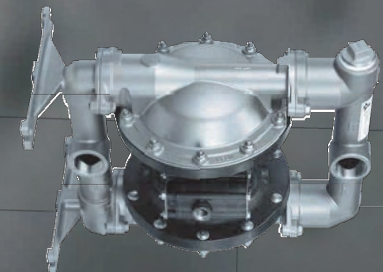
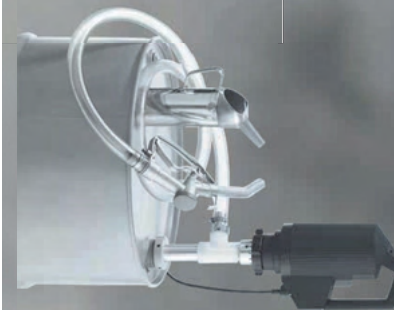
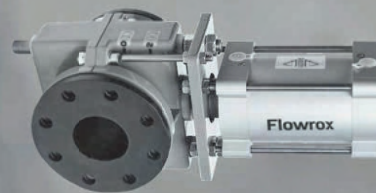
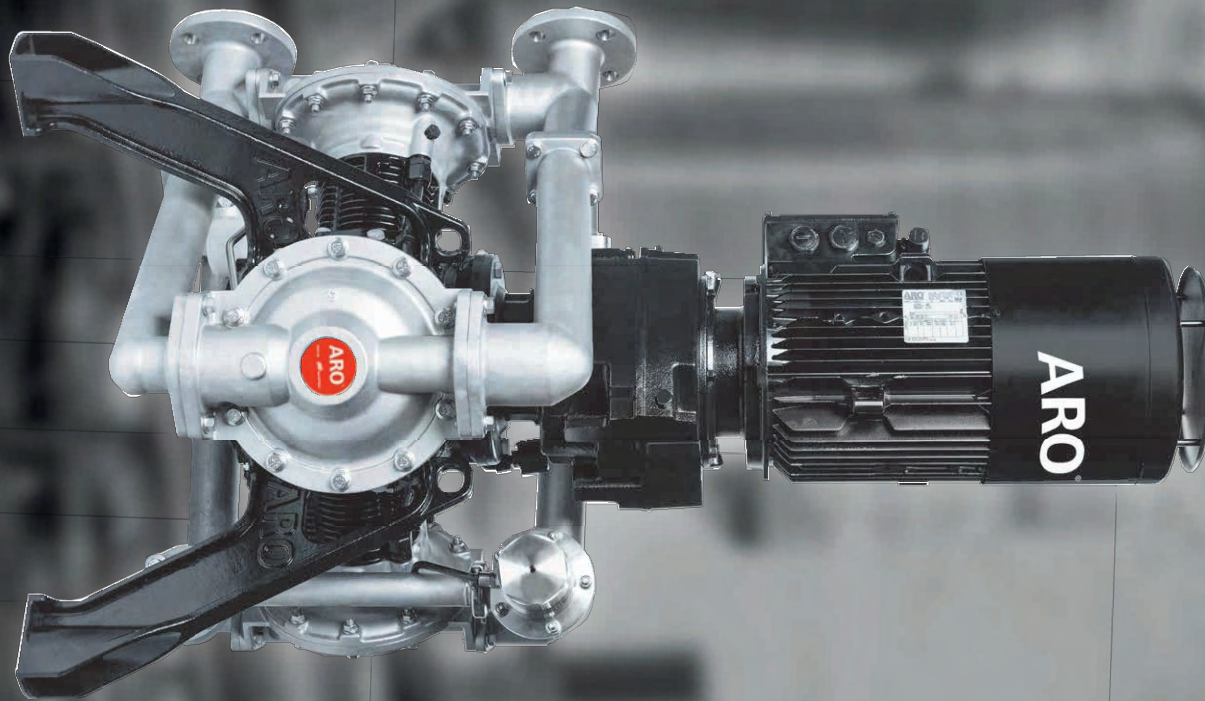


# OVERVIEW

## DELIVERY PROGRAMME



## About us - Company profile



As the world's largest partner of Ingersoll Rand ARO, WP-ARO is the ideal contact for products of the brands Ingersoll Rand ARO (air-operated double diaphragm pumps, piston pumps, ram pumps), Albin Pumps (peristaltic pumps), Milton Roy (metering and process pumps), Flowrox (peristaltic pumps, hose pinch valves, flat slide valves), Salvatore Robuschi (process pumps), Nakakin (rotary piston pumps), WP-ARO (pulsation dampers, drum pumps, air-operated agitators) and FluidMix (electrically operated agitators).

