ANTERIOR PRE-TORQUED SUPER ELASTIC NiTi

**True Super Elastic forces vs high force stainless steel**

Rapid transition from 20 degree to 0 degree torque.

**BENEFITS**
* Reduced force levels provide gentle, efficient torquing forces.
* Minimal intercisial anterior crown movement while simultaneously providing efficient root torque and paralleling.

**SIZES**
- .017x.025 or .019x.025
- 28 mm (lower anterior rollout control) *Symmetry only
- 34 mm (mid-range; most popular size)
- 38 mm (for broader upper arches)

**Reverse Curve of Spee Pro Force NiTi**

**Type 1**
A moderate radius exerts near ideal force for correction of severe curve of spee cases.

**Type 2**

**Type 3**
Shallower radius than Type 1 which allows for a lighter force throughout the entire arch. Type 3 offers easy ligation and provides gentle, comfortable tooth movement.

**Type 4**
Very tight arch form with 'toed-in' molar section, resulting in effective molar rotation and realignment. Our most aggressive tooth-moving RCS due to the tight radius.

**Type 5**

**Type 6**
Blending Type 1 with Type 4 yields RCS with a slightly shallower 'rocking chair' radius than Type 1, but not as narrow as Type 4. Type 6 is perfect for bite opening and closing, leveling and aligning, and deep and open bite correction.

“H” Type
Sweeping straight distal legs provide multiple solutions. “H” Type is excellent for tilting back molars for anchorage.

“H” easily puts curve of spee on the upper arch and can be used to torque molars buccally. Intrusion or extrusion of anterior teeth can also be accomplished. Flip “H” Type to expand the lower arch.

Toll free: 800.642.3009 - 816.228.6594 - fax: 816.228.4872 - www.phoenixorthodontics.com - email: sales@phoenixorthodontics.com
MOLYBDENUM TITANIUM ARCHWIRE

MTA is 40% stronger than SE nickel titanium, but has only 45% of the stiffness of stainless steel.

MTA features accurate wire dimensions, reduced edge bevel, smooth surface and higher resistance to fracture.

Effectually address rotations, leveling, space closure, and curve of spee issues. Loops and bends can be easily formed without archwire fracturing.

Moderate, resilient forces allow early torque control and three dimensional adjustments.

Precision dimension final detailing wires for excellent treatment finish.

ROUND

\[ \text{SQUARE \& RECTANGULAR:} \quad 0.016x.016, \ 0.016x.022, \ 0.017x.025, \ 0.018x.018, \ 0.018x.025, \ 0.019x.025, \ 0.021x.025 \]

STAINLESS STEEL AUXILARIES

Palatal Bars

0.036” with double back bends for arch maintenance, molar rotation and distalization. Available in kit of 40 or individually. Specify mesial or distal loop.

SIZE in mm

35 37 39 41 43 45 47 49 51 53 55

MESIAL LOOP

DISTAL LOOP

SQUARE & RECTANGULAR

ROUND

0.016 & 0.018

SQUARE & RECTANGULAR

RECTANGULAR

ROUND

0.016 & 0.018

SQUARE & RECTANGULAR

RECTANGULAR

0.016 x 0.022, 0.017 x 0.025, 0.018 x 0.025, 0.019 x 0.025, 0.021 x 0.025

(All sizes = 10 wires per pack)

A. J. Wilcock

Uprighting Springs

Mini Uprighting Springs (Supreme Grade)

Short leg .010

Long leg .010

lower left CCW

lower right CW

lower left CCW

lower right CW

lower left CCW*

lower right CW*

Uprighting Springs (Premium Grade+)

Short leg .012/.014

Long leg .012/.014

lower left CCW

lower right CW

lower right CW

10/ pack

Phoenix “Blue Temp” nickel cobalt wire allows intricate bending without fracture or stress. If desired, “Blue Temp” may be heat treated after formation at 900 degrees for 10 minutes. This will increase tensile strength and resiliency dramatically. Excellent for archwire and removable and functional appliances.

