Solventum pioneered the use of nickel-titanium into orthodontists' wire progression plans. Today we offer three variations of Nitinol, three variations of stainless steel and Beta III Titanium – the happy medium between nickel-titanium and stainless steel.

Strict controls over archwire dimensions, visual appearance and mechanical properties assure the highest quality in the arch form, the force levels generated, and the malleability of the wire alloy.

Archwire Introduction

Many orthodontists state that archwire selection is more important when working with a self-ligating appliance than with a traditional appliance. Of significant importance are the force profiles, dimensional integrity and arch form availability of the archwires.

Force Profiles

When working in a low friction environment it is important to select archwires that deliver minimal, consistent and predictable force levels. For this reason, Solventum has designed archwires in a variety of materials and sizes to offer a large range of force profiles.

Dimensional Integrity

In a self-ligating system where ligatures are not actively seating the archwire, dimensional consistency is essential for the archwire to predictably express torquing, rotating and tipping movements. All Solventum square and rectangle archwires are engineered to have precise corner radii that deliver predictable torque control. Solventum archwires are available in a range of dimensions and include Hybrid and Dimpled options.

Arch Forms

A critical part of successful treatment is having an archwire that predictably develops the arch form best suited for each patient. Solventum provides three OrthoForm™ Arch Forms – Tapered, Square, and Ovoid – that offer the diversity needed to fit the range of arch forms among orthodontic cases.

Solventum also offers a large variety of wire auxiliaries to allow you to best treat your patients.

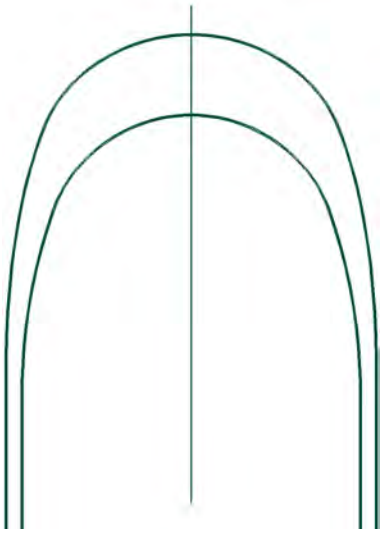
Simplified Archwire Sequence For Self-Ligating Appliances

Note: There are many variations to this basic sequence that can be used. Archwire sequence should always be modified to best treat each individual case. Hybrid rectangular arches can be substituted depending on torque requirements.

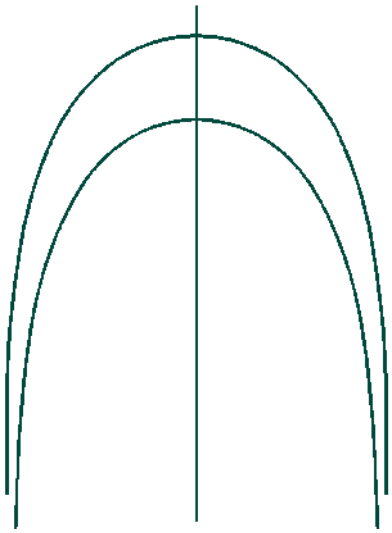
Treatment Phase	.018 Slot	.022 Slot
Initial Phase Getting Organized • leveling • aligning Necessary Wire Criteria • low forces • low modulus • low friction	**Nitinol Classic .012** **Nitinol SE or HA .014**	**Nitinol Classic .012** **Nitinol SE or HA .014** **Nitinol HA .016**
Intermediate Phase Working the Big Picture • arch form correction • occlusal plane leveling • rotating • tipping Necessary Wire Criteria • medium forces • medium working range • medium modulus • medium malleability • low friction	**Nitinol SE or HA .014 with Nitinol SE .014 tandem** **Nitinol SE or HA .018** **Nitinol HA .016 x .025**	**Nitinol SE or HA .014 with Nitinol SE .014 or .016 tandem** **Nitinol SE or HA .020** **Nitinol HA .016 x .025**
Finishing Phase Getting Down to Details • vertical detailing • space closure • refine interdigitation • retention Necessary Wire Criteria • medium forces • short working range • high modulus • high malleability	**Beta III Titanium (non-extraction) .016 x .025 .017 x .025** **Permachrome Resilient (extraction) .016 x .025 .017 x .025** **Braided .017 x .025**	**Beta III Titanium (non-extraction) .019 x .025** **Permachrome Resilient (extraction) .019 x .025** **Braided .019 x .025**

Arch Form

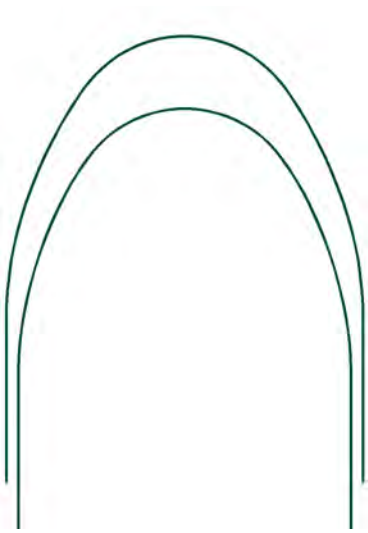
Changes to arch form during treatment may result in instability and subsequent relapse, which can contradict this search for the ideal arch form. There is an awareness that a great deal of variation exists from one human arch form to another. With this in mind, Solventum provides three distinct arch forms that reconcile the variation in anterior curvature, inter-cuspid width, inter-molar width and the curvature from the cuspid to the second molars.



OrthoForm™ II Square



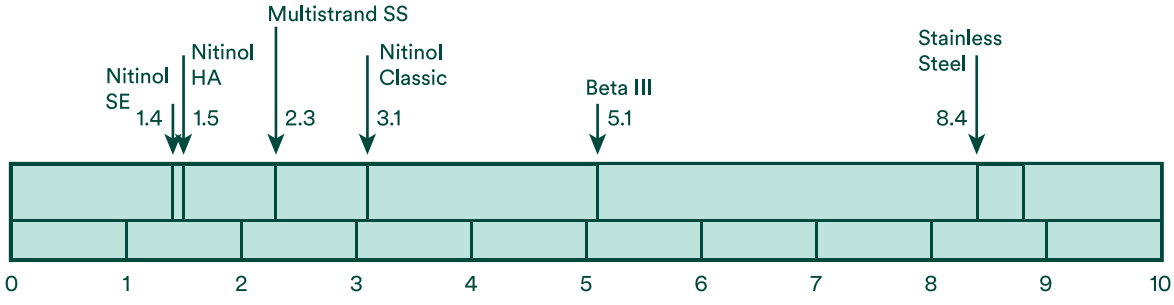
OrthoForm™ III Ovoid



10/pk unit of use

Malleability

How easily a wire bends and how well it maintains the bends placed by the orthodontist are important criteria for choosing the correct archwire material. Malleability (or bendability) is almost the opposite of elasticity. Springy metals are difficult to bend, but wires that bend easily have minimal elasticity. Below is a continuum of malleability* on a scale from one to ten, ten being the most bendable:



*Solventum data

Archwire

Tandem Archwires: Filling the Slot

Tandem archwires have shown to produce significant results in correcting rotations and creating leveling and alignment in SmartClip™ SL3.

