

船用发电机组

Marine Generating Sets





公司新的厂区鸟瞰图 New aerial view of the company

船用发电机组技术特点

MARINE GENERATING SETS CHARACTERISTICS

- GDF可以提供功率为550kW~4180kW多种规格的发电机组，频率为50Hz或60Hz，电压等级有400V、450V、690V、3150V、6300V、6600V等，发电功率因数0.8（可按客户要求适当调整）。
- 各系列柴油机均可以燃用重油，适用于运输船舶和工程船舶电站、电力推进船舶动力。
- GDF根据客户需求，可配套带公共底座的发电机组。
- 发电机组配有完善的监测控制系统保证其可靠运行，能满足各种轮机自动化要求。
- 各系列柴油机和天然气机的排放完全符合国际海事组织IMO-Tier II的要求。

说明

- 各机型供货范围及技术参数，按相应技术条件执行。
- 可以提供包括CCS、BV、DNV、NK、GL、LR等船级社证书。

- GDF can supply range of generating sets with power 550kW~4180kW and frequency 50Hz or 60Hz, and the voltage class includes 400V、450V、690V、3150V、6300V、6600V etc.. The power factor is 0.8 (it can be adjusted according to the client requirements).
- All the diesel engines can operate on HFO, and apply to transportation ship and ship power station, the ships driven by electricity.
- GDF can supply generating set with a common base frame as per the client requirements.
- Generating sets have been equipped with the perfect monitoring system to ensure the engine running reliability, so can meet automation requirements for various engines.
- The emission of the diesel engine and gas engine can meet IMO-Tier II emission level.

EXPLANATIONS

- The supplying scope and technical parameters refer to the related technical conditions
- GDF can supply society certificates including CCS, BV, DNV, NK, GL, LR etc.

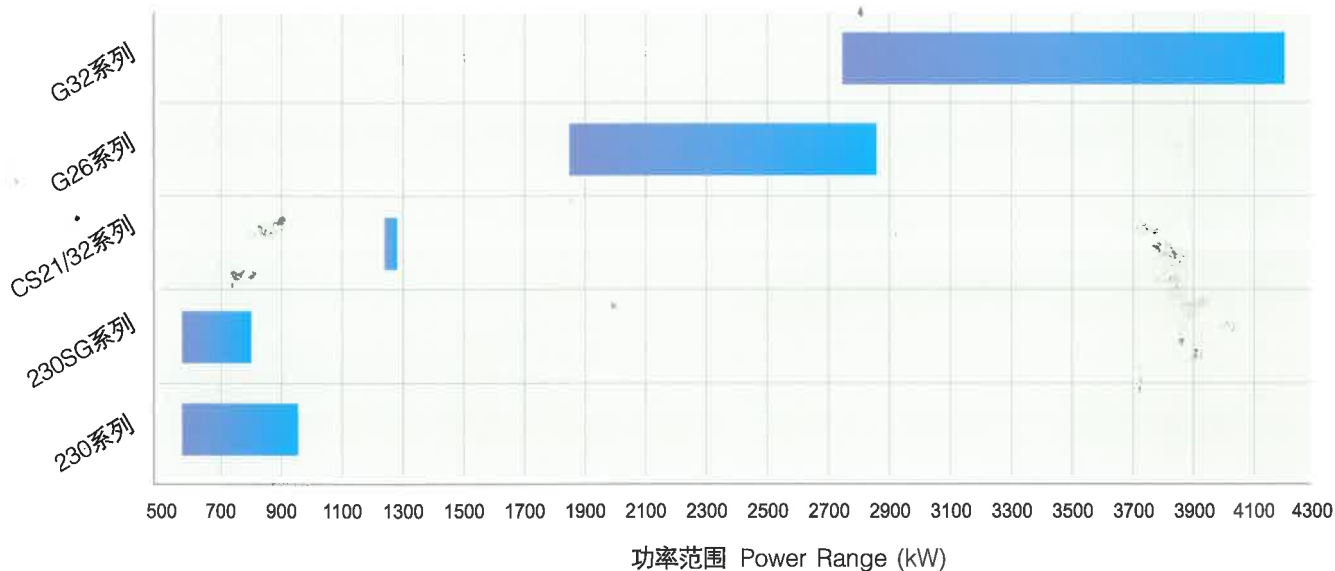
广州柴油机厂股份有限公司（原广州柴油机厂）是中国柴油机制造业中历史最悠久的企业之一，她的前身是协同和机器厂，始建于1911年，1915年她成功地制造出中国第一台柴油机。今天的广州柴油机厂股份有限公司(英文缩写：GDF)已经发展成为中国华南地区最大的柴油机专业生产企业，具有批量生产柴油机的能力。

