

BispheraTBA Phoenix



The result of the 15 years long MEI experience



BispheraTBA Phoenix is the new MEI lens edger perfect for any kind of small and big lab, offering excellent throughput, great flexibility, and best-in-class quality control capability, unique features in the overall edging machinery scenario.

The machine is completely renewed in the exterior design, mechanical structure, and user interface. The footprint remained the same, but the active parts and the mainframe have been redesigned.



INCREASED PRODUCTIVITY

New hardware configuration and twin spindle technology that increase the overall throughput



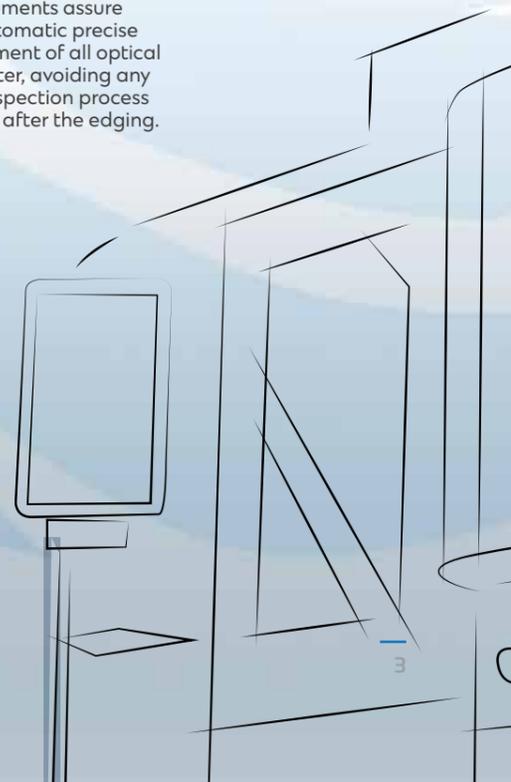
GREAT FLEXIBILITY

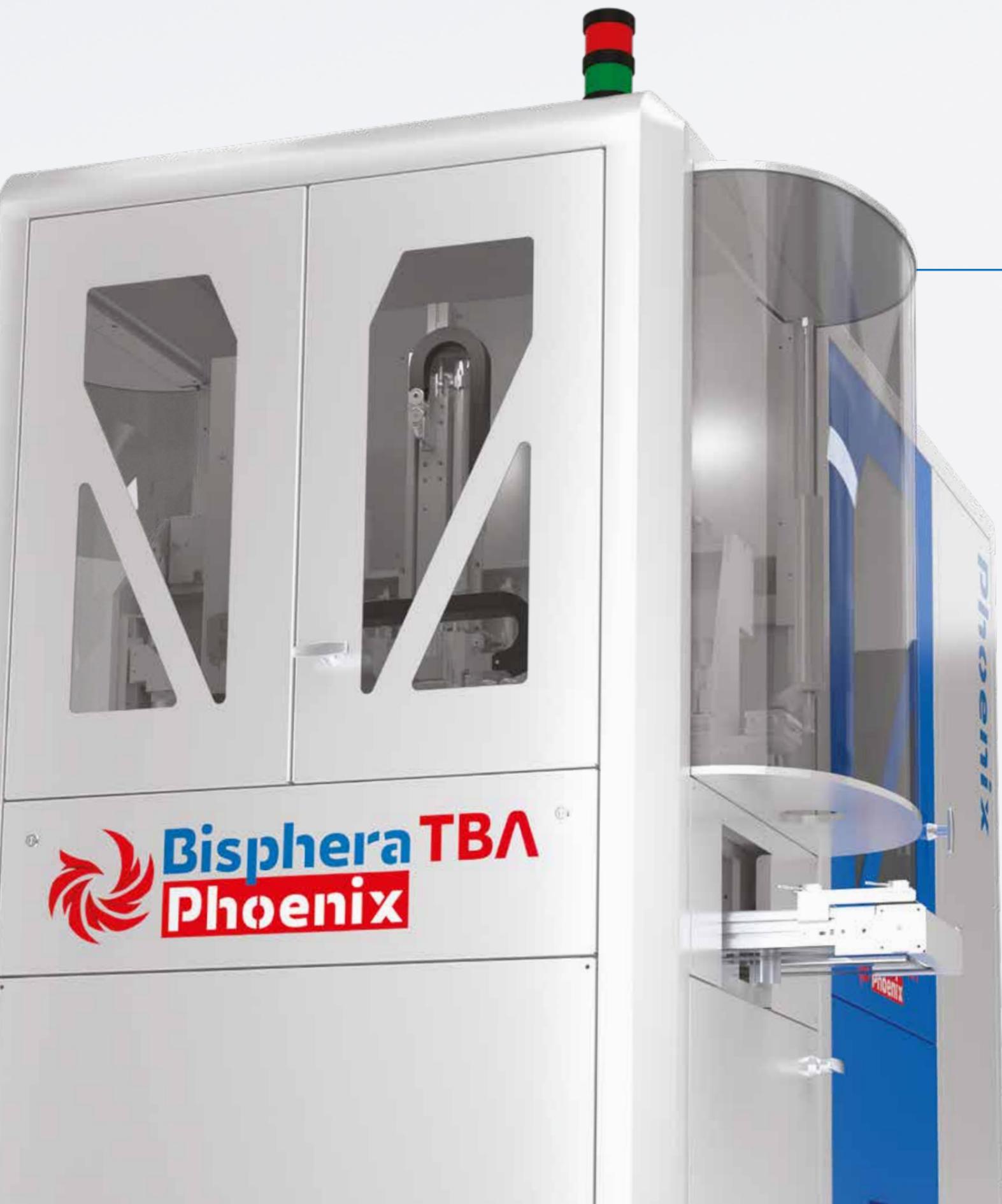
Totally independent edging stations, able to cut lenses of different shapes at the same time, offer the maximum flexibility



