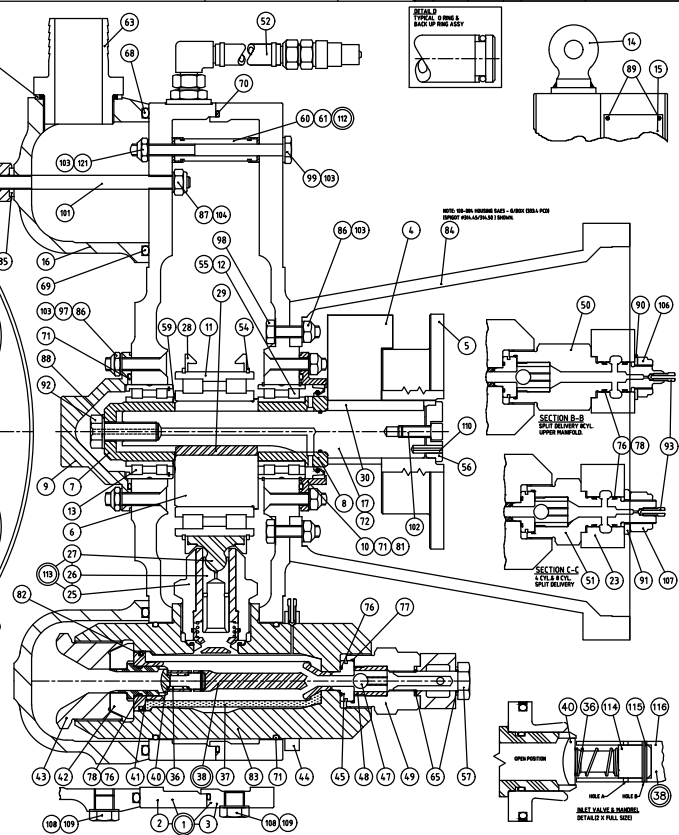
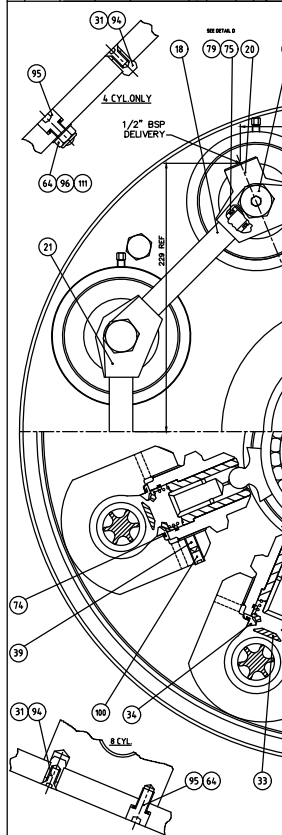


Fig. 4.4 - Century pump Assembly

MATERIAL LIST

INFORMATION FOR ESTIMATION OF WEIGHT AND COST ONLY

PARTS LIST



ITEM	PART NO.	QTY	DESCRIPTION	REMARKS
1	100	1	CAST IRON PUMP HOUSING	
2	101	1	IMPELLER	
3	102	1	SHAFT	
4	103	2	BEARING	
5	104	1	IMPELLER NUT	
6	105	1	IMPELLER WASHER	
7	106	1	IMPELLER KEY	
8	107	1	IMPELLER LOCKWASHER	
9	108	1	IMPELLER BUSHING	
10	109	1	IMPELLER GASKET	
11	110	1	IMPELLER O-RING	
12	111	1	IMPELLER GASKET	
13	112	1	IMPELLER O-RING	
14	113	1	IMPELLER GASKET	
15	114	1	IMPELLER O-RING	
16	115	1	IMPELLER GASKET	
17	116	1	IMPELLER O-RING	

