

The “Leader” of Pumps for Industry & Nuclear

**RÜTSCHI**   
SWITZERLAND – FRANCE



*The technological and entrepreneurial heritage of a great pump engineer has been absorbed by a corporation who itself is closely connected to the history of pump production including the first pump manufacturing company in Italy. Dr. ing. h.c. Karl Rüttschi, inventor of the PERFECTA® canned motor pump, the origin of today's heating system circulators. Millions have been sold around the world as it has continuously developed to also be used in high-tech applications within the chemical, petrochemical and nuclear industries.*

*Today this historical heritage combines with the advanced technology, quality, and production resources of Gruppo Aturia keeping our focus, as always, trained on the customer.*

Dott. Alessandro Reni  
President Gruppo Rüttschi & Gruppo Aturia

1946



Rütschi invents the “Perfecta®”: the canned motor pump used in industrial heating systems. Although Rütschi was focused on activities within the Swiss construction market, the Perfecta was marketed around the world through licensing agreements. A total of 21 licensing agreements were issued to the most prominent pump manufacturers to be used in heating circuits around the globe. The success of the Perfecta® allows for the dedicated development of many new hydraulic systems as a basis for additional industrial applications. The development of the Perfecta® using special materials allows for expansion from the construction into the chemical market of both Switzerland and Germany.

1970



Rütschi develops the “Chemieperfecta” - the canned motor pump specifically designed for chemical applications - and quickly gains experience in many different areas of the chemical industry. Canned motor pumps are introduced in applications within the nuclear industry. Rütschi establishes a new company “Pompes Rutschi” in Mulhouse, France to be at the heart of the most advanced nuclear development centers (FRAMATONE-AREVA) in Europe. Rütschi continues to strengthen its presence in water-pumping technology, the chemical industry, as well as other important international projects. Dr. ing. h.c. Karl Rütschi steps down from the operational leadership of the Rütschi company.

2006



Rütschi, the pioneer of canned motor pumps, made up of the two companies Rütschi Fluid AG in Brugg, Switzerland and Pompes Rutschi SAS in Mulhouse, France is acquired by Gruppo Aturia, headquartered in Gessate, Italy.

The acquisition by Aturia SpA adds competence and experience in the technologically demanding areas of chemical, petrochemical, nuclear and conventional power thus expanding its own prominent tradition in water pump technology.

2012



Gruppe Rütschi and Gruppo Aturia continue the process of development and integration through key investments.

The orientation of our activities internationally and development of worldwide partnerships increase the added value for our customers.



## RÜTSCHI FLUID AG

Brugg (Schweiz): 5.000 m<sup>2</sup>

RÜTSCHI FLUID AG's head office

RÜTSCHI's production site for process pumps and Sealless/Canned pumps.

Retailer for GRUPPO ATURIA's pumps in Switzerland, Germany, Austria.



