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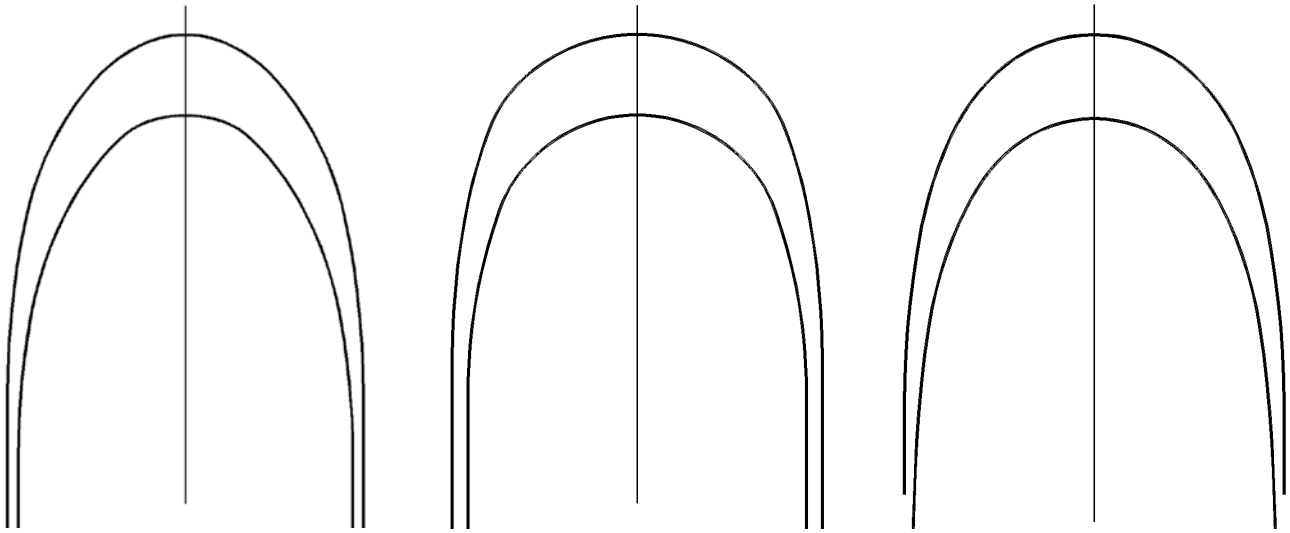
Archwire Products

Over thirty years ago 3M Unitek pioneered the use of nickel-titanium into orthodontists' wire progression plans, creating what would be one of the top ten innovations in orthodontic treatment. Today we offer three variations of Nitinol, three variations of stainless steel and Unitek™ 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.

Arch Form

For over a century, there has been a persistent search for the ideal arch form for human dentition. 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, 3M Unitek 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.

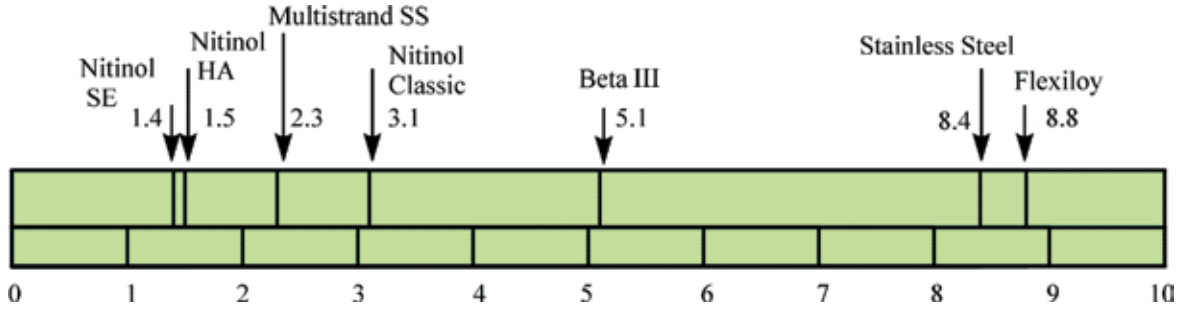


OrthoForm™ I Tapered | OrthoForm™ II Square | OrthoForm™ III Ovoid

3M Unitek continues to offer both the original OrthoForm™ I (now "OrthoForm LA") which was originally designed to meet the arch form requirements of Level Anchorage and the original "standard" arch used primarily with the Edgewise Appliance.

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:



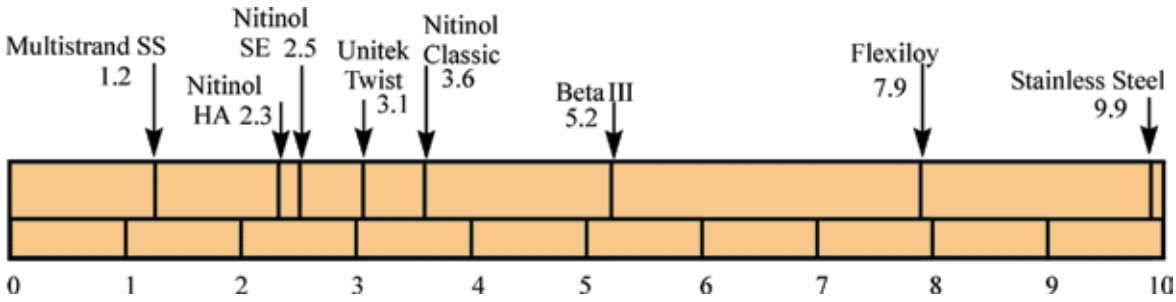
* 3M Unitek data

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.

