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Cordes pour harpe

Harp strings



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©SAVAREZ and HARPS :

A LONG HISTORY...

Already known in Egypt 3.000 years B.C. the bow-shaped harp had from 3 to 7 strings.

The pedal harp made its appearance at the end of the 17th century.

In France, it took its letters of nobility and became in vogue thanks to Marie-Antoinette and Madam de Genlis. Around 1810 Sébastien Erard brought the ultimate improvements that are always in use and conducted to the instrument that we know today.

It is between these dates, during the Age of Enlightenment, that the Italian Master SAVARESSE, who settled in Lyon, manufactured his first hand rectified gut strings in 1770. A collaboration was established quite naturally between the master, whose reputation was growing day after day, and the harpists and harp makers of that time. There came the great discoveries that opened the ways towards the harp of today.

From that moment the harp strings, which at the beginning were made of hand-rectified gut, evolved progressively with technical progress.

Well traced lines and a Master word : **INNOVATION**

Much progress arose from the collaboration with the musicians he associated to his research aimed at meeting their requirements with a care of perfection. And to ensure the success of their essential innovations, the best harp makers of the 18th century and the beginning of the 19th century approached SAVAREZ and sealed links that have been going on throughout the 20th century till nowadays. As a result, the successive revolutions in string making and harp making knew the following main stages.

©constant improvement of the gut strings, from the string of Master SAVARESSE in 1770 to the current rectified strings

©the development of nylons in the 1950's

©the introduction of a new material exclusive to SAVAREZ:

the Alliance composite,

A WORLD EXCLUSIVENESS

©the manufacture of the wound bass strings

⌘ GUT STRINGS

If the strings that we sell today are mainly made out of synthetic material, the gut strings symbolically embody the perpetuation of a two-century know-how and the combination of tradition and innovation.

All the gut strings are rectified, either they are oiled or varnished. Their gauge is thus very precise and **the string is very homogeneous (with perfect geometry)**. It ensures the accuracy of the note and guarantees a clean and direct sound with much power and projection.

The diameters are controlled with a high degree of accuracy. We offer a large choice that makes it possible for each note to choose the string diameter, that is tension, which best suits the instrument.

Each diameter exists in natural color, and also in red or blue, which makes the choice of the diameters for the C and F strings easier.

2 lengths: - strings in length of 1,20 metre for diameters 38 to 150/100 mm.
 - strings in length of 1,50 metre for diameters 160 to 225/100 mm.

It should be noted that the tension used on the harps evolved during centuries according to an ascending curve. Thus, the tensions of today would not be appropriate for the harps of the 19th century.

To consult the references and diameters of the strings see the chart of page 12.

⌘ DEVELOPMENT OF NYLONS : THE FIRST REVOLUTION

During centuries, gut was the most used material. However, the harpists saw their treble strings break easily, much more quickly than the strings in the lower octaves. And during the concerts, in rooms heated by the stage lights and a public whose exhalations increased the humidity rate in the ambient air, the strings suffered great variations that affected the sound. Moreover the gut strings were rather expensive because of high manufacturing costs.

In the late 1930's, a small revolution shook the industry world: Nylon made its appearance and showed its applications everywhere, in all the fields of the everyday life. After the Second World War SAVAREZ was the first manufacturer to apply this material to the world of the harp. Thanks to well-mastered technologies relating to synthetic materials, he found the way to adapt nylon for the use as musical strings, and by the way harp strings, by acting on its molecular structures.

- **an adapted chemical process: a SAVAREZ advantage**

By modifying the links between the nylon molecules SAVAREZ controlled the string elongation and offered **a better sound** to the musicians.

Thanks to the control of the elasticity and rigidity of the nylon the harpists were offered the desired flexibility and resistance under fingers.

- Gauge control and rectification process: → a better sound and increased playing comfort

SAVAREZ produced the useful string diameters with a perfect geometrical regularity. The successive developments of increasingly sophisticated technologies of rectification testify to this search for perfection:

- manual rectification with sandpaper,
- then device with mobile plates moving along the string in rotation,
- and today "centerless" machines and laser control of the diameter.

The rectification process enables to offer an extended choice of diameters to the harpist. That choice was formerly limited by the difficulties of obtaining precise gauges.

The perfectly regular geometrical shape gives the string a perfect accuracy, a pure and clean sound.

The qualities of SAVAREZ nylon strings are such as the harps can be fitted with nylon strings from 1st to 2nd octave, and then in gut and metal wound strings.

Length and colours: The strings are available in 1 meter and still there is a large choice of diameters in natural colour and also in Red and Blue, thus offering the possibility to choose the best suited diameter for the C and F strings.

To consult the references, diameters and colors of the strings, see the chart of page 13.

