KYORITSU METAL INDUSTRY CO., LTD.
www.kyoritsu-metal.co.jp/en/

Who We Are

The best material what you need, The best service what you want.

Kyoritsu Metal Industry Co., Ltd. started as
a small processing factory of gold and silver fine wires.
Now we have expanded its range of materials such as stainless steel,
piano wire and copper alloy.
We continue to seek to grow our company in unity
with society through creating and supplying the materials.

FOR ELECTRONICS INDUSTRY

0.05~0.40mm

Electroforming Tube

Electroforming is a new method to produce
micro tubes for chipmaking equipment.
Our wires are used for this method because
of its perfect roundness and perfect smoothness.

FOR AUTOMOBILE INDUSTRY

0.05~0.50mm

Wire Harness

With excellent formability and uniform quality,
our wires are adopted by automobile wire harness.

FOR SEMICONDUCTOR INDUSTRY

0.02~0.20mm

Contact Probe

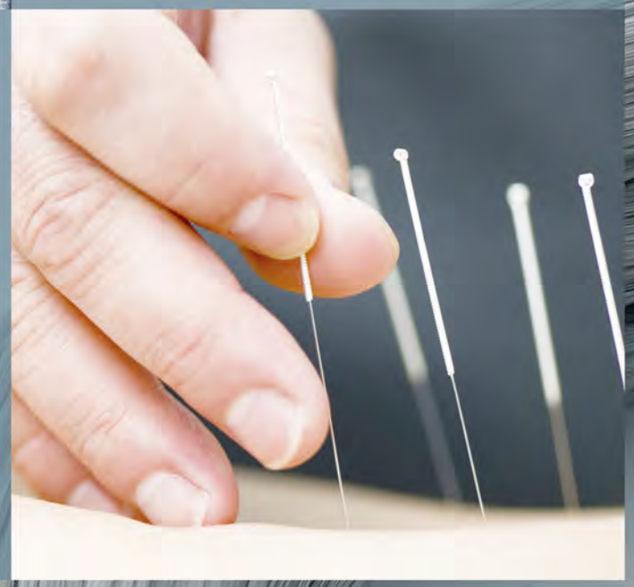
Wires used for the spring in the contact probe is
important for its fineness and fatigue resistance.
Kyoritsu's wires meet these requirements
and are used in many contact probes.

FOR MEDICAL INDUSTRY

0.10~0.40mm

Acupuncture Needle

Due to its smooth surface and high strength,
Kyoritsu's wires are chosen
as the painless acupuncture needle.



Our Service

We care your experience and usability.

We will do anything for you because we are more than a wire manufacturer.
Handling small orders that no one receives or
processing wires brought in by customers, for example.
Let us know what you need. We will find the way.

Case.01

Processing wires brought in by customers

We'll handle the materials other than stainless steel
or piano wire, such as aluminum, nickel, and,
of course, the material that you bring in.

Case.02

Straightening Shaped Wire

Our company is characterized not only
by our own wire drawing technology but also
in the high wire processing technology.
For instance, we succeed in straightening
the shaped wires that are difficult to even just draw.

Flowchart

From Inquiry to Product Delivery

01

Inquiry

To ask a question or to receive a quotation,
please feel free to contact us.

02

Consultation

Kyoritsu offer many options to you.
The size of spool, the wire weight per spool and
the lubricant applying to surface of the wire etc.

03

Examination and Inspection

We are producing products under strict quality
control and observing the quality standards. Kyoritsu
offers some testing services such as tension testing,
torsion testing and corrosion testing.

04

Delivery

Please let us know about your preference.
You can choose a spool, a lubricant,
a type of package from a variety of options.

Quality

±0.0001mm

We pursuit the highest accuracy,

'±0.0001mm' is Kyoritsu's smallest wire diameter tolerance.

We believe no other wire has such high accuracy.

Our team provides high-quality products with

reliable technical capabilities that meet your requirements.

01 The Surface Smoothness

When it comes to medical-graded wires,
what is most required is the surface cleanliness and smoothness.
Kyoritsu's wires rarely have a defect and its surface are,
as you see, like a mirror.

02 The accuracy

We offer wires with high roundness and excellent uniform.

