



Environmentally Friendly Engines Compliant with
IMO Secondary Regulations

DAIHATSU

MARINE PROPULSION DIESEL ENGINE

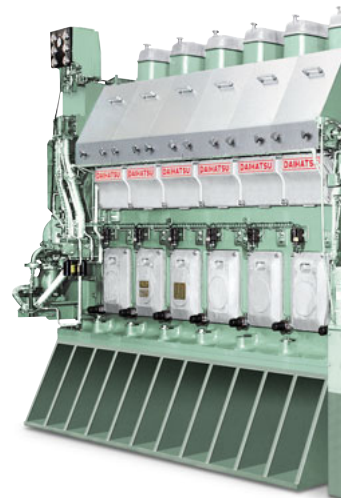


DAIHATSU DIESEL MFG.CO.,LTD.

Gentleness toward People and the Environment Our Technological Cornerstone

Careful consideration of both people and the environment is indispensable for the next generation of marine propulsion systems.

Research & Development at Daihatsu Diesel continues along dual tracks that aim to boost power, save on fuel and deliver maintenance-free products, while also forging the engineering technology for drastically cutting emissions of harmful substances like NOx found in exhaust gas.



Solid Reliability Based on Performance

Daihatsu Diesel engines have powered a wide variety of ships over the years, and won high acclaim everywhere.

Energy Savings and Low Maintenance

By thoroughly revising everything, from fuels to the number of parts, we have achieved excellent economy.

Environment —



DKM/DCM/DEM series



ABS



CCS



KR



LRS



NK

Quality Certificate

ABS(American Bureau of Shipping),
CCS(China Shipping Classification Association),
KR(Korean Register of shipping),
LRS(Lloyd's Register of Shipping),
NK(Nippon Kaiji Kyokai)

Full Compliance with NOx Secondary Regulations

We also responded quickly to secondary regulations on NOx emissions. Featuring both low vibration and low noise, our engines are truly gentle on people and the environment.



Environmentally Friendly Engines Compliant with
IMO Secondary Regulations

Power, Cost and Navigability ... Daihatsu's G Meet Expectation with Overall Performance.

At Daihatsu Diesel, in order to produce geared diesel engines customers can be satisfied with, we pump a lot of effort into improving basic performance while also constructively and logically challenging new technological development.

Customers turn us for most everything ... power, cost-performance, navigability, etc. Our geared diesel engines are highly respected and evaluated for being forward-looking and always one step ahead.

We have spared no efforts in shortening maintenance time and reducing the number of parts. As a result, maintenance and inspections are both simple and speedy for mid-speed engines.

**Simple
Maintenance &
Inspections**

Adopting an exhaust gas economizer and hot effluent circulation system, waste heat energy is recovered and efficiently utilized as an onboard heat source to heat tanks, lines, living quarters, etc.

**Effective
Utilization of
Waste Heat**

The generator and cargo oil pump are driven by a crank shaft through the reduction gear and front engine block. This saves on space, reduces maintenance and offers other advantages.

**Front Power
Take-Off & Shaft
Generator**

Cost-performing

**DAIH
DIE
ENG**

Daihatsu's geared diesel engines were the first in the world to run on heavy fuel (H.O.7000 cSt/50°C). Moreover, they can run in the low-load region.

**Heavy-Fuel
Drive**

Propeller revolutions can also be freely set. A larger diameter propeller and multiple-input gear system greatly boosts economy, sailing speed and tow-tug force.

**Improved
Propulsion
Efficiency**

**Optimal
Geared
System**

Customers can freely select reduction gears and gear ratio to suit vessel usage. Furthermore, with additions like Daihatsu's CRASH ASTERN system, slipping control and 2-speed slip-clutch reduction gears, vessels can go smoothly and directly from full-speed to dead-slow ahead.

Navi

Geared Diesel Engines

Aftercare Service

Daihatsu Diesel has offices and dealers all over the world. We offer complete aftercare service and make every effort to communicate with customers.

Thorough Quality Control

Our manufacturing plants are certified by JG, NK, LR, AB and CCS, moreover the famed ISO9001 for excellence in quality assurance systems. Thanks to this, the hi-tech and high quality we stand by are known worldwide.

Reliable

Tough, Dependable & Environment-Friendly

Years of enduring R & D has made us tough and proud of our successful record and won us the trust of many faithful customers. Our search for progress and betterment continues with strong emphasis on reducing emissions of harmful substances.

Proven Over and Over Again

Daihatsu's geared diesel engines are employed in ferry boats, tankers, freighters, working craft and many other types vessels. Our marine engines are highly acclaimed all over as reliable propulsion systems.

Designed for Low Vibration & Low Noise

Our mid-speed engines have a low vibromotive force, resonate with vessel natural vibrations and are quiet. Furthermore, dynamic load is small and torque fluctuation minimized, making them advantageous.

No More Critical Revolutions

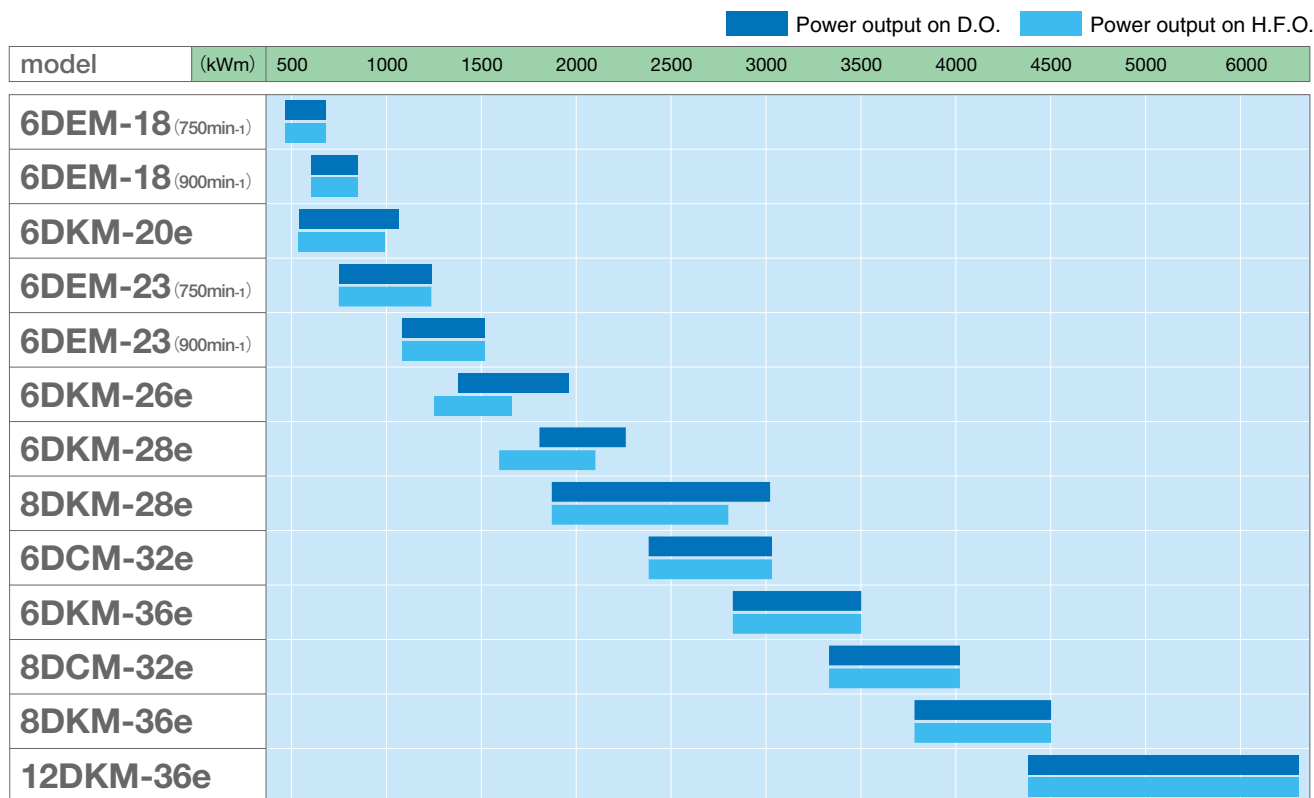
Both the engine and shaft drive system are no longer operated in fear of critical revolutions when shifting from idle to rated rpm. The merits are well demonstrated in fuel-saving cruising at reduced speed. Moreover, thanks to our in-house developed doughnut RD coupling, we have eliminated the problem of torsional vibration. Now, customers are free to select shafting and propeller to suit their vessel's needs.



