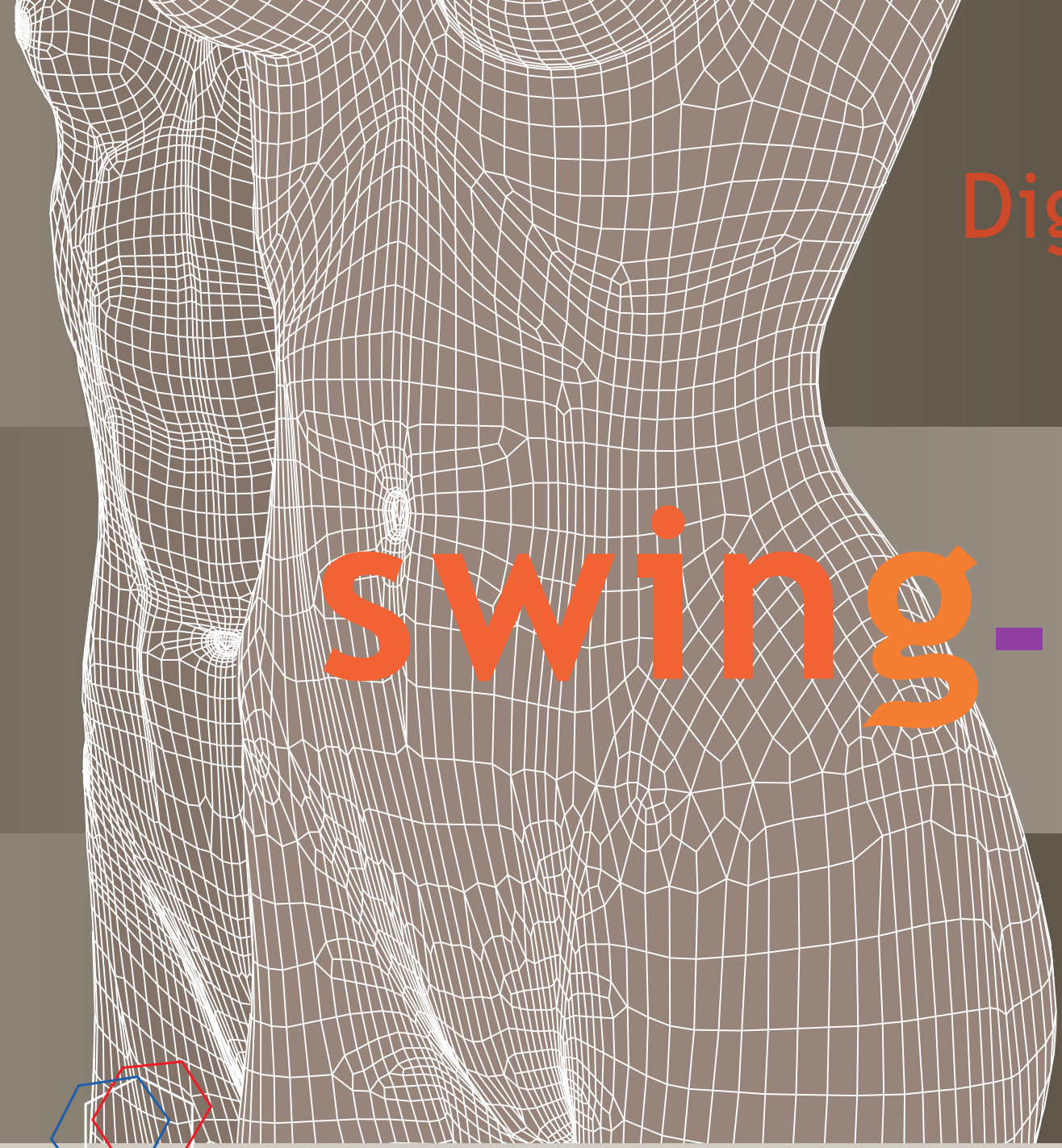


Digestive Surgery

swing-CONCEPT®

made in FRANCE SINCE 1992

Product Catalog

swing TECHNOLOGIES
a THT bio-science division

swing-MESH® POLYPROPYLENE

3 LIGHT & STANDARD

4 ULTRA LIGHT & LIGHT

swing-MESH® POLYESTER

6 BIDIMENSIONAL

8 TRIDIMENSIONAL

swing-CONTACT® GRIPPING TRIDIMENSIONAL

9 ONLAY / LAP / VENTRAL

NEW INTRA-swing® COMPOSITE

10 IS180 / PREFIX / VENTRO-S

swing-MESH® POLYPROPYLENE LIGHT & STANDARD

ADVANTAGES

- Light porous structure to favour quick tissue ingrowth and colonization[1, 2, 5]
- Semi-rigid for optimal abdominal fit
- Good shape memory for perfect use via laparoscopic or open surgery
- Multidirectional mechanical properties

