

# YANMAR POWER TECHNOLOGY CO., LTD. Large Power Products Business

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yanmar.com/global/



001B0-G00230 2006®



PRODUCT GUIDE

# MARINE DIESEL ENGINE

MARINE PROPULSION POWER RANGE [ 374~4500kW ] MARINE AUXILIARY GENERATOR CAPACITY [ 180~4600kWe ]

Low emission

Low fuel consumption

# Earth friendly

Safe &

High reliabillty

High efficiency

Easy maintenance

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- 08P Marine dual fuel engine
- 09P Marine spring vibration isolating system

# **Limitless Blue Skies and Oceans**



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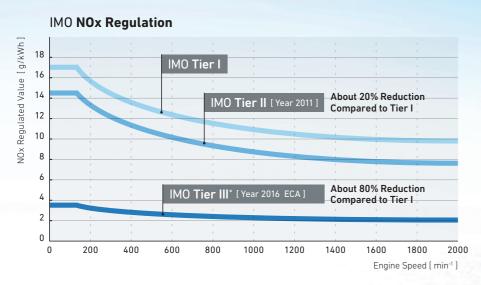
# **Clean and Reliable Technology**

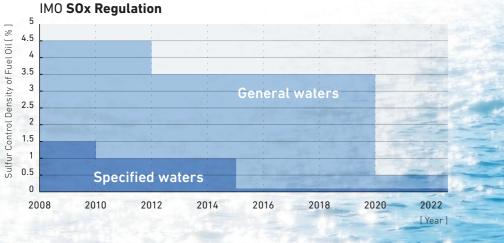
IMO Tier III\* requires ships built from 2016 onwards

in designated emission control areas (ECAs) to have an 80% Nox reduction from Tier I levels. By 2020, sulfur content of less than 0.5% will be required for all ships as well. Time and time again, YANMAR technology has proven itself to be reliable in a wide range of commercial marine engines. In addition to this, to stay a head of the game we are continually making new technology that meets tightening emissions regulations. In addition to providing our customers with the products they need, we also improve "Life Cycle Value" of our products.

With a focus on harmony with nature,

YANMAR delivers optimized solutions that support longer ship life.





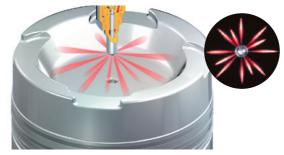
\* Tier III is applied in general waters ECA = Emission Control Area IMO = International Maritime Organization ogen Oxides **SOx** = Sulfur Oxides

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

# **ASSIGN combustion system**

# • Staggered Layout Multi-Hole Nozzle

The vibration noise mainly in the low frequency band was difficult to reduce until now. However, we can drastically reduce it by the metal spring with high quality vibration damping performance. We will contribute to further improvement of the shipboard environment.

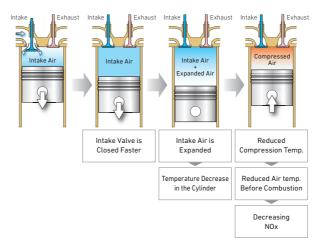


Staggered Layout Injection System

# High pressure miller cycle system

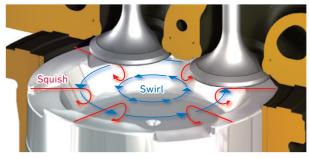
# Miller type cam

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.



# • Air Flow Motion

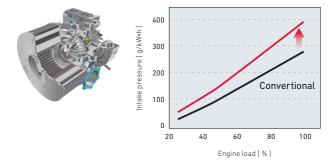
The optimally shaped air intake port generates a suitable swirl (votex flow) in the combustion chamber as well as a squish in the compression stroke. This promotes fuel / air mixing, improving combustion efficiency.



Intake Swirl and Squish

# • High pressure ratio turbocharger

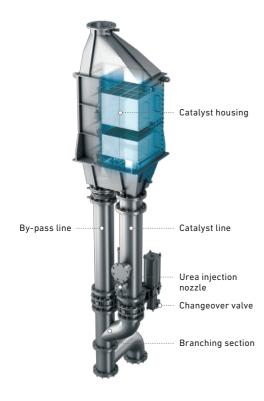
Increasing the intake pressure by high pressure ratio turbocharger during the short intake stroke ensures the quantity of charged air and fixes the cylinder pressure to restrain the increase of the specific fuel consumption.



# **NEW TECHNOLOGY** YANMAR SOLUTION

# SCR system

# 2-stage turbocharging system



# SCR system developed in-house by YANMAR to meet to IMO Tier III NOx regulations.

YANMAR has developed SCR system that meets to IMO Tier III regulations, which require an 80%, i.e. big reduction in NOx compared with Tier I. Making use of our original technology and wealth of experience, we have created a system whose design and functionality are optimized for marine vessels, and which is perfectly matched for use with diesel engines, both in ECA and non-ECA waters. In addition, repeated verification tests have been conducted on ocean-going vessels ( equipped with SCR system for 3 auxiliary engines ) to further improve the system.



On board SCR system installation on test bench

# • Maintaining highly NOx reduction performance whilst ensuring safety.

The by-pass branching section and catalytic reactor have been integrated into a single unit, achieving high-performance NOx reduction. Engines equipped with our SCR system is obtained NOx certification (Scheme A), whilst maintaining performance onboard. Additionally, a urea injection nozzle is installed downstream from the branching section, preventing ammonia from leaking into the by-pass line.

# Long lifetime of catalyst.

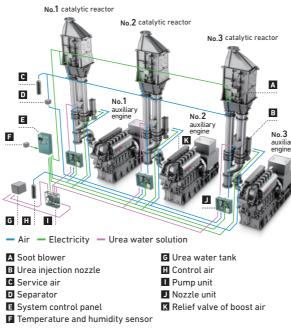
Catalyst degradation occurs due to the flow of small amounts of exhaust gas into the catalyst line when the by-pass is in operation. Specification not to flow the exhaust gas realizes longer lifetime of catalyst.

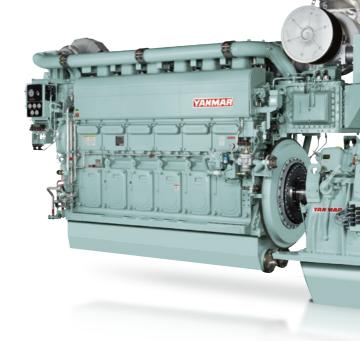
|   | Standard<br>spec. | Optional<br>spec. 1 | Optional<br>spec. 2 |
|---|-------------------|---------------------|---------------------|
| Changeocver valve installed to catalystic reactor outet | —                 | ○*1                 | _                   |
| Purge air   | Req'd             | Not req'd           | Not req'd           |
| Blower fan unit   | _                 | —                   | ○ *2                |

\*1 Overall height of catalystic reactor outlet becomes higher than standard \*2 To be installed on hull side : 2019-

# • Automatic control for multiple engines.

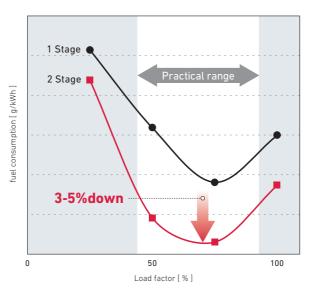
Control unit integrates all devices including catalytic reactors mounted to each individual engine. A single pump unit and control panel can manage system for multiple engines, allowing the system to remain compact.





# Evolution of high pressure Miller cycle system

We aguired the air by using the "2 stage turbocharging system" in spite of advanced closing timing of suction valve to compare with "1 stage turbocharging system". As a result, we could achieve the low fuel consumption in wide load.



Note: Specifications may differ according to vessel classification



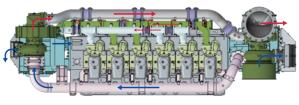
# Ultra low fuel consumption of 4-stroke medium speed diesel engine.

YANMAR has always pursued low fuel consumption as its corporate creed "Fuel reward to Nation" since foundation. This time, we developed the "2-stage turbocharging system" compliant with IMO secondary regulation, further evolving the engine, achieving fuel economy far superior to the conventional engine.

# • Simple system

It is easy to maintain the system, because it is simple system that two turbochargers and two air coolers are only connected by suction air pipes and exhaust pipe.