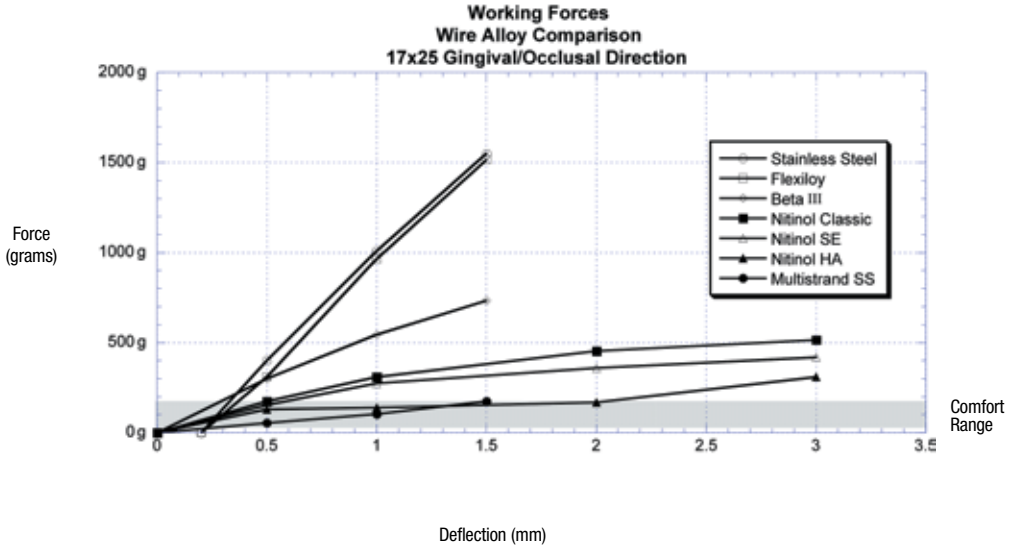


* 3M Unitek data

7

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 Products

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, our 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**
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**	**Flexiloy**

Archwire Products

Unitek™ Nitinol Heat-Activated Archwire

Dimension Inches	Dimension mm	OrthoForm™ I Tapered	OrthoForm™ II Square		OrthoForm™ III Ovoid		OrthoForm™ LA	
Round								
Upper								
.014	.36	9296-607	9296-609		9296-611		-	
.016	.41	4293-701	4296-985	6	4296-991	6	4296-979	6
.018	.46	4293-703	4296-987	6	4296-993	6	4296-981	
.020	.51	-	-		4296-995		-	
.0215	.55	9296-613	9296-615		9296-617		-	
Lower								
.014	.36	9296-608	9296-610		9296-612		-	
.016	.41	4293-702	4296-986	6	4296-992	6	4296-980	
.018	.46	4293-704	4296-988	6	4296-994	6	4296-982	6
.020	.51	-	-		4296-996		-	
.0215	.55	9296-614	9296-616		9296-618		-	
Rectangular/Square								
Upper								
.014 x .025	.36 x .64	9296-631	9296-633		9296-635		-	
.016 x .022	.41 x .56	4293-707	4297-973	6	4297-913	6	4297-981	
.016 x .025	.41 x .64	9296-619	9296-621		9296-623		-	
.0175 x .0175	.44 x .44	4293-709	4297-975	6	4297-911	6	4297-983	
.017 x .025	.43 x .64	4293-711	4297-991	6	4297-921	6	4297-995	
.017 x .025 H*	.43 x .64	9296-625	9296-627		9296-629		-	
.019 x .025	.48 x .64	4293-713	4297-977	6	4297-919	6	4297-985	
.019 x .025 H*	.48 x .64	9296-643	9296-645		9296-647		-	
.021 x .021	.53 x .53	-	4297-979		4297-917		-	
.021 x .025	.53 x .64	-	4297-993		4297-923		4297-997	
.021 x .025 H*	.53 x .64	9296-637	9296-639		9296-641		-	
Lower								
.014 x .025	.36 x .64	9296-632	9296-634		9296-636		-	
.016 x .022	.41 x .56	4293-708	4297-974	6	4297-914	6	4297-982	
.016 x .025	.41 x .64	9296-620	9296-622		9296-624		-	
.0175 x .0175	.44 x .44	4293-710	4297-976	6	4297-912	6	4297-984	
.017 x .025	.43 x .64	4293-712	4297-992	6	4297-922	6	4297-996	
.017 x .025 H*	.43 x .64	9296-626	9296-628		9296-630		-	
.019 x .025	.48 x .64	4293-714	4297-978	6	4297-920	6	4297-986	
.019 x .025 H*	.48 x .64	9296-644	9296-646		9296-648		-	
.021 x .021	.53 x .53	-	4297-980		4297-918		-	
.021 x .025	.53 x .64	-	4297-994		4297-924		4297-998	
.021 x .025 H*	.53 x .64	9296-638	9296-640		9296-642		-	
				Gold		Gold		Gold

* 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.

