langermedical



ACCESSORIES

The art
of neuromonitoring

Contents

Stimulation probes 4
Disposable stimulation probes 6
Disposable suction stimulators 8
Reusable stimulation probes 9

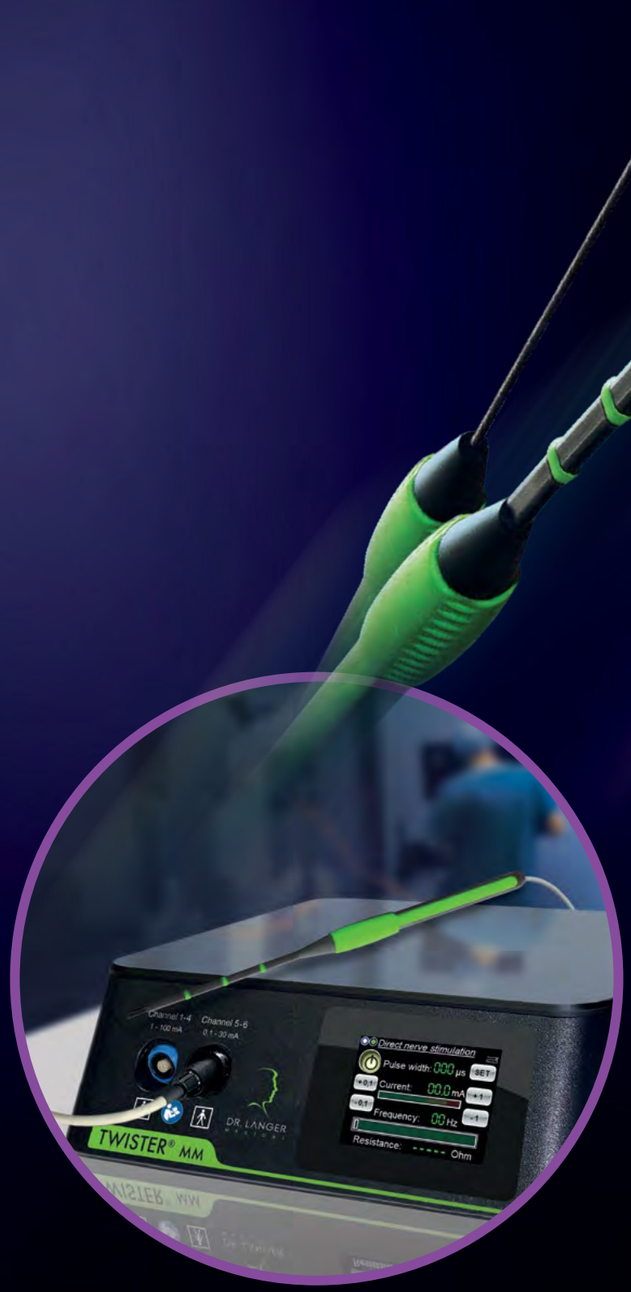
Electrodes 18
Disposable electrodes 19
Vagus electrode 19
Tube electrode 19
Electrode tubes 19
Subdermal needle electrodes 20
D-wave catheter 25
Subdural strip electrodes 26
Electrode catheters 27
Adhesive electrodes 28

Connection cables 29
EMG recording cables 30
EP recording cables 31
Stimulation cables 32
Stimulation probe cables 34
Snap button cables 35
Adapters 35

Miscellaneous accessories 36
AEP stimulation 37
VEP stimulation 38
Stimulation clip 39
Sterile touch screen films 39
Simulators 40
Other accessories 41

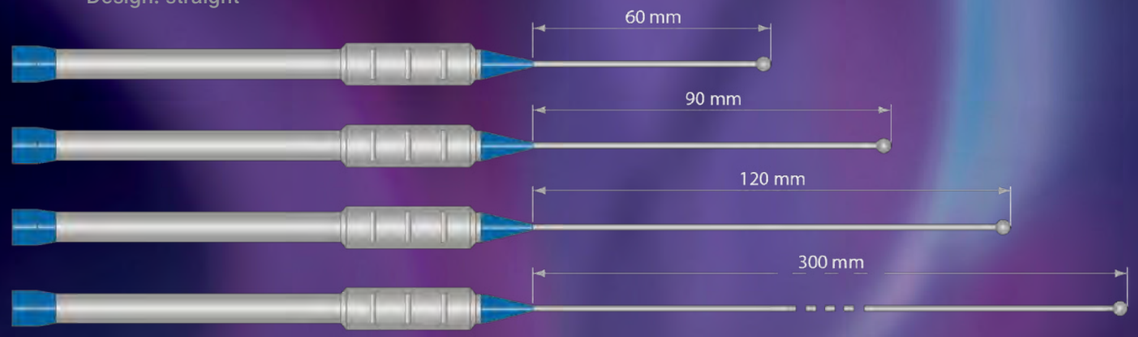
This catalogue supersedes all previous catalogues which are no longer valid.

PROBES

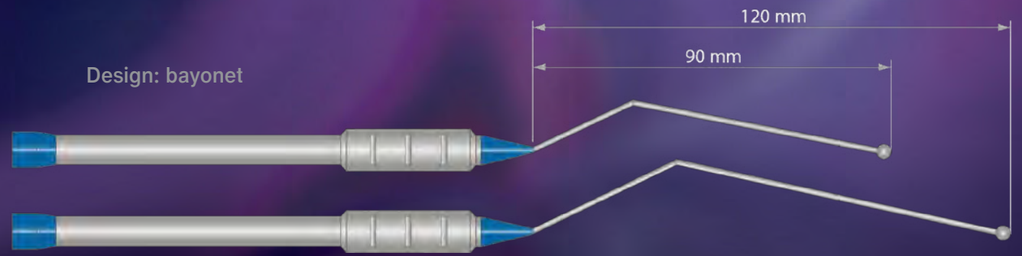


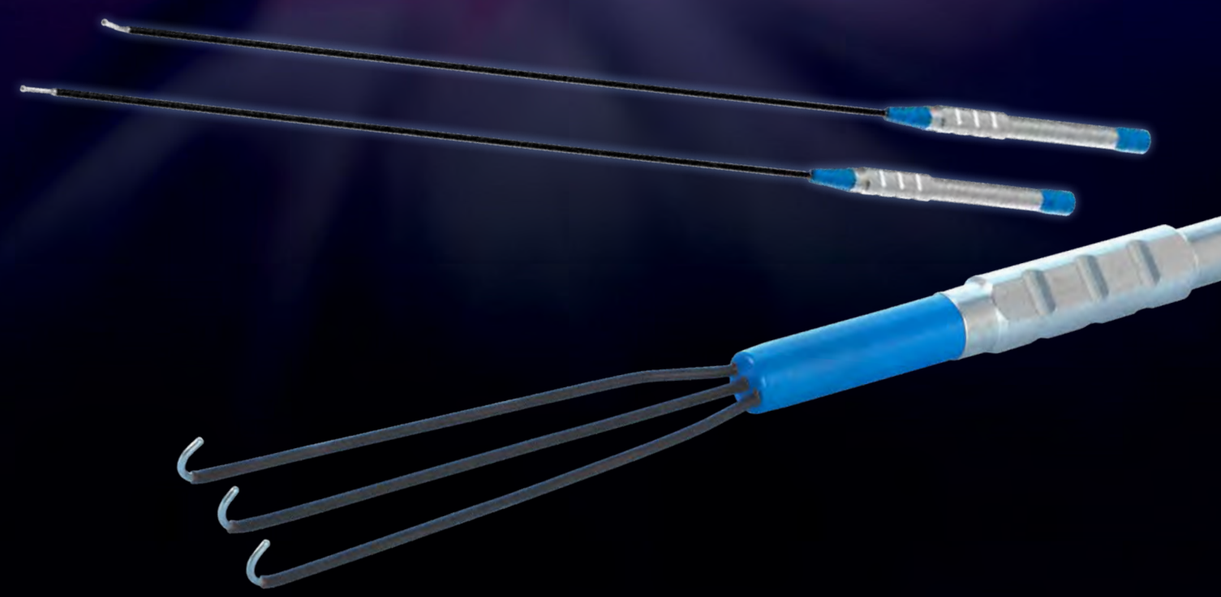
Shaft lengths and designs

Design: straight



Design: bayonet





Disposable stimulation probes

Disposable stimulation probes



40-1303 Disposable stimulation probe, monopolar [1, 2]

shaft length 90 mm, insulated shaft, Ø 0.8 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk



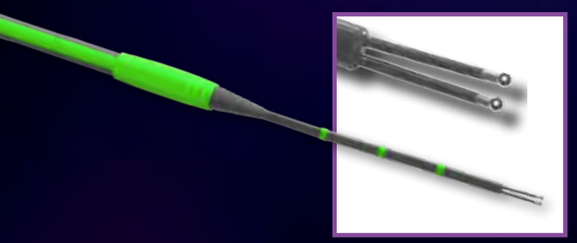
40-1306 Disposable ball probe, monopolar [1, 2]

shaft length 90 mm, ball Ø 2.4 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk



40-1304 Disposable microfork probe, bipolar [2]

shaft length 90 mm, cable length 0.7 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk



40-1308 Disposable microfork ball probe, bipolar [2]

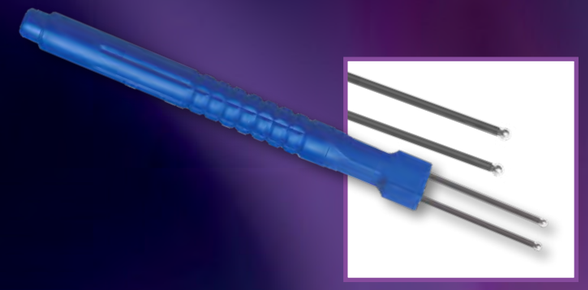
shaft length 80 mm, ball Ø 1.2 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk



40-1307 Disposable stimulation probe, bipolar concentric [2]

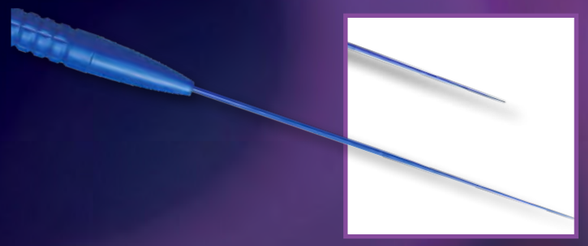
shaft length 60 mm, 30° angle tip, Ø 1.2 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk

Disposable stimulation probes



40- 1100 Disposable cortex probe, bipolar [2]

tip length 30 mm, ball Ø 2 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk



40-1101 Disposable flush-tip probe, monopolar [1, 2]

shaft length 95 mm, flexible and insulated shaft, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, 5/pk

Page 20



[1] To use our monopolar disposable stimulation probes, you need the subdermal disposable needle electrode (42-9712).

Page 35



[2] To use our disposable stimulation probes with DIN 42802-1 connectors, you need the adapter with the green/grey connector (41-0048 or 41-0080) or the adapter with the grey/grey connector (41-0087).

Disposable suction stimulators



40-1102 Monopolar suction stimulator [1, 2]

length 130 mm, with DIN 42802-1 connector, for stimulation and simultaneous aspiration of conductive fluids, cable length 2.5 m, Fields of application: brain mapping, spine surgery, TOETVA, individual sterile packaging, single use, 5/pk



40-1103 Monopolar suction stimulator [1, 2]

length 260 mm, with DIN 42802-1 connector, for stimulation and simultaneous aspiration of conductive fluids, cable length 2.5 m, Fields of application: brain mapping, spine surgery, TOETVA, individual sterile packaging, single use, 5/pk

Monopolar stimulation probes

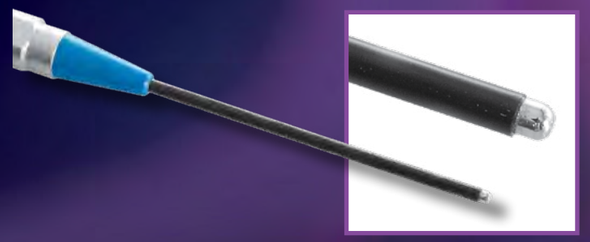


40-0000 Ball probe, monopolar

shaft length 60 mm, ball Ø 2.4 mm, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0001 like item 40-0000, shaft length 90 mm

40-0002 like item 40-0000, shaft length 120 mm



40-0003 Stimulation probe, monopolar

shaft length 60 mm, insulated shaft, tip Ø 2 mm, straight, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0004 like item 40-0003, shaft length 90 mm

40-0051 like item 40-0003, shaft length 120 mm



40-0028 Stimulation probe, monopolar

shaft length 90 mm, insulated shaft, tip Ø 1.5 mm, 30° angle tip, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0037 like item 40-0028, shaft length 300 mm



40-0038 Stimulation probe, monopolar

usable length 250 mm, insulated shaft, curved, tip Ø 1.5 mm, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

Reusable stimulation probes

Monopolar stimulation probes



40-0027 Stimulation instrument, monopolar

shaft length 45 mm, insulated shaft, flat tip, angled, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0031 like item 40-0027, shaft length 120 mm

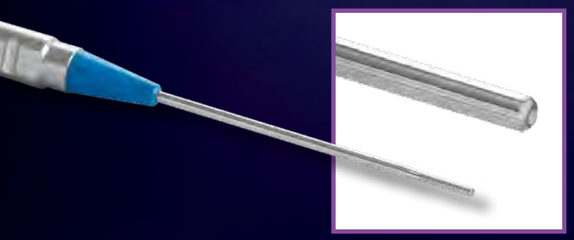


40-0047 Ball probe, monopolar

shaft length 60 mm, insulated shaft, 90° angle tip, ball Ø 0.9 mm, for connection to monopolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0042 like item 40-0047, shaft length 90 mm

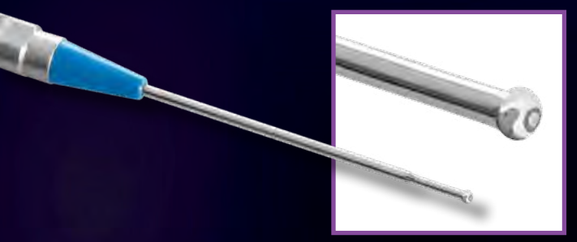
Bipolar stimulation probes



40-0005 Stimulation probe, bipolar concentric

shaft length 60 mm, tip Ø 1.4 mm, straight, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0006 like item 40-0005, shaft length 90 mm



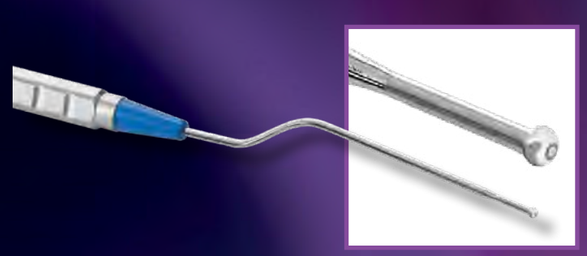
40-0008 Ball probe, bipolar concentric

shaft length 60 mm, straight tip, ball Ø 2 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0009 like item 40-0008, shaft length 90 mm

