

ARC 350
HF ELECTROSURGICAL GENERATOR
SIMPLY SAFE

BOWA
ARC 350

BOWA
EINFACH SICHER

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Simply more to offer: ARC 350

As well as 20 years of BOWA experience in the sector and the most up-to-date technology, the ARC 350 all-in-one unit also incorporates clever innovations. All settings for more than 20 standard operations are pre-programmed - and updates are continuously being added. Inside, extremely fast processors ensure that

the ARC CONTROL is optimally integrated at all times, while self-check programs continuously provide maximum safety. Four separate outputs can be individually configured with the utmost ease, and the settings visually checked by the operator at any time.

Fast: The **ARC CONTROL** regulator adjusts the power output to the necessary minimum for tissue variations and changes in cutting area or speed in every case.

Flexible: 2 monopolar and 2 bipolar outputs enable 4 different instruments to be configured independently.

Safe: The **EASY** electrode application system monitors the neutral electrode connected to the patient and signals any change in resistance to the user.

Convenient: More than 20 of the 100 locations for storing programs are already pre-programmed. They can be shown and hidden as well as named individually. Information can be displayed in different languages as required.

Clever: The continuous self-test program **ISSys** monitors all safety-related parameters several hundred times a second and signals any faults.

Field of application	Program
Bronchoscopy	Argon Flex
Cardiology	DryCUT, Mamaria, SimCOAG, Thorax
ENT surgery	ENT
Gastroenterology	Argon Flex, GastroCUT (Polypectomy, Papillotomy)
General surgery	Argon Ligation, Argon Open, Ligation, Standard
Gynaecology	Abdominal Ligation, EndoLAP, Hystero
Laparoscopy	EndoLAP Bipolar CUT, EndoLAP II Ligation
Liver surgery	Argon Open, Argon Ligation
Neuro surgery	Micro Neuro
Paediatrics	Micro Pediatric
Plastic surgery	Micro Plastic, Macro Plastic, Local Anesthesia
Thorax surgery	EndoLAP II Ligation, Thorax
Urology	TUR-P, TUR-BT, TUR-VAP, Bipolar TUR

