

Elgiloy®

Elgiloy® wire is a premium, specially-fabricated wire in four tempers. Each Elgiloy wire type has separate characteristics. Wire forms made from Elgiloy can be heat-treated, depending on the desired application. Elgiloy wire's toughness and flexibility are easily discernible with use.

Elgiloy wire is superior, as furnished, for forming, and in performance time during treatment. All tempers have the unique capability of beginning as a "softer" easily handled wire. Because Elgiloy wire can be used as is or heat-treated, it provides flexibility and control in force applications.

Elgiloy Development

RMO® was selected to develop Elgiloy for orthodontics because of its leadership in developing new materials for the profession. This "wonder metal", developed by the Elgin National Company as the "Heart That Never Breaks" in modern precision time pieces, is not a stainless steel. It is a patented cobalt-base alloy compounded of eight materials (cobalt 40%; chromium 20%; nickel 15%; molybdenum 7%; manganese 2%; beryllium .04%; carbon .15%; and iron 15.81%).

Elgiloy Offers Orthodontists Particular Advantages

- Superior physical properties
- Longer functioning as a resilient spring wire without distortion or fatigue
- Easy soldering without annealing
- Easy heat-treating to increase physical properties
- Simple electrolyte polishing

Maximum properties are not necessarily best for all orthodontic purposes. Full spring qualities are excellent for small diameter arch wires and coil springs, but larger wires of full spring temper are impossible to handle. It follows that the best qualities for a particular alloy form vary according to the work to be done to the material and the final usage. Recognizing this, RMO developed a series of different types of Elgiloy wires—each fabricated for specific applications and each identified by a color marking on the end. With a wide range of carefully engineered wire types, orthodontists can take full advantage of Elgiloy's superiority and versatility, whatever their techniques.

Elgiloy Wire Properties

- **Set resistance** – Retains power longer than stainless steel
- **Fatigue resistance** – More cycles than stainless steel without breakage
- **Greater spring efficiency** – Up to 20% more power than spring steel without an increase in dimensions
- **Corrosion resistance** – Outperforms chrome stainless steel by 17%
- **Non-magnetic** – Non-magnetic through all temperature ranges

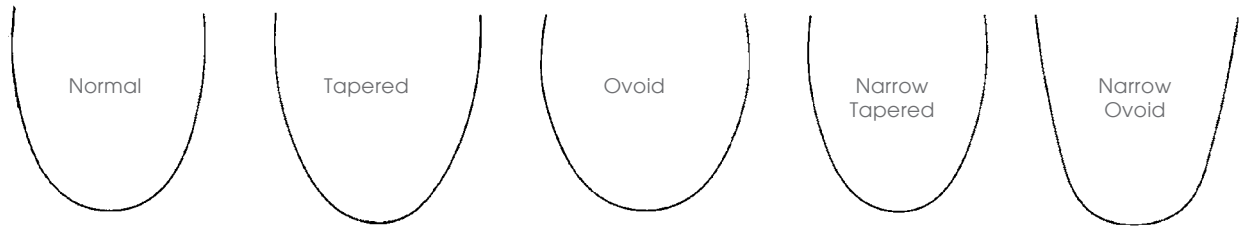
How to Use Elgiloy

- **Blue – Blue Elgiloy** is initially the softest of the tempers. It can be welded with low heat, and soldered without embrittling. Blue Elgiloy is recommended when the wire to be used is over .020" (0.508mm) or when the wire requires considerable bending, welding or soldering. Excellent for edgewise arches, lingual arches, retainers and removables.
- **Yellow – Yellow Elgiloy** is initially ductile and slightly harder than Blue. Using caution, you can spot-weld and solder to large Yellow Elgiloy wires, .021" x .025"; .030"; .036" (0.533mm x 0.635mm; 0.762mm; 0.914mm), without embrittling them. Some practitioners use Yellow as furnished, but it can be heat-treated if greater resiliency or spring performance is required. After heat-treating, Yellow can be adjusted slightly, but should not be adjusted sharply. It is excellent for flat wire techniques. Yellow Elgiloy is recommended where greater spring qualities are needed than those provided by Blue Elgiloy.
- **Green – Green Elgiloy** is initially semi-resilient and will temper comparable to high spring-tempered steel wires. It can be shaped easily with the fingers and can be plier-manipulated before heat-treating.
- **Red – Red Elgiloy** is initially "hard" with exceptionally high spring qualities. It is not recommended for heat-treating. Use where adjustments will not be required after heat-treating.

