

Product lineup

Specifications and Comparison of properties

Legend : 5=Highest, 1=Lowest applicability

Category	Item	Type	Specification(Trial)		1to1 Torque response	High-speed rotation	Push/Pull	Compression	Flexibility	Feature							
			OD(mm)	ID(mm)													
Hollow cable	Torque coil	3layer	0.36-6.05	0.18-5.25	↑	↑	↑	↑	↑	bi-directional (3 layers) or unidirectional (2 layers) rotation *Archimedes screw with spiral wire							
		2layer	0.30-5.17	0.15-3.55													
		flat	-	-													
	auger*	-	-														
Torque Hypotube			0.20-1.10	0.10-0.70	5	2	5	5	1	high breaking strength and elongation resistance							
ACT ONE	standard	flat	0.21-5.22	0.13-4.00	4	3	4	3	3	well balanced properties *Archimedes screw with spiral wire							
		ultra thin	0.21-4.70	0.16-3.95													
Wire coil	round	flat	0.10-3.50	~1.80	1	1	2	4	5	high flexibility and compression resistance							
		flat	0.10-5.90	0.07-5.30													
Cable	Drive Cable	2-6layer	0.41-6.00	-	↑	↑	↑	↑	↑	Optimized for high speed rotation and power transmission							
		Torque rope	1x3,1x7, 1x12,1x19	0.30-3.00							-	4	3	5	4	3	1:1 torque transmission at hand-speed rotation
		Wire rope	1x7,1x19 7x7,7x19 7x7x7, etc.	0.09-3.00							-	1	1	5	4	3	High breaking strength and elongation resistance
Coating	Outer coating	Extrusion Dip coat Spray	Floropolymer Nylon, etc.		To add lubricity, ablation resistance or biocompatible sealing to cable												
	Inner tube		Floropolymer		Inner coating applied to a hollow cable												
	Precoating		PTFE		Coating for both inner and outer of hollow cable without losing the property of the cable												
Assembly	Machining & Assembly	Laser welding, Grinding Tube assembly			Variety of welding and machining available for assembly or additional mechanical property												
	End termination	Ball, Eye, Loop, etc.			For the end of a cable or used for intermediate attaching.												
Power transmission	Synchromesh wire rope	AWS40 -AWS120	1.10-3.40	-	Synchronous round belt, ideal for linear-motion system drawn in 3-dimensional.												
	Cable rack	CL0.8S / H	W3.0 x H3.6	-	With stainless cable core, ideal when the Rack needs to be flexible and high-force movement required.												

Flexible Shaft

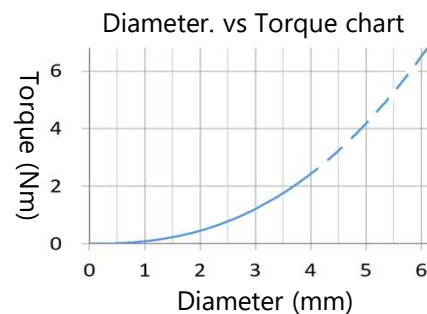


Flexible shaft (Product name: Drive cable) offers high torque force and excellent rotational performance during high-speed rotation, Designed for transmitting power or rotary motion through obstructed or curved path, either between fixed shafts or shafts having relative movement.

It can solve problems of misalignment, absorb and isolate vibration, and simplify power transmission designs and applications.

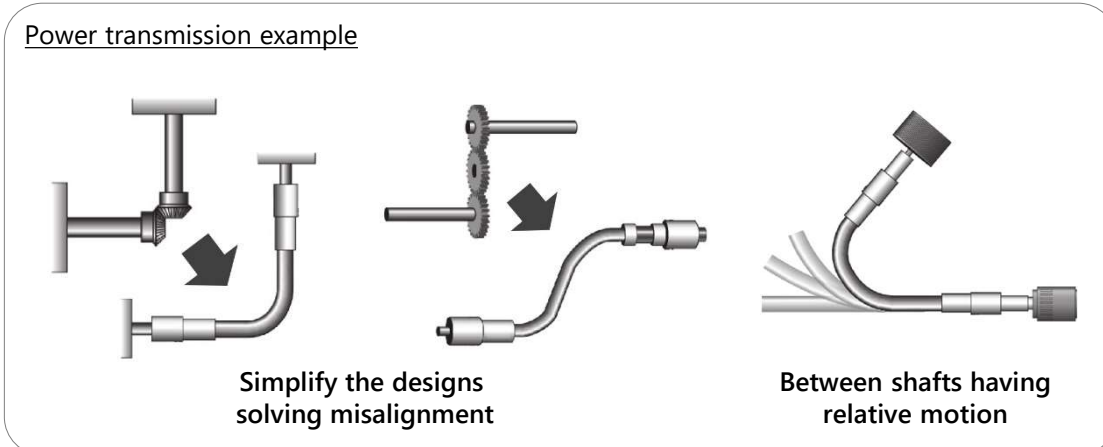
Specifications

- Diameter: 0.5 - 4.0mm (Trial : up to 6.0mm)
- Max. Torque: up to 2.4Nm (Trial : up to 6.5Nm)
- Construction: 3 – 6 layers
- Material: Stainless steel, Ni-Ti

