5. Technological Information

5-1 Comparison with Other Panel Materials

3 m^3 (Reference size: 1 × 2 × 1.5 meter height)		Panel tank	Concrete	Steel plate integrated type	FRP integrated type
Tank body	Weight	350 kg	1,500 kg	1,000 kg	150 kg
	Heat insulation specifications	Available	Not available	Corresponding to racking	Special order
	Sanitation	Good	Bad	Problem with rust	Average
	Price range	100	200	180	80
Process control	Carry-in operation	Easy	Heavy machinery is required	Heavy machinery is required	Heavy machinery is required
	Assembly period	0.5 days	14 days	0.5 days	0.5 days
	Time required to manufacture it	30 days	60 days	50 days	Goods in stock
Maintenance management	Cleaning of the inside	Easy	Difficult	Difficult	Average
	Dismantlement	Easy	Difficult	Difficult	Complicated

200 m^3 (Reference size: 7.5 × 9 × 3 meter height)		Panel tank	Concrete	Steel plate integrated type	FRP integrated type
Tank body	Weight	8,300 kg	40,000 kg	20,000 kg	Impossible to manufacture
	Heat insulation specifications	Available	Not available	Corresponding to racking	—
	Sanitation	Good	Bad	Problem with rust	—
	Price range	100	200	180	—
Process control	Carry-in operation	Easy	Heavy machinery is required	Heavy machinery is required	—
	Assembly period	20 days	90 days	60 days	—
	Time required to manufacture it	30 days	90 days	60 days	—
Maintenance management	Cleaning of the inside	Easy	Difficult	Difficult	—
	Dismantlement	Easy	Difficult	Difficult	—

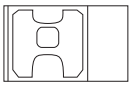
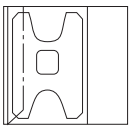
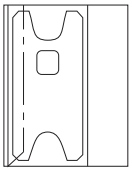
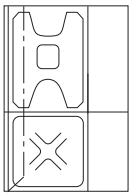
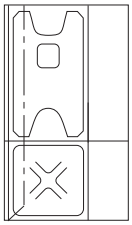
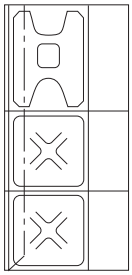
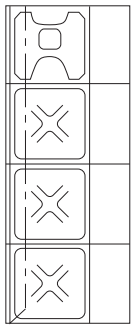
5-2 Lead Time (Only for Manufacturing)

	Item	Lead time (after reception of the order form)
1	High height type (3.5 meter height/4 meter height)	1.5 months
2	With a top sump tank	1 month
3	Inside ladder SUS	1 month
4	Current panel	1 month
5	Free-form tank	1 month
6	Less than 250 ton/tank	1 month
7	More than 250 ton/tank	1.5 months
8	Less than 20 tanks/order	1 month
9	More than 20 tanks/order	1.5 months
10	Multiple partitioned tank	1 month
11	50 mm thermal insulation	1 month

*The above data can change depending on the time and situation.

5-3 Panel Flange Fitting Position

5-3-1 Sidewall Panel Positioning

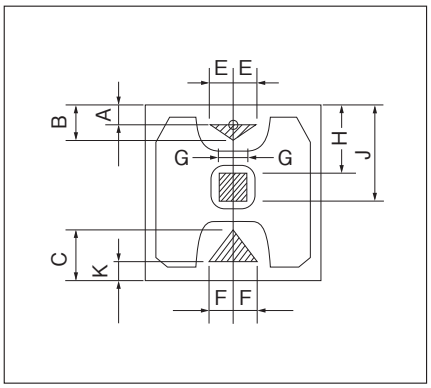
Tank height (m)	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Sidewall panel composition							

5-3-2 Flange Fitting Position

The parts shown below are fit to the panels.

Shaded area is the range for fitting the center of flange.

●Tank height 1m

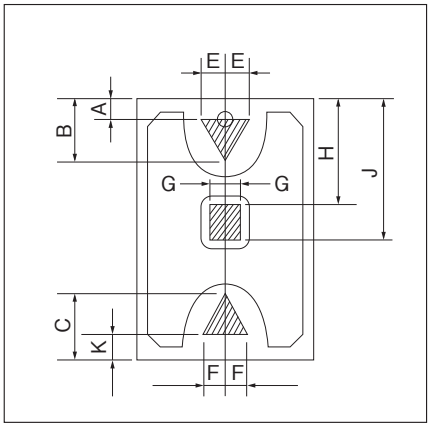


Allowable range for fitting the flange center unit:mm

		Piping diameter (A)	Flange fitting position									Socket fitting position		
			A	B	C	E	F	G	H	J	K	A	B	E
Overflow, outlet	Inlet	15	120	190	300	105	105	75	380	530	120	100	215	130
		20	120	190	300	105	105	75	380	530	120	105	210	125
		25	135	175	285	90	90	60	390	515	135	110	205	120
		32	140	170	280	85	85	55	400	510	140	115	200	115
		40	140	170	280	85	85	55	400	510	140	120	195	110
		50	150	160	270	75	75	45	410	500	150	125	190	105
		65	Use flat panel for inlet over 65A		260		65	35	420	490	160	130	185	100
		80			255		60	30	425	485	165			
		100			245		50	20	435	475	175			
		125			225		30	0	455	455	195			
		150			210		15				210			
		200												

Limitaion of pipe mounted in side panel top area: Up to 50 A and 65 A for the flange and socket respectively.
Use a flat panel for 80 A or higher.

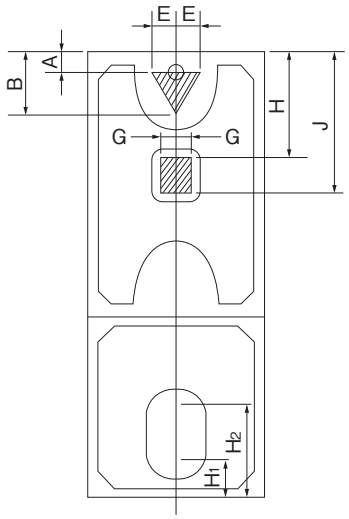
●Tank height 1.5m 2.0m



unit:mm

	Piping diameter (A)	Flange fitting position						Socket fitting position		
		A、K	B、C	E、F	G	H	J	A	B	E
Inlet, overflow, outlet	15	120	385	160	95	610	800	100	425	185
	20	120	385	160	95	610	800	105	420	180
	25	135	370	145	80	620	790	110	415	175
	32	140	365	140	75	630	780	115	410	170
	40	140	365	140	75	630	780	120	405	165
	50	150	355	130	65	640	770	125	400	160
	65	160	345	120	55	650	760	130	395	155
	80	165	340	115	50	655	755			
	100	175	330	105	40	665	745			
	125	195	310	85	20	685	725			
	150	210	295	60	0	700	710			
	200	Use flat panel for inlet over 200A								

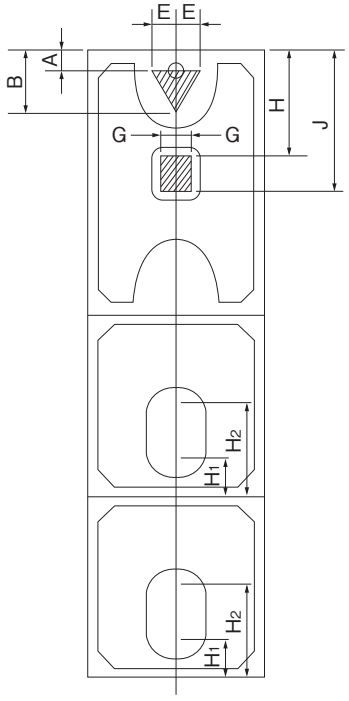
●Tank height 2.5m 3m



unit:mm

	Piping diameter (A)	Flange fitting position								Socket fitting position		
		A	B	E	G	H	J	H_1	H_2	A	B	E
Inlet, overflow, outlet	15	120	385	160	95	610	800	200	600	100	425	185
	20	129	385	160	95	610	800	200	600	105	420	180
	25	135	370	145	80	620	790	215	585	110	415	175
	32	140	365	140	75	630	780	220	580	115	410	170
	40	140	365	140	75	630	780	220	580	120	405	165
	50	150	355	130	65	640	770	230	570	125	400	160
	65	160	345	120	55	650	760	240	560	130	395	155
	80	165	340	115	50	655	755	245	555			
	100	175	330	105	40	665	745	255	545			
	125	195	310	85	20	685	725	275	525			
	150	210	295	70	0	700	710	290	510			
	200	Use flat panel for inlet over 200A						315	485			
	250							350	450			

