

# **OPERATION**UNDER CONTROL



## **Battery Operated Surgical Motor Systems**

Light weight provides efficient and reliable performance with new generation powerful motor

sharpline.de

SHARPLINE.





### We Believe

Developing a creative mindset leads to innovative technologies that can change the World. Our passion is to bring products to markets that can enhance lives. One of the key ingredients to our success is having 25 years of producing and marketing experience.

### What We Do

We are interested in connecting with individuals who are trying to innovate the World into a better place and willing to share creativity. If we can help in any way please feel free to e-mail us at info@sharpline.de













- Light weight provides efficient and reliable cutting performance with new generation powerful motor.
- One hand piece solution for reaming, high speed drilling, screw driving and tapping functions with high torque performance.
- Lithium-ion battery technology provides consistent power during the operation.
- Easy handling and ergonomic design of SharpX ensures reliable and better controlled operation results.
- Efficient torque for acetabular reaming.
- SharpX is an innovative new generation power tool with high quality engineering materials.
- · Providing efficiency with Engineering Solutions
- Extended battery life.
- · Comfortable ergonomic design.
- · Easy attachment assembly.
- · High speed drilling and oscillating.



- Less Weight, High Power
- Next Generation Cutting Technology
- New Generation Surgical Motor Technology
- Li-ion Technology



SharpX power box records all data about usage for technical service information.

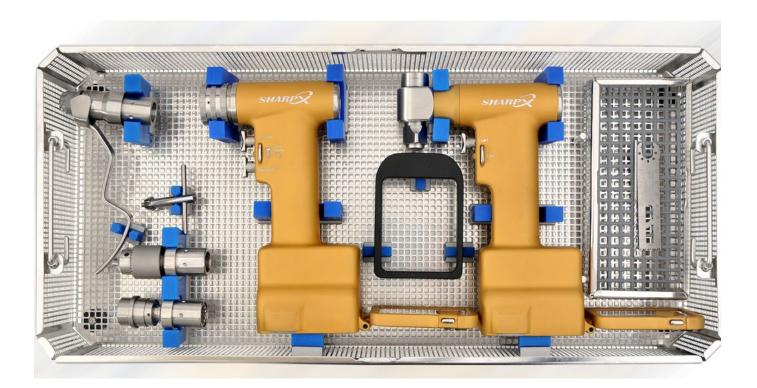


Power box oled screen enables users to indicate battery capacity by pressing the test button.



Sterile funnel

"Technical structure of SharpX HandPieces provides users nonrestrictive washing and disifection."





- Less Weight, High Power
- Next Generation Cutting Technology
- New Generation Surgical SKotor Technology
- Li-ion Technology



SharpX provides users to observe battery level without removing the power box.

### Sagittal Saw System

High-Low speed options Weight: 1290g (Including Power Box)

**Hexa - Function System**Six Different Trigger Functions
Weight: 1440g (Including Power Box)







Reciprocating Saw System High-Low speed options

Weight: 1250g (Including Power Box)

Sternum Saw System High-Low speed options

Weight: 1430g (Including Power Box)





### **Battery Charging Units**



charged or fully charged.



Power box oled screen enables users to indicate battery capacity by pressing the test button.



Battery, motor and all electronical components are combined together and exempt from sterilization by aim of increasing life time of the device



battery process cycles like how many times,

minutes, seconds the battery is charged, half

#### S-210

#### Power box

- Swiss made powerful DC motor technology
- Battery capacity: 2.5 Ah
- Voltage: 14.8 Volts
- Integrated oled screen audible alert motification
- Not autoclaveable
- 75 x 61 x 160 mm / 465 g



Autoclaveable sterile funnel for aseptic battery loading

- Steam sterilisable
- 30 x 74 x 104 mm / 55 g



Sterile funnel





#### S-226

Charger unit for 1 battery

- Main voltage 100-240 Volts, 50-60 Hz
- Charging current 2 A
- Charging voltage 16.8 Volts
- Protections: Short circuit / Overload / Over voltage
- · Charging indicator led
- Battery not included
- 130 x 250 x 130 mm / 900 g



