

### **4-key fagottino, Johannes & Georg H. Scherer (5), Butzbach, ca 1750–78**

<b>BASIC - OUTSIDE</b>			<b>Comments</b>
<b>Joint lengths</b>	<b>mm</b>	<b>mm</b>	
Standing length to bell	694		
Standing length to wing joint	526		
Wing joint length	302		
Wing joint - tenon length	31.1		
Butt joint length	256		
Long joint length	332.5		
Long joint - south tenon length	33.2		
Long joint - north tenon length	28.3		
Bell length	167		
Vent hole distance from north	x		
Vent hole approx diameter	x		
<b>Tone hole distance, axis</b>			
Wing - tone hole 1 distance from north	144.4		
Wing - tone hole 2 distance from north	177		
Wing - tone hole 3 distance from north	213		
Butt - tone hole 4 distance from north	66.5		
Butt - tone hole 5 distance from north	99.6		
Butt - tone hole 6 distance from north	133.3		
Butt - tone hole F distance from north	206		
Butt - tone hole E distance from north	86		
Butt - tone hole Ab distance from north	206		
Butt - tone hole F# distance from north	x		
Long joint - tone hole D distance from north	286		

### **4-key fagottino, Johannes & Georg H. Scherer (5), Butzbach, ca 1750–78**

Long joint - tone hole Eb distance from north	x		
Long joint - tone hole C distance from north	184		
Long joint - tone hole Bb distance from north	67		
Wing - major axis at tone hole 1	42.8		
Wing - major axis at tone hole 2	43		
Wing - major axis at tone hole 3	43		
Butt - major axis (side to side) at tone hole 4	58		
Butt - minor axis (front to back) at tone hole 4	38.3		
Butt - major axis (side to side) at tone hole 5	57.8		
Butt - minor axis (front to back) at tone hole 5	37.7		
Butt - major axis (side to side) at tone hole 6	57.3		
Butt - minor axis (front to back) at tone hole 6	36.6		
Butt - major axis (side to side) at tone hole F	55.2		
Butt - minor axis (front to back) at tone hole F	33		
Butt - major axis (side to side) at tone hole E	57.9		
Butt - minor axis (front to back) at tone hole E	37.9		
Butt - major axis (side to side) of the bottom butt ellipse	49.7	53.3	
Butt - minor axis (front to back) of the bottom butt ellipse	32.8		
Butt - major axis (side to side) of the top butt ellipse	57.9		
Butt - minor axis (front to back) of the top butt ellipse	40		
Butt - cork major axis (side to side)	39.5		
Butt - cork minor axis (front to back)	18.5		
Long joint - minor axis (front to back) at tone hole D	29		
Long joint - major axis (side to side) at tone hole D	31.1		
Long joint - minor axis (front to back) at tone hole Eb	x		

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Long joint - major axis (side to side) at tone hole Eb	x		
Long joint - minor axis (front to back) at tone hole C	33.4		
Long joint - major axis (side to side) at tone hole C	33.8		
Long joint - minor axis (front to back) at tone hole Bb	34		
Long joint - major axis (side to side) at tone hole Bb	36		
<b>Tone hole angle, Ø, length</b>			
Wing - tone hole 1 angle	x		
Wing - tone hole 2 angle	x		
Wing - tone hole 3 angle	x		
Wing - tone hole 1 approx. Ø	6.7		
Wing - tone hole 2 approx. Ø	6.4		
Wing - tone hole 3 approx. Ø	6.4		
Wing - tone hole 1 approx. length	21.3		
Wing - tone hole 2 approx. length	18.9		
Wing - tone hole 3 approx. length	21.3		
Butt - tone hole 4 angle	x		
Butt - tone hole 5 angle	x		
Butt - tone hole 6 angle	x		
Butt - tone hole E angle	x		
Butt - tone hole 4 approx. Ø	8.2		
Butt - tone hole 5 approx. Ø	7.2		
Butt - tone hole 6 approx. Ø	6.1		
Butt - tone hole E approx. Ø	11.3		
Butt - tone hole 4 approx. length	24.9		
Butt - tone hole 5 approx. length	21.3		

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Butt - tone hole 6 approx. length	23.2		
Butt - tone hole E approx. length	15.6		
Long joint - tone hole C angle	x		
Long joint - tone hole C Ø	10.1		
Long joint - tone hole C approx. length	6.3		
<b>BASIC - INSIDE</b>			
<b>Inner bore length</b>			
Bore length	1227.3		
Wing bore length	305		
Butt - small bore length	244		
Butt - big bore length	243		
Butt - small bore socket length	31.6		
Butt - big bore socket length	33.2		
Butt - small bore beginning of septum	225		
Butt - big bore beginning of septum	226		
Long joint bore length	336		
Bell bore length	168		
<b>Inner bore beginning Ø (not socket!)</b>	<b>Min.</b>	<b>Max.</b>	
Wing bore Ø north	x		Bocal well Ø 12.4 mm
Wing bore Ø south	12	12.3	
Bocal well length	13.5		
Butt - small bore Ø north	12.8		
Butt - big bore Ø north	20.2		
Long joint Ø north	25.8		
Long joint Ø south	20.2	21.3	