40-0010 like item 40-0008, shaft length 120 mm

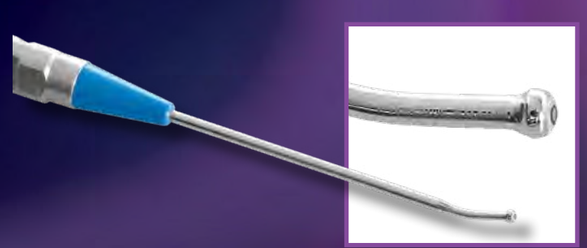
Bipolar stimulation probes



40-0011 Ball probe, bipolar concentric

shaft length 90 mm, straight tip, ball Ø 2 mm, bayonet, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

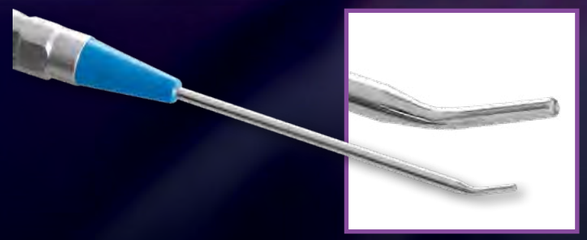
40-0012 like item 40-0011, shaft length 120 mm



40-0013 Ball probe, bipolar concentric

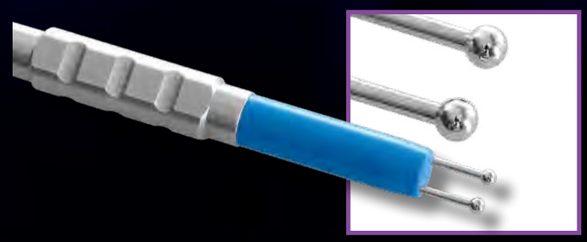
shaft length 60 mm, 30° angle tip, ball Ø 2 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0014 like item 40-0013, shaft length 90 mm



40-0052 Stimulation probe, bipolar concentric

shaft length 60 mm, 30° angle tip, Ø 1.4 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0016 Cortex probe, bipolar

tip length 9.5 mm, ball Ø 2.5 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

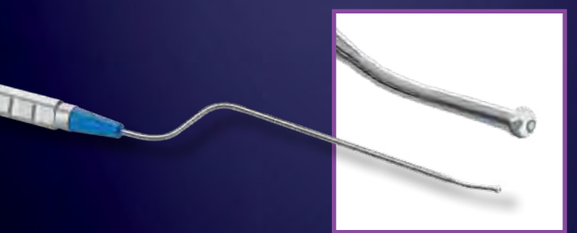
Reusable stimulation probes

Bipolar stimulation probes



40-0030 Stimulation probe, bipolar concentric

shaft length 120 mm, straight tip, Ø 1.4 mm, bayonet, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0036 Ball probe, bipolar concentric

shaft length 120 mm, 30° angle tip, ball Ø 2 mm, bayonet, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0033 Ball probe, bipolar concentric

shaft length 300 mm, insulated shaft, straight tip, ball Ø 2 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0039 Ball probe, bipolar concentric

shaft length 300 mm, insulated shaft, 15° angle tip, ball Ø 2 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

Bipolar microfork probes



40-0020 Microfork probe, bipolar

shaft length 90 mm, bayonet, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0021 like item 40-0020, shaft length 120 mm



40-0017 Microfork probe, bipolar

shaft length 60 mm, straight tip, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0018 like item 40-0017, shaft length 90 mm

40-0019 like item 40-0017, shaft length 120 mm

40-0041 like item 40-0017, shaft length 150 mm

40-0046 like item 40-0017, shaft length 300 mm



40-0049 Microfork ball probe, bipolar

shaft length 60 mm, straight tip, ball Ø 0.9 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

40-0053 like item 40-0049, shaft length 90 mm

Reusable stimulation probes

Bipolar NAP hook probes



40-0022 Hook probe for signal recording, small, bipolar

with 2 contacts, shaft length 60 mm, 90° angle tip, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0023 Hook probe for stimulation, small, bipolar

with 3 contacts (+ - +), shaft length 60 mm, 90° angle tip, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0024 Hook probe for stimulation, large, bipolar

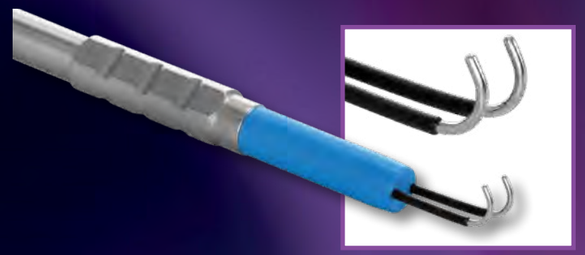
with 3 contacts, semicircular tips, Ø 10 mm, shaft length 12 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable

Page 34

The reusable stimulation probes 40-00XX are used in combination with one of the 3 probe cables on page 34.

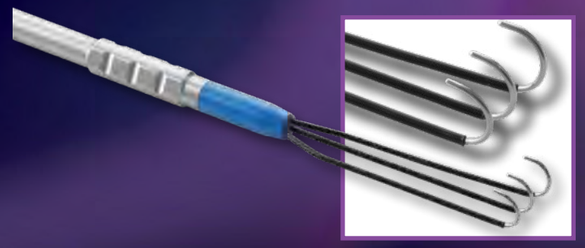


Bipolar NAP hook probes



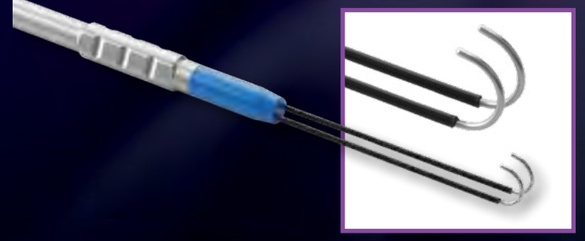
40-0026 Hook probe for signal recording, large, bipolar

with 2 contacts, semicircular tips, Ø 10 mm, shaft length 12 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non, autoclavable



40-0032 Hook probe for stimulation, large, bipolar

with 3 contacts, semicircular tips, Ø 10 mm, shaft length 70 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non-sterile, autoclavable



40-0034 Hook probe for signal recording, large, bipolar

with 2 contacts, semicircular tips, Ø 10 mm, shaft length 70 mm, for connection to bipolar probe cables from Dr. Langer Medical GmbH, delivered non, autoclavable

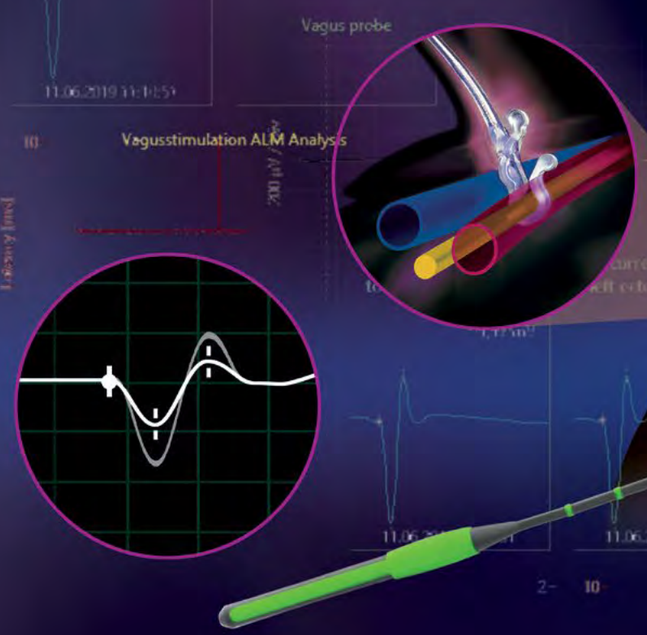
Continuous monitoring of the recurrent laryngeal nerve during thyroid surgeries

