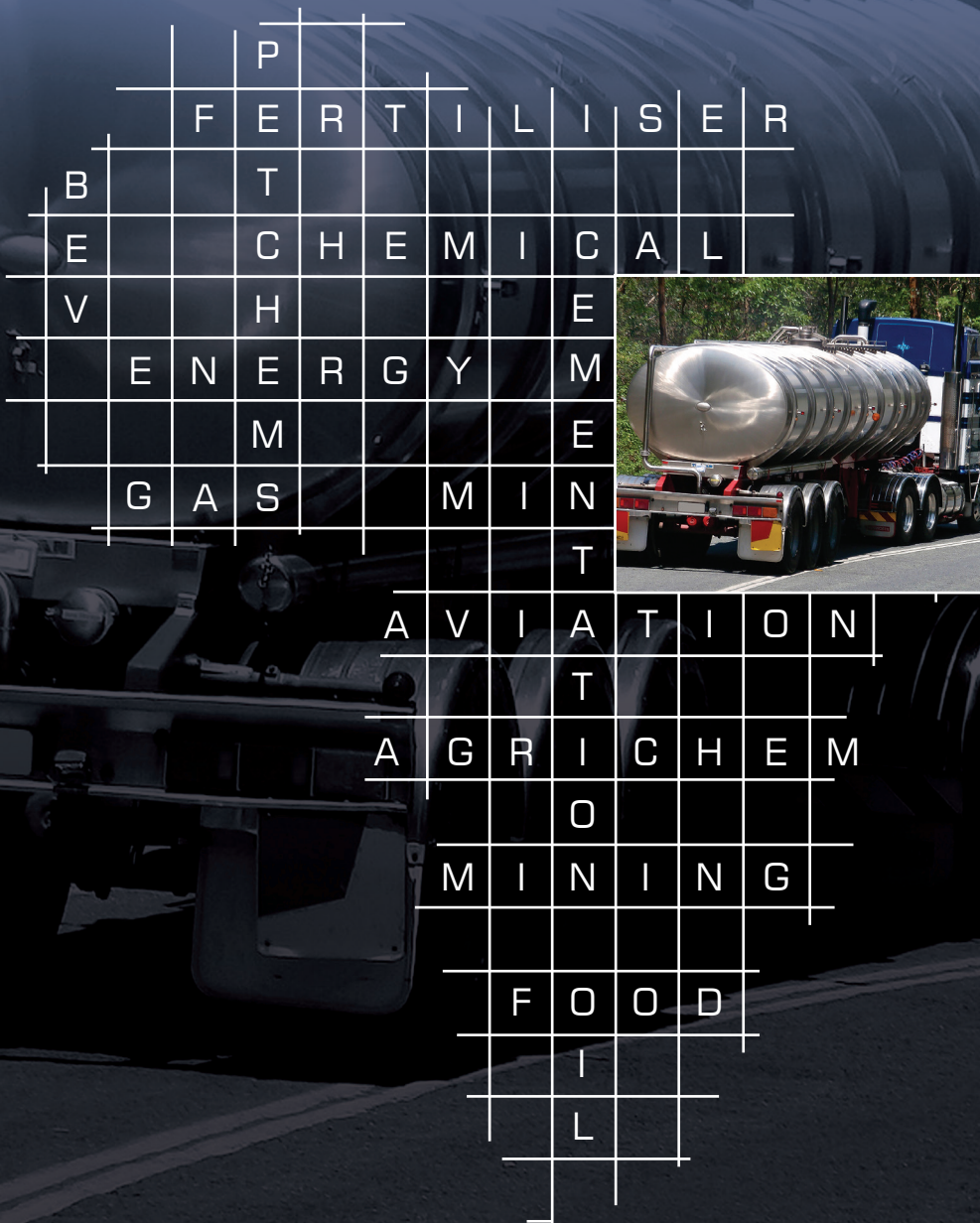


# AFRICA'S LIQUID CONTROL & TANKER LOADING SPECIALISTS



From equipment and component supply, to the engineering and delivery of fully-packaged solutions, Soliflo serves a diverse range of industries throughout Southern and Eastern Africa.



Tel: +27 (0) 11 792 2196  
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[www.soliflo.co.za](http://www.soliflo.co.za)



# SOLIFLO SERVICE

Excellence in respect of customer care, both pre- and post-purchase, is key to success and the After-Sales Service and Support that Soliflo Service affords our clients, is an integral part of our portfolio.

## SOLIFLO AT YOUR SERVICE, NEAR & FAR

Soliflo Service has a highly skilled team of qualified technicians with many years of experience in the fuel, chemical and related sectors.

And, when it comes to training, no expense is spared. Team members regularly attend specialised training sessions offered by our overseas principals.

Testament to our team's solid technical skillset is that several of our international partners and principals regularly task Soliflo Service to undertake global assignments on their behalf.



- Installations of three-, four- and five-step Folding Stairs, Tanker Truck Equipment and Metering Systems.
- Bigger projects include, but are not limited to, Marine Loading Arms, Bottom and Top Loading Arms assembly, installation and commissioning.
- Our aftermarket service, repair and maintenance facilities in Johannesburg also undertake full inspection assessments followed by report backs with quotes for repairs, refurbishment, upgrading or replacement should a customer's equipment be beyond economical repair.
- Soliflo Service's mobile product installation, service, support and commissioning technical teams operate within South Africa as well as over-border in the Southern Africa Development Community (SADC), East African Community (EAC) and certain countries in the Common Market for Eastern and Southern Africa (COMESA) regions.

