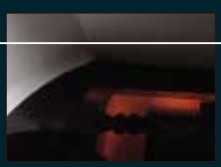
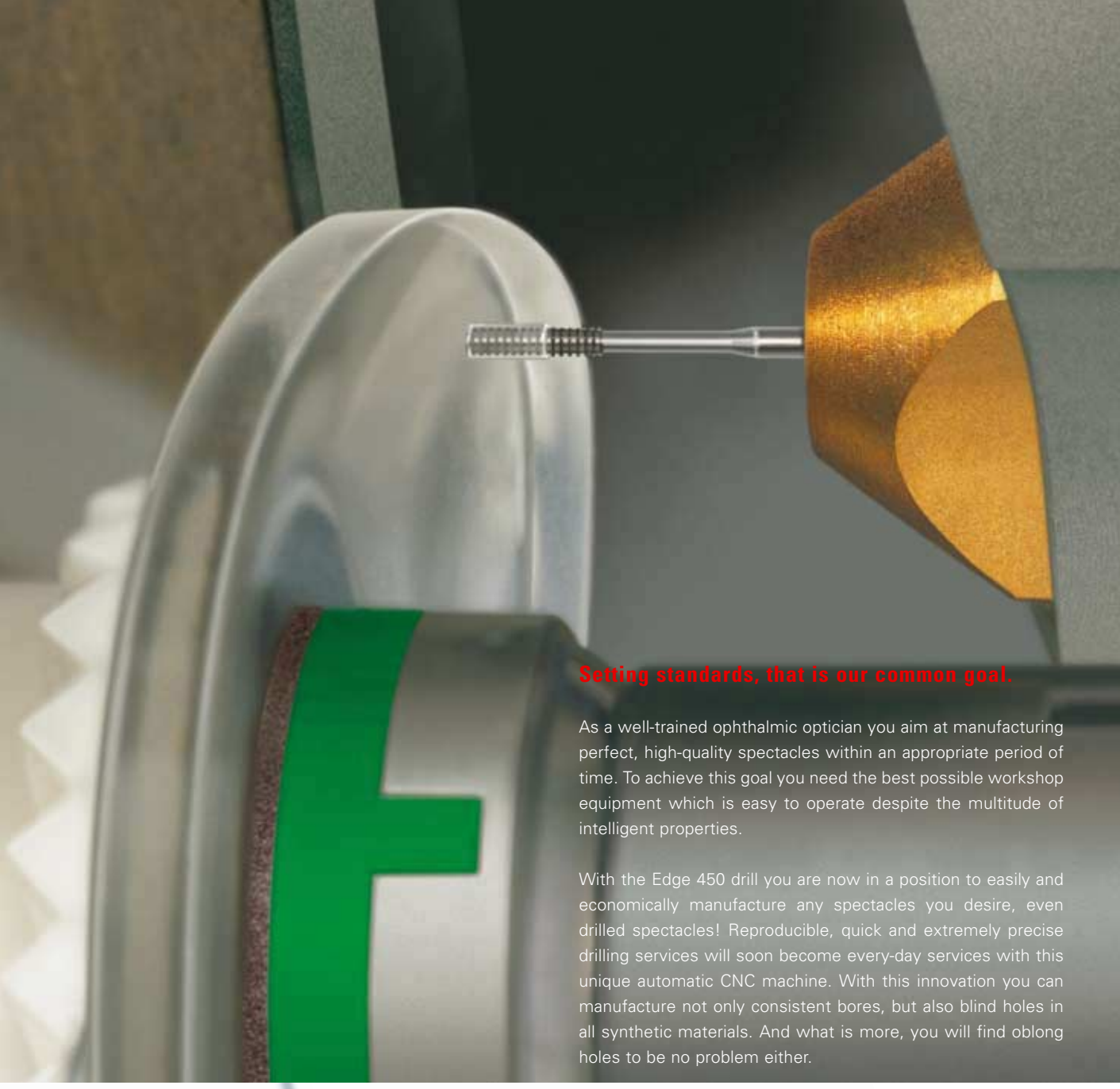


Optical Machinery by WECO

Edge 450, Edge 450 drill



Setting standards, that is our common goal.

