



Steel & Aluminium





An introduction

Who we are

Cavotec is a multi-national group of companies serving the following industries: mining and tunnelling, ports and maritime, steel and aluminium, energy and offshore, airports and automation. In the early 1960's our main focus was the design and production of motorised cable reels primarily for manufacturers of tower cranes, harbour cranes and mining equipment. Today, Cavotec is connecting mobile equipment around the world in many diverse applications.

Where we are

The Cavotec Group consists of 7 manufacturing "Centres of Excellence" located in Canada, France, Germany, Italy, Norway and Sweden and by 5 local manufacturing units located in Australia, China, Germany and the USA. For the distribution of products and providing support to customers Cavotec has 25 sales companies which, together with a network of distributors, serve more than 30 countries in five continents. The ultimate objective is to be perceived as "local everywhere".

How we work

Our aim is to work closely with our customers in order to build long-term partnerships. To achieve this aim we have created a working environment that attracts the best people, encourages them to stay and brings out their best qualities. By producing totally reliable systems and backing them with efficient service, we strive to create true customer satisfaction.



Our experience in the steel and aluminium industry

In 2002 the Cavotec Group acquired the Gantrex Corporation, a leading manufacturer of crane rail fastening systems with a manufacturing facility in Canada and an extensive sales network in North and South America. This meant a substantial expansion in the US market as well as the addition of a new core product namely, Crane Runway Systems. Gantrex has during the past 30 years supplied crane rail fastening systems and full installation service to various sectors of industry, including steel mills and aluminium plants.

The Cavotec Group also supplies other equipment for use in this area such as radio remote controls, motorised cable reels, cable chains and power connectors.

Our major customers in this market segment are:

- Alcoa
- Arcelor
- Avesta-Sheffield
- Baosteel
- CORUS

Local throughout the world



As shown here the Cavotec Group is organized to support its customers around the world through its manufacturing units and sales companies. Each Cavotec manufacturing company, no matter where it is located, aims at being a market leader in its field by providing innovative and reliable products to Group customers. Each Cavotec sales company, in the 22 countries where they operate, aims at better serving its local market following the Group philosophy “to be local everywhere”.

MANUFACTURING NETWORK

Centers of Excellence

- Canada**
Cavotec Gantrex Canada
Crane Rail Systems
- France**
Cavotec RMS
Spring Driven Reels
- Germany**
Cavotec Alfo
Spring Driven Reels
Slipring Columns
- Cavotec Fladung**
Aircraft Support Systems
Physical Security Systems
- Italy**
Cavotec Specimas
Motorized Cable Reels
Panzerbelt Cable Protection
Slipring Columns
- Norway**
Cavotec Micro-control
Radio Remote Controls
- Sweden**
Cavotec Connectors
Electrical Plugs & Sockets

Local Manufacturing

- Australia**
Cavotec Australia
Motorized Cable Reels
- China**
Cavotec China
Product Assembly
- Germany**
Cavotec MoorMaster
Automated Mooring Systems
- Sweden**
Cavotec Sverige
Product Assembly
- USA**
Cavotec Gantrex USA
Product Assembly

Group Partners

- Belgium**
Gantry
Crane Rail Systems
- Italy**
Brevetti Stendalto
Cable Chains
Pirelli
Flexible Cables
Tratos Cavi
Flexible Cables
Americable
Flexible Cables
- New Zealand**
Mooring Systems Ltd
Automated Mooring Systems
- The Netherlands**
De Jong
Permanent Elevators

SALES NETWORK

Cavotec Sales Companies

- | | | |
|-------------------|-----------------------|------------------------------|
| Cavotec Australia | Cavotec Germany | Cavotec Singapore |
| Cavotec BeNeLux | Cavotec Hong Kong | Cavotec Sweden |
| Cavotec Brazil* | Cavotec Italy | Cavotec UK & Ireland |
| Cavotec Chile | Cavotec Korea* | Cavotec Gantrex Canada |
| Cavotec China | Cavotec Latin America | Cavotec Gantrex Mexico |
| Cavotec Denmark | Cavotec Middle East | Cavotec Gantrex South Africa |
| Cavotec Finland | Cavotec Norway | Cavotec Gantrex USA |
| Cavotec France | Cavotec Russia* | |

* Branch Office





Rail Fastening Systems

Gantrex is a North American company specialised in the design, development and manufacture of a complete range of products related to rail fastening systems for both overhead and ground supported cranes. Additionally, the company offers a wide range of rail profiles and complete inspection, survey, installation and thermite and flash-butt welding services. Gantrex has 30 years of experience and reliability in the steel and aluminium industry and is supported by an experienced engineering and installation group. In 2002, Gantrex became a fully integrated member of the Cavotec Group and, in 2005, changed their name into Cavotec Gantrex.