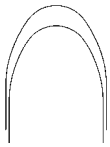
- Can be cooled or chilled resulting in a softer, more pliable wire for easy engagement
- Provides light continuous forces
- Force activation occurs around body temperature
- Available in square sizes making it excellent for early torque control
- Good bend retention when bent in hot water
- 10/pk unit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

Heat-Activated

Order Online! www.3MUnitek.com • USA and PR 1-800-423-4588 • Canada 1-800-443-1661

Archwire Products

Unitek™ Nitinol Super-Elastic Archwire



Dimension Inches	Dimension mm	OrthoForm™ I Tapered	OrthoForm™ II Square		OrthoForm™ III Ovoid	OrthoForm™ LA	Reverse Curve
Round							
Upper							
.014	.36	4293-601	4296-805	6	4296-911	4296-813	-
.014 D**	.36	9293-601	9296-805		9296-911	-	-
.016	.41	4293-603	4296-807	6	4296-913	4296-815	296-821
.016 D**	.41	9293-603	9296-807		9296-913	-	-
.018	.46	-	4296-809	6	4296-915	4296-817	296-823
.020	.51	-	4296-811		4296-917	4296-819	297-871
Lower							
.014	.36	-	4296-806	6	4296-912	4296-814	-
.014 D**	.36	9293-602	9296-806		9296-912	-	-
.016	.41	4293-604	4296-808	6	4296-914	4296-816	296-822
.016 D**	.41	9293-604	9296-808		9296-914	-	-
.018	.46	-	4296-810	6	4296-916	4296-818	296-824
.020	.51	-	4296-812		4296-918	4296-820	297-872
Rectangular/Square							
Upper							
.014 x .025 D**	.36 x .64	9293-813	9293-815		9293-817	-	-
.016 x .016	.41 x .41	-	4297-803	6	4297-951	4297-831	-
.016 x .022	.41 x .56	-	4297-801	6	4297-953	4297-833	297-821
.016 x .025	.41 x .64	-	-		-	-	297-869
.016 x .025 D**	.41 x .64	9293-849	9293-851		9293-853	-	-
.017 x .025	.43 x .64	-	4297-807	6	4297-955	4297-835	297-823
.017 x .025 D**	.43 x .64	9293-613	9297-807		9297-955	-	-
.017 x .025 H* D**	.43 x .64	9293-877	9293-879		9293-881	-	-
.018 x .018	.46 x .46	4293-615	4297-809		4297-957	4297-837	-
.018 x .025	.46 x .64	-	4297-813	6	4297-959	4297-839	-
.018 x .025 H*	.46 x .64	9293-903	9293-905		9293-907	-	-
.019 x .025	.48 x .64	4293-619	4297-815	6	4297-961	4297-841	297-825
.019 x .025 H*	.48 x .64	9296-649	9296-651		9296-653	-	-
.021 x .025	.53 x .64	-	4297-817		4297-963	4297-843	297-827
.021 x .025 H*	.53 x .64	9293-931	9293-933		9293-935	-	-
Lower							
.014 x .025 D**	.36 x .64	9293-814	9293-816		9293-818	-	-
.016 x .016	.41 x .41	-	4297-804	6	4297-952	4297-832	-
.016 x .022	.41 x .56	-	4297-802	6	4297-954	4297-834	297-822
.016 x .025	.41 x .64	-	-		-	-	297-870
.016 x .025 D**	.41 x .64	9293-850	9293-852		9293-854	-	-
.017 x .025	.43 x .64	-	4297-808	6	4297-956	4297-836	297-824
.017 x .025 D**	.43 x .64	9293-614	9297-808		9297-956	-	-
.017 x .025 H* D**	.43 x .64	9293-878	9293-880		9293-882	-	-
.018 x .018	.46 x .46	4293-616	4297-810		4297-958	-	-
.018 x .025	.46 x .64	-	4297-814	6	4297-960	4297-840	-
.018 x .025 H*	.46 x .64	9293-904	9293-906		9293-908	-	-
.019 x .025	.48 x .64	4293-620	4297-816	6	4297-962	-	297-826
.019 x .025 H*	.48 x .64	9296-650	9296-652		9296-654	-	-
.021 x .025	.53 x .64	-	4297-818		4297-964	4297-844	297-828
.021 x .025 H*	.53 x .64	9293-932	9293-934		9293-936	-	-