“Blue Temp” Nickel Cobalt Alloy

Symmetry and Modern Standard Arches

Stainless steel 14” lengths (spring hard temper)

Round (20/ tube)

0.012, .014, .016, .018, .020

Rectangular (10/ tube)

0.016 x 0.016, .016 x .022, .017 x .022, .017 x .025, .018 x .018, .018 x .022, .018 x .025, .019 x .025, .020 x .020, .021 x .025

Removable Quad Helix

0.036 spring temper steel for palatal expansion and arch width maintenance.

SIZES: 1 (41.9mm), 2 (43.6mm), 3 (45.4mm), 4 (47.2mm), 5 (50mm)
RESILIENT
Ultra smooth bright mirror-finished archwire. Manufactured flat with less than one degree torque on all rectangular sizes.

RESILIENT PLUS
Heat treated, stress relieved, gold-tone finish with slightly higher spring and stiffness qualities than RESILIENT.

ROUND (PKG. 100)
.014 .016 .018 .020

SQUARE / RECTANGULAR (PKG. 10)
.016x.016, .016x.022, .016x.025, .017x.022,
.017x.025, .018x.018, .018x.022, .018x.025
.019x.025, .020x.020, .021x.025

Phoenix does not imply endorsement by Drs. Roth, McLaughlin, Bennett, Trevisi or Damon

8 BRAID SYMMETRY OR SYMMETRY 2
Provides early torque control.
Intermediate use between round and rectangular stainless steel.
Finish wire with vertical elastics.

COAXIAL SYMMETRY
30’ SPOOLS
14” LENGTHS
Resists unraveling when cut. Very light and gentle forces. Initial archwire to level and align.

Toll free: 800.642.3009 - 816.228.6594 - fax: 816.228.4872 - www.phoenixorthodontics.com - email: sales@phoenixorthodontics.com
A.J. Wilcock Australian 25' Wire Spools
Regular, Regular+, Special, Special+, .012, .014, .016, .018, .020
Premium, .012, .014, .016, .018

A.J. Wilcock COLOR CODES
Regular (pink): Easiest to bend.
Regular+ (green): Easy to bend. Increased tensile strength.
Special (blue): Higher force with minimal breakage.
Special+ (yellow): Caution when bending to avoid fracture.

A.J. Wilcock Straight Lengths
Round (10" lengths. 30 lengths/tube)
Available: Reg, Reg+, Sp, Sp+, Pr, Pr+ .012, .014, .016, .018, .020

Rectangular (10" lengths. 10 lengths/tube)
Available: Special Grade & Special+. .016x.016, .016x.022, .017x.022, .017x.025, .018x.022, .018x.025, .019x.025, .021x.025, .0215x.027

Notice: All A.J. Wilcock products are not returnable for credit or exchange.

Premium Grade STAINLESS STEEL ARCHWIRE

STAINLESS STEEL SPECIALTY WIRE

KEY HOLE

T-LOOP

TEAR DROP

POSTED

SIZES: UPPER 34-44mm lower 22-32mm
Symmetry arch: .016x.016 (2 loop only), .016x.022, .017x.025, .018x.025, .019x.025
Standard arch: .016, .018, .020
.016x.016, .016x.022, .017x.025, .018x.025, .019x.025, .021x.025. 10 wires / pack.

SIZES: UPPER 36-46mm lower 24-34mm
.016x.022, .017x.025, .018x.025, .019x.025 .021x.025 (standard only). 10 wires / pack.

SYMMETRY
UPPER 36-46mm lower 24-34 mm
.016x.022, .017x.022, .018x.025, .019x.025
10 wires / pack.

SYMMETRY-DAMON TYPE
UPPER 30-44mm Lower 22-32 mm
.016X.025, .017x.025, .019X.025 .021x.025 10 wires / pack.

A.J. Wilcock Australian Wire Arches
Unsurpassed in resiliency and hardness with incredible levels of stored energy for rapid tooth alignment. Rectangular wire is sharp cornered with minimum radius for highest possible torque values.

Special + .014, .016, .018, .020
.016x.016, .016x.022, .017x.022, .017x.025, .018x.018, .018x.022, .018x.025, .019x.025, .020x.020, .021x.025
Premium (not for intricate bending) .022
Premium+ (not for intricate bending) .014, .016, .018

All Wilcock wires: 25 wires / pack.

