

**DAIHATSU**

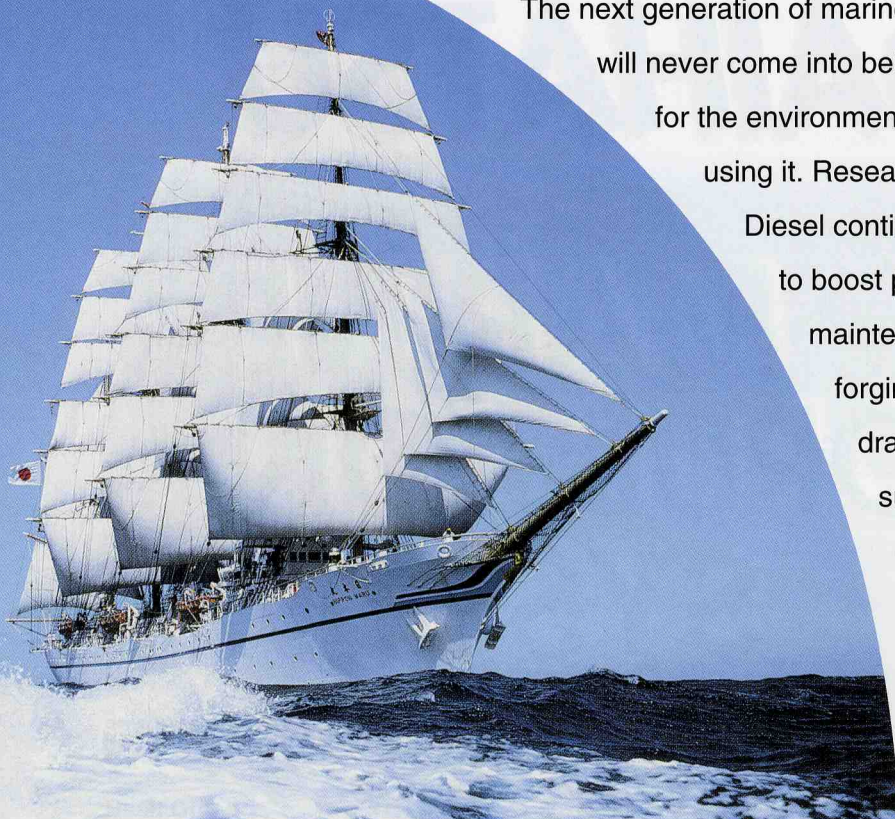
**MARINE  
PROPULSION  
SYSTEM**



## Daihatsu Diesel R & D seeks a good balance between mother nature and the industrial sciences.

The next generation of marine propulsion system will never come into being without due consideration for the environment and the people who will be using it. 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. It is the common love we share for all living creatures on the earth that, by and by, crystallizes new technologies in the form of better products.

**Mankind and The Environment as Our Technological Foundation**



# **DKM SERIES ENGINE**

Marketing Division

Tokyo Office

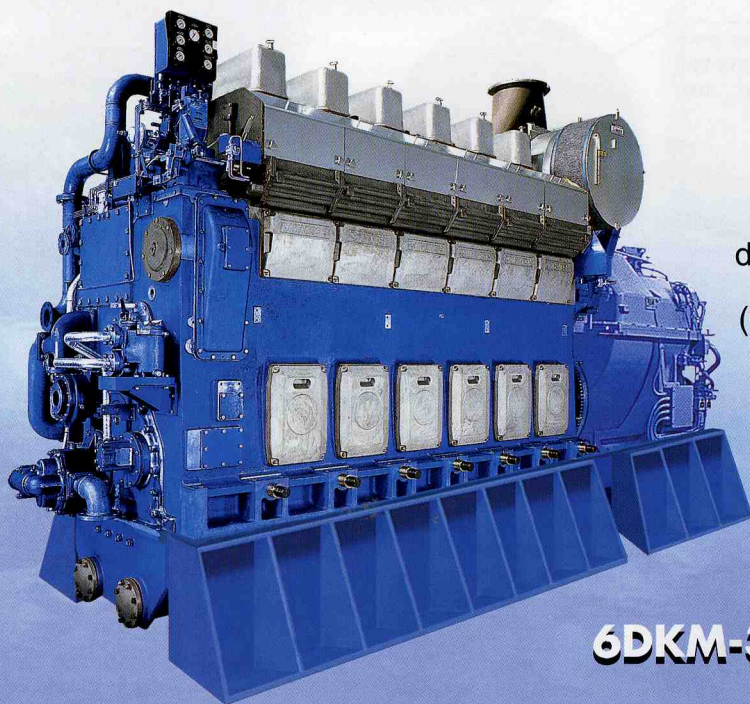
Taiwan Office

Export Division



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**6DKM-36**

Since shipment in October 1993,  
Daihatsu Diesel has delivered  
low NOx engines  
numbering more than ※4,300,  
demonstrating excellent durability.  
(Conformity with NOx regulations)

※ AUGUST, 2005



# Power, Cost and Navigability ... Daihatsu's Geared

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**

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**

**Cost-performing**

**Navigable**

**Improved Propulsion  
Efficiency**

**Optimal Geared  
System**

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.

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.



**6DKM-26**



# Diesel Engines Meet Expectation with Overall Performance.

## 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.

## 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.

# Reliable



# A Wide Variation to Meet a Wide Range of Needs

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.

## DKM SERIES

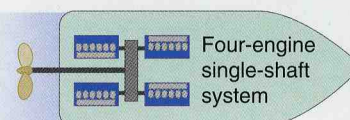
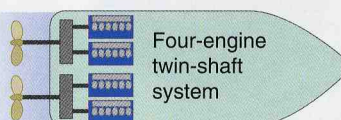
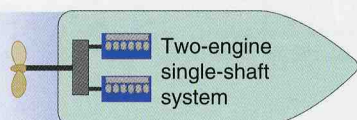
### Single-Engine Single-Shaft System

Power output on fuel oil A  
Power output on Heavy fuel oil

Model	(kW)	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
	(ps)	1000	1500	2000	3000	4000	5000	6000	7000		
6DKM-20											
8DKM-20											
6DKM-26											
6DKM-28											
8DKM-28											
6DKM-36											
8DKM-36											

## Multiple-Geared Diesel Engines

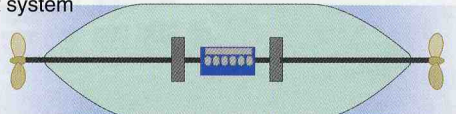
Daihatsu's multiple-geared diesel engines are ideal for ships with twin-shaft propellers or low ceiling engine rooms. We offer a wide selection to choose including a twin-engine single-shaft system, single-engine twin-shaft system, four-engine twin-shaft system, four-engine single-shaft system and eight-engine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



