Commercial

Marine

Marine.

High speed propulsion engines.

MAN Engines
A Division of MAN Truck & Bus

Contents.

MAN Marine Engines.

Full steam ahead.

At sea, ships and boats have to contend with elemental forces, while harbours require them to navigate precisely through the narrowest of corridors.

MAN engines offer a perfectly coordinated power spectrum for medium duty (400–1,400 hp) and heavy duty (258–900 hp) operation with powerful acceleration and high tractive force. They are the ultimate in terms of reliability and efficiency in freight and passenger shipping as well as in escort and patrol vessels. And when it comes to customer service, MAN engines ensure happy sailing for ship and boat owners.

In light duty operation (730–1,800 hp), MAN engines offer exceptional dynamics accompanied by maximum economic efficiency. And by the way: their path-breaking technology for adhering to emission guidelines means that they easily take up a leading position.

MAN Service.

Competent and Motivated.

MAN is there for you from the outset. Where qualified guidance is needed for the installation, our experts are at your side with advice and practical assistance.
Of course you can always rely on our worldwide service.

Qualified service centres provide you with fast and skilled servicing and repairs.
Worldwide partners ensure a service network for marine engines. As you can see we are there whenever and wherever you need us.

Customer Benefits

- High tractive power even at low speeds
- Powerful acceleration and rapid reaction to commands
- High performance combined with low weight
- Compact, space-saving design
- High efficiency owing to low fuel consumption
- Low running costs and long service life
- Low emission values
- World-wide service network with rapid supply of spare parts

Light duty operation.

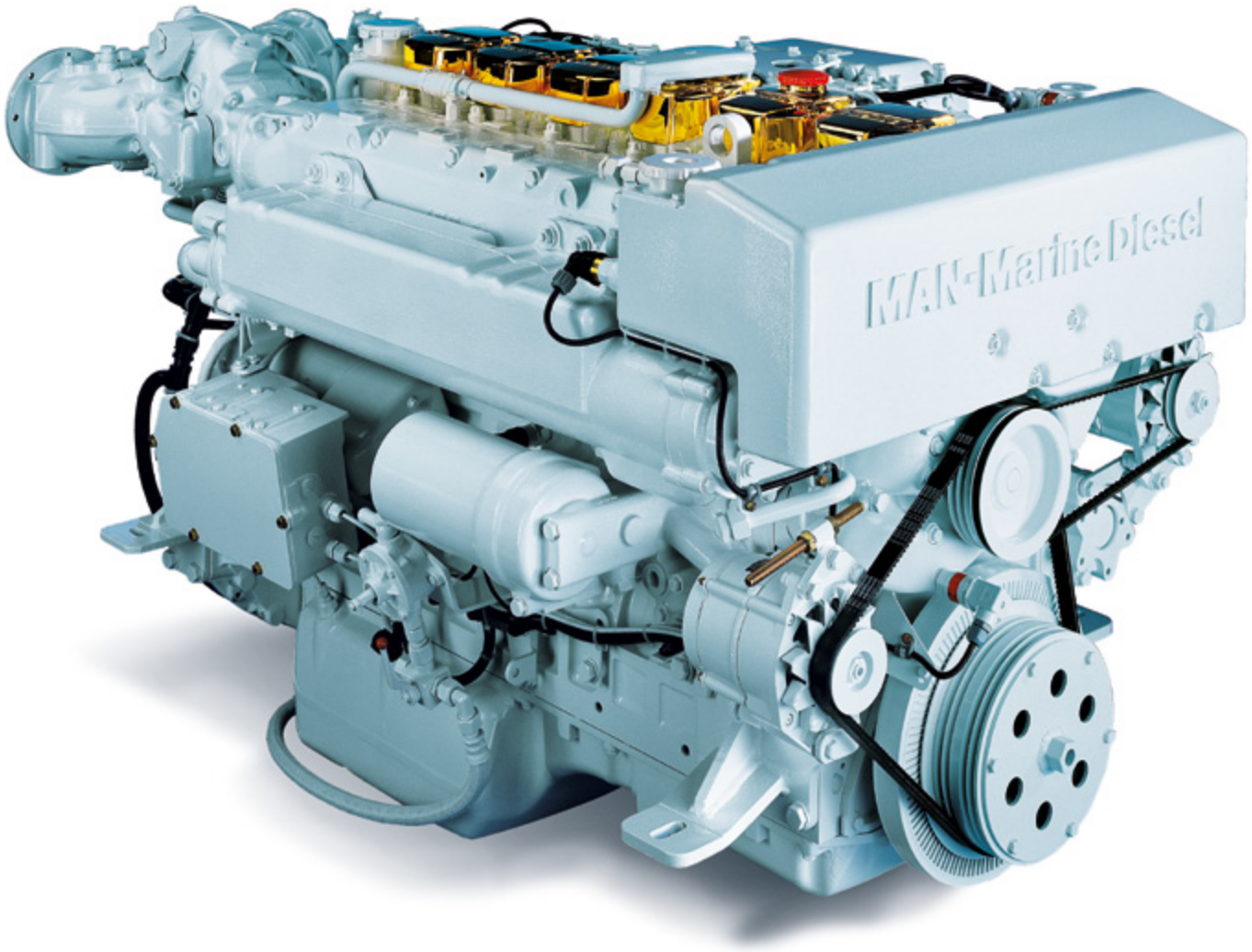
Definition of application type.

Characteristics

- Annual operating hours: ≤ 1,000
- Percentage of time at full load: ≤ 20 %
- Average load application: ≤ 50 %
- Particular operation conditions: no wide-open throttle below rated speed

Typical applications

- Escort boats and patrol boats
- Ambulance boats
- Pleasure crafts
- Police boats



R6-730 and R6-800.

Engine description.

Characteristics

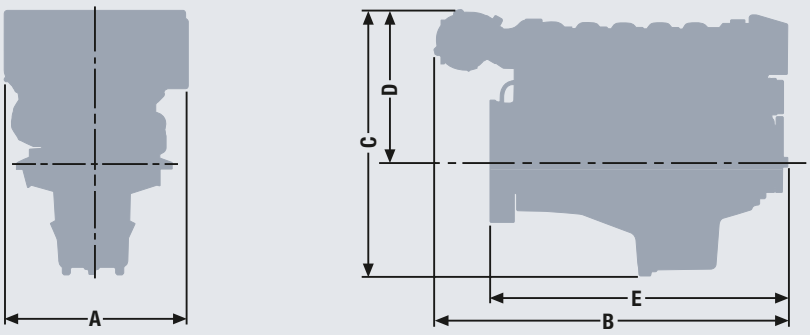
- Cylinders and arrangement: 6 cylinders in-line
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection with electronic control
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Heat exchanger with engine and seawater circuit
- Engine control: Electronic injection control (EDC)
  Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC, EPA Tier 2, SAV/BSO, 97/68/EC
- Fuel: DIN EN 590

R6-730 and R6-800.
Technical data.

Technical features R6-730 and R6-800

Type of engine		R6-730	R6-800
Displacement	l	12.82	12.82
Maximum output to DIN ISO 3046-1 [1]	kW (hp)	537 (730)	588 (800)
Rated speed	rpm	2,300	2,300
Maximum torque	Nm	2,450	2,700
at speed	rpm	1,200–2,100	1,200–2,100
Weight (dry)	kg	1,305	1,305
Fuel consumption at rated power	l/h	145	158

1) The ratings are only for operation of private yachts.



Dimensions R6-730 and R6-800

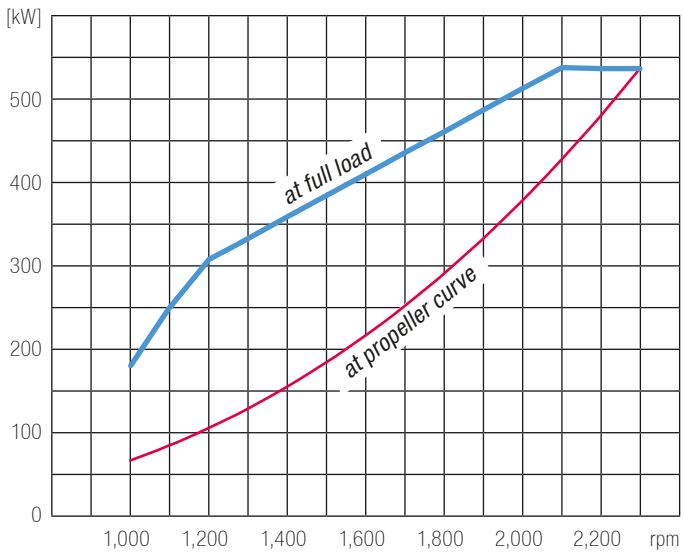
Type of engine			R6-730/R6-800
A-Overall width of engine		mm	910
B-Overall length of engine		mm	1,634
C-Overall height of engine	– flat oil pan	mm	1,020
	– standard oil pan	mm	1,097
D-Top of engine to crankshaft centre		mm	683
E-Length of engine from front end to edge of flywheel housing		mm	1,356

For detailed examinations of installation dimensions, please order drawings from our factory.

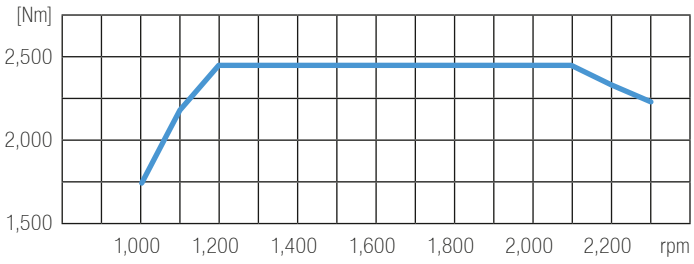
R6-730 and R6-800.
Power charts.

R6-730

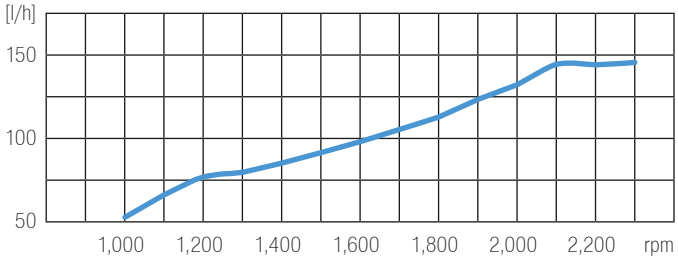
Power



Torque



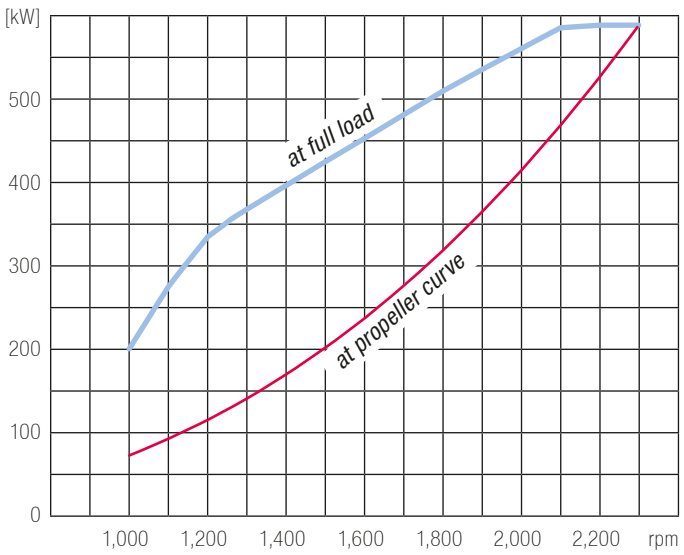
Absolute fuel consumption



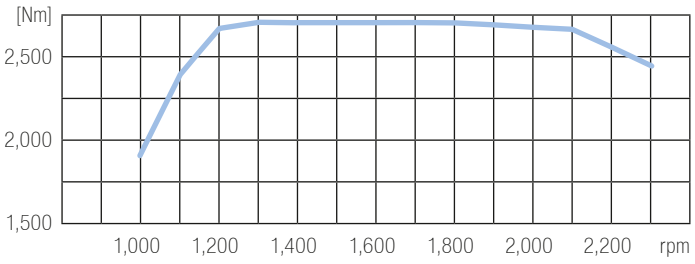
R6-730 with 537 kW (730 hp at 2,300 rpm)

R6-800

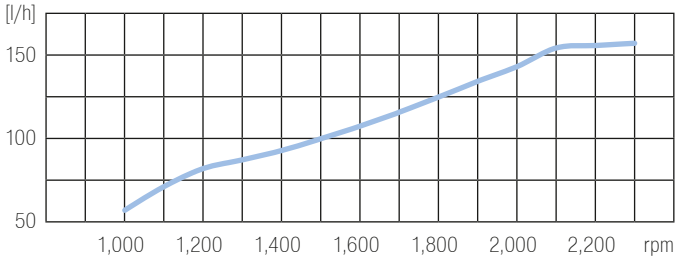
Power



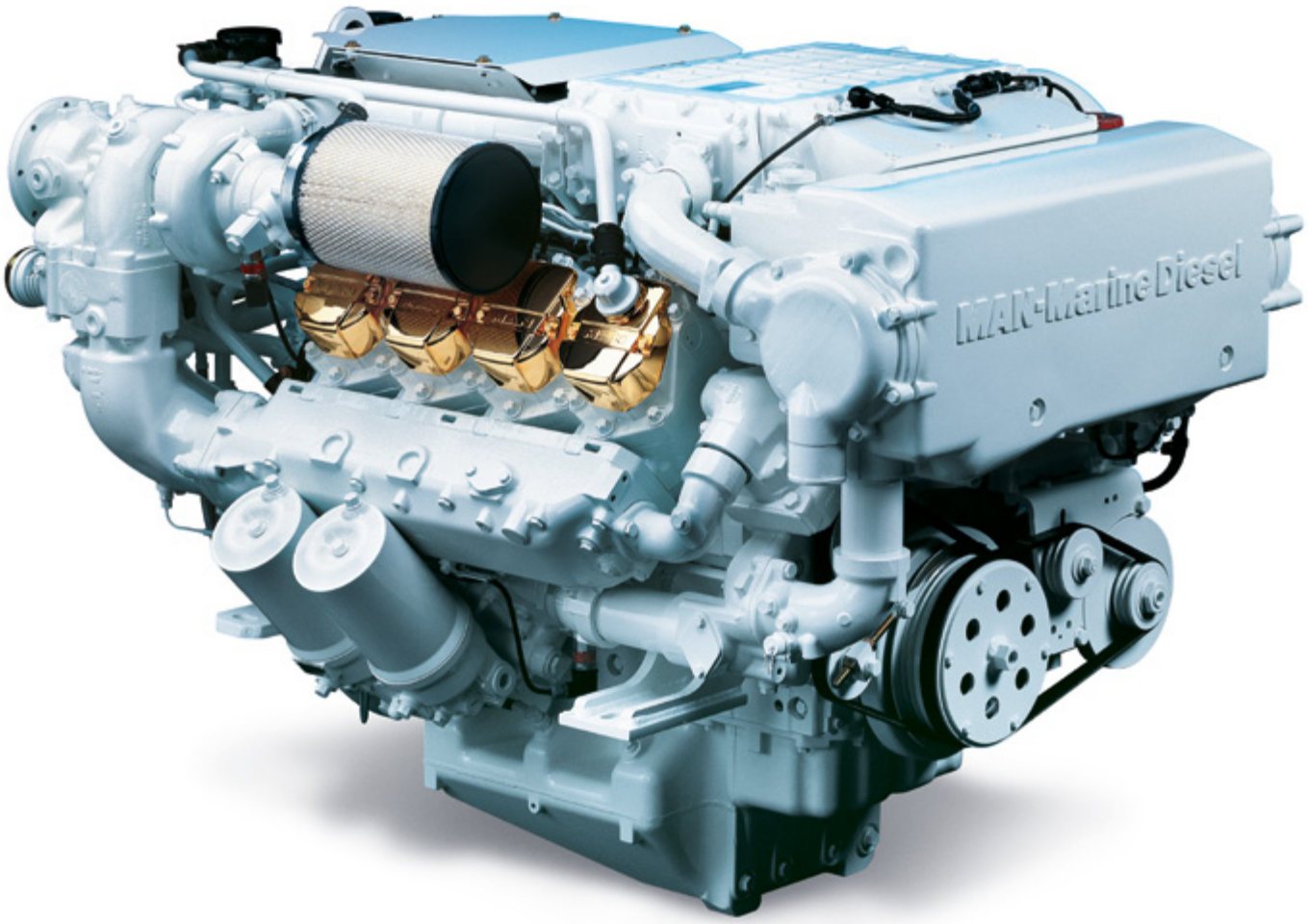
Torque



Absolute fuel consumption



R6-800 with 588 kW (800 hp at 2,300 rpm)



V8-900.

Engine description.

Characteristics

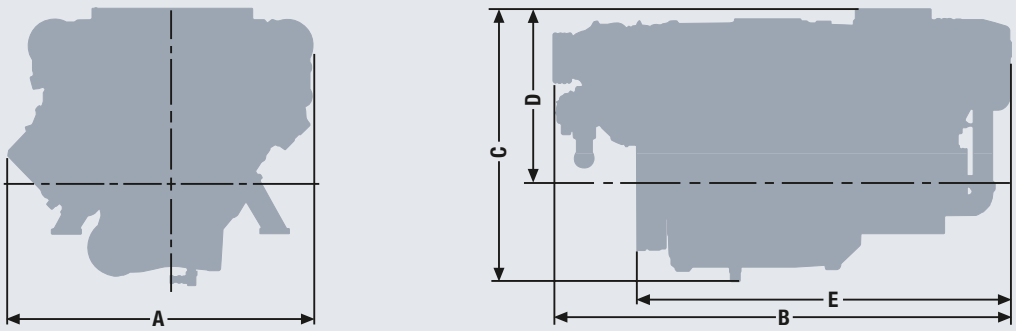
■ Cylinders and arrangement:	8 cylinders in 90° V design
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	Exhaust turbocharger with intercooler, boost pressure control with waste gate
■ Number of valves:	4 valves per cylinder
■ Fuel system:	Common Rail direct fuel injection with electronic control
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Heat exchanger with engine and seawater circuit
■ Engine control:	Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
■ Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, SAV/BSO, 97/68/EC
■ Fuel:	DIN EN 590

V8-900.
Technical data.

Technical features V8-900

Type of engine		V8-900
Displacement	l	14.62
Maximum output to DIN ISO 3046-1 [1]	kW (hp)	662 (900)
Rated speed	rpm	2,300
Maximum torque	Nm	2,900
at speed	rpm	1,500–2,100
Weight (dry)	kg	1,565
Fuel consumption at rated power	l/h	176

1) The ratings are only for operation of private yachts.



Dimensions V8-900

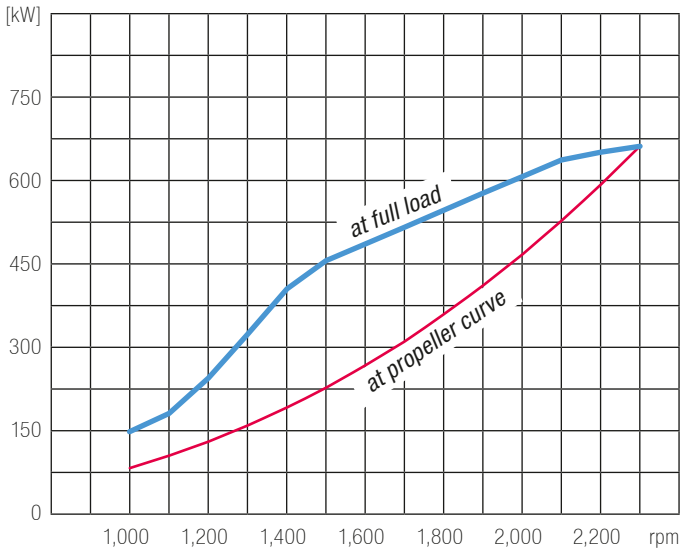
Type of engine		V8-900
A-Overall width of engine	mm	1,240
B-Overall length of engine	mm	1,546
C-Overall height of engine	mm	1,173
D-Top of engine to crankshaft centre	mm	789
E-Length of engine from front end to edge of flywheel housing	mm	1,175

For detailed examinations of installation dimensions, please order drawings from our factory.

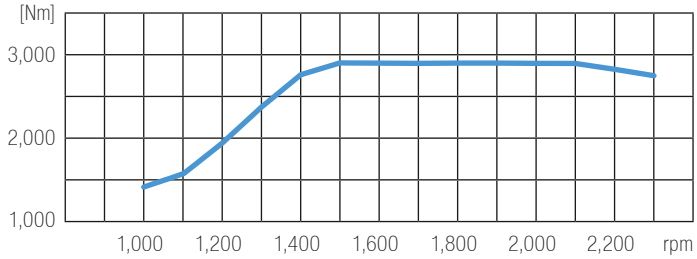
V8-900.
Power charts.