## POMPES RUTSCHI SAS

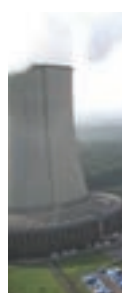
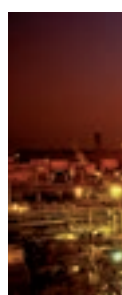
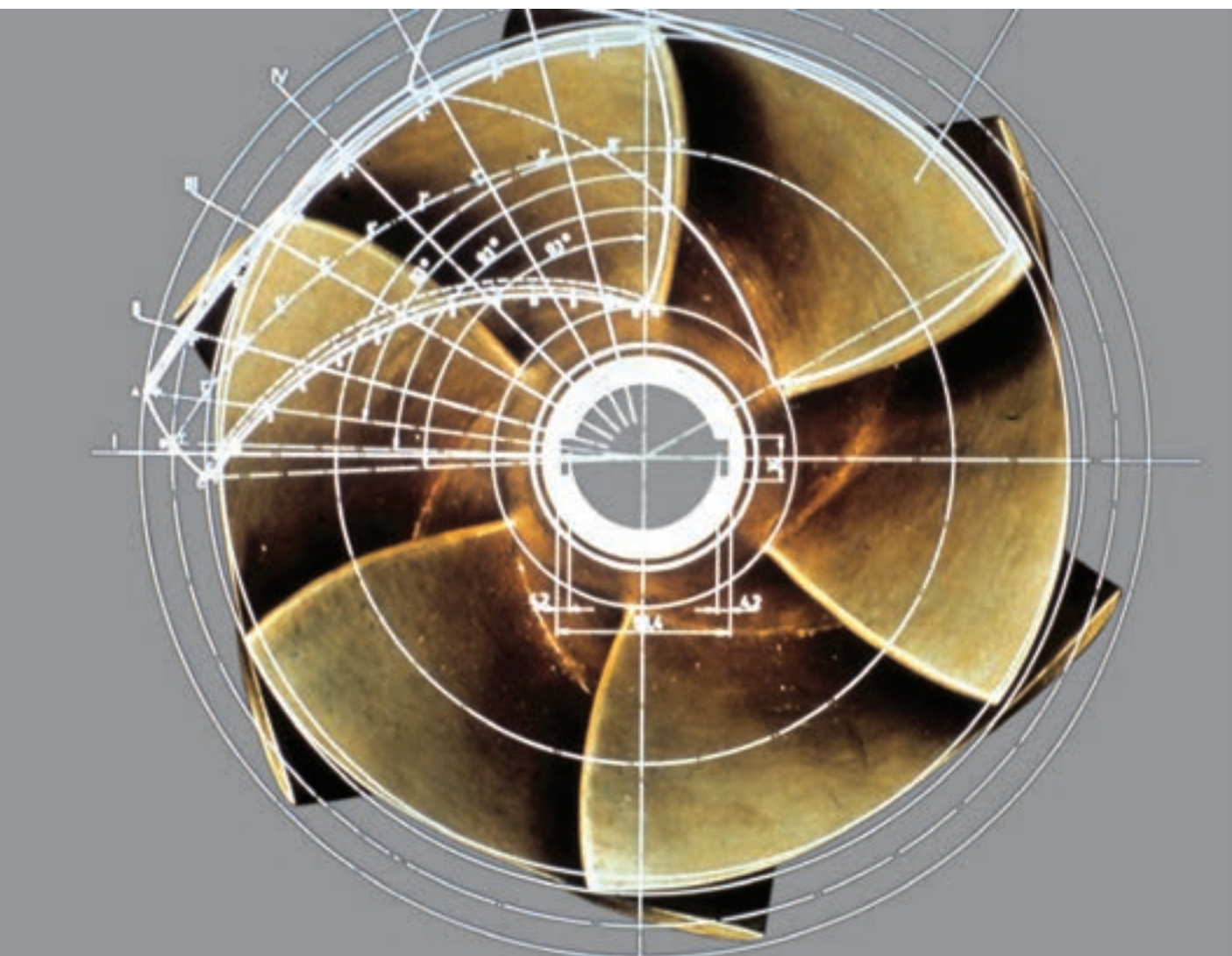
Mulhouse (Frankreich): 2.000 m<sup>2</sup>

POMPES RUTSCHI SAS' head office

RÜTSCHI's production site for process pumps and vertical pumps for lubrication systems.

Retailer for GRUPPO ATURIA's pumps in France.





# A “Leader” of Pumps for Industry & Nuclear



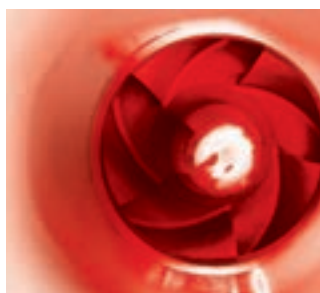
SURFACE



PROCESS



NUCLEAR



FIRE FIGHTING



SUBMERSIBLE





# SURFACE Applications

Gruppe Rütchi offers a wide range of surface pumps meeting the needs of top manufacturing sectors. One type, the "monobloc" pump is used in the civil sector to supply water as well as for the purpose of heating and air conditioning. Single-stage and split pumps are used for pumping water and fire-fighting systems. They are also used in the clean-water industry when large capacities with limited head is required. Multistage pumps are used not only for pumping stations but for the creation of artificial snow, reverse osmosis, as well as for more sophisticated services such as boiler feeding.





**"IN LINE"  
MONOBLOC PUMPS  
DIN 24255 - EN 733  
SINGLE-STAGE PUMPS  
DIN 24255 - EN 733**



Size [DN]	25 - 100	25 - 250
Poles	2	4
Capacity [m³/h]	6 - 330	3 - 1300
Head [m]	9 - 90	2 - 90
Impeller Dia [mm]	up to 250	up to 500
Power [kW]	up to 75	up to 315

**RADIAL MULTISTAGE PUMPS**



Size [DN]	25 - 125	25 - 250
Poles	2	4
Capacity [m³/h]	3 - 400	3 - 750
Head [m]	up to 600	up to 350
Impeller Dia [mm]	up to 320	up to 415
Power [kW]	up to 450	up to 700