* Hybrid ** Dimpled

Gold

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™ SuperElastic

Archwire Products

Unitek™ Nitinol Classic Archwire

Dimension Inches	Dimension mm	OrthoForm™ I Tapered	OrthoForm™ II Square	OrthoForm™ III Ovoid	OrthoForm™ LA	Standard
Round						
Upper						
.012	.30	9296-601	9296-603	9296-605	-	4296-121
.014	.36	4293-510	4296-405	4296-517	4296-307	4296-141
.014 D**	.36	9293-510	9296-405	9296-517	-	-
.016	.41	4293-512	4296-407	4296-519	4296-303	4296-161
.016 D**	.41	9293-512	9296-407	9296-519	-	-
.018	.46	4293-514	4296-409	4296-521	4296-315	4296-181
.020	.51	4293-516	4296-411	4296-523	4296-327	4296-201
Lower						
.012	.30	9296-602	9296-604	9296-606	-	4296-122
.014	.36	4293-511	4296-406	4296-518	4296-308	4296-142
.014 D**	.36	9293-511	9296-406	9296-518	-	-
.016	.41	4293-513	4296-408	4296-520	4296-304	4296-162
.016 D**	.41	9293-513	9296-408	9296-520	-	-
.018	.46	4293-515	4296-410	4296-522	4296-316	4296-182
.020	.51	4293-517	4296-412	4296-524	4296-328	4296-202
Rectangular/Square						
Upper						
.014 x .025 D**	.36 x .64	9293-819	9293-821	9293-823	-	-
.016 x .016	.41 x .41	4293-518	4297-701	4297-851	4297-601	-
.016 x .022	.41 x .56	4293-520	4297-703	4297-853	4297-603	4297-171
.016 x .025 D**	.41 x .64	9293-855	9293-857	9293-859	-	-
.017 x .022	.43 x .56	4293-522	4297-705	4297-855	-	-
.017 x .025	.43 x .64	4293-524	4297-707	4297-857	4297-609	4297-281
.017 x .025 D**	.43 x .64	9293-524	9297-707	9297-857	-	-
.017 x .025 H* D**	.43 x .64	9293-883	9293-885	9293-887	-	-
.018 x .018	.46 x .46	4293-526	4297-709	4297-859	4297-613	4297-113
.018 x .022	.46 x .56	4293-528	4297-711	4297-861	4297-617	-
.018 x .025	.46 x .64	4293-530	4297-713	4297-863	4297-615	4297-381
.018 x .025 H*	.46 x .64	9293-909	9293-911	9293-913	-	-
.019 x .025	.48 x .64	4293-532	4297-715	4297-865	4297-621	4297-481
.019 x .025 H*	.48 x .64	9293-951	9293-953	9293-955	-	-
.021 x .021	.53 x .53	-	-	-	-	-
.021 x .025	.53 x .64	-	4297-717	4297-867	4297-633	4297-581
Lower						
.014 x .025 D**	.36 x .64	9293-820	9293-822	9293-824	-	-
.016 x .016	.41 x .41	4293-519	4297-702	4297-852	4297-602	-
.016 x .022	.41 x .56	4293-521	4297-704	4297-854	4297-604	4297-172
.016 x .025 D**	.41 x .64	9293-856	9293-858	9293-860	-	-
.017 x .022	.43 x .56	4293-523	4297-706	4297-856	-	-
.017 x .025	.43 x .64	4293-525	4297-708	4297-858	4297-610	4297-282
.017 x .025 D**	.43 x .64	9293-525	9297-708	9297-858	-	-
.017 x .025 H* D**	.43 x .64	9293-884	9293-886	9293-888	-	-
.018 x .018	.46 x .46	4293-527	4297-710	4297-860	4297-614	4297-114
.018 x .022	.46 x .56	4293-529	4297-712	4297-862	4297-618	-
.018 x .025	.46 x .64	4293-531	4297-714	4297-864	4297-616	4297-382
.018 x .025 H*	.46 x .64	9293-910	9293-912	9293-914	-	-
.019 x .025	.48 x .64	4293-533	4297-716	4297-866	4297-622	4297-482
.019 x .025 H*	.48 x .64	9293-952	9293-954	9293-956	-	-
.021 x .025	.53 x .64	-	4297-718	4297-868	4297-634	4297-582

*Hybrid ** Dimpled

3M Unitek 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. It was the first and continues to be the most versatile.

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

Classic

Order Online! www.3MUnitek.com • USA and PR 1-800-423-4588 • Canada 1-800-443-1661

Archwire Products

Unitek™ Beta III Titanium Archwire

Dimension Inches	Dimension mm	OrthoForm™ I Tapered	OrthoForm™ II Square	OrthoForm™ III Ovoid
Rectangular/Square				
Upper				
016 x .022	.41 x .56	4301-324	4301-302	4301-304
.016 x .025	.41 x .64	4301-350	4301-352	4301-354
.0175 x .0175	.44 x .44	-	4301-336	4301-338
.017 x .025	.43 x .64	4301-326	4301-308	4301-310
.019 x .025	.48 x .64	4301-328	4301-314	4301-316
.021 x .021	.53 x .53	-	-	4301-346
.021 x .025	.53 x .64	4301-330	4301-320	4301-322
Lower				
.016 x .022	.41 x .56	4301-325	4301-303	4301-305
.016 x .025	.41 x .64	4301-351	4301-353	4301-355
.0175 x .0175	.44 x .44	-	4301-337	4301-339
.017 x .025	.43 x .64	4301-327	4301-309	4301-311
.019 x .025	.48 x .64	4301-329	4301-315	4301-317
.021 x .021	.53 x .53	-	-	-
.021 x .025	.53 x .64	4301-331	4301-321	4301-323

7

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.

