

# ARGAL

## CHEMICAL PUMPS

*Quality, Experience, Innovation*



### ***The Company.***

ARGAL has been designing and manufacturing pumps since 30 years made of thermoplastic polymers, for handling chemicals liquids.

ARGAL pumps turned out to be an ideal solution for the resistance of the thermoplastic materials to aggressive chemical liquids in alternative to the expensive special alloys pumps manufactured by our competitors.

ARGAL manufacture a wide range of pumps in several construction materials, for various applications with a temperature range from  $-40^{\circ}\text{C}$  to  $120^{\circ}\text{C}$ , Capacity up to  $1600\text{ m}^3/\text{h}$  and Head up to 150 m.

ARGAL obtained in 2002 the ISO 9001:2000 compliance which certifies sound organisational procedures, the adequacy of the operative instruments available as the parametric CAD and the FEM analysis adopted by our engineering department, the numerical control machinery, the fully equipped assembly department featuring modern test room, the constant support provided to a permanent staff of professionals, constantly informed and trained.

**ARGAL Srl - Via Labirinto, 159 - 25125 BRESCIA - ITALY**

**Tel. +39.030.3507011 - Fax +39.030.3507077 - Export dpt. Tel. +39.030.3507033**

**Web: [www.argal.it](http://www.argal.it) - E-mail: [export@argal.it](mailto:export@argal.it)**

**TMB**

The pumps "TMB" belong to Argal's BASIS range and feature, single stage, centrifugal impeller and magnetic drive. The range of TMB pumps includes five models to deliver flows from 15 to 70 l/min. It is made entirely of thermoplastics with outstanding chemical and mechanical resistance namely glassfibre reinforced polypropylene (GFR/PP). Compact dimension, low noise, absence of seal device make these pumps ideal for application in any place or plant and can be incorporated into sophisticated equipment or "clean" environment.

Available motor powers: W 15÷100  
Material version: GFR/PP  
Capacity: 1,5÷70 l/min.

The pumps of the TMP series, magnetically driven, were developed on the experience made on the magnetic drive traction of previous AM series. These pumps are centrifugal, horizontal axis, close-coupled types; the bodies are entirely built with reinforced thermoplastic polymers, and the internal components are in ceramic. It means that any contact of metallic parts with the pumped fluid is avoided. This combination of materials was chosen to obtain the best performances on the smallest scale chemical pump possible. Special solutions and materials allow occasional dry running operation (starting from 15 min. up to many hours in function of working conditions). Dry running capability requires R inner execution.

Available motor powers: kW 0,18÷1,1  
Material versions: GFR/PP - CFF/E-CTFE  
Capacity: 1÷16 m³/h

**TMP****Range ROUTE**

It is a range of chemical pumps for different applications available either in magnetically driven version (TMR serie) or mechanically sealed (ZMR serie).

Available motor powers: kW 0,55÷15  
Material versions: GFR/PP - CFF/E-CTFE  
Capacity: 1÷50 m³/h.

**TMR**

The magnetic driven pumps have the patented "two axial directions self-alignment" system that allows the dry running as standard work conditions for "R" internal configuration.

The combination of adequate materials of guide system of the impeller to one specific magnetic field eliminates completely all the axial frictions that are the cause of breakages due to dry running.

It is possible to install the motor without disassembling the pump.

**ZMR**

Centrifugal horizontal close coupled pumps in thermoplastic materials, strongly built by injection moulding process.

The structure is reinforced by fillings of glass or carbon fibre.

Mechanical seal executions can be either single or double.

