



PRODUCT BROCHURE • REV 1.2 • OCTOBER 2026

✉ ORDER

PEG® tools, accessories & O&M — supplied and supported in Africa

Everything an EPC or asset owner needs to install, test, maintain and optimise a Jurchen Technology PEG® East-West ground-mount plant — sourced, landed and supported by CatalystGrid Energy.

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jaws

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tools

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solution

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PEG® installation tools

Hand-held tools only — no piling rigs. Models below are tested or approved by Jurchen Technology (PEG Tools Rev06, 2026).



A Hammer drills — rod ramming

≈9 kg · impact energy ≥9 J · SDS-Max

- DeWalt DCH773Y2 · Makita DHR400PG2U
- Milwaukee M18 BLHX-502X · Hilti TE 60-22 (Nuron)
- Any SDS-Max hammer meeting the spec, fitted with a PEG impact attachment



B Post drivers — hard ground

≈12 kg · 20–45 J · PEG reducing sleeve required

- Atlas Copco LPD-RV (hydraulic)
- Titan PGD3200 (petrol)
- Battery backpack post driver



C Earth auger — anchor rods

≥2.96 kW (4 PS) · only JT-tested augers

- Bluebird T170 HO (Honda) — JT 600225; with JT handle extension 600710
- Ergonomic handle adapter — JT 600757 (not yet CE certified)
- Drives the JT insert tools for ND14/ND16 anchor rods



D Crimping (pressing) machines

Only these three are certified for PEG plates

- Novopress ACO203 — JT 600696 · 2.8 kg · radial · ND14/16/20
- Milwaukee M18 BLHPT / 2922-20 FORCE LOGIC™ · radial
- Burndy PAT750LIL-CB · 7.1 kg · axial · ND14/16



E Cordless angle screwdrivers

Module clamping — modules ≥1,134 mm wide

- Milwaukee M12 ONEFTR38 digital torque wrench (13.6–135.6 Nm)
- Milwaukee M12 FHIR14LR ratchet · Makita DFL303F (10–30 Nm)
- DeWalt DCD740NT angle drill



F Torque limiters & hex sockets

Protects module frames — set to the module maker's torque

- KS Tools 3/8" torque-limiting adapters, 18 Nm / 25 Nm
- Bernstein 1/4" 18 Nm · X-4 Perf-A-Torq adjustable
- KS Tools 6 mm hex bit socket, extra short (3/8" or 1/4")

Adapters, insert tools & jaws

Genuine JT wear parts and adapters that turn standard power tools into PEG installation tools.
Quote JT article numbers when ordering.

Earth-auger insert tools (anchor rods)

JT Art.	Description
600176	Bluebird T170 HO insert-tool adapter
600170	Stihl BT360 insert-tool adapter (legacy units)
600757	Ergonomic handle adapter, Bluebird T170 HO
600719	Anchor-rod insert tool with flange, 850 mm, ND16
600720	Anchor-rod insert tool with flange, 1,500 mm, ND16
600166	Anchor-rod insert tool with flange, 850 mm, ND14
600167	Anchor-rod insert tool with flange, 1,500 mm, ND14
600591	Insert-tool extension 0.4 m
600592	Insert-tool extension 0.8 m
600726	ND16 insert-tool adapter nut
600728	ND20 insert-tool adapter nut
600472	Hexagon screw tool ISO 4017 – M12×30
600452	Hexagon nut tool ISO 4032 – M12 (welded-nut rods)
600168	Manual screw-wrench handle — pull-out tests only

SDS-Max impact attachments (rod ramming)

JT Art.	Description
600053	Impact attachment ND14
600054	Impact attachment ND16
600055	Impact attachment ND20
600714	WERHE impact attachment ND16 (Ø20.2 × 165 mm)
600715	WERHE impact attachment ND20

Pressing jaws — wear parts

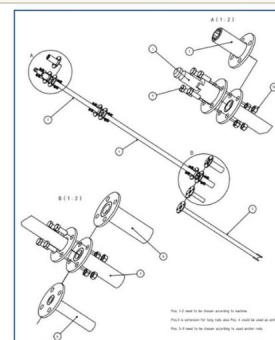
JT Art.	Jaw
600236	ND14 NP, radial tools
600237	ND16 NP, radial tools
600238	ND20 NP, radial tools
600235	Jaw for axial tools (Burndy)

Only JT jaws are approved — not the tool maker's own jaws. Budget one jaw per ≈10,000 crimps (radial) or 6,000–8,000 (axial).