Ø INTRODUCTION OF A NEW MATERIAL EXCLUSIVE TO SAVAREZ : THE ALLIANCE COMPOSITE : A SECOND REVOLUTION

This new material was developed by SAVAREZ a little more than ten years ago. Seven years of research enabled us to discover a molecule that has the same density as gut without the inconvenience of gut fragility. This discovery caused a small seism in the field of string making. While acting on the molecular links and the rate of crystallinity SAVAREZ thus could obtain an elongation and elasticity identical to those of gut.

- A difficult development:

In its usual form, the fibre presents two inconveniences for the use as musical strings:

- The original fibre does not have sufficient tensile strength to support tensions as high as 35 kilograms for the thicker harp string diameters.
- The original fibre presents the risk called defibrillation. That means that once put under tension the string can become withish, no more transparent, or have some small hairs appearing and can break after some hours.

Thanks to its experience and competences, the development and implementation of delicate and sophisticated technologies, SAVAREZ solved all the technological problems inherent to the nature of the material, working through the complex processes necessary to give the Alliance fibres the characteristics desired in top quality strings. It made it possible to produce strings that not only resist the tensions required by the harp without the risk of string breakage and defibrillation, but present perfect geometrical qualities and characteristics of elasticity and elongation identical to those of gut.

- Unprecedented advantages:

Indeed the ALLIANCE strings combine the advantages of gut and nylon without the inconveniences of them.

First of all, this material offers **a great liberty and new possibilities** because of the control of the following parameters: density, elasticity and stiffness.

Moreover, the Alliance strings present all the qualities that are offered by synthetic strings: **tuning steadiness**, solidity, and long life.

Lastly, because they have the same elasticity as gut and a much higher density than nylon, the Alliance strings feature **all the sounding qualities that are found in gut strings**.

For a given tension, the Alliance string has a thinner diameter than a nylon string. It makes the vibration easier with as a result **an increased projection and great clarity of sound**.

- Outstanding qualities

The Alliance strings have **specific qualities of their own**:

- a total insensitivity to the variations of humidity and temperature,
- an increased steadiness,
- a very competitive price on account of a longer life.

Lastly, the Alliance strings produce very few internal frictions with as a result an increased quality of sound and longer sustain. This advantage is all the more sensitive as the diameter is thicker.

This is why SAVAREZ developed **an exclusive technology to produce thicker string diameters**: winding of a monofilament or multifilament core, then rectification by wire drawing, and coating or coating / rectification. SAVAREZ is the only manufacturer using such a technology that makes it possible to produce strings in thicker diameters, which have a very clear sound with much projection and power.

The ALLIANCE strings offer **an additional choice** to the harpist who can either put on a complete setting of Alliance strings or mix Alliance strings with Nylon or gut strings.

- Different lengths: 1,00m – 1,50m and 2,00 m
- A large choice of diameters in natural colour and in Red and Black.

To consult the references and diameters of the strings see the chart of page 14.

⌘ STRINGS WOUND ON STEEL

♦ - Concert Harp

The metal wound strings for concert harp are available in two tensions: Medium and Forte.

The strings in Medium tension have been existing for a long time. They suit the old harps and are used in particular for the interpretation of early music or classic music.

The strings in Forte tension were developed thereafter in response to an evolution of the contemporary tastes and a search for a richer and brilliant sound and more power. They perfectly suit to the modern harps.

Important improvements were made to the strings. Their composition has been redesigned and they now benefit from the use of new winding technologies that made it possible to produce strings that have a very homogeneous tone.

These strings fit particularly well with the Alliance strings or gut strings to give a particularly well-balanced sound.

2 tensions: - Medium: form G 5th octave n°34 to C 7th octave n°45
 - Forte: from E 5th octave n°29 to C 7th octave n°45

To consult the references of the strings see the chart of page 15.

♦ - Small Harps

The metal wound strings for small harps have been especially designed to fit the different existing models of small harps.

- 2 length series: 1,20m – 1,35m and 1,35m – 1,40m
- from C 4th octave n°27 to A 6th octave n° 36

To consult the references of the strings see the chart of page 15.

© EXAMPLES OF SETTINGS

© LIST OF DIAMETERS AND REFERENCES

For each type of SAVAREZ strings we give hereafter:

– some examples of settings :

- Varnished Gut strings - 3 examples for concert harp..... Page 7
- Rectified Nylon strings - 3 examples for concert harp Page 8
- Rectified Nylon strings - 3 examples for small harp..... Page 9
- ALLIANCE strings - 3 examples for concert harp..... Page 10
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– the list of all the available string diameters and references :

- Rectified Oiled Gut and Rectified Varnished Gut strings Page 12
- Rectified Nylon strings..... Page 13
- ALLIANCE strings..... Page 14
- Strings wound on steel Page 15

The examples hereafter are given as an indication.

