

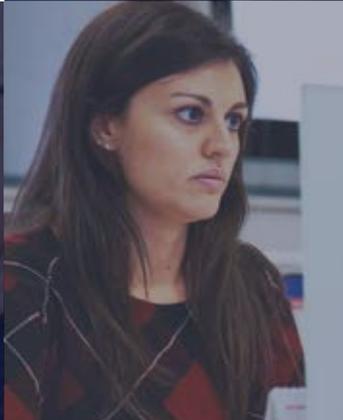


Totally Focused. Totally Independent.

Unique Company.
Unique People.

The world's largest independent
producer of alternators 1 - 5,000kVA







OUR UNIQUE COMPANY

TOTALLY FOCUSED. TOTALLY INDEPENDENT.

We only make one kind of product. That's why we've been totally focused on producing high quality alternators since we were established in 1947. Today, we have factories or distribution centres in every continent and we're the world's largest independent producer of alternators. Our independence is very important to us... and to our customers because we never compete with any of them in the end market. (We don't sell complete generator sets.) We believe that we're a totally unique company because of the special combination of qualities that set us apart from our competitors. We offer the highest levels of global support to our customers and we put them at the forefront of every single decision we make, which continually spurs us on in terms of our continuous development, product innovation and constantly evolving product ranges.

TOTALLY COMMITTED TO GLOBAL PRODUCTION

We manufacture the world's widest range of low voltage alternators 1 – 5,000kVA via our 'made for manufacturing' product design in Italy, the UK, China and India. Our network of factories is supported by wholly-owned subsidiaries across the globe who specialise locally in the sales, distribution and aftersales for all Mecc Alte products. This global support ensures that our customers get the assistance they need... wherever they are.

TOTALLY COMMITTED TO QUALITY

We've reached the highest possible quality standards in every area of design, production and sales. At Mecc Alte, our constant pursuit of quality begins well before the actual production process with careful checks on semi-processed parts and sample testing of electrical components. We build over 1,400 alternators every day... over 450,000 a year. We have a complete range of products and our production process is totally integrated. This ensures that every production phase, from the design and selection of materials right through to manufacture and aftersales assistance, complies with the strictest international and organisational standards.

OUR UNIQUE PEOPLE

We employ over 1,000 unique people throughout the world. Every one of them is totally committed to the global support that we offer to our customers... and to ensuring that every single alternator we produce meets the world-class standards that Mecc Alte is renowned for.



WORLD-CLASS ALTERNATORS

In 1947, my father, Mario Carraro, launched a repair workshop for electric motors in Italy. Today, we are a global group with over 1,000 employees, producing over 1,400 alternators a day across the globe.

We have proven expertise and experience in research, design, low-cost manufacturing and development capabilities. With manufacturing taking place in Italy, the UK, India and China, coupled with high market capabilities and a powerful worldwide capacity, we offer a fast and reliable service to our customers... all over the world. There are several reasons why we are now the leading independent manufacturer of world-class alternators.

We only make one kind of product

We're always totally focused on producing high quality alternators.

We're totally independent

We never compete with any of our customers in the end market.

We believe in the power of partnerships

We constantly and consistently aim to be the most reliable partner for all those companies working in the energy field.

We're strategically focused

We offer a single product range from 1 – 5,000kVA... from portable alternators to machines for heavy industrial use.

We do everything ourselves

We have complete control from the design and personalisation of our high quality products and every single component we use through to technical solutions and aftersales assistance.

These reasons and the strength of our customers, coupled with our complete dedication, go some of the way to explaining our continuous development.



Mr D Carraro, President

OUR INDEPENDENCE

Our total independence allows us to listen and continually react to the power needs and requirements of the market and, most importantly, our customers. Keeping our customers at the forefront of every decision that we make has spurred on our continual development and ever-evolving product ranges, as well as assisting in the development of positive reputability in the wider market, as the go-to alternator provider.



Mr M.R. Carraro



Mr P.E. Carraro

OUR GROUP

We are now a global group with activities in every continent, but we started life as a family business. Mario Carraro launched a repair workshop for electric motors in Italy in 1947 and eventually progressed to the production of small electric motors.