TOTAL QUALITY CONTROL

The built-in inspection instruments assure the automatic precise measurement of all optical parameter, avoiding any other inspection process before or after the edging.





PRODUCTIVITY

Excellent throughput

| Two edging heads, two spindles each |

The excellent throughput of the new **BispheraTBA Phoenix**, improved than on the previous version, is based on two original MEI concepts. The winning system of two edging heads cutting two lenses at the same time has been improved with a second spindle on each head; the new spindle is equipped with the tools necessary for the polishing process and comes to action only in case of polished jobs, without tool change.

With the MEI concept of double arms manipulator, all loading and unloading operations take place while the edging is in progress without affecting the machine throughput.

All the pick-up devices and lens holding systems have double grippers to improve the machine throughput and keep pace with the fastest cycle time. Even with the most complex progressive lens requiring several optical measurements, the inspection cycle time does not overcome the edging cycle.



TWO EDGING HEADS



DOUBLE ARMS MANIPULATOR



DOUBLE GRIPPERS



FLEXIBILITY

The best flexibility

In order to offer you great flexibility, the left and right edging heads of the new **BispheraTBA Phoenix** are now totally independent, to be able to cut in parallel also jobs having the two lens shapes really different or to mark disparate logos on the lens with the engraving tools.

The classic Bisphera tool changing system that allows adding tools with special profiles, provides the flexibility needed for the special jobs and engraving features.



INDEPENDENT EDGING STATIONS

Totally independent edging stations, able to cut lenses of different shapes at the same time



TOOL CHANGING SYSTEM

All the flexibility you need for special jobs and engraving features

QUALITY CONTROL

Total Quality Control. Like no other.

Edging is **just one part** of the RX lens mounting process. Making sure that your customer receives the quality they deserve requires **several inspection processes**, before and after edging. This impacts labor costs, work space and delivery time, but this was before the **BispheraTBA Phoenix**.

