

# stainless steel k-wires - 78-79/1

78-79

## Double Trocar

### Smooth



diameter		4"	5"	6"	9"	12"
0.7mm	[.028"]	gS 78.2000	gS 78.2050	gS 78.1210	gS 78.2105	gS 78.2200
0.9mm	[.035"]	gS 78.2010	gS 78.2060	gS 78.1220	gS 78.2110	gS 78.2210
1.1mm	[.045"]	gS 78.2020	gS 78.2070	gS 78.1230	gS 78.2120	gS 78.2220
1.4mm	[.054"]	gS 78.2040	gS 78.2080	gS 78.1240	gS 78.2140	gS 78.2240
1.6mm	[.062"]	gS 78.2030	gS 78.2090	gS 78.1250	gS 78.2130	gS 78.2230

### Full Thread



diameter		4"	5"	6"	9"	12"
1.6mm	[.062"]	gS 78.4210	gS 78.4220	gS 78.4230	gS 78.4030	gS 78.4035

## Single Trocar

### Smooth / Round End



diameter		4"	5"	6"	9"	12"
0.7mm	[.028"]	gS 78.2300	gS 78.2700	gS 78.2800	gS 78.2500	gS 78.2600
0.9mm	[.035"]	gS 78.2310	gS 78.2710	gS 78.2810	gS 78.2510	gS 78.2610
1.1mm	[.045"]	gS 78.2320	gS 78.2720	gS 78.2820	gS 78.2520	gS 78.2620
1.4mm	[.054"]	gS 78.2330	gS 78.2740	gS 78.2840	gS 78.2540	gS 78.2640
1.6mm	[.062"]	gS 78.2340	gS 78.2750	gS 78.2850	gS 78.2530	gS 78.2630

### Partial Thread 25mm / Round End



diameter		4"	5"	6"	9"	12"
1.6mm	[.062"]	gS 78.9110	gS 78.9112	gS 78.9114	gS 78.9116	gS 78.9118

### Full Thread / Round End



diameter		4"	5"	6"	9"	12"
1.6mm	[.062"]	gS 78.4080	gS 78.4085	gS 78.4090	gS 78.4100	gS 78.4110

## Double Diamond

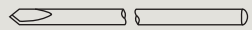
### Smooth



diameter		4"	5"	6"	9"	12"
0.7mm	[.028"]	gS 78.3000	gS 78.3050	gS 78.1300	gS 78.3100	gS 78.3200
0.9mm	[.035"]	gS 78.3010	gS 78.3060	gS 78.1310	gS 78.3110	gS 78.3210
1.1mm	[.045"]	gS 78.3020	gS 78.3070	gS 78.1320	gS 78.3120	gS 78.3220
1.4mm	[.054"]	gS 78.3030	gS 78.3080	gS 78.1340	gS 78.3140	gS 78.3230
1.6mm	[.062"]	gS 78.3040	gS 78.3090	gS 78.1330	gS 78.3130	gS 78.3240

## Single Diamond

### Smooth / Round End



diameter		4"	5"	6"	9"	12"
0.7mm	[.028"]	gS 78.3300	gS 78.3341	gS 78.3350	gS 78.3400	gS 78.3500
0.9mm	[.035"]	gS 78.3310	gS 78.3342	gS 78.3360	gS 78.3410	gS 78.3510
1.1mm	[.045"]	gS 78.3320	gS 78.3344	gS 78.3370	gS 78.3420	gS 78.3520
1.4mm	[.054"]	gS 78.3330	gS 78.3346	gS 78.3380	gS 78.3440	gS 78.3525
1.6mm	[.062"]	gS 78.3340	gS 78.3348	gS 78.3390	gS 78.3430	gS 78.3530

An internal fixation device, such as the K-wires, Steinmann Pins and cerclage wires shown in this section, must never be reused. They are intended for single use only.



### Stainless Steel Kirschner Wires

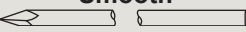

6 wires per package  
non-sterile

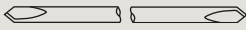

Precision ground from certified implant stainless steel.  
Smooth tapered points are expertly machined for easier penetration.  
Please inquire about the availability of any size and style not shown on this page.