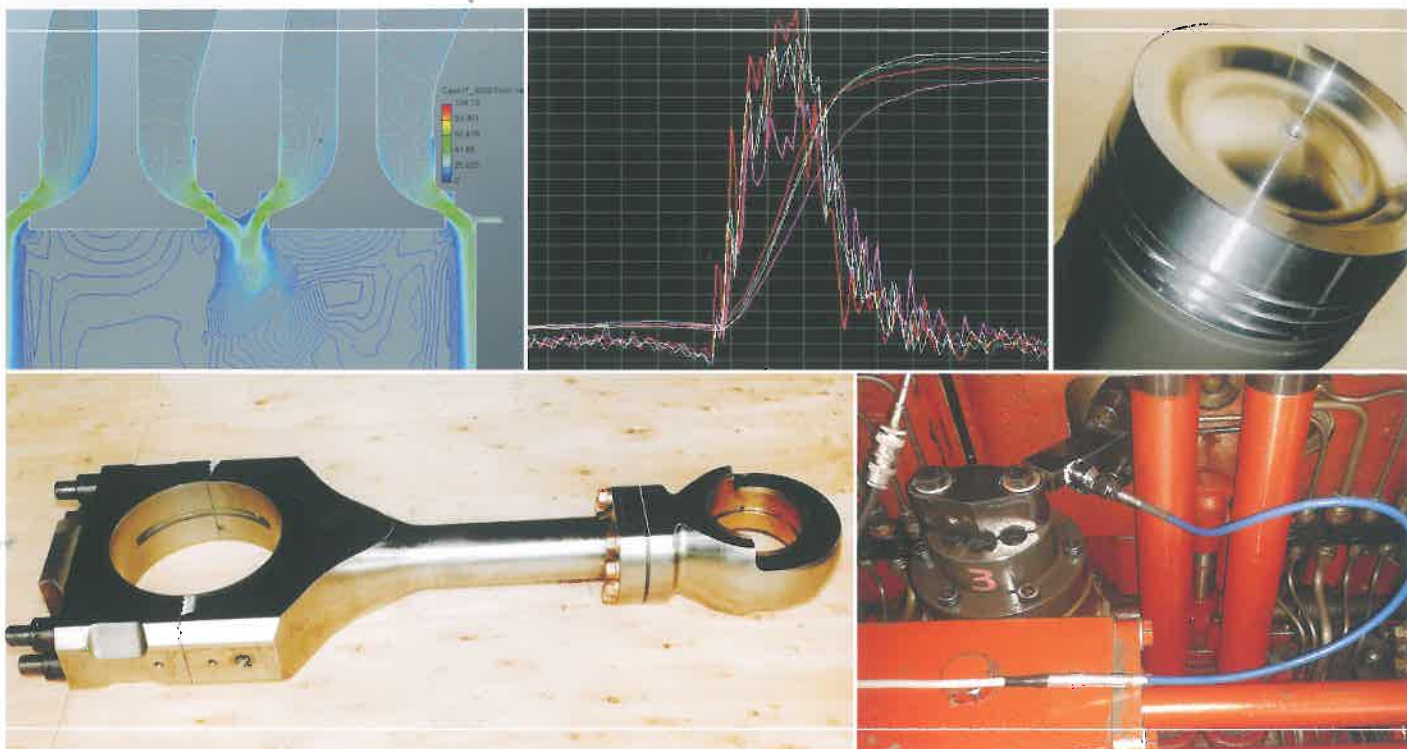
GDF制造230、CS21/32、320、G26、G32系列中速柴油机发电机组及230SG天然气机发电机组，具有良好的动力性和经济性。

Guangzhou Diesel Engine Factory Co.,Ltd-"GDF"(Formerly known as Guangzhou Diesel Engine Factory) known as Hip Tung Wo Machinery Factory established in 1911, who made the first diesel engine in China in 1915. Now, the factory has become the largest factory manufacturing diesel engines in the South China with the capacity of mass production of diesel engines.

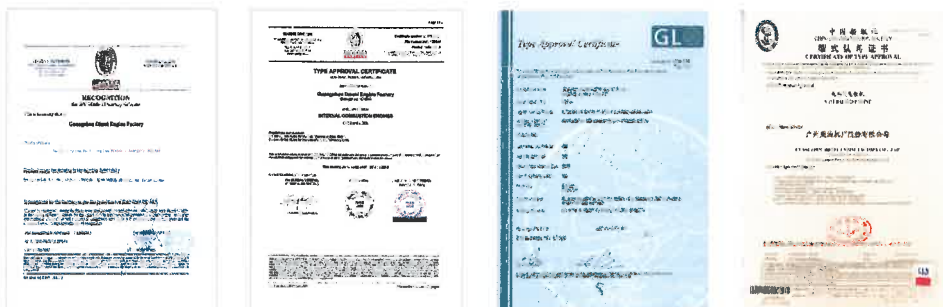
GDF mainly manufactures 230, CS21/32, 320, G26, G32 series medium-speed diesel engine generating sets and 230SG series nature gas generating sets with good power and economy.

船用发电机组功率范围 POWER RANGE FOR MARINE GENERATING SETS





- 质量管理体系认证证书
- Certificate of Conformity of Quality Management System Certification
- 认证注册证书
- Certificate of Registration



- BV对工厂的认可
- Recognition for BV Model II Survey Scheme
- BV型式认可证书
- BV Type Approval Certificate
- GL型式认可证书
- GL Type Approval Certificate
- 天然气机型式认可证书
- Certificate of Type Approval of Natural gas

GDF是一家技术密集型企业，产品从设计、制造、测试到投放市场，是一项复杂的系统工程。

设计方面，我们积极与国内外著名的科研所合作，应用计算机PLM、CAD、三维有限元软件进行设计、研制新产品，持续加强新产品质量改进，使我们的新产品拥有较高的技术含量。

制造方面，我们拥有专业的生产线和先进的设备，从铸造、机加工到总装配，我们都严格执行工艺纪律，以工艺提升制造水平，打造企业竞争力。

测试方面，我们选用精密的测试仪器，运用先进的测试手段，保证产品的技术精度，突显我们的品牌优势。

GDF is concentrated technology enterprise. The manufacturing product is a complex system engineering: design, manufacture, measuring, test and marketing.