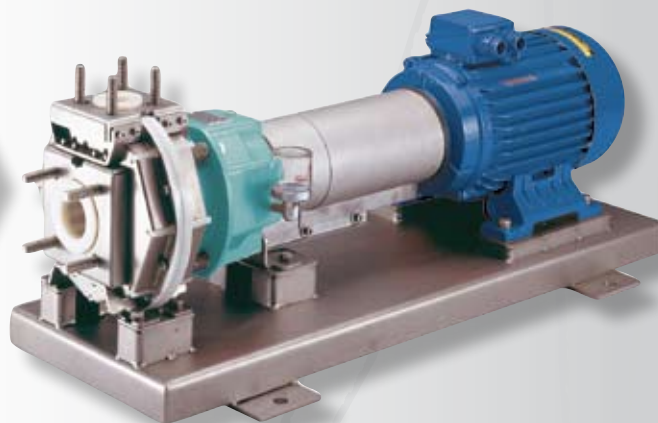
**FRONTIERA**

Centrifugal chemical pumps moulded in pure thermoplastic material with many executions to offer different applications for pumping chemicals in the most efficient way. Innovation thanks to stainless steel use in the pump body as reinforcement. The stainless steel is also used for the coupling guard and the base plate all according to the ISO regulations. The employed material and external structures are identical for the whole project Frontiera. The inside solutions and type of motor connection are different. These pumps can be sealless or sealed; close coupled or long coupled executions.

Available motor power: kW 0,55÷15  
Material version: PP - E-CTFE  
Capacity: 3÷90 m³/h

**TGF** sealless centrifugal magnetically driven pumps according to ISO 2858 with the possibility to choose between different internal structures in order to offer many applications for pumping the chemicals in the most efficient way. One execution allows the accidental dry running.

**ZGF** Sealed pumps produced according to ISO 2858 regulations with own mechanical support, back pull out execution. As "process" pumps they are designed to accept commercially standardized mechanical seals. The bearings are oil lubricated.



**TMF** Hydraulic parts of the precedent range but in close coupled execution with the normalised electric motors installable without dismantling the pump.

**ZMF** sealed pumps, close-coupled execution, ready to fit normalized motors with additional bearing to withstand hydraulic loads.

### TMA - ZMA

Horizontal axle, self-priming pumps for chemicals, can be supplied with trolley, do not need any bottom valve.  
Magnetic drive or single or doubled flushed mechanical seal design. Maximum negative suction head of 6 m depending on the nature of the chemicals (specific gravity, vapour tension).

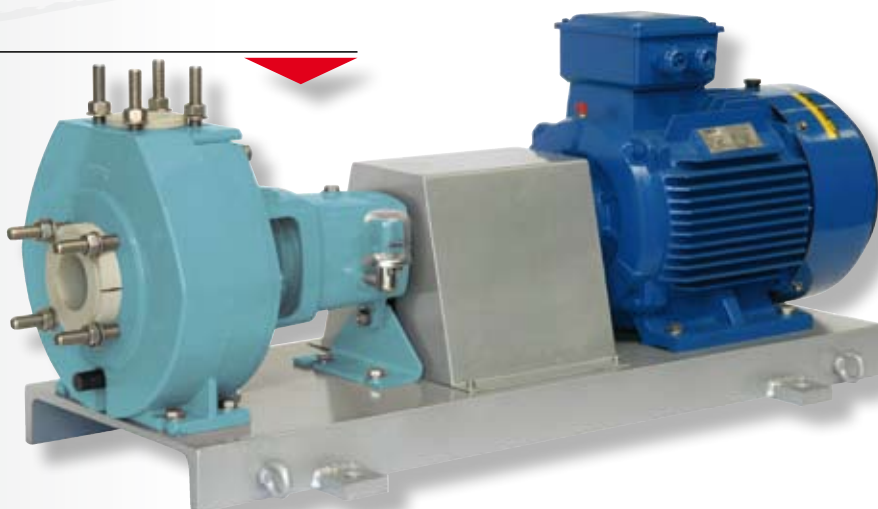
Available motor powers: kW 0,25÷11  
Material versions: PP - E-CTFE - PVDF - PVC  
Capacity: 0,5÷50 m³/h



### ZGE

Wide, complete range of centrifugal chemical process pumps realized in thermoplastic pure materials and designed to accept commercially standardized mechanical seals. These long-coupled pumps, built in compliance with ISO 2858 (all normalized), are available either bare shaft or complete with base, for back pull out execution.

Available motor powers: kW 0,55÷300  
Material versions: PP - PVDF - PVC - PE HMW  
Capacity: 10÷1600 m³/h



### QGN

The NESK range are vertical external centrifugal pumps, mechanical sealed, to transfer or circulate of large volumes of corrosive fluids with the innovative semi-axial hydraulic flow.

The advantages of this design are:

- low noise operation
- high efficiency
- reduced wear on the inner parts.

The advantages of the vertical structure are:

- reduced overall dimensions
- easy maintenance on the normalized IEC motors
- air drain system.

