

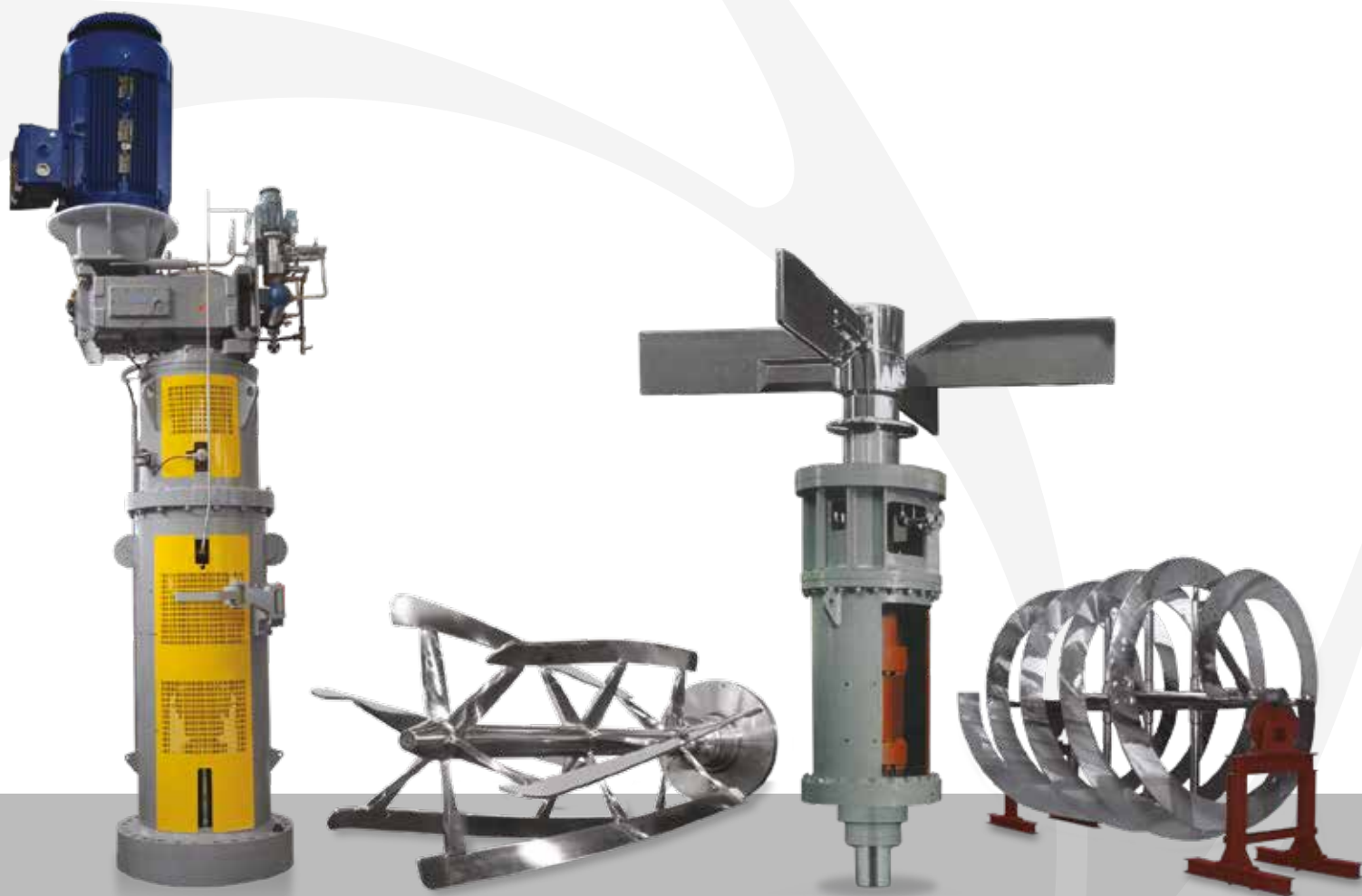
MADE IN ITALY

since 1964



ZUCCHETTI

Mixing Process Technology



Engineering and Construction of Industrial Mixers

ABOUT US

With more than 60 years of experience throughout the world, **ZUCCHETTI** is known and recognized for **Mixing Process Technology** and **Engineering & Construction of Tailor Made Process Solutions**. Zucchetti is an established industrial company founded on 1964 by Mr. Agostino Zucchetti as a mechanical workshop near Milan in which small mixers and mechanical details were manufactured. In the years, the company became bigger and started a profitable business relationship with the main important Italian Engineering Companies (Tecnimont, Enichem, Snam Progetti, Snia Enigineering) producing large mixers for every application. The company, now currently managed with passion and devotion to duty by the second and third generation of its founding family, has gained a leading position thanks to mixing solutions characterized by hardworking, high technological value and ISO 9001 certification. ZUCCHETTI industrial mixers are used for agitation systems characterized by high values of critical parameters such pressure, temperature, density or viscosity for hazardous or corrosive working environment. The continuous specialization in the construction of even bigger agitators for critical applications has stimulated and promoted the creation of a new building to test in vertical position all agitators with height up to 15 meters and maximum weight of 20 Tons.

ZUCCHETTI MIXERS Technical Data:

- Power up to 600 kW
- Shafts with diameters up to 400 mm and length up to 20000 mm
- Impellers with diameters up to 6000 mm
- Single, Double and Triple Mechanical Seals
- Magnetic Couplings
- Materials: Carbon Steel, SAF, Stainless Steel, Hastelloy, Monel, Titanium

Since 1964, ZUCCHETTI designs and manufactures agitators to satisfy every possible request placing the customer at the center of the whole business system to ensure the highest level of quality and efficiency. We firmly believe that every industry has its own critical factors to recognize and we constantly work closely to our customers to supply customized mixing process technology with mixing equipment characterized by the highest operating mechanical procedure on quality and design.

Zucchetti's main strenght is the ability to satisfy every single specific customers' request: maintenance, modification, repair and parts requirements, ensuring the highest operating procedure on quality and design. Zucchetti after-sale/service department is able to assist every customer with detailed information on products installed.