The **BispheraTBA Phoenix** performs all needed **quality inspection** tasks **without increasing** the edging cycle, **analyzing 100%** of the production, minimizing the rejects and automatically applying the needed correction.

Inspection before edging

The **BispheraTBA Phoenix** built-in inspection instruments assure the automatic precise measurement of all optical parameter, avoiding any other inspection process before edging.



BACK VERTEX POWER MEASUREMENT



BUILT-IN MULTIPPOINT SHACK-HARTMANN FOCOMETER



TRANSMITTANCE VERIFICATION*



POLARIZATION VERIFICATION & ALIGNMENT



AVOIDANCE OF EDGE LACQUERING DEFECTS AND EDGE PROCESS ENGRAVINGS



GRADIENT VERIFICATION & ALIGNMENT



CENTRAL THICKNESS VERIFICATION

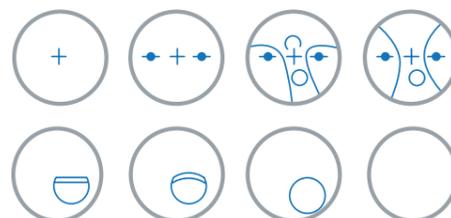


BLANK CUT-OUT AUTO CORRECTION

*This feature requires a MEI successful evaluation and preliminary test. MEI is available to test samples for a feasibility report.

Lens centering ability

The BispheraTBA Phoenix performs the perfect centering of any kind of single vision or progressive lens, including single vision freeform, progressive, multifocal and plano lenses.



Final verification by the 4QC inspection system (OPTIONAL)



RX

S=-2.75 S=-1.75
C=+0.45 C=+1.25
ADD=2.05 ADD=2.10



LENS POWER VERIFICATION



CENTERING VERIFICATION



AXIS VERIFICATION



SIZE AND CIRC VERIFICATION



The state of the art.

The best for inspection and edging of prescription lenses.



MEI MILLING TECHNOLOGY
Extreme precision with no rework



DRY CUT
No water to cut lenses



SWIVELING OPERATOR INTERFACE
22" full frame capacitive multi-touch screen with video keyboard and ergonomic wireless mouse



USER FRIENDLY SOFTWARE INTERFACE
With the intuitive Eyegoal interface the job can be configured in a simple and rapid way



CUTTING EVERY KIND OF EDGE
Bevel, rimless, nylon, drilling, polishing, safety bevel, T-bevel, step back, ... with every inclination (up to base 16)



EASILY EDGE SPORT FRAMES (ACCESSORY)
Thanks to Shape Finder EVO, the optical device for the detection of shapes and holes in a lens



JOBTRACKING 4.0 (ACCESSORY)
Functions of data supervision, productivity analysis, and overall lab efficiency with JobTracking4.0



-60% DUST EMISSIONS
Innovative roughing tools reduce dust emissions by 60%



SILVER POLISHING
New polishing process guarantees higher quality, shorter cycle time and improves the tool's cycle life



NO TWISTING OR CRAZING
Double Drive system eliminates risk of twisting or crazing (from lenses with hydrophobic, oleophobic or AR coatings)



IONIZERS
One ionizer in the edging area and one in the inspection side to help the scraps evacuation



AUTOMATIC CALIBRATION (ACCESSORY)
With DCU EVO, without interrupting the production



MEI GUARANTEED LONG TERM QUALITY
Minimal costs for maintenance, downtime and service visits, due to the machine's industrial design



