# KAULMED

## **Dynamic Compression** plate System

# Surgical Technique

www.kaulmed.com

# about us

KAUL-Medizintechnik GmbH is a German manufacturer and supplier of medical items. Being part of Auxein Group and its German representative, we use its strength and experience to offer excellent products and services.

With our international brand KAULMED our products and we are there **For the Surgeons**.

# History of "KAULMED”

## 2020
Construction of KAULMEDs new manufacturing facility has started. Bone Cement and a brand new wound closure system developed in Germany have been added to our portfolio. New catalogues have been designed and published.

## 2019
KAULMED Spine Solutions were successfully registered and will be dispatched during Q4. Also in 2019 KAULMED gets a new website as we consider this part of our service. At MEDICA 2019 KAULMED is published and made known to the international medical market, with overwhelming success.

## 2018
KAUL-Medizintechnik GmbH started manufacturing Spine Solutions under KAULMED brand to support a customer and his surgeons. End of 2018 registration of these products in customers country started.

## 2017
KAUL-Medizintechnik GmbH started its international brand KAULMED. Now the excellent products and services can be offered to customer all over the world.

## 2016
In 2016 KAUL-Medizintechnik GmbH company structure was modified to ensure enough ressources will be available for the new international brand. Manufacturing capacity, customer and technical service have been increased to meet the demands of international customers.

## 2015
The board of directors decided to use their knowledge and experience of orthopaedic implants to establish a seperate international brand.

# Limited Contact Dynamic Compression Plate System

## The Plate Grooved Undersurface

- Provides limited contact between plate and bone, minimizing the chance for temporary osteoporosis under the plate.
- Allows for periosteal callus formation at the fracture site.


## Uniform Stiffness

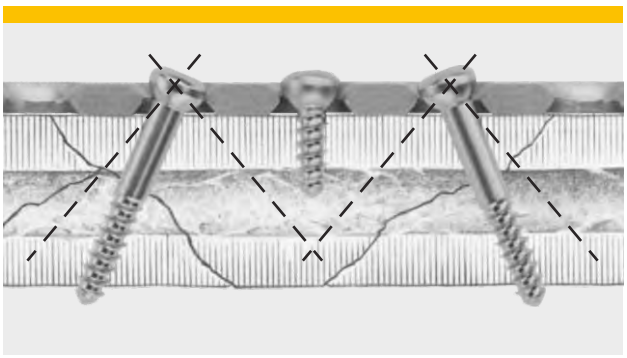
- Allows smooth contour of plate to bone.
- Protects plate from localized high bending stresses.

## Plate Hole

- Provides bidirectional compression.
- Allows 80° of longitudinal screw angulation.
- Allows 14° of transverse screw angulation.
- Uniform hole spacing provides greater intra-operative flexibility for screw and plate placement.

## Shaft Screw

- 60% more efficient in providing compr ession than a fully -threaded lag screw.
- Prevents catching of screw threads in near cortex or plate when used as a lag screw.
- Large shaft diameter resists shearing in positions of high stress.



*The hole allows 80° of longitudinal lag screw angulation.*

# Neutral and Load Drill Guide

Use when drilling screw holes through the plate in these positions:

- Neutral
- Buttress
- Load

Features:

- Color coded green and yellow drill sleeves.
- Drill sleeve tips seat precisely in hole for accurate drilling.


Use the green drill sleeve when drilling a screw hole in the neutral or buttress positions.

Use the yellow drill sleeve when drilling a screw hole in the load position.

**Buttress**

A screw placed in the buttress position in the plate hole helps maintain anatomic length.

Arrow on drill guide points away from fracture to buttress the proximal fragment.


