

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | | |
|--|-----------|-----------|-----------------|
| BASIC - OUTSIDE | | | Comments |
| Joint lengths | mm | mm | |
| Standing length to bell | 952 | | |
| Standing length to wing joint | 663 | | |
| Wing joint length | 375.5 | | |
| Wing joint - tenon length | 33.8 | | |
| Butt joint length | 321 | | |
| Long joint length | 451 | | |
| Long joint - south tenon length | 35.5 | | |
| Long joint - north tenon length | 34 | | |
| Bell length | 246.5 | | |
| Vent hole distance from north | x | | |
| Vent hole approx diameter | x | | |
| Tone hole distance, axis | | | |
| Wing - tone hole 1 distance from north | 163 | | |
| Wing - tone hole 2 distance from north | 192 | | |
| Wing - tone hole 3 distance from north | 223 | | |
| Butt - tone hole 4 distance from north | 61 | | |
| Butt - tone hole 5 distance from north | 91 | | |
| Butt - tone hole 6 distance from north | 122.5 | | |
| Butt - tone hole F distance from north | 245 | | |
| Butt - tone hole E distance from north | 83 | | |
| Butt - tone hole Ab distance from north | 284.5 | | |
| Butt - tone hole F# distance from north | 180 | | |
| Long joint - tone hole D distance from north | 403 | | |
| Long joint - tone hole Eb distance from north | 342.5 | | |
| Long joint - tone hole C distance from north | 254 | | |
| Long joint - tone hole Bb distance from north | 50 | | |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | | |
|--|------|--|-----------------|
| Wing - major axis at tone hole 1 | 47.8 | | |
| Wing - major axis at tone hole 2 | 47.6 | | |
| Wing - major axis at tone hole 3 | 47.3 | | |
| Butt - major axis (side to side) at tone hole 4 | 57 | | |
| Butt - minor axis (front to back) at tone hole 4 | 44 | | |
| Butt - major axis (side to side) at tone hole 5 | 55.4 | | |
| Butt - minor axis (front to back) at tone hole 5 | 42.8 | | |
| Butt - major axis (side to side) at tone hole 6 | 53.7 | | |
| Butt - minor axis (front to back) at tone hole 6 | 41.5 | | |
| Butt - major axis (side to side) at tone hole F | 49.6 | | |
| Butt - minor axis (front to back) at tone hole F | 38 | | |
| Butt - major axis (side to side) at tone hole E | 55.7 | | |
| Butt - minor axis (front to back) at tone hole E | 42.7 | | |
| Butt - major axis (side to side) of the bottom butt ellipse | 46 | | Without ferrule |
| Butt - minor axis (front to back) of the bottom butt ellipse | 35 | | Without ferrule |
| Butt - major axis (side to side) of the top butt ellipse | 57.7 | | Without ferrule |
| Butt - minor axis (front to back) of the top butt ellipse | 41.5 | | Without ferrule |
| Butt - cork major axis (side to side) | x | | |
| Butt - cork minor axis (front to back) | x | | |
| Long joint - minor axis (front to back) at tone hole D | 31.4 | | |
| Long joint - major axis (side to side) at tone hole D | 32.5 | | |
| Long joint - minor axis (front to back) at tone hole Eb | 33.2 | | |
| Long joint - major axis (side to side) at tone hole Eb | 34.4 | | |
| Long joint - minor axis (front to back) at tone hole C | 34.4 | | |
| Long joint - major axis (side to side) at tone hole C | 34.6 | | |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | | |
|---|-------------|--|--|
| Long joint - minor axis (front to back) at tone hole Bb | 37.3 | | |
