

Reliable solutions for the oil and gas industry – with ProMinent

Maximum operational reliability for sensitive production processes



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Maximum productivity through perfectly integrated system solutions

In the oil and gas industry, total operational reliability takes top priority. That's why ProMinent have successfully relied on the ORLITA® range of high-end dosing pumps for many years. With their advanced, robust technology, they represent the top brand name for quality, outstanding performance and maximum reliability. And we support our customers right from the start, even when it comes to adapting to difficult operating conditions. With complete solutions optimized for each specific application, covering every step of the process: from dosing, through control equipment, to storage of inhibitors, drag reducers, additives and other chemicals. Worldwide applications experience added to the know-how gained through years of practical experience and the highly flexible approach of our experts in meeting customer requirements also ensure smooth, trouble-free operation, even in tricky situations.

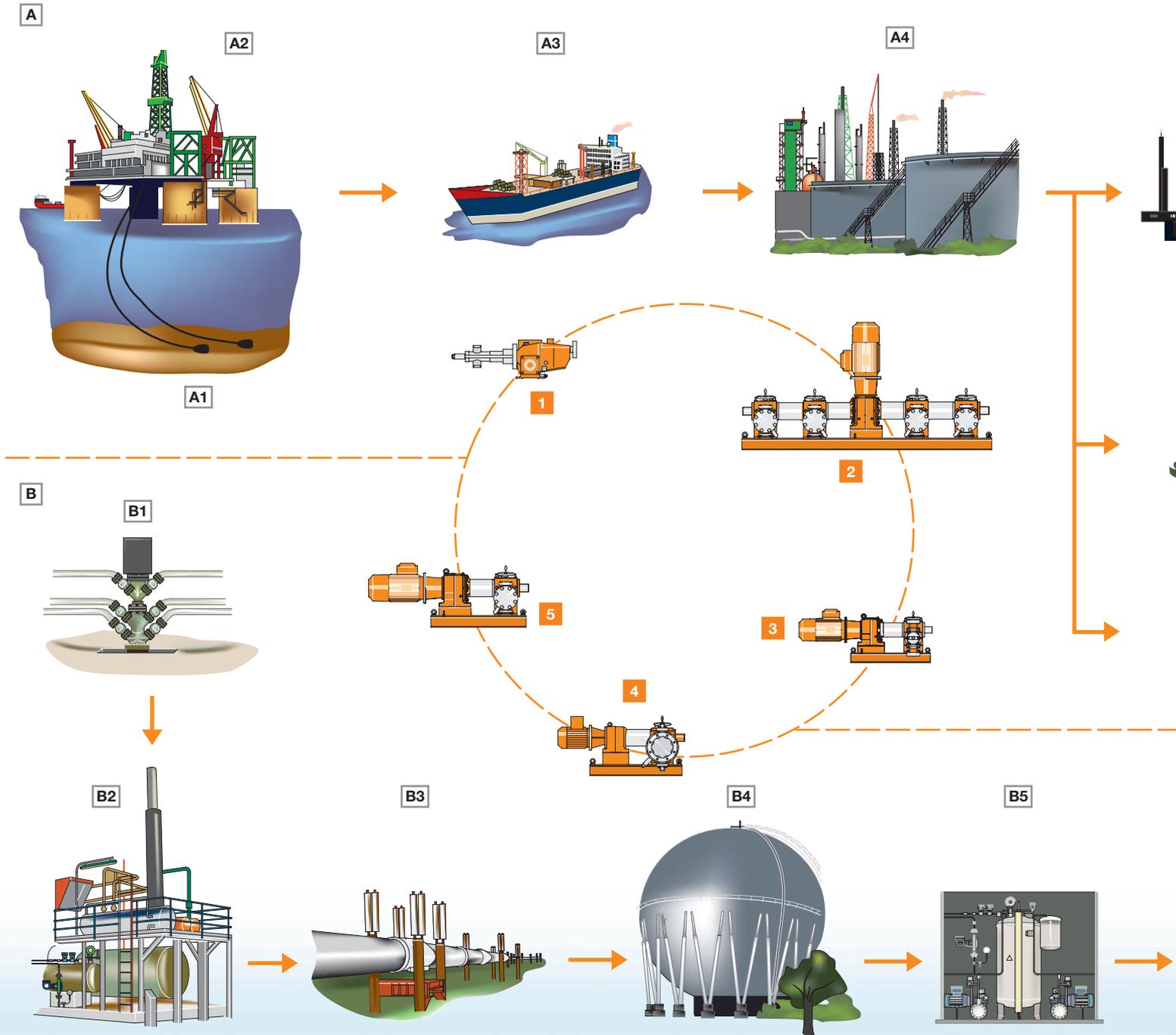
- Top quality at attractive prices
- Enquiries processed very quickly
- Solutions to specific technical problems
- Strict compliance with agreed customer requirements
- Flexible design of pumps and packages to customer specification
- Documentation prepared to customer specification
- Short lead times even for special solutions
- Worldwide service and sales network