●Tank height 3.5m

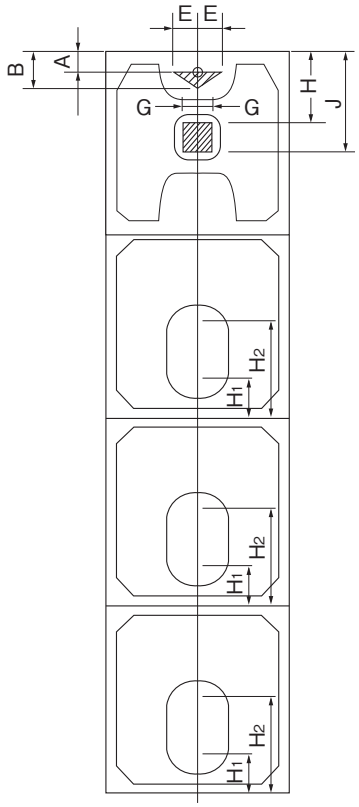


unit:mm

	Piping diameter (A)	Flange fitting position								Socket fitting position		
		A	B	E	G	H	J	H_1	H_2	A	B	E
Inlet, overflow, outlet	15	120	385	160	95	610	800	200	600	100	425	185
	20	129	385	160	95	610	800	200	600	105	420	180
	25	135	370	145	80	620	790	215	585	110	415	175
	32	140	365	140	75	630	780	220	580	115	410	170
	40	140	365	140	75	630	780	220	580	120	405	165
	50	150	355	130	65	640	770	230	570	125	400	160
	65	160	345	120	55	650	760	240	560	130	395	155
	80	165	340	115	50	655	755	245	555			
	100	175	330	105	40	665	745	255	545			
	125	195	310	85	20	685	725	275	525			
	150	210	295	70	0	700	710	290	510			
	200	Cannot be fit. Use a flat panel.						315	485			
	250							350	450			

●Tank height 4.0m

unit:mm

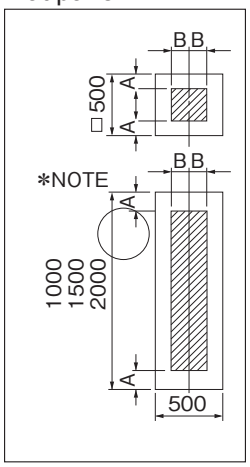


	Piping diameter (A)	Flange fitting position								Socket fitting position		
		A	B	E	G	H	J	H_1	H_2	A	B	E
Inlet, overflow, outlet	15	120	190	105	75	380	530	200	600	100	425	185
	20	120	190	105	75	380	530	200	600	105	420	180
	25	135	175	90	60	390	515	215	585	110	415	175
	32	140	170	85	55	400	510	220	580	115	410	170
	40	140	170	85	55	400	510	220	580	120	405	165
	50	150	160	75	45	410	500	230	570	125	400	160
	65	Cannot be fit. Use a flat panel.			35	420	490	240	560	130	395	155
	80				30	425	485	245	555			
	100				20	435	475	255	545			
	125				0	455	455	275	525			
	150							290	510			
	200							315	485			
	250							350	450			

Limitation for fitting section of the above pipes : Up to 50 A and 65 A for the flange and socket respectively.
Use a flat panel for 80 A or higher.

●Flat panel

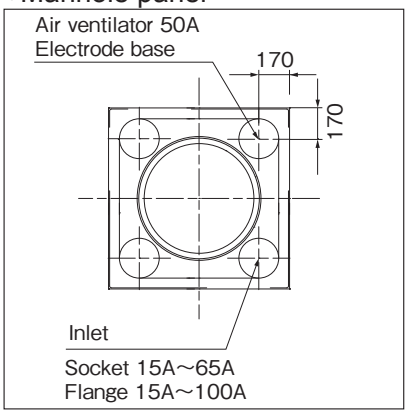
unit:mm



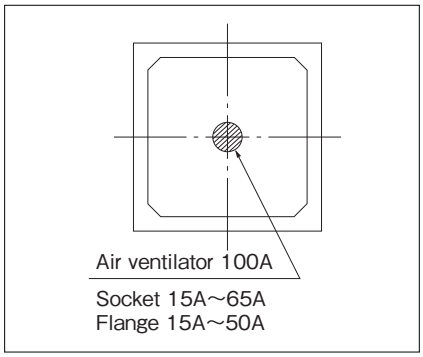
	Piping diameter (A)	Flange fitting position		Socket fitting position	
		A	B	A	E
Inlet, overflow, outlet, Drainage	20	120 (200)	130	90 (170)	150
	25	135 (215)	115	95 (175)	145
	32	140 (220)	110	100 (180)	140
	40	140 (220)	110	105 (185)	135
	50	150 (230)	100	110 (190)	130
	65	160 (240)	90	115 (195)	125
	80	165 (245)	85		
	100	175 (255)	75		
	125	195 (275)	55		
	150	210 (290)	40		
	200	235 (315)	15		
	250	279 (350)	0		

*NOTE : In case of changing from 1m width side panel to 2 nos. of flat panels for 2.0～3.0H, please see ( ) of the above chart.

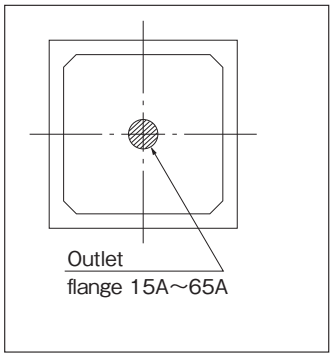
●Manhole panel



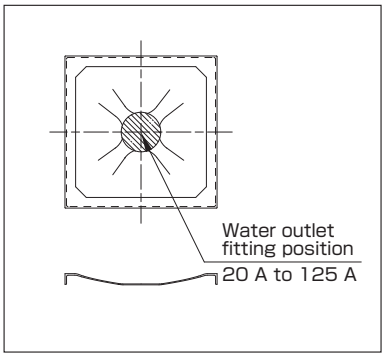
●Roof panel



●Bottom panel



●Drainage panel



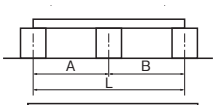
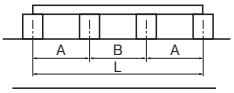
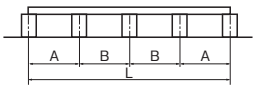
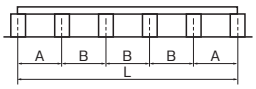
5-4 Design of the Foundation and Base

5-4-1 Foundation Shape/Level

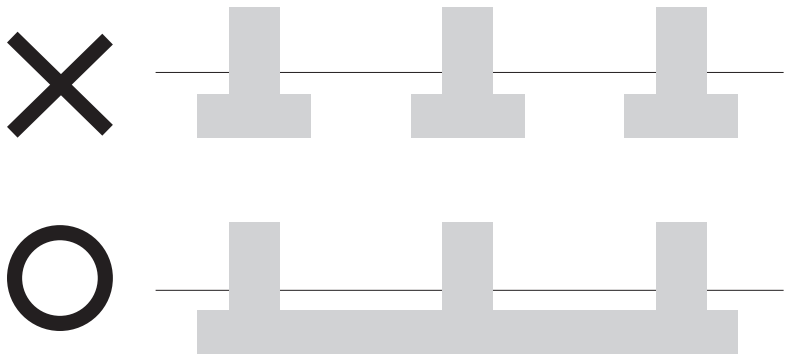
・The width of the concrete foundation shall be 300 mm and its height 500 mm or more.