In design, We cooperate with famous institution home and abroad to design the engine, use PLM and CAD and other software to develop new product, and have been improving the quality of products continuously to make our product have high technical content.

In manufacture, We have special production line and advanced devices to make the enterprise own competitive power including casting, machine and assembly production line.

In measure, We use precise testing instrument by means of advanced testing methods to guarantee the accuracy of product.





技术特点 PRODUCT CHARACTERISTIC

230柴油机采用无管路设计理念，油、水管路被集成在机体内，大大减少了零部件，进一步提高了整机的可靠性。

230柴油机与发电机一同安装在公共底座上，公共底座同时作为润滑油存储柜，结构紧凑有效减少了占用机舱空间，发电机组可与船体刚性安装，也可以根据客户需要采用弹性支承。

230 diesel engine adopts "no pipeline" design concept, and the oil, water pipelines are integrated in the engine block, so the parts and components have been significantly reduced, and it further improves the whole engine reliability.

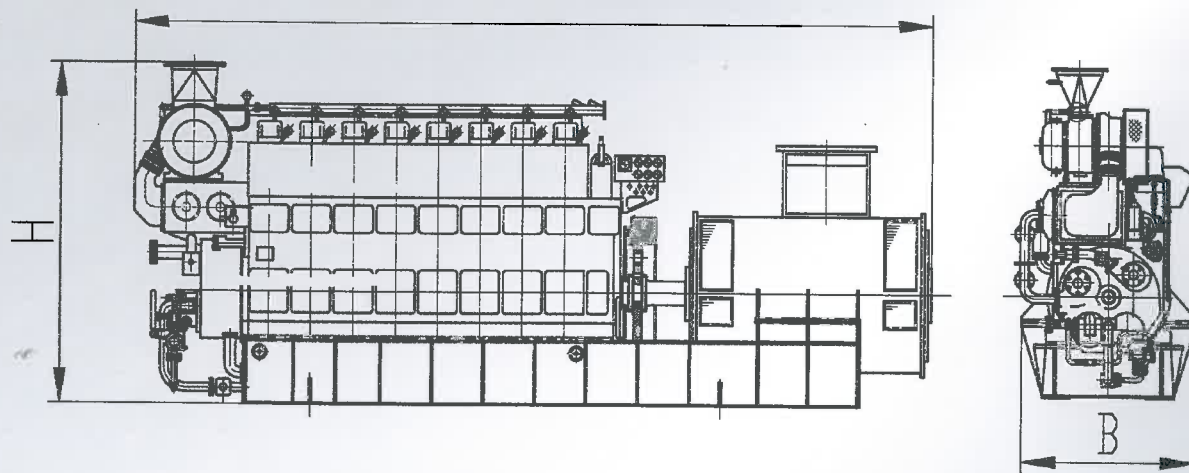
230 diesel engine and generating set are installed on the common base frame, which is as the storage tank of lube oil, so the configuration is compact and the space using engine room is reduced. The generating sets not only can rigidly assemble with ship body, but also adopt elastic bearing as per the client requirements.



- "海洋石油278"半潜海工船 配用CCFJ960J-WS 50/60Hz双频发电机组
- "HAIYANG SHIYOU 278" semi-dive engineering ship, equipped with CCFJ960J-WS 50/60Hz double-frequency generating sets