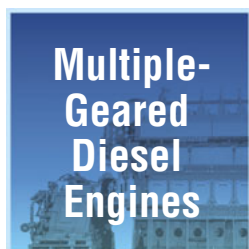
Environmentally Friendly Engines Compliant with
IMO Secondary Regulations

A Wide Variation to Meet a Wide Range of N

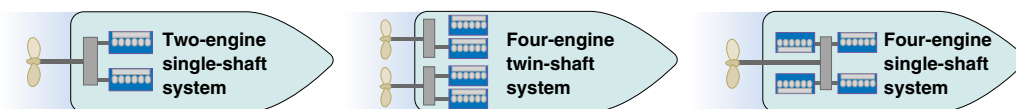
Daihatsu's geared diesel engines come in a wide line-up from single-engine single-shaft systems to large multiple-input systems. Customers can choose the best system based on ship size, fuel, usage, etc.



Single-Engine Single-Shaft System



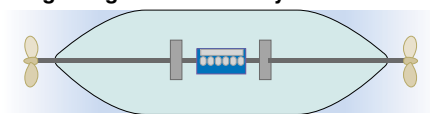
Daihatsu's multiple-geared diesel engines are ideal for ships with twin-shaft propellers or low ceiling engine rooms. We offer a wide selection to choose including a twin-engine single-shaft system, single-engine twin-shaft system, four-engine twin-shaft system, four-engine single-shaft system and eight-engine twin-shaft system. Engine cut-off is also possible according to ship speed.



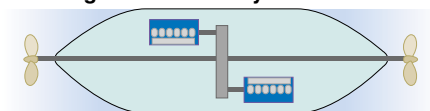
Single-Engine Twin-Shaft System for Double-Bow Ships

Daihatsu Diesel engines are at work onboard double-bow ships navigating narrow channels or short routes, or which operate as sightseeing boats on river cruises, etc. A single engine drives the propellers on the bow and stern. Any combination of single-engine twin-shaft system and Daihatsu's remote control system can be selected according to steering demands and guarantees improved navigation.

Single-engine twin-shaft system



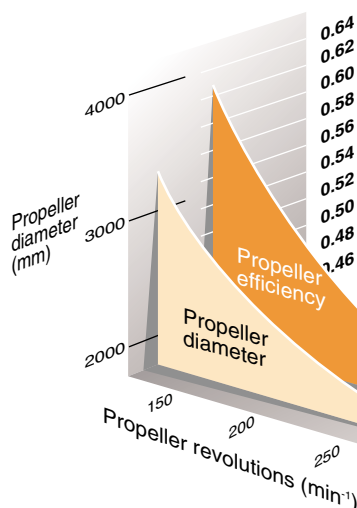
Two-engine twin-shaft system



6DKM-20(e)

Large Diameter Propeller

With the right size propeller, fuel consumption is reduced by as much as 3% in comparison with conventional propellers running at the same nautical speed, when propeller rpm is lowered by 10%. Daihatsu Diesel can set the propeller that best matches the vessel thus offering greatly improved propulsion efficiency.

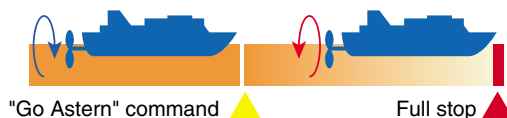


Propeller Efficiency for 499G/T Tanker (2000PS Engine)

CRASH ASTERN System

With a low-rpm large-diameter propeller, engine stalling is always a problem when moving astern because of increased torque and engine overload. For this reason, Daihatsu geared diesel engines employ our own CRASH ASTERN system. It can also be effectively operated from the bridge.

Ship equipped with CRASH ASTERN system



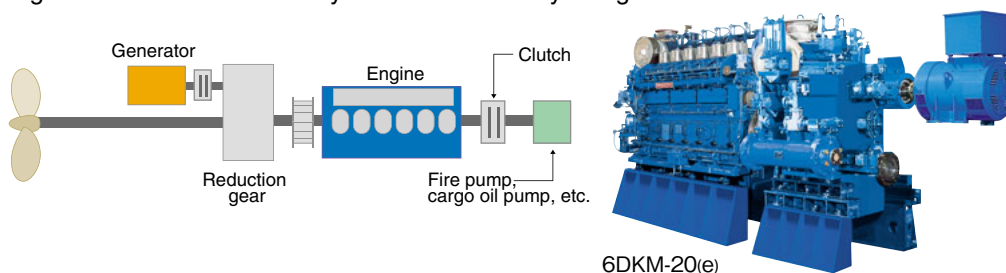
Ship not equipped with CRASH ASTERN system



* Performance will vary according to ship speed, type of vessel and sea conditions.

Power Take-Off & Engine Layout

With Daihatsu's geared diesel engines, generators, cargo oil pumps and other machinery can be driven using power drawn through the front engine block and reduction gear. This system greatly reduces fuel consumption. What's more, one of the generators used in conventional systems can be omitted, which enables more effective use of dead space. In addition, this kind of system reduces labor and costs in running and maintenance. Also, engine and onboard control systems can be freely designed.



