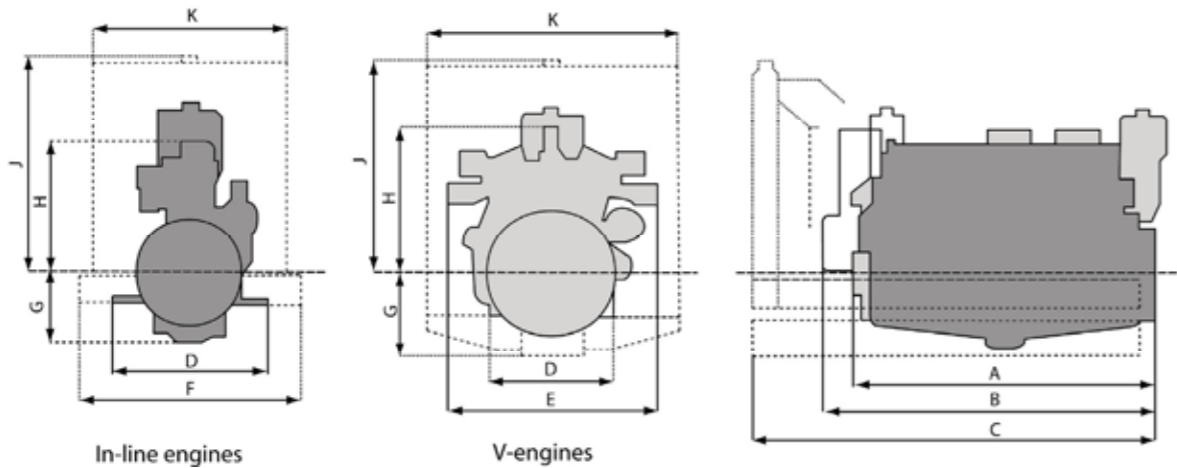


Dimensions



Engine type	A	B	C	D	E	F	G	H	J	K
RHS618V	mm 1320 ⁷⁾	1230 ⁸⁾	1520 ⁹⁾	790	-	860	400	880	880 ¹⁰⁾	680 ¹¹⁾
RHS618S	mm 1680 ⁷⁾	1650 ⁸⁾	2020 ⁹⁾	790	-	1240	400	880	920 ¹⁰⁾	1030 ¹¹⁾
RHS618A	mm 2040 ⁷⁾	1950 ⁸⁾	2460 ⁹⁾	790	-	1300	400	880	1025 ¹⁰⁾	1230 ¹¹⁾
RHS618V12	mm 1760 ⁷⁾	2000 ⁸⁾	2540 ⁹⁾	730	1210	-	445	850	1490 ¹⁰⁾	1380 ¹¹⁾
RHS618V16	mm 2160 ⁷⁾	2420 ⁸⁾	3350 ⁹⁾	730	1210	-	445	850	1640 ¹⁰⁾	1480 ¹¹⁾
TRHS618V	mm 1320 ⁷⁾	1230 ⁸⁾	1520 ⁹⁾	790	-	860	400	880	1010 ¹⁰⁾	900 ¹¹⁾
TRHS618S	mm 1820 ⁷⁾	1690 ⁸⁾	2070 ⁹⁾	790	-	1240	400	880	1110 ¹⁰⁾	1230 ¹¹⁾
TRHS618A	mm 2450 ⁷⁾	2340 ⁸⁾	2870 ⁹⁾	790	-	2300	400	950	1160 ¹⁰⁾	1230 ¹¹⁾
TRHS618V12	mm 2120 ⁷⁾	2500 ⁸⁾	3050 ⁹⁾	730	1180	-	445	850	1640 ¹⁰⁾	1480 ¹¹⁾
TRHS618V16	mm 2660 ⁷⁾	2900 ⁸⁾	3570 ⁹⁾	730	1260	-	445	850	1720 ¹⁰⁾	1880 ¹¹⁾

Engine type	RHS618V	RHS618S	RHS618A	RHS618V12	TRHS618V16
Weight (t)	1.40 ¹²⁾	1.53 ¹²⁾	1.73 ¹²⁾	2.25 ¹²⁾	3.23 ¹²⁾
	1.45 ¹³⁾	1.68 ¹³⁾	1.93 ¹³⁾	2.75 ¹³⁾	3.70 ¹³⁾
	1.50 ¹⁴⁾	1.63 ¹⁴⁾	1.83 ¹⁴⁾	2.70 ¹⁴⁾	3.25 ¹⁴⁾

