



JOHNSON PUMP
AN SPX BRAND

TopAir

Air Operated Diaphragm Pumps



SPX[®]

TopAir –

Reliability, performance and quality – based on more than 40 years of experience in manufacturing air operated diaphragm pumps

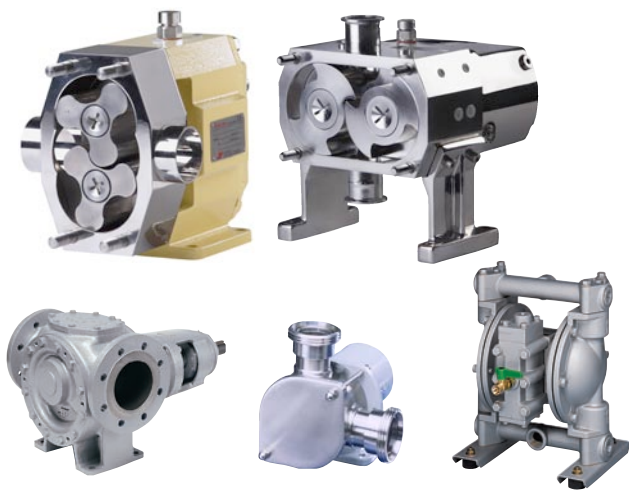
Diaphragm pumps are used in all types of industries for transporting a wide variety of liquids. Clean or polluted, thin or viscous, abrasive or aggressive. The wide use of an AODD pump is the main reason for its growing popularity.

Johnson Pump is manufacturing pumps at five locations world-wide.

We are proud of being able to say that we have 70 years of experience of developing, manufacturing and marketing pumps.

We offer our customers solutions in liquid transports based on our long experience in the pump business and wide range of quality products.

Positive Displacement Pumps



Centrifugal Pumps



TopAir

is one of the most complete lines of diaphragm pumps on the market. With eight sizes up to 800 l/min in a wide range of material combinations we can offer pump solutions for all types of industries.

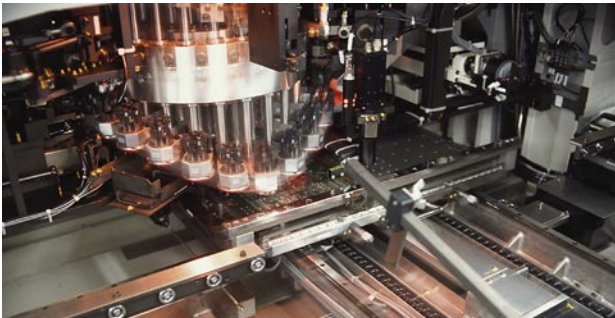
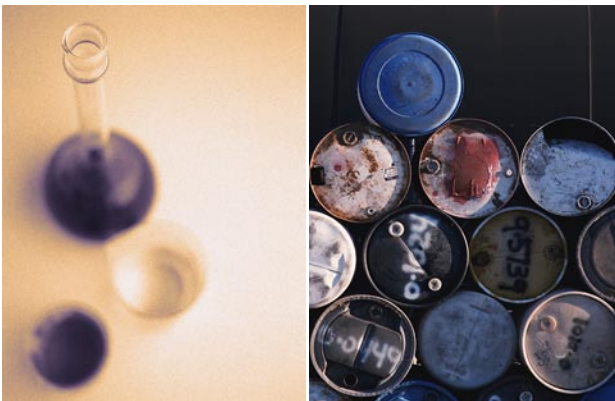
Typical characteristics

- Self-priming
- High and low viscous products
- Dry running capability
- Solids and polluted liquids
- Variable flow
- Wide range of materials
- Simple design – easy maintenance

TopAir –

The multi-purpose pump for solutions in all industries

TopAir will pump any liquid which flows or moves through a pipe – from clear water and thin volatile liquids to highly viscous and abrasive or chemically aggressive liquids. The survey below provides an outline of applications possible with the TopAir pumps.



