



**AUTZ + HERRMANN**  
TECHNOLOGIE IN BLECH

# ROTOCLEAR<sup>®</sup> S

Patent DBP 3713158

**Type A-P 1620 500**  
**Type A-P 1620 500 30**  
**Type A-P 1620 500 50**

Operating manual

**Rotating inspection glass with integrated safety**



Design certified by the German professional institute for workplace safety (Berufsgenossenschaftliches Institut für Arbeitssicherheit – BIA)

Certified to

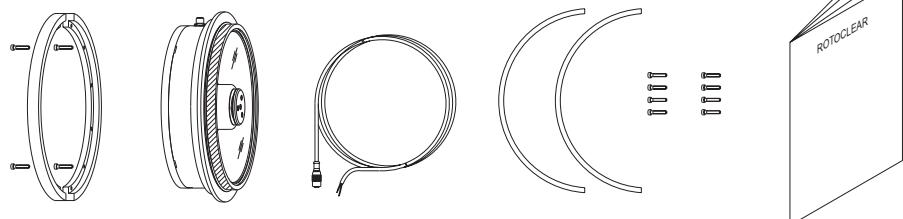
– **CEN/143/WG3 N 41 “Safety of Machine Tools-Lathes and Turning Centres-Guard Test Methods”**

Suitability: As inspection glass on protective hoods for lathes with a maximum working speed of 50 m/s  
Resistance class A1, A2

– **DIN EN 12417 “Machine Tools-safety-Machining centres”**

Suitability: As inspection glass on protective hoods for machining centers with a maximum speed ( $V_c$  max) of  
– 150 m/s (safety pane thickness of 12 mm on the A-P 1620 500/500 30 models) or  
– 220 m/s (safety pane thickness of 2x12 mm on the A-P 1620 500 50 model)

