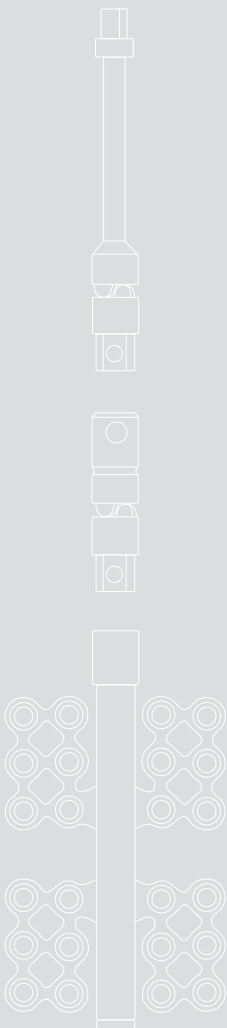
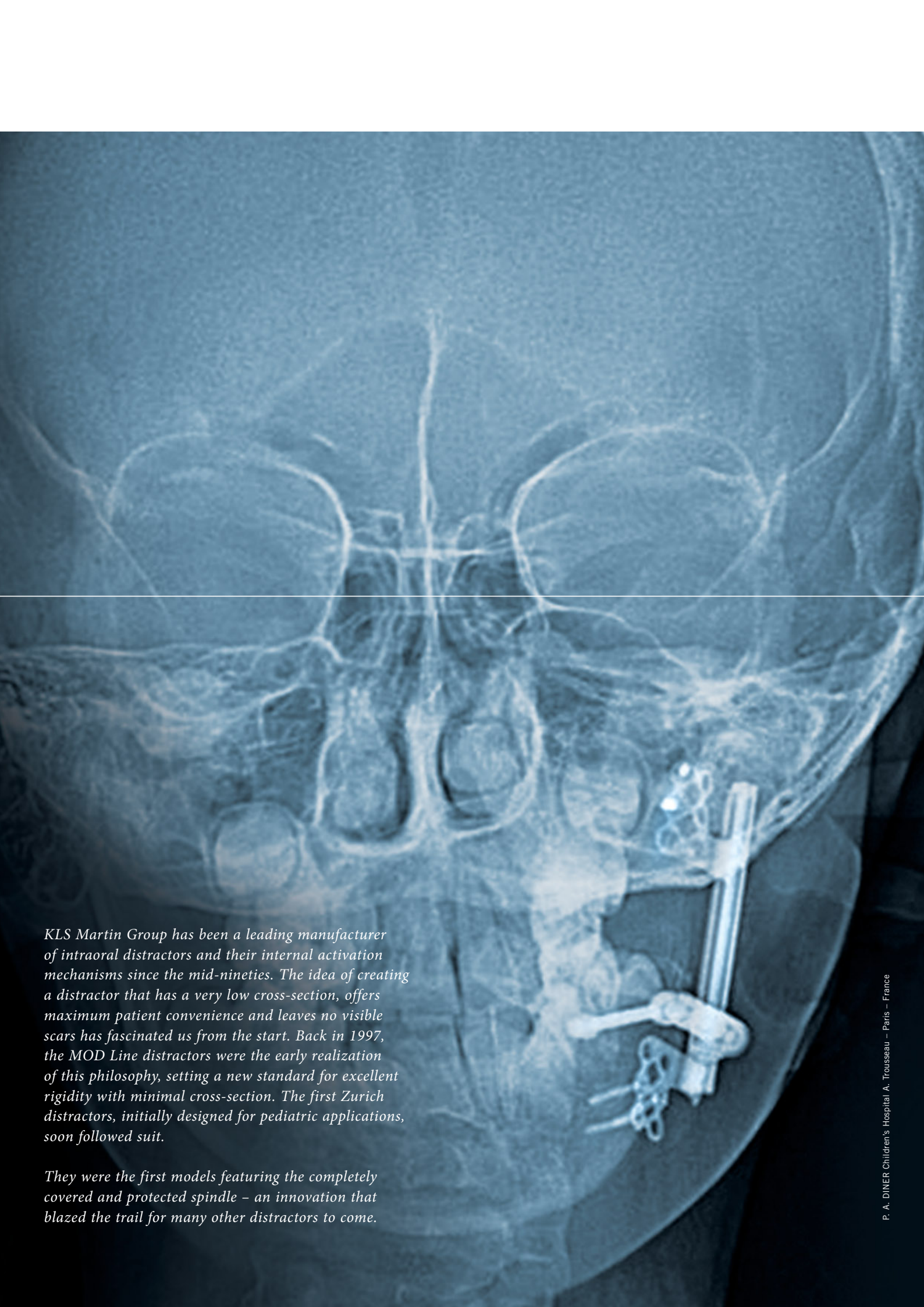




Zurich II Modular Distraction Concept

New horizons in horizontal mandibular distraction





KLS Martin Group has been a leading manufacturer of intraoral distractors and their internal activation mechanisms since the mid-nineties. The idea of creating a distractor that has a very low cross-section, offers maximum patient convenience and leaves no visible scars has fascinated us from the start. Back in 1997, the MOD Line distractors were the early realization of this philosophy, setting a new standard for excellent rigidity with minimal cross-section. The first Zurich distractors, initially designed for pediatric applications, soon followed suit.

They were the first models featuring the completely covered and protected spindle – an innovation that blazed the trail for many other distractors to come.

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Zurich II Modular Distraction Concept

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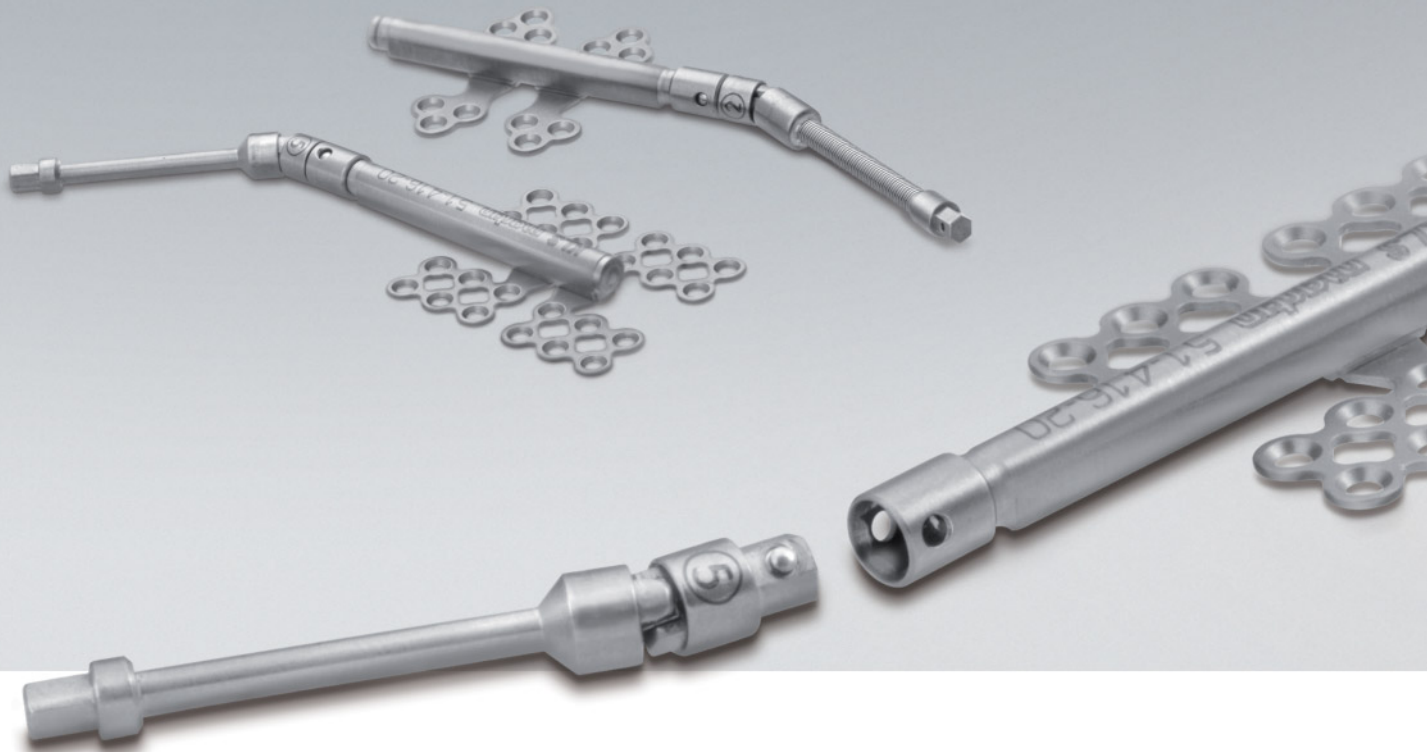
Zurich II Modular Distraction Concept New horizons in horizontal mandibular distraction

A whole variety of new products have been added in response to repeated customer demands, usually as special solutions to the therapeutic difficulties posed by specific pathologies.

