

Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM

	A	B	C	D	E	F	G
1	I. Bocal		Original bocal, Poerschmann1 not original				
2	dia reed end		inside diameter of reed end of bocal	4.2			
3	bocal string length (0, 1)		length of bocal inserted into receiver	38			
4	metal bocal length top (0, 1)		meas. along top of bocal	352			
5	metal bocal length bot (0, 1)		meas. along bottom of bocal	331			
6	dia wj end		inside diameter of bocal; OOR 9.4 x 9.8	9.6			
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, Poerschmann1 has been rebuilt; a choke because the wood at top of the wing has been replaced				
14	choke bore dia.	9.7	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)	38	logic 1; length of choke from top of wing joint; logic 0; length of receiver (same as string length)				
16	wing joint length	527	total wing joint length, including tenon and socket				
17	tenon length	44.8	tenon length				
18							
19	wj f2	237	dist top of wing to where tone hole enters bore [not at the center of the tone hole]				
20	wj e	295					
21	wj d	341					
22							
23	Bore dia. Bottom of wing joint	17.4	Need to Average, usually oval; Poerschmann1 yes				
24	Bore dia. top of boot joint small side	18.4					
25	Bore dia. top of boot joint large side	24.2					
26							
27	III. Boot Lengths		Poerschmann1 Two hole design				
28	bj logic	1	logic=> if bj logic = 0 => plug removed; if bj logic = 1 => plug cannot be removed				
29	bj c	94	dist from top of boot to where topmost tone hole enter bore [not at center of tone hole]				
30	bj b	148					
31	bj a	191					
32							
33	bjstotal [Needed for both boot logics]	422	total length of boot, include socket, along the small bore side				
34	bjltotal [Needed for both boot logics]	422	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]	380	hook length along s bore => bjs-septum length = boot - septum <= calc the septum				
39	bootl [Needed for both boot logics]	380	hook length along l bore => bjl-septum length = boot - septum <= calc the septum				
40							
41	boots bottom [Needed for both boot logics]	21.5	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]	21.5	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	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	42	dist. From very bottom of boot to spetum [bjl - bootl]	do not imput value			
48	septum length - do not imput value	42	if bj logic = 0 => septum = septum exp; if bj logic = 1 => septum = septum c	do not imput value			
49							
50	sbore dia sep* [Needed for both boot logics]	19.6	septum small bore dia [assume = lbore dia sep]				
51	lbore dia sep* [Needed for both boot logics]	19.8	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	1.6	septum width; calc. => extreme bore - sbore - lbore	do not imput value			
54	sep width - do not imput value	1.6	if bj logic = 0 => sep width = sep width exp; if bj logic = 1 => sep width = sep	do not imput value			
55							
56	bj g	336	dist from top of boot (socket) to where G hole enters bore [not at cent of tone hole]				
57	bj fl	132	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	6.8	Poerschmann1 Tone holes are of large diameter on wing				
65	e	7					
66	d	6.8					
67							
68	c	8.6	Poerschmann1Tone holes are of large diamter on boot				
69	b	9.1					
70	a	7.2					
71	g	9.6	Poerschmann1 OOR 9.8 x 9.2				
72	fl	9.4					
73							
74	e1	14.5	e1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
75	d1	10.8	d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
76	c1	10.3	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]				
77			Poerschmann1 C1 tone hole is small compared to the others				
78							
79							
80							
81							
82	V. Tone Hole Depths						
83	f2	24.2					
84	e	22.8					
85	d	24.1					
86							
87	c	26.8					
88	b	25.2					
89	a	24.8					
90	g	15	meas along bot tone hole wall [north wall, toward reed,tone hole usually at angle]				
91	fl	21.5	meas along east side tone hole wall [north wall, toward reed,t hole usually at angle]				
92							
93	e1	13.1	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	12.8	d1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]				