AVALANCHE® SI 2
Thyroid VNS software specifically designed for thyroid surgery

Saxophone electrode after Prof. Lamadé
continuous vagus nerve stimulation

Electrode tube / tube electrode
signal recording at the vocalis muscle

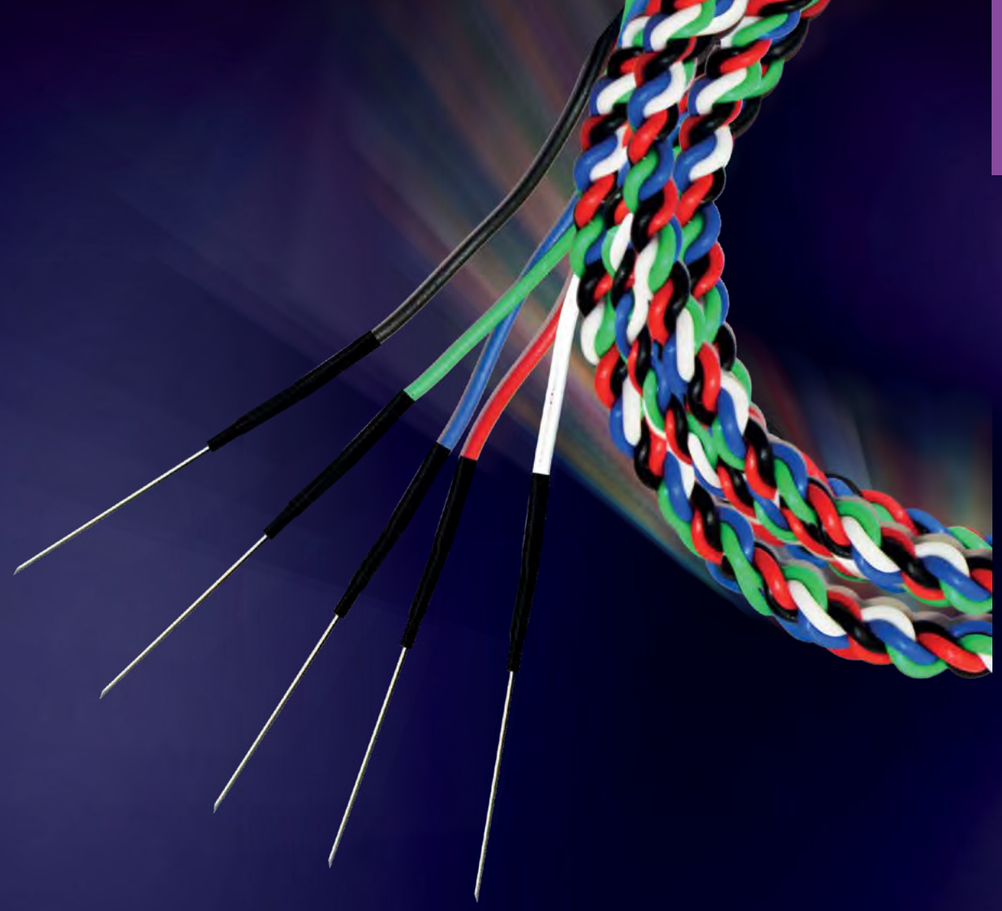




Handheld probe
intermittent stimulation

Signal analysis
- display
- storage
- documentation

ELECTRODES





Disposable electrodes

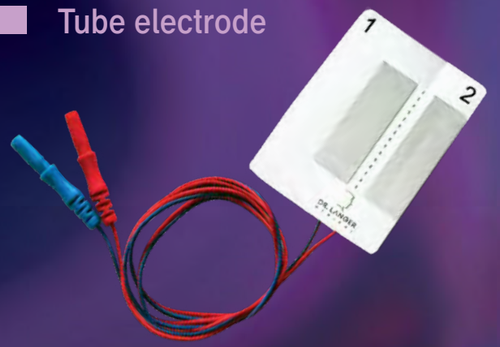
Vagus electrode



42-0068 Saxophone electrode

after Prof. Lamadé, single use, for continuous stimulation of the vagus nerve, cable length 175 cm, with DIN 42802-1 connectors, individual sterile packaging, 5/pk

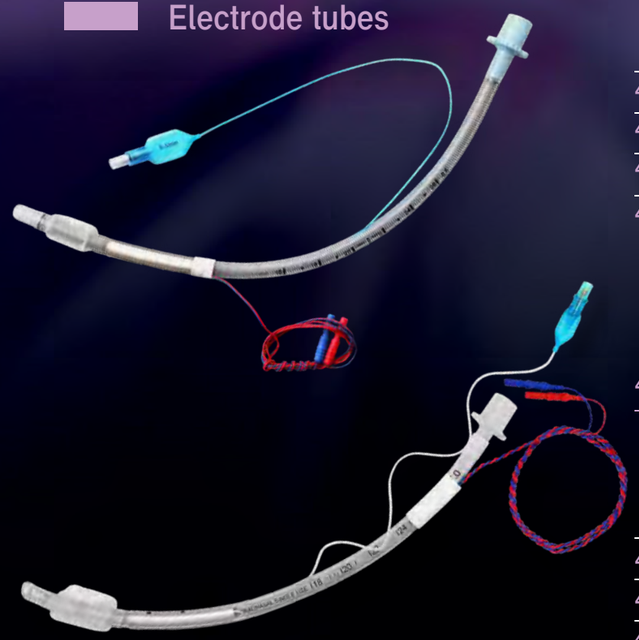
Tube electrode



42-9800 Adhesive tube electrode

suitable for use with spiral and standard tubes with diameters ≥ 7.5 mm, cable length 75 cm, with DIN 42802-1 connectors, single use, individual sterile packaging, 5/pk

Electrode tubes



42-9912 Electrode tube, I.D. 6.0 mm

Woodbridge tube with guide wire for intraoperative neuromonitoring, 1 channel, cable length 75 cm, with DIN 42802-1 connectors, single use, individual sterile packaging, 5/pk

42-9913	like item 42-9912, I.D. 6.5 mm
42-9914	like item 42-9912, I.D. 7.0 mm
42-9915	like item 42-9912, I.D. 7.5 mm
42-9916	like item 42-9912, I.D. 8.0 mm

42-9902 Electrode tube, I.D. 6.0 mm

standard tube for intraoperative neuromonitoring, 1 channel, cable length 75 cm, with DIN 42802-1 connectors, single use, individual sterile packaging, 5/pk

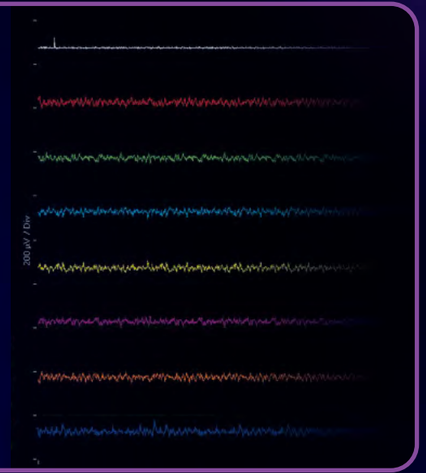
42-9903	like item 42-9902, I.D. 6.5 mm
42-9904	like item 42-9902, I.D. 7.0 mm
42-9905	like item 42-9902, I.D. 7.5 mm
42-9906	like item 42-9902, I.D. 8.0 mm

Disposable electrodes

User-friendly application

The 8 colours of our disposable subdermal needle electrodes match the EMG channel colours of the AVALANCHE® SI 2 system.

channel 1	white
channel 2	red
channel 3	green
channel 4	light blue
channel 5	yellow
channel 6	purple
channel 7	orange
channel 8	dark blue



Subdermal needle electrodes



42-9710 Subdermal, monopolar disposable needle electrode

black, needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9711 Subdermal, monopolar disposable needle electrode

green, needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802- connectors, individual sterile packaging, 24/pk

42-9714 like item 42-9711, cable length 2.5 m

42-9712 Subdermal, monopolar disposable needle electrode

white, needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 10/pk

Page 6

The subdermal reference needle electrode 42-9712 is required for application of the monopolar stimulation probes (e.g. 40-1303 or 40-1306).