Committed to support the highest quality standard, Zucchetti integrates mechanical and chemical engineering knowledge to improve innovative solutions optimizing the system performance and equipment reliability.

SERVICE

- Spare Parts for every agitator with interchangeability guarantee and best delivery time
- Technical assistance or supervision on-site during the installation, maintenance, commissioning and start-up phases
- Tailor made mixing solutions to modify the agitation system to ensure an efficiency improvements according to new customer specification
- Customized maintenance programs
(Periodic or as-required maintenance, during and after the warranty period)



*Scan the QR code to watch
ZUCCHETTI official video*



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MIXING PROCESS TECHNOLOGY

The complexity of the problems concerning the mixing technology requires careful consideration of the process requirements in order to identify the suitable agitator to solve these issues. Shaft and impellers are the most important components that need to be carefully designed to achieve the process requirements. The shaft is an essential and critical mechanical element for the performance of the mixer because if it is not rigidly supported, it may vibrate and cause misalignment and consequently damage to the whole system. **Zucchetti, with the experience acquired in 50 years of activity and the continuous monitoring of all essential mixing improvements, guarantees the highest operating procedure on quality and design through the analysis of torsional / bending stresses and the critical speed, in order to meet all mechanical requirements and avoid any unpleasant breakdown.** Understanding of key parameters and the effect created by the different impellers on flows may suggest the best solution to produce the desired result. More efficient impellers mean greater benefits in pumping and power efficiency with cost-effective mixing technology. **Zucchetti is constantly engaged on the research and development of new impeller designs that can provide opportunities for process improvements.** We focus our attention on applications where advanced impeller design and cutting edge mixing solutions are required in order to comply with all critical situations that can interest the process. Since the mixer design is strictly connected with the mechanical seal, our engineers are always studying

new improved sealing arrangements with the cooperation of all major mechanical seal companies to provide the most complete service and support.

We operate as a full service provider and we are able to offer the best software applications to complete the entire project:

