BASIC - OUTSIDE	mm	mm	Comments
Joint lengths			
Standing length to bell	948.5		
Standing length to wing joint	631		
Wing joint length	356		
Wing joint - tenon length	43.5		
Butt joint length	319.5		
Long joint length	428.5		
Long joint - south tenon length	48.8		
Long joint - north tenon length	32.7		
Bell length	280		
Vent hole distance from north	x		
Vent hole approx diameter	x		
Tone hole distance, axis	,		
Wing - tone hole 1 distance from north	160		
Wing - tone hole 2 distance from north	191		
Wing - tone hole 3 distance from north	220		
Butt - tone hole 4 distance from north	65.5		
Butt - tone hole 5 distance from north	93.4		
Butt - tone hole 6 distance from north	121.7		
Butt - tone hole F distance from north	244		
Butt - tone hole E distance from north	97.6		
Butt - tone hole E distance from north	263		
Butt - tone hole F# distance from north	182		
	367		
Long joint - tone hole D distance from north	326		
Long joint - tone hole Eb distance from north Long joint - tone hole C distance from north	232		
Ţ,			
Long joint - tone hole Bb distance from north	72.5		
Wing - major axis at tone hole 1	41.4		
Wing - major axis at tone hole 2	41		
Wing - major axis at tone hole 3	39.9		
Butt - major axis (side to side) at tone hole 4	56.8		
Butt - minor axis (front to back) at tone hole 4	46.3		
Butt - major axis (side to side) at tone hole 5	56.5		
Butt - minor axis (front to back) at tone hole 5	46.2		
Butt - major axis (side to side) at tone hole 6	55.8		
Butt - minor axis (front to back) at tone hole 6	46.1		
Butt - major axis (side to side) at tone hole F	51.7		
Butt - minor axis (front to back) at tone hole F	41		
Butt - major axis (side to side) at tone hole E	56.8		
Butt - minor axis (front to back) at tone hole E	46.5		
Butt - major axis (side to side) of the bottom butt ellipse	48		
Butt - minor axis (front to back) of the bottom butt ellipse	36.5		
Butt - major axis (side to side) of the top butt ellipse	56		

13-key tenoroon, ANONYMOUS (6), Paris, ca. 1860			
Butt - minor axis (front to back) of the top butt ellipse	43.5		
Butt - cork major axis (side to side)	35.4		
Butt - cork minor axis (front to back)	20.6		
Long joint - minor axis (front to back) at tone hole D	32		Platform 3.4
Long joint - major axis (side to side) at tone hole D	31.1		
Long joint - minor axis (front to back) at tone hole Eb	34.2		
Long joint - major axis (side to side) at tone hole Eb	32.5		
Long joint - minor axis (front to back) at tone hole C	36.2		
Long joint - major axis (side to side) at tone hole C	34		
Long joint - minor axis (front to back) at tone hole Bb	37.2		
Long joint - major axis (side to side) at tone hole Bb	36.9		
Tone hole angle, Ø, length			
Wing - tone hole 1 angle	45° North		
Wing - tone hole 2 angle	37° South		
Wing - tone hole 3 angle	51° South		
Wing - tone hole 1 approx. Ø	3.3		
Wing - tone hole 2 approx. Ø	3.9		
Wing - tone hole 3 approx. Ø	4		
Wing - tone hole 1 approx. length	33		
Wing - tone hole 2 approx. length	31.6		
Wing - tone hole 3 approx. length	34.6		
Butt - tone hole 4 angle	28.5° North		
Butt - tone hole 5 angle	22.5° South		
Butt - tone hole 6 angle	43.5° South		
Butt - tone hole E angle	33.5° South		
Butt - tone hole 4 approx. Ø	5.3		
Butt - tone hole 5 approx. Ø	5.1		
Butt - tone hole 6 approx. Ø	4.1		
Butt - tone hole E approx. Ø	6.5		
Butt - tone hole 4 approx. length	24		
Butt - tone hole 5 approx. length	21.9		
Butt - tone hole 6 approx. length	27.3		
Butt - tone hole E approx. length	17.3		
Long joint - tone hole C angle	0		
Long joint - tone hole C Ø	х		Not possible
Long joint - tone hole C approx. length	х		Not possible
BASIC - INSIDE			
Inner bore length			
Bore length	1564.5		
Wing bore length	346		
Butt - small bore length	299		
Butt - big bore length	299		
Butt - small bore socket length	43.6	44	
Butt - big bore socket length	49.2	49.4	
Butt - small bore beginning of septum	281		
Butt - big bore beginning of septum	281		

