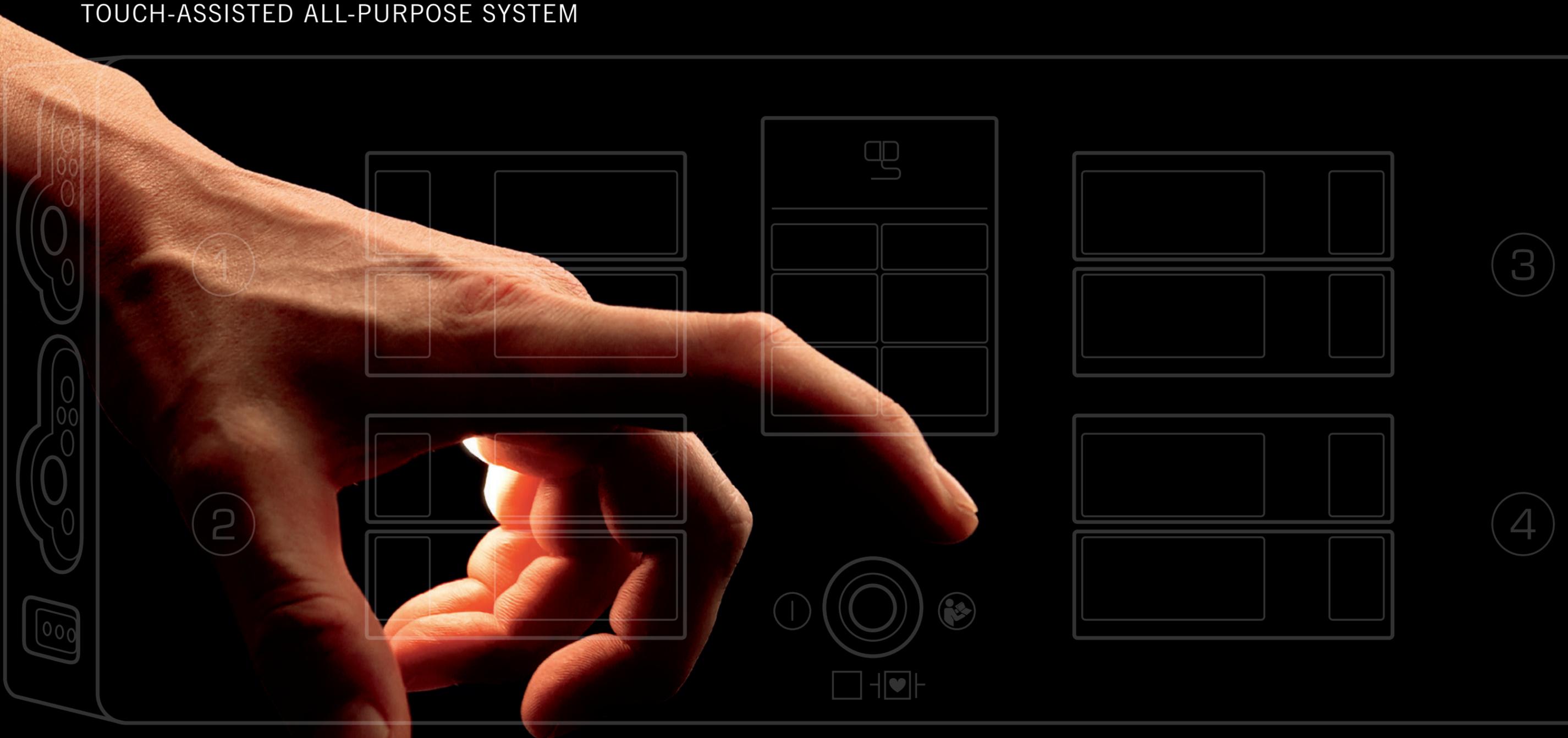


ARC 350  
ELECTROSURGICAL UNIT  
TOUCH-ASSISTED ALL-PURPOSE SYSTEM



**BOWA**  
**ARC**  
**350**

Heart and soul for the OR

The best is never good enough, for beyond it lie new discoveries and new solutions. It is our shared passion for a field in which we both excel, each in our own way. And it is this same passion that gives each of us the ability to achieve outstanding accomplishments.

Take advantage of the latest innovations in the field of electrosurgery units with the ARC 350. Discover a high-tech system as an all-purpose base that can be flexibly extended to meet your individual requirements.

# Clever innovations for your OR

The ARC 350 is a clever all-in-one-generator that is winning over customers with its clearly understandable operating concept and innovative functionalities. Thus, all device settings are pre-programmed for numerous standard procedures. Inside, processors ensure optimum integrated arc control at all times, while self-checking programs continuously ensure maximum safety. Four separate outputs can be individually configured with ease and operating personnel can check the settings visually at any time.

## Ideal applications for the ARC 350 in HF surgery:

- General, visceral, thoracic and paediatric surgery
- Gynaecology
- Gastroenterology
- Urology
- ENT
- Plastic and aesthetic surgery
- Orthopaedic and trauma surgery
- Oral and maxillofacial surgery
- Neurosurgery
- Cardiac surgery



## Effective use

Every field has specific requirements, every team works differently and a wide range of diverse instruments are called on to be used.

Select the pre-configured indication-orientated standard values or create a program on one of the 350 memory locations for your own specific field or to meet your individual needs.

## Assisted operation

Process optimisation and quality assurance in the OR start with the user-friendliness of the systems. The unit's interactive fingertip operation and touch-assisted glass front panel and clear relationship between the controller and instrument give users a complete overview.

The Plug & Cut function recognises instruments and Plug & Cut COMFORT\* also automatically preselects the right basic settings for the COMFORT instruments connected.

\*Optional

## Simply efficient

Its ease of use and safe operation, its special LIGATION function and the ability to connect up to four instruments to the ARC 350 simultaneously save valuable OR time.

The ARC 350 communicates with other system components via standard connections and software can also be easily updated via a USB port, ensuring you can also work efficiently in future.

# The interactive touch assistance system securely guides you to the right setting

## Touchpad technology for enhanced assistance in the OR

With the ARC 350, you have direct fingertip control of all device functions via the interactive glass touchpad. Effects and individualised settings can be selected via the touchscreen area. Messages are issued in plain text supported by graphic symbols, ensuring that the team retains a clear overview at every stage throughout hectic everyday work in the OR.