- On two different models of harps that have identical vibrating lengths, it can be necessary to use different tensions and thus different diameters.

- Also, for the same tension on two different instruments, it can be necessary to use a different string diameter.

- It is possible to mix the strings and for example to use Nylon strings for the 2 first octaves and Alliance strings or gut strings for the following octaves.

For each example we give the note and position on the instrument, the reference of the string and the string diameter in hundredths of millimetres and inches.

If for a given string reference or diameter, you observe not enough tension or on the contrary an excess of rigidity that blocks the string, by referring to the list of the references and diameters, you can choose the thinner diameter just below for less tension and more flexibility or the thicker diameter just above for more tension and more rigidity.

VARNISHED GUT STRINGS - 3 examples of settings for Concert Harp

	NOTE	POSITION
OCTAVE 0	LA-A	000
	SOL-G	00
	FA-F	0
OCTAVE 1	MI-E	1
	RE-D	2
	DO-C	3
	SI-B	4
	LA-A	5
	SOL-G	6
	FA-F	7
OCTAVE 2	MI-E	8
	RE-D	9
	DO-C	10
	SI-B	11
	LA-A	12
	SOL-G	13
	FA-F	14
OCTAVE 3	MI-E	15
	RE-D	16
	DO-C	17
	SI-B	18
	LA-A	19
	SOL-G	20
	FA-F	21
OCTAVE 4	MI-E	22
	RE-D	23
	DO-C	24
	SI-B	25
	LA-A	26
	SOL-G	27
	FA-F	28
OCTAVE 5	MI-E	29
	RE-D	30
	DO-C	31
	SI-B	32
	LA-A	33

INFERIOR DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPBV40	40	.015
HPBV44	44	.017
HPBV48B	48	.019
HPBV51	51	.020
HPBV53	53	.021
HPBV55R	55	.022
HPBV58	58	.023
HPBV61	61	.024
HPBV63	63	.025
HPBV66B	66	.026
HPBV68	68	.027
HPBV71	71	.028
HPBV74R	74	.029
HPBV79	79	.031
HPBV81	81	.032
HPBV84	84	.033
HPBV89B	89	.035
HPBV94	94	.037
HPBV97	97	.038
HPBV99R	99	.039
HPBV104	104	.041
HPBV109	109	.042
HPBV114	114	.045
HPBV122B	122	.048
HPBV127	127	.050
HPBV132	132	.052
HPBV137R	137	.054
HPBV142	142	.056
HPBV150	150	.059
HPBV160	160	.063
HPBV170B	170	.067
HPBV178	178	.070
HPBV185	185	.073
HPBV193R	193	.076
HPBV203	203	.080
HPBV213	213	.084

STANDARD DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPBV44	44	.017
HPBV48	48	.019
HPBV51B	51	.020
HPBV53	53	.021
HPBV55	55	.022
HPBV58R	58	.023
HPBV61	61	.024
HPBV63	63	.025
HPBV66	66	.026
HPBV68B	68	.027
HPBV71	71	.028
HPBV74	74	.029
HPBV79R	79	.031
HPBV81	81	.032
HPBV84	84	.033
HPBV89	89	.035
HPBV94B	94	.037
HPBV97	97	.038
HPBV99	99	.039
HPBV104R	104	.041
HPBV109	109	.043
HPBV114	114	.045
HPBV122	122	.048
HPBV127B	127	.050
HPBV132	132	.052
HPBV137	137	.054
HPBV142R	142	.056
HPBV150	150	.059
HPBV160	160	.063
HPBV170	170	.067
HPBV178B	178	.070
HPBV185	185	.073
HPBV193	193	.076
HPBV203R	203	.080
HPBV213	213	.084
HPBV225	225	.088

SUPERIOR DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPBV48	48	.019
HPBV51	51	.020
HPBV53B	53	.021
HPBV55	55	.022
HPBV58	58	.023
HPBV61R	61	.024
HPBV63	63	.025
HPBV66	66	.026
HPBV68	68	.027
HPBV71B	71	.028
HPBV74	74	.029
HPBV79	79	.031
HPBV81R	81	.032
HPBV84	84	.033
HPBV89	89	.035
HPBV94	94	.037
HPBV97B	97	.038
HPBV99	99	.039
HPBV104	104	.041
HPBV109R	109	.043
HPBV114	114	.045
HPBV122	122	.048
HPBV127	127	.050
HPBV132B	132	.052
HPBV137	137	.054
HPBV142	142	.056
HPBV150R	150	.060
HPBV160	160	.063
HPBV170	170	.067
HPBV178	178	.070
HPBV185B	185	.073
HPBV193	193	.076
HPBV203	203	.080
HPBV213R	213	.084
HPBV225	225	.088