| Long joint - major axis (side to side) at tone hole Bb | 38.7 | | |
| Tone hole angle, Ø, length | | | |
| Wing - tone hole 1 angle | 20° North | | |
| Wing - tone hole 2 angle | 13.5° South | | |
| Wing - tone hole 3 angle | 31.5° South | | |
| Wing - tone hole 1 approx. Ø | 4.2 | | |
| Wing - tone hole 2 approx. Ø | 4.2 | | |
| Wing - tone hole 3 approx. Ø | 4.2 | | |
| Wing - tone hole 1 approx. length | 23 | | |
| Wing - tone hole 2 approx. length | 21 | | |
| Wing - tone hole 3 approx. length | 22 | | |
| Butt - tone hole 4 angle | 14° North | | |
| Butt - tone hole 5 angle | 9.5° South | | |
| Butt - tone hole 6 angle | 28.5° South | | |
| Butt - tone hole E angle | 8° South | | |
| Butt - tone hole 4 approx. Ø | 5.4 | | |
| Butt - tone hole 5 approx. Ø | 5.5 | | |
| Butt - tone hole 6 approx. Ø | 5.2 | | |
| Butt - tone hole E approx. Ø | 7.7 | | |
| Butt - tone hole 4 approx. length | 19.5 | | |
| Butt - tone hole 5 approx. length | 17 | | |
| Butt - tone hole 6 approx. length | 19.5 | | |
| Butt - tone hole E approx. length | 17 | | |
| Long joint - tone hole C angle | 0 | | |
| Long joint - tone hole C Ø | 8.1 | | |
| Long joint - tone hole C approx. length | 5 | | |
| BASIC - INSIDE | | | |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | |
|--|-------------|--------------------------------|
| Inner bore length | | |
| Bore length | 1584.8 | |
| Wing bore length | 377 | 348.5 mm, excluding bocal well |
| Butt - small bore length | 288.5 | |
| Butt - big bore length | 288.5 | |
| Butt - small bore socket length | 34.8 | |
| Butt - big bore socket length | 35.7 | |
| Butt - small bore beginning of septum | 278 | |
| Butt - big bore beginning of septum | 277 | |
| Long joint length | 453 | |
| Bell length | 248 | |
| Inner bore beginning Ø (not socket!) | Min. | Max. |
| Wing bore Ø north | 10.3 | 10.4 |
| Wing bore Ø south | 12.3 | 12.6 |
| Bocal well length | 29.6 | |
| Butt - small bore Ø north | 21.4 | 21.8 |
| Butt - big bore Ø north | 20.2 | 20.6 |
| Long joint Ø north | 27.7 | 28.1 |
| Long joint Ø south | 20.8 | 21.5 |
| Bell bore Ø north | 24.3 | 25 |
| Bell bore Ø south | 33.9 | 34.3 |
| Bell socket length | 34.7 | |
| Bocal Ø at the beginning | x | |
| Bocal thickness at the beginning | x | |
| Bocal Ø at the tenon | x | |
| Bocal thickness at the tenon | x | |
| Bocal length (along top) | x | |
| COMPLETE - OUTSIDE | Min. | Max. |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | | |
|--|------|------|-------------------------------|
| Bocal well thickness with ferrule | 7.2 | 7.6 | 23.3/ 23.7 mm without ferrule |
| Bocal well ferrule thickness | 0.4 | 0.5 | |
| Wing - tenon thickness | 4 | 4.3 | |
| Wing - tenon northern extern. Ø | 20.5 | 20.8 | |
| Wing - tenon southern extern. Ø | x | | |
| Wing - tone hole A distance from north | 70.6 | | |
| Wing - tone hole A angle | x | | |
| Wing - tone hole A extern. Ø | x | | |
| Wing - tone hole A approx. length | x | | |
| Wing - tone hole C distance from north | 57.4 | | |
| Wing - tone hole C angle | 0 | | |
| Wing - tone hole C extern. Ø | x | | |
| Wing - tone hole C approx. length | x | | |
| Butt - big socket thickness with ferrule | 3 | | |
| Butt - small socket thickness with ferrule | 3.2 | | |
| Butt - top ferrule thickness | 0.4 | 0.5 | |
