

YANMAR

MARINE

DIESEL ENGINE



Yanmar—The World's First

Yanmar marine diesels are known and prized by the people who own them—those who actually make their living from the sea. In 19 countries Yanmar offers the finest quality marine diesel for a wide range of use. For that main propulsion and auxiliary jobs, where design and high performance are fully needed. Indeed, there is a suitable Yanmar for every requirement, from 2 to 1200 horsepower, with a full line of accessories.

In Japan over 90% of all small fishing craft use a Yanmar diesel engine for their propulsion. The industry overwhelmingly selected especially in a product that is proved within your own reach.

Over 30 years ago after years of difficult research, Yanmar introduced the world's first compact diesel. Today, the average engine is 7.5 times as efficient as other engines. Proved that when you choose a Yanmar you avoid disaster.

Yanmar marine diesels are proven in every area of performance and economy.

Versatility

Each Yanmar marine diesel has built-in flexibility with regard to use. That is, each is well suited for fishing boats, cargo vessels, ferries, passenger ships and other applications. Yanmar's 100 models cover variation of power requirements from 2 to 1200 hp, capable to handle different fishing methods, hull shapes and all auxiliary power needs.

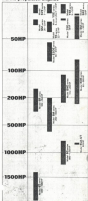
Tough and Reliable

Continuous heavy operation will never bother a Yanmar. It is built to make powerboats in style and provide full-rated power at all times. Keeping this, fishermen and other users of the sea appreciate the wide range of safety provided for years and longevity.

Economy in Operation

Because each Yanmar diesel offers high combustion efficiency and maximum power/tonnage from every drop of fuel, low fuel cost is a fact. Moreover, easy oil service and economy for simple construction greatly reduce operating cost. Low overall expense is required to compare the overall operation and projected future maintenance, all three factors make Yanmar diesel—cheaper to install, safely built and far cheaper when calculated over a long term basis.

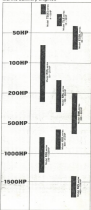
Marine propulsion engines



Choice in Diesels



Marine auxiliary engines



MARINE PROPULSION ENGINES

Model YSE series

5-12 HP

Low profile horizontal design. Idealized for watermanagers. Accessories available for various water depths, fishing and pleasure boats.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke (in.)	Max. rpm (RPM)	Max. torque (lb-ft)	Max. hp (HP)	Max. weight (lb)	Dimensions (L x W x H in.)
YSE5	Single cylinder, horizontal design	1	19 x 15	4,700/5,700	12.000	5.5	110/100	500 x 100 x 200
YSE6	"	1	19	4,700	12.000	5.5	110/100	500 x 100 x 200
YSE8	"	1	19 x 15	4,700/5,700	12.000	5.5	110/100	500 x 100 x 200
YSE10	"	1	19	4,700	12.000	5.5	110/100	500 x 100 x 200

Model YSE series

LOW PROFILE

5-12 HP

Standard YSE engine from the fuel tank down into the water. Accessories available for various water depths, fishing and pleasure boats.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke (in.)	Max. rpm (RPM)	Max. torque (lb-ft)	Max. hp (HP)	Max. weight (lb)	Dimensions (L x W x H in.)
YSE5	Single cylinder, horizontal design	1	19 x 15	4,700/5,700	12.000	5.5	110/100	500 x 100 x 200
YSE6	"	1	19	4,700	12.000	5.5	110/100	500 x 100 x 200
YSE8	"	1	19 x 15	4,700/5,700	12.000	5.5	110/100	500 x 100 x 200
YSE10	"	1	19	4,700	12.000	5.5	110/100	500 x 100 x 200

Model **SVE** series

7-12 HP

Slam vertical cylinder design ideally suited for limited engine room width but providing same horsepower (HP). From power take-off alone 100% engine output.



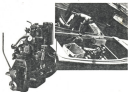
SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke, mm	Max. rating output (HP/kW)	Min. rating output (HP/kW)	Max. torque (kg)	Dry weight (kg/Net)	Dimensions L x B x H (mm)
SVE6	4 stroke, water cooled, vertical, four-cylinder	4	55 + 55	12/9.0	8/5.9	2.15	60/52.5	450 x 450 x 450
SVE8	"	"	"	"	"	3.00	"	"
SVE10	"	"	65 + 65	16/12.0	12/9.0	3.75	68/59.5	480 x 450 x 475
SVE12	"	"	"	"	"	5.00	"	"

Model **SKE** series

13 HP

Vertical single cylinder design and inverted balance reducing vibration makes for simple design and easy operation. Perfect for maintenance of non-powered boats.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke, mm	Max. rating output (HP/kW)	Min. rating output (HP/kW)	Max. torque (kg)	Dry weight (kg/Net)	Dimensions L x B x H (mm)
SKE	4 stroke, water cooled, vertical, single-cylinder	1	65 + 65	13/9.5	10/7.4	3.94	57/50.5	475 x 475 x 750
SKE6	"	"	"	"	"	3.00	"	"
SKE8	"	"	"	"	"	3.94	"	"