**Neutral**

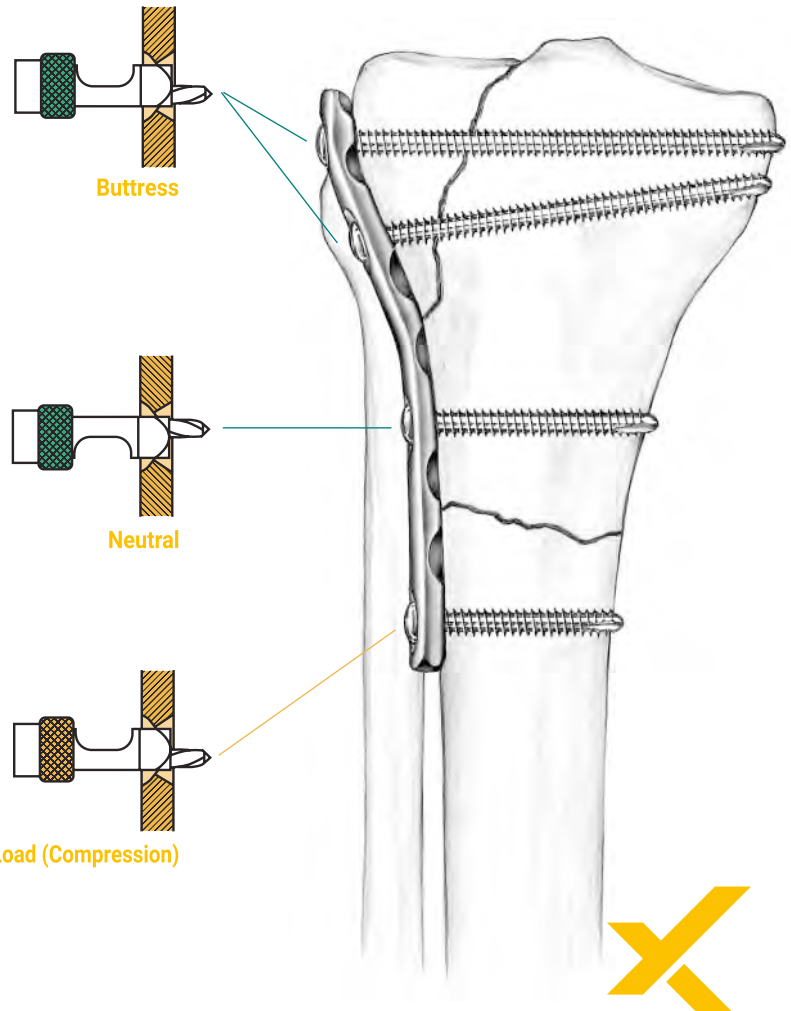
A screw placed in the neutral position anchors the plate to the bone.

Arrow on drill guide points toward fracture.


**Load (Compression)**

A screw placed in the load position serves to compress the bone fragments together.

Arrow on drill guide points toward fracture for compression.

# Universal Drill Guide

Use when drilling lag screws through the plate hole or when drilling independent lag screws.

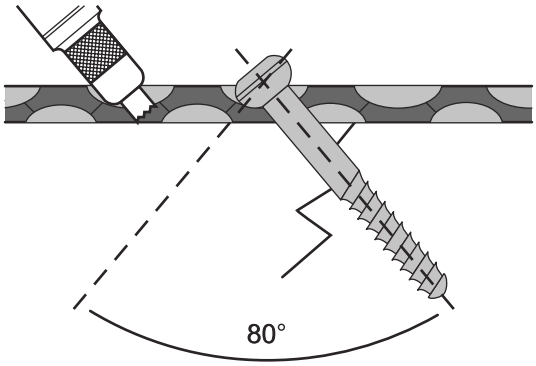
Use the Universal Drill Guide as an alternative to the Neutral and Loaded Drill Guide when drilling screw holes in the neutral, buttress and loaded +- positions

Can also be used as a tap sleeve.

Features:

- Narrow tip allows 80° of longitudinal lag screw angulation in plate hole.
- Narrow tip allows 14° of transverse lag screw angulation in the plate hole.
- Serrated tip prevents slipping on bone when placing independent lag screws.
- Spring loaded tip allows drilling of screw hole in the neutral, buttress or load positions, thereby providing an alternative to the Neutral and Load Drill Guide.

