

Orthonol

FLI® AESTHETIC WIRE

ELGILOY

THERMALOY+ PLUS

Flex-VIII™

Orthonol



THERMALOY

bendaloy

FLI® COPPER NICKEL-TITANIUM

TRU-CHROME



THERMALOY

ORTHODONTIC WIRE

SWLF
STRAIGHT WIRE | LOW FRICTION

bendaloy

ELGILOY

THERMALOY+ PLUS
FLI® AESTHETIC WIRE

Flex-VIII™



RMO®
rocky mountain orthodontics

WIRE CHARACTERISTICS



ORTHONOL®

- Ideal for leveling and aligning
- Moderate, consistent forces
- Superelastic Nickel-Titanium
- High flexibility and resiliency
- Ideal for mid-stage treatment
- Responsive to chilling
- Available in reverse curve
- Pre-torqued arch wires available

Orthonol

THERMALOY®

- Low forces
- Thermal-activated nickel-titanium
- Excellent resiliency and exhibits true thermal performance
- Bendable at room temperature for easy insertion
- Ideal for significant crowding cases
- Gentle forces for greater patient comfort

THERMALOY

THERMALOY® PLUS

- Low to moderate forces
- Thermal-activated nickel-titanium
- Excellent resiliency above room temperature
- Midrange load characteristics

THERMALOY⁺ PLUS

FLI® AESTHETIC WIRE

- Long lasting natural appearance
- Coating on labial surface only
- Decreased flaking and chipping
- Superelastic Nickel-titanium and stainless steel
- Provides ideal forces throughout treatment

FLI® AESTHETIC WIRE

FLI® COPPER NICKEL-TITANIUM

- Consistent transformation temperatures: 27° C, 35° C, 40° C
- Proven gradual force throughout treatment
- Precise control of forces

FLI® COPPER NICKEL-TITANIUM

BENDALOY®

- Moderate to higher forces
- Nickel-free beta-titanium
- Solid bending characteristics and excellent formability
- Ideal for mid to finishing stages of treatment

bendaloy

TRU-CHROME®

- The highest quality of solid stainless steel in every wire
- Smooth, polished surfaces for reduced friction between bracket and arch
- Accurate forms and consistent forces for precise torque control
- Ideal for mid- to late stages of treatment
- Forces well-suited for stabilizing positioned teeth
- Excellent corrosion resistance

TRU-CHROME

SWLF®

- Available in thermal activated, superelastic and stainless steel wires
- Ideal for all phases of treatment

SWLF
STRAIGHT WIRE | LOW FRICTION

ELGILOY®

- Provides flexibility and control in force applications
- Longer functioning as a resilient spring wire without distortion or fatigue
- Easy heat-treated to increase physical properties
- Excellent formability for lab applications

ELGILOY

TRI-FLEX

- 3-stranded wire
- Initial stage arch
- Spring-tempered, twisted, leveling
- Gentle force

