

CPGC-MAN B&W系列二冲程发动机

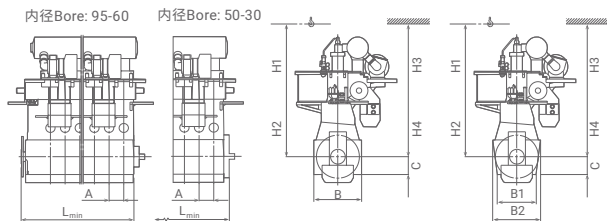
CPGC-MAN B&W two-stroke engines



发动机尺寸 Engine dimensions

最小长度是从曲轴末端到发动机前端的距离

The minimum length L_{min} is stated from the aft end of the crankshaft to the fore end of the engine.



L_{min} 最小长度
Minimum length of engine

A 气缸间距
Cylinder distance

B 机座宽度
Bedplate width

B1 底脚法兰处机座宽度
Bedplate width at foot flange

B2 顶部法兰处机座宽度
Bedplate width at top flange

C 曲轴至底脚法兰底部的距离
Crankshaft to underside of foot flange

H1 正常起吊高度
Normal height lifting procedure

H2 斜吊的起吊高度
Reduced height lifting procedure

H3 采用MAN B&W双臂起重机正常高度起吊程序
Reduced height lifting procedure with MAN B&W double-jib crane

H4 降低高度起吊程序
Normal height lifting procedure with MAN B&W double-jib crane

毛重 Dry masses

毛重是指带有 MAN 涡轮增压器及标准调频轮的发动机重量，单位是吨。该数值会因设计及配件而变化，比如：力矩补偿器、调频轮等。

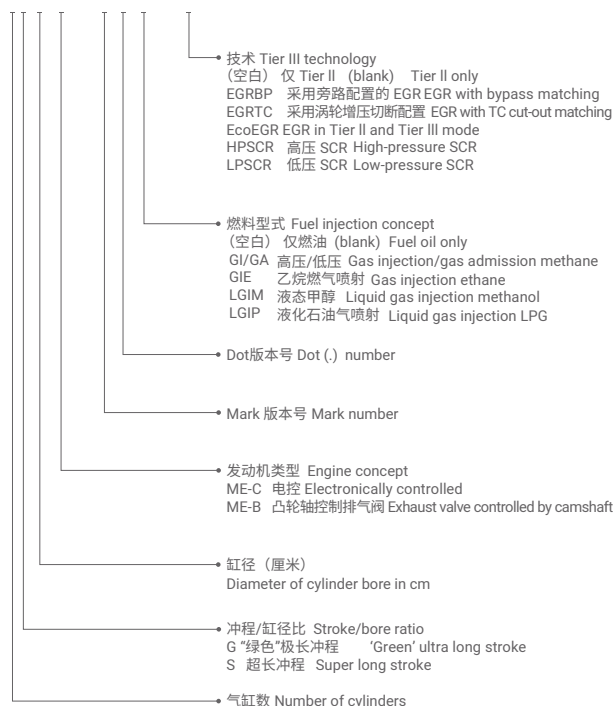
Dry masses are stated in metric tonnes for engines with MAN turbocharger(s) and a standard turning wheel. Figures will vary depending on the design and options chosen, e.g. moment compensators, tuning wheel, etc.

Tier III 发动机的毛重包含直接集成于发动机上的部件。

Dry masses for Tier III engines cover components directly integrated on the engine.

发动机型号说明 Engine type designation

5G70ME-C 10.5-GI-EGRBP



双燃料发动机 ME-GI, ME-LGI and ME-GA dual fuel engines

发动机方案含气态燃料的发动机(ME-GI,ME-GA)和液态燃料的发动机 (ME-LGI) 。 This engine programme includes a number of engines designed for gas fuel (ME-GI and ME-GA engines) and liquid gas fuel (ME-LGI engines) operation.

ME-GA发动机是最新版本的双燃料发动机。甲烷在压缩冲程中进入，这使得与其他双燃料发动机相比，供应压力更低。极其适用于带有大量汽化气体的船舶，因为在燃料压缩机的投资上可以大大减少。

The ME-GA engine is the latest addition to our dual fuel portfolio. Methane is admitted during the compression stroke, which allows for a lower supply pressure compared to other dual fuel engines. This is especially interesting for vessels with large amounts of boil-off gas where the investment in fuel compressors can be substantially reduced.

ME-GA发动机在燃气模式下可满足TierIII标准，在燃油模式下，采用现有技术手段可满足TierIII标准。

The ME-GA engine is Tier III compliant in dual fuel mode and can be equipped with existing Tier III technologies to achieve Tier III compliance in fuel oil mode.

燃料Fuel	燃料名Fuel designation	LCV [kJ/kg]
甲烷Methane	GI/GA	50,000
乙烷Ethane	GIE	47,500
甲醇Methanol	LGIM	19,900
液化石油气LPG*	LGIP	46,000

*LPG是一种液态丙烷和丁烷的混合物。*LPG is a mixture of liquid propane and butane.

引燃油比例 Pilot oil energy fraction

根据主机类型，在双燃料模式下，引燃油化比例：根据主机类型，GI机1.5%-5.0%、GIE/LGIP机5.0%、LGIM机5%（指的是L1功率点）。对于实际引燃油比，请参照各个主机页和CEAS。

In dual fuel mode, the pilot oil energy fraction amounts to 1.5%-5.0% for GI, 5.0% for GIE and LGIP, and 5% for LGIM in L₁ rating. For actual pilot oil energy fractions, refer to individual engine pages and CEAS.

燃料名Fuel designation	引燃油比例 % Available pilot oil fraction in %
GI	1.5-5.0
GA	0.5
GIE	5.0
LGIP	5.0
LGIM	5.0

对于G95ME-C10.5-GI、G90ME-C10.5-GI、G80ME-C10.5-GI和G70ME-C10.5-GI，一种新的“双燃料气体优化模式”被引入，在以牺牲略微增加燃油模式下油耗为代价的基础上，改善了双燃料模式下的燃料消耗。

For G95ME-C10.5-GI, G90ME-C10.5-GI, G80ME-C10.5-GI and G70ME-C10.5-GI a new gas tuning, called “dual fuel gas optimised”, with improved fuel consumption in dual fuel mode at the expense of a slightly increased fuel consumption in fuel oil mode has been introduced. All other ME-GI engines will have a “dual fuel standard” gas tuning without a penalty in fuel oil mode. Both gas tunings apply to both Tier II and all Tier III technologies.

双燃料发动机表中显示以下燃油消耗值：

The following fuel consumption figures are shown in the tables for dual fuel engines:

- 双燃料模式，指定燃气消耗率 (SGC) 和引燃燃油消耗率 (SPOC)
- 燃油模式
- dual fuel mode with distribution of specific gas consumption (SGC) and specific pilot oil consumption (SPOC)
- fuel oil mode

所有 GI 发动机型号都可以以燃料共享方式运行，也称作指定双燃料(SDF)运行，其引燃燃油和燃气燃料的比例可以根据预设值选择。对于双燃料发动机，提供了热耗率的保证数值，它们与燃油消耗率(SPOC)保证数值具有相同的误差，参见第 10 页。

All types of GI engines can operate with fuel sharing, also referred to as specified dual fuel (SDF) operation, where the ratio between pilot fuel oil and gas fuel can be selected according to preset values.

Guarantee figures for dual fuel engines are given for heat rate, which has the same tolerances as SFOC guarantees, i.e. see page 10.

热耗率的定义如下（甲烷作为双燃料的示例）：

热耗率 (kJ/kWh) = SGC (g/kWh) × 50 kJ/g + SPOC (g/kWh) × 42.7 kJ/g

Heat rate is defined as follows (example for methane as dual fuel):

Heat rate (kJ/kWh) = SGC (g/kWh) × 50 kJ/g + SPOC (g/kWh) × 42.7 kJ/g.

CEAS报告中提供了SGC与SPOC之间的分布以及整个负荷范围内的热耗率。

Distribution between SGC and SPOC as well as the heat rate over the load range are available in the CEAS report.

请注意，双燃料发动机必须有既能供应低 BN 润滑油又能供应高 BN 润滑油的气缸润滑系统。

Please note that dual fuel engines must have cylinder lubrication systems capable of supplying both low-BN lubricating oils and high-BN lubricating oils.

温室气体排放 Greenhouse gas emissions

IMO开发了EEDI(能效设计指数)，该指数将CO₂作为温室气体(GHG)排放的唯一考量因素。但是，IMO正在评估制定除CO₂以外的其他温室气体法规的可能性。尤其是甲烷，因为它是一种非常强的温室气体，因此，IMO正在评估在短时间内引入甲烷泄漏立法作为第一项措施的可能性。为了准备有关甲烷排放的可能立法，尤其是来自GI发动机的甲烷排放，MAN Energy Solutions将在完整的二冲程发动机选型手册中，做好准备确保甲烷逸出率最高不超过0.35g/kWh。

IMO has developed the EEDI (energy efficiency design index) with CO₂ as the only greenhouse gas (GHG) emission accounted for. However, IMO is preparing legislation on other GHGs than CO₂. Especially methane is in focus, as it is a very strong GHG and, accordingly, IMO is preparing to introduce legislation on methane slip with short notice as a first measure. In order to be prepared for possible legislation on methane emissions, MAN Energy Solutions will, for the complete two-stroke engine programme, be prepared to guarantee a methane slip of 0.2 g/kWh with a tolerance of +/-0.1 g/kWh for ME-GI engines. For part-load figures of methane slip, please refer to CEAS.