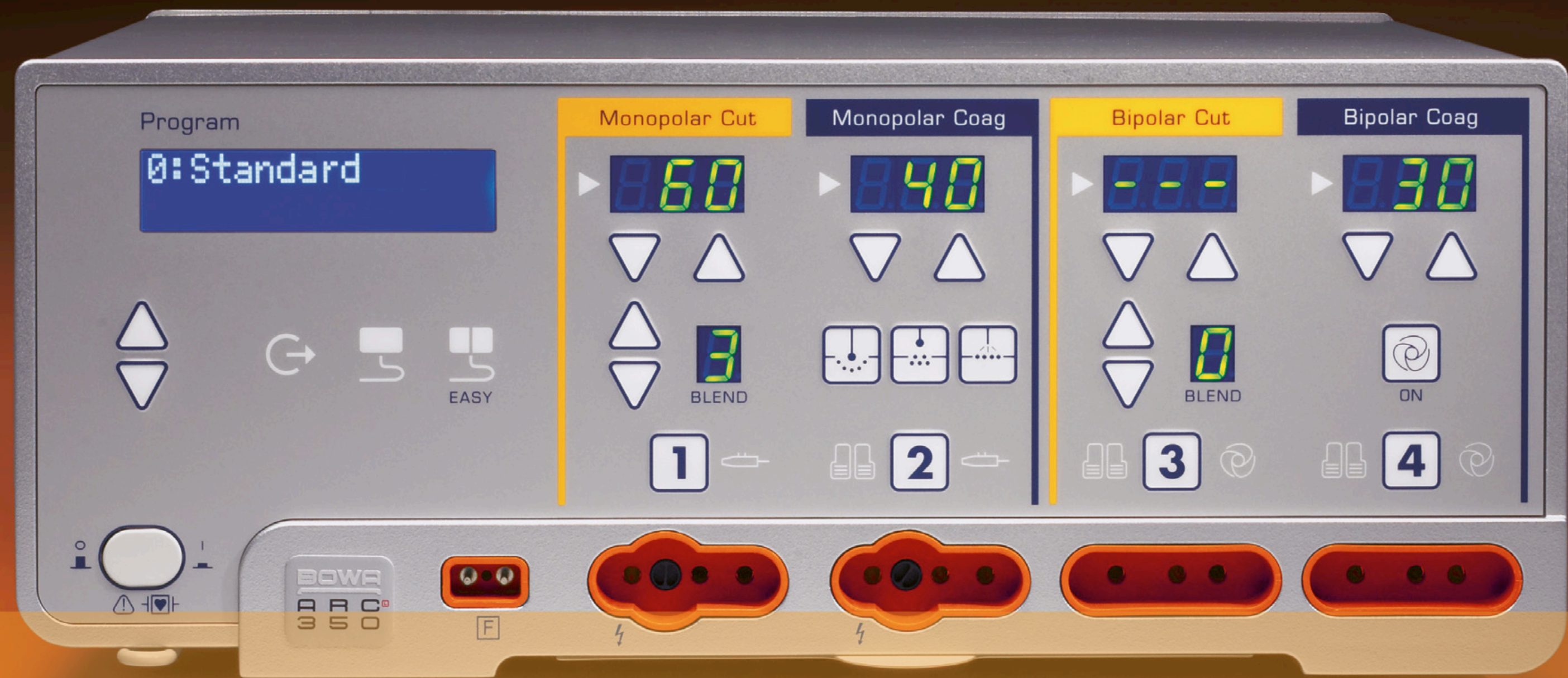


Fast: ARC CONTROL
Convenient: 100 programs

Clever: Continuous self-test
Clearly laid out: Settings at a glance

Safe: Patient monitoring
Innovative: High-tech inner workings

Flexible: Outputs for 4 instruments



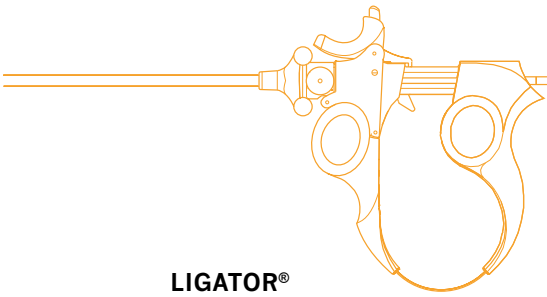
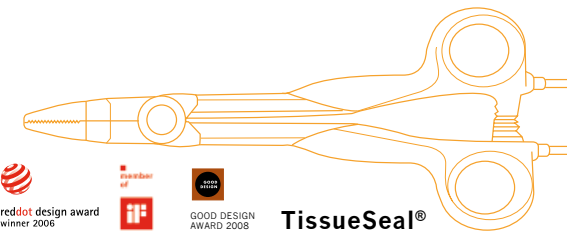


In the **350L** version, ARC provides three optional “**LIGATION**” programs and the associated special instruments for sealing vessels and tissue bundles in both open and laparoscopic surgery · **TissueSeal®** and **LIGATOR®**, which have received the red dot design award for their ergonomic and mechanical ingenuity. The **LIGATION** program enables even large veins, arteries and bunched

tissue to be continuously sealed and provides the surgeon with different shaped instrument tips depending on the situation. The tissue sealing option can therefore be carried out without additional equipment, and an adapter enables third-party accessories to be used for this application.

