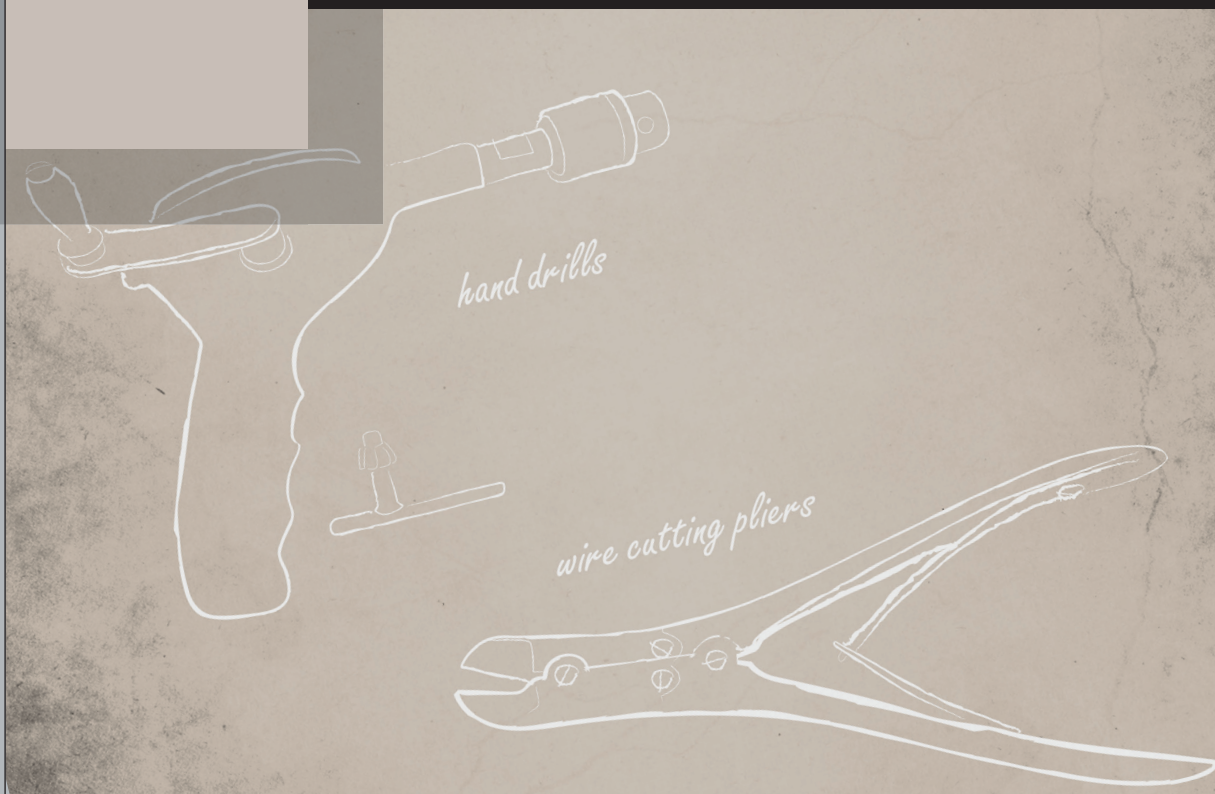


OPEN SURGERY



Knochenchirurgie

Bone Surgery

Chirurgia ósea

Chirurgie osseuse

Chirurgia osseas

190

Gipsmesser; Gipssäge
Plaster Knives; Plaster Saws

Cuchillos para yeso; Sierras para yeso
Couteaux pour plâtre; Scies pour plâtre
Coltelli per gesso; Seghe per gesso

TONTARRA

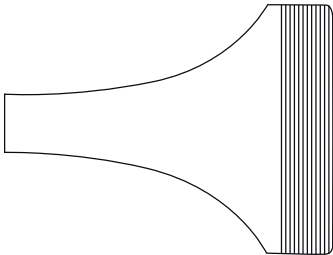


Art.Nr.	Beschreibung Description	Size	Spez.
190-130-20	HOPKINS mit Holzheft with wooden handle con mango de madera avec manche en bois con manico di legno	20,0 cm; 7 7/8"	
			
190-138-18	ESMARCH	18,0 cm; 7 1/8"	
			
190-140-18	REINER	18,0 cm; 7 1/8"	
			
190-160-14	ENGEL	15,0 cm; 5 7/8"	
			
190-162-18	BERGMANN	18,0 cm; 7 1/8"	
			

Gipsspreizer; Gipsabreißzangen
Plaster Spreaders; Plaster Breakers
 Separadores para yeso; Pinzas para romper yeso
 Pincers pour plâtre; Pincers pour rompre plâtre
 Pinze per gesso; Pinze per rompere gesso

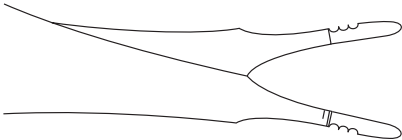
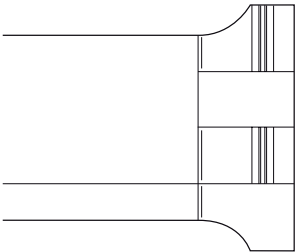


Art.Nr.	Beschreibung Description	Size	Spez.
190-200-28	HENNING	28,0 cm; 11"	



1/1

190-220-23	MODELL USA	23,0 cm; 9"	
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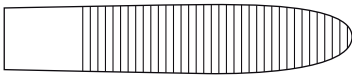


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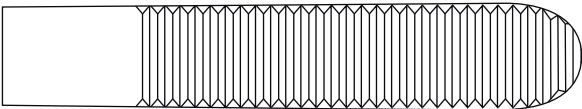
WOLFF



190-204-18	18,0 cm; 7"
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190-204-24	24,0 cm; 9 4/8"
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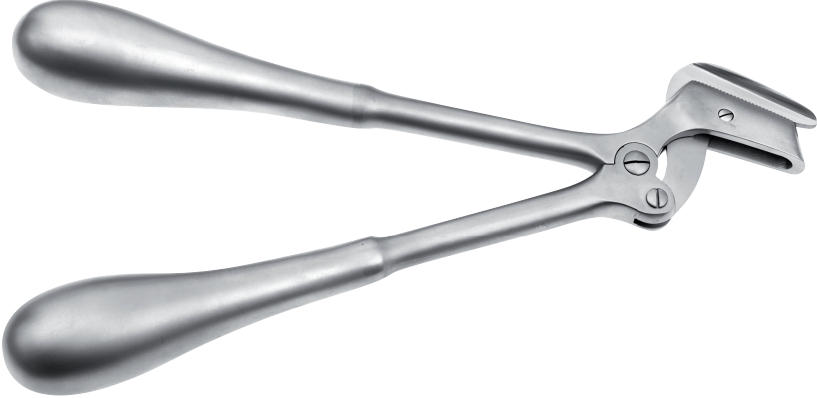
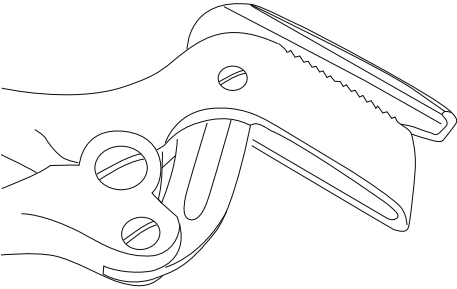
1/1

