



# YANMAR

MARINE  
PROPULSION  
DIESEL  
ENGINE



DAIMLERCHRYSLER CORPORATION

DAIMLERCHRYSLER FINANCIAL SERVICES CORPORATION

DAIMLERCHRYSLER CREDIT CORPORATION

DAIMLERCHRYSLER RENTALS CORPORATION

DAIMLERCHRYSLER TRADING CORPORATION

DAIMLERCHRYSLER INVESTMENT CORPORATION

DAIMLERCHRYSLER HOLDINGS CORPORATION

DAIMLERCHRYSLER INSURANCE CORPORATION





# S165



Engine model		S165A	S165A-T	S165A-2T	S165A-3T	S165A-3T
Number of cylinders		12	12	12	12	12
Cylinder bore × stroke		mm 160 × 210	mm 160 × 210	mm 160 × 210	mm 160 × 210	mm 160 × 210
Continuous rated output		PSI/kW	200/147	240/176	300/220	360/264
Rated engine speed		rpm	1500	1500	1500	1500
Standard lubrication system	oil-in	14.0/100	14.0/100	14.0/100 or 20.0/100	14.0/100 or 20.0/100	14.0/100
	oil sump	—	—	—	—	—
Performance parameters (optional)		2.00, 2.00, 2.00, 2.00	2.00, 2.00	2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00	2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00	2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00, 2.00
Engine dry weight		kg	2000	2400	2900	3400
Maximum fuel oil rate (optional)	oil-in	100	100	100/100	100/100	100
	oil sump	—	—	—	—	—
Total weight with standard lubrication gear	oil-in	2000	2400	2900/3400	3400/3900	3900
	oil sump	—	—	—	—	—



Model	PSI/kW	Rated speed (rpm)	Rated torque (kgm)	Rated power (kW)	Rated fuel oil rate (kg/h)	Rated water rate (kg/h)	Rated air rate (kg/h)	Rated exhaust rate (kg/h)	Rated oil rate (kg/h)	Rated oil sump (kg)	Rated oil sump (L)
S165A	200/147	1500	14.7	147	100	100	100	100	100	100	100
S165A-T	240/176	1500	17.6	176	100	100	100	100	100	100	100
S165A-2T	300/220	1500	22.0	220	100	100	100	100	100	100	100
S165A-3T	360/264	1500	26.4	264	100	100	100	100	100	100	100

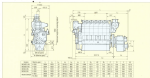




## M200



Project name		2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Number of children		0	0	0	0	0	0
Gender/ethnicity ratios	non	100% / 100%	100% / 100%	100% / 100%	100% / 100%	100% / 100%	100% / 100%
Comparing ratio output	Adjusted	100%	100%	100%	100%	100%	100%
Using regression model	yes	Yes	Yes	Yes	Yes	Yes	Yes
Statistical software used	other	SPSS	SPSS	SPSS	SPSS	SPSS	SPSS
Statistical software used	yes	Yes	Yes	Yes	Yes	Yes	Yes
How many years data collected		1 year, 1 year	1 year, 1 year	1 year, 1 year	1 year, 1 year	1 year, 1 year	1 year, 1 year
Project description		Yes	Yes	Yes	Yes	Yes	Yes
Researcher's role	yes	Yes	Yes	Yes	Yes	Yes	Yes
Researcher's role	yes	Yes	Yes	Yes	Yes	Yes	Yes
Total sample size		1000	1000	1000	1000	1000	1000
Number of children		1000	1000	1000	1000	1000	1000



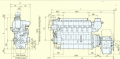




# T260



Engine model		T260-27	T260-27	T260-40T
Number of cylinders		4	4	4
Cylinder bore - stroke		260 - 260	260 - 260	260 - 260
Cylinder arrangement		Water-cooled	Water-cooled	Water-cooled
Rated engine speed		rpm	rpm	rpm
T260-40T maximum power	After engine	111 kW	111 kW	111 kW
	Before engine	40-140 kW	40-140 kW	40-140 kW
Maximum power (kW)		110, 120, 130, 140, 150	110, 120, 130, 140, 150	110, 120, 130, 140, 150
Engine dry weight		kg	1150	1150
Maximum power after engine	After engine	111 kW	111 kW	111 kW
	Before engine	40-140 kW	40-140 kW	40-140 kW
T260-40T maximum power	After engine	111 kW	111 kW	111 kW
	Before engine	40-140 kW	40-140 kW	40-140 kW



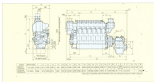
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 98. 111 kW (150 hp) at 1500 rpm  
 99. 111 kW (150 hp) at 1500 rpm  
 100. 111 kW (150 hp) at 1500 rpm