**SPLIT CASE PUMPS**



Size [DN]	150 - 600
Poles	2 - 4 - 6
Capacity [m³/h]	200 - 4000
Head [m]	10 - 150
Impeller Dia [mm]	up to 650
Power [kW]	up to 800

**VERTICAL TURBINE PUMPS**



Size [DN]	100 - 1000
Poles	2 - 4 - 6 - 8 - 10 - 12
Capacity [m³/h]	10 - 25000
Head [m]	3 - 400
Impeller Dia [mm]	up to 1350
Power [kW]	up to 1000





# PROCESS Applications

Gruppe Rüttschi builds on its extensive experience in the field of process pumps for the petrochemical, chemical, as well as general industry. We design, manufacture and deliver pumps which are renowned for reliability and quality. As pioneer of the sealless canned motor pumps Rüttschi offer highest safety in all applications where dangerous, toxic or flammable chemical products are pumped. Seal-less magnetic driven pumps seamlessly integrate into the concept of 'no leakage' and extend therefore the product portfolio available to Rüttschi customers. These pumps are also available as API 685 execution and with ATEX conformity.

Traditional process pumps with mechanical seals according to API 610, ISO 2858 or ISO 5199 are available for varied applications in many different executions. Gruppe Rüttschi offers a wide range of products adaptable to the specific requirements of today's challenging applications like: solar, molten salt, geothermic, osmosis, desalination, cryogenic, etc.

**CANNED MOTOR PUMP,  
VERTICAL AND HORIZONTAL**



**CANNED MOTOR PUMP,  
ENGINEERED PUMPS**



Size [DN], In-Line	3-100	10-200
Size [DN], horizontal	150 – 340	
Capacity [m³/h]	up to 500	
Head [m]	up to 300	
Max. Pressure [bar]	25	
Power [kW]	up to 135	

Size [DN]	Different requirements (material, temperature, pressure)
Capacity [m³/h]	up to 500
Head [m]	up to 300
Max. Pressure [bar]	up to 650
Max. Temper. [°C]	-100 / 450





**VERTICAL LUBE OIL PUMPS CNV**



Medium	Oil (ISO VG 32)
Capacity [m³/h]	50 up to 600
Head [m]	up to 100
Fluid temperature [°C]	10 - 110
Diving length under the support	on request of the customer

**PROCESS PUMPS API 610**



Size [DN]	1 1/2" - 12"	
Poles	2	4
Capacity [m³/h]	8-1500	4-1500
Head [m]	up to 350	up to 140
Impeller Dia [mm]	up to 520	up to 610
Power [kW]	up to 1500	up to 700

**MAGNETIC DRIVE PUMPS**



Size [DN]	15 - 100	
Poles	2	4
Capacity [m³/h]	8-150	3-100
Head [m]	up to 100	up to 140
Max. Pressure [bar]	25	
Max. Temper. [°C]	300	

**SINGLE-STAGE PUMPS, HORIZONTAL AND VERTICAL**



Size [DN]	32-100	32-300
Poles	2	4
Capacity [m³/h]	5-330	3-1300
Head [m]	up to 140	up to 100
Impeller Dia [mm]	up to 315	up to 570
Power [kW]	up to 200	up to 315





# NUCLEAR Applications

Since 1967 Rüttschi has maintained its leadership in supplying pumps for use in nuclear applications covering Uranium processing, waste recovery and treatment, pressurized water, superheated water, heavy water reactors, fast breeder and research reactors.

**CANNED MOTOR PUMP,  
TYPE SMR**



The single- or multistage sealless pump offers the best possible safety on radioactive liquids. Used for clean and charged liquids from primary and secondary circuits.

Power [kW]	up to 250
Capacity [m³/h]	up to 1000
Head [m]	up to 250
Max. Pressure [bar]	up to 170

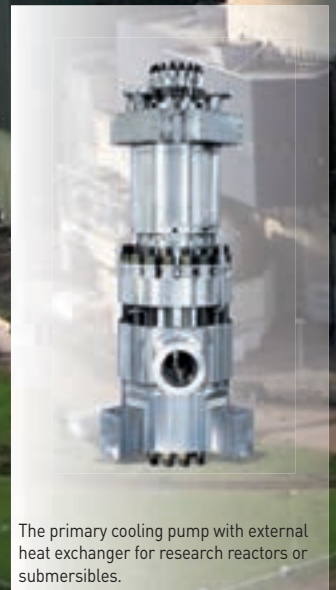
**CANNED MOTOR PUMP  
SUBMERSED, TYPE SMRT**



Used for clean and charged liquids from primary and secondary circuits.