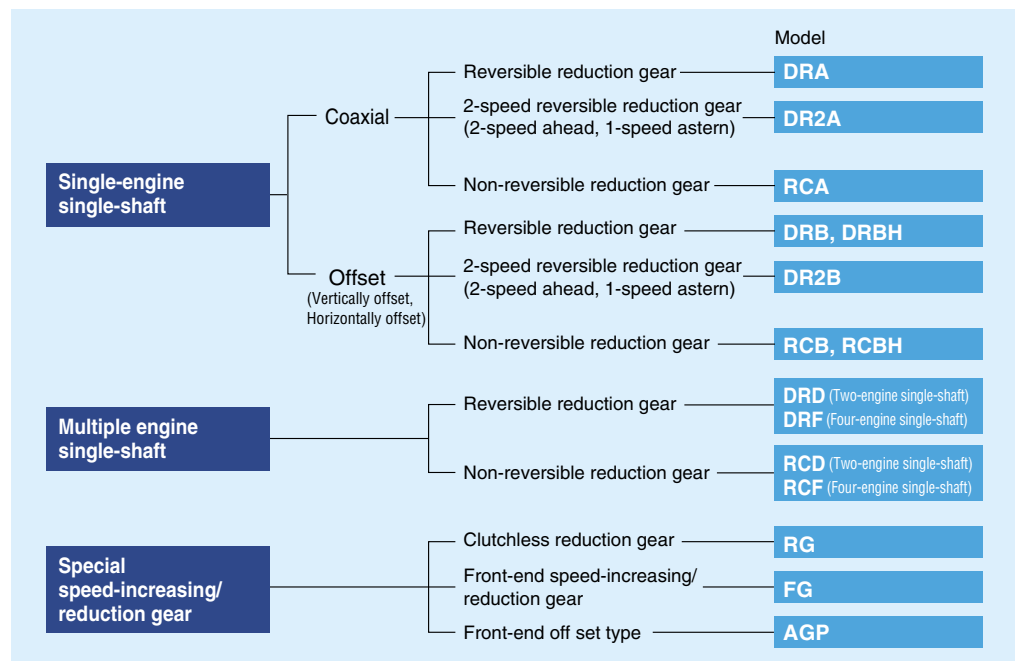
6DKM-20(e)

Daihatsu's Reduction Gears — One Supporting

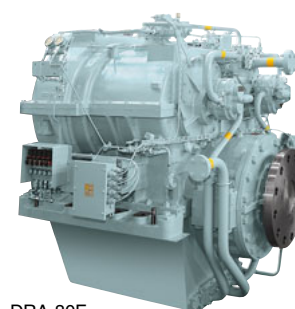
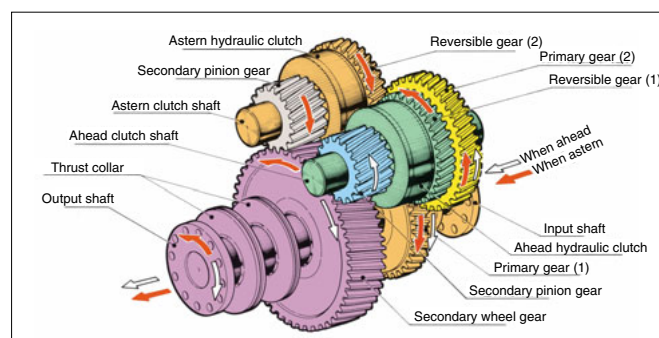
Our reduction gears have a built-in main thrust bearing and wet hydraulic clutch, and can be incorporated in the CRASH ASTERN system. We also have a wide selection of speed-increasing and reduction gears for driving any type of machinery, which can be used on the engine front end block.

2-Speed Reduction Gears

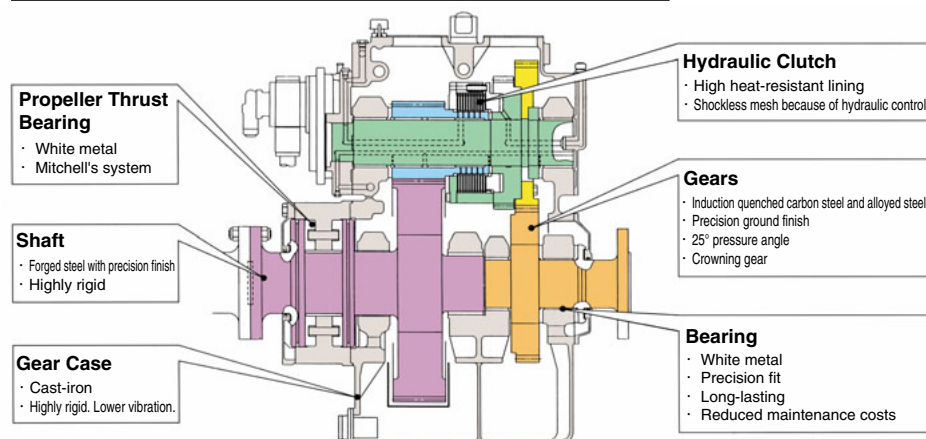
Though low-speed and high thrust are necessary for port navigation, high-speed cruising performance is needed on the open seas. Our 2-speed reduction gear is ideal for the situation. We developed the 2-speed system (2-step ahead, 2-step astern) to maximize efficiency in normal and low-speed sailing. Because the reduction gear is suited to all kinds of vessels, from freighters to fishing trawlers, captains all over have favorably evaluated it.



DRA Type Reversible Reduction Gear



DRA-80F

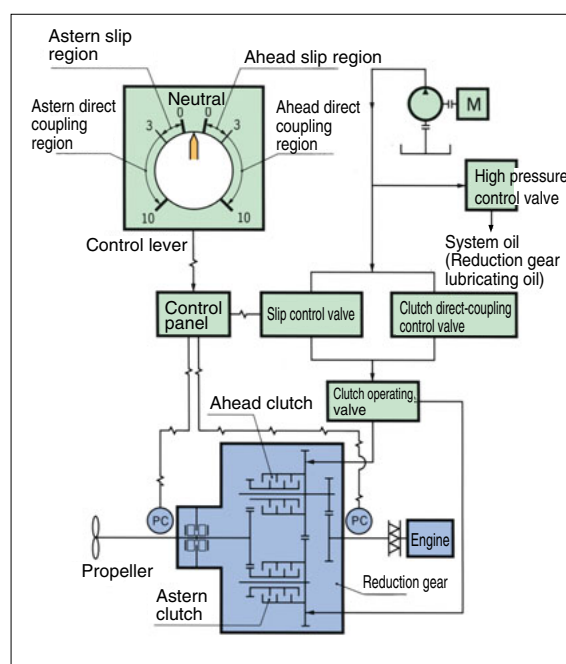
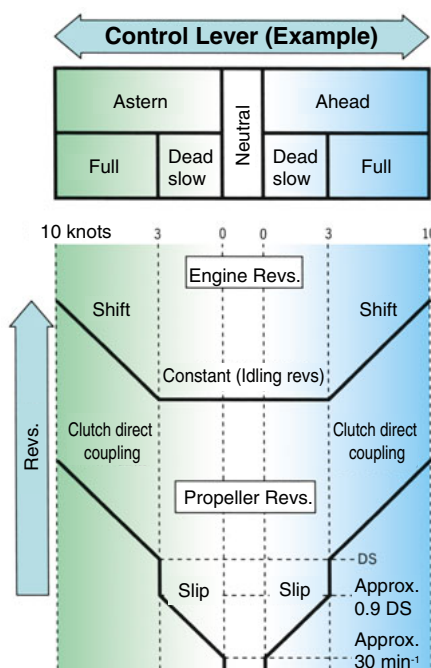




Clutch fluid is electronically controlled to slip the clutch. As such, propeller revolutions below idling rpm are freely controlled.

