

NOVADOS

DIAPHRAGM AND PLUNGER METERING PUMPS



Based in Charlotte, North Carolina, SPX FLOW is a leading global supplier of highly engineered flow components, process equipment and turn-key systems, along with the related aftermarket parts and services, into the food and beverage, power and energy and industrial end markets. SPX FLOW has more than \$2 billion in annual revenues and approximately 8,000 employees with operations in over 35 countries and sales in over 150 countries around the world. To learn more about SPX FLOW, please visit our website at www.spxflow.com

For more than 75 years, Bran+Luebbe - now SPX FLOW Technology – has been providing customers with high quality metering, processing and analysing equipment.

As part of the global SPX FLOW 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 whilst meeting the highest quality standards.

NOVADOS - A Selection of Metering Pumps Beyond Compare

With NOVADOS 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 0.4 l/h up to largest 20,000 l/h on a single head
- Operating pressure up to 1,000 bar
- Manual or automatic flow rate adjustment

ADVANTAGES

FLEXIBLE

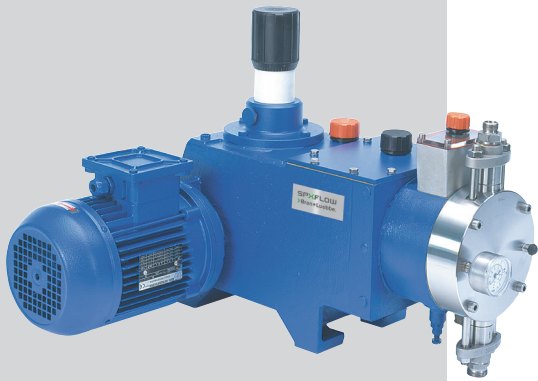
- Optimal capacity adaptation to widely varying production processes
- Variable stroke length for each pump allows independent flow rate adjustment of each pump component
- Variable speed drive allows flow rate variations while maintaining constant proportions

ECONOMICAL

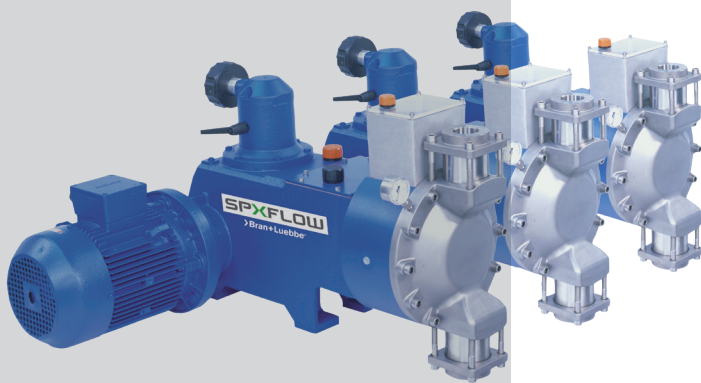
- Automation allows higher production efficiency to be achieved

ADAPTABLE

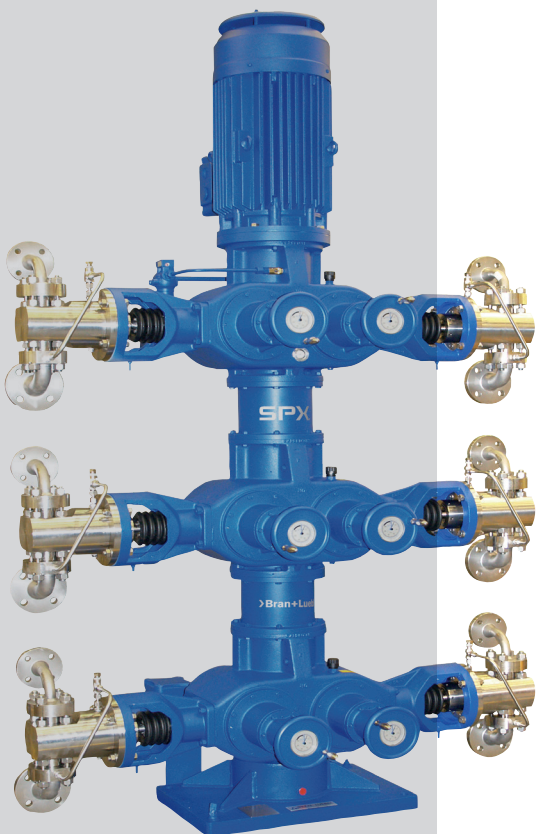
- Existing installations can be altered or expanded with extra pumps or automatic control