Fields of application for TissueSeal® (extract)
Adhesiolysis
Adrenalectomy
Colon resection
Cystectomy
Gastrectomy
General surgery
Gynaecology
Haemorrhoidectomy
Hysterectomy
Nephrectomy
Pancreasectomy
Prostatectomy
Salpingoophorectomy
Splenectomy
Urology

Fields of application LIGATOR® (extract)
Adhesiolysis
Adrenalectomy
Appendectomy
Cholecystectomy
Fundoplicatio
Gastrectomy
Gynaecology
Hysterectomy
Nephrectomy
Salpingoophorectomy
Splenectomy



Gripping: LIGATION option with ARC 350L





Special programs for gastroenterologists, cardiologists and urologists

BOWA also provides practical thinking in the areas of gastroenterology, cardiology and urology. Sophisticated programs save the operator the trouble of manually pre-setting the equipment. This saves time, avoids incorrect settings and thus enables the operating team to concentrate fully on the operation.

Gastroenterology programs
ARC 350 has three programs for gastroenterological operations: polypectomy, papillotomy and argon plasma coagulation. The combination of cutting and coagulation current gives optimum results when using polypectomy loops or papillotomes.

TUR for urology
Three special programs are available for urologists for underwater cutting: **TUR-P** for prostate resection, **TUR-VAP** for vaporising prostate tissue, and **TUR-BT** for treating vesical tumours. All three special programs may be operated in the **Bipolar TUR** mode.

Cardiology
ARC 350 already has four programs with special cutting current for cardiology (**DryCUT**, **SimCOAG**, **Thorax**, **Mamaria**). Two handles can be activated simultaneously with **SimCOAG**.

Gastroenterology programs	Urology programs	Cardiology programs
GastroCUT (polypectomy)	TUR-P (prostate resection)	DryCUT
GastroCUT (papillotomy)	TUR-BT (vesical tumours)	SimCOAG
Argon Flex	TUR-VAP (vaporisation)	Thorax
	Bipolar TUR	Mamaria





Igniting PLUS with argon assistance

ARC PLUS ideally complements the ARC range of HF generators with its argon gas technology. Argon-assisted HF spray coagulation can even work reliably with arcs in the extremely low power range of **less than 10 watts**. As a result of their low coagulation depth, they only cause minimal necrosis of the tissue, which favours their use in areas at risk of perforation. The non-contact method of working also prevents electrodes sticking. Two ranges are available for the use of different argon accessories.

In a high-performance combination with the **ARC PLUS**, the **ARC 350** provides even more: namely two further individually configurable outputs. The possible applications of **ARC** are considerably enhanced by the argon-assisted non-contact HF spray coagulation options.

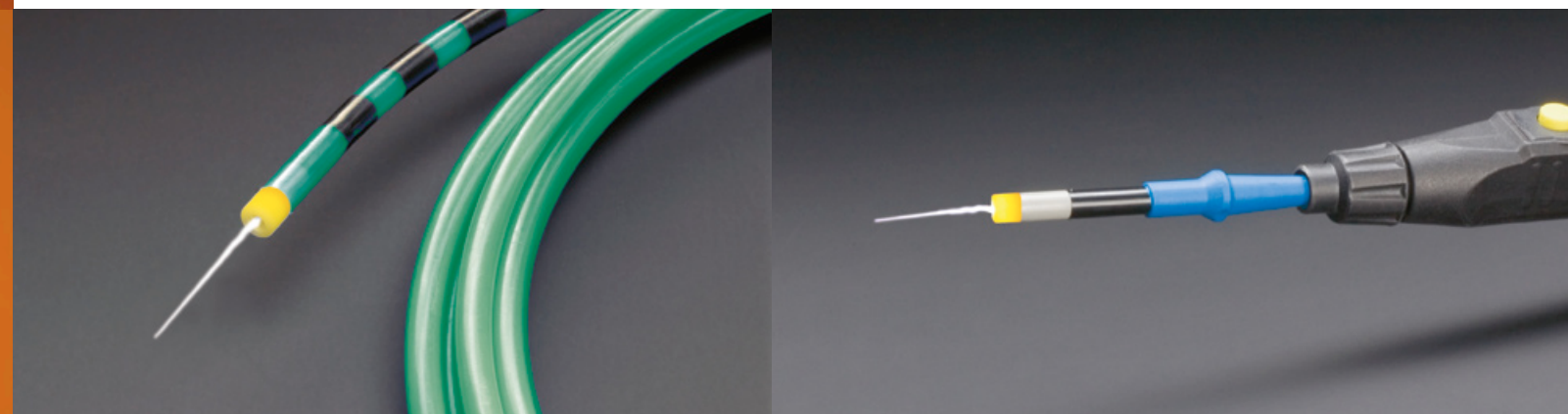
Fields of application (extract)