In the next decade, the company moved onto producing alternators and, in the early 1970s, things really began to take off. All brilliant ideas are very simple; in this case, Mecc Alte decided to concentrate its activities on a single type of product. This led to a progressive expansion of our production range and our share of the Italian market. In the 1980s, we opened our first overseas branches for sales and assistance, which paved the way for our growth in international markets. However, it was during the 1990s that our rapid and consistent rise in sales allowed our current production levels of over 1,400 alternators a day to be achieved.

We are a worldwide group with manufacturing and sales plants in Italy, the UK, China and India. Each facility is concentrated on the production of world-class alternators, with complete manufacturing in Mecc Alte SpA and Mecc Alte Power Products in Italy (1 – 5,000kVA), Mecc Alte UK in Great Britain (1 – 3,000kVA), Mecc Alte Haimen in China (7.5 – 3,000kVA) and Mecc Alte India in Pune India (6.5 – 420kVA). This network of factories is additionally supported by wholly-owned subsidiaries based in Australia, France, Germany, Singapore, Spain and the USA who specialise locally in the sales, distribution and aftersales for all Mecc Alte products. We have a vertically integrated production structure; we control everything we do from the lamination die manufacturing right through to the final electronics.

**MECC ALTE HAS GAINED SIGNIFICANT
EXPERIENCE ACROSS THE GLOBAL
MARKET SINCE 1947.**

**WE HAVE FACTORIES OR DISTRIBUTION
CENTRES IN EVERY CONTINENT
AROUND THE WORLD.**

STRATEGIC EXPANSION

As a company, we have won an estimated worldwide market share of over 20%. Working in a market dominated by international giants, we have proven capabilities competing with all major European, American and Asian multinationals.

Concentrating on a single product sector, we have achieved year-on-year growth and market success. This strategic decision has allowed us to attain the highest possible levels of specialisation, enabling us to offer the world's widest range of alternators: from 1 to 5,000kVA. We pride ourselves on our expansion and the fact that every single one of our components is controlled within our group, making us strongly positioned to further grow our operations worldwide.

**WE SPECIALISE IN SYNCHRONOUS
AND ASYNCHRONOUS ALTERNATORS.**

**WE HAVE OVER 20% OF AVAILABLE
WORLDWIDE MARKET SHARE.**



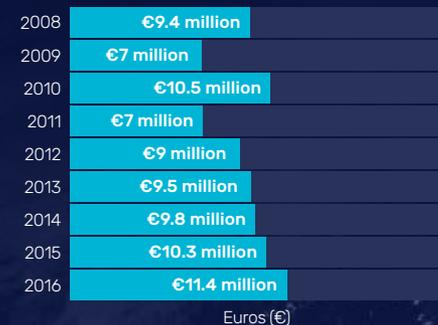
WORLDWIDE GROWTH

We support our rapid growth with continued reinvestment; last year's investments in India and China will see international expansion in Asia and the Near and Far East. Further global investment increasing the range manufactured in the UK, has further underlined our global capacity and ability to support all business. The recent addition of the Mecc Alte Power Products division has seen us move into high and medium voltages.

This increased global capacity ensures that we are able to support the growth of our customers, react to any market demands and ensure we can instantly realise any growth opportunities for us and our clients.

The latest investments have seen expansion of the product range and its manufacturing facilities and capabilities in Italy, expanding into high power products, hydro products and purpose-built facilities capable of manufacturing machines up to 10,000kVA.

NEW INVESTMENTS



INVESTING IN OUR FUTURE WILL INCREASE GLOBAL CAPACITY.

LATEST INVESTMENTS HAVE INTRODUCED STATE-OF-THE-ART MANUFACTURING OF HIGH POWER ALTERNATORS AND FACILITIES.

OUR TECHNOLOGY

Predicting the needs of the market has always been standard practice for us. That's why the group has its own in-house research division and why we have collaborated closely with the Engineering Faculty of Padova University for over 30 years. Constant research and experimentation allows us to construct machines that are considered smaller, lighter and more efficient than those produced by our competitors.

