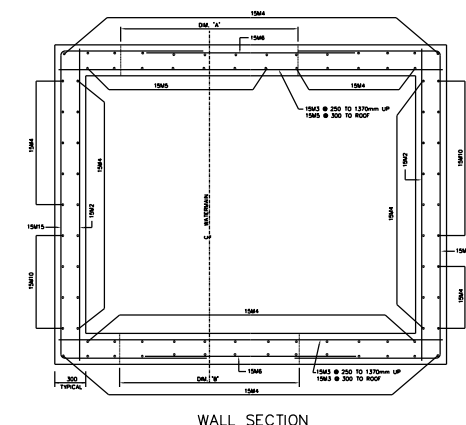
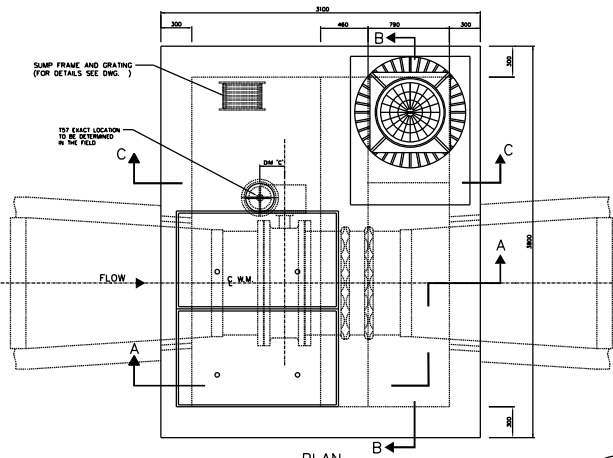
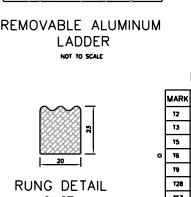
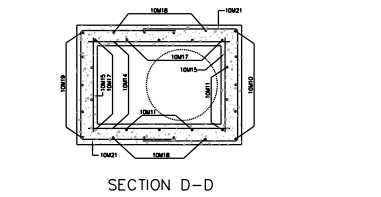
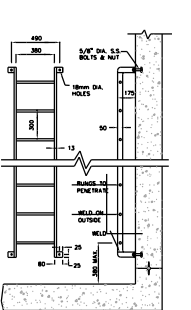
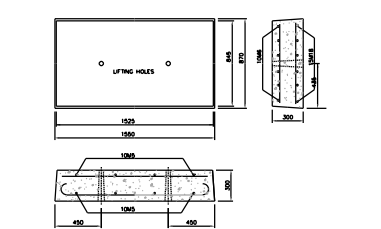
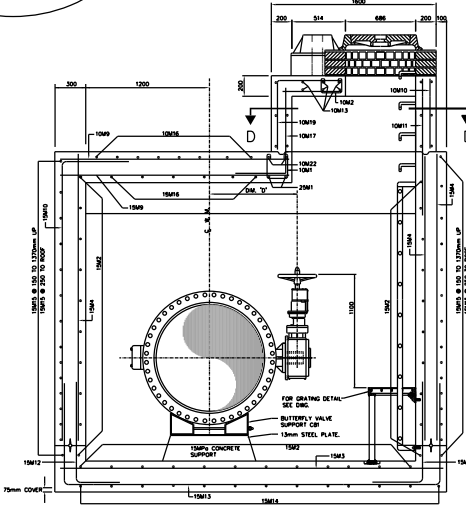
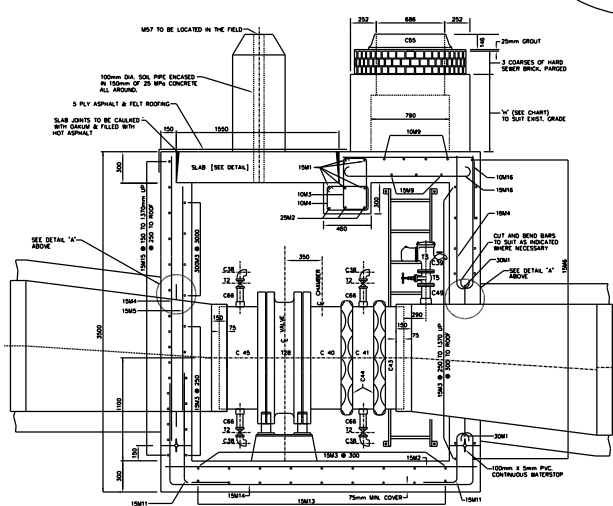


CHAMBER No.	DM. 'A'	DM. 'B'	DM. 'C'	DM. 'D'	DM. 'E'



CHAMBER No.	CHAMBER	BUTTERFLY VALVE	SURFACE ELEV. (m)	DIFFERENCE IN ELEV. (m)	COVER LOCATION	DRAIN TYPE	FOR LOCATION REFER TO PLAN No.	REMARKS

- NOTES:**
- 25MPa CONCRETE TO BE USED EXCEPT AS NOTED.
