

4-key fagottino, Johannes & Georg H. SCHERER (3), Butzbach, 1760–70

BASIC - OUTSIDE	mm	mm	Comments
Joint lengths			
Standing length to bell	641		With ferrule
Standing length to wing joint	455		With ferrule
Wing joint length	261		
Wing joint - tenon length	28.4		
Butt joint length	222		With ferrules
Long joint length	298		
Long joint - south tenon length	23.3		
Long joint - north tenon length	25		
Bell length	168	168.5	Without ferrule/with
Vent hole distance from north	x		
Vent hole approx diameter	x		
Tone hole distance, axis			
Wing - tone hole 1 distance from north	107.5		
Wing - tone hole 2 distance from north	135.5		
Wing - tone hole 3 distance from north	164		
Butt - tone hole 4 distance from north	52		
Butt - tone hole 5 distance from north	74.5		
Butt - tone hole 6 distance from north	100		
Butt - tone hole F distance from north	191		
Butt - tone hole E distance from north	75		
Butt - tone hole Ab distance from north	172		
Butt - tone hole F# distance from north	x		
Long joint - tone hole D distance from north	265		
Long joint - tone hole Eb distance from north	x		
Long joint - tone hole C distance from north	162		Irregular, oval tone hole.
Long joint - tone hole Bb distance from north	40		Small repair under tone hole.
Wing - major axis at tone hole 1	33.1		
Wing - major axis at tone hole 2	32.4		
Wing - major axis at tone hole 3	32.3		
Butt - major axis (side to side) at tone hole 4	51.6		
Butt - minor axis (front to back) at tone hole 4	33.7		
Butt - major axis (side to side) at tone hole 5	51.4		
Butt - minor axis (front to back) at tone hole 5	33		
Butt - major axis (side to side) at tone hole 6	51.3		
Butt - minor axis (front to back) at tone hole 6	32.2		Surface area reduced (sanded?)
Butt - major axis (side to side) at tone hole F	47.2		
Butt - minor axis (front to back) at tone hole F	31.2		
Butt - major axis (side to side) at tone hole E	51.4		
Butt - minor axis (front to back) at tone hole E	32.9		
Butt - major axis (side to side) of the bottom	44.6		Without ferrule
Butt - minor axis (front to back) of the bottom	30.2		Without ferrule
Butt - major axis (side to side) of the top butt	52.9		With ferrule
Butt - minor axis (front to back) of the top butt	36		With ferrule
Butt - cork major axis (side to side)	39.2		One cork (instead of two, new)
Butt - cork minor axis (front to back)	18.6		
Long joint - minor axis (front to back) at tone	27.9		
Long joint - major axis (side to side) at tone	27.6		
Long joint - minor axis (front to back) at tone	x		
Long joint - major axis (side to side) at tone	x		
Long joint - minor axis (front to back) at tone	29		
Long joint - major axis (side to side) at tone	28.9		
Long joint - minor axis (front to back) at tone	31.3		
Long joint - major axis (side to side) at tone	30.3		

Tone hole angle, Ø, length			
Wing - tone hole 1 angle	31.5°		
Wing - tone hole 2 angle	9° South		
Wing - tone hole 3 angle	30.5°		
Wing - tone hole 1 approx. Ø	4		
Wing - tone hole 2 approx. Ø	4.1		
Wing - tone hole 3 approx. Ø	4		
Wing - tone hole 1 approx. length	13.9		
Wing - tone hole 2 approx. length	10.5		
Wing - tone hole 3 approx. length	11.5		
Butt - tone hole 4 angle	21.5°		
Butt - tone hole 5 angle	11° South		
Butt - tone hole 6 angle	29° South		
Butt - tone hole E angle	17.5°		
Butt - tone hole 4 approx. Ø	5.9		
Butt - tone hole 5 approx. Ø	5.7		
Butt - tone hole 6 approx. Ø	4.8		
Butt - tone hole E approx. Ø	8.3		
Butt - tone hole 4 approx. length	14.5		
Butt - tone hole 5 approx. length	14.4		
Butt - tone hole 6 approx. length	15.4		
Butt - tone hole E approx. length	7.5		
Long joint - tone hole C angle	0°		Undercutting on north, south edges
Long joint - tone hole C Ø	9.5	10.7	Very oval
Long joint - tone hole C approx. length	3.9		
BASIC - INSIDE			
Inner bore length			
Bore length	1090.1		
Wing joint - bore length	262.5		
Butt - small bore length	209		
Butt - big bore length	208		
Butt - small bore socket length	28.5		Irregular
Butt - big bore socket length	28.5		Irregular
Butt - small bore beginning of septum	184		Difficult to measure
Butt - big bore beginning of septum	183		Difficult to measure
Long joint - bore length	299		
Bell - bore length	169		
Inner bore beginning Ø (not socket!)			
	Min.	Max.	
Wing bore Ø north	7.6	7.7	
Wing bore Ø south	12.4	12.8	
Bocal well length	18	21	
Butt - small bore Ø north	13.2	14.2	
Butt - big bore Ø north	17.8	18	
Long joint Ø north	22	22.5	
Long joint Ø south	16.3	17.3	
Bell bore Ø north	21.2	21.7	
Bell bore Ø south	23.6		Bell socket southern Ø 27.1–27.6
Bell socket length	25.4		
Bocal Ø at the beginning	x	x	Not round; external Ø 4–4.2 mm
Bocal thickness at the beginning	0.2	0.3	
Bocal Ø at the tenon	x	x	External Ø 8.2–8.4 mm
Bocal thickness at the tenon	0.3	0.4	
Bocal length (along top)	244		
COMPLETE - OUTSIDE			
	Min.	Max.	
Bocal well thickness with ferrule	4.3	4.7	
Bocal well ferrule thickness	0.2	0.2	
Wing - tenon thickness	2	2.4	

