



**TONTARRA Medizintechnik GmbH**  
Surgical Instruments in Demand

### **HF-Chirurgie Zubehör**

HF-surgical accessories  
HF-chirurgical accessoires  
HF-quirúrgico accesorios  
HF-accessori per elettrochirurgia

## Über uns | About us



Chirurgische Instrumente ‚Made by TONTARRA‘ stehen seit mehr als 40 Jahren für höchste Qualität und Präzision. Dieser Erfolg und den weltweit guten Ruf, den wir uns durch den hohen Standard unserer Produkte erworben haben, basieren auf Innovationskraft, Leistungsbereitschaft und dem kompromisslosen Bekenntnis zu unserer Tradition.

Die Anerkennung durch unsere Kunden und Partner im In- und Ausland waren und sind uns stets ein Ansporn neben dem Bewährten auch die Herausforderung für neue Problemlösungen zu suchen und sich ihnen erfolgreich zu stellen.

Voraussetzungen für die marktrechte Umsetzung von der ursprünglichen Idee zum medizintechnischen Präzisionsinstrumentarium sind unsere modernste Produktionsstätte, die Kreativität und das Engagement unserer Mitarbeiter sowie ein Produktionsstandort, der seit mehr als einem Jahrhundert synonym für innovative und patientenorientierte Medizintechnik steht.

For more than 40 years TONTARRA has been recognized as a leader in quality and precision manufacturing of surgical instruments by continually implementing the latest advances in technology and production.

This success and the international recognition of the surgical skillfulness and accomplishment of TONTARRA Medizintechnik GmbH are based on our proven commitment to medical innovation, mastery in manufacturing and not least a strong focus on our continuing tradition of excellence.

The confidence in our medical programs and surgical lines as expressed for more than 40 years by our international customers and partners are a driving force to face and meet new challenges in surgical instrumentation.

Indispensable ‘tools’ for maturing new ideas into surgical instruments of highest precision include our state-of-the-art manufacturing facility and production processes and especially the ingenuity and strong commitment of our entire team.



## Elektroden | electrode

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### Pflegehinweis

Die HF-Kabel, Adapter und Handgriffe dürfen nicht in einem Ultraschallbad gereinigt werden. Die HF-Kabel, Adapter und Handgriffe samt Elektroden dürfen nicht in Heißluftsterilisatoren sterilisiert werden. Unmittelbar nach der Anwendung alle Teile mit alkoholhaltigem Oberflächendesinfektionsmittel abwischen. Das HF-Kabel oder der Handgriff kann auch alternativ in einer kombinierte Reinigungs- und Desinfektionsmittellösung eingelegt werden, was aber seine Lebenszeit durch Oxidation der Kontakte oder Auskristallisationen in den Steckern verringern kann. Die Hinweise der Chemiehersteller bitte beachten. Danach Kabel, Stecker, Griffstück oder Elektrode mit sterilisiertem Wasser gründlich spülen. Die Produkte bei 134 °C dampfsterilisieren. Konkrete Empfehlungen siehe gesondertes Blatt welches dem Artikel beigelegt ist. Oder siehe Katalog Seite 86.

### Care instructions

Do not clean HF cables, adapters or electrode handles in an ultrasound bath. Do not sterilise HF cables, adapters or electrode handles and electrodes in hot air sterilisers. After use, wipe HF cable with an alcoholic surface disinfectant immediately. The HF cable or the handle may also be immersed in a combined cleaning and disinfecting solution; in this case, the service life may then be reduced due to oxidation of the contacts and crystallisation in the plugs. Observe the instructions of the chemical manufacturer and make sure that the agents used are compatible. Then rinse cable, connectors, pencil or electrode thoroughly with sterilised water. For concrete recommendations see separate instruction sheet which is included to the item or refer to catalogue page 86.

### Indications d'entretien

Ne pas nettoyer les câbles HF, adaptateurs et manches dans un bain à ultrasons. Ne pas stériliser les câbles HF, adaptateurs et manches avec leurs électrodes dans des stérilisateurs à air chaud. Immédiatement après utilisation, essuyer chaque élément avec un désinfectant de surface contenant de l'alcool. Vous pouvez également tremper le câble HF ou le manche dans une solution combinant nettoyant et désinfectant, mais cela altèrera leur durée de vie en raison de l'oxydation des contacts ou des cristallisations dans les fiches. Veuillez respecter les indications du fabricant chimique. Rincer ensuite soigneusement câble, fiche, manche ou électrode avec de l'eau stérilisée. Stériliser les produits à la vapeur à 134°C. Veuillez lire les recommandations annexes dans la fiche jointe à l'article. Ou consultez le catalogue page 86.

### indicación de cuidado

El cable HF, el adaptador y los asideros no se pueden limpiar en un baño ultrasónico. El cable HF, el adaptador y los asideros junto con los electrodos no se pueden esterilizar en esterilizadores de aire caliente. Todas las partes se limpian con desinfectantes para superficies con contenido de alcohol inmediatamente después de la utilización. El cable HF o el asidero puede alternativamente también colocarse en una solución combinada de detergente y desinfectante, lo cual a su vez puede reducir la vida útil por oxidación de los contactos o florescencias. Observar las indicaciones del fabricante químico. A continuación, lavar bien el cable, el enchufe, la empuñadura o los electrodos con agua esterilizada. Esterilizar el producto a 134 °C con vapor. Recomendaciones concretas se pueden ver en una hoja especial adjunta al artículo. O ver el catálogo, página 86.

### istruzioni per la manutenzione

I cavi HF, l'adattatore e le impugnature non devono essere puliti in un bagno ultrasonico. I cavi HF, l'adattatore e le impugnature, compresi gli elettroodi, non devono essere sterilizzati in sterilizzatori ad aria calda. Subito dopo l'uso detergere tutte le parti con un disinfettante per superfici contenente alcol. Il cavo HF o l'impugnatura possono essere anche depositati in una soluzione disinfettante e detergente combinata, cosa che può però diminuire la loro durata per ossidazione dei contatti o cristallizzazioni nelle spine. Osservare le indicazioni del produttore di sostanze chimiche. Sciacquare in seguito accuratamente cavi, spine, impugnatura o elettrodo con acqua sterilizzata. Sterilizzare i prodotti a vapore con una temperatura intorno a 134°C. Per consigli concreti si veda il foglio separato, allegato all'articolo oppure si veda il catalogo a pagina 86.



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-010-04	<b>Messerelektrode</b> knife electrode électrode couteau cuchillo electrodo elettrodo a lama	5	Umax: 4 KVp  4mm 3,3 x 25mm
280-015-04	<b>Messerelektrode lanzettförmig abgewinkelt; feines Blatt</b> knife electrode lancet shaped; angled; thin blade électrode couteau en forme de lancette; coudée; fin cuchillo electrodo lanceta; angulada; fino elettrodo angolato a lama fine	5	Umax: 4 KVp  4mm 1,6 x 19mm
280-020-04	<b>Messerelektrode lanzettförmig; gerade; feines Blatt</b> knife electrode lancet shaped; straight; thin blade électrode couteau en forme de lancette; droite; fin cuchillo electrodo lanceta; recta; fino elettrodo retto a lama fine	5	Umax: 4 KVp  4mm 1,6 x 19mm
280-025-04	<b>Messerelektrode lanzettförmig; gerade; starkes Blatt</b> knife electrode lancet shaped; straight; strong blade électrode couteau en forme de lancette; droite; forte cuchillo electrodo lanceta; recta; fuerte elettrodo retto a lama; forte	5	Umax: 4 KVp  4mm 2,5 x 25mm
280-030-04	<b>Spattelektrode; ovale Form</b> cutting electrode; oval shape électrode spatule; ovale espátula electrodo; ovale elettrodo a spatola; ovale	5	Umax: 4 KVp  4mm 3,0 x 24mm
280-035-04	<b>Messerelektrode; seitliche Spitze</b> knife electrode; tip sidewise électrode couteau cuchillo electrodo elettrodo a lama	5	Umax: 4 KVp  4mm 3,3 x 24mm
280-040-04	<b>Spattelektrode; biegsam</b> cutting electrode; flexible électrode spatule; flexible espátula electrodo; flexible elettrodo a spatola; flessibile	5	Umax: 4 KVp  4mm 2,0 x 16mm

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-045-04	<b>Messerelektrode lanzettförmig; abgewinkelt</b> knife electrode lancet shaped; angled électrode couteau en forme de lancette; coudée cuchillo electrodo lanceta; angulada elettrodo angolato a lancetta	5	Umax: 4 KVp  4mm 1,5 x 17mm
280-050-04	<b>Messerelektrode lanzettförmig</b> knife electrode lancet shaped électrode couteau en forme de lancette cuchillo electrodo lanceta elettrodo retto a lancetta	5	Umax: 4 KVp  4mm 1,5 x 17mm
280-055-04	<b>Messerelektrode</b> knife electrode électrode couteau cuchillo electrodo elettrodo a spatola	5	Umax: 4 KVp  4mm 2,5 x 20mm
280-060-04	<b>Nadelelektrode mit Keramikisolation</b> needle electrode with ceramic isolation électrode aiguille; isolée en ceramic aguja electrodo; aislado con ceramica elettrodo ad ago con isolamento in ceramica	1	Umax: 4 KVp  4mm tungsten 0,5 x 5mm
280-065-04	<b>Nadelelektrode</b> needle electrode électrode aiguille aguja electrodo elettrodo ad ago	5	Umax: 4 KVp  4mm 0,5 x 23mm
280-070-04	<b>Nadelelektrode</b> needle electrode électrode aiguille aguja electrodo elettrodo ad ago	5	Umax: 4 KVp  4mm 0,8 x 23mm



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-075-04	<b>Nadelelektrode; isoliert</b> needle electrode; isolated électrode aiguille; isolée aguja electrodo; aislado elettrodo ad ago; isolato	5	Umax: 4 KVp
		4mm	0,5 x 15mm
280-080-04	<b>Nadelelektrode; isoliert</b> needle electrode; isolated électrode aiguille; isolée aguja electrodo; aislado elettrodo ad ago; isolato	5	Umax: 4 KVp
		4mm	0,7 x 15mm
280-085-04	<b>Nadelelektrode; isoliert</b> needle electrode; isolated électrode aiguille; isolée aguja electrodo; aislado elettrodo ad ago ; isolato	5	Umax: 4 KVp
		4mm	0,5 x 6mm
280-090-04	<b>Drahtschlingenelektrode</b> wire loop electrode électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 4 KVp
		4mm	Ø 5mm
280-095-04	<b>Drahtschlingenelektrode</b> wire loop electrode électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 4 KVp
		4mm	Ø 10mm
280-100-04	<b>Bandschlingenelektrode</b> ribbon loop electrode électrode anse à bande asa de cinta electrodo elettrodo ad ansa a nastro	5	Umax: 4 KVp
		4mm	Ø 12mm
280-105-04	<b>Bandschlingenelektrode</b> ribbon loop electrode électrode anse à bande asa de cinta electrodo elettrodo ad ansa a nastro	5	Umax: 4 KVp
		4mm	Ø 16mm

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-110-04	<b>Kugelelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp
		4mm	Ø 2mm
280-115-04	<b>Kugelelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp
		4mm	Ø 4mm
280-120-04	<b>Kugelelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp
		4mm	Ø 6mm
280-125-04	<b>Kugelelektrode; abgewinkelt</b> ball electrode; angled électrode boule; coudée bola electrodo; angulada elettrodo a sfera; angolato	5	Umax: 4 KVp
		4mm	Ø 2mm
280-130-04	<b>Kugelelektrode; abgewinkelt</b> ball electrode; angled électrode boule; coudée bola electrodo; angulada elettrodo a sfera; angolato	5	Umax: 4 KVp
		4mm	Ø 4mm



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-200-04	<b>Chirurgie-Elektroden Set bestehend aus:</b> surgical electrode set consisting of: Jeu d'électrodes de chirurgie consister de: surrido de electrodos de cirugia consiste de: set di elettrodi per la chirurgia consistente da:	1  280-070-04   280-015-04   280-115-04   280-095-04   280-010-04	
280-205-04	<b>Nadelektrode; isoliert; gerade</b> needle electrode; isolated; straight électrode aiguille; isolée; droite aguja electrodo; aislado; recta elettrodo retto ad ago; isolato	1  4mm tungsten 0,5 x 20mm	
280-210-04	<b>Nadelektrode; isoliert; abgewinkelt</b> needle electrode; isolated; angled électrode aiguille; isolée; coudée aguja electrodo; aislado; angulada elettrodo angolato ad ago; isolato	1  4mm tungsten 0,5 x 20mm	
280-215-04	<b>Nadelektrode; isoliert; gerade</b> needle electrode; isolated; straight électrode aiguille; isolée; droite aguja electrodo; aislado; recta elettrodo retto ad ago; isolato	1  4mm tungsten 0,5 x 40mm	
280-220-04	<b>Nadelektrode; isoliert; abgewinkelt</b> needle electrode; isolated; angled électrode aiguille; isolée; coudée aguja electrodo; aislado; angulada elettrodo angolato ad ago; isolato	1  4mm tungsten 0,5 x 40mm	
280-225-04	<b>Spatelektrode; gerade; ovale Form</b> cutting electrode; straight; oval shape électrode spatule; droite; ovale espátula electrodo; recta; oval elettrodo retto a spatola ovale	1  4mm 3,0 x 24mm	
280-230-04	<b>Nadelektrode; gerade</b> needle electrode; straight électrode aiguille; droite aguja electrodo; recta elettrodo retto ad ago	1  4mm 0,8 x 29mm	

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-235-04	<b>Drahtschlingenelektrode</b> wire loop electrode électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	1  4mm 100 mm Ø 5mm	
280-240-04	<b>Drahtschlingenelektrode</b> wire loop electrode électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	1  4mm 100 mm Ø 10mm	
280-245-04	<b>Kugelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	1  4mm 100 mm Ø 2mm	
280-250-04	<b>Kugelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	1  4mm 100 mm Ø 4mm	
280-255-04	<b>Kugelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	1  4mm 100 mm Ø 6mm	
280-260-04	<b>Nadelektrode</b> needle electrode électrode aiguille aguja electrodo elettrodo ad ago	1  4mm 100 mm 0,8 x 12mm	
280-265-04	<b>Nadelektrode</b> needle electrode électrode aiguille aguja electrodo elettrodo ad ago	1  4mm 100 mm 0,8 x 12mm	



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	Umax: 4 KVp
280-270-04	<b>Messerelektrode</b> <b>knife electrode</b> électrode couteau cuchillo electrodo elettrodo a lama	1	100 mm 4mm 2,4 x 10mm
280-275-04	<b>Messerelektrode; abgewinkelt</b> <b>knife electrode; angled</b> électrode couteau; coudée cuchillo electrodo; angulada elettrodo angolato a lama	1	100 mm 4mm 2,4 x 10mm
280-280-04	<b>Messerelektrode</b> <b>knife electrode</b> électrode couteau cuchillo electrodo elettrodo a lama	1	100 mm 4mm 3,3 x 25mm
280-285-04	<b>Messerelektrode; seitliche Spitze;</b> <b>knife electrode; tip sidewise</b> électrode couteau cuchillo electrodo elettrodo a lama	1	100 mm 4mm 3,3 x 20mm
280-290-04	<b>Messerelektrode</b> <b>knife electrode</b> électrode couteau cuchillo electrodo elettrodo a spatola	1	100 mm 4mm 2,4 x 20mm
280-295-04	<b>Messerelektrode lanzetttenförmig; feines Blatt</b> <b>knife electrode lancet shaped; thin blade</b> électrode couteau en forme de lancette; fin cuchillo electrodo rombico; fino elettrodo a lancetta; fine	1	100 mm 4mm 1,6 x 20mm
280-300-04	<b>Messerelektrode lanzetttenförmig; starkes Blatt</b> <b>knife electrode lancet shaped; strong blade</b> électrode couteau en forme de lancette; forte cuchillo electrodo rombico; fuerte elettrodo a lancetta; forte	1	100 mm 4mm 2,2 x 20mm

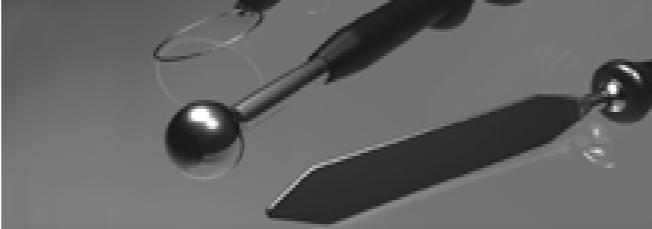
Art.Nr.	Beschreibung   Description	VPE   Unit	Umax: 4 KVp
280-305-04	<b>Spatelelektrode; biegsam</b> <b>cutting electrode; flexible</b> électrode spatule; flexible espátula electrodo; flexible elettrodo a spatola; flessibile	1	55 mm 4mm 2 x 16mm
280-310-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	120 mm 4mm 10 x 10mm
280-315-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	120 mm 4mm 15 x 15mm



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoclavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	Umax: 0,5 KVp
280-320-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    20 x 15mm
280-325-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    20 x 20mm
280-330-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    20 x 25mm
280-335-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    Ø 10mm

Art.Nr.	Beschreibung   Description	VPE   Unit	Umax: 0,5 KVp
280-340-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    Ø 15mm
280-345-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    Ø 20mm
280-350-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    120 mm                    Ø 25mm
280-355-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	
			4mm                    115 mm                    10 x 25mm