#### S-227

Charger unit for 2 batteries

- Main voltage 100-240 Volts, 50-60 Hz
- Charging current 2 A (x2)
- Charging voltage 16.8 Volts
- Protections: Short circuit / Overload / Over voltage
- Charging indicator led
- Battery not included
- 230 x 250 x 130 mm / 2000 g



#### S-229

Charger unit for 4 batteries

- Main voltage 100-240 Volts, 50-60 Hz
- Charging current 2 A (x4)
- Charging voltage 16.8 Volts
- Protections: Short circuit / Overload / Over voltage
- · Charging indicator led
- Battery not included
- 430 x 250 x 130 mm / 3500 g



### **Drill-Reamer Handpiece**







#### S-200

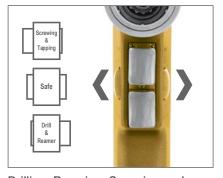
Hexa - Function System

Dual trigger system for speed control and direction control Steam sterilisable Cannulated Ø 4 mm 77 x 140 x 210 mm / 785 g

- Drill SKode F&R (1200 rpm)
- Drill Oscillation SKode (1200 cpm)
- Screwing SKode F&R (50 rpm)
- Tapping SKode (50 rpm)
- Reamer SKode F&R (300 rpm)
- Reamer Oscillation SKode (300 cpm)



Screwing and tapping options enable smooth control with one-handpiece solution.



Drilling, Reaming, Screwing and Tapping options in one-handpiece



Forward, reverse and oscillation mode options provide versatile alternatives to the users.



### **Drill Attachments**



#### S-308

Drill attachment with keyed chuck Ø4 mm Cannulated Ø 1.0 mm - 4.0 mm 1200 rpm / 5 Nm 29 x 70 mm / 140 g





#### S-309

Drill attachment with keyed chuck Ø4 mm Cannulated Ø 1.0 mm - 6.35 mm 1200 rpm / 5 Nm 29 x 87 mm / 205 g





#### S-311

Drill attachment with hybrid chuck Both keyed and keyless operation Ø4 mm Cannulated Ø 0.3 mm - 3 mm 1200 rpm / 5 Nm 29 x 87 mm / 225 g

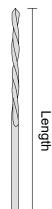




### S-310

Drill attachment with hybrid chuck Both keyed and keyless operation Ø4 mm Cannulated Ø 1.0 mm - 7.4 mm 1200 rpm / 5 Nm 34 x 100 mm / 320 g





Code	(Ø) Diameter mm	Length mm
S7-500	1.5	60
S7-501	2.0	100
S7-502	2.5	100
<b>\$7-503</b>	2.7	100
S7-504	3.0	100
S7-505	3.2	100
S7-506	3.5	100
S7-507	4.0	110
S7-508	4.5	130
S7-509	5.0	160
<b>\$7-510</b>	6.0	160



### **Shank Drill Bit Attachments**





S-360 Attachment for SQUARE shank 1200 rpm / 5 Nm 29 x 75 mm / 115 g

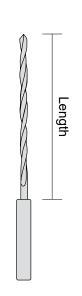


**S-361**Attachment for AO shank
1200 rpm / 5 Nm
29 x 73 mm / 125 g



S-362 Attachment for TRINKE shank 1200 rpm / 5 Nm 29 x 70 mm / 130 g

### **Drills**



		SQUARE	AO	TRINKE
L Length mm	Ø Diameter mm			
38	1.5	\$7-520	<b>\$7-540</b>	<b>S7-560</b>
45	2.0	S7-521	S7-541	S7-561
53	2.5	\$7-522	<b>\$7-542</b>	<b>S7-562</b>
57	2.7	\$7-523	<b>\$7-543</b>	<b>S7-563</b>
57	3.0	<b>\$7-524</b>	<b>S7-544</b>	<b>S7-564</b>
57	3.2	<b>S7-525</b>	<b>S7-545</b>	<b>S7-565</b>
65	3.5	<b>\$7-526</b>	S7-546	S7-566
70	4.0	<b>S7-527</b>	S7-547	<b>S7-567</b>
70	4.5	<b>S7-528</b>	S7-548	S7-568
95	5.0	S7-529	S7-549	S7-569
120	6.0	S7-530	S7-550	S7-570