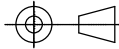
MATERIAL LIST										INFORMATION FOR ESTIMATION OF WEIGHT AND COST ONLY	A B C D E F G H J K L M N P Q R S T U V W X Y Z	THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED OR COMMUNICATED TO OTHER PERSONS OR COMPANIES WITHOUT WRITTEN PERMISSION FROM FLOWPLANT GROUP LTD.	MANUFACTURERS UNABLE TO COMPLY MAY SUBMIT ALTERNATIVES WHEN QUOTING.	Incl. male connection	PARTS LIST									
ITEM	PART NO.	MATERIAL	SPEC	SIZE	QTY	TOTAL WT	REMARKS	ITEM	PART NO.	MATERIAL	SPEC	SIZE	QTY	TOTAL WT	REMARKS	ITEM	PART No.	DRG No	QTY	DESCRIPTION	REMARKS			
1	100-347	100-334	1	1	1		CRANKCASE ASSEMBLY	41	100-476	100-476	4	8	8		SEAT INLET	80	100-997	100-997	8	8	8	WASHER MANIFOLD		
2	100-334	100-334	1	1	1		CRANKCASE INLET	42	100-488	100-488	4	8	8		COLLAR	88	013-284	NONE	14	14	14	NUT NYLOC M10 S125		
3	100-335	100-334	1	1	1		CRANKCASE DELIVERY	43	100-499	100-499	4	8	8		NUT INLET	87	013-199	NONE	8	8	8	NUT NYLOC M12		
4	100-517	100-517	1	1	1		COUNTER BALANCE	44	100-184	100-184	4	8	8		BLEED RING	88	013-116	NONE	1	1	1	WASHER PLAIN M16		
5	023-305	023-305	1	1	1		COUPLING	45	100-563	100-563	4	8	8		SEAT DELIVERY	89	013-232	NONE	6	6	6	SCREW HAMMER DRIVE		
6	100-515	100-515	1	1	1		ECCENTRIC	46								90	013-308	NONE	0	0	0	WASHER M10		
7	100-267	100-267	1	1	1		ELDER NON-PURJ END	47	013-037	013-037	4	8	8		VALVE DELIVERY	91	100-381	100-381	4	0	4	WASHER		
8	100-462	100-462	1	1	1		ELDER DRIVE END OIL CIRCULATION	48	100-484	100-484	4	8	8		GUDGE DELIVERY VALVE	92	100-503	100-453	1	1	1	SCREW SHAFT OIL CIRCULATION		
9	100-336	100-336	1	1	1		BEARING RETAINER	49	100-299	100-299	0	8	0		NUT DELIVERY	93	100-345	100-345	8	10	10	BLEED SCREW		
10	100-484	100-484	1	1	1		OIL SEAL CHAMBER OIL CIRCULATION	50	100-484	100-484	4	0	4		NUT DELIVERY	94	013-281	NONE	8	8	8	SCREW SET CSR M16 X 1.5		
11	100-520	NONE	1	1	1		BEARING	51	100-377	100-377	0	0	0		NUT DELIVERY	95	013-298	NONE	8	8	8	SCREW SET CAP M16 X 2.0		
12	100-054	NONE	1	1	1		BEARING	52	100-442	100-442	1	1	1		OIL EXPANSION PIPE ASSY	96	013-029	NONE	6	6	6	WASHER PLAIN M10 X 1.0	M16 Zn	
13	100-056	NONE	1	1	1		BEARING	53	100-376	100-376	8	0	0		CIRCLIP	97	013-181	NONE	8	8	8	SCREW SET CSR M10 X 1.0		
14	061-047	061-077	1	1	1		LIFTING EYE	54	100-521	NONE	2	2	2		CIRCLIP	98	013-219	NONE	6	6	6	SCREW SET M10 X 1.0		
15	043-110	043-110	1	1	1		CABLE PUMP IDENTIFICATION MANIFOLD	55	013-185	NONE	2	2	2		CIRCLIP	99	013-303	NONE	8	8	8	BOLT M16 X 30		
16	100-456	100-456	1	1	1		SHAFT CENTURY OIL CIRCULATION	56	100-234	100-234	1	1	1		DRIVE CAP	100	013-067	NONE	4	8	8	SCREW SOCKET HELM M10		
17	100-465	100-465	1	1	1		TUBE DELIVERY	57	100-333	100-333	0	6	0		BANDIO BOLT	101	100-465	100-465	8	8	8	STUD MANIFOLD		
18	100-316	100-316	0	8	0		TUBE DELIVERY	58	100-176	100-333	0	2	0		BANDIO BOLT	102	013-218	NONE	1	1	1	SCREW SET CAP HELM M10		
