

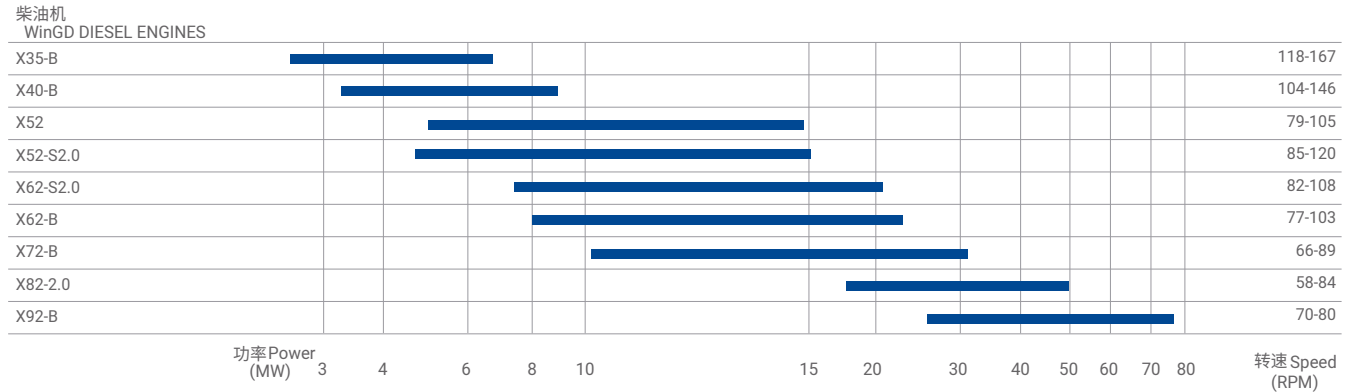
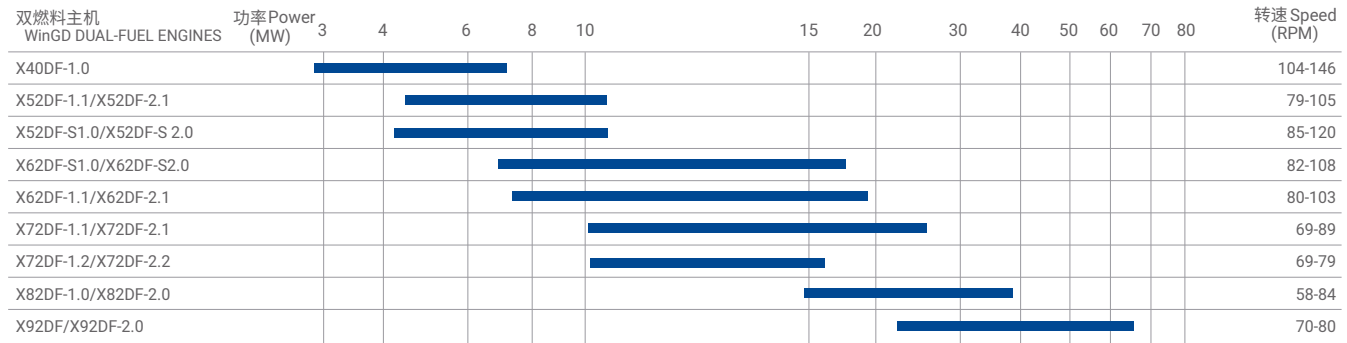
CPGC-WinGD系列二冲程发动机

CPGC-WinGD two-stroke engines



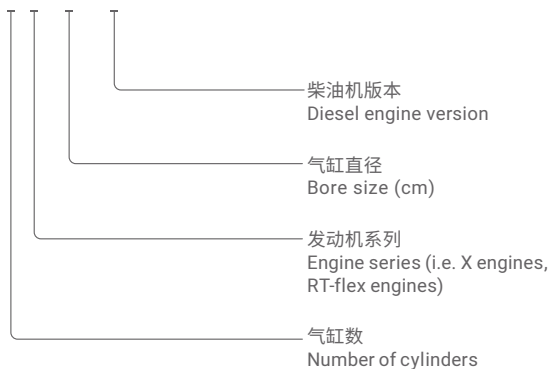
WinGD低速机 WinGD Low-speed Engines

功率范围 Power range for WinGD Low-speed Engines



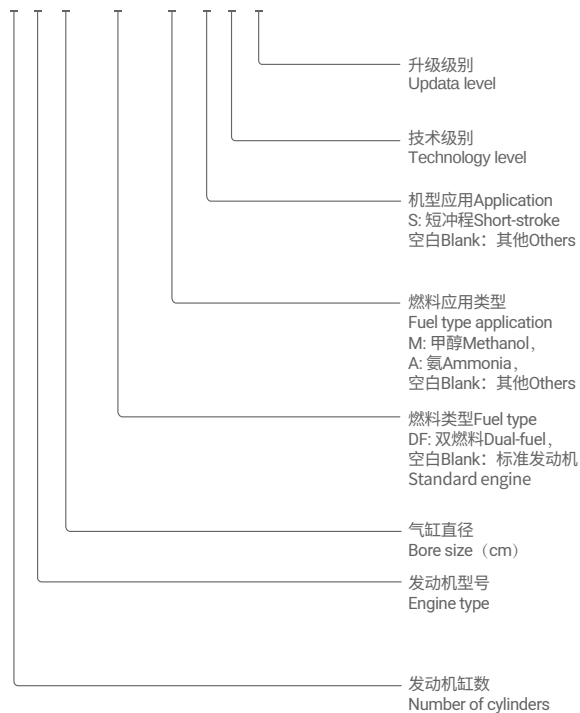
发动机型号说明 Engine Designation

8X72-B



新型发动机型号说明 New Engine Designation (from October 2022)