All the strings are also available in rectified oiled gut (HPBH) except the varnished red and blue strings

RECTIFIED NYLON Strings - 3 examples of settings for Concert Harp

NOTE	POSITION	INFERIOR DIAMETER			STANDARD DIAMETER			SUPERIOR DIAMETER		
		REF.	%mm	inch	REF.	%mm	inch	REF.	%mm	inch
OCTAVE 0										
SOL-G	00	HPN52	52	.020	HPN54	54	.021	HPN56	56	.022
FA-F	0	HPN54B	54	.021	HPN56B	56	.022	HPN58B	58	.023
OCTAVE 1										
MI-E	1	HPN56	56	.022	HPN58	58	.023	HPN60	60	.024
RE-D	2	HPN58	58	.023	HPN60	60	.024	HPN64	64	.025
DO-C	3	HPN60R	60	.024	HPN64R	64	.025	HPN66R	66	.026
SI-B	4	HPN64	64	.025	HPN66	66	.026	HPN68	68	.027
LA-A	5	HPN66	66	.026	HPN68	68	.027	HPN70	70	.027
SOL-G	6	HPN68	68	.027	HPN70	70	.027	HPN72	72	.028
FA-F	7	HPN72B	72	.028	HPN74B	74	.029	HPN77B	77	.030
OCTAVE 2										
MI-E	8	HPN74	74	.023	HPN77	77	.030	HPN80	80	.031
RE-D	9	HPN77	77	.030	HPN80	80	.031	HPN83	83	.033
DO-C	10	HPN80R	80	.031	HPN83R	83	.033	HPN86R	86	.034
SI-B	11	HPN83	83	.033	HPN86	86	.034	HPN89	89	.035
LA-A	12	HPN86	86	.034	HPN89	89	.035	HPN91	91	.036
SOL-G	13	HPN89	89	.035	HPN91	91	.036	HPN94	94	.037
FA-F	14	HPN91B	91	.036	HPN94B	94	.037	HPN97B	97	.038
OCTAVE 3										
MI-E	15	HPN94	94	.037	HPN97	97	.038	HPN100	100	.039
RE-D	16	HPN97	97	.038	HPN100	100	.039	HPN103	103	.040
DO-C	17	HPN100R	100	.039	HPN103R	103	.040	HPN107R	107	.042
SI-B	18	HPN103	103	.040	HPN107	107	.042			
LA-A	19	HPN107	107	.042						
SOL-G	20									
FA-F	21									

* Since nylon strings "HPN" do not come in thicker diameter than 107/100 mm, we recommend Alliance strings "HPK" in the positions where diameters of nylon strings are not available.

RECTIFIED NYLON Strings - 3 examples of settings for Small Harp

NOTE	POSITION	INFERIOR DIAMETER			STANDARD DIAMETER			SUPERIOR DIAMETER		
		REF.	%mm	inch	REF.	%mm	inch	REF.	%mm	inch
OCTAVE 0										
DO-C	00	HPN54R	54	.021	HPN56R	56	.022	HPN58R	58	.023
SI-B	0	HPN54	54	.021	HPN56	56	.022	HPN58	58	.023
OCTAVE 1										
LA-A	1	HPN56	56	.022	HPN58	58	.023	HPN60	60	.024
SOL-G	2	HPN56	56	.022	HPN58	58	.023	HPN60	60	.024
FA-F	3	HPN58B	58	.023	HPN60B	60	.024	HPN64B	64	.025
MI-E	4	HPN58	58	.023	HPN60	60	.024	HPN64	64	.025
RE-D	5	HPN58	58	.023	HPN60	60	.024	HPN64	64	.025
DO-C	6	HPN60R	60	.024	HPN64R	64	.025	HPN66R	66	.026
SI-B	7	HPN60	60	.024	HPN64	64	.025	HPN66	66	.026
OCTAVE 2										
LA-A	8	HPN64	64	.025	HPN66	66	.026	HPN68	68	.027
SOL-G	9	HPN66	66	.026	HPN68	68	.027	HPN70	70	.027
FA-F	10	HPN68B	68	.027	HPN70B	70	.027	HPN72B	72	.028
MI-E	11	HPN72	72	.028	HPN74	74	.029	HPN77	77	.030
RE-D	12	HPN74	74	.029	HPN77	77	.030	HPN80	80	.031
DO-C	13	HPN77R	77	.030	HPN80R	80	.031	HPN83R	83	.033
SI-B	14	HPN77	77	.030	HPN80	80	.031	HPN83	83	.033
OCTAVE 3										
LA-A	15	HPN80	80	.031	HPN83	83	.033	HPN86	86	.034
SOL-G	16	HPN86	86	.034	HPN89	89	.035	HPN91	91	.036
FA-F	17	HPN91B	91	.036	HPN94B	94	.037	HPN97B	97	.038
MI-E	18	HPN94	94	.037	HPN97	97	.038	HPN100	100	.039
RE-D	19	HPN100	100	.039	HPN103	103	.040	HPN107	107	.043
DO-C	20	HPK95R*	95	.037	HPK95R*	95	.037	HPK101R*	101	.040
SI-B	21	HPK95*	95	.037	HPK101*	101	.040	HPK108*	108	.042
OCTAVE 4										
LA-A	22	HPK105*	105	.041	HPK108*	108	.042	HPK116*	116	.046
SOL-G	23	HPK108*	108	.042	HPK116*	116	.046	HPK121*	121	.048
FA-F	24	HPK121B*	121	.048	HPK125B*	125	.049	HPK127B*	127	.050
MI-E	25	HPK136*	136	.053	HPK140*	140	.057	HPK145*	145	.057
RE-D	26	HPK140*	140	.055	HPK145*	145	.063	HPK150*	150	.059

