Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 **Казахстан** +7(7172)727-132 **Киргизия** +996(312)96-26-47

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Технические характеристики на инструменты и принадлежности для спинальной хирургии Quintex, SecureSpan, Modulift, Caspar, Ennovate, ArcadiusXP, MonoliftXP TL компании B. BRAUN

Виды товаров: системы транспедикулярных винтов, ретракторы, гибридные универсальные системы переднего цервикального покрытия, имплантаты и др.

MonoliftXP TL®

Monosegmental anterior stabilisation of the thoracic and lumbar spine

MonoliftXP TL®

The Monolift^{XP} TL® implant is a unique device for the fracture management of the thoracic and lumbar spine. It is used as partial vertebral body replacement for the monosegmental reconstruction and fusion of the spine. The implant is used with additional pedicle screw systems and / or anterior plating systems. Its Plasmapore^{XP} osteoconductive coating enhances implant stability and improved imaging properties. The Monolift^{XP} TL® system enables a simple implant insertion in minimally invasive antero-lateral approach.

Characteristics

- Monosegmental anterior stabilization - less invasive treatment of the patient
- Implant material PEEK-OPTIMA with Plasmapore^{XP} coating
- Lined implant surface for easier implantation
- Adapted size and height range for the thoracic and lumbar spine

- Good imaging properties with reduced artefacts in MRI and CT
- Improved stability thanks to innovative PEEK Plasmapore^{XP} coating and optional filling
- Intuitive and easy instrumentation

System components

- Adapted sizes for the thoracic and lumbar spine: size S, 0°, 8-12 mm I size L, 5°, 11-21 mm
- Simple and fast instrumentation

Indication

The Monolift^{XP} TL® implants are used for the monosegmental reconstruction and fusion in the anterior thoracic and lumbar spine (T4-L5; L5 only upper endplate) as partial vertebral body replacement in anterior-lateral approach. The treatment is possible for heights from 8-21 mm. The implant indicated for post-traumatic instability due to fracture of a vertebral body affecting max. 50 % of the vertebral body height A3.1).

Arcadius^{XP} L®

Stand-Alone Interbody Device (SIBD)

Arcadius XP L®

The Arcadius^{XP} L® Interbody Fusion System is a stand-alone device intended to be used with four bone screws if no supplement fixation is used to stabilize the lumbar spine through an anterior approach.

Arcadius^{XP} L® combines high primary and secondary stability [1, 2] and improved imaging properties [3]. PLASMAPORE$^{XP®}$ osteoconductive coating was developed to promote implant stability and bony ingrowth [1, 2].

Implant design and flexible instrumentation allow an accessibility from a wide range of angles for instrumentation and hence provide ease in screw insertion.

System Features

- PLASMAPORE$^{XP®}$ coating
- Wide variety of implant options
- Generous graft window
- Surface texturing
- Five X-Ray marker pins
- Midline accessibility for screw insertion
- Diverging screw design
- Dual locking mechanism

- Self-centering, self-drilling and self-tapping bone screws
- Comprehensive array of instrumentation

Implant Design

- Built on experience
  Aesculap has many years of experience in applying PLASMAPORE® coatings to titanium orthopaedic and spine implants [4-6] to develop the PLASMAPORE^{XP}® coating for PEEK spinal implants.
- Innovative surface enhancing technology
  PLASMAPORE^{XP}® is an osteoconductive pure titanium coating (Ti/ISO 5832-2) which enables bone ingrowth due to its balanced relation between pore depth, porosity and roughness [1].
- Enhanced stability
  The benefits of PLASMAPORE^{XP}® in combination with the diverging screw design contribute to the implant stability [2, 7].
- Implant fit
  Wide variety of implant sizes are designed to fit with varying patient anatomies.
- Accessibility from diverse angles
  Implant design and flexible instrumentation allow an accessibility from a wide range of angels for instrumentation and hence provide ease in screw insertion.
- Simple locking mechanism
  Integrated dual locking mechanism with single-step activation.
- Excellent imaging properties
  The PLASMAPORE^{XP}® coating together with the X-ray marker pins allow the visualization of implant contour and localization [3].

Intended Use

The Arcadius^{XP} L® Interbody Fusion System is a stand-alone device intended to be used with four bone screws if no supplement fixation is used to stabilize the lumbar spine through an anterior approach.

The system contains:

- Cages in different heights, angles and footprints
- Bone screws in different lengths

Levels of anterior lumbar interbody fusion for the indications listed in the instructions for use are from L2-S1.

Note

For further information please see instructions for use TA-No. 015555.

Ennovate®

Solutions Beyond Fusion

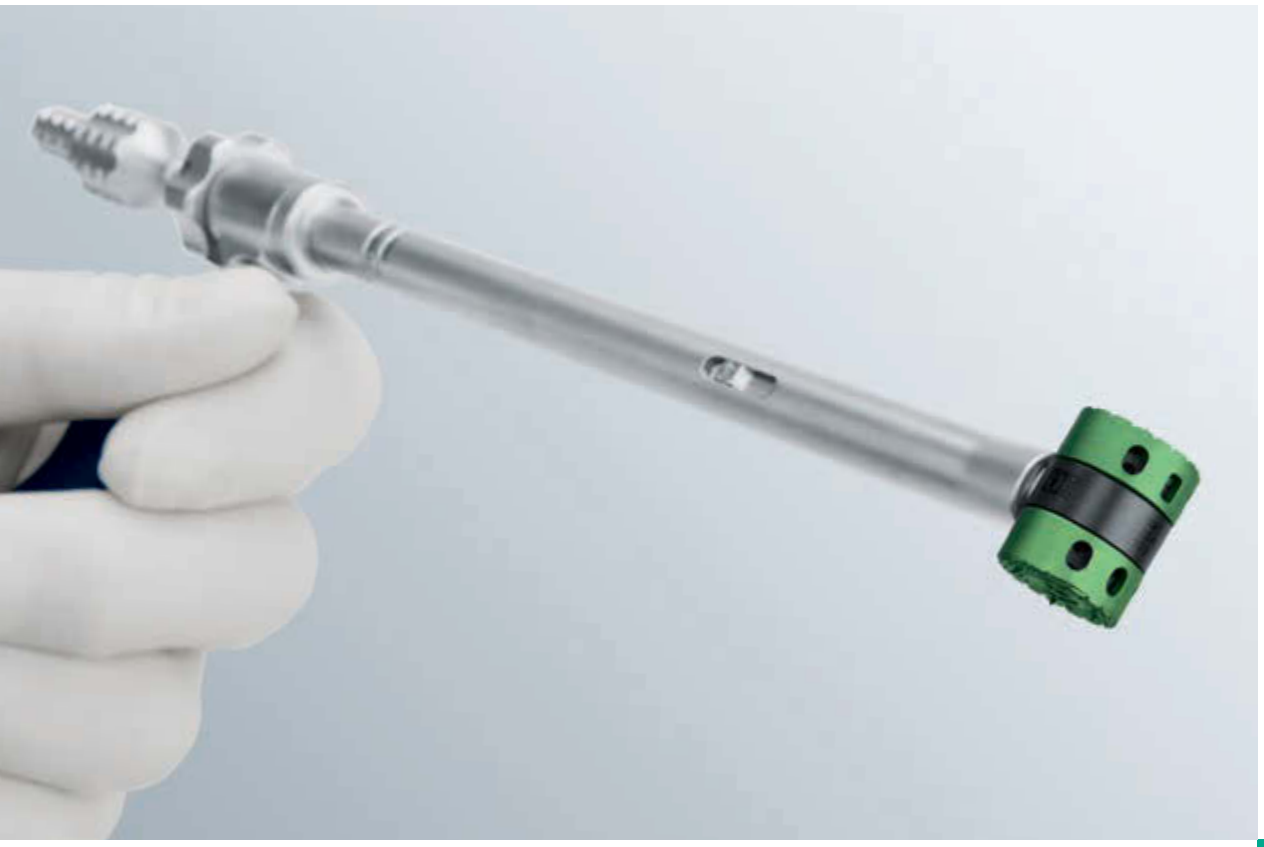
One Modular Platform

Ennovate®

Ennovate® – that is the epitome of an innovative solution platform with technological advancements that leverages your surgical experiences and greatly increases clinical efficiency.

From the thoracic spine to the ilium, Ennovate® facilitates surgeon choice and flexibility across patient types with a variety of implant options for treating multiple spinal pathologies with ONE system.

B BRAUN
SHARING EXPERTISE



DEGENERATIVE
SPINAL DISORDERS

AESCULAP® Modulift® S

VERTEBRAL BODY REPLACEMENT SYSTEM

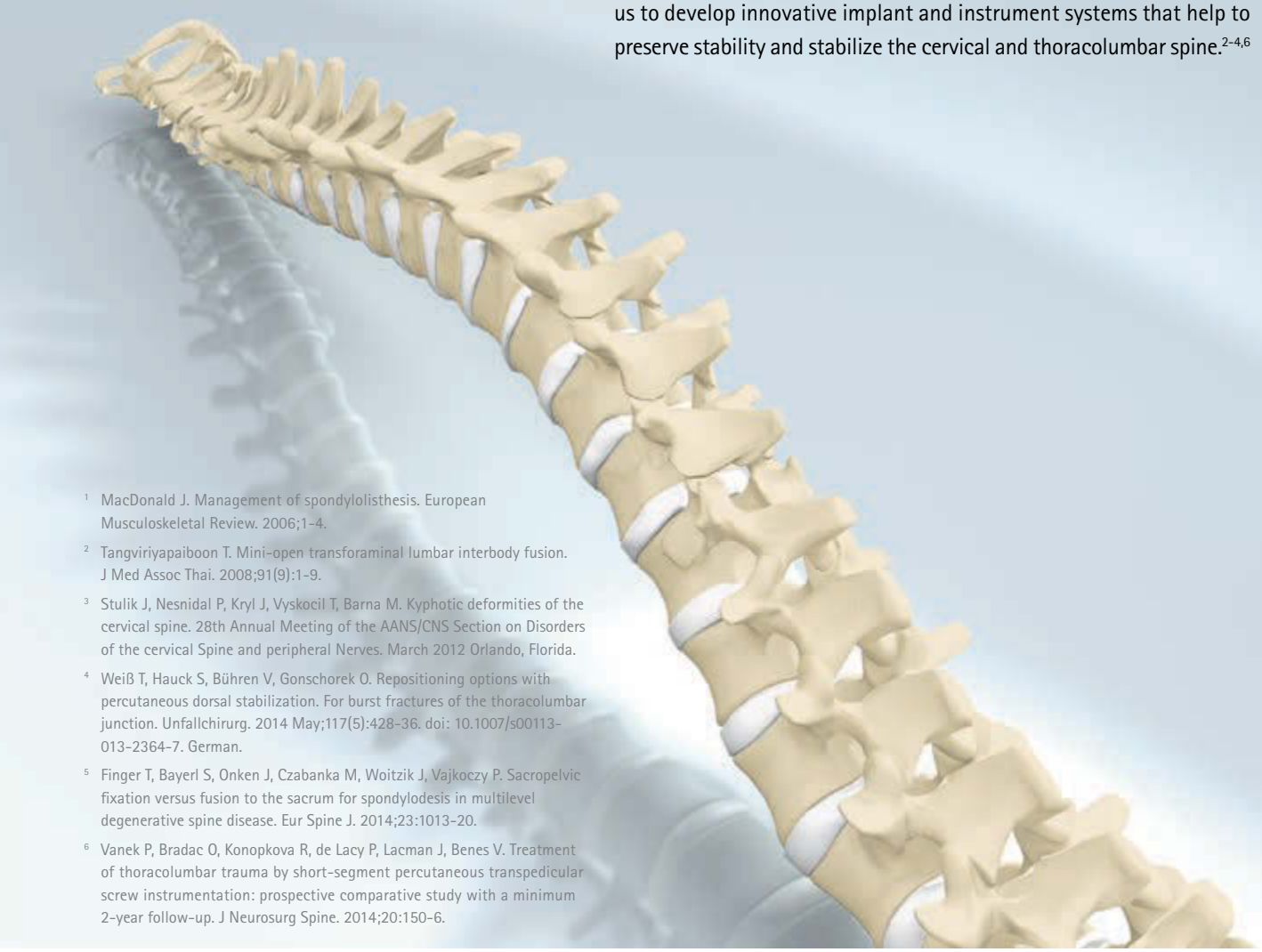
SURGICAL TECHNIQUE

DEGENERATIVE SPINAL DISORDERS

PROTECTING AND PRESERVING SPINAL STABILITY

Modern life style has resulted in increasing physical inactivity among people all over the world. Of the many medical problems associated with this, spinal disorders are among the most critical. This is even more significant as the spinal column is one of the most important structures in the human body. It supports and stabilizes the upper body and is the center of our musculoskeletal system, which gives the body movement.

Our work in the field of degenerative spinal disorders is dedicated to protecting the spinal column and preserving its stability. We support spine surgeons with durable, reliable products and partner services for safe procedures and good clinical outcomes.[1-6] Our philosophy of sharing expertise with healthcare professionals and patients allows us to develop innovative implant and instrument systems that help to preserve stability and stabilize the cervical and thoracolumbar spine.[2-4,6]



1 MacDonald J. Management of spondylolisthesis. European Musculoskeletal Review. 2006;1-4.

2 Tangviriyapaiboon T. Mini-open transforaminal lumbar interbody fusion. J Med Assoc Thai. 2008;91(9):1-9.

3 Stulik J, Nesnidal P, Kryl J, Vyskocil T, Barna M. Kyphotic deformities of the cervical spine. 28th Annual Meeting of the AANS/CNS Section on Disorders of the cervical Spine and peripheral Nerves. March 2012 Orlando, Florida.

4 Weiß T, Hauck S, Bühren V, Gonschorek O. Repositioning options with percutaneous dorsal stabilization. For burst fractures of the thoracolumbar junction. Unfallchirurg. 2014 May;117(5):428-36. doi: 10.1007/s00113-013-2364-7. German.

5 Finger T, Bayerl S, Onken J, Czabanka M, Woitzik J, Vajkoczy P. Sacropelvic fixation versus fusion to the sacrum for spondylodesis in multilevel degenerative spine disease. Eur Spine J. 2014;23:1013-20.

6 Vanek P, Bradac O, Konopkova R, de Lacy P, Lacman J, Benes V. Treatment of thoracolumbar trauma by short-segment percutaneous transpedicular screw instrumentation: prospective comparative study with a minimum 2-year follow-up. J Neurosurg Spine. 2014;20:150-6.

AESCULAP CERVICAL SPINE

PORTFOLIO OVERVIEW

IMPLANT SYSTEMS

anterior


CeSPACE® PEEK / Titan / XP


Quintex®


Modulift® S

posterior


SecureSpan®


activC®


ABC2®


S4® Cervical


Apfelbaum / Odontoid


CASPARevolution


Apfelbaum / C1 / C2

INSTRUMENT SYSTEMS

anterior


CASPAR® Distractor


activC® Distractor

anterior / posterior


CCR


CCR-XX

AESCULAP® Modulift® S

CONTENT

AESCULAP® Modulift® S

PRODUCT ADVANTAGES

Spikes provide initial stability.[1] The oval anatomic shape and waffle pattern increase surface contact while the central hole and fenestrations accommodate bone in-growth. All these features are thought to work in concert to create a positive bone modeling response for long term fusion and stability.

EASY HANDLING

A one-piece design with built-in set screws and a state-of-the-art instrumentation system that simplifies the Modulift® VBR insertion, distraction and locking process.

TACTILE FEEDBACK

Proprietary spindle surface treatment was designed to minimize friction of the internal moving parts which enhances tactile feedback.

[1] *Internal Mechanical Test Report. Empirical Testing Corp. ASTM F2077, F2267, and Expulsion Testing of the Modulift Testing. Colorado Springs. 2013.*

CENTRAL DRIVE MECHANISM

Provides symmetrical expansion to accommodate visualization of both endplates.

STERILE PACKED

The Modulift® Small VBR is a one-piece device individually sterile packaged for uncompromised patient safety.

DIFFERENT FOOTPLATES AVAILABLE

0, 5 and 10 degrees of curvature correction allow to accomodate clinical and anatomical considerations.

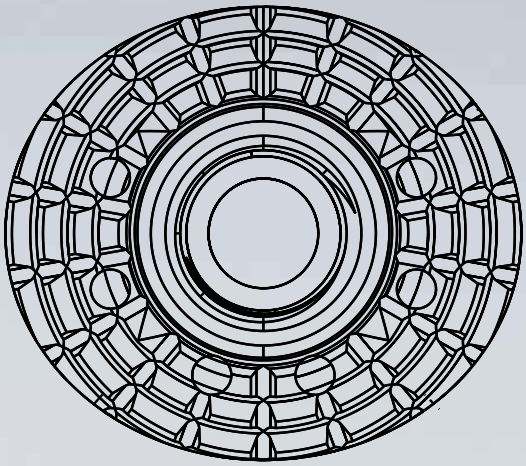
ATTACHMENT POINTS

Allows for an efficient yet secure attachment point for both insertion and in-situ reattachment capability. The dovetail attachment and inserter alignment holes allow for a low-profile inserter thus allowing visualization of the dynamic expansion process.

AESCULAP® Modulift® S

A SIMPLE ...

... yet comprehensive cervical VBR System that was designed to provide tactile feedback, initial stability, and sagittal balance restoration.



INDICATIONS

- The Aesculap® Modulift® VBR System is used for partial or total replacement of a collapsed, damaged or unstable vertebral body in the cervical spine (C3-C7).
- The Aesculap® Modulift® VBR System is used with supplemental spinal fixation systems.
- The Aesculap® Modulift® VBR System may be used with bone graft.

Surgically installed implants serve to support normal healing processes. They are not intended for use either as replacement for natural body parts or to bear loads over the long term in the event the healing process is incomplete or slow.

Use for the following indications:

- Fractures
- Anterior correction of spinal defomities
- Degenerative Disc Disease
- Deformities
- Degenerative instability
- Post-traumatic instability
- Spinal tumors

Note:

- For contraindications and further informations see instructions for use TA015036 for Modulift® General Instrument, TA015037 for Modulift® Implant Inserter and TA015038 for Modulift® Implants.

