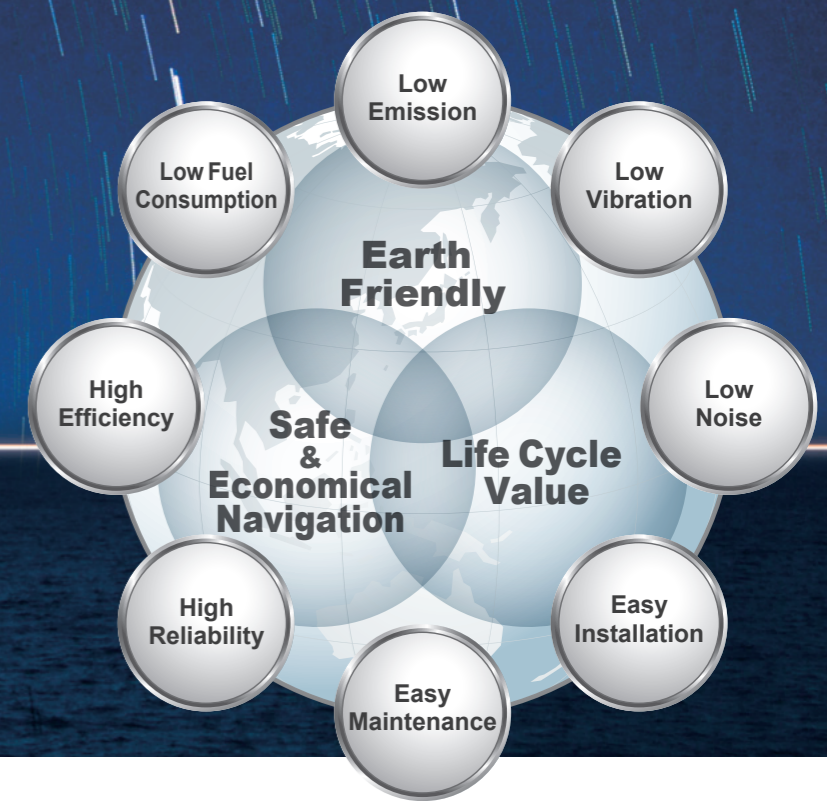


MARINE DIESEL ENGINE

Marine Propulsion | Power Range [368~3310kW]
Marine Auxiliary | Generator Capacity [180~3300kWe]



Where the stars always shine brightest.



Contents

04 > Environmental performance
06 > Marine propulsion diesel engine

12 > Marine auxiliary diesel engine
20 > Marine compressor

22 > Amagasaki plant
23 > History

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Heart of YANMAR, for the People, for the Earth.

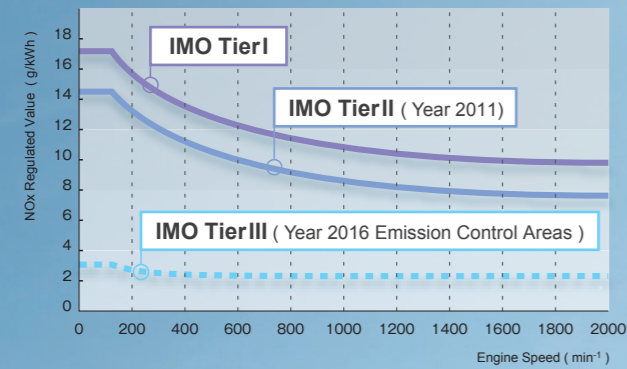
- YANMAR Power Solution, for Good Mileage and Good Environmental Goals -

YANMAR Power Solution contributes to work “ Life Cycle Value ” and “ Harmony with the environment ”

As almost every human social activity can be a cause of further deterioration of environment by air pollution and global warming, the search for solutions naturally requires broad international cooperation. YANMAR is developing all our engines in harmony with the environment by reducing NOx, CO2, SOx and other emissions, and taking antipollution measures. Furthermore, YANMAR has been dedicated to developing its own leading-edge technologies and products in pursuit of resource and energy efficiency. We have pursued the continuous improvement of Life Cycle Value for the customer throughout a long product life by developing products that embody reliability, durability and low-cost operation. YANMAR Power Solution, it's all for your business and the world of tomorrow.

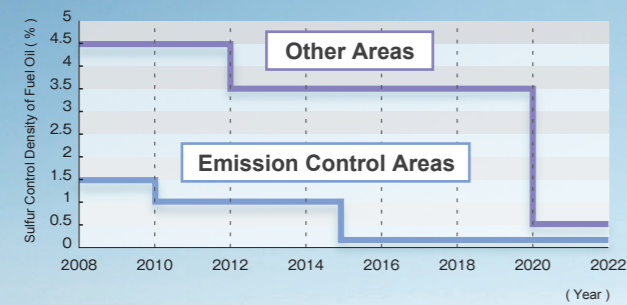
Harmony with the Environment – IMO Emission Limits –

IMO NOx Emission Limits



The pollution of the atmosphere by hazardous substances released from marine diesel engines has become a major global issue. The release of hazardous substances into the atmosphere by ships is regulated by the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). Annex VI: Prevention of Air Pollution from Ships was later passed in September 1997. As a result, the regulation of NOx emission levels began for marine diesel engines with a power of above 130kW on vessels built on or after January 1, 2000. A further amendment was passed in October, 2008 and engines mounted in vessels built on or after January 1, 2011 face even stricter Tier II regulations. Technological solutions have been developed to overcome these regulatory challenges including engine technologies, supplementary technologies and post processing technologies. YANMAR is addressing the stricter IMO Tier II regulation NOx limits with improvements to combustion technologies of engine.

IMO SOx Emission Limits



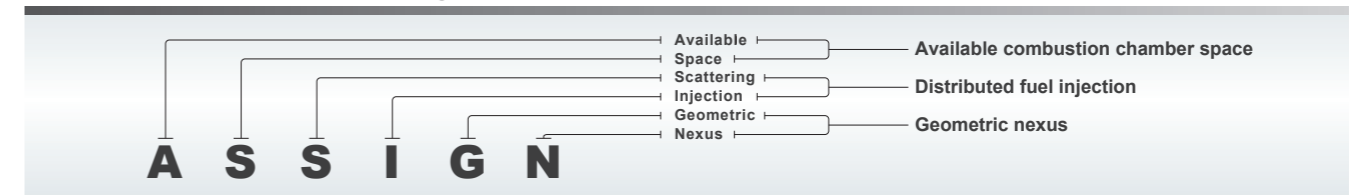
The regulations on NOx and SOx emissions continue to grow stricter. In special "Emission Control Areas" established by various countries, the sulphur content of fuel oil used must be 0.1% or below after 2015. The limit of 0.1% sulphur content in fuel oil has already been in effect within the EU for vessels anchoring within a bay or traversing inland waterways since January 1, 2010. YANMAR EcoDiesel has been modified to correspond to low sulfur (low viscosity, low lubricity) fuels through alterations to the fuel and other systems.

YANMAR EcoDiesel is addressing the stricter IMO Tier II regulation NOx limits with improvements to combustion technologies of engine.

In general, when NOx emissions are reduced, the fuel consumption and smoke generation will increase, adversely affecting both environment and management. As a solution to this, YANMAR has employed " the ASSIGN Combustion System ", which is an innovative state-of-the-art technology, and "the High Pressure Miller Cycle System". These systems improve the fuel consumption and smoke generation in addition to reducing NOx emissions. YANMAR marine diesel engines already comply with IMO Tier II emission requirement and meet the needs of our customers.

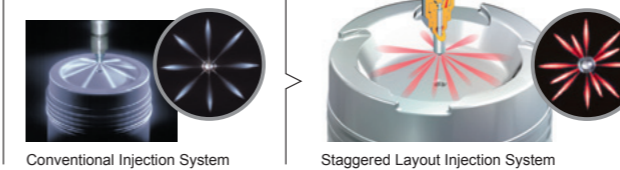


ASSIGN Combustion System



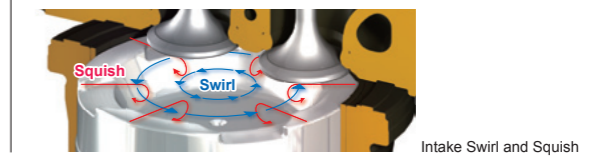
Staggered Layout Multi-Hole Nozzle

By staggering the layout and using multiple injection holes, this design achieves sufficient total injection area and improves air utilization.



Air Flow Motion

The optimally shaped air intake port generates a suitable swirl (vortex flow) in the combustion chamber as well as a squish in the compression stroke. This promotes fuel / air mixing, improving combustion efficiency.



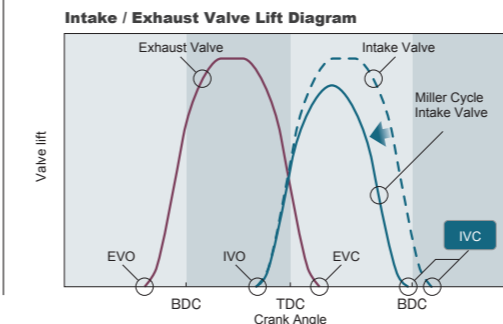
※ Some models do not employ these technologies.

