Aspamet

CATALOGUE

MIXERS

SUBMERSIBLE · PUMPING · VERTICAL

ASPAMET MIXER SYSTEM

Mixing starts with a well-designed system

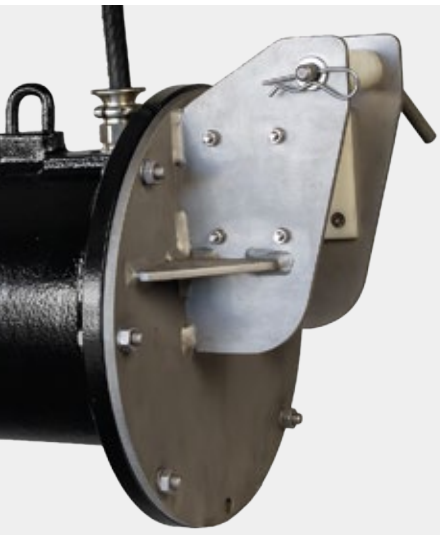
We design and deliver complete mixing systems: from selecting the mixer type and its location in the tank, through manufacture of the unit itself, to support structures, davit cranes, monitoring, control and automation integration. This makes installation, operation and servicing simpler, safer and tailored to site conditions.

- selection of the mixer type and its location by Aspamet
- support structures and davit cranes tailored to the facility
- design tailored to the medium, process and tank geometry
- monitoring, control and automation integration (optional)
- production in Poland (EU), full service and spare parts availability

FULL AVAILABILITY OF SPARE PARTS

DESIGN & MANUFACTURING IN POLAND

FULL OVERHAUL CAPABILITY IN POLAND



Product map

page 4
AS
- submersible, direct drive
Compact mixing in small and medium -sized tanks.

page 6
AR
- submersible, geared
Higher axial thrust, larger propeller diameters and larger tanks.

page 8
PAS / PAR
- pumping (recirculation)
High flow, low head, recirculation systems.

page 10
AV
- vertical
Drive above the liquid level, for unusual tank geometries.

FAMILY	APPLICATION	DRIVE	RANGE (general)
AS	mixing / circulation in small and medium-sized tanks	direct drive	**Ø 220-370 mm • 0.75-11 kW • 700-1450 rpm**
AR	larger tanks, high axial thrust	gearbox	**Ø 580-2500 mm • 0.75-18.5 kW • 30-500 rpm**
PAS / PAR	recirculation (high flow, low head)	PAS direct / PAR geared	**Ø 220-800 mm • 1.1-18.5 kW • Q: 0.02-1.0 m³/s • H: 1.8 m**
AV	drive above the liquid level, unusual geometries	direct / geared	**range according to project requirements**

ASPAMET MIXER TECHNICAL PLATFORM (AS/AR/PAS/PAR)

Housing and Coating

- housing: grey cast iron or ductile cast iron
- standard finish: high-resistance protective coating

Sealing and protection

- double mechanical seal in the oil chamber + protective elements

Motor protection and design

- 3 bimetal thermal contacts
- windings: double impregnation
- insulation class: F (standard) / H (option)
- efficiency: IE2 (standard) / IE3 (option)

Monitoring and sensors

- leakage sensors: 2 independent sensors - motor chamber and terminal box
- optional: Pt100 and/or PTC

Power supply and automation

- power supply (standard): 400 V, 50 Hz
- power supply (export): 380–460 V, 50–60 Hz
- complete control cabinets or monitoring modules for installation in the customer's cabinet; automation integration optional
- control: optional inverter

Service

- service in Poland: full spare parts availability and full overhaul capability

Hydraulics, propellers and gearboxes are described in the individual product sections.

AS

AS - submersible mixers with direct drive

The AS series comprises compact mixers for intensive mixing and maintaining liquid circulation in small and medium-sized process tanks. Direct drive ensures a simple design, low weight and a limited number of mechanical components, contributing to reliable operation and easy servicing.

