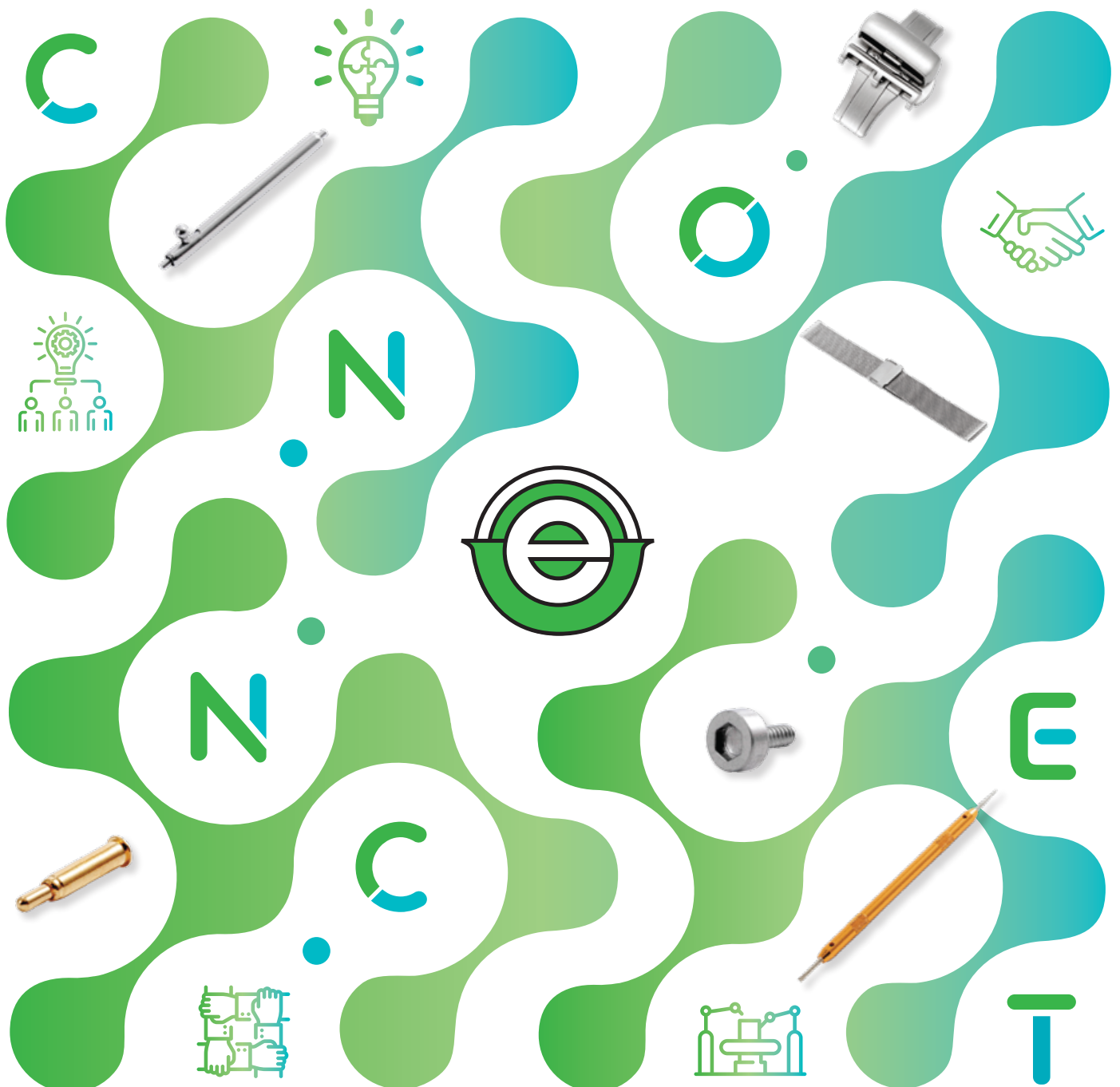
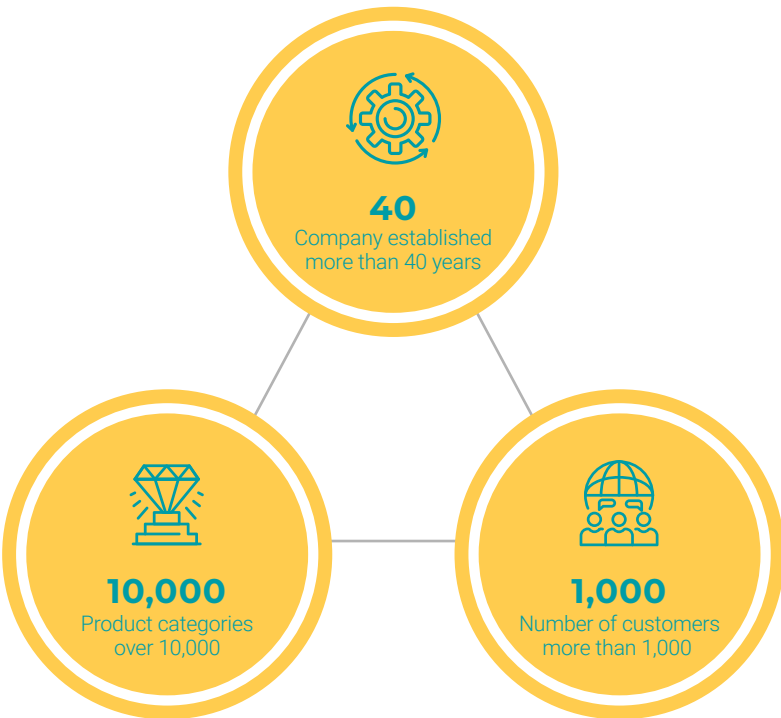


CONNECT • COMMIT • COLLABORATE



With over 40 years of experience in watch industry, Union Energy is a manufacturer specializing in making and selling high-quality precision metal parts. While environmental protection and product safety is highly regarded, all stainless steel spring bars produced by Union Energy comply with EU standards and meet respective environmental requirements in different countries or regions. Union Energy has become a renowned and reliable partner in the industry with its endeavour and experience.

联力屹立钟表界逾四十载，是一家专业生产及销售优质、精密金属配件的制造商。本着对环保及产品安全的重视，联力所有不锈钢表生耳均符合欧盟标准及满足不同国家或地区的环保要求。而凭借多年努力及经验，联力已成为业界中享负盛名的可靠合作伙伴。



Spring Bars & Watch Parts
表生耳及表配件

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Metal Parts & Pogo Pins
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Repair Tools
维修工具

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A MANUFACTURER SPECIALIZING
IN MAKING AND SELLING
HIGH-QUALITY PRECISION
METAL PARTS

专业生产及销售优质、精密
金属配件

Spring Bars & Watch Parts

表生耳及表配件

Spring bars and watch parts produced by Union Energy meet multiple needs in the market, which are applicable to both traditional watches and smart bracelets. Watch parts used in sport watches or hiking watches with compass could be made anti-magnetic. Catch of quick release spring bar is customizable. Straps could therefore be removed quickly and conveniently.