Production range : 0.01 - 0.50mm
Roundness : ±0.0001 - ±0.001mm
Tensile Strength : ASTM, JIS, EN and other international standards
or customized specifications by customers.

03 Inspections

We ensure that our products meet customer requirements
by various inspections.

Tensile Strength Test, Torsion Test, Appearance Inspection,
Corrosion Test, Roundness Inspection

Packaging

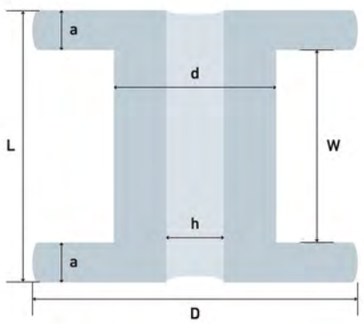
Spools & Delivery

We believe that it is important that not only the wire itself but also its packaging.
Kyoritsu offers a variety of spools and delivery options based on its
many years of wire handling experience. We promise to be flexible.

Spools

Kyoritsu Metal Industry offers a wide variety of spools.
You can choose from wide selection or from our recommendation of the spool which we believe that the best for your needs.

Type of Spool	Outer Diameter D mm	Drum Diameter d mm	Inner Width W mm	Shaft Diameter h mm	Flange Thickness a mm	Length L mm	Weight g
T-118R	118	100	14	10.5	3	20	59
P-1	100	50	70	20	10	90	105
P-3R	130	80	90	20	10	110	250
P-5R	160	90	90	20	12	114	400
P-10	200	90	110	25	12	134	500
B-25	250	110	110	32/34	15	140	900
DP-5	145	110	150	70	10	170	520
DP-15	200	160	180	73	18	216	1100
DP-25	280	200	180	73	20	220	2180
DP-35	290	200	208	133	20	248	3130



The spool which can be used is depending on type of material and wire size. Please contact our sales associate for details.

Tell Us What You Need

01 Tensile Strength

We offer wires of various range of tensile strength,
even if it is out of standard.

02 Diameter Tolerance

Our technology makes it possible to meet the request of very strict diameter tolerance.
Diameter tolerance of our standard products are ±0.0015mm, and we can offer ±0.0001mm precision when you need.

03 Method for Winding Wire

To ensure more machine uptime, we can increase the amount of wire per spool.
On the other hand, if you prefer, we can offer the spools with small amount of wire wound.

04 Lubricants

If you choose this option, Kyoritsu apply the lubricant to the wire surface
to improve lubricity in your manufacturing process.

Materials / Specs

Materials / Specs

At Kyoritsu we handle a wide range of materials.
Kyoritsu believes that the combination of
our unique technology and materials
can meet any demands of you.

Stainless Steel

End Products

Acupuncture Needles, Guide Wires, Cored Bars,
Suture Needles, Springs

Wires for Electroforming 304CORE

After plating around the wire, you can create injection needle by pulling out the wire (called ELECTROFORMING). Since Kyoritsu's wires are perfectly circular in cross section and have smooth surface, it is possible to make the internal surface of needle rounder and smoother.

Cemical Compositions (%)

C	Si	Mn	P
~0.08	~1.00	~2.00	~0.045
S	Cu	Cr	
~0.030	8.00~10.50	18.00~20.00	

Diameter (mm)	Tensile Strength (N/mm²)	Torelances(mm)
0.020	-	±0.002
0.070	650~900	
0.080		
0.100		
0.160		
0.200	610~860	
0.210		
0.300		
0.400		
0.410		
0.500		

304V

304V has been vacuum arc remelted in order to minimizes impurities and achieves a highly uniform chemical composition. This alloy is widely used for no-implant medical devices which high-purity material are required.

Cemical Compositions (%)

C	Si	Mn	P
~0.08	~1.00	~2.00	~0.045
S	Ni	Cr	N
~0.030	8.00~10.50	18.00~20.00	0.10

Diameter (mm)	Tensile Strength (N/mm²)			Torelances(mm)
	Annealed Condition	Hard Condition		
	W1	WPA	WPB	
0.020	-	*negotiable		±0.002
0.070	650~900			±0.002 or +0/-0.003
0.080		1,650~1,900	2,150~2,400	
0.100				
0.160				
0.200	610~860			
0.210		1,600~1,850	2,050~2,300	
0.300				
0.400				
0.410			1,950~2,200	
0.500				

304

This alloy is the most popular and well-known type of austenitic stainless steel. It is usually used for non-implant medical devices. 304 has high formability and good fatigue resistance.