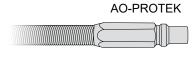
#### S-375

Attachment for OSTEO shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 78 mm / 160 g



#### S-376

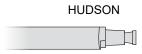
Attachment for DHS shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 100 mm / 170 g





#### S-377

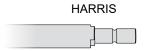
Attachment for AO-PROTEK shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 82 mm / 210 g





#### S-378

Attachment for HUDSON shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 68 mm / 145 g





### S206-379

Attachment for HARRIS shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 102 mm / 145 g





#### S-380

Attachment for ZISKSKER-HUDSON shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 115 mm / 155 g







#### S-381

Attachment for ZISKSKER shank Ø4 mm Cannulated 300 rpm / 22 Nm 29 x 115 mm / 155 g



### **Reamer Attachment**





S-330
Reamer attachment for wire and pin
Cannulated Ø 4 mm
300 rpm / 22 Nm
29 x 80 mm / 185 g



## **\$7-905**Adaptor for AO-Protek shank Cannulated Ø 4 mm

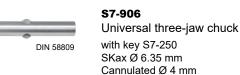


## **\$7-908**Adaptor for Hudson Cannulated Ø 4 mm



DRILL

**\$7-907**Adaptor for Harris
Cannulated Ø 4 mm









	Intram flexible, v	edullary reamers, with drilling heads		Guides,	blunt		Guides, w	ith drill tip
	Ø mm	Length 430 mm	Ø mm	Length 600 mm	Length 990 mm	Ø mm	Length 600 mm	Length 990 mm
	5.5	<b>S7-920</b>						
	6.0	S7-921						
	6.5	<b>\$7-922</b>	1.9	<b>S7-960</b>	S7-961	1.9	<b>S7-962</b>	
	7.0	<b>S7-923</b>						
	7.5	<b>S7-924</b>						
	8.0	<b>\$7-925</b>						
	8.5	S7-926						
	9.0	S7-927						
	9.5	S7-928						
	10.0	<b>S7-929</b>						
	10.5	<b>S7-930</b>						
	11.0	S7-931						
	11.5	<b>\$7-932</b>						
	12.0	<b>S7-933</b>	3.4	<b>S7-963</b>	S7-964	3.4		<b>S7-965</b>
	12.5	S7-934						
	13.0	S7-935						
	13.5	S7-936						
	14.0	\$7-937						
	14.5	S7-938						
	15.0	\$7-939 \$7.040						
	15.5	\$7-940 \$7.944						
	16.0 16.5	\$7-941 \$7-942						
	17.0	S7-942						
	17.0	S7-943						
<b>A</b>	18.0	57-94 <del>4</del> S7-945						
DIN 50000	18.5	S7-945						
DIN 58809	19.0	\$7-940 \$7-947						



