

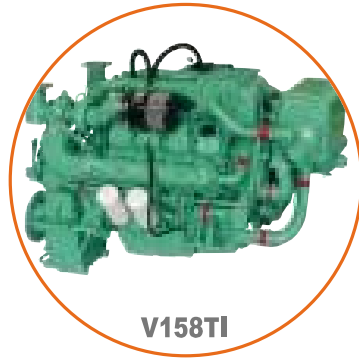
Motoare de propulsie navala

Model	Putere (kW)	Turtatie (RPM)	Regim lucru
6D16-T propulsion	141	2700	M
6D24-T propulsion	211	2200	M
S6A3-MPTK propulsion	404	1840	H
S6R-MPTA propulsion	570/485/440	1800/1650/1600	L/M/H
S6R2-MPTA propulsion	565/490/445	1500/1400/1350	L/M/H
S6R-Z3MPTAW propulsion	470	1600	H
S6R-MPTK propulsion	605/520/470	1800/1650/1600	L/M/H
S6R-MPTK(FW) propulsion	605/520/470	1800/1650/1600	L/M/H
S6R MPTAW propulsion	520/470	1650/1600	M/H
S6R2 T2MPTK propulsion	480	1350	H
S6R2-MPTK propulsion	610/530/480	1500/1400/1350	L/M/H
S6R2-MPTK(FW) propulsion	610/530/480	1500/1400/1350	L/M/H
S12A2-MPTA propulsion	776/700/634	2100/2000/1940	L/M/H
S12A2-Z3MPTAW propulsion	701	1940	H
S12A2-Z3MPTAW propulsion	701	1940	H
S12A2-MPTK propulsion	858/776/701	2100/2000/1940	L/M/H
S12A2 MPTAW propulsion	776/701	2000/1940	M/H
S12R-MPTA propulsion	1140/970/880	1800/1650/1600	L/M/H
S12R-C2MPTK (FW) propulsion	940	1600	H
S12R-MPTK propulsion	1210/1040/940	1800/1650/1600	L/M/H
S12R MPTAW propulsion	1040/940	1650/1600	M/H
S6U-C2MPTK propulsion	1119/1007/1103	1100/1060/1150	M/H/H*
S6U2-MPTK propulsion	1156/1040	960/930	M/H
S16R-MPTA propulsion	1520/1290/1170	1800/1650/1600	L/M/H
S16R-Z3MPTAW propulsion	1250	1600	H
S16R-C2MPTK (FW) propulsion	1250	1600	H
S16R-MPTK propulsion	1610/1380/1250	1800/1650/1600	L/M/H
S16R MPTAW propulsion	1380/1250	1650/1600	M/H
S8U-C2MPTK propulsion	1492/1343/1492	1100/1060/1150	M/H/H*
S12U-MPTK propulsion	2238/2015/2205	1100/1060/1150	M/H/H*
S16U-MPTK propulsion	2984/2686/2940	1100/1060/1150	M/H/H*

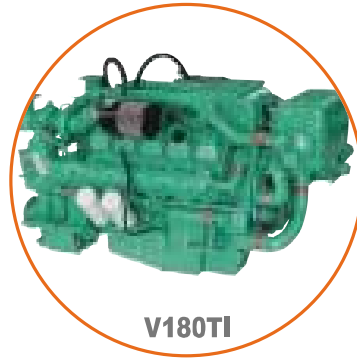
L - light duty
 M - medium duty
 H - heavy duty
 H* - heavy duty tugboat (remorcher)