 - MAXIMUM SIZE OF COARSE AGGREGATE TO BE 20mm.
 - COVER TO MAIN REINFORCEMENT TO BE 50mm OR AS INDICATED.
 - ALL BAR DIMENSIONS ARE OUT TO OUT.
 - BARS TO BE BENT COLD, MINIMUM INSIDE RADIUS TO 4 DIAMETERS.
 - ALL CROSSING BARS TO BE WELL WELDED.
 - ALL REINFORCING STEEL TO BE DEFORMED BILLET-STEEL BARS GRADE 350, CONFORMING TO C.S.A. STANDARD G30.2M.
 - ALL LAPS IN REINFORCING STEEL TO BE AT LEAST 30 DIAMETERS IN LENGTH OR AS SHOWN, AND TO BE STAGGERED.
 - ALL BRICKWORK TO BE OF HIGH QUALITY HARD SEWER BRICK, Laid IN FULL MORTAR BED AND JOINTS, PARSED INSIDE AND OUT.
 - WATERSTOP (PVC) TO BE PROVIDED AT ALL CONSTRUCTION JOINTS.
 - WHERE NECESSARY ADJUST REINFORCING STEEL TO SUIT WATERSTOPS AND OPENINGS.
 - PROVIDE SUMP PIT WITH GRATING AND SLOPE FLOOR TO SUMP 10mm/METRE.
 - DRAIN OUTLET TO BE LOCATED AT NEAREST POINT TO EXISTING SEWER. IF ELEVATION OF CHAMBER IS HIGHER THAN CHAMBER FLOOR THE DRAIN MAY BE CLAMPED TO THE WALL BY AN APPROVED METHOD. IF NO SEWER IS AVAILABLE DELETE DRAIN TYPE 'A' AND CONSTRUCT DRAIN TYPE 'B' AND INSTALL PIPE WITH STOPPER AS SHOWN ON DWG.
 - DRAIN CONNECTION TO SEWER TO BE MADE BY CONTRACTOR UNLESS OTHERWISE STATED IN THE GENERAL SPECIFICATIONS.
 - LADDERS, GRATINGS AND RAILINGS TO BE ALUMINUM AND OF REMOVABLE TYPE WITH STAINLESS STEEL BOLTS.
 - TOP TWO STEPS AND ANY ADDITIONAL STEPS IN THE CHIMNEY TO BE OF THE REMOVABLE TYPE.
 - CHAMBERS DEEPER THAN 1200mm FROM SURFACE ELEVATION TO TOP OF VALVE OPERATING SPINDLE SHALL HAVE EXTENSION SPINDLE AND GUIDE BRACKET.
 - ALL ALUMINUM SURFACES CONTACTING CONCRETE TO RECEIVE ONE COAT OF BITUMINOUS PAINT.
 - 'X' DEPENDS ON HEIGHT (H) & BARS SHALL BE COUNTED TO ENSURE THAT THE BOTTOM BAR IS LESS THAN 150mm ABOVE THE ROOF CHAMBER.

BENDING SCHEDULE

BAR No.	DA	LENGTH	s	b	c	e	SHAPE	O.C.	No. REQD.