Tier III 技术 Tier III technologies

要确保符合 IMO Tier III 规定，必须选择 EGR 或 SCR 氮氧化物减排技术。具体首选哪项技术，取决于市场需求、发动机规格、其他要求以及运行模式。

To ensure compliance with IMO Tier III regulations, a Tier III NO_x reduction technology must be selected. The preferred technology depends on market demands, engine size, other requirements, and operational pattern.

所有 Tier III 发动机都至少有两种运行模式：

- Tier III 模式满足 IMO Tier III 法规
- Tier II 模式满足 IMO Tier II 法规

All Tier III engines have at least two operating modes:

- Tier III mode fulfilling the IMO Tier III regulations
- Tier II mode fulfilling the IMO Tier II regulations

Tier III 技术设计用于 Tier III 级运行中的低硫燃料 (<0.1%) 或高硫燃料 (>0.5% 且 <3.5%)。在 Tier II 运行中，发动机在任何情况下均能够使用高含硫量燃料。必须在订购发动机时选择燃料硫含量，因为这会影响到发动机的设计。

Tier III technologies are designed for either low-sulphur fuels (<0.1%) or high-sulphur fuels (>0.5% and <3.5%) in Tier III operation. In Tier II operation, the engine is in all cases capable of using fuels with a high sulphur content. The fuel sulphur content must be selected when the engine is ordered, as it impacts the engine design. Fuel consumption guarantees can be given for engines for both Tier II and Tier III modes.

废气再循环 EGR

有两种 EGR 匹配方案可用，具体取决于发动机缸径：

- EGRTC：与缸径 ≥ 80cm 且采用多个涡轮增压器的 ME-C 发动机相配合的增压器切断系统
 - EGRBP：与缸径 ≤ 70cm 且采用一个高效涡轮增压器的 ME-C 发动机相配合的旁通系统。
- EGR 装置也可用于双燃料发动机，GIE 除外。
- SCR 建议用于小缸径 ME-B 发动机。但是，如果采用 EGR 为 ME-B 发动机的 Tier III 技术，请联系 MAN Energy Solutions。

Two EGR-matching concepts are available depending on engine bore:

- EGRTC: T/C cut-out matching for ME-C engines with bores ≥ 80 cm and more than one turbocharger applied
- EGRBP: Bypass matching for ME-C engines with bores ≤ 70 cm and one high efficiency turbocharger applied.

EGR operation is also possible for dual fuel engines, except GIE. SCR is recommended for the small-bore ME-B engines. However, if EGR is the preferred Tier III technology for an ME-B engine, please contact MAN Energy Solutions.

EcoEGR

EcoEGR 是 EGRBP 系统经过 SFOC 优化的型号，在配有高效涡轮增压器的所有 ME-C 发动机上均使用 EGRBP 系统。与标准 EGRBP 系统相比，EcoEGR 发动机的优势在于，在 Tier II 模式下以 10–15% 的再循环运行，在 Tier III 模式下以略微增加的再循环运行。对于以低硫燃料 (<0.5 %S) 运行的 EcoEGR 发动机，可以大幅节约总成本。对于高硫燃料，必须根据具体情况计算整体效益。

EcoEGR is an SFOC optimised version of the EGRBP system available on all ME-C engines with high-efficiency turbochargers. Compared to the standard EGRBP system, the EcoEGR engines operate with 10–15% recirculation in Tier II mode and with slightly increased recirculation in Tier III mode. For EcoEGR engines running on low-sulphur fuels (<0.5 %S), considerable overall savings are obtained. For high-sulphur fuels the overall benefits must be calculated on a case-to-case basis.

EcoEGR 操作也可用于双燃料发动机，GIE 除外。

如果采用 EcoEGR 为 ME-B 发动机上的 Tier III 技术，请联系 MAN Energy Solutions。

EcoEGR operation is also possible for dual fuel engines, except GIE and engines with gas optimised tuning.

If EcoEGR is the preferred Tier III technology on ME-B engines, please contact MAN Energy Solutions.

选择性催化还原 SCR

有两种 SCR 方案可用：

- HPSCR：高压 SCR，带有安装于涡轮增压器上游的反应器
- LPSCR：低压 SCR，带有安装于涡轮增压器下游的反应器

Two SCR concepts are available:

- HPSCR: High-pressure SCR with reactor installed upstream the turbocharger(s)
- LPSCR: Low-pressure SCR with reactor installed downstream the turbocharger(s)

SCR 运行适用于 ME-C 和 ME-B 发动机，包括双燃料发动机型号。对于某些缸数较多的大缸径发动机（缸径 ≥ 90 cm），仅在客户特别要求时提供 HPSCR。

SCR 系统必须由认可的供应商提供。

SCR operation applies to ME-C and ME-B engines, including dual fuel engine types. For some large-bore engines (bore ≥ 90 cm) with a high cylinder number, HPSCR is only available on special request. The SCR system must be supplied by an approved supplier.

发动机型谱 Engine fuel variants

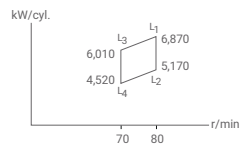
Engine type	Fuel oil	GI	GA
G95ME-C10.6	●		
G95ME-C10.5	●	●	
G90ME-C10.5	●	●	
G80ME-C10.6	●		
G80ME-C10.5	●	●	
G70ME-C10.5	●	●	●
S70ME-C10.5	●	●	
G60ME-C10.5	●	●	
G60ME-C9.5			
S60ME-C10.6	●		
S60ME-C10.5	●	●	
G50ME-C10.7	●		
G50ME-C9.6		●	
G50ME-C9.5			
S50ME-C10.6	●		
S50ME-C9.7	●	●	
S50ME-C9.6			
S46ME-C8.6	●		
G45ME-C9.7	●		
G45ME-C9.5		●	
S40ME-C9.5	●		
S35ME-C9.7	●	●	
S30ME-B9.5	●		

LGIM	LGIP	GIE
●		
●		
	●	
		●
	●	
●	●	
		●
●		
	●	

MAN B&W G95ME-C10.6

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,460 mm/L ₁ MEP: 21.0 bar
6	41,220	
7	48,090	
8	54,960	
9	61,830	
10	68,700	
11	75,570	
12	82,440	



MAN B&W G95ME-C10.6

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
Low-load SEQ	151.5	155.0	163.5

MAN B&W G95ME-C10.6-EGRTC

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	151.5	155.0	163.5
Tier III mode	158.5	158.0	161.0

MAN B&W G95ME-C10.6-LPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	151.5	155.0	163.5
Tier III mode	155.5	158.0	161.0

Tier II Tier III

MAN B&W G95ME-C10.6

Specifications

Dimensions:	A	B	C	H1
Fuel oil mm	1,574	5,380	2,060	16,100

Cyl. distance	6-9 cyl.	10 cyl.	11 cyl.	12 cyl.
mm	1,574	1-6: 1,574	1-6: 1,574	1-6: 1,574
mm	-	7-10: 1,670	7-11: 1,670	7-12: 1,670

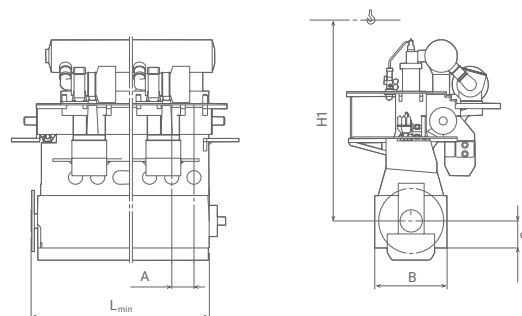
Cylinders:	6	7	8	9	10	11	12
L _{min} mm	13,042	14,616	16,190	17,804	19,779	21,489	23,159

Dry mass

Tier II	t	1,220	1,360	1,615	1,780	1,950	2,130	2,320
---------	---	-------	-------	-------	-------	-------	-------	-------

Tier III (added)

EGRTC	t	16	17	18	19	20	21	31
LPSCR	t	0	0	0	0	0	0	0



MAN B&W G95ME-C10.5

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,460 mm/L ₁ MEP: 21.0 bar
6	41,220	
7	48,090	
8	54,960	
9	61,830	
10	68,700	
11	75,570	
12	82,440	

MAN B&W G95ME-C10.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	158.5	157.0	161.0
Part-load EPT	156.5	155.5	163.5
Low-load EPT	154.5	156.5	163.5

MAN B&W G95ME-C10.5-EGRTC

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	154.5	156.5	163.0
Tier III mode	160.5	160.0	165.0

MAN B&W G95ME-C10.5-LPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	154.5	156.5	163.5
Tier III mode	155.5	157.5	164.5

Tier II Tier III

MAN B&W G95ME-C10.5

Specifications

Dimensions:	A	B	C	H1
Fuel oil mm	1,574	5,380	2,060	16,100
GI mm	1,574	5,380	2,060	16,100
LGIM mm	1,574	5,380	2,060	16,100

Cyl. distance	6-9 cyl.	10 cyl.	11 cyl.	12 cyl.
mm	1,574	1-6: 1,574	1-6: 1,574	1-6: 1,574
mm		7-10: 1,670	7-11: 1,670	7-12: 1,670

Cylinders:	6	7	8	9	10	11	12
L _{min} mm	13,042	14,616	16,190	17,804	19,779	21,489	23,159

