



argon in electrosurgery

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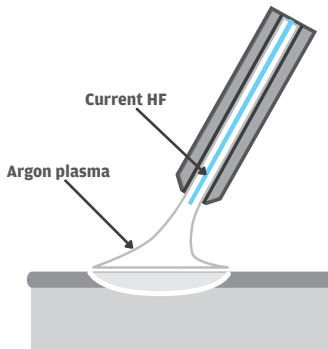
efficiency oriented performance

Argon plasma coagulation ensures fast and efficient coagulation of large, heavily bleeding surfaces. Provides effectual devitalisation of tissues, e.g. neoplastic tumours. Argon plasma coagulation means less blood loss and less tissue damage. With penetration depth limited to 3 mm, it is particularly recommended for areas of high perforation risk.

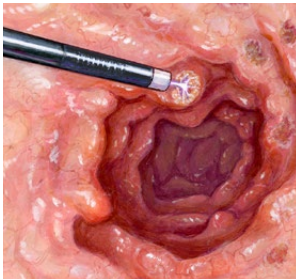


argon in electrosurgery

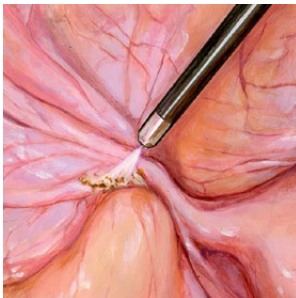
confidence through technology



Argon coagulation uses the phenomenon of good conduction of high frequency current by ionised argon. Argon is a chemically inert gas, devoid of physiological effects and non combustible. Under the effect of current, it becomes ionised and forms a plasma cloud in which electric arcs are formed.



In argon coagulation, there is no contact of the active electrode with the tissue, and the distance between the surgical instrument and the tissue in open surgery is up to about 5 mm, and in endoscopic surgery up to about 3 mm. The thermal effect occurs at the time when a spark jumps from the active electrode tip to the tissue. The length of the plasma arc between the probe tip and the tissue depends on the selected power, resistance of the target tissue and argon flow rate. Usually the distance between the active electrode and the tissue is 3 to 5 mm, depending on the selected coagulation parameters.



When using argon coagulation, observe all precautions for standard monopolar coagulation. Read the instructions for using argon components. Class 4.8 (99.998%) or 5.0 (99.999%) argon is used for argon coagulation.

argon safety features

confidence through safety

The main advantage of argon coagulation is constant, minimum depth of the thermal effect. Owing to the limited depth of tissue damage during argon plasma coagulation, the risk of perforation is minimised; therefore, this method can be safely used in thin walled organs.

In the case of classical contact electrocoagulation, the thermal effect reaches deeper into the tissue; this is associated with a risk of gastrointestinal perforation. In argon coagulation, the plasma arc occurs in the tissues that have the lowest electrical resistance. The tissue through which the current has flowed achieves rapid haemostasis and as a result its electrical resistance increases. It means that at that site electric arcs will not form any more, so the coagulation depth will not increase and it will be maintained within the limits of 2 to 3 mm.

As argon plasma is a good conductor, the desired effect is obtained with significantly less power compared to standard high voltage coagulation and the amount of heat delivered to the patient's tissues is lower.



advantages of argon

setting performance goals

Efficiency enhancing features of argon plasma coagulation:

- immediate hemostasis helps efficiently coagulate large areas of bleeding surface
- penetration depth limited to approximately 3 mm minimizes risk of perforation
- tissue carbonization is minimal compared to standard electrocoagulation
- no tissue vaporization minimizes the risk of perforation
- no contact between the applicator and tissue means no tissue adhesion
- less surgical smoke gives good visibility of operating area
- reduced smoke eliminates unpleasant odors
- precise application of thermal energy results in reducing procedure time



ARGON COAG

The mode is used for non-contact coagulation of the surface of bleeding tissues. It eliminates smoke and smell. It ensures very shallow and gentle coagulation.

Instruments: rigid argon electrodes for coagulation.



ENDO ARGON

Argon-enhanced monopolar coagulation for endoscopic procedures. It ensures very shallow and gentle coagulation. It is necessary when there is a risk of perforation. The absence of smoke ensures the perfect visibility of the operative field.

Instruments: flexible argon probes.



PULSE ARGON

Argon-enhanced pulsed monopolar coagulation. It is used in gastroenterology to control bleeding. It enables the precise delivery of energy doses exactly to the bleeding site.

Instruments: flexible argon probes.