10M1	10	900	220	220	220	220	100	250	7
10M2	10	750	120	230	120	120	100	250	8
10M3	10	1640	520	230	520	230	100	250	19
10M4	10	1380	380	230	380	230	100	250	16
10M5	10	750	120	230	120	120	100	250	8
10M6	10	1425	520	230	520	230	100	250	19
10M7	10	1425	520	230	520	230	100	250	19
10M8	10	2220	520	230	520	230	100	250	5
10M9	10	1100	1100	1100	1100	1100	100	250	5
10M10	10	1100	1100	1100	1100	1100	100	250	5
10M11	10	614	614	614	614	614	100	250	4
10M12	10	1000	1000	1000	1000	1000	100	250	4
10M13	10	1000	1000	1000	1000	1000	100	250	4
10M14	10	1000	1000	1000	1000	1000	100	250	4
10M15	10	1000	1000	1000	1000	1000	100	250	4
10M16	10	1300	1300	1300	1300	1300	100	250	8
10M17	10	1100	1100	1100	1100	1100	100	250	8
10M18	10	1100	1100	1100	1100	1100	100	250	8
10M19	10	1100	1100	1100	1100	1100	100	250	8
10M20	10	2140	1100	550	550	550	100	250	7
10M21	10	2000	1000	1000	1000	1000	100	250	10
10M22	10	2000	1000	1000	1000	1000	100	250	10
10M23	10	2000	1000	1000	1000	1000	100	250	10
10M24	10	2000	1000	1000	1000	1000	100	250	10
10M25	10	2000	1000	1000	1000	1000	100	250	10
10M26	10	2000	1000	1000	1000	1000	100	250	10
10M27	10	2000	1000	1000	1000	1000	100	250	10
10M28	10	2000	1000	1000	1000	1000	100	250	10
10M29	10	2000	1000	1000	1000	1000	100	250	10
10M30	10	2000	1000	1000	1000	1000	100	250	10
10M31	10	2000	1000	1000	1000	1000	100	250	10
10M32	10	2000	1000	1000	1000	1000	100	250	10
10M33	10	2000	1000	1000	1000	1000	100	250	10
10M34	10	2000	1000	1000	1000	1000	100	250	10
10M35	10	2000	1000	1000	1000	1000	100	250	10
10M36	10	2000	1000	1000	1000	1000	100	250	10
10M37	10	2000	1000	1000	1000	1000	100	250	10
10M38	10	2000	1000	1000	1000	1000	100	250	10
10M39	10	2000	1000	1000	1000	1000	100	250	10
10M40	10	2000	1000	1000	1000	1000	100	250	10
10M41	10	2000	1000	1000	1000	1000	100	250	10
10M42	10	2000	1000	1000	1000	1000	100	250	10
10M43	10	2000	1000	1000	1000	1000	100	250	10
10M44	10	2000	1000	1000	1000	1000	100	250	10
10M45	10	2000	1000	1000	1000	1000	100	250	10
10M46	10	2000	1000	1000	1000	1000	100	250	10
10M47	10	2000	1000	1000	1000	1000	100	250	10
10M48	10	2000	1000	1000	1000	1000	100	250	10
10M49	10	2000	1000	1000	1000	1000	100	250	10
10M50	10	2000	1000	1000	1000	1000	100	250	10
10M51	10	2000	1000	1000	1000	1000	100	250	10
10M52	10	2000	1000	1000	1000	1000	100	250	10
10M53	10	2000	1000	1000	1000	1000	100	250	10
10M54	10	2000	1000	1000	1000	1000	100	250	10
10M55	10	2000	1000	1000	1000	1000	100	250	10
10M56	10	2000	1000	1000	1000	1000	100	250	10
10M57	10	2000	1000	1000	1000	1000	100	250	10
10M58	10	2000	1000	1000	1000	1000	100	250	10
10M59	10	2000	1000	1000	1000	1000	100	250	10
10M60	10	2000	1000	1000	1000	1000	100	250	10
10M61	10	2000	1000	1000	1000	1000	100	250	10
10M62	10	2000	1000	1000	1000	1000	100	250	10
10M63	10	2000	1000	1000	1000	1000	100	250	10
10M64	10	2000	1000	1000	1000	1000	100	250	10