6X52DF-A-S1.0



○ 发动机定义和注释 Engine Definitions and Notes

ISO标准 ISO Standard (ISO 3046-1) 参考条件 reference conditions

1.0 bar	R1大气压力 Total barometric pressure at R1
25°C	吸入空气温度 Suction air temperature
30%	相对湿度 Relative humidity
25°C	发动机前冷却水温度 Cooling water temperature before engine

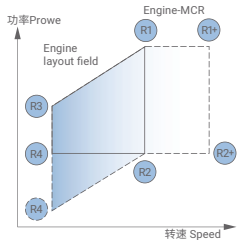
功率点 Rating points

WinGD低速机设计区域定义了R1、R2、R3、R4功率点。对于特定机型，功率点可能延伸至R1+和R2+。

The engine layout fields for WinGD low-speed engines are defined by the power/speed rating points R1, R2, R3 and R4 (see diagram below). In certain engines, the layout field is extended to the points R1+ and R2+.

R1或R1+是MCR功率点。

R1, or R1+ instead if applicable, is the nominal maximum continuous rating (MCR).



设计区域中的任何功率/转速均可选择CMCR功率点。

Any power and speed within the respective engine layout field may be selected as the Contract-MCR (CMCR) point for an engine.

尺寸和重量 Dimensions and weights

尺寸和重量供参考，具体可参照WinGD网站。

All dimensions and weights are not binding. For detailed information and updates, please visit: www.wingd.com/en/engines/engine-types/

A 发动机长度，是指从连接法兰处到机座端面
A Engine length from the coupling flange to the end of the bedplate

A* 发动机长度，是指从增压器后端到机座端面
A* Engine length from the TC aft end to the end of the bedplate

B 机座宽度
B Width of the engine seating

C 从曲轴中心线到机座底脚法兰的距离
C Dist. from the centre of the crankshaft to the underside of the foot flange

D 从曲轴中心线到发动机最高点的距离
D Dist. from the centre of the crankshaft to the highest point of the engine

F1 活塞垂直拆卸的最小高度
F1 Min. height for vertical removal of the piston

F2 活塞用双臂起重机进行垂直拆卸的最小高度
F2 Min. height for vertical removal of the piston with double-jib crane

F3 活塞用双臂起重机进行倾斜拆卸的最小高度
F3 Min. height for tilted removal of the piston with double-jib crane

G 从曲轴中心线到发动机最低点的距离
G Distance from the centre of the crankshaft to the lowest point of the engine

— 发动机重量为净重，不含任何液体
— The engine weight is a net value and excludes any liquids.

燃料/能源消耗 Fuel/energy consumption

所有有效燃油消耗和引燃油消耗率是基于燃油低热值42.7MJ/kg
All brake specific fuel consumptions (BSFC) and brake specific pilot fuel consumptions (BSPC) are quoted for fuel of lower calorific value 42.7 MJ/kg.

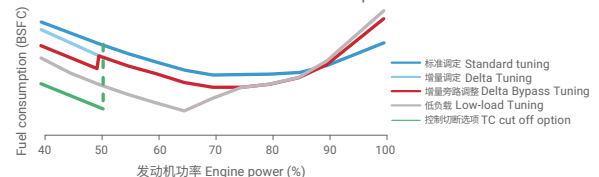
有效燃气消耗率是基于燃气低热值50.0MJ/kg
Brake specific gas consumptions (BSGC) are quoted for gas of lower calorific value 50.0 MJ/kg.

对于所有WinGD低速柴油机和双燃料发动机，参照ISO标准参考条件，BSFC/BSEC保证阶梯公差：

For all WinGD low-speed diesel and dual-fuel engines stepwise tolerances have been introduced for the brake specific fuel and energy consumption (BSFC/BSEC) guarantee, referring to ISO standard reference conditions (ISO 15550 and 3046):

- 100%至85%功率为+5%
- +5% tolerance for 100% to 85% engine power
- 小于85%至65%功率为+6%
- +6% tolerance for <85% to 65% engine power
- 小于65%至50%功率为+7%
- +7% tolerance for <65% to 50% engine power

油耗担保在50%-100%功率区间可能最多3个功率点。
The BSFC/BSEC guarantee is possible at up to three power points between 50–100%.



可用发动机优化 Available engine tunings

标准优化，德尔塔优化，德尔塔旁通优化和低负荷优化可用于某些WinGD低速柴油机，以提供不同负荷的油耗优化。

德尔塔优化和低负荷优化专注90%或75%负荷以下油耗优化。

Standard Tuning, Delta Tuning, Delta Bypass Tuning and Low-Load Tuning are available for certain WinGD low-speed diesel engines to provide optimum fuel consumption for different engine loads. Delta Tuning and Low-Load Tuning focuses on reducing fuel consumption in the operating range below 90% or 75% engine power.

先进的SPC技术可以加入到低负荷和德尔塔优化中以增加蒸汽产量，同时保持整体油耗最低。

The advanced technology of Steam Production Control (SPC) can be added to the Low-load and Delta Bypass Tuning to increase the steam production, while keeping the overall fuel consumption at a minimum.

双模式优化在客户要求、船级社认可的前提下也可获得。
Dual Tuning is available on request and in cooperation with Classification Societies.

