MOUNTING – DISASSEMBLY – INCLINATION of RIMLESS DRILLED FRAMES
1. Glazing possibilities in general and Wrap-around frames
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13. Chequered pad to control the drilling marks

Key:
One arrow = use some pressure
Two arrows = fix by hand
Circle = inclinate at this point
Press Tip for „Wrap-around“-lenses and strongly curved lenses
1. Glazing Possibilities

1.1. For all drilled frames in general

- **Max. lens thickness** at the drill hole = 6.5 mm due to length of the BLS
- **RX-range** to approx. +/- 10 dpt, depending on lens shape and lens material

1.2. Special Execution „Wrap-around“-Frames

- **Max. lens thickness** at the drill hole = 6.5 mm due to length of the BLS
- **Recommended RX-range** from +2 dpt to -4 dpt inc. 2 dpt cylinder limit because of the resulting lens thickness
- **IMPORTANT** for „Wrap-around“-orders:
  - Order an 8-base-front curve!
  - Convert customer prescription based on higher lens angle of more than 10°
  - Use the wrap around calculator on [http://b2b.silhouette.com](http://b2b.silhouette.com) for this purpose

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- According to Username and Password you will have the calculator in a preset language
- In case of any questions please contact your local customer service team!
2. Mounting Box and Tools

P0023 Mounting pliers for horizontal drill holes incl. sideparts for wide frame parts
(P 00023 00 0000 0000)
Optionally available – not included

P0026 Mounting pliers for vertical drill holes incl. sideparts for wide frame parts
(P 0026 00 0000 0000)
Optionally available – not included

P0027 Universal-Mounting box
(P 0027 00 0000 2010)

P0004 Disassembly pliers
(P 0004 00 0000 0000)
Optionally available – not included
3. MOUNTING OF RIMLESS DRILLED FRAMES
3.1. Download Drilling Coordinates and Print in Colour

Drilling coordinates on the enclosed CD or from customer service upon request!

1:1-print

IMPORTANT no page scaling!
3.2. Cutting and Drilling

- Measure lenses in the focimeter. Mark the central axis with a waterproof pen.
  
  For strongly curved front surfaces ("Wrap-Around" and strong plus lenses) the enclosed 8-base axis lineal AC 344 is useful.

- Cut the lenses using a flat edge at a 1:1 scale

- Polish edges as desired

- Afterwards drill
  
  a) automatically with lens-cutting and drilling or
  
  b) manually
3.3. Deburring

Fix protective film to the lens front. Deburr drilling holes carefully on both sides.
3.4. Press in Plastic Sleeves – Cut to Length - Expand

1. Insert plastic sleeves (BLS) into drilled holes to the point of stopping using a demo lens. Only after this cut to the length at the front, depending on the lens thickness. Place the blade parallel to the lens.

2. Expand the open end of the BLS with a conical pin, to make it easier to press in the frame parts.
3.5. Press in the Frame Parts

Remove protective film and marks. The lens must be clean!
Press in the frame parts by hand.
Use some counter-pressure at the top of the BLS with a demo lens.
3.6. Fix Frame Parts

1. Horizontal drill holes: Mounting pliers P0023

2. Vertical drill holes: Mounting pliers P0026

Always place the moveable sideparts at the top of the BLS. Use some counter-pressure at the top of the BLS with the sideparts of the pliers. Close pliers only after this and press in the frame parts in one go – be careful.

TIP: Change the sideparts of the pliers according to the width of the frame parts.
4. IMPROVED DURABILITY

by

GLAZING

with

PLASTIC SLEEVES BLS 58
4. Comfortable Glazing and Optimum Durability with BLS 58

We recommend to glaze principally all metal frames with the harder plastic sleeves BLS 58, especially all models with stiffer temples. Due to the material characteristics and the different construction these sleeves can absorb considerably more tension. This means that the lens fixation holds multiplicatively better.

For a comfortable and easier glazing we also have optimised the geometry of the rivet pins of all frame parts in accordance to this.
5. IMPROVED DURABILITY
by
GLAZING
with
THREAD CUTTING
5.1. Glazing with Thread Cutting

- Increases the durability of the lens fixation by 30%
- Avoids sliding of the BLS in the drill hole
- Recommendable especially for stiffer temples
- Recommendable also for thin lens edges

1. Effect drilling as usual
2. Use tread cutting tap from mounting box P0027
3. Cut tap M 1,6 from the front by hand
4. Depth of drill approx. 3 mm / 0.11811 inches
5. Continue glazing as usual!
5.2. Disassembly of Frame Parts with Thread Cutting

1. BLS digs into thread pitches
2. Heat, brought from the front to the frame part, unwinds the fixation sleeve and makes it easier to loosen it. Temperature: 60 – 70° C / 140 – 158° F.
3. ATTENTION: **DO NOT** overheat the prescription lens.
4. Disassembly of the lens should be only by traction at the frame sidepart
6. DRILLING BY HAND
with
DRILLING PATTERN
6. Manual Drilling Method

6.1. Fix protective film to the front of the lens

Cut protective film exactly to size following the edge of the lens!
6. Manual Drilling Method

6.2. Convert drilling positions to the prescription lens in colour

Place the cut lens on the drawing of the drilling coordinates. Convert drilling position and auxiliary marks from the lens edge to the lens front.

