



HYDROCONTROL SMART

Intelligent Electro Hydraulic Unit

HydroControl Smart is an extremely compact, lightweight and robust intelligent hydraulic unit concept in development that combines electronic brake control and hydraulic supply and control functions in one single unit. Designed for the demanding operating conditions of modern public transportation systems, it is suited to a wide range of vehicle types. Its high power density, modular extendable system layout, connectivity and data management features make it a perfect choice for hydraulic railway brake systems.

Customer benefits

- Compact electro-hydraulic unit with embedded brake electronics
- Direct connection to Train Control and Management System
- Simplified and standardized electrical interface
- Reduced wiring
- Bogie-based data processing and management
- Reduced Carbon Footprint

Applications

- Light rail vehicles
- Metros
- Monorails
- People movers



KNORR-BREMSE

HydroControl Smart Intelligent Electro-Hydraulic Unit

Architecture / Interfaces

- Modular extendable system features
- Simplified and standardized electrical interface, hardwired standalone; one central plug
- Service status via hardware signal available
- Unified mechanical and hydraulic interfaces for different brake applications
- Brake electronics integrated

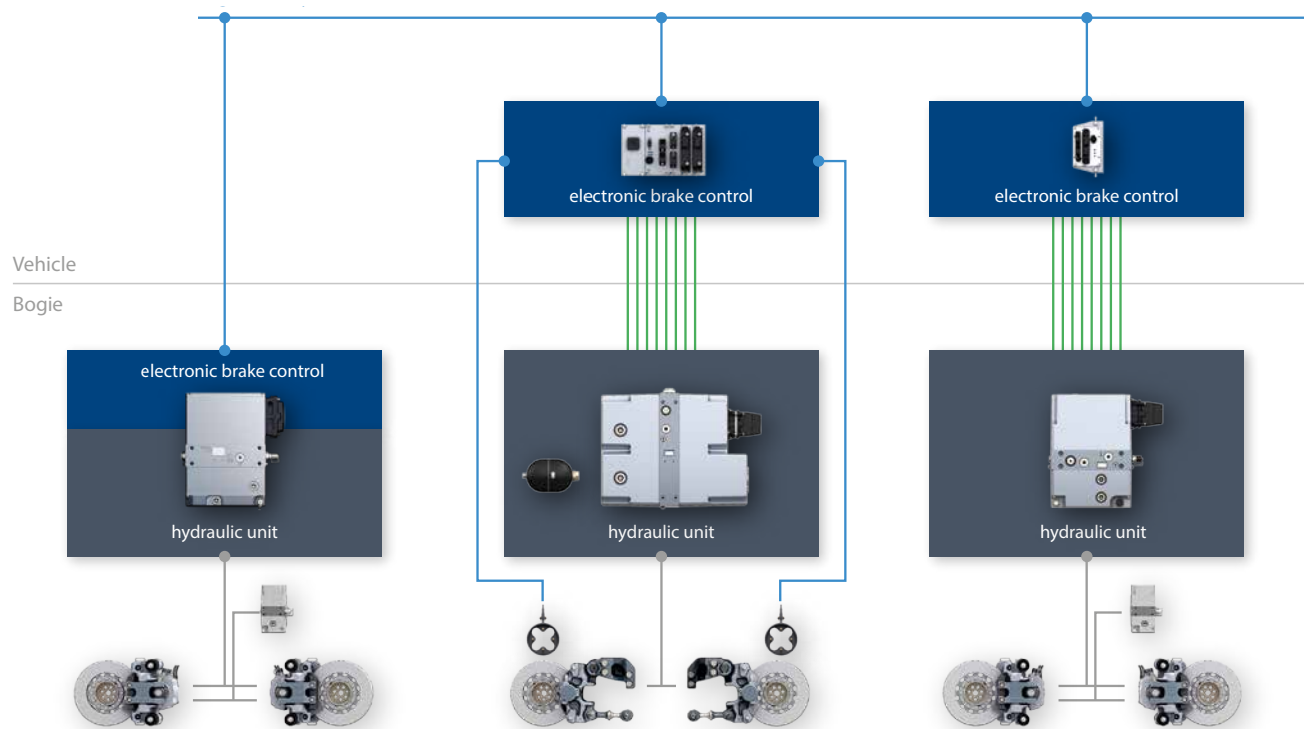
Maintenance and Life Cycle

- Bogie-based data collection & management
- Digital ready: Connects to Knorr-Bremse Efficient Maintenance Solutions
- Self diagnosis integrated

Performance

- Size reduction by up to 60% on product level
- Weight reduction by up to 40% on product level
- High power density
- Reduction of oil volume by up to 15%
- Carbon Footprint reduced by up to 15%

Train Control and Management System



HydroControl Smart merges standard electro-hydraulic units and brake electronics in one intelligent hydraulic unit.

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 **NEW YORK AIR BRAKE**

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