Power [kW]	up to 45
Capacity [m³/h]	up to 100
Head [m]	up to 120
Max. Pressure [bar]	up to 40

**CANNED MOTOR PUMP,  
TYPE SMYR-KD**



The primary cooling pump with external heat exchanger for research reactors or submersibles.

Power [kW]	up to 250
Capacity [m³/h]	up to 1100
Head [m]	up to 60
Max. Pressure [bar]	up to 170



Over 4000 centrifugal pumps with mechanical seals, in horizontal or vertical execution and sealless canned motor pumps have been designed and delivered according to ASME section III class 1-2 and 3, N, NS, NPT or according to code RCCM level 1,2 and 3. Rütchi is also certified by AREVA, EdF, HAF604, KHNP, KTA 1401, Tractebel and TÜV.

**VERTICAL AND HORIZONTAL PUMPS OF TYPES CNR, PSP OR SMKM IN VARYING SIZES AND HYDRAULICS**



The most widely used pump configurations within Rütchi.

Power [kW]	up to 1000
Capacity [m³/h]	up to 2500
Head [m]	up to 120
Max. Pressure [bar]	up to 40

**VERTICAL AND HORIZONTAL PUMPS OF TYPE VORTEX FSP**



The most rugged design pump for radioactive and charged liquids.

Power [kW]	up to 100
Capacity [m³/h]	up to 60
Head [m]	up to 50
Max. Pressure [bar]	up to 40

**HORIZONTAL PUMP TYPE SRP**



Semi-axial pumps for very large flow requirements.

Power [kW]	up to 1000
Capacity [m³/h]	up to 3000
Head [m]	up to 60
Max. Pressure [bar]	up to 40

**HORIZONTAL MULTISTAGE PUMP TYPE RHP**



Safety pumps.

Power [kW]	up to 1000
Capacity [m³/h]	up to 1000
Head [m]	up to 1300
Max. Pressure [bar]	up to 200





# FIRE FIGHTING Applications

Gruppe Rüttschi includes the experience of the brand "Audoli & Bertola" within the „Gruppo Aturia“ to supply complete systems as well as individual pumps in the fire fighting sector according to European standards (EN 12845 and EN 12259-12) as well as with the American standards (NFPA 20). Audoli & Bertola's technical competencies allows it to easily operate in civil and industrial sectors complying with the strictest specifications required by refineries, petrochemical industries, off-shore infrastructures, platforms and in-shore infrastructures. Audoli & Bertola has developed a range of products for explosive risk areas: including many which have been made with diesel and gas engines, suitable to operate in Exd II B oder C Atex Zone 1.





## PUMPING SYSTEMS VERTICAL PUMPS

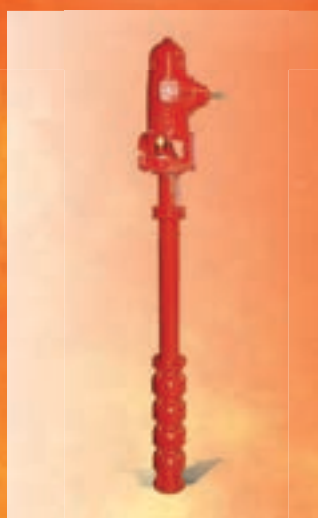
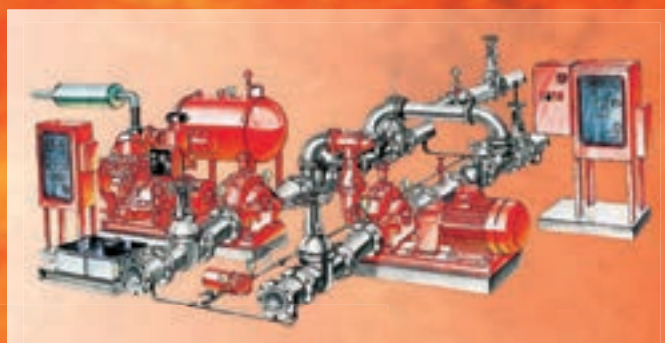
Gruppe Rütchi in collaboration with Gruppo Aturia can supply an extensive range of centrifugal pumps for fire-fighting services, both with a vertical and a horizontal design.