联力生产的表生耳及配件能迎合多元市场需要，可应用于传统手表及智能手环，部分应用于备有指南针的运动手表或登山手表配件可作不受磁处理。开关表生耳的把手更可度身订造，让表带能轻易拆卸，方便快捷。



SPRING BARS AND
WATCH PARTS MEET
MULTIPLE NEEDS

表生耳及配件能迎合
多元市场需要

A

Stainless Steel Spring Bars for Watch
不锈钢表生耳

(Unit 單位 / mm)



Double Flange 双介子双托生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	SDF-100S	1.00	8 ~ 11	0.70	0.55	0.70
			12 ~ 24	0.80		
	SDF-120S	1.20	10 ~ 11	0.70	0.60	0.90
			12 ~ 24	0.80		
	SDF-130S	1.30	8 ~ 11	0.70	0.70	1.00
			12 ~ 24	0.80		
	SDF-150S	1.50	6	0.50	0.80	1.20
			7 ~ 11	0.70		
			12 ~ 24	0.80		
	SDF-160S	1.60	6	0.50	0.80	1.30
			7 ~ 11	0.70		
			12 ~ 24	0.80		
	SDF-178S	1.80	6	0.50	0.80	1.50
			7 ~ 11	0.70		
			12 ~ 24	0.80		
	SDF-200S	2.00	8 ~ 11	0.70	0.80	1.70
			12 ~ 24	0.80		

Single Flange 单托生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	SSF-130S	1.30	7 ~ 11	0.70	0.70	1.00
			12 ~ 14	0.80		
			15 ~ 24	0.90		
	SSF-150S	1.50	7 ~ 11	0.70	0.80	1.20
			12 ~ 14	0.80		
			15 ~ 24	0.90		
	SSF-178S	1.80	7 ~ 11	0.70	0.80	1.50
			12 ~ 14	0.80		
			15 ~ 24	0.90		

Stair Double Flange (FS) 阶级形双托生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	SST-150S	1.50	8 ~ 11	0.80FS	0.80	1.30
			12 ~ 24	1.00FS		
	SST-178S	1.80	8 ~ 11	0.80FS	0.80	1.50
			12 ~ 24	1.00FS		
	SST-130S	1.30	10 ~ 13	0.80	0.70	1.00
			14 ~ 22	0.90		
	SST-150S	1.50	10 ~ 13	0.80	0.80	1.20
			14 ~ 22	0.90		
	SST-178S	1.80	10 ~ 13	0.80	0.80	1.50
			14 ~ 22	0.90		

Single Shoulder & Double Flange 单头及双介子生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Double Flange Tip Length 双介子钉頭長度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	STD-130S	1.30	8 ~ 10	0.70	0.70	0.70	1.00
			11 ~ 12	0.80	0.80		
			13 ~ 24	1.00	0.80		
	STD-150S	1.50	8 ~ 10	0.70	0.70	0.80	1.20
			11 ~ 12	0.80	0.80		
			13 ~ 24	1.00	0.80		
	STD-178S	1.80	8 ~ 10	0.70	0.70	0.80	1.50
			11 ~ 12	0.80	0.80		
			13 ~ 24	1.00	0.80		

Stair Double Flange with Notch 坑位阶级形双托生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	SSTT-150S	1.50	12 ~ 24	1.00	0.90	1.50
	SSTT-180S	1.80				1.80

Thick Double Flange 加厚形双介子生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	STDF-178S	1.80	10 ~ 16	0.70	0.80	1.80
			17 ~ 19	0.80		
			20 ~ 24	1.00		

Single Flange Short Tip 短咀龟壳单托生耳	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径
	SSB-120S	1.20	7 ~ 24	0.40	0.70	1.10
	SSB-130S	1.30			0.70	1.10
	SSB-150S	1.50			0.80	1.20
	SSB-160S	1.60			0.80	1.30
	SSB-178S	1.80			0.80	1.50

Double Shoulder 双肩生耳



Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径
SDS-130S	1.30	8 ~ 15	0.80	0.55
		16 ~ 24	1.00	
SDS-150S	1.50	8 ~ 15	0.80	0.80
		16 ~ 24	1.00	
SDS-178S	1.80	8 ~ 15	0.80	0.80
		16 ~ 24	1.00	

Double Shoulder Universal 通用双头生耳



Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径
SDSU-150S	1.50	8 ~ 10	0.60	0.80
		10 ~ 12, 11 ~ 14	0.80	
		12 ~ 15, 13 ~ 17		
		14 ~ 18, 15 ~ 19		
SDSU-178S	1.80	16 ~ 22, 17 ~ 23	1.00	
		18 ~ 24, 19 ~ 25		
		20 ~ 26, 21 ~ 27		

Single Shoulder 无托单头生耳



Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径
SSS-120S	1.20	8 ~ 24	1.00	0.65
SSS-130S	1.30			0.70
SSS-150S	1.50			0.80
SSS-160S	1.60			0.80
SSS-178S	1.80			0.80

Curved Double Flange 双介子双托弯生耳



Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径	Flange Diameter 介子直径	Radian (R) 弧度径
SDF-150C	1.50	12	0.80	0.80	1.20	S18
		14				S20
		16				S23
		18				S25
		20				S28
		22				S31
		24				S35
SDF-178C	1.80	12	0.80	0.80	1.50	S18
		14				S20
		16				S23
		18				S25
		20				S28
		22				S31
		24				S35

Ball Catch Short Tip 弹珠生耳



Model 产品型号	Diameter 直径	Compress Length 压缩长度	Tip Length 钉头长度	Tip Diameter 钉头直径
SHB-130S	1.30	2 ~ 7	0.80	0.35
SHB-150S	1.50		0.80	0.40
SHB-178S	1.80		1.00	0.50
SHB-200S	2.00		1.00	0.50

B 316 Quick Release Spring Bars 316 开关生耳

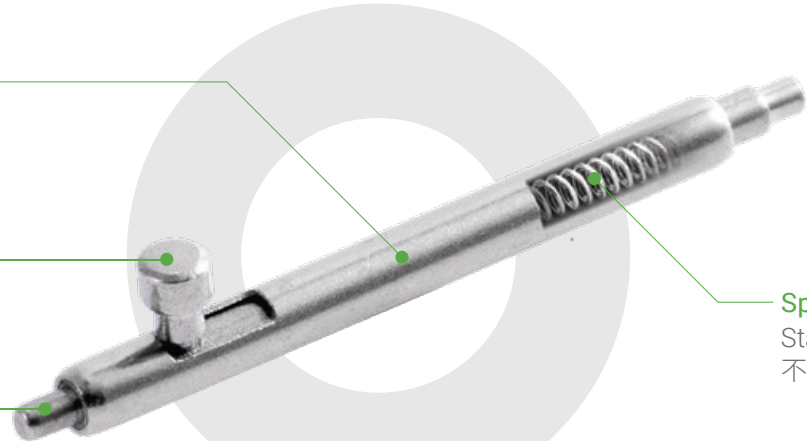
(Unit 單位 / mm)