◎ Top view



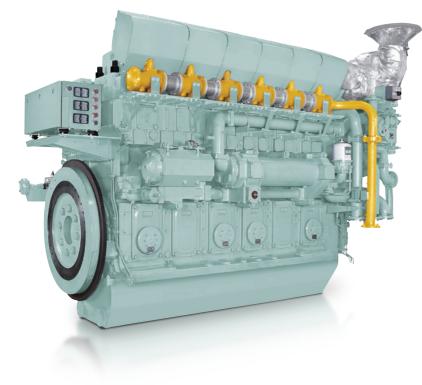
Intake ----> Exhaust

# Unchanged mountability and Good acceleration

We arranged turbocharger & air-cooler unit on both sides of the engine. By this structure, we could achieve the equivalent mountability as the base engine by keeping the height of engine. This engine has good acceleration at low load by adapting dynamic pressure type exhaust manifold.



# Marine dual fuel engine

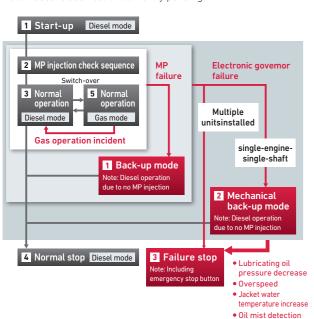


# Comply with environmental regulations by using both diesel and gas fuels.

The use of natural gas is now attracting attention within the marine engine sector, both as a means of addressing fluctuating fuel costs, and as a way of reducing the burden on the environment. Basing on our reliable engines that will improve life cycle value for our customers, YANMAR have developed a dual fuel engine that can use both diesel and gas, which complies with IMO NOx Tier III regulations as well as SOx Emission Control Area.

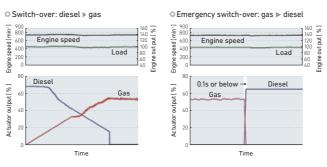
 Safe System for use in single-engine-single-shaft vessels

YANMAR has developed a unique control system. Through multiplexing of devices, this system achieves safety and redundancy even with single-engine-single-shaft vessels, allowing you to navigate with peace of mind. Note: Vessel classification currently pending



# • Switch fuels even at 100% output

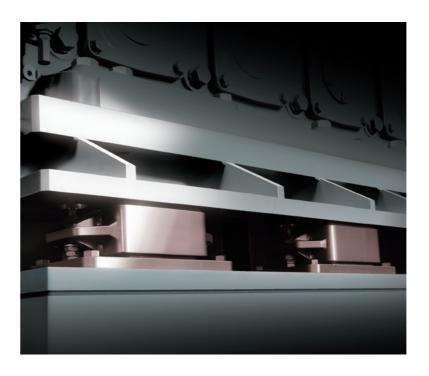
Freely select which fuel to use. The system makes it possible to switch from diesel mode to gas mode during navigation, with no output restrictions. Furthermore, during emergencies the system can shift safely and instantaneously from gas mode back to diesel mode.



# • Can operate with natural gas in any region

Through real-time analysis of cylinder internal pressure together with high-speed control, this system avoids abnormal combustion (knocking) even when running on natural gases with a low methane number. Offering superior combustion stability, this engine can operate with natural gas in any region and with no output restrictions.

# Marine spring vibration isolating system

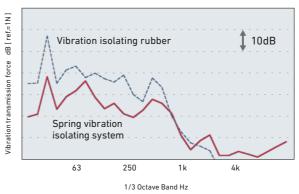


Ministry of Land, Infrastrure, Trnsport and Tourism approval Acquisition of certificate by Nippon Kaiji Kyokai Association

# • Reduce vibration noise inside ship

The vibration noise mainly in the low frequency band was difficult to reduce until now. However, we can drastically reduce it by the metal spring with high quality vibration damping performance. We will contribute to further improvement of the shipboard environment.

 $\ensuremath{\mathbb O}$  Isolation performance



# Latest system to help comfort and reduce maintenance

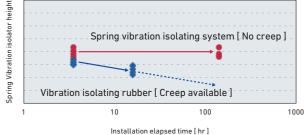
In YANMAR, utilizing the technology accumulated over many years in vibration isolating rubber for marine engines and metal spring vibration isolating system for land engines, we have developed a marine metal spring isolation system with support of Japan Railway Construction, Transport and Technology Agency.

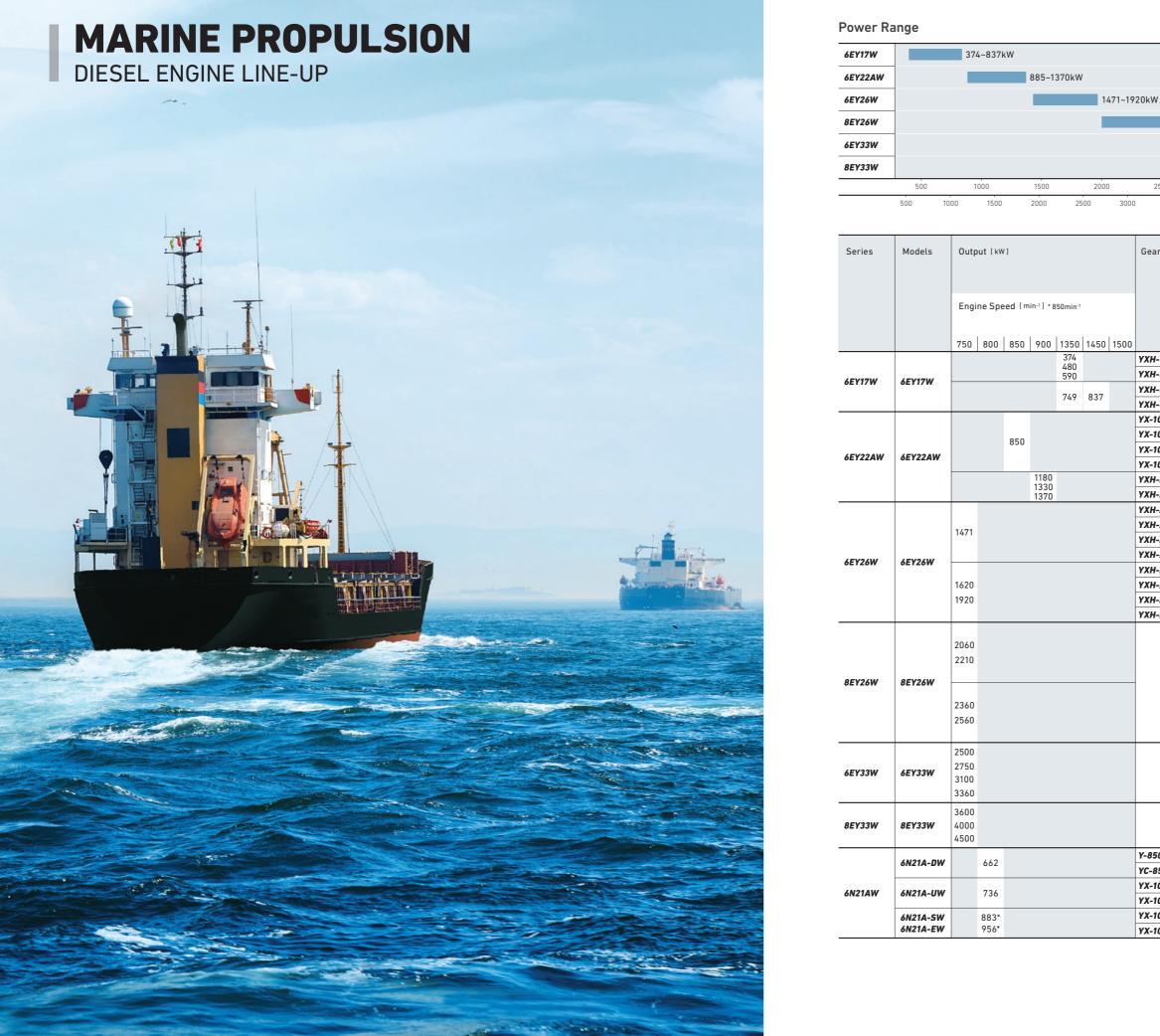
It realizes more excellent vibration proofing effect and maintenance-free than rubber. And it helps comfortable shipboard environment and low cost.