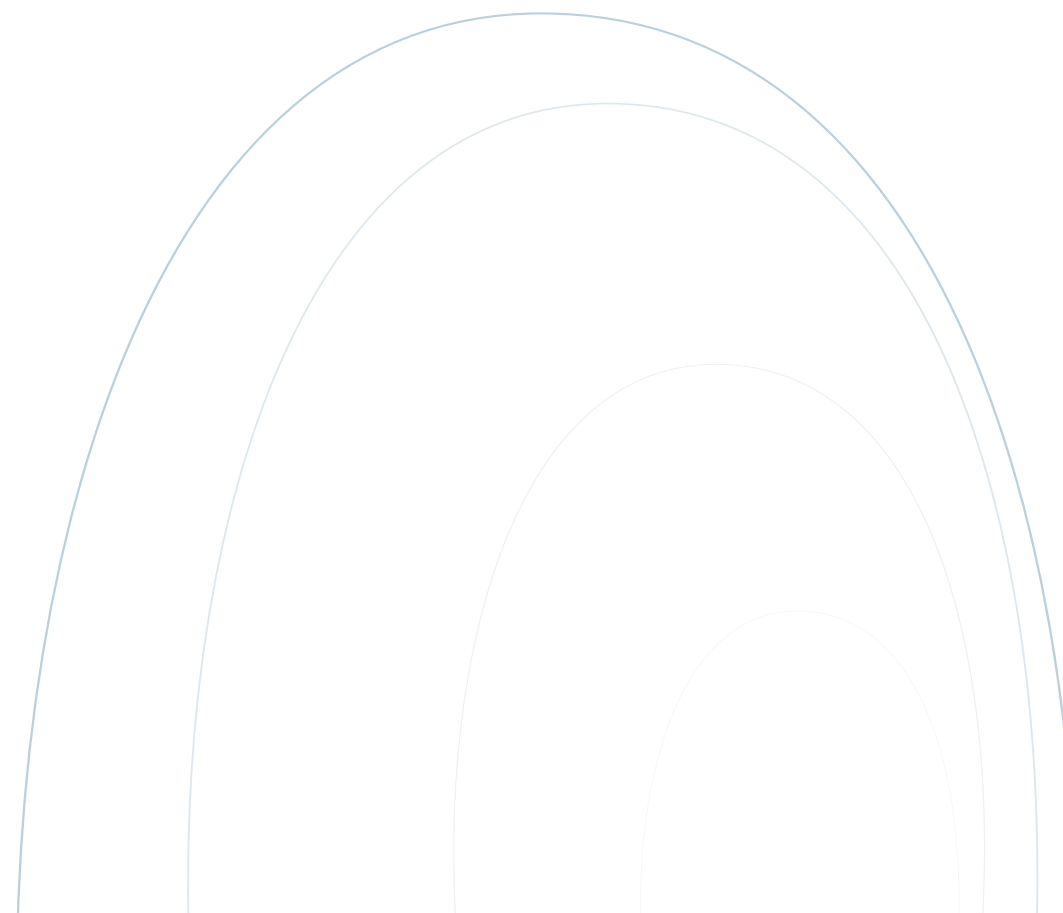
SUPRA-FLEX™

- 6-stranded wire
- Initial stage arch
- 5 exterior wires helically wound around a core wire
- Constant uniform light force

FLEX VIII™

- 8-stranded wire
- Initial stage arch
- Braided wire for unscrambling and leveling

Flex-VIII™



	.016 x .016	.017 x .017	.0175 x .0175	.018 x .018	.019 x .019	.020 x .020
Orthonal Natural Arch	X P			X P		
Orthonal Ideal Arch	X P			X		
Orthonal Expanded Arch	X P					
Orthonal Pentamorphic Normal Arch	X					
Orthonal Pentamorphic Ovoid Arch	X					
Orthonal Pentamorphic Narrow Tapered Arch	X					
Orthonal Pentamorphic Tapered Arch	X					
Orthonal Pentamorphic Narrow Ovoid Arch	X					
Orthonal Reverse Vector Arch	X					
Thermaloy Plus Natural Arch	X P **					X
Thermaloy Plus Ideal Arch	X					
Thermaloy Natural Arch	X P					X
Thermaloy Ideal Arch	X					
FLI Copper Nickel-Titanium Natural Arch (35)						X
FLI Aesthetic Coated Natural Arch (NiTi)	X					
FLI Aesthetic Coated Natural Arch (SS)	X					
Bendaloy Natural Arch	X					
Bendaloy Straight Length	X		X			
Tru-Chrome Pentamorphic Normal Arch	X					
Tru-Chrome Pentamorphic Tapered Arch	X					
Tru-Chrome Pentamorphic Ovoid Arch	X					
Tru-Chrome Pentamorphic Narrow Tapered Arch	X					
Tru-Chrome Pentamorphic Narrow Ovoid Arch	X					
Tru-Chrome Natural Arch	X			X	X	
Tru-Chrome Straight Length	X	X			X	
Yellow Elgiloy Pentamorphic Normal Arch	X	X				
Yellow Elgiloy Pentamorphic Tapered Arch	X	X				
Yellow Elgiloy Pentamorphic Ovoid Arch	X					
Yellow Elgiloy Pentamorphic Narrow Tapered Arch	X					
Yellow Elgiloy Pentamorphic Narrow Ovoid Arch	X					
Blue Elgiloy Natural Arch	X				X	
Blue Elgiloy Ideal Arch	X				X	
Blue Elgiloy Anterior Arch Blank	X					
Yellow Elgiloy Anterior Arch Blank	X					
Yellow Elgiloy Straight Length	X	X			X	
Blue Elgiloy Straight Length	X	X			X	
FLEX-VIII Braided Arch	X					

