

20

Neurochirurgie

Neurosurgery

Neurocirugía

Neurochirurgia





## 20

Mikro Instrumente

Micro Instruments

Instrumentos de micro

Strumentario micro



Kugelgelenkkloben zur Befestigung  
des Haltearms an OP-Tisch-Schienen  
Ball and socket joint, to fixe holding device  
of operating table  
Articulación esférica, para sujetar los brazos  
de apoyo sobre la mesa de operaciones  
Giunto a sfera ad incastro, per il fissaggio  
dell'asta all'estremità del tavolo operatorio



**LEYLE**

**20-100-01** 10 x 25 mm

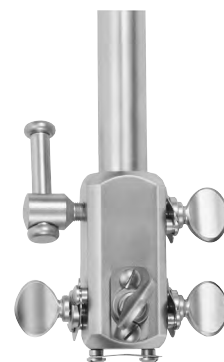
Haltearm  
Holding device  
Brazo  
Porta asta



**LEYLE**

**20-100-02**

Kupplungskopf zur Aufnahme von 1-5 Spannarmen  
Coupling head to hold 1-5 flexible arms  
Acoplamiento para sujetar 1-5 brazos  
Testa accoppiamento per 1-5 bracci flessibili



**LEYLE**

**20-100-03**

Kupplungskopf, drehbar zur Aufnahme von 1 Spannarm  
Coupling head, rotatable to hold 1 flexible arm  
Acoplamiento, girable para sujetar 1 brazo  
Testa accoppiamento, girevole per 1 bracci flessibili



**LEYLE**

**20-100-04**

Kupplungskopf, seitlich offen zur Aufnahme von 1 Spannarm  
Coupling head, lateral open to hold 1 flexible arm  
Acoplamiento, lateral abierto para sujetar 1 brazo  
Testa accoppiamento, laterale aperta per 1 bracci flessibili



**LEYLE**

**20-101-04**

Spannarm zum Aufstecken auf Kupplungs-  
köpfe 20-100-03 | 20-100-04 | 20-101-04  
und Fixiervorrichtungen

Flexible arm to be attached to coupling  
heads 20-100-03 | 20-100-04 | 20-101-04  
and fixation device

Brazo para colocar sobre el acopplamiento  
20-100-03 | 20-100-04 | 20-101-04 y los  
fijadores

Braccio flessibile per il fissaggio delle teste  
di accoppiamento 20-100-03 | 20-100-04 |  
20-101-04 e le basi di fissaggio



**LEYLE**

**20-100-08**



Fixiervorrichtung für 1 Spannarm 20-100-08 zum Festschrauben am Schädel

Fixation device for 1 flexible arm 20-100-08 for skull mounting

Fijador para 1 brazo 20-100-08 para atornillar al cráneo

Base di fissaggio per 1 braccio flessibile 20-100-08 per il supporto del cranio



**LEYLA**

**20-100-05**

Fixiervorrichtung für 2 Spannarme 20-100-08 zum Festschrauben am Schädel

Fixation device for 2 flexible arms 20-100-08 for skull mounting

Fijador para 2 brazos 20-100-08 para atornillar al cráneo

Base di fissaggio per 2 bracci flessibile 20-100-08 per il supporto del cranio



**LEYLA**

**20-100-06**

Fixiervorrichtung für 1 Spannarm 20-100-08 zum Festschrauben an Rohrteilen

Fixation device for 1 flexible arm 20-100-08 for mounting to bars

Fijador para 1 brazo 20-100-08 para atornillar al tubos

Base di fissaggio per 1 braccio flessibile 20-100-08 per il supporto di asta di riccardo



**LEYLA**

**20-100-07** Ø 16,0 mm

Spatelhalter für flache Spatel zur Befestigung am Spannarm 20-100-08

Holding device for flat brain spatulas, to be fixed at holding device 20-100-08

Porta-espátula para espátulas planas, parasujeterlo al brazo 20-100-08

Supporto per spatola cervicale piatta, fissato al braccio flessibile 20-100-08



**LEYLA**

**20-100-09**

Spatelhalter für Rundschaft-Spatel zur Befestigung am Spannarm 20-100-08

Holding device for spatulas with round shaft, to be fixed at holding device 20-100-08

Porta-espátula con vástago redondo, parasujeterlo al brazo 20-100-08

Supporto per spatola craniale, fissato al braccio flessibile 20-100-08



**LEYLA**

**20-100-10** Ø 5,5 mm

Ohrtrichterhalter zur Befestigung am Spannarm 20-100-08

Ear specula holder, to be fixed at holding device 20-100-08

Soporte para espéculo, parasujeterlo al brazo 20-100-08

Sostegno per specchio, fissato al braccio flessibile 20-100-08



**LEYLA**

**20-100-13**



## LEYLA

### 20-100-11 SET

Selbsthaltender Hirnspatel mit 1  
Spannarm komplett, bestehend aus:

Self-retaining brain retractor with 1  
arm complete, consisting of:

|                     |                  |
|---------------------|------------------|
| 1 Spannarm          | <b>20-100-08</b> |
| 1 Fixiervorrichtung | <b>20-100-05</b> |
| 1 Spatelhalter      | <b>20-100-09</b> |

|                        |                  |
|------------------------|------------------|
| 1 Flexible arm         | <b>20-100-08</b> |
| 1 Fixation device      | <b>20-100-05</b> |
| 1 Support for spatulas | <b>20-100-09</b> |

Separador automático para el cerebro  
con 1 brazo, completo compuesto de:

Autofissatore per retrattore cervicale  
con 1 braccio, completo composto da:

|                   |                  |
|-------------------|------------------|
| 1 Brazo, flexible | <b>20-100-08</b> |
| 1 Fijador         | <b>20-100-05</b> |
| 1 Porta-espátula  | <b>20-100-09</b> |

|                        |                  |
|------------------------|------------------|
| 1 Braccio flessibile   | <b>20-100-08</b> |
| 1 Base di fissaggio    | <b>20-100-05</b> |
| 1 Supporto per spatole | <b>20-100-09</b> |

## LEYLA

### 20-100-12 SET

Selbsthaltender Hirnspatel mit 2  
Spannarmen komplett, bestehend  
aus:

Self-retaining brain retractor with 2  
arms complete, consisting of:

|                     |                  |
|---------------------|------------------|
| 2 Spannarme         | <b>20-100-08</b> |
| 1 Fixiervorrichtung | <b>20-100-06</b> |
| 1 Spatelhalter      | <b>20-100-09</b> |

|                        |                  |
|------------------------|------------------|
| 2 Flexible arms        | <b>20-100-08</b> |
| 1 Fixation device      | <b>20-100-06</b> |
| 1 Support for spatulas | <b>20-100-09</b> |

Separador automático para el cerebro  
con 2 brazos, completo compuesto  
de:

Autofissatore per retrattore cervicale  
con 2 bracci, completo composto da:

|                   |                  |
|-------------------|------------------|
| 2 Brazo, flexible | <b>20-100-08</b> |
| 1 Fijador         | <b>20-100-06</b> |
| 1 Porta-espátula  | <b>20-100-09</b> |

|                        |                  |
|------------------------|------------------|
| 2 Braccio flessibile   | <b>20-100-08</b> |
| 1 Base di fissaggio    | <b>20-100-06</b> |
| 1 Supporto per spatole | <b>20-100-09</b> |



|                  |            |
|------------------|------------|
| <b>20-110-08</b> | 7   8 mm   |
| <b>20-110-11</b> | 10   11 mm |
| <b>20-110-14</b> | 13   14 mm |
| <b>20-110-17</b> | 16   17 mm |
| <b>20-110-20</b> | 19   20 mm |
| <b>20-110-25</b> | 22   25 mm |

biegsam  
malleable  
maleable  
malleabile

## HEIFETZ

**20-110-08 - 20-110-25** 20,0 cm, 8 "



|                  |       |
|------------------|-------|
| <b>20-115-08</b> | 8 mm  |
| <b>20-115-11</b> | 11 mm |
| <b>20-115-14</b> | 14 mm |
| <b>20-115-17</b> | 17 mm |

biegsam  
malleable  
maleable  
malleabile

## HEIFETZ

**20-115-08 - 20-115-17** 15,5 cm, 6 1/8 "



|                  |       |
|------------------|-------|
| <b>20-120-14</b> | 14mm  |
| <b>20-120-17</b> | 17 mm |
| <b>20-120-20</b> | 20 mm |

biegsam  
malleable  
maleable  
malleabile

## HEIFETZ

**20-120-14 - 20-120-20** 20,0 cm, 8 "



|                  |            |
|------------------|------------|
| <b>20-122-07</b> | 7   9 mm   |
| <b>20-122-11</b> | 11   13 mm |
| <b>20-122-15</b> | 15   18 mm |
| <b>20-122-18</b> | 18   22 mm |

biegsam  
malleable  
maleable  
malleabile

## CUSHING

**20-122-07 - 20-122-18** 18,0 cm, 7 "



|                  |            |
|------------------|------------|
| <b>20-124-07</b> | 7   9 mm   |
| <b>20-124-11</b> | 11   13 mm |
| <b>20-124-15</b> | 15   18 mm |
| <b>20-124-18</b> | 18   22 mm |

konkav, biegsam  
concave, malleable  
cóncavas, maleable  
concave, malleabile

## OLIVECRONA

**20-124-07 - 20-124-18** 18,0 cm, 7 "



|                  |            |
|------------------|------------|
| <b>20-125-07</b> | 7   9 mm   |
| <b>20-125-11</b> | 11   13 mm |
| <b>20-125-15</b> | 15   18 mm |
| <b>20-125-18</b> | 18   22 mm |

kovex, biegsam  
convex, malleable  
cónvexas, maleable  
convesse, malleabile

## OLIVECRONA

**20-125-07 - 20-125-18** 18,0 cm, 7 "



|                  |       |
|------------------|-------|
| <b>20-125-29</b> | 9 mm  |
| <b>20-125-32</b> | 12 mm |
| <b>20-125-34</b> | 14 mm |
| <b>20-125-38</b> | 18 mm |
| <b>20-125-40</b> | 20 mm |
| <b>20-125-45</b> | 25 mm |

biegsam, aus spezieller MEMORY-Legierung, verformt sich bei der Sterilisation automatisch in den ursprünglich geraden Zustand

malleable, made of special MEMORY alloy, straightens out automatically during sterilisation process

flexible, Fabricado en una aleación especial MEMORY, recupera la forma recta original de forma automática durante la esterilización

pieghevole, realizzato in speciale lega a memoria di forma, che in seguito a sterilizzazione ritorna automaticamente alla forma diritta originaria

## MEMORY

**20-125-29 - 20-125-45** 20,0 cm, 8 "



|                  |       |
|------------------|-------|
| <b>16-074-01</b> | 6 mm  |
| <b>16-074-02</b> | 8 mm  |
| <b>16-074-03</b> | 10 mm |
| <b>16-074-04</b> | 12 mm |
| <b>16-074-05</b> | 17 mm |
| <b>16-074-06</b> | 25 mm |

biegsam  
malleable  
maleable  
malleabile

**16-074-01 - 16-074-06** 20,0 cm, 8 "



7,0 mm

#### **20-126-07**

Federhaken zur Galea-Fixation mit Bulldog-Klemme zum Befestigen am Abdecktuch.

Spring hooks for galea fixation with bulldog clamp, to be fixed at covering drape.

Ganchos con muelle para la fijación de la galea, con pinza de bulldog para agarrar tela.

Ganci a molla per fissare la galea con clamp bulldog, da applicare al telo di copertura.



**YASARGIL**

**20-126-07** 31,0 cm, 12 1/4"



9,0 mm

#### **20-126-09**

Federhaken zur Galea-Fixation mit Bulldog-Klemme zum Befestigen am Abdecktuch.

Spring hooks for galea fixation with bulldog clamp, to be fixed at covering drape.

Ganchos con muelle para la fijación de la galea, con pinza de bulldog para agarrar tela.

Ganci a molla per fissare la galea con clamp bulldog, da applicare al telo di copertura.



**YASARGIL**

**20-126-09** 41,0 cm, 16 1/4"

Anlege- und Abnehmezange  
Applying and removing forceps  
Pinza para aplicar y quitar clips  
Pinza per applicare e togliere le agraes



## RANEY

**20-130-00** 16,0 cm, 6 1/4"



Verpackungseinheit: 1 St.  
Packing unit: 1 piece  
Unidad: 1 pieza  
Confezione: 1 pezza

Kopfhautklammern  
Scalp clips  
Pinza haemostática para cuero cabelludo  
Agraes emostatici per cuoio capelluto



## RANEY

**20-131-00**



Verpackungseinheit: 50 St.  
Packing unit: 50 pieces  
Unidad: 50 piezas  
Confezione: 50 pezzi

Kopfhautklammern  
Scalp clips  
Pinza haemostática para cuero cabelludo  
Agraes emostatici per cuoio capelluto



## KOELNER

**20-132-00**



Verpackungseinheit: 100 St.  
Packing unit: 100 pieces  
Unidad: 100 piezas  
Confezione: 100 pezzi

Silberklammern in Plastikbehälter  
Silver brain clips in plastic box  
Grapas de plata en tubo de plástico  
Agraes di argento, contenuti in piccoli tubi



## MC KENZIE

**20-133-00**

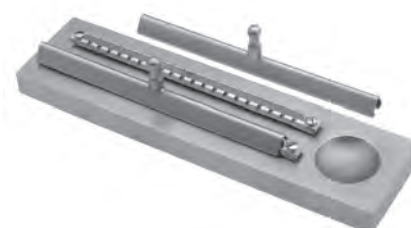
Silberklammernblock  
Silver clip carrier  
Porta-rapas  
Supporto porta-agraes



## MC KENZIE

**20-134-01** 148x40x6 mm

Silberklammernblock  
Silver clip carrier  
Porta-rapas  
Supporto porta-agraes



## MC KENZIE

**20-134-02** 190x48x13mm



**20-136-15**  
**20-136-19**

gerade  
straight  
recta  
retta



**20-137-15**  
**20-137-19**

gebogen  
curved  
curva  
curvo

Klammer Anlegezange für Silberklammern  
Clip applying forceps for silver clips  
Pinzas clipadoras para las grapas de plata  
Pinze metti agrafo per agrafo in argento



**20-138-23**  
**20-138-26**

gerade  
straight  
recta  
retta

Klammer Anlegezange für Silberklammern  
Clip applying forceps for silver clips  
Pinzas clipadoras para las grapas de plata  
Pinze metti agrafo per agrafo in argento

## MC KENZIE

**20-136-15 - 20-137-15** 15,0 cm, 6 "  
**20-136-19 - 20-137-19** 19,0 cm, 7 ½ "

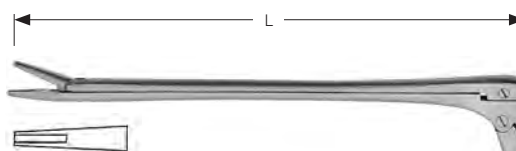
## SWEET

**20-138-23** 23,0 cm, 9 "  
**20-138-23** 26,0 cm, 10 ¼ "



**20-139-23**  
**20-139-26**

gebogen  
curved  
curva  
curvo



Klammer-Anlegezange für Silberklammern  
Clip applying forceps for silver clips  
Pinzas clipadoras para las grapas de plata  
Pinze metti agrafo per agrafo in argento

## SMITHWICK

**20-139-23** 23,0 cm, 9 "  
**20-139-23** 26,0 cm, 10 ¼ "

## OLIVECRONA-TOENNIS

**20-140-14** 14,0 cm, 5 ½ "



**CRUTCHFIELD**

**20-150-01** 10,5 cm, 4 1/4 "



**CRUTCHFIELD**

**20-150-02** 15,5 cm, 6 1/8 "



**20-151-00**

Ersatzdorn  
Spare pin  
Punta de requesto  
Punta di scorta

**CRUTCHFIELD**

**20-150-03** 17,5 cm, 7 "

Schädelhalter für Extension der Halswirbel, großes Modell, Dorne verstellbar, deshalb vorbohren nicht erforderlich.