Gantrex rail fastening systems are at work throughout the Americas in many diverse applications. Thanks to their robust design they are perfectly adaptable for operation either indoors or outdoors under the most extreme working conditions.

Rail clips supplied by Cavotec Gantrex are often used in the steel and aluminium industry for the overhead crane rails.



The Cavotec Gantrex soft-mounting rail fastening system is the proven solution for any crane runway problem. A complete range of weldable and boltable clips, as well as steel-reinforced continuous rail pads ensures the longevity of the crane and rail support structure. The company also supplies specialised soleplates, anchor bolts and epoxy grout.

Traditional girder-column connections on active, heavy-duty runways have traditionally been an area of failure and the company's unique tie-back design assemblies have provided solutions on structures for over 25 years.

The experienced Cavotec Gantrex installation group identifies problems through inspections and surveys. Solutions are available with project/design coordination, supervision, thermite and flash-butt welding and complete installation.

The Cavotec Gantrex products are distributed by the Cavotec Group in the following countries: North and South America, Australasia, South Africa, Finland, Norway and Sweden.

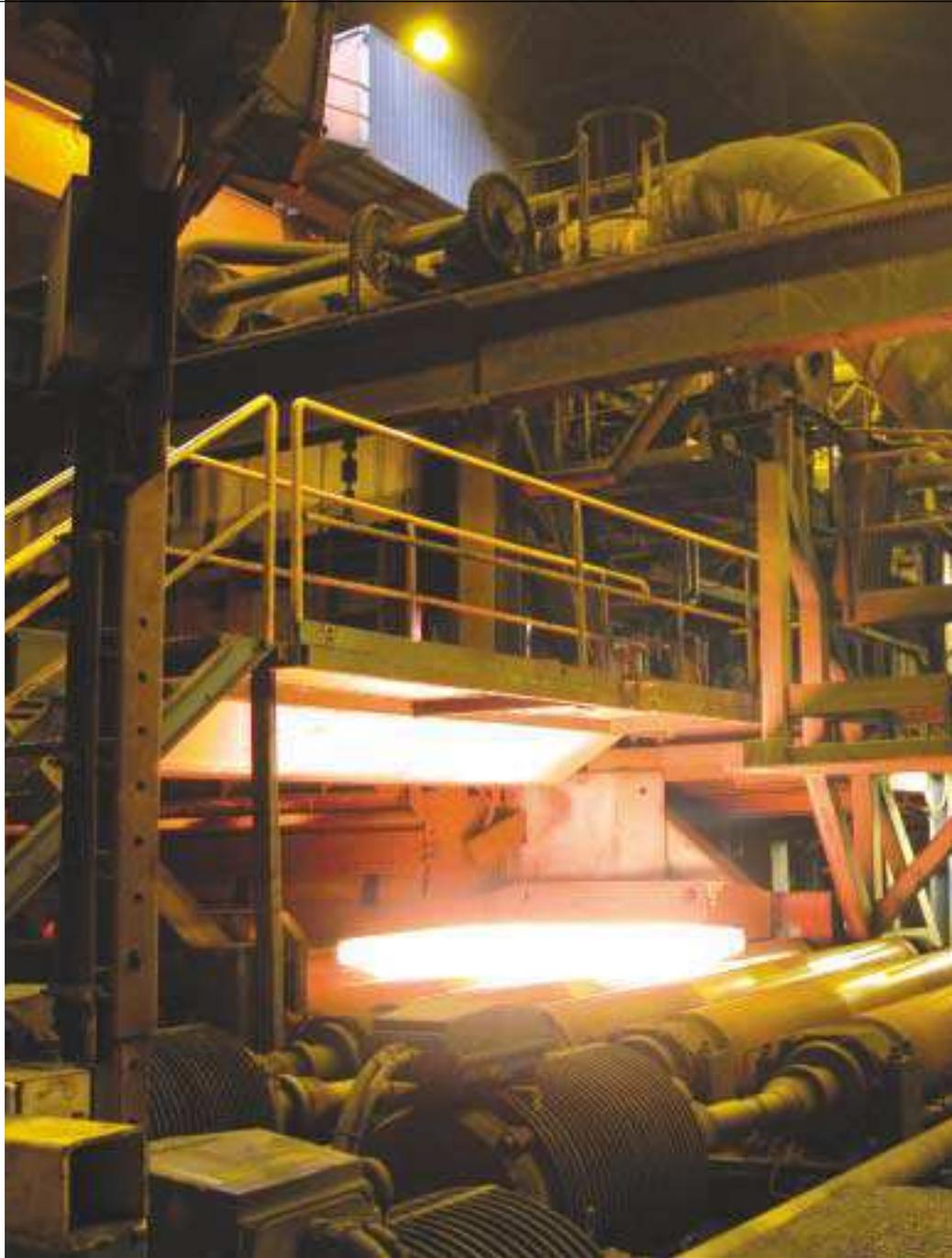
Cavotec Gantrex offers a complete solution to any rail fastening application. Their range comprises of rails, rail clips, pads, soleplates, anchor bolts and special epoxy grout.