具有多增压器配置的WinGD X82-D和X92/B发动机可以配置涡轮增压器切断方案，从而显著降低发动机在低负荷下的油耗。WinGD X82-D和X92/B engines with multi-turbocharger configuration can be equipped with a Turbocharger (TC) cut off tuning that significantly reduces the engine's fuel consumption at low loads.

双燃料 X-DF Dual-Fuel

X40DF-1.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	400 mm
冲程 Piston stroke	1770 mm
转速 Speed	104-146 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.43

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	146 rpm	104 rpm				
	R1	R2	R3	R4		
5	4 675	3 900	3 325	2 775	4 512	109
6	5 610	4 680	3 990	3 330	5 212	125
7	6 545	5 460	4 655	3 885	5 912	140
8	7 480	6 240	5 320	4 440	6 612	153

尺寸 Dimensions (mm)	B		C		D	
	2 610		950		6 563	
	F1		F2		F3	
	7 986		8 035		7 590	
					1 411	

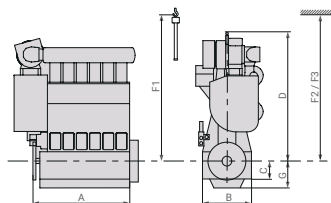
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 312	7 073	7 410	7 171
BSGC (gas)	g/kWh	145.0	140.0	147.0	142.0
BSPC (pilot fuel)	g/kWh	1.4	1.7	1.4	1.7

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	189.6	187.6	189.6	187.6



X52DF-1.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2315 mm
转速 Speed	79-105 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.45

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	长度 mm Length A*	重量Weight tonnes
	105 rpm		79 rpm				
	R1	R2	R3	R4			
5	7 450	6 200	5 600	4 650	5985	6 990	217
6	8 940	7 440	6 720	5 580	6925	7 930	251
7	10 430	8 680	7 840	6 510	7865		288
8	11 920	9 920	8 960	7 440	8805		323

尺寸 Dimensions (mm)	B		C		D	
	3 514		1 205		8415	
	F1		F2		F3	
	10 350		10 400		9 850	
					1 910	

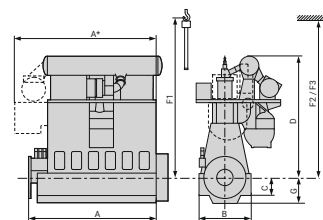
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 201	6 962	7 299	7 064
BSGC (gas)	g/kWh	142.7	137.7	144.7	139.7
BSPC (pilot fuel)	g/kWh	1.5	1.8	1.5	1.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	184.1	182.1	184.1	182.1



X52DF-2.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2315 mm
转速 Speed	79-105 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.45

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes	
	105 rpm	79 rpm					
	R1	R2	R3	R4			
5	7 450	6 200	5 600	4 650	5985	217	
6	8 940	7 440	6 720	5 580	6925	251	
7	10 430	8 680	7 840	6 510	7865	288	
8	11 920	9 920	8 960	7 440	8805	323	

尺寸 Dimensions (mm)	B		C		D	
	3 514		1 205		8415	
	F1		F2		F3	
	10 350		10 400		9 850	
					1 910	

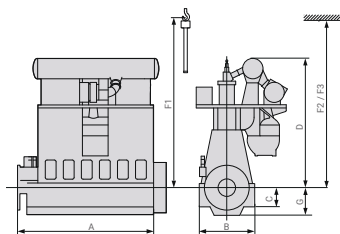
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 067	6 833	7 170	6 931
BSGC (gas)	g/kWh	140.1	135.1	142.1	137.1
BSPC (pilot fuel)	g/kWh	1.5	1.8	1.5	1.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	181.4	175.4	183.4	179.4



X52DF-S1.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2045 mm
转速 Speed	85-120 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.93

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	长度 mm Length A*	重量Weight tonnes
	120 rpm	85 rpm					
	R1	R2	R3	R4			
5	7 500	6 250	5325	4425	5485	6 565	190
6	9 000	7 500	6390	5310	6345	7 415	215
7	10 500	8 750	7455	6195	7205		245
8	12 000	10 000	8520	7080	8065		275

尺寸 Dimensions (mm)	B		C		D	
	3 100		1185		7725	
	F1		F2		F3	
	9 340		9 340		8 800	
					1 675	

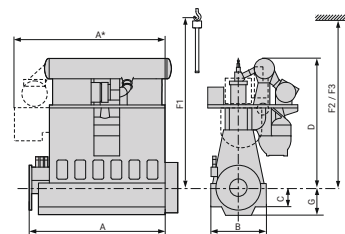
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 201	6 962	7 299	7 064
BSGC (gas)	g/kWh	142.7	137.7	144.7	139.7
BSPC (pilot fuel)	g/kWh	1.5	1.8	1.5	1.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	184.1	182.1	184.1	182.1



X52DF-S2.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2045 mm
转速 Speed	85 -120 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.93

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	长度 mm Length A*	重量 Weight tonnes
	120 rpm	85 rpm					
	R1	R2	R3	R4			
5	7 500	6 250	5 325	4 425	5 485	6 565	190
6	9 000	7 500	6 390	5 310	6 345	7 415	215
7	10 500	8 750	7 455	6 195	7 205		245
8	12 000	10 000	8 520	7 080	8 065		275

