

LOADING EQUIPMENT



OPW Engineered
Systems Europe

A **DOVER** COMPANY



Fluid transfer solutions for the petroleum, chemical and food transportation industries.

INTRODUCING OPW FLUID TRANSFER GROUP EUROPE B.V.

Dover Corporation is a diversified global manufacturer of industrial products based in the USA and listed on the New York Stock Exchange.

Dover Corporation has four independent operating subsidiaries: Dover Technologies, Dover Diversified, Dover Industries and Dover Resources.

Dover Resources is the parent company of OPW Fluid Transfer Group, a market leading supplier of engineered products for the transfer, monitoring, measuring and protection of hazardous fluids for the petroleum, chemical and food transportation industries.

From its European head office near Amsterdam in the Netherlands, OPW FTG Europe B.V. manufactures for and distributes to markets in Europe, the former Soviet Union, Africa, the Middle East and Asia up to and including Pakistan.

OPW FTG Europe B.V. consists of two dedicated business units:

- OPW Engineered Systems Europe is a leading manufacturer of a full range of loading arms and subsequent fluid handling equipment.
- OPW Civacon Europe is a major provider of cargo tank products and an extensive package of bulk handling fittings.



chemical processing plant

FLUID HANDLING

Keeping your operation running smoothly means having dependable equipment and systems to handle your bulk loading and unloading requirements. Reliable fluid transfer equipment from OPW Engineered Systems Europe is the answer to your transfer application needs. OPW ESE offers the most complete range of equipment available to meet today's bulk loading and unloading requirements.



storage of hazardous fluids

OPW ESE also provides innovative solutions for some of the most challenging fluid handling applications. The company manufactures systems for the safe and efficient handling of aggressive / critical chemicals and by-products for the industrial sector.

Other areas where our products are used include the refining, distilling, brewing, pharmaceutical and paint industries as well as waste water treatment plants, cooling equipment, and hundreds of OEM applications.



rail car loading systems

Whether your application involves tank trucks, rail cars, ISO containers or drums, we will work with you to develop the right equipment for your needs. Regardless of whether it's a matter of top- or bottom-loading.

A wide array of standard equipment utilising proven technology is available for regular transfer of hazardous fluids.

All OPW ESE fluid handling equipment is designed, manufactured and tested to meet or exceed the highest industrial standards. In order to monitor and maintain this level, OPW ESE implemented a Quality Assurance System according to ISO NEN 9001 as one of the first suppliers of fluid transfer systems. OPW ESE is clearly working to maintain its leadership position and to distinguish itself in the industry. The following pages provide general product and application information on our complete range of fluid handling equipment.