Radio Remote Controls

Cavotec Micro-control, a full member of the Cavotec Group since 2004, has been involved since 1984 in the development and production of advanced radio remote control systems, including the latest unit for use in areas where explosions could occur. All systems have a high level of flexibility and are made from standard modules allowing for full customisation to meet specific customer requirements. Cavotec Micro-control radio remote control systems meet the most stringent safety and quality controls and are fully ATEX and IEC approved.



In the harsh working environment of the steel industry, it is very important to be able to rely on your equipment. With the highest safety standards in its category, innovative and robust design specifications and support from specialised engineers anywhere in the world, Cavotec Micro-control RRC's are the right choice.

The high standard of safety make the radio remote control systems, manufactured by Cavotec Micro-control, the preferred choice for use in harsh working environments.



The MC 3000Eex provides a secure and flexible control of many different types of machinery in complete safety. Everything, from simple control functions to complete process supervision, can be done from the same system. This radio remote control can solve most of the direct hydraulic and electric control functions and provide serial communication with most known PLC and frequency converters. An important additional feature is communication using the TCP/IP protocol. In addition, the MC 3000Eex has the option of cable control besides the standard radio control. This provides an extra failsafe against shutdown if a fault occurs in one of the other types of communication.

The system can be delivered with simplex or duplex communication. With the duplex option the operator can receive messages (alarm messages, status indications etc.) through LED's, the control display and indicator instruments. In addition the base unit can be delivered with a serial interface for the most common bus standards on the market today. Of course, the base unit comes standard with EEx protection and with an intrinsically safe battery.

The MC 3000EEx is the first ever explosion proof RRC to obtain a full ATEX approval.





Power Connectors

Cavotec Connectors have set the standard concerning high and low voltage power supply for many applications throughout various sectors of industry. Thanks to their high quality and robust design these connectors are ideally suited for use in the harsh working environments of the steel and aluminium sector. For specific information on the complete Cavotec range please consult our 32 page product catalogue.



Cavotec Connectors for both low and high voltage applications are robustly designed, with a standard IP 66 protection and a standard maximum temperature of 80°C. The range of low voltage power connectors, available in a variety of sizes, are made in two different operation systems:

1. The “Push and Pull” system is preferred when the connectors have to be disconnected manually or automatically several times a day.

2. The “Screw Ring” system where the connectors are fitted with a screw ring for applications that have to be disconnected by hand on a day-to-day or weekly basis.

The high quality, robustness and integral safety of the Cavotec Connectors have set the standard concerning high and low voltage power supply to many different types of equipment used in applications around the world.

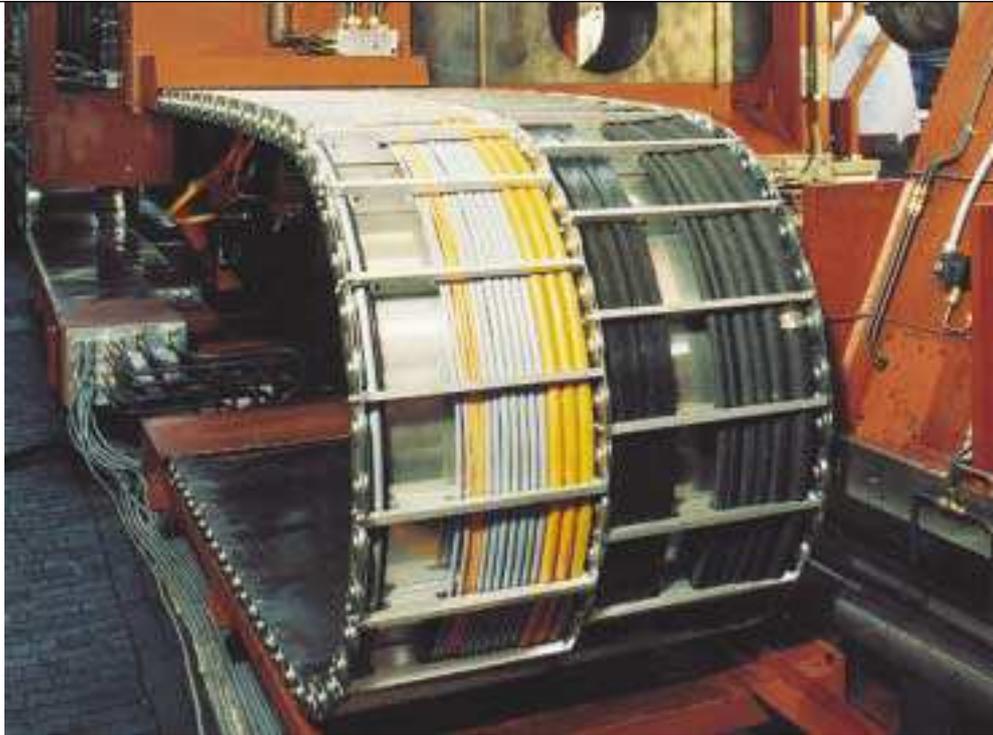


The innovative MWT (Multi Way Technology) allows for exceptional current carrying capacity relative to the size of the contacts while making connecting and disconnecting the unit much easier.