## EXAMPLES OF MARINE LOADING ARM INSTALLATIONS IN AFRICA & ASIA



Cameroon



Durban, South Africa



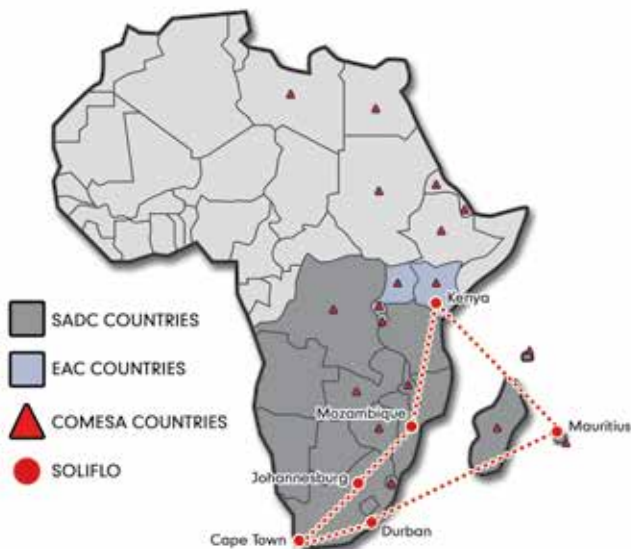
Ho Chi Minh City, Vietnam



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## SERVICING SADC, EAC & CERTAIN COMESA COUNTRIES

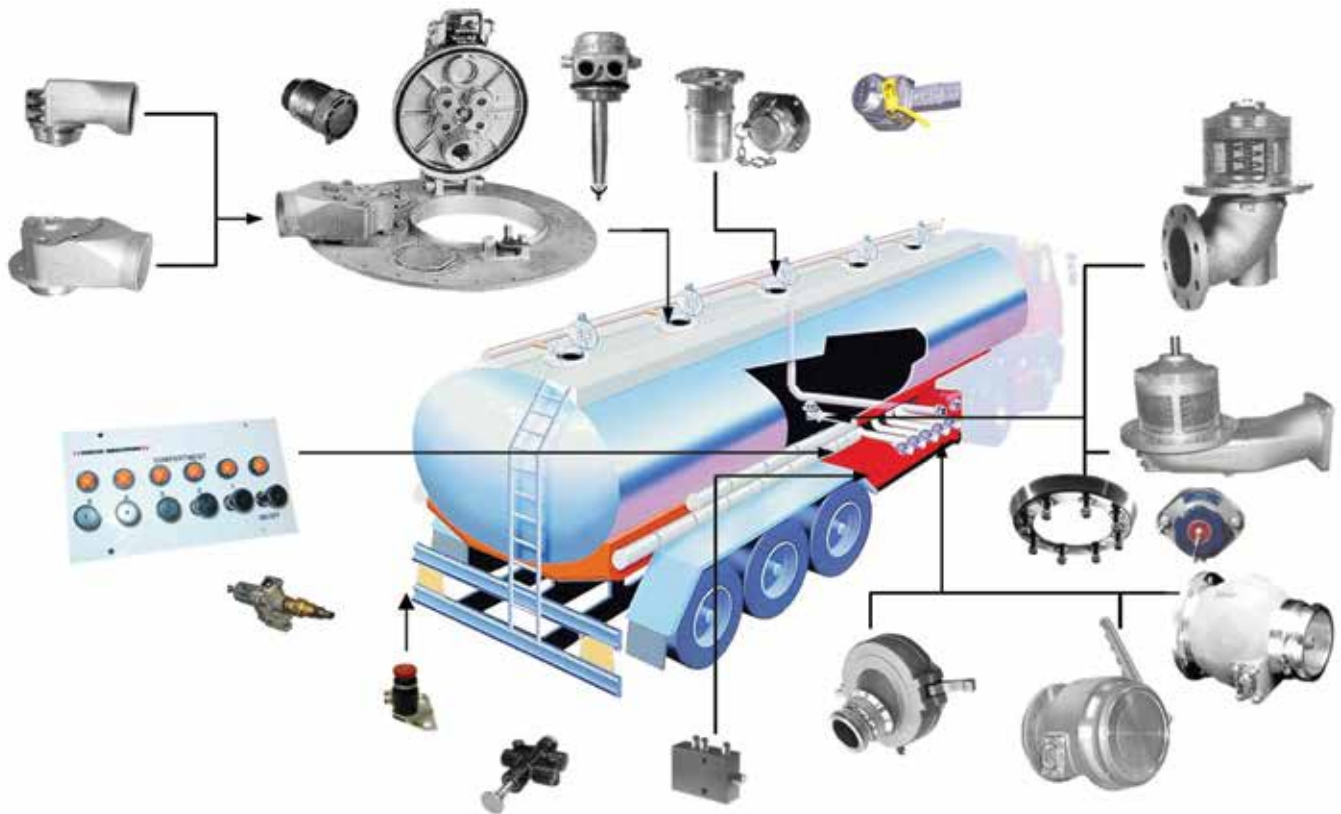


SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC)	EAST AFRICAN COMMUNITY (EAC)	COMMON MARKET FOR EASTERN & SOUTHERN AFRICA (COMESA)
<ul style="list-style-type: none"> <li>Angola</li> <li>Botswana</li> <li>Dem. Rep. Congo</li> <li>Lesotho</li> <li>Madagascar</li> <li>Malawi</li> <li>Mauritius</li> <li>Mozambique</li> <li>Namibia</li> <li>Seychelles</li> <li>South Africa</li> <li>Swaziland</li> <li>Tanzania</li> <li>Zambia</li> <li>Zimbabwe</li> </ul>	<ul style="list-style-type: none"> <li>Burundi</li> <li>Kenya</li> <li>Rwanda</li> <li>South Sudan</li> <li>Tanzania</li> <li>Uganda</li> </ul>	<ul style="list-style-type: none"> <li>Burundi</li> <li>Comores</li> <li>Dem. Rep. Congo</li> <li>Djibouti</li> <li>Egypt</li> <li>Eritrea</li> <li>Ethiopia</li> <li>Kenya</li> <li>Libya</li> <li>Madagascar</li> <li>Malawi</li> <li>Mauritius</li> <li>Rwanda</li> <li>Seychelles</li> <li>Sudan</li> <li>Swaziland</li> <li>Uganda</li> <li>Zambia</li> <li>Zimbabwe</li> </ul>

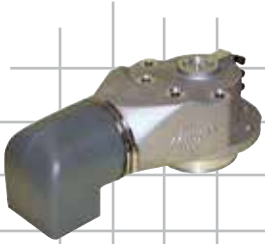
# TANK TRUCK EQUIPMENT

Soliflo provides world-leading Tank Truck Equipment tailored to fit into various operations, vehicles and bulk plant requirements. All components are compliant with many international standards and recommended practices including API, ADR and CEN.

## TANK TRUCK EQUIPMENT



# TANK TRUCK EQUIPMENT



COAMING VENT



VAPOUR TRANSFER VENT



PNEUMATIC CONTROL



OPTIC OVERFILL SENSOR



OPTIC SOCKET



TANKER METERING SYSTEMS



MANHOLE COVER



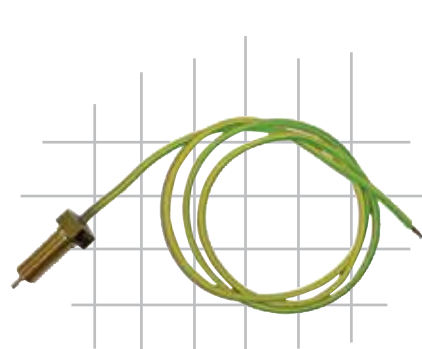
VAPOUR ADAPTOR



API ADAPTOR



DUST CAP



GROUND BOLT



EMERGENCY SHUT-OFF VALVE



FUEL & OIL NOZZLES

# TANKER LOADING

Loading systems supplied by Soliflo are designed and manufactured to the highest industry standards. The company is a premium supplier of Marine, Top and Bottom Loading Arms. We also market the QuayReel® Tanker Loading and Unloading System made by Techflow Marine, a global supplier of fluid transfer systems.

## MARINE LOADING ARMS

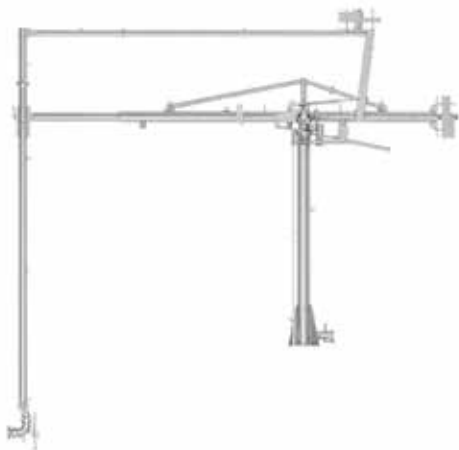
Soliflo offers a wide range of Marine Loading Arms for loading and unloading of almost any liquid and compressed gas product from river barges, ships and ocean-going super tankers. We also service these arms throughout the SADC, EAC and COMESA communities as well as internationally.

### MARINE LOADING ARMS

For transfer of mineral oil, chemicals and LPG.

Designed for hydraulic operation, they can be fitted with the most sophisticated ancillary equipment.

Includes a rigid link pantograph balancing system with independent counterweights directly linked to the inboard and outboard arm ensuring accurate balance throughout all manoeuvring and connecting positions.



#### Features Include

- Fully balanced with independent counterweights for inboard/outboard arm
- Self-supporting system
- Less manpower due to low weight
- Swivel joints either welded-in or flanged





# TANKER LOADING

## BOTTOM LOADING ARMS

Soliflo supplies specialised Bottom Loading Arms that conform to customer specific requirements. Designed to load products for applications where a vehicle cannot be accurately spotted, these arms are suitable for tank trucks, rail tankers or any other vessel with sealed connections. Easily adaptable to vapour recovery systems and capable of handling any liquid from liquefied natural gas and petroleum products to hazardous and non-hazardous chemicals and food grade liquids.

Variants include API RP 1004, chemical, gas, LNG and cryogenic bottom loading arms. Soliflo manufacture and assemble the API RP 1004 bottom loading arms locally.

### CHEMICAL BOTTOM LOADING ARM STATION

Suggested Applications: Road and Rail Bottom Loading and Unloading

Suggested Mediums: Oil and Chemical Products



- Designed to load mineral oil or chemical products and suitable for bottom loading and unloading of road or rail tankers.
- Has a long reach and is suitable for applications where the tanker connection flange cannot be accurately positioned.
- High quality swivel joints and precise loading arm balancing make it very easy to handle.



### API LOADING ARM AND RISER

Designed to meet the specific requirements of API RP 1004 for loading of fuels in to road tankers.

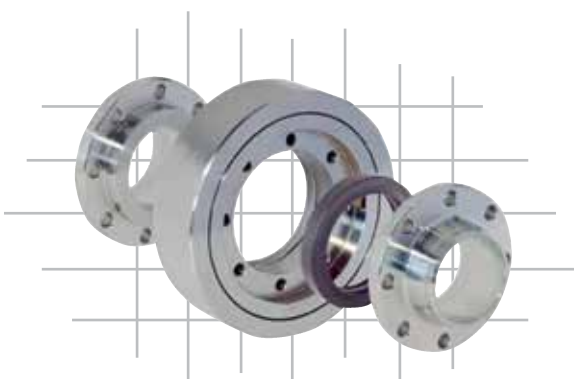


- For bottom loading and unloading of road or rail tankers with all types of fuel.
- Tanker side connection is achieved with a 4" API coupler and loading arm dimensions are designed to give coverage of entire API connection area.
- Features carbon steel swivel joint with flame hardened ball race and smooth action spring cylinder balances.

## SWIVEL JOINTS

Swivel joints are used where easy handling, operational safety and low-wear characteristics are required.

- Types: Multi-purpose, high pressure, cryogenic, abrasive, PTFE-lined
- Diameters: 1" up to 24"
- Wide range of construction materials dependent upon media being transferred



Optimises nearly all liquid transports meeting the highest standards.

Due to its sandwich design, the bearing module is separated from the product-carrying components.

It can therefore be used as a standard swivel joint for nearly all media with temperatures ranging from -45 °C to +250 °C.

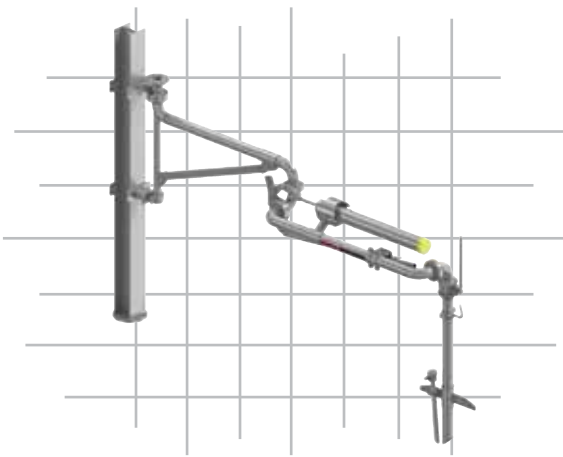
# TANKER LOADING

## TOP LOADING ARMS

Our Top Loading Arm systems are especially designed for top loading of compartment road or rail tankers using the manhole, or any kind of fixed connection such as flange or coupling. These arms can also be used for vapour recovery / balance, and other applications when used with an engineered design. Variants include fixed reach, variable reach and long reach loading arms, suitable for open, semi-closed and closed loading of road and rail tankers.

### LONG REACH TOP LOADING ARMS

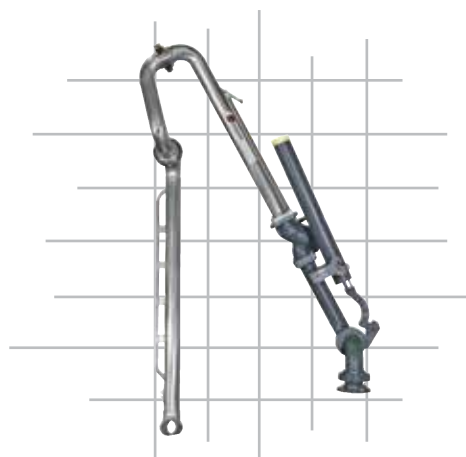
For top loading of multiple-compartment road or rail tankers.



- Versatile, easy to adjust, super smooth spring-loaded cylinder balanced, heavy duty swivel joints.
- Custom boom support enables these arms to reach even further than unsupported boom loaders.

### VARIABLE REACH TOP LOADING ARMS

For petroleum, chemical and mineral applications. Available with or without a load valve.



- Designed for top loading of road or rail tankers where the manhole cannot be positioned accurately.
- Versatility of reach (applications less than 335 cm) makes it ideal where more than one compartment can be reached without re-spotting the vehicle.