Subdermal needle electrodes



42- 9700 Disposable subdermal needle electrode set

12 x white, 12 x red, consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9701 Disposable subdermal needle electrode set

12 x green, 12 x light blue, consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9702 Disposable subdermal needle electrode set

12 x yellow, 12 x purple, consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9703 Disposable subdermal needle electrode set

12 x orange, 12 x dark blue, consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9704 Disposable subdermal needle electrode set

2 x (white + 6 colours), 2 x (black + 6 colours), consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9708 like item 42-9704, cable length 2.5 m

Disposable electrodes

Subdermal needle electrodes



42-9705 Disposable subdermal needle electrode set

12 x white, 12 x red, consisting of 2 paired electrodes (twisted wire), needle length 15 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9706 Disposable subdermal needle electrode set

12 x green, 12 x light blue, consisting of 2 paired electrodes (twisted wire), needle length 15 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk



42-9750 Disposable subdermal needle electrode set

consisting of two paired insulated electrodes (twisted wire), 90° angle, 10 mm electrode spacing, needle length 37 mm, needle diameter 0.45 mm, cable length 1.5 m, cable colour: white + 5 colours, black + 5 colours with DIN 42802-1 connectors, individual sterile packaging, 10/pk

42-9751 like item 42-9750
90° angle,
5 mm electrode spacing,
25 mm needle length

42-9752 like item 42-9750
30° angle,
5 mm electrode spacing,
18 mm needle length

Subdermal needle electrodes



42-9740 Disposable subdermal needle electrode set

12 x (white + black), 12 x (red + black), consisting of 2 electrodes (twisted wire), needle length 18 mm, needle diameter 0.4 mm, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

Page 20

For recording of the EMG signal with needle electrodes, a ground electrode is required, e.g., 42-9710 or 42-9711.





42-9730 Disposable subdermal needle electrodes, corkscrew

12 x red, 12 x black, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9731 Disposable subdermal needle electrodes, corkscrew

4 x red, 4 x black, 4 x blue, 4 x white, 4 x yellow, 4 x green, cable length 1.5 m, with DIN 42802-1 connectors, individual sterile packaging, 24/pk

42-9732 like item 42-9731, cable length 2.5 m

Disposable electrodes

Subdermal needle electrodes



42-9720 **Disposable subdermal needle electrodes, twisted lead wires**

1-channel referential, consisting of 3 electrodes (twisted wire), red, green, black, needle length 18 mm, needle diameter 0.4 mm, cable length 1 m, 20–25 cm untwisted, with DIN 42802-1 connectors, individual sterile packaging, 10/pk



42-9721 **Disposable subdermal needle electrodes, twisted lead wires**

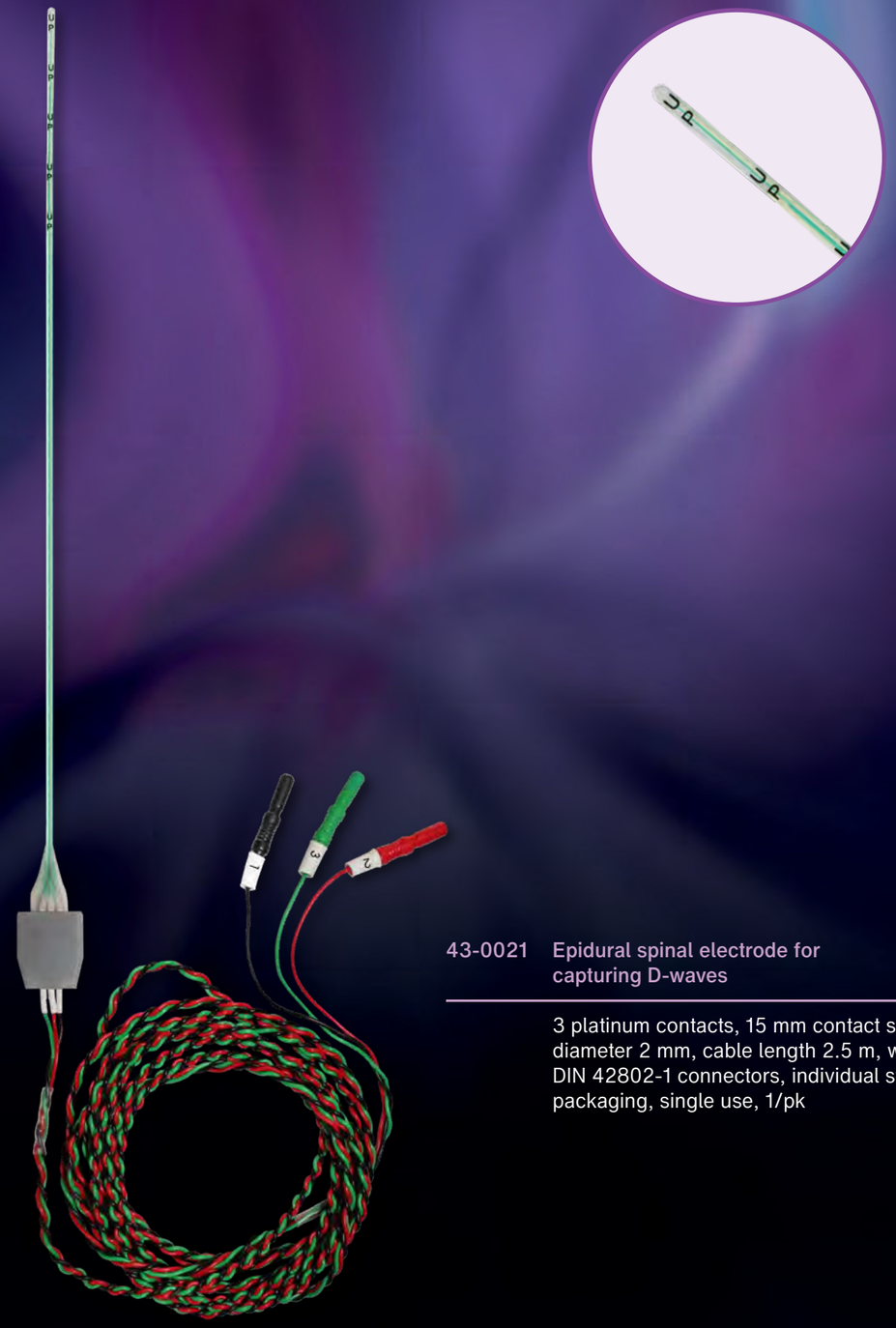
2-channel referential, consisting of 4 electrodes (twisted wire), red, green, black, blue, needle length 18 mm, needle diameter 0.4 mm, cable length 1 m, 20–25 cm untwisted, with DIN 42802-1 connectors, individual sterile packaging, 10/pk



42-9722 **Disposable subdermal needle electrodes, twisted lead wires**

3-channel referential, consisting of 5 electrodes (twisted wire), red, green, black, blue, white, needle length 18 mm, needle diameter 0.4 mm, cable length 1 m, 20–25 cm untwisted, with DIN 42802-1 connectors, individual sterile packaging, 10/pk

