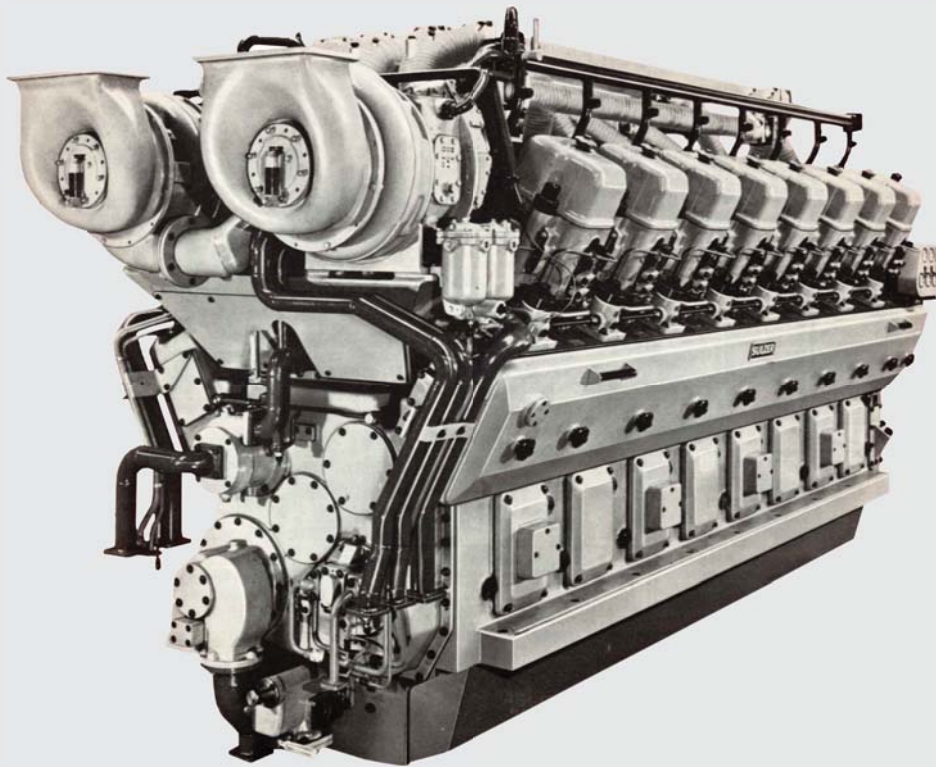


AS25 / AT25

MDO: 735-3960 kW at 720-1000 min⁻¹
HFO: 642-3600 kW at 720-1000 min⁻¹

TOTAL SERVICE



SULZER 4-stroke ENGINES

CHARACTERISTICS

- Water-cooled 5-, 6-, 8-, and 10-cylinder in-line-engines. 12- 16- and 18 cylinder V-engines
- Four stroke, direct fuel injection.
- Turbocharger and charge air cooling.
- Cylinder heads with 4-valve technology.
- Single pipe exhaust system or pulse for AT25 engines.

BENEFITS

- High reliability of the engine.
- Low operational costs due to easy maintenance and long maintenance intervals.
- Low fuel and lubricating oil consumption.

