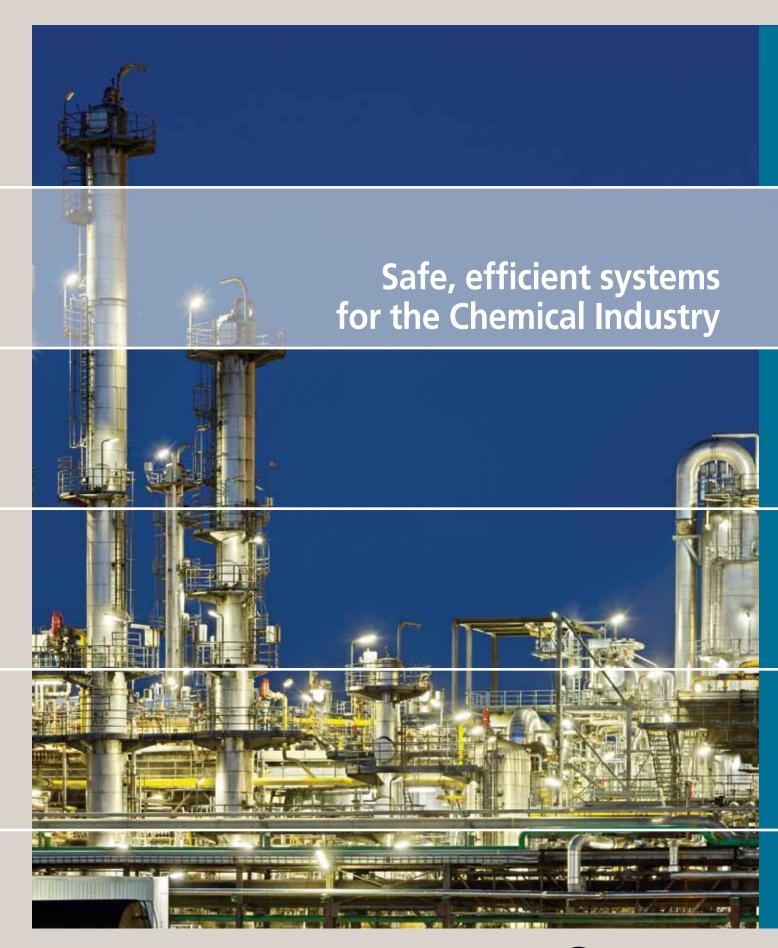
Product Brochure





Cavotec – a brief overview



CAVOTEC DEVELOPS
INNOVATIVE
TECHNOLOGIES THAT
ENABLE INDUSTRY TO
OPERATE EFFICIENTLY
AND SUSTAINABLY.

Cavotec is a global engineering group, developing innovative solutions that enable industry to operate efficiently and sustainably. We manufacture systems for the ports and maritime, airports, mining and tunnelling and general industry sectors.

In the chemical sector, Cavotec Meyerinck develops a range of systems that ensure safe and efficient operations. Our areas of expertise include: top and bottom loading arms, safety infrastructure, swivel joints and floating suction units. Our engineers also provide unrivalled installation, commissioning and after-sales support.







CAVOTEC MEYERINCK

Cavotec Meyerinck offers customers more than 40 years' experience of manufacturing highly specialised systems and components for the chemical, petrochemical, agricultural and aircraft refuelling markets.

All Cavotec Meyerinck products comply with the highest industry standards such as: ATEX, NEMA, PED, CEregulations, PTB, TÜV, STS-M, MIL-Standards, ASME, UL, ISO 9000, FM, GOST (CIS). The company also meets all requirements for complete ISO 9000 certification.

State of the art liquid handling

We ensure the safe and efficient transfer of all types of liquids – fruit juice, petroleum, toxic acid or liquefied gas – to and from tanker trucks, trains, ships and aircraft.

Cavotec Meyerinck loading arms combine the advantages of rigid pipe systems with the flexibility of hoses for safe and easy operation.

Swivel joints are core components of our loading arms. They enable easy rotation of the pipe in all directions and remain liquid tight even under high pressure and external loads. Our quality systems ensure lowest maintenance requirements and long service lives. We also supply components and accessory units for all types of application.