13-key tenoroon, ANONYMOUS (6), Paris, ca. 1860				
Long joint length	429			
Bell length	281.5			
Inner bore beginning Ø (not socket!)	Min.	Max.		
Wing bore Ø north	9.9			
Wing bore Ø south	12.2	12.4		
Bocal well length	23			
Butt - small bore Ø north	14.2			
Butt - big bore Ø north	19.8			
Long joint Ø north	24.7			
Long joint Ø south	19			
Bell bore Ø north	26.2			
Bell bore Ø south	26.7	27		
Bell socket length	32.2	32.6		
Bocal Ø at the beginning	No bocal			
Bocal thickness at the beginning	No bocal			
Bocal Ø at the tenon	No bocal			
Bocal thickness at the tenon	No bocal			
Bocal length (along top)	No bocal			
COMPLETE - OUTSIDE	Min.	Max.		
Bocal well thickness with ferrule	4.8	5		
Bocal well ferrule thickness	0.6			
Wing - tenon thickness	3.6			
Wing - tenon northern extern. Ø	20.8			
wing - tenon southern extern. Ø	х			
Wing - tone hole A distance from north	69.5			
Wing - tone hole A angle	X			
Wing - tone hole A approx. Ø	X			
Wing - tone hole A approx. length	X			
Wing - tone hole C distance from north	40.5			
Wing - tone hole C angle	X			
Wing - tone hole C extern. Ø	X			
Wing - tone hole C approx. length	x			
Butt - big socket thickness with ferrule	2.8		Without 1.6	
Butt - small socket thickness with ferrule	3.1		Without 2.1	
Butt - top ferrule thickness	0.7			
Minimum wall thickness between butt sockets	1.7			
Butt - wood space between corks - bottom	one cork			
Butt - big bore cork Ø - bottom	20.8			
Butt - small bore cork Ø - bottom	18.4			
Butt - wood wall between cork/front - small bore	17.4		Without ferrule	
Butt - wood wall between cork/front - big bore	6		Without ferrule	
Butt - wood wall between cork/back - small bore	6.2		Without ferrule	
Butt - wood wall between cork/back - big bore	6		Without ferrule	
Wood wall between cork/side - small bore	5.9		Without ferrule	
Wood wall between cork/side - big bore	4.7		Without ferrule	
Butt - bottom ferrule thickness	0.5			

Long joint - south tenon thickness	3.5	
Long joint - south tenon northern extern. Ø	27.2	
Long joint - south tenon southern extern. Ø	26	
ong joint - north tenon thickness	3	
ong joint - north tenon northern extern. Ø	30.9	
ong joint - north tenon southern extern. Ø	31.8	
Bell socket thickness with brass	2.9	Without 1.9
Brass thickness of the bell ferrule	0.6	
Bell ferrule height	31	
Fone hole angle, Ø, length		
Butt - tone hole Ab angle	Х	
Butt - tone hole F angle	Х	
Butt - tone hole F♯ angle	X	
Butt - tone hole Ab approx. Ø	7.7	
Butt - tone hole F approx. Ø	7.8	
Butt - tone hole F# approx. Ø	5.7	
Butt - tone hole Ab approx. length	X	
Butt - tone hole F approx. length	х	
Butt - tone hole F# approx. length	х	
ong joint - tone hole D angle	х	
Long joint - tone hole E♭ angle	х	
Long joint - tone hole B♭ angle	х	
Long joint - tone hole D approx. Ø	9.2	
Long joint - tone hole E♭ approx. Ø	х	
Long joint - tone hole B♭ approx.Ø	10.4	
ong joint - tone hole D approx. length	х	
Long joint - tone hole E papprox. length	х	
Long joint - tone hole B♭ approx. length	х	
COMPLETE - INSIDE		
Wing - tone hole 1 distance from south	221	
Wing - tone hole 2 distance from south	147	
Wing - tone hole 3 distance from south	110	
Wing - tone hole A distance from south	X	
Wing - tone hole C distance from south	x	
Butt - tone hole 4 distance from north	53	
Butt - tone hole 5 distance from north	100	
Butt - tone hole 6 distance from north	137	
Butt - tone hole Ab distance from north	X	
Butt - tone hole F distance from north	x	
Butt - tone hole F # distance from north	187	
Butt - tone hole E distance from north	16	
ong joint - tone hole D distance from north	365	Approx.
ong joint- tone hole E ♭ distance from north	325	Approx.
ong joint - tone hole C distance from north	235	Approx.
Long joint - hole Bb distance from north	72	Approx.
Bell - vent hole distance from north	X	, topi on

13-key tenoroon, ANONYMOUS (6), Paris, ca. 1860				
EXTRAS				
Butt - tone hole Bb (front) distance from north	183			
Long joint - tone hole C# low distance from north	129.5			
Wing - tone hole C# distance from north	252			