CuvillierAînè1-O-BrusMIM4352-Wg1-WOB-DNM

	A	B	C	D	E	F	G
1	**I. Bocal**		Original bocal; CuvillierAîné1 Yes but not original				
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: CuvillierAîné1 no; just a slight shelf where metal bocal receiver stops				
14	choke bore dia.	8.5	logic 1; bore diameter of choke; logic 0; either diameter bocal bottom or beginning of bore at bottom or receiver				
15	receiver length (1, 0) (formally choke length)	33	logic 1; length of choke from top of wing joint; logic 0; length of receiver (same as string length)				
16	wing joint length	500	total wing joint length, including tenon and socket;				
17	tenon length	45.3	tenon length				
18							
19	wj f2	203	dist from top of wing to where tone hole enters bore [not at the center of the tone hole]				
20	wj e	282					
21	wj d	339					
22							
23	Bore dia. Bottom of wing joint	14.9	Need to Average, usally oval; CuvillierAîné1 no				
24	Bore dia. top of boot joint small side	16.7					
25	Bore dia. top of boot joint large side	21.4					
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	95	dist from top of boot to where topmost tone hole enter bore [not at center of tone hole]				
30	bj b	153					
31	bj a	199					
32			CuvillierAîné1 two hole boot boot system				
33	bjstotal [Needed for both boot logics]	431	total length of boot, include socket, along the small bore side				
34	bjltotal [Needed for both boot logics]	431	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]	388	hook length along s bore => bjs-septum length = boot - septum <= calc the septum				
39	bootl [Needed for both boot logics]	388	hook length along l bore => bjl-septum length = boot - septum <= calc the septum				
40							
41	boots bottom [Needed for both boot logics]	19	use hook, dist of bore [dist on stick plus 7mm, diff between hook and bot of stick] 12.0 + 7= 19				
42	bootl bottom [Needed for both boot logics]	19	use hook, dist of bore [same as boots bot except tenon depth will be different]				
43							
44	extreme bore [Needed for logic 1 only]	41.8	Outside dia of plug [measured] = small bore dia + large bore dia + the septum width;				
45							
46	septum length exp [Need for logic 0 only]	0	dist. from very bottom of boot to septum [point between the large and small bore]				
47	septum length calc - do not imput value	43	dist. From very bottom of boot to spetum [bjl - bootl]	do not imput value			
48	septum length - do not imput value	43	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]	18.4	septum small bore dia [assume = lbore dia sep]				
51	lbore dia sep* [Needed for both boot logics]	19.4	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	4	septum width; calc. => extreme bore - sbore - lbore	do not imput value			
54	sep width - do not imput value	4	if bj logic = 0 => sep width = sep width exp; if bj logic = 1 => sep width = sep width ca	do not imput value			
55							
56	bj g	337	dist from top of boot (socket) to where G hole enters bore [not at cent of tone hole]				
57	bj f1	143	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	5.8					
65	e	6.8					
66	d	6.3					
67							
68	c	7.8					
69	b	6.7					
70	a	6.3					
71	g	9.9					
72	f1	9.7					
73							
74	e1	12.2	e1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
75	d1	9.2	d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
76	c1	12.3	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
77			CuvillierAîné1 three long joint tone holes all round, not oblong				
78							
79							
80							
81							
82	**V. Tone Hole Depths**						
83	f2	38.5	CuvillierAîné1 F tone holes drilled at very extreme angle				
84	e	30.7					
85	d	38.8	CuvillierAîné1 D tone holes drilled at fairly extreme angle; verified				
86							
87	c	25					
88	b	26.4					
89	a	28.5	CuvillierAîné1 A tone holes drilled at fairly extreme angle				
90	g	15.5	meas along bot tone hole wall [north wall, toward reed,tone hole usually at angle]				
91	f1	19	meas along east side tone hole wall [north wall, toward reed,t hole usually at angle]				
92							
93	e1	8.5	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	8.1	d1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]				
95	c1	7.3	c1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist] y				
96							
97							
98							
99							
100							
101	**VI. Long Joint**		CuvillierAîné1 a table along long joint				
102	lg_length	585	total length of long joint				
