Rottenburgh2-O-Brugge-Wg1-WOB-DNM

	A	B	C	D	E	F	G
1	**I. Bocal**		Original bocal; Rotten2 NO 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							
11							
12							
13	**II. Wing Joint Lengths**		bocal receiver: Rotten2 no				
14	choke bore dia.	10.2	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)	60	logic 1; length of choke from top of wing joint; logic 0; length of receiver (same as string length)				
16	wing joint length	516	total wing joint length, including tenon and socket				
17	tenon length	41.4	tenon length; Rotten2 one can see the rough cut job, tenon not even around the circumance, c 41 to 42 mm				
18							
19	wj f2	240	dist top of wing to where tone hole enters bore [not at the center of the tone hole]				
20	wj e	305	Rotten2 vrfd				
21	wj d	350	Rotten2 vrfd				
22							
23	Bore dia. Bottom of wing joint	17	Need to Average, usally oval; Rotten2 16.7 x 17.3				
24	Bore dia. top of boot joint small side	18.3	Rotten2 vrfd, larger than wing tenon, an average				
25	Bore dia. top of boot joint large side	23.8					
26							
27	**III. Boot Lengths**		Rotten2 No Two whole design; normal rounded cork ; used logic 1, but could remove plug				
28	bj logic	1	logic=> if bj logic = 0 => plug removed; if bj logic = 1 => plug cannot be removed				
29	bj c	89	dist from top of boot to where topmost tone hole enter bore [not at center of tone hole]				
30	bj b	157					
31	bj a	196					
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]	393	hook length along s bore => bjs-septum length = boot - septum <= calc the septum				
39	bootl [Needed for both boot logics]	393	hook length along l bore => bjl-septum length = boot - septum <= calc the septum				
40							
41	boots bottom [Needed for both boot logics]	26.5	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]	26.5	use hook, dist of bore [same as boots bot except tenon depth will be different]; 19.5 + 7 =26.5				
43							
44	extreme bore [Needed for logic 1 only]	48.1	Outside dia of plug [measured] = small bore dia + large bore dia + the septum width				
45							
46	septum length exp [Need for logic 0 only]	33	dist. from very bottom of boot to septum [point between the large and small bore]				
47	septum length calc - do not imput value	34	dist. From very bottom of boot to spetum [bjl - bootl]	do not imput value			
48	septum length - do not imput value	34	if bj logic = 0 => septum = septum exp; if bj logic = 1 => septum = septum calc	do not imput value			
49							
50	sbore dia sep* [Needed for both boot logics]	18.9	septum small bore dia [assume = lbore dia sep]				
51	lbore dia sep* [Needed for both boot logics]	18.9	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]	9.5	septum width; direct measurement if remove plug; Rotten2 used logic 1, but could remove plug				
53	sep width calc - do not imput value	10.3	septum width; calc. => extreme bore - sbore - lbore	do not imput value			
54	sep width - do not imput value	10.3	if bj logic = 0 => sep width = sep width exp; if bj logic = 1 => sep width = sep wi	do not imput value			
55							
56	bj g	349	dist from top of boot (socket) to where G hole enters bore [not at cent of tone hole]				
57	bj f1	129	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	4.8					
65	e	5.7					
66	d	5.2					
67							
68	c	6.7					
69	b	6.5					
70	a	5.8					
71	g	8.5					
72	f1	8.9					
73			Rotten2 Tone holes on long joint totally round				
74	e1	12.1	e1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
75	d1	11.7	d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
76	c1	10	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
77							
78							
79							
80							
81							
82	**V. Tone Hole Depths**						
83	f2	24					
84	e	25.4	Rotten2 wing not very wide, see photos and extra meas., but has a different form or slope				
85	d	24.3					
86							
87	c	26.9					
88	b	25.6					
89	a	27.5					
90	g	17	meas along bot tone hole wall [north wall, toward reed,tone hole usually at angle]				
91	f1	21	meas along east side tone hole wall [north wall, toward reed,t hole usually at angle]				
92							
93	e1	7.2	e1 tone hole depth;meas east/west with deapth gauge [at center, or shortest dist]				

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	A	B	C	D	E	F	G
94	d1	8.4	d1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]				
95	c1	8	c1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]				
96							
97							
98							
99							
100							
101	**VI. Long Joint**		Rotten2 There is a table along long joint; not a normal table along long joint, a flatten area along long joint				