In order to correct rotations and level and align the teeth early in treatment, the goal is to engage archwires that fill the horizontal plane and have a low unloading force. Using two flexible round archwires in tandem fills both the horizontal and vertical planes of the bracket slot. This configuration corrects and manages rotations while simultaneously correcting vertical discrepancies.

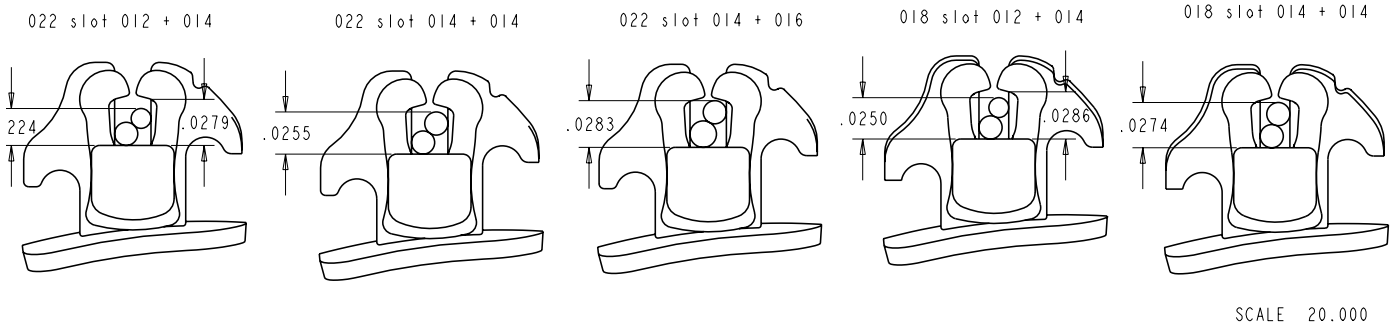
The tandem archwire should be inserted directly on top of the initial archwire used in treatment. There is no need to disengage the initial archwire, saving valuable chair time.

Tandem Archwire Combinations

Slot	Initial Archwire	Tandem Archwire
.018/.022	.012	.014
.018/.022	.014	.014
.022	.014	.016

The choice of tandem archwire combination depends on the slot size and degree of rotational deflection. In most cases, the .018 slot option will be the .014/.014 and the .022 slot will be the .014/.016 combination.

SmartClip™ Appliance Lower Anterior

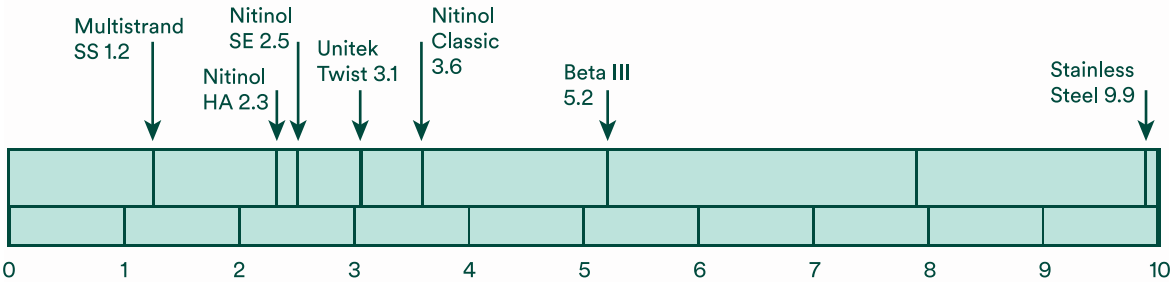


Force Levels

Force levels of archwires can be divided into two distinct categories. The engagement force, which is known as the loading force, that the practitioner feels while handling the wire and ligating it into the appliance. The working force, commonly referred to as the return or unloading force, is the force that moves the teeth and is the force that the patient feels.

Engagement Force

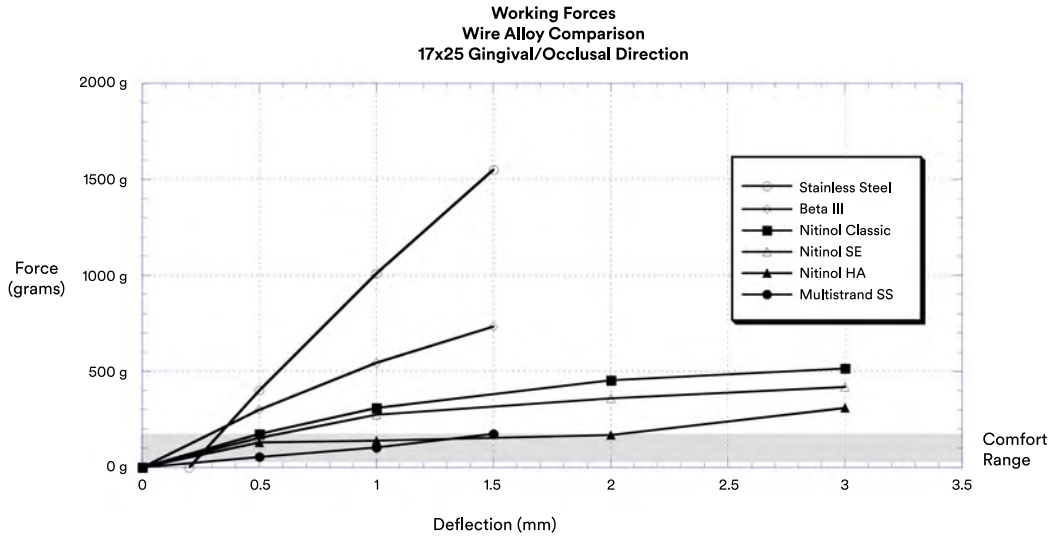
Below is a continuum that describes the range of engagement forces from one wire alloy to another.* In this continuum, the smaller the number, the lighter the engagement force.



