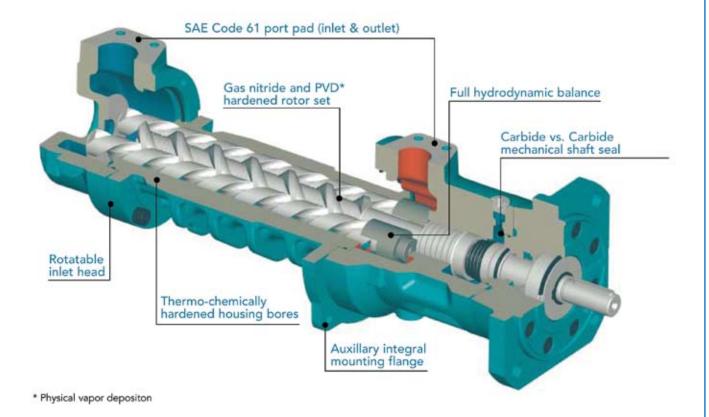
EMTEC-A:

Advanced Technology for Long Service Life



Emtec pumps are specifically designed to withstand the harsh environment of high pressure machine tool coolant service. Special hardening techniques produce surface hardness similar to ceramic in the housing bores while maintaining elasticity that eliminates the danger of bore surface fracture. The hardening process of the rotor includes PVD* treatment that results in a surface hardness of 1200HV. The Emtec pump is fully hydrodynamically balanced which eliminates thrust due to differential pressure. The power

rotor's balance piston is extra long which improves the pump's volumetric efficiency. Flow that crosses the balance piston serves to cool and lubricate the silicon carbide mechanical shaft seal faces. In applications where the "DQ" submersible version is utilized, the shaft seal is eliminated to further reduce cost. Flow that passes across the balance piston is vented from the pump and into the reservoir. In this design, a labyrinth ring on the fluid side of the ball bearing prevents coolant "splash" from washing out the bearing grease.





















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Materials of Construction

Rotor Housing: Cast Iron-basic hardness (62 HRC) 1200 HV surface hardness

Inlet Head: Cast Iron

Discharge Casing: Cast Iron

Power & Idler Rotors: Alloy Steel Gas

Nitrided (62 HRC) PVD Hard Coat

(1200 HV)

Mounting Flange: Cast Iron Mechanical Seal: Silicon carbide,

fluorocarbon elastomer **Elastomer**: Fluorocarbon

Emtec Performance Parameters

Capacity: 3 to 265 usgpm

Temperature Range: to 176° F **Max Inlet Pressure:** 145 psig

Differential Pressure: 1450 psig (emulsion)

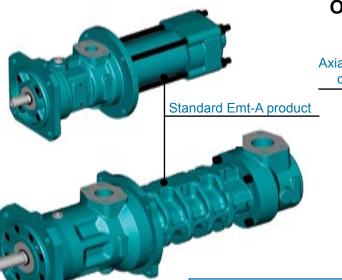
1740 psig (oil)

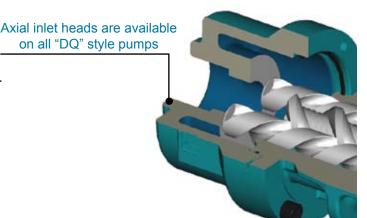
Max Outlet Pressure: to 1885 psig Viscosity Range: 1 to 2000 cSt

Maximum Allowable Air Entrainment

Emulsions & Solutions: 10%

Oils: 7%





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