## Simply intuitive

Power is to be reset? Simply touch the respective figure with your fingertip. The glass touchpad of the ARC 350 is divided into four quadrants that correspond to the four sockets on the sides: if you attach an instrument to the upper right bipolar socket (3), for example, the upper right socket indicator is brightly lit.

## Always work with the correct socket

The socket indicator identifies the socket on which the settings are to be altered.

## Not just simpler – more hygienic too

The ARC 350 display is made of flat, wipe-resistant, shatter- and scratch-proof safety glass. The benefit of this is that the touchpad technology eliminates joints and grooves, thereby ensuring rapid and hygienic cleaning in the OR.

## A wealth of electrosurgical modes and effects

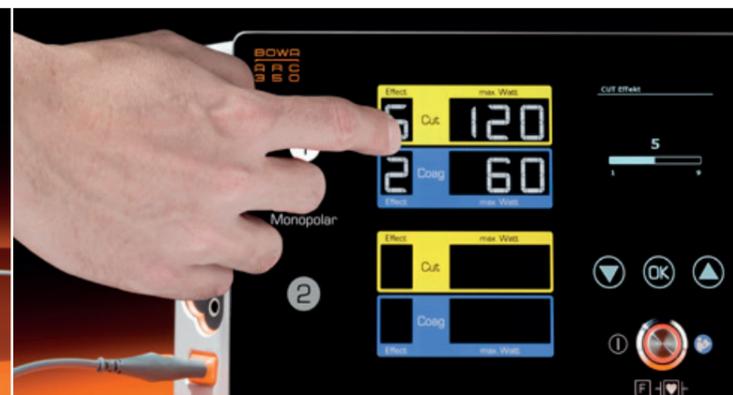
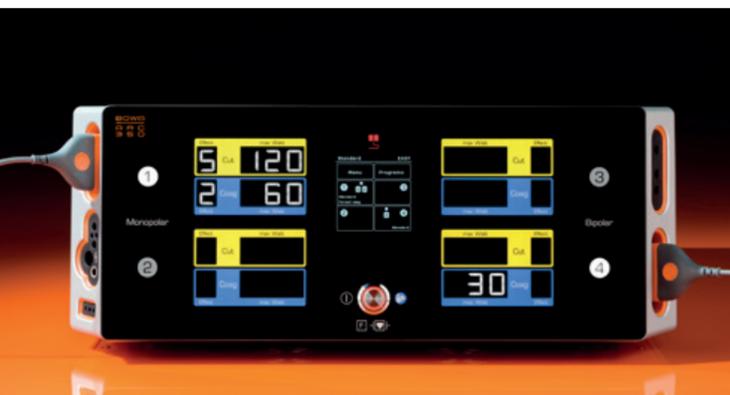
There are numerous standard modes available to the operator – each pre-set with the recommended power parameters. Moreover, the ARC 350 also offers indication-orientated modes that offer faster and simplified applications alongside the option of coordinating them specifically to your individual needs.

## Application-orientated and individual device profiles

The base ARC 350 model offers a range of application-orientated profile settings. Use one of the settings as the starting point for your adaptation or save a profile to meet your own individual needs. You can save a total of 300 profiles.

## Intelligent system concept for electrosurgery

The connection between the unit base and instrument is controlled and monitored by the use of RFID technology. The BOWA COMFORT system ensures the error-free use of instruments in conjunction with the ARC 350, however, the system can of course also be operated with conventional accessories and existing instruments.



## 100 % simplified – thanks to touch-assisted operation

The ARC 350 is simple and safe to operate. The menu opens up merely by tapping the setting to be changed on the display. Select the figure you require with the touch of your fingertip, assisted by

the information in the menu field. The active socket is highlighted by the socket number becoming illuminated, providing security and operating convenience.

Clarity: Every connected socket – in this photo the upper left and lower right – is clearly assigned to one quadrant of the display

Simple to use: Tap the corresponding field to activate the input menu in the centre of the ARC 350 to adjust effects or power values

# The COMFORT SYSTEM – process reliability, quality assurance and monitoring

Our COMFORT SYSTEM relies on smart RFID technology – and thus on the new standard for electro-surgical accessories. The COMFORT SYSTEM is the first and optimum system worldwide for process optimisation in the OR – across all electro-surgical applications.

Every ARC 350 is equipped with the COMFORT System and thus with the standard of the future. Take advantage of intelligent COMFORT instruments and secure for yourself decisive benefits for your workflow in the OR.

## Lean processes – more time for what's important

The COMFORT SYSTEM documents the use of the instruments in the instrument itself. The ARC 350 or the COMFORT BOX reads the information and, at a glance, identifies whether the instrument may still be used, thereby preventing the maximum number of uses being exceeded.

## Maximum safety and simultaneous reduction of OR time

The Plug & Cut functionality of the COMFORT SYSTEM enables the generator to automatically identify the instrument, check it and select the correct device settings. The Plug & Cut COMFORT function thereby avoids incorrect settings.

# Work efficiently – on a high-tech basis

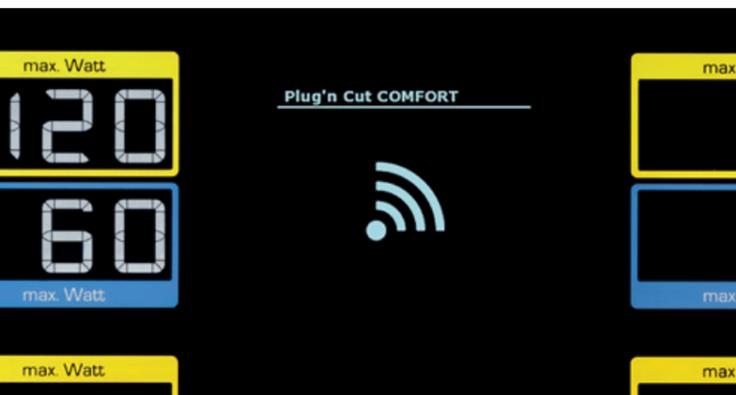
## Passion is nothing – without the right technology

Excellent results depend on the right technology. In addition to the innovative socket design that allows up to two monopolar and two bipolar instruments to be attached simultaneously and is compatible with all popular standard connections, there are numerous hardware and software components that can also directly affect performance in the OR.