Typical applications

- biological reactors and process chambers
- equalisation and retention tanks
- elimination of stagnation zones and sedimentation
- mixing in industrial tanks

AS series range

- propeller diameter: **Ø 220 - 370 mm**
- motor power: **0.75 - 11 kW**
- rotational speed: **700 - 1450 rpm**

Drive

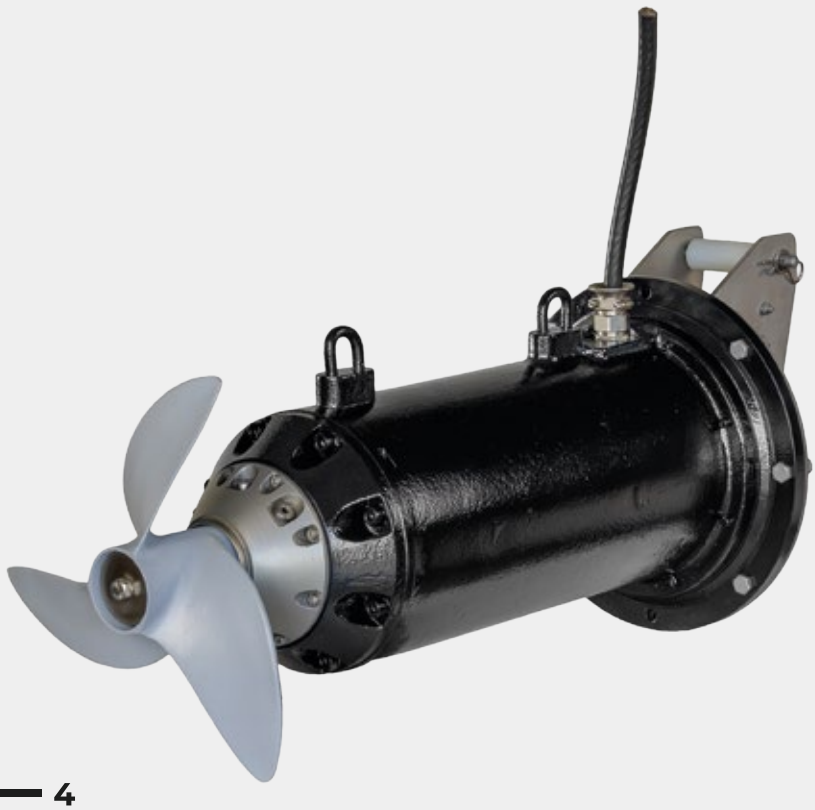
- **direct drive** (the propeller is mounted directly on the motor shaft)
- compact design, low weight
- recommended for small and medium-sized tanks

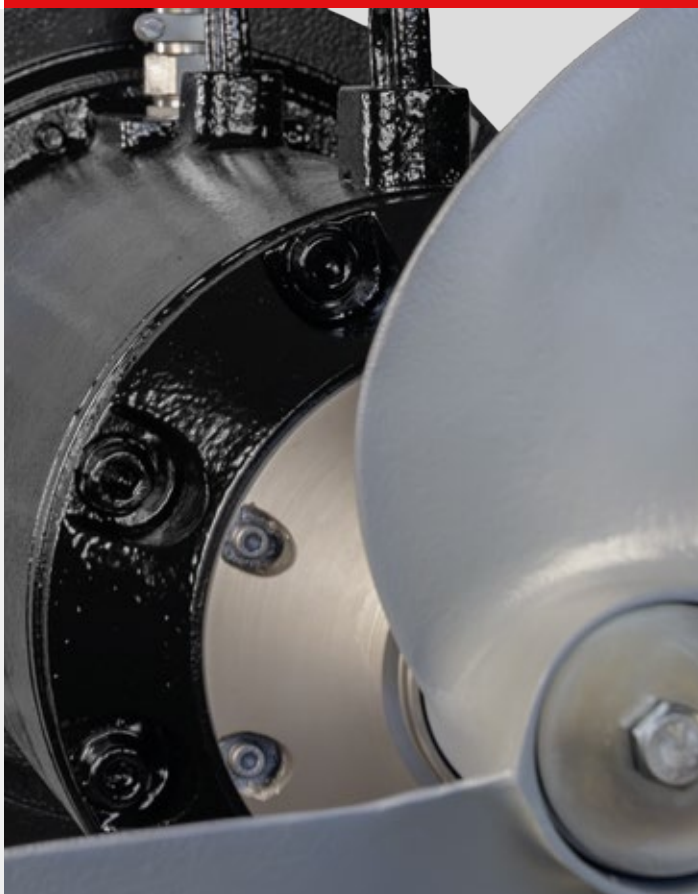
Hydraulics and propeller

- propeller geometry ensures high efficiency with low energy consumption
- the self-cleaning blade profile reduces the build-up of solids
- propellers are manufactured as one-piece stainless cast steel castings
- 2- and 3-blade versions matched to the application