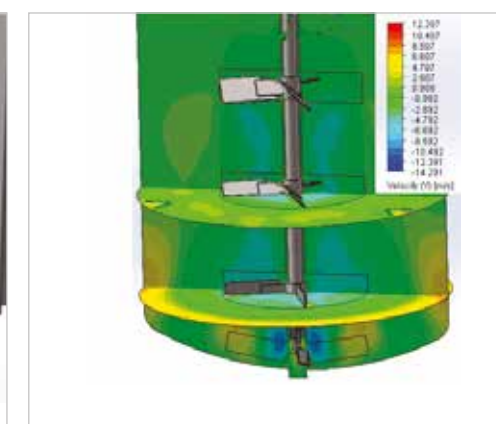
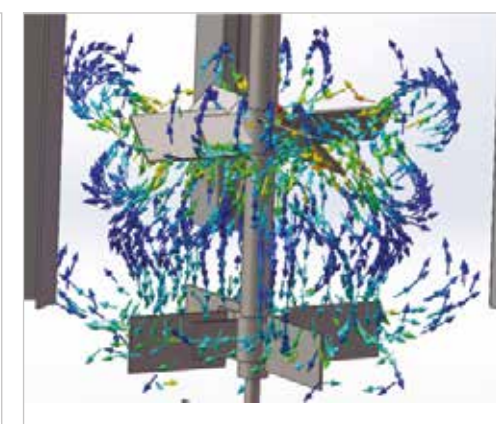
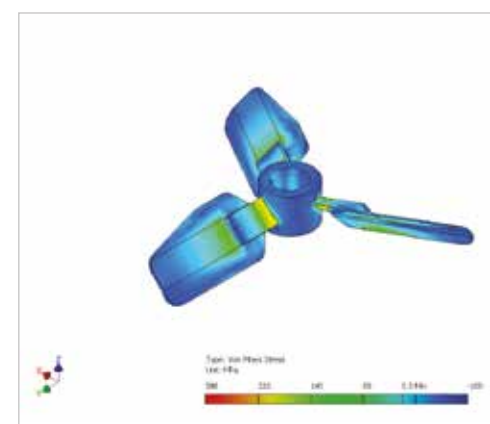
- **FEA (Finite Element Analysis)** is a computer program that uses the finite element method to study and test a material or object and find how applied stresses & modal analysis will interest the material or the design. FEA can estimate any points of weakness in a design before production reducing cost and time.

- **CFD (Computational Fluid Dynamics)** is a fundamental and preminent mixing technology technique that develops a real model of the mixing process on an industrial scale project. This method, with a distinctive employment of numerical analysis and physical models, examines more carefully those processes that are problematic to study with conventional testing ways.

Zucchetti has experienced process engineers that provide consultation and expert advice. Thanks to our R&D facilities all processes can be simulated on scale to find the most suitable solution for real-scale situations. **We develop prototypes for testing new impellers to improve our existing line of equipment even further.**

Our mission is to work with our customers to supply customized mixing process technology with fluid mixing equipment characterized by the highest level of quality. We offer the best mixing solution for every application.

IMPELLER TYPE	FLOW PATTERN	FLOW REGIME	MAX VISCOSITY
PROPELLER	AXIAL	LAMINAR	UP TO 6,000 Cp
HF3	AXIAL	TURBULENT/LAMINAR	UP TO 6,000 Cp
HF4	AXIAL	TURBULENT/LAMINAR	UP TO 10,000 Cp
PBT	AXIAL/RADIAL	TURBULENT/LAMINAR	UP TO 20,000 Cp
RBT	RADIAL	TURBULENT	UP TO 20,000 Cp
ANCHOR	TANGENTIAL	LAMINAR	FROM 5,000 TO 500,000 Cp
RIBBON	AXIAL	LAMINAR	FROM 50,000 TO 1,000,000 Cp
DOUBLE HELICAL RIBBON	AXIAL	LAMINAR	FROM 50,000 TO 1,000,000 Cp
RUSHTON (RADIAL BLADE DISK)	RADIAL	TURBULENT	UP TO 10,000 Cp
COWLES	RADIAL	TURBULENT	UP TO 10,000 Cp