L086TI



V158TI



V180TI



V222TI

Marine Propulsion Engines

Model	Type		Displacement (Liter)	Bore x Stroke (mm)	Output (ISO 3046 kW(ps)/rpm)			Dimension (L x W x H) (mm)	Dry Weight (kg)	IMO, Emission
	No. of Cyl.	Aspiration			Heavy Duty	Medium Duty	Light Duty			
L034	L 4	NA	3.3	102 x 100	51(70)/3,000	-	-	822 x 703 x 822	372	TIER-I
L034TI	L 4	TI	3.3	102 x 100	88(120)/3,000	107(145)/3,300	-	844 x 703 x 774	402	TIER-I
L066TI	L 6	TI	5.8	102 x 118	132(180)/2,200	-	-	1,042 x 800 x 915	535	TIER-II
L136	L 6	NA	8.1	111 x 139	118(160)/2,200	-	-	1,188 x 764 x 926	743	TIER-I
L136T	L 6	TC	8.1	111 x 139	147(200)/2,200	-	177(240)/2,500	1,188 x 766 x 926	748	TIER-I
L136TI	L 6	TI	8.1	111 x 139	169(230)/2,200	-	-	1,188 x 825 x 926	773	TIER-I
L086TI	L 6	TI	8.1	111 x 139	210(285)/2,100	232(315)/2,300	265(360)/2,500	1,188 x 827 x 962	790	TIER-II
MD196T	L 6	TC	11.1	123 x 155	206(280)/2,000	-	-	1,235 x 855 x 1,073	975	TIER-I
MD196TI	L 6	TI	11.1	123 x 155	235(320)/2,000	-	-	1,235 x 855 x 1,073	1,009	TIER-I
L126TI	L 6	TI	11.1	123 x 155	265(360)/2,000	294(400)/2,100	-	1,235 x 855 x 1,073	1,060	TIER-II
V158TI	V 8	TI	14.6	128 x 142	353(480)/1,800	397(540)/2,100	500(680)/2,300	1,337 x 1,223 x 1,074	1,350	TIER-I
4V158TI	V 8	TI	14.6	128 x 142	390(530)/1,800	441(600)/2,100	603(820)/2,300	1,202 x 1,237 x 1,095	1,540	TIER-II
V180TI	V 10	TI	18.3	128 x 142	441(600)/1,800	478(650)/2,100	603(820)/2,300	1,495 x 1,223 x 1,169	1,550	TIER-I
V222TI	V 12	TI	21.9	128 x 142	530(720)/1,800	588(800)/2,100	736(1,000)/2,300	1,653 x 1,223 x 1,199	1,750	TIER-I
4V222TI	V 12	TI	21.9	128 x 142	588(800)/1,800	647(880)/2,100	883(1,200)/2,300	1,518 x 1,245 x 1,180	1,920	TIER-II

Marine Auxiliary Engines

Model	Type		Displacement (Liter)	Bore x Stroke (mm)	Output ISO 3046		Dimension (L x W x H) (mm)	Dry Weight (kg)	Emission
	No. of Cyl.	Aspiration			Kw(ps)@1800rpm	Kw(ps)@1500rpm			
AD034	L 4	NA	3.3	102 x 100	32(43)	26(35)	822 x 703 x 822	372	TIER-I
AD034TI	L 4	TI	3.3	102 x 100	55(75)	42(57)	844 x 703 x 774	402	TIER-I
AD066TI	L 6	TI	5.8	102 x 118	110(150)	96(130)	1,042 x 800 x 915	535	TIER-II
AD136	L 6	NA	8.1	111 x 139	93(126)	77(105)	1,188 x 764 x 926	735	TIER-I
AD136T	L 6	TC	8.1	111 x 139	125(170)	107(145)	1,188 x 766 x 926	748	TIER-I
AD136TI	L 6	TI	8.1	111 x 139	138(188)	115(157)	1,188 x 825 x 926	773	TIER-I
AD086TI	L 6	TI	8.1	111 x 139	186(253)	151(205)	1,188 x 827 x 962	790	TIER-II
AD196T	L 6	TC	11.1	123 x 155	181(246)	154(210)	1,235 x 855 x 1,073	975	TIER-I
AD196TI	L 6	TI	11.1	123 x 155	199(270)	173(235)	1,235 x 855 x 1,073	1,009	TIER-I
AD126TI	L 6	TI	11.1	123 x 155	247(336)	206(280)	1,193 x 854 x 1,072	1,060	TIER-II
AD158TI	V 8	TI	14.6	128 x 142	353(480)	302(410)	1,337 x 1,223 x 1,074	1,295	TIER-I
AD180TI	V 10	TI	18.3	128 x 142	441(600)	357(485)	1,495 x 1,223 x 1,169	1,545	TIER-I
AD222TI	V 12	TI	21.9	128 x 142	530(720)	446(606)	1,653 x 1,223 x 1,199	1,735	TIER-I