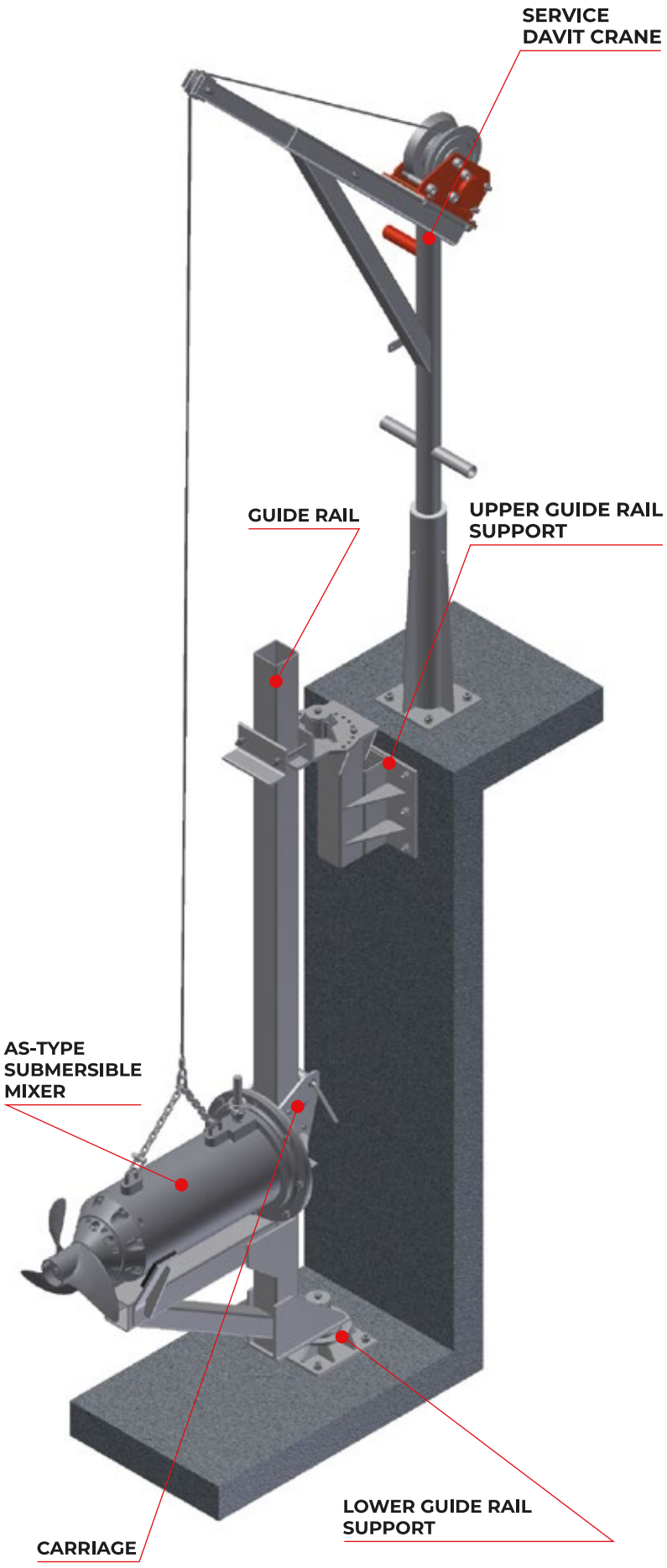
Material design, protection and control:

see the common Aspamet mixer technical platform (p. 3).





AS



Installation and Service Platform

- guide rail, davit crane, monitoring and control

For AS series mixers, we provide installation and service solutions for small and medium-sized units. The system ensures correct mixer positioning, convenient operation and safe servicing. It also allows condition monitoring and optional output control.