TOP ENTRY MIXERS

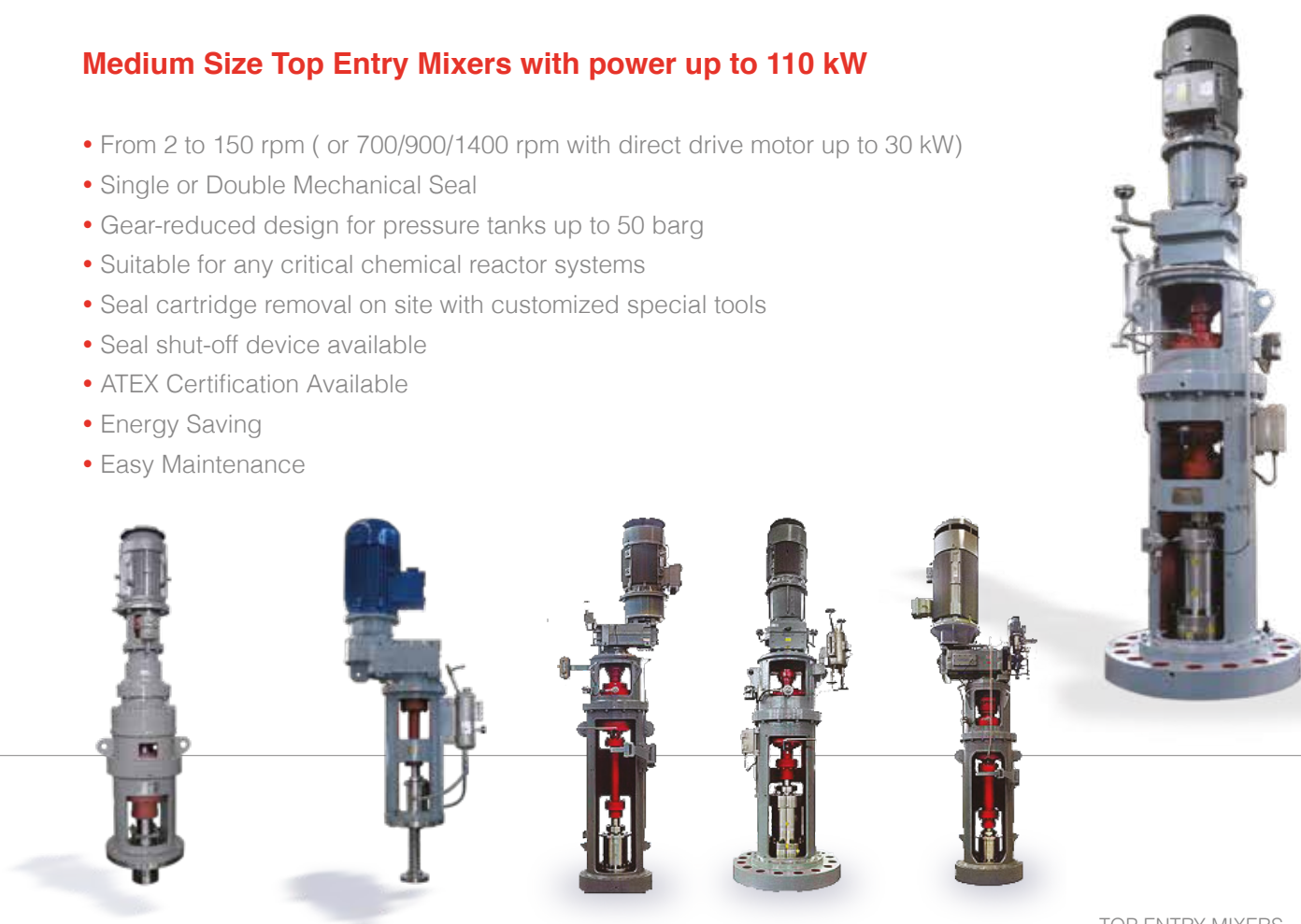
Large Size Top Entry Mixers with power up to 600 kW

- From 10 to 200 rpm
- Double or Triple Mechanical Seal
- Gear Reduced design for pressure tanks up to 140 barg
- Suitable for any critical chemical reactor systems
- Seal cartridge removal on site with customized special tools
- Seal shut-off device available
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



Medium Size Top Entry Mixers with power up to 110 kW

- From 2 to 150 rpm (or 700/900/1400 rpm with direct drive motor up to 30 kW)
- Single or Double Mechanical Seal
- Gear-reduced design for pressure tanks up to 50 barg
- Suitable for any critical chemical reactor systems
- Seal cartridge removal on site with customized special tools
- Seal shut-off device available
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



TOP ENTRY MIXERS

Top Entry Mixers are the most common industrial agitators usually used on all process industries.

ZUCCHETTI Top Entry Industrial Mixers can be tailored to every customer request identifying the proper mixing solution to optimize the process.

ZUCCHETTI Top Entry Industrial Agitators can be equipped with Single, Double or Triple mechanical seal in order to define and ensure the highest level of quality and efficiency. Many types of standard and special impellers can be installed to achieve the desired process result.