CENTRAL DRIVE MECHANISM

A End cap/Expansion end

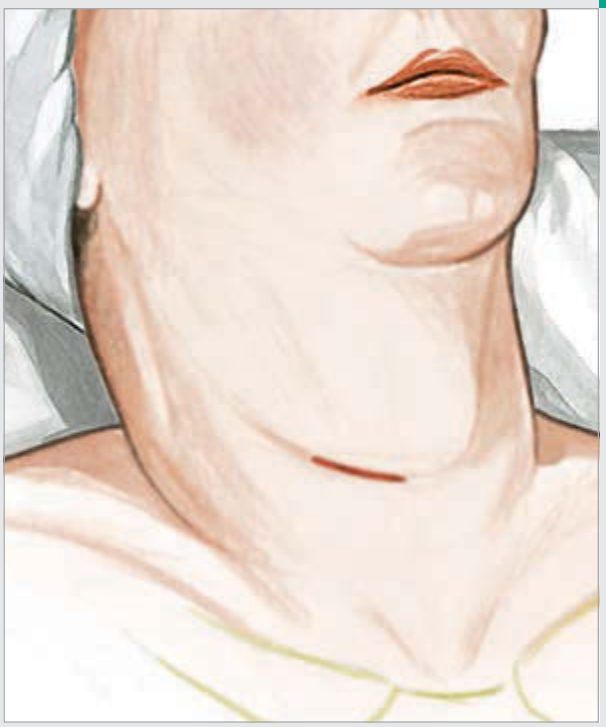
B Center spindle driver hole

C Dovetail attachment and inserter alignment guide

D Pre assembled set screw(s)

AESCULAP® Modulift® S

B | SURGICAL TECHNIQUE



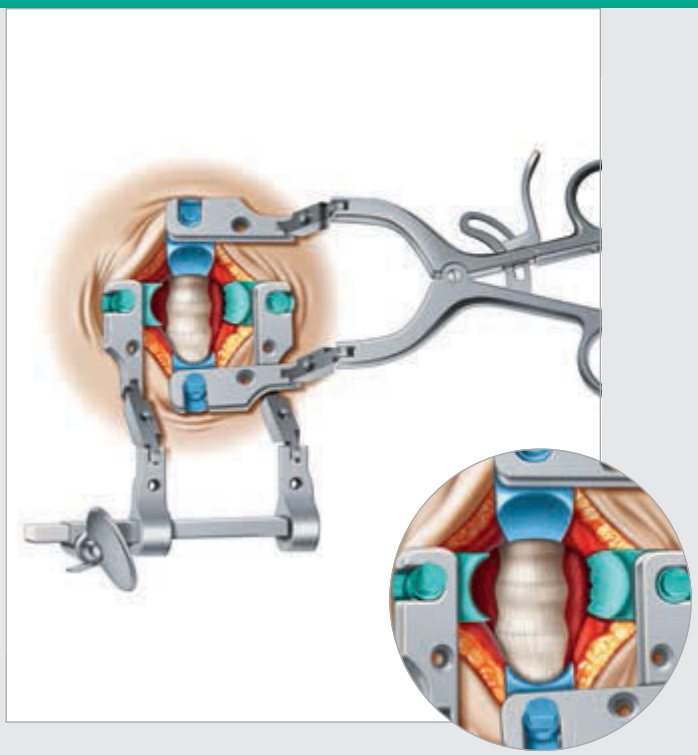
PRE-OPERATIVE PLANNING

- Use the appropriate imaging techniques to determine the patient's osseous anatomy, proper size and type of the instrumentation to be used.
- Anticipate your needs with pre-operative planning to identify the implant components to be used for the assembly (implant expansion range, footplates). Changes in implant configuration may become necessary based on intra-operative findings and conditions.

PATIENT POSITIONING

- The patient is placed in the supine position with the head slightly reclined and resting in a headrest or ring.
- Once the lordotic spine has been supported, the interscapular region may be bolstered to emphasize the reclination of the cervical spine.
- The arms are fixed along the sides of the body. Using the arm fixations, draw the shoulders down far enough to remove them from the radiation path of the segment to be fused.

MF810R
Modulift® S Footplate Sizer



EXPOSURE OF THE CERVICAL VERTEBRAL BODY

- After the skin incision and preparation, the CASPAR® Cervical Retractor is applied. The blades are available in PEEK and Titanium. A counter retractor can be used. The subcutaneous tissue is separated from the platysma cranially, caudally and medially, and the platysma is also separated following the direction of its fibers. The margins of the platysma can be held apart with the retractor or with two surgical forceps.
- Now the medial edge of the sternocleidomastoid muscle is located and prepared with the index finger in the connective tissue space over the ventral surface of the cervical spine and under lateralization of the vascular nerve bundle and medialization of the trachea, esophagus and thyroid gland.
- After the Langenbeck hooks have been inserted, the ventral surface of the cervical spine, still covered by a thin prevertebral layer of connective tissue, is revealed. This layer can now be exposed by either a blunt scissor or alternatively through bipolar coagulation in order to expand the tissue cranially and caudally using a swab.

Modulift® S Footplate Sizer

PERFORM CORPECTOMY

- Please perform a discectomy and corpectomy of the respective vertebral body to be replaced.
- The endplates of both adjacent vertebral bodies should be cleaned with a curette to help ensure a secure bony connection to the implant.

FOOTPLATE SIZING

- Utilize the footplate sizer to determine the appropriate implant endplate size, cranially and caudally. Ensure adequate coverage of the vertebral body endplate.
- The Modulift® S Footplate Sizer is color coded to match the footprint of the VBR.

AESCULAP® Modulift® S

B | SURGICAL TECHNIQUE

EXPANSION RANGE SIZING

- The trial sizer replicates the retracted height of the VBR with footplates. Lordotic curvature correction can be determined by using the modular trial footplate attachments.
- Assemble the trial footplate to the trial implant body by lightly squeezing the body spring mechanism. Use of imaging is recommended at this time to evaluate the anatomy.
- The Modulift® VBR size range incorporates overlap in expansion range capability. It is recommended to avoid selecting a VBR at the end of its expansion range.
- As an optionally available tool – a caliper can be used to measure the vertebral body space.

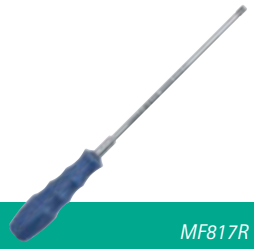
Note:

- Orientation of the footplate trials to the trial implant base is provided by matching alignment lines on both trial implant components.

Article No.	Description
MF811T	Modulift® S Trial Implant Body 19-23 mm
MF812T	Modulift® S Trial Implant Body 21-27 mm
MF813T	Modulift® S Trial Implant Body 25-35 mm
MF814T	Modulift® S Trial Implant Body 30-45 mm
MF815T	Modulift® S Trial Implant Body 38-57 mm
MF816T	Modulift® S Trial Implant Body 48-74 mm
MF808T	Modulift® S Trial Implant Body 34-49 mm
MF795T	Modulift® S Footplate Trial 0°
MF796T	Modulift® S Footplate Trial 5°
MF797T	Modulift® S Footplate Trial 10°
MF817R	Modulift® S Handle for Trial Implant
MF807R	Modulift® S Caliper (optional)

Optional

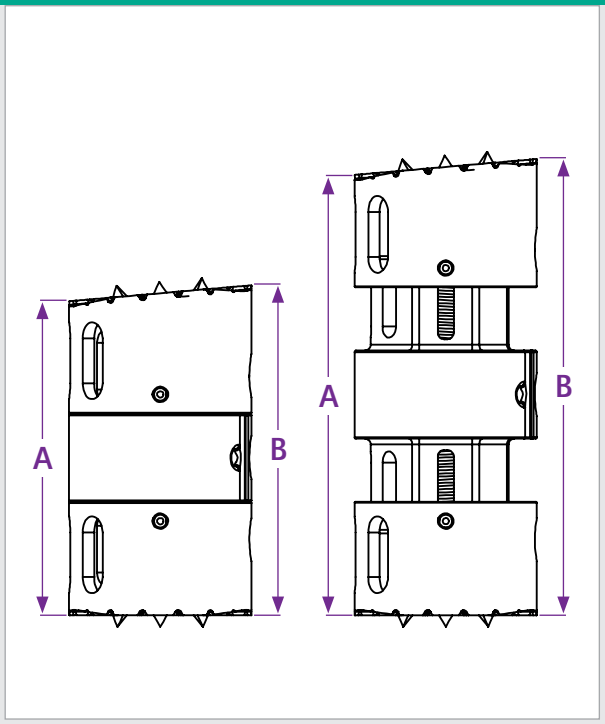
MF807R
Modulift® S Caliper



MF817R
Modulift® S Handle for Trial Implant

MF811T - MF816T, MF808T
Modulift® S Trial Implant Bodies

MF795T - MF797T
Modulift® S Footplate Trials



Based on preoperative plan, endplate size, curvature correction and expansion range needed – select the appropriate sized expansion body and footplate configuration from the implant tray.

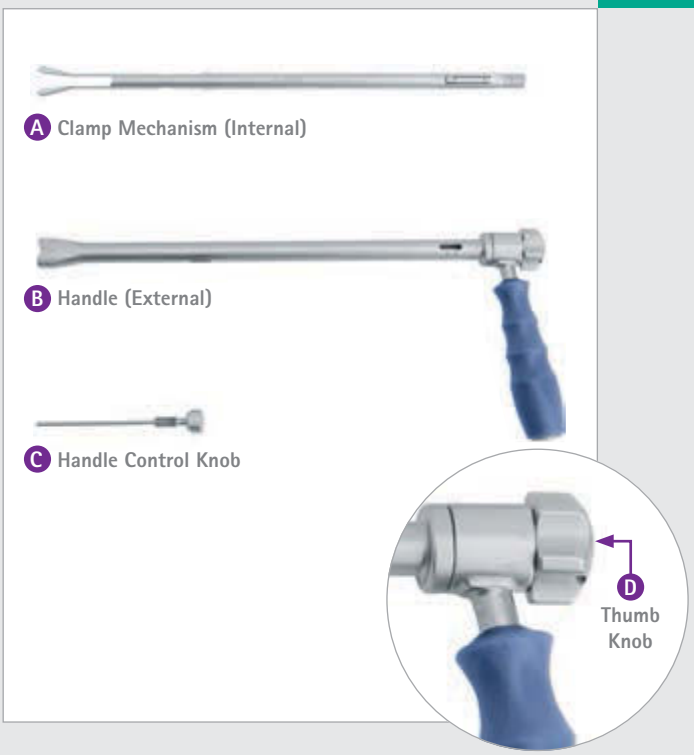
Curvature correction footplates add to the vertical dimension of the VBR. See chart below for complete critical dimensional information.

Modulift® S – CRITICAL DIMENSIONS

Article No.	Modulift® S Description	Article No.	Modulift® S Description	Retracted		Expanded	
				A (mm)	B (mm)	A (mm)	B (mm)
		MF633T	14 x 16, 19-23 mm, 0°	19		23	
		MF634T	14 x 16, 21-27 mm, 0°	21		27	
		MF635T	14 x 16, 25-35 mm, 0°	25		35	
		MF636T	14 x 16, 30-45 mm, 0°	30		45	
MF622T	12 x 14, 19-23 mm, 5°	MF638T	14 x 16, 19-23 mm, 5°	19	20.1	23	24.1
MF623T	12 x 14, 21-27 mm, 5°	MF639T	14 x 16, 21-27 mm, 5°	21	22.1	27	28.1
MF624T	12 x 14, 25-35 mm, 5°	MF640T	14 x 16, 25-35 mm, 5°	25	26.1	35	36.1
MF625T	12 x 14, 30-45 mm, 5°	MF641T	14 x 16, 30-45 mm, 5°	30	31.1	45	46.1
MF626T	12 x 14, 38-57 mm, 5°	MF642T	14 x 16, 38-57 mm, 5°	38	39.1	57	58.1
MF627T	12 x 14, 48-74 mm, 5°	MF643T	14 x 16, 48-74 mm, 5°	48	49.1	74	75.1
		MF645T	14 x 16, 25-35 mm, 10°	25	27.2	35	37.2
		MF646T	14 x 16, 34-49 mm, 10°	34	36.2	49	51.2
		MF647T	14 x 16, 48-74 mm, 10°	48	50.2	74	76.2

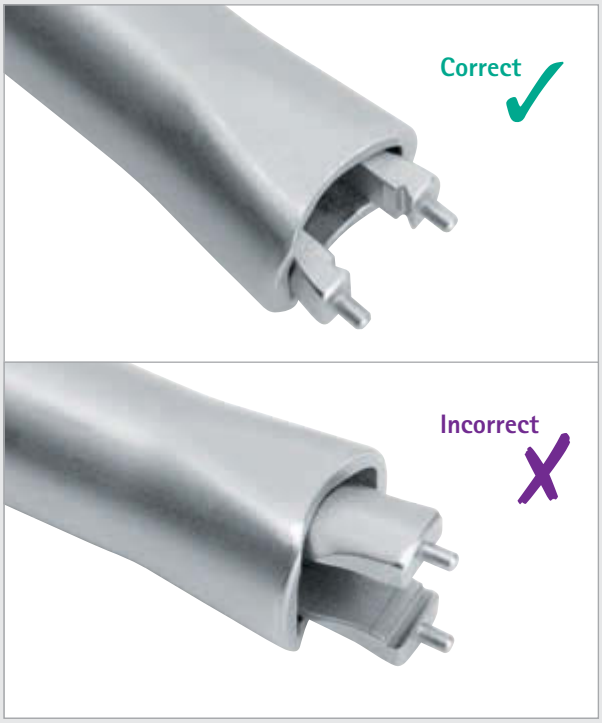
AESCULAP® Modulift® S

B | SURGICAL TECHNIQUE



INSERTER ASSEMBLY

- Assemble the three inserter components by inserting the clamp mechanism (A) through the barrel of the handle (B). Engage the threads of the clamp by turning the thumb knob (D, circled below) clockwise one or two turns.
- Insert the „handle control knob" (C) into the bottom of the handle. Before twisting the knob in the handle clockwise until it fully engages, the handle can be rotated to enhance the working ergonomics and X-ray image capability.



Note:

- The flat surfaces of the clamp mechanism and barrel of the handle assembly must be on the same plane.

ATTACHMENT OF THE INSERTION HANDLE TO THE VBR

- For proper alignment and expansion function, ensure that the two male ends on the inserter match the female VBR alignment holes.
- Twist the thumb knob (D) until the indicator (F) lines up with the "OPEN" position marked on the tube of the insertion instrument.
- The clamp mechanism on the inserter should be open enough to grasp the dove tail attachment of the VBR. This will ensure the VBR is in the correct position relative to the clamp and expansion driver function.

- Rotate the thumb knob (D) clockwise to close the jaws. Check that the indicator (F) lines up with the "CLAMPED" position marked on the tube of the insertion instrument. Verify the security of the attachment. Use the thumb knob (D) and rotate counterclockwise to loosen the jaws.

Note:

- Do not overtighten the clamp mechanism. Finger tighten the thumb knob (D) by turning in clockwise direction to secure the Modulift® VBR implant to the insertion handle.

AESCULAP® Modulift® S

B | SURGICAL TECHNIQUE

- By loosening the „handle control knob" (circled) you can improve the ergonomics and image technique by rotating the handle around the barrel of the inserter. Be sure to re-tighten once the optiomal handle position is selected.

Modulift® S Bone Tamp

Modulift® S Graft Funnel

Modulift® S Bench Block

BONE PACKING (OPTIONAL)

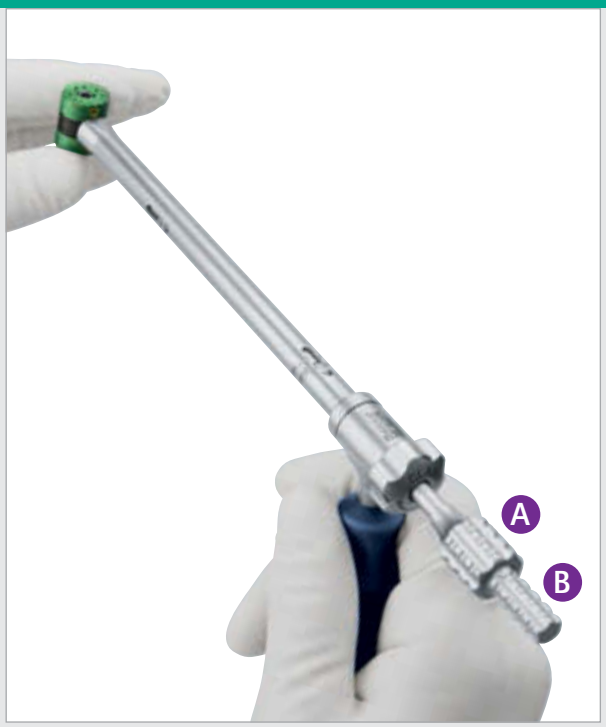
- Using the bench block, graft funnel, and bone tamp, it is possible to add bone graft or other media into the central column of the chosen implant.
- It is up to the operating surgeon whether or not to add bone graft to the implant.

MF801R
Modulift® S Expansion Driver

Optional
MF708R
Modulift® S Bone Tamp

Optional
MF709R
Modulift® S Graft Funnel

Optional
MF809P
Modulift® S Bench Block



INSERTION AND EXPANSION

- Carefully slide the expansion driver instrument (MF801R) into the inserter to engage the expansion gear drive located on the internal assembly of the VBR.
- There will be an audible click when the expansion driver is properly engaged.
- The dual geometry expansion driver provides a smaller handle (A) for quicker expansion and a larger handle (B) for greater mechanical advantage. Both options provide optional tactile feedback of the spinal anatomy.
- Once the expansion driver is properly engaged with the VBR, rotate the expansion knob clockwise. This will ensure the VBR expands as desired. Return the VBR to the retracted height prior to insertion.

Note:

- One full rotation of the expansion driver yields a change in vertical height of 0.4 mm.

Note:
A broken line on the expansion body represents 50 % expansion. A solid line on the VBR body represents a fully expanded VBR.

- Insert the VBR and insure your position is appropriate relative to the patient's anatomic situation, overall stability and bone quality.
- Expand the VBR to fit the prepared space.

AESCULAP® Modulift® S

B | SURGICAL TECHNIQUE

- Once a satisfactory position has been found – commence final expansion under flouroscopic conditions.
- If a less than satisfactory result is achieved, rotate the expansion knob counterclockwise to collapse the VBR in a controlled manner, reposition and re-expand.

FINAL IMPLANT VERIFICATION

- Once final seating and positioning is confirmed, remove only the expansion driver (circled). The inserter will remain and function as your counter torque.
- There is a implant tamp available for minor adjustments of the VBR position.

Modulift® S Set Screw Driver and
Modulift® S Torque Limit Handle 1.2 NM

- Lock both set screws utilizing the appropriate torque limited driver. Because of the patented dual-expansion mechanism, two locking screws are provided for added security. The pre-positioned locking screw is already a part of the VBR construct. Use the set screw torque driver to lock the set screws by turning clockwise until the torque limit is reached and the handle clicks. Use the insertion handle for maintaining stability and counter torque.