尺寸 Dimensions (mm)	B	C	D	
	3 100	1185	7725	
	F1	F2	F3	G
	9 340	9 340	8 800	1 675

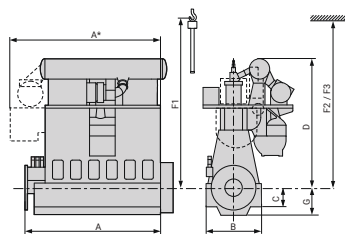
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 067	6 833	7 170	6 931
BSGC (gas)	g/kWh	140.1	135.1	142.1	137.1
BSPC (pilot fuel)	g/kWh	1.5	1.8	1.5	1.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	181.4	175.4	183.4	179.4



X62DF-1.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2658 mm
转速 Speed	80-103 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	103 rpm	80 rpm				
	R1	R2	R3	R4		
5	11 925	9 925	9 250	7 700	6 805	318
6	14 310	11 910	11 100	9 240	7 910	370
7	16 695	13 895	12 950	10 780	9 020	428
8	19 080	15 880	14 800	12 320	10 125	475

尺寸 Dimensions (mm)	B	C	D	
	4 200	1 360	9 580	
	F1	F2	F3	G
	11 775	11 775	10 950	2 110

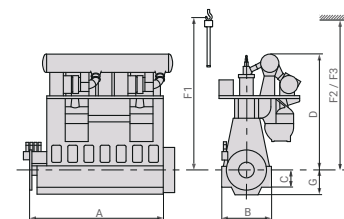
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 167	6 928	7 269	7 026
BSGC (gas)	g/kWh	142.5	137.5	144.5	139.5
BSPC (pilot fuel)	g/kWh	1.0	1.2	1.0	1.2

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	182.0	180.0	182.0	180.0



X62DF-2.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2658 mm
转速 Speed	80~103 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	103 rpm	80 rpm				
	R1	R2	R3	R4		
5	11 925	9 925	9 250	7 700	6 805	318
6	14 310	11 910	11 100	9 240	7 910	370
7	16 695	13 895	12 950	10 780	9 020	428
8	19 080	15 880	14 800	12 320	10 125	475
尺寸 Dimensions (mm)	B		C		D	
	4 200		1 360		9 580	
	F1		F2		F3	
	11 775		11 775		10 950	
					2 110	

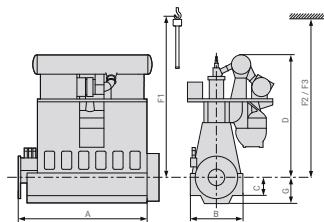
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 982	6 747	7 089	6 845
BSGC (gas)	g/kWh	138.8	133.9	140.9	135.9
BSPC (pilot fuel)	g/kWh	1.0	1.2	1.0	1.2

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	178.3	172.3	180.3	176.3



X62DF-S1.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2245 mm
转速 Speed	82~108rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.62

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	108 rpm	82 rpm				
	R1	R2	R3	R4		
5	10 550	8 775	8 000	6 675	6 260	280
6	12 660	10 530	9 600	8 010	7 260	325
7	14 770	12 285	11 200	9 345	8 260	370
8	16 880	14 040	12 800	10 680	9 260	415
尺寸 Dimensions (mm)	B		C		D	
	3 440		1295		8575	
	F1		F2		F3	
	10 300		10 300		9 680	
					1835	

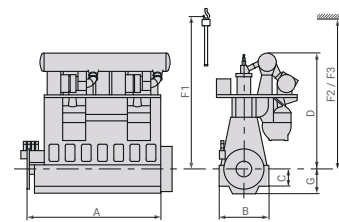
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 161	6 928	7 269	7 026
BSGC (gas)	g/kWh	142.5	137.5	144.5	139.5
BSPC (pilot fuel)	g/kWh	1.0	1.2	1.0	1.2

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	182.0	180.0	182.0	180.0



X62DF-S2.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2 245 mm
转速 Speed	82–108 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.62

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	108 rpm	82 rpm				
	R1	R2	R3	R4		
5	10 550	8 775	8 000	6 675	6 260	280
6	12 660	10 530	9 600	8 010	7 260	325
7	14 770	12 285	11 200	9 345	8 260	370
8	16 880	14 040	12 800	10 680	9 260	415

尺寸 Dimensions (mm)	B		C		D	
	3 440		1295		8575	
	F1		F2		F3	
	10 300		10 300		9 680	
					1 835	

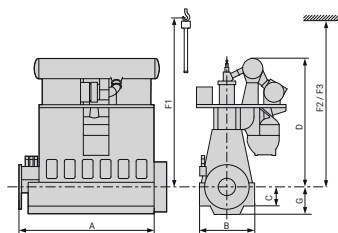
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 982	6 747	7 098	6 845
BSGC (gas)	g/kWh	138.8	133.9	140.9	135.9
BSPC (pilot fuel)	g/kWh	1.0	1.2	1.0	1.2

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	178.3	172.3	180.3	176.3



X72DF-1.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	720 mm
冲程 Piston stroke	3086 mm
转速 Speed	69–89 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	89 rpm	69 rpm				
	R1	R2	R3	R4		
5	16 125	13 425	12 500	10 400	8 230	481
6	19 350	16 110	15 000	12 480	9 520	561
7	22 575	18 795	17 500	14 560	10 810	642
8	25 800	21 480	20 000	16 640	12 105	716

尺寸 Dimensions (mm)	B		C		D	
	4 780		1 575		10 790	
	F1		F2		F3	
	13 655		13 655		12 730	
					2 455	