# • Maintenance-free

There is no creep phenomenon in the metallic spring vibration isolating system, so it is almost unnecessary to replace and maintenance, and contributes to cost reduction.







| 2060~ | 2560kW |      |          |      |        |        |
|-------|--------|------|----------|------|--------|--------|
|       |        | 25   | 00~33601 | ٨W   |        |        |
|       |        |      |          |      | 3600~4 | 4500kW |
| )     | 3000   | 35   | 00       | 4000 | 4500   | [ kW ] |
| 500   | 4000   | 4500 | 5000     | 5500 | 6000   | [PS]   |

|   | Gear       | Dime<br>[mm | nsions | -    |      | A<br>A1 |          | c     | В    | G                        |      |
|---|------------|-------------|--------|------|------|---------|----------|-------|------|--------------------------|------|
|   |            |             | E      | F    | A3   | A       |          |       |      | <br>mum Heig<br>lemoving |      |
| D |            | A           | A1     | A2   | A3   | в       | с        | D     | E    | F                        | G    |
|   | YXH-500    | 2908        |        |      | 615  |         |          |       | 682  | 349                      |      |
|   | YXH-500L   | 3091        | 2/10   | 215/ | 794  | 1005    | 1813     | (00   | 862  | 429                      | 1200 |
|   | YXH-500    | 2908        | 2410   | 2154 | 615  | 1305    | 1000     | 620   | 682  | 349                      | 1300 |
|   | YXH-500L   | 3091        |        |      | 794  |         | 1882     |       | 862  | 429                      |      |
|   | YX-1000    | 4574        |        |      | 1488 |         |          |       | 885  | 435                      |      |
|   | YX-1000C   | 4687        |        |      | 1601 |         |          |       | 450  | -                        |      |
|   | YX-1000    | 4603        | 3647   | 2965 | 1517 | 1618    | 2416     | 666   | 885  | 435                      | 1922 |
|   | YX-1000C   | 4636        | 0047   | 2700 | 1550 | 1010    | 2410     | 000   | 450  | -                        | 1722 |
|   | YXH-2000   | 4810        |        |      | 1807 |         |          |       | 1145 | 590                      |      |
|   | YXH-2000C  | 4960        |        |      | 1957 |         |          |       | 555  | -                        |      |
|   | YXH-2000M  | 5702        |        |      | 1882 |         |          |       | 1145 | 590                      |      |
|   | YXH-2000MC | 5880        |        |      | 2322 |         | 3112 842 |       | 555  | -                        | 1900 |
|   | YXH-2000   | 5483        |        |      | 1882 |         |          | 2 842 | 1145 | 590                      |      |
| _ | YXH-2000C  | 5601        | 4271   | 3563 | 2070 | 1804    |          |       | 555  | -                        |      |
|   | YXH-2500M  | 5710        |        |      | 1890 |         |          |       | 1145 | 590                      |      |
|   | YXH-2500MC | 5880        |        |      | 2320 |         |          |       | 555  | -                        |      |
|   | YXH-2500   | 5491        |        |      | 1890 |         |          |       | 1145 | 590                      |      |
| _ | YXH-2500C  | 5601        |        |      | 2070 |         |          |       | 555  | -                        |      |
|   |            |             |        |      |      |         | 3257     | 842   |      |                          |      |
|   |            |             |        |      |      |         | 3542     | 1127  |      |                          |      |
|   | -          | -           | 5090   | 5022 | -    | 2085    | 2845     | 430   | -    | -                        | 1900 |
|   |            |             |        |      |      |         | 3257     | 842   |      |                          |      |
|   |            |             |        |      |      |         | 3542     | 1127  |      |                          |      |
|   |            |             |        |      |      |         | 2845     | 430   |      |                          |      |
|   | -          | -           | 5700   | 4520 | -    | 2335    | 3695     | 1025  | -    | -                        | 2372 |
|   | -          | -           | 7125   | 5585 | -    | 2555    | 4040     | 1025  | -    | -                        | 2372 |
|   | Y-850      | 3920        |        |      | 1158 |         |          |       | 814  | 359                      |      |
|   | YC-850     | 4051        |        |      | 1289 |         |          |       | 455  | -                        | 1802 |
|   | YX-1000    | 4053        | 2776   | 2733 | 1199 | 1420    | 2081     | 601   | 885  | 435                      |      |
|   | YX-1000C   | 4086        |        | 2.00 | 1232 |         | 2001     |       | 450  | -                        |      |
|   | YX-1000    | 4059        |        |      | 1205 |         |          |       | 885  | 435                      |      |
|   | YX-1000C   | 4092        |        |      | 1238 |         |          |       | 450  | -                        |      |





| Engine Model          |          |                  |           | 6EY17W            |            |            |  |
|-----------------------|----------|------------------|-----------|-------------------|------------|------------|--|
| No. of Cylinders      |          |                  | 6         |                   |            |            |  |
| Cylinder Bore×Strol   | ke [mm]  |                  |           | 170×230           |            |            |  |
| Rated Output [kW(P    | S)]      | 374 (508)        | 480 (653) | 590 (802)         | 749 (1018) | 837 (1138) |  |
| Engine Speed [min-    | 1]       |                  | 1350      |                   | 1400       | 1450       |  |
| Dry Weight [kg]       |          |                  |           | 3880              |            |            |  |
| Propeller Type        |          |                  |           | for F.P.P.        |            |            |  |
| Marine Coor Madel     | Offset - | YXH-500          |           |                   |            |            |  |
| Marine Gear Model     | Uliset   |                  |           | YXH-500L          |            |            |  |
| Reduction Gear        | Offset   | 2.53, 3.04, 3.48 |           |                   |            |            |  |
| Ratio ( Ahead )       | Uliset   |                  | 3.5       | 57, 4.07, 4.48, 4 | .96        |            |  |
| Marine Gear           | Offset   |                  |           | 700               |            |            |  |
| Dry Weight [kg]       | UISEL    | 1667             |           |                   |            |            |  |
| Total Dry Weight      | Offset   | 4580             |           |                   |            |            |  |
| with Marine Gear [kg] | Unset    |                  |           | 5547              |            |            |  |
|                       |          |                  |           |                   |            |            |  |



00 0 0 0 00

6/8EY33W

Engine Model No. of Cylinders Cylinder Bore×Stroke (mm Rated Output [kW(PS)] Engine Speed [min-1] Dry Weight [kg]





| Engine Model          | 6EY22AW  |                        |       |      |                        |             |             |             |
|-----------------------|----------|------------------------|-------|------|------------------------|-------------|-------------|-------------|
| No. of Cylinders      |          |                        |       |      |                        | 6           |             |             |
| Cylinder Bore×Stro    | oke [mm] |                        |       |      | 220                    | ×320        |             |             |
| Rated Output [kW(F    | PS)]     | 885(                   | 1203) | 1030 | 0 (1400)               | 1180 (1604) | 1330 (1808) | 1370 (1863) |
| Engine Speed [min     | -1]      | 850                    | 900   | 850  | 900                    |             | 900         |             |
| Dry Weight [kg]       |          |                        |       |      | 10                     | 000         |             |             |
| Propeller Type        |          | for F.P.P.             |       |      |                        |             |             |             |
| Marine Gear Model     | Offset   | YX-1000                |       |      | YXH-2000               |             |             |             |
| Marine Gear Model     | Co-Axial | YX-1000C               |       |      | YXH-2000C              |             |             |             |
| Reduction Gear        | Offset   | 2.03, 2.36, 2.78, 3.32 |       |      | 2.23, 2.58, 2.79, 3.03 |             |             |             |
| Ratio ( Ahead )       | Co-Axial | 2.03, 2.36, 2.78, 3.32 |       |      | 2.23, 2.58, 2.79, 3.03 |             |             |             |
| Marine Gear           | Offset   |                        | 2400  |      |                        | 4750        |             |             |
| Dry Weight [kg]       | Co-Axial |                        | 2565  |      | 5050                   |             |             |             |
| Total Dry Weight      | Offset   |                        | 12505 |      | 12556                  |             | 14861       |             |
| with Marine Gear [kg] | Co-Axial |                        | 12670 |      | 12721                  | 15161       |             |             |



| Engine Model             |
|--------------------------|
| No. of Cylinders         |
| Cylinder Bore×Stroke (mn |
| Rated Output [kW(PS)]    |
| Engine Speed [min-1]     |
| -                        |

Dry Weight [kg] Engine Model No. of Cylinders Cylinder Bore×Stroke [mm] Rated Output [kW(PS)] Engine Speed [min-1] Dry Weight [kg]