Gipsscheren
Plaster Shears

Tijeras para yeso
Ciseaux pour plâtre
Forbici per gesso

TONTARRA

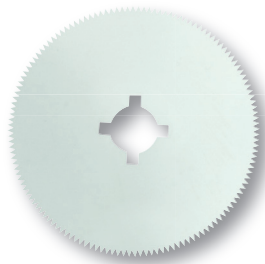
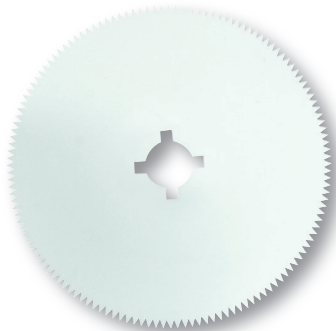
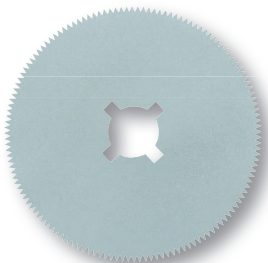
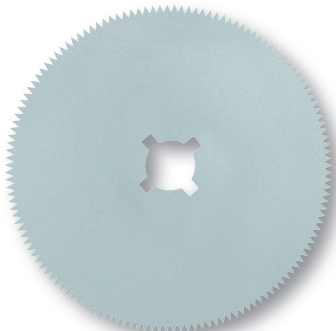
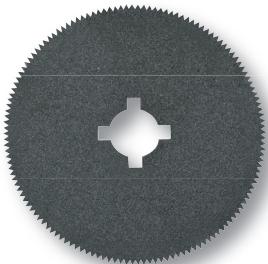


Art.Nr.	Beschreibung Description	Size	Spez.
STILLE			
			
190-208-23	23,0 cm; 9"		
190-208-26	26,0 cm; 10 5/8"		
190-208-37	37,0 cm; 15"		



Art.Nr.	Beschreibung Description	Size	Spez.
	BLUEPOWER		SET
			
190-420-00	Gipssäge mit Sägeblätter für Synthetic Verbände 230 V; 50 HZ Plaster Saw with blades for synthetic casts 230 V; 50 HZ Sierra oscilante para vendaje dura 230 V; 50 HZ Scie oscillante pour plâtre synthétique 230 V; 50 HZ Sega oscillata per bendaggi duri 230 V; 50 HZ komplett mit 2 Sägeblättern (190-408-50, 190-408-65) und 2 Schraubenschlüssel (190-420-99) complete with 2 saw blades (190-408-50, 190-408-65) and 2 wrenches (190-420-99) completo con 2 hojas de sierra (190-408-50, 190-408-65) y 2 llaves de tuercas (190-420-99) complet avec 2 lames de scie (190-408-50, 190-408-65) et clé à écrou (190-420-99) completa con 2 lame (190-408-50, 190-408-65) e 2 chiavi (190-420-99)		
190-420-01	Gipssäge mit Sägeblätter für Naturgipsverbände 230 V; 50 HZ Plaster Saw with blades for plaster of paris 230 V; 50 HZ Sierra oscilante para vendaje enyesado 230 V; 50 HZ Scie oscillante pour plâtre régulier 230 V; 50 HZ Sega oscillata per ingessatura 230 V; 50 HZ komplett mit 2 Sägeblättern (190-407-50, 190-407-65) und 2 Schraubenschlüssel (190-420-99) complete with 2 saw blades (190-407-50, 190-407-65) and 2 wrenches (190-420-99) completo con 2 hojas de sierra (190-407-50, 190-407-65) y 2 llaves de tuercas (190-420-99) complet avec 2 lames de scie (190-407-50, 190-407-65) et clé à écrou (190-420-99) completa con 2 lame (190-407-50, 190-407-65) e 2 chiavi (190-420-99)		
190-430-00	BLUEPOWER Gipssäge (190-420-00) mit Absaugung (190-430-99) 230 V; 50 HZ Plaster Saw (190-420-00) with vacuum (190-430-99) 230 V; 50 HZ Sierra oscilante (190-420-00) con aspiración (190-430-99) 230 V; 50 HZ Scie oscillante (190-420-00) avec aspiration (190-430-99) 230 V; 50 HZ Sega oscillata (190-420-00) con aspirazione (190-430-99) 230 V; 50 HZ		SET
			



Art.Nr.	Beschreibung Description		Size	Spez.	
für Naturgipsverbände for plaster of paris para vendaje enyesado pour plâtre régulier per gesso naturale					
190-407-50	Ø 50 mm		190-407-65	Ø 65 mm	
für syntehtische Hartverbände for synthetic casts para vendaje duro pour plâtre synthétique per bendaggi duri (sintetici)					
190-408-50	Ø 50 mm		190-408-65	Ø 65 mm	
PTFE-Antihaftbeschichtung PTFE non-stick coating Recubrimiento antiadherente de PTFE Revêtement PTFE antiadhérent Rivestimento antiadesione in PTFE					
190-409-50	Ø 50 mm		190-409-65	Ø 65 mm	



Art.Nr.	Beschreibung Description	Size	Spez.
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Segment für Naturgipsverbände
Segmented for plaster of paris
De segmentos para vendajes de yeso
Segment pour plâtres naturels
Segmento per bendaggi in gesso naturale

Ø 65 mm

190-413-65



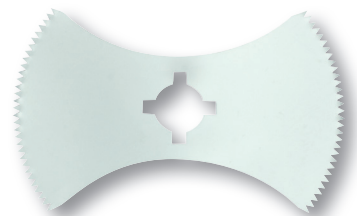
190-414-65



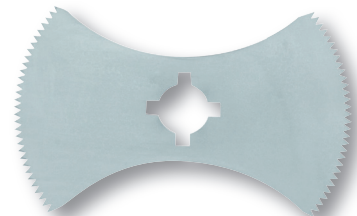
Segment für Naturgipsverbände
Segmented for plaster of paris
De segmentos para vendajes de yeso
Segment pour plâtre naturels
Segmento per bendaggi in gesso naturale

Ø 65 mm

190-415-65



190-416-65





Art.Nr.	Beschreibung Description	Size	Spez.
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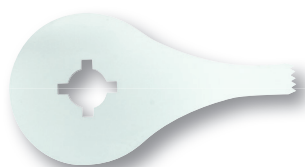
Tiefensägeblätter für Naturgipsverbände

Deep saw blades for plaster of paris

Hojas de sierra de profundidad para vendajes de yeso
Lame de scie circulaire plâtre épais pour plâtres naturels
Lama a taglio di profondità per bendaggi in gesso naturale

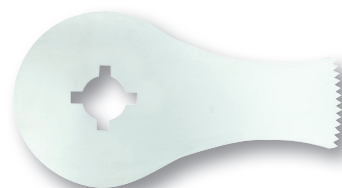
190-417-08

8 mm



190-417-20

20 mm



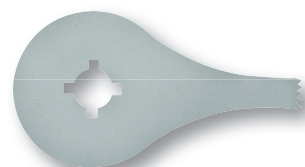
Tiefensägeblätter für synthetische Hartverbände

Deep saw blades for synthetic casts

Hojas de sierra de profundidad para vendajes sintéticos rígidos
Lame de scie circul. plâtre épais pour bandages durs
Lama a taglio di profondità per bendaggi duri (sintetici)