SMX Standard

DESCRIPTION

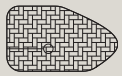
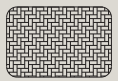
- Knitted structure
- Polypropylene (PP) monofilament

Weight : 80 g/m² - Thickness : 0,56 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 0,7 x 0,7 mm - Porosity : 48 %
Mean Tensile strength (Warp/Weft) : 129/514 N
Mean Elongation (Warp/Weft) : 118/77 %

*Max. intra abdominal pressure 24 kPa

INDICATIONS

- Abdominal wall reinforcement
- Treatment of ventral, inguinal and femoral hernias
- Laparoscopic or open surgery

Ref.	Size in cm	Shapes
SMX 5595 L	5,5 X 9,5	
SMX 0611 S SMX 1015 S	6 X 11 10 X 15	
SMX 1515 S SMX 3030 S	15 X 15 30 X 30	

SMPX Standard plug with onlay patch

DESCRIPTION

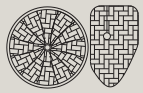
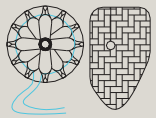
- Adjustable plug for hernia hole
- Available with onlay preshaped mesh keyholed
- Knitted structure
- Polypropylene (PP) monofilament

Weight : 80 g/m² - Thickness : 0,56 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 0,7 x 0,7 mm - Porosity : 48 %
Mean Tensile strength (Warp/Weft) : 129/514 N
Mean Elongation (Warp/Weft) : 118/77 %

*Max. intra abdominal pressure 24 kPa

INDICATIONS

- Abdominal wall reinforcement
- Treatment of inguinal and femoral hernias
- Laparotomic approach

Ref.	Size in cm	Shapes
SMP 75950 PX SMP 95950 PX	Ø 7,5 - 5,5 X 9,5 Ø 9,5 - 5,5 X 9,5	
SMP 75958 X SMP 95958 X	Ø 7,5 - 5,5 X 9,5 Ø 9,5 - 5,5 X 9,5	

SMPH2 Light plug with onlay patch

DESCRIPTION

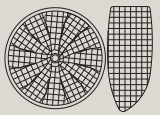
- Plug for hernia hole
- Available with onlay preshaped mesh
- Knitted structure
- Polypropylene (PP) monofilament

Weight : 55 g/m²- Thickness : 0,48 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,53 x 1,30 mm - Porosity : 62 %
Mean Tensile strength (Warp/Weft) : 244/335 N
Mean Elongation (Warp/Weft) : 40/62 %

*Max. intra abdominal pressure 24 kPa

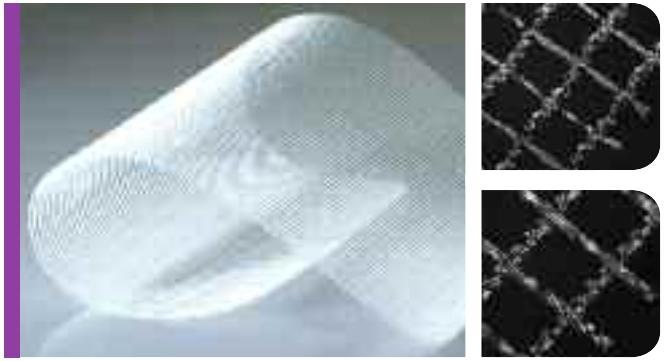
INDICATIONS

- Abdominal wall reinforcement
- Treatment of inguinal and femoral hernias
- Laparotomic approach

Ref.	Size in cm	Shapes
SMP 75145 H2 SMP 95145 H2	Ø 7,5 - 5,5 X 14 Ø 9,5 - 5,5 X 14	

Mean values given as an indication - Non-exhaustive reference list

swing-MESH® POLYPROPYLENE
ULTRA LIGHT & LIGHT



SMH/SMH2 Ultra light & light

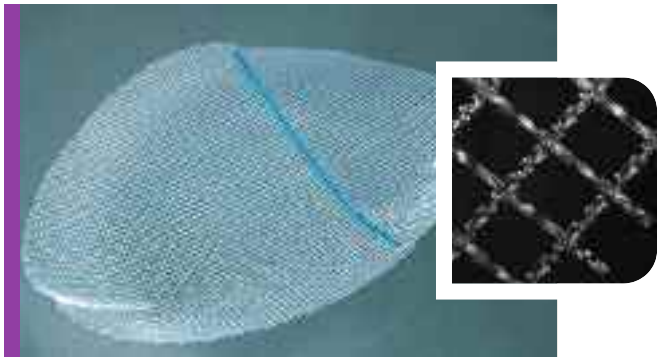
SMH Weight : 28 g/m² - Thickness : 0,33 mm
Mean bursting strength : 396 kPa*
Pore size : 1,06 x 1,01 mm - Porosity : 60 %
Mean Tensile strength (Warp/Weft) : 176/89 N
Mean Elongation (Warp/Weft) : 36/58 %