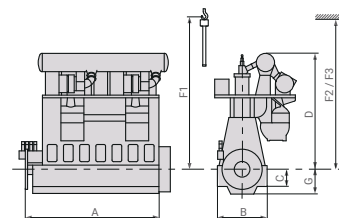
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 150	6 906	7 248	7 004
BSGC (gas)	g/kWh	142.3	137.3	144.3	139.2
BSPC (pilot fuel)	g/kWh	0.8	1.0	0.8	1.0

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	182.0	180.0	182.0	180.0



X72DF-1.2

IMO Tier III in gas mode

气缸直径 Cylinder bore	720 mm
冲程 Piston stroke	3086 mm
转速 Speed	69-79 rpm
平均有效压力 Mean effective pressure at R1	15.7 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	79 rpm	69 rpm				
	R1	R2	R3	R4		
5	13 000	11 900	11 350	10 400	7 875	470
6	15 600	14 280	13 620	12 480	9 165	550
尺寸 Dimensions (mm)	B		C		D	
	4 780		1 575		10 790	
	F1		F2		F3	
	13 655		13 655		12 730	
					2 455	

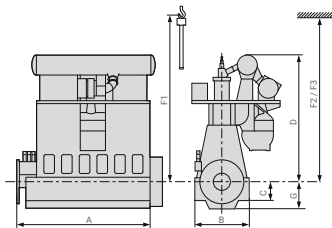
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 052	6 955	7 113	7 004
BSGC (gas)	g/kWh	140.3	138.2	141.5	139.2
BSPC (pilot fuel)	g/kWh	0.9	1.0	0.9	1.0

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	180.8	180.0	180.9	180.0

Engine optimised for reduced rating field
and 5/6 cylinder applications

X72DF-2.1

IMO Tier III in gas mode

气缸直径 Cylinder bore	720 mm
冲程 Piston stroke	3086 mm
转速 Speed	69-89 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	89 rpm		69 rpm			
	R1	R2	R3	R4		
5	16 125	13 425	12 500	10 400	8 230	495
6	19 350	16 110	15 000	12 480	9 520	580
7	22 575	18 795	17 500	14 560	10 810	642
8	25 800	21 480	20 000	16 640	12 105	716
尺寸 Dimensions (mm)	B		C		D D(icer on engine)	
	4 780		1 575		10 790	
	F1		F2		F3	
	13 655		13 655		12 730	
					2 455	

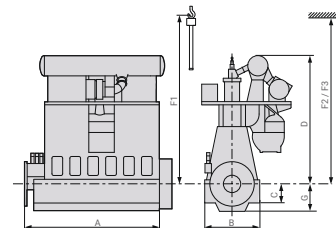
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 918	6 676	7 020	6 777
BSGC (gas)	g/kWh	137.7	132.7	139.7	134.7
BSPC (pilot fuel)	g/kWh	0.8	1.0	0.8	1.0

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	177.3	171.3	179.3	175.3



X72DF-2.2 IMO Tier III in gas mode

气缸直径 Cylinder bore	720 mm
冲程 Piston stroke	3086 mm
转速 Speed	69-79 rpm
平均有效压力 Mean effective pressure at R1	15.7 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量
RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	79 rpm	69 rpm				
	R1	R2	R3	R4		
5	13 000	11 900	11 350	10 400	7 875	484
6	15 600	14 280	13 620	12 480	9 165	565

尺寸 Dimensions (mm)	B	C	D	D (icer on engine)
	4 780	1 575	10 790	11 755
	F1	F2	F3	G
	13 655	13 655	12 730	2 455

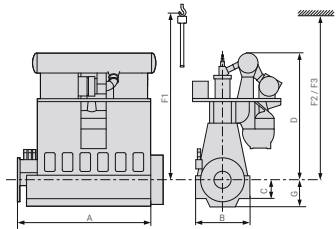
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 824	6 725	6 887	6 777
BSGC (gas)	g/kWh	135.7	133.6	137.0	134.7
BSPC (pilot fuel)	g/kWh	0.9	1.0	0.9	1.0

柴油模式下的有效消耗
BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	175.7	173.3	177.1	175.3

Engine optimised for reduced rating field
and 5/6 cylinder applications



X82DF-1.0 IMO Tier III in gas mode

气缸直径 Cylinder bore	820 mm
冲程 Piston stroke	3375mm
转速 Speed	58-84 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.12

额定功率，主要尺寸和重量
RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	84 rpm	58 rpm				
	R1	R2	R3	R4		
6	25 920	21 600	17 880	14 940	10 425	805
7	30 240	25 200	20 860	17 430	11 865	910
8	34 560	28 800	23 840	19 920	13 305	1 020
9	38 880	32 400	26 820	22 410	14 745	1 160

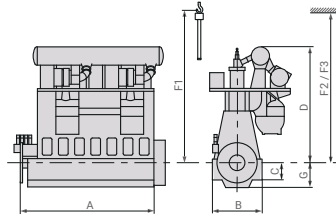
尺寸 Dimensions (mm)	B	C	D	
	5 050	1 800	12 310	G
	F1	F2	F3	G
	15 080	-	-	2 700

气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 115	6 872	7 218	6 970
BSGC (gas)	g/kWh	141.8	136.8	143.8	138.8
BSPC (pilot fuel)	g/kWh	0.6	0.7	0.6	0.7

柴油模式下的有效消耗
BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	183.9	181.9	183.9	181.9



X82DF-2.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	820 mm
冲程 Piston stroke	3375mm
转速 Speed	58-84 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	4.12

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	84 rpm		58 rpm			
	R1	R2	R3	R4		
6	25 920	21 600	17 880	14 940	10 425	805
7	30 240	25 200	20 860	17 430	11 865	910
8	34 560	28 800	23 840	19 920	13 305	1 020
9	38 880	32 400	26 820	22 410	14 745	1 160