19	100-380	100-316	4	0	8		TUBE DELIVERY	59	100-071	NONE	1	1	1		DISC SPRING	103	013-305	NONE	30	30	30	WASHER		
20	100-316	100-316	0	2	0		BANDIO S-PORT	60	100-343	100-343	8	8	8		SPACER TUBE	104	013-111	NONE	8	8	8	WASHER M12		
21	100-317	100-317	0	6	0		BANDIO S-PORT	61	100-341	100-341	16	16	16		SEAL	105	100-076	100-076	8	8	8	NUT MANIFOLD		
22	100-379	100-379	2	0	4		BANDIO S-PORT	62	032-191	032-191	1	1	1		CON 1/2 BSP 1/2 BSP ST-10T	106	100-501	100-501	0	0	0	NUT SLUT DELIVERY		
23	100-378	100-378	2	0	4		BANDIO S-PORT	63	043-177	043-177	1	1	1		ADAPTOR	107	013-094	013-094	4	0	4	NUT NYLOC M10		
24								64	033-449	NONE	8	8	8		SEAL BONDED 1/8 BSP	108	013-400	NONE	2	2	2	DRAIN PLUG	MAGNETIC	
25	100-670	100-670	4	8	8		CYLINDER 22.5	65	015-097	NONE	0	16	0		SEAL BONDED 3/8 BSP	109	013-028	NONE	2	2	2	WASHER SEAL 3/8" BSP		
26	100-660	100-660	4	8	8		CYLINDER 27.5	66	015-088	NONE	1	1	1		SEAL BONDED 1/2 BSP	110	013-021	NONE	1	1	1	FIN		
27	100-660	100-660	4	8	8		CYLINDER 27.5	67	015-010	NONE	1	1	1		SEAL BONDED 7/8 BSP	111	013-030	NONE	12	8	8	NUT NYLOC M10		
28	100-560	100-560	4	8	8		PISTON 22.5	68	013-292	NONE	1	1	1		O/RING	112	100-094	100-094	8	8	8	SPACER ASSY		
29	100-561	100-561	4	8	8		PISTON 25.0	69	013-291	NONE	1	1	1		O/RING	113	100-073	100-073	4	8	8	HISTON CYLINDER & SUPPLER ASSY 22.5		
30	100-562	100-562	4	8	8		PISTON 27.5	70	013-296	NONE	1	1	1		O/RING	104-074	100-073	4	8	8	HISTON CYLINDER & SUPPLER ASSY 25.0			
31	100-609	100-609	4	8	8		SUPPLIER	71	013-191	NONE	18	18	18		O/RING	105-075	100-073	4	8	8	HISTON CYLINDER & SUPPLER ASSY 27.5			
32	100-516	100-516	2	2	2		RETAINING RING	72	013-001	NONE	1	1	1		O/RING	114	100-075	100-075	4	8	8	STOP INLET VALVE		
33	100-063	100-063	1	1	1		KEY 8x10x6	73	013-000	NONE	4	8	8		SEAL	115	100-348	NONE	4	8	8	FIN		
34	100-064	100-063	1	1	1		KEY 14x6x8	74	013-222	NONE	4	8	8		O/RING	116	100-072	100-072	4	8	8	MANDEL		
35	100-337	100-337	8	8	8		SHEAR PIN	75	013-302	NONE	8	16	16		O/RING	117	100-401	100-334	1	1	1	CRANKCASE ASSY		
36	100-375	100-375	8	0	0		PLUG	76	013-256	NONE	16	16	32		O/RING	118	100-334	100-334	1	1	1	CRANKCASE INLET	CAST IRON OPTION	
37	100-449	100-449	4	8	8		VALVE DIAPHRAGM PROTECTION	77	013-279	NONE	4	8	8		O/RING	119	100-335	100-334	1	1	1	CRANKCASE DELIVERY		
38	100-569	100-569	4	8	8		SEAT DIAPHRAGM PROTECTION	78	013-257	NONE	12	8	24		BACK UP RING	120	100-417	100-334	1	1	1	CRANKCASE ASSY	AS ITEM 1 BUT ANODED	
39	037-008	037-008	4	8	8		SPRING DIAPHRAGM PROTECTION	79	013-328	NONE	8	16	16		BACK UP RING	121	013-723	NONE	8	8	8	NUT NYLOC M10	BRASS	
40	037-107	NONE	4	8	8		SPRING	80																
41	100-186	100-186	4	8	8		DIAPHRAGM	81	100-058	NONE	1	1	1		OIL SEAL									
42	100-478	100-478	4	8	8		MANDREL ASSY	82	015-043	NONE	4	8	8		SEAL									
43	100-140	100-140	4	8	8		PLUG	83	100-497	100-497	4	8	8		BARREL M14									
44	100-674	100-674	4	8	8		VALVE INLET	84	100-		1	1	1		BELL HOUSING (RED)									