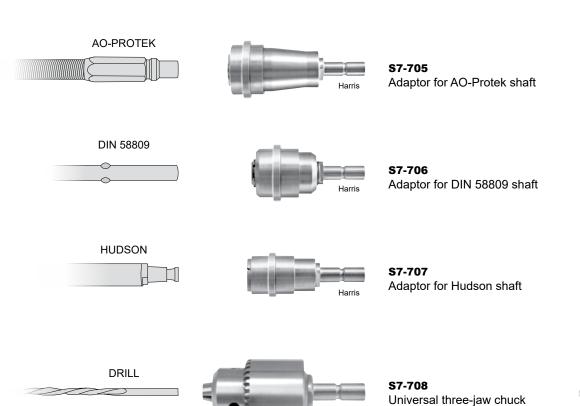
### **Acetabular Reamer Attachment**





S-320 Acetabular reamer attachment 150 rpm / 35 Nm 29 x 80 mm / 175 g

with key S7-250







**\$7-709**Shaft only,
With Harris Connection for \$7-750, \$7-757



**\$7-789**SKovable protector case,
Fits with all reamer shafts

Only Acetabular Reamer



S7-750	Ø 46 mm
S7-751	Ø 48 mm
<b>S7-752</b>	Ø 50 mm
<b>S7-753</b>	Ø 52 mm
S7-754	Ø 56 mm
<b>S7-755</b>	Ø 60 mm
S7-756	Ø 64 mm
<b>\$7-757</b>	Ø 68 mm





### Quick - action chuck (K-wire Driver)







#### S-352

Quick - action chuck (K-wire Driver) Cannulated Ø 0.7 mm - 2.5 mm 1200 rpm / 5 Nm 29 X 77 mm / 300 g

### S-353

Quick - action chuck (K-wire Driver) Cannulated Ø 1.5 mm - 4.0 mm 1200 rpm / 5 Nm 29 X 77 mm / 300 g





### **Reciprocating Saw System**

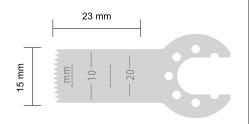






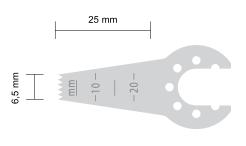
### Sagittal Saw System





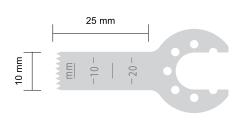
### \$103-1110

SKaterial Thickness: 0.4 mm Cutting Thickness: 0.6 mm



### S103-1111

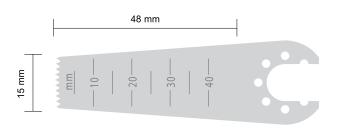
SKaterial Thickness: 0.4 mm Cutting Thickness: 0.6 mm



### S103-1112

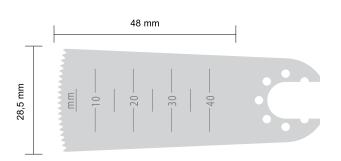
SKaterial Thickness: 0.4 mm Cutting Thickness: 0.6 mm





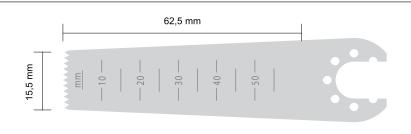
#### S103-1113

SKaterial Thickness: 0.4 mm Cutting Thickness: 0.6 mm



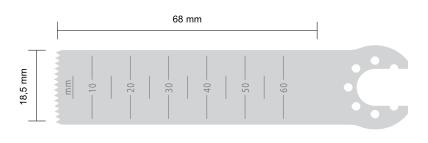
### S103-1114

SKaterial Thickness: 0.4 mm Cutting Thickness: 0.6 mm



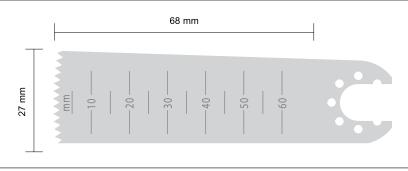
### S103-1115

SKaterial Thickness: 0.6 mm Cutting Thickness: 0.8 mm



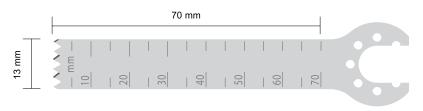
### S103-1116

SKaterial Thickness: 0.6 mm Cutting Thickness: 0.8 mm



#### S103-1117

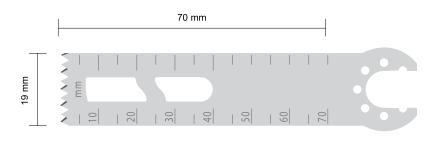
SKaterial Thickness: 0.6 mm Cutting Thickness: 0.8 mm