Top Loading Arms –

For the loading and unloading of tank trucks and rail cars



CM.TL-RA

- Fixed reach
- Loading arm able to swivel 360°
- Operable on both sides of the platform
- Suitable for single compartment vehicles



CM.TL-RB

- Variable reach
- Flexible working area
- Loading arm able to swivel 360°
- Operable on both sides of a platform
- Scissor model
- Working area up to 4.5 m



CM.TL-RC

- Long reach
- Ideal for multi compartment vehicles
- Enlarged working area possible with addition of boom pipe section
- Working area up to 9.0 m



TECHNICAL DATA

Diameters: From 2" to 8".

Pressure ratings: Up to ANSI 300.

Materials: Stainless steel, carbon steel, low temperature steel, internal linings (PTFE, rubber) and other

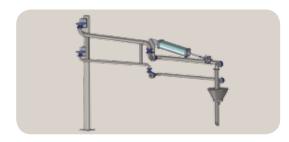
materials on request.

Top Loading Arms with vapour return — For the loading and unloading of tank trucks and rail cars



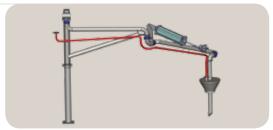
CM.TL-RCT

- Product arm and vapour return arm
- Features vapour return cone or cover plate
- Long reach for multi-compartment vehicles
- Large working area up to 9.0 m



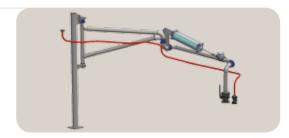
CM.TL-RCH

- Product arm and vapour return hose
- Features vapour return cone or cover plate
- Long reach for multi-compartment vehicles
- Large working area up to 9.0 m



CM.TL-RCHF

- Product arm and vapour return hose
- Flange connection
- Long reach for multi-compartment vehicles
- Large working area up to 9.0 m



TECHNICAL DATA

Diameters: From 3" to 6". Up to ANSI 300. Pressure ratings:

Materials: Stainless steel, carbon steel, low temperature steel, internal linings (PTFE, rubber) and other

materials on request.

Top Loading Arms – For loading of container



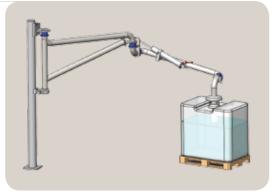
CM.TL-RC

- Long reach loading arm with flange connection
- Features independent product arm and vapour arm
- Working area up to 8.0 m



CM.TL-RCI

- Long reach loading arm, in 1.5" or 2" sizes
- Able to fill IBC* container
- Working area up to 6.0 m



* Intermediated Bulk Container

TECHNICAL DATA

From 1.5" to 6". Diameters: Up to ANSI 150. Pressure ratings:

Stainless steel, carbon steel, and other materials on request. Materials:

Bottom Loading Arms -

For the loading and unloading of tank trucks and rail cars



CM.BL-RA5

- Double section arm with 5 swivel joints
- Fillstand model
- No support beam required
- Loading arm able to swivel 360°
- Operable on both sides of the platform
- Flexible working area
- Available with six swivel joints and parallelogram for improved handling (tpye CM.BL-RA6)
- Working area up to 5.0 m

CM.BL-RB

- Intermediate pipe section for enlarged working area
- Suitable for rail cars
- Operable on both sides of a platform
- Flexible working area
- Working area up to 10.0 m





CM.BL-RC

- Suitable for loading and unloading stations
- Product arm and vapour return arm
- Operable on both sides of a platform
- Working area up to 5.0 m



TECHNICAL DATA

Diameters: From 3" to 6".

Pressure ratings: Up to ANSI 300.

Materials: Stainless steel, carbon steel, low temperature steel, and other materials on request.

Bottom Hose Loading Arms –

For the loading of tank trucks



CM.BL-HA

- Variable reach
- For bottom loading of tank trucks acc. to API RP 1004
- Flexible working area
- Loading arm able to swivel 360°
- Working area up to 2.8 m
- Combination of up to 5 arms possible for unrestricted cross over



CM.BL-HB

- Long reach
- For bottom loading of tank trucks acc. to API RP 1004
- Greater flexibility and additional reach



