

Ingeteam will design and deliver traction systems for a new platform of multi-system service and shunting locomotives developed by the German Company SCHALKE, mainly for urban Rail Transport operators.

Orders have been already placed for those new vehicles that cover a wide scope of needs thanks to the different power packs (Diesel, Electric and Battery) offered and to the modules that can be easily integrated.

The traction systems have been designed accordingly to these particular needs and requirements of space and weight, while maintaining high standards of availability, reliability and easy maintenance of traction converters.

Vehicle Characteristics

Inout Catenary Voltage:	750 V DC (Third Rail) 640 V DC (Traction Battery)
Length over couple:	15,340 mm
Width:	2,758 mm
Height:	3,550 mm
Weight:	48 - 64 t
Maximum Speed:	60 km/h
Axle Arrangement:	Bo'Bo'
Track Gauge:	1,000 - 1,676 mm
Tractive Effort:	Up to 200 kN (at $\mu=0,33$)
Power Modules:	Powerpacks (Diesel and Batterie), Pantograph or 3rd Rail
Power Transmission:	AC
Power :	800 kW (e-traction)
Nr. of traction inverters:	4
Nr. of Motors/tract. invert.:	1



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Traction Converters

Nr. Traction Inverters:	4
Nr of Motors / Traction Inverter:	1
Inverter Topology:	2 Level, 3 Phase inverter
Max. Power / Inverter:	200 kW
Semiconductor Topology:	1.7 kV IGBT
Output Voltage of Inverter:	0 ÷ 465
Output Frequency:	0 ÷ 183
Output Current:	335 A
Cooling System:	Forced Air
Temp. Range:	+40° to -30°C
Electric Braking:	Rheostatic

Auxiliary Converter

Topology:	2-level three-phase inverter
Output Power:	125 kVA
Output Voltage:	3x400 Vrms

Battery Charger

Traction Battery Charger:	60 kW
Nr. of chargers:	2

Power diagram