Guide rail

- guide rails and carriages are matched to tank geometry
- stationary or rotating versions available
- hot-dip galvanized steel / AISI 304 / AISI 316

Service davit crane

- enables safe access to the mixer from the walkway level
- facilitates removal for inspection, maintenance and repair
- hot-dip galvanized steel / AISI 304 / AISI 316

Monitoring module

- leakage and winding temperature monitoring
- cabinet-mounted module, independent of the power and control cabinet

Control and operation

- on request: complete power and control cabinets
- optional: frequency converter and automation integration

AR

AR - submersible mixers with gearbox

The AR series is intended for larger tanks and applications requiring higher axial thrust. The use of a gearbox allows operation at lower speeds, the use of larger propeller diameters, and efficient flow generation in high-volume tanks

Typical applications

- large biological and process chambers
- tanks requiring intensive circulation
- keeping sludge in suspension in high-volume tanks
- applications with increased axial thrust requirements

AR series range

- propeller diameter: **Ø 580 - 2500 mm**
- motor power: **0.75 - 18.5 kW**
- rotational speed: **30 - 500 rpm**

Drive and gearbox

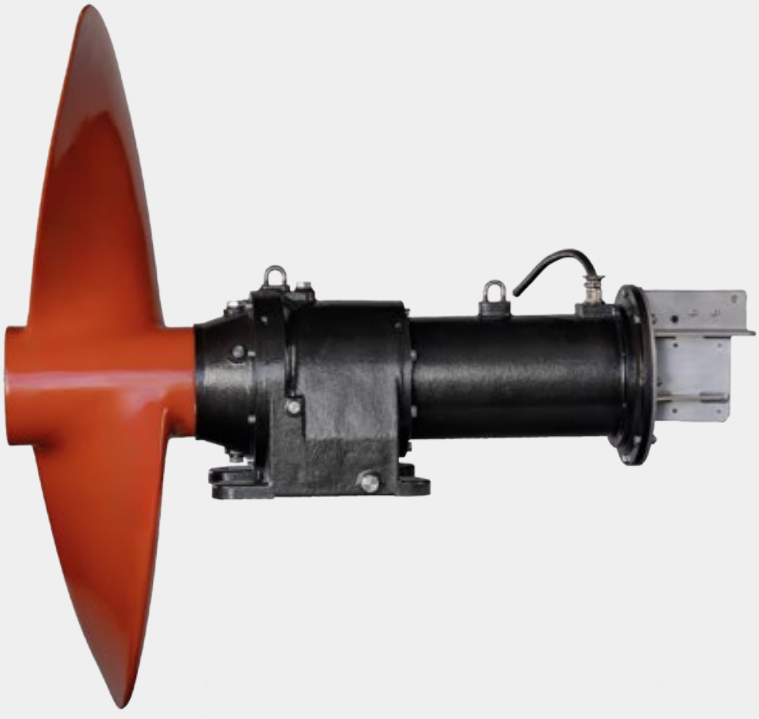
- **helical gearbox** transmitting power from the motor to the propeller
- lower speed enables the use of larger propeller diameters
- high axial thrust and stable flow in large tanks