*Solventum data

Working Force

Below is an example of comparison working forces between different types of archwires. In it you will see the working force generated from 3 mm of deflection to zero for different wire families. This working force chart details .017 x .025 gingival/occlusal direction:



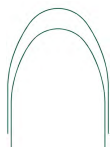
Archwire Analysis

Clearly your choices are numerous, and your orthodontic training and experience contribute to the overall list of criteria you use. In addition to reviewing the criteria listed in the preceding pages, Solventum consultative representatives can provide an analysis and may be able to recommend a new wire progression for improved efficiency in your treatment plans.

Treatment Phase	First Choice	Second Choice	Third Choice
Initial Phase Getting Organized • leveling • tipping • rotating Necessary Wire Criteria • low forces • long working range • low modulus • low friction	**Nitinol HA**	**Nitinol SE**	**Nitinol Classic**
Intermediate Phase Working the Big Picture • space closure • arch form correction • occlusal plane leveling Necessary Wire Criteria • medium forces • medium working range • medium modulus • medium malleability • low friction	**Nitinol Classic**	**Beta III Titanium**	**Permachrome Resilient**
Finishing Phase Getting Down to Details • vertical detailing • individual rotations • refine interdigitation • retention Necessary Wire Criteria • medium forces • short working range • high modulus • high malleability	**Beta III Titanium**	**Permachrome Resilient**	**Permachrome Standard**

Nitinol Heat-Activated Archwire





Dimension Inches	Dimension mm	OrthoForm™ II Square	OrthoForm™ III Ovoid	OrthoForm™ LA
Round				
Upper				
.014	.36	9296-609	9296-611	-
.016	.41	4296-985	4296-991	4296-979
.018	.46	4296-987	4296-993	-
.020	.51	-	4296-995	-
.0215	.55	9296-615	9296-617	-
Lower				
.014	.36	9296-610	9296-612	-
.016	.41	4296-986	4296-992	4296-980
.018	.46	4296-988	4296-994	-
.020	.51	-	4296-996	-
.0215	.55	9296-616	9296-618	-
Rectangular/Square				
Upper				
.014 x .025	.36 x .64	9296-633	9296-635	-
.016 x .022	.41 x .56	4297-973	4297-913	4297-981
.016 x .025	.41 x .64	9296-621	9296-623	-
.0175 x .0175	.44 x .44	4297-975	4297-911	4297-983
.017 x .025	.43 x .64	4297-991	4297-921	4297-995
.017 x .025	.43 x .64	9296-627	9296-629	-
.019 x .025	.48 x .64	4297-977	4297-919	-
.019 x .025	.48 x .64	9296-645	9296-647	-
.021 x .021	.53 x .53	4297-979	4297-917	-
.021 x .025	.53 x .64	4297-993	4297-923	-
.021 x .025	.53 x .64	-	9296-641	-
Lower				
.014 x .025	.36 x .64	9296-634	9296-636	-
.016 x .022	.41 x .56	4297-974	4297-914	4297-982
.016 x .025	.41 x .64	9296-622	9296-624	-
.0175 x .0175	.44 x .44	4297-976	4297-912	4297-984
.017 x .025	.43 x .64	4297-992	4297-922	4297-996
.017 x .025	.43 x .64	9296-628	9296-630	-
.019 x .025	.48 x .64	4297-978	4297-920	-
.019 x .025	.48 x .64	9296-646	9296-648	-
.021 x .021	.53 x .53	4297-980	4297-918	-
.021 x .025	.53 x .64	4297-994	4297-924	-
.021 x .025	.53 x .64	-	9296-642	-

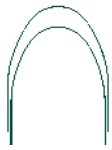
*Hybrid

Nitinol Heat-Activated is a thermally activated super-elastic archwire. It is the easiest of Nitinol wires to engage, and it delivers light continuous forces that effectively move teeth with minimal discomfort to the patient.

- Can be cooled or chilled resulting in a softer, more pliable wire for easy engagement
- Provides light continuous forces
- Force activation occurs around body temperature
- Available in square sizes making it excellent for early torque control
- Good bend retention when bent in hot water
- 10/pk unit of use

Nitinol Super-Elastic Archwire





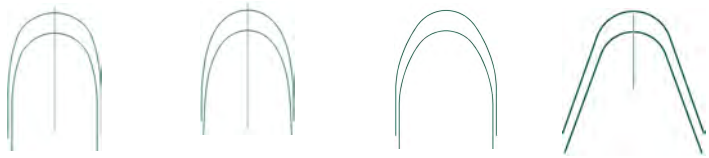
Dimension Inches	Dimension mm	OrthoForm™ II Square	OrthoForm™ III Ovoid	OrthoForm™ LA	Reverse Curve
Round					
Upper					
.014	.36	4296-805	4296-911	4296-813	-
.014 D**	.36	9296-805	9296-911	-	-
.016	.41	4296-807	4296-913	4296-815	296-821
.016 D**	.41	9296-807	9296-913	-	-
.018	.46	4296-809	4296-915	4296-817	296-823
.020	.51	4296-811	4296-917	-	297-871
Lower					
.014	.36	4296-806	4296-912	4296-814	-
.014 D**	.36	9296-806	9296-912	-	-
.016	.41	4296-808	4296-914	4296-816	296-822
.016 D**	.41	9296-808	9296-914	-	-
.018	.46	4296-810	4296-916	4296-818	296-824
.020	.51	4296-812	4296-918	-	297-872
Rectangular/Square					
Upper					
.014 x .025 D**	.36 x .64	9293-815	9293-817	-	-
.016 x .016	.41 x .41	4297-803	4297-951	4297-831	-
.016 x .022	.41 x .56	4297-801	4297-953	4297-833	297-821
.016 x .025	.41 x .64	-	-	-	297-869
.016 x .025 D**	.41 x .64	9293-851	9293-853	-	-
.017 x .025	.43 x .64	4297-807	4297-955	4297-835	297-823
.017 x .025 D**	.43 x .64	9297-807	9297-955	-	-
.017 x .025 H* D**	.43 x .64	9293-879	9293-881	-	-
.018 x .018	.46 x .46	4297-809	4297-957	-	-
.018 x .025	.46 x .64	4297-813	4297-959	-	-
.018 x .025 H*	.46 x .64	9293-905	9293-907	-	-
.019 x .025	.48 x .64	4297-815	4297-961	-	297-825
.019 x .025 H*	.48 x .64	9296-651	9296-653	-	-
.021 x .025	.53 x .64	4297-817	4297-963	-	297-827
.021 x .025 H*	.53 x .64	9293-933	9293-935	-	-
Lower					
.014 x .025 D**	.36 x .64	9293-816	9293-818	-	-
.016 x .016	.41 x .41	4297-804	4297-952	4297-832	-
.016 x .022	.41 x .56	4297-802	4297-954	4297-834	297-822
.016 x .025	.41 x .64	-	-	-	297-870
.016 x .025 D**	.41 x .64	9293-852	9293-854	-	-
.017 x .025	.43 x .64	4297-808	4297-956	4297-836	297-824
.017 x .025 D**	.43 x .64	9297-808	9297-956	-	-
.017 x .025 H* D**	.43 x .64	9293-880	9293-882	-	-
.018 x .018	.46 x .46	4297-810	4297-958	-	-
.018 x .025	.46 x .64	4297-814	4297-960	-	-
.018 x .025 H*	.46 x .64	9293-906	9293-908	-	-
.019 x .025	.48 x .64	4297-816	4297-962	-	297-826
.019 x .025 H*	.48 x .64	9296-652	9296-654	-	-
.021 x .025	.53 x .64	4297-818	4297-964	-	297-828
.021 x .025 H*	.53 x .64	9293-934	9293-936	-	-