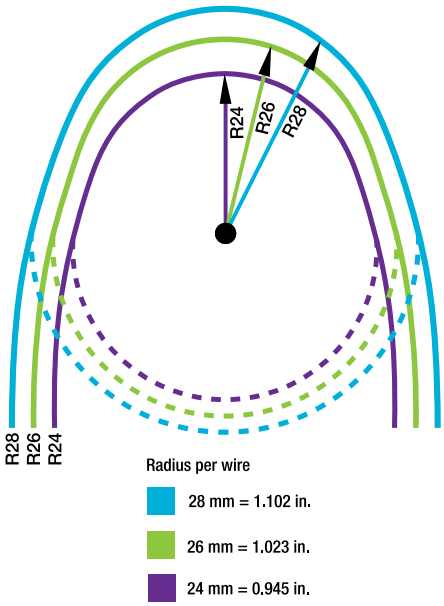
- Processed to reduce breakage
- Polished surface finish for improved sliding mechanics
- Tight corner radii specifications reducing torque loss, especially in final phase of treatment
- 10/pk unit of use

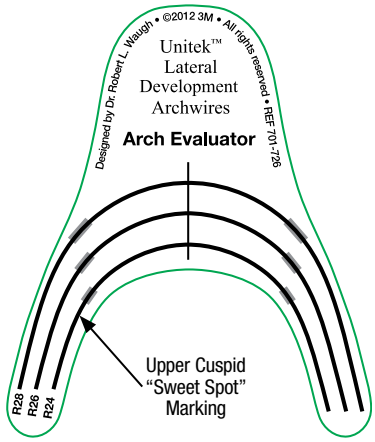
Archwire Products

Unitek™ 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	
Heat Treated SS							
.016 x .025	.41 x .64	4584-301		4584-302		4584-303	
.019 x .025	.48 x .64	4584-304		4584-305		4584-306	
			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)
REF 701-726

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Archwire Products

Permachrome Resilient Archwire

Dimension Inches	Dimension mm	OrthoForm™ I Tapered	OrthoForm™ II Square		OrthoForm™ III Ovoid	OrthoForm™ LA	Standard
Round							
Upper							
.012	.30	-	4 300-603		300-003	-	-
.014	.36	4 293-305	4 300-605	6	4 300-005	4 300-507	299-145
.016	.41	4 293-307	4 300-607	6	4 300-007	4 300-503	299-165
.018	.46	4 293-309	4 300-609	6	4 300-009	4 300-515	299-185
.020	.51	4 293-311	4 300-611	6	4 300-011	4 300-521	299-205
Lower							
.012	.30	-	4 300-604		300-004	-	-
.014	.36	4 293-306	4 300-606	6	4 300-006	4 300-508	299-146
.016	.41	4 293-308	4 300-608	6	4 300-008	4 300-504	299-166
.018	.46	4 293-310	4 300-610	6	4 300-010	4 300-516	299-186
.020	.51	4 293-312	4 300-612	6	4 300-012	4 300-522	299-206
Rectangular/Square							
Upper							
.016 x .016	.41 x .41	4 293-315	4 300-615	6	4 300-015	4 300-565	298-115
.016 x .022	.41 x .56	4 293-317	4 300-617	6	4 300-017	4 300-567	298-175
.016 x .025	.41 x .64	-	4 300-657		4 300-659	-	-
.0175 x .0175	.44 x .44	-	4 293-341		4 293-351	4 -	-
.017 x .022	.43 x .56	-	4 300-619		4 300-019	4 300-577	298-275
.017 x .025	.43 x .64	4 293-321	4 300-621	6	4 300-021	4 300-579	298-285
.017 x .025 H*	.43 x .64	9293-889	9293-891		9293-893	-	-
.018 x .022	.46 x .56	-	4 300-623		4 300-023	4 300-569	298-375
.018 x .025	.46 x .64	4 293-325	4 300-625	6	4 300-025	4 300-573	298-385
.018 x .025 H*	.46 x .64	9293-915	9293-917		9293-919	-	-
.019 x .025	.48 x .64	4 293-327	4 300-627	6	4 300-027	4 300-585	298-485
.019 x .025 H*	.48 x .64	9293-957	9293-959		9293-961	-	-
.021 x .021	.53 x .53	-	-		-	-	-
.021 x .025	.53 x .64	293-329	4 300-629	6	4 300-029	4 300-593	298-585
.021 x .025 H*	.53 x .64	9293-943	9293-945		9293-947	-	-
Lower							
.016 x .016	.41 x .41	293-316	4 300-616	6	4 300-016	4 300-566	298-116
.016 x .022	.41 x .56	4 293-318	4 300-618	6	4 300-018	4 300-568	298-176
.016 x .025	.41 x .64	4 300-656	4 300-658		4 300-660	-	-
.0175 x .0175	.44 x .44	-	-		4 293-352	-	-
.017 x .022	.43 x .56	-	4 300-620		4 300-020	4 300-578	298-276
.017 x .025	.43 x .64	4 293-322	4 300-622	6	4 300-022	4 300-580	298-286
.017 x .025 H*	.43 x .64	9293-890	9293-892		9293-894	-	-
.018 x .022	.46 x .56	-	4 300-624		4 300-024	4 300-570	298-376
.018 x .025	.46 x .64	4 293-326	4 300-626	6	4 300-026	4 300-574	298-386
.018 x .025 H*	.46 x .64	9293-916	9293-918		9293-920	-	-
.019 x .025	.48 x .64	4 293-328	4 300-628	6	4 300-028	4 300-586	298-486
.019 x .025 H*	.48 x. 64	9293-958	9293-960		9293-962	-	-
.021 x .021	.53 x .53	-	-		-	-	-
.021 x .025	.53 x .64	293-330	4 300-630	6	4 300-030	4 300-594	298-586
.021 x .025 H*	.53 x .64	9293-944	9293-946		9293-948	-	-
		Unit of Use	Unit of Use	Gold	Unit of Use	Unit of Use	