## TANKER LOADING & UNLOADING SYSTEM

With an increased demand for flexible and versatile solutions for tanker loading and offloading operations in complex situations and multi-purpose docksides, where loading arms or hose towers are not an option, a great alternative is Techflow Marine's QuayReel System which combines the versatility of a hose coupled with the ease of a reel.

### QUAYREEL® SYSTEMS

Simultaneous loading reduces loading operation time by 50% - 60%.



#### Loading/Unloading Applications Include

- Near-shore tanker (unloading)
- Tanker loading
- Multi-purpose cargo dockside
- Small scale river terminal

#### Benefits Include

- Minimises spillage risk
- Reduces CO<sub>2</sub> emissions
- Reduces maintenance
- Less dock space
- Reduces loading times
- Tanker fuel savings
- Maximises safety and reliability



# TANKER GROUNDING & OVERFILL PREVENTION

We are suppliers of Grounding Control Systems for bulk liquid transport road and rail tankers, barrels and marine vessels as well as Overfill Prevention Systems which provide essential and optimum safety for bottom loading tank trucks.



## DCMT-4 STATIC GROUNDING DEVICE

Used to ground the tank during the liquid transfer process, the DCMT-4 mitigates any risk of explosion due to sparks generated by static electricity. Any static generated is immediately transferred to the ground.

### Features Include

- Two grounding relays
- Pre-set circuit board or set on site
- Working temperature: -40°C to +60°C
- Explosion proof box, intrinsic safety electronic board
- High insulation voltage relay (10 000V)

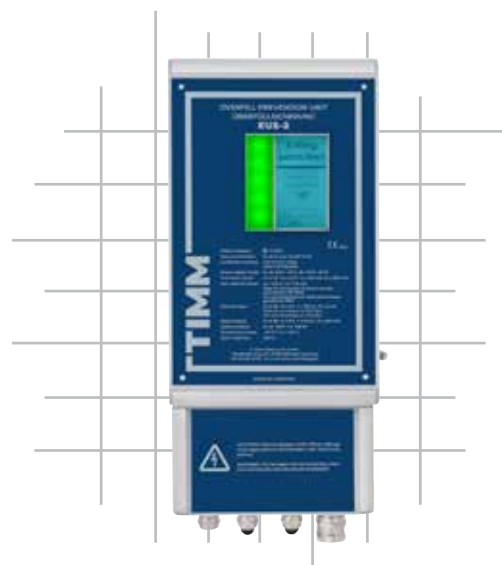


## TIMM EXK-4 GROUNDING CONTROL DEVICE

A monitored earthing system, it ensures the safe, controlled discharge of electrostatics occurring during filling processes of tank trucks, silo trucks, railway wagons or tank containers, preventing static-caused ignitions.

### Benefits Include

- Prevents manipulation due to object recognition by measuring impedance
- Opening of housing while operating in gas hazardous areas allowed
- Automatic self-monitoring diagnostic system
- Connects to cables up to 30 m
- NAMUR-compatible Ex i control output



## TIMM EUS-2 OVERFILL PREVENTION CONTROLLER

By monitoring the level sensors at the tanker compartments, the truck grounding and the vapour recovery connection on bottom loading road tank trucks, it prevents hazardous spills, accumulation of electrostatic charges and evaporation of emissions.

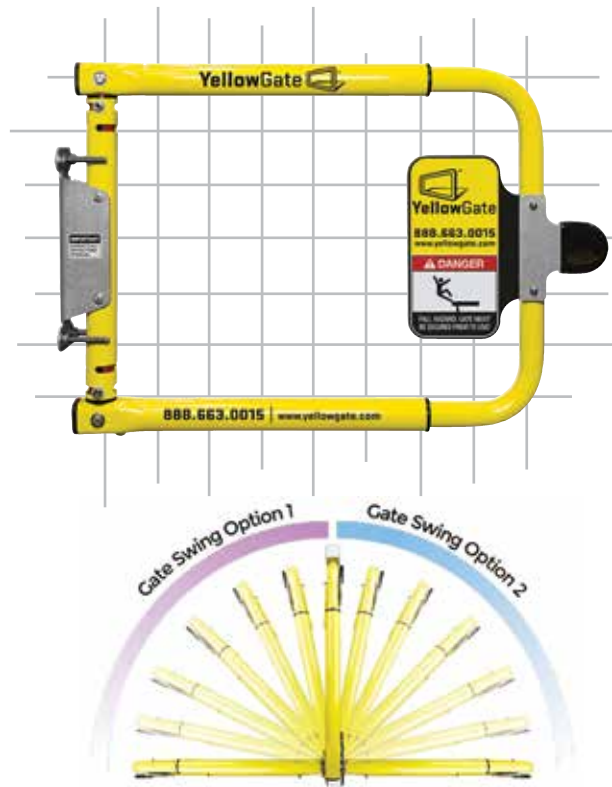
### Benefits Include

- Plain text messages display
- Opening of housing during operation in hazardous areas allowed
- Intuitive operation of configuration menu
- Serial data interface (Ex ib) for connection with the TExi data bus

# FALL PREVENTION & SAFE ACCESS

Soliflo has developed a wide range of tanker access, fall prevention and safety systems in line with the highest safety standards, to prevent potential operator injuries and fatalities at bulk loading and off-loading facilities. We also represent leading international brands in these fields including SafeRack and YellowGate.

We supply loading gantries and access platforms, fall arrest systems, folding stairways and gangways, safety gate enclosures, hydraulic elevating platforms, mobile tanker access units and marine tanker and barge access systems and towers.



## YELLOWGATE SWING GATES

With YellowGate's 20" (508mm) of adjustability and universal mounting system, you can protect every passway in your facility with one SKU.

Its universal mount's parallel and perpendicular mounting capabilities meet any installation requirement with no additional parts required.

It can be placed at the top of any rolling ladder or elevated work platform, and its universal swing further reduces ordering complexity enabling re-purposing of gates as required.

### Features Include

- ➔ Universal mount
- ➔ Adjusts from 16" to 36" (406 mm to 914 mm)
- ➔ Malbec tensioner
- ➔ Adjustable swing direction
- ➔ Field adjustable with no cutting, welding, drilling

## FOLDING STAIRWAYS & SAFETY CAGES

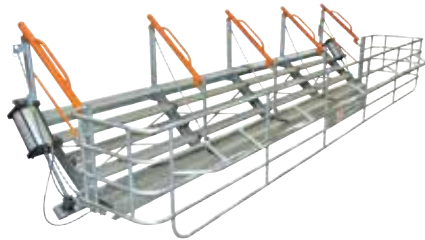
Folding stairways are used to bridge the distance from loading racks to tank cars or rail tankers, although they can also be used in other similar applications. They can be configured with a range of steps and step widths together with safety baskets.

The majority of tanker access is required for loading or unloading. In many cases, however, operators need to have access to tanker tops to check security of man lids or sample product.

The most common form of tanker access and enclosure is the folding stair. In case of a high variance of tankers and large working areas, a complex protecting grating system may be the better solution.



# FALL PREVENTION & SAFE ACCESS



## SINGLE- AND DOUBLE-SIDED FALL ARREST SYSTEMS

Fall arrest systems are designed to stop the fall and absorb the energy and are used to protect personnel working at heights.

Body Support, Connectors, Anchors and Rescue are all a part of the fall arrest system.

A fall arrest system may be used in tandem with other fall protection devices like guardrails and/or a self-closing gate, but this isn't always the case.





# HOSES & COUPLINGS

## RUBBER & COMPOSITE HOSES

Trelleborg offers a specialised range of EN-standard hoses (rubber and composite) for numerous industries: oil, petroleum, aviation oil, materials handling, chemical and corrosive products, food, construction and mining equipment. Having acquired Gutteling Composite Hoses, Trelleborg has greatly enhanced its offering.

### TRELLEBORG PUMPADUKT S

Oil and Petroleum Transfer



Suction and discharge of petroleum products with aromatic content up to 50%. Loading and unloading of road or rail tankers and boats. Fixed installations in various industries.

Temperature Range: -40°C to +100°C

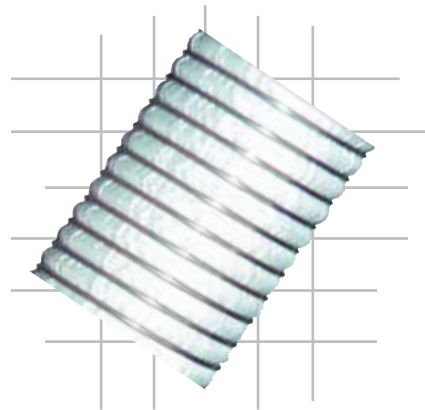
#### Advantages Include

- Highly robust and flexible
- Cover especially resistant to hydrocarbons, abrasion, atmospheric conditions and ozone
- Electrical conductivity assured by inner tube compound
- Suitable for biofuels up to 60°C



### GUTTELING MULTI-LNG WHITE HOSES (CRYOGENIC)

For use with fully refrigerated conveyants such as Liquid Nitrogen and LNG down to -196°C.



