



Glass Plant Equipment Manufacturers

KTG ENGINEERING

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KTG Engineering is part of the TECO Group, one of world leaders in glass furnace design and melting technology.

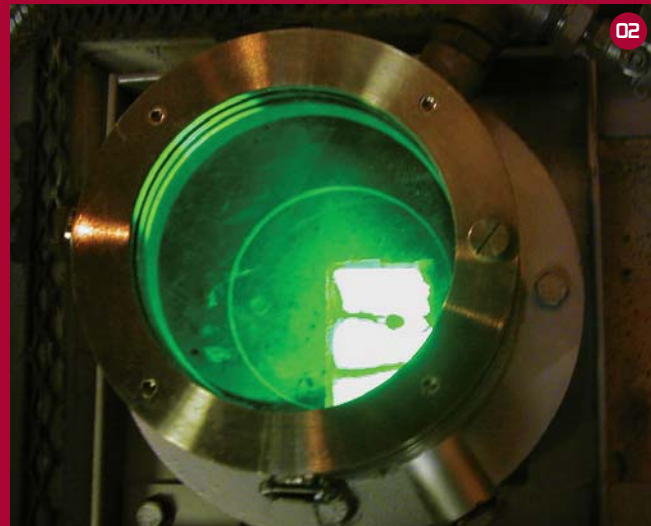
We manufacture high quality items for glass furnaces and whether we are providing existing products or installation services, we are well-placed to respond to your needs

- Total flexibility in order to meet your exact requirements
- Resources and experience in all glass types and technologies
- Commitment to building a long term relationship with you



01 On site services

Amongst our services we provide maintenance and commissioning of equipment, risk assessments and method statements.



02 Spy hole covers

Completely sealed units available with clear or green tinted lenses.

For more information, please contact us:

Telephone: +44 (0) 114 275 9955
Email: sales@ktgengineering.com
www.ktgengineering.com

Products and services:

SX electrode holders

We've supplied thousands of our SX electrode holders worldwide.

- Nose manufactured from solid high temperature resistant alloy
- Waterways precision drilled into nose ensures no welds at the front of the holder
- Cooling close to glass ensures a good seal
- Horizontal or vertical installations
- Electrodes advanced as often as required
- K-type thermocouple drilled into nose
- Excellent service record in all types of glass.

Other types of electrode holder are available including scroll welded, splash cooled and gas purged. We can also manufacture to your bespoke design.

Technical services

Our expert engineers work with clients throughout the world.

- Drilling bottom or sidewall blocks and fitting:
 - electrodes
 - drains
 - glass temperature and measuring equipment
 - bubbler tubes
- Installation of equipment:
 - boost systems
 - bubbler systems
- Advancing electrodes
- Replacing electrode and electrode holders
- Maintenance and commissioning of equipment
- Risk assessments and surveys
- Emergency call outs and repairs worldwide.

Boost systems

We design and construct electric boost systems to meet client melting capacity, emission reduction and glass quality improvement requirements.

- Single, two or three phase
- Bottom and side wall applications
- Wide range of frequencies
- Can be installed with any furnace design
- Electrode materials vary depending on type of glass and installed at hot spot or under blanket.

Bubbler systems

We offer various solutions to deliver proven results.

Manual bubbler system

Bubbler frequency controlled using individual panel mounted flow meters separate "holding" air supply to each bubbler to help prevent blockage.

Pulse bubbler system

Precision control of bubble size and frequency; individual solenoid valves mounted close to the bubbler tubes are PLC controlled, enabling various bubbling patterns.

Bubbler tubes

High temperature alloy sheath with ceramic twin-bore inner. Other multi-bore designs available including water cooled.

Controllable drain system

This system has proven to be simple, effective and economical for different glass types with clients globally.

- Used to remove zircon rich glass and other deposits
- Electrical current passed between orifice plate; partner electrode controls flow
- High temperature alloy orifice plate
- Scope of supply usually includes drain and burner system, drain cables, SCR controlled transformer and automatic control panel
- Furnace, throat or forehearth applications.

Spy hole covers

There are many benefits to be gained from using a sealed KTG spy hole cover and installations are entirely suited to client needs.

- Fewer flue gas emissions due to sealed spy holes preventing ingress of external air
- Reduced health and safety risks for operators
- Fully sealed and for use with all types of furnaces
- Available with clear or green tinted lenses and flexible window size
- Lens assembly easily removed for cleaning
- Typical air cooling supply 8 mbar at 25m³/hour
- Uses fan air; can be used with oxygen if required.

Screw batch chargers

We supply water-cooled screw batch chargers for use on oxyfuel, conventionally fired, electric melt or mixed melt furnaces.

- Various sizes available up to 120 TPD
- Water cooled nose from high temperature resistant stainless steel
- Easily replaceable high wear manganese steel screw flight sections
- Constant torque variable speed drive unit
- Electrical isolation of nose and flight shaft from boost systems
- Conforms to EU standards and directives.

Electrodes

Dry molybdenum electrodes provide a cost effective way to apply direct electrical heating to glass.

- Non-advancing, for use in low wear areas
- Anti-oxidation coatings available
- Vertical or horizontal installations
- Waterboxes can be provided for added security.

We also manufacture bi-metallic electrodes, as well as tin oxide electrodes and connectors, mainly used for heavily oxidised glass to prevent contamination.



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Part No.

Serial No.

Test Date

Approved

03 KTG Engineering Electrode Holder
Unique because of its one-piece design the SX Electrode holder is used in boost systems.



KTG Engineering

ONE GROUP - SIX COMPANIES

As part of the TECO Group, Toledo Engineering, Tecoglas and KTG Systems can offer complete capabilities in glass furnaces of all types, with KTG Engineering supporting this activity as glass plant equipment manufacturers. Zedtec are the TECO Group specialists in forehearth and working end technology. EAE Tech provides high quality industrial automation engineering services and custom control systems.

The TECO Group has been serving the world's primary glass manufacturing industry since 1927.



www.teco.com

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TECO[®]

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