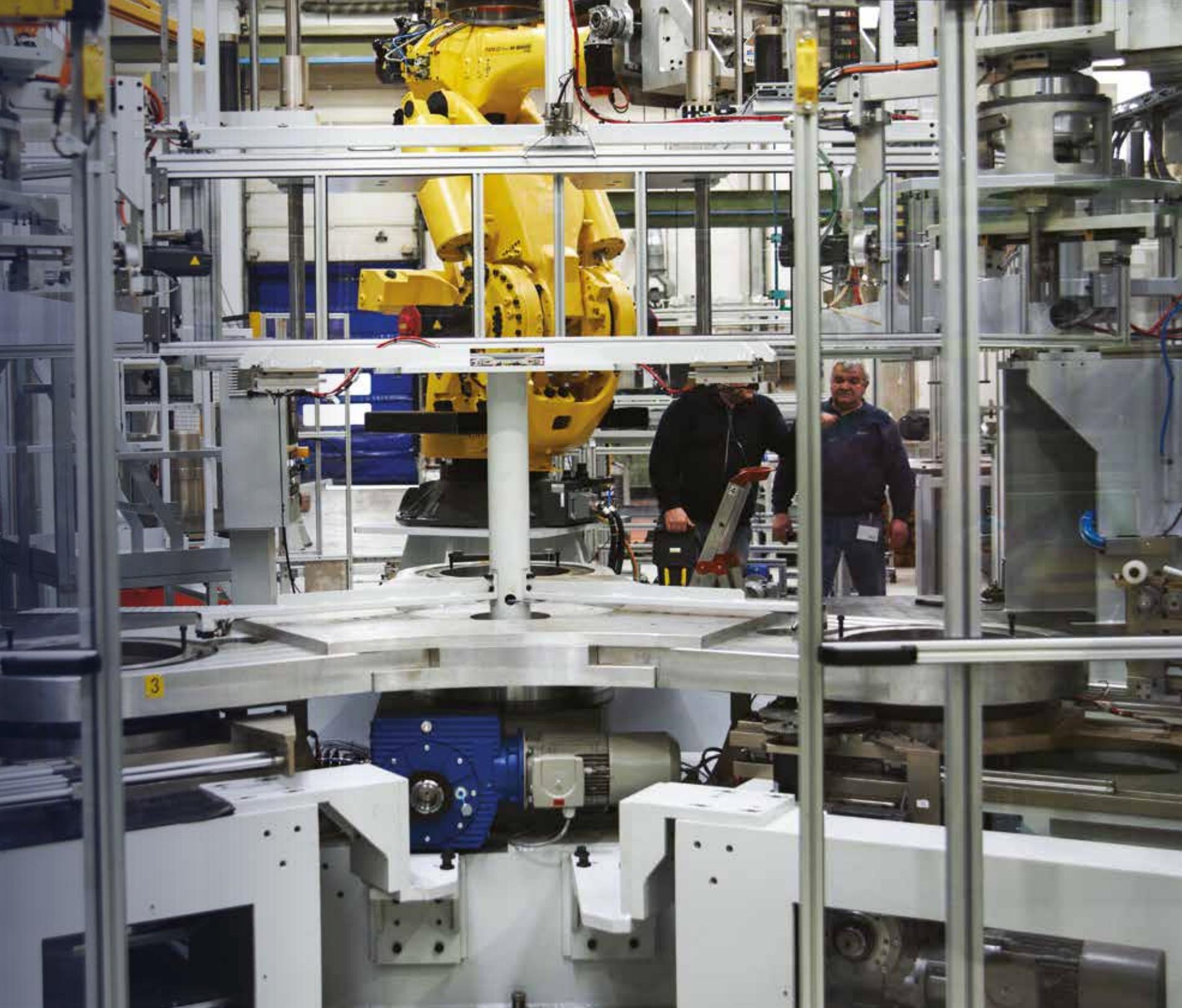
Operating at the cutting edge of design, Mecc Alte develops its mechanical components using solid design and utilises dedicated design software for electronic parts. Every alternator model is designed using simulations of finite element analyses.