ARGON CUT

Argon-enhanced monopolar cutting. The use of argon reduces the amount of smoke and smell. The thermal damage to the tissues is reduced and bleeding control is improved. This function is particularly desirable during procedures that require intensive use of the unit.

Instruments: needle or lancet type argon electrodes.

applications

Argon coagulation has broad application in local treatment of cancer, both in the case of advanced tumour resection and in the treatment of benign or pre-cancerous lesions.

The method of coagulation in argon plasma is equally effective when treating small adenomas of the large intestine, and, first of all, in tumour resection at locations where the risk of perforation is high.

Due to its convenience and safety, argon coagulation is often used during procedures performed for non oncological indications - endoscopic bleeding control and destruction of vascular lesions in the gastrointestinal tract.

Application areas for argon coagulation include :

- superficial bleeding in the respiratory tract
- removal of neoplastic lesions obstructing the airway lumen
- bleeding in resected areas
- bleeding angiodysplastic lesions
- bleeding after polypectomy
- removal of tissue remaining after polypectomy
- tumors that narrow the intestinal lumen
- colitis
- bleeding of cancerous lesions of the stomach and colon
- watermelon stomach
- tonsilectomy

instruments for endoscopic and open surgical procedures

setting the stage

Our offer includes a comprehensive range of electrosurgical products for argon plasma coagulation, completely equipped with accessories and surgical instruments – for both endoscopic procedures and open surgery. We also offer an argon tip for laparoscopic applications.

All instruments for argon coagulation offered by EMED are intended for multiple use. They can be sterilised in an autoclave at 134°C.

TROLLEYS FOR ARGON PLASMA GENERATORS

080-100

SpectrumLine trolley with argon cylinder case for electrosurgical units



080-060

TinyLine trolley with argon cylinder case for electrosurgical units



electrosurgical units

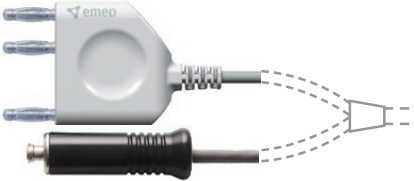
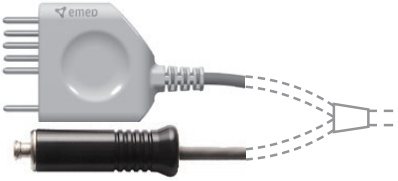

with argon module

	REF NO.	
	100-620	Electrosurgical unit ATOM
	100-600	Electrosurgical unit ENDO
	100-013	Electrosurgical unit SPECTRUM

argon coagulations instruments

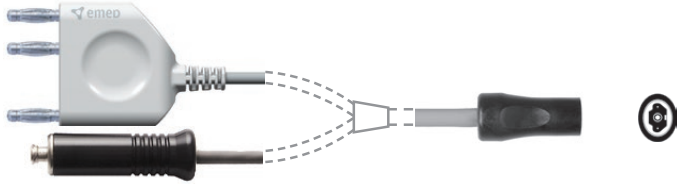
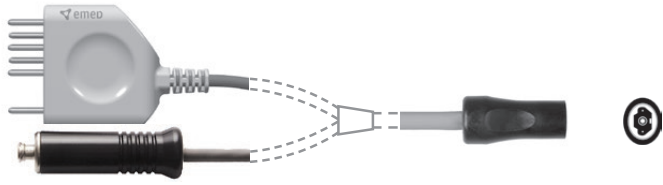
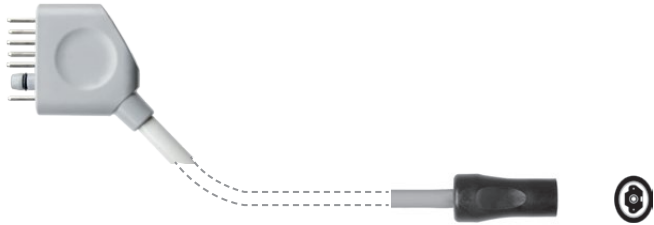
argon handle