Model 2SE series

18 HP

For the most engine in small fishing boats or an auxiliary engine for sailing yachts, this versatile 2-cylinder constant speed engine features a mechanical clutch, manual starting and cooling by raw water using a plunger type pump.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. x stroke (mm)	Max. rating output (kW/PS)	Max. rating output (HP/PS)	Reduction ratio	Dry weight (kg/15.7)	Dimensions (L x B x H mm)
2200	Single water-cooled, vertical shaft engine	2	85 x 100	16/22.0	22/30.0	1.65 : 1	166 (365)	554 x 381 x 1015
2500	"	2	"	"	"	1.55 : 1	"	"

Model QM series

20-33 HP

Light duty type. High speed, high power light engine. Features low noise, low vibration and many optionally available accessories for pleasure boaters. Ideal for commercial trailer-type craft.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. x stroke (mm)	Max. rating output (kW/PS)	Max. rating output (HP/PS)	Reduction ratio	Dry weight (kg/15.7)	Dimensions (L x B x H mm)
2040 (20)	Single water-cooled, vertical shaft engine	2	85 x 95	15/20.0	20/27.0	1.7 : 1	84 (186)	455 x 351 x 875
2200 (22)	"	2	"	"	"	1.65 : 1	"	"
2500 (25)	"	2	"	16/22.0	22/30.0	1.5 : 1	166 (365)	554 x 381 x 1015
2800 (28)	"	2	"	"	"	1.5 : 1	"	"

Model TE series

22-37 HP

Available either in the Isuzu/DAEWOO or Isuzu/DAEWOO models. Widely used not only in Japan, but throughout the world in the major engine of fishing craft. Fundamental fuel consumption and sturdy construction requiring little maintenance allows trouble free operation.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke (mm)	Max. output (kW/gps)	Max. output (HP/gps)	Reduction ratio	Wt. (kg/ lbs)	Dimensions (L x B x H mm)
220	Single water cooled, vertical shaft engine	2	80 x 100	16.1/100	22.0/100	1.8:1	260/570	660 x 460 x 670
2700	"	2	"	"	"	1.8:1	"	"
27000	"	2	"	"	"	1.8:1	"	"
330	"	3	"	18.7/100	25.7/100	1.8:1	280/580	710 x 480 x 670
3700	"	"	"	"	"	1.8:1	"	"
37000	"	"	"	"	"	1.8:1	"	"

Model SME series

14-30 HP

Available in Isuzu/DAEWOO SME1, 2, 3, 4, 5, 1500-HP (SME1), or Isuzu/DAEWOO 14-30-HP (SME1) models. Other than standard block and starting systems, available if desired. The fuel/ignition system available for the SME1 and SME2 is a world wide first for small engines.



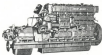
SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke (mm)	Max. output (kW/gps)	Max. output (HP/gps)	Reduction ratio	Wt. (kg/ lbs)	Dimensions (L x B x H mm)
1400	Single water cooled, vertical shaft engine	2	80 x 100	10.4/100	14.3/100	1.8:1	240/530	710 x 460 x 670
1500	"	2	"	"	"	1.8:1	"	"
1500	"	2	"	10.4/100	14.3/100	1.8:1	240/530	660 x 460 x 670
15000	"	2	"	"	"	1.8:1	"	"
150000	"	2	"	"	"	1.8:1	"	"
1500	"	2	"	10.4/100	14.3/100	1.8:1	240/530	710 x 460 x 670
15000	"	2	"	"	"	1.8:1	"	"
150000	"	2	"	"	"	1.8:1	"	"

Model KD series

8.2 - 265 HP

Available in 2, 4, 6, 8-cylinder normally aspirated or 6-cylinder turbo-charged and air-inter-cooled engine models, a medium speed engine featuring dual 540 and 600-cm. Hydraulic clutch and four different reduction gear types are available. Fuel system features a pre-combustion chamber and in-line Bosch type injection pump. Heavy rubber injection pump available as standard equipment for direct and water cooling.