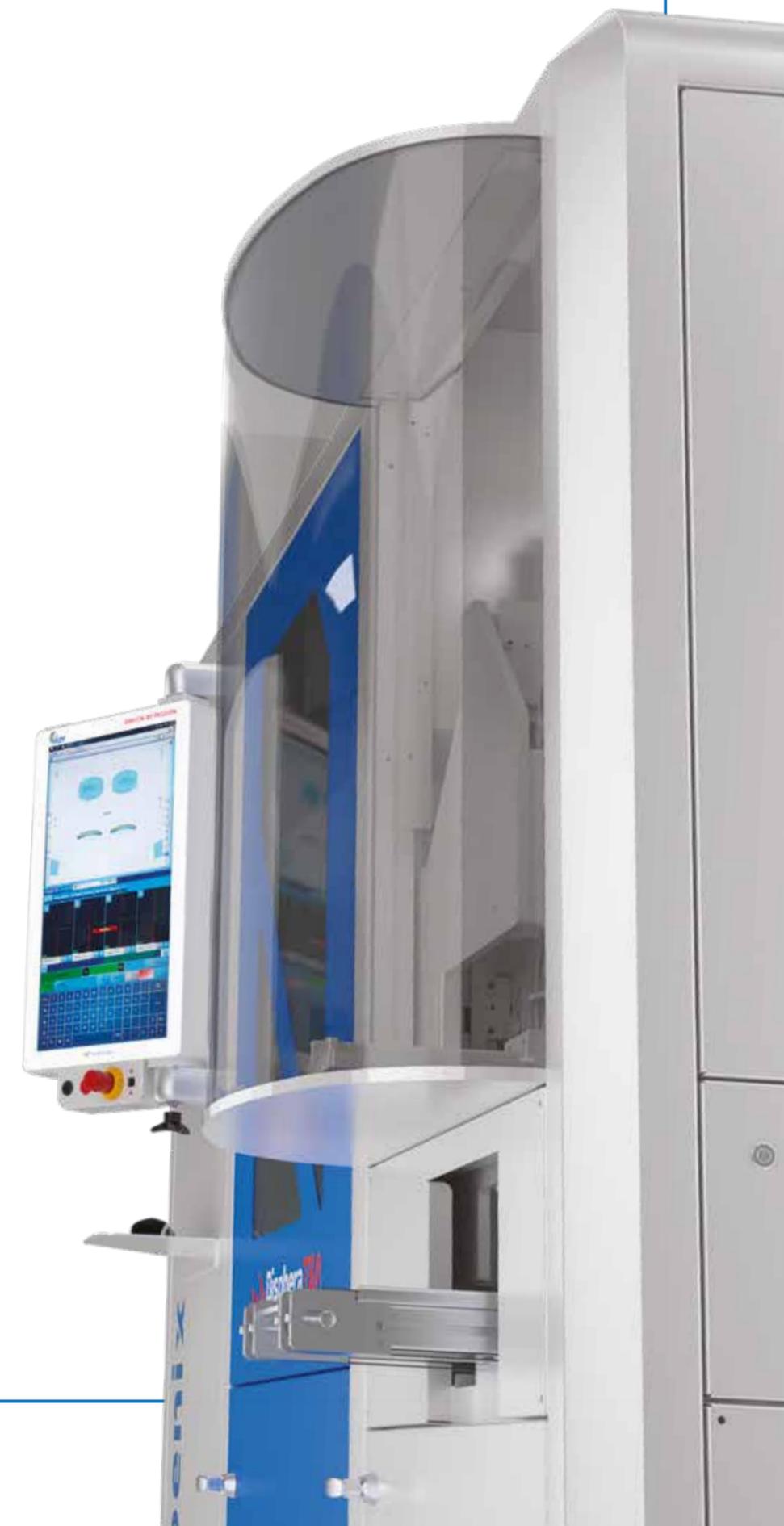
STANDARD OMA/VCA COMPATIBILITY
In addition to customized MEI/OMA tags. Easy and optimized connection with LMS



CALIBRATION-FREE DESIGN
Save time with the calibration-free design of spindles, heads and tracers.



SMART BEVEL FUNCTION
Bevel position is automatically adjusted according to frame base and varying thicknesses of lenses



Certifications



Better together.

All the accessories.

EZLINE

The EZLine automated conveyor system provides a flexible job management system that minimizes floor space when connecting several MEI machines. The EZLine handling system is controlled by a central PC and server that is integrated with each edger.