10M65	10	2000	1000	1000	1000	1000	100	250	10
10M66	10	2000	1000	1000	1000	1000	100	250	10
10M67	10	2000	1000	1000	1000	1000	100	250	10
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10M80	10	2000	1000	1000	1000	1000	100	250	10
10M81	10	2000	1000	1000	1000	1000	100	250	10
10M82	10	2000	1000	1000	1000	1000	100	250	10
10M83	10	2000	1000	1000	1000	1000	100	250	10
10M84	10	2000	1000	1000	1000	1000	100	250	10
10M85	10	2000	1000	1000	1000	1000	100	250	10
10M86	10	2000	1000	1000	1000	1000	100	250	10
10M87	10	2000	1000	1000	1000	1000	100	250	10
10M88	10	2000	1000	1000	1000	1000	100	250	10
10M89	10	2000	1000	1000	1000	1000	100	250	10
10M90	10	2000	1000	1000	1000	1000	100	250	10
10M91	10	2000	1000	1000	1000	1000	100	250	10
10M92	10	2000	1000	1000	1000	1000	100	250	10
10M93	10	2000	1000	1000	1000	1000	100	250	10
10M94	10	2000	1000	1000	1000	1000	100	250	10
10M95	10	2000	1000	1000	1000	1000	100	250	10
10M96	10	2000	1000	1000	1000	1000	100	250	10
10M97	10	2000	1000	1000	1000	1000	100	250	10
10M98	10	2000	1000	1000	1000	1000	100	250	10
10M99	10	2000	1000	1000	1000	1000	100	250	10
10M100	10	2000	1000	1000	1000	1000	100	250	10

MATERIAL LIST			
SUPPLIED BY CITY OF TORONTO		MARKED / SUPPLIED BY CONTRACTOR	
12	4-50mm GATE VALVE (DOWNWELL)	C40	1-100mm FABRICATED S.S. FL-VCT CONNECTION
13	1-100mm AIR VALVE (DOWNWELL)	C41	1-100mm FABRICATED S.S. VCT & VCT SPACER
14	1-100mm GATE VALVE (FLANGED)	C42	1-100mm FABRICATED S.S. WETWALL CONNECTION
15	1-100mm BACKWATER CHECK VALVE	C43	2-100mm VCT COUPLING, STEEL SHOULDERED
16	1-100mm CENTRE PUG FOR CHAMBER COVER	C44	1-100mm FABRICATED S.S. FLANGE ASSEMBLY
17	1-100mm HOR. BUTTERFLY VALVE	C45	2-100mm to 100mm REDUCERS
18	1-100mm HOR. BUTTERFLY VALVE	C46	1-100mm C.I. RUNNING TRAP WITH POLYANTRON GASKET AND STEERING DRUMMING NUT AND HOE (DUAL FACE ONE PIECE)
19	1-100mm HOR. BUTTERFLY VALVE	C47	1-100mm C.I. RUNNING TRAP WITH POLYANTRON GASKET AND STEERING DRUMMING NUT AND HOE (DUAL FACE ONE PIECE)
20	1-100mm HOR. BUTTERFLY VALVE	C48	56-403 x 18mm S.S. BOLTS & NUTS
21	1-100mm HOR. BUTTERFLY VALVE	C49	56-403 x 18mm S.S. BOLTS & NUTS
22	1-100mm HOR. BUTTERFLY VALVE	C50	1-CHOK ANCHOR WITH M16 S.S. BOLTS WITH NUT
23	1-100mm HOR. BUTTERFLY VALVE	C51	2-100mm CLOTH INSERTED RUBBER GASKETS (DUAL FACE, ONE PIECE)
24	1-100mm HOR. BUTTERFLY VALVE	C52	1-C.I. RUNNING TRAP WITH GROUNDOUT & COVER
25	1-100mm HOR. BUTTERFLY VALVE	C53	1-100mm HOR. BUTTERFLY VALVE
26	1-100mm HOR. BUTTERFLY VALVE	C54	1-100mm HOR. BUTTERFLY VALVE
27	1-100mm HOR. BUTTERFLY VALVE	C55	1-100mm HOR. BUTTERFLY VALVE
28	1-100mm HOR. BUTTERFLY VALVE	C56	1-100mm HOR. BUTTERFLY VALVE
29	1-100mm HOR. BUTTERFLY VALVE	C57	1-100mm HOR. BUTTERFLY VALVE
30	1-100mm HOR. BUTTERFLY VALVE	C58	1-100mm HOR. BUTTERFLY VALVE
31	1-100mm HOR. BUTTERFLY VALVE	C59	1-100mm HOR. BUTTERFLY VALVE
32	1-100mm HOR. BUTTERFLY VALVE	C60	1-100mm HOR. BUTTERFLY VALVE