	REF NO.	
	932-141	Argon electrode handle, large, 2 swiches, cable 3,5m, 3-pin/LuerLock plug
	932-14S	Argon electrode handle, large, 2 switches, cable 3,5m, SDS/LuerLock plug
	932-14A	Argon electrode handle, large, 2 switches, cable 3,5m, SDSA plug







argon coagulations instruments

cable for flexible argon probe





	REF NO.	
	432-146	Monopolar cable for argon flexible electrode, L:3,5m, 3-pin/LuerLock plug, flat connector
	432-46S	Monopolar cable for argon flexible electrode, L:3,5m, SDS/LuerLock plug, flat connector
	432-46A	Monopolar cable for argon flexible electrode, flat connector, L:3,5m, SDSA plug

argon coagulations instruments

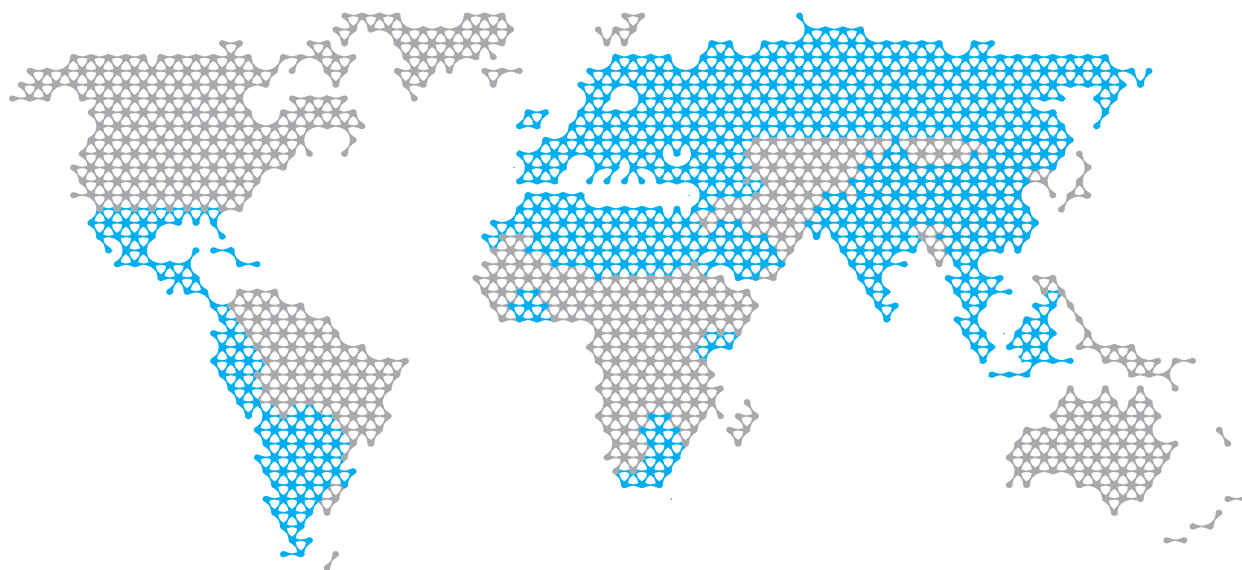
argon electrodes

	REF NO.	
	932-031	Argon electrode, rigid, insulated shaft, 25mm w. length, dia. 5mm
	932-032	Argon electrode, rigid, insulated shaft, 100mm w. length, dia. 5mm
	932-034	Argon electrode, rigid, insulated shaft, 320mm w. length, dia. 5mm
	932-054	Argon needle 14mm, rigid, insulated shaft, 40mm w. length, dia. 5mm
	932-044	Argon needle 14mm, rigid, insulated shaft, 115mm w. length, dia. 5mm
	932-057	Argon lancet 14mm, rigid, insulated shaft, 40mm w. length, dia. 5mm
	932-056	Argon lancet 14mm, rigid, insulated shaft, 115mm w. length, dia. 5mm
   flat connector	932-148	Flexible argon probe, reusable, TBS, dia. 1.5mm, length 1.5m
	932-149	Flexible argon probe, reusable, GIT, dia. 2.3mm, length 2.2m
	932-150	Flexible argon probe, reusable, GIT, dia. 3.2mm, length 2.2m
	932-151	Flexible argon probe, reusable, TBS, dia. 1.5mm, length 3m
	932-152	Flexible argon probe, reusable, GIT, dia. 2.3mm, length 3m

argon coagulations instruments

	REF NO.	
	100-051	Argon Cylinder 5L (empty housing - with no gas)
	100-151	Argon Cylinder 10L (empty housing - with no gas)
	5501640	Argon regulator P300-P40EMED, DIN 477/6 (Europe)
	5501565	Argon regulator P300-P40EMED, DIN 477/6 with pressure sensor
	5501641	Argon regulator P300-P40EMED, DIN 477/10 (Northern Europe)
	5501621	Argon regulator P300-P40EMED, BS 341/3 (UK)
	5501631	Argon regulator P300-P40EMED, CGA 580 (America)
	SE2M034I07	Argon bacteria filter, 0.33mm, 0.45um, sterile, 1pc. <div><div>2</div></div>
	100-053	Pneumatic argon cable, L: 3m <div>other lenght available on request</div>

contact us



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