SPECIFICATIONS

** 60°C intake temp. & air reference

Model	Type	No. of cylinders	Rated output (kW)	Rated output (HP)	1 hr. output (kW)	1 hr. output (HP)	Reduction ratio	Dry weight (kg)	Dimensions (L x B x H mm)
2000	4-cyl. water-cooled, air-cooled engine	4	100 (135)	137 (188)	137 (188)	137 (188)	1.75:1	1240 (2750)	1400 x 750 x 1200
2400	"	4	132	180	180	180	1.75:1	14	14
2800	"	4	164	223	223	223	1.75:1	14	14
3200	"	4	196	268	268	268	1.75:1	1400 (3100)	1400 x 750 x 1200
3600	"	4	228	310	310	310	1.75:1	1400 (3100)	1400 x 750 x 1200
4000	"	4	260	354	354	354	1.75:1	14	14
4400	"	4	292	398	398	398	1.75:1	1400 (3100)	1400 x 750 x 1200
4800	"	4	324	442	442	442	1.75:1	14	14
5200	"	4	356	486	486	486	1.75:1	1400 (3100)	1400 x 750 x 1200
5600	"	4	388	529	529	529	1.75:1	1400 (3100)	1400 x 750 x 1200
6000	"	4	420	573	573	573	1.75:1	14	14
6400	"	4	452	617	617	617	1.75:1	14	14
6800	"	4	484	661	661	661	1.75:1	1400 (3100)	1400 x 750 x 1200
7200	"	4	516	705	705	705	1.75:1	1400 (3100)	1400 x 750 x 1200
7600	"	4	548	749	749	749	1.75:1	1400 (3100)	1400 x 750 x 1200
8000	"	4	580	793	793	793	1.75:1	1400 (3100)	1400 x 750 x 1200
8400	"	4	612	837	837	837	1.75:1	1400 (3100)	1400 x 750 x 1200
8800	"	4	644	881	881	881	1.75:1	1400 (3100)	1400 x 750 x 1200
9200	"	4	676	925	925	925	1.75:1	1400 (3100)	1400 x 750 x 1200
9600	"	4	708	969	969	969	1.75:1	1400 (3100)	1400 x 750 x 1200
10000	"	4	740	1013	1013	1013	1.75:1	1400 (3100)	1400 x 750 x 1200
10400	"	4	772	1057	1057	1057	1.75:1	1400 (3100)	1400 x 750 x 1200
10800	"	4	804	1101	1101	1101	1.75:1	1400 (3100)	1400 x 750 x 1200
11200	"	4	836	1145	1145	1145	1.75:1	1400 (3100)	1400 x 750 x 1200
11600	"	4	868	1189	1189	1189	1.75:1	1400 (3100)	1400 x 750 x 1200
12000	"	4	900	1233	1233	1233	1.75:1	1400 (3100)	1400 x 750 x 1200
12400	"	4	932	1277	1277	1277	1.75:1	1400 (3100)	1400 x 750 x 1200
12800	"	4	964	1321	1321	1321	1.75:1	1400 (3100)	1400 x 750 x 1200
13200	"	4	996	1365	1365	1365	1.75:1	1400 (3100)	1400 x 750 x 1200
13600	"	4	1028	1409	1409	1409	1.75:1	1400 (3100)	1400 x 750 x 1200
14000	"	4	1060	1453	1453	1453	1.75:1	1400 (3100)	1400 x 750 x 1200
14400	"	4	1092	1497	1497	1497	1.75:1	1400 (3100)	1400 x 750 x 1200
14800	"	4	1124	1541	1541	1541	1.75:1	1400 (3100)	1400 x 750 x 1200
15200	"	4	1156	1585	1585	1585	1.75:1	1400 (3100)	1400 x 750 x 1200
15600	"	4	1188	1629	1629	1629	1.75:1	1400 (3100)	1400 x 750 x 1200
16000	"	4	1220	1673	1673	1673	1.75:1	1400 (3100)	1400 x 750 x 1200
16400	"	4	1252	1717	1717	1717	1.75:1	1400 (3100)	1400 x 750 x 1200
16800	"	4	1284	1761	1761	1761	1.75:1	1400 (3100)	1400 x 750 x 1200
17200	"	4	1316	1805	1805	1805	1.75:1	1400 (3100)	1400 x 750 x 1200
17600	"	4	1348	1849	1849	1849	1.75:1	1400 (3100)	1400 x 750 x 1200
18000	"	4	1380	1893	1893	1893	1.75:1	1400 (3100)	1400 x 750 x 1200
18400	"	4	1412	1937	1937	1937	1.75:1	1400 (3100)	1400 x 750 x 1200
18800	"	4	1444	1981	1981	1981	1.75:1	1400 (3100)	1400 x 750 x 1200
19200	"	4	1476	2025	2025	2025	1.75:1	1400 (3100)	1400 x 750 x 1200
19600	"	4	1508	2069	2069	2069	1.75:1	1400 (3100)	1400 x 750 x 1200
20000	"	4	1540	2113	2113	2113	1.75:1	1400 (3100)	1400 x 750 x 1200
20400	"	4	1572	2157	2157	2157	1.75:1	1400 (3100)	1400 x 750 x 1200
20800	"	4	1604	2201	2201	2201	1.75:1	1400 (3100)	1400 x 750 x 1200
21200	"	4	1636	2245	2245	2245	1.75:1	1400 (3100)	1400 x 750 x 1200
21600	"	4	1668	2289	2289	2289	1.75:1	1400 (3100)	1400 x 750 x 1200
22000	"	4	1700	2333	2333	2333	1.75:1	1400 (3100)	1400 x 750 x 1200
22400	"	4	1732	2377	2377	2377	1.75:1	1400 (3100)	1400 x 750 x 1200
22800	"	4	1764	2421	2421	2421	1.75:1	1400 (3100)	1400 x 750 x 1200
23200	"	4	1796	2465	2465	2465	1.75:1	1400 (3100)	1400 x 750 x 1200
23600	"	4	1828	2509	2509	2509	1.75:1	1400 (3100)	1400 x 750 x 1200
24000	"	4	1860	2553	2553	2553	1.75:1	1400 (3100)	1400 x 750 x 1200
24400	"	4	1892	2597	2597	2597	1.75:1	1400 (3100)	1400 x 750 x 1200