Cemical Compositions (%)

C	Si	Mn	P
~0.08	~1.00	~2.00	~0.045
S	Ni	Cr	
~0.030	8.00~10.50	18.00~20.00	

Diameter (mm)	Tensile Strength (N/mm²)			Torelances(mm)
	Annealed Condition	Hard Condition		
	W1	WPA	WPB	
0.020	-	*negotiable		±0.002
0.070	650~900			±0.002 or +0/-0.003
0.080		1,650~1,900	2,150~2,400	
0.100				
0.160				
0.200	610~860			
0.210		1,600~1,850	2,050~2,300	
0.300				
0.400				
0.410			1,950~2,200	
0.500				

302

Used mainly for spring applications, 302 has similar chemical components to 304 with the exception of its higher carbon content.
After same amount of cold work, 302 becomes harder than 304.

Cemical Compositions (%)

C	Si	Mn	P
~0.15	~1.00	~2.00	~0.045
S	Ni	Cr	
~0.030	8.00~10.00	17.00~19.00	

Diameter (mm)	Tensile Strength (N/mm²)			Torelances(mm)
	Annealed Condition	Hard Condition		
	W1	WPA	WPB	
0.020	-	*negotiable		±0.002
0.070	650~900			±0.002 or +0/-0.003
0.080		1,650~1,900	2,150~2,400	
0.100				
0.160				
0.200	610~860			
0.210		1,600~1,850	2,050~2,300	
0.300				
0.400				
0.410			1,950~2,200	
0.500				

SUS631J1

This alloy was developed to have combined characteristics, namely easy processing like austenitic stainless steel, along with high strength like martensitic stainless steel. SUS631J1 has good formability and good form stability during the precipitation hardening heat treatment and a moderate level of corrosion resistance.

Cemical Compositions (%)

C	Si	Mn	P
~0.09	~1.00	~1.00	~0.04
S	Ni	Cr	Al
~0.030	7.00~8.50	16.00~18.00	0.75~1.50

Diameter (mm)	Tensile Strength (N/mm²)	Torelances(mm)
	WPC	
0.050	*negotiable	±0.002 or +0/-0.003
0.070		
0.080		
0.100		
0.200		
0.210	1,930~2,180	
0.300		
0.400		
0.410	1,850~2,100	
0.500		

316(L)

316 is used for permanent implants for many years.
This alloy has higher corrosion resistance than the other 300 series alloys because of increased content of molybdenum.
We also offer 316L which has lower content of carbon.
This alloy frequently used in the situations where corrosion resistance is required.

316 Cemical Compositions (%)

C	Si	Mn	P
~0.08	~1.00	~2.00	~0.045
S	Ni	Cr	Mo
~0.030	10.00~14.00	16.00~18.00	2.00~3.00

316L Cemical Compositions (%)

C	Si	Mn	P
~0.03	~1.00	~2.00	~0.045
S	Ni	Cr	Mo
~0.030	12.00~15.00	16.00~18.00	2.00~3.00

Diameter (mm)	Tensile Strength (N/mm²)	Torelances(mm)
	WPA	
0.020	*negotiable	±0.002
0.070		
0.080	1,650~1,900	±0.002 or +0/-0.003
0.100		
0.200		
0.210	1,600~1,850	
0.300		
0.400		
0.410		
0.500		

Materials / Specs

Piano Wires

End Products

Springs, Polishing Wires, Precision machinery parts

Copper Alloys

End Products

Springs, Semiconductor equipment

Lapping Wires for Ferrules

Ferrules are used together with the connector that connects the optical fiber cables. To keep the fibers accurately aligned within the connector, ferrules are needed to be processed with accuracy of submicron unit. Kyoritsu have developed ultra-precise processing technologies capable of achieving perfectly round shape within diameters deviation of ±0.0001mm and tolerances of up to 0.0002mm.