## Monopolar simultaneous coagulation

With the ARC 350, monopolar simultaneous coagulation permits the simultaneous COAG activation of two monopolar handles for consistent tissue effects. This mode is especially ideal for coagulation and preparation, with the selected power setting being available for both handles. Applications include gynaecology with mastectomies, cardiac surgery with bypasses and surgery with multiple traumas.

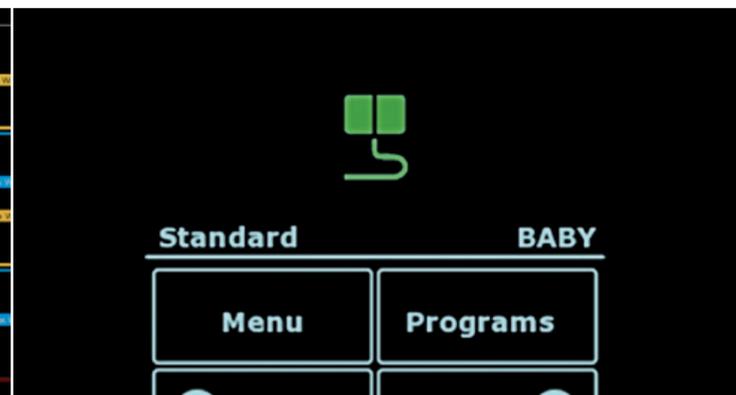
- ARC control arc regulation for reproducible monopolar and bipolar cutting results
- Up to 9 effects per mode
- EASY neutral electrode monitoring with contact monitor, baby mode with automatic power limitation
- Current leakage monitoring
- Short circuit detection
- ISSys permanent system self-testing
- CCS permanent initial cutting support
- Configurable socket design
- Information area for device messages
- CUT modes: e.g. standard, dry, cardiac, GastroCut loop and knife, MetraLOOP, laparoscopy
- Micro-regulations and power forms for plastic and neurosurgery down to 0.1 W
- COAG modes: moderate, forced, spray, cardiac
- Autostart function



Plug & Cut COMFORT: The COMFORT SYSTEM automatically recognises the COMFORT instrument, indicates how many times it may still be used and selects the correct parameters for the procedure



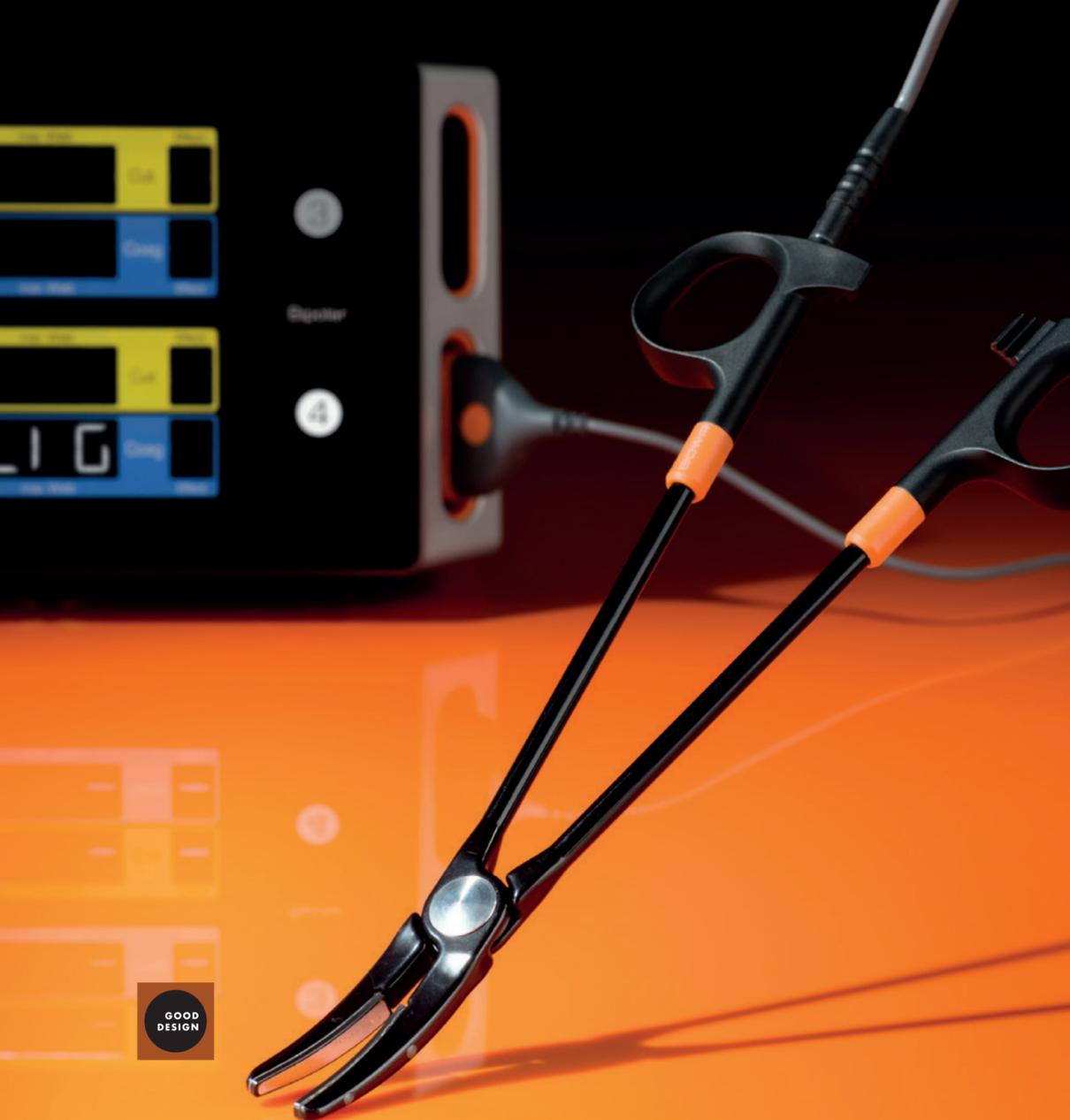
Plug & Cut: The ARC 350 automatically detects that a standard instrument is connected



The neutral electrode monitoring, shown here in the setting for babies (max. 50 watts), continuously informs users of the status



Efficient: Both handles can be activated simultaneously with monopolar coagulation



## Costs and benefits – close the gap

### ARC 350: the vessel sealing specialist

With the ARC 350 and BOWA LIGATION instruments, such as TissueSeal PLUS for open surgery applications and ERGO 315R also for laparoscopic applications, large-bore veins, arteries and tissue bundles with diameters of up to 7 mm can be sealed permanently and securely by bonding elastin and collagen to each other. The LIGATION sealing technique guarantees procedures free from residues and foreign bodies.