IMPLANT REMOVAL

- Clear all soft tissue and bony in-growth around the VBR.
- For counter torque attach the inserter if possible, then insert the expansion driver.
- Unscrew both lock mechanisms with the appropriate set screw removal driver (MF827R).
- Rotate the driver counterclockwise to retract the VBR.
- Continue removal of all soft tissue and bony in-growth until the VBR is loose and able to be removed with minimal force.

Note:

- Do not remove the VBR by force. Patient injury will occur.
- A previously locked Modulift® S Implant cannot be reused, as the spindle of the VBR is deformed by the locking screw.

AESCULAP® Modulift® S

C | SET PROPOSAL

IMPLANTS	Article No.	Description	Set Proposal	Optional
	MF633T	Modulift® S, 14x16, 19-23 mm, 0°	1	–
	MF634T	Modulift® S, 14x16, 21-27 mm, 0°	1	–
	MF635T	Modulift® S, 14x16, 25-35 mm, 0°	1	–
	MF636T	Modulift® S, 14x16, 30-45 mm, 0°	1	–
	MF638T	Modulift® S, 14x16, 19-23 mm, 5°	1	–
	MF639T	Modulift® S, 14x16, 21-27 mm, 5°	1	–
	MF640T	Modulift® S, 14x16, 25-35 mm, 5°	1	–
	MF641T	Modulift® S, 14x16, 30-45 mm, 5°	1	–
	MF642T	Modulift® S, 14x16, 38-57 mm, 5°	1	–
	MF643T	Modulift® S, 14x16, 48-74 mm, 5°	1	–
	MF645T	Modulift® S, 14x16, 25-35 mm, 10°	1	–
	MF646T	Modulift® S, 14x16, 34-49 mm, 10°	1	–
	MF647T	Modulift® S, 14x16, 48-74 mm, 10°	1	–

IMPLANTS

Article No.	Description	Set Proposal	Optional
MF622T	Modulift® S, 12x14, 19-23 mm, 5°	1	–
MF623T	Modulift® S, 12x14, 21-27 mm, 5°	1	–
MF624T	Modulift® S, 12x14, 25-35 mm, 5°	1	–
MF625T	Modulift® S, 12x14, 30-45 mm, 5°	1	–
MF626T	Modulift® S, 12x14, 38-57 mm, 5°	1	–
MF627T	Modulift® S, 12x14, 48-74 mm, 5°	1	–

Other sizes available for order

AESCULAP® Modulift® S

C | SET PROPOSAL

INSTRUMENTS	Article No.	Description	Set Proposal	Optional
	MF807R	Modulift® S Caliper	–	1
	MF810R	Modulift® S Footplate Sizer	1	–
	MF811T	Modulift® S Trial Implant Body 19-23 mm	1	–
	MF812T	Modulift® S Trial Implant Body 21-27 mm	1	–
	MF813T	Modulift® S Trial Implant Body 25-35 mm	1	–
	MF814T	Modulift® S Trial Implant Body 30-45 mm	1	–
	MF815T	Modulift® S Trial Implant Body 38-57 mm	1	–
	MF816T	Modulift® S Trial Implant Body 48-74 mm	1	–
	MF808T	Modulift® S Trial Implant Body 34-49 mm	1	–
	MF795T	Modulift® S Footplate Trial 0°	1	–
	MF796T	Modulift® S Footplate Trial 5°	1	–
	MF797T	Modulift® S Footplate Trial 10°	1	–
	MF817R	Modulift® S Handle for Trial Implant	2	–

INSTRUMENTS & TRAY	Article No.	Description	Set Proposal	Optional
	MF800R	Modulift® S Implant Inserter	1	–
	MF801R	Modulift® S Expansion Driver	2	–
	MF809P	Modulift® S Bench Block	–	1
	MF708R	Modulift® S/M Bone Tamp	–	1
	MF709R	Modulift® S/M Graft Funnel	–	1
	MF802R	Modulift® S Set Screw Driver	1	–
	MF828R	Modulift® S Torque Limit Handle 1.2 NM	1	–
Alternatively: 	*WS-19-985-RAL5023*	*Alternatively: Torque Limit Handle 1.2 NM*	–	*1*
	MF806R	Modulift® S Implant Tamp	–	1
	MF827R	Modulift® S Set Screw Removal Driver	1	–
	MF832	Modulift® S Instrument Tray	1	–
	MF833	Modulift® S Lid for Instrument Tray	1	–

Aesculap® Quintex®

Hybrid All-In-One Anterior Cervical Plating System
Surgical Technique

Aesculap Spine

B BRAUN
SHARING EXPERTISE

Aesculap® Quintex®

Content

A

System Overview

The Quintex® cervical plating system offers four distinct implant combinations. Constructs may be 'dynaminized' or 'hybridized' to accommodate patient-specific clinical and anatomical considerations. With only one instrument set all construct options can be formed according to the course of disease. Applying hybrid constructs addressing each level of the patient's cervical spine individually is possible.

System Features

- 4 construct options from constrained to fully dynamic
- All plates with generous graft window
- Low profile plate (2 mm)
- Self-drilling and self-tapping screws
- Fully automatic locking mechanism
- Color coded implants
- Intuitive instruments

Aesculap® Quintex®

A

System Overview

Quintex® Design Advantages

- **Built on Clinical Experience**
  The dynamic design is based on clinical evidence collected in a multi-centric, randomized, controlled study, investigating Aesculap's ABC Anterior Cervical Plating System.[1]
- **High Variability**
  Two plates and three screw styles offer distinct implant combinations.
- **Thin Plate Design**
  2 mm low profile implant
- **Excellent Visibility**
  The graft window helps to control the interbody fusion device
- **Automatic Locking**
  Integrated screw locking mechanism
- **Self-drilling and Self-tapping Screws**
  Improved screw tip and thread configuration for easy start and insertion
- **Strong Tactile Feel**
  Very firm connection between screw and screwdriver
- **One Intuitive Instrument Set**
  Easy preparation and implant insertion

[1] *Pitzen TR, Jiri Chrobok J, Štulik J, Ruffing S, Drumm J, MD, Sova L, Kučera R, Vyskočil T, Steudel WI. Implant Complications, Fusion, Loss of Lordosis, and Outcome After Anterior Cervical Plating With Dynamic or Rigid Plates: Two-Year Results of a Multi-Centric, Randomized, Controlled Study.*

Indications

Surgical implants serve to support normal healing processes. They are not intended to either replace normal structures of the human body or permanently bear the loads they would be subjected to in cases of incomplete healing.

Use for the following indications:

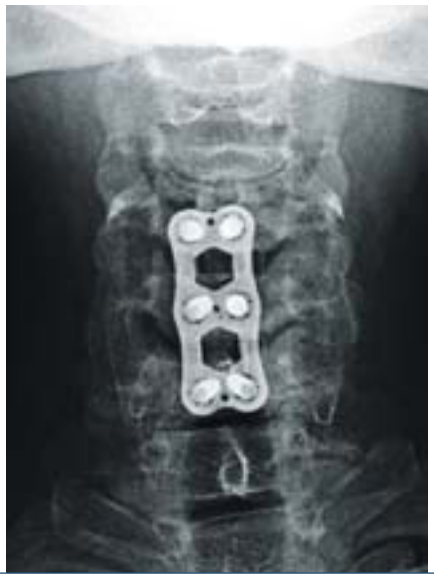
- Degenerative disc disease
- Trauma (including fractures or dislocation)
- Post-traumatic kyphosis or lordosis
- Tumors
- Spondylolisthesis
- Spinal Stenosis
- Deformity (Scoliosis, Kyphosis, and / or Lordosis)
- Pseudarthrosis following an unsuccessful spinal operation
- Symptomatic cervical spondylosis
- Instability following surgical intervention due to the indications listed above
- Reoperations necessitated by prior fusion failure

For these indications, screws can be fixated in the region C2 to T1.

Note:
For further information please see instructions for use TA013366 Quintex® Implants and TA013377 Quintex® Instruments

Dynamic Plate

Hybrid Plate



Dynamic Plate from lateral

Aesculap® Quintex®

A

System Overview

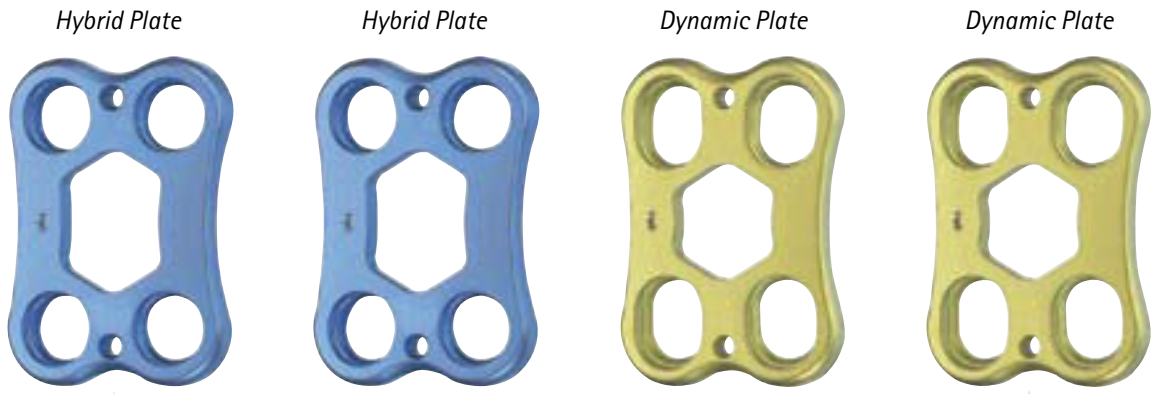
Implant Information

The Quintex® cervical plating system is used for the anterior mono- and multisegmental stabilization of the cervical spine.

It consists of the following components:

- **Bone Plates**
  - hybrid cervical plate (constrained and semi-constrained)
  - dynamic cervical plate (dynamic and semi-dynamic)
- **Screws**
  - constrained bone screw (10-18 mm, diameter 4.0 mm / 11-19 mm, diameter 4.5 mm)
  - semi-constrained bone screw (10-18 mm, diameter 4.0 mm / 11-19 mm, diameter 4.5 mm)
  - dynamic bone screw (10-18 mm, diameter 4.0 mm / 11-19 mm, diameter 4.5 mm)

Specific instruments are available and must be used for implanting these components.



Constrained
- Screws will block polyaxiality
- Screws will not translate

Semi-Constrained
- Screws offer polyaxial motion until fusion occurs
- Screws will not translate

Semi-Dynamic
- Screws retain polyaxial motion until fusion occurs
- Screws will translate with resistance until fusion occurs

Dynamic
- Screws retain polyaxial motion until fusion occurs
- Screws are free to translate without resistance until fusion occurs

The four Quintex® construct options

The Quintex® cervical plating system offers four plating options:

- Blue plates + blue screws:
  Fully-Constrained
- Blue plate + green screws:
  Semi-Constrained
- Gold plate + green screws:
  Semi-Dynamic
- Gold plate + gold screws:
  Fully-Dynamic

Constructs may be 'dynamized' from fully constrained to fully dynamic. The surgeon has the full choice – taking patient-specific clinical and anatomical aspects into consideration. Moreover, a tailored approach with hybrid constructs is possible in which each level of the patient's cervical spine can be individually addressed.

Aesculap® Quintex®

Surgical Technique

B

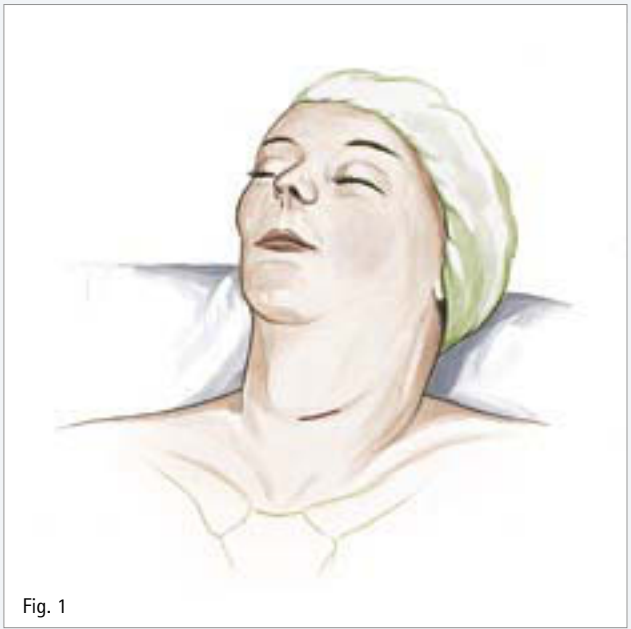


Fig. 1

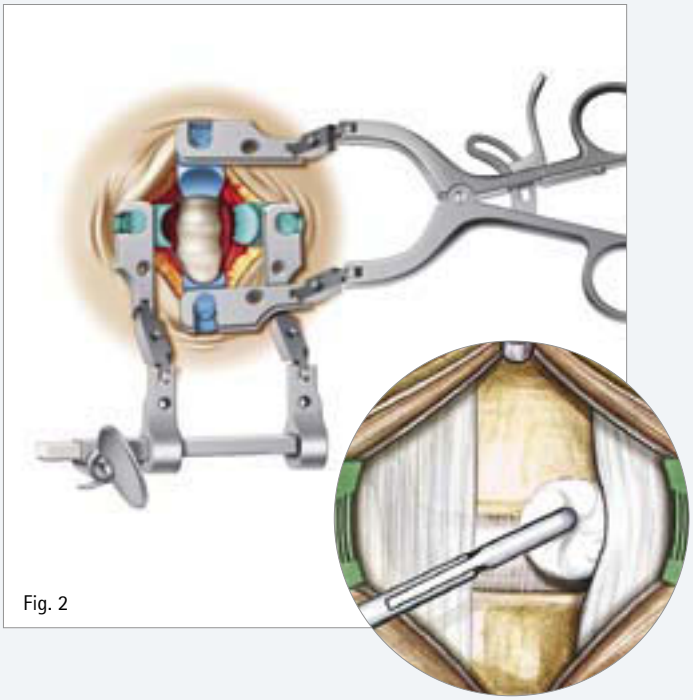


Fig. 2

Patient Positioning (Fig. 1)

- The patient is placed in the supine position with the head slightly reclined and resting in a headrest or ring.

Once the lordotic spine has been supported, the interscapular region may be bolstered to emphasize the reclination of the cervical spine (Fig. 1).

- The arms are fixed along the sides of the body. Using the arm fixations, draw the shoulders down far enough to remove them from the radiation path of the segment to be fused.

Exposure of the Intervertebral Space (Fig. 2)

- After the skin incision and preparation, the CASPAR Cervical Retractor is applied (Fig. 2). The blades are available in PEEK and Titanium. A counter retractor can be used. The subcutaneous tissue is separated from the platysma cranially, caudally and medially, and the platysma is also separated following the direction of its fibers. The margins of the platysma can be held apart with the retractor or with two surgical forceps.
- Now the medial edge of the sternocleidomastoid muscle is located and prepared with the index finger in the connective tissue space over the ventral surface of the cervical spine and under lateralization of the vascular nerve bundle and medialization of the trachea, esophagus and thyroid gland.
- After the Langenbeck hooks have been inserted, the ventral surface of the cervical spine, still covered by a thin prevertebral layer of connective tissue, is revealed. This layer can now be exposed by either a blunt scissor or alternatively through bipolar coagulation in order to expand the tissue cranially and caudally using a swab. A k-wire can be set under X-ray monitoring to mark the intervertebral disc space.

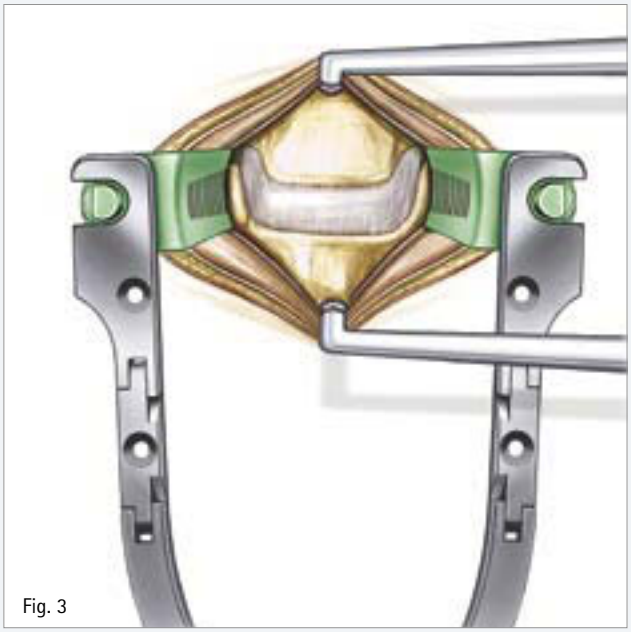


Fig. 3

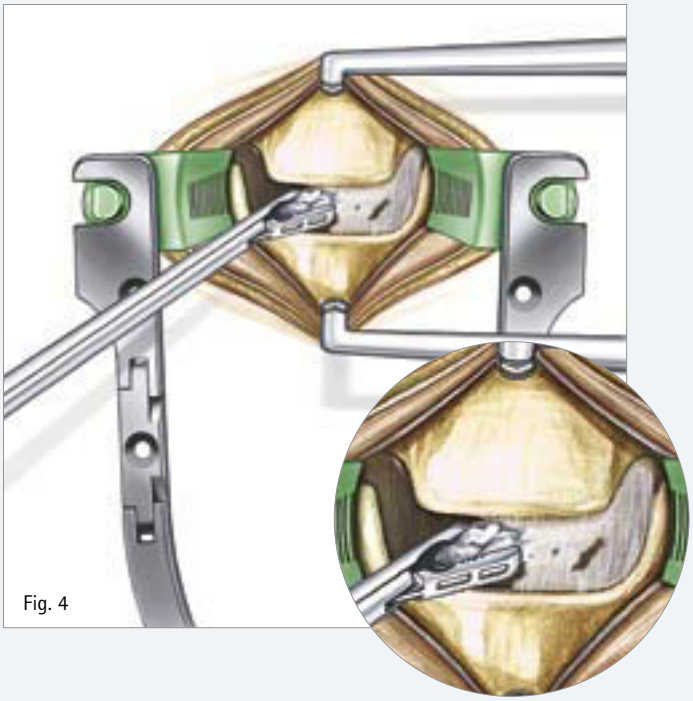


Fig. 4

Distraction / Discectomy / Preparation of the Endplates (Fig. 3–4)

- The distraction screws are placed in position and the CASPAR distractor is applied following the CASPAR technique (Fig. 3).
- Complete discectomy is performed using various rongeurs, box curettes and bone curettes (Fig. 4). While using a high speed drill to remove dorsal ostephytes, care must be taken to avoid damaging the vertebral body endplates.

Note: Excessive preparation of the endplates may weaken the construct and cause subsidence of the interbody device.