#### Overview

- Two different types: Multi-LNG White for LNG bunkering, Ship to Shore and industrial applications and Multi-LNG White STS for Ship to Ship and LNG Bunker operations
- Can be used in combination with loading arms and flexible pipelines
- Certified to several international standards

#### Properties

- Inner and Outer Wire: Stainless steel 316
- Lining and Cover: Polyamide
- Carcass: Polyamide fabrics, polyester films
- Working Pressure: 10.5 & 21 bar
- Maximum Length: 30 m
- Available Sizes: 1" up to 12"

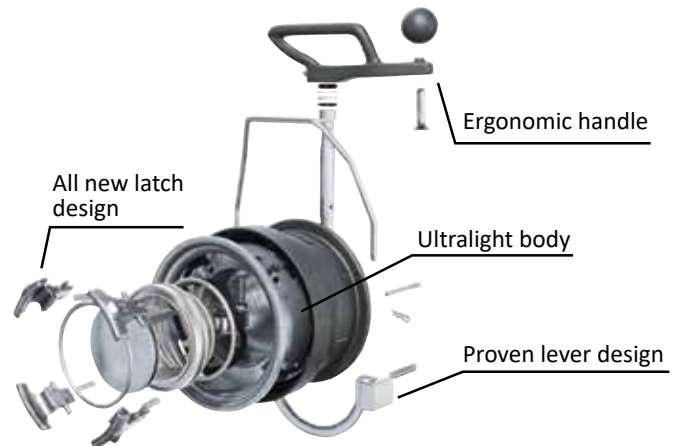
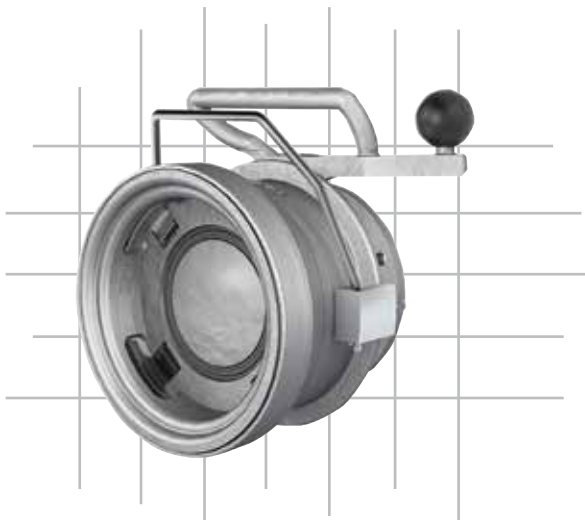
# HOSES & COUPLINGS

## API COUPLERS

Soliflo has access to the most comprehensive range of API couplers available. Approved worldwide and operating successfully in the most demanding environments, each coupler incorporates a host of patented features ensuring a clean, spill-free loading rack.

### EMCO WHEATON J0453

New Generation Tank Truck Couplings



#### Applications Include

- Suitable for road and rail, these API bottom loading adapters and couplers form the mission critical connection when a tanker is at the loading rack
- Handles a wide range of different fuels including petrol, diesel, kerosene and biofuels. Also equipped to deal with future fuels such as hydrogen

#### Features Include

- Greatly reduced weight, improved ergonomics
- Up to 50% less maintenance downtime
- Easier sealing maximises safety of complex loading applications
- Smoother coupling operation due to low engagement force
- Working pressure increased to 16 bar (g) with test pressure of 25 bar (g)
- Conforms to API RP 1004 for compatibility with API adapters

### EMCO WHEATON API ADAPTOR F5000 SERIES

Installed on road tankers supporting filling at the loading rack and unloading by hose at the service station.



### EMCO WHEATON J0451 FUEL LINE COUPLER

Transfers wide-ranging fuel products such as petrol, diesel and kerosene, held on tank trucks. Able to handle other mediums such as crude oil, biofuels, alcohol and solvents.



# HOSES & COUPLINGS

## DRY-BREAK™ COUPLERS

TODO-MATIC Dry-Break Couplings safely transfer their most hazardous, valuable or environmentally sensitive media with minimal residual loss and virtually zero spillage. Minimal operator intervention means loading and unloading is more efficient be it on the road, rail, offshore rig or ship.

### TODO-MATIC® DRY-BREAK™ COUPLINGS

- Available in 1" to 6" sizes
- Working pressure of PN 10 - 25 (145 - 363 psi)



KLAW's QS Dry Disconnect (Dry Break) Coupling range offers the latest in robust and efficient design affording quick connect and disconnect transfer lines with no spillage. It is equally suitable for transfer hose and loading arm applications, bulk loading and unloading of road tankers, rail cars and ship terminals as well as Ship-to-Ship transfer (bunkering), Ship-to-Shore transfer (PSVs), Ship-to-Rig transfer and marine refuelling.

Interchangeable with other manufacturers, the QS range is fully compliant to NATO/STANAG 3756.

### KLAW QS DRY DISCONNECT COUPLERS

Available in aluminium and stainless steel

#### Sizes

1" DN25; 2" DN50; 2 ½" DN65; 3" DN80; 4" DN100; 6" DN150

#### Applications Include

Petrochemical, chemical, industrial, marine and pharma

#### Features Include

- Ergonomic single action operation for both square and round handle QS options
- Automatic Turn and Lock mechanism for secure and safe connection
- Bump ring to guide and protect
- Selectivity system protects against cross-contamination, fully compatible with existing systems
- Built-in swivel within QS Dry Disconnect coupling removes hose twist and tension
- Automatic valve opening and closure delivers non-spill efficiency



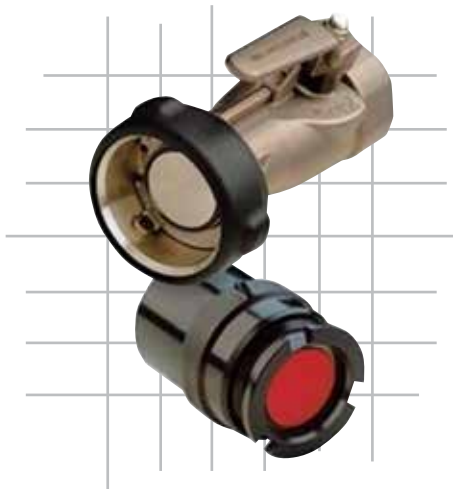


# HOSES & COUPLINGS

## — DRY-BREAK™ COUPLERS —

Emco Wheaton's Dry-Break Couplers and Adaptors are designed for total safety. Fluid cannot flow until the coupler has been locked into position on an adapter and the valve opened. The coupler can only be disconnected from the adapter when the valve has been closed eliminating product loss and potential hazards associated with leakage at disconnect.

### EMCO WHEATON DRY-BREAK™ COUPLERS



Wide range of body construction choices and seals.

- Available 1" - 3" sizes
- Working pressure of 6 bar (87 psi)



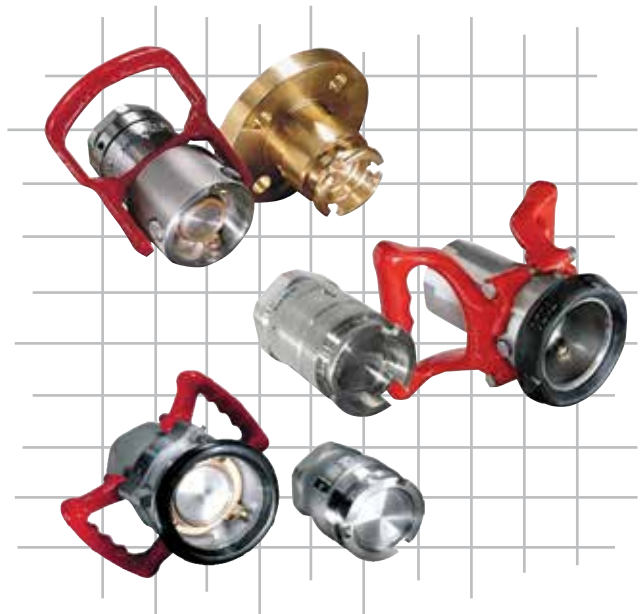
J72 2" VARIANT

J73 3" VARIANT



TODO-GAS Dry-Break Couplings simplify LPG handling and transfer in both liquid and vapour phases. Similar in design to the TODO-MATIC range, TODO-GAS 1" and 2" sizes are, however, dimensionally different to stop cross contamination.

### TODO-GAS® DRY-BREAK™ COUPLERS



- Available 1" - 3" sizes
- Working pressure of PN 25 (363 psi)

Built to take the strain of rapid fuelling activities in the most demanding of applications, TODO Dry-Break Aviation Fuel Couplers are used in commercial, offshore and military applications ensuring safe and spillage-free aviation fuel transfer.

### TODO-45 DRY-BREAK AVIATION FUEL COUPLINGS

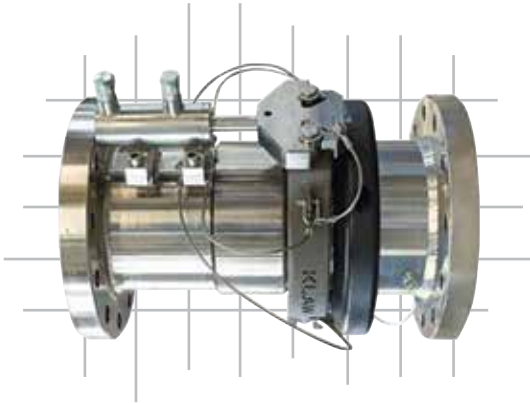


- Transfers up to 3 000 l/min
- Working temperature of -20°C to +80°C
- Working pressure of 10 bar (145 psi)

# HOSES & COUPLINGS

## EMERGENCY RELEASE COUPLINGS

The KLAW Emergency Release Coupling (ERC) is the breakpoint within a transfer system. It shuts off flow and separates without stress to transfer systems delivering minimum spillage and 100% shut-off. To maximise flow efficiency, the ERC uses the same Flip-Flap design as the KLAW Breakaway Coupling.



### KLAW ERC COUPLINGS

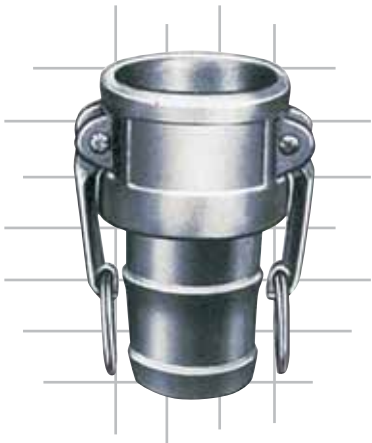
Sizes: 2" DN50 to 12" DN400

#### Options

- Spring Release: For smaller loading arms
- Cable Release: The cable is attached to ERC and a fixed point suitable to withstand activation load
- Hydraulic Release: Controlled with hand pump or Hydraulic Power Unit (HPU)
- Dual Release: Cable and hydraulic control
- Cryogenic ERCs: Designed for LNG and other cryogenic gases

## SURELOK COUPLINGS

Emco Wheaton's SURELOK Couplings produce fast, tight connection between two hoses or a vessel and a hose. No tools or pre-adjustment required, coupling process is achieved by the simple operation of two handles.



### EMCO WHEATON SURELOK COUPLINGS

Extremely robust in design, they withstand some of the most challenging applications.