Features

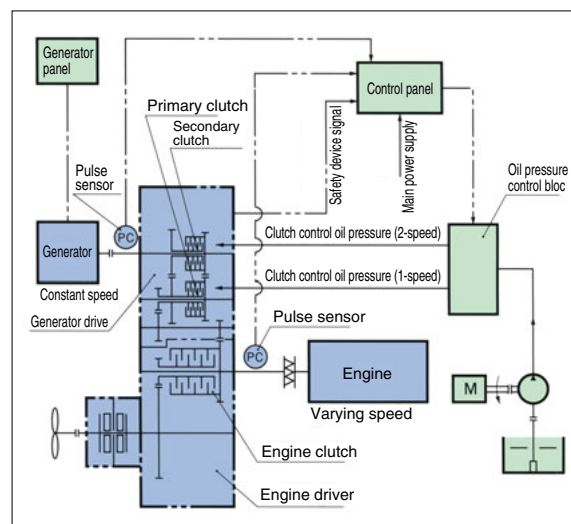
1. Enables dead-slow sailing ahead/astern with a fixed pitch propeller (FPP).
2. Enables shockless, smooth clutch meshing.
3. Propeller revolutions remain stable even under fluctuating engine revolution and propeller load.



A compact constant-speed shaft generator is built into the reduction gear. Clutch fluid is automatically controlled by an electronic governor. By slipping the clutch, generator revolutions can be kept constant even under fluctuating engine revolution.

Features

1. An electronic governor keeps constant generator revolutions, thus ensuring a stable power supply.
2. Because of the 2-speed slipping clutch, the generator can operate a wide engine revolution range from idling to rated rpm.
3. Generator revolutions and droop can be adjusted easily during generator operation. Load switching to other generators and parallel operation can be performed easily.



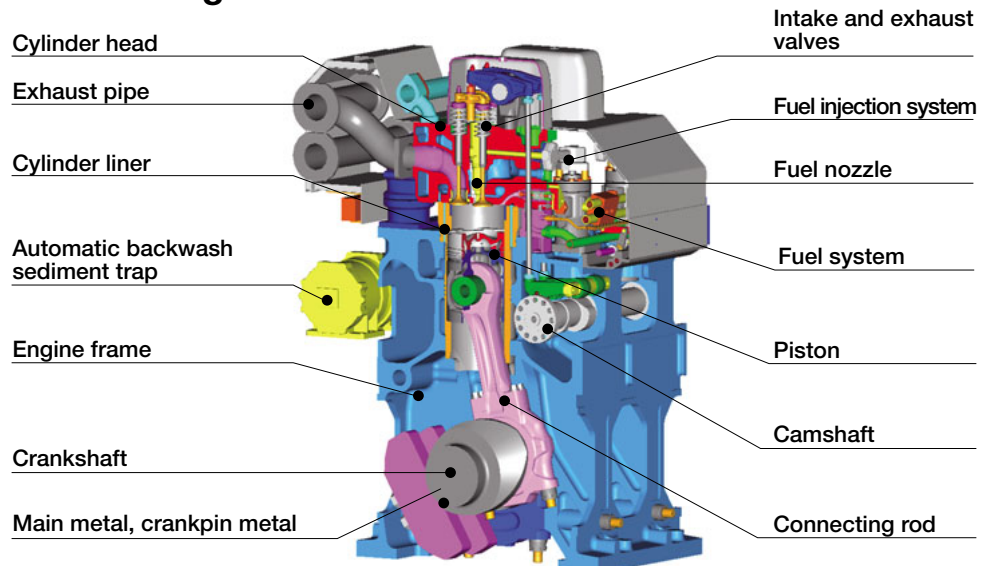
Specifications



Engine model	Output		Engine revs. min ⁻¹	Bore mm	Stroke mm
	MDO kWm	HFO kWm			
6DEM-18 (750min ⁻¹)	680	680	750	185	280
6DEM-18 (900min ⁻¹)	850	850	900	185	280
6DKM-20e	1060	980	900	200	300
6DEM-23 (750min ⁻¹)	1236	1236	750	230	320
6DEM-23 (900min ⁻¹)	1516	1516	900	230	320
6DKM-26e	1960	1660	750	260	380
6DKM-28e	2260	2100	750	280	390
8DKM-28e	3020	3020	750	280	390
6DCM-32e	3030	3030	750	320	400
8DCM-32e	4020	4020	750	320	400
6DKM-36e	3500	3500	600	360	480
8DKM-36e	4500	4500	600	360	480
12DKM-36e	6600	6600	600	360	480

Output for all engine given for crank shaft end.

6DE-23: Engine Cross Sectional View

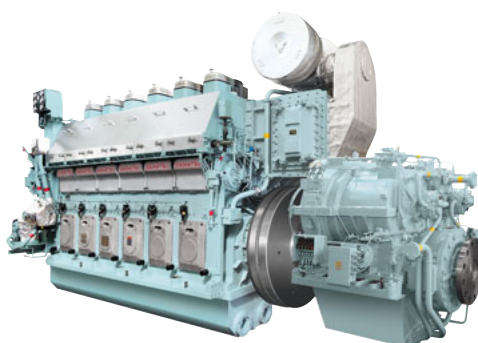


*1: D.O.

No. of cylinders	R/G model	Gear ratio	Propeller revs. min ⁻¹	Propeller diam. Z=4(mm) *1	Propeller diam. Z=5(mm) *1	Intermediate shaft diam. mm *1	Propeller shaft diam. mm *1
6	DRA-11E	3.174	236	2160	2130	130	170
	DRB-11E	3.115	241	2140	2110	130	170
6	DRA-11E	3.174	284	2090	2050	135	175
	DRB-11E	3.115	289	2070	2030	135	175
6	DRA-16F	3.429	262	2250	2160	145	180
6	DRA-19F	2.358	318	2110	2080	150	190
	DRB-19F	3.029	248	2390	2350	160	200
6	DRA-25F	3.198	281	2380	2340	165	210
	DRB-25H	3.400	265	2450	2410	165	210
6	DRA-25F	2.371	316	2380	2280	165	210
		2.576	291	2480	2380	170	210
	DRB-25H	2.734	274	2600	2500	175	220
6	DRA-35H	2.595	289	2640	2540	180	220
		2.800	268	2830	2720	185	240
	DRB-35H	3.030	248	2950	2840	190	240
8	DRA-50F	2.700	278	2850	2740	200	250
		3.101	242	3060	2940	205	260
	DRB-50F	3.353	224	3280	3150	220	280
6	DRA-80F	2.700	309	2750	2700	210	260
		3.101	274	2950	2900	220	270
	DRB-80F	3.353	238	3250	3150	230	290
8	DRA-100F	3.014	249	3340	3280	235	295
	DRB-100F	2.972	252	3320	3260	235	295
6	DRA-80F	2.430	247	3190	3070	225	280
		2.740	219	3430	3300	235	290
	DRB-80F	3.149	191	3720	3580	245	310
8	DRA-120F	2.862	210	3730	3580	260	330
		3.263	184	4030	3880	270	340
	DRB-120F	3.722	161	4370	4200	280	360
12V	DRA-150F	2.862	210	3990	3910	290	370
		3.263	184	4200	4180	305	385
	DRB-150F	3.722	161	4550	4470	315	405