### S103-1118

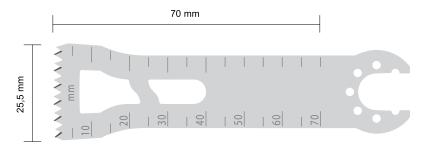
SKaterial Thickness: 1.19 mm





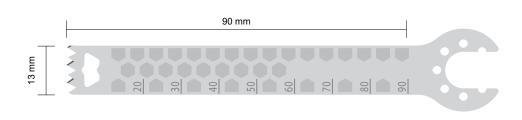
#### S103-1119

SKaterial Thickness: 1 mm



#### S103-1120

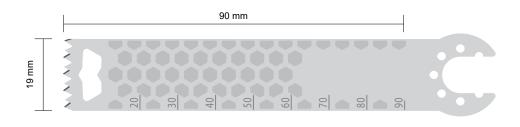
SKaterial Thickness: 1 mm



**SKaterial** Thickness

1.37 mm

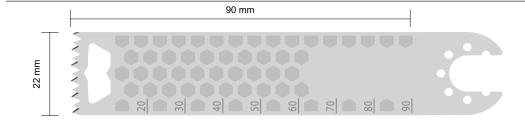
S103-1121 1 mm S103-1122 1.19 mm S103-1123 1.27 mm S103-1124



SKaterial

Thickness

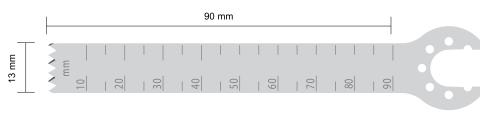
S103-1125 1.19 mm S103-1126 1.27 mm S103-1127 1.37 mm



SKaterial Thickness

1 mm

S103-1128 S103-1129 1.19 mm S103-1130 1.27 mm S103-1131 1.37 mm S103-1132 1.47 mm