Further information:
www.prominent.com/oil_gas

- A** Oil industry
- A1** Well
- A2** Platform
- A3** Transportation (tanker, pipeline)
- A4** Refinery
- A5** Petrochemical
- A6** Industry/power plants
- A7** Filling stations

- B** Gas industry
- B1** Well
- B2** Gas treatment/gas drying
- B3** Transportation (tanker, pipeline)
- B4** Gas storage tank
- B5** Local distribution/odorization
- B6** Industry/power plants



1 Valveless piston-type dosing pump DR

2 Multiplexed dosing pumps

3 Piston-type dosing pump PS

4 Hydraulic diaphragm-driven dosing pump Mh (metal diaphragm)

5 Hydraulic diaphragm-driven dosing pump Mf (PTFE diaphragm)

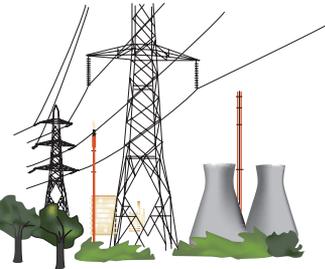
Safe complete solutions for the oil and gas industry

A5



ProMinent/ORLITA offers tailor-made solutions for all dosing applications in the oil and gas industry: from pumps through skids and storage tanks to control equipment – all from a single source. So interface problems just never arise. That doesn't just save our customers round the world time and money. It also guarantees them the one thing that really matters in oil and gas handling: highest possible availability.

A6



A7



Oil industry

- Well: dosing of various chemicals/Mf, Mh pumps
- Platform: dosing of inhibitors, methanol and additives/Mf, Mh pumps
- Transportation: dosing of inhibitors, drag reducers, etc./all pump types
- Refinery: dosing of inhibitors, additives, catalysts, colourants, etc./all pump types
- Petrochemical: dosing of various chemicals for support and initiation of chemical and physical processes/all pump types
- Industry and power plants: dosing of liquid chemicals and components in production and power plant processes/all pump types

B6



Gas industry

- Well: dosing of various chemicals/Mf, Mh pumps
- Gas treatment/gas drying: dosing of inhibitors, methanol and glycol/Mf, Mh pumps
- Transportation: dosing of inhibitors, methanol etc. in gas pipelines and removal of residue from LPG (liquid petroleum gas) tankers/Mf, Mh pumps
- Gas storage tanks, mainly underground: dosing of methanol, glycol, acids and other chemicals/Mf, Mh pumps
- Local distribution: odorization for gas detection of leaks/Mh pumps
- Industry/power plants: liquid gas applications, dosing of combustion additives/Mf, Mh



Further information:
www.prominent.com/oil_gas

High-end pumps

Hydraulic diaphragm dosing pump Mf

The pumps have an exceptional suction capability (up to 8 m suction lift).