・Reference foundation drawing

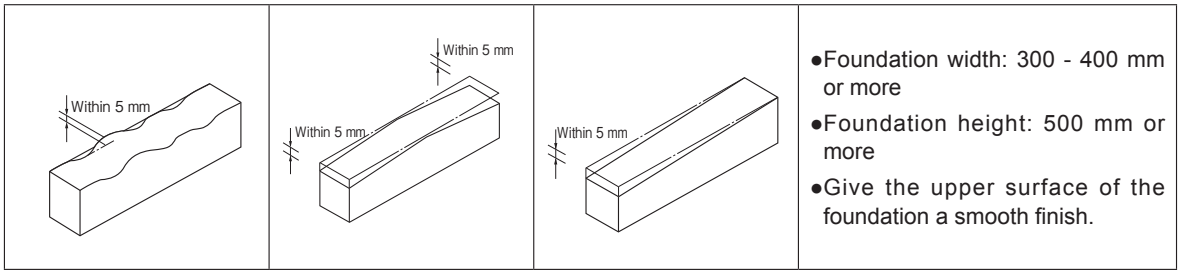
Concrete foundation intervals (Standard)

Concrete Foundation	Tank length (longest)	1.0meter height			1.5meter height,2.0meter height			2.5meter height,3.0meter height		
		L	A	B	L	A	B	L	A	B
	1000	1034	-	-	1044	-	-	1064	-	-
	1500	1536	-	-	1546	-	-	1566	-	-
	2000	2036	-	-	2046	-	-	2066	-	-
	2500	2538	1519	1019	2548	1524	1024	2568	1534	1034
	3000	2538	1519	1019	3048	1524	1524	3068	1534	1534
	3500	3540	1770	1770	3550	1775	1775	3570	1785	1785
	4000	4040	2020	2020	4050	2025	2025	4070	2035	2035
	4500	4542	1512	1518	4552	1517	1518	4572	1517	1518
	5000	5042	1679	1684	5052	1684	1684	5072	1694	1684
	5500	5544	1846	1852	5554	1851	1852	5574	1861	1852
	6000	6044	2013	2018	6054	2018	2018	6074	2028	2018
	6500	6546	1634	1639	6556	1639	1639	6576	1524	1764
	7000	7046	1759	1764	7056	1764	1764	7076	1774	1764
	7500	7548	1885	1889	7558	1890	1889	7578	1900	1889
	8000	8048	2010	2014	8058	2015	2014	8078	2025	2014
	8500	8550	1710	1710	8560	1712	1712	8580	1722	1712
	9000	9050	1807	1812	9060	1812	1812	9080	1822	1812
	9500	9552	1908	1912	9562	1913	1912	9582	1923	1912
	10000	10052	2008	2012	10062	2013	2012	10082	2023	2012

∗Mat foundation must be employed to prevent differential settlement. The foundation should be of adequate strength.



● Foundation finishing accuracy



5-4-2 Base Specifications

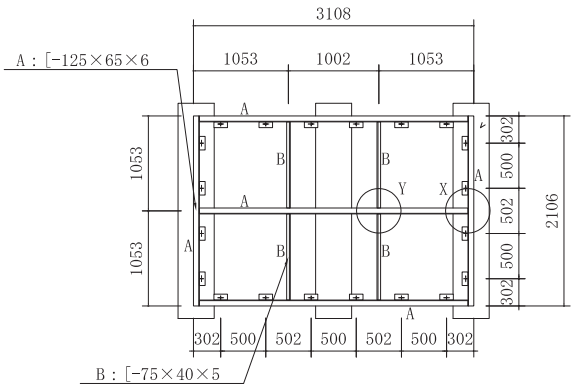
・The basic shape of the base of HISHITANK™ G Panel Type tanks is parallel crosses.

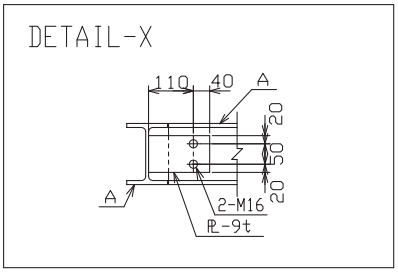
・The basic interval between base beams is 1002 mm for full-size panels and 502 mm for half-size panels.

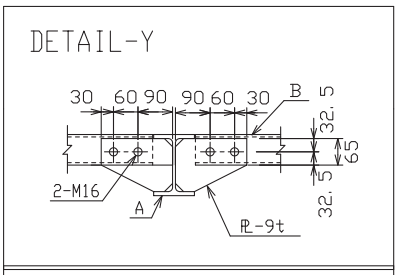
・Reference base drawings

● Sample base drawing

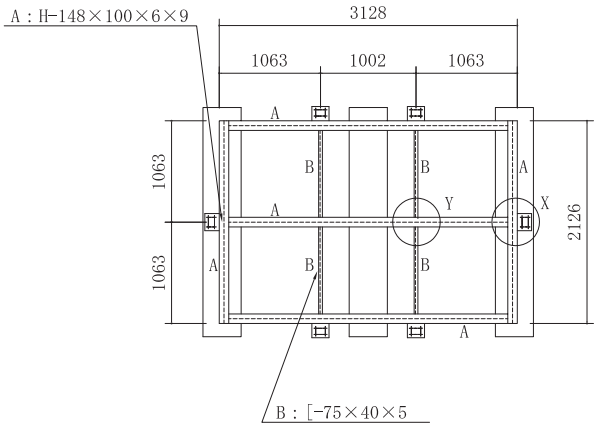
EXAMPLE OF CHANNEL STEEL

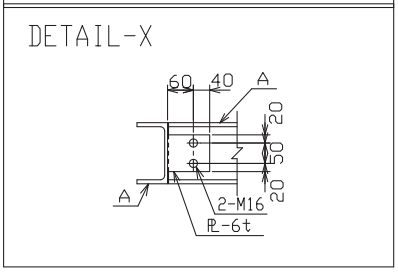


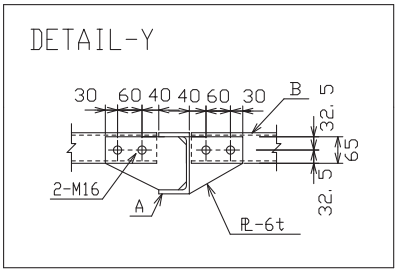




EXAMPLE OF H-SHAPED STEEL



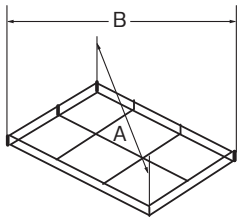




Criteria and accuracy of base preparation

Observe the following points when building a base.

(1) The diagonal dimension difference (A − B) must be as shown in the table below.
Deformation must be eliminated especially for hot dip galvanizing finishes.

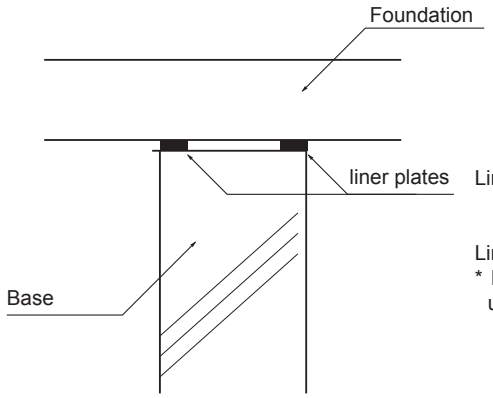


Length	A − B
Less than 5 m	3
More than 5 m	5

(2) The top Horizontal level of plane of the base must be set within the values shown in the table below for the base length. Insert pieces of liner or similar items if necessary when adjusting the levelness.

Base length and levelness

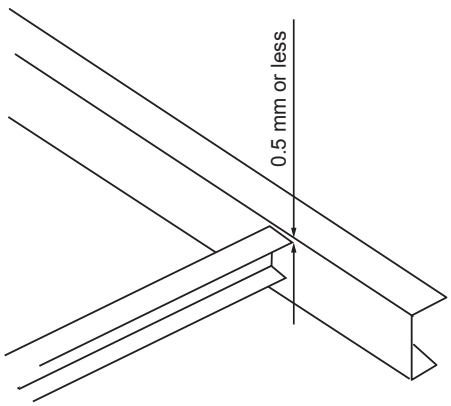
Base length	1m	2m	3m	4m	5 m or longer
Level difference (max.)	2mm	4mm	6mm	8mm	10mm



Liner specification : Use plates of approx.
[base width − 10 mm]

Liner
* Be sure to insert pieces of liner under both sides of a base beam.

(3) Base unevenness: 0.5 mm or less



5-4-3 Anchor Bolt Design

① Importance of anchor bolts

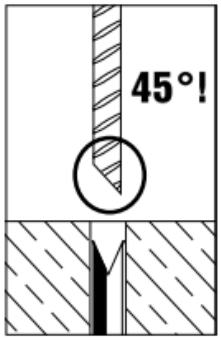
Anchor bolts are important members that connect the tank to its foundation.

A great force will act on the installation parts of a tank in the horizontal and vertical directions in the event of an earthquake or typhoon.