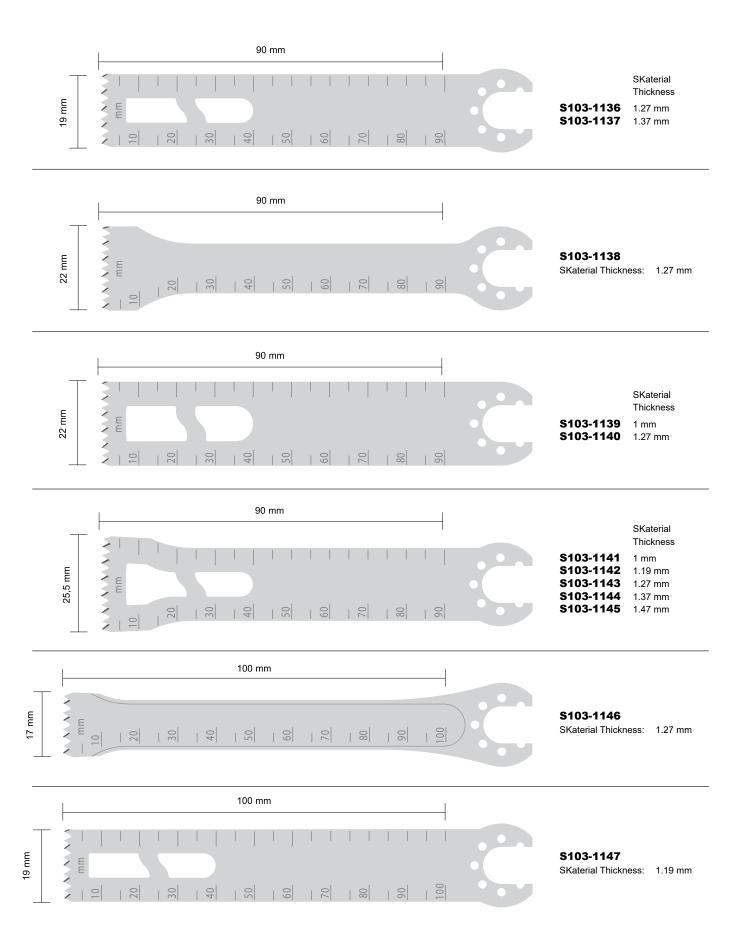


**SKaterial** 

Thickness

S103-1133 1 mm S103-1134 1.19 mm S103-1135 1.27 mm







### **Sternum Saw System**





#### S-240

Sternum saw system (Without saw blades, guide and power box)

- High-Low speed options
- Steam sterilisable
- 11.000 x 14.000 cpm / <> 4 mm
- 77 x 180 x 210 mm / 930 g



**\$103-715** Adult saw guide

Adult saw blade	Code	Length	Usable Length	Blade Thickness	Cutting Thickness
	S103-709	58 mm	35 mm	0,6 mm	1 mm
	S103-710	58 mm	35 mm	0,8 mm	1,2 mm



**\$103-716** Pediatric saw guide

Pediatric saw blade	Code	Length	Usable Length	Blade Thickness	Cutting Thickness
	S103-711	40 mm	18 mm	0.6 mm	0.6 mm
	S103-712	40 mm	18 mm	0.6 mm	0,8 mm





# Re-Operation Oscillating Saw System

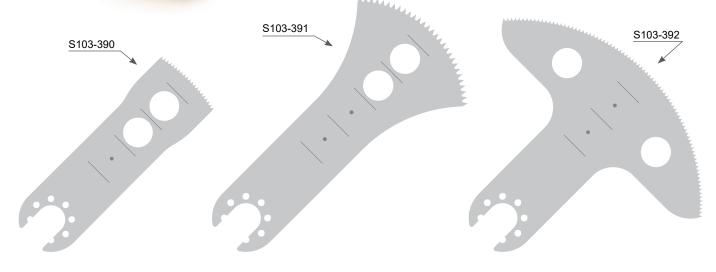




### S-300

Oscillating saw system (Without saw blades and power box)

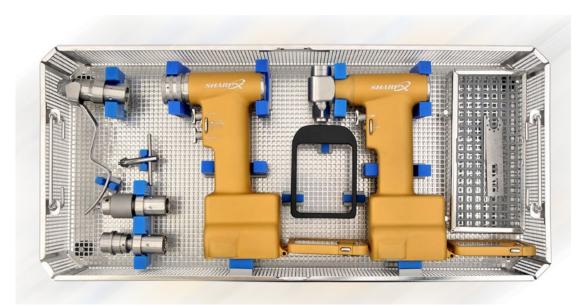
- High-Low speed options
- Steam sterilisable
- 10.000 x 12.000 cpm / \( 4^\circ 50'\)
- 77 x 180 x 210 mm / 850 g



Code	Length	Width	Thickness
S103-390	35 mm	25 mm	0.8 mm
\$103-391	50 mm	40 mm	0.8 mm
S103-392	35 mm	75 mm	0.8 mm



### **Orthopedic Set**



S-1001	Orthopedic Set
Set Content	
S-200	Sharpx Drill-Reamer Handpiece
S-210	Power box (2 pcs)
S-212	Autoclaveable sterile funnel for aseptic battery loading
S-227	Charger unit for 2 battery
S-309	Drill attachment with keyed chuck
S7-502	Drill bit
S7-504	Drill bit
S7-250	Chuck key for S-309
S-300	Sharpx Sagittal saw Handpiece
S103-1117	Sagittal saw blade
S103-1146	Sagittal saw blade
S-320	Acetabular reamer attachment
S-330	Reamer attachment for wire and pin
S-352	Quick - action chuck (K-wire Driver)
S8-510	Sprey oil
S3-2723	Basket with silicone fixations 540 x 253 x 113 mm