**Aktive monopolare Elektroden, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
280-360-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-380-04	<b>Elektrodenverlängerung; für 4mm Schaft</b> <b>electrode extension; for 4mm shaft</b> rallonge d'électrode; pour électrodes 4mm alargamiento para electrodos; para 4mm asta prolunga per elettrodo con attacco da 4mm	1	Umax: 4 KVp
280-365-04	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-385-04	<b>Elektrodenverlängerung; für 4mm Schaft</b> <b>electrode extension; for 4mm shaft</b> rallonge d'électrode; pour électrodes 4mm alargamiento para electrodos; para 4mm asta prolunga per elettrodo con attacco da 4mm	1	Umax: 4 KVp
280-370-04	<b>Koagulationsnadel; Schaft gewinkelt;</b> <b>coagulation needle; angled</b> électrode de coagulation; tige coudée electrodo para coagulación; asta angulada elettrodo ad ago; camicia angolata	1	Umax: 0,5 KVp	280-390-04	<b>Adapter; von 4mm auf 2,4mm</b> <b>adapter; from 4mm to 2,4mm</b> adaptateur; de 4mm à 2,4mm adaptador; de 4mm a 2,4mm adattatore; da 4mm a 2,4mm	1	Umax: 4 KVp
280-375-04	<b>Kugelelektrode; Schaft gewinkelt</b> <b>ball electrode; angled</b> électrode boule; tige coudée bola electrodo; asta angulada elettrodo a sfera; camicia angolata	1	Umax: 0,5 KVp	280-395-04	<b>Adapter; von 4mm auf 1,6mm</b> <b>adapter; from 4mm to 1,6mm</b> adaptateur; de 4mm à 1,6mm adaptador; de 4mm a 1,6mm adattatore; da 4mm a 1,6mm	1	Umax: 4 KVp



**Aktive monopolare Elektroden, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 2.4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-400-24	<b>Spatelektrode</b> <b>cutting electrode</b> électrode spatule espátula electrodo elettrodo a spatola	5	Umax: 4 KVp  2,4mm      2,5 x 20mm
280-405-24	<b>Messerektrode</b> <b>knife electrode</b> électrode couteau cuchillo electrodo elettrodo a lama	5	Umax: 4 KVp  2,4mm      2,5 x 20mm
280-410-24	<b>Kugelektrode</b> <b>ball electrode</b> électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp  2,4mm      Ø 2,0mm
280-415-24	<b>Kugelektrode</b> <b>ball electrode</b> électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp  2,4mm      Ø 4,0mm
280-420-24	<b>Kugelektrode</b> <b>ball electrode</b> électrode boule bola electrodo elettrodo a sfera	5	Umax: 4 KVp  2,4mm      Ø 6,0mm
280-425-24	<b>Kugelektrode; abgewinkelt</b> <b>ball electrode; angled</b> électrode boule; coudée bola electrodo; angulada elettrodo angolato a sfera	5	Umax: 4 KVp  2,4mm      Ø 2,0mm
280-430-24	<b>Kugelektrode; abgewinkelt</b> <b>ball electrode; angled</b> électrode boule; coudée bola electrodo; angulada elettrodo angolato a sfera	5	Umax: 4 KVp  2,4mm      Ø 4,0mm

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-435-24	<b>Drahtschlingenektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 4 KVp  2,4mm      Ø 5mm
280-440-24	<b>Drahtschlingenektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 4 KVp  2,4mm      Ø 10mm
280-445-24	<b>Drahtschlingenektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 4 KVp  2,4mm      Ø 14mm
280-450-24	<b>Bandschlingenektrode</b> <b>ribbon loop electrode</b> électrode anse à bande asa de cinta electrodo elettrodo ad ansa a nastro	5	Umax: 4 KVp  2,4mm      Ø 10mm
280-455-24	<b>Bandschlingenektrode</b> <b>ribbon loop electrode</b> électrode anse à bande asa de cinta electrodo elettrodo ad ansa a nastro	5	Umax: 4 KVp  2,4mm      Ø 14mm
280-460-24	<b>Nadelektrode</b> <b>needle electrode</b> électrode aiguille aguja electrodo elettrodo ad ago	5	Umax: 4 KVp  2,4mm      0,5 x 20mm
280-465-24	<b>Nadelektrode</b> <b>needle electrode</b> électrode aiguille aguja electrodo elettrodo ad ago	5	Umax: 4 KVp  2,4mm      0,7 x 20mm



**Aktive monopolare Elektroden, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 2.4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-470-24	<b>Nadelektrode; isoliert; gerade</b> needle electrode; isolated; straight  électrode aiguille; isolée; droite aguja electrodo; aislado; recta elettrodo retto ad ago; isolato	1	Umax: 1 KVp  2,4mm tungsten 0,5 x 20mm
280-475-24	<b>Nadelektrode; isoliert; abgewinkelt</b> needle electrode; isolated; angled  électrode aiguille; isolée; coudée aguja electrodo; aislado; angulada elettrodo angolato ad ago; isolato	1	Umax: 1 KVp  2,4mm tungsten 0,5 x 20mm
280-480-24	<b>Nadelektrode mit Keramikisolation; gerade</b> needle electrode with ceramic isolation; straight  électrode aiguille; isolée en ceramic aguja electrodo; aislado con ceramica elettrodo ad ago con isolamento in ceramica	1	Umax: 1 KVp  2,4mm tungsten 0,5 x 5mm
280-485-24	<b>Kugelektrode</b> ball electrode  électrode boule bola electrodo elettrodo a sfera	1	Umax: 4 KVp  90 mm Ø 2,0mm
280-490-24	<b>Kugelektrode</b> ball electrode  électrode boule bola electrodo elettrodo a sfera	1	Umax: 4 KVp  90 mm Ø 4,0mm

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-495-24	<b>Spatelektrode</b> cutting electrode  électrode spatule espátula electrodo elettrodo a spatola	1	Umax: 4 KVp  2,4mm 90 mm 2,5 x 20mm
280-500-24	<b>Messerelektrode</b> knife electrode  électrode couteau cuchillo electrodo elettrodo a lama	1	Umax: 4 KVp  2,4mm 90 mm 2,5 x 20mm
280-505-24	<b>Nadelektrode</b> needle electrode  électrode aiguille aguja electrodo elettrodo ad ago	1	Umax: 4 KVp  2,4mm 90 mm 0,5 x 12mm
280-510-24	<b>Nadelektrode</b> needle electrode  électrode aiguille aguja electrodo elettrodo ad ago	1	Umax: 4 KVp  2,4mm 90 mm 0,7 x 12mm



**Aktive monopolare Elektroden, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 2.4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
280-525-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-540-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp
	2,4mm	105 mm	10 x 25mm		2,4mm	110 mm	10 x 10mm
280-530-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-545-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp
	2,4mm	105 mm	15 x 25mm		2,4mm	110 mm	15 x 15mm
280-535-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-550-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp
	2,4mm	105 mm	20 x 25mm		2,4mm	110 mm	20 x 15mm
280-555-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-560-24	<b>Schlingenelektrode</b> <b>loop electrode</b> électrode anse asa electrodo elettrodo ad ansa	1	Umax: 4 KVp
	2,4mm	110 mm	20 x 20mm		2,4mm	110 mm	20 x 25mm



**Aktive monopolare Elektroden, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Active monopolar electrodes, reusable, 2.4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
280-565-24	<b>Schlingenelektrode</b> loop electrode électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-515-24	<b>Elektrodenverlängerung für 2,4mm Schaft</b> electrode extension for 2,4mm shaft rallonge d'électrode pour électrodes 2,4mm alargamiento para electrodos para 2,4mm asta prolonga per elettrodo con attacco da 2,4mm	1	Umax: 4 KVp
							
280-570-24	<b>Schlingenelektrode</b> loop electrode électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp	280-520-24	<b>Elektrodenverlängerung für 2,4mm Schaft</b> electrode extension for 2,4mm shaft rallonge d'électrode pour électrodes 2,4mm alargamiento para electrodos para 2,4mm asta prolonga per elettrodo con attacco da 2,4mm	1	Umax: 4 KVp
							
280-575-24	<b>Schlingenelektrode</b> loop electrode électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp				
							
280-580-24	<b>Schlingenelektrode</b> loop electrode électrode anse asa electrodo elettrodo ad ansa	1	Umax: 0,5 KVp				
							



**Monopolare Elektroden für Dental und Kosmetik, wiederverwendbar, Schaft 1,6 mm**  
**Monopolar electrodes for dental and cosmetic applications, reusable, shaft 1,6 mm**

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-600-16	<b>Drahtschlingenelektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 1 KVp  1,6mm      Ø 3mm
280-605-16	<b>Drahtschlingenelektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 1 KVp  1,6mm      Ø 5mm
280-610-16	<b>Drahtschlingenelektrode</b> <b>wire loop electrode</b> électrode anse à fil asa de alambre electrodo elettrodo ad ansa di filo metallico	5	Umax: 1 KVp  1,6mm      Ø 8mm
280-615-16	<b>Nadelelektrode</b> <b>needle electrode</b> électrode aiguille aguja electrodo elettrodo ad ago	5	Umax: 1 KVp  1,6mm      Ø 0,2mm
280-620-16	<b>Nadelelektrode; abgewinkelt</b> <b>needle electrode; angled</b> électrode aiguille; coudée aguja electrodo; angulada elettrodo ad ago; angolato	5	Umax: 1 KVp  1,6mm      Ø 0,2mm
280-625-16	<b>Koagulations-Nadelelektrode; abgewinkelt</b> <b>coagulation needle-electrode; angled</b> électrode aiguille pour coagulation; coudée electrodo para coagulación; angulada elettrodo per coagulazione; angolato	5	Umax: 1 KVp  1,6mm      Ø 1,7mm

Art.Nr.	Beschreibung   Description	VPE   Unit	
280-630-16	<b>Kugelelektrode; abgewinkelt</b> <b>ball electrode; angled</b> électrode boule; coudée bola electrodo; angulada elettrodo a sfera; angolato	5	Umax: 1 KVp  1,6mm      Ø 1,7mm
280-635-16	<b>Kugelelektrode</b> <b>ball electrode</b> électrode boule bola electrodo elettrodo a sfera	5	Umax: 1 KVp  1,6mm      Ø 1,7mm
280-640-16	<b>Kugelelektrode; abgewinkelt</b> <b>ball electrode; angled</b> électrode boule; coudée bola electrodo; angulada elettrodo a sfera; angolato	5	Umax: 1 KVp  1,6mm      Ø 3mm
280-645-16	<b>Kugelelektrode</b> <b>ball electrode</b> électrode boule bola electrodo elettrodo a sfera	5	Umax: 1 KVp  1,6mm      Ø 3mm
280-650-16	<b>Koagulations-und Fulgurationselektrode</b> <b>coagulating and fulgurating electrode</b> électrode de coagulation et de fulguration electrodo para coagulación y fulguración elettrodo per coagulazione e folgorazione	5	Umax: 1 KVp  1,6mm



# Elektroden | electrode

**Elektroden für die plastische Chirurgie, monopolar, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Electrodes for the plastic surgery, monopolar, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
281-010-04	<b>Nadelelektrode; biegsam</b> needle electrode; flexible électrode aiguille; flexible aguja electrodo; flexible elettrodo ad ago; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,25 x 20mm	
281-015-04	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo triangular; flexible elettrodo in filo metallico triangolare; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,2 x 7mm	
281-020-04	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo; triangular; flexible elettrodo in filo metallico triangular; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,2 x 9mm	
281-025-04	<b>Drahtschlingenelektrode rhombusförmig; biegsam</b> wire loop electrode rhombic shaped; flexible électrode anse à fil losange; flexible asa de alambre electrodo; rómbico; flexible elettrodo in filo metallico a rombo; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,2mm	
281-030-04	<b>Drahtschlingenelektrode; biegsam</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,2 x Ø 5mm	
281-035-04	<b>Drahtschlingenelektrode; biegsam</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5	Umax: 2 KVp
		4mm tungsten 0,2 x Ø 8mm	



**Elektroden für die plastische Chirurgie, monopolar, wiederverwendbar, 2,4 mm, autoclavierbar 134°C**  
**Electrodes for the plastic surgery, monopolar, reusable, 2.4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
281-040-04	<b>Kugelelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5	Umax: 2 KVp	281-100-24	<b>Nadelelektrode; biegsam</b> needle electrode; flexible électrode aiguille; flexible aguja electrodo; flexible elettrodo ad ago; flessibile	5	Umax: 2 KVp
281-045-04	<b>Kugelelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5	Umax: 2 KVp	281-105-24	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo triangular; flexible elettrodo in filo metallico triangolare; flessibile	5	Umax: 2 KVp
281-050-04	<b>Spatelelektrode; biegsam</b> cutting electrode; flexible électrode spatule; flexible espátula electrodo; flexible elettrodo a spatola; flessibile	5	Umax: 2 KVp	281-110-24	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo triangular; flexible elettrodo in filo metallico triangolare; flessibile	5	Umax: 2 KVp
				281-115-24	<b>Drahtschlingenelektrode rhombusförmig; biegSAM</b> wire loop electrode rhombic shaped; flexible électrode anse à fil losange; flexible asa de alambre electrodo rómbico; flexible elettrodo in filo metallico a rombo; flessibile	5	Umax: 2 KVp
				281-120-24	<b>Drahtschlingenelektrode; biegSAM</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5	Umax: 2 KVp
				281-125-24	<b>Drahtschlingenelektrode; biegSAM</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5	Umax: 2 KVp



**Elektroden für die plastische Chirurgie, monopolar, wiederverwendbar, 1,6 mm, autoklavierbar 134°C**  
**Electrodes for the plastic surgery, monopolar, reusable, 1.6 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit
281-130-24	<b>Kugelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5  Umax: 2 KVp    2,4mm      Ø 1mm
281-135-24	<b>Kugelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5  Umax: 2 KVp    2,4mm      Ø 3mm
281-140-24	<b>Spatelektrode; biegsam</b> cutting electrode; flexible électrode spatule; flexible espátula electrodo; flexible elettrodo a spatola; flessibile	5  Umax: 2 KVp    2,4mm      6 x 2mm

Art.Nr.	Beschreibung   Description	VPE   Unit
281-200-16	<b>Nadelektrode; biegsam</b> needle electrode; flexible électrode aiguille; flexible aguja electrodo; flexible elettrodo ad ago; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,25 x 20mm
281-205-16	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo triangular; flexible elettrodo in filo metallico triangolare; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,2 x 7mm
281-210-16	<b>Drahtschlingenelektrode dreiecksförmig; biegsam</b> wire loop electrode triangular shaped; flexible électrode anse à fil triangulaire; flexible asa de alambre electrodo triangular; flexible elettrodo in filo metallico triangolare; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,2 x 9mm
281-215-16	<b>Drahtschlingenelektrode rhombusförmig; biegsam</b> wire loop electrode rhombic shaped; flexible électrode anse à fil losange; flexible asa de alambre electrodo rómbico; flexible elettrodo in filo metallico a rombo; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,2mm
281-220-16	<b>Drahtschlingenelektrode; biegsam</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,2 x Ø 5mm
281-225-16	<b>Drahtschlingenelektrode; biegsam</b> wire loop electrode; flexible électrode anse à fil; flexible asa de alambre electrodo; flexible elettrodo ad ansa di filo metallico; flessibile	5  Umax: 2 KVp    1,6mm      tungsten 0,2 x Ø 8mm



Art.Nr.	Beschreibung   Description	VPE   Unit
281-230-16	<b>Kugelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5 Umax: 2 KVp  1,6mm Ø 1mm
281-235-16	<b>Kugelektrode; biegsam</b> ball electrode; flexible électrode boule; flexible bola electrodo; flexible elettrodo a sfera; flessibile	5 Umax: 2 KVp  1,6mm Ø 3mm
281-240-16	<b>Spattelektrode; biegsam</b> cutting electrode; flexible électrode spatule; flexible espátula electrodo ; flexible elettrodo a spatola; flessibile	5 Umax: 2 KVp  1,6mm 6 x 2mm



**Mikrodissektions-Nadelelektroden**  
*Microdissection needle electrodes*



**Mikrodissektions-Nadelelektroden, monopolar, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Mircodissection needle electrodes, monopolar, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
282-010-04	<b>Mikrodissektions-Nadelelektrode; biegsam</b> <b>micro dissection needle electrode; flexible</b> micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	1	Umax: 2 KVp
282-015-04	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> <b>micro dissection needle electrode; flexible; 45°</b> micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	1	Umax: 2 KVp
282-020-04	<b>Mikrodissektions-Nadelelektrode; biegsam</b> <b>micro dissection needle electrode; flexible</b> micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	1	Umax: 2 KVp
282-025-04	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> <b>micro dissection needle electrode; flexible; 45°</b> micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	1	Umax: 2 KVp

Art.Nr.	Beschreibung   Description	VPE   Unit	
282-030-04	<b>Mikrodissektions-Nadelelektrode</b> <b>micro dissection needle electrode</b> micro électrode aiguille micro aguja electrodo micro elettrodo ad ago	1	Umax: 2 KVp
282-035-04	<b>Mikrodissektions-Nadelelektrode</b> <b>micro dissection needle electrode</b> micro électrode aiguille micro aguja electrodo micro elettrodo ad ago	1	Umax: 2 KVp
282-040-04	<b>Mikrodissektions-Nadelelektrode</b> <b>micro dissection needle electrode</b> micro électrode aiguille micro aguja electrodo micro elettrodo ad ago	5	Umax: 2 KVp
282-045-04	<b>Mikrodissektions-Nadelelektrode</b> <b>micro dissection needle electrode</b> micro électrode aiguille micro aguja electrodo micro elettrodo ad ago	5	Umax: 2 KVp



**Mikrodissektions-Nadelelektroden, monopolar, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Mircodissection needle electrodes, monopolar, reusable, 2.4 mm, autoclavable 134 °C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
282-100-24	<b>Mikrodissektions-Nadelelektrode; biegsam</b> micro dissection needle electrode; flexible  micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	1	Umax: 2 KVp	282-120-24	<b>Mikrodissektions-Nadelelektrode; biegsam</b> micro dissection needle electrode; flexible  micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	1	Umax: 2 KVp
282-105-24	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> micro dissection needle electrode; flexible; 45°  micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	1	Umax: 2 KVp	282-125-24	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> micro dissection needle electrode; flexible; 45°  micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	1	Umax: 2 KVp
282-110-24	<b>Mikrodissektions-Nadelelektrode; biegsam</b> micro dissection needle electrode; flexible  micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	1	Umax: 2 KVp	282-130-24	<b>Mikrodissektions-Nadelelektrode; biegsam</b> micro dissection needle electrode; flexible  micro électrode aiguille; flexible micro aguja electrodo; flexible micro elettrodo ad ago; flessibile	5	Umax: 2 KVp
282-115-24	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> micro dissection needle electrode; flexible; 45°  micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	1	Umax: 2 KVp	282-135-24	<b>Mikrodissektions-Nadelelektrode; biegsam; 45°</b> micro dissection needle electrode; flexible; 45°  micro électrode aiguille; flexible; 45° micro aguja electrodo; flexible; 45° micro elettrodo ad ago; flessibile; 45°	5	Umax: 2 KVp