SMH2 Weight : 55 g/m² - Thickness : 0,48 mm
Mean bursting strength. : ≥ 500 kPa*
Pore size : 1,53 x 1,30 mm - Porosity : 62 %
Mean Tensile strength (Warp/Weft) : 244/335 N
Mean Elongation (Warp/Weft) : 40/62 %

*Max. intra abdominal pressure 24 kPa

DESCRIPTION
- Knitted structures
- Polypropylene (PP) monofilament

INDICATIONS
- Abdominal wall reinforcement
- Treatment of ventral, inguinal and femoral hernias
- Laparoscopic or open surgery



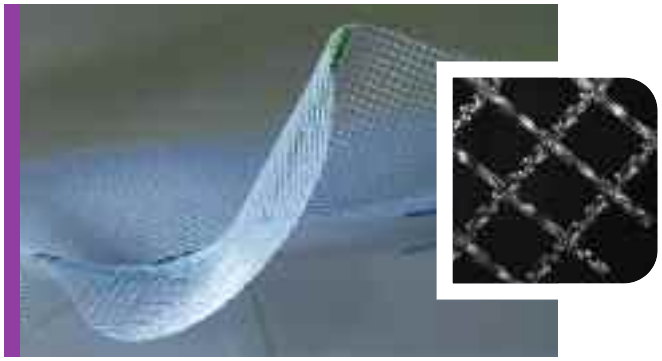
SMH2+ Shape memory

Weight : 58 g/m² - Thickness : 0,48 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,46 x 1,26 mm - Porosity : 62 %
Mean Tensile strength (Warp/Weft) : 261/322 N
Mean Elongation (Warp/Weft) : 42/59 %

*Max. intra abdominal pressure 24 kPa

DESCRIPTION
- Knitted structure
- Polypropylene (PP) monofilament
- Semi-anatomical prosthesis with shape memory
- Impregnated with polyurethane (PUR)

INDICATIONS
- Abdominal wall reinforcement
- Treatment of ventral, inguinal and femoral hernias
- Laparoscopic or open surgery



SMH2A Anatomical

Weight : 58 g/m² - Thickness : 0,48 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,46 x 1,26 mm - Porosity : 62 %
Mean Tensile strength (Warp/Weft) : 261/322 N
Mean Elongation (Warp/Weft) : 42/59 %

*Max. intra abdominal pressure 24 kPa

DESCRIPTION
- Anatomical prosthesis with visual marks for easy positioning
- Knitted structure
- Polypropylene (PP) monofilament
- Impregnated with polyurethane (PUR)

INDICATIONS
- Abdominal wall reinforcement
- Treatment of inguinal and femoral hernias
- SMH2A is preferably used via laparoscopic totally extraperitoneal approach (TEP)

Mean values given as an indication

swing-MESH® POLYPROPYLENE ULTRA LIGHT & LIGHT

ADVANTAGES

- Ultra light and light porous structures to favour quick tissue ingrowth and colonization[1, 2, 5]
- Semi-rigid for optimal abdominal fit
- Shape memory for perfect use for laparoscopic or open surgery
- Multidirectional mechanical properties

	SMH	Size in cm	Shapes
LICHT.	SMH 0611 S	6 X 11	
	SMH 1015 S	10 X 15	
TAPP/TEP	SMH 1515 S	15 X 15	
VENTRAL HERNIA REPAIR	SMH 1520 S	15 X 20	
	SMH 3030 S	30 X 30	

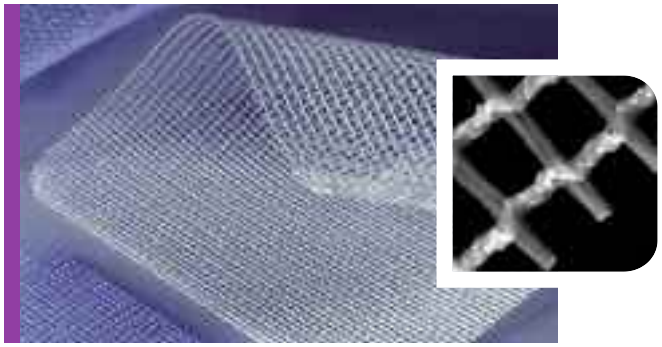
	SMH2+	Size in cm	Shapes
TAPP/TEP	SMH2+ 1114 MA	11 X 14	
	SMH2+ 1215 MA	12 X 15	
	SMH2+ 1216 MA	12 X 16	