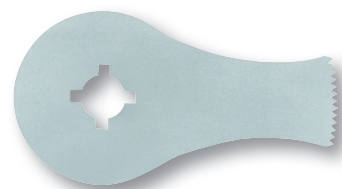
190-418-08

8 mm



190-418-20

20 mm

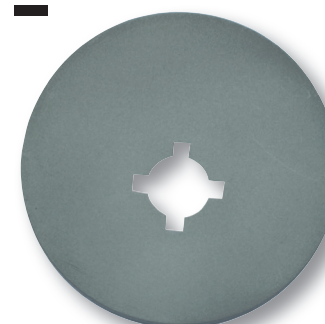


190-419-90

Exzentrische Begrenzungsscheibe für Tiefenbegrenzung

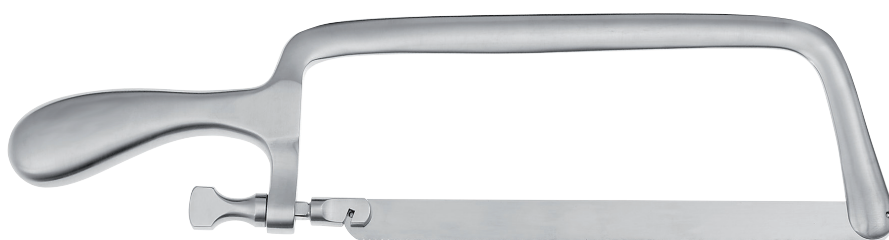
Excentric disc to limit depth of cut

Disco de tope excéntrico para tope de profundidad
Disque de limitation excentrique pour limitation de profondeur
Disco di limitazione eccentrico per limitazione della profondità





Art.Nr.	Beschreibung Description	Size	Spez.
190-210-35	CHARRIÈRE mit 2 Sägeblättern; 12 mm und 18 mm with 2 saw blades; 12 mm and 18 mm con 2 hojas; 12 mm y 18 mm avec 2 lames ;12 mm et 18 mm con 2 lame; 12 mm e 18 mm	35,0 cm; 13 6/8"	SET



Ersatzsägeblätter
Saw blades
 Hojas de recambio
 Lames de rechange
 Lame di ricambio



190-211-12	12 mm
190-211-15	15 mm
190-211-18	18 mm



Art.Nr.	Beschreibung Description	Size	Spez.
190-212-39	BIER mit 3 Sägeblättern; 4 mm, 6 mm und 8 mm with 3 saw blades; 4 mm, 6 mm and 8 mm con 3 hojas; 4 mm, 6 mm y 8 mm avec 3 lames; 4 mm, 6 mm et 8 mm con 3 lame; 4 mm, 6 mm e 8 mm	40,5 cm; 16"	SET



Ersatzsägeblätter Saw blades

Hojas de recambio
 Lames de rechange
 Lame di ricambio



190-213-04	4 mm
190-213-06	6 mm
190-213-08	8 mm



Art.Nr.	Beschreibung Description	Size	Spez.
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190-218-23

LANGENBECK

24,0 cm; 9 4/8"



CHARRIÈRE



190-220-27

27,0 cm; 10 3/8"

190-220-30

30,0 cm; 11 3/4"

190-220-34

34,0 cm; 13 1/3"

190-225-31

SATTERLEE

29,0 cm; 11 3/8"



190-225-20

Ersatzsägeblatt
Saw blade

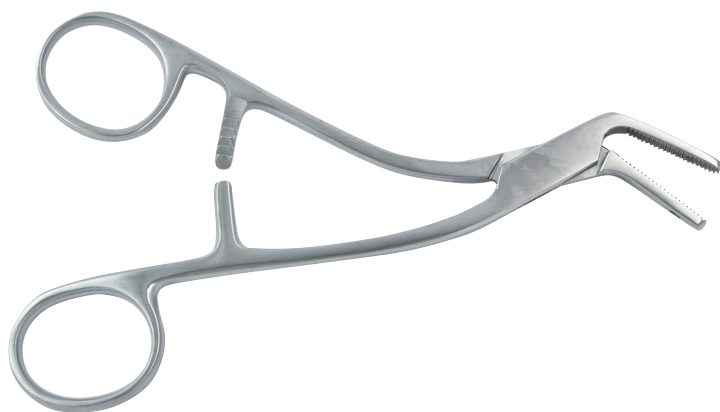
Hoja de recambio
 Lames de rechange
 Lame di ricambio



Art.Nr.	Beschreibung Description	Size	Spez.
190-240-00	PERCY auseinandernehmbar detachable desmontable démontable smontabile		



190-242-15	ADSON	15,0 cm; 5 7/8"
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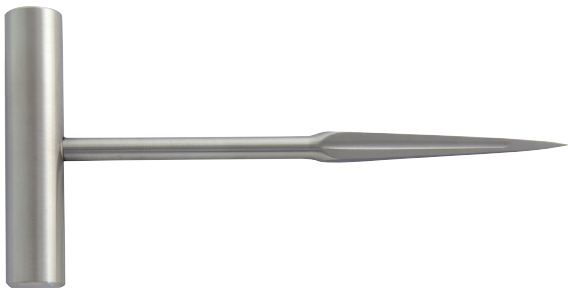




Art.Nr.	Beschreibung Description	Size	Spez.
190-244-13		14,0 cm; 5 1/8"	



190-245-14	eine Seite konkav one side concave un lado cóncavo un côté concave un lato concavo	14,0 cm; 5 1/8"	
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1/1

PERTHES



190-246-18	18,0 cm; 7 1/8"
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190-246-21	21,5 cm; 8 4/8"
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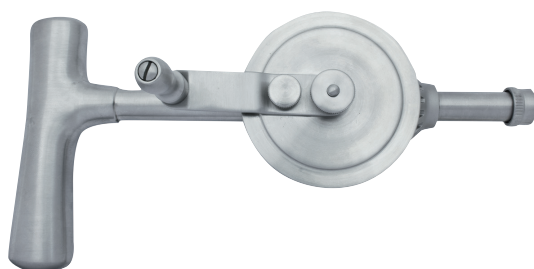
Art.Nr.	Beschreibung Description	Size	Spez.
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190-260-00

STILLE

SET

mit 9 Bohrern und Fräser | with 9 twist drills and burrs
con 9 brocas y fresas | avec 9 méche et fraise | con 9 punte e frese



bestehend aus: | consisting of:

compuesto de: | composé de: | composto da:

190-261-25; 190-261-30; 190-261-35; 190-261-40; 190-262-10; 190-263-05; 190-263-08;
190-263-12; 190-263-16

Spiralbohrer für Handbohrapparat
Twist drills for hand drill

Brocas espiral para perforadores de mano
Mèche hélicoïdale pour perforateurs à main
Punta a spirale per perforatori a mano

190-261-10	Ø 1,0 mm		190-261-30	Ø 3,0 mm	
190-261-15	Ø 1,5 mm		190-261-35	Ø 3,5 mm	
190-261-20	Ø 2,0 mm		190-261-40	Ø 4,0 mm	
190-261-25	Ø 2,5 mm				

Fräser für Handbohrapparat
Burrs for hand drill

Taladros para perforadores de mano
Fraise pour perforateurs à main
Frese per perforatori a mano

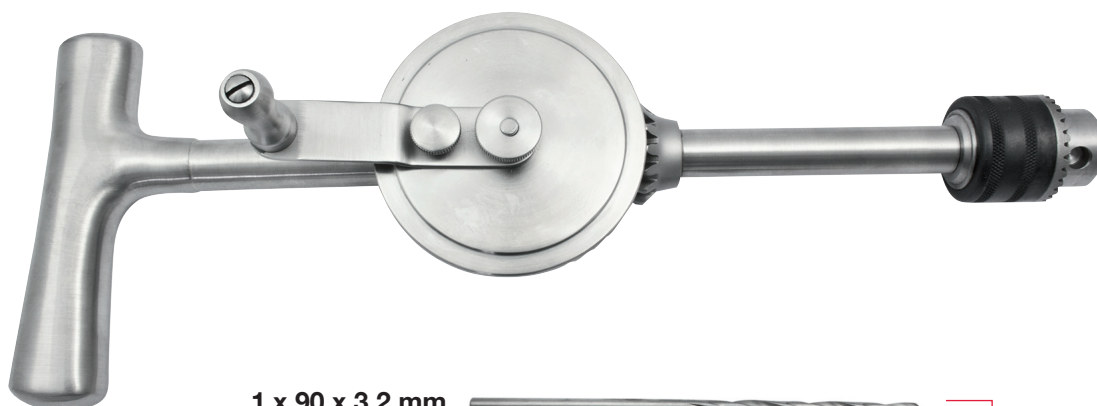
190-262-10	Ø 10,0 mm				
190-263-05	Ø 5,0 mm		190-263-12	Ø 12,0 mm	
190-263-08	Ø 8,0 mm		190-263-16	Ø 16,0 mm	