High Pressure Miller Cycle System

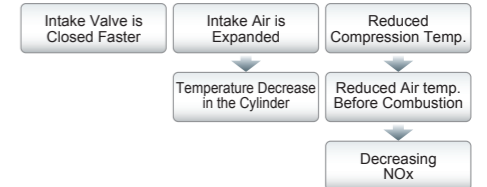
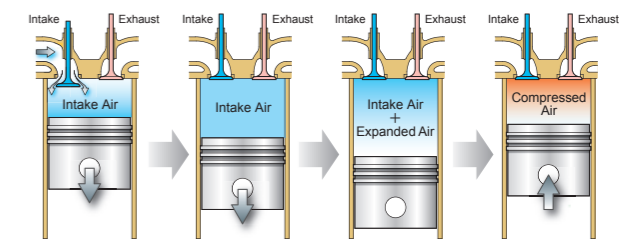
Miller Type Cam

Reduced air temperature before combustion → **Decreasing NOx**

With the miller type cam in its intake stroke, the miller cycle closes the intake valve earlier than conventional combustion. By finishing the intake stroke earlier, the intake air expands and temperature in the cylinder decreases, and by reducing air temperature before combustion in the next compression stroke, the NOx emission is reduced.



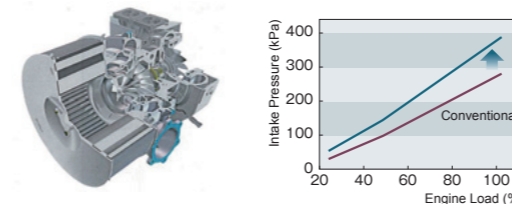
EVO : Exhaust Valve Open
IVO : Intake Valve Open
EVC : Exhaust Valve Close
IVC : Intake Valve Close



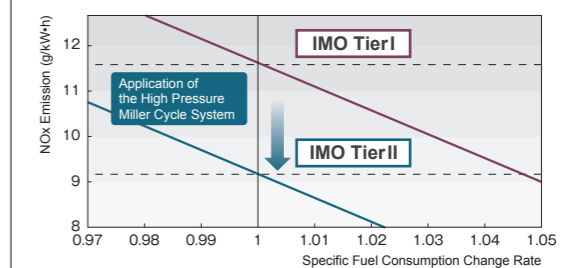
High Pressure Ratio Turbocharger

Recovery of pressure in the cylinder → **Improved fuel consumption**

Using the method of finishing the intake stroke earlier alone decreases the air quantity charged in the cylinder, resulting in decreasing the cylinder pressure and worsening the specific fuel consumption. Increasing the intake pressure by high pressure ratio turbocharger during the short intake stroke ensures the quantity of charged air and fixes the cylinder pressure to restrain the increase of the specific fuel consumption.



Relationship between Specific Fuel Consumption and NOx Emission

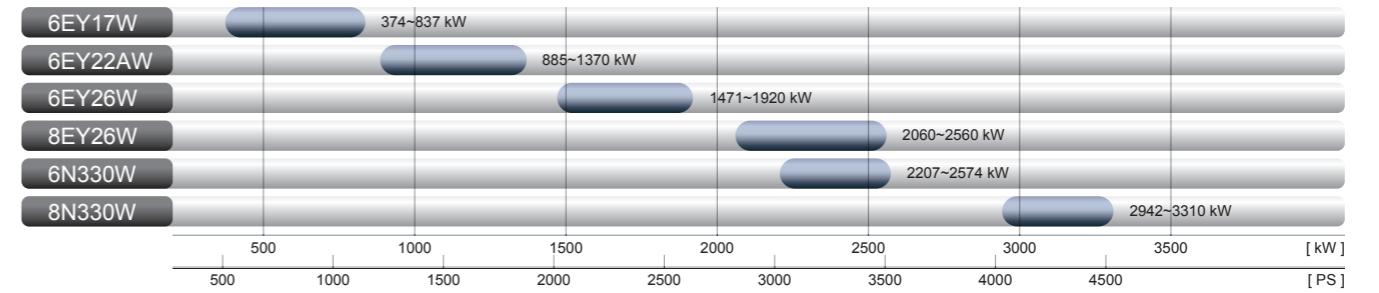


※ Some models do not employ these technologies.

Marine Propulsion Diesel Engine Line-up



Power Range



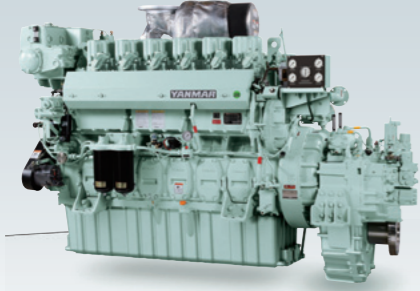
Series	Models	Output (kW)								Gear	Dimensions (mm)											
		Engine Speed (min ⁻¹)																				
		620	750	800	900	1350	1450	1500			A	A1	A2	A3	B	C	D	E	F	G		
6EY17W	6EY17W					374				YXH-500	2908	2410	2154	615	1305	1813	620	682	349	1300		
						480					YXH-500L	3091	2410	2154	794	1305	1813	620	862	429	1300	
						590				YXH-500		2908	2410	2154	615	1305	1882	620	682	349	1300	
						749	837				YXH-500L	3091	2410	2154	794	1305	1882	620	862	429	1300	
6EY22AW	6EY22AW					885				YX-1000		4574	3647	2965	1488	1618	2416	666	885	435	1922	
						1030					YX-1000C	4687	3647	2965	1601	1618	2416	666	450	-	1922	
										YX-1000		4603	3647	2965	1517	1618	2416	666	885	435	1922	
											YX-1000C	4636	3647	2965	1550	1618	2416	666	450	-	1922	
						1180				YXH-2000		4810	3647	2965	1807	1618	2416	666	1145	590	1922	
						1330					YXH-2000C	4960	3647	2965	1957	1618	2416	666	555	-	1922	
6EY26W	6EY26W					1471				YXH-2000M		5702	4271	3563	1882	1804	3112	842	1145	590	1900	
									YXH-2000MC		5880	4271	3563	2322	1804	3112	842	555	-	1900		
											YXH-2000	5483	4271	3563	1882	1804	3112	842	1145	590	1900	
										YXH-2000C		5601	4271	3563	2070	1804	3112	842	555	-	1900	
						1620					YXH-2500M	5710	4271	3563	1890	1804	3112	842	1145	590	1900	
						1920				YXH-2500MC		5880	4271	3563	2320	1804	3112	842	555	-	1900	
											YXH-2500	5491	4271	3563	1890	1804	3112	842	1145	590	1900	
										YXH-2500C		5601	4271	3563	2070	1804	3112	842	555	-	1900	
		8EY26W	8EY26W					2060					YX-3500M	6912	5090	5022	1890	2085	3257	842	1427	777
								2210				YX-3500MC		7481	5090	5022	2459	2085	3257	842	730	80
										YX-3500	6836		5090	5022	1814	2085	3542	1127	1427	777	1900	
											YX-3500C	6898	5090	5022	1876	2085	2845	430	730	80	1900	
						2360				YX-3500M		6925	5090	5022	1903	2085	3257	842	1427	777	1900	
						2560					YX-3500MC	7494	5090	5022	2472	2085	3257	842	730	80	1900	
										YX-3500		6849	5090	5022	1827	2085	3542	1127	1427	777	1900	
											YX-3500C	6911	5090	5022	1889	2085	2845	430	730	80	1900	
6N330W	6N330-UW 6N330-SW			2207								YX-3500M	6957	5600	4784	2173	2432	3667	1006	1427	777	2348
				2472							YX-3500MC		7756	5600	4784	2972	2432	3667	1006	730	80	2348
									YX-3500	6836		5600	4784	2052	2432	3667	1006	1427	777	2348		
								YX-3500C		7178	5600	4784	2394	2432	3667	1006	730	80	2348			
	6N330-EW	2574									YX-3500M	6968	5600	4784	2184	2432	3667	1006	1427	777	2348	
										YX-3500MC		7767	5600	4784	2983	2432	3667	1006	730	80	2348	
									YX-3500		6847	5600	4784	2063	2432	3667	1006	1427	777	2348		
								YX-3500C		7189	5600	4784	2405	2432	3667	1006	730	80	2348			
8N330W	8N330-UW 8N330-SW 8N330-EW	2942								MGR8044V96	8275	6640	5826	2449	1943	3557	1006	1730	860	2348		
		3163							MGN8044V96		8275	6640	5826	2449	1943	3557	1006	1730	860	2348		
		3310																				
6RY17W	6RY17W							368	YXH-240-1	2723	2170	2018	615	1147	1759	595	608	313	1250			
								478		YXH-240-1	2723	2170	2018	615	1147	1769	595	608	313	1250		
								552			YXH-240-1	2723	2170	2018	615	1152	1779	595	608	313	1250	
								YXH-250L	2813	2170		2018	795	1152	1779	595	834	414	1250			
6N21AW	6N21A-DW					662				Y-850	3920	2776	2733	1158	1420	2081	601	814	359	1802		
									YC-850		4051	2776	2733	1289	1420	2081	601	455	-	1802		
	6N21A-UW	736						YX-1000		4053	2776	2733	1199	1420	2081	601	885	435	1802			
										YX-1000C	4086	2776	2733	1232	1420	2081	601	450	-	1802		
	6N21A-SW 6N21A-EW	883※ 956※							YX-1000		4059	2776	2733	1205	1420	2081	601	885	435	1802		
											YX-1000C	4092	2776	2733	1238	1420	2081	601	450	-	1802	