In order to find the optimum solution for your application, we support you from the selection of the right product through to its use and cater to your specific requirements. In the event of a repair or

Our assembly and service department is on hand to help you plan preventive maintenance measures. Thanks to our well-stocked warehouse, the short-term supply of our products and spare parts is guaranteed at all times.

On 1 January 2016, WP-ARO AG, based in Basel, was opened as part of an expansion in order to be able to offer the WP-ARO product portfolio in Switzerland ([www.wp-aro.ch](http://www.wp-aro.ch)). Further information about WP-ARO GmbH, our products and other services can be found on the Internet at [www.wp-aro.de](http://www.wp-aro.de).

We always set the highest quality standards for our products, our service and our entire team. That is why WP-ARO is also certified according to DIN EN ISO 9001:2015 certified.



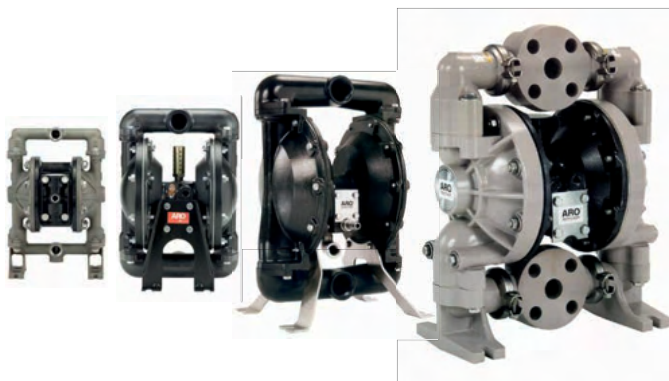
Qualidata  
Zertifizierung  
ISO 9001

## Double diaphragm pumps from the PRO and EXP series 1:1

### Common technical features of the PRO and EXP series

- Easy and efficient media delivery up to dynamic viscosities of max. 20,000 mPas
- Predestined for the transport of highly abrasive materials with low wear
- Gentle pumping of shear-sensitive liquids with large solids without heat generation or foaming
- Delivery rate and pressure can be varied from 0 to maximum by simply regulating the air supply upstream of the pump
- No complicated motor control required, no critical design calculations that no longer work if changes are made to the system
- Slow pumping speed possible - safe restart due to unbalanced air valve
- Operation against closed gate valves possible
- Short-term dry running possible without damage
- Dry self-priming
- No dynamic seals, low wear, long service life
- Oil-free operation
- Pre-moulded membranes with a long service life
- Simple maintenance
- Wide range of material variants available
- Approval according to EN 2014/34/EU ( )

### PRO series



- In the pump sizes: ½"-3"
- Flow rate: max. 897 l/min
- Pressure: max. 8.3 bar
- Air motor material: aluminium, grey cast iron, polypropylene
- Material of wetted parts: Aluminium, grey cast iron, stainless steel, polypropylene, conductive acetal, PVDF
- Ball seat material: aluminium, stainless steel, polypropylene, PVDF, unalloyed steel, stainless steel, hardened stainless steel, Santoprene®, acetal
- Diaphragm/ball material: Neoprene, nitrile, Viton®, PTFE, acetal, polyurethane, Hytrel®, Santoprene®
- Also available with a duckbill valve at ½"



