

Rottenburgh1-O-Leipzig1374-Wg1-WOB-DNM

	A	B	C	D	E	F	G	H
1	I. Bocal		Original bocal???					
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			Put here choke vs receiver details??					
11								
12								
13	II. Wing Joint Lengths		bocal receiver: 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 leng	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; 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	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	bjstotal [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 => bj1-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]					
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			Two round plug design: NO.					
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 [bj1 - 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 = sep			do not imput value		
49								
50	sbore dia sep* [Needed for both boot logic]	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			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			Notes on turn-around: cork is made of ??? could add friction, ??mm of curve					
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	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]			very oblong 11.7 x 12.7		
77			d1 There is a brass tone hole liner in d tone hole.					
78								
79								
80								
81								
82	V. Tone Hole Depths							
83	f2	26.2	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			Very slight table along long joint					
93	e1	9.3	e1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]					

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94	d1	9.3	d1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]					
95	c1	10	c1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]					
96								
97								
98								
99								
100								
101	VI. 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] Average out of round					
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	Correct, bore is almost cyn. At these three RH tone holes					
123	g	20						
124	f1	23.4						
125								
126	e1	23.2	e1 tone hole bore diameter on long joint, This is correct, the bore contracts going up from the tenon					
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							
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, 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: very out of round in places					
158			Notes on boot joint bore: ????					
159	XI. Bore Diameter Locations							
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 win	17.2			1
168		108	dist7; measured from the bottom of the wing joint- 16mm	top boot str	18.5			1
169		9	dist8; measured from the bottom of the wing joint- 17mm	top boot lar	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 se	20			2
172		385	dist11; measured from the top of the bootjoint - small bore side- 20mm	lbore dia se	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	dist17; measured from the top of the long joint- 26mm; This is an average, the bore is at 26 mm					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; very out of round					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