	٨	в	C	D	E	E	G	н	T	1
1	A T. Beenl	D	Original basaly CouvillierP1 perbably pet	U			9	11	Cuvilliant	Cuvillior2
1	1. Bocal		Original bocal, CouvillerP1 porbably not						Cuvillier1	Cuvillierz
2	dia reed end		Inside diameter of reed end of bocal						Brus	Brus
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							
/										
8	bocal logic	2	if bocal logic = 0 => bocal is choke; if bocal logic = 1 =>choke in i	wing joint calc;	if bocal	logic	= 2 =>	no bocal	2	2
9										
10										
11										
12										
13	II. Wing Joint Lengths		bocal receiver: CouvillierP1 no reciever							
14	choke bore dia.	10.3	logic 1; bore diameter of choke; logic 0; either diameter bocal bott	om or beginning	of bore	e at bo	ottom o	r receiver	8.5	10
15	receiver length (1, 0) (formally choke length)	60	logic 1: length of choke from top of wing joint; logic 0: length of re	ceiver (same as	strina	lenath	1)		33	33
16	wing joint length	506	total wing joint length, including tenon and socket				-		500	514
17	tenon length	46.1	tenon length						45.3	48.8
18										
19	wi f2	213	dist from top of wing to where tone hole enters hore (not at the cer	ter of the tone	hole]				203	217
20	wie	289							282	289
21	wi d	330							330	330
21	wju	333							559	333
23	Bore dia Bottom of wing joint	14.8	CouvillierP1 yrfd small			-			14.9	12.5
24	Bore dia, top of boot joint small side	19.3				_			16.7	17.0
24	Bore dia, top of boot joint small side	10.5							21.4	21.4
25	Bore dia, top or boot joint large side	23.3				-			21.4	21.4
20										
2/	III. Boot Lengths									
28	uj logic	1	$r_{10}$ rugic = $r_{10}$ rugic = $r_{10}$ = $r_{10}$ plug removed; if bj logic = $r_{10}$ = $r_{10}$ plug ca	conton of	u hol-1				1	1
29		95	uist north top of boot to where topmost tone hole enter bore [not at	center or tone	noie]				95	94
30	DJ D	157			⊢ − ↓				153	153
31	ט נע	202							199	198
32	Laboration (Margaret A. 1997) - 1997	100	ConvilliorP1 two hole best systems total by 21, 21, 21, 21, 21, 21, 21, 21, 21, 21,	kat alaaa ''		<u> </u>			101	100
33	ujstotal [Needed for both boot logics]	432	Couvinierri two noie boot system; total length of boot, include soc	ket, along the s	mall bo	e side	e;		431	428
34	Dirocal [Needed for both boot logics]	432	Itotal length of boot, include socket, along large bore side		├	$\rightarrow$			431	428
35	piug small [Need for logic 0 only]	U	ping thickness, large bore side		l				U	U
36	plug large [Need for logic 0 only]	0	plug thickness, small bore side						0	0
37					L	$ \rightarrow $				
38	boots [Needed for both boot logics]	386	hook length along s bore => bjs-septum length = boot - septum <=	= calc the septu	m				388	386
39	bootl [Needed for both boot logics]	386	hook length along I bore => bjl-septum length = boot - septum <=	calc the septur	n				388	386
40										
41	boots bottom [Needed for both boot logics]	20	use hook, dist of bore [dist on stick plus 7mm, diff between hook a	nd bot of stick]	13.0 +	7 = 2	0		19	20
42	bootl bottom [Needed for both boot logics]	20	use hook, dist of bore [same as boots bot except tenon depth will b	e different]					19	20
43										
44	extreme bore [Needed for logic 1 only]	41.8	Outside dia of plug [measured] = small bore dia + large bore dia +	the septum wi	dth				41.8	40.7
45										
46	septum length exp [Need for logic 0 only]	0	dist. from very bottom of boot to septum [point between the large a	and small bore]					0	0
47	septum length calc - do not imput value	46	dist. From very bottom of boot to spetum [bil - boot]	do not imput vi	alue				43	42
