Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM

			ſ		F	_	
\perp	A A	В	G G	D	<u> </u>	F	G
	I. Bocal		Original bocal, Poerschmann1 not original	4.2	-	\vdash	
	dia reed end		inside diameter of reed end of bocal			\vdash	
	bocal string length (0, 1)		length of bocal inserted into receiver	38	-	\vdash	
	metal bocal length top (0, 1)		meas. along top of bocal	352	1	$\vdash \vdash$	-
	metal bocal length bot (0, 1)		meas. along bottom of bocal	331	1	\sqcup	
	dia wj end		inside diameter of bocal; OOR 9.4 x 9.8	9.6			
7					L	Ш	
	bocal logic	2	if bocal logic = 0 => bocal is choke; if bocal logic = 1 =>choke in wing joint calc; if bo	ocal 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 to	op of the wing ha	s been	replac	ced
14	choke bore dia.	9.7	logic 1; bore diameter of choke; logic 0; diameter bocal bottom or beginning of	bore at bottom of	r receiv	er	
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	e as string length	1)		
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 ho	ole]			
	wj e	295					
21	wj d	341					
22							
23	Bore dia. Bottom of wing joint	17.4	Need to Average, usally oval; Poerschmann1 yes				
	Bore dia. top of boot joint small side	18.4	* ' ' '				
	Bore dia. top of boot joint large side	24.2					
26						\Box	
	III. Boot Lengths		Poerschmann1 Two hole design		1		
	bj logic	1	$ \log c $ if bj $ \log c = 0 = > plug removed$; if bj $ \log c = 1 = > plug cannot be rem$	oved		\Box	
	bj c	94	dist from top of boot to where topmost tone hole enter bore [not at center of to			\Box	
	bj b	148		1	1		
	bj a	191			1		
32	-				1		
	bistotal [Needed for both boot logics]	422	total length of boot, include socket, along the small bore side			\Box	
	bjltotal [Needed for both boot logics]	422	total length of boot, include socket, along large bore side				
	plug small [Need for logic 0 only]	0	plug thickness, large bore side				
	plug large [Need for logic 0 only]	0	plug thickness, small bore side				
37	p. a. y = [a		, , , , , , , , , , , , , , , , , , ,				
	boots [Needed for both boot logics]	380	hook length along s bore => bjs-septum length = boot - septum <= calc the se	entum			
	bootl [Needed for both boot logics]	380	hook length along I bore => bjl-septum length = boot - septum <= calc the se		1		
40	book [receded for both book logics]	500	nook length diong i bore is by beptam length book beptam i eare the be	Jeann			
	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 sti	ck]			
	bootl bottom [Needed for both boot logics]	21.5	use hook, dist of bore [same as boots bot except tenon depth will be different]	CKJ		t	
43	book bottom [Needed for both book logics]	21.5	ase mook, dist of bore [same as boots bot except terior depth will be different]				
	extreme bore [Needed for logic 1 only]	41	Outside dia of plug [measured] = small bore dia + large bore dia + the septum	width			
45	extreme bore [Needed for logic 1 only]	7.1	Sindi bore did in plug [medsared] = Sindi bore did i large bore did i die septan	Widen			
	septum length exp [Need for logic 0 only]	0	dist. from very bottom of boot to septum [point between the large and small bo	rel		1	
	septum length calc - do not imput value	42	dist. From very bottom of boot to septum [point between the large and small but dist. From very bottom of boot to spetum [bjl - bootl]	do not imput va	luo	\vdash	
	septum length - do not imput value	42	if bj logic = 0 => septum = septum exp; if bj logic = 1 => septum = septum c			\vdash	
	septum length - do not imput value	42		do not imput va	lue	\vdash	
49	sbore dia sep* [Needed for both boot logics]	19.6	contum amali have dia [aggume – lhave dia con]			\vdash	
			septum small bore dia [assume = lbore dia sep]	di for Logic 01	1	-	