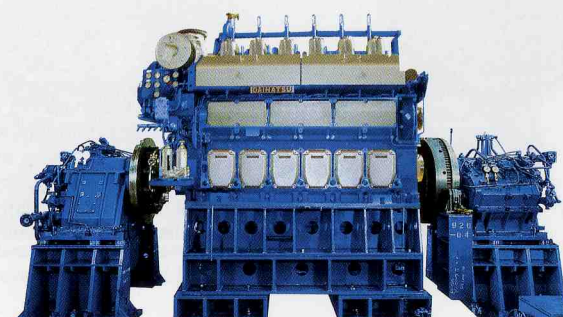
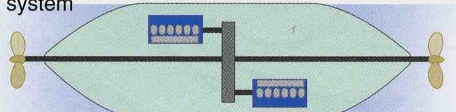
## Single-Engine Twin-Shaft System for Double-Bow Ships

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

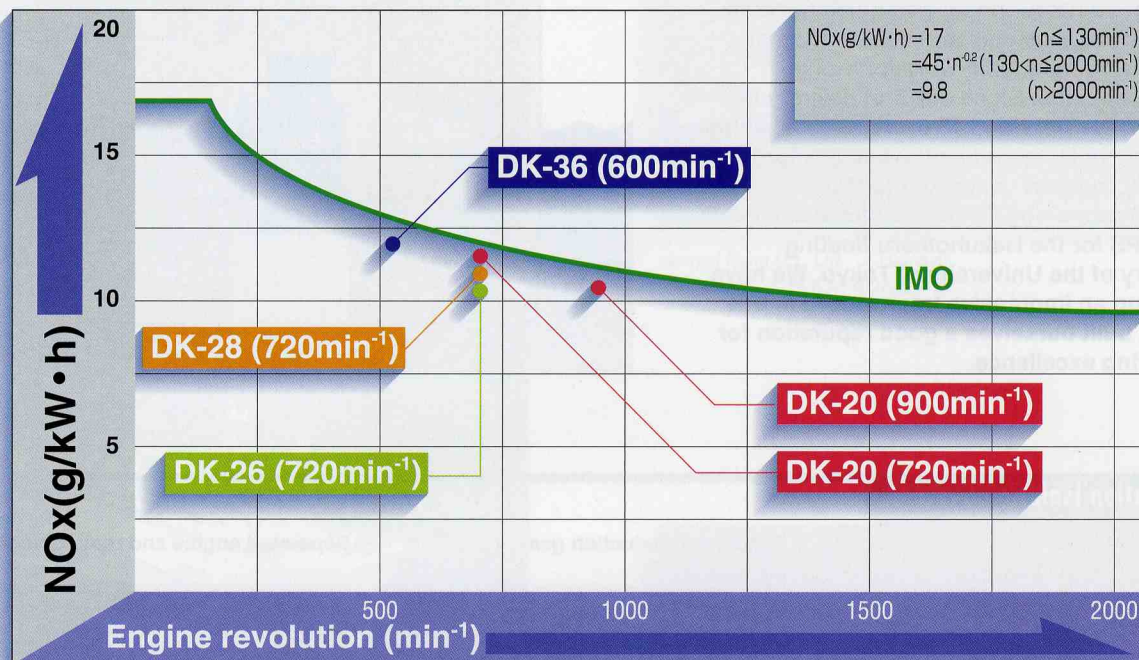


6DKM-20



For an environment-friendly engine, lower fuel consumption has been accomplished with low NOx.

**NOx < 12.1 g/kW·h : IMO regulation (at 720 min<sup>-1</sup>)**



Reduction of NOx (Nitrogen oxides) emitted from diesel engine has become an emergency problem worldwide.

The above graph shows the standard values of international emission control that was adopted by IMO (International Maritime Organization) in September 1997.

### Environmental Conservation

Low noise/vibration

Reduction of NOx

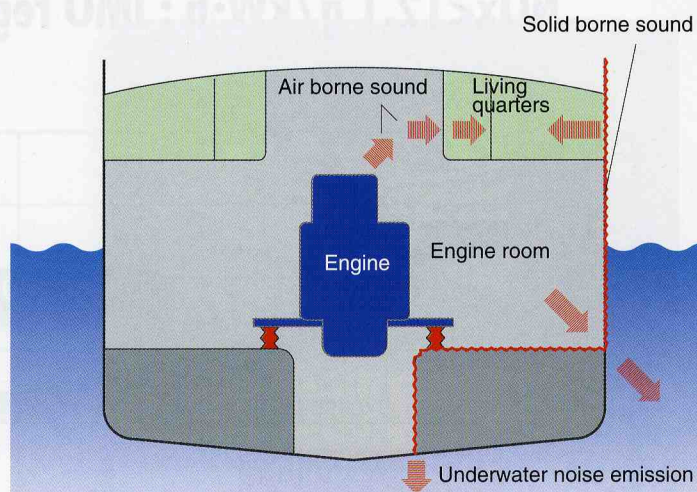
- ★ Optimum combustion
- ★ Strengthening fuel injection
- ★ Increase of compression ratio
- ★ Optimizing intake/exhaust valve timing
- ★ Optimum supercharger matching
- ★ Injection timing delay



# Daihatsu's Geared Diesel Engines Are a Never-Ending Pursuit of Advanced Technology, Onboard Living and Economics.

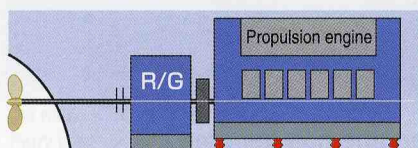
## • Noise-Vibration Isolation Systems

In recent years, vibration-proofing and noise emission controls for onboard machinery have come under focus as a means for improving onboard living and reducing underwater noise emission. Daihatsu Diesel was quick to catch sight of these problems and has, ever since, been developing engine vibration-noise isolation systems. Since our first delivery in 1980, we have provided 43 systems to 20 ships (as of Mar. 1999) including the 6000PS for the Yokosuka support vessel of the Marine Science Technology Center's Shinkai 6500 and the 7600PS for the Hakuohmaru floating laboratory of the University of Tokyo. We have chalked up an impressive track record in this field and built ourselves a good reputation for engineering excellence.