Tube / 通身
Stainless Steel
不锈钢

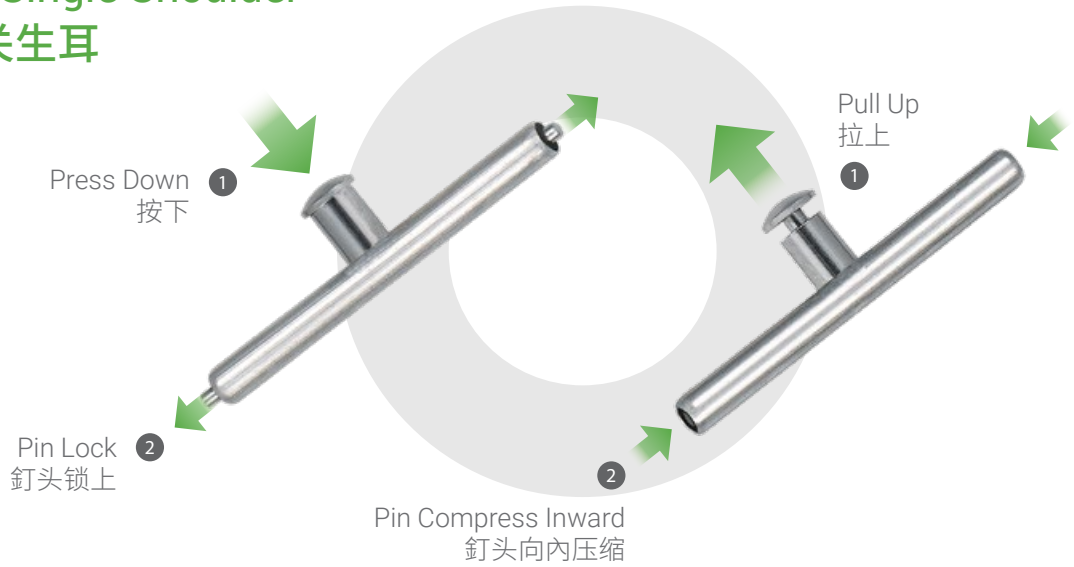
Catch / 把手
Stainless Steel
不锈钢

Tip / 针头
Stainless Steel
不锈钢

Spring / 弹弓
Stainless Steel
不锈钢



Press & Pull Single Shoulder 按拉单托开关生耳



国家产品专利号：
PATENTED I2018 20361890.2

Customized Quick Release Spring Bars 订制开关生耳



Ball Catch Single Shoulder 圆头把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SAS-150S	1.50	8 ~ 9 10 ~ 24	H2.00 / H3.00	0.80 1.10	0.80
	SAS-178S	1.80	8 ~ 9 10 ~ 24	H2.00 / H3.00	0.80 1.10	0.80

Screwed Ball Catch Single Shoulder 螺丝圆头把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SASS-150S	1.50	10 ~ 24	H2.20	1.10	0.80
	SASS-178S	1.80				

2 Ball Catch Single Shoulder 圆头双把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SA2S-150S	1.50	10 ~ 24	H2.00 / H3.00	1.10	0.80
	SA2S-178S	1.80				

Ball Catch Single Shoulder Curved 圆头把手无托弯开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径	Radian 弧度 (S)
	SAS-150C	1.50	10 ~ 24	H2.50	1.10	0.80	S25 ~ S30
	SAS-178C	1.80					

Flatten Catch Single Shoulder 平头把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SMS-150S	1.50	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80
	SMS-178S	1.80	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80

2 Flatten Catch Single Shoulder 平头双把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SM2S-150S	1.50	12 ~ 24	H1.50 / H2.00	1.10	0.80
	SM2S-178S	1.80		H1.50 / H2.00		

Flatten Catch Double Shoulder 平头把手双肩开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SMD-150S	1.50	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80
	SMD-178S	1.80	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80

Stair Flatten Catch Single Shoulder 双级平头把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SES-150S	1.50	8 ~ 9 10 ~ 24	H2.00 / H3.00	0.80 1.10	0.80
	SES-178S	1.80	8 ~ 9 10 ~ 24	H2.00 / H3.00	0.80 1.10	0.80

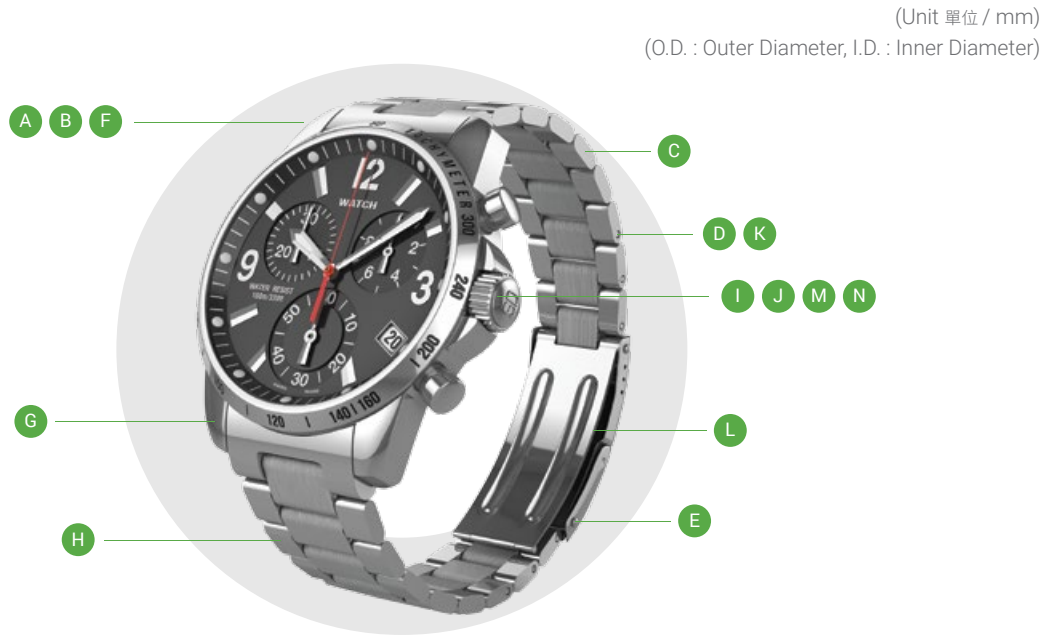
2 Stair Flatten Catch Single Shoulder 双级平头双把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SE2S-150S	1.50	12 ~ 24	H2.00 / H3.00	1.10	0.80
	SE2S-178S	1.80				

Stair Flatten Catch Double Shoulder 双级平头把手双肩开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SED-150S	1.50	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80
	SED-178S	1.80	8 ~ 9 10 ~ 24	H1.50 / H2.00	0.80 1.10	0.80

Funnel Catch Single Shoulder 漏斗把手无托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度	Tip Diameter 钉头直径
	SBS-150S	1.50	8 ~ 9 10 ~ 24	H2.00	0.80 1.10	0.80
	SBS-178S	1.80	8 ~ 9 10 ~ 24	H2.00	0.80 1.10	0.80

Press & Pull Single Shoulder 按拉单托开关生耳 	Model 产品型号	Diameter 直径	Compress Length 压缩长度	Catch Height 把头钉高度	Tip Length 钉头长度
	SPPS-200S	2.00	16 ~ 22	H5.1	1.10

Watch Parts
手表配件



C	SS Straight Pin / Stamped Pin / Knurled Pin 不锈钢直支 (SP-A) / 压头钢支 (SP-B) / 搓花 (SP-E)			
	Model 产品型号	O.D. Ø 外径	Length 尺寸	
	SP-A			
	SP-E	0.8 ~ 1.8	10 ~ 30	
	SP-B			

D	Open-End Pin 发夹			
	Model 产品型号	O.D. Ø 外径	Length 尺寸	
	SOP-A	0.8 ~ 1.1	5 ~ 25	

E	Stainless Steel Tube-with-Pin 不锈钢通连钉			
	Model 产品型号	Rivet Ø 钉头直径	Bar Ø 通身外径	Length 尺寸
	STP-A	1.5 ~ 2.0	1.0 ~ 1.3	10 ~ 30

F	Stainless Steel Screw T-bar 不锈钢螺丝生耳杆			
	Model 产品型号	Rivet Ø 钉头直径	Bar Ø 通身外径	Length 尺寸
	STBS-B	3.0	1.3	10 ~ 30

G	Stainless Steel Tube / C-Ring Open Tube (304/316L) 净钢通 / C环开口通 / 斜口通 (304/316L)	
		