尺寸 Dimensions (mm)	B	C	D
	5 050	1 800	12 310
	F1	F2	F3
	15 080	-	-
			G
			2 700

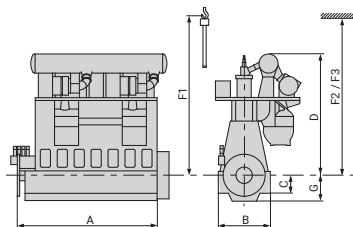
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 807	6 559	6 905	6 658
BSGC (gas)	g/kWh	135.6	130.6	137.6	132.6
BSPC (pilot fuel)	g/kWh	0.6	0.7	0.6	0.7

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	177.2	171.2	179.2	175.2



X92DF

IMO Tier III in gas mode

气缸直径 Cylinder bore	920 mm
冲程 Piston stroke	3468 mm
转速 Speed	70-80 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.77

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	80 rpm		70 rpm			
	R1	R2	R3	R4		
6	31 920	26 580	27 930	23 250	11 755	1 120
7	37 240	31 010	32 585	27 125	13 345	1 260
8	42 560	35 440	37 240	31 000	14 935	1 380
9	47 880	39 870	41 895	34 875	17 960	1 630
10	53 200	44 300	46 550	38 750	19 550	1 790
11	58 520	48 730	51 205	42 625	21 215	1 960
12	63 840	53 160	55 860	46 500	22 875	2 140

尺寸 Dimensions (mm)	B	C	D	
	5 550	1 900	13 140	
	F1	F2	F3	G
	15 520	15 530	14 260	2 970

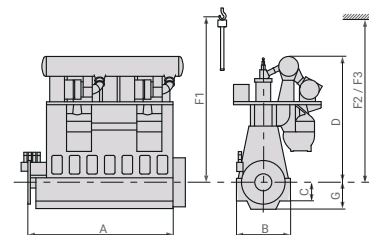
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	7 090	6 846	7 192	6 945
BSGC (gas)	g/kWh	141.2	136.2	143.2	138.2
BSPC (pilot fuel)	g/kWh	0.7	0.8	0.7	0.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	180.9	178.9	180.9	178.9



X92DF-2.0

IMO Tier III in gas mode

气缸直径 Cylinder bore	920 mm
冲程 Piston stroke	3468 mm
转速 Speed	70-80 rpm
平均有效压力 Mean effective pressure at R1	17.3 bar
冲程缸径比 Stroke / bore	3.77

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	80 rpm	70 rpm				
	R1	R2	R3	R4		
6	31 920	26 580	27 930	23 250	11 755	1 120
7	37 240	31 010	32 585	27 125	13 345	1 260
8	42 560	35 440	37 240	31 000	14 935	1 380
9	47 880	39 870	41 895	34 875	17 960	1 630
10	53 200	44 300	46 550	38 750	19 550	1 790
11	58 520	48 730	51 205	42 625	21 215	1 960
12	63 840	53 160	55 860	46 500	22 875	2 140

尺寸 Dimensions (mm)	B	C	D	
	5 550	1 900	13 140	
	F1	F2	F3	G
	15 520	15 530	14 260	2 970

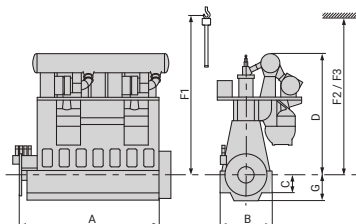
气体模式下的有效消耗 BRAKE SPECIFIC CONSUMPTIONS IN GAS MODE

Rating point		R1	R2	R3	R4
BSEC (energy)	kJ/kWh	6 760	6 512	6 858	6 615
BSGC (gas)	g/kWh	134.6	129.6	136.6	131.6
BSPC (pilot fuel)	g/kWh	0.7	0.8	0.7	0.8

柴油模式下的有效消耗

BRAKE SPECIFIC FUEL CONSUMPTION IN DIESEL MODE

Rating point		R1	R2	R3	R4
BSFC (diesel)	g/kWh	174.2	168.2	176.2	172.2



Diesel

X35-B

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	350 mm
冲程 Piston stroke	1550 mm
转速 Speed	118–167 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	4.43

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	167 rpm	118 rpm				
	R1	R2	R3	R4		
5	4 350	3 475	3 075	2 450	3 838	74
6	5 220	4 170	3 690	2 940	4 450	84
7	6 090	4 865	4 305	3 430	5 062	95
8	6 960	5 560	4 920	3 920	5 674	105

尺寸 Dimensions (mm)	B	C	D	
	2 284	830	5 556	
	F1	F2	F3	G
	6 806	6 806	6 330	1 326

气体模式下的制动比油耗

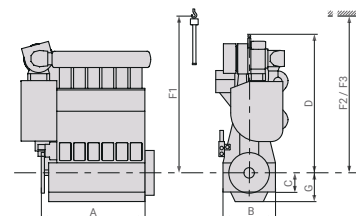
BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	16.7	21.0	16.7
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	175.8	169.8	177.8	171.8

R1 BSFC (g/kWh), Tier II

	50	65	75	90	100
Delta Bypass Tuning	169.7	167.5	167.3	170.1	175.8
Low-load Tuning	166.2	164.0	167.3	170.5	176.8



X40-B

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	400 mm
冲程 Piston stroke	1770 mm
转速 Speed	104-146 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	4.43