Hydraulics and propeller

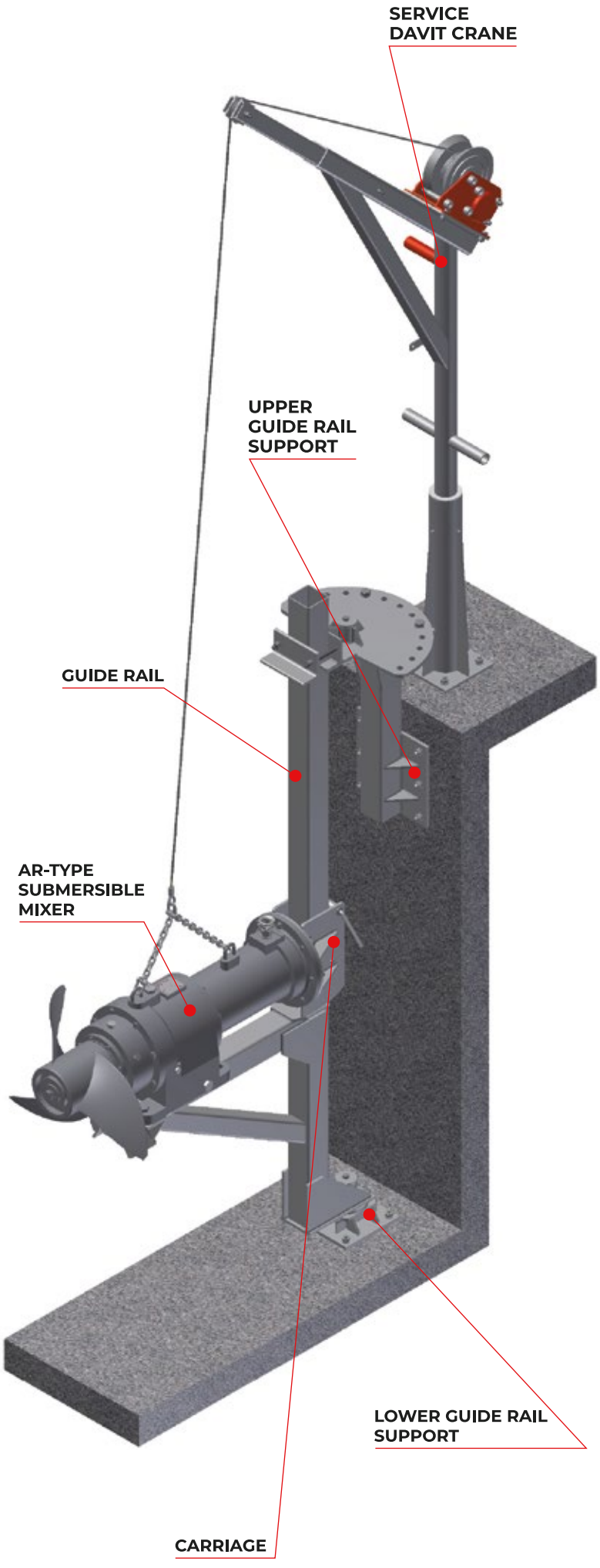
- up to Ø 800 mm: propellers manufactured as stainless cast steel castings, 2- or 3-blade
- above Ø 800 mm up to Ø 2500 mm: fiberglass-reinforced resin propellers (composite)
- composite propellers: 2- or 3-blade up to Ø 1200 mm and 2-blade above Ø 1200 mm up to Ø 2500 mm

Material design, protection and control:

see the common Aspamet mixer technical platform (p. 3).



AR



Installation and Service Platform

- guide rail, davit crane, monitoring and control

For AR series mixers, we provide installation and service solutions designed for larger propeller diameters, higher axial thrust and heavier units. The system ensures stable mixer positioning, convenient operation and safe servicing. It also allows condition monitoring and optional output control.

Structural configuration for AR

- guide rails, carriages and supports are selected with higher loads in mind
- stationary and rotating versions available, depending on tank geometry and operating conditions

AR service and operation

- davit crane and guide system configuration for larger mixer sizes
- solutions facilitating removal for inspection, maintenance and repair

Monitoring and control

- leakage and winding temperature monitoring
- module for installation in the customer's cabinet or in the power and control cabinet
- optional: frequency converter and automation integration

