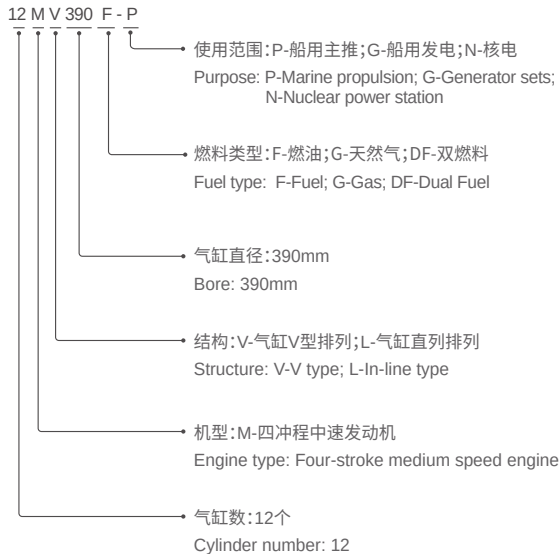


发动机型号说明 Engine type designation



M390系列四冲程发动机 M390 series four-stroke engine

M390系列四冲程发动机能满足大型陆用电站, 核电应急发电机组, 1至5万吨级近海、内河船舶, 大型工程船, 海工平台, LNG船, 豪华邮轮等高端重大装备的动力需求。

CSOP-M390 series four-stroke engine can meet the power needs of large power stations, nuclear emergency generating sets, 10,000-50,000-ton offshore, inland river ships, large engineering ships, offshore engineering platforms, LNG ships, luxury cruises and other high-end major equipment.

M390中速柴油机满足IMO Tier II 排放标准(应用SCR装置可达到Tier III), 具有高技术指标、高功率密度、低排放、低油耗、可靠性高、振动及噪声低、大修期长、维修便捷等特点。

M390 medium-speed diesel engines are compliant with IMO Tier II emissions standards (Tier III can be achieved with application of SCR device); It has the characteristics of high technical index, high power density, low emission, low fuel consumption, high reliability, low vibration and noise, long overhaul period and convenient maintenance.

超过60年的船舶动力装置研发、制造与经验。

There is inheritance of over 60 years of Marine power plant research and development, manufacturing and experience.

该系列柴油机发动机设计有常规机械喷油、高压共轨喷油以及双燃料三种机型, 可满足客户多种要求。

Three types of engine are designed in those series, including the Conventional mechanical fuel injection(M) engine, the Electronic control common rail(E) engine and Dual fuel (DF) engine, which may satisfy the variety of requirements from customers.

ML390F-P

IMO Tier II & Tier III with SCR

直列燃油推进主机 In-line type diesel fuel (F) engine for Marine Propulsion

缸径Bore: 390mm, 冲程Stroke: 550mm

转速speed	r/min		600
频率frequency	Hz		50/60
缸数Cyl		主机功率Engine kW	机组功率Genset kW ¹⁾
6		5100	4947
7		5950	5772
8		6800	6596
9		7650	7421

备注: 可根据客户需求定制5缸或10缸机型

Note: 5 cylinder or 10 cylinder models can be customized according to customer demands

MCR点经济性指标Economical performance ²⁾

MCR	燃油消耗率BSFC	
100%	175g/kWh (共轨R版)	181@g/kWh (机械M版)

滑油消耗率Lube oil consumption 0.8 g/kWh

尺寸和重量Dimension and weight ²⁾

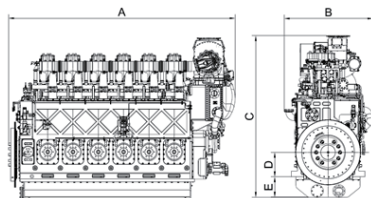
Cyl.No.		6	7	8	9
L	mm	11320	12020	12720	13420
W	mm	2480	2480	2480	2480
H	mm	4820	4820	4820	4820
Dry mass	t	133	141	149	159

*1) 基于标称发电机效率为97%Based on nominal generator efficiencies of 97%

*2) 基于燃料低热值为42700kJ/kg; ISO工况条件

This based on diesel fuel with low heating value 42700 kJ/kg and ISO condition;

*3) 实际尺寸及重量取决于所用发电机 Dimensions are not finally fixed ,Depending on alternator applied



MV390F-P

IMO Tier II & Tier III with SCR

V型燃油推进主机 V type diesel fuel (F) engine for Marine Propulsion

缸径Bore: 390mm, 冲程Stroke: 550mm

转速speed	r/min		600
频率frequency	Hz		50/60
缸数Cyl		主机功率Engine kW	机组功率Genset kW ¹⁾
12		10200	9894
14		11900	11543
16		13600	13192
18		15300	14841
20		17000	16490

