

Technic 48" x 18"Ø Automated, Modular, Barrel Plating Line - 35 Stations



Stock No	BAK500
Manufacturer	Technic
Year of Manufacture	2015
Condition	Brand New, Unused, Current Model
Work Envelope (WxDxH mm)	18"Ø x 48" Barrels (1220mm x 460mmØ)
Process Stages	35 Process Stations
Other Info	Allen-Bradley PLC/HMI
Location	Connecticut, USA

Description

Unused and never installed, this Technic automated plating system, offers 35 process stations, 12 electrolytic plating stations. With a capacity for up to 10 loads per hour, as currently configured.

The finishing system is complete with three servo-controlled transporters/hoists, Allen-Bradley PLC/HMI, 18 plating barrels, rectifiers, filtration, drying and fume extraction – factory packaged and ready for immediate deployment.

Stop!

Take a minute to read the detail.

These plating lines are the real deal. The features included are high quality, well thought out and ready now.

Even better these plants are modular so are installation friendly, reducing costs significantly.

This plating system was built by **Technic**, a leading global supplier of high quality finishing equipment and analytical control systems to the semiconductor, electronic component, printed circuit board, industrial finishing, and decorative industries for more than 80 years. Technic is also a major supplier of engineered metal powders to the solar industry.

This system is currently located in the USA, having been manufactured at Technic manufacturing site, but is available to be installed worldwide due to Technic Inc's experience across **North America, Europe and Asia**.

The plant was moved to the end user's site but never installed due to a change in production contacts and the parties involved are now seeking partial recovery of costs by the sale of this plating system.

What Makes This A Premium Plating Line? Features & Benefits

- **Unused & never installed** – Complete system, factory packaged and ready for shipment.
- **High production capacity** – Designed to process up to 10 loads per hour with 12 electrolytic plating stations.
- **35 station process line** – Extensive capacity for high throughput production.
- **Complete modular package** – Pre-installed electrical wiring and plumbing minimises site engineering and installation requirements.
- **Three overhead transporters/hoists** – 1,500lb / 750kg lifting capacity, stainless steel legs and polypropylene belt lifts.
- **Precision hoist positioning** – Servo-encoder positioning for accurate, repeatable movement.
- **Allen-Bradley PLC control** – Automated system control with HMI interface.
- **Heavy duty support structure** – Floor-mounted, bolt-together steel structure approx 115' long x 13' wide x 12'6" high (35m x 4m x 3.81m)
- **Robust polypropylene tanks** – 1" (25mm) thick, fusion-welded polypropylene construction with external reinforcement on all but one tank.
- **12 electrolytic plating stations** – Each with 1,000A / 20V air-cooled modular switch-mode rectifiers for high-capacity plating.
- **Dedicated electrocleaning** – Two electrocleaner tanks with 1,000A / 12V air-cooled modular rectifiers and steel anodes.
- **18 plating barrels** – 48" x 18"Ø (1220mm x 460mmØ), with plastisol-coated (chemical resistant) structures and automatic hoist pickups.
- **Efficient rinsing system** – Counterflow rinsing with adjustable water flow controlled through the HMI and Dwyer flow meters.
- **Integrated fume extraction** – Push-pull exhaust system with fume scrubber for effective process ventilation.
- **Controlled tank heating** – Electric immersion heaters with liquid-level safety controls.
- **High capacity DC electrical** – All tanks include electrified tanks busbar-connected at both ends for up to 1,000A DC.
- **Specialist solution filtration** – Two Mefiag 6500 horizontal disc filter systems, one serving each six-cell electrolytic tank.
- **Integrated drying** – Two Desco 2318 electrically heated centrifugal dryers supplied with four polypropylene baskets.

Tanks & Equipment - Preamsembled

- **Technic-manufactured tanks** – Rigid, defect-free construction using materials specified for each process.
- **Heavy-duty polypropylene construction** – 1" (25mm) walls, bottoms and rims, with fusion-welded construction and encapsulated structural steel reinforcement.
- **Secure tank saddles** – Stainless steel fixings, with polyglass/polypropylene saddles for non-electrified tanks and cast bronze for electrified applications.
- **Process-specific drainage & heating** – Tank drains and heating elements sized to the specified requirements, with a 4-hour heat-up target from 65°F (18°C) using 480V/3-phase/60Hz supply.
- **Nickel cooling system** – Mains water fed cooling coils with solenoid control, also supplying rinse tanks as required.
- **Standard tank dimensions** – 62" wide x 36" deep (1,575mm wide by 915mm deep), with front-side plumbing.
- **Corrosion-resistant finish** – Mild steel exteriors and support frames finished with epoxy paint.
- **Operator safety** – Emergency pull-cord system positioned along the operator side.
- **Automatic brightener dosing** – Amp-hour controlled nickel brightener pumps, one per nickel tank.

Automation

Transporters/Hoists

The system includes three Technic overhead, underhung inboard transporters, designed for reliable, low-maintenance operation with a **1,500 lb (750kg)** lifting capacity. Constructed from shot-blasted and epoxy-coated structural steel, the hoists feature 304 stainless steel leg assemblies, servo-driven rack-and-pinion travel and servo encoder positioning.