*Hybrid **Dimpled

Nitinol Super-Elastic is easy to engage and maintains light continuous forces with a range between Nitinol Heat-Activated and Nitinol Classic.

- Provides light continuous forces
- Easy engagement characteristics
- Good early torque control
- 10/pk unit of use
- Available in Reverse Curve in folder pack of 10 wires

Nitinol Classic Archwire



Dimension Inches	Dimension mm	OrthoForm™ II Square	OrthoForm™ III Ovoid	OrthoForm™ LA	Standard
Round					
Upper					
.012	.30	9296-603	9296-605	-	4296-121
.014	.36	4296-405	4296-517	4296-307	4296-141
.014 D**	.36	9296-405	9296-517	-	-
.016	.41	4296-407	4296-519	4296-303	4296-161
.016 D**	.41	9296-407	9296-519	-	-
.018	.46	4296-409	4296-521	4296-315	4296-181
.020	.51	4296-411	4296-523	-	-
Lower					
.012	.30	9296-604	9296-606	-	4296-122
.014	.36	4296-406	4296-518	4296-308	4296-142
.014 D**	.36	9296-406	9296-518	-	-
.016	.41	4296-408	4296-520	4296-304	4296-162
.016 D**	.41	9296-408	9296-520	-	-
.018	.46	4296-410	4296-522	4296-316	4296-182
.020	.51	4296-412	4296-524	-	-
Rectangular/Square					
Upper					
.014 x .025 D**	.36 x .64	9293-821	9293-823	-	-
.016 x .016	.41 x .41	4297-701	4297-851	4297-601	-
.016 x .022	.41 x .56	4297-703	4297-853	4297-603	4297-171
.016 x .025 D**	.41 x .64	-	9293-859	-	-
.017 x .022	.43 x .56	4297-705	4297-855	-	-
.017 x .025	.43 x .64	4297-707	4297-857	4297-609	4297-281
.017 x .025 D**	.43 x .64	-	9297-857	-	-
.017 x .025 H* D**	.43 x .64	-	-	-	-
.018 x .018	.46 x .46	4297-709	4297-859	4297-613	4297-113
.018 x .022	.46 x .56	4297-711	4297-861	-	-
.018 x .025	.46 x .64	4297-713	4297-863	4297-615	4297-381
.018 x .025 H*	.46 x .64	-	-	-	-
.019 x .025	.48 x .64	4297-715	4297-865	4297-621	-
.019 x .025 H*	.48 x .64	9293-953	9293-955	-	-
.021 x .025	.53 x .64	4297-717	4297-867	-	-
Lower					
.014 x .025 D**	.36 x .64	9293-822	9293-824	-	-
.016 x .016	.41 x .41	4297-702	4297-852	4297-602	-
.016 x .022	.41 x .56	4297-704	4297-854	4297-604	4297-172
.016 x .025 D**	.41 x .64	-	9293-860	-	-
.017 x .022	.43 x .56	4297-706	4297-856	-	-
.017 x .025	.43 x .64	4297-708	4297-858	4297-610	4297-282
.017 x .025 D**	.43 x .64	-	9297-858	-	-
.017 x .025 H* D**	.43 x .64	-	-	-	-
.018 x .018	.46 x .46	4297-710	4297-860	4297-614	4297-114
.018 x .022	.46 x .56	4297-712	4297-862	-	-
.018 x .025	.46 x .64	4297-714	4297-864	4297-616	4297-382
.018 x .025 H*	.46 x .64	-	-	-	-
.019 x .025	.48 x .64	4297-716	4297-866	4297-622	-
.019 x .025 H*	.48 x .64	9293-954	9293-956	-	-
.021 x .025	.53 x .64	4297-718	4297-868	-	-

*Hybrid **Dimpled

Solventum pioneered nickel-titanium as an improved alternative to stainless steel in 1977. This “Classic” archwire continues to provide the linear elasticity and bendability of high strength steel and the elastic working range and lighter forces that only a nickel-titanium can deliver.

- Long working range
- 40% the forces of stainless steel
- 10/pk unit of use

Beta III Titanium Archwire

Dimension Inches	Dimension mm	OrthoForm™ II Square	OrthoForm™ III Ovoid
Rectangular/Square			
Upper			
016 x .022	.41 x .56	**4301-302**	**4301-304**
.016 x .025	.41 x .64	**4301-352**	**4301-354**
.0175 x .0175	.44 x .44	**4301-336**	**4301-338**
.017 x .025	.43 x .64	**4301-308**	**4301-310**
.019 x .025	.48 x .64	**4301-314**	**4301-316**
.021 x .025	.53 x .64	**4301-320**	**4301-322**
Lower			
.016 x .022	.41 x .56	**4301-303**	**4301-305**
.016 x .025	.41 x .64	**4301-353**	**4301-355**
.0175 x .0175	.44 x .44	**4301-337**	**4301-339**
.017 x .025	.43 x .64	**4301-309**	**4301-311**
.019 x .025	.48 x .64	**4301-315**	**4301-317**
.021 x .025	.53 x .64	**4301-321**	**4301-323**

Known as the “happy medium” between nickel-titanium and stainless steel, this archwire provides the extended working range of a titanium alloy and the bendability of stainless steel.