Art.Nr.	Beschreibung Description		Size	Spez.
190-270-00	HUDSON	mit Fräsern Fig. 1-4 und Verlängerungsstück with burrs Fig. 1-4 and extension piece con fresas Fig. 1-4 y pieza de prolongación avec fraises Fig. 1-4 et pièce de rallonge con frese Fig. 1-4 e giunto di prolungamento		SET
				
bestehend aus: consisting of: compuesto de: composé de: composto da: 190-271-00; 190-271-10; 190-271-14; 190-271-16; 190-271-22; 190-270-01				
190-271-00	Verlängerungsstück Extention piece	Pieza de prolongación Pièce de rallonge Giunto di prolungamento		
				
Kegelfräser Conical Burrs				
Fresas cónica Fraise conique Fresa conica				
190-271-10	Fig. 1	Ø 10,0 mm		
190-271-14	Fig. 2	Ø 14,0 mm		
190-271-16	Fig. 3	Ø 16,0 mm		
190-271-22	Fig. 4	Ø 22,0 mm		



Art.Nr.	Beschreibung Description	Size	Spez.
190-272-13	CUSHING Flachbohrer Flat trephine Taladro plano Fraise plate Trapano piatto	Ø 13,0 mm	
190-273-24	ADSON Spiralbohrer Twist drill Broca espiral Mèche hélicoidale Punta a spirale	Ø 2,0 mm	
190-274-13	MC KENZIE Fräser Burr Taladro Fraise Frese	Ø 13,0 mm	
190-274-16	ERRICO Fräser Burr Taladro Fraise Frese	Ø 16,0 mm	
190-280-04	MOORE mit 3 Bohrer (190-280-10) with 3 drills (190-280-10) con 3 brocas (190-280-10) avec 3 fraises (190-280-10) con 3 punte (190-280-10)	27,5 cm; 10 7/8"	SET



1 x 90 x 3,2 mm



2 x 70 x 3,2 mm



190-280-10

Spiralbohrer; Handbohrapparate Twist Drill; Hand Drills

Brocas espirales; Perforadores de mano
Mèche hélicoidale; Perforateurs à main
Punta a spirale; Perforatori a mano

TONTARRA



Art.Nr.	Beschreibung <i>Description</i>					Size	Spez.
	glatter Schaft	smooth shaft	vástago liso	tige lisse	asta liscia		



190-288-10	Ø 1,0 mm	190-288-28	Ø 2,8 mm	190-288-40	Ø 4,0 mm
190-288-15	Ø 1,5 mm	190-288-30	Ø 3,0 mm	190-288-45	Ø 4,5 mm
190-288-20	Ø 2,0 mm	190-288-32	Ø 3,2 mm	190-288-50	Ø 5,0 mm
190-288-25	Ø 2,5 mm	190-288-35	Ø 3,5 mm	190-288-60	Ø 6,0 mm

190-296-00	BUNNELL	längsdurchbohrt; mit Dreibackenspannfutter und Schlüssel longitudinally bored with three-jaw chuck and key taladrado longitudinalmente con mandril de tres mordazas y llave à perforation axiale avec mandrin à trois mâchoires et clé forati longitudinalmente con mandrino a tre ganasce e chiave
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Spannweite bis Ø 4,0 mm
Opening up to Ø 4,0 mm
Abertura hasta Ø 4,0 mm
Overture jusqu'à Ø 4,0 mm
Apertura fino a Ø 4,0 mm

190-300-00	RALK	längsdurchbohrt; mit Dreibackenspannfutter und Schlüssel longitudinally bored with three-jaw chuck and key taladrado longitudinalmente con mandril de tres mordazas y llave à perforation axiale avec mandrin à trois mâchoires et clé forati longitudinalmente con mandrino a tre ganasce e chiave
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Spannweite Ø 0,8 mm bis Ø 7,0 mm
Opening Ø 0,8 mm up to 7,0 mm
Abertura Ø 0,8 mm hasta 7,0 mm
Overture Ø 0,8 mm jusqu'à 7,0 mm
Apertura Ø 0,8 fino a 7,0 mm



Art.Nr.	Beschreibung Description	Size	Spez.
190-303-10	Bohrhandgriff Handle Mango Manches Perforatore a mano mit Dreibacken-Spannfutter und Schlüssel with three-jaw-chuck and key con mandril de tres mordazas y llave avec mandrin á trois mâchoires et clé con mandrino a tre ganasce e chiave 		
190-312-00	Dreibacken-Spannfutter mit Spannschlüssel Three-jaw-chuck with key Mandril de tres mordazas y llave Mandrin á trois mâchoires et clé Mandrino a tre guance e chiave 		
190-312-01	Spannschlüssel Key llave Clé Chiave per il mandrino 		

Schraubendreher mit Kunststoffgriff Screwdriver with Plastic Handle

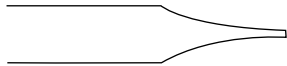
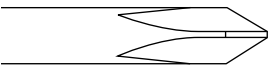
Destornilladores con mango de plástico

Tournevis avec manche en plastique

Giraviti con manico di plastica

TONTARRA

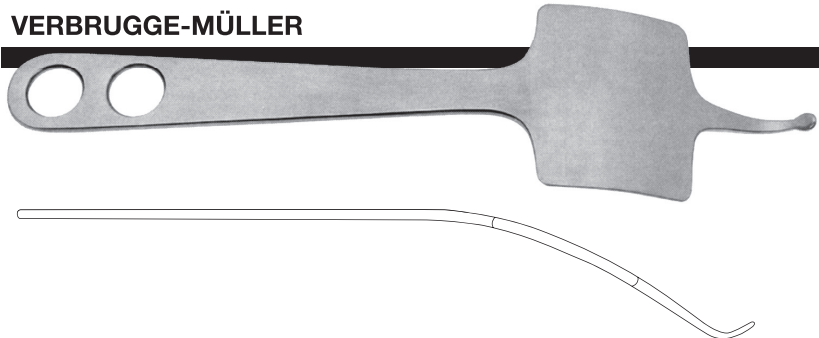
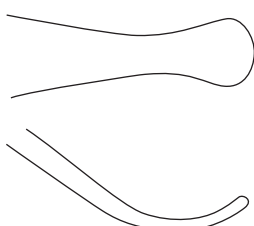
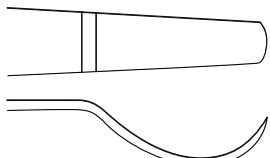
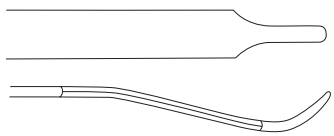
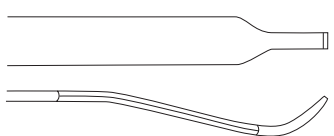
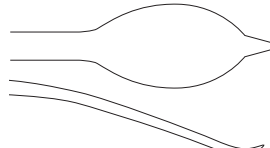
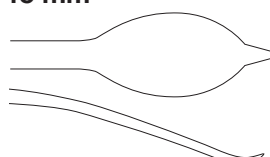