	SMH2A	Size in cm	Shapes
TAPP/TEP	SMH2A 1115 D+	11 X 15	
	SMH2A 1216 D+	12 X 16	
	SMH2A 1115 G+	11 X 15	
	SMH2A 1216 G+	12 X 16	

	SMH2	Size in cm	Shapes
LICHT.	SMH2 0611 S	6 X 11	
	SMH2 1015 S	10 X 15	
TAPP/TEP	SMH2 1515 S	15 X 15	
VENTRAL HERNIA REPAIR	SMH2 1520 S	15 X 20	
	SMH2 3030 S	30 X 30	

Non-exhaustive reference list

swing-MESH® BIDIMENSIONAL POLYESTER



SM2 Standard

Weight : 110 g/m² - Thickness : 0,55 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,56 x 1,17 mm - Porosity : 49 %
Mean Tensile strength (Warp/Weft) : 300/524 N
Mean Elongation (Warp/Weft) : 59/41 %

*Max. intra abdominal pressure 24 kPa

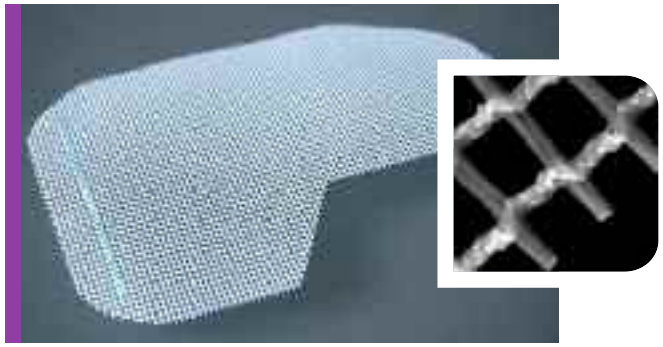
DESCRIPTION

- Knitted structure
- Sealed openwork rectangular mesh
- Polyester (PET) multifilament

INDICATIONS

Abdominal wall reinforcement
- ventral
- inguinal
- femoral hernias

for laparoscopic or open surgery



SM2+ Shape memory

Weight : 113 g/m² - Thickness : 0,54 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,58 x 1,20 mm - Porosity : 49 %
Mean Tensile strength (Warp/Weft) : 284/562 N
Mean Elongation (Warp/Weft) : 59/54 %

*Max. intra abdominal pressure 24 kPa

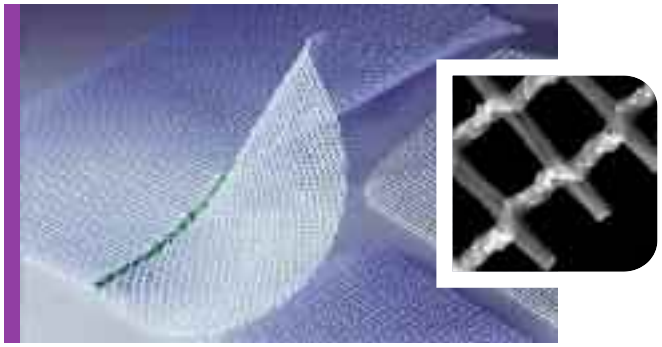
DESCRIPTION

- Knitted structure
- Sealed openwork rectangular mesh
- Polyester (PET) multifilament
- Impregnated with polyurethane (PUR)

INDICATIONS

Abdominal wall reinforcement
- ventral
- inguinal
- femoral hernias

for laparoscopic or open surgery



SMA Anatomical

Weight : 113 g/m² - Thickness : 0,54 mm
Mean bursting strength : ≥ 500 kPa*
Pore size : 1,58 x 1,20 mm - Porosity : 49 %
Mean Tensile strength (Warp/Weft) : 284/562 N
Mean Elongation (Warp/Weft) : 59/54 %

*Max. intra abdominal pressure 24 kPa

DESCRIPTION

- Anatomical prosthesis with visual marks for easy positioning
- Knitted structure
- Sealed openwork rectangular mesh
- Polyester (PET) multifilament
- Impregnated with polyurethane (PUR)

INDICATIONS

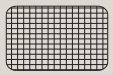
- Abdominal wall reinforcement
- Treatment of inguinal and femoral hernias
- SMA is preferably used via laparoscopic totally extraperitoneal approach (TEP)

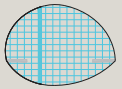
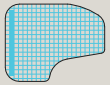
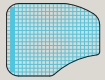
Mean values given as an indication

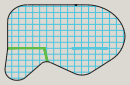
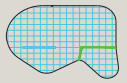
swing-MESH® BIDIMENSIONAL POLYESTER