Dry mass

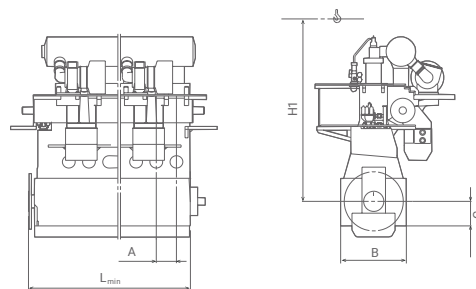
Tier II	t	1,220	1,360	1,615	1,780	1,950	2,130	2,320
---------	---	-------	-------	-------	-------	-------	-------	-------

Tier III (added)

EGRTC	t	16	17	18	19	20	21	31
LPSCR	t	0	0	0	0	0	0	0

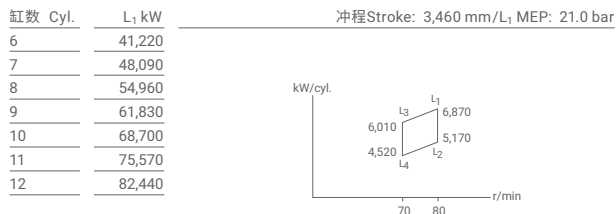
Dual fuel (added)

GI	t	8	9	10	11	12	13	14
LGIM	t	9	10	11	12	13	14	15



MAN B&W G95ME-C10.5-GI

Tier II Tier III



MAN B&W G95ME-C10.5-GI (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Gas optimised	126.8+3.9/157.5	126.3+3.0/160.0	132.8+2.5/164.0

MAN B&W G95ME-C10.5-GI-EGRTC (gas optimised)

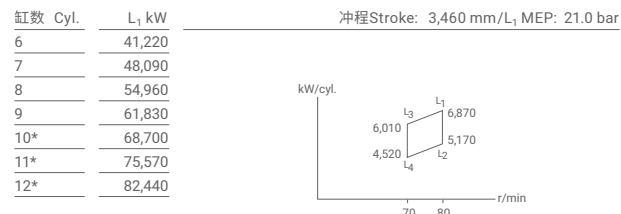
	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	125.2+3.8/157.5	126.3+2.9/160.0	132.9+2.4/164.0
Tier III mode	131.1+3.8/157.5	131.5+2.9/157.5	134.6+2.4/161.0

MAN B&W G95ME-C10.5-GI-LPSCR (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	126.9+3.8/157.5	127.8+2.9/160.0	133.7+2.4/165.0
Tier III mode	128.6+3.8/155.5	131.5+2.9/158.0	134.6+2.4/161.0

Tier II Tier III

MAN B&W G95ME-C10.5-LGIM



MAN B&W G95ME-C10.5-LGIM (standard methanol tuning)

	L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Standard tuned	301.7+12.8/153.5	314.6+9.8/156.5	331.4+8.1/162.5

MAN B&W G95ME-C10.5-LGIM-EGRTC (standard methanol tuning)

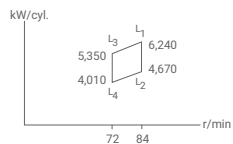
	L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	303.9+12.8/154.5	314.6+9.8/156.5	332.5+8.1/163.0
Tier III mode	316.8+12.8/160.5	322.1+9.8/160.0	336.8+8.1/165.0

* 10-cylinder engines available up to 19.2 bar MEP. All other data available on request

MAN B&W G90ME-C10.5

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,260 mm/L ₁ MEP: 21.5 bar	
6	37,440		
7	43,680		
8	49,920		
9	56,160		
10	62,400		
11	68,640		
12	74,880		



MAN B&W G90ME-C10.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	162.5	161.0	165.0
Part-load EGB	160.5	159.5	167.5
Low-load EGB	158.5	160.5	167.5

MAN B&W G90ME-C10.5-EGRTC

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	158.5	160.5	167.0
Tier III mode	164.5	164.0	169.0

MAN B&W G90ME-C10.5-LPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	158.5	160.5	167.5
Tier III mode	159.5	161.5	168.5

Tier II Tier III

MAN B&W G90ME-C10.5

Specifications

Dimensions:	A	B1	B2	C	H1
Fuel oil mm	1,490	5,110	5,034	1,885	14,425
GI mm	1,490	5,110	5,034	1,885	14,425

Cylinders:	6	7	8	9	10	11	12
L _{min} mm	12,040	12,855	14,345*	15,835*	18,040	19,530	21,020

Dry mass

Tier II	t	1,050	1,170	1,330	1,470	1,610	1,750	1,890
---------	---	-------	-------	-------	-------	-------	-------	-------

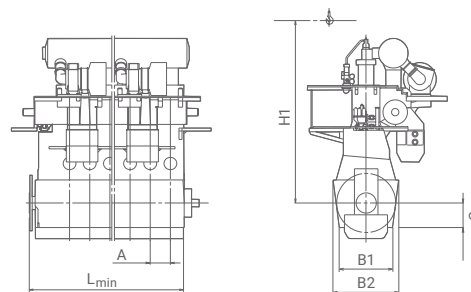
Tier III (added)

EGRTC	t	17	17	18	18	20	20	20
LPSCR	t	0	0	0	0	0	0	0

Dual fuel (added)

GI	t	7	8	9	10	11	12	13
----	---	---	---	---	----	----	----	----

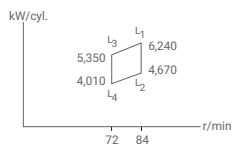
* 8 and 9-cylinder engines can be ordered with either divided or undivided crankshaft.
Data is given for undivided crankshaft.



MAN B&W G90ME-C10.5-GI

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,260 mm/L ₁ MEP: 21.5 bar
6	37,440	
7	43,680	
8	49,920	
9	56,160	
10	62,400	
11	68,640	
12	74,880	



MAN B&W G90ME-C10.5-GI (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Gas optimised	130.1+4.0/161.5	129.6+3.1/164.0	136.2+2.5/168.0

MAN B&W G90ME-C10.5-GI-EGRTC (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	128.5+3.9/161.5	129.7+3.0/164.0	136.2+2.5/168.0
Tier III mode	134.5+3.9/162.5	134.8+3.0/162.0	137.9+2.5/165.0

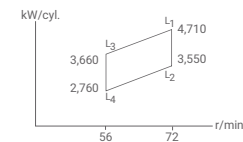
MAN B&W G90ME-C10.5-GI-LPSCR (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	130.2+3.9/161.5	131.1+3.0/164.0	137.1+2.5/169.0
Tier III mode	131.9+3.9/159.5	134.8+3.0/162.0	137.9+2.5/165.0

MAN B&W G80ME-C10.6

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,720 mm/L ₁ MEP: 21.0 bar
6	28,260	
7	32,970	
8	37,680	
9*	42,390	



MAN B&W G80ME-C10.6

L ₁ SFOC [g/kWh]	50%	75%	100%
Opt. load range			
High-load	158.5	157.0	161.0
Low-load EGB	154.5	155.0	165.0

MAN B&W G80ME-C10.6-EGRTC

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	154.5	155.0	165.0
Tier III mode	156.5	156.0	162.0

MAN B&W G80ME-C10.6-HPSCR

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	154.5	155.0	165.0
Tier III mode	154.5	155.0	165.5

MAN B&W G80ME-C10.6-LPSCR

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	154.5	155.0	165.0
Tier III mode	157.0	156.5	165.5

* Available on request for HPSCR

MAN B&W G80ME-C10.6

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1
Fuel oil mm	1,400	5,018	5,254	1,960	15,750

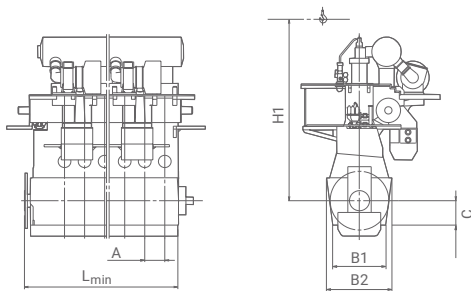
Cylinders:	6	7	8	9
L _{min} mm	11,509	12,135	13,535	14,935

Dry mass

Tier II	t	900	1,000	1,110	1,240
---------	---	-----	-------	-------	-------

Tier III (added)

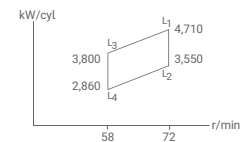
EGRTC	t	14	14	14	15
HPSCR	t	4	5	5	-
LPSCR	t	0	0	0	0



Tier II Tier III

MAN B&W G80ME-C10.5

缸数 Cyl.	L ₁ kW
6	28,260
7	32,970
8	37,680
9*	42,390

冲程Stroke: 3,720 mm/L₁ MEP: 21.0 bar

MAN B&W G80ME-C10.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	160.5	159.0	163.0
Part-load EPT	158.5	157.5	165.5
Low-load EPT	156.5	158.5	165.5

MAN B&W G80ME-C10.5-EGRTC

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	156.5	158.5	165.0
Tier III mode	162.5	162.0	167.0

MAN B&W G80ME-C10.5-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	156.5	158.5	165.5
Tier III mode	158.0	159.5	166.0

MAN B&W G80ME-C10.5-LPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	156.5	158.5	165.5
Tier III mode	157.5	159.5	166.5

* Available on request for HPSCR

MAN B&W G80ME-C10.5

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1
Fuel oil mm	1,400	5,018	5,254	1,960	15,750
GI mm	1,400	5,018	5,254	1,960	15,750

Cylinders:	6	7	8	9
L _{min} mm	11,509	12,135	13,535	14,935

Dry mass

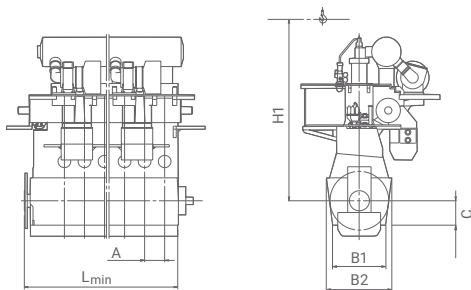
Tier II	t	900	1,000	1,110	1,240
---------	---	-----	-------	-------	-------