※ 850min⁻¹

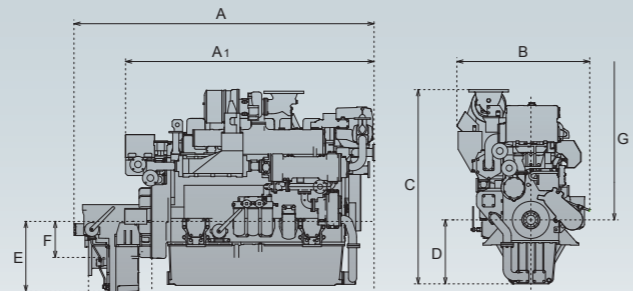
Marine Propulsion Diesel Engine

6EY17W

• Power : 374~837kW



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

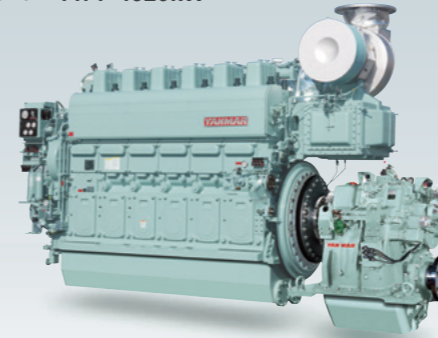
Engine Model	6EY17W					
No. of Cylinders	6					
Cylinder Bore×Stroke	mm	170×230				
Rated Output	kW(PS)	374 (508)	480 (653)	590 (802)	749 (1018)	837 (1138)
Engine Speed	min ⁻¹	1350			1450	
Dry Weight	kg	3880				
Propeller Type	for F.P.P.					
Marine Gear Model	Offset	YXH-500				YXH-500L
	Co-Axial	YXH-500L				
Reduction Gear Ratio (Ahead)	Offset	2.53, 3.04, 3.48				
	Co-Axial	3.57, 4.07, 4.48, 4.96				
Marine Gear Dry Weight	Offset	700				
	kg	1667				
Total Dry Weight with Marine Gear	Offset	4580				
	kg	5547				

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

Marine Propulsion Diesel Engine

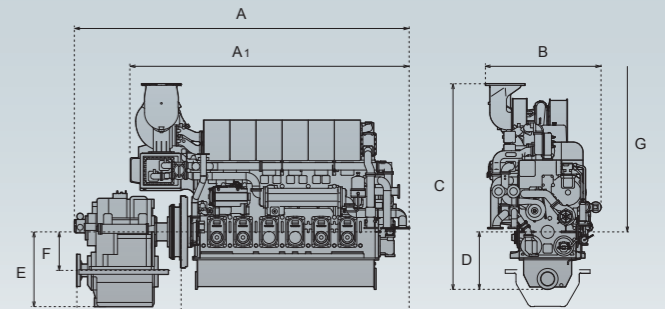
6EY26W

• Power : 1471~1920kW



This Photograph Shows Model 6EY26. (IMO Tier I).

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

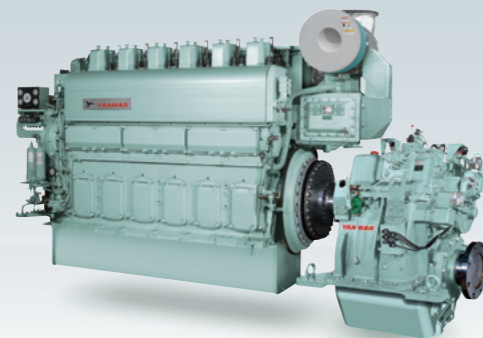
Engine Model	6EY26W							
No. of Cylinders	6							
Cylinder Bore×Stroke	mm	260×385						
Rated Output	kW(PS)	1471 (2000)		1620 (2203)		1920 (2610)		
Engine Speed	min ⁻¹	750						
Dry Weight	kg	18500						
Propeller Type	for C.P.P.		for F.P.P.		for C.P.P.		for F.P.P.	
Marine Gear Model	Offset	YXH-2000M	YXH-2000	YXH-2500M	YXH-2500	YXH-2500M	YXH-2500	
	Co-Axial	YXH-2000MC	YXH-2000C	YXH-2500MC	YXH-2500C	YXH-2500MC	YXH-2500C	
Reduction Gear Ratio (Ahead)	Offset	2.23, 2.58, 2.79, 3.03						
	Co-Axial	2.23, 2.58, 2.79, 3.03						
Marine Gear Dry Weight	Offset	3900	4750	3950	4800	3950	4800	
	kg	Co-Axial	4300	5050	4400	5150	4400	5150
Total Dry Weight with Marine Gear	Offset	22549	23349	22640	23490	22640	23490	
	kg	Co-Axial	22949	23649	23090	23840	23090	23840

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

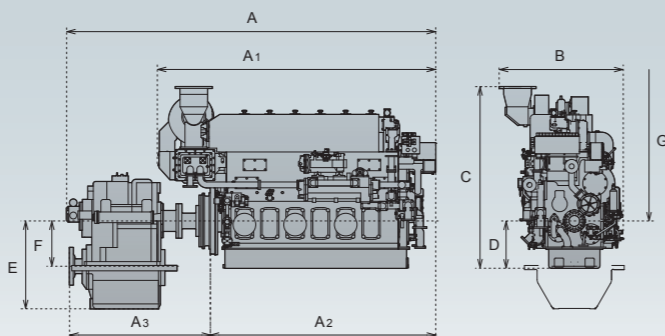
Marine Propulsion Diesel Engine

6EY22AW

• Power : 885~1370kW



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

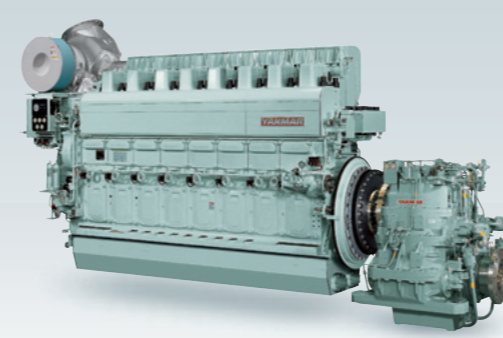
Engine Model	6EY22AW					
No. of Cylinders	6					
Cylinder Bore×Stroke	mm	220×320				
Rated Output	kW(PS)	885 (1203)	1030 (1400)	1180 (1604)	1330 (1808)	1370 (1863)
Engine Speed	min ⁻¹	900				
Dry Weight	kg	10000				
Propeller Type	for F.P.P.					
Marine Gear Model	Offset	YX-1000		YXH-2000		
	Co-Axial	YX-1000C		YXH-2000C		
Reduction Gear Ratio (Ahead)	Offset	2.03, 2.36, 2.78, 3.32		2.23, 2.58, 2.79, 3.03		
	Co-Axial	2.03, 2.36, 2.78, 3.32		2.23, 2.58, 2.79, 3.03		
Marine Gear Dry Weight	Offset	2400		4750		
	kg	Co-Axial	2565	5050		
Total Dry Weight with Marine Gear	Offset	12505	12556	14861		
	kg	Co-Axial	12670	12721	15161	

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

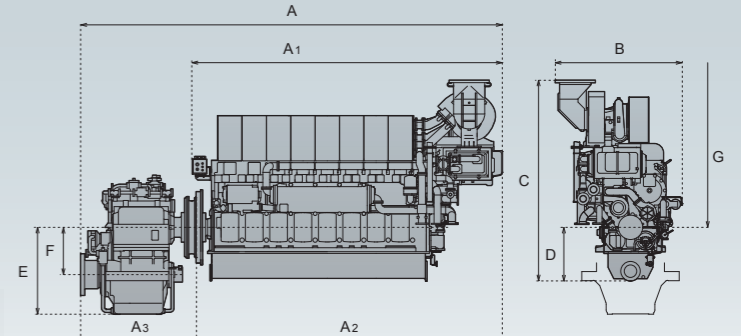
Marine Propulsion Diesel Engine

8EY26W

• Power : 2060~2560kW



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

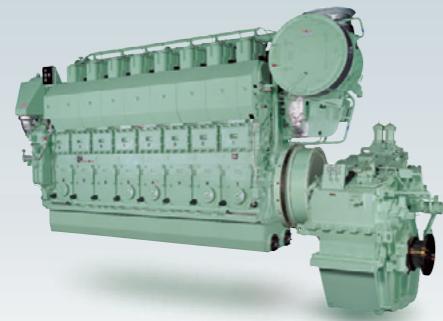
Engine Model	8EY26W							
No. of Cylinders	8							
Cylinder Bore×Stroke	mm	260×385						
Rated Output	kW(PS)	2060 (2801)		2210 (3005)		2360 (3209)		2560 (3481)
Engine Speed	min ⁻¹	750						
Dry Weight	kg	24500						
Propeller Type	for C.P.P.		for F.P.P.		for C.P.P.		for F.P.P.	
Marine Gear Model	Offset	YX-3500M	YX-3500	YX-3500M	YX-3500	YX-3500M	YX-3500	YX-3500
	Co-Axial	YX-3500MC	YX-3500C	YX-3500MC	YX-3500C	YX-3500MC	YX-3500C	YX-3500C
Reduction Gear Ratio (Ahead)	Offset	2.55, 2.80, 3.09, 3.31						
	Co-Axial	2.31, 2.54, 2.80, 3.00						
Marine Gear Dry Weight	Offset	8700	9400	8700	9400	8700	9400	9400
	kg	Co-Axial	8400	9100	8400	9100	8400	9100
Total Dry Weight with Marine Gear	Offset	33428	34128	33428	34128	33485	34185	34185
	kg	Co-Axial	33128	33828	33128	33828	33185	33885

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

Marine Propulsion Diesel Engine

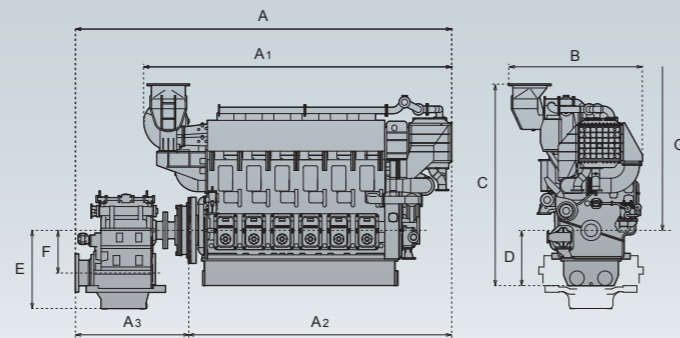
6N330W

• Power : 2207~2574kW



This Photograph Shows Model 8N330. (IMO Tier I).

