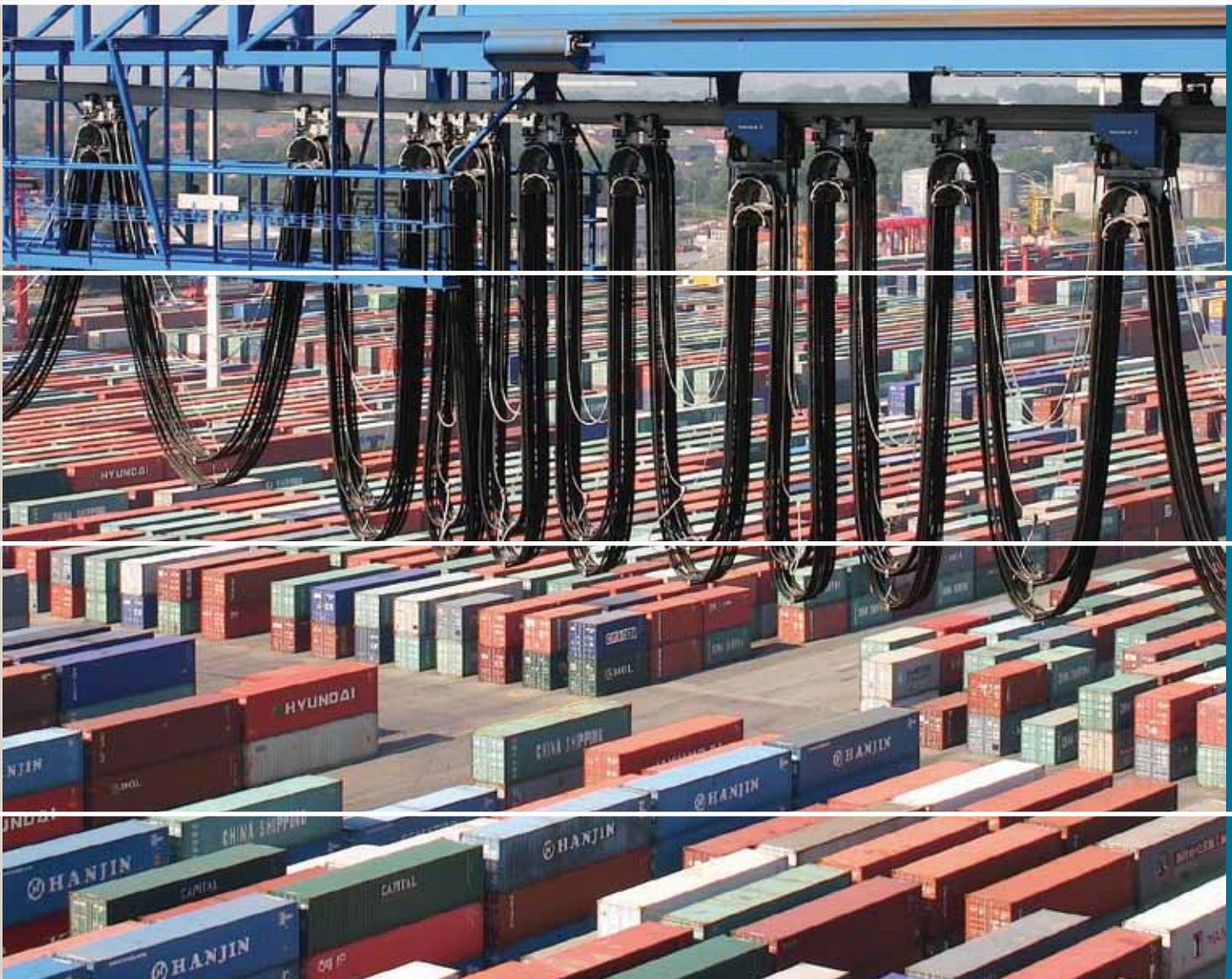


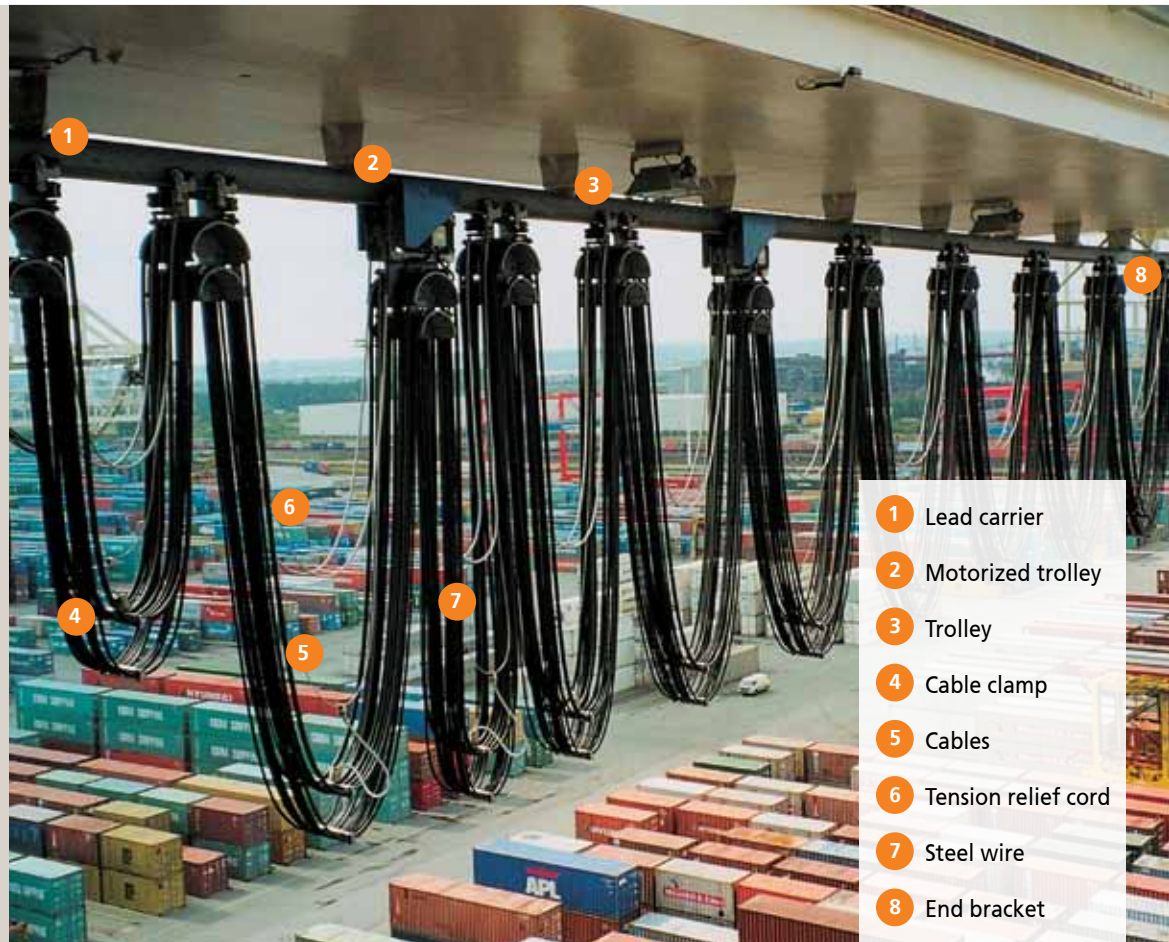
Festoon Systems



Festoon Systems - Port Applications

CAVOTEC MSL PROVIDES INNOVATIVE AND ENVIRONMENTALLY FRIENDLY TECHNOLOGIES FOR THE PORTS AND MARITIME, AIRPORTS, MINING AND GENERAL INDUSTRY SECTORS.

WE PROVIDE RELIABLE AND HIGH QUALITY SYSTEMS, AND, THROUGH CONSTANT DIALOGUE WITH OUR CUSTOMERS, WE DEVELOP INNOVATIVE SOLUTIONS THAT OFTEN REDEFINE INDUSTRY STANDARDS, ENHANCE EFFICIENCY AND IMPROVE ENVIRONMENTAL SUSTAINABILITY.



- 1 Lead carrier
- 2 Motorized trolley
- 3 Trolley
- 4 Cable clamp
- 5 Cables
- 6 Tension relief cord
- 7 Steel wire
- 8 End bracket

HEAVY DUTY FESTOON SYSTEM

An extremely large field of applications can be covered by the cable carrier system with its modular design. The cable carriers will be specifically combined for your application.

The carrier kit comprises the wheel set, the carrier body and the cable support.

The cable carriers are available as single-level and multiple-level variants for flat and round cables.

Depending on the selection of the wheel set, applications for all speeds, with low loads, and applications with high dynamic loads and transverse movements are possible. 6-roller variants of the wheel set are available for crossing of hinge points in the track profile.

The selection of the carrier body depends on the quantity and dimension of the cables.

Cable supports are available in standard sizes from 300 to 800mm overall width. We will be pleased to assist you in engineering your system.

A large number of applications can be covered using Festoon Systems. Our modular design will be designed for each application.

