



CRRC LOCOMOTIVE

9600KW ELECTRIC LOCOMOTIVE
PROPULSION SYSTEM

PRODUCT PORTFOLIOS

TEC has more than five decades of experience in design, production and service for locomotive AC electric drive systems;
TEC provides high-performance traction converters, auxiliary converters, network control systems and key components for mainline electric and diesel locomotives.

2 HXD1 PASSENGER ELECTRIC LOCOMOTIVE

Technical Features
IGBT Based 4QC Rectifier and PWM Inverter
Water Cooling
Independent Auxiliary Converter
TEC3000 Converter Control Platform
DTECS Modularized Distributed Network Control

Locomotive Parameters
Max. speed: 160km/h
Intermediate voltage: 1800V
Power Rating: 7200 kW
Starting tractive force: 420kN
Continuous tractive effort: 324kN
Axle Arrangement: Co-Co

3 HXD1C FREIGHT ELECTRIC LOCOMOTIVE

Technical Features
IGBT Based 4QC Rectifier and PWM Inverter
Water Cooling
Independent Auxiliary Converter
TEC3000 Converter Control Platform
DTECS Modularized Distributed Network Control
There are more than 1200 HXD1C on operation till now

Locomotive Parameters
Max. speed: 120km/h
Intermediate voltage: 1800V
Power Rating: 7200 kW
Starting tractive force: 570kN
Continuous tractive effort: 400kN
Axle Arrangement: Co-Co

1 HXD1 FREIGHT ELECTRIC LOCOMOTIVE

Technical Features
Integrated Traction and Auxiliary Converter
Water Cooling
TEC3000 Converter Control Platform
DTECS Modularized DCS
Based on traction system platform for 8-axle 9600kW vehicle

Locomotive Parameters
Max. speed: 120km/h
Intermediate voltage: 1800V
Power Rating: 9600 kW
Starting tractive force: 760kN
Continuous tractive effort: 532kN
Axle Arrangement:2(Bo – Bo)



CRRC LOCOMOTIVE

SOUTH AFRICA DUAL
VOLTAGE ELECTRIC LOCOMOTIVE

PAST PROJECTS

5 SOUTH AFRICA DUAL VOLTAGE ELECTRIC LOCOMOTIVE

Technical Features
Integrated Traction and Auxiliary Converter
Axle Controlled
Water Cooling
DTECS Modularized Distributed Network Control
95% Adhesion Control Efficiency
Based on dual vottage traction system platform for 4/6-axle vehicle

Locomotive Parameters
Max. speed: 100km/h
Intermediate voltage: 3000V
Power Rating: 3000kW/4500kW
Daul Model: Daul Model:AC 25Kv&DC 3kV
Starting tractive force: 320kN
Continuous tractive effort: 270kN
Axle Arrangement:Bo-Bo/ Co-Co

4 HIGH POWER AC TRACTION DIESEL LOCOMOTIVE

Technical Features
IGBT-based high-power converting technology
DTECS Modularized Distributed Network Control
Remote monitoring and diagnosis system
Independent auxiliary motor drives
Air cooling
Environmental friendly

Locomotive Parameters
Max. Traction Power:4400 HP
Axle Arrangement:Co-Co
Max. Speed:100 km/h

6 AUSTRALIA SDA1 AC TRACTION DIESEL LOCOMOTIVE

Technical Features
IGBT-based high-power converting technology
DTECS Modularized Distributed Network Control
Water cooling
IEC standard
Independent auxiliary motor drives

Locomotive Parameters
Max. speed: 120km/h
Power Rating: 3150kW
Intermediate voltage: DC1600V
Axle power: 460kW
Max. Traction Power:4400 HP
Axle Arrangement:Co-Co

AC drive diesel locomotive with proprietary intellectual property rights. Starting driving force reach up to 600kN (adhesion factor: 0.45), adopted advanced Low constant speed control technology and newest harmonic control technology to fit compatibility requirement of railway signaling in Australia

CRRC LOCOMOTIVE

7 THAILAND SDA3/SDA1 AC TRACTION DIESEL LOCO

Technical Features
IGBT-based high-power converting technology
DTECS Modularized Distributed Network Control
Remote monitoring and diagnosis system
Independent auxiliary motor drives
Water cooling
IEC standard

Locomotive Parameters
Max. Traction Power:2800 kW
Axle Arrangement:Co-Co (axle load 16t)
Max. Speed:100 km/h

9 HXN6 HYBRID POWER LOCOMOTIVE

Technical Features
IGBT-based high-power converting technology
DTECS Modularized Distributed Network Control
Remote monitoring and diagnosis system

Locomotive Parameters
Max. speed: 100km/h
Intermediate voltage: 1500V
Rating power: 1300kW
Power battery: Lithium iron phosphate battery
Discharge power: 1000kW
Starting tractive force: 560kN
Continuous tractive effort: 540kN
Axle Arrangement: C0-C0
Max. Traction Power:2500 kW, 1000 kW

The world's most power hybrid power locomotive
TEC provides drive system, auxiliary drive system, network control system, battery management system

8 30-ton axle load HXD1F FREIGHT ELECTRIC LOCOMOTIVE

Locomotive Parameters
Max. speed: 120km/h
Intermediate voltage: 1800V
Power Rating: 9600kW
Daul Model: Daul Model:AC 25Kv&DC 3kV
Starting tractive force: 910kN
Continuous tractive effort: 691kN

10 HXN5B DIESEL SHUNTING LOCOMOTIVE

Locomotive Parameters
Max. speed: 100km/h
Rating power: 3300kW
Intermediate voltage: DC1500V
Axle power: 470kW

Traction converter adopts many new technologies such as " invertors start diesel", " moving car with battery" and so on



AUSTRALIA SDA1 AC TRACTION
DIESEL LOCOMOTIVE

THAILAND SDA3/SDA1 AC
TRACTION DIESEL LOCO