Argon Open, Argon Ligation

Abdominal plastic surgery
ENT
General surgery
Liver surgery
Transplantation surgery

Argon Flex

Bronchoscopy
Gastroenterology
Rectoscopy



Safety: Continuous self-test

Operation: Simple and safe

Ignition: Reliable at less than 10 watts

Endurance: Bottle and spare bottle



ARC PLUS: REF 900-000
ARC 350: REF 900-350

MADE IN GERMANY



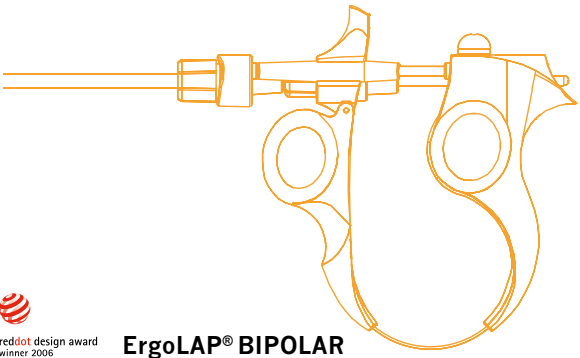
Hand tools for minimally invasive artists

BOWA knows what surgeons need inside out. This knowledge is invaluable when it comes to developing accessories for monopolar and bipolar laparoscopic HF surgery. This is how the **ErgoLAP®** accessory range with its future-orientated functionality, design and ergonomics came into being. The surgeon uses

the accessories without tiring and always has a tactile feel for the action of the instrument tip, which is equipped with the appropriate jaws for each required operation. The easily dismantled accessories can be autoclaved and can be used several hundred times.

Programs
EndoLAP, Bipolar CUT
EndoLAP II Ligation
Gynaecology Abdominal

Fields of application (extract)
Adhesiolysis
Adrenalectomy
Appendectomy
Cholecystectomy
Gastrectomy
Gynaecology
Hysterectomy
Nephrectomy
Fundoplicatio
Salpingoophorectomy
Splenectomy