Cervical traction tongs, for extension of the neck vertebrae, large size, pins adjustable hence no initial drilling.

Pinza de tracción craneal para la extensión de las vertebrae de cuello, tamaño grande, puntas ajustables suprimiendo perforaciones iniciales.

Pinza per trazione craniale e l'estensione delle vertebre del collo, modello grande, punte regolabili al fine di evitare la perforazione iniziale.

Vorböhrer für CRUTCHFIELD-Schädelhalter  
Drill point for CRUTCHFIELD cervical traction tongs  
Perforador inicial pinzas de tracción craneal CRUTCHFIELD  
Alesatore per pinze di trazione craniale di CRUTCHFIELD



**CRUTCHFIELD**

**20-152-35** Ø 3,5 mm



**CRUTCHFIELD**

**20-152-50** Ø 5,0 mm



### DAHLGREN

**20-154-20** 20,0 cm, 8 "



### DE VILBISS

**20-156-21** 21,0 cm, 8 ¼ "



Schädelstanzzange bis 12 mm Schädelstärke  
 Cranial punch rongeur for max. 12 mm of bone  
 Pinza sca-bocados craneal para craneo hasta 12 mm  
 Pinza per cranio, asta 12 mm

### CONE

**20-156-22** 22,5 cm, 9 "



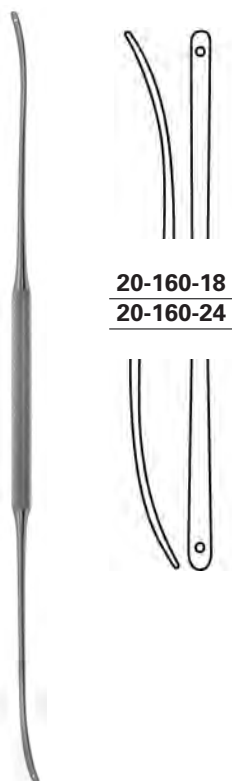
### DE MARTEL

**20-158-33** 33,0 cm, 13 "



### LEBSCH

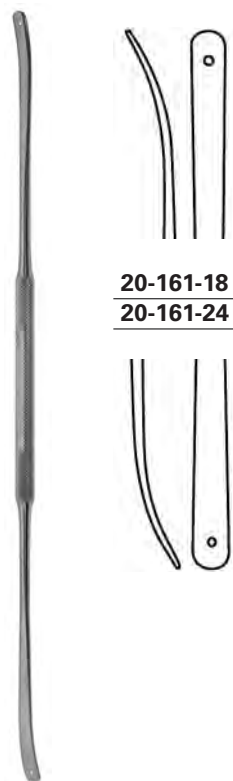
**20-159-25** 25,0 cm, 10 "



**20-160-18**  
**20-160-24**

**OLIVECRONA**

|                  |                |
|------------------|----------------|
| <b>20-160-18</b> | 18,0 cm, 7 "   |
| <b>20-160-24</b> | 24,0 cm, 9 ½ " |



**20-161-18**  
**20-161-24**

**OLIVECRONA**

|                  |                |
|------------------|----------------|
| <b>20-161-19</b> | 19,0 cm, 7 ¾ " |
| <b>20-161-24</b> | 24,0 cm, 9 ½ " |



3,0 mm  
**20-163-03**

**SACHS**

|                  |                |
|------------------|----------------|
| <b>20-163-03</b> | 21,0 cm, 8 ¼ " |
|------------------|----------------|



6,0 mm  
**20-163-06**

**SACHS**

|                  |                |
|------------------|----------------|
| <b>20-163-06</b> | 21,0 cm, 8 ¼ " |
|------------------|----------------|



**20-164-18**

**SWEDISH**

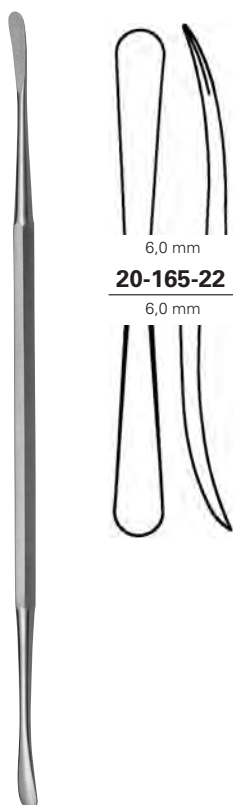
|                  |              |
|------------------|--------------|
| <b>20-164-18</b> | 18,0 cm, 7 " |
|------------------|--------------|



**20-164-20**

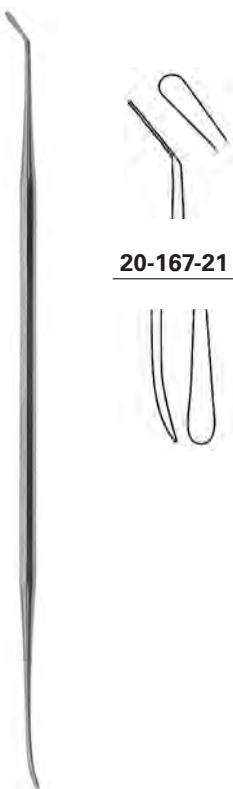
**SWEDISH**

|                  |              |
|------------------|--------------|
| <b>20-164-20</b> | 20,0 cm, 8 " |
|------------------|--------------|



6,0 mm  
**20-165-22**  
6,0 mm

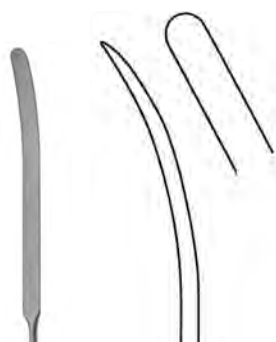
|                  |                |
|------------------|----------------|
| <b>20-165-22</b> | 22,0 cm, 8 ¾ " |
|------------------|----------------|



**20-167-21**

**MILLIGAN**

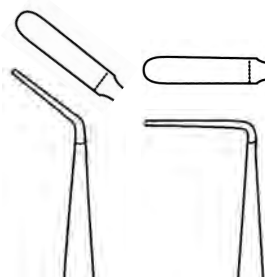
|                  |              |
|------------------|--------------|
| <b>20-167-21</b> | 21,0 cm, 8 " |
|------------------|--------------|



**20-169-21**



**20-170-01**



3,0 mm | 45°  
**20-170-02**

3,0 mm | 90°  
**20-170-03**

### SACHS

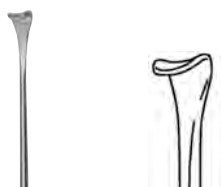
**20-169-21** 21,0 cm, 8 ¼ "

### FRAZIER

**20-170-01** 15,0 cm, 6 "

### HOEN

**20-170-02 -20-170-03** 15,0 cm, 6 "



**20-172-01**



45°  
**20-172-02**



90°  
**20-172-03**

### LOVE

**20-172-01** 20,0 cm, 8 "

### LOVE

**20-172-02** 18,0 cm, 7 "

### LOVE

**20-172-03** 14,0 cm, 5 ½ "

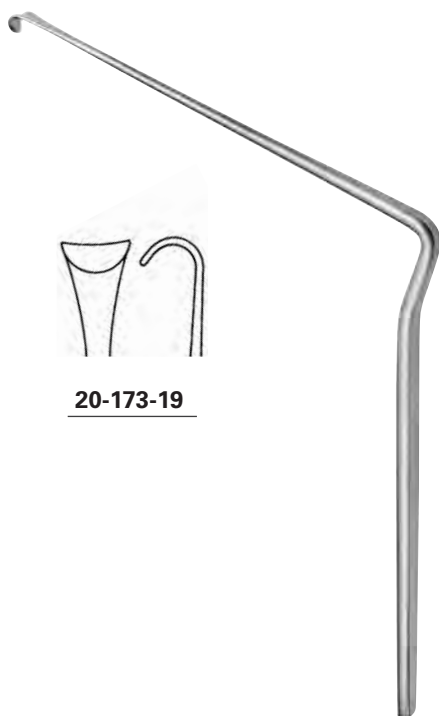


**20-172-04**



**LOVE**

**20-172-04** 22,5 cm, 9 "



**20-173-19**



**20-173-19** 19,0 cm, 7 ½ "



**20-174-04** 4,0 mm

**20-174-06** 6,0 mm

**20-174-08** 8,0 mm

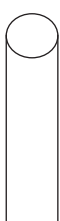
**20-174-10** 10,0 mm

**CASPAR**

**20-174-04 - 20-174-10** 24,0 cm, 9 ½ "



**20-175-20**

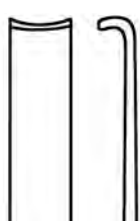


**HORSLEY**

**20-175-20** 20,0 cm, 8 "



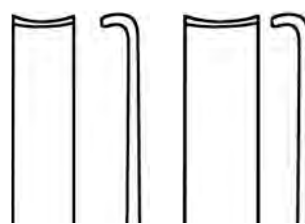
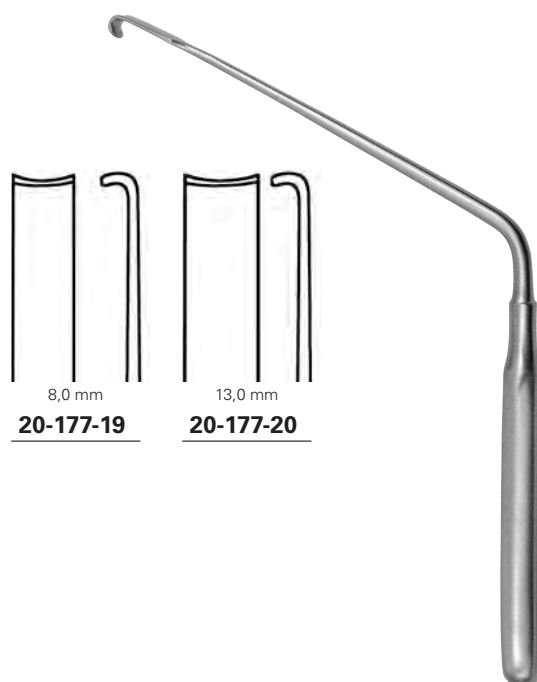
**20-176-23**



8,0 mm

**SCOVILLE**

**20-176-23** 23,0 cm, 9 "



8,0 mm

13,0 mm

**20-177-19**

**20-177-20**

**SCOVILLE**

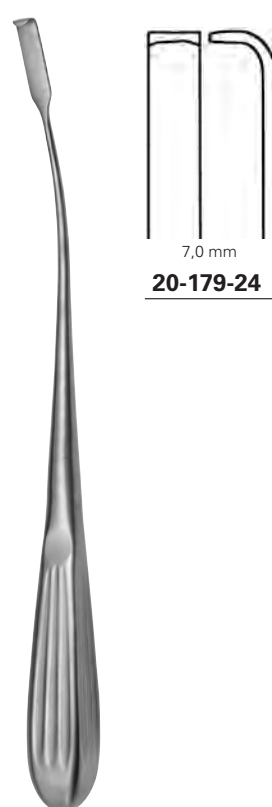
**20-177-19 - 20-177-20** 19,0 cm, 7 ½ "



|                  |        |
|------------------|--------|
| <b>20-178-03</b> | 3,0 mm |
| <b>20-178-04</b> | 4,0 mm |
| <b>20-178-05</b> | 5,0 mm |
| <b>20-178-07</b> | 7,0 mm |

## LOVE

**20-178-03 - 20-178-07** 11,0 cm, 4 3/8 "



7,0 mm  
**20-179-24**

## HOLSHER

**20-179-24** 24,0 cm, 9 1/2 "



|                  |         |
|------------------|---------|
| <b>20-181-18</b> | 18,0 mm |
| <b>20-181-20</b> | 20,0 mm |
| <b>20-181-23</b> | 23,0 mm |

## CLOWARD

**20-181-18 - 20-181-23** 18,0 cm, 7 "



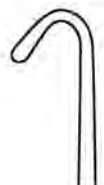
**20-182-20**  
 Duramesser  
 Dura knife  
 Cuchillo para dura-madré  
 Coltello per dura-madre

## HALLE

**20-182-20** 20,0 cm, 8 "



20-185-01



20-185-02

### GRONINGEN

20-185-01 - 20-185-02 26,0 cm, 10 ¼"



20-187-17



20-187-21

### SMITHWICK

20-187-17 17,0 cm, 6 ¾"

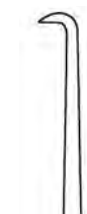
20-187-21 21,0 cm, 8 ¼"



20-188-20

### DANDY

20-188-20 20,0 cm, 8"



20-189-20



20-190-20

### ADSON

20-189-20 - 20-190-20 20,0 cm, 8"



20-191-16

### GRAHAM

20-191-16 16,5 cm, 6 ½"



20-192-18

### SACHS

20-192-18 18,5 cm, 7 ¼"



**20-193-15**

## TOENNIS

**20-193-15** 15,0 cm, 6 "



**20-194-14**

## CUSHING

**20-194-14** 14,0 cm, 5 ½ "



**20-195-13**  
**20-195-18**

scharf  
sharp  
agudo  
acuto



**20-196-13**

stumpf  
blunt  
romo  
smusso

## FRAZIER

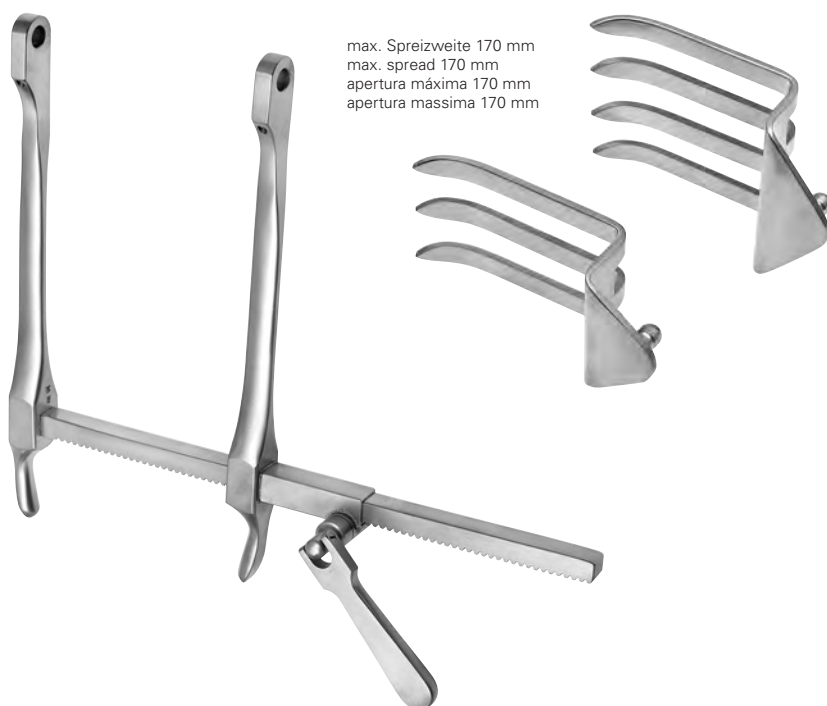
**20-195-13 - 20-196-13** 13,0 cm, 5 ⅛ "  
**20-195-18** 18,0 cm, 7 "



**20-196-20**

## ADSON

**20-196-20** 20,0 cm, 8 "



## SCOVILLE-RICHTER

**20-300-00** SET

Komplett, bestehend aus:

Complete, consisting of:

|                     |                  |
|---------------------|------------------|
| 1 Sperrer           | <b>20-300-01</b> |
| 1 Paar Seitenvalven | <b>20-300-02</b> |

|                       |                  |
|-----------------------|------------------|
| 1 Spreader            | <b>20-300-01</b> |
| 1 Pair lateral valves | <b>20-300-02</b> |

Completo, compuesto de:

Completo, composto da:

|                        |                  |
|------------------------|------------------|
| 1 Separador            | <b>20-300-01</b> |
| 1 Par valvas laterales | <b>20-300-02</b> |

|                       |                  |
|-----------------------|------------------|
| 1 Divaricatore        | <b>20-300-01</b> |
| 1 Paio valve laterali | <b>20-300-02</b> |



