



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Components and system solutions for rail vehicle applications



ENGINEERING YOUR SUCCESS.

Save time and costs.

With components and system solutions from Parker.
Everything from just a single source.

Good advice is worth hard cash

At the design phase, too, Parker engineers are ready to work beside you and offer their advice. They will recommend to you suitable products for your application and show you how, through specific design actions, you can make cost savings you would not have imagined possible previously.

Specific stainless steel version - top quality at an advantageous price

An economic alternative to Cr(VI)-free steel is the stainless steel version that was specially developed for railway transportation.

This acid-resistant stainless steel has the same properties as standard stainless steel but is substantially more economic! Easy formability just as well as easy machining are further characteristics. When welded this material remains constant and wear-resistant. Corrosion resistance actually increases.

This means that it is not only in railway vehicle construction that this stainless steel version is an attractive alternative material.

Components with Cr(VI)-free surfaces offer excellent resistance!

With the coming into force of the EU End-of-life Vehicle (ELV) Directive on 01.07.2007 the employment of products with surfaces containing Cr(VI) is strictly prohibited.

Since 2001 Parker has been offering its complete product programme – from tube and hose fittings through to tubing, flanges and diagnostic connectors – with Cr(VI)-free surfaces. This type of material is substantially more environment-friendly and offers up to 400% greater corrosion resistance.

All components are from a single source and are available world-wide.




Products <small>with document number for further information</small>	Tube Fittings								Hoses				Quick Connect Couplings			Accessories			Measuring		Machines			
	EO-Plus	EO2-Plus	EO2-FORM	Prestolok & Prestolok 2	Metrulok	Pneumatic Instant Function Fittings	Pneumatic Adaptors	372RH No-Sliver Compact Hose	421RH No-Sliver Hose	441RH No-Sliver Compact Hose	681DB No-Sliver Hose	Dry-Break Design	Stainless Steel Couplings	Double Shut-off	Aluminium Ball Valves	Non-return Valves	Tube Clamps	Tubes	The Parker Service Master Easy	TestPoints	Sensors	Tube assembly machines	Hose assembly machines	
Hydraulics	Cooling	■	■	■				■	■	■		■	■	■		■	■	■	■		■	■	■	■
	Hydraulic Brake System	■	■	■				■	■	■		■	■	■		■	■	■	■		■	■	■	■
	Hydrostatic	■	■	■				■	■	■						■	■	■	■		■	■	■	■
Pneumatics	Door System	■	■	■	■		■	■			■	■	■	■		■	■	■	■	■	■	■	■	■
	Pneumatic Brake System	■	■	■							■			■	■	■	■	■	■	■	■	■	■	■
	Auxiliaries	■	■	■	■	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■
Cooling	Water Cooling	■	■	■	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Air conditioning	■	■	■	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fuel	Diesel	■	■	■						■		■	■	■			■	■	■	■	■	■	■	■
Drinking Water	Sanitary Facilities	■	■	■	■	■					■	■	■	■		■	■	■	■		■	■	■	■
Heating	Water	■	■	■		■					■	■	■	■			■	■	■	■	■	■	■	■

■ Water ■ Oil ■ Air


The right answer for any application.

Every Parker component is a quality product. The best-matched components when in combination with each other.




E0-Plus

- For metallic sealed connections
- Leak-free, quick and easy assembly
- Cr(VI)-free surface coating with high corrosion resistance




E02-Plus

- Soft seal bite type with high vibration resistance
- Cr(VI)-free surface coating with high corrosion resistance
- Leak-free in extreme long term use




E02-FORM

- High pressure formed tube generation based on the proven EO-2 technology
- Extreme rigidity and low tightening torques due to cold forming process
- Time-saving and easy to use in comparison to welding or brazing



