

MAN B&W S80ME-S

Performance data

	Cylinder	7				7			
Cylinder variants	7 8 9								
Operational setup		L1				L2			
Frequency [Hz] - Speed [rpm] - Layout point		50-76.9		60-78.3		50-76.9		60-78.3	
Alternator efficiency @PF0.9		97.00 %	97.00 %	96.60 %	94.90 %	97.00 %	97.00 %	96.60 %	94.90 %
Output per cylinder [kW]		4220		4300		3780		3750	
Engine output mech. [kWm]		29540		30100		26460		26250	
GenSet output [kWe]		28654		29197		25666		25463	
Efficiency mech. (at 100 %)	WB 2008	50.0 %				50.7 %			
Efficiency electr. (at 100 %)	WB 2008	48.5 %				49.2 %			
Load		100 %	75 %	50 %	25 %	100 %	75 %	50 %	25 %
Heat rate mech. [BTU/kWh]	SC; WB 2008	6824	6739	6839	7491	6730	6654	6796	7519
Heat rate electr. [BTU/kWh]	SC; WB 2008	7035	6947	7079	7893	6938	6859	7035	7923
SFOC mech. [g/kWh]	SC; WB 2008	168.6	166.5	169.0	185.1	166.3	164.4	167.9	185.8
SFOC electr. [g/kWh]	SC; WB 2008	173.8	171.7	174.9	195.0	171.4	169.5	173.8	195.8
Heat rate mech. [kJ/kWh]	SC; WB 2008	7200	7110	7215	7903	7100	7020	7170	7933
Heat rate electr. [kJ/kWh]	SC; WB 2008	7423	7330	7469	8328	7320	7237	7422	8359
Specific lube oil consumption [g/kWh]		0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Fuel oil types		HFO; MDO; MGO; DMA; DMZ; crude biofuel				HFO; MDO; MGO; DMA; DMZ; crude biofuel			
Engine-internal emission limit		Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****				Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****			
Continuous low load [%]		5				5			
Low load expressed in MWm and Mwe		1.477		1.505		1.323		1.3125	
	Cylinder	8				8			
Cylinder variants	7 8 9								
Operational setup		L1				L2			
Frequency [Hz] - Speed [rpm] - Layout point		50-76.9		60-78.3		50-76.9		60-78.3	
Alternator efficiency @PF0.9		97.00 %	97.00 %	96.60 %	94.90 %	97.00 %	97.00 %	96.60 %	94.90 %
Output per cylinder [kW]		4220		4300		3780		3750	
Engine output mech. [kWm]		33760		34400		30240		30000	
GenSet output [kWe]		32747		33368		29333		29100	
Efficiency mech. (at 100 %)	WB 2008	50.0 %				50.7 %			
Efficiency electr. (at 100 %)	WB 2008	48.5 %				49.2 %			