PUREPAK® WIRE PRODUCTS

- Each arch wire is individually packaged and sealed in
- RMO®'s PurePak® for enhanced product safety
- PurePak® protects against airborne contaminants and cross contamination
- Tear away tab enclosure for easy access to individually sealed wires
- RMO®'s PurePak® containers feature color-coded labels for easy identification of your wire inventories



*P indicates that the wire is available in a PurePak
 ** PurePak offered in Mandibular only

TERMS, TESTS AND CONTROLS FOR ORTHODONTIC WIRE

“Hardness” to an orthodontist means the ability of wire to exert continuous spring pressure. “Soft” means ease of bending. Engineers use “hardness” to indicate resistance to indentation and “soft” to denote low resistance to indentation. To the engineer, many “hard” wires have poor spring qualities and many “soft” wires do not bend easily. To establish common terminology, the following terms and test facts are worth doing:

TEST

Mechanical properties for wires are determined by tensile test, where a wire is pulled until it breaks. The pull (load) causes the wire to stretch (extension) until it breaks. People may use different size wires when they do this test. To normalize and compare results from different test shapes, results are reported as stress and strain. Stress is the intensity of the force that is applied over a cross-sectional area of the wire. Stress or “strength” is reported in units of pounds per square inch (psi), or in the metric (SI) system as pascals. Strain is the resulting change in length of the wire when a force is applied, referred to as the original length. Because strain is a ratio tensile strength or ultimate tensile is the highest stress recorded before the wire breaks. Tensile strength determines spring qualities of orthodontic wire. High tensile strength wires may make poor springs.

ELASTIC LIMIT

Maximum stress that can be applied before material is permanently deformed. At the elastic limit, the material will return to original length when load is released.

RESILIENCY

Tendency of material to return to original shape after release of load.

YIELD STRENGTH

Stress that when applied will permanently deform the wire to a smaller amount.

MODULUS OF ELASTICITY

Ratio between stress applied and deformation that results from stress.

PROPORTIONAL LIMIT

Maximum value of stress that is proportional to strain. Proportion limit and elastic limit are the same.

TOUGHNESS

Ability of wire to be ductile and strong. “Tough” materials take much bending before breaking. Brittleness implies lack of ductility. Brittle wire may have great tensile strength but fail when manipulated. A degree of brittleness is acceptable for certain orthodontic wires but not generally for orthodontic wires. Spring performance is the continuous deflecting of wire to test resistance to set and fatigue. The specimen withstanding the most severe deflections without being deformed permanently, possesses the greatest resistance to set. Wire withstanding the most deflections before failure has the greatest resistance to fatigue.

CORROSION RESISTANCE

A metal’s ability to maintain original finish and dimensions in certain solutions and in the mouth. While many more tests than outlined here are involved in establishing a practical selection of “controlled wires”, the final evaluation of the types best suited to clinical use is up to the orthodontist.