421RH No-Skive Hose

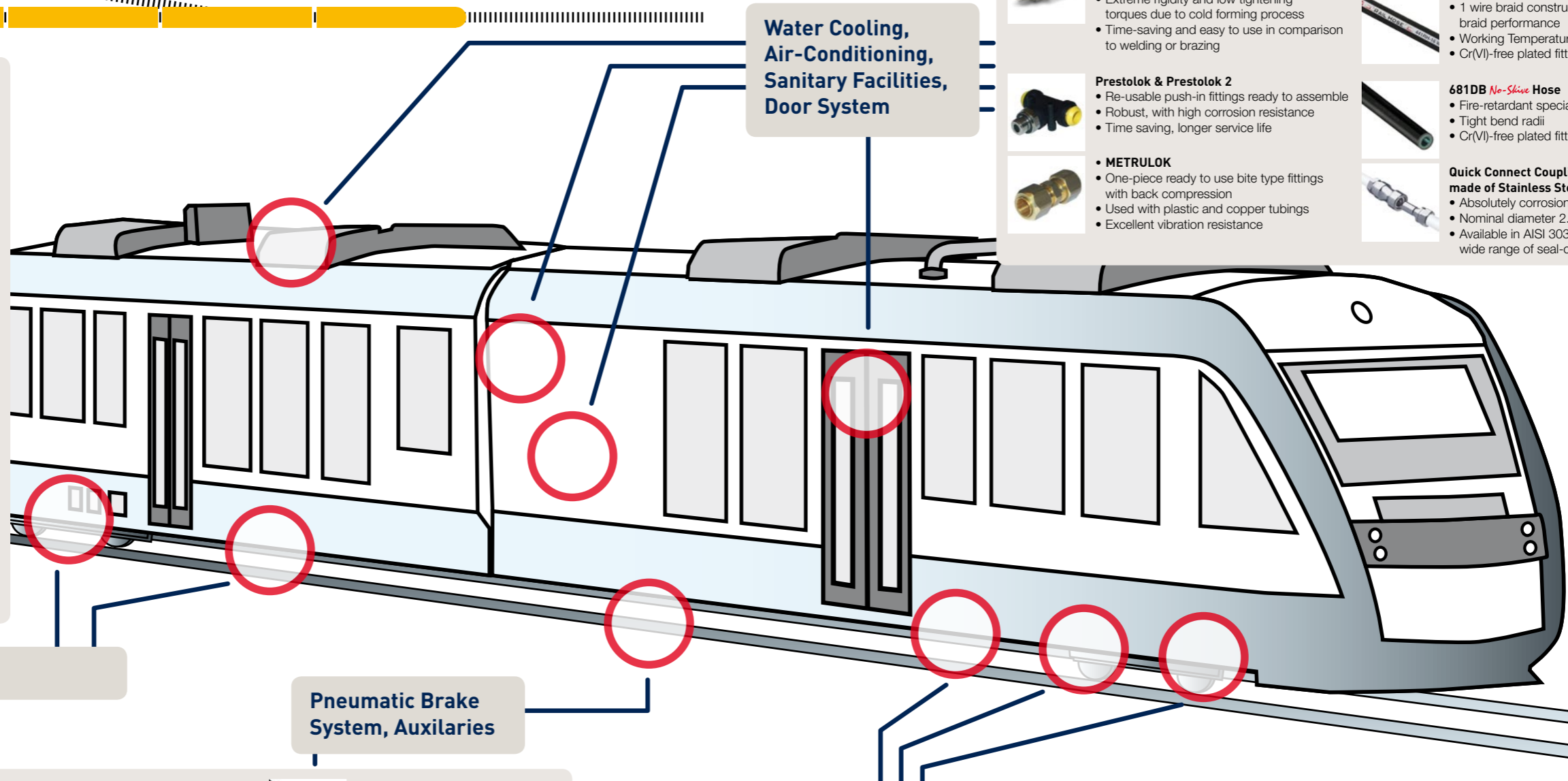
- Nitrile inner tube with high chemical resistance
- Pressure range up to 63 bar
- Cr(VI)-free plated fittings



Quick Connect Couplings Dry-Break Design

- Valve in coupler and plug
- Absolutely drop-free operation for sensible applications
- Pressure is held constant and not released after disconnection

Diesel



Water Cooling, Air-Conditioning, Sanitary Facilities, Door System

Pneumatic Brake System, Auxiliaries

Cooling, Hydraulic Brake System, Hydrostatic



E0-Plus

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- Cr(VI)-free surface coating with high corrosion resistance



E02-Plus

- Soft seal bite type with high vibration resistance
- Cr(VI)-free surface coating with high corrosion resistance
- Leak-free in extreme long term use



E02-FORM

- High pressure formed tube generation based on the proven EO-2 technology
- Extreme rigidity and low tightening torques due to cold forming process
- Time-saving and easy to use in comparison to welding or brazing



Prestolok & Prestolok 2

- Re-usable push-in fittings ready to assemble
- Robust, with high corrosion resistance
- Time saving, longer service life



METRULOK

- One-piece ready to use bite type fittings with back compression
- Used with plastic and copper tubings
- Excellent vibration resistance



Pneumatic Instant Function Fittings

- Flow regulator in high resistance polyamide
- Directly used in compressed air line