Cables

In order to supply a comprehensive selection of high quality cables specially adapted to the harsh working environment of the steel and aluminium industry, the Cavotec Group decided to select specialised manufacturing partners enabling Cavotec to guarantee the very highest level of productivity and safety. Among the specialised cable manufacturing partners represented by the Group, we can mention such companies as Americable, Baude, Gore, Palazzo, Pirelli and Nexans. The cables shown on this page are just a selection specifically for the steel and aluminium industry. They form part of the complete range of cables offered by the Cavotec Group.



All the cables offered by the Cavotec Group are divided in low and medium voltage. Low voltage cables are further divided into power or control cables as each single cable is designed to deal with specific applications. Medium voltage cables on the other hand are all power cables but the majority can be supplied with integrated fibre-optics as an option. The range of cables is such that Cavotec can supply any type of cable to suit any specific application.

Cavotec offers many different types of cables to meet specific operating requirements. For more detailed information please consult our 32 page flexible cables catalogue.



Heavy duty low voltage power cables



Light-weight low voltage control cables



Medium voltage power cables



Medium voltage power cables with FO



Cable Reels

Cavotec Specimas cable reels have been supplied to steel and aluminium industries since many years. Each unit is used in a variety of operations supplying power, air and water to moving equipment.

The Cavotec Specimas reputation in this market segment has been established by supplying innovative, robust systems together with specialised engineering staff to provide support where needed.

For intermittent duty applications Cavotec normally recommends the Hydrodynamic System, while for continuous duty applications Cavotec has designed a variable torque regulating system.



The Hydrodynamic System is a unique patented system which provides a simple and rational solution for many cable and hose reel applications. The system is based on a torque unit in which reduction gear, clutch and brake are built into one closed unit. Furthermore, thanks to the clutch acting directly on the main drum shaft, an even torque output is guaranteed.

Cavotec Specimas also provides another type of system called the Cavotec Torque Control system. This provides a constant pull in the cable following a torque reference signal based on cable weight and length, speed and acceleration. The benefit is

a longer cable life. The system can be used for single-phase and three-phase AC and for DC feed. The standard protection class is IP55 and is suitable for environment temperatures up to +40 °C. Special ventilation and motor insulation are supplied for higher temperature ranges.



To guarantee maximum support to its customers Cavotec Specimas has a team of specialised engineers for 24/7 service demands anywhere in the world.



Cable Chains

Founded in 1976 in Monza, Italy the manufacturing company Brevetti Stendalto was the first to develop and manufacture the revolutionary cable chains in nylon. Today Brevetti is considered one of the most important manufacturers not only of nylon but also of steel cable chains in Europe. Their range of chains, which can be used in many different types of application, are marketed by the Cavotec Group all around the world.



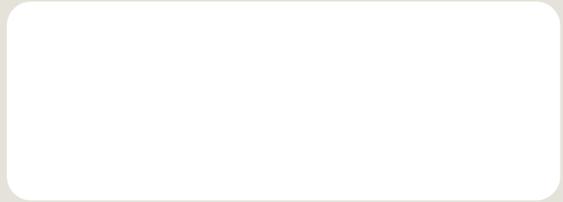
Brevetti steel and nylon cable chains are a proven alternative for supplying power in a secure fast way. With this system power and control cables are carried safely and fully protected by a heavy-duty steel or nylon chain over long travelling distances at high speeds. Thanks to the high quality and innovative design the Brevetti cable chains are able to maintain their full operational function even in the harsh working environment of the steel and aluminium industry. Endurance tests carried out by leading operators and the many applications at work have proven the reliability of the system and its clear economic advantages.

Brevetti cable chains are renowned for their high quality and attention to detail. Their wide range of cable chains covers any possible type of application while allowing for custom-made solutions where necessary.



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We are present in

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- Australia
- Belgium
- Brasil
- Canada
- Chile
- China
- Denmark
- Egypt
- Finland
- France
- Germany
- Hong Kong
- Indonesia
- Ireland
- Italy
- Japan
- Korea
- Luxemburg
- Mexico
- The Netherlands
- New Zealand
- Norway
- Russia
- Saudi Arabia
- Singapore
- South Africa
- Sweden
- Taiwan
- U.A.E.
- U.K.
- U.S.A.



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