

# EARLY

## Instruments



**Pyramid Strings**

[www.pyramid-saiten.de](http://www.pyramid-saiten.de)

# Strings

<b>Price information</b> .....	4
<b>Historical Lutes</b> .....	5
<i>Treble (Soprano) Lute</i> .....	5
<i>Renaissance Lute</i> .....	6
<i>Baroque Lute</i> .....	7
<i>Tenor Lute</i> .....	8
<i>A Lute</i> .....	9
<i>D Lute</i> .....	9
<i>Liuto Forte</i> .....	9
<i>Theorbo</i> .....	10
<i>Bass Lute</i> .....	10
<i>Vihuela</i> .....	11
<i>Baroque Guitar</i> .....	11
<b>Viola da Gamba</b> .....	12
<i>Pardessus</i> .....	12
<i>Treble/Soprano</i> .....	13
<i>Alto/Tenor</i> .....	13
<i>Tenor/Bass</i> .....	13
<i>Baroque Violin</i> .....	14
<i>Baroque Viola</i> .....	14
<i>Baroque Cello</i> .....	14
<i>Viola d'amour</i> .....	15
<b>Mandolin</b> .....	16
<i>Milanese Mandolin</i> .....	16
<i>Neapolitan Mandolin</i> .....	16
<b>Rebec</b> .....	17
<i>Treble/Soprano Rebec</i> .....	17
<i>Alto/Tenor Rebec</i> .....	17
<i>Bass Rebec</i> .....	17
<b>Various Historical Instruments</b> .....	18
<i>Chitarrone</i> .....	18
<i>Cittern</i> .....	18
<i>Orpharion</i> .....	19
<i>Bandora</i> .....	19

<b>Single strings</b> .....	20
<i>Nylon</i> .....	20
<i>Carbon</i> .....	21
<i>Gut</i> .....	22
<i>Copper, Brass, Aluminum</i> .....	23
<i>Steel</i> .....	24
<i>Bronze</i> .....	24
<i>Experimental strings</i> .....	25

## ***Accessories***

<i>Fret material</i> .....	26
<i>String oil</i> .....	27
<i>Polish</i> .....	27
<i>Peg soap</i> .....	27
<i>Fingerboard oil</i> .....	27
<i>Saddle powder</i> .....	27
<i>Lute String Calculator</i> .....	28

## ***Information***

<i>Strings</i> .....	30
<i>Tone table</i> .....	32
<i>Material tensions</i> .....	32
<i>Frequency range     of string and     plucked instruments</i> .....	33

## ***Misc.***

<i>A Family Company through the ages</i> .....	34
<i>Terms</i> .....	36

# *Price information*

You will find numerous price examples in this catalogue.

**The corresponding scales and tensions are given in each case.**

We also offer custom string sets for your instrument.

To customize your individual string set, we need the following details:

**! Specifications per set**

1. Scale (vibrating string length from bridge to nut)
2. Complete tuning

**! Specifications per string**

1. Tone
2. Tension in kg
3. String material

**? Do you need assistance in choosing the right strings? No problem.**

Our team will assist you in making the right choice for your instrument.

Please get in contact with us.

E-Mail: [s.holz@pyramid-saiten.de](mailto:s.holz@pyramid-saiten.de)



## Historical Lutes

# Treble (Soprano) Lute

**6-10 courses**

scale 34-50 cm

### Price examples

for scale 38-39 cm and tension 2,3-2,4 kg

Description											Price
6 courses	g <sup>2</sup>	d <sup>2</sup> d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g					45.18 €
6 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d					46.57 €
6 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d <sup>1</sup>					47.54 €
6 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a					42.39 €
6 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g <sup>1</sup>	d d <sup>1</sup>	A a					40.69 €
7 courses	g <sup>2</sup>	d <sup>2</sup> d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d <sup>1</sup>				53.55 €
7 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d	c c				55.24 €
7 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d <sup>1</sup>	c c				56.03 €
7 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g				52.21 €
7 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g <sup>1</sup>	d d <sup>1</sup>	A a	G g				50.51 €
8 courses	g <sup>2</sup>	d <sup>2</sup> d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	f f <sup>1</sup>	d d <sup>1</sup>			61.01 €
8 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d	c c	H H			63.92 €
8 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d <sup>1</sup>	c c	H H			67.00 €
8 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f			61.27 €
8 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g <sup>1</sup>	d d <sup>1</sup>	A a	G g	F f			59.55 €
9 courses	g <sup>2</sup>	d <sup>2</sup> d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	f f <sup>1</sup>	e e <sup>1</sup>	d d <sup>1</sup>		68.05 €
9 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d	c c	H H	A A		72.52 €
9 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g <sup>1</sup>	d d <sup>1</sup>	c c	H H	A A		76.84 €
9 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f	E e		69.74 €
9 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g <sup>1</sup>	d d <sup>1</sup>	A a	G g	F f	E e		68.05 €
10 courses	g <sup>2</sup>	d <sup>2</sup> d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	f f <sup>1</sup>	e e <sup>1</sup>	d d <sup>1</sup>	c c <sup>1</sup>	76.59 €
10 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d	c c	H H	A A	G G	80.65 €
10 courses	d <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g <sup>1</sup>	d d <sup>1</sup>	c c	H H	A A	G G	86.35 €
10 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f	E e	D d	77.75 €
10 courses	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g <sup>1</sup>	d d <sup>1</sup>	A a	G g	F f	E e	D d	76.04 €

*Historical Lutes**Renaissance Lute***6-13 courses**

scale 56-67 cm

**Price examples**

for scale 60 cm and tension 2,7-2,8 kg

Description															Price
<b>6 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G									43.60 €
<b>6 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g									43.55 €
<b>6 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g									41.12 €
<b>7 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	D d								52.34 €
<b>7 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	D d								52.27 €
<b>7 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	D d								49.85 €
<b>8 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	D d							63.55 €
<b>8 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	D d							63.49 €
<b>8 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	D d							61.06 €
<b>9 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	E e	D d						73.62 €
<b>9 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	E e	D d						73.55 €
<b>9 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	E e	D d						71.13 €
<b>10 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	E e	D d	C c					83.44 €
<b>10 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	E e	D d	C c					83.38 €
<b>10 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	E e	D d	C c					80.95 €
<b>11 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	E e	D d	C c	H <sub>1</sub> H				92.47 €
<b>11 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H				92.41 €
<b>11 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H				89.99 €
<b>12 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A			100.96 €
<b>12 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A			100.90 €
<b>12 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A			98.47 €
<b>13 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G		108.97 €
<b>13 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G		108.90 €
<b>13 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff <sup>1</sup>	c c <sup>1</sup>	G g	F f	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G		106.48 €

# Baroque Lute

**8-14 courses**

scale 62-80 cm

## Price examples

for scale 70-71 cm and tension 2,7-2,8 kg

Description														Price			
<b>8 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f									54.33 €
<b>9 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e								61.37 €
<b>10 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e	D d							72.58 €
<b>11 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e	D d	C c						82.65 €
<b>12 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e	D d	C c	H, H					92.71 €
<b>13 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e	D d	C c	H, H	A, A				101.76 €
<b>14 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	A a	G g	F f	E e	D d	C c	H, H	A, A	G, G			110.24 €