6DEM-23



6DCM-32

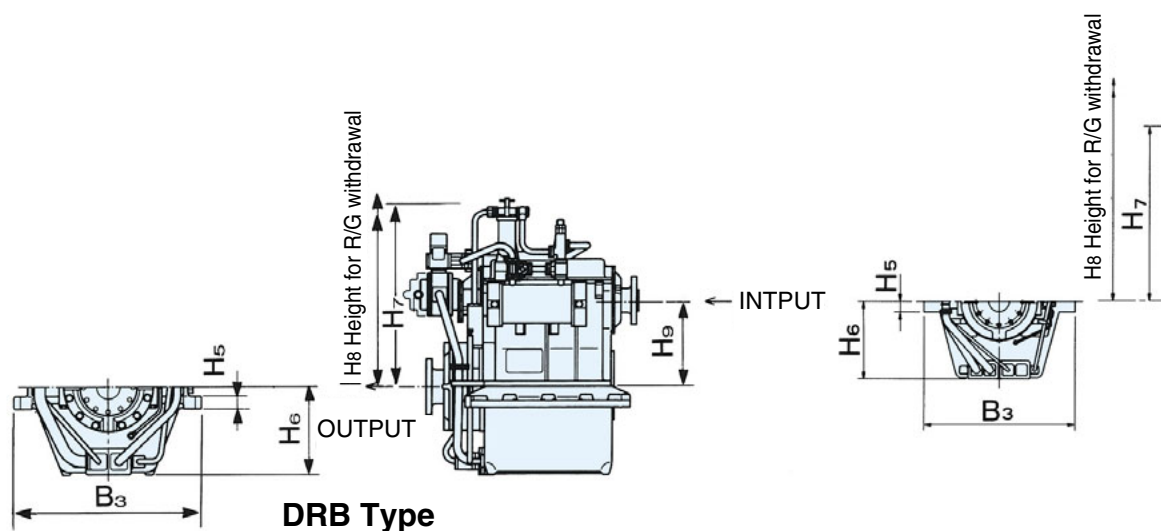


6DKM-26

Dimensions

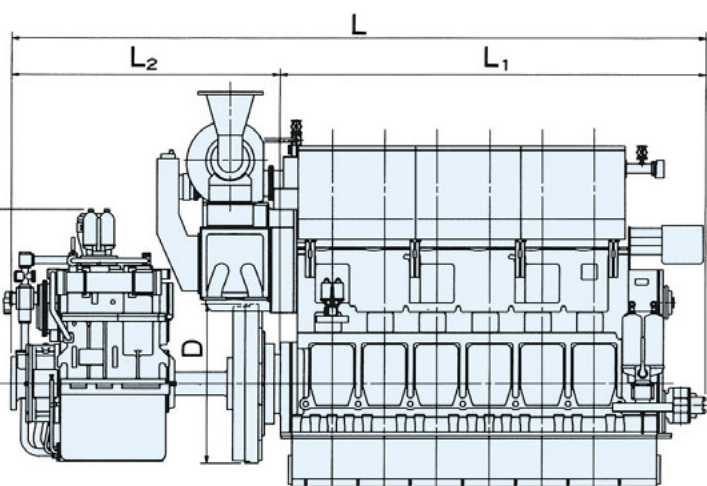
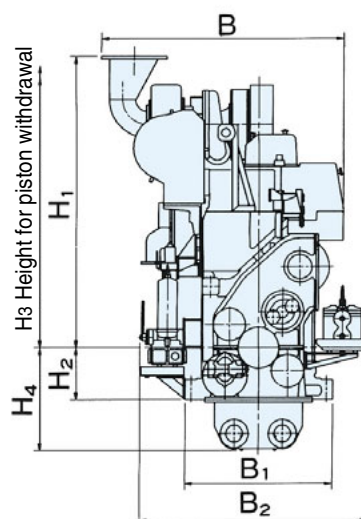


Engine model	R/G model	L	L1	L2	B	B1	H1
6DEM-18 (750min ⁻¹)	DRA-11E	4449	3019	1430	1590	840	1500
	DRB-11E	4449	3019	1425	1590	840	1500
6DEM-18 (900min ⁻¹)	DRA-11E	4449	3019	1430	1590	840	1500
	DRB-11E	4449	3019	1425	1590	840	1500
6DKM-20e	DRA-16F	4555	3135	1420	1480	960	1885
	DRB-16F	4525	3135	1390	1480	960	1885
6DEM-23 (750min ⁻¹)	DRA-19F	4910	3150	1760	1725	1050	1870
	DRB-19F	4655	3150	1505	1725	1050	1870
6DEM-23 (900min ⁻¹)	DRA-25F	5025	3150	1875	1725	1050	1870
	DRB-25H	4810	3150	1660	1725	1050	1870
6DKM-26e	DRA-25F	5295	3350	1945	1835	1180	2110
	DRB-25H	5010	3350	1660	1835	1180	2110
6DKM-28e	DRA-35H	5615	3675	1940	—	1220	2563
	DRB-35H	5595	3675	1920	—	1220	2563
8DKM-28e	DRA-50F	7075	4535	2540	—	1220	2719
	DRB-50F	6745	4535	2210	—	1220	2719
6DCM-32e	DRA-80F	6967	3907	3060	2160	1450	3022
	DRB-80F	5966	3907	2060	2535	1450	2871
8DCM-32e	DRA-100F	8655	5185	3480	2160	1450	3450
	DRB-100F	8515	5185	3330	2160	1450	3450
6DKM-36e	DRA-80F	7285	4465	2820	2090	1680	3270
	DRB-80F	7075	4465	2610	2090	1680	3270
8DKM-36e	DRA-120F	8865	5595	3270	2090	1680	3270
	DRB-120F	8665	5595	3070	2090	1680	3270
12DKM-36e	DRA-150F	11178	7378	3800	3224	1920	3372
	DRB-150F	10978	7378	3600	3224	1920	3372



(mm)