24800	"	4	1924	2641	2641	2641	1.75:1	1400 (3100)	1400 x 750 x 1200
25200	"	4	1956	2685	2685	2685	1.75:1	1400 (3100)	1400 x 750 x 1200
25600	"	4	1988	2729	2729	2729	1.75:1	1400 (3100)	1400 x 750 x 1200
26000	"	4	2020	2773	2773	2773	1.75:1	1400 (3100)	1400 x 750 x 1200
26400	"	4	2052	2817	2817	2817	1.75:1	1400 (3100)	1400 x 750 x 1200
26800	"	4	2084	2861	2861	2861	1.75:1	1400 (3100)	1400 x 750 x 1200
27200	"	4	2116	2905	2905	2905	1.75:1	1400 (3100)	1400 x 750 x 1200
27600	"	4	2148	2949	2949	2949	1.75:1	1400 (3100)	1400 x 750 x 1200
28000	"	4	2180	2993	2993	2993	1.75:1	1400 (3100)	1400 x 750 x 1200
28400	"	4	2212	3037	3037	3037	1.75:1	1400 (3100)	1400 x 750 x 1200
28800	"	4	2244	3081	3081	3081	1.75:1	1400 (3100)	1400 x 750 x 1200
29200	"	4	2276	3125	3125	3125	1.75:1	1400 (3100)	1400 x 750 x 1200
29600	"	4	2308	3169	3169	3169	1.75:1	1400 (3100)	1400 x 750 x 1200
30000	"	4	2340	3213	3213	3213	1.75:1	1400 (3100)	1400 x 750 x 1200
30400	"	4	2372	3257	3257	3257	1.75:1	1400 (3100)	1400 x 750 x 1200
30800	"	4	2404	3301	3301	3301	1.75:1	1400 (3100)	1400 x 750 x 1200
31200	"	4	2436	3345	3345	3345	1.75:1	1400 (3100)	1400 x 750 x 1200
31600	"	4	2468	3389	3389	3389	1.75:1	1400 (3100)	1400 x 750 x 1200
32000	"	4	2500	3433	3433	3433	1.75:1	1400 (3100)	1400 x 750 x 1200
32400	"	4	2532	3477	3477	3477	1.75:1	1400 (3100)	1400 x 750 x 1200
32800	"	4	2564	3521	3521	3521	1.75:1	1400 (3100)	1400 x 750 x 1200
33200	"	4	2596	3565	3565	3565	1.75:1	1400 (3100)	1400 x 750 x 1200
33600	"	4	2628	3609	3609	3609	1.75:1	1400 (3100)	1400 x 750 x 1200
34000	"	4	2660	3653	3653	3653	1.75:1	1400 (3100)	1400 x 750 x 1200
34400	"	4	2692	3697	3697	3697	1.75:1	1400 (3100)	1400 x 750 x 1200
34800	"	4	2724	3741	3741	3741	1.75:1	1400 (3100)	1400 x 750 x 1200
35200	"	4	2756	3785	3785	3785	1.75:1	1400 (3100)	1400 x 750 x 1200
35600	"	4	2788	3829	3829	3829	1.75:1	1400 (3100)	1400 x 750 x 1200
36000	"	4	2820	3873	3873	3873	1.75:1	1400 (3100)	1400 x 750 x 1200
36400	"	4	2852	3917	3917	3917	1.75:1	1400 (3100)	1400 x 750 x 1200
36800	"	4	2884	3961	3961	3961	1.75:1	1400 (3100)	1400 x 750 x 1200
37200	"	4	2916	4005	4005	4005	1.75:1	1400 (3100)	1400 x 750 x 1200
37600	"	4	2948	4049	4049	4049	1.75:1	1400 (3100)	1400 x 750 x 1200
38000	"	4	2980	4093	4093	4093	1.75:1	1400 (3100)	1400 x 750 x 1200
38400	"	4	3012	4137	4137	4137	1.75:1	1400 (3100)	1400 x 750 x 1200
38800	"	4	3044	4181	4181	4181	1.75:1	1400 (3100)	1400 x 750 x 1200
39200	"	4	3076	4225	4225	4225	1.75:1	1400 (3100)	1400 x 750 x 1200
39600	"	4	3108	4269	4269	4269	1.75:1	1400 (3100)	1400 x 750 x 1200
40000	"	4	3140	4313	4313	4313	1.75:1	1400 (3100)	1400 x 750 x 1200
40400	"	4	3172	4357	4357	4357	1.75:1	1400 (3100)	1400 x 750 x 1200
40800	"	4	3204	4401	4401	4401	1.75:1	1400 (3100)	1400 x 750 x 1200
41200	"	4	3236	4445	4445	4445	1.75:1	1400 (3100)	1400 x 750 x 1200
41600	"	4	3268	4489	4489	4489	1.75:1	1400 (3100)	1400 x 750 x 1200
42000	"	4	3300	4533	4533	4533	1.75:1	1400 (3100)	1400 x 750 x 1200
42400	"	4	3332	4577	4577	4577	1.75:1	1400 (3100)	1400 x 750 x 1200
42800	"	4	3364	4621	4621	4621	1.75:1	1400 (3100)	1400 x 750 x 1200
43200	"	4	3396	4665	4665	4665	1.75:1	1400 (3100)	1400 x 750 x 1200
43600	"	4	3428	4709	4709	4709	1.75:1	1400 (3100)	1400 x 750 x 1200
44000	"	4	3460	4753	4753	4753	1.75:1	1400 (3100)	1400 x 750 x 1200
44400	"	4	3492	4797	4797	4797	1.75:1	1400 (3100)	1400 x 750 x 1200
44800	"	4	3524	4841	4841	4841	1.75:1	1400 (3100)	1400 x 750 x 1200
45200	"	4	3556	4885	4885	4885	1.75:1	1400 (3100)	1400 x 750 x 1200
45600	"	4	3588	4929	4929	4929	1.75:1	1400 (3100)	1400 x 750 x 1200
46000	"	4	3620	4973	4973	4973	1.75:1	1400 (3100)	1400 x 750 x 1200
46400	"	4	3652	5017	5017	5017	1.75:1	1400 (3100)	1400 x 750 x 1200
46800	"	4	3684	5061	5061	5061	1.75:1	1400 (3100)	1400 x 750 x 1200
47200	"	4	3716	5105	5105	5105	1.75:1	1400 (3100)	1400 x 750 x 1200
47600	"	4	3748	5149	5149	5149	1.75:1	1400 (3100)</	

