

NOVADOS

Metering Pumps



NOVADOS – A Selection of Metering Pumps Beyond Compare

Bran+Luebbe offers you an unrivalled range of metering pumps for practically every situation where liquids have to be metered and blended. The product range includes leakage-free diaphragm pumps as well as plunger pumps.



Metering pump type H2 (formerly H2-31) with diaphragm pumphead and manual flow rate control

Applications

Industries

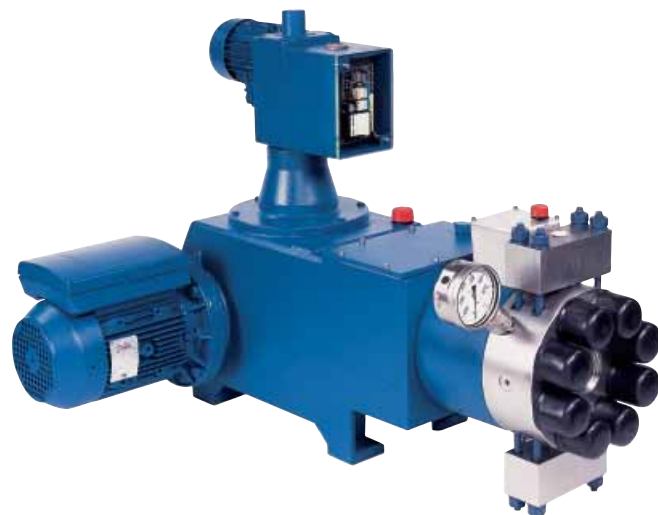
- Chemical Processing
- Food & Beverages
- Detergents
- Energy
- Environmental
- Oil & Gas
- Personal Care
- Petrochemical
- Pharmaceutical & Biotechnology
- Pulp & Paper
- Textile
- Water Treatment

Liquids

- From harmless to aggressive, toxic or hazardous
- From clean to slurries with up to 20% solids content
- From low to high viscosity up to 15000 cP

Service

- **Standard metering** of one component
- **Process metering** of one component utilizing a multihead pump
- **Multi stream metering** For recipe blending of different liquids



Metering pump type H4 (formerly H4-41) with high pressure diaphragm pumphead and electric flow rate control

Common design features

- Individual combinable metering pump gears with built-in low noise worm gear
- Individual stroke length adjustment mechanism with harmonic eccentric positive return crank drive utilizing the unsurpassed Z-shaped crankshaft
- Individual pumphead sizes allowing to build pumps with a maximum flow rate of as little as 0.4 l/h up to 40000 l/h per pumphead
- Variety of options for flow rate control from manual to remote



Metering pump type H4-H4-H1-H1 (formerly H4-42 P42) with diaphragm pumpheads and individual electric flow rate control



Metering pump type CS32C32J32 with a variety of different pumpheads and individual manual flow rate control

Advantages

Flexible

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

Economical

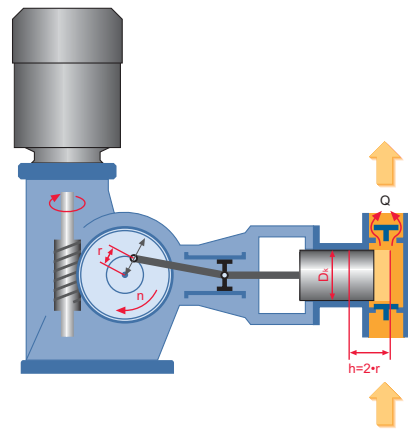
- Automation allows higher production efficiency to be achieved

Adaptable

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

NOVADOS - Concept of the Bran+Luebbe Metering Pumps

Working principle of the metering pump



Metering pumps are normally composed of a motor, the metering pump gear and the pumphead.

The gear reduces the motor speed and converts the rotary motion into a reciprocating movement of a plunger in the pumphead and with a certain stroking speed.

The alternating operation of suction and discharge valves during the plunger stroke generates a flow of liquid.

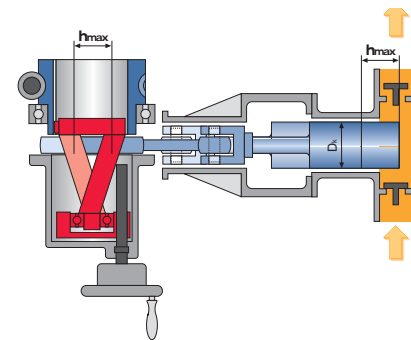
Flow rate of a metering pump is basically defined by the number of stroke volumes per time unit.

Simply effective: Flow rate adjustment by the Z-shaped crankshaft

Flow rate can be adjusted linearly and continuously between zero and maximum by altering the position of the eccentric (Z-Shape) crankshaft. This design allows adjustment while the pump is operating or at standstill. The stroke length can be set with a vernier indication of position in 0.02 mm increments (manual).

Bran+Luebbe metering pumps exceed the requirements of API 675 in terms of metering accuracy, linearity and reproducibility. Metering accuracy can be as good as 0.5 %

For a more detailed description please ask for a free copy of our CD-ROM "The Function of the Bran+Luebbe Stroke Length Adjustment via Z-shaped crankshaft". Or visit our website www.bran-luebbe.com



Flow rate control

Manual

- with integrated scale with 0.02 mm resolution

Electric servo motor

- directly operated
- with input signal 0/4...20 mA
- incl. explosion proof executions

Pneumatic

- directly operated
- with input signal 0.2... 1 bar
- with input signal 0/4... 20 mA



Metering pump type H1 (formerly P51) with plastic diaphragm pumphead and pneumatic flow rate control

Diaphragm Metering Pumps

Patented diaphragm position control for maximum operating security

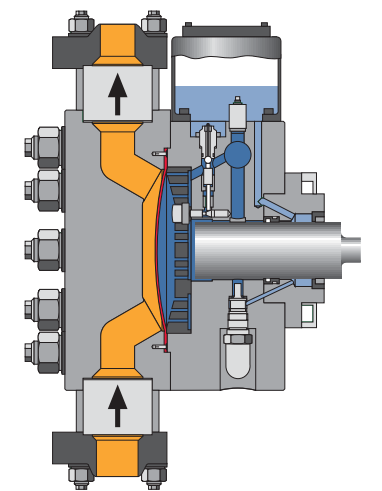
A leak-proof pump is the right choice whenever product purity or sterility are imperative or when toxic liquids must be handled.

Bran+Luebbe offers a wide range of diaphragm pumps, all with hydraulically actuated double diaphragm. Flow rates range from as little as 100 ml/h up to 10000 l/h and pressure may be as high as 1000 bar. The patented positive diaphragm position control system (PDPC) ensures that the diaphragm cannot be damaged even under critical

conditions such as a blocked pipe or closed valves upstream or downstream the pump.

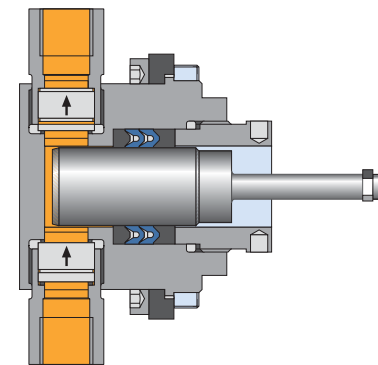
This system allows to have no obstruction in the pumping chamber making the pump suitable even for the metering of slurries.

For a more detailed description please ask for a free copy of our CD-ROM "The Function of the Diaphragm Metering Pumphead and the Patented Diaphragm Position Control". Or visit our website www.bran-luebbe.com



Plunger Metering Pumps

The right choice for metering harmless or non-critical applications



Even though the design of plunger pumpheads is quite simple, these Bran+Luebbe pumps have an outstanding performance. This is due to the Bran+Luebbe metering pump valves in combination with the high-precision metering gear.

For certain applications it is possible to use double-acting pumpheads that allow to pump roughly two times as much fluid.

Flow rates range from 100 ml/h up to 40000 l/h and pressure may be as high as 1000 bar.

Advantages

- Metering accuracy as good as +/- 0.5% due to precise metering gears
- Harmonic flow rate pattern for all stroke settings due to positive return crankshaft
- Versatility due to vertical and horizontal combinations
- Leakage-free metering of liquids due to double diaphragm pumpheads with hydraulic diaphragm actuation
- Various possibilities for controls and automation
- Flow rates per pumphead from 0.4 l/h up to 40000 l/h
- Pressure up to 1000 bar

NOVADOS-Solutions for numerous requirements

Options to suit specific applications

Pumpehead executions

- **Double diaphragm** with hydraulically actuated diaphragms or **Plunger or piston** with
 - heating or cooling jackets even incl. valves
 - quick-change valves
 - remote valves
 - optimized flow channels for slurries or viscous fluids

Valve designs

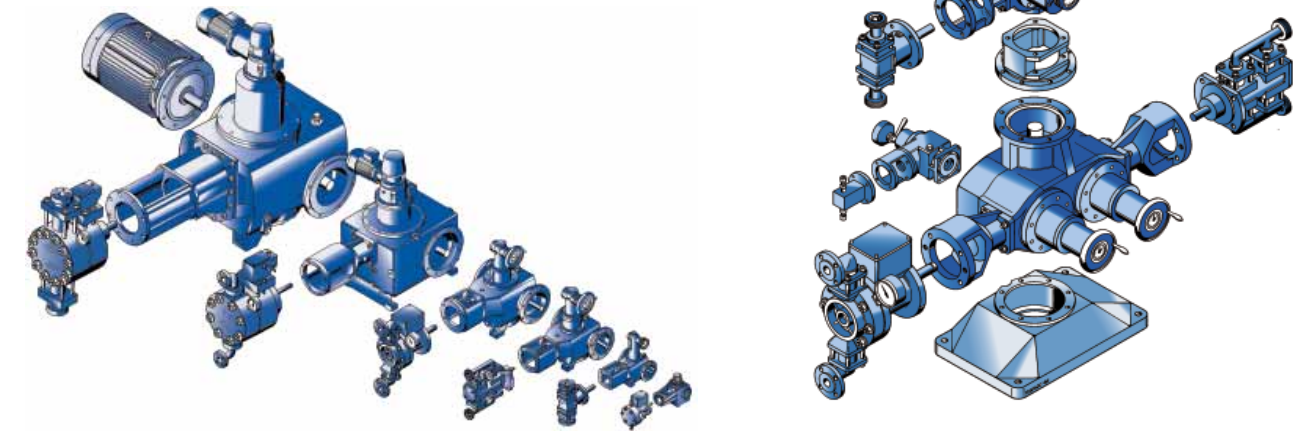
- Ball valves (single, double or triple)
- Cone valves with or without spring
- Plate valves

Materials of construction for liquid-wetted parts of the pump

- Housings of Stainless steel 1.4571, 1.4581, 1.4462,
 - Alternatively PVC, PP, PVDF or stainless steel lined with HALAR® (E-CTFE)
 - Diaphragms of PTFE or stainless steel 1.4310
 - Plungers of 1.4571, ceramic, tungsten carbide
- Valve of stainless steel or plastic, hard metals and exotic material
 - Practically all exotic materials such as Hastelloy, Titanium, Stellite etc. are available as well

Horizontal and Vertical Combinations

Bran+Luebbe is the only manufacturer of metering pumps worldwide to offer both combinations, horizontal and vertical. Possible equipment combinations range from simplex pumps for one stream of liquid to multiplex pumps with up to 20 different streams, each of them can be controlled independently.



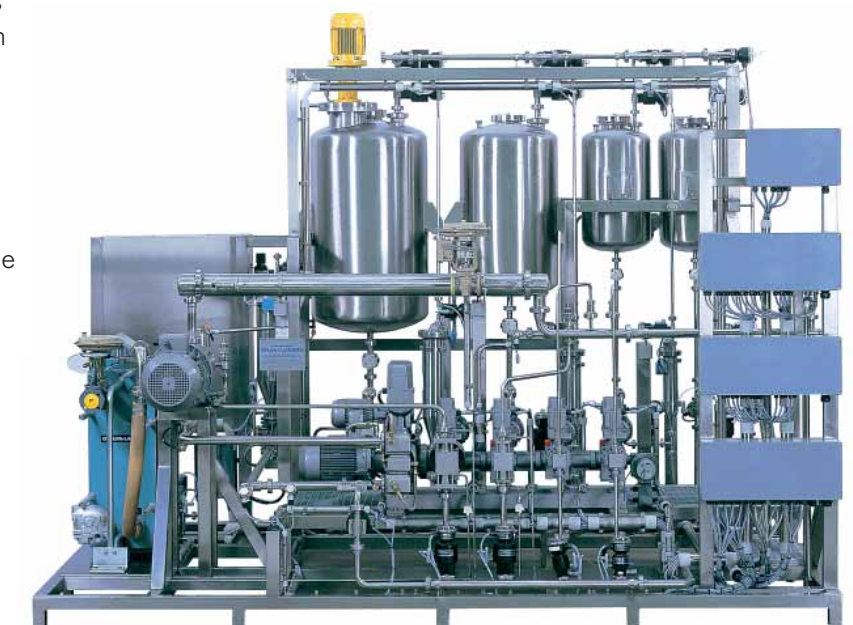
Triplex process metering pump type BS43 with diaphragm pump-head and electric flow rate control

AutoBlend

AutoBlend is the brand name of Bran+Luebbe turn-key metering & blending systems for the production of high-value products using liquids, pastes and powders.

Our dedicated systems engineers develop the best possible solution for your needs, either from our extensive range of standard systems or individually designed and manufactured to your specification.

For more details please ask for the specific AutoBlend brochure.



Bran+Luebbe metering and mixing system for continuous production of high quality body lotion.

Global Headquarters:
SPX Process Equipment, Delavan, WI USA



Bran+Luebbe, Headquarters:
Norderstedt, Germany



SPX[®]

PROCESS EQUIPMENT

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For more information about our worldwide locations, approvals, certifications and local representatives, please visit www.spxpe.com

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