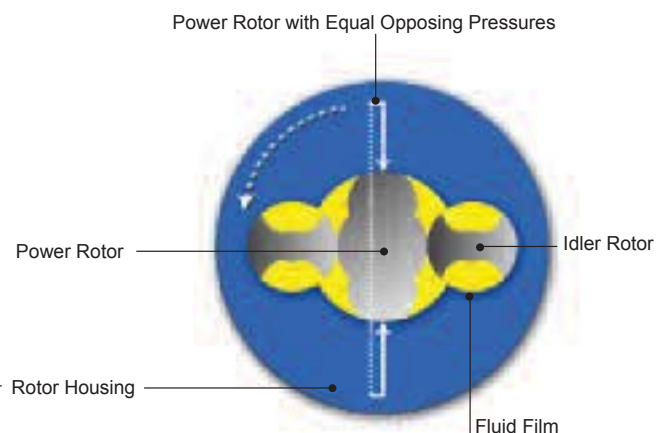
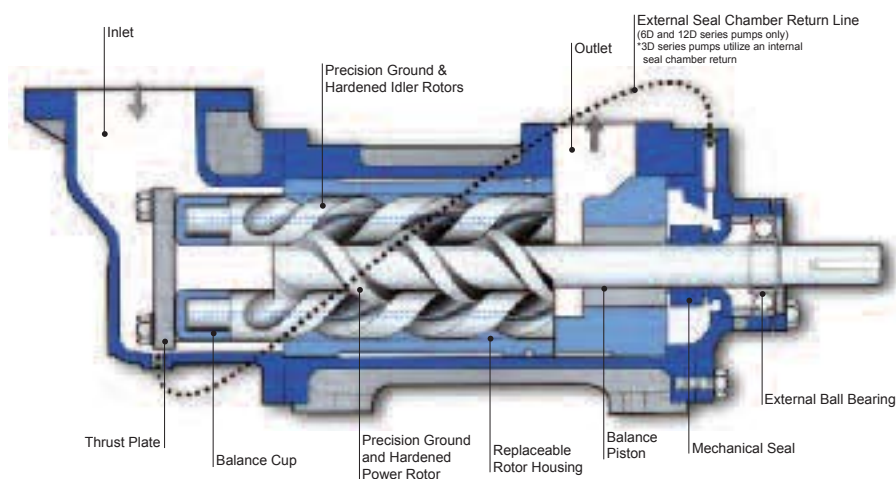


Figure B



>> Colfax Three-Screw Pumps: Leading Technology, Global Capacity

You may know Colfax best by our strong legacy brands that include Imo, Imo AB and Allweiler. We serve customers just like you at facilities, manufacturing sites, and distribution centers throughout the Americas, Europe, Africa, the Middle-East and Asia Pacific. Our Global network of critical fluid handling technologies, solutions, services and support are unmatched in the industries that we serve. The Colfax team in each of these regions understand the challenges you face, respects the high stakes of mission critical equipment and stands ready to deliver with the fluid handling solutions you need.

When precision is mandatory and failure not an option, the most trusted names in critical fluid handling is Colfax.





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