Marine Generator Sets

Model	Engine	Type		Displacement (Liter)	Bore x Stroke (mm)	Output ISO 3046		Dimension (L x W x H) (mm)	Dry Weight (kg)	Emission
		No. of Cyl.	Aspiration			KVA/Kw@1800rpm	KVA/Kw@1500rpm			
PNM30	AD034	4	NA	3.3	102 x 100	30/24	25/20	1,431 x 751 x 886	635	TIER-I
PNB60	AD034TI	4	TI	3.3	102 x 100	63/50	45/36	1,600 x 809 x 930	811	TIER-I
PNJ100	AD136	6	NA	8.1	111 x 139	100/80	85/68	1,960 x 789 x 1,132	1,328	TIER-I
PNK130	AD136T	6	TC	8.1	111 x 139	130/104	120/96	2,050 x 789 x 1,136	1,405	TIER-I
PND160	AD136TI	6	TI	8.1	111 x 139	159/127	133/106	2,095 x 789 x 1,136	1,489	TIER-I
PNE215	AD086TI	6	TI	8.1	111 x 139	215/172	170/136	2,095 x 789 x 1,136	1,613	TIER-II
PNI280	AD126TI	6	TI	11.1	123 x 155	280/224	240/192	2,320 x 850 x 1,195	2,108	TIER-II
PNZ400	AD158TI	V8	TI	14.9	128 x 142	410/328	345/276	2,425 x 1,222 x 1,250	2,675	TIER-I
PNS500	AD180TI	V10	TI	18.3	128 x 142	500/400	415/332	2,580 x 1,222 x 1,250	3,138	TIER-I
PNY625	AD222TI	V12	TI	21.9	128 x 142	625/500	510/408	2,900 x 1,222 x 1,250	3,619	TIER-I

New Power of Marine Diesel Engines

H-Series

380hp [280kW] acc. to ISO 8665

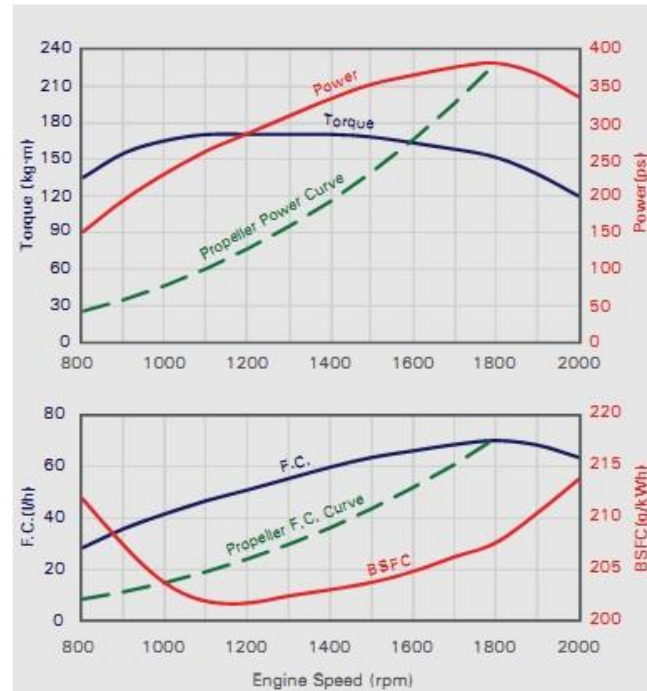
NEW



H 10.0 Series Specifications

Engine type	H380
Engine Duty Rating	S1 (Heavy Duty) 4-Stroke, 24-Valve, E-VGT with Intercooler, Fresh Water Cooling
Output [hp (kW)]	380 (280)
RPM @ Full Load	1,800
Cylinders	6 in-line
Displacement [cc]	9,960
Bore X Stroke [mm]	122 X 142
Compression Ratio	16 : 1
Max. Torque @ RPM	170kg·m @1,100rpm
Injection System	Electronic Unit Injectors (EUI), one per cylinder
Alternator [A]	24V-70A
Electronic Engine Diagnostic	YES
MAX. Fuel Consumption [l/h]	71
Dry Weight [kg]	1,060
Propulsion system	Shaftdrive