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

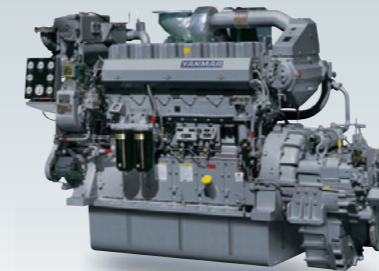
Engine Model	6N330-UW		6N330-SW		6N330-EW	
No. of Cylinders	6					
Cylinder Bore×Stroke	mm 330×440					
Rated Output	kW(PS) 2207 (3000)		2427 (3300)		2574 (3500)	
Engine Speed	min ⁻¹ 620					
Dry Weight	kg 34000					
Propeller Type	for C.P.P.		for F.P.P.		for C.P.P.	
Marine Gear Model	Offset	YX-3500M	YX-3500	YX-3500M	YX-3500	YX-3500M
	Co-Axial	YX-3500MC	YX-3500C	YX-3500MC	YX-3500C	YX-3500MC
Reduction Gear Ratio (Ahead)	Offset	2.55, 2.80, 3.09, 3.31				
	Co-Axial	2.31, 2.54, 2.80, 3.00				
Marine Gear Dry Weight	Offset	8700	9400	8700	9400	8700
	Co-Axial	8400	9100	8400	9100	8400
Total Dry Weight with Marine Gear	Offset	42985	43685	42985	43685	43038
	Co-Axial	42685	43385	42685	43385	42738

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

Marine Propulsion Diesel Engine

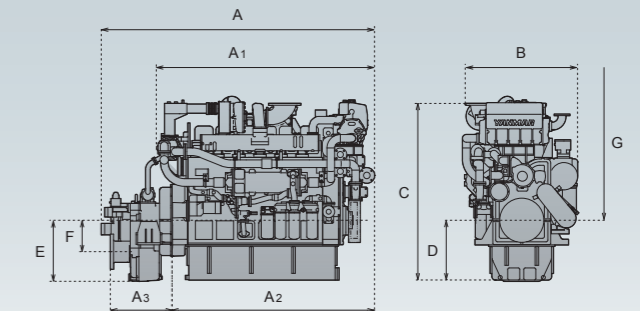
6RY17W

• Power : 368~736kW



This Photograph Shows Model 6RY17. (IMO Tier I).

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

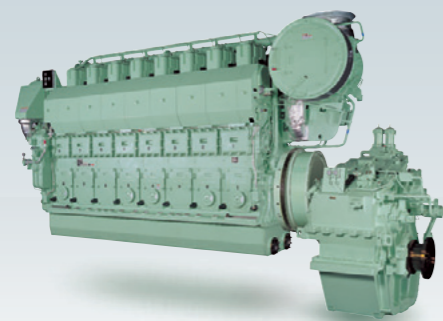
Engine Model	6RY17W			6RY17P-EW	6RY17P-GW
No. of Cylinders	6				
Cylinder Bore×Stroke	mm 165×219				
Rated Output	kW(PS) 368 (500)	478 (650)	552 (750)	625 (850)	736 (1000)
Engine Speed	min ⁻¹ 1500				
Dry Weight	kg 3939			3972	3981
Propeller Type	for F.P.P.				
Marine Gear Model	Offset	YXH-240-1			YXH-250L
	Co-Axial	YXH-240-1			YXH-250L
Reduction Gear Ratio (Ahead)	Offset	2.56, 3.03, 3.48			3.82, 4.30, 4.68, 5.12
	Co-Axial	2.56, 3.03, 3.48			3.82, 4.30, 4.68, 5.12
Marine Gear Dry Weight	Offset	609			1371
	Co-Axial	609			1371
Total Dry Weight with Marine Gear	Offset	4548	4581	4590	5116
	Co-Axial	4548	4581	4590	5116

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

Marine Propulsion Diesel Engine

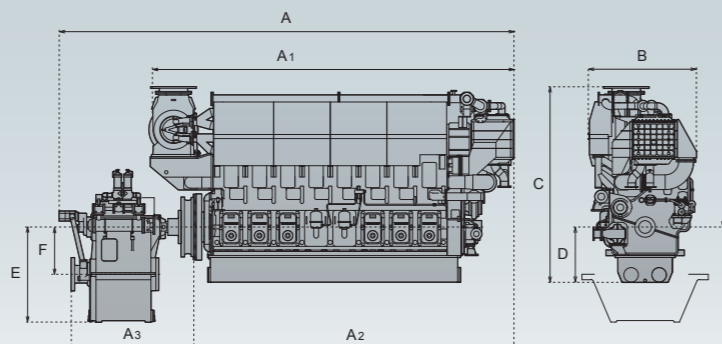
8N330W

• Power : 2942~3310kW



This Photograph Shows Model 8N330. (IMO Tier I).

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

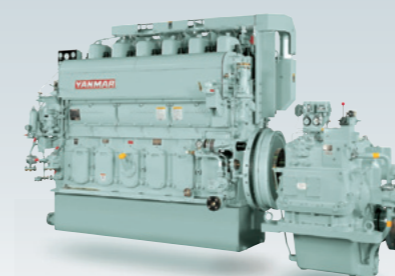
Engine Model	8N330-UW		8N330-SW		8N330-EW	
No. of Cylinders	8					
Cylinder Bore×Stroke	mm 330×440					
Rated Output	kW(PS) 2942 (4000)		3163 (4300)		3310 (4500)	
Engine Speed	min ⁻¹ 620					
Dry Weight	kg 43000					
Propeller Type	for C.P.P.		for F.P.P.		for C.P.P.	
Marine Gear Model	Offset	MGR8044V96	MGN8044V96	MGR8044V96	MGN8044V96	MGR8044V96
	Co-Axial	MGR8044V96	MGN8044V96	MGR8044V96	MGN8044V96	MGR8044V96
Reduction Gear Ratio (Ahead)	Offset	2.53, 3.03, 3.55, 4.00, 4.46				
	Co-Axial	2.53, 3.03, 3.55, 4.00, 4.46				
Marine Gear Dry Weight	Offset	14200	13700	14200	13700	14200
	Co-Axial	14200	13700	14200	13700	14200
Total Dry Weight with Marine Gear	Offset	57538	57038	57538	57038	57038
	Co-Axial	57538	57038	57538	57038	57038

The engine dry weight and outline may differ depending upon the specifications and attached accessories.

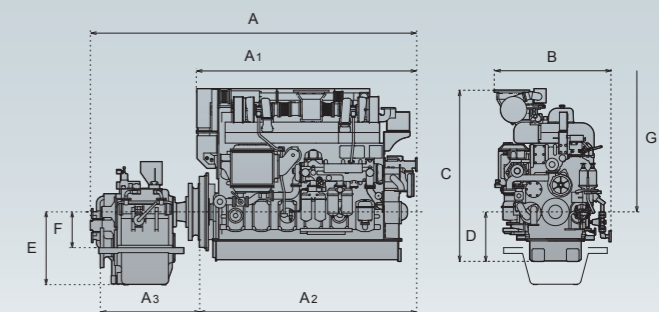
Marine Propulsion Diesel Engine

6N21AW

• Power : 662~956kW



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6N21A-DW		6N21A-UW		6N21A-SW		6N21A-EW	
No. of Cylinders	6							
Cylinder Bore×Stroke	mm 210×290							
Rated Output	kW(PS) 662 (900)	736 (1000)	883 (1200)	956 (1300)				
Engine Speed	min ⁻¹ 800				850			
Dry Weight	kg 8000				8500			
Propeller Type	for F.P.P.							
Marine Gear Model	Offset	Y-850		YX-1000				
	Co-Axial	YC-850		YX-1000C				
Reduction Gear Ratio (Ahead)	Offset	1.84, 2.07, 2.35, 2.68		2.03, 2.36, 2.78, 3.32				
	Co-Axial	1.84, 2.07, 2.35, 2.68		2.03, 2.36, 2.78, 3.32				
Marine Gear Dry Weight	Offset	2050		2400				
	Co-Axial	2150		2565				
Total Dry Weight with Marine Gear	Offset	10128	10478	10478		10494		
	Co-Axial	10228	10643	10643		10659		