ROUND WIRES

	0.009	0.010	0.011	0.012	0.013	0.014	0.015	0.016	0.017
Orthonol Natural Arch				X P		X P		X P	
Orthonol Ideal Arch				X P		X P		X P	
Orthonol Expanded Arch					X P		X P	X P	
Orthonol Pentamorphic Normal Arch						X		X	
Orthonol Pentamorphic Ovoid Arch						X		X	
Orthonol Pentamorphic Narrow Tapered Arch						X		X	
Orthonol Pentamorphic Tapered Arch						X		X	
Orthonol Pentamorphic Narrow Ovoid Arch						X		X	
Orthonol Reverse Vector Arch								X	
Thermaloy Plus Natural Arch					X P	X P	X	X P	
Thermaloy Plus Ideal Arch					X	X	X	X	
Thermaloy Plus Expanded Arch					X P			X P	
Thermaloy Natural Arch					X P	X P	X P	X P	X P
Thermaloy Ideal Arch					X	X P **	X P	X P	
FLI Copper Nickel Titanium Expanded Arch (27)					X P	X P		X P	
FLI Copper Nickel Titanium Natural Arch (27)						X		X	
FLI Copper Nickel Titanium Natural Arch (35)								X	
FLI Aesthetic Coated Natural Arch (NiTi)						X		X	
Bendaloy Natural Arch								X	
Bendaloy Straight Length								X	
Tru-Chrome Pentamorphic Normal Arch						X		X	
Tru-Chrome Pentamorphic Tapered Arch						X		X	
Tru-Chrome Pentamorphic Ovoid Arch						X		X	
Tru-Chrome Pentamorphic Narrow Tapered Arch						X		X	
Tru-Chrome Pentamorphic Narrow Ovoid Arch								X	
Tru-Chrome Natural Arch						X		X	
Tru-Chrome Ideal Arch						X		X	
Tru-Chrome Anterior Arch Blank								X	
Tru-Chrome Straight Length		X	X	X		X		X	
Tru-Chrome Retainer Wire									
Tru-Chrome Retainer Clasp Wire									
Green Elgiloy Natural Arch								X	
Red Elgiloy Straight Length	X	X	X			X		X	
Green Elgiloy Straight Length		X				X		X	
Yellow Elgiloy Straight Length								X	
Blue Elgiloy Straight Length								X	
Blue Elgiloy Retainer Clasp									
Green Elgiloy Anterior Arch Blank								X	
Green Elgiloy Ideal								X	
SWLF Thermal NiTi Natural Arch					X		X		X
SWLF Superelastic NiTi Natural Arch					X				
TRI-FLEX Twisted Straight Length								X	
TRI-FLEX Twisted Arch								X	
SUPRA-FLEX Twisted Straight Length								X	
SUPRA-FLEX Twisted Arch								X	
SUPRA-FLEX Spool								X	

0.018	0.020	0.022	0.024	0.025	0.028	0.030	0.032	0.036	0.038	0.040	0.045	0.050	0.057	0.060
X P														
X														
X P														
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X P	X													
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X	X													
X	X	X	X	X	X	X	X	X		X	X	X		X
					X	X	X	X		X	X	X		X
					X	X	X	X	X	X	X	X		X
X														
X	X	X												
X														
X	X	X												
X	X	X												
X	X	X												

*P indicates that the wire is available in a PurePak
 ** PurePak offered in Mandibular only