As a well-trained ophthalmic optician you aim at manufacturing perfect, high-quality spectacles within an appropriate period of time. To achieve this goal you need the best possible workshop equipment which is easy to operate despite the multitude of intelligent properties.

With the Edge 450 drill you are now in a position to easily and economically manufacture any spectacles you desire, even drilled spectacles! Reproducible, quick and extremely precise drilling services will soon become every-day services with this unique automatic CNC machine. With this innovation you can manufacture not only consistent bores, but also blind holes in all synthetic materials. And what is more, you will find oblong holes to be no problem either.

Of course you are not restricted to drilling lenses with the Edge 450 drill. That is why the automatic grinding machine features a convenient groove function which facilitates manufacturing Nylor spectacles considerably. Select between automatic and manual grooves to meet your individual requirements. And finally you can give your product, the spectacles, a high-quality professional finish by polishing.

The Edge 450 drill is of course also designed for glazing conventional spectacle frames. We also offer a variety of high-quality diamond discs to meet your specific requirements, ensuring your flexibility in this field, too. A pneumatic chucking feature enables gentle chucking of your high-quality spectacle lenses.

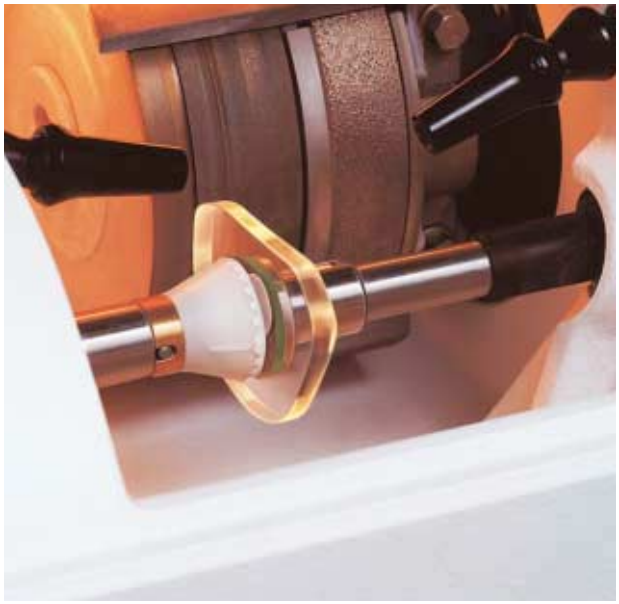
The term flexibility reaches a new dimension with the Edge 450 drill.

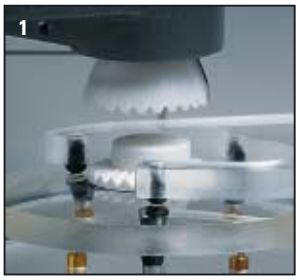
Grinding.

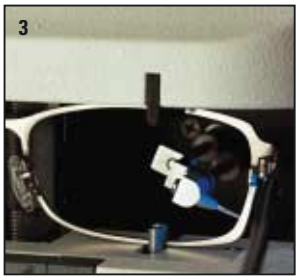
A key prerequisite for the compatibility of the spectacles is the precise centring of the lens before the grinding operation. The exact form of the spectacle frame is registered with the Tracer and is routed as data via an interface to a centring system. The centring system, WECO CAD or WECO Verifier Pro, serves to position a block on the lens surface so that the form matches the raw glass completely and ensures that all the centring requirements are complied with.

From the centring system the form and centring data are transmitted to the machine. The Edge 450 disposes of a data memory in which you can save your standard moulds. The form of the lens to be manufactured is displayed on the colour display.

All further settings are made via the clear keyboard which is positioned ergonomically at the display.







1 CAD III
2 Verifier Pro
3 Trace II

Before the lens is ground, it has to be initially positioned in the grinding section. This step is done with the block which is bonded to the lens in the centring system and then chucked in the shaft axle. The special block design and the block retainer in the shaft axle prevent the lens from rotating and therefore reduces the danger of rejects as a result of axial distortion. In addition the Edge 450 is also furnished with a pneumatic chucking function for the lens, enabling a grinding pressure setting and therefore gentle chucking tuned to the lens properties. The danger of glass breakage is by far lower as a result.