H	Stainless Steel Union Pin 不锈钢子母通				
	Model 产品型号	O.D. Tube Ø套管外径	Tube Length 套管长度	O.D. Pin Ø芯棒外径	Pin Length 芯棒长度
	CPA	1.2	2 ~ 6	0.9	10 ~ 30
		1.3		1.0	
		1.5		1.2	
		2.2		1.8	

I	Stem Connector 驳霸		
	Model 产品型号	I.D. 内径	O.D. 外径
	SC0909	0.9	0.9

J	Duplex Stair Watch Crown Tube 二级霸管		
	Model 产品型号	I.D. 内径	Length 尺寸
	SCTB-1	1.3 ~ 1.8	2.5 ~ 4.0

K	Stainless Steel Screw-link Screw 不锈钢拆生螺丝			
	Model 产品型号	Head O.D. Ø 平头外径	Thread 牙径 (M)	Length 尺寸
	LSK-1	1.0 ~ 1.6	1.0 1.2	10 ~ 20

L	Stainless Steel Mushroom Pin 不锈钢冬菇钉		
	Model 产品型号	Head O.D. Ø 平头外径	Length 尺寸
	CLP-A	2.4 ~ 2.6	4.5 ~ 5.5

M	Stainless Steel Flat Head Screw (SK-6) / Round Head Screw (SK-2) / Hexagon Screw 不锈钢平头一字螺丝 (SK-6) / 圆头螺丝 (SK-2) / 内六角螺丝				
	Model 产品型号	Head O.D. Ø 平头外径	Head Length 平头长度	Thread 牙径 (M)	Length 尺寸
	SK-6	1.2 ~ 3.0	0.5 ~ 20	1.0	1.5 ~ 3.0
	SK-2			1.2	
				1.4	

N

Stainless Steel Spring (304J)
不锈钢弹弓 (304J)



公差 ±0.05

Model 产品型号	Wire Diamater Ø 线径	O.D. Ø 圈外径	Length 长度	No. of Coils 圈数
30#	0.315	1.0 ~ 2.5	4 ~ 30	5 ~ 30
32#	0.274			
33#	0.254			
34#	0.234			
35#	0.213			
36#	0.193			

Packing 包装

(Unit 單位 / mm)

Polybag 胶袋



1000 pcs



100 pcs

Plastic Box 胶盒



10 pcs Bottle Paper Box 10个樽仔纸盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB01	1.30	7 ~ 26	100	1000	13.5 x 5.6 x 4
	1.50		100	1000	
	1.78		50	500	



10 pcs Small Box 10个细胶盒盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB10	1.30	7 ~ 38	100	1000	10 x 13 x 2.8
	1.50				
	1.78				



20 pcs Bottle Plastic Box 20个樽仔盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB20A	1.30	8 ~ 24	20	400	18 x 9.4 x 2
	1.50				
	1.78				



Assortment of 18 Types of Watch Spring Bar Plastic Box 18种钢生耳盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB18	1.30	8 ~ 24	20	360	10.7 x 6.4 x 1.8
	1.50				
	1.78				

Assortment of 18 Type of 316 Watch Spring Bar Plastic Box 18种不锈钢316生耳盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB18-SS316	1.78 2.00	13, 17, 19, 20	4	72	10.7 x 6.4 x 1.8

Assortment of 18 Types of Screws Plastic Box 18种螺丝盒装

Model 产品型号	Thread 牙径 (M)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB18-SK6	M1.0 / 1.2 / 1.4	1.5 ~ 4	20	360	10.7 x 6.4 x 1.8

Assortment of 18 Types of Watch Spring Bar Blue Box 18种钢生耳蓝色盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
PB18A	1.30	7 ~ 24	50	900	19.5 x 9.5 x 2.2
	1.50				
	1.78				

Assortment of 30 Types of Spring Bar Cardboard Box 30種钢生耳盒装

Model 产品型号	Diameter 直径 (Ø)	Length 尺寸	Quantity (pcs) 数量 (支)	Quantity / Box (pcs) 每盒数量 (支)	Box Size (cm) 盒尺寸 (L x W x H)
CB01-SDF	1.30	8 ~ 24	50	1500	13.5 x 30 x 2.5
	1.50				
	1.78				



CUSTOMIZED METAL
PARTS ARE WIDELY USED
INSIDE THE COMPLEX
CONNECTION PARTS OF
ELECTRONICS

度身订造的金属配件
广泛应用于电子产品
中的精密连接组件

Metal Parts & Pogo Pins 金属配件及弹簧针

Union Energy offers one-stop service to clients with its well-experienced team of research & development specialists and high-quality production equipments. Customized metal parts are widely used inside the complex connection parts of electronics in various industries such as communications, automotive, medical, aviation, and so on. The parts are used inside devices including smart watches, wireless earphones, cameras and portable walkie-talkies, etc. This technology is beneficial in numerous areas of everyday life.

联力凭借资深产品研发团队及优质生产设备为客户提供一站式服务，度身订造的各类金属配件可广泛应用于通讯、汽车、医疗、航空业等电子产品中的精密连接组件，包括智能手表、无线耳机、相机、手提式对讲机等，惠及日常生活中多个不同范畴。



Precision Metal Parts 微型精密零件



Materials 材料使用



Stainless Steel,
Aluminum, Brass, Bronze,
Titanium, etc
不锈钢、铝、黄铜、
青铜、钛等

Machining Processes 机械加工



CNC Machining, Turning,
Grinding, Drilling, Laser Cutting,
Laser Soldering, etc
CNC加工、车削、磨削、钻孔、
激光切割、激光焊接等

Quality Control 质量控制



Element Analyzer, 2D Projector,
Microscope, Optical Image
Auto-screening Machine,
Hardness Measuring Tester
& Other Measure Instruments
元素分析仪、二维投影仪、显微镜、
光学影像自动筛选机、硬度计等
测量仪器

Machining Ability for Tolerance of Precision Metal Parts
精密金属零件公差加工能力

$\geq 0.005 \text{ mm}$

Micro Precision Parts 微型精密零件



CNC Lathes Machining Parts 数控车床机械件



Pogo Pins 弹簧针

(Unit 单位 / mm)

