

HALO

With the HALO product line, Tyrolit defines a new concept for edge grinding of automotive glass. As well as high process speed, low dressing frequency and a clean edge, the design of a single use wheel offers several new advantages and added value compared to a standard repeatedly reprofiled wheel.

Minimum startup time:
Specific alloys grant a perfect edge finish from the first piece and maximum speed can be reached after few pieces.

Machine set up minimized:
because only new wheels with precise geometry are used the machine setting and working parameters are always the same.

Easy installation in few seconds and proper positioning are granted by specifically designed cones and adaptors.

Economic advantage: Minimized investment in new wheels; significant reduction of handling/logistic efforts and reduced spindle maintenance due to a lighter wheel that reduce vibrations during work.

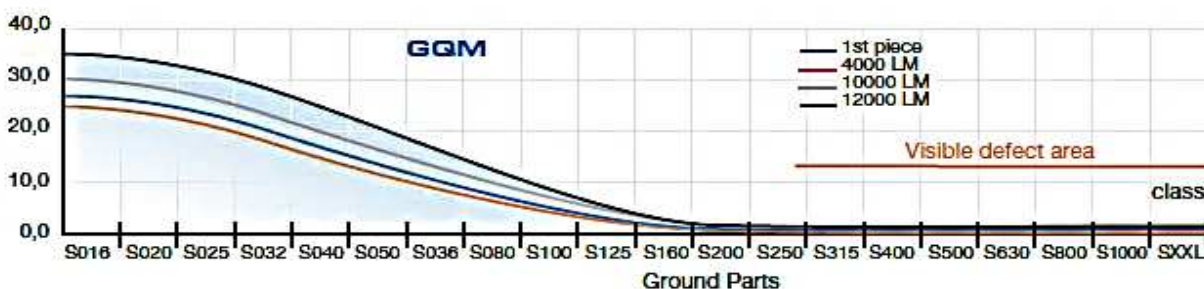
Increased productivity: Thanks to a reduced set up time and to the possibility to install more wheels on the same cone allowing to work continuously. TYROLIT also guarantees dimensional tolerances from the very first piece produced.



GQM chart analysis of a processed glass edge.

Machine parameters

| | |
|-------------------------|------|
| Glass thickness (mm) | 2,1 |
| Grinding speed | 30 |
| Peripheral speed /m/sec | 55 |
| Dressing freq (LM) | 160 |
| GQM Medium | 28,5 |



HALO

SINGLE USE AUTOMOTIVE GRINDING WHEEL

| Ø mm | Glass mm | Material | Application |
|----------------|--------------------|-----------------|-------------------------------|
| 150 | < 3,0 | Laminated glass | Windshield and Sidelight |
| 150 | 3,0 - 3,7 | Tempered glass | Sidelight, backlight, sunroof |
| 150 | 3,71 - 4,0 | Tempered glass | Sidelight, backlight, sunroof |
| 150 | 4,1 - 6,0 | Tempered glass | Sidelight, backlight, sunroof |
| 200 | < 3,0 | Laminated glass | Windshield and Sidelight |
| 200 | 3,0 - 3,7 | Tempered glass | Sidelight, backlight, sunroof |
| 200 | 3,71 - 4,0 | Tempered glass | Sidelight, backlight, sunroof |
| 200 | 4,1 - 6,0 | Tempered glass | Sidelight, backlight, sunroof |

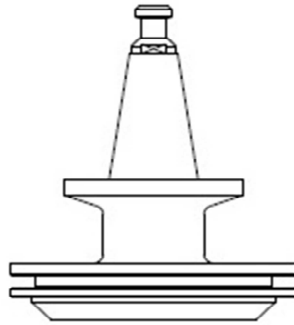
WORKING SPECIFICATIONS

| Application | Spec. | Grinding speed | Dressing | Refrigeration | Radius of removal |
|------------------------------------------------|--------------|---------------------------|--------------------|----------------------|--------------------------|
| Laminated windshield | PKD 5051 | Low and high ≤ 40m/min | Automatic | Just water/Coolant | ≤0,6mm |
| Laminated windshield, sidelight and sunroof | PKE 5051 | Low and high ≤ 40m/min | Automatic | Coolant | ≤0,3mm |
| Tempered sidelight | PKD 50C5 | Low speed ≤ 16m/min | Manually/Automatic | Just water/Coolant | ≤0,5mm |
| Tempered backlight | PKE 50C5 | Low speed ≤ 16m/min | Manually/Automatic | Just water/Coolant | ≤0,5mm |
| Tempered sidelight and backlight | PKE 6551 | Low and high ≤ 30m/min | Automatic | Coolant | ≤0,3mm |

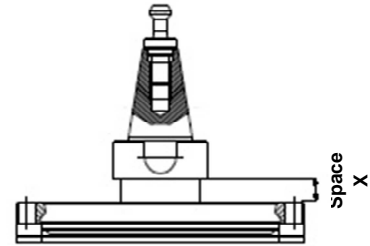
HALO

The tool holder and adaptors are specifically designed to grant easy installation in few seconds and proper positioning for the best performances

TOOL HOLDER



Bystronic



Bando

| Description | Machine | Diameter of HALO | Number of HALO on the holder | Space X | Drawing | Sysnr |
|-------------|-------------------|------------------|------------------------------|---------|---------|----------|
| | | mm | | mm | | |
| Tool holder | Bottero | 150 | 1 HALO | --- | EA0238 | 34174546 |
| Tool holder | Bystronic | 150 | 1 HALO | --- | EA0137 | 34248314 |
| Tool holder | Bystronic B-Champ | 150 | 2-3-4 HALO | --- | EA0139 | 34315304 |
| Tool holder | Bando Old models | 150 | 1 HALO | 13,5 | EA0138 | 34303922 |
| Tool holder | Bando New models | 150 | 1 HALO | 17,0 | EA0236 | 34170551 |
| Tool holder | Bando New models | 150 | 2 HALO | 17,0 | EA0237 | 34174545 |
| Tool holder | Bando New models | 150 | 4 HALO | 17,0 | EA0242 | 34219640 |

ADAPTOR FOR STANDARD CONES

| Description | Machine | Diameter of HALO | Diameters | Drawing | Sysnr |
|-------------|-----------------|------------------|-----------|---------|----------|
| | | mm | mm | | |
| Adaptor | Bando/Bystronic | 150 | 63,5/116 | E03037 | 34155377 |
| Adaptor | Bando | 150 | 30/116 | E03185 | 34190039 |
| Adaptor | R&S | 150 | 25/116 | E03195 | 34191353 |

EXTRACTOR

| Description | Tool holder | Drawing | Sysnr |
|-------------|-------------|---------|----------|
| Extractor | Bando | E03038 | 34155376 |
| Extractor | Bystronic | E03112 | 34180098 |