D-wave catheter

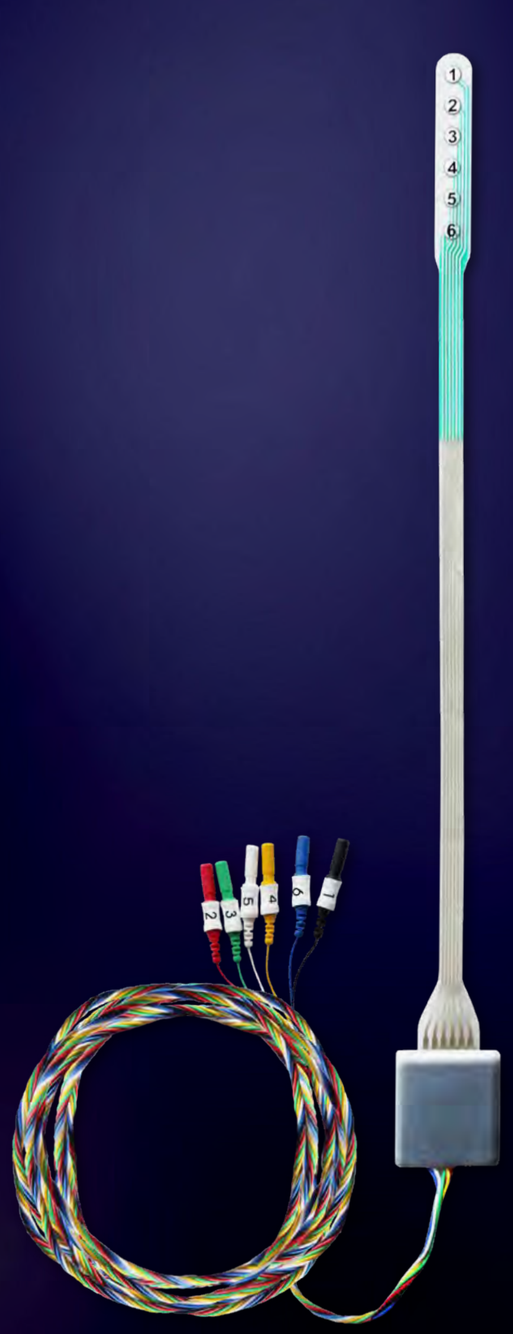


43-0021 **Epidural spinal electrode for capturing D-waves**

3 platinum contacts, 15 mm contact spacing, diameter 2 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, single use, 1/pk

Disposable electrodes

Subdural strip electrodes



43-0050 Subdural strip electrode with 4 contacts

10 mm electrode spacing, electrode contact diameter 4 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, single use, 1/pk

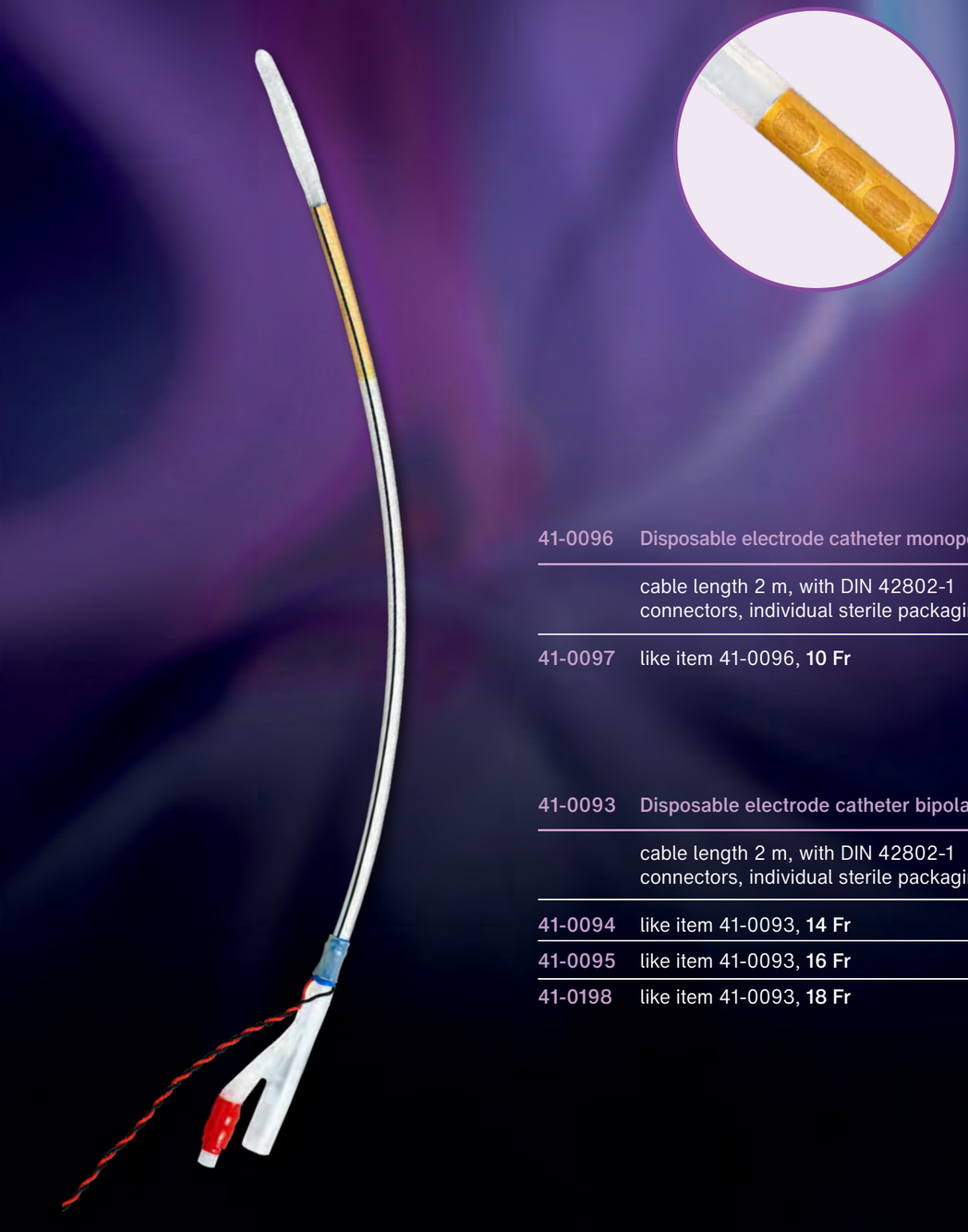
43-0051 Subdural strip electrode with 6 contacts

10 mm electrode spacing, electrode contact diameter 4 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, single use, 1/pk

43-0052 Subdural strip electrode with 8 contacts

10 mm electrode spacing, electrode contact diameter 4 mm, cable length 2.5 m, with DIN 42802-1 connectors, individual sterile packaging, single use, 1/pk

Electrode catheters



41-0096 Disposable electrode catheter monopolar, 8 Fr

cable length 2 m, with DIN 42802-1 connectors, individual sterile packaging, 1/pk

41-0097 like item 41-0096, **10 Fr**

41-0093 Disposable electrode catheter bipolar, 12 Fr

cable length 2 m, with DIN 42802-1 connectors, individual sterile packaging, 1/pk

41-0094 like item 41-0093, **14 Fr**

41-0095 like item 41-0093, **16 Fr**

41-0198 like item 41-0093, **18 Fr**

Disposable electrodes

Adhesive electrodes



42-0015 Disposable adhesive electrode, snap button

15 x 20 mm, 20/pk



42-0016 Disposable adhesive electrode, snap button with solid gel

42 x 24 mm, 50/pk



CONNECTION CABLES

Connection cables

EMG recording cables



41-0010 EMG recording cable

1 channel, for AVALANCHE® headbox, for connection of electrodes with DIN 42802-1 connectors, cable length 1.5 m, shielded, connector yellow/grey, not autoclavable