Plunger / 针头
Brass, Gold-plated
黄铜, 镀金



Spring / 弹弓
Stainless Steel
不锈钢

Barrel / 管身
Brass, Gold-plated
黄铜, 镀金

SMT 平底式



Diameter 直径 : 1.0
Free Height 自由高度 : 3.6
Working Travel 工作行程 : 0.8



Diameter 直径 : 1.0
Free Height 自由高度 : 8.5
Working Travel 工作行程 : 1.5



Diameter 直径 : 1.0
Free Height 自由高度 : 25.0
Working Travel 工作行程 : 2.0

Double-End 双头式



Diameter 直径 : 0.9
Free Height 自由高度 : 8.3
Working Travel 工作行程 : 1.0



Diameter 直径 : 0.3
Free Height 自由高度 : 6.0
Working Travel 工作行程 : 0.5



Diameter 直径 : 0.3
Free Height 自由高度 : 5.0
Working Travel 工作行程 : 0.5

Housing Connector 外壳连接器



Diameter 直径 : 0.9
Free Height 自由高度 : 9.4
Working Travel 工作行程 : 1.0



Diameter 直径 : 0.9
Free Height 自由高度 : 7.5
Working Travel 工作行程 : 1.5



Diameter 直径 : 1.4
Free Height 自由高度 : 21.0
Working Travel 工作行程 : 4.0

DIP 插板式



Diameter 直径 : 1.3
Free Height 自由高度 : 10.0
Working Travel 工作行程 : 1.5



Diameter 直径 : 1.6
Free Height 自由高度 : 8.0
Working Travel 工作行程 : 1.0



Diameter 直径 : 1.6
Free Height 自由高度 : 9.0
Working Travel 工作行程 : 1.5



Diameter 直径 : 1.3
Free Height 自由高度 : 7.6
Working Travel 工作行程 : 1.5



Diameter 直径 : 0.9
Free Height 自由高度 : 5.6
Working Travel 工作行程 : 1.0



Diameter 直径 : 1.05
Free Height 自由高度 : 10.3
Working Travel 工作行程 : 1.5



Diameter 直径 : 1.4
Free Height 自由高度 : 10.0
Working Travel 工作行程 : 2.0



Diameter 直径 : 1.3
Free Height 自由高度 : 17.2
Working Travel 工作行程 : 2.0



Diameter 直径 : 1.2
Free Height 自由高度 : 13.0
Working Travel 工作行程 : 2.0



Diameter 直径 : 2.0
Free Height 自由高度 : 9.5
Working Travel 工作行程 : 1.0



Diameter 直径 : 4.0
Free Height 自由高度 : 20.0
Working Travel 工作行程 : 3.0



Diameter 直径 : 4.0
Free Height 自由高度 : 15.0
Working Travel 工作行程 : 3.0

Customized Pogo Pins 订制弹簧针



Contact Probes 探针

(Unit 单位 / mm)

Plunger / 针头
Beryllium Copper,
Gold-plated
铍铜, 镀金

Spring / 弹弓
Stainless Steel
不锈钢

Barrel / 管身
Brass, Gold-plated
黄铜, 镀金

A Variety of Plunger Styles for Each Application
不同针头的使用方法

**Leads
焊点**



- A
Concave
杯型头



- H
Serrated
九爪头



- B
Spear Point
针尖头



- U
4-Point Crown
四爪皇冠头



- D
Spherical Radius
圆头



- J
Spherical Radius
圆头

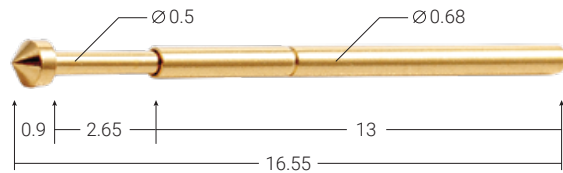


- E
Convex
伞型头

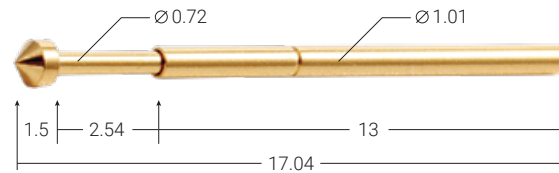


- K
Chisel
三面锥型头

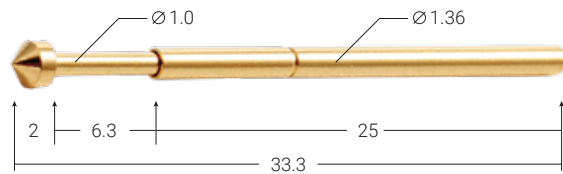
P50



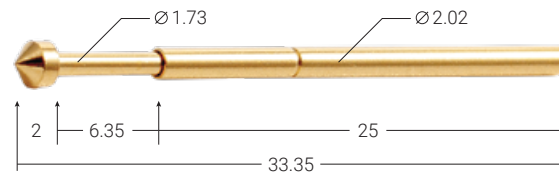
P75



P100



P125



Series 系列	Test Center 中心距值 (mm)	Max. Travel 最大行程 (mm)	Spring Force at Working Travel 工作行程弹力 (g)	Rated Current 额定电流值 (A)	Resistance 电阻值 (mOhm)	Operating Temperature Range (°C) 操作温度	Packing (pcs/polybag) 包装 (支/塑料袋)
P50	1.27	2.65	80	3	50	-45~140	100
P75	1.90	2.54	128	3	50	-45~140	100
P100	2.54	6.30	150 / 250	3	50	-45~140	100
P125	3.17	6.35	110 / 200 / 250	5	50	-45~140	100

Receptacle / 接触套管
Brass, Gold-plated
黄铜, 镀金



CR
No Termination
焊线针套

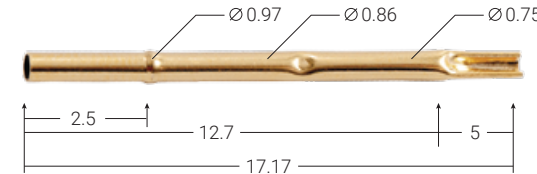


SC
With Solder Cup
焊线针套

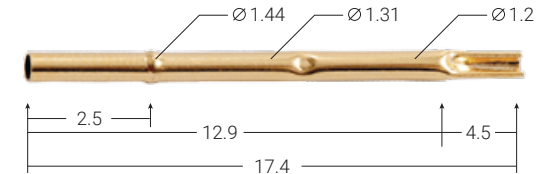


WW
With Wire Wrap
绕线针套

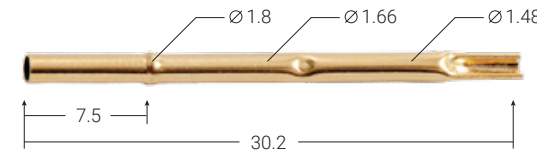
R50



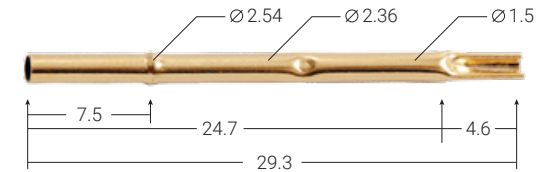
R75



R100



R125



Customized Contact Probes
订制探针



Watch Bands & Buckles 表带及表扣



PROVIDES A VARIETY
OF WATCH BANDS MADE
OF STAINLESS STEEL,
SILICONE, NYLON, ETC
提供不锈钢、硅胶及
尼龙等多种不同物料
的表带

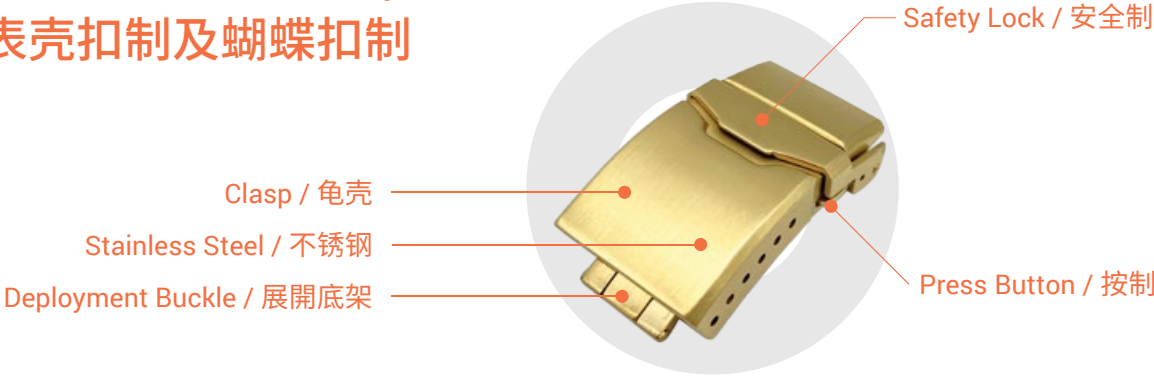


In recent years, Union Energy provides a variety of straps made of materials including stainless steel, silicone and nylon, etc. They are suitable for different occasions like sport, business and leisure. The buckles are also excellent in all aspects which are tough, highly durable, fashionable and appealing.