*Historical Lutes**Tenor Lute***6-13 courses**

scale 60-68 cm

**Price examples**

for scale 64-65 cm and tension 2,7-2,8 kg

Description															Price
<b>6 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e									47.18 €
<b>6 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e									43.66 €
<b>6 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e									47.18 €
<b>6 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e									43.66 €
<b>7 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d								57.24 €
<b>7 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d								53.74 €
<b>7 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d								57.24 €
<b>7 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d								53.74 €
<b>8 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c							67.31 €
<b>8 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c							63.79 €
<b>8 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c							67.31 €
<b>8 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c							63.79 €
<b>9 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c	H <sub>1</sub> H						71.13 €
<b>9 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H						73.62 €
<b>9 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c	H <sub>1</sub> H						77.13 €
<b>9 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H						73.62 €
<b>10 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A					85.62 €
<b>10 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A					82.10 €
<b>10 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A					85.62 €
<b>10 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A					82.10 €
<b>11 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G				94.11 €
<b>11 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G				90.60 €
<b>11 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G				94.11 €
<b>11 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G				90.60 €
<b>12 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F			102.11 €
<b>12 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F			98.60 €
<b>12 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F			102.11 €
<b>12 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F			98.60 €
<b>13 courses</b>	e <sup>1</sup>	h h	fis fis	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F	E <sub>1</sub> E		110.36 €
<b>13 courses</b>	e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F	E <sub>1</sub> E		106.85 €
<b>13 courses</b>	e <sup>1</sup>	h h	g g	d d	AA	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F	E <sub>1</sub> E		110.36 €
<b>13 courses</b>	e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e	D d	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G	F <sub>1</sub> F	E <sub>1</sub> E		106.85 €



## *A Lute*

**6-10 courses**

scale 55-60 cm

### Price examples

for scale 58-59 cm and tension 2,7-2,8 kg

Description											Price	
<b>6 courses</b>	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a						48.88 €
<b>7 courses</b>	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g					57.00 €
<b>8 courses</b>	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f				68.21 €
<b>9 courses</b>	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f	E e			79.44 €
<b>10 courses</b>	a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	G g	F f	E e	D d		89.50 €

## *D Lute*

**6-10 courses**

scale 63-80 cm

### Price examples

for scale 70-71 cm and tension 2,7-2,8 kg

Description											Price	
<b>6 courses</b>	d <sup>1</sup>	a a	e e	c c	G G	D D						44.57 €
<b>7 courses</b>	d <sup>1</sup>	a a	e e	c c	G G	D D	C c					54.57 €
<b>8 courses</b>	d <sup>1</sup>	a a	e e	c c	G G	D D	C c	H <sub>1</sub> H				64.65 €
<b>9 courses</b>	d <sup>1</sup>	a a	e e	c c	G G	D D	C c	H <sub>1</sub> H	A <sub>1</sub> A			74.40 €
<b>10 courses</b>	d <sup>1</sup>	a a	e e	c c	G G	D D	C c	H <sub>1</sub> H	A <sub>1</sub> A	G <sub>1</sub> G		82.90 €

## *Liuto Forte*

You can obtain the special string selection for the Liuto Forte directly from André Burguete:

[www.liuto-forte.de/en/](http://www.liuto-forte.de/en/)

*Historical Lutes**Theorbo***12-14 courses**

scales: board 60-90 cm, bordun 90-170 cm

**Price on request**

für Spannung 2,7-2,8 kg

Description														Price		
<b>12 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	cc	GG	Ff	Ee	Dd	Cc	H, H	A, A				—
<b>12 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H				—
<b>12 courses</b>	e <sup>1</sup>	hh	gg	dd	AA	EE	Dd	Cc	H, H	A, A	G, G	F, F				—
<b>12 courses</b>	a a	ee	hh	gg	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H				—
<b>13 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	cc	GG	Ff	Ee	Dd	Cc	H, H	A, A	G, G			—
<b>13 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H	A, A			—
<b>13 courses</b>	e <sup>1</sup>	hh	gg	dd	AA	EE	Dd	Cc	H, H	A, A	G, G	F, F	E, E			—
<b>13 courses</b>	a a	ee	hh	gg	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H	A, A			—
<b>14 courses</b>	g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	cc	GG	Ff	Ee	Dd	Cc	H, H	A, A	G, G	F, F		—
<b>14 courses</b>	f <sup>1</sup>	d <sup>1</sup>	a a	ff	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H	A, A	G, G		—
<b>14 courses</b>	a a	ee	hh	gg	dd	Aa	Gg	Ff	Ee	Dd	Cc	H, H	A, A	G, G		—

*Bass Lute***8 courses****Price example**

for scale 92-93 cm and tension 3,4-3,5 kg

Description										Price
<b>8 courses</b>	g g	d d	A A	F F	C C	G, G	F, F	D, D		63.98 €

# Vihuela

**6 and 7 courses**

scale 55-65 cm

## Price examples

for scale 59-60 cm and tension 3,4-3,5 kg

Description								Price
6 courses	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A		46.82 €
6 courses	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	f f	c c	G G		47.06 €
6 courses	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	f f	c c <sup>1</sup>	G g		47.66 €
6 courses	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	dis dis	Ais Ais	F F		60.52 €
6 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	E e		48.75 €
6 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A A	E E		49.24 €
6 courses	e <sup>1</sup> e <sup>1</sup>	h h	fis fis	d d <sup>1</sup>	A a	E e		48.75 €
6 courses	e <sup>1</sup> e <sup>1</sup>	h h	fis fis	d d	A A	E E		49.24 €
7 courses	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A	E E	55.67 €
7 courses	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	f f	c c	G G	D D	55.43 €
7 courses	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	f f	c c <sup>1</sup>	G g	D d	56.16 €
7 courses	f <sup>1</sup> f <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	e e	H H	F F	C C	51.84 €

# Baroque Guitar

**5 courses**

scale 60-70 cm

## Price examples

for scale 60-61 cm and tension 3,3 kg

Description						Price
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d <sup>1</sup>	a a	33.77 €
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A a	34.39 €
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d <sup>1</sup>	A A	34.98 €
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	a a	35.41 €
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A a	36.03 €
5 courses	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A	36.63 €

# Viola da Gamba

## Pardessus

**6-string set**

scale 28-34 cm

Tone	Description	Price
Set	<b>Pardessus</b>	69.63 €
g <sup>2</sup>	Gut	7.16 €
d <sup>2</sup>	Gut	10.62 €
a <sup>1</sup>	Gut	9.70 €
f <sup>1</sup>	Aluminum on gut core	15.71 €
c <sup>1</sup>	Silver-plated copper on gut core	13.46 €
g	Silver-plated copper on gut core	12.98 €