The insight that intraoral distractors can be successfully used even in infants became generally accepted and customer requests for a more modular and symmetric design have been implemented along the way as well.

This brochure is intended to give you a comprehensive overview of the entire range of KLS Martin distractors for horizontal mandibular and ramus distraction. Should you be looking for a special design not included in this documentation, do not hesitate to put us to the test! We are confident that we will be able to implement your design suggestions fast and to your full satisfaction.

KLS Martin – Surgical innovation is our passion!



Zurich II Modular Distraction Concept

The different anatomical forms of mandibular microsomias and asymmetries frequently make high demands on the variability and adaptability of the distractors used. Prefabricated distractor models are sometimes too static and therefore cannot meet the requirements of specific clinical tasks.

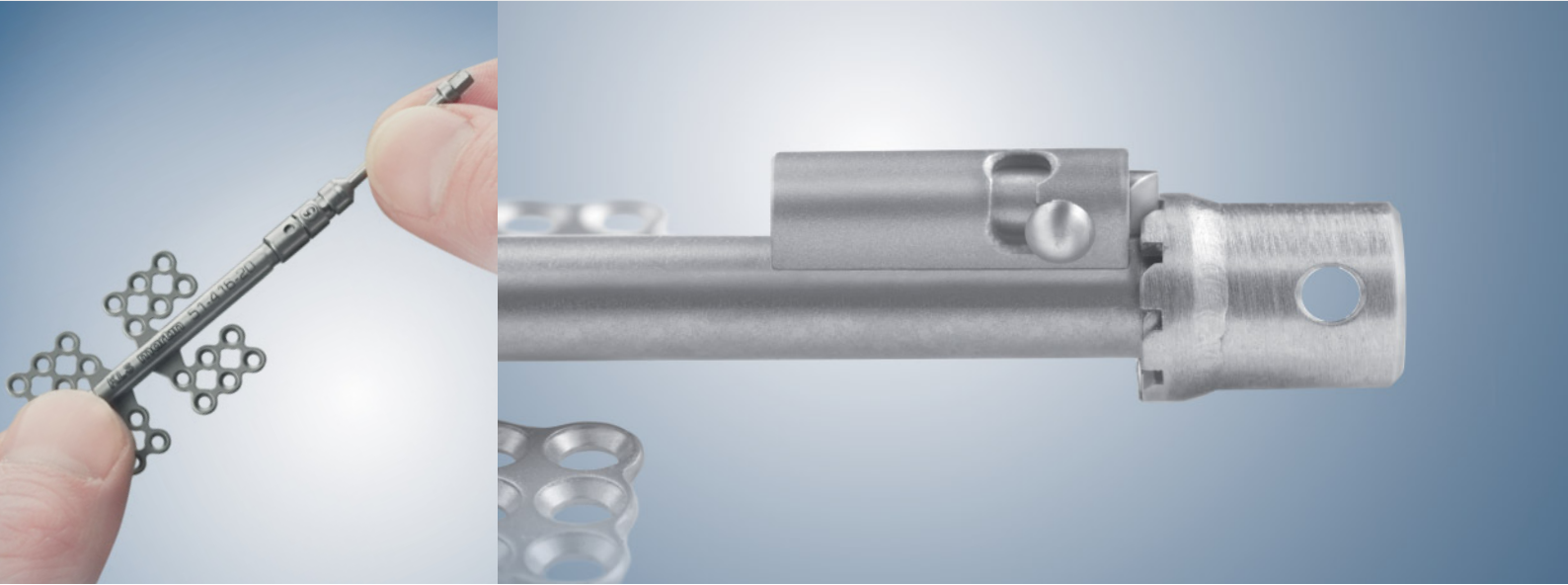
The Zurich II concept takes a completely different path: it is totally based on a modular principle, breaking down intraoral distractors into their basic components.

All system components can be easily and rapidly combined with each other to create a perfect whole.

Product advantages

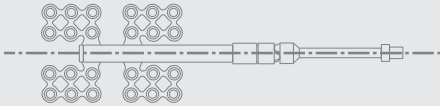
- Fast and easy creation of customized problem solutions meeting the anatomical requirements of each patient
- Perfected modularity – minimized stock-keeping
- The distractors can be easily adapted at any time (even intraoperatively).
- Low cross-section of the Zurich distractors, with proven record of high stability
- Symmetrical design – no right and left versions
- No waiting times for special individual configurations
- Customized activation cardanics for each individual patient
- Activation spindle can be attached and removed as needed. This increases patient convenience during the consolidation period.

Product Features
maximum benefit



Advantages

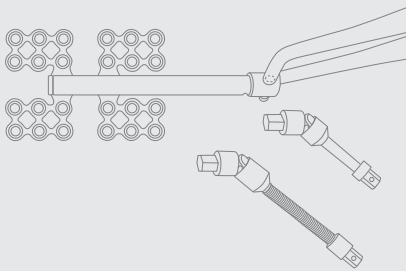
Symmetrical design



The symmetrical design allows you to use the same distractor on the left or on the right side. This reduces your stock-keeping needs and lowers the amount of capital tied up in distractors held in stock. The fixing plates can be cut to size intraoperatively to adapt them to individual anatomical requirements.

The plates available include the well-known clover-leaf plates and mesh designs. The distractors can be installed in place with the plates down or up.

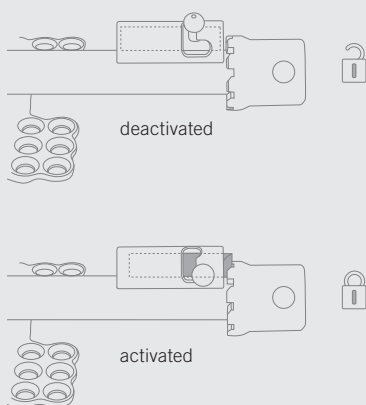
A whole range of activators



The Zurich II distractor line can be supplemented with a whole range of activators (see pages 8, 10 and 11).

The various activators come in a modular design as well and therefore can be freely combined with each other. Besides, there is the option of using additional cardanic extensions for more flexibility. The activator can be removed during consolidation period for increased patient convenience.

Anti-relapse ratchet

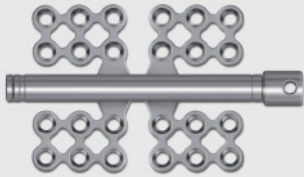


Some distractors of the Zurich II and Micro Zurich product lines feature an anti-relapse ratchet that reliably prevents backward rotation of the distractor and consequential relapse of the distracted bone area. This stop can be deactivated intraoperatively for function test performance.

Maximum flexibility

thanks to optional combination of different activators

Distractor, Mesh design, middle-driven



Rigid extension 20 mm for activation arm

⑩



Single cardanic extension for activation arm

⑨














Activation arm, rigid, incl. cardanic element, 35 mm

⑤



*Example: Activator length 61 mm
1:1 scale*

Activation arms

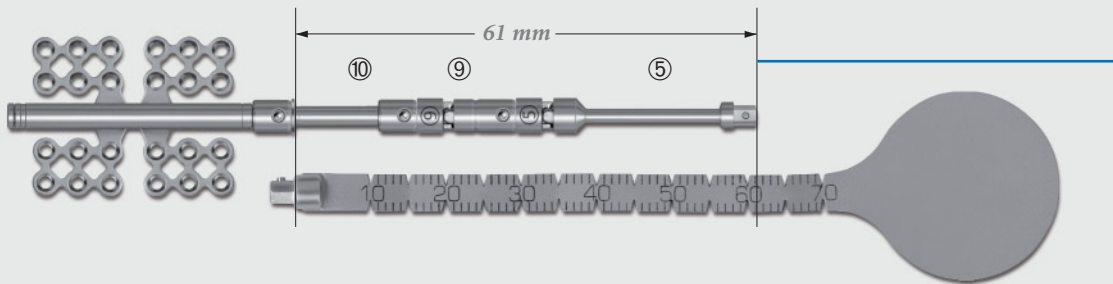
| | Activation arms | Item No. |
|---|--|-----------------|
| ①  | Activation arm, flexible, incl. cardanic element, 30 mm | 51-400-30-09 |
| ②  | Activation arm, flexible, incl. cardanic element, 40 mm | 51-400-40-09 |
| ③  | Activation arm, flexible, incl. cardanic element, 50 mm | 51-400-50-09 |
| ④  | Activation arm, rigid, incl. cardanic element, 25 mm | 51-401-25-09 |
| ⑤  | Activation arm, rigid, incl. cardanic element, 35 mm | 51-401-35-09 |
| ⑥  | Activation arm, rigid, incl. cardanic element, 45 mm | 51-401-45-09 |
| ⑦  | Activation arm, rigid, incl. cardanic element, 50 mm, clipable | 51-401-50-09 |
| Additional | | Item No. |
| ⑧  | Direct drive activator | 51-401-90-09 |
| ⑨  | Single cardanic extension for activation arm | 51-401-91-09 |
| ⑩  | Rigid extension 20 mm for activation arm | 51-401-92-09 |
| 1/1  | Trocar tip for activation arm | 51-401-93-09 |



Removal of activation arm

After completion of distraction, the activator can be removed easily by using a special disconnection forceps (for more information, see page 33).