This Photograph Shows Model 6EY33

| Power: 1471~1920kW |
|--------------------|
|                    |

6EY26W

|          | 6EY26W   |  |  |   |   |  |  |  |
|----------|--|--|--|---|---|--|--|--|
|          | 6  |  |  |   |   |  |  |  |
| ke [mm]  |  |  | 260>   | 385   |   |  |  |  |
| PS)]     | 1471   | (2000)   | 1620 (   | 2203)   | 1920 (  | 2610)  |  |  |
| -1]      |  |  | 75   | 50  |   |  |  |  |
|          |  |  | 185  | 00  |   |  |  |  |
|          | for C.P.P.   | for F.P.P.   | for C.P.P.   | for F.P.P.  | for C.P.P.  | for F.P.P.   |  |  |
| 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  |  |  |
| Offset   | 2.23, 2.58, 2.79, 3.03   |  |  |   |   |  |  |  |
| Co-Axial |  | 2.23, 2.58, 2.79, 3.03   |  |   |   |  |  |  |
| Offset   | 3900   | 4750   | 3950   | 4800  | 3950  | 4800   |  |  |
| Co-Axial | 4300   | 5050   | 4400   | 5150  | 4400  | 5150   |  |  |
| Offset   | 22549  | 23349  | 22640  | 23490   | 22640   | 23490  |  |  |
| Co-Axial | 22949  | 23649  | 23090  | 23840   | 23090   | 23840  |  |  |
|          | 2S)]<br>Offset<br>Co-Axial<br>Offset<br>Co-Axial<br>Offset<br>Co-Axial<br>Offset<br>Co-Axial | PS)]     1471       Image: style sty | Offset     YXH-2000M     YXH-2000       0ffset     YXH-2000M     YXH-2000       Co-Axial     YXH-2000MC     YXH-2000C       Offset     Co-Axial     YXH-2000MC       Offset     J     J       0ffset     J     J       J     J     J       J     J     J     J       J     J     J     J       J     J     J     J     J       J     J     J     J     J       J | 6       6       ke [mm]     260>       25]     1471 (2000)     1620 (       25]     1471 (2000)     1620 (       25]     1471 (2000)     1620 (       26]     for C.P.P.     for F.P.P.     for C.P.P.       0ffset     YXH-2000M     YXH-2000     YXH-2500M       Co-Axial     YXH-2000MC     YXH-2000C     YXH-2500MC       Offset     2.23, 2.58,     2.23, 2.58,       Offset     3900     4750     3950       Co-Axial     4300     5050     4400       Offset     22549     23349     22640 | 6       ke [mm]     260×385       PS)]     1471 (2000)     1620 (2203)       PS)     for C.P.P.     for C.P.P.     for F.P.P.       Offset     YXH-2000M     YXH-2500M     YXH-2500C       Co-Axial     YXH-2000MC     YXH-2500C     YXH-2500C       Offset     2.23, 2.58, 2.79, 3.03     2.23, 2.58, 2.79, 3.03       Co-Axial     3900     4750     3950     4800       Co-Axial     4300     5050     4400     5150       Offset     22549     23349     22640     23490 | 6       6       6       6       260×385       260×385       260×385       95)]     1471 (2000)     1620 (2203)     1920 (2203)       18500       18500       18500       18500       18500       18500       0ffset YXH-2000M YXH-2000     YXH-2500M YXH-2500 YXH-2500M       Co-Axial     YXH-2000MC     YXH-2000C     YXH-2500MC     YXH-2500MC     YXH-2500MC       0ffset YXH-2000MC     YXH-2000C     YXH-2500MC     YXH-2500MC     YXH-2500MC       0ffset YXH-2000MC     YXH-2000C     YXH-2500MC     YXH-2500MC     YXH-2500MC       0ffset 2.23, 2.58, 2.79, 3.03       0     3950     4800     3950       0     6/fset 3900     4750     3950     4800     3950     Co-Axial |  |  |

This Photograph Shows Model 6EY26 [ IMO Tier I ]

6N21AW Power: 662~956kW



| Engine Model          |          | 6N21A-DW               | 6N21A-UW               | 6N21A-SW   | 6N21A-EW   |  |  |
|-----------------------|----------|------------------------|------------------------|------------|------------|--|--|
| No. of Cylinders      |          | 6                      |                        |            |            |  |  |
| Cylinder Bore×Stro    | oke [mm] |                        | 210×                   | <290       |            |  |  |
| Rated Output [kW(     | PS)]     | 662 (900)              | 736 (1000)             | 883 (1200) | 956 (1300) |  |  |
| Engine Speed [min     | -1]      | 80                     | 00                     | 8          | 50         |  |  |
| Dry Weight [kg]       |          | 8000                   |                        |            |            |  |  |
| Propeller Type        |          | for F.P.P.             |                        |            |            |  |  |
| Marine Gear Model     | Offset   | Y-850                  |                        | YX-1000    |            |  |  |
| Marine Gear Model     | Co-Axial | YC-850                 | YX-1000C               |            |            |  |  |
| Reduction Gear        | Offset   | 1.84, 2.07, 2.35, 2.68 | 2.03, 2.36, 2.78, 3.32 |            |            |  |  |
| Ratio ( Ahead )       | Co-Axial | 1.84, 2.07, 2.35, 2.68 | 2.03, 2.36, 2.78, 3.32 |            |            |  |  |
| Marine Gear           | Offset   | 2050                   |                        | 2400       |            |  |  |
| Dry Weight [kg]       | Co-Axial | 2150                   | 2565                   |            |            |  |  |
| Total Dry Weight      | Offset   | 10128                  | 10478                  | 104        | 494        |  |  |
| with Marine Gear [kg] | Co-Axial | 10228                  | 10643                  | 100        | 659        |  |  |

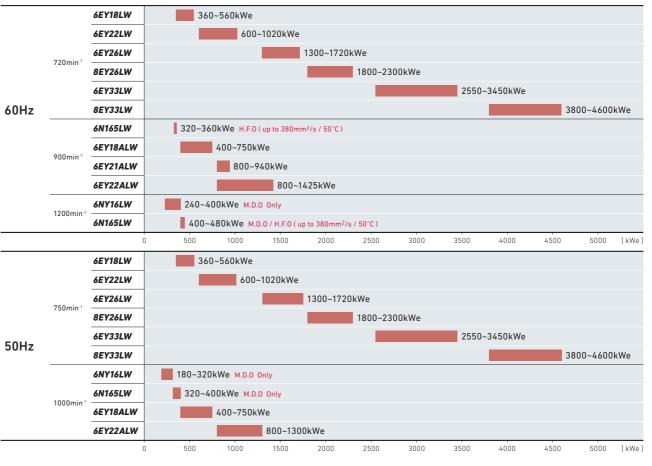
| _  |             |             |             |             |  |  |  |
|----|-------------|-------------|-------------|-------------|--|--|--|
|    | 8EY26W      |             |             |             |  |  |  |
|    | 8           |             |             |             |  |  |  |
| n] | 260×385     |             |             |             |  |  |  |
|    | 2060 (2801) | 2210 (3005) | 2360 (3209) | 2560 (3481) |  |  |  |
|    | 750         |             |             |             |  |  |  |
|    |             | 245         | 500         |             |  |  |  |

|    |             | 6EY33W      |             |             |  |  |  |  |
|----|-------------|-------------|-------------|-------------|--|--|--|--|
|    |             |             | 5           |             |  |  |  |  |
| n] |             | 330;        | <440        |             |  |  |  |  |
|    | 2500 (3399) | 2750 (3739) | 3100 (4215) | 3360 (4568) |  |  |  |  |
|    | 750         |             |             |             |  |  |  |  |
|    | 39100       |             |             |             |  |  |  |  |
|    |             |             |             |             |  |  |  |  |
|    |             |             |             |             |  |  |  |  |

|    |             | 8EY33W      |             |  |  |  |
|----|-------------|-------------|-------------|--|--|--|
|    |             | 8           |             |  |  |  |
| n] | 330×440     |             |             |  |  |  |
|    | 3600 (4895) | 4000 (5438) | 4500 (6118) |  |  |  |
|    | 750         |             |             |  |  |  |
|    | 50900       |             |             |  |  |  |