发电机组外形尺寸

OVERALL DIMENSIONS



型号与规格

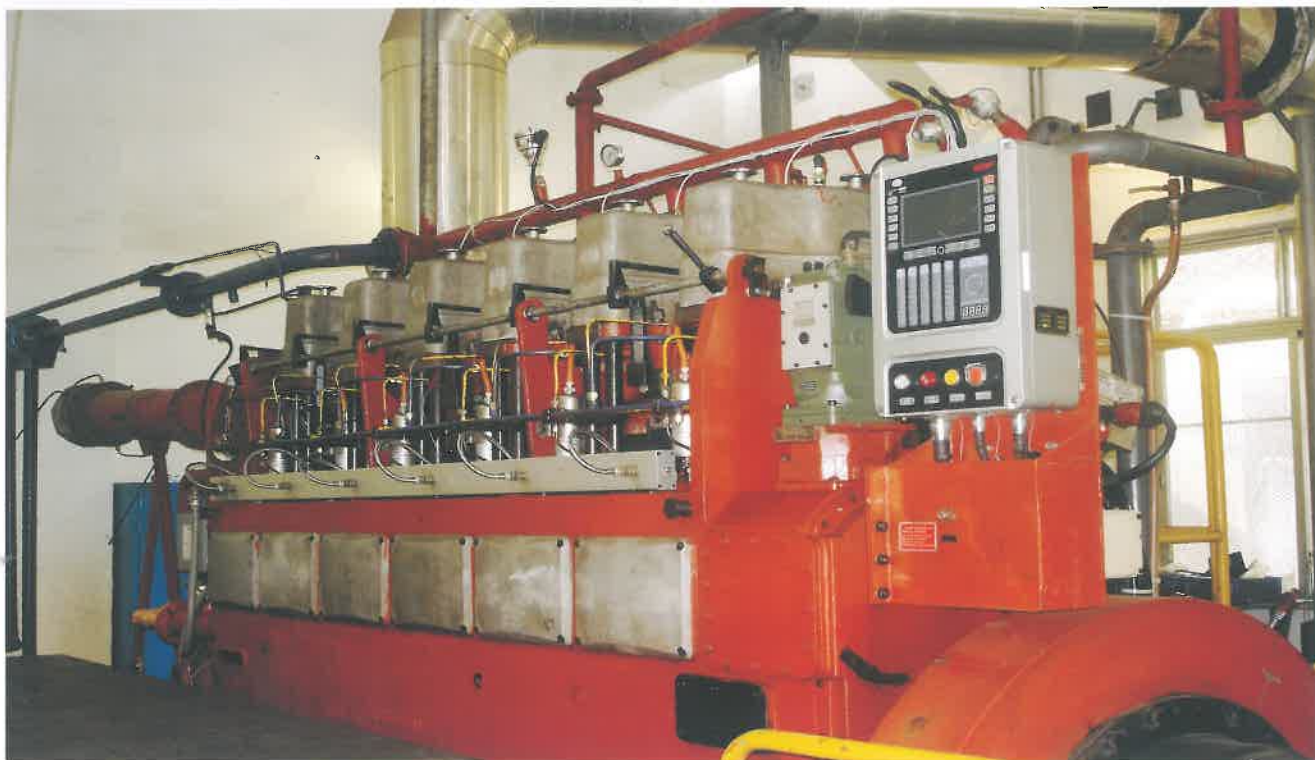
MODEL AND SPECIFICATION

发电机组Generating set				柴油机Diesel engine	机组外形尺寸(mm)Main dimensions		
型号Model	功率(kW) Rated output	频率(Hz) Frequency	机组重量(kg) Weight of Gen-set	型号Model	L	B	H
CCFJ550J-W	550	50/60	18000	6230ZD	5743	1534	2748
CCFJ660J-W	660	50/60	18500	6230ZD	5673	1634	2748
CCFJ704J-W	704	60	18500	6230ZD	5673	1634	2748
CCFJ750J-W	750	50	19500	6230ZD	5673	1634	2748
CCFJ880J-W	880	50/60	23000	8230ZD	6629	1634	2822
CCFJ944J-W	944	60	23000	8230ZD	6629	1634	2822
CCFJ960J-W	960	50	23000	8230ZD	6629	1634	2822

柴油机主要技术参数

THE MAIN SPECIFICATIONS PARAMETERS

缸径(mm) Bore	冲程(mm) Stroke	单缸功率(kW/cyl) Cylinder power	转速(rpm) Speed	平均有效压力(MPa) Mean effective pressure	燃油消耗(g/kW.h) Spec. fuel consumption	燃料类型 Fuel type
230	300	100~128	750/720	1.3~1.7	192	380cSt/50°C HFO



技术特点 PRODUCT CHARACTERISTIC

230SG天然气发动机是GDF与国外专业研究所合作研发的低碳环保型的新产品。

- 空燃比控制精确，氮氧化物排放非常低。
- 碳氧化物排放仅为柴油机的75%。
- 爆振检测和应急处理系统保证了发动机的安全运行。
- 2012年，DNV和CCS验船师现场监督了6230SG天然气机的型式试验，CCS已向GDF颁发了该机型式认可证书。
- 适用内河、近海航运船舶主机，船舶电站。

230SG natural gas engine is a new and low-carbon product, which is developed with the foreign research institute.

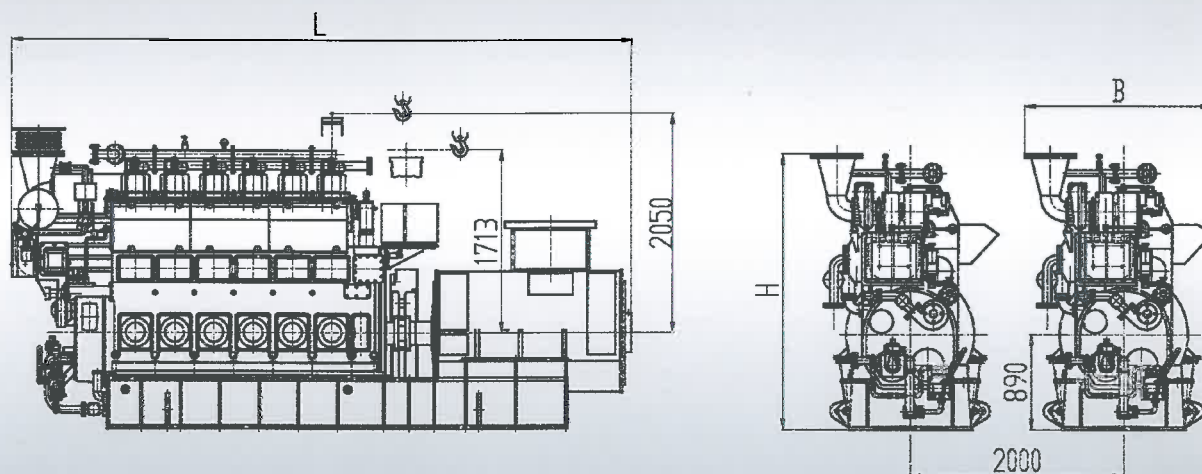
- The accurate air-gas ratio makes NOx emission much less.
- COx emission is only 75% of diesel engine.
- Knock detection and emergency handling system ensure engine safety running.
- 6230SG has passed type approval test in the present of CCS and DNV surveyors in 2012, and got the type approval certificate issued by CCS.
- Application: marine main engine of inland and offshore navigation, ship power station.