Audoli & Bertola is the only pump manufacturer in Europe that was given Factory Mutual's approval for:

- Vertical Pumps: from 500 GPM to 4000 GPM, at 50 and at 60 Hz.
- Split Case Pumps: from 750 GPM to 2000 GPM, at 50 and at 60 Hz.



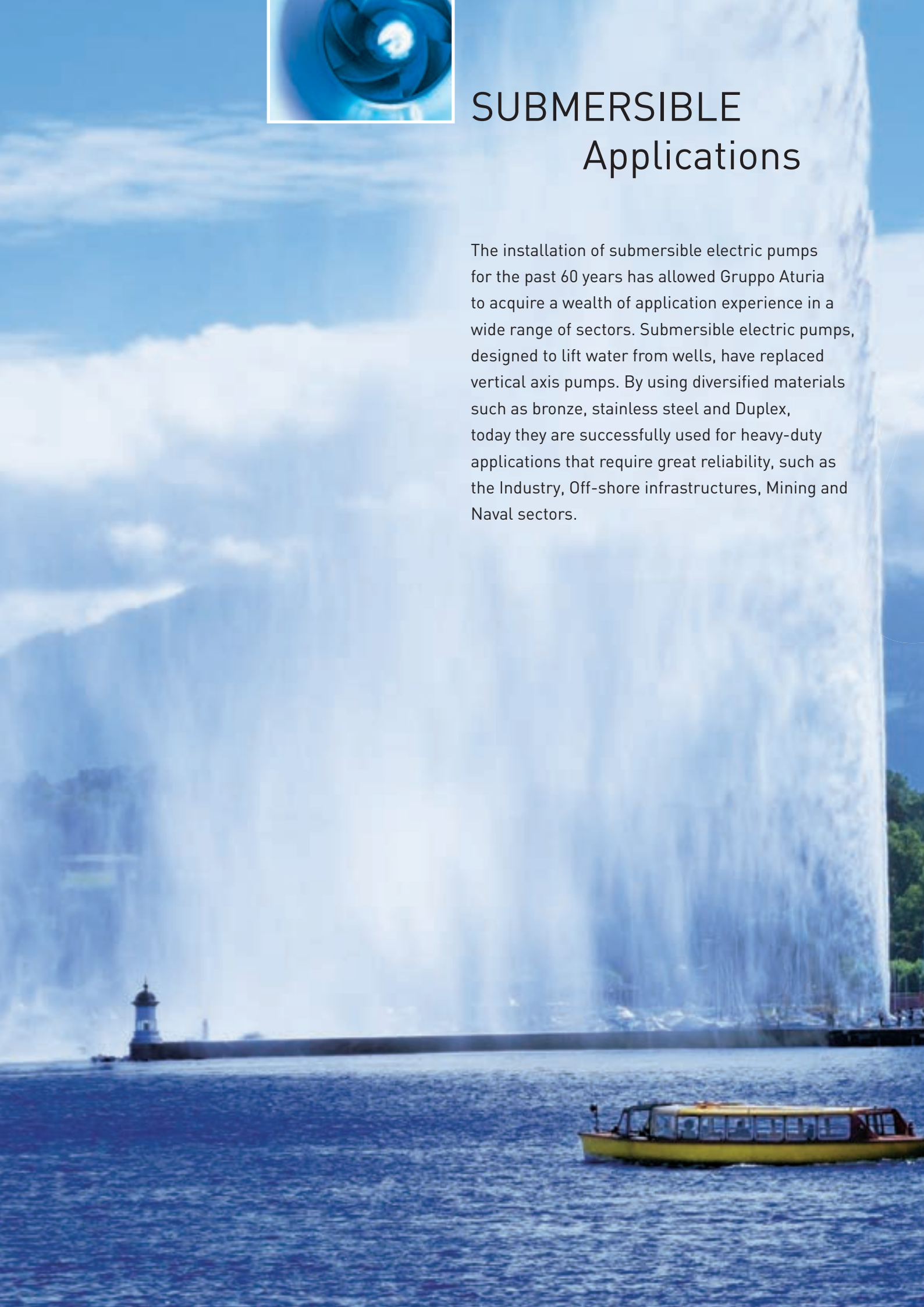
## PUMPING SYSTEMS SPLIT CASE PUMPS





# SUBMERSIBLE Applications

The installation of submersible electric pumps for the past 60 years has allowed Gruppo Aturia to acquire a wealth of application experience in a wide range of sectors. Submersible electric pumps, designed to lift water from wells, have replaced vertical axis pumps. By using diversified materials such as bronze, stainless steel and Duplex, today they are successfully used for heavy-duty applications that require great reliability, such as the Industry, Off-shore infrastructures, Mining and Naval sectors.