# Double diaphragm pumps from the PRO and EXP series 1:1

## EXP series



- In the pump sizes: ¼"-3"
- Delivery rate: max. 1,041 l/min
- Pressure: max. 8.6 bar
- External main air valve for easy maintenance
- Optional electronic interfaces - for control via controller, PC or PLC
- Efficient - 20-30 % higher delivery capacity and energy efficiency than conventional products on the market
- Quick dump valve (from 1" nominal diameter) - exhaust air valve that prevents freezing and thus downtimes
- Reliable adjustment signal thanks to SimulShift
- Changeover gate and sliding plate made of ceramic
- Air motor material: aluminium, grey cast iron, stainless steel, polypropylene, electrically conductive polypropylene
- Material of wetted parts: Aluminium, grey cast iron, stainless steel, Hastelloy C, polypropylene, conductive polypropylene, acetal, conductive acetal, PVDF, conductive PVDF
- Ball seat material: aluminium, stainless steel, polypropylene, PVDF, unalloyed steel, stainless steel, hardened stainless steel, Hastelloy C, Santoprene®, acetal, nitrile, Hytrel®
- Diaphragm/ball material: Nitrile, Viton®, PTFE, polyurethane, Hytrel®, Santoprene®, Santoprene® for medical applications
- Also available with ¼" and ¾" Flex-Check™ (duckbill valve)

## Double diaphragm pumps of the PZ series ATEX Zone 0/20



The metallic air-operated double diaphragm pumps in the EXP-PZ series from ARO fulfil the requirements of Zone 0 for gases and Zone 20 for dusts. They have been approved by an independent laboratory for the strictest ATEX requirements.

ARO is the only leading global manufacturer of air operated double diaphragm pumps with this certification. Zone 0/20 pumps are the safest choice for critical applications where a higher risk may unexpectedly occur.

- Pumps can be used in extremely hazardous applications become
- Selected models are available from 1/2 inch to 3 inch connection sizes in aluminium, cast iron and stainless steel
- The safest choice for critical applications where a higher risk may occur unexpectedly

### ATEX zones

Potentially explosive atmospheres are all places where there is a risk of explosion. The hazard level of an explosion is determined by the frequency and duration of the occurrence of an explosive atmosphere.

#### Zone 0/20

This is an area in which a potentially explosive atmosphere occurs continuously, frequently or over a long period of time.

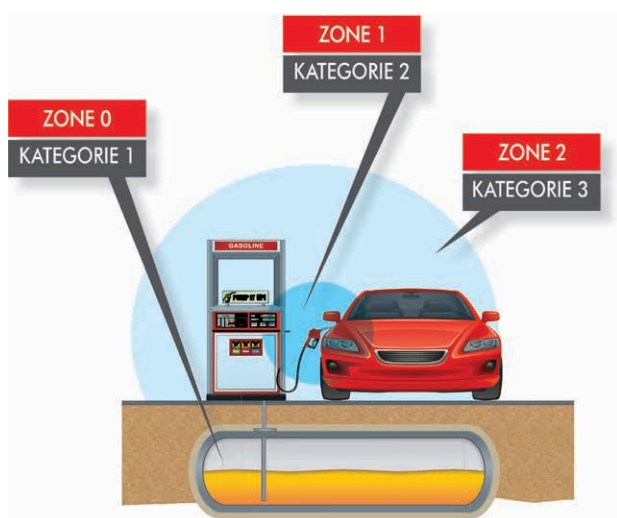
#### Zone 1/21

This is an area in which a potentially explosive atmosphere is likely to occur occasionally under normal operating conditions. It can occur due to repairs, maintenance work or leaks.

#### Zone 2/22

This is a place where a potentially explosive atmosphere is unlikely to occur during normal operation, and if it does occur, then only for a short period of time.

These areas only become dangerous in the event of an accident or unusual operating conditions.

