_									
F	A I. Bocal	В	C C	D	Е	F		H Not open	I
2	dia reed end		Original bocal, DeLoose2 no inside diameter of reed end of bocal				+ + +	DeLoose1	
3	bocal string length (0, 1)		length of bocal inserted into receiver						
4	metal bocal length top (0, 1) metal bocal length bot (0, 1)		meas. along top of bocal meas. along bottom of bocal				-		
	dia wj end		inside diameter of bocal				 		
7								_	
9	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			 	2	
10									
11							-		
12	II. Wing Joint Lengths		bocal receiver; DeLoose2; no receiver			-	 		
14	choke bore dia.	9.5	logic 1; bore diameter of choke; logic 0; either diameter bocal bottom or beginning of bore at bot	tom or receiver				9.9	
15 16		75 526	DeLoose2 vrfd long; logic 1; length of choke from top of wing joint; logic 0; length of receiver (so total wing joint length, including tenon and socket	me as string length)			 	55 525	
17	wing joint length tenon length	47.5	tenon length					44.5	
18									
20	wj f2 wj e	237 295	dist top of wing to where tone hole enters bore [not at the center of the tone hole]				-	230 298	
21	wj d	335						340	
22	David de Dathaus of vide data	16.5	Need to Assess and Bull and Delegan					140	
23	Bore dia. Bottom of wing joint Bore dia. top of boot joint small side	16.5 15.9	Need to Average, usally oval; DeLoose2; no DeLoose2, vrfd gap between wing and boot, OOR 15.4 x 16.1				 	14.8 17	
25	Bore dia. top of boot joint large side	23.6						24.5	
26	III Post Longths		Del cocco? Two whole decign No				-		
28	III. Boot Lengths bj logic	1	DeLoose2, Two whole design No logic=> if bj logic = 0 => plug removed; if bj logic = 1 => plug cannot be removed		L	<u>t </u>		_1	
29	bi c	95	dist from top of boot to where topmost tone hole enter bore [not at center of tone hole]					95	
30	bj b bj a	149 189				\vdash	+	153 190	
32			DeLoose2 measured with boot cap removed						
33		430	total length of boot, include socket, along the small bore side,				$+$ \mp	432	
34 35	bjltotal [Needed for both boot logics] plug small [Need for logic 0 only]	430 0	total length of boot, include socket, along large bore side plug thickness, large bore side			+	+ +	432 0	
36	plug large [Need for logic 0 only]	0	plug thickness, small bore side					0	
37 38	boots [Needed for both boot logics]	402	DeLoose2 vrfd long; hook length along s bore => bjs-septum length = boot - septum <= calc th	sentum	-	-	++	392	
39	bootl [Needed for both boot logics]	402	hook length along I bore => bjl-septum length = boot - septum <= calc the	Josephani				392	
40									
41	boots bottom [Needed for both boot logics] bootl bottom [Needed for both boot logics]	9	use hook, dist of bore [dist on stick plus 7mm, diff between hook and bot of stick]; 2 + 7=9 use hook, dist of bore [same as boots bot except tenon depth will be different]			1	++	22	
43			DeLoose2 something in the bottom of the boot, paper?						
44	extreme bore [Needed for logic 1 only]	48.5	DeLoose2, vrfd very large, Outside dia of plug [measured] = small bore dia + large bore dia + tl	e septum width		\perp	$+$ \mp	50	
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	28	dist. From very bottom of boot to spetum [bil - bootl]	do not imput value				40	
48 49		28	if bj logic = 0 => septum = septum exp; if bj logic = 1 => septum = septum calc	do not imput value	1	\vdash	$+$ \mp	40	
50	sbore dia sep* [Needed for both boot logics]	18.9	DeLoose2, vrfd larger than up bore; septum small bore dia [assume = lbore dia sep]			1	+ +	19.4	
51	lbore dia sep* [Needed for both boot logics]	17.2	DeLoose2 vrfd much smaller than down bore; septum large bore dia [assume = sbore dia sep]					19	
52 53	sep width exp [Need for logic 0 only] sep width calc - do not imput value	12.4	septum width; direct measurement if remove plug septum width; calc. => extreme bore - sbore - lbore	do not imput value		-	+	11.6	
54	sep width caic - do not imput value sep width - do not imput value	12.4	if by logic = 0 => sep width = sep width exp; if by logic = 1 => sep width = sep width calc	do not imput value		L		11.6	