#### Sizes

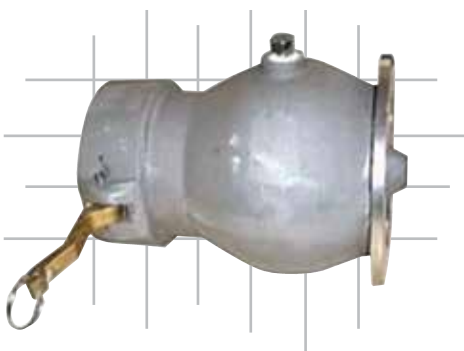
- 15mm (½ ") to 200mm (8") in brass and aluminium
- 5mm (½ ") to 150mm (6") in other materials

#### Operating Pressure & Temperature

- 5 to 8 bar (dependent on material)
- Maximum 40 bar for high pressure special model
- -40° C to +200° C

## VAPOUR COUPLERS

Emco Wheaton's self-sealing Vapour Coupler allows high transfer rates of vapour to flow freely from the tank truck back to the loading rack. It permits higher flow rates at reduced pressure drop when incorporated into a well-engineered vapour return system, preferably as an integral part of a vapour unloading arm.



### EMCO WHEATON J0550 VAPOUR COUPLERS

#### Specifications Include

- Spring close poppet, 4" TTMA flanged inlet
- 4" Female cam and groove outlet
- Mates to all available vapour adapters made in accordance with the API RP 1004
- Aluminium body, hard wearing brass cams
- Viton seals, product drain plug

# DOUBLE BLOCK & BLEED (DBB) GATE VALVES

Posiwell DBB Gate Valves have been designed by engineers at the forefront of valve service, repair, modifications and automation.

Sizes Range: 2" to 40" ANSI Class 150 - Class 300. ANSI 600 and other sizes, contact Soliflo.  
Rising and Non-Rising Stem Valves available.



## DBB GATE VALVES

### Applications Include

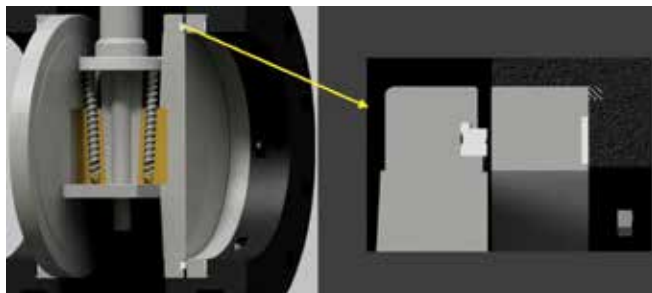
- Metering stations
- Oil, gas and aviation terminals
- Tank storage and hydrant isolation
- Applications requiring zero leakage performance
- Multi-product manifold

### Benefits Include

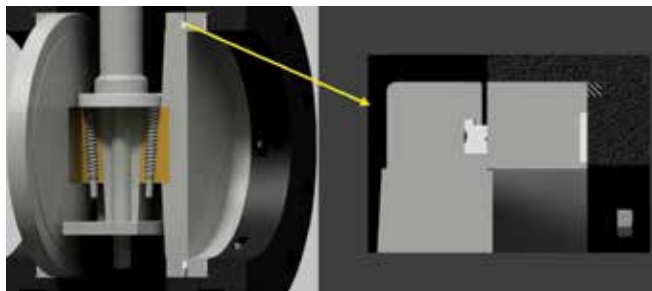
- Full bore - MAX FLOW - increased flow rate vs plug valves
- API 6D compliant - ISO 14313 for DBB and DIB
- Flow torque (use of smaller actuators)
- Face to face as per a standard gate valve

## SPRING-LOADED DISC DESIGN

Spring-loaded disc design ensures seat tightness is maintained during thermal expansion and contraction; that both discs are adequately retracted before starting uplifting motion.



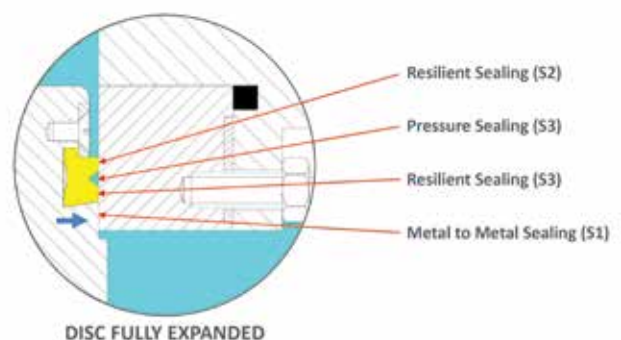
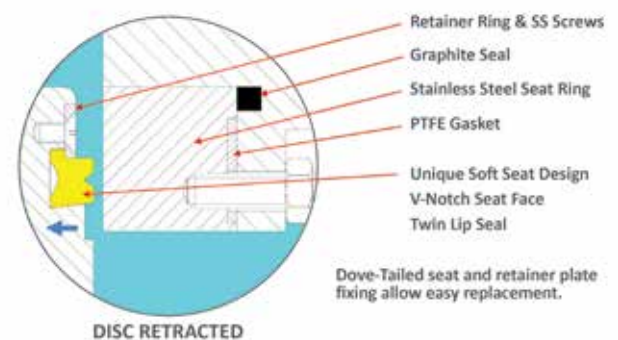
Valve in closed position, springs decompressed, discs located on disc shoulders and retracted from valve seats.



Springs compressed, discs expanded sealing on soft and metal-to-metal seats achieving bubble tight shut-off to API 6D - DBB/DIB-1 standard.

## SEAT-ON-DISC DESIGN

Designed using a unique patented sealing concept (S1, S2 and S3).





# INSTRUMENTATION & FLOW CONTROL

Save on total cost of ownership with leading brand Instrumentation and Flow Control solutions including Positive Displacement (PD) Flowmeters, Industrial Turbine Flowmeters, Cryogenic Flowmeters, Piston Control Valves, Integrated Flow Controllers, Terminal Management Systems and Gravity Discharge Meters.

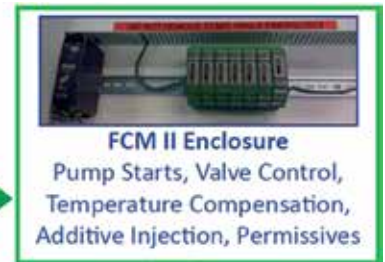
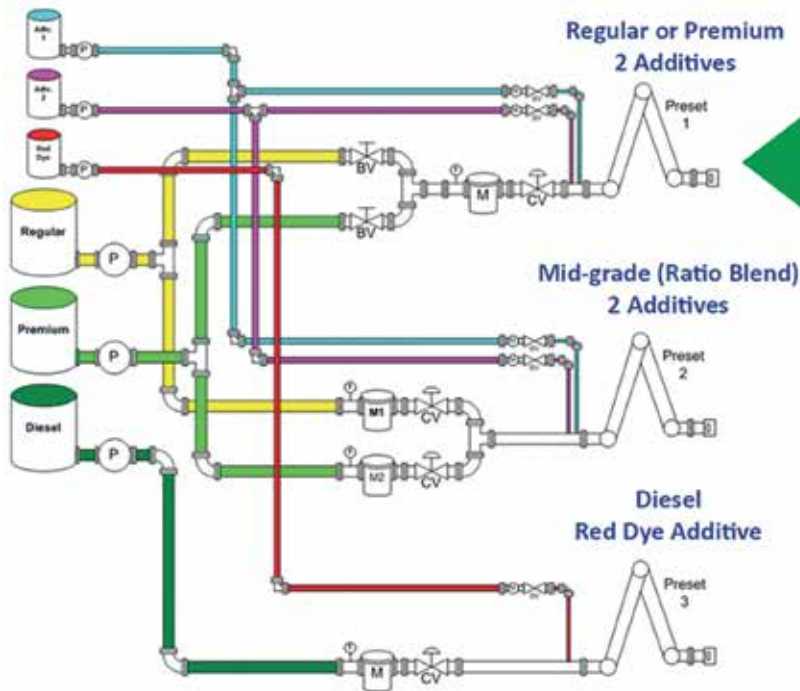


## TOPTECH MULTILOAD II Integrated Flow Controller

Powerful stand-alone operation, seamless integration with terminal automation systems, near limitless scalability. Delivers straight product or multi-product recipes.

### Features Include

- Full colour LCD display, alphanumeric keypad
- Division 1 and 2 enclosures
- Integrated card reader options
- Auto temperature and pressure correction
- Controls up to 12 arms per bay



RS-232



Ethernet or Serial

TMS7 or other Supervisory System (Optional)



## TMS7

The latest version automation system, the new TMS7, is a user-friendly terminal management hub that provides load rack visibility and flexibility. With its superior user interface and additional features, it affords even more productivity (up to 60%) and controls.

### Overview

- Ideal for variety of terminal applications including an unlimited number of drivers, carriers and customers
- Accesses terminal analytics, allocations management, customer onboarding tools and more

# INSTRUMENTATION & FLOW CONTROL



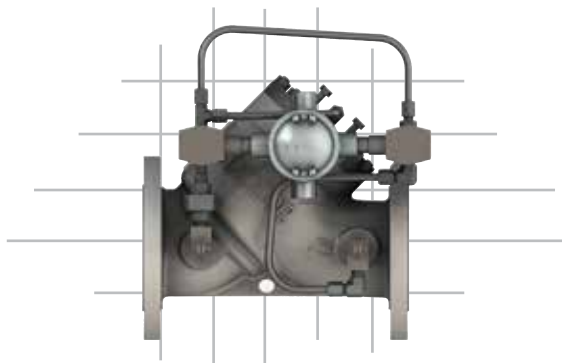
## BRODIE BI-ROTOR PLUS POSITIVE DISPLACEMENT (PD) FLOWMETER

Applied in custody transfer, biofuels and terminal applications.

Accurate measurement of petroleum liquids in variety of applications. Size ranges from 1/2" - 16", measures flows from 2.7 l/min - 2 000 m<sup>3</sup>/hr. Accuracy and repeatability reaching  $\pm 0.075\%$ .