## Treble/Soprano

### 6-string set

scale 34-40 cm

Tone	Description	Price
Set	<b>Treble/Soprano</b>	88.12 €
d <sup>2</sup>	Gut	8.13 €
a <sup>1</sup>	Gut	9.89 €
e <sup>1</sup>	Gut	12.19 €
c <sup>1</sup>	Aluminum on gut core	20.02 €
g	Silver-plated copper on gut core	17.95 €
d	Silver-plated copper on gut core	19.94 €

## Alto/Tenor

### 6-string set

scale 48-58 cm

Tone	Description	Price
Set	<b>Alto/Tenor</b>	113.29 €
g <sup>1</sup>	Gut	8.92 €
d <sup>1</sup>	Gut	14.26 €
a	Gut	19.70 €
f	Aluminum on gut core	23.47 €
c	Silver-plated copper on gut core	21.23 €
G	Silver-plated copper on gut core	25.71 €

## Tenor/Bass

### 6- and 7-string sets

scale 60-78 cm

Tone	Description	Price
Set	<b>Tenor/Bass/ 6-string set</b>	135.85 €
Set	<b>Tenor/Bass/ 7-string set</b>	167.75 €
d <sup>1</sup>	Gut	14.07 €
a	Gut	17.35 €
e	Gut	22.80 €
c	Aluminum on gut core	28.38 €
G	Silver-plated copper on gut core	25.41 €
D	Silver-plated copper on gut core	27.84 €
A <sub>1</sub>	Silver-plated copper on gut core	31.90 €

*Viola da Gamba**Baroque Violin***4-string set**

scale 31-33 cm

Tone	Description	Price
Set	<b>Baroque Violin</b>	51.54 €
e <sup>2</sup>	Gut	9.03 €
a <sup>1</sup>	Gut	10.91 €
d <sup>1</sup>	Silver-plated copper on gut core	16.86 €
g	Silver-plated copper on gut core	14.74 €

*Baroque Viola***4-string set**

scale 36-38 cm

Tone	Description	Price
Set	<b>Baroque Viola</b>	54.17 €
a <sup>1</sup>	Gut	10.43 €
d <sup>1</sup>	Gut	13.29 €
g	Silver-plated copper on gut core	14.80 €
c	Silver-plated copper on gut core	15.65 €

*Baroque Cello***4-string set**

scale 67-69 cm

Tone	Description	Price
Set	<b>Baroque Cello</b>	98.64 €
a	Gut	20.08 €
d	Gut	26.93 €
G	Silver-plated copper on gut core	24.55 €
C	Silver-plated copper on gut core	27.08 €

# Viola d'amour

## 7-string set

scale 36-37 cm

Tone	Description	Price
Set	<b>Viola d'amour / Melody strings</b>	98,98 €
d <sup>2</sup>	Gut	8,49 €
a <sup>1</sup>	Gut	11,15 €
fis <sup>1</sup>	Gut	12,62 €
d <sup>1</sup>	Aluminum on gut core	18,87 €
a	Silver-plated copper on gut core	15,52 €
d	Silver-plated copper on gut core	15,71 €
A	Silver-plated copper on gut core	16,62 €
Set	<b>Viola d'amour / Sympathetic strings</b>	19,18 €
d <sup>1</sup>	Silver-plated steel	2,49 €
a <sup>1</sup>	Silver-plated steel	2,49 €
fis <sup>1</sup>	Silver-plated steel	2,49 €
d <sup>1</sup>	Silver-plated steel	2,49 €
a	Silver-plated copper on steel core	3,16 €
d	Silver-plated copper on steel core	3,21 €
A	Silver-plated copper on steel core	2,85 €



*Mandolin**Milanese Mandolin***12-string set**

scale 32-35 cm

Tone	Description	Price
Set	<b>Milanese Mandolin</b>	134.14 €
g <sup>2</sup>	Gut	7.82 €
g <sup>2</sup>	Gut	7.82 €
d <sup>2</sup>	Gut	8.73 €
d <sup>2</sup>	Gut	8.73 €
a <sup>1</sup>	Gut	10.43 €
a <sup>1</sup>	Gut	10.43 €
e <sup>1</sup>	Gut	13.04 €
e <sup>1</sup>	Gut	13.04 €
h	Silver-plated copper on gut core	13.46 €
h	Silver-plated copper on gut core	13.46 €
g	Silver-plated copper on gut core	13.59 €
g	Silver-plated copper on gut core	13.59 €

*Neapolitan Mandolin***8-string set**

scale 32-35 cm

Tone	Description	Price
Set	<b>Neapolitan Mandolin</b>	54.84 €
e <sup>2</sup>	Gut	9.46 €
e <sup>2</sup>	Gut	9.46 €
a <sup>1</sup>	Bronze plain	2.43 €
a <sup>1</sup>	Bronze plain	2.43 €
d <sup>1</sup>	Bronze plain	2.49 €
d <sup>1</sup>	Bronze plain	2.49 €
g	Aluminum on gut core	13.04 €
g	Silver-plated copper on gut core	13.04 €



*Rebec**Treble/Soprano Rebec*

scale 31-33 cm

**Price on request**

Tone	Description	Price
Set	<b>Treble/Soprano Rebec</b>	—
d <sup>2</sup> g <sup>1</sup> c <sup>1</sup>	Silver-plated copper on gut core	—
a <sup>1</sup> d <sup>1</sup> g	Silver-plated copper on gut core	—

*Alto/Tenor Rebec*

scale 40-45 cm

Tone	Description	Price
Set	<b>Alto/Tenor Rebec</b>	—
d <sup>1</sup> g <sup>1</sup> c <sup>1</sup>	Silver-plated copper on gut core	—
a <sup>1</sup> d <sup>1</sup> g c	Silver-plated copper on gut core	—

*Bass Rebec*

scale 56-62 cm

Tone	Description	Price
Set	<b>Bass Rebec</b>	—
d <sup>1</sup> g c F	Silver-plated copper on gut core	—
a d G C	Silver-plated copper on gut core	—

## Various Historical Instruments

### Chitarrone

**13 and 14 courses**

scale board 60-90 cm, bordun 90-170 cm

#### Price on request

Description															Price
<b>13 courses</b>	g g	d d	a a	f f	c c	G G	F	E	D	C	H <sub>1</sub>	A <sub>1</sub>	G <sub>1</sub>		—
<b>14 courses</b>	g g	d d	a a	f f	c c	G G	F	E	D	C	H <sub>1</sub>	A <sub>1</sub>	G <sub>1</sub>	F <sub>1</sub>	—
<b>15 courses</b>	a a	e e	h h	g g	d d	A A	G	F	E	D	C	H <sub>1</sub>	A <sub>1</sub>	G <sub>1</sub>	—