Impact Attachments

SDS-Max impact attachments — ND14 / ND16 / ND20 and WERHE heads



Explosion drawing of the insert tool

Insert tool assembly: adapter, extension and flanged insert for the anchor-rod disc



PEG® accessories

Foundations, clamps, cable management and ground cover that complete a PEG® block. Data sheets and manuals: jurchen-technology.com/downloads



PEG® rods — standard & anchor

- **Standard rods ND16** — DIN 488 rebar, 1,200–1,800 mm, rammed with hand tools; $\approx 80 \mu\text{m}$ zinc, up to $\approx 140 \mu\text{m}$ for corrosive soils
- **Anchor rods ND16** — screw disc $\varnothing 80 / 150 / 250$ mm for soft soil, sand, landfill, brownfields and shallow foundations
- Welded-hex-nut or pin-hole disc versions to suit the insert tool; final depth set by on-site pull-out tests



Module clamps

Centre clamp with 8 piercing jaws earths every module through clamp, top plate and rods. Edge clamps close each row. Modules must be approved for corner clamping.

PEG®: Installation of Rods and Modules

3) Plate Installation/Crimping

- 1 Ground plate (installed at ground level on any rammed rod)
- 2 Top plate (installed at top of long rod)
- 3 Down plate (installed at top of short rod)
- 4 Crimping tool & 5 crimper jaws detail



Plates & frame parts

Ground, top and down plates ($\approx 20 \mu\text{m}$ zinc) crimped onto the rods — no bolts, no welding. Shipped flat-packed for low freight cost.

Under Array Design and Cable Management



Cable management

- Under-array aluminium cable trays (SA-made)
- Module cable clips — JT 600230
- UV-stable cable ties; Starlock M8 washers

1,500 V

DC • IP68 • TÜV

JuCon® DC cabling

Jurchen's German-made DC harness system with vulcanised watertight joints and a 25-year design life.

Ground cover sheet

Water-permeable, non-flammable geotextile laid under the PEG® tables to stop weed growth. 4–6 year guarantee — often >10 years in PEG shade — with a typical payback around 18 months against mowing.

Spares & consumables kit

Per-project spares packs — clamps, plates, rods, jaws, clips and fasteners — sized by CGE from the PEG bill of materials and landed with the main shipment, so site teams are never waiting on a part.

Pull-out test (POT) tools

On-site pull-out tests fix the final ramming depth and let Jurchen engineering issue the project static calculation and a firm offer.

1

Set out

Test grid across soil zones from the geotech report.

2

Install

Ram standard rods and screw anchor rods to trial depths.

3

Pull

Lever hoist loads each rod; crane scale logs peak force.

4

Report

Results to JT engineering → depth, rod type, static calc.

Standard POT kit — contents

Qty	Item
30	PEG anchor rod ND16, Ø80 mm disc, 1.19 m (test rods)
30	PEG standard rod ND16, 1.19 m (test rods)
1	SDS-Max hammer drill (e.g. DeWalt D25501K) + WERHE ND16 impact attachment, JT 600714
1	Bluebird T170 HO adapter, JT 600176 + ND16 insert tool 1,500 mm, JT 600720
1	Manual drilling insert with flange, JT 600168
1	Lever hoist — Yale UNOplus 0.75 t
1	Ratchet chain hoist — Mitari MRT 32, WLL 3.2 t
1	Digital crane scale Dini Argeo DFWL 2.5 t + shackles, in case
1	IGEL frog clamp 1,500 kg, 10–25 mm
1	Torque wrench (Monochrom 5122-1) + 6 mm hex sockets
1	Charger, cable ties, transport case — ≈90 kg gross, one pallet

Kit contents mirror the Jurchen Technology tool shipment to South Africa (April 2026). Earth auger (Bluebird T170 HO) supplied separately where anchor rods are tested.