48	septum length - do not imput value	46	if bi logic = 0 => septum = septum exp; if bi logic = 1 => septum	do not imput vi	alue				43	42
49										
50	sbore dia sep* [Needed for both boot logics]	18.4	septum small bore dia [assume =  bore dia sep]						18.4	18.1
51	Ibore dia sep* [Needed for both boot logics]	19.9	septum large bore dia [assume = shore dia sep] [mesure if cork ca	he removed: f	or Logic	: 01			19.4	19
52	sep width exp [Need for logic 0 only]	0	septum width: direct measurement if remove plug			-			0	0
53	sen width calc - do not imput value	3.5	sentum width: calc => extreme hore - shore - lhore	do not imput v	alue				4	3.6
54	sep width - do not imput value	3.5	if bi logic = $0 \Rightarrow$ sep width = sep width exp: if bi logic = $1 \Rightarrow$ sep	do not imput vi	alue				4	3.6
55										
56	bi a	335	dist from top of boot (socket) to where G hole enters hore [not at c	ent of tone hole	1				337	336
57	bif1	143	dist from top of boot (socket) to where E1 hole enters bore [not at a	cent of tone hole	ر. دام	-			143	143
59	0]11	145	distribut top of boot (socket) to where i'r nole chiefs bore [not de	cente or conte nor		-			145	145
50										
60										
61										
62										
62	IV. Tono Hole Diameters									
605			CouncillianD1 and						F 0	6.0
04	12	5.5							5.0	0.0
65		0.7				-			0.0	0.0
60	u	0				$\rightarrow$			0.3	0.3
60	c	7 0				-+			7 0	7 0
60	ь b	7.0				-+			7.8 6.7	/.ö 7.2
70	2	1.Z	CouvillierP1 wrfd			$\rightarrow$			6.7	7.2
70	a a	0.5	COUVINIEIE I VIIU						0.3	3.8
72	9 f1	0.5							3.9	10
44	11	9.3							9./	ð
74	o1	17 5	at tone hale dia, on long joint (need to pursue NC and EV) (1	Sucuelly					13.3	13 5
75	d1	12.5	d1 tone hole dia, on long joint [need to average NS and EW dias, N	S usually greate	-ij pr]i				12.2	11.0
76	c1	12 5	c1 tone hole dia, on long joint [need to average NS and EW dias, N	S usually greate	17	-+			12 3	12
77	<u></u>	12.3	ince tone hole did, on long joint [need to average NS and EW dids, N	s assumy greate		$\rightarrow$			12.5	10
78						-+				
79						-+				
80										
81										
87	V. Tone Hole Denths									
82	f2	35 5	CouvillierP1 yrfd. E tone hole not drilled into contor of hore			-+			38 5	37 5
84	e	31.7	CouvillierP1 vrfd, E tone hole not drilled into center of bore						30.7	31.7
85	d	39	CouvillierP1 vrfd, D tone holes drilled at fairly extreme and						38.8	36
86	-		continuer, a viray or concrete annea acrainty extreme dirgie			-+			55.0	50
87	C	26							25	74
80	s h	25 7							25	26.4
00	2	20.7	CouvillierP1 A topo bolos drilled at fairly subsets and						20.4	20.4
09	a a	17 4	mean along bot tone hole well from the well toward and the	sually at ar -1.3					20.3	20.3
90	9 f1	1/.4	meas along bot tone note wan priorth wall, toward reed, tone hole us	ucually at angle					10	13.5
31	11	23	meas along east side tone note wall [north wall, toward reed,t hole	usually at angle	1				13	21
92	-1	0.2		n alaanka (j. 17.17)	└ <u></u>	-+			0.5	6.5
93	21	8.2	let tone note depth; meas east/west with deapth gauge [at center, o	r snortest dist]		$\rightarrow$			8.5	6.5
94	01	6./	ut tone note depth; meas east/west with deapth gauge [at center, o	or snortest dist]					8.1	6.5
95	C1	/.2	ICL tone note depth; meas east/west with deapth gauge [at center, or line in the set of the set	or shortest dist]	l				/.3	5.5
96										
97									L	
98										
99										
100	WT Lowe Toint		Constitution of Theme is a solution of the state of the							
101	vi. Long Joint		COUVINIERP1 There is a table along long joint		<b>⊢</b>					