* Since nylon strings HPN do not come in thicker diameter than 107/100 mm, we recommend Alliance strings HPK in the positions where diameters of nylon strings are not available.

RECTIFIED NYLON Strings - 3 examples of settings for Small Harp

ALLIANCE Strings - 3 examples of settings for Concert Harp

	NOTE	POSITION
OCTAVE 0	LA -A	000
	SOL-G	00
	FA-F	0
OCTAVE 1	MI-E	1
	RE-D	2
	DO-C	3
	SI-B	4
	LA -A	5
	SOL-G	6
	FA-F	7
OCTAVE 2	MI-E	8
	RE-D	9
	DO-C	10
	SI-B	11
	LA -A	12
	SOL-G	13
	FA-F	14
OCTAVE 3	MI-E	15
	RE-D	16
	DO-C	17
	SI-B	18
	LA -A	19
	SOL-G	20
	FA-F	21
OCTAVE 4	MI-E	22
	RE-D	23
	DO-C	24
	SI-B	25
	LA -A	26
	SOL-G	27
	FA-F	28
OCTAVE 5	MI-E	29
	RE-D	30
	DO-C	31
	SI-B	32
	LA -A	33

INFERIOR DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPK41	41	.016
HPK43	43	.017
HPK45B	45	.018
HPK45	45	.018
HPK50	50	.019
HPK52R	52	.020
HPK52	52	.020
HPK55	55	.022
HPK60	60	.024
HPK60B	60	.024
HPK64	64	.025
HPK66	66	.026
HPK71R	71	.028
HPK74	74	.029
HPK77	77	.030
HPK84	84	.033
HPK86B	86	.034
HPK86	86	.034
HPK91	91	.036
HPK95R	95	.037
HPK101	101	.04
HPK105	105	.041
HPK108	108	.042
HPK121B	121	.048
HPK121	121	.048
HPK127	127	.050
HPK136R	136	.053
HPK140	140	.055
HPK145	145	.057
HPK150	150	.059
HPK160B	160	.063
HPK172	172	.068
HPK180	180	.070
HPK203R	203	.080
HPK203	203	.080
HPK207	207	.081

STANDARD DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPK43	43	.017
HPK45	45	.018
HPK47B	47	.018
HPK47	47	.018
HPK52	52	.020
HPK55R	55	.022
HPK55	55	.022
HPK57	57	.022
HPK62	62	.024
HPK62B	62	.024
HPK66	66	.026
HPK69	69	.027
HPK74R	74	.029
HPK77	77	.030
HPK81	81	.032
HPK86	86	.034
HPK91B	91	.036
HPK91	91	.036
HPK95	95	.037
HPK101R	101	.039
HPK105	105	.041
HPK108	108	.042
HPK116	116	.046
HPK125B	125	.049
HPK125	125	.049
HPK132	132	.052
HPK140R	140	.055
HPK145	145	.057
HPK150	150	.059
HPK160	160	.063
HPK172B	172	.068
HPK180	180	.071
HPK190	190	.075
HPK207R	207	.081
HPK207	207	.081
HPK210	210	.083

SUPERIOR DIAMETER		
REF.	DIAMETER	
	%mm	inch
HPK45	45	.018
HPK47	47	.018
HPK50B	50	.020
HPK50	50	.020
HPK55	55	.022
HPK57R	57	.022
HPK57	57	.022
HPK60	60	.024
HPK64	64	.025
HPK64B	64	.025
HPK69	69	.027
HPK71	71	.028
HPK77R	77	.030
HPK81	81	.032
HPK84	84	.033
HPK91	91	.036
HPK95B	95	.037
HPK95	95	.037
HPK101 *	101	.040
HPK105R	105	.041
HPK108	108	.042
HPK116	116	.046
HPK121	121	.048
HPK127B	127	.050
HPK127	127	.050
HPK136	136	.053
HPK145R	145	.057
HPK150	150	.059
HPK160	160	.063
HPK172	172	.068
HPK180B	180	.071
HPK190	190	.075
HPK203	203	.080
HPK210R	210	.083
HPK210 *	210	.083
HPK210 *	210	.083