Ceramics

Clay, enamel clay, glazes.

Chemical Industry

Acids, alkalis, suspensions, stabilisers, resins, latex, solvents, electroplating baths, filter press operation and dispersions.

Construction

Sump and pit drainage, cement slurry, concrete slurry, rock slurry, tile adhesive, ceiling coating paints.

Electronic Industry

Solvents, ultrapure liquids, electroplating solutions, carrier fluids for ultrasonic washing facilities, wafer production, mercury.

Environmental Protection

Effluents, thin slurry, chemicals, charging of filter presses, milk of lime.

Machine Industry

Oil, grinding emulsion, polishing slurries and pastes, de-greasing baths, varnish disposal, waste oil, varnish additives.

Mining

Coal sludge and rock slurry, pastes, adhesives, powered rock, water drainage, sump gallery drainage, packing material as dry matter, cement slurry, grouting mortar.

Paint Industry

Solvent, resins, primers, concrete paints, wood preservative, varnishes, varnish additives, stains, varnish cleaning baths, latex, dispersions, impregnating compounds.

Paper Industry

Printing inks, solvents, adhesives, resins, dispersions, latex, glue, pulp and paper slurry.

Petrochemical Industry

Tank roof drainage, tank cleaning, oil sludge, petroleum, benzene.

Pharmaceutical Industry

Ultrafiltration, ointment, tablets pastes, alcohol, vegetable extracts, filtering acids.

Plating

Anodic sludge, electroplating baths, solvents with coarse containments, varnishes, enamels.

Power Stations

Milk of lime, contaminated liquids, charging scrubbing facilities, petroleum.

Waste Water

Waste water, waste oil, bilge water, sewage.

Features and benefits

High performance – long life time diaphragm

- All TopAir diaphragms are manufactured from high quality, virgin materials.
- Abrasive and corrosive materials can be handled without problems.

Versatile material handling ability

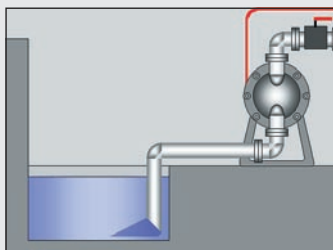
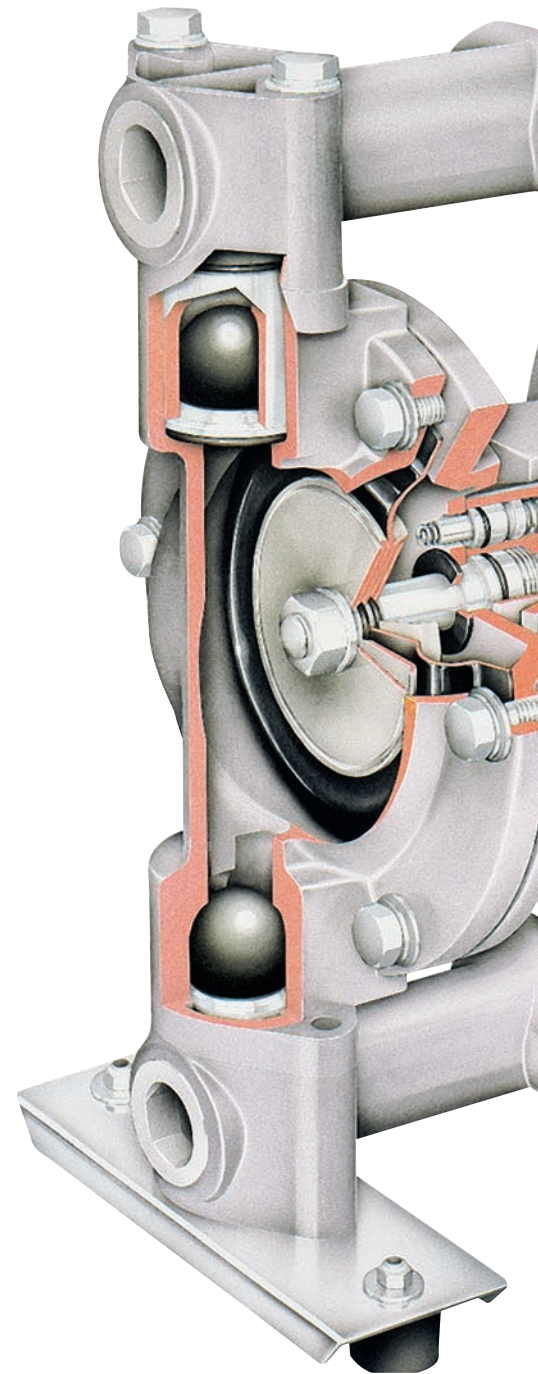
- Wide range of material combinations for low and high viscous liquids, alkalis or acids.