Model **ESDE** series 56-84 HP

Based on the Isuzu4800HP engine and Isuzu4800HP engine, this ES engine series offers a broad combination of starting systems and reduction gears with plenty of capacity for heavy duty use including and cargo boats.

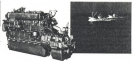


SPECIFICATIONS

Model	Type	No. of cylinders	Max. crankshaft speed (rpm)	Max. starting output (HP/kW)	Max. running output (HP/kW)	Reduction ratio	Dry weight (kg/lbs)	Dimensions (L x W x H mm)
ESDE56	Single water pump, vertical shaft engine	3	1200-1200	150/110	150/110	1.00:1	800/1760	1050 x 1000 x 800
ESDE60	"	4	"	"	"	0.80:1	"	"
ESDE65	"	4	"	"	"	0.60:1	"	"
ESDE70	"	4	"	"	"	0.50:1	"	"
ESDE80	"	4	"	150/110	150/110	0.40:1	800/1760	1050 x 1000 x 1000
ESDE84	"	4	"	"	"	0.30:1	"	"
ESDE90	"	4	"	"	"	0.20:1	"	"
ESDE100	"	4	"	"	"	0.10:1	"	"

Model **BNE** series 115-260 HP

Medium speed and heavy duty with adequate capacity for use as the main engine in fishing and commercial tug boats. A variety of features to satisfy a wide range of needs.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. crankshaft speed (rpm)	Max. starting output (HP/kW)	Max. running output (HP/kW)	Reduction ratio	Dry weight (kg/lbs)	Dimensions (L x W x H mm)
BNE115	4-cylinder water, vertical shaft engine	4	1200-1200	175/130	150/110	0.80:1	1000/2200	1050 x 800 x 1000
BNE120	"	4	"	"	"	0.60:1	"	"
BNE130	"	4	"	"	"	0.50:1	"	"
BNE140	"	4	"	"	"	0.40:1	"	"
BNE150	"	4	"	150/110	150/110	0.30:1	1000/2200	1050 x 1000 x 1000
BNE160	"	4	"	"	"	0.20:1	"	"
BNE170	"	4	"	"	"	0.10:1	"	"
BNE180	"	4	"	"	"	0.05:1	"	"
BNE200	"	4	"	200/150	180/135	0.20:1	1000/2200	1050 x 1000 x 1000
BNE220	"	4	"	"	"	0.10:1	"	"
BNE240	"	4	"	"	"	0.05:1	"	"
BNE260	"	4	"	"	"	0.02:1	"	"

16.5-35.0 HP

Exhaustive Warner test runs yielded less than 100,000 miles of total equivalent distance, after deducting test mileage already.



