Technical data sheet

Marine diesel engine

D2676LE453 (i6-850)

19.02.2019
(Version 1)

Performance data [1]

Rated power	625	kW
Rated power	850	PS
Speed	2300	rpm
Bore/Stroke	126/166	mm
Displacement	12,42	liter
Rated torque	2595	Nm
Maximum torque	2845	Nm
at speed	1400-2100	rpm
Compression ratio [ε]	16,5	:1
Mean effective pressure	26,26	bar
Mean piston speed	12,73	m/s

The engine illustrated may not entirely be identical to production standard engine

Consumption data [2]

Specific fuel consumption [1]	218	g/kWh
Absolute fuel consumption [1]	162	l/h
Lowest fuel consumption [3]	196	g/kWh

Engine description

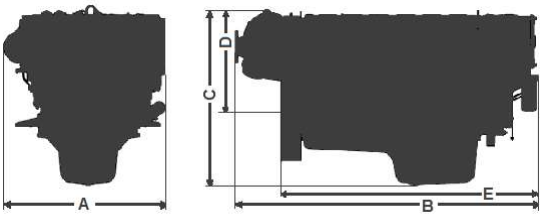
Application	Main propulsion diesel for ships with fixed pitch propeller
Operation profile	Up to 1000 hours per year at a maximum of 20 % of time at full load | average load < 50 %
Construction	Four-stroke marine diesel engine, direct injection, SAE 1 flywheel housing
Cylinders	6 cylinders in line, wet replaceable cylinder liners
Air system	Single-stage turbocharger with charge air intercooler and wastegate
Cooling system	Seawater cooled charge air cooler and plate heat exchanger by rubber impeller pump
Oil system	Force-feed lubrication by gear pump, lubricating oil cooler in cooling water circuit of the engine
Fuel system	Common Rail injection system with high pressure pump and EDC control, fuel to DIN EN 590
Auxiliary PTO	PTO for hydraulic pump 16 cm²
Alternator	Three-phase generator with rectifier and transistorized governor, 28 V, 110 A
Starting system	Solenoid-operated electric starter, 24 V, 5.5 kW
Service	Oil change interval 400 operating hours, average TBO 5.000 operating hours*
Classification	-----

Exhaust status	**IMO Tier II, EU Stage IIIA**

[1] Values at rated power
[2] Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046)
[3] Values on propeller curve
*TBO 5.000 operating hours for non or low particulate matters (PM) regulated jurisdictions (IMO, Canada, EU Stage IIIA)

D2676LE453 (i6-850)

A - overall width.....	986	mm
B - overall length.....	1795	mm
C - overall height.....	1096	mm
D - above crank shaft....	674	mm
E - length to flywheel....	1527	mm
Engine weight (dry).....	1215	kg



Combustion parameters [1]

Intake air temperature (max.)	45	°C
Intake air vacuum (min/max)	30/60	mbar
Intake air volume flow	2300	m³/h
Exhaust gas temperature	625	°C
Exhaust gas volume flow	7130	m³/h
Exhaust gas mass flow	2730	kg/h
Exhaust back pressure (min/max)	20/80	mbar

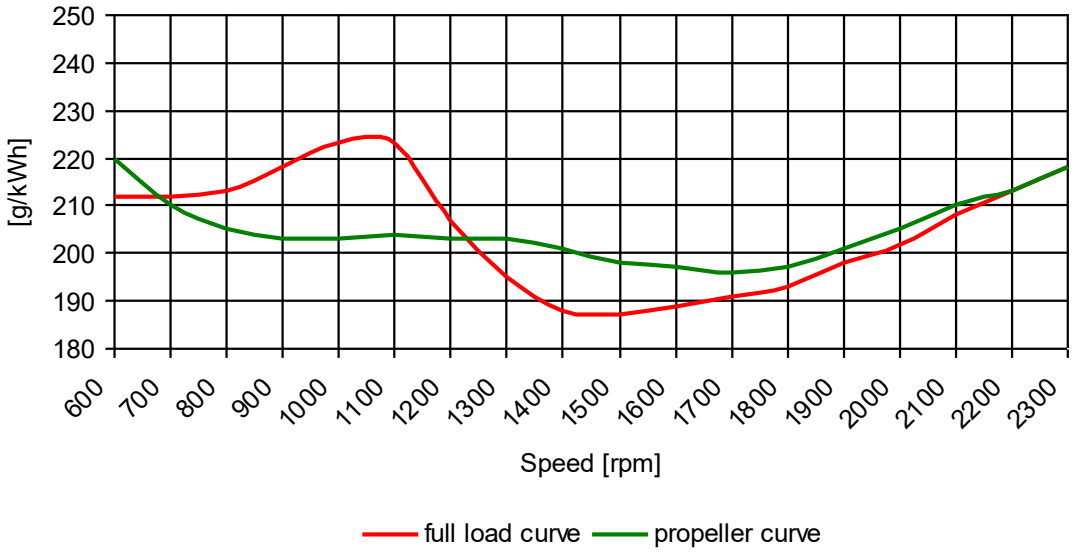
Heat balance [1]