	Ibore dia sep* [Needed for both boot logics]	19.8	septum large bore dia [assume = sbore dia sep] [mesure if cork can be remove	a; for Logic U]	-	-	
	sep width exp [Need for logic 0 only]	0	septum width; direct measurement if remove plug	4	lee-	\vdash	
53	sep width calc - do not imput value	1.6	septum width; calc. => extreme bore - sbore - lbore	do not imput va		₩	
	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 va	iue	\vdash	
55	L: -	226	# # # # # # # # # # # # # # # # # # #	-1-1		\vdash	
	bj g	336 132	dist from top of boot (socket) to where G hole enters bore [not at cent of tone		-	-	
	bj f1	132	dist from top of boot (socket) to where F1 hole enters bore [not at cent of tone	noiej		₩	
58						\vdash	
59 60					1	\vdash	
61						-	
62					1	$\vdash \vdash$	
	IV. Tone Hole Diameters				1	\vdash	
64	f)	6.8	Poerschmann1 Tone holes are of large diameter on wing		1	\vdash	
65	0	7	Poerschmann1 Tone holes are of large diameter on wing		1	\vdash	
66		6.8			1	\vdash	
67	<u> </u>	0.0			1	\vdash	
68	c	8.6	Poerschmann1Tone holes are of large diameter on boot		1	\vdash	
69		9.1	- 22-25			\vdash	
70		7.2				\vdash	
71	<u> </u>	9.6	Poerschmann1 OOR 9.8 x 9.2		1	\vdash	
72	f1	9.4				\Box	
73						\vdash	
74	e1	14.5	e1 tone hole dia, on long joint [need to average NS and EW dias, NS usually gr	eaterl			
75	d1	10.8	d1 tone hole dia, on long joint [need to average NS and EW dias, NS usually gr			\Box	
76		10.3	c1 tone hole dia, on long joint [need to average NS and EW dias, NS usually gro				
77			Poerschmann1 C1 tone hole is small compared to the others	_			
78							
78 79							
80							
81							
	V. Tone Hole Depths				1		
83		24.2					
84		22.8					
85		24.1					
86							
87	с	26.8					
88		25.2					
89	a	24.8					
90	g	15	meas along bot tone hole wall [north wall, toward reed,tone hole usually at ang	le]	1		
91		21.5	meas along east side tone hole wall [north wall, toward reed,t hole usually at a		1		
92						\Box	
93	e1	13.1	e1 tone hole depth;meas east/west with deapth gauge [at center, or shortest d	ist]			
			y y y y y y y y y y y y y y y y y y y	-			

Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM

1.34 1.10 1.24 1.10 1.25 1.10 1.25 1.10 1.25 1.10 1.25 1.10 1.25			-				- 1	_
1.25 C. 1.26		A	12.0	C	D	E	F	G
Section 1 1 1 1 1 1 1 1 1 1							-	
VILLONG Joint Street Community Street Communi		CI	12.4	cr tone note depth, meas east, west with deapth gauge [at center, or shortest d	iistj			
Comparison Com								
Personance of the property of							-	
Vision Joint							-	
Comment Comm							\dashv	
100 1. seroth		VI Long loint		Poorschmann1 a table along long joint				
100 St. perest. Jobb 100			500				-	
100 100								
100 1,000 10					it of round			
100 street 100 1					ac or round			
100 1.00 1								
1981 1982								
100 Clastrace								
110 111 112 113 114 115 114 115								
111 112 113 114 115		er distance	150	and rong joint tends to at [morn but of tends to mile a tone note enterly burg				
13.5 13.5								
13 13 13 13 13 13 13 13								
113 VII. See all ameters at Tone Holes								
11.5 MT. Bell								
11		VII. Bore diameters at Tone Holes						
13 13 13 13 13 13 13 13			13.4					
13		e						
120 18		d						
120 180								
12 12 13 18 19 19 19 19 19 19 19		С	18	Poerschmann1 cyrindical bore alone c, b, and a tone tones				
123 134 135 136 137		b		, , , , , , , , , , , , , , , , , , , ,				
120 20 20 20 20 20 20 20		a						
126 1		g						
126 et al. 23.8 1 tone hole bore diameter on long joint	124	f1	22.6					
126 et al. 23.8 1 tone hole bore diameter on long joint								
127 et 26.1 dit tone hole bore diameter on long joint	126	e1	23.8	e1 tone hole bore diameter on long joint				
13								
130		c1						
132	129							
13 13 13 13 13 13 13 13	130							
133 VIII. Bell	131							
135 Self	132							
135 Bell logic	133							