Penta-Morphic® Arches (Ricketts®)

- Developed by Dr. Robert Ricketts
- Finishing arches for post-treatment provide long-term stability
- Five arch forms: normal, tapered, ovoid, narrow tapered, narrow ovoid
- Tooth size, facial type, and other morphological considerations have been built into the five forms
- Distal length for individualized bends or continuation to second molar
- Maxillary or mandibular
- Yellow Elgiloy Penta-Morphic arches are heat-treated to maintain form and resiliency
- Yellow Elgiloy (heat-treated)

	RECTANGULAR .016" x .022" (0.406mm x 0.559mm)	RECTANGULAR .017" x .025" (0.432mm x 0.635mm)	RECTANGULAR .018" x .025" (0.457mm x 0.635mm)	RECTANGULAR .019" x .025" (0.483mm x 0.635mm)	SQUARE .016" x .016" (0.406mm x 0.406mm)	SQUARE .017" x .017" (0.432mm X 0.432mm)	Package Contains
Normal	E00551	E01025	E01030	E01040	E01020	E01070	10
Tapered	E00552	E01026	E01031	E01041	E01021	E01071	10
Ovoid	E00553	E01027	E01032	E01042	E01022	E01072	10
Narrow Tapered	E00554	E01028	E01033	E01043	E01023		
Narrow Ovoid	E00555	E01029	E01034	E01044	E01024		

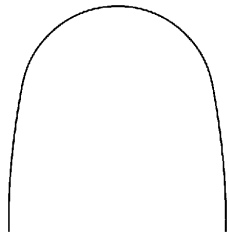


Order Number | Package Contains

Penta-Morphic® Arch Selector

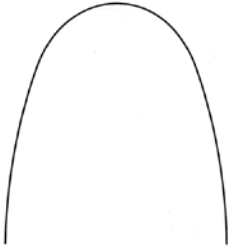
8" x 10" Vinylite	i00509	1
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Elgiloy® Preformed Natural Arches



- Maxillary and mandibular arches are distinguished by permanent midline etchmarks: Three lines for a maxillary arch, one line for a mandibular arch
- Elgiloy arches are delivered unheat-treated, allowing complex bends and loops to be easily made. After bending, Elgiloy arches can be heat-treated to increase their springiness

Inch	Size	(mm)	Blue Elgiloy® (unheat-treated)		Green Elgiloy® (unheat-treated)		Package Contains
			Max.	Man.	Max.	Man.	
ROUND							
.016		(0.406)			A07502	A07522	100
.018		(0.457)			A07503	A07523	100
SQUARE							
.016 x .016		(0.406 x 0.406)	A07505	A07525			10
.019 x .019		(0.483 x 0.483)	A07506	A07526			10
RECTANGULAR							
.016 x .022		(0.406 x 0.559)	A07507	A07527			10
.017 x .025		(0.432 x 0.635)	A07508	A07528			10
.018 x .025		(0.457 x 0.635)	A07509	A07529			10



Elgiloy® Preformed Ideal Arches

- Maxillary and mandibular arches are distinguished by permanent midline etchmarks: Three lines for a maxillary arch, one line for a mandibular arch
- Elgiloy arches are delivered unheat-treated, allowing complex bends and loops to be easily made. After bending, Elgiloy arches can be heat-treated to increase their springiness

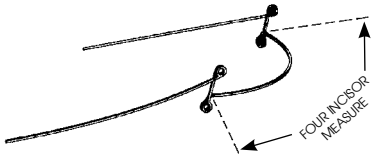
Inch	Size (mm)	Blue Elgiloy® (unheat-treated)		Green Elgiloy® (unheat-treated)		Package Contains
		Max.	Man.	Max.	Man.	
ROUND						
.016	(0.406)			A07552	A07572	100
.018	(0.457)			A07553	A07573	100
SQUARE						
.016 x .016	(0.406 x 0.406)	A07555	A07575			10
.019 x .019	(0.483 x 0.483)	A07556	A07576			10
RECTANGULAR						
.016 x .022	(0.406 x 0.559)	A07557	A07577			10
.017 x .025	(0.432 x 0.635)	A07558	A07578			10
.018 x .025	(0.457 x 0.635)	A07559	A07579			10