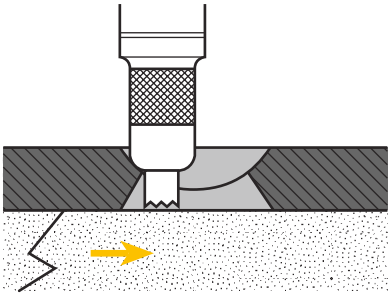

## Lag Screw Placement




*80° Longitudinal angulation*

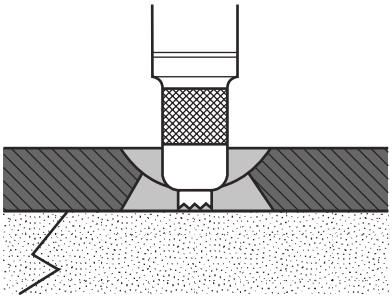



*14° Transverse angulation*



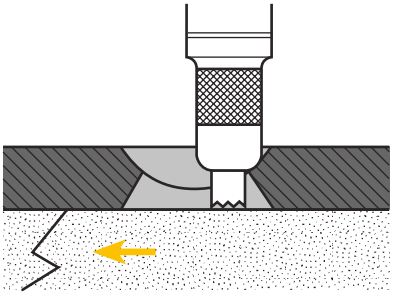
## Buttress

To buttress the proximal fragment, place the drill guide at the end of the hole nearest the fracture without downward pressure on the spring-loaded tip.



## Neutral

Fully press the spring-loaded sleeve down into the plate hole.



## Load (Compression)

To obtain compression, place the drill guide at the end of the hole away from the fracture without downward pressure on the spring-loaded tip.

## 3.5mm Small Limited Contact Dynamic Compression Plate

| Holes | Stainless Steel | Titanium |
|---|---|---|
| 3 | T211353S | T211353T |
| 4 | T211354S | T211354T |
| 5 | T211355S | T211355T |
| 6 | T211356S | T211356T |
| 7 | T211357S | T211357T |
| 8 | T211358S | T211358T |
| 9 | T211359S | T211359T |
| 10 | T2113510S | T2113510T |
| 11 | T2113511S | T2113511T |
| 12 | T2113512S | T2113512T |
| 13 | T2113513S | T2113513T |
| 14 | T2113514S | T2113514T |

**T2I001** Drill Bit Quick Coupling,Ø2.5mm x 112mm


**T2I003** Bone Tap Quick Coupling for Cortical Screws, Ø3.5mm


**T2I005** Drill Sleeve Insert,Ø3.5/2.5mm

**T2I007** T-Handle with Quick Coupling

**T2I009** Double Drill Guide, Ø2.5/3.5mm


**T2I002** Drill Bit Quick Coupling,Ø3.5mm x 112mm

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|---|---|
| **T2I004** | Bone Tap, Quick Coupling for Cancellous Screws, Ø4.0mm |


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|---|---|
| **T2I006** | Countersink, for Ø 3.5/4.0mm Screws, Quick Coupling |

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|---|---|
| **T2I008** | Quick Coulping Shaft |

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|---|---|
| **T2I010** | Self Centering double drill guide, Ø2.5/3.5mm |


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|---|---|
| **T2I011** | Drill Guide for Neutral and Loaded Position, DCP Ø2.5mm |

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|---|---|
| **T2I013** | Hexagonal Screw Driver Shaft - 2.5mm Tip, Quick Coupling |

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|---|---|
| **T2I015** | Extraction Screw, Ø3.5mm |

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|---|---|
| **T2I017** | Kirschner Wire with One Side Trocar Tip,Ø 1.2mm x 150mm |