**Nadelektroden mit Keramikisolation, monopolar, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Needle electrodes with ceramic, monopolar, reusable, 4 mm, autoclavable 134 °C**

Art.Nr.	Beschreibung   Description	VPE   Unit
282-200-04	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-205-04	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1
282-210-04	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-215-04	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1

Art.Nr.	Beschreibung   Description	VPE   Unit
282-220-04	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-225-04	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1
282-230-04	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-235-04	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1



**Nadelektroden mit Keramikisolation, monopolar, wiederverwendbar, 2,4 mm, autoklavierbar 134°C**  
**Needle electrodes with ceramic, monopolar, reusable, 2.4 mm, autoclavable 134°C**

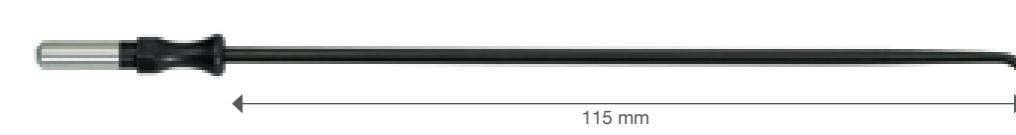
Art.Nr.	Beschreibung   Description	VPE   Unit
282-300-24	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-305-24	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1
282-310-24	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-315-24	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1

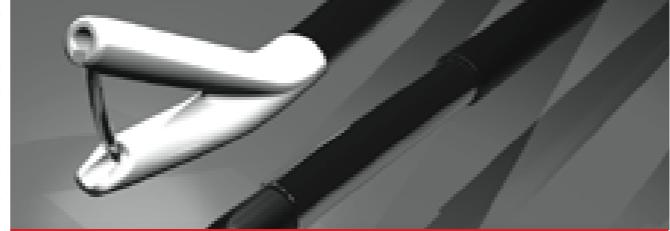
Art.Nr.	Beschreibung   Description	VPE   Unit
282-320-24	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-325-24	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1
282-330-24	<b>Nadelektrode mit Keramikisolation; abgewinkelt</b> <b>needle electrode with ceramic isolation; angled</b> électrode aiguille avec céramique isolation; coudée aguja electrodo con cerámica aislamiento; angulada elettrodo ad ago con isolamento in ceramica; angolato	1
282-335-24	<b>Nadelektrode mit Keramikisolation; gerade</b> <b>needle electrode with ceramic isolation; straight</b> électrode aiguille avec céramique isolation; droite aguja electrodo con cerámica aislamiento; recta elettrodo ad ago con isolamento in ceramica; retto	1



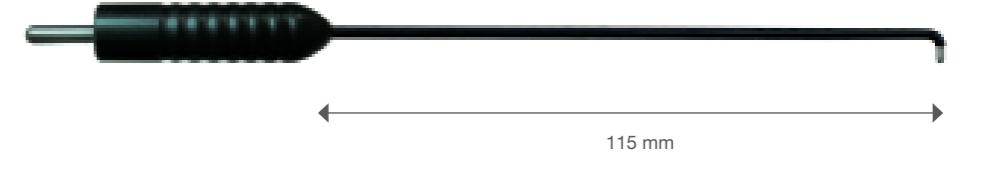
## Arthroskopieelektroden Arthroscopic electrodes

**Arthroskopieelektroden, monopolar, wiederverwendbar, 4 mm, autoklavierbar 134°C**  
**Arthroscopic electrodes, monopolar, reusable, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit	
283-010-04	<b>Nadelelektrode; 90° abgewinkelt</b> <b>needle electrode; 90° angled</b> <b>électrode aiguille; 90° coudée</b> <b>aguja electrodo; 90° angulada</b> <b>elettrodo ad ago; angolato a 90°</b>	1	Umax: 4 KVp
		115 mm	0,6 x 1,5mm
283-015-04	<b>Nadelelektrode; 90° abgewinkelt</b> <b>needle electrode; 90° angled</b> <b>électrode aiguille; 90° coudée</b> <b>aguja electrodo; 90° angulada</b> <b>elettrodo ad ago; angolato a 90°</b>	1	Umax: 4 KVp
		115 mm	0,6 x 4mm
283-020-04	<b>Messerelektrode; 45° abgewinkelt</b> <b>knife electrode; 45° angled</b> <b>électrode couteau; 45° coudée</b> <b>cuchillo electrodo; 45° angulada</b> <b>elettrodo a lama; angolato a 45°</b>	1	Umax: 4 KVp
		115 mm	4mm

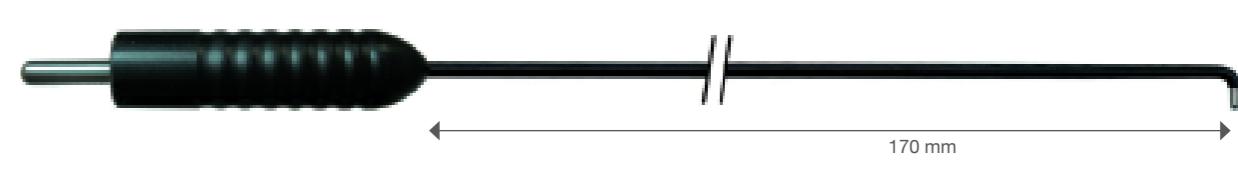
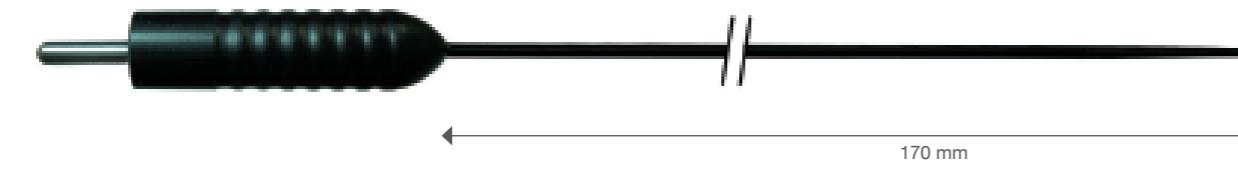
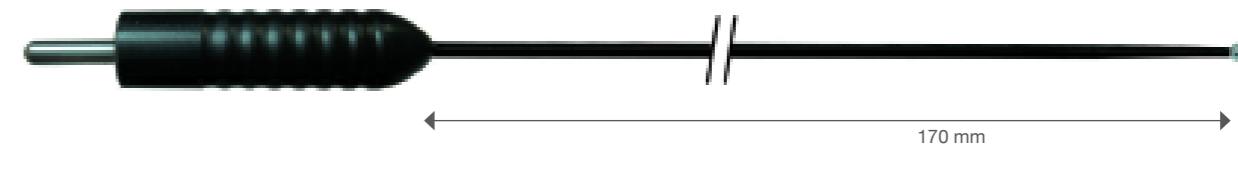


**Arthroskopieelektroden, monopolar, wiederverwendbar, 4mm, autoklavierbar 134°C**  
**Arthroscopic electrodes, monopolar, reusable, 4mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
283-025-04	<b>Tastelektrode; 90° abgewinkelt</b> button electrode; 90° angled électrode palpateur; 90° coudée electrodo de palpación; 90° angulada uncino con punta; angolato a 90°	1	Umax: 4 KVp	283-040-04	<b>Nadelektrode mit Handgriff; 90° abgewinkelt</b> needle electrode with handle; 90° angled électrode aiguille avec poignée; 90° coudée aguja electrodo con asidero; 90° angulada elettrodo ad ago con manico; angolato a 90°	1	Umax: 4 KVp
							
283-030-04	<b>Kugelektrode</b> ball electrode électrode boule bola electrodo elettrodo a sfera	1	Umax: 4 KVp	283-045-04	<b>Messerelektrode mit Handgriff; 45° abgewinkelt</b> knife electrode with handle; 45° angled électrode couteau avec poignée; 45° coudée cuchillo electrodo con asidero; 45° angulada elettrodo a lama con manico; angolato a 45°	1	Umax: 4 KVp
							
283-035-04	<b>Nadelektrode mit Handgriff; 90° abgewinkelt</b> needle electrode with handle; 90° angled électrode aiguille avec poignée; 90° coudée aguja electrodo con asidero; 90° angulada elettrodo ad ago con manico; angolato a 90°	1	Umax: 4 KVp	283-050-04	<b>Tastelektrode mit Handgriff; 90° abgewinkelt</b> button electrode with handle; 90° angled électrode palpateur avec poignée; 90° coudée electrodo de palpación con asidero; 90° angulada uncino con manico; angolato a 90°	1	
							



**Arthroskopieelektroden, monopolar, wiederverwendbar, 4mm, autoklavierbar 134°C**  
**Arthroscopic electrodes, monopolar, reusable, 4mm, autoclavable 134°C**

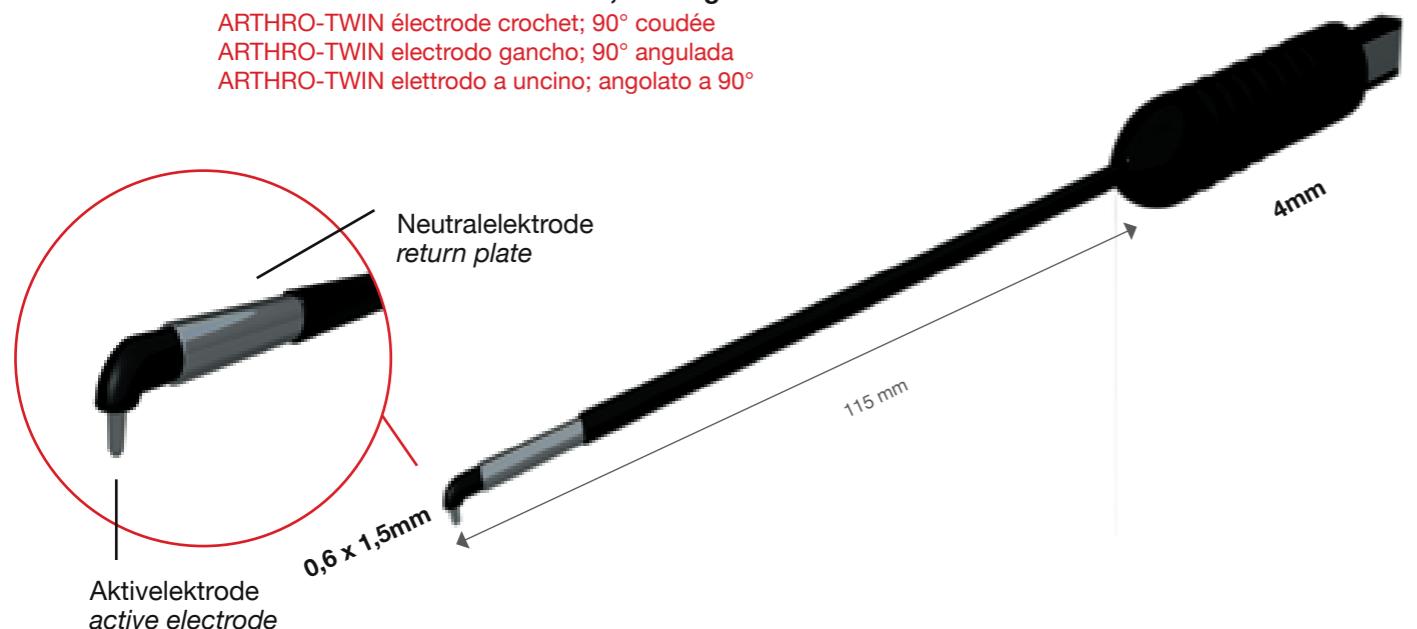
Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
283-055-04	<b>Kugelelektrode mit Handgriff</b> <b>ball electrode with handle</b> électrode boule avec poignée bola electrodo con asidero elettrodo a sfera con manico	1	Umax: 4 KVp	283-070-04	<b>Messerelektrode mit Handgriff; 45° abgewinkelt</b> <b>knife electrode with handle; 45° angled</b> électrode couteau avec poignée; 45° coudée cuchillo electrodo con asidero; 45° angulada elettrodo a lama con manico; angolato a 45°	1	Umax: 4 KVp
							
283-060-04	<b>Nadelektrode mit Handgriff; 90° abgewinkelt</b> <b>needle electrode with handle; 90° angled</b> électrode aiguille avec poignée; 90° coudée aguja electrodo con asidero; 90° angulada elettrodo ad ago con manico; angolato a 90°	1	Umax: 4 KVp	283-075-04	<b>Tastelektrode mit Handgriff; 90° abgewinkelt</b> <b>button electrode with handle; 90° angled</b> électrode palpateur avec poignée; 90° coudée electrodo de palpación con asidero; 90° angulada uncino con manico; angolato a 90°	1	Umax: 4 KVp
							
283-065-04	<b>Nadelektrode mit Handgriff; 90° abgewinkelt</b> <b>needle electrode with handle; 90° angled</b> électrode aiguille avec poignée; 90° coudée aguja electrodo con asidero; 90° angulada elettrodo ad ago con manico; angolato a 90°	1	Umax: 4 KVp	283-080-04	<b>Kugelelektrode mit Handgriff</b> <b>ball electrode with handle</b> électrode boule avec poignée bola electrodo con asidero elettrodo a sfera con manico	1	Umax: 4 KVp
							



**Arthroskopieelektroden, bipolar, wiederverwendbar, 4mm, autoklavierbar 134°C**  
**Arthroscopic electrodes, bipolar, reusable, 4mm, autoclavable 134°C**

**Art.Nr.** **Beschreibung | Description**

283-105-04 **ARTHRO-TWIN Hakenelektrode; 90° abgewinkelt**  
**ARTHRO-TWIN hook electrode; 90° angled**  
**ARTHRO-TWIN électrode crochet; 90° coudée**  
**ARTHRO-TWIN electrodo gancho; 90° angulada**  
**ARTHRO-TWIN elettrodo a uncino; angolato a 90°**



**Art.Nr. | Art.No** **Beschreibung | Description**

		<b>Länge   Length</b>
	<b>HF-Kabel bipolar</b> <b>Flachstecker</b> <b>Bipolar cable</b>	
286-200-30	Erbe ICC/ACC, Storz	3,0 m
286-200-50	Erbe ICC/ACC, Storz	5,0 m
286-205-30	Berchtold; Martin	3,0 m
286-205-50	Berchtold; Martin	5,0 m
286-210-30	US-Models; 2-pins	3,0 m
286-210-50	US-Models; 2-pins	5,0 m
286-215-30	international Models; 2-pins	3,0 m
286-215-50	international Models; 2-pins	5,0 m

**Vorteile:**

- Wiederverwendbar
- Stromfluss nur partiell
- nur geringe HF-Leistungen: 30 bis 60 Watt
- sehr geringe Blasenbildung
- In Kochsalz einzusetzen
- Sehr gute Cut-/Vaporisationseigenschaften
- passende HF-Kabel

**advantage:**

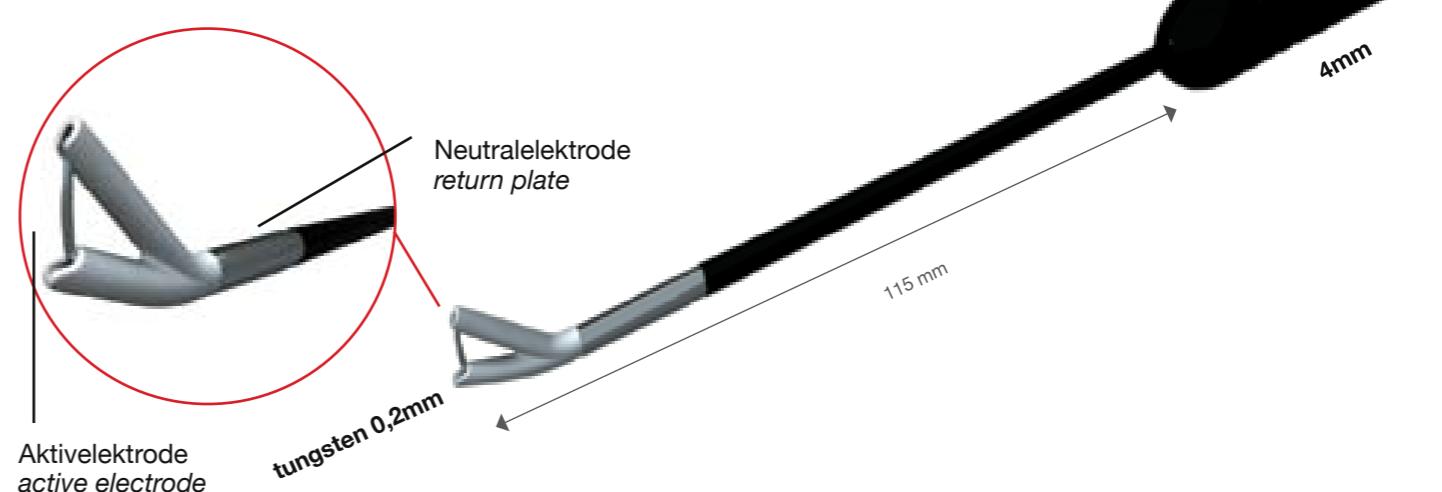
- reusable
- current flow only partial
- only low HF-capacity: 30 till 60 Watt
- very low blistering
- to use in saline solution
- very good cut-/and vaporisation features
- suitable HF-cables

**advantages:**

- réutilisable
- courant électrique seulement partiel
- seulement avec une puissance bas entre 30-60 Watt
- insignifiante formation de cloques
- d'être utilisé dans Liquid Natriumchloride
- très bonnes résultats de cut et vaporisation
- HF-câbles adaptables

**Art.Nr.** **Beschreibung | Description**

283-110-04 **ARTHRO-SNIPE Schlingenelektrode (nach Dr. Friedrich)**  
**ARTHRO-SNIPE loop electrode (acc. to Dr. Friedrich)**  
**ARTHRO-SNIPE électrode**  
**ARTHRO-SNIPE electrodo**  
**ARTHRO-SNIPE elettrodo**