102	lg_length	575	total length of long joint				
103	lg_tenon_bot	40	length bottom tenon on long joint [tenon going into boot joint] Rotten2 Mostly 40mm, it is uneven				
104	lj_bot_bore	23.7	long joint bottom tenon bore diameter [tenon going into boot joint]				
105	lj_top_bore	31.7	long joint top tenon bore diameter [tenon going into bell]				
106	lg_tenon_top	42.2	length top tenon on long joint [tenon going into bell] Rotten2 mostly 42.2 mm again uneven				
107	e1 distance	46	dist long joint tenon to e1 [from bot of tenon to where tone hole enters bore]				
108	d1 distance	237	dist long joint tenon to d1 [from bot of tenon to where tone hole enters bore]				
109	c1 distance	440	dist long joint tenon to c1 [from bot of tenon to where tone hole enters bore]				
110			Rotten2 Three tone holes on long joint dist. Short because joint cut back				
111							
112							
113							
114							
115	**VII. Bore diameters at Tone Holes**						
116	f2	13.2					
117	e	13.6					
118	d	14.1					
119							
120	c	18.2					
121	b	18.2					
122	a	18.3					
123	g	20					
124	f1	23.4	Rotten2 vrfd larger than e1 tone hole				
125							
126	e1	23.1	e1 tone hole bore diameter on long joint				
127	d1	25.3	d1 tone hole bore diameter on long joint				
128	c1	30.4	c1 tone hole bore diameter on long joint				
129							
130							
131							
132							
133							
134	**VIII. Bell**		Rotten2 There IS a tone hole in the bell: 7.1mm, 85 mm from bottom, include bell socket				
135	bell logic	2	If bell_logic = 0 => normal conical bore; if bell_logic = 1 => inverted concial bore; if bell_logic = 2 => bell expansion				
136	bell_length (0, 1, 2)	300	total length of bell [lines 141 + 144 = line 136]				
137	bell_bot_bore (0, 1, 2)	30.4	dia bore at the bottom of bell [end with socket]				
138	bell_top_bore 0, (1, 0, 2)	25.7	dia bore at the top of bell [where low Bb exits]				
139	bell_center_bore (only for logic 2)	37	dia bore at max center of expansion				
140	bell_wall (only for logic 2)	10.5	bell wall thickness, Just for David				
141	bell_bot_bore_expansion (only for logic 2)	207	dist of bottom to maxium of expansion [including bell socket length,if bell logic=0 =>100]				
142	Outside diameter of wood at expansion	54.2	Just for David				
143	bell_tenon (0, 1, 0, 2)	42.2	bell socket length				
144	bell_expansion_length (only for logic 2)	67	distance of maxium expansion to top of bell [where Bb exits]				
145							
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: Rottenburgh2-O-Brugge-Wg1-WOB-DNM				
156							
157			Notes on long joint bore: Rotten2 not very OOR, in good shape				
158			Notes on boot joint bore: Rotten2 small side very cyn.				
159	**XI. Bore Diameter Locations**		Notes on wing joint bore: Rotten2 normal				
160		19	Number of diameters				
161		10.2	Initial bore diameter [do not include in line 160 counting]				
162		0	dist1; measured from the bottom of the wing joint- 10mm				1
163		430	dist2; measured from the bottom of the wing joint- 11mm				1
164		312	dist3; measured from the bottom of the wing joint- 12mm				1
165		274	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		130	dist6; measured from the bottom of the wing joint- 15mm;	Bottom wing jt	17		1
168		52	dist7; measured from the bottom of the wing joint- 16mm	top boot small	18.3		1
169		0	dist8; measured from the top of the bootjoint - small bore side- 17mm	top boot large	23.8		2
170		0	dist9; measured from the top of the bootjoint - small bore side- 18mm				2
171		275	dist10; measured from the top of the bootjoint -small bore side- 19mm	sbore dia sep	18.9		2
172		365	dist11; measured from the top of the bootjoint - large bore side- 20mm	lbore dia sep	18.9		3
173		263	dist12; measured from the top of the bootjoint - large bore side- 21mm	Hook Length	393		3
174		248	dist13; measured from the top of the bootjoint - large bore side- 22mm				3
175		210	dist14; measured from the top of the bootjoint - large bore side- 23mm				3
176		442	dist15; measured from the top of the long joint- 24mm	lj_bot_bore	23.7		4
177		363	dist16; measured from the top of the long joint- 25mm				4
178		310	dist17; measured from the top of the long joint- 26mm				4
179		255	dist18; measured from the top of the long joint- 27mm				4
180		195	Rotten2 OOR 180 x 210; dist19; measured from the top of the long joint- 28mm				4
181		162	dist20; measured from the top of the long joint- 29mm				4
182		140	dist21; measured from the top of the long joint- 30mm				4
183		15	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	31.7		4