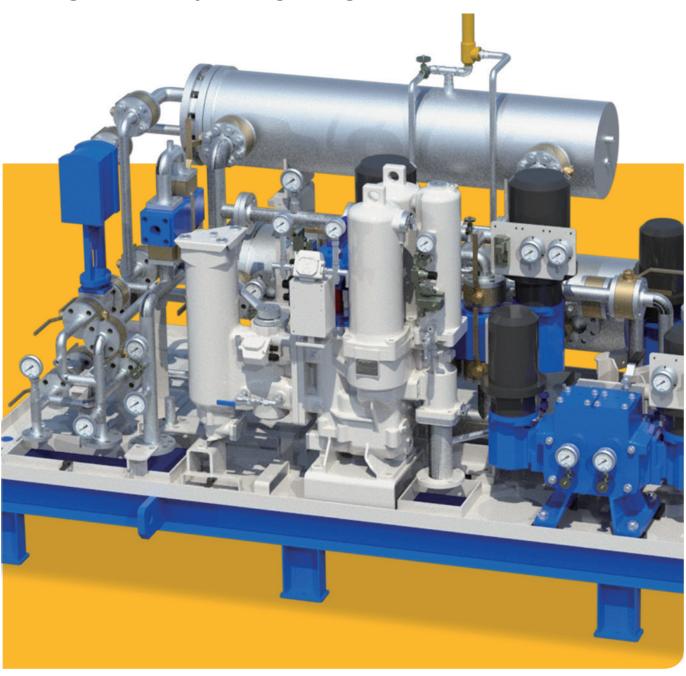


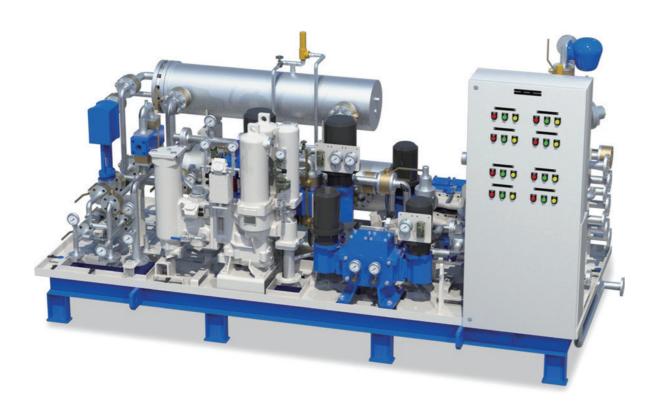
Fuel Oil Supply Booster & Purifier Module

Create Customer Value through Innovative System Engineering





Fuel Oil Supply Booster & Purifier Module



MnSi Fuel Oil Supply Booster Unit and Purifier Unit can enhance the efficiency and performance of the main engine by keeping fuel temperature, pressure and viscosity in best conditions, which contribute to the excellent productivity for ship and plant operation.

Benefits

- · Availability of engine room space by compact size
- · Simple and easy installation by compact structure and all nozzle connections in bottom plate
- · Easy operation and maintenance by optimal layout

Quality

- · High reliability and safety by quality key components and 3D design
- · Complete functional test and commissioning at shop as well as Onboard

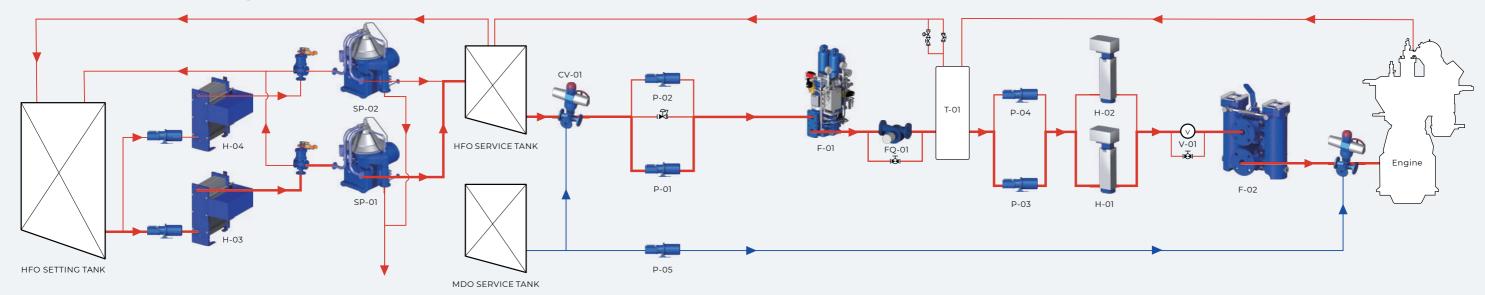
Application • Diesel engine fuel oil operation for Power and Marine application