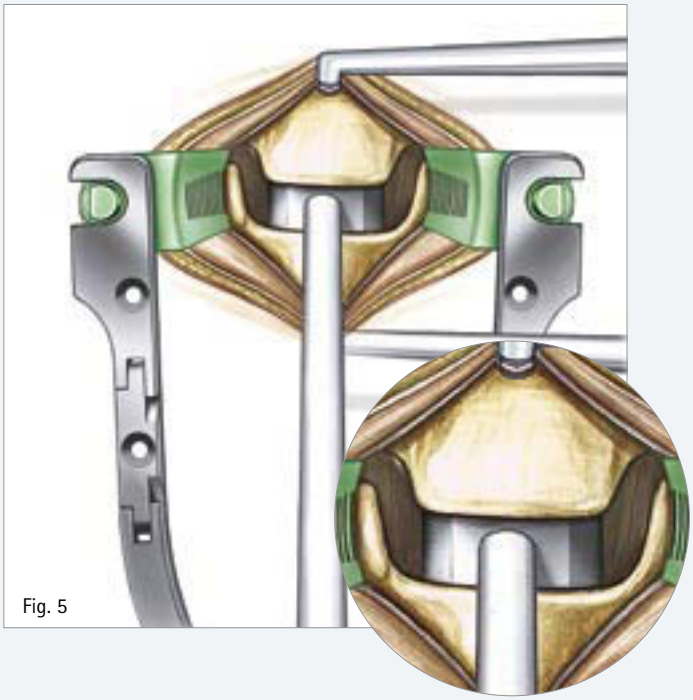


Fig. 5

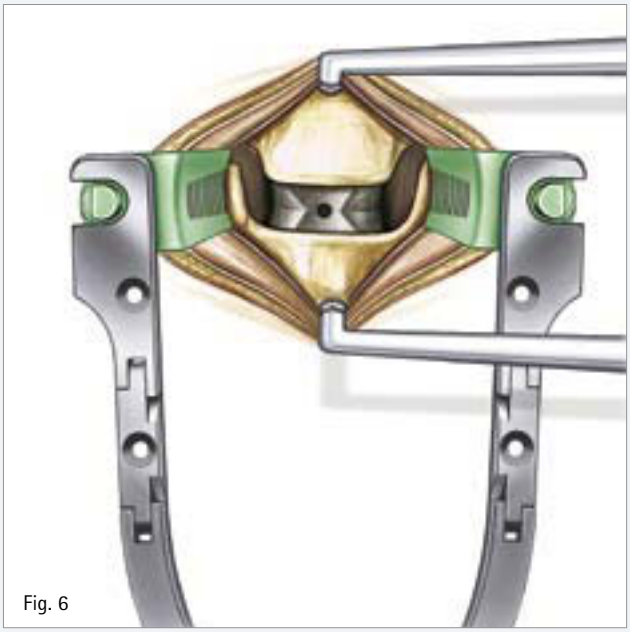


Fig. 6

Insertion of Interbody Device (Fig. 5–6)

- Bone graft or interbody devices made of Titanium, PEEK or titanium coated PEEK spacers can be used, e.g. CeSPACE®XP.
- The correct size of CeSPACE® can be determined using the trial implants (Fig. 5).
- CeSPACE® has different implant shapes. Therefore different trials are available for the respective system. Laser markings on the handle as well as the trial itself indicate the cranial and caudal side of the trial.

Determination of implant size of CeSPACE® Titanium

The height of the CeSPACE® Titanium trials corresponds with the height of the final implant and is inclusive of the fixation crown.

Determination of implant size of CeSPACE® PEEK and CeSPACE®XP

The CeSPACE® PEEK and CeSPACE®XP trials mimic the anatomical shape of the corresponding anatomically shaped implant.

- The CeSPACE® implant should be inserted centrally in AP direction leaving a distance of approximately 1-2 mm to both the anterior and posterior rim (Fig. 6).

Fig. 7

Fig. 8

Plate Selection and Length Verification (Fig. 7–8)

The Quintex® system is designed with the patient and surgeon in mind. Its constrained, semi-constrained, semi-dynamic and dynamic construct options offer intraoperative versatility and accommodate a wide range of anatomical considerations (Fig. 7).

- Each Quintex® construct features different properties. It is important to understand the performance characteristics of these implant combinations when determining the appropriate construct for the patient.
- Both the Quintex® hybrid and Quintex® dynamic plates allow the surgeon to vary screw selection by each level, enabling to form a patient specific construct with different polyaxial and translational properties.
- Once the desired plating construct has been selected, the Caliper (SC421R) may be used to provide a linear measurement of the plate length (Fig. 8).

Note: Hybrid plates should be sized to encompass the desired area of fixation. Dynamic plates should be sized considering space needed to accommodate translational settling.

Note:

- For a successful treatment the proper selection of implant size, shape and design should be considered. Quintex® system implants are not intended to either replace normal structures of the human body or permanently bear the loads they would be subjected to in case of incomplete healing. The indication of a cervical plate therefore is combined with an indication of an interbody fusion or vertebral body replacement device.
- Intraoperative contamination with blood, secretions or other fluids may render the contaminated component unsuitable for resterilization!

Fig. 9a

Fig. 9b

Fig. 10

Plate Contouring (Fig. 9a and 9b)

Quintex® plates are pre-contoured to approximate cervical lordotic anatomy. If additional contouring is required, the plate bender (SC420R) should be used. The bending zone is the area between the pairs of holes within the bone graft window (window in the plate).

Adding Lordosis:

- To increase the lordosis, place the Quintex® plate with the bending zone positioned centrally between the two upper rolls of the plate bender (Fig. 9a).

Decreasing Lordosis:

- To decrease the lordosis, place the bending wedge over the bending zone (Fig. 9b).

Note: The area on the instrument on which the lordosis of the plate can be reduced is labeled 'STRAIGHTEN PLATE HERE'.

Note: In order to prevent excessive or insufficient lordosis, the long Quintex® plates should be bent in steps (one bending zone after another on multi-level plates).

Caution:

- Contouring of the plate should be minimized as excessive contouring can fatigue implant materials.
- Always bend the Quintex® plate in one direction only. Do not bend back the Quintex® plate.
- Always bend the plate only in the zone where the graft window is located. Never bend the plate close to or over the screw holes.

Plate Insertion (Fig. 10)

The Quintex® system features a plate holder (SC434R) to facilitate handling.

- Use the plate holder forceps to grasp the Quintex® plate by the outer edge, see Fig. 10.
- Compress the handles of the plate holding forceps to activate the lock. The plate holding forceps now holds the Quintex® plate without further pressure required on the handles.
- As soon as the Quintex® plate is correctly positioned, fix the plate with fixation pins and further press the handles of the plate holding forceps to release the lock.

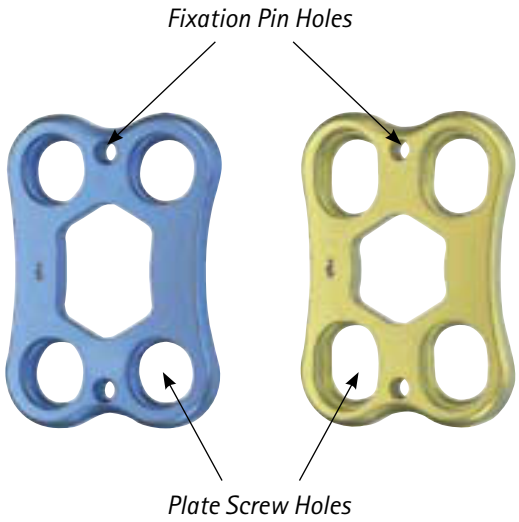


Fig. 11

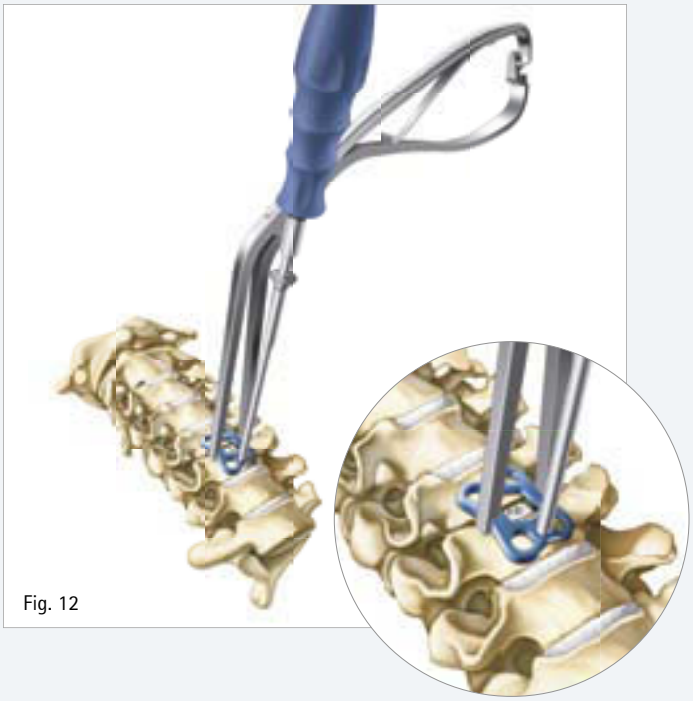


Fig. 12

Temporary Plate Fixation (Fig. 11–12)

Inserting the Plate Fixation Pins:

- Fixation pins must be used to provide temporary fixation of Quintex® plates to the vertebral bodies. Temporary fixation prevents unintended repositioning of the plate during screw hole preparation and screw placement.
- Load one fixation pin (FJ833RS) into the fixation pin instrument (SC422R). To do this, pull back the outer sleeve of the instrument and insert the fixation pin. To secure the fixation pin in the instrument release outer sleeve. The outer sleeve is then pushed forward by a spring.
- Place the plate in the desired position and insert the fixation pin into the vertebral body through the pin hole (Fig. 11) by gently advancing the instrument until the pin is fully seated.
- To release the fixation pin from the instrument pull back outer sleeve fully and remove the instrument from the pin.
- Repeat this process for each level where fixation pin placement is desired. At a minimum, the most cranial and caudal fixation pin holes of the plate are utilized for temporary fixation of the plate (Fig. 12).

Note: At least two fixation pins must be inserted for a secure fixation of the Quintex® plate. Use the instrument for fixation pins (SC422R) for inserting and removing the pins!

Removing the Plate Fixation Pins:

- Fixation pins are removed after screw placement
- The instrument for fixation pins (SC422R) is also used for pin removal
- Attach the instrument onto the fixation pin
- To do this, pull back the outer sleeve of the instrument
- To secure the fixation pin release the outer sleeve of the instrument
- The outer sleeve is then pushed forward by a spring mechanism
- Pull the fixation pin out of the vertebral body
- To release the fixation pin from the instrument pull back the outer sleeve fully and take out the fixation pin from the instrument

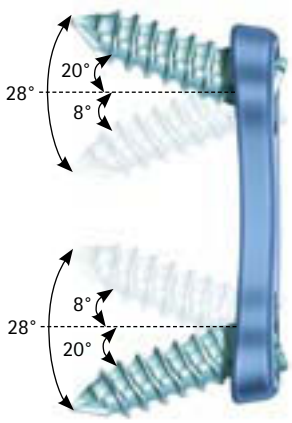


Fig. 13a

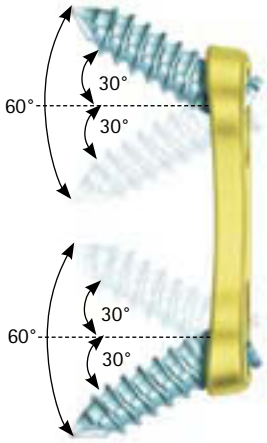


Fig. 13b

Angulation (Fig. 13a and 13b)

The screw insertion angle can be adjusted in a cranial-caudal direction and in a medial-lateral direction when using a single drill guide or cortical center punch.

- The Quintex® hybrid plate has a maximum angulation of up to +20°/-8° in the distal holes (Fig. 13a) and +15°/-15° in the medial holes of the multilevel plate.
- The Quintex® dynamic plate has a maximum angulation of up to +30°/-30° in all slots of the plate (Fig. 13b).
- All Quintex® plates have a medial/lateral angulation of up to +6°/-6° in all holes and slots of the plate.

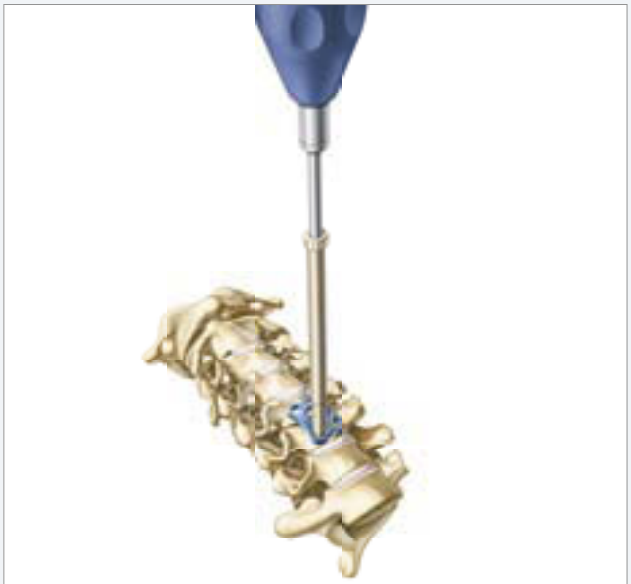


Fig. 14

Opening the Cortex (Fig. 14 and Fig. 15)

Quintex® provides three possibilities to open up the cortical bone layer of the vertebral body. The holes for the self-drilling and self-tapping Quintex® screws are prepared using either the self-centering cortical punch, cortical punch through drill guide or the drill in combination with a drill guide. Commonly, the screw can be screwed in without drilling.

- Gently pierce the anterior cortex of the vertebral body by advancing the cortical punch into bone until stop is met. The cortical punch features a positive stop at a depth of 6 mm.
- Repeat for the contralateral side and any remaining screw holes.

Cortical Punch with Self-Centring Sleeve (Fig. 14)

The cortical punch (SC428R) can be used as a stand-alone instrument. If used without guide the instrument must be assembled with the self-centring sleeve for appropriate pilot hole placement.

- Position the cortical punch with sleeve to the desired angle and visually confirm that the trajectory is within the system's specified angulation.

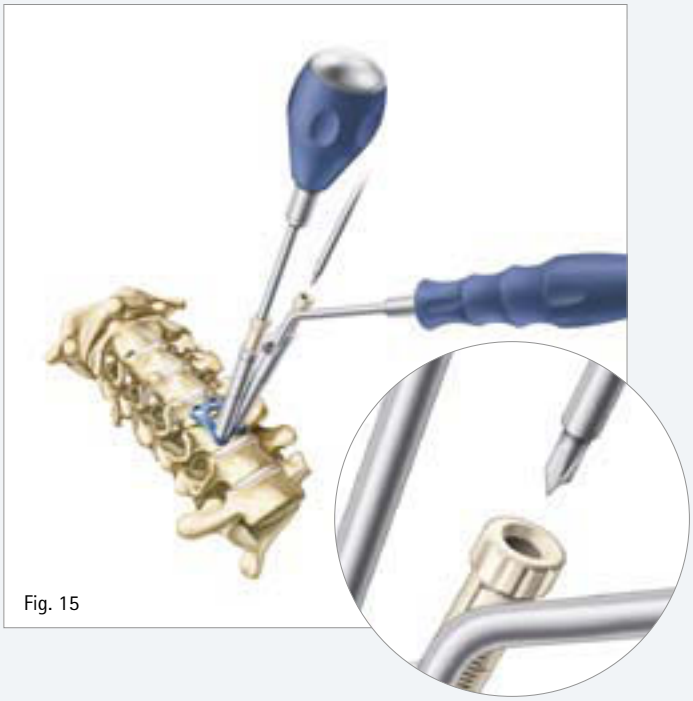


Fig. 15

Cortical Punch with Drill Guide (Fig. 15)

The cortical punch can be used without outersleeve in combination with a drill guide:

- Turn threaded cap counterclockwise to remove the outer sleeve form the threaded cap. Remove the self-centring outer sleeve of the cortical punch.
- Insert the cortical punch (without outer sleeve) into the drill guide.
- Position the drill guide to the desired angle on the pre-fixated plate and check visually that the trajectory is within the system's specified angulation.

Note: Use of a cortical punch in combination with drill guide or self-centring sleeve is required to achieve appropriate placement of the screw holes.
The maximum penetration depth of the cortical punch with mounted outer sleeve is 6 mm.
The maximum penetration depth of the cortical punch through the drill guide is 6 mm to the shoulder between distal tip with trocar and the shaft. This shoulder will act as a stop on the cortical bone.

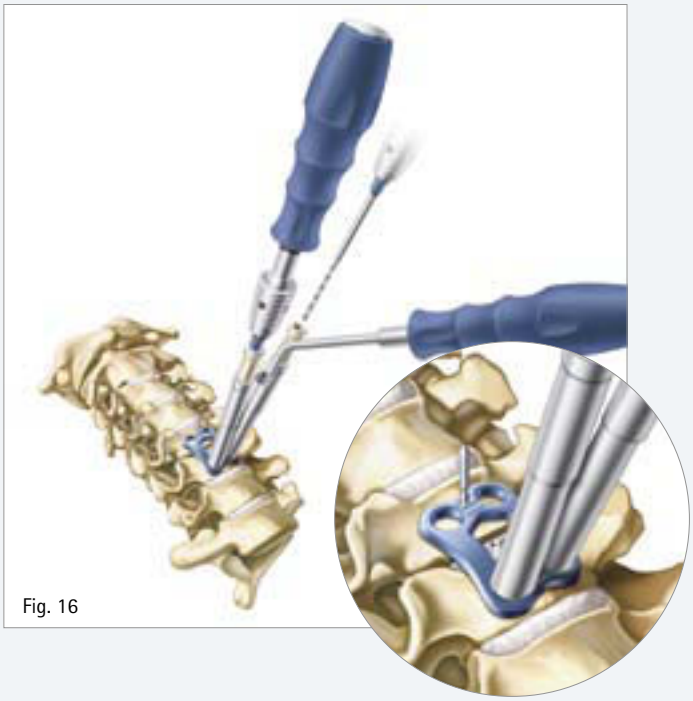


Fig. 16

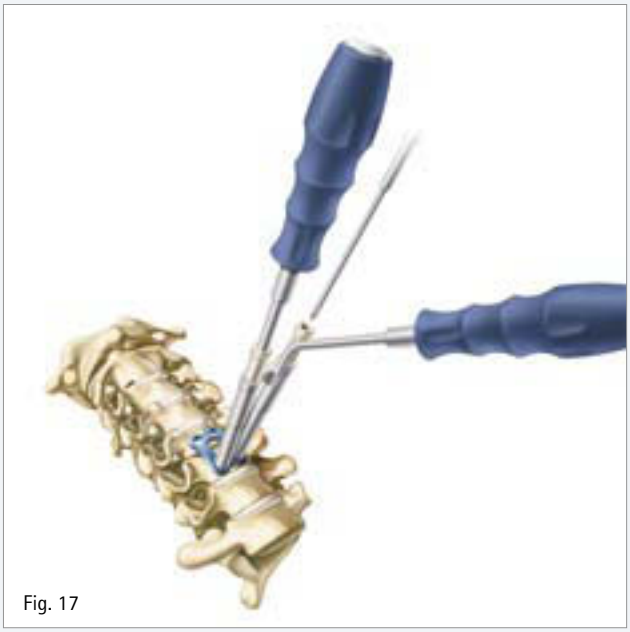


Fig. 17

Drilling and Tapping (optional Fig. 16 and Fig. 17)

The Quintex® system offers several drill guides to facilitate screw hole preparation and screw placement.