RECTANGULAR WIRES

	.014 x .025	.016 x .018	.016 x .020	.016 x .022	.016 x .025
Orthonal Natural Arch				X P	
Orthonal Straight Length				X	
Orthonal Ideal Arch				X P	
Orthonal Expanded Arch				X P	
Orthonal Pentamorphic Normal Arch				X	
Orthonal Pentamorphic Ovoid Arch				X	
Orthonal Pentamorphic Narrow Tapered Arch				X	
Orthonal Pentamorphic Tapered Arch				X	
Orthonal Pentamorphic Narrow Ovoid Arch				X	
Orthonal Reverse Vector Arch				X	
Orthonal Natural Pre-Torqued (28)				X	
Orthonal Natural Pre-Torqued (34)				X	
Orthonal Natural Pre-Torqued (38)				X	
Thermaloy Plus Natural Arch	X			X P	
Thermaloy Plus Ideal Arch				X	
Thermaloy Plus Expanded Arch				X P	
Thermaloy Natural Arch	X			X P	
Thermaloy Ideal Arch				X P	
FLI Copper Nickel-Titanium Expanded Arch	X P				X P
FLI Copper Nickel-Titanium Natural Arch (27)	X			X	
FLI Copper Nickel-Titanium Natural Arch (35)				X	
FLI Copper Nickel-Titanium Natural Arch (40)				X	
FLI Copper Nickel Titanium Expanded Arch (27)	X P				X P
FLI Aesthetic Coated Natural Arch (NiTi)				X	
FLI Aesthetic Coated Natural Arch (SS)				X	
Bendaloy Natural Arch				X	
Bendaloy Straight Length				X	
Tru-Chrome Pentamorphic Normal Arch				X	
Tru-Chrome Pentamorphic Tapered Arch				X	
Tru-Chrome Pentamorphic Ovoid Arch				X	
Tru-Chrome Pentamorphic Narrow Tapered Arch				X	
Tru-Chrome Pentamorphic Narrow Ovoid Arch				X	
Tru-Chrome Natural Arch				X P	
Tru-Chrome Ideal Arch				X	
Tru-Chrome Anterior Arch Blank				X	
Tru-Chrome Straight Length (Square Cornered)				X	
Tru-Chrome Straight Length (Round Cornered)					
Yellow Elgiloy Pentamorphic Normal Arch				X	
Yellow Elgiloy Pentamorphic Tapered Arch				X	
Yellow Elgiloy Pentamorphic Ovoid Arch				X	
Yellow Elgiloy Pentamorphic Narrow Tapered Arch				X	
Yellow Elgiloy Pentamorphic Narrow Ovoid Arch				X	
Blue Elgiloy Natural Arch				X	
Blue Elgiloy Ideal Arch				X	
Blue Elgiloy Anterior Arch Blank				X	
Yellow Elgiloy Anterior Arch Blank				X	
Yellow Elgiloy Straight Length		X	X	X	
Blue Elgiloy Straight Length				X	
SWLF Thermal NiTi Arch				X	
SWLF Curve of Spee NiTi Arch				X	
SWLF Space Closing SS Arch				X	
SWLF Finishing Braided SS Arch					
SWLF Finishing Beta III Titanium Arch					
FLEX-VII Braided Arch				X	

	.017 x .022	.017 x .025	.018 x .022	.018 x .025	.019 x .025	.019 x .026	.021 x .025	.0215 x .028
		X		X	X P		X	
				X P	X			
		X P		X P	X			
		X P						
		X						
		X						
		X						
		X						
		X						
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X		X P	X P			
		X		X P	X			
		X P		X P				
		X P		X P	X P		X P	
		X P		X	X P			
				X P				
		X		X	X			
		X		X	X			
		X			X		X	
				X P				
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X			X			
		X	X	X		X		
	X	X	X	X	X	X	X	X
	X	X	X	X		X	X	X
		X			X			
		X						
		X			X			
		X			X			
		X			X			
		X		X	X			