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Schematic Diagram



Main Components and Options

Item	Components	Options
CV-01	3-Way HFO / MDO Change - over valve	Local Manually
		Remote (Air / Electric)
		Automatic (Temp & Time)
P-01/02	Supply Pump	
FO 01	Flow Meter	Volume
FQ-01		Mass
T-01	Mixing Vessel	
P-03/04	Circulating Pump	
H-01/02	Pre Heater for Engines	Steam
	Pre Heater for Purifiers	Electric
H-03/04		Thermal Oil
V-01	Viscosity Control System	Local Controller
V-U I		Remote Loosely
	Automatic Filter	10 / 25 / 34 / 50 μm
F-01		By-Pass Manual Filter
		Indicator Filter
F-02	Mannual Duplex Filter	10 / 25 / 34 / 50 μm
D.05	MDO Pump	Electic Motor
P-05		Air Motor
SP-01/02	Purifier	Selfjector

Main Specification & Application

Model	HSBM-6000, HSBM-11000, HSBM-18000, HSBM-26000 (max. 26,000 kW engine(s) output)	
	Customized design & engineering according to the building specification	
Fuel Oil	MGO (min. 1.5 cSt), MDO (min. 2 cSt), HFO (max. 380 / 700 / 1,200 cSt)	
	DO, HFO, Crude Oil	
	Viscosity control range: 0 ~ 50 cSt	
Process	Fuel supply and circulating booster process separated or combined	
Application	Uni-fuel system combined main engine and aux. Engines	
	Separate fuel system for mani engine and aux. Engines	
Auto Filter	Hot side of circulating process or cold side of supply process	
Mode	HFO / MDO Manual or automatic change-over	
	HFO / MDO Smooth change-over, time & temp controlled	

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Key Components



SP-01/02 Purifier



P-01/02, P-03/04 Supply Pumps, Circ. Pumps



H-01/02/03/04 Thermal Oil/Steam Heaters



CV-01 3 Way Change - Over Valve



F-01 Indicator Filters



H-01/02/03/04 Electric Heaters



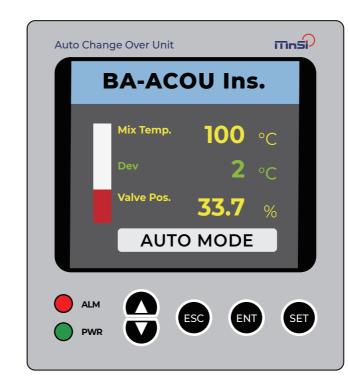
V-01 Viscosity Sensor & Controller



F-01 Automatic Filter

Control Systems

Auto Change Over Unit (BA-ACOU)

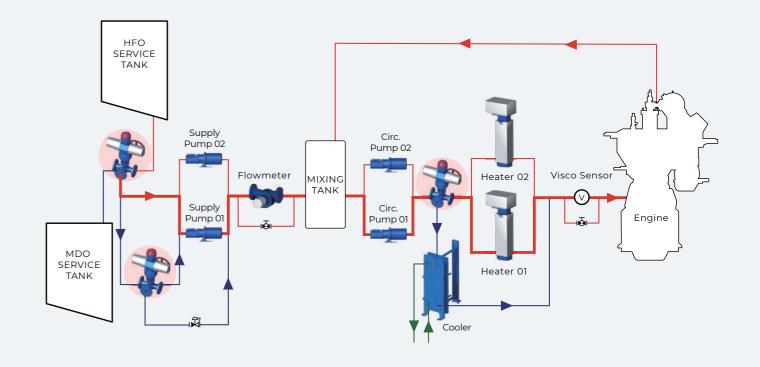


Auto Change Over Unit is limited use of HFO due to environmental regulation in the littoral sea and uses a valve system to control the conversion of HFO to MDO/MGO according to user setting.

Specification

Description
3.2" TFT-LCD with Touch
3ch (Temp, RTD, TC)
2ch (Valve control)
2ch, Open Collector Type
4ch, Dry Contact
96 x 96 x 120 (mm)
100 ~ 240 VAC 50 / 60Hz

Control System Diagram



06 Module & System Integration

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