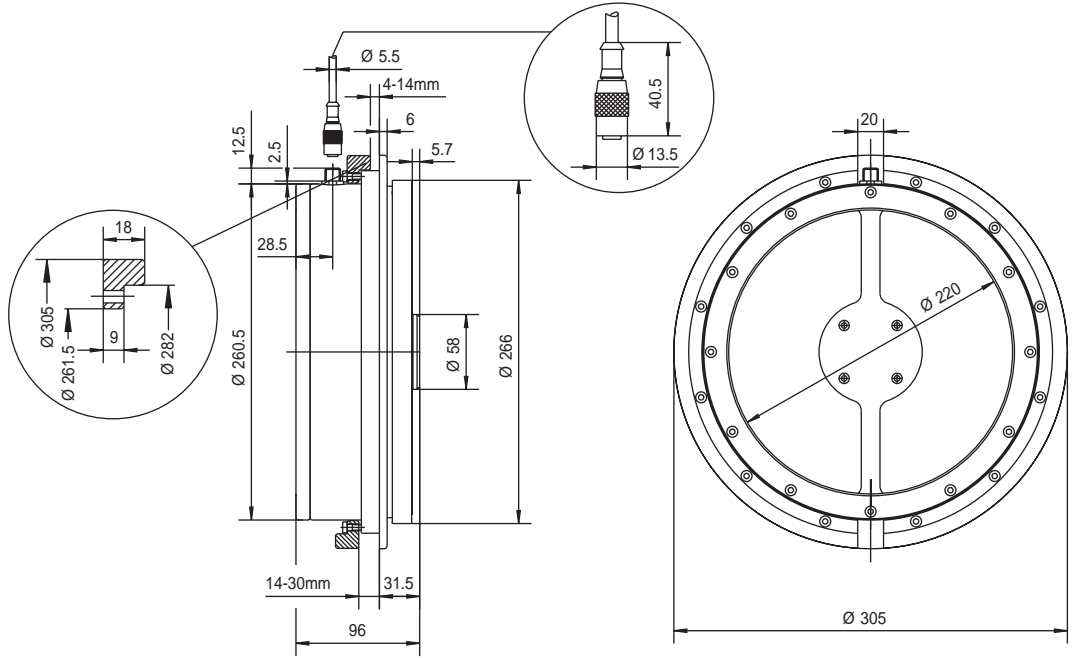
## Standard shipping list



## Areas of application

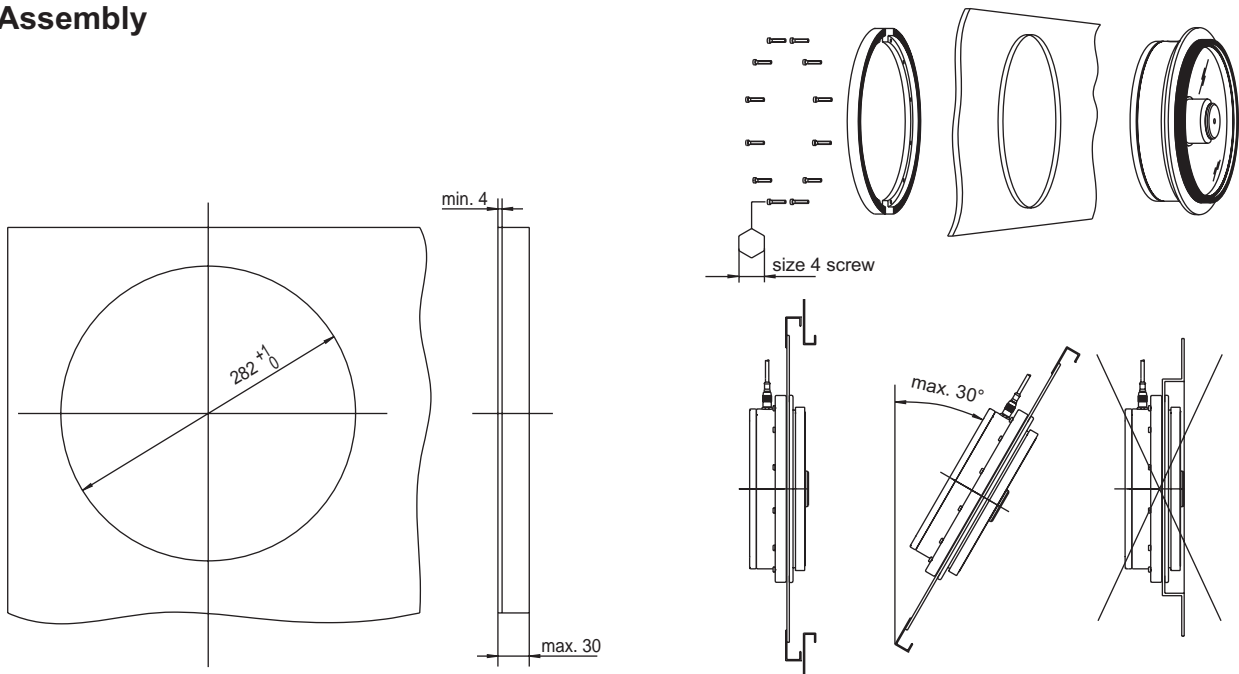
Milling machines  
 Machining centers  
 Automatic lathes  
 Test benches  
 Machines of all kinds

## Dimensions (mm)



Different on type A-P 1620 500 50: 110

## Assembly



## Safety note

- With a 0° installation Rotoclear® S offers the retaining safety under the conditions assumed in the test procedure.
- Under other conditions it is not possible to fully exclude potential dangers.
- Inclined installations offer reduced collision strength.

## Assembly instructions

- Select an installation position that allows ergonomic operation with Rotoclear. (consider potential collision points on doors and brushes etc.)
- Mark out and create a  $\varnothing$  282 hole (or replace an existing pane with a metal sheet already prepared for Rotoclear mounting).
- Unscrew the clamping collar from the packaged Rotoclear.
- Insert the Rotoclear® S Type A into the machine casing from the inside.
- With a clamping area of up to 14 mm, screw down the two-piece clamping collar as shown in the assembly example. From 14 mm upwards, first rotate it 180° before mounting and from 25 mm upwards use longer screws.
- Screw the round coupling of the connection cable provided tightly onto the Rotoclear.  
The cable should be laid separately from the power supply cables and must be protected from mechanical damage. Establish a 24 V DC protective extra-low voltage connection (PELV) in line with EN 60204-1 on the circuit with machine side fuse protection.

## Operating instructions

- To ensure reliable functioning, first switch on Rotoclear and then add coolant
- Allow Rotoclear to run during production
- Seal only guaranteed during rotation
- Do not clean the safety pane (polycarbonate) with solvents
- The rotating pane cannot be removed on its own, only in combination with the motor