ADVANTAGES

- Porous structure to favour fast tissue ingrowth and colonization[1, 2, 5]
- Semi-rigid for optimal abdominal fit
- Shape memory for use for laparoscopic or open surgery
- Elasticity and excellent multidirectional mechanical properties

	SM2	Size in cm	Shapes
TAPP/TEP	SM2 1515 S	15 X 15	
VENTRAL HERNIA REPAIR	SM2 1520 S	15 X 20	
	SM2 2020 S	20 X 20	
	SM2 3030 S	30 X 30	

	SM2+	Size in cm	Shapes
TAPP/TEP	SM2+ 1114 MA	11 X 14	
	SM2+ 1215 MA	12 X 15	
	SM2+ 1216 MA	12 X 16	
	SM2+ 1114 BM	11 X 14	
	SM2+ 1215 BM	12 X 15	
	SM2+ 1515 S	15 X 15	

	SMA	Siez in cm	Shapes
TAPP/TEP	SMA 1115 FD	11 X 15	
	SMA 1115 FG	11 X 15	
	SMA 1115 D	11 X 15	
	SMA 1216 D	12 X 16	
	SMA 1115 G	11 X 15	
	SMA 1216 G	12 X 16	

Non-exhaustive reference list

swing-MESH® TRIDIMENSIONAL POLYESTER

ADVANTAGES

- Porous structure to favour fast tissue ingrowth and colonization[1, 2, 5]
- Semi-rigid for optimal abdominal fit
- Shape memory for use via laparoscopic or open surgery
- Elasticity and excellent multidirectional mechanical properties

DESCRIPTION

- Tridimensional "honeycomb" knitted structure
- Polyester (PET) multifilament

SM3 Weight : 120 g/m² - Thickness : 1,14 mm
Mean bursting strength : 481 kPa*
Pore size : 1,59 x 1,41 mm - Porosity : 65 %
Mean Tensile strength (Warp/Weft) : 226/319 N
Mean Elongation (Warp/Weft) : 45/86 %

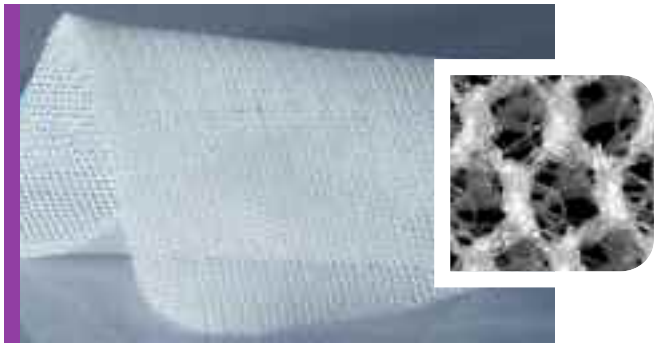
SM3+ Weight : 126 g/m² - Thickness : 1,09 mm
Mean bursting strength. : ≥ 500 kPa*
Pore size : 1,49 x 1,32 mm - Porosity : 60 %
Mean Tensile strength (Warp/Weft) : 227/318 N
Mean Elongation (Warp/Weft) : 50/90 %

*Max. intra abdominal pressure 24 kPa

INDICATIONS

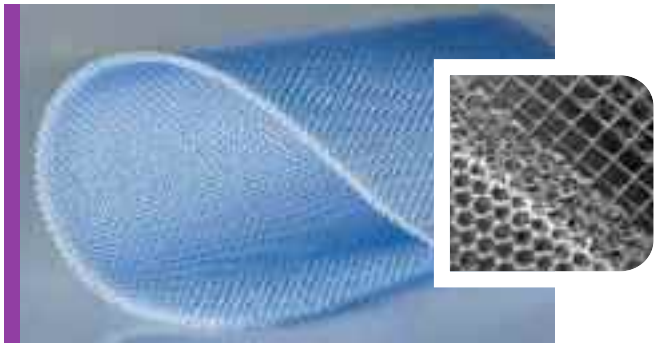
Abdominal wall reinforcement
- ventral
- inguinal
- femoral hernias

for laparoscopic or open surgery



SM3 Standard

	SM3	Size in cm	Shapes
LICHT.	SM3 0812 L	8 X 11	
	SM3 0813 A	8 X 12	
	SM3 0813 L	8 X 12	
	SM3 0913 F	9 X 13	
TAPP/TEP	SM3 1515 S	15 X 15	
VENTRAL HERNIA REPAIR	SM3 1520 S	15 X 20	
	SM3 3030 S	30 X 30	



SM3+ Shape memory

- Impregnated with polyurethane (PUR)