Elgiloy® Arch Blanks

- Maxillary and mandibular arches are distinguished by permanent midline etchmarks: Three lines for a maxillary arch, one line for a mandibular arch
- Elgiloy arch blanks are packaged in their unheat-treated state making complex bends and loops easier. After bending Elgiloy, arches can be heat-treated to increase their springiness
- Blue Elgiloy arches can be welded with low heat and soldered without embrittling
- Yellow Elgiloy arches are slightly harder than blue. Using caution, they can be spot welded and soldered without embrittling

Inch	Size (mm)	Blue Elgiloy® (unheat-treated)		Yellow Elgiloy® (unheat-treated)		Green Elgiloy® (unheat-treated)		Package Contains
		Max.	Man.	Max.	Man.	Max.	Man.	
ROUND								
.016	(0.406)					A00861	A00866	100
SQUARE								
.016 x .016	(0.406 x 0.406)	A00917	A00922	A00907	A00912			10
RECTANGULAR								
.016 x .022	(0.406 x 0.559)	A00888	A00897	A00870	A00879			10
.017 x .025	(0.432 x 0.635)	A00890	A00899	A00872	A00881			10
.018 x .025	(0.457 x 0.635)	A00892	A00901					10
.019 x .026	(0.483 x 0.660)	A00893	A00902					10



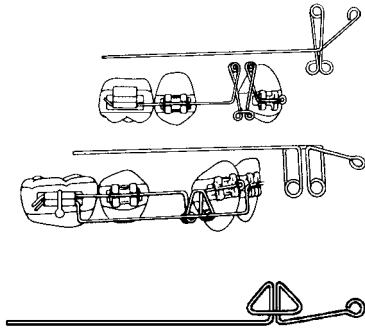
Maxillary Anterior Torquing Retractor (Bench®)

- Blue Elgiloy® .016" x .016" (0.406mm x 0.406mm), unheat-treated

Size	Incisor Measurement (mm)	Order Number	Package Contains
0	(30.0mm)	E00148	5
.5	(32.0mm)	E00149	5
1	(35.0mm)	E00150	5
2	(40.0mm)	E00151	5
3	(45.0mm)	E00152	5

Bioprogressive® Auxiliaries (Ricketts®)

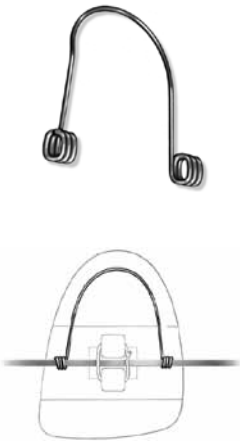
- Blue Elgiloy® .016" x .016" (0.406mm x 0.406mm), unheat-treated



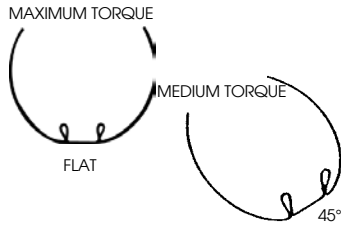
	Position	Order Number	Package Contains
Maxillary Cuspid Retractor	Right	A00520	4
	Left	A00521	4
Mandibular Cuspid Retractor	Right	A00519	4
	Left	A00518	4
Double Delta Sectionals • Cuspid Retractor for closing small spaces	Mandibular Left	E00815	3
	Mandibular Right	E00816	3
	Maxillary Left	E00817	3
	Maxillary Right	E00818	3

Anterior Torquing Spring (Warren)

- Applies continuous torquing action to individual anterior teeth
- Spring slips on arch wire straddling the bracket on the anterior tooth to be moved
- Placement of the arch wire in the bracket activates the spring, providing single contact with the tooth surface
- Each size is designed for a specific wire dimension and will not grip other dimensional wire sizes or round wire
- Green Elgiloy® heat-treated



