

# EXCELL MCDSe



EXCELL 400/A MCDSe



## Electrosurgical unit for monopolar and bipolar surgery

**EXCELL MCDSe** are electrocautery units for advanced surgery, indicated for all monopolar, bipolar and monopolar techniques with Argon gas flow.

**They are available in 5 models:**

- **EXCELL 400 MCDSe, EXCELL 350 MCDSe, EXCELL 250 MCDSe, EXCELL 200 MCDSe** for electrocautery
- **EXCELL 400/A MCDSe** both for electrocautery and for electrocautery with Argon gas, being equipped with an integrated Argon module

# CURRENTS

## MONOPOLAR CURRENTS

<b>PURE</b>	Pure cut without any coagulating effect
<b>BLEND 1</b>	Coagulating cut with medium haemostatic effect
<b>BLEND 2</b>	Coagulating cut with strong haemostatic effect, spray type
<b>ENDO</b>	Coagulating cut with cut phases alternated to coagulation phases, for flexible endoscopy

<b>FULG FORCED</b>	Coagulation with strong superficial and deep effect
<b>PINPOINT CONTACT</b>	Coagulation similar to the previous one, but softer
<b>SOFT</b>	Very delicate coagulation, with soft superficial effect and strong deep action
<b>SPRAY</b>	Coagulation without any contact and a very strong superficial effect

## BIPOLAR CURRENTS

<b>PURE</b>	Pure cut with minimum coagulating effect
<b>BLEND</b>	Coagulating cut with strong coagulating effect

<b>MICRO</b>	Very delicate coagulation, Micro Precise type, with minimum sticking effect of tissue on the tips of the forceps
<b>MICRO AUTO</b>	Coagulation identical to Micro, but with Impedance Sensing automatic Auto Start/Auto Stop
<b>MACRO</b>	Coagulation Standard type, very rapid and efficacious, ideal for forceps with bigger section (for example, for laparoscopy)