Optimum procedural results, thanks to outstanding ergonomics and tactility, are a further bonus for surgical artists. The massive potential for time-saving in the OR, as well as savings in terms of suturing materials and clips and instrument reusability, are all key features to convince even the strictest cost controller.

**LIGATION** is a fully automatic mode for the sealing of tissue with BOWA LIGATION instruments.



### Surgical applications:

- Colectomy
- Gastrectomy
- Liver resection
- Thyroidectomy
- Lobectomy



### Gynaecological applications:

- Hysterectomy – open and vaginal laparoscopic-assisted vaginal hysterectomy
- TLH: Total laparoscopic hysterectomy
- LASH: Laparoscopic supracervical hysterectomy
- Mastectomy



### Urological applications:

- Prostatectomy
- Cystectomy
- Nephrectomy

### ERGO 310D

- 340mm
- Ø 5mm
- Disposable, sterile
- Packing unit of 5 pieces
- Integrated blade
- Plug & Cut COMFORT



### NightKNIFE®

- 360 and 200mm
- Ø 10mm
- Autoclavable
- Replaceable knife
- Plug & Cut COMFORT



### ERGO 315R

- 275 and 360mm
- Ø 5mm
- Autoclavable
- Disposable blade
- Plug & Cut COMFORT



### TissueSeal® PLUS

- 160, 190, 230 and 280mm
- Autoclavable
- Plug & Cut COMFORT



### Literature:

Schuld J, Laschke MW, Rupertus K, Richter S, Menger MD, Schilling MK: Evaluationsstudie: BOWA NightKNIFE® vs. Ligasure Atlas™. BOWA, Gomaringen 2008

Schuld J, Richter S, Laschke MW, Sperling J, Menger MD, Schilling MK, Surgical Association for OR and Instrument Technology of the German Association for General and Visceral Surgery: Evaluationsstudie: BOWA TissueSeal® vs. Valleylab Ligasure™. BOWA, Gomaringen 2008

Schuld MD, Sperling MD, Kollmar MD, Menger MD, Schilling MD, Richter MD, Laschke MD: The Night KNIFE: Evaluation of Efficiency and Quality of Bipolar Vessel Sealing JOURNAL OF LAPAROENDOSCOPIC & ADVANCED SURGICAL TECHNIQUES 2011

GOOD DESIGN

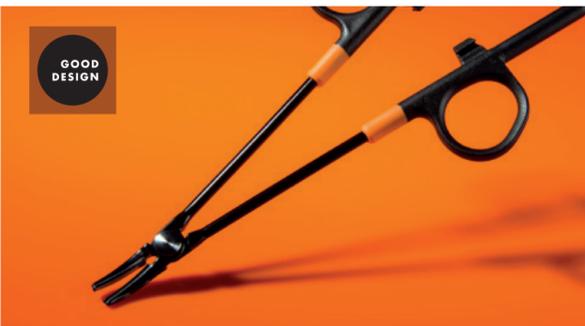
## A join that conserves resources – LIGATION\* with the ARC 350

Rely on an established technique for vessel and tissue sealing: LIGATION. Alongside the advantage of preventing the introduction of foreign bodies into the patient, this method also saves OR time, suture

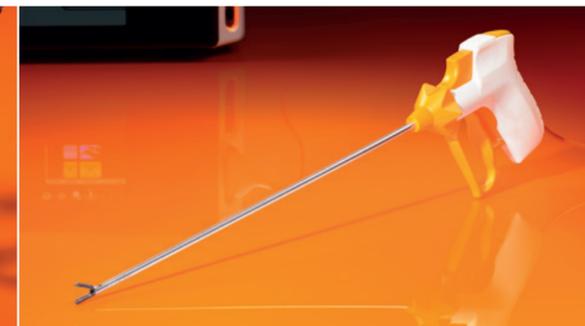
materials and clips. Autoclavable BOWA LIGATION instruments are the first choice for use with the ARC 350.



New: The LIGATION choice opens up new potential procedures and all settings are entered automatically



TissueSeal PLUS 160mm: re-usable sealing instrument with minimal thermal spread due to its sandwich structure



The 5mm single-use sealing instrument ERGO 310D combined with the BOWA ARC 350 generator is the perfect system for laparoscopic procedures.



The ERGO 315R combines the advantages of a multifunctional instrument for laparoscopy with the added value of a reusable instrument.

\* LIGATION is optionally available as a LIGATION package for the ARC 350



# ARC PLUS – the ground-breaking addition with argon support

## Contact-free. Reliable. Fast.

An electrical bridge is created between the instrument and the tissue in argon-assisted electro-surgery, with the aid of the ionisation of argon gas. The argon beam produced with ARC PLUS can be administered particularly well and can be used for contact-free haemostasis. Take advantage of enhanced clinical effectiveness for fast contact-free coagulation with maximum perforation safety and simple administration.