Due to the great force, a large shearing force and pulling force will be applied to the anchor bolts connecting the building structure and the ground (foundation). Therefore, if the anchor bolts have not been used properly or the anchor bolts designated by the designer are not used, the anchor bolts may be pulled out of the foundation concrete or they may break, which could damage the tank.

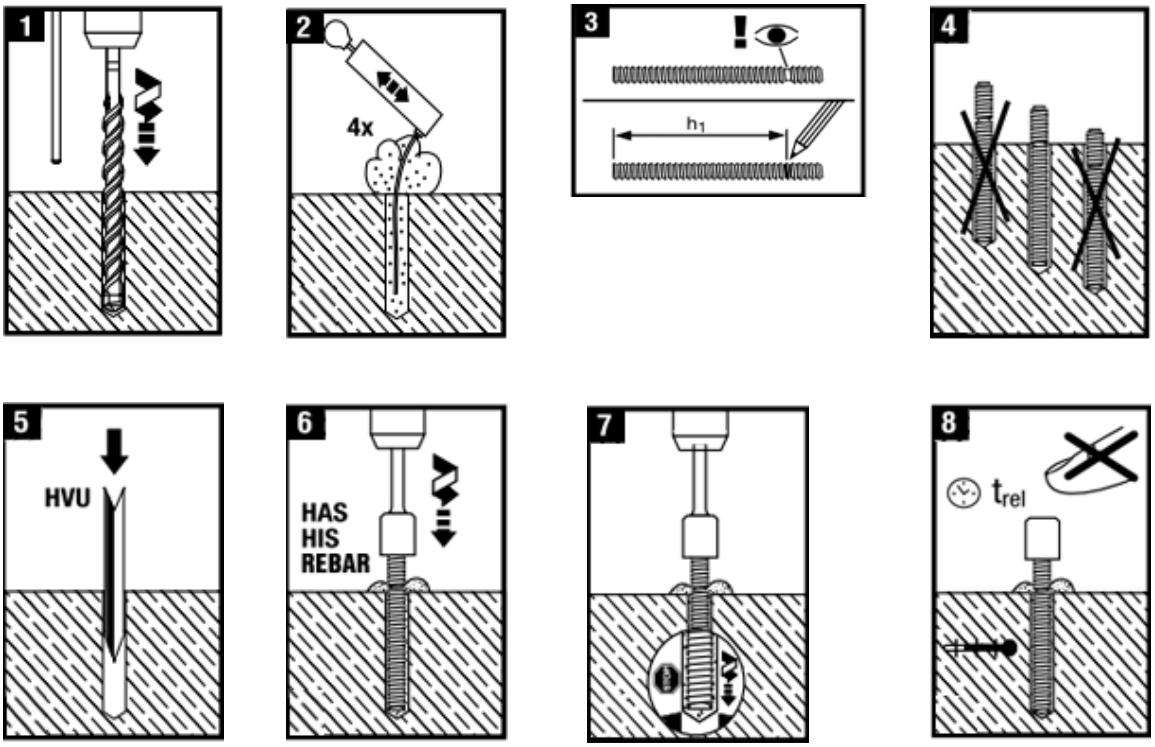
② Sample usage of post-construction adhesive anchors

Recommended anchor shapes



recommended all threaded bolt that was cut on one side or both sides

Construction procedure



③Flat base

● Standard base member table (Dimension between foundation: 1700 mm or less)

Horizontal seismic intensity / Tank height	type GE (Non-seismic)	type GA (Kh=2/3G)
1.0m	[-100×50×5	[-100×50×5
1.5m	[-125×65×6	[-125×65×6
2.0m	[-125×65×6	[-125×65×6
2.5m	[-150×75×6.5	[-150×75×6.5
3.0m	[-150×75×6.5	[-150×75×6.5
3.5m	H-148×100×6×9	H-148×100×6×9
		H-150×150×7×10
4.0m	H-148×100×6×9	H-148×100×6×9
		H-150×150×7×10

5-5 Tank/Base Weight

Tank height: 1 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	1	1	105	105	55
1	1.5	1	1.5	140	150	75
1	2	1	2	155	165	85
1	2.5	1	2.5	190	215	110
1	3	1	3	205	225	120
1	3.5	1	3.5	245	275	140
1	4	1	4	255	290	150
1	4.5	1	4.5	295	335	175
1	5	1	5	310	350	185
1.5	1.5	1	2.25	190	210	115
1.5	2	1	3	210	230	130
1.5	2.5	1	3.75	260	290	160
1.5	3	1	4.5	280	310	180
1.5	3.5	1	5.25	330	370	210
1.5	4	1	6	345	390	225
1.5	4.5	1	6.75	395	450	260
1.5	5	1	7.5	415	470	275
2	2	1	4	235	255	145
2	2.5	1	5	290	325	180
2	3	1	6	310	345	195
2	3.5	1	7	365	415	230
2	4	1	8	390	440	245
2	4.5	1	9	445	505	285
2	5	1	10	470	530	300
2.5	2.5	1	6.25	355	400	230
2.5	3	1	7.5	385	430	255
2.5	3.5	1	8.75	450	510	300
2.5	4	1	10	480	540	320
2.5	4.5	1	11.25	545	620	370
2.5	5	1	12.5	575	650	390
3	3	1	9	420	470	270
3	3.5	1	10.5	490	555	320
3	4	1	12	525	590	340
3	4.5	1	13.5	595	675	390
3	5	1	15	630	710	415
3.5	3.5	1	12.25	575	650	390
3.5	4	1	14	615	690	415
3.5	4.5	1	15.75	695	790	475
3.5	5	1	17.5	735	830	505
4	4	1	16	655	740	435
4	4.5	1	18	745	845	500
4	5	1	20	790	890	530
4.5	4.5	1	20.25	845	975	585
4.5	5	1	22.5	895	1030	620
5	5	1	25	950	1085	640

Tank height: 1.5 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	1.5	1.5	150	150	55
1	1.5	1.5	2.25	200	210	75
1	2	1.5	3	220	235	85
1	2.5	1.5	3.75	275	295	150
1	3	1.5	4.5	295	320	165
1	3.5	1.5	5.25	350	380	195
1	4	1.5	6	370	405	210
1	4.5	1.5	6.75	425	465	240
1	5	1.5	7.5	445	490	255
1.5	1.5	1.5	3.375	270	285	115
1.5	2	1.5	4.5	295	315	180
1.5	2.5	1.5	5.625	360	390	225
1.5	3	1.5	6.75	385	415	250
1.5	3.5	1.5	7.875	455	490	290
1.5	4	1.5	9	480	520	315
1.5	4.5	1.5	10.125	545	595	360
1.5	5	1.5	11.25	570	625	380
2	2	1.5	6	325	350	200
2	2.5	1.5	7.5	395	430	250
2	3	1.5	9	425	465	270
2	3.5	1.5	10.5	500	550	320
2	4	1.5	12	530	585	340
2	4.5	1.5	13.5	600	665	390
2	5	1.5	15	630	700	415
2.5	2.5	1.5	9.375	480	525	320
2.5	3	1.5	11.25	515	565	350
2.5	3.5	1.5	13.125	600	660	415
2.5	4	1.5	15	635	700	445
2.5	4.5	1.5	16.875	720	795	510
2.5	5	1.5	18.75	755	835	540
3	3	1.5	13.5	555	615	375
3	3.5	1.5	15.75	645	715	445
3	4	1.5	18	685	765	475
3	4.5	1.5	20.25	775	865	540
3	5	1.5	22.5	815	915	570
3.5	3.5	1.5	18.375	750	825	540
3.5	4	1.5	21	795	880	575
3.5	4.5	1.5	23.625	895	995	660
3.5	5	1.5	26.25	940	1050	700
4	4	1.5	24	845	945	605
4	4.5	1.5	27	950	1065	690
4	5	1.5	30	1000	1125	730
4.5	4.5	1.5	30.375	1070	1220	810
4.5	5	1.5	33.75	1125	1285	855
5	5	1.5	37.5	1185	1365	885