V8-900

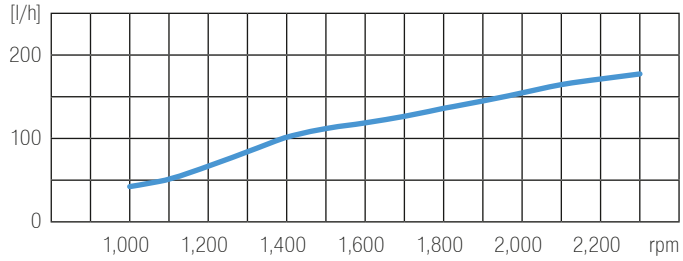
Power



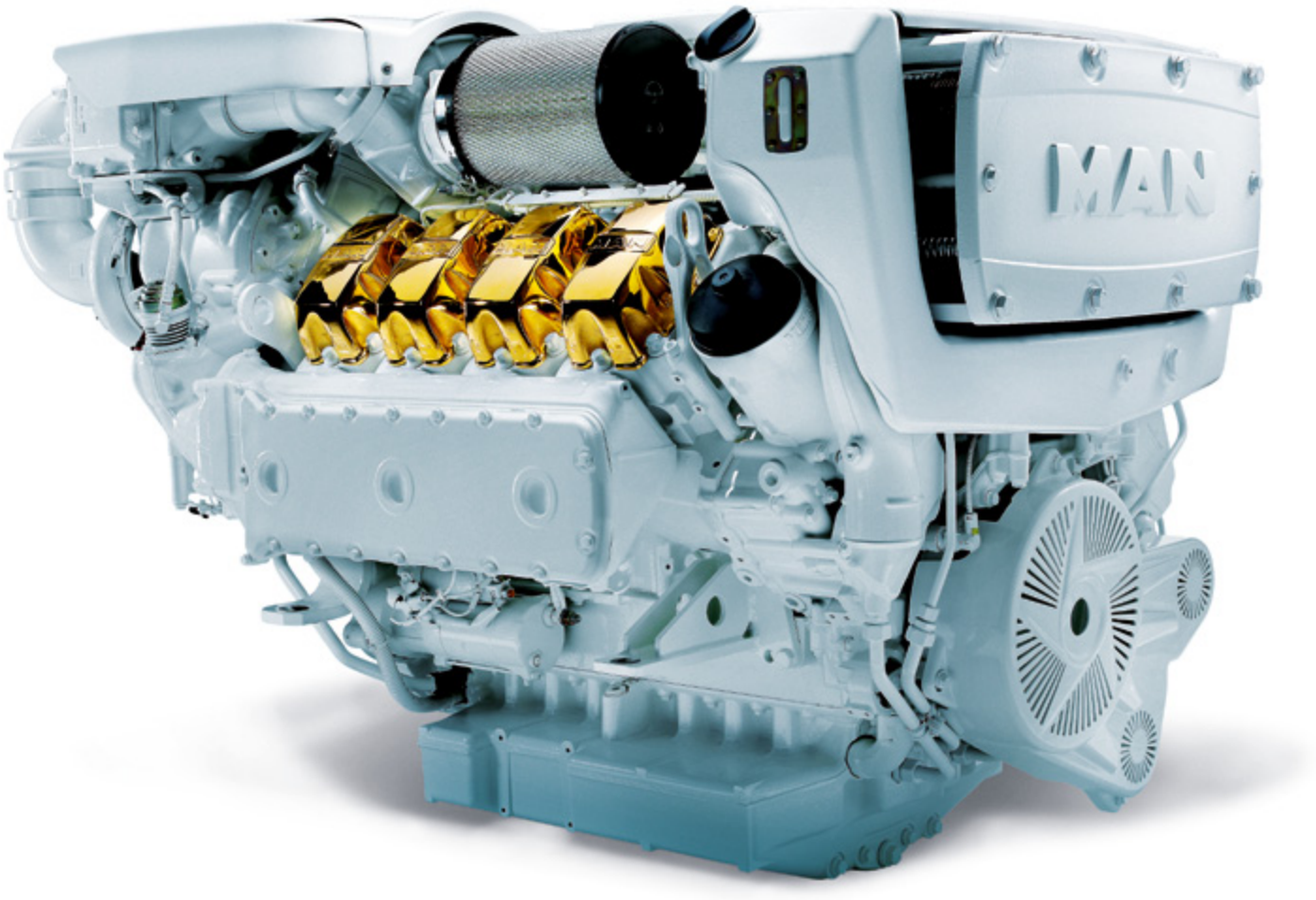
Torque



Absolute fuel consumption



V8-900 with 662 kW (900 hp at 2,300 rpm)



V8-1000 and V8-1200.

Engine description.

Characteristics

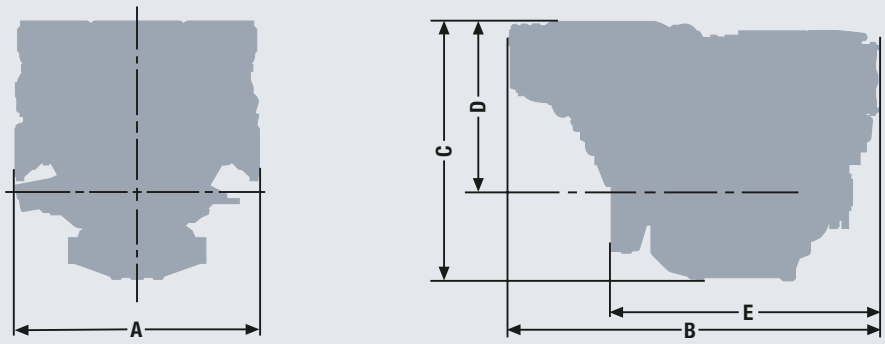
Cylinders and arrangement:	8 cylinders in 90° V design
Operation mode:	4-stroke diesel engine, watercooled
Turbocharging:	Exhaust turbocharger with intercooler (1-stage: V8-1000, 2-stage: V8-1200), boost pressure control with waste gate
Number of valves:	4 valves per cylinder
Fuel system:	Common Rail direct fuel injection with electronic control
Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
Type of cooling:	Plate heat exchanger, seawater cooled
Engine control:	Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, 97/68/EC
Fuel:	DIN EN 590

V8-1000 and V8-1200.
Technical data.

Technical features V8-1000 and V8-1200

Type of engine		V8-1000	V8-1200
Displacement	l	16.16	16.16
Maximum output to DIN ISO 3046-1 [1)]	kW (hp)	735 (1,000)	882 (1,200)
Rated speed	rpm	2,300	2,300
Maximum torque	Nm	3,350	4,010
at speed	rpm	1,300–2,100	1,200–2,100
Weight (dry)	kg	1,780	1,875
Fuel consumption at rated power	l/h	195	231

1) The ratings are only for operation of private yachts.



Dimensions V8-1000 and V8-1200

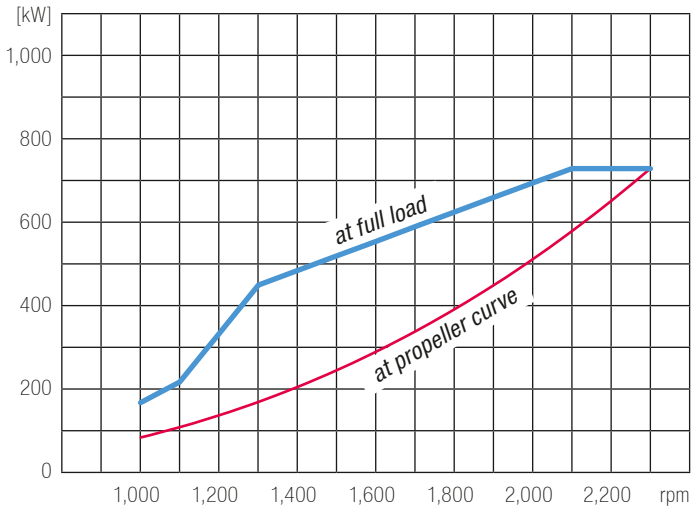
Type of engine		V8-1000	V8-1200
A-Overall width of engine	mm	1,153	1,153
B-Overall length of engine	mm	1,736	1,745
C-Overall height of engine	mm	1,236	1,222
D-Top of engine to crankshaft centre	mm	825	811
E-Length of engine from front end to edge of flywheel housing	mm	1,243	1,262

For detailed examinations of installation dimensions, please order drawings from our factory.

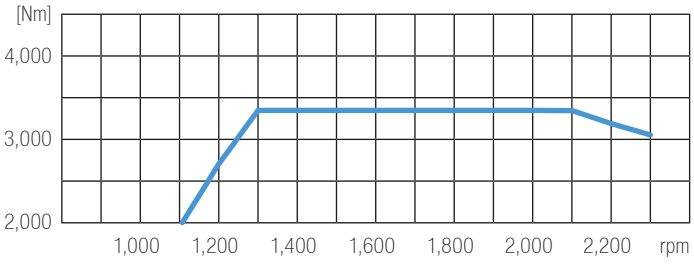
V8-1000 and V8-1200.
Power charts.

V8-1000

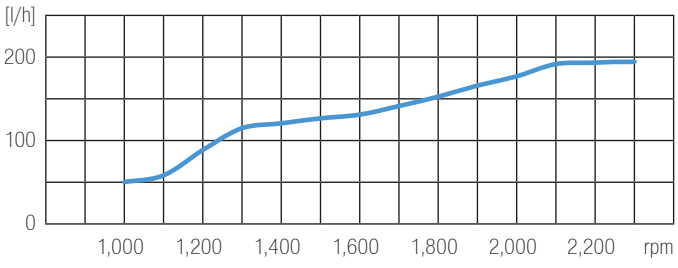
Power



Torque



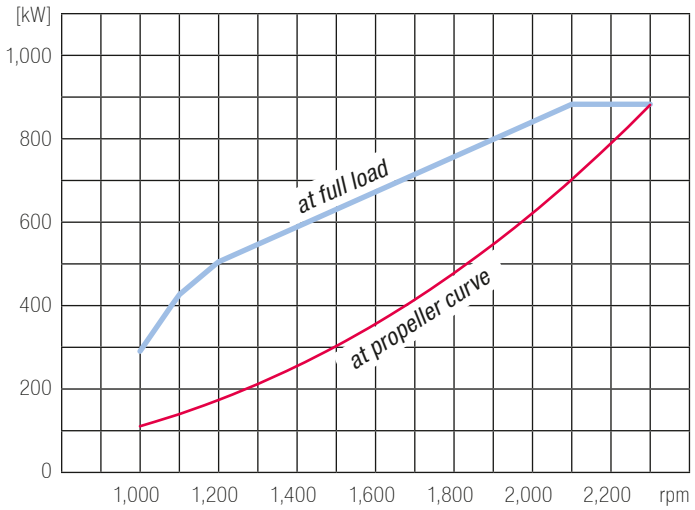
Absolute fuel consumption



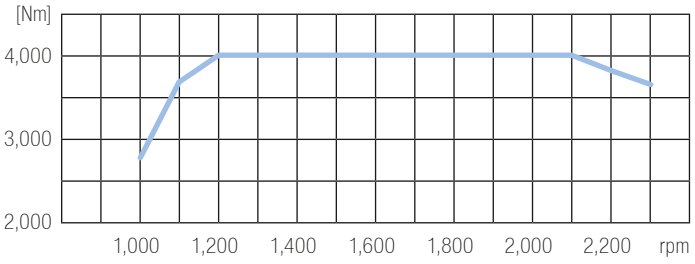
V8-1000 with 735 kW (1,000 hp at 2,300 rpm)

V8-1200

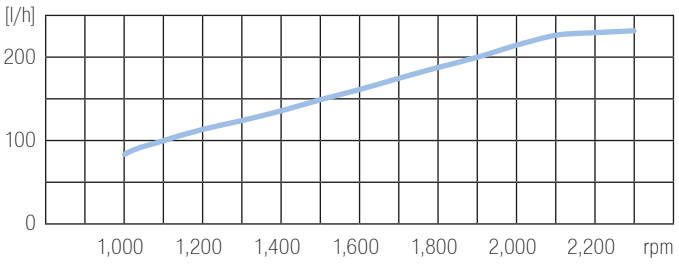
Power



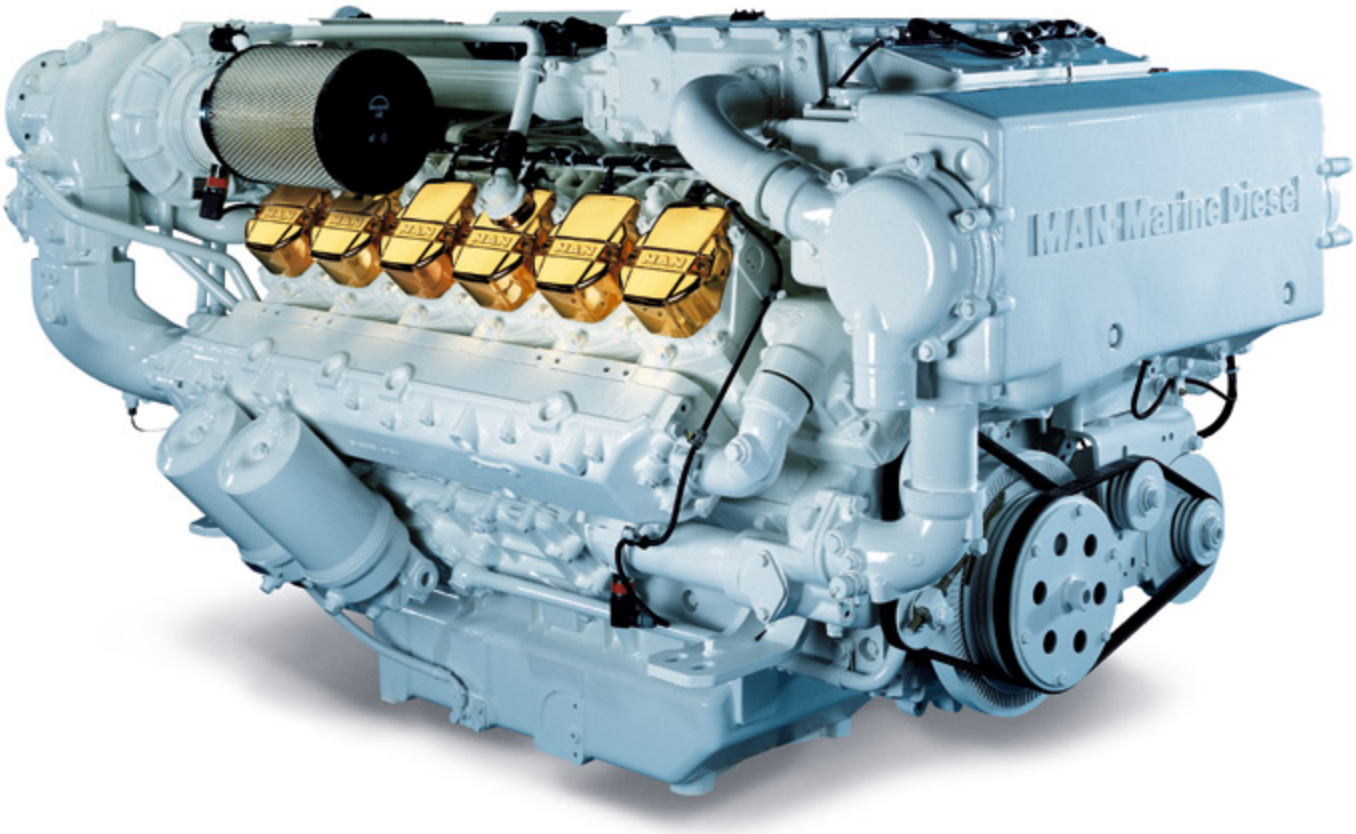
Torque



Absolute fuel consumption



V8-1200 with 882 kW (1,200 hp at 2,300 rpm)



V12-1360.

Engine description.

Characteristics

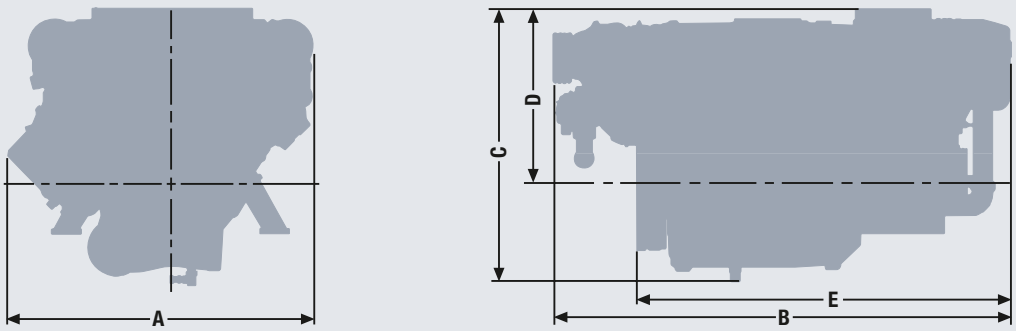
■ Cylinders and arrangement:	12 cylinders in 90° V design
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	Exhaust turbocharger with intercooler, boost pressure control with waste gate
■ Number of valves:	4 valves per cylinder
■ Fuel system:	Common Rail direct fuel injection with electronic control
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Heat exchanger with engine and seawater circuit
■ Engine control:	Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
■ Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, SAV/BSO, 97/68/EC
■ Fuel:	DIN EN 590

V12-1360.
Technical data.

Technical features V12-1360

Type of engine		V12-1360
Displacement	l	21.93
Maximum output to DIN ISO 3046-1 [1]	kW (hp)	1,000 (1,360)
Rated speed	rpm	2,300
Maximum torque	Nm	4,550
at speed	rpm	1,200–2,100
Weight (dry)	kg	1,965
Fuel consumption at rated power	l/h	263

1) The ratings are only for operation of private yachts.



Dimensions V12-1360

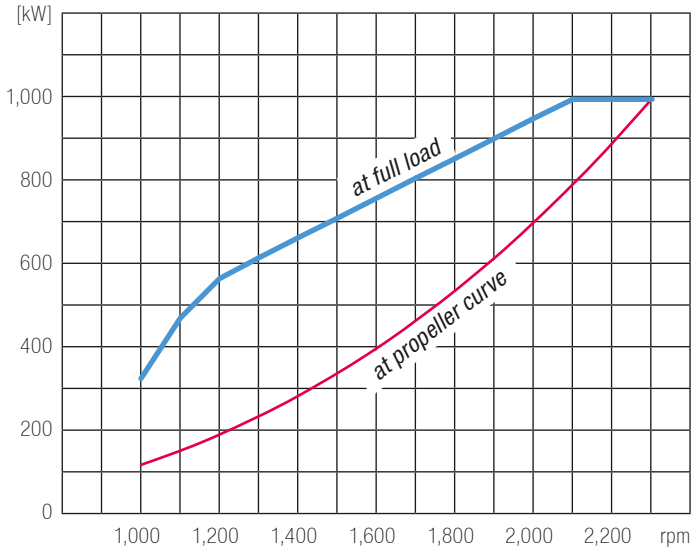
Type of engine			V12-1360
A-Overall width of engine		mm	1,307
B-Overall length of engine		mm	1,846
C-Overall height of engine	– flat oil pan	mm	1,209
	– standard oil pan	mm	1,270
D-Top of engine to crankshaft centre		mm	789
E-Length of engine from front end to edge of flywheel housing		mm	1,493

For detailed examinations of installation dimensions, please order drawings from our factory.

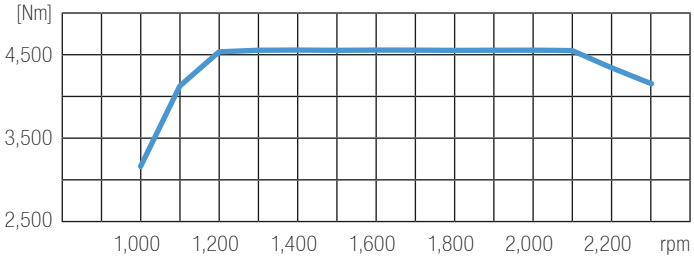
V12-1360.
Power charts.

V12-1360

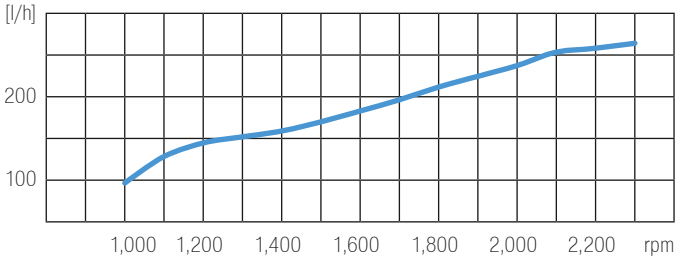
Power



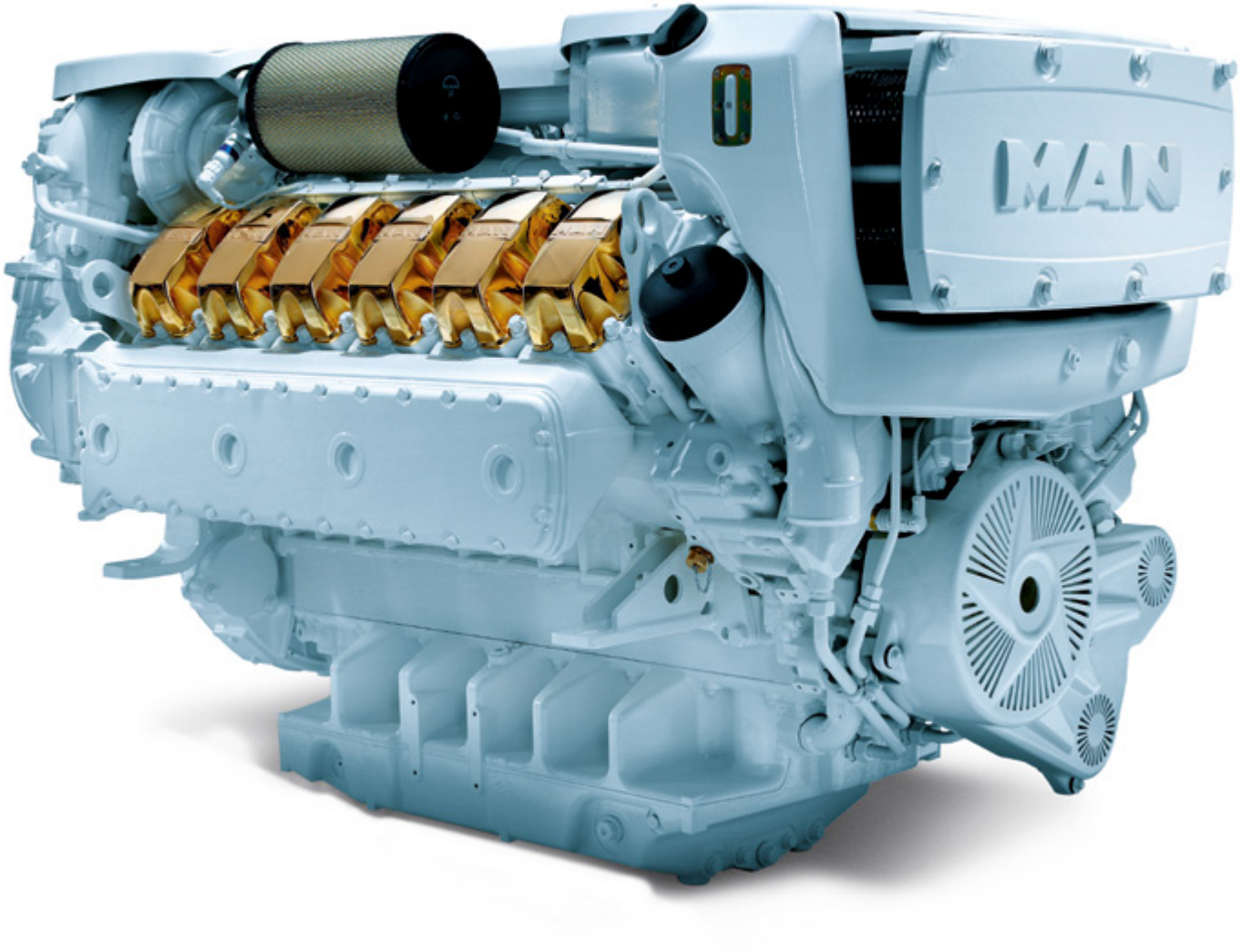
Torque



Absolute fuel consumption



V12-1360 with 1,000 kW (1,360 hp at 2,300 rpm)



V12-1400 and V12-1550.