Note: Use of a drill guide or self centering sleeve is required to achieve appropriate placement of the screw holes.

Guide Selection

- The adjustable single drill guide (SC423R) and adjustable double drill guide (SC424R) accommodate all of the screw hole preparation instruments with a variable depth setting.
- The fixed single drill guide (SC425R) and fixed double drill guide (SC426R) accommodate all of the screw hole preparation instruments with a fixed depth of 14 mm.
- The Cortical Punch (SC428R) without self centering sleeve can be used through all of these drill guides.

Note: The fixed single drill guide and the fixed double drill guide are labeled '14 mm' on the sleeve for easier identification. The adjustable drill guides are equipped with adjustable depth stops. With every half turn (= depth adjustment by 0.5 mm) you will hear and feel the guide sleeve clicking into position. The thread in the drill guide is a left-hand thread.

Drilling (optional Fig. 16)

- Attach the drill bit (SC430R) to the drill handle (SC429R or SC436R).
- Alternatively attach the drill bit to a powered intra-handpiece (e.g. Aesculap® micro-Line handpiece GD450M / GD456M).
- Select the desired guide and, if necessary, set the depth by rotating the adjustable stop(s) to the desired depth.
- Insert the drill into the drill guide and check depth with caliper or ruler (e.g. 14 mm).
- Position the drill guide to the desired angle on the pre-fixated plate and check visually that the trajectory is within the system's specified angulation.
- Slowly advance the drill bit through the lumen of the guide until the stop is reached.
- Repeat for the contralateral side and any remaining screw holes.

Tapping (optional Fig. 17)

- Slowly advance the Tap (SC431R) through the lumen of the guide until the desired depth is tapped and / or the stop is reached.
- Repeat for the contralateral side and any remaining screw holes.

Note: The Quintex® system screws are self-drilling and drilling is commonly not required if a cortical punch is used.
Quintex® system screws are self-tapping and manual tapping is commonly not required.
For hard bone always use the Quintex® drill and the Quintex® tap.

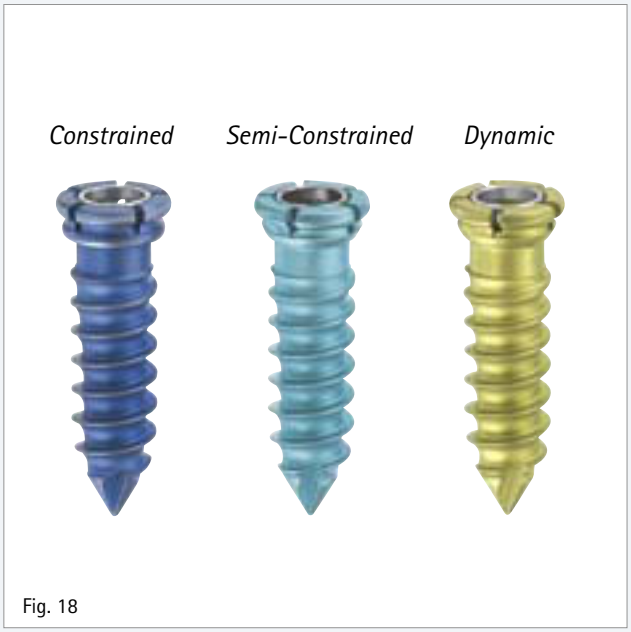


Fig. 18

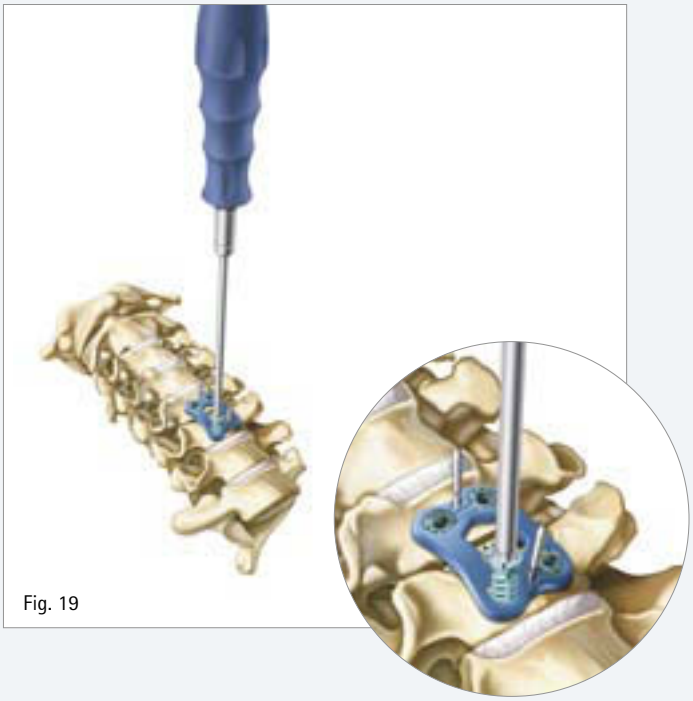


Fig. 19

Screw Selection (Fig. 18)

- Construct selection will determine the bone screw styles required to achieve the desired performance characteristics (please refer to plate selection on page 12). Quintex® screws are available in 3 styles:
  - Constrained screws (blue) for use in the hybrid plate only
  - Semi-constrained screws (green) for use in the hybrid or dynamic plate
  - Dynamic screws (gold) for use in the dynamic plate only
- The screws are color-coded (Fig. 18) and organized in the respective sterilization tray according to compatible plate choices. (See set proposals on page 24-35).
- The screw length can be verified by the measuring scale at the caddy.

Screw Placement (Fig. 19)

The Quintex® screws are loaded from the screw caddy.

- Load the desired screw onto the screwdriver (SC432R) by inserting the working end of the screwdriver into the head of the screw. Ensure that the screwdriver is fully seated into the screw then apply axial downward pressure to load the screw (Fig. 20).
- Make sure that the screwdriver holds the screw (self-holding feature).
- Align the tip of the screw with the screw hole on the vertebral body and angle the screw / driver assembly at the desired trajectory. Visually confirm that the trajectory is within the system's specified angulation. If the hole has been pre-drilled, approximate the pre-drilled trajectory.
- Gently but firmly advance the screw into the vertebral body by applying mild axial pressure with the screwdriver while rotating clockwise until resistance is met and the screw head fully engages in the hole or slot.
- Remove the screwdriver from the screw head.
- Repeat for the contralateral side and any remaining screw holes.

Fig. 20

Caution:

- The Quintex® plate and/or Quintex® screw may be damaged when screwing in the plate if the screwdriver is applied incorrectly!
- Insert the working end of the screwdriver fully into the hexalobe (receptive part) of the screw.
- When screwing in the screw, maintain a mild axial pressure on the screw.
- Applying the screwdriver at a slant or tilted would result in damage to the locking ring or locking mechanism of the Quintex® screw, or may destruct the working end of the screwdriver.
- Always align the screwdriver with the axis of the screw.
- The Quintex® screw may be damaged or insufficiently locked if it is not correctly engaged in the hold or slot of the Quintex® plate.
- Ensure that the Quintex® screw correctly engages in the hole or slot of the Quintex® plate.
- The Quintex® screw must not be screwed in too deep.

Fig. 21

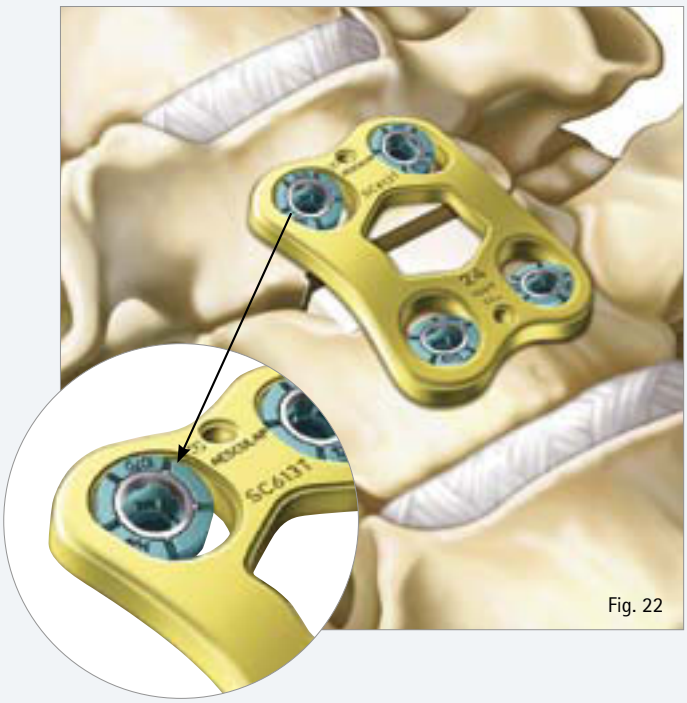


Fig. 22

Screw Locking Confirmation (Fig. 21–22)

Make sure that the Quintex® screw is securely locked in the Quintex® plate.

- After removing the screwdriver, the locking ring of the screw must be flush with the screw head.
- Visually confirm screw / plate engagement by verifying that at least 3 petals of the screw head are located below the ventral surface of the plate's hole or slot and that the lateral aspects of the screw are contained in the holes / slots of the plate (Fig. 21 and Fig. 22).
- Visually confirm lock engagement for all screws in the same manner by visually noting that the locking ring is flush with the screw head.

Note: The screw is securely locked when at least 3 of the 5 petals of the screw head are positioned in the hole / slotted hole of the Quintex® plate under the plate surface and both sides of the screw head are positioned in the hole or slotted hole underneath the plate surface from a lateral perspective.

Practical tip: Check if the Quintex® screw is correctly seated in the hole or slot of the Quintex® plate:
If the Quintex® screw has not been fully screwed into the plate hole or slot, screw the screw in deeper by 1/4 to 1/2 turns clockwise.
If the Quintex® screw has been screwed in too deep, turn the screw by 1/4 to 1/2 turns counterclockwise.

Final Steps

- Remove all fixation pins as described on page 14.
- It is recommended to confirm acceptable implant placement using fluoroscopy or intraoperative radiographs.

Fig. 23

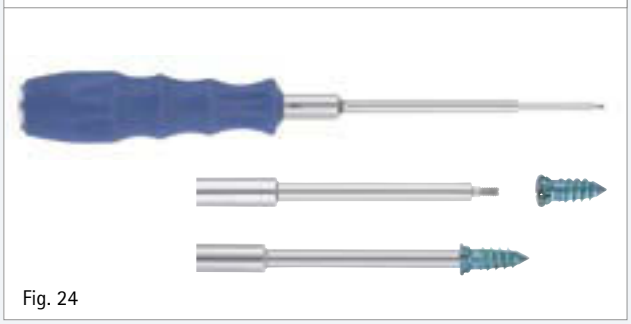


Fig. 24

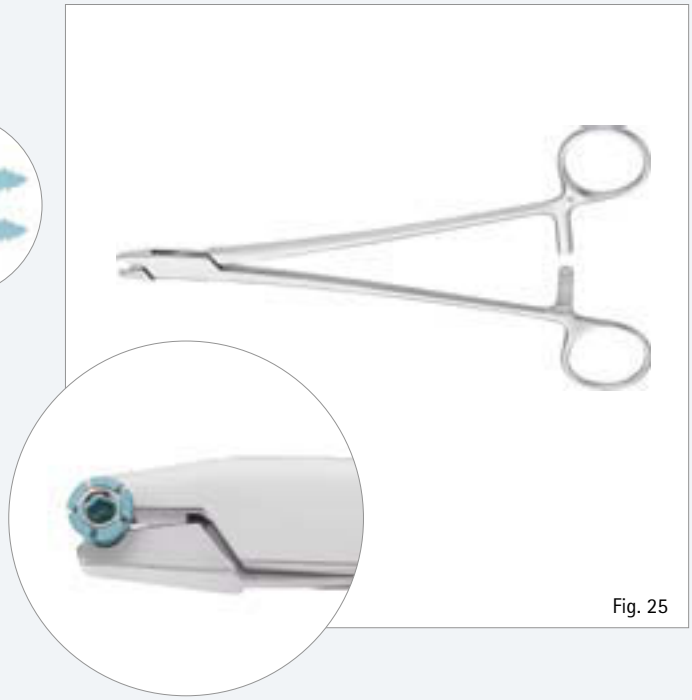


Fig. 25

Implant Removal (Fig. 23, Fig. 24, Fig. 25)

If necessary, Quintex® screws and plates can be removed.

- Carefully clear the anterior surface of the plate and screw head of any tissue overgrowth.
- Remove all screws with the screwdriver or in case of free spinning screws with the screw removal tool.
- Once all screws are removed, the plate can be removed.

Screw Removal with the Screwdriver

Try the regular screwdriver (SC432R, Fig. 23) to remove the screw.

- To remove an implanted Quintex® screw, insert the tip of the screwdriver fully into the screw head.
- When unscrewing the Quintex® screw with the screwdriver maintain a mild axial pressure on the screw.
- Turn the screwdriver counterclockwise to release the Quintex® screw.

Removal of Free-spinning Screws with the Screw Removal Tool

If the screw head of the free turning Quintex® screw does not automatically snap out of the hole or slot in the Quintex® plate use the screw removal tool (SC433R, Fig. 24) instead of screwdriver.

- Insert the screw removal tool as deep as possible into the screw head (Fig. 24).
- Turn the left-hand thread on the tip of the screw removal tool counterclockwise into the screw head as far as possible (The screw head has an internal threaded portion).
- Quintex® screw is removed from the hole or slot of the Quintex® plate by pulling and turning the instrument counterclockwise at the same time.
- If you encounter difficulties removing the Quintex® screw from the screw removal tool use the holding forceps (FW076R, Fig. 25) as a counter torque.

Note: Using the screw removal tool damages the screw's locking ring. Implants removed using the screw removal tool should not be reused. The thread on the tip of the screw extraction instrument is a left-hand.

Revision Tips

- 4.5 mm screws are provided to accommodate revisiting a previously used screw hole.
- Do not reuse explanted implants.

Quintex® Hybrid Set 1-3 Level

Implants

1-level Hybrid Plate

Art. no.	Length	Recommended
SC510T	18 mm	2 pc.
SC511T	20 mm	2 pc.
SC512T	22 mm	2 pc.
SC513T	24 mm	2 pc.
SC514T	26 mm	2 pc.
SC515T	28 mm	2 pc.
SC516T	30 mm	2 pc.
SC517T	32 mm	2 pc.
SC518T	34 mm	2 pc.

2-level Hybrid Plate

Art. no.	Length	Recommended
SC521T	34 mm	2 pc.
SC522T	37 mm	2 pc.
SC523T	40 mm	2 pc.
SC524T	43 mm	2 pc.
SC525T	46 mm	2 pc.
SC526T	49 mm	2 pc.
SC527T	52 mm	2 pc.
SC528T	55 mm	2 pc.
SC529T	58 mm	2 pc.

3-level Hybrid Plate

Art. no.	Length	Recommended
SC532T	49 mm	2 pc.
SC533T	52 mm	2 pc.
SC534T	55 mm	2 pc.
SC535T	58 mm	2 pc.
SC536T	61 mm	2 pc.
SC537T	64 mm	2 pc.
SC538T	67 mm	2 pc.

Note: 4-5 Level Hybrid Plates can be found on page 32.

Constrained Screw, ø 4.0 mm

Art. no.	Length	Recommended
SC400T	10 mm	6 pc.
SC401T	12 mm	10 pc.
SC402T	14 mm	12 pc.
SC403T	16 mm	10 pc.
SC404T	18 mm	6 pc.

Constrained Rescue Screw, ø 4.5 mm

Art. no.	Length	Recommended
SC490T	11 mm	2 pc.
SC491T	13 mm	4 pc.
SC492T	15 mm	4 pc.
SC493T	17 mm	3 pc.

Semi-Constrained Screw, ø 4.0 mm

Art. no.	Length	Recommended
SC500T	10 mm	6 pc.
SC501T	12 mm	10 pc.
SC502T	14 mm	12 pc.
SC503T	16 mm	10 pc.
SC504T	18 mm	6 pc.

Semi-Constrained Rescue Screw, ø 4.5 mm

Art. no.	Length	Recommended
SC590T	11 mm	2 pc.
SC591T	13 mm	4 pc.
SC592T	15 mm	4 pc.
SC593T	17 mm	3 pc.

C

Implant Overview and Sets

Quintex® Hybrid Set 1-3 Level

Trays and Caddies (Implants not included)

Art. no.	Description	Recommended
SC455R	Quintex® hybrid implant tray 1-3 level	1 pc.
JH217R	1/1 size wide perf. basket lid 489 x 257 mm	1 pc.
ME250P	Quintex® screw caddy lid constrained D 4.0 mm	1 pc.
ME251P	Quintex® screw caddy lid constrained D 4.5 mm	1 pc.
ME544P	Quintex® constrained screw caddy base	1 pc.
ME254P	Quintex® screw caddy lid semi-constrained D 4.0 mm	1 pc.
ME255P	Quintex® screw caddy lid semi-constrained D 4.5 mm	1 pc.
ME543P	Quintex® semi-constrained screw caddy base	1 pc.
ME263P	Quintex® hybrid plate caddy lid 1-level	1 pc.
ME264P	Quintex® hybrid plate caddy lid 2-level	1 pc.
ME265P	Quintex® hybrid plate caddy lid 3-level	1 pc.
ME538P	Quintex® hybrid plate caddy base 1-level	1 pc.
ME539P	Quintex® hybrid plate caddy base 2-level	1 pc.
ME540P	Quintex® hybrid plate caddy base 3-level	1 pc.
TF054	Packing stencil for SC455R	1 pc.
JK442	Container	1 pc.
JK489	Container lid	1 pc.

