

Finalist: 2026 Australian Bulk Handling Awards | TECO

Canonical: <https://electricmotors.teco.com.au/finalist-2026-australian-bulk-handling-awards/>

Details:

Rotating the World Sustainably & Reliably with TECO's Solutions TECO Oceania TECO Home Appliances TECO Energy Solutions About Us Case Studies Articles Spare Part Enquiries Distributor Log in CONTACT US 0 Cart

News

TECO Named a Finalist 2026 Australian Bulk Handling Awards

Posted on August 6, 2026

Update : On 16 September 2026, TECO won the 2026 Australian Bulk Handling Award for Excellence in Drive Systems and Power Transmission. Read the announcement .

TECO has been named a finalist at the 2026 Australian Bulk Handling Awards, in Excellence in Drive Systems and Power Transmission, for the TECO MV510 medium-voltage drive .

The TECO MV510 is a medium-voltage variable speed drive built and designed on the cascaded H-bridge multilevel topology, using low-voltage 690 V power cells in series fed by an integral phase-shifting isolation transformer. It drives standard medium- and high-voltage induction and synchronous motors directly, with no output transformer and no output filter required, from 250 kW to 10,000 kW across 2.4 kV to 13.8 kV.

Two international mining projects prove it in service. At a Gold Mine in Senegal, the TECO MV510 drives the SAG mill and Ball mill motors of an 11 kV grinding circuit, this utilises a single installed drive system to start the Ball mill and once up to full speed that is transferred onto the network supply, it then starts and fully controls the SAG mill on variable speed. At the Mine in Mexico, TECO ANZ supplied both the TECO MV510 drive and a TECO medium-voltage motor for the SAG mill, factory-tested and covered by an ongoing site support agreement. Both projects sit behind TECO's own engineering support, delivered on the ground in Senegal and Mexico and backed by the factory and local support.

The TECO MV510 in engineering terms

The TECO MV510 converts the incoming medium-voltage supply to DC voltage and back to a variable-frequency medium-voltage output through the power cells connected in series. Each cell is a low-voltage H-bridge running at 690 V, stacking the power cells builds the medium-voltage output as a near-sinusoidal, multilevel waveform. Because the output is close to a network sine wave, the drive runs standard motors without an output filter being needed, without the need to derate the motor output, and most importantly without the dv/dt insulation stress or harmonic torque ripple associated with two-level drives.

Parameter	TECO MV510 Medium Voltage Drive
Topology	Cascaded H-bridge multilevel, AC–DC–AC
Power cells	Low-voltage 690 V power cells connected in series

Transformer	Internal phase-shifting isolation transformer rated at Class H insulation (180°C)
Power range	250 kW – 10,500 kW
Voltage range	2.4 kV – 13.8 kV
Output frequency	0 – 120 Hz (0.01 Hz resolution)
Input power factor	Greater than 0.96
Input current THD	1.59% achieved in TECO testing (10 kV, 1,250 kW) against the IEEE 519 limit of 5%
Drive efficiency	Greater than 98% at rated load, excludes the transformer
Mill protection	Mill Asset Protection: frozen-charge protection, start Ball-run SAG (SBRS)
Motor types	Induction and synchronous motors, driven directly (no output filter and no derating required)

TECO MV510 Modular constructed cabinets with IP31 Protection complete with Fortress Interlocking safety for all cabinets and personnel

What sets the TECO MV510 solution apart

The points an engineer would check.

Clean power at the front end. The rectifier is a phase-shifted multi-pulse diode design, reaching up to 54 pulses at 11 kV. In TECO testing at 10 kV and 1,250 kW, the input-current total harmonic distortion measured only 1.59% against the IEEE 519 limit of 5%, with no separate input harmonic filter and no power-factor correction, and input power factor above 0.96. Harmonic compliance is designed and built into the drive rather than added around it.

Mill protection for grinding duty. The TECO MV510 includes dedicated Mill Asset Protection, with frozen-charge protection and start Ball-run SAG capability. These safeguards guard against structural damage to the mill shells and bearings during high-torque starts that the grinding circuits impose.

Serviceable at low voltage. The power cells operate at 690 V, so a cell can be exchanged under a standard local electrical licence, without needing high-voltage-endorsed maintenance clearance. That changes who on site can work on the drive, and more importantly, how quickly.

Common cells, small spares holding required. Power cells are common across the voltage classes at the same current rating, so a site holds one shared set of spare cells rather than a different spare for every drive rating, this saves the end user money and storage space.