Toll free: 800.642.3009 - 816.228.6594 - fax: 816.228.4872 - www.phoenixorthodontics.com - email: sales@phoenixorthodontics.com
Phoenix Orthodontics wire products are certified to the highest levels of ISO 13485 (Quality Management System for Medical Devices) and incorporate full compliance requirements with CE Marking and the FDA QSR. Our orthodontic products conform to the provisions of the European Medical Device Directive (93/42/EEC), Annex II, for full quality assurance system. In addition, Phoenix Orthodontics, Inc. is FDA registered and all Phoenix manufacturers adhere to Quality Systems Regulations (Good Manufacturing Practices) as prescribed in the Code of Federal Regulations.

**RELATIVE FORCE AND DEFORMATION CHART**

**MANUFACTURING OVERVIEW**

**STAINLESS STEEL:**
All Phoenix stainless steel archwires are manufactured from 304VAR (Vacuum Air Remelted) material. 304 VAR stainless steel yields more uniform chemistry with minimal voids and contaminant. This process greatly reduces brittleness which may lead to breakage.

Functional testing is conducted to ensure highly reliable archwire of consistent high quality. Exacting wire tolerances are maintained throughout manufacture. Tight corner radii on Phoenix square and rectangular wire prevents spinning or slippage of wire in bracket slots. Strict flatness, tensile strength, and midline/posterior torque requirements on all archwire. No excessive torque (+3 degrees) guaranteed.

**NICKEL TITANIUM:**
All Phoenix nickel titanium archwires are rigidly inspected for product assurance. To assure optimum performance of our nickel titanium archwire, test methods are employed to identify forces and efficiency during the loading (engagement) and unloading (working) phases. When our archwire is engaged in the bracket, it exerts a “working” force to align the teeth and remove the offset between the brackets. To simulate actual use, our quality assurance department uses a three point bend test method. This testing accurately verifies the engagement and working forces of the nickel titanium arches.

The test measures the two forces; the force required to deform the archwire to a specified distance, and the force the wire exerts to return to its original shape. Our goal is to offer high efficiency archwire that not only offers more comfort to the patient but reduces valuable chair time.
*Phoenix Orthodontics does not claim endorsement by Drs. Roth, Alexander, McLaughlin, Bennett, Trevisi, or Damon.

(Standard Arch Blanks Available in Super Elastic NT and Stainless Steel)
Super Elastic Nickel Titanium Archwire

- Unique shape memory provides near constant unloading (tooth moving) forces in the middle range, regardless of the degree of deflection.
- SE arches work exceptionally well even in the most severe malpositions.
- Friction free, ultra-smooth finish allows brackets to slide easily along the wire.

Three point load cell testing: archwire deflection in 100°F water bath measuring loading and unloading forces. 3mm deflection over a 10mm span.

**Rectangular Phoenix SE**

<table>
<thead>
<tr>
<th>Wire Dimension</th>
<th>0.015</th>
<th>0.016</th>
<th>0.017</th>
<th>0.018</th>
<th>0.019</th>
<th>0.020</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.025</td>
<td>660</td>
<td>658</td>
<td>661</td>
<td>659</td>
<td>661</td>
<td>660</td>
</tr>
<tr>
<td>0.030</td>
<td>658</td>
<td>659</td>
<td>661</td>
<td>660</td>
<td>661</td>
<td>660</td>
</tr>
<tr>
<td>0.035</td>
<td>659</td>
<td>660</td>
<td>661</td>
<td>660</td>
<td>661</td>
<td>660</td>
</tr>
<tr>
<td>0.040</td>
<td>660</td>
<td>661</td>
<td>661</td>
<td>660</td>
<td>661</td>
<td>660</td>
</tr>
<tr>
<td>0.045</td>
<td>661</td>
<td>661</td>
<td>661</td>
<td>660</td>
<td>661</td>
<td>660</td>
</tr>
</tbody>
</table>

**Round Phoenix SE**

<table>
<thead>
<tr>
<th>Wire Dimension</th>
<th>0.012</th>
<th>0.014</th>
<th>0.016</th>
<th>0.018</th>
<th>0.020</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.013</td>
<td>59</td>
<td>64</td>
<td>69</td>
<td>73</td>
<td>207</td>
</tr>
<tr>
<td>0.016</td>
<td>139</td>
<td>139</td>
<td>139</td>
<td>139</td>
<td>207</td>
</tr>
<tr>
<td>0.018</td>
<td>207</td>
<td>207</td>
<td>207</td>
<td>207</td>
<td>207</td>
</tr>
</tbody>
</table>