Performance Curve



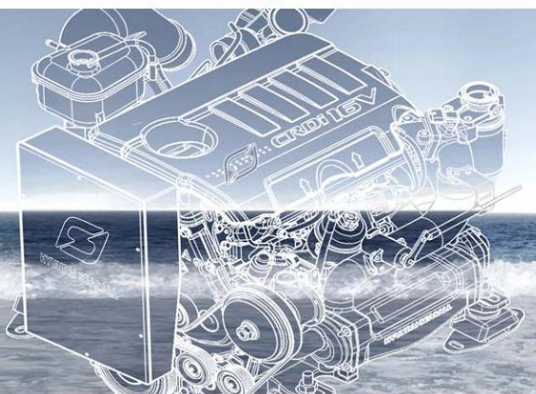
New Standard for Marine Diesel Engines

U-Series

125hp [92kW] acc. to ISO 8665

NEW

U 1.6 Series **U125**



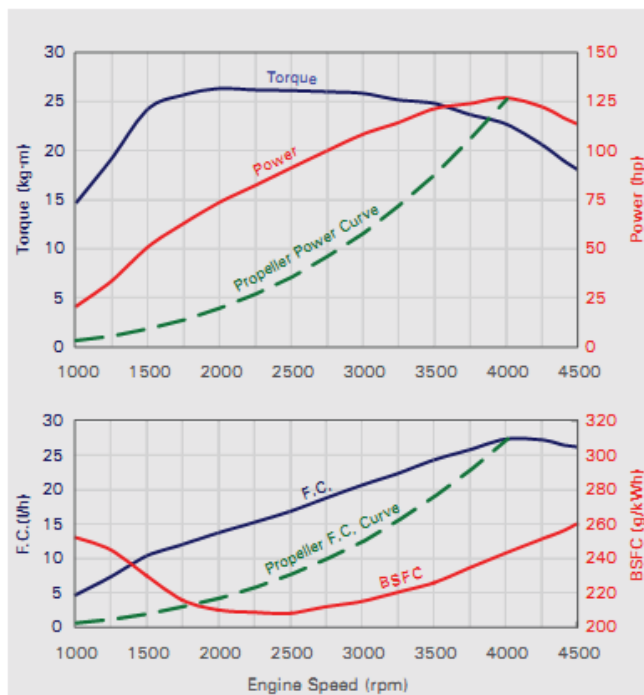
125hp [92kW] acc. to ISO 8665



U 1.6 Series Specifications

Engine type	U125
Engine Duty Rating	S5 (Pleasure Duty) 4-Stroke, 16-Valve, VGT with Intercooler, Fresh Water Cooling
Output [hp (kW)]	125 (93)
RPM @ Full Load	4,000
Cylinders	4 in-line
Displacement [cc]	1,582
Bore X Stroke [mm]	77.2 X 84.5
Compression Ratio	17.3 : 1
Max. Torque @ RPM	26.5kg·m @ 1,900rpm
Injection System	Common Rail Direct injection (CRDi) - Solenoid Injector
Alternator [A]	12V-120A
Electronic Engine Diagnostic	YES
MAX. Fuel Consumption [l/h]	27
Dry Weight [kg]	220
Propulsion system	Sterndrive, Shaftdrive