* Hybrid

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

- Better formability than Hi-T™ II
- Mid-range tensile strength
- Gold available in unit of use only 5/pk

- OrthoForm I, 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

Archwire Products

Permachrome Standard Archwire

Dimension Inches	Dimension mm	Unit of Use	Standard
Round			
Upper			
.014	.36		301-141
.016	.41		301-161
.018	.46		301-181
.020	.51		301-201
Lower			
.016	.41		301-162
.018	.46		301-182
Rectangular/Square			
Upper			
.016 x .022	.41 x .56	4	300-171
.017 x .022	.43 x .56		300-271
.017 x .025	.43 x .64		300-281
.018 x .025	.46 x .64	4	300-381
.019 x .025	.48 x .64	4	300-481
.021 x .025	.53 x .64		300-581
Lower			
.016 x .022	.41 x .56	4	300-172
.017 x .022	.43 x .56		300-272
.017 x .025	.43 x .64	4	300-282
.018 x .025	.46 x .64	4	300-382
.019 x .025	.48 x .64	4	300-482
.021 x .025	.53 x .64		300-582

7

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
- All unit of use 50/pk

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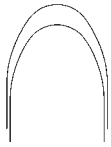
Archwire Products

Permachrome Posted Archwire



Dimension Inches	Inter-Post mm	OrthoForm™ I Tapered	OrthoForm™ II Square	OrthoForm™ III Ovoid	OrthoForm™ LA
Rectangular					
Upper					
.016 x .022	44	-	-	300-931	-
.016 x .022	42	-	300-726	300-932	-
.016 x .022	40	293-105	300-727	300-933	-
.016 x .022	38	293-107	300-728	300-934	-
.016 x .022	36	293-109	300-729	300-935	-
.016 x .022	34	-	300-730	300-936	-
.016 x .022	32	-	300-731	300-937	-
.019 x .025	44	293-115	300-232	300-938	300-132
.019 x .025	42	293-117	300-233	300-939	-
.019 x .025	40	293-119	300-234	300-940	300-134
.019 x .025	38	293-121	300-235	300-941	300-135
.019 x .025	36	293-123	300-236	300-942	300-136
.019 x .025	34	293-125	300-237	300-943	300-137
.019 x .025	32	293-127	300-238	300-944	300-138
Rectangular					
Lower					
.016 x .022	30	-	300-749	300-955	-
.016 x .022	28	293-104	300-750	300-956	-
.016 x .022	26	293-106	300-751	300-957	-
.016 x .022	24	293-108	300-752	300-958	-
.016 x .022	22	-	-	300-959	-
.019 x .025	30	293-112	300-244	300-960	300-144
.019 x .025	28	293-114	300-245	300-961	300-145
.019 x .025	26	293-116	300-246	300-962	300-146
.019 x .025	24	293-118	300-247	300-963	300-147
.019 x .025	22	293-120	300-248	300-964	-

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

Archwire Products

Hi-T™ II Archwire

Dimension Inches	Dimension mm	Standard
Round		
Upper		
.012	.30	294-121
.014	.36	294-141
.016	.41	294-161
.018	.46	294-181
.020	.51	294-201
Lower		
.012	.30	294-122
.014	.36	294-142
.016	.41	294-162
.018	.46	294-182
.020	.51	294-202
Rectangular/Square		
Upper		
.016 x .016	.41 x .41	295-111
.016 x .022	.41 x .56	295-171
.017 x .025	.43 x .64	295-281
.018 x .022	.46 x .56	295-371
.018 x .025	.46 x .64	295-381
.019 x .025	.48 x .64	295-481
Lower		
.016 x .016	.41 x .41	295-112
.016 x .022	.41 x .56	295-172
.017 x .025	.43 x .64	295-282
.018 x .022	.46 x .56	295-372
.018 x .025	.46 x .64	295-382
.019 x .025	.48 x .64	295-482

- High tensile strength
- Available in folder packs only
- Round wires: 50/pk
- Rectangular wires: 10/pk

Archwire Products

Hi-T™ II Twist Flex
Miscellaneous Solder Supplies

Hi-T™ II Twist Flex (Stainless Steel)