Example:
 Activator length 61 mm
 1:1 scale



Combination options

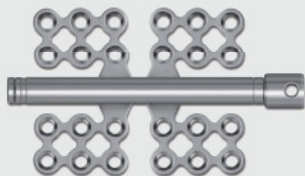
| L (mm) | System |
|--------|-----------|
| 16 | ⑧ + ⑨ |
| 20 | ⑧ + ⑩ |
| 22 | ④ |
| 27 | ① |
| 32 | ⑤ |
| 33 | ⑧ + ⑨ + ⑩ |
| 35 | ④ + ⑨ |
| 37 | ② |
| 39 | ① + ⑨ |
| 39 | ④ + ⑩ |
| 42 | ⑥ |
| 44 | ① + ⑩ |
| 45 | ⑤ + ⑨ |
| 47 | ⑦ |
| 47 | ③ |
| 49 | ② + ⑨ |
| 49 | ⑤ + ⑩ |
| 51 | ④ + ⑨ + ⑩ |
| 54 | ② + ⑩ |
| 56 | ① + ⑨ + ⑩ |
| 55 | ⑥ + ⑨ |
| 59 | ③ + ⑨ |
| 59 | ⑥ + ⑩ |
| 60 | ⑦ + ⑨ |
| 61 | ⑤ + ⑨ + ⑩ |
| 64 | ③ + ⑩ |
| 64 | ⑦ + ⑩ |
| 66 | ② + ⑨ + ⑩ |
| 71 | ⑥ + ⑨ + ⑩ |
| 76 | ③ + ⑨ + ⑩ |
| 77 | ⑦ + ⑨ + ⑩ |

Note: All Zurich II and Micro Zurich distractors are delivered without activation arms.

Maximum safety and patient comfort *thanks to Remote Release Activators*

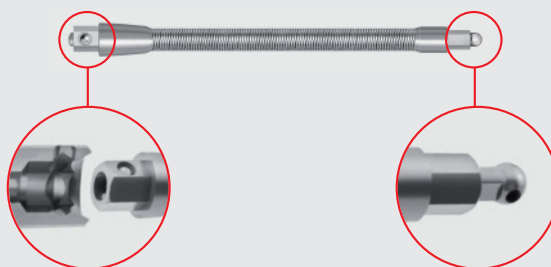


*Distractor, Mesh design,
middle-driven*



*Example: Activator length 53 mm
1:1 scale*

*Remote Release Activator,
flexible, 53 mm*



During the consolidation phase – once the active distraction process has been completed – distraction activators are basically no longer needed. Quite the contrary, they are not only a constant source of inconvenience to the patient but also involve elevated risk of infection right at the percutaneous point. Conventional distraction activators are disconnected from the distractor body with the aid of a special forceps. This usually requires that the operation situs has to be opened again to access the connection point between distractor and activator. Mainly in difficult accessible anatomical regions this can be both time-consuming and difficult and moreover the patient is exposed to additional stress.

Especially for such cases we developed an alternative, a new generation of activators:

The Remote Release Activators.

The special and completely new feature about these activators is that the mechanism of coupling and uncoupling is located at the point of activation with the patient screwdriver. Thereby the uncoupling of the activator can be initiated directly from the outside and the dissection of the way to the connection point between distractor and activator is not applicable anymore.

Remote Release Activators fit to all standard couplings that are designed for removable activators, such as almost all distractors specified in this brochure. They provide an alternative option in addition to the proven, conventional activators. As standard Remote Release Activators are provided without cardanic element, they may be combined with the cardanic element 51-401-91-09. If one chooses an additional cardanic element, it will stay with the distractor after removal of the Remote Release Activator.

Uncoupling procedure



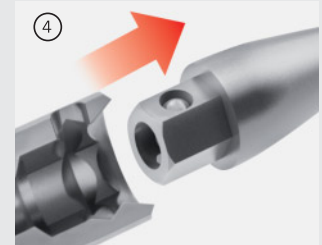
1. Pull out the release lug (some resistance needs to be overcome).



2. The release lug stands in exposed position by turning it clockwise or anti-clockwise by 90°.



3. This lowers the ball and socket of the universal coupling of the activator.










4. The activator can now be easily removed.

Coupling procedure

The coupling procedure is exactly the same up to step 3. Once the ball and socket is lowered, the activator can be easily plugged in place. To lock it, rotate the release lug back by 90° and push it in. This causes the internal ball to rise, thus locking the activator in place.

Remote Release Activators

| | Activators | Item No. |
|---|--|--------------|
|  | Remote Release Activator, flexible, 33 mm | 51-411-33-09 |
|  | Remote Release Activator, flexible, 43 mm | 51-411-43-09 |
|  | Remote Release Activator, flexible, 53 mm | 51-411-53-09 |
|  | Remote Release Activator, rigid, 33 mm | 51-410-33-09 |
|  | Remote Release Activator, rigid, 43 mm | 51-410-43-09 |
|  | Remote Release Activator, rigid, 53 mm | 51-410-53-09 |
|  | Single cardanic extension for activation arm | 51-401-91-09 |

Each Remote Release Activator comes with a dedicated instruction for use providing all important information for handling the device.

Zurich II Distraction System The distractor bodies



Patient screwdriver
51-500-90-07

End-driven distractors

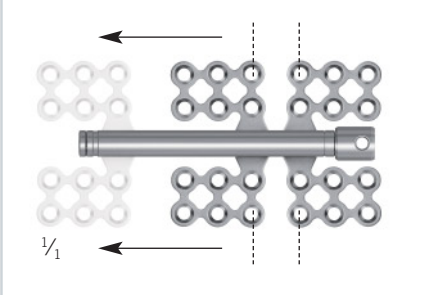

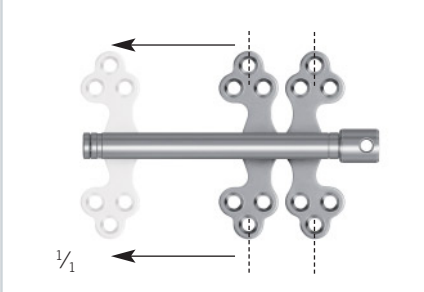
(the posterior plate stays in place, while the anterior plate moves forward)

| | | | | | | |
|--------------|-----------------|---------------------------|----------------|---------------|-----------------|----------------|
| | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-416-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-416-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-416-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| 51-416-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | | |
| | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-418-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-418-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-418-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| 51-418-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | | |
| | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-426-15-09 | 15 mm | yes | 1.5 Micro | 0.5 mm | |
| | 51-426-20-09 | 20 mm | yes | 1.5 Micro | 0.5 mm | |
| | 51-426-25-09 | 25 mm | yes | 1.5 Micro | 0.5 mm | |
| 51-426-30-09 | 30 mm | yes | 1.5 Micro | 0.5 mm | | |

Note: All Zurich II and Micro Zurich distractors are delivered without activation arms. Activation arms see page 8.

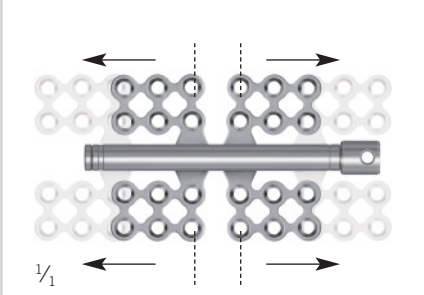

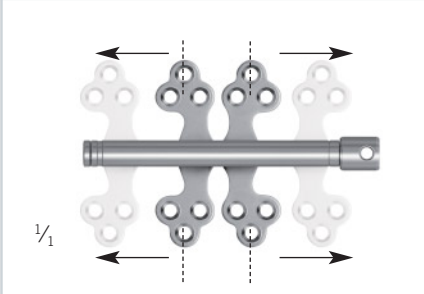

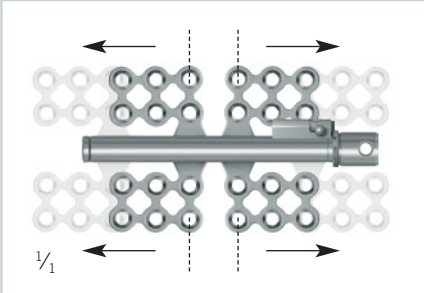

Front-driven distractors

(the anterior plate stays in place, while the posterior plate moves backwards)

|  | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
|---|--------------|--------------------|---------|-----------|----------|---|
| | 51-419-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm |  |
| | 51-419-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-419-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-419-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | |
|  | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-414-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm |  |
| | 51-414-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-414-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-414-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | |

Middle-driven distractors

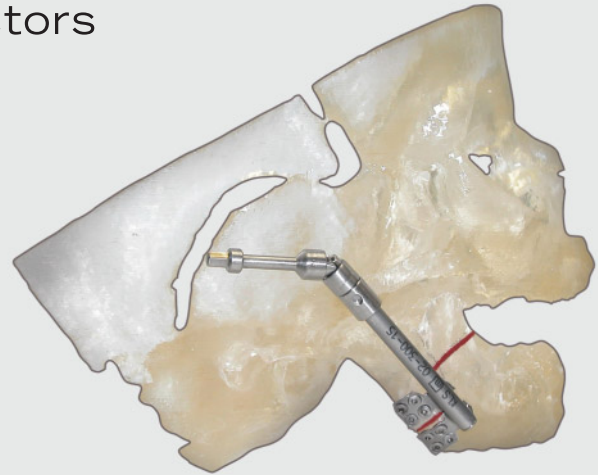
(both plates start from central position bilaterally)

|  | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
|---|--------------|--------------------|---------|-----------|----------|---|
| | 51-415-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm |  |
| | 51-415-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-415-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-415-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | |
|  | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-417-15-09 | 15 mm | no | 1.5 Micro | 0.5 mm |  |
| | 51-417-20-09 | 20 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-417-25-09 | 25 mm | no | 1.5 Micro | 0.5 mm | |
| | 51-417-30-09 | 30 mm | no | 1.5 Micro | 0.5 mm | |
|  | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-425-15-09 | 15 mm | yes | 1.5 Micro | 0.5 mm |  |
| | 51-425-20-09 | 20 mm | yes | 1.5 Micro | 0.5 mm | |
| | 51-425-25-09 | 25 mm | yes | 1.5 Micro | 0.5 mm | |
| | 51-425-30-09 | 30 mm | yes | 1.5 Micro | 0.5 mm | |

Note: All Zurich II and Micro Zurich distractors are delivered without activation arms. Activation arms see page 8.

Zurich II Micro Zurich Distractors

Early intraoral distraction therapy for babies and infants aged up to one year requires distractors with an especially small cross-section to ensure that the distractor can be reliably covered with soft tissue. The Micro Zurich product line has been designed with exactly this goal in mind.

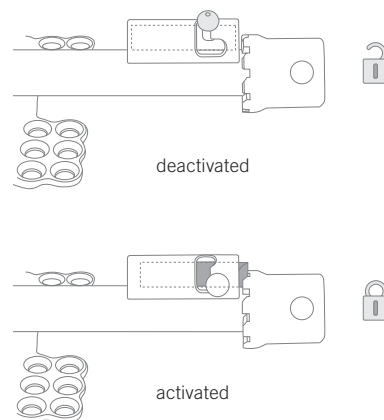


Product features

- All distractors are symmetrical.
There are no right/left versions.
- Almost all Micro Zurich distractors are fixed in place with 1.0 mm microscrews.
 - 1 turn = 0.3 mm distraction length
(end-driven distractors)
 - 1 turn = 0.6 mm distraction length
(middle-driven distractors)
- Different plates and mesh designs provide the flexibility for optimum fixation according to anatomical requirements.
- Just as in the Zurich II product line, a distinction is made between middle-driven, end-driven and front-driven distractors.
- In addition, the user can select from the entire range of activation arms described on page 8.

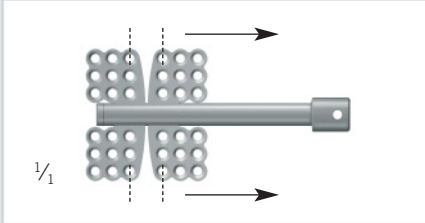

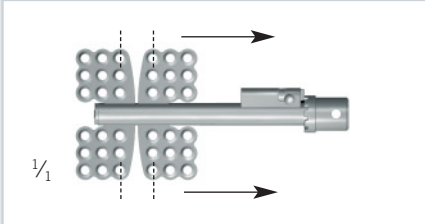

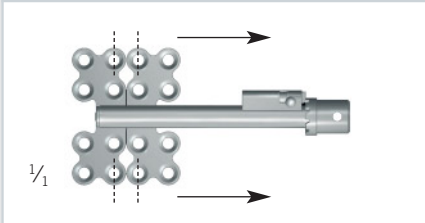

The anti-relapse ratchet

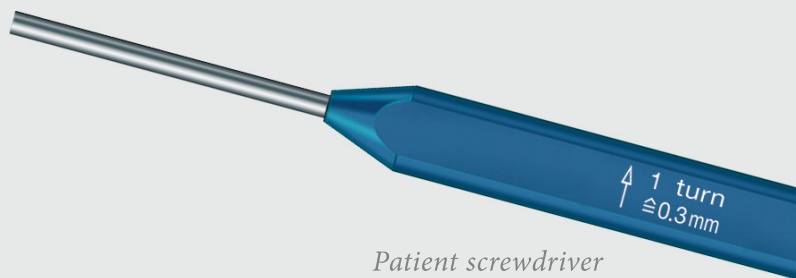
Some distractors of the Zurich II and Micro Zurich product lines feature an anti-relapse ratchet that reliably prevents backward rotation of the distractor and consequential relapse of the distracted bone area. This ratchet can be deactivated intra-operatively for function test performance.



End-driven distractors

(the posterior plate stays in place, while the anterior plate moves forward)

|  <p>1/1</p> | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
|---|--------------|--------------------|-----------|-----------|----------|--|
| | 51-430-15-09 | 15 mm | no | 1.0 Micro | 0.3 mm |  |
| | 51-430-20-09 | 20 mm | no | 1.0 Micro | 0.3 mm | |
| | 51-430-25-09 | 25 mm | no | 1.0 Micro | 0.3 mm | |
| 51-430-30-09 | 30 mm | no | 1.0 Micro | 0.3 mm | | |
|  <p>1/1</p> | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-424-15-09 | 15 mm | yes | 1.0 Micro | 0.3 mm |  |
| | 51-424-20-09 | 20 mm | yes | 1.0 Micro | 0.3 mm | |
| | 51-424-25-09 | 25 mm | yes | 1.0 Micro | 0.3 mm | |
| 51-424-30-09 | 30 mm | yes | 1.0 Micro | 0.3 mm | | |
|  <p>1/1</p> | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
| | 51-428-15-09 | 15 mm | yes | 1.5 Micro | 0.3 mm |  |
| | 51-428-20-09 | 20 mm | yes | 1.5 Micro | 0.3 mm | |
| | 51-428-25-09 | 25 mm | yes | 1.5 Micro | 0.3 mm | |
| 51-428-30-09 | 30 mm | yes | 1.5 Micro | 0.3 mm | | |

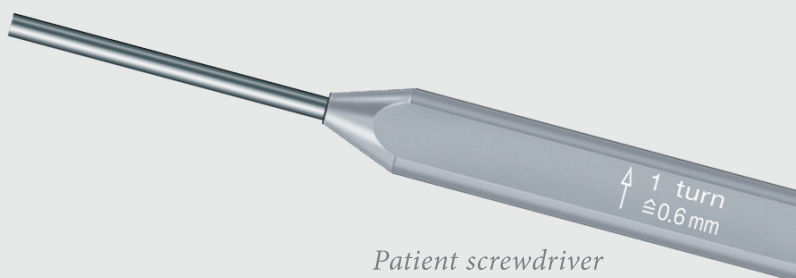


Patient screwdriver
51-430-95-07

Middle-driven distractors

(both plates move from central position bilaterally)

|  <p>1/1</p> | Item No. | Distraction length | Ratchet | Screws | 1 turn = | Pat. SD |
|--|--------------|--------------------|-----------|-----------|----------|---|
| | 51-423-15-09 | 15 mm | yes | 1.0 Micro | 0.6 mm |  |
| | 51-423-20-09 | 20 mm | yes | 1.0 Micro | 0.6 mm | |
| | 51-423-25-09 | 25 mm | yes | 1.0 Micro | 0.6 mm | |
| 51-423-30-09 | 30 mm | yes | 1.0 Micro | 0.6 mm | | |



Patient screwdriver
51-423-95-07

Screws, Drill Bits and Screwdrivers 1.0 mm Micro

suited for:

- Most Micro Zurich Distractors



Micro screws

■ Ø 1.0 mm

|  Ti 5 units (ø) | Length | Centre Drive®  |
|---|--------------|--|
| | 2 mm | 25-660-02-09 |
| | 3 mm | 25-660-03-09 |
| | 4 mm | 25-660-04-09 |
| | 5 mm | 25-660-05-09 |
| | 6 mm | 25-660-06-09 |
| | 7 mm | 25-660-07-09 |
| | 9 mm | 25-660-09-09 |
| | 11 mm | 25-660-11-09 |
| | 13 mm | 25-660-13-09 |
| | ■ Ø 1.2 mm | |
| 5 mm | 25-601-05-09 | |
| 7 mm | 25-601-07-09 | |
| 9 mm | 25-601-09-09 | |
| 11 mm | 25-601-11-09 | |
| 13 mm | 25-601-13-09 | |