## SCOVILLE-RICHTER

**20-300-02**

## SCOVILLE-RICHTER

**20-300-03** 47 x 51 mm

## SCOVILLE-RICHTER

**20-300-04** 30 x 40 mm

## SCOVILLE-RICHTER

**20-300-05** 37 x 62 mm



max. Spreizweite 150 mm  
max. spread 150 mm  
apertura máxima 150 mm  
apertura massima 150 mm

mit Gelenkarmen  
with hinged arms  
con brazos articulados  
con braccio articolato

## SCOVILLE-HAVERFIELD

**20-302-00** SET

Komplett, bestehend aus:

Complete, consisting of:

|                       |                  |
|-----------------------|------------------|
| 1 Sperrer             | <b>20-302-01</b> |
| 1 Haken 50 mm         | <b>20-302-02</b> |
| 1 Seitenvalve 64x25mm | <b>20-302-03</b> |

|                         |                  |
|-------------------------|------------------|
| 1 Spreader              | <b>20-302-01</b> |
| 1 Hook 50 mm            | <b>20-302-02</b> |
| 1 Lateral valve 64x25mm | <b>20-302-03</b> |

Completo, compuesto de:

Completo, composto da:

|                           |                  |
|---------------------------|------------------|
| 1 Separador               | <b>20-302-01</b> |
| 1 Gancho 50 mm            | <b>20-302-02</b> |
| 1 Valva laterales 64x25mm | <b>20-302-03</b> |

|                          |                  |
|--------------------------|------------------|
| 1 Divaricatore           | <b>20-302-01</b> |
| 1 Gancio 50 mm           | <b>20-302-02</b> |
| 1 Valve laterale 64x25mm | <b>20-302-03</b> |



stumpf  
blunt  
romo  
smusso



### SCOVILLE

**20-302-02** 50 mm

### SCOVILLE

**20-302-03** 64 x 25 mm  
**20-302-04** 64 x 50 mm

### SCOVILLE

**20-302-05** 44 x 38 mm

### SCOVILLE

**20-302-06** 62 x 52 mm



max. Spreizweite 150 mm  
max. spread 150 mm  
apertura máxima 150 mm  
apertura massima 150 mm

## SCOVILLE

**20-303-00** SET

Komplett, bestehend aus:

|                       |                  |
|-----------------------|------------------|
| 1 Sperrer             | <b>20-303-01</b> |
| 1 Haken 50 mm         | <b>20-303-04</b> |
| 1 Seitenvalve 64x25mm | <b>20-303-06</b> |

Complete, consisting of:

|                         |                  |
|-------------------------|------------------|
| 1 Spreader              | <b>20-303-01</b> |
| 1 Hook 50 mm            | <b>20-303-04</b> |
| 1 Lateral valve 64x25mm | <b>20-303-06</b> |

Completo, compuesto de:

|                           |                  |
|---------------------------|------------------|
| 1 Separador               | <b>20-303-01</b> |
| 1 Gancho 50 mm            | <b>20-303-04</b> |
| 1 Valva laterales 64x25mm | <b>20-303-06</b> |

Completo, composto da:

|                          |                  |
|--------------------------|------------------|
| 1 Divaricatore           | <b>20-303-01</b> |
| 1 Gancio 50 mm           | <b>20-303-04</b> |
| 1 Valve laterale 64x25mm | <b>20-303-06</b> |



stumpf  
blunt  
romo  
smusso

## SCOVILLE

|                  |       |
|------------------|-------|
| <b>20-303-02</b> | 50 mm |
| <b>20-303-03</b> | 70 mm |



scharf  
sharp  
agudo  
acuto



## SCOVILLE

|                  |       |
|------------------|-------|
| <b>20-303-04</b> | 50 mm |
| <b>20-303-05</b> | 70 mm |

## SCOVILLE

|                  |            |
|------------------|------------|
| <b>20-303-06</b> | 64 x 25 mm |
| <b>20-303-07</b> | 64 x 50 mm |
| <b>20-303-08</b> | 88 x 25 mm |

## TAYLOR

|                  |            |
|------------------|------------|
| <b>20-303-11</b> | 48 x 50 mm |
| <b>20-303-12</b> | 64 x 50 mm |
| <b>20-303-13</b> | 64 x 64 mm |
| <b>20-303-14</b> | 80 x 57 mm |

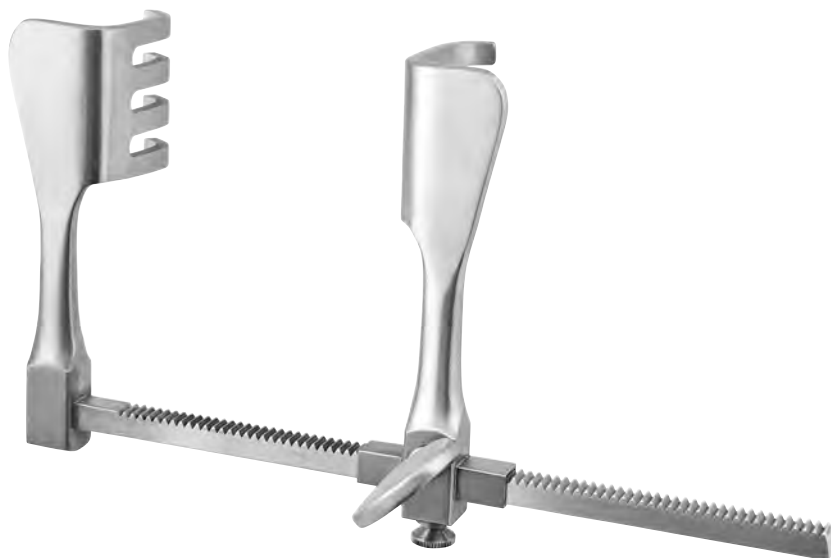
## SCOVILLE

|                  |            |
|------------------|------------|
| <b>20-303-15</b> | 41 x 38 mm |
| <b>20-303-16</b> | 67 x 44 mm |



Wundspreizer, Seitenvalven 50 x 43 mm  
Self-retaining retractor, lateral valves 50 x 43 mm  
Separador, vlvas laterales 50 x 43 mm  
Divaricatore, valve laterali 50 x 43 mm

max. Spreizweite 165 mm  
max. spread 165 mm  
apertura máxima 165 mm  
apertura massima 165 mm



## BAGDLEY

20-305-00



Messschieber zum Vermessen des  
Knochenspanns und des Span-Situs  
Caliper, for measuring the bone  
graft and graft side

Pies de rey para medir esquirlas óseas y  
determinar la posición en el que se encuentran éstas  
Calibro per misurare innesti ossei  
e i relativi siti di innesto

## CASPAR

20-310-22 140 mm



## CASPAR

20-313-00 SET

links  
left  
zurdo  
sinistra

Komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Distraktor, links     | <b>20-315-01</b> |
| 1 Bohrlehre, links      | <b>20-318-00</b> |
| 1 Bohrer, Ø 1,7 mm      | <b>20-320-17</b> |
| 2 Distraktionsschrauben | <b>20-315-16</b> |
| 1 Schraubendreher       | <b>20-322-20</b> |

Complete, consisting of:

|                      |                  |
|----------------------|------------------|
| 1 Distractor, left   | <b>20-315-01</b> |
| 1 Drill guide, left  | <b>20-318-00</b> |
| 1 Drill, Ø 1,7 mm    | <b>20-320-17</b> |
| 2 Distraction screws | <b>20-315-16</b> |
| 1 Screw driver       | <b>20-322-20</b> |

Completo, compuesto de:

|                            |                  |
|----------------------------|------------------|
| 1 Distractor, zurdo        | <b>20-315-01</b> |
| 1 Guia-taladro, zurdo      | <b>20-318-00</b> |
| 1 Broca, Ø 1,7 mm          | <b>20-320-17</b> |
| 2 Tornillos de distraccion | <b>20-315-16</b> |
| 1 Destornillador           | <b>20-322-20</b> |

Completo, composto da:

|                           |                  |
|---------------------------|------------------|
| 1 Distrattori, sinistra   | <b>20-315-01</b> |
| 1 Guida-trapano, sinistra | <b>20-318-00</b> |
| 1 Trapano, Ø 1,7 mm       | <b>20-320-17</b> |
| 2 Viti di distrazione     | <b>20-315-16</b> |
| 1 Cacciavite              | <b>20-322-20</b> |



## CASPAR

20-314-00 SET

rechts  
right  
derecho  
destra

Komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Distraktor, rechts    | <b>20-315-00</b> |
| 1 Bohrlehre, rechts     | <b>20-317-00</b> |
| 1 Bohrer, Ø 1,7 mm      | <b>20-320-17</b> |
| 2 Distraktionsschrauben | <b>20-315-16</b> |
| 1 Schraubendreher       | <b>20-322-20</b> |

Complete, consisting of:

|                      |                  |
|----------------------|------------------|
| 1 Distractor, right  | <b>20-315-00</b> |
| 1 Drill guide, right | <b>20-317-00</b> |
| 1 Drill, Ø 1,7 mm    | <b>20-320-17</b> |
| 2 Distraction screws | <b>20-315-16</b> |
| 1 Screw driver       | <b>20-322-20</b> |

Completo, compuesto de:

|                            |                  |
|----------------------------|------------------|
| 1 Distractor, derecho      | <b>20-315-00</b> |
| 1 Guia-taladro, derecho    | <b>20-317-00</b> |
| 1 Broca, Ø 1,7 mm          | <b>20-320-17</b> |
| 2 Tornillos de distraccion | <b>20-315-16</b> |
| 1 Destornillador           | <b>20-322-20</b> |

Completo, composto da:

|                         |                  |
|-------------------------|------------------|
| 1 Distrattori, destra   | <b>20-315-00</b> |
| 1 Guida-trapano, destra | <b>20-317-00</b> |
| 1 Trapano, Ø 1,7 mm     | <b>20-320-17</b> |
| 2 Viti di distrazione   | <b>20-315-16</b> |
| 1 Cacciavite            | <b>20-322-20</b> |

Bohrer zum Vorbohren  
Drill for rough drilling  
Broca para la perforación  
Perforatore per la perforazione iniziale



## CASPAR

20-320-17 Ø 1,7 mm



Distraktionsschrauben  
Distraction screws  
Tornillos de distraccion  
Viti di distrazione

## CASPAR

**20-315-12** 12,0 mm  
**20-315-14** 14,0 mm  
**20-315-16** 16,0 mm  
**20-315-18** 18,0 mm



rechts  
right  
derecho  
destra



**CASPAR**

**20-317-00**



links  
left  
zurdo  
sinistra



**CASPAR**

**20-318-00**



Schraubendreher  
Screw driver  
Destornillador  
Cacciavite



**CASPAR**

**20-322-20** 20,0 cm, 8 "



rechts  
right  
derecho  
destra

**CASPAR**

**20-315-00** kurz | short | corto | corto

**20-316-00** lang | long | largo | lungo



links  
left  
zurdo  
sinistra

**CASPAR**

**20-315-01** kurz | short | corto | corto

**20-316-01** lang | long | largo | lungo

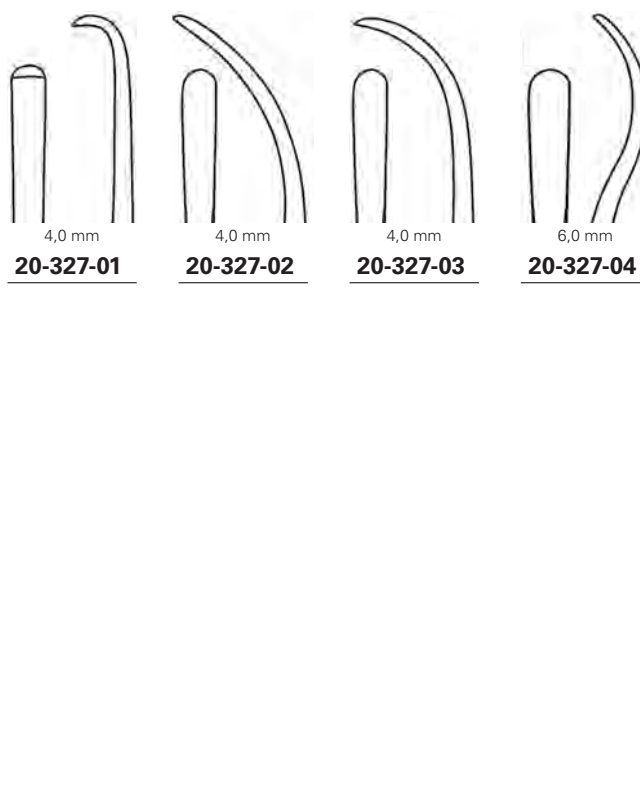


4,7 mm

**20-325-18**

### LANDOLT

**20-325-18** 17,5 cm, 7 "



4,0 mm

**20-327-01**

4,0 mm

**20-327-02**

4,0 mm

**20-327-03**

6,0 mm

**20-327-04**

### MUEHLING

**20-327-01 - 20-327-04** 17,0 cm, 6 ¾ "



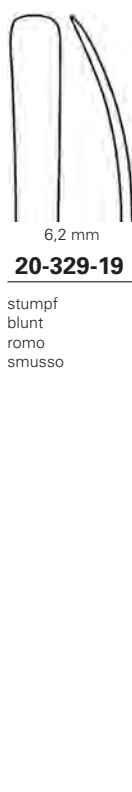
6,2 mm

**20-329-18**

scharf  
sharp  
agudo  
acuto

### CASPAR

**20-329-18** 18,0 cm, 7 "



6,2 mm

**20-329-19**

stumpf  
blunt  
romo  
smusso

### CASPAR

**20-329-19** 18,0 cm, 7 "



**20-331-01**



**20-331-02**



**CASPAR**

**20-331-01 - 20-331-02** 20,5 cm, 8 "



**20-331-01 P**



**20-331-02 P**



**CASPAR**

**20-331-01 P - 20-331-02 P** 20,5 cm, 8 "

Weitere Raspatorien finden Sie in in Produktgruppe 40.  
More raspatories you will find in product group 40.  
Encontrará más raspadores en el grupo de productos 40.  
Diversi periostotomi si trovano nel gruppo prodotti 40.



max. Spreizweite 145 mm  
max. spread 145 mm  
apertura máxima 145 mm  
apertura massima 145 mm

Lumbal, thorakal und cervical einzusetzen  
For use of lumbar, thoracic and cervical  
Útil para lumbar, toracal y cervical  
Per impiego lombare, toracico e cervicale

## CASPAR

20-350-00 SET



Wundspreizer mit Gelenkarmen und Kugelschnellverschluß, für Laminektomie und Hemi-Laminektomie, komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Rahmen                | <b>20-350-01</b> |
| 1 Schlüssel             | <b>20-350-02</b> |
| 1 Haken, 38 mm          | <b>20-351-13</b> |
| 1 Seitenvalve, 37x22 mm | <b>20-352-37</b> |
| 1 Seitenvalve, 43x22 mm | <b>20-352-43</b> |
| 1 Seitenvalve, 47x22 mm | <b>20-352-47</b> |
| 1 Seitenvalve, 52x22 mm | <b>20-352-52</b> |
| 1 Seitenvalve, 57x22 mm | <b>20-352-57</b> |

Self-retaining retractor with hinged arms and ball snap closure, for laminectomy and hemi-laminectomy, complete, consisting of:

|                           |                  |
|---------------------------|------------------|
| 1 Frame                   | <b>20-350-01</b> |
| 1 Key                     | <b>20-350-02</b> |
| 1 Hook, 38 mm             | <b>20-351-13</b> |
| 1 Lateral valve, 37x22 mm | <b>20-352-37</b> |
| 1 Lateral valve, 43x22 mm | <b>20-352-43</b> |
| 1 Lateral valve, 47x22 mm | <b>20-352-47</b> |
| 1 Lateral valve, 52x22 mm | <b>20-352-52</b> |
| 1 Lateral valve, 57x22 mm | <b>20-352-57</b> |