They ensure trouble-free operation through internal overfilling and diaphragm protection, thanks to the valveless and virtually wear-free ProMinent/ORLITA anti-cavitation device.

Hydraulic diaphragm dosing pump Mh

Like the Mf range, this range is also extremely flexible in its application, but is designed for very high pressures (up to 3,000 bar). Pump heads are equipped with double stainless steel diaphragms and are designed for maximum operational reliability and low wear and can be fitted without special tools.

Piston-type dosing pump PS

Key features of the PS range of pumps are the exceptionally high hydraulic efficiency combined with outstanding self-cleaning and low pressure loss. PS pumps can be used in a wide range of temperatures (up to 400 °C) and are easy to maintain, attractively priced and robust.

Valveless piston-type dosing pump DR

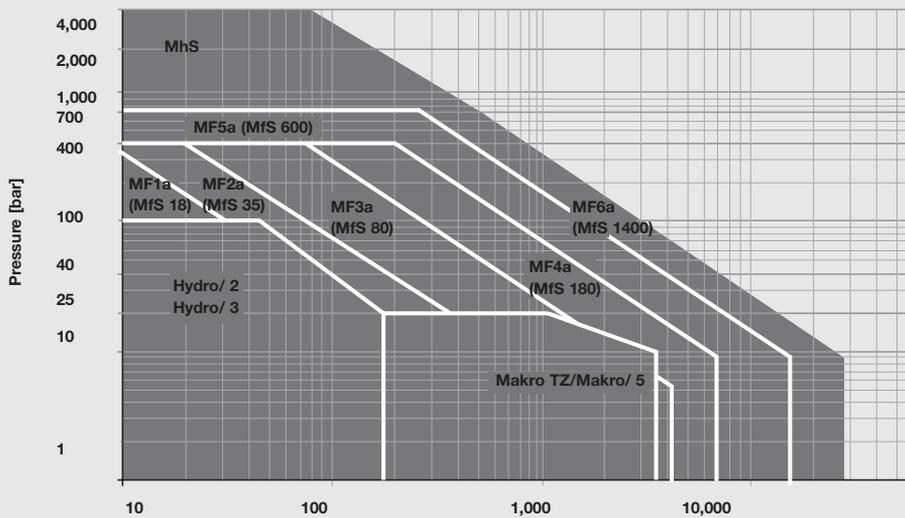
Highly accurate dosing of highly to extremely viscous media (up to 1,000,000 mPas).

Even liquids with a solids content are no problem for the valveless piston-type dosing pumps. Products at temperatures down to -40 °C up to +400 °C can be pumped with infinite 0-100 % capacity adjustment.



Specialists for peak performances

Performance overview of high-end pumps



ProMinent/ORLITA high-end pumps prove themselves even under the most arduous conditions. Their robust construction and the application flexibility enabled by their performance profile take good care of that. They can be adapted to almost any customer specification, as required: maximum pressure up to 3,000 bar, extreme dosing accuracy of $\leq 0.5\%$ to API 675, product temperatures from $-40\text{ }^{\circ}\text{C}$ to $+400\text{ }^{\circ}\text{C}$ and liquids with dynamic viscosities up to 1,000,000 mPas.



Hydraulic diaphragm-driven dosing pumps Hydro

The optimal solution in the lower performance range, up to 100 bar. The two ranges – Hydro/ 2 and 3 – can be flexibly combined as single-head, double-head and multiplexed units. In the standard version with multi-layer safety diaphragm and integrated excess flow valve, the pumps meet the highest safety requirements.



Diaphragm-driven, hydraulic diaphragm-driven piston type dosing pumps Makro TZ and Makro/ 5

The right modular solution for every application, whether it be simple mechanical diaphragm pumps, high-tech hydraulic diaphragm driven pumps, or extremely robust piston-type pumps. The low pressure range – up to 10 bar – includes standard dosing head versions in highly chemical resistant-plastics, e.g. PP, PVC, PTFE.