### Features Include

- Pulse output
- Electronic display (optional)
- 150# or 300# pressure rating
- Flow ranges from 114 to 9 462 l/min

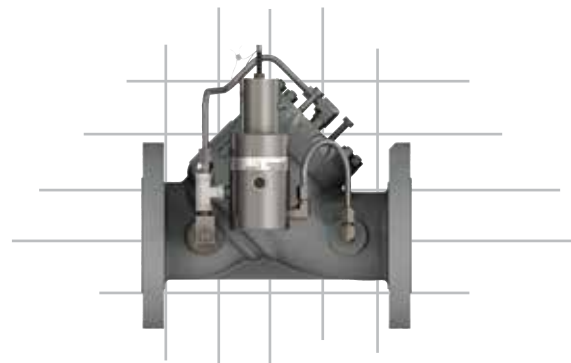


## BV88 DIGITAL PISTON CONTROL VALVE

Controlled by electronic batch control device for low flow start-up, high flow control, low flow shut-down and final shut-off.

### Features Include

- Precision flow rate and batch control
- Fail safe, closes on power failure
- Compatible with electronic presets
- Optimum meter performance, avoids overfill due to fast response
- External pilot control loop (a normally open solenoid pilot, normally closed solenoid pilot, strainer and opening / closing speed controls)



## BV70 DIFFERENTIAL PISTON CONTROL VALVE

Controlled pressure differential maintained within  $\pm 2\%$  regardless of variations in upstream or downstream pressure.

### Features Include

- No outside power source required to operate
- Pilots are balanced, single seated valves with large ports
- Will operate on a differential as low as 5 psi [34.5 kPa]
- Completely self-contained

# INSTRUMENTATION & FLOW CONTROL

## INDUSTRIAL TURBINE FLOWMETERS

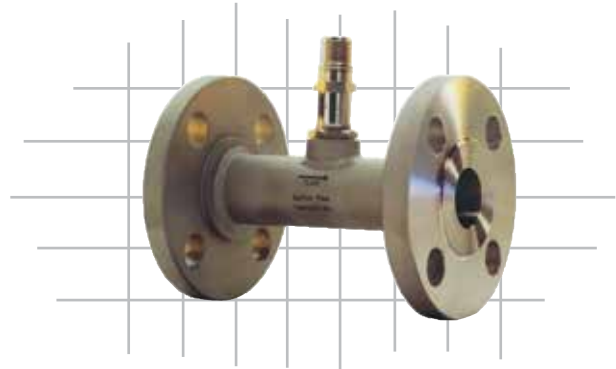
Sizes: ¼" - 12". Liquid and gas applications include petroleum, natural and industrial gases, chemicals, water, cryogenic liquids and air with the process industries. Low cost, outstanding accuracy. Operational over wide range of temperatures and pressures.



### HO SERIES TURBINE FLOWMETERS: LIQUIDS

#### Features Include

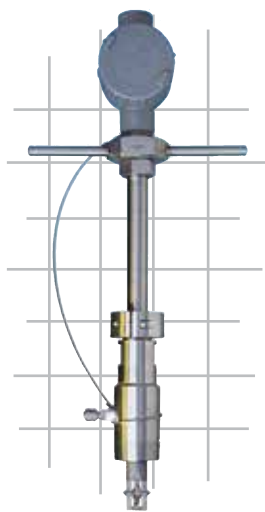
- Linearity +/- .5%
- Repeatability +/- .1%
- Provides wide flow ranges (10:1 to 100:1 turndown ranges available)
- Repeatability Flow Range: .0625 to 15 000 GPM



### HO SERIES TURBINE FLOWMETERS: GASES

#### Features Include

- Linearity of +/-1% of reading typically density-dependent for a given meter. Consult Soliflo
- Repeatability Flow Range: .15 - 12 000 ACFM
- Variety of process connections available
- Hybrid ceramic ball bearings, superior life



### HP INSERTION SERIES: LIQUIDS & GASES

4" - 72" pipe diameters. Precision flow measurement of liquid and gas applications in large diameter pipes costing less than an in-line flowmeter.



### CRYOGENIC FLOWMETERS: ICE

Hoffer's most advanced, truck-mounted Cryogenic Flow Metering system, typical application includes ICE as the primary electronic indicating element of a bulk delivery system for CO<sub>2</sub> and cryogenic liquids.

Other system components typically include a turbine flow meter, temperature sensor, optional pressure sensor and optional printer.

Insertion for:	Liquids	Gases
Repeatability Flow Range:	.25 - 50 FPS	5 - 250 FPS
Accuracy:	± 1%	± 2%

#### Features Include

- Low-pressure drop, wide flow turndown ranges, process connection flexibility
- Installable / removable from active line without stopping service
- -20 to +400°F standard operating range with Viton seal

#### Features Include

- User-friendly interface
- Aluminium enclosure has shock mounts but can fit with optional articulated bracket
- Back panel fitted with environmentally sealed, military-style electrical connectors for all standard and optional I/O connections

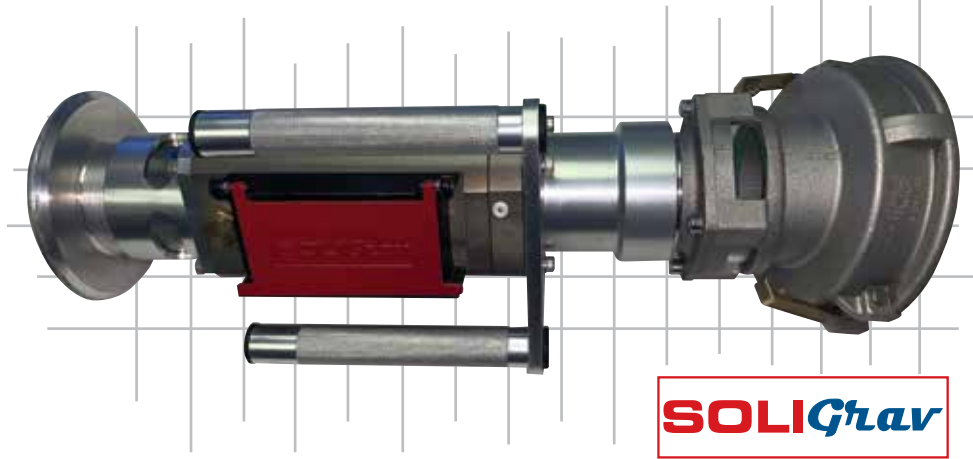


# INSTRUMENTATION & FLOW CONTROL

## SOLIGRAV® GRAVITY DISCHARGE METER

A portable, compact custody transfer-approved metering device, SOLIGrav facilitates precise measurement of fuel quantities delivered to retail sites.

Exclusively for the gravity discharge of petroleum products, it measures partial or full compartment deliveries and product returns thereby reducing risk of fraud.



### Applications Include

- Product metering of service station delivery operations
- Tank truck, rail car production reception control



### Features Include

- 3" high accuracy turbine
- Electronic totaliser and flow computer
- Liquid and gas sensors, heavy duty filter
- Temperature compensation
- Wide range of inlets and outlets
- Bluetooth and GPS

### Benefits Include

- Large LCD screen
- Quick, easy to use
- Lightweight and autonomous
- History data management
- Customised fluid parameters
- Temperature monitoring



Bluetooth



Android



iOS



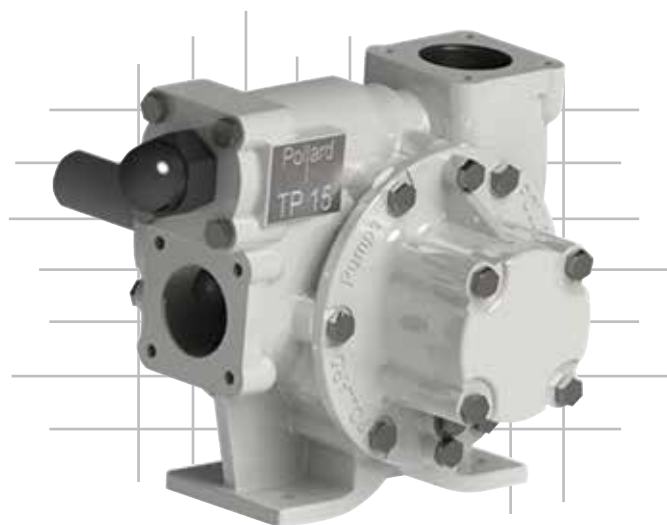
Windows

### Specifications Include

- Metered Liquids: Refined hydrocarbons, diesel, petrol, kerosene, Jet A-1, etc.
- Flow Rate: 8 - 80 m<sup>3</sup>/hr; 130 - 1 300 l/min
- Accuracy:  $\pm 0.2\%$
- Repeatability:  $\pm 0.02\%$
- Scale Interval: 1 litre
- Maximum Pressure: 5 000 kPa
- Temperature Range: -25°C to + 55°C
- Temperature Conversion: To 15°C or 20°C
- Weight: 6 kg
- Air Detection: 2 x integral gas detectors
- Temperature Detection: 1 x integral temperature probe

# PUMPS

Robust industrial pumps designed to provide continuous service for many years, Pollard has an extensive product range developed for use in numerous industry sectors. Proprietary CMtec technology guarantees good volumetric efficiency and suction capacity and the ability to pump viscous fluids.

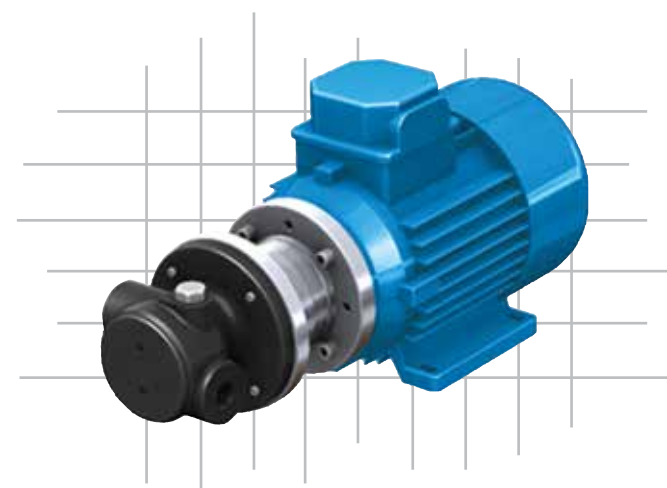


## TP SERIES - ROTARY VANE TRANSFER PUMPS

Designed for loading and unloading of tanks and tankers transferring hydrocarbons such as biofuels, diesels, gasoline, lubricants etc.