Flexible installation possibilities

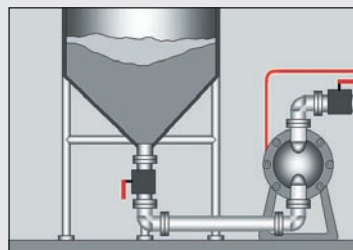
- Dry start – self-priming up to 5 meter.
- Possible to submerge.
- Can be installed with flooded suction condition.
- Can run dry without damage or overheating.

Explosion proof

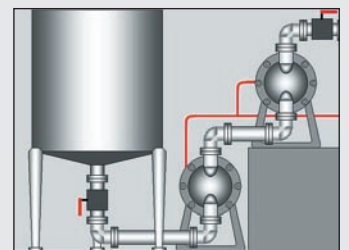
- Air drive – no electrical hazard.
- Sparkless conditions – no metallic contact between moving parts in the liquid.



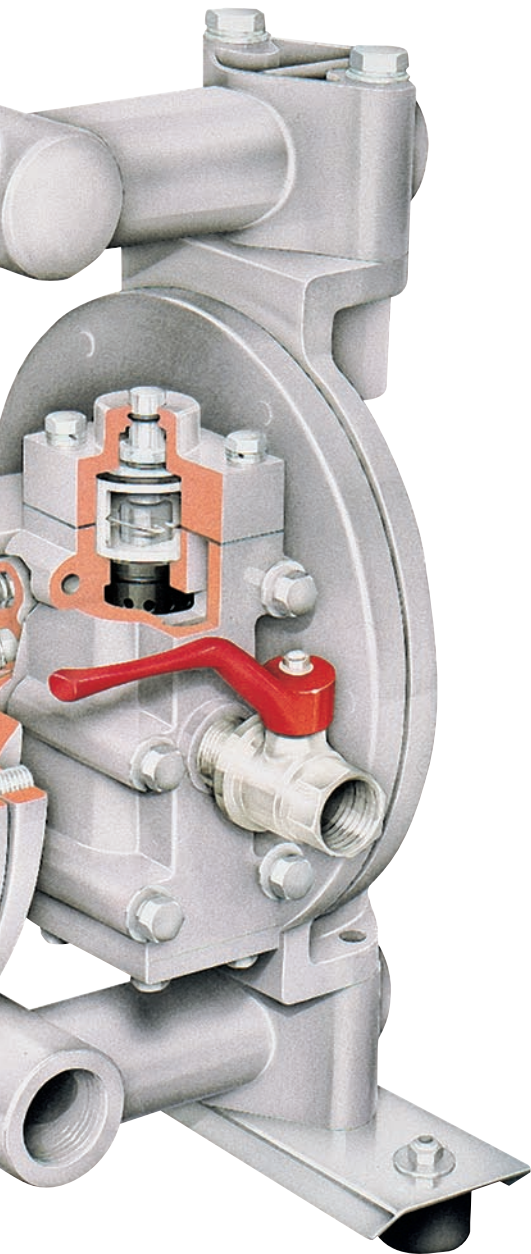
Self-priming situation



Positive feed for viscous products



Pressure boosting situation



Variable flow control

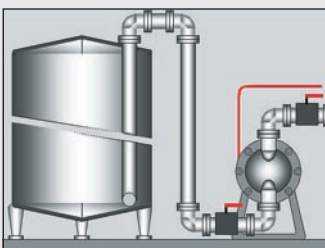
- By opening or closing the valve.
- By increasing or decreasing the air supply.