# 78-79/2 - stainless steel steinmann pins

78-79

Double Trocar	Smooth		Full Thread
			
diameter	9"	12"	9"
2.0mm [.079"]	<b>gS 78.5500</b>	<b>gS 78.5720</b>	<b>gS 78.8500</b>
2.4mm [.094"]	<b>gS 78.5530</b>	<b>gS 78.5724</b>	<b>gS 78.8530</b>
2.8mm [.110"]	<b>gS 78.5560</b>		<b>gS 78.8560</b>
3.2mm [.126"]	<b>gS 78.5590</b>		<b>gS 78.8590</b>
3.5mm [.138"]	<b>gS 78.5620</b>		<b>gS 78.8620</b>
4.0mm [.157"]	<b>gS 78.5650</b>		<b>gS 78.8650</b>
4.5mm [.177"]	<b>gS 78.5680</b>		<b>gS 78.8680</b>
6.35mm [.250"]	<b>gS 78.5698</b>		

Single Trocar / Round End	Smooth		Threaded
			
diameter	9"	12"	9"
2.0mm [.079"]	<b>gS 78.6100</b>	<b>gS 78.5820</b>	<b>gS 78.8700</b>
2.4mm [.094"]	<b>gS 78.6130</b>	<b>gS 78.5824</b>	<b>gS 78.8730</b>
2.8mm [.110"]	<b>gS 78.6160</b>		<b>gS 78.8760</b>
3.2mm [.126"]	<b>gS 78.6190</b>		<b>gS 78.8780</b>
3.5mm [.138"]	<b>gS 78.6220</b>		<b>gS 78.8820</b>
4.0mm [.157"]	<b>gS 78.6250</b>		<b>gS 78.8850</b>
4.5mm [.177"]	<b>gS 78.6280</b>		<b>gS 78.8880</b>
6.35mm [.250"]	<b>gS 78.6288</b>		

Double Diamond	Smooth		Full Thread
			
diameter	9"		9"
2.0mm [.079"]	<b>gS 78.7000</b>		<b>gS 78.8300</b>
2.4mm [.094"]	<b>gS 78.7030</b>		<b>gS 78.8330</b>
2.8mm [.110"]	<b>gS 78.7060</b>		<b>gS 78.8360</b>
3.2mm [.126"]	<b>gS 78.7090</b>		<b>gS 78.8390</b>
3.5mm [.138"]	<b>gS 78.7120</b>		<b>gS 78.8420</b>
4.0mm [.157"]	<b>gS 78.7150</b>		<b>gS 78.8450</b>
4.5mm [.177"]	<b>gS 78.7180</b>		<b>gS 78.8480</b>

Single Diamond / Round End	Smooth		Threaded
			
diameter	9"		9"
2.0mm [.079"]	<b>gS 78.7780</b>		<b>gS 78.8000</b>
2.4mm [.094"]	<b>gS 78.7630</b>		<b>gS 78.8030</b>
2.8mm [.110"]	<b>gS 78.7660</b>		<b>gS 78.8060</b>
3.2mm [.126"]	<b>gS 78.7690</b>		<b>gS 78.8090</b>
3.5mm [.138"]	<b>gS 78.7720</b>		<b>gS 78.8120</b>
4.0mm [.157"]	<b>gS 78.7750</b>		<b>gS 78.8150</b>
4.5mm [.177"]	<b>gS 78.7782</b>		<b>gS 78.8180</b>

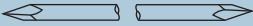
An internal fixation device, such as the K-wires, Steinmann Pins and cerclage wires shown in this section, must never be reused. They are intended for single use only.

**Stainless Steel Steinmann Pins**

6 wires per package  
non-sterile

Precision ground from certified implant stainless steel.  
Smooth tapered points are expertly machined for easier penetration.  
Please inquire about the availability of any size and style not shown on this page.

# titanium k-wires and stainless steel cerclage wires - 78-79/3

Double Trocar		Smooth			
diameter		4"	6"		
0.6mm	[.024"]	<b>gS 79.2106</b>	<b>gS 79.2306</b>		
1.0mm	[.039"]	<b>gS 79.2110</b>	<b>gS 79.2310</b>		
1.2mm	[.047"]	<b>gS 79.2112</b>	<b>gS 79.2312</b>		
1.5mm	[.059"]	<b>gS 79.2115</b>	<b>gS 79.2315</b>		
1.6mm	[.062"]	<b>gS 79.2116</b>	<b>gS 79.2316</b>		
1.8mm	[.070"]	<b>gS 79.2118</b>	<b>gS 79.2318</b>		

- Titanium K-wires are lightweight and have a high tensile strength especially useful under repeated load stresses and capable of withstanding strain during internal fixation.
- Titanium is non-magnetic, biocompatible, and corrosion resistant.

An internal fixation device, such as the K-wires, Steinmann Pins and cerclage wires shown in this section, must never be reused. They are intended for single use only.

## Titanium

### Kirschner Wires

1 wire per package  
non-sterile

Precision ground from certified implant titanium.

Smooth tapered points are expertly machined for easier penetration.