MODULAR CONSTRUCTION

Any combination of wheels for straight or angled I-beams with or without support rollers, carrier body and single or multi-layer cable support for flat or round cables are available. Depending on speed, weight, travel length, noise and temperature, the rollers are supplied with Steel, Nylatron or Vulcatron surface. Tilting prevention by means of support rollers or skids. Each trolley equipped with bumpers.

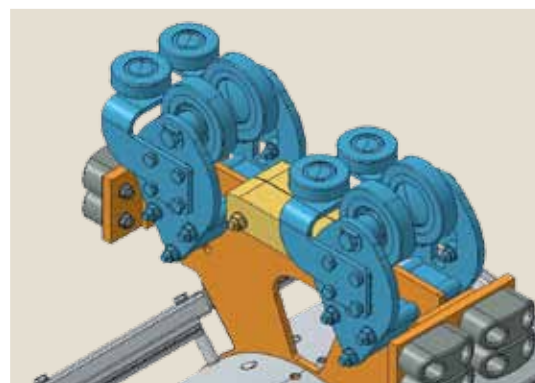


Modular clamping system for round and flat cables. Individual clamping of round cables possible.



DOUBLE BUMPER

For cable carriers with high travel speeds, acceleration values or cable weights, a high damping level is achieved by using double bumpers.



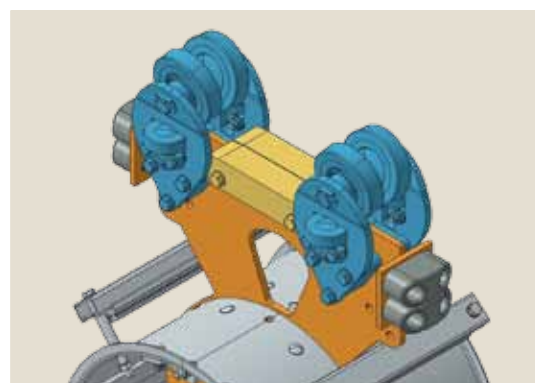
WHEEL SET, WEB GUIDED

Web guided wheel set is characterized by stable tracking and a low rate of wear of the guide rollers and a good compensation of transverse forces.



CABLE CARRIER WITH SUPPORT SKID

Support skids are used for container cranes or cranes with high transversal acceleration as they compensate these forces particularly well.



Cable Carriers

TYPICAL STS INSTALLATION
USING WHEEL DESIGN FOR
HINGE CROSSING.
FESTOON SYSTEMS FOR "C"
PROFILE TRACKS AVAILABLE.

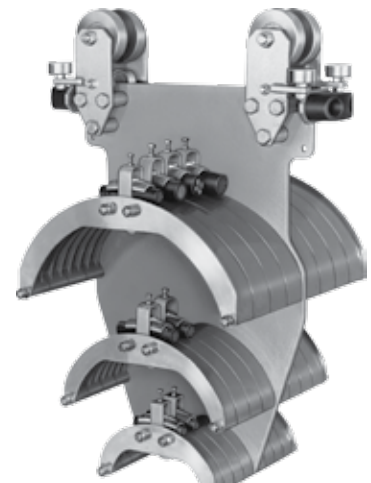
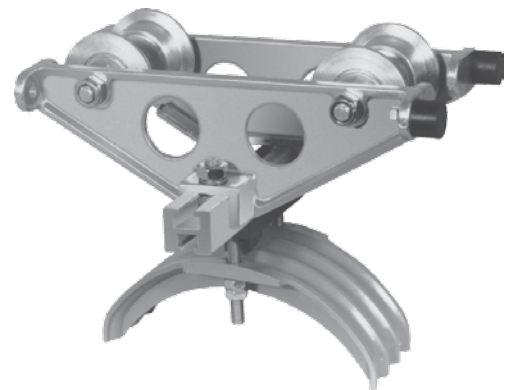


CABLE CARRIERS FOR ROUND CABLE INSTALLED ON I-BEAMS

Cavotec Festoon systems support electric cables or hoses for mobile machinery.

The cable carriers contained in this catalog comply with VDE regulations and international safety requirements. Round cables and fittings per our catalog no. 8L.

I-beams with angled or flat flanges (European types INP or IPE) can be used. Actual dimensions of beams being utilized for track purposes should be specified with enquiries and orders.