- Consists of three small diameter strands of Hi-T™ II round wires twisted tightly together to form a single wire
- High resistance to permanent deformation
- Delivers continuous light force over a greater distance and working range than solid round stainless steel wire of the same diameter
- Silver-soldered to prevent unraveling, can be trimmed up to 3/8 in. (9.5 mm) without unraveling. If further trimming is necessary, use Unitek™ Soldering Flux.
- 10/pk

Individual Precut Lengths of Twist Flex Wires

		Archwire Diameter		
Length Inches	**(cm)**	**.0175 in. (.44 mm)**	**.0195 (.50 mm)**	**.0215 (.55 mm)**
14*	(35.6)	260-175	260-195	260-215

* Not pre-soldered

7

Solder Supplies

Unitek™ Soldering Flux
700-202

Silver Solder

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

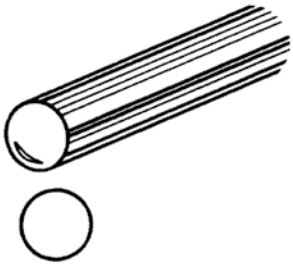
700-101	Light, Diameter: 0.010 in. (0.25 mm); Length: 30 feet (9.14 meters)
700-102	Regular, Diameter: 0.015 in. (0.38 mm); Length: 20 feet (6.10 meters)
700-103	Heavy, Diameter: 0.025 in. (0.64 mm); Length: 10 feet (3.05 meters)

Archwire Products

Unitek™ Stainless Steel Straight Lengths

Round Wire

- 14 in. (35.6 cm) Straight Lengths

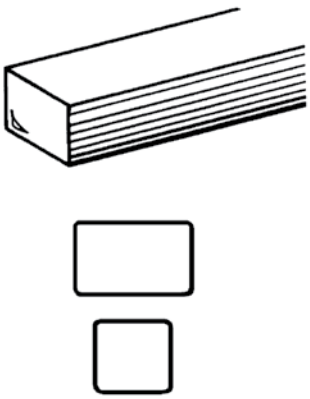


Size Inches	Size mm	Hi-T™ II	Qty/ Pkg	Permachrome Standard	Qty/ Pkg	Permachrome Resilient	Qty/ Pkg
.010	.25	216-100	30	211-100	40	-	
.012	.30	216-120	30	211-120	40	-	40
.014	.36	216-140	30	211-140	40	213-140	40
.015	.39	-		211-150	40	-	
.016	.41	216-160	30	211-160	40	213-160	40
.018	.46	216-180	20	211-180	40	213-180	40
.020	.51	216-200	20	211-200	40	213-200	40
.021	.53	-		211-210	35	-	
.022	.56	216-220	30	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	-	
.062	1.57	-		211-620	15	-	

7

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 Inches	Size mm	Hi-T II	Permachrome Standard	Permachrome Resilient
.016 x .016	.41 x .41	256-616	251-616	253-616
.016 x .022	.41 x .56	256-622	251-622	253-622
.017 x .022	.43 x .56	-	251-722	253-722
.017 x .025	.43 x .64	256-725	251-725	253-725
.018 x .018	.46 x .46	-	-	253-818
.018 x .022	.46 x .56	256-822	251-822	253-822
.018 x .025	.46 x .64	256-825	251-825	253-825
.019 x .025	.48 x .64	256-925	251-925	253-925
.020 x .025	.51 x .64	-	-	253-025
.021 x .025	.53 x .64	256-125	251-125	253-125
.0215 x .028	.55 x .71	-	251-228	253-228

15 in. (37.5 cm) Straight Lengths

Size Inches	Size mm	Hi-T II	Permachrome Standard
.016 x .022	.41 x .56	256-621	251-621

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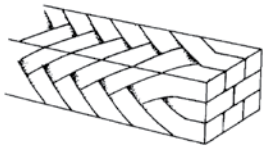
Archwire Products

Multi-Strand Archwire

Unitek™ Braided Wire

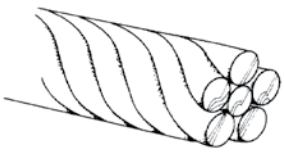
- Eight (8) strand Braided Rectangular
- Three dimensional control
- Wide working range
- 10/pk



Dimension Inches	Dimension mm	OrthoForm™ I Tapered	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	300-965	300-909	300-967
.018 x .025	.46 x .64	-	300-911	-
.019 x .025	.48 x .64	300-969	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	300-966	300-910	300-968
.018 x .025	.46 x .64	-	300-912	-
.019 x .025	.48 x .64	300-970	300-914	300-972
.021 x .025	.53 x .64	-	300-916	-

Unitek™ 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 Inches	Size mm	OrthoForm™ II Upper/Lower	OrthoForm™ II 14 in. Lengths
.0155	.40	300-766	300-760
.0175	.45	300-767	300-761
.0195	.48	300-768	300-762
.0215	.51	-	300-763

Unitek™ Twist Wire

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

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

Archwire Products

Blue Flexiloy Wire
(Cobalt-Based Nickel Alloy)

- Temper spring increases with heat-treatment
- Can be used “out-of-the box”, especially when complex bends and loops need to be formed, then heat-treated to approximately double its normal springiness, if desired
- Ideal for wire manipulation
- Can be soldered with low heat and welded without becoming brittle
- Excellent for retainers and standard arches