**S-210** Power box (2 pcs)



**S-227** Charger unit for 2 batteries



#### S8-510







S-1005	Drill Set
Set Content	
S-200	Sharpx Drill-Reamer Handpiece
S-210	Power box
S-212	Autoclaveable sterile funnel for aseptic battery loading
S-226	Charger unit for 1 battery
S-309	Drill attachment with keyed chuck
S7-502	Drill bit
S7-504	Drill bit
S7-250	Chuck key for S-309
S8-510	Sprey oil
S3-2731	Basket with silicone fixations 405 x 253 x 113 mm



**S-210** Power box



**S-226**Charger unit for 1 battery



#### S8-510







S-1007	Sagittal	Saw Set	

Set Content	
S-300	Sharpx Sagittal saw Handpiece
S-210	Power box
S-212	Autoclaveable sterile funnel for aseptic battery loading
S-226	Charger unit for 1 battery
S103-1117	Sagittal saw blade
S103-1146	Sagittal saw blade
S8-510	Sprey oil
S3-2731-S2	Basket with silicone fixations 405 x 253 x 113 mm



**S-210** Power box



**S-226** Charger unit for 1 battery



### S8-510







S-1013	Reciprocating Saw Set
Set Content	
S-235	Sharpx Reciprocating saw Handpiece
S-210	Power box
S-212	Autoclaveable sterile funnel for aseptic battery loading
S-226	Charger unit for 1 battery
S103-239	Reciprocating saw blade
S8-510	Sprey oil
S3-2731-S3	Basket with silicone fixations 405 x 253 x 113 mm



**S-210** Power box



**S-226** Charger unit for 1 battery



### S8-510







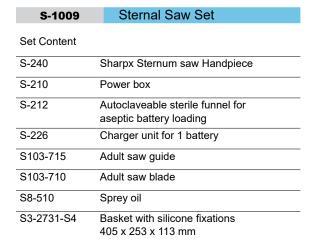
### Sternal Saw Set



**S-210** Power box



**S-226** Charger unit for 1 battery





### S8-510







Cardio Vascular Set



**S-210** Power box (2 pcs)



**S-227** Charger unit for 2 batteries

S-1011	Cardio Vascular Set
Set Content	
S-240	Sharpx Sternum saw Handpiece
S-210	Power box (2 pcs)
S-212	Autoclaveable sterile funnel for aseptic battery loading
S-227	Charger unit for 2 battery
S-300	Sharpx Re-Operation saw Handpiece
S103-715	Adult saw guide
S103-710	Adult saw blade
S103-392	Re-Operation saw blade
S8-510	Sprey oil
S3-2723-S2	Basket with silicone fixations 540 x 253 x 113 mm



### S8-510



sharpline.de







### **EC** Certificate

## Full Quality Assurance System according to Medical Devices Directive 93/42/EEC Annex-II Section 3

Certificate Number: 1984-MDD-11-102

We hereby declare that an examination of the under mentioned full quality assurance system has been carried out following the requirements of the national legislation to which the undersigned is subjected, transposing annex II (with the exemption of section 4) of the Directive 93/42/EEC on medical devices. We certify that the full quality assurance system conforms with the relevant provisions of the aforementioned directive.

Organization:

### SHARPLINE MEDIKAL IC VE DIS TICARET LIMITED SIRKETI

Hancerli Mah. Derviszade Sk. No: 6/4 Ilkadim SAMSUN-TURKEY

**Product:** Electrical and battery operated surgical motor system

Model Name: Sharp X

**Product:** High speed surgical motor system

Model Name: HSM, HSM Micro

**Product:** Electrical and pneumatical surgical motor systems

Model Name: Electrical Control Unit (M6-034), Pneumatic Surgical Motor

The certificate is valid till expiration date, subject to successful completion of periodical surveillance audits. Please contact Kiwa Certification Services for details.