	SM3+	Size in cm	Shapes
LICHT.	SM3+ 5595 L	5,5 X 9,5	
	SM3+ 0812 L	8 X 11	
	SM3+ 0813 A	8 X 12	
	SM3+ 0813 L	8 X 12	
	SM3+ 0913 F	9 X 13	
TAPP/TEP	SM3+ 1114 MA	11 X 14	
	SM3+ 1215 MA	12 X 15	
	SM3+ 1515 S	15 X 15	
VENTRAL HERNIA REPAIR	SM3+ 1520 S	15 X 20	
	SM3+ 2020 S	20 X 20	
	SM3+ 3030 S	30 X 30	

Non-exhaustive reference list

Mean values given as an indication

swing-CONTACT® GRIPPING TRIDIMENSIONAL

ADVANTAGES

- Self gripping prosthesis thanks to atraumatic "grips" on both sides[3, 4]
- Easy repositioning during surgery[3, 4]
- Porous structure to favour fast tissue ingrowth and colonization[1, 2, 5]
- Shape memory for perfect use for laparoscopic or open surgery
- Elasticity and excellent multidirectional mechanical properties

DESCRIPTION

- Tridimensional Light "honeycomb" knitted structure with "grips"
- Polyester multifilament impregnated with polyurethane (PUR)

Weight : 126 g/m² - Thickness : 1,09 mm
Mean bursting strength. : 314 kPa*
Pore size : 1,48 x 1,32 mm - Porosity : 61 %
Mean Tensile strength (Warp/Weft) : 147/166 N
Mean Elongation (Warp/Weft) : 41/76 %

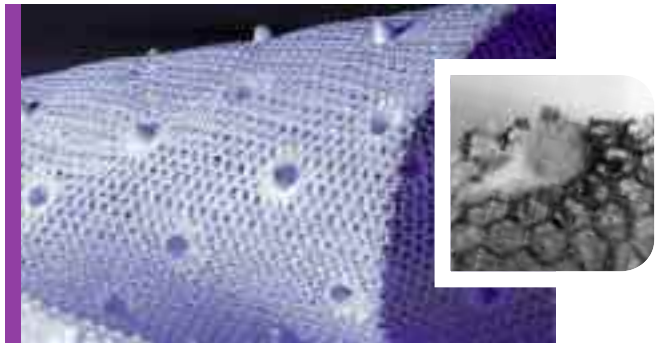
*Max. intra abdominal pressure 24 kPa

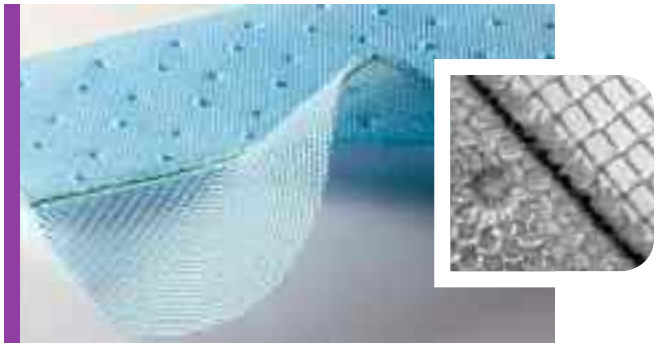
INDICATIONS

Abdominal wall reinforcement
- ventral
- inguinal
- femoral hernias

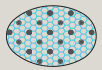
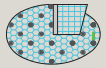
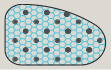
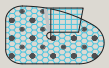
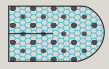
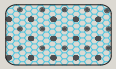
via laparoscopic or open surgery

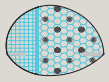
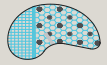
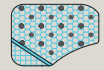
- CO3A is preferably used via laparoscopic totally extraperitoneal approach (TEP)

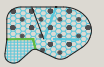
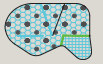
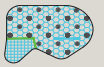
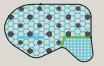


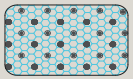


ONLAY / LAP / VENTRAL

	ONLAY	Size in cm	Shapes
LICHT.	CO3+ 0812 A	8 X 11	
	CO3+ 0812 L	8 X 11	
	CO3+ 0813 A	8 X 12	
	CO3+ 0813 L	8 X 12	
	CO3+ 0913 F	9 X 13	
	CO3+ 1015 S	10 X 15	

	LAP	Size in cm	Shapes
TAPP/TEP	CO3+ 1114 MA	11 X 14	
	CO3+ 1215 MA	12 X 15	
	CO3+ 1216 MA	12 X 16	
	CO3+ 1115 MB	11 X 15	
	CO3+ 1114 ER	11 X 14	