Tier III (added)

EGRTC	t	14	14	14	15
HPSCR	t	4	5	5	-
LPSCR	t	0	0	0	0

Dual fuel (added)

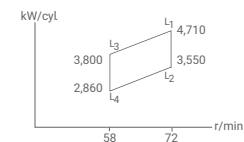
GI	t	6	7	8	9
LGIM	t	7	8	9	10



Tier II Tier III

MAN B&W G80ME-C10.5-GI

缸数 Cyl.	L ₁ kW
6	28,260
7	32,970
8	37,680
9*	42,390

冲程Stroke: 3,720 mm/L₁ MEP: 21.0 bar

MAN B&W G80ME-C10.5-GI (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Gas optimised	128.5+4.0/159.5	128.0+3.0/162.0	134.5+2.5/166.0

MAN B&W G80ME-C10.5-GI-EGRTC (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	126.8+3.9/159.5	128.0+3.0/162.0	134.6+2.5/166.0
Tier III mode	132.8+3.9/160.5	133.1+3.0/160.0	136.3+2.5/163.0

MAN B&W G80ME-C10.5-GI-HPSCR (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	128.5+3.9/159.5	128.0+3.0/162.0	135.4+2.5/167.0
Tier III mode	130.3+3.9/157.5	131.4+3.0/158.0	135.4+2.5/162.0

MAN B&W G80ME-C10.5-GI-LPSCR (gas optimised)

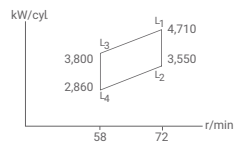
L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	128.5+3.9/159.5	129.5+3.0/162.0	135.4+2.5/167.0
Tier III mode	130.3+3.9/157.5	133.1+3.0/160.0	136.3+2.5/163.0

* Available on request for HPSCR

MAN B&W G80ME-C10.5-LGIM

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,720 mm/L ₁ MEP: 21.0 bar
6*	28,260	
7	32,970	
8	37,680	
9	42,390	



MAN B&W G80ME-C10.5-LGIM (standard methanol tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	305.7+12.9/155.5	318.6+9.9/158.5	335.8+8.2/164.5

MAN B&W G80ME-C10.5-LGIM-EGRTC (standard methanol tuning)

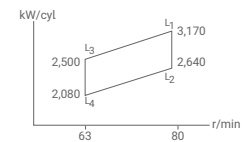
L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	307.9+12.9/156.5	318.6+9.9/158.5	336.6+8.2/165.0
Tier III mode	320.7+12.9/162.5	326.1+9.9/162.0	340.8+8.2/167.0

* 6-cylinder engines can be ordered with reduced or external moment compensation depending on rating and ship dynamics. Evaluation is made on request.

Tier II Tier III

MAN B&W G70ME-C10.5

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,256 mm/L ₁ MEP: 19.0 bar
5	15,850	
6	19,020	



MAN B&W G70ME-C10.5

L ₁ SFOC [g/kWh]	50%	75%	100%
Opt. load range			
High-load	160.5	158.5	163.0
Part-load EGB	158.5	157.0	165.5
Low-load EGB	156.5	158.0	165.5

MAN B&W G70ME-C10.5-EGRBP

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	156.5	158.0	166.0
Tier III mode	163.5	162.5	168.0

MAN B&W G70ME-C10.5-HPSCR

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	156.5	158.0	165.5
Tier III mode	158.0	159.0	166.0

MAN B&W G70ME-C10.5-LPSCR

L ₁ SFOC [g/kWh]	50%	75%	100%
Tier II mode	156.5	158.0	165.5
Tier III mode	157.5	159.0	166.5

MAN B&W G70ME-C10.5

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1
Fuel oil	mm	1,044	4,470	4,628	1,750
GI	mm	1,044	4,470	4,628	1,750
GA	mm	1,044	4,470	4,628	1,750

Cylinders:	5	6
L _{min}	mm	7,399

Dry mass

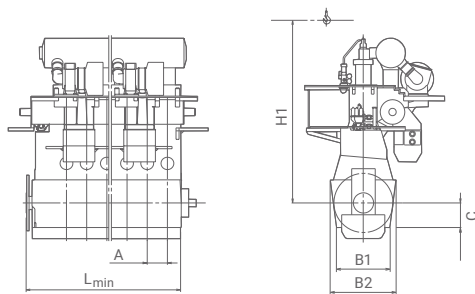
Tier II	t	525	590
---------	---	-----	-----

Tier III (added)

EGRBP	t	11	11
HPSCR	t	3	3
LPSCR	t	0	0

Dual fuel (added)

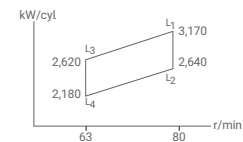
GI	t	5	6
GA	t	5	5



Tier II Tier III

MAN B&W G70ME-C10.5-GI

缸数 Cyl.	L ₁ kW
5	15,850
6	19,020

冲程 Stroke: 3,256 mm/L₁ MEP: 19.0 bar

MAN B&W G70ME-C10.5-GI (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Gas optimised	128.6+3.9/159.5	127.8+3.0/161.5	134.6+2.5/166.0

MAN B&W G70ME-C10.5-GI-EGRBP (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	128.6+3.9/159.5	127.8+3.0/161.5	136.3+2.5/168.0
Tier III mode	134.6+3.9/162.5	134.6+3.0/161.5	138.0+2.5/165.0

MAN B&W G70ME-C10.5-GI-HPSCR (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	128.6+3.9/159.5	127.8+3.0/161.5	135.4+2.5/167.0
Tier III mode	130.3+3.9/157.5	131.2+3.0/157.5	135.4+2.5/162.0

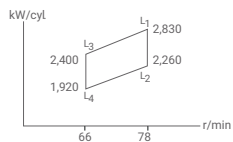
MAN B&W G70ME-C10.5-GI-LPSCR (gas optimised)

	L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]		
	50%	75%	100%
Tier II mode	128.6+3.9/159.5	129.2+3.0/162.0	135.4+2.5/167.0
Tier III mode	130.3+3.9/157.5	132.9+3.0/159.5	136.2+2.5/163.0

MAN B&W G70ME-C10.5-GA

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程Stroke: 3,256 mm/L ₁ MEP: 17.4 bar
5	14,150	
6	16,980	



MAN B&W G70ME-C10.5-GA-EGRBP

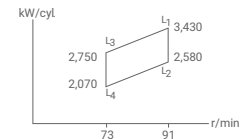
L₁ dual fuel mode equivalent SFOC (heat-rate)/fuel oil mode SFOC [g/kWh]

	50%	75%	100%
Tier III mode	162.0 (6,918)/171.9	161.0 (6,876)/171.0	166.0 (7,088)/179.0
Tier II mode	162.0 (6,918)/170.1	161.0 (6,876)/169.2	166.0 (7,088)/177.1

MAN B&W S70ME-C10.5

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,800 mm/L ₁ MEP: 21.0 bar
5	17,150	
6	20,580	
7	24,010	
8	27,440	



MAN B&W S70ME-C10.5

L₁ SFOC [g/kWh]

	50%	75%	100%
Opt. load range			
High-load	164.5	163.0	167.0
Part-load EGB	162.5	161.5	169.5
Low-load EGB	160.5	162.5	169.5

MAN B&W S70ME-C10.5-EGRBP

L₁ SFOC [g/kWh]

	50%	75%	100%
Tier II mode	160.5	162.5	170.0
Tier III mode	167.5	167.0	172.0

MAN B&W S70ME-C10.5-HPSCR

L₁ SFOC [g/kWh]

	50%	75%	100%
Tier II mode	160.5	162.5	169.5
Tier III mode	162.5	163.5	170.0

MAN B&W S70ME-C10.5

Tier II Tier III

Specifications

Dimensions:		A	B1	B2	C	H1
Fuel oil	mm	1,098	4,012	4,150	1,520	12,675
GI	mm	1,098	4,012	4,150	1,520	12,725

Cylinders:	5	6	7	8
L _{min} mm	7,581	8,679	9,777	10,875

Dry mass

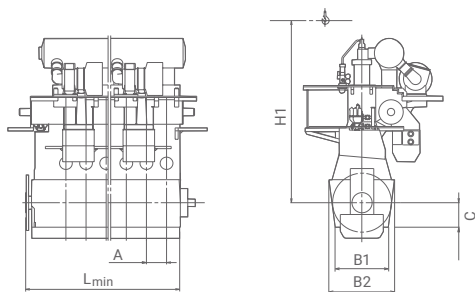
Tier II	t	460	510	545	615
---------	---	-----	-----	-----	-----

Tier III (added)

EGRBP	t	11	11	12	12
HPSCR	t	4	5	6	7

Dual fuel (added)

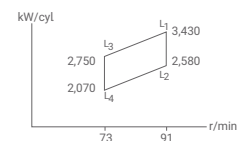
GI	t	5	6	7	8
----	---	---	---	---	---



Tier II Tier III

MAN B&W S70ME-C10.5-GI

缸数 Cyl.	L ₁ kW
5	17,150
6	20,580
7	24,010
8	27,440

冲程 Stroke: 2,800 mm/L₁ MEP: 21.0 bar

MAN B&W S70ME-C10.5-GI (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	133.6+4.0/164.5	133.1+3.0/163.0	139.6+2.5/167.0