Buy, hire or have CGE test

- Purchase the full kit for in-house testing
- Hire a kit for a single campaign
- CGE / Bluestone field team runs POTs and soil tests and submits results to Jurchen

PEG® mowing solution — RAYMO

The vegetation answer Jurchen Technology specifies for low, dense PEG® tables.



RAYMO TORPEDO robot + R42 FLEX mowing deck

Remote-controlled, all-wheel-drive, zero-turn carrier just ≈50 cm high — it drives under and between PEG® rows where ride-on mowers and tractors cannot go.

≈1,500
m²/h

mowing rate, one operator

6–8 h

runtime, hybrid · 4–5 h
fully electric

≈50 cm

chassis height for under-table access

238 kg

robot with deck — low ground pressure

Why RAYMO on PEG®

- Operator stands clear of modules and DC cabling
- PowerSwap: hybrid or full-electric cartridges, swapped in about a minute
- 4WD and low centre of gravity for slopes and wet ground
- Interchangeable heads: flail, mulching, rough-cut, sickle bar, inter-row disc
- Emission-free in electric mode; auto-drive under development

Supply options through CGE

- Outright purchase — robot, deck, battery/hybrid packs, charger
- Bundled into a Bluestone Service Group O&M contract
- Spares, blades and operator training on commissioning

Complementary vegetation control for PEG® sites

Ground cover sheet

Permeable geotextile under the tables; ≈18-month payback.

Pre-seeding

Low clover and fescue sown ≥4 months before construction.

Crusher-dust layer

≈30 mm compacted basalt dust suppresses growth.

Approved herbicide

Only products cleared by Jurchen — some attack zinc coatings.

PV module cleaning tools

PEG® tables are low and continuous — so they can be cleaned fast from the walkway, by hand, by robot or with rotary brushes.



MANUAL · JURCHEN TECHNOLOGY · JT 600584

PEG® Gal-In cleaning system

Stainless-steel frame that rides on the PEG® table with an Unger brush and water feed. Two workers pull it across the block with a rope — no ladders, no walking on modules.

865 modules/h with 2 workers

≈2.5 h per MWp (450 W modules)

18 kg · folds to 1 × 0.4 m

Widths to suit the module: 1,134 mm and 1,303 mm landscape, 2,384 mm portrait.



ROBOTIC · GEVA-BOT (ISRAEL)

PEG® Patroller cleaning robot

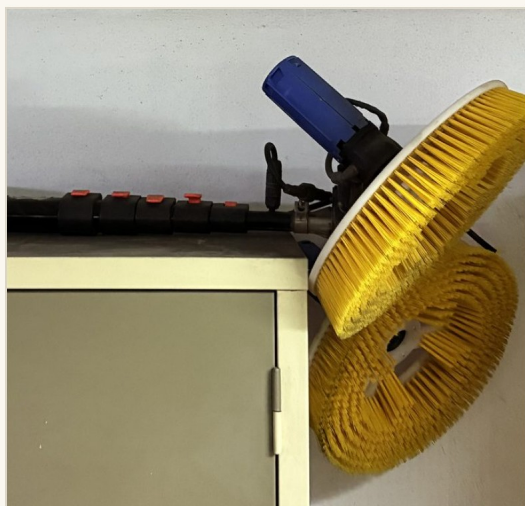
Battery-powered robot built for PEG® rows. Placed on the table from a mobile cart, it travels the row on its own and brushes the modules clean, leaving operators free to move the next unit.

2,384 mm portrait version

Swappable battery

Shipped in a safe box

≈30 working days to ship



SEMI-MANUAL · WATER-FED

Double rotating-brush (rotary) cleaners

Twin counter-rotating brush heads on a telescopic carbon pole, driven by water pressure or a cordless motor. The operator cleans two to three module widths per pass from the walkway.