103	lg_tenon_bot	45.8	length bottom tenon on long joint [tenon going into boot joint]				
104	lj_bot_bore	23.8	long joint bottom tenon bore diameter [tenon going into boot joint]				
105	lj_top_bore	31.5	long joint top tenon bore diameter [tenon going into bell]				
106	lg_tenon_top	35	length top tenon on long joint [tenon going into bell]				
107	e1 distance	54	dist long joint tenon to e1 [from bot of tenon to where tone hole enters bore]				
108	d1 distance	255	dist long joint tenon to d1 [from bot of tenon to where tone hole enters bore]				
109	c1 distance	469	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	11.3					
117	e	12.6					
118	d	13.3					
119							
120	c	16.5					
121	b	16.6					
122	a	16.7					
123	g	20.6					
124	f1	21.2					
125							
126	e1	24.7	e1 tone hole bore diameter on long joint				
127	d1	28.1	d1 tone hole bore diameter on long joint				
128	c1	31.1	c1 tone hole bore diameter on long joint				
129							
130							
131							
132							
133							
134	**VIII. Bell**		CuvillierAîné1 no bell tone hole				
135	bell logic	1	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)	325	total length of bell [lines 141 + 144 = line 136]				
137	bell_bot_bore (0, 1, 2)	30.9	CuvillierAîné1 OOR 30.7 x 31.2; dia bore at the bottom of bell [end with socket]				
138	bell_top_bore 0, (1, 0, 2)	30.6	dia bore at the top of bell [where low Bb exits]				
139	bell_center_bore (only for logic 2)		dia bore at max center of expansion				
140	bell_wall (only for logic 2)		bell wall thickness, Just for David				
141	bell_bot_bore_expansion (only for logic 2)		dist of bottom to maxium of expansion [including bell socket length,if bell logic=0 =>100]				
142	Outside diameter of wood at expansion		Just for David				
143	bell_tenon (0, 1, 0, 2)	35.2	bell socket length				
144	bell_expansion_length (only for logic 2)		distance of maxium expansion to top of bell [where Bb exits]				
145	Bellflg	39.5					
146							
147							
148	**IX. PITCH**						
149	pitch	430	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: CuvillierAîné1-O-BrusMIM4352-Wg1-WOB-DNM				
156			No date found;				
157			Notes on long joint bore: CuvillierAîné1 very OOR				
158			Notes on boot joint bore: CuvillierAîné1 small side very out of round				
159	**XI. Bore Diameter Locations**		Notes on wing joint bore: CuvillierAîné1 normal				
160		17	Number of diameters				
161	**Bell Bore**	8.5	Initial bore diameter				
162	30.9mm dia. at socket	383	dist1; measured from the bottom of the wing joint- 10mm				1
163	30mm rod 170mm from socket	326	dist2; measured from the bottom of the wing joint- 11mm				1
164	29mm rod 240mm from socket	252	dist3; measured from the bottom of the wing joint- 12mm				1
165	30mm rod 35mm from top of bell OOR	187	dist4; measured from the bottom of the wing joint- 13mm				1
166	30.6mm dia.at bell end	52	dist5; measured from the bottom of the wing joint- 14mm				1
167		0	dist6; measured from the bottom of the wing joint- 15mm	Bottom wing	14.9		1
168		0	dist7; measured from the top of the bootjoint - small bore side- 16mm	top boot sma	16.7		2
169		265	CuvillierAîné1 OOR dist8; measured from the top of the bootjoint - small bore side- 17mm	top boot larg	21.4		2
170		337	dist9; measured from the top of the bootjoint - small bore side- 18mm				2
171		0	dist10; measured from the top of the bootjoint - small bore side- 19mm	sbore dia sep	18.4		2
172		380	dist11; measured from the top of the bootjoint - large bore side- 20mm	lbore dia sep	19.4		3
173		322	CuvillierAîné1 very OOR dist12; measured from the top of the bootjoint - large bore side-	Hook Length	388		3
174		0	dist13; measured from the top of the bootjoint - large bore side- 22mm				3
175		0	dist14; measured from the top of the bootjoint - large bore side- 23mm				3
176		537	dist15; measured from the top of the long joint - 24mm	lj_bot_bore	23.8		4
177		490	dist16; measured from the top of the long joint- 25mm				4
178		430	CuvillierAîné1 OOR; dist17 measured from the top of the long joint- 26mm				4
179		465	CuvillierAîné1 OOR dist18; measured from the top of the long joint- 27mm				4
180		307	CuvillierAîné1 OOR dist19; measured from the top of the long joint- 28mm				4
181		230	CuvillierAîné1 OOR dist20; measured from the top of the long joint- 29mm				4
182		167	CuvillierAîné1 OOR dist21; measured from the top of the long joint- 30mm				4
183		105	CuvillierAîné1 very OOR 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	31.5		4