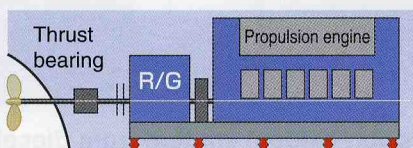


## • Vibration Isolation Systems

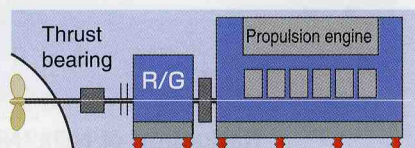
Engine only



Engine and reduction gear

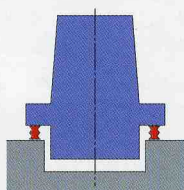


Separated engine and reduction gear

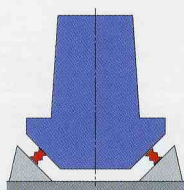


## • Vibration Isolation Systems

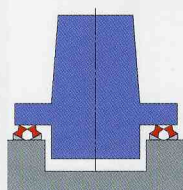
1. Horizontal vibration isolation



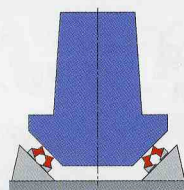
2. Inclined vibration isolation



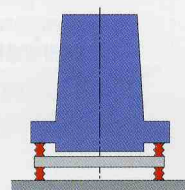
3. Unit vibration isolation



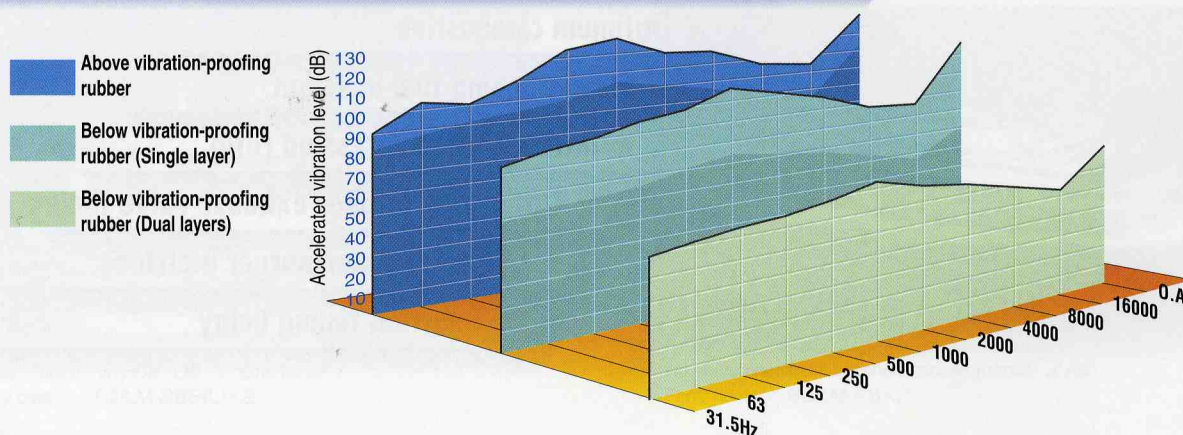
4. Unit inclined vibration isolation



5. Double stage vibration isolation



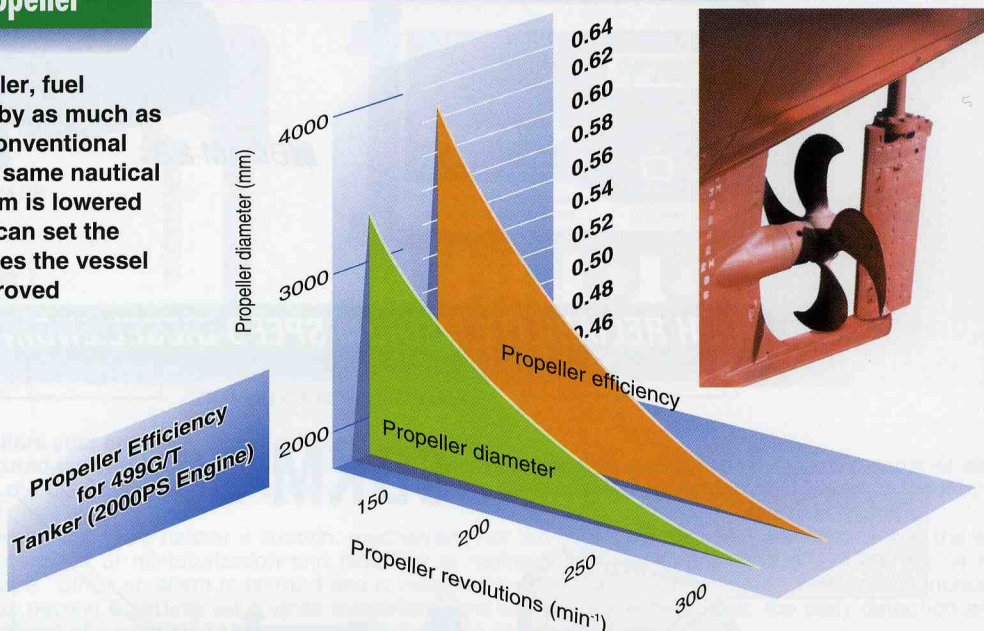
## • Simulated Vibration-Isolating Effect of Horizontal Vibration-Isolating System





## • Large Diameter Propeller

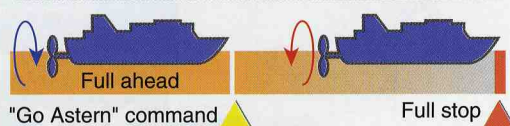
With the right size propeller, fuel consumption is reduced by as much as 3% in comparison with conventional propellers running at the same nautical speed, when propeller rpm is lowered by 10%. Daihatsu Diesel can set the propeller that best matches the vessel thus offering greatly improved propulsion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



## • 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



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

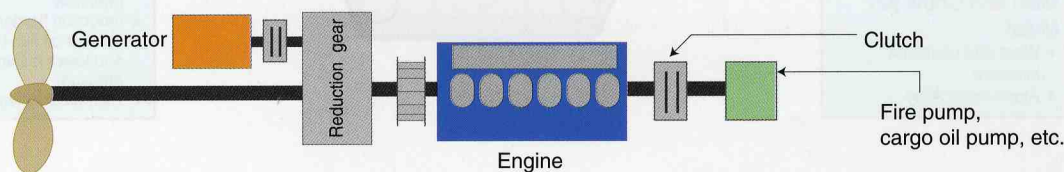
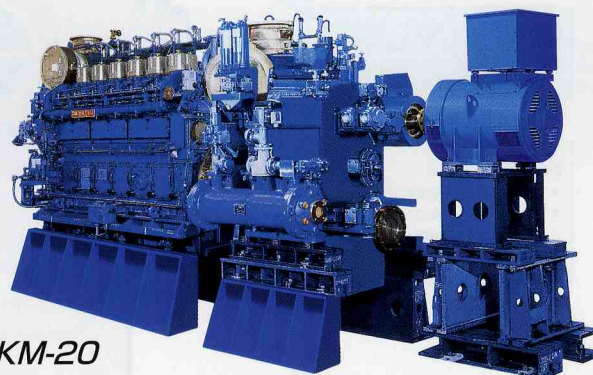
### Ship not equipped with CRASH ASTERN system