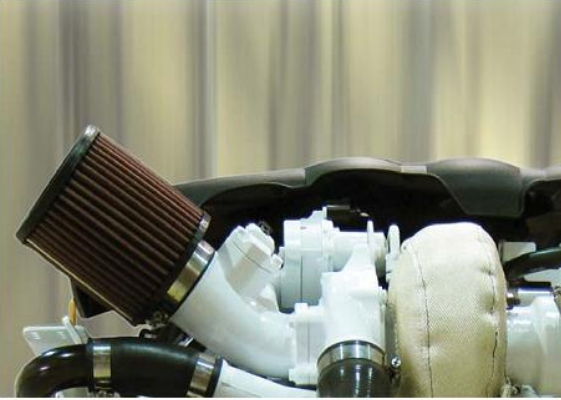
Performance Curve



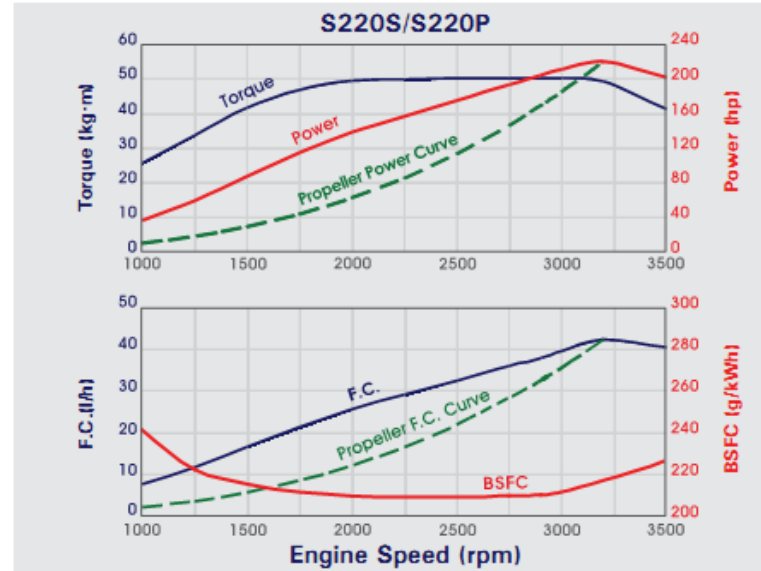
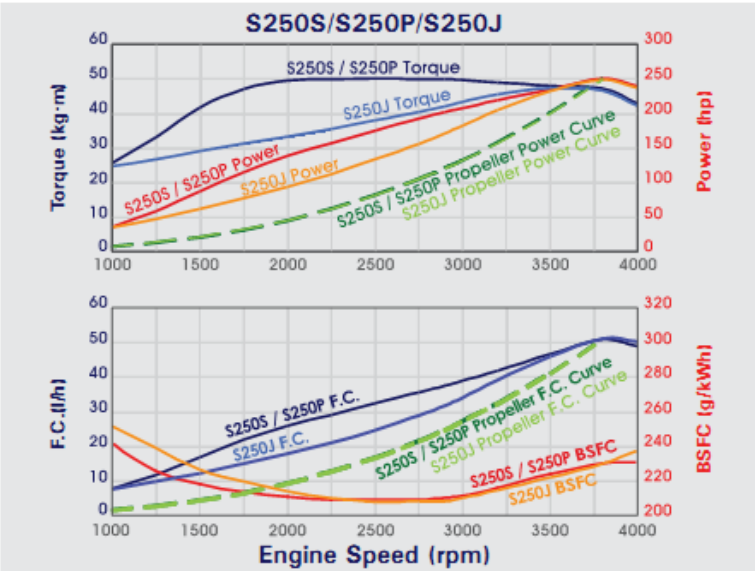
New Standard for Marine Diesel Engines

S-Series

250hp [184kW] / 220hp [162kW] acc. to ISO 8665



Engine type	S250S	S250P	S250J	S220S	S220P
Engine Duty Rating	Pressure Duty (S5) Special Pressure Duty, Special Light Duty Commercial (S4)			Light Duty Commercial (S3)	
	4-Stroke, 4-Valve, E-VGT with Intercooler, Fresh Water Cooling				
Output [hp (kW)]	250 (184)			220 (162)	
RPM @ Full Load	3,800			3,200	
Cylinders	V6				
Displacement [cc]	2,959				
Bore X Stroke [mm]	84 X 89				
Compression Ratio	17.5 : 1				
Max. Torque @ RPM	80 kgm @ 2,500	48 kgm @ 3,500		50 kgm @ 2,500	
Injection System	Common Rail Direct Injection (CRDi) - Piezo Injector				
Alternator [A]	12V-150A				
Electronic Engine Diagnostic	YES				
MAX. Fuel Consumption [l/h]	51.0			42.3	
Dry Weight [kg]	334				
Propulsion system	Stemdrive	Shaftdrive	Waterjet	Stemdrive	Shaftdrive



S 3.0 Series Propulsion System

Propulsion type	Model	S250S / S250P / S250J	S220S / S220P	Weight [kg]
Sterndrive	Bravo One X Diesel	1.36 / 1.50 / 1.65	1.50 / 1.65	59
	Bravo Two X Diesel	1.81 / 2.0 / 2.2	1.81 / 2.0 / 2.2	64
	Bravo Three X Diesel	1.50 / 1.65 / 1.81 / 2.0 / 2.2	1.65 / 1.81 / 2.0 / 2.2	68
Inboard	ZF 63 A for P	1.22 / 1.56 / 2.04 / 2.52 / 2.70	1.22 / 1.56 / 2.04 / 2.52 / 2.70	44
	ZF 63 C for J	1 : 1	-	32
	ZF 45 C for J	1 : 1	-	31