Emergency screws

■ Ø 1.2 mm

|  Ti 5 units (ø) | Length | Centre Drive®  |
|---|--------|--|
| | 3 mm | 25-661-03-09 |
| | 5 mm | 25-661-05-09 |
| | | |
| | | |



Patient screwdriver
51-430-95-07
straight



Patient screwdriver
51-423-95-07
straight







Screwdriver handle
25-402-99-07
size "M"










Screwdriver handle
25-480-99-07
size "S"






Drill bits (J-Notch attachment)

|   | Ø x Length | | Stop | Item No. |
|--|---|-------------|--|--|
| |  | 0.7 x 50 mm | | 3 mm |
| 0.7 x 50 mm | | | 3 mm | 25-454-03-91  |
| 0.7 x 50 mm | | | 5 mm | 25-454-05-07  |
| 0.7 x 50 mm | | | 5 mm | 25-454-05-91  |
| 0.7 x 50 mm | | | 7 mm | 25-454-07-07  |
| 0.7 x 50 mm | | | 7 mm | 25-454-07-91  |
| for dense bone | | Stop | | Item No. |
| 0.8 x 50 mm | | 5 mm | 25-457-05-07  | |
| 0.8 x 50 mm | | 5 mm | 25-457-05-91  | |
| 0.8 x 50 mm | | 7 mm | 25-457-07-91  | |





Icon explanations

-  Steel
-  Titanium
-  Units/pack
-  Centre Drive®
-  Cross Drive
-  J-Notch attachment
-  Dental attachment

Drill bits for angled handpiece (dental attachment)

|   | Ø x Length | Stop | Item No. |
|--|-------------|------|--|
|  | 0.7 x 18 mm | 5 mm | 50-916-05-07  |
| | 0.7 x 20 mm | 7 mm | 50-916-07-07  |

Screwdriver blades

|   | Screwdriver | Centre Drive®  |
|--|--------------------|---|
|  | Size "S" | 25-492-98-07 |
| | Size "M" | 25-428-98-07 |
| | Angled screwdriver | 50-910-10-07 |


Screws, Drill Bits and Screwdrivers 1.5 mm Micro

suited for:


- Zurich II Distractors
- Micro Zurich Distractors (partially)
- Horizontal and Ramus Distractors
- Mandibular Telescoping Distractors
- Wood-Zurich Intraoral Distractors
- Zurich Bidirectional Mandibular Distractors
- Moses-Stucki Distractors
- Right Angle Driven (RAD) Distractors
- Ramus Transport Distractors

Micro screws

■ Ø 1.5 mm


|  | Length | Centre Drive® | Cross Drive |
|---|--------|---------------|--------------|
| | 3.5 mm | 25-665-03-09 | 25-675-03-09 |
| | 4 mm | 25-665-04-09 | 25-675-04-09 |
| | 5 mm | 25-665-05-09 | 25-675-05-09 |
| | 6 mm | 25-665-06-09 | 25-675-06-09 |
| | 7 mm | 25-665-07-09 | 25-675-07-09 |
| | 8 mm | 25-665-08-09 | 25-675-08-09 |
| | 9 mm | 25-665-09-09 | 25-675-09-09 |
| | 11 mm | 25-665-11-09 | 25-675-11-09 |
| | 13 mm | 25-665-13-09 | 25-675-13-09 |

■ Ø 1.5 mm


|  | Length | maxDrive® |
|--|--------|--------------|
| | 3.5 mm | 25-875-03-09 |
| | 4 mm | 25-875-04-09 |
| | 5 mm | 25-875-05-09 |
| | 6 mm | 25-875-06-09 |
| | 7 mm | 25-875-07-09 |
| | 8 mm | 25-875-08-09 |
| | 9 mm | 25-875-09-09 |
| | 11 mm | 25-875-11-09 |
| | 13 mm | 25-875-13-09 |

Emergency screws

■ Ø 1.8 mm


|  | Length | Centre Drive® | Cross Drive |
|---|--------|---------------|--------------|
| | 3.5 mm | 25-666-03-09 | 25-676-03-09 |
| | 5 mm | 25-666-05-09 | 25-676-05-09 |
| | 7 mm | 25-666-07-09 | 25-676-07-09 |

■ Ø 1.8 mm


|  | Length | maxDrive® |
|--|--------------|--------------|
| | 3.5 mm | 25-876-03-09 |
| | 4 mm | 25-876-04-09 |
| | 5 mm | 25-876-05-09 |
| 7 mm | 25-876-07-09 | |

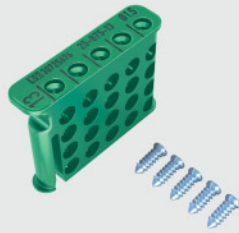
Drill-Free screws

■ Ø 1.5 mm

|  | Length | Centre Drive® | Cross Drive |
|---|--------|---------------|--------------|
| | 4 mm | 25-668-04-09 | 25-678-04-09 |
| | 5 mm | 25-668-05-09 | 25-678-05-09 |
| | 6 mm | 25-668-06-09 | 25-678-06-09 |
| | 7 mm | 25-668-07-09 | 25-678-07-09 |

■ Ø 1.5 mm

|  | Length | maxDrive® |
|--|--------|--------------|
| | 4 mm | 25-878-04-09 |
| | 5 mm | 25-878-05-09 |
| | 6 mm | 25-878-06-09 |
| | 7 mm | 25-878-07-09 |



maxDrive®

in 5-piece clip magazines
All screws are made of titanium



Patient screwdriver
51-500-90-07
straight



Patient screwdriver
51-505-90-07
angled



Screwdriver handle
25-402-99-07
size "M"



Patient screwdriver
51-505-91-07
for handle 25-402-99-07

Drill bits (J-Notch attachment)

| | Ø x Length | Stop | Item No. |
|--------------|------------------------|--------------|--------------|
| | 1.1 x 50 mm | 3.5 mm | 25-452-03-07 |
| | 1.1 x 50 mm | 3.5 mm | 25-452-03-91 |
| | 1.1 x 50 mm | 5 mm | 25-452-05-07 |
| | 1.1 x 50 mm | 5 mm | 25-452-05-91 |
| | 1.1 x 50 mm | 7 mm | 25-452-07-07 |
| | 1.1 x 50 mm | 7 mm | 25-452-07-91 |
| | 1.1 x 50 mm | 9 mm | 25-452-09-07 |
| | 1.1 x 50 mm | 9 mm | 25-452-09-91 |
| | for transbuccal access | | Stop |
| 1.1 x 105 mm | 5 mm | 50-511-05-07 | |
| 1.1 x 105 mm | 7 mm | 25-452-57-07 | |
| 1.1 x 105 mm | 20 mm | 25-452-61-07 | |

Icon explanations

- Steel
- Titanium
- Units/pack
- Centre Drive®
- Cross Drive
- maxDrive®
- J-Notch attachment
- Dental attachment

Drill bits for angled handpiece (dental attachment)

| | Ø x Length | Stop | Item No. |
|----------|-------------|---------|--------------|
| | 1.1 x 20 mm | 7 mm | 50-920-07-07 |
| | 1.1 x 30 mm | no stop | 50-920-00-07 |

Screwdriver blades

| | Screwdriver | Centre Drive® | Cross Drive | maxDrive® |
|----------|--------------------|---------------|--------------|--------------|
| | Size "M" | 25-430-98-07 | 25-483-97-07 | 25-489-97-07 |
| | Size "L" * | | | 25-438-97-07 |
| | Angled screwdriver | 50-910-15-07 | 50-915-15-07 | 50-916-15-07 |

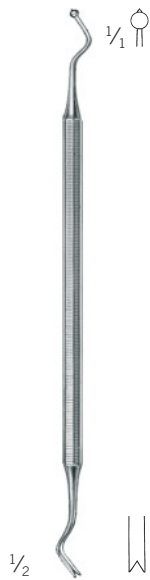
* Screwdriver, size "L", item no. 25-406-99-07; 25-407-03-04; 25-407-04-04; 25-410-00-07; 25-411-00-07; 50-425-05-07

Instruments for Zurich II Distraction System
1.0 mm and 1.5 mm Micro

1.0 mm Micro



*Plate-holding
forceps, curved*
51-525-80-07
15.5 cm/6"



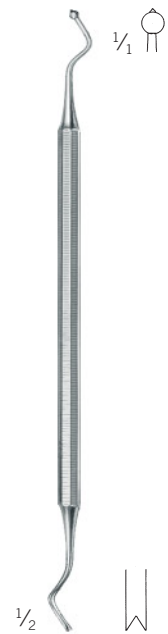
*Lindorf
Plate-holding instrument*
25-435-10-07
16 cm/6 1/4"