### Features Include

- Flow range up to 60m<sup>3</sup>/h
- Differential pressure up to 8 bar
- Constant flow, self-priming, hose drain
- Lower weight, higher flow rate
- Self-lubricating with internal bypass
- Robust construction for severe conditions
- ATEX certification



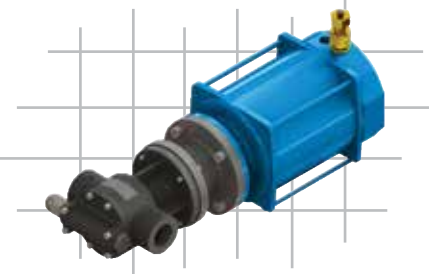
## MOTO PUMP (MP) SERIES

Standard range of robust industrial pumps and motor pumps for pumping oil, diesel, fuel etc.

### Features Include

- Covers capacities between 0.5cm<sup>3</sup> and 665cm<sup>3</sup> per rotation for pressures up to 10 bar
- Flow rate from 1 - 24 l/min for a working pressure up to 10 bar
- MP type pumps exist in non-reversible and reverse plus versions

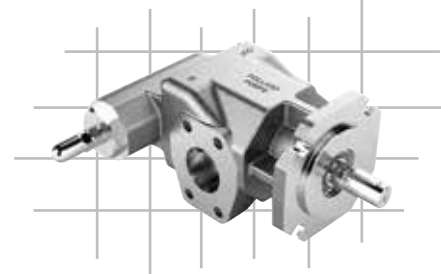
## MPEX RANGE: 1CM<sup>3</sup> - 60CM<sup>3</sup> ROTATION ATEX



### Features Include

- For optimum use in an Explosive Atmosphere
- ATEX certified with LCIE for flow rates from 1 - 60 l/min at 1 500 rpm

## PK PS - INTERCHANGE-ABILITY VANE PUMP RANGE



### Features Include

- Ranges from 2 cc/rev pumps to 80 cc/rev pumps, pressure up to 15 bar (g)
- Designed to replace gear pumps for better performance

## MICRO MOTOR PUMP (MMP) RANGE



### Features Include

- Flow rates range from 70 - 200 l/h for a working pressure up to 5 bar
- Suitable for pumping oil, diesel oil etc. for machinery

# ADDITIVE, PRESSURE & INJECTION

Together with Flotech Performance Systems, we offer complete turnkey Additive Injection and Blending Systems for petroleum and chemical applications.



## ADDITIVE SYSTEMS

The additive systems we design and manufacture are flexible in design and offer a wide variety of component options. Systems with integrated storage ranging from Mother / Daughter Systems with storage capacity of 1 200 to 3 000 litres, to containerised systems with storage capacity of 5 000 to 60 000 litres.

Each is engineered to suit users' current and future additive requirements and incorporate additive storage, pressurisation and monitoring equipment such as temperature, pressure and flow transmitters.



### FLOBLOCK ADDITIVE INJECTOR

Combines check valve, needle valve, flowmeter, solenoid valve and filter in a single manifold 23 cm in length.

#### Integrates With

- All mainstream load computers
- Additive controllers
- PLCs
- Terminal automation systems



### FLOCAL CALIBRATION DEVICE

Using this kit, FLOBLOCK can be calibrated with no exposure to potentially harmful additives or vapours.

#### Features Include

- Inlet diverter valve, calibration cylinder, graduated piston gauge, outlet diverter valve and sample return pump all in one device
- Captures additive in built-in calibration cylinder from which volume can be read using piston gauge



# FILTRATION & WATER SEPARATION

iCerMax™ filtration systems (water and particle variants) extend the economic lifecycle of engines and equipment working with the often-harsh contamination levels facing Africa's fuel sector.

## BULK

### T REX XL WATER VESSEL THICK BASE, ICE 1" SPIN ON HEAD



#### Features Include

- 2-stage filtration for highly contaminated fuels
- Flow rate 120 l/min
- Permanent water coalesce removes free and suspended water
- Particle pre-filtration using 10 micron cellulose paper
- Large internal water trap with side glass indicator
- Drain valve or water sensor optional

## ON BOARD

### DUO-AQUA TRIP FILTER DAT 2

2 x 2 ultra-injector protection using four different filtration methodologies in one filter.



#### Applications Include

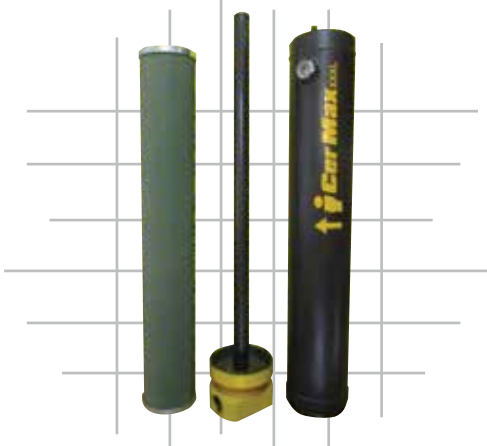
All medium to large diesel engines for:

- Trucks
- Cranes
- Underground mining equipment
- Earthmoving equipment

## TANK/KIDNEY

### XXL WATER FILTER, YELLOW 1" HEAD

Extra-long water removal filter (free and suspended water).



#### Applications Include

- Bulk tank filtration
- Kerbside pumps
- Tanktainers and gensets
- Service trucks and mobile bowzers
- Self-bunded tanks and tank cleaning

## MOBILE BOWSER

### XL WATER UNIT YELLOW 1" SPIN ON HEAD

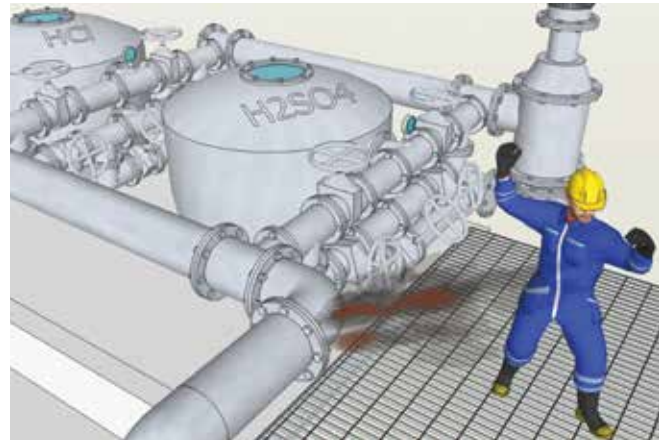
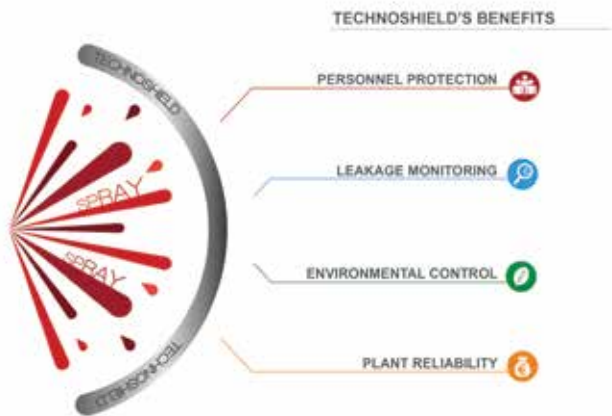


#### Applications Include

- Bulk tank filtration
- Kerbside pumps
- Tanktainers
- Service trucks and mobile bowzers
- Gensets, self-bunded tanks and tank cleaning

# SPRAY SHIELDS

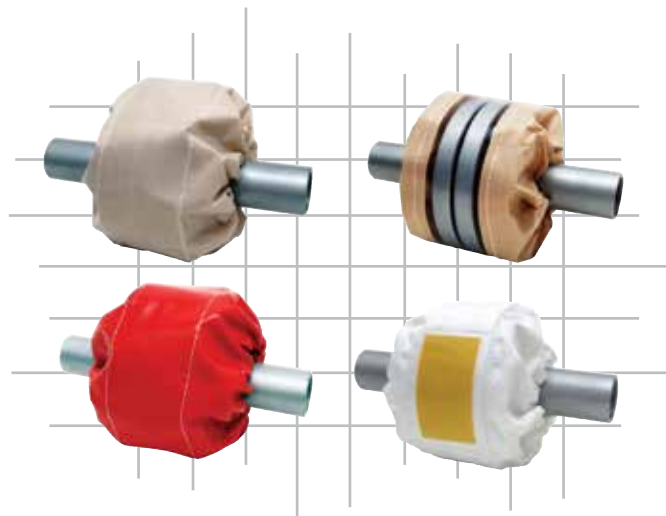
Technoshield's advanced preventative control system minimises spray-out energy and chemical fluids maximising personnel and environmental safety. Typical spray-out causes are peak pressures in piping systems, vibrations and shocks within piping system during operation, inappropriate or inaccurate torque on bolts, flange misalignment, thermal cycles and thermal relaxation of fixings and corrosion.



## FABRIC & TSCT TYPES

High endurance fabrics providing strength against mechanical stresses.

Applications include sulphuric, hydrochloric, hydrofluoric, nitric and phosphoric acids, caustic services, solvents, ammonia, peroxides, additives and glycols.