Engine description.

Characteristics

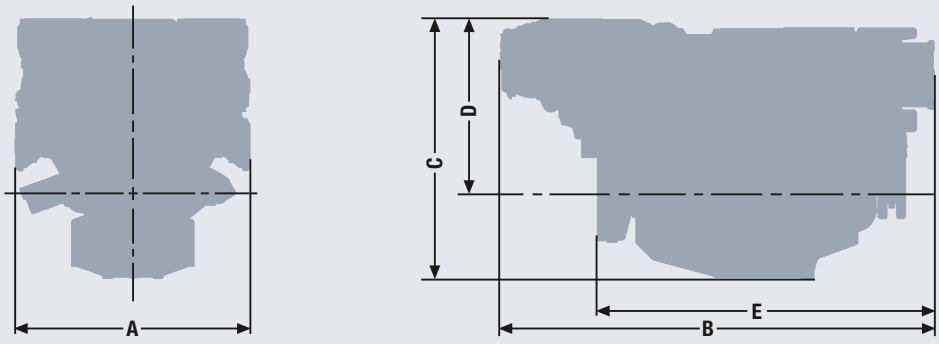
■ Cylinders and arrangement:	12 cylinders in 90° V design
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	Exhaust turbocharger with intercooler, boost pressure control with waste gate
■ Number of valves:	4 valves per cylinder
■ Fuel system:	Common Rail direct fuel injection with electronic control
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Plate heat exchanger, seawater cooled
■ Engine control:	Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
■ Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, 97/68/EC
■ Fuel:	DIN EN 590

V12-1400 and V12-1550.
Technical data.

Technical features V12-1400 and V12-1550

Type of engine		V12-1400	V12-1550
Displacement	l	24.24	24.24
Maximum output to DIN ISO 3046-1 [1]	kW (hp)	1,029 (1,400)	1,140 (1,550)
Rated speed	rpm	2,300	2,300
Maximum torque	Nm	4,670	5,140
at speed	rpm	1,200–2,100	1,300–2,100
Weight (dry)	kg	2,270	2,270
Fuel consumption at rated power	l/h	266	296
Classifiable		✓	–

1) The ratings are only for operation of private yachts.



Dimensions V12-1400 and V12-1550

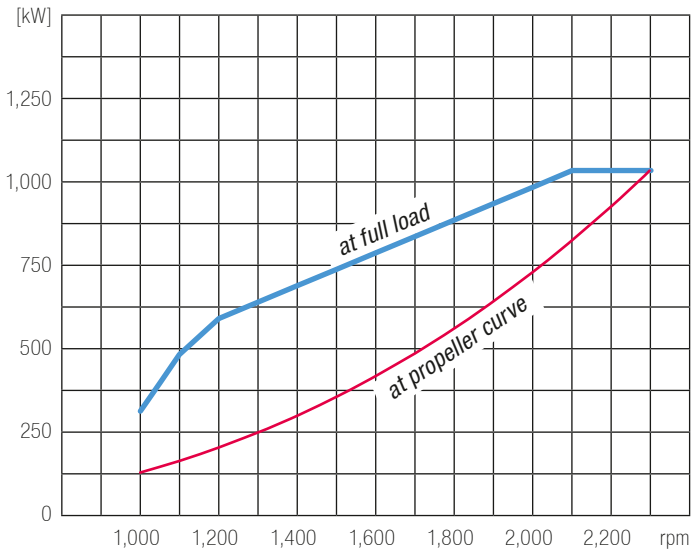
Type of engine		V12-1400	V12-1550
A-Overall width of engine	mm	1,270	1,153
B-Overall length of engine	mm	2,230	2,124
C-Overall height of engine	mm	1,289	1,289
D-Top of engine to crankshaft centre	mm	825	825
E-Length of engine from front end to edge of flywheel housing	mm	1,614	1,631

For detailed examinations of installation dimensions, please order drawings from our factory.

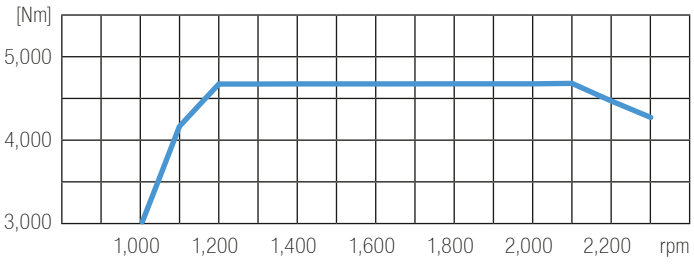
V12-1400 and V12-1550.
Power charts.

V12-1400

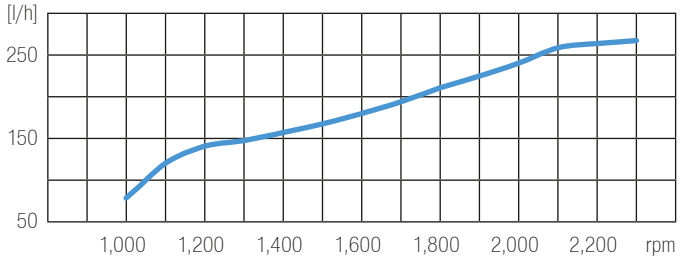
Power



Torque



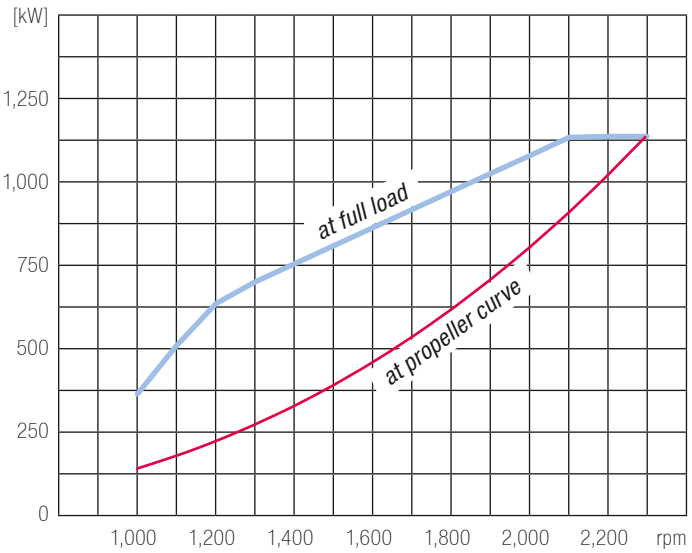
Absolute fuel consumption



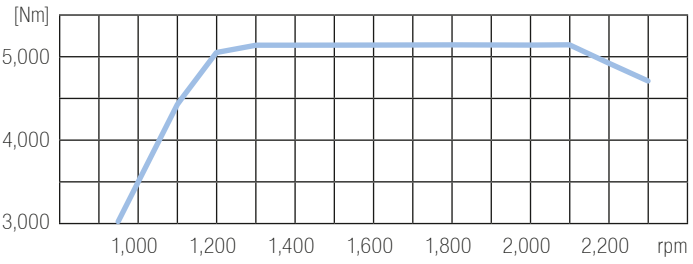
V12-1400 with 1,029 kW (1,400 hp at 2,300 rpm)

V12-1550

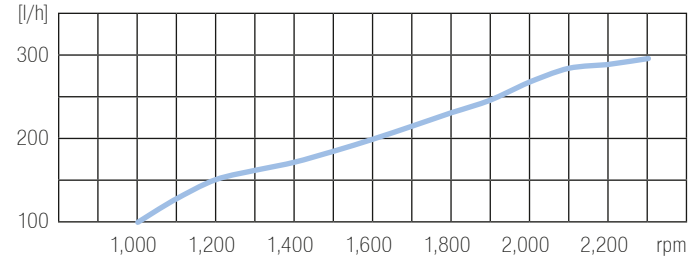
Power



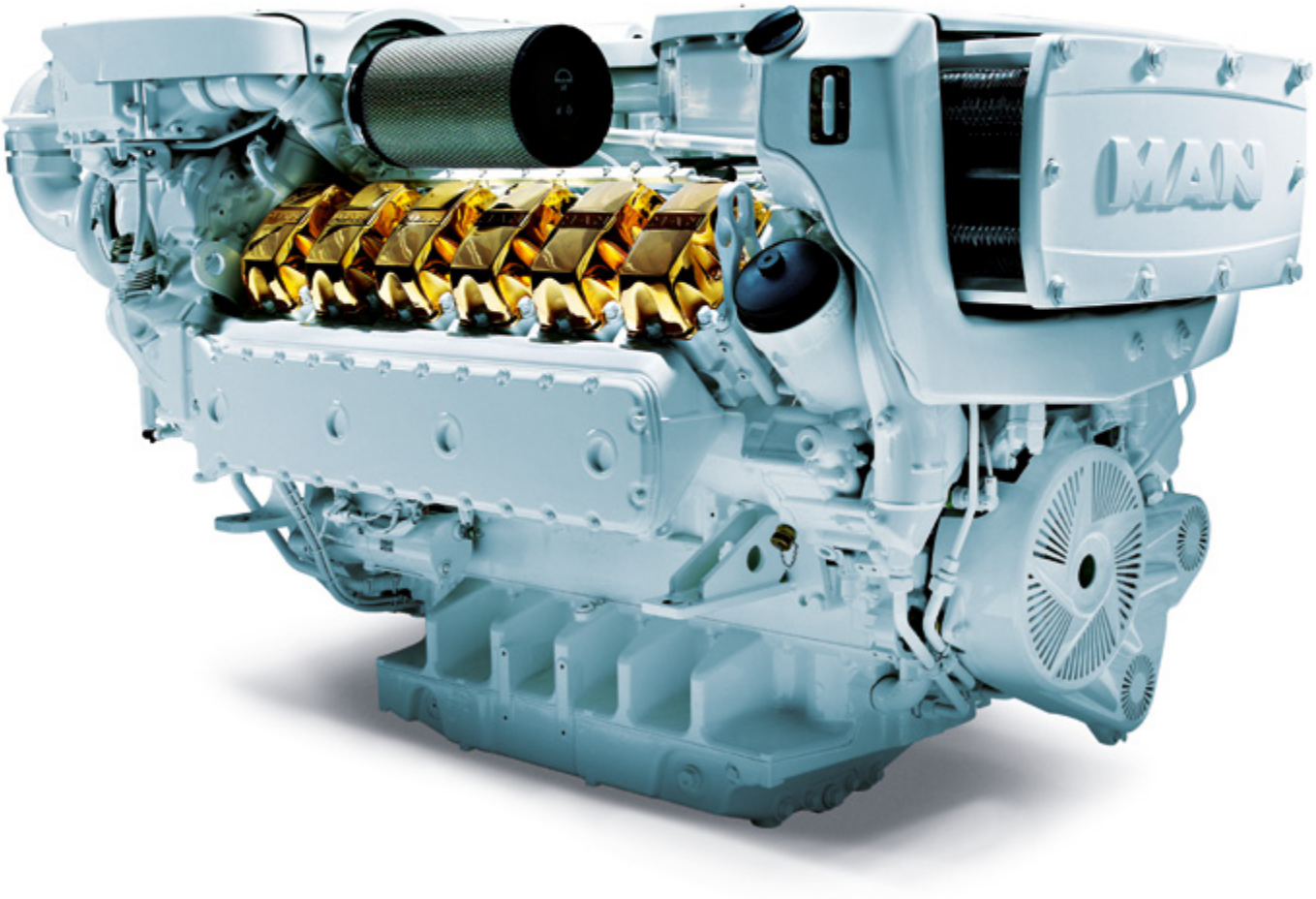
Torque



Absolute fuel consumption



V12-1550 with 1,140 kW (1,550 hp at 2,300 rpm)



V12-1650 and V12-1800.

Engine description.

Characteristics

■ Cylinders and arrangement:	12 cylinders in 90° V design
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	2-stage exhaust turbocharger with intercooler, boost pressure control with waste gate
■ Number of valves:	4 valves per cylinder
■ Fuel system:	Common Rail direct fuel injection with electronic control
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Plate heat exchanger, seawater cooled
■ Engine control:	Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
■ Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, 97/68/EC
■ Fuel:	DIN EN 590

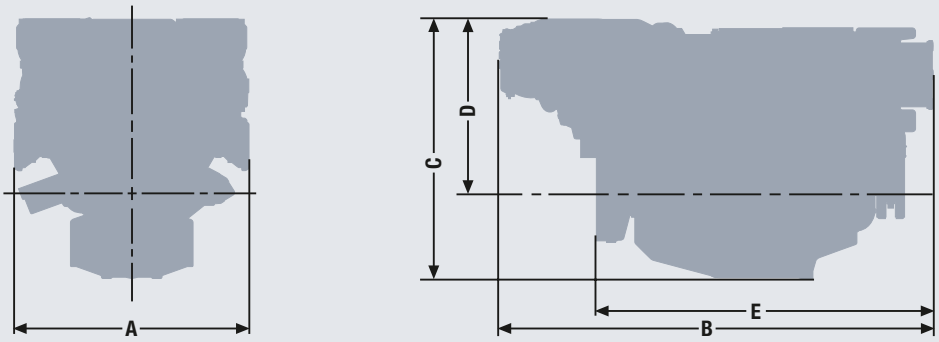
V12-1650 and V12-1800.

Technical data.

Technical features V12-1650 and V12-1800

Type of engine		V12-1650	V12-1800
Displacement	l	24.24	24.24
Maximum output to DIN ISO 3046-1 [1)]	kW (hp)	1,213 (1,650)	1,324 (1,800)
Rated speed	rpm	2,300	2,300
Maximum torque	Nm	5,520	6,020
at speed	rpm	1,200–2,100	1,200–2,100
Weight (dry)	kg	2,400	2,365
Fuel consumption at rated power	l/h	315	339
Classifiable		✓	–

1) The ratings are only for operation of private yachts.



Dimensions V12-1650 and V12-1800

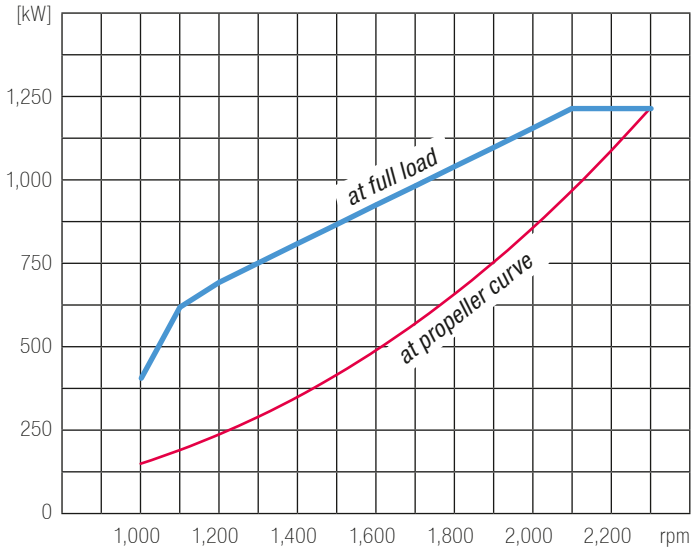
Type of engine		V12-1650	V12-1800
A-Overall width of engine	mm	1,150	1,153
B-Overall length of engine	mm	2,255	2,139
C-Overall height of engine	mm	1,350	1,265
D-Top of engine to crankshaft centre	mm	885	811
E-Length of engine from front end to edge of flywheel housing	mm	1,667	1,658

For detailed examinations of installation dimensions, please order drawings from our factory.

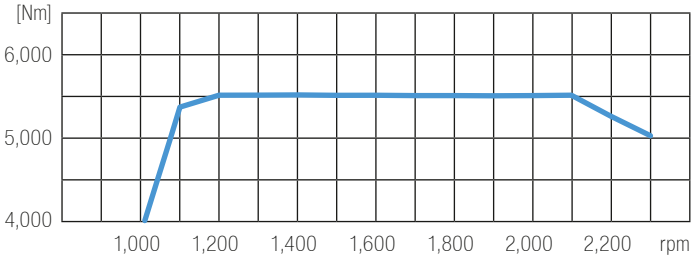
V12-1650 and V12-1800.
Power charts.

V12-1650

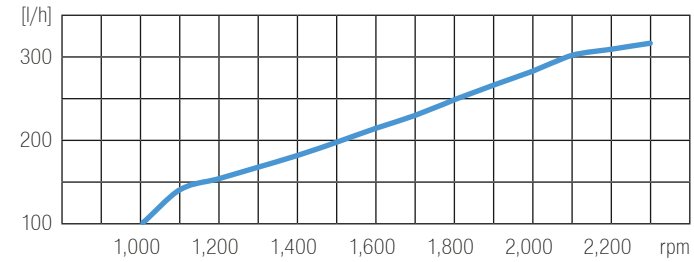
Power



Torque



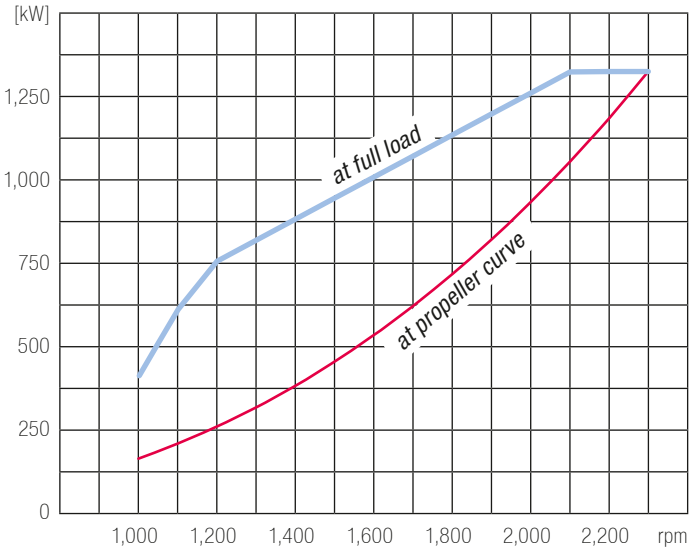
Absolute fuel consumption



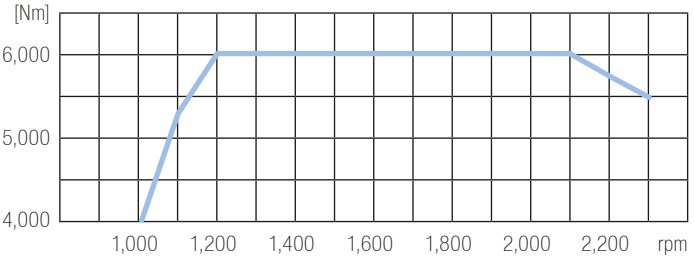
V12-1650 with 1,213 kW (1,650 hp at 2,300 rpm)

V12-1800

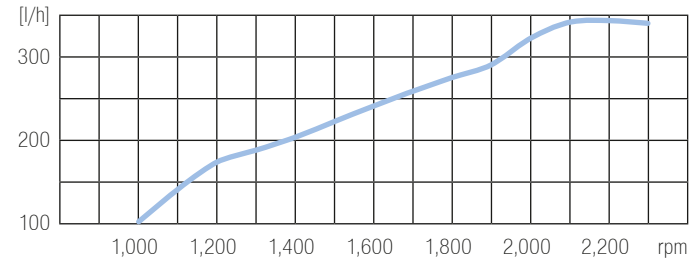
Power



Torque



Absolute fuel consumption



V12-1800 with 1,324 kW (1,800 hp at 2,300 rpm)

medium duty

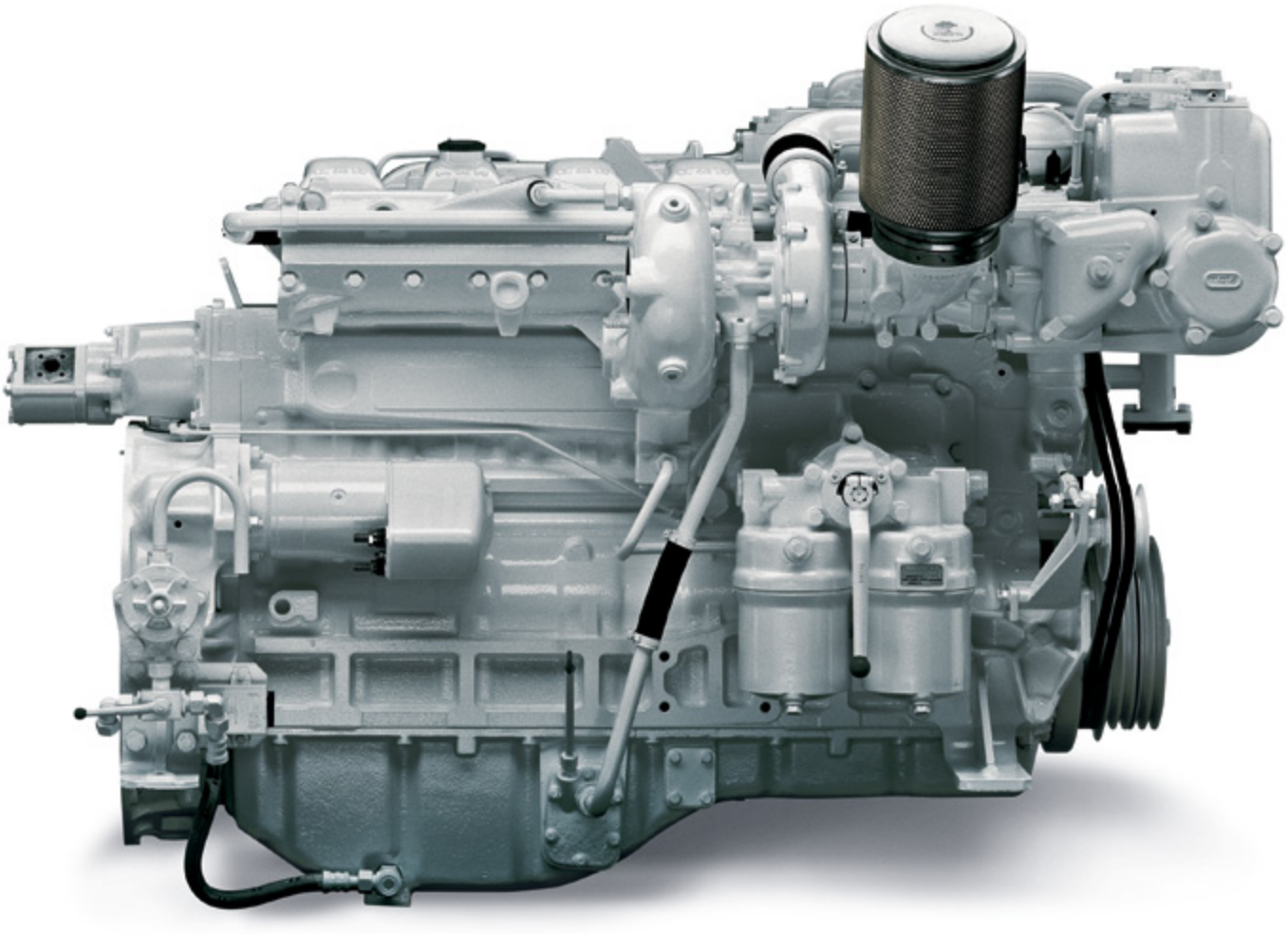
Medium duty operation.