33	1-100mm HOR. BUTTERFLY VALVE	C61	1-100mm HOR. BUTTERFLY VALVE
34	1-100mm HOR. BUTTERFLY VALVE	C62	1-100mm HOR. BUTTERFLY VALVE
35	1-100mm HOR. BUTTERFLY VALVE	C63	1-100mm HOR. BUTTERFLY VALVE
36	1-100mm HOR. BUTTERFLY VALVE	C64	1-100mm HOR. BUTTERFLY VALVE
37	1-100mm HOR. BUTTERFLY VALVE	C65	1-100mm HOR. BUTTERFLY VALVE
38	1-100mm HOR. BUTTERFLY VALVE	C66	1-100mm HOR. BUTTERFLY VALVE
39	1-100mm HOR. BUTTERFLY VALVE	C67	1-100mm HOR. BUTTERFLY VALVE
40	1-100mm HOR. BUTTERFLY VALVE	C68	1-100mm HOR. BUTTERFLY VALVE
41	1-100mm HOR. BUTTERFLY VALVE	C69	1-100mm HOR. BUTTERFLY VALVE
42	1-100mm HOR. BUTTERFLY VALVE	C70	1-100mm HOR. BUTTERFLY VALVE
43	1-100mm HOR. BUTTERFLY VALVE	C71	1-100mm HOR. BUTTERFLY VALVE
44	1-100mm HOR. BUTTERFLY VALVE	C72	1-100mm HOR. BUTTERFLY VALVE
45	1-100mm HOR. BUTTERFLY VALVE	C73	1-100mm HOR. BUTTERFLY VALVE
46	1-100mm HOR. BUTTERFLY VALVE	C74	1-100mm HOR. BUTTERFLY VALVE
47	1-100mm HOR. BUTTERFLY VALVE	C75	1-100mm HOR. BUTTERFLY VALVE
48	1-100mm HOR. BUTTERFLY VALVE	C76	1-100mm HOR. BUTTERFLY VALVE
49	1-100mm HOR. BUTTERFLY VALVE	C77	1-100mm HOR. BUTTERFLY VALVE
50	1-100mm HOR. BUTTERFLY VALVE	C78	1-100mm HOR. BUTTERFLY VALVE
51	1-100mm HOR. BUTTERFLY VALVE	C79	1-100mm HOR. BUTTERFLY VALVE
52	1-100mm HOR. BUTTERFLY VALVE	C80	1-100mm HOR. BUTTERFLY VALVE
53	1-100mm HOR. BUTTERFLY VALVE	C81	1-100mm HOR. BUTTERFLY VALVE
54	1-100mm HOR. BUTTERFLY VALVE	C82	1-100mm HOR. BUTTERFLY VALVE
55	1-100mm HOR. BUTTERFLY VALVE	C83	1-100mm HOR. BUTTERFLY VALVE
56	1-100mm HOR. BUTTERFLY VALVE	C84	1-100mm HOR. BUTTERFLY VALVE
57	1-100mm HOR. BUTTERFLY VALVE	C85	1-100mm HOR. BUTTERFLY VALVE
58	1-100mm HOR. BUTTERFLY VALVE	C86	1-100mm HOR. BUTTERFLY VALVE
59	1-100mm HOR. BUTTERFLY VALVE	C87	1-100mm HOR. BUTTERFLY VALVE
60	1-100mm HOR. BUTTERFLY VALVE	C88	1-100mm HOR. BUTTERFLY VALVE
61	1-100mm HOR. BUTTERFLY VALVE	C89	1-100mm HOR. BUTTERFLY VALVE
62	1-100mm HOR. BUTTERFLY VALVE	C90	1-100mm HOR. BUTTERFLY VALVE
63	1-100mm HOR. BUTTERFLY VALVE	C91	1-100mm HOR. BUTTERFLY VALVE
64	1-100mm HOR. BUTTERFLY VALVE	C92	1-100mm HOR. BUTTERFLY VALVE
65	1-100mm HOR. BUTTERFLY VALVE	C93	1-100mm HOR. BUTTERFLY VALVE
66	1-100mm HOR. BUTTERFLY VALVE	C94	1-100mm HOR. BUTTERFLY VALVE
67	1-100mm HOR. BUTTERFLY VALVE	C95	1-100mm HOR. BUTTERFLY VALVE
68	1-100mm HOR. BUTTERFLY VALVE	C96	1-100mm HOR. BUTTERFLY VALVE
69	1-100mm HOR. BUTTERFLY VALVE	C97	1-100mm HOR. BUTTERFLY VALVE
70	1-100mm HOR. BUTTERFLY VALVE	C98	1-100mm HOR. BUTTERFLY VALVE
71	1-100mm HOR. BUTTERFLY VALVE	C99	1-100mm HOR. BUTTERFLY VALVE
72	1-100mm HOR. BUTTERFLY VALVE	C100	1-100mm HOR. BUTTERFLY VALVE
73	1-100mm HOR. BUTTERFLY VALVE	C101	1-100mm HOR. BUTTERFLY VALVE
74	1-100mm HOR. BUTTERFLY VALVE	C102	1-100mm HOR. BUTTERFLY VALVE
75	1-100mm HOR. BUTTERFLY VALVE	C103	1-100mm HOR. BUTTERFLY VALVE