Hybrid Implant Tray and Caddies (Implants not included)

Upper level tray

Lower level tray

Implant Overview and Sets

Quintex® Dynamic Set 1-3 Level

Implants

1-level Dynamic Plate

Art. no.	Length	Recommended
SC611T	20 mm	2 pc.
SC612T	22 mm	2 pc.
SC613T	24 mm	2 pc.
SC614T	26 mm	2 pc.
SC615T	28 mm	2 pc.
SC616T	30 mm	2 pc.
SC617T	32 mm	2 pc.
SC618T	34 mm	2 pc.

2-level Dynamic Plate

Art. no.	Length	Recommended
SC621T	34 mm	2 pc.
SC622T	37 mm	2 pc.
SC623T	40 mm	2 pc.
SC624T	43 mm	2 pc.
SC625T	46 mm	2 pc.
SC626T	49 mm	2 pc.
SC627T	52 mm	2 pc.
SC628T	55 mm	2 pc.
SC629T	58 mm	2 pc.

3-level Dynamic Plate

Art. no.	Length	Recommended
SC632T	49 mm	2 pc.
SC633T	52 mm	2 pc.
SC634T	55 mm	2 pc.
SC635T	58 mm	2 pc.
SC636T	61 mm	2 pc.
SC637T	64 mm	2 pc.
SC638T	67 mm	2 pc.

Note: 4-5 Level Dynamic Plates can be found on page 33.

Dynamic Screw, ø 4.0 mm

Art. no.	Length	Recommended
SC600T	10 mm	6 pc.
SC601T	12 mm	10 pc.
SC602T	14 mm	12 pc.
SC603T	16 mm	10 pc.
SC604T	18 mm	6 pc.

Dynamic Rescue Screw, ø 4.5 mm

Art. no.	Length	Recommended
SC690T	11 mm	2 pc.
SC691T	13 mm	4 pc.
SC692T	15 mm	4 pc.
SC693T	17 mm	3 pc.

Semi-Constrained Screw, ø 4.0 mm

Art. no.	Length	Recommended
SC500T	10 mm	6 pc.
SC501T	12 mm	10 pc.
SC502T	14 mm	12 pc.
SC503T	16 mm	10 pc.
SC504T	18 mm	6 pc.

Semi-Constrained Rescue Screw, ø 4.5 mm

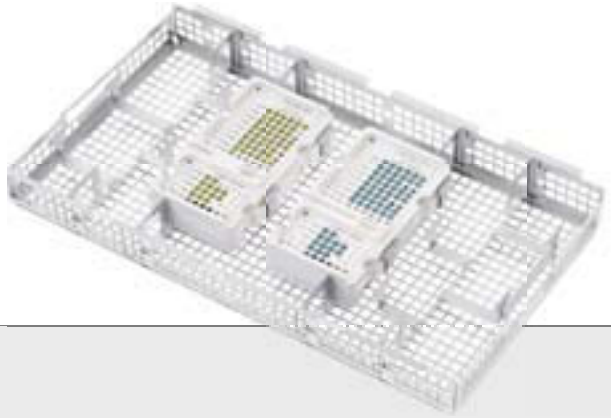
Art. no.	Length	Recommended
SC590T	11 mm	2 pc.
SC591T	13 mm	4 pc.
SC592T	15 mm	4 pc.
SC593T	17 mm	3 pc.

Quintex® Dynamic Set 1-3 Level

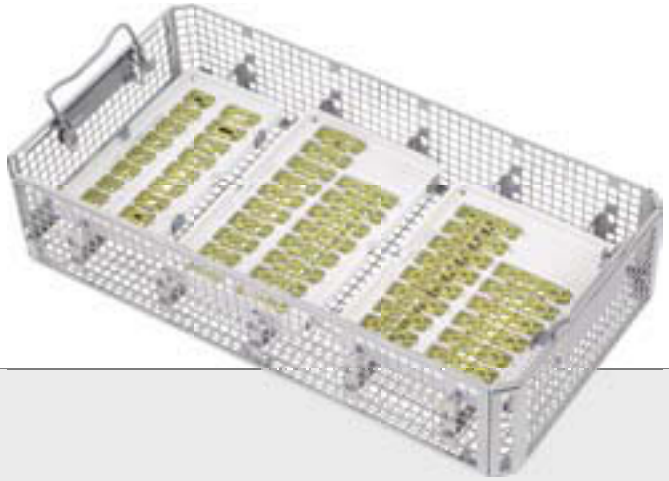
Trays and Caddies (Implants not included)

Art. no.	Description	Recommended
SC453R	Quintex® dynamic implant tray 1-3 level	1 pc.
JH217R	1/1 size wide perf. basket lid 489 x 257 mm	1 pc.
ME252P	Quintex® screw caddy lid dynamic D 4.0 mm	1 pc.
ME253P	Quintex® screw caddy lid dynamic D 4.5 mm	1 pc.
ME545P	Quintex® dynamic screw caddy base	1 pc.
ME254P	Quintex® screw caddy lid semi-constrained D 4.0 mm	1 pc.
ME255P	Quintex® screw caddy lid semi-constrained D 4.5 mm	1 pc.
ME543P	Quintex® semi-constrained screw caddy base	1 pc.
ME256P	Quintex® dynamic plate caddy lid 1-level	1 pc.
ME257P	Quintex® dynamic plate caddy lid 2-level	1 pc.
ME258P	Quintex® dynamic plate caddy lid 3-level	1 pc.
ME530P	Quintex® dynamic plate caddy base 1-level	1 pc.
ME531P	Quintex® dynamic plate caddy base 2-level	1 pc.
ME532P	Quintex® dynamic plate caddy base 3-level	1 pc.
TF052	Packing stencil for SC453R	1 pc.
JK442	Container	1 pc.
JK489	Container lid	1 pc.

Dynamic Implant Tray and Caddies (Implants not included)



Upper level tray



Lower level tray

Implant Overview and Sets

Quintex® 4–5 Level complementary implant set

Implants

4-level Hybrid Plate

Art. no.	Length	Recommended
SC541T	67 mm	2 pc.
SC542T	70 mm	2 pc.
SC543T	73 mm	2 pc.
SC544T	76 mm	2 pc.
SC545T	79 mm	2 pc.
SC546T	82 mm	2 pc.
SC547T	85 mm	2 pc.

5-level Hybrid Plate

Art. no.	Length	Recommended
SC550T	82 mm	2 pc.
SC551T	85 mm	2 pc.
SC552T	88 mm	2 pc.
SC553T	91 mm	2 pc.
SC554T	94 mm	2 pc.
SC555T	97 mm	2 pc.
SC556T	100 mm	2 pc.
SC557T	103 mm	2 pc.

4-level Dynamic Plate

Art. no.	Length	Recommended
SC641T	67 mm	2 pc.
SC642T	70 mm	2 pc.
SC643T	73 mm	2 pc.
SC644T	76 mm	2 pc.
SC645T	79 mm	2 pc.
SC646T	82 mm	2 pc.
SC647T	85 mm	2 pc.

5-level Dynamic Plate

Art. no.	Length	Recommended
SC650T	82 mm	2 pc.
SC651T	85 mm	2 pc.
SC652T	88 mm	2 pc.
SC653T	91 mm	2 pc.
SC654T	94 mm	2 pc.
SC655T	97 mm	2 pc.
SC656T	100 mm	2 pc.
SC657T	103 mm	2 pc.

Implant Overview and Sets

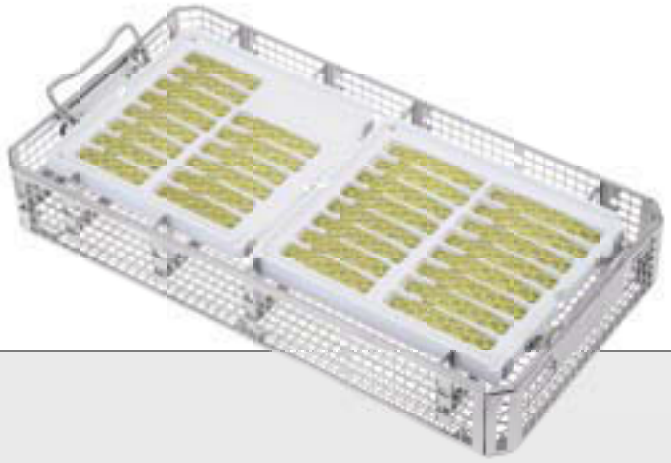
Quintex® 4-5 Level complementary implant trays

Trays and Caddies (Implants not included)

Art. no.	Description	Recommended
SC454R	Quintex® implant tray 4-5 level	2 pc.
JH217R	1/1 size wide perf. basket lid 489 x 257 mm	2 pc.
ME259P	Quintex® dynamic plate caddy lid 4-level	1 pc.
ME260P	Quintex® dynamic plate caddy lid 5-level	1 pc.
ME533P	Quintex® dynamic plate caddy base 4-level	1 pc.
ME534P	Quintex® dynamic plate caddy base 5-level	1 pc.
ME266P	Quintex® hybrid plate caddy lid 4-level	1 pc.
ME267P	Quintex® hybrid plate caddy lid 5-level	1 pc.
ME541P	Quintex® hybrid plate caddy base 4-level	1 pc.
ME542P	Quintex® hybrid plate caddy base 5-level	1 pc.
TF053	Packing stencil for SC454R	1 pc.
JK444	Container	1 pc.
JK489	Container lid	1 pc.
JK440	Container	2 pc. (alternatively to JK444)
JK489	Container lid	2 pc. (alternatively for 2 pc. JK440)

4-5 Level complementary implant trays (Implants not included)

Hybrid 4-5 level tray



Dynamic 4-5 level tray

Aesculap® Quintex®

D

Instrument Overview and Set

Instruments

	Art. no.	Description	Recommended	Optional
	SC420R	Quintex® plate bender	1 pc.	
	SC421R	Quintex® caliper	1 pc.	
	SC422R	Quintex® fixation pin instrument	1 pc.	
	FJ833RS	ABC and Quintex® plate fixation pin single sterile	6 pc.	
	SC423R	Quintex® adjustable single drill guide	1 pc.	
	SC424R	Quintex® adjustable double drill guide	1 pc.	
	SC428R	Quintex® cortical punch D 2.7 x 6 mm	1 pc.	
	SC429R	Quintex® drill handle	1 pc.	
	SC436R	Quintex® drill handle tear drop style		1 pc.

	Art. no.	Description	Recommended	Optional
	SC430R	Quintex® drill bit D 2.9 mm nonsterile	2 pc.	
	SC431R	Quintex® tap D 4.0 mm	1 pc.	
	SC432R	Quintex® screwdriver	2 pc.	
	SC433R	Quintex® screw removal tool	1 pc.	
	SC434R	Quintex® plate holder	1 pc.	
	FW076R	S4®C rod holding forceps to remove screw from removal tool	1 pc.	
	SC425R	Quintex® fixed single drill guide 14 mm		1 pc.
	SC426R	Quintex® fixed double drill guide 14 mm		1 pc.

D

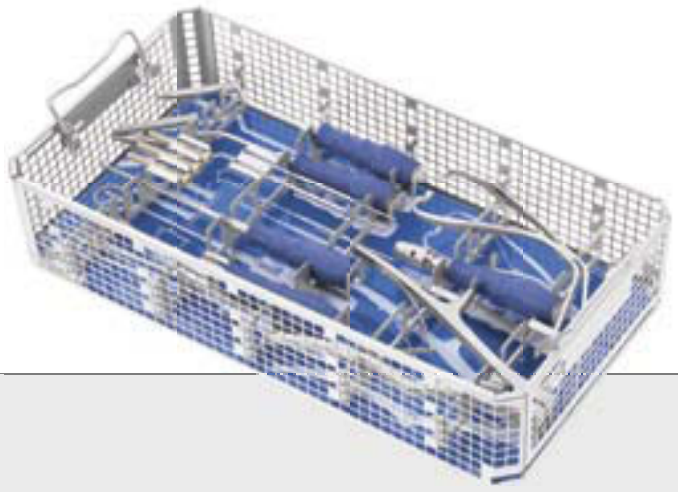
Instrument Overview and Set

Instrument Tray (Instruments not included)

Art. no.	Description	Recommended
SC451R	Quintex® instrument tray	1 pc.
JH217R	1/1 size wide perf. basket lid 489 x 257 mm	1 pc.
TF050	Graphic template for SC451R	1 pc.
TF051	Packing stencil for SC451R	1 pc.
JK442	Container	1 pc.
JK489	Container lid	1 pc.

Instrument Tray (Instruments not included)

Upper level tray



Lower level tray

SecureSpan®

Posterior Laminoplasty Fixation System

SecureSpan®

Cervical laminoplasty is a procedure used to expand the cervical canal and leaves the protective posterior elements in place. SecureSpan® implants allow for decompression without compromised stability of the cervical spine.

Advantages

- Threaded shaft screwdriver
- Solid connection between screw and screwdriver
- Color-Coded implants
- Variety of implant sizes

Features

- Threaded shaft screwdriver
- Color coding of implants to size
- 6 plate screw sizes
- 5 plate sizes

Indication

Posterior cervical decompression in case of: Cervical multilevel myelopothy, stenosis and OPLL used in the lower cervical and upper thoracic spine (C3-T3).

Aesculap Special Instruments for Anterior Cervical Approach

Aesculap Spine

B BRAUN
SHARING EXPERTISE

Content

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A | Preface

Anterior cervical discectomy and fusion (ACDF) using an interbody fusion device or bone graft in combination with plate fixation is an accepted technique for the treatment of degenerative disc disease.[1,2,3,4] The success of this surgical procedure which is also considered as the golden standard, relies on decompression and development of a solid osseous fusion. Traditional interbody fusion using tricortical bone graft can maintain disc height as well as foraminal height at the intervertebral segment.[5] More modern techniques involve the use of interbody fusion devices made of synthetic materials (PEEK, carbon fiber) or titanium. Special coating of the cage (e.g. Plasmapore®) can promote implant stability and bony ingrowth.

Anterior plate osteosynthesis with a bone graft support or with an interbody fusion device cannot only be applied to degenerative instability but also to traumatic, tumorous, rheumatoid and infectious instability.

Another option to treat symptomatic cervical discopathy is to maintain the motion through the use of an artificial cervical intervertebral disc. Artificial cervical discs are supposed to slow down the degeneration of the adjacent disc, allowing the physiological alignment and range of motion of vertebrae to be restored as best as possible.[6] This procedure has emerged as a potential alternative to ACDF in appropriately selected patients.[7]

The purpose of this brochure is to give an overview about special instruments for the anterior approach to the cervical spine including both, ACDF and motion preservation techniques.

B | Ordering Information

CASPAR® Combined Neck and Head Rest
The rest is especially suitable for fusion and plate osteosynthesis procedures but is also applicable for all other operations with cervical anterior approach.
The stable construction and high versatility of the CASPAR® Combined Neck and Head Rest permits adaptation to the individual patient and access to the surgical site, particularly for intra-operative C-arm fluoroscopy.

FF140
Combined neck and head rest, consisting of a head and neck cushion (FF141, FF143) and an integrated adjustable skull traction device with stand.

FF141

FF143

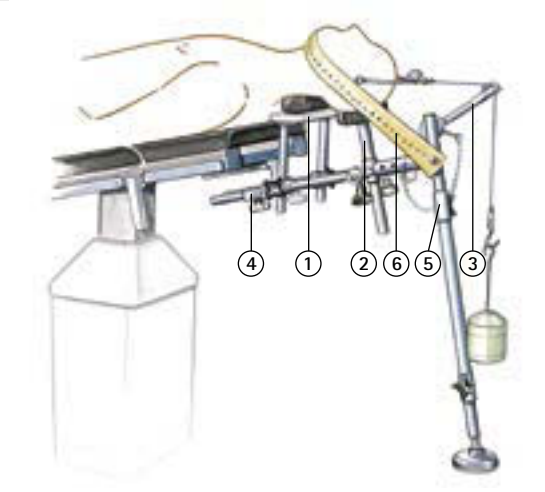
FF144

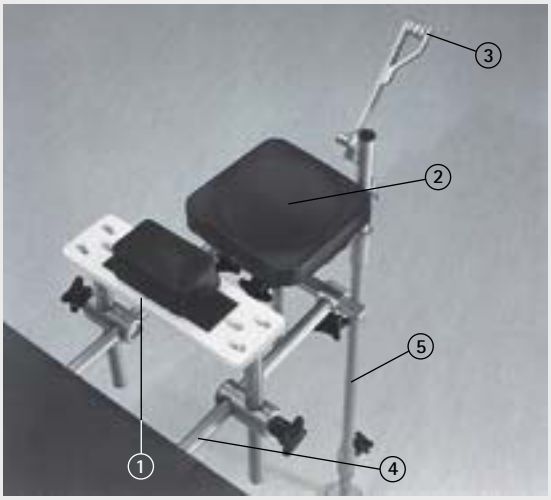
FF141
Head cushion, attachable to the head support (included in the FF140 set).

FF142
Rubber band for elastic head fixation (must be ordered separately).

FF143
Neck cushion, attachable to the neck support (included in the FF140 set).

FF144
Neck support transparent to X-ray, without cushion, 265 x 62 x 75 mm (must be ordered separately).





① Neck support with detachable cushion. Adjustable vertically, horizontally and obliquely. Can be rotated for longitudinal or transverse use. Illustrated here is the version which is transparent to X-ray. This neck support (FF144), with neck cushion, transparent to X-ray in the sagittal plane, can be adjusted for height and position, and can easily be exchanged for the regular neck support.

② Head support with cushion, adjustable height.

③ Guide pulley for traction rope, adjustable height.

④ Fixation to operating table (if necessary, the MAQUET Universal Adaptor 1005.27 may be used).

⑤ Stand, adjustable height.

⑥ Rubber band for elastic head fixation (FF142).

B | Ordering Information

Instruments for approach

BA311SU

BA323SU

Scalpels for Single Use (10 pieces)
230 mm

BV997R

GELPI

Skin retractor
175 mm

BV085R

ADSON

Wound retractor, semi-sharp
140 mm

US602
1.0 mm

US604
2.0 mm

Rose Gold bipolar non-stick forceps, insulated
190 mm

GN133

for bipolar coagulation units Aesculap GN060, GN160, GN640 such as BOWA, Lamidey, Söring and Valleylab

Instruments for approach

Explanation

W

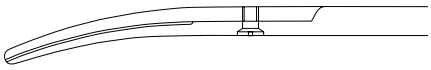
prevents tissue or suture materials from slipping out.

»grazil«

Scissors with special delicate and slim design.

DUROTIP®

Scissors with inserted carbide guarantee permanent cutting edge.