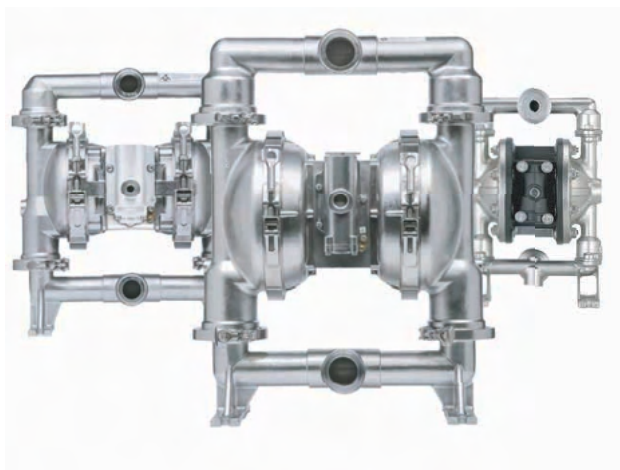


# Powder pumps 1:1



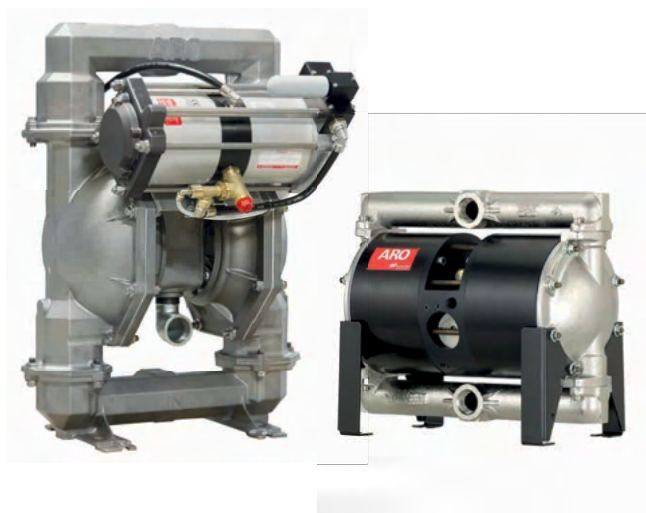
- In nominal sizes 1" to 3"
- For the continuous and problem-free conveying of powders such as highly dispersive silicon oxide, silica, carbon black, talc, expanded glimmer, silicones, acrylic resins, pharmaceuticals, ground limestone, starch, spice mixtures, ground plastics, etc.
- Replaces manual powder handling
- Reduces airborne contamination - conveys powder directly from the container to the processing location
- Unique patented air injection system - prevents compaction of the powder
- Economical and simple - in contrast to complex large-scale systems
- Approval according to EN 10414/34/EU ( )

# Food pumps and hygiene pumps 1:1



- Ideal for efficient and safe conveying in the food, beverage, cosmetics and pharmaceutical industries
- ARO FDA-compliant diaphragm pumps deliver safety, Quality and lowest total cost of ownership and convey low to high viscosity, abrasive, explosive and aggressive media hygienically
- Tri-Clamp connections
- SD series with clamping system construction for quick disassembly and assembly
- PM series with bolted construction
- Material of wetted parts: electropolished stainless steel
- Certified - CE, ATEX, USP Class VI, EC 1935/2004, FDA CFR 21.177

# High-pressure diaphragm pumps 2:1, 3:1



- 2:1 ratio in nominal sizes 1" to 3"
- 3:1 ratio in nominal size 1"
- Ideally suited for applications such as
  - Circulation of colours and highly viscous media
  - Systems with long pipework and high friction losses
  - Inks (printing inks), adhesives, filling materials, sealants, resins
  - Solvent recovery
  - Feeding of filter presses
- Approval according to EN 10414/34/EU ( )



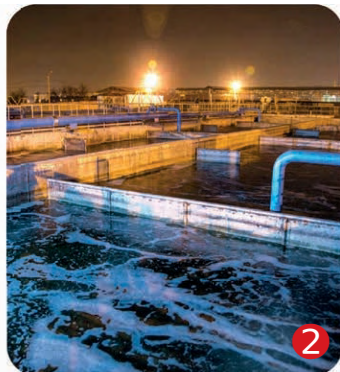
# EVO SERIES™ electric diaphragm pumps

## EVO SERIES™ EVOLUTION IN PROCESS PUMPS



### Key market focal points

- ① Processing and transfer of critical media
- ② Waste water treatment
- ③ Colour and paint processing
- ④ General manufacturing



The EVO Series™ electric diaphragm pump is the **next EVolution** from a reliable and proven brand.

With the expertise gained from almost 100 years of pump experience, ARO® has **combined** many advantages of its industry-leading EXP series air-operated diaphragm pumps with unique functions of other pump technologies.

The result?

You get the versatility of a diaphragm pump paired with the efficiency and controllability of other positive displacement pump technologies.