High capability

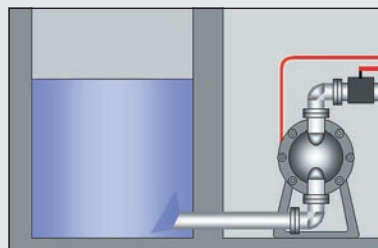
- Pump pressure is equal to air inlet pressure up to maximum 0.7 MPa.

Reliable operation – non-stalling air valve

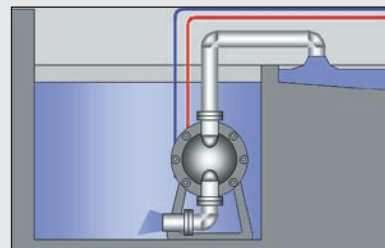
- Patented design eliminates stalling (patent 5.002.469).
- Special designed, spring-loaded shifters ensure consistent, positive switching every stroke.



Tank transfer



Positive primed pump situation



Submerged pump situation

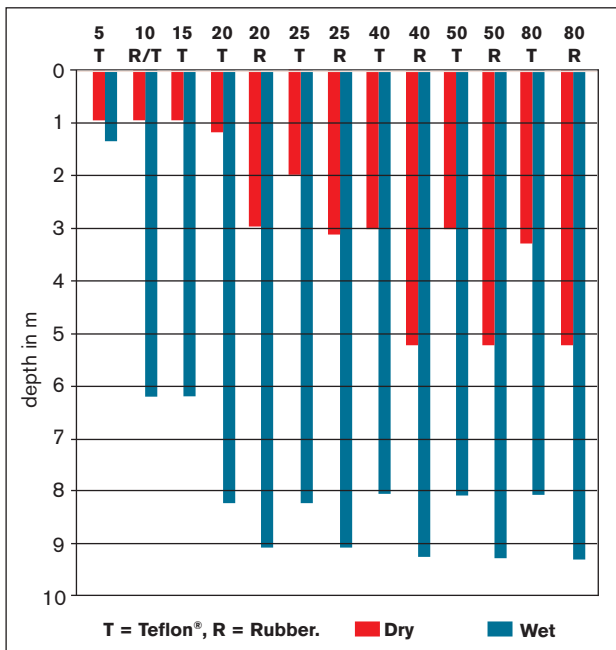
Technical Data

Performance overview

	Max capacity l/min	Max pressure MPa	Max size solids mm
TA-5	10	0.7	0.2
TA-10	20	0.7	1
TA-15	45	0.7	1
TA-20	100	0.7	2
TA-25	160	0.7	3
TA-40	450	0.7	7
TA-50	650	0.7	8
TA-80	800	0.7	10

0.1 MPa = 1 bar

Max suction lift



For details ask for the technical data sheet per pump size.

Materials of wetted parts

Plastic pumps in general are recommended for strong acids and caustics and not recommended for high temperatures or slurries.

Metal pumps in general are good for abrasion resistance, solvents, hydrocarbons, and high temperature applications.

Polypropylene (PPG)

Temperature range: 0°C to 60°C.

Good chemical resistance.

Light weight.

Not resistant to petroleum based solvents.

Glass filled.

Kynar® (PVDF)

Temperature range: 0°C to 80°C.

High chemical resistance.

Carbon filled.

Poly Vinyl Chloride (PVC)

Temperature range: 0°C to 60°C.

Very good resistance to acids and alkalis.

Aluminium (ADC-12/AC2A-F)

Used in many non-corrosive, non-abrasive applications.

Light weight.

Stainless steel (SCS14/SUS316)

Used in chemically active fluids.