135 bell Length (0, 1, 2)	134	VIII. Bell		Poerschmann1 no tone hole in the bell				
137 bell bot, bore (0, 1, 0, 2)	135	bell logic	1	If bell_logic = 0 => normal conical bore; if bell_logic = 1 => inverted concial bore; if	bell_logic = 2 =>	bell expa	nsion	
138 bell center bore (only for logic 2) 25.3 dia bore at the top of bell [where low 8b exits] 140 bell wall (only for logic 2) 25.3 dia bore at the top of bell [where low 8b exits] 25.4 25.4 25.4 25.5 25.	136	bell_length (0, 1, 2)	278	total length of bell [lines 141 + 144 = line 136]				
dia bore at max center of expansion September Sept	137	bell_bot_bore (0, 1, 2)	30.3	dia bore at the bottom of bell [end with socket]				
140 bell wall (only for logic 2)	138	bell_top_bore 0, (1, 0, 2)	25.3	dia bore at the top of bell [where low Bb exits]				
131 bet bot bore expansion (only for logic 2)	139	bell_center_bore (only for logic 2)		dia bore at max center of expansion				
141 142 143 141 143 141 143 141 144 145	140	bell_wall (only for logic 2)		bell wall thickness, Just for David				
143 bell kenon (0, 1, 0, 2)	141			dist of bottom to maxium of expansion [including bell socket length,if bell logic=	=0 =>100]			
144 bell expansion, length (only for logic 2)	142	Outside diameter of wood at expansion		Just for David				
145 belifig			41.5					
146	144	bell_expansion_length (only for logic 2)		distance of maxium expansion to top of bell [where Bb exits]				
148] IX. PTICH	145	belflg	48.5	Usually about 10mm more than line 138				
148] IX. PITCH								
149 pitch 315 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 1.05 Frequency adjust 1.05 Frequency adjustment parameter 1.05 Frequency a								
1.05 Frequency adjust 1.05 Frequency adjustment parameter								
155 title								
Bassoon Calculation: Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM			1.05	rrequency adjustment parameter				
Notes on long joint bore: Poerschmann1 very out of round in places Notes on boot joint bore: Poerschmann1 small side very out of round and cyn.				0.1.1				
Notes on long joint bore: Poerschmann1 very out of round in places Notes on boot joint bore: Poerschmann1 small side very out of round and cyn. Notes on wing joint bore: Poerschmann1 good Notes on wing joint bore in the wing joint low ming joint low poers goint low poers		title		bassoon Calculation: Poerschmann1-O-Leipzig1384-Wg1-WOB-DNM		\vdash		
Notes on boot joint bore: Poerschmann1 small side very out of round and cyn.	120			Notes on long joint have, Depreshment were set of several trades		\vdash		
Notes on wing joint bore: Poerschmann1 good	150						\dashv	
161 Bell Bore 9.7 Initial bore diameters 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting] 9.7 Initial bore diameter [do not include in line 160 counting in line 1.1 Initial bore diast; measured from the bottom of the wing joint- 1.1 14.4 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line 1.1 Initial bore diameter [do not include in line in line 1.1 Initial bore diameter [do not include in line in line 1.1 Initial bore diameter [do not include in line in line in line in line in line 1		YT Rore Diameter Locations					-	
Sell Bore		AL DOTE DIGITIELES LOCATIONS	20			\vdash	-+	
162 30.3mm dia. at socket 468 dist1; measured from the bottom of the wing joint- 10mm 163 30mm rod 50mm from socket 430 dist2; measured from the bottom of the wing joint- 11mm 164 29mm rod 83mm from socket 298 dist4; measured from the bottom of the wing joint- 12mm 165 28mm rod 120mm from socket 298 dist4; measured from the bottom of the wing joint- 13mm 166 27mm rod 180mm from socket 181 dist5; measured from the bottom of the wing joint- 15mm 167 26mm rod 250mm from socket 181 dist6; measured from the bottom of the wing joint- 15mm 17.4 168 25.3mm dia. at bell end 99 dist7; measured