Use different coloured pens for marking the bridge and temples. Connect punctual marks according to colour (nasal = blue / temporal = red).

Use the 8-base axis lineal for "Wrap-Around" and strong plus lenses!
6. Manual Drilling Method

6.3. Control marks

Marks must be on the same level on both lenses.
A chequered pad is helpful for this purpose.
6.4. Nasal Drilling for Bridge

1. Fix the drilling pattern to the front of the lens with a double sided adhesive tape. To do this place the adhesive tape up to the central peak of the drilling pattern.

2. Place the central peak of the drilling pattern at the **nasal blue** mark. Align the central line of the drilling pattern at the **blue** auxiliary mark.
Place the central peak of the drilling template at the **temporal red** mark. Align the central line of the drilling template at the **red** auxiliary mark.

6.6. Drilling

Place prescription lens on a curved drilling pad. Drill holes 90° to the lens front.

ATTENTION: Select the correct drilling diameter according to the frame type!

NOTE: Drill holes that are too large reduce the durability.
7. MANUAL DRILLING METHOD with DRILLING TEMPLATE
7. Manual Drilling Method with Drilling Pattern

7.1. Fix Drilling Pattern „MINUS-Lenses“

Use enclosed demo lens as drilling pattern. Fix drilling pattern to the prescription lens with double sided adhesive tape exactly to the contour and parallel to the axis. Fix the adhesive tape horizontally!
Use enclosed demo lens as drilling pattern. Fix drilling pattern on the optical lens with double sided adhesive tape exactly to the contour and parallel to the axis.
Place prescription lens on a curved drilling pad. Drill holes 90° to the lens front.

ATTENTION: Select correct drilling diameter according to frame type!

Afterwards deburr the holes.

NOTE: Drill holes that are too large reduce the durability.
8. DISASSEMBLY of LENSES
8.1. Disassembly of Demo Lenses

1. Horizontal Drill Holes

   - AC 212 -> Ø 2 mm
   - AC 212-2 -> Ø 1,4 mm

2. Vertical Drill Holes

   - AC 268

Use disassembly tool meant for this purpose. Place metal pins of the tool at the head of the lens fixation sleeves and press out the frame parts.
8.2. Disassembly of Prescription Lenses

1. Carefully fix protective film around the lens fixation sleeves

2. Cut off the head of the plastic sleeves with the disassembly pliers P0004

1. Press out the frame parts from the drill hole with the disassembly tool.
   NOTE: AC 212–2 for 1,4 mm-drill hole resp. AC 212 for 2,0 mm-drill hole, AC 268 für vertical drill hole

2. Carefully remove remains of plastic from the fixation pins.
   NOTE: Fixation pins, barbed hooks, surfaces must NOT be damaged!
   Cuttings and grooves can cause breakages!
9. INSTRUCTIONS for the ADJUSTING of FRAMES
9. For Adjusting please always consider the Following

**Lens fixation**
- **must be fixed!**

**Hinge elements**
- **must be relieved**
  - of pressure, bending forces and leverage!

**Temple-ends and end-pieces must be**
- **striped out in a large swing!**
  - **Do not bend!**

**Key:**
- One arrow = use pressure
- Two arrows = fix by hand
- Circle = inclinate here
10. TEMPLE DISASSEMBLY
TEMPLE ASSEMBLY
INCLINATION

- SNAP-Hinge
- PLUG-WAVE-Hinge
- Hinge-LESS
1. Place disassembly tool AC 336 to the stopping point where the trim and temple meet. Select necessary diameter, depending on distance between temple and lens. Close temple and press it through behind the rounded part.

1. Disassemble the temple
2. Fix the lens fixation with the pliers P0023
3. TIP: Cover prescription lens on both sides with protective film
4. Adjust inclination and opening angle of temple with flat pliers.
5. Enclose the loop completely with the pliers' sideparts!

1. Put temple on a safe edge of a table.
   NOTE: The pressure may affect the edge of a table, but not the lens fixation or a decoration part of the temple!