### Cittern

**4-6 courses**

scale 34-58 cm

#### Price examples

for scale 36-37 cm and tension 3,4 kg

Description							Price
<b>4 courses</b>	e <sup>2</sup> e <sup>2</sup>	a <sup>1</sup> a <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	g g			24.01 €
<b>4 courses</b>	e <sup>1</sup> e <sup>1</sup>	a a	d d	G G			25.95 €
<b>4 courses</b>	e <sup>1</sup> e <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	g g	h h			28.45 €
<b>4 courses</b>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d			32.75 €
<b>4 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a <sup>1</sup>	f f <sup>1</sup>			20.99 €
<b>5 courses</b>	e <sup>2</sup> e <sup>2</sup>	h <sup>1</sup> h <sup>1</sup>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	g g		31.83 €
<b>5 courses</b>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A		39.77 €
<b>5 courses</b>	e <sup>1</sup> e <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	g g	d <sup>1</sup> d	G G		30.32 €
<b>5 courses</b>	d <sup>1</sup> d <sup>1</sup>	g g	d d <sup>1</sup>	c c <sup>1</sup>	G g		43.73 €
<b>6 courses</b>	e <sup>2</sup> e <sup>2</sup>	h <sup>1</sup> h <sup>1</sup>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	e e	32.26 €
<b>6 courses</b>	e <sup>2</sup> e <sup>2</sup>	h <sup>1</sup> h <sup>1</sup>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	A A	E E	31.65 €
<b>6 courses</b>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A	E E	47.42 €
<b>6 courses</b>	e <sup>1</sup> e <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	g g	h h	d d	G G	44.52 €
<b>6 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	f f	c c	G G	40.50 €

# Orpharion

**6-9 courses**

scale 58-63 cm

## Price on request

Description	Price										
<b>6 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G					—
<b>7 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	D D				—
<b>8 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F F	D D			—
<b>9 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F F	E E	D D		—
<b>9 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F F	D D	C C		—

# Bandora

**6-9 courses**

scale 59-72 cm

## Price on request

Description	Price										
<b>6 courses</b>	a <sup>1</sup> a <sup>1</sup>	e <sup>1</sup> e <sup>1</sup>	c <sup>1</sup> c <sup>1</sup>	g g	d d	c c					—
<b>6 courses</b>	a a	e e	c c	G G	D D	C C					—
<b>7 courses</b>	a a	e e	c c	G G	D D	C C	G <sub>1</sub> G <sub>1</sub>				—
<b>7 courses</b>	e <sup>1</sup> e <sup>1</sup>	h h	g g	d d	A A	E E	D D				—
<b>7 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F F				—
<b>8 courses</b>	g <sup>1</sup> g <sup>1</sup>	d <sup>1</sup> d <sup>1</sup>	a a	ff	c c	G G	F F	E E			—
<b>9 courses</b>	a a	e e	c c	G G	D D	A <sub>1</sub> A <sub>1</sub>	G <sub>1</sub> G <sub>1</sub>	F <sub>1</sub> F <sub>1</sub>	E <sub>1</sub> E <sub>1</sub>		—

*Single strings***Nylon****Nylon plain**

Total length 115 cm

Ø / Gauge	Price
0.31 mm	1.94 €
0.33 mm	1.94 €
0.36 mm	1.94 €
0.41 mm	1.94 €
0.43 mm	1.94 €
0.46 mm	2.00 €
0.51 mm	2.00 €
0.56 mm	2.00 €
0.60 mm	2.00 €
0.62 mm	2.00 €
0.64 mm	2.00 €
0.68 mm	2.12 €
0.71 mm	2.12 €
0.81 mm	2.12 €
0.91 mm	2.12 €
1.01 mm	2.12 €

**Nylon rectified**

Total length 115 cm

Ø / Gauge	Price
0.400 mm	3.21 €
0.425 mm	3.21 €
0.450 mm	3.21 €
0.475 mm	3.21 €
0.500 mm	3.21 €
0.525 mm	3.21 €
0.550 mm	3.21 €
0.575 mm	3.21 €
0.600 mm	3.21 €
0.625 mm	3.21 €
0.650 mm	3.21 €
0.675 mm	3.21 €
0.700 mm	3.21 €
0.725 mm	3.21 €
0.750 mm	3.21 €
0.775 mm	3.21 €
0.800 mm	3.21 €
0.825 mm	3.21 €
0.850 mm	3.21 €
0.875 mm	3.21 €
0.900 mm	3.21 €
0.925 mm	3.21 €
0.950 mm	3.21 €
0.975 mm	3.59 €
1.000 mm	3.59 €

# Carbon

## Carbon plain

Total length 100 cm

Ø / Gauge	Price
0.30 mm	2.79 €
0.33 mm	2.79 €
0.37 mm	2.79 €
0.41 mm	2.79 €
0.44 mm	2.97 €
0.48 mm	2.97 €
0.50 mm	2.97 €
0.54 mm	3.04 €
0.59 mm	3.04 €
0.63 mm	3.04 €
0.68 mm	3.45 €
0.70 mm	3.45 €
0.72 mm	4.18 €
0.74 mm	4.18 €
0.78 mm	4.18 €
0.80 mm	4.18 €
0.83 mm	5.28 €
0.85 mm	5.28 €
0.86 mm	5.28 €
0.87 mm	5.28 €
0.90 mm	5.28 €
1.00 mm	5.28 €

## Carbon plain

Total length 180 cm

Ø / Gauge	Price
0.30 mm	2.79 €
0.33 mm	2.79 €
0.37 mm	2.79 €
0.41 mm	2.79 €

*Single strings**Gut***Gut**

Total length 125 cm

Ø / Gauge	Price
0.38 mm	7.82 €
0.40 mm	7.82 €
0.44 mm	7.82 €
0.46 mm	7.82 €
0.48 mm	8.61 €
0.51 mm	8.61 €
0.53 mm	8.61 €
0.55 mm	8.61 €
0.58 mm	9.52 €
0.61 mm	9.52 €
0.63 mm	9.52 €
0.66 mm	10.84 €
0.68 mm	10.84 €
0.71 mm	10.84 €
0.74 mm	11.64 €
0.79 mm	11.64 €
0.81 mm	11.64 €
0.84 mm	13.22 €
0.89 mm	13.22 €
0.94 mm	13.22 €
0.97 mm	14.85 €
0.99 mm	14.85 €

Ø / Gauge	Price
1.04 mm	17.35 €
1.09 mm	17.89 €
1.14 mm	18.87 €
1.22 mm	20.26 €
1.27 mm	21.04 €
1.32 mm	22.20 €
1.37 mm	23.41 €
1.42 mm	24.63 €
1.50 mm	35.96 €

# Copper, Brass, Aluminum

## Silver-plated copper on special multifilaments\*

## Brass alloy on special multifilaments\*

## Aluminum on special multifilaments\*

(special multifilaments with high tensile strength and low extension)

Total length 105 cm

M = Brass alloy  
AL = Aluminum

Identifier	Price
805	6.79 €
905	6.79 €
1005	6.79 €

906	5.63 €
906 M	5.63 €
1006 M	5.63 €
1006	5.63 €
10065	5.63 €
1007	5.63 €
9075	5.63 €
10075	5.63 €
908	5.63 €
1008	5.63 €