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|---|---|
| **T2I019** | Kirschner Wire with One Side Trocar Tip,Ø 2.0mm x 150mm |

| | |
|---|---|
| **T2I012** | Drill Guide for Neutral and Loaded Position, LC-DCP Ø2.5mm |


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|---|---|
| **T2I014** | Depth Gauge, measuring range upto 60mm |


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|---|---|
| **T2I016** | 2.0mm Wire Sleeve |

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|---|---|
| **T2I018** | Kirschner Wire with One Side Trocar Tip, Ø 1.5mm x 150mm |

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|---|---|
| **T2I020** | Guide Wire, with threaded Trocar Tip, Ø 1.2mm x Length 150mm |



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|---|---|
| **T2I021** | Guide Wire with Threaded Trocar Tip, Ø 1.5mm x Length 100mm |



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|---|---|
| **T2I023** | Hexagonal Screw Driver with Holding Sleeve - 2.5mm Tip |

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|---|---|
| **T2I027** | Reduction Forcep, Pointed, Ratchet Lock |

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|---|---|
| **T2I029** | Self Centering Bone Holding Forcep, Speed Lock |

**T2I022** Guide Wire with Threaded Trocar Tip, Ø 2.0mm x Length 150mm



**T2I025 & T2I026** Bending Iron, Left & Right

**T2I028** Reduction Forcep, Serrated Jaws, Speed Lock

**T2I030** Periosteal Elevator with Silicon Handle, Curved, 6mm

**T2I031** Hohmann Retractor, 6.5mm

**T2I032** Hohmann Retractor,8.5mm

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| **T2I033** | Hohmann Retractor,15.5mm |

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| **T2I034** | 3.5mm Bending Template, Small |


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| **T2I035** | 3.5mm Bending Template, Large |


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| **T2I036** | Screw Holding Forcep for Small Fragment Instrument Set |

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|---|---|
| **T2I037** | Articulated Tension Device |

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|---|---|
| **T2I038** | Articulated Tension Device Key |

