

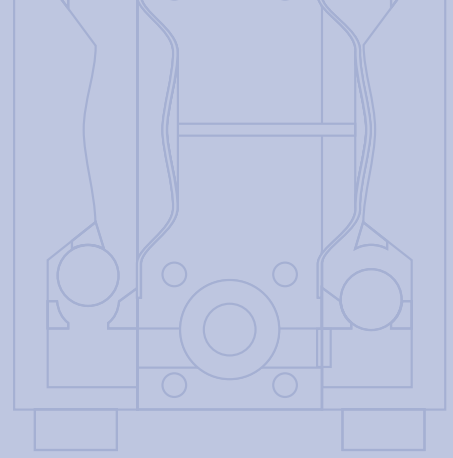


VERDERAIR

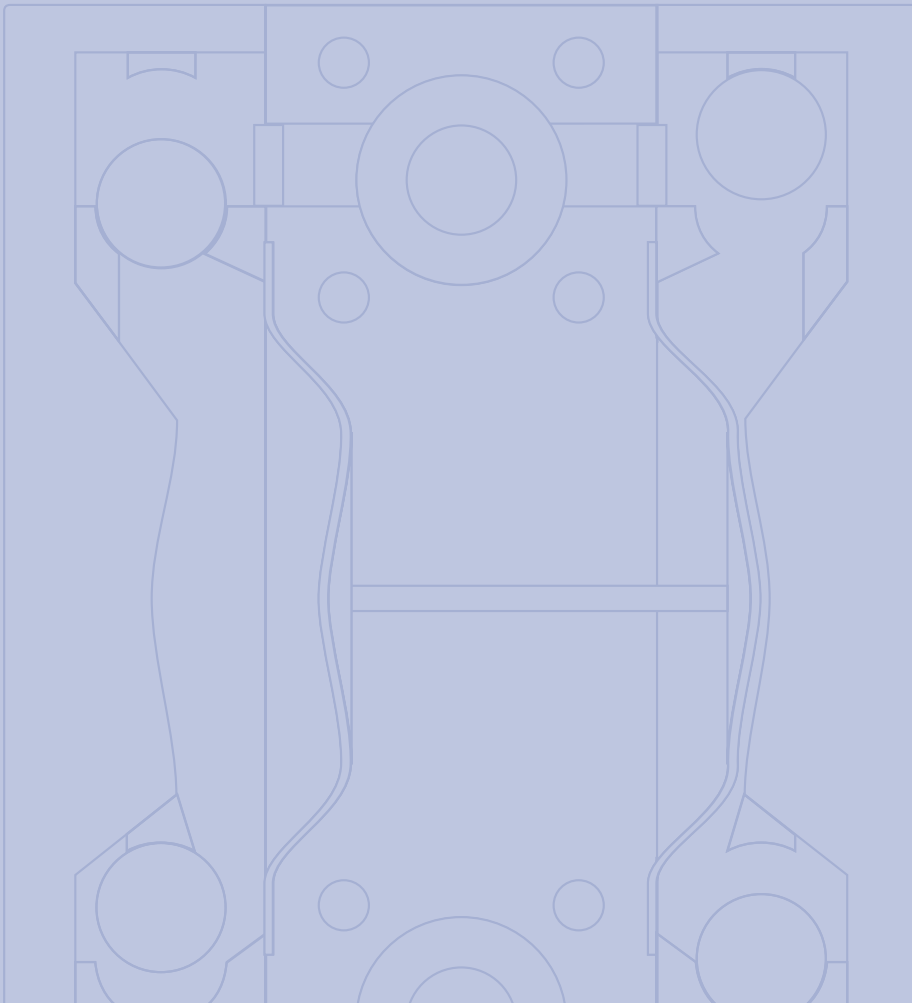
Double Diaphragm Pumps



Increased productivity
Reduced operational cost
Improved working environment



Verderair
The most efficient
diaphragm pump



Verderair

Meet the most efficient diaphragm pumps

Verderair double diaphragm pumps have quick acting air valves. This results in an increased productivity, reduced operational cost and improved working environment. This makes them the most efficient double diaphragm pumps!