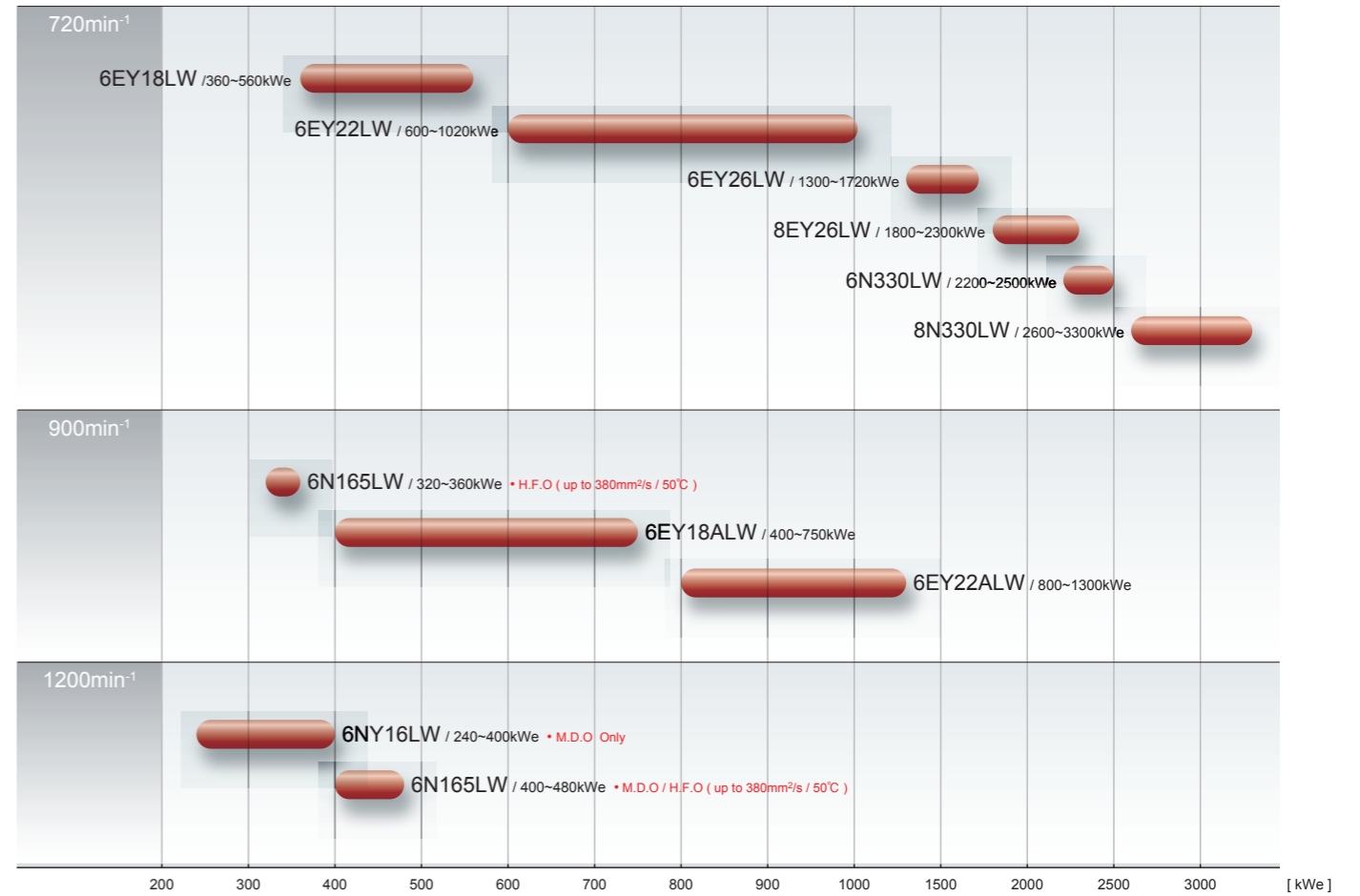
The engine dry weight and outline may differ depending upon the specifications and attached accessories.

Marine Auxiliary Diesel Engine Line-up

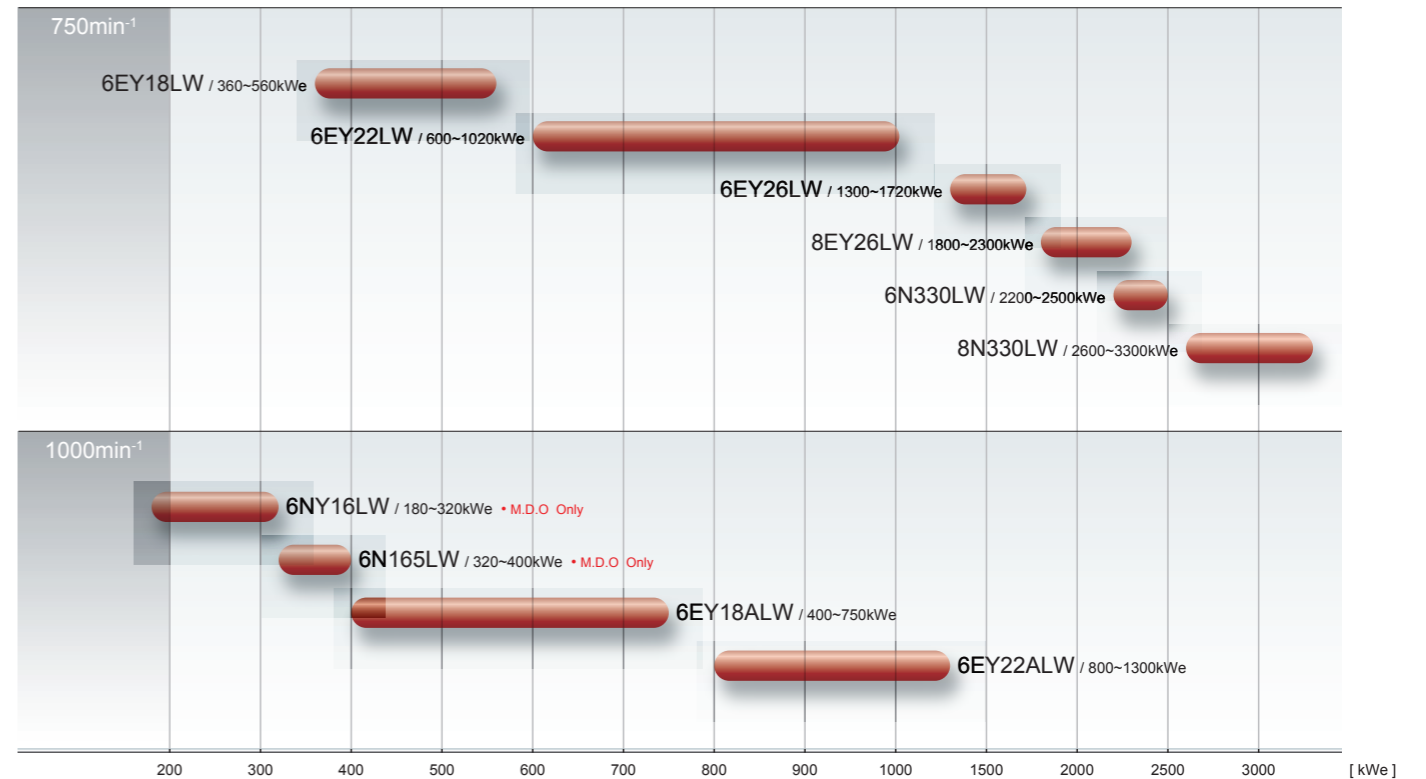
Generator Capacity

Fuel Oil : M.D.O / H.F.O (up to 700mm²/s / 50°C)

60Hz



50Hz



Series	Models	Output (kW)					Dimensions (mm)							
		Engine Speed (min ⁻¹)												
		720	750	900	1000	1200	A	A'	B	C	D	E	F	G
6NY16LW	6NY16L-HW				200	265	3097	1972	1265	1813	2530	940	800	1983
	6NY16L-DW				245	310	3097	1972	1265	1813	2530	940	800	1983
	6NY16L-UW				270	355	3117	1972	1265	1813	2530	940	800	1983
	6NY16L-SW				310	400	3112	1972	1265	1813	2530	940	800	1983
	6NY16L-EW				353	441	3172	1972	1265	1813	2530	940	800	1983
6N165LW	6N165L-UW				353	441	3182	1982	1341	1999	2700	990	800	2105
	6N165L-SW			353			3332	2012	1557	1999	2800	990	800	2105
	6N165L-EW			397	485		3332	2012	1341	1999	2800	990	800	2105
				441	530		3332	2012	1341	1999	2800	990	800	2105
6EY18LW	6EY18LW	400 ~ 615					4441	2751	1493	2255	3620	1070	915	2564
6EY18ALW	6EY18ALW	455 ~ 615					4391	2751	1489	2255	3620	1070	915	2564
		660 ~ 800					4680	2751	1489	2255	3720	1070	915	2564
6EY22LW	6EY22LW	660 ~ 1080					5452	3337	1678	2630	4120	1180	985	2907
6EY22ALW	6EY22ALW	880 ~ 1370					5647	3337	1782	2675	4310	1180	985	2907
6EY26LW	6EY26LW	1400 ~ 1620					6474	3974	1847	3520	5270	1420	1250	3150
		1730 ~ 1840					6774	3974	1847	3520	5270	1420	1250	3150
8EY26LW	8EY26LW	1900 ~ 2130					8258	5290	2030	3665	6720	1420	1250	3150
		2245					8358	5290	2030	3665	6800	1420	1250	3150
		2450					8418	5290	2030	3665	6840	1420	1250	3150
6N330LW	6N330L-EW	2354					7651	4817	2622	4111	6740	1740	1450	3835
	6N330L-GW	2648					7651	4817	2622	4111	6740	1740	1450	3835
8N330LW	8N330L-UW	2795					9550	5975	2480	4000	7900	1740	1450	3835
	8N330L-SW	2942					9550	5975	2480	4000	7900	1740	1450	3835
	8N330L-EW	3089					9550	5975	2480	4000	7900	1740	1450	3835
	8N330L-GW	3530					9550	5975	2480	4000	7900	1740	1450	3835
6N21LW	6N21L-DW	615					4683	2783	1544	2410	3860	1180	950	2752
	6N21L-UW	660					4683	2783	1544	2410	3860	1180	950	2752
	6N21L-SW	745					4683	2783	1544	2410	3860	1180	950	2752
	6N21L-EW	800					4683	2783	1544	2410	3860	1180	950	2752
6N21ALW	6N21AL-DW	745					4853	2783	1544	2410	3860	1180	950	2752
	6N21AL-UW	800					4853	2783	1544	2410	3860	1180	950	2752
	6N21AL-SW	880					4853	2783	1584	2550	3860	1180	950	2752
	6N21AL-EW	970					4853	2783	1584	2550	3860	1180	950	2752
		1020					4853	2783	1584	2550	3860	1180	950	2752

The dimensions for the diesel engine generator sets are simply reference values. The values may differ for different generator manufacturers.