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	146 rpm	104 rpm				
	R1	R2	R3	R4		
5	5 675	4 550	4 050	3 250	4 390	109
6	6 810	5 460	4 860	3 900	5 090	125
7	7 945	6 370	5 670	4 550	5 790	140
8	9 080	7 280	6 480	5 200	6 490	153

尺寸 Dimensions (mm)	B	C	D	
	2 610	950	6 344	
	F1	F2	F3	G
	7 742	7 742	7 400	1 411

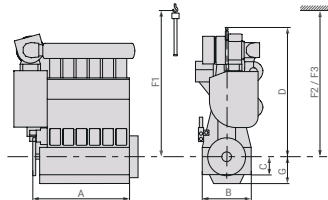
气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	16.8	21.0	16.8
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	176.8	170.8	176.8	170.8

R1 BSFC (g/kWh), Tier II		Power(%)			
	50	65	75	90	100
Delta Bypass Tuning	170.7	168.5	168.3	171.1	176.8
Low-load Tuning	167.2	165.0	168.3	171.5	177.8



X52

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2315 mm
转速 Speed	79-105 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	4.45

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	长度 mm Length A*	重量 Weight tonnes
	105 rpm	79 rpm					
	R1	R2	R3	R4			
5	9 050	6 800	6 800	5 100	5 985	6 990	217
6	10 860	8 160	8 160	6 120	6 925	7 930	251
7	12 670	9 520	9 520	7 140	7 865		288
8	14 480	10 880	10 880	8 160	8 805		323

尺寸 Dimensions (mm)	B	C	D	D (iSCR)
	3 514	1 205	8 415	8 760
	F1	F2	F3	G
	10 350	10 350	9 800	1 910

气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

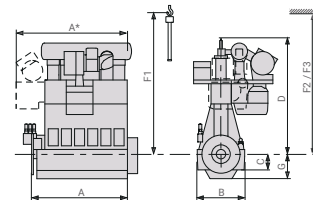
满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	15.8	21.0	15.8
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	169.8	162.8	169.8	162.8

R1 BSFC (g/kWh), Tier II		Power(%)			
	50	65	75	90	100
Delta Bypass Tuning	163.7	161.5	161.3	164.1	169.8
Low-load Tuning	160.2	158.0	161.3	164.5	170.8

iSCR available for 5- to 7-cylinder engines with one TC on exhaust side

iSCR对于5-7缸单个增压器在排气侧的可选用。



X52-S2.0

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	520 mm
冲程 Piston stroke	2045 mm
转速 Speed	85-120 rpm
平均有效压力 Mean effective pressure at R1	22.0 bar
冲程缸径比 Stroke / bore	3.93

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	长度 mm Length A'	重量Weight tonnes
	120 rpm		85 rpm				
	R1	R2	R3	R4			
5	9 550	6 850	6 775	4 850	5 485	6 565	190
6	11 460	8 220	8 130	5 820	6 345	7 415	215
7	13 370	9 590	9 485	6 790	7 205		245
8	15 280	10 960	10 840	7 760	8 065		275

尺寸 Dimensions (mm)	B		C		D		D (ISCR)
	3 100		1 185		7 775		
	F1		F2		F3		
	9 340		9 340		8 800		
							1 675

气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

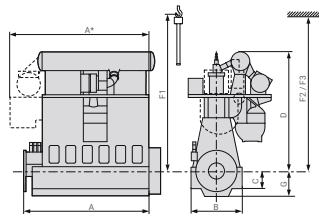
满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		22.0	15.8	22.0	15.8
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	163.8	157.8	162.8	160.8

R1 BSFC (g/kWh), Tier II	Power(%)			
	50	65	75	90
Delta Bypass Tuning	157.7	155.5	155.3	158.1
Low-load Tuning	154.2	152.0	155.3	158.5

ISCR available for 5- to 7-cylinder engines with one TC on exhaust side

ISCR对于5-7缸单个增压器在排气侧的可选用。



X62-S2.0

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2245 mm
转速 Speed	82-108 rpm
平均有效压力 Mean effective pressure at R1	22 bar
冲程缸径比 Stroke / bore	3.62

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	108 rpm		82 rpm			
	R1	R2	R3	R4		
5	13 425	9 650	10 200	7 325	6 260	280
6	16 110	11 580	12 240	8 790	7 260	325
7	18 795	13 510	14 280	10 255	8 260	370
8	21 480	15 440	16 320	11 720	9 260	415

尺寸 Dimensions (mm)	B		C		D		D (ISCR)
	3 440		1 295		8 575		
	F1		F2		F3		
	10 230		10 230		9 620		
							1 835

气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

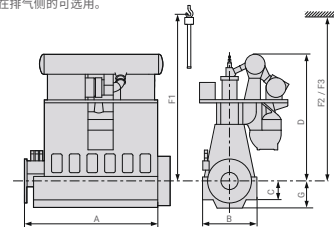
满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		22.0	15.8	22.0	15.8
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	163.8	158.8	161.8	159.8

R1 BSFC (g/kWh), Tier II	Power(%)			
	50	65	75	90
Delta Bypass Tuning	157.7	155.5	155.3	158.1
Low-load Tuning	154.2	152.0	155.3	158.5

ISCR available for 5- to 7-cylinder engines with one TC on exhaust side

ISCR对于5-7缸单个增压器在排气侧的可选用。



X62-B

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	620 mm
冲程 Piston stroke	2658 mm
转速 Speed	77-103 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	103 rpm	77 rpm				
	R1	R2	R3	R4		
5	14 500	10 650	10 800	7 950	7 000	325
6	17 400	12 780	12 960	9 540	8 110	377
7	20 300	14 910	15 120	11 130	9 215	435
8	23 200	17 040	17 280	12 720	10 320	482