近年，联力提供不锈钢、硅胶及尼龙等多种不同物料的表带，满足运动、商务及休闲方面的不同需要。联力的表扣同样内外兼备，坚固、极耐用而不失时尚、亮丽。



Stainless Steel Watch Clasps & Buckles 不锈钢表壳扣制及蝴蝶扣制



Plating 电镀	● PP 原色	● IPG 金色	● IPRG 玫瑰金色	● IPBK 黑色
Polishing 打磨	Shiny 磨光	Brush 拉砂	Matte 喷砂	



CPB-173
18, 20, 22, 24mm
316L High Grade Diving Clasp
Extendable Front Cover (Optional)
316L高质潜水龟壳扣
可伸缩前盖 (可选择)



CPB-500A
12 to 26mm
Stainless Steel Clasp
Safety Lock
Double Press Button
不锈钢安全制扣
双按制扣



HCPY-P068
16, 18, 20, 22mm
316L Deployment Strap Buckle
316L蝴蝶皮带扣



HCPY-18GS
12, 14, 16, 18, 20, 22, 24mm
316L Deployment Strap Buckle
C-Shape
Double Press Button
316L蝴蝶C字架皮带扣
双按制扣



CPB-190-B
18, 20, 22mm
316L High Grade Clasp
Safety Lock
Double Press Button
316L高质安全锁龟壳
双按制扣



CPB-33A
10 to 26mm
Stainless Steel Double Press Clasp
不锈钢双按制扣



HCPY-22C
12, 14, 16, 18, 20, 22, 24mm
316L Deployment Double Press Button Strap Buckle
C-Shape
316L蝴蝶皮带C字架
双按制扣



HCPY-18GE
12, 14, 16, 18, 20, 22, 24mm
316L Deployment Strap Buckle
E-Shape
Double Press Button
316L蝴蝶E字架皮带扣
双按制扣



HCPB-12
a) 10.2 x 5.9 x 41mm (G)
b) 8.7 x 4.5 x 35mm (L)
Stainless Steel Butterfly Clasp
不锈钢蝴蝶扣制



SBKJ-54A
18mm
316L Strap Buckle
1.5mm Solid Tongue
316不锈钢皮带扣
1.5毫米实心利仔



SBKD-AP201
20, 22, 24, 26mm
Stainless Steel Strap Buckle
2mm Solid Tongue
不锈钢皮带扣
2毫米实心利仔



SBKD-251
26mm
Stainless Steel Strap Buckle
3.8mm Solid Tongue
不锈钢扣
3.8毫米实心利仔



SBKD-103
16, 18, 20, 22mm
Stainless Steel Strap Buckle
1.8mm Solid Tongue
不锈钢扣
1.8毫米实心利仔



SBKD-U271
20 to 26mm
Stainless Steel Strap Buckle
4mm Solid Tongue
不锈钢扣
4毫米实心利仔



HCPB-603
a) 22 x 5.9 x 40mm (G)
b) 17 x 4.4 x 36.3mm (L)
Stainless Steel Butterfly Clasp with Press Button
Double Press Button
不锈钢蝴蝶按制扣
双按制扣



SBKJ-7A
8 to 30mm
Stainless Steel Strap Buckle
2mm Tongue
不锈钢扣
2毫米利仔



SBKD-AP101
16, 18, 20, 22, 24mm
Stainless Steel Strap Buckle
3mm Tongue
不锈钢皮带扣
3毫米实心利仔



SBKD-BR201
24mm
Stainless Steel Strap Buckle
6mm Solid Tongue
不锈钢扣
6毫米实心利仔



SBKD-708
18mm
Stainless Steel Strap Buckle
1.6mm Solid Tongue
不锈钢扣
1.6毫米实心利仔



AIW-AC38/42-02
38 / 42, 40 / 44mm
SB: 20, 22, 24mm
Stainless Steel Spring Bar Connector for Watch Band
表生耳连接器
配表带

Stainless Steel Solid Bands

不锈钢实心带

End-Piece / 盖耳

- a) Straight (S) / Curved (C)
直S / 弯C
- b) Connector (AIW)
连接器 AIW

Spring Bar (SB) / Quick-Release Spring Bar (QR)

普通生耳 (SB) / 开关生耳 (QR)



Open-End Pin / 发夹



Clasp / 龟制扣

Thin B1 / Solid B2 / Butterfly B3

薄片B1 / 实心 B2 / 蝴蝶型B3

Stainless Steel / 不锈钢

Plating
电镀

PP
原色

IPG
金色

IPRG
玫瑰金色

IPBK
黑色

IP2Tone
间金

Polishing
打磨

Shiny
磨光

Brush
拉砂

Matte
喷砂

SBH311-B1

18, 20, 22, 24mm

Total Length 总长 : 190mm

Thickness 厚度 : 3.6mm

End-Piece 盖耳 : S

SB / QR

3-Link 三珠

SBH336-B2

20, 22, 24mm

Total Length 总长 : 190mm

Thickness 厚度 : 4.0mm

End-Piece 盖耳 : S

SB / QR

SBH626-B3

38 / 40mm , 42 / 44mm

Total Length 总长 : 180mm

Thickness 厚度 : 3.4mm

End-Piece 盖耳 : AIW / S

SB / QR

5-Link 五珠

SBH533-B1

18, 20, 22, 24mm

Total Length 总长 : 195mm

Thickness 厚度 : 3.9

End-Piece 盖耳 : S

SB / QR

5-Link 五珠

SBH020-B1

12, 14, 16, 18, 20, 22, 24mm

Total Length 总长 : 185mm

Thickness 厚度 : 3.5mm

End-Piece 盖耳 : S & C

SB

5-Link 五珠

SBH668-B3

16, 18, 20, 22mm

Total Length 总长 : 170mm

Thickness 厚度 : 3.3mm

End-Piece 盖耳 : S / AIW

SB / QR

Stainless Steel Mesh Bands

不锈钢网带

MB-HR012

8, 10, 12, 14, 16, 18, 20, 22, 24mm

0.6mm, Safety Lock

0.6毫米网带, 安全制扣

SB / QR

MB-HR900-B1

18, 20, 22mm

0.6mm, Double Press Clasp

0.6毫米网带, 双按制扣

SB / QR

MB-HR300

14, 16, 18, 20, 22, 24mm

0.6mm, Magnetic Band

0.6毫米网带, 磁性表带

SB / QR

MB-HR025-B3

18, 20, 22mm

0.6mm, Butterfly Clasp

0.6毫米网带, 蝴蝶扣制

Total Length 总长 : 165mm

Thickness 厚度 : 3.3mm

SB / QR

MB-HR700

18, 20, 22mm

0.6mm, Solid Clasp

0.6毫米网带, 实心制扣

SB / QR

MB-HR024-B1

18, 20, 22mm

0.6mm, Double Press Clasp

0.6毫米网带, 双按制扣

SB / QR

MB-HR031

18, 20, 22, 24mm

2.4mm Thickness, Safety Lock

2.4毫米厚度, 安全制扣

SB / QR

MB-HR024-B2

18, 20, 22mm

1mm, Safety Lock, Double Press Clasp

1毫米网带, 安全制, 双按制扣

Total Length 总长 : 200mm

Thickness 厚度 : 3.3mm

SB

Silicone Straps, Leather Straps, Nylon Straps & Rubber Band Straps 硅胶表带、皮表带、尼龙表带及橡胶表带