Marine Auxiliary Diesel Engine
6NY16LW
• Generator Capacity : 180~400kWe

Dimensions

G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6NY16L-HW	6NY16L-DW	6NY16L-UW	6NY16L-SW	6NY16L-EW					
No. of Cylinders	6									
Cylinder Bore×Stroke	mm 160×200									
Rated Output	kW(PS)									
	200 (272)	265 (360)	245 (333)	310 (421)	270 (367)	355 (483)	310 (421)	400 (544)	353 (480)	441 (600)
Generator Capacity	kWe									
	180	240	220	280	240	320	280	360	320	400
Engine Speed	min ⁻¹									
	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
Dry Weight	kg									
	2880									
Total Weight (Gen.Set)	kg									
	5870									

The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine
6N165LW
• Generator Capacity : 320~480kWe

Dimensions

G : Minimum Height for Removing Piston

This Photograph Shows Model 6N165L. (IMO Tier I).

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6N165L-UW	6N165L-SW	6N165L-EW					
No. of Cylinders	6							
Cylinder Bore×Stroke	mm 165×232							
Rated Output	kW(PS)							
	353 (480)	441 (600)	353 (480)	397 (540)	485 (660)	397 (540)	441 (600)	530 (720)
Generator Capacity	kWe							
	320	400	320	360	450	360	400	480
Engine Speed	min ⁻¹							
	1000	1200	900	1000	1200	900	1000	1200
Dry Weight	kg							
	4100							
Total Weight (Gen.Set)	kg							
	6410		7160					

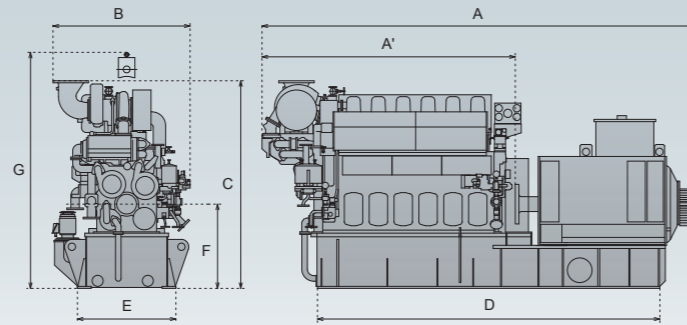
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.
※1000min⁻¹ : for MDO Application Only. ※900min⁻¹ : for HFO Application Only.

Marine Auxiliary Diesel Engine
6EY18(A)LW

• Generator Capacity : 360~750kWe



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6EY18LW						6EY18ALW						
No. of Cylinders	6												
Cylinder Bore×Stroke	mm 180×280												
Rated Output	kW(PS)												
	400 (544)	450 (612)	500 (680)	550 (748)	615 (836)	455 (619)	500 (680)	550 (748)	615 (836)	660 (897)	680 (925)	745 (1013)	800 (1088)
Generator Capacity	kWe												
	360	400	450	500	560	400	450	500	560	600	620	680	750
Engine Speed	min ⁻¹												
	720/750	720/750	720/750	720/750	720/750	900/1000	900/1000	900/1000	900/1000	900/1000	900/1000	900/1000	900/1000
Dry Weight	kg 6600												
Total Weight (Gen.Set)	kg 11200						kg 12100						

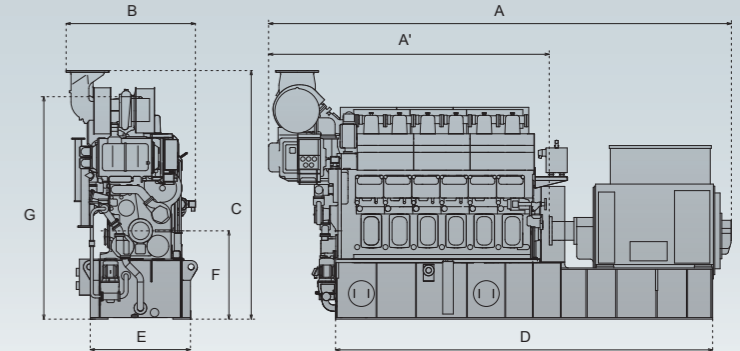
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine
6EY26LW

• Generator Capacity : 1300~1720kWe



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6EY26LW			
No. of Cylinders	6			
Cylinder Bore×Stroke	mm 260×385			
Rated Output	kW(PS)			
	1400 (1903)	1620 (2203)	1730 (2352)	1840 (2502)
Generator Capacity	kWe			
	1300	1500	1600	1720
Engine Speed	min ⁻¹			
	720/750	720/750	720/750	720/750
Dry Weight	kg 18500			
Total Weight (Gen.Set)	kg 29800		kg 30600	

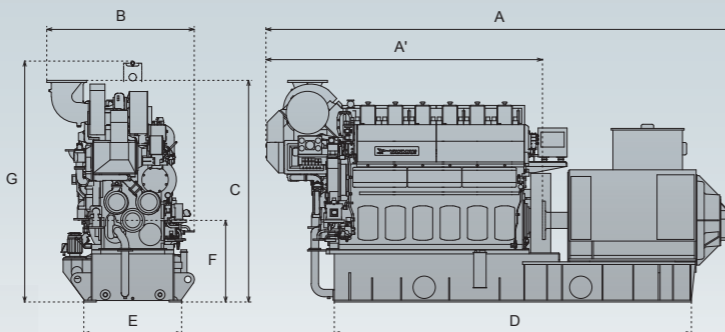
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine
6EY22(A)LW

• Generator Capacity : 600~1300kWe



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

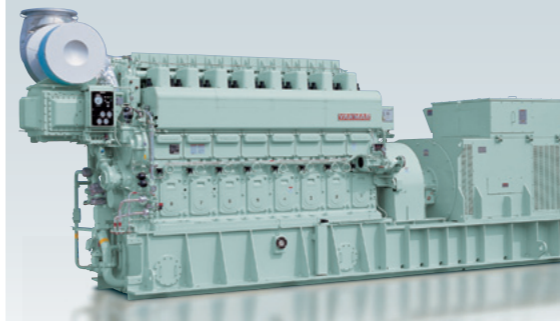
Specifications

Engine Model	6EY22LW						6EY22ALW						
No. of Cylinders	6												
Cylinder Bore×Stroke	mm 220×320												
Rated Output	kW(PS)												
	660 (897)	745 (1013)	800 (1088)	880 (1197)	970 (1319)	1080 (1468)	880 (1197)	970 (1319)	1020 (1387)	1100 (1496)	1180 (1604)	1300 (1768)	1370 (1863)
Generator Capacity	kWe												
	600	680	740	800	900	1020	800	900	950	1000	1100	1200	1300
Engine Speed	min ⁻¹												
	720/750	720/750	720/750	720/750	720/750	720/750	900/1000	900/1000	900/1000	900/1000	900/1000	900/1000	900/1000
Dry Weight	kg 11200						kg 10500						
Total Weight (Gen.Set)	kg 18500						kg 18100						

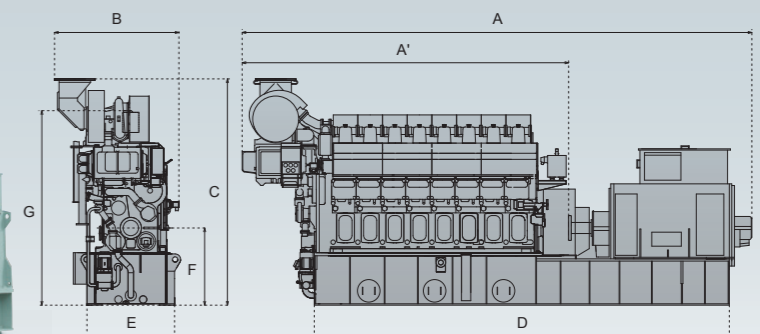
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine
8EY26LW

• Generator Capacity : 1800~2300kWe



Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	8EY26LW				
No. of Cylinders	8				
Cylinder Bore×Stroke	mm 260×385				
Rated Output	kW(PS)				
	1900 (2583)	2030 (2760)	2130 (2896)	2245 (3052)	2450 (3331)
Generator Capacity	kWe				
	1800	1900	2000	2100	2300
Engine Speed	min ⁻¹				
	720/750	720/750	720/750	720/750	720/750
Dry Weight	kg 24500				
Total Weight (Gen.Set)	kg 40000		kg 40200		kg 45000