We have an extremely well-equipped test laboratory and we are a co-founder of the Crei-Ven Electronics Industry Research Consortium – a body that promotes scientific activities and international collaborations.

**WE HAVE AN INTERNAL DIVISION
FOCUSING ON RESEARCH AND
DEVELOPMENT OF NEW TECHNOLOGIES.**

**WE HAVE BEEN COLLABORATING WITH
THE ENGINEERING FACULTY OF PADOVA
UNIVERSITY FOR OVER 30 YEARS.**





OUR PEOPLE

We continue to believe that our employees are our most important asset: professional, skilled, experienced and committed, they remain the critical reason for our success. Our products are so successful due to their high quality and reliability – this is because our people provide real added value.

We employ over 1,000 people throughout the world and we invest heavily into our ongoing training program to ensure that they are able to make a significant, ongoing contribution to our expansion.

**WE NOW EMPLOY OVER 1,000 PEOPLE
WORLDWIDE AND ARE EXTREMELY
DEDICATED TO CONTINUALLY INVESTING
IN OUR PEOPLE.**





OUR QUALITY

We have reached the highest possible quality standards in every area of design, production and sales. With us, the pursuit of quality begins long before actual production, with checks on semi-processed parts and sample tests on electronic components.

These tests are performed with rapid aging methods by means of alternating exposure to extreme temperatures. Our quality is enhanced during the production process, with computerised equipment making checks on electronic and electrical circuits. The high quality of our finished products is a result of a perfect combination – high performance and maximum reliability. That quality is certified by international bodies such as the Canadian Standards Association (CSA), the Underwriters Laboratories (UL) and Det Norske Veritas (DNV) and Bureau Veritas, further supported by our ISO 9001 accreditation from Registro Italiano Navale (RINA).

Every quality mark is a guarantee of the rigorous assessment of prototypes and a commitment to continuous audits by external inspectors to monitor product consistency – and product quality.

This quality assurance allows us to be proud of our products. Our products are now globally recognised. This high market acceptance has originated from a combination of effective marketing through our sales and distribution facilities, established training plans for our many customers, and consistently great aftersales service. We are a professional and responsible company and understand that a good

reputation breeds success. We also understand that our reputation depends on continually delivering high standards of support – whenever and wherever it is required. With an extensive global service and aftersales network, you can be assured that your product will be supported anywhere in the world.

Our quality is certified by international bodies and is supported by our ISO 9001 accreditation across the whole group. This quality assurance allows us to be proud of our products and gives you peace of mind knowing our alternators are built with the highest possible quality standards.

**WITH US, THE PURSUIT OF QUALITY
BEGINS LONG BEFORE THE START OF
THE PRODUCTION PROCESS.**





OUR COMMUNICATION

We demonstrate our capabilities via close collaborations with our partners. Communication is a vitally important part of this continuous process and, to ensure success, considerable time and resources are invested in establishing a close relationship with each and every one of our customers.

Mecc Alte always has a presence at international trade fairs and pays close attention to the markets to ensure it can support its customers in the best possible way. We have an extensive media communications programme, with advertisements in specialised trade journals and local publications.

Our carefully designed website contains a complete catalogue of products, detailed information and technical data sheets, along with a list of authorised assistance centres. The website is updated daily and ensures the latest product news and information is always available 24 hours a day, 7 days a week.

Complementing our website, a dedicated support section empowers our clients to be able to rapidly and technically support our products. It allows instant access to machine data: test reports, spare parts lists and build constructions, along with pre and post technical guides and videos. Most notably, the website hosts part of our product authenticity guarantees, safeguarding our customer against fraudulent products.

**MECC ALTE HAS AN EXTENSIVE
MEDIA COMMUNICATION
PROGRAMME WORLDWIDE.**

**OUR WEBSITE HAS A COMPLETE
CATALOGUE OF ALL MECC ALTE
PRODUCTS. WWW.MECCALTE.COM**

**A DEDICATED AFTERSALES WEBSITE
PROVIDES OUR CUSTOMERS WITH
COMPLETE CARE AND SUPPORT.
WWW.SUPPORT.MECCALTE.COM**



OUR PRODUCTION PROCESS

The process begins with carefully selected materials and components, thoroughly tested in compliance with ISO 9001 quality specifications.