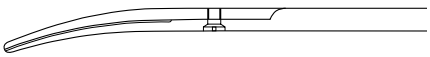


BC263R W

METZENBAUM

curved
180 mm

»grazil« **DUROTIP®**

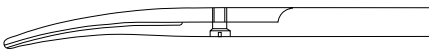


BC271R W

METZENBAUM

curved
180 mm

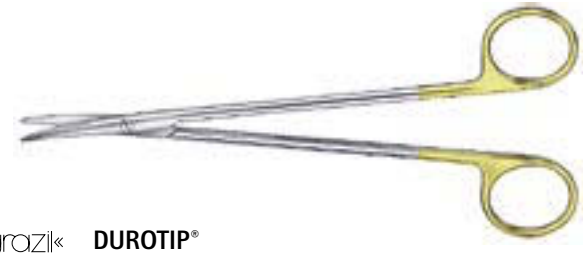
»grazil« **DUROTIP®**



BC273R W

TÖNNIS-ADSON

curved
175 mm



»grazil« **DUROTIP®**

B | Ordering Information

Soft tissue retraction: CCR System (CASPAR® Cervical Retractor System)

BW049R

CCR basic cervical retractor, preferably used for medial-lateral retraction, double hinge, tiltable butterfly screw, side load mechanism

BW047R

CCR basic counter retractor, preferably used for longitudinal retraction, double hinge, side load mechanism

BW048R

CCR longitudinal counter retractor, preferably used for longitudinal retraction, with high loading, high torsion resistance, side load mechanism

BW010R

Handle for blades for a modular use as hand-held retractors (as Langenbeck hand retractor)

BW011P

Depth gauge to determine the appropriate blade length

Soft tissue retraction: CCR System (CASPAR® Cervical Retractor System)

BW139R

CCR radiolucent basic retractor, preferably used for medial-lateral retraction, double hinge, tiltable butterfly screw, side load mechanism

BW137R

CCR radiolucent basic counter retractor, preferably used for longitudinal retraction, double hinge, side load mechanism

BW138R

CCR radiolucent longitudinal counter retractor, preferably used for longitudinal retraction, with high loading, high torsion resistance, side load mechanism

Info

See following pages for blades!

B | Ordering Information

Soft tissue retraction: CCR System (CASPAR® Cervical Retractor System)

Blades

Titanium	
BW050T	CCR blade, toothed (medial/lateral), 19 x 25 mm
BW051T	CCR blade, toothed (medial/lateral), 19 x 30 mm
BW052T	CCR blade, toothed (medial/lateral), 19 x 35 mm
BW053T	CCR blade, toothed (medial/lateral), 19 x 40 mm
BW054T	CCR blade, toothed (medial/lateral), 19 x 45 mm
BW055T	CCR blade, toothed (medial/lateral), 19 x 50 mm
BW056T	CCR blade, toothed (medial/lateral), 19 x 55 mm
BW057T	CCR blade, toothed (medial/lateral), 19 x 60 mm

Titanium	
BW060T	CCR blade, blunt (longitudinal), 19 x 25 mm
BW061T	CCR blade, blunt (longitudinal), 19 x 30 mm
BW062T	CCR blade, blunt (longitudinal), 19 x 35 mm
BW063T	CCR blade, blunt (longitudinal), 19 x 40 mm
BW064T	CCR blade, blunt (longitudinal), 19 x 45 mm
BW065T	CCR blade, blunt (longitudinal), 19 x 50 mm
BW066T	CCR blade, blunt (longitudinal), 19 x 55 mm
BW067T	CCR blade, blunt (longitudinal), 19 x 60 mm

Titanium	
BW141T	CCR blade, small teeth (lateral), 24 x 30 mm
BW142T	CCR blade, small teeth (lateral), 24 x 35 mm
BW143T	CCR blade, small teeth (lateral), 24 x 40 mm
BW144T	CCR blade, small teeth (lateral), 24 x 45 mm
BW145T	CCR blade, small teeth (lateral), 24 x 50 mm
BW146T	CCR blade, small teeth (lateral), 24 x 55 mm
BW147T	CCR blade, small teeth (lateral), 24 x 60 mm
BW148T	CCR blade, small teeth (lateral), 24 x 65 mm
BW149T	CCR blade, small teeth (lateral), 24 x 70 mm

Titanium	
BW151T	CCR blade, large teeth (medial), 24 x 30 mm
BW152T	CCR blade, large teeth (medial), 24 x 35 mm
BW153T	CCR blade, large teeth (medial), 24 x 40 mm
BW154T	CCR blade, large teeth (medial), 24 x 45 mm
BW155T	CCR blade, large teeth (medial), 24 x 50 mm
BW156T	CCR blade, large teeth (medial), 24 x 55 mm
BW157T	CCR blade, large teeth (medial), 24 x 60 mm
BW158T	CCR blade, large teeth (medial), 24 x 65 mm
BW159T	CCR blade, large teeth (medial), 24 x 70 mm

Soft tissue retraction: CCR System (CASPAR® Cervical Retractor System)

Blades

Titanium

BW162T	CCR blade, blunt (longitudinal), 24 x 35 mm
BW163T	CCR blade, blunt (longitudinal), 24 x 40 mm
BW164T	CCR blade, blunt (longitudinal), 24 x 45 mm
BW165T	CCR blade, blunt (longitudinal), 24 x 50 mm
BW166T	CCR blade, blunt (longitudinal), 24 x 55 mm
BW167T	CCR blade, blunt (longitudinal), 24 x 60 mm
BW168T	CCR blade, blunt (longitudinal), 24 x 65 mm
BW169T	CCR blade, blunt (longitudinal), 24 x 70 mm
BW170T	CCR blade, blunt (longitudinal), 24 x 75 mm

PEEK

BW251P	CCR blade, toothed (medial / lateral), 19 x 30 mm
BW252P	CCR blade, toothed (medial / lateral), 19 x 35 mm
BW253P	CCR blade, toothed (medial / lateral), 19 x 40 mm
BW254P	CCR blade, toothed (medial / lateral), 19 x 45 mm
BW255P	CCR blade, toothed (medial / lateral), 19 x 50 mm
BW256P	CCR blade, toothed (medial / lateral), 19 x 55 mm
BW257P	CCR blade, toothed (medial / lateral), 19 x 60 mm
BW258P	CCR blade, toothed (medial / lateral), 19 x 65 mm
BW259P	CCR blade, toothed (medial / lateral), 19 x 70 mm

PEEK

BW261P	CCR blade, blunt (longitudinal), 19 x 30 mm
BW262P	CCR blade, blunt (longitudinal), 19 x 35 mm
BW263P	CCR blade, blunt (longitudinal), 19 x 40 mm
BW264P	CCR blade, blunt (longitudinal), 19 x 45 mm
BW265P	CCR blade, blunt (longitudinal), 19 x 50 mm
BW266P	CCR blade, blunt (longitudinal), 19 x 55 mm
BW267P	CCR blade, blunt (longitudinal), 19 x 60 mm
BW268P	CCR blade, blunt (longitudinal), 19 x 65 mm
BW269P	CCR blade, blunt (longitudinal), 19 x 70 mm

B | Ordering Information

Instruments for vertebral body distraction

FF900R
Set

CASPAR®

Vertebral body distractor, for use in surgical procedures from the left approach for C5 through T1/2 and from the right approach for the upper cervical spine.

Please order separately:

FF903R
Distractor, like FF901R, but with elongated toothed bar, for multilevel (more than 2) distraction.

Consisting of:

FF901R	Distractor only
FF907R	Drill guide
FF908R	Twist drill
FF905SB	10 distraction screws, 16 mm
FF906R	Screw driver

FF907R

CASPAR®

Drill guide for parallel positioning of the distraction screws, to be used with distractor FF901R or FF903R.

FF908R

CASPAR®

Drill bit, Ø 1.7 mm
for pre-drilling holes for distraction screws, drilling depth: 8 mm,
shank Ø 2.35 mm
145 mm

Recommendation:
FF908R preferably to be used with micro-Line handpiece GD450M and with Aesculap motor system

GD450M

micro-Line handpiece, transmission 1:1

Instruments for vertebral body distraction

FF890R
Set

CASPAR®

Vertebral body distractor, for use in surgical procedures from the right approach for C5 through T1/2 and from the left approach for the upper cervical spine.

Please order separately:

FF893R
Distractor, like FF891R, but with elongated toothed bar, for multilevel (more than 2) distraction.

Consisting of:

FF891R	Distractor only
FF897R	Drill guide
FF908R	Twist drill
FF905SB	10 distraction screws, 16 mm
FF906R	Screw driver

FF897R

CASPAR®

Drill guide for parallel positioning of the distraction screws, to be used with distractor FF891R or FF893R.

FF906R

CASPAR®

Screw driver for distraction screws 20 mm

FF912SB, FF904SB, FF905SB and FF909SB

CASPAR®

Distraction screws to be used with distractors FF901R and FF891R, at least 2 pieces are required.

FF912SB	12 mm	10 pieces
FF904SB	14 mm	10 pieces
FF905SB	16 mm	10 pieces
FF909SB	18 mm	10 pieces

B | Ordering Information

Instruments for vertebral body distraction

FW849R

Cervical lockable distractor

Lockable vertebral body distractor, for use in surgical procedures from the left approach for C5 through T1/2 and from the right approach for the upper cervical spine. Sleeves with locking mechanism to interlock the distraction screws.

FW848R

Cervical lockable distractor

Lockable vertebral body distractor, for use in surgical procedures from the right approach for C5 through T1/2 and from the left approach for the upper cervical spine. Sleeves with locking mechanism to interlock the distraction screws.

Instruments for vertebral body distraction

FW850R

Screw driver for lockable distraction screw

FW861SU, FW862SU, FW855SU and FW856SU

Lockable standard screws to be used with distractors FW849R and FW848R.

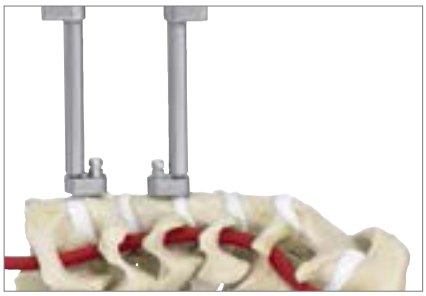
FW861SU	12 mm	2 pieces
FW862SU	14 mm	2 pieces
FW855SU	16 mm	2 pieces
FW856SU	18 mm	2 pieces

FW851SU – FW854SU

Lockable off-set screws

Lockable off-set distraction screw providing more in space to the surgical field, even in small anatomical conditions to be used with distractors FW849R and FW848R.

FW851SU	12 mm	2 pieces
FW852SU	14 mm	2 pieces
FW853SU	16 mm	2 pieces
FW854SU	18 mm	2 pieces



B | Ordering Information

Instruments for discectomy

BB078R

Scalpel Handle
225 mm

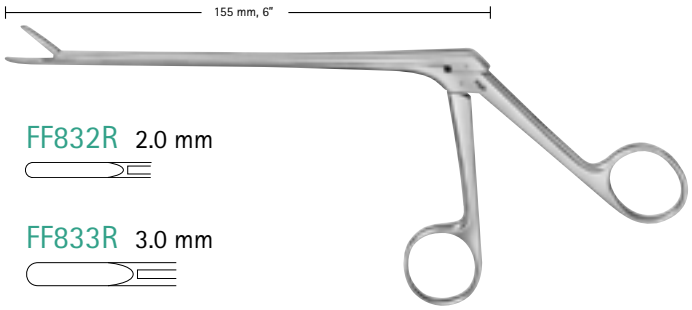
BB511

Carbon steel surgical blade, usable for incision of intervertebral discs
(100 pieces)

FF832R – FF834R

CASPAR®

Rongeur, straight, jaw standard
155 mm



FF832R 2.0 mm

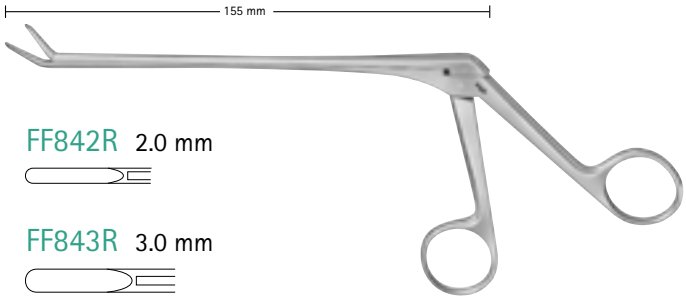
FF833R 3.0 mm

FF834R 4.0 mm

FF842R – FF843R

CASPAR®

Rongeur, 150°, jaw standard
155 mm



FF842R 2.0 mm

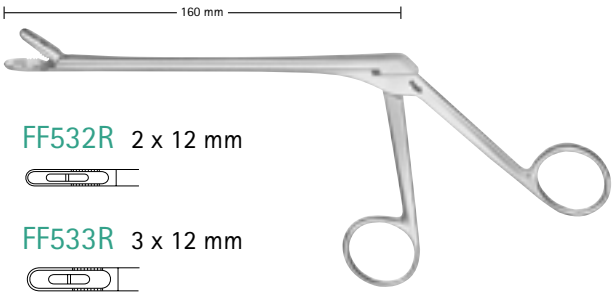
FF843R 3.0 mm

Instruments for discectomy

FF532R – FF534R

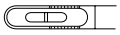
CASPAR®

Rongeur, straight, jaw serrated
160 mm

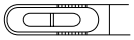


FF532R 2 x 12 mm

FF533R 3 x 12 mm



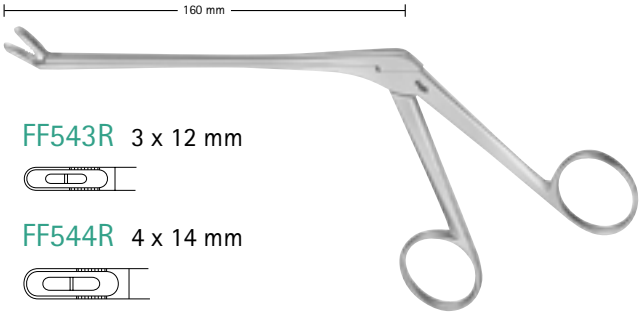
FF534R 4 x 14 mm



FF543R – FF544R

CASPAR®

Rongeur, 150°, jaw serrated
160 mm



FF543R 3 x 12 mm

FF544R 4 x 14 mm

For the full range of Aesculap rongeurs, please ask for:
C24502

B | Ordering Information

Instruments for discectomy and preparation of graft site

FK328R

CASPAR®

Longus colli muscle dissector
180 mm

FL101R, FL102R, FL104R

LAMBOTTE

Osteotome, straight
125 mm

FL101R	FL102R	FL104R
4.0 mm	6.0 mm	8.0 mm

FO520R

MARQUARDT

Bone Rongeur, curved
200 mm

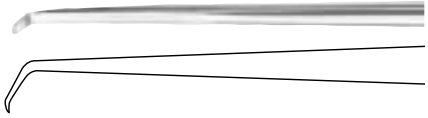
FF917R – FF918R

CASPAR®

Vertebral body dissectors, usable for loosening the posterior longitudinal ligament and removal of disk fragments and osteophytes
205 mm

FF917R

FF918R



Instruments for discectomy and preparation of graft site

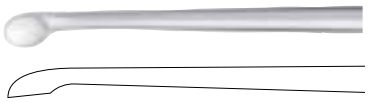
FK773R – FK785R

CASPAR®

Scoops
220 mm

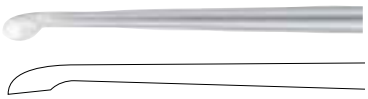
FK773R – FK775R

straight



FK783R – FK785R

curved



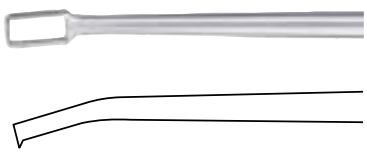
FK773R	FK774R	FK775R
3.6 x 5 mm	4.4 x 6.2 mm	5.2 x 7.3 mm
		

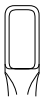
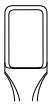
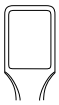
FK783R	FK784R	FK785R
3.6 x 5 mm	4.4 x 6.2 mm	5.2 x 7.3 mm
		

FK834R – FK836R

CASPAR®

Curretes, toothed
220 mm



FK834R	FK835R	FK836R
4 mm	5 mm	6 mm
		

B | Ordering Information

Preparation of graft site

FF310R

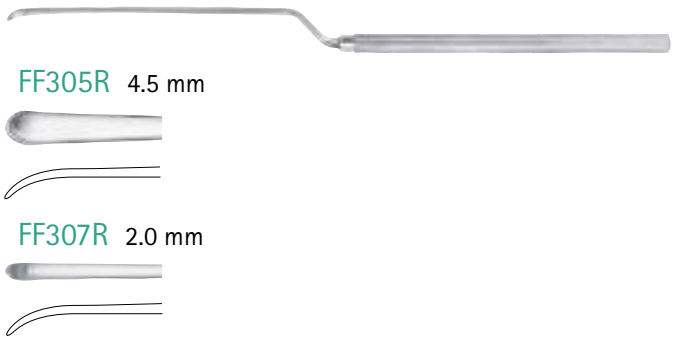
CASPAR®

Micro dissector, curved
200 mm

FF305R – FF307R

CASPAR®

Micro dissector, bayonett shaped,
downwards curved
250 mm



FF300R

DAVIS

Dissector, blunt, round handle,
double ended
245 mm

OL165R

FREER

Elevatorium, blunt/sharp
185 mm

Preparation of graft site

FD396R – FD399R

KRAYENBÜHL

Nerve- and Vessel hooks, probe-end
185 mm

FD396R

FD397R

FD398R

FD399R

BT088R – BT091R

CASPAR®

Exploration hooks, probe-end
245 mm

BT088R

BT089R

BT090R

BT091R

B | Ordering Information

Preparation of graft site/microspeed uni – Electric High Speed Motor System

GD670

microspeed uni control unit

GD675

microspeed uni XS high speed motor for all Hi-Line XS, Hi-Line XXS hand-pieces

GD678

microspeed uni micro motor for micro-Line handpieces (e.g. GD450M, GB129)

GD672

microspeed uni motor cable

GD668

microspeed uni foot control – single pedal

Preparation of graft site/HiLAN XS – Pneumatic High Speed Motor System

GA740R

HiLAN XS high speed motor
for all Hi-Line XS, Hi-Line XXS
handpieces

GA553

microLAN pneumatic motor
for micro-Line handpieces
(e.g. GD450M, GB129)

GA521

Foot pedal

GA513R

Motor hose (3 m)