## Important safety instructions!

- The polycarbonate safety pane protects the operator from parts thrown out by the machine. This means that the resistance of the polycarbonate pane plays an extremely important safety role.
- Research has shown that long term contamination of the polycarbonate pane by coolant vapors leads to aging or brittleness. The result is a reduced resistance of the safety pane. The reduced strength caused by the brittleness of the polycarbonate pane is not visible and can only be determined in bombardment tests.
- To guarantee operational safety, the German Machine Tool Builders' Association (VDW – Verein Deutscher Werkzeugmaschinenfabriken) and the German professional trade association (Berufsgenossenschaft) have set the following replacement intervals for polycarbonate safety panes:
  1. Polycarbonate panes with either single-side protection or no protection: **2 years**
  2. Polycarbonate panes with protection on both sides and sealed cutting edge: **5 years** (the polycarbonate safety panes should therefore be classed as wearing parts.)
- Standard/polycarbonate safety pane P 1620 503 **without** protective foil and **without** sealed cutting edge, with "Change on month/year" sticker  
**Replacement interval 2 years**
- Optional/polycarbonate safety panes P 1620 530 and P 1620 503 01 **with** 180  $\mu$  protective foil, **with** sealed cutting edge, with "Change on month/year" sticker  
**Replacement interval 5 years**
- Please observe the following when placing purchase orders:
  - a) Rotoclear Type P 1620 500 with standard/polycarbonate safety pane P 1620 503
  - b) Rotoclear Type P 1620 500 50 with optional/polycarbonate safety pane P 1620 530
  - c) Rotoclear Type P 1620 500 50 with optional/polycarbonate safety pane P 1620 530 01 (2x12 mm)

## Specifications

### Polycarbonate safety pane

- Thickness  
A-P 1620 500: **12 mm**  
A-P 1620 500 30: **12 mm** (twin foil)  
A-P 1620 500 50: **2x12 mm** (twin foil)
- Replacement interval  
A-P 1620 500: **2 years**  
A-P 1620 500 30: **5 years**  
A-P 1620 500 50: **5 years**
- Max. cutting speed of the processing machine  
A-P 1620 500: **150 m/s**  
A-P 1620 500 30: **150 m/s**  
A-P 1620 500 50: **220 m/s**

### Casing

#### Rotating pane

#### Motor

#### Speed

#### Nominal voltage

#### Power consumption

#### Current consumption

#### Starting current

#### Connection cable

#### Weight A-P 1620 500/A-P 1620 500 30

#### Weight A-P 1620 500 50

#### Shipping unit dimensions for

#### FCL shipping (container)

G-ALMg3 saltwater-proof  
5.0 mm tempered hardened safety glass  
brushless with blocking protection and reverse voltage protection  
2300 rpm  
24 V DC (16 – 28V)  
16 W  
0.66 A  
24 V – 5.0 A  
10 m with IP 67 plug connection to the device  
6.2 kg net/9.6 kg gross  
7.9 kg net/11.3 kg gross  
W 380 x H 210 x D 440 Vol. 0.035 m<sup>3</sup>

## Cleaning/Maintenance

- Only by specialist staff
- Do not clean the protective pane with solvents.
- If the surface of the polycarbonate pane is scratched or becomes dull, replace it with a new pane (spare part no. P 1620 503 / P 1620 530 / P 1620 503 01).
- If condensations builds up or there is coolant inside the casing, remove the collar P 1620 502 / P 1620 502 02 and clean the ventilation slits.
- In the event of a grinding noise or blockage of the rotating pane, swarf may have penetrated into the sealed labyrinth. To clean the labyrinth remove the complete unit (motor and window) P 1620 400.
- The rotating window can become dull due to limescale deposits on the surface caused by hard cooling water or abrasion of the hardened glass surface by swarf impact.  
Deposits can be removed from the glass surface using cleaner (limescale-removing bathroom cleaner or polish).
- If the pane is scratched or even destroyed, replace the complete unit (spare part no. P 1620 400)

## Warranty

If used and maintained correctly in line with the instructions in the operating manual, we provide a warranty of 2 years from the date of delivery. During this time we will repair or replace the device on site free of charge.

The warranty does not include the rotating pane or the safety pane, as these are wearing parts.

## Manufacturer's declaration

We take sole responsibility in declaring that this product conforms to the following standards and normative documentation: CEN/TC143/WG3 N41, pr EN 12417, EN 292-1/2, EN 60204-1, pr EN 953, in line with the provisions of the guideline for machines 89/392/EWG.

## Declaration of conformity

We hereby declare that this product conforms to the following standards or normative documentation: EN 50082-2, EN 55011, DINVDE0875-11, in line with the provisions of the guideline on electromagnetic compatibility 89/336/EWG.