TECHNICAL DATA

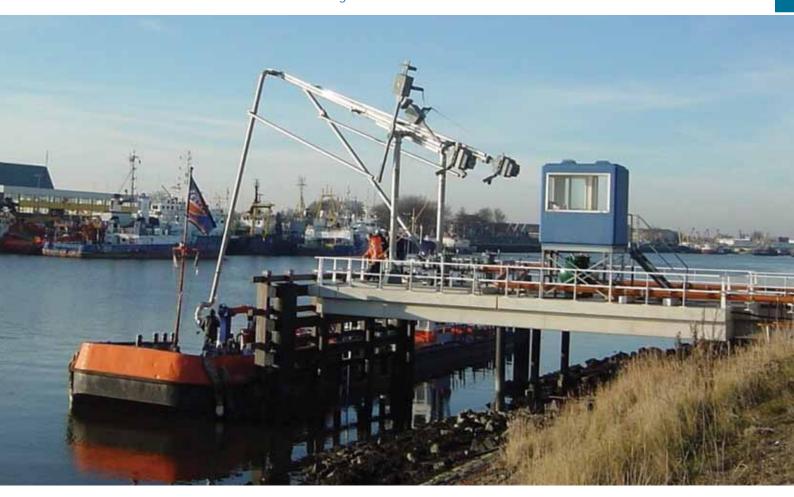
Diameters: From 3" to 4".

Pressure ratings: Up to ANSI 150.

Materials: Stainless steel, carbon steel, and other materials on request.

Marine Loading Arms –

For use with river barges



CM.ML-A

- Full counter weight balance
- Self-supporting design
- Manually operated due to high quality swivel joints
 Maximum diameter 8"
- Stainless steel product carrying parts
- Couplers designed for rapid connection to ship manifolds available on request



CM.ML-P

- Pipe bridges are used to transfer any kind of liquid from storage to pontoon
- Extended reach
- Heavy-duty swivel joints up to 32"
- Steel or stainless steel



Safety Equipment



FOLDING STAIRS

Cavotec Meyerinck folding stairs enable loading personnel to reach vehicles from loading platforms safely.

Our stair units are adjustable to function with a wide range of tanker and silo trucks, rail cars and containers, and can be fitted with safety baskets.

We also offer safety baskets that enable independent operation of folding stairs.



LOADING PLATFORMS

All Cavotec loading platforms ensure the highest possible safety standards for personnel working with all types of liquids across the chemical, agricultural and petrochemical sectors.

They are used to get easy and safe access to the top of all kind of vehicles.



Swivel Joints



OUR RUGGED SWIVEL JOINTS ARE USED IN APPLICATIONS ALL AROUND THE WORLD.

LONG LIFE, LEAKAGE-FREE Cavotec Meyerinck hose free pantographs for direct fuelling of aviation offer service lives of more than 20 years. Our swivel joints are used in applications from Arctic regions such as Alaska and northern Norway, to desert climates in Bahrain and Saudi Arabia. All Cavotec swivel joints are manufactured according to the highest quality standards to ensure leakage-free operation and long service life.

We always use two independent active seals and multiple bearings to ensure a low maintenance, long operational life. Our rigorous quality control checks and stringent measuring methods guarantee the safety of all our swivel joints. CNC-operated lathes ensure efficient, high precision production.

We grant a five-years-guarantee on mechanical funtion of the swivel joint.

Standards

- Directive 2008/50/EC, Ambient Air Quality, German TA-Luft Standard (Legal requirements for leakage free operation)
- DIN EN ISO 9001
- MIL-Standards, STS-M