## Technical features

- Automatic detection of argon instruments and parameter preselection by Plug & Cut
- Documentation of uses in the BOWA COMFORT instrument
- Automatic control by the ARC 350
- Electronic level indicator and pre-warning
- Flow rates of from 0.1 to 10l/min, max 2 bar outlet pressure
- Large coverage with 2 argon bottles
- Foot and manual operation
- Simple, space-saving docking of the ARC electro-surgery unit
- 2.0 to 4.5 bar input pressure
- Flow testing and pressure monitoring
- Extensive range of accessories

## CUT

for argon-assisted cutting and coagulation with open and laparoscopic applications in surgery and gynaecology:

- Abdominal surgery
- Laparoscopy
- Liver surgery
- Mamma surgery
- Visceral surgery

## Advantages of argon-assisted electro-surgery in surgery and gynaecology

- Contact-free coagulation without adherence or sticking in parenchymal tissues, such as the liver
- Fast coagulation of large surfaces
- Carbonisation-free
- Flexible coagulation zone
- Clear vision due to smoke-free coagulation
- Ultra-simple to operate with large ignition gap of >10 mm and easy ignition

## Applications (excerpts)

- Argon
  - General surgery
  - Liver surgery
  - Abdominal plastic
  - Transplant surgery
  - ENT



## Argon FLEX

for internal medical applications with flexible probes

## Argon PULSED

with fine regulation across several effect stages

## Advantages of argon-assisted electro-surgery in internal medicine

- Safe dosage with power and pulse sequence minimises the risk of perforation
- Particularly fine coagulation is possible from 1 W in gastroenterology
- Clear vision due to smoke-free coagulation
- Low-odour due to reduced smoke gases
- Carbonisation-free
- Flexible, long-lasting coagulation zone
- Ultra-simple to operate with large ignition gap of >10 mm and easy ignition
- Minimal argon flow rates of 0.4l/min
- Limited penetration depth
- Perforation-free

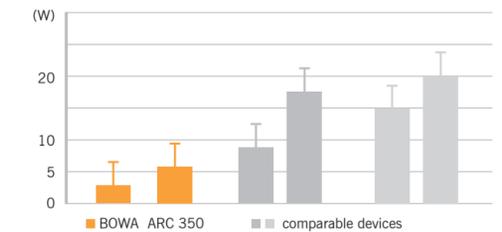
## Applications (excerpts)

- Argon FLEX/Argon Flex 90
  - Gastroenterology
    - Superficial and smaller vascular bleeds
    - Tumour reductions
    - Tumour bleeds
    - Devitalisation and coagulation, also in the right colon
    - Stent ingrowth/overgrowth
    - Radiation proctitis
  - Interventional bronchology
    - Superficial and smaller vascular bleeds
    - Tumour reduction
    - Tumour bleeding
    - Recanalisation
    - Granulation
    - Fistula conditioning
    - Stent ingrowth/overgrowth
  - Rectoscopy



## Safety advantages and perforation safety with low power setting

Energy setting (W) for effective ignition or therapeutic effect



**Literature:**  
Endo today 2007;  
Prospective, randomised evaluation of low-energy argon plasma coagulation with endoscopic haemostasis of the gastrointestinal tract (GIT)  
M. Raithel, J. Hänslar, A. Stegmaier, F. Boxberger, J. Maiss, W. Müller, E.G. Hahn  
Med. Clinic I University of Erlangen-Nuremberg, Gastroenterology, Endoscopy, Funct. of Tissue Diagnostics; Conference Paper

## ARC 350 and ARC PLUS – the all-purpose workstation for surgery and endoscopy

Argon-assisted electro-surgery offers contact-free work on large surfaces with diffuse bleeding and fine dosage on sensitive structures.

ARC 350 with ARC PLUS permits simple application thanks to reliable ignition and offers excellent perforation safety with low power settings.



The argon parameters are set directly on the ARC 350



A number of probes are available for the various argon-assisted applications

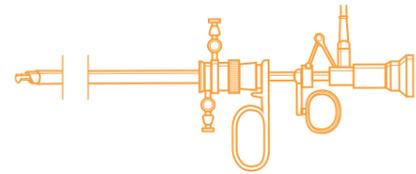


Activation of argon modes is also visualised on the ARC PLUS



The green display signals pre-flushing of the connected instruments with argon

# Special applications – just four of many



**Optional: Bipolar resection for urology**  
Bipolar resection with the ARC 350 stands out on account of its extremely reliable initial cutting and high resection speed.

Reduced irritation of the obturator nerve and bipolar technology hugely increase operating safety in this field. Using saline solution as a medium prevents the danger of TUR syndrome.

In addition, monopolar transurethral resection of the prostate (TUR-P), surgical treatment of bladder tumours (TUR-BT) and vaporisation of the prostate tissue (TUR-VAP) can also be carried out with the ARC 350.

### Resection Cut & COAG

Special modes for the use of bipolar resectoscopes in gynaecology and urology



**Quadruple specialities – functions for cardiac surgery**

Four highly specialised functions for effective work are available for use in the field of cardiac surgery:

**Monopolar SimCOAG** for simultaneous coagulation and preparation with two monopolar handles

**Cardiac thorax** for forced coagulation when opening the thorax

**Cardiac mammaia** for forced coagulation in the area of the mammaries

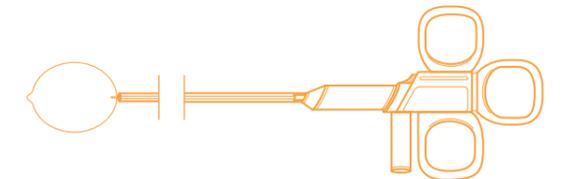
**Dry cutting** for strong haemostasis



**Gynaecology – clean removal with MetraLOOP**  
In addition to the modes for vessel sealing and monopolar and bipolar resection, a special function is available in gynaecology for laparoscopic supracerical removal of the uterus (LSH).

This mode – combined with the BOWA MetraLOOP instrument – offers more rapid cutting of the loop for uterus removal. Work can be accomplished safely, rapidly and precisely, even with large loops.

