



G 2000 BB

Four axle diesel-hydraulic locomotive for heavy line service

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Diesel Locomotive class G 2000 BB

This successful line locomotive comes in different versions with various diesel engine performances, air conditioning equipment and homologations in different countries.

All versions are based on a robust design and offer easy handling. This frame-based locomotive features conveniently accessible modular superstructures. All major components are provided by renowned suppliers.

Originally the G2000-1 was designed for line service as well as shunting service purposes in order to serve the German market. This was achieved by means of an asymmetric driver's cab and by installing a shunting platform, convenient access ways and radio remote control.

The Italian requirement for operation with two locomotive drivers lead to the development of the G2000-2 and G2000-3 with a full width standard driver's cab. It accommodates two drivers' workplaces next to each other, providing both drivers with equally good visibility conditions.

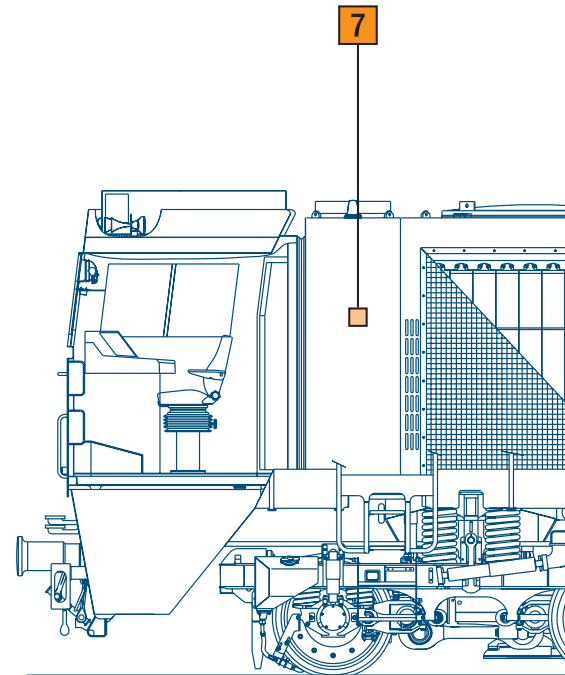
The G 2000-4 and G 2000-5 with 2,700 kW were introduced in order to ensure adequate traction power, even whilst operating in adverse climatic conditions, such as in the north of Scandinavia.

The precisely adjustable anti-slide/slip system secures an optimal power transmission onto the tracks.

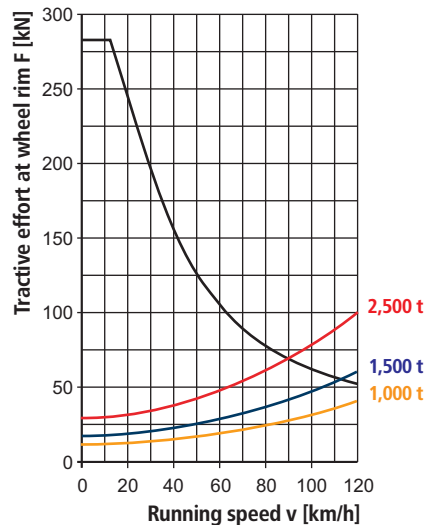
The retarder on the Voith turbo transmission provides wear-free braking, reaching up to 2,000 kW. All main electronic equipment are arranged in an electronic module, which is accessible from within the driver's cabs. An exhaust gas particle filter system, unique in this performance class, is available as an

option. More than 99 % of the particles (according to the VERT criteria) are filtered out without limiting either performance or operation.

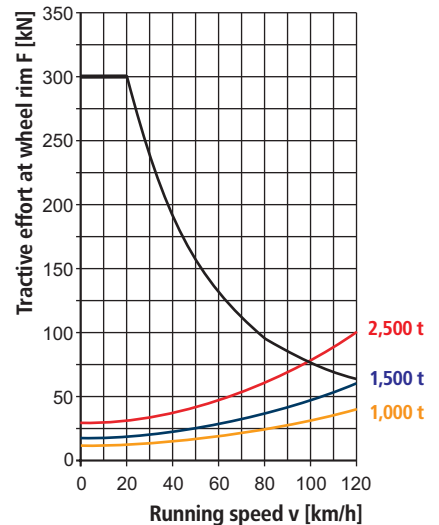
The homologations are granted for the versions in Germany, The Netherlands, Italy, Denmark and Sweden. Multinational homologations are also available. At the time of printing the homologations for Poland, France and Belgium are expected to be approved shortly.