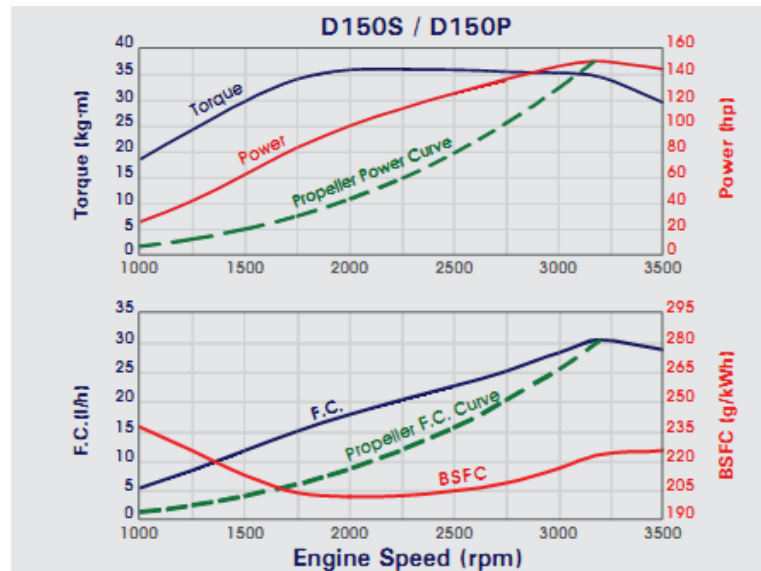
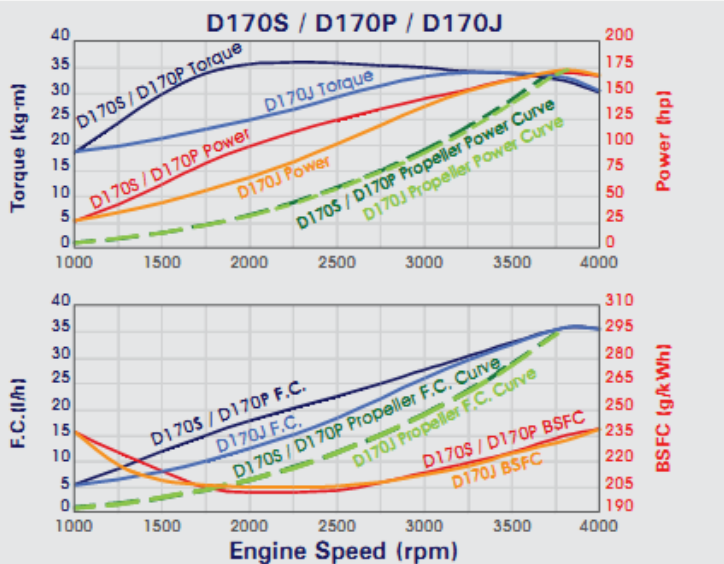
New Power of Marine Diesel Engines

D-Series

170hp [125kW] / 150hp [110kW] acc. to ISO 8665



Engine type	D170S	D170P	D170J	D150S	D150P
Engine Duty Rating	Pressure Duty (S6) Special Pressure Duty, Special Light Duty Commercial (S4)			Light Duty Commercial (S3)	
	4-Stroke, 4-Valve, VGT with Intercooler, Fresh Water Cooling				
Output [hp (kW)]	170 (125)			150 (112)	
RPM @ Full Load	3,800			3,200	
Cylinders	Inline-4				
Displacement [cc]	2,184				
Bore X Stroke [mm]	87 X 92				
Compression Ratio	17.3 : 1				
Max. Torque @ RPM	36 kgm @ 2,000		34 kgm @ 3,500		36 kgm @ 2,000
Injection System	Common Rail Direct injection (CRDi) - Solenoid Injector				
Alternator [A]	12V-120A				
Electronic Engine Diagnostic	YES				
MAX. Fuel Consumption [l/h]	36.0			30.5	
Dry Weight [kg]			261		
Propulsion system	Sterndrive	Shaftdrive	Waterjet	Sterndrive	Shaftdrive



D 2.2 Series Propulsion System

Propulsion type	Model	D170S / D170P / D170J	D150S / D150P	Weight [kg]
Sterndrive	Bravo One X Diesel	1.36 / 1.50 / 1.65	1.50 / 1.65	59
	Bravo Two X Diesel	1.81 / 2.0 / 2.2	1.81 / 2.0 / 2.2	64
	Bravo Three X Diesel	1.65 / 1.81 / 2.0 / 2.2	1.81 / 2.0 / 2.2	68
Inboard	ZF 45 A for P	1.26 / 1.51 / 2.03 / 2.43	1.26 / 1.51 / 2.03 / 2.43	28
	ZF 45 C for J	1 : 1	-	31