- 合作开发天然气发动机的国外研究所
- Foreign research institute for developing gas engine

发电机组外形尺寸

OVERALL DIMENSIONS



型号与规格

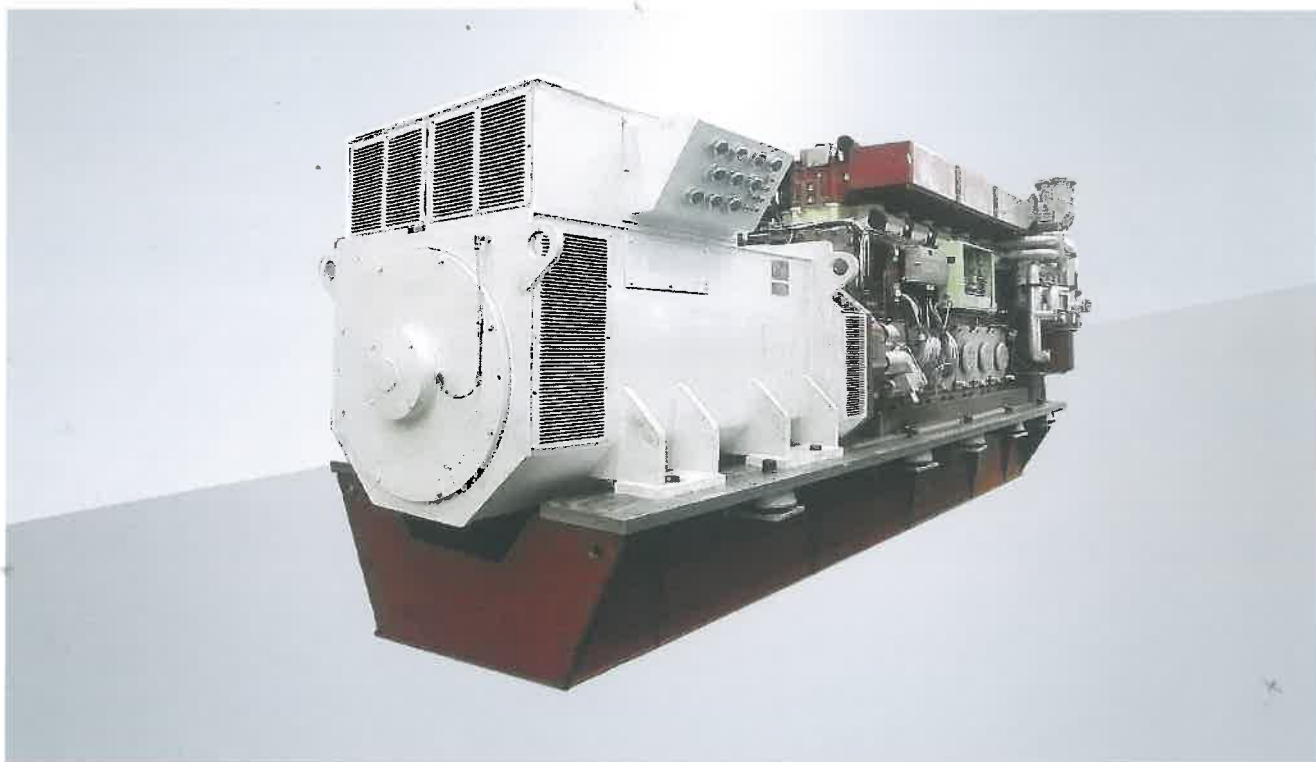
MODEL AND SPECIFICATION

机组Generating set				发动机Gas Engine	机组外形尺寸(mm)Main dimensions		
型号Model	功率(kW) Rated output	频率(Hz) Frequency	机组重量(kg) Weight of Gen-set	型号Model	L	B	H
CQFJ580J-W	580	60	18500	6230SG	5763	1753	2572
CQFJ600J-W	600	50	18500	6230SG	5763	1753	2572
CQFJ770J-W	770	60	23000	8230SG	6719	1753	2822
CQFJ800J-W	800	50	23000	8230SG	6719	1753	2822

发动机主要技术参数

THE MAIN SPECIFICATIONS PARAMETERS

缸径(mm) Bore	冲程(mm) Stroke	单缸功率(kW/cyl) Cylinder power	转速(rpm) Speed	平均有效压力(MPa) Mean effective pressure	燃气消耗(kJ/kW.h) Spec. fuel gas consumption	燃料类型 Fuel type
230	300	110	720/750	1.47/1.41	8376	天然气 Natural gas (甲烷值 Methane number ≥ 80)