**Art.Nr. | Art.No** **Beschreibung | Description**

		<b>Länge   Length</b>
	<b>HF-Kabel bipolar</b> <b>Flachstecker</b> <b>Bipolar cable</b>	
286-200-30	Erbe ICC/ACC, Storz	3,0 m
286-200-50	Erbe ICC/ACC, Storz	5,0 m
286-205-30	Berchtold; Martin	3,0 m
286-205-50	Berchtold; Martin	5,0 m
286-210-30	US-Models; 2-pins	3,0 m
286-210-50	US-Models; 2-pins	5,0 m
286-215-30	international Models; 2-pins	3,0 m
286-215-50	international Models; 2-pins	5,0 m

**ventajas:**

- reciclabile
- flujo de corriente parcial
- baja potencia HF 30-60 watt
- muy poca formación de burbujas
- aplicable en solución de sal
- excelentes calidad para cortar y vaporizar
- adecuados cables HF

**vantaggi:**

- riutilizzabile
- flusso di corrente solo parziale
- capacità minima HF 30-60 watt
- minima formazione di bollicine
- solvente salina inseribile
- ottime caratteristiche per il taglio e la vaporizzazione
- adattabile ai maggiori cavi HF



**Arthroskopieelektroden, bipolar, wiederverwendbar, 4mm, autoklavierbar 134°C**  
**Arthroscopic electrodes, bipolar, reusable, 4mm, autoclavable 134°C**

**Art.Nr.** **Beschreibung | Description**

283-115-04 **ARTHRO-PHASER Vaporisations-Elektrode**  
**ARTHRO-PHASER vaporization electrode**  
 ARTHRO-PHASER électrode pour vaporisation  
 ARTHRO-PHASER electrodo para vaporización  
 ARTHRO-PHASER elettrodo per vaporizzazione



Aktivelektrode  
active electrode

**Art.Nr. | Art.No.** **Beschreibung | Description**

**HF-Kabel bipolar**  
**Flachstecker**  
**Bipolar cable**



286-200-30 Erbe ICC/ACC, Storz  
 286-200-50 Erbe ICC/ACC, Storz

3,0 m

5,0 m



286-205-30 Berchtold; Martin  
 286-205-50 Berchtold; Martin

3,0 m

5,0 m



286-210-30 US-Models; 2-pins  
 286-210-50 US-Models; 2-pins

3,0 m

5,0 m



286-215-30 international Models; 2-pins  
 286-215-50 international Models; 2-pins

3,0 m

5,0 m



**Vorteile:**

- Wiederverwendbar
- Stromfluss nur partiell
- nur geringe HF-Leistungen: 30 bis 60 Watt
- sehr geringe Blasenbildung
- In Kochsalz einzusetzen
- Sehr gute Cut-/Vaporisationseigenschaften
- passende HF-Kabel

**advantage:**

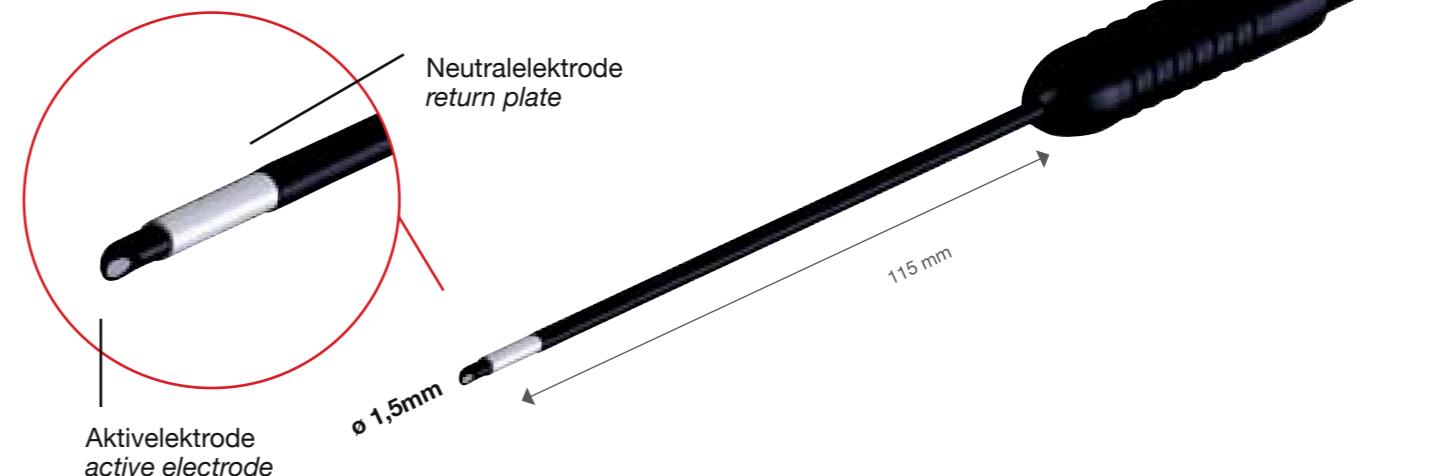
- reusable
- current flow only partial
- only low HF-capacity: 30 till 60 Watt
- very low blistering
- to use in saline solution
- very good cut-/and vaporisation features
- suitable HF-cables

**advantages:**

- réutilisable
- courant électrique seulement partiel
- seulement avec une puissance bas entre 30-60 Watt
- insignifiante formation de cloques
- d'être utilisé dans Liquid Natriumchloride
- très bonnes résultats de cut et vaporisation
- HF-câbles adaptables

**Art.Nr.** **Beschreibung | Description**

283-120-04 **ARTHRO-POINTER Vaporisations-Elektrode**  
**ARTHRO-POINTER vaporization electrode**  
 ARTHRO-POINTER électrode pour vaporisation  
 ARTHRO-POINTER electrodo para vaporización  
 ARTHRO-POINTER elettrodo per vaporizzazione



Aktivelektrode  
active electrode

**Art.Nr. | Art.No.** **Beschreibung | Description**

**HF-Kabel bipolar**  
**Flachstecker**  
**Bipolar cable**



286-200-30 Erbe ICC/ACC, Storz  
 286-200-50 Erbe ICC/ACC, Storz

3,0 m

5,0 m



286-205-30 Berchtold; Martin  
 286-205-50 Berchtold; Martin

3,0 m

5,0 m



286-210-30 US-Models; 2-pins  
 286-210-50 US-Models; 2-pins

3,0 m

5,0 m



286-215-30 international Models; 2-pins  
 286-215-50 international Models; 2-pins

3,0 m

5,0 m



**ventajas:**

- reciclabile
- flujo de corriente parcial
- baja potencia HF 30-60 watt
- muy poca formación de burbujas
- aplicable en solución de sal
- excelentes calidad para cortar y vaporizar
- adecuados cables HF

**vantaggi:**

- riutilizzabile
- flusso di corrente solo parziale
- capacità minima HF 30-60 watt
- minima formazione di bollicine
- solvente salina inseribile
- ottime caratteristiche per il taglio e la vaporizzazione
- adattabile ai maggiori cavi HF

V

# Laparoskopieelektroden

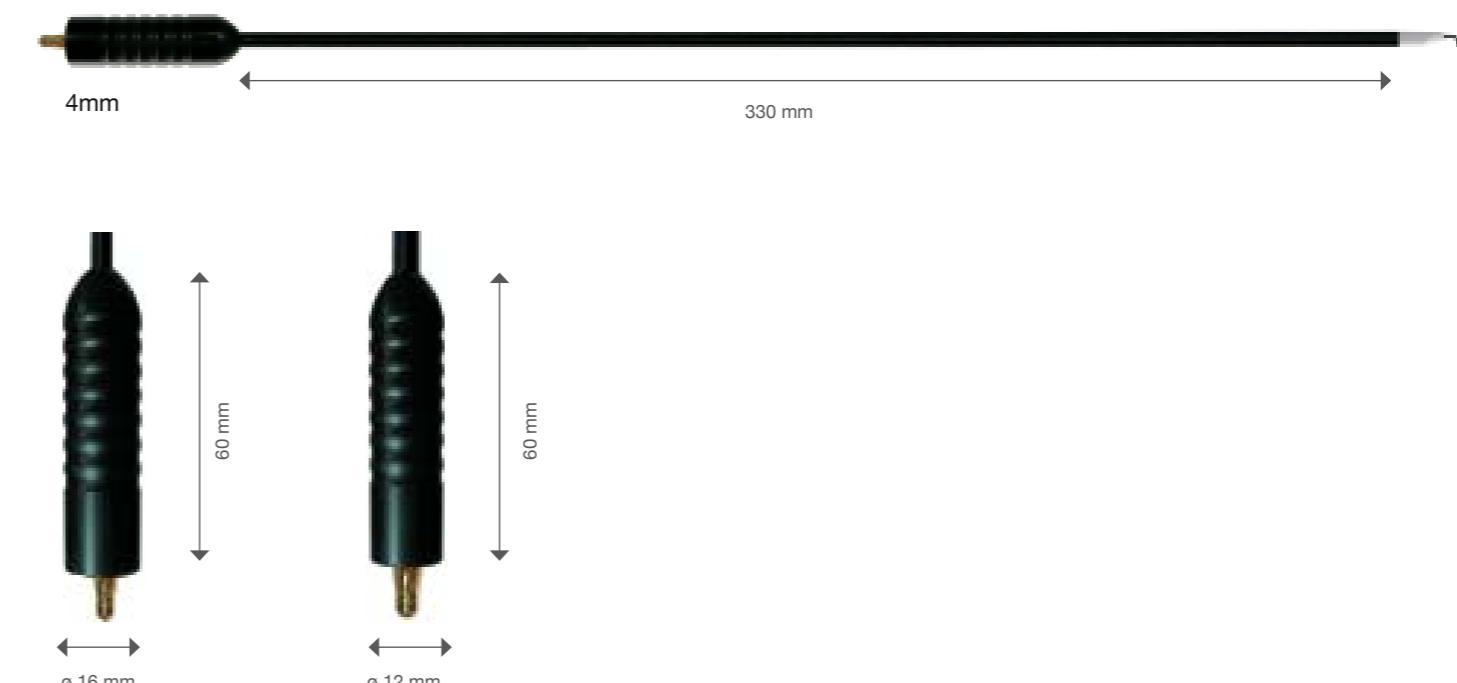
## Laparoscopic electrodes



**Laparoskopieelektroden mit Keramikisolation, wiederverwendbar, autoklavierbar 134°C**  
**Laparoscopic electrodes with ceramic insulation, reusable, autoclavable 134°C**

**Elektroden mit Keramikisolation; Anschluss: 4mm**  
**electrodes with ceramic isolation; connection: 4mm**

**électrode avec céramique isolation; connexion: 4mm**  
**electrodo con cerámica aislamiento; conexión: 4mm**  
**elettrodo con isolamento in ceramica; attacco: 4mm**



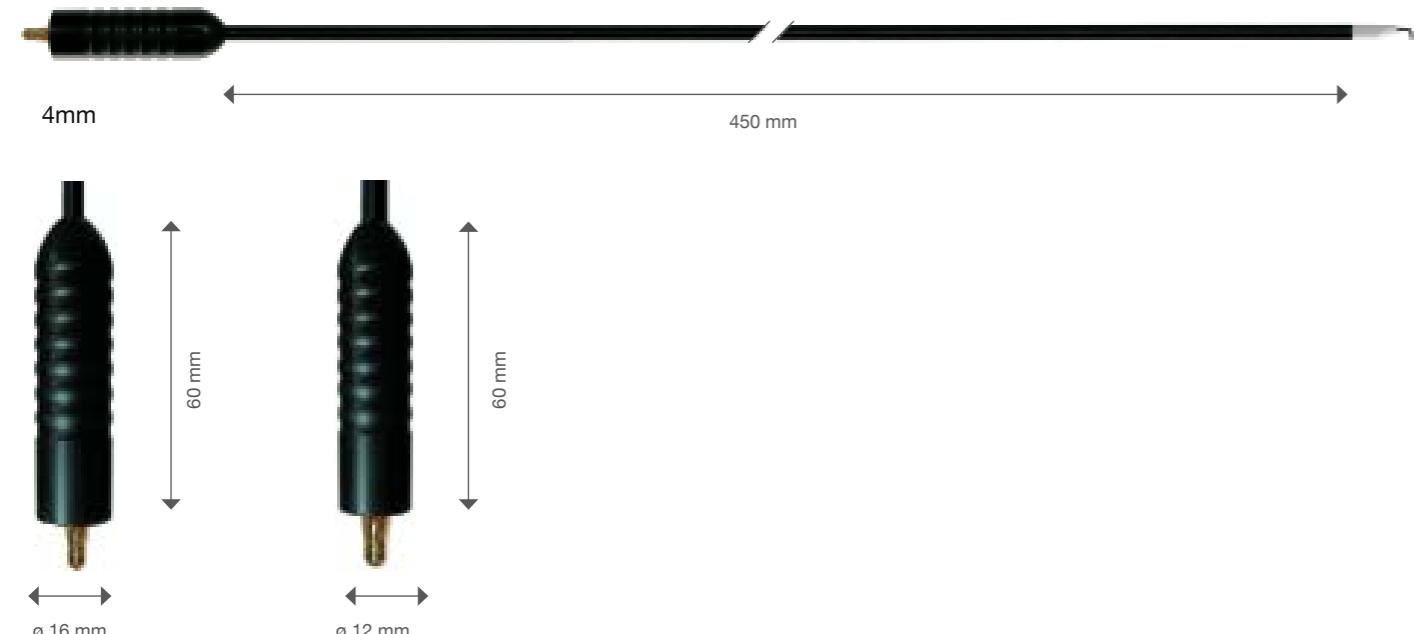
Art.Nr.	Art.Nr.	Beschreibung   Description	Umax: 4 KVp
284-040-04	284-045-04	<b>Spatelektrode</b> <b>cutting electrode</b> électrode spatule espátula electrodo elettrodo a spatola	
284-050-04	284-055-04	<b>L-Hakenelektrode</b> <b>L-hook electrode</b> électrode L-crochet L-gancho electrodo elettrodo ad "L,"	Umax: 4 KVp
284-060-04	284-065-04	<b>J-Hakenelektrode</b> <b>J-hook electrode</b> électrode J-crochet J-gancho electrodo elettrodo a "J,"	Umax: 4 KVp
284-030-04	284-035-04	<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	Umax: 4 KVp



**Laparoskopieelektroden mit Keramikisolation, wiederverwendbar, autoclavierbar 134°C**  
**Laparoscopic electrodes with ceramic insulated, reusable, autoclavable 134°C**

**Elektroden mit Keramikisolation; Anschluss: 4mm**  
**electrodes with ceramic isolation; connection: 4mm**

électrode avec céramique isolation; connexion: 4mm  
electrodo con cerámica aislamiento; conexión: 4mm  
elettrodo con isolamento in ceramica; attacco: 4mm



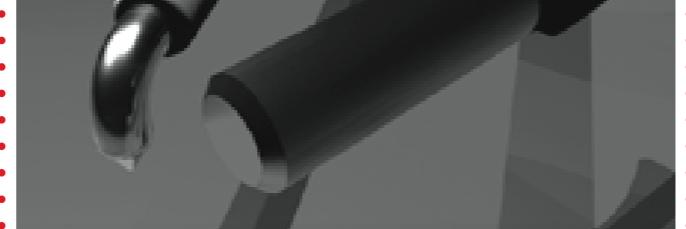
Art.Nr.	Art.Nr.	Beschreibung   Description	Umax: 4 KVp
284-041-04	284-046-04	<b>Spatelektrode</b> <b>cutting electrode</b> électrode spatule espátula electrodo elettrodo a spatola	
284-051-04	284-056-04	<b>L-Hakenelektrode</b> <b>L-hook electrode</b> électrode L-crochet L-gancho electrodo elettrodo ad "L,"	
284-061-04	284-066-04	<b>J-Hakenelektrode</b> <b>J-hook electrode</b> électrode J-crochet J-gancho electrodo elettrodo a "J,"	
284-031-04	284-036-04	<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	

**Elektroden mit Keramikisolation; Anschluss: 4mm**  
**electrodes with ceramic isolation; connection: 4mm**

électrode avec céramique isolation; connexion: 4mm  
electrodo con cerámica aislamiento; conexión: 4mm  
elettrodo con isolamento in ceramica; attacco: 4mm



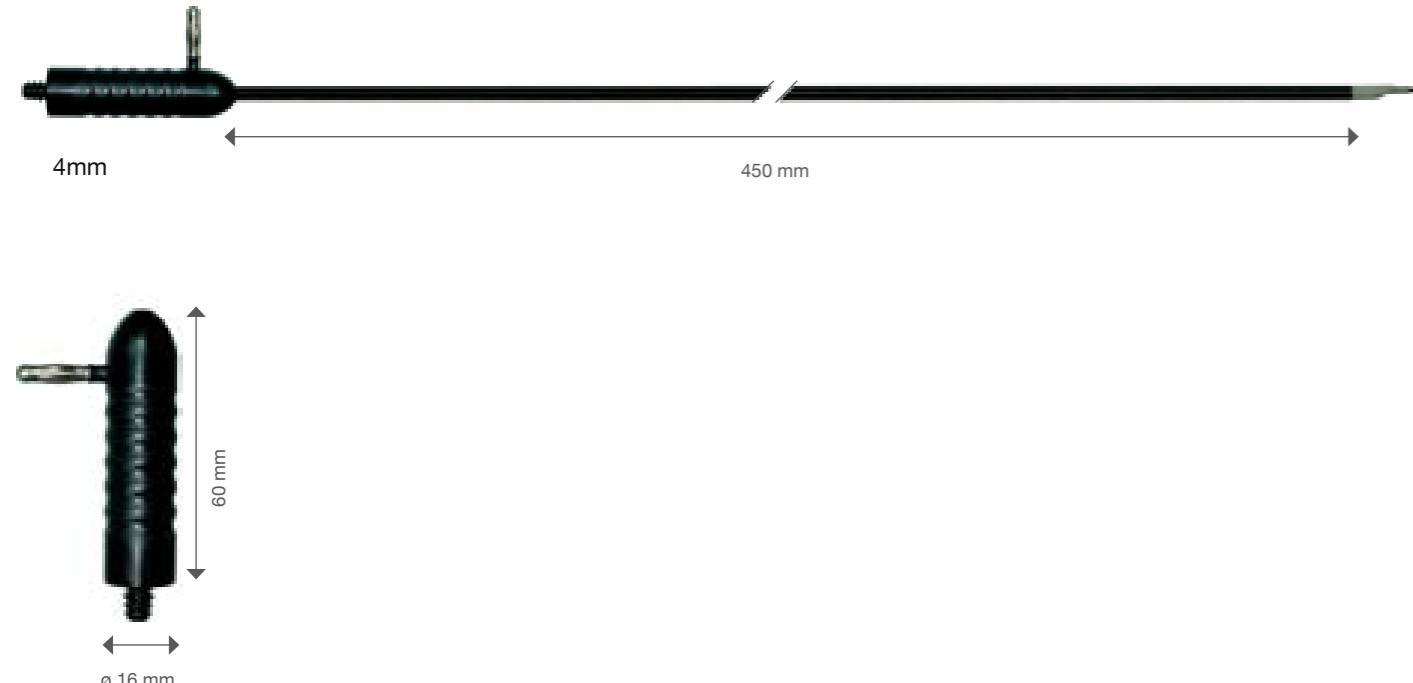
Art.Nr.	Art.Nr.	Beschreibung   Description	Umax: 4 KVp
284-070-04		<b>Spatelektrode mit Saug-/Spüladapter</b> <b>cutting electrode w/suction-/irrigation</b> électrode spatula aspiración/irrigación espátula electrodo aspira./irrigacion elettrodo a spatola con canale aspir./irrigaz.	
284-075-04		<b>L-Hakenelektrode mit Saug-/Spüladapter</b> <b>L-hook electrode w/suction-/irrigation</b> électrode L-crochet aspiración/irrigación L-gancho electrodo aspira./irrigacion elettrodo ad "L," con aspir./irrigaz.	
284-080-04		<b>J-Hakenelektrode mit Saug-/Spüladapter</b> <b>J-hook electrode w/suction-/irrigation</b> électrode J-crochet aspiración/irrigación J-gancho electrodo aspira./irrigacion elettrodo a "J," con aspir./irrigaz.	
284-085-04		<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	