1.5 mm Micro



*Plate-holding
forceps*
25-441-16-07
18 cm/7"





*Lindorf
Plate-holding forceps*
25-435-15-07
18 cm/7"





Icon explanations

-  1.0 mm
-  1.5 mm

TC GOLD TC Instruments with hard-metal inserts

For both sizes



1/2

Modeling pliers

25-486-13-07

13 cm/5"

2 items recommended



1/2

Body holding forceps

51-400-03-07

15.5 cm/6"



1/2

Cutter

51-400-02-07

18 cm/7"



1/2

Activator measuring device

51-400-04-07

18 cm/7"



1/2

Activation arm disconnection forceps

51-400-01-07

15.5 cm/6"



Zurich II Storage Module

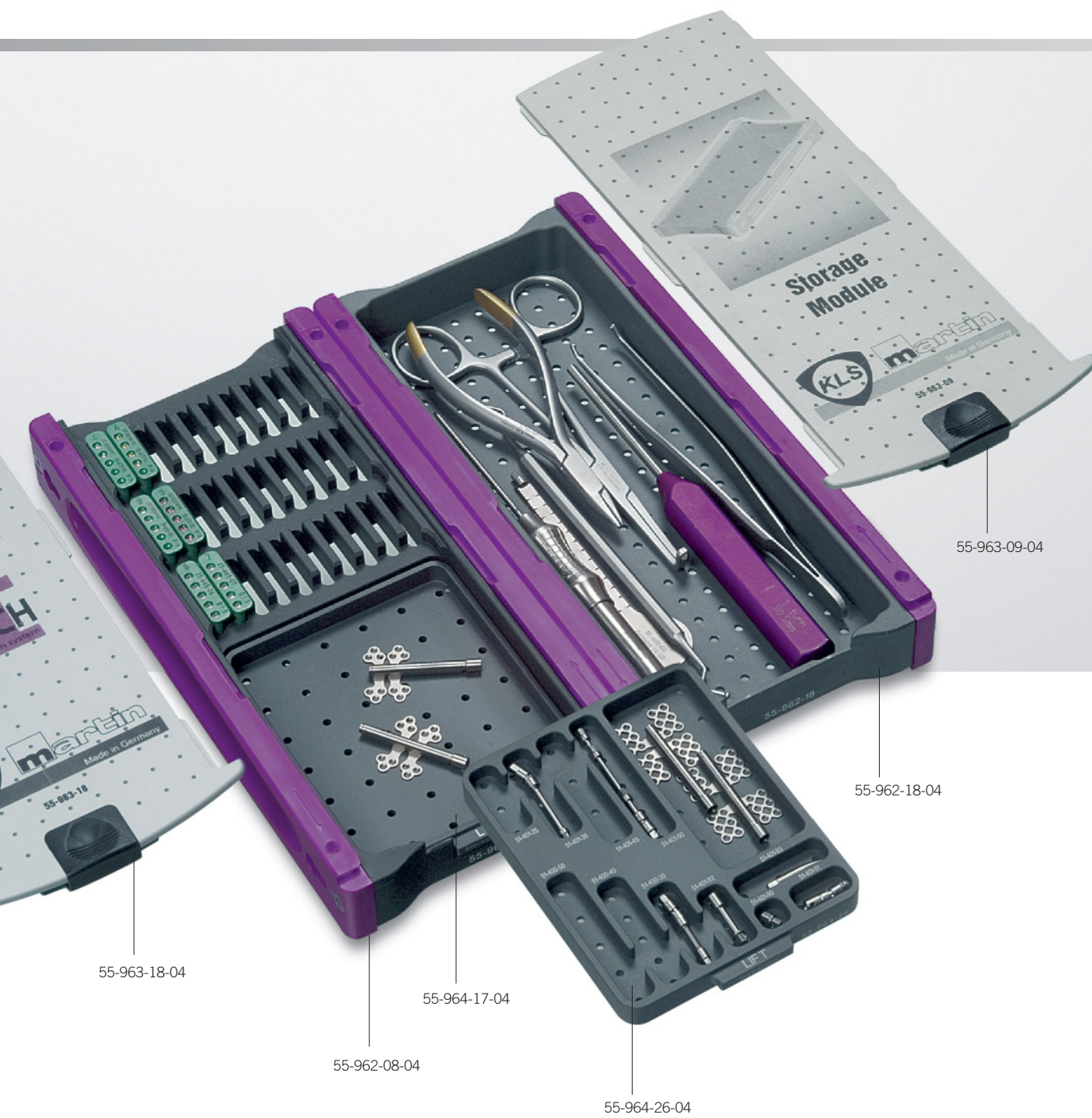


Storage Module

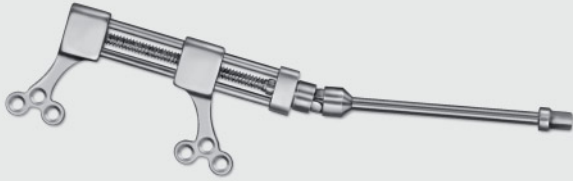
This storage proposal offers yourself enough room to integrate the most important application tools.



| | Item No. |
|--------------------------------------|--------------|
| Basic module, purple | 55-962-08-04 |
| Insert, universal | 55-964-17-04 |
| Insert for activation arms | 55-964-26-04 |
| Lid for Zurich II distraction module | 55-963-18-04 |
| Storage module, purple | 55-962-18-04 |
| Lid for storage module | 55-963-09-04 |

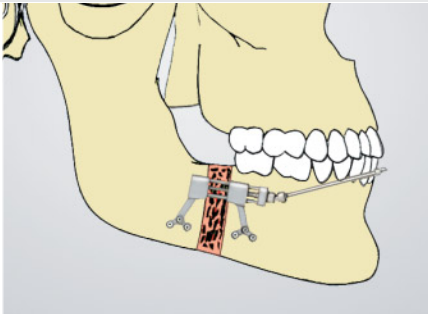


Unidirectional Mandibular Distraction



Horizontal Distractor

1:1 scale



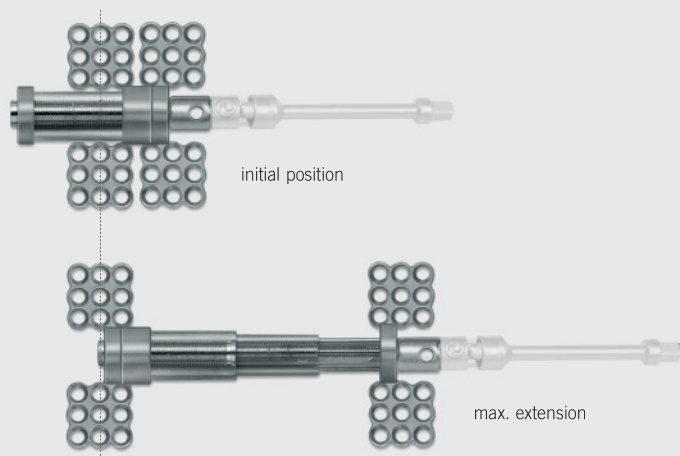
Horizontal Distractor

- Low-profile distractors
- Use for mandibular body
- Symmetrical design – no right or left versions
- Fixation optionally with the screw holes downwards or upwards (for fixation in the oblique line)
- Cardanic activators offer maximum flexibility for intraoral activation.
- Activation arm is already included.

Horizontal Distractors

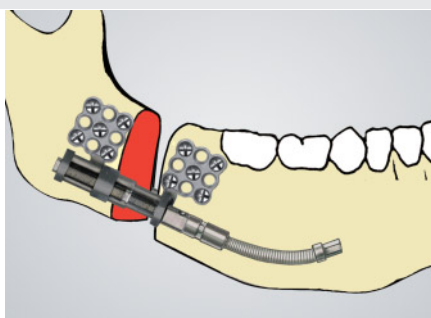
| | Distractors | |
|-------|--------------|--------------|
| | Distractors | Item No. |
| | 10 mm | 51-500-10-05 |
| | 15 mm | 51-500-15-05 |
| 20 mm | 51-500-20-05 | |

| | 1 turn = 0.5 mm distraction length Recommended patient screwdrivers: | |
|--|---|--------------|
| | Straight | 51-500-90-07 |
| | Angled | 51-505-90-07 |



Mandibular Telescoping Distractor, 30 mm

1:1 scale




Mandibular Telescoping Distractor


Using intraoral distractors for the therapy of serious mandibular micrognathias or asymmetries poses the basic problem of how to accommodate the relatively large spindle of the distractor in the patient's mouth.

The telescopic mandibular distractor provides the solution. Just like a car antenna, this distractor extends continuously in various phases, reaching its full volume only at the end of the distraction process.

