SPXFLOW

TopAir

AIR OPERATED DIAPHRAGM PUMPS



Johnson Pump

Welcome to a World of Pumps

For more than 75 years SPX FLOW Johnson Pump brand pumps have been developed, manufactured and marketed for industrial use. This experience and expertise, combined with our wide product range, makes us one of the most reliable pump producers world wide

At SPX FLOW we believe in 'life cycle economy'. Buying a pump is not just a one-off transaction – the pump has to keep running for a long time. Service and maintenance is therefore as important to us as it is to provide our customers with a suitable solution to each and every unique application. SPX FLOW is therefore much more than a SPX FLOW Johnson Pump brand manufacturer – We are your solution provider!

Based in Charlotte, North Carolina, SPX FLOW (NYSE: FLOW) is a multi-industry manufacturing company with operations in more than 35 markets worldwide. SPX FLOW's innovative, world-class products and highly-engineered solutions are helping to meet the needs of a constantly developing world and growing global population. You'll find our innovative solutions in everything from dairy plants and power plants to oil and gas pipelines, and the power grid. SPX FLOW is really everywhere you look.

We help our customers around the globe expand and enhance their food and beverage, power and energy and industrial production processes. For more information, please visit **www.spxflow.com**

Diaphragm Pumps

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 above 75 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.











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, degreasing 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, benzine.

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

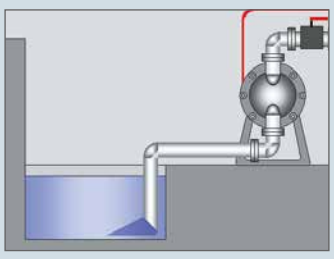
- Dry start – self-priming up to 5 meter.
- Possible to submerge.
- Can be installed with flooded suction condition.
- Can run dry without damage or overheating.

EXPLOSION PROOF

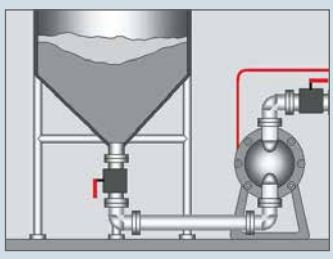
- Air drive – no electrical hazard.
- Sparkless conditions – no metallic contact between moving parts in the liquid.