**Laparoskopieelektroden mit Keramikisolation, wiederverwendbar, autoclavierbar 134°C**  
**Laparoscopic electrodes with ceramic insulated, reusable, autoclavable 134°C**

**Elektroden mit Keramikisolation; Anschluss: 4mm**  
**electrodes with ceramic isolation; connection: 4mm**

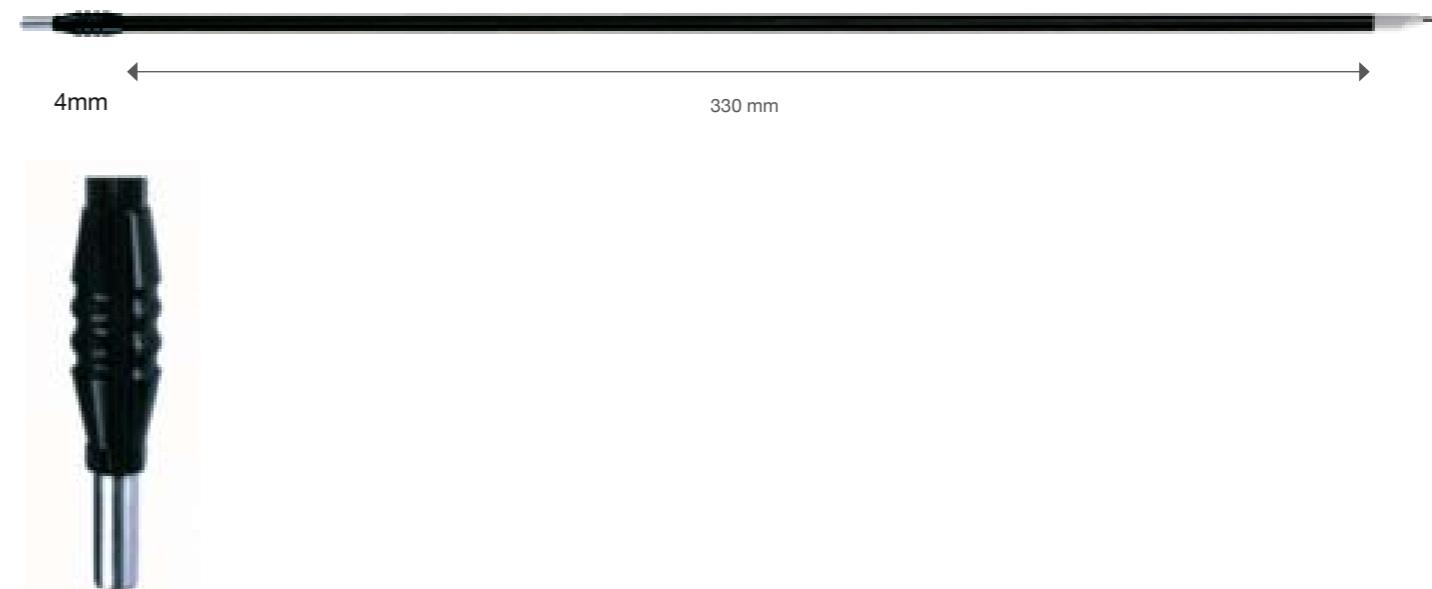
électrode avec céramique isolation; connexion: 4mm  
electrodo con cerámica aislamiento; conexión: 4mm  
elettrodo con isolamento in ceramica; attacco: 4mm



Art.Nr.	Beschreibung   Description	Umax: 4 KVp
284-071-04	<b>Spatielektrode mit Saug-/Spüladapter</b> <b>cutting electrode w/suction-/irrigation</b> électrode spatula aspiración/irrigation espátula electrodo aspira./irrigacion elettrodo a spatola con canale aspir./irrigaz.	
284-076-04	<b>L-Hakenelektrode mit Saug-/Spüladapter</b> <b>L-hook electrode w/suction-/irrigation</b> électrode L-crochet aspiración/irrigation L-gancho electrodo aspira./irrigacion elettrodo ad "L," con aspir./irrigaz.	
284-081-04	<b>J-Hakenelektrode mit Saug-/Spüladapter</b> <b>J-hook electrode w/suctio-/irrigation</b> électrode J-crochet aspiración/irrigación J-gancho electrodo aspira./irrigacion elettrodo a "J," con aspir./irrigaz.	
284-086-04	<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	

**Elektroden mit Keramikisolation; Anschluss: 4mm**  
**electrodes with ceramic isolation; connection: 4mm**

électrode avec céramique isolation; connexion: 4mm  
electrodo con cerámica aislamiento; conexión: 4mm  
elettrodo con isolamento in ceramica; attacco: 4mm



Art.Nr.	Beschreibung   Description	Umax: 4 KVp
284-100-04	<b>Spatielektrode</b> <b>cutting electrode</b> électrode spatule espátula electrodo elettrodo a spatola	
284-105-04	<b>L-Hakenelektrode</b> <b>L-hook electrode</b> électrode L-crochet L-gancho electrodo elettrodo ad "L,"	
284-110-04	<b>J-Hakenelektrode</b> <b>J-hook electrode</b> électrode J-crochet J-gancho electrodo elettrodo a "J,"	
284-115-04	<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	



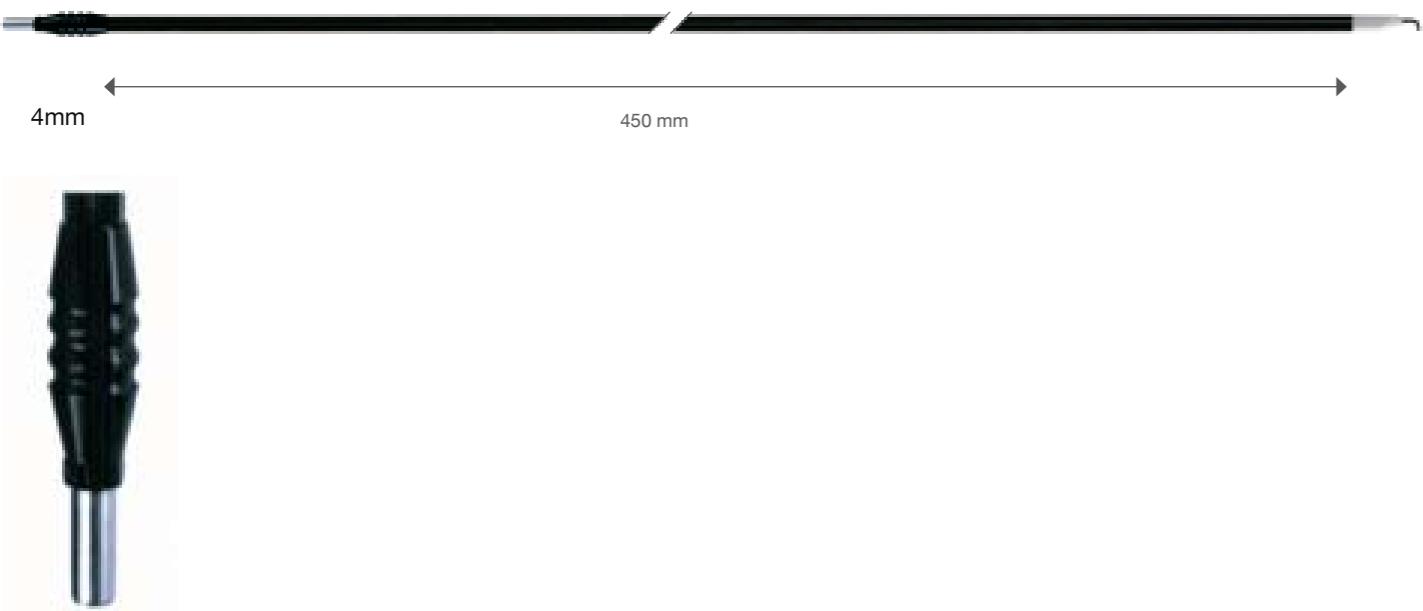
Laparoskopieelektroden mit Keramikisolation, wiederverwendbar, autoklavierbar 134°C  
Laparoscopic electrodes with ceramic insulated, reusable, autoclavable 134°C

Elektroden mit Keramikisolation; Anschluss: 4mm  
electrodes with ceramic isolation; connection: 4mm

électrode avec céramique isolation; connexion: 4mm

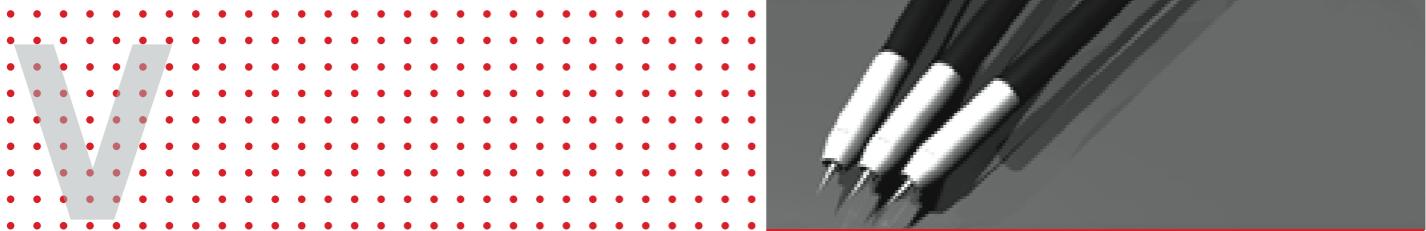
electrodo con cerámica aislamiento; conexión: 4mm

elettrodo con isolamento in ceramica; attacco: 4mm



Art.Nr.	Beschreibung   Description	
284-101-04	<b>Spatelektrode</b> <b>cutting electrode</b> électrode spatule espátula electrodo elettrodo a spatola	Umax: 4 KVp
284-106-04	<b>L-Hakenelektrode</b> <b>L-hook electrode</b> électrode L-crochet L-gancho electrodo elettrodo ad "L,"	Umax: 4 KVp
284-111-04	<b>J-Hakenelektrode</b> <b>J-hook electrode</b> électrode J-crochet J-gancho electrodo elettrodo a "J,"	Umax: 4 KVp
284-116-04	<b>Knopfelektrode</b> <b>button electrode</b> électrode boule bola electrodo elettrodo a sfera	Umax: 4 KVp





**Argon Plasmaelektroden, wiederverwendbar, monopolar, 4 mm, autoklavierbar 134°C**  
**Argon plasma electrodes, reusable, monopolar, 4 mm, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit		Art.Nr.	Beschreibung   Description	VPE   Unit	
285-010-04	<b>Argon Plasma Elektrode</b> <b>Argon plasma electrode</b> argon plasma électrode argon plasma electrodo elettrodo argon plasma	1	Umax: 4 KVp	285-030-04	<b>Argon Plasma Nadelektrode</b> <b>Argon plasma needle electrode</b> argon plasma électrode aiguille argon plasma electrodo aguja electrodo elettrodo argon plasma ad ago	1	Umax: 4 KVp
285-015-04	<b>Argon Plasma Elektrode</b> <b>Argon plasma electrode</b> argon plasma électrode argon plasma electrodo elettrodo argon plasma	1	Umax: 4 KVp	285-035-04	<b>Argon Plasma Messerelektrode</b> <b>Argon plasma knife electrode</b> argon plasma électrode couteau argon plasma cuchillo electrodo elettrodo argon plasma a lama	1	Umax: 4 KVp
285-020-04	<b>Argon Plasma Elektrode</b> <b>Argon plasma electrode</b> argon plasma électrode argon plasma electrodo elettrodo argon plasma	1	Umax: 4 KVp	285-040-04	<b>Argon Plasma Messerelektrode</b> <b>Argon plasma knife electrode</b> argon plasma électrode couteau argon plasma cuchillo electrodo elettrodo argon plasma a lama	1	Umax: 4 KVp
285-025-04	<b>Argon Plasma, Nadelektrode</b> <b>Argon plasma, needle electrode</b> argon plasma; électrode aiguille argon plasma; aguja electrodo elettrodo argon plasma ad ago	1	Umax: 4 KVp				

# HF-Handgriffe | HF-Handle



**HF-Handgriffe, wiederverwendbar, autoklavierbar 134°C**  
**HF-Handle, reusable, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	VPE   Unit
286-010-04	<b>HF-Handgriff für 4mm Schaft Elektroden</b> <b>HF-Handle for 4mm electrodes</b> HF-poignée pour 4mm électrodes HF-asidero para 4mm electrodos manico HF per elettrodi da 4mm	1
286-010-24	<b>HF-Handgriff für 2,4mm Schaft Elektroden</b> <b>HF-Handle for 2,4mm electrodes</b> HF-poignée pour 2,4mm électrodes HF-asidero para 2,4mm electrodos manico HF per elettrodi da 2,4mm	 Erbe kompatibel   Erbe compatible
286-015-40	<b>Kabel für HF-Handgriff; 4m</b> <b>cable for HF-handle; 4m</b> câble pour HF-poignée; 4m cable para HF-asidero; 4m cavo per manico HF; 4m	
286-015-50	<b>Kabel für HF-Handgriff; 5m</b> <b>cable for HF-handle; 5m</b> câble pour HF-poignée; 5m cable para HF-asidero; 5m cavo per manico HF; 5m	 HF-Gerät Erbe   Generator Erbe
286-020-04	<b>HF-Handgriff für 4mm Schaft Elektroden</b> <b>HF-Handle for 4mm electrodes</b> HF-poignée pour 4mm électrodes HF-asidero para 4mm electrodos manico HF per elettrodi da 4mm	 Berchthold/Martin Kompatibel Berchthold/Martin compatible
286-020-24	<b>HF-Handgriff für 2,4mm Schaft Elektroden</b> <b>HF-Handle for 2,4mm electrodes</b> HF-poignée pour 2,4mm électrodes HF-asidero para 2,4mm electrodos manico HF per elettrodi da 2,4mm	 1
286-025-40	<b>Kabel für HF-Handgriff; 4m</b> <b>cable for HF-handle; 4m</b> câble pour HF-poignée; 4m cable para HF-asidero; 4m cavo per manico HF; 4m	
286-025-50	<b>Kabel für HF-Handgriff; 5m</b> <b>cable for HF-handle; 5m</b> câble pour HF-poignée; 5m cable para HF-asidero; 5m cavo per manico HF; 5m	 HF-Gerät Berchthold; Martin Generator Berchthold; Martin

# VII



**HF-Handgriffe, wiederverwendbar, autoklavierbar 134°C**  
***HF-Handle, reusable, autoclavable 134°C***

Art.Nr.	Beschreibung   Description	VPE   Unit
	<b>E-Line HF-Handgriff für 4mm Schaft Elektroden; mit Kabel</b> <b>E-Line HF-Handle for 4mm electrodes; with cable</b>  E-Line HF-poignée pour 4mm électrodes; avec câble E-Line HF-asidero para 4mm electrodos; con cable E-Line manico HF per elettrodi da 4mm; con cavo	Umax: 4 KVp
286-030-30	Erbe ICC/ACC, Storz	3,0 m
286-030-50	Erbe ICC/ACC, Storz	5,0 m
286-035-30	Berchtold / Martin	3,0 m
286-035-50	Berchtold / Martin	5,0 m
286-040-30	international Models; 3-pins	3,0 m
286-040-50	international Models; 3-pins	5,0 m
	<b>E-Line HF-Handgriff für 2,4mm Schaft Elektroden; mit Kabel</b> <b>E-Line HF-Handle for 2,4mm electrodes; with cable</b>  E-Line HF-poignée pour 2,4mm électrodes; avec câble E-Line HF-asidero para 2,4mm electrodos; con cable E-Line manico HF per elettrodi da 2,4mm; con cavo	Umax: 4 KVp
286-045-30	Erbe ICC/ACC, Storz	3,0 m
286-045-50	Erbe ICC/ACC, Storz	5,0 m
286-050-30	Berchtold / Martin	3,0 m
286-050-50	Berchtold / Martin	5,0 m
286-055-30	international Models; 3-pins	3,0 m
286-055-50	international Models; 3-pins	5,0 m
286-060-16	<b>HF-Handgriff für 1,6mm Elektroden mit Kabel</b> <b>HF-Handle for 1,6mm electrodes with cable</b>  HF-poignée pour électrodes 1,6mm avec câble HF-asidero para 1,6mm electrodos con cable manico HF con cavo; per elettrodi da 1,6mm	1
286-065-16	<b>HF-Handgriff für 1,6mm Elektroden</b> <b>HF-Handle for 1,6mm electrodes</b>  HF-poignée pour électrodes 1,6mm HF-asidero para 1,6mm electrodos manico HF con cavo; per elettrodi da 1,6mm	1
286-070-16	<b>HF-Handgriff für 1,6mm Elektroden mit Kabel Stecker</b> <b>HF-Handle for 1,6mm electrodes with cable</b>  HF-poignée pour électrodes 1,6mm avec câble HF-asidero para 1,6mm electrodos con cable manico HF con cavo; per elettrodi da 1,6mm	1