PAS / PAR

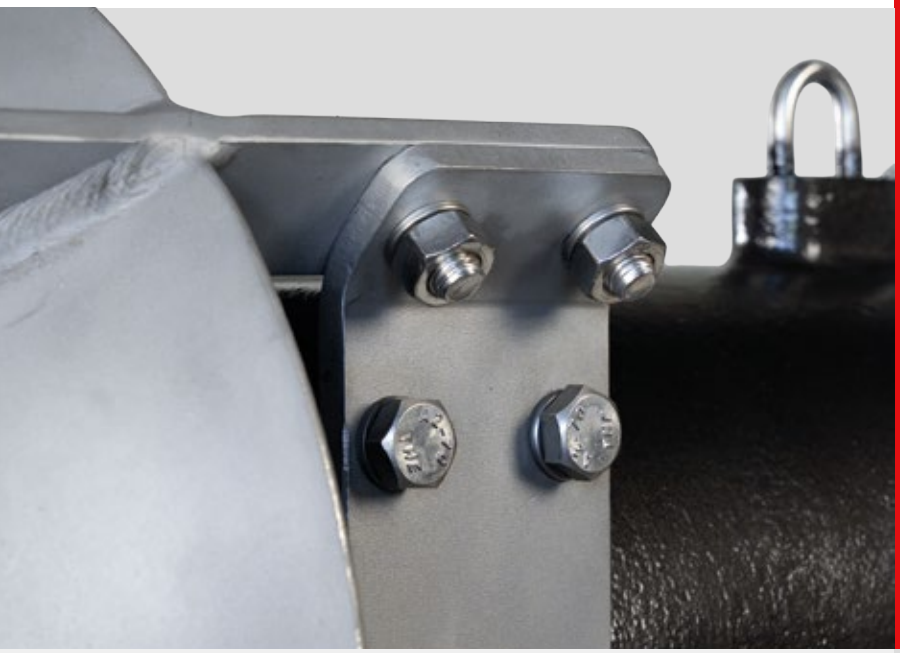
PAS / PAR - pumping mixers for recirculation

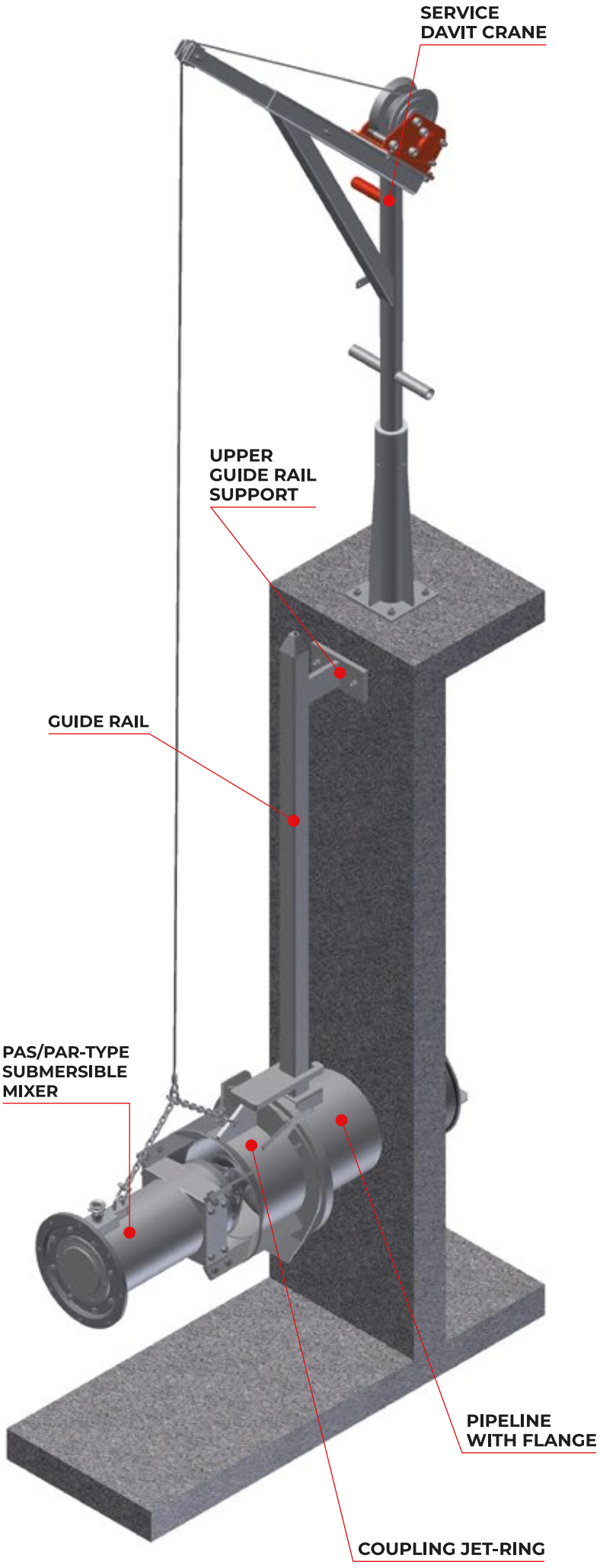
PAS and PAR pumping mixers are used in recirculation systems where high flow at low head is required. Unit selection depends on the hydraulics of the installation, installation conditions and medium parameters.