DO NOT SCALE  
IF IN DOUBT ASK !

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ISSUE ARE TO BE DESTROYED.



PARTS LIST

ITEM	PART NO.	DRG. NO.	QTY	DESCRIPTION	REMARKS
------	----------	----------	-----	-------------	---------

ASSEMBLY PART NO.	NO. OF CYLINDERS			CYLINDER SIZE			MATL	REMARKS
	4	8	8 S/DEL	22.5	25	27.5		
100-680	1			1			AL	
100-681	1				1		AL	
100-682	1					1	AL	
100-683		1		1			AL	
100-684		1			1		AL	
100-685		1				1	AL	
100-686	1			1			AL	ANODIZED/HB
100-687	1				1		AL	ANODIZED/HB
100-688	1					1	AL	ANODIZED/HB
100-689		1		1			AL	ANODIZED/HB
100-690		1			1		AL	ANODIZED/HB
100-691		1				1	AL	ANODIZED/HB
100-692			1	1			AL	
100-693			1		1		AL	
100-694			1			1	AL	
100-695			1	1			AL	ANODIZED/HB
100-696			1	1	1		AL	ANODIZED/HB
100-697			1			1	AL	ANODIZED/HB

B	22/03/17	GHM		220317/C
1	25/02/97	DC		NEW DRG
ISSUE	DATE	DRN	CHK	STATUS



Flowplant Group Ltd.  
Watt Road, Churchfields, Salisbury, Wiltshire. SP2 7UD  
England.  
Tel: (01722) 325424 Fax: 01722 411329 Tlx: 477183