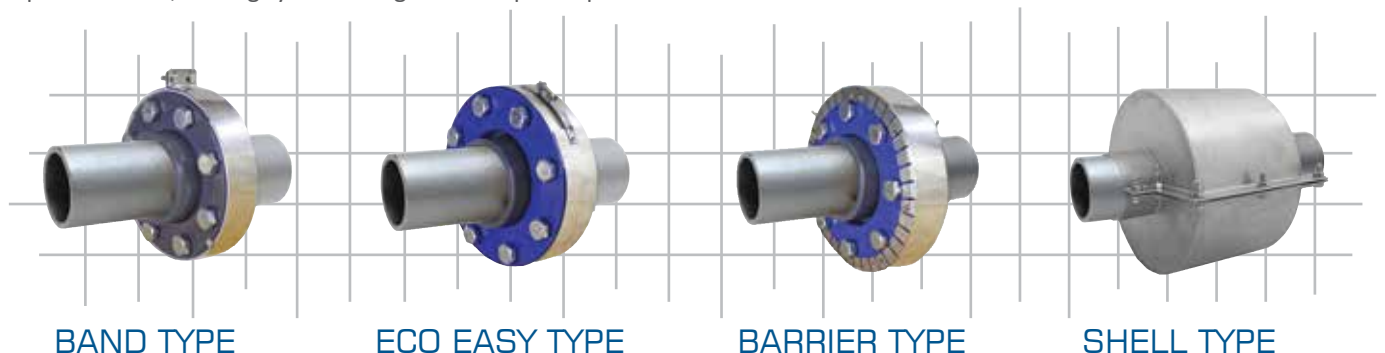
### Overview

- ➔ Fabric is scientifically researched and technically tested to be thin, resistant and outstandingly safe
- ➔ Resists up to 250°C and has widest range of resistance to chemicals
- ➔ Suited to internal and external environments
- ➔ Available materials: FG-PTFE, Pure PTFE, PVC, Polyethylene and Polypropylene
- ➔ Leakage visual indicator, drainage and transparent window options
- ➔ Bespoke options available

## METALLIC TYPES

Solid and metal types are the best choice for demanding environments (higher pressure and temperature). Laser-machined and fine welded parts, available materials are 304 or 316 stainless steel, special alloys and galvanised steel. Applications include oil, gas, oil mist, steam, thermal oil, marine, power, thermal and hydraulic oils.

Optional: drain, locking system and gasket. Bespoke options available.



# PETROLEUM RETAIL SITE SOLUTIONS

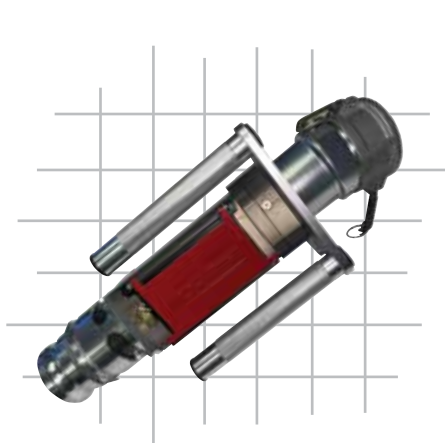
Soliflo offers numerous leading brand solutions for Petroleum Retail Sites. These include: Vapour Recovery Units, Mobile Gravity Meters, Automatic Tank Gauging Equipment, Flowmeters and Tank Monitoring Systems.

For a digital or hard copy of our comprehensive **LEADING BRAND PETROLEUM RETAIL SITE SOLUTIONS** brochure, please email [sales@soliflo.co.za](mailto:sales@soliflo.co.za).

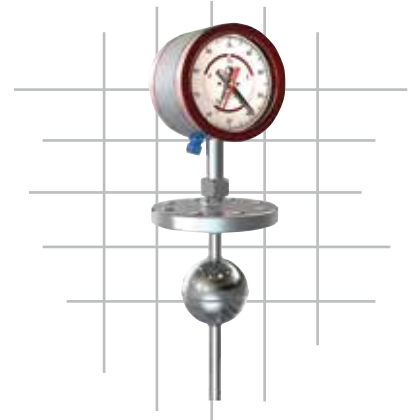
VR REFINER VAPOUR  
RECOVERY UNITS MK 3



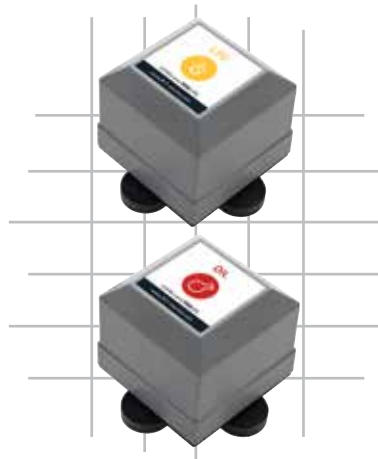
SOLIGRAV MOBILE  
GRAVITY METERS



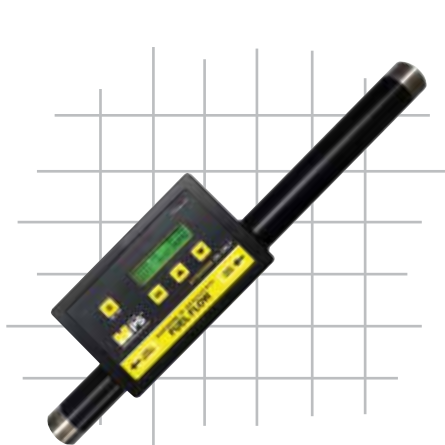
ALISONIC CYCLOPS  
CLOCKWORK DIAL LEVEL  
INDICATORS



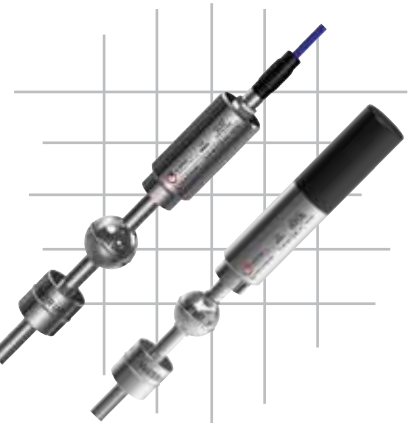
RCT REMOTE MONITORING  
SYSTEMS FOR TANKS



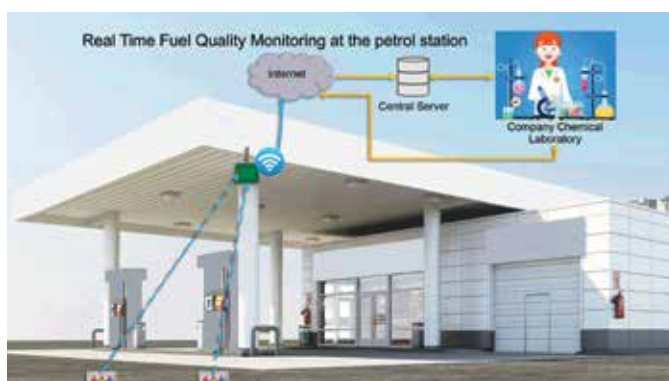
METRICON MPS  
FLOWMETERS



ALISONIC DELPHI WIRED  
& WIRELESS MAGNETO-  
STRICTIVE PROBES



METRICON FUEL QUALITY MEASURING &  
MONITORING



HELIOS MONITORING CONSOLES





# VAPOUR CONTROL

Through our association with Aereon, parent company of Jordan Technologies and Flare Industries, Soliflo markets a host of gas and vapour handling, combustion, recovery technologies and services and flare systems for multiple industrial applications.

## INDUSTRIAL SOLUTIONS

### EMISSIONS BURNER



#### CERTIFIED ULTRA-LOW EMISSIONS BURNER

Aereon's Certified Ultra-Low Emissions Burner (CEB®) is a vapour destruction device that utilises premix surface combustion to achieve high level VOC destruction efficiencies up to 99.99%.

- ➡ NOx emissions guarantee of < 15 ppmv & CO emissions of < 10 ppmv at 3% oxygen.
- ➡ The CEB® single unit product range varies from nominal thermal capacities as low as .34 MMBTU/hr. (0.1MW) to 40 MMBTU/hr. (12MW).
- ➡ The CEB® can be staged where multiple units can be installed in series for higher flows.

### VAPOUR RECOVERY

#### VAPOUR RECOVERY (VRC)

Jordan Technologies' VRC Units recover a variety of Volatile Organic Compounds in truck, rail, marine and tank breathing applications as well as crude, ethanol and natural gases.

The basic system comprises a pressure swing absorption (PSA) process with two activated carbon bed vessels alternating on a 15-minute time cycle.



### VAPOUR COMBUSTION

#### VAPOUR COMBUSTION (VCU)

As an alternative to recovery, hydrocarbon vapours may be destroyed in a flare, combustor or thermal oxidizer.

In many applications, a combustor can be successfully used as a safe, economical method of controlling vapours from the handling, storage or loading of volatile liquid hydrocarbons or ethanol, when recovery of the vapours is not a viable option.



# EXPERTISE IN AFRICA SINCE 1984

Highly specialised Bulk Liquid Control and Tanker Loading and Off-Loading Systems has been a core focus for Soliflo since 1984.

Our name has long been synonymous with these, and other products and services, throughout the Southern African Development Community and East African Community regions, certain Common Market for Eastern and Southern Africa countries, as well as internationally. To strengthen our African footprint and give us ease of access to key markets in these regions, Soliflo International, Kenya was established in 2017.

Soliflo is a principal supplier of a diverse range of safe, efficient and enviro-friendly liquid control, fluid and gas transfer solutions to tanker operators. We market leading brand access and loading equipment for road, rail and marine tankers.

Under our current ownership since 2003, we have continued to forge strong ties with leading name local and international equipment manufacturers, suppliers and engineering companies in wide ranging sectors:

PETROCHEMICAL | OIL & GAS | RETAIL FUEL | CHEMICALS |  
CRYOGENICS | ENERGY | PHARMACEUTICALS |  
CEMENTATION | FOOD & BEVERAGE | AVIATION | MINING |  
AGRICHEMICALS & FERTILISERS

## PRODUCT PORTFOLIO INCLUDES

- Tank truck equipment, tanker grounding, earthing devices and overfill prevention, tanker loading, instrumentation and flow control, hoses and couplings, additive pressure and injection, pumps, filtration and water separation, retail and industrial vapour control, spray shields and double block and bleed valves.
- Related equipment including industrial hoses and assemblies, dry break couplings and adaptors as well as breakaway and emergency release couplings.
- Soliflo has developed a comprehensive range of tanker access, fall prevention and safety systems to prevent potential operator injuries or fatalities at bulk loading and off-loading facilities.

**Soliflo (Pty) Ltd is ISO 9001:2015 and ISO/TS 29001:2020 Quality Management System certified and B-BBEE Level 2 accredited.**



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