技术特点 PRODUCT CHARACTERISTIC

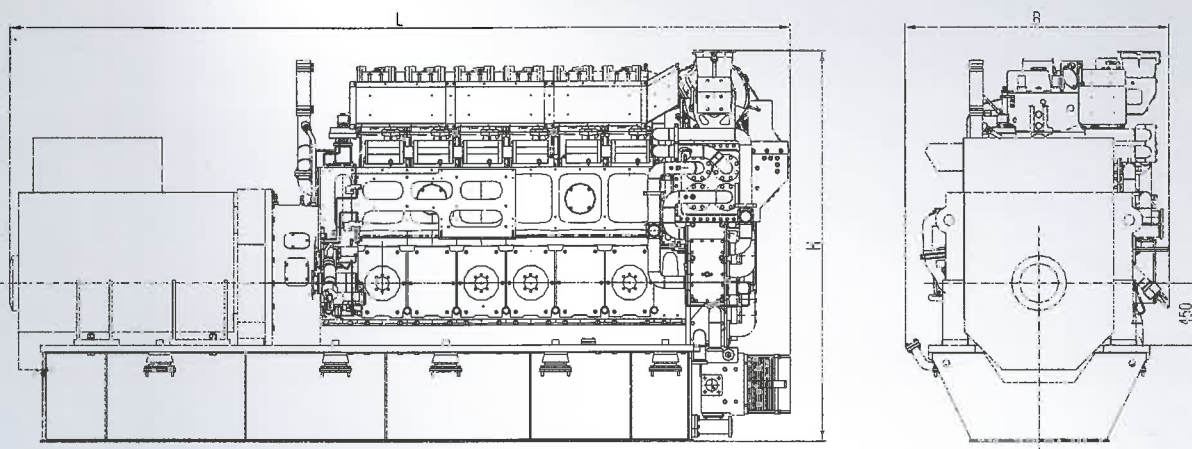
- 6CS21/32柴油机采用高压共轨燃油系统，采用高压比增压器及米勒配气定时，实现各个工况优良的经济性和低排放。
- 6CS21/32柴油机可燃用180cSt/50°C重油。
- 6CS21/32柴油机前端箱体内集成了冷却水泵、润滑油泵、高压油泵及冷却水、润滑油冷却器等，无管化设计即提高了机器的可靠性又使柴油机维护保养简单便捷。其与发电机连接紧凑，有效减小发电机组的外形尺寸。
- 6CS21/32 diesel engine adopts high-pressure common-rail fuel injection system with high-pressure ratio turbocharger and Miller timing, so these can make each condition good economy and low emission.
- 6CS21/32 diesel engine can operate on 180cSt/50°C HFO.
- The free-end case body for 6CS21/32 diesel engine integrates cooling water pump, lube oil pump, injector pump, cooling water cooler and lube oil cooler etc. No pipeline design not only

improves the reliability, but also makes the maintenance easy and convenient. The compact connecting with the generator effectively reduces the overall dimensions.



发电机组外形尺寸

OVERALL DIMENSIONS



型号与规格

MODEL AND SPECIFICATION

机组Generating set				柴油机Diesel engine	机组外形尺寸(mm)Main dimensions		
型号Model	功率(kW) Rated output	频率(Hz) Frequency	机组重量(kg) Weight of Gen-set	型号Model	L	B	H
CCFJ1230J-W	1230	50/60	26000	6CS21/32	5690	1910	2830

柴油机主要技术参数

THE MAIN SPECIFICATIONS PARAMETERS

缸径(mm) Bore	冲程(mm) Stroke	单缸功率(kW/cyl) Cylinder power	转速(rpm) Speed	平均有效压力(MPa) Mean effective pressure	燃油消耗(g/kW.h) Spec. fuel consumption	燃料类型 Fuel type
210	320	220	900/1000	2.60/2.34	185	180cSt/50°C HFO



技术特点 PRODUCT CHARACTERISTIC

G26系列柴油机是我公司自主研发的新一代产品，是在我公司长期技术积累和丰富的制造经验基础上，吸取国际先进技术开发成功的。该机吊缸高度更小，结构可靠，节能环保，人性化的设计，简化轮机人员操作及降低了劳动强度。

G26船用发电机组的发电机可选用双支撑或单支撑形式。机组具有良好的扭振性能。机组配置公共底架，与船体安装可选择弹性和刚性两种型式，以满足不同船型和客户的需求。滑油、冷却系统采用模块化设计，布置在公共底架上。配合不同形式的公共底架结构可使机组更为紧凑。

G26 series diesel engine is a new self-developed product, and it is developed successfully based on many years' technology accumulation and abundant manufacture experience, also absorbed the advanced technique from international brand engines. The engine has many features, such as: small lifting cylinder height, configuration reliability, energy saving and environmental protection and humanization design, these characteristics not only decrease the engine person operation,

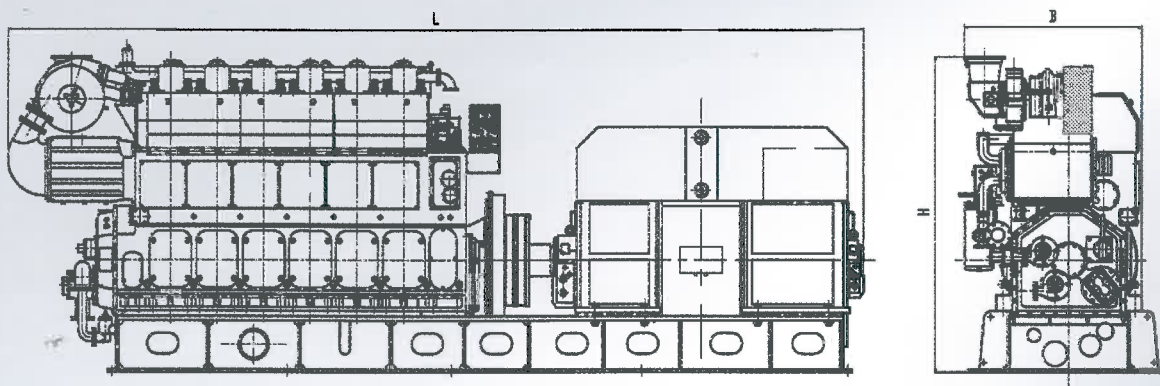
but also reduce the labor intensity.

The generator for G26 marine generating sets can select of double-bearing or signal bearing, and the generating-set has good torque vibration performance, also can be equipped with the common base frame. It can adopt two means (elastic or rigid) for ship installation, so meet the requirements of different ship types and clients. The lube oil and water cooling system is modular designed, and set on the common base frame. The different types of the common base frame make Gen-set more compact.