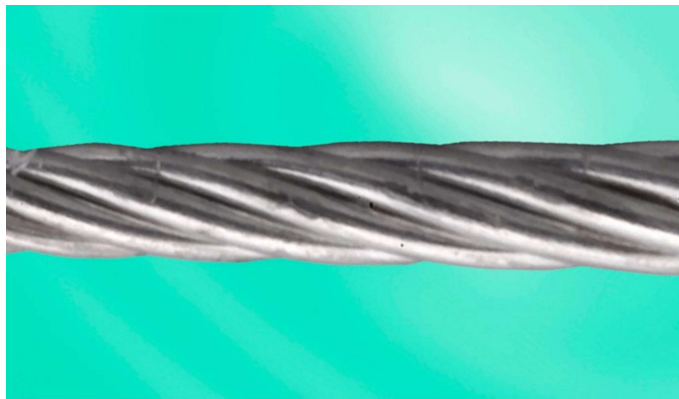


Applications

Flexible shaft tools in dental, jewelry and industrial applications.



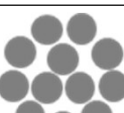



Torque rope



Regular wire ropes have reduced torque transmission. Our internal technologies make it possible to achieve 1:1 torque transmission. Well-known applications are endoscopic clips, forceps, and other devices that require high flexibility with precise torque transmission.







Specifications

Type		OD	Length
1 x 3		0.30-1.00 mm	up to 3000mm
1 x 7		0.60-1.00 mm (Trial : 0.27-1.52)	up to 3000mm
1 x 12		0.50-1.00 mm (Trial : 0.50-1.20)	up to 3000mm
1 x 19		0.40-0.83 mm (Trial : 0.30-3.00)	up to 3000mm

Wire rope

Asahi Intecc makes full use of the proprietary wire processing technologies, such as ultra-thin wire drawing and die forming, to manufacture fine stainless-steel wires with diameters from 0.013mm to 0.50mm.

Main Lineup

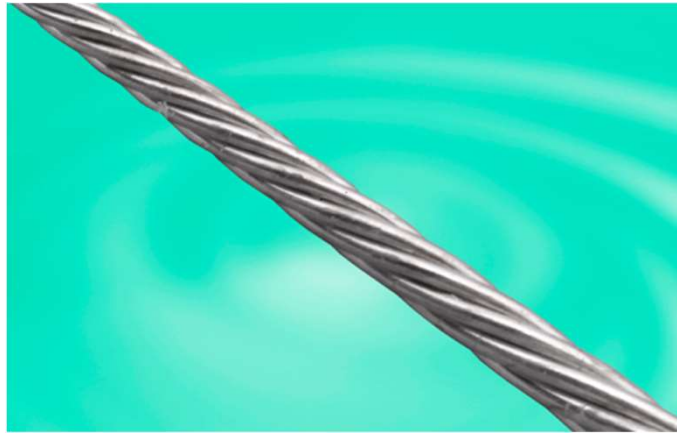
Type	Construction		Wire Rope O.D.		Breaking load	
			Min.	Max.	Min.	Max.
Type-E	1x7		0.09	1.5	9	2548
Type-G	1x19		0.15	2.0	24	3670
Type-B	7x7		0.27	3.0	59	7154
Type-C	7x19		0.45	3.0	153	6762
Type-P	7x7x7		0.81	2.16	412	2940
			(mm)		(N)	

Wire Ropes are formed by twisting different sizes of fine wires and wire strands. These are provided in stainless steel, nitinol and tungsten.

Comparison of properties at O.D. 1mm of each type

Type	Construction	Model	O.D. (tolerance)	fine wire O.D.	Total number of fine wires	Breaking load	Elongation	Flexibility	Min. bend radius
Type-E	1x7	E-105	1.05 (±0.03)	0.35	7	1127	↑ High ↓ Low	↓ Low ↑ High	53
Type-G	1x19	G-100	1.00 (±0.05)	0.20	19	1078			30
Type-B	7x7	B-100	1.00 (±0.04)	0.11	49	784			17
Type-C	7x19	C-105	1.05 (±0.04)	0.07	133	833			11
Type-P	7x7x7	P-108	1.08 (±0.05)	0.04	343	715			6
			(mm)	(mm)		(N)			(mm)

Tungsten wire rope



The wire rope made by Tungsten which is remarkable for its robustness, especially the fact that it has the highest melting point of all metals and the highest tensile strength. Ideal for heating elements and refractory parts in high-temperature furnaces, required with long fatigue life.

Specifications

O.D.	up to 3.0 mm
Breaking load	up to 8309N (@ OD = 3.0 mm)
Construction	7x7, 19x7, 7x7x7

Applications

Industrial, Surgical robot, office printer

Actual example

Cable for pulling up Silicon ingot, using in high-temperature furnaces

Wire for Corona discharge in Office printer