



# DUORAIL

ZL200 / ZL300





# Derailment-proof rack-and-pinion locomotive with diesel drive

The derailment-proof ZL200/ZL300 rack-and-pinion locomotives demonstrate their outstanding quality especially on extreme inclines of up to 30 degrees and large transport weights of up to 48 tonnes.

The train set, consisting of drive and brake wagons as well as transport wagons, is guided in a derailment-proof manner on the easily mountable rail system.



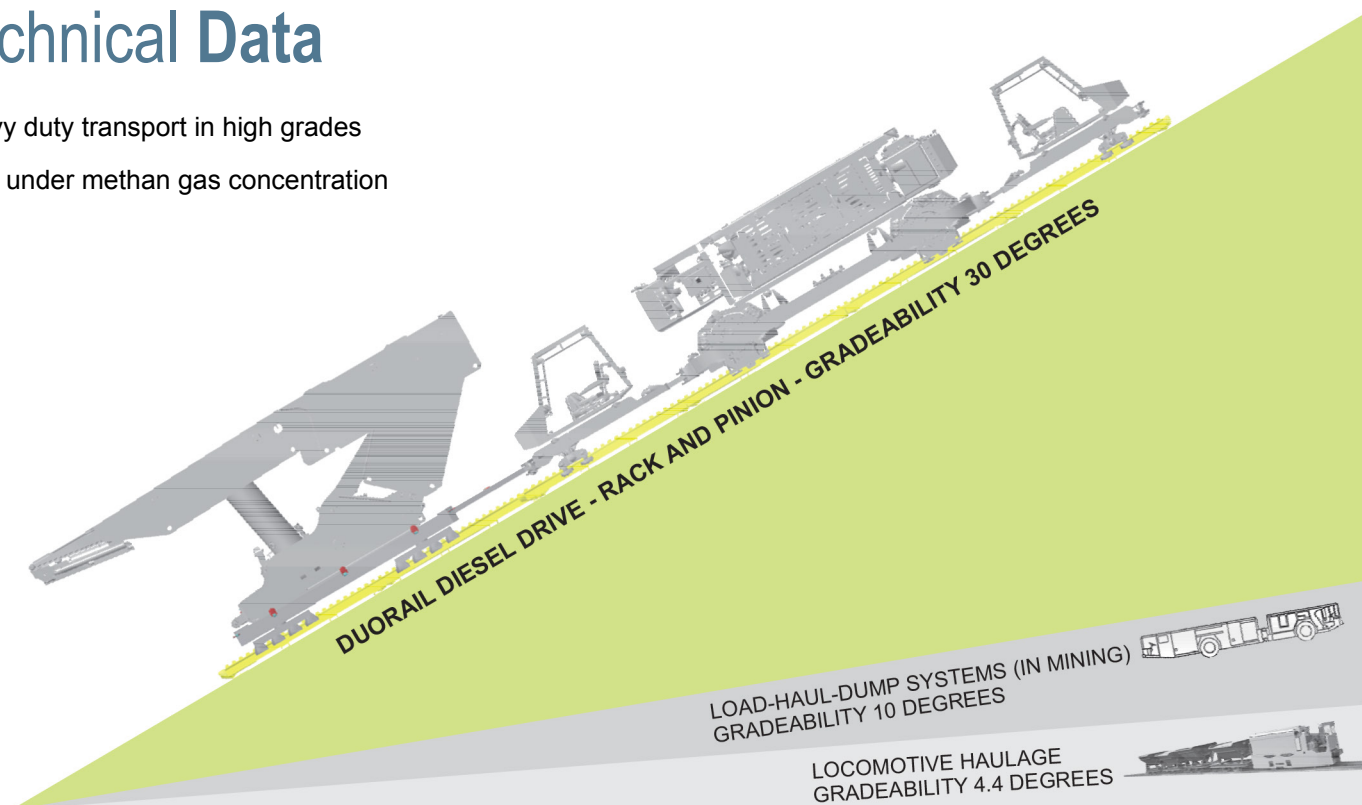
The derailment-proof rack-and-pinion locomotive can be used both on closed tracks and as a climbing aid for normal mine railways equipped with flanged wheels. However, the transport system can just as easily be converted into an overhead monorail. The drive unit can then be suspended from a rail and used on suspended monorail lines for transporting loads or passengers. This makes the rack-and-pinion locomotive particularly interesting for use in coal mines where very heavy equipment has to be transported on a regular basis.





## Technical Data

Heavy duty transport in high grades  
even under methan gas concentration



Type	ZL200-80-xxx	ZL200-130-xxx	ZL200-150-xxx	ZL300-150-xxx
Pulling force (kN)	200	200	200	300
Brake force (kN)	300	300	300	450
max. speed (m/s)	2,0	2,5	3,0	2,0
max. inclination (°)	30	30	30	30
Gauge (mm)	600/900	600/900	600/900	600/900
Rail type	SMT 140	SMT 140	SMT 140	SMT 140
Width engine part (mm)	800	800	800	800
Width engine car (mm)	1,500	1,500	1,500	1,500
Height locomotive (mm)	2,180	2,260	2,200	2,200
Length locomotive (mm)	11,420	11,420	11,420	13,100
Weight locomotive (kg)	12,100	13,300	14,400	16,500

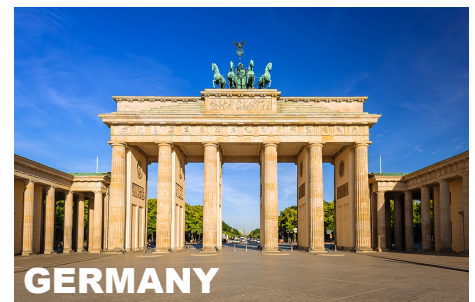
# SMT SCHARF Group

The SMT Scharf Group is the global technology leader for derailment-proof monorails and floor mounted Duorail-vehicles in underground mining and tunneling. Our portfolio expansions and organic growth in the area of tunnel logistics and rubber-tyred vehicles have given us an even broader position as a comprehensive solutions provider, enabling us to offer our global customers individual solutions.

The Scharf brand has been known for high machine quality and reliability for over 70 years. Our solutions are the first choice when it comes to maintaining high safety standards in particularly challenging geological environments.

**Hidden champion, world leader in the niche!**

With our worldwide network of subsidiaries and commercial agencies, we ensure optimum support for our globally active customers. No matter in which time zone and in which national language, our specialists are locally available for you.



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