MAN B&W S70ME-C10.5-GI-EGRBP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	133.6+4.0/160.5	136.1+3.0/162.5	143.0+2.5/170.0
Tier III mode	139.6+4.0/167.5	139.9+3.0/167.0	144.7+2.5/172.0

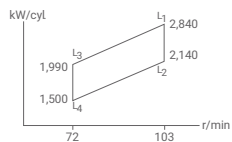
MAN B&W S70ME-C10.5-GI-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	133.6+4.0/160.5	136.1+3.0/162.5	142.6+2.5/169.5
Tier III mode	134.9+4.0/162.0	136.9+3.0/163.5	143.0+2.5/170.0

MAN B&W G60ME-C10.5

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,790 mm/L ₁ MEP: 21.0 bar
5	14,200	
6	17,040	
7	19,880	
8	22,720	



MAN B&W G60ME-C10.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	161.5	160.0	164.0
Part-load EPT	159.5	158.5	166.5
Low-load EPT	157.5	159.5	166.5

MAN B&W G60ME-C10.5-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	159.5	167.0
Tier III mode	164.5	164.0	169.0

MAN B&W G60ME-C10.5-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	159.5	166.5
Tier III mode	159.0	160.5	167.0

Tier II Tier III

MAN B&W G60ME-C10.5

Specifications

Dimensions:	A	B1	B2	C	H1	H4
Fuel oil mm	1,080	4,090	4,220	1,500	12,175	11,975
GI mm	1,080	4,090	4,220	1,500	12,175	11,975
LGIP mm	1,080	4,090	4,220	1,500	12,175	11,975

Cylinders:	5	6	7	8
L _{min} mm	7,390	8,470	9,550	10,630

Dry mass

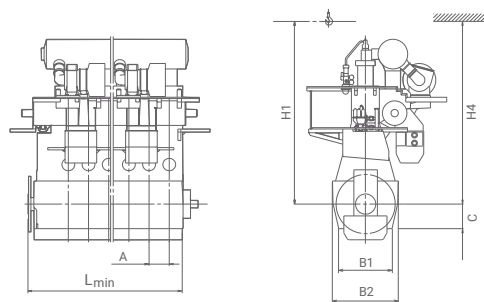
Tier II	t	395	440	490	555
---------	---	-----	-----	-----	-----

Tier III (added)

EGRBP	t	10	10	11	11
HPSCR	t	3	4	5	5

Dual fuel (added)

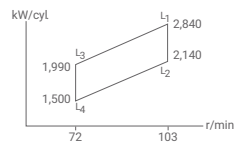
GI	t	5	5	6	7
LGIP	t	5	5	6	7



MAN B&W G60ME-C10.5-GI

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,790 mm/L ₁ MEP: 21.0 bar
5	14,200	
6	17,040	
7	19,880	
8	22,720	



MAN B&W G60ME-C10.5-GI (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	131.1+3.9/161.5	130.6+3.0/160.0	137.1+2.5/164.0

MAN B&W G60ME-C10.5-GI-EGRBP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	131.1+3.9/157.5	133.5+3.0/159.5	140.5+2.5/167.0
Tier III mode	137.1+3.9/164.5	137.4+3.0/164.0	142.2+2.5/169.0

MAN B&W G60ME-C10.5-GI-HPSCR (standard gas tuning)

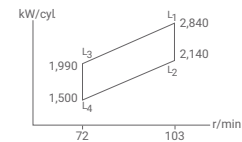
L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	131.1+3.9/157.5	133.5+3.0/159.5	140.1+2.5/166.5
Tier III mode	132.4+3.9/159.0	134.4+3.0/160.5	140.5+2.5/167.0

Note: Also available with 3.0% pilot oil fraction

Tier II Tier III

MAN B&W G60ME-C10.5-LGIP

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,790 mm/L ₁ MEP: 21.0 bar
5	14,200	
6	17,040	
7	19,880	
8	22,720	



MAN B&W G60ME-C10.5-LGIP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	137.7+13.0/161.5	139.2+9.9/160.0	144.6+8.2/164.0

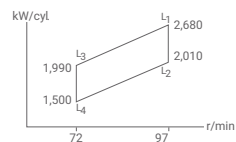
MAN B&W G60ME-C10.5-LGIP-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	134.0+13/157.5	138.7+9.9/159.5	146.9+8.2/166.5
Tier III mode	135.4+13/159.0	139.6+9.9/160.5	147.4+8.2/167.0

MAN B&W G60ME-C9.5-GIE

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,790 mm/L ₁ MEP: 21.0 bar
5	13,400	
6	16,080	
7	18,760	
8	21,440	



MAN B&W G60ME-C9.5-GIE (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Gas optimised	139.3+13.6/168.5	141.2+10.4/167.5	146.0+8.6/171.0

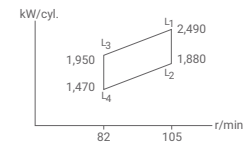
MAN B&W G60ME-C9.5-GIE-HPSCR (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	134.8+13.6/163.5	140.8+10.4/167.0	147.4+8.6/172.5
Tier III mode	136.1+13.6/165.0	141.7+10.4/168.0	147.8+8.6/173.0

MAN B&W S60ME-C10.6

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,400 mm/L ₁ MEP: 21.0 bar
5	12,450	
6	14,940	
7	17,430	
8	19,920	



MAN B&W S60ME-C10.6

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Opt. load range			
High-load	157.5	156.0	160.0
Low-load EGB	153.5	154.0	164.0

MAN B&W S60ME-C10.6-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	153.5	154.0	165.0
Tier III mode	156.5	156.0	165.0

MAN B&W S60ME-C10.6-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	153.5	154.0	164.0
Tier III mode	153.5	154.0	164.5

MAN B&W S60ME-C10.6

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil	940	3,420	3,550	1,300	10,500	10,000	10,350

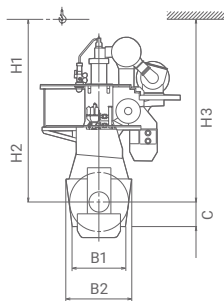
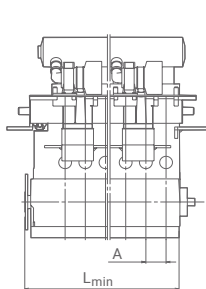
Cylinders:	5	6	7	8
L _{min} mm	6,502	7,442	8,382	9,322

Dry mass

Tier II	t	320	345	370	410
---------	---	-----	-----	-----	-----

Tier III (added)

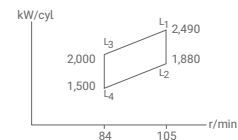
EGRBP	t	10	10	11	11
HPSCR	t	6	6	6	6



Tier II Tier III

MAN B&W S60ME-C10.5

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,400 mm/L ₁ MEP: 21.0 bar
5	12,450	
6	14,940	
7	17,430	
8	19,920	



MAN B&W S60ME-C10.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	164.5	162.0	166.0
Part-load EGB	161.5	160.5	167.5
Low-load EGB	159.5	161.5	167.5

MAN B&W S60ME-C10.5-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	159.5	161.5	168.0
Tier III mode	167.5	166.0	171.0

MAN B&W S60ME-C10.5-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	159.5	161.5	167.5
Tier III mode	161.0	162.5	168.0

MAN B&W S60ME-C10.5

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	940	3,420	3,550	1,300	10,500	9,775	10,125
GI mm	940	3,420	3,550	1,300	10,500	10,025	10,375
LGIP mm	940	3,420	3,550	1,300	10,500	10,175	10,525

Cylinders:	5	6	7	8
L _{min} mm	6,502	7,442	8,382	9,322

Dry mass

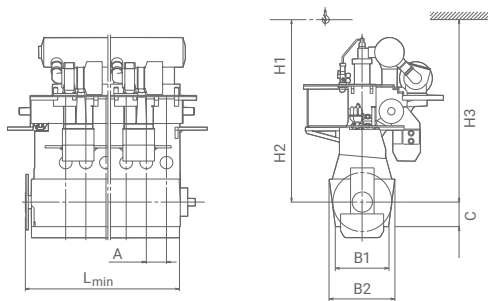
Tier II t	305	330	355	395
-----------	-----	-----	-----	-----

Tier III (added)

EGRBP t	10	10	11	11
HPSCR t	6	6	6	6

Dual fuel (added)

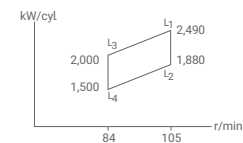
GI t	5	5	6	7
LGIP t	5	5	6	7



MAN B&W S60ME-C10.5-GI

Tier II Tier III

缸数 Cyl.	L ₁ kW
5	12,450
6	14,940
7	17,430
8	19,920

冲程 Stroke: 2,400 mm/L₁ MEP: 21.0 bar

MAN B&W S60ME-C10.5-GI (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Standard tuned	133.7+4.0/164.5	132.4+3.0/162.0	138.8+2.5/166.0

MAN B&W S60ME-C10.5-GI-EGRBP (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Tier II mode	132.8+4.0/159.5	135.4+3.0/161.5	141.3+2.5/168.0
Tier III mode	139.7+4.0/167.5	139.3+3.0/166.0	143.9+2.5/171.0

MAN B&W S60ME-C10.5-GI-HPSCR (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

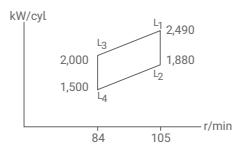
	50%	75%	100%
Tier II mode	132.8+4.0/159.5	135.4+3.0/161.5	140.9+2.5/167.5
Tier III mode	134.1+4.0/161.0	136.3+3.0/162.5	141.3+2.5/168.0