Engine type	TRHS618V	TRHS618S	TRHS618A	TRHS618V12	TRHS618V16
Weight (t)	1.50 ¹²⁾	1.65 ¹²⁾	2.05 ¹²⁾	2.70 ¹²⁾	3.68 ¹²⁾
	1.60 ¹³⁾	1.77 ¹³⁾	2.30 ¹³⁾	3.10 ¹³⁾	4.20 ¹³⁾
	1.55 ¹⁴⁾	1.70 ¹⁴⁾	2.10 ¹⁴⁾	2.90 ¹⁴⁾	3.90 ¹⁴⁾

7) Dimension with indirect cooling
 8) Dimension with mixed cooling
 9) Dimension with ventilator cooling
 10) Cooler height

11) Cooler width
 12) Standard engine with mixed cooling
 13) Standard engine with ventilator cooling including ventilator and without cooler
 14) Standard engine with indirect cooling

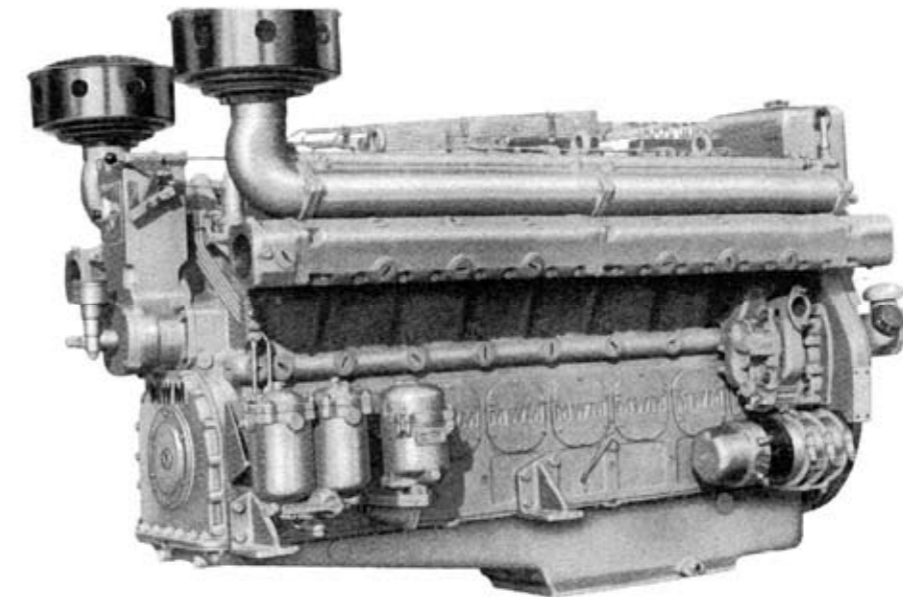
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Total Service



WÄRTSILÄ DEUTZ marine engines

Characteristics

- Water-cooled 4, 6, 8 cylinder in-line engine and 12, 16 cylinder 50° V- engine.
- Four-stroke engine.
- Direct fuel injection.
- Electric or air starting system.
- One inlet and one exhaust valve per cylinder head.
- Available in turbocharged version.
- Sturdy construction.

Benefits

- Easy access to all engine parts.
- Easy maintenance and easy engine operation.



➤ Engine description

Crankcase	The crankcase with reinforced ribs is made of grey cast iron and is made in one piece.
Crankshaft	The crankshaft is made of drop forged steel.
Torsional vibration damper	A fluid-viscosity vibration damper is mounted on the V-engine. A viscous-fluid or frictional damper is mounted on the in-line engine.
Connecting rod	The obliquely split connection rod is made of heat treated steel. The bearings are of the lead bronze type with a steel back and a galvanic plated running-in layer.
Piston	The piston is made of a special light metal alloy and has 5 piston rings. The top ring is chrome plated.
Cylinder head	The cylinder head is made of special grey cast iron. The cylinder head contain a starting valve, injection valve and one inlet and one exhaust valve.
Camshaft	The camshaft with the inlet and exhaust cams is made in one piece. The cams are case-hardened and polished.
Injection pump	Block pump with internal camshaft. The V-engine has two coupled block pumps.
Governor	The engine has a mechanical or hydraulic governor.
Fuel system	The in-line engine has one fuel supply pump and a single fuel filter. (optional: duplex switch-over filter) The V-engine has two fuel supply pumps and a duplex switch-over fuel filter.
Lubricating oil system	Forced oil circulation by engine mounted gear lubricating oil pump.
Lube oil filter	A strainer or gap filter in main stream is mounted on the in-line engines. A single-stage filter, duplex filter, paper filter or strainer filter in main stream is mounted on the V-engines. A centrifugal filter is mounted in partial flow.
Starting system	Electric with glow plug.
Cooling water system	The engine can have the following cooling water systems: <ul style="list-style-type: none"> • Mixed cooling system: with a centrifugal pump or a gear type pump and cooling water thermostat. • Ventilator cooling: with a centrifugal pump for cooling water circulation and a honeycomb radiator with ventilator for re-cooling. • Indirect (two-circuit) cooling system with two separate cooling water circuits with a fresh water circulation pump, heat-exchanger, cooling water thermostat and raw water gear type pump.
Exhaust gas system	Water-cooled or uncooled.
Turbochargers	Turbochargers are mounted on engine types beginning with 'T'. The V engine type TRHS618V12, and TRHS618V16 has two turbochargers.
Optional	Electronic speed governing, compressed air starter.