Key features include polypropylene belt lift assemblies, inductive proximity switches for travel and safety limits, anti-collision protection and a bath-occupied safety system to prevent loads being lowered into occupied stations. Each hoist also includes visual safety indicators, a handheld RF control unit and an up-barrel rotator assembly.

Hoist Support Steel

A structural steel floor support system approximately 115 ft long x 13 ft wide x 12 ft 6 in high (35m x 4m x 3.81m), designed to support the hoists and e-chain systems along the plating line. The structure includes upright columns, crossover beams, adjustment angles, trolley and drive tracks with gear rack, and diagonal bracing. All components are cut and fabricated as required, then cleaned, primed and finished with a two-part epoxy coating for durability.

E-Chain Cable System

The system includes three complete e-chain systems with cable track and cabling designed to support hoist movement along the full length of the plating line. Each system includes entrance glands and terminal junction boxes, with individually marked cables at both ends to simplify identification and field installation.

Transporter Control Centre System

The automated hoist control system is built around an **Allen-Bradley PLC** with servo-driven travel and encoder-based positioning, providing precise and reliable control of the hoist system. A PC-based HMI provides a clear interface for monitoring and operation, including **hoist status, fault messages, bath temperatures and rectifier controls**.

- **Allen-Bradley PLC** with I/O rack, CPU and power supply.
- Servo drives and encoder positioning for accurate hoist movement.
- PC-based HMI for system monitoring and control.
- Timeway storage and editing for up to 10 programmes.
- One programmed timeway included, with additional programmes able to be created by the end user.

- Three operating modes – fully automated, semi-automated and manual/jog.
- Lockable main disconnect, fuses and control transformers for safe system operation.

Factory Assembly – Tank Module

The tank module is factory-assembled on a robust, acid-resistant epoxy-coated structural steel frame, with flexible PVC protection between the tanks and base to minimise corrosion. Tanks are securely fixed using 304 stainless steel hardware, with all process piping, drains, water feeds, push-air lines and electrical connections pre-installed, labelled and routed to convenient junction points.

The modular design includes stainless steel pipe supports, drip shields, drain and water headers, push-air systems, barrel rotators and hard-piped filters, with split tank bases and couplings allowing straightforward transport and site reassembly. Nickel tanks can be configured to operate independently or together, while independent brightener feed pumps with amp-hour control provide accurate chemical dosing.

Exhaust & Ventilation System

A complete PVC fume extraction and ventilation system designed to serve 7 process tanks at 32,208 CFM (55 m³/h), incorporating a push/pull arrangement to efficiently capture airborne contaminants. The system includes corrosion-resistant PVC exhaust hoods and ductwork, a Technic MW-100-35-3-SC fume scrubber, recirculation and pH control systems, and a high-capacity 50 HP centrifugal exhaust fan.

Additional equipment includes a dedicated high-pressure push blower, PVC push ducts and headers, exhaust stack, vibration isolation, stainless steel duct supports and a central NEC-compliant master control panel providing individual motor controls, overload protection and system monitoring. The scrubber incorporates high-efficiency packing and mist elimination to support effective fume treatment and controlled discharge.

Rectifiers

The system comprises three air-cooled multi-output DC rectifier cabinets, providing high-capacity, reliable power for industrial plating applications. The package includes one 2-output D480 cabinet rated at $\pm 12V$ / 1,000A per output and two 6-output D480 cabinets rated at 12V / 1,000A per output, all housed in robust NEMA 12 enclosures.

Featuring modular MS-Series switch-mode rectifiers, the systems provide low ripple, independent circuit protection and integrated polarity reversal on the 2-output unit. The plug-in design allows individual rectifiers to be quickly accessed, isolated, replaced or serviced without disrupting other outputs, while efficient forced-air cooling and automatic fan-speed control support reliable continuous operation.

Barrels

The system includes 18 heavy-duty 18" x 48" (460mm x 1220mm) plating barrel assemblies, sized to support a 57-minute plating cycle. Each barrel features a robust ½" (12.5mm) thick textured sidewall, 1" (25mm) thick drop-in covers with snap locks, polypropylene hangers, dangler contacts and plastisol-coated superstructure with automatic pickups. Supplied as a complete Super barrel configuration, ready for online operation.



Spin Dryers

The system includes two DESCO 2318 spin dryers, each fitted with a 12 kW electric heater for efficient drying. Each unit features an integrated timer, adjustable audible horn and strobe warning light, and is supplied with four polypropylene baskets for handling components.

Filters

The system includes two 6,500 GPM disc filter systems, providing high-capacity filtration for efficient process solution management.

Motor Control Centre

The system includes stand-alone NEMA 12 motor control enclosures with flange-mounted disconnects, motor starters, fuse protection and HMI interface for controlling the filters, pumps and barrel rotator motors. The barrel rotation can be programmed to operate only when occupied, helping optimise system operation and energy use.

Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.