Abstract

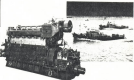
Abstract

Model	Type	Flux at optimum	Mass in atomic unit	Final velocity (km/s)	1-D velocity dispersion (km/s)	Reduction ratio			File weights (g, b, r)	Improvement (1-D vs 3-D case)
BB1	Simple water cloud, carbonaceous grains	0	1000 ± 1000	1000 ± 1000	1000 ± 1000	2.0/1	2.0/1	2.0/1	BB1 (BB1)	1000 ± 1000 = 1000
BB1, 2 nd	"	0	0	2000 ± 1000	1000 ± 1000	2	2	2	BB1 (BB1)	1000 ± 1000 = 1000
BB1, 3 rd	"	0	0	2000 ± 1000	1000 ± 1000	2	2	2	BB1 (BB1)	1000 ± 1000 = 1000
BB1, 4 th	"	0	0	2000 ± 1000	1000 ± 1000	2	2	2	BB1 (BB1)	1000 ± 1000 = 1000

Model
GM workhorse

200 605 H

Highly reliable, long-lasting, heavy-duty, medium speed engine. All necessary accessories are standard equipment and many optional accessories are available for specific use. Typical remote control and starting devices allow engine-type choice from the field.



References

*All trademarks are the property of their respective owners.

[illegible]

Model 6UA-UT

825 HP

Compact high-temperature cooling system and cooling type fuel valves give easily improved combustion performance and provide a far more economical fuel consumption. Protection device, alarm system and remote control are incorporated.



SPECIFICATIONS

*All values are based on ISO conditions, that is, sea level.

Model	Type	No. of cylinders	Rated capacity (kW)	Rated output (HP/kW)	1-hr output (HP/kW)	Reduction ratio	Dry weight (kg/ton)	Dimensions (L x W x H mm)
6UA-UT-1	High-pressure cooled surface scavenging	6	600-1200	750/1000	1000/1300	1.00 : 1.00 : 1.00	1700-17500	2600 x 2000 x 2000

Model 6G series

1000-1250 HP

All the advantages of a high-output 4-stroke diesel engine make this model popular as a main engine for fishing vessels, cargo passenger vessels, ferries and ferries. (Horse head is fitted with air-cooling system.)



SPECIFICATIONS

*All values are based on ISO conditions, that is, sea level.

Model	Type	No. of cylinders	Rated capacity (kW)	Rated output (HP/kW)	1-hr output (HP/kW)	Reduction ratio	Dry weight (kg/ton)	Dimensions (L x W x H mm)
6G-01	High-pressure cooled surface scavenging	6	1000-1200	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000
6G-02	"	"	"	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000
6G-03	"	"	"	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000
6G-04	"	"	"	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000
6G-05	"	"	"	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000
6G-06	"	"	"	1000/1300	1000/1300	1.00 : 1.00 : 1.00	17000-17500	2600 x 2000 x 2000

Model 6Z series

1400-1200 HP

Excellent maneuverability, plus reduced compressor output are the benefits of big diesel remote control. With improved cooling and fuel injection systems, complete fuel combustion is guaranteed under the best low speed condition, as well as under high load at high engine speed.



SPECIFICATIONS

*600 kwhorsepower ** 600 kwhorsepower 600 kwhorsepower 600 kwhorsepower

Model	Type	Rated output	Rated torque (kgm)	Rated speed (rpm)	1 hr rated output (kg)	1 hr rated output (kg)	Rated torque	Rated torque (kgm)	Rated torque (kgm)
6Z-600	600 kwhorsepower 600 kwhorsepower	600	1000	1000	1000	1000	1000	1000	1000
6Z-600	600	600	600	600	600	600	600	600	600
6Z-600	600	600	600	600	600	600	600	600	600



MARINE AUXILIARY ENGINES



Model TS series

4-18 HP

Tsuneo TS series models have a reputation of high performance and dependability in many areas of marine use—including service power for aquaculture, ventilation, and engine room power for generator, compressor, refrigeration, etc.



SPECIFICATIONS

Model	Type	No. of cylinders	Net cylinder size	Net cooling water (GPM)	Net cooling water (CFM)	Dry weight (kg/500)	Dimensions (L x B x H mm)
TS400L	4 cycle water cooled, vertical shaft engine	1	35 x 35	4.0/100	5.0/100	100/200	100 x 100 x 400
TS400S	"	1	35 x 35	4.0/100	5.0/100	75/150	100 x 100 x 350
TS400T	"	1	35 x 35	4.0/100	5.0/100	100/200	100 x 100 x 350
TS400V	"	1	35 x 35	4.0/100	5.0/100	100/200	100 x 100 x 350
TS600L	"	1	45 x 45	6.0/100	8.0/100	150/300	150 x 150 x 450
TS600S	"	1	45 x 45	6.0/100	8.0/100	100/200	150 x 150 x 400
TS600T	"	1	45 x 45	6.0/100	8.0/100	150/300	150 x 150 x 400
TS600V	"	1	45 x 45	6.0/100	8.0/100	150/300	150 x 150 x 400
TS800L	"	1	55 x 55	8.0/100	10.0/100	200/400	200 x 200 x 500

Model TLE series

18-30 HP

Very easy to operate, models only require minimal daily inspection and maintenance. Standard model features open seawater cooling with a radiator type cooling model also available.