Motorized Festoon

for High Speed Applications

CAVOTEC ROBUST AND HIGHLY EFFICIENT MOTORIZED TROLLEYS GUARANTEE THE FAST MOVEMENTS OF THE FESTOON SYSTEM AND ENSURE A HIGH PRODUCTIVITY FOR LOADING AND UNLOADING CONTAINERS

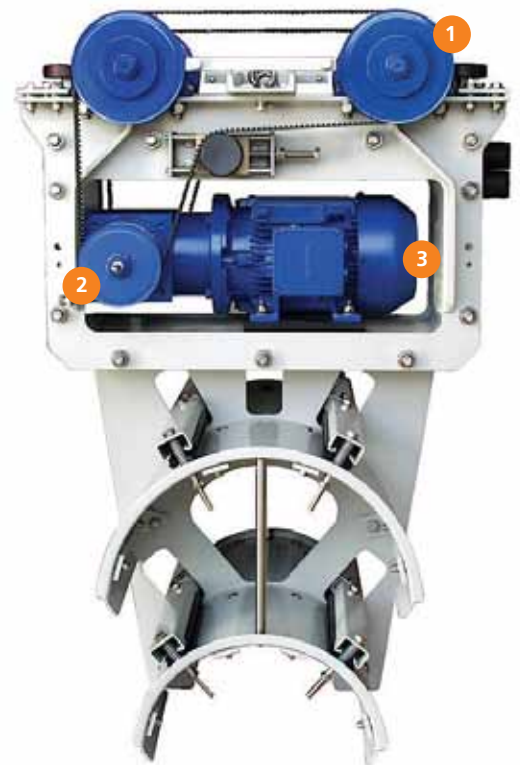


SPECIAL HIGH SPEED DESIGN

High speed and/or quick acceleration may require motorized trolleys. Cavotec will engineer and design complete systems.

Main Motorized Trolley Parts:

Drive motor, Gearbox, Frequency Inverter, Belt Drive, Tensioning Device, Frame.



- 1 Belt drive
- 2 Gearbox
- 3 Drive motor

Installation & Maintenance

SERVICE IS A CRITICAL COMPONENT OF CAVOTEC'S. OUR LOCAL SALES AND SERVICE OFFICES, LOCATED AROUND THE WORLD, ARE BACKED BY THE EXPERTISE OF OUR CENTRES OF EXCELLENCE.



SERVICE & SUPPORT

Cavotec engineers provide unrivaled levels of customer service and support to ensure successful installation, commissioning and long service life.

We also provide on-site commissioning and training at our Centres of Excellence. Using in-depth manuals and system documentation, and our highly qualified engineers, we can provide all levels of training and maintenance instruction, in-line with your operational requirements.



Reference List

ACROSS INDUSTRIES, ACROSS THE WORLD; CAVOTEC DELIVERS ADVANCED TECHNOLOGIES DESIGNED TO HELP YOU IMPROVE OPERATIONAL EFFICIENCY AND INCREASE SUSTAINABILITY.



OUR PORT REFERENCES AROUND THE WORLD

ABB	Italia Marittima	Seawell
Aker Solutions	Kalmar	Siemens
Port of Antwerp	Koch	Port of Singapore
APL	Konecranes	Port of Shanghai
APM Terminals	Kuwait oil Co	Port of Shenzhen
BP	Port of Long Beach	StatoilHydro
British Royal Navy	Port of Los Angeles	Port of St Laurence
Port of Buenos Aires	MacGregor	Stora Enso
Port of Buzan	MAERSK Drilling	Port of St Petersburg
Port of Chennai	Maher Terminal	Port of Stockholm
China Shipping Lines	Port of Manzanillo	STX Shipyard
Contship/Eurokay	Matson Shipping	Sumimoto
Doosan Heavy Ind.	Port of Miami	Swedish Navy
DP World Cochin JNPT	Mitsubishi Heavy Industry	Techint
Port of Dubai	Mitsui	Port of Tianjin
Port of El Callao	MOL	TTS
Port of Everglades	MSC	U.S. Coast Guard
Evergreen	Port of Mumbai	U.S. Navy
Fantuzzi-Reggiane	National Oilwell	Port of Vancouver
Port of Felixstowe	Port of Ningbo	Port of Virginia
Fels crane	Noell	Yang Ming
FMC Technologies	NYK	ZPMC
Port of Gioia Tauro	Odim	
Port of Gothenburg	Port of Piraeus	
Port of Guangzhou	P.S.A.	
Port of Hamburg	Qatar Petroleum Co	
Port of Heidland	Port of Qingdao	
Port of Helsinki	Port of Rotterdam	
Port of Ho Ci Minh	Port of Salalah	
Port of Hong Kong	Samsung	
Hyundai Heavy Industry	Port of San Antonio	
Impsa	Port of Santos	



With a global presence of sales and manufacturing companies across six continents, Cavotec ensures each of our clients receives local, expert and personal service.

Cavotec's creativity and professionalism is founded on teamwork: working closely with clients, exchanging knowledge and ideas.



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For more information please visit our website www.cavotec.com
or contact us directly at info@cavotec.com