STACKERS/DESTACKERS

Stacker and Destacker allow MEI machines to work with autonomy through automated loading of stacks of trays. The system is composed of two different devices placed on either side of the machine. Compressed-air devices introduce the trays automatically into the machine for processing.

DCU EVO

The DCU EVO (Direct Calibration Unit) is an optical measuring system used to calibrate automatically the MEI edgers' cutting tools and lens axis. With DCU EVO you can calibrate the machine without interrupting the production.

SHAPE FINDER EVO

The ShapeFinder EVO is an optical scanning device used to detect lens shapes and holes. Its exclusive design specifically avoids all the typical inaccuracies of the camera based units currently on the market.

JOB TRACKING 4.0

JobTracking4.0 combines the functions of data supervision, productivity analysis and overall lab efficiency, driving your production process to excellence by taking advantage of Industry 4.0 technologies.

4QC

With the 4QC inspection system after edging you can verify lens power, centering, axe, size and circ. The new system allows you to certify that every lens meets required specifications in terms of optical parameters and shaping processes.

POLARIZER AXIS GAUGE

The Polarizer axis gauge unit allows the machine to read the polarized lenses and edge them without any manual intervention.

CSA / UL COMPLIANCE

Equipment and accessories manufactured with CSA / UL approved material and in compliance with CSA / UL specifications.

EZLine Automatic Feeder.



The EZLine automated conveyor system provides a flexible job management system that minimizes floor space when connecting several MEI machines. The EZLine handling system is controlled by a central PC and server that is integrated with each edger.

EZLine **EZLine**
DUAL

Datasheet



Technical Data



Materials

All organic lens materials, i.e. CR39, Polycarbonate, High Index and Trivex



Max lens blank dimension

Ø 50 to Ø 85 mm



Min box dimension

Bevel: 24x30 mm (vertical)
- 26x30 mm (inclined)
Rimless: 22x30 mm (vertical)
- 24x30 mm (inclined)



Lens base

Standard: up to 09
Special: up to 16 - Limitation are possible depending on real front radius, thickness, shape and decentration. (MEI is available to test samples for a feasibility report)



Lens clamping system

Double Drive system, TBA loading system



Communication

Standard VCA/OMA protocol RS232 or Ethernet



Security certificate

Signed CE manufacturer certificate



Dimension

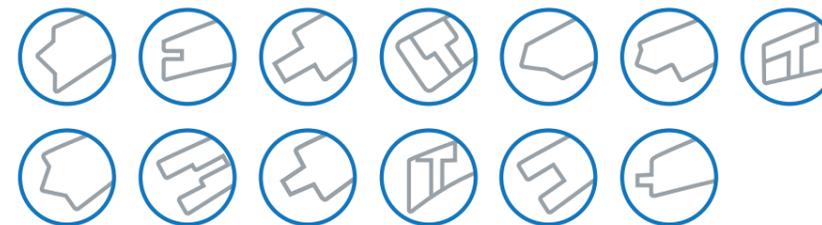
BispheraTBA Phoenix 1900x2400x2350 (h) mm (75x95x93 inches)
BispheraTBA Phoenix with Ez-Line module: 2050x2720x2350 (h) mm (81x107x93 inches)
BispheraTBA Phoenix with Ez-Line Dual module: 2050x3000x2350 (h) mm (81x118x93 inches)



Weight (approx.)

1500 kg BispheraTBA Phoenix
1605 kg BispheraTBA Phoenix + EZ-Line module
1630 Kg BispheraTBA Phoenix + EZ-Line Dual module

Examples of kind of edge



External Supplies

Power Supply 400V 3 phase, 50/60 Hz
208V 3 phase, 50/60 Hz

Air Supply 6 bars (87-101 psi), min capacity 900 l/min

Scrap Collection Air flow 20 m/sec, Min capacity of 1,400 m³/hour (800 CFM) connection pipe Ø 150 mm (5.9 inches)





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