BOTTOM ENTRY MIXERS

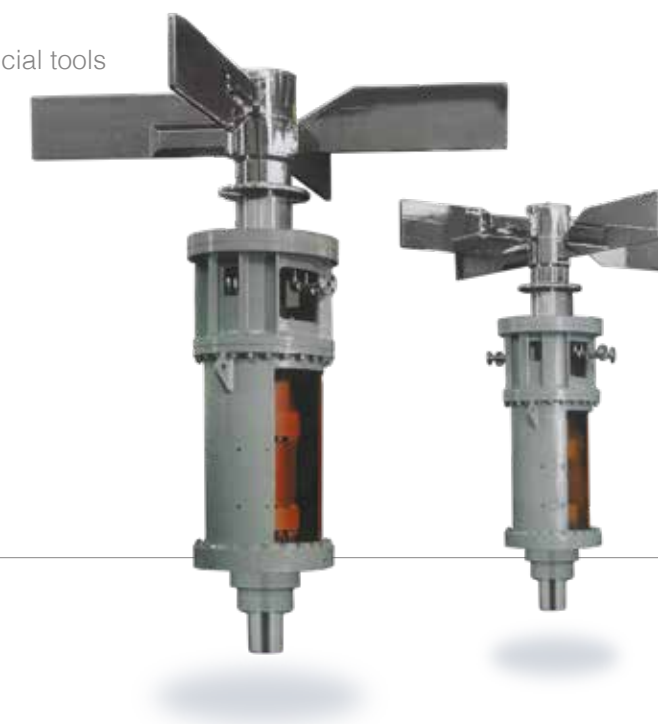
Large Size Bottom Entry Mixers with power up to 600 kW

- From 10 to 200 rpm
- Double Mechanical Seal
- Gear Reduced design for pressure tanks up to 50 barg
- Suitable for any critical chemical reactor systems
- Seal cartridge removal on site with customized special tools
- Seal shut-off device
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



Medium Size Bottom Entry Mixers with power up to 110 kW

- From 2 to 150 rpm
- Single or Double Mechanical Seal
- Gear-reduced design for pressure tanks up to 50 barg
- Suitable for any critical chemical reactor systems
- Seal cartridge removal on site with customized special tools
- Seal shut-off device
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



BOTTOM ENTRY MIXERS

ZUCCHETTI Bottom Entry Mixers have been successfully installed on many PVC polymerization reactors having capacity up to 50 cubic meters.

The complexity of the problems concerning the mixing technology requires careful consideration of the process requirements and ZUCCHETTI provide tailored solution to identify the suitable agitator to solve these issues.