## TECHNICAL FEATURES

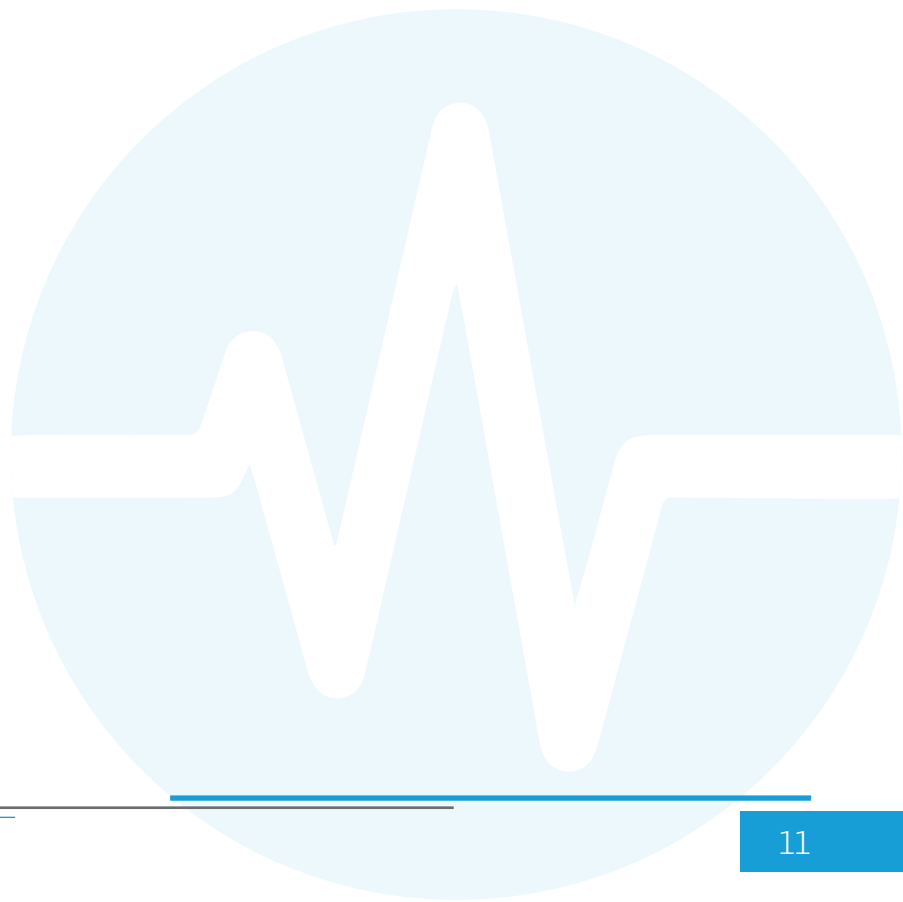
<b>HF generator compliant with</b>	IEC 60601-1 and IEC 60601-2-2
<b>CE Classification</b>	IIb
<b>IEC 60601-1 classification and type</b>	I CF
<b>IEC 60601-2-2 output circuit</b>	Floating - protected for the use of a defibrillator (HF dispersion <150 mA)
<b>Monopolar and bipolar working frequency</b>	440 kHz
<b>Operation check</b>	Complete self-diagnosis by means of a double microprocessor which performs: <ul style="list-style-type: none"> <li>- <b>Main Self-check</b> when turned on</li> <li>- <b>Standard Self-check</b> during operation and, if any, operation lock (within 100 milliseconds), with alarm signalling to operators through specific <b>Error Codes</b>, in the event of problems concerning: <ul style="list-style-type: none"> <li>- general operation or activation errors (General Error Control)</li> <li>- output power (Output Error Control)</li> </ul> </li> <li>- <b>HF Leakage Control</b>: continuous verification, by means of a specific circuit, of any HF current dispersion to earth and possible automatic power reduction by means of an alarm signal</li> <li>- Storage of the last 32 Error Codes</li> </ul>
<b>Power self-adjustment</b>	By microprocessor with: <ul style="list-style-type: none"> <li>- <b>ADC System</b> - Constant power: self-adjusts power, controlling voltage and current, based on real-time feedback (7000 checks/sec) between device and patient's tissue</li> </ul>
<b>Operation memorisation</b>	10 programs
<b>Outputs</b>	2 Monopolar and 1 Bipolar
<b>Foot-operated controls</b>	The EXCELL MCDSe can be equipped with: <ul style="list-style-type: none"> <li>• A double pedal control selectable for monopolar or bipolar functions.</li> <li>• Two double pedal controls, one for monopolar and one for bipolar functions.</li> </ul> The pedals are compliant with IEC 60601-2-2, waterproof (IP67), electric with 12 VDC low voltage power supply.
<b>Micro/macro power adjustment</b>	Monopolar: 0-30 W = 1 W, 30-100 W = 2 W, 100-200 W = 5 W, over 200 W = 10 W Bipolar: 0-10 W = 0.5 W, 10-30 W = 1 W, 30-100 W = 2 W, over 100 W = 5 W
<b>Panel</b>	Smooth, with digital displays and keys
<b>Neutral electrode safety circuit NPCC System</b>	Control of the connection of the neutral electrode - and of the quality of the contact using double section/split electrodes - with alarm signal and possible lock of delivered power.
<b>Power supply</b>	230 or 115 V - 50/60 Hz
<b>Power consumption at 230 V</b>	Max power 3.6 A = 828 VA, Stand-by 0.4 A = 92 VA
<b>Cooling</b>	Convection, without fan
<b>Equipotential bonding</b>	Standard DIN 42801 plug
<b>Size (LxDxH) and weight</b>	EXCELL 400/A MCDSe: 38x38x16 cm – 16 Kg EXCELL 400 MCDSe, EXCELL 350 MCDSe, EXCELL 250 MCDSe, EXCELL 200 MCDSe: 38x35x16 cm – 15 Kg
<b>Argon gas section (only in the EXCELL 400/A MCDSe model)</b>	
<b>Supply</b>	One 5 litre cylinder or with centralised system
<b>Flow</b>	Max 15 l/min
<b>Pressure</b>	Inlet 2.5 atm / Outlet 1 atm
<b>Flow check with Constant flow System</b>	From 1 to 15 l/min by means of an electronic sensor with adjustment buttons and visual control on the LED bar. Automatic self-compensation based on the type of electrode used. Alarm if gas is absent.
<b>Pressure check in the Safety gas System circuit</b>	Two-stage pressure reducer (on the cylinder and inside, with safety valve). Pressure sensor connected to the electronic control system, with Auto-Check when the gas section is switched on.
<b>Protection of the supplied gas flow</b>	Gas outlet equipped with antibacterial filter.