9085	4.85 €
10085	4.85 €
909	4.85 €
1009	4.85 €
1109	4.85 €
10095	4.85 €

1010	4.31 €
1011	4.31 €
1111	4.31 €
1012	4.31 €

Identifier	Price
1013	3.83 €
1014	3.83 €
1114	3.83 €
1015	3.83 €
1016	3.83 €
1116	3.83 €
1017	3.83 €
1018	3.83 €
1019	3.83 €

1020	4.42 €
1021	4.42 €
1022	4.42 €
1122	4.42 €
1023	4.42 €
1024	4.42 €
1124	4.42 €
1025	4.42 €
1026	4.42 €
1027	4.42 €
1028	4.42 €
1029	4.42 €

Identifier	Price
1030	4.18 €
1031	4.18 €
1032	4.18 €
1033	4.18 €
1034	4.18 €
1035	4.18 €
1236	4.18 €
1237	4.18 €
1238	4.18 €
1239	4.18 €
1240	4.18 €
1440	4.18 €
1441	4.18 €
1442	4.18 €
1443	4.18 €
1345	4.18 €
1445	4.18 €
1348	4.18 €
1448	4.18 €

Identifier	Price
1350	4.42 €
1450	4.42 €
1650	4.42 €
1652	4.42 €
1653	4.42 €
1654	4.42 €
1655	4.42 €
1856	4.42 €
2056	4.42 €
2057	4.42 €
2058	4.42 €
2458	4.42 €
2460	4.42 €
2462	4.42 €
2463	4.42 €
3262	4.42 €
3263	4.42 €
3265	4.42 €
3268	4.42 €
3270	4.42 €
3272	4.42 €

Identifier	Price
806 AL	5.63 €
807 AL	5.63 €
808 AL	5.63 €

809 AL	4.85 €
909 AL	4.85 €
1009 AL	4.85 €

1010 AL	4.31 €
1011 AL	4.31 €
1012 AL	4.31 €
1013 AL	4.31 €
1014 AL	4.31 €
1015 AL	4.31 €

## Plain copper\*

All above listed **wound strings** are available as **plain copper** for the same price.

### \* SURCHARGES FOR LONGER STRINGS:

**120 cm** +50% surcharge

**140 cm** +60% surcharge

**160 cm** +70% surcharge

**180 cm** +100% surcharge

## Single strings

### Steel

#### Silver-plated steel\*

Total length 100 cm,  
with ball or loop end

Ø / Gauge	Price
0.16 – 0.40 mm	2.12 €
0.42 – 0.50 mm	2.43 €
0.52 – 0.70 mm	2.73 €

### Bronze

#### Bronze plain\*

Total length 100 cm,  
with ball or loop end

Ø / Gauge	Price
0.200 – 0.400 mm	2.31 €
0.425 – 0.600 mm	2.73 €
0.625 – 1.000 mm	3.40 €

---

#### \* SURCHARGES FOR LONGER STRINGS:

**120 cm** +15% surcharge

**140 cm** +25% surcharge

**160 cm** +40% surcharge

**180 cm** +50% surcharge



## Experimental strings

### Silver-plated copper on steel core\*

Total length 100 cm, with ball or loop end

∅ 0.05 – 0.06 mm	8.86 €	∅ 0.11 – 0.13 mm	5.15 €	∅ 0.19 – 0.20 mm	3.94 €	∅ 0.58 – 0.65 mm	4.66 €
∅ 0.07 – 0.08 mm	7.52 €	∅ 0.14 – 0.15 mm	4.66 €	∅ 0.21 – 0.29 mm	3.64 €	∅ 0.68 – 0.75 mm	4.85 €
∅ 0.09 – 0.10 mm	6.79 €	∅ 0.16 – 0.18 mm	4.55 €	∅ 0.30 – 0.45 mm	3.40 €	∅ 0.78 – 0.90 mm	5.23 €
				∅ 0.46 – 0.56 mm	3.52 €		
on steel core		on steel core		on steel core		on steel core	
∅ 0.18 – 0.32 mm		∅ 0.25 – 0.35 mm		∅ 0.30 – 0.50 mm		∅ 0.40 – 0.60 mm	

### Brass alloy on phosphor bronze core\*

Total length 100 cm, with ball or loop end

∅ 0.05 – 0.06 mm	10.19 €	∅ 0.11 – 0.13 mm	5.95 €	∅ 0.19 – 0.20 mm	4.49 €	∅ 0.58 – 0.65 mm	5.39 €
∅ 0.07 – 0.08 mm	8.61 €	∅ 0.14 – 0.15 mm	5.39 €	∅ 0.21 – 0.29 mm	4.25 €	∅ 0.68 – 0.75 mm	5.52 €
∅ 0.09 – 0.10 mm	7.82 €	∅ 0.16 – 0.18 mm	5.23 €	∅ 0.30 – 0.45 mm	3.94 €	∅ 0.78 – 0.90 mm	6.01 €
				∅ 0.46 – 0.56 mm	4.07 €		
on phosphor bronze core		on phosphor bronze core		on phosphor bronze core		on phosphor bronze core	
∅ 0.18 – 0.32 mm		∅ 0.25 – 0.35 mm		∅ 0.30 – 0.50 mm		∅ 0.40 – 0.60 mm	

---

#### \* SURCHARGES FOR LONGER STRINGS:

**120 cm** +15% surcharge

**140 cm** +25% surcharge

**160 cm** +40% surcharge

**180 cm** +50% surcharge

*Accessories**Fret material***Perlon for frets**

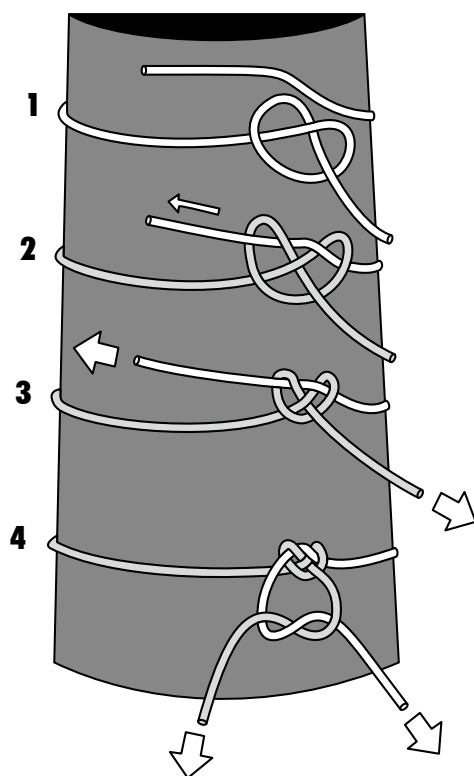
on spools, 50 m

Ø / Gauge	Price
0.40 mm	4.91 €
0.50 mm	4.91 €
0.55 mm	4.91 €
0.60 mm	4.91 €
0.65 mm	4.91 €
0.70 mm	4.91 €
0.75 mm	8.01 €
0.80 mm	8.01 €
0.90 mm	8.01 €
1.00 mm	8.01 €

**Gut for frets**

2 × 1,25 m

Ø / Gauge	Price
0.50 mm	5.63 €
0.55 mm	5.87 €
0.60 mm	6.13 €
0.65 mm	6.44 €
0.70 mm	6.73 €
0.75 mm	7.03 €
0.80 mm	7.34 €
0.85 mm	7.65 €
0.90 mm	7.89 €
0.95 mm	8.06 €
1.00 mm	8.37 €
1.05 mm	8.86 €
1.10 mm	9.22 €
1.20 mm	10.37 €

*Knotting the lute frets*

***String oil*****7.62 €**

JOHA® string oil is used for the care and impregnation of natural gut strings. The acid-free JOHA® String Oil protects natural gut strings from drying out.

