

						1 1	UNIT	TOTAL	
SI.	DESCRIPTION	DIMENSION	MATERIAL	STANDARD	QUANTITY	UNIT	WEIGHT	WEIGHT	REMARKS
NO.	DESCRIPTION	DIVIENSION	WATERIAL	SIANDAND	QOANTITI	0,4,1	(kg)	(kg)	REMARKS
PIPE AND PIPE FITTINGS (CLASS III )									
	Pipe Seamless, BW	100A Sch40	STPG370	JISG3454	14.67	m.	16	234.58	
2	Pipe Seamless, BW	80A Sch40	STPG370	JISG3454	1.17	m.	11.3	13.18	
3	Pipe Seamless, BW	65A Sch40	STPG370	JISG3454	2.06	m.	9.12	18.75	
	Pipe Seamless, BW	50A Sch40	STPG370	JISG3454	1.16	m.	5.44	6.29	
5	Pipe Seamless, BW	32A Sch40	STPG370	JISG3454	0.13	m.	3.47	0.46	
	Elbow 90Deg.SR, BW	100A Sch40	PG 370	JIS B 2312	13	Pcs.	2.69	34.97	
	Elbow 60Deg.SR, BW	100A Sch40	PG 370	JIS B 2312	1	Pcs.	2.69	2.69	
8	Elbow 45Deg.SR, BW	100A Sch40	PG 370	JIS B 2312	10	Pcs.	2.69	26.9	
	Elbow 30Deg.SR, BW	100A Sch40	PG 370	JIS B 2312	1	Pcs.	2.69	2.69	
10	Elbow 90Deg.SR, BW	80A Sch40	PG 370	JIS B 2312	1	Pcs.	1.43	1.43	
	Elbow 90Deg.SR, BW	65A Sch40	PG 370	JIS B 2312	3	Pcs.	0.96	2.88	
12	Elbow 45Deg.SR, BW	65A Sch40	PG 370	JIS B 2312	1	Pcs.	0.96	0.96	
13	Elbow 90Deg.SR, BW	50A Sch40	PG 370	JIS B 2312	4	Pcs.	0.46	1.84	
	Elbow 90Deg.SR, BW	32A Sch40	PG 370	JIS B 2312	2	Pcs.	0.18	0.36	
15	Reducer Concentric, BW	100Ax80ASch40	PG 370	JIS B 2312	2	Pcs.	1.45	2.9	
16	Reducer Concentric, BW	65Ax32ASch40	PG 370	JIS B 2312	1	Pcs.	0.63	0.63	
17	Flange SOFF	100A JIS5K	SF440	JIS B2220	60	Pcs.	2.39	143.4	
18	Flange SOFF	80A JIS5K	SF440	JIS B2220	5	Pcs.	1.99	9.95	
19	Flange SOFF	65A JIS5K	SF440	JIS B2220	8	Pcs.	1.49	11.92	
20	Flange SOFF	DN100 PN10	Carbon Steel	EN 1092-1	12	Pcs.	4.03	48.36	
21	Flange SOFF	DN80 PN10	Carbon Steel	EN 1092-1	4	Pcs.	3.79	15.16	
22	Flange SOFF	DN50 PN10	Carbon Steel	EN 1092-1	7	Pcs.	2.47	17.29	
23	Flange SOFF	DN32 PN10	Carbon Steel	EN 1092-1	1	Pcs.	1.62	1.62	
24	Blind plate	O.D 134 (100A) X 10mm Thk	SS 400	JIS	2	Pcs.	0.77	1.54	
25	Machine bolt with single nut	M 16 x 115	Galvanized Steel, Grade 10.9	313	24	Pcs.	0.77	1.54	
26	Machine bolt with single nut	M 16 x 105	Galvanized Steel, Grade 10.9		16	Pcs.			
	Machine bolt with single nut	M 16 x 130	Galvanized Steel, Grade 10.9		16	Pcs.			
	Machine bolt with single nut	M 16 x 110	Galvanized Steel, Grade 10.9		64	Pcs.			
29	Machine bolt with single nut	M 16 x 65	Galvanized Steel, Grade 10.9		64	Pcs.			
30	Machine bolt with single nut	M 16 x 60	Galvanized Steel, Grade 10.9		220	Pcs.			
31	Machine bolt with single nut	M 16 x 55	Galvanized Steel, Grade 10.9		8	Pcs.			
32	Machine bolt with single nut	M 12 x 115	Galvanized Steel, Grade 10.9		4	Pcs.			
33	Machine bolt with single nut	M 12 x 95	Galvanized Steel, Grade 10.9		4	Pcs.			
34	Machine bolt with single nut	M 12 x 50	Galvanized Steel, Grade 10.9		8	Pcs.			
	Gasket, JIS5K, Thk 3mm	100A	CNAF		26	Pcs.			
36	Gasket, JIS5K, Thk 3mm	80A	CNAF		1	Pcs.			
	Gasket, JIS5K, Thk 3mm	65A	CNAF		2	Pcs.			
38	Gasket, PN10, Thk 3mm	DN100	CNAF		6	Pcs.			
	Gasket, PN10, Thk 3mm	DN80	CNAF		2	Pcs.			
	Gasket, PN10, Thk 3mm	DN50	CNAF		3	Pcs.			
41	Gasket, PN10, Thk 3mm	DN32	CNAF		<u>3</u> 1	Pcs.			
42	U-Bolt with Double Nuts	DN100	Galv. Steel		10	Pcs.	0.8	8	
43	U-Bolt with Double Nuts	DN80	Galv. Steel		10	Pcs.	0.3	0.3	
44	U-Bolt with Double Nuts	DN65	Galv. Steel		2	Pcs.	0.3	0.6	
45	U-Bolt with Double Nuts	DN50	Galv. Steel		1	Pcs.	0.3	0.3	
46	Equal Leg Angle	L 50 x 50 x 6.0	SS400	JIS	6.85	m.	4.47	30.59	
	Pad	70 x 70 x 8	SS400	JIS	9	Pcs.	0.16	1.44	
	ENT INSTALLATION BOLT	70 × 70 × 0	33.00	3.5	<u>_</u>	1 1 63.	0.10	<u> </u>	
	Machine Bolt with Double nut	M10x50	Galvanized Steel, Grade 10.9	JIS	6	Pcs.	0.259	3.108	
2	Machine Bolt with Double nut	M12x60	Galvanized Steel, Grade 10.9	JIS	6	Pcs.	0.259	3.108	
	Machine Bolt	M10x30	Galvanized Steel, Grade 10.9	JIS	10	Pcs.	0.259	3.108	
<b> </b>		20,00	Tanzen Steel, Stade 10.3	3.3	10	1 . 63.	0.233	0.200	