from the bottom of the wing joint- 15mm 18.4 169 3 dist8; measured from the bottom of the wing joint- 16mm 18.4 169 3 dist8; measured from the bottom of the wing joint- 17mm 170 170 0 dist9; measured from the top of the bootjoint - small bore side- 18mm 171 252 dist10; measured from the top of the bootjoint - small bore side- 19mm 172 dist11; measured from the top of the bootjoint - large bore side- 20mm 173 dist12; measured from the top of the bootjoint - large bore side- 21mm 174 250 dist13; measured from the top of the bootjoint - large bore side- 22mm 175 85 dist14; measured from the top of the bootjoint - large bore side- 22mm 176 490 dist15; measured from the top of the bootjoint - large bore side- 23mm 177 451 dist16; measured from the top of the long joint- 24mm; 178 dist16; measured from the top of the long joint- 24mm; 177 dist16; measured from the top of the long joint- 25mm 178 dist17; measured from the top of the long joint- 27mm 179 227 dist18; measured from the top of the long joint- 28mm 180 dist20; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 30mm 183 dist20; measured from the top of the long joint- 30mm 183 dist20; measured from the top of the long joint- 30mm 183 dist20; measured from the top of the		Rell Rore					+	
163 30mm rod 50mm from socket 430 dist2; measured from the bottom of the wing joint- 11mm 164 29mm rod 83mm from socket 366 dist3; measured from the bottom of the wing joint- 12mm 165 28mm rod 120mm from socket 298 dist4; measured from the bottom of the wing joint- 13mm 166 27mm rod 180mm from socket 223 dist5; measured from the bottom of the wing joint- 14mm 167 26mm rod 250mm from socket 181 dist6; measured from the bottom of the wing joint- 15mm 17.4 17.4 17.4 17.4 17.4 17.5 18.5						\vdash	-+	- 1
165 29mm rod 83mm from socket 298 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 166 27mm rod 180mm from socket 223 dist5; measured from the bottom of the wing joint- 14mm 167 26mm rod 250mm from socket 181 dist6; measured from the bottom of the wing joint- 15mm 17.4 168 25.3mm dia. at bell end 99 dist7; measured from the bottom of the wing joint- 16mm 17.4 168 25.3mm dia. at bell end 99 dist8; measured from the bottom of the wing joint- 16mm 17.4 169 3 dist8; measured from the bottom of the wing joint- 17mm 17.4 17.5						\vdash	-+	1
166 27mm rod 180mm from socket 223 dist5; measured from the bottom of the wing joint- 14mm 8 167 26mm rod 250mm from socket 181 dist6; measured from the bottom of the wing joint- 15mm 8 8 17.4 181 182 183 dist6; measured from the bottom of the wing joint- 16mm 187 187 188 189							\rightarrow	1
167 26mm rod 250mm from socket 181 dist6; measured from the bottom of the wing joint- 15mm Bottom wing jt 17.4 168 25.3mm dia. at bell end 99 dist7; measured from the bottom of the wing joint- 16mm top boot small 18.4 170 3 dist8; measured from the bottom of the wing joint- 17mm top boot large 24.2 170 0 dist9; measured from the top of the bootjoint - small bore side- 18mm							-+	1
168 25.3mm dia. at bell end 99 dist7; measured from the bottom of the wing joint- 16mm top boot small 18.4 169 3 dist8; measured from the bottom of the wing joint- 17mm top boot large 24.2 170 170 0 dist9; measured from the bottom of the wing joint- 17mm top boot large 24.2 170 1	100				Bottom wing it	17 /	-	1
3 dist8; measured from the bottom of the wing joint- 17mm top boot large 24.2	167						-+	1