An electric diaphragm pump with unique features never before available in a single pump solution. There is no other pump on the market that has all the features of an air-operated diaphragm pump and also offers first-class efficiency, minimised pulsation and the option of full integration into the process control system. A highly efficient and self-priming pump without dynamic seals, which also conveys viscous or abrasive media in a protective manner and at the same time has no problems with dry running or working against a closed gate valve.

The unique design ensures comprehensive protection for your employees, trouble-free processes and low operating costs.

- In the nominal widths 1" and 2"
- Delivery rate: max. 204 or 530 l/min
- Pressure: max. 8.3 bar
- Construction material: aluminium, stainless steel, cast iron, polypropylene, conductive polypropylene

### Integrated safety functions

Detects diaphragm failure and switches the pump off proactively with a drive warning

- **Secondary seal made of Viton** - protects key components from any contact with hazardous liquids in the event of a diaphragm rupture
- **Operation against closed gate valve possible** maintains the fluid pressure even without volume flow when the downstream valve is closed

# Piston pumps

- Bottom pump made of carbon steel and stainless steel
- Slow pumping speed possible - safe restart due to unbalanced air valve
- Operation against closed gate valve possible
- Short-term dry running without damage
- Self-priming



## 2 and 4-ball piston pumps

- Gear ratio 1:1 to 100:1
- Delivery rate 1.0 l/min to 110 l/min
- Seal packings of the lower pump made of PTFE, Viton®, UHMW-PE, leather
- Can be used up to a viscosity of 100,000 mPas

- No dead centre in the air motor
- Maintenance-free and oil-free operation of the air motor
- Integrated compressed air regulator
- Approval according to EN 2014/34/EU ( )



## Scoop piston pumps

- Gear ratio 12:1 to 100:1
- Delivery rate 1.0 l/min to 40 l/min
- Seal packings of the lower pump made of PTFE, UHMW-PE, leather
- Can be used up to a viscosity of 1,000,000 mPas

# Ram presses



- Container sizes from 20 litres to 200 litres
- Viscosity up to 1,000,000 mPas
- Follower plates made of aluminium and stainless steel
- Scraper rings as single, double and tube scrapers
- Suitable for ball piston and scoop piston pumps
- 1-pillar design
- 2-pillar design
- High pressure version
- Mobile transport trolleys
- Completely pre-assembled
- Approval according to EN 2014/34/EU ( )



# Drum pumps, progressive cavity pumps



## Barrel pumps

- For simple decanting and filling tasks
- Suitable for the food industry
- For flow rates up to 160 l/min
- Pump material: polypropylene, PVDF, aluminium, stainless steel, Hastelloy
- Motor power from 0.52 kW to 0.85 kW
- Also available as a sealless version
- Also with quick-release coupling
- Easy to clean
- Quick to dismantle
- Also with magnetic coupling
- Also available as a multi-stage version
- Approval according to EN 2014/34/EU ( )
- EC 1935 / 2004



## Progressing cavity pumps

- For pumping viscous and highly viscous liquids with a Viscosity up to 100,000 mPas
- Suitable for the food industry
- For flow rates up to 50 l/min
- Pump material: Stainless steel (pump unit), NBR, PTFE (stator)
- Motor power from 0.37 kW to 1.5 kW
- Quick-release coupling
- Quick to dismantle
- Approval according to EN 2014/34/EU ( )
- EC 1935 / 2004

## Accessories



### Pulsation damper

- In the nominal widths ½"-3"
- Up to 97% pulsation damping
- Modular design
- Manual and automatic air adjustment possible
- Can be used with any double diaphragm pump
- Housing material: aluminium, stainless steel, grey cast iron, polypropylene, acetal, PVDF
- Numerous membrane materials
- Approval according to EN 2014/34/EU ( )

### Material pressure regulator

- Adjustable supply and return pressure
- Directly controllable and remote controllable
- C-steel and stainless steel housing
- Max. Inlet pressure 414 bar
- Flow rate up to 70 l/min

### Compressed air control

- Robust housing with large rotary knobs and buttons
- Maintenance units, filter regulators, throttle valves, dry-running protection, soft start, restart protection and many other sets available
- Suitable for use in ATEX areas