SI. NO.	DESCRIPTION	DIMENSION	MATERIAL	STANDARD	QUANTITY	UNIT	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REMARKS	
COMPRESSED AIR SYSTEM										
1	Pipe Welded, BW	15A Sch40	STPG370	JIS G3454	12	m			CA01	
2	Pipe Welded, BW	20A Sch40	STPG370	JIS G3454	1	m			CA01	
3	Elbow 90Deg. LR, BW	15A Sch40	PG370	JIS B 2313	6	Pcs.			CA01	
4	Flange SOFF	15A JIS10K	SF 440A	JIS B2220	4	Pcs.			CA01	
5	Connector	15A	Steel	JIS	6	Pcs.			CA01	
6	Gasket, JIS5K, Thk 3mm	15A	CNAF		3	Pcs.			CA01	
7	Machine bolt with single nut	M 12 x 45	Galvanized Steel, Grade 10.9		12	Pcs.			CA01	
8	Equal Leg Angle	L 40 x 40 x 5.0	SS400	JIS	3	m.	4.47	13.41	CA01	
FRESHWATER SYSTEM										
1	Pipe Welded, BW	15A Sch40	STPG370	JIS G3454	12	m			FW01	
2	Pipe Welded, BW	32A Sch40	STPG370	JIS G3454	1	m			FW01	
3	Elbow 90Deg. LR, BW	15A Sch40	PG370	JIS B 2313	6	Pcs.			FW01	
4	Flange SOFF	15A JIS10K	SF 440A	JIS B2220	6	Pcs.			FW01	
5	Connector	15A	Steel	JIS	6	Pcs.			FW01	
6	Gasket, JIS5K, Thk 3mm	15A	CNAF		5	Pcs.			FW01	
7	Machine bolt with single nut	M 12 x 45	Galvanized Steel, Grade 10.9		20	Pcs.	·		FW01	
8	Equal Leg Angle	L 40 x 40 x 5.0	SS400	JIS	3	m.	4.47	13.41	FW01	

## Notes:

- 1) For final treatment of pipe and pipe fittings, refer individual piping spool fabrication drawings.
- 2) MTO estimated based on the current 3D model.
- 3) Class III pipes and its fittings to be procured as applicable.
- 4) For the fabrication/ procurement of threadolets, pads etc. Yard piping practice shall be followed.
- 5) 10% margin considered for Bolts & nuts and Gaskets, Client to confirm before purchase