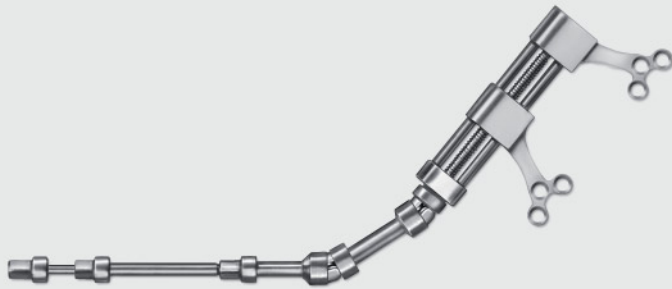
Mandibular Telescoping Distractors

|  | Distractors w/o activation arms | | Item No. |
|---|---------------------------------|--|--------------|
| | 20 mm | | 51-350-20-09 |
| | 30 mm | | 51-350-30-09 |

Activation arms see page 8

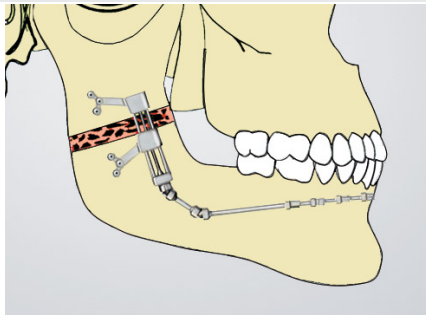
|  | 1 turn = 0.3 mm distraction length Recommended patient screwdrivers: | |
|---|---|--------------|
| | Straight | 51-555-85-07 |
| | Angled | 51-555-95-07 |

Unidirectional Mandibular Distraction



Ramus Distractor

1:1 scale



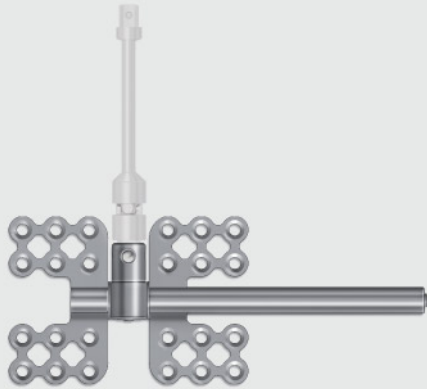
Ramus Distractor

- Low-profile distractors
- Use for ascending ramus
- Symmetrical design – no right or left versions
- Fixation optionally with the screw holes downwards or upwards (for fixation in the oblique line)
- Cardanic activators offer maximum flexibility for intraoral activation.
- Activation arm is already included.

Ramus Distractors

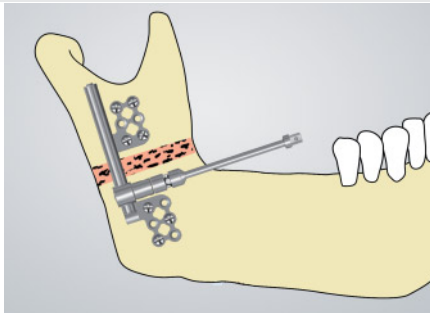
| | Distractors | | Item No. | |
|--|-------------|--|--------------|--|
| | 15 mm | | 51-510-15-05 | |
| | 20 mm | | 51-510-20-05 | |
| | 25 mm | | 51-510-25-05 | |

| | 1 turn = 0.5 mm distraction length | |
|--------|------------------------------------|--------------|
| | Recommended patient screwdrivers: | |
| | Straight | 51-500-90-07 |
| Angled | 51-505-90-07 | |



Right Angle Driven (RAD) Distractor

1:1 scale




Intraoral fixation of a distractor with 90° activation

Distraction of the ascending ramus makes special demands on intraoral distractors. The surgeon normally prefers intraoral activation in these cases as well, but this is especially hard to realize here because space is scarce.

Due to their offset activator providing 90-degree access, these distractors offer excellent support in this situation, facilitating intraoral activation a great deal. They are always fixed in place with 1.5-mm micro screws. One screwdriver turn is equivalent to a distraction length of 0.1 mm.

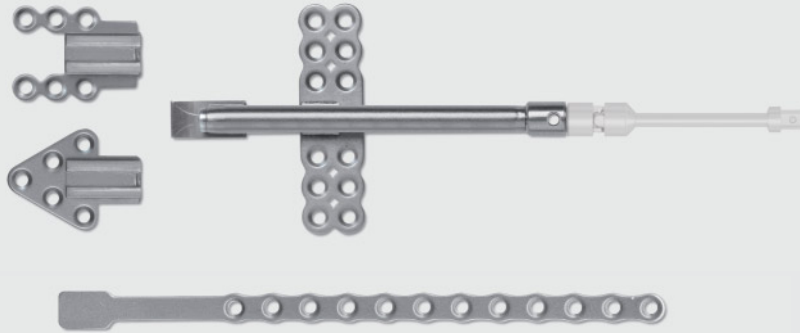
Right Angle Driven (RAD) Distractors

|  | Distractors w/o activation arms | | Item No. |
|---|---------------------------------|--|--------------|
| | 20 mm, left | | 51-612-20-09 |
| | 25 mm, left | | 51-612-25-09 |
| | 30 mm, left | | 51-612-30-09 |
| | 20 mm, right | | 51-613-20-09 |
| | 25 mm, right | | 51-613-25-09 |
| | 30 mm, right | | 51-613-30-09 |

Activation arms see page 8

|  | 1 turn = 0.1 mm distraction length Recommended patient screwdrivers: | |
|---|---|--|
| | Straight | |

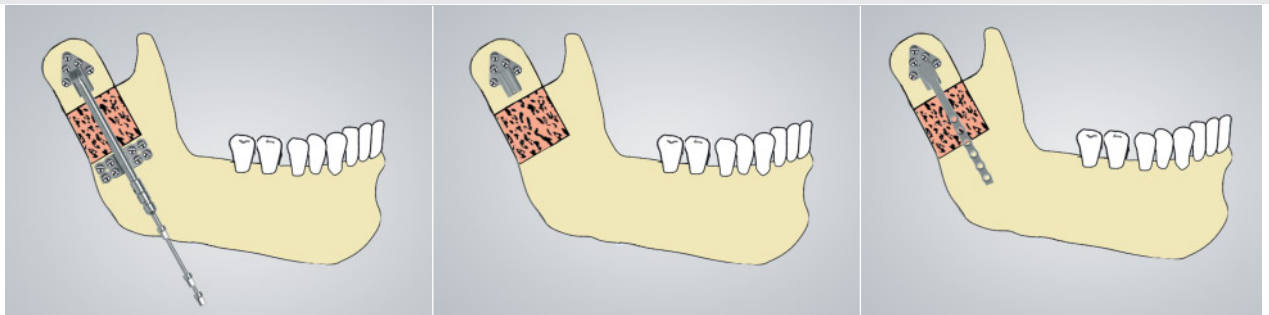
Unidirectional Mandibular Distraction



Consolidation plate

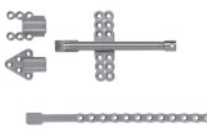
Ramus Transport Distractor


1:1 scale



Ramus Transport Distractors

Ramus Transport Distractors

|  | Distractors w/o activation arms | |
|---|---------------------------------|--------------|
| | Length | Item No. |
| Front-driven | 20 mm | 51-420-20-09 |
| | 25 mm | 51-420-25-09 |
| | 30 mm | 51-420-30-09 |
| End-driven | 20 mm | 51-421-20-09 |
| | 25 mm | 51-421-25-09 |
| | 30 mm | 51-421-30-09 |

|  | To order separately | |
|--|---------------------|--------------|
| | Consolidation plate | 51-422-12-09 |

|  | 1 turn = 0.5 mm distraction length Recommended patient screwdrivers: | |
|--|---|--------------|
| | Straight | 51-500-90-07 |

Activation arms see page 8

Transport distraction of the condylar head represents an interesting therapeutic option for the surgical correction of mandibular joint ankylosis and improvement of oral opening.

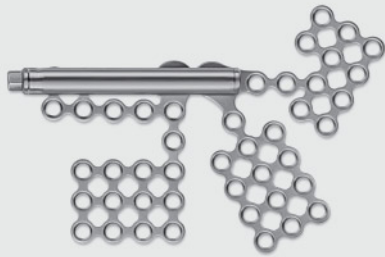
An L-type posterior ramus osteotomy provides for targeted movability to the condyle and enables isolated osteogenesis of the respective bone structures. The distractor has a completely symmetrical design and therefore can be used on both sides.

Thanks to the availability and modular use of activators from the Zurich II product line (see page 8), together with the two alternative posterior attachments provided, the surgeon can respond flexibly and individually to any anatomical challenge.

A special retention plate (51-422-12-09) is optionally available for increased patient convenience during the consolidation phase.

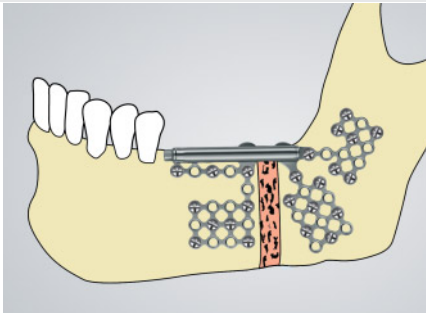
The distractor is detached from the posterior plate and removed. The retention plate is then attached from the front (caudally) and firmly locked in place. The posterior plate remains firmly connected to the condyle at any time.