Our production process covers a variety of mechanical processing phases performed by advanced, latest generation numerical-control machines. These machines combine exceptional performance and reliability in order to guarantee the highest levels of dimensional precision. Robots and other machines (designed and constructed to our own specifications to ensure only the highest standards of quality, safety and accuracy) carry out metalworking operations. Windings

are made by equally sophisticated systems and are impregnated using the VPI and other specialised processes. Every single Mecc Alte product is subjected to rigorous final trials performed by automatic equipment that memorises data and produces the necessary certification.

After painting and the application of CE and CSA marks, our products are ready to go out into the marketplace – accompanied by the relevant technical and test certificates.

Performance trials can be carried out on request under the supervision of the relevant certification bodies.

ANNUAL ALTERNATOR PRODUCTION

MECC ALTE

2011	334,606
2012	3211,221
2013	426,401
2014	440,309
2015	453,165
2016	455,430

PORTABLE

2011	214,443
2012	201,576
2013	238,626
2014	262,489
2015	263,000
2016	263,600

INDUSTRIAL AND MARINE

2011	111,209
2012	107,873
2013	148,900
2014	163,790
2015	166,790
2016	171,793

SPECIALISED ALTERNATORS

2011	8,954
2012	11,772
2013	12,200
2014	14,030
2015	14,100
2016	14,382

Alternators manufactured this year



OUR PRODUCTS

We have been highly successful in global markets by offering a wide and diversified range of alternators that are capable of satisfying and exceeding customer requirements. This success has been possible due to the inherent flexibility in the design of our standard products.

Today, Mecc Alte builds over 1,400 alternators every day, with a total of over 450,000 units a year. We have the widest range of low voltage 2 pole and 4 pole alternators, and our production process is totally integrated. This ensures that every production phase, from the design and selection of materials through to manufacture and aftersales assistance, complies with the strictest international and organisational standards.

Innovation and technological advancement is core to our growth and being at the forefront of technological advancement is key to our continued success.

WE MANUFACTURE OVER 1,400 ALTERNATORS EVERY DAY IN ITALY, THE UK, CHINA AND INDIA.

WE PRODUCE A WIDE AND DIVERSE RANGE FROM SMALL 2 POLE ALTERNATORS TO LARGE 4 POLE ALTERNATORS, MEDIUM AND HIGH VOLTAGE MACHINES AND ALSO MULTI-POLE UNITS FOR HYDRO APPLICATIONS.

OUR LEADING BRANDS



Industrial and Marine Products

Our main brand – a manufacturer and supplier of synchronous alternators 4 pole from 3.5kVA through to 5,000kVA and 2 pole alternators 5kVA to 2,000kVA.

3.5 – 5,000kVA

1 phase brushless – capacitor for light towers

Slipring/Compound in 2 and 4 pole up to 24kVA

Brushless compound in 2 and 4 pole to 98.5kVA with AVR option

Brushless AVR in 2 and 4 pole to 5,000kVA

400Hz up to 200kVA

6 pole alternators

Specialised technologies

Variable speed

Permanent magnet generators

Generators for renewable applications (water and wind turbine)

Mercurio DC system and hybrid systems for telecom applications 5kW to 15kW



Specialised Power Products

Focusing on MV and HV products for power generation and producing synchronous and asynchronous generators suitable for hydropower applications.

Low, medium and high voltage alternators, designed for demanding applications

- 1 – 5MVA
- LV – voltage up to 690V / MV up to 7,200V / HV up to 13,800V
- Separate circuit cooling by air or water is available

Hydropower alternators

- Synchronous alternators up to 10MVA, 380 – 15,000V, up to 32 pole, water or air-cooled, horizontal or vertical mounting
- Asynchronous alternators up to 700kW, low speed, water or air-cooled
- D2G – permanent magnet generators, steady speed without inverter up to 500kW



Portable 2 Pole Products 1 – 17kVA

A company that specialises in the volume manufacturing of small 2 pole portable units 1.2kVA to 17kVA.