- Brush widths ≈420–1,020 mm; up to ≈350 m²/h (water-driven heads ≈700 rpm at 100–120 bar)
- Soft nylon bristles; pair with a deionised-water filter for spot-free results
- In service on the Nylstene 720 kWp PEG® reference site, Limpopo

Small & mid sites

Rotary brush or Gal-In, run by the site team.

Utility scale

Gal-In crews plus Patroller robots on high-soiling blocks.

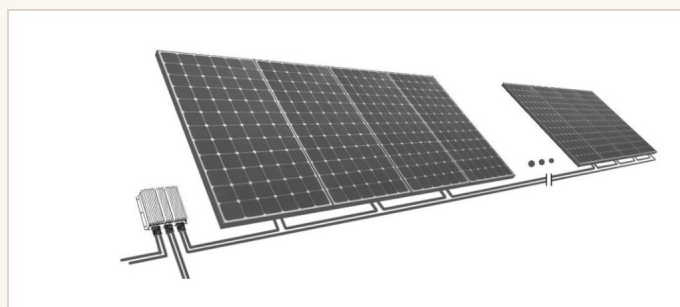
Water-scarce sites

Ask CGE about low-water brushing regimes.

Ampt DC string optimisers



DC/DC converters mounted in the array that run maximum-power-point tracking on every pair of strings and deliver power at a **high, fixed DC-bus voltage**. Less current means less copper, fewer combiners and higher-power inverters — so the plant costs less on day one and yields more for its whole life.



up to 25%

fewer combiners / disconnects

up to 25%

fewer home-run cables

up to 40%

more power from the same inverter

2 : 1

DC:AC ratios and beyond, within spec

Product range

Model	System voltage	Output current	Output power
i50	600 – 1,500 V	32 – 50 A	15 – 70 kW
i32	600 – 1,500 V	20 – 32 A	11 – 45 kW
i20	750 – 1,500 V	16 – 20 A	9.3 – 28 kW
i13.5	600 – 1,000 V	12 – 13.5 A	5.9 – 12.2 kW
i12	600 V	12 A	4.8 – 6.8 kW

Four ways to use Ampt

Optimise new PV plants

Lower total system cost, higher lifetime yield and LCOE.

DC-coupled storage (D2C / D2B)

Direct-to-Battery removes the battery DC/DC converter; Direct-to-Converter halves its power stage.

Repower existing plants

Recover mismatch losses, re-use cables and combiners, add DC capacity.

Monitoring & O&M

Wireless string-level data to SCADA pinpoints faults without truck rolls.

Ampt + PEG® + BESS

Paired with dense, low-cost PEG® East-West arrays, Ampt's fixed-voltage DC bus makes DC-coupled storage simpler and cheaper — a natural fit for the solar-plus-BESS projects across CGE's African pipeline.

- Inverter-agnostic; fan-free, no electrolytic capacitors
- Independently evaluated by DNV
- CGE supports system design and project intake

One partner from pull-out test to ten-year O&M

Accredited PEG® agent

Commercial & Distribution Agent for Jurchen Technology across Africa and the Islands — genuine JT parts, article numbers and warranty.

Landed, not ex-works

CGE consolidates tools, spares and racking into one shipment, handles export documents, freight, duties and delivery to site.

Field-proven in Africa

PEG® reference sites including Evander 27 MWp (Mpumalanga) and Nylstene 720 kWp (Limpopo).

Install, test, maintain

Bluestone Service Group delivers POTs, installation supervision, commissioning, cleaning and mowing.

Right tool, right spec

Only JT-approved hammers, augers, crimpers and jaws — protecting the structural warranty and insurance.

Buy, hire or service

Every product line is available outright, as a hire kit, or bundled into a CGE service contract.

DOCUMENT CONTROL

Rev	Date	Change
1.0	15 Oct 2026	First issue — 7 product lines
1.1	15 Oct 2026	Document number, revision and issue date added to every page
1.2	15 Oct 2026	Order-by-email button added to every page

Doc CGE-BR-001 · Current revision 1.2 · Issued 15 October 2026 · Supersedes Rev 1.1 · Owner: Colin Cloete

REQUEST A QUOTE

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✉ ORDER NOW