尺寸 Dimensions (mm)	B		C		D	
	4 200		1 360		9 580	
	F1		F2		F3	
	11 830		11 830		11 005	
					2 110	

气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

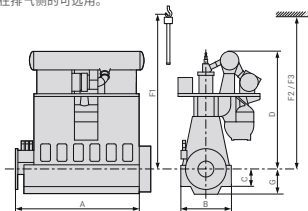
满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	15.5	21.0	15.4
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	167.8	162.3	166.8	162.3

R1 BSFC (g/kWh), Tier II	Power(%)				
	50	65	75	90	100
Delta Bypass Tuning	160.7	158.8	159.3	162.1	167.8
Low-load Tuning	157.2	155.3	159.3	162.5	168.8

ISCR available for 5- to 7-cylinder engines with one TC on exhaust side

ISCR对于5-7缸单个增压器在排气侧的可选用。



X72-B

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	720 mm
冲程 Piston stroke	3086 mm
转速 Speed	66-89 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	4.29

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数Cyl.	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量Weight tonnes
	89 rpm	66 rpm				
	R1	R2	R3	R4		
5	19 600	14 300	14 550	10 600	8 085	481
6	23 520	17 160	17 460	12 720	9 375	561
7	27 440	20 020	20 370	14 840	10 665	642
8	31 360	22 880	23 280	16 960	11 960	716

尺寸 Dimensions (mm)	B		C		D	
	4 780		1 575		10 790	
	F1		F2		F3	
	13 750		13 750		12 820	
					2 455	

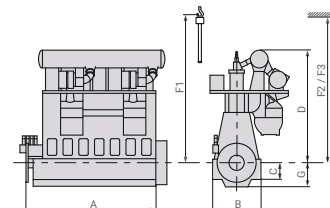
气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	15.3	21.0	15.3
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	167.8	162.3	166.8	162.3

R1 BSFC (g/kWh), Tier II	Power(%)				
	50	65	75	90	100
Delta Bypass Tuning	160.7	158.8	159.3	162.1	167.8
Low-load Tuning	157.2	155.3	159.3	162.5	168.8



X82-2.0

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	820 mm
冲程 Piston stroke	3375 mm
转速 Speed	58-84 rpm
平均有效压力 Mean effective pressure at R1	22.0 bar
冲程缸径比 Stroke / bore	4.12

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	84 rpm	58 rpm				
	R1	R2	R3	R4		
6	33 000	24 000	22 800	16 560	10 426	805
7	38 500	28 000	26 600	19 320	11 866	910
8	44 000	32 000	30 400	22 080	13 306	1 020
9	49 500	36 000	34 200	24 840	14 746	1 160

尺寸 Dimensions (mm)	B		C	D	G
	5 050		1 800	12 310	
	F1		F2*	F3*	
	15 250		-	-	2 700

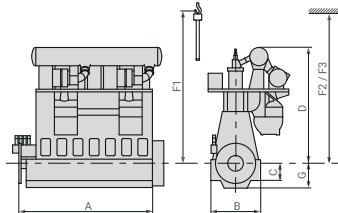
气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		22.0	16.0	22.0	16.0
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	165.3	160.2	161.5	158.7

R1 BSFC (g/kWh), Tier II	Power(%)				
	50	65	75	90	100
Delta Bypass Tuning	159.2	157.0	156.8	159.6	165.3
Low-load Tuning	155.7	153.5	156.8	160.0	166.3



X92-B

IMO Tier II & Tier III (SCR)

气缸直径 Cylinder bore	920 mm
冲程 Piston stroke	3468 mm
转速 Speed	70-80 rpm
平均有效压力 Mean effective pressure at R1	21.0 bar
冲程缸径比 Stroke / bore	3.77

额定功率，主要尺寸和重量

RATED POWER, PRINCIPAL DIMENSIONS AND WEIGHTS

缸数 Cyl	输出功率 (千瓦) Output in kW at				长度 mm Length A	重量 Weight tonnes
	80 rpm	70 rpm				
	R1	R2	R3	R4		
6	38 700	27 900	33 900	24 420	11 755	1 120
7	45 150	32 550	39 550	28 490	13 345	1 260
8	51 600	37 200	45 200	32 560	14 935	1 380
9	58 050	41 850	50 850	36 630	17 960	1 630
10	64 500	46 500	56 500	40 700	19 550	1 790
11	70 950	51 150	62 150	44 770	21 215	1 960
12	77 400	55 800	67 800	48 840	22 875	2 140

尺寸 Dimensions (mm)	B		C	D	G
	5 550		1 900	13 150	
	F1		F2	F3	
	15 640		15 650	14 360	2 970

气体模式下的制动比油耗

BRAKE SPECIFIC FUEL CONSUMPTION (BSFC) IN g/kWh

满负荷 Full load

Rating point		R1	R2	R3	R4
BMEP, bar		21.0	15.1	21.0	15.1
BSFC(g/kWh)	Delta Tuning, 100% power, Tier II	162.8	156.8	161.8	157.8

R1 BSFC (g/kWh), Tier II	Power(%)				
	50	65	75	90	100
Delta Bypass Tuning	156.7	154.5	154.3	157.1	162.8
Low-load Tuning	151.6	149.6	153.8	157.5	163.8