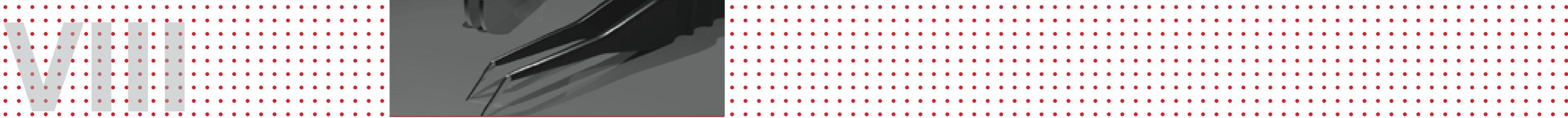
# VIII

## Pinzetten, Kabel, Scheren und Klemmen *forceps, cables, scissors and clamps*



**Bipolare Pinzetten, wiederverwendbar, autoklavierbar 134°C**  
**Bipolar forceps, reusable, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	Länge   Length	Spitzenbreite   tip	Spitze   tip
				Umax: 0,5 KVp
287-010-00	<b>Bipolare Pinzette; gerade</b> <b>bipolar forceps; straight</b> pince bipolaire; droite pinza bipolar; recta pinza bipolare; retta	110mm	needle tip	
287-010-05		110mm	0,5mm	
				Umax: 0,5 KVp
287-015-00	<b>Bipolare Pinzette; abgewinkelt</b> <b>bipolar forceps; angled</b> pince bipolaire; coudée pinza bipolar; angulada pinza bipolare; angolata	110mm	needle tip	
287-015-05		110mm	0,5mm	



**Bipolare Pinzetten, wiederverwendbar, autoklavierbar 134°C**  
**Bipolar forceps, reusable, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	Länge   Length	Spitzenbreite   tip	Spitze   tip	Art.Nr.	Beschreibung   Description	Länge   Length	Spitzenbreite   tip	Spitze   tip
	<b>Bipolare Pinzette; gerade</b> <b>bipolar forceps; straight</b> Pince bipolaire; droite Pinza bipolar; recta Pinza bipolare; retta			Umax: 0,5 KVp		<b>Bipolare Pinzette; abgewinkelt</b> <b>bipolar forceps; angled</b> pince bipolaire; coudée pinza bipolar; angulada pinza bipolare; angolata			Umax: 0,5 KVp
287-020-00		160mm	needle tip		287-040-00		160mm	needle tip	
287-020-05		160mm	0,5mm		287-040-05		160mm	0,5mm	
287-020-10		160mm	1mm		287-040-10		160mm	1mm	
287-020-20		160mm	2mm		287-045-00		180mm	needle tip	
287-025-00		180mm	needle tip		287-045-05		180mm	0,5mm	
287-025-05		180mm	0,5mm		287-045-10		180mm	1mm	
287-025-10		180mm	1mm		287-045-20		180mm	2mm	
287-025-20		180mm	2mm		287-050-00		195mm	needle tip	
287-030-00		195mm	needle tip		287-050-05		195mm	0,5mm	
287-030-05		195mm	0,5mm		287-050-10		195mm	1mm	
287-030-10		195mm	1mm		287-050-20		195mm	2mm	
287-030-20		195mm	2mm		287-050-50		195mm	2mm	
287-030-50		195mm	2mm		287-055-00		220mm	needle tip	
287-035-00		220mm	needle tip		287-055-05		220mm	0,5mm	
287-035-05		220mm	0,5mm		287-055-10		220mm	1mm	
287-035-10		220mm	1mm		287-055-20		220mm	2mm	
287-035-20		220mm	2mm						



**Bipolare Pinzetten, wiederverwendbar, autoklavierbar 134°C**  
**Bipolar forceps, reusable, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	Länge   Length	Spitzenbreite   tip	Spitze   tip
	<b>Bipolare Pinzette; bajonett</b> <b>bipolar forceps; bayonet</b> <b>pince bipolaire; baionnette</b> <b>pinza bipolar; bayoneta</b> <b>pinza bipolare a baionetta</b>			Umax: 0,5 KVp
287-100-00		165mm	needle tip	
287-100-05		165mm	0,5mm	
287-100-10		165mm	1mm	
287-105-00		180mm	needle tip	
287-105-05		180mm	0,5mm	
287-105-10		180mm	1mm	
287-105-20		180mm	2mm	
287-110-00		195mm	needle tip	
287-110-05		195mm	0,5mm	
287-110-10		195mm	1mm	
287-110-20		195mm	2mm	
287-110-50		195mm	2mm	
287-115-00		220mm	needle tip	
287-115-05		220mm	0,5mm	
287-115-10		220mm	1mm	
287-115-20		220mm	2mm	

Art.Nr.	Beschreibung   Description	Länge   Length	Spitzenbreite   tip	Spitze   tip
	<b>Bipolare Pinzette; bajonett; aufgebogen</b> <b>bipolar forceps; bayonet; angled up</b> <b>pince bipolaire; baionnette; coudée haut</b> <b>pinza bipolar; bayoneta; angulada arriba</b> <b>pinza bipolare a baionetta; angolata sopra</b>			Umax: 0,5 KVp
287-120-10		195mm	1mm	
287-125-10		220mm	1mm	
	<b>Bipolare Pinzette; bajonett; abgebogen</b> <b>bipolar forceps; bayonet; angled down</b> <b>pince bipolaire; baionnette; coudée en bas</b> <b>pinza bipolar; bayoneta; angulada abajo</b> <b>pinza bipolare a baionetta; angolata sotto</b>			Umax: 0,5 KVp
287-130-10		195mm	1mm	
287-135-10		220mm	1mm	

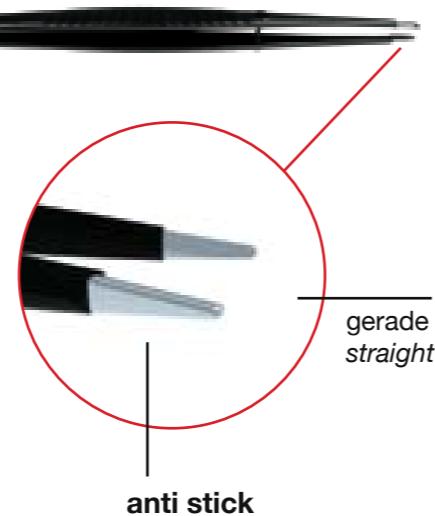


**Bipolare Pinzetten, wiederverwendbar, autoklavierbar 134°C**  
**Bipolar forceps, reusable, autoclavable 134°C**

**Bipolare Pinzette; gerade; anti stick**  
**bipolar forceps; straight; anti stick**  
**pince bipolaire; droite; anti stick**  
**pinza bipolar; recta; anti stick**  
**pinza bipolare; retta; anti stick**

Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-020-15	160mm	1mm	
287-020-25	160mm	2mm	
287-025-15	180mm	1mm	
287-025-25	180mm	2mm	
287-030-15	195mm	1mm	
287-030-25	195mm	2mm	
287-035-15	220mm	1mm	
287-035-25	220mm	2mm	

L Umax: 0,5 KVp



gerade  
straight

anti stick

**Bipolare Pinzette; abgewinkelt; anti stick**  
**bipolar forceps; angled; anti stick**  
**pince bipolaire; coudée; anti stick**  
**pinza bipolar; angulada; anti stick**  
**pinza bipolare; angolata; anti stick**

Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-050-15	195mm	1mm	
287-050-25	195mm	2mm	
287-055-15	220mm	1mm	
287-055-25	220mm	2mm	

L Umax: 0,5 KVp



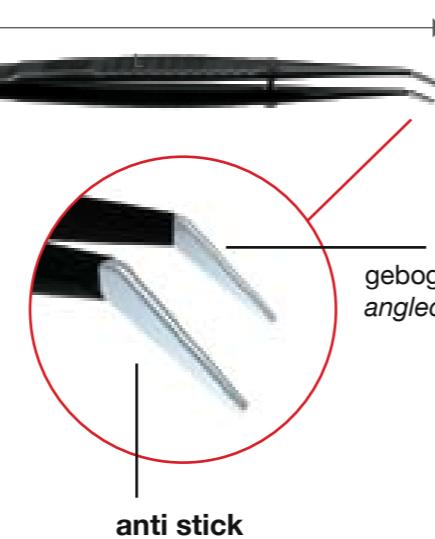
gebogen  
angled

anti stick

**Bipolare Pinzette; abgewinkelt; anti stick**  
**bipolar forceps; angled; anti stick**  
**pince bipolaire; coudée; anti stick**  
**pinza bipolar; angulada; anti stick**  
**pinza bipolare; angolata; anti stick**

Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-040-15	160mm	1mm	
287-045-15	180mm	1mm	
287-045-25	180mm	2mm	

Umax: 0,5 KVp



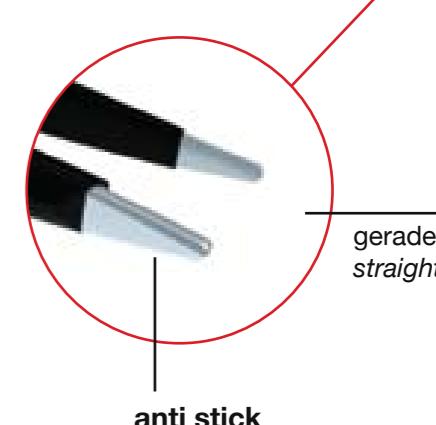
gebogen  
angled

anti stick

**Bipolare Pinzette; gerade; bajonet; anti stick**  
**bipolar forceps; straight; bayonet; anti stick**  
**pince bipolaire; droite; baionnette; anti stick**  
**pinza bipolar; recta; bayoneta; anti stick**  
**pinza bipolare a baionetta; retta; anti stick**

Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-100-15	165mm	1mm	
287-105-15	180mm	1mm	
287-105-25	180mm	2mm	
287-110-15	195mm	1mm	
287-110-25	195mm	2mm	
287-115-15	220mm	1mm	
287-115-25	220mm	2mm	

Umax: 0,5 KVp



gerade  
straight

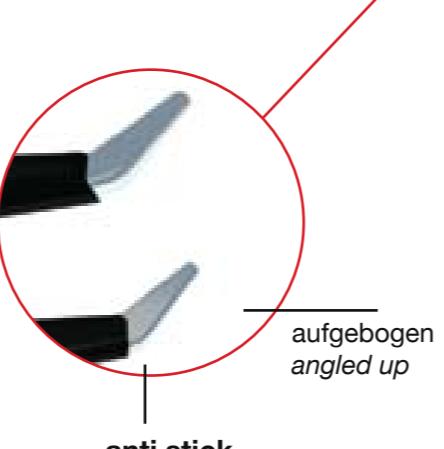
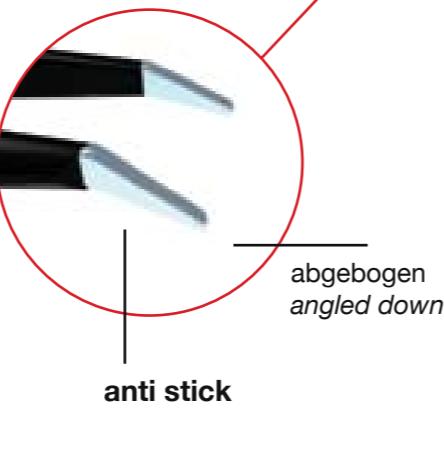
anti stick

Die Pinzettenspitzen werden aus einer reinen Silberlegierung gefertigt  
tips of the bipolar forceps are made out of pure silver alloy

Die Pinzettenspitzen werden aus einer reinen Silberlegierung gefertigt  
tips of the bipolar forceps are made out of pure silver alloy

# VIII

## Bipolare Pinzetten, wiederverwendbar, autoklavierbar 134°C Bipolar forceps, reusable, autoclavable 134°C

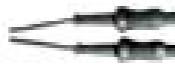
<p><b>Bipolare Pinzette; bajonett; aufgebogen; anti stick</b>  <b>bipolar forceps; bayonet; angled up; anti stick</b>          pince bipolaire; baionnette; coudée hant; anti stick          pinza bipolar; bayoneta; angulada arriba; anti stick          pinza bipolare a baionetta; angolata sopra; anti stick</p>			
Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-120-15	195mm	1mm	
287-125-15	220mm	1mm	
			
<p><b>Bipolare Pinzette; bajonett; abgebogen; anti stick</b>  <b>bipolar forceps; bayonet; angled down; anti stick</b>          pince bipolaire; baionnette; coudée en bas; anti stick          pinza bipolar; bayoneta; angulada abajo; anti stick          pinza bipolare a baionetta; angolata sotto; anti stick</p>			
Art.Nr.	Länge   Length	Spitzenbreite   tip	Spitze   tip
287-130-15	195mm	1mm	
287-135-15	220mm	1mm	
			

Die Pinzettenspitzen werden aus einer reinen Silberlegierung gefertigt  
tips of the bipolar forceps are made out of pure silver alloy

## HF-Kabel, wiederverwendbar, autoklavierbar 134°C HF-Cable, reusable, autoclavable 134°C

Art.Nr.	Beschreibung   Description	Länge   Length
	<b>bipolares Kabel für Flachstecker</b> <b>bipolar cable for flat-cable plug</b> câble bipolaire pour fiche plate cable bipolar para enchufe plano cavo bipolare per attacco piatto	Umax: 0,8 KVp
	für Instrumentanschlüsse von:   for instrument plugs from:	
287-200-30	Erbe ICC/ACC, Storz	3,0 m
287-200-50	Erbe ICC/ACC, Storz	5,0 m
287-205-30	Berchtold; Martin	3,0 m
287-205-50	Berchtold; Martin	5,0 m
287-210-30	US-Models; 2-pins	3,0 m
287-210-50	US-Models; 2-pins	5,0 m
287-215-30	international Models; 2-pins	3,0 m
287-215-50	international Models; 2-pins	5,0 m
	<b>bipolares Kabel für Rundstecker</b> <b>bipolar cable for round plug</b> câble bipolaire pour fiche ronde cable bipolar para enchufe redondo cavo bipolare per attacco rotondo	Umax: 0,8 KVp
	für Instrumentanschlüsse von:   for instrument plugs from:	
287-300-30	Erbe ICC/ACC, Storz	3,0 m
287-300-50	Erbe ICC/ACC, Storz	5,0 m
287-305-30	Berchtold; Martin	3,0 m
287-305-50	Berchtold; Martin	5,0 m
287-310-30	US-Models; 2-pins	3,0 m
287-310-50	US-Models; 2-pins	5,0 m
287-315-30	international Models; 2-pins	3,0 m
287-315-50	international Models; 2-pins	5,0 m
	<b>bipolares Kabel für US-Stecker</b> <b>bipolar cable for US-plug</b> câble bipolaire pour fiche Etats-Unis cable bipolar para enchufe E.E.U.U. cavo bipolare per attacco USA	Umax: 0,8 KVp
	für Instrumentanschlüsse von:   for instrument plugs from:	
287-400-30	Erbe ICC/ACC, Storz	3,0 m
287-400-50	Erbe ICC/ACC, Storz	5,0 m
287-405-30	Berchtold; Martin	3,0 m
287-405-50	Berchtold; Martin	5,0 m
287-410-30	US-Models; 2-pins	3,0 m
287-410-50	US-Models; 2-pins	5,0 m
287-415-30	international Models; 2-pins	3,0 m
287-415-50	international Models; 2-pins	5,0 m

**HF-Kabel, wiederverwendbar, autoklavierbar 134°C**  
**HF-Cable, reusable, autoclavable 134°C**

Art.Nr.	Beschreibung   Description	Länge   Length	
	<b>bipolares Kabel für Aesculap</b> <b>bipolar cable for Aesculap</b> <b>câble bipolaire pour Aesculap</b> <b>cable bipolar para Aesculap</b> <b>cavo bipolare per Aesculap</b> <b>für Instrumentanschlüsse von:   for instrument plugs from:</b>		Umax: 0,8 KVp
287-500-50	Erbe ICC/ACC, Storz	5,0 m	
287-505-50	Berchtold; Martin	5,0 m	
287-510-50	US-Models; 2-pins	5,0 m	
287-515-50	international Models; 2-pins	5,0 m	
	<b>bipolares Kabel für Powerstar Ethicon</b> <b>bipolar cable for powerstar Ethicon</b> <b>câble bipolaire pour Powerstar Ethicon</b> <b>cable bipolar para Powerstar Ethicon</b> <b>cavo bipolare per Powerstar Ethicon</b> <b>für Instrumentanschlüsse von:   for instrument plugs from:</b>		Umax: 0,8 KVp
287-600-50	Erbe ICC/ACC, Storz	5,0 m	
287-605-50	Berchtold; Martin	5,0 m	
287-610-50	US-Models; 2-pins	5,0 m	
287-615-50	international Models; 2-pins	5,0 m	
	<b>bipolares Kabel für Storz Anschluss</b> <b>bipolar cable for Storz connection</b> <b>câble bipolaire pour fiche Storz</b> <b>cable bipolar para enchufe Storz</b> <b>cavo bipolare per attacco Storz</b> <b>für Instrumentanschlüsse von:   for instrument plugs from:</b>		Umax: 0,8 KVp
287-700-30	Erbe ICC/ACC, Storz	3,0 m	
287-700-50	Erbe ICC/ACC, Storz	5,0 m	
287-705-30	Berchtold; Martin	3,0 m	
287-705-50	Berchtold; Martin	5,0 m	
287-710-30	US-Models; 2-pins	3,0 m	
287-710-50	US-Models; 2-pins	5,0 m	
287-715-30	international Models; 2-pins	3,0 m	
287-715-50	international Models; 2-pins	5,0 m	