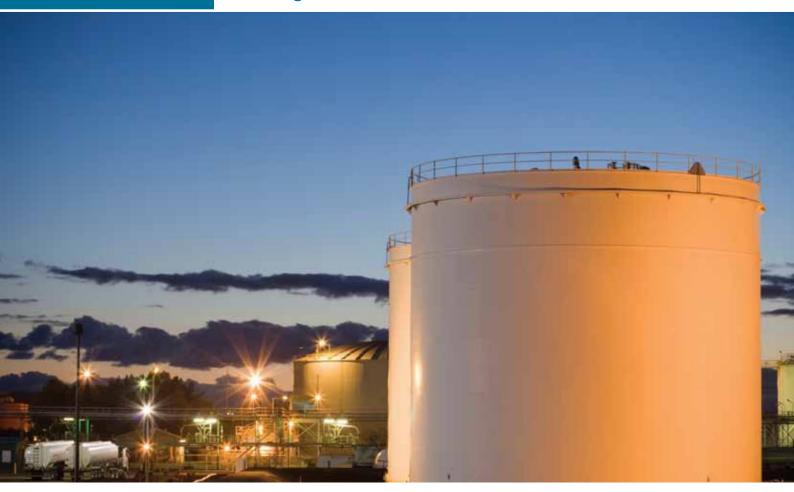
Seal materials

- FEP/FKM
- FKM
- NBR
- Other materials on request

Swivel joint features

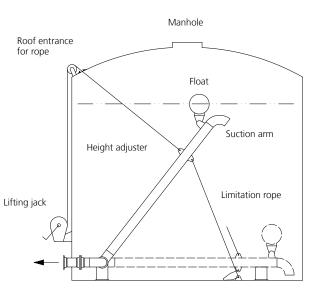
- Two, three or four bearings
- Both sides flanged
- Optional welding
- Two active seals
- Internal lining
- Tightness monitoring
- Suitable for pigging
- Heated and insulated
- Purged
- Aseptic design
- Operational temperature range: -52°C to 250°C
- Specific designs available on request

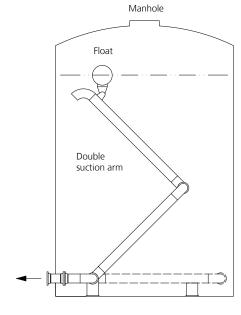
Floating Suction Units



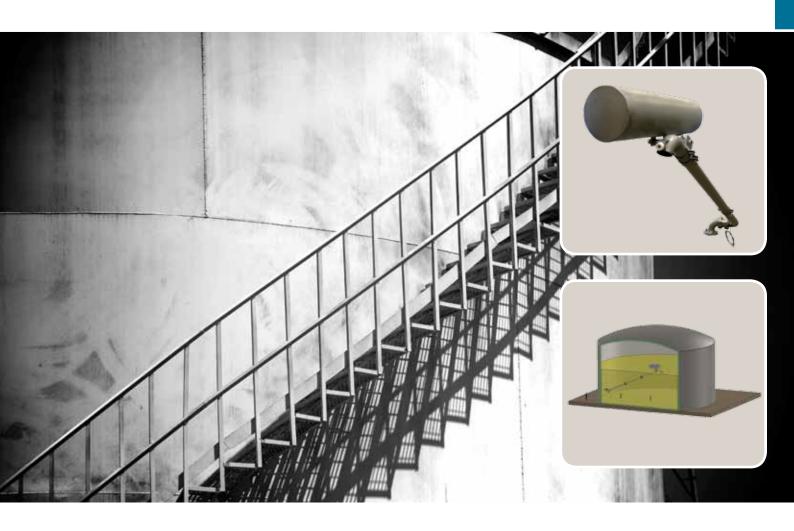
CM.FS-A

- Floating suction units to ensure clean product delivery
- Suction arms from 3" to 32" in diameterStrong, reliable swivel joints
- Adaptable to many different tank designs
- Single and double suction arms available
- Stainless steel or aluminium
- 10-years-guarantee on mechanical function of the swivel joint



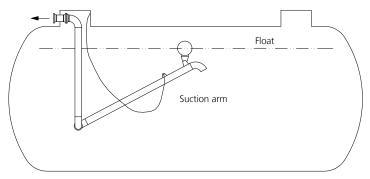


CM.FS-BV



HORIZONTAL TANK

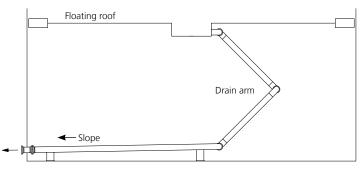
Vertical connection pipe and suction arm with single float.



CM.FS-AH

FLOATING ROOF TANK

- Drain arm system provides positive roof drainage
- Continuous slope ensures free flow of sediment
- Stainless steel swivel joint and pipes



CM.FR-A

Installation & Maintenance



WE BUILD LONG-TERM RELATIONSHIPS WITH ALL OUR CUSTOMERS.