Separador con brazos articulados y cierre rápido esférico, para laminectomía y hemilaminectomía, completo, compuesto de:

|                           |                  |
|---------------------------|------------------|
| 1 Cuadro                  | <b>20-350-01</b> |
| 1 Llave                   | <b>20-350-02</b> |
| 1 Gancho, 38 mm           | <b>20-351-13</b> |
| 1 Valva lateral, 37x22 mm | <b>20-352-37</b> |
| 1 Valva lateral, 43x22 mm | <b>20-352-43</b> |
| 1 Valva lateral, 47x22 mm | <b>20-352-47</b> |
| 1 Valva lateral, 52x22 mm | <b>20-352-52</b> |
| 1 Valva lateral, 57x22 mm | <b>20-352-57</b> |

Divaricatore con braccio articolato a chiusura istantanea, per laminectomia e emi-laminectomia, completo, composto da:

|                           |                  |
|---------------------------|------------------|
| 1 Telaio                  | <b>20-350-01</b> |
| 1 Chiave                  | <b>20-350-02</b> |
| 1 Gancio, 38 mm           | <b>20-351-13</b> |
| 1 Valva laterale 37x22 mm | <b>20-352-37</b> |
| 1 Valva laterale 43x22 mm | <b>20-352-43</b> |
| 1 Valva laterale 47x22 mm | <b>20-352-47</b> |
| 1 Valva laterale 52x22 mm | <b>20-352-52</b> |
| 1 Valva laterale 57x22 mm | <b>20-352-57</b> |



**20-351-13**

38 mm



**20-352-37**

37 x 22 mm



**20-352-43**

43 x 22 mm



**20-352-47**

47 x 22 mm



**20-352-52**

52 x 22 mm



**20-352-57**

57 x 22 mm



**20-350-02**



Pinzette zum Valvenwechsel bei Kugel-  
schnellverschluß-System  
Forceps for changing valves with ball snap  
closure system  
Pinza para el cambio de valvas con el  
sistema de cierre rápido esférico  
Pinza per il cambio delle valve a chiusura  
istantanea



**20-358-99** 11,5 cm, 4 ½ "



Schlüssel  
Key  
llave  
Chiave



**20-350-02** 16,0 cm, 6 ¼ "



Haken mit Kugelschnellverschluss  
Hooks with ball snap closure  
Ganchos con cierre rápido esférico  
Ganci a chiusura istantanea



**20-351-13** 38 mm  
**20-351-15** 58 mm



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-352-32</b> | 32 x 22 mm |
| <b>20-352-37</b> | 37 x 22 mm |
| <b>20-352-43</b> | 43 x 22 mm |
| <b>20-352-47</b> | 47 x 22 mm |
| <b>20-352-52</b> | 52 x 22 mm |
| <b>20-352-57</b> | 57 x 22 mm |
| <b>20-352-62</b> | 62 x 22 mm |
| <b>20-352-67</b> | 67 x 22 mm |



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-353-32</b> | 32 x 37 mm |
| <b>20-353-37</b> | 37 x 37 mm |
| <b>20-353-43</b> | 43 x 37 mm |
| <b>20-353-47</b> | 47 x 37 mm |
| <b>20-353-52</b> | 52 x 37 mm |
| <b>20-353-57</b> | 57 x 37 mm |
| <b>20-353-62</b> | 62 x 37 mm |
| <b>20-353-67</b> | 67 x 37 mm |
| <b>20-353-70</b> | 70 x 37 mm |



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-354-32</b> | 32 x 52 mm |
| <b>20-354-37</b> | 37 x 52 mm |
| <b>20-354-43</b> | 43 x 52 mm |
| <b>20-354-47</b> | 47 x 52 mm |
| <b>20-354-52</b> | 52 x 52 mm |
| <b>20-354-57</b> | 57 x 52 mm |
| <b>20-354-62</b> | 62 x 52 mm |
| <b>20-354-67</b> | 67 x 52 mm |
| <b>20-354-70</b> | 70 x 52 mm |



max. Spreizweite 145 mm  
max. spread 145 mm  
apertura máxima 145 mm  
apertura massima 145 mm

## CASPAR

**20-350-10** SET



Wundspreizer mit Kugelschnellverschluss, für Laminektomie und Hemi-Laminektomie, komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Rahmen                | <b>20-350-11</b> |
| 1 Haken, 38 mm          | <b>20-351-13</b> |
| 1 Seitenvalve, 37x22 mm | <b>20-352-37</b> |
| 1 Seitenvalve, 43x22 mm | <b>20-352-43</b> |
| 1 Seitenvalve, 47x22 mm | <b>20-352-47</b> |
| 1 Seitenvalve, 52x22 mm | <b>20-352-52</b> |
| 1 Seitenvalve, 57x22 mm | <b>20-352-57</b> |

Self-retaining retractor with ball snap closure, for laminectomy and hemi-laminectomy, complete, consisting of:

|                           |                  |
|---------------------------|------------------|
| 1 Frame                   | <b>20-350-11</b> |
| 1 Hook, 38 mm             | <b>20-351-13</b> |
| 1 Lateral valve, 37x22 mm | <b>20-352-37</b> |
| 1 Lateral valve, 43x22 mm | <b>20-352-43</b> |
| 1 Lateral valve, 47x22 mm | <b>20-352-47</b> |
| 1 Lateral valve, 52x22 mm | <b>20-352-52</b> |
| 1 Lateral valve, 57x22 mm | <b>20-352-57</b> |

Separador con cierre rápido esférico, para laminectomía y hemilaminectomía, completo, compuesto de:

|                           |                  |
|---------------------------|------------------|
| 1 Cuadro                  | <b>20-350-11</b> |
| 1 Gancho, 38 mm           | <b>20-351-13</b> |
| 1 Valva lateral, 37x22 mm | <b>20-352-37</b> |
| 1 Valva lateral, 43x22 mm | <b>20-352-43</b> |
| 1 Valva lateral, 47x22 mm | <b>20-352-47</b> |
| 1 Valva lateral, 52x22 mm | <b>20-352-52</b> |
| 1 Valva lateral, 57x22 mm | <b>20-352-57</b> |

Divaricatore con chiusura istantanea, per laminectomia e emi-laminectomia, completo, composto da:

|                           |                  |
|---------------------------|------------------|
| 1 Telaio                  | <b>20-350-11</b> |
| 1 Gancio, 38 mm           | <b>20-351-13</b> |
| 1 Valva laterale 37x22 mm | <b>20-352-37</b> |
| 1 Valva laterale 43x22 mm | <b>20-352-43</b> |
| 1 Valva laterale 47x22 mm | <b>20-352-47</b> |
| 1 Valva laterale 52x22 mm | <b>20-352-52</b> |
| 1 Valva laterale 57x22 mm | <b>20-352-57</b> |



**20-351-13**

38 mm



**20-352-37**

37 x 22 mm



**20-352-43**

43 x 22 mm



**20-352-47**

47 x 22 mm



**20-352-52**

52 x 22 mm



**20-352-57**

57 x 22 mm



Pinzette zum Valvenwechsel bei Kugel-  
schnellverschluß-System  
Forceps for changing valves with ball snap  
closure system  
Pinza para el cambio de valvas con el  
sistema de cierre rápido esférico  
Pinza per il cambio delle valve a chiusura  
istantanea



**20-358-99** 11,5 cm, 4 ½ "



Haken mit Kugelschnellverschluss  
Hooks with ball snap closure  
Ganchos con cierre rápido esférico  
Ganci a chiusura istantanea



**20-351-13** 38 mm  
**20-351-15** 58 mm



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-352-32</b> | 32 x 22 mm |
| <b>20-352-37</b> | 37 x 22 mm |
| <b>20-352-43</b> | 43 x 22 mm |
| <b>20-352-47</b> | 47 x 22 mm |
| <b>20-352-52</b> | 52 x 22 mm |
| <b>20-352-57</b> | 57 x 22 mm |
| <b>20-352-62</b> | 62 x 22 mm |
| <b>20-352-67</b> | 67 x 22 mm |



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-353-32</b> | 32 x 37 mm |
| <b>20-353-37</b> | 37 x 37 mm |
| <b>20-353-43</b> | 43 x 37 mm |
| <b>20-353-47</b> | 47 x 37 mm |
| <b>20-353-52</b> | 52 x 37 mm |
| <b>20-353-57</b> | 57 x 37 mm |
| <b>20-353-62</b> | 62 x 37 mm |
| <b>20-353-67</b> | 67 x 37 mm |
| <b>20-353-70</b> | 70 x 37 mm |



Seitenvalven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-354-32</b> | 32 x 52 mm |
| <b>20-354-37</b> | 37 x 52 mm |
| <b>20-354-43</b> | 43 x 52 mm |
| <b>20-354-47</b> | 47 x 52 mm |
| <b>20-354-52</b> | 52 x 52 mm |
| <b>20-354-57</b> | 57 x 52 mm |
| <b>20-354-62</b> | 62 x 52 mm |
| <b>20-354-67</b> | 67 x 52 mm |
| <b>20-354-70</b> | 70 x 52 mm |



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

Transversal zu verwenden  
To be used for transverse retraction  
Útil para retracción transversal  
Da impiegarsi per trazioni trasversali

## CASPAR

**20-355-00** SET



Wundspreizer mit Gelenkarmen und Kugelschnellverschluß, komplett, bestehend aus:

|                          |                  |
|--------------------------|------------------|
| 1 Rahmen                 | <b>20-355-01</b> |
| 1 Mediale Valve 40x23mm  | <b>20-358-01</b> |
| 1 Mediale Valve 45x23mm  | <b>20-358-02</b> |
| 1 Mediale Valve 50x23mm  | <b>20-358-03</b> |
| 1 Mediale Valve 55x23mm  | <b>20-358-04</b> |
| 1 Mediale Valve 60x23mm  | <b>20-358-05</b> |
| 1 Laterale Valve 40x23mm | <b>20-358-11</b> |
| 1 Laterale Valve 45x23mm | <b>20-358-12</b> |
| 1 Laterale Valve 50x23mm | <b>20-358-13</b> |
| 1 Laterale Valve 55x23mm | <b>20-358-14</b> |
| 1 Laterale Valve 60x23mm | <b>20-358-15</b> |

Self-retaining retractor with hinged arms and ball snap closure, complete, consisting of:

|                         |                  |
|-------------------------|------------------|
| 1 Frame                 | <b>20-355-01</b> |
| 1 Medial valve 40x23mm  | <b>20-358-01</b> |
| 1 Medial valve 45x23mm  | <b>20-358-02</b> |
| 1 Medial valve 50x23mm  | <b>20-358-03</b> |
| 1 Medial valve 55x23mm  | <b>20-358-04</b> |
| 1 Medial valve 60x23mm  | <b>20-358-05</b> |
| 1 Lateral valve 40x23mm | <b>20-358-11</b> |
| 1 Lateral valve 45x23mm | <b>20-358-12</b> |
| 1 Lateral valve 50x23mm | <b>20-358-13</b> |
| 1 Lateral valve 55x23mm | <b>20-358-14</b> |
| 1 Lateral valve 60x23mm | <b>20-358-15</b> |

Separador con brazos articulados y cierre rápido esférico, completo, compuesto de:

|                         |                  |
|-------------------------|------------------|
| 1 Cuadro                | <b>20-355-01</b> |
| 1 Valva mediana 40x23mm | <b>20-358-01</b> |
| 1 Valva mediana 45x23mm | <b>20-358-02</b> |
| 1 Valva mediana 50x23mm | <b>20-358-03</b> |
| 1 Valva mediana 55x23mm | <b>20-358-04</b> |
| 1 Valva mediana 60x23mm | <b>20-358-05</b> |
| 1 Valva lateral 40x23mm | <b>20-358-11</b> |
| 1 Valva lateral 45x23mm | <b>20-358-12</b> |
| 1 Valva lateral 50x23mm | <b>20-358-13</b> |
| 1 Valva lateral 55x23mm | <b>20-358-14</b> |
| 1 Valva lateral 60x23mm | <b>20-358-15</b> |

Divaricatore con braccio articolato a chiusura istantanea, completo, composto da:

|                          |                  |
|--------------------------|------------------|
| 1 Telaio                 | <b>20-355-01</b> |
| 1 Valva media 40x23mm    | <b>20-358-01</b> |
| 1 Valva media 45x23mm    | <b>20-358-02</b> |
| 1 Valva media 50x23mm    | <b>20-358-03</b> |
| 1 Valva media 55x23mm    | <b>20-358-04</b> |
| 1 Valva media 60x23mm    | <b>20-358-05</b> |
| 1 Valva laterale 40x23mm | <b>20-358-11</b> |
| 1 Valva laterale 45x23mm | <b>20-358-12</b> |
| 1 Valva laterale 50x23mm | <b>20-358-13</b> |
| 1 Valva laterale 55x23mm | <b>20-358-14</b> |
| 1 Valva laterale 60x23mm | <b>20-358-15</b> |



**20-358-14**

55 x 23 mm



**20-358-15**

60 x 23 mm



**20-358-01**

40 x 23 mm



**20-358-02**

45 x 23 mm



**20-358-03**

50 x 23 mm



**20-358-04**

55 x 23 mm



**20-358-05**

60 x 23 mm



**20-358-11**

40 x 23 mm



**20-358-12**

45 x 23 mm



**20-358-13**

50 x 23 mm



max. Spreizweite 85 mm  
 max. spread 85 mm  
 apertura máxima 85 mm  
 apertura massima 85 mm

In Wirbelsäulen-Längsachse zu verwenden  
 To be used for outer line retraction  
 Útil para el eje longitudinal de la columna vertebra  
 Da impiegarsi per la trazioni e la compressione della colonna

## CASPAR

**20-356-00** SET



Wundspreizer mit Gelenkarmen und Kugelschnellverschluß, komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Rahmen                | <b>20-356-01</b> |
| 1 Stumpfe Valve 45x23mm | <b>20-358-21</b> |
| 1 Stumpfe Valve 50x23mm | <b>20-358-22</b> |
| 1 Stumpfe Valve 55x23mm | <b>20-358-23</b> |
| 1 Stumpfe Valve 60x23mm | <b>20-358-24</b> |
| 1 Stumpfe Valve 65x23mm | <b>20-358-25</b> |

Self-retaining retractor with hinged arms and ball snap closure, complete, consisting of:

|                       |                  |
|-----------------------|------------------|
| 1 Frame               | <b>20-356-01</b> |
| 1 Blunt valve 45x23mm | <b>20-358-21</b> |
| 1 Blunt valve 50x23mm | <b>20-358-22</b> |
| 1 Blunt valve 55x23mm | <b>20-358-23</b> |
| 1 Blunt valve 60x23mm | <b>20-358-24</b> |
| 1 Blunt valve 65x23mm | <b>20-358-25</b> |

Separador con brazos articulados y cierre rápido esférico, completo, compuesto de:

|                      |                  |
|----------------------|------------------|
| 1 Cuadro             | <b>20-356-01</b> |
| 1 Valva roma 45x23mm | <b>20-358-21</b> |
| 1 Valva roma 50x23mm | <b>20-358-22</b> |
| 1 Valva roma 55x23mm | <b>20-358-23</b> |
| 1 Valva roma 60x23mm | <b>20-358-24</b> |
| 1 Valva roma 65x23mm | <b>20-358-25</b> |

Divaricatore con braccio articolato a chiusura istantanea, completo, composto da:

|                        |                  |
|------------------------|------------------|
| 1 Telaio               | <b>20-356-01</b> |
| 1 Valva smussa 45x23mm | <b>20-358-21</b> |
| 1 Valva smussa 50x23mm | <b>20-358-22</b> |
| 1 Valva smussa 55x23mm | <b>20-358-23</b> |
| 1 Valva smussa 60x23mm | <b>20-358-24</b> |
| 1 Valva smussa 65x23mm | <b>20-358-25</b> |



**20-358-21**

45 x 23 mm

**20-358-22**

50 x 23 mm

**20-358-23**

55 x 23 mm

**20-358-24**

60 x 23 mm

**20-358-25**

65 x 23 mm



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

In Wirbelsäulen-Längsachse zu verwenden  
To be used for outer line retraction  
Útil para el eje longitudinal de la columna vertebra  
Da impiegarsi per la trazioni e la compressione della colonna