PAS	PAR
Mixer for recirculation systems in direct-drive configuration.	Mixer for recirculation systems in geared configuration.
PAS range · diameter: 220-400 mm · power: 1.1-18.5 kW	**PAR range** · diameter: 580-800 mm · power: 1.1-18.5 kW
Drive · direct drive	**Drive** · geared drive
Application and pumping hydraulics (PAS / PAR) · recirculation systems: high flow at low head · flow rate Q: 0.02-1.0 m^3/s · maximum head H: 1.8 m	

Material design, protection and control:

see the common Aspamet mixer technical platform (p. 3).





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PAS / PAR

Installation and Service Platform

- flange mounting, positioning, monitoring and control

For PAS/PAR series pumping mixers, we provide installation and service solutions for recirculation systems where high flow at low head and reliable connection to the process pipeline are required. The system ensures correct unit positioning, convenient operation and safe servicing. It also allows condition monitoring and optional output control.

Flange mounting and recirculation system

- mounting on the recirculation pipeline flange
- support structure matched to installation geometry and operating conditions
- unit configuration and flow direction selected in accordance with the system design

Service, monitoring and control

- service access adapted to the pipeline arrangement
- leakage and winding temperature monitoring
- optional: frequency converter and automation integration

AV

AV - Vertical Mixers

Vertical mixers are used where the drive must be located above the liquid level and where unusual tank geometry or operating conditions make the use of submersible mixers impractical. This solution provides convenient service access and allows the impeller and drive to be selected according to the process.

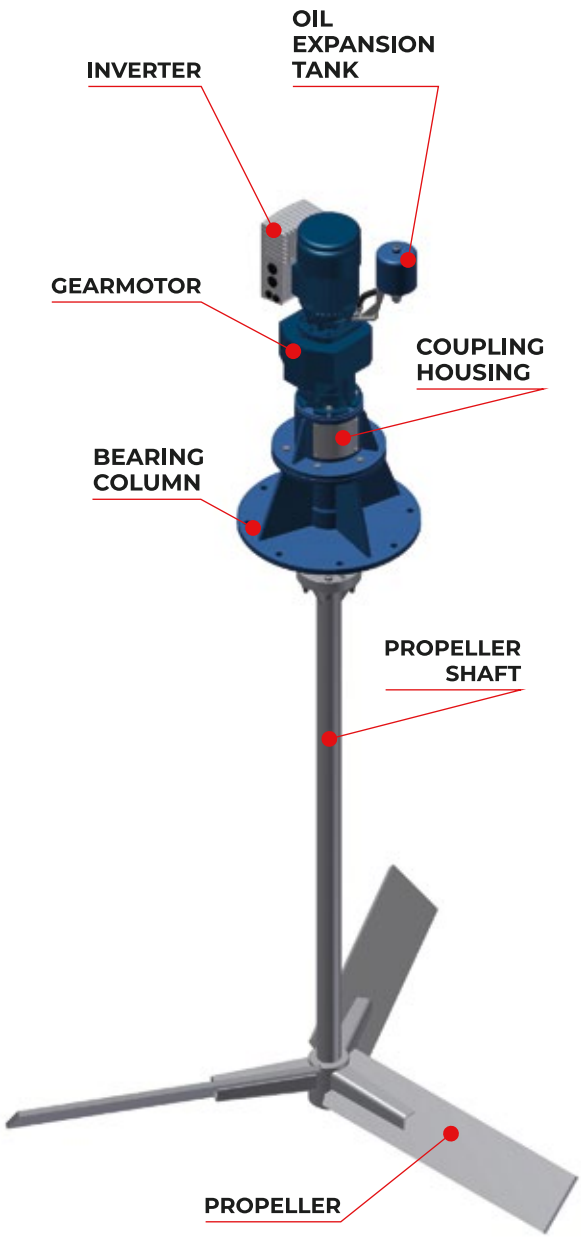
Typical applications

- deep tanks or tanks with unusual geometry
- aggressive media or applications requiring the drive to be isolated from the medium
- processes requiring effective vertical mixing
- industrial applications with installation constraints

Key features

- drive above the liquid level and convenient service access
- drive variants: direct drive or geared, depending on selection

Available configuration: custom selection of power, speed, impeller, materials and mounting method according to project requirements.