14 in. Straight Lengths

Round

Size			
Inches	**mm**	**Qty per**	**Blue**
.016	.41	30	218-160
.018	.46	20	218-180
.020	.51	20	218-200
.028	.71	10	218-280
.030	.76	10	218-300
.036	.91	10	218-360
.045	1.14	6	218-450

Rectangular/Square

Size			
Inches	**mm**	**Qty per**	**Blue**
.016 x .016	.41 x .41	10	258-616
.016 x .022	.41 x .56	10	258-622
.017 x .025	.41 x .64	10	258-725

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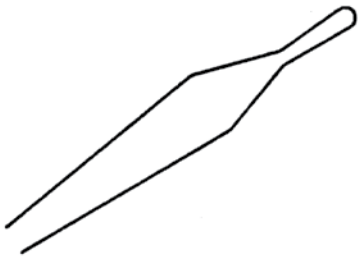
Archwire Products

Ligature Wire and Tie Hooks

Ligature Wire

- Preformed ligature slips easily over all brackets
- Coated preformed ligature wire; ideal for aesthetic brackets such as Clarity™ Ceramic 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 Inches	Diameter mm		Color 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	Orange

Spool Uncoated

Diameter Inches	Diameter mm	16 oz. (.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

Preformed Coated (100/pk)

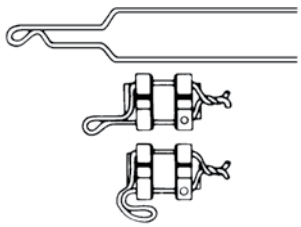
Diameter Inches	Diameter mm		Coating Color
.012*	.30	390-160	Natural

* Finished diameter .008 Core wire

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



Unitek™ Ligature Ties Preformed Tooth Colored Shorty .012**

- Aesthetic, tooth colored ligature tie that can be used with ceramic brackets such as Clarity™ ADVANCED Ceramic Brackets
- Stainless Steel tie with a Polymer Coating (Ethylene/Tetrafluoroethylene Copolymer)
- .012 diameter
- Available in packs of 100

390-170 100/pk

** Available in the United States and Canada

Pretorqued, Preformed Edgewise Archwires

- Preformed archwires supplied with a fixed angle of torque over the anterior region of the arch
- Permachrome standard
- Remove or reverse torque with Rose Torquing pliers or two parallel pliers, e.g., Tweed arch-forming pliers
- 10/pk

Size		Standard Arch Form			
		10°	10°	20°	25°
Inches	mm	Upper	Lower	Upper	Upper
.016 x .022	.41 x .56	300-785	300-786	300-797	-
.017 x .025	.43 x .64	-	300-788	-	300-823
.018 x .025	.46 x .64	-	-	-	300-827
.019 x .025	.48 x .64	300-793	300-794	-	-
.021 x .025	.53 x .56	-	-	-	300-831

Archwire Products

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

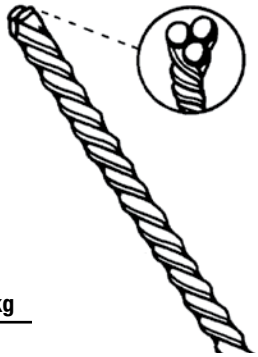
Hawley Retainer Wires (1/Pack)

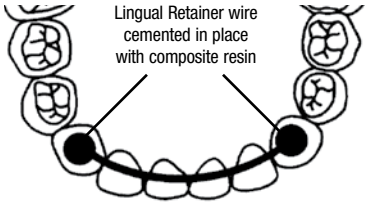
Length (mm*)	Size		Length (mm*)	Size	
32.8	0	360-300	45.3	5	360-305
35.2	1	360-301	47.8	6	360-306
37.8	2	360-302	50.3	7	360-307
40.3	3	360-303	52.7	8	360-308
42.8	4	360-304	55.2	9	360-309

*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
- Allows for long term stability with physiologic teeth movement
- Tight spiral twist facilitates bonding without end loops or bonding pads
- Bond any or all teeth in segment





Diameter Inches	Diameter mm	Order 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

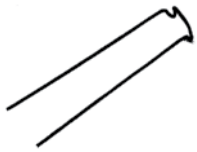
406-044 10/pk

Archwire Products

Clasps

Modified Arrowhead Clasps

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



Modified Arrowhead Clasp (10/Pk)

Size Inches	Size mm	Width (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

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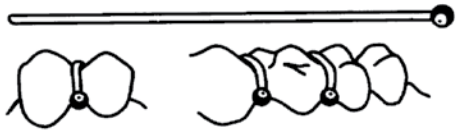
Ball Clasps

- Length 1.38 in. (34.9 mm)
- Stainless steel round wire with integrated round ball at one end
- Ball diameter approximately twice wire diameter
- Simplifies retainer fabrication, contouring and retention, especially mixed dentition
- 10/pk



Wire Diameter in.	Wire Diameter mm	Length in.	Length 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 Products

Archwire Accessories

Unitek™ 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

Refer to Supplies and Equipment section for arch form symmetry aids.

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