MAGNETIC MIXERS

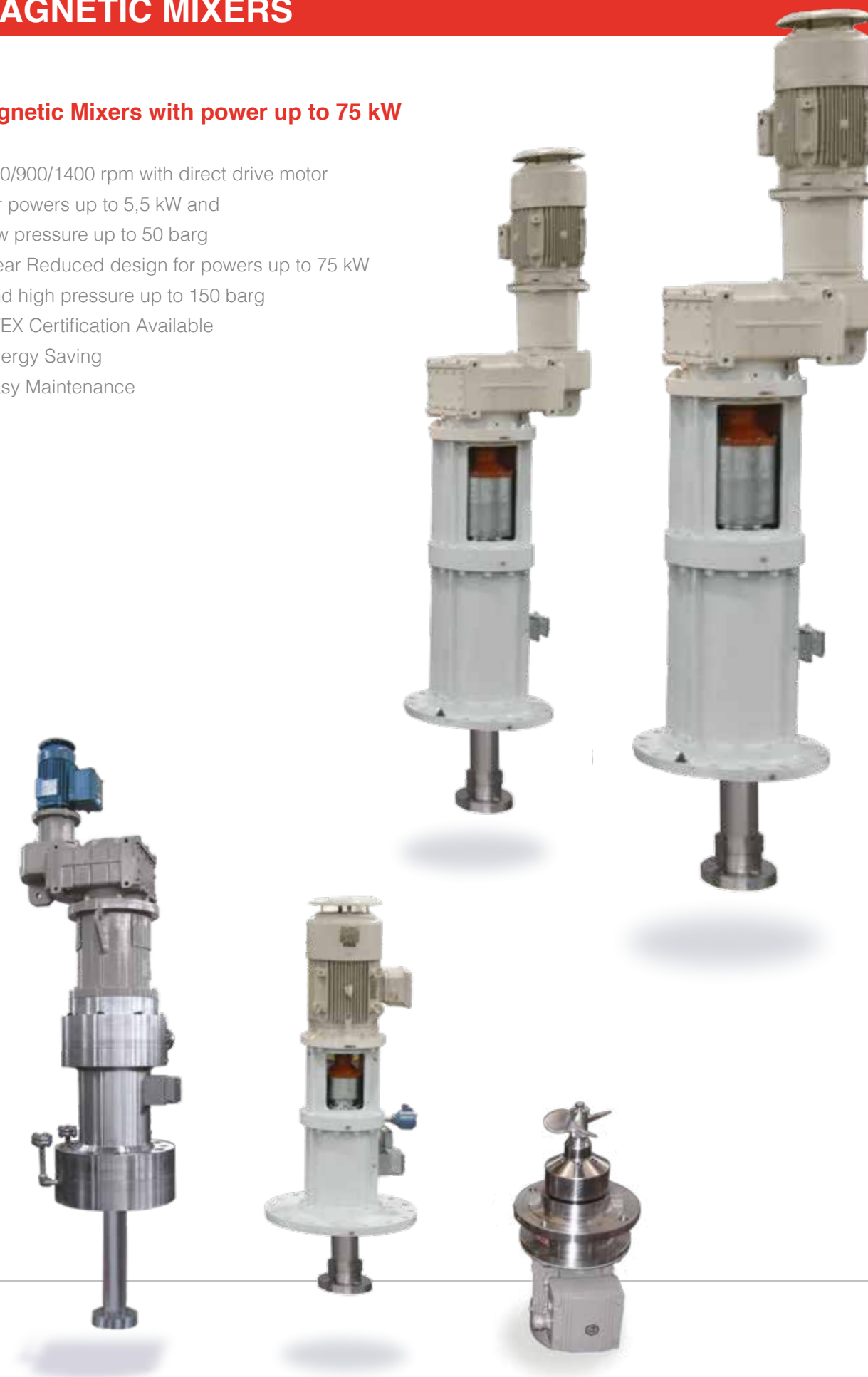
Magnetic Mixers with power up to 75 kW

- 700/900/1400 rpm with direct drive motor for powers up to 5,5 kW and low pressure up to 50 barg
- Gear Reduced design for powers up to 75 kW and high pressure up to 150 barg
- ATEX Certification Available
- Energy Saving
- Easy Maintenance

MAGNETIC MIXERS

ZUCCHETTI Magnetic Drive Mixers are suitable for process with high pressure and temperature where there is the presence of hazardous or corrosive working environment.

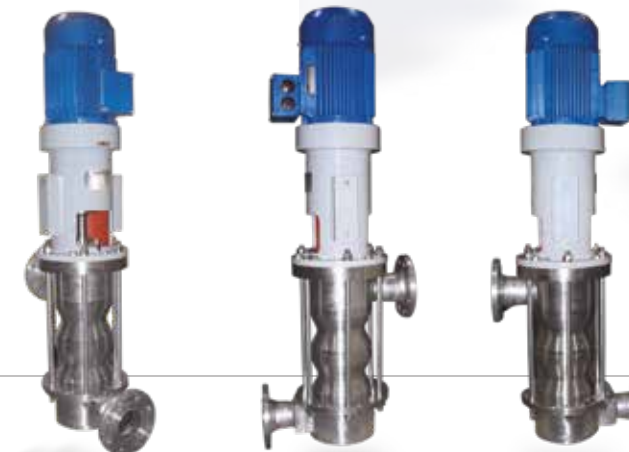
We offer various types of top-mounted and bottom-mounted magnetic agitators. Our product are steadily used in the chemical, pharmaceutical and biotechnological industries. Important advantages of these agitators are their compact design, minimum maintenance requirements and high reliability.



DYNAMIC IN-LINE MIXERS

Magnetic Mixers with power up to 75 kW

- Gear Reduced design for powers up to 75 kW and high pressure up to 150 barg
- 700/900/1400 rpm with direct drive motor for powers up to 5,5 kW and low pressure up to 50 barg
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



DYNAMIC IN-LINE MIXERS

ZUCCHETTI Dynamic In-Line mixers provide an intensive mixing process with very short time and they are specially projected for Gas Dispersion and High Viscosity Applications with values up to 100,000 cps.