Exhaust gas heat	570	kW
Cooling water heat	280	kW
Intercooler heat	130	kW
Radiation heat	28	kW

Noise emission (sound power) [1]

Engine surface noise (Lwa)	115,5	dB(A)
Free exhaust noise (Lwa)	129,7	dB(A)

Specific fuel consumption[2]



< The rated power is based on reference conditions according to ISO 3046-1 (2002) >

< Intake air temperature, max. 45°C | sea water temperature, max. 32°C >

< Barometric pressure 1000 mbar | air humidity 60% >

< Exponent for propeller curve 2,5 >

< Engine specifications are subjected to change without prior notice >

[1] Values at rated power

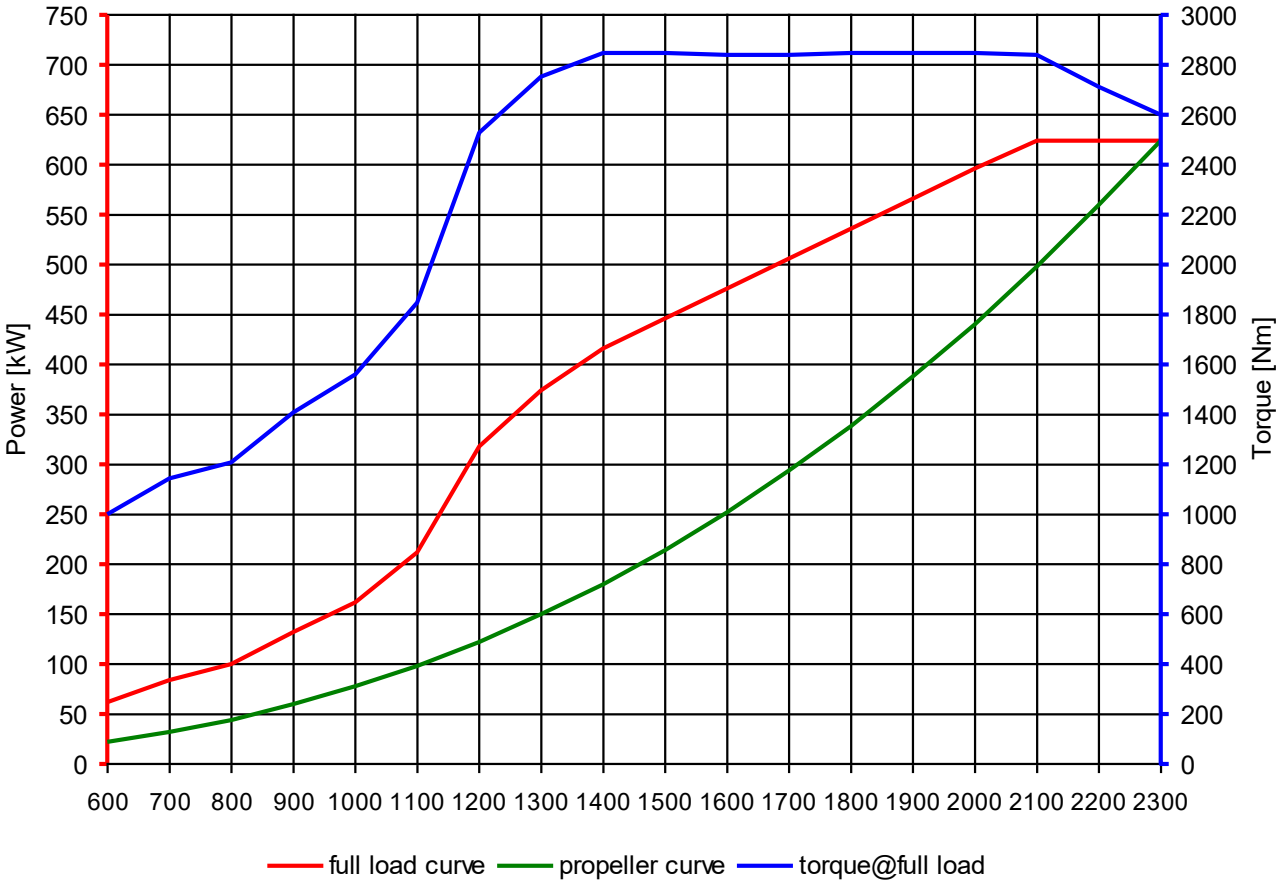
[2] Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046)