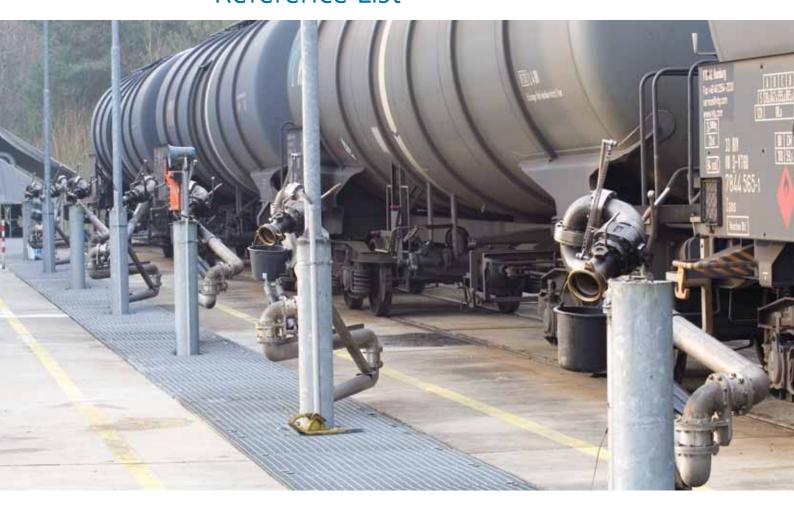
SERVICE AND SUPPORT

Cavotec engineers work closely with customers throughout the lifetime of a system, from design and manufacturing to installation, commissioning and maintenance. Our service, provided by local staff and supported by teams of experts worldwide, is unrivalled in the industry.

We also provide on-site commissioning and training, as well as dedicated training classes at our eight Centres of Excellence. Using in-depth manuals and system documentation, our highly qualified engineers provide all training levels and maintenance instruction.



Reference List



CAVOTEC IN ACTION - AROUND THE GLOBE

ADNOC ALGOL CHEMICALS Amana Pipeline AMI Agrolinz AMD

Arabian Chemicals, KSA Arak Iran

ARAL Gelsenkirchen Arsol Aromatics GmbH Balver Chemie Oberhausen

Bayer Bazan-Oil Bilfo Ltd.

BASF, Antwerpen

Bio Diesel Wittenberge GmbH

Brenntag Hamburg BSL Böhlen Campa Süd GmbH CARGILL, Netherlands

CG- Chemikalien Laatzen Chemische Fabrik Budenheim

Clariant Produkte GmbH

Color Line Compo Conoco, UK CSC JÄKLECHEMIE

DEA
Degussa AG
Descon Eng. Ltd.
Dhafir Technology
DHL Leipzig Airport
Donau Chemie, Austria
Dovechemie W.S.L., SGP

Dr. Kolb

Eka Chemicals, Finland

Emarat TTLR ESSO

Evonik Degussa AG

FBG

FINA Antwerpen

Fluor

Formosa Petrochemical, RC

Fuchs Europe Fuchs DEA

Gardermoen / Oslo-Airport

Grillo Werke

H+R Schindler Ölwerke Hamburg Helsingin Energie, Finland HIP Petrochemia, Czechia

Hoechst Vinnolit

Hoechst

Hydrogas Malaysia

Ineos Infraserv

JLC Chemie, Austria Joamet Oy, Finland Kemira Oy, Finland Kroodi-Tanklager Estonia Leuna Harze GmbH

Linde KCA

Lurgi / Aliyan Alfasel Luxfuel S.A., Luxembourg Minerva Spence, Chile Munich Airport

National Gas Co., New Zealand

NEAG Sulingen Niederländische Marine Nordzucker AG Novamelt GmbH

Oiltanking Deutschland GmbH

OJSC Taneco Oleo Chemie Overseas AST PCK Schwedt

Petroplus Ingolstadt GmbH

Phenolchemie
Promintek
Qatar Vinyl
Raflatac S.A., France
Rayong Olefin, Taiwan
Rheinzink Datteln
Rosneft

Rowa Seevetal GmbH Ruhr Öl GmbH Sasol Wax

Schäfer Kalk GmbH Schiphol Airport Schühmann Sasol

SHELL

SWISS BioEnergy

Taneco Tanguid

Tatu Terminal, Estonia Toyo Wittenberge Ungarische Bundesbahn

Varta VEBA

Ventspils Nafta, Latvia Wacker Chemie Westag & Getalit Wintershall Holding AG Woellner Werke GmbH



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.



We are present in:

Argentina Australia Bahrain Belgium Brazil Canada China Denmark Finland
France
Germany
Hong Kong
India
Italy
the Netherlands
New Zealand

Norway Russia Singapore South Africa South Korea Spain Sweden Switzerland

UAE UK USA

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