TOLERANCES TO BE AS SPECIFIED BELOW UNLESS OTHERWISE STATED	MATL
DIVER	0 30 100 300 1000 2000
UP TO AND INCLUDING	30 100 300 1000 2000
+ FINE MACHING	+ 0.1 ± 0.15 ± 0.2 ± 0.3 ± 0.5 ± 0.8
+ MEDIATE RANGE MACHING	+ 0.3 ± 0.5 ± 0.7 ± 1.0 ± 1.5 ± 2.0
+ FABRICATION / UNFINISHED	+ 0.5 ± 1.0 ± 1.5 ± 2.0 ± 3.0 ± 3.0

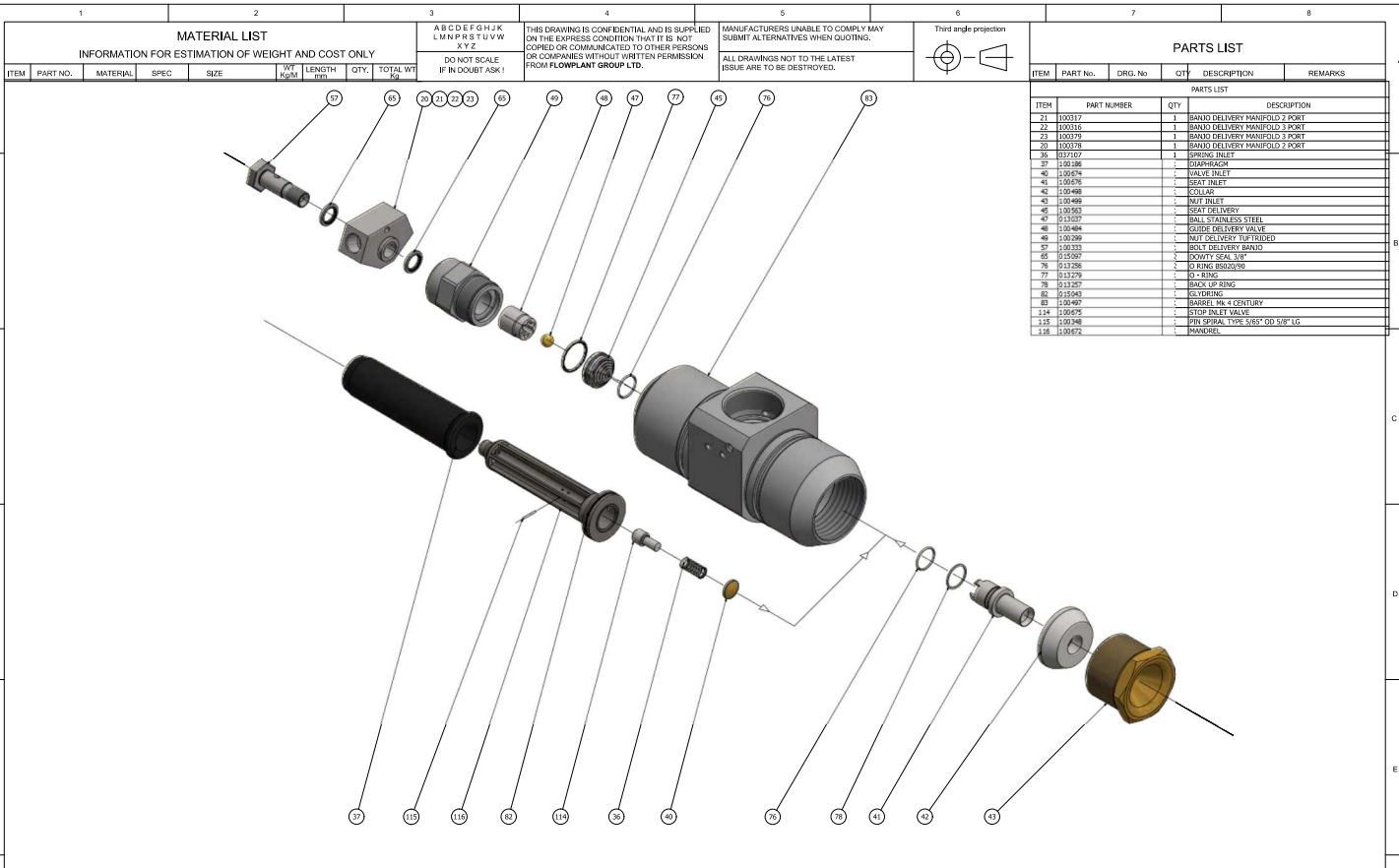
ALL DIMENSIONS IN MILLIMETRES  
GEOMETRICAL TOLERANCES TO BS 2048  
ANGULAR DIMS TO BE WITHIN:  
FINISHED ± 5° FINISHING ± 2°  
THREADS DEP. TO MET. FIT. B.S. 2779  
ASYMPTIC TO ISG / 90°

SURFACE ROUGHNESS: 1.6 MICRONS Ra  
CONCENTRICITY TO WITHIN 0.2 TLAK  
MAX RADII 15  
DRILLED HOLES ± 0.01-0.02  
HOLE CENTRES TO BE ± 0.2  
REMOVE ALL BURRS & SHARP EDGES.