## CASPAR

**20-357-00** SET



Wundspreizer mit Gelenkarmen und Kugelschnellverschluß, komplett, bestehend aus:

|                         |                  |
|-------------------------|------------------|
| 1 Rahmen                | <b>20-357-01</b> |
| 1 Stumpfe Valve 45x23mm | <b>20-358-21</b> |
| 1 Stumpfe Valve 50x23mm | <b>20-358-22</b> |
| 1 Stumpfe Valve 55x23mm | <b>20-358-23</b> |
| 1 Stumpfe Valve 60x23mm | <b>20-358-24</b> |
| 1 Stumpfe Valve 65x23mm | <b>20-358-25</b> |

Self-retaining retractor with hinged arms and ball snap closure, complete, consisting of:

|                       |                  |
|-----------------------|------------------|
| 1 Frame               | <b>20-357-01</b> |
| 1 Blunt valve 45x23mm | <b>20-358-21</b> |
| 1 Blunt valve 50x23mm | <b>20-358-22</b> |
| 1 Blunt valve 55x23mm | <b>20-358-23</b> |
| 1 Blunt valve 60x23mm | <b>20-358-24</b> |
| 1 Blunt valve 65x23mm | <b>20-358-25</b> |

Separador con brazos articulados y cierre rápido esférico, completo, compuesto de:

|                      |                  |
|----------------------|------------------|
| 1 Cuadro             | <b>20-357-01</b> |
| 1 Valva roma 45x23mm | <b>20-358-21</b> |
| 1 Valva roma 50x23mm | <b>20-358-22</b> |
| 1 Valva roma 55x23mm | <b>20-358-23</b> |
| 1 Valva roma 60x23mm | <b>20-358-24</b> |
| 1 Valva roma 65x23mm | <b>20-358-25</b> |

Divaricatore con braccio articolato a chiusura istantanea, completo, composto da:

|                        |                  |
|------------------------|------------------|
| 1 Telaio               | <b>20-357-01</b> |
| 1 Valva smussa 45x23mm | <b>20-358-21</b> |
| 1 Valva smussa 50x23mm | <b>20-358-22</b> |
| 1 Valva smussa 55x23mm | <b>20-358-23</b> |
| 1 Valva smussa 60x23mm | <b>20-358-24</b> |
| 1 Valva smussa 65x23mm | <b>20-358-25</b> |



**20-358-21**

45 x 23 mm

**20-358-22**

50 x 23 mm

**20-358-23**

55 x 23 mm

**20-358-24**

60 x 23 mm

**20-358-25**

65 x 23 mm



## CCR

**20-358-00** SET



Cervikales Wirbelsäulen Retraktor Set,  
bestehend aus:

Cervical spine retractor Set,  
consisting of:

|                           |                                  |
|---------------------------|----------------------------------|
| 1 Draht-Siebschale        | <b>55-191-07</b>                 |
| 1 Silikon Nopenmatte      | <b>55-855-00</b>                 |
| 1 OP Tuch                 | <b>55-890-09</b>                 |
| 1 Kennzeichnungsschild    | <b>55-820-04</b>                 |
| 1 Cervikal Sperrer        | <b>20-355-01</b>                 |
| 1 Cervikal Sperrer        | <b>20-356-01</b>                 |
| 1 Cervikal Gegensperrer   | <b>20-357-01</b>                 |
| 10 Stumpfe Valven, TITAN  | <b>20-358-71 T - 20-358-80 T</b> |
| 10 Mediale Valven, TITAN  | <b>20-358-51 T - 20-358-60 T</b> |
| 10 Laterale Valven, TITAN | <b>20-358-61 T - 20-358-70 T</b> |
| 1 Blätterwechselepinzette | <b>20-358-99</b>                 |

|                             |                                  |
|-----------------------------|----------------------------------|
| 1 Wire basket               | <b>55-191-07</b>                 |
| 1 Silicone mat              | <b>55-855-00</b>                 |
| 1 OT towel                  | <b>55-890-09</b>                 |
| 1 Identification label      | <b>55-820-04</b>                 |
| 1 Cervical retractor        | <b>20-355-01</b>                 |
| 1 Cervical retractor        | <b>20-356-01</b>                 |
| 1 Cervical counter retr.    | <b>20-357-01</b>                 |
| 10 Blunt valves, TITANIUM   | <b>20-358-71 T - 20-358-80 T</b> |
| 10 Medial valves, TITANIUM  | <b>20-358-51 T - 20-358-60 T</b> |
| 10 Lateral valves, TITANIUM | <b>20-358-61 T - 20-358-70 T</b> |
| 1 Valve changing forceps    | <b>20-358-99</b>                 |

Columna vertebral Separador Set,  
compuesto de:

Columna vertebral Separador Set,  
compuesto de:

|                            |                                  |
|----------------------------|----------------------------------|
| 1 Cesta de alambre         | <b>55-191-07</b>                 |
| 1 Soportes de silicona     | <b>55-855-00</b>                 |
| 1 Paño                     | <b>55-890-09</b>                 |
| 1 Placa de identificación  | <b>55-820-04</b>                 |
| 1 Separador cervical       | <b>20-355-01</b>                 |
| 1 Separador cervical       | <b>20-356-01</b>                 |
| 1 Cervical contraseparador | <b>20-357-01</b>                 |
| 10 Valvas romas, TITAN     | <b>20-358-71 T - 20-358-80 T</b> |
| 10 Valvas mediales, TITAN  | <b>20-358-51 T - 20-358-60 T</b> |
| 10 Valvas laterales, TITAN | <b>20-358-61 T - 20-358-70 T</b> |
| 1 Pinza para valvas        | <b>20-358-99</b>                 |

|                               |                                  |
|-------------------------------|----------------------------------|
| 1 Castello in rete metallica  | <b>55-191-07</b>                 |
| 1 Suppórtui in silicone       | <b>55-855-00</b>                 |
| 1 Tessuto                     | <b>55-890-09</b>                 |
| 1 Targhette di identification | <b>55-820-04</b>                 |
| 1 Cervical divaricatori       | <b>20-355-01</b>                 |
| 1 Cervical divaricatori       | <b>20-356-01</b>                 |
| 1 Cerv. contro divaricatori   | <b>20-357-01</b>                 |
| 10 Valve smusse, TITAN        | <b>20-358-71 T - 20-358-80 T</b> |
| 10 Valve medie, TITAN         | <b>20-358-51 T - 20-358-60 T</b> |
| 10 Valve laterali, TITAN      | <b>20-358-61 T - 20-358-70 T</b> |
| 1 Pinza per valve             | <b>20-358-99</b>                 |



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

**CASPAR**

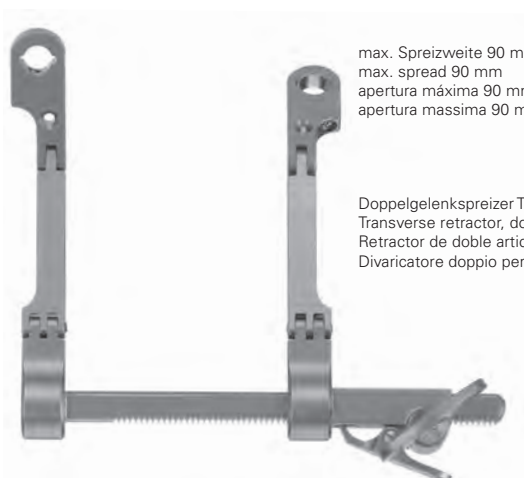
**20-355-01**



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

**CASPAR**

**20-355-01 T**



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

Doppelgelenkspreizer Transversal  
Transverse retractor, double hinged  
Retractor de doble articulación, transversal  
Divaricatore doppio per articolazione trasversale

**CASPAR**

**20-355-10**



max. Spreizweite 85 mm  
max. spread 85 mm  
apertura máxima 85 mm  
apertura massima 85 mm

**CASPAR**

**20-356-01**





max. Spreizweite 90 mm  
 max. spread 90 mm  
 apertura máxima 90 mm  
 apertura massima 90 mm

**CASPAR**

**20-357-01**



max. Spreizweite 90 mm  
 max. spread 90 mm  
 apertura máxima 90 mm  
 apertura massima 90 mm

**CASPAR**

**20-357-01 T**



max. Spreizweite 90 mm  
 max. spread 90 mm  
 apertura máxima 90 mm  
 apertura massima 90 mm

Doppelgelenkspreizer Transversal  
 Transverse retractor, double hinged  
 Retractor de doble articulación, transversal  
 Divaricatore doppio per articolazione trasversale

**CASPAR**

**20-357-10**





Mediale Valven mit Kugelschnellverschluss  
Medial valves with ball snap closure  
Valvas mediales con cierre rápido esférico  
Valve medie a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-358-01</b> | 40 x 23 mm |
| <b>20-358-02</b> | 45 x 23 mm |
| <b>20-358-03</b> | 50 x 23 mm |
| <b>20-358-04</b> | 55 x 23 mm |
| <b>20-358-05</b> | 60 x 23 mm |



Laterale Valven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-358-11</b> | 40 x 23 mm |
| <b>20-358-12</b> | 45 x 23 mm |
| <b>20-358-13</b> | 50 x 23 mm |
| <b>20-358-14</b> | 55 x 23 mm |
| <b>20-358-15</b> | 60 x 23 mm |



Stumpfe Valven mit Kugelschnellverschluss  
Blunt valves with ball snap closure  
Valvas romas con cierre rápido esférico  
Valve smusse a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-358-21</b> | 45 x 23 mm |
| <b>20-358-22</b> | 50 x 23 mm |
| <b>20-358-23</b> | 55 x 23 mm |
| <b>20-358-24</b> | 60 x 23 mm |
| <b>20-358-25</b> | 65 x 23 mm |



Stumpfe Valven mit Kugelschnellverschluss  
Blunt valves with ball snap closure  
Valvas romas con cierre rápido esférico  
Valve smusse a chiusura istantanea



|                  |            |
|------------------|------------|
| <b>20-358-31</b> | 50 x 25 mm |
| <b>20-358-32</b> | 60 x 25 mm |



Mediale Valven mit Kugelschnellverschluss  
Medial valves with ball snap closure  
Valvas mediales con cierre rápido esférico  
Valve medie a chiusura istantanea



|                    |            |
|--------------------|------------|
| <b>20-358-51 T</b> | 25 x 24 mm |
| <b>20-358-52 T</b> | 30 x 24 mm |
| <b>20-358-53 T</b> | 35 x 24 mm |
| <b>20-358-54 T</b> | 40 x 24 mm |
| <b>20-358-55 T</b> | 45 x 24 mm |
| <b>20-358-56 T</b> | 50 x 24 mm |
| <b>20-358-57 T</b> | 55 x 24 mm |
| <b>20-358-58 T</b> | 60 x 24 mm |
| <b>20-358-59 T</b> | 65 x 24 mm |
| <b>20-358-60 T</b> | 70 x 24 mm |



Laterale Valven mit Kugelschnellverschluss  
Lateral valves with ball snap closure  
Valvas laterales con cierre rápido esférico  
Valve laterali a chiusura istantanea



|                    |            |
|--------------------|------------|
| <b>20-358-61 T</b> | 25 x 24 mm |
| <b>20-358-62 T</b> | 30 x 24 mm |
| <b>20-358-63 T</b> | 35 x 24 mm |
| <b>20-358-64 T</b> | 40 x 24 mm |
| <b>20-358-65 T</b> | 45 x 24 mm |
| <b>20-358-66 T</b> | 50 x 24 mm |
| <b>20-358-67 T</b> | 55 x 24 mm |
| <b>20-358-68 T</b> | 60 x 24 mm |
| <b>20-358-69 T</b> | 65 x 24 mm |
| <b>20-358-70 T</b> | 70 x 24 mm |



Stumpfe Valven mit Kugelschnellverschluss  
Blunt valves with ball snap closure  
Valvas romas con cierre rápido esférico  
Valve smusse a chiusura istantanea



|                    |            |
|--------------------|------------|
| <b>20-358-71 T</b> | 30 x 24 mm |
| <b>20-358-72 T</b> | 35 x 24 mm |
| <b>20-358-73 T</b> | 40 x 24 mm |
| <b>20-358-74 T</b> | 45 x 24 mm |
| <b>20-358-75 T</b> | 50 x 24 mm |
| <b>20-358-76 T</b> | 55 x 24 mm |
| <b>20-358-77 T</b> | 60 x 24 mm |
| <b>20-358-78 T</b> | 65 x 24 mm |
| <b>20-358-79 T</b> | 70 x 24 mm |
| <b>20-358-80 T</b> | 75 x 24 mm |

Wundspreizer für die cervikale Wirbelsäule  
 Retractors for cervical spine  
 Separadores para la columna cervical  
 Divaricatori per colonna cervicale



Mediale Valven mit Kugelschnellverschluss  
 Medial valves with ball snap closure  
 Valvas mediales con cierre rápido esférico  
 Valve medie a chiusura istantanea



|                     |            |
|---------------------|------------|
| <b>20-358-51 ST</b> | 25 x 25 mm |
| <b>20-358-52 ST</b> | 30 x 25 mm |
| <b>20-358-53 ST</b> | 35 x 25 mm |
| <b>20-358-54 ST</b> | 40 x 25 mm |
| <b>20-358-55 ST</b> | 45 x 25 mm |
| <b>20-358-56 ST</b> | 50 x 25 mm |
| <b>20-358-57 ST</b> | 55 x 25 mm |
| <b>20-358-58 ST</b> | 60 x 25 mm |
| <b>20-358-59 ST</b> | 65 x 25 mm |
| <b>20-358-60 ST</b> | 70 x 25 mm |



Laterale Valven mit Kugelschnellverschluss  
 Lateral valves with ball snap closure  
 Valvas laterales con cierre rápido esférico  
 Valve laterali a chiusura istantanea



|                     |            |
|---------------------|------------|
| <b>20-358-61 ST</b> | 25 x 25 mm |
| <b>20-358-62 ST</b> | 30 x 25 mm |
| <b>20-358-63 ST</b> | 35 x 25 mm |
| <b>20-358-64 ST</b> | 40 x 25 mm |
| <b>20-358-65 ST</b> | 45 x 25 mm |
| <b>20-358-66 ST</b> | 50 x 25 mm |
| <b>20-358-67 ST</b> | 55 x 25 mm |
| <b>20-358-68 ST</b> | 60 x 25 mm |
| <b>20-358-69 ST</b> | 65 x 25 mm |
| <b>20-358-70 ST</b> | 70 x 25 mm |



Pinzette zum Valvenwechsel bei Kugel-  
 schnellverschluss-System

Forceps for changing the valves with ball  
 snap closure system

Pinza para el cambio de valvas con el  
 sistema de cierre rápido esférico

Pinza per il cambio delle valve a chiusura  
 istantanea



**20-358-99** 11,5 cm, 4 ½ "

Maßangaben für Blattgrößen  
 Dimesions for blade sizes  
 Datos sobre las dimensiones de cada tamaño de hoja  
 Indicazioni sulle misure delle valve



**20-358-14** 55 x 23 mm

Valven mit Kugelschnellverschluss für Wundspreizer:  
 Valves with ball snap closure for self retaining retractors:  
 Valvas con cierre rápido esférico para seperadores:  
 Valve a chiusura istantanea per divaricatori:

20-350-01  
 20-355-01  
 20-355-01 T  
 20-355-10  
 20-356-01  
 20-357-01  
 20-357-01 T  
 20-357-10





max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

PK  
PEEK

**CASPAR**

20-355-01 P



STEEL  
STAINLESS



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

PK  
PEEK

**CASPAR**

20-355-10 P



STEEL  
STAINLESS

Doppelgelenkspreizer Transversal  
Transverse retractor, double hinged  
Retractor de doble articulación, transversal  
Divaricatore doppio per articolazione trasversale



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

PK  
PEEK

**CASPAR**

20-357-01 P



STEEL  
STAINLESS



max. Spreizweite 90 mm  
max. spread 90 mm  
apertura máxima 90 mm  
apertura massima 90 mm