76	1-100mm HOR. BUTTERFLY VALVE	C104	1-100mm HOR. BUTTERFLY VALVE
77	1-100mm HOR. BUTTERFLY VALVE	C105	1-100mm HOR. BUTTERFLY VALVE
78	1-100mm HOR. BUTTERFLY VALVE	C106	1-100mm HOR. BUTTERFLY VALVE
79	1-100mm HOR. BUTTERFLY VALVE	C107	1-100mm HOR. BUTTERFLY VALVE
80	1-100mm HOR. BUTTERFLY VALVE	C108	1-100mm HOR. BUTTERFLY VALVE
81	1-100mm HOR. BUTTERFLY VALVE	C109	1-100mm HOR. BUTTERFLY VALVE
82	1-100mm HOR. BUTTERFLY VALVE	C110	1-100mm HOR. BUTTERFLY VALVE
83	1-100mm HOR. BUTTERFLY VALVE	C111	1-100mm HOR. BUTTERFLY VALVE
84	1-100mm HOR. BUTTERFLY VALVE	C112	1-100mm HOR. BUTTERFLY VALVE
85	1-100mm HOR. BUTTERFLY VALVE	C113	1-100mm HOR. BUTTERFLY VALVE
86	1-100mm HOR. BUTTERFLY VALVE	C114	1-100mm HOR. BUTTERFLY VALVE
87	1-100mm HOR. BUTTERFLY VALVE	C115	1-100mm HOR. BUTTERFLY VALVE
88	1-100mm HOR. BUTTERFLY VALVE	C116	1-100mm HOR. BUTTERFLY VALVE
89	1-100mm HOR. BUTTERFLY VALVE	C117	1-100mm HOR. BUTTERFLY VALVE
90	1-100mm HOR. BUTTERFLY VALVE	C118	1-100mm HOR. BUTTERFLY VALVE
91	1-100mm HOR. BUTTERFLY VALVE	C119	1-100mm HOR. BUTTERFLY VALVE
92	1-100mm HOR. BUTTERFLY VALVE	C120	1-100mm HOR. BUTTERFLY VALVE
93	1-100mm HOR. BUTTERFLY VALVE	C121	1-100mm HOR. BUTTERFLY VALVE
94	1-100mm HOR. BUTTERFLY VALVE	C122	1-100mm HOR. BUTTERFLY VALVE
95	1-100mm HOR. BUTTERFLY VALVE	C123	1-100mm HOR. BUTTERFLY VALVE
96	1-100mm HOR. BUTTERFLY VALVE	C124	1-100mm HOR. BUTTERFLY VALVE
97	1-100mm HOR. BUTTERFLY VALVE	C125	1-100mm HOR. BUTTERFLY VALVE
98	1-100mm HOR. BUTTERFLY VALVE	C126	1-100mm HOR. BUTTERFLY VALVE
99	1-100mm HOR. BUTTERFLY VALVE	C127	1-100mm HOR. BUTTERFLY VALVE
100	1-100mm HOR. BUTTERFLY VALVE	C128	1-100mm HOR. BUTTERFLY VALVE
101	1-100mm HOR. BUTTERFLY VALVE	C129	1-100mm HOR. BUTTERFLY VALVE
102	1-100mm HOR. BUTTERFLY VALVE	C130	1-100mm HOR. BUTTERFLY VALVE
103	1-100mm HOR. BUTTERFLY VALVE	C131	1-100mm HOR. BUTTERFLY VALVE
104	1-100mm HOR. BUTTERFLY VALVE	C132	1-100mm HOR. BUTTERFLY VALVE
105	1-100mm HOR. BUTTERFLY VALVE	C133	1-100mm HOR. BUTTERFLY VALVE
106	1-100mm HOR. BUTTERFLY VALVE	C134	1-100mm HOR. BUTTERFLY VALVE
107	1-100mm HOR. BUTTERFLY VALVE	C135	1-100mm HOR. BUTTERFLY VALVE
108	1-100mm HOR. BUTTERFLY VALVE	C136	1-100mm HOR. BUTTERFLY VALVE
109	1-100mm HOR. BUTTERFLY VALVE	C137	1-100mm HOR. BUTTERFLY VALVE
110	1-100mm HOR. BUTTERFLY VALVE	C138	1-100mm HOR. BUTTERFLY VALVE
111	1-100mm HOR. BUTTERFLY VALVE	C139	1-100mm HOR. BUTTERFLY VALVE
112	1-100mm HOR. BUTTERFLY VALVE	C140	1-100mm HOR. BUTTERFLY VALVE
113	1-100mm HOR. BUTTERFLY VALVE	C141	1-100mm HOR. BUTTERFLY VALVE
114	1-100mm HOR. BUTTERFLY VALVE	C142	1-100mm HOR. BUTTERFLY VALVE
115	1-100mm HOR. BUTTERFLY VALVE	C143	1-100mm HOR. BUTTERFLY VALVE
116	1-100mm HOR. BUTTERFLY VALVE	C144	1-100mm HOR. BUTTERFLY VALVE
117	1-100mm HOR. BUTTERFLY VALVE	C145	1-100mm HOR. BUTTERFLY VALVE
