

Rottenburgh1-O-Leipzig1374-Wg1-WOB-DNM

	A	B	C	D	E	F	G
1	I. Bocal		Original bocal; Rotten1 no				
2	dia reed end		inside diameter of reed end of bocal				
3	bocal string length (0, 1)		length of bocal inserted into receiver				
4	metal bocal length top (0, 1)		meas. along top of bocal				
5	metal bocal length bot (0, 1)		meas. along bottom of bocal				
6	dia wj end		inside diameter of bocal				
7							
8	bocal logic	2	if bocal logic =0=> bocal is choke; if bocal logic =1=>choke in wing joint calc; if bocal logic = 2 => no bocal				
9							
10							
11							
12							
13	II. Wing Joint Lengths		bocal receiver: Rotten1 yes; but this is a repair, the choke is futher down the bore from the brass insert				
14	choke bore dia.	10.4	logic 1; bore diameter of choke; logic 0; diameter bocal bottom or beginning of bore at bottom or receiver				
15	receiver length (1, 0) (formally choke length)	61	logic 1; length of choke from top of wing joint; logic 0; length of receiver (same as string length)				
16	wing joint length	540	total wing joint length, including tenon and socket				
17	tenon length	43.3	tenon length				
18							
19	wj f2	241	dist top of wing to where tone hole enters bore [not at the center of the tone hole]				
20	wj e	304					
21	wj d	352					
22							
23	Bore dia. Bottom of wing joint	17.2	Need to Average, usally oval; Rotten1 yes this is average of 17.8 and 17.4 mm				
24	Bore dia. top of boot joint small side	18.5					
25	Bore dia. top of boot joint large side	23.5	Rotten1 This is an average, see below at 25mm bore measurement, bore is oblong				
26							
27	III. Boot Lengths						
28	bj logic	1	logic=> if bj logic = 0 => plug removed; if bj logic = 1 => plug cannot be removed				
29	bj c	90	dist from top of boot to where topmost tone hole enter bore [not at center of tone hole]				
30	bj b	147					
31	bj a	189					
32							
33	bjtotal [Needed for both boot logics]	427	total length of boot, include socket, along the small bore side				
34	bjltotal [Needed for both boot logics]	427	total length of boot, include socket, along large bore side				
35	plug small [Need for logic 0 only]	0	plug thickness, large bore side				
36	plug large [Need for logic 0 only]	0	plug thickness, small bore side				
37							
38	boots [Needed for both boot logics]	391	hook length along s bore => bjs-septum length = boot - septum <= calc the septum				
39	bootl [Needed for both boot logics]	391	hook length along l bore => bj-septum length = boot - septum <= calc the septum				
40							
41	boots bottom [Needed for both boot logics]	23	use hook, dist of bore [dist on stick plus 7mm, diff between hook and bot of stick] 7 + 16 = 23				
42	bootl bottom [Needed for both boot logics]	23	use hook, dist of bore [same as boots bot except tenon depth will be different]				
43							
44	extreme bore [Needed for logic 1 only]	47	Outside dia of plug [measured] = small bore dia + large bore dia + the septum width				
45							
46	septum length exp [Need for logic 0 only]		dist. from very bottom of boot to septum [point between the large and small bore]				
47	septum length calc - do not imput value	36	dist. From very bottom of boot to septum [bjl - bootl]			do not imput value	
48	septum length - do not imput value	36	if bj logic = 0 => septum = septum exp; if bj logic = 1 => septum = septum cal			do not imput value	
49							
50	sbore dia sep* [Needed for both boot logics]	20	septum small bore dia [assume = lbore dia sep]				
51	lbore dia sep* [Needed for both boot logics]	20	septum large bore dia [assume = sbore dia sep] [mesure if cork can be removed; for Logic 0]				
52	sep width exp [Need for logic 0 only]	0	septum width; direct measurement if remove plug				
53	sep width calc - do not imput value	7	septum width; calc. => extreme bore - sbore - lbore			do not imput value	
54	sep width - do not imput value	7	if bj logic = 0 => sep width = sep width exp; if bj logic = 1 => sep width = sep			do not imput value	
55							
56	bj g	344	dist from top of boot (socket) to where G hole enters bore [not at cent of tone hole]				
57	bj f1	125	dist from top of boot (socket) to where F1 hole enters bore [not at cent of tone hole]				
58							
59							
60							
61							
62							
63	IV. Tone Hole Diameters						
64	f2	5.1					
65	e	6.1					
66	d	5.2					
67							
68	c	7.1					
69	b	7.1					
70	a	6.1					
71	g	8.7					
72	f1	9.8					
73							
74	e1	12	e1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
75	d1	10.9	d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
76	c1	12.1	Rotten1 very oblong 11.7 x 12.7; c1 tone hole dia, on long joint [need to average NS and EW dias]				
77							
78							
79							
80							
81							
82	V. Tone Hole Depths						
83	f2	26.2	Rotten1 Tone holes drilled at NOT extreme angles, average				
84	e	23.5					
85	d	25.3					
86							
87	c	24.8					
88	b	24.1					
89	a	25.6					
90	g	17.8	meas along bot tone hole wall [north wall, toward reed,tone hole usually at angle]				
91	f1	18.3	meas along east side tone hole wall [north wall, toward reed,t hole usually at angle]				
92			Rotten1 Very slight table along long joint				
93	e1	9.3	e1 tone hole depth; meas east/west with depth gauge [at center, or shortest dist]				