If the natural gut strings feel a little dry, simply apply the JOHA® string oil with a soft cloth, the strings will become elastic again.

***Fingerboard oil*****9.59 €**

JOHA® fretboard oil contains valuable oils that when rubbed on to the fretboard completely refreshes it. Your fretboard shines in fresh colour again and the drying out of the wood is avoided.

Attention: You must not get the fretboard oil on the lacquer.

***Polish*****10.63 €**

The JOHA® shine and care polish is ideal for refreshing and gently cleaning the varnish.

Both as a final treatment for new lacquer finishes and for the care of sensitive lacquer surfaces of new and old instruments, JOHA® Gloss and Care Polish is very well suited.

***Saddle powder*****14.09 €**

Saddle powder is used to reduce the friction of the string on the saddle. In the most extreme case, the string could get caught on an unevenness of the saddle and become severely damaged or unusable.

***Peg soap*****4.97 €**

Special soap to rub onto the pegs to prevent them slipping and to ensure they turn smoothly.

*Accessories*

## *Lute String Calculator*

**20,90 €**

The string calculator allows the lute manufacturer to select the strings for his instrument individually.

It's suitable for all plucked instruments with nylon, carbon or gut strings.

<b>Scales:</b>	30 cm to 160 cm
<b>String tension:</b>	10 N to 70 N (1 kp to 7 kp (kg))
<b>Tonal range:</b>	a <sup>2</sup> (880 Hz) to E <sub>1</sub> (41,2 Hz)

Adjustable for a<sup>1</sup> 329, 415, 440, 466, 494 Hz.

**Our string calculator allows:**

- 25 nylon strings, precision nylon
- 16 nylon strings, plain
- 21 carbon strings
- 31 gut strings, precision nylon
- 92 wound strings on nylon silk

# PYRAMID®

## Lautensaiten-Rechner

Lute-String-Calculator  
Règle à calcul pour les cordes de luth  
System Ekkehard Sachs

**Saitenkraft N**  
String tension  
Tension corde

**Polyvinyliden-Flourid blank** 115 cm  
(PVF) "Carbon" plain non filées

**Nylon geschliffen** 105 cm  
Nylon, rectified  
Nylon rectifié

**Nylon blank** 110 cm  
Plain nylon  
Nylon non filées

**Darm** 125 cm  
Gut  
Bouyeu

**Mensur cm**  
Vibrating length  
Longueur vibrante

30 ← 440 Hz

**Saitendurchmesser mm**  
String diameter  
Diamètre de corde

**PYRAMID Saiten- und Stimm Pfeifenfabrik Junger GmbH**  
Postfach 6  
91088 Bubenreuth / Erlangen  
Telefon: +49 (0) 9131 - 2 40 64  
Telefax: +49 (0) 9131 - 20 66 42  
E-Mail: pyramid@junger.de  
Internet: www.pyramid-strings.de  
www.pyramid-saiten.de

**Saiten Nr.**  
String No  
Cordes No

**Umspanne**  
Without strings  
Saiten  
105 cm  
Al = Aluminium

**Tonbereich**  
Diapason notes

a<sup>1</sup>: 440 Hz

466 ← 494 → 415 ← 392

**Mensur cm**  
Vibrating length  
Longueur vibrante

30

**Höchster Ton**  
Highest pitch  
La note plus aigüe

a<sup>2</sup> g<sup>2</sup> f<sup>2</sup> e<sup>2</sup>

**Tiefster Ton**  
Lowest pitch  
La note plus grave

f<sup>1</sup> e<sup>1</sup> d<sup>1</sup> c<sup>1</sup> h a

**Abstufung der Saitenkraft**  
Gradation of tension  
Gradatio tension

1. Saite  
1st string  
1re corde

2. Saite / Chor  
2nd string / course  
2e corde / choer

**Theorbe / Erzlaute:**  
Theorbo / Archlute:  
Theorbe / Archluth:  
Saite 7 bis 14  
String 7 to 14  
Corde 7 - 14

**Alle anderen Chöre**  
All other courses  
Tous les autres choers  
Oktavsaiten  
Oktave strings  
Cordes octave

**Saitenkraft N**  
String tension  
Tension corde

**Mensur cm**  
Vibrating length  
longueur vibrante

① **Mensur einstellen**  
Adjusting vibrating length  
Ajuster la longueur vibrante

② **Kraft einstellen**  
Adjusting tension  
Ajuster la tension

③ **Saiten auswählen**  
Choosing strings  
Choisir les cordes

**Beispiel:** Renaissance-lute  
**Mensur 60 cm** Vibrating length 60 cm

a <sup>1</sup> =440 Hz	Kraft	Tension	Saite	String	Corde
g <sup>1</sup> sol <sup>1</sup>	35 N		Ø 0,450 Nylon		
d <sup>1</sup> re <sup>1</sup>	32 N		Ø 0,575 Nylon		
a la	28 N		Ø 0,700 Nylon		
f fa	28 N		Ø 0,675 PVF		
c do	28 N		No.1010		
c <sup>1</sup> do <sup>1</sup>	25 N		Ø 0,450 Nylon		
G Sol	28 N		No. 1116		
g sol	25 N		Ø 0,575 PVF		

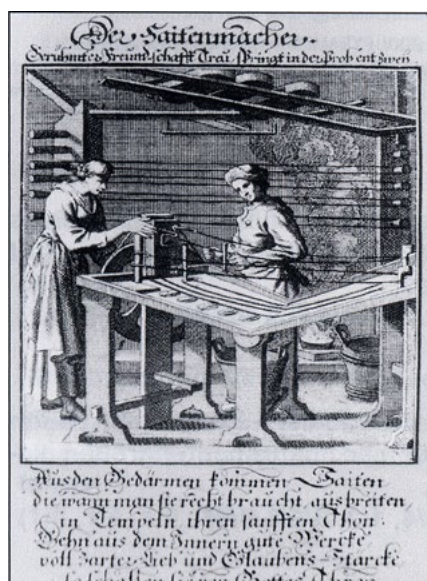
## Information

# Strings

### Gut strings

Gut strings were first used in Europe by the people of the Mediterranean area. Their production was a well guarded secret for a long time. For lower tones the thickness of plain strings must be increased while the string elasticity is reduced at the same time. This problem was solved in the 17th century by winding the strings with wires, thus providing them the necessary flexibility.

In Germany gut strings are produced since the 18th century. Our gut strings, made of highest quality sheep gut, have a constant circular cross-section, most important supposition for perfect fifths. Their easy response and excellent sustain is a main property of our gut strings. Due to their particular and soft sound character they are admired especially by players of historical instruments.