102	ig_iength	589	Itotal length of long joint						585	583
103	ig_tenon_bot	45.5	[length bottom tenon on long joint [tenon going into boot joint]						45.8	46
104	1) DOT DOTE	24.1	liong joint pottom tenon bore diameter. I tenon going into boot joint	1		- 1			23.8	23.2

_		2			-	- 1	<u> </u>		
	A	В	Ĺ	U	E	F	ын	1	J
105	lj_top_bore	32.8	CouvillierP1 OOR, 33.2 x 32.3; long joint top tenon bore diameter	[tenon going int	o bell]			31.5	31.3
106	la tenon top	36.1	length top tenon on long joint [tenon going into bell]					35	32.5
107	o1_distance	57	dist long joint topon to al. [from bat of topon to whore topon to ball	ators bors1				54	52.0
107		52	uist long joint tenon to er [nom bot of tenon to where tone note er	iters bore]				34	52
108	d1 distance	254	dist long joint tenon to d1 [from bot of tenon to where tone hole er	nters bore];				255	254
109	c1 distance	471	CouvillierP1 vrds: dist long joint tenon to c1					469	482
110									
110									
111									
112									
113									
115									
114									
115	VII. Bore diameters at Tone Holes								
116	f2	12						11.3	0
117	-	12.1						12.0	0
11/	e	13.1						12.0	0
118	d	13.4	CouvillierP1, might be 13.5, wing has narrow tenon					13.3	0
119									
120		17.2						16 E	16 E
120		17.2						10.5	10.5
121	D	17.3						16.6	16.6
122	а	17.3						16.7	16.8
123	a	21						20.6	20.2
123	5	21						20.0	20.2
124	11	22						21.2	21.2
125									
126	e1	24.8	e1 tone hole bore diameter on long joint					24.7	23.9
127	d1	27.0	d1 tone hole hore diameter on long joint					29.1	26.6
12/	u1	27.9	ar tone note bore diameter on long joint					20.1	20.0
128	C1	31.2	c1 tone hole bore diameter on long joint					31.1	30.8
129									
130									
100									
131									
132									
133									
100									
134	VIII. Dell		Couvinierr1, no bell tone noie	L					
135	bell logic	1	If bell_logic = 0 => normal conical bore; if bell_logic = 1 => inver	rted concial bore	e; if bell	_logic =	= 2 => bell expansi	1	0
136	bell length (0, 1, 2)	326	total length of bell [lines 141 + 144 = line 136]					325	328
127	hell het here $(0, 1, 2)$	22.1	CouvilliarP1 OOP 33.3 x 32.9 varified dia here at the bettern of he	all [and with cor	kot1			20.0	20.2
137		33.1	Codvinierr1, OOK 55.5 X 52.5 Verified, dia bore at the bottom of be		.Kelj			30.9	29.2
138	bell_top_bore 0, (1, 0, 2)	31.2	dia bore at the top of bell [where low Bb exits]					30.6	34
139	bell center bore (only for logic 2)		dia bore at max center of expansion						
140	holl wall (only for logic 2)		hell wall thickness. Just for David						
140	Dell_wall (only for logic 2)		Dell wall unickness, Just for David						
141	bell_bot_bore_expansion (only for logic 2)		dist of bottom to maxium of expansion [including bell socket length	n, if bell logic=0	=>100				
142	Outside diameter of wood at expansion		Just for David						
1/13	holl topon $(0, 1, 0, 2)$	36.1	bell socket length					25.2	34.5
143	bell suspended leastly ( 1 ( 1 ) C)	30.1	distance of annual supervise to the first of the second					JJ.2	J4.J
144	bell_expansion_length (only for logic 2)		distance of maxium expansion to top of bell [where Bb exits]						
145	Bellflg	40						39.5	39.5
146									
140									
14/									
148	IX. PITCH								
149	nitch	430	input the historical nitch of the bassoon must input value, best que	200				430	430
150	free init	200	Table for success and an antickle					700	200
150	rreq_init	380	Initial frequency range variable					380	380
151	Delta frequency	2	frequency increment parameter					2	2
152	Number of frequencies	60	number of frequencies to scan for min chi sq					60	60