Using pumps submersed in special vertical or horizontal cylindrical tanks allows systems to be designed with increased pressure by reducing space and operating noise compared with traditional solutions. With more than five hundred types of electrical pumps, we are able to offer a wide capacity and head range giving customers hydraulic features with the best performance. In recent years Aturia introduced a range of submersible motors suitable for hot water by adopting new design solutions.

**CAST IRON  
SUBMERSIBLE  
PUMPSETS**



**BRONZE, STAINLESS  
STEEL / DUPLEX  
SUBMERSIBLE PUMPSETS**



Size	6" - 14"	14" - 25"
Poles	2	4
Capacity [m³/h]	7 - 800	up to 1800
Head [m]	10 - 700	up to 160
Power [kW]	up to 400	up to 300

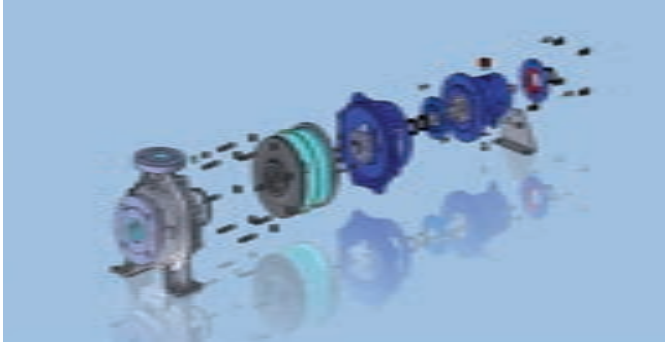




WORKING TOGETHER  
MEANS WINNING



# An integrated and flexible cycle: from design to shipment



Thanks to integrated design systems, 3D models and FEM, Gruppo Rüttschi and Gruppo Aturia offer products in line with state of the art technology.

The product life-cycle starts at the design stage where, thanks to our many years of experience and a database with over a thousand hydraulic systems, Gruppo Rüttschi and Gruppo Aturia are able to develop pumps for special fluids with power values that reach 1000 kW, pressure values up to 150 bar and temperatures up to 500°C.



Gruppo Aturia is divided into five specialised Units:

- Brugg (Switzerland): Development and manufacturing of sealless canned motor special pumps as well as
- Mulhouse (France): Development and manufacturing of nuclear and lube oil pumps
- Gessate (Italy): Development and manufacturing of pumps for the water sector and petrochemical applications
- Taglio di Po (Italy): Development and manufacturing of magnetic driven sealless pumps
- S. Mauro Torinese (Italy): Development and manufacturing of pumps and systems for fire fighting applications

The integration of these production units allows the optimization of all supply chain processes.



The various steps of the industrial process take place in just one Production Unit (Gessate). This helps the company's various departments work together. We recently achieved the important objective of fitting each Unit with a modern Testing Room. In our plants in Gessate and S. Mauro Torinese we can test pumps with powers up to 650 kW, capacities up to 8000 m<sup>3</sup>/h and pressure values up to 120 bar. Our plant in Taglio di Po, Brugg and Mulhouse have been designed for sealless pumps intended for applications in the chemical sector. Along with periodic tests on the performance of standard products, the Testing Room also conducts tests in front of customers or certifying bodies.



To adequately meet the needs of our customers, Gruppo Rüttschi and Gruppo Aturia invest considerable financial resources in the management of their combined inventories.

Thanks to rapid assembly and a vast availability of components we can ensure prompt delivery of standard products. Painting and packing are carried out accurately in accordance with specifications and transport conditions.

# Certified Quality System

## Quality Control

The involvement and dedication of Gruppe Rüttschi and Gruppo Aturia for the continual improvement of quality has been confirmed by internationally renowned quality auditing companies and their continuous review.

The quality of the product is guaranteed by the "Total Control" of all its components. The pumps' performance is checked in the Testing Room. Gruppe Rüttschi and Gruppo Aturia have set up a metrological lab to test parts with a coordinate-measuring machine and traditional instruments calibrated with latest-generation software.

The wide range of NC machines allows operators to

easily achieve the precision requested to process the components.

The online management of project and design specifications ensures the latest updated information is readily available. The IT management system and the collection of processing data also allows traceability of products at every stage of the process.

Gruppe Rüttschi and Gruppo Aturia invest in qualified human resources and ensure their staff's proficiency through continual training programs. Operators are trained to manage machinery and drawings and inspect components, autonomously and safely.









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