**Gynaecology program**  
MetraLOOP

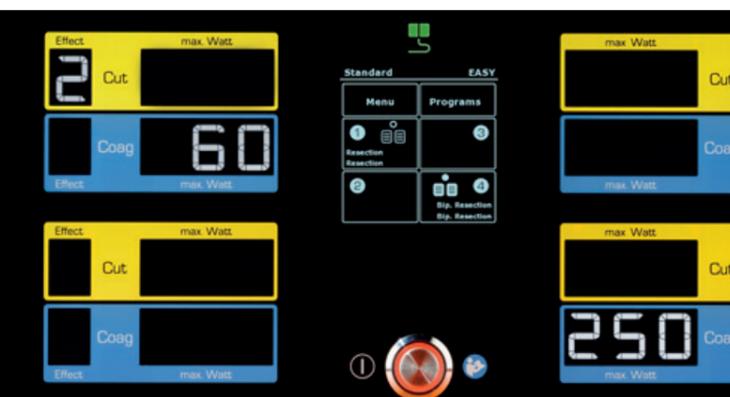
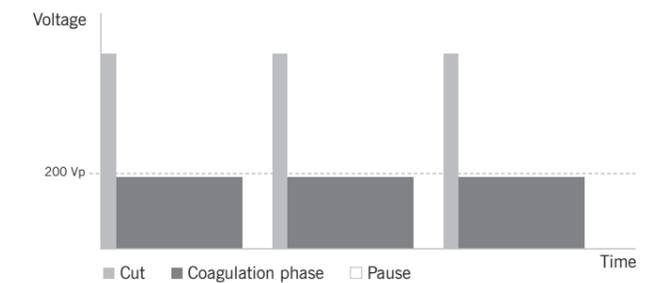


**Optional: GastroCut for gastroenterology**  
With the ARC 350's GastroCut modes, gastroenterologists can achieve the best results with polypectomy and papillotomy and endoscopic resections with loops or knife electrodes.

Gastroenterologists can adjust the haemostasis level of cutting and coagulation power to three speeds "slow", "medium" and "fast" as required to meet their needs.

The cut is optimised, the surgeon controls the cut's coagulation effect through the effect in nine steps. This allows the surgeon to work cautiously to avoid complications, as well as proceeding rapidly when the situation allows it.

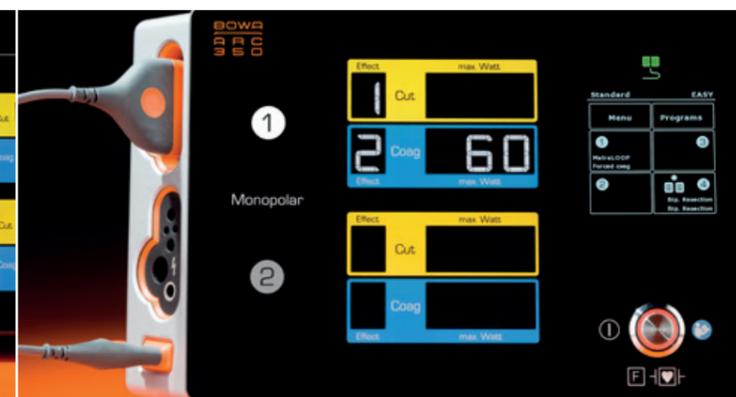
### GastroCut power type



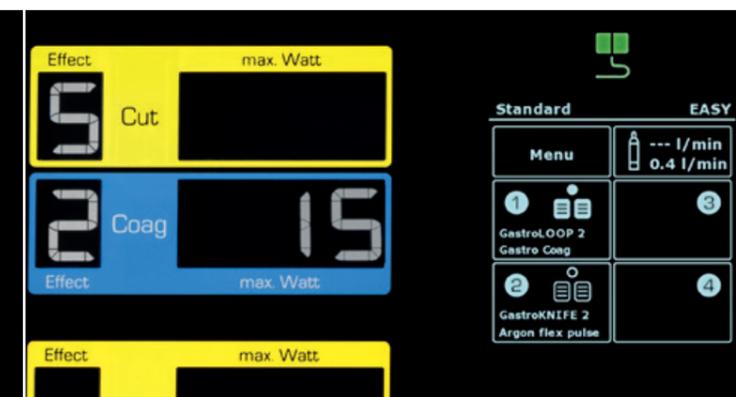
Innovation: Bipolar resection in urology with ultra-high resection speed



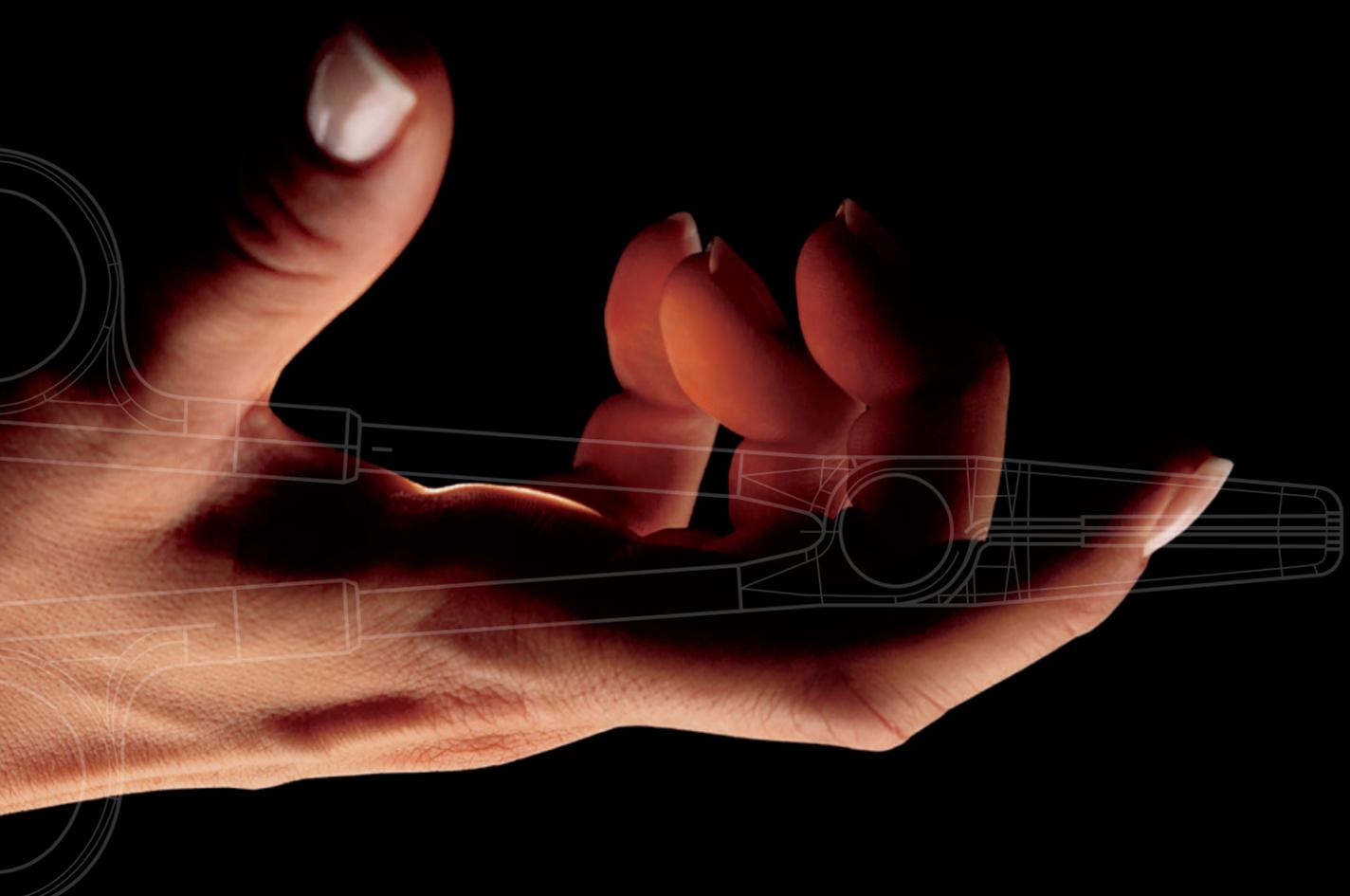
Supporting the division of work in cardiac surgery: simultaneous activation can be selected