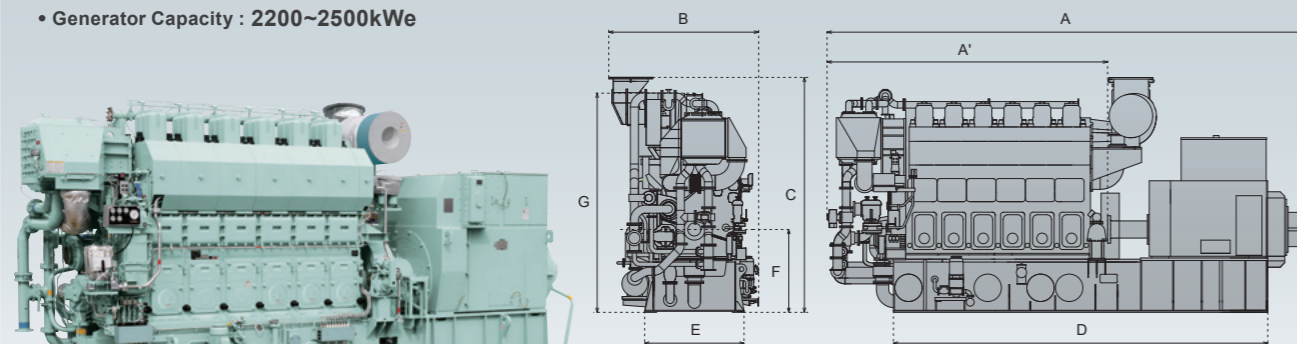
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine

6N330LW

• Generator Capacity : 2200~2500kWe

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6N330L-EW	6N330L-GW
No. of Cylinders	6	
Cylinder Bore×Stroke	mm 330×380	
Rated Output	kW(PS) 2354 (3200)	2648 (3600)
Generator Capacity	kWe 2200 2500	
Engine Speed	min ⁻¹ 720/750 720/750	
Dry Weight	kg 35000	
Total Weight (Gen.Set)	kg 52000	

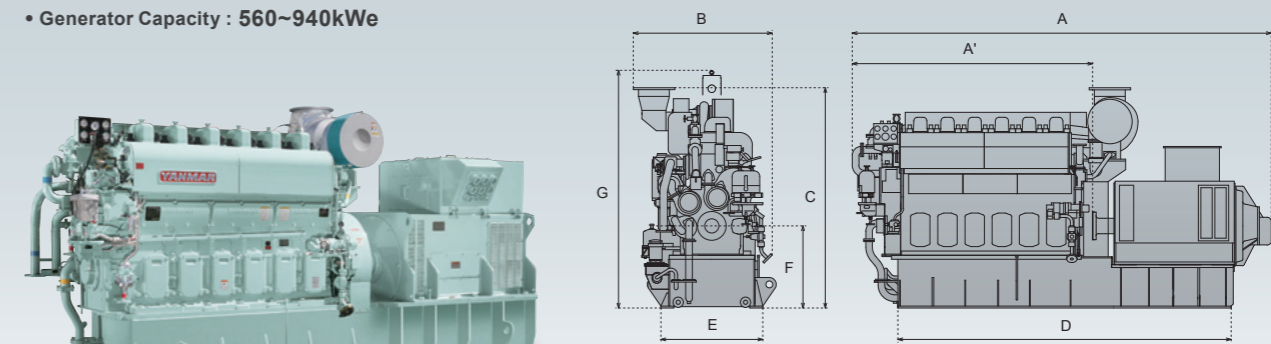
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine

6N21(A)LW

• Generator Capacity : 560~940kWe

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	6N21L-DW	6N21L-UW	6N21L-SW	6N21L-EW	6N21AL-DW	6N21AL-UW	6N21AL-SW	6N21AL-EW	6N21AL-GW
No. of Cylinders	6								
Cylinder Bore×Stroke	mm 210×290								
Rated Output	kW(PS) 615 (836)	660 (897)	745 (1013)	800 (1088)	745 (1013)	800 (1088)	880 (1197)	970 (1319)	1020 (1387)
Generator Capacity	kWe 560 600 680 740 680 740 800 900 940								
Engine Speed	min ⁻¹ 720/750 720/750 720/750 720/750 900/1000 900/1000 900/1000 900/1000 900/1000								
Dry Weight	kg 9100				8800				
Total Weight (Gen.Set)	kg 14900				14700				

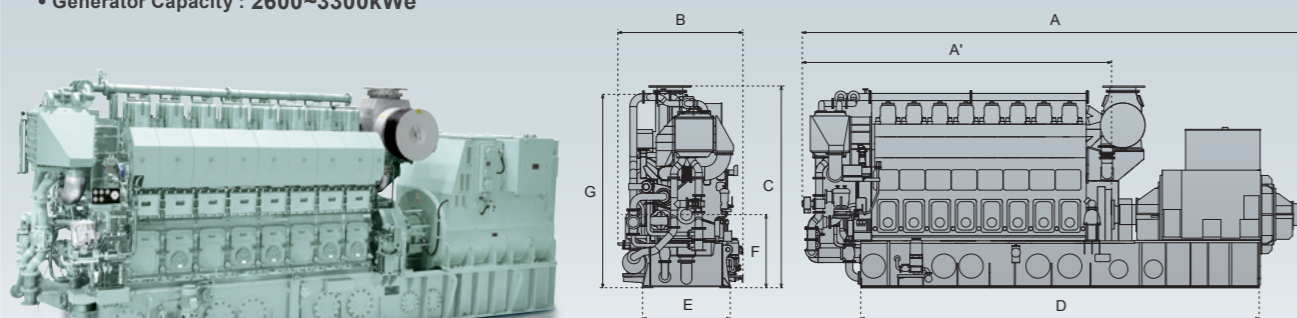
The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

Marine Auxiliary Diesel Engine

8N330LW

• Generator Capacity : 2600~3300kWe

Dimensions



G : Minimum Height for Removing Piston

The photograph and outline may differ depending upon the specifications and attached accessories.

Specifications

Engine Model	8N330L-UW	8N330L-SW	8N330L-EW	8N330L-GW
No. of Cylinders	8			
Cylinder Bore×Stroke	mm 330×380			
Rated Output	kW(PS) 2795 (3800)	2942 (4000)	3089 (4200)	3530 (4800)
Generator Capacity	kWe 2600 2750 2900 3300			
Engine Speed	min ⁻¹ 720/750 720/750 720/750 720/750			
Dry Weight	kg 45000			
Total Weight (Gen.Set)	kg 71000			

The engine dry weight may differ depending upon the specifications and attached accessories. Above generator capacity will vary according to actual generator efficiency.

11 major ship certifications

The Amagasaki Plant has been certified by the world's 11 major ship classification societies. Its voluntary inspection program was certified by the 11 ship classification societies for the first time in the world.



Amagasaki plant



Certifications of 11 major shipping classification societies

NK
[Nippon Kaiji Kyokai]

ABS
[American Bureau of Shipping]

LR
[Lloyd's Register of Shipping]

DNV
[Det Norske Veritas]

RINA
[Registro Italiano Navale]

BV
[Bureau Veritas]

KR
[Korean Register of Shipping]

CCS
[China Classification Society]

GL
[Germanischer Lloyd]

IRS
[Indian Register of Shipping]

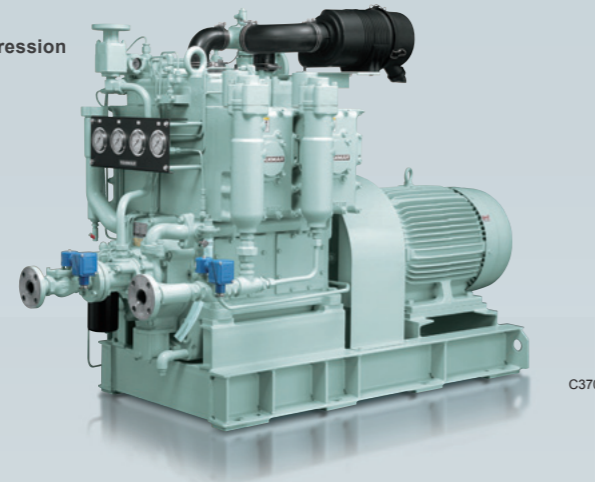
RS
[Russian Maritime Register of Shipping]

Marine Compressor

Line-up

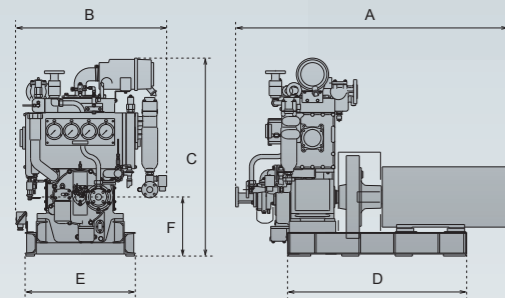
Marine Compressor C SERIES

• The Water-Cooled, Vertical, 2-Stage Compression



C370

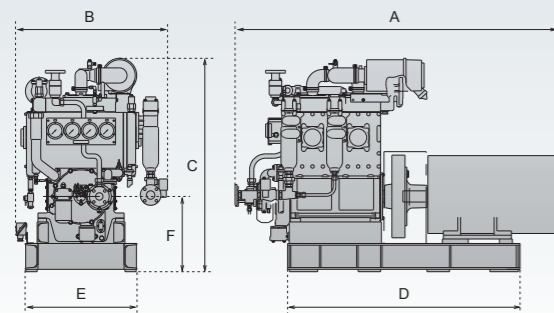
■ C185 / C220 / C300



Dimensions (mm)

Model	A	B	C	D	E	F
C185	1467	892	1160	1040	640	343
C220	1467	892	1160	1040	640	343
C300	1587	892	1160	1040	640	343

■ C370 / C450 / C550



Dimensions (mm)

Model	A	B	C	D	E	F
C370	1855	892	1250	1350	650	437
C450	1875	892	1250	1350	650	437
C550	1936	892	1250	1350	650	437

Specifications

Depending on the specifications or options that have been chosen, your model may differ slightly from the one in the outline.