55							\Box		
56 57	bj g bj f1	341 130	dist from top of boot (socket) to where G hole enters bore [not at cent of tone hole] dist from top of boot (socket) to where F1 hole enters bore [not at cent of tone hole]		 	+	+	341 127	
58	5) 12	150	and from top or book (socket) to where 12 hore enters bore (not at each of tone hore)					12,	
59									
60 61							 		
62									
63 64	IV. Tone Hole Diameters	E 0				-	-	6	
65	e e	5.8 6.2						6.1	
66	d	5.9						6.4	
67 68	r	6.8					 	6.9	
69	b	7						6.5	
70 71	a g	9.6			-	-	+	5.6 10.5	
72	f1	11						10.3	
73	o1	1.	Dal asse2 abless 10 E v 11 E at tass hala dia an invadable for all a superior at the control of			\perp	oxdot	11.2	
74 75	d1	10.1	DeLoose2 oblong 10.5 x 11.5; e1 tone hole dia, on long joint [need to average NS and EW dias] d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]		<u> </u>	+	+	9.8	
76	c1	13	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually greater]					12.5	
77 78			DeLoose2 tone holes on long joint not totally round		-	1	++		
79									
80						1	\vdash		
82	V. Tone Hole Depths				L	<u> </u>	DeLoose	1 joints re	eversed
83		25.7	DeLoose2; tone hole not drilled exactly in center of bore					28.3	
84 85	d d	22.5 27			-	\vdash	+	26.7 31	
86									
87	c h	23				1	+	25	
88 89	a	21.8				+	+	22.8	
90	q	14	meas along bot tone hole wall [north wall, toward reed,tone hole usually at angle]					25	
91 92	LT.	22.5	meas along east side tone hole wall [north wall, toward reed,t hole usually at angle]			-	+	20.5	
93	e1	8.7	e1 tone hole depth;meas east/west with deapth gauge [at center, or shortest dist]					9.3	
94 95		8.4 7.1	d1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist] c1 tone hole depth; meas east/west with deapth gauge [at center, or shortest dist]			1	+	8	
96		/.1	er cone note deptit, meas easywest with deaptil gauge [at center, or shortest dist]		L	L	\pm		
97									
98 99						1	+		
100									
101 102		575	DeLoose2 a table along long joint total length of long joint;				+	575	
102		43.8	length bottom tenon on long joint [tenon going into boot joint]			+	+	42.7	
104	lj_bot_bore	22.2	long joint bottom tenon bore diameter [tenon going into boot joint]					23.4	
105	li top bore lg_tenon_top	31.9 43.3	long joint top tenon bore diameter [tenon going into bell] OOR 34.0 x 34.8 length top tenon on long joint [tenon going into bell]		-		+	31.3 44	
107	e1 distance	49	dist long joint tenon to e1 [from bot of tenon to where tone hole enters bore]					49	
108	d1 distance	249	dist long joint tenon to d1 [from bot of tenon to where tone hole enters bore]	_				249	
109 110	c1 distance	471	dist long joint tenon to c1 [from bot of tenon to where tone hole enters bore]		 		+	464	
111									
112 113							\vdash		
114									
115		12.7					\Box	12.7	
116		12.7	I .	1	1	1		14./	

	A	В	C	D	Е	F	G	Н	T
117	e .	13.3	Ų.			H	Ü	13.4	-
118	d	13.6						13.6	
119									
120	с	16.2						17	
121	b	17						17.3	
122	a	17.2						17.4	
123	g	18.4						19	
124	f1	22						22.3	
125									
126	e1		e1 tone hole bore diameter on long joint					23.8	
127		26	d1 tone hole bore diameter on long joint					27	
	c1	30.2	DeLoose2 OOR; c1 tone hole bore diameter on long joint					30.2	
129									
130									
131									
132						-			
133						-			
	VIII. Bell	0	DeLoose2 no tone hole in the bell	2 -> hall avmar -!		\vdash		0	
	bell logic		If bell_logic = 0 => normal conical bore; if bell_logic = 1 => inverted concial bore; if bell_logic =	∠ => peii expansion	<u> </u>	\mapsto		0	
136	bell_length (0, 1, 2) bell bot bore (0, 1, 2)		total length of bell		-	\vdash		319 31.2	
	bell_bot_bore (0, 1, 2) bell_top_bore 0, (1, 0, 2)		DeLoose2; OOR 30.9 x 31.2; dia bore at the bottom of bell [end with socket]; DeLoose1, OOR, bell flare, measured at bottom of caliper jaws; dia bore at the top of bell [wher	o low Ph ovite1:		\vdash		31.2 32.6	