HEAT TREATMENT  
CALC  
SUPERSEDED BY  
SUPERSEDED BY

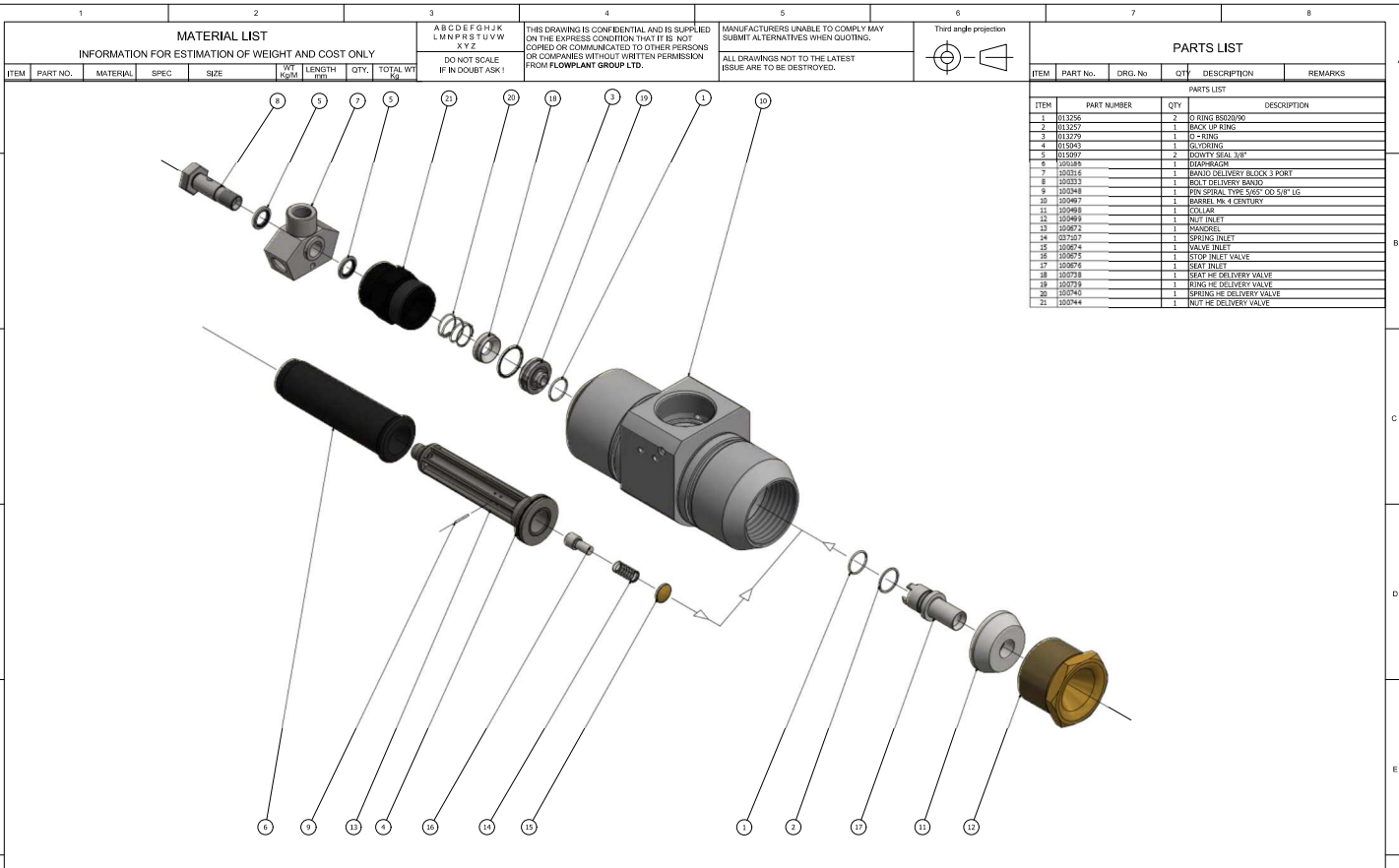
DRAWN	D CLARK	DATE	25/02/97
APPROVED		DATE	
CHECKED		DATE	
SCALE	NTS	CALC	
WEIGHT	N/A	KG	TEST
PROTECTION			