Special effect for gynaecology: extremely fast and safe removal of the uterus using the MetraLOOP function



Highly flexible: GastroCut permits 6 cutting types with loops or knife electrodes for up to 9 effects



## ARC CART – greater mobility

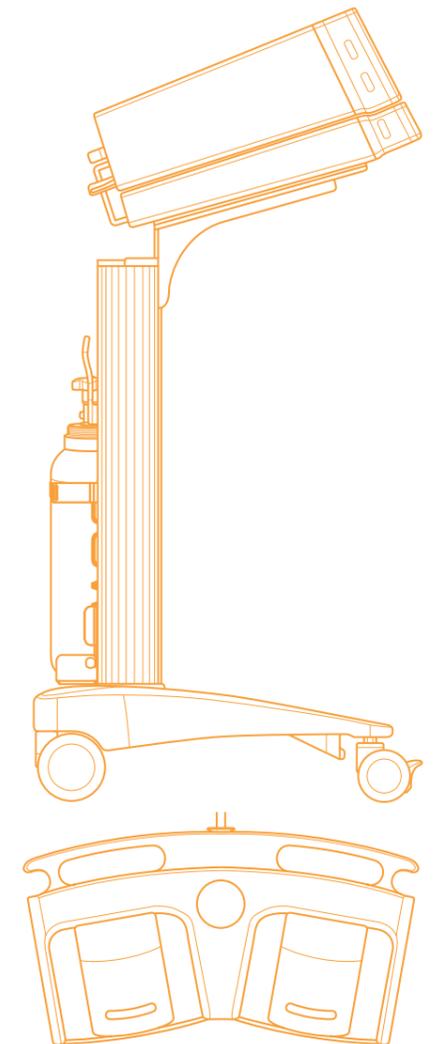
### One unit – many options

The ARC 350, ARC PLUS and the ARC CART form a high-performance unit that can be quickly manoeuvred to wherever it is needed in the OR.

Everything is in the right place and can be individually configured in the ARC CART. The basic ARC CART offers four steerable rollers with brakes, cable conduit, power cable detachment prevention device, handle, foot switch holder and a cable holder. The storage shelf is optimised for the ARC generator.

Also available as accessories are shelves, for SHE SHA smoke evacuation systems, drawers, gas bottle holders, equipotential bonding connectors or baskets, thereby greatly increasing mobility.

The foot switches are waterproof (IPX8) and explosion-protected. Pedals are ergonomically arranged to allow for fatigue-free operation over long periods of time.



## Accessories – more than the sum of their parts

The ARC 350 is the functional, efficient and modular upgradable generator solution that offers superior performance for all standard instrument families. When used in conjunction

with BOWA accessories, the ARC 350 becomes a closed system with outstanding properties – medical as well as economical.



Optimum: Vision and operation



Flexible: freely assignable foot pedals



Space-saving: streamlined design

# Made by BOWA accessories – simply safe

"Simply safe" is more than just a promise. For us it is the commitment to always think beyond the current standards. This approach leads us to solutions that open up new perspectives and support you as best as possible in your work.

As a specialist HF surgical company, we offer you complete systems as well as complementary individual products.

For a comprehensive overview of our product range, visit us at [www.bowa-medical.com](http://www.bowa-medical.com).