Art.Nr.	Beschreibung Description	Size	Spez.
190-330-25	Hexagonal Hexagonal Hexagonal Hexagonale Esagonale	25,0 cm; 10"	
			2,5 mm
190-331-25	Hexagonal Hexagonal Hexagonal Hexagonale Esagonale	25,0 cm; 10"	
			3,5 mm
190-332-25	Schlitz Flat tip Ranurada Lame pour vis à tête fendue Fessura	25,0 cm; 10"	
			6 mm
190-333-25	Kreuzschlitz phillips attachment Punta philips Lame philips Punta philips	25,0 cm; 10"	
			6 mm

190





Art.Nr.	Beschreibung Description	Size	Spez.
190-564-64	VERBRUGGE-MÜLLER 	25,0 cm; 10" 65 mm	
1/1			
190-570-07		15,0 cm; 5 7/8" 7 mm	
1/1			
190-571-06	MINI-HOHMANN 	16,0 cm; 6 2/8" 6 mm	
1/1			
190-571-08	MINI-HOHMANN 	16,0 cm; 6 2/8" 8 mm	
1/1			
190-571-15		16,0 cm; 6 2/8" 15 mm	
1/1			
190-571-16		12,0 cm; 4 6/8" 15 mm	
1/1			

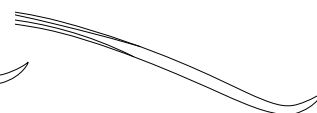
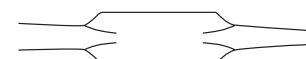


Art.Nr.	Beschreibung <i>Description</i>	Size	Spez.
190-572-08	HOHMANN	21,5 cm; 8 4/8" 8 mm	
1/1			
190-572-18	HOHMANN	23,5 cm; 9 2/8" 18 mm	
1/1			
190-572-43	HOHMANN	23,5 cm; 9 2/8" 43 mm	

1/1

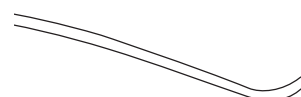


Art.Nr.	Beschreibung Description	Size	Spez.
190-573-22	HOHMANN	25,5 cm; 10" 22 mm	



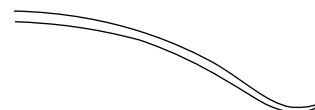
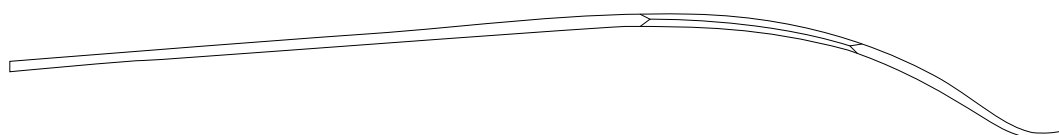
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190-573-24	HOHMANN	27,5 cm; 10 7/8" 24 mm	
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190-573-35	HOHMANN	29,0 cm; 11 3/8" 35 mm	
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1/1



Art.Nr.	Beschreibung Description	Size	Spez.
190-573-43	HOHMANN schmale Spitze narrow tip punta estrecha pointe étroite punta stretta	23,5 cm; 9 2/8" 43 mm	

1/1

190	190-574-22	LANGE-HOHMANN breite Spitze mit Längsrille wide tip with groove punta ancha con ranura pointe large avec rainure punta larga con scanalatura	25,0 cm; 10" 22 mm	
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1/1

Kniehaken
Knee Retractors

Separadores para rodilla
Ecarteurs pour le genou
Divaricatori per il ginocchio



Art.Nr.	Beschreibung Description	Size	Spez.
190-575-26	BLOUNT stumpf blunt romo mousse smusso	26,5 cm; 10 3/8" 38 mm	



1/1

190-576-26	BLOUNT	26,5 cm; 10 3/8" 47 mm	
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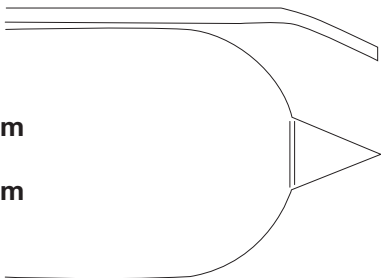
1/1



Art.Nr.	Beschreibung <i>Description</i>	Size	Spez.
	TAYLOR	16,0 cm; 6 2/8"	
	spitz sharp agudo pointu acuto		

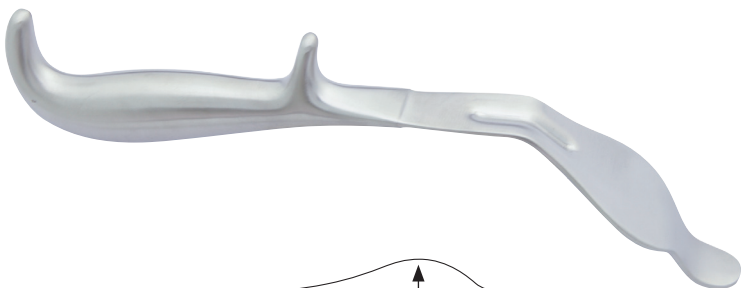


190-577-01	75 x 30 mm
190-577-02	100 x 30 mm

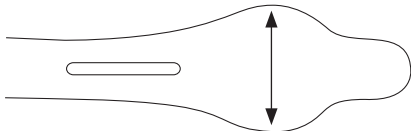


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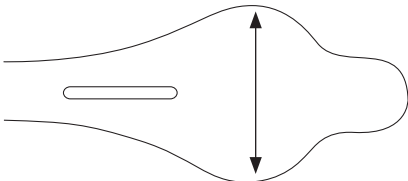
	BENNETT	23,5 cm; 9 2/8"
	stumpf blunt omo mousse smusso	



190-580-45	45 mm
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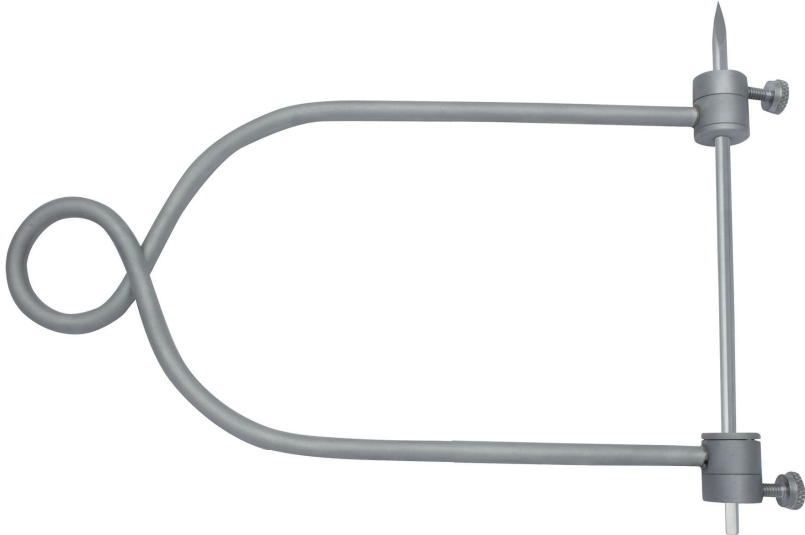


190-580-60	60 mm
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1/1



Art.Nr.	Beschreibung Description	Size	Spez.
BOEHLER			
			
190-600-01	für Arm for arm para brazo pour bras per il braccio	160 x 90 mm; 6 2/8" x 4 4/8"	
190-600-02	für Oberschenkel und Knie for femur and knee para fémur y rodilla pour fémur et genou per il femore ed il ginocchio	210 x 110 mm; 8 2/8" x 4 4/8"	
190-600-03	für Oberschenkel und Knie for femur and knee para fémur y rodilla pour fémur et genou per il femore ed il ginocchio	210 x 150 mm; 8" x 6"	



