

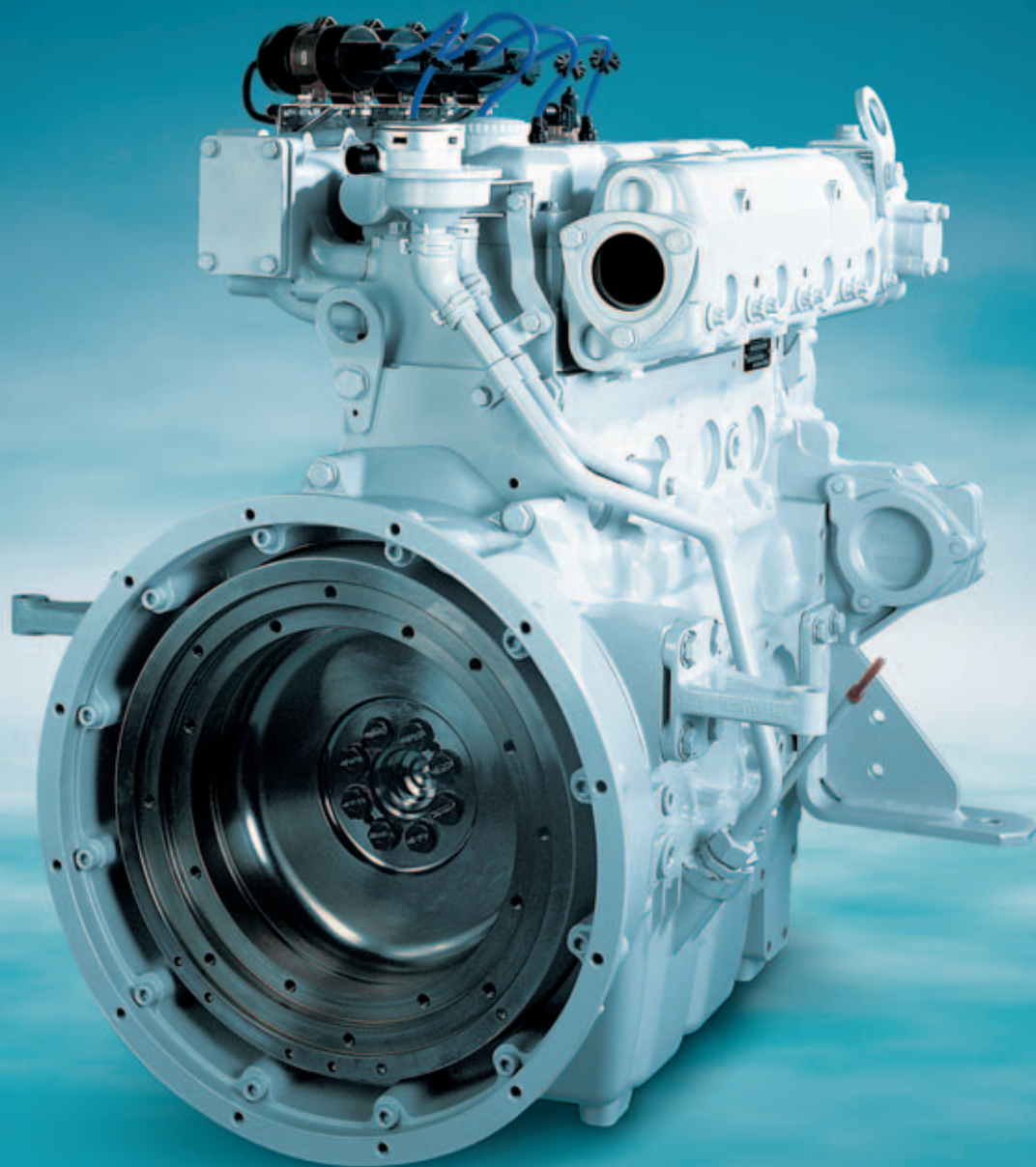
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E0834

4-cylinder gas engine for cogeneration plants



Efficient and Clean

Producers and operators of cogeneration plants have stringent demands. Robust and compact engines have to work reliably round-the-clock. Economic operation is important for the lifetime of the complete plant. Economic means highly efficient use of resources and low running costs of the plant. Due to continuous development MAN engines always work highly efficiently, reliably and environmentally-friendly.

Engine Description E0834

Characteristics

Cylinder	4-cylinder
Arrangement	In line
Operation mode	4-stroke otto gas engine
Type of cooling	Watercooled

Dimensions E0834

Type of engine	E 302/312	
A-Overall length	mm	825
B-Overall width	mm	740
C-Overall height	mm	940
Weight (dry)	kg	430

Customer Benefits

- High efficiency due to optimal combustion
- Compact design
- Reduced operating costs due to low fuel and oil consumption as well as long service life
- Sophisticated and well-tested technology ensures reliable operation and long lifetime
- Low emissions to save the environment

Technical Data E0834

Operation mode		COP with natural gas			
		1 500 (50 Hz)		1 800 (60 Hz)	
at speed	rpm	E 302	E 312	E 302	E 312
Type of engine					
Bore	mm	108	108	108	108
Stroke	mm	125	125	125	125
Displacement	l	4.6	4.6	4.6	4.6
ISO standard rating	kW	54	47	62	53
Air ratio	λ	1.0	1.0	1.0	1.0
Coolant heat ¹	kW	46	39	51	44
Exhaust heat up to 120°C ¹	kW	33	24	40	28
Efficiency ¹					
mechanical	%	36.5	36.4	36.5	34.9
thermal	%	53.5	48.8	53.7	47.4
total	%	90.0	85.3	90.2	82.3
Emissions ² NO _x	mg/Nm ³	< 6 500	< 5 000	< 7 000	< 5 000
Combustion ³		st	st	st	st

¹ At 100% load. ² Correlation 5% oxygen. ³ st=stoichiometric.

Definition of Application

Engines for COP (continuous power) are designed for 8 000 annual operation hours at a load factor of 100%. Usually, these engines are used in cogeneration plants.

