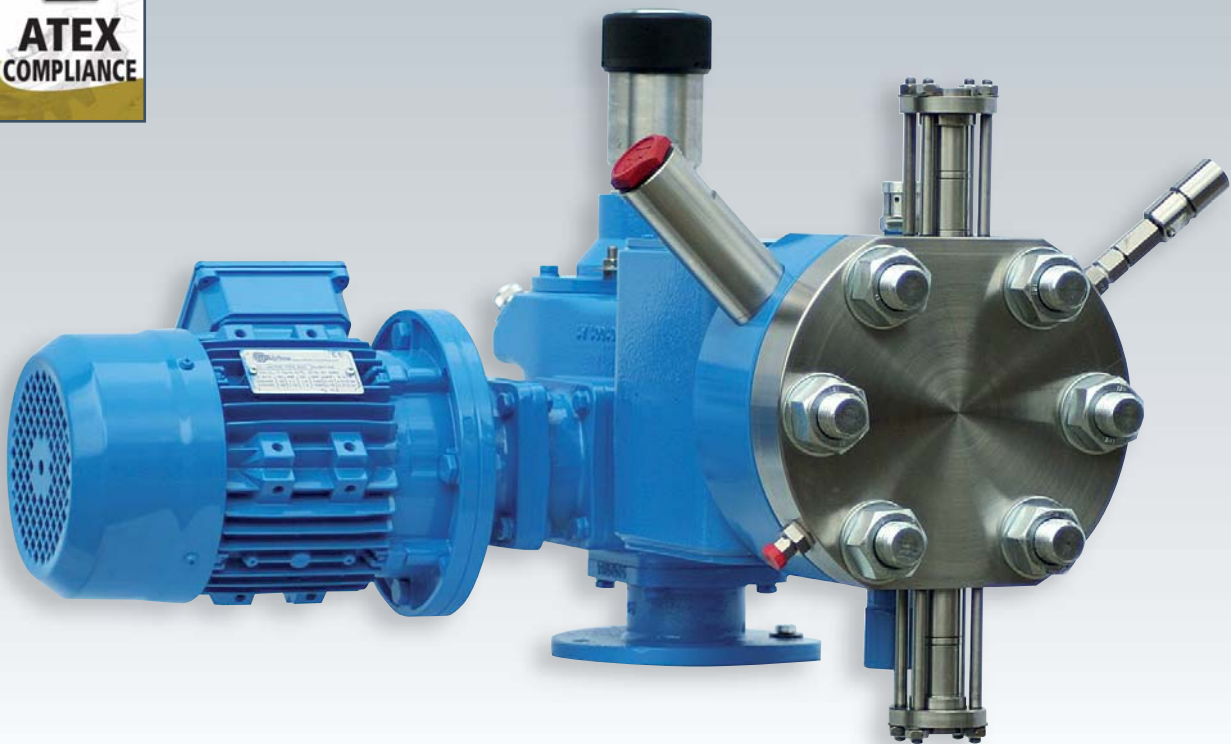


# nexa Series

Plunger and hydraulic double diaphragm metering pumps



innovation > technology > future

# nEXa Series



Hydraulic double diaphragm metering pump  
in AISI 316L stainless steel

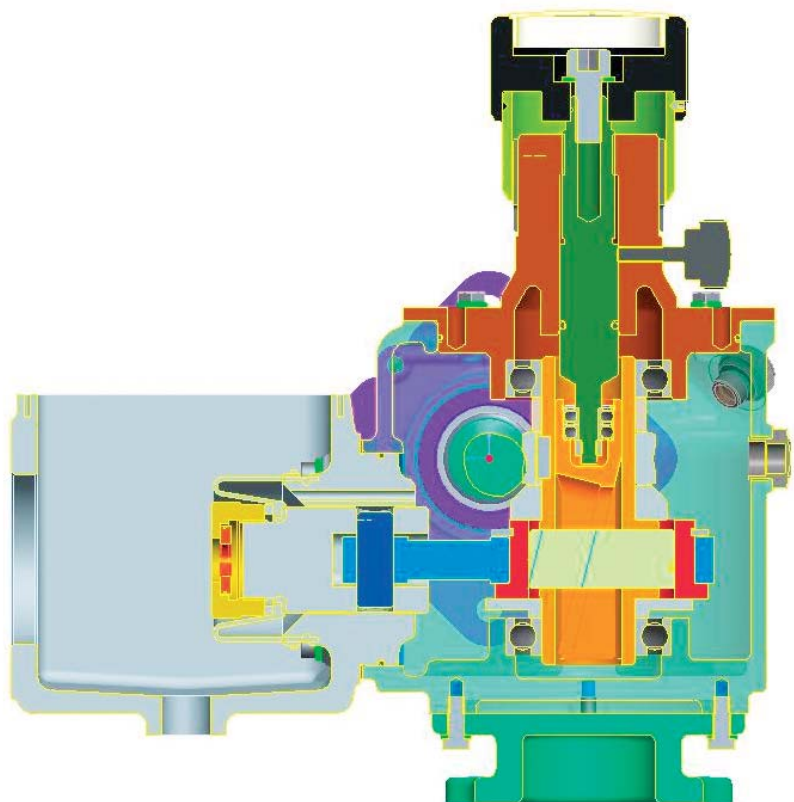
A line of plunger and hydraulic double diaphragm metering pumps designed according to the **API 675 standards**. Their possibility of construction with various materials allows these metering pumps to satisfy every liquid dosing and mixing application. Furthermore, their complete compliance with the **ATEX standards** even allows for these pumps to be installed in hazardous areas.

## Mechanisms

**Of a positive return typology and available in various sizes.**

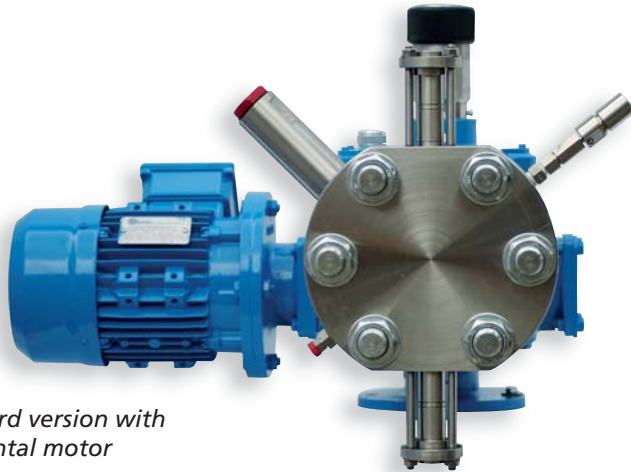