## • 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





# DKM Series

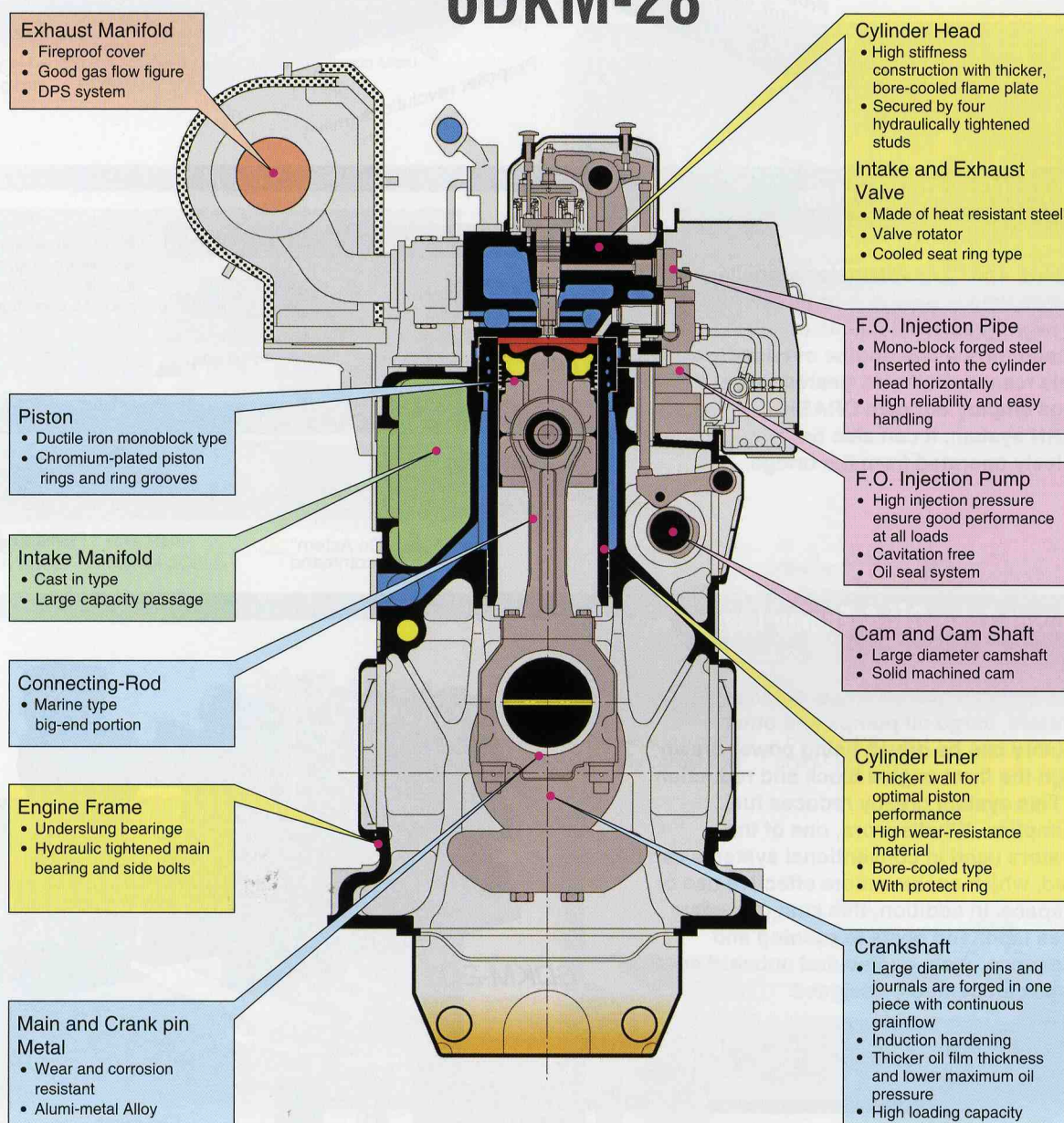
Engines of the DKM Series are a convergence of high reliability and environmental-friendly engineering.



6DKM-28

## HIGH RELIABILITY MEDIUM SPEED DIESEL ENGINE

### 6DKM-28





## DKM Series Specifications

Engine model	Bore (mm)	Stroke (mm)	No. of cylinders
<b>DKM-20</b>	200	300	6, 8
<b>DKMS-25</b>	250	360	6
<b>DKM-26</b>	260	380	6
<b>DKMS-28</b>	280	385	6
<b>DKM-28</b>	280	390	6, 8
<b>DKM-36</b>	360	480	6, 8

## Specifications

\*1 : kW = PS x 0.7355

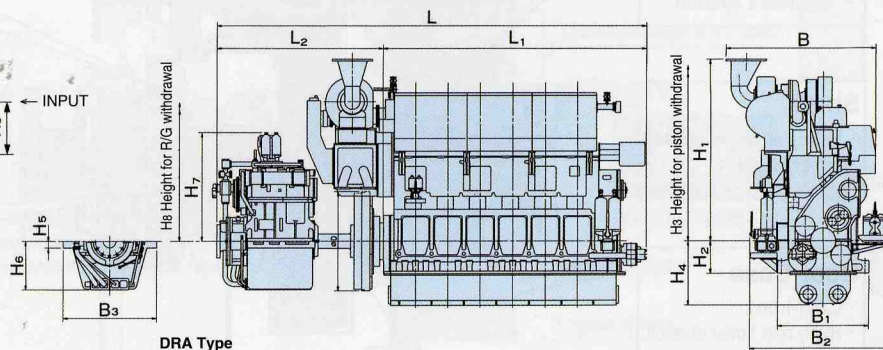
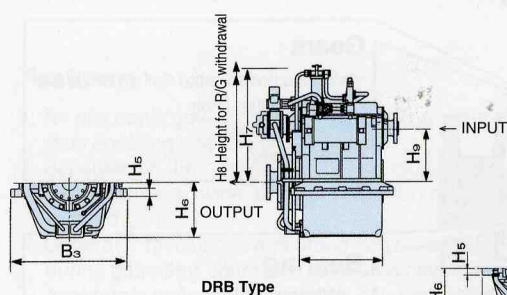
Output given for fuel oil A. Figures in ( ) given for heavy fuel oil.

Engine model	Output		Engine revs. (min <sup>-1</sup> )	R/G model	Gear ratio	Propeller revs. (min <sup>-1</sup> )	Propeller diam. Z = 4 (mm)	Propeller diam. Z = 5 (mm)	Intermediate shaft diam. (mm)	Propeller shaft diam. (mm)	Weight (ton)	
	(kW)*1	(PS)									Engine	R/G
<b>6DKM-20</b>	956 (882)	1300 (1200)	900	DRA-16F	3.429	262	2250	2160	145	180	8.0	2.5
<b>8DKM-20</b>	1250 (1176)	1700 (1600)	900	DRA-19F	3.022	298	2350	2260	155	190	10.1	2.8
				DRB-19F	3.281	274	2450	2360	160	200		3.0
<b>6DKMS-25</b>	1470 (1470)	2000 (2000)	750	DRA-25F	2.371	316	2340	2250	160	200	16.0	3.8
					2.576	291	2460	2360	165	210		
				DRB-25H	2.734	274	2550	2450	170	210		3.5
<b>6DKM-26</b>	1618 (1618)	2200 (2200)	750	DRA-25F	2.371	316	2380	2280	165	210	16.0	3.8
					2.576	291	2480	2380	170	210		
				DRB-25H	2.734	274	2600	2500	175	220		3.5
<b>6DKMS-28</b>	1838 (1838)	2500 (2500)	750	DRA-35H	2.595	289	2580	2480	175	220	18.0	6.0
					2.800	268	2700	2600	180	230		
				DRB-35H	3.030	248	2830	2720	185	230		5.5
<b>6DKM-28</b>	1912 (1912)	2600 (2600)	750	DRA-35H	2.595	289	2640	2540	180	220	18.0	6.0
					2.800	268	2830	2720	185	240		
				DRB-35H	3.030	248	2950	2840	190	240		5.5
<b>8DKM-28</b>	2500 (2500)	3400 (3400)	750	DRA-50F	2.700	278	2850	2740	200	250	23.0	8.5
					3.101	242	3060	2940	205	260		
				DRB-50F	3.353	224	3280	3150	220	280		8.0
<b>6DKM-36</b>	3309 (3309)	4500 (4500)	600	DRA-80F	2.430	247	3190	3070	225	280	44.0	12.0
					2.740	219	3430	3300	235	290		
				DRB-80F	3.149	191	3720	3580	245	310		
<b>8DKM-36</b>	4413 (4413)	6000 (6000)	600	DRA-120F	2.862	210	3730	3580	260	330	55.0	20.0
					3.263	184	4030	3880	270	340		
				DRB-120F	3.722	161	4370	4200	280	360		

Output for only DKM-36 engine given for crank shaft end.