H2	H3	H4	D	H5	H6	H7	H8	H9	B2	B3	Weight (ton)	
											Engine	R/G
290	1400	750	1000	70	440	850	1100	—	1455	920	8.8	2.0
290	1400	750	1000	55	440	750	1050	378	1455	960		1.8
290	1400	750	1000	70	440	850	1100	—	1455	920	8.8	2.0
290	1400	750	1000	55	440	750	1050	378	1455	960		1.8
365	1680	695	1000	70	445	870	1200	—	1610	970	10.5	2.5
365	1680	695	1000	120	490	1050	1200	475	1610	1040		
350	1710	820	1000	80	500	1005	1300	—	1530	1020	14.0	2.8
350	1710	820	1000	80	600	1155	1200	563	1530	1190		3.0
350	1710	820	1150	80	565	1040	1380	—	1530	1090	14.0	3.8
350	1710	820	1150	70	630	1133	1200	600	1530	1300		3.5
400	1970	830	1200	80	600	1040	1380	—	1950	1500	18.0	3.8
400	1970	830	1200	200	630	1130	1200	600	1950	1300		3.5
430	2065	850	1310	90	640	1435	1820	—	1880	1240	22.0	6.0
430	2065	850	1310	200	640	1186	1700	609	1880	1400		5.5
430	2065	850	1310	100	750	1160	1650	—	1880	1500	28.0	8.5
430	2065	850	1310	260	800	1335	1650	770	1880	1640		8.0
500	2295	1030	1400	70	800	1564	1800	—	2160	1600	35.0	12.0
500	2295	1030	1400	50	800	1354	1500	772	2160	1650		
500	2295	1030	1400	250	850	1415	2000	—	2160	1870	42.0	18.0
500	2295	1030	1400	250	900	1650	2500	871	2160	1870		
605	2930	1200	1400	250	800	1362	1800	—	2060	1600	51.0	12.0
605	2930	1200	1400	250	830	1583	2300	927	2060	2000		
605	2930	1200	1400	250	900	1590	2100	—	2060	2050	67.0	20.0
605	2930	1200	1400	300	1000	1760	2300	1002	2060	2300		
605	2710	1305	—	300	1200	1700	2400	—	3074	2500	80.0	25.0
605	2710	1305	—	350	1300	1850	2600	1150	3074	2700		

**DRA Type**

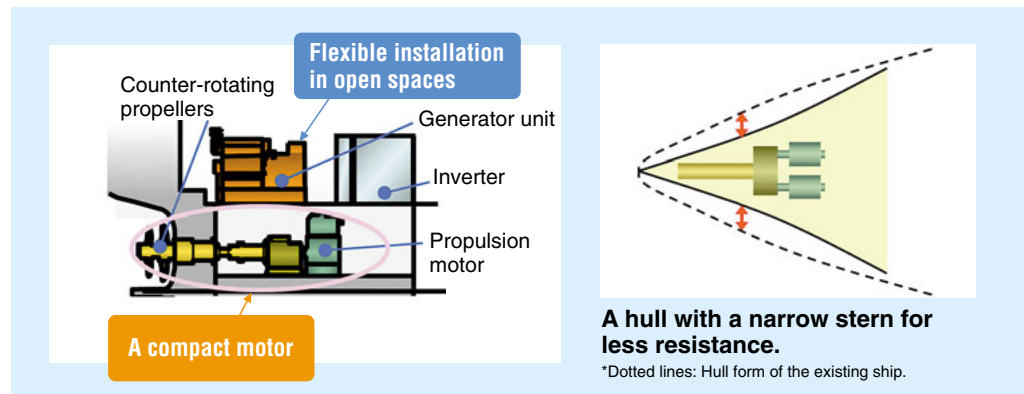
Electrical Propulsion Systems That Are Kinder to the Earth

Electrical propulsion systems are different from the systems on conventional ships, where the propellers are turned directly by the main diesel engine; instead, the propellers are turned by an electric motor. This energy-saving, next-generation system covers economical, propulsion and safety demands.

Advantages of Electric Propulsion Ships

Gentle to Ships

Loading capacity is increased by reducing the size of the engine room. The engine room and propellers can also be optimally located to create the ideal hull form.



Gentle to People

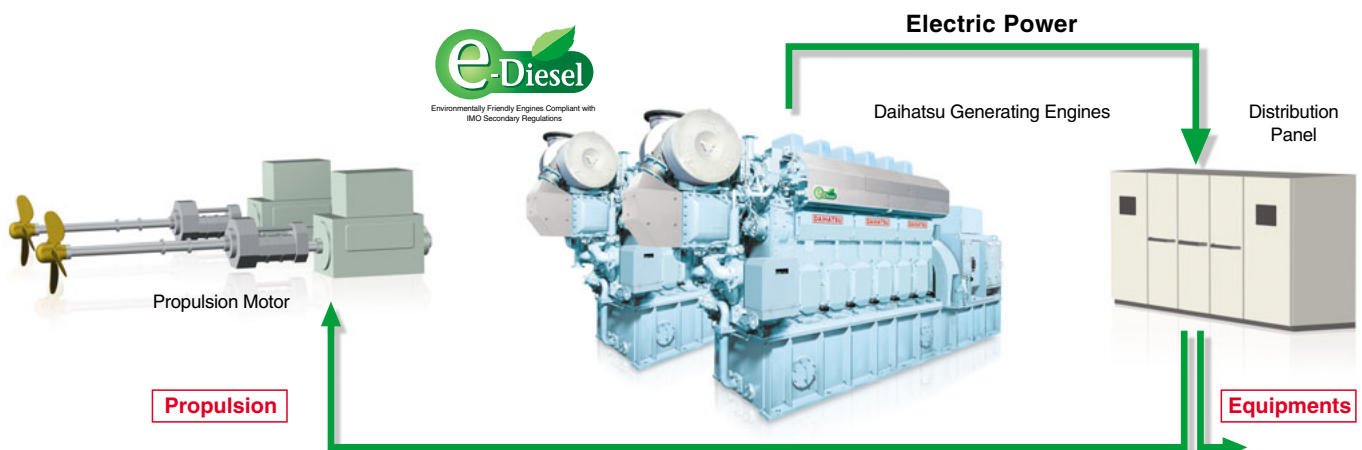
The use of a medium-speed engine allows vibrations and noises to be reduced. Compact, lightweight components also enhance work safety.

Gentle to the Earth's Environment

A medium-speed engine reduces NOx emissions. By optimally controlling the number of generators in operation, fuel consumption and CO2 emissions are also reduced.



"TAHO" Cement Carrier



Daihatsu Diesel Equipment for Marine Applications

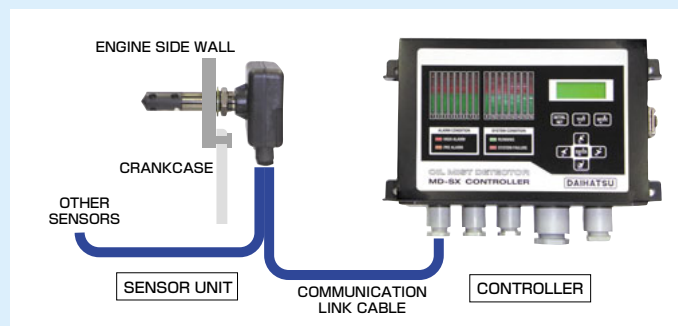


The Oil Mist Detector Monitors your engine to detect major engine failure.

This equipment consists of plural sensor units, inserted into crankcase side wall of each cylinder on diesel engine, and an integrated controller which controls sensor units by the communication link.

Sensor units are compactly designed to detect oil mist by the natural diffusion system without air suction mechanism by moving parts like a fan, driving air, and piping, as well as, realizes improved reliability, and easy maintenance.

Controller constantly monitors the oil mist density in the crankcase, and indicates the oil mist level. Additionally it will indicate status with alarm in case the oil mist density will be increased over normal level by overheated bearing etc, so can realize early detecting and reasonable precaution for the serious accident in a low-, medium-, and high-speed diesel engines.



Early detection of the oil mist abnormalities in the engine room and prevention of firing

Since 1976, Daihatsu Diesel Mfg. Co., Ltd. has put OIL MIST DETECTOR continuously on the market. In 2004, model MD-SX which is of sensor type mounted on crankcase was developed. It can directly measure the oil mist density inside crankcase in a way the sensor is so mounted that the sensing part is sticking into the crankcase.

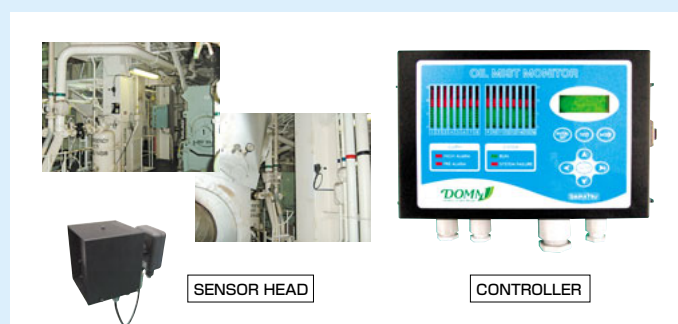
Conventional system has to take out oil mist for measurement from crankcase inside through piping. The new system provides following merits by the oil mist level is sent out for the controller as digital signal.

- (1) Speedy response in less than 1 sec. with max. No. of sensor 16
- (2) Self diagnosis functions to display the time for sensor replacement

In recent years, as fire prevention measures for tankers, earlier detection on abnormal oil mist level in engine room is required as it is thought to be effective in pin-point the cause and its measures. Daihatsu Diesel Mfg. Co., Ltd. has further advanced MD-SX type detector into OIL MIST MONITORING DEVICE, OMM type, whose development is based on the technologies of MD-SX type many classes give TYPE APPROVAL.

The new OMM type can provide visual display on oil mist level where it is likely to generate. The OMM type is expected to go into the market October, '07.

The system does not guarantee prevention of disaster, such as a fire.



Engine Room (Example)

Daihatsu's geared diesel engines are used in ships of all classes and types, including vessels for public offices, ferries, coastal vessels, working crafts, and fishing boats. Their outstanding performance has been highly acclaimed by all customers.

750 G/T Tanker



6DKM-26



Using a generator driven by the speed reducer shaft.



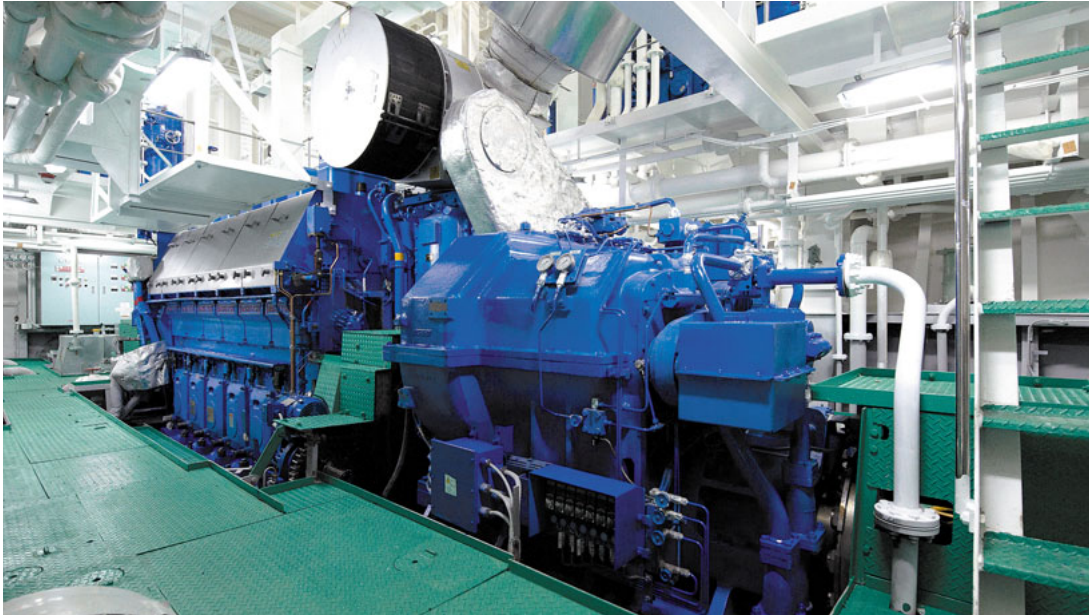
500 G/T Cargo Ship



6DKM-26



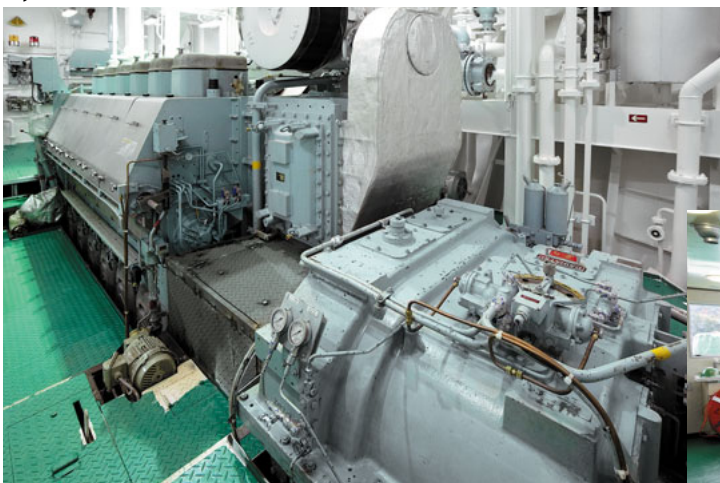
5,000 m³ Tanker



6DCM-32F



3,500 m³ Tanker



6DCM-32



Proof of Success

■ Vessels for public offices



Fisheries Agency / Taka Maru
Reserch vessel / 6DKM-20FL×1



Ministry of Defense / Suou / Asakuma
Support vessel / 6DLM-28×2



Ministry of Land, Infrastructure and Transport / Nippon Maru
Training ship / 6DSMB-28NS×2



Japan Metrrological Agency / Ryoufu Maru
Reserch vessel / 6DLM-40AL×1



Tokyo University / Hakuho Maru
Reserch vessel / 6DSM-28N(L)×4



Japan Marine Science & Technology Center / Mirai
Reserch vessel / 6DKM-28F(L)×4



Japan Coast Guard / Kaiyo
Reserch vessel / 6DLM-24S(L)×2



Tokyo University of Mercantile Marine / Shioji Maru
Training ship / 6DLM-26SL×1



Yuge National College of Maritime Technology / Yuge Maru
Training ship / 6DLM-24SL×1



Hokkaido Government / Hokuo Maru
Fishery Control Boat / 6DKM-28(L)×2



Kobe University of Mercantile Marine / Fukae Maru
Training ship / 6DLM-26S×1



Reiyo Highschool / Kumamoto Maru
Training ship / 6DKM-26F×1

■ Ferries



Kampu Ferry Co., Ltd. / Hamayu
Ferry boat / 8DLM-40A(L)×2



Kamiyaku town, Kagoshima / Ferry Taiyo
Ferry boat / 6DKM-26(L)×2



Kyusyu Shosen Co., Ltd. / Ferry Kumamoto
Ferry boat / 6DLM-26S(L)×2



Kitanihon Kaiun K.K. / Asakaze #2
Ferry boat / 6DKM-36×2



Uwajima Unyu Co., Ltd. / Oita
Ferry boat / 6DKM-36(L)×2



Oki Kisen / Ferry Oki
Ferry boat / 6DKM-36(L)×2



Kyusyu Yusen K.K. / Emerald Karatsu
Ferry boat / 8DKM-28×2



Heart Land Ferry / Saipia Soya
Ferry boat / 8DKM-28(L)×2



Koshiki Shosen K. K. / New Koshiki
Ferry boat / 8DKM-26(L)×2



Nomo Shosen K. K. / Taiko
Ferry boat / 8DLM-32(L)×2



Ie village office, Okinawa / Gusuku
Ferry boat / 6DLM-28S(L)×2



Iheya village office, Okinawa / Ferry Iheya
Ferry boat / 6DKM-28(L)×2

Proof of Success

■ Coastal vessels



Seimei Kaiun / Seimei
Tanker / 6DKM-26Lx1



Kokoku Kaiun K.K. / Daiko Maru 21
Pure Car Carrier / 6DKM-36x1



Omaezaki Kaiun / Kotoku
Cargo / 6DKM-26Lx1
Non ballast ship



Imoto Line, Ltd. / Takasago
Container Carrier / 6DKM-28(L)x1



Toda Kisen K.K. / Morning Breeze
LNG Tanker / 6DKM-36x1



Kinriki Kisen K.K. / Kinyo Maru #2
Tanker / 6DKM-32x1



Fujiitsuna Kaiun K. K. / Kosyu Maru #8
Tanker / 6DKM-32x1



Arita Kaiun K.K. / Arita Maru
Cargo / 6DKM-26Lx1

■ Working craft



Tanba Kisen K.K. / Tensho Maru #2
Tanker / 6DKM-26Lx1



Nitto Tugboat Co., Ltd. / Hoki Maru
Tug boat / 6DKM-26(L)x2



Tabuchi Kaiun K.K. / Kosei Maru
Chemical Tanker / 6DKM-28Lx1



Daikai Marine Co. Nippon Telegraph & Telephone Co. / Daiki Maru
Pusher boat Cable Laying ship / 6DKM-26(L)x2



Wakamiya Kisen K.K. / Risshin Maru
Cement Tanker / 6DKM-36Fx1



Nakamura Shoji / Hokuyo Maru # 5
Pusher boat / 6DKM-28F(L)x2



Daiichi Kaiun K.K. / Asuzan Maru
Asphalt Tanker / 6DKM-26Fx1



Fukada Salvage & Marine Works Co., Ltd. / Naruto Maru
Tug boat / 6DLM-28FSx2

Proof of Success

■ Working craft



Nippon Telegraph & Telephone Co. / Subaru
Cable Laying ship / 8DK-32x4



Chang Jiang Waterway Bureau / Chang Jin 2
Dredger 8000m³ / 12DKM-36x2



Zamil Operations & Maintenance Co., Ltd. / Zamil # 5
Supply vessel / 6DKM-26(L)x2



Shanghai Maritime Rescue and Salvage Bureau Ministry of Communication / Hua Cai
Ocean Salvage Tug boat / 8DKM-28(L)x2



天津航道局 / 天鲸号
Dredger / 8DKM-36x2



Japan Ocean Tug Co., Ltd. & The Nippon Salvage Co., Ltd. / Koyo Maru
Ocean Salvage Tug boat / 8DLM-40A(L)x2



Yorigami Maritime Construction Co., Ltd. / Shinsei Maru # 8
Pusher boat / 6DLM-22S(L)x2



Shoyo Kisen K.K. / Seiyo Maru
Tug boat / 6DKM-32(L)x2

■ Fishing boats



Fukushima Fishery / Sofo Maru #83
Purse Seiner / 6DKM-36Lx1



Daiyu Fishery / Tenno Maru #81
Purse Seiner / 6DKM-28Fx1



K.K. Taishu / Ikitsuki
Fishery Control Boat / 8DKM-28Lx1



Kanei Bussan Co. / Genpuku Maru #81
Purse Seiners / 6DKM-32x1



Yoshikazu Ishikura / Sanko Maru
Skipjack Pole & Line Fishing boat / 6DKM-28Lx1



Myojin Fishery / Sagamyojin Maru #83
Skipjack Pole & Line Fishing boat / 6DKM-28Lx1



Norihiro Takemura / Sensho Maru #1
Skipjack Pole & Line Fishing boat / 6DKM-26Lx1



Kanei Bussan Co. / Wakaba Maru #6
Purse Seiners / 8DLM-32x1



DAIHATSU DIESEL MFG.CO.,LTD.

Head Office	1-30, Oyodo Naka1-chome, Kita-ku, Osaka, 531-0076 Japan TEL:81-6-6454-2393 FAX:81-6-6454-2686
Tokyo Office	16-11, Nihonbashi 1-Chome Chuo-ku, Tokyo, 103-0027 Japan TEL:81-3-3279-0827 FAX:81-3-3245-0359
Moriyama Division	45 Amura-cho, Moriyama-city, Shiga, 524-0035 Japan TEL:81-77-583-2551 FAX:81-77-582-5714
Taiwan Office	c/o Marine Technical Industries Co., Ltd. No.14 Tai-Tang RD. Lin-Hai Industrial Zone, Kaohsiung, 812 Taiwan TEL:886-7-803-1082 FAX:886-7-801-9179
Daihatsu Diesel (Europe) Ltd.	5th Floor, Devon House, 58-60 St. Katharine's Way, London E1W 1LB, U.K. TEL:44-20-7977-0280 FAX:44-20-7702-4325
Daihatsu Diesel (AMERICA), Inc.	180 Adams Avenue, Hauppauge, NY 11788, U.S.A. TEL:1-631-434-8787/8/9 FAX:1-631-434-8759
Daihatsu Diesel (ASIA PACIFIC) Pte.Ltd.	128 Pioneer Road Singapore 639586 TEL:65-6270-7235 FAX:65-6270-6236
Daihatsu Diesel (SHANGHAI) Co.,Ltd.	Room A-B, Floor 14, Huamin Empire Plaza, No.728, Yanan Rd.(W.), Shanghai, 200050, China TEL:86-21-6225-7876/7 FAX:86-21-6225-9299

●Please refer to the separate brochure for "DAIHATSU AFTER-SERVICE NETWORK".

●All information contained in this Pamphlet is corrected at the time of printing, but will be subject to change without notice.