### Metal strings

Ever since the 14th century, metal strings of iron, copper, or silver were used in Europe. The presumably first reference to strings of iron wire was made in 1511. Wire for stringed instruments was drawn by hand on so-called „Handleiern“. The wire had to be drawn always in the same direction so as not to destroy the structure of the metal. As string wires are exposed to considerable tensions, the observance of that rule was essential for the quality of the wire.

The former string wires possessed a much lower tensile strength than steel wire - for example - as today. This was, however, no disadvantage, quite the contrary: the low string tension of the historical instruments required a low tensile strength in order to produce the particularly gentle sound of those times.

Modern music wires of bronze, brass or silver-plated copper are produced in three steps: first the rolled wire with a diameter of 6 mm is drawn to 1 mm. After a glowing process the wire is reduced to 0,20 mm. The result of the last drawing process is wire with a diameter as this as a hair – 0,06 mm.

In order to obtain the characteristic sound of historical strings we use proved materials like bronze or brass-wires in the high quality that is now available.

## A comparison of nylon strings with fluoro-carbon and gut

In our range of products we offer strings of plain nylon and polished nylon. The additional polishing process ensures the strings are precision round and of a constant diameter over the whole length. The advantage of this processing is that the musician is able to play his instrument more in perfect fifths. In addition to that we are able to provide strings of more different diameters. Nylon strings offer a very reliable durability and the polishing has never shown any negative effects on this material.

Fluoro-carbon (polyvinyliden fluorid) has a higher density compared to nylon. So when replacing a nylon string with a carbon string a smaller diameter is used. This results in a decreased bending stiffness and the string vibrates more easily. This emphasizes the upper harmonics and results in a more brilliant timbre.

The reduced inharmonicity is physically detectable and proven. Plain and polished carbon strings show a behaviour analogue to nylon strings. The polishing is also an additional processing of the diameter. Compared to the reliable nylon strings especially the polished carbon strings are more sensitive to sharp-edged bridges and frets. But past experience has shown that this concerns only the smallest diameters.

Gut strings have a higher bending stiffness because of their lower density and therefore give less upper harmonics than nylon strings. This tone with emphasized fundamentals is the well known old fashioned timbre.

It is usually advisable to replace gut strings with nylon ones, because a polyamide like nylon is more insensitive to changes in humidity and temperature. So less corrective tuning is required. The brilliant timbre of carbon strings may sound unfamiliar compared to gut strings and is highly dependant of the subjective hearing habits of the musician.

**Results:** The durability of nylon strings is excellent while carbon offers a more brilliant timbre.



*Habit de Musicien.*



## Information

### Tone table

Tone	Tone
c <sup>1</sup>	do <sup>1</sup>
c	do
C	Do

Tone	Tone
d <sup>1</sup>	re <sup>1</sup>
d	re
D	Re

Tone	Tone
e <sup>1</sup>	mi <sup>1</sup>
e	mi
E	Mi

Tone	Tone
f <sup>1</sup>	fa <sup>1</sup>
f	fa
F	Fa

Tone	Tone
g <sup>1</sup>	sol <sup>1</sup>
g	sol
G	Sol

Tone	Tone
a <sup>1</sup>	la <sup>1</sup>
a	la
A	La

Tone	Tone
h <sup>1</sup>	si <sup>1</sup>
h	si
H	Si

### Material tensions

A comparison of nylon, carbon, gut and steel strings

Nylon	Carbon (PVF)	Gut	Steel
0.400	0.30	0.36	—
0.425	0.33	0.38	—
0.450	0.37	0.40	0.16
0.475	0.37	0.40	0.17
0.500	0.41	0.44	0.18
0.525	0.41	0.48	0.19
0.550	0.44	0.48	0.20
0.575	0.44	0.51	0.20
0.600	0.48	0.53	0.21
0.625	0.50	0.55	0.22
0.650	0.50	0.58	0.23
0.675	0.54	0.61	0.24
0.700	0.54	0.61	0.25
0.725	0.54	0.63	0.26
0.750	0.59	0.66	0.27
0.775	0.59	0.68	0.28