## Dimensions

(mm)																		
Engine model	R/G model	L	L1	L2	B	B1	H1	H2	H3	H4	D	H5	H6	H7	H8	H9	B2	B3
6DKM-20	DRA-16F	4555	3135	1420	1480	960	1885	365	1680	695	1000	70	445	870	1200	—	1610	970
	DRB-16F	4525	3135	1390	1480	960	1885	365	1680	695	1000	120	490	1050	1200	475	1610	1040
8DKM-20	DRA-19F	5570	3870	1700	1590	960	1885	365	1680	695	1000	80	500	1005	1200	—	1610	1020
	DRB-19F	5375	3870	1505	1590	960	1885	365	1680	695	1000	80	600	1155	1300	553	1610	1190
6DKMS-25	DRA-25F	5295	3350	1945	1835	1180	2463	400	1970	830	1200	80	600	1040	1380	—	1952	1500
	DRB-25H	5010	3350	1660	1835	1180	2463	400	1970	830	1200	200	630	1130	1200	600	1952	1300
6DKM-26	DRA-25F	5295	3350	1945	1835	1180	2110	400	1970	830	1200	80	600	1040	1380	—	1950	1500
	DRB-25H	5010	3350	1660	1835	1180	2110	400	1970	830	1200	200	630	1130	1200	600	1950	1300
6DKMS-28	DRA-35H	5615	3675	1940	—	1220	2563	430	2065	850	1310	90	640	1435	1820	—	1872	1240
	DRB-35H	5595	3675	1920	—	1220	2563	430	2065	850	1310	200	640	1186	1700	609	1872	1400
6DKM-28	DRA-35H	5615	3675	1940	—	1220	2563	430	2065	850	1310	90	640	1435	1820	—	1880	1240
	DRB-35H	5595	3675	1920	—	1220	2563	430	2065	850	1310	200	640	1186	1700	609	1880	1400
8DKM-28	DRA-50F	7075	4535	2540	—	1220	2719	430	2065	850	1310	100	750	1160	1650	—	1880	1500
	DRB-50F	6745	4535	2210	—	1220	2719	430	2065	850	1310	260	800	1335	1650	770	1880	1640
6DKM-36	DRA-80F	7285	4465	2820	2090	1680	3270	605	2930	1200	1400	250	800	1362	1800	—	2060	1600
	DRB-80F	7075	4465	2610	2090	1680	3270	605	2930	1200	1400	250	830	1583	2300	927	2060	2000
8DKM-36	DRA-120F	8865	5595	3270	2090	1680	3270	605	2930	1200	1400	250	900	1590	2100	—	2060	2050
	DRB-120F	8665	5595	3070	2090	1680	3270	605	2930	1200	1400	300	1000	1760	2300	1002	2060	2300





# Daihatsu's Reduction Gears - One Supporting Element of Engine High Reliability

In addition to engines, Daihatsu Diesel also has a wide range of in-house developed reduction gears to match any type of vessel. We have built ourselves a good name and reputation as a gear manufacturer. 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.

### Single-engine single-shaft

Coaxial	Reversible reduction gear	Model <b>DRA</b>
	2-speed reversible reduction gear (2-speed ahead, 1-speed astern)	<b>DR2A</b>
	Non-reversible reduction gear	<b>RCA</b>
Offset (Vertically offset, Horizontally offset)	Reversible reduction gear	<b>DRB, DRBH</b>
	2-speed reversible reduction gear (2-speed ahead, 1-speed astern)	<b>DR2B</b>
	Non-reversible reduction gear	<b>RCB, RCBH</b>

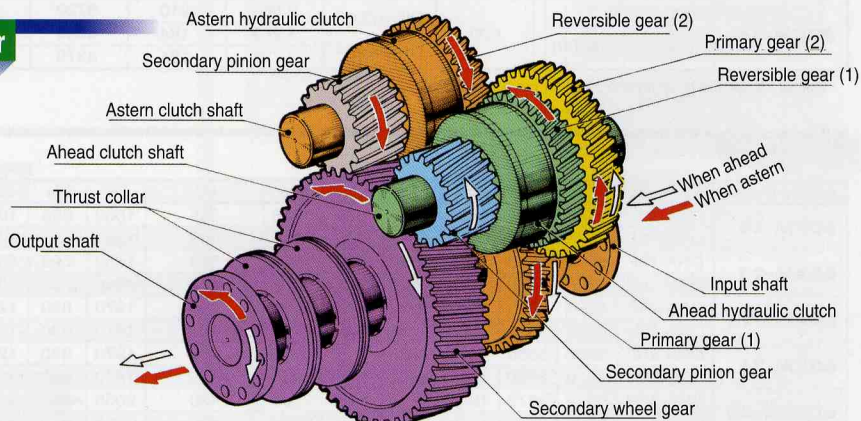
### Multiple engine single-shaft

Reversible reduction gear	<b>DRD</b> (Two-engine single-shaft)
	<b>DRF</b> (Four-engine single-shaft)
Non-reversible reduction gear	<b>RCD</b> (Two-engine single-shaft)
	<b>RCF</b> (Four-engine single-shaft)

### Special speed-increasing/reduction gear

Clutchless reduction gear	<b>RG</b>
Front-end speed-increasing/reduction gear	<b>FG</b>
Front-end off set type	<b>AGP</b>

## • DRA-50F Reversible Reduction Gear



### Propeller Thrust Bearing

- White metal
- Mitchell's system

### Shaft

- Forged steel with precision finish
- Highly rigid

### Gear Case

- Cast-iron
- Highly rigid. Lower vibration.