118	1-100mm HOR. BUTTERFLY VALVE	C146	1-100mm HOR. BUTTERFLY VALVE
119	1-100mm HOR. BUTTERFLY VALVE	C147	1-100mm HOR. BUTTERFLY VALVE
120	1-100mm HOR. BUTTERFLY VALVE	C148	1-100mm HOR. BUTTERFLY VALVE
121	1-100mm HOR. BUTTERFLY VALVE	C149	1-100mm HOR. BUTTERFLY VALVE
122	1-100mm HOR. BUTTERFLY VALVE	C150	1-100mm HOR. BUTTERFLY VALVE
123	1-100mm HOR. BUTTERFLY VALVE	C151	1-100mm HOR. BUTTERFLY VALVE
124	1-100mm HOR. BUTTERFLY VALVE	C152	1-100mm HOR. BUTTERFLY VALVE
125	1-100mm HOR. BUTTERFLY VALVE	C153	1-100mm HOR. BUTTERFLY VALVE
126	1-100mm HOR. BUTTERFLY VALVE	C154	1-100mm HOR. BUTTERFLY VALVE
127	1-100mm HOR. BUTTERFLY VALVE	C155	1-100mm HOR. BUTTERFLY VALVE
128	1-100mm HOR. BUTTERFLY VALVE	C156	1-100mm HOR. BUTTERFLY VALVE
129	1-100mm HOR. BUTTERFLY VALVE	C157	1-100mm HOR. BUTTERFLY VALVE
130	1-100mm HOR. BUTTERFLY VALVE	C158	1-100mm HOR. BUTTERFLY VALVE
131	1-100mm HOR. BUTTERFLY VALVE	C159	1-100mm HOR. BUTTERFLY VALVE
132	1-100mm HOR. BUTTERFLY VALVE	C160	1-100mm HOR. BUTTERFLY VALVE
133	1-100mm HOR. BUTTERFLY VALVE	C161	1-100mm HOR. BUTTERFLY VALVE
134	1-100mm HOR. BUTTERFLY VALVE	C162	1-100mm HOR. BUTTERFLY VALVE
135	1-100mm HOR. BUTTERFLY VALVE	C163	1-100mm HOR. BUTTERFLY VALVE
136	1-100mm HOR. BUTTERFLY VALVE	C164	1-100mm HOR. BUTTERFLY VALVE
137	1-100mm HOR. BUTTERFLY VALVE	C165	1-100mm HOR. BUTTERFLY VALVE
138	1-100mm HOR. BUTTERFLY VALVE	C166	1-100mm HOR. BUTTERFLY VALVE
139	1-100mm HOR. BUTTERFLY VALVE	C167	1-100mm HOR. BUTTERFLY VALVE
140	1-100mm HOR. BUTTERFLY VALVE	C168	1-100mm HOR. BUTTERFLY VALVE
141	1-100mm HOR. BUTTERFLY VALVE	C169	1-100mm HOR. BUTTERFLY VALVE
142	1-100mm HOR. BUTTERFLY VALVE	C170	1-100mm HOR. BUTTERFLY VALVE
143	1-100mm HOR. BUTTERFLY VALVE	C171	1-100mm HOR. BUTTERFLY VALVE
144	1-100mm HOR. BUTTERFLY VALVE	C172	1-100mm HOR. BUTTERFLY VALVE
145	1-100mm HOR. BUTTERFLY VALVE	C173	1-100mm HOR. BUTTERFLY VALVE
146	1-100mm HOR. BUTTERFLY VALVE	C174	1-100mm HOR. BUTTERFLY VALVE
147	1-100mm HOR. BUTTERFLY VALVE	C175	1-100mm HOR. BUTTERFLY VALVE
148	1-100mm HOR. BUTTERFLY VALVE	C176	1-100mm HOR. BUTTERFLY VALVE
149	1-100mm HOR. BUTTERFLY VALVE	C177	1-100mm HOR. BUTTERFLY VALVE
150	1-100mm HOR. BUTTERFLY VALVE	C178	1-100mm HOR. BUTTERFLY VALVE
151	1-100mm HOR. BUTTERFLY VALVE	C179	1-100mm HOR. BUTTERFLY VALVE
152	1-100mm HOR. BUTTERFLY VALVE	C180	1-100mm HOR. BUTTERFLY VALVE
153	1-100mm HOR. BUTTERFLY VALVE	C181	1-100mm HOR. BUTTERFLY VALVE
154	1-100mm HOR. BUTTERFLY VALVE	C182	1-100mm HOR. BUTTERFLY VALVE
155	1-100mm HOR. BUTTERFLY VALVE	C183	1-100mm HOR. BUTTERFLY VALVE
156	1-100mm HOR. BUTTERFLY VALVE	C184	1-100mm HOR. BUTTERFLY VALVE
157	1-100mm HOR. BUTTERFLY VALVE	C185	1-100mm HOR. BUTTERFLY VALVE
158	1-100mm HOR. BUTTERFLY VALVE	C186	1-100mm HOR. BUTTERFLY VALVE
159	1-100mm HOR. BUTTERFLY VALVE	C187	1-100mm HOR. BUTTERFLY VALVE
160	1-100mm HOR. BUTTERFLY VALVE	C188	1-100mm HOR. BUTTERFLY VALVE