**Generator Capacity** 



| Series   | Models    | Output | Dutput [kW] |                     |       | Dimens<br>[mm] | Dimensions<br>[mm]<br>G |      |      |      |      |          |      |      |  |
|----------|-----------|--------|-------------|---------------------|-------|----------------|-------------------------|------|------|------|------|----------|------|------|--|
|          |           | Engine | Speed [     | min <sup>-1</sup> ] |       |                | G: Minimum Height F D   |      |      |      |      |          |      |      |  |
|          |           | 720    | 750         | 900                 | 1000  | 1200           | A                       | A2   | В    | с    | D    | E        | F    | G    |  |
|          | 6NY16L-HW |        |             |                     | 200   | 265            | 3097                    |      |      |      |      |          |      |      |  |
|          | 6NY16L-DW |        |             |                     | 245   | 310            | 3097                    |      |      |      |      |          |      |      |  |
| 6NY16LW  | 6NY16L-UW |        |             |                     | 270   | 355            | 3117                    | 1972 | 1265 | 1813 | 2530 | 940      | 800  | 1983 |  |
|          | 6NY16L-SW |        |             |                     | 310   | 400            | 3112                    |      |      |      |      |          |      |      |  |
|          | 6NY16L-EW |        |             |                     | 353   | 441            | 3172                    |      |      |      |      |          |      |      |  |
|          | 6N165L-UW |        |             | 353 441             |       | 3182           | 1982                    | 1341 |      | 2700 |      |          |      |      |  |
|          | 6N165L-SW |        |             | 353                 |       |                |                         |      | 1557 | ]    |      | ]        |      |      |  |
| 6N165LW  | 0N105L-SW |        |             |                     | 397   | 485            | 3332 2012               | 1341 | 1999 | 2800 | 990  | 800      | 2105 |      |  |
|          | 6N165L-EW |        |             | 397                 |       |                | 3332                    |      | 1557 |      | 2000 |          |      |      |  |
|          | ONTOSE-EW |        |             |                     | 441   | 530            |                         |      | 1341 |      |      |          |      |      |  |
| 6EY18LW  | 6EY18LW   | 400~   | -615        |                     |       |                | 4441                    | 2751 | 1493 | 2255 | 3620 | 1070     | 915  | 2564 |  |
| 6EY18ALW | 6EY18ALW  |        |             | 455                 | ~615  |                | 4391                    | 2751 | 1489 | 2255 | 3620 | 1070     | 915  | 2564 |  |
| 01110A1  |           |        |             | 660-                | ~800  |                | 4680                    | 2701 | 1407 | 2200 | 3720 |          |      | 2004 |  |
| 6EY21ALW | 6EY21ALW  |        |             | 880~1020            |       |                | 4845                    | 2730 | 1618 | 2602 | 3860 | 1180     | 950  | 2752 |  |
| 6EY22LW  | 6EY22LW   | 660~   | 1080        |                     |       |                | 5452                    | 3337 | 1678 | 2630 | 4120 | 1180     | 985  | 2907 |  |
| 6EY22ALW | 6EY22ALW  |        |             | 880~                | -1500 |                | 5647                    | 3337 | 1782 | 2675 | 4310 | 1180     | 985  | 2907 |  |
| 6EY26LW  | 6EY26LW   | 1400~  | -1620       |                     |       |                | 6474                    | 3974 | 1847 | 3520 | 5270 | 1420     | 1250 | 3150 |  |
| DETZOLW  | OE 120LW  | 1730~  | 1840        |                     |       |                | 6774                    | 5774 | 1047 | 5520 | 5270 | 1420     | 1230 | 5150 |  |
|          |           | 1900~  | 2130        |                     |       |                | 8258                    |      |      |      | 6720 |          |      |      |  |
| 8EY26LW  | 8EY26LW   | 224    | 45          |                     |       |                | 8358                    |      | 2030 | 3665 | 6800 | 1420     | 1250 | 3150 |  |
|          |           | 24     | 50          |                     |       |                | 8418                    |      |      |      | 6840 | <u> </u> |      |      |  |
| 6EY33LW  | 6EY33LW   | 2750~  | 3600        |                     |       |                | 8950                    | 5280 | 2355 | 3895 | 7130 | 1780     | 1370 | 3742 |  |
| 8EY33LW  | 8EY33LW   | 4000~  | 4800        |                     |       |                | 10640                   | 6655 | 2555 | 4470 | 7950 | 1780     | 1620 | 3992 |  |

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





| 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<br>(272) | 265<br>(360) | 245<br>(333) | 310<br>(421) | 270<br>(367) | 355<br>(483) | 310<br>(421) | 400<br>(544) | 353<br>(480) | 441<br>(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]              | Weight [kg]  |              |              |              | 2880         |              |              |              |              |              |
| Total Weight (Gen. Set) [kg] | 5870         |              |              |              |              |              |              |              |              |              |





| Engine Model                 | iL-UW        | 6            | N165L-S      | w            | 6N165L-EW    |              |              |              |  |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| No. of Cylinders             |              |              |              |              |              |              |              |              |  |
| Cylinder Bore×Stroke [mm]    |              |              |              | 165          | ×232         |              |              |              |  |
| Rated Output [kW(PS)]        | 353<br>(480) | 441<br>(600) | 353<br>(480) | 397<br>(540) | 485<br>(660) | 397<br>(540) | 441<br>(600) | 530<br>(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] | 64           | 10           |              |              | 71           | 60           |              |              |  |

• 1000min<sup>-1</sup> : for MDO Application Only. • 900min<sup>-1</sup> : for HFO Application Only. This Photograph Shows Model 6N165L [ IMO Tier I ]





| Engine Model                 |              | 6EY18LW      |              |              |              | 6EY18ALW     |              |              |              |              |       |               |               |  |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|---------------|---------------|--|
| No. of Cylinders             |              | 6            |              |              |              |              |              |              |              |              |       |               |               |  |
| Cylinder Bore×Stroke [mm]    |              | 180×280      |              |              |              |              |              |              |              |              |       |               |               |  |
| Rated Output [kW(PS)]        | 400<br>(544) | 450<br>(612) | 500<br>(680) | 550<br>(748) | 615<br>(836) | 455<br>(619) | 500<br>(680) | 550<br>(748) | 615<br>(836) | 660<br>(897) |       | 745<br>(1013) | 800<br>(1088) |  |
| Generator Capacity [kWe]     | 360          | 400          | 440          | 500          | 560          | 400          | 450          | 500          | 560          | 600          | 620   | 680           | 750           |  |
| Engine Speed [min-1]         |              | 73           | 20 / 75      | 50           |              | 900 / 1000   |              |              |              |              |       |               |               |  |
| Dry Weight [kg]              | 6600         |              |              |              |              |              |              |              |              |              |       |               |               |  |
| Total Weight (Gen. Set) [kg] |              | 11200        |              |              |              |              | )            |              |              |              | 12100 |               |               |  |
|                              |              |              |              |              |              |              |              |              |              |              |       |               |               |  |



Generator Capacity : 800~940kWe



Engine Model

No. of Cylinders

Cylinder Bore×Stroke [mm]

Rated Output [kW(PS)]

Generator Capacity [kWe]

Engine Speed [min-1]

Dry Weight [kg]

Total Weight (Gen. Set) [kg]



| 6EY22[A]LW                               | Engine Model     |
|--|------------------|
| Generator Capacity : $600 \sim 1425 kWe$ | No. of Cylinders |

Cylinder Bore×Stroke [mm]

Rated Output [kW(PS)]

Generator Capacity [kWe]

Engine Speed [min-1]

Dry Weight [kg]

Total Weight (Gen. Set) [kg]

| 6EY26LW                          | Engine Model                 | 6EY26LW                        |                |                |                |  |  |
|----------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|--|--|
| enerator Capacity : 1300~1720kWe | No. of Cylinders             |                                | e              | 5              |                |  |  |
|                                  | Cylinder Bore×Stroke [mm]    | 260×385                        |                |                |                |  |  |
|                                  | Rated Output [kW(PS)]        | 1400<br>(1903)                 | 1620<br>(2203) | 1730<br>(2352) | 1840<br>(2502) |  |  |
|                                  | Generator Capacity [kWe]     | 1300                           | 1500           | 1600           | 1720           |  |  |
| ATA MAL                          | Engine Speed [min-1]         | Engine Speed [min-1] 720 / 750 |                |                |                |  |  |
|                                  | Dry Weight [kg]              |                                | 185            | 500            |                |  |  |
|                                  | Total Weight (Gen. Set) [kg] | 29800                          |                | 30600          |                |  |  |

|    |               | 6EY21ALW      |                |
|----|---------------|---------------|----------------|
|    |               | 6             |                |
| n] |               | 210×290       |                |
|    | 880<br>(1197) | 970<br>(1319) | 1020<br>(1387) |
| ]  | 800           | 900           | 940            |
|    |               | 900           |                |
|    |               | 8800          |                |
| g] |               | 16000         |                |
|    |               |               |                |

|   |           |         | 6EY2 | 2LW | ,   | 6EY22ALW |            |     |     |      |      |      |      |      |
|---|-----------|---------|------|-----|-----|----------|------------|-----|-----|------|------|------|------|------|
|   |           |         |      |     |     |          | 5          |     |     |      |      |      |      |      |
| 1]  |           | 220×320 |      |     |     |          |            |     |     |      |      |      |      |      |
| 660     745     800     880     970     1080     880     970     1020     1100     1180       (897)     (1013)     (1088)     (1197)     (1319)     (1468)     (1197)     (1319)     (1387)     (1496)     (1604) |           |         |      |     |     |          |            |     |     |      |      |      |      |      |
|   | 600       | 680     | 740  | 800 | 900 | 1020     | 800        | 900 | 950 | 1000 | 1100 | 1200 | 1300 | 1425 |
|   | 720 / 750 |         |      |     |     |          | 900 / 1000 |     |     |      |      |      |      |      |
|   | 11200     |         |      |     |     |          | 10500      |     |     |      |      |      |      |      |
| ]   | 18500     |         |      |     |     |          |            |     |     | 18   | 100  |      |      |      |
| _   |           |         |      |     |     |          |            |     |     |      |      |      |      |      |