PK  
PEEK

**CASPAR**

20-357-10 P



STEEL  
STAINLESS

Doppelgelenkspreizer Transversal  
Transverse retractor, double hinged  
Retractor de doble articulación, transversal  
Divaricatore doppio per articolazione trasversale



max. Spreizweite 85 mm  
 max. spread 85 mm  
 apertura máxima 85 mm  
 apertura massima 85 mm

**CASPAR**

**20-356-01 P**



Handgriff für Valves  
 Handle for valves  
 Asa para valvas  
 Impugnatura per valvola

**20-358-98 P**



Mediale Valven mit Kugelschnellverschluss  
 Medial valves with ball snap closure  
 Valvas mediales con cierre rápido esférico  
 Valve medie a chiusura istantanea



Laterale Valven mit Kugelschnellverschluss  
 Lateral valves with ball snap closure  
 Valvas laterales con cierre rápido esférico  
 Valve laterali a chiusura istantanea



Laterale Valven mit Kugelschnellverschluss  
 Lateral valves with ball snap closure  
 Valvas laterales con cierre rápido esférico  
 Valve laterali a chiusura istantanea



Stumpfe Valven mit Kugelschnellverschluss  
 Blunt valves with ball snap closure  
 Valvas romas con cierre rápido esférico  
 Valve smusse a chiusura istantanea



**20-358-01 P** 40 x 23 mm

**20-358-02 P** 45 x 23 mm

**20-358-03 P** 50 x 23 mm

**20-358-04 P** 55 x 23 mm

**20-358-05 P** 60 x 23 mm

**20-358-06 P** 65 x 23 mm

**20-358-08 P** 75 x 23 mm

**20-358-11 P** 40 x 23 mm

**20-358-12 P** 45 x 23 mm

**20-358-13 P** 50 x 23 mm

**20-358-14 P** 55 x 23 mm

**20-358-15 P** 60 x 23 mm

**20-358-16 P** 65 x 23 mm

**20-358-18 P** 75 x 23 mm

**20-358-41 P** 40 x 12 mm

**20-358-42 P** 45 x 12 mm

**20-358-43 P** 50 x 12 mm

**20-358-44 P** 55 x 12 mm

**20-358-45 P** 60 x 12 mm

**20-358-21 P** 40 x 23 mm

**20-358-22 P** 45 x 23 mm

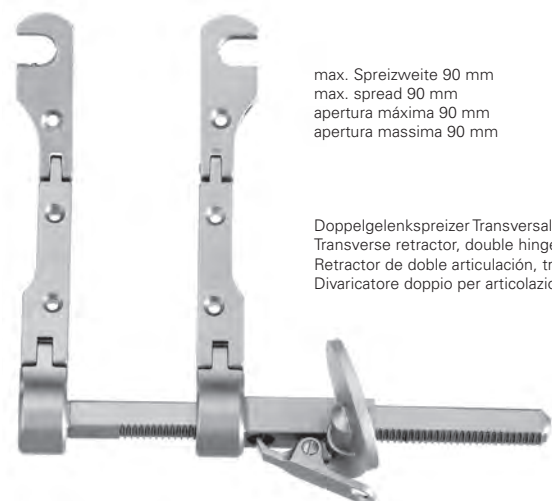
**20-358-23 P** 50 x 23 mm

**20-358-24 P** 55 x 23 mm

**20-358-25 P** 60 x 23 mm

**20-358-26 P** 65 x 23 mm

**20-358-28 P** 75 x 23 mm



max. Spreizweite 90 mm  
 max. spread 90 mm  
 apertura máxima 90 mm  
 apertura massima 90 mm

Doppelgelenkspreizer Transversal  
 Transverse retractor, double hinged  
 Retractor de doble articulación, transversal  
 Divaricatore doppio per articolazione trasversale

**CASPAR-QC**

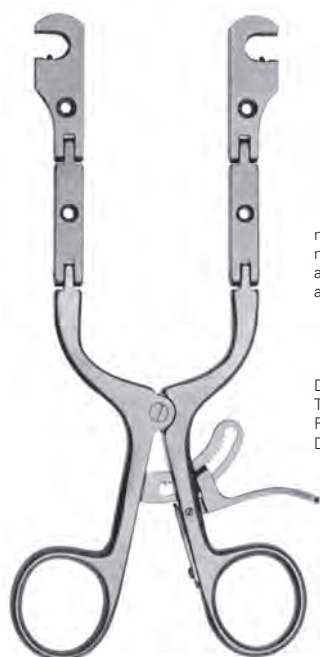
**20-355-10 QC**



max. Spreizweite 85 mm  
 max. spread 85 mm  
 apertura máxima 85 mm  
 apertura massima 85 mm

**CASPAR-QC**

**20-356-01 QC**



max. Spreizweite 90 mm  
 max. spread 90 mm  
 apertura máxima 90 mm  
 apertura massima 90 mm

Doppelgelenkspreizer Transversal  
 Transverse retractor, double hinged  
 Retractor de doble articulación, transversal  
 Divaricatore doppio per articolazione trasversale

**CASPAR-QC**

**20-357-10 QC**



Einsetzinstrument für QC Valven  
 QC valve inserter  
 Introducutor para valvas QC  
 Strumenti per inserzione di valve QC

**CASPAR-QC**

**20-357-60 QC** 18,5 cm, 7 "





Mediale Valven mit QC-Verschluss  
 Medial valves with QC-closure  
 Valvas mediales con cierre QC  
 Valve medie a chiusura QC



## QC

|                    |            |
|--------------------|------------|
| <b>20-359-31 T</b> | 25 x 19 mm |
| <b>20-359-32 T</b> | 30 x 19 mm |
| <b>20-359-33 T</b> | 35 x 19 mm |
| <b>20-359-34 T</b> | 40 x 19 mm |
| <b>20-359-35 T</b> | 45 x 19 mm |
| <b>20-359-36 T</b> | 50 x 19 mm |
| <b>20-359-37 T</b> | 55 x 19 mm |
| <b>20-359-38 T</b> | 60 x 19 mm |



Stumpfe Valven mit QC-Verschluss  
 Blunt valves with QC-closure  
 Valvas romas con cierre QC  
 Valve smusse a chiusura QC



## QC

|                    |            |
|--------------------|------------|
| <b>20-359-41 T</b> | 25 x 19 mm |
| <b>20-359-42 T</b> | 30 x 19 mm |
| <b>20-359-43 T</b> | 35 x 19 mm |
| <b>20-359-44 T</b> | 40 x 19 mm |
| <b>20-359-45 T</b> | 45 x 19 mm |
| <b>20-359-46 T</b> | 50 x 19 mm |
| <b>20-359-47 T</b> | 55 x 19 mm |
| <b>20-359-48 T</b> | 60 x 19 mm |



Mediale Valven mit QC-Verschluss  
 Medial valves with QC-closure  
 Valvas mediales con cierre QC  
 Valve medie a chiusura QC



## QC

|                    |            |
|--------------------|------------|
| <b>20-359-51 T</b> | 30 x 24 mm |
| <b>20-359-52 T</b> | 35 x 24 mm |
| <b>20-359-53 T</b> | 40 x 24 mm |
| <b>20-359-54 T</b> | 45 x 24 mm |
| <b>20-359-55 T</b> | 50 x 24 mm |
| <b>20-359-56 T</b> | 55 x 24 mm |
| <b>20-359-57 T</b> | 60 x 24 mm |
| <b>20-359-58 T</b> | 65 x 24 mm |
| <b>20-359-59 T</b> | 70 x 24 mm |



Laterale Valven mit QC-Verschluss  
 Lateral valves with QC-closure  
 Valvas laterales con cierre QC  
 Valve laterali a chiusura QC



## QC

|                    |            |
|--------------------|------------|
| <b>20-359-61 T</b> | 30 x 24 mm |
| <b>20-359-62 T</b> | 35 x 24 mm |
| <b>20-359-63 T</b> | 40 x 24 mm |
| <b>20-359-64 T</b> | 45 x 24 mm |
| <b>20-359-65 T</b> | 50 x 24 mm |
| <b>20-359-66 T</b> | 55 x 24 mm |
| <b>20-359-67 T</b> | 60 x 24 mm |
| <b>20-359-68 T</b> | 65 x 24 mm |
| <b>20-359-69 T</b> | 70 x 24 mm |



Stumpfe Valven mit QC-Verschluss  
 Blunt valves with QC-closure  
 Valvas romas con cierre QC  
 Valve smusse a chiusura QC



## QC

|                    |            |
|--------------------|------------|
| <b>20-359-71 T</b> | 30 x 24 mm |
| <b>20-359-72 T</b> | 35 x 24 mm |
| <b>20-359-73 T</b> | 40 x 24 mm |
| <b>20-359-74 T</b> | 45 x 24 mm |
| <b>20-359-75 T</b> | 50 x 24 mm |
| <b>20-359-76 T</b> | 55 x 24 mm |
| <b>20-359-77 T</b> | 60 x 24 mm |
| <b>20-359-78 T</b> | 65 x 24 mm |
| <b>20-359-79 T</b> | 70 x 24 mm |



max. Spreizweite 80 mm  
max. spread 80 mm  
apertura máxima 80 mm  
apertura massima 80 mm

## CLOWARD

**20-360-00** SET



Wundspreizer, komplett,  
bestehend aus:

|                     |                  |
|---------------------|------------------|
| 1 Sperrer           | <b>20-360-01</b> |
| 1 Seitenvalve 40 mm | <b>20-362-02</b> |
| 1 Seitenvalve 45 mm | <b>20-362-03</b> |
| 1 Seitenvalve 50 mm | <b>20-362-04</b> |
| 1 Seitenvalve 55 mm | <b>20-362-05</b> |
| 1 Seitenvalve 60 mm | <b>20-362-06</b> |

Separador, completo,  
compuesto de:

|                       |                  |
|-----------------------|------------------|
| 1 Separador           | <b>20-360-01</b> |
| 1 Valva lateral 40 mm | <b>20-362-02</b> |
| 1 Valva lateral 45 mm | <b>20-362-03</b> |
| 1 Valva lateral 50 mm | <b>20-362-04</b> |
| 1 Valva lateral 55 mm | <b>20-362-05</b> |
| 1 Valva lateral 60 mm | <b>20-362-06</b> |

Self-retaining retractor,  
complete, consisting of:

|                       |                  |
|-----------------------|------------------|
| 1 Spreader            | <b>20-360-01</b> |
| 1 Lateral valve 40 mm | <b>20-362-02</b> |
| 1 Lateral valve 45 mm | <b>20-362-03</b> |
| 1 Lateral valve 50 mm | <b>20-362-04</b> |
| 1 Lateral valve 55 mm | <b>20-362-05</b> |
| 1 Lateral valve 60 mm | <b>20-362-06</b> |

Divaricatore, completo,  
composto da:

|                        |                  |
|------------------------|------------------|
| 1 Divaricatore         | <b>20-360-01</b> |
| 1 Valva laterale 40 mm | <b>20-362-02</b> |
| 1 Valva laterale 45 mm | <b>20-362-03</b> |
| 1 Valva laterale 50 mm | <b>20-362-04</b> |
| 1 Valva laterale 55 mm | <b>20-362-05</b> |
| 1 Valva laterale 60 mm | <b>20-362-06</b> |



**20-362-02**

40 mm



**20-362-03**

45 mm



**20-362-04**

50 mm



**20-362-05**

55 mm



**20-362-06**

60 mm



Pinzette zum Valvenwechsel bei Kugel-  
schnellverschluß-System

Forceps for changing valves with ball snap  
closure system

Pinza para el cambio de valvas con el  
sistema de cierre rápido esférico

Pinza per il cambio delle valve a chiusura  
istantanea



**20-358-99** 11,5 cm, 4 1/2 "



max. Spreizweite 60 mm  
 max. spread 60 mm  
 apertura máxima 60 mm  
 apertura massima 60 mm

## CLOWARD

**20-362-00** SET



Wundspreizer, komplett,  
 bestehend aus:

|                     |                  |
|---------------------|------------------|
| 1 Sperrer           | <b>20-362-01</b> |
| 1 Seitenvalve 40 mm | <b>20-362-12</b> |
| 1 Seitenvalve 45 mm | <b>20-362-13</b> |
| 1 Seitenvalve 50 mm | <b>20-362-14</b> |
| 1 Seitenvalve 55 mm | <b>20-362-15</b> |
| 1 Seitenvalve 60 mm | <b>20-362-16</b> |

Separador, completo,  
 compuesto de:

|                       |                  |
|-----------------------|------------------|
| 1 Separador           | <b>20-362-01</b> |
| 1 Valva lateral 40 mm | <b>20-362-12</b> |
| 1 Valva lateral 45 mm | <b>20-362-13</b> |
| 1 Valva lateral 50 mm | <b>20-362-14</b> |
| 1 Valva lateral 55 mm | <b>20-362-15</b> |
| 1 Valva lateral 60 mm | <b>20-362-16</b> |

Self-retaining retractor,  
 complete, consisting of:

|                       |                  |
|-----------------------|------------------|
| 1 Spreader            | <b>20-362-01</b> |
| 1 Lateral valve 40 mm | <b>20-362-12</b> |
| 1 Lateral valve 45 mm | <b>20-362-13</b> |
| 1 Lateral valve 50 mm | <b>20-362-14</b> |
| 1 Lateral valve 55 mm | <b>20-362-15</b> |
| 1 Lateral valve 60 mm | <b>20-362-16</b> |

Divaricatore, completo,  
 composto da:

|                        |                  |
|------------------------|------------------|
| 1 Divaricatore         | <b>20-362-01</b> |
| 1 Valva laterale 40 mm | <b>20-362-12</b> |
| 1 Valva laterale 45 mm | <b>20-362-13</b> |
| 1 Valva laterale 50 mm | <b>20-362-14</b> |
| 1 Valva laterale 55 mm | <b>20-362-15</b> |
| 1 Valva laterale 60 mm | <b>20-362-16</b> |



**20-362-12**

40 mm



**20-362-13**

45 mm



**20-362-14**

50 mm



**20-362-15**

55 mm



**20-362-16**

60 mm



Pinzette zum Valvenwechsel bei Kugel-  
 schnellverschluss-System

Forceps for changing valves with ball snap  
 closure system

Pinza para el cambio de valvas con el  
 sistema de cierre rápido esférico

Pinza per il cambio delle valve a chiusura  
 istantanea



**20-358-99** 11,5 cm, 4 ½ "



CASPAR

20-365-00 SET



Wundspreizer, komplett,  
bestehend aus:

|                        |                  |
|------------------------|------------------|
| 1 Sperrer              | <b>20-365-01</b> |
| 1 Valve, gezahnt 40 mm | <b>20-365-40</b> |
| 1 Valve, gezahnt 45 mm | <b>20-365-45</b> |
| 1 Valve, gezahnt 50 mm | <b>20-365-50</b> |
| 1 Valve, gezahnt 55 mm | <b>20-365-55</b> |
| 1 Valve, gezahnt 60 mm | <b>20-365-60</b> |
| 1 Valve, gezahnt 65 mm | <b>20-365-65</b> |
| 1 Valve, gezahnt 70 mm | <b>20-365-70</b> |

Self-retaining retractor,  
complete, consisting of:

|                        |                  |
|------------------------|------------------|
| 1 Spreader             | <b>20-365-01</b> |
| 1 Serrated valve 40 mm | <b>20-365-40</b> |
| 1 Serrated valve 45 mm | <b>20-365-45</b> |
| 1 Serrated valve 50 mm | <b>20-365-50</b> |
| 1 Serrated valve 55 mm | <b>20-365-55</b> |
| 1 Serrated valve 60 mm | <b>20-365-60</b> |
| 1 Serrated valve 65 mm | <b>20-365-65</b> |
| 1 Serrated valve 70 mm | <b>20-365-70</b> |

Separador, completo,  
compuesto de:

|                       |                  |
|-----------------------|------------------|
| 1 Separador           | <b>20-365-01</b> |
| 1 Valva dentada 40 mm | <b>20-365-40</b> |
| 1 Valva dentada 45 mm | <b>20-365-45</b> |
| 1 Valva dentada 50 mm | <b>20-365-50</b> |
| 1 Valva dentada 55 mm | <b>20-365-55</b> |
| 1 Valva dentada 60 mm | <b>20-365-60</b> |
| 1 Valva dentada 65 mm | <b>20-365-65</b> |
| 1 Valva dentada 70 mm | <b>20-365-70</b> |