## FLOWROX LPP-T, LPP-D

- In nominal widths from 15 mm to 100 mm
- Flow rate up to 100 m<sup>3</sup>/h
- Operating pressure up to 16 bar
- Only one pressure roller (adjustable with LPP-T)
- Only the hose comes into contact with the medium
- 360° hose contact
- Hose materials: NR, EPDM, NBR, NBRF, CSM
- Various motor outputs from 0.55 kW to 90 kW
- Reliable hose connection
- Inline connection (input and output at the same height)
- Lower energy consumption than with conventional peristaltic pumps
- No coolant - only a small amount of lubricant required
- Low maintenance - quick and easy hose change

## FLOWROX FXM

- Dosing pump with a delivery rate of up to 840 l/h
- Operating pressure up to 8.6 bar
- Hose materials: Norprene, Tygothane, Norprene coated with Tygon
- Self-priming up to 9 m, without backflow
- With frequency converter and programmable control
- High repeatability: ± 0.5 %
- max. viscosity 5,000 mpas

## ALBIN PUMP ALH - High-pressure hose pumps

- Flow rates up to 88 m<sup>3</sup>/h
- Operating pressure up to 15 bar
- Available in nominal widths from 5 mm to 125 mm
- 7 hose materials and 16 sizes available
- Wet runner with 2 sliding shoes
- Ideal for abrasive, corrosive and viscous media
- Self-priming up to 9.8 mWs and dry-running capability
- Running direction reversible
- Easy installation and maintenance

## ALBIN PUMP ALP - Low-pressure peristaltic pumps

- Flow rates up to 13.8 m<sup>3</sup>/h
- Operating pressure up to 4 bar
- Available in nominal widths from 9 mm to 45 mm
- 12 hose materials and 6 sizes available
- Dry runner with 2 pressure rollers
- Ideal for slightly abrasive and corrosive media
- Self-priming up to 6 mWs and dry-running capability
- Running direction reversible
- Easy installation and maintenance





# Dosing and process pumps



## Electromagnetic dosing pumps

- Flow rates from 0.027 ml/h to 200 l/h
- Operating pressure up to 50 bar
- Connection options for a wide range of control pulses for Control and evaluation
- Extensive control range up to 1,000:1 turndown
- High dosing accuracy up to  $\pm 1\%$
- Low power consumption

## Dosing and process pumps

- Wide range of different pump series including heavy-duty and off-shore variants
- Delivery rates from 0.02 l/h to 49,470 l/h per dosing head
- Operating pressure up to 1,000 bar
- Media temperatures up to 300°C possible
- Countless possible combinations of materials, dosing heads and drives
- High flexibility thanks to multiplex configuration on an identical base frame
- Extensive control range up to 100:1 turndown
- High dosing accuracy up to  $\pm 1\%$
- Wide range of API 675 compliant pumps for the oil & gas industry

# Rotary piston pumps



- Conveying liquids with viscosities of up to 300,000 mPas
- Gentle conveying of liquids containing solids - fruit, nuts and other solids are not damaged
- Flow rates up to approx. 90,000 l/h
- Operating pressure up to 20 bar
- Maximum temperature: 150°C
- Self-priming - suction capacity up to 9 mWS
- Easy to clean
- Can be completely cleaned and sterilised with CIP & SIP processes the
- Easy to disassemble and assemble
- Constant delivery rates
- Vertical and horizontal installation
- Virtually pulsation-free
- The special alloy minimises the gap between the rotor and housing and allows low-viscosity media to be pumped at low speed and high pressure
- Also available as a completely pre-assembled unit with motor and base plate
- Certificates: 3A, EHEDG, CE, ATEX, EC 1935/2004



## Pumps in block/process design

### Characteristics

Discharge nozzle nominal diameter DN 25 ÷ 300	
Flow rate Q (m³/h)	3 ÷ 2,400
Delivery head H (m)	1 ÷ 350
Drive power (kW)	0.25 ÷ 400
Materials	GG, stainless steel, bronze, duplex, superduplex, Hastelloy, chilled cast iron, stainless steel chilled cast iron