Definition of application type.

Characteristics		D2862 LE 463	D2862 LE 422/432	D2868 LE 422
■ Annual operating hours:	≤ 3,000		≤ 4,000	≤ 4,000
■ Percentage of time at full load:	≤ 50 %	≤ 20 %		
■ Average load application:	≤ 70 %	≤ 50 %	≤ 60 %	≤ 60 %
■ Particular operation conditions:	no wide-open throttle below rated speed			

Typical applications

- Escort boats and pilot boats
- Fishing boats
- Passenger boats and ferries
- Cruising vessels
- Seagoing patrol boats



D2866.
Engine description.

Characteristics

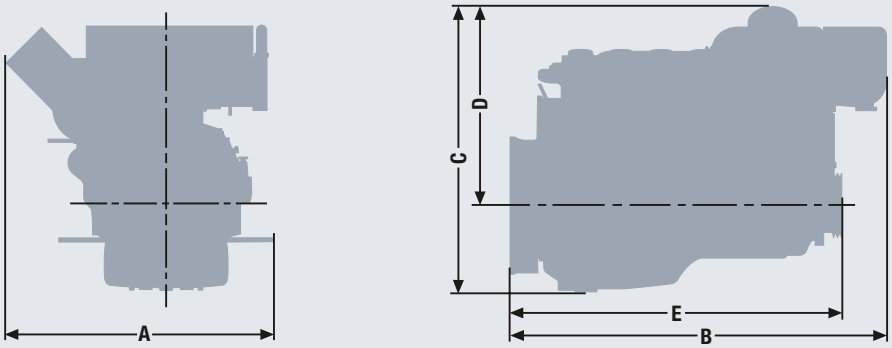
- Cylinders and arrangement: 6 cylinders in-line
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler
- Number of valves: 2 valves per cylinder
- Fuel system: Direct fuel injection with Bosch injection pump
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Seawater cooled heat exchanger
- Engine control: Mechanical injection control
- Exhaust gas status: IMO Tier 2, 97/68/EC, RCD 94/25/EC
- Fuel: DMX fuel to ISO 8217, DIN EN 590

D2866.
Technical data.

Technical features D2866

Type of engine		LXE 40
Bore	mm	128
Stroke	mm	155
Displacement	l	11.97
Compression ratio		15.5 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Nominal rating [1]	kW (hp)	294 (400)
Rated speed	rpm	2,100
Torque at rated speed	Nm	1,337
Maximum torque	Nm	1,420
at speed	rpm	1,700–1,800
Specific fuel consumption [2]	g/kWh	213
Fuel consumption [2]	l/h	75
Classifiable		✓

1) The rating is according to DIN 3046/1. 2) Consumption at rated power.



Dimensions D2866

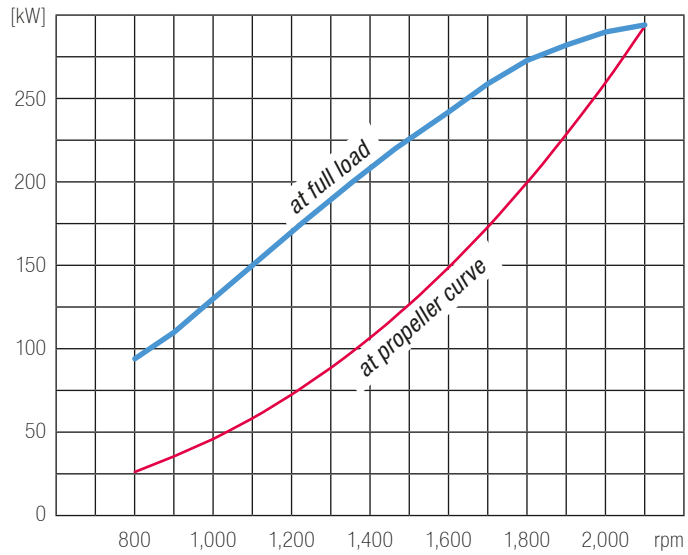
Type of engine			LXE 40
A-Overall width of engine		mm	855
B-Overall length of engine		mm	1,474
C-Overall height of engine	– flat oil pan	mm	1,016
	– deep oil pan	mm	1,244
D-Top of engine to crankshaft centre		mm	686
E-Length of engine from front end to edge of flywheel housing		mm	1,298
Average weight of engine ready for installation (dry)		kg	1,020

For detailed examinations of installation dimensions, please order drawings from our factory.

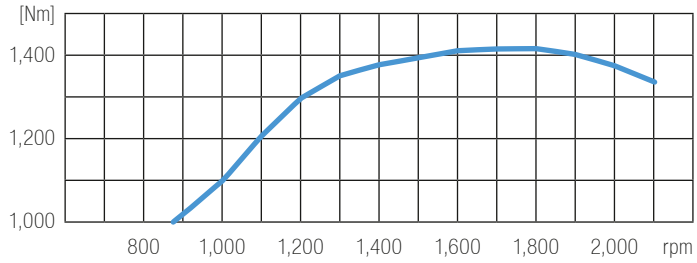
D2866.
Power charts.

D2866 LXE 40

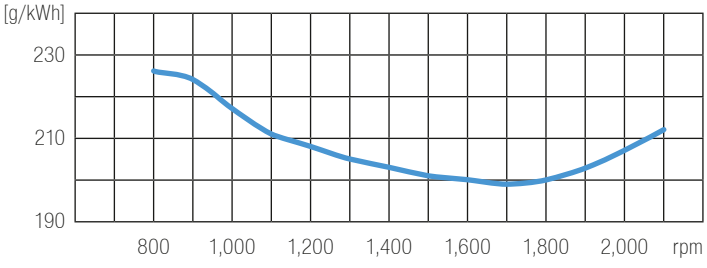
Power



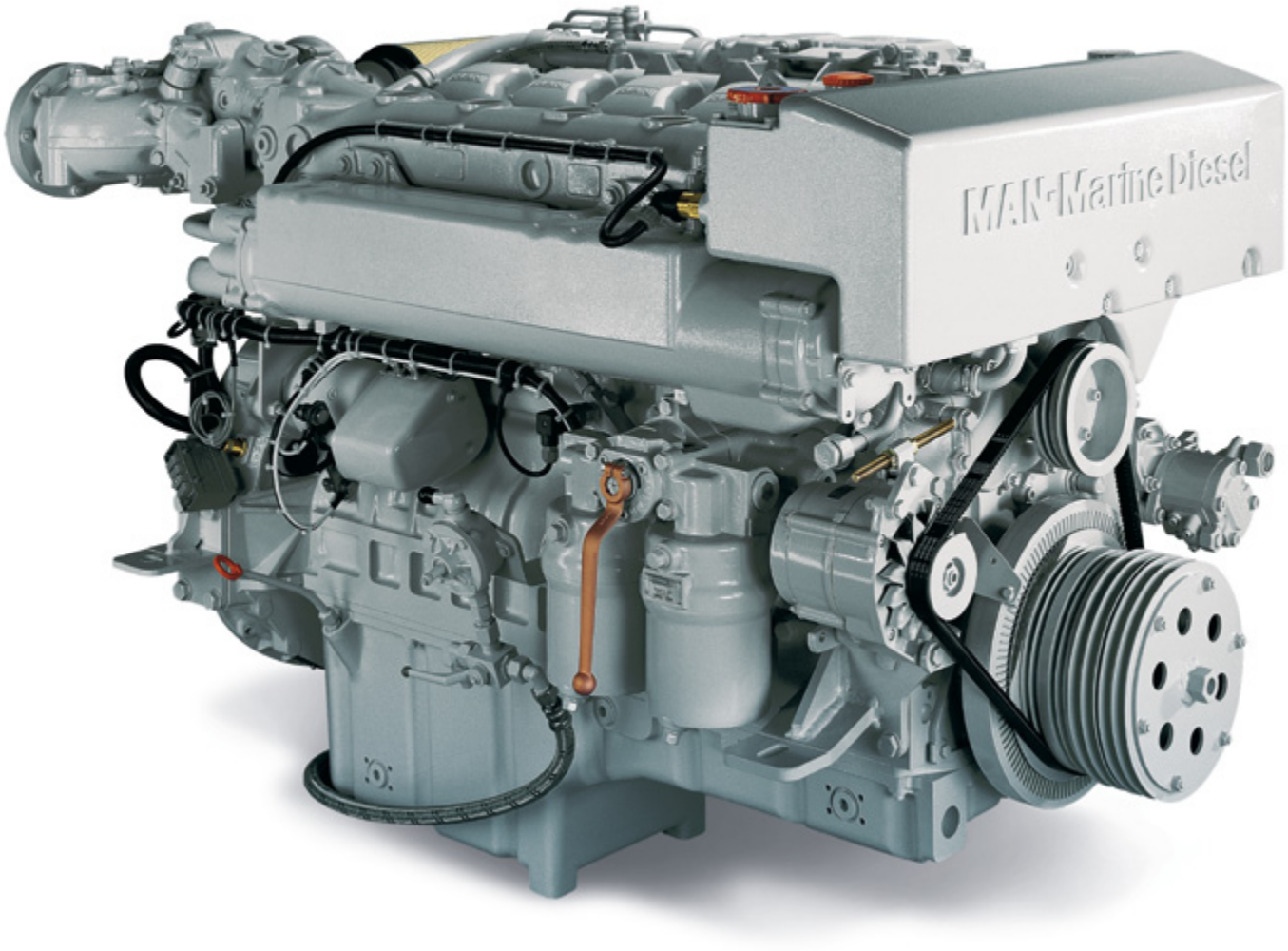
Torque



Specific fuel consumption (full load)



D2866 LXE 40 with 294 kW (400 hp at 2,100 rpm)



D2876.

Engine description.

Characteristics

- Cylinders and arrangement: 6 cylinders in-line
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 4 valves per cylinder
- Fuel system: Direct fuel injection with Bosch injection pump
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Seawater cooled heat exchanger
- Engine control: Electronic injection control
  Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC
- Fuel: DMX fuel to ISO 8217, DIN EN 590

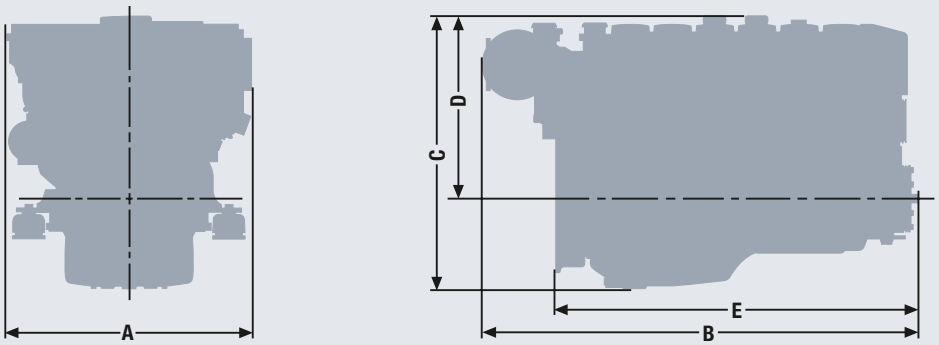
D2876.
Technical data.

Technical features D2876

Type of engine		LE 402
Bore	mm	128
Stroke	mm	166
Displacement	l	12.82
Compression ratio		15.5 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Nominal rating [1]	kW (hp)	412 (560)
Rated speed	rpm	2,100
Torque at rated speed	Nm	1,873
Maximum torque	Nm	2,095
at speed	rpm	1,200–1,800
Specific fuel consumption [2]	g/kWh	223
Fuel consumption [2]	l/h	109
Classifiable		✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2876

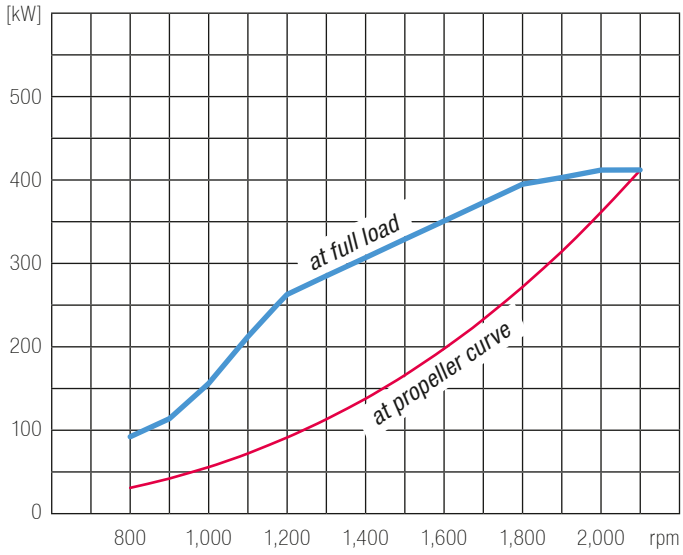
Type of engine			LE 402
A-Overall width of engine		mm	877
B-Overall length of engine		mm	1,605
C-Overall height of engine	– flat oil pan	mm	1,000
	– deep oil pan	mm	1,080
D-Top of engine to crankshaft centre		mm	665
E-Length of engine from front end to edge of flywheel housing		mm	1,320
Average weight of engine ready for installation (dry)		kg	1,290

For detailed examinations of installation dimensions, please order drawings from our factory.

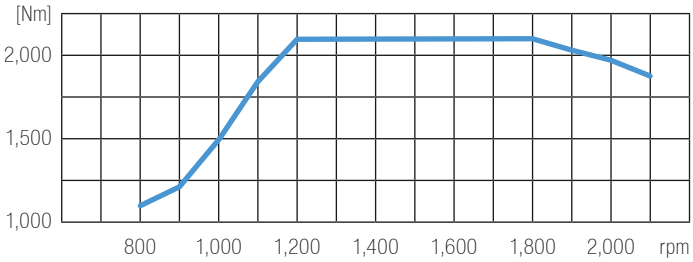
D2876.
Power charts.

D2876 LE 402

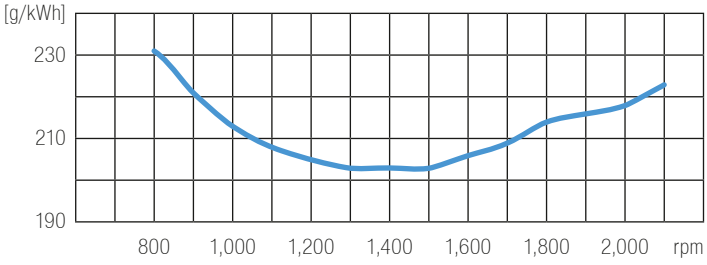
Power



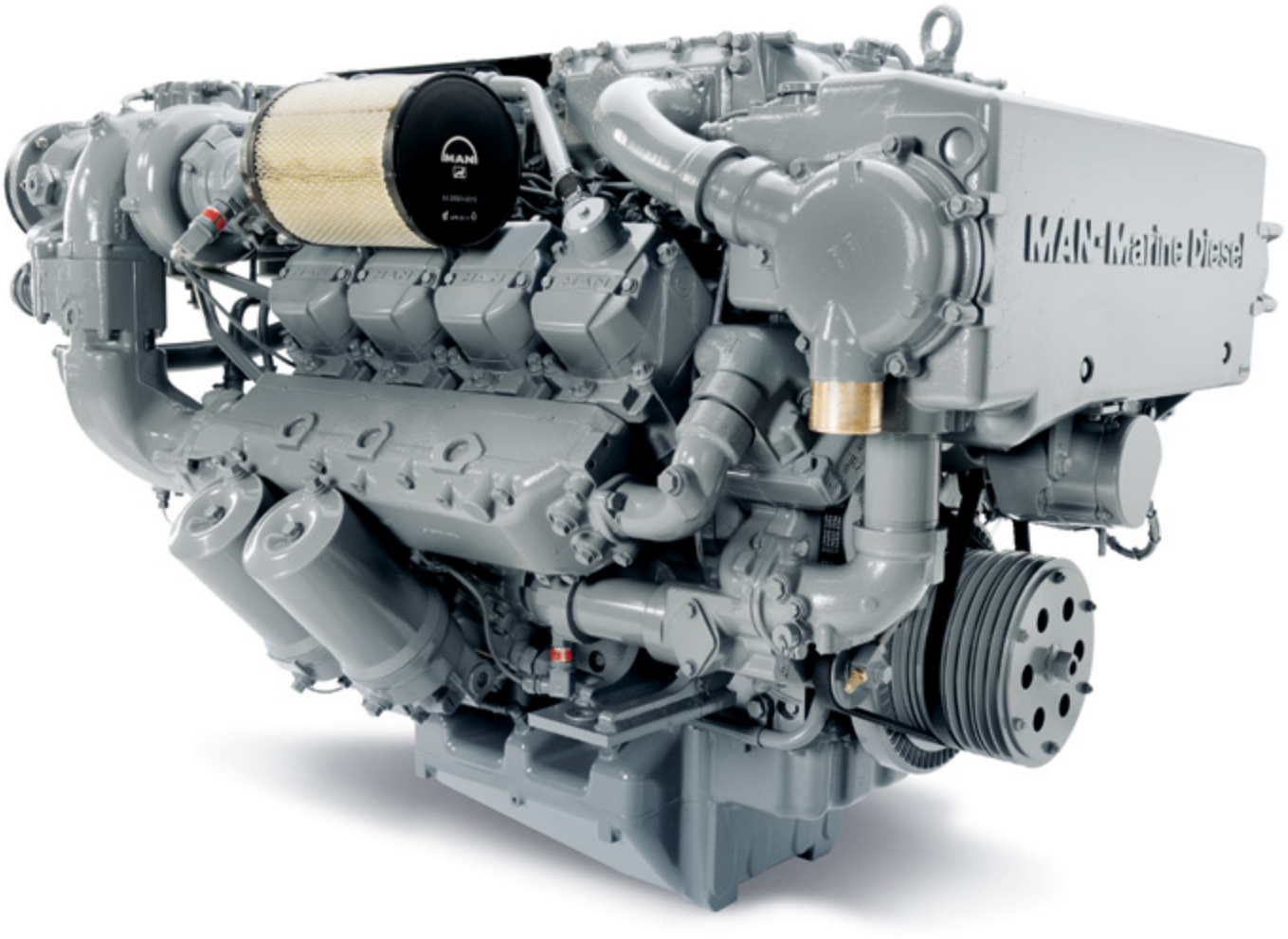
Torque



Specific fuel consumption (full load)



D2876 LE 402 with 412 kW (560 hp at 2,100 rpm)



D2848.

Engine description.

Characteristics

- Cylinders and arrangement: 8 cylinders in 90° V design
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Seawater cooled heat exchanger
- Engine control: Electronic injection control
  Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC, EPA Tier 2, SAV/BSO, 97/68/EC
- Fuel: DIN EN 590

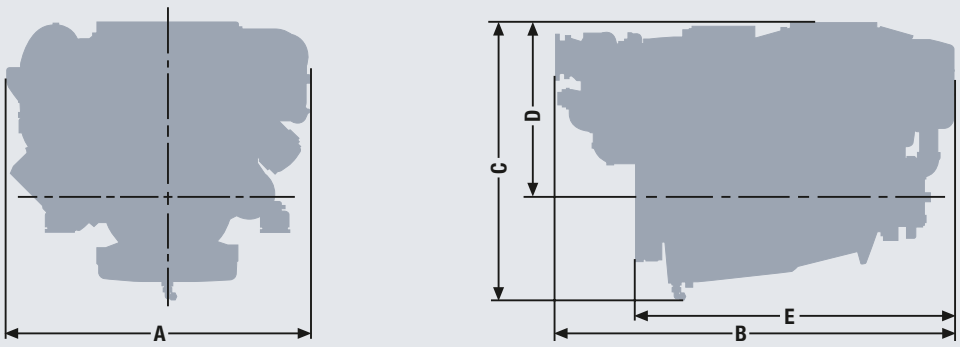
D2848.
Technical data.