Pneumatic Adaptors

- Nickel plated brass adaptors
- Robust, with high corrosion and shock resistance
- Weight saving, compact dimensions



421RH No-Skive Hose

- Nitrile inner tube with high chemical resistance
- Pressure range up to 63 bar
- Cr(VI)-free plated fittings



441RH No-Skive Compact Hose

- 1 wire braid construction - 2 wire braid performance
- Working Temperature up to +125 °C
- Cr(VI)-free plated fittings




681DB No-Skive Hose

- Fire-retardant special rubber cover
- Tight bend radii
- Cr(VI)-free plated fittings




Quick Connect Couplings made of Stainless Steel

- Absolutely corrosion-resistant
- Nominal diameter 2.7 up to 20
- Available in AISI 303 and AISI 316L, wide range of seal-compounds




E0-Plus

- For metallic sealed connections
- Leak-free, quick and easy assembly
- Cr(VI)-free surface coating with high corrosion resistance




E02-Plus

- Soft seal bite type with high vibration resistance
- Cr(VI)-free surface coating with high corrosion resistance
- Leak-free in extreme long term use




E02-FORM

- High pressure formed tube generation based on the proven EO-2 technology
- Extreme rigidity and low tightening torques due to cold forming process
- Time-saving and easy to use in comparison to welding or brazing




681DB No-Skive Hose

- Fire-retardant special rubber cover
- Tight bend radii
- Cr(VI)-free plated fittings




Quick Connect Couplings Double Shut-off

- Valve in coupler and plug
- Single handed operation - safe handling
- High flow rate - low pressure drop




E0-Plus

- For metallic sealed connections
- Leak-free, quick and easy assembly
- Cr(VI)-free surface coating with high corrosion resistance




E02-Plus

- Soft seal bite type with high vibration resistance
- Cr(VI)-free surface coating with high corrosion resistance
- Leak-free in extreme long term use




E02-FORM

- High pressure formed tube generation based on the proven EO-2 technology
- Extreme rigidity and low tightening torques due to cold forming process
- Time-saving and easy to use in comparison to welding or brazing




372RH No-Skive Compact Hose

- 3 Wire Braids with 4SP-WP and nitrile inner tube
- Tight Bend radii
- Cr(VI)-free plated fittings



421RH No-Skive Hose

- Nitrile inner tube with high chemical resistance
- Pressure range up to 63 bar
- Cr(VI)-free plated fittings



441RH No-Skive Compact Hose

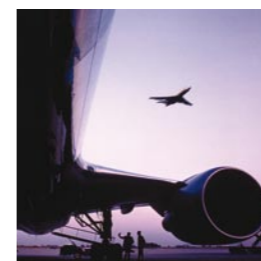
- 1 wire braid construction - 2 wire braid performance
- Working Temperature up to +125 °C
- Cr(VI)-free plated fittings

Parker's Motion & Control Technologies

Parker – the acknowledged partner for the railway vehicle construction industry.

With its products in many companies in the railway vehicle construction industry Parker is a certified partner. Could there be better proof of trust in its quality and reliability?

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion or control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further information call 00800 27 27 5374



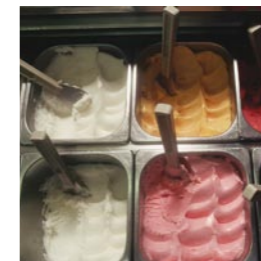
AEROSPACE

Key Markets

- Aircraft engines
- Business & general aviation
- Commercial transports
- Land-based weapons systems
- Military aircraft
- Missiles & launch vehicles
- Regional transports
- Unmanned aerial vehicles

Key Products

- Flight control systems & components
- Fluid conveyance systems
- Fluid metering delivery & atomization devices
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes



CLIMATE CONTROL

Key Markets

- Agriculture
- Air conditioning
- Food, beverage & dairy
- Life sciences & medical
- Precision cooling
- Processing
- Transportation

Key Products

- CO² controls
- Electronic controllers
- Filter driers
- Hand shut-off valves
- Hose & fittings
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves



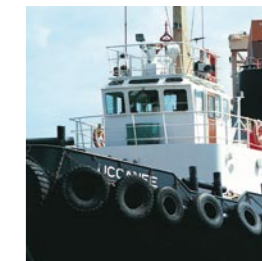
ELECTROMECHANICAL

Key Markets

- Aerospace
- Factory automation
- Life science & medical
- Life sciences
- Machine tools
- Packaging machinery
- Paper machinery
- Plastics machinery & converting
- Primary metals
- Semiconductor & electronics
- Textile
- Wire & cable