170 0 dist9; measured from the top of the bootjoint - small bore side- 18mm 171 252 dist10; measured from the top of the bootjoint - small bore side- 19mm sbore dia sep 19.6 dist12; measured from the top of the bootjoint - large bore side- 20mm lbore dia sep 19.8 173 303 dist12; measured from the top of the bootjoint - large bore side- 21mm Hook Length 380 174 250 dist13; measured from the top of the bootjoint - large bore side- 22mm Hook Length 380 175 385 dist14; measured from the top of the bootjoint - large bore side- 22mm 175 490 dist15; measured from the top of the bootjoint - large bore side- 22mm 176 490 dist15; measured from the top of the long joint- 24mm; lj bot bore 23.6 177 451 dist16; measured from the top of the long joint- 25mm 178 415 dist16; measured from the top of the long joint- 25mm 179 227 dist18; measured from the top of the long joint- 27mm 180 165 dist19; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 29mm 182 30 dist21; measured from the top of the long joint- 30mm 183 0 dist21; measured from the top of the long joint- 30mm 183 0 dist21; measured from the top of the long joint- 31mm 184 185			QQ				-	1
171 252 dist10; measured from the top of the bootjoint - small bore side- 19mm sbore dia sep 19.6	168			dist8: measured from the hottom of the wing joint- 17mm				2
340 dist11; measured from the top of the bootjoint - large bore side- 20mm lbore dia sep 19.8	168 169		3		top boot large	24.2	J	
173 303 dist12; measured from the top of the bootjoint - large bore side- 21mm Hook Length 380 174 250 dist13; measured from the top of the bootjoint - large bore side- 22mm 175 85 dist14; measured from the top of the bootjoint - large bore side- 22mm 176 490 dist15; measured from the top of the long joint- 24mm; lj bot bore 23.6 177 451 dist16; measured from the top of the long joint- 25mm 178 415 dist16; measured from the top of the long joint- 26mm 179 227 dist18; measured from the top of the long joint- 27mm 180 165 dist19; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 29mm 182 30 dist21; measured from the top of the long joint- 30mm 183 0 dist21; measured from the top of the long joint- 31mm	168 169 170		3 0	dist9; measured from the top of the bootjoint - small bore side- 18mm				າ
174	168 169 170 171		3 0 252	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm	sbore dia sep	19.6		2
175	168 169 170 171 172		3 0 252 340	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm	sbore dia sep Ibore dia sep	19.6 19.8		2 3 3
176	168 169 170 171 172 173		3 0 252 340 303	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm	sbore dia sep Ibore dia sep	19.6 19.8		3 3
177	168 169 170 171 172 173 174		3 0 252 340 303 250	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm	sbore dia sep Ibore dia sep	19.6 19.8		3 3
178 415 dist17; measured from the top of the long joint- 26mm 179 227 dist18; measured from the top of the long joint- 27mm 180 165 dist19; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 29mm 182 30 dist21; measured from the top of the long joint- 30mm 183 0 dist22; measured from the top of the long joint- 31mm	168 169 170 171 172 173 174 175		3 0 252 340 303 250 85	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 23mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		3 3 3 3
179 227 dist18; measured from the top of the long joint- 27mm 180 165 dist19; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 29mm 182 30 dist21; measured from the top of the long joint- 30mm 183 0 dist22; measured from the top of the long joint- 31mm	168 169 170 171 172 173 174 175 176		3 0 252 340 303 250 85 490	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 23mm dist15; measured from the top of the long joint- 24mm;	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		2 3 3 3 4 4
180 165 dist19; measured from the top of the long joint- 28mm 181 98 dist20; measured from the top of the long joint- 29mm 182 30 dist21; measured from the top of the long joint- 30mm 183 0 dist22; measured from the top of the long joint- 31mm	168 169 170 171 172 173 174 175 176		3 0 252 340 303 250 85 490 451	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 22mm dist15; measured from the top of the long joint- 24mm; dist16; measured from the top of the long joint- 25mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4