TITLE				
PUMP OPTIONS				
MK4D CENTURY PUMP				
DRG NO.	100-636/2.8 Sht 3of3			
PART NO.	100636			



1	2		3			4		5		6		7		8				
MATERIAL LIST INFORMATION FOR ESTIMATION OF WEIGHT AND COST ONLY												PARTS LIST						
ITEM	PART NO.	MATERIAL	SPEC	SIZE	WT kg/m	LENGTH mm	QTY.	TOTAL WT kg	A B C D E F G H J K L M N P R S T U V W X Y Z		THIRD ANGLE PROJECTION		ITEM	PART NO.	DRG. No	QTY	DESCRIPTION	REMARKS
<p>THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED OR COMMUNICATED TO OTHER PERSONS OR COMPANIES WITHOUT WRITTEN PERMISSION FROM FLOWPLANT GROUP LTD.</p> <p>MANUFACTURERS UNABLE TO COMPLY MAY SUBMIT ALTERNATIVES WHEN QUOTING.</p> <p>ALL DRAWINGS NOT TO THE LATEST ISSUE ARE TO BE DESTROYED.</p>												<p>DO NOT SCALE IF IN DOUBT ASK!</p>		<p>Third angle projection</p>		<p>ITEM PART NO. DRG. No QTY DESCRIPTION REMARKS</p>		
<p>21 100317 1 BANDU DELIVERY MANIFOLD 2 PORT</p> <p>22 100316 1 BANDU DELIVERY MANIFOLD 3 PORT</p> <p>23 100375 1 BANDU DELIVERY MANIFOLD 3 PORT</p> <p>20 100378 1 BANDU DELIVERY MANIFOLD 2 PORT</p> <p>36 037707 1 SPRING INLET</p> <p>37 100586 1 O-RING</p> <p>40 100674 1 VALVE INLET</p> <p>41 100576 1 SEAT BLEET</p> <p>42 100488 1 CHL. AS</p> <p>43 100449 1 INLT INLET</p> <p>45 100563 1 SEAT DELIVERY</p> <p>47 100507 1 BALL STAINLESS STEEL</p> <p>48 100484 1 SEAT DELIVERY VALVE</p> <p>49 100299 1 INLT DELIVERY 1/2 TRIDED</p> <p>57 100333 1 BALL DELIVERY MANIF.</p> <p>65 015507 1 DOWTY SEAL 1/8"</p> <p>76 013296 2 O RING BS2079D</p> <p>77 013279 1 O RING</p> <p>78 013257 1 BACK UP RING</p> <p>81 015543 1 O-RING</p> <p>83 100407 1 BARREL Mk 4 CENTURY</p> <p>114 100675 1 STOP INLET VALVE</p> <p>115 100398 1 PIN SPRAL 1/2x 3/32" OD 5/8" LG</p> <p>116 100672 1 MANDREL</p>																		

Flowplant Group Ltd. Gemini House, Brunel Rd, Churchfields, Salisbury, Wiltshire, England, SP2 7PU Tel: (01722) 325424 Fax: 01722 411329



MATERIAL LIST		INFORMATION FOR ESTIMATION OF WEIGHT AND COST ONLY		A B C D E F G H J K L M N P R S T U V W X Y Z		THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED OR COMMUNICATED TO OTHER PERSONS OR COMPANIES WITHOUT WRITTEN PERMISSION FROM FLOWPLANT GROUP LTD.		MANUFACTURERS UNABLE TO COMPLY MAY SUBMIT ALTERNATIVES WHEN QUOTING.		Third angle projection		PARTS LIST					
ITEM	PART NO.	MATERIAL	SPEC	SIZE	WT kg	LENGTH mm	QTY.	TOTAL WT kg	DO NOT SCALE IF IN DOUBT ASK!	ALL DRAWINGS NOT TO THE LATEST ISSUE ARE TO BE DESTROYED.		ITEM	PART No.	DRG. No	QTY	DESCRIPTION	REMARKS
1	013256						2					ITEM	PART NUMBER	QTY	PARTS LIST		DESCRIPTION
2	013257						1					1	013256	2		O RING BS20700	
3	013259						1					2	013257	1		BACK UP RING	
4	015043						1					3	013259	1		O-RING	
5	015097						2					4	015043	1		GLYKING	
6	100508						1					5	015097	2		DOVITY SEAL 3/8"	
7	100216						1					6	100508	1		DISHWAGON	
8	100313						1					7	100216	1		BARREL DELIVERY BLOCK 3 PORT	
9	100348						1					8	100313	1		SEAT DELIVERY VALVE	
10	100467						1					9	100348	1		PIN SPIRAL TYPE S45C OD 5/8" LG	
11	100468						1					10	100467	1		BARREL Mk 4 CENTURY	
12	100469						1					11	100468	1		COLLAR	
13	100470						1					12	100469	1		NUT INLET	
14	037107						1					13	100470	1		PACKEREL	
15	100474						1					14	037107	1		SPRING INLET	
16	100475						1					15	100474	1		VALVE INLET	
17	100476						1					16	100475	1		STOP INLET VALVE	
18	100728						1					17	100476	1		SEAT INLET	
19	100729						1					18	100728	1		SEAT THE DELIVERY VALVE	
20	100730						1					19	100729	1		RING THE DELIVERY VALVE	
21	100740						1					20	100730	1		SPRING THE DELIVERY VALVE	
22	100744						1					21	100740	1		SEAT THE DELIVERY VALVE	
												22	100744	1		NUT THE DELIVERY VALVE	

