

TECHNICAL SYSTEM DATA

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2 Component data

Electric motors

Characteristics	Main power packs	Feed pumps	Hydraulic oil transfer unit	Fuel filter separator
Number of motors	5	3	1	1
Protection (IP)	55	55	55	55
Power supply (V / Hz / Ph)	440 / 60 / 3	440 / 60 / 3	440 / 60 / 3	440 / 60 / 3
Rated power (see note below) (kW)	425	15,0	1,5	0,3
Required power (kW)	414	15,0	1,5	0,3
Speed at required power (rpm)	1787	3600	1750	1120
Current at required power (A)	666	24	2,84	1,2
Starting current (direct) (A)	3929	187	21,9	3,3
Efficiency at required power (%)	96,2	91	84,2	
Power factor (Cos ϕ) at required power	0,87	0,9	0,8	
Heating power at 220 V (W)	2 x 65	1 x 25	NA	
Insulation- / Temp. rise class	F / F	F / F	F / B	
Remarks			Cap.: 35 l/min	Fuel flow : 480 l/hour

Note: Maximum, allowable, power output for the type of electric motor at specified conditions, and given on the motor name plate.
For design and dimensioning of electric starters, power cables etc., required power (i.e. power output required for the specific order(s)) and corresponding parameters to be used.

Diesel engines

Data based upon ambient temperature 25°C at 760 mmHg and relative humidity of 30%

Characteristics	
Number of engines	3
Power installed: (kW)	426
Speed (rpm)	1800
Type of cooling water	Fresh Water
Heat transfer rate (kW)	284
Cooling water requirement (min./ max.) (m³/h)	15-24
Cooling water inlet temperature (°C)	36
Maximum cooling water inlet pressure (bar)	4
Cooling water pressure drop (min./ max.) (bar)	1,7 - 4
Specific fuel oil consumption (g/kWH)	203
Intake air flow (kg/min)	33
Exhaust gas flow (kg/min)	32
Exhaust gas temperature (°C)	496
Maximum exhaust gas back pressure (mbar)	50
<i>Air start:</i>	
Air consumption for air starter at: 6,2 bar (m³/s)	0,16
8,3 bar (m³/s)	0,21
10,3 bar (m³/s)	0,25
Maximum air inlet pressure (bar)	10,3



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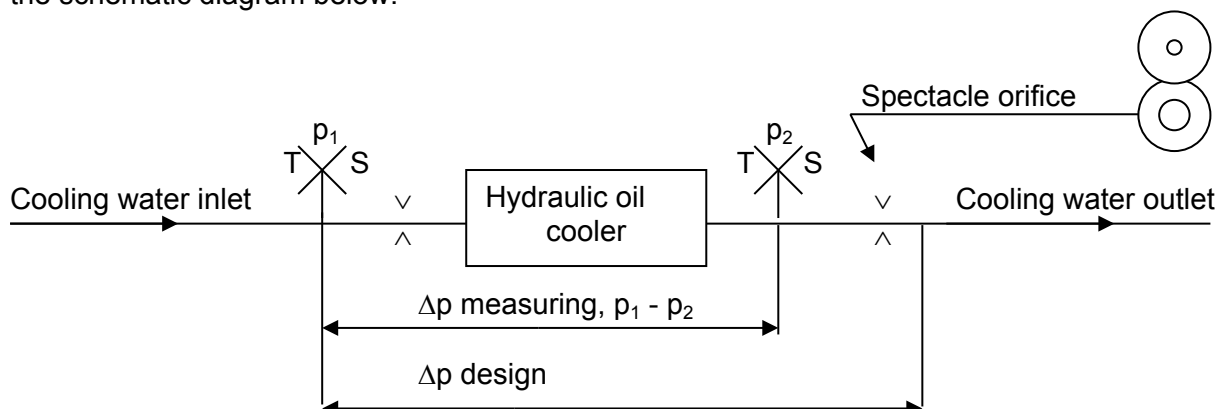
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Hydraulic oil coolers

Number of coolers	1
Type of cooling water:	Fresh water
Heat transfer rate:	964 kW
Cooling water inlet temperature:	36 °C
Minimum required cooling water flow:	170 m ³ /h
Pressure drop at minimum required flow:	16,7 mwc (Δp design)
	10,5 mwc (Δp measuring, $p_1 - p_2$)
Maximum cooling water flow:	220 m ³ /h
Pressure drop at maximum flow:	28,4 mwc (Δp design)
	17,9 mwc (Δp measuring, $p_1 - p_2$)
Maximum cooling water inlet pressure:	40 mwc

For cooling water pressure drop curve (Δp measuring, $p_1 - p_2$), refer to the dimensional drawing for the cooling water accessories.

The cooling water accessories include a spectacle orifice in the cooling water outlet line, refer to the schematic diagram below.



The “free” bore of the spectacle orifice marked “adjustable” (the smallest of the two) to be modified at site during commissioning and used instead of the one assembled, if required for one of the following reasons:

- measured pressure drop (Δp measuring, $p_1 - p_2$) is outside the min./ max. range given above.
- measured pressure drop (Δp measuring, $p_1 - p_2$) is within the min./ max. range given above, but higher cooling water flow than minimum required makes disturbance of the cooling water balance onboard.

Cargo pumps

Inert gas/air consumption for one stripping sequence of each pump SD300:	7,5 Nm ³
Inert gas/air consumption for one stripping sequence of each pump SD200:	3,5 Nm ³
Inert gas/air consumption for one stripping sequence of each pump SD100:	1 Nm ³
Required inert gas/air pressure:	6 - 7 bar
Number of stripping sequences for each pump:	2 (max. 3)
Duration of each stripping sequence SD300:	4 - 7 min
Duration of each stripping sequence SD200:	4 - 7 min
Duration of each stripping sequence SD100:	2 - 4 min



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Portable winch

Air consumption:

125 Nm³/h

Required air pressure:

6-7 bar

Cargo heaters

Design data for heating of HFO - 370 cSt / 55°C - 950 kg/m³ - 1,89 kJ/kg°C

Characteristics	HE500/1000
Number of cargo heaters	12
Capacity (kW)	1550
<i>Heating medium data:</i>	
Type	Saturated steam
Pressure (barg)	6
Inlet temperature (on heater) (°C)	165
Outlet temperature (°C)	95
Consumption (kg/h)	2360
<i>Cargo data:</i>	
Type	HFO
Inlet temperature (on heater) (°C)	55
Viscosity at inlet temperature (cSt)	370
Flow (m ³ /h)	650
Pressure drop (bar)	3,0



3 Hydraulic oil, Lubricants and Fuel

Hydraulic oil

For type of oil, see separate instruction.

Total oil volume in the system except for storage/ drain tank, is approximately XX m³.

Lubricants

Bearing grease for electric motors:

Good quality lithium base or lithium complex grease.

Base oil viscosity 100 - 140 cSt at 40°C.

Consistency grade 2 or 3.

Temperature range -30°C - +120°C continuously.

Lubricating oil for diesel engines:

For type of oil, see separate instruction.

Lubricating oil type on engines at delivery:

Shell Rimula R4 15W 40

Total volume: 31 litres/ engine

Fuel

DMA low sulphur marine distillate fuel according to ISO 8217 to be used for diesel engines.

Others

Coolant for diesel engines:

For type of coolant, see separate instruction.

Coolant type on engines at delivery:

Scania antifreeze and corrosion inhibitor.

Total volume: 65 litres