SPECIFICATIONS

Model	Type	No. of cylinders	Net cylinder size	Net refrigerant (GPM)	Net refrigerant (CFM)	Dry weight (kg/500)	Dimensions (L x B x H mm)
TLE18	4 cycle water cooled, vertical shaft engine	2	55 x 55	8.0/100	10.0/100	200/400	200 x 200 x 500
TLE24	"	2	"	10.0/100	12.0/100	250/500	250 x 250 x 550

Model ESDL series

38-77 HP

ESDL/38-55 HP engine and ESDCL/55-77 HP engine available. Standby ready to operate and well balanced performance... excellent for dependable use, they are.



SPECIFICATIONS

Model	Type	No. of cylinders	Max. stroke (in)	Crank output (hp/kW)			Flywheel output (hp/kW)			Net weight (kg/lbs)	Dimensions (L x B x H in)
ESDL	4-cyl water cooled, overhead valve engine	4	105 x 105	38/27.8	55/40.2	55/40.2	55/40.2	55/40.2	55/40.2	1000 x 775 x 1000	1000 x 775 x 1000
ESDCL	"	"	"	55/40.2	80/58.8	80/58.8	80/58.8	80/58.8	80/58.8	1000 x 775 x 1000	1000 x 775 x 1000

Model KDL / KFL series

70-287 HP

Compact, heavy duty design featuring maximum horsepower per cubic weight. Simple construction and functional design facilitate internal inspection. widely used to provide stable power supply in electric power of ships.



SPECIFICATIONS

* With water pump ** With water pump & air compressor

Model	Type	No. of cylinders	Max. stroke (in)	Crank output (hp/kW)			Flywheel output (hp/kW)			Net weight (kg/lbs)	Dimensions (L x B x H in)
KDL	4-cyl water cooled, overhead valve engine	4	105 x 105	70/51.2	105/76.6	105/76.6	105/76.6	105/76.6	105/76.6	1000 x 775 x 1000	1000 x 775 x 1000
KDL	"	"	"	105/76.6	150/109.3	150/109.3	150/109.3	150/109.3	150/109.3	1000 x 775 x 1000	1000 x 775 x 1000
KFL	"	"	"	105/76.6	200/147.1	200/147.1	200/147.1	200/147.1	200/147.1	1000 x 775 x 1000	1000 x 775 x 1000
KFL	"	"	"	105/76.6	250/183.7	250/183.7	250/183.7	250/183.7	250/183.7	1000 x 775 x 1000	1000 x 775 x 1000
KFL	"	"	"	105/76.6	300/220.3	300/220.3	300/220.3	300/220.3	300/220.3	1000 x 775 x 1000	1000 x 775 x 1000
KFL	"	"	"	105/76.6	350/256.9	350/256.9	350/256.9	350/256.9	350/256.9	1000 x 775 x 1000	1000 x 775 x 1000
KFL	"	"	"	105/76.6	400/293.5	400/293.5	400/293.5	400/293.5	400/293.5	1000 x 775 x 1000	1000 x 775 x 1000

Model GRL series

180-350 HP

In four types, pump facilities adjusting the injection timing of oil and the amount injected from each pump.

Developed for power generation, they provide ease of installation, operation and maintenance.



SPECIFICATIONS

① 180-hp (132-kW) ② 200-hp (147-kW) ③ 250-hp (184-kW) ④ 350-hp (257-kW)

Model	Type	No. of cylinders	Max. crank shaft rpm	Cooling water pump capacity		Oil pump capacity (l/min)		Oil weight (kg/hr)	Dimensions (L x B x H mm)
GRL	4-cyl. water-cooled, vertical crank engine	4	1750/1800	180/180	180/180	180/180	180/180	2000/1700	1000 x 1000 x 1000
GRL	①	①	①	200/180		200/180		2000/1700	①
GRL-T	②	②	②	200/180	200/180	180/180	170/180	2000/1700	1000 x 1000 x 1000
GRL-T	③	③	③	200/180		200/180		2000/1700	③
GRL-OT	④	④	④	180/180	180/180	180/180	180/180	2000/1700	1000 x 1000 x 1000
GRL-OT	④	④	④	200/180		200/180		2000/1700	④

Model GML series

200-650 HP

Centrifugal oil-pump control governor highly sensitive to load fluctuation, and exhaust-improved combustion chamber, multi-cylinder stable performance even in case of parallel operation of more than 7 units.