Wing - tenon northern extern. Ø	17.5	17.7	
Wing - tenon southern extern. Ø	17.1	17.3	
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	6.1		Irregular, loose ferrule
Butt - small socket thickness with ferrule	2.7		Irregular, loose ferrule
Butt - top ferrule thickness	0.4	0.5	
Minimum wall thickness between butt sockets	2.5		
Butt - wood space between corks - bottom	x		
Butt - big bore cork Ø - bottom	x		
Butt - small bore cork Ø - bottom	x		
Butt - wood wall between cork/front - small bore	6		Irregular
Butt - wood wall between cork/front - big bore	7.2		Irregular
Butt - wood wall between cork/back - small bore	4.5		Irregular
Butt - wood wall between cork/back - big bore	3.5		Irregular
Wood wall between cork/side - small bore	1.4		Irregular
Wood wall between cork/side - big bore	3.2		Irregular
Butt - bottom ferrule thickness	0.5	0.7	
Long joint - south tenon thickness	1.3	2	
Long joint - south tenon northern extern. Ø	20.6	21.2	With thread
Long joint - south tenon southern extern. Ø	19.5	20.2	
Long joint - north tenon thickness	1.6	1.8	
Long joint - north tenon northern extern. Ø	25.4	26.2	
Long joint - north tenon southern extern. Ø	25.2	25.7	
Bell socket thickness with brass	1.2	1.8	Without brass: 1.4/1
Brass thickness of the bell ferrule	0.3	0.4	
Bell ferrule height	10.3		
Tone hole angle, Ø, length	Min.	Max.	
Butt - tone hole Ab angle	11.5°		
Butt - tone hole F angle	12.5°		
Butt - tone hole F# angle	x		
Butt - tone hole Ab approx. Ø	3.7		
Butt - tone hole F approx. Ø	6.5		
Butt - tone hole F# approx. Ø	x		
Butt - tone hole Ab approx. length	10.1		
Butt - tone hole F approx. length	13.8		
Butt - tone hole F# approx. length	x		
Long joint - tone hole D angle	0		
Long joint - tone hole Eb angle	x		
Long joint - tone hole Bb angle	0		
Long joint - tone hole D approx. Ø	8.5	9.3	Oval
Long joint - tone hole Eb approx. Ø	x		
Long joint - tone hole Bb approx.Ø	8.2	9	Oval
Long joint - tone hole D approx. length	5.3		
Long joint - tone hole Eb approx. length	x		
Long joint - tone hole Bb approx. length	5.1		
COMPLETE - INSIDE			
Wing - tone hole 1 distance from south	162.5		
Wing - tone hole 2 distance from south	125		
Wing - tone hole 3 distance from south	93		
Wing - tone hole A distance from south	x		
Wing - tone hole C distance from south	x		

Butt - tone hole 4 distance from north	45		
Butt - tone hole 5 distance from north	74.5		
Butt - tone hole 6 distance from north	105		
Butt - tone hole Ab distance from north	171		
Butt - tone hole F distance from north	187		
Butt - tone hole F# distance from north	x		
Butt - tone hole E distance from north	75		
Long joint - tone hole D distance from north	265.5		D hole distance from south 33.5 mm
Long joint- tone hole E distance from north	x		
Long joint - tone hole C distance from north	162.5		C hole distance from south 137.5 mm
Long joint - hole B _b distance from north	40.5		B _b hole distance from south 258 mm
Bell - vent hole distance from north	x		
EXTRAS			
Butt joint - Ø beginning of big bore south	15.4	15.5	
(New) single cork measurements			
cork side to side -bottom	38		
cork side to side -top	37		
cork height at small bore	13		
cork height at big bore	14.5		
cork height in the middle	15		
cork front - back at big bore -top	16		
cork front - back at big bore -bottom	17		
cork front - back at small bore -top	13		
cork front - back at small bore -bottom	14.5		
cork front - back at middle -top	15		
cork front - back at middle -bottom	17		