➤ Technical data

Engine type ¹⁾		(T)RHS 618V	(T)RHS 618S	(T)RHS 618A	(T)RHS 618V12	(T)RHS 618V16
Model		in-line engine	in-line engine	in-line engine	50° V-engine	50° V-engine
Number of cylinders		4	6	8	12	16
Bore / stroke	mm	140 /180	140 /180	140 /180	140 /180	140 /180
Displacement	l	11.08	16.62	22.16	33.24	44.32
Compression ratio		16 engines without turbocharger 14 engines with turbocharger				
Rotation direction (facing flywheel)		clockwise or counter-clockwise				

Power ratings for marine propulsion units and on board generating sets.

Rated speed	min ⁻¹	1000-1800	1000-1800	1000-1800	1000-1800	1000-1800
Engine output ²⁾						
according to A	kW	65-129 ⁵⁾	98-194 ⁵⁾	130-258 ⁵⁾	196-386 ⁵⁾	261-515 ⁵⁾
according to B	kW	71-136 ⁵⁾	106-205 ⁵⁾	141-276 ⁵⁾	212-412 ⁵⁾	282-552 ⁵⁾
Mean effective pressure						
according to A	bar	7.01-9.31 ⁵⁾	6.97-9.32 ⁵⁾	7.05-9.32 ⁵⁾	7.06-9.30 ⁵⁾	7.05-9.30 ⁵⁾
according to B	bar	7.65-9.90 ⁵⁾	7.65-9.86 ⁵⁾	7.65-10.0 ⁵⁾	7.65-9.90 ⁵⁾	7.65-9.95 ⁵⁾
Fuel consumption ³⁾						
according to A	g/kWh	212-214 ⁵⁾	212-214 ⁵⁾	212-214 ⁵⁾	212-214 ⁵⁾	212-214 ⁵⁾
according to B	g/kWh	213-214 ⁵⁾	213-214 ⁵⁾	213-214 ⁵⁾	214-217 ⁵⁾	214-217 ⁵⁾
Lubrication oil consumption ⁴⁾	kg/h	0.13-0.25 ⁵⁾	0.20-0.37 ⁵⁾	0.26-0.49 ⁵⁾	0.40-0.74 ⁵⁾	0.52-0.98 ⁵⁾
Idling speed	min ⁻¹	400-450	400-450	400-450	600-650	600-650
Total oil capacity of engine	l	28 ⁶⁾ 34 ⁷⁾	34 ⁶⁾ 40 ⁷⁾	40 ⁶⁾ 40 ⁷⁾	76 ⁶⁾ 97 ⁷⁾	90 ⁶⁾ 120 ⁷⁾

1) Explanation of model designation:

T= engine with turbocharger

RHS= engine designation for crude oil, high-pressure and high speed

V= 4 cylinder in-line

S= 6 cylinder in-line

A= 8 cylinder in-line

2) Output according to DIN 6270, referring to 736 mm Hg, 20 °C and 60% air humidity.

The power requirement of the cooling-water circulation pump is included in the output declarations.

A= continuous output A: 10% exceedable for one hour within 6 hours.

B= output B: blocked, not exceedable.

3) The fuel consumption values are related to the indicated engine output, referred to a fuel with a calorific value of at least 10,000 kcal/kg.

Guarantee at full load according to DIN 6270 and BBS with a tolerance of 5% after a running time of 100 hours.

4) Without considering lube oil changes.

5) Values depending of engine configuration.

6) Total oil capacity with standard oil sump.

7) Total oil capacity with special oil sump.

Note:

The values given in this data sheet are for information purposes only and not binding.

The data provided in the offer is decisive.