Technical features D2848

Type of engine		LE 422
Bore	mm	128
Stroke	mm	142
Displacement	l	14.62
Compression ratio		15.5 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Maximum output [1)]	kW (hp)	551 (750)
Rated speed	rpm	2,100
Torque at rated speed	Nm	2,506
Maximum torque	Nm	2,730
at speed	rpm	1,400–1,800
Specific fuel consumption [2)]	g/kWh	221
Fuel consumption [2)]	l/h	145
Classifiable		–

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2848

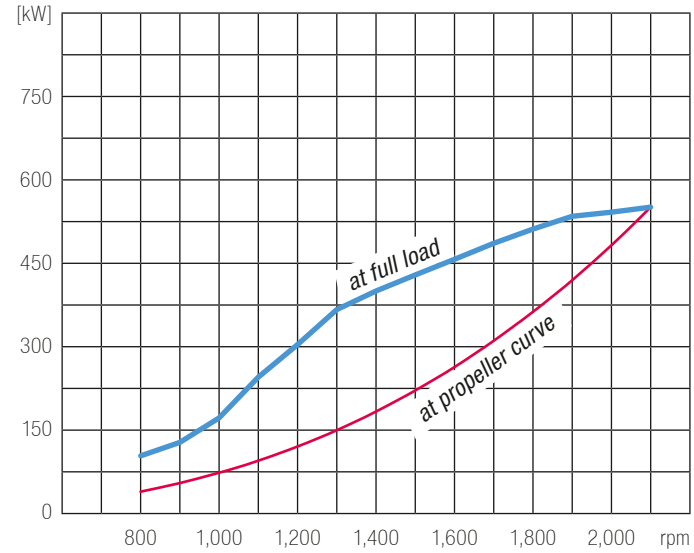
Type of engine		LE 422
A-Overall width of engine	mm	1,240
B-Overall length of engine	mm	1,546
C-Overall height of engine	mm	1,173
D-Top of engine to crankshaft centre	mm	789
E-Length of engine from front end to edge of flywheel housing	mm	1,175
Average weight of engine ready for installation (dry)	kg	1,565

For detailed examinations of installation dimensions, please order drawings from our factory.

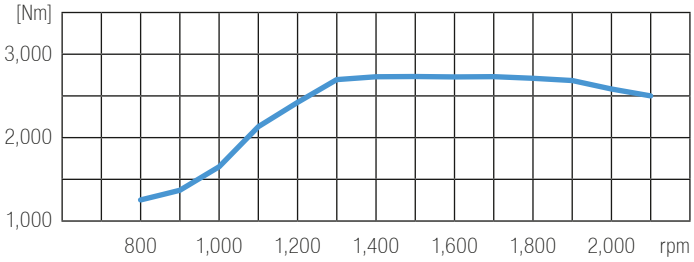
D2848.
Power charts.

D2848 LE 422

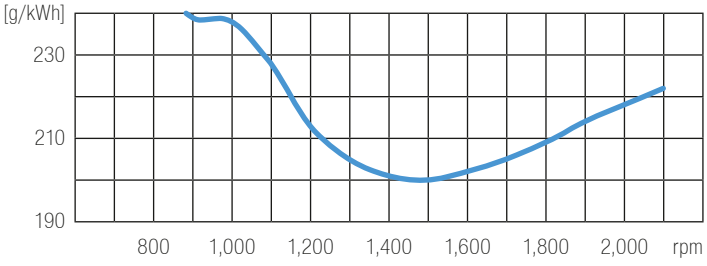
Power



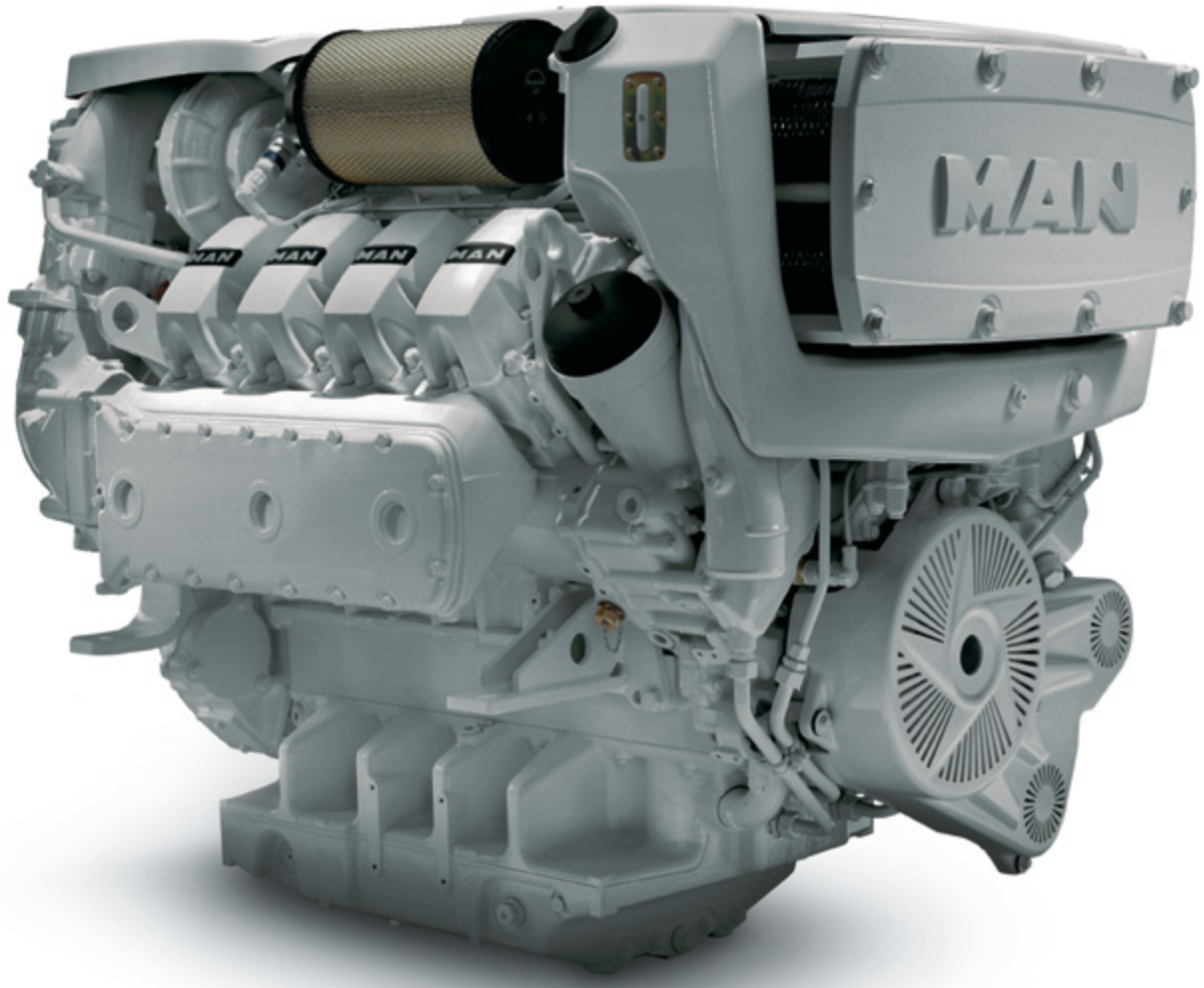
Torque



Specific fuel consumption (full load)



D2848 LE 422 with 551 kW (750 hp at 2,100 rpm)



D2868.

Engine description.

Characteristics

- Cylinders and arrangement: 8 cylinders in 90° V design
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with wastegate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine Lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Plate heat exchanger, seawater cooled
- Engine control: Electronic injection control
Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC, EPA Tier 2, SAV/BSO, 97/68/EC
- Fuel: DIN EN 590

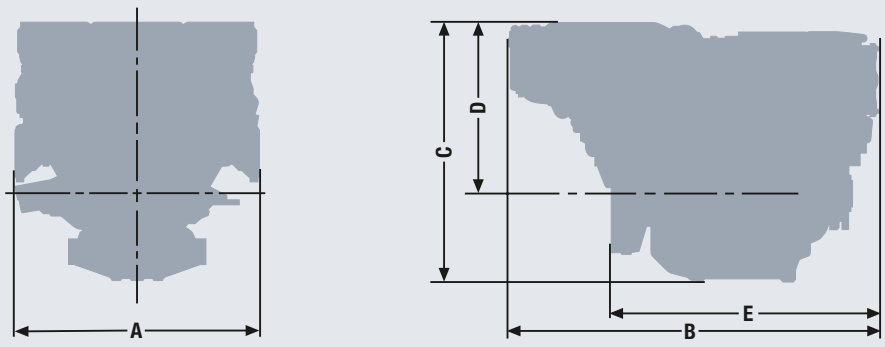
D2868.
Technical data.

Technical features D2868

Type of engine		LE 422
Bore	mm	128
Stroke	mm	157
Displacement	l	16.16
Compression ratio		19 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Maximum output [1]	kW (hp)	588 (800)
Rated speed	rpm	2,100
Torque at rated speed	Nm	2,674
Maximum torque	Nm	2,945
at speed	rpm	1,200–1,900
Specific fuel consumption [2]	g/kWh	208
Fuel consumption [2]	l/h	146
Classifiable		✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2868

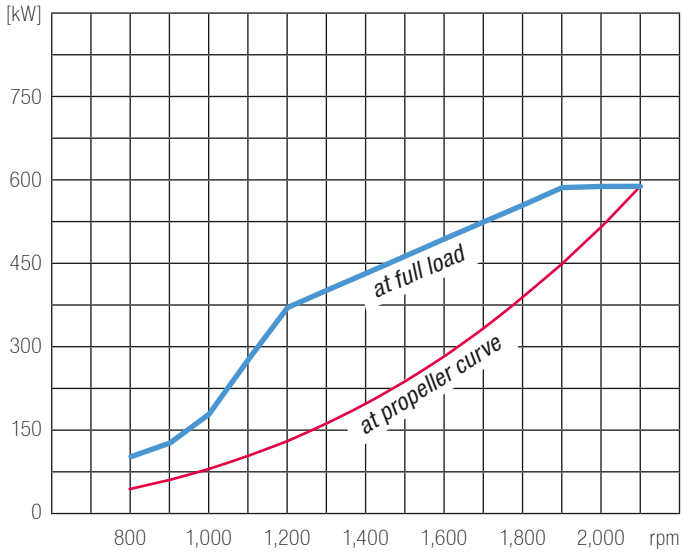
Type of engine		LE 422
A-Overall width of engine	mm	1,150
B-Overall length of engine	mm	1,740
C-Overall height of engine	mm	1,240
D-Top of engine to crankshaft centre	mm	825
E-Length of engine from front end to edge of flywheel housing	mm	1,243
Average weight of engine ready for installation (dry)	kg	1,800

For detailed examinations of installation dimensions, please order drawings from our factory.

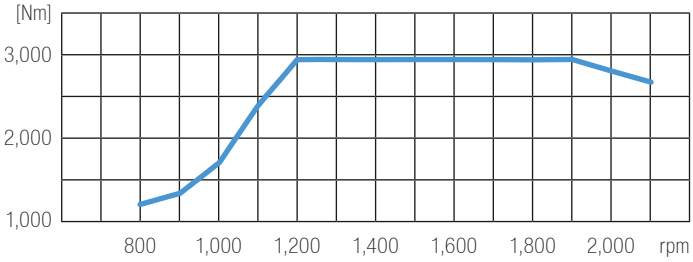
D2868.
Power charts.

D2868 LE 422

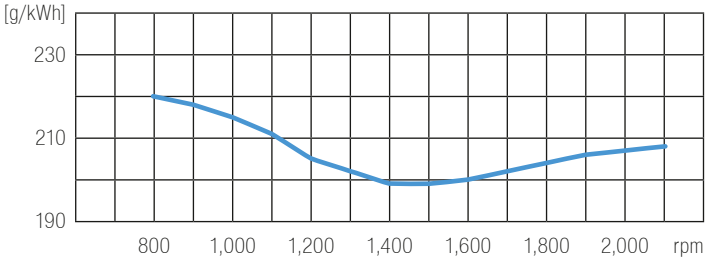
Power



Torque



Specific fuel consumption (full load)



D2868 LE 422 with 588 kW (800 hp at 2,100 rpm)

D2842.

Engine description.

Characteristics

■ Cylinders and arrangement:	12 cylinders in 90° V design
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	Exhaust turbocharger with intercooler, boost pressure control with waste gate
■ Number of valves:	2 valves per cylinder
■ Fuel system:	Direct fuel injection with Bosch injection pump
■ Engine block:	High-strength casting with integrated oil and water ducts and replaceable cylinder liners
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Seawater cooled heat exchanger
■ Engine control:	Electronic injection control for LE 410 Electronic engine monitoring unit
■ Exhaust gas status:	IMO Tier 2, RCD 94/25/EC On request: SAV and BSO for commerical application
■ Fuel:	DMX fuel to ISO 8217, DIN EN 590

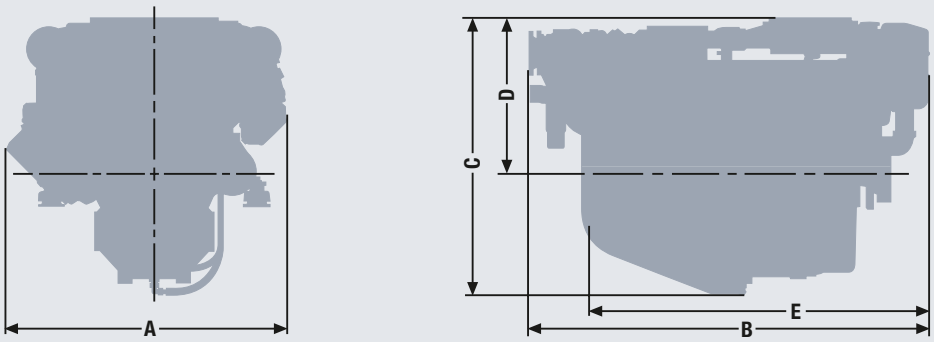
D2842.
Technical data.

Technical features D2842

Type of engine		LE 410
Bore	mm	128
Stroke	mm	142
Displacement	l	21.93
Compression ratio		13.5 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Nominal rating [1]	kW (hp)	749 (1,019)
Rated speed	rpm	2,100
Torque at rated speed	Nm	3,406
Maximum torque	Nm	3,700
at speed	rpm	1,300–1,900
Specific fuel consumption [2]	g/kWh	222
Fuel consumption [2]	l/h	198
Classifiable		✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2842

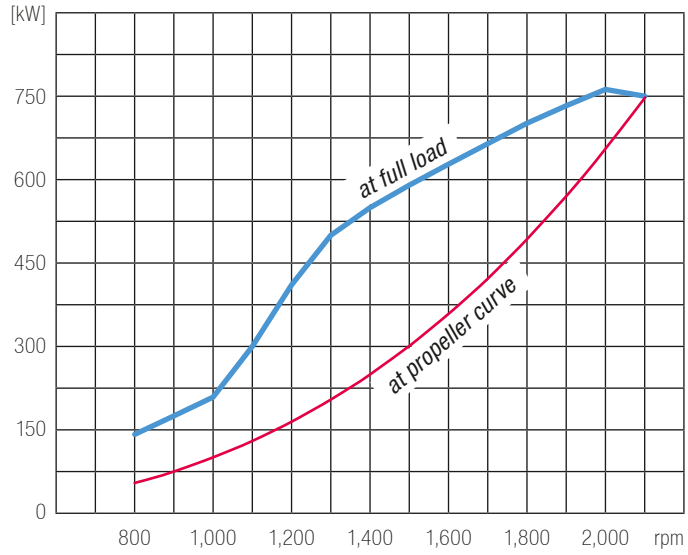
Type of engine			LE 410
A-Overall width of engine		mm	1,227
B-Overall length of engine		mm	1,795
C-Overall height of engine	– flat oil pan	mm	1,105
	– deep oil pan	mm	1,216
D-Top of engine to crankshaft centre		mm	685
E-Length of engine from front end to edge of flywheel housing		mm	1,492
Average weight of engine ready for installation (dry)		kg	1,860

For detailed examinations of installation dimensions, please order drawings from our factory.

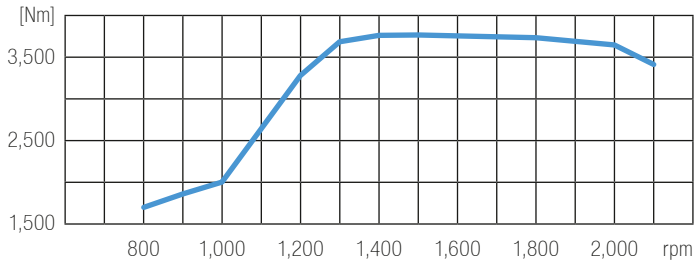
D2842.
Power charts.

D2842 LE 410

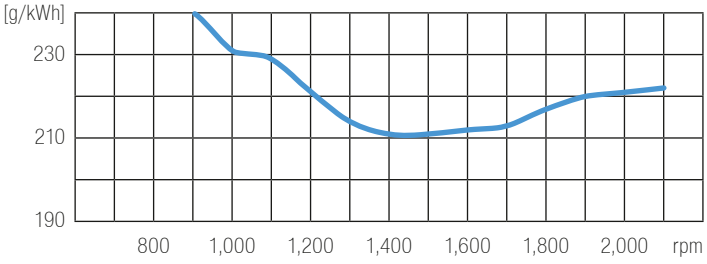
Power



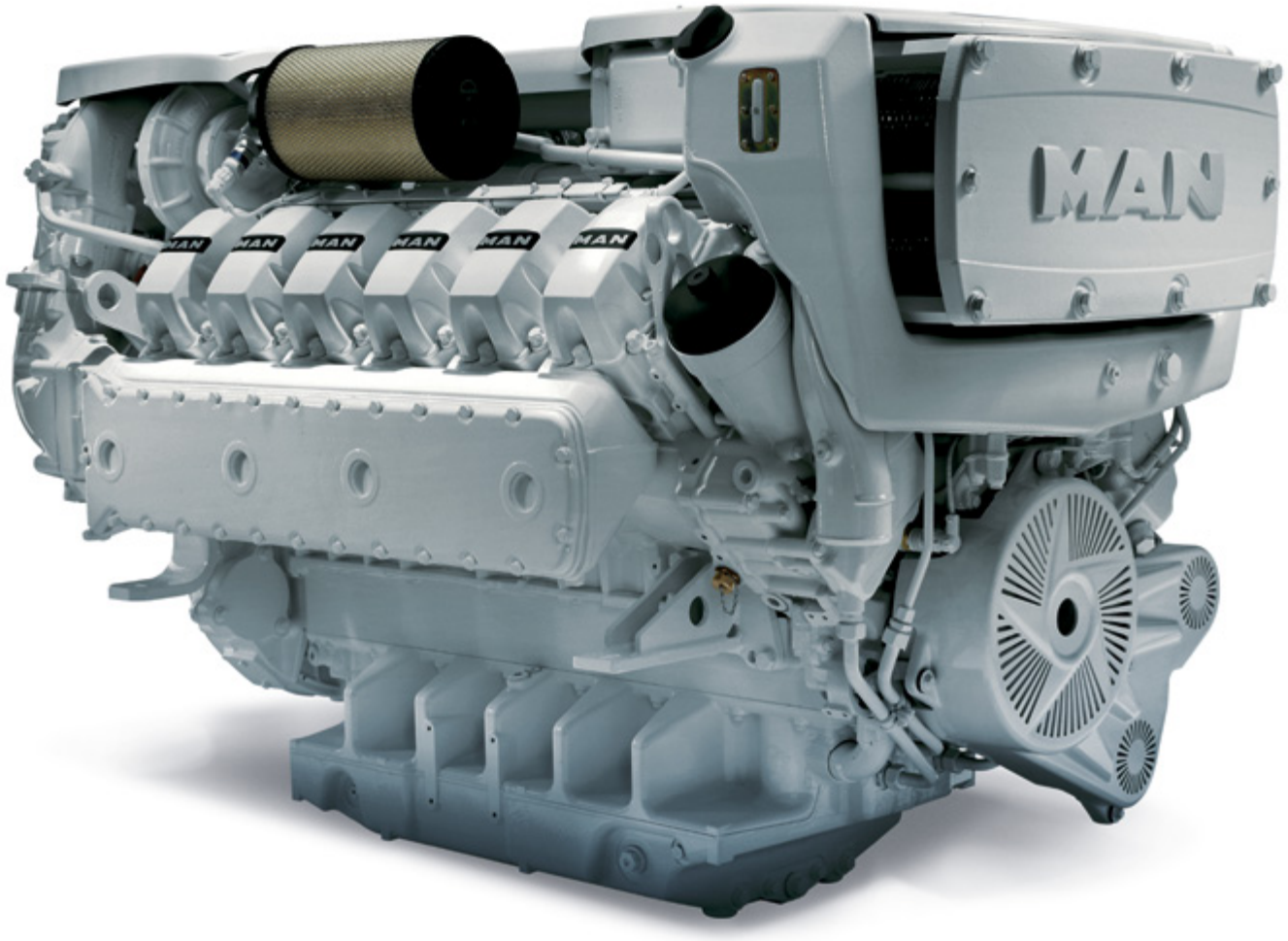
Torque



Specific fuel consumption (full load)



D2842 LE 410 with 749 kW (1,019 hp at 2,100 rpm)



D2862.

Engine description.

