



introduction of company

OUPA

DIAPHRAGM AND PLUNGER METERING PUMPS



OUPA_{PUMP}

For more than 20 years, ofogh pump parsian - now oupa Flow Technology – has been providing customers with high quality metering, processing and analysing equipment. As part of the global oupa Corporation, we are one of the world's most reputable manufacturers of metering and process pumps, process systems as well as analyzing technologies. Our engineers have comprehensive process and applications knowledge across a wide range of markets. This has resulted in product innovations and developments which harness the latest technology while meeting the highest quality standards.

highly-specialized, engineered products and technologies are concentrated in Flow Technology and energy infrastructure. Many of oupa innovative solutions are playing a role in helping to meet rising global demand for electricity and processed foods and beverages, particularly in emerging markets. The company's products include food processing systems for the food and beverage industry, critical Flow components for oil and gas processing, power transformers for utility companies, and cooling systems for power plants.

OUPA - A Selection of Metering Pumps Beyond Compare

With OUPA metering pumps we offer a wide range for virtually all applications where liquids have to be metered or blended.

The product range comprises leak-free diaphragm pumps as well as plunger pumps.

COMMON DESIGN FEATURES

- Modular metering pump gears with built-in low noise worm gear
- Individual stroke length setting utilizing the z-shaped crankshaft
- Range of pump head sizes to allow a flow range of between smallest 0.5 l/h (0.13 gph) up to largest 24,000 l/h (6,340 gph)
- Operating pressure up to 1,000 bar (14,500 gph)
- Manual or automatic flow rate adjustment

ADVANTAGES

Flexible

- Optimal capacity adaptation to widely varying production processes
- Variable stroke length for each pump allows independent flow rate adjustment of each pump component
- Variable speed drive allows flow rate variations while maintaining constant proportions

Economical

- Automation allows higher production efficiency to be achieved

Adaptable

- Existing installations can be altered or expanded with extra pumps or automatic control

**DIAPHRAGM
PUMPS**



**PLUNGER
PUMPS**



**DOUBLE
PUMPS**



Typical product applications

The oupa range is designed for medium pressure high flow applications on clean liquids.

Chemical Processing



Oil & Gas



Power Generation



Pharmaceutical & Biotechnology



Textile



Food & Beverage



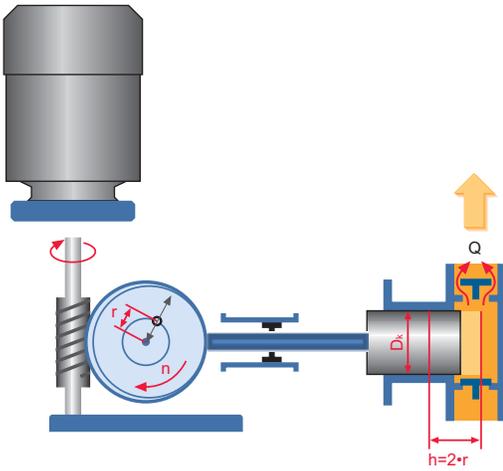
Water Treatment



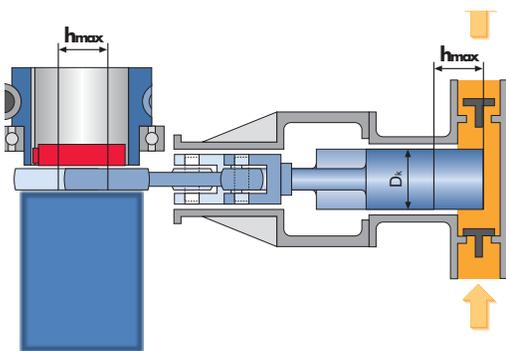
Household Detergents & Personal Care



Concept of the OUPA Metering Pumps



Working principle of the metering pump



Principle of a flow rate adjustment

WORKING PRINCIPLE OF THE METERING PUMP

Reciprocating pumps are normally comprised of a motor, gearbox and pump head.

The gear reduces the motor speed and converts the rotary motion into a reciprocating movement of a plunger in the pump head.

Flow rate of a reciprocating pump is defined by the plunger diameter, stroke length and stroking speed.

Setting the flow rate of a metering pump can be achieved by changing the speed of the drive motor or - as described below - via an adjustment of the stroke length.

SIMPLY EFFECTIVE: FLOW RATE ADJUSTMENT BY THE Z-SHAPED CRANKSHAFT

Flow rate can be adjusted linearly between zero and maximum by altering the position of the z-shaped crankshaft. This design allows adjustment while the pump is operating or at standstill.

oupa pump metering pumps exceed the requirements of API 675 in terms of metering accuracy, linearity and reproducibility.

PLUNGER PUMPS

- Low investment costs
- Simple design
- Easy maintenance

DIAPHRAGM PUMPS

A leak-proof pump is the right choice whenever product purity or sterility are imperative or when toxic liquids must be handled.

oupa Flow Technology offers a wide range of hydraulically actuated diaphragm pumps.

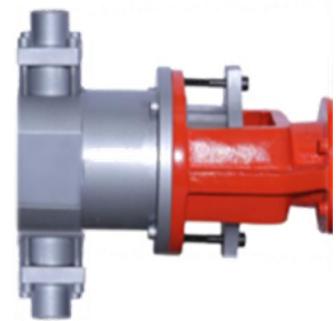
The design of the pump head ensures that the diaphragm cannot be damaged under critical conditions such as a blocked pipe or closed valves upstream or downstream of the pump.

The freely deflecting diaphragm makes the pump suitable for the metering.