Spring Size (mm)		For Arch Wire Size (mm)		Order Number	Package Contains
Inch	(mm)	Inch	(mm)		
.010	(0.254)	.010 x .028	(0.254 x 0.711)	A00465	10
.011	(0.279)	.016 x .022	(0.406 x 0.559)	A00466	10
.011	(0.279)	.018 x .025	(0.457 x 0.635)	A00474	10
.011	(0.279)	.019 x .026	(0.483 x 0.660)	A00467	10



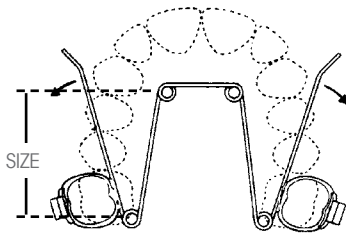
Light Wire Torquing Arch (Von Der Heydt)

- Inserted in the central light wire brackets and secures with pins
- Activated by tying distal ends to the arch wire with ligating wire
- Heat-treated Red Elgiloy® .014" (0.356 mm)
- Do not make bends in wire

	Order Number	Package Contains
For maximum torque	F00133	4
45° for medium torque	F00134	4

Maxillary Quad Helix (Ricketts®)

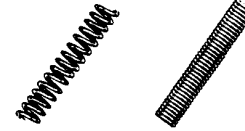
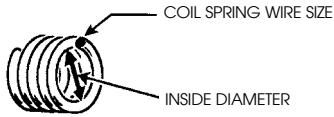
- Continuous controlled force application, solder to bands
- For rotation or stabilization of molars, for expansion, or for contraction of the arch
- .038" (0.965mm) Blue Elgiloy® unheat-treated



	Order Number	Package Contains
1 - 14mm	A00510	3
2 - 18mm	A00511	3
3 - 24mm	A00512	3
4 - 28mm	A00513	3
5 - 37mm	A00514	3
Assortment, one of each size	K00690	5

Coil Springs – Unheat-treated

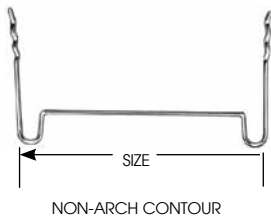
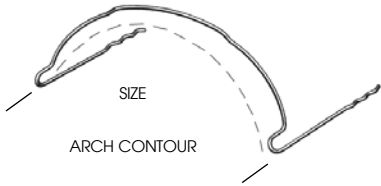
- Super resilient
- Extremely durable
- Precision wound
- Red Elgiloy®



Coil Spring Wire Size		Inside Diameter Accepts Arch Wire Size (mm)	Open Coil Spring	Closed Coil Spring	Package Contains
.007"	x	.028" (0.178 x 0.711)	F00096		2' (60cm)
.007"	x	.030" (0.178 x 0.762)	F00098		2' (60cm)
.008"	x	.022" (0.203 x 0.559)	F00022		2' (60cm)
.008"	x	.025" (0.203 x 0.635)	F00024		2' (60cm)
.008"	x	.028" (0.203 x 0.711)	F00026		2' (60cm)
.008"	x	.030" (0.203 x 0.762)	F00028	F00029	2' (60cm)
.008"	x	.032" (0.203 x 0.813)	F00030		2' (60cm)
.008"	x	.036" (0.203 x 0.914)	F00032	F00033	2' (60cm)
.009"	x	.028" (0.229 x 0.711)	F00042		2' (60cm)
.009"	x	.030" (0.229 x 0.762)	F00044	F00045	2' (60cm)
.009"	x	.032" (0.229 x 0.813)	F00046	F00047	2' (60cm)
.009"	x	.036" (0.229 x 0.914)	F00048		2' (60cm)
.009"	x	.040" (0.229 x 1.016)	F00050		2' (60cm)
.010"	x	.028" (0.254 x 0.711)	F00058		2' (60cm)
.010"	x	.030" (0.254 x 0.762)	F00060	F00061	2' (60cm)
.010"	x	.032" (0.254 x 0.813)	F00062		2' (60cm)
.010"	x	.036" (0.254 x 0.914)	F00064	F00065	2' (60cm)
.010"	x	.040" (0.254 x 1.016)	F00066		2' (60cm)
.010"	x	.045" (0.254 x 1.143)	F00080		2' (60cm)