Increased productivity

Higher flow rate, less maintenance

Low "pressure drop" when the liquid passes the pump chamber. Smoother flow, increased efficiency pumping the liquid. The diaphragms have a special profile which is designed for extreme long diaphragm life time.

Reduced operational cost

Lower air consumption

The quick acting air valves are very fast in changing direction. Therefore no compressed air is entering the air chamber when the stroke is already completed. The used compressed air is removed from the pump with almost no restrictions. The compressed air is only used to move the liquid!

Improved working environment

Less noise

By using all compressed air the pump makes less noise. Also freezing of the exhaust is reduced.

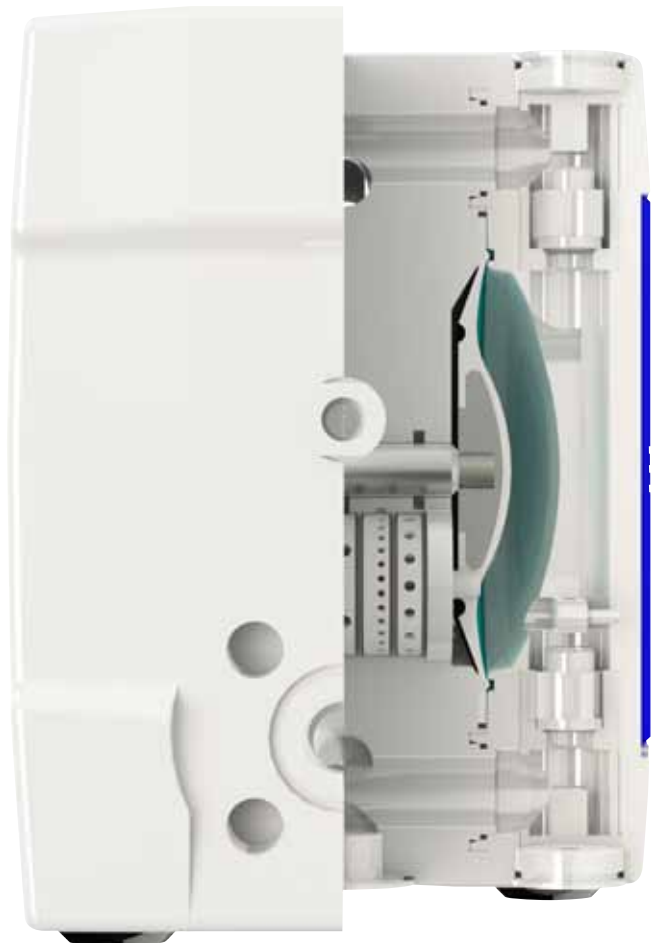
50 years of more than 600.000

With more than 50 years of experience in double diaphragm pump technology, and having sold more than 600.000 pumps all over the world, Verder continuously improves its technology to increase the efficiency of the Verderair pumps, without using ancillary equipment. All other brands need ancillary equipment to enlarge pump efficiency; Needing no such equipment to achieve the best performance makes Verderair the most efficient diaphragm pump.



Special features Verderair Pure

- Solid design, limited vibrations to the piping
- Metal free external parts
- Possible to build pulsation dampener on top as integrated unit



The Verderair Pure

experience diaphragm pumps sold

Some of Verderair's features

- Quick acting air valve
- Easy to install
- Extremely portable for multi-location use
- Easy to maintain
- Easy to operate
- Free of air lubrication
- Can run dry without damage
(no dry-run protection needed)
- Can run against closed valves
- Non stalling air valves
- Dry self priming
- No dynamic or pressure loaded seals



Special features Verderair VA

- Screwed chambers for safe operation and easy maintenance
- Rugged, cast feed mounting holes for limited vibrations
- Plastic versions with inserts in pump chambers for optimum pressure holding



The Verderair VA



Materials to choose of meeting your most severe process

To meet your most severe process conditions, yet still having a trouble-free operation Verderair pumps have nine different material options. Also the best combination of wetted parts (valve seat, diaphragm & ball) and the best selection and combination of diaphragms.

