

## Technical Data D2-55

Rating 40,5kW(55Hp)

### General

4-stroke indirect injected, naturally aspirated diesel engine

Number of cylinders		4
No of valves		4
Displacement, total	litres in <sup>3</sup>	2,216 135,2
Firing order		1342
Rotational direction, viewed from the front		Clockwise
Bore	mm in	84 3,31
Stroke	mm in	100 3,94
Compression ratio		22,3:1
Compression pressure at 250 rpm	MPa	2,95
Maximum continuous forward inclination:	°	10
Max. continuous backward tilt while running:	°	35
Max. continuous side tilt while running:	°	35
Idling speed	rpm	850 ± 25
Rated speed	rpm	3000
Propeller selection range	rpm	2700-3000

Performance	r/min	1400	1800	2200	2400	2600	2800	3000
Crankshaft power 1), 5)	kW	17,6	25	31	33,9	36,4	39	40,5
	hp	23,94	34	33,9	46,1	49,5	52,99	55,03
Propellershaft power 1) (At full load)	kW	16,9	24,1	29,9	32,6	35,1	37,6	39,0
	hp	23,1	32,7	40,6	44,4	47,7	51,1	53,0
Propellershaft power at prop.load x <sup>3</sup>	kW	4,0	8,4	15,4	20,0	25,4	31,7	39
	hp	5	11	21	27	35	43	53
Torque at crankshaft 2)	Nm	120	132,6	134,6	134,9	133,7	133	128,9
	kpm	12,24	13,53	13,72	13,76	13,64	13,57	13,15
Mean piston speed	m/s	4,7	6,0	7,3	8,0	8,7	9,3	10,0
	ft/s	15,4	19,7	24,0	26,2	28,5	30,5	32,8
Effective mean pressure 2)	MPa	0,76	0,84	0,85	0,85	0,84	0,84	0,837
	psi	110,2	121,8	123,3	123,3	121,8	121,8	121,4

### Lubricating system

Specific lubricating oil consumption.		g/kWh
Max oil volume excl. filters at following inclination:	0 °	litres 10,6
Min oil volume excl. filters at following inclination:	0 °	litres 8,9
Max oil volume excl. filters at following inclination:	°	litres
Min oil volume excl. filters at following inclination:	°	litres
Max oil volume excl. filters at following inclination:	°	litres
Min oil volume excl. filters at following inclination:	°	litres

1) ISO 3046, fuel temp 40°C.

ISO 8665 (=SAE J 1228=ICOMIA 28-83)

2) At power according to 1).

3) If reverse gear is used, 4% in heat rejection will be added for its oil cooler.

4) Acc. to ISO 3744

5) At installed back pressure

# Technical Data D2-55

Rating 40,5kW(55Hp)

<b>Fuel system</b>	<b>r/min</b>	<b>1500</b>	<b>1800</b>	<b>2100</b>	<b>2400</b>	<b>2700</b>	<b>3000</b>
Specific fuel consumption 2)	g/kWh	234	231,2	241	245	250,5	255
Fuel consumption at prop. load x <sup>3</sup>	L/h	2,2	3,1	4,4	6,5	8,9	12,8
	US gal/h	0,6	0,8	1,2	1,7	2,3	3,4
Fuel consumption at full load	L/h	5,4	6,9	8,5	10,4	11,8	12,8
	US gal/h	1,4	1,8	2,2	2,7	3,1	3,4

<b>Intake and exhaust system</b>	<b>r/min</b>	<b>1400</b>	<b>1800</b>	<b>2200</b>	<b>2400</b>	<b>2600</b>	<b>2800</b>	<b>3000</b>	
Specific exhaust heating effect in percent of crankshaft power	%	55	63	71	76	79	82	84	
Exhaust temperature at the exhaust pipe connecting flange after the turbo charger.	°C	355	420	485	495	520	550	570	
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)	kPa							20 15,0	Max Min
	psi							2,9 2,2	Max Min
Engine air consumption at 25°C / 77°F atmospheric pressure 100kPA and relative humidity 30%.	m <sup>3</sup> /h	73	99	118	135	143	148	155	
Exhaust gas flow	m <sup>3</sup> /h	165	235	300	335	360	385	405	