**Main characteristics:**

- Internal worm gearbox, oil bath lubricated with low noise emissions
- Rotating parts on bearings to minimise power consumption
- Each mechanism comes complete with an internal gearbox; pumps with different speeds (strokes/min) can therefore be joined, allowing for greater flexibility in selecting the pumps themselves
- High precision stroke adjustment, both manual and by means of an electric or pneumatic actuator or frequency converter.
- Accuracy within  $\pm 1\%$

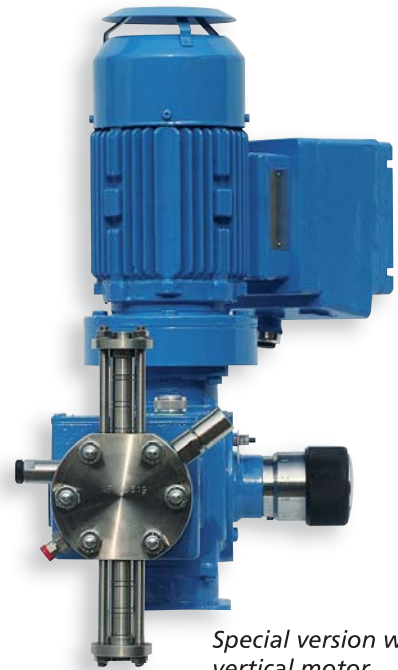


## Flexibility

In the standard configuration, the motor is horizontally mounted on the right, but the pumps can also be furnished with the motor horizontally mounted on the left or vertically mounted, depending on the installation requirements