	bell top bore 0, (1, 0, 2) bell center bore (only for logic 2)	32.5	dia bore at max center of expansion	e iow du exits];	-	\vdash		32.0	
	bell_center_bore (only for logic 2) bell_wall (only for logic 2)		dia pore at max center of expansion		-	+			
	bell_bot_bore_expansion (only for logic 2)		dist of bottom to maxium of expansion [including bell socket length,if bell logic=0 =>100]		 	++			
	Outside diameter of wood at expansion		Just for David		-	++			
	bell tenon (0, 1, 0, 2)	44.7	bell socket length			+		45.3	
	bell expansion length (only for logic 2)		distance of maxium expansion to top of bell [where Bb exits]			\vdash		43.3	
	belfiq		Usually about 10mm more than line 138;			\vdash		42	
145	Deling	35	osuany about 10mm more than line 130,			+		44	
147						\vdash			
	IX. PITCH					\Box			
	pitch	430	input the historical pitch of the bassoon, must input value, best guess			\vdash		430	
	freq init		Initial frequency range variable			\vdash		380	
	Delta frequency		frequency increment parameter			\Box		3	
	Number of frequencies		number of frequencies to scan for min chi sq					18	
153	Frequency adjust		frequency adjustment parameter					1.05	
	X. Title		<u> </u>						
	title		Bassoon Calculation: DeLoose2-O-Watel242-Wg1-WOB-DNM						
156						\Box			
157			Notes on long joint bore: DeLoose2 OOR more than normal, especially near large tenon			\sqcup			
158			Notes on boot joint bore: DeLoose2 normal			\sqcup			
	XI. Bore Diameter Locations		Notes on wing joint bore: DeLoose2 normal			\sqcup			
160			Number of diameters		<u> </u>	\vdash		19	
161	Bell Bore		Initial bore diameter [do not include in line 160 counting]		<u> </u>	\vdash		9.9	
162	30.0mm dia. at socket	415	dist1; measured from the bottom of the wing joint- 10mm			\vdash	1	470	
163 164	31mm rod 110mm from socket OOR		dist2; measured from the bottom of the wing joint- 11mm			\vdash	1	380	
165	32.5mm dia.at bell end OOR	338 255	dist3; measured from the bottom of the wing joint- 12mm DeLoose2 OOR; dist4; measured from the bottom of the wing joint- 13mm		-	\vdash	1	348 255	
166			DeLoose2 Vrfd gap, OOR; dist5; measured from the bottom of the wing joint- 13mm DeLoose2 vrfd gap, OOR; dist5; measured from the bottom of the wing joint- 14mm		-	\vdash	- 1	30	
165		125 70	dist6; measured from the bottom of the wing joint- 15mm	Rottom wing it	16 5	\vdash	1	30 0	
168			dist7; measured from the bottom of the wind joint- 15mm dist7; measured from the top of the bootjoint - small bore side- 16mm	Bottom wing it top boot small	16.5 15.9		2	0	
169			dist8; measured from the top of the bootjoint - small bore side- 16mm	top boot large	23.6		2	0	
170			dist9; measured from the top of the bootjoint - small bore side- 17mm dist9; measured from the top of the bootjoint - small bore side- 18mm	top boot large	23.0	+	2	225	
171			dist10; measured from the top of the bootjoint - large bore side- 19mm	sbore dia sep	18.9	\vdash	3	330	
172			dist11; measured from the top of the bootjoint - large bore side - 20mm	Ibore dia sep	17.2		3	290	
173			dist12; measured from the top of the bootjoint - large bore side- 21mm	Hook Length	402		3	215	
174			dist13; measured from the top of the bootjoint - large bore side- 22mm	congen			3	180	
175			dist14; measured from the top of the bootjoint - large bore side- 23mm			\vdash	4	90	
176		490	DeLoose2 OOR; dist15; measured from the top of the long joint- 24mm	lj bot bore	22.2	\vdash	4	500	
177		425	DeLoose2 OOR; dist16; measured from the top of the long joint- 25mm			\Box	4	440	
178		337	dist17; measured from the top of the long joint- 26mm			\Box	4	380	
179		285	DeLoose2 OOR; dist18; measured from the top of the long joint- 27mm			П	4	318	
180			dist19; measured from the top of the long joint- 28mm				4	250	
181			dist20; measured from the top of the long joint- 29mm				4	165	
182			dist21; measured from the top of the long joint- 30mm				4	126	
183		43	DeLoose2 OOR vrfd; dist22; measured from the top of the long joint- 31mm				4	40	
184		0	dist23; measured from the top of the long joint- 32mm	lj top bore	31.9		4	0	