<b>Cooling system</b>	<b>r/min</b>	<b>1400</b>	<b>1800</b>	<b>2200</b>	<b>2400</b>	<b>2600</b>	<b>2800</b>	<b>3000</b>
Radiated heat in percent of crankshaft power.	%	14	4	4	4	5	5	4
Cooling water heating effect in percent of crankshaft power.	%	114	109	111	112	113	115	115
Sea water pump flow.	m <sup>3</sup> /h	1,9	2,4	2,9	3,1	3,4	3,6	3,9
Cooling water circulation pump flow	m <sup>3</sup> /h	1,1	1,5	2,2	2,4	2,8	3,0	3,4
Coolant content engine	litres	9,5						
Thermostat, start open at	°C	82						
Thermostat, fully open at	°C	95						

<b>Emissions</b>	<b>r/min</b>	<b>1500</b>	<b>1800</b>	<b>2100</b>	<b>2400</b>	<b>2700</b>	<b>3000</b>
Smoke at prop. load x <sup>3</sup>	BSU	0,4	0,5	0,8	0,9	1,5	2,3

1) ISO 3046, fuel temp 40°C.

ISO 8665 (=SAE J 1228=ICOMIA 28-83)

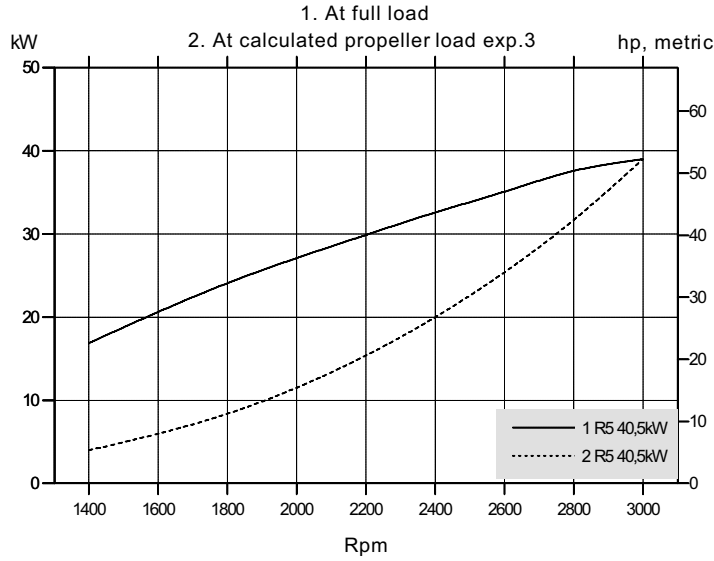
2) At power according to 1).

3) If reverse gear is used, 4% in heat rejection will be added for its oil cooler.