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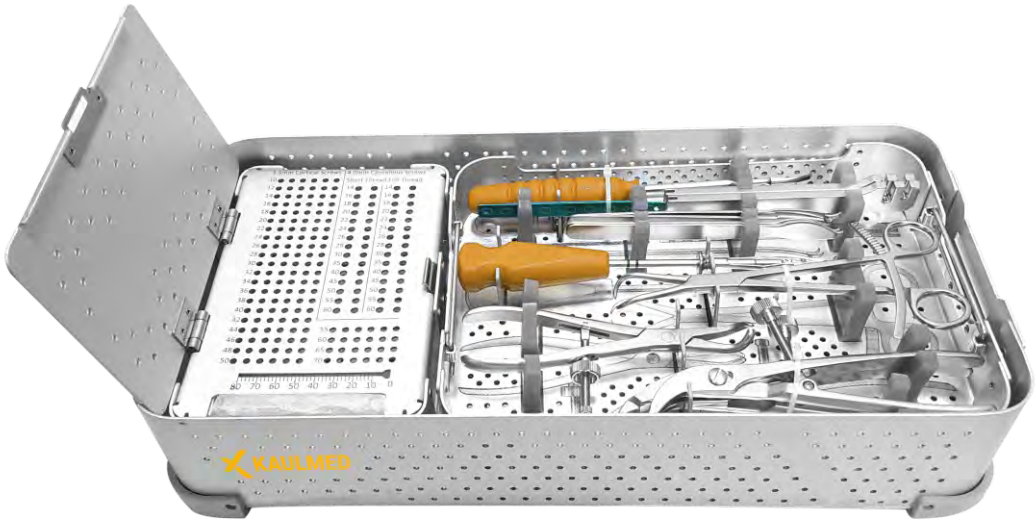
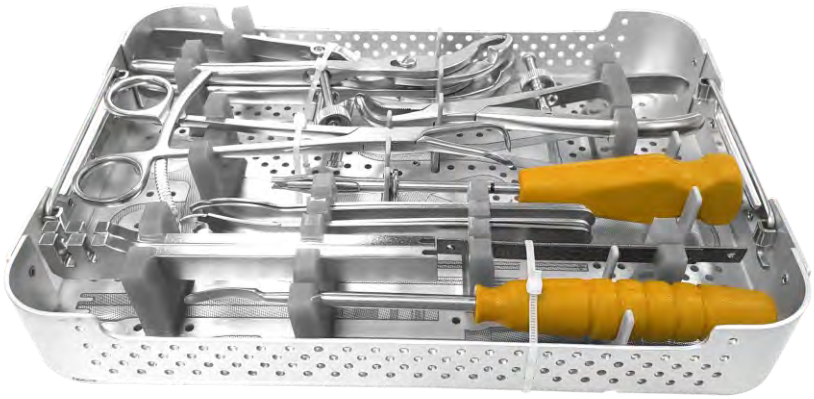
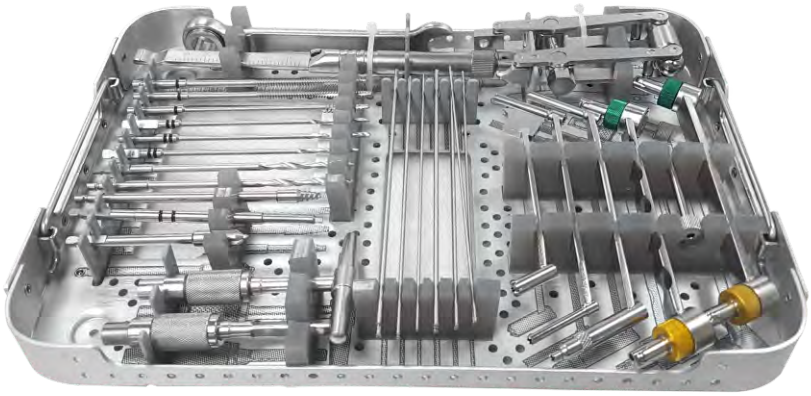
| **T2I100** | Container  for Small Fragment Instrument Set |
| **T2I040** | Screw Caddy for Small Fragment Instrument Set |

T2I 3.5mm Small Fragment Instrument Set





4.5mm Narrow Dynamic Compression Plate

| Holes | Stainless Steel | Titanium |
|---|---|---|
| 4 | T308454S | T308454T |
| 5 | T308455S | T308455T |
| 6 | T308456S | T308456T |
| 7 | T308457S | T308457T |
| 8 | T308458S | T308458T |
| 9 | T308459S | T308459T |
| 10 | T3084510S | T3084510T |
| 11 | T3084511S | T3084511T |
| 12 | T3084512S | T3084512T |
| 13 | T3084513S | T3084513T |
| 14 | T3084514S | T3084514T |
| 15 | T3084515S | T3084515T |
| 16 | T3084516S | T3084516T |
| 17 | T3084517S | T3084517T |
| 18 | T3084518S | T3084518T |

4.5mm Narrow Limited Contact
Dynamic Compression Plate

| Holes | Stainless Steel | Titanium |
|---|---|---|
| 4 | T309454S | T309454T |
| 5 | T309455S | T309455T |
| 6 | T309456S | T309456T |
| 7 | T309457S | T309457T |
| 8 | T309458S | T309458T |
| 9 | T309459S | T309459T |
| 10 | T3094510S | T3094510T |
| 11 | T3094511S | T3094511T |
| 12 | T3094512S | T3094512T |
| 13 | T3094513S | T3094513T |
| 14 | T3094514S | T3094514T |
| 15 | T3094515S | T3094515T |
| 16 | T3094516S | T3094516T |
| 17 | T3094517S | T3094517T |
| 18 | T3094518S | T3094518T |