Applying facette.

During the grinding process you can follow the operation at any time on the display. After the rough-grinding process the facette is ground optionally as flat facette, free-wheel, manual or monitored facette. In free-wheel operation the facette course is saved during the first rotation in the fine grinding process. Each further rotation as well as all subsequent grinding operations are thus automatically monitored. That feature drastically improves the facette quality in the case of thin lenses and extreme forms.

The manual facette is applied if you desire to shift the course of the facette directly in some individual areas, so that e.g. the lens fits into extraordinary spectacle frames.

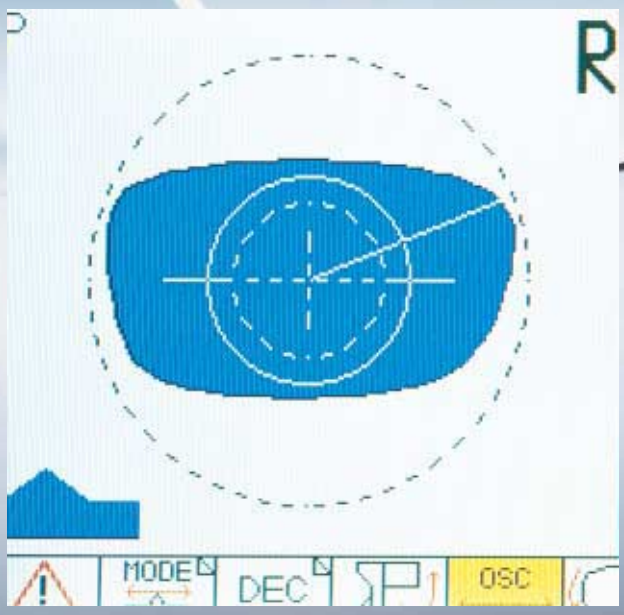
With the help of the monitored facette the spectacle lenses are measured in the rough-grinding process. Several programs are available: Auto-facette, percent curve and facette course with regard to the front or rear curve of the lens.

In the case of the auto-facette a facette curve is created on the basis of the cell curve. It is applied in spectacle lenses which are difficult to adapt to the lens curves.

In the program percent curve the facette course is ground in the desired ratio taking the edge thickness and lens curves into account. The percent curve can be used for all lenses in the normal range.

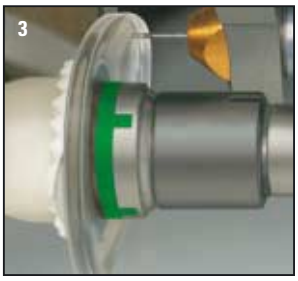
In order to grind a sufficient facette height in frames with a low groove depth, it is possible to grind an adjustable miniature facette.

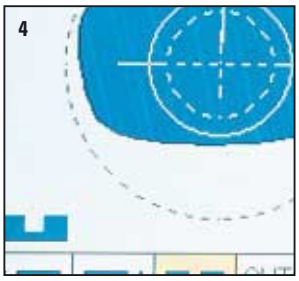
The diamond grinding discs are guided according to the calculated facette course. After grinding the facette, the lens can be refined with polish.

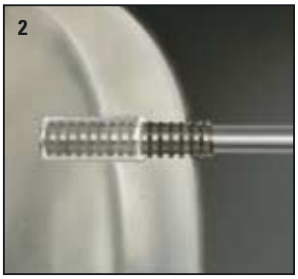


Grooves and bores.

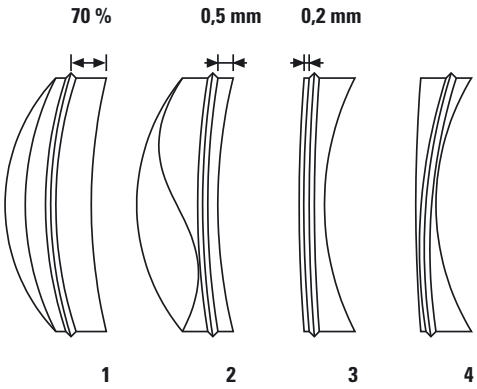
In future you can conveniently produce Nylor spectacles and drilled spectacles at high speed. In one operation: First the lens is ground, then milled or drilled and then polished.