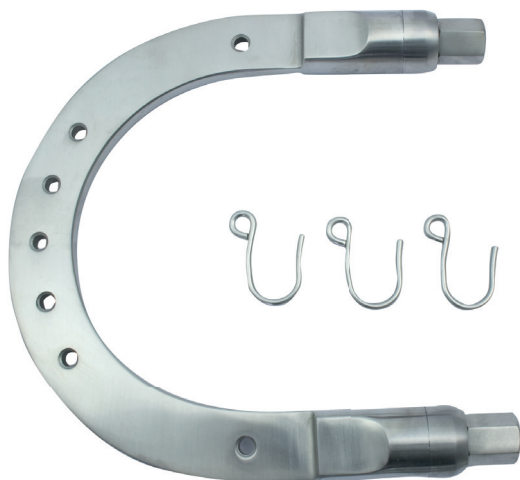
Art.Nr.	Beschreibung Description	Size	Spez.
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KIRSCHNER

mit 3 Zughaken (190-623-01) | with 3 traction hook (190-623-01)

con 3 ganchos de tracción (190-623-01) | avec 3 crochets de traction (190-623-01)

con 3 ganci di trazione (190-623-01)



190-620-01	95 x 70 mm	für Kinder for children para niños pour enfants per bambini
190-620-03	105 x 105 mm	für Hand- und Fußgelenk for wrist and ankle para muñeca y tobillo pour poignet et articulation du pied per polso e caviglia
190-620-04	120 x 120 mm	für Ellenbogen for elbow para codo pour coude per il gomito
190-620-06	155 x 155 mm	für Knie for knee para rodilla pour genou per il ginocchio
190-620-07	200 x 155 mm	für Oberschenkel for femur para fémur pour fémur per il femore

190-620-90	Spannschlüssel Wire strainer Tensor de taladros filiformes Tendeur de broches Chiave per mandrino	18,5 cm; 7 7/8"
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Art.Nr.	Beschreibung Description	Size	Spez.
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KIRSCHNER

mit 3 Zughaken (190-623-01) | with 3 traction hook (190-623-01)

con 3 ganchos de tracción (190-623-01) | avec 3 crochets de traction (190-623-01)

con 3 ganci di trazione (190-623-01)



190-622-10 185 mm; 7 2/8"

190-622-20 265 mm; 10 4/8"

KIRSCHNER

mit 3 Zughaken (190-623-01) | with 3 traction hook (190-623-01)

con 3 ganchos de tracción (190-623-01) | avec 3 crochets de traction (190-623-01)

con 3 ganci di trazione (190-623-01)



190-625-13 180 x 100 mm

190-625-26 270 x 160 mm

190-623-01 KIRSCHNER

Zughaken für Extensionsbügel | Traction hook for extension bow

Gancho de tracción para estribos | Crochet de traction pour etriers | Gancio di trazione per archi



190-625-01 Gabelschlüssel Wrench

Llave de tuercas

Clé de serrage

Chiave per madreviti



20,0 cm; 8"



Art.Nr.	Beschreibung Description	Size	Spez.
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Drahtgeflecht für Finger

Wire mesh for fingers

Malla de alambre para dedos

Gaze de fil de métal

Maglia metallica per le dita



190-628-01 klein | small | pequeño | petit | piccolo

190-628-02 mittel | medium | mediano | moyen | mezzo

190-628-03 groß | big | grande | grande | grande

STEINMANN

Ø 4,0 mm



Trokarspitze | Trocar point

Punta de trócar | Pointe de trocart | Punta a trequarti



212-348-14 14,0 cm; 5 4/8"

212-348-16 16,0 cm; 6 2/8"

212-348-18 18,0 cm; 7"

212-348-20 20,0 cm; 8"



Trokar | trocar | trócar | trocart | trequarti



rund | round | redondo | ronde | rotonde



flach | flat | plano | plate | piatti

Verpackung - Etikett | Packing - Label

Tontarra Medizintechnik GmbH ist nicht der Hersteller der aufgeführten Knochennägel. Sie erhalten das Labeling des Originalherstellers.

Tontarra Medizintechnik GmbH is not the manufacturer of the illustrated Extension pins. You will receive the product with the labeling of the original manufacturer.



Art.Nr. Beschreibung | Description Size Spez.

KIRSCHNER



Trokar-rund | trocar-round | trócar-redondo | trocart-ronde | trequarti-rotonde

	60 mm; 2 4/8"	120 mm; 5"	140 mm; 5 4/8"	160 mm; 6 2/8"	310 mm; 12 2/8"
Ø 1,0 mm	212-501-10	212-504-10	212-505-10	212-506-10	212-508-10
Ø 1,2 mm	212-501-12	212-504-12	212-505-12	212-506-12	212-508-12
Ø 1,4 mm	212-501-14	212-504-14	212-505-14	212-506-14	212-508-14
Ø 1,5 mm	212-501-15	212-504-15	212-505-15	212-506-15	212-508-15
Ø 1,6 mm	212-501-16	212-504-16	212-505-16	212-506-16	212-508-16
Ø 1,8 mm	212-501-18	212-504-18	212-505-18	212-506-18	212-508-18
Ø 2,0 mm	212-501-20	212-504-20	212-505-20	212-506-20	212-508-20
Ø 2,2 mm	212-501-22	212-504-22	212-505-22	212-506-22	212-508-22
Ø 2,5 mm				212-506-25	212-508-25

Pack á 10 Stück | Box with 10 pieces | confección de 10 piezas | Box avec 10 pcs. | Box à 10 pezzi

KIRSCHNER



Trokar-flach | trocar-flat | trócar-plano | trocart-plate | trequarti-piatti

	60 mm; 2 4/8"	120 mm; 5"	140 mm; 5 4/8"	160 mm; 6 2/8"	310 mm; 12 2/8"
Ø 0,6 mm	212-511-06				
Ø 0,8 mm	212-511-08				
Ø 1,0 mm	212-511-10	212-514-10	212-515-10	212-516-10	212-518-10
Ø 1,2 mm	212-511-12	212-514-12	212-515-12	212-516-12	212-518-12
Ø 1,4 mm	212-511-14	212-514-14	212-515-14	212-516-14	212-518-14
Ø 1,5 mm	212-511-15	212-514-15	212-515-15	212-516-15	212-518-15
Ø 1,6 mm	212-511-16	212-514-16	212-515-16	212-516-16	212-518-16
Ø 1,8 mm	212-511-18	212-514-18	212-515-18	212-516-18	212-518-18
Ø 2,0 mm	212-511-20	212-514-20	212-515-20	212-516-20	212-518-20
Ø 2,2 mm	212-511-22	212-514-22	212-515-22	212-516-22	212-518-22
Ø 2,5 mm				212-516-25	212-518-25

Knochennägel; Bohrdratsspender Extension Pins; K-Wire Dispensers

Clavos de extensión; Dispensades para brocas filiformes
Clous à os; Distributeur de broches filiformes
Chiodi per ossa; Distributore per fili

TONTARRA



Art.Nr. Beschreibung | Description Size Spez.