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





| Engine Model                 |                | 6EY33LW        |                |                |  |  |  |  |  |
|------------------------------|----------------|----------------|----------------|----------------|--|--|--|--|--|
| No. of Cylinders             |                | 6              |                |                |  |  |  |  |  |
| Cylinder Bore×Stroke [mm]    |                | 330×440        |                |                |  |  |  |  |  |
| Rated Output [kW(PS)]        | 2750<br>(3739) | 3000<br>(4079) | 3360<br>(4568) | 3600<br>(4895) |  |  |  |  |  |
| Generator Capacity [kWe]     | 2550           | 2800           | 3200           | 3450           |  |  |  |  |  |
| Engine Speed [min-1]         |                | 720            | / 750          |                |  |  |  |  |  |
| Dry Weight [kg]              | 38500          |                |                |                |  |  |  |  |  |
| Total Weight (Gen. Set) [kg] |                | 630            | 000            |                |  |  |  |  |  |



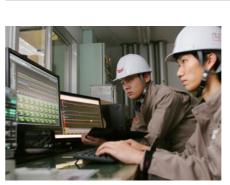


| Engine Model                 |                | 8EY33LW        |                |  |  |  |  |  |  |
|------------------------------|----------------|----------------|----------------|--|--|--|--|--|--|
| No. of Cylinders             |                | 8              |                |  |  |  |  |  |  |
| Cylinder Bore×Stroke [mm]    |                | 330×440        |                |  |  |  |  |  |  |
| Rated Output [kW(PS)]        | 4000<br>(5438) | 4500<br>(6118) | 4800<br>(6526) |  |  |  |  |  |  |
| Generator Capacity [kWe]     | 3800           | 4300           | 4600           |  |  |  |  |  |  |
| Engine Speed [min-1]         |                | 720 / 750      |                |  |  |  |  |  |  |
| Dry Weight [kg]              |                |                |                |  |  |  |  |  |  |
| Total Weight (Gen. Set) [kg] |                | 90200          |                |  |  |  |  |  |  |

# **POWER SOLUTION BUSINESS AMAGASAKI FACTORY**

Amagasaki factory started in 1936 as world's first factory to produce small sized diesel engines. Today, the factory mass produces large-sized diesel engines for marine and generator use, and also produces diesel and gas engines for land use and general power source. From 1983, the factory also produces gas turbines, and continues to produce high quality products ever since.





# engine technology.



# Certified by various ship classification societies

The Amagasaki factory has been certified by the world's 10 major ship classification societies. Its voluntary inspection program was certified by the 10 ship classification societies for the first time in the world.

| <b>NK</b> : Nippon Kaiji Kyokai  |
|----------------------------------|
| ABS : American Bureau of Shipp   |
| <b>BV</b> : Bureau Veritas       |
| CCS · China Classification Socie |

Certifications of 10 major shipping classification societies.

| AND THE REPORT OF THE PARTY OF | UKAS<br>MANAGEMENT<br>STSTEMES |   | Manufacture LRQ4   | UKAS<br>MINAGEMENT<br>SSISTEMS |  |
|---|--------------------------------|---|--|--------------------------------|--|
| ISO 9001  | 001                            |   | ISO 14001  | 001                            |  |
| *1 ) ISO 9001:<br>International Quality Control<br>System Standard of the   |                                | _ | *2) ISO 14001:<br>International Environmental<br>Management System Stand |                                |  |

of the International StandardizationOrg zation, Standardization Organizati (Certification No. 912208) (Certification No. 770250)

In July 1992, Power Solution Business was certified under ISO 9001\*1 by a certification authority in England, Lloyd's Register Quality Assurance Limited (LRQA). Responding swiftly to environmental issues, in June 1996 Amagasaki factory became one of the first land-use and marine diesel engine manufacturing facilities to be ISO 14001\*2 certified. Furthermore, YANMAR instantaneously attained the International Maritime Organization (IMO) Tier II and III certification for the regulation of NOx emission levels. YANMAR maintains an internationally acclaimed reputation for leading edge technology that has environmental conservation at its forefront.

# Highly quality and efficient production system

Amagasaki factory uses its unique, high performance devices and advanced machines for automatic and laborsaving operation. Furthermore, a suitable order-entry system matching each product is applied and controlled with an accurate quality management system. Therefore, we are able to produce highly reliable products to customers. YANMAR is the only company that produces the entire engine integrally within one factory.

# Research and development with advanced technology

YANMAR continues to research and develop environmental-friendly technology in a higher degree, such as developing cleaner emission gas, low fuel consumption, and less vibration and noise, based on our unique

| DNVGL                                 |
|---------------------------------------|
| IRS : Indian Register of Shippi       |
| <b>KR</b> : Korean Register of Shippi |
| LR : Lloyd's Register of Shippin      |
|                                       |

RINA : Registro Italiano Navale RS : Russian Maritime Register of Shipping

# Internationally certified quality control and environmental response

# WORLDWIDE SERVICE NETWORK



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U.A.E. COUNTRY CODE - 971

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- ALBWARDY MARINE ENGINEERING (L.L.C) Al Jadaf Ship Docking Yard P.O.Box 6515, Dubai, U.A.F TEL: 4-324-1001, 324-1561 FAX: 4-324-1005 WEB: www.albwardymarine.com
- GOLTENS CO. LTD. DUBAI BRANCH Al Jadaf Ship Docking Yard P.O. Box 2811, Dubai, U.A.E. TEL: 4-324-1642 FAX: 4-324-1963 WEB: www.goltens.com
- AL-FUTTAIM AUTO & MACHINERY COMPANY (FAMCO) Plot B-131, Al Ramoul-Rashidiya P O Box 5502, Dubai, UAE TEL: 4-213-5100 E-MAIL: famco@alfuttaim.com WEB: www.famcouae.com/

SAUDI ARABIA COUNTRY CODE - 966

 ABDULLAH HASHIM CO.LTD- HEAD OFFICE Al Madinaa Road, Al Bawadi P.O. Box 44 TEL: 2-662-1500 E-MAIL: info@ah-group.com WFB<sup>·</sup> www.ahcl-machinerv.com/

- MAPSO MARINE PROPULSION & SUPPLY S.A.E. 44 Industrial Zone, Cairo/Ismailia Desert Road, Egypt TEL: 22-6984-777 FAX: 22-6990-780 E-MAIL: mapso@mapso.co WEB: www.mapso.com
- MAPSO-ALEXANDRIA OFFICE 5 Ahmed Orabi Street Alexandria, Egypt TEL: 3-487-3453 FAX: 3-487-3486

JORDAN COUNTRY CODE " 962

 AL ZAMAN GROUP LLC P.O. BOX 928481 Amman 11190 Jordan TEL: 6-565-5261 FAX: 6-565-5266

IRAN COUNTRY CODE . 98 .

SADAF KARAN BOUSHEHR CO. Yanmar bldg., Teleghani blvd., Boushehr, Iran TEL: 773-3553400 FAX: 773-3553403 E-MAIL: dehghani@sadafkaran.com WEB: www.sadafkaran.com

QATAR COUNTRY CODE - 974 -

• QATAR NAVIGATION QPSC P.O. Box 153 Doha, State of Qatar TEL: 4-494-7000 FAX: 4477-1687

ASIA

JAPAN COUNTRY CODE \* 81 \*

 HEAD OFFICE YANMAR FLYING-Y BUILDING, 1-32. Chayamachi, Kita-ku, Osaka, 530-8311, Japan WEB: vanmar.com

= AMAGASAKI PLANT 1-1-1, Nagasu Higashidori, Amagasaki, Hyogo, 660-8585, Japan • OVERSEAS SALES DIVISION.

TEL: 6-6489-8042 EAX: 6-6489-108 = QUALITY ASSURANCE DIVISION. TEL: 6-6489-8017 FAX: 6-6489-400

YANMAR ENGINEERING CO., LTD.