Characteristics

- Cylinders and arrangement: 12 cylinders in 90° V design
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection with electronic control
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Plate heat exchanger seawater cooled
- Engine control: Electronic injection control (EDC) Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC, EPA Tier 2 com, 97/68/EC
- Fuel: DIN EN 590

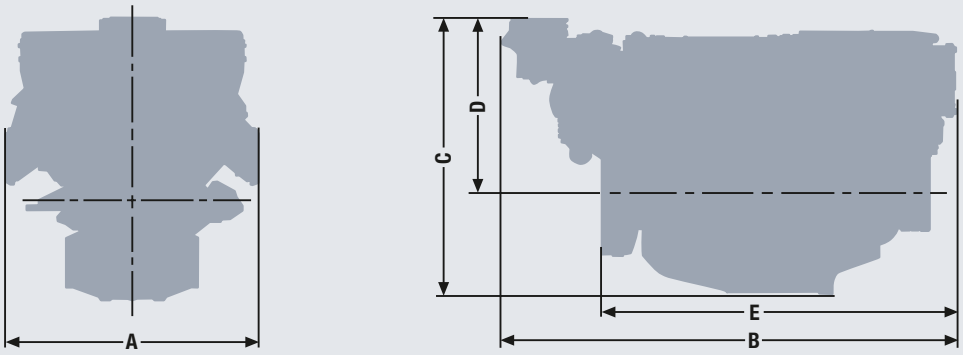
D2862.
Technical data.

Technical features D2862

Type of engine		LE 422	LE 432	LE 463
Bore	mm	128	128	128
Stroke	mm	157	157	157
Displacement	l	24.24	24.24	24.24
Compression ratio		19 : 1	19 : 1	17 : 1
Rotation looking on flywheel		left	left	left
Flywheel housing		SAE 1	SAE 1	SAE 1
Nominal rating [1]	kW (hp)	749 (1,019)	882 (1,200)	1,029 (1,400)
Rated speed	rpm	2,100	2,100	2,100
Torque at rated speed	Nm	3,406	4,010	4,680
Maximum torque	Nm	3,780	4,450	5,120
at speed	rpm	1,300–1,900	1,300–1,900	1,300–1,900
Specific fuel consumption [2]	g/kWh	207	211	210
Fuel consumption [2]	l/h	185	222	257
Classifiable		✓	✓	✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2862

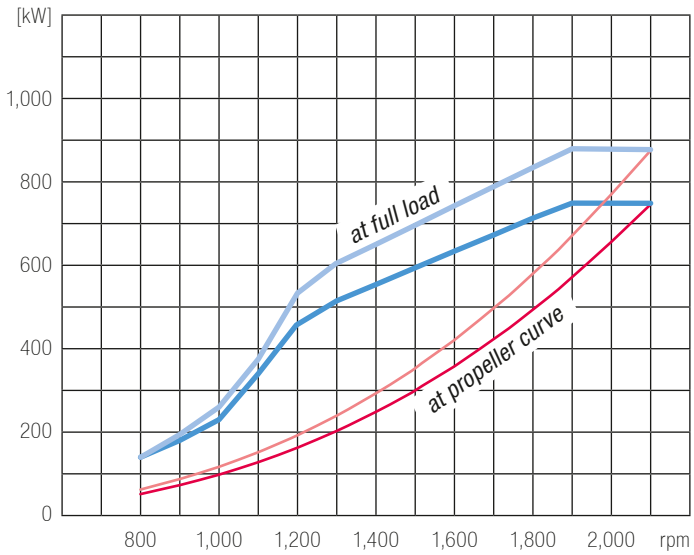
Type of engine		LE 422/432/463
A-Overall width of engine	mm	1,270
B-Overall length of engine	mm	2,230
C-Overall height of engine	mm	1,290
D-Top of engine to crankshaft centre	mm	825
E-Length of engine from front end to edge of flywheel housing	mm	1,614
Average weight of engine ready for installation (dry)	kg	2,270

For detailed examinations of installation dimensions, please order drawings from our factory.

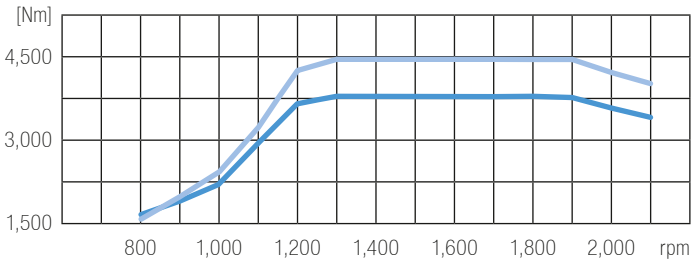
D2862.
Power charts.

D2862 LE 422 and D2862 LE 432

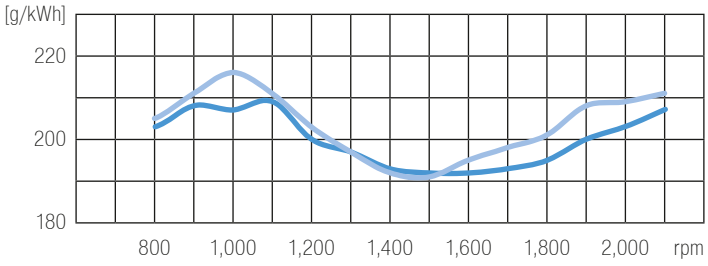
Power



Torque



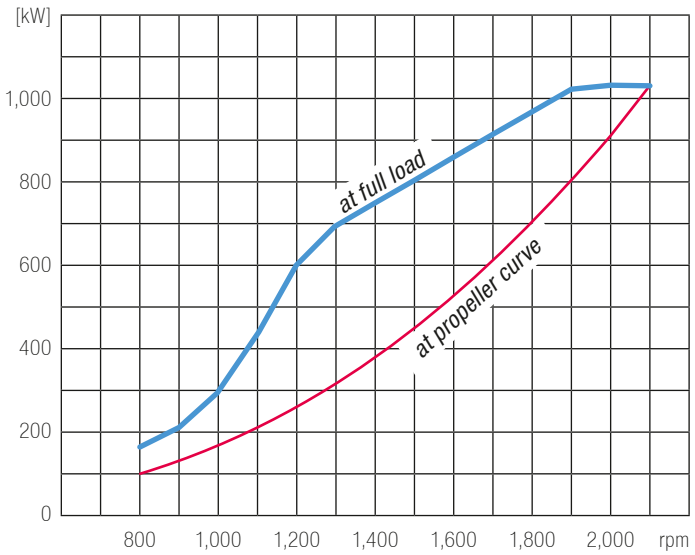
Specific fuel consumption (full load)



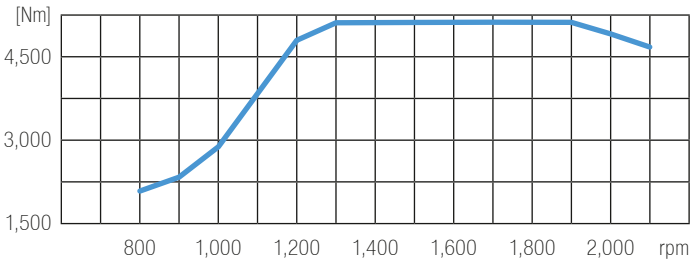
D2862 LE 422 with 749 kW (1,019 hp at 2,100 rpm)
D2862 LE 432 with 882 kW (1,200 hp at 2,100 rpm)

D2862 LE 463

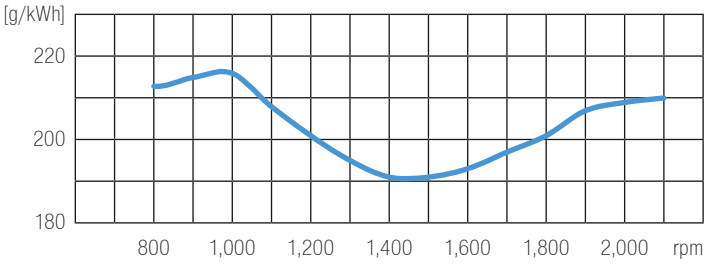
Power



Torque



Specific fuel consumption (full load)



D2862 LE 463 with 1,029 kW (1,400 hp at 2,100 rpm)

heavy duty

Heavy duty operation.

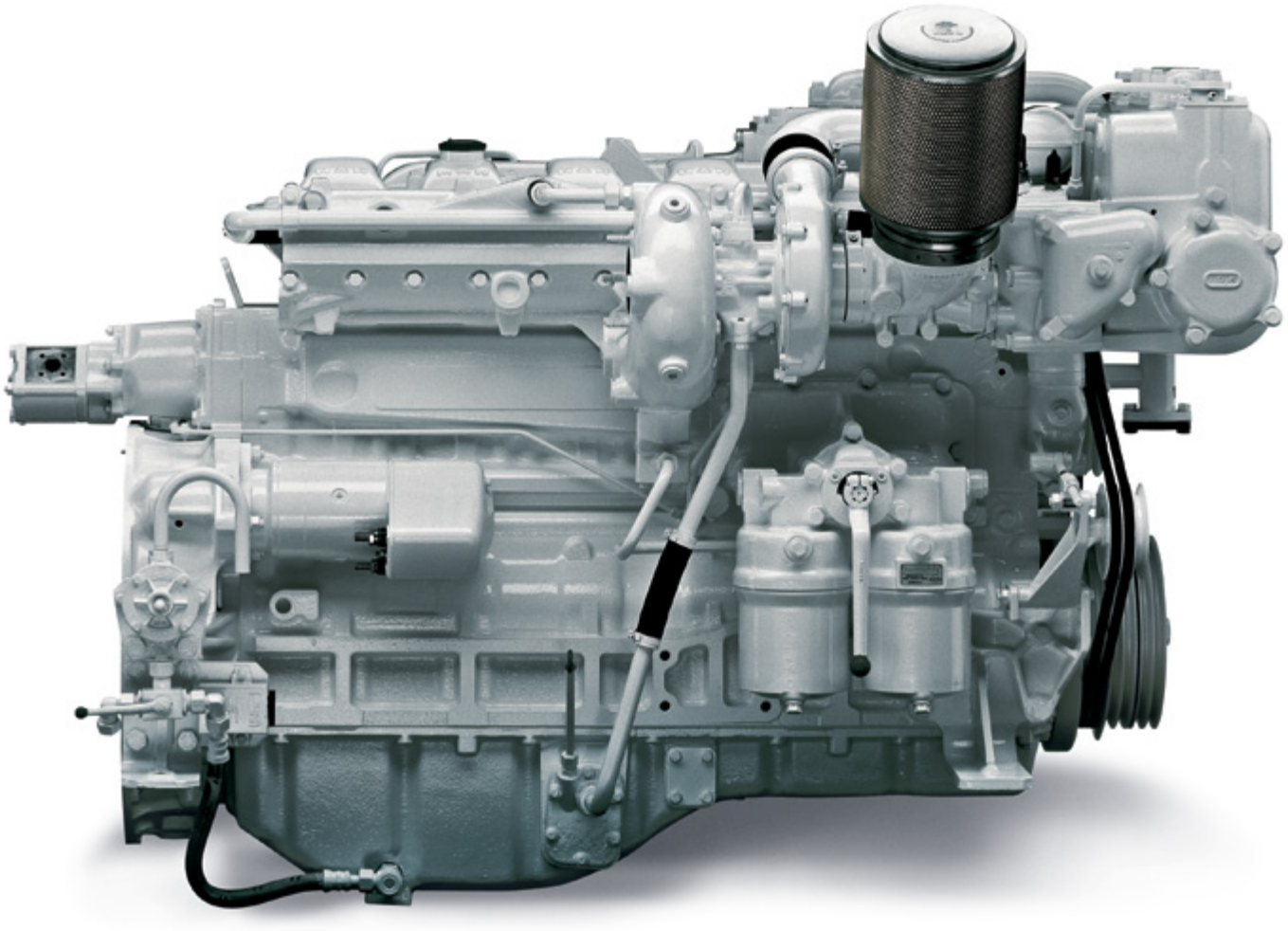
Definition of application type.

Characteristics

- Annual operating hours: unlimited
- Percentage of time at full load: ≤ 100 %
- Average load application: ≤ 100 %

Typical applications

- Trawlers
- Tugs and pushboats
- Freight barges and freighters
- Ferries
- Dredgers



D2866.
Engine description.

Characteristics

■ Cylinders and arrangement:	6 cylinders in-line
■ Operation mode:	4-stroke diesel engine, watercooled
■ Turbocharging:	Exhaust turbocharger with intercooler
■ Number of valves:	2 valves per cylinder
■ Fuel system:	Direct fuel injection with Bosch injection pump
■ Engine block:	High-strength casting with integrated oil and water ducts and replaceable cylinder liners
■ Engine lubrication:	Closed system with forced feeding, oil cooling and filtering
■ Type of cooling:	Heat exchanger with seawater pump fitted, alternatively equipment for keel cooling
■ Engine control:	Electronic engine monitoring
■ Exhaust gas status:	IMO Tier 2, 97/68/EC, RCD 94/25/EC
■ Fuel:	DMX fuel to ISO 8217, DIN EN 590

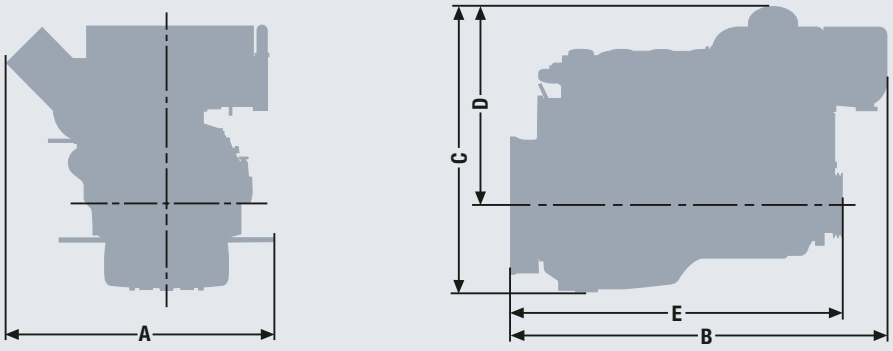
D2866.
Technical data.

Technical features D2866

Type of engine		LXE 40	LXE 40
Bore	mm	128	128
Stroke	mm	155	155
Displacement	l	11.97	11.97
Compression ratio		15.5 : 1	15.5 : 1
Rotation looking on flywheel		left	left
Flywheel housing		SAE 1	SAE 1
Nominal rating [1]	kW (hp)	190 (258)	279 (379)
Rated speed	rpm	1,800	1,800
Torque at rated speed	Nm	1,008	1,480
Maximum torque	Nm	1,055	1,555
at speed	rpm	1,500	1,400–1,500
Specific fuel consumption [2]	g/kWh	213	207
Fuel consumption [2]	l/h	48	69
Classifiable		✓	✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2866

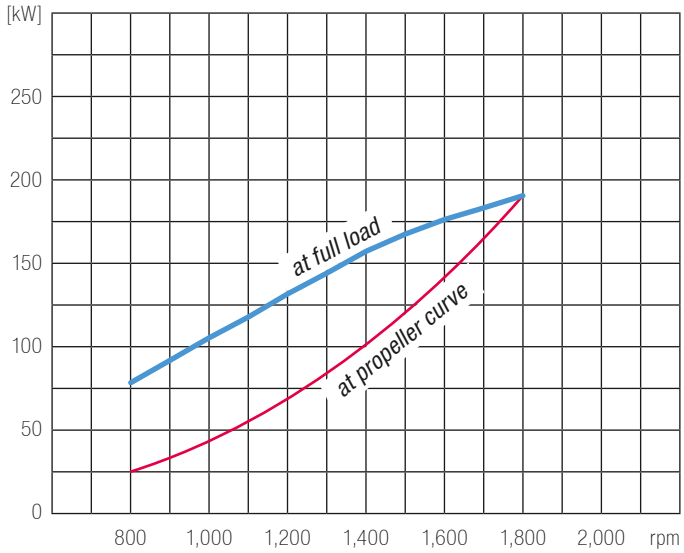
Type of engine			LXE 40
A-Overall width of engine		mm	855
B-Overall length of engine		mm	1,474
C-Overall height of engine	– flat oil pan	mm	1,016
	– deep oil pan	mm	1,244
D-Top of engine to crankshaft centre		mm	686
E-Length of engine from front end to edge of flywheel housing		mm	1,298
Average weight of engine ready for installation (dry)		kg	1,020

For detailed examinations of installation dimensions, please order drawings from our factory.

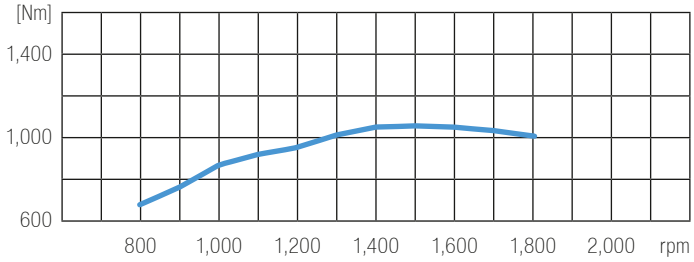
D2866.
Power charts.

D2866 LXE 40 with 190 kW

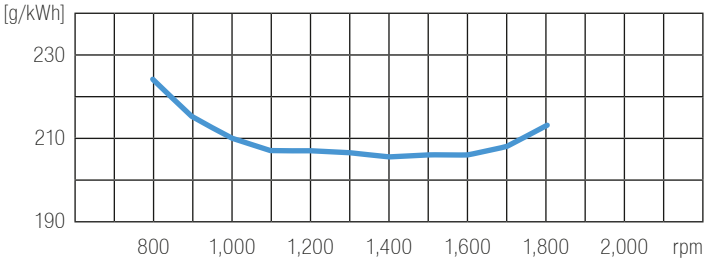
Power



Torque



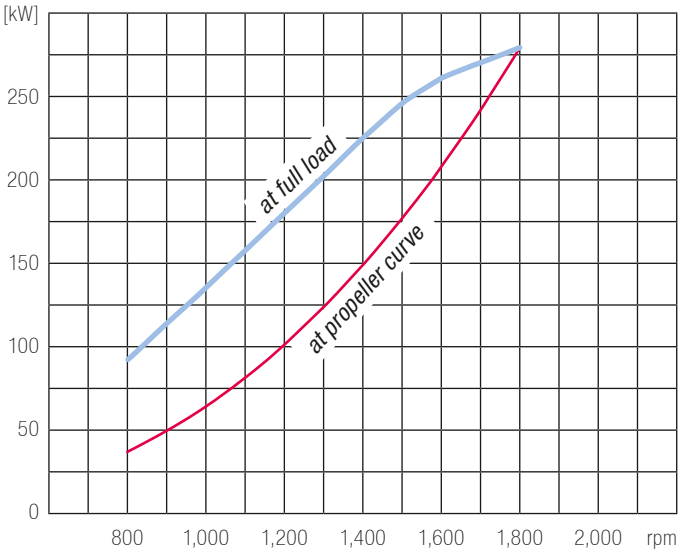
Specific fuel consumption (full load)



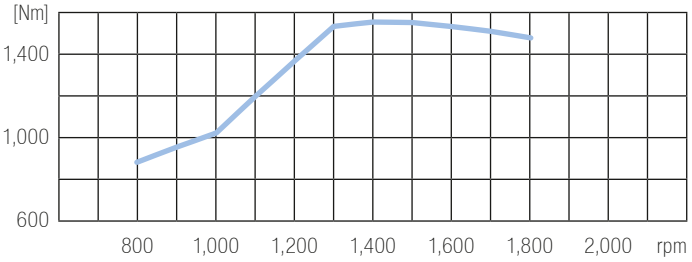
D2866 LXE 40 with 190 kW (258 hp at 1,800 rpm)

D2866 LXE 40 with 279 kW

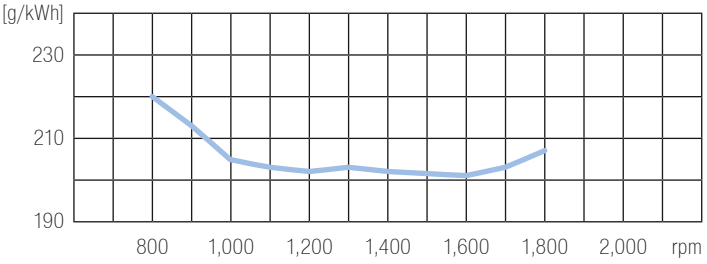
Power



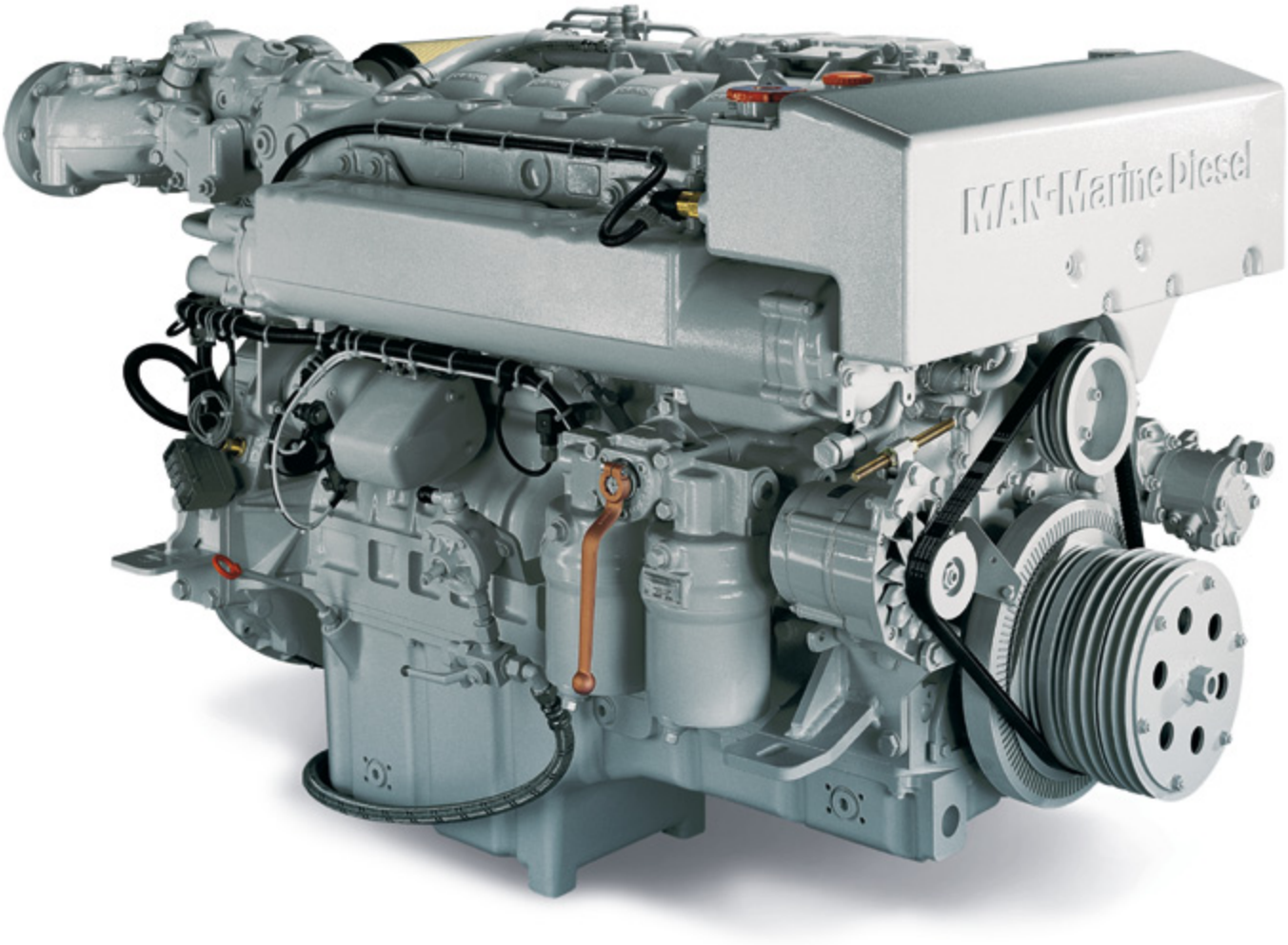
Torque



Specific fuel consumption (full load)



D2866 LXE 40 with 279 kW (379 hp at 1,800 rpm)



D2876.