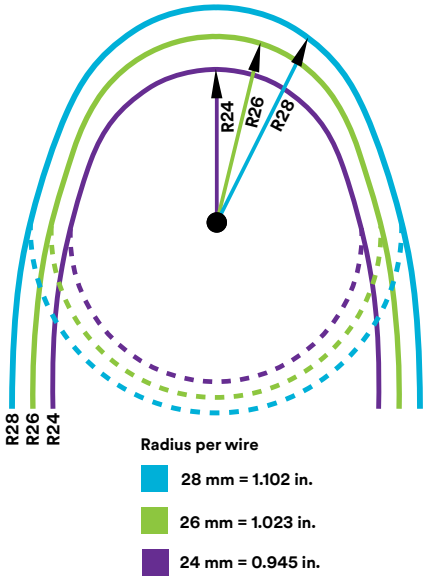
- Processed to reduce breakage
- Polished surface finish for improved sliding mechanics
- Tight corner radii specifications reducing torque loss, especially in final phase of treatment
- 10/pk unit of use

Lateral Development Archwire

Lateral Development can help achieve a Platinum Proportion smile, which is the esthetic result that occurs when properly selected archwires completely express the lateral dimension of the upper arch, creating a gradation that exceeds the traditional Golden Proportion.

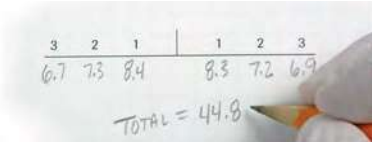
Dr. Robert Waugh designed Lateral Development Archwires for treatment of patients with smaller tooth anatomy and/or spacing. After measuring all anterior teeth in his practice for over five years, he has crystallized a method to consistently deliver a predictable anterior display while idealizing functional coupling of anterior teeth.

A unique feature of the Lateral Development System is that the archwires have circular anterior contours available in three coordinating sizes with approximate radii of 28 mm, 26 mm and 24 mm. Each wire is specifically designed to align and display the upper anterior six teeth for a known range of mesial-distal tooth sizes. Now, patients with small, medium, and large teeth can achieve both a predictable esthetic display and coordinated occlusion.



Simple Technique for Choosing the Right Arch Form

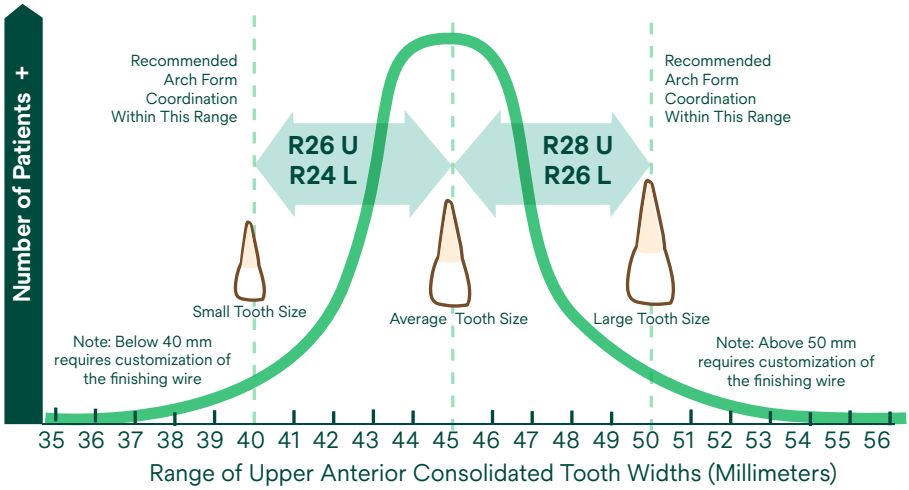
1. After initial alignment, total the collective mesio-distal widths of the upper anterior six teeth (rounded to nearest 1/10th of a millimeter).

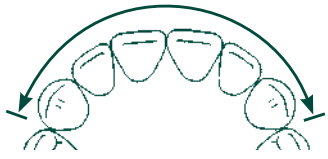


This case displays a consolidated width of 44.8 mm, indicating consideration of arch forms R26 upper and R24 lower.

2. Using the reference diagram below, select the appropriate upper arch form radius for the patient's "Platinum Proportion" or gradation (R28, R26 or R24). Based on the upper arch form radius, select the appropriate lower archwire.

Tooth Size Range – Corresponding Arch Form Size





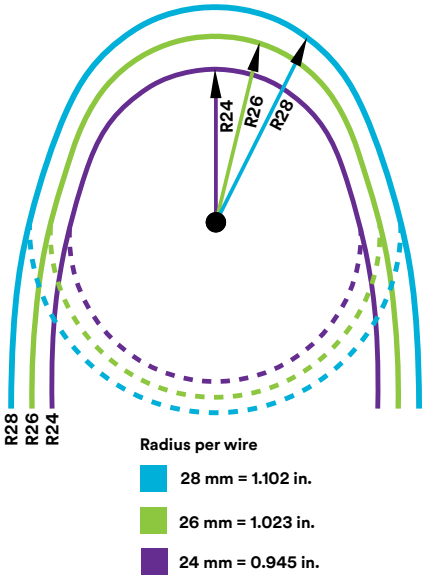
Consolidated width 3 2 1 | 1 2 3
indicates arch form size:

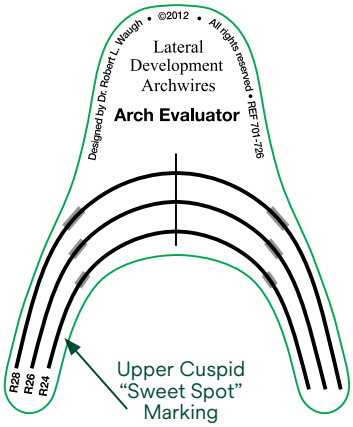
Less than 40 mm = Customize R24
40 mm - 45 mm = R26 Upper and R24 Lower
45 mm - 50 mm = R28 Upper and R26 Lower
More than 50 mm = Customize R28