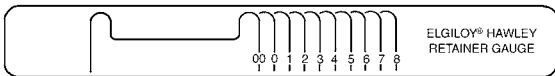
Hawley Labial Retainer Forms – Unheat-treated

- Blue Elgiloy® .030" (0.762mm) – easily contoured
- Can be used as is or heat-treated to greater resiliency
- "Serrated" end sections provide stability in acrylic



Size	Width	Arch Contour (with anterior offset)	Nonarch Contour (for custom fitting)	Package Contains
00	1 3/8" (34.92mm)	E00600	A00238	5
0	1 1/2" (38.10mm)	E00601	A00239	5
1	1 5/8" (41.28mm)	E00602	A00240	5
2	1 3/4" (44.45mm)	E00603	A00241	5
3	1 7/8" (47.62mm)	E00604	A00242	5
4	2" (50.80mm)	E00605	A00243	5
5	2 1/8" (53.98mm)	E00606	A00244	5
6	2 1/4" (57.15mm)	E00607	A00245	5
7	2 3/8" (60.32mm)	E00608	A00273	5
8	2 1/2" (63.50mm)	E00609	A00274	5

Hawley Arch Selector



Order Number	Package Contains
i00513	1



Elgiloy® Wire ● Round, 14" (35.56cm) Lengths

Inch	Size (mm)	Red (Resilient)	Green (Semi-resilient)	Yellow (Ductile)	Blue (Soft)	Package Contains
.009	(0.229)	E00209				30
.010	(0.254)	E00210	E00273			30
.011	(0.279)	E00211				30
.014	(0.356)	E00214	E00278			30
.016	(0.406)	E00216	E00280	E00201	E00282	30
.018	(0.457)	E00218	E00281	E00202	E00283	20
.020	(0.508)		E00203	E00284	E00220	20
.022	(0.559)		E00204	E00285	E00222	20
.025	(0.635)			E00205	E00225	10
.028	(0.711)			E00206	E00228	10
.030	(0.762)			E00207	E00230	10
.032	(0.813)			E00276	E00232	10
.036	(0.914)			E00208	E00236	10
.038	(0.965)				E00221	10
.040	(1.016)				E00237	6
.045	(1.143)				E00238	6
.060	(1.524)				E00226	5

Elgiloy® Wire ■ Square (Square cornered), 14" (35.56cm) Lengths

.016 x .016	(0.406 x 0.406)		E00300	E00304	10
.017 x .017	(0.432 x 0.432)		E00301	E00305	10
.019 x .019	(0.483 x 0.483)		E00289	E00242	10

Elgiloy® Wire ● Square (w/rounded corners), Ricketts®, 14" (35.56cm) Lengths

.017 x .017	(0.432 x 0.432)			E00317	10
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Elgiloy® Wire ■ Rectangular (Square cornered), 14" (35.56cm) Lengths

.016 x .018	(0.406 x 0.457)		E00258		10
.016 x .020	(0.406 x 0.508)		E00296		10
.016 x .022	(0.406 x 0.559)		E00302	E00306	10
.017 x .022	(0.432 x 0.559)		E00303	E00307	10
.017 x .025	(0.432 x 0.635)		E00308	E00345	10
.018 x .022	(0.457 x 0.559)		E00286	E00239	10
.018 x .025	(0.457 x 0.635)		E00293	E00245	10
.019 x .025	(0.483 x 0.635)		E00259		10
.019 x .026	(0.483 x 0.660)		E00292	E00294	10
.021 x .025	(0.533 x 0.635)		E00287	E00240	10
.0215 x .028	(0.546 x 0.711)		E00288	E00241	10

Elgiloy® Wire ■ Flat Ribbon Arch, 14" (35.56cm) Lengths

.010 x .020	(0.254 x 0.508)		E00260		10
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Elgiloy® Wire ● Round Retainer Clasp, 14" (35.56cm) Lengths

.030	(0.762)			E00230	10
.032	(0.813)			E00232	10
.036	(0.914)			E00236	10
.038	(0.965)			E00221	10
.040	(1.016)			E00237	6
.045	(1.143)			E00238	6
.060	(1.524)			E00226	5

Recommended when the wire to be used is .030 or larger and when considerable bending or soldering is required.