4.5mm Broad Dynamic Compression Plate

| Holes | Stainless Steel | Titanium |
|---|---|---|
| 4 | T310454S | T310454T |
| 5 | T310455S | T310455T |
| 6 | T310456S | T310456T |
| 7 | T310457S | T310457T |
| 8 | T310458S | T310458T |
| 9 | T310459S | T310459T |
| 10 | T3104510S | T3104510T |
| 11 | T3104511S | T3104511T |
| 12 | T3104512S | T3104512T |
| 13 | T3104513S | T3104513T |
| 14 | T3104514S | T3104514T |
| 15 | T3104515S | T3104515T |
| 16 | T3104516S | T3104516T |
| 17 | T3104517S | T3104517T |
| 18 | T3104518S | T3104518T |
| 19 | T3104519S | T3104519T |
| 20 | T3104520S | T3104520T |

4.5mm Broad Limited Contact
Dynamic Compression Plate

| Holes | Stainless Steel | Titanium |
|---|---|---|
| 4 | T311454S | T311454T |
| 5 | T311455S | T311455T |
| 6 | T311456S | T311456T |
| 7 | T311457S | T311457T |
| 8 | T311458S | T311458T |
| 9 | T311459S | T311459T |
| 10 | T3114510S | T3114510T |
| 11 | T3114511S | T3114511T |
| 12 | T3114512S | T3114512T |
| 13 | T3114513S | T3114513T |
| 14 | T3114514S | T3114514T |
| 15 | T3114515S | T3114515T |
| 16 | T3114516S | T3114516T |
| 17 | T3114517S | T3114517T |
| 18 | T3114518S | T3114518T |
| 19 | T3114519S | T3114519T |
| 20 | T3114520S | T3114520T |

| | |
|---|---|
| **T3I001** | Drill Bit Quick Coupling,Ø2.0mm x 100mm |

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|---|---|
| **T3I003** | Drill Bit Quick Coupling,Ø4.5mm x 145mm |

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|---|---|
| **T3I005** | Tap, for Cancellous Screws,Ø6.5mm |

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|---|---|
| **T3I007** | Self Centering double drill guide, Ø4.5/3.2mm |

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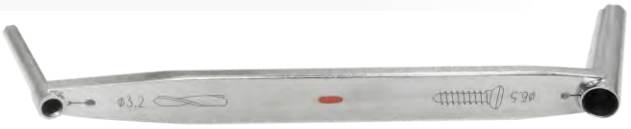
|---|---|
| **T3I010** | Drill Guide for Neutral and Loaded Position, DCP Ø4.5mm |

| | |
|---|---|
| **T3I002** | Drill Bit Quick Coupling,Ø3.2mm x 145mm |

| | |
|---|---|
| **T3I004** | Tap for Ø 4.5mm Cortical Screws, Quick Coupling |


| | |
|---|---|
| **T3I006** | Double Drill Guide,Ø4.5/3.2mm |


| | |
|---|---|
| **T3I008** | Double Drill Guide, Ø6.5/3.2mm |




| | |
|---|---|
| **T3I011** | Drill Guide for Neutral and Loaded Position, LC-DCP Ø4.5mm |


| | |
|---|---|
| **T3I012** | Pointed Drill Guide with sleeve 4.5mm |


| | |
|---|---|
| **T3I026** | Hexagonal Screw Driver Shaft - 3.5mm Tip, Quick Coupling |

| | |
|---|---|
| **T3I015** | T-Handle with Quick Coupling |

| | |
|---|---|
| **T3I017** | Kirschner Wire with One Side Trocar Tip, Ø 2.0mm x 150mm |



| | |
|---|---|
| **T3I019 & T3I020** | Large Bending Iron, Left & Right |

| | |
|---|---|
| **T3I013** | Insert Drill Sleeve, Ø 4.5/3.2mm |

| | |
|---|---|
| **T3I014** | Extraction Screw, Ø5.0mm |

| | |
|---|---|
| **T3I016** | Quick Coulping Shaft |

| | |
|---|---|
| **T3I018** | Guide Wire with Threaded Tip, Ø 2.0mm x Length 150mm x Thread Length 8mm |