Note: Also available with 3.0% pilot oil fraction

MAN B&W S60ME-C10.5-LGIP

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,400 mm/L ₁ MEP: 21.0 bar
5	12,450	
6	14,940	
7	17,430	
8	19,920	



MAN B&W S60ME-C10.5-LGIP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Standard tuned	140.5+13.2/164.5	141.2+10.1/162.0	146.4+8.3/166.0

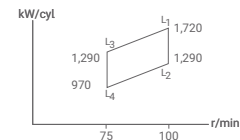
MAN B&W S60ME-C10.5-LGIP-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	135.8+13.2/159.5	140.7+10.1/161.5	147.8+8.3/167.5
Tier III mode	137.2+13.2/161.0	141.6+10.1/162.5	148.2+8.3/168.0

MAN B&W G50ME-C10.7

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,500 mm/L ₁ MEP: 21.0 bar
5	8,600	
6	10,320	
7	12,040	
8	13,760	



MAN B&W G50ME-C10.7

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Opt. load range			
High-load	161.5	160.0	164.0
Low-load EGB	157.5	159.5	166.5

MAN B&W G50ME-C10.7-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	159.5	167.0
Tier III mode	164.5	164.0	169.0

MAN B&W G50ME-C10.7-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	159.5	166.5
Tier III mode	159.0	160.5	167.0

MAN B&W G50ME-C10.7

Tier II Tier III

Specifications

Dimensions:		A	B1	B2	C	H1	H2	H3
Fuel oil	mm	872	-	3,652	1,205	10,775	10,075	9,825

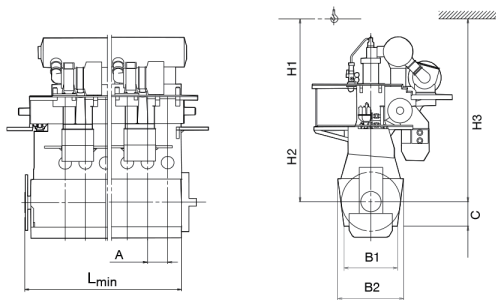
Cylinders:	5	6	7	8
L _{min} mm	5,748	6,620	7,492	8,364

Dry mass

Tier II	t	211	246	276	311
---------	---	-----	-----	-----	-----

Tier III (added)

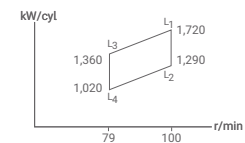
EGRBP	t	12	12	13	13
HPSCR	t	6	6	7	7



Tier II Tier III

MAN B&W G50ME-C9.6-GI

缸数 Cyl.	L ₁ kW
5	8,600
6	10,320
7	12,040
8	13,760
9	15,480

冲程 Stroke: 2,500 mm/L₁ MEP: 21.0 bar

MAN B&W G50ME-C9.6-GI (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	134.4+4.0/165.5	133.9+3.1/164.0	140.5+2.5/168.0

MAN B&W G50ME-C9.6-GI-EGRBP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	134.4+4.0/161.5	136.9+3.1/163.5	143.9+2.5/171.0
Tier III mode	140.4+4.0/168.5	140.7+3.1/168.0	145.6+2.5/173.0

MAN B&W G50ME-C9.6-GI-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	134.4+4.0/161.5	136.9+3.1/163.5	143.5+2.5/170.5
Tier III mode	135.7+4.0/163.0	137.7+3.1/164.5	143.9+2.5/171.0

Note: Also available with 3.0% pilot oil fraction

MAN B&W G50ME-C9.6

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	872	3,776	3,652	1,205	10,775	10,075	9,825
GI mm	872	3,776	3,652	1,205	10,775	10,075	9,825
LGIM mm	872	3,776	3,652	1,205	10,775	10,075	9,825
LGIP mm	872	3,776	3,652	1,205	10,775	10,075	9,825

Cylinders:	5	6	7	8	9
L _{min} mm	5,748	6,620	7,492	8,364	9,236

Dry mass

Tier II	t	211	246	276	311	346
---------	---	-----	-----	-----	-----	-----

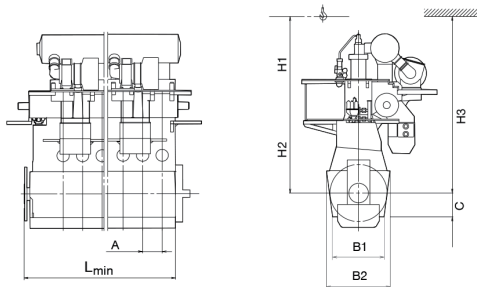
Tier III (added)

EGRBP	t	12	12	13	13	13
HPSCR	t	6	6	7	7	7

Dual fuel (added)

GI	t	4	4	5	5	6
LGIM	t	7	7	8	9	10
LGIP	t	6	6	7	8	9

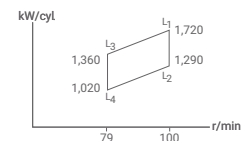
*Tier III compliance



Tier II Tier III

MAN B&W G50ME-C9.6-LGIM

缸数 Cyl.	L ₁ kW
5	8,600
6	10,320
7	12,040
8	13,760
9	15,480

冲程 Stroke: 2,500 mm/L₁ MEP: 21.0 bar

MAN B&W G50ME-C9.6-LGIM (standard methanol tuning)

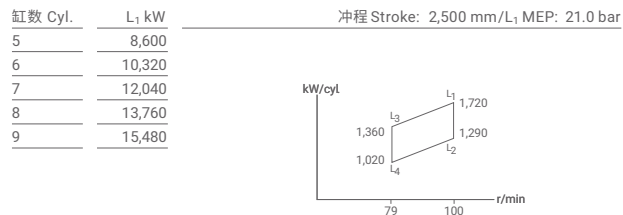
L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Standard tuned	326.3+13.3/165.5	329.7+10.2/164.4	342.5+8.4/168.0

MAN B&W G50ME-C9.6-LGIM-EGRBP (standard methanol tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]	50%	75%	100%
Tier II mode	317.7+13.3/161.5	328.7+10.2/163.5	348.9+8.4/171.0
Tier III mode	332.7+13.3/168.5	338.3+10.2/168.0	353.2+8.4/173.0

MAN B&W G50ME-C9.6-LGIP

Tier II Tier III



MAN B&W G50ME-C9.6-LGIP (standard gas tuning)

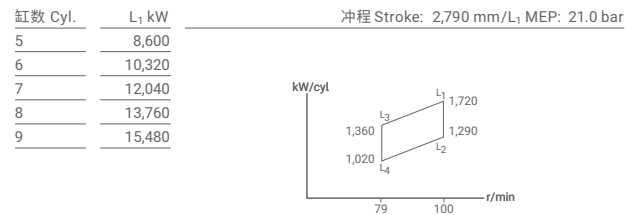
L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Standard tuned	141.2+13.3/165.5	142.6+10.2/164.0	148.2+8.4/168.0

MAN B&W G50ME-C9.6-LGIP-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	137.4+13.3/161.5	142.2+10.2/163.5	150.5+8.4/170.5
Tier III mode	138.8+13.3/163.0	143.1+10.2/164.5	150.9+8.4/171.0

Tier II Tier III

MAN B&W G50ME-C9.5-GIE



MAN B&W G50ME-C9.5-GIE (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Gas optimised	140.1+13.7/169.5	142.1+10.4/168.5	146.9+8.6/172.0

MAN B&W G50ME-C9.5-GIE-HPSCR (gas optimised)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	135.6+13.7/164.5	141.6+10.4/168.0	148.2+8.6/173.5
Tier III mode	136.9+13.7/166.0	142.5+10.4/169.0	148.7+8.6/174.0

MAN B&W G50ME-C9.5

Tier II Tier III

Specifications

Dimensions:		A	B1	B2	C	H1	H2	H3
GIE	mm	872	3,776	3,652	1,205	10,775	10,075	9,825

Cylinders:	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
L _{min} mm	5,748	6,620	7,492	8,364	9,236

Dry mass

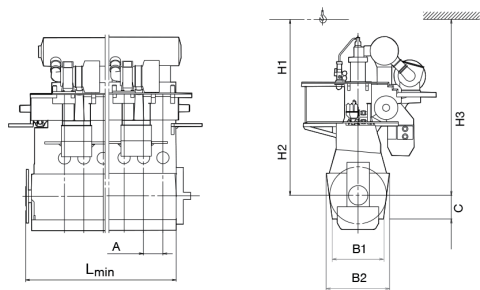
Tier II	t	211	246	276	311	346
---------	---	-----	-----	-----	-----	-----

Tier III (added)

HPSCR	t	6	6	7	7	7
-------	---	---	---	---	---	---

Dual fuel (added)

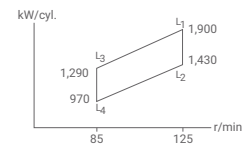
GIE	t	4	4	5	5	6
-----	---	---	---	---	---	---



Tier II Tier III

MAN B&W S50ME-C10.6

缸数 Cyl.	L ₁ kW
5	9,500
6	11,400
7	13,300
8	15,200
9	17,100

冲程 Stroke: 2,214 mm/L₁ MEP: 21.0 bar

MAN B&W S50ME-C10.6

L₁ SFOC [g/kWh]

Opt. load range	50%	75%	100%
High-load	158.5	157.0	161.0
Low-load EGB	154.5	155.0	165.0

MAN B&W S50ME-C10.6-EGRBP

L₁ SFOC [g/kWh]