* strings HPK210 or metal wound

ALLIANCE Strings - 3 examples of settings for Concert Harp

ALLIANCE Strings - 3 examples of settings for Small Harps

NOTE
DO-C
SI-B
LA-A
SOL-G
FA-F
MI-E
RE-D
DO-C
SI-B
LA-A
SOL-G
FA-F
MI-E
RE-D
DO-C
SI-B
LA-A
SOL-G
FA-F
MI-E
RE-D
DO-C
SI-B
LA-A
SOL-G
FA-F
MI-E
RE-D

IRISH SMALL HARP			
POSITION	REF.	DIAMETER	
		%mm	inch
1	HPK43	43	.017
2	HPK45	45	.018
3	HPK47B	47	.018
4	HPK47	47	.018
5	HPK52	52	.020
6	HPK55R	55	.022
7	HPK55	55	.022
8	HPK57	57	.022
9	HPK62	62	.024
10	HPK66B	66	.026
11	HPK66	66	.026
12	HPK69	69	.027
13	HPK74R	74	.030
14	HPK77	77	.030
15	HPK81	81	.032
16	HPK86	86	.034
17	HPK91B	91	.036
18	HPK91	91	.036
19	HPK95	95	.037
20	HPK101R	101	.040
21	HPK105	105	.041
22	HPK108	108	.042
23	HPK116	116	.046
24	HPK125B	125	.049

SMALL HARP WITHOUT PEDAL N°1			
POSITION	REF.	DIAMETER	
		%mm	inch
1	HPK52	52	.020
2	HPK52	52	.020
3	HPK52B	52	.020
4	HPK52	52	.020
5	HPK52	52	.020
6	HPK55R	55	.022
7	HPK57	57	.022
8	HPK62	62	.024
9	HPK64	64	.025
10	HPK66B	66	.026
11	HPK71	71	.028
12	HPK77	77	.030
13	HPK81R	81	.032
14	HPK84	84	.033
15	HPK86	86	.034
16	HPK91	91	.036
17	HPK95B	95	.037
18	HPK101	101	.040
19	HPK101	101	.040
20	HPK108R	108	.042
21	HPK116	116	.046
22	HPK116	116	.046
23	HPK121	121	.048
24	HPK125B	125	.050
25	HPK127	127	.050
26	HPK132	132	.052

SMALL HARP WITHOUT PEDAL N°2			
POSITION	REF.	DIAMETER	
		%mm	inch
1	HPK55R	55	.022
2	HPK55	55	.022
3	HPK55	55	.022
4	HPK57	57	.022
5	HPK57B	57	.022
6	HPK62	62	.024
7	HPK62	62	.024
8	HPK69R	69	.027
9	HPK69	69	.027
10	HPK71	71	.028
11	HPK71	71	.028
12	HPK74B	74	.029
13	HPK77	77	.030
14	HPK77	77	.030
15	HPK81R	81	.032
16	HPK81	81	.032
17	HPK86	86	.034
18	HPK86	86	.034
19	HPK91B	91	.036
20	HPK91	91	.036
21	HPK91	91	.036
22	HPK101R	101	.040
23	HPK108	108	.042
24	HPK108	108	.042
25	HPK125	125	.050
26	HPK125B	125	.050
27			
28			

ALLIANCE Strings - 3 examples of settings for Small Harps

String Diameters and References

RECTIFIED OILED GUT and RECTIFIED VARNISHED GUT

RECTIFIED OILED GUT

SAVAREZ

RECTIFIED VARNISHED GUT

INUSA

DIAMETER		REFERENCE length 1,20 m
% mm	inch	Natural
38	0,0150	HPBH38
40	0,0157	HPBH40
44	0,0173	HPBH44
48	0,0189	HPBH48
51	0,0201	HPBH51
53	0,0209	HPBH53
55	0,0216	HPBH55
58	0,0228	HPBH58
61	0,0240	HPBH61
63	0,0248	HPBH63
66	0,0260	HPBH66
68	0,0268	HPBH68
71	0,0279	HPBH71
74	0,0291	HPBH74
79	0,0311	HPBH79
81	0,0319	HPBH81
84	0,0331	HPBH84
89	0,0350	HPBH89
94	0,0370	HPBH94
97	0,0382	HPBH97
99	0,0390	HPBH99
104	0,0409	HPBH104
109	0,0429	HPBH109
114	0,0449	HPBH114
122	0,0480	HPBH122
127	0,0500	HPBH127
132	0,0520	HPBH132
137	0,0539	HPBH137
142	0,0559	HPBH142
150	0,0590	HPBH150
DIAMETER		REFERENCE length 1,50 m
% mm	inch	Natural
160	0,0630	HPBH160
170	0,0669	HPBH170
178	0,0701	HPBH178
185	0,0728	HPBH185
193	0,0760	HPBH193
203	0,0799	HPBH203
213	0,0839	HPBH213
225	0,0886	HPBH225