ZUCCHETTI Dynamic In-Line Mixing Technology is based on Multi Stage Turbines to ensure high shear performance with product uniformity and Single or Double Mechanical Seals to guarantee the highest operating level for any degree of temperature and pressure. Vessel internals promote optimum flow patterns to ensure quick and complete dispersion.

SIDE ENTRY MIXERS

Fixed and Swivel Side Entry Mixers with power up to 55 kW

- From 220 to 360 rpm
- Single or Double Mechanical Seal
- Impeller diameter up to 850 mm manufactured in One-Piece component (Propeller and High Efficiency Turbine with 3 blades)
- No misalignment with the shaft that is supported by antifriction bearings
- Excellent Pumping Efficiency
- Gear Driven unit design for pressure tanks up to 2 barg.
- Suitable for low viscosity applications.
- Seal cartridge removal on site with no special tools
- Shut-Off device allows the replacement of the mechanical seal under full tank conditions. Mechanical Seals prevent product leakage and toxic emission during the mixer service under pressure. All side entry mixers are equipped with a standard tank shut-off device for seal maintenance with tank full of liquid.
- Materials: Carbon Steel and Stainless Steel
- ATEX Certification Available
- Energy Saving
- Easy Maintenance



SIDE ENTRY MIXERS

ZUCCHETTI Fixed Side Entry Mixers are usually installed at an angle of 10 degrees to the left of the tank axis. ZUCCHETTI Swivel Side Entry Mixers are equipped with a special device which allows the mixer angle of entry to be varied through 30 degrees either side of the tank centerline with 10 degrees increments.

All ZUCCHETTI Side Entry Mixers incorporate a Shut-Off device to allow the shaft seal and bearings to be changed under full tank conditions. ZUCCHETTI provides tailored solutions for special applications ensuring customer mixing requirement.

REFERENCE LIST

AUSTRIA

PCD Polymere Gmbh
Borealis Ag

BELGIUM

Montefina S.A.
Finamont S.A.
Neste Polypropylene N.v.
Petrofina S.A.
Solvay Specialty Polymers S.A.
Total Petrochemicals S.A.

BRAZIL

Borealis Brasil S.A.
Braskem S.A.
Petroquimica Triunfo

CANADA

Himont Inc.

CHINA

Cnooc and Shell
Petrochemicals Co. Ltd.
Cntic
Cspc Pharmaceutical Group Ltd.
Hong Kong Petrochemical Co. Ltd.
Hovione Pharmascience Ltd
Jilin Zhongxin Chemical Group
Panjin Liaohe Chemical
Industrial Co. Ltd.
Panjin Liaohe-soken
Chemical Co. Ltd.
Shandong Eco Chemical Co. Ltd.
Solvay Specialty Polymers Co. Ltd.
Wepec

CROATIA

Sipro D.O.O.

EGYPT

TCI Sanmar Chemicals S.a.e.
Vinavil Egypt for Chemicals S.a.e.

FINLAND

Neste Oyj

GERMANY

Borealis Ag
Basell Polyolefine Gmbh
Dow Bsl Buna Leuna Olefinverbund
Gmbh
Dow Chemical Company
Lyondellbasell Group
Petrochemie Danubia Gmbh

HUNGARY

Dunamont Co. Ltd.
Dunastyr Polisztirolgyarto Zrt
Mol Group
Tiszai Vegyi Kombinat Zrt

INDIA

Aker Powergas Pvt. Ltd.
Aker Solutions Pvt. Ltd.
Chemplast Sanmar Ltd.
Haldia Petrochemicals Ltd.
Jacobs Engineering India

Private Ltd.
Reliance Industries Ltd.
Reliance Sibur Elastomers Pvt. Ltd.
Supreme Petrochem Ltd.
Tecnimont Pvt Ltd. - Ticb

INDONESIA

Pt Jgc Indonesia
Pt Polytama Propindo

IRAN

Arak Petrochemical Company
Jam Petrochemical Co.
Nargan Engineers & Constructors
Sadaf Petrochemicals Co.

IRELAND

3M Industrial Tapes Ltd.

ISRAEL

Bazan Group
Carmel Olefins Ltd.
Nilit Ltd.