	LAP	Size in cm	Shapes
TAPP/TEP	CO3A 1115 FD	11 X 15	
	CO3A 1115 FG	11 X 15	
	CO3A 1115 D+	11 X 15	
	CO3A 1216 D+	12 X 16	
	CO3A 1115 G+	11 X 15	
	CO3A 1216 G+	12 X 16	
	CO3+ 1515 S	15 X 15	

	VENTRAL	Size in cm	Shapes
VENTRAL HERNIA REPAIR	CO3+ 1520 S	15 X 20	
	CO3+ 1730 S	17 X 30	

Mean values given as an indication - Non-exhaustive reference list

INTRA-swing® COMPOSITE

ADVANTAGES

IS180 : Wide range of sizes and designs covering all laparoscopic indications

PREFIX : Pre-fixation traction threads with needles, for In-Out approach

VENTRO-S : Anatomical designs with fixation skirt for open surgery

DESCRIPTION

- Composite structure
- Polyester (polyethylene terephthalate PET) multifilament, coated on one side with a thin membrane of polyurethane (PUR)
- Precut and entirely macro-perforated prosthesis

INDICATIONS

- Abdominal wall reinforcement
- Treatment of ventral hernia repair
- Use for laparoscopic or open surgery

Weight : 184 g/m² - Thickness : 1,38 mm
Mean bursting strength. : 289 kPa*
Pore size : 2,58 x 1,63 mm
Porosity (Visceral side/Parietal side) : 1,4 %/55 %
Mean Tensile strength (Warp/Weft) : 179/123 N
Mean Elongation (Warp/Weft) : 71/103 %

*Max. intra abdominal pressure 24 kPa

RABBIT

Electronic microscopy pictures after 13 months.

The PET mesh features a well-orientated continuous fibrocellular coating.

The PEU structure consists of thick fibrous cords, reminiscent of fibroblast cells.

Experimental study with 18 rabbits: A wound was created in each rabbit in aponeurose, muscle and peritoneal abdominal wall. An Intra-swing® dual-side mesh was then implanted in intraperitoneal situation and removed at 4, 9 and 13 months for electronic microscopy examination and histological analysis :

- No local sepsis observed (seroma, infection...)
- All meshes were found intact and well integrated
- No adhesion observed on 15 rabbits: 83% of cases
- After 13 months implantation, PEU sides are completely colonized. Their structure consists of thick fibrous cords, reminiscent of non inflammatory fibroblast cells
- The mesh center is often colonized by a connective tissue, highly vascularized
- Nothing wrong against PEU biocompatibility and stability.

PIG

Picture of the prosthesis after 18 weeks.

Tissue ingrowth and neovascularization.

Histological view at 24 weeks (x4).

Low inflammatory reaction.

Histological view at 32 weeks (x4).

Tissue ingrowth and low inflammatory reaction (perforation area).

Experimental study to evaluate the biocompatibility and tissue ingrowth of Intra-swing® wall reinforcement dual-side meshes, following implantation with pig.

Each one of the 5 animals received 3 perforated meshes coated with polyurethane for 8, 18, 24 or 32-week periods :

- No sign of degradation of the PEU coating observed
- Good tissue ingrowth
- Low inflammatory response.

HUMAN

Electronic microscopy picture - PEU side.

The polyurethane side is covered with a film of macrophagic peritoneal cells.

Histological view - PEU side (10x1.25).

The fibrous tissue is well organized, orientated and shows vascular islands surrounded by lymphocitic elements.

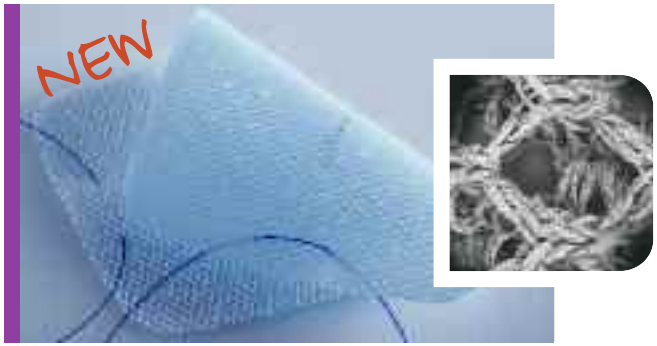
Electronic microscopy picture - PET side.

Complete colonization of the PET side by fibrous tissue in a collagen and cellular network.

Histological view - PET side (10x1.25).

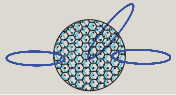
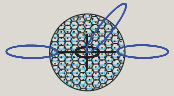
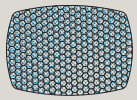
Organized fibrous network visible throughout the mesh.

Electronic microscopy examination and histological analysis of an Intra-swing® dual-side mesh after 4 months human implantation.