| Minimum wall thickness between butt sockets | 2.5 | | |
| Butt - wood space between corks - bottom | 2.6 | | |
| Butt - big bore cork Ø - bottom | 16 | 16.7 | |
| Butt - small bore cork Ø - bottom | 17 | 17.4 | |
| Butt - wood wall between cork/front - small bore | 5.4 | | |
| Butt - wood wall between cork/front - big bore | 4.5 | | |
| Butt - wood wall between cork/back - small bore | x | | |
| Butt - wood wall between cork/back - big bore | x | | |
| Wood wall between cork/side - small bore | x | | |
| Wood wall between cork/side - big bore | x | | |
| Butt - bottom ferrule thickness | 0.6 | | |
| Long joint - south tenon thickness | 3 | 3.4 | |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | | |
|--|----------|------|----------------------------|
| Long joint - south tenon northern extern. Ø | 27.1 | 27.5 | |
| Long joint - south tenon southern extern. Ø | x | | |
| Long joint - north tenon thickness | 2.5 | 2.7 | |
| Long joint - north tenon northern extern. Ø | x | | |
| Long joint - north tenon southern extern. Ø | 33 | 33.3 | |
| Bell socket thickness with brass | 2.9 | 3.4 | 2.3/2.4 mm without ferrule |
| Brass thickness of the bell ferrule | 0.4 | 0.5 | |
| Bell ferrule height | 31.5 | | |
| Tone hole angle, Ø, length | | | |
| Butt - tone hole Ab angle | 5° South | | |
| Butt - tone hole F angle | x | | |
| Butt - tone hole F# angle | x | | |
| Butt - tone hole Ab approx. Ø | 3.7 | | |
| Butt - tone hole F approx. Ø | 8.5 | | |
| Butt - tone hole F# approx. Ø | 5.5 | | |
| Butt - tone hole Ab approx. length | 10 | | |
| Butt - tone hole F approx. length | 15 | | |
| Butt - tone hole F# approx. length | 12.5 | | |
| Long joint - tone hole D angle | x | | |
| Long joint - tone hole E b angle | x | | |
| Long joint - tone hole B b angle | x | | |
| Long joint - tone hole D approx. Ø | 10 | | |
| Long joint - tone hole E b approx. Ø | 6.2 | | |
| Long joint - tone hole B b approx.Ø | 12.6 | | |
| Long joint - tone hole D approx. length | 5 | | |
| Long joint - tone hole E b approx. length | 5 | | |
| Long joint - tone hole B b approx. length | 5 | | |
| COMPLETE - INSIDE | | | |

| 8-key tenoroon, I. Merklein, Vienna, ca. 1835 | | |
|---|------|------|
| Wing - tone hole 1 distance from south | x | |
| Wing - tone hole 2 distance from south | x | |
| Wing - tone hole 3 distance from south | 140 | |
| Wing - tone hole A distance from south | x | |
| Wing - tone hole C distance from south | x | |
| Butt - tone hole 4 distance from north | 54 | |
| Butt - tone hole 5 distance from north | 91.5 | |
| Butt - tone hole 6 distance from north | 130 | |
| Butt - tone hole Ab distance from north | 282 | |
| Butt - tone hole F distance from north | 244 | |
| Butt - tone hole F# distance from north | 180 | |
| Butt - tone hole E distance from north | 82 | |
| Long joint - tone hole D distance from north | 400 | |
| Long joint - tone hole E \flat distance from north | 352 | |
| Long joint - tone hole C distance from north | 251 | |
| Long joint - hole B \flat distance from north | 50 | |
| Bell - vent hole distance from north | x | |
| | | |
| EXTRAS | | |
| Wing joint - external diameter of wing at tone hole 1 | 25.8 | 25.9 |
| Wing joint - external diameter of wing at tone hole 2 | 25.6 | 25.9 |