Engine description.

Characteristics

- Cylinders and arrangement: 6 cylinders in-line
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 2 valves per cylinder
- Fuel system: Direct fuel injection with Bosch injection pump
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Heat exchanger with seawater pump fitted, alternatively equipment for keel cooling
- Engine control: Electronic engine monitoring
- Exhaust gas status: IMO Tier 2, 97/68/EC, RCD 94/25/EC
- Fuel: DMX fuel to ISO 8217, DIN EN 590

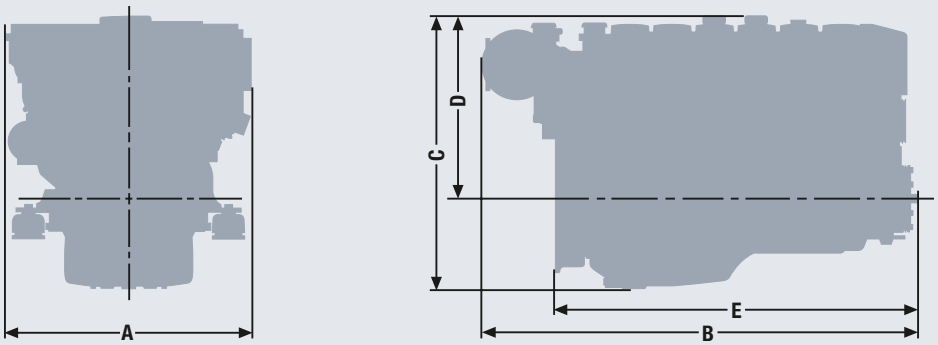
D2876.
Technical data.

Technical features D2876

Type of engine		LE 406	LE 403	LE 407
Bore	mm	128	128	128
Stroke	mm	166	166	166
Displacement	l	12.82	12.82	12.82
Compression ratio		15.5 : 1	15.5 : 1	15.5 : 1
Rotation looking on flywheel		left	left	left
Flywheel housing		SAE 1	SAE 1	SAE 1
Nominal rating [1]	kW (hp)	280 (381)	331 (450)	360 (490)
Rated speed	rpm	1,800	1,800	1,800
Torque at rated speed	Nm	1,485	1,756	1,910
Maximum torque	Nm	1,620	1,960	2,074
at speed	rpm	1,300–1,600	1,300–1,500	1,200–1,500
Specific fuel consumption [2]	g/kWh	222	223	222
Fuel consumption [2]	l/h	74	88	95
Classifiable		✓	✓	✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2876

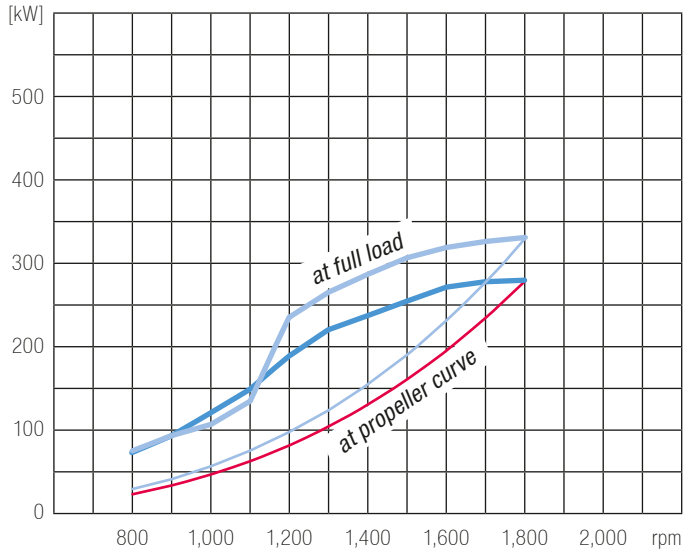
Type of engine			LE 406/403/407
A-Overall width of engine		mm	877
B-Overall length of engine		mm	1,565
C-Overall height of engine	– flat oil pan	mm	1,000
	– deep oil pan	mm	1,080
D-Top of engine to crankshaft centre		mm	665
E-Length of engine from front end to edge of flywheel housing		mm	1,320
Average weight of engine ready for installation (dry)		kg	1,160

For detailed examinations of installation dimensions, please order drawings from our factory.

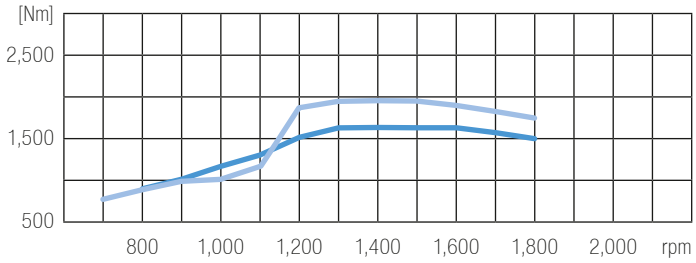
D2876.
Power charts.

D2876 LE 406 and D2876 LE 403

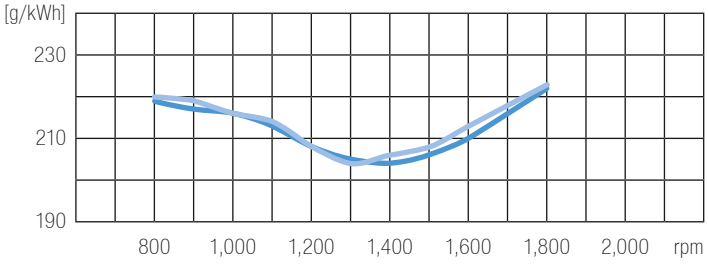
Power



Torque



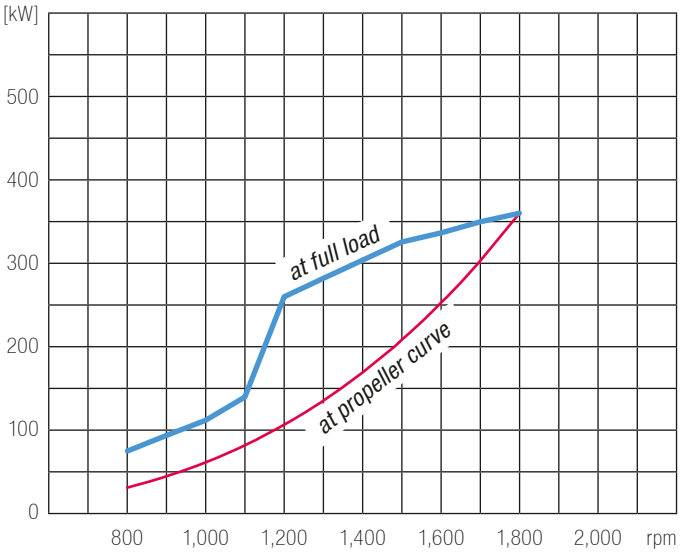
Specific fuel consumption (full load)



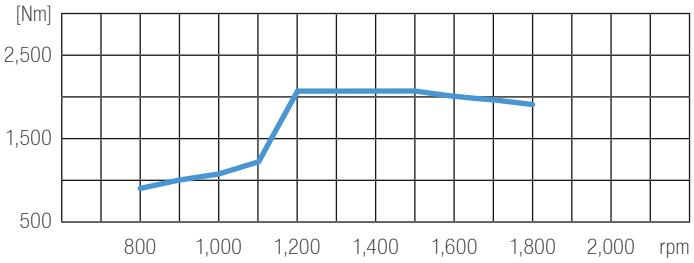
D2876 LE 406 with 280 kW (381 hp at 1,800 rpm)
D2876 LE 403 with 331 kW (450 hp at 1,800 rpm)

D2876 LE 407

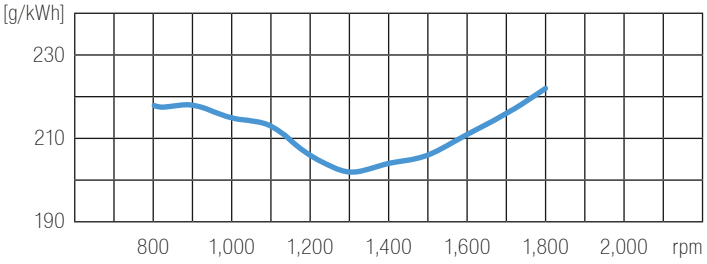
Power



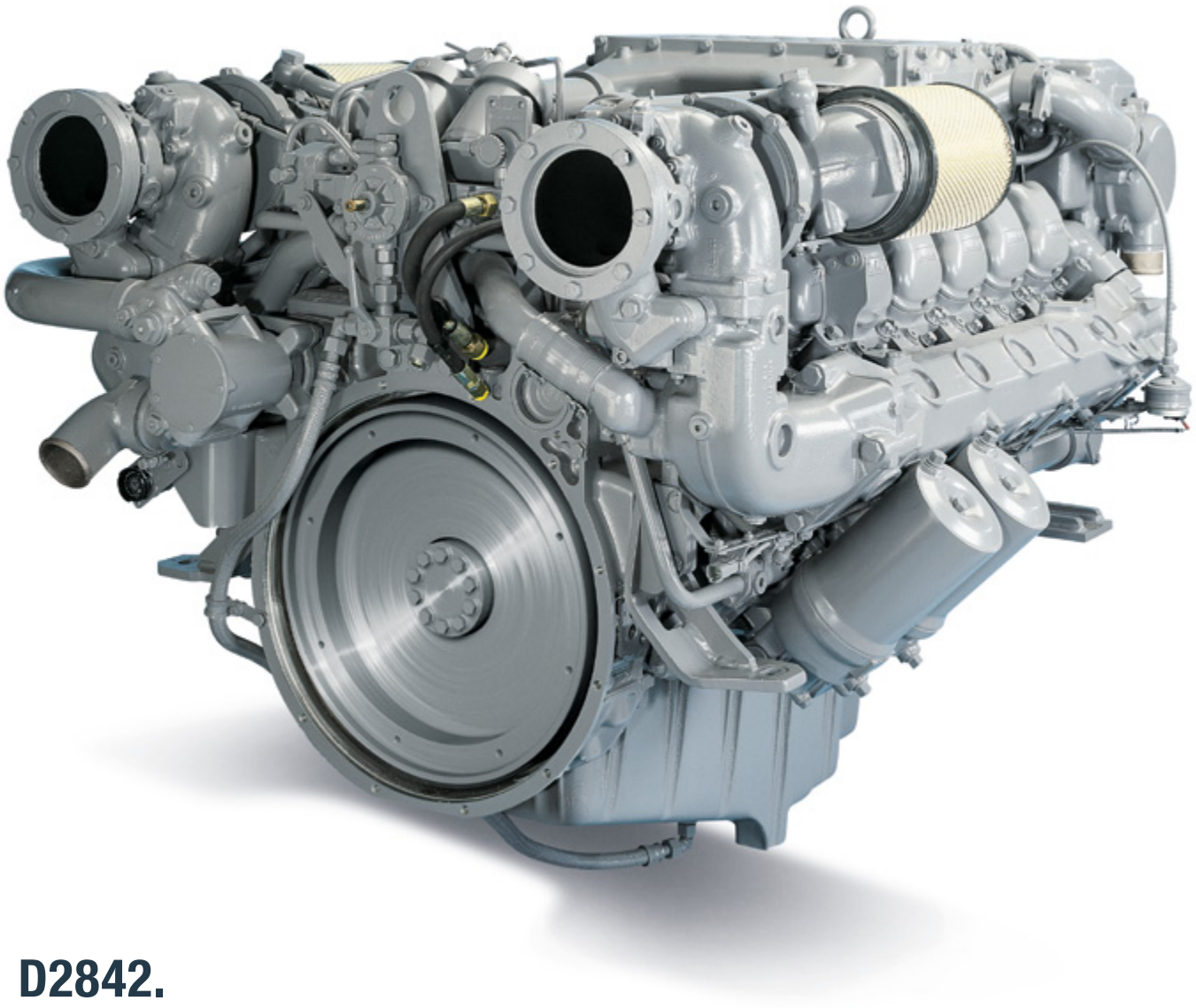
Torque



Specific fuel consumption (full load)



D2876 LE 407 with 360 kW (490 hp at 1,800 rpm)



D2842.

Engine description.

Characteristics

- Cylinders and arrangement: 12 cylinders in 90° V design
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler, boost pressure control with waste gate
- Number of valves: 2 valves per cylinder
- Fuel system: Direct fuel injection with Bosch injection pump
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Heat exchanger with seawater pump fitted, alternatively equipment for keel cooling
- Engine control: Electronic engine monitoring for LE419/LE412/LE405
- Exhaust gas status: IMO Tier 2, 97/68/EC for LE412/LE419
- Fuel: DMX fuel to ISO 8217, DIN EN 590

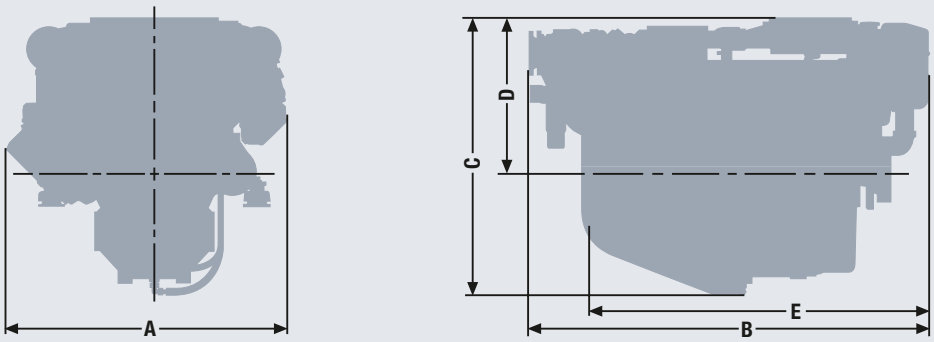
D2842.
Technical data.

Technical features D2842

Type of engine		LE 419	LE 412	LE 405
Bore	mm	128	128	128
Stroke	mm	142	142	142
Displacement	l	21.93	21.93	21.93
Compression ratio		15.5 : 1	15.5 : 1	15.5 : 1
Rotation looking on flywheel		left	left	left
Flywheel housing		SAE 1	SAE 1	SAE 1
Nominal rating [1]	kW (hp)	440 (598)	588 (800)	662 (900)
Rated speed	rpm	1,800	1,800	2,100
Torque at rated speed	Nm	2,334	3,120	3,010
Maximum torque	Nm	2,530	3,340	3,400
at speed	rpm	1,600	1,200–1,600	1,200–1,400
Specific fuel consumption [2]	g/kWh	216	222	230
Fuel consumption [2]	l/h	113	155	181
Classifiable		✓	✓	✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2842

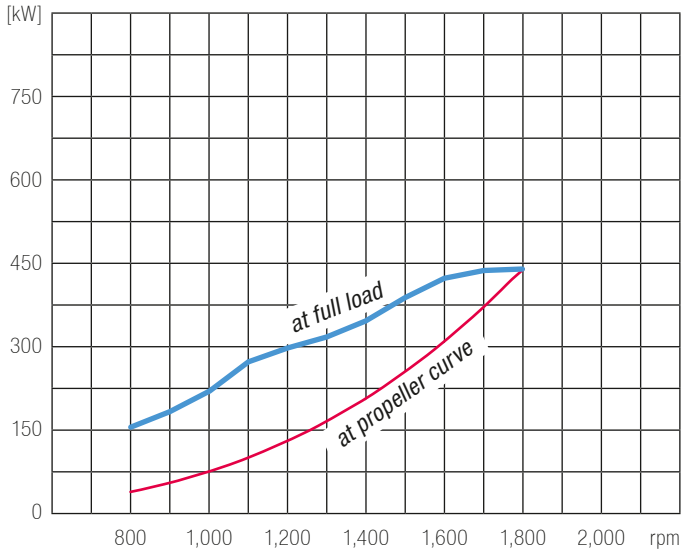
Type of engine			LE 419/412/405
A-Overall width of engine		mm	1,230
B-Overall length of engine		mm	1,750
C-Overall height of engine	– flat oil pan	mm	1,105
	– deep oil pan	mm	1,215
D-Top of engine to crankshaft centre		mm	685
E-Length of engine from front end to edge of flywheel housing		mm	1,491
Average weight of engine ready for installation (dry)		kg	1,790

For detailed examinations of installation dimensions, please order drawings from our factory.

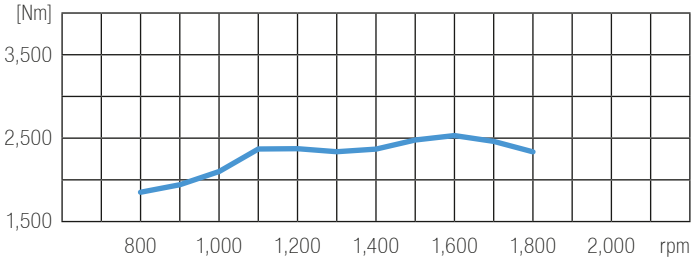
D2842.
Power charts.

D2842 LE 419

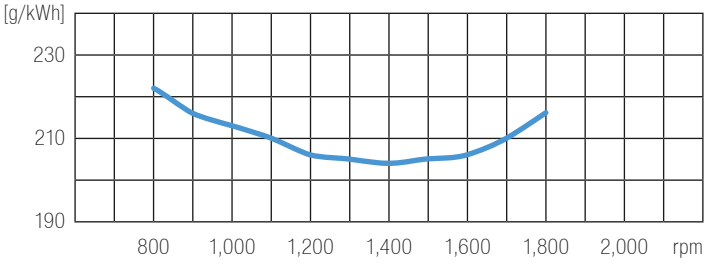
Power



Torque



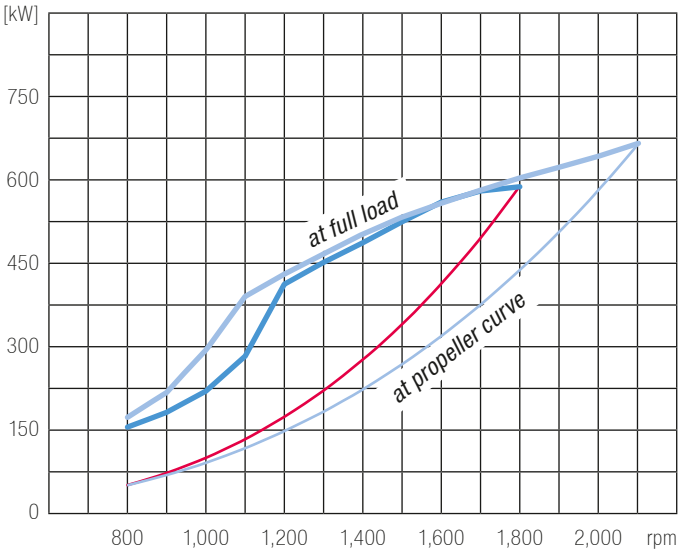
Specific fuel consumption (full load)



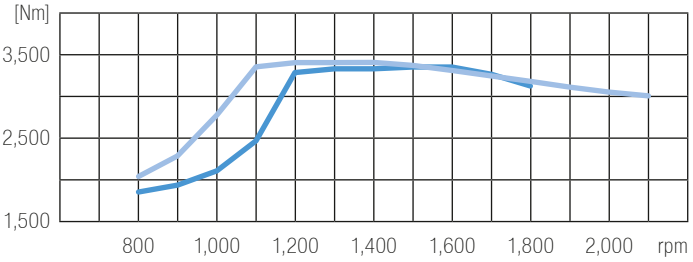
D2842 LE 419 with 440 kW (598 hp at 1,800 rpm)

D2842 LE 412 and D2842 LE 405

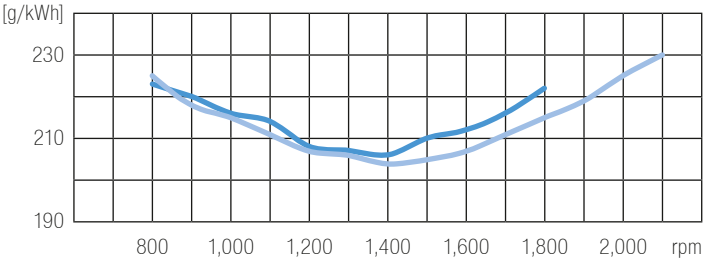
Power



Torque



Specific fuel consumption (full load)



D2842 LE 412 with 588 kW (800 hp at 1,800 rpm)
D2842 LE 405 with 662 kW (900 hp at 2,100 rpm)

D2868.