Available motor powers: kW 4÷55  
Material versions: GFR/PP - PVDF  
Capacity: 1÷240 m³/h



### LAGOON Filtration system

Lagoon filtration system provides the removal of foreign solids or organic impurities from chemical solutions or from baths of special treatments.

The group is constituted by the filtration chamber with lid, injection-moulded fittings which contain the filtration system, positioned on the base. In the same base, well protected, is situated the mag drive pump, the pipeline equipped with valves and switch.

Many chambers can be assembled together either in parallel or in series connected to a bathtub in order to filter using the carbon purification process.

Thanks to the spacious basement all the parts can be easily inspected.

Many different versions of filtration units are available: paper, meraklon cartridges, washable pleated cartridges. Filtrating grade: between 1 and 100 micrometers having 10 micrometers as standard.

Range: from 500 to 40.000 l/h  
Filter materials: PP - PVDF  
Pump materials: GFR/PP - CFF/E-CTFE  
Capacity: 500÷40000 l/h





**KGK**

Centrifugal long coupled sump pumps with column and pump body submerged in the pumped liquid; suction depth up to 4000 mm. For length above 2000 mm one intermediate guide is added to the one existent in the casing.

Bearing are manufactured with ceramic oxides and Silicium carbide. In case of liquid is laden with mildly abrasive solids the guide bearings can be optionally flushed with external clean liquid.

External different vapour seals systems to protect the upper mechanical parts form corrosion are optionally. Available as well as column and delivery pipe made of Epoxi Vinil Ester resin (FRP).

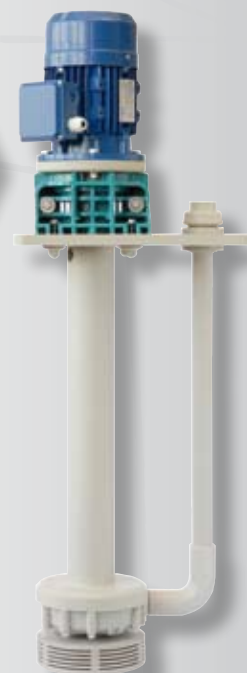
Available motor powers: kW 0,55÷45  
Material versions: GFR/PP - PVDF  
Capacity: 1÷240 m³/h

**KME**

Close-coupled sump pumps with column and pump body submerged in the chemical. Lengths from 600 to 1500mm. and bearings made in ceramic or silicium carbide. An efficient dry vapour seal system has been designed to prevent the mechanical parts from corrosion.

This pump model is our solution to users that want pumps of limited flow and head but to be fitted easily with IEC normalised motor readily available almost worldwide.

Available motor powers: kW 0,55÷11  
Material versions: GFR/PP - PVDF  
Capacity: 1÷50 m³/h

**MPP**

Air driven double diaphragm pumps, volumetric type, are self-priming and insensitive to dry running. They are suitable to transfer abrasive, viscous, with solids in suspensions liquids and available from ¼" to 3".

The flow of the liquid delivered can be adjusted by simply adjusting the flow of the feeding air. These pumps are mainly adapt in dangerous areas and are almost maintenance free.

Materials: PP - PVDF - Aluminium - Stainless Steel  
Capacity: up to 950 l/min.

**HME**

Centrifugal close-coupled sump pumps, self-priming in tank. Sealless without bearings, no bushings, wearing parts, with cantilevered shaft and strainer to prevent the accumulation of corrosive vapours.

They can be mounted in-tank or out-of-tank. Standard lengths: 275 mm and 450 mm.

Special motor powers for higher specific medium gravity are available.

Available motor powers: 0,25÷7,5 kW  
Material versions: GFR/PP - PVDF  
Capacity: 1÷30 m³/h

**SONDA**

Drum pumps to transfer common and aggressive liquids from drum to other containers.

These pumps can be fitted with 230 Volt electrical motor or with pneumatic motor.

Optional versions compliant to Atex 100 regulation available.

Max. Flow: Up to 250 l/min  
Max. Head: up to 25 mwc  
Max. Viscosity: from 500 to 1200 mPas  
Material of the tube: PP, PVDF, ALU, SS Stainless Steel  
Length of tube: 700 - 1000 - 1200 mm  
Max, operational temperature: 40°C (PP) - 60°C (PVDF - ALU - SS)