Horizontal metering pump
with diaphragm pump head



Horizontal metering pump
with diaphragm pump heads



Vertical metering pump
with plunger pump heads

Applications

CHEMICAL PROCESSING



OIL & GAS



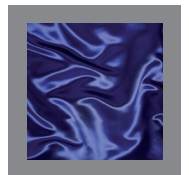
POWER & ENERGY



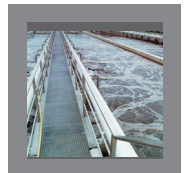
**PHARMACEUTICAL &
BIOTECHNOLOGY**



TEXTILE



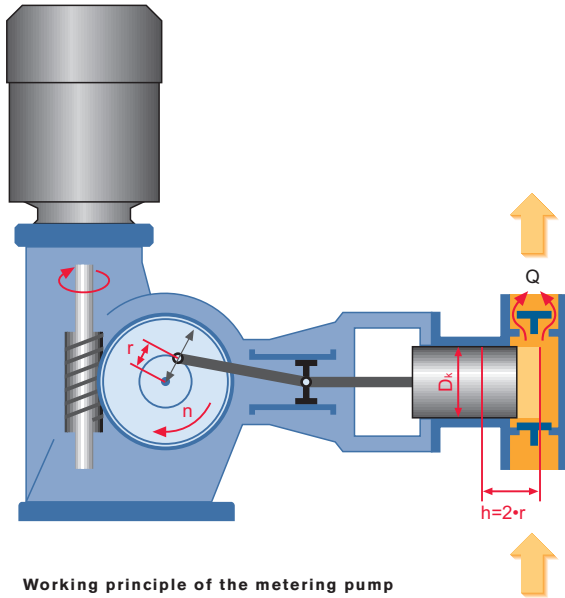
WATER TREATMENT



PERSONAL CARE



Concept of the Bran+Luebbe NOVADOS Metering Pumps



Working principle of the metering pump

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.

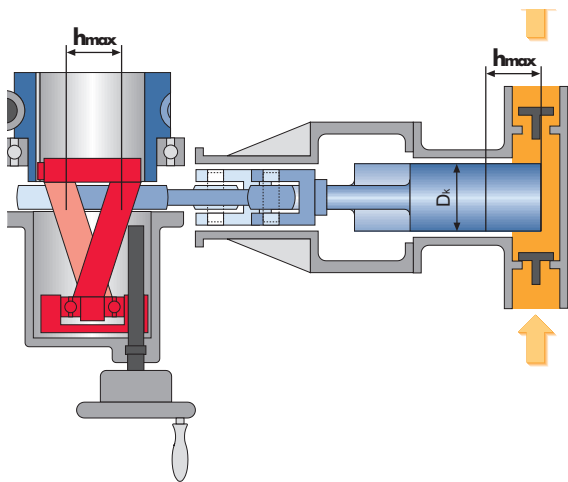
Flow rate of a reciprocating pump is defined by the plunger diameter, stroke length and stroking speed.

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.

Bran+Luebbe NOVADOS metering pumps exceed the requirements of API 675 in terms of metering accuracy, linearity and reproducibility.



Principle of a flow rate adjustment

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.

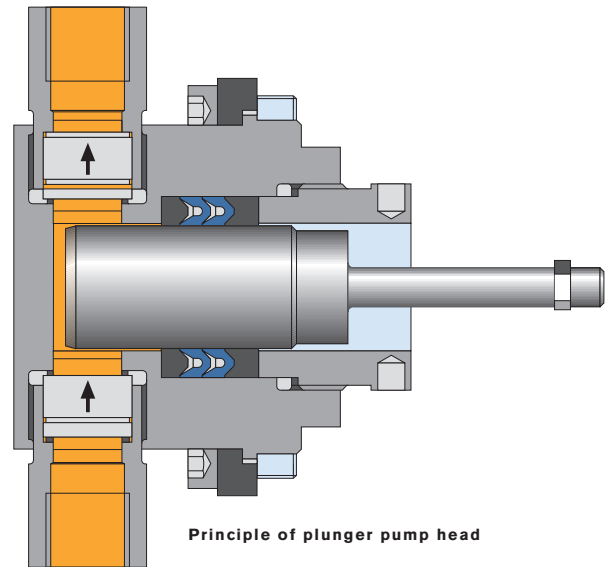
SPX FLOW Technology offers a wide range of hydraulically actuated double diaphragm pumps.

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.