41-0068 EMG recording cable

2 channels, for AVALANCHE® headbox, for connection of colour-coded disposable needle electrodes with DIN 42802-1 connectors (white, red), cable length 1.5 m, shielded, connector yellow/grey, not autoclavable



41-0069 EMG recording cable

4 channels, cable designation 1–4, for AVALANCHE® headbox, for connection of colour-coded disposable needle electrodes with DIN 42802-1 connectors (white, red, green, light blue), cable length 1.5 m, shielded, connector yellow/grey, not autoclavable



41-0070 EMG recording cable

4 channels, cable designation 5–8, for AVALANCHE® headbox, for connection of colour-coded disposable needle electrodes with DIN 42802-1 connectors (yellow, purple, orange, dark blue), cable length 1.5 m, shielded, connector yellow/grey, not autoclavable

EP recording cable



41-0018 EP recording cable

1 channel, active, for AVALANCHE® headbox, for connection of electrodes with DIN 42802-1 connectors, cable length 1.5 m, shielded, connector yellow/grey, not autoclavable



41-0019 EP recording cable

2 channels, active, for AVALANCHE® headbox, for connection of electrodes with DIN 42802-1 connectors, cable length 1.5 m, shielded, connector yellow/grey, not autoclavable



41-0020 EP recording cable

3 channels, active, for AVALANCHE® headbox, for connection of electrodes with DIN 42802-1 connectors, cable length 1.5 m, shielded, connector yellow/grey, not autoclavable

Connection cables

Stimulation cables



41-0073 Stimulation cable for TWISTER® MM and AVALANCHE® PLUS I/O Box

1 channel, output 1–4, for connection of stimulation probes and electrodes, with DIN 42802-1 connectors, cable length 4 m, connector blue/black, not autoclavable



41-0074 Stimulation cable for TWISTER® MM and AVALANCHE® PLUS I/O Box

2 channels, output 1–4, for connection of stimulation probes and electrodes, with DIN 42802-1 connectors, cable length 4 m, connector blue/black, not autoclavable



41-0075 Stimulation cable for TWISTER® MM and AVALANCHE® PLUS I/O Box

4 channels, output 1–4, for connection of stimulation probes and electrodes, with DIN 42802-1 connectors, cable length 4/5 m, connector blue/black, not autoclavable

Stimulation cables



41-1000 Stimulation cable for AVALANCHE® PLUS I/O Box

for connection of stimulation probes and electrodes with DIN 42802-1 connectors (output A1–2) and VEP flash goggles with DIN 42802-1 connectors (output A3–4), cable length 4 m, connector blue/black, not autoclavable



41-0083 Stimulation cable for TWISTER® MM

1 channel, output 5–6, for connection of stimulation probes and electrodes, with DIN 42802-1 connectors, cable length 4 m, connector black/black, not autoclavable



41-0084 Stimulation cable for TWISTER® MM

2 channels, output 5–6, for connection of stimulation probes and electrodes, with DIN 42802-1 connectors, cable length 4 m, connector black/black, not autoclavable

Connection cables

Stimulation probe cables



41-0000 Probe cable for AVALANCHE® Headbox and AVALANCHE® PLUS I/O Box

for connection of bipolar probes from Dr. Langer Medical GmbH, cable length 2.5 m, green/black connector, delivered non-sterile, autoclavable



41-0002 Probe cable, bipolar, with DIN 42802-1 connectors

(black, red) for connection of bipolar probes from Dr. Langer Medical GmbH, cable length 2.5 m, delivered non-sterile, autoclavable



41-0027 Probe cable, monopolar, with DIN 42802-1 connector

(black), without reference for connection of monopolar probes from Dr. Langer Medical GmbH, cable length 2.5 m, delivered non-sterile, autoclavable

Page 35



Probe cables 41-0002 and 41-0027 with DIN 42802-1 connectors are used in combination with one of the adapters 41-0048, 41-0080 or 41-0087.

Page 20

The monopolar probe cable 41-0027 is used in combination with the disposable needle electrode 42-9712 on p. 20.



Snap button cables



41-0022 Snap button cable, black

for connection of adhesive electrodes with snap button, cable length 1.5 m, with DIN 42802-1 connector, not autoclavable

41-0023 Snap button cable, red

for connection of adhesive electrodes with snap button, cable length 1.5 m, with DIN 42802-1 connector, not autoclavable

41-0024 Snap button cable, green

for connection of adhesive electrodes with snap button, cable length 1.5 m, with DIN 42802-1 connector, not autoclavable

41-0034 like item 41-0024, cable length 0.6 m

Adapters



41- 0048 Adapter for AVALANCHE® Headbox and AVALANCHE® PLUS I/O Box

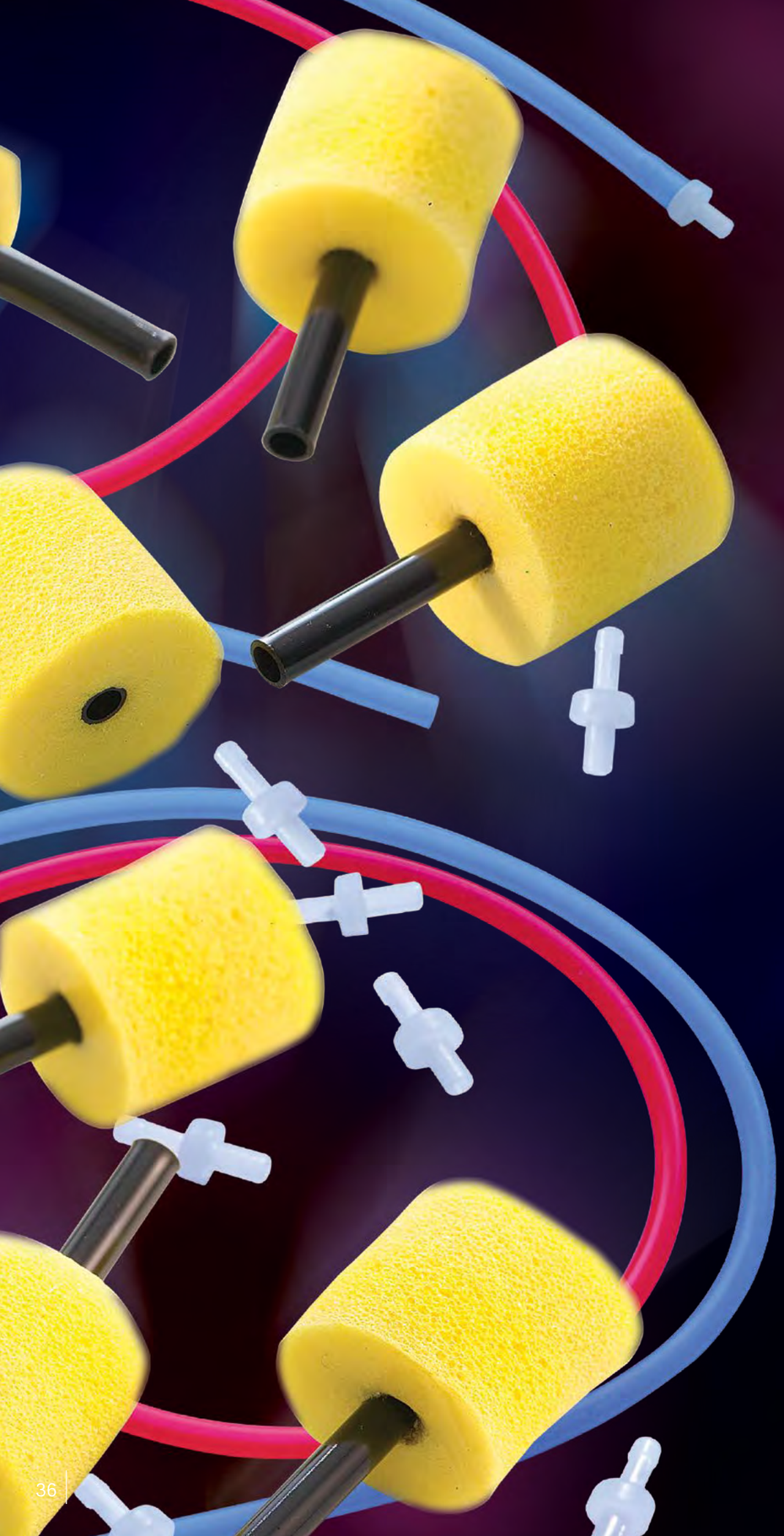
for connection of stimulation probes and electrodes from Dr. Langer Medical GmbH with DIN 42802-1 connectors, cable length 0.2 m, connector green/grey, not autoclavable