Color Choices
颜色选择

Black
黑色

Orange
橙色

Blue
深蓝

White
白色

Red
红色

Green
海军

Grey
灰色

Brown
棕色

Others
其他



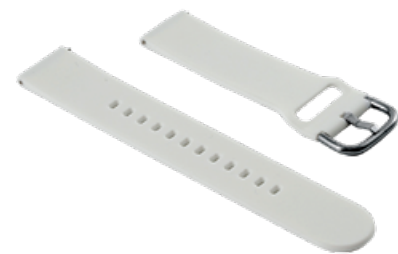
SBR2111

20, 22, 24, 26mm
Camouflage Color Sporty
TPU Strap
迷彩运动型TPU表带
SB



SBR2143

22mm
Silicone Strap
硅胶表带
QR



SBR2145

22mm
Silicone Strap
硅胶表带
QR



SBR128

18, 20mm
Silicone Strap
硅胶表带
SB



SBR038

16, 18, 20, 22mm
Silicone Strap, Wave Pattern
硅胶表带, 波浪纹
SB



SBR8012

16, 18, 20, 22mm
Curved End-Piece Rubber
Band, Brush Buckle
弯盖耳橡胶表带, 拉沙皮
带扣
SB



SBR8008

18, 20, 22, 24mm
Rubber Band, Shiny
Deployment Buckle
橡胶表带, 磨光蝴蝶扣
QR



SBR8001

16, 18, 20, 22, 24mm
Rubber Band, Shiny Buckle
橡胶表带, 磨光扣
SB



NSB30-03

20, 22mm
Nylon Strap
尼龙表带
Thickness 厚度 : 1.3mm



NSB29B-01

18, 20, 22, 24mm
Seat Belt Quality Nato Strap
安全带质量NATO表带
Thickness 厚度 : 1.5mm



NSB35-02

18, 20, 22, 24mm
Nylon Strap
尼龙表带
Thickness 厚度 : 1.6mm
QR



NSB36-02

18, 20, 22, 24mm
Nylon Strap
尼龙表带
Thickness 厚度 : 1.5mm
SB



NSB21-03

18, 20, 22, 24mm
Sport Nato Strap
Buckle : SS / IPBK
运动NATO表带
表扣 : 原色 / 黑色
QR



RSB-11880

20, 22, 24, 26mm
Leather Strap
Buckle : SS / IPBK
牛皮表带
表扣 : 原色 / 黑色
SB



AIW-RSA11854

38 / 40mm , 42 / 44mm
Leather Strap
Rivet Buckle
Buckle : SS / IPBK / IPG
铆钉扣牛皮表带
表扣 : 原色 / 黑色 / 金色
End-Piece 盖耳 : AIW
SB



RSA-11880

18, 20, 22, 24mm
Leather Strap
Deployment Buckle
Buckle : SS / IPBK /
IPG / IPRG
牛皮表带
表扣 : 原色 / 黑色 /
金色 / 玫瑰金
SB

Repair Tools 维修工具

Repair tools is an essential part in every industry. Union Energy offers comprehensive tool kits that are user-friendly for both novices and professional craftsmen to do repairing, maintenance and testing. Some tools are even applicable to handicraft or fixing jewels, cameras, electronics and computers. Union Energy also offers logo engraving service for clients to optimize their brand images.

维修工具是各行各业不可或缺的一环。联力提供的工具套装功能全面，不论是行业新手还是专业工匠，都可从中找到合适工具轻松地进行维修、保养及测试等工序，部分工具甚至可用作修整首饰、相机、电子产品及电脑，以至供制作手工艺产品之用。联力亦为客户提供产品商标蚀刻服务，让客户的品牌形象得以提升。



COMPREHENSIVE TOOL KITS
THAT ARE USER-FRIENDLY
FOR BOTH NOVICES AND
CRAFTSMEN

工具套装功能全面适合
行业新手或专业工匠

Professional Watch Repair Tools

专业手表维修工具



TUM1002

Aluminum Spring Bar Remover
Changeable Pin & Fork
Color : IPG / IPBK / PP
铝料拆生耳批, 可转换针叉咀
颜色: 金色 / 黑色 / 原色



TUM1045

Aluminum Spring Bar Remover with
Cover, Changeable Pin & Fork
铝料拆生耳批, 有前盖, 可转换针叉咀



TUM1057

Aluminum Spring Bar Remover With
Cover, Changeable Pin & Fork
铝料拆生耳批, 有前盖, 可转换针叉咀



TUM1040

Stainless Steel Spring Bar Remover
Changeable Pin & Fork
不锈钢拆生耳批, 可转换针叉咀



TUM1002-EL50

Stainless Steel Spring Bar Remover
Changeable Pin & Fork
不锈钢拆生耳批, 可转换针叉咀



TUM1068

Spring Bar Remover, Tweezer-Shape
镊子型拆生耳批



TUM1004

Stainless Steel Spring Bar Remover
Changeable Pin & Fork
不锈钢拆生耳批, 可转换针叉咀



TUM1067

V-Shape Spring Bar Remover
Changeable Pin & Fork
V型拆生耳批, 可转换针叉咀



TUM1033

Punch Pin Watch Band
Adjustment Pin
冲针型表带调节批



TUM1022

Punch Pin Watch Band
Adjustment Pin
冲针型表带调节批



TUM2034

Screwdriver 4pcs / Set
1.5 - 1.8 - 1.6+ & 2.0+
螺丝批套装



TBP1003

Band Opener, Changeable Pin
拆表带器, 可转换针咀



TBM1006

Watch Band Holder
表带座



TUM2009

Screwdriver 8pcs / Set
0.8-1.0-1.2-1.4-1.6-1.8-2.0 & 1.6+
螺丝批套装



TBP1005

Mini Band Opener , Changeable Pin
小型拆表带器, 可转换针咀



TBM1007

Watch Band Holder Set
表带座套装



TUM2018

Screwdriver
0.8-1.0-1.2-1.4-1.6-1.8-2.0 & 1.6+
螺丝批



TBP1013

Band Opener, Changeable Pin
拆表带器, 可转换针叉咀



TBM1001

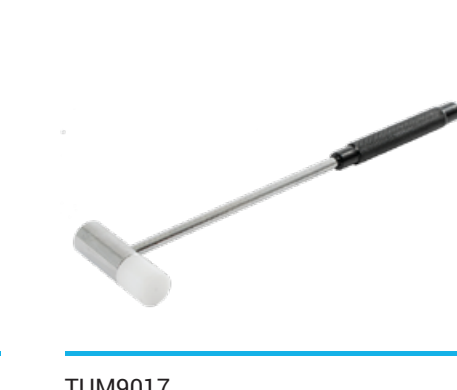
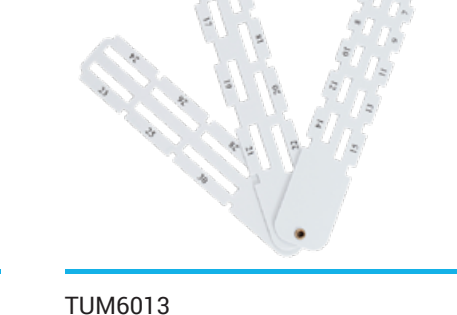
Aluminum Band Opener,
Changeable Pin
铝质拆表带器, 可转换针咀



TUP9010

Watch Pad 6cm / 8cm
表垫

		
TUM3002 Tweezers Sharp Tip 尖咀镊子	TCM1045 Watch Movement Holder 2pc / Set 机芯座套装	TCM1044 Watch Case Holder 手表壳座
		