DIAMETER		REFERENCE length 1,20 m		
% mm	Inch	Natural	Red	Blue
38	0,0150	HPBV38		
40	0,0157	HPBV40		
44	0,0173	HPBV44		
48	0,0189	HPBV48		HPBV48B
51	0,0201	HPBV51		HPBV51B
53	0,0209	HPBV53		HPBV53B
55	0,0216	HPBV55	HPBV55R	
58	0,0228	HPBV58	HPBV58R	
61	0,0240	HPBV61	HPBV61R	
63	0,0248	HPBV63		
66	0,0260	HPBV66		HPBV66B
68	0,0268	HPBV68		HPBV68B
71	0,0279	HPBV71		HPBV71B
74	0,0291	HPBV74	HPBV74R	
79	0,0311	HPBV79	HPBV79R	
81	0,0319	HPBV81	HPBV81R	
84	0,0331	HPBV84		
89	0,0350	HPBV89		HPBV89B
94	0,0370	HPBV94		HPBV94B
97	0,0382	HPBV97		HPBV97B
99	0,0390	HPBV99	HPBV99R	
104	0,0409	HPBV104	HPBV104R	
109	0,0429	HPBV109	HPBV109R	
114	0,0449	HPBV114		
122	0,0480	HPBV122		HPBV122B
127	0,0500	HPBV127		HPBV127B
132	0,0520	HPBV132		HPBV132B
137	0,0539	HPBV137	HPBV137R	
142	0,0559	HPBV142	HPBV142R	
150	0,0590	HPBV150	HPBV150R	
DIAMETER		REFERENCE length 1,50 m		
% mm	Inch	Natural	Red	Blue
160	0,0630	HPBV160		
170	0,0669	HPBV170		HPBV170B
178	0,0701	HPBV178		HPBV178B
185	0,0728	HPBV185		HPBV185B
193	0,0760	HPBV193	HPBV193R	
203	0,0799	HPBV203	HPBV203R	
213	0,0839	HPBV213	HPBV213R	
225	0,0886	HPBV225		

The number after the letters corresponds to the diameter in hundredths of millimetres.
The letters R or B are for Red or Blue.

String Diameters and References
RECTIFIED STABILON NYLON

SAVAREZ

DIAMETER		REFERENCE 1,00 m		
% mm	inch	Natural	Red	Blue
40	0,0157	HPN40		
42	0,0165	HPN42		
44	0,0173	HPN44		
47	0,0185	HPN47		
50	0,0197	HPN50	HPN50R	
52	0,0205	HPN52		
54	0,0212	HPN54	HPN54R	HPN54B
56	0,0220	HPN56	HPN56R	HPN56B
58	0,0228	HPN58	HPN58R	HPN58B
60	0,0236	HPN60	HPN60R	HPN60B
64	0,0252	HPN64	HPN64R	HPN64B
66	0,0260	HPN66	HPN66R	HPN66B
68	0,0268	HPN68	HPN68R	HPN68B
70	0,0275	HPN70		HPN70B
72	0,0283	HPN72		HPN72B
74	0,0291	HPN74		HPN74B
77	0,0303	HPN77	HPN77R	HPN77B
80	0,0315	HPN80	HPN80R	HPN80B
83	0,0327	HPN83	HPN83R	
86	0,0338	HPN86	HPN86R	
89	0,0350	HPN89		
91	0,0358	HPN91	HPN91R	HPN91B
94	0,0370	HPN94		HPN94B
97	0,0382	HPN97		HPN97B
100	0,0394	HPN100	HPN100R	
103	0,0405	HPN103	HPN103R	
107	0,0421	HPN107	HPN107R	

The number after the letters corresponds to the diameter in hundredths of millimetres. The letters R or B are for Red or Blue.