- 1 Thermoplastic polyester (Hytrel)** Good low temperature properties. Good abrasion resistance. Often substitute for Buna-N.
- 2 Santoprene** Good abrasion and chemical resistance. Good for use with some solvents (e.g. Acetone, MEK), caustic solutions, dilute acids, and alcohols. Often substitute for EPDM, EPR.
- 3 Teflon (PTFE)** Widest chemical compatibility, extreme corrosion resistance, very low frictional coefficient, non-adhesive, high heat resistance.
- 4 BUNA** Good for petroleum-based fluids, water, oils, hydrocarbons and mild chemicals (e.g. mineral spirits).
- 5 Fluorelastomers (Viton)** High heat resistance. Good resistance to aggressive chemicals including acids and some solvents. (e.g. xylene and mineral spirits). Good resistance to steam as well as animal, vegetable and petroleum oils. Resists unleaded fuels.

NOTE not all combinations are available. Please contact your local supplier.



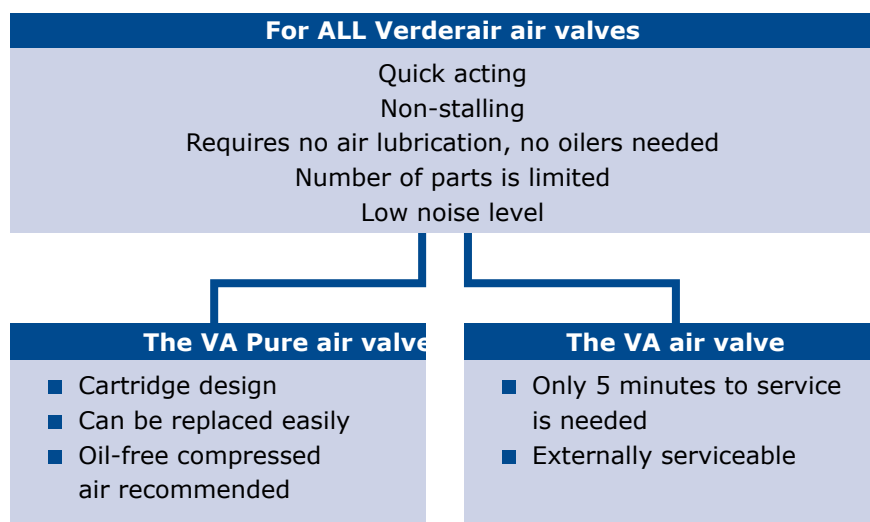
- 6 Geolast** Good abrasion resistance. Approximately same chemical compatibility as Buna-N.
- 7 Polychloroprene (Neoprene)** High resilience. Good with whiskey, wine, beer and natural gas. About 30% higher abrasion resistance than Buna.
- 8 EPDM** Good water and chemical resistance. Not for use with oils, greases and most solvents.
- 9 Neoprene** Good chemical resistance, good performance with oils and many chemicals, good temperature resistance, outstanding physical toughness, Outstanding resistance to damage caused by flexing and twisting
- 10 Acetal** Wide range of solvent resistant and withstands extreme fatigue. Good level of abrasion resistance. Electrical conductive (Atex!)

The heart of your pump: The air valve

Verderair has proven to be the most efficient double diaphragm pump, mainly because of the special engineered design of the air valve. The Verderair VA series are equipped with an air valve that has a modular cup and plate design air valve. This air valve design is re-engineered based upon the successful air valve design Verderair already uses many years now.



The Verderair Pure pump is especially designed for working in severe environments. The air valve of this series is mounted in the inner of the pump. Therefore the air valve is not influenced by any environmental fluctuation.