### Hydraulic Clutch

- High heat-resistant lining
- Shockless mesh because of hydraulic control

### Gears

- Induction quenched carbon steel and alloyed steel
- Precision ground finish
- 25° pressure angle
- Crowning gear

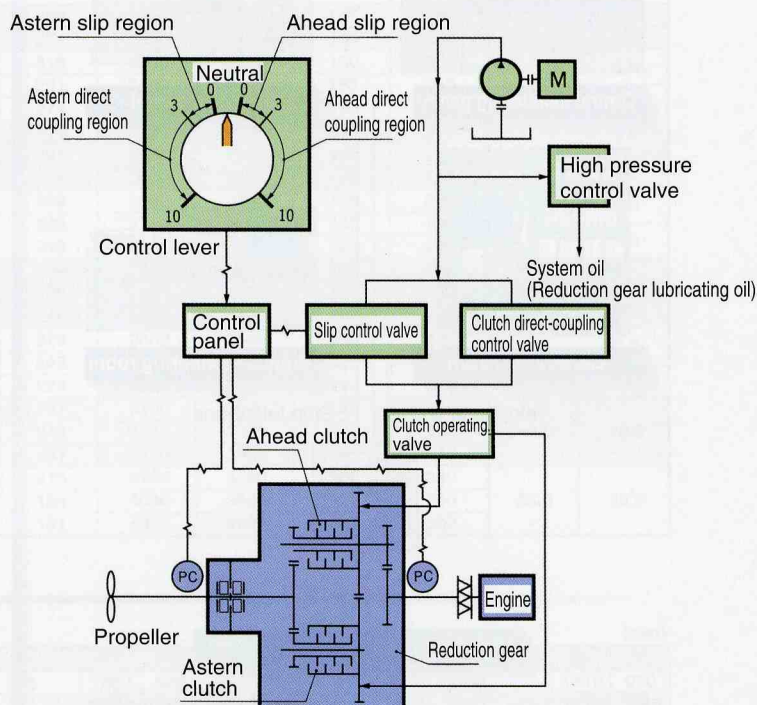
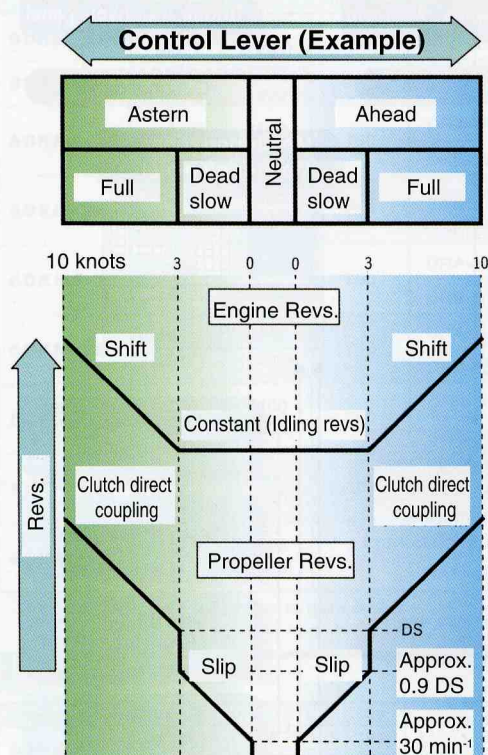
### Bearing

- White metal
- Precision fit
- Long-lasting
- Reduced maintenance costs



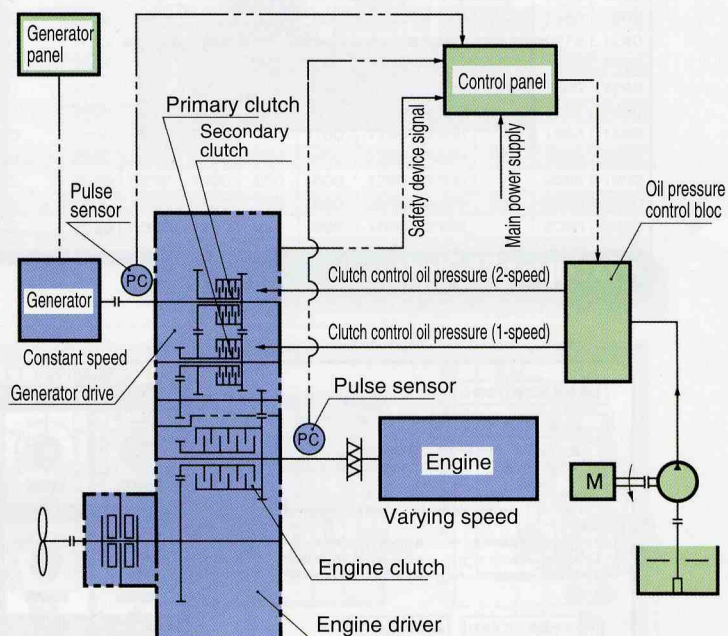
- **DICS (Daihatsu Slipping Clutch System)**

Features	<ol style="list-style-type: none"> <li>1. Enables dead-slow sailing ahead/astern with a fixed pitch propeller (FPP).</li> <li>2. Enables shockless, smooth clutch meshing.</li> <li>3. Propeller revolutions remain stable even under fluctuating engine revolution and propeller load.</li> </ol>
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**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.**

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.