Model	C185	C220	C300	C370	C450	C550
No. of Cylinders	1			2		
Pressure	2.45					
	2.94					
Rev	1200					
Air Capacity	85	110	140	170	220	275
	80	105	135	160	215	270
Motor Output	18.5	22	30	37	45	55
	18.5	22	30	37	45	55
Dry Weight	415	435	435	700	740	740
Set Weight	775	775	810	1170	1220	1365

The compressor dry weight and outline may differ depending upon the specifications and attached accessories.
The dimensions and weight for motor set are reference value, the value may differ depending on the motor manufactures.

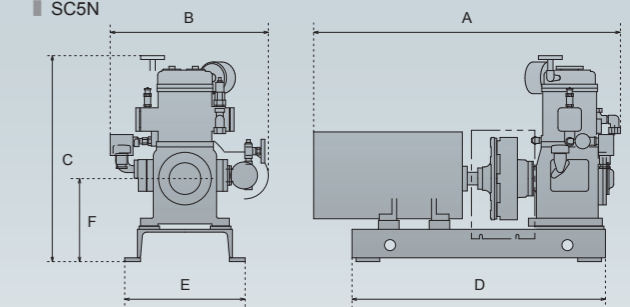
Marine Compressor SC SERIES

• The Water-Cooled, Vertical, 2-Stage Compression



SC10N

■ SC5N



Dimensions (mm)

Model	A	B	C	D	E	F
SC2G	733	340	514	550	330	211
SC5N	1019	499	650	800	380	262
SC7N	1049	530	875	810	400	302
SC10N	1127	559	935	870	430	302
SC12.5N	1174	556	890	870	430	302

Specifications

Depending on the specifications or options that have been chosen, your model may differ slightly from the one in the outline.

Model	SC2G			SC5N			SC7N			SC10N			SC12.5N		
No. of Cylinders	1														
Pressure	2.45														
	2.94														
Rev	900	1000	1200	900	1000	1200	900	1000	1200	900	1000	1200	900	1000	1200
Air Capacity	6.0	6.6	7.8	13.6	14.9	17.6	24.7	27.2	32	36	40	47	54	60	67
	5.8	6.3	7.5	13.0	14.3	16.9	23.8	26.1	30	35	38	45	52	58	65
Motor Output	2.2			3.7			5.5			7.5			11		
	2.2			3.7			5.5			7.5			11		
Dry Weight	36			63			111			134			145		
Set Weight	109			208			351			460			490		

The compressor dry weight and outline may differ depending upon the specifications and attached accessories.
The dimensions and weight for motor set are reference value, the value may differ depending on the motor manufactures.

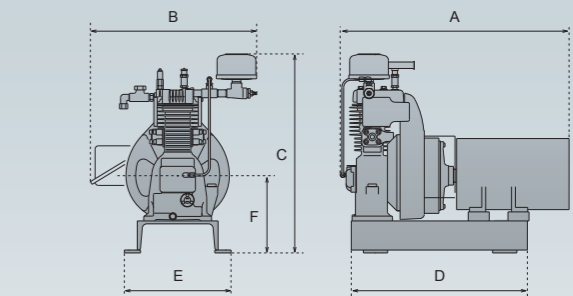
Marine Compressor KSC SERIES

• The Air-Cooled, Vertical(V), 2-Stage Compression



KSC3N

■ KSC3N



Dimensions (mm)

Model	A	B	C	D	E	F
KSC3N	711	515	616	545	330	239
KSC7	1190	520	744	930*	330*	299*

* Motor Output 5.5kW

Specifications

Depending on the specifications or options that have been chosen, your model may differ slightly from the one in the outline.

Model	KSC3N						KSC7			
No. of Cylinders	1						V2			
Pressure	2.45									
	2.94									
Rev	1000	1200	1500	1800	750	900	1200			
Air Capacity	6.8	7.9	9.2	10.5	14.2	17.1	22.8			
	6.6	7.7	9.0	10.3	13.8	16.5	22.0			
Motor Output	2.2			3.7			3.7		5.5	
	2.2			3.7			3.7		5.5	
Dry Weight	36						136			
Set Weight	111						278			

The compressor dry weight and outline may differ depending upon the specifications and attached accessories.
The dimensions and weight for motor set are reference value, the value may differ depending on the motor manufactures.

Large Power Products Operations Division Amagasaki Plant

Development and Production of World-class Quality Large Diesel Engines

The Large Power Products Operations Division has a long history among YANMAR's wide variety of businesses. The Amagasaki Plant was the first plant to open in 1936 as the world's first practical small diesel engine plant. In time, the plant started mass-producing diesel engines and gas engines for ship propulsion, power generation, land application, and general use. The plant also started producing gas turbines in 1983. YANMAR is the only integrated manufacturer producing all of these products and other products by itself. In addition, we also promote automation and energy saving with the use of own high-performance specialized machines and state-of-the-art machines. We produce superior products through the establishment of an order entry system that suits the characteristics of products, and a superior quality control system.



Large Diesel Engine Assembly Process



Operation Process



Outfitting Process



Design using 3D-CAD



Development meeting towards product commercialization



Technical Training School

Internationally Certified Quality Control and Environmental Response

In July 1992, the Large Power Products Operations Division was certified under ISO 9001*1 by a certification authority in England, Lloyd's Register Quality Assurance Limited (LRQA). And in June 1997 under ISO 14001*2 for the first time as a plant producing large land and marine diesel engines. In addition, we also met IMO emissions control regulations (with NOx emission values) (Tier I in 2000 and Tier II in 2011) for the first time as a Japanese engine manufacturer. Our advanced technological capabilities for environmental conservation are highly recognized worldwide.



*1) ISO 9001:
International Quality Control System Standard of the International Standardization Organization, (Certification No. 912208)



*2) ISO 14001:
International Environmental Management System Standard of the International Standardization Organization, (Certification No. 770250)

History

Great Footsteps that Pave the Way and Make History;
The History of the Large Power Products Operations Division

1912 >
• Founded as Yamaoka Hatsudoki Kosakusho.

1978 >
• Plant certified by ABS (American Bureau of Shipping) and LR (Lloyd's Register of Shipping), becoming the first plant in Japan to be so honored by the major ship classification organizations of Japan, U.K. and U.S.A., the major marine transportation countries of the world.

1991 >
• Production level of large-sized engines reached 100,000 units.

• Plant certified by RINA (Registro Italiano Navale).

1992 >
• Certified by LRQA (Lloyd's Register Quality Assurance) for ISO9001 Quality Assurance System.

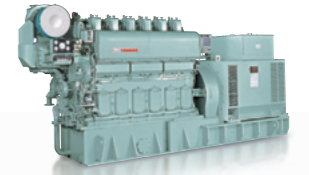
1997 >
• Certified under ISO14001 (International Standard for Environmental Management System) by LRQA in June, first among Japanese engine manufacturers.

1998 >
• Three series of Yanmar marine engines certified first in Japan by IMO (International Maritime Organization) for complying with its NOx emissions in regulations.

1999 >
• Our new products of diesel engine " SAVETEN " series which advance of low NOx and low fuel oil consumption are on the commercial.



2010 >
• Released Model 6EY22.



2012 >
• Yanmar celebrated the 100th anniversary of its founding.

• Received a designation for approved factories by IRS (Indian Register of Shipping).

• Released Model 6EY17.



2013 >
• Received a designation for approved factories by RS (Russian Maritime Register of Shipping).

2002 >
• The Name of the company changed to Yanmar Co., Ltd.

1984 >
• Plant certified by NV (Det Norske Veritas).

1968 >
• Awarded Deming Prize for pursuing distinguished quality control.



1952 >
• Name changed to Yanmar Diesel Engine Co., Ltd.

1936 >
• Founded as Yamaoka Nainenki (internal combustion engine) Company Ltd. with 3 million yen on a 40,000m² site in Nagasu Oda-mura, Kawabe-gun, Hyogo Pref. Manufactured diesel engines together with Yamaoka Hatsudohki Kosakusho (engine mfg.) Co., Ltd.

2009 >
• Received supervision for approved factories by CCS (China Classification Society).

• The 6EY18 engine model received a certificate from IMO (International Maritime Organization) for NOx Tier II standards that will be applicable from 2011, making Yanmar the first domestic ship engine manufacturer to receive the certificate.



• Received a designation for approved factories by GL (Germanischer Lloyd).

2008 >
• Received supervision for approved factories by KR (Korean Register of Shipping).

2007 >
• Completion of the Amagasaki Plant Development Laboratory, aimed at strengthening emissions standards and systems for developing new products as well as strengthening systems for producing large-sized products.

2006 >
• The Large Power Products Operations Division celebrated its 70th anniversary.

2005 >
• Received supervision for approved factories by BV (Bureau Veritas).