KIRSCHNER



Trokar-Trokar | trocar-trocar | trócar-trócar | trocart-trocart | trequarti-trequarti

	60 mm; 2 4/8"	120 mm; 5"	140 mm; 5 4/8"	160 mm; 6 2/8"	310 mm; 12 2/8"
Ø 0,6 mm	212-521-06	212-524-06			
Ø 0,8 mm	212-521-08	212-524-08	212-525-08		
Ø 1,0 mm	212-521-10	212-524-10	212-525-10	212-526-10	212-528-10
Ø 1,2 mm	212-521-12	212-524-12	212-525-12	212-526-12	212-528-12
Ø 1,4 mm	212-521-14	212-524-14	212-525-14	212-526-14	212-528-14
Ø 1,5 mm	212-521-15	212-524-15	212-525-15	212-526-15	212-528-15
Ø 1,6 mm	212-521-16	212-524-16	212-525-16	212-526-16	212-528-16
Ø 1,8 mm	212-521-18	212-524-18	212-525-18	212-526-18	212-528-18
Ø 2,0 mm	212-521-20	212-524-20	212-525-20	212-526-20	212-528-20
Ø 2,2 mm	212-521-22	212-524-22		212-526-22	212-528-22
Ø 2,5 mm	212-521-25	212-524-25	212-525-25	212-526-25	212-528-25

Pack á 10 Stück | Box with 10 pieces | Bonfección de 10 piezas | Box avec 10 pcs. | Box à 10 pezzi

VICKERS



	Ø Drähte Ø Wires Ø Brocas Ø Broches Ø Fili	Drahtlänge Wire lenght Longitud brocas Longueur de broches Lunghezza fili	
212-596-10	1,0 / 1,2 / 1,4 / 1,6 mm	10,0 cm	12,0 cm; 4 6/8"
212-596-15	1,0 / 1,2 / 1,4 / 1,6 mm	16,0 cm	18,5 cm; 7 2/8"
212-596-31	1,0 / 1,2 / 1,4 / 1,6 mm	31,0 cm	35,0 cm; 14"
212-598-15	1,8 / 2,0 / 2,2 / 2,5 mm	16,0 cm	18,5 cm; 7 2/8"
212-598-31	1,8 / 2,0 / 2,2 / 2,5 mm	31,0 cm	35,0 cm; 14"

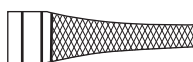
Flachzangen
Flat Nose Pliers
 Alicates de pico plano
 Pinces plates
 Tenaglie piatte



Art.Nr.	Beschreibung Description	Size	Spez.
	parallel fassend parallel grip acción paralela action parallèle afferramento parallelo	18,0 cm; 7 1/8"	TC



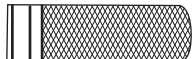
190-740-18



190-741-18



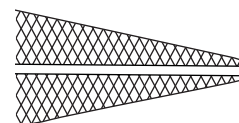
190-742-18



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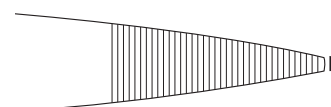
190-752-16	HACKSTOCK	16,0 cm; 6 2/8"
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mit Längsrille | with groove
 con ranura longitudinal | avec rainure longitudinale | con scanalatura longitudinale



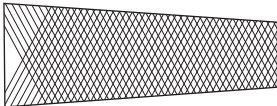
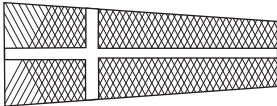
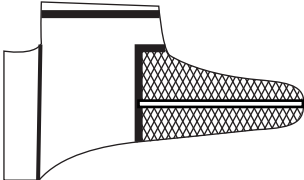
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190-753-19	spitzes Maul sharp jaw boca aguda mors pointu morso acuto	19,0 cm; 7 4/8"
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Art.Nr.	Beschreibung Description	Size	Spez.
	flaches Maul flat jaw boca plana mors plat morso piatto	17,0 cm; 6 6/8"	
190-755-01	gerieft serrated estriada strié striata		
190-755-02	mit Kreuzrille with crosswise groove con ranura en forma de cruz avec rainures croisés con scanalatura a croce		
190-757-15	Kombinationszange Combi-Flat Nose Plier Combi-Alicate Combi-Pince Combi-Pinza	15,0 cm; 5 7/8"	



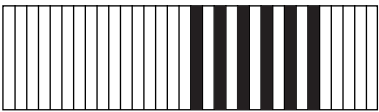
Art.Nr.	Beschreibung Description	Size	Spez.
	parallel fassend parallel grip acción paralela action parallèle afferramento parallelo	18,0 cm; 7 1/8"	
190-760-18			
190-761-18			
190-762-18			
1/1			
190-763-19		19,0 cm; 7 4/8"	
1/1			
190-764-14		14,0 cm; 5 3/8"	
1/1			

Tonnenzangen; Parallelfasszangen
Vise Grips; Parallel Pliers

Alicates de pico plano
Pinces plates
Tenaglie piatte

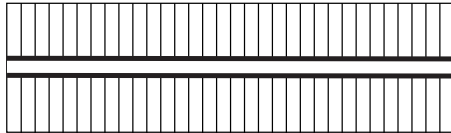
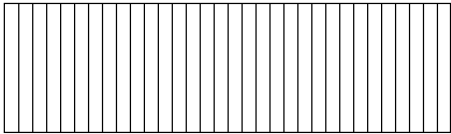


Art.Nr.	Beschreibung Description	Size	Spez.
190-765-18		18,0 cm; 7 1/8"	



1/1

190-766-18		18,5 cm; 7 2/8"	
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1/1

Drahtkneifzangen Wire Cutting Pliers

Alicates para cortar alambre

Pinces à couper le fil

Tenaglie tagliafili

TONTARRA



Art.Nr.	Beschreibung Description	Size	Spez.
190-768-18	für weiche Drähte bis Ø 2,4 mm for soft wires up to Ø 2,4 mm para alambres blandos hasta Ø 2,4 mm pour fils mous jusqu'a Ø 2,4 mm per fili morbidi fino a Ø 2,4 mm für harte Drähte bis Ø 1,8 mm for hard wires up to Ø 1,8 mm para alambres duros hasta Ø 1,8 mm pour fils durs jusqu'a Ø 1,8 mm per fili metallici duri fino Ø 1,8 mm	18,5 cm; 7 2/8" 13,5 mm	
190-771-16	für weiche Drähte bis Ø 2,2 mm for soft wires up to Ø 2,2 mm para alambres blandos hasta Ø 2,2 mm pour fils mous jusqu'a Ø 2,2 mm per fili morbidi fino a Ø 2,2 mm für harte Drähte bis Ø 2,0 mm for hard wires up to Ø 2,0 mm para alambres duros hasta Ø 2,0 mm pour fils durs jusqu'a Ø 2,0 mm per fili metallici duri fino Ø 2,0 mm	16,0 cm; 6 2/8" 18,0 mm	
190-770-15	für weiche Drähte bis Ø 2,0 mm for soft wires up to Ø 2,0 mm para alambres blandos hasta Ø 2,0 mm pour fils mous jusqu'a Ø 2,0 mm per fili morbidi fino a Ø 2,0 mm für harte Drähte bis Ø 1,2 mm for hard wires up to Ø 1,2 mm para alambres duros hasta Ø 1,2 mm pour fils durs jusqu'a Ø 1,2 mm per fili metallici duri fino Ø 1,2 mm	15,0 cm; 5 7/8" 14,5 mm	TC

Seitenschneider Wire Cutting Pliers

Alicates para cortar alambre

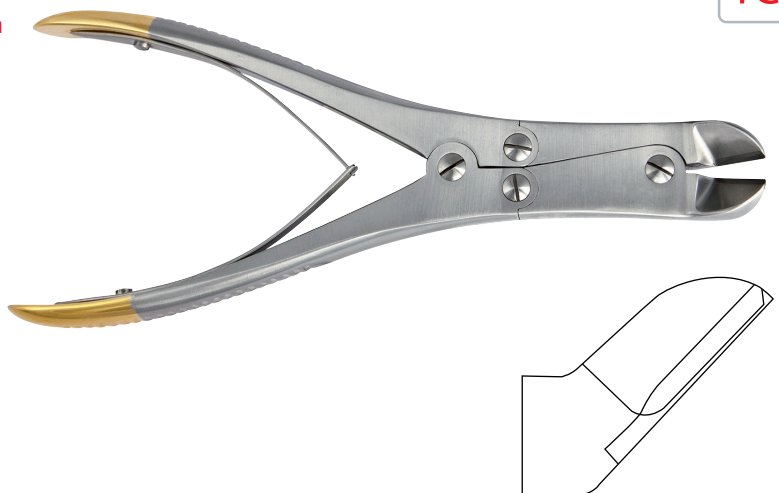
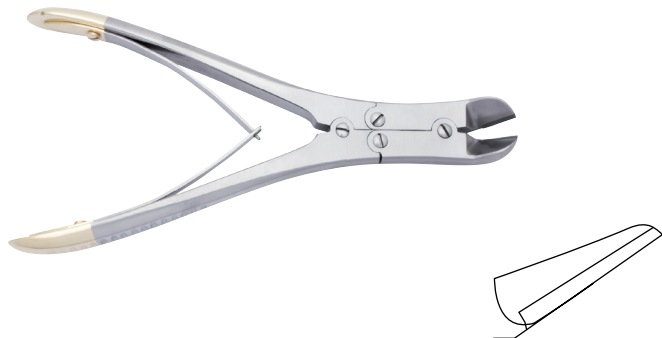
Pinces à couper le fil