*Standard version with horizontal motor*

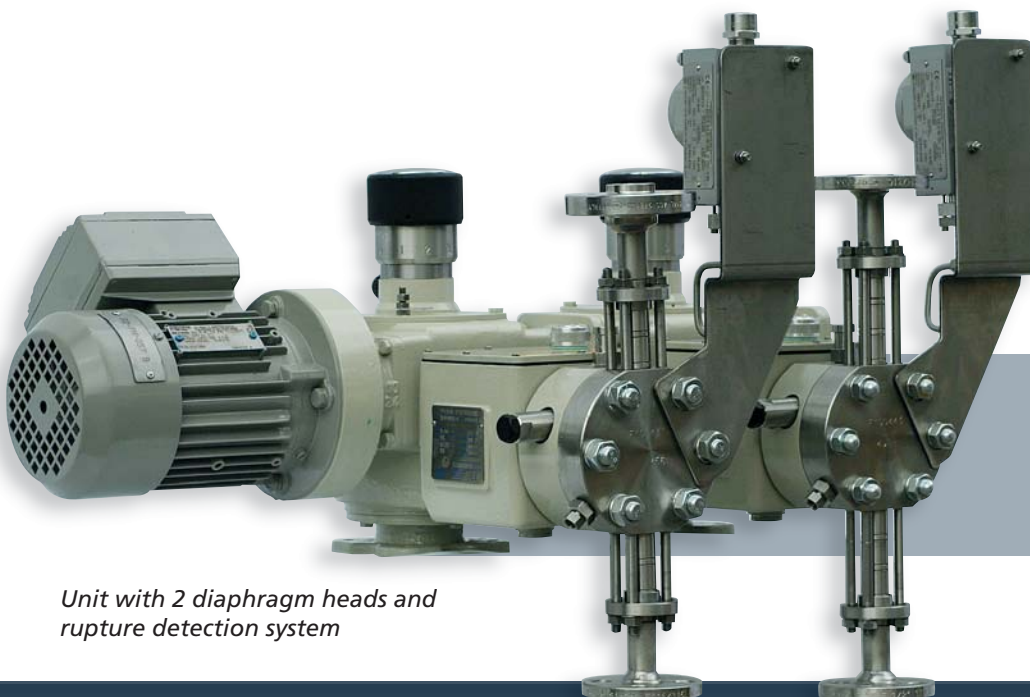


*Special version with vertical motor*

## Modularity

All **nexa** mechanisms, even of different sizes, can be easily combined to form metering units with certain significant construction advantages, simplifying assembly and installation.

- The mechanisms are coupled together using joints with no exposed parts; the result is a compact unit with a strong and properly-aligned connection which does not require the use of a special base
- Another advantage is the possibility of adding a pump to another existing pump just by performing a few simple coupling operations , even on site



*Unit with 2 diaphragm heads and rupture detection system*

Different size mechanisms can be coupled; casings are designed to maintain the same foot level, to allow installation on a flat support base