Tank height: 2 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	2	2	200	200	60
1	1.5	2	3	285	295	110
1	2	2	4	315	325	130
1	2.5	2	5	405	420	155
1	3	2	6	435	450	175
1	3.5	2	7	525	545	205
1	4	2	8	555	575	220
1	4.5	2	9	645	670	250
1	5	2	10	670	705	270
1.5	1.5	2	4.5	390	400	160
1.5	2	2	6	425	435	185
1.5	2.5	2	7.5	525	545	230
1.5	3	2	9	560	580	255
1.5	3.5	2	10.5	665	690	300
1.5	4	2	12	695	725	325
1.5	4.5	2	13.5	800	835	370
1.5	5	2	15	835	870	395
2	2	2	8	460	480	210
2	2.5	2	10	570	595	255
2	3	2	12	610	640	280
2	3.5	2	14	715	755	330
2	4	2	16	755	800	355
2	4.5	2	18	865	910	400
2	5	2	20	905	955	430
2.5	2.5	2	12.5	695	720	330
2.5	3	2	15	740	770	365
2.5	3.5	2	17.5	860	900	425
2.5	4	2	20	905	950	460
2.5	4.5	2	22.5	1030	1075	520
2.5	5	2	25	1075	1125	555
3	3	2	18	785	830	390
3	3.5	2	21	915	965	455
3	4	2	24	965	1020	490
3	4.5	2	27	1095	1155	555
3	5	2	30	1140	1210	590
3.5	3.5	2	24.5	1055	1110	550
3.5	4	2	28	1110	1170	590
3.5	4.5	2	31.5	1250	1315	675
3.5	5	2	35	1305	1380	715
4	4	2	32	1170	1240	620
4	4.5	2	36	1315	1395	705
4	5	2	40	1375	1465	750
4.5	4.5	2	40.5	1480	1585	825
4.5	5	2	45	1545	1660	875
5	5	2	50	1615	1750	910

Tank height: 2.5 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	2.5	2.5	265	265	105
1	1.5	2.5	3.75	415	415	145
1	2	2.5	5	440	445	170
1	2.5	2.5	6.25	590	595	215
1	3	2.5	7.5	615	620	235
1	3.5	2.5	8.75	765	770	280
1	4	2.5	10	795	800	300
1	4.5	2.5	11.25	940	950	345
1	5	2.5	12.5	970	975	365
1.5	1.5	2.5	5.625	575	575	220
1.5	2	2.5	7.5	605	610	255
1.5	2.5	2.5	9.375	770	770	315
1.5	3	2.5	11.25	800	805	350
1.5	3.5	2.5	13.125	965	970	410
1.5	4	2.5	15	995	1000	445
1.5	4.5	2.5	16.875	1160	1165	505
1.5	5	2.5	18.75	1190	1200	540
2	2	2.5	10	645	650	280
2	2.5	2.5	12.5	815	820	345
2	3	2.5	15	855	860	380
2	3.5	2.5	17.5	1025	1030	445
2	4	2.5	20	1065	1070	475
2	4.5	2.5	22.5	1230	1240	545
2	5	2.5	25	1270	1280	575
2.5	2.5	2.5	15.625	1000	1000	450
2.5	3	2.5	18.75	1045	1045	495
2.5	3.5	2.5	21.875	1230	1230	580
2.5	4	2.5	25	1275	1275	620
2.5	4.5	2.5	28.125	1455	1460	710
2.5	5	2.5	31.25	1505	1505	750
3	3	2.5	22.5	1100	1105	525
3	3.5	2.5	26.25	1290	1290	615
3	4	2.5	30	1340	1345	655
3	4.5	2.5	33.75	1530	1535	745
3	5	2.5	37.5	1585	1590	790
3.5	3.5	2.5	30.625	1485	1490	745
3.5	4	2.5	35	1545	1550	800
3.5	4.5	2.5	39.375	1750	1750	910
3.5	5	2.5	43.75	1810	1810	960
4	4	2.5	40	1615	1620	835
4	4.5	2.5	45	1820	1830	945
4	5	2.5	50	1885	1895	1,000
4.5	4.5	2.5	50.625	2050	2080	1,110
4.5	5	2.5	56.25	2120	2150	1,175
5	5	2.5	62.5	2200	2235	1,210

Tank height: 3 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	3	3	330	330	105
1	1.5	3	4.5	540	545	145
1	2	3	6	580	590	170
1	2.5	3	7.5	790	800	215
1	3	3	9	830	845	235
1	3.5	3	10.5	1045	1060	280
1	4	3	12	1085	1105	300
1	4.5	3	13.5	1295	1320	345
1	5	3	15	1340	1365	365
1.5	1.5	3	6.75	760	765	220
1.5	2	3	9	810	815	255
1.5	2.5	3	11.25	1035	1045	315
1.5	3	3	13.5	1080	1095	350
1.5	3.5	3	15.75	1305	1320	410
1.5	4	3	18	1350	1370	445
1.5	4.5	3	20.25	1575	1595	505
1.5	5	3	22.5	1625	1650	540
2	2	3	12	860	880	280
2	2.5	3	15	1095	1110	345
2	3	3	18	1145	1175	380
2	3.5	3	21	1380	1405	445
2	4	3	24	1430	1470	475
2	4.5	3	27	1665	1700	545
2	5	3	30	1715	1760	575
2.5	2.5	3	18.75	1340	1355	450
2.5	3	3	22.5	1400	1425	495
2.5	3.5	3	26.25	1645	1670	580
2.5	4	3	30	1710	1735	620
2.5	4.5	3	33.75	1955	1980	710
2.5	5	3	37.5	2015	2050	750
3	3	3	27	1470	1505	525
3	3.5	3	31.5	1720	1755	615
3	4	3	36	1790	1835	655
3	4.5	3	40.5	2040	2085	745
3	5	3	45	2105	2165	790
3.5	3.5	3	36.75	1985	2020	745
3.5	4	3	42	2055	2100	800
3.5	4.5	3	47.25	2320	2365	910
3.5	5	3	52.5	2395	2450	960
4	4	3	48	2135	2200	835
4	4.5	3	54	2405	2470	945
4	5	3	60	2490	2565	1,000
4.5	4.5	3	60.75	2700	2790	1,110
4.5	5	3	67.5	2785	2890	1,175
5	5	3	75	2875	3005	1,210

Tank height: 3.5 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	3.5	3.5	450	475	105
1	1.5	3.5	5.25	620	—	155
1	2	3.5	7	695	—	175
1	2.5	3.5	8.75	870	—	225
1	3	3.5	10.5	935	—	245
1	3.5	3.5	12.25	1110	—	295
1	4	3.5	14	1185	—	315
1	4.5	3.5	15.75	1355	—	365
1	5	3.5	17.5	1425	—	385
1.5	1.5	3.5	7.875	820	865	225
1.5	2	3.5	10.5	930	980	260
1.5	2.5	3.5	13.125	1120	1180	335
1.5	3	3.5	15.75	1190	1255	370
1.5	3.5	3.5	18.375	1380	—	440
1.5	4	3.5	21	1460	—	475
1.5	4.5	3.5	23.625	1645	—	545
1.5	5	3.5	26.25	1720	—	585
2	2	3.5	14	975	1025	295
2	2.5	3.5	17.5	1155	1215	375
2	3	3.5	21	1245	1310	410
2	3.5	3.5	24.5	1460	1535	495
2	4	3.5	28	1545	1625	530
2	4.5	3.5	31.5	1760	1855	610
2	5	3.5	35	1850	1945	645
2.5	2.5	3.5	21.875	1345	1415	485
2.5	3	3.5	26.25	1450	1525	535
2.5	3.5	3.5	30.625	1675	1765	640
2.5	4	3.5	35	1770	1865	690
2.5	4.5	3.5	39.375	2010	2115	795
2.5	5	3.5	43.75	2105	2215	840
3	3	3.5	31.5	1545	1625	580
3	3.5	3.5	36.75	1775	1870	695
3	4	3.5	42	1885	1985	740
3	4.5	3.5	47.25	2135	2245	855
3	5	3.5	52.5	2240	2360	905
3.5	3.5	3.5	42.875	2025	2130	840
3.5	4	3.5	49	2145	2260	900
3.5	4.5	3.5	55.125	2415	2545	1,040
3.5	5	3.5	61.25	2525	2660	1,100
4	4	3.5	56	2275	2395	955
4	4.5	3.5	63	2560	2695	1,105
4	5	3.5	70	2685	2825	1,160
4.5	4.5	3.5	70.875	2800	2945	1,285
4.5	5	3.5	78.75	2925	3080	1,360
5	5	3.5	87.5	3075	3235	1,420