# OUTPUT POWERS

Monopolar currents	EXCELL 400 MCDSe	EXCELL 350 MCDSe	EXCELL 250 MCDSe	EXCELL 200 MCDSe	EXCELL 400/A MCDSe
PURE	400 W – 350 Ω 3450 Vpp – CF: 1.6 M: no – D: no	350 W – 350 Ω 3450 Vpp – CF: 1.6 M: no – D: no	280 W – 350 Ω 3450 Vpp – CF: 1.6 M: no – D: no	200 W – 350 Ω 3450 Vpp – CF: 1.6 M: no – D: no	400 W – 350 Ω 3450 Vpp – CF: 1.6 M: no – D: no
BLEND 1	300 W – 350 Ω 3600 Vpp – CF: 2.3 M: 29 kHz – D: 65%	300 W – 350 Ω 3600 Vpp – CF: 2.3 M: 29 kHz – D: 65%	280 W – 350 Ω 3540 Vpp – CF: 2.3 M: 29 kHz – D: 65%	200 W – 350 Ω 3500 Vpp – CF: 2.3 M: 29 kHz – D: 65%	300 W – 350 Ω 3600 Vpp – CF: 2.3 M: 29 kHz – D: 65%
BLEND 2	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%
ENDO	250 W – 350 Ω 1880 Vpp – CF: 2.2 50% Pure / 50% Coag	220 W – 350 Ω 1880 Vpp – CF: 2.2 50% Pure / 50% Coag	220 W – 350 Ω 1880 Vpp – CF: 2.2 50% Pure / 50% Coag	200 W – 350 Ω 1880 Vpp – CF: 2.2 50% Pure / 50% Coag	250 W – 350 Ω 1880 Vpp – CF: 2.2 50% Pure / 50% Coag
FULG FORCED	150 W – 350 Ω 4700 Vpp – CF: 4.5 M: 78 kHz – D: 35%	150 W – 350 Ω 4700 Vpp – CF: 4.5 M: 78 kHz – D: 35%	150 W – 350 Ω 4700 Vpp – CF: 4.5 M: 78 kHz – D: 35%	150 W – 350 Ω 4700 Vpp – CF: 4.5 M: 78 kHz – D: 35%	150 W – 350 Ω 4700 Vpp – CF: 4.5 M: 78 kHz – D: 35%
PINPOINT CONTACT	250 W – 250 Ω 3460 Vpp – CF: 2.6 M: 29 kHz – D: 56%	250 W – 250 Ω 3460 Vpp – CF: 2.6 M: 29 kHz – D: 56%	250 W – 250 Ω 3460 Vpp – CF: 2.6 M: 29 kHz – D: 56%	200 W – 250 Ω 3400 Vpp – CF: 2.6 M: 29 kHz – D: 56%	250 W – 250 Ω 3460 Vpp – CF: 2.6 M: 29 kHz – D: 56%
SOFT	280 W – 250 Ω 3440 Vpp – CF: 2.5 M: 29 kHz – D: 56%	280 W – 250 Ω 3440 Vpp – CF: 2.5 M: 29 kHz – D: 56%	280 W – 250 Ω 3440 Vpp – CF: 2.5 M: 29 kHz – D: 56%	200 W – 250 Ω 3020 Vpp – CF: 2,5 M: 29 kHz – D: 56%	280 W – 250 Ω 3440 Vpp – CF: 2.5 M: 29 kHz – D: 56%
SPRAY	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%	140 W – 600 Ω 7600 Vpp – CF: 8.1 M: 19 kHz – D: 9%
Argon Coag					SPRAY + ARGON GAS
Bipolar currents	EXCELL 400 MCDSe	EXCELL 350 MCDSe	EXCELL 250 MCDSe	EXCELL 200 MCDSe	EXCELL 400/A MCDSe
PURE	140 W – 300 Ω 790 Vpp – CF: 1.5 M: no – D: no	140 W – 300 Ω 790 Vpp – CF: 1.5 M: no – D: no	140 W – 300 Ω 790 Vpp – CF: 1.5 M: no – D: no	140 W – 300 Ω 790 Vpp – CF: 1.5 M: no – D: no	140 W – 300 Ω 790 Vpp – CF: 1.5 M: no – D: no
BLEND	120 W – 300 Ω 980 Vpp – CF: 1.8 M: 29 kHz – D: 75%	120 W – 300 Ω 980 Vpp – CF: 1.8 M: 29 kHz – D: 75%	120 W – 300 Ω 980 Vpp – CF: 1.8 M: 29 kHz – D: 75%	120 W – 300 Ω 980 Vpp – CF: 1.8 M: 29 kHz – D: 75%	120 W – 300 Ω 980 Vpp – CF: 1.8 M: 29 kHz – D: 75%
MICRO	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no
MICRO AUTO	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 450 Vpp – CF: 1.7 M: no – D: no
MACRO	120 W – 100 Ω 760 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 760 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 760 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 760 Vpp – CF: 1.7 M: no – D: no	120 W – 100 Ω 760 Vpp – CF: 1.7 M: no – D: no