Multi-motor control. A bypass and switching cabinet allows one drive to start a motor and transfer it to the network, or move its output between motors, this is the basis of the dual-mill control used at the Gold Mine in Senegal. Optional cell bypass and two independent control-power supplies support continuity which is a must on a remote gold mine location.

1. Gold Mine grinding circuit, Senegal

One drive installed on the SAG and Ball mills on critical gold-processing circuits.

The Gold Mine sits at south-east of Dakar in eastern Senegal. On its grinding circuit, a TECO MV510-JB0/270 rated 5,250 kVA at 11 kV drives the SAG mill and Ball mill motors ahead of the plant's

gold-processing stage.

The installation uses Start Ball-mill, Run SAG-mill (SBRS) control complete with a bypass switching cabinet. The SAG mill runs on variable speed from the drive, while the ball mill is started through the drive and then transferred to network supply at fixed speed. One installed medium-voltage drive starts and manages both mill motors of the circuit in the most optimal way.

Senegal installation	Detail
Site	Gold Mine, south-east of Dakar, Senegal
Application	Grinding circuit, SAG mill and Ball mill motors
Drive	TECO MV510-JB0/270 Rating 5,250 kVA, 11 kV, 270 A, forced-air cooled
Motor	2,800 kW, 11 kV 50Hz
Multi-motor control	SBRS via bypass switching cabinet: SAG on variable speed, Ball mill transferred to the line supply (network)
TECO on site	Commissioning 2024; on-site engineering support January 2026

TECO commissioned the drive in 2024 and has supported it on site since. During a January 2026 support site visit, the installation was reviewed under full production load: the 11 kV supply and the drive's output voltage, current and motor speed were confirmed highly satisfactory, and the drive was verified operating correctly in vector control, delivering optimised torque to the speed reference. TECO engineers from Australia and the factory worked alongside the end user site team and trained the operators in drive operation and maintenance.

TECO MV510 HDMI control screen snapshot, 6 January 2026

SAG and Ball mill line-up, switching successful, 48.56 Hz, around 10.4 kV and 183 A.

2. SAG mill, Mexico

A complete TECO drive-and-motor package, factory-tested and supported.

At the Mine in Mexico, TECO supplied a complete package for the SAG mill: a TECO MV510 medium-voltage drive and a TECO medium voltage Squirrel Cage Induction Motor in a Totally Enclosed Air-to-Air Cooled (TEAAC) design with forced cooling (IC616 or IC666). The MV510-K42/360 takes a 13.8 kV supply and drives the 1600kW mill motor stepped down to 4.16 kV through its integral dry-type isolation transformer, on the same 690 V multi-cell design, with drive efficiency above 98%.

Terronera installation	Detail
Site	Mine, Mexico
Application	SAG mill (grinding)
Drive	TECO MV510-K42/360-S00, 2,600 kVA, 13.8 kV input / 4.16 kV output, forced-air cooled
Motor	TECO medium voltage TEAAC Motor, 1,600 kW, 6 Pole, 4.16 kV, squirrel-cage induction motor type
Scope	Drive and motor package built and supplied by TECO
Factory test	Witnessed FAT to IEC and IEEE standards

The drive passed a customer-witnessed factory acceptance test to IEC and IEEE standards in October 2022, covering the transformer and system protection, control and communications, running with the motor, and emergency stop, before shipment. A 2025 remote and onsite technical support agreement is in place for the Mine, with monthly remote support and an annual site visit, TECO support committed in writing for the installation.

Senegal and Mexico add to the TECO MV510 international, hard-rock mining references on two continents: an 11 kV dual-mill grinding circuit and a 4.16 kV SAG mill drive-and-motor package, each designed, built and supported directly by TECO.

Local engineering, global reach

TECO Australia and TECO New Zealand operates as a centre of excellence for these medium-voltage drives, with local application engineering, commissioning and support, extended warranty, and a local engineering team that travels internationally, backed by TECO's factory engineering.

On the ground, that has meant commissioning, on-site optimisation and performance verification, and operator training, with successful onsite support delivered as far afield as Mexico and Senegal. At Senegal, a 24-hour TECO technical support contact is posted on the drive itself; at the Mine in Mexico, that commitment is written into a 2025 remote and onsite technical support agreement, with monthly remote support and an annual site visit. For a site selecting a medium-voltage drive on a production-critical circuit, the available support model is as much about the product, as it is about the hardware.

TECO MV510 – Safety, efficiency, production and cost

Safety

Cell maintenance is carried out at low voltage 690 V under a standard electrical licence rather than needing to have a high-voltage endorsed licence, the system can be proven at low voltage before it is energised at 11 kV. Soft starting removes the mechanical and electrical shock of starting a mill direct on line.