Divaricatore, completo,  
composto da:

|                          |                  |
|--------------------------|------------------|
| 1 Divaricatore           | <b>20-365-01</b> |
| 1 Valva dentellata 40 mm | <b>20-365-40</b> |
| 1 Valva dentellata 45 mm | <b>20-365-45</b> |
| 1 Valva dentellata 50 mm | <b>20-365-50</b> |
| 1 Valva dentellata 55 mm | <b>20-365-55</b> |
| 1 Valva dentellata 60 mm | <b>20-365-60</b> |
| 1 Valva dentellata 65 mm | <b>20-365-65</b> |
| 1 Valva dentellata 70 mm | <b>20-365-70</b> |





## MLD

**20-366-00** SET



Lumbales Mikrodiskektomie Retraktor Set, bestehend aus:

|                               |                              |
|-------------------------------|------------------------------|
| 2 Draht-Siebschalen           | <b>55-191-07</b>             |
| 2 Silikon Nopenmatten         | <b>55-855-00</b>             |
| 2 OPTücher                    | <b>55-890-09</b>             |
| 2 Kennzeichnungsschilder      | <b>55-820-04</b>             |
| 6 Caspar Spekulas, 40 - 65 mm | <b>20-366-40 - 20-366-65</b> |
| 1 Caspar Gegensperrer         | <b>20-367-01</b>             |
| 7 Laterale Valven, 35 - 65 mm | <b>20-367-02 - 20-367-08</b> |
| 1 Blätterwechselpinzette      | <b>20-358-99</b>             |

Microdissectomía lumbar separador Set, compuesto de:

|                                |                              |
|--------------------------------|------------------------------|
| 2 Cesta de alambre             | <b>55-191-07</b>             |
| 2 Soportes de silicona         | <b>55-855-00</b>             |
| 2 Paño                         | <b>55-890-09</b>             |
| 2 Placa de identificación      | <b>55-820-04</b>             |
| 6 Caspar espéculos, 40 - 65 mm | <b>20-366-40 - 20-366-65</b> |
| 1 Caspar contraseparador       | <b>20-367-01</b>             |
| 7 Valvas lateral, 35 - 65 mm   | <b>20-367-02 - 20-367-08</b> |
| 1 Pinza para valvas            | <b>20-358-99</b>             |

Micro lumbar discectomy retractor Set, consisting of:

|                               |                              |
|-------------------------------|------------------------------|
| 2 Wire baskets                | <b>55-191-07</b>             |
| 2 Silicone mats               | <b>55-855-00</b>             |
| 2 OT towels                   | <b>55-890-09</b>             |
| 2 Identification labels       | <b>55-820-04</b>             |
| 6 Caspar speculas, 40 - 65 mm | <b>20-366-40 - 20-366-65</b> |
| 1 Caspar counter retractor    | <b>20-367-01</b>             |
| 7 Lateral valves, 35 - 65 mm  | <b>20-367-02 - 20-367-08</b> |
| 1 Valve changing forceps      | <b>20-358-99</b>             |

Lombare microdischectomia divaricatori Set, composto da:

|                               |                              |
|-------------------------------|------------------------------|
| 2 Castello in rete metallica  | <b>55-191-07</b>             |
| 2 Suppórtui in silicone       | <b>55-855-00</b>             |
| 2 Tessuto                     | <b>55-890-09</b>             |
| 2 Targhette di identification | <b>55-820-04</b>             |
| 6 Caspar speculi, 40 - 65 mm  | <b>20-366-40 - 20-366-65</b> |
| 1 Caspar divaricatori         | <b>20-367-01</b>             |
| 7 Valva laterale, 35 - 65 mm  | <b>20-367-02 - 20-367-08</b> |
| 1 Pinza per valve             | <b>20-358-99</b>             |



max. Spreizweite 60 mm  
max. spread 60 mm  
apertura máxima 60 mm  
apertura massima 60 mm

CASPAR

20-367-00 SET



Wundspreizer mit Gelenkarmen und Kugelschnellverschluß komplett, bestehend aus:

Self-retaining retractor with hinged arms and ball snap closure, complete, consisting of:

|                      |                  |
|----------------------|------------------|
| 1 Rahmen             | <b>20-367-01</b> |
| 1 Seitenvalve, 35 mm | <b>20-367-02</b> |
| 1 Seitenvalve, 40 mm | <b>20-367-03</b> |
| 1 Seitenvalve, 45 mm | <b>20-367-04</b> |
| 1 Seitenvalve, 50 mm | <b>20-367-05</b> |
| 1 Seitenvalve, 55 mm | <b>20-367-06</b> |
| 1 Seitenvalve, 60 mm | <b>20-367-07</b> |

|                        |                  |
|------------------------|------------------|
| 1 Frame                | <b>20-367-01</b> |
| 1 Lateral valve, 35 mm | <b>20-367-02</b> |
| 1 Lateral valve, 40 mm | <b>20-367-03</b> |
| 1 Lateral valve, 45 mm | <b>20-367-04</b> |
| 1 Lateral valve, 50 mm | <b>20-367-05</b> |
| 1 Lateral valve, 55 mm | <b>20-367-06</b> |
| 1 Lateral valve, 60 mm | <b>20-367-07</b> |

Seperador con brazos articulados y cierre rápido esférico, completo compuesto de:

Divaricatore con braccio articolato a chiusura istantanea, completo, composto da:

|                        |                  |
|------------------------|------------------|
| 1 Separador            | <b>20-367-01</b> |
| 1 Valva lateral, 35 mm | <b>20-367-02</b> |
| 1 Valva lateral, 40 mm | <b>20-367-03</b> |
| 1 Valva lateral, 45 mm | <b>20-367-04</b> |
| 1 Valva lateral, 50 mm | <b>20-367-05</b> |
| 1 Valva lateral, 55 mm | <b>20-367-06</b> |
| 1 Valva lateral, 60 mm | <b>20-367-07</b> |

|                         |                  |
|-------------------------|------------------|
| 1 Divaricatore          | <b>20-367-01</b> |
| 1 Valva laterale, 35 mm | <b>20-367-02</b> |
| 1 Valva laterale, 40 mm | <b>20-367-03</b> |
| 1 Valva laterale, 45 mm | <b>20-367-04</b> |
| 1 Valva laterale, 50 mm | <b>20-367-05</b> |
| 1 Valva laterale, 55 mm | <b>20-367-06</b> |
| 1 Valva laterale, 60 mm | <b>20-367-07</b> |



**20-367-02**  
35 mm



**20-367-03**  
40 mm



**20-367-04**  
45 mm



**20-367-05**  
50 mm



**20-367-06**  
55 mm



**20-367-07**  
60 mm





Laterale Valven mit Kugelschnellverschluss  
 Lateral valves with ball snap closure  
 Valvas laterales con cierre rápido esférico  
 Valve laterali a chiusura istantanea



Mediale Valven mit Kugelschnellverschluss  
 Medial valves with ball snap closure  
 Valvas mediales con cierre rápido esférico  
 Valve medie a chiusura istantanea



Pinzette zum Valvenwechsel bei Kugel-  
 schnellverschluss-System  
 Forceps for changing valves with ball snap  
 closure system  
 Pinza para el cambio de valvas con el  
 sistema de cierre rápido esférico  
 Pinza per il cambio delle valve a chiusura  
 istantanea



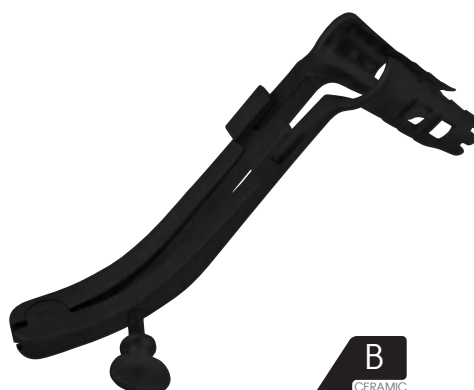
**20-358-99** 11,5 cm, 4 1/2"

## CASPAR

|                  |       |
|------------------|-------|
| <b>20-367-02</b> | 35 mm |
| <b>20-367-03</b> | 40 mm |
| <b>20-367-04</b> | 45 mm |
| <b>20-367-05</b> | 50 mm |
| <b>20-367-06</b> | 55 mm |
| <b>20-367-07</b> | 60 mm |
| <b>20-367-08</b> | 65 mm |
| <b>20-367-09</b> | 75 mm |
| <b>20-367-10</b> | 85 mm |

## CASPAR

|                  |       |
|------------------|-------|
| <b>20-367-13</b> | 40 mm |
| <b>20-367-14</b> | 45 mm |
| <b>20-367-15</b> | 50 mm |
| <b>20-367-16</b> | 55 mm |
| <b>20-367-17</b> | 60 mm |
| <b>20-367-18</b> | 65 mm |
| <b>20-367-19</b> | 70 mm |

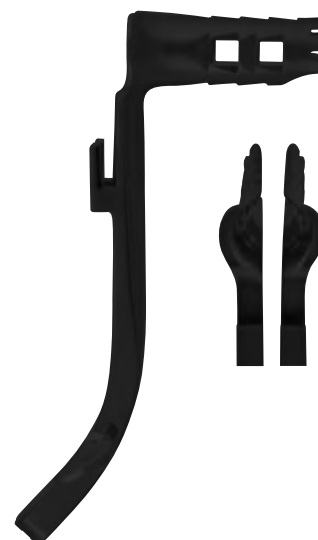


## CASPAR

|                  |       |
|------------------|-------|
| <b>20-366-40</b> | 40 mm |
| <b>20-366-45</b> | 45 mm |
| <b>20-366-50</b> | 50 mm |
| <b>20-366-55</b> | 55 mm |
| <b>20-366-60</b> | 60 mm |
| <b>20-366-65</b> | 65 mm |
| <b>20-366-70</b> | 70 mm |
| <b>20-366-75</b> | 75 mm |
| <b>20-366-85</b> | 85 mm |

## STOTZ

|                  |       |
|------------------|-------|
| <b>20-366-01</b> | 40 mm |
| <b>20-366-02</b> | 45 mm |
| <b>20-366-03</b> | 50 mm |
| <b>20-366-04</b> | 55 mm |
| <b>20-366-05</b> | 60 mm |
| <b>20-366-06</b> | 65 mm |
| <b>20-366-07</b> | 70 mm |
| <b>20-366-08</b> | 75 mm |
| <b>20-366-09</b> | 85 mm |





max. Spreizweite 70 | 90 mm  
max. spread 70 | 90 mm  
apertura máxima 70 | 90 mm  
apertura massima 70 | 90 mm

### MC CULLOCH

|                  |       |
|------------------|-------|
| <b>20-368-00</b> | 70 mm |
| <b>20-368-02</b> | 90 mm |



max. Spreizweite 67 mm  
max. spread 67 mm  
apertura máxima 67 mm  
apertura massima 67 mm

### MC CULLOCH

|                  |       |
|------------------|-------|
| <b>20-368-01</b> | 67 mm |
|------------------|-------|



Muskelblätter, 4 Zinken, schmal  
Muscle blades, 4 prongs, narrow  
Valvas musculares, 4 dientes, estrechas  
Valve muscolari, 4 punte, sottili

Muskelblätter, 6 Zinken, breit  
Muscle blades, 6 prongs, wide  
Valvas musculares, 6 dientes, anchas  
Valve muscolari, 6 punte, larghe



### MC CULLOCH

|                  |             |
|------------------|-------------|
| <b>20-368-03</b> | 30 x 20 mm  |
| <b>20-368-04</b> | 40 x 20 mm  |
| <b>20-368-05</b> | 50 x 20 mm  |
| <b>20-368-06</b> | 60 x 20 mm  |
| <b>20-368-07</b> | 70 x 20 mm  |
| <b>20-368-08</b> | 80 x 20 mm  |
| <b>20-368-09</b> | 90 x 20 mm  |
| <b>20-368-10</b> | 100 x 20 mm |
| <b>20-368-11</b> | 120 x 20 mm |



### MC CULLOCH

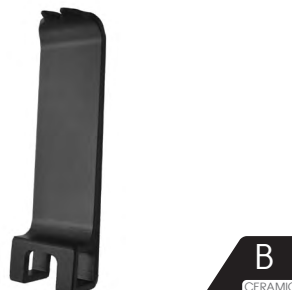
|                  |             |
|------------------|-------------|
| <b>20-368-13</b> | 30 x 27 mm  |
| <b>20-368-14</b> | 40 x 27 mm  |
| <b>20-368-15</b> | 50 x 27 mm  |
| <b>20-368-16</b> | 60 x 27 mm  |
| <b>20-368-17</b> | 70 x 27 mm  |
| <b>20-368-18</b> | 80 x 27 mm  |
| <b>20-368-19</b> | 90 x 27 mm  |
| <b>20-368-20</b> | 100 x 27 mm |



Muskelblätter, 2 Zinken, schmal  
Muscle blades, 2 prongs, narrow  
Valvas musculares, 2 dientes, estrechas  
Valve muscolari, 2 punte, sottili



Cervikal Blätter, 2 Zinken  
Cervical blades, 2 prongs  
Valvas cervicales, 2 dientes  
Valve cervicali, 2 punte



## MC CULLOCH

|                  |            |
|------------------|------------|
| <b>20-368-23</b> | 30 x 27 mm |
| <b>20-368-24</b> | 40 x 27 mm |
| <b>20-368-25</b> | 50 x 27 mm |
| <b>20-368-26</b> | 60 x 27 mm |
| <b>20-368-27</b> | 70 x 27 mm |
| <b>20-368-28</b> | 80 x 27 mm |
| <b>20-368-29</b> | 90 x 27 mm |

## MC CULLOCH

|                  |            |
|------------------|------------|
| <b>20-368-35</b> | 50 x 20 mm |
| <b>20-368-36</b> | 60 x 20 mm |
| <b>20-368-37</b> | 70 x 20 mm |

Hakenblätter  
Hook blades  
Valvas con gancho  
Divaricatori a valve



Hakenblätter, mehrfach gezahnt  
Hook blades, multiple serrated  
Valvas con gancho, dentado múltiple  
Divaricatori a valve, dentato su diversi lati

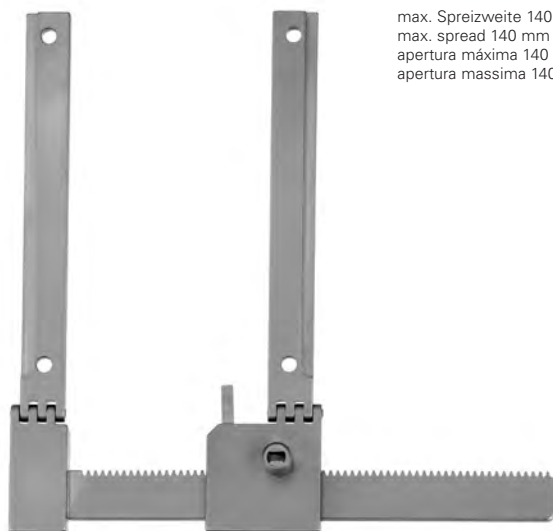


## MC CULLOCH

|                  |       |
|------------------|-------|
| <b>20-369-02</b> | 20 mm |
| <b>20-369-03</b> | 30 mm |
| <b>20-369-04</b> | 40 mm |
| <b>20-369-05</b> | 50 mm |
| <b>20-369-06</b> | 60 mm |
| <b>20-369-07</b> | 70 mm |
| <b>20-369-08</b> | 80 mm |
| <b>20-369-09</b> | 90 mm |

## MC CULLOCH

|                  |       |
|------------------|-------|
| <b>20-369-12</b> | 20 mm |
| <b>20-369-13</b> | 30 mm |
| <b>20-369-14</b> | 40 mm |
| <b>20-369-15</b> | 50 mm |
| <b>20-369-16</b> | 60 mm |
| <b>20-369-17</b> | 70 mm |
| <b>20-369-18</b> | 80 mm |
| <b>20-369-19</b> | 90 mm |



max. Spreizweite 140 mm  
max. spread 140 mm  
apertura máxima 140 mm  
apertura massima 140 mm

