



Totally Focused. Totally Independent.

TOTALLY COMMITTED TO

SATISFYING YOUR IRRIGATION REQUIREMENTS

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 1,200 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.

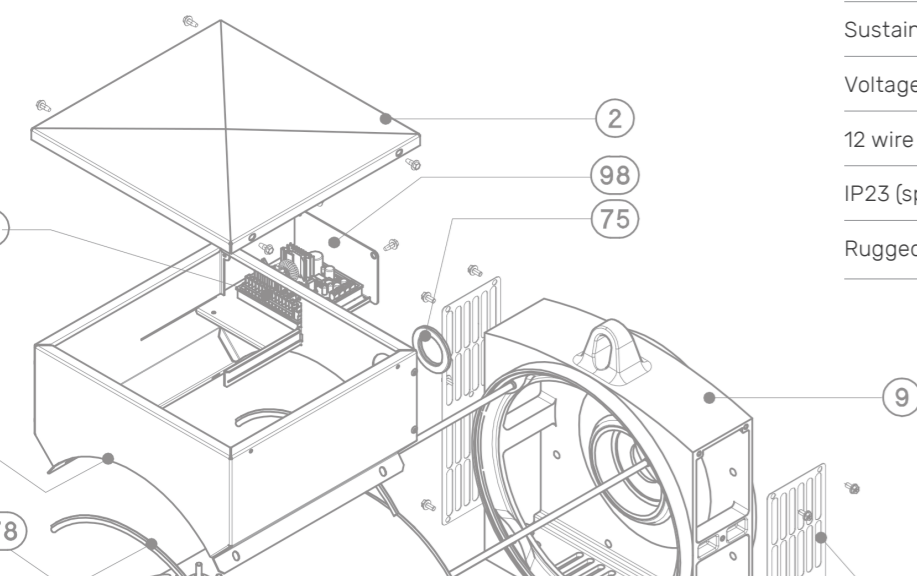
ECP28/ECP32 RANGE



The ECP28/ECP32 range used in the irrigation market on pivot and fixed systems are typically the smaller belt-driven machines, normally 10kW to 30kW 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 voltage excursion). With excellent MTBF (Mean Time Between Failure), the reliability is optimised without the need to worry about maintaining airgap on transformers, as with older, traditional machines.

PERFORMANCE INDICATORS

- High transient power for economic alternator selection
- Low reactance (x"d) values to enhance motor starting (8-11%)
- Volts/Hz characteristic – underspeed protection (voltage reduces proportionate to the rpm to limit excitation current)
- Overload protection (operational after 20 seconds to avoid tripping on motor starting)
- TOTAL+ winding protection – a black severe environment protection on the main and exciter stators with EG43 compound on main rotor
- +/-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 >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%
- 12 wire reconnectable to have more options on voltage – 1ph and 3ph
- IP23 (splashproof to 60° from vertical)
- Rugged construction able to withstand up to 5G in any direction



MAIN ROTOR AND STATOR

Impregnated using the latest trickle technology, the non-hygroscopic resin is added to the windings and then cured in the same process while rotating to ensure best coverage possible. The insulation materials used are Class H throughout. Copper used for the main windings is G2 with two layers of polyamide coating; the winding for the MAUX is G4 with four layers. Add to this the upgrade option of TOTAL+ to have black severe environment protection over the main and exciter stators, and EG43 compound over the main and exciter rotors, and you have a very high degree of protection against harmful particle ingress.

BEARINGS

Sealed-for-life, premium quality ball bearings are used throughout with oversize bearings at the driven end to accept the side loading in belt-driven applications. Rear bearing is outboard of the exciter for easier examination of rectifier assembly. For belt drive the maximum radial loads accepted are: ECP28: 4,000N. ECP32: 5,200N.

EXCITATION SYSTEM

The brushless excitation system takes the DC voltage from the DSR regulator according to load changes. The DSR power is derived from the MAUX auxiliary winding within the main stator, 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 MAUX 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, 25% with 200% load on and 35% with 300% load on.

PROTECTION

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

- IP 2_ Items larger than 12mm diameter
- IP _3 Water spray falling at up to 60° from the vertical

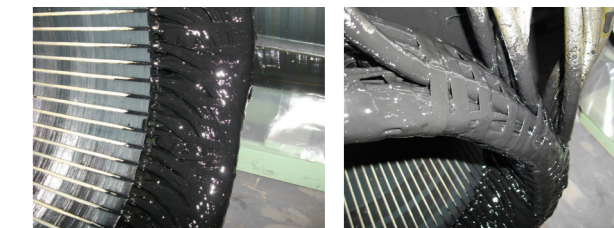
Higher protection degrees such as IP45 are available upon request.

Rating of MAC	Equivalent Mecc Alte Model	SKVA@35% dip
10kW	ECP28-S/4	75
12kW & 15kW	ECP28-M/4	100
20kW	ECP28-VL/4	135
25kW	ECP32-3S/4	175
30kW	ECP32-1M/4	240



TOTAL+

The optional TOTAL+ level of winding protection is recommended as standard for the irrigation alternators, adding protection against the particles that pass the IP23 protection. It is the ultimate solution to be used when the application or the environment is abusing the insulation of the generator. With this protection level, the grey EG43 varnish on main and exciter stator is upgraded to have a black severe environment protection. This acts as a physical barrier to moisture particles and chemical substances. The active rotating parts now have the EG43 added to further enhance protection.



Black severe environment protection



OUR QUALITY, SERVICE AND AFTERSALES

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 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 recognise 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.





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