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Bell bore Ø north	23.1		
Bell bore Ø south	25		
Bell socket length	28.9		
Bocal Ø at the beginning			See below
Bocal thickness at the beginning			See below
Bocal Ø at the tenon			See below
Bocal thickness at the tenon			See below
Bocal length (along top)			See below
<b>COMPLETE - OUTSIDE</b>	<b>Min.</b>	<b>Max.</b>	
Bocal well thickness with ferrule	5.5	6	
Bocal well ferrule thickness	0.6		
Wing - tenon thickness	3.3		
Wing - tenon northern extern. Ø	19.3		
Wing - tenon southern extern. Ø	18.6		
Wing - tone hole A distance from north	x		
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	x		
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	4		
Butt - small socket thickness with ferrule	4.4		
Butt - top ferrule thickness	0.4		

### **4-key fagottino, Johannes & Georg H. Scherer (5), Butzbach, ca 1750–78**

Minimum wall thickness between butt sockets	2.7		
Butt - wood space between corks - bottom	x		One cork
Butt - big bore cork Ø - bottom	17.3		
Butt - small bore cork Ø - bottom	16.5		
Butt - wood wall between cork/front - small bore	5.1		
Butt - wood wall between cork/front - big bore	3.5		
Butt - wood wall between cork/back - small bore	4.9		
Butt - wood wall between cork/back - big bore	7.1		
Wood wall between cork/side - small bore	4.1		
Wood wall between cork/side - big bore	5.9		
Butt - bottom ferrule thickness	0.5		
Long joint - south tenon thickness	2.8		
Long joint - south tenon northern extern. Ø	25.8		
Long joint - south tenon southern extern. Ø	26.3		
Long joint - north tenon thickness	2.3		
Long joint - north tenon northern extern. Ø	30.6		
Long joint - north tenon southern extern. Ø	31		
Bell socket thickness with brass	2.4		
Brass thickness of the bell ferrule	0.8		
Bell ferrule height	13.5		
<b>Tone hole angle, Ø, length</b>			
Butt - tone hole Ab angle	x		
Butt - tone hole F angle	x		
Butt - tone hole F# angle	x		
Butt - tone hole Ab approx. Ø	4.8		
Butt - tone hole F approx. Ø	8.6		

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Butt - tone hole F# approx. Ø	x		
Butt - tone hole Ab approx. length	x		
Butt - tone hole F approx. length	x		
Butt - tone hole F# approx. length	x		
Long joint - tone hole D angle	x		
Long joint - tone hole E $\flat$ angle	x		
Long joint - tone hole B $\flat$ angle	x		
Long joint - tone hole D approx. Ø	11		
Long joint - tone hole E $\flat$ approx. Ø	x		
Long joint - tone hole B $\flat$ approx.Ø	10.2		
Long joint - tone hole D approx. length	x		
Long joint - tone hole E $\flat$ approx. length	x		
Long joint - tone hole B $\flat$ approx. length	x		
<b>COMPLETE - INSIDE</b>			
Wing - tone hole 1 distance from south	166		
Wing - tone hole 2 distance from south	126		
Wing - tone hole 3 distance from south	86		
Wing - tone hole A distance from south	x		
Wing - tone hole C distance from south	x		
Butt - tone hole 4 distance from north	63		
Butt - tone hole 5 distance from north	102		
Butt - tone hole 6 distance from north	143		
Butt - tone hole Ab distance from north	x		
Butt - tone hole F distance from north	210		
Butt - tone hole F# distance from north	x		
Butt - tone hole E distance from north	93		

### **4-key fagottino, Johannes & Georg H. Scherer (5), Butzbach, ca 1750–78**

Long joint - tone hole D distance from north	291		
Long joint- tone hole E $\flat$ distance from north	x		
Long joint - tone hole C distance from north	190		
Long joint - hole B $\flat$ distance from north	74		
Bell - vent hole distance from north	x		
<b>EXTRAS</b>			
Bocal 1 $\emptyset$ at the beginning	3		
Bocal 1 thickness at the beginning	0.3		
Bocal 1 $\emptyset$ at the tenon	6.4		
Bocal 1 thickness at the tenon	0.5-0.8		
Bocal 1 length (along top)	127		
Bocal 2 $\emptyset$ at the beginning	3.1		
Bocal 2 thickness at the beginning	0.3		
Bocal 2 $\emptyset$ at the tenon	6.2		
Bocal 2 thickness at the tenon	0.7		
Bocal 2 length (along top)	136		
Bocal 3 $\emptyset$ at the beginning	3.3		
Bocal 3 thickness at the beginning	0.3		
Bocal 3 $\emptyset$ at the tenon	6.4		
Bocal 3 thickness at the tenon	0.6		
Bocal 3 length (along top)	134		
Bocal 4 $\emptyset$ at the beginning	3.4		
Bocal 4 thickness at the beginning	0.3		
Bocal 4 $\emptyset$ at the tenon	7.3		
Bocal 4 thickness at the tenon	0.7		

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Bocal 4 length (along top)

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