High abrasion resistance.

Cast Iron (FC)

Used in a variety of non-corrosive and slurry applications.

Teflon® (PTFE)

Temperature range: 0°C to 80°C.

Inert to most chemicals.

100% Virgin PTFE.

Diaphragm materials

Rubber compounds

Nitrile (NBR)

Temperature range: 0°C to 70°C.

Estimated 10 million strokes.

Excellent for oil/petroleum based fluid.

Neoprene (CR)

Temperature range: 0°C to 70°C.

Estimated 10 million strokes.

Excellent elastomer for use in non-aggressive applications.

Good for abrasive material.

Nordel® (EPDM)

Temperature range: -20°C to +80°C.

Estimated 10 million strokes.

Great for extremely cold applications.

Good resistance to acids and caustics.

Viton® (FPM)

Temperature range: -10°C to +120°C.

Estimated 3 million strokes.

Excellent for aggressive fluids such as aromatic or chlorinated hydrocarbons and acids.

Good for high temperature applications.

Thermoplastic compounds

Hytrel® (TPEE)

Temperature range: 0°C to 80°C.

Estimated 15 million strokes.

Excellent general purpose/durable diaphragm.

Longest life in non-aggressive applications.

Santoprene® (TPO)

Temperature range: 0°C to 100°C.

Estimated 15 million strokes.

Excellent general purpose/durable diaphragm.

Teflon® (PTFE)

Temperature range: 0°C to 100°C.

Estimated 30 million strokes for 1/4" pumps.

Estimated 10 million strokes for 3/8" to 1/2" pumps.

Estimated 3 million strokes for 3/4" to 3" pumps.

Excellent choice for pumping highly aggressive fluids.

Homogeneous PTFE.

Kynar is a registered trademark of Elf Atochem North America Inc.
Teflon and Hytrel are registered trademarks of the DuPont Company
Viton is a registered trademark of DuPont Performance Elastomers
Nordel is a trademark of the Dow Chemical Company
Santoprene is the registered trademark of Advanced Elastomer Systems

Accessories

Pulsation damper



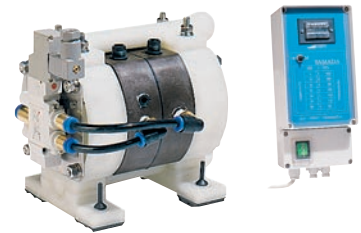
An air driven diaphragm pump creates a pulsating flow, which is no problem in most applications. However, in some cases a reduced pulsation is required and the pulsation damper will reduce the pulses up to 75%.

Diaphragm leak sensor



The leak sensor protects the diaphragm pump from corrosive, aggressive or other harmful fluids.

Speed generator EDP1



High performance generator in combination with an EDP1 diaphragm pump will create a constant flow – an accurate measuring unit.

Electronic stroke counter for dosing



An air driven diaphragm pump can be used for dosing and measuring a specific volume of a liquid. The stroke counter is delivered together with a sensor and a solenoid valve. After the set number of strokes has been reached, the stroke counter will shut the solenoid valve and the pump will stop.

FRL – Filter, Regulator and Lubricator



The FRL is recommended to increase the lifetime of your diaphragm pump.

Flange connections



All kind of outlet can be created by using a flange, flange with internal, external threads in available materials like aluminium, SUS 316, PP, PTFE, etc.

Drum pump



The TA-20 can be converted into a drum pump execution. It is delivered complete with a suction pipe, bung adapter, ball valve and silencer. Good choice for emptying drums containing abrasive, viscous or shear sensitive liquids.

Pneumatic stroke counter for preventive maintenance



Intrinsically safe, able to check diaphragm life without any electrical devices. Available for 3/4" up to 3" pumps. The pneumatic stroke counter is not a dry running detector.

Air motors



In some environment we advise to apply for air motor with epoxy coating or a complete PP air motor. Air motor of 5 and 15 series are standard in polypropylene PPG.



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

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