Art.Nr.	Beschreibung   Description	Länge   Length	
	<b>monopolares Kabel für Storz Resektoskop</b> <b>monopolar cable for Storz resectoscopes</b> <b>câble monopolaire pour Storz resectoscope</b> <b>cable monopolar para Storz resectoscope</b> <b>cavo monopolare per resettori Storz</b>		Umax: 3 KVp
287-800-30	monopolar cable 4 mm	3,0 m	
287-800-50	monopolar cable 4 mm	5,0 m	
	<b>Kabel für Neutralelektrode</b> <b>cable for return plates</b> <b>câble pour électrodes neutres</b> <b>cable para electrodos neutros</b> <b>cavo per piastre neutre monouso</b>		Umax: 3 KVp
287-805-30	Erbe; Martin	3,0 m	
287-805-50	Erbe; Martin	5,0 m	
	<b>Kabel für Einmal-Neutralelektrode</b> <b>cable for single use return plates</b> <b>câble pour électrodes neutres à usage unique</b> <b>cable para electrodos neutros desechable</b> <b>cavo per piastre neutre monouso</b>		Umax: 3 KVp
287-810-30	Erbe; Martin	3,0 m	
287-810-50	Erbe; Martin	5,0 m	
	<b>monopolares Kabel 4mm</b> <b>monopolar cable 4mm</b> <b>câble monopolaire 4mm</b> <b>cable monopolar 4mm</b> <b>cavo monopolare 4mm</b>		Umax: 3 KVp
287-815-30	Berchtold; Martin	3,0 m	
287-815-50	Berchtold; Martin	5,0 m	
	<b>monopolares Kabel 4mm</b> <b>monopolar cable 4mm</b> <b>câble monopolaire 4mm</b> <b>cable monopolar 4mm</b> <b>cavo monopolare 4mm</b>		Umax: 3 KVp
287-820-30	Erbe	3,0 m	
287-820-50	Erbe	5,0 m	
	<b>HF-Kabel nach Kundenwunsch, bzw. mit Sonderlängen können gerne angefertigt werden.</b> <b>Customers modifications are available upon request.</b>		



Art.Nr.	Beschreibung   Description	VPE   Unit
288-010-00	Bipolare Klemme; gebogen; gerieft bipolar clamp; curved; serrated pince bipolaire; courbe; striée pinza bipolar; curva; estriada pinza bipolare; curva; striata	1
	passende Kabel: 287-600-50 – 287-615-50 (Seite 78) suitable cables: 287-600-50 – 287-615-50 (page 78)	230 mm
	Bipolare Schere bipolar scissors ciseaux bipolaire tijera bipolar forbici bipolari	1
	gerade   straight droite   recta   retta	fein gebogen   curved courbe   curva   curva
288-020-18	288-021-18	180 mm
288-020-21	288-021-21	210 mm
288-020-23	288-021-23	230 mm
288-020-28	288-021-28	280 mm
	230 mm	
	Bipolares Kabel für bipolare Scheren bipolar cable for bipolar scissors câble bipolaire pour ciseaux bipolaire cable bipolar para tijera bipolar cavo bipolare per forbici bipolari	1
	für Instrumentanschlüsse von:   for instrument plugs from:	
288-030-30	US-Models; 2-pins	3,0 m
288-030-50	US-Models; 2-pins	5,0 m
288-035-30	Erbe ICC/ACC, Storz	3,0 m
288-035-50	Erbe ICC/ACC, Storz	5,0 m
288-040-30	Berchtold; Martin	3,0 m
288-040-50	Berchtold; Martin	5,0 m
288-045-30	international Models; 2-pins	3,0 m
288-045-50	international Models; 2-pins	5,0 m



**Neutralektroden zum einmaligen Gebrauch**  
**Single-use return plates**

Art.Nr.	Beschreibung   Description
289-010-05	<b>Einmal-Neutralektrode für Erwachsene und Kinder</b> <b>Kontakt 105cm<sup>2</sup>; Pack á 50 Stück</b> single use return plates for adults and children conductive 105cm <sup>2</sup> ; 50 pcs. électrodes neutres à usage unique pour adultes et enfants conductrice 105cm <sup>2</sup> ; box á 50 pieces electrodos neutros desechables para adultos e ninos superficie 105cm <sup>2</sup> ; box á 50 unidades piastre neutre monouso per adulti e bambini superficie 105cm <sup>2</sup> ; box da 50 pezzi



Art.Nr.	Beschreibung   Description
289-010-10	<b>Einmal-Neutralektrode für Erwachsene und Kinder</b> <b>Kontakt 110cm<sup>2</sup>; Pack á 50 Stück</b> single use return plates for adults and children conductive 110cm <sup>2</sup> ; 50 pcs. électrodes neutres à usage unique pour adultes et enfants conductrice 110cm <sup>2</sup> ; box á 50 pieces electrodos neutros desechables para adultos e ninos superficie 110cm <sup>2</sup> ; box á 50 unidades piastre neutre monouso per adulti e bambini superficie 110cm <sup>2</sup> ; box da 50 pezzi

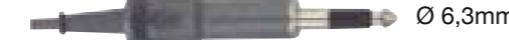


Art.Nr.	Beschreibung   Description
289-010-15	<b>Einmal-Neutralektrode für Babies</b> <b>Kontaktfläche 35cm<sup>2</sup>; Pack á 50 Stück</b> single use return plates; baby size conductive 35cm <sup>2</sup> ; 50 pcs. électrodes neutres à usage unique pour bébé conductrice 35cm <sup>2</sup> ; box á 50 pieces electrodos neutros desechables para bebé superficie 35cm <sup>2</sup> ; box á 50 unidades piastre neutre monouso per bambini superficie 35cm <sup>2</sup> ; box da 50 pezzi



**Kabel für Neutralektrode**  
**cable for return plates**  
câble pour électrodes neutres  
cable para electrodos neutros  
cavo per piastre neutre

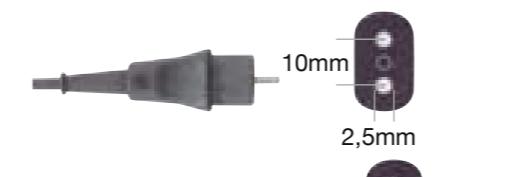
289-020-45	Erbe ACC/ICC; Martin	4,5m
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289-025-45	ALSA; Eschmann	4,5m
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289-030-45	BOWA; Conmed; Valleylab	4,5m
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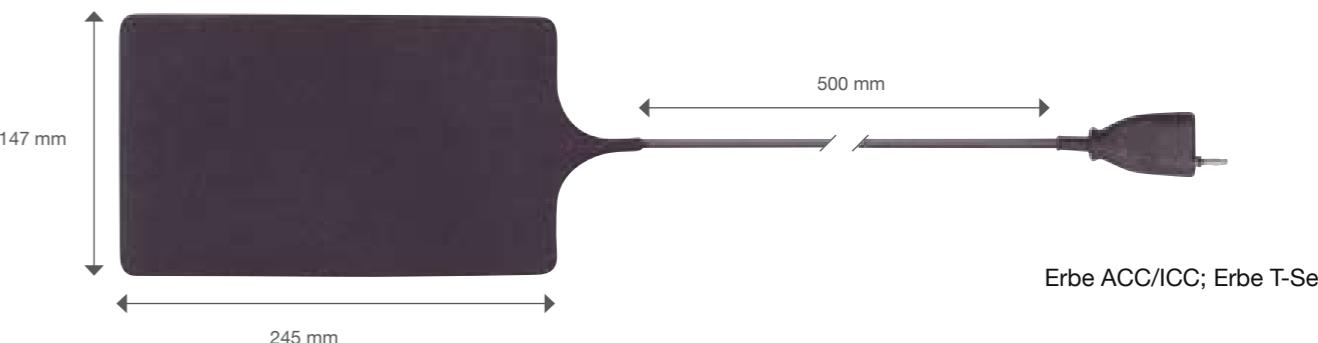


289-035-45	BOWA; Conmed; Valleylab	4,5m
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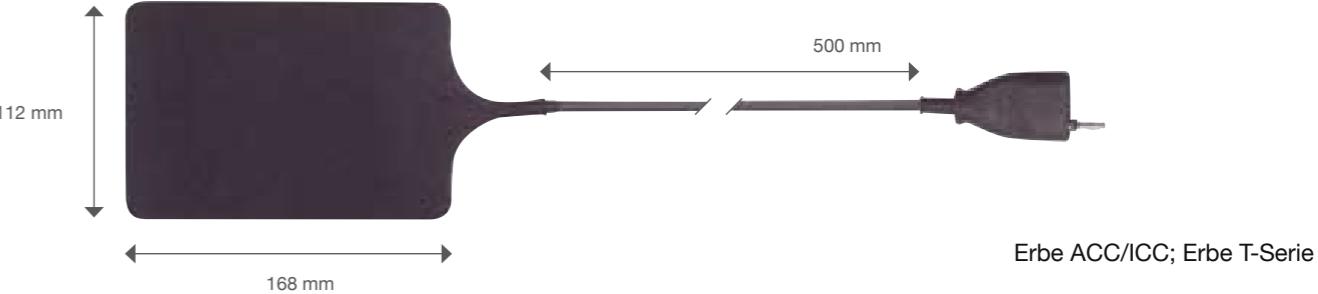
**Wiederverwendbare Gummi-Neutralektroden (Silikon)**  
**Reusable rubber return plates (silicone)**

Art.Nr.	Beschreibung   Description
289-100-05	<b>Neutralektrode; wiederverwendbar; gummi</b> <b>return plates; reusable; rubber</b> électrodes neutres; réutilisables; caoutchouc electrodos neutros de goma; reutilizables piastre neutre; riutilizzabile



Erbe ACC/ICC; Erbe T-Serie

Art.Nr.	Beschreibung   Description
289-100-10	<b>Neutralektrode; wiederverwendbar; gummi</b> <b>return plates; reusable; rubber</b> électrodes neutres; réutilisables; caoutchouc electrodos neutros de goma; reutilizables piastre neutre; riutilizzabile



Erbe ACC/ICC; Erbe T-Serie

**Kabel für Neutralektrode**  
**cable for return plates**  
câble pour électrodes neutres  
cable para electrodos neutros  
cavo per piastre neutre



289-110-45	Erbe ACC/ICC; Erbe T-Serie	4,5m
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Ø 6,3mm





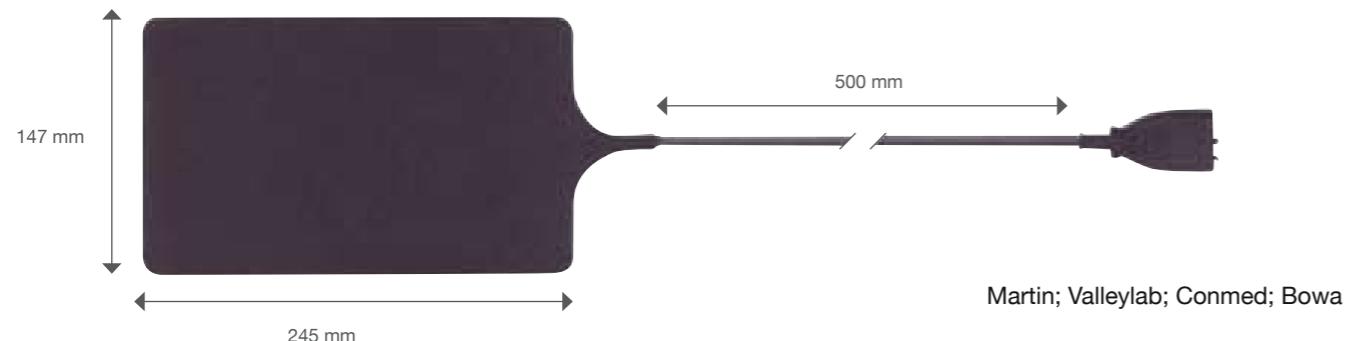
**Wiederverwendbare Gummi-Neutralelektroden (Silikon)**  
**Reusable rubber return plates (silicone)**

LATEX  
134°C  
Autoclave  
273°F

**Art.Nr.** **Beschreibung | Description**

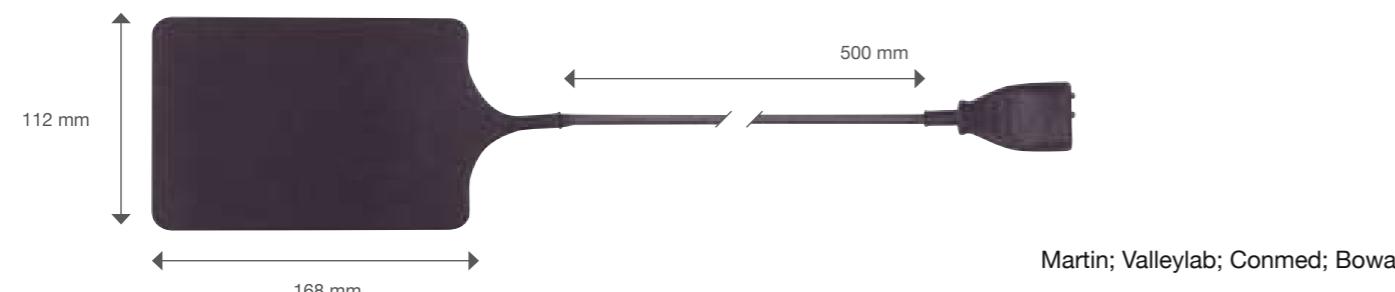
**289-200-05** **Neutralelektrode; wiederverwendbar; gummi return plates; reusable; rubber**

électrodes neutres; réutilisables; caoutchouc  
electrodos neutros de goma; reutilizables  
piastre neutra; riutilizzabile



**289-200-10** **Neutralelektrode; wiederverwendbar; gummi return plates; reusable; rubber**

électrodes neutres; réutilisables; caoutchouc  
electrodos neutros de goma; reutilizables  
piastre neutra; riutilizzabile



**Kabel für Neutralelektrode**  
**cable for return plates**  
**câble pour électrodes neutres**  
**cable para electrodos neutros**  
**cavo per piastre neutre**

**289-210-45** Martin

4,5m



10mm  
4mm



Ø 6,3mm

**289-215-45** Erbe; Valleylab; Conmed; Bowa 4,5m



10mm  
2,5mm

**Wiederverwendbare Gummi-Neutralelektroden (Silikon)**  
**Reusable rubber return plates (silicone)**

LATEX  
134°C  
Autoclave  
273°F

**Art.Nr.** **Beschreibung | Description**

**289-300-05** **Gummibinde; elastisch; gelocht mit Befestigungsknopf**  
**rubber band; perforated; with fixing button**

bande élastique en caoutchouc; perforée, avec bouton de fixation  
cinta de goma elástica; perforada, con botón de fijación  
fascia elastica in gomma perforata, con bottone di fissaggio

500m



**289-300-10** **Gummibinde; elastisch; gelocht mit Befestigungsknopf**  
**rubber band; perforated; with fixing button**

bande élastique en caoutchouc; perforée, avec bouton de fixation  
cinta de goma elástica; perforada, con botón de fijación  
fascia elastica in gomma perforata, con bottone di fissaggio

1000m



**289-305-00** **Befestigungsknopf für Gummibinde**  
**button for rubber band**

bouton de fixation pour bande en caoutchouc  
botón de fijación para cinta de goma  
bottone per il fissaggio della fascia elastica





# Gebrauchsanweisung instructions



## Gebrauchsanweisung für HF-Kabel / Handgriffe / Elektroden / Adapter Instructions for HF cables / handles / electrodes / adapters

**Richtlinie Medizinprodukte (Europa)**  
Dieses Produkt entspricht der Richtlinie 93/42 EEC über Medizinprodukte

### 1. Verwendung

HF-Kabel und Handgriffe mit Elektroden dienen dem Anschluß von Hilfsinstrumenten für monopolare oder bipolare Koagulation an HF-Geräte. Diese Produkte unterliegen bei bestimmungsgemäßem Gebrauch je nach Verwendungsintensität einem mehr oder weniger starken Verschleiß. Dieser Verschleiß ist technisch bedingt und unvermeidlich. Daher ein Produkt vor jeder Anwendung einer gründlichen Sicht- und Funktionskontrolle unterziehen. Weist das Produkt äußerlich erkennbare Mängel auf oder arbeitet es nicht wie in dieser Anleitung beschrieben, unverzüglich den Hersteller oder dessen zuständigen Repräsentanten benachrichtigen.

### 2. Gebrauch

Kabel, Stecker und Handgriff sind vollständig auf sichtbare Unregelmäßigkeiten zu überprüfen. Kabel mit brüchiger oder defekter Isolierung dürfen nicht benutzt werden. Gegebenenfalls die Funktionsfähigkeit mit einem geeigneten Prüfgerät überprüfen.

#### Anschluß am HF-Gerät in monopolarer Betriebsweise

Zunächst wird die Neutralelektrode am Patienten befestigt, möglichst an Oberarm oder Oberschenkel. Die Haut muß an dieser Stelle haar- und fettfrei sein. Leitgel gleichmäßig auf der Neutral-elektrode verteilen. Die Stromwege im Körper des Patienten sollen kurz sein und in diagonaler Richtung verlaufen. Niemals Stromwege quer durch den Körper und keinesfalls über den Thorax laufen lassen. Der Patient muß gegen alle elektrisch leitfähigen Teile isoliert sein. OP-Tisch erden, Patient auf eine trockene, elektrisch isolierende Unterlage legen. Haut-zu-Haut-Berührungen vermeiden. Trockenen Mull einlegen. Anschließend werden die Neutralelektrode, der Fußschalter und das HF-Kabel mit dem HF-Gerät verbunden. Zur Vermeidung von Monitor-Bildstörungen sind HF-Kabel nicht unmittelbar parallel mit Kamerakabeln zu führen.

HF-Kabel dürfen niemals unmittelbar auf die Haut des Patienten liegen.