## KEY

- W:** DELIVERED POWER
- Ω:** NOMINAL LOADS
- Vpp:** PEAK/NO-LOAD PEAK VOLTAGES
- CF:** CREST FACTORS
- M:** MODULATION
- D:** DUTY CYCLE



# DEVICES AND STANDARD ACCESSORIES

**EXCELL 400 MCDSe**, without accessories

**EXCELL 350 MCDSe**, without accessories

**EXCELL 250 MCDSe**, without accessories

**EXCELL 200 MCDSe**, without accessories

**EXCELL 400/A MCDSe**, without accessories

**B610/A** STANDARD ACCESSORIES SERIES including:

1 DS/E Double pedal control, electric, waterproof

1 NP/A Stainless steel neutral electrode, 2.5 m cable

1 FGE Fixing belt for electrodes

2 MPE/E Sterilisable electrode holder, 3.5 m cable

1 SEL/E Series of 8 active electrodes (2 E1 - Straight blade electrode, 2 E5 – Thick needle electrode, 1 E7 - Fine needle electrode, 1 E12 - Straight ball electrode Ø 2.5 mm, 2 E14 - Straight ball electrode Ø 4 mm)

**B610/B** STANDARD ACCESSORIES SERIES identical to B610/A, but with NP/GA flexible conductive rubber neutral electrode for adults

**B610/P** As above, with neutral paediatric electrode NP/GP



EXCELL 400 MCDSe



EXCELL 350 MCDSe



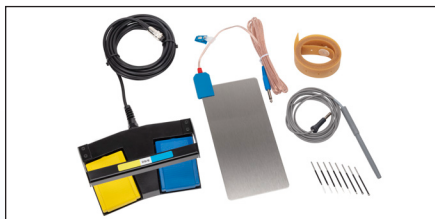
EXCELL 250 MCDSe



EXCELL 200 MCDSe



EXCELL 400/A MCDSe



B610/A



B610/B