Tank height: 4 meter height

Width	Length	Height	Capacity	Tank weight		Base weight
				type GE (Non-seismic)	type GA (Kh=2/3G)	
1	1	4	4	510	535	105
1	1.5	4	6	705	—	155
1	2	4	8	785	—	175
1	2.5	4	10	980	—	225
1	3	4	12	1060	—	245
1	3.5	4	14	1255	—	295
1	4	4	16	1335	—	315
1	4.5	4	18	1535	—	365
1	5	4	20	1610	—	385
1.5	1.5	4	9	925	975	225
1.5	2	4	12	1055	1110	260
1.5	2.5	4	15	1270	1335	335
1.5	3	4	18	1350	1420	370
1.5	3.5	4	21	1560	—	440
1.5	4	4	24	1650	—	475
1.5	4.5	4	27	1860	—	545
1.5	5	4	30	1940	—	585
2	2	4	16	1100	1160	295
2	2.5	4	20	1305	1375	375
2	3	4	24	1405	1480	410
2	3.5	4	28	1650	—	495
2	4	4	32	1750	—	530
2	4.5	4	36	1990	—	610
2	5	4	40	2090	—	645
2.5	2.5	4	25	1520	1600	485
2.5	3	4	30	1635	1720	535
2.5	3.5	4	35	1895	—	640
2.5	4	4	40	2000	—	690
2.5	4.5	4	45	2270	—	795
2.5	5	4	50	2375	—	840
3	3	4	36	1745	1835	580
3	3.5	4	42	2010	—	695
3	4	4	48	2130	—	740
3	4.5	4	54	2415	—	855
3	5	4	60	2530	—	905
3.5	3.5	4	49	2290	2410	840
3.5	4	4	56	2425	2555	900
3.5	4.5	4	63	2730	2875	1,040
3.5	5	4	70	2860	3010	1,100
4	4	4	64	2575	2710	955
4	4.5	4	72	2895	3045	1,105
4	5	4	80	3035	3195	1,160
4.5	4.5	4	81	3165	3330	1,285
4.5	5	4	90	3310	3485	1,360
5	5	4	100	3475	3660	1,420

5-6 Specifications for Water Quality, Water Temperature, and Installation, and Resistance to Outside Air Temperature

5-6-1 Range of Allowable Water Quality

Item	Standard design specification
Potential of hydrogen	5.8～8.6
Chloride ion content	≦200ppm

∗If you are planning to store water other than tap water, separate measures will be required.

5-6-2 Compatible Water Temperature

Water at ordinary temperature

∗Storage of high-temperature water over a long period of time can deteriorate the panels.

5-6-3 Resistance to Outside Air Temperature

This product is for use in a thermally neutral environment.

∗Existence of a heat source such as a boiler within close proximity of the tank can deteriorate the panels.

5-7 Handling Precautions

5-7-1 Operating Precautions

・Use of the tank with the full water level set too low can cause the internal members to corrode.

・Do not modify or repair the tank. Doing so may cause the tank to rupture.

・When cleaning the inside of one section of a tank that is separated into two sections, use the other section for only a short period of time.

・After performing a water-passing test and water-filling test, clean the tank thoroughly. Foreign matter in the tank such as dust, cutting scraps produced during the piping work may cause rust formation.

・ If you find the tank to be damaged during a periodic inspection, contact your local agent.

・Before using the tank after the tank has been left empty for a long time (a month or more), you will need to take measures such as retightening the nuts and bolts and checking the tank condition.

・When closing the manhole lid, tighten the locking nuts and bolts firmly, and then confirm that the lid is closed securely.

・Be sure the manhole is locked at all times except for cleaning and inspections. Neglecting to lock the manhole can lead to water contamination.

・Never block the ventilation holes and overflow holes. Blocking such holes can cause abnormal pressure in the tank, which may cause it to break.

5-7-2 Precautions for Maintenance/Inspections

・When performing maintenance, inspections, or cleaning the tank, follow the rules and regulations of the country where the tank is located.

・Be careful when using the outside and inside ladders. In particular, the inside ladder may be wet and thus slippery.

・Opening/closing the manhole lid while on the ladder can be dangerous.

・The elevated portion of the panels may be slippery, so be careful when walking on the roof or bottom panels for maintenance or inspection. Walk on the outer flat portion of each panel.

Recommended maintenance and inspections

Inspection item	Frequency	Note
Cleaning of the inside of the tank	At least once or twice a year	Clean the tank with water to remove dust, foreign matter, rust, and scales, etc. from the pipes.
Operation of the water-level control equipment and the alarm system	Once a month	In particular, check whether the alarm system works well.
Blocking of the ventilation holes, overflow holes, and other holes	Once a month	If the insect screen is torn, replace it with a new one.
Sealing condition of the manhole lid	Once a month	Be sure to lock the manhole lid. (Confirm that the manhole is securely sealed with the lid.)
Water leaks	Once a month	If an abnormality is found, contact your local agent.
Abnormal deformation of the tank body	Once a month	If an abnormality is found, contact your local agent.
Loosening, rusting, and missing bolts/nuts that secure the internal/external reinforcement members	At least once a year	If any missing, rusty, or loose nuts or bolts are found, contact your local agent.
Application of pressure (internal or external) other than hydrostatic pressure	Once a month	If any pressure other than hydrostatic pressure is being applied, remove it immediately.
Inspection of the metal members including the internal/external frames, outside ladder, nuts and bolts	At least once a year	Check for peel-off of paint, rust, and loose nuts and bolts.

5-7-3 Notes on Cleaning the Tank

- For safety purposes, when cleaning the inside of one section of a tank that is separated into two or more sections, lower the water level of the other sections to half or less.
- The elevated portion of the panels may be slippery, so be careful when walking on the roof or bottom panels for cleaning. Walk on the outer flat portion of each panel.
- Never remove the internal and external reinforcement members.
- When cleaning the tank, follow the rules and regulations of the country where the tank is located and always keep safety in mind.

5-8 Maintenance Inspection, Renovation, and Replacement

5.8-1 Maintenance Inspection Items

Periodic inspection (once or twice a year)

Inspection item	Remarks
Cleaning of the inside of the tank	Clean the tank with water to remove dust, foreign matter, rust, and scales, etc.
Loose or missing bolts that secure the internal reinforcement members	Tighten the bolts securely if they are loose. Replace them with new ones if necessary.
Inspection of the metal members including the external frames, outside ladder, and connecting nuts and bolts	Check for peeling paint and plating, rust, and loose bolts/nuts. Paint the relevant items in a systematic manner.
Inspection of the base, anchor bolts, and concrete foundation	Check for peeling paint and plating, rust, and loosened, etc. anchor bolts.

Regular inspection (once a month)

Inspection item	Remarks
Operation of the water-level control equipment and the alarm system	In particular, check whether the alarm system works well.
Blocking of the ventilation holes, overflow holes, and other holes	Immediately remove any objects that are blocking the holes.
Sealing condition of the manhole lid	Lock the manhole lid.
Abnormal deformation of the tank body	Contact your local agent.
Application of pressure (internal/external) other than hydrostatic pressure	If any pressure other than hydrostatic pressure is being applied, remove it immediately.

5-8-2 Maintenance Methods (How to Replace Panels/Parts)

In addition to cleaning and inspection of the FRP tank at least once a year, it is recommended to replace the following parts as shown below.

Sample tank renovation (designed durable life of a tank: 15 years)

● Replace (recommended by the manufacturer)

Elapsed years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Periodic inspection	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Manhole lid/gasket					●					●					
Ventilation holes					●					●					
Electrode cover								●							
Body paint								●							
Replacement of the tank body															●

* Perform inspection and part replacement, including bolt adjustment and reinforcement replacement, whenever identified as needed in each inspection.

Guideline for inspection and replacement of major parts

Guide for maintenance timing (years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	First maintenance					Second maintenance					Third maintenance				
											Designed durable life (years)				

＜Maintenance＞

Perform detailed checks in a periodic inspection once or twice a year in the first and second maintenance. If necessary, replace parts and perform a repair work.

It has reached the design service life in the maintenance of the third stage, we recommend that you take necessary measures such as replacement of parts and reinforcement of the tank based on the detailed checks.