Verderair Pure; Pure & Solid

With its efficient Verderair quick acting air valve in cartridge design the Verderair Pure is a new, robust, high-end series of double diaphragm pumps, produced from one-piece solid material. The Verderair Pure is designed for heavy-duty operation, also for harsh liquids and severe process conditions, such as operation in power plants and refineries. Every pump is duly tested before dispatch.

The Verderair Pure has all the benefits of a Verderair double diaphragm pump. Increased productivity through a higher flow rate, reduced operational cost because of lower air consumption and less maintenance, and an improved working environment is created because the pump makes less noise. The Verderair Pure is available in 4 wetted part materials.

Applications

- Chemicals transfer
- Pharmaceutical industry
- Power plants
- Electronics-plating (Galvanics)
- Refineries

MATERIALS

Polyethylene (PE)

Extremely abrasion resistant. Upto 7 times better than Polypropylene. Chemical resistance is comparable to Polypropylene.

Conductive polyethylene

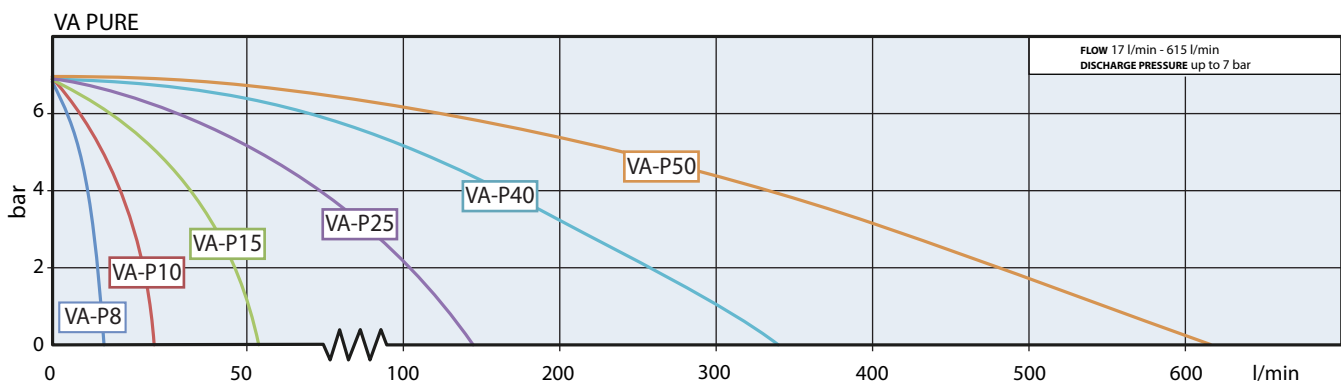
Similar to PE, but electrical conductive (Atex!).

Teflon (PTFE)

Widest chemical compatibility, extreme corrosion resistance, very low frictional coefficient, non-adhesive, high heat resistance.

Conductive teflon

Similar to PTFE, but electrical conductive (Atex!).





Verderair Non-Metallic Series

Verderair non-metallic double diaphragm pumps are excellent pumps for use in a wide range of applications all over industry. Depending on your wishes, fluid and process specifications, the best solution is selected.

Verderair VA offers seven non-metallic materials to choose from. For severe applications we offer polyethylene models, whilst for multi-purpose applications a polypropylene pump is a good choice.

Applications

- Ink & paper
- Preparation of CIP solutions
- Surface finishing
- Car wash chemicals
- Water based paints

MATERIALS

Polypropylene

Wide chemical compatibility. General Purpose. Limited temperature resistant.