ErgoLAP® BIPOLAR



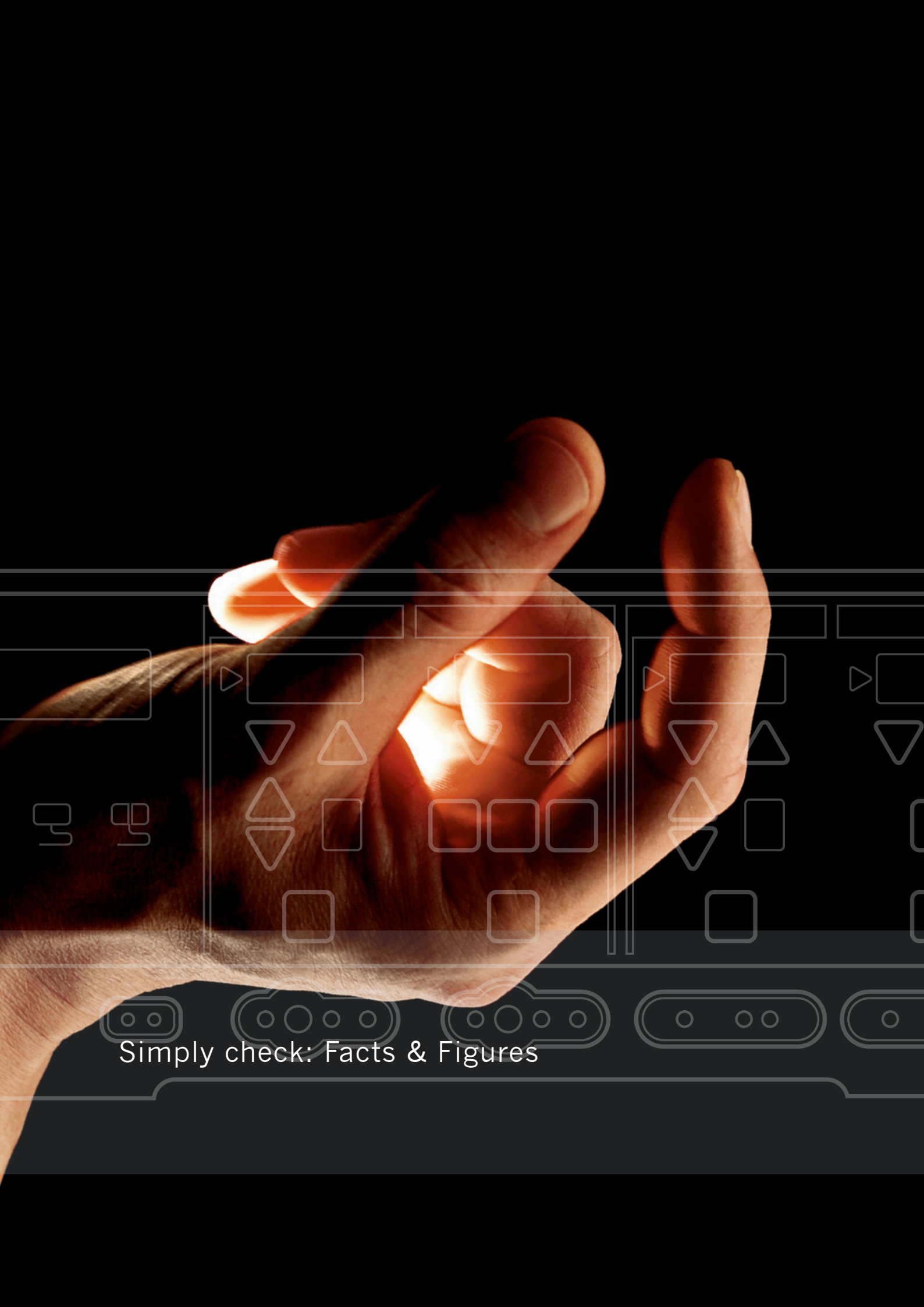
Technical specification for the ARC 350

12

BOWA **ARC 350** units can be used in all areas of HF surgery. They can be located both on ceiling supply units and also on a mobile **ARC CART**, without or in combination with an argon unit. The 2 monopolar and 2 bipolar outputs provided form a modular socket system. The unit complies with the currently required applicable standards and can be maintained by the hospital technician himself.

Error memories can be read out without difficulty. The technician can update software simply by changing a board and subsequently calibrating the unit. Third-party accessories can be connected with the help of adapters.

Maximum cutting power / short-term	300 / 420 watts
Number of types of cutting current	82 (of which 62 monopolar)
Number of types of coagulation current	27 (of which 7 bipolar)
ARC CONTROL🔥 via 32 bit microcontroller (RISC)	Yes
Number of displays / indicators	7
Number of foot switches	2
Digital set-up	Yes
Auto Start function for both bipolar outputs	Yes
ARC CONTROL🔥 for monopolar and bipolar cutting	Yes
Neutral electrode monitoring (EASY)	Yes
Impedance window for NE-monitoring	0–200 ohms
EASY monitoring frequency	44 kHz
Continuous system self-test (ISSys)	Yes
Error memory	Yes
Error documentation display	Yes
Arc suppression for contact coagulation	Yes
Continuous Cut Support (CCS)	Yes
Continuous leakage current monitoring	Yes
Defibrillator checked	Yes
Compendium: Technical specification HF electrosurgical generator ARC 350	
Max. output power for monopolar Cut	300 watts