Lateral Development Archwires

Dimension Inches	Dimension mm	R28		R26		R24	
Nitinol							
.012	.30	4581-301	5	4581-302	5	4581-303	5
.013	.33	4581-304	5	4581-305	5	4581-306	5
.014	.36	4581-307	5	4581-308	5	4581-309	5
.016	.41	4581-310	5	4581-311	5	4581-312	5
.018	.46	4581-313	5	4581-314	5	4581-315	5
.020	.51	4581-316	5	4581-317	5	4581-318	5
.014 x .025	.36 x .64	4581-319	5	4581-320	5	4581-321	5
.016 x .022	.41 x .56	4581-322	5	4581-323	5	4581-324	5
.016 x .025	.41 x .64	4581-325	5	4581-326	5	4581-327	5
.017 x .025	.43 x .64	4581-328	5	4581-329	5	4581-330	5
.018 x .025	.46 x .64	4581-331	5	4581-332	5	4581-333	5
.019 x .025	.48 x .64	4581-334	5	4581-335	5	4581-336	5
Nitinol HA							
.014 x .025	.36 x .64	4585-301	5	4585-302	5	4585-303	5
.016 x .025	.41 x .64	4585-304	5	4585-305	5	4585-306	5
.017 x .025	.43 x .64	4585-307	5	4585-308	5	4585-309	5
.018 x .025	.46 x .64	4585-310	5	4585-311	5	4585-312	5
.019 x .025	.48 x .64	4585-313	5	4585-314	5	4585-315	5
Beta Titanium							
.016 x .022	.41 x .56	4582-301		4582-302		4582-303	
.017 x .025	.43 x .64	4582-304		4582-305		4582-306	
.019 x .025	.48 x .64	4582-307		4582-308		4582-309	
Stainless Steel							
.016 x .022	.41 x .56	4583-301		4583-302		4583-303	
.016 x .025	.41 x .64	4583-304		4583-305		4583-306	
.017 x .025	.43 x .64	4583-307		4583-308		4583-309	
.019 x .025	.48 x .64	4583-310		4583-311		4583-312	
			with stops		with stops		with stops

- For Nitinol and Nitinol HA archwires with pre-loaded stops, add a 5 at the end of the 7 digit part number.
- 10/pk unit of use





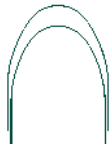
Arch Evaluator (5/pk)

The Arch Evaluator is a useful tool that can be used at various times during treatment.

- Helps estimate the necessary lateral development
- Allows you to identify upper cuspid "Sweet Spot" position on wires and confirm proper upper cuspid bracket positioning
- Helps evaluate progression of lateral development
- Use on diagnostic model as an early guide for archwire sizing
- Can be used with wax bite to assess lateral development
- Confirms arch form size prior to insertion
- Tabletop guide for restoring shape following adjustment bends
- Reference for customizing extra-large or extra-small arch forms in extreme cases

Permachrome Resilient Archwire






Dimension Inches	Dimension mm		OrthoForm™ II Square		OrthoForm™ III Ovoid		OrthoForm™ LA	Standard
Round								
Upper								
.012	.30		4300-603		300-003		-	-
.014	.36	4	300-605	4	300-005		-	299-145
.016	.41	4	300-607	4	300-007		300-503	299-165
.018	.46	4	300-609	4	300-009		300-515	299-185
.020	.51	4	300-611	4	300-011		4300-521	299-205
Lower								
.012	.30		4300-604		300-004		-	-
.014	.36	4	300-606	4	300-006		-	299-146
.016	.41	4	300-608	4	300-008		300-504	299-166
.018	.46	4	300-610	4	300-010		300-516	299-186
.020	.51	4	300-612	4	300-012		4300-522	299-206
Rectangular/Square								
Upper								
.016 x .016	.41 x .41	4	300-615	4	300-015	4	300-565	298-115
.016 x .022	.41 x .56	4	300-617	4	300-017		300-567	298-175
.016 x .025	.41 x .64		4300-657	4	300-659		-	-
.0175 x .0175	.44 x .44		4293-341		4293-351	4	-	-
.017 x .022	.43 x .56		4300-619	4	300-019		4300-577	298-275
.017 x .025	.43 x .64	4	300-621	4	300-021		300-579	298-285
.017 x .025 H*	.43 x .64		9293-891		9293-893		-	-
.018 x .022	.46 x .56		4300-623	4	300-023		4300-569	-
.018 x .025	.46 x .64	4	300-625	4	300-025		300-573	298-385
.018 x .025 H*	.46 x .64		9293-917		9293-919		-	-
.019 x .025	.48 x .64	4	300-627	4	300-027		300-585	298-485
.019 x .025 H*	.48 x .64		9293-959		9293-961		-	-
.021 x .025	.53 x .64		4300-629	4	300-029		4300-593	298-585
Lower								
.016 x .016	.41 x .41	4	300-616	4	300-016	4	300-566	298-116
.016 x .022	.41 x .56	4	300-618	4	300-018		300-568	298-176
.016 x .025	.41 x .64		4300-658	4	300-660		-	-
.0175 x .0175	.44 x .44		4293-342		4293-352		-	-
.017 x .022	.43 x .56		4300-620	4	300-020		4300-578	298-276
.017 x .025	.43 x .64	4	300-622	4	300-022		300-580	298-286
.017 x .025 H*	.43 x .64		9293-892		9293-894		-	-
.018 x .022	.46 x .56		4300-624	4	300-024		-	-
.018 x .025	.46 x .64	4	300-626	4	300-026		300-574	298-386
.018 x .025 H*	.46 x .64		9293-918		9293-920		-	-
.019 x .025	.48 x .64	4	300-628	4	300-028		300-586	298-486
.019 x .025 H*	.48 x. 64		9293-960		9293-962		-	-
.021 x .025	.53 x .64		4300-630	4	300-030		4300-594	298-586
*Hybrid		Unit of Use		Unit of Use		Unit of Use		


Our most popular stainless steel archwire – delivering a balance of malleability and springback.