[3] Values on propeller curve

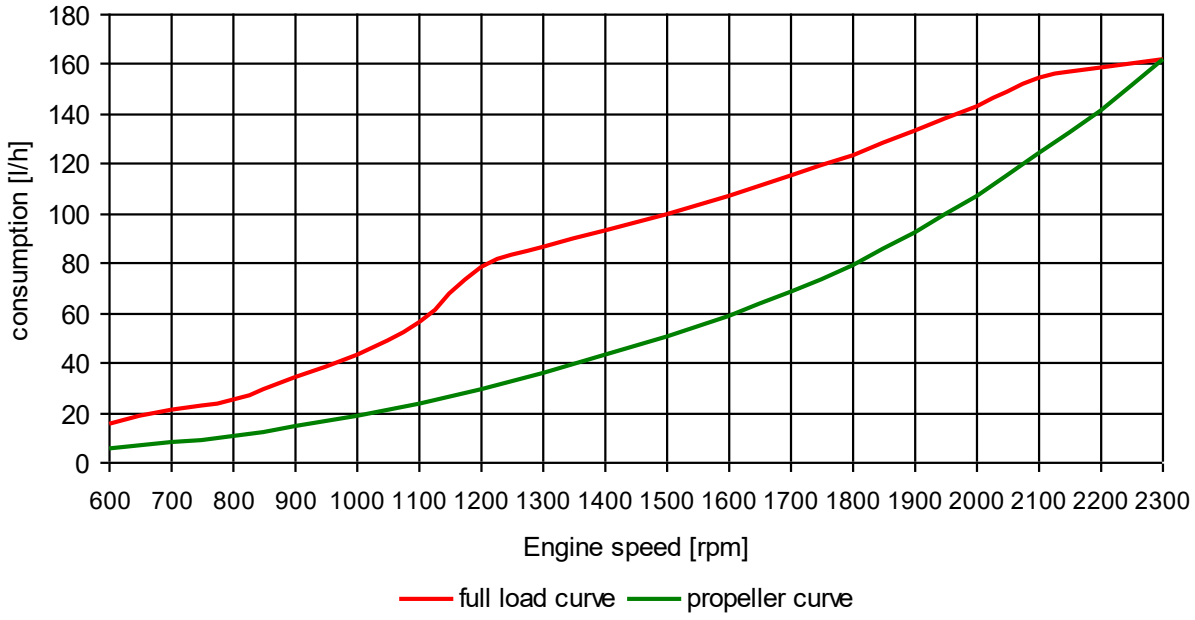
*TBO 5.000 operating hours for non or low particulate matters (PM) regulated jurisdictions (IMO, Canada, EU Stage IIIA)

D2676LE453 (i6-850)

Power/torque curves



Absolute fuel consumption[1]



< The rated power is based on reference conditions according to DIN ISO 3046-1 (2002) >

< Exponent for propeller curve 2,5 >

< Engine specifications are subjected to change without notice >

[1] Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046)