	50%	75%	100%
Tier II mode	154.5	155.0	166.0
Tier III mode	157.5	157.0	166.0

MAN B&W S50ME-C10.6-HPSCR

L₁ SFOC [g/kWh]

	50%	75%	100%
Tier II mode	154.5	155.0	165.0
Tier III mode	154.5	155.0	165.0

MAN B&W S50ME-C10.6

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	875	3,350	3,290	1,190	-	-	-

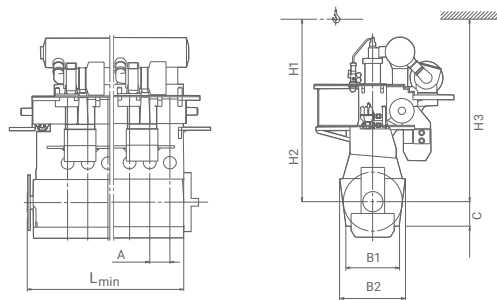
Cylinders:	5	6	7	8	9
L _{min} mm	5,747	6,622	7,497	8,372	9,247

Dry mass

Tier II	t	195	226	262	293	324
---------	---	-----	-----	-----	-----	-----

Tier III (added)

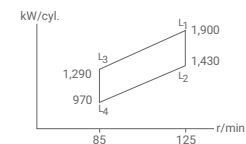
EGRBP	t	12	12	13	13	13
HPSCR	t	6	6	6	6	6



MAN B&W S50ME-C9.7

Tier II Tier III

缸数 Cyl.	L ₁ kW
5	9,500
6	11,400
7	13,300
8	15,200
9	17,100

冲程 Stroke: 2,214 mm/L₁ MEP: 21.0 bar

MAN B&W S50ME-C9.7

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	161.5	160.5	165.0
Part-load EGB	159.5	159.0	167.5
Low-load EGB	157.5	160.0	167.5

MAN B&W S50ME-C9.7-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	160.0	168.0
Tier III mode	164.5	164.5	170.0

MAN B&W S50ME-C9.7-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	157.5	160.0	167.5
Tier III mode	159.0	161.0	168.0

MAN B&W S50ME-C9.7

Tier II Tier III

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	875	3,350	3,290	1,190	9,875	9,200	8,850
GI mm	875	3,350	3,290	1,190	-	-	

Cylinders:	5	6	7	8	9
L _{min} mm	5,747	6,622	7,497	8,372	9,247

Dry mass

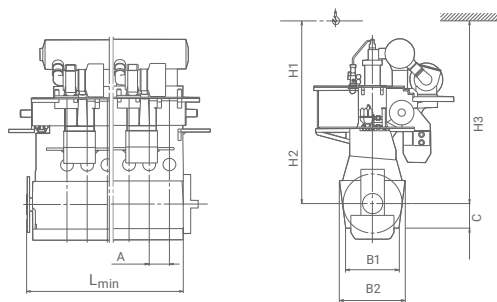
Tier II	t	193	223	259	289	320
---------	---	-----	-----	-----	-----	-----

Tier III (added)

EGRBP	t	12	12	13	13	13
HPSCR	t	4	4	5	6	7

Dual fuel (added)

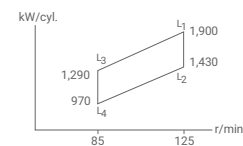
GI	t	4	4	5	5	6
----	---	---	---	---	---	---



Tier II Tier III

MAN B&W S50ME-C9.7-GI

缸数 Cyl.	L ₁ kW
5	9,500
6	11,400
7	13,300
8	15,200
9	17,100

冲程 Stroke: 2,214 mm/L₁ MEP: 21.0 bar

MAN B&W S50ME-C9.7-GI (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Standard tuned	131.1+3.9/161.5	131.2+3.0/160.5	137.9+2.5/165.0

MAN B&W S50ME-C9.7-GI-EGRBP (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Tier II mode	131.1+3.9/157.5	134.2+3.0/160.0	141.4+2.5/168.0
Tier III mode	137.1+3.9/164.5	138.0+3.0/164.5	143.1+2.5/170.0

MAN B&W S50ME-C9.7-GI-HPSCR (standard gas tuning)

L₁ dual fuel mode (SGC+SPOC (1.5%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Tier II mode	131.1+3.9/157.5	134.2+3.0/160.0	140.9+2.5/167.5
Tier III mode	132.4+3.9/159.0	135.0+3.0/161.0	141.4+2.5/168.0

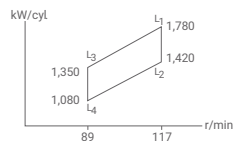
Note: Also available with 3.0% pilot oil fraction

MAN B&W S50ME-C9.6-LGIM

Tier II Tier III

缸数 Cyl. L₁ kW 冲程 Stroke: 2,214 mm/L₁ MEP: 21.0 bar

5	8,900
6	10,680
7	12,460
8	14,240
9	16,020



MAN B&W S50ME-C9.6-LGIM (standard methanol tuning)

L₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Standard tuned	322.4+13.3/163.5	327.2+10.1/162.5	340.4+8.4/167.0

MAN B&W S50ME-C9.6-LGIM-EGRBP

L₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]

	50%	75%	100%
Tier II mode	313.8+13.3/159.5	326.2+10.1/162.0	346.9+8.4/170.0
Tier III mode	328.8+13.3/166.5	335.8+10.1/166.5	351.1+8.4/172.0

Tier II Tier III

MAN B&W S50ME-C9.6

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	875	3,350	3,290	1,190	9,875	9,200	8,850

Cylinders:	5	6	7	8	9
L _{min} mm	6,073	6,948	7,823	8,698	9,573

Dry mass

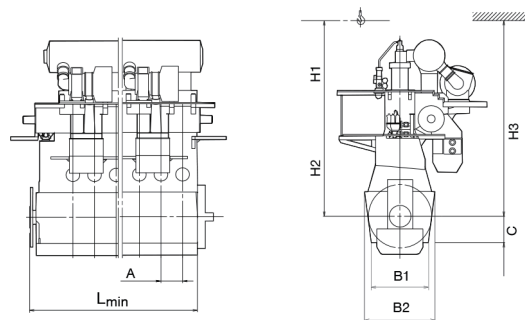
Tier II	t	190	220	255	285	315
---------	---	-----	-----	-----	-----	-----

Tier III (added)

EGRBP	t	12	12	13	13	13
-------	---	----	----	----	----	----

Dual fuel(added)

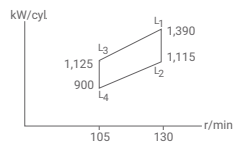
LGIM	t	-	-	-	-	-
------	---	---	---	---	---	---



MAN B&W S46ME-C8.6

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 1,932 mm/L ₁ MEP: 20.0 bar
5	6,950	
6	8,340	
7	9,730	
8	11,120	



MAN B&W S46ME-C8.6

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	165.5	163.0	167.0
Part-load EGB	163.5	161.5	169.5
Low-load EGB	161.5	162.5	169.5

MAN B&W S46ME-C8.6-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	161.5	162.5	170.0
Tier III mode	168.5	167.0	172.0

MAN B&W S46ME-C8.6-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	161.5	162.5	169.5
Tier III mode	163.0	163.5	170.0

Tier II Tier III

MAN B&W S46ME-C8.6

Specifications

Dimensions:	A	B	C	H1	H2	H3
Fuel oil mm	782	2,924	986	8,725	8,175	7,925

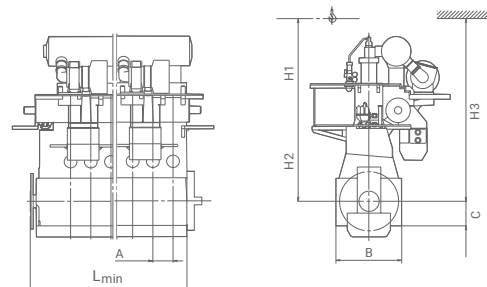
Cylinders:	5	6	7	8
L _{min} mm	5,100	5,882	6,664	7,446

Dry mass

Tier II	t	150	168	191	211
---------	---	-----	-----	-----	-----

Tier III (added)

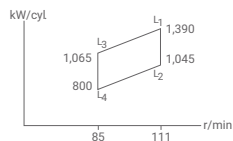
EGRBP	t	12	12	12	12
HPSCR	t	3	3	4	4



MAN B&W G45ME-C9.7

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,250 mm/L ₁ MEP: 21.0 bar
5	6,950	
6	8,340	
7	9,730	
8	11,120	



MAN B&W G45ME-C9.7

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	162.5	161.0	165.0
Part-load EGB	160.5	159.5	167.5
Low-load EGB	158.5	161.5	167.5

MAN B&W G45ME-C9.7-EGRBP

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	158.5	161.5	168.0
Tier III mode	165.5	165.0	170.0

MAN B&W G45ME-C9.7-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	158.5	160.5	167.5
Tier III mode	160.0	161.5	168.0

Note: Also available on request with extended layout for 5 and 6 cylinders

Tier II Tier III

MAN B&W G45ME-C9.7

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	784	3,350	3,260	1,169	9,725	9,525	9,250

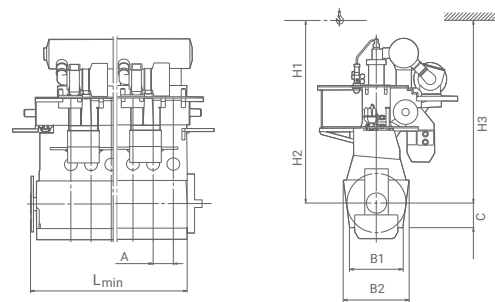
Cylinders:	5	6	7	8
L _{min} mm	5,200	5,984	6,768	7,552