SPECIFICATIONS

① 200-hp (147-kW) ② 250-hp (184-kW) ③ 300-hp (220-kW) ④ 350-hp (257-kW) ⑤ 400-hp (294-kW) ⑥ 450-hp (331-kW) ⑦ 500-hp (368-kW) ⑧ 550-hp (405-kW) ⑨ 600-hp (442-kW)

Model	Type	No. of cylinders	Max. crank shaft rpm	Cooling water pump capacity		Oil pump capacity (l/min)		Oil weight (kg/hr)	Dimensions (L x B x H mm)
GML	4-cyl. water-cooled, vertical crank engine	4	1800/1800	200/180	200/180	200/180	200/180	2000/1700	1000 x 1000 x 1000
GML	①	①	①	200/180	200/180	200/180	170/180	2000/1700	1000 x 1000 x 1000
GML-T	②	②	②	200/180	200/180	200/180	180/180	2000/1700	1000 x 1000 x 1000
GML-T	③	③	③	200/180	200/180	200/180	200/180	2000/1700	③
GML-OT	④	④	④	200/180	200/180	200/180	200/180	2000/1700	1000 x 1000 x 1000
GML-OT	⑤	⑤	⑤	200/180	200/180	200/180	200/180	2000/1700	⑤
GML-OT	⑥	⑥	⑥	200/180	200/180	200/180	200/180	2000/1700	1000 x 1000 x 1000
GML-OT	⑦	⑦	⑦	200/180	200/180	200/180	200/180	2000/1700	⑦
GML-OT	⑧	⑧	⑧	200/180	200/180	200/180	200/180	2000/1700	1000 x 1000 x 1000
GML-OT	⑨	⑨	⑨	200/180	200/180	200/180	200/180	2000/1700	⑨

Model 6GL series 720-1320 HP

Four valve diesel/ventilating charge-cooled temperature cooling systems direct injection fuel system, etc.

Outstanding frequency stability because of accurate variable-speed fuel regulation and low cycle irregularity.



SPECIFICATIONS

10 models. Four valve diesel/ventilating charge-cooled four valve system

Model	Type	No. of cylinders	Rated output kW	Rated output HP/kW	Rated output HP/kW	Rated output HP/kW	Rated output HP/kW	Rated output HP/kW	Dimensions L x B x H mm
6GL-6T	4 cycle water-cooled direct four valve	6	260 x 200	350/700	475/700	500/700	500/700	500/700	4800 x 2050 x 2000
6GL-8T	"	8	"	460/700	630/700	650/700	650/700	650/700	"
6GL-10T	"	10	"	660/700	910/700	950/700	950/700	950/700	4800 x 2050 x 2000
6GL-12T	"	12	"	860/700	1160/700	1200/700	1200/700	1200/700	"
6GL-14T	"	14	"	1060/700	1460/700	1500/700	1500/700	1500/700	"

Model 6ZL series 1400-1760 HP

Vertical, medium-speed super-charged engine.

Long trouble-free operation without overhaul and dependable service.



SPECIFICATIONS

10 models. Four valve diesel/ventilating charge-cooled four valve system

Model	Type	No. of cylinders	Rated output kW	Rated output HP/kW	Rated output HP/kW	Rated output HP/kW	Rated output HP/kW	Dimensions L x B x H mm
6ZL-10T	4 cycle water-cooled direct four valve	10	200 x 200	1400/700	1900/700	1900/700	1900/700	4800 x 2050 x 2000
6ZL-12T	"	12	"	1600/700	2200/700	2200/700	2200/700	"

Model UL series

600 - 1015 HP

Four-stroke type diesel featuring high output and compact size.

Universal, vertical 6-cylinder diesel incorporating a jet cooling system, and a separate cylinder head cooling circuit. The optimum unit as part of a system.



All models fitted with turbocharger & air intercooler (two stage system)

Model	Type	No. of cylinders	Rated output kW	Full rating output (kW/gps)		1 hr rating output (kW/gps)		Wt. approx (kg/ton)	Dimensions (L x B x H mm)
UL-6T	4-cyl. water cooled, vertical diesel engine	6	100-110	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500
UL6A-6T	"	6	"	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500
UL6B-6T	"	6	"	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500
UL6A-6T	"	6	"	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500

Four-stroke 6-cyl. diesel having light and well independent functions.

Easily started manually by supplying start, air or to air cylinder in one side.

Overhead fuel injection system provides excellent durability, and high constant temperature cooling system (water intercooler) gives extra stable engine efficiency for prolonged periods.



All models fitted with turbocharger & air intercooler (two stage system)

Model	Type	No. of cylinders	Rated output kW	Full rating output (kW/gps)		1 hr rating output (kW/gps)		Wt. approx (kg/ton)	Dimensions (L x B x H mm)
UL6A-6T	4-cyl. water cooled, vertical diesel engine	6	100-110	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500
UL6B-6T	"	6	"	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500
UL6A-6T	"	6	"	100/130	100/130	100/130	100/130	1000 (1000)	2000 x 1000 x 1500