Engine power 2,240 kW
Locomotive weight 87.3 t

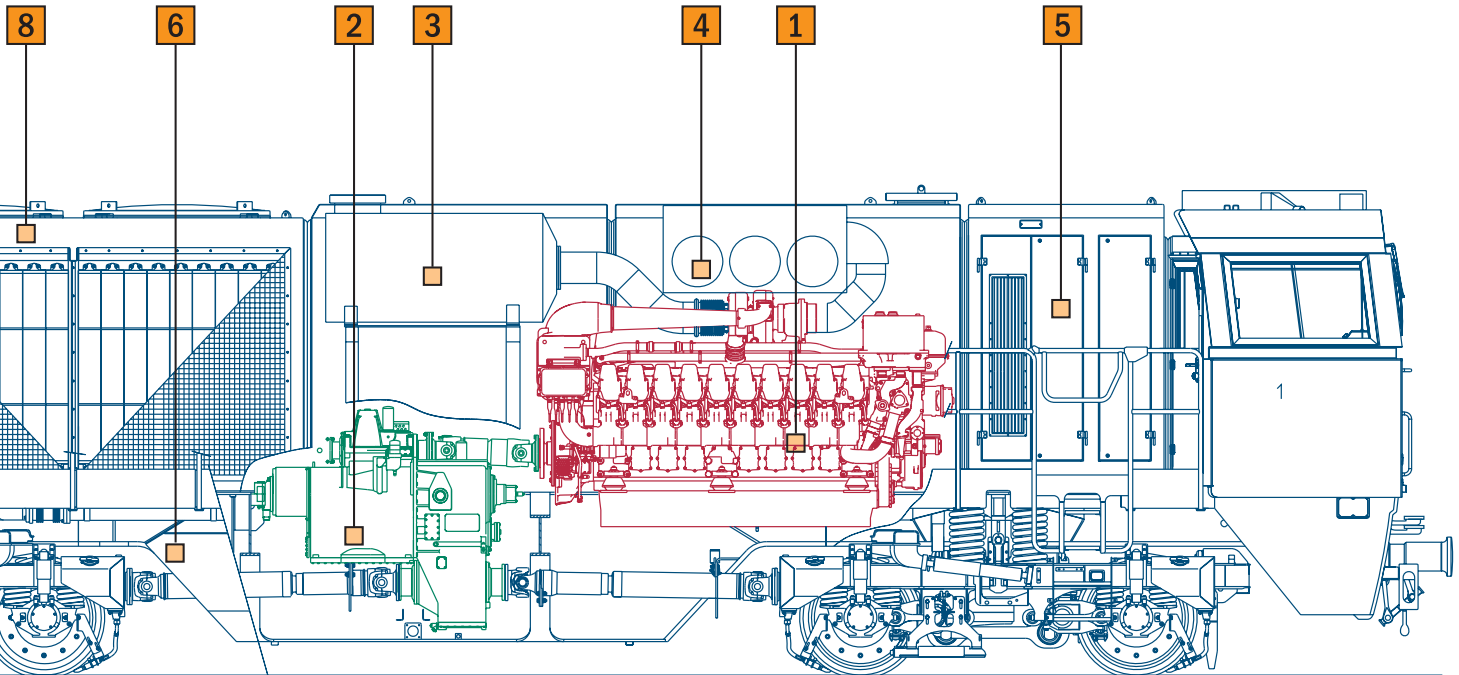


Engine power 2,700 kW
Locomotive weight 90 t



Tractive effort on starting according to Curtius and Kniffler, train resistance on level tangent track according to the formula for complete trains

- | | |
|-----------------------------------|--|
| 1 Diesel engine | 5 Compressed air / break module |
| 2 Turbo gear with retarder | 6 Diesel tank |
| 3 Exhaust silencer | 7 Elektronik module |
| 4 Air intake system | 8 Cooling plant |



OPTIONS

- | | | |
|-------------------------------------|---|--|
| - Broad gauge bogies | - Display at driver's desk | and radio systems and special equipment |
| - Heavy-duty buffers | - Electronic event recorder | - Available for left hand and right hand traffic |
| - Central Coupler acc. to UIC, Z-AK | - Central data management system | - Heated front windows |
| - Wheel flange lubrication | - Remote data transfer for teleservice | - Air conditioning unit |
| - Headlamps with full beam position | - Diagnostic software | - Thermobox/mobile cooling box |
| - Crash energy absorbers | - Constant speed control | - Auxiliary driver's cab heating |
| - Tired wheels | - Shunting coupler | - ETCS |
| - Exhaust gas particle filter | - Multiple traction | - Provisions for service down to -40°C |
| - Pressure refuelling | - Train radio / shunting radio system | |
| - Fuel gauge in driver's cab | - Radio remote control | |
| - Multi frequency horns | - For cross border traffic up to three country packages at the same time, consisting of national train safety | |
| - Electric bell | | |
| - Extended diagnosis system | | |

Technical features

Technical Data		
Diesel engine output	2,240 kW	2,700 kW
Diesel engine	CAT 3516 BHD	MTU 20V 4000 R42
Diesel engine speed	1,800 rpm	
Axle arrangement	B'B'	
Track gauge	1,435 mm	
Weight	84-90 t	
Length above buffer	17,400 mm	
Height	approx. 4,220 mm	approx. 4,250 mm
Width	3,080 mm	
Wheel diameter new/worn	1,000/920 mm	
Maximum speed	120 km/h	
Transmission	Voith L620reU2	Voith L620reU2 with KB 385 retarder
Tractive effort on starting ($i = 0.33$)	282 kN with 87,3 t	292 kN with 90 t
Minimum unrestricted curve radius	80 m	
Diesel fuel capacity	5,000 l	

References

Angel Trains Cargo NV/SA
 Azienda Consorziale Transporti (ACT)
 Del Fungo Giera Servizi Ferroviari S.p.A.
 Hector Rail AB
 KSW Kreisbahn Siegen-Wittgenstein
 Mitsui Rail Capital Europe B.V. (MRCE)
 Neusser Eisenbahn
 RAG Bahn- und Hafenbetriebe GmbH

Railion Italia S.r.l.
 Swiss Federal Railways SBB
 Servizi Ferroviari S.r.l. (SERFER)
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