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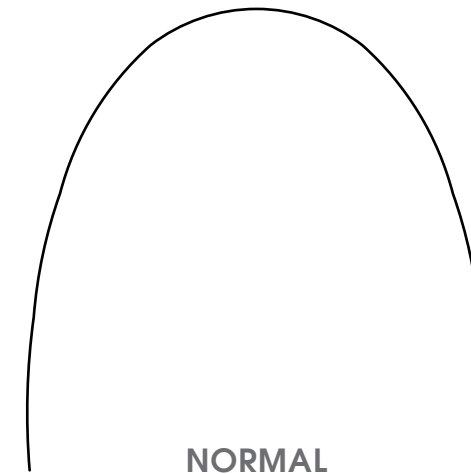
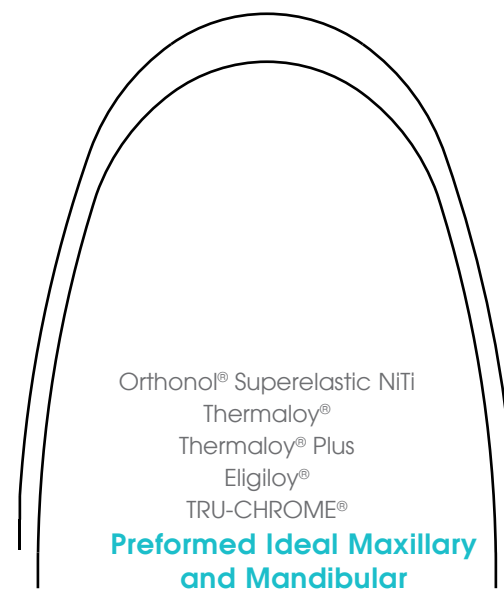
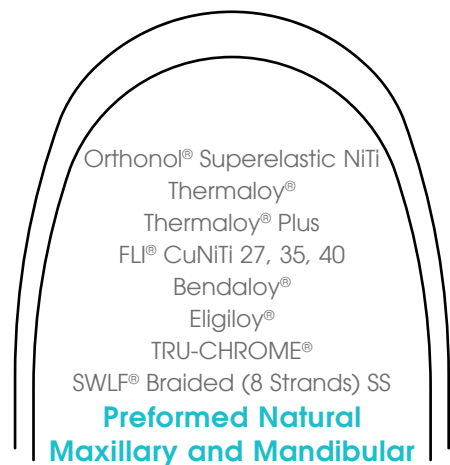
WIRES FORMS 1 TO 1

WIRE

Wires are a key component of any fixed appliance treatment. Recent metallurgical advances have created many options for today's orthodontics. RMO® is proud to have the most complete wire selection available in the market.