GA464R

Supply hose (3 m) wall connection
Aesculap Dräger

GA468R

Supply hose (3 m) wall connection
Schrader

GA461R

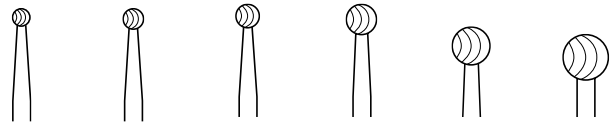
Supply hose (3 m) wall connection DIN

B | Ordering Information

Preparation of graft site/High Speed Tools – For microspeed uni and HiLAN XS

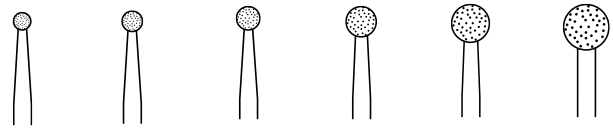
II GB757R III GB758R

Rosen burrs



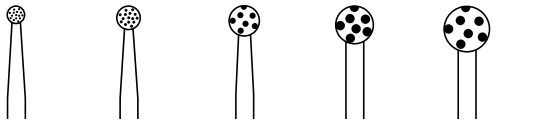
mm/diam.	2.3	2.7	3.1	4.0	5.0	6.0
II	GE504R	GE505R	GE506R	GE507R	GE508R	GE509R
III	GE604R	GE605R	GE606R	GE607R	GE608R	GE609R

Diamond burrs



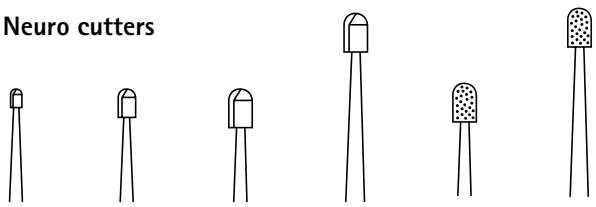
mm/diam.	2.3	2.7	3.1	4.0	5.0	6.0
II	GE514R	GE515R	GE516R	GE517R	GE518R	GE519R
III	GE614R	GE615R	GE616R	GE617R	GE618R	GE619R

coarse extra coarse



mm/diam.	2.3	3.1	4.0 ②	5.0 ②	6.0 ②
II	GE524R	GE525R	GE556SU	GE557SU	GE558SU
III	GE624R	GE625R	GE656SU	GE657SU	GE658SU

Neuro cutters



mm/diam.	1.8	2.3	3.1	3.1	3.1	3.1
II	GE531R	GE534R	GE535R	GE553R	GE554R	GE555R
III	GE631R	GE634R	GE635R	GE653R	GE654R	GE655R

Preparation of graft site/High Speed Tools – For microspeed uni and HiLAN XS

mm/diam.
II
III

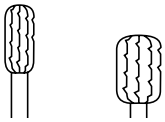
II GB757R
III GB758R

mm/diam.
II
III

Barrel burrs
soft cut

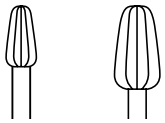
4.0 GE548R GE648R
5.0 GE549R GE649R
4.0 GE645R

Barrel burrs
standard



4.0 GE544R GE644R
6.0 GE546R GE646R

Cone burrs



4.0 GE540R
6.0 GE542R

Reverse taper burr coarse diamond

4.0 GE539R GE639R

Oval burr

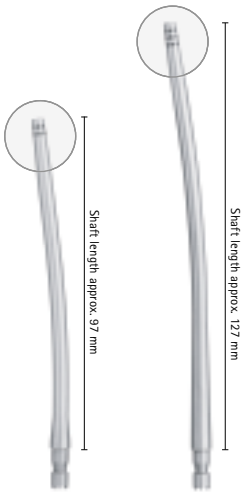
4.0 GE536R

For further details, please ask for:
O28302

For further details, please ask for:
O26002

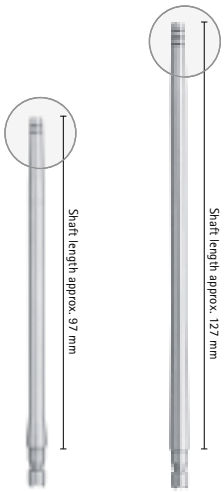
B | Ordering Information

Preparation of graft site/High Speed Tools – For microspeed uni and Hi-Line XXS



mm/diam.

	II	III
	GB792R	GB794R



mm/diam.

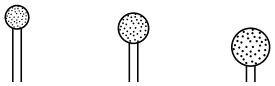
	II	III
	GB791R	GB793R

GB790R

Rosen burrs

3.0	4.0
GE804SU	GE805SU
GE834SU	GE835SU

Round diamond burrs, coarse



3.0	4.0	5.0
GE816SU	GE817SU	GE818SU
GE846SU	GE847SU	GE848SU

Neuro cutter

3.0	4.0
GE802SU	GE803SU
GE832SU	GE833SU

Neuro cutter, coarse diamond

2.0	3.0	4.0	5.0
GE812SU	GE813SU	GE814SU	GE815SU
GE842SU	GE843SU	GE844SU	GE845SU

For further details, please ask for: 046502

KERRISION

Jaw position 130°, upward opening

shaft length 180 mm

Width (mm)	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0

Width (mm)	Footplate	Jaw width	Ejector	Detachable	Noir®, detachable
2.5 mm	standard	10	✔	FK912R	FK912B
3.0 mm	standard	10	✔	FK902R	FK902B
1.0 mm	thin	8	–	FK906R	FK906B
1.5 mm	thin	9	–	FK923R	FK923B
2.0 mm	thin	9	✔	FK907R	FK907B
2.5 mm	thin	10	✔	FK924R	FK924B
3.0 mm	thin	10	✔	FK908R	FK908B

For further details, please ask for:
084802

B | Ordering Information

OPTIONAL:
Instruments for bone graft harvesting

Bone graft harvesting and impaction of bone graft

AA845R

Caliper, for measurement of the bone graft and graft site until 150 mm, 220 mm

GC640R – GC646R

Oscillating double saw blades for harvesting of precisely dimensioned fusion grafts from the iliac crest (for vertical cutting). To be used with sagittal saw GB129.

GC640R	6 mm
GC641R	7 mm
GC642R	8 mm
GC643R	9 mm
GC644R	10 mm
GC645R	11 mm
GC646R	12 mm

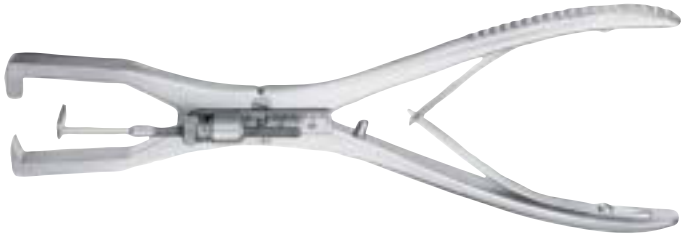
GB129

micro-Line sagittal saw, to be used with Aesculap motor system microspeed uni

OPTIONAL:
CASPAR® instruments for bone graft harvesting

Bone graft harvesting and impaction of bone graft

FF927R – FF928R



FF927R

CASPAR®

Graft cutter with adjustable depth control,
10 mm width, for graft from 9 – 12 mm
220 mm

FF928R

CASPAR®

Graft cutter with adjustable depth control,
7 mm width, for graft from 6 – 9 mm
220 mm

FF911R

CASPAR®

Bone graft holder and impactor
220 mm

FF913R – FF915R

CASPAR®

Tapper for the fine positioning of the
graft and for cancellous bone plasty
200 mm

FF913R	FF914R	FF915R
ø 3 mm	ø 5 mm	ø 8 mm

C | Ordering Information – Set configurations

CCR System (CASPAR® Cervical Retractor System)

BW124

CCR retractor set
24 mm titanium blade system

Art. No.	Unit	Description
BW125P	1	CCR tray, with lid
BW049R	1	CCR basic retractor
BW047R	1	CCR counter retractor
BW048R	1	CCR counter retractor
BW010R	2	Handle
BW011P	1	Depth gauge
BW141T	1	CCR blade, small teeth (lateral), 24 x 30 mm
BW142T	1	CCR blade, small teeth (lateral), 24 x 35 mm
BW143T	1	CCR blade, small teeth (lateral), 24 x 40 mm
BW144T	1	CCR blade, small teeth (lateral), 24 x 45 mm
BW145T	1	CCR blade, small teeth (lateral), 24 x 50 mm
BW146T	1	CCR blade, small teeth (lateral), 24 x 55 mm
BW147T	1	CCR blade, small teeth (lateral), 24 x 60 mm
BW148T	1	CCR blade, small teeth (lateral), 24 x 65 mm
BW149T	1	CCR blade, small teeth (lateral), 24 x 70 mm
BW151T	1	CCR blade, large teeth (medial), 24 x 30 mm
BW152T	1	CCR blade, large teeth (medial), 24 x 35 mm

Art. No.	Unit	Description
BW153T	1	CCR blade, large teeth (medial), 24 x 40 mm
BW154T	1	CCR blade, large teeth (medial), 24 x 45 mm
BW155T	1	CCR blade, large teeth (medial), 24 x 50 mm
BW156T	1	CCR blade, large teeth (medial), 24 x 55 mm
BW157T	1	CCR blade, large teeth (medial), 24 x 60 mm
BW158T	1	CCR blade, large teeth (medial), 24 x 65 mm
BW159T	1	CCR blade, large teeth (medial), 24 x 70 mm
BW162T	1	CCR blade, blunt (longitudinal), 24 x 35 mm
BW163T	1	CCR blade, blunt (longitudinal), 24 x 40 mm
BW164T	1	CCR blade, blunt (longitudinal), 24 x 45 mm
BW165T	1	CCR blade, blunt (longitudinal), 24 x 50 mm
BW166T	1	CCR blade, blunt (longitudinal), 24 x 55 mm
BW167T	1	CCR blade, blunt (longitudinal), 24 x 60 mm
BW168T	1	CCR blade, blunt (longitudinal), 24 x 65 mm
BW169T	1	CCR blade, blunt (longitudinal), 24 x 70 mm
BW170T	1	CCR blade, blunt (longitudinal), 24 x 75 mm

BW123

CCR basic counter retractor set
24 mm titanium system

Art. No.	Units	Description
BW047R	1	CCR counter retractor
BW164T	1	CCR blade, blunt (longitudinal), 24 x 45 mm
BW165T	1	CCR blade, blunt (longitudinal), 24 x 50 mm

Art. No.	Units	Description
BW166T	1	CCR blade, blunt (longitudinal), 24 x 55 mm
BW167T	1	CCR blade, blunt (longitudinal), 24 x 60 mm
BW168T	1	CCR blade, blunt (longitudinal), 24 x 65 mm

CCR System (CASPAR® Cervical Retractor System)

BW119

CCR retractor set
19 mm titanium blade system
for microsurgical techniques

Art. No.	Units	Description
BW125P	1	CCR tray, with lid
BW049R	1	CCR basic retractor
BW047R	1	CCR counter retractor
BW048R	1	CCR counter retractor
BW010R	2	Handle
BW011P	1	Depth gauge
BW050T	2	CCR blade, toothed (medial/lateral), 19 x 25 mm
BW051T	2	CCR blade, toothed (medial/lateral), 19 x 30 mm
BW052T	2	CCR blade, toothed (medial/lateral), 19 x 35 mm
BW053T	2	CCR blade, toothed (medial/lateral), 19 x 40 mm
BW054T	2	CCR blade, toothed (medial/lateral), 19 x 45 mm

Art. No.	Units	Description
BW055T	2	CCR blade, toothed (medial/lateral), 19 x 50 mm
BW056T	2	CCR blade, toothed (medial/lateral), 19 x 55 mm
BW057T	2	CCR blade, toothed (medial/lateral), 19 x 60 mm
BW060T	1	CCR blade, blunt (longitudinal), 19 x 25 mm
BW061T	1	CCR blade, blunt (longitudinal), 19 x 30 mm
BW062T	1	CCR blade, blunt (longitudinal), 19 x 35 mm
BW063T	1	CCR blade, blunt (longitudinal), 19 x 40 mm
BW064T	1	CCR blade, blunt (longitudinal), 19 x 45 mm
BW065T	1	CCR blade, blunt (longitudinal), 19 x 50 mm
BW066T	1	CCR blade, blunt (longitudinal), 19 x 55 mm
BW067T	1	CCR blade, blunt (longitudinal), 19 x 60 mm

BW122

CCR basic retractor set
24 mm titanium system

Art. No.	Units	Description
BW049R	1	CCR basic retractor
BW010R	2	Handle
BW143T	1	CCR blade, small teeth (lateral), 24 x 40 mm
BW144T	1	CCR blade, small teeth (lateral), 24 x 45 mm
BW145T	1	CCR blade, small teeth (lateral), 24 x 50 mm
BW146T	1	CCR blade, small teeth (lateral), 24 x 55 mm

Art. No.	Units	Description
BW147T	1	CCR blade, small teeth (lateral), 24 x 60 mm
BW153T	1	CCR blade, large teeth (medial), 24 x 40 mm
BW154T	1	CCR blade, large teeth (medial), 24 x 45 mm
BW155T	1	CCR blade, large teeth (medial), 24 x 50 mm
BW156T	1	CCR blade, large teeth (medial), 24 x 55 mm
BW157T	1	CCR blade, large teeth (medial), 24 x 60 mm

C | Ordering Information – Set configurations

CCR System (CASPAR® Cervical Retractor System)

BW118

CCR-XX radiolucent retractor set

Art. No.	Units	Description
BW125P	1	Tray with lid
BW139R	1	CCR radiolucent basic retractor
BW137R	1	CCR radiolucent basic counter retractor
BW010R	2	Handle
BW011P	1	Depth gauge
BW251P	2	CCR blade, toothed (medial/lateral), 19 x 30 mm
BW252P	2	CCR blade, toothed (medial/lateral), 19 x 35 mm
BW253P	2	CCR blade, toothed (medial/lateral), 19 x 40 mm
BW254P	2	CCR blade, toothed (medial/lateral), 19 x 45 mm
BW255P	2	CCR blade, toothed (medial/lateral), 19 x 50 mm
BW256P	2	CCR blade, toothed (medial/lateral), 19 x 55 mm
BW257P	2	CCR blade, toothed (medial/lateral), 19 x 60 mm
BW258P	2	CCR blade, toothed (medial/lateral), 19 x 65 mm
BW259P	2	CCR blade, toothed (medial/lateral), 19 x 70 mm

Art. No.	Units	Description
BW261P	2	CCR blade, blunt (longitudinal), 19 x 30 mm
BW262P	2	CCR blade, blunt (longitudinal), 19 x 35 mm
BW263P	2	CCR blade, blunt (longitudinal), 19 x 40 mm
BW264P	2	CCR blade, blunt (longitudinal), 19 x 45 mm
BW265P	2	CCR blade, blunt (longitudinal), 19 x 50 mm
BW266P	2	CCR blade, blunt (longitudinal), 19 x 55 mm
BW267P	2	CCR blade, blunt (longitudinal), 19 x 60 mm
BW268P	2	CCR blade, blunt (longitudinal), 19 x 65 mm
BW269P	2	CCR blade, blunt (longitudinal), 19 x 70 mm

Vertebral body distraction

CASPAR® distractor

Art. No.	Units	Description
FF890R	1	Vertebral body distractor complete for approach from the right to C5-Th1 respectively the approach of the left C2-C5, consisting of: FF891R Distractor FF897R Drill guide FF908R Drill with drill stop FF905SB Distraction screw (10 pieces), 16 mm FF906R Screw driver for distraction screw
FF893R	1	Distractor like FF891R, but with elongated distraction arm
or: FF900R	1	Vertebral body distractor complete for approach from the left to C5-Th1 respectively the approach of the right C2-C5, consisting of: FF901R Distractor FF907R Drill guide FF908R Drill with drill stop FF905SB Distraction screw (10 pieces), 16 mm FF906R Screw driver for distraction screw
or: FF903R	1	Distractor like FF901R, but with elongated distraction arm
FF912SB	1	Distraction screws (10 pieces), 12 mm
FF904SB	1	Distraction screws (10 pieces), 14 mm
FF905SB	1	Distraction screws (10 pieces), 16 mm
FF909SB	1	Distraction screws (10 pieces), 18 mm
FF906R	1	Screw driver for distraction screw
FF917R	1	Vertebral body dissector
FF918R	1	Vertebral body dissector, toothed

Alternatively: Cervical lockable distractor

Art. No.	Units	Description
FW849R	1	Cervical lockable distractor Lockable vertebral body distractor, for use in surgical procedures from the left approach for C5 through T1/2 and from the right approach for the upper cervical spine. Sleeves with locking mechanism to interlock the distraction screws.
or: FW848R	1	Cervical lockable distractor Lockable vertebral body distractor, for use in surgical procedures from the right approach for C5 through T1/2 and from the left approach for the upper cervical spine. Sleeves with locking mechanism to interlock the distraction screws.
FW851SU	5	Lockable off-set screws (2 pieces), 12 mm
FW852SU	5	Lockable off-set screws (2 pieces), 14 mm
FW853SU	5	Lockable off-set screws (2 pieces), 16 mm
FW854SU	5	Lockable off-set screws (2 pieces), 18 mm
FW850R	1	Screw driver for lockable distraction screw
FF917R	1	Vertebral body dissector
FF918R	1	Vertebral body dissector, toothed

C | Ordering Information – Set configurations

COMPLEMENTARY SET

Graft harvesting and graft insertion

Art. No.	Units	Description
BV764R	2	Blades for graft harvesting at iliac crest, 50 x 25 mm to be used with BW047R, BW048 or BW049R
BV766R	2	Blades for graft harvesting at iliac crest, 60 x 25 mm to be used with BW047R, BW048 or BW049R
AA845R	1	Calliper
GC640R – GC646R	each 1x	Oscillating saw blade, height of 6 – 12 mm, range of length according the user
GB129	1	Oscillating saw handpiece with key (TE472) for changing the saw blades
FF928R	1	Graft cutter, 7 mm width of jaw
FF927R	1	Graft cutter, 10 mm width of jaw, for bone graft 9 – 12 mm
FF911R	1	Graft holder and impactor
FF913R	1	Tappet, Ø 3 mm
FF914R	1	Tappet, Ø 5 mm
FF915R	1	Tappet, Ø 8 mm
select on page 23 – 26	select quan-tity	Drills and burrs for precise preparation of the bone graft, to be used with either the micro-Line handpiece or Hi-Line XS or XXS handpiece, range of sizes according the user
FK773R	1	Scoop, straight, size of jaw 3.6 x 5 mm
FK774R	1	Scoop, straight, size of jaw 4.4 x 6.2 mm
FK775R	1	Scoop, straight, size of jaw 5.2 x 7.3 mm
FK783R	1	Scoop, curved, size of jaw 3.6 x 5 mm
FK784R	1	Scoop, curved, size of jaw 4.4 x 6.2 mm
FK785R	1	Scoop, curved, size of jaw 5.2 x 7.3 mm
FK834R	1	Curettes, square shaped jaw, toothed, 4 mm
FK835R	1	Curettes, square shaped jaw, toothed, 5 mm
FK836R	1	Curettes, square shaped jaw, toothed, 6 mm
JF213R	2	Perforated basket 485 x 253 x 76 mm
JF945	4	Silicone pad

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