2. Place the sidepart exactly at the opening of the plastic temple and press it in.

Examples: Contrasti, Enviso, Intarsia, Mystero, Softtouch, SPX-Motion, Titan Edge, Titan Design, Zenlight
1. Bend temple. Press out the joint.
2. Temple becomes unfastened with a click.
3. Turn around 180° and thread out the temple.

Examples: TNG, Titan Metallic, TNG III
1. Fix lens fixation: Hold the titanium sidepart **very firmly** at the lens fixation.

2. Hold titanium temple with BLS-hinge very firmly and inclinate it in the desired direction.

Examples: TNG, Titan Metallic, TNG III
Bend temple approx. 60°. Pressure may only affect the plastic parts (not the temple!) in the direction of the opening of the hinge loop. Temple becomes unfastened with a click. Turn temple around 180° and pull it out.

Examples: Titan X, Titan Translucent
Close temple. Use pressure beside the hinge. Temple becomes unfastened with a click. Extract temple from the sidepart.

Example: Colorama
Hold sideparts very firmly in the area of the lens fixation with the universal mounting pliers. Incline sideparts with flat pliers.

NOTE: Only twist metal parts – never the plastic temple!

Example: Colorama
1. Secure lens fixation with universal mounting pliers. Bend temple a bit. Extract temple from the BLX-hinge **totally straight**. NOTE: Pulling forces must only be applied in one direction – backwards!

2. Attach oval hole and oval tap of the BLS positively on both sides of the loop.

3. For the assembly place the temple exactly at the slot of the BLS-hinge and snap it in carefully, to the stop.

Example: Metal Twist
1. Hold the titanium temple **firmly** at the lens fixation.
2. Incline at the beginning of the flat stamped part of the titanium temple, i.e. not immediately beside the lens fixation and not in the area of the round profile of the temple. **ATTENTION: Do not bend the temple!!**

Example: Titan Minimal Art - The MUST Collection
Hold the sidepart **very firmly** in the area of the lens fixation. Incline carefully in the marked area. **TIP:** Make first adjustments with demo lenses!

Example: Dimension
1. Warm temple carefully over an air heater with a small cone, only a few seconds, until you feel the material tension sink at approx. 80° Celsius/176° Fahrenheit.

2. ATTENTION: Do **NOT** overheat the plastic part nor the prescription lens!

3. As soon as the material is softened, adjust the inclination and curve the temple.

4. Hold the position, until the plastic has cooled down.

Examples: Minimal X, Titan Colours, SPX-Motion
11. Mounting Box Contents (P 0027)
12. Spareparts for the Mounting Box (P 0027)

Contents / Spareparts

- Drilling pattern 3H transparent (AC 158) / P 0001 11 0158 0000
- Disassembly tool TMA transparent (AC 212-2) / P 0009 11 0212 2000
- Disassembly tool MX blue (AC 211) / P 0006 11 0211 0600
- Disassembly tool wave green (AC 298) / P 0009 11 0298 0100
- AC 336 - Rundholz als Demontagehilfe
- Adhesive tape / P 0009 95 0014 0004
- Deburring tool (1 pc.) / P 0009 99 0009 0029
- Twist drill 1.4 D21 HSS (1 pc.) / P 0009 99 0009 0001
- Twist drill 2.0 D21 HSS (1 pc.) / P 0009 99 0009 0065
- Adhesive tape / P 0009 95 0014 0004
- Deburring tool (1 pc.) / P 0009 99 0009 0029
- Twist drill 1.4 D21 HSS (1 pc.) / P 0009 99 0009 0001
- Twist drill 2.0 D21 HSS (1 pc.) / P 0009 99 0009 0065
- Tap 1.6 (1 pc.) / P 0009 99 0009 0007
- BLS 40 (set) / P 0009 22 0400 0002
  Spare part: 100 pcs. Content in box: 12 pcs.
- BLS 50 (hand) / P 0009 22 0400 0161
  Spare part: 100 pcs. Content in box: 6 pcs.
- BLS 63 (set) / P 0009 22 0400 0110
  Spare part: 100 pcs. Content in box: 12 pcs.
- Micron 48-I (glazing instructions incl. CD (1 pc.)
- Sideparts red (AC 329) / P 0000 11 0329 0100
  for vertical drill holes
- Sideparts Uni (AC 244) / P 0009 11 0244 0000
- Sideparts Uni yellow (AC 253) / P 0009 11 0253 0000
- Sideparts wave green (AC 298) / P 0009 11 0298 0100
- Sideparts Uni blue (AC 244) / P 0009 11 0244 0000
- Sideparts Uni yellow (AC 253) / P 0009 11 0253 0000
- Sideparts wave green (AC 298) / P 0009 11 0298 0100

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13. Chequered Pad to Control the Drilling Marks