Dry mass

Tier II	t	165	186	209	238
---------	---	-----	-----	-----	-----

Tier III (added)

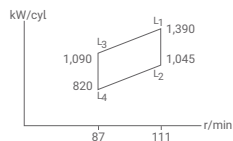
EGRBP	t	12	12	12	12
HPSCR	t	3	3	4	4



MAN B&W G45ME-C9.5-GI

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 2,250 mm/L ₁ MEP: 21.0 bar
5	6,950	
6	8,340	
7	9,730	
8	11,120	



MAN B&W G45ME-C9.5-GI (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (3.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Standard tuned	133.6+8.1/168.5	133.2+6.2/166.0	140.0+5.1/170.0

MAN B&W G45ME-C9.5-GI-EGRBP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (3.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	132.7+8.1/163.5	136.2+6.2/165.5	142.5+5.1/172.0
Tier III mode	139.5+8.1/171.5	140.0+6.2/170.0	145.1+5.1/175.0

MAN B&W G45ME-C9.5-GI-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (3.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	132.7+8.1/163.5	136.2+6.2/165.5	142.1+5.1/171.5
Tier III mode	134.0+8.1/165.0	137.0+6.2/166.5	142.5+5.1/172.0

Tier II Tier III

MAN B&W G45ME-C9.5

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	784	3,350	3,260	1,169	9,775	9,575	9,275

Cylinders:	5	6	7	8
L _{min} mm	5,200	5,984	6,768	7,552

Dry mass

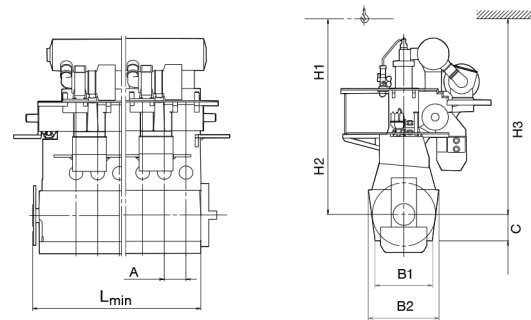
Tier II	t	163	183	206	234
---------	---	-----	-----	-----	-----

Tier III (added)

EGRBP	t	12	12	12	12
HPSCR	t	3	3	4	4

Dual fuel(added)

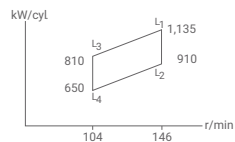
GI	t	4	4	5	5
----	---	---	---	---	---



MAN B&W S40ME-C9.5

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 1,770 mm/L ₁ MEP: 21.0 bar
5	5,675	
6	6,810	
7	7,945	
8	9,080	
9*	10,215	



MAN B&W S40ME-C9.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	172.5	170.0	174.0
Part-load EGB	169.5	168.5	175.5
Low-load EGB	167.5	169.5	175.5

MAN B&W S40ME-C9.5-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	167.5	169.5	175.5
Tier III mode	169.0	170.5	176.0

Tier II Tier III

MAN B&W S40ME-C9.5

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	700	2,650	2,610	950	7,800	7,475	7,200

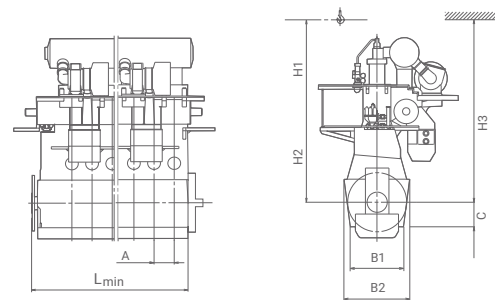
Cylinders:	5	6	7	8	9
L _{min} mm	4,642	5,342	6,042	6,742	7,442

Dry mass

Tier II	t	107	126	142	157	189
---------	---	-----	-----	-----	-----	-----

Tier III (added)

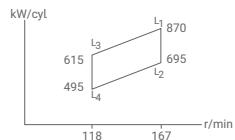
EGRBP	t	10	10	10	10	10
HPSCR	t	3	3	4	4	-
LPSCR	t	0	0	0	0	0



MAN B&W S35ME-C9.7

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 1,550 mm/L ₁ MEP: 21.0 bar
5	4,350	
6	5,220	
7	6,090	
8	6,960	



MAN B&W S35ME-C9.7

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	169.5	167.0	171.0
Part-load EGB	166.5	165.5	172.5
Low-load EGB	164.5	166.5	172.5

MAN B&W S35ME-C9.7-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	164.5	166.5	172.5
Tier III mode	166.0	167.5	173.0

MAN B&W S35ME-C9.7-LPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	164.5	166.5	172.5
Tier III mode	165.5	167.5	173.5

Note: All fuel consumption figures are based on engine driven HPS

Tier II Tier III

MAN B&W S35ME-C9.7

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	612	2,300	2,288	830	7,025	6,675	6,275
GI mm	612	2,300	2,288	830	7,025	6,675	6,275
LGIP mm	612	2,300	2,288	830	7,025	6,675	6,275

Cylinders:	5	6	7	8
L _{min} mm	4,080	4,692	5,304	5,916

Dry mass

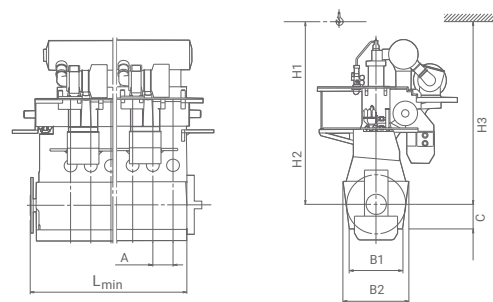
Tier II	t	77	87	98	108
---------	---	----	----	----	-----

Tier III (added)

EGRBP	t	8	8	8	8
HPSCR	t	3	3	4	4
LPSCR	t	0	0	0	0

Dual fuel (added)

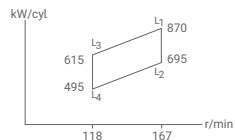
GI	t	3	3	4	4
LGIP	t	5	5	6	6



MAN B&W S35ME-C9.7-GI

Tier II Tier III

缸数 Cyl.	L ₁ kW	冲程 Stroke: 1,550 mm/L ₁ MEP: 21.0 bar
5	4,350	
6	5,220	
7	6,090	
8	6,960	



MAN B&W S35ME-C9.7-GI (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Standard tuned	129.8+13.6/169.5	130.5+10.4/167.0	137.9+8.6/171.0

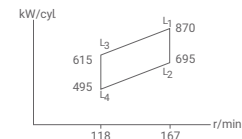
MAN B&W S35ME-C9.7-GI-HPSCR (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	128.9+13.6/164.5	133.5+10.4/166.5	140.0+8.6/172.5
Tier III mode	130.2+13.6/166.0	134.3+10.4/167.5	140.4+8.6/173.0

MAN B&W S35ME-C9.7-LGIP

Tier II Tier III

Cyl.	L ₁ kW	Stroke: 1,550 mm/L ₁ MEP: 21.0 bar
5	4,350	
6	5,220	
7	6,090	
8	6,960	



MAN B&W S35ME-C9.7-LGIP (standard gas tuning)

L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Standard tuned	144.7+13.6/169.5	145.5+10.4/167.0	150.8+8.6/171.0

MAN B&W S35ME-C9.7-LGIP-HPSCR (standard gas tuning)

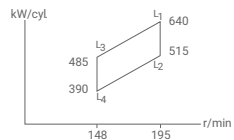
L ₁ dual fuel mode (SGC+SPOC (5.0%))/fuel oil mode (SFOC) [g/kWh]			
	50%	75%	100%
Tier II mode	140.1+13.6/164.5	145.1+10.4/166.5	152.2+8.6/172.5
Tier III mode	141.5+13.6/166.0	146.0+10.4/167.5	152.7+8.6/173.0

Note: All fuel consumption figures are based on engine driven HPS

MAN B&W S30ME-B9.5

Tier II Tier III

Cyl.	L ₁ kW	Stroke: 1,328 mm/L ₁ MEP: 21.0 bar
5	3,200	
6	3,840	
7	4,480	
8	5,120	



MAN B&W S30ME-B9.5

L ₁ SFOC [g/kWh]			
Opt. load range	50%	75%	100%
High-load	175.5	173.0	176.0

MAN B&W S30ME-B9.5-HPSCR

L ₁ SFOC [g/kWh]			
	50%	75%	100%
Tier II mode	175.5	173.0	176.0
Tier III mode	177.0	174.0	176.5

Tier II Tier III

MAN B&W S30ME-B9.5

Specifications

Dimensions:	A	B1	B2	C	H1	H2	H3
Fuel oil mm	538	1,980	2,020	712	6,025	5,950	5,625

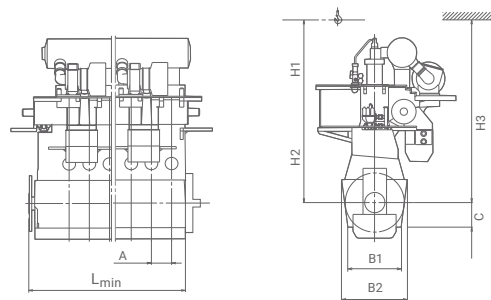
Cylinders:	5	6	7	8
L _{min} mm	3,700	4,238	4,776	5,314

Dry mass

Tier II	t	61	69	77	86
---------	---	----	----	----	----

Tier III (added)

HPSCR	t	3	3	4	4
-------	---	---	---	---	---



四冲程推进主机

Four-stroke Propulsion Engines