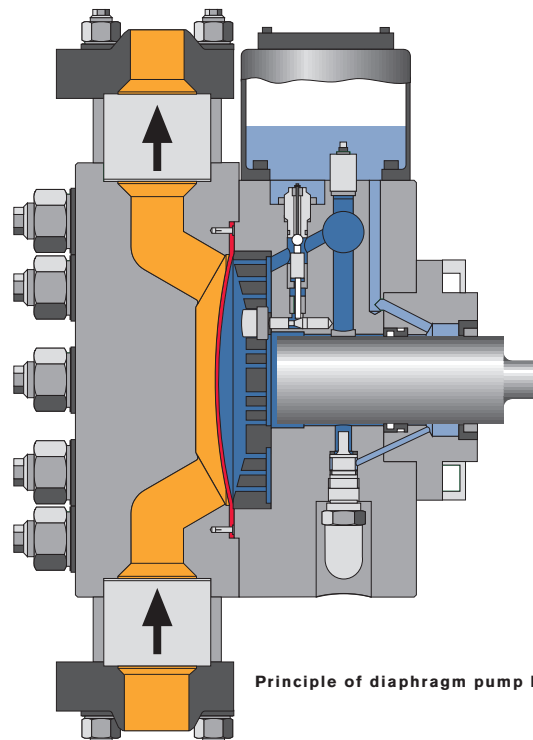
The freely deflecting diaphragm makes the pump suitable for the metering of slurries.

NOVADOS DIAPHRAGM PUMPS: FEATURES

- Diaphragm position control for maximum operating security
- Operating pressure (PTFE diaphragm) up to 400 bar
- Operating pressure (metallic diaphragm) up to 1000 bar
- Fluid temperature up to 150°C
- Safe dry-run capabilities
- High volumetric efficiency
- High metering accuracy
- Hermetically sealed by two diaphragm layers
- Diaphragm condition monitoring
- NOVALINK CSM 2 Diagnosis interface as standard
- Specific customer requirements on request

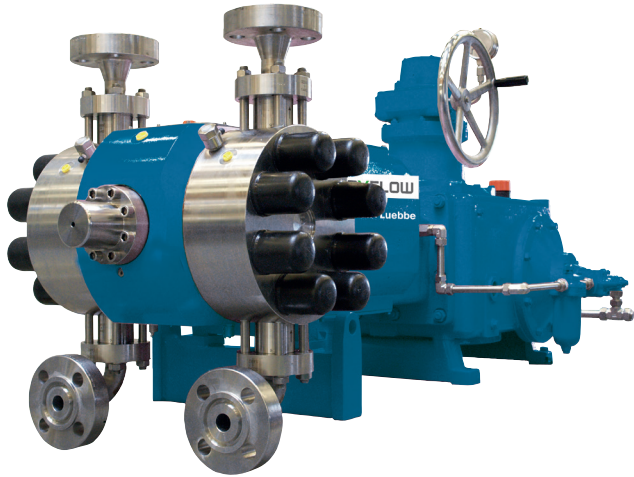


Principle of plunger pump head



Principle of diaphragm pump head

Concept of the Bran+Luebbe NOVADOS Metering Pumps



Metering pump with double-acting diaphragm pump head



Metering pump with plastic diaphragm pump head and pneumatic flow rate control

DOUBLE-ACTING 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

PNEUMATIC

- direct remote control via input signal (0.2... 1 bar respectively 0/4... 20 mA)

NOVADOS-Solutions

OPTIONS TO SUIT SPECIAL APPLICATIONS

PUMP HEAD OPTIONS (ON REQUEST)

- Heating or cooling jackets (valve heating possible)
- Quick-release valves
- Remote valves
- Optimised 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

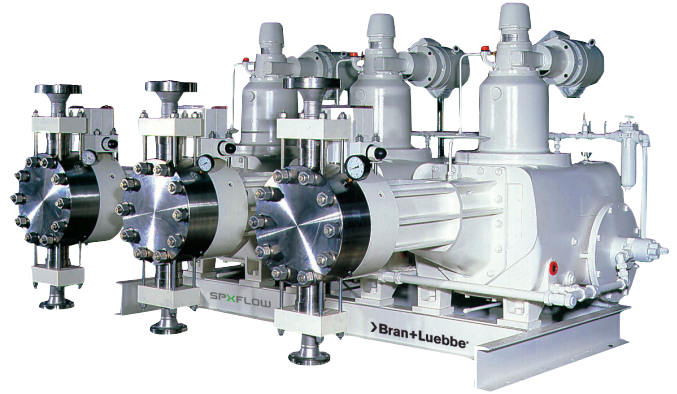
LIQUID-WETTED PARTS OF THE PUMP

- Housings of Stainless steel 1.4571 or 1.4462 alternatively PVC or PVDF
- Diaphragms of PTFE or stainless steel 1.4310
- Plungers of stainless steel, ceramic, tungsten carbide
- Valves of stainless steel, plastic or hard metals
Special materials available upon request

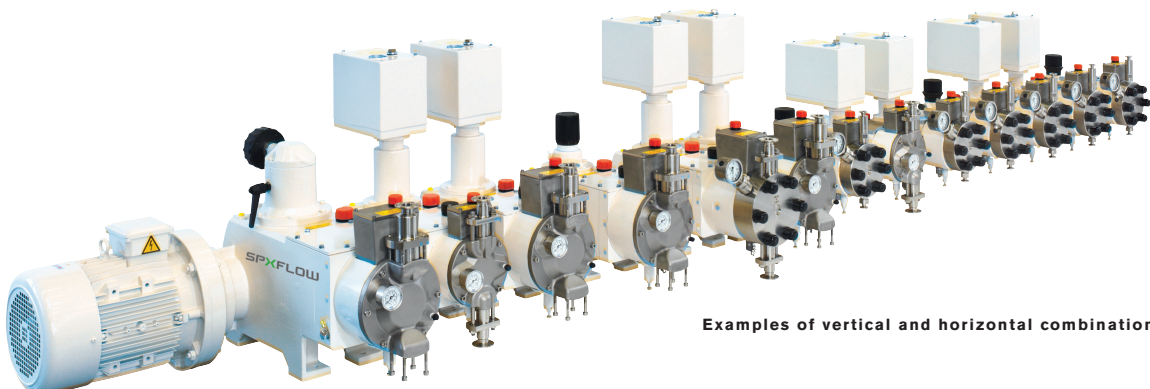
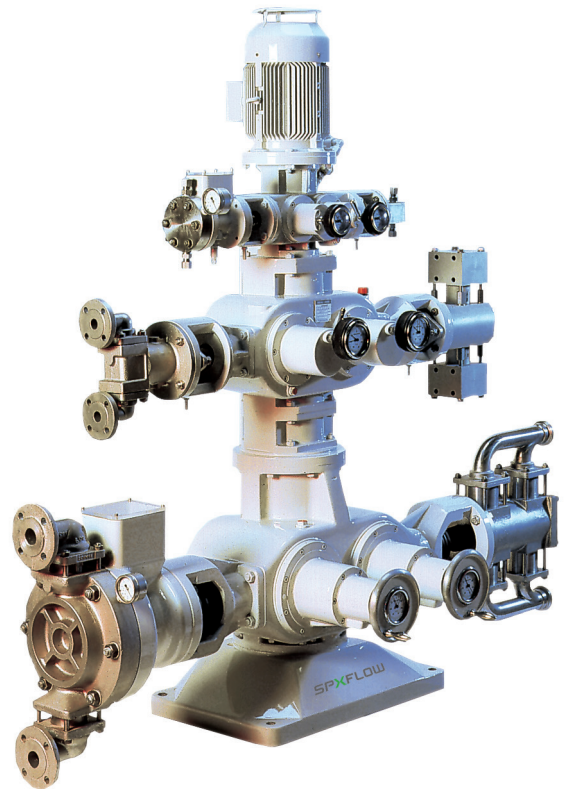
HORIZONTAL OR VERTICAL COMBINATIONS

SPX FLOW Technology is the only pump manufacturer worldwide to offer both vertical and horizontal combinations of metering pumps.

Possible equipment combinations range from simplex pumps to multiplex pumps with different pump heads, each of them can be controlled independently.



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



Examples of vertical and horizontal combinations

THE PRODUCT RANGE: MORE EXAMPLES OF BRAN+LUEBBE PRODUCTS WITH HIGH QUALITY STANDARD, INNOVATION AND KNOW-HOW.



**Metering Pumps
for universal applica-
tions in the low to
medium requirement
range**

ProCam
ProCam Smart
ProCam Hygienic



**Process pumps
for large flow rates and
high operating pres-
sures**

NOVAPLEX
MEGANIZER
High pressure homogenizer



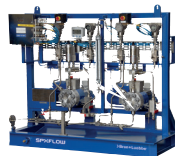
**Dynamic in-line
mixer
for gentle but intensive
mixing**

PENTAX
PENTAX Hygienic



**Process systems
as a complete solution
for increased productivity
and quality**

AutoBlend
Metering and mixing systems



**Oil & Gas systems
to aid oil & gas recovery
onshore and offshore**

Solar Panel Packages
Chemical Injection Systems
Flow Control Device Panels



**On-line analyzers
for use in water
and effluent treatment**

PowerMon
PowerMon S
PowerMon Compact

Global locations

EMEA

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