41-0080 Adapter for AVALANCHE® Headbox and AVALANCHE® PLUS I/O Box

for connection of stimulation probes and electrodes from Dr. Langer Medical GmbH with DIN 42802-1 connectors, cable length 1.5 m, connector green/grey, not autoclavable

41-0087 Adapter for AVALANCHE® PLUS I/O Box

like item 41-0080, connector grey/grey



MISCELLANEOUS ACCESSORIES

Miscellaneous accessories

AEP stimulation



43-0010 Earphones

ER3C earphones for acoustic stimulation (red/blue) for AEP, not autoclavable, 1 pair/pk (1 x red, 1 x blue)

41-0105 AEP Link cable

for connection of AEP earphones (43-0010) to AVALANCHE®



43-0011 Sound tubes, red/blue

for earphones 43-0010, incl. adapters (43-0012) for foam ear plugs, 1 pair/pk (1 x red, 1 x blue)



43-0012 Adapter

for connection of foam ear plugs to sound tubes 43-0011, 10/pk

Miscellaneous accessories

AEP stimulation



43-0013 Foam ear plugs, small

for earphones 43-0010, 10 mm diameter
50/pk

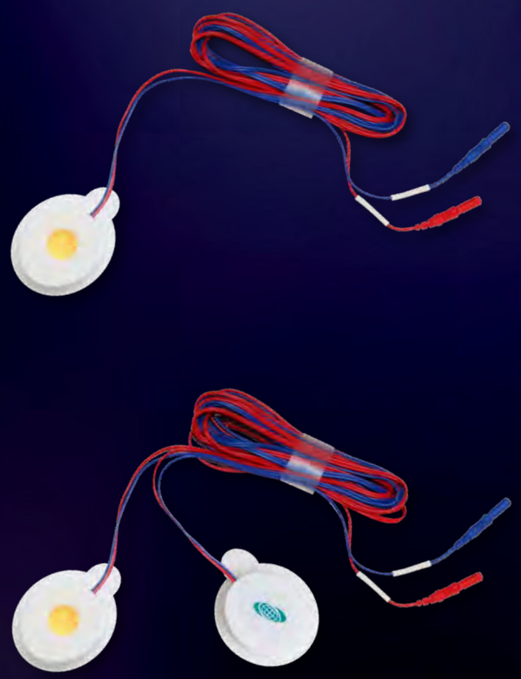
43-0014 Foam ear plugs, medium

for earphones 43-0010, 13 mm diameter
50/pk

43-0015 Foam ear plugs, large

for earphones 43-0010, 18 mm diameter
24/pk

VEP stimulation



43-0030 VEP flash goggles

for stimulation of visual evoked potentials, white light stimuli, with DIN 42802-1 connectors, cable length 2 m, single use, self-adhesive, 1/pk

43-0031 VEP flash goggles

for stimulation of visual evoked potentials, red light stimuli, with DIN 42802- connectors, cable length 2 m, single use, self-adhesive, 1/pk

43-0032 VEP flash goggles

for stimulation of visual evoked potentials, white light stimuli, with DIN 42802-1 connectors, cable length 2 m, single use, self-adhesive, 1 pair/pk

43-0033 VEP flash goggles

for stimulation of visual evoked potentials, red light stimuli, with DIN 42802-1 connectors, cable length 2 m, single use, self-adhesive, 1 pair/pk

Stimulation clip



40-1106 Disposable stimulation cable with clip

monopolar, with DIN 42802-1 connector, cable length 2.5 m, individual sterile packaging, 10/pk

Sterile touch screen films



49-0003 Film for sterile operation of the touch screen of the AVALANCHE® SI 2 neuromonitor

film dimensions 419 mm x 290 mm, individual sterile packaging, single use, 50/pk

49-0002 Film for sterile operation of the touch screen of the AVALANCHE® PLUS neuromonitor

film dimensions 580 mm x 415 mm, individual sterile packaging, single use, 50/pk

Miscellaneous accessories

Simulators



20-1001 Simulant XS

Simulator for neuromonitoring in thyroid surgery

- Simulates physiological muscle action potentials of the vocalis muscle after stimulation of the vagus nerve and recurrent laryngeal nerve
- Simulates continuous vagus stimulation with VANESSA headbox and Thyroid VNS software
- Simulates signal changes and signal loss



20-1003 Simulant XS

SEP signal simulator

- Simulates physiological median nerve SEP at C3'/C4'/Fz & physiological tibial nerve SEP at Cz'/Fz
- Simulates critical signal changes



Simulators

- **Ideal for training and instruction**
- **Perfect for quick cable, headbox and neuromonitor testing**
- **incl. accessory kit**

Other accessories



44-0015 Foot switch

for controlling device functions, cable length 6 m, white

44-0003 like item 44-0015, black



21-0005 Mute Sensor

for connection to AVALANCHE®, suppresses HF noise signals, cable length 4 m, not autoclavable

21-0020 like item 21-0005, cable length 7 m



06-0000 Larynx model

scale 1:1

Neuromonitoring and neurostimulation

AVALANCHE® SI 2



The Allrounder
Multimodal
8-channel neuromonitor

Simple – reliable – scalable

- *Functional integrity check of motor nerves in thyroid, ENT and maxillofacial surgeries*
- *Oxygen perfusion monitoring during carotid surgeries*







AVALANCHE® SI 2 – impressive modular concept with up to 8 measurement channels for use in multiple surgical disciplines. The operational design stands out for its easy handling. The hygiene-optimised design uses adhesive films for sterile applications in the OR.

AVALANCHE® PLUS



The Specialist
Multimodal
32-channel neuromonitor

A completely new approach to IONM

- *Brain surgery*
- *Spine surgery*

Superior assistance package:

- *Visual anatomy-based configuration*
- *LED-guided patient connection*
- *EMG / EP signal overview*







AVALANCHE® PLUS – a revolutionary IONM system that stands out for its clarity and intuitive operation. The hygiene-optimised design uses adhesive films for sterile applications in the OR.

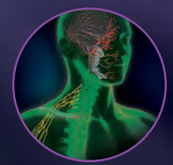
TWISTER® MM



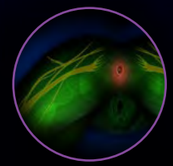
The Compact
Multimodal
neurostimulator

for intraoperative nerve, muscle and cortex stimulation

- *Direct nerve stimulation*
- *Cortical mapping – speech monitoring*
- *PSARP*







Pre-defined user programs simplify the use of **TWISTER®** MM. Stimulation parameters can be changed directly on the touchscreen. The device design was optimised for surgical use. **TWISTER®** MM functions as a stand-alone device without any additional PC or laptop.

For further information about our full product range, please scan the QR code:

For nearly 30 years, our high-quality intraoperative neuromonitors have impressively demonstrated the art of neuromonitoring.

langermedical



We are neuromonitoring

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