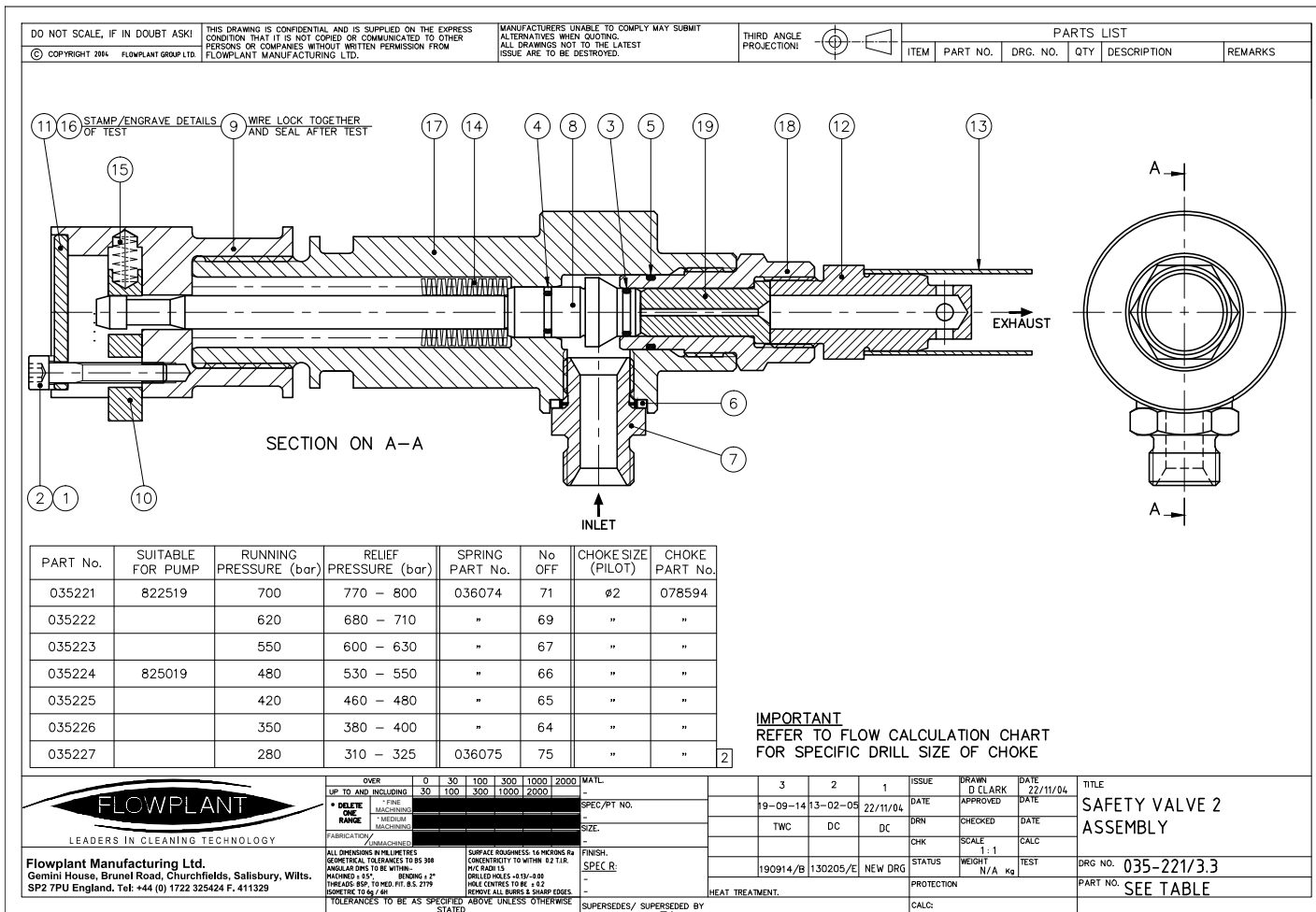


Fig. 4.7 - Safety Valve Assembly

**Parts list****035221 – Safety Valve 2 Assembly**

Item No.	Part No.	Description	Qty
1	013069	WASHER S/COIL SQR.SECTION M6 SPRING STEEL ZN	1
2	013525	SCREW SET SOCKET CAP HD M 6-1.0 6G 35 LG HT 8.8 ZN	1
3	015013	O RING BS013 PTFE	1
4	015014	SEAL GLYD RING 15MM DIA SHAFT	1
5	015033	O RING BS018/90	1
6	015098	SEAL BONDED 1/2" BSP 400-825-4490-73 761 BAR	1
7	032191	ADAPTOR 1/2" BSP M x 1/2" BSP M 1000 BAR ST/ST	1
8	078597	PLUNGER SAFETY RELIEF VALVE 2	1
9	036064	CATCH NUT SAFETY VALVE	1
10	036065	CATCH PLATE SAFETY VALVE MK2	1
11	036066	CAP SAFETY VALVE	1
12	036067	DISCHARGE ASSEMBLY SAFETY VALVE	1
14	036074	DISC SPRING 20x10.2x1.10 ZINC PLATED	71
15	036076	SPRING COMPRESSION SIR SPRINGMASTERS 459817	1
16	036077	LABEL SAFETY VALVE	1
17	078591	BODY SAFETY RELIEF VALVE	1
18	078592	NUT RELIEF VALVE	1
19	078594	CHOKE RELIEF 6.0	1
20	013354	SEAL SAFETY RELIEF VALVE	1



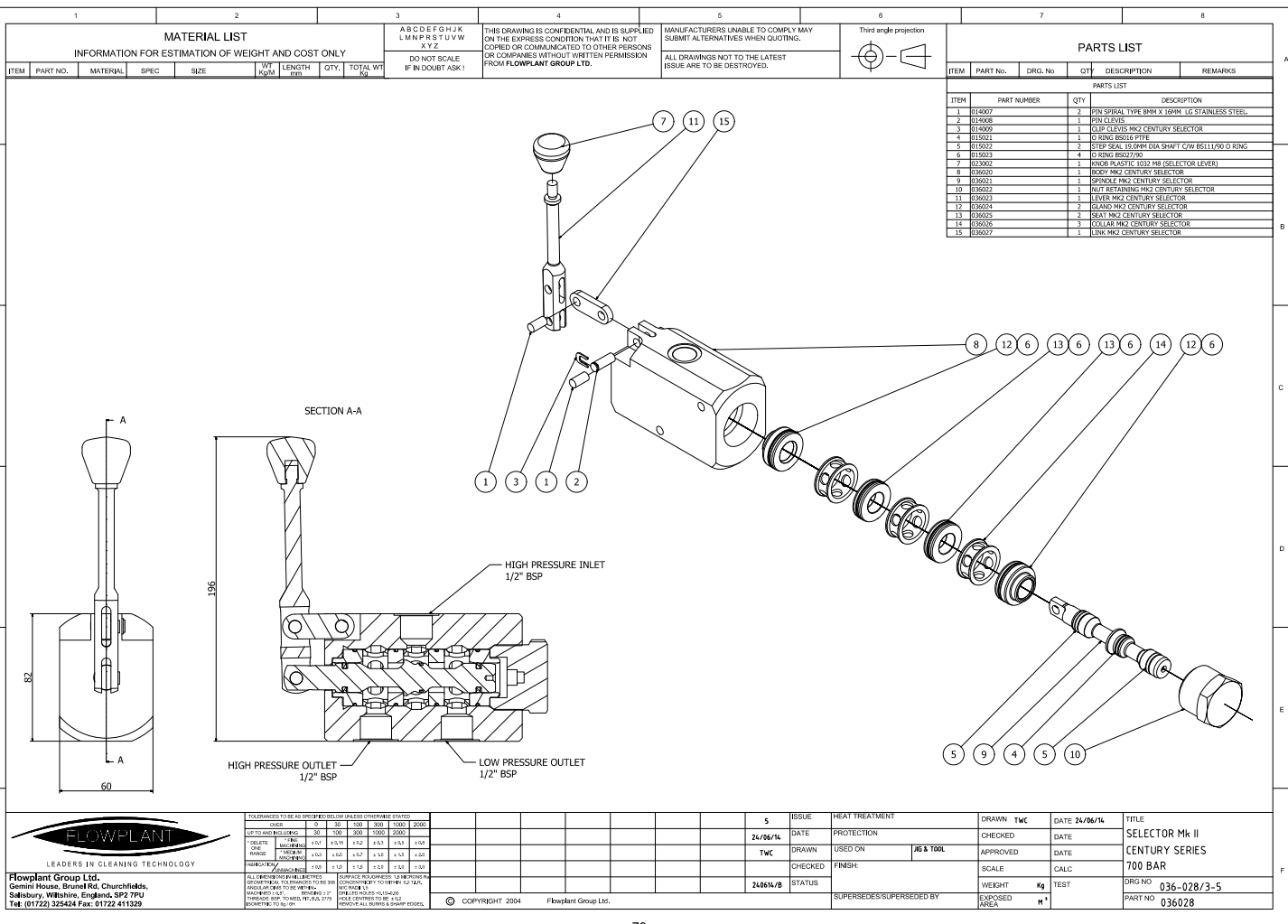


Fig. 4.8 - Selector Mk2 - Century