DIAPHRAGM PUMPS: FEATURES .

Diaphragm position control for maximum operating security

- Operating pressure (PTFE diaphragm) up to 400 bar (5,800 psig)
- Operating pressure (metallic diaphragm) up to 1000 bar (14,500 psig)
- Fluid temperature up to 150°C (300° F)
- Safe dry-run capabilities
- High volumetric efficiency
- High metering accuracy
- Hermetically sealed by two diaphragm layers
- Diaphragm condition monitoring
- Diagnosis interface as standard
- Specific customer requirements on request

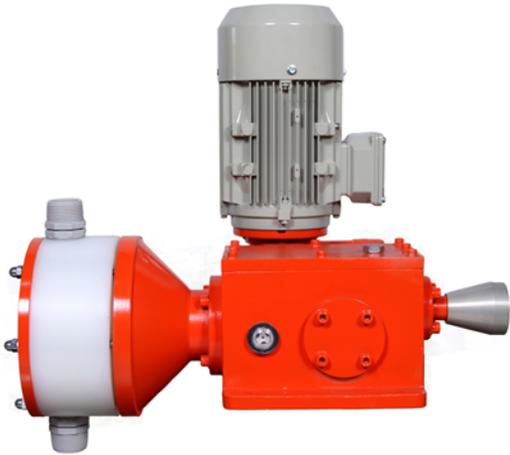


Principle of plunger pump head



Principle of diaphragm pump head

Concept of the **OUPA** Metering Pumps



Metering pump with double diaphragm pump head



Metering pump with diaphragm pump head and flow rate control

DOUBLE DIAPHRAGM PUMPS

The double-acting diaphragm pump head offers the benefit of twice the flow rate on a single gearbox whilst maintaining the same metering accuracy

Advantages

- Doubled flow rate
- Less foot print required compared with conventional duplex pumps

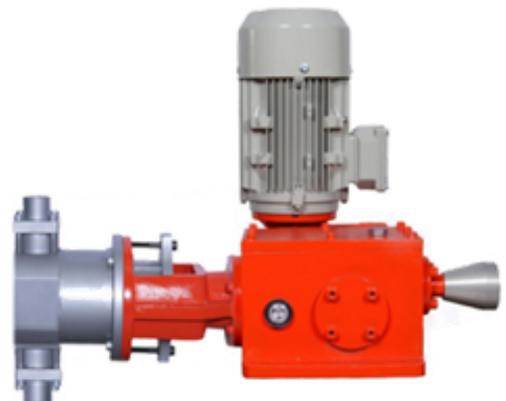
OPTIONS FOR STROKE LENGTH ADJUSTMENT

Manual

- with integrated scale

Electric

- direct remote control with input signal 0/4...20 mA
- with electronic control card



OUPA- Solutions

OPTIONS TO SUIT SPECIAL APPLICATIONS

Pump head Options (on request)

- Heating or cooling jackets (valve heating possible)
- Quick-release valves
- Remote valves
- Optimized flow channels for slurries or viscous fluids

Valve designs

- Ball valves (single, double or triple)
- Cone valves with or without spring
- Plate valves

Materials of construction for liquid-wetted parts of the pump

- Housings of Stainless steel 1.4571 or 1.4462 (316 SS) with options for PVC or PVDF
- Diaphragms of PTFE or stainless steel 1.4310 (316 SS)
- Plungers of stainless steel, ceramic, tungsten carbide
- Valves of stainless steel, plastic or hard metals
Special materials available upon request

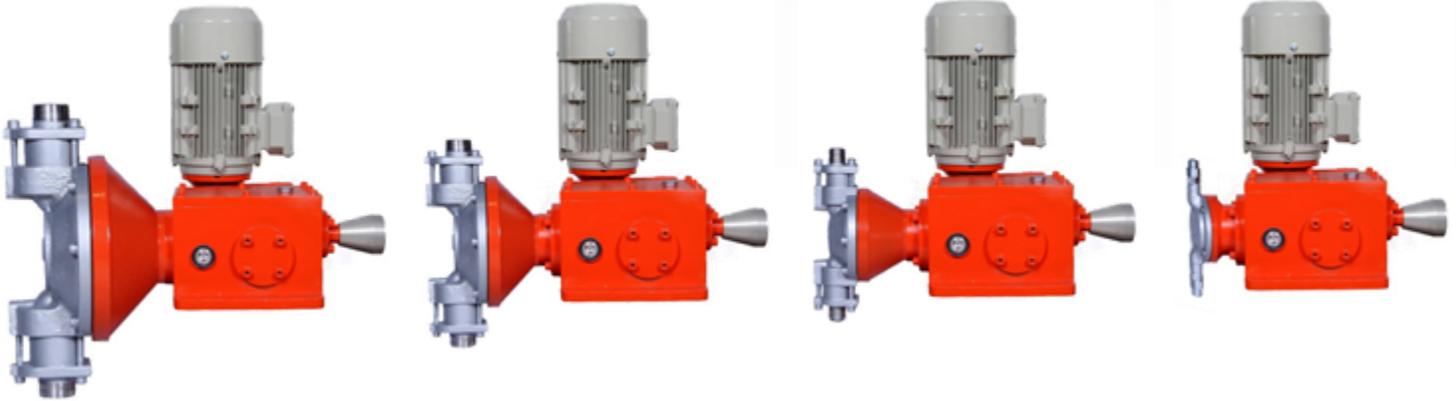


Process metering pump with diaphragm pump head and electric stroke length adjustment



Range of dosing pumps

OUPA PUMP



location

IRAN

Workshop location

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OUPA reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed.