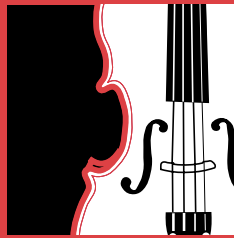
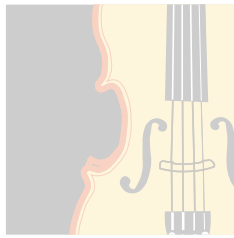


D'Addario®



Bowed
Instrument
Strings



C o n t e n t s



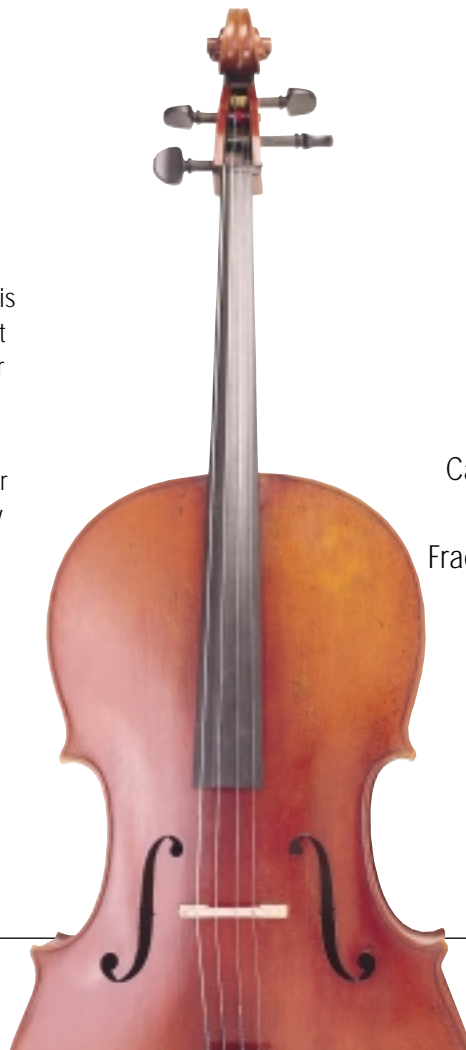
It's a cool summer night in Salle, Italy, 1905. A man walks through the flickering lights of the little town, bidding farewell to family and friends as the soothing sound of crickets fiddling floats to him from the dark shapes of the Abruzzi mountains which surround the village.

Tomorrow, he will embark upon a journey to America, where he will begin importing the family's musical instrument strings. Like many during the Industrial Revolution, the promise of America is luring him away from home. But he's bringing more than his belongings with him. He's bringing generations of string making knowledge.

His name is Charles D'Addario.

In 1917, with World War I raging across Europe, Charles decides to produce his own strings in Astoria, New York, with the help of his brother-in-law Rocco. The two manufacture gut strings for bowed instruments, packaged under the names La Rita and Puccini-La Milanese.

A short distance away, in Connecticut, Ladislav Kaplan is also producing gut strings for bowed instruments. The two companies enjoy modest success as friendly competitors for decades, freely exchanging ideas and raw materials with each other. During these years, several enormous advancements to string making are achieved, including, in 1949, the invention of the most revolutionary string winding and polishing machine of its time: the Kaplamatic.



History	1-2
Bringing Quality to New Heights	3
Musician's Advisory Board	3
D'Addario Zyex	4
Helicore	5
Unicore	5
Helicore Bass	6
Pro•Arté	7
Prelude	8
Golden Spiral Solo	9
Golden Spiral	10
String Measurements	10
Rosin	11
Caring For Your Strings	11
Fractional Size Tensions	12
String Silk Colors	13

The Kaplamatic automatically winds and polishes strings on one machine, eliminating the need to remount and rehandle fragile gut cores, thus removing many of the variables that cause defects in the strings. String quality improves dramatically, and remains fairly consistent until 1979, when Otto Kaplan (Ladislav's son and the inventor of the Kaplamatic) starts to think of retirement, and begins talking to D'Addario, now in the hands of Charles' grandsons, John D'Addario, Jr. and Jim D'Addario, about selling his string company.

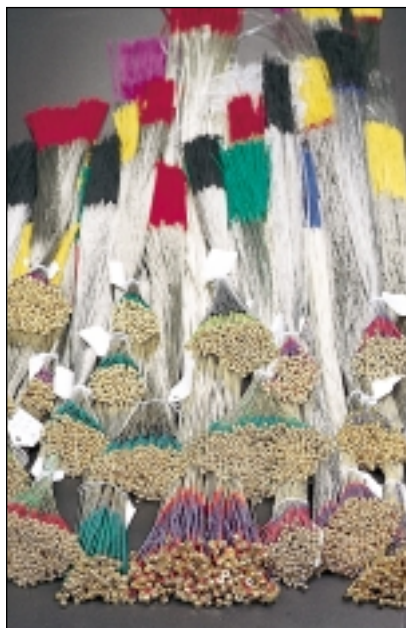
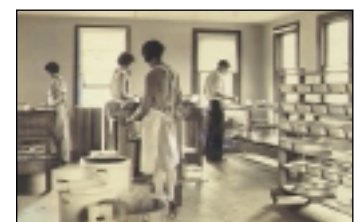
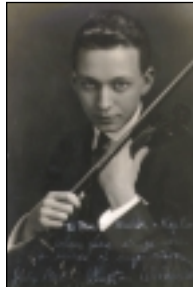
Sadly, Otto dies before a final purchase agreement is reached. But in 1981, J. D'Addario & Company, Inc. acquires Kaplan Musical Strings from the Kaplan estate.

A renaissance for bowed instrument strings had begun. In 1983, while continuing to manufacture Kaplan's established line of gut strings, Jim D'Addario, with the help of Dr. Norman Pickering (violinist, physicist, engineer, and foremost authority on the study of stringed instruments) and Jim Rickard (renowned instrument designer, engineer, and musician), began the task of bringing the production to new technological levels. He dismantled and studied the original Kaplamatic, then fused the original ideas with cutting-edge computer and mechanical technologies to create the Kaplamatic II, which was built on the original 25-year-old hand-welded Kaplamatic frame.

The Kaplamatic is now in a sixth generation, and boasts total control over winding and polishing operations; D'Addario's string production has reached a quality that is virtually unrivaled.

1991 saw revolutionary breakthroughs in string design. Zealous experiments with dozens of different materials and metal tempers were undertaken, eventually leading to the development of new cores and tempering machinery which prepare silver, aluminum, copper, and nickel wires. Updated quality control machinery brought consistency to unprecedented levels.

Now, nearly a century after Charles came to America with the string making knowledge his family had been perfecting since the 1600s, D'Addario is at the forefront of the string world and set to enter the 21st Century. But even as the company heads further into the technology of the future, the guiding hand of the past is never out of sight.



Bringing Quality To New Heights

When it comes to quality control technology, D'Addario is peerless.

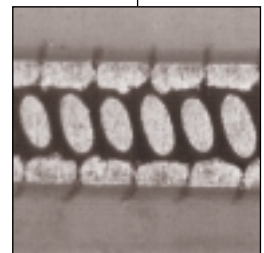
All Kaplamatic winding and polishing machines utilize sophisticated load cells which measure winding wire tension; computers automatically adjust for variations. A master computer stores winding speeds, wire feeding ratios, and polishing parameters. Dust collection systems recover silver and aluminum dust from the polishing process for recycling and environmental purposes.

In D'Addario's testing lab, a tensiometer is used to simulate the parameters of a string on an actual instrument. A load cell is used to measure the tension of the string at its accepted pitch and scale length; this information is vital to quality control and product development.

An advanced computerized bowing machine provides information about a string's response at a given bow pressure and speed. This machine is connected to a digital spectrum analyzer which creates a graph of the vibrations produced when bowing. The graphs paint a picture of the level of each partial frequency found within the string's vibrational pattern. These graphs are used to compare one string's sound characteristics to another.

A high powered stereo microscope allows D'Addario string engineers to look inside finished strings in extreme close-up to check that elements like wrap spacing are within set parameters.

With engineers constantly improving and updating technology, D'Addario continually raises the level of quality that musicians expect from their strings. And the higher expectations rise, the harder we try to exceed them.



The Musician's Advisory Board

The D'Addario Musician's Advisory Board, formed in 1995, has played an important role in D'Addario's string development. The Board, which consists of a bi-yearly rotation of top musicians and instrument experts, was created to test both new and existing products and make recommendations as to any possible improvements. Board members were invaluable in helping us refine the design of our Helicore Hybrid and Helicore Pizzicato bass strings. They also provided us with essential feedback on our entire line of violin strings.



D'ADDARIO ZYEX®

D'Addario Zyex® strings are the most recent addition to the D'Addario bowed instrument string line, and they have been met with unprecedented praise and unanimous accolades from players and makers around the world. Zyex strings consist of a new composite fiber that is actually the closest man-made equivalent to gut, with better recovery, less tension loss, and a much higher resistance to climatic changes.

The core material of these strings is a product of aerospace technology, designed for the most extreme conditions of space—and this totally new molecular structure is perfect for use in musical instrument strings. It is not temperamental, like the more expensive gut, yet equals or outperforms gut in nearly every area of play. D'Addario Zyex strings have as much as 1/3 less tension loss when compared to gut or perlon/nylon strings. And unlike gut, Zyex's playing characteristics are unaffected by exposure to moisture, sunshine, or temperature changes.

Violin

Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
DZ311	E	Tinned High Carbon Steel	16.8	18.6	20.4
DZ312	A	Aluminum Wound	11.6	13.4	15.0
DZ313A	D	Aluminum Wound	10.3	12.0	14.2
DZ313S	D	Silver Wound	11.0	13.1	14.9
DZ314	G	Silver Wound	9.5	10.9	11.8
DZ310A	-	Complete Set - Coiled (Alum. D)			
DZ310S	-	Complete Set - Coiled (Silver D)			

Available in 4/4 scale length only; light, medium, & heavy tensions.

Viola

Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
DZ411	A	Aluminum Wound	13.8	15.9	18.5
DZ412A	D	Aluminum Wound	9.9	11.8	13.4
DZ413	G	Silver Wound	10.2	11.8	13.8
DZ414	C	Tungsten/Silver Wound	10.3	11.4	12.98

Available in long scale (16" and over); light, medium, & heavy tensions.

Zyex is a registered trademark of Zyex, Ltd.
US Patent #5587541

HELICORE®

Helicore® are crafted with a multi-strand twisted steel core and wound with exotic metals like titanium (used here for the first time in bowed instrument strings). These innovative materials have enabled us to design strings with a very small diameter to provide extremely quick bow response. The application of damping resins under selected windings gives the Helicore® a warm, rich sound, quite unlike steel strings of the past. The strings are subtle under the ear, yet carry great projection in large concert halls. Helicore® stay in tune especially well due to their cores, and retain a very long playing life. They are available in complete sets or individually for violin, viola, cello, and bass.



Violin

Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
H311	E*	Tinned High Carbon Steel	16.8	18.6	20.4
H311W	E*	Aluminum Wound	16.3	18.1	19.9
H312	A	Aluminum Wound	11.7	12.7	13.6
H313	D	Titanium Wound	9.2	11.5	12.2
H314	G	Silver Wound	9.2	10.2	11.4
H310	–	Complete Set - Coiled			
H310W	–	Complete Set - Coiled (Wound E)			

Available in 4/4 scale length; light, medium, & heavy tensions. Available in 3/4, 1/2, 1/4, 1/8 (fits 1/10), 1/16 scale lengths. Fractional sizes available in medium tension only (see page 13). Specify when ordering.

Viola

H411	A	Aluminum Wound	15.6	17.0	18.2
H412	D	Titanium Wound	11.3	12.8	14.2
H413	G	Silver Wound	11.9	13.8	15.0
H414	C	Tungsten/Silver Wound	11.8	13.1	14.6
H410	–	Complete Set - Coiled			

Available in long scale (16" and over); light, medium, & heavy tensions. Available in medium scale, medium tension only (see page 13).

Cello

H511	A	Titanium Wound	33.3	35.6	38.1
H512	D	Titanium Wound	29.0	32.0	34.2
H513	G	Tungsten/Silver Wound	27.4	29.4	31.7
H514	C	Tungsten/Silver Wound	27.0	28.8	31.8
H510	–	Complete Set - Coiled			

Available in 4/4 scale length; light, medium, & heavy tensions.

HELICORE® / UNICORE®

Available for cello only, the Helicore/Unicore set is comprised of A and D strings with cores forged of a single strand of high-tensile steel in contrast to the G and C strings, which are crafted with the multi-strand core of the Helicore®. The solid steel cores of the A and D produce increased power and volume, but keep a clear tone and quick bow response.



Cello

HU511	A	Nickel Wound	34.0	36.5	37.1
HU512	D	Nickel Wound	29.0	32.0	34.0
HU510	–	Complete Set - Coiled, Unicore A & D, Helicore G & C			

Available in 4/4 scale length; light, medium, & heavy tensions.

*Except where noted all D'Addario and Kaplan violin E strings have a loop end with a brass ball. The ball can be easily removed if a loop end string is desired.



HELICORE® BASS

The standard Helicore bass strings, introduced in 1994, have met with worldwide acclaim. These stranded steel core strings (standard H610 models) provide unprecedented ease of bowing and the warm, natural tone one would expect from a fine gut core string.

In 1996, with the help of D'Addario Musician's Advisory Board members, D'Addario completed development of additional Helicore double bass string varieties. The new strings include the HP series, designed specifically for the bassist who plays pizzicato, HH series, for those who play a broad range of musical styles, and HS series, for solo orchestral work.

The HH series has improved pizzicato sustain over the standard orchestral models, yet still provides excellent bow response for arco passages. The HP series provides even more sustain and "growl" when played pizzicato. The HS series is a solo tuning version (one full step above normal pitch) of the standard orchestral Helicore strings.

Bass

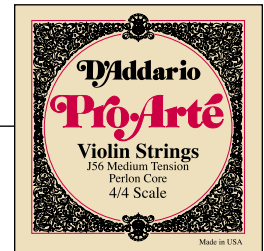
Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
Orchestral Series					
H611	G	Nickel Wound	58.2	62.0	64.0
H612	D	Nickel Wound	61.3	65.9	68.4
H613	A	Nickel Wound	62.5	69.0	73.0
H614	E	Nickel Wound	64.1	70.0	74.8
H615	C	Nickel Wound, Extended E	64.1	70.0	74.8
H616	Low B	Nickel Wound		66.4	
H610	–	Complete Set-Coiled			
Solo Series					
HS611	A	Nickel Wound		60.5	
HS612	E	Nickel Wound		63.0	
HS613	B	Nickel Wound		68.4	
HS614	F#	Nickel Wound		69.0	
HS610	–	Complete Set - Coiled			
Hybrid Series					
HH611	G	Nickel Wound	58.2	62.0	64.0
HH612	D	Nickel Wound	61.3	65.9	68.4
HH613	A	Nickel Wound	63.0	67.0	70.0
HH614	E	Nickel Wound	64.0	68.0	71.0
HH615	C	Nickel Wound, Extended E	64.0	68.0	71.0
HH616	Low B	Nickel Wound		69.6	
HH610	–	Complete Set - Coiled			
Pizzicato Series					
HP611	G	Nickel Wound	58.2	62.0	64.0
HP612	D	Nickel Wound	61.0	66.0	69.0
HP613	A	Nickel Wound	63.0	67.0	70.0
HP614	E	Nickel Wound	64.0	68.0	71.0
HP615	C	Nickel Wound, Extended E	64.0	68.0	71.0
HP610	–	Complete Set - Coiled			

Available in $\frac{3}{4}$ scale length; light, medium, & heavy tensions.
Solo Series, H616 & HH616 available in $\frac{3}{4}$ scale length only; medium tension only.
H615, H616, HH615, HH616, & HP615 sold as single strings only.

P R O • A R T É®

A synthetic perlon core enables D'Addario's Pro•Arté strings to offer the sound and feel of traditional gut strings without the problems associated with delicate gut cores. The finest aluminum, silver, and tungsten alloys are precision wound and polished on D'Addario's state-of-the-art computer controlled winding machines.

Carefully hand finished and hand inspected, this is a string for the professional or serious amateur. Available for violin, viola, and cello (fractional sizes).



Violin

Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
J5601W	E*	Aluminum Wound	16.3	18.1	19.9
J5601	E*	Tinned High Carbon Steel	5.2	16.8	18.6
J5602	A	Aluminum Wound	10.2	12.0	13.6
J5603	D	Aluminum Wound	9.6	11.3	13.8
J5603S	D	Silver Wound	9.5	11.7	13.5
J5604	G	Silver Wound	9.2	10.6	11.4
J56	–	Complete Set - Coiled (Alum D)			
J56W	–	Complete Set - Coiled (Wound E)			
J56S	–	Complete Set - Coiled (Silver D)			

Available in $\frac{4}{4}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ (fits $\frac{1}{10}$), $\frac{1}{16}$ scale lengths. Fractional sizes available in medium tension only (see page 13). Specify when ordering.

Viola

J5801	A	Aluminum Wound	13.8	15.1	16.0
J5802	D	Aluminum Wound	9.7	11.9	13.4
J5802S	D	Silver Wound	10.8	12.4	14.0
J5803	G	Silver Wound	10.2	11.5	12.5
J5804	C	Silver Wound	10.2	11.5	12.5
J5804T	C	Tungsten/Silver Wound	10.5	11.8	13.2
J58	–	Complete Set - Coiled (Alum. D, Silver C)			

Available in three scale lengths - under 15" (short), 15"-16" (medium), and 16" and over (long). Silver D and Tungsten C sold as single strings only and are available for long scale only. Long scale available in three tensions (light, medium, & heavy). Medium tension only for short and medium scales.

Specify when ordering.

Cello

J5901	A	Aluminum Wound	29.8	32.8	36.3
J5902	D	Silver Wound	28.2	30.6	33.2
J5903	G	Silver Wound	27.1	29.3	31.3
J5903T	G	Tungsten/Silver Wound	25.9	28.1	29.8
J5904	C	Tungsten/Silver Wound	25.0	27.7	29.8
J59	–	Complete Set - Coiled (Silver G)			

Available in $\frac{4}{4}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ scale lengths. $\frac{4}{4}$ size sets available in three tensions (light, medium, & heavy). Fractional sizes available in medium tension only, see page 13 for tension. Specify when ordering.



P R E L U D E™

D'Addario Preludes are solid high-carbon steel core strings with polished pure nickel windings. Introduced in 1983, Preludes have undergone systematic improvements to make them the finest sounding and playing student-grade strings on the market today. Each string is wound on our latest Kaplamatic winding equipment, where layer upon layer of winding is applied without removing the core tension. During the winding phases, damping resin is applied under the wrap wire to reduce the brightness of tone usually associated with solid steel core strings. Available for violin, viola, and cello (fractional sizes).

Violin

Item #	Note	Description	Tension at Pitch (Lbs.)		
			Lt.	Med.	Hvy.
J811	E*	Tinned High Carbon Steel	16.8	18.6	20.4
J812	A	Aluminum Wound	12.2	13.1	14.1
J813	D	Nickel Wound	10.3	11.7	12.5
J814	G	Nickel Wound	10.3	11.4	13.2
J810	–	Complete Set - Coiled			

Available in $\frac{4}{4}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ (fits $\frac{1}{10}$), $\frac{1}{16}$ scale lengths. Fractional sizes available in medium tension only (see page 13).

Specify when ordering.

Viola

J911	A	Aluminum Wound	16.1		
J912	D	Aluminum Wound	11.6		
J913	G	Nickel Wound	10.6		
J914	C	Nickel Wound	10.8		
J910	–	Complete Set - Coiled			

Available in four scale lengths: 12" (extra short), under 15" (short), 15"-16" (medium), and 16" and over (long). Available in medium tension only. Fractional sizes available in medium tension only (see page 13).

Cello

J1011A	A	Aluminum Wound	29.3	31.8	35.2
J1011	A	Nickel Wound	34.0	36.5	37.1
J1012	D	Nickel Wound	27.0	30.0	32.0
J1013	G	Nickel Wound	26.0	29.0	31.0
J1014	C	Nickel Wound	26.0	28.0	30.4
J1010	–	Complete Set - Coiled (Nickel A)			

Aluminum A sold as single string only and available in $\frac{4}{4}$ size only.

Available in $\frac{4}{4}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ scale lengths. Fractional sizes available in medium tension only (see page 13). Specify when ordering.

*Except where noted all D'Addario and Kaplan violin E strings have a loop end with a brass ball. The ball can be easily removed if a loop end string is desired.

KAPLAN™ GOLDEN SPIRAL™ SOLO

Imported sheep gut cores are individually mounted on pneumatic stretching racks where the natural fibers are subjected to a series of treatments of dampening, stretching, and drying to stabilize the material. Each strand is then individually ground to a precise diameter, wound with aluminum or silver alloys, and polished to a smooth exterior. Digital winding controls allow for exact spacing of the windings to facilitate expansion and contraction of the gut core. Available for violin and viola. Kaplan Golden Spiral Solo Strings are sold by individual violin gauge.



Violin

Item #	Gauge	Tension	Description
Violin E • Tinned High Carbon Steel			
K420B-1		15.2	Light Tension, Ball End
K420B-3		16.8	Medium Tension, Ball End
K420B-5		18.6	Heavy Tension, Ball End
K420L-1		15.2	Light Tension, Loop End
K420L-3		16.8	Medium Tension, Loop End
K420L-5		18.6	Heavy Tension, Loop End

Violin E • Aluminum Wound on Steel			
K301W		16.3	Medium Tension, Loop End

Violin A • Aluminum Wound Gut Core			
K424-1	13	10.1	Light Tension
K424-2	13¼	11.0	Medium-Light Tension
K424-3	13½	11.7	Medium Tension
K424-4	13¾	12.5	Medium-Heavy Tension
K424-5	14	13.1	Heavy Tension

Violin D • Aluminum Wound Gut Core			
K425-1	16½	8.2	Light Tension
K425-2	16¾	8.7	Medium-Light Tension
K425-3	17	9.2	Medium Tension
K425-4	17¼	9.8	Medium-Heavy Tension
K425-5	17½	10.4	Heavy Tension

Violin D • Silver Wound Gut Core			
K440-1	13	8.3	Light Tension
K440-2	13¼	9.3	Medium-Light Tension
K440-3	13½	10.4	Medium Tension
K440-4	13¾	11.5	Medium-Heavy Tension
K440-5	14	12.6	Heavy Tension

Violin G • Silver Wound Gut Core			
K450-1	15½	7.9	Light Tension
K450-2	15¾	8.5	Medium-Light Tension
K450-3	16	9.0	Medium Tension
K450-4	16¼	10.2	Medium-Heavy Tension
K450-5	16½	11.4	Heavy Tension

Viola

Item #	Gauge	Tension	Description
Viola A • Aluminum Wound Gut Core			
K423-L1	12	11.1	Light Tension, Long Scale
K423-L3	12½	12.6	Medium Tension, Long Scale
K423-L5	13	14.2	Heavy Tension, Long Scale
K423-M	13	12.8	Medium Tension, Med. Scale

Viola D • Aluminum Wound Gut Core			
K426-L1	15½	9.2	Light Tension, Long Scale
K426-L3	16	10.1	Medium Tension, Long Scale
K426-L5	16½	10.9	Heavy Tension, Long Scale
K426-M	16½	9.3	Medium Tension, Med. Scale

Viola D • Silver Wound Gut Core			
K441-L1	11½	9.1	Light Tension, Long Scale
K441-L3	12	11.2	Medium Tension, Long Scale
K441-L5	12½	13.2	Heavy Tension, Long Scale
K441-M	12½	11.0	Medium Tension, Med. Scale

Viola G • Silver Wound Gut Core			
K451-L1	14½	8.4	Light Tension, Long Scale
K451-L3	15	9.7	Medium Tension, Long Scale
K451-L5	15½	11.1	Heavy Tension, Long Scale
K451-M	15½	10.0	Medium Tension, Med. Scale

Viola C • Silver Wound Gut Core			
K452-L1	17¼	9.1	Light Tension, Long Scale
K452-L3	17¾	9.8	Medium Tension, Long Scale
K452-L5	18½	11.0	Heavy Tension, Long Scale
K452-M	18½	9.8	Medium Tension, Med. Scale



KAPLAN™ GOLDEN SPIRAL™

Kaplan Golden Spiral strings are manufactured using the same techniques as our Golden Spiral Solo line.

Available for violin and bass, Golden Spiral strings are not sorted by gauge.



Violin

Item #	Note	Tension	Description
K400L	E	15.2	Light Tension, Loop End
K400M	E	16.8	Medium Tension, Loop End
K400H	E	20.4	Heavy Tension, Loop End
K401	A		Plain Gut
K434	A		Aluminum Wound on Gut
K435	D		Aluminum Wound on Gut
K430	D		Silver Wound on Gut
K460	G		Silver Wound on Gut

Bass • Gut Core/Tynex® Wound

Item #	Note	Tension	Description
K485L	G	42.3	Light Tension
K485M	G	46.5	Medium Tension
K485H	G	50.9	Heavy Tension
K486L	D	35.0	Light Tension
K486M	D	37.8	Medium Tension
K486H	D	40.8	Heavy Tension

Tynex® is a registered trademark of E.I. Du Pont de Nemours & Co. (Inc.)

A WORD ON STRING MEASUREMENTS

The gauge specifications listed for Golden Spiral Solo gut core strings are based on the music string industry violin gauge. This is a measure developed in Europe based on the Metric System. Listed below are the most frequently used violin gauges and their equivalents in mm and inches.

Violin Gauge x .05 = diameter in mm

Violin Gauge	Diameter in mm	Diameter in inches	Violin Gauge	Diameter in mm	Diameter in inches
11	0.55	.0217	15	0.75	.0295
11¼	0.56	.0221	15¼	0.76	.0300
11½	0.58	.0226	15½	0.78	.0305
11¾	0.59	.0231	15¾	0.79	.0310
12	0.60	.0236	16	0.80	.0315
12¼	0.61	.0241	16¼	0.81	.0320
12½	0.63	.0246	16½	0.83	.0325
12¾	0.64	.0251	16¾	0.84	.0330
13	0.65	.0256	17	0.85	.0335
13¼	0.66	.0261	17¼	0.86	.0340
13½	0.68	.0266	17½	0.88	.0344
13¾	0.69	.0271	17¾	0.89	.0349
14	0.70	.0276	18	0.90	.0354
14¼	0.71	.0281	18¼	0.91	.0359
14½	0.73	.0285	18½	0.93	.0364
14¾	0.74	.0290	18¾	0.94	.0369

KAPLAN™ ARTCRAFT ROSIN

Premium quality Artcraft Rosin is manufactured using the original recipe handed down from Ladislav Kaplan. Available in light and dark, it is packaged in a reusable, soft flannel pouch.



Item #	Description
--------	-------------

KACR6	Kaplan Artcraft Rosin, Light
-------	------------------------------

KACR7	Kaplan Artcraft Rosin, Dark
-------	-----------------------------

D'ADDARIO® NATURAL ROSIN

All natural ingredients combined in a very special process makes this rosin perfect for either horsehair or synthetic hair bows. Packaged in an ergonomically designed soft plastic channel.



Item #	Description
--------	-------------

VR200	D'Addario Natural Rosin, Light
-------	--------------------------------

VR300	D'Addario Natural Rosin, Dark
-------	-------------------------------

CARING FOR YOUR STRINGS

D'Addario strings are very durable, and are constructed to reach the maximum life span possible. We carefully select metals that will resist corrosion, and quality control testing ensures that core materials are strong enough to withstand the forces generated under normal playing conditions.

However, it's important to take certain steps when changing strings to prevent breakage. When a string goes over the bridge and nut, it should glide freely over these two points. If the winding gets caught in the nut groove while tuning the instrument, it may result in too much tension between the nut and the peg box. Sticking at the bridge can result in abnormal stresses on the core. Either situation could cause the string to break.

To prevent this, we suggest that you run a soft lead pencil on the groove of the bridge and nut. The graphite acts as a lubricant and reduces friction.

The groove on the bridge and nut should be wider than the diameter of the string, but should not be deeper than 1/3 of the string's diameter.

It's a good idea to clean your strings occasionally, as rosin dust and dirt can get between the windings, affecting the tone of the strings. To clean the strings, use rubbing alcohol and a soft cloth, being careful not to get any alcohol on the varnish of your instrument.

Tension Specifications for Fractional Sizes

HELICORE®

Violin

Item #	Tension	Note	Tension at Pitch (Lbs.)					
			4/4	3/4	1/2	1/4	1/8	1/16
H311	M	E	18.6	16.5	14.5	12.1	10.9	9.5
H312	M	A	12.7	12.2	11.4	10.2	9.3	8.0
H313	M	D	11.5	11.3	10.3	9.7	8.3	7.5
H314	M	G	10.2	10.3	10.0	8.9	7.8	7.0

Viola

Item #	Tension	Note	Tension at Pitch (Lbs.)	
			Medium	
H411	M	A	15.1	
H412	M	D	11.4	
H413	M	G	12.2	
H414	M	C	11.6	

PRO-ART È®

Violin

Item #	Tension	Note	Tension at Pitch (Lbs.)					
			4/4	3/4	1/2	1/4	1/8	1/16
J5601	M	E	16.8	16.5	14.6	12.1	10.9	9.5
J5602	M	A	12.0	10.7	9.8	9.6	8.8	7.4
J5603	M	D	11.3	10.6	9.4	8.5	8.1	7.2
J5604	M	G	10.6	10.2	9.8	9.4	8.5	7.2

Viola

Item #	Tension	Note	Tension at Pitch (Lbs.)		
			Long	Medium	Short
J5801	M	A	15.1	14.4	13.1
J5802	M	D	11.9	10.6	10.1
J5803	M	G	11.5	11.6	9.5
J5804	M	C	11.5	11.2	9.4

Cello

Item #	Tension	Note	Tension at Pitch (Lbs.)				
			4/4	3/4	1/2	1/4	1/8
J5901	M	A	32.8	31.3	26.0	23.4	19.3
J5902	M	D	30.6	28.2	24.7	22.8	18.2
J5903	M	G	29.3	27.0	25.1	21.8	18.6
J5904	M	C	27.7	26.4	23.0	20.1	16.6

PRELUDE®

Violin

Item #	Tension	Note	Tension at Pitch (Lbs.)					
			4/4	3/4	1/2	1/4	1/8	1/16
J811	M	E	18.6	16.5	16.0	13.3	13.0	10.4
J812	M	A	13.1	12.0	11.0	10.4	8.9	7.1
J813	M	D	11.7	10.8	9.4	8.6	7.3	6.3
J814	M	G	11.4	10.6	10.2	8.9	7.6	6.6

















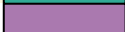

Viola

Item #	Tension	Note	Tension at Pitch (Lbs.)			
			Long	Med.	Short	X-Short
J911	M	A	16.1	14.9	13.8	12.0
J912	M	D	11.6	11.3	10.6	10.2
J913	M	G	10.6	10.4	9.2	11.1
J914	M	C	10.8	10.6	9.5	9.5

Cello




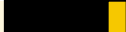
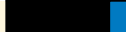
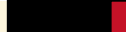












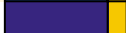
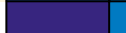
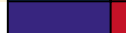



Item #	Tension	Note	Tension at Pitch (Lbs.)				
			4/4	3/4	1/2	1/4	1/8
J1011	M	A	36.5	30.0	27.0	26.0	20.0
J1012	M	D	30.0	26.5	23.5	20.8	17.1
J1013	M	G	29.0	26.5	25.0	21.0	16.5
J1014	M	C	28.0	26.5	24.0	21.0	16.0

Silking Colors at Ball Ends

Description	Colors	Description	Colors
Zyex			
Light tension violin			
Medium tension violin			
Heavy tension violin			
Helicore			
Helicore Strings			
Helicore Solo Bass			
Helicore Hybrid Bass			
Helicore Pizzicato Bass			
Unicore Cello Strings			
Golden Spiral Solo			
Golden Spiral			
Pro•Arté			
Light tension violin, viola, & cello			
Medium tension violin, viola, & cello			
Heavy tension violin, viola, & cello			
Prelude			
4/4 size violin & cello, light tension			
4/4 size violin & cello, medium tension, long scale viola			
4/4 size violin & cello, heavy tension, extra short scale viola			
3/4 size violin & cello, medium tension, medium scale viola			
1/2 size violin & cello, medium tension, short scale viola			
1/4 size violin & cello, medium tension			
1/8 size violin & cello, medium tension			
1/16 size violin			

Silking Colors at Peg Ends

Strings denoted with 2 colors below have a small, solid section of the color on the far right silked at the top of the first color to indicate the tension (Helicore, Unicore & Kaplan strings only).

	Light Tension	Medium Tension	Heavy Tension
E			
A			
D Aluminum			
D Silver			
G			
G Tungsten			
C			
C Tungsten			

DLK-1 – 11/00

D'Addario®, Helicore®, Unicore®, and Pro•Arté® are registered trademarks of J. D'Addario & Company, Inc.

Prelude™, Golden Spiral™ and Kaplan™ are trademarks of J. D'Addario & Company, Inc.

D'Addario®

P.O. Box 290, Farmingdale, N.Y. 11735

Phone: 631-439-3300 • Fax: 631-439-3333

E-Mail: strings@daddario.com

Home Page: <http://www.daddario.com>