Conductive polypropylene

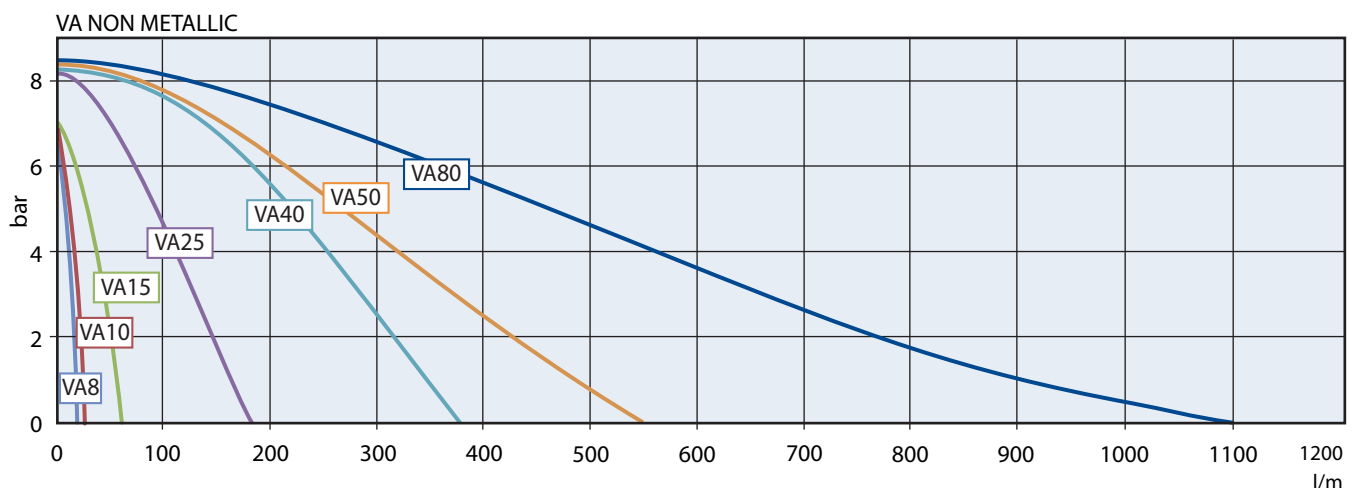
Similar to standard Polypropylene but electrical conductive (Atex!).

PVDF (Kynar)

Strong chemical resistance: acids and bases. Good abrasion resistance. High temperature resistance.

Acetal

Wide range of solvent resistant and withstands extreme fatigue. Good level of abrasion resistance. Electrical conductive (Atex!).





Verderair Metallic Series

Verderair metallic double diaphragm pumps are the best choice when chemical resistance is an important issue. If your process fluid is of abrasive nature, a metallic double diaphragm pump will be an excellent choice. VA metallic diaphragm pumps are offered in both Aluminium and SS316.

Applications

- Slaughterhouse waste
- Waste water
- Chemicals transfer
- Ceramic slurry
- Solvent based paints

MATERIALS

Aluminium

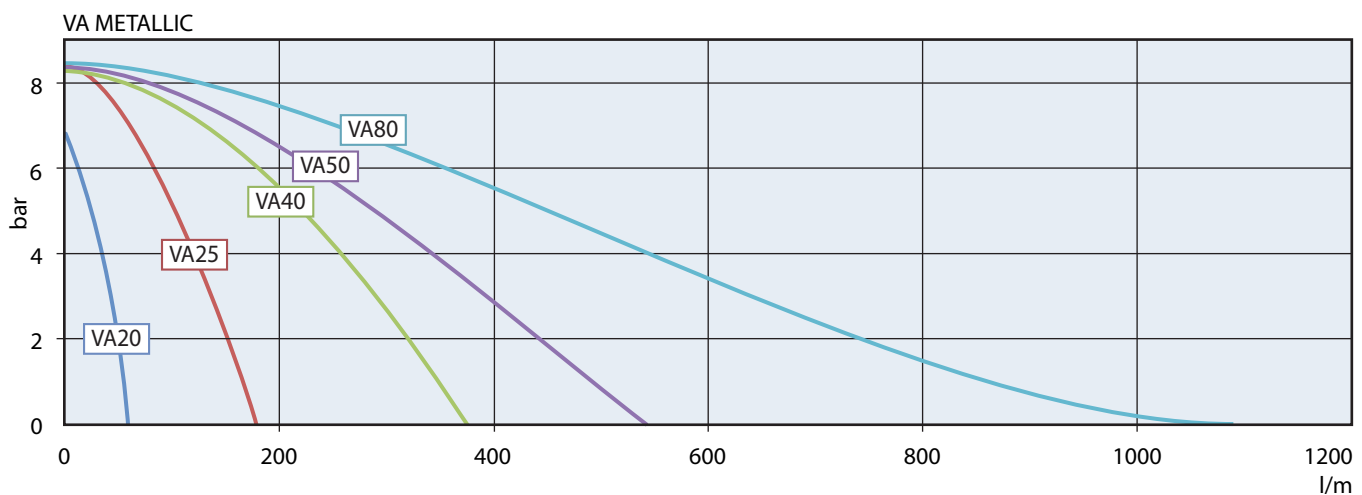
General purpose. Good for solvent based coatings and inks. Resistant to mild chemicals.