Further information:
www.prominent.com/metering_pumps

Customized dosing systems

Complete solutions to customer requirements



- Complete, ready-to-run dosing systems designed to customer's specific requirements
- On-site commissioning on request
- Any customer requirement can be implemented quickly thanks to own-manufacturing capability
- Broad spectrum from simple, distributed systems to explosion-proof ATEX-compliant systems linked to a central PLC via PROFIBUS®
- From proportional dosing to complex systems with reaction tanks
- Also complete dosing systems installed in walk-in containers, complete with heating and/or air conditioning
- Capacity and chemical usage are practically unlimited

Possible features

- Fitted in a dosing cabinet
- Plate or frame mounted
- With dosing tank and safety bund
- Installed in a container

Standard materials (other materials possible)

- Stainless steel
- Duplex stainless steel
- Hastelloy
- Alloy 20
- Titanium

Control systems on request

- Terminal boxes
- Relay control systems
- Compact controllers
- ProMinent® controllers
- PLC with operator panel and PROFIBUS® connection



Further information:
www.prominent.com/packages

Packages for specific requirements

For special applications



Special applications need special dosing systems. For the oil and gas industry, we offer special packages that are precisely tailor-made for the tasks of our customers: highly practical, attractively priced and extremely reliable.

Tasks

- Methanol injection in underground deposits and pipelines
- Glycol injection in gas drying plants
- Dosing of various additives and inhibitors in oil and gas treatment, transportation and processing
- Injection of high-viscosity drag reducers (DRA) to reduce pipe friction in pipelines
- Injection of chemicals for conditioning of underground deposits

Design

In accordance with current worldwide specifications:

- API 675
- ASME, DIN, PED etc.
- Explosion-proof to ATEX
- Pumps certified to Gosgortekhnadzor
- Compliance with customized factory standards
- Versions of all components suitable for onshore and offshore applications
- Certified to ISO 9001

With more than 50 years experience, ProMinent/ORLITA is a dependable and competent partner when it comes to liquid dosing duties in the oil and gas industry.



Further information:
www.prominent.com/packages

References

Proven worldwide



All around the world, dosing systems from ProMinent/ORLITA make a vital contribution to the productivity of the oil and gas industry. We would like to thank our customers for their trust in our products and look forward to further successful cooperation in the future.

Oil & Gas

- Agip
- BP
- British Gas
- Burullus Gas
- Chevron
- Conoco
- ELF
- Exxon
- Gaz de France
- Gasprom
- Mærsk Oil
- Norsk-Hydro
- ÖMV
- Pemex
- Perenco
- Petro Canada
- Petro SA
- Petrobras

- Romgas
- RWE DEA
- Shell
- Statoil
- Texaco, Caltex
- Total
- Turkmenneft
- Wintershall

Plant constructors

- Frames
- Halliburton
- Kværner Oil & Gas
- Peroni
- Positive Metering Systems
- SMS
- Tractebel
- Tyco

EPC

- ABB
- AKER Maritime
- AMEC Engineering
- Bechtel
- FLUOR
- Foster Wheeler
- KBR
- Kværner Oil & Gas
- Linde
- Lurgi
- Snamprogetti
- SNC
- Uhde



Further information:
www.prominent.com/oil_gas

Global service locally



We offer ProMinent® Service even before you become one of our customers. Our pre-sales services ensure that you get the optimum solution for your individual needs:

- **Advice in choosing the products**
- **Application and process optimisation**
- **Project planning**

However, our commitment does not end with delivery. We offer you a comprehensive after-sales service, which lasts for the entire service life of your equipment.

That maximises your productivity and minimises your operating costs:

- **Assembly/installation**
- **Commissioning**
- **Maintenance**
- **Spare parts service**
- **Repair**
- **Troubleshooting**

Thanks to our worldwide presence in over 100 countries, our service is available wherever you need it.



Further information:
www.prominent.com/service

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