Engine description.

Characteristics

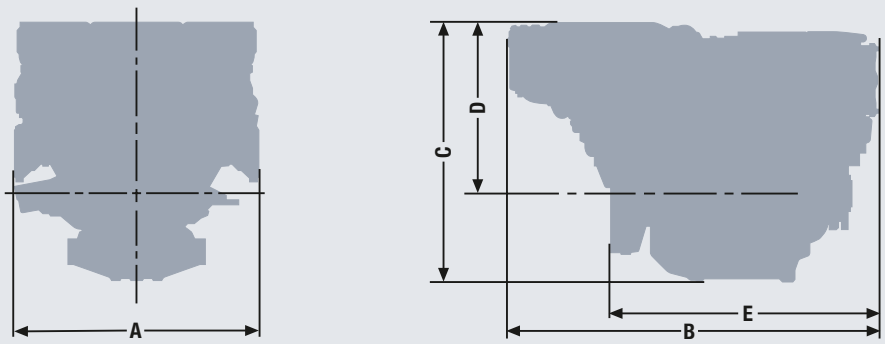
Cylinders and arrangement:	8 cylinders in 90° V design
Operation mode:	4-stroke diesel engine, watercooled
Turbocharging:	Exhaust turbocharger with intercooler
Number of valves:	4 valves per cylinder
Fuel system:	Common Rail direct fuel injection
Engine block:	High-strength casting with integrated oil and water ducts and replaceable cylinder liners
Engine Lubrication:	Closed system with forced feeding, oil cooling and filtering
Type of cooling:	Plate heat exchanger, seawater cooled
Engine control:	Electronic injection control Electronic engine monitoring including diagnostic unit
Exhaust gas status:	IMO Tier 2, RCD 94/25/EC, EPA Tier 2, 97/68/EC
Fuel:	DIN EN 590

D2868.
Technical data.

Technical features D2868

Type of engine		LE 421
Bore	mm	128
Stroke	mm	157
Displacement	l	16.16
Compression ratio		19 : 1
Rotation looking on flywheel		left
Flywheel housing		SAE 1
Nominal rating [1]	kW (hp)	441 (600)
Rated speed	rpm	1,800
Torque at rated speed	Nm	2,340
Maximum torque	Nm	2,630
at speed	rpm	1,100–1,600
Specific fuel consumption [2]	g/kWh	207
Fuel consumption [2]	l/h	109
Classifiable		✓

1) The rating is according to DIN 3046/1. 2) Consumption at rated power.



Dimensions D2868

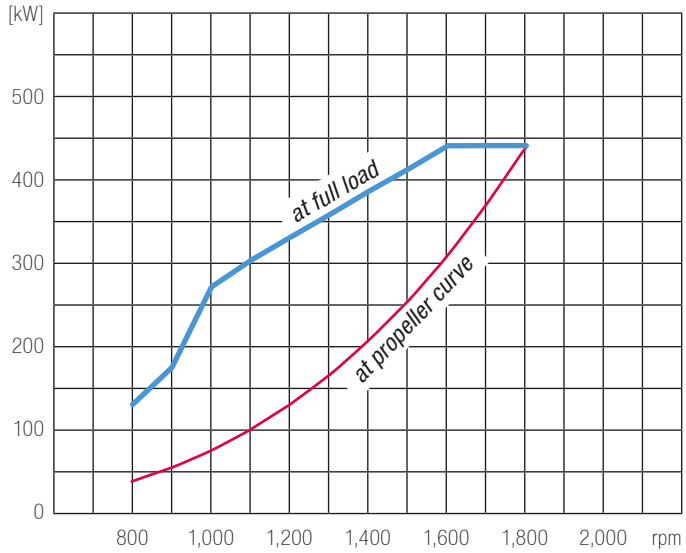
Type of engine		LE 421
A-Overall width of engine	mm	1,150
B-Overall length of engine	mm	1,740
C-Overall height of engine	mm	1,240
D-Top of engine to crankshaft centre	mm	825
E-Length of engine from front end to edge of flywheel housing	mm	1,243
Average weight of engine ready for installation (dry)	kg	1,800

For detailed examinations of installation dimensions, please order drawings from our factory.

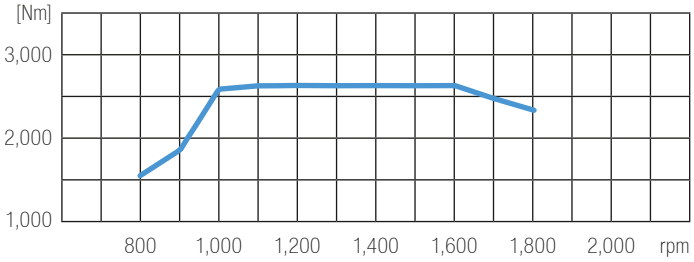
D2868.
Power charts.

D2868 LE 421

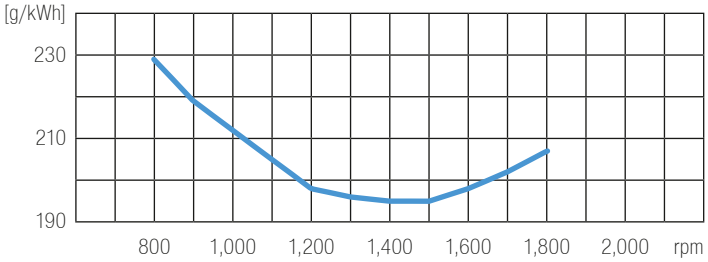
Power



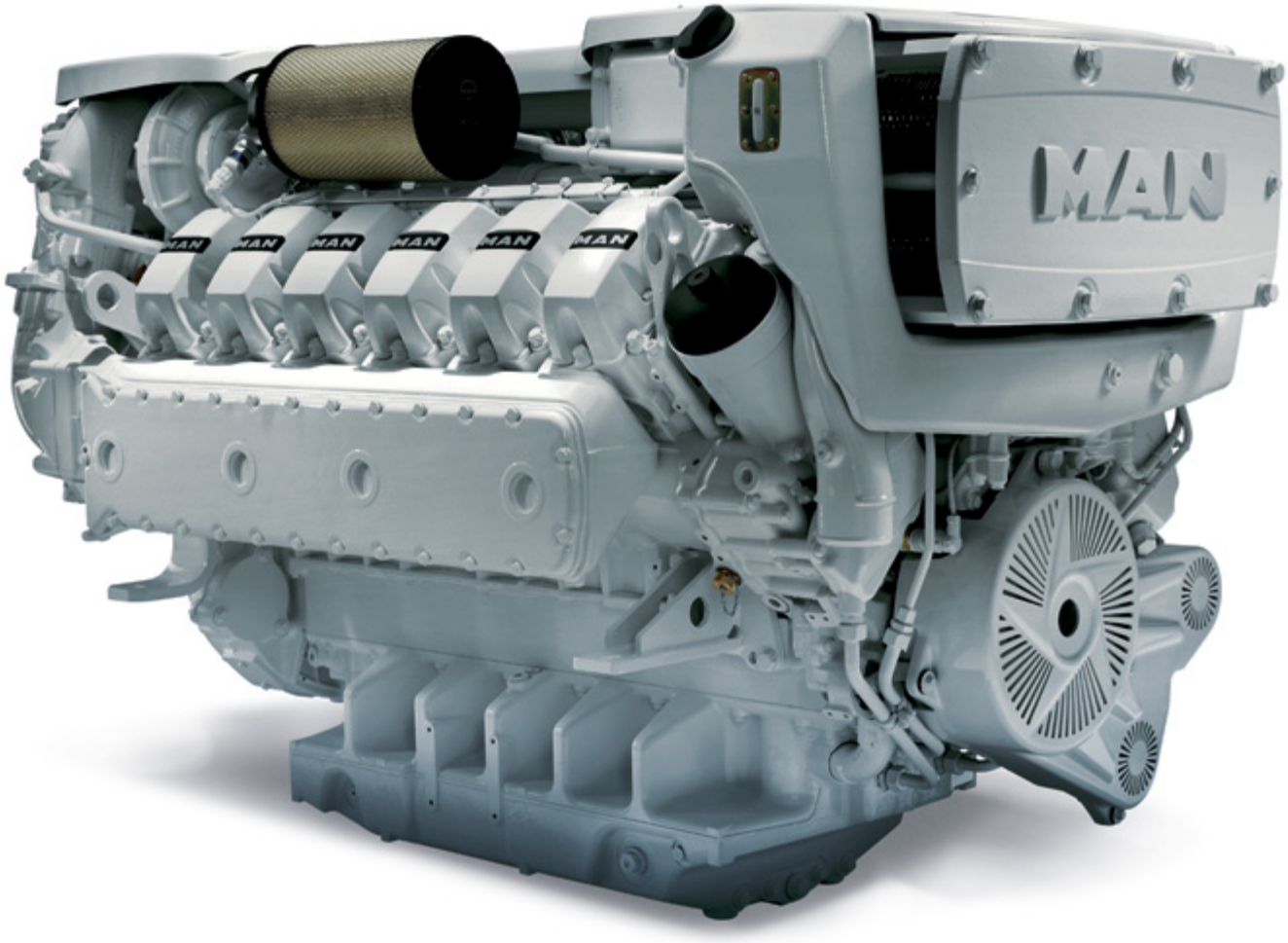
Torque



Specific fuel consumption (full load)



D2868 LE 421 with 441 kW (600 hp at 1,800 rpm)



D2862.

Engine description.

Characteristics

- Cylinders and arrangement: 12 cylinders in 90° V design
- Operation mode: 4-stroke diesel engine, watercooled
- Turbocharging: Exhaust turbocharger with intercooler
- Number of valves: 4 valves per cylinder
- Fuel system: Common Rail direct fuel injection with electronic control
- Engine block: High-strength casting with integrated oil and water ducts and replaceable cylinder liners
- Engine lubrication: Closed system with forced feeding, oil cooling and filtering
- Type of cooling: Plate heat exchanger seawater cooled
- Engine control: Electronic injection control (EDC)
  Electronic engine monitoring including diagnostic unit
- Exhaust gas status: IMO Tier 2, RCD 94/25/EC, EPA Tier 2 com, 97/68/EC
- Fuel: DIN EN 590

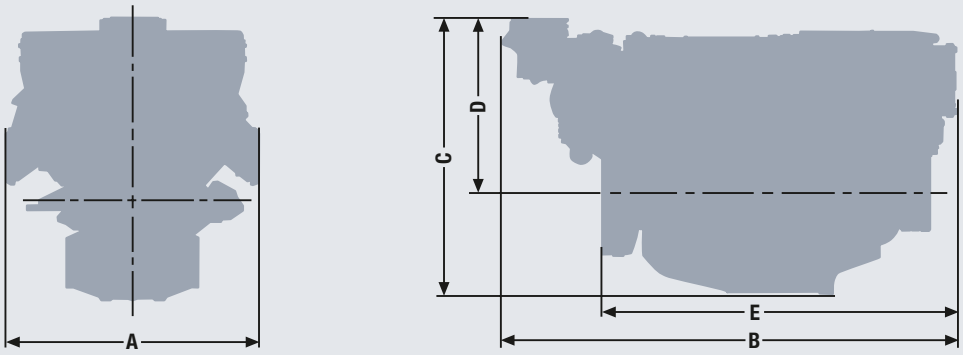
D2862.
Technical data.

Technical features D2862

Type of engine		LE 431	LE 421
Bore	mm	128	128
Stroke	mm	157	157
Displacement	l	24.24	24.24
Compression ratio		19 : 1	19 : 1
Rotation looking on flywheel		left	left
Flywheel housing		SAE 1	SAE 1
Nominal rating [1]	kW (hp)	551 (749)	662 (900)
Rated speed	rpm	1,800	1,800
Torque at rated speed	Nm	2,923	3,512
Maximum torque	Nm	3,290	3,955
at speed	rpm	1,000–1,600	1,000–1,600
Specific fuel consumption [2]	g/kWh	213	212
Fuel consumption [2]	l/h	140	167
Classifiable		✓	✓

1) The rating is according to DIN 3046/1.

2) Consumption at rated power.



Dimensions D2862

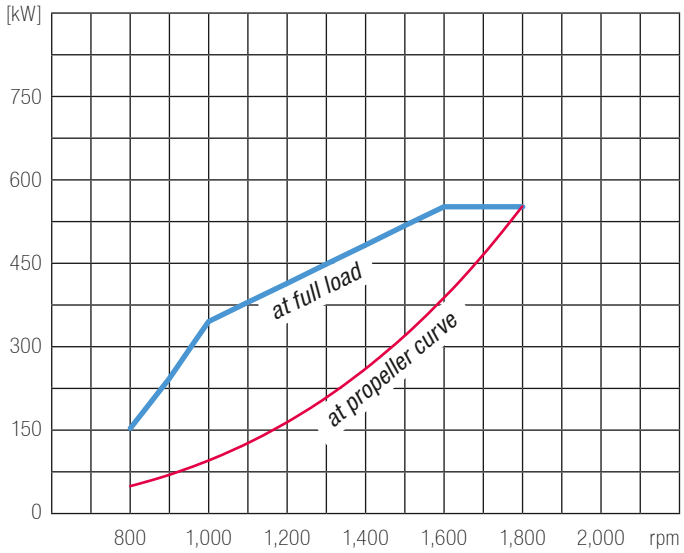
Type of engine		LE 431/421
A-Overall width of engine	mm	1,153
B-Overall length of engine	mm	2,124
C-Overall height of engine	mm	1,289
D-Top of engine to crankshaft centre	mm	825
E-Length of engine from front end to edge of flywheel housing	mm	1,631
Average weight of engine ready for installation (dry)	kg	2,270

For detailed examinations of installation dimensions, please order drawings from our factory.

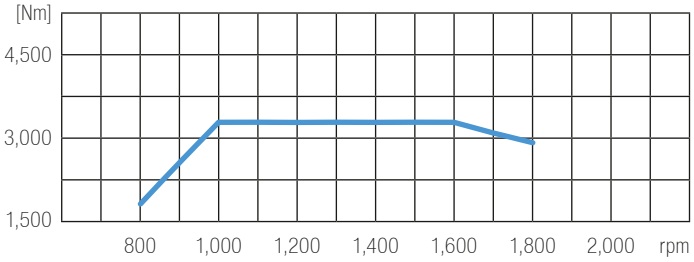
D2862.
Power charts.

D2862 LE 431

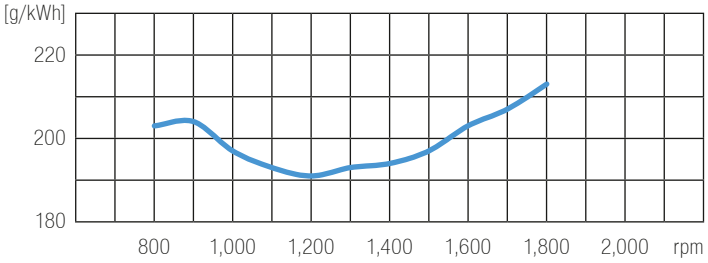
Power



Torque



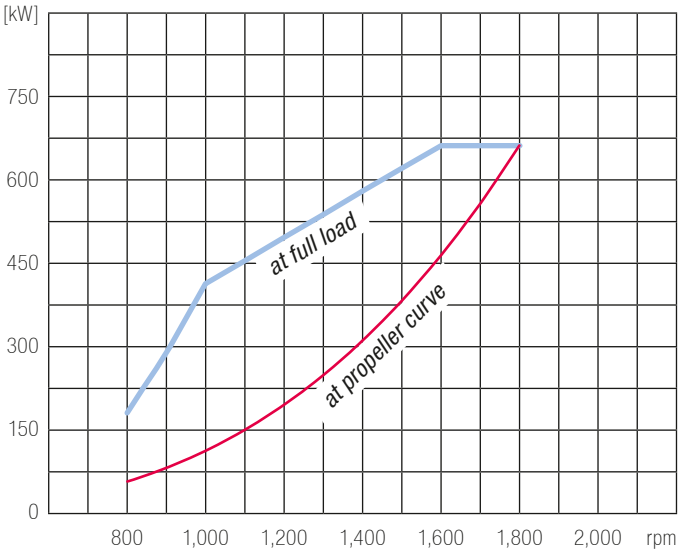
Specific fuel consumption (full load)



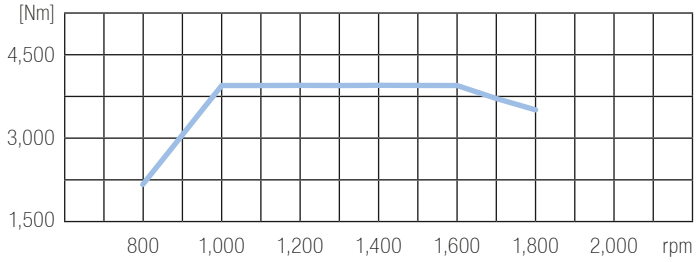
D2862 LE 431 with 551 kW (750 hp at 1,800 rpm)

D2862 LE 421

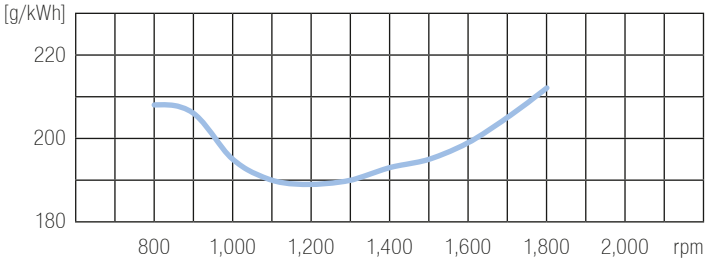
Power



Torque

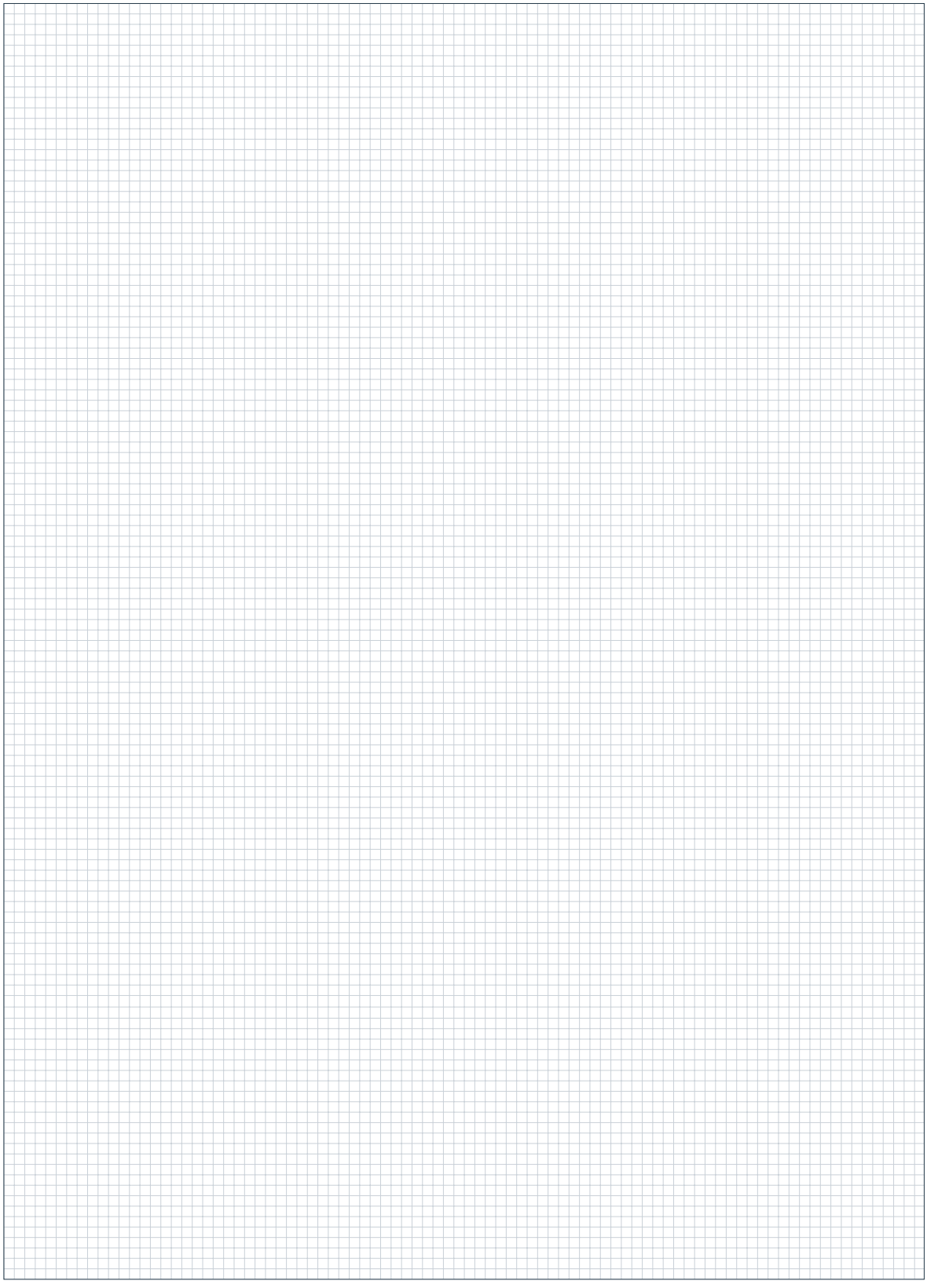


Specific fuel consumption (full load)



D2862 LE 421 with 662 kW (900 hp at 1,800 rpm)

Notes.



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