ARC system and accessories



LOTUS



LIGATION – vessel sealing



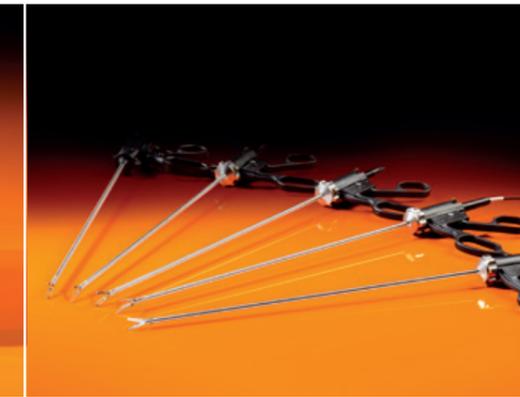
Argon-assisted electrosurgery



SHE SHA smoke evacuation



Instruments for laparoscopy



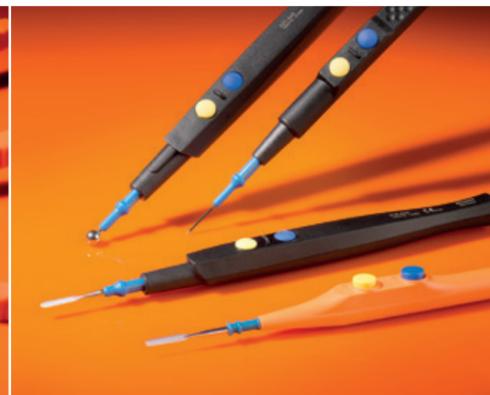
BiZZER® – bipolar scissors



Forceps



Handles and electrodes



Cables and adapters



Neutral electrodes



Sets



## Made in Germany – technical information

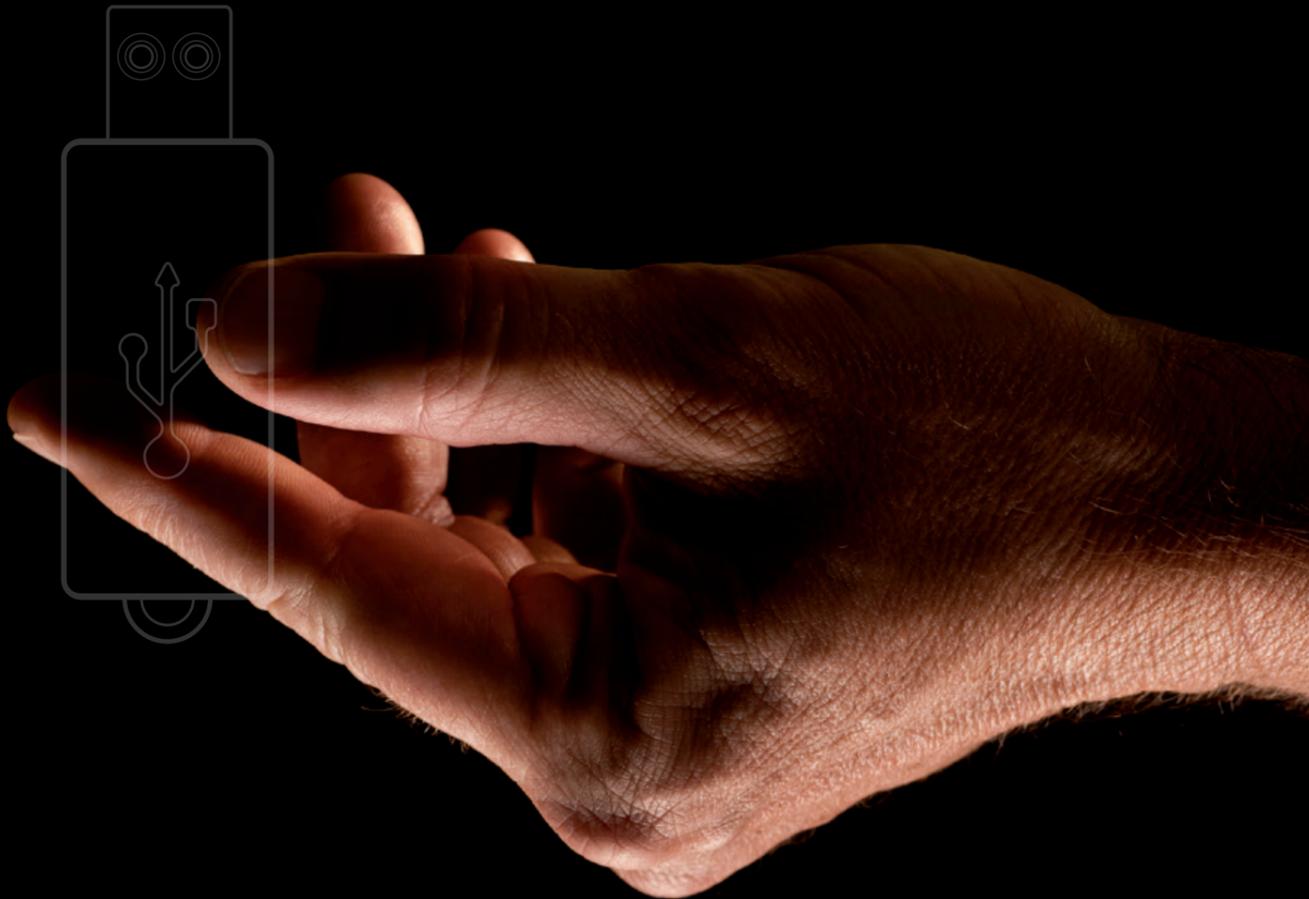
BOWA ARC 350 is designed for use in almost all areas of electrosurgery. ARC generators can be placed on ceiling supply units or on the ARC CART for unrestricted mobility. The device has two monopolar and two bipolar outputs. Hospital technicians can perform simple maintenance work,

such as reading off unit information or running software updates that are supplied on a USB stick. Should you wish to connect third-party accessories, this is also possible using a range of different sockets.

Technical data at a glance	ARC 350	ARC PLUS
Mains voltage	100–127 V/220–240 V	100–240 V
Line frequency	50/60 Hz	50/60 Hz
Max. current consumption	Max. 5 A @ 240 V	10 A @ 100 V 8 A @ 127 V
Mains fuse	2 x 5 AH slow blow/ 2 x 10 AH slow blow	2 x 1 A slow blow
Power consumption in standby mode	3 W/40 VA	5 W/25 VA
Power consumption at max.	700 W/1150 VA	32 W/65 VA
Width x Height x Depth	430 x 180 x 475 mm	433 x 97 x 489 mm
Weight	12.5 kg	7.7 kg
Classification under EC Directive 93/42/EEC	II b	II a
Protection class according to EN 60601-1	I	I
Type according to EN 60601-1	CF	-
CE marking	CE0123	CE0123
Item no.	900-351	900-001
GastroCut incl. COMFORT	900-391	-
Bipolar resection incl. COMFORT	900-395	-
LIGATION incl. COMFORT	900-396	-
Max. MONOPOLAR power	400 W (at 100 Ω)	-
Max. BIPOLAR power	400 W (at 75 Ω)	-
Output frequency	350 kHz/1 MHz	-

### Your choice – configuration of sockets

	monopolar	bipolar
International	2 x 3-pin/Bovie	2 x 2-pin
Europe	2 x 3-pin/Erbe	2 x 2-pin/Erbe



## Update service – simply by USB

Take advantage of the latest developments of the future. The ARC 350 is ready and waiting. Use our Update Service to update your ARC 350 software, such as new programs for standard procedures,

simply via a USB stick. The many standard sockets guarantee the future-proofing of your unit and its automated integration into your system landscape – even in the future.



Clear design: compact design, ideal to meet the exacting hygiene conditions in your OR



Communicative interfaces: with USB and network socket – designed for today and tomorrow

**BOWA**  
EINFACH SICHER

**SIUN**  
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