String Diameters and References

ALLIANCE COMPOSITE



DIAMETER		REFERENCE length 1,00 m		
% mm	Inch	Natural	Red	Black
30	0,0118	HPK30		
33	0,0130	HPK33		
37	0,0146	HPK37	HPK37R	
41	0,0161	HPK41		HPK41B
43	0,0169	HPK43		HPK43B
45	0,0177	HPK45	HPK45R	HPK45B
47	0,0185	HPK47	HPK47R	HPK47B
50	0,0197	HPK50	HPK50R	HPK50B
52	0,0205	HPK52	HPK52R	HPK52B
55	0,0216	HPK55	HPK55R	HPK55B
57	0,0224	HPK57	HPK57R	HPK57B
60	0,0236	HPK60		HPK60B
62	0,0244	HPK62	HPK62R	HPK62B
64	0,0252	HPK64	HPK64R	HPK64B
66	0,0260	HPK66	HPK66R	HPK66B
69	0,0272	HPK69	HPK69R	HPK69B
71	0,0279	HPK71	HPK71R	HPK71B
74	0,0291	HPK74	HPK74R	HPK74B
77	0,0303	HPK77	HPK77R	
81	0,0319	HPK81	HPK81R	HPK81B
84	0,0331	HPK84	HPK84R	HPK84B
86	0,0338	HPK86	HPK86R	HPK86B
91	0,0358	HPK91	HPK91R	HPK91B

DIAMETER		REFERENCE length 1,50 m			REFERENCE length 2,00 m		
% mm	Inch	Natural	Red	Black	Natural	Red	Black
95	0,0374	HPK95	HPK95R	HPK95B			
101	0,0397	HPK101	HPK101R	HPK101B	HPK101A	HPK101RA	HPK101BA
105	0,0413	HPK105	HPK105R		HPK105A	HPK105RA	
108	0,0425	HPK108	HPK108R	HPK108B	HPK108A	HPK108RA	HPK108BA
116	0,0457	HPK116	HPK116R	HPK116B	HPK116A	HPK116RA	HPK116BA
121	0,0476	HPK121		HPK121B	HPK121A		HPK121BA
125	0,0492	HPK125	HPK125R	HPK125B	HPK125A	HPK125RA	HPK125BA
127	0,0500	HPK127	HPK127R	HPK127B	HPK127A	HPK127RA	HPK127BA
132	0,0519	HPK132	HPK132R	HPK132B	HPK132A	HPK132RA	HPK132BA
136	0,0535	HPK136	HPK136R		HPK136A	HPK136RA	
140	0,0551	HPK140	HPK140R		HPK140A	HPK140RA	
145	0,0571	HPK145	HPK145R	HPK145B	HPK145A	HPK145RA	HPK145BA
150	0,0590	HPK150			HPK150A		
160	0,0630	HPK160	HPK160R	HPK160B	HPK160A	HPK160RA	HPK160BA
172	0,0677	HPK172		HPK172B	HPK172A		HPK172BA
180	0,0708	HPK180	HPK180R	HPK180B	HPK180A	HPK180RA	HPK180BA
190	0,0748	HPK190			HPK190A		
203	0,0799	HPK203	HPK203R		HPK203A	HPK203RA	
207	0,0815	HPK207	HPK207R	HPK207B	HPK207A	HPK207RA	HPK207BA
210	0,0826	HPK210	HPK210R		HPK210A	HPK210RA	

The number after the letters corresponds to the diameter in hundredths of millimetres.

The letters R or B are for Red or Black.

References of the Strings WOUND ON STEEL

SAVAREZ

Concert Harp

OCTAVE	NOTE	REFERENCE	
		Medium	Forte
5th octave	DO-C		HAF31
	SI-B		HAF32
	LA-A		HAF33
	SOL-G	HAM34	HAF34
	FA-F	HAM35	HAF35
6th octave	MI-E	HAM36	HAF36
	RE-D	HAM37	HAF37
	DO-C	HAM38	HAF38
	SI-B	HAM39	HAF39
	LA-A	HAM40	HAF40
	SOL-G	HAM41	HAF41
	FA-F	HAM42	HAF42
7th octave	MI-E	HAM43	HAF43
	RE-D	HAM44	HAF44
	DO-C	HAM45	HAF45

Small Harps

OCTAVE	NOTE	REFERENCE	Length	NOTE	REFERENCE	Length
4th octave	DO-C	J27	1,20m	DO-C	JC27	1,35m
	SI-B	J28	1,20m	SI-B	JC28	1,35m
5th octave	LA-A	J29	1,20m	LA-A	JC29	1,35m
	SOL-G	J30	1,20m	SOL-G	JC30	1,35m
	FA-F	J31	1,20m	FA-F	JC31	1,35m
	MI-E	J32	1,20m	MI-E	JC32	1,35m
	RE-D	J33	1,20m	RE-D	JC33	1,35m
	DO-C	J34	1,20m	DO-C	JC34	1,35m
	SI-B	J35	1,35m	SI-B	JC35	1,40m
6th octave	LA-A	J36	1,35m	LA-A	JC36	1,40m



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