发电机组外形尺寸

OVERALL DIMENSIONS



型号与规格

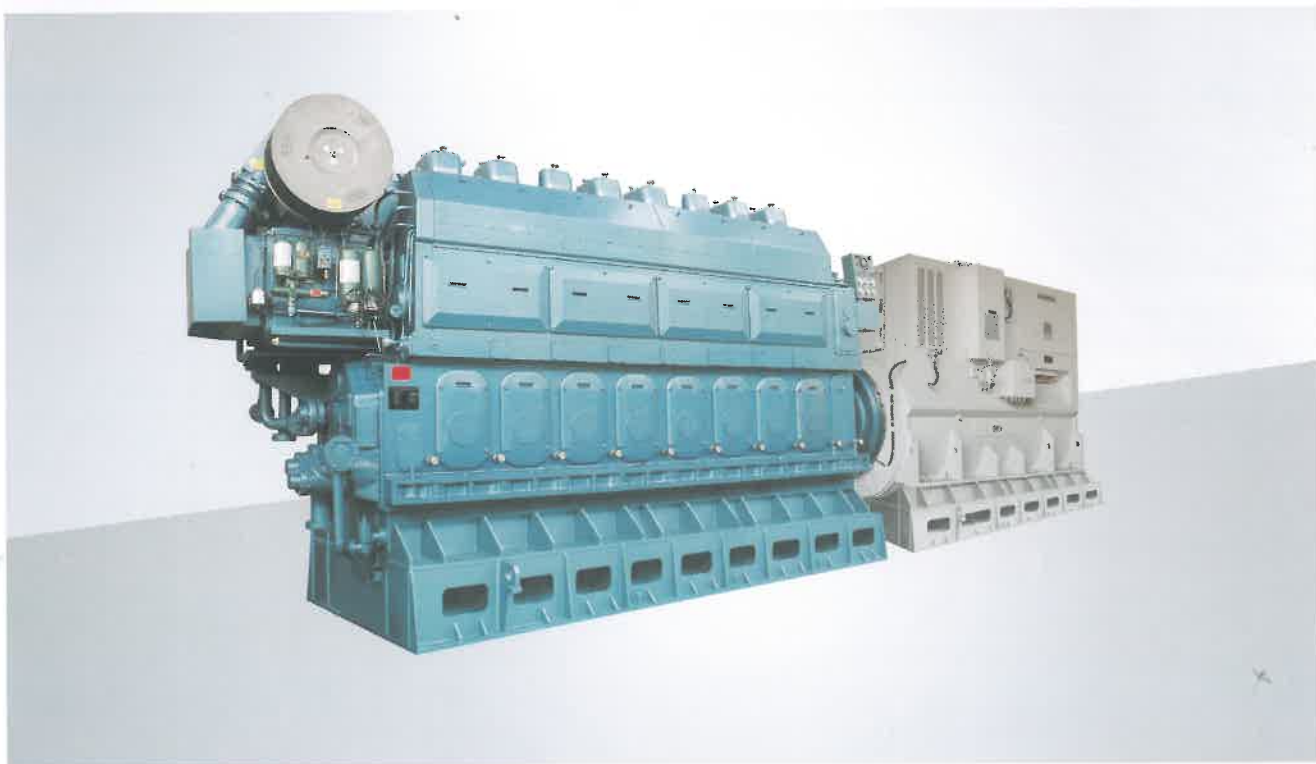
MODEL AND SPECIFICATION

发电机组Generating set				柴油机Diesel engine	机组外形尺寸(mm)Main dimensions		
型号Model	功率(kW) Rated output	频率(Hz) Frequency	机组重量(kg) Weight of Gen-set	型号Model	L	B	H
CCFJ1825J-W	1825	60	53000	6G26	8152	1683	3386
CCFJ1900J-W	1900	50	53000	6G26	8152	1683	3386
CCFJ2430J-W	2430	60	61000	8G26	9042	2100	3300
CCFJ2530J-W	2530	50	61000	8G26	9042	2100	3300
CCFJ2735J-W	2735	60	74300	9G26	9487	2100	3300
CCFJ2850J-W	2850	50	74300	9G26	9487	2100	3300

柴油机主要技术参数

THE MAIN SPECIFICATIONS PARAMETERS

缸径(mm) Bore	冲程(mm) Stroke	单缸功率(kW/cyl) Cylinder power	转速(rpm) Speed	平均有效压力(MPa) Mean effective pressure	燃油消耗(g/kW.h) Spec. fuel consumption	燃料类型 Fuel type
260	390	320/333	720/750	2.57	185	380cSt/50°C HFO