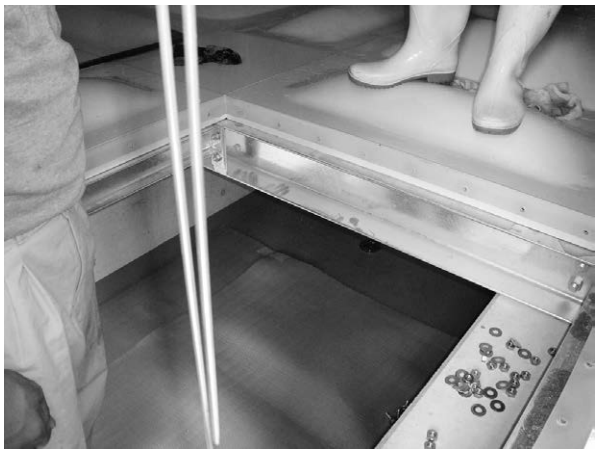
＜Examples of parts to be replaced＞

Inspection and replacement of metal members including external reinforcement members and internal reinforcement members, connection bolts/nuts, and accessories

5-8-3 Convenience of Repair

Since a panel tank is comprised of individual panels, it is possible to replace only damaged panels.

*Photo of replacement of a damaged bottom panel



5-8-4 Tank Diagnosis

We design our FRP water tanks with a useful life-span of 15 years based on the GRP water tank structure design calculation method. However, this useful life is based on the assumption that the user performs maintenance and inspections properly.

Since an FRP water tank may have problems such as water leakage or cracks due to age deterioration after 15 years of use, we recommend that you diagnose the level of deterioration based on the tank diagnosis checklist to promptly renovate it or replace it with a new one.

[Water tank deterioration diagnosis checklist] (Reference)

(Deterioration diagnosis) Panel system bolt-assembly type

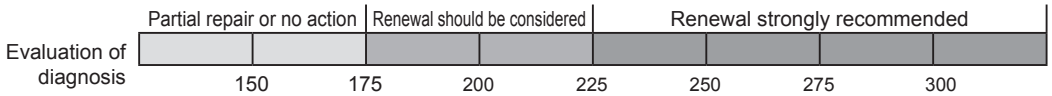
Part		Diagnostic item	Judgment value based on the criteria		Level of importance	Points	Measure
Tank body	Top/side/ bottom panels (outside)	1. Deformation	①	5・4・3・2・1	5	6	・Replace, repair or paint the panels.
		2. Cracks	①	5・4・3・2・1	5	6	
		3. Degree of surface deterioration	①	5・4・3・2・1	5	6	
		4. Contamination	①	5・4・3・2・1	5	6	
	Manhole	5. Looseness and damage of the hatch	①	5・4・3・2・1	5	6	・Replace the hatch. ・Replace the gasket.
		6. Missing or damaged gasket	①	5・4・3・2・1	5	6	
		7. Rusty or damaged lock	①	5・4・3・2・1	5	6	・Install a lock or replace the lock.
Exterior of tank	Reinforcement members	8. Degree of rust	①	5・4・3・2・1	5	6	・Replace or repair the reinforcement members or bolts.
		9. Degree of deformation	①	5・4・3・2・1	5	6	
		10. Rusty or damaged bolts	①	5・4・3・2・1	5	6	
	Flanges	11. Deformation or tilting	①	5・4・3・2・1	5	6	・Repair or replace.
		12. Water leakage	①	5・4・3・2・1	5	6	
	Outside ladder	13. Rust or breakage	①	5・4・3・2・1	5	6	・Replace.
	Electrode seats	14. Breakage of the cover	①	5・4・3・2・1	5	6	
	Ventilation pipes	15. Breakage of the insect screen	①	5・4・3・2・1	5	6	
Interior of tank	Internal reinforcement members	16. Rust or breakage	①	5・4・3・2・1	5	6	・Replace or repair the reinforcement members or bolts.
		17. Degree of deformation	①	5・4・3・2・1	5	6	
		18. Rusty or damaged bolts	①	5・4・3・2・1	5	6	
	Inside ladder	19. Damaged ladder	①	5・4・3・2・1	5	6	・Replace the inside ladder.
Assembly bolts	Outside bolts	20. Rust or breakage	①	5・4・3・2・1	5	6	・Replace or securely tighten the outside bolts.
		21. Possibility of tightening bolts	①	5・4・3・2・1	5	6	
	Inside bolts	22. Rust or breakage	①	5・4・3・2・1	5	6	・Replace or securely tighten the inside bolts.
		23. Possibility of tightening bolts	①	5・4・3・2・1	5	6	
Sealing members		24. Level of water leakage	①	5・4・3・2・1	5	6	・Replace the sealing members.
Base		25. Degree of rust	①	5・4・3・2・1	5	6	・Correct the levelness. ・Replace the bolts.
		26. Condition/amount of tilt	①	5・4・3・2・1	5	6	
		27. Degree of rust/damage to bolts	①	5・4・3・2・1	5	6	
Anchor bolts		28. Degree of rust/damage to anchor bolts	①	5・4・3・2・1	5	6	・Repair or replace.
Years of tank use		29. Years of use	②	5・4・3・2・1	5	6	・Replace the tank body.
Setup environment		30. Setup location	③	5・4・3・2・1	5	6	
Tank use conditions		31. Water level, frequency of water filling and discharge	④	5・4・3・2・1	5	6	
				Total			

(Judgment criteria)

① Deterioration	5: Terrible	4: Bad	3: A little	2: Some	1: No problems
② Years of use	5: Over 20 years	4: 15 to 20 years	3: 10 to 14 years	2: 5 to 9 years	1: 4 years or less
③ Installation location	5: Outdoors, high place		3: Outdoors, ground level		1: Indoors
④ Water level, frequency	5: Water level (high), frequency (high)		3: Water level (medium), frequency (medium)		1: Water level (low), frequency (low)

(Maintenance diagnosis measure)

If points (judgment value × level of importance) total 174 or less, no actions need to be taken or only partial repair is recommended. If the points total between 175 and 224, renewal of the tank should be considered. If the points total 225 or more, renewal of the tank is strongly recommended.



Remarks

5-8-5 Renewal of Each Tank of a Multiple-Tank System

Tank renewal is subject to various restraints due to a variety of circumstances.
As a pioneer in the field of water tanks, MITSUBISHI CHEMICAL INFRATEC handles tank renewals under a variety of circumstances.
We provide many methods for renewing a tank, for example, setup of a temporary tank to minimize the water stoppage time or delivery of a completed product, etc.
Our partitioned water tanks allow users to dismantle/build individual portions of the tank separately to renew only one portion without having to stop the water supply.
Based upon our accumulated know-how, MITSUBISHI CHEMICAL INFRATEC proposes the most suitable renewal method for each customer.

5-9 Tests/Certifications

①"Public Building Construction Standard Specifications (Machinery Edition)" Supervised by the Government Buildings Department, Minister's Secretariat of MLIT
②Singapore Standard 245
③Singapore Standard 375
④WRAS (Water Regulations Advisory Scheme) Part Certification
⑤WRAS (Water Regulations Advisory Scheme) Product Certification

HISHITANK™ G Panel Types have one or more of the following certifications.

①“Public Building Construction Standard Specifications (Machinery Edition)” Supervised by the Government Buildings Department, Minister’s Secretariat of MLIT

評価書 973-01401803号

評　価　書

設備機材名　タンク

①ＦＲＰ製パネルタンク
申請シリーズ　Ｇシリーズ
（評価書別紙参照）

申請者名　三菱ケミカルインフラテック株式会社
所在地　東京都中央区日本橋本石町一丁目２番２号

製造所名　三菱ケミカルインフラテック株式会社　平塚事業所
（所在地）　神奈川県平塚市真土二丁目１番３５号
ISO9001・ISO14001登録工場

納入地区及びアフターサービス地区　全国

申請のあった上記設備機材について、下記のとおり評価する。

平成29年10月31日

一般社団法人　公共建築協会
会　長　春田　浩司

記

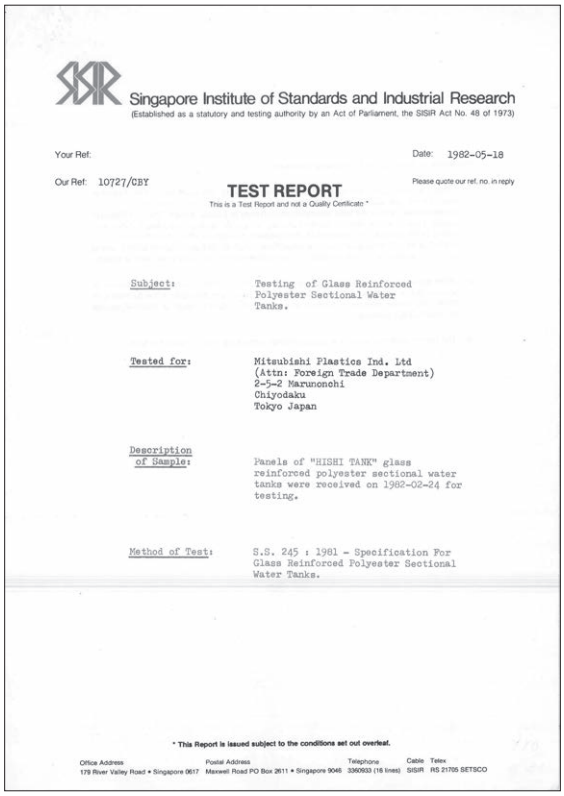
１　評価の結果
本設備機材について、建築材料・設備機材等評価委員会で申請資料に基づき評価した結果、次の評価基準を満たしていると認める。
（１）国土交通省大臣官房官庁営繕部監修「公共建築工事標準仕様書（機械設備工事編）」に適合する品質・性能が確保されている。
（２）適切な品質管理・製造管理が行われている。
（３）納入仕様が整備されている。
（４）アフターサービス体制が整備されている。