## YN, TN, HN: Hydraulic double diaphragm heads

**The ideal solution for applications requiring high levels of operational safety and reliability:**

- Zero leakage; watertight construction for dosing toxic, corrosive and other hazardous liquids, for which the absence of leaks is fundamental
- Protection against external pollutants which could contaminate the liquid being pumped if using plunger pumps
- Double diaphragm, double protection; if one of the two diaphragms is damaged, the protection system immediately signals the anomaly; the pump is nevertheless permitted to continue to operate, thereby preventing immediate downtime
- Flexibility of use; the PTFE diaphragms are compatible with a vast assortment of liquids
- Flow rate modularity; the rated flow rate can be changed by simply replacing the plunger and the relevant seal cartridge
- Solid suspensions; the diaphragm's proper positioning is ensured by a mechanical system which does not require the use of perforated shields on the process side, thereby allowing for liquids containing solid suspensions to be pumped.
- Construction materials; the parts in the standard configuration that make contact with the liquid are made from AISI 316L stainless steel, PP and PVDF. Other materials available upon request.

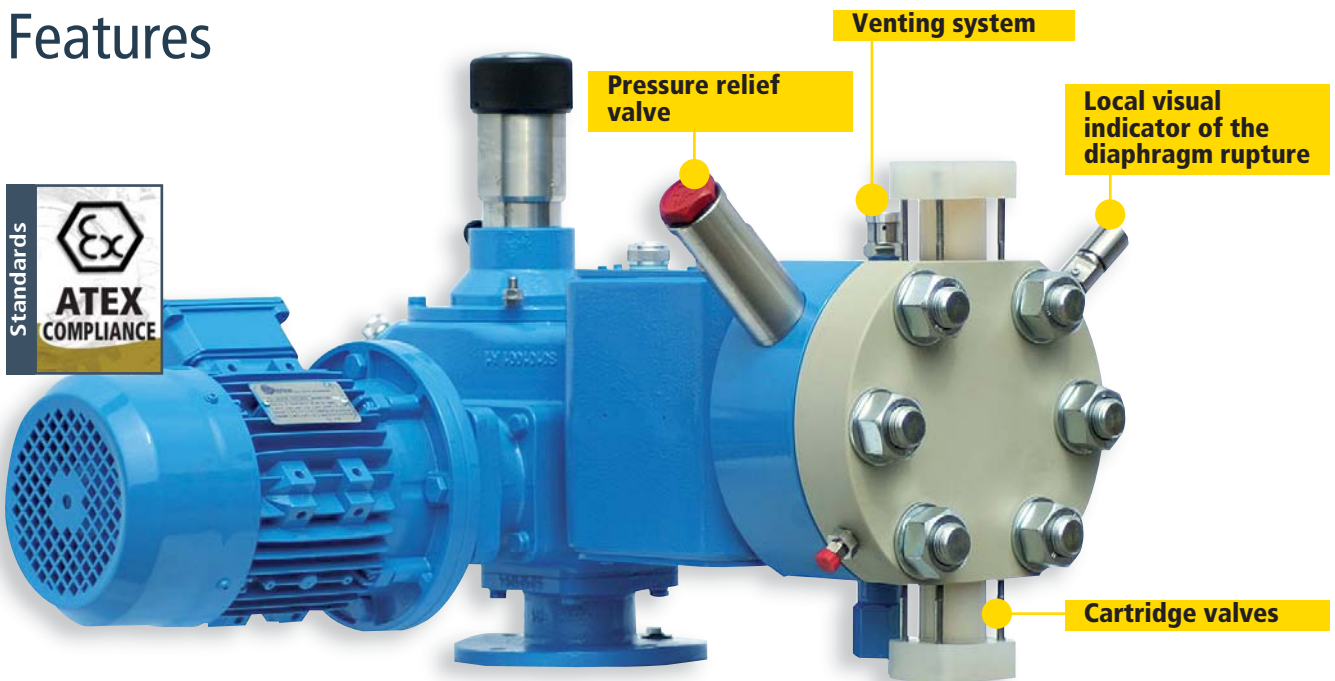


## PN, KN: Plunger heads

**The simplest and most suitable solution for dosing and transferring non-hazardous liquids; despite their design simplicity, PN and KN heads have certain special features which provide for extremely high performance**