1 Drilling coordinates
2, 3 Drill process
4 Grooving
5 Test foil cutter



1 Percentage curve
2 Rear curve
3 Front curve
4 Auto-facette

To manufacture Nylor spectacles from all synthetic materials the monitored groove facette is applied. A selection of programs similar to the "normally" monitored facette is available. The difference: The lens is now milled and not ground. Flexibility in the case of varying thread characteristics in spectacle frames from various manufacturers is achieved by setting the groove width and groove depth. Simple handling by keyboard and visualisation on the screen support quick programming.

In drilling spectacles the drilling coordinates entered or the coordinates transmitted by the centring system are displayed for control purposes on the colour monitor. The Edge 450 drill then makes the planned holes in each synthetic material. Any desired drill hole diameter and drill hole geometries are possible. By automatically mirroring the drilling and mould data two exactly congruent, symmetrically mirrored lenses are produced. That guarantees a perfect fit at the first assembly of the spectacles. Subsequent machining is now no longer necessary.

With the groove and bore function, laborious, time-consuming marking and manual drilling of the spectacle lenses is now a thing of the past. Operations at your workshop are now more efficient, as you can do other things in the mean time.

Key parameters and technical specifications:

Grinding with optimum results
- > High productivity
- > For processing all lens materials
- > For all optical values
- > Polishing
- > Chamfering the ground spectacle lenses (option)

Turbo grooves
- > In all synthetic materials
- > Adjustable groove width and groove depth
- > Tool easy to replace
- > Precise results also in the case of angular forms

Automatic drilling
- > In all synthetic materials
- > Clearance holds and blind holes
- > High precision in measuring the drilling data
- > Identical drilling data for right-hand and left-hand lens
- > Up to 4 bores or oblong holes per lens
- > Saving the drilling information
- > Simple tool change

Excellent accuracy of fit
- > With regard to facette course, facette surface and axial position
- > Computer-controlled facette taking the sphere, cylinder, prism and decentration into account

Automatic process monitoring
- > High "first time fit" rate
- > Reduced risk of glass breakage
- > Automatic harmonisation of sizes of the scanned mould with the ground lens
- > Safety grinding mode for highly hardened lenses

Simple operation
- > Convenient and ergonomic user prompting
- > Clear 1:1 presentation on the colour monitor
- > Permanent process display on the colour monitor
- > Graphic presentation of the facette position
- > Internal data memory for up to 200 lens forms
- > Barcode input (option)

Equipping with diamond disc on request
- > Pure synthetic material processing, incl. polycarbonate
- > Silicate and synthetic material processing, incl. polycarbonate

Compatible in the WECO system
- > Standard interface to peripheral system units; CL (Current Loop), RS 232, OMA
- > Operation as single device or in the system
- > Multitasking, parallel operation at all system components

Technical specifications:

Width	455 mm
Depth	420 mm
Height	550 mm
Weight	56 kg

Further features and accessories:

Test foil cutter

The Edge 450 is equipped with a test foil cutter, with which test foils can be easily cut to the exact size required. Progressive lenses, aspheric lenses and other lens types are centred at high speed and with a maximum of precision. The data required for marking are provided by the WECO Tracer.

Safety

From a safety engineering viewpoint the Edge 450 drill complies with the latest state-of-the-art in technology. The pneumatically operated cover over the grinding area is automatically closed before a process is started. That reduces the risk of injury.

Interfaces

The Edge 450 disposes of several interfaces to ensure a flexible configuration of your workshop facilities.

Accessories
- > Half Eye Set – to grind extremely flat spectacle frames
- > Cooling system – to cool the lenses during grinding
- > Compressor – to operate the pneumatic glass chucking facility and the drilling function

Subject to changes within the scope of technical development.

1400-1300-05 WECO 10/02 6.6 H+H

For further information on Edge 450 and WECO optical machinery please call us.

We would be pleased to inform you.

WECO Optik GmbH
Administration Jägerstraße 58
D-40231 Düsseldorf
Tel +49-211-21 04-105
Fax +49-211-21 04-251
info@weco-instruments.com
www.weco-instruments.com

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