Efficiency

Running the SAG mill on variable speed matches grinding speed to the duty. The multi-pulse front end held input-current THD to 1.59% in TECO testing against the allowable 5% IEEE 519 limit, with power factor above 0.96 with no input filter or correction equipment required, the drive efficiency is above 98% excluding the transformer.

Production

One drive starts and manages both mill motors through SBRS switching. Dedicated Mill Asset Protection, frozen-charge protection and start Ball-run SAG, guards the mills against structural damage during high-torque starts. Optional cell bypass and redundant control power support continuity, plus TECO's on-site engineering support keeps the grinding circuit running and the operators are equipped to run it.

Cost

There is no separate input harmonic filter and no power-factor correction to purchase, install or house. Common power cells across the voltage classes keep the spares holding small, and the medium-voltage line-up is compact for its rating. No separate external transformer required, these typically require oil sampling on a regular basis, with the TECO MV510 system the transformer is a dry type and is internal, therefore no need to do any maintenance around this item.

The TECO MV510 puts a fully rated medium-voltage drive on the hardest duty in a bulk-handling production plant, starting and speed-controlling grinding mills, with measured harmonic performance, dedicated mill protection, low-voltage serviceability and multi-motor flexibility. It is proven here on two international gold-mining projects, in Senegal and Mexico, each supported on site by TECO engineers from Australia and backed by the factory. A very capable drive and the support to keep it running: that is what this submission puts forward, with valuable Gold being king at present, reliability and quality is the key to product success.

Proven on site, recognised by the industry

The nomination really belongs to the engineering, sales, product managers and support people who put these drives in and keep them running. Sabodala in Senegal and Terronera in Mexico are a big part of that story: two tough mining sites where our drives, and our people, have done the job.

Winners are announced at the gala on 16 September in Melbourne.

Fingers crossed for the night, and good on everyone who got us here.

[Prev](#)[Previous](#) [Next](#)[Next](#) [Related posts](#) [TECO Wins at the 2026 Australian Bulk Handling Awards](#)

TECO has officially won the 2026 Australian Bulk Handling Award for Excellence in Drive Systems and Power Transmission. After being announced as a finalist earlier this year, we're now delighted

[Read more](#) [TECO Australia and New Zealand Retains Best Places to Work Recognition in 2026](#)

There's a reason walking into a TECO office doesn't feel like stepping into a typical workplace. For the second year running, that culture has been recognised nationally: TECO Australia and

[Read more](#) [TECO Australia, Billion Watts and Tun Green Power Partner to Invest in Australian Solar and Energy Storage Projects](#)

TECO Australia & New Zealand (TAC), a subsidiary of TECO Electric & Machinery Co., Ltd. (TWSE: 1504), Billion Watts (BW), a subsidiary of Billion Electric Co., Ltd. (TWSE: 3027), and

[Read more](#)

© Copyright 2025 TECO Pty Ltd

[Products](#)

[Electric Motors](#)

[Variable Speed Drives Solutions](#)

[Low Voltage Motors](#)

[Medium and High Voltage Electric Motors](#)

[Low Voltage Variable Speed Drives](#)

[Medium Voltage Drives](#)

[Invicta Vibrator Motor](#)

[Motor Controls](#)

[IoT - MHM and Smart Motor](#)

[Soft Starters](#)

[Sitemap](#)

[Customer Service](#)

[Frequently Asked Questions](#)

[Online Enquiry](#)

[Sales T&C](#)

[Privacy Policy](#)

[Teco](#)

[Our Story](#)

[Contact us](#)

[Sustainability](#)

[News](#)

[Technical Articles](#)

[Glossary](#)

[Mobile App](#)

[Modshop](#)

[Social](#)

[LinkedIn](#)

[Youtube](#)

<https://electricmotors.teco.com.au/wp-content/uploads/sites/53/2026/05/ISO9001-Intertek-SAI-Global-Certificate-QEC3088-Expiry-25-May-2029.pdf> <https://electricmotors.teco.com.au/wp-content/uploads/sites/53/2026/08/ISO45001-Intertek-SAI-Global-Certificate-0185118-Expiry-22-August-2027.pdf> Enquire Now Selectors Preferred Service Center Enquire Now Selectors Preferred Service Center

<https://electricmotors.teco.com.au/contact-us/> tel: +61297658118

<https://electricmotors.teco.com.au/contact-us/> tel: +61297658118

+61 297 658 118

[Enquire Now](#)

[LinkedIn](#)

[YouTube](#)

[Skip to content](#)