备注: 可根据客户需求定制10缸机型

Note: 10 cylinder models can be customized according to customer demands

MCR点经济性指标Economical performance ²⁾

MCR	燃油消耗率BSFC	
100%	175g/kWh (共轨R版)	181@g/kWh (机械M版)

滑油消耗率Lube oil consumption 0.8 g/kWh

尺寸和重量Dimension and weight ³⁾

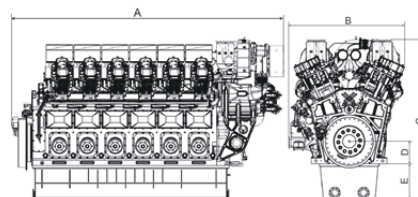
Cyl.No.		12	14	16	18	20
L	mm	13010	13850	14790	15630	16470
W	mm	3450	3450	3450	3450	3450
H	mm	4950	4950	4950	4950	4950
Dry mass	t	176	190	205	219	234

*1) 基于标称发电机效率为97%Based on nominal generator efficiencies of 97%

*2) 基于燃料低热值为42700kJ/kg; ISO工况条件

This based on diesel fuel with low heating value 42700 kJ/kg and ISO condition;

*3) 实际尺寸及重量取决于所用发电机 Dimensions are not finally fixed ,Depending on alternator applied



ML390DF-P

IMO Tier II & Tier III in gas mode

直列双燃油推进主机 In-line type dual fuel (DF) engine for Marine Propulsion

缸径Bore:390mm, 冲程Stroke:550mm

转速speed	r/min		600
频率frequency	Hz		50/60
缸数Cyl		主机功率Engine kW	机组功率Genset kW ¹⁾
6		3900	3783
7		4550	4413
8		5200	5044
9		5850	5675

备注:可根据客户需求定制5缸或10缸机型

Note: 5 cylinder or 10 cylinder models can be customized according to customer demands

MCR点经济性指标Economical performance ²⁾

MCR	燃油消耗率BSFC	能耗BSEC	pilot fuel@gas mode
100%	186g/kWh	7900 kJ/kWh	1.8 g/kWh

滑油消耗率Lube oil consumption 0.8 g/kWh

尺寸和重量Dimension and weight ³⁾

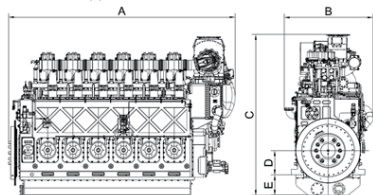
Cyl.No.		6	7	8	9
L	mm	11320	12020	12720	13420
W	mm	2480	2480	2480	2480
H	mm	4820	4820	4820	4820
Dry mass	t	133	141	149	159

*1) 基于标称发电机效率为97%;Based on nominal generator efficiencies of 97%;

*2) 基于天然气低热值为44.87MJ/kg;燃油低热值42700kJ/kg;ISO工况条件;
燃料消耗已考虑了微引燃油。

This based on the nature gas with low heating value 44.87MJ/kg, diesel fuel with low heating value 42700 kJ/kg and ISO condition, Micro-pilot fuel consumption already considered.

*3) 实际尺寸及重量取决于所用发电机 Dimensions are not finally fixed ,
Depending on alternator applied



MV390DF-P

IMO Tier II & Tier III in gas mode

V型双燃料推进主机 V type dual fuel (DF) engine for Marine Propulsion

缸径Bore:390mm, 冲程Stroke:550mm

转速speed	r/min		600
频率frequency	Hz		50/60
缸数Cyl		主机功率Engine kW	机组功率Genset kW ¹⁾
12		7800	7566
14		9100	8827
16		10400	10088
18		11700	11349
20		13000	12610

备注:可根据客户需求定制10缸机型

Note: 10 cylinder models can be customized according to customer demands

MCR点经济性指标Economical performance ²⁾

MCR	燃油消耗率BSFC	能耗BSEC	pilot fuel@gas mode
100%	186g/kWh	7900 kJ/kWh	1.8 g/kWh

滑油消耗率Lube oil consumption 0.8 g/kWh

尺寸和重量Dimension and weight ³⁾

Cyl.No.		12	14	16	18	20
L	mm	13010	13850	14790	15630	16470
W	mm	3450	3450	3450	3450	3450
H	mm	4950	4950	4950	4950	4950
Dry mass	t	176	190	205	219	234

*1) 基于标称发电机效率为97%;Based on nominal generator efficiencies of 97%;

*2) 基于天然气低热值为44.87MJ/kg;燃油低热值42700kJ/kg;ISO工况条件;
燃料消耗已考虑了微引燃油。

This based on the nature gas with low heating value 44.87MJ/kg, diesel fuel with low heating value 42700 kJ/kg and ISO condition, Micro-pilot fuel consumption already considered.

*3) 实际尺寸及重量取决于所用发电机 Dimensions are not finally fixed ,
Depending on alternator applied