ITALY

Abc Farmaceutici S.P.A.
Antibioticos S.P.A.
Basell Poliolefine Italia S.R.L.
Basf S.P.A.
Biochemtex S.P.A.
Bobst Group S.P.A.
Cividac S.P.A.
Cordenpharma S.P.A.
Desmet Ballestra S.P.A.
Dettin S.P.A.
Dutral S.P.A.
Ecoltecnica S.R.L.
Eurotecnica S.P.A.
Evc Italia S.P.A
Farchemia S.R.L.
Farmabios S.P.A
Fastech S.R.L.
FBM Hudson Italiana S.P.A
GCP Saint Gobain.
Gnosis Bioresearch S.R.L.
Grande Meccanica S.P.A.
Henkel Chimica S.P.A.
Himont Italia S.P.A.
Industrie Chimiche Forestali S.P.A.
Ineos Vinyls S.P.A.
IPT S.R.L.
IPM S.P.A
Lyondellbasell Group
Maire Tecnimont S.P.A.
Mangiarotti S.P.A.
Manica S.P.A
Mapei S.P.A.
Marubeni Europe Plc.
Matrica S.P.A.
Montefluos S.P.A.
Montell Italia S.P.A.
Novamont S.P.A.
Officine Orsi S.P.A.

Olon S.P.A.
Polimeri Europa S.P.A.
Polynt S.P.A.
PPM Industries S.P.A.
PPMdue S.R.L.
Procos S.P.A.
Procter & Gamble Italia S.P.A.
Pro-Team Tps S.R.L.
Ravagnan S.P.A.
Rhodia Italia S.P.A.
Rosetti Marino S.P.A.
Saipem S.P.A.
Samec S.P.A.
Samic S.P.A
Sicad S.P.A.
Sices S.P.A.
Snamprogetti S.P.A.
Solvay Specialty Polymers S.P.A.
Syensqo S.P.A
Versalis S.P.A
Villa Scambiatori S.P.A
Vinavil S.P.A.
VRV S.P.A.

JAPAN

Jgc Corporation
Mitsubishi Heavy Industries Ltd.
Mitsui Engineering & Shipbuilding
Co. Ltd.
Sumitomo Chemical Engineering
Co. Ltd.

MALAYSIA

Lotte Chemical Titan Corporation
Titan Himont Polymers Sdn
Titan Petchern Sdn Bhd

NETHERLANDS

BSL Buna Sow Leuna
Olefinverbund Gmbh
Dow Chemical Company
Jgc Corporation Europe B.V.

NIGERIA

Indorama Eleme
Petrochemicals Ltd.
Port Harcourt Refinery Company Ltd.

POLAND

Basell Orlen Polyolefins
Lyondellbasell Group

PORTUGAL

Hovione
Fabrica Torrejana De Azeites
Repsol Polimeros
Sovena Group

ROMANIA

Oltchim S.A.

RUSSIA

Eurochem Group
Gazprom Neft
Nizhnekamskneftekhim - Nknk
Sibur Llc

SAUDI ARABIA

National Industrial
Company - Tasnee
Petrabigh Refining &
Petrochemical Company
Saudi Aramco
Saudi Kayan Petrochemical Co.

SINGAPORE

Bechtel International Inc.
Exxon Mobil Asia Pacific Pte Ltd.

SOUTH AFRICA

Dow Chemical Company
Safripol Pty Ltd.
Sentrachem Ltd.

SOUTH KOREA

Daelim Industrial Co. Ltd.
Hanwha Chemical Co. Ltd.
Honam Petrochemical Corporation
Hyundai Heavy Industries Co. Ltd.
Hyundai Petrochemical Co. Ltd.
Lg Chem Ltd.
Lg Engineering Co. Ltd.
Lotte Chemical Corporation
Polymirae Co. Ltd.
Sk Global Chemical Co. Ltd.

SPAIN

Repsol Quimica S.A.

SWITZERLAND

Mapei Suisse S.A.
Sulzer Chemtech Ltd.

TAIWAN

Alpha Beta Global Tapes And
Adhesives Co. Ltd.
CTCI Group
LCY Group
Taiwan Polypropylene Co. Ltd.
YF Chemical Corporation

THAILAND

Hmc Polymers
Thai Plastic And Chemicals - Tpc

UK

KBR Limited
Mitsubishi Chemical Ltd.
Nippon Gohsei Ltd.
Nissho Iwai Corporation

USA

Dow Chemical Company
Jacobs Engineering
Lyondellbasell Group

VIETNAM

Nghi Son Refinery and
Petrochemical

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