**Square & Rectangular:**

- .016 x .016, .016 x .022, .017 x .025,
- .018 x .018, .018 x .025, .019 x .025,
- .020 x .020, .021 x .025

**Square & Rectangular:**

- .014 x .025*, .016 x .016, .016 x .022,
- .016 x .025*, .017 x .025, .018 x .018,
- .018 x .025, .019 x .025, .020 x .020,
- .021 x .025

**Square & Rectangular:**

- .016 x .016, .016 x .022, .017 x .025,
- .018 x .018, .018 x .025, .019 x .025,
- .020 x .020, .021 x .025

Center Stop option prevents arch wire creep and rotation out of buccal tubes and eliminates the need to heat and cinch distal ends of archwire. The entire archwire remains active, even in molar tubes.

Reverse Curve of Spee

**Round:**

- .014, .016, .018, .020

**Square & Rectangular:**

- .016 x .016, .016 x .022, .017 x .025,
- .018 x .025, .019 x .025, .021 x .025

**H** Type

- Similar in shape to Symmetry.
- "Rocking Chair" radius towards anterior prevents bite collapse.
- Straight, level posterior segment. No "Toe-In."

**Original**

- Moderate anti-rotation for molars.
- Deep curve mesial of cuspids to correct severe or closed bites.
- Wide, circular arch.

Toll free: 800.642.3009 - 816.228.6594 - fax: 816.228.4872 - www.phoenixorthodontics.com - email: sales@phoenixorthodontics.com
Progressive loading and unloading forces in a moderate range that can increase efficiency and require fewer archwire changes. The higher the degree of deflection, the greater the return or tooth moving forces.

Highly effective in space closure/retractions, stubborn rotations, leveling and arch form development.

Rectangular dimensions are excellent finishing wires where complete torque control is required. Slight detailing in the vertical and horizontal planes is accomplished with our narrow three prong plier.

*Center Stop* option prevents arch wire creep and rotation out of buccal tubes and eliminates the need to heat and cinch distal ends of arch wires. The entire archwire remains active, even in molar tubes.

<table>
<thead>
<tr>
<th>SQUARE &amp; RECTANGULAR:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ROUND:</td>
<td>.016 x .016, .016 x .022, .017 x .025, .018 x .018, .018 x .025, .019 x .025, .020 x .020, .021 x .025</td>
</tr>
<tr>
<td>ROUND:</td>
<td>.016 x .016, .016 x .022, .017 x .025, .018 x .018, .018 x .025, .019 x .025, .020 x .020, .021 x .025</td>
</tr>
</tbody>
</table>

**Round**

- .012, .014, .016, .018, .020
  - Roth compatible arch

- .014, .016, .018
  - Alexander/MBT compatible arch

- .014, .016
  - Damon compatible arch

- .016 x .016, .016 x .022, .017 x .025

<table>
<thead>
<tr>
<th>Edgewise unloading V/H* forces (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.016 x .016 = 260/260</td>
</tr>
<tr>
<td>.016 x .022 = 330/475</td>
</tr>
<tr>
<td>.017 x .025 = 410/630</td>
</tr>
<tr>
<td>.018 x .018 = 325/325</td>
</tr>
<tr>
<td>.018 x .025 = 530/660</td>
</tr>
<tr>
<td>.019 x .025 = 566/730</td>
</tr>
<tr>
<td>.020 x .020 = 450/450</td>
</tr>
<tr>
<td>.021 x .025 = 660/850</td>
</tr>
</tbody>
</table>

*vertical and horizontal

<table>
<thead>
<tr>
<th>ROUND:</th>
</tr>
</thead>
<tbody>
<tr>
<td>.014 x .025, .016 x .025, .016 x .022, .017 x .025, .018 x .025, .019 x .025, .020 x .020, .021 x .025</td>
</tr>
</tbody>
</table>

**“H” TYPE RCS SYMMETRY 2**

- Closing bite action on the upper arch.
- Easily places curve of Spee on the upper arch.
- Expands the lower arch.
- Torques the molars buccally.
- Tilts molars back for anchorage.
- Maintains uprighted molars while using auxiliary arches or nitinol retraction springs for the cuspids.
- Excellent for lower anterior intrusion and leveling the occlusal plane.
Early use of full dimensioned wire with greater patient comfort, less potential for root resorption and fewer bond failures.