Management of Autz + Herrmann

Signed

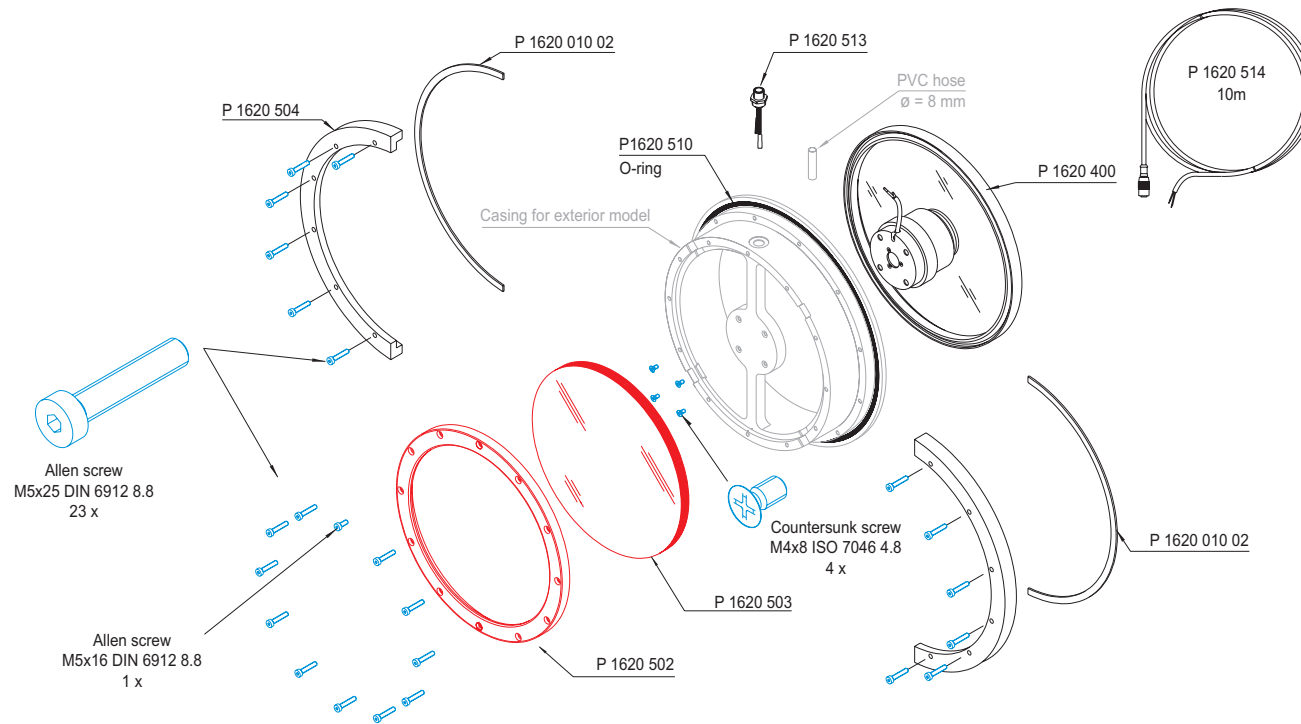
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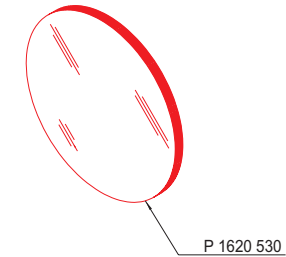
## Spare parts list

Parts marked **red** can vary depending on the specific model. Parts marked **black** are identical in all models.  
 Parts marked **blue** are standard commercially available screws. While these are included in the standard shipping list of the complete models, you do not have to order them as special spare parts from AUTZ + HERRMANN.  
 Parts marked **gray** are included in the standard shipping list of the complete models, but are not sold separately as individual parts.

### Type A-P 1620 500

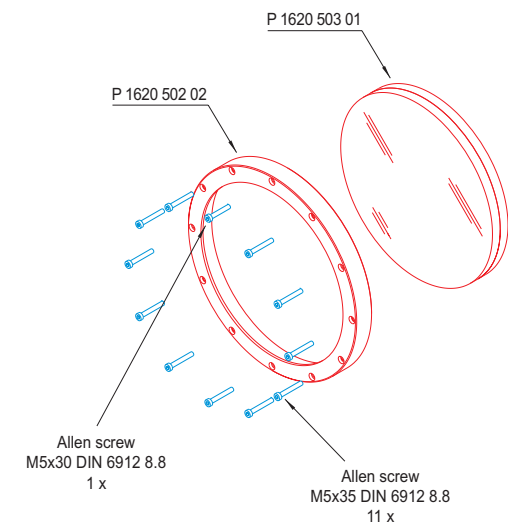


### Type A-P 1620 500 30



If you replace the polycarbonate safety pane P 1620 503 with this twin foil polycarbonate safety pane P 1620 530, the replacement interval is increased from 2 to 5 years.

### Type A-P 1620 500 50



Twin foil composite polycarbonate safety pane 2x12 mm with sealed cutting edge, replacement interval 5 years, certified to DIN EN 12417 and permitted for cutting speeds of 220 m/s. Type 500 can be retrofitted with these parts.