YANMAR ENGINEERING (HEAD OFFICE) 1-1-1, Nagasu Higashidori, Amagasaki, Hyogo, 660-8585, Japan TEL: 6-6489-8045 FAX: 6-6489-8075 WEB: www.vanmar.co.ip/ve/ **= OVERSEAS ENGINEERING DIVISION.** TEL: 6-6489-8048 FAX: 6-6481-6101

INDIA COUNTRY CODE - 91 -

**@** YANMAR INDIA PRIVATE LIMITED 707 REAL TECH PARK, SECTOR Vashi Navi Mumhai Pin: 400 703 Maharashtra TEL: 22-2781-0975 FAX: 22-3969-4410

IND-AUST MARITIME PVT LTD. C-6/2, T.T.C, M.I.D.C. Pawane, Turbhe, Navi Mumbai 400 705. Maharashtra, India TEL: 22-2763-3178 FAX: 22-2789-2529 E-MAIL: meenasingh@indaust.

MALDIVES COUNTRY CODE - 960 -

COMPANY (PLC)LTD. 181 Boduthakurufaanu Magu, 4th Floor MTCC MTCC Building, Male TEL: 332-6822 E-MAIL: info@mtcc.com.mv WEB: mtcc.mv/

SRI LANKA COUNTRY CODE . 94 .

SENOK TRADE COMBINE (PVT) LTD No.3, R A De Mel, Mawatha, Colo TEL: 11-2-580017 E-MAIL: info@senoksl.com WEB: senoksl.com/

CHINA COUNTRY CODE ' 86 '

# YANMAR ENGINE ( SHANGHAI ) CO., LTD.

1101-1106, Gopher Center Building, No.757 Meng Zi Road, Shanghai, China 200023 TEL: 21-2312-0688 FAX: 21-6880-8090 / 21-6880-8682 WEB: vanmar.com/cn/

 GOLTENS SHANGHAI CO., LTD Block No.5, No.533 Yuanzhong Road, Nanhui Industrial Zone, Nanhui District, Shanghai, China TEL: 21-58186628 FAX: 021-58186633

E-MAIL: shanghai@goltens.con

- TIANJIN PORT TUG-BOAT & LIGHTER COMPANY / YANMAR ENGINE SERVICE CENTER No.383 Yongtai Road, Tanggu District, Tianjin, China TEL: 22-2570-7510 FAX: 22-2570-7510
- DALIAN WANFANG MARINE TECHNOLOGY CO., LTD No.40 Aixian Street, Qixianling Dalian High-Tech Industrial Zone, China TEL: 411-84799000 EAX: 411-84795678 E-MAIL: wf@china-wf.com
- ZHOUSHAN IMC-YY SHIPYARD & ENGINEERING COLUTD 28, Mazhi West Road, Shenjiame Putuo, Zhonshan, China, 316100 TEL: 580-3696572 FAX: 580-3690572 E-MAIL: weilicheng@imc-yy.com WEB: www.imc-vv.com

ARAB REPUBLIC OF EGYPT COUNTRY CODE - 20

## • YANMAR POWER TECHNOLOGY CO., LTD.

# MALDIVES TRANSPORT & CONTRACTING

SINGAPORE COUNTRY CODE - 65

# YANMAR ASIA ( SINGAPORE ) CORPORATION PTE. LTD. 4 Tuas Lane, Singapore 638613 TEL: 6595-4200 FAX: 6862-5189 VEB: yanmar.com/sg/

### • CHONG LEE LEONG SENG CO., (PTE)LTD. 23 Tuas Avenue 2, Singapore 639454 TEL: 6264-2922 FAX: 6861-8785

VIETNAM COUNTRY CODE - 84 -

### YANMAR ASIA ( SINGAPORE ) CORPORATION PTE LTD RESIDENT **REPRESENTATIVE OFFICE** HO CHI MINH CITY 875 Tran Hung Dao, Ward 1, Dist 5, HCMC, Vietnam TEL: 8-3923-8063 FAX: 8-3923-5602

HAI PHONG TRADING AND ENGINEERING SERVICES **COMPANY LIMITED ( HATESCO )** Nam Hoa Hamlet - An Hung Village -An Duong District - Hai Phong City, Vietnam TEL: 31-3504-117 E-MAIL: hatesco@gmail.com

HONG KONG COUNTRY CODE . 852 .

# **O** YANMAR ENGINEERING ( HK ) CO., LTD.

RoomJ, 23/F, King Palace Plaza 55 King Yip Street Kwun Tong Kow loon Ho TEL: 2833-9032 FAX: 2904-7783 E-MAIL: yanmarhk@yanmarhk.com.hk

TAIWAN COUNTRY CODE \* 886

### **O** YANMAR ENGINEERING CO., LTD. TAIWAN BRANCH 1F., No.3, Yugang N. 2nd Rd., Cianjhen Dist., Kaohsiung City 80672, Taiwan TEL: 7-815-3156 FAX: 7-815-3280

E-MAIL: yanmar-service@umail.hinet.ne

# YANMAR ENGINEERING CO., LTD. TAIWAN BRANCH TAIPEI SATELLITE OFFICE R/M8, 9F, No.142, Sec3, Minquan E. Rd., Songshan Dist. Taipei City 104, Taiwan R.O.C.

TEL: 2-8712-3150/3151 FAX: 2-8712-3107 E-MAIL: yanmar-service@umail.hinet.net

# • YEE FOO MARINE INDUSTRIAL CO., LTD. 6F-3, No.369 Fusing North Road, Taipei, Taiwan R.O.C. 105 TEL: 2-8712-0848 FAX: 2-8712-0797

### SEIKOH CO., LTD. IF., No.3, Yugang N. 2nd Rd., Cianjhen Dist., Kaohsiung City 80672, Taiwan TEL: 7-815-3156 FAX: 7-815-3280 E-MAIL: vanmar-service@umail.hinet.net

PHILIPPINES COUNTRY CODE " 63 "

### SEAPOWERS TRADING & INDUSTRIAL SERVICES

316-A Mamatid Cabuyao, Laguna, Philippines TEL: 917-500-3017 FAX: 49-502-0765 E-MAIL: seapowers@pldtdsl.net

# PHILL\_NIPPON KYOEI CORPORATION

S705 Royal Plaza Twin Towers 648 Remedios St. Malate, Manila , Philippines TEL: 400-9130 FAX: 400-9130 E-MAIL: inquiry@philnippon.com.ph

### AVP MARINE AND INDUSTRIAL SERVICE INC.

3rd F AVJ Bldg SRP Road cor Cansojong St. Talisay City Cebu, Philippines 6045 TEL: 32-462-2955 E-MAIL: service.avmarine@avmes.com

### AZUMI CORPORATION

The Venue Annex Bldg., Unit A-201-205 Rizal Highway cor. Brilliant St., SBFZ , Philippines 2222 TEL: 47-250-0806 E-MAIL: fujii.subic@gmail.com

# ALL CERTIFIED EQUIPMENT

TRADING CORPORATION 905 Philam Homes EDSA, 1104 Quezon City, Philippines TEL: 2-622-3448 E-MAIL: info@allcertifiedequipment.com WEB: www.allcertifiedequipment.com/

MONGOLIA COUNTRY CODE " 976 "

UNITRA CO., LTD 273-Chinggis avenue Ulaanbaatar Capital, 17010, Mongolia TEL: 11-31-1766 E-MAIL: info@unitra.mn WEB: unitra.mn/

KOREA COUNTRY CODE " 82 "

- HWA ILL TRADING CO., LTD. #93, 2-GA, Namhang Dong Young Do-Ku, Busan, Korea TEL: 51-412-6385 FAX: 51-414-8752 E-MAIL: hwaill@hwaill.co.kr
- PLUS SERVICE CO. Room 3806, Centum Leaders Mark B/D, 1514 U-Dong, Haeundae-gu, Busan, 612-889, Korea TEL: 51-745-8200~1 FAX: 51-745-8203 E-MAIL: plusbusan@gmail.com
- CHIBA MARINE KOREA CO., LTD. -90, Chunghak-Dong, Yeongdo-gu, Busan, Korea TEL: 51-418-8998 FAX: 51-418-5880 E-MAIL: chibako@korea.com

### BANGLADESH COUNTRY CODE " 880 "

• TSI MARINE LIMITED Makkah Madinah Trade Centre (15th Floor ) , 78 , Agrabad C/A , Chittagong TEL: 1711799692 E-MAIL: tsimarineltd@gmail.com