Key Products

- AC/DC drives & systems
- Electric actuators, gantry robots & slides
- Electrohydraulic actuation systems
- Electromechanical actuation systems
- Human machine interface
- Linear motors
- Stepper motors, servo motors, drives & controls
- Structural extrusions



FILTRATION

Key Markets

- Food & beverage
- Industrial machinery
- Life sciences
- Marine
- Mobile equipment
- Oil & gas
- Power generation
- Process
- Transportation

Key Products

- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators



FLUID & GAS HANDLING

Key Markets

- Aerospace
- Agriculture
- Bulk chemical handling
- Construction machinery
- Food & beverage
- Fuel & gas delivery
- Industrial machinery
- Mobile
- Oil & gas
- Transportation
- Welding

Key Products

- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



HYDRAULICS

Key Markets

- Aerospace
- Aerial lift
- Agriculture
- Construction machinery
- Forestry
- Industrial machinery
- Mining
- Oil & gas
- Power generation & energy
- Truck hydraulics

Key Products

- Diagnostic equipment
- Hydraulic cylinders & accumulators
- Hydraulic motors & pumps
- Hydraulic systems
- Hydraulic valves & controls
- Power take-offs
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



PNEUMATICS

Key Markets

- Aerospace
- Conveyor & material handling
- Factory automation
- Life science & medical
- Machine tools
- Packaging machinery
- Transportation & automotive

Key Products

- Air preparation
- Brass fittings & valves
- Manifolds
- Pneumatic accessories
- Pneumatic actuators & grippers
- Pneumatic valves & controls
- Quick disconnects
- Rotary actuators
- Rubber & thermoplastic hose & couplings
- Structural extrusions
- Thermoplastic tubing & fittings
- Vacuum generators, cups & sensors



PROCESS CONTROL

Key Markets

- Chemical & refining
- Food, beverage & dairy
- Medical & dental
- Microelectronics
- Oil & gas
- Power generation

Key Products

- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds



SEALING & SHIELDING

Key Markets

- Aerospace
- Chemical processing
- Consumer
- Energy, oil & gas
- Fluid power
- General industrial
- Information technology
- Life sciences
- Military
- Semiconductor
- Telecommunications
- Transportation

Key Products

- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogeneous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management

Even today, rail transportation manufacturers have to consider the various national safety requirements of their European customers.

As a pan-European standard may not be expected in the foreseeable future, the nationally applicable standards will remain in force. The three most requested standards in Europe are the German, the French and the British standards.

The new Parker RH hose range meets and is certified by all three of these standards.

No-Skive hose approvals:
Deutsche Bahn – DIN 5510
SNCF – NF F 16-101
British Rail – BS 6853

Reference customers:

- ALSTOM
- BEHR
- Bombardier Transportation
- Deutsche Bahn
- Knorr Bremse
- Siemens Transportation
- SNCF
- Stadler (Switzerland)
- Voith Turbo
- Vossloh
- etc.

German Standard DIN 5510 Part 2

Tests the fire behaviour and fire effluents of the hose assemblies. Test item: The smallest and largest nominal width of a specific hose type

- Inflammability class S4 (S3)
- Smoke development class SR2
- Drop-forming class ST2

French Standard NFF-16-101/102

Tests the fire behaviour and fire effluents of the hose cover material. Test item: Rubber material of the hose cover

- Flame resistance class I2
- Smoke toxicity class F3

British Standard BS 6853

Tests the fire behaviour and fire effluents of the hose cover material. Test item: Rubber material of the hose cover

- Smoke behaviour
- Release of toxins

meet the limit values in table 4 of the declaration.

IRIS (International Railway Industry Standard)

is a globally recognized standard unique to the railway industries for the evaluation of management systems. IRIS intends to complement the internationally recognized ISO 9001 quality standard.

IRIS benefits:

- Quality will increase across the entire supply chain
 - Evaluation and approval of equipment manufacturers will become more efficient
 - Costs for manufacturers and suppliers will decrease
 - Comprehensive data and its accessibility will improve
- Implementation of IRIS standard: probably by May 2009



The collage shows various certification documents. At the top left is a document from 'Die Bahn' (German Rail) regarding fire safety tests. Below it is a document from 'LAPI' (Laboratoire d'Analyse et de Production Industrielle) for fire safety testing. At the bottom left is the 'IRIS Certification' logo and a document titled 'Bescheinigung' (Certificate) for Parker Rail Services GmbH, certifying their management system according to the IRIS standard.



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