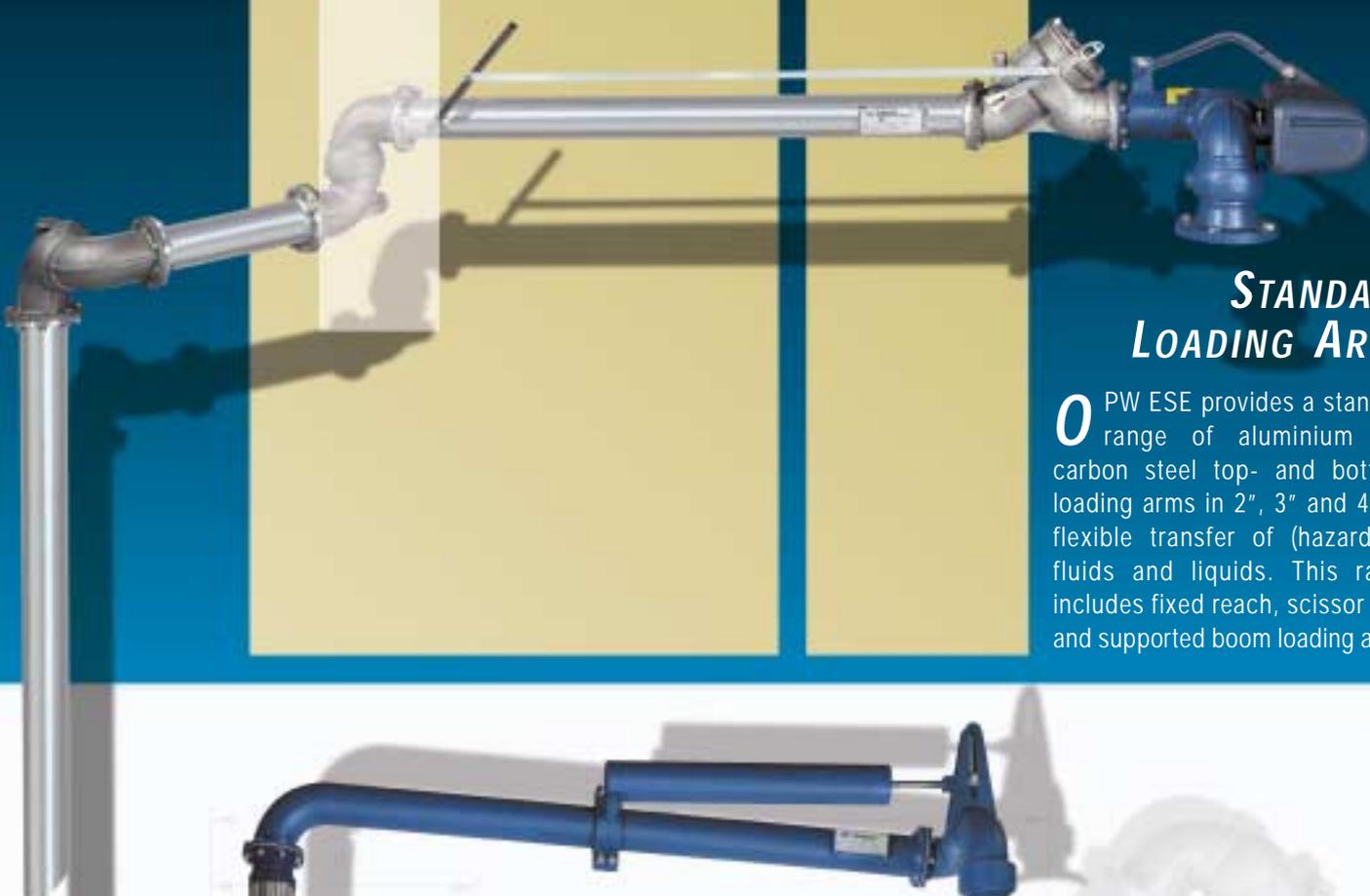


FLUID TRANSFER SOLUTIONS



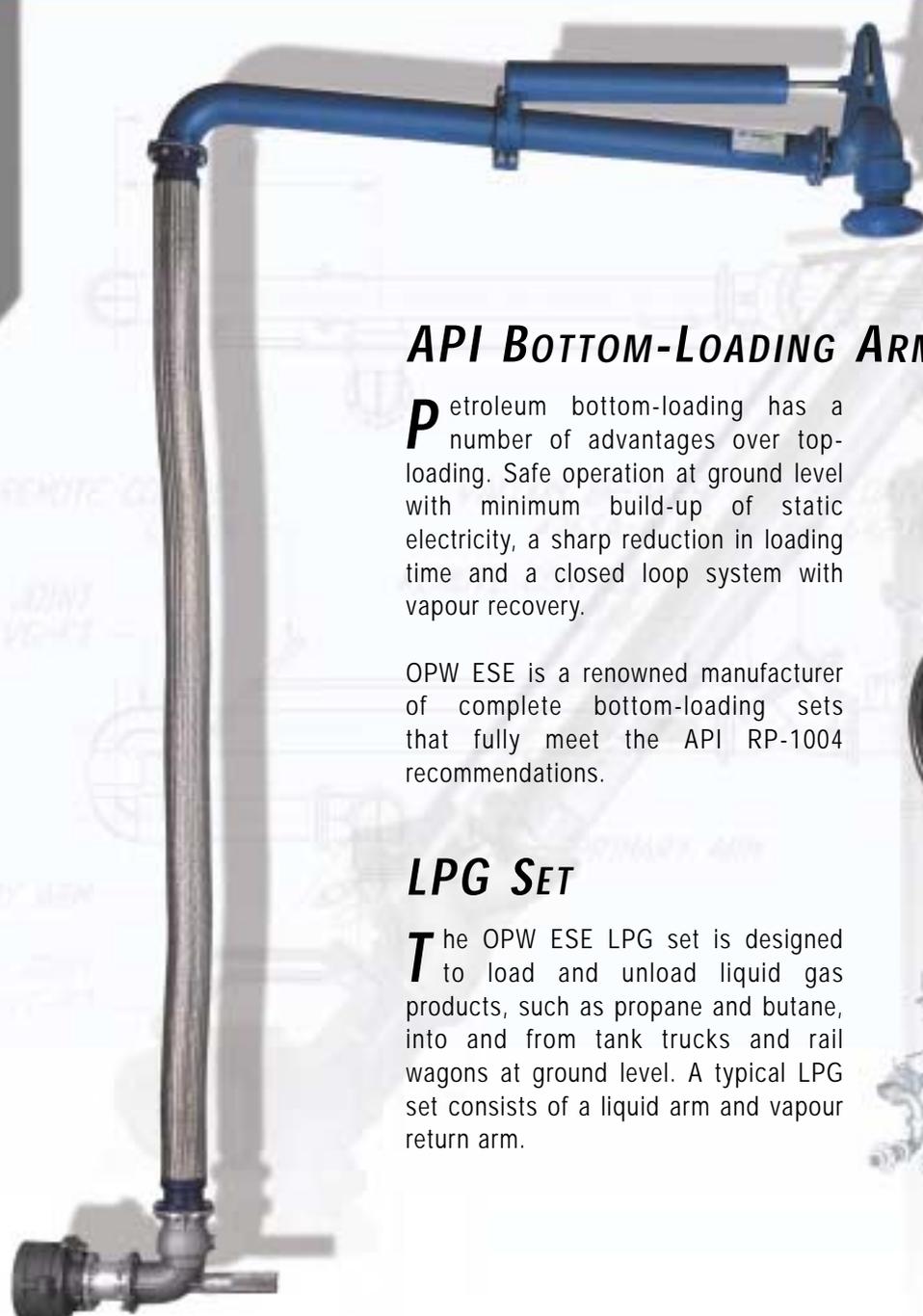
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STANDARD LOADING ARMS

OPW ESE provides a standard range of aluminium and carbon steel top- and bottom-loading arms in 2", 3" and 4" for flexible transfer of (hazardous) fluids and liquids. This range includes fixed reach, scissor type and supported boom loading arms.



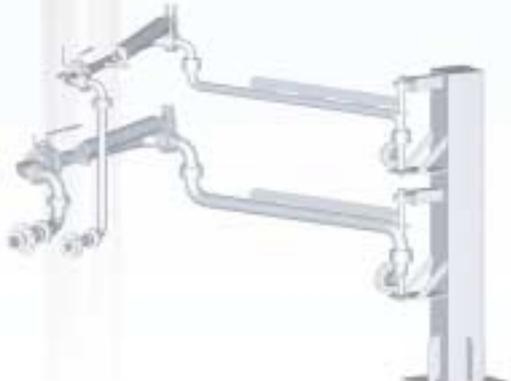
API BOTTOM-LOADING ARMS

Petroleum bottom-loading has a number of advantages over top-loading. Safe operation at ground level with minimum build-up of static electricity, a sharp reduction in loading time and a closed loop system with vapour recovery.

OPW ESE is a renowned manufacturer of complete bottom-loading sets that fully meet the API RP-1004 recommendations.