- Trans Thermal provides moderate forces (approx. 45-50% of Phoenix SE wire). Fully active at 95 degrees F.
- Trans Thermal+ provides mid-range unloading forces (approx. 55-60% of Phoenix SE wire). Fully active at 80 degrees F.
- Trans Thermal archwire offers easy ligation at room temperature. Trans Thermal+ offers easy ligation when chilled.
- Trans Thermal and Trans Thermal+ provide complete shape memory at body temperature.

Center Stop option prevents arch wire creep and rotation out of buccal tubes and eliminates the need to heat and cinch distal ends of arch wires. The entire archwire remains active, even in molar tubes.

Please specify Trans Thermal or Trans Thermal+ when placing your order.

**SQUARE & RECTANGULAR:**

- .016 x .022, .017 x .025
- .018 x .018, .018 x .025, .019 x .025
- .020 x .020, .021 x .025

**SQUARE & RECTANGULAR:**

- .016 x .022, .017 x .025
- .018 x .018, .018 x .025, .019 x .025
- .020 x .020, .021 x .025

**SQUARE & RECTANGULAR:**

- .016 x .022, .017 x .025
- .018 x .018, .018 x .025, .019 x .025
- .020 x .020, .021 x .025

**SQUARE & RECTANGULAR:**

- .014 x .025, .016 x .022
- .016 x .025, .017 x .025, .018 x .025
- .019 x .025, .021 x .025
Closed Coil Springs With Eyelets

- Springs are medical grade nickel titanium wire.
- Continuous retraction forces throughout activation.
- Securely attached, precision designed stainless steel eyelets for easy attachment.
- Virtually no permanent deformation with proper use.
- Activation length up to 2x original spring length.

LENGTHS: 9mm or 12m

FORCES: Heavy (250g), Medium (200g), Light (150g), Gentle (100g), X Gentle (50g).

PACK: 10 springs.

CONSISTENT-PREDICTABLE-RELIABLE force values

<table>
<thead>
<tr>
<th>FORCE</th>
<th>Load @ 12mm ext</th>
<th>Load @ 8mm ext</th>
<th>Load @ 5mm ext</th>
<th>Load @ 2mm ext</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>258gf</td>
<td>209gf</td>
<td>175gf</td>
<td>138gf</td>
</tr>
<tr>
<td>Medium</td>
<td>198gf</td>
<td>166gf</td>
<td>146gf</td>
<td>122gf</td>
</tr>
<tr>
<td>Light</td>
<td>155gf</td>
<td>132gf</td>
<td>114gf</td>
<td>95gf</td>
</tr>
<tr>
<td>Gentle</td>
<td>94gf</td>
<td>82gf</td>
<td>72gf</td>
<td>59gf</td>
</tr>
<tr>
<td>X Gentle</td>
<td>46gf</td>
<td>40gf</td>
<td>35gf</td>
<td>28gf</td>
</tr>
</tbody>
</table>

Data based on 9/18/08 9mm specimen

Open Coil Compression Spring

AVAILABLE: 7” LENGTHS OR 21” SPOOLS

Nickel Titanium Separators and De-Impaction Springs

- .018 small & .018 large
- 25/ pack.
- Vertical legs are memory set and spaced to provide separation by continuously “pushing away” at the interproximal contact points.

De-Impaction springs

- .016 x .022
- .017 x .025
- 15/pack

Nickel Titanium DISTALIZING SPRING

Moves maxillary molars distally in Class II corrections.
Delivers gentle, continuous distal movement with minimum patient discomfort.

3 force levels

- (gram forces at 4mm deflection)
  - .011 x .045 (180 grams)
  - .010 x .045 (140 grams)
  - .011 x .036 (230 grams)

3 - 7" lengths / pack.