Cemical Compositions (%)

C	Si	Mn	P
0.80~0.85	0.12~0.32	0.30~0.60	~0.025
S	Cu		
~0.025	~0.20		

Diameter (mm)	Tensile Strength (N/mm²)	Torelances(mm)
0.020	*negotiable	±0.0005
0.040		
0.050		±0.0003
0.090		
0.160		
0.200		
0.210		
0.300		
0.400		±0.0005
0.410		
0.500		

SWRS82A

Piano wire is a metal wire made from carbon steel. While there are numerous types of piano wire, in general piano wire refers to the type used for springs. Piano wire needs to have few nonmetallic or other impurities and to have homogeneous chemical ingredients. Due to its high stress tolerance and resistance to metal fatigue, it is used widely as wire for precision cutting and as a material in coil spring.
A strength of our piano wire is its extremely smooth surface. Our piano wire product lineup includes type A wire, highly durable type B wire, and even stronger wires.

Cemical Compositions (%)

C	Si	Mn	P
0.80~0.85	0.12~0.32	0.30~0.60	~0.025
S	Cu		
~0.025	~0.20		

Diameter (mm)	Tensile Strength (N/mm²)		Torelances(mm)
	SWP-A	SWP-B	
0.020	*negotiable		±0.002
0.070			
0.080	2,890~3,190	3,190~3,480	±0.002 or +0/-0.003
0.100	2,790~3,090	3,090~3,380	
0.160	2,650~2,940	2,940~3,240	
0.200	2,600~2,840	2,840~3,090	
0.260	2,500~2,750	2,750~2,990	
0.290	2,450~2,700	2,700~2,940	

Phosphor Bronze Wires

Phosphor bronze is an alloy consisting mainly of copper, tin and phosphor. Depending on the volume of tin contained, it can have a wide range of distinctive qualities. With superior performance mainly in the areas of resistance to fatigue, corrosion and abrasion as well as electro-conductivity, it is used as a material for springs realizes stable coiling through use of our own drawing methods.

Cemical Compositions (%)

Pb	Fe	Sn	P
~0.1	0.30~0.60	5.50~7.00	0.03~0.35
Zu	Cu		
~0.20	Balance		

Diameter (mm)	Tensile Strength (N/mm²)	Torelances(mm)
0.100	~1,130	+0/-0.003
0.120		
0.140		
0.200		
0.300		
0.350		

*We can also process the sizes or materials not mentioned. Please contact our sales associate for details.

Other Materials / Wire processing

Kyoritsu offers various materials as well as stainless steel and piano wires.
We also produce straightened cut wires and rounded tip wires etc.

End Products

- Other Materials : Beryllium Copper, Aluminum, Nickel
- We also produce straightened wires and cut wires, rounded tip wires.