HF-Kabel nicht in Schleifen verlegen. Danach Instrument oder Handgriff mit Elektrode für die Koagulation anschließen und HF-Gerät einschalten. Die aktive Elektrode mit dem jeweils passenden Schaftdurchmesser (4mm oder 2,4mm) ist fest an der Spitze des Handgriffs zu befestigen. Für Handgriffe mit Fingerschaltern gilt: Gelbe Taste = Aktivierung des Schneidestroms Blaue Taste = Aktivierung der Gewebskoagulation. Die Gebrauchsanweisung des HF-Gerätes sowie dessen allgemeine Hinweise zu elektrochirurgischen Eingriffen beachten. Alle monopolaren Produkte sind im Leistungsbereich von max. 8500 VSS einsetzbar (monopolare Pinzetten bis max. 5500 VSS).

#### Anschluß am HF-Gerät in bipolarer Betriebsweise.

Bei der bipolaren HF-Chirurgie erfolgt die Koagulation zwischen den beiden Elektroden des bipolaren Instruments. Das Anbringen einer Neutralelektrode wird hierbei überflüssig. Ansonsten gelten die gleichen Hinweise zur Patientenlagerung und die entsprechenden Anweisungen zum HF-Gerät. Alle bipolaren Produkte sind im Leistungsbereich bis max. 2000 VSS einsetzbar.

### 3. Gefahrenhinweise

**Die Ausgangsleistung des HF-Geräts** darf nur auf den für den Eingriff unbedingt erforderlichen Wert eingestellt werden. Stellt sich trotz Standardeinstellung des HF-Geräts nicht die gewohnte Koagulationsleistung ein, niemals ohne vorherige Prüfung die Ausgangsleistung des Geräts erhöhen. Im einzelnen ist zu prüfen: Einwandfreier Kontakt aller HF-Stecker und Kabel, Funktionieren des Fußschalters bzw. des Fingerschalters am Handgriff, Isolation der HF-Kabel, des Instruments sowie Sauberkeit und Abnutzung des distalen Endes der aktiven Elektrode(n). Vor Operationsbeginn ist durch Betätigung der gelben Taste (CUT) und der blauen Taste (COAG) die störungsfreie Signalübertragung (z.B. ohne Rauschen) der Monitore zu überprüfen.

**5. Reparatur**  
**Vorsicht:** Defekte HF-Kabel oder Handgriffe dürfen grundsätzlich nicht repariert werden. Sie sind durch neue zu ersetzen.



**Endogene Verbrennungen**  
sind Verbrennungen, verursacht durch hohe Stromdichte im Gewebe des Patienten. Ursachen können unter anderem sein: Der Patient erhält unbeabsichtigt Kontakt zu elektrisch leitfähigen Teilen. Bei direktem Hautkontakt von HF-Kabeln können kapazitive Ströme zu Verbrennungen führen.



**Exogene Verbrennungen**  
sind Verbrennungen durch die Hitze entzündeter Flüssigkeiten oder Gase. Auch Explosionen sind möglich. Ursachen können sein: Entzündung von Hautreinigungs- und Desinfektionsmitteln, Entzündung von Narkosegasen etc.



**Herz-Schrittmacher**  
können durch HF-Strom geschädigt werden. Vor dem Eingriff einen Kardiologen hinzuziehen. Niemals ambulante Eingriffe mit HF-Strom an Patienten mit Herz-Schrittmachern durchführen.



**4. Reinigung, Desinfektion und Sterilisation**  
**Vorsicht:** Die HF-Kabel, Adapter und Handgriffe dürfen nicht in einem Ultraschallbad gereinigt werden. Die HF-Kabel, Adapter und Handgriffe samt Elektroden dürfen nicht in Heißluftsterilisatoren sterilisiert werden. Unmittelbar nach der Anwendung alle Teile mit alkoholhaltigem Oberflächendesinfektionsmittel abwaschen. Das HF-Kabel oder der Handgriff kann auch alternativ in eine kombinierte Reinigungs- und Desinfektionsmittelösung eingelegt werden, was aber seine Lebenszeit durch Oxidation der Kontakte oder Auskristallisationen in den Steckern verringern kann. Die Hinweise der Chemiehersteller bitte beachten. Danach Kabel, Stecker, Griffstück oder Elektrode mit sterilisiertem Wasser gründlich spülen. Die Produkte bei 134 °C dampfsterilisieren. Konkrete Empfehlungen siehe gesondertes Blatt.





**Medical Device Directive (Europe)**  
**This device complies with the requirements of Directive 93/42 EEC concerning medical devices**

**1. Use**

HF cables connect electrode handles, electrodes and instruments for monopolar or bipolar coagulation to HF units. When used as intended, these products are more or less subject to wear, depending on the intensity of use. This kind of wear is caused by technical factors and cannot be avoided. Therefore carry out a thorough visual examination and a function test prior to each application of these products. In case a new product has externally visible defects or does not operate according to the instructions, contact the manufacturer or his responsible representative immediately.

**2. Operating**

Thoroughly examine the cable, plugs and electrode handle for irregularities on the surface. Do not use cables with a brittle or defective insulation. In case of doubt check functioning by means of a proper testing device.

**Connection to HF unit in monopolar mode**

First fix the neutral electrode ("return plate") to the patient, possibly on the upper arm or on the thigh. Ensure that the skin is free from hair and grease. Apply conductive gel evenly over the neutral electrode. The current paths inside the patient's body should be short and must proceed diagonally. Current paths must never run in transverse direction through the body or across the thorax. The patient must be insulated against all electrically conductive parts. Ground the operating table. Place the patient on a dry electrically insulating layer. Prevent skin areas touching each other. Place dry gauze in between. Then connect the neutral electrode, the foot switch and the "active" HF cable to the HF unit. In order to avoid interference with camera systems, do not guide HF cables in line with camera cables.

Never place HF cables directly on the

patient's skin. Never lay HF cables in loops. Then connect the HF cable to the instrument or to the electrode handle incl. the active electrode for coagulation and switch on the HF unit. The electrode with the proper shaft diameter (4mm resp. 2.4mm) has to be firmly attached to the handle tip.

Activation by yellow (finger) switch means: cutting current.

Activation by blue (finger) switch means: coagulating current.

Always refer to the instruction manual of the HF unit and to its general information about electrosurgical procedures. All monopolar products can be operated up to 8500 VP-P. (monopolar forceps up to 5500 VP-P).

**Connection to HF unit in bipolar mode**

In bipolar HF surgery the coagulation is restricted to the area between the two electrodes of the bipolar instrument. Consequently, a neutral electrode is not necessary. Besides, follow the recommendations regarding patient preparation in monopolar operating mode and the corresponding instructions of the HF unit. All bipolar products can be operated up to 2000 VP-P.

**3. Warnings**

**Power output of the HF unit:** Always select the lowest possible output of the HF unit for any procedure. If the coagulating capacity of the electrode is below normal, do not increase increase the output of the HF unit without a thorough preliminary check. Inspect for correct fit of the neutral electrode (in case of monopolar mode), correct attachment of all HF cables and plugs, correct activation of current by the finger- or foot-switches, undamaged insulation of the HF cables and instrument and check if the distal end of the electrode is clean and undamaged.

Before operating check if the signal transmission of the monitors works without interference (e.g. without noise); this check is done by pressing the yellow button (CUT) and the blue one (COAG).

Never place HF cables directly on the



**Endogenous burns**

Endogenous burns are those caused by high current density in the patient's tissue. Possible reasons are: The patient is inadvertently positioned in contact with electrically conductive parts. Direct contact between skin areas and HF cables may lead to electrical capacitance which in turn may cause burn.

**Exogenous burns**

Exogenous burns are those caused by the heat of ignited fluids or gases. They may also be caused by explosions. Possible reasons are among others: Ignition of skin cleaning agents and disinfectants, ignition of narcotic gases etc.



**Cardiac pacemakers**

Pacemakers may be damaged by electrosurgical current. Consult a cardiologist for the intervention. Never use electrosurgical current on outpatients fitted with pacemakers.



**4. Cleaning, disinfection and sterilisation**

**Caution:** Do not clean HF cables, adapters or electrode handles in an ultrasound bath. Do not sterilise HF cables, adapters or electrode handles and electrodes in hot air sterilisers.

After use, wipe HF cable with an alcoholic surface disinfectant immediately. The HF cable or the handle may also be immersed in a combined cleaning and disinfecting solution; in this case, the service life may then be reduced due to oxidation of the contacts and crystallisation in the plugs. Observe the instructions of the chemical manufacturer and make sure that the agents used are compatible. Then rinse cable, connectors, pencil or electrode thoroughly with sterilised water. For concrete recommendations see separate instruction sheet.

**5. Repairs**

**Caution:** Defective HF cables or electrode handles may not be repaired. Always replace a defective part with a new one.

• • •



**detachable bipolar coagulation forceps**

**Important Information - Please read before use !**

**Caution**

Please read all information contained in this insert. Incorrect handling and care as well as misuse can lead to premature wear of surgical instruments. This instrument is designed for use with the bipolar outputs of electrosurgical generators only. Do not exceed 60 Watts in the bipolar coagulation mode of generators.

**Description**

The Detachable Bipolar Coagulation Forceps are intended for use in general operative and laparoscopic surgical procedures. The device is intended to be passed through a 5mm laparoscopic cannula. Coagulation is achieved using electrosurgical energy under laparoscopic visualisation. This device is intended to be used with the outputs of compatible electrosurgical generators such as Erbe, Martin, Berchtold, Codman, Valleylab and similar generators. Do not exceed 60 Watts in the bipolar coagulation mode of generators.

**Indications for Use**

The Detachable Bipolar Coagulation Forceps are designed to manipulate, grasp and cut selected tissue. Bipolar Coagulation current may be selectively applied to the tissue as indicated. Suitable Cables:

**Note:** Bipolar coagulation instruments should be used only by individuals who are trained and licensed to use such devices.

Examples of such training and experience include:

Training through qualified residency program, surgical skills workshops, training programs offered by equipment manufacturers or preceptorship/surgical assistant training.

**Contraindications**

Not intended for contraceptive coagulation of the fallopian tube but may be used to achieve hemostasis following transection of the tube.

sparking in a flammable gas environment (i.e. explosive anesthetic gases). Organ perforation. Sudden massive hemorrhage.

**Contraindications to endoscopic procedures, not necessarily bipolar coagulation include:**

As identified in the Manual of Endoscopy available from the American Association of Gynecologic Laparoscopists. The presence of large pelvic or pelvic-abdominal masses, hypovolemic shock and severe cardiac decompensation. Also, intestinal obstruction and marked bowel distention, increase possibility of pelvic and abdominal adhesions.

A significantly elevated diaphragm contra-indicates the use of insufflation which may be necessary for proper surgical visualisation and may increase the chance of inadvertent bowel injury. Pelvic abscess, chronic pulmonary disease, diaphragmatic hernia, obesity, and septic peritonitis may exclude some patients from surgical consideration depending on severity of these conditions.

**Caution:** Please refer to the labeling and user manual for the electrosurgical generator for additional information on contraindications on electrosurgical or laparoscopic use.

Complications reported in the medical literature during laparoscopic surgical procedures include:

Hemorrhage, damage to surrounding soft tissue, leakage of bile or other secretions, infection (local and systemic), bowel perforation, damage to large blood vessels and/or neurological structures, inadvertently retained instruments and death.

**Adverse events reported while using bipolar electrosurgical devices include:**

Inadvertent activation with resultant tissue damage at the wrong site and/or equipment damage.

Fires involving surgical drapes and other combustible materials have been reported.

Alternate current pathways resulting in burns where the patient or physician or assistant is in contact with exposed metal.

Explosions caused by electrosurgical

Cautions & Warnings  
**US Federal Law restricts this device to sale by or on the order of a physician only.**

Special safety precautions should be observed when using electrosurgical instruments. Electrosurgical instruments can pose a significant shock, burn or explosion hazard if used improperly, incorrectly or carelessly.

Avoid touching or grounding electro-surgical instruments to non-insulated instruments, scopes, trocar sleeves, etc. All persons using such devices should be knowledgeable in the use and handling of laparoscopic instruments, coagulation equipment, their accessories and other related equipment.

Test all instruments, accessories and equipment prior to each use. Written Standard Operating Procedures for the cleaning, sterilisation, storage, inspection and maintenance of the instruments, accessories and equipment are recommended.

Do not use electrosurgical instruments on patients with pacemakers. Do not use in presence of flammable liquids or anaesthetics.

Electrosurgical generators used with these devices are designed to cause destruction of tissue and are inherently dangerous if operated improperly. Follow all safety precautions and instructions supplied by the manufacturer of the electrosurgical generator.

The electrode tip must always be in full view before activating power. Apply power only when electrode tip is in full contact with the tissue selected for coagulation.

Electrode tip must not come in contact with the laparoscope or other metal instruments during use.

Failure to observe these cautions and contraindications may result in injury, malfunction or other unanticipated



occurrences or events for the operator, staff and/or the patient.

#### Initial use of new instruments

Every instrument must be cleaned and sterilised before it is used for the first time.

The instrument was developed for sterilisation by autoclave and has shown good results using this method.

#### Inspection and functional check

It is very important to carefully examine each surgical instrument for breaks, cracks or malfunctions before use. It is especially essential to check areas such as blades, points, ends, stops and snaps as well as all movable parts.

Do not use damaged instruments. Never attempt to make repairs yourself. Service and repairs should be referred to trained qualified persons only. Refer questions about repair to the manufacturer or your biomedical engineering department.

#### Assembly and Operation

Assemble/disassemble forceps following the example assembly instructions and diagram.

Once correct assembled and connected to power, the device may be used in either the right or the left hand and any desired handle orientation to facilitate use and reduce hand discomfort and/or fatigue.

To close jaws: compress (grip) handle. To open jaws: gently release handle compression (grip).

Forceps jaws will not retract into the tube.

Never withdraw laparoscopic or surgical devices from the surgical site without direct observation or laparoscopic view to prevent inadvertent damage to adjacent tissue.

The Detachable Bipolar Coagulation Forceps are designed to provide concentrated grasping force or to cut at the forceps jaw and will cause some degree of tissue crushing where the jaws grasp or close. Tissue that is not to be clamped, crushed, cut or coagulated should not be grasped except with extreme care to avoid damage.

Coagulation forceps require the use of good surgical judgement and should not be used where crushing injury or coagulation is not acceptable. When retracting tissue with the forceps, the traction force applied to the tissue should be low enough to avoid tearing the selected tissue.

#### Cleaning and Maintenance

Every surgical instrument should be disinfected and thoroughly cleaned after each use. Proper cleaning, inspection and maintenance will help ensure correct function of the surgical instrument. Clean, inspect and test each instrument carefully. Sterilise all instruments before surgery. A good cleaning and maintenance procedure will extend the useful life of the instrument.

Special attention must be paid to slots, stops, ends, hollow tubes and other highly inaccessible areas. Check insulation, cables and connectors for cuts, voids, cracks, tears, abrasions, etc.

Do not use damaged instruments. This device can be disassembled. It must be cleaned in the disassembled state. (Note: Keep all parts together and protected from being misplaced, do not intermix with other or similar devices of other manufacture.)

Cleaning and rinsing must take place immediately after each use for best effect. Failure to clean promptly may result in adherent particles or dried secretions that may resist cleaning and complicate or resist future sterilisation. Instruments must be completely cleaned and rinsed of all foreign matter. Use warm water and a commercially available instrument pre-soak or cleaning agent. Enzymatic cleaners must be used to remove protein deposits. Follow the enzymatic cleaner's instructions; rinse thoroughly.

- Do not use corrosive cleaning agents (i.e. bleach). Cleaning solutions and rinses at or near a neutral pH (7.0) are best.
- Do not use abrasive cleaners.
- Only a soft bristle brush should be used.
- Immerse the entire device in deter-

gent and clean while soaking. Use a minimum of six strokes in and six strokes out with an instrument brush for all inside channels. Rinse with sterile deionized water. Repeat this procedure.

- Can be disinfected in the washing machine up to 203°F (95°C).
- Rinse thoroughly with distilled water.
- Prepare for storage and/or sterilisation.

After cleaning and rinsing, dry instruments completely and carefully with compressed air (including inside channels and highly inaccessible areas). Note: After cleaning and before sterilisation, treat all instruments with an oil which is considered as being physiologically safe, especially their blades, ends, stops, snaps and all movable parts.

#### Storage and Sterilisation

Instruments must be stored in a clean, dry, moisture free area. The instruments should be stored individually in their shipping carton or in a protective tray with partitions. Protects tips with cloth, gauze or tubing if stored in drawers.

Instruments and cables are reusable and meet AAMI standards for sterilisation.

We guarantee our products to withstand a minimum of twenty sterilisation cycles when sterilised according to the criteria listed below. Most devices will surpass this standard if a protocol is established for the proper care and inspection of medical devices at your facility.

Use steam autoclave sterilisation. Thoroughly clean instruments of all debris, tissue and foreign matter prior to sterilisation.

Follow the sterilizer manufacturer's instructions for operation and loading of steam autoclaves. There must be direct steam exposure to all surfaces of the instruments being sterilised including the internal surface and tubes channels.

Allow instrument to air cool to room temperature before use.

#### Standard sterilisation method

Use steam autoclave sterilisation only.

Standard autoclave cycle:

Steam sterilise at 270°F (132°C) for 15 minutes. Other time and steam temperature cycles may also be used. However, user must validate any deviation from the recommended time and temperature.

(Note: Contact the manufacturer of your steam autoclave to confirm appropriate temperatures and sterilisation times.)

Caution: Autoclave temperatures should not exceed 280°F (137°C); handles, insulation or other non-metallic parts may be damaged.

#### Handling

All surgical instruments must be handled with the greatest care when being transported, cleaned, treated, sterilised and stored.

This is especially true for blades, fine points and other sensitive areas. Surgical instruments corrode and their functions are impaired if they come into contact with aggressive materials. The instruments must not be exposed to acids or other aggressive cleaning agents.

#### Warranty

All products are guaranteed to be free from defects in material and workmanship at the time of shipping.

All of our products are designed and manufactured to meet the highest quality standards. We cannot accept any liability for failure of products which have been modified in any way from their originals, for any failure due to misuse or application which is not in accordance with the designer's intentions.





**TONTARRA MEDIZINTECHNIK GmbH**

Daimlerstraße 15

78573 Wurmlingen

Germany

Tel: +49(0) 74 61 / 9 65 76 -0

Fax: +49(0) 74 61 / 9 65 76 -26

[info@tontarra.de](mailto:info@tontarra.de)

[www.tontarra.de](http://www.tontarra.de)