TCM1052 Bezel Opener Tool 开表盘座工具	TCM1047 3-Jaw Watch Case Back Opener 三爪开表底盖器	TCM1043-01 2-Jaw Watch Case Back Opener 二爪开表底盖器
		
TCM1012 2-Jaw Watch Case Back Opener 二爪开表底盖器	TCM1006 Knife Watch Case Back Opener 刀型开表底盖器	TCM1018 Watch Case Back Presser 压表盖器
		
TCM1010 Knife Case Back Opener 刀型开表底盖器	TCM1017 Watch Case Back Opener 开表底盖座	

		
TUM9012 Eye Loupe 3X w/ Wire Headband (Optional) 小型眼罩放大镜, 可另配头圈	TLM8047 Eye Loupe 5X / 10X 小型眼罩放大镜	TUM9017 Hammer 锤子
		
TUM4012 Short Nose Plier, with / without teeth 短咀钳, 可有牙/ 无牙	TUM1034 Leather Hole Punch Set 打皮带洞器	TUM1021 (Set) Punch Pin (0.8 / 1.0 / 1.2mm) 冲针
		
TUP9012 Dust Blower 吹尘风球	TUM5002-BK Cleaning Cloth 28 x 28cm 清洁布	TUM6013 Watch Size Measurement 3-layers (6 to 30mm) 三层手表尺寸量度器
		
TSA9005 (12 in 1) Watch Repair Tool Set 30 x 13.5 x 4cm 手表维修工具套装	TSA9011 (15 in 1) Watch Repair Tool Set 30 x 17.8 x 4cm 手表维修工具套装	TSA7003D (17 IN 1) Watch Repair Tool Set 10 x 20.5 x 5.5cm 手表维修工具套装



TWT1053

Ultrasonic Cleaner 320ml
20 x 9.5 x 6.5cm / Net 0.38kg
超声波清洗机



TUM6024

Digital Caliper
(0-150mm / 0-200mm / 0-300mm)
电子卡尺



TWT1026

Waterproof Resistor Machine 10bar
测试水压机



TWT1006

Quartz Battery Tester
石英电池测量器



TUM7004

Diamond Selector II
钻石选择器 II



TWB2001-C06

PU Watch Collection Box for
2/3/5/6/10/12/20/24 Watches
30 x 11 x 8cm
PU 表盒



TWB4001-C03

PU Collection Box for 1/3 watches
22.5 x 10 x 7cm
PU 表盒



TWB9001-A01

Automatic Mechanical Watch Winder
21 x 18 x 18cm
机械表自动上链盒

Our Success 致胜关键



Sophistication
发展完善



Ultimacy
绝佳品质



Capacity
强大产能



Clients
知名客户



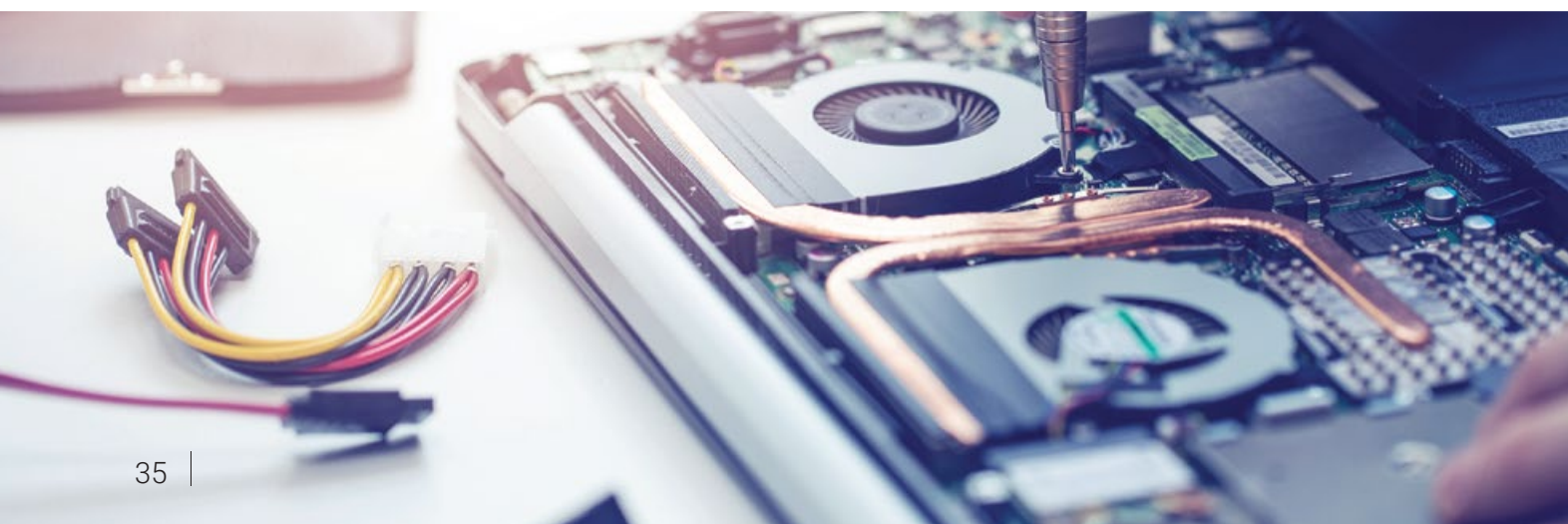
Exploration
专业研发

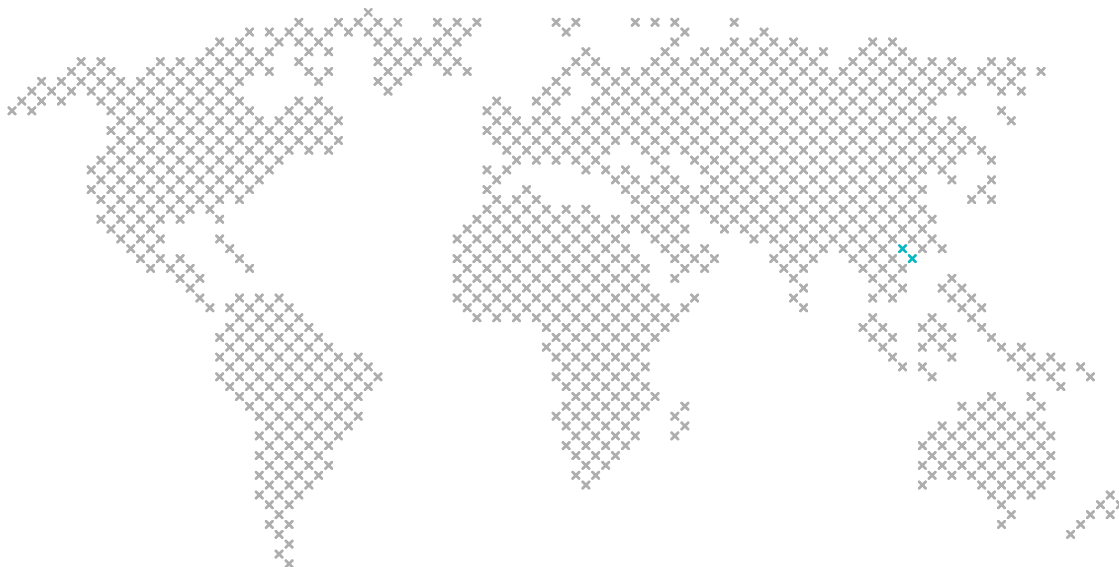


System
系统化管理



Sustainability
可持续发展





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