ABOUT US

Company Information

Values

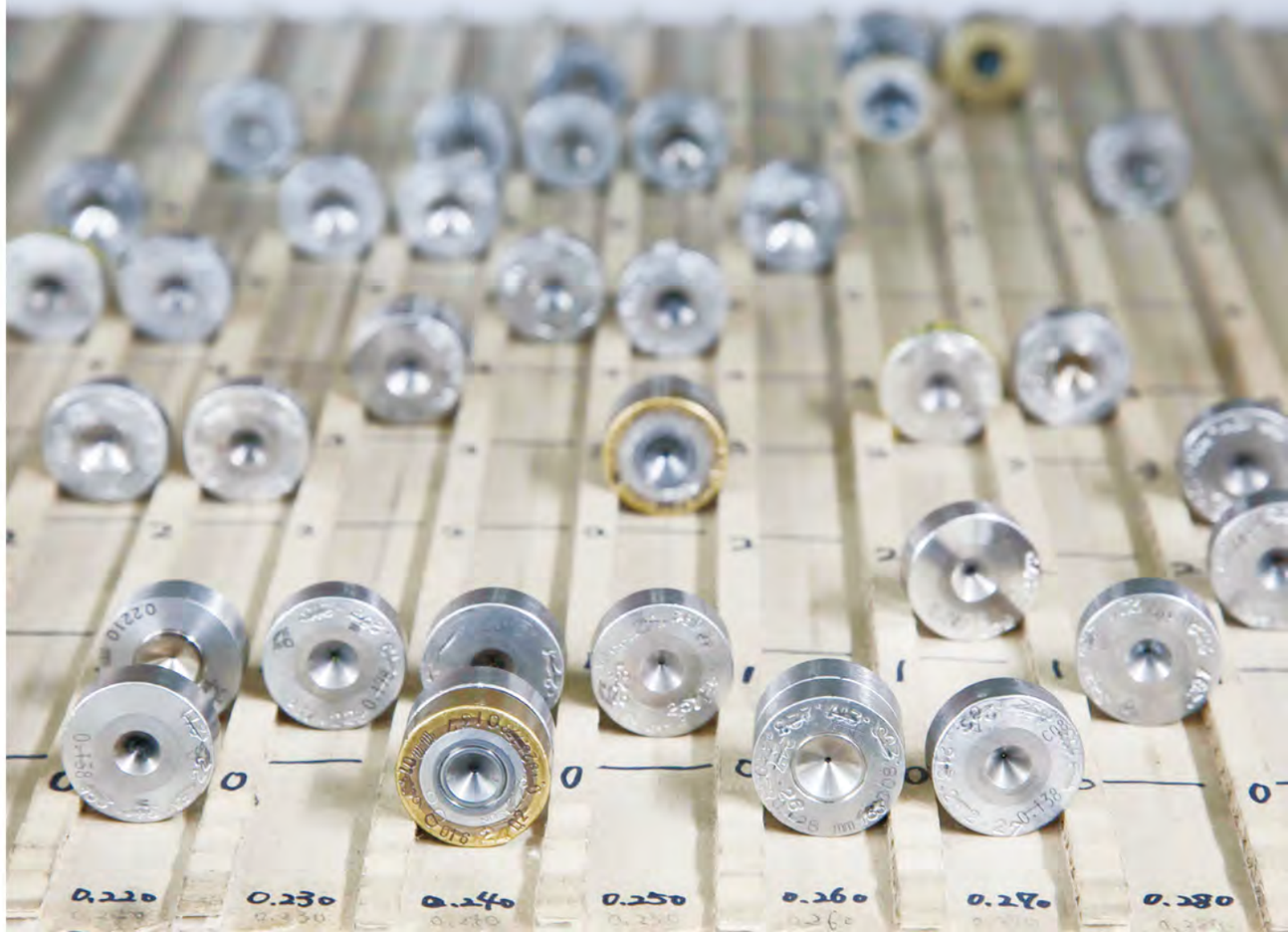
INTEGRITY	We are always sincere.
CREATIVITY	We create new value.
TEAMWORK	We grow our business by sharing knowledge and respecting each other.
RESPONSIBILITY	We embrace our responsibility and act responsibly.
CONTRIBUTION TO SOCIETY	We seek to grow our company in unity with society.

Information

Corporate Name	Kyoritsu Metal Industry Co., Ltd.
Established	July 8, 1961
Capital Stock	10,000,000 yen
Location	2-8-23, Fukuura, Kanazawa-ku, Yokohama, Kanagawa, Japan
Registered Certification	ISO Quality Management System
Lines of Business	Drawing

Products

1. Stainless steel wires for precision springs
2. Piano wires for precision springs
3. Phosphor bronze wires for precision springs
4. High-precision wires for bore diameter of ferrules
5. Straightening various metal wires
6. Annealed stainless steel wires
7. Other metal wires

History

1961.7	Kyoritsu Metal Industry Co., Ltd. incorporated in Yokohama.
1962.10	We received an order from Seiko Group for piano wire drawing process materials to be used as quartz hole polishing materials for luxury watches.
1985.4	Received an order from Suzuki Metal Industry Co., Ltd. A member of the Nippon Steel & Sumitomo Metal Group, for production of stainless steel wire for use in springs.
1995.7	Head office and factory relocated to current location in Fukuura, Yokohama city.
1998.3	Increased the capital to 10 million yen.
2003.2	Gained ISO9002 certification. Started production of lapping wires for ferrules.
2007.7	Gained ISO9001:2008 certification.
2008.4	Received an order from Suzuki-Sumiden Stainless Steel Wire Co., Ltd., a member company of Nippon Steel & Sumikin SG Wire Group, for Stainless Steel wires for use in wire harnesses.
2009.5	Certified as "Social Contribution Company in Yokohama".
2013.7	Certified as "Social Contribution Company in Yokohama".
2018.2	Gained ISO9001:2015 certification.
2021.7	Celebrates its 60th anniversary.