- Particularly precise plunger surface finishing, with increased hardness for a longer working life
- Perfect alignment of the plunger in the seal
- Adjustable seal predisposed for flushing or leakage recovery

# Features



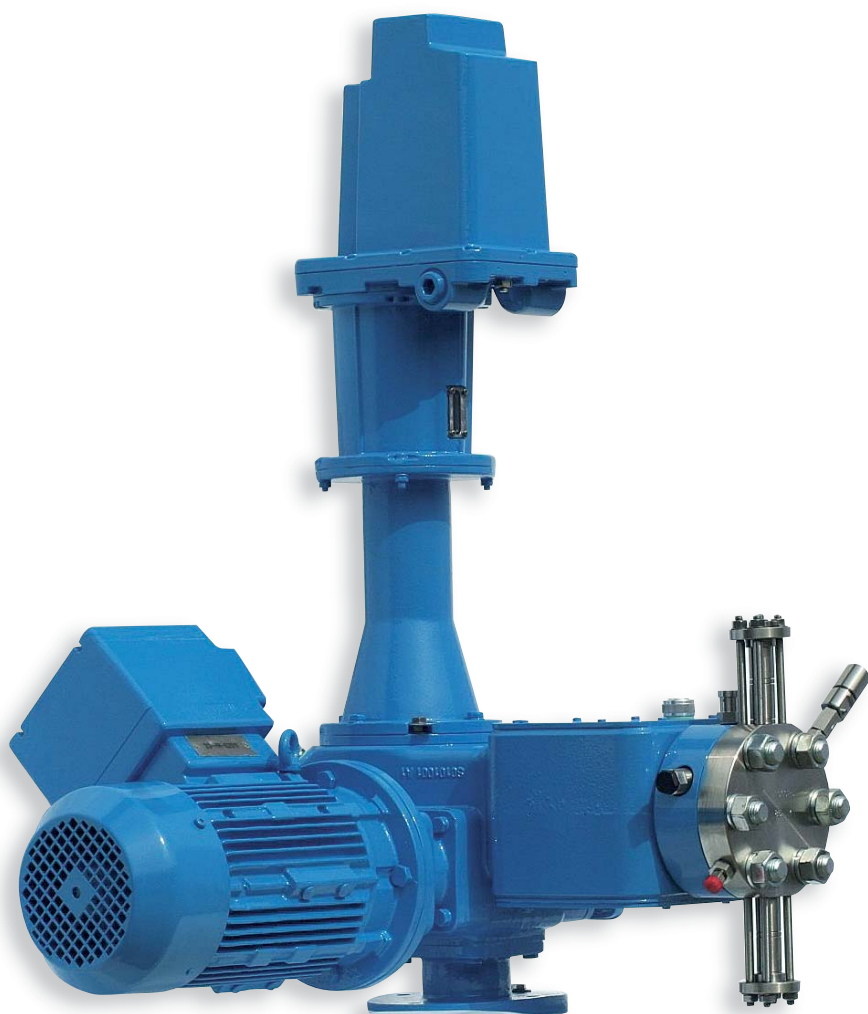
- **Pressure**  
up to 200 barg (higher upon request)
- **Flow rate**  
up to 2650 l/h with a single head
- **Fluid temperature**  
from -10 °C to 90 °C (from -40 °C to 150 °C upon request)
- **Contact materials**
  - AISI 316L
  - PP
  - PVDF
  - Special configurations available upon request
- **Venting system**  
Aside from guaranteeing automatic venting during operation, the venting system also facilitates the pump start-up by favouring the air purge by means of a manual action.
- **Mechanical refilling system**  
Maintains a constant level of the hydraulic fluid, thereby guaranteeing maximum precision and repeatability. Also maintains control over the deformation of the diaphragm, thereby increasing its duration.
- **Cartridge valves**  
In order to ensure maximum dosing precision, even for small flow rates, double and triple ball configurations are available with high precision seats. They can be replaced without disconnecting the pump from the pipelines. The metal gaskets for the AISI 316L stainless steel heads, and the FPM gaskets for those in plastic, guarantee maximum compatibility.
- **Pressure relief valve**  
Protects the pump against unwanted excess pressure.
- **Double diaphragm with rupture detector**  
In the event that one of the two diaphragms should rupture, the detector activates a local visual indicator or signal; in this emergency situation, the second diaphragm guarantees the pump's continued functionality and allows for the necessary maintenance intervention to be scheduled.
- **Separation of the hydraulic fluid from the mechanism's lubricant**  
The two fluids have independent and differentiated functions and are therefore kept separate.