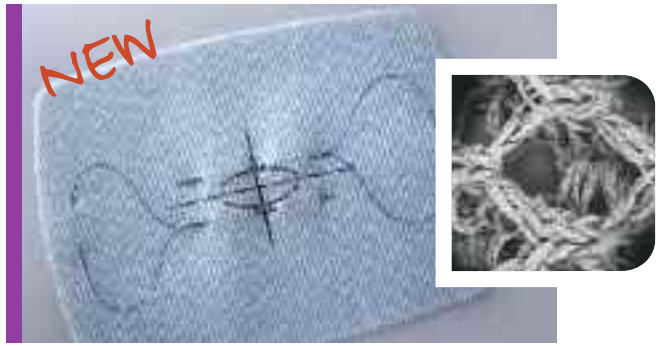
IS180 Laparoscopic / Open surgery

Tridimensional polyester prosthesis coated with polyurethane (PUR) with centering and positioning threads using Easy-catch single use instrument

Ref.	Size in cm	Shapes
IS180 1000 R	Ø 10	
IS180 1200 R	Ø 12	
IS180 1600 R	Ø 16	
IS180 1015 S	10 X 15	
IS180 1520 S	15 X 20	
IS180 2030 S	20 X 30	
IS180 2535 S	25 X 35	

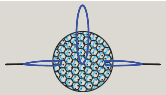
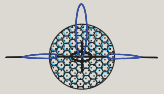
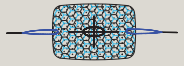
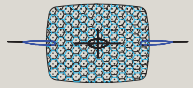
EASY-CATCH® Transabdominal instrument

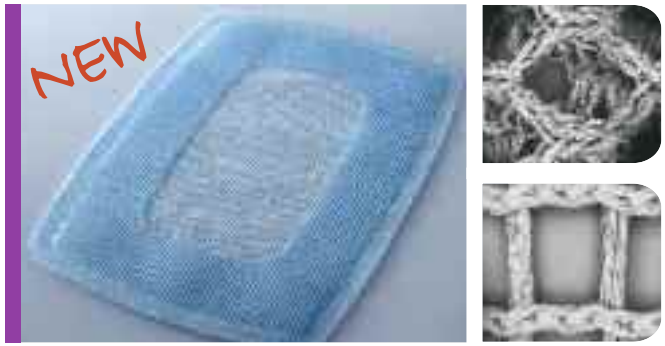
Ref.	Size in mm	Shape
EC 208	Ø 8 x 201	



PREFIX Pre-fixation threads with needles

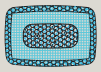
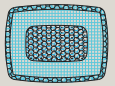
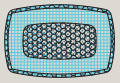
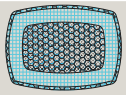
Tridimensional prosthesis coated with polyurethane (PUR) with centering and positioning threads loaded with straigth needles

Ref.	Size in cm	Shapes
IS180 1002 VL	Ø 10	
IS180 1202 VL	Ø 12	
IS180 1602 VL	Ø 16	
IS180 10152 VL	10 X 15	
IS180 15202 VL	15 X 20	



VENTRO-S Mini open surgery

Tridimensional polyester prosthesis coated with polyurethane (PUR) with fixation skirt made of bidimensional polyester impregnated with PUR (113 g/m²)

Ref.	Size in cm	Shapes
IS180 1200 VO	Ø 12	
IS180 1015 VO	10 X 15	
IS180 1520 VO	15 X 20	
IS180 2030 VO	20 X 30	
IS180 2535 VO	25 X 35	

Mean values given as an indication - Non-exhaustive reference list

BIBLIOGRAPHY

1- «Which mesh for hernia repair ?» CN Brown, JG Finch, Ann R Coll Surg Engl 2010; 92: 272-278.

2 - «A review of available prosthetic material for abdominal wall repair» M Poussier, E Denève, P Blanc, E Boulay, M Bertrand, M Nedelcu, A Herrero, JM Fabre, D Nocca, Journal of Visceral Surgery (2013) 150, 55-62.

3 - «Enquête rétrospective Swing-Contact®» THT, 15/10/2012 rev3 sur 3867 prothèses posées par 31 chirurgiens.

4 - «Evaluation clinique sur 181 patients des implants Swing-Contact® dans le traitement des hernies de l'aine» THT, 04/10/2011 rev1 (suivi post-commercialisation).

5 - «The search for ideal hernia repair; mesh materials and types» Y Bilsel, I Abci, International Journal of Surgery 10 (2012) 317 - 321.

6 - «Les biomatériaux à base de collagène» A Huc, Lyon Pharmaceutique (1993) 44, 5, 309 - 319.

7 - Avis favorable émis par le groupe de travail «sécurité virale» de l'AFSSPS le 14 mai 2002.

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