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|---|---|
| **T3I021** | Bending Template, Small |


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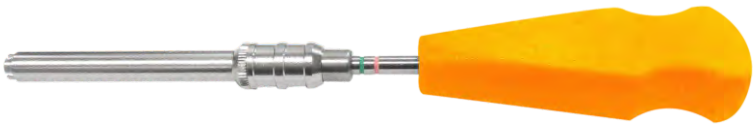
|---|---|
| **T3I022** | Bending Template, Medium |


| | |
|---|---|
| **T3I024 & T3I025** | Hexagonal Screw Driver with Holding Sleeve, 3.5mm Tip |



| | |
|---|---|
| **T3I028** | Depth Gauge, measuring range upto,110mm |

| | |
|---|---|
| **T3I030** | Articulated Tension Device |

**T3I032** Periosteal Elevator, Round, 8mm

**T3I023** Bending Template, Large

**T3I027** Countersink, for Ø 4.5/6.5mm Screws

**T3I029** Sharp Hook

**T3I031** Articulated Tension Device Key

**T3I033** Periosteal Elevator, Flat, 16mm

**T3I034** Hohmann Retractor, Ø 44mm

**T3I036** Reduction Forceps, Serrated, Speed Lock

**T3I038** Self Centering Bone Holding Forcep Speed Lock

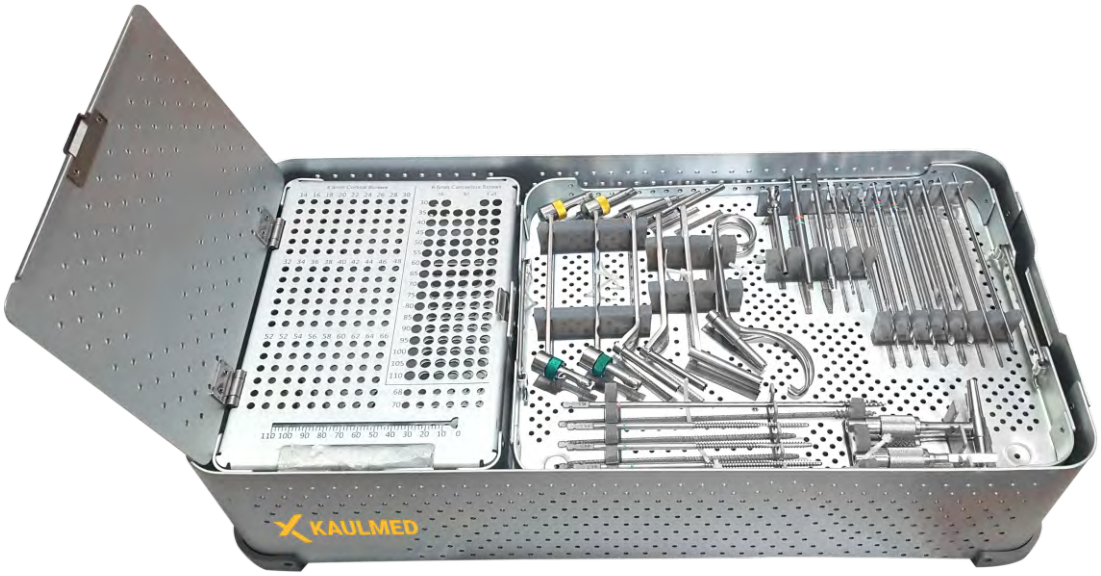
**T3I035** Hohmann Retractor, 16mm

**T3I037** Reduction Forceps, Pointed, Ratchet Lock

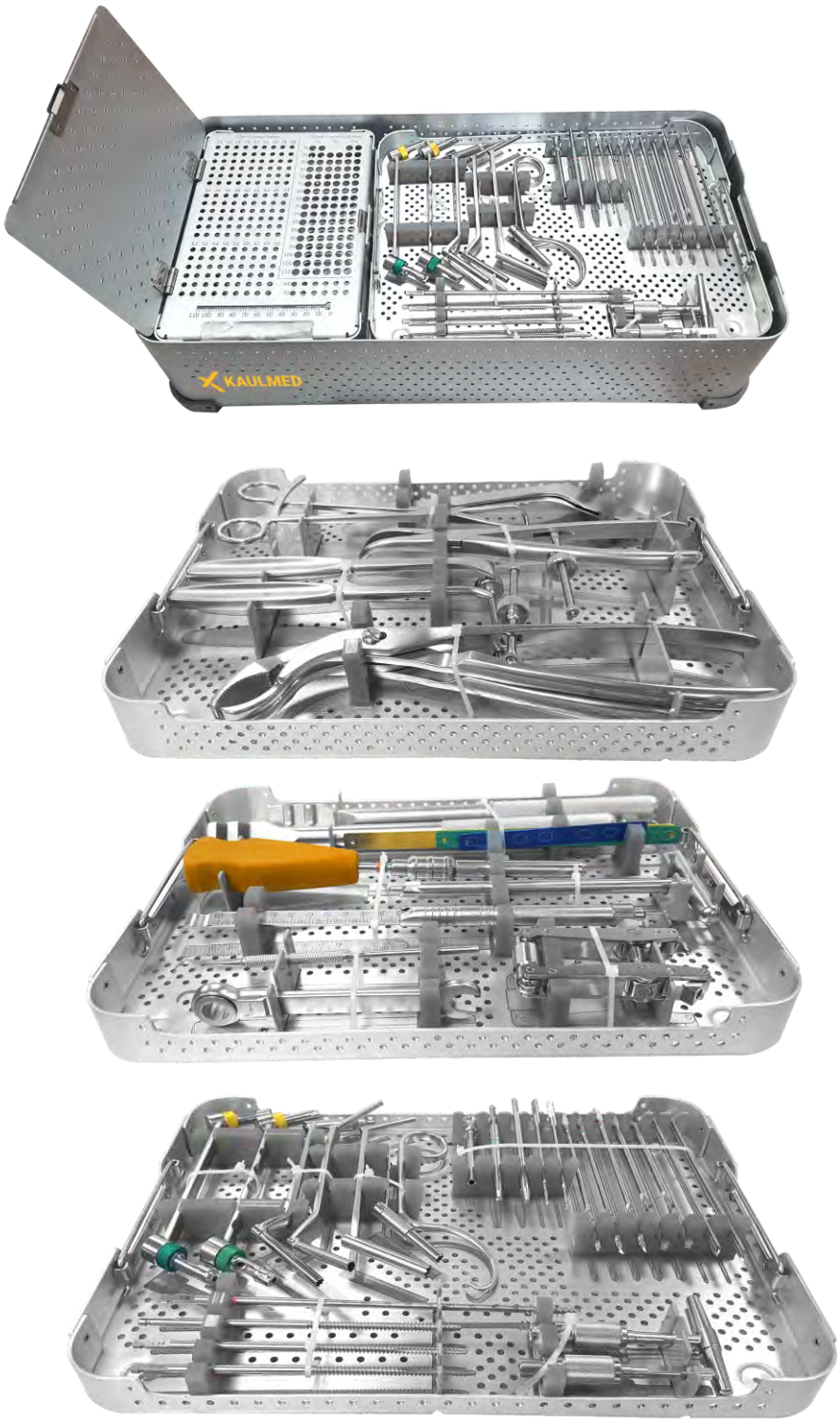
**T3I039** Screw Holding Forceps

| | |
|---|---|
| **T3I100** | Container for Large Fragment Instrument Set |

| | |
|---|---|
| **T3I040** | Screw Tray for Large Fragment Instrument Set |



T3I 5.0mm Large Fragment Instrument Set



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KAULMED

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