Mixer selection data

For preliminary mixer selection, we need a few basic pieces of information. Based on this information, we recommend the equipment type, its location in the tank, the material specification and the installation and service solution.

1. **Tank geometry**
(dimensions | levels | obstacles walkways)

2. **Process objective**
(mixing | circulation recirculation)

3. **Medium parameters**
(suspension | viscosity aggressiveness | temperature)

4. **Installation conditions**
(service access | space limitations)

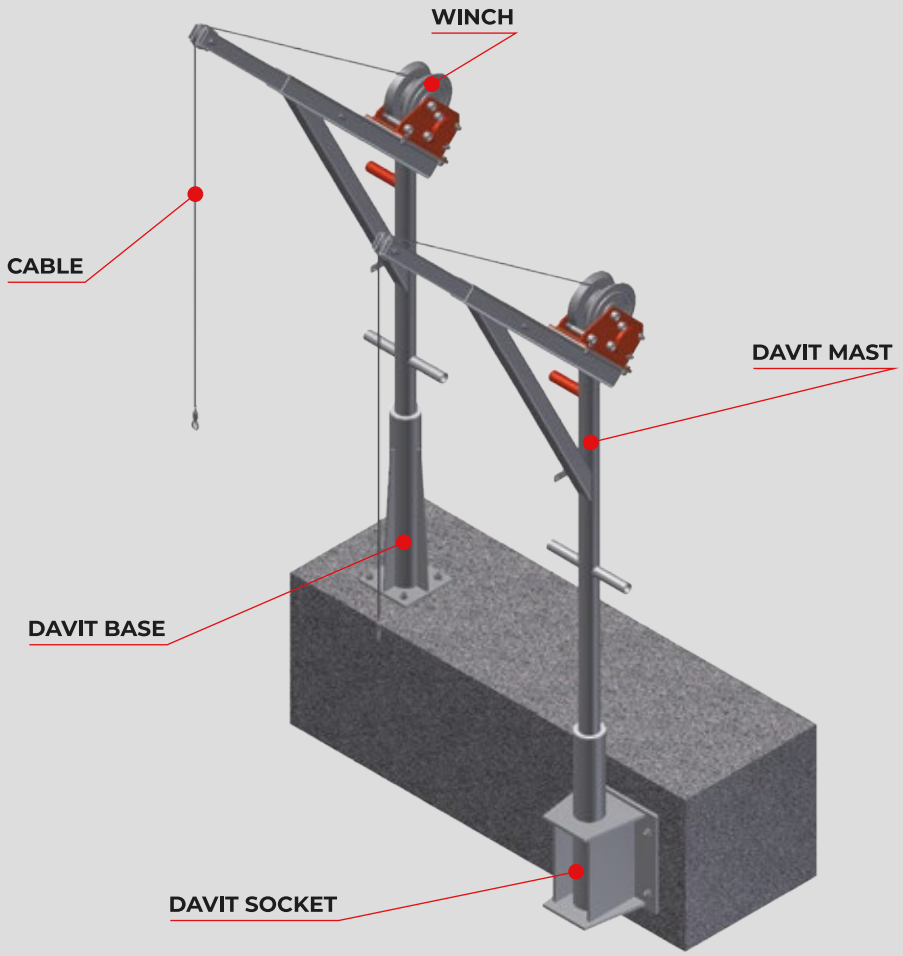
5. **Material requirements**
(e.g. galvanized steel | AISI 304 AISI 316)

6. **Power supply**
(voltage and frequency - if different from standard)

7. **Automation**
(signals | operating mode | SCADA integration - if required)

8. **Formal requirements**
(e.g. warranty | documentation acceptance procedures)

Based on this information, we prepare the equipment selection and a recommendation for the installation and service solution.



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