Simply check: Facts & Figures

Technical specification for ARC PLUS

Max. output power for monopolar Coag	120 watts
Max. output power for bipolar Cut	150 watts / Bipolar TUR 380 watts
Max. output power for bipolar Coag	120 watts / Ligation & Bipolar TUR 200 watts
NE safety monitoring	EASY
Rated frequency	330 kHz / 1MHz
Mains connection/max. current consumption	90 V–110 V / 6,4 A
	100 V–130 V / 6,4 A
	198 V–260 V / 3,2 A
Mains fuse	2 x 8 A / (90 V–110 V)
	2 x 8 A / (100 V–130 V)
	2 x 4 A / (198 V–260 V)
Mains frequency	50 / 60 Hz
Power consumption in standby mode	25 watts
Max. power consumption at max HF power	500 watts
Equipotential bonding connector	Yes
Width x Height x Depth	430 x 180 x 400 mm
Weight	ca. 14 kg

Storage and transport conditions	
Temperature	–20 °C to +50 °C
Relative humidity	0 to 75 %, non condensing
Air pressure	500 to 1600 mbar

Operating conditions	
Temperature	10 °C to +40 °C
Relative humidity	30 to 85 %, non-condensing
Air pressure	700 to 1600 mbar
Protection class to EN 60601-1	I
Type according to EN 60601-1	CF
Operating mode	10 sec / 30 sec
Classification according to EC Directive 93/42/EEC	Class IIb

BOWA **ARC PLUS** can be used in all areas of HF surgery in combination with all **ARC** generators. It can be located both on ceiling supply units and also on a mobile **ARC CART**. The communications interface provided continuously monitors the interaction with the ARC generator. The unit complies with the currently required applicable standards and

can be maintained by the hospital technician himself without special measuring equipment. Fault memories can be read out without difficulty. The technician can update software simply by changing a board and subsequently calibrating the unit.

Gas supply	
Gas type	Argon Purity 4.8 or better, Class 2.1 A
Adjustment range	0,1 to 1,0 l/min, Adjustment step 0,1 l/min
Adjustment range	1,0 to 3,0 l/min, Adjustment step 0,2 l/min
Adjustment range	3,0 to 9,5 l/min, Adjustment step 0,5 l/min
Gas input pressure	between 2,5 and 4,5 bar
Max. gas output pressure	2 bar

- Two gas tank connections, automatic or manual changeover of gas tanks and optical level indicator
 - PURGE rinsing function with electrode-dependent gas pressure control
 - Safety devices
 - Continuous flow monitoring, fault indication with display of error number, hose blockage detection, continuous self-test, warning tone, continuous pressure monitoring at distal end
- Documentation
 - Recording of fault conditions and operator errors by storing within the unit
Data recall facility
 - Connections, Communication
 - Optical interface for communication with **ARC 350**

Mains connection	
Power consumption	40 VA
Mains frequency	50 / 60 Hz
Equipotential bonding connector	Yes
Voltage range	85 bis 264 V A.C.

Dimensions and weights	
External dimensions (W x H x D)	430 x 94 x 400 mm
Net weight	ca. 7,3 kg
Protection class to EN 60601-1	I
Type according to EN 60601-1	CF in conjunction with ARC 3x0
Classification according to EC Directive 93/42/EEC	Class IIa



For even greater potential

The **ARC 350** and **ARC PLUS** are often combined to form an unbeatable all-in-one package, which can be conveniently located on the BOWA **ARC CART** or on ceiling supply units.

The **ARC CART** can be configured individually, e.g. shelves, drawer, basket, gas tank holder.

The whole range of foot switches has ergonomically arranged pedals.