1 phase brushless capacitor excited units with optional AVR or Brush + AVR

3 phase with slipring compound control or Brush + AVR



Welders and Specialised Products

A factory specialising in customised power solutions making tailor-made specialised alternators and welding generators.

2 and 4 pole welding alternators with auxiliary output

AC 130-220A and 200-500A DC

Special products tailored to meet customers' requirements

Water-cooled, DC, lighting, totally enclosed, variable speed, short units

Asynchronous alternators

Wound component parts

Permanent magnet generators





Mecc Alte SpA (HQ)

Via Roma
20 – 36051 Creazzo
Vicenza – ITALY
T: +39 0444 396111
F: +39 0444 396166
E: info@meccalte.it
aftersales@meccalte.it

Mecc Alte Portable

Via A. Volta
1 37038 Soave
Verona – ITALY
T: +39 0456 173411
F: +39 0456 101880
E: info@meccalte.it
aftersales@meccalte.it

Mecc Alte Power Products srl

Via Melaro
2 – 36075 Montecchio
Maggiore (VI) – ITALY
T: +39 0444 1831295
F: +39 0444 1831306
E: info@meccalte.it
aftersales@meccalte.it

Zanardi Alternatori srl

Via Dei Laghi
48/B – 36077 Altavilla
Vicenza – ITALY
T: +39 0444 370799
F: +39 0444 370330
E: info@zanardialternatori.it

United Kingdom

Mecc Alte U.K. LTD
6 Lands' End Way
Oakham
Rutland LE15 6RF
T: +44 (0) 1572 771160
F: +44 (0) 1572 771161
E: info@meccalte.co.uk
aftersales@meccalte.co.uk

Spain

Mecc Alte España S.A.
C/ Rio Taibilla, 2
Polig. Ind. Los Valeros
03178 Benijofar (Alicante)
T: +34 (0) 96 6702152
F: +34 (0) 96 6700103
E: info@meccalte.es
aftersales@meccalte.es

China

Mecc Alte Alternator Haimen LTD
755 Nanhai East Rd
Jiangsu HEDZ 226100 PRC
T: +86 (0) 513 82325758
F: +86 (0) 513 82325768
E: info@meccalte.cn
aftersales@meccalte.cn

India

Mecc Alte India PVT LTD
Plot NO: 1, Sanaswadi
Talegaon
Dhamdhare Road Taluka:
Shirur, District:
Pune - 412208
Maharashtra, India
T: +91 2137 619600
F: +91 2137 619699
E: info@meccalte.in
aftersales@meccalte.in

U.S.A. and Canada

Mecc Alte Inc.
1229 Adams Drive
McHenry, IL, 60051
T: +1 815 344 0530
F: +1 815 344 0535
E: info@meccalte.us
aftersales@meccalte.us

Germany

Mecc Alte Generatoren GmbH
Ensener Weg 31
D-51149 Köln
T: +49 (0) 2203 503810
F: +49 (0) 2203 503796
E: info@meccalte.de
aftersales@meccalte.de

Australia

Mecc Alte Alternators PTY LTD
10 Duncan Road, PO Box 1046
Dry Creek, 5094, South
Australia
T: +61 (0) 8 8349 8422
F: +61 (0) 8 8349 8455
E: info@meccalte.com.au
aftersales@meccalte.com.au

France

Mecc Alte International S.A.
Z.E. la Gagnerie
16330 St. Amant de Boixe
T: +33 (0) 545 397562
F: +33 (0) 545 398820
E: info@meccalte.fr
aftersales@meccalte.fr

Far East

Mecc Alte (F.E.) PTE LTD
19 Kian Teck Drive
Singapore 628836
T: +65 62 657122
F: +65 62 653991
E: info@meccalte.com.sg
aftersales@meccalte.com.sg



www.meccalte.com