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	A	B	C	D	E	F	G
94	d1	9.3	d1 tone hole depth; meas east/west with depth gauge [at center, or shortest dist]				
95	c1	10	c1 tone hole depth; meas east/west with depth gauge [at center, or shortest dist]				
96							
97							
98							
99							
100							
101	VI. Long Joint		Rotten1 There is a table along the long joint				
102	lg_length	589	total length of long joint				
103	lg_tenon_bot	43.5	length bottom tenon on long joint [tenon going into boot joint]				
104	lj_bot_bore	23.5	long joint bottom tenon bore diameter [tenon going into boot joint]				
105	lj_top_bore	30.7	long joint top tenon bore diameter [tenon going into bell]				
106	lg_tenon_top	42.4	length top tenon on long joint [tenon going into bell]				
107	e1_distance	60	dist long joint tenon to e1 [from bot of tenon to where tone hole enters bore]				
108	d1_distance	249	dist long joint tenon to d1 [from bot of tenon to where tone hole enters bore]				
109	c1_distance	460	dist long joint tenon to c1 [from bot of tenon to where tone hole enters bore]				
110							
111							
112							
113							
114							
115	VII. Bore diameters at Tone Holes						
116	f2	13					
117	e	13.4					
118	d	13.9					
119							
120	c	18.5					
121	b	18.6					
122	a	18.6	Rotten1 Correct, bore is almost cyn. At these three RH tone holes				
123	g	20					
124	f1	23.4					
125			e1 Rotten1 This is correct, the bore contracts going up from the tenon				
126	e1	23.2	e1 tone hole bore diameter on long joint,				
127	d1	25.2	d1 tone hole bore diameter on long joint				
128	c1	28.1	c1 tone hole bore diameter on long joint				
129							
130							
131							
132							
133							
134	VIII. Bell		Rotten1 There is not a tone hole in the bell				
135	bell_logic	2	If bell_logic = 0 => normal conical bore; if bell_logic = 1 => inverted conical bore; if bell_logic = 2 => bell expansion				
136	bell_length (0, 1, 2)	313	total length of bell [lines 141 + 144 = line 136]				
137	bell_bot_bore (0, 1, 2)	30.6	dia bore at the bottom of bell [end with socket]				
138	bell_top_bore 0, (1, 0, 2)	28.5	dia bore at the top of bell [where low Bb exits]				
139	bell_center_bore (only for logic 2)	43	dia bore at max center of expansion				
140	bell_wall (only for logic 2)	11	bell wall thickness, Just for David				
141	bell_bot_bore_expansion (only for logic 2)	332	dist of bottom to maxium of expansion [including bell socket length,if bell logic=0 =>100]				
142	Outside diameter of wood at expansion	55.2	Just for David				
143	bell_tenon (0, 1, 0, 2)	43.4	bell socket length				
144	bell_expansion_length (only for logic 2)	81	distance of maxium expansion to top of bell [where Bb exits]				
145	bellfg	45	Usually about 10mm more than line 138				
146							
147							
148	IX. PITCH						
149	pitch	415	input the historical pitch of the bassoon, must input value, best guess				
150	freq_init	380	Initial frequency range variable				
151	Delta frequency	2	frequency increment parameter				
152	Number of frequencies	60	number of frequencies to scan for min chi sq				
153	Frequency adjust	1.05	frequency adjustment parameter				
154	X. Title						
155	title		Bassoon Calculation: Rottenburgh1-O-Leipzig1374-Wg1-WOB-DNM				
156							
157			Notes on long joint bore: Rotten1 very OOR in places				
158			Notes on boot joint bore: Rotten1 OOR				
159	XI. Bore Diameter Locations		Notes on wing joint bore: Rotten1 OOR				
160		19	Number of diameters				
161		10.4	Initial bore diameter				
162		0	dist1; measured from the bottom of the wing joint- 10mm				1
163		388	dist2; measured from the bottom of the wing joint- 11mm				1
164		354	dist3; measured from the bottom of the wing joint- 12mm				1
165		285	dist4; measured from the bottom of the wing joint- 13mm				1
166		175	dist5; measured from the bottom of the wing joint- 14mm				1
167		151	dist6; measured from the bottom of the wing joint- 15mm	Bottom wing jt	17.2		1
168		108	dist7; measured from the bottom of the wing joint- 16mm	top boot small	18.5		1
169		9	dist8; measured from the bottom of the wing joint- 17mm	top boot large	23.5		1
170		0	dist9; measured from the top of the bootjoint - small bore side- 18mm				2
171		240	dist10; measured from the top of the bootjoint - small bore side- 19mm	sbore dia sep	20		2
172		385	dist11; measured from the top of the bootjoint - small bore side- 20mm	lbore dia sep	20		2
173		270	dist12; measured from the top of the bootjoint - large bore side- 21mm				3
174		255	dist13; measured from the top of the bootjoint - large bore side- 22mm				3
175		235	dist14; measured from the top of the bootjoint - large bore side- 23mm				3
176		395	dist15; measured from the top of the long joint- 24mm	lj_bot_bore	23.5		4
177		345	dist16; measured from the top of the long joint- 25mm				4
178		250	Rotten1 an average, the bore is at 26 mm dia. From about 200 to 300 mm; dist17- 26mm;				4
179		175	dist18; measured from the top of the long joint- 27mm				4
180		145	dist19; measured from the top of the long joint- 28mm				4
181		72	dist20; measured from the top of the long joint- 29mm				4
182		19	dist21; measured from the top of the long joint- 30mm				4
183		0	dist22; measured from the top of the long joint- 31mm				4
184		0	dist23; measured from the top of the long joint- 32mm	lj_top_bore	30.7		4