- Better formability than Hi-T™ II
- Mid-range tensile strength
- OrthoForm II, III, LA packed 50/pk unit of use or 10/pk folders
- Standard Archform Round packed 50/pk folders, Square and Rectangular 10/pk folders
- Hybrid packed 10/pk unit of use

Permachrome Standard Archwire

Dimension Inches	Dimension mm	Standard	Unit of Use
Round			
Upper			
.018	.46	**301-181**	
Lower			
.018	.46	**301-182**	
Rectangular/Square			
Upper			
.016 x .022	.41 x .56	**300-171**	
.017 x .025	.43 x .64	**300-281**	
.018 x .025	.46 x .64	**300-381**	
.019 x .025	.48 x .64	**300-481**	
Lower			
.016 x .022	.41 x .56	**300-172**	
.017 x .025	.43 x .64	**300-282**	
.018 x .025	.46 x .64	**300-382**	
.019 x .025	.48 x .64	**300-482**	

This stainless steel archwire is recommended when complex bends and loops are required.

- Better malleability than Permachrome Resilient and Hi-T™ II
- Lowest tensile strength
- Round wires packed 50/pk folders, Rectangular wires 10/pk folders

Permachrome Posted Archwire

Miscellaneous Solder Supplies

Dimension Inches	Inter-Post mm	OrthoForm™ II Square	OrthoForm™ III Ovoid
Rectangular			
Upper			
.016 x .022	44	-	300-931
.016 x .022	42	-	300-932
.016 x .022	40	-	300-933
.016 x .022	38	300-728	300-934
.016 x .022	36	300-729	300-935
.016 x .022	34	300-730	300-936
.016 x .022	32	300-731	300-937
.019 x .025	44	-	300-938
.019 x .025	42	300-233	300-939
.019 x .025	40	300-234	300-940
.019 x .025	38	300-235	300-941
.019 x .025	36	300-236	300-942
.019 x .025	34	300-237	300-943
.019 x .025	32	300-238	300-944
Rectangular			
Lower			
.016 x .022	30	-	300-955
.016 x .022	28	-	300-956
.016 x .022	26	-	300-957
.016 x .022	24	-	300-958
.016 x .022	22	-	300-959
.019 x .025	30	300-244	300-960
.019 x .025	28	300-245	300-961
.019 x .025	26	300-246	300-962
.019 x .025	24	300-247	300-963
.019 x .025	22	-	300-964

- High tensile strength
- Stainless steel wires with brass alloy posts
- Available in folder packs only
- 10/pk

Solder Supplies

Soldering Flux

700-202

Silver Solder

- Dead soft. Contains no toxic cadmium.
- 2-DWT package

700-101 Light, Diameter: 0.010 in. (0.25 mm); Length: 30 feet (9.14 meters)

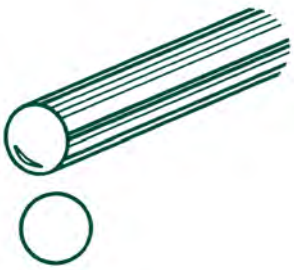
700-102 Regular, Diameter: 0.015 in. (0.38 mm); Length: 20 feet (6.10 meters)

700-103 Heavy, Diameter: 0.025 in. (0.64 mm); Length: 10 feet (3.05 meters)

Stainless Steel Straight Lengths

Round Wire

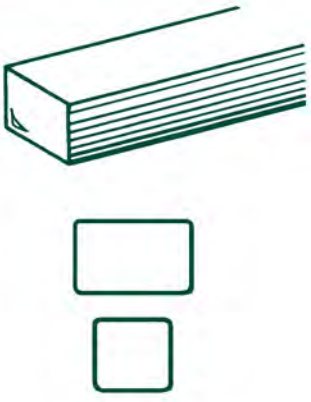
- 14 in. (35.6 cm) Straight Lengths



Size		Permachrome	Qty/	Permachrome	Qty/
Inches	mm	Standard	Pkg	Resilient	Pkg
.010	.25	**211-100**	40	-	
.012	.30	**211-120**	40	-	40
.014	.36	**211-140**	40	**213-140**	40
.015	.39	**211-150**	40	-	
.016	.41	**211-160**	40	**213-160**	40
.018	.46	**211-180**	40	**213-180**	40
.020	.51	**211-200**	40	**213-200**	40
.021	.53	**211-210**	35	-	
.022	.56	**211-220**	35	-	
.024	.61	**211-240**	30	-	
.025	.64	**211-250**	30	**220-250**	30
.026	.66	**211-260**	30	-	
.028	.71	**211-280**	25	**220-280**	30
.030	.76	**211-300**	25	**220-300**	30
.032	.81	**211-320**	25	**220-320**	30
.036	.91	**211-360**	25	**220-360**	25
.040	1.0	**211-400**	20	-	
.045	1.14	**211-450**	15	-	
.051	1.3	**211-510**	15	-	
.055	1.4	**211-550**	15	-	

Rectangular and Square Wire

- Slightly radiused corners facilitate insertion into bracket slot with no appreciable loss of torque
- Square wire for control with optimum sliding mechanics
- Tighter diagonal tolerance on .016 x .016 to avoid rolling in slot
- 10/pk



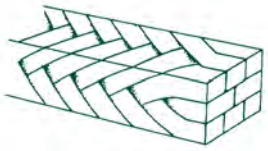
14 in. (35.6 cm) Straight Lengths

Size		Permachrome	Permachrome
Inches	mm	Standard	Resilient
.016 x .016	.41 x .41	**251-616**	**253-616**
.016 x .022	.41 x .56	**251-622**	**253-622**
.017 x .022	.43 x .56	**251-722**	**253-722**
.017 x .025	.43 x .64	**251-725**	**253-725**
.018 x .018	.46 x .46	-	**253-818**
.018 x .022	.46 x .56	**251-822**	**253-822**
.018 x .025	.46 x .64	**251-825**	**253-825**
.019 x .025	.48 x .64	**251-925**	**253-925**
.020 x .025	.51 x .64	-	**253-025**
.021 x .025	.53 x .64	**251-125**	**253-125**
.0215 x .028	.55 x .71	**251-228**	**253-228**

Multi-Strand Archwire

Braided Wire

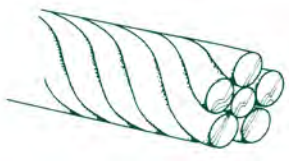
- Eight (8) strand Braided Rectangular
- Three dimensional control
- Wide working range
- 10/pk