LPG SET

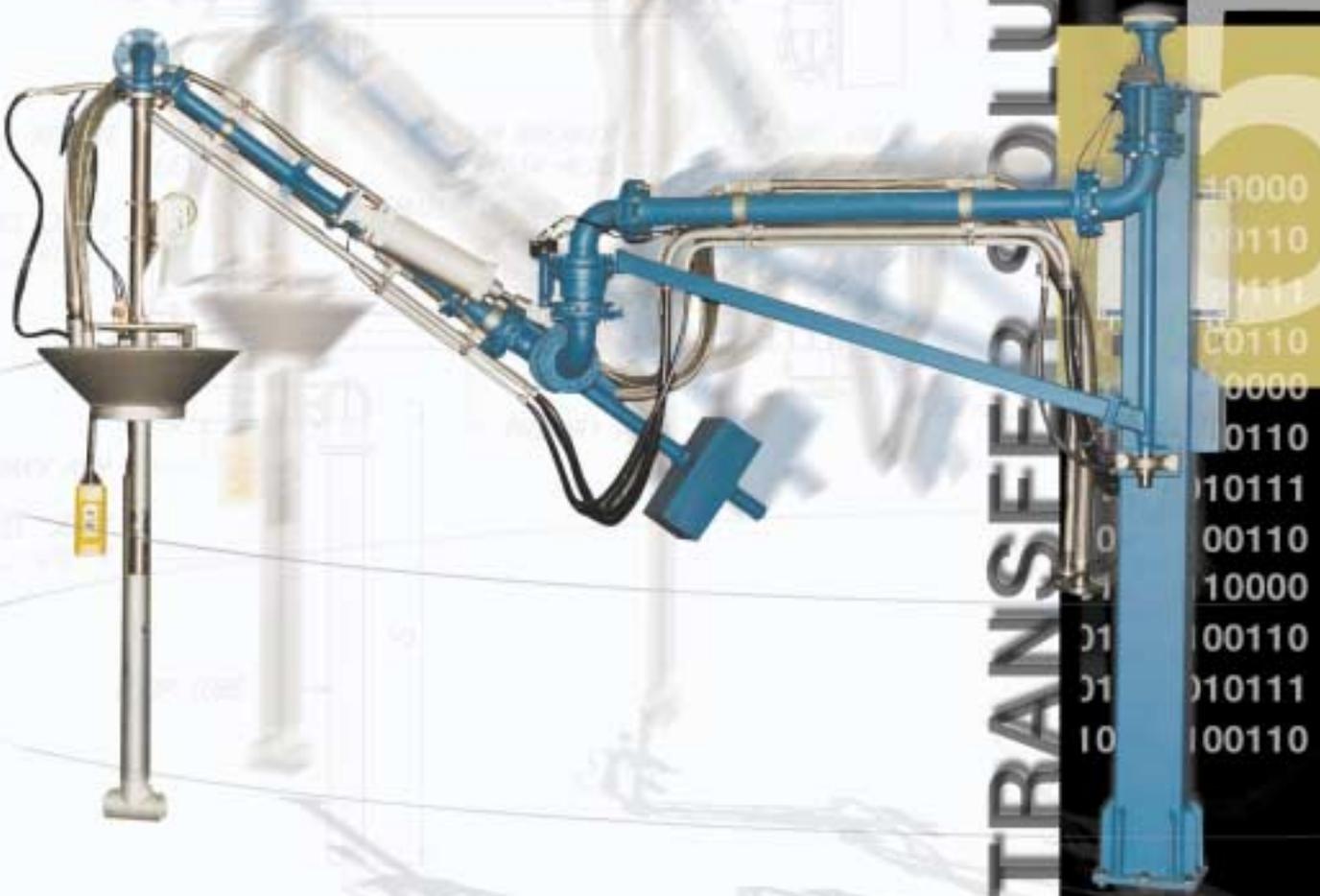
The OPW ESE LPG set is designed to load and unload liquid gas products, such as propane and butane, into and from tank trucks and rail wagons at ground level. A typical LPG set consists of a liquid arm and vapour return arm.



CUSTOMISED LOADING ARMS

Chemicals and other hazardous liquids often demand a customised and engineered solution. The loading arm style, dimensions and method of tanker filling largely depend on the customer's transfer process and gantry layout.

Various materials, including stainless steel and PTFE lining, are often required to comply with complex liquid characteristics. In many cases, features like pneumatic balancing, heating, vapour recovery and overfill protection are additional requirements.



FLOATING SUCTIONS AND RAIN DRAINS

OPW ESE floating suctions have been developed for use in horizontal and vertical storage tanks above or below ground level, where little or no contamination is permitted. These assemblies draw the product near the top, since just under the surface the fluid is least likely to contain water or foreign particles.

OPW ESE also offers floating roof drains for efficient drainage of rainwater from storage tank roofs. Both types of assemblies are equipped with OPW ESE submerged swivel joints for trouble-free service.