Tenaglie tagliafili

TONTARRA



Art.Nr.	Beschreibung Description	Size	Spez.
190-772-18	für weiche Drähte bis Ø 2,0 mm for soft wires up to Ø 2,0 mm para alambres blandos hasta Ø 2,0 mm pour fils mous jusqu'a Ø 2,0 mm per fili morbidi fino a Ø 2,0 mm für harte Drähte bis Ø 1,5 mm for hard wires up to Ø 1,5 mm para alambres duros hasta Ø 1,5 mm pour fils durs jusqu'a Ø 1,5 mm per fili metallici duri fino Ø 1,5 mm	17,5 cm; 6 7/8" 10,0 mm	TC
190-773-17	für weiche Drähte bis Ø 2,0 mm for soft wires up to Ø 2,0 mm para alambres blandos hasta Ø 2,0 mm pour fils mous jusqu'a Ø 2,0 mm per fili morbidi fino a Ø 2,0 mm für harte Drähte bis Ø 1,7 mm for hard wires up to Ø 1,7 mm para alambres duros hasta Ø 1,7 mm pour fils durs jusqu'a Ø 1,7 mm per fili metallici duri fino Ø 1,7 mm	17,0 cm; 6 6/8"	TC
190-773-22	für weiche Drähte bis Ø 2,8 mm for soft wires up to Ø 2,8 mm para alambres blandos hasta Ø 2,8 mm pour fils mous jusqu'a Ø 2,8 mm per fili morbidi fino a Ø 2,8 mm für harte Drähte bis Ø 2,2 mm for hard wires up to Ø 2,2 mm para alambres duros hasta Ø 2,2 mm pour fils durs jusqu'a Ø 2,2 mm per fili metallici duri fino Ø 2,2 mm	23,0 cm; 9"	TC



1/1

1/1

Seitenschneider; Kopfschneider Wire Cutting Pliers; Wire Cutter Front Action

Alicates para cortar alambre; Alicates frontal para cortar alambre

Pinces à couper le fil; Pinces coupantes frontales

Tenaglie tagliafili; Tenaglie tagliafili frontali

TONTARRA



Art.Nr.	Beschreibung Description	Size	Spez.
190-774-23	für weiche Drähte bis Ø 3,0 mm for soft wires up to Ø 3,0 mm para alambres blandos hasta Ø 3,0 mm pour fils mous jusqu'a Ø 3,0 mm per fili morbidi fino a Ø 3,0 mm für harte Drähte bis Ø 2,2 mm for hard wires up to Ø 2,2 mm para alambres duros hasta Ø 2,2 mm pour fils durs jusqu'a Ø 2,2 mm per fili metallici duri fino Ø 2,2 mm	23,0 cm; 9"	TC
190-775-47	für harte Drähte und Schrauben bis Ø 6,0 mm for hard wires and screws up to Ø 6,0 mm para alambres duros hasta Ø 6,0 mm pour fils durs jusqu'a Ø 6,0 mm per fili duri fino a Ø 6,0 mm	47,0 cm; 17 3/4"	
190-776-26	für weiche Drähte bis Ø 3,2 mm for soft wires up to Ø 3,2 mm para alambres blandos hasta Ø 3,2 mm pour fils mous jusqu'a Ø 3,2 mm per fili morbidi fino a Ø 3,2 mm für harte Drähte bis Ø 2,5 mm for hard wires up to Ø 2,5 mm para alambres duros hasta Ø 2,5 mm pour fils durs jusqu'a Ø 2,5 mm per fili metallici duri fino Ø 2,5 mm	26,0 cm; 10 2/8"	
190-776-56	für harte Drähte und Schrauben bis Ø 6,0 mm for hard wires and screws up to Ø 6,0 mm para alambres duros hasta Ø 6,0 mm pour fils durs jusqu'a Ø 6,0 mm per fili duri fino a Ø 6,0 mm	56,0 cm; 22"	

1/1

Drahtspanner; Drahtumföhrungsnadeln
Wire Tighteners; Wire Guides

Tensor cierra-hilo; Aguja­pasa-hilo
Tendeur serre-fil; Aiguilles passe-fils
Strumento tendifili; Aghi passafili

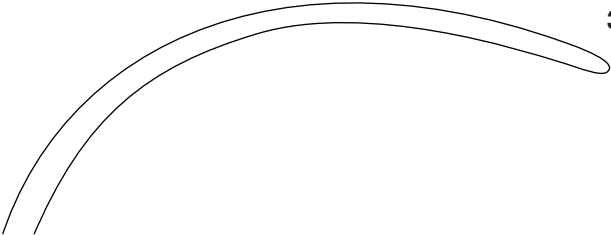


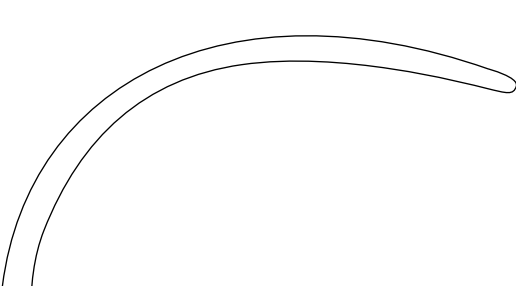
Art.Nr.	Beschreibung Description	Size	Spez.
190-780-21	LOUTE	21,0 cm; 8 2/8"	

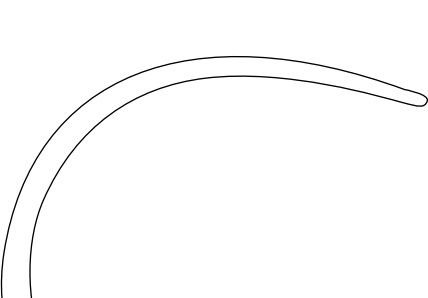


DEMEL



190-781-01	Fig. 1	groß big grande grande grande		31,0 cm; 12 2/8"
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190-781-02	Fig. 2	mittel medium mediano moyen medio		29,0 cm; 11 3/8"
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190-781-03	Fig. 3	klein small pequeño petit piccolo		28,0 cm; 11"
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Art.Nr.	Beschreibung Description	Size	Spez.
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Rolle

Coil

Rollo

En rouleaux

Rotolo

mit 10,0 m | of 10,0 m | de 10,0 m | de 10,0 m | di 10,0 m



190-795-02 Ø 0,2 mm

190-795-03 Ø 0,3 mm

190-795-04 Ø 0,4 mm

190-795-05 Ø 0,5 mm

190-795-06 Ø 0,6 mm

190-795-07 Ø 0,7 mm

190-795-08 Ø 0,8 mm

190-795-09 Ø 0,9 mm

190-795-10 Ø 1,0 mm

190-795-12 Ø 1,2 mm

190-795-15 Ø 1,5 mm