技术特点 PRODUCT CHARACTERISTIC

G32柴油机产品性能稳定质量可靠，功率储备充足，燃油耗低，维护方便，广泛使用在各种运输船舶上，得到用户的肯定和欢迎。

G32船用发电机组可满足大型工程船舶和全电力驱动的船舶电站使用、自动化控制日益提高的要求。

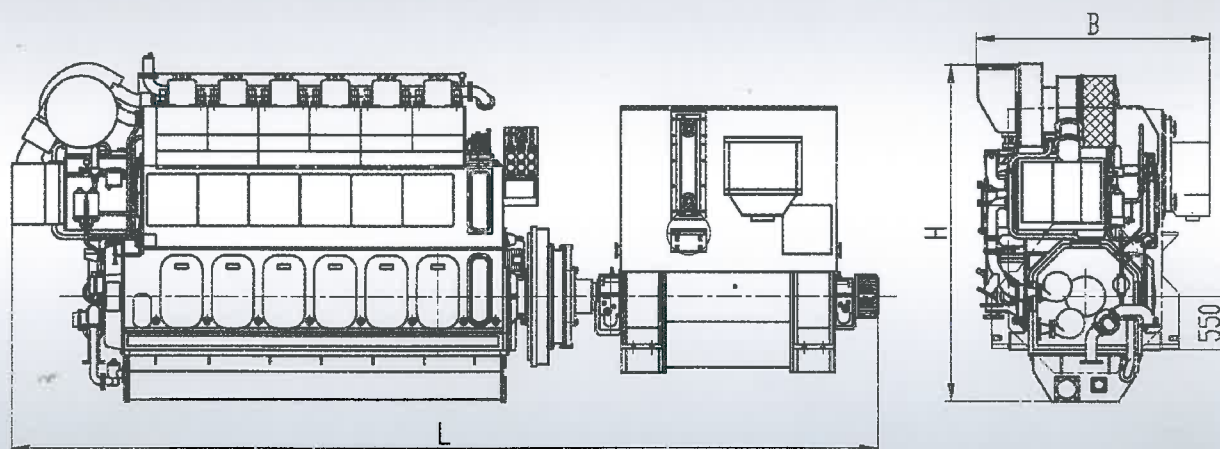
G32 diesel engines have many features such as stable operation and high reliability, sufficient margin power, low fuel consumption and emission, easy maintenance, widely apply to various transport ships, and warmly received by the users. G32 marine generating sets can apply to large engineering ships, and meet the requirements for the growing automatic control.



- "华西5000"海洋工作船 安装三台CCFJ3380J-W发电机组
- "HUAXI 5000" ocean ship, equipped with 3 sets of CCFJ3380J-W generating set

发电机组外形尺寸

OVERALL DIMENSIONS



型号与规格

MODEL AND SPECIFICATION

发电机组Generating set				柴油机Diesel engine	机组外形尺寸(mm)Main dimensions		
型号Model	功率(kW) Rated output	频率(Hz) Frequency	机组重量(kg) Weight of Gen-set	型号Model	L	B	H
CCFJ2750J-W	2750	50/60	55800	6G32A	9195	2720	3490
CCFJ3380J-W	3380	50/60	75000	8G32	10618	2850	3455
CCFJ3700J-W	3700	50/60	75000	8G32A	10618	2850	3455
CCFJ4180J-W	4180	50/60	87000	9G32	11400	2850	3745

柴油机主要技术参数

THE MAIN SPECIFICATIONS PARAMETERS

缸径(mm) Bore	冲程(mm) Stroke	单缸功率(kW/cyl) Cylinder power	转速(rpm) Speed	平均有效压力(MPa) Mean effective pressure	燃油消耗(g/kW.h) Spec. fuel consumption	燃料类型 Fuel type
320	480	444/488	600	2.30/2.53	185	380cSt/50°C HFO

■ 广州柴油机厂股份有限公司 (原广州柴油机厂)

GUANGZHOU DIESEL ENGINE FACTORY CO., LTD (FORMERLY KNOWN AS GUANGZHOU DIESEL ENGINE FACTORY)

地址: 广州市芳村大道东73号 PC: 510371 网址: www.gdiesel.com.cn

Address: No.73, East, Fangcun Road, Guangzhou, China.

电话(Tel): 0086-20-81891619 传真(Fax): 0086-20-81892297

■ 销售机构: 广州协同和柴油机销售有限公司

SALES ORGANIZATION: GUANGZHOU XIETONGHE DIESEL ENGINE SALES CO., LTD.

地址: 广州市芳村大道东148号 PC: 510370 Email: gdefsd@21cn.com

Address: No.148, East, Fangcun Road, Guangzhou, China.

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Hanhua Garden, 6 Caochang Jiao, Hankou, Wuhan, China.

电话(Tel): 0086-27-83766435 传真(Fax): 0086-27-83766435

越南海防办事处:

Hai Phong Office: Number 38, Lot 6, Pham Phu Str, Hai Phong City, Vietnam

电话(Tel): 0084-31-3533119 传真(Fax): 0084-31-3533119

■ 服务网点:

SERVICE NETWORKING

技术支持: 广州市芳村大道东73号

Technical Support: No.73, East, Fangcun Road, Guangzhou.

电话(Tel): 0086-20-81689720 传真(Fax): 0086-20-81689720

工程部: 广州市芳村大道东73号

After-sales Department: No.73, East, Fangcun Road, Guangzhou.

电话(Tel): 0086-20-81573791 传真(Fax): 0086-20-81573791

配件销售: 广州市芳村大道东73号

Spare Parts Sale: No.73, East, Fangcun Road, Guangzhou.

电话(Tel): 0086-20-81801008 传真(Fax): 0086-20-81596792

泉州服务中心: 福建省泉州市坪山路碧水湾2B-02号

Quanzhou Service Centre: No. 2B-02, Bishuiwan, Pingshan Road, Quanzhou City, China.

电话(Tel): 0086-595-22987366

宁波服务分部: 宁波市江东区中兴路197号

Ningbo Service Branch: No. 197, Zhongxing Road, Jiangdong District, Ningbo City, China.

电话(Tel): 0086-574-87773823 传真(Fax): 0086-574-87773823

大连特约维修服务分中心: 大连市中山区上海路3号上影大厦2207室

Dalian Special Maintenance Service Centre: 2207 Room, Shangying Building, No 3 Shanghai Road, Zhongshan District, Dalian City.

电话(Tel): 0411-82800955 传真(Fax): 0411-82800958

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