FLUID TRANSFER SOLUTIONS

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LOADING ACCESSORIES

OPW ESE offers a wide range of accessories that help make your loading operations safer and easier.

STEP UNIT

The OPW ESE range of step units provides safe and reliable access to tanker tops. These fully galvanised units are available in different reaches, with a safety basket as an additional protective feature.

RACK HOSE COVER

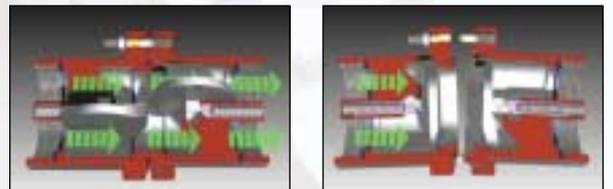
Covering the hoses of API bottom-loaders, OPW ESE rack hose covers are a simple but innovative cost-saving item.

These covers, available in different colours and lettering, extend the lifespan of hoses, prevent damage to the tank truck and improve on-site efficiency thanks to clear product identification.

BREAK-AWAY COUPLER

For safety reasons it is recommended that the OPW ESE break-away coupler is installed onto loading arms or when hoses are applied.

This device greatly reduces incidences of dangerous accidents and pollution. The coupler acts as a clear safety measure as it disconnects when excessive force is applied, completely shutting off the line on both sides.



API COUPLER

The 1005ED API bottom-loading coupler combines easy usage with heavy-duty construction for unequalled reliability.

An advanced nose seal design, using one seal instead of two, provides superior sealing properties and makes replacement quick and simple.



GROUNDING DEVICE

Electronic grounding devices are used to eliminate electrostatic charges when (un)loading flammable and explosive fluids. During this operation the tank trucks and rail cars are maintained at an electric zero potential. Only when all safety parameters have been checked and found to be positive, the unit will give a permissive 'safe to load' signal.

SWIVEL JOINTS

OPW ESE swivel joints allow the use of rigid metal piping for the loading and unloading of hazardous liquids, dry products and other material, under pressure or in a vacuum.

For applications requiring a hose, swivel joints increase manoeuvrability by eliminating kinking and twisting of the hose. This results in reduced hose wear.

OPW ESE swivel joints are available in a wide range of diameters, styles and materials, in combination with various seal materials and end connections.

Special types include split-flange swivels for easy maintenance and heavy-duty applications, hose reel swivel joints and swivels with Teflon lining.



swivel joints

SIGHT FLOW INDICATORS

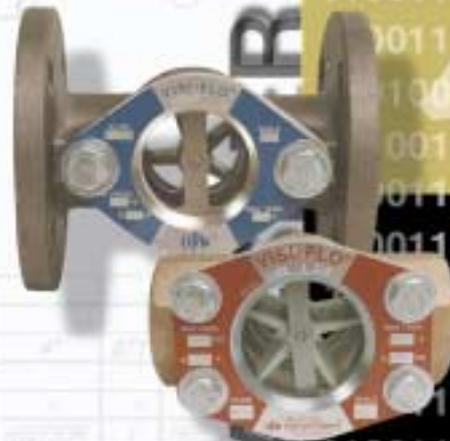
VISI-FLO sight flow indicators provide a quick, reliable and economical way to verify flow and monitor colour and clarity in fluid lines.

Several sizes, styles and materials are available for a wide range of industrial applications.

All sight flow indicators are designed for maintenance-free use and come with an exclusive 3-year 'No Leak' guarantee.

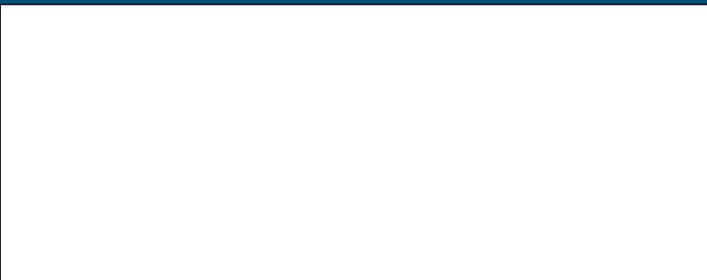


sight flow indicators



INDUSTRIAL TRADING SOLUTIONS

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