161	1-100mm HOR. BUTTERFLY VALVE	C189	1-100mm HOR. BUTTERFLY VALVE
162	1-100mm HOR. BUTTERFLY VALVE	C190	1-100mm HOR. BUTTERFLY VALVE
163	1-100mm HOR. BUTTERFLY VALVE	C191	1-100mm HOR. BUTTERFLY VALVE
164	1-100mm HOR. BUTTERFLY VALVE	C192	1-100mm HOR. BUTTERFLY VALVE
165	1-100mm HOR. BUTTERFLY VALVE	C193	1-100mm HOR. BUTTERFLY VALVE
166	1-100mm HOR. BUTTERFLY VALVE	C194	1-100mm HOR. BUTTERFLY VALVE
167	1-100mm HOR. BUTTERFLY VALVE	C195	1-100mm HOR. BUTTERFLY VALVE
168	1-100mm HOR. BUTTERFLY VALVE	C196	1-100mm HOR. BUTTERFLY VALVE
169	1-100mm HOR. BUTTERFLY VALVE	C197	1-100mm HOR. BUTTERFLY VALVE
170	1-100mm HOR. BUTTERFLY VALVE	C198	1-100mm HOR. BUTTERFLY VALVE
171	1-100mm HOR. BUTTERFLY VALVE	C199	1-100mm HOR. BUTTERFLY VALVE
172	1-100mm HOR. BUTTERFLY VALVE	C200	1-100mm HOR. BUTTERFLY VALVE
173	1-100mm HOR. BUTTERFLY VALVE	C201	1-100mm HOR. BUTTERFLY VALVE
174	1-100mm HOR. BUTTERFLY VALVE	C202	1-100mm HOR. BUTTERFLY VALVE
175	1-100mm HOR. BUTTERFLY VALVE	C203	1-100mm HOR. BUTTERFLY VALVE
176	1-100mm HOR. BUTTERFLY VALVE	C204	1-100mm HOR. BUTTERFLY VALVE
177	1-100mm HOR. BUTTERFLY VALVE	C205	1-100mm HOR. BUTTERFLY VALVE
178	1-100mm HOR. BUTTERFLY VALVE	C206	1-100mm HOR. BUTTERFLY VALVE
179	1-100mm HOR. BUTTERFLY VALVE	C207	1-100mm HOR. BUTTERFLY VALVE
180	1-100mm HOR. BUTTERFLY VALVE	C208	1-100mm HOR. BUTTERFLY VALVE
181	1-100mm HOR. BUTTERFLY VALVE	C209	1-100mm HOR. BUTTERFLY VALVE
182	1-100mm HOR. BUTTERFLY VALVE	C210	1-100mm HOR. BUTTERFLY VALVE
183	1-100mm HOR. BUTTERFLY VALVE	C211	1-100mm HOR. BUTTERFLY VALVE
184	1-100mm HOR. BUTTERFLY VALVE	C212	1-100mm HOR. BUTTERFLY VALVE
185	1-100mm HOR. BUTTERFLY VALVE	C213	1-100mm HOR. BUTTERFLY VALVE
186	1-100mm HOR. BUTTERFLY VALVE	C214	1-100mm HOR. BUTTERFLY VALVE
187	1-100mm HOR. BUTTERFLY VALVE	C215	1-100mm HOR. BUTTERFLY VALVE
188	1-100mm HOR. BUTTERFLY VALVE	C216	1-100mm HOR. BUTTERFLY VALVE
189	1-100mm HOR. BUTTERFLY VALVE	C217	1-100mm HOR. BUTTERFLY VALVE
190	1-100mm HOR. BUTTERFLY VALVE	C218	1-100mm HOR. BUTTERFLY VALVE
191	1-100mm HOR. BUTTERFLY VALVE	C219	1-100mm HOR. BUTTERFLY VALVE
192	1-100mm HOR. BUTTERFLY VALVE	C220	1-100mm HOR. BUTTERFLY VALVE
193	1-100mm HOR. BUTTERFLY VALVE	C221	1-100mm HOR. BUTTERFLY VALVE
194	1-100mm HOR. BUTTERFLY VALVE	C222	1-100mm HOR. BUTTERFLY VALVE
195	1-100mm HOR. BUTTERFLY VALVE	C223	1-100mm HOR. BUTTERFLY VALVE
196	1-100mm HOR. BUTTERFLY VALVE	C224	1-100mm HOR. BUTTERFLY VALVE
197	1-100mm HOR. BUTTERFLY VALVE	C225	1-100mm HOR. BUTTERFLY VALVE
198	1-100mm HOR. BUTTERFLY VALVE	C226	1-100mm HOR. BUTTERFLY VALVE
199	1-100mm HOR. BUTTERFLY VALVE	C227	1-100mm HOR. BUTTERFLY VALVE
200	1-100mm HOR. BUTTERFLY VALVE	C228	1-100mm HOR. BUTTERFLY VALVE
201	1-100mm HOR. BUTTERFLY VALVE	C229	1-100mm HOR. BUTTERFLY VALVE
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