Cast Iron

Highly abrasion resistant. Often used in paper, waste water industry and mining.

Stainless Steel 316

Resistance to most acids, bases and solvents. Can handle halogenated hydrocarbons. Good abrasion resistance.





Verderair Special Diaphragm Pumps

The Verderair range includes a series of special pump models for specific applications relevant in many industries and application areas.

Verderair VA high pressure diaphragm pumps

Double diaphragm pumps have a maximum air pressure rating of 8.4 bar. Verderair now offer a series of high pressure pumps (up to 16 bar liquid pressure) with the same benefits and features as the reliable VA series of pumps.



279 l/min

Verderair VA FDA diaphragm pumps

Verderair FDA diaphragm pumps are specially constructed for processing applications in the food industry. Wetted materials are made of SS 316 Ra polish, 3.2 µm.



565 l/min



Verderair VA hygienic diaphragm pumps

The hygienic AODD pump series has a fast knock down system and can be cleaned with CIP and SIP processes. All wetted and non-wetted parts of these series are FDA and 3A compliant (SS 316 Ra polish, 0.8 µm). Ball valves are used as standard, but also flap valves for handling larger solids are available. Model 3A is provided with a leak detection.



568 l/min



Verderair VA Drum pumps

For the emptying of all kind of chemicals from small barrels, containers, canisters and drums (approx. 200l), (acid or lye) a double diaphragm pump is a very good alternative for a conventional rod drum pump. Pumps are delivered with standard suction tube.



568 l/min

Verderair diaphragm pump with split manifold

For the pumping of two liquids with one pump or for mixing two liquids with a 50-50 ratio.



Verderair Accessories



Pulsation dampeners

Due to the function principle, double diaphragm pumps are generating a pulsating flow. To minimize this Verderair has created a line of pulsation dampeners based on the VA-Pure technology. The VA-P dampeners are active dampeners and are giving the best possible dampening effect to create an almost flat flow. They are available in the same sizes and materials as the VA-Pure pump range.

Barrier chamber (VA Pure only)

To have the optimum protection against diaphragm failure, the VA-Pure series of pumps can be equipped with barrier chambers. A non conductive neutral fluid is kept between 2 diaphragms to separate the pump liquid and the atmosphere. When the diaphragm at the side of the pumped liquid fails, the neutral liquid is mixed with the pumped liquid. A sensor will detect the change in conductivity and the control unit will generate a signal which can start an alarm and/or stop the pump. In case of a failure of the air-side diaphragm, the neutral liquid will flow away and a capacitive sensor will detect this and also now the control unit will generate an alarm signal.



Diaphragm monitoring (VA and VA Pure)

A capacitive sensor is installed in the muffler of the pump. When a diaphragm fails, liquid is entering the air-side of the pump. The sensor will detect this and the control unit will generate a signal which can be used to start an alarm and/or stop the pump.

Remote operation (VA and VA-Pure)

VA and VA-Pure pumps can be equipped to be controlled by a solenoid valve.