## KARLIN-CRANK

**20-370-00 SET**

Wundspreizer mit Gelenkarmen,  
komplett, bestehend aus:

Self-retaining retractor with hinged  
arms, complete, consisting of:

|                           |                  |                          |                  |
|---------------------------|------------------|--------------------------|------------------|
| 1 Rahmen                  | <b>20-370-01</b> | 1 Frame                  | <b>20-370-01</b> |
| 1 Schlüssel               | <b>20-370-05</b> | 1 Key                    | <b>20-370-05</b> |
| 1 Blatt, links, 31x38 mm  | <b>20-370-10</b> | 1 Blade, left, 31x38 mm  | <b>20-370-10</b> |
| 1 Blatt, rechts, 31x38 mm | <b>20-370-11</b> | 1 Blade, right, 31x38 mm | <b>20-370-11</b> |
| 1 Blatt, links, 57x44 mm  | <b>20-370-12</b> | 1 Blade, left, 57x44 mm  | <b>20-370-12</b> |
| 1 Blatt, rechts, 57x44 mm | <b>20-370-13</b> | 1 Blade, right, 57x44 mm | <b>20-370-13</b> |
| 2 Blätter, 76x64 mm       | <b>20-370-14</b> | 2 Blades, 76x64 mm       | <b>20-370-14</b> |

Seperador con brazos articulados,  
completo, compuesto de:

Divaricatore con braccio articolato,  
completo, composto da:

|                           |                  |                             |                  |
|---------------------------|------------------|-----------------------------|------------------|
| 1 Cuadro                  | <b>20-370-01</b> | 1 Telaio                    | <b>20-370-01</b> |
| 1 Llave                   | <b>20-370-05</b> | 1 Chiave                    | <b>20-370-05</b> |
| 1 Valva, zurdo, 31x38mm   | <b>20-370-10</b> | 1 Valva, sinsitra, 37x22 mm | <b>20-370-10</b> |
| 1 Valva, derecha, 31x38mm | <b>20-370-11</b> | 1 Valva, destra, 37x22 mm   | <b>20-370-11</b> |
| 1 Valva, zurdo, 57x44mm   | <b>20-370-12</b> | 1 Valva, sinsitra, 57x44 mm | <b>20-370-12</b> |
| 1 Valva, derecha, 57x44mm | <b>20-370-13</b> | 1 Valva, destra, 57x44 mm   | <b>20-370-13</b> |
| 1 Valva, 76x64mm          | <b>20-370-14</b> | 1 Valva, 76x64 mm           | <b>20-370-14</b> |



**20-370-10**

31 x 38 mm



**20-370-11**

31 x 38 mm



**20-370-12**

57 x 44 mm



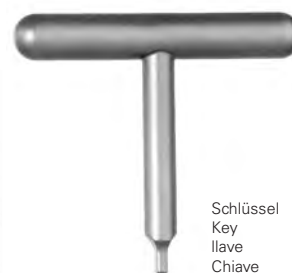
**20-370-13**

57 x 44 mm



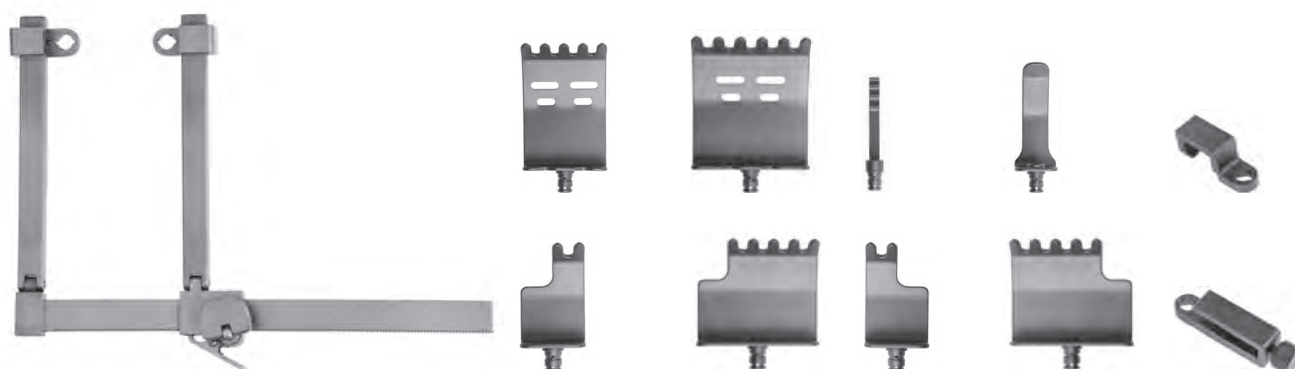
**20-370-14**

76 x 64 mm



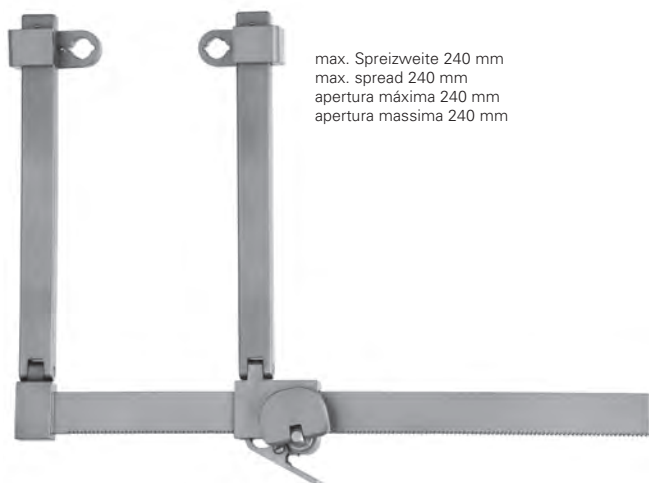
Schlüssel  
Key  
llave  
Chiave

**20-370-05**



**Ti**  
TITANIUM

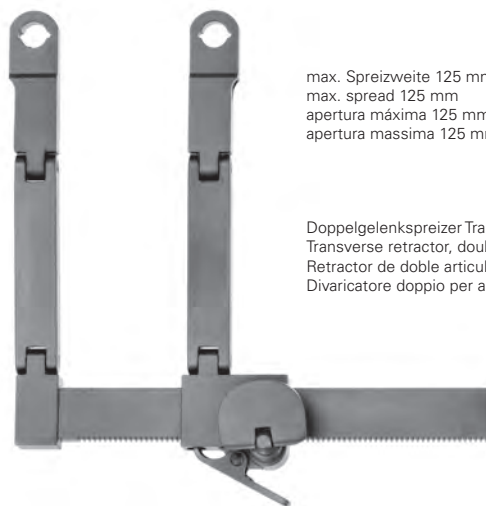
|                           |                    |
|---------------------------|--------------------|
| 1 Telaio                  | <b>20-370-32 T</b> |
| 2 L. valva, 46 x 45 mm    | <b>20-370-52 T</b> |
| 2 L. valva, 56 x 45 mm    | <b>20-370-53 T</b> |
| 2 L. valva, 66 x 45 mm    | <b>20-370-54</b>   |
| 2 L. valva, 76 x 45 mm    | <b>20-370-55 T</b> |
| 2 L. valva, 46 x 60 mm    | <b>20-370-62 T</b> |
| 2 L. valva, 56 x 60 mm    | <b>20-370-63 T</b> |
| 2 L. valva, 66 x 60 mm    | <b>20-370-64 T</b> |
| 2 L. valva, 76 x 60 mm    | <b>20-370-65 T</b> |
| 2 L. Divari. valva, 42 mm | <b>20-370-72 T</b> |
| 2 L. Divari. valva, 52 mm | <b>20-370-73 T</b> |
| 2 L. Divari. valva, 62 mm | <b>20-370-74 T</b> |
| 2 L. Divari. valva, 72 mm | <b>20-370-75 T</b> |
| 1 Valva V1, 36 x 30 mm    | <b>20-370-91 T</b> |
| 1 Valva V2, 36 x 30 mm    | <b>20-370-93 T</b> |
| 1 Valva V1, 41 x 60 mm    | <b>20-370-92 T</b> |
| 1 Valva V2, 41 x 60 mm    | <b>20-370-94 T</b> |
| 2 Supporto valva          | <b>20-370-35 T</b> |
| 1 Supporto valva          | <b>20-370-36 T</b> |



max. Spreizweite 240 mm  
max. spread 240 mm  
apertura máxima 240 mm  
apertura massima 240 mm

## SPREADY

**20-370-32 T**



max. Spreizweite 125 mm  
max. spread 125 mm  
apertura máxima 125 mm  
apertura massima 125 mm

Doppelgelenkspreizer Transversal  
Transverse retractor, double hinged  
Retractor de doble articulación, transversal  
Divaricatore doppio per articolazione trasversale

## SPREADY

**20-370-33 T**



Lumbal Blätter, 3 Zinken mit Kugelschnellverschluss  
Lumbar blades, 3 prongs with ball snap closure  
Valvas lumbares, 3 dientes con cierre rápido esférico  
Valve lombari, 3 punte a chiusura istantanea



Lumbal Blätter, 5 Zinken mit Kugelschnellverschluss  
Lumbar blades, 5 prongs with ball snap closure  
Valvas lumbares, 5 dientes con cierre rápido esférico  
Valve lombari, 5 punte a chiusura istantanea



Lumbal Blätter, 6 Zinken mit Kugelschnellverschluss  
Lumbar blades, 6 prongs with ball snap closure  
Valvas lumbares, 6 dientes con cierre rápido esférico  
Valve lombari, 6 punte a chiusura istantanea



## SPREADY

**20-370-40 T** 30 x 20 mm

**20-370-41 T** 35 x 20 mm

**20-370-42 T** 40 x 20 mm

**20-370-43 T** 50 x 20 mm

**20-370-44 T** 60 x 20 mm

**20-370-45 T** 70 x 20 mm

**20-370-46 T** 80 x 20 mm

**20-370-47 T** 90 x 20 mm

**20-370-48 T** 100 x 20 mm

**20-370-49 T** 110 x 20 mm



## SPREADY

**20-370-52 T** 46 x 45 mm

**20-370-53 T** 56 x 45 mm

**20-370-54 T** 66 x 45 mm

**20-370-55 T** 76 x 45 mm



## SPREADY

**20-370-62 T** 46 x 60 mm

**20-370-63 T** 56 x 60 mm

**20-370-64 T** 66 x 60 mm

**20-370-65 T** 76 x 60 mm



Lumbale Hakenblätter mit Kugelschnellverschluss  
Lumbar hook blades with ball snap closure  
Valvas con gancho lumbares con cierre rápido esférico  
Divaricatori lombari a valve a chiusura istantanea



## SPREADY

**20-370-72 T** 42 x 6 mm

**20-370-73 T** 52 x 6 mm

**20-370-74 T** 62 x 6 mm

**20-370-75 T** 72 x 6 mm



Stumpfe Blätter mit Kugelschnellverschluss  
Blunt blades with ball snap closure  
Valvas romas con cierre rápido esférico  
Valve smusse a chiusura istantanea



## SPREADY

**20-370-81 T** 30 x 15 mm

**20-370-82 T** 40 x 15 mm

**20-370-83 T** 50 x 15 mm

**20-370-84 T** 60 x 15 mm

**20-370-85 T** 70 x 15 mm

Blattaufnahme mit Verschluss  
Blade adapter with closure  
Soporte de valvas con cierre  
Supporto valva con chiusura



## SPREADY

**20-370-36 T**

Blattaufnahme mit Rändelschraube, justierbar  
Blade adapter with knurled screw, adjustable  
Soporte de valvas con tornillo moleteado, ajustable  
Supporto valva con vite a testa zigrinata, regolabile



## SPREADY

**20-370-35 T**



Sakral Lumbale Blätter mit Kugelschnellverschluss  
Sacral lumbar blades with ball snap closure  
Valvas lumbares sacras con cierre rápido esférico  
Divaricatori sacrali a valve a chiusura istantanea



## SPREADY

**20-370-91 T** 36 x 30 mm



## SPREADY

**20-370-93 T** 36 x 30 mm



Sakral Lumbale Blätter mit Kugelschnellverschluss  
Sacral lumbar blades with ball snap closure  
Valvas lumbares sacras con cierre rápido esférico  
Divaricatori sacrali a valve a chiusura istantanea



## SPREADY

**20-370-94 T** 41 x 60 mm



## SPREADY

**20-370-92 T** 41 x 60 mm

max. Spreizweite 20 mm  
max. spread 20 mm  
apertura máxima 20 mm  
apertura massima 20 mm



**CLOWARD**

**20-371-13** 13,5 cm, 5 1/4"

max. Spreizweite 15 mm  
max. spread 15 mm  
apertura máxima 15 mm  
apertura massima 15 mm



**CLOWARD**

**20-371-15** 15,5 cm, 6 1/8"

max. Spreizweite 38 mm  
max. spread 38 mm  
apertura máxima 38 mm  
apertura massima 38 mm



**INGE**

**20-375-01** 17,0 cm, 6 3/4"

max. Spreizweite 38 mm  
max. spread 38 mm  
apertura máxima 38 mm  
apertura massima 38 mm



**INGE**

**20-375-02** 17,0 cm, 6 3/4"

max. Spreizweite 50 mm  
max. spread 50 mm  
apertura máxima 50 mm  
apertura massima 50 mm



**INGE**

**20-376-27** 27,5 cm, 10 3/4"

max. Spreizweite 50 mm  
max. spread 50 mm  
apertura máxima 50 mm  
apertura massima 50 mm



**INGE**

**20-377-27** 27,5 cm, 10 3/4"

Konkav  
Concave  
Côncavo  
Concavo



max. Spreizweite 80 mm  
 max. spread 80 mm  
 apertura máxima 80 mm  
 apertura massima 80 mm



### CLOWARD

**20-380-12** 13,0 cm, 5 ¼"

max. Spreizweite 70 mm  
 max. spread 70 mm  
 apertura máxima 70 mm  
 apertura massima 70 mm



### CLOWARD

**20-380-13** 13,5 cm, 5 ¼"

max. Spreizweite 70 mm  
 max. spread 70 mm  
 apertura máxima 70 mm  
 apertura massima 70 mm



### CLOWARD

**20-380-16** 16,5 cm, 6 ¼"

max. Spreizweite 105 mm  
 max. spread 105 mm  
 apertura máxima 105 mm  
 apertura massima 105 mm



### KNIGHTON

**20-381-19** 19,0 cm, 7 ½"

max. Spreizweite 105 mm  
 max. spread 105 mm  
 apertura máxima 105 mm  
 apertura massima 105 mm



### KNIGHTON

**20-382-19** 19,0 cm, 7 ½"



|                  |            |
|------------------|------------|
| <b>20-450-40</b> | 40 x 10 mm |
| <b>20-450-50</b> | 50 x 10 mm |
| <b>20-450-60</b> | 60 x 10 mm |
| <b>20-450-70</b> | 70 x 10 mm |
| <b>20-451-50</b> | 50 x 20 mm |
| <b>20-451-60</b> | 60 x 20 mm |
| <b>20-451-70</b> | 70 x 20 mm |

links  
left  
zurdo  
sinistra

## SCHUL

**20-450-40 - 20-451-70** 17,0 cm, 6  $\frac{3}{4}$  "



|                  |            |
|------------------|------------|
| <b>20-452-40</b> | 40 x 10 mm |
| <b>20-452-50</b> | 50 x 10 mm |
| <b>20-452-60</b> | 60 x 10 mm |
| <b>20-452-70</b> | 70 x 10 mm |
| <b>20-453-50</b> | 50 x 20 mm |
| <b>20-453-60</b> | 60 x 20 mm |
| <b>20-453-70</b> | 70 x 20 mm |

rechts  
right  
derecha  
destra

## SCHUL

**20-452-40 - 20-453-70** 17,0 cm, 6  $\frac{3}{4}$  "