## Options

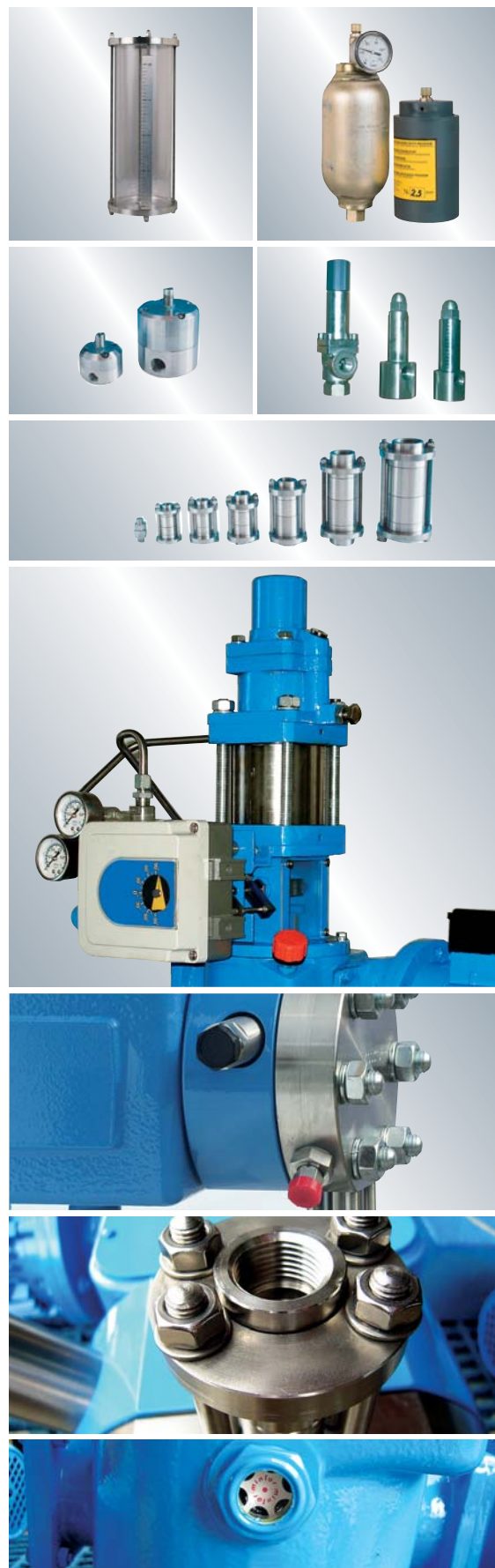
- Automatic, electric or pneumatic adjustment or through an inverter
- Flanged connections
- Heated or cooled heads
- Transmission of the diaphragm rupture signal

## Accessories

- Flow rate calibrators
- Pulsation dampers
- Safety valves
- Back pressure valves



*ATEX metering pump equipped with an electric actuator for flow rate adjustment*



# Applications

## Industrial sectors

- Chemical
- Food & Beverages
- Detergents
- Power Generation
- Environment
- Oil & Gas
- Petrochemical
- Pharmaceutical
- Paper
- Textile



*Double diaphragm metering pump with PVDF head*



*Plunger metering pump with AISI 316L stainless steel head*





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