Stroke counting (VA and VA-pure)

For VA pumps, a REED switch is mounted in the center block. This switch is generating a pulse with every movement of the diaphragms. The output of this switch can be connected to a control box which is counting the number of strokes the pump is making. For the VA-Pure pumps an inductive sensor is used instead of the REED switch.

Draining System (VA Pure only)

The VA-Pure pumps of sizes 15-50 can be equipped with a draining system. This gives the possibility to drain the pump in line by operating a valve by hand or by a pneumatic signal.





Verderair Sparekits

The Verderair pump structure design was engineered to create a long service life. However, regardless of quality, some parts are prone to wear and will need to be replaced. To ensure a minimum disruption to your production process, we advise you to keep the necessary spares in stock.

Verderair offers spare part kits for wetted parts exposed to natural wear. The spare parts kit ensures your production process will never have downtime because of missing parts. In case of a pump break down it is advised to keep at least one spare parts kit on stock at your premises.

In case of emergencies Verderair always can deliver from stock. Our fast delivery ensures your production process will be operational. Verderair spare parts are diaphragms, flap valves, valve seats and ball valves. For parts that are subject to wear we stock pre-assembled spare part kits.





We also have a solution for your application!

Verderair double diaphragm pumps can be used for drum transfer and for food transfers such as: chocolate, vinegar and dog food. They are also used for circulation of low/high viscosity inks, filling and emptying process vessels and mixing tanks, stains and dyes, wastewater and ceramics. Verderair pumps are great pumps for pumping chemicals like acids, solvents, resins and latex. They are also suitable for the pharmaceutical industry; vegetable extracts, ointments, alcohols and sump waste.

[Beverage industry](#)

Yeast, diatomaceous earth, slurry, dregs, liquid hops, sugar, wine, fruit, corn syrup.

[Pharmaceutical industry](#)

Vegetable extracts, tablet pastes, alcohols, filtering aids, ultra filtration, blood plasma.

[Electronic industry](#)

Solvents, electroplating baths, ultrapure liquids, carrier fluids for ultra-sonic washing, sulfuric nitric and acid washes, etching acids, acetone, polishing compound.

[Paint and coatings](#)

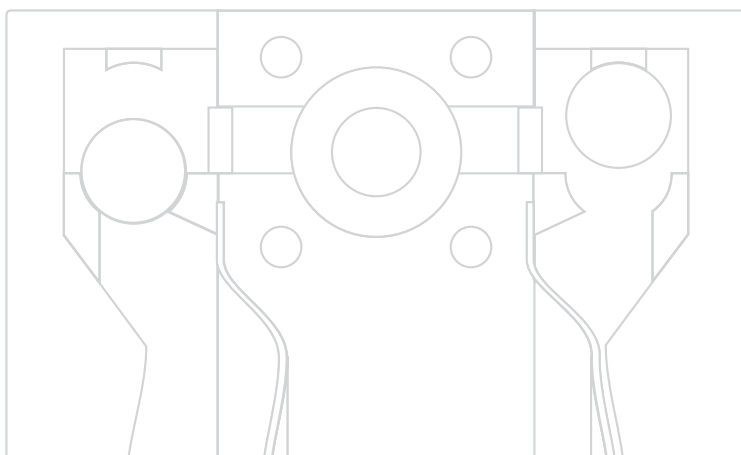
Resins, solvents, wood preservative stain, concrete paints, titanium dioxide slurry, dispersions, varnish cleaning baths.

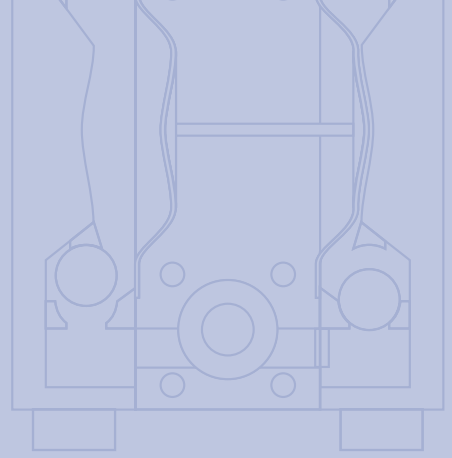
[Food](#)

Brine, chocolate vinegar, molasses, dog & cat food, vegetable oil, honey, animal blood, CIP liquid preparation.