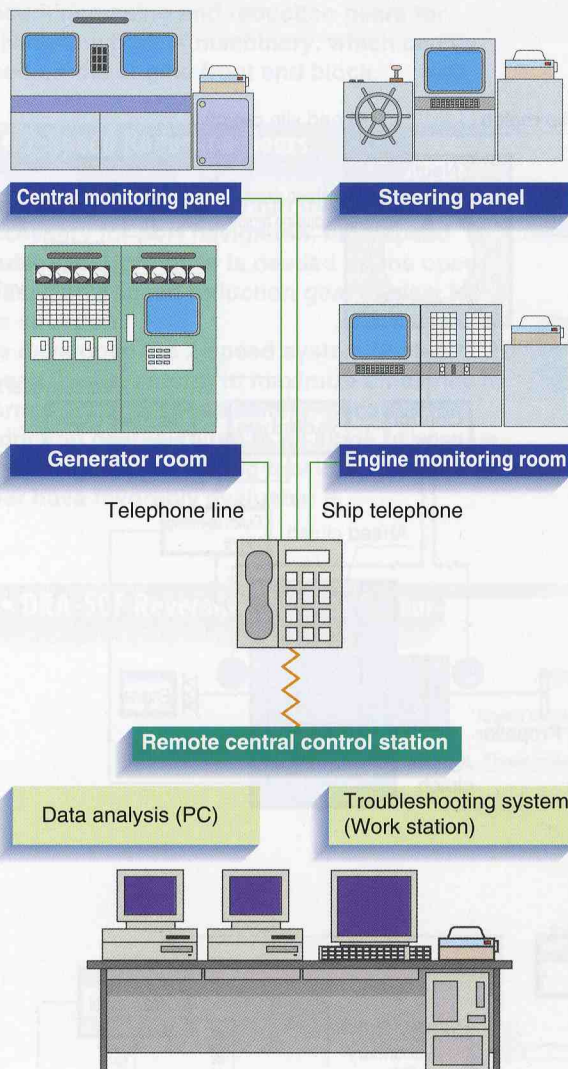




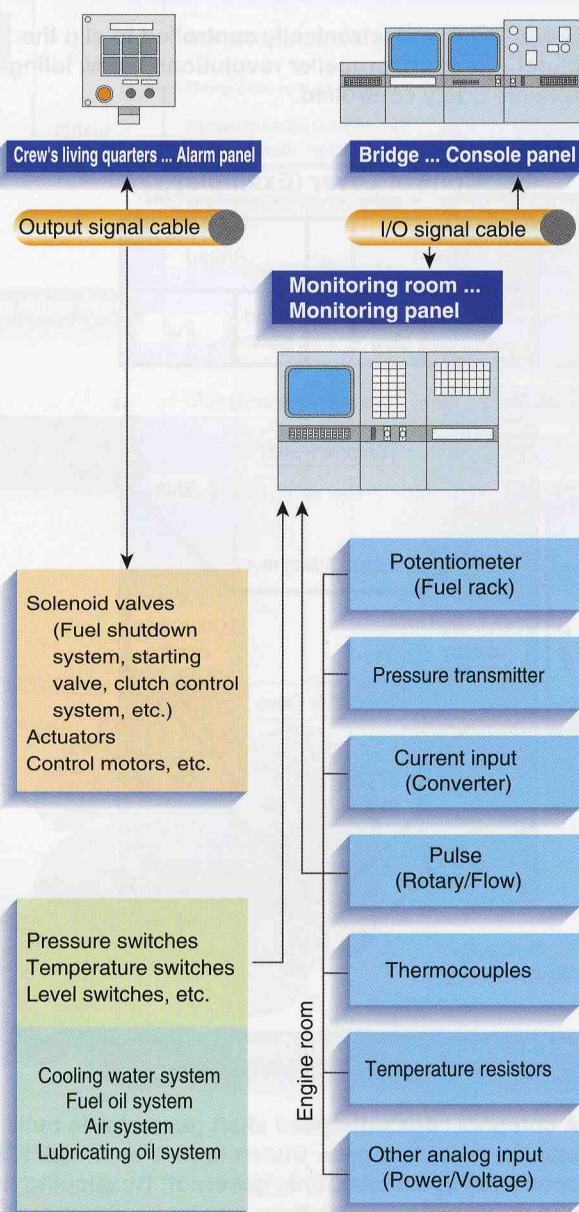
# Monitoring Systems for Assured Safe Sailing

## • Daihatsu's Maintenance Support System

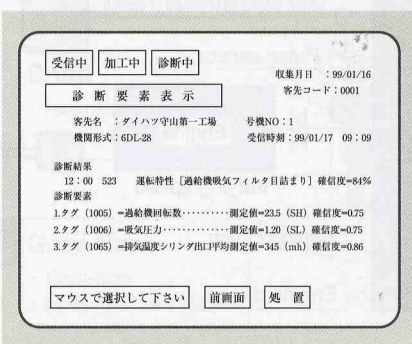
Reduces maintenance labor and helps prevent unexpected breakdowns. Ensures accurate maintenance data and swift service.



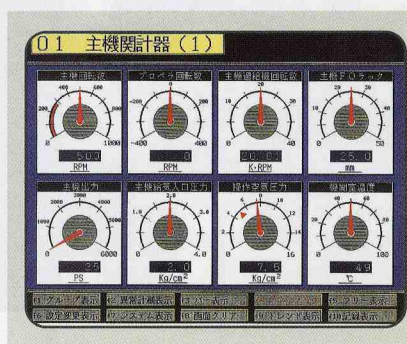
## • Monitoring System



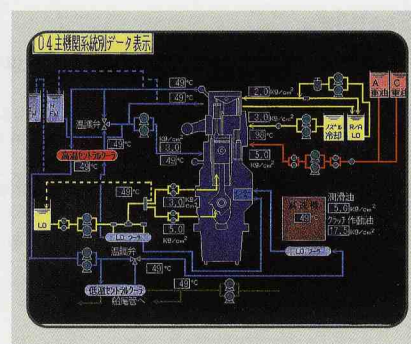
## • Example CRT Displays



Diagnostic data



Engine data



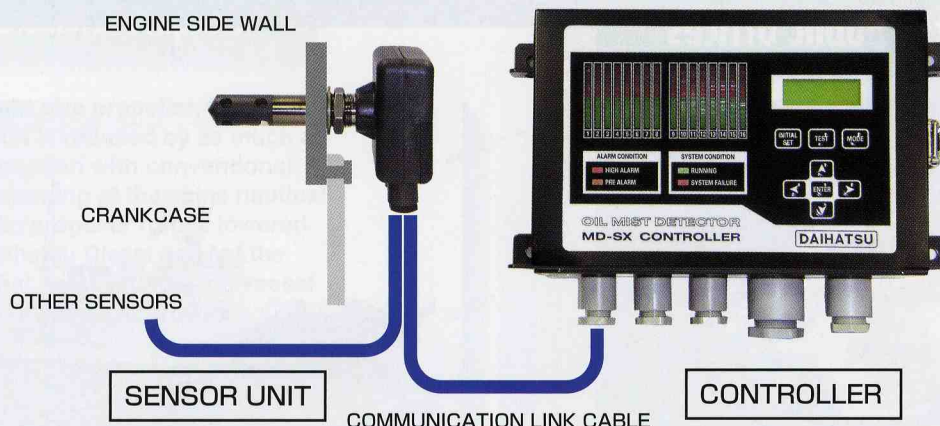
Engine exhaust gas temperature



# Daihatsu Diesel Equipment for Marine Applications

## • Oil Mist Detector

## MD-SX (Sensor Type)

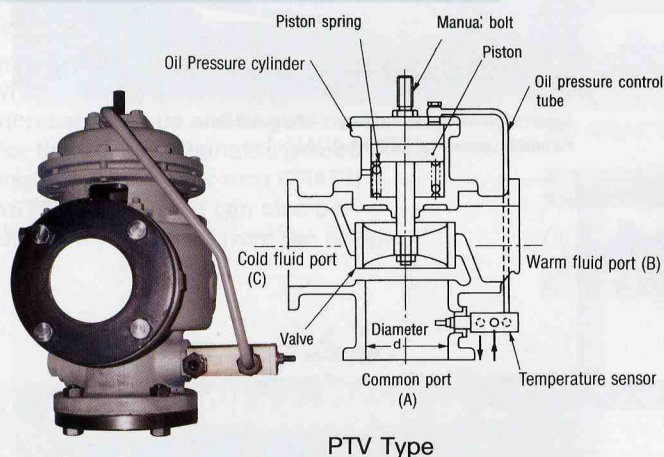


### The Oil Mist Detector Monitors your engine to detect major engine failure.

This equipment is constituted by two or more sensor units which carry out insertion attachment for every cylinder of diesel engine more directly than the side wall of a crankcase, and the controller which carries out integrated control of them by the communication.

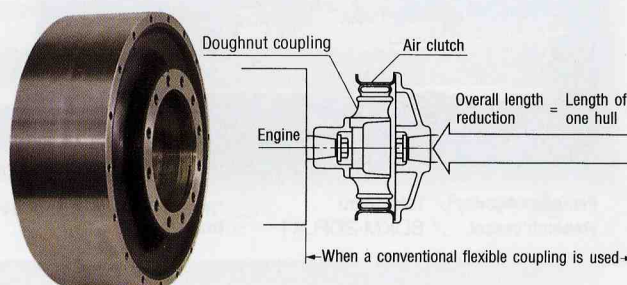
The natural diffusion system which need neither a suction mechanism, nor the mist detection of a sensor unit, and the ease of improvement and maintenance of miniaturization and reliability is realized. With a controller, it is always the oil mist concentration in a crankcase. Since an alarm is emitted and it indicates by the state when oil mist concentration increases by bearing overheating etc. beyond a setting value while supervising and displaying the mist level, the early detection and a forecast of the serious accident of a medium- or high-speed diesel engine are attained.