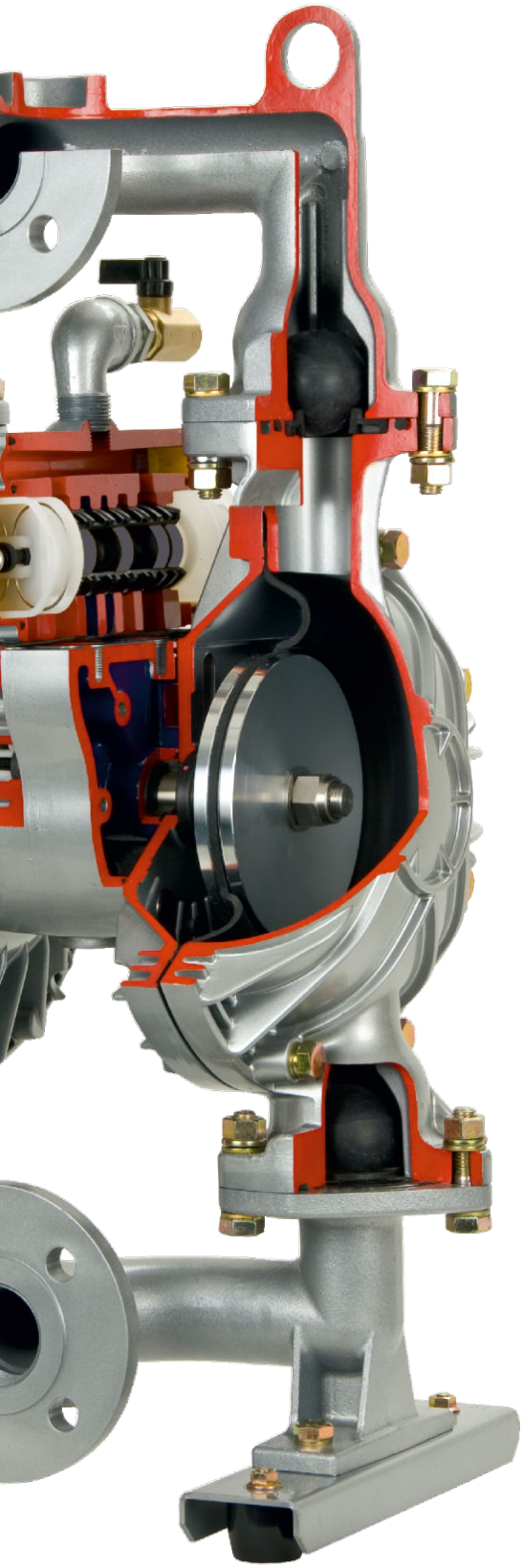




Self-priming situation



Positive feed for viscous products



VARIABLE FLOW CONTROL

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

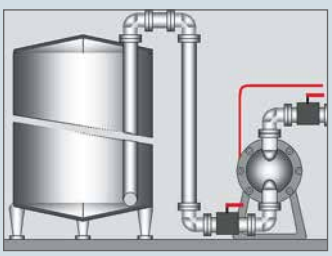
HIGH CAPABILITY

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

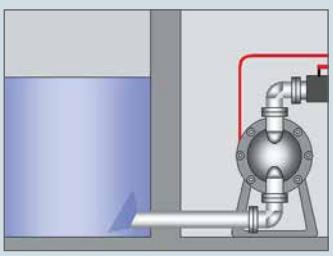
RELIABLE OPERATION – NON-STALLING AIR VALVE

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

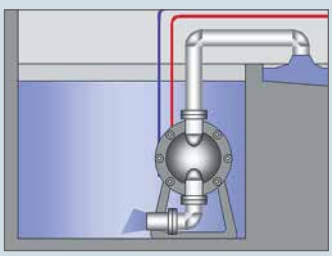




Tank transfer



Positive primed pump situation



Submerged pump situation

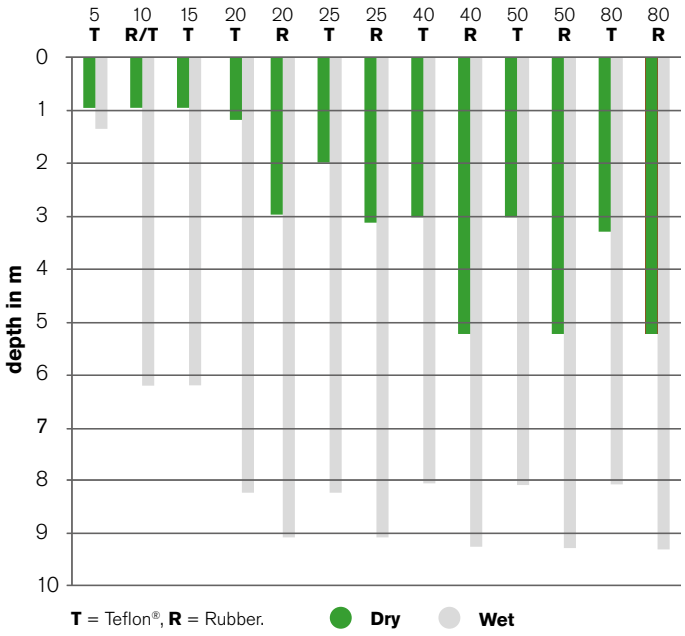
Technical Data

PERFORMANCE OVERVIEW

	Max capacity l/min	Max pressure MPa	Max size solids mm
TA-5	10	0.7	0
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



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.

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)

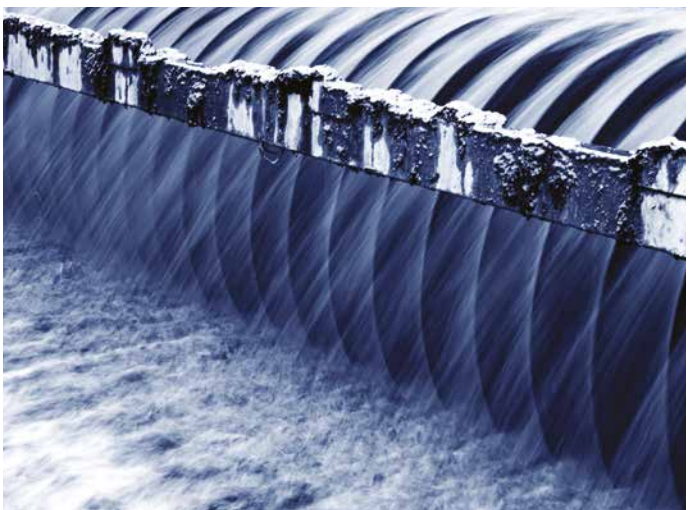
Temperature range: 0°to 80°C.
Inert to most chemicals.
100% Virgin PTFE.











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°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.

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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

Air Operated Diaphragm Pumps

SPXFLOW

SPX FLOW TECHNOLOGY
Building A, Compass House, Manor Royal
Crawley, West Sussex, RH10 9PY, UK
T: +44(0)1293 553495
F: +44(0)1293 574444
E: johnson-pump.uk@spxflow.com

Your local contact:
www.spxflow.com/johnson-pump/where-to-buy

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