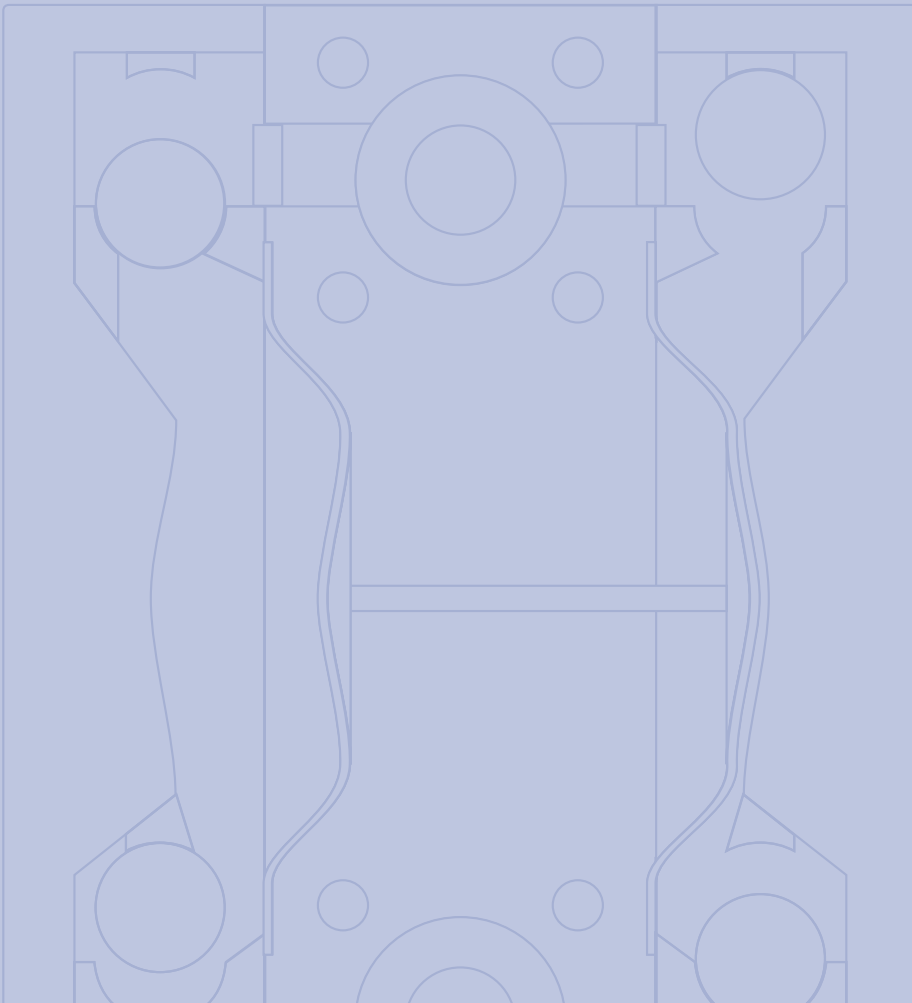
[Food](#)

Silicon dioxide slurry, HF, filter press.





Verderair
The most efficient
diaphragm pump





Any questions? You may still have questions and/or comments after reading this brochure. For more information, please visit our website **www.verderair.com** or contact your local supplier.

VERDERAIR



VA_broch_rev04-2012_UK_(uk)

Uvoznik in distributer:



TRGOVINA PTK, Tilen Kokelj, s.p.
Miševa ulica 8
1230 Domžale

T: +386 (0)41 305 777
E: info@ptk.si
I: www.ptk.si