152	Frequency adjust	1.05	frequency adjustment parameter					1.05	1.05
155		1.05						1.05	1.05
154	X. I ITIE								
155	title		Bassoon Calculation: CuvillierP1-O-Sigal1995.08-Wg1-WOB-DNM		ד ו				
156						I			
1/2-			Notes on long joint here: CuvilliorP1 mens COD they are						
12/			Notes on long joint bore: CuvillierP1 more OOK than normal						
158			Notes on boot joint bore: CuvillierP1 boot in good shape, but very of	differ. Tapers					
159	XI. Bore Diameter Locations		Notes on wing joint bore: CuvillierP1, choke at wing tenon					-	
100	All zoros in horo diameters verified	12	Number of diameters			-		17	12
100	An zeros in pore diameters ventiled	13	number of utameters					1/	13
161	Bell Bore	10.3	Initial bore diameter					8.5	10
162	33.1mm dia. at socket	0	dist1; measured from the bottom of the wing joint- 10mm				1	383	0
163	32mm rod 70mm from socket	385	dist2: measured from the bottom of the wing joint- 11mm			1	1	326	0
164	31mm rod 140mm from cocket	300	dict3: mancured from the bottom of the wing joint 12mm				1	252	0
104	Simili Tou 140mm from socket	300	usis, measured from the bottom of the wing joint- 12mm				1	252	U
165	31.2mm dia. at bell end	230	dist4; measured from the bottom of the wing joint- 13mm				1	187	0
166		0	CouvillierP1, large differ. Between wing and boot; dist5: measured	from the botton	n of the	wind	1	52	0
167		0	dist6: measured from the bottom of the wing joint- 15mm	Bottom wing it	14.9	1	1	0	0
100		<u> </u>	dist7, managed from the tap of the besticist arroll be and the	top bost any	10 0		-	c	0
108		U	uist/, measureu from the top of the bootjoint - small bore side- 16	top boot small	10.3		4	U	U
169		0	dist8; measured from the top of the bootjoint - small bore side- 17	top boot large	23.3		2	265	300
170		320	CouvillierP1 vrfd; large differ. Between wing and boot: dist9: meas	sured from the to	op of th	e bod	2	337	360
171		0	dist10: measured from the top of the bootioint - small bore side-1	shore dia ser	184	- 1	2	0	0
1/1		0	alacto, measured nom the top of the bootjoint - sindii bole side= 1	soore uid sep	10.4		-	0	0
172		370	aist11; measured from the top of the bootjoint - large bore side- 20	ipore dia sep	19.9		3	380	356
173		353	dist12; measured from the top of the bootjoint - large bore side- 2	Hook Length	386		3	322	290
174		0	dist13: measured from the top of the bootioint - large hore side- 2	2mm, vrfd			3	0	0
175		<u> </u>	dist14, manufaction the top of the bootjoint intrige bole side- 2.	2000			4	5	550
1/5		U	uist14; measured from the top of the bootjoint - large bore side- 2.	SIIIIU			4	U	553
176		0	dist15; measured from the top of the long joint - 24mm	lj_bot_bore	24.1		4	537	502
177		500	dist16: measured from the top of the long joint- 25mm				4	490	465
179		435	dist17: measured from the top of the long joint- 26mm			-	4	430	395
1/0			user, measured from the top of the folly joint= 20mm				7	-10	550
179		370	dist18; measured from the top of the long joint- 27mm	L			4	465	305
180		317	dist19; measured from the top of the long joint- 28mm		1		4	307	245
181		250	dist20: measured from the top of the long joint- 29mm				4	230	205
102		107	CuvilliorP1 yony OOP: dist21: measured from the ten of the long is	int- 30mm		-	4	167	120
102		10/	covinient i very ook, disizit, medsured nom die top of the long jo	nic Joillin,			4	10/	130
183		115	CuvillierP1 very OOR; dist22; measured from the top of the long jo	oint- 31mm;			4	105	75
184		0	dist23: measured from the top of the long joint- 32mm.	li ton hore	32.8		4	0	0