95	c1	12.4	c1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]				
96							
97							
98							
99							
100							
101	VI. Long Joint		Poerschmann1 a table along long joint				
102	lg_length	590	total length of long joint				
103	lg_tenon_bot	49.8	length bottom tenon on long joint [tenon going into boot joint]				
104	lj_bot_bore	23.6	long joint bottom tenon bore diameter [tenon going into boot joint] Average out of round				
105	lj_top_bore	30.9	long joint top tenon bore diameter [tenon going into bell]				
106	lg_tenon_top	39.2	length top tenon on long joint [tenon going into bell]				
107	e1_distance	58	dist long joint tenon to e1 [from bot of tenon to where tone hole enters bore]				
108	d1 distance	251	dist long joint tenon to d1 [from bot of tenon to where tone hole enters bore]				
109	c1 distance	456	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	13.4					
117	e	13.9					
118	d	15					
119							
120	c	18	Poerschmann1 cyrindical bore alone c, b, and a tone tones				
121	b	18					
122	a	18					
123	g	20					
124	f1	22.6					
125							
126	e1	23.8	e1 tone hole bore diameter on long joint				
127	d1	26.1	d1 tone hole bore diameter on long joint				
128	c1	28.4	c1 tone hole bore diameter on long joint				
129							
130							
131							
132							
133							
134	VIII. Bell		Poerschmann1 no tone hole in the bell				
135	bell_logic	1	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)	278	total length of bell [lines 141 + 144 = line 136]				
137	bell_bot_bore (0, 1, 2)	30.3	dia bore at the bottom of bell [end with socket]				
138	bell_top_bore 0, (1, 0, 2)	25.3	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)	41.5	bell socket length				
144	bell_expansion_length (only for logic 2)		distance of maxium expansion to top of bell [where Bb exits]				
145	bellfg	48.5	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: Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM				
156							
157			Notes on long joint bore: Poerschmann1 very out of round in places				
158			Notes on boot joint bore: Poerschmann1 small side very out of round and cyn.				
159	XI. Bore Diameter Locations		Notes on wing joint bore: Poerschmann1 good				
160		20	Number of diameters				
161	Bell Bore	9.7	Initial bore diameter [do not include in line 160 counting]				
162	30.3mm dia. at socket	468	dist1; measured from the bottom of the wing joint- 10mm				1
163	30mm rod 50mm from socket	430	dist2; measured from the bottom of the wing joint- 11mm				1
164	29mm rod 83mm from socket	366	dist3; measured from the bottom of the wing joint- 12mm				1
165	28mm rod 120mm from socket	298	dist4; measured from the bottom of the wing joint- 13mm				1
166	27mm rod 180mm from socket	223	dist5; measured from the bottom of the wing joint- 14mm				1
167	26mm rod 250mm from socket	181	dist6; measured from the bottom of the wing joint- 15mm	Bottom wing jt	17.4		1
168	25.3mm dia. at bell end	99	dist7; measured from the bottom of the wing joint- 16mm	top boot small	18.4		1
169		3	dist8; measured from the bottom of the wing joint- 17mm	top boot large	24.2		1
170		0	dist9; measured from the top of the bootjoint - small bore side- 18mm				2
171		252	dist10; measured from the top of the bootjoint - small bore side- 19mm	sbore dia sep	19.6		2
172		340	dist11; measured from the top of the bootjoint - large bore side- 20mm	lbore dia sep	19.8		3
173		303	dist12; measured from the top of the bootjoint - large bore side- 21mm	Hook Length	380		3
174		250	dist13; measured from the top of the bootjoint - large bore side- 22mm				3
175		85	dist14; measured from the top of the bootjoint - large bore side- 23mm				3
176		490	dist15; measured from the top of the long joint- 24mm;	lj_bot_bore	23.6		4
177		451	dist16; measured from the top of the long joint- 25mm				4
178		415	dist17; measured from the top of the long joint- 26mm				4
179		227	dist18; measured from the top of the long joint- 27mm				4
180		165	dist19; measured from the top of the long joint- 28mm				4
181		98	dist20; measured from the top of the long joint- 29mm				4
182		30	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	30.9		4