Unidirectional Mandibular Distraction



Moses-Stucki Distractor*

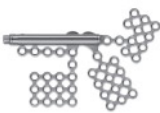
1:1 scale



Moses-Stucki Distractor

As the mesh plates can be arranged and cut freely in three different levels, this provides maximum flexibility to define and maintain the distraction vector. This is a very important aspect for bilateral distraction in particular.

Moses-Stucki Distractors

|  | Distractors | | Item No. |
|---|--------------------|--|-----------------|
| | 15 mm, left | | 51-435-15-09 |
| | 20 mm, left | | 51-435-20-09 |
| | 15 mm, right | | 51-436-15-09 |
| | 20 mm, right | | 51-436-20-09 |

|  | 1 turn = 0.5 mm distraction length | |
|---|---|--------------|
| | Recommended patient screwdrivers: | |
| | Straight | 51-500-90-07 |

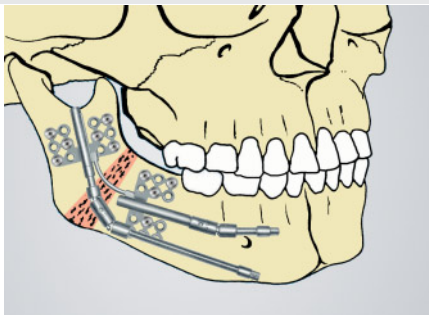
* Developed in collaboration with Dr. Jeffrey Moses and Dr. Suzanne Stucki-McCormick

Bidirectional Mandibular Distraction




Wood-Zurich Intraoral Distractor

1:1 scale



Wood-Zurich distractors require only one osteotomy line to be performed in the mandibular angle.

Wood-Zurich Intraoral Distractors

|  | Distractors w/o activation arms | Item No. |
|---|------------------------------------|--------------|
| | 10 x 15 mm, left | 51-300-15-09 |
| | 20 x 20 mm, left | 51-300-20-09 |
| | 10 x 15 mm, right | 51-301-15-09 |
| | 20 x 20 mm, right | 51-301-20-09 |

Activation arms see page 8

|  | 1 turn = 0.5 mm distraction length Recommended patient screwdrivers: | |
|---|---|--------------|
| | straight | 51-500-90-07 |

Mandibular micrognathias frequently affect both the mandibular body and the ascending ramus. Bidirectional distractors offer surgeons an opportunity to treat both sectors in a targeted but independent way.

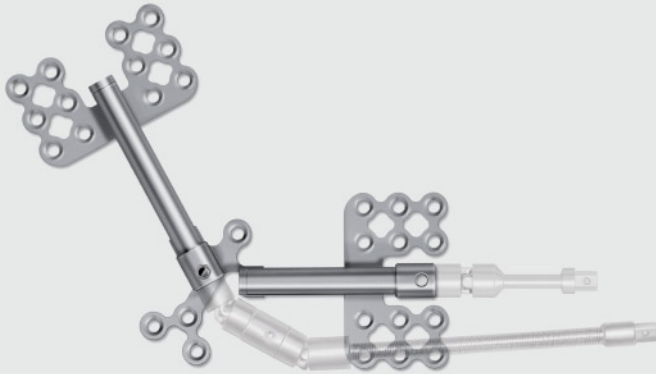
As opinions differ with regard to the question whether single or double osteotomy is indicated in the mandibular angle, the KLS Martin range of distractors offers solutions that satisfy the demands of both parties.

Wood-Zurich distractors are a combination of two Zurich distractors. Their design reflects a very frequent type of mandibular micrognathias and asymmetries in which both the mandibular body and the ascending ramus are affected.

However, the entire range of activators contained in the Zurich modular distractor line can be used in addition to supplement or modify the two activators as required.

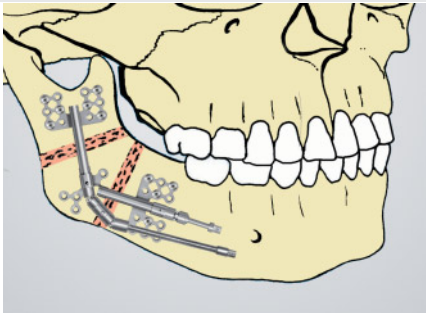
Wood-Zurich distractors require only one osteotomy line to be performed in the mandibular angle region.

Bidirectional Mandibular Distraction



Zurich Bidirectional Mandibular Distractor


1:1 scale



Distractor fitted to the mandible. The two osteotomies are marked.

By means of a double osteotomy, the gonial angle will be clearly identified and formed. Individual bone formation of both, the ascending ramus and the mandibular body are guaranteed applying the two different activation spindles.

Zurich Bidirectional Mandibular Distractors

|  | Distractors w/o activation arms | Item No. |
|---|---------------------------------|--------------|
| | 10 x 15 mm, left | 51-310-15-09 |
| | 15 x 20 mm, left | 51-310-20-09 |
| | 10 x 15 mm, right | 51-311-15-09 |
| | 15 x 20 mm, right | 51-311-20-09 |

Activation arms see page 8

|  | 1 turn = 0.5 mm distraction length Recommended patient screwdrivers: | |
|---|---|--|
| | Straight | |



Removal procedure for
standard activation arms
(see page 8)

Instructions for use

- Select the appropriate device and activation arm. A stereolithographic (STL) model may be very helpful to determine the exact anatomical conditions and to select the right distractor. Specific STL models, based on your CT scan, can be ordered at KLS Martin Group.
- Make a mucosal or extra-oral incision. Then elevate the periosteum to give good access. Place the distractor in the desired position and mark the osteotomy site.
- Applying the activation arm measuring device 51-400-04-07 the accurate length of the activation arm can be determined. The distractor can be adjusted using the cutting plier 51-400-02-07.
- A firm anchorage according to the desired distraction vector applying at least three 1.0- or 1.5-mm micro screws on each side of the osteotomy line is recommended.
- Bend the micro plates as necessary to ensure good bone contact establishing a stable distraction vector. Caution: Take extreme care to protect the welding zone during bending procedure. Place one plate bender 25-486-13-07 next to the weld and use the other bender to modify the plate.
- The KLS Martin measuring device 51-400-04-07 is a good tool to confirm the distraction vector and the length of the activator. If performing bilateral distraction, ensure that both vectors are parallel to each other.
- Remove the device and perform a complete osteotomy taking care about the anatomical situation of the alveolar nerve. Then refix the distractor with 1.5- mm micro screws, 4 to 7 mm in length.
- Connect the selected activation arm to the distraction device. This can also be done prior to the surgery. Caution: Take care to ensure that the ball on the arm interlocks with the distractor body.
- Confirm device function intra-operatively by activating the device. Then return to starting position and suture the wound.

Latency Phase

- A latency phase of 3-7 days is recommended, based on patient's age, health status, and surgeon's treatment plan.
- After the desired latency period, distraction begins at a standard rate of 1 mm per day (usually 2 turns of 360°).

Activation arm removal of conventional activators (page 8)

- Activation arm can be removed after completion of distraction phase. This can be done in the O.R. or the office, depending on the access.
- Expose the activator and by using the forceps 51-400-01-07, depress the ball at the base of the activation arm and pull off the activation arm.

Distraction Device Removal

Remove distractor according to the surgical treatment protocol, approximately 8-12 weeks, based on patient's age, actual lengthening and any other therapeutic considerations.

Please note:

This brochure does not replace the manual. The instructions will accompany the product and must be considered before use.

Should any more questions remain ...
... just contact us!

KLS Martin is a pioneering company in distraction osteogenesis and has established in many individual indications its own specific product portfolio.

Besides these specific disciplines the KLS Martin product range also includes the complete spectrum of systems for traumatology, orthognathic surgery and reconstruction in today's oral maxillofacial surgery. The Level One catalog is the standard work to all osteosynthesis products.

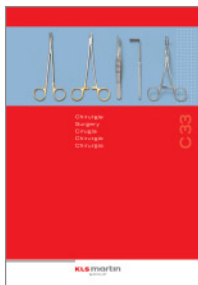
You should also get to know SonicWeld Rx®: It is worldwide patented the only resorbable osteosynthesis program, which is entirely based on ultrasound technology to weld in resorbable pins.

Resorbable osteosynthesis can just be so easy !

*Of course you can also get in touch with us personally – via e-mail:
info@klsmartin.com or via our customer hotline: +49/7461-706-0*



Level One Catalog



General Catalog



Dental Catalog



Distraction Devices Overview



Patient Leaflet for details (available in German and English)



Alveolar Ridge Distraction



SonicWeld Rx® Guided Bone Regeneration



SonicWeld Rx® Catalog



SonicWeld Rx® CD-ROM

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