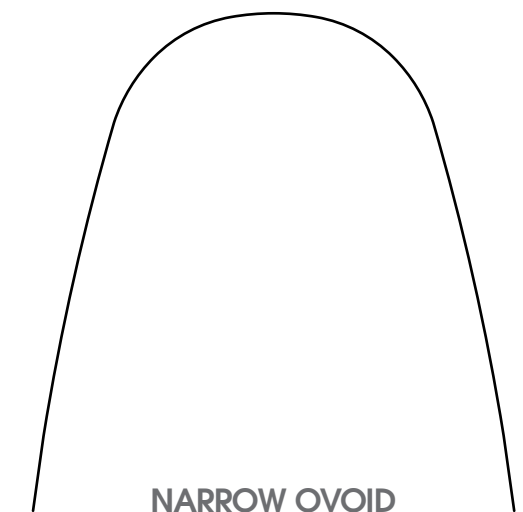
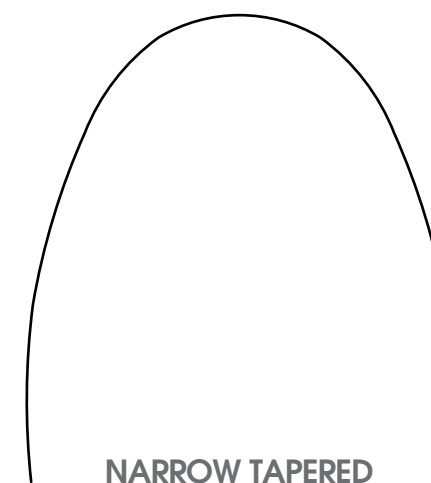
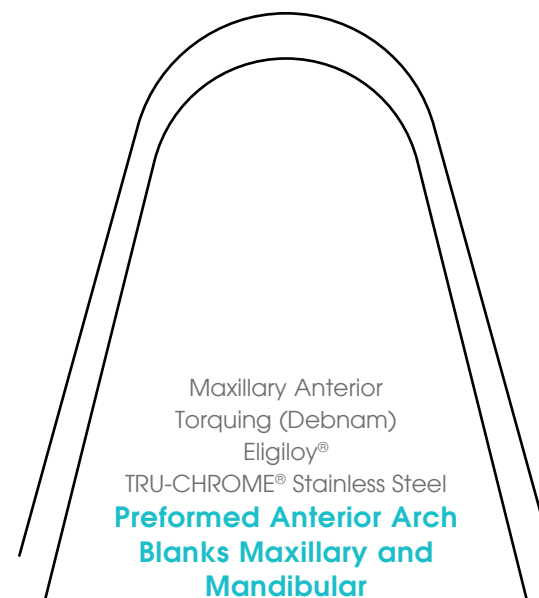
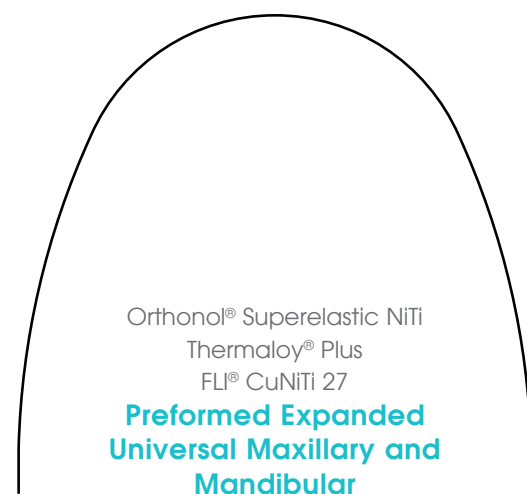
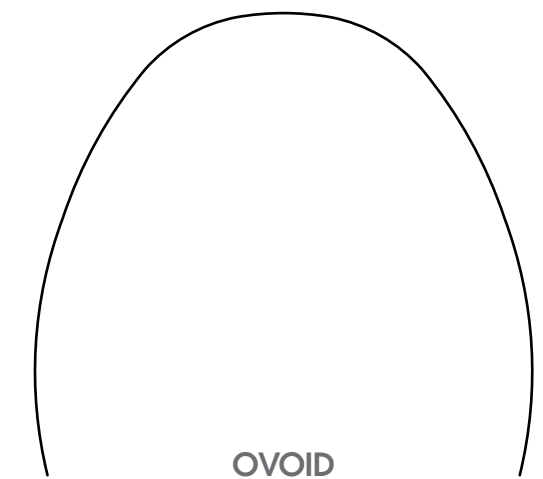
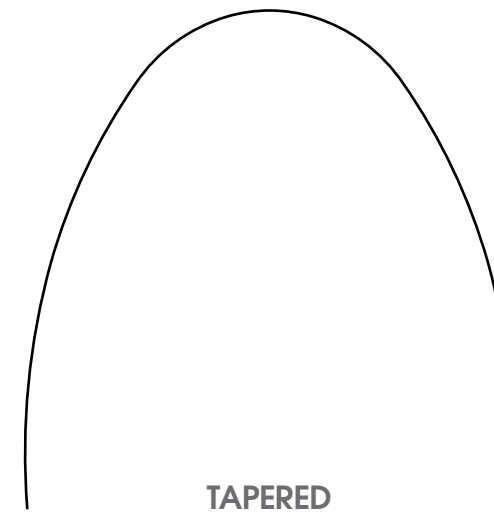
Key characteristics of wire to consider are:

- Strength
- Stiffness (or its inverse- springiness)
- Range
- Resilience
- Formability



Preformed Penta-Morphic®

NiTi (Orthonol® Dimpled)
Elgiloy® (Yellow Heat Treated)
Stainless Steel (TRU-CHROME®)





P00774 Rev.-