	Cylinder	8				8			
Load		100 %	75 %	50 %	25 %	100 %	75 %	50 %	25 %
Heat rate mech. [BTU/kWh]	SC; WB 2008	6824	6739	6839	7491	6730	6654	6796	7519
Heat rate electr. [BTU/kWh]	SC; WB 2008	7035	6947	7079	7893	6938	6859	7035	7923
SFOC mech. [g/kWh]	SC; WB 2008	168.6	166.5	169.0	185.1	166.3	164.4	167.9	185.8
SFOC electr. [g/kWh]	SC; WB 2008	173.8	171.7	174.9	195.0	171.4	169.5	173.8	195.8
Heat rate mech. [kJ/kWh]	SC; WB 2008	7200	7110	7215	7903	7100	7020	7170	7933
Heat rate electr. [kJ/kWh]	SC; WB 2008	7423	7330	7469	8328	7320	7237	7422	8359
Specific lube oil consumption [g/kWh]		0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Fuel oil types		HFO; MDO; MGO; DMA; DMZ; crude biofuel				HFO; MDO; MGO; DMA; DMZ; crude biofuel			
Engine-internal emission control		Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****				Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****			
Continuous low load [%]		5				5			
Low load expressed in MWm and Mwe		1.688		1.72		1.512		1.5	
	Cylinder	9				9			
Cylinder variants		7 8 9							
Operational setup		L1				L2			
Frequency [Hz] - Speed [rpm] - Layout point		50-76.9		60-78.3		50-76.9		60-78.3	
Alternator efficiency @PF0.9		97.00 %	97.00 %	96.60 %	94.90 %	97.00 %	97.00 %	96.60 %	94.90 %
Output per cylinder [kW]		4220		4300		3780		3750	
Engine output mech. [kWm]		37980		38700		34020		33750	
GenSet output [kWe]		36841		37539		32999		32738	
Efficiency mech. (at 100 %)	WB 2008	50.0 %				50.7 %			
Efficiency electr. (at 100 %)	WB 2008	48.5 %				49.2 %			
Load		100 %	75 %	50 %	25 %	100 %	75 %	50 %	25 %
Heat rate mech. [BTU/kWh]	SC; WB 2008	6824	6739	6839	7491	6730	6654	6796	7519
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Specific lube oil consumption [g/kWh]		0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Fuel oil types		HFO; MDO; MGO; DMA; DMZ; crude biofuel				HFO; MDO; MGO; DMA; DMZ; crude biofuel			
Engine-internal emission limit		Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****				Engine internal NO _x emission control: 1850 mg/Nm ³ at 15 % O ₂ , dry at loads from 50 % and upwards****			
Continuous low load [%]		5				5			
Low load expressed in MWm and Mwe		1.899		1.935		1.701		1.6875	

**** Lower NO_x emission values are possible by application of secondary abatement system such as High Pressure SCR (HP-SCR) for any kind of fuel with sulphur content above 0.1 %. Exhaust gas recirculation (EGR) for any kind of fuel with sulphur content above 0.1 %. HP-SCR and EGR will influence engine design and is an ad hoc design job. Low Pressure SCR (LP-SCR) for any kind of fuel with sulphur content equal to or below 0.1 % sulphur. LP-SCR is placed after the turbocharger and seen as external to the engine and considered to be a standard solution covered by many makers of LP-SCR systems

Dimensions

	Cylinder	7	7	8	8
Engine width	[inch]	204	204	204	204
Engine height	[inch]	531	531	531	531
Engine length	[inch]	450	450	503	503
Engine weight	[US t]	1028	1028	1150	1150
Engine transport weight	[US t]	dismantled in parts	dismantled in parts	dismantled in parts	dismantled in parts
Engine width	[mm]	5180	5180	5180	5180
Engine height	[mm]	13492	13492	13492	13492
Engine length	[mm]	11434	11434	12768	12768
Engine weight	[t]	933	933	1043	1043
Engine transport weight	[t]	dismantled in parts	dismantled in parts	dismantled in parts	dismantled in parts

	Cylinder	9	9
Engine width	[inch]	204	204
Engine height	[inch]	531	531
Engine length	[inch]	555	555
Engine weight	[US t]	1271	1271
Engine transport weight	[US t]	dismantled in parts	dismantled in parts
Engine width	[mm]	5180	5180
Engine height	[mm]	13492	13492
Engine length	[mm]	14102	14102
Engine weight	[t]	1153	1153
Engine transport weight	[t]	dismantled in parts	dismantled in parts

Dynamics

	Cylinder	7	7	8	8
Start request to full load** [sec.]		773	773	773	773
Engine load ramping down* [sec.]		40	40	40	40

	Cylinder	9	9
Start request to full load** [sec.]		773	773
Engine load ramping down* [sec.]		40	40

* Afterwards engine operation at idling speed for a minimum of 1 min required before final engine stop according to inertia

** Hot and stand-by

Last updated January 2020

Disclaimer: All data provided in this document is non-binding. This data serves informational purposes only and is especially not guaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.