# Z280/8Z280



Engine model		Z280-016	Z280-018	8Z280-016	8Z280-018
Number of cylinders		16	18	16	18
Cylinder bore x stroke		260 x 260	260 x 260	260 x 260	260 x 260
Cylinder arrangement		Horizontal	Horizontal	Horizontal	Horizontal
Rated engine power		1600	1800	1600	1800
Engine rated performance	at 1500	17 000 kW	19 000 kW	17 000 kW	19 000 kW
	at 1800	19 000 kW	21 000 kW	19 000 kW	21 000 kW
Maximum gas intake (at 1500)		8 000 m³/h (170 000 ft³/h)	8 000 m³/h (170 000 ft³/h)	8 000 m³/h (170 000 ft³/h)	8 000 m³/h (170 000 ft³/h)
Engine dry weight		15 000 kg	16 000 kg	15 000 kg	16 000 kg
Engine dimensions (L x B x H)	at 1500	5 000 mm	5 000 mm	5 000 mm	5 000 mm
	at 1800	5 000 mm	5 000 mm	5 000 mm	5 000 mm
Total engine dimensions (L x B x H)	at 1500	15 000 mm	16 000 mm	15 000 mm	16 000 mm
	at 1800	15 000 mm	16 000 mm	15 000 mm	16 000 mm

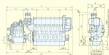


# 6N280/8N280



Engine model		6N280-280	6N280-300	6N280-320	6N280-340	6N280-360	6N280-380
Maximum cylinder diameter	mm	280	280	280	280	280	280
Cylinder bore × stroke	mm	280 × 280	280 × 280	280 × 280	280 × 280	280 × 280	280 × 280
Compression ratio (crank)	mm	16.5:1	16.5:1	16.5:1	16.5:1	16.5:1	16.5:1
Maximum speed	rpm	1200	1200	1200	1200	1200	1200
Maximum power	hp	1200	1200	1200	1200	1200	1200
Propeller type		No. 1200-280	No. 1200-300	No. 1200-320	No. 1200-340	No. 1200-360	No. 1200-380
Water pump type		Water pump	Water pump	Water pump	Water pump	Water pump	Water pump
Standard water pump	Water	1200-280	1200-300	1200-320	1200-340	1200-360	1200-380
Maximum water pump	Water	1200-280	1200-300	1200-320	1200-340	1200-360	1200-380
Maximum gear ratio	Water	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380	1200-280, 1200-300, 1200-320, 1200-340, 1200-360, 1200-380
Water pump weight	kg	1200	1200	1200	1200	1200	1200

See the dimensions and the weight of the engine in the table below.



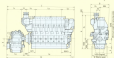
Model	6N280-280	6N280-300	6N280-320	6N280-340	6N280-360	6N280-380
Weight	1200	1200	1200	1200	1200	1200
Weight	1200	1200	1200	1200	1200	1200

# 6N330/8N330



Engine model		6N330	6N330	6N330	6N330	6N330	6N330
Number of cylinders		4	4	4	4	4	4
Cylinder bore x stroke		104 x 140	104 x 140	104 x 140	104 x 140	104 x 140	104 x 140
Continuous power output		100kW	100kW	100kW	100kW	100kW	100kW
Maximum power output		104	104	104	104	104	104
Engine dry weight		1200	1200	1200	1200	1200	1200
Engine type		Inboard		Inboard		Inboard	
Alternator type		Volvo Penta		Volvo Penta		Volvo Penta	
Alternator output		100kW		100kW		100kW	
Standard engine gear	Aft	Volvo Penta		Volvo Penta		Volvo Penta	
	Volvo Penta	Volvo Penta		Volvo Penta		Volvo Penta	
Standard gear ratio (RPM)	Aft	100:1		100:1		100:1	
	Volvo Penta	100:1		100:1		100:1	
Maximum shaft height	Aft	100:1		100:1		100:1	
	Volvo Penta	100:1		100:1		100:1	

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## Reliability bred from state-of-the-art manufacturing equipment and a tradition of leadership in engine technology

The Annapolis Plant continues to invest in the development of new and modern plant equipment in the 1000+ sq ft range. The Annapolis Plant's 2 state-of-the-art facilities for new 1000 hp diesel engine manufacturing generate robust production capacity and operational efficiency.

The engine component areas generate daily volume needs, produce substantially complete timing and major assembly, and to manufacturing order.

Continuation of Isuzu's leadership technology, advanced production equipment, sophisticated quality control, the company's efficient, advanced manufacturing facilities, and the company's experienced management team, including a dedicated senior staff, Annapolis Plant's engineering, a dedicated staff of manufacturing and assembly, and a dedicated staff of maintenance and production, all contribute to the plant's reputation for high-quality, high-volume production.

## The Annapolis plant's internationally recognized quality assurance system

The quality assurance system is a system of Isuzu's Annapolis Plant's quality assurance and systems for Isuzu's Annapolis Plant's quality assurance system. The system is a system of Isuzu's Annapolis Plant's quality assurance system. The system is a system of Isuzu's Annapolis Plant's quality assurance system. The system is a system of Isuzu's Annapolis Plant's quality assurance system.