Please inquire about the availability of any size and style not shown on this page.

	diameter	gauge
<b>gS 79.2002</b>	0.2mm	36
<b>gS 79.2003</b>	0.3mm	30
<b>gS 79.2004</b>	0.4mm	27
<b>gS 79.2005</b>	0.5mm	25
<b>gS 79.2006</b>	0.6mm	23
<b>gS 79.2007</b>	0.7mm	22
<b>gS 79.2008</b>	0.8mm	21
<b>gS 79.2009</b>	0.9mm	20
<b>gS 79.2010</b>	1.0mm	19
<b>gS 79.2012</b>	1.2mm	18
<b>gS 79.2015</b>	1.5mm	17



## Stainless Steel Cerclage Wires

1 roll per package  
10 meters in length  
non-sterile

An internal fixation device, such as the K-wires, Steinmann Pins and cerclage wires shown in this section, must never be reused. They are intended for single use only.

### did you know... ?

Since their introduction, Kirschner wires (also known as K-wires) have been used extensively throughout the body to help reduce and stabilize fractures, osteotomies, and fusions. They are considered a versatile tool in the hands of orthopedic and plastic surgeons. gSource provides surgeons with a wide selection of K-wires in various styles and sizes, as shown on pages 1 and 3 in this section.

In 1908, Swiss surgeon Fritz Steinmann improved the technique of reducing fractures by directing the realigning force directly onto the bone. Dr. Steinmann initially used a perforating pin with a sharp tip to pierce the skin on both sides as it went in and out to transfix the bone in the transverse axis. Due to the problem of infection when the pin was removed, he suggested two pins be inserted into the bone from both sides only piercing the skin once.

German surgeon Rudolf Klapp introduced the use of a thin, flexible wire for treatment of lower extremity fractures using traction. He burred a hole into the calcaneum and inserted the wire through it. To avoid direct surface-skin-bone contact, the wire was directed towards the plantar surface and penetrated the skin in the area through separate incisions.

When German surgeon Martin Kirschner became aware of these techniques and developments, he contributed to the technique of applying traction directly to the bone and published his first series of cases in 1909. Dr. Kirschner combined the advantages of wire and pin extension techniques. He inserted a thin wire directly into the bone, minimizing the size of the skin wounds and damage to the bone, and designed the wire to be rigid enough in order to avoid transverse wire movement.

Although Dr. Kirschner developed the wire technique, he used it exclusively for traction treatment. The first paper suggesting the use of the Kirschner wires for fracture fixation was published by Otto Loewe in 1932. In the same year, Rene Sommer described percutaneous wires to fix fractures with different patterns (transverse, oblique, complex), as well as dislocations of the acromio-clavicular joint. The ability to facilitate implant removal, avoid excessive dissection, and avoid strangulation of bone as in cerclage wiring were the main advantages of this technique according to Dr. Loewe.

Dr. Kirschner was born in 1870 in Breslau (now Wroclaw, Poland). He attended the universities of Fribourg, Strasbourg (in France), Zurich and Munich, graduating in 1904. He went to Berlin for postgraduate studies under Rudolf von Renvers. Between 1908 and 1910 he was at the university surgical clinic in Greifswald under Erwin Payr, then went to Königsberg to work with Dr. Payr and Paul Leopold Friedrich. Three years later he started work in Leipzig (Germany). He first experienced war surgery during a Red Cross expedition to Sofia and Adrianopol in 1912-1913. Later he worked as a surgeon on the Western Front in the First World War during 1914-1915. He was appointed professor of surgery at Königsberg in 1916. From 1927 to 1934 he was head of the department of surgery in Tübingen (Germany) and in 1934 he was elected President of the German Society of Surgery. He passed away in 1942.

His scientific research and academic interests addressed topics covered by several specialties such as general surgery, orthopedic surgery, neurosurgery, urology, anesthesiology and even plastic surgery. In orthopedics, he remains renowned for skeletal tractions, bone elongations, and invention of thin wire. He described tourniquet application. In 1924, he performed the first successful pulmonary artery embolectomy. His skills contributed significantly to cancer surgery of the stomach, colon and rectum. He was able to mobilize the stomach without vascular compromise in order to use for esophagoplasty (plastic surgery for the repair or reconstruction of the esophagus). He modified the Bassini technique for inguinal hernia repair in order to reduce the recurrence rate. He also modified the technique of craniotomy that was used at the time and contributed to neurosurgery with his proposals for the treatment of cortical epilepsy. His impact on plastic surgery was comparably important as he modified the Langenbeck technique for cleft palate repair. He published several articles on wound healing and infection, and changed the current techniques of anesthesiology in 1931 when he presented a technique of spinal anesthesia which was individually adjustable in dosage and level of anesthesia.