Dimension Inches	Dimension mm	OrthoForm™ II Square	OrthoForm™ III Ovoid
Rectangular/Square			
Upper			
.016 x .016	.41 x .41	**300-905**	-
.016 x .022	.41 x .56	**300-907**	-
.017 x .025	.43 x .64	**300-909**	**300-967**
.018 x .025	.46 x .64	**300-911**	-
.019 x .025	.48 x .64	**300-913**	**300-971**
.021 x .025	.53 x .64	**300-915**	-
Lower			
.016 x .016	.41 x .41	**300-906**	-
.016 x .022	.41 x .56	**300-908**	-
.017 x .025	.43 x .64	**300-910**	**300-968**
.018 x .025	.46 x .64	**300-912**	-
.019 x .025	.48 x .64	**300-914**	**300-972**
.021 x .025	.53 x .64	**300-916**	-

Coaxial Wire

- Five (5) tempered wires wrapped around a core wire
- Light force
- Highly flexible – easy to engage
- Excellent initial wire
- One form for both U/L arches
- Ends do not unravel when cut
- 10/pk



Round Size		OrthoForm™ II
Inches	mm	14 in. Lengths
.0155	.40	**300-760**
.0175	.45	**300-761**
.0195	.48	**300-762**
.0215	.51	**300-763**

Twist Wire

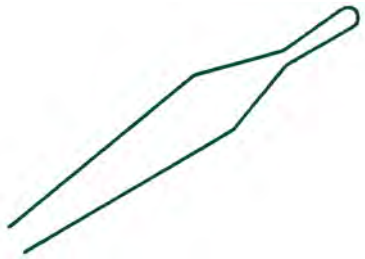
- Three (3) strand twist
- More continuous light force over greater working range than solid round wire of same diameter
- 10/pk

Size		OrthoForm™ II	
Inches	mm	Upper	Lower
.0175	.45	**300-701**	**300-702**

Ligature Wire and Tie Hooks

Ligature Wire

- Preformed ligature slips easily over all brackets
- Coated preformed ligature wire; ideal for esthetic brackets such as Clarity™ Brand Brackets
- Dead soft permachrome wire in color coded bundles of 200
- Coated ligature wire reduces friction between archwire and bracket



Preformed Uncoated (1,000/pk)

Diameter			Color
Inches	mm		Band
.008	.20	**390-080**	Yellow
.009	.23	**390-090**	Green
.010	.25	**390-100**	Blue
.011	.28	**390-110**	Pink
.012	.30	**390-120**	Black
.014	.36	**390-140**	Red

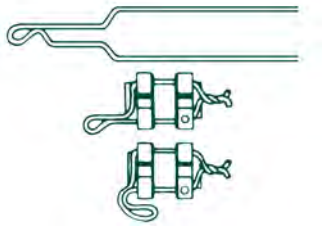
Spool Uncoated

Diameter		16 oz.
Inches	mm	(.45 kg)
.008	.20	**200-084**
.009	.23	**200-094**
.010	.25	**200-104**
.011	.28	**200-114**
.012	.30	**200-124**
.014	.36	**200-144**

Auxiliary Ligature Tie Hooks

- .014 in. (.36 mm) ligature wire spot-welded to form a hook
- Slips under tie-wing, secures like ligature
- Tie-in mesially or distally with archwire in place

390-145 100/pk



Retainer Wire

Hawley Labial Retainer (Single Loop)

- .030 in. (.76 mm) Permachrome Resilient Wire
- Preformed three dimensional complex bends, including lateral indents and convoluted palatal extensions for positive anchorage
- Ready to anchor in acrylic base
- Center of loop is on marginal ridge of cuspid

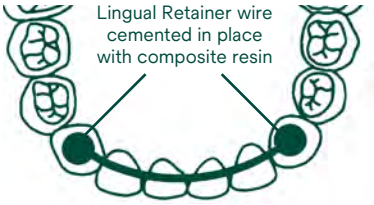
Hawley Retainer Wires (1/Pack)

Length (mm*)	Size		Length (mm*)	Size	
32.8	0	**360-300**	45.3	5	**360-305**
35.2	1	**360-301**	47.8	6	**360-306**
37.8	2	**360-302**	50.3	7	**360-307**
40.3	3	**360-303**	52.7	8	**360-308**
42.8	4	**360-304**	55.2	9	**360-309**

*Center distal loop to distal loop which corresponds to the distance cuspid to cuspid

Lingual Retainer Wire (Bondable)

- 7 in. (17.8 cm) straight lengths
- .032 in. (.81 mm) stainless steel in tight twist, will not unravel when cut
- Tight spiral twist facilitates bonding without end loops or bonding pads
- Bond any or all teeth in segment



Diameter		Order	
Inches	mm	No.	Qty/Pkg
.032	.81	**260-032**	25

Lingual Retainer Kit

- 25 each Twist wire
- 50 each AlastiK™ EZ3 Holders
- Complete Instructions

709-060

AlastiK™ EZ3 Holder

- **Not Made With Natural Rubber Latex**
- Pre-bonding lingual wire support
- Eliminates need for wax, ligature wire, floss threader or manual assistance

406-044 10/pk

Clasps

Modified Arrowhead Clasps

- Permachrome Resilient
- Grips single teeth independently
- Use on primary, permanent or semi-erupted teeth

Modified Arrowhead Clasp (10/Pk)

Size		Width		
Inches	mm	(mm)		
.024	.61	5.5	**362-241**	Primary & Permanent Cuspids
.024	.61	6.5	**362-243**	Primary & Permanent Cuspids
.028	.71	6.0	**362-282**	Bicuspids & Primary Molars
.028	.71	7.0	**362-284**	Primary Molars
.028	.71	8.0	**362-285**	Permanent Molars
.028	.71	9.0	**362-286**	Permanent Molars
.028	.71	10.0	**362-287**	Permanent Molars
.028	.71	11.0	**362-288**	Permanent Molars
.028	.71	12.0	**362-289**	Permanent Molars

Ball Clasps

- Length 1.38 in. (34.9 mm)
- Stainless steel round wire with integrated round ball at one end
- Ball diameter approximately twice wire diameter
- 10/pk

Wire

Diameter		Length		
in.	mm	in.	mm	
.024	.61	1.38	34.9	**364-240**
.028	.71	1.38	34.9	**364-280**
.032	.81	1.50	38.1	**364-320**
.040	1.02	1.50	38.1	**364-400**

Archwire Accessories

Archwire Dispenser

Holds up to six boxes of archwires (archwires not included). White Plexiglass.

453-012

Light Wire Arch Computer

Flexible vinyl computer used for fast determination of proper archwire size by measuring cuspid-to-cuspid distance on patient's model.

701-720