TOTALLY COMMITTED TO

SATISFYING YOUR IRRIGATION REQUIREMENTS

The world's largest independent producer of alternators 1 – 5,000kVA
Our Unique Company

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 are the world’s largest independent producer of alternators. Our independence is very important to us, and all of 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 to continue our continuous development, product innovation and constantly evolving product ranges.

Our Unique People

We employ over 1,200 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.

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 subsidiaries is supported by wholly-owned subsidiaries across the globe and operation locals in the same, 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. Mecc Alte’s constant pursuit of quality begins 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 to the selection of materials, right through to manufacture and aftersales assistance, complies with the strictest international and organisational standards.
The ECP28/ECP32 range used in the irrigation market on pivot and fixed systems are typically the smaller belt-driven machines, normally 10kW to 25kW in power. They are brushless, self-excited with electronic regulation using the formidable Mecc Alte DSR regulator. The system has the Mecc Alte trademark MAUX auxiliary winding to give outstanding motor start performances, starting motors with impact loads up to three times the size of the alternator (allowing up to 35% transient power). With excellent HTBS (Mean Time Between Failures), the reliability is optimised without the need to worry about maintaining airgap on the main rotor, which uses the third harmonic to have high levels of power when starting motors. The voltage dip will vary according to the level of the impact load but typical TVDs would be 15% with 100% load which gives you protection for the following:

- 20 seconds at 30% of rated voltage
- 1 second at 50% of rated voltage
- 0.2 seconds at 80% of rated voltage

The MAUX system provides over 300% power for 20 seconds which is easily enough for most irrigation motors.

**PERFORMANCE INDICATORS**

High transient power for economic alternator selection

Low resistance (X”d) values to enhance motor starting (8-11%)

- 1% voltage regulation on the DSR regulator to satisfy a range -14% to +14%

Voltage recovery to within 3% of set voltage within 0.2 seconds

Sustained >300% short circuit support for 20 seconds with preset cut-out period for safety

Voltage adjustable on the DSR regulator to satisfy a range -14% to +14%

Valve-free characteristics - under-speed protection (voltage reduces proportionate to the rpm to limit excitation current)

Overload protection (operational after 30 seconds to avoid towing on motor starting)

TOTAL+ winding protection – a black severe environment protection on the main and exciter stators

**PROTECTION**

The ECP28 and ECP32 are IP23 protected, which gives you protection for the following:

- IP 2, flame larger than 12cm diameter
- IP 3, water spray falling at up to 60° from the vertical

Higher protection degrees such as IP45 are available upon request.

**MAIN ROTOR AND STATOR**

High reactance (x”q) values to enhance motor starting (6-9%)

- 1% voltage regulation through all steady state load conditions and inclusive of hot and cold variations

Voltage recovery to within 3% of set voltage within 0.2 seconds

- Sustained 1000% short circuit support for 20 seconds with preset cut-out period for safety

Voltage adjustable on the DSR regulator to satisfy a range -14% to +14%

Oversize bearings to have more options on voltage – 1ph and 3ph

IPx0 (open to 60° from vertical) Rugged construction able to withstand up to 5G in any direction

**EXCITATION SYSTEM**

The brushless excitation system takes the DC voltage from the DSR regulator according to load changes. The DC1 power is derived from the MAUX auxiliary winding within the main rotor, which uses the third harmonic to have high levels of power when starting motors.

**MOTOR STARTING**

Key to the irrigation application is the ability to accept large impact loads relative to the size of the alternator. The Mecc Alte system provides over 300% power for 20 seconds which is easily enough for most irrigation motors. The voltage dip will vary according to the level of the impact load but typical TVDs would be 15% with 100% load on, 20% with 200% load on and 35% with 300% load on.
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 due to 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 channels, established training programs for our many customers, and consistently good aftersales service. We are a professional and responsible company and understand that a good reputation breeds success.

We recognise that our reputation depends on continuously 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.