## • Automatic Temperature Control Valve



A temperature sensor featuring an ultra-small wax element detects the fluid temperature and uses an oil-pressure servo function with a trigonal main valve to control the fluid temperature automatically. This unit offers easy operation as well as excellent response and sensitivity.

## • Doughnut RD coupling



This new flexible coupling combines a conventional flexible coupling with an air clutch. This design greatly reduces engine room space requirements compared to conventional installation of independent components.



# Proof of Success

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.

## Vessels for public offices



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



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



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



Japan Meteorological Agency / Ryoufu Maru  
Research vessel / 6DLM-40AL×1



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



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



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



## Ferries



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



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



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



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



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



Nankai Awaji Line Co., Ltd. / Ferry Senshu  
Ferry boat / 6DLM-40A(L)×2



Nankai Ferry Co., Ltd. / Ferry Yoshino  
Ferry boat / 6DLM-40(L)×2



# Our Record is in the Wake

Ferries are safe and comfortable for travel. Today, many are powered by Daihatsu's geared diesel engines. Daihatsu will continue to meet the high expectations of those who live at sea.

## Ferries



Uwajima Unyu Co., Ltd. / Sakura  
Ferry boat / 6DLM-40A(L)×2



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



Oki Kisen K. K. / Ferry Shirahama  
Ferry boat / 6DLM-40A(L)×2



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



Kyusyu Yusen Co., Ltd. / Ferry Chikushi  
Ferry boat / 6DLM-40A(L)×2



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



Higashi Nihon Ferry Co., Ltd. / Eins Soya  
Ferry boat / 6DLM-28S(L)×2



Takehara Namikata Jidosha Kososen Kumiai / Aki  
Ferry boat / 6DKM-26×2



# Diesel Engines Meet Expectation with Overall Performance.



Kokudo Kyusi Ferry K. K. / New Hoyo # 2  
Ferry boat / 6DLM-28S(L)×2



Sanyo Kisen Co., Ltd. / Sanyo # 7  
Ferry boat / 6DLM-26FS(L)×1



Isewan Ferry Co., Ltd. / Atsumi Maru  
Ferry boat / 6DLM-28S(L)×2



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



Shodoshima Kyuko Ferry K. K. / Olive Maru  
Ferry boat / 6DKM-26(L)×2



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



Boyo Kisen Kaisha, Ltd. / Orange Grace  
Ferry boat / 6DLM-26S(L)×2



Matsuo Ferry Co., Ltd. / Daian # 8  
Ferry boat / 6DKM-20FX 1



## Power Variation to Meet a Wide Range of Needs

Daiichi'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.

### Ferries



Uwajima Unyu Co., Ltd. / Akatsuki # 2  
Ferry boat / 6DLM-40A(L)×2



Hapag Lloyd A. G. / Bremen  
Passenger boat / 8DKM-32×2



Setonaikai Kisen Co., Ltd. / Furutaka  
Ferry boat / 8DKM-20FL×1



Miyako Ferry Co., Ltd. / Ferry Yuumutsu  
Ferry boat / 6DKM-20F×1

### Coastal vessels



Kita Nippon Kaiun Co., Ltd. / Asakaze # 5  
RORO / 6DLM-40A(L)×2



Ube Shipping & Logistics, Ltd. / Seizan Maru  
Cement vessel / 6DLM-40AF×1



Kokoku Kaiun K. K. / Suzuka  
PCC / 8DLM-40×1



Akiyama Zosen / Sansha Maru # 45  
Gravel Carrier / 6DLM-32×1





Kansai Tech Co., Ltd. / Hikari Maru # 15  
Tanker / 8DKM-28F×1



Fuji Shipping Co., Ltd. / Fujifuku Maru  
Crane vessel / 6DKM-28L×1



Sanwa Shokai Co., Ltd. / Kayou Maru  
General Cargo / 6DKM-26L×1



Kinriki Kisen K.K. / Kinriki Maru  
General Cargo / 6DKM-26L×1



Kotobuki Kaiun Co., Ltd. / Kotobuki Maru # 3  
Chemical Tanker / 6DLM-22FS×1

## Working craft



Nippon Telegraph & Telephone Co. / Subaru  
Cable Laying ship / 8DK-32×4



Nitto Tugboat Co., Ltd. / Hoki Maru  
Tug boat / 6DKM-26(L)×2



Fukada Salvage & Marine Works Co., Ltd. / Naruto Maru  
Tug boat / 6DLM-28FS×2



Daikai Marine Co. / Daiki Maru  
Pusher boat / 6DKM-26(L)×2



## Working craft



Zamil Operations & Maintenance Co., Ltd. / Zamil # 5  
Supply vessel / 6DKM-26(L)×2



Yatsushiro Shokai / Tensho Maru # 8  
Pusher boat / 6DKM-26(L)×2



Shanghai Maritime Rescue and Salvage Bureau Ministry of Communication / Hua Cai  
Ocean Salvage Tug boat / 8DKM-28(L)×2



K.K. Taiyo / Fuji  
Pusher boat / 6DLM-24S(L)×2



Japan Ocean Tug Co., Ltd. & The Nippon Salvage Co., Ltd. / Koyo Maru  
Ocean Salvage Tug boat / 8DLM-40A(L)×2



Yorigami Maritime Construction Co., Ltd. / Shinsei Maru # 8  
Pusher boat / 6DLM-22S(L)×2



Nakamura Shoji / Hokuyo Maru # 5  
Pusher boat / 6DKM-28F(L)×2



Tsukiboshi Kaiun Co., Ltd. & Shinbishi Kaiun K. K. / Shinbishi  
Pusher boat / DY-28EN×2



## Fishing boats



Yoshikazu Ishikura / Sanko Maru  
Skipjack Pole & Line Fishing boat / 6DKM-28L×1



Kanei Bussan Co. / Genpuku Maru # 81  
Purse Seiners / 6DKM-32×1



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



Ohama Fishery / Teno Maru # 7  
Purse Seiners / 8DLM-32×1



Myojin Fishery / Sagamyoin Maru # 83  
Skipjack Pole & Line Fishing boat / 6DKM-28L×1



Kanei Bussan Co. / Wakaba Maru # 6  
Purse Seiners / 8DLM-32×1



K.K. Taishu / Ikitsuki  
Fishery Control Boat / 8DKM-28L×1



Marukawa Fishery / Daikichi Maru # 58  
Carrier boat / 6DKM-32L×1



Daihatsu Diesel R & D seeks a good balance



ISO 9001 Accredited  
Quality Assurance System Standards of the International  
Organization for Standardization  
Conforming Sites : Head Office-Moriyama Factory

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- 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.

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