### Brief description

- Standardised chemical pumps in process design according to ISO 5199
- Industrial pumps with channelled impellers and vortex impellers
- Standardised water pumps according to EN 733
- ATEX pumps (category 2 and 3)
- High-performance pumps in block design
- Shaft seal with single or double mechanical seal and locking systems according to API
- Block design, with bearing bracket and base plate, with lantern and base plate



## Pumps in vertical/cantilever design

### Characteristics

Discharge nozzle nominal diameter DN 25 ÷ 250	
Flow rate Q (m³/h)	5 ÷ 1,400
Delivery head H (m)	1 ÷ 145
Drive power (kW)	0.55 ÷ 110
Materials	GG, stainless steel, bronze, duplex, superduplex, Hastelloy, chilled cast iron, stainless steel chilled cast iron

### Brief description

- Multi-bearing vertical immersion pumps to ISO 5199, up to 6 m immersion depth
- Cantilever design without intermediate bearings in the medium area for extreme applications, temperatures up to over 500°C and problem-free dry running without damage
- High operational reliability with solids-laden media and under the most difficult conditions
- Base plate in various designs and completely according to customer specifications
- Various impeller types: closed radial impeller, channelled impeller, open impeller, vortex impeller with ball passages up to 90% of the nominal diameter

## Areas of application

- Industrial water treatment
- Industrial and municipal wastewater treatment
- Flotation plants
- Chemical industry, pharmaceuticals, electroplating
- Textile industry, tannery
- Cleaning systems
- Washing systems for fruit and vegetables



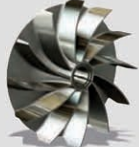
Closed impeller highly efficient with very low NPSH



Open impeller highly efficient with very low NPSH



Duct wheel Ball passage up to 40 mm



Vortex impeller Ball passage up to 90% of the nominal diameter



- Pumping of chemically and mechanically contaminated liquids



## Pinch valves

From the simplest applications to use under the most severe operating conditions - our modular valve consists of three main components: the sleeve, the housing and the actuator unit.

We find the right solution for every application!

- The elastic sleeve is the only component that comes into contact with the flow medium
- Full diameter at opening, no cross-sectional constriction
- A variety of sleeve materials are available, which can be adapted to the respective flow medium
- The housing is available in various designs and materials
- The valve drive unit is available with manual, pneumatic, hydraulic, electric, electro-pneumatic and other special drives for control purposes
- In nominal widths from 15 mm to 1,000 mm
- Operating pressures up to 100 bar
- 100 % tight
- Tight-closing with particle sizes of up to 25 % of the nominal diameter
- Mechanically closing crossbars (depending on version)
- Long service life

## Knife pusher

Ideal for clean and sludgy media. Closes even under the most demanding process conditions. Based on the concept of easy maintenance, you only receive three maintenance parts: Ringman collars, top seal and slide plate.

- Bidirectional flow allows backflow
- Free flow of the process medium
- 100% tightness
- Only the ring cuffs are in contact with the process medium when the slide valve is open
- Integrated load distribution ring
- Integrated upper housing seal and wiper
- Removable base plate has flushing connections
- Length according to industry standard

# Agitators



## Electrically operated agitators

- For 5 m³ to > 500 m³ containers
- Outputs from 0.12 kW to 45 kW
- Speed 3 - 1,500 1/min
- Various agitators
- Approval according to EN 2014/34/EU ( )



## Pneumatically operated agitators

- For 5 - 1,000 litre containers
- Outputs from 0.25 kW to 3.6 kW
- Speed max. 2,500 1/min
- Oil-free operation
- Various agitators
- Approval according to EN 2014/34/EU ( )
- Viscosity up to max. 5,000 mPas





## Systems and customised solutions

- **Complete systems ready for connection**  
Finely coordinated  
Components, pre-assembled and  
customised to your needs
- **High-quality components**  
Selected materials, stable,  
Ergonomic and first-class  
workmanship
- **Customised special solutions**  
Tell us what you need and we will  
develop a customised solution
- **Mounting plates, pump trolleys,  
sound insulation housings,  
drums...**  
... and much more



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