Report Number: M.3608.09

Date of first issue: 05 July 2011

Date of last issue: 28 May 2019

Revision Number: 07

Expiry Date: 27 May 2024

Kiwa Certification Services Inc. is Notified Body under Council Directive 93/42/EEC

concerning medical devices with identification number: 1984

28 May 2019, Istanbul, Turkey

Head of Notified Body

Kiwa Certification Services Inc. ITOSB 9. Cad. No:15 Tepeören, Tuzla, Istanbul, Turkey

Tel.: +90 216 593 25 75 , Fax: +90 216 593 25 74 Web: www.kiwa.com.tr , e-mail: posta@kiwa.com.tr



### EC DECLARATION OF CONFORMITY

Full quality assurance procedure

No:TD05-02-009 / 20190206-002 Samsun 02.2019

Manufacturer: Sharpline Medical Ic ve Dis Ticaret Ltd. Hancerli Mah. Derviszade Sk. No:6/4 Manufacturer's Adress:

55020 Ilkadim, SAMSUN, TURKEY

Surgical Motor Systems Electrical and Battery Operated Medical Device Product Name:

Model Name: Sharp X

Classification: Enclosure IX rule 2 and rule 9, class IIA

**Notified Body** 

Name: Kiwa Certification Services Inc.

Adress: ITOSB 9. Cadde No:15 Tepeören Tuzla, İstanbul, TÜRKİYE

No: 1984

GMDN Code and Term: [58187] Surgical Drill System multifunctional rechargeable battery/electrical

[58188] Surgical Saw System rechargeable battery/electrical

We declare under our sole responsibility, that the medical device of class IIa, to which this declaration relates are in conformity with the provisions of the Council Directive 93/42/EEC (2007/47/EC). Each kind of medical device to which the Full Quality Assurance Procedures have been applied complies with the applicable provisions of the essential principles, the classification rules, at each stage, from the design of the device until its final inspection before being supplied. The medical devices are in conformity with the essential requirements of Annex I of the EEC directive. The conformity assessment procedure was performed according to Annex II (class IIa)of the EEC directive.

Standards and Directives Applied: 93/42/EC EN 60601-1:2006 EN 60601-1-2:2015

> EN 60601-1-6:2010/ EN ISO 15223-1:2016 EN ISO 14971:2012

EN 62366-1:2015 EN 1041:2008

Notes: These standards do not necessarily apply to all parts of the product Sharp X and its accessories.

Authorides Signatory:

Murat BAHADIR , Founder - CEO

Date: 29.02.2019

DD-01R(01) 06.06.2016











### SHARPLINE MEDİKAL İÇ VE DIŞ TİCARET LTD. ŞTİ.

HANÇERLİ MAH. DERVİŞZADE SOK. NO: 6/4 İLKADIM - SAMSUN - TURKEY

with a scope of

DESIGN, DEVELOPMENT, MANUFACTURING AND DISTRIBUTION OF ELECTRICAL, PNEUMATIC AND BATTERY OPERATED SURGICAL MOTOR SYSTEMS, SURGICAL ILLUMINATION SYSTEMS AND STERILISATION CONTAINERS

Medical devices - Quality management systems - Requirements for regulatory purposes

"Following elements of the standard are excluded"
"7.5.5" "7.5.7" "7.5.9.2"

EN ISO 13485:2016

Certificate No

: M 8693

**Initial Certification Date** 

: 05 July 2011

Certification Date

: 01 June 2020

**Expiration Date** 

: 31 May 2023

General Manager

Kiwa Certification Services Inc.

ITOSB 9. Cadde No. 15 Tepeören Tuzla - Istanbul - Turkey

Tel: +90 216 593 25 75 Faks: +90 216 593 25 74

Web: www.kiwa.com.tr E-mail: info@kiwa.com.tr

Certificate is valid till expiration date, subject to successful completion of periodical surveillance audits.

Please contact above numbers for detailed information.

Last Modified: 01 June 2020 - R 05