### MYANMAR COUNTRY CODE - 95

- UMG MYANMAR No.589. Bo Aung Kyaw Street. Yangon-Pathein Highway Road, Hlaing Thar Yar Township. Yangon, Myanmar TEL: 1-645178 FAX: 1-645211 E-MAIL: sale-div@winstrategic.com.mn
- UNITED ENGINEERING CO., LTD UE Office Complex UE Building : Corner of Wayzayanta & Yadanar Rd, Thingangyun Tsp, Yangon, Myanmar TEL: 1-571321 FAX: 1-571288 WEB: www.united-engineering.net
- WATANA TRADING LTD No.59 (A)Shwe Hintha Street 6 1/2 Mile, Pyay Road, Hlaing Township Yangon TEL: 1-526-130 E-MAIL: wwtnmya@gmail.com WEB: www.watana.org/

### THAILAND COUNTRY CODE - 66 -

• STAR MARINE ENGINEERING CO., LTD 2 / 5 M11 Tumbol Bangphueng Phrapradaeng, Samutprakarn TEL: 2-816-8001 EAX: 2-463-2616 E-MAIL: info@starmarineeng.com

### MALAYSIA COUNTRY CODE . 60

- PANSAR COMPANY., SDN BHD Wisma Pansar 23-27 Workshop Road 96007 Sibu Sarawak, Malaysia TEL: 84-333366 FAX: 84-314555
- CHONG LEE LEONG SENG ENTERPRISE SDN BHD Lot 530. Persiaran Subang Permai Sg Penaga Industrial Park, USJ 1 47500 Subang Jaya Selangor Darul Ehsan, Malaysia TEL: 3-5632-1577 FAX: 3-5632-3126

### INDONESIA COUNTRY CODE " 62 "

- YANMAR JAKARTA SERVICE CENTER C/O P.T. PIONEER Jalan Ir. H. Juanda, No.40-42 Jakarta 10120, Indonesia (P.O. Box 2502-Jakarta 10025) TEL: 21-385-8526 FAX: 21-384-8995
- P.T. PIONEER Jalan Ir. H. Juanda, No.40-42 Jakarta 10120, Indonesia (P.O. Box 2502-Jakarta 10025) TEL: 21-344-8486 FAX: 21-384-8995

OCEANIA

AUSTRALIA COUNTRY CODE - 61 -

- FOGACS CAIRNCROSS DOCKYARD PTY LTD. Thynne Road, Morningside, Brisbane Queensland, Australia 4170 TEL: 7-322-70856 FAX: 7-3399-6164
- WATERSIDE ENGINEERING PTY LTD. 48-50 Export Drive, Brooklyn 3025 Victoria Australia TEL: 3-9314-3722 FAX: 3-9314-3799 E-MAIL: waterside@waterside-eng.com
- JAITCO 10199 Kurraba Road, Neutral Bay, N.S.W. 2089, Australia TEL: +81-89-956-8927 FAX: +81-89-956-8927
- JAPAN MARINE ENGINEERING CO..LTD 475 Warrigal Road Mooral Victoria Australia 3189 TEL: 3-9555-5277 FAX: 3-9555-5344 E-MAIL: sales@jmeaust.com.au
- POWER EQUIPMENT PTY LTD- HEAD OFFICE 10-12 Commercial Drive Lynbrook, VIC, 3975 TEL: 3-9709-8500 E-MAIL: info@powerequipment.com.au WEB: www.powerequipment.com.au/

### NEW ZEALAND COUNTRY CODE \* 64 \*

- POWER EQUIPMENT PTY LTD 10A Vega Place, Rosedale, Auckland, 0632 TEL: 9-358-7478 sales@powerequipment.co.nz parts@powerequipment.co.nz service@powerequipment.co.nz WEB: www.powerequipment.co.nz/
- PAPUA NEW GUINEA COUNTRY CODE . 675 .
- LUTHERAN SHIPPING P.O. Box 1459 Lae, Papua New Guinea TEL: 42-6190 FAX: 42-5806 TELEX: NE 44172

NORTH AMERICA

U.S.A. COUNTRY CODE '1'

- **G** YANMAR AMERICA CORP. 101 International GA 30103, U.S.A. onal Parkway, Adairsville, TEL: 770-877-9894 FAX: 770-877-9009 WEB: yanmar.com/global
- MARINE TURBO & DIESEL INC. 090 7th Street Richm Ca 94801, U.S.A. TEL: 510-236-3525 FAX: 519-236-3576
- GOLTENS MIAMI CO. INC. 2323 N.E.Miami Court · Miami Florida 33137 U.S.A. TEL: 305-576-4410 FAX: 305-576-3827
- TRANSMARINE PROPULSION SYSTEM, INC 5434 West Crenshaw Tampa Florida, 33634 U.S.A.
- TEL: 813-830-9180 FAX: 813-830-9181 BAY DIESEL & GENERATOR 3736 Cook Boulevard. Chesapeake, VA 23323-1604 USA TEL: 757-485-0075 FAX: 757-485-0242
- UNITED WORLD ENTERPRISE, INC 6310 Winfree Housto Texas 77087 U.S.A. TEL: 713-641-1915 FAX: 713-641-2717
- GOLTENS HOUSTON INC 7214 Clinton Drive Houston TX 77020 USA TEL: 713-487-4900 FAX: 713-487-4904

## SOUTH AMERICA

BRAZIL COUNTRY CODE - 55

- YANMAR SOUTH AMERICA LTDA Cond E Indaituba 4509 Mod 01/0 ndaiatuba Rod SP73 13347-390 TEL: 19-3801-9200 FAX: 19-3834-4454 WEB: www.yanmar.com.br
- YANMAR SOUTH AMERICA MANAUS BRANCH Rua Jonatas Pedrosa Numero 50 Bairro Centro Manaus 69020-110 TEL: 92-3347-9205
- METALOCK BRASIL LTDA Rua Visconde do Rio Branco 20/26, 11013-030, Santos, SP, Brazil TEL: 13-3226-4686 FAX: 13-3226-4680 E-MAIL: santos@metalock.com.b WEB: www.metalock.com.br
- MANUTENÇÃO E REPAROS DE MOTORES DIESEL (ROMAGA) Rua Pedro Alves, 18 / 20 / 22 / 22 fds 01 e 02 Santo Cristo Rio de Janeiro - RJ 20220-281 TEL: 21-2263-3115 WEB: www.romaga.com.br

### EQUADOR COUNTRY CODE - 593 -

MOTORES DEL PACÍFICO S.A. Av. Francisco de Orellana, Alborada XIII etapa, Mz 29,C.C. Albotrece, locales 1 y 2, Guayaquil - Ecuador Tel : 4-2174-067 , 4-6033-350 WEB: motoresdelpacifico.com

## PARAGUAY COUNTRY CODE - 595 -

ADRIASOL S.A. Ruta km 19,5, Transchaco, Asunción, Paraguay TEL: 21-756099 WEB: www.adriasolsa.com

## ARGENTINE COUNTRY CODE - 54 -

- TALLERES LILO S.A. Defensa 1883 - Dock Sud - Avellaneda - Buenos Aires, Argentina TEL: 11-4222-1289 WEB: www.tallereslilo.com.ar/
- VN PROPUL SION S R L Mar de Plata 7600 Buenos Aires - Argentina TEL: 011-4553-4026 WEB: vnpropulsion.com/en
- JOSE V. NATALICHIO Av. Regimientos de Patricios 176 1ª B (C1205ADO) Ciudad Autonoma De Buenos Aires-Argentina TEL: 911-4300-8226 FAX: 911-4361-3001

# HISTORY

- 1912 Founded as Yamaoka Hatsudoki Kosakusho.
- 1936 Founded as Yamaoka Nainenki (internal combustion engine) Company Ltd. with 3 million yen on a 40,000m<sup>2</sup> site in Nagasu Oda-mura, Kawabe-gun, Hyogo Pref. Manufactured diesel engines together with Yamaoka Hatsudohki Kosakusho (engine mfg.) Co., Ltd.
- 1952 Name changed to Yanmar Diesel Engine Co., Ltd.
- **1968** Awarded Deming Prize for pursuing distinguished quality control.
- 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.
- 1984 Plant certified by NV ( Det Norske Veritas ).
- **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 IS014001 (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.
- 10-10-10
- **1999** Our new products of diesel engine " SAVETEN " series which advance of low NOx and low fuel oil consumption are on the commercial.
- 2002 The Name of the company changed to YANMAR Co., Ltd.
- **2005** Received supervision for approved factories by BV (Bureau Veritas).
- **2006** The Large Power Products Operations Business celebrated its 70th anniversary.
- **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.
- **2008** Received supervision for approved factories by KR (Korean Register of Shipping).





- **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).
- 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).
- 2014 Released Model 6EYG26L.
- 2015 Released Model 6EY33.
  - Released SCR for Model 6EY26.







2016 • Released Model 6EY26DF Released

Marine spring vibration isolating system