■ ■ ■ ENGINE DESCRIPTION

Crankcase	The crankcase is rigid cast-iron.
Crankshaft	The crankshaft is forged in one piece and fully machined. Large journal diameters for high torsional rigity.
Main bearings	The main bearings are of trimetal type with a white metal running layer. The bearing next to the flywheel acts as a thrust bearing and is large enough to take the rotor of a single bearing generator.
Connecting rods	The connecting rods are drop-forged from chrome-nickel steel and fully machined. The big and small end bearings are force-lubricated through oil drillways in the crankshaft. The big end is split diagonally.
Big end bearings	The big end bearings are of trimetal type with a galvanic running layer.
Pistons	The pistons are of light alloy with cast-in inserts for the upper two piston rings and cast-in coils for the cooling oil.
Cylinder heads	The cylinder heads are made of special cast iron and are fitted with two inlet and two exhaust valves. The fuel injector is arranged centrally.
Camshaft	The camshaft consists of individual segments. The driving pinion of the camshaft can be adjusted at will in order to vary the ignition timing.
Fuel injection pumps	The fuel injection pumps are of sunk type, the roller guide being combined with the pump body. Injected fuel quantity is regulated according to the Bosch-principle.
Governor	The governor is of Woodward type. As an additional safeguard a safety governor is fitted to the camshaft.
Turbocharger	The turbocharger is mounted on the front end. ABB VTR or RR type.
Pump drive	The oil pump, cooling water pump and fuel booster pump are mounted on the front end. Provision is made for driving an extra cooling water pump.
Fuel system	The fuel system is pressurized by a built-on feed pump. Fuel circulates over the fuel day tank. Optionally, external fuel supply is possible.
Lubricating oil system	A built-on gear pump supplies oil flow and pressure. Oil flows through a cooler and filter before entering the engine. Optionally, a centrifugal filter is installed.
Starting air system	The engine is started by means of direct air starting. The system supplies starting air to the individual cylinder heads via the main starting valve. Control air derived from the starting air is used to control the individual starting valves.
Cooling water system	The cooling water system is divided in a high temperature and a low temperature system. High temperature cooling water is used for jacket cooling, low temperature is used for charge air cooling and lubricating oil cooling.
Exhaust gas system	The exhaust gas system can be of pulse type or Single Pipe Exhaust System (SPES).
Classification	Classification performed by engine manufacturer.

TECHNICAL DATA

TECHNICAL DATA								
Engine type		AS25 / AT25						
Model		5 cyl.	6 cyl.	8 cyl.	10ASL25	12 cyl.	16 cyl.	18ASV25
Number of cylinders		5	6	8	10	12	16	18
Bore / stroke	mm	250 / 300						
Displacement	l	74	89	118	147	177	236	265
MEP	bar	AS25: HFO: 15.75 - 14.67, MDO: 17.82 - 16.29 AT25: HFO: 15.84 - 16.29, MDO: 17.54 - 17.93						
Direction of rotation		Clockwise or counter-clockwise, non-reversible						
AS25 Power ratings for marine propulsion units								
HFO								
at 750 min ⁻¹	kW	690	870	1160	1450	1740	2320	-
at 1000 min ⁻¹	kW	-	1080	1440	1800	2160	2880	-
MDO								
at 750 min ⁻¹	kW	760	960	1280	1600	1920	2560	-
at 1000 min ⁻¹	kW	-	1200	1600	2000	2400	3200	-
AS25 Power ratings for generating sets (60 / 50 Hz)								
HFO								
at 720 / 750 min ⁻¹	kW	690	870	1160	1450	1740	2320	-
at 900 / 1000 min ⁻¹	kW	-	1080	1440	1800	2160	2880	-
MDO								
at 720 / 750 min ⁻¹	kW	760	960	1280	1600	1920	2560	-
at 900 / 1000 min ⁻¹	kW	-	1200	1600	2000	2400	3200	-
AT25 Power ratings for marine propulsion units								
HFO								
at 750 min ⁻¹	kW	665	840	1120	-	1680	2240	2520
at 1000 min ⁻¹	kW	670	870	1160	-	1740	2320	2610
at 750 min ⁻¹	kW	-	1080	1440	-	2160	2880	3240
at 1000 min ⁻¹	kW	-	1200	1600	-	2400	3200	3600
MDO								
at 750 min ⁻¹	kW	735	930	1240	-	1860	2480	2790
at 1000 min ⁻¹	kW	760	960	1280	-	1920	2560	2880
at 750 min ⁻¹	kW	-	1200	1600	-	2400	3200	3600
at 1000 min ⁻¹	kW	-	1320	1760	-	2640	3520	3960
AT25 Power ratings for generating sets (60 / 50 Hz)								
HFO								
at 720 / 750 min ⁻¹	kW	642	810	1080	-	1620	2160	2430
at 900 / 1000 min ⁻¹	kW	-	1110	1480	-	2220	2960	3330
MDO								
at 720 / 750 min ⁻¹	kW	760	960	1280	-	1920	2560	2880
at 900 / 1000 min ⁻¹	kW	-	1110	1480	-	2220	2960	3330
General data								
Specific fuel consumption ¹⁾								
at 1000 min ⁻¹	g/kWh	208	AS25: 214 / AT25: 204					