181 98 dist20; measured from the top of the long joint- 29mm 182 182 30 dist21; measured from the top of the long joint- 30mm 183 183 0 dist22; measured from the top of the long joint- 31mm 183	168 169 170 171 172 173 174 175 176 177		3 0 252 340 303 250 85 490 451 415	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 21mm dist14; measured from the top of the bootjoint - large bore side- 22mm dist15; measured from the top of the long joint- 24mm; dist16; measured from the top of the long joint- 25mm dist17; measured from the top of the long joint- 25mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4 4
182 30 dist21; measured from the top of the long joint- 30mm 183 183 0 dist22; measured from the top of the long joint- 31mm 183	168 169 170 171 172 173 174 175 176 177 178		3 0 252 340 303 250 85 490 451 415 227	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 22mm dist15; measured from the top of the bootjoint - large bore side- 23mm dist15; measured from the top of the long joint- 24mm; dist16; measured from the top of the long joint- 25mm dist17; measured from the top of the long joint- 26mm dist18; measured from the top of the long joint- 27mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4 4 4
183 0 dist22; measured from the top of the long joint- 31mm	168 169 170 171 172 173 174 175 176 177 178 179 180		3 0 252 340 303 250 85 490 451 415 227 165	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 22mm dist15; measured from the top of the long joint- 12mm; dist16; measured from the top of the long joint- 25mm dist17; measured from the top of the long joint- 25mm dist18; measured from the top of the long joint- 27mm dist19; measured from the top of the long joint- 27mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4 4 4
	168 169 170 171 172 173 174 175 176 177 178 179 180 181		3 0 252 340 303 250 85 490 451 415 227 165 98	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 21mm dist14; measured from the top of the bootjoint - large bore side- 23mm dist15; measured from the top of the long joint- 24mm; dist16; measured from the top of the long joint- 25mm dist17; measured from the top of the long joint- 27mm dist18; measured from the top of the long joint- 28mm dist19; measured from the top of the long joint- 28mm dist19; measured from the top of the long joint- 28mm dist20; measured from the top of the long joint- 29mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4 4 4 4
184 0 dist23; measured from the top of the long joint- 32mm li top bore 30.9	168 169 170 171 172 173 174 175 176 177 178 179 180 181 182		3 0 252 340 303 250 85 490 451 415 227 165 98 30	dist9; measured from the top of the bootjoint - small bore side- 18mm dist10; measured from the top of the bootjoint - small bore side- 19mm dist11; measured from the top of the bootjoint - large bore side- 20mm dist12; measured from the top of the bootjoint - large bore side- 21mm dist13; measured from the top of the bootjoint - large bore side- 22mm dist14; measured from the top of the bootjoint - large bore side- 22mm dist15; measured from the top of the bootjoint - large bore side- 23mm dist15; measured from the top of the long joint- 24mm; dist16; measured from the top of the long joint- 25mm dist17; measured from the top of the long joint- 26mm dist19; measured from the top of the long joint- 28mm dist20; measured from the top of the long joint- 29mm dist20; measured from the top of the long joint- 29mm dist21; measured from the top of the long joint- 30mm	sbore dia sep Ibore dia sep Hook Length	19.6 19.8 380		4 4 4