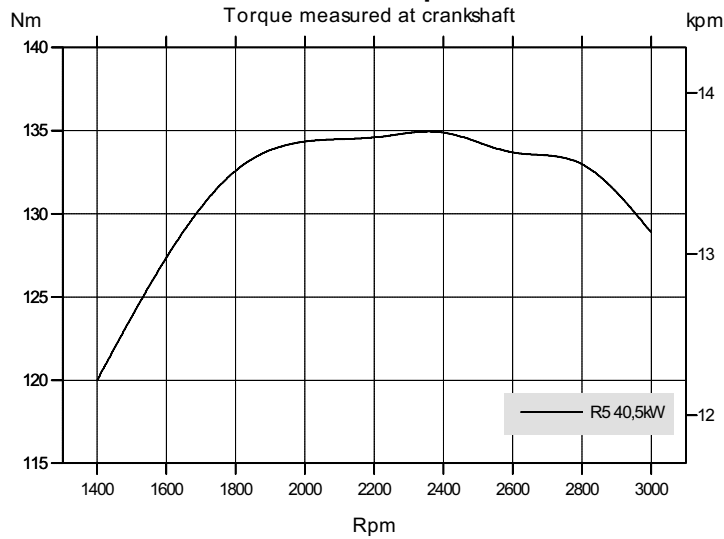
4) Acc. to ISO 3744

5) At installed back pressure

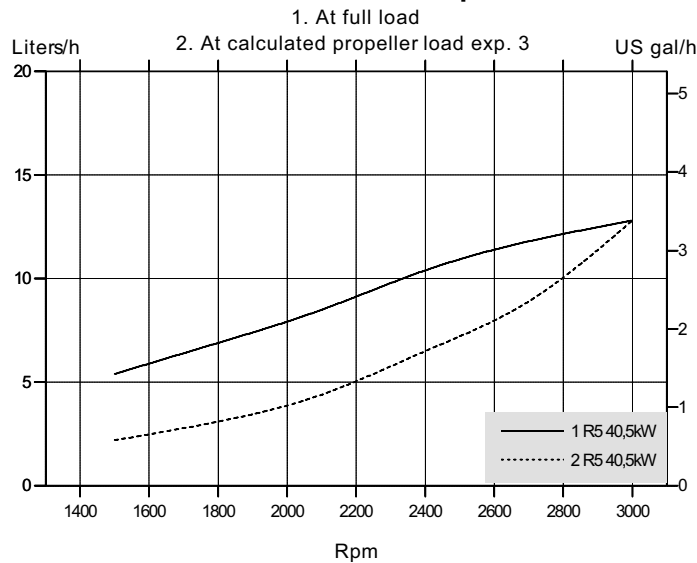
### D2-55 Propeller Shaft Power



### D2-55 Torque



### D2-55 Fuel Consumption



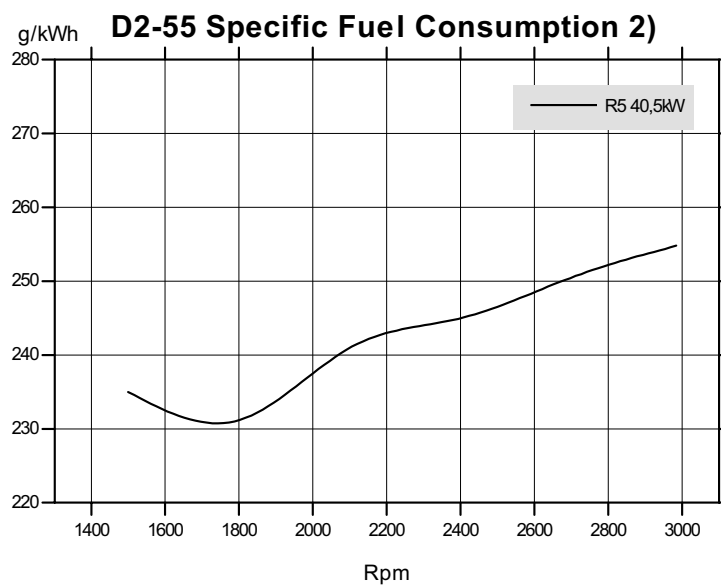
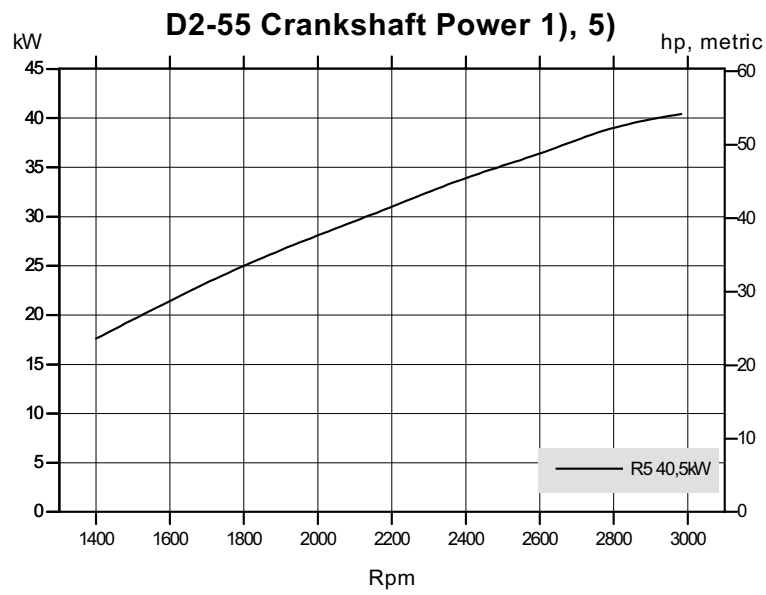
1) ISO 3046, fuel temp 40°C.  
ISO 8665 (=SAE J 1228=ICOMIA 28-83)

2) At power according to 1).

3) If reverse gear is used, 4% in heat rejection will be added for its oil cooler.

4) Acc. to ISO 3744

5) At installed backpressure



- 1) ISO 3046, fuel temp 40°C.  
ISO 8665 (=SAE J 1228=ICOMIA 28-83)
- 2) At power according to 1).
- 3) If reverse gear is used, 4% in heat rejection will be added for its oil cooler.
- 4) Acc. to ISO 3744
- 5) At installed backpressure