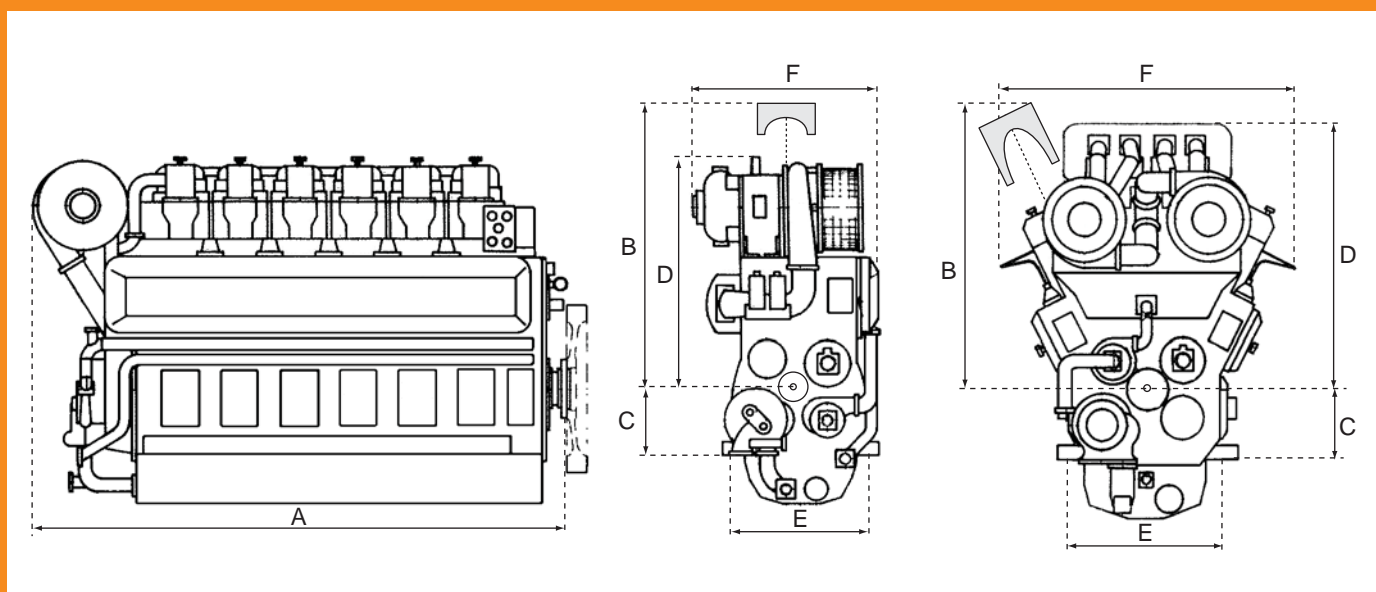
1) For net calorific value 42 707 kJ/kg (10 200 kcal/kg) and ISO-standard reference condition.

Power declarations based on the following ISO standard reference conditions:
27 °C intake air temperature, 27 °C charge air coolant temperature, barometric pressure 1000 mbar, relative humidity 60%.

Note: The values given in this document are for information purposes only and not binding.



DIMENSIONS



PRINCIPAL ENGINE DIMENSIONS (mm) AND WEIGHTS (t)

Engine type	A	B	C	D	E	F	Weight
5ASL25 / 5ATL25	n.a.	2030	420	1560	906	n.a.	9.1
6ASL25 / 6ATL25	3500	2030	420	1560	906	1180	11.4
8ASL25 / 8ATL25	4370	2030	420	1560	906	1226	14.4
10ASL25 / -	5280	2030	420	1580	906	1314	17.5
12ASV25 / 12ATV25	4400	1900	480	1700	1140	1800	18.9
16ASV25 / 16ATV25	5170	1900	480	1800	1140	1800	24
18ASV25 / -	-	1900	480	-	1140	1800	27.2

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