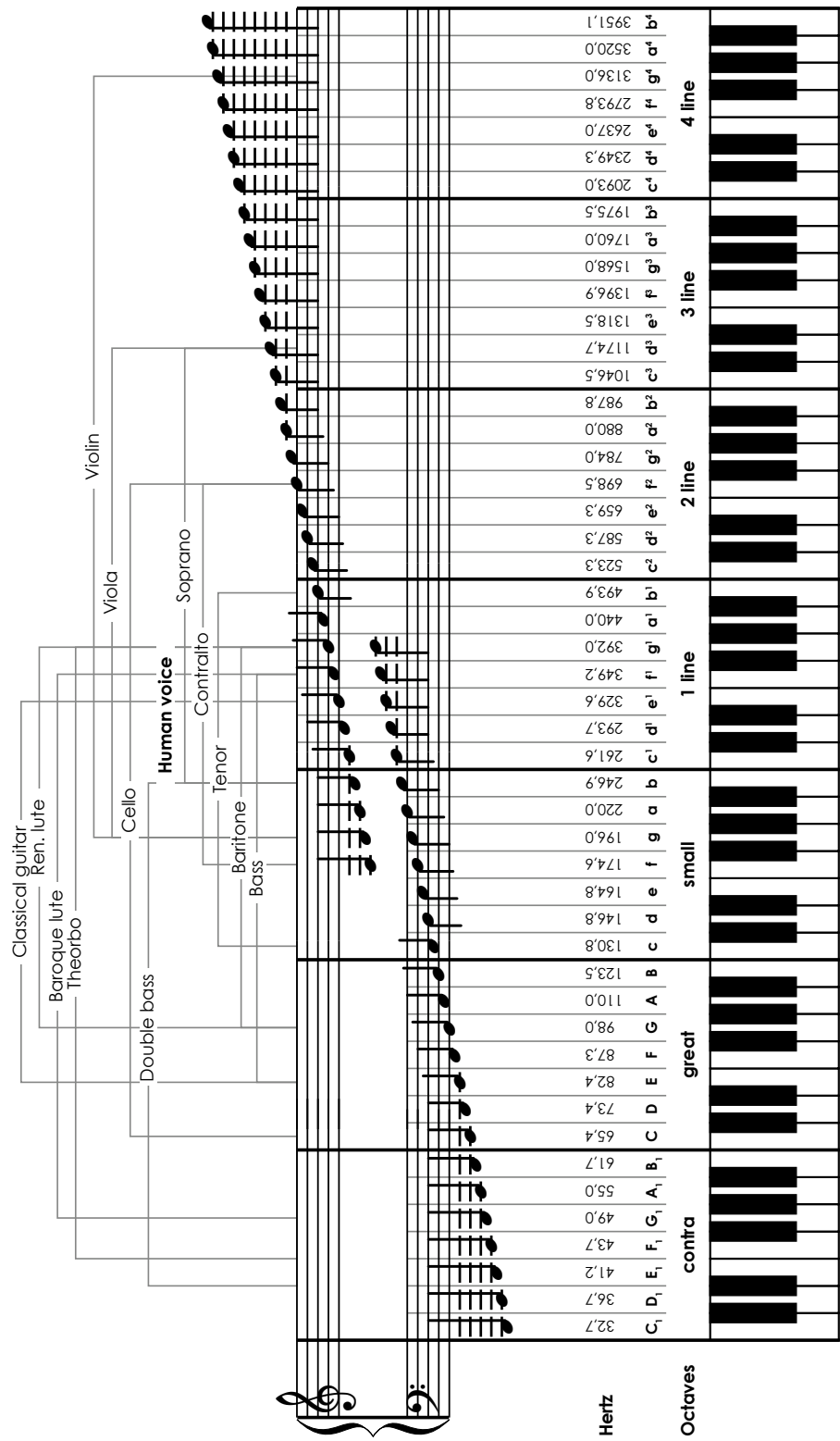
all dimensions in mm

Nylon	Carbon (PVF)	Darm	Stahl
0.800	0.63	0.71	0.29
0.825	0.63	0.71	0.30
0.850	—	0.74	0.30
0.875	0.68	0.79	0.31
0.900	0.70	0.79	0.32
0.925	0.72	0.81	0.33
0.950	0.74	0.84	0.34
0.975	0.74	0.84	0.35
1.000	0.78	0.89	0.36
1.050	0.80	0.94	0.37
1.100	0.85	0.97	0.39
1.150	0.87	0.99	0.41
1.200	0.90	1.04	0.43
1.250	0.96	1.09	0.44
1.275	0.98	1.09	0.45
1.300	1.00	1.14	0.46

all dimensions in mm



*Frequency range of string and plucked instruments*



# *A Family Company through the ages*

The history of PYRAMID string and tuning pipe manufacture

**Foundation – A. Osmanek Musikinstrumenten- und Saitenfabrik was established in Schönbach, near Eger, in the former Austro-Hungarian Empire.**

Anton Osmanek ran a weaving mill with 300 hand weavers. Due to the rapid increase in mechanisation, the hand weaving business was set to become extinct, so he changed to trading with musical instruments. Alongside the trade of musical instruments and accessories, he developed specialised silk based E strings, “the fifth”, for violins. Products which were of the highest quality and received numerous awards and certificates of merit over the subsequent years at various exhibitions and fairs.

The 1st World War then brought a sudden end to the successful business of exporting to the eastern countries and overseas markets. The successor – Karl Junger began to reorganise the company following the difficult times. He focused on the manufacture of strings for musical instruments.

The 2nd World War brought about the closure of the company as a non-vital industry. Following the end of the war the company was moved, under difficult circumstances, to Bubenreuth near Erlangen in Bavaria, Germany.





Restart in Bubenreuth 1948 in a barrack, then the 1st new factory building on the company's own ground about 1952/53.

2nd and 3rd building phases followed later in 1956.

The Challenge of rebuilding the company was undertaken by Karl and Norbert Junger. Their endeavours were supported well by the loyalty of countless domestic and overseas customers. Under the name of Karl Junger

Saitenfabrik the company expanded rapidly and during this period the tuning pipe manufacturer, Leopold Müller from Schönbach, was incorporated into the business.

PYRAMID today is recognised the world over for good quality and excellent service, exports to over 100 countries across the globe and is under the management of Max Junger.



### Where does the name PYRAMID come from ?

Pyramid was developed from the former name used on the string packaging and subsequently became the registered Trademark PYRAMID for all our products. The graphic and word PYRAMID is a patented registered trademark in Germany and across the world. Patent Registration No. 613826/27.

# *Terms*

## **Prices**

Quoted ex factory in EURO. Consular fees will be charged to the buyer. An extra 100% is charged for strings of non-standard tunings or non-standard vibrating lengths. Strings not on this list can be custom-made at prices quoted upon request.

19% VAT will be charged for EU countries only.

On an order amount of Euro 250.00 we grant a discount of -33.33%.

## **Delivery**

Delivery dates are indicated to the best of our judgement, but without any obligation on our part. Unforeseen extraordinary events and influences beyond our control may cause delays and justify postponements in accordance with our possibilities.

## **Payment**

In advance with remittance to our bank account or PayPal.

## **Retention of title**

We shall retain the title to the furnished goods until the payment in full of the amount of our invoice and of the other out-standing debits.

## **The place of performance and jurisdiction**

is Erlangen/Germany for both parties.

# *Bank References*

# *Address*

## **PYRAMID Saiten- und Stimpfeifenfabrik Junger GmbH**

Sudetenstraße 41-43

P. O. Box 6

D-91088 Bubenreuth

Fed. Rep. of Germany

Tel: +49 (0) 9131 / 24 06 4  
+49 (0) 9131 / 24 06 5

Email: [s.holz@pyramid-saiten.de](mailto:s.holz@pyramid-saiten.de)  
Internet: [www.pyramid-saiten.de](http://www.pyramid-saiten.de)  
[www.facebook.com/pyramidstrings](https://www.facebook.com/pyramidstrings)  
[www.instagram.com/pyramid\\_strings\\_official/](https://www.instagram.com/pyramid_strings_official/)

### **Hypo-Vereinsbank AG Erlangen**

BLZ: ..... 763 200 72  
Account #: ..... 3140 970

BLZ: ..... 763 600 33  
Account #: ..... 808 784  
IBAN: ..... DE15 7636 0033 0000 8087 84  
SWIFT(BIC): ..... GENODEF1ER1

### **Sparkasse Bubenreuth**

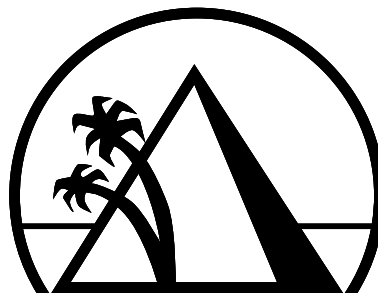
BLZ: ..... 763 500 00  
Account #: ..... 3 001 477  
IBAN: ..... DE75 7635 0000 0003 0014 77  
SWIFT(BIC): ..... BYLADEM1ERH

IBAN: ..... DE06 7632 0072 0003 1409 70  
SWIFT(BIC): ..... HYVEDEMM417

### **Raiffeisen-Volksbank Bubenreuth**

### **Postbank Nürnberg**

BLZ: ..... 760 100 85  
Account #: ..... 37 653 854  
IBAN: ..... DE03 7601 0085 0037 6538 54  
SWIFT(BIC): ..... PBNKDEFF



**Pyramid Strings**

[www.pyramid-saiten.de](http://www.pyramid-saiten.de)

*Enjoy the great tone  
of our Pyramid musical strings!*

**PYRAMID Saiten- und Stimpfeifenfabrik Junger GmbH**

Sudetenstraße 41 – 43 | D-91088 Bubenreuth / Germany | [pyramid@junger.de](mailto:pyramid@junger.de) | [www.pyramid-strings.de](http://www.pyramid-strings.de)