２　評価の前提
申請者により提出された資料には、事実と反する記載がないものとして評価した。

３　評価書の有効期間
本評価書の有効期間は、平成29年11月1日から平成30年3月31日までとする。

内容変更により平成29年10月31日再交付

②Singapore Standard 245



Singapore Institute of Standards and Industrial Research
(Established as a statutory and testing authority by an Act of Parliament, the SISIR Act No. 48 of 1973)

Your Ref:　Date: 1982-05-18

Our Ref: 10727/CEY　Please quote our ref. no. in reply

TEST REPORT
This is a Test Report and not a Quality Certificate *

Subject: Testing of Glass Reinforced Polyester Sectional Water Tanks.

Tested for: Mitsubishi Plastics Ind. Ltd
(Attn: Foreign Trade Department)
2-5-2 Marunouchi
Chiyodaku
Tokyo Japan

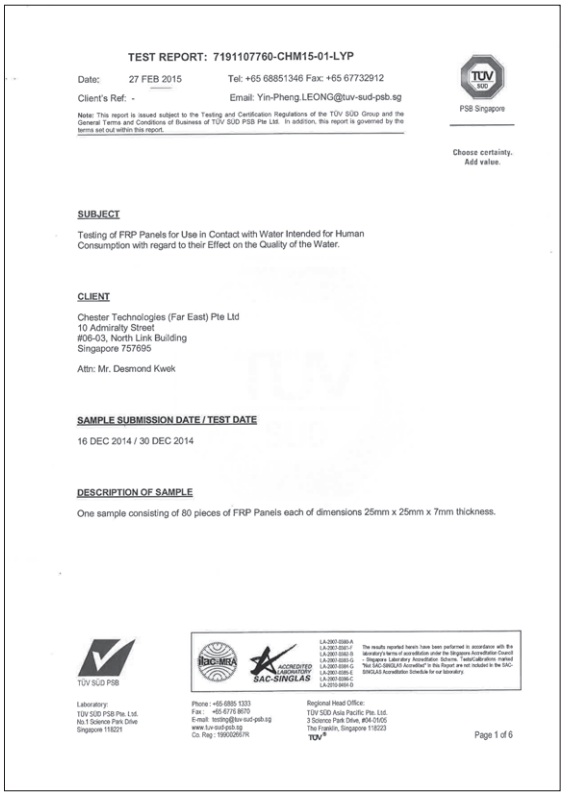
Description of Sample: Panels of "HISHI TANK" glass reinforced polyester sectional water tanks were received on 1982-02-24 for testing.

Method of Test: S.S. 245 : 1981 - Specification For Glass Reinforced Polyester Sectional Water Tanks.

* This Report is issued subject to the conditions set out overleaf.

Office Address: 179 River Valley Road • Singapore 0617　Postal Address: Maxwell Road PO Box 2611 • Singapore 9046　Telephone: 3360933 (16 lines)　Cable: SISIR　Telex: RS 21705 SETSCO

③Singapore Standard 375



TEST REPORT: 71911107760-CHM15-01-LYP

Date: 27 FEB 2015　Tel: +65 68851346 Fax: +65 67732912
Client's Ref: -　Email: Yin-Pheng.LEONG@tuv-sud-psb.sg

Note: This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.

PSB Singapore

Choose certainty.
Add value.

SUBJECT

Testing of FRP Panels for Use in Contact with Water Intended for Human Consumption with regard to their Effect on the Quality of the Water.

CLIENT

Chester Technologies (Far East) Pte Ltd
10 Admiralty Street
#06-03, North Link Building
Singapore 757695

Attn: Mr. Desmond Kwek

SAMPLE SUBMISSION DATE / TEST DATE

16 DEC 2014 / 30 DEC 2014

DESCRIPTION OF SAMPLE

One sample consisting of 80 pieces of FRP Panels each of dimensions 25mm x 25mm x 7mm thickness.

TÜV SÜD PSB

ACCREDITED LABORATORY SAC-SINGLAS

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme. Tests/Calibrations marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our laboratory.

Laboratory:
TÜV SÜD PSB Pte. Ltd.
No.1 Science Park Drive
Singapore 118221

Phone : +65-6885 1333
Fax : +65-6776 8670
E-mail: testing@tuv-sud-psb.sg
www.tuv-sud-psb.sg
Co. Reg.: 199002057R

Regional Head Office:
TÜV SÜD Asia Pacific Pte. Ltd.
3 Science Park Drive, #04-01/05
The Franklin, Singapore 118223

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④ NSF (National Sanitation Foundation International Certification)
International Cerrification

NSF International
789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Mitsubishi Chemical Infratec Co., Ltd.
Japan

AS COMPLYING WITH NSF/ANSI/CAN 61 AND ALL APPLICABLE REQUIREMENTS.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.

Certification Program Accredited by the American National Standards Institute

Certification Program Accredited by the Standards Council of Canada

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in NSF's Official Listings for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

September 12, 2019
Certificate# C0337101 - 01

Theresa Bellish
General Manager, Water Systems

⑤WRAS (Water Regulations Advisory Scheme)
Part Certification

Approval Number: 1710557
Test Report: MA6091/J & MA6091/1/J

19th December 2018

Mitsubishi Chemical Infratec Co. Ltd.
1-2-2, Nihonbashi Hongokucho,
Chuo-ku,
Tokyo 103-0021,
Japan

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

RUBBERS - SILICONE - MATERIAL ONLY. **5415**

'OHJI Silicone Rubber Karyu3-type'. Grey coloured, extruded silicone rubber material. Shore hardness 30. Tested in-radius size 2.05. For use with water up to 23°C.

APPROVAL NUMBER: 1710557
APPROVAL HOLDER: MITSUBISHI CHEMICAL INFRATEC CO. LTD.

The Scheme reserves the right to review approval.
Approval 1710557 is valid between October 2017 and October 2022

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully

Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

The Water Regulations Advisory Scheme Ltd. Registered in England No, 06663930 Registered office: 6D Lowick Close, Hazel Grove, Stockport, SK7 5ED
Tel:+44(0)333 207 9030 Fax:+44(0)1495 248 540 Email:info@wras.co.uk website:www.wras.co.uk

⑥WRAS (Water Regulations Advisory Scheme)
Product Certification

WRAS APPROVED PRODUCT

This certifies that

MITSUBISHI PLASTICS INFRATEC CO LTD

has had the undermentioned product examined, tested and found, when correctly installed, to comply with the requirements of the United Kingdom Water Supply (Water Fittings) Regulations and Scottish Water Byelaws.

'HISHITANK' GEV & GSEV RANGE OF GRP SECTIONAL COLD WATER STORAGE CISTERNS: 1000 - 430,000 LITRES

The certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current status of an approval must be obtained from the WRAS Directory (www.wras.co.uk/directory)

The product so mentioned will be valid until the end of:

May 2020

1505049
Certificate No.

Secretary

Chairman, Product Assessment Group

5-10 Examples of tank construction

G-panel type	
Location	: Environment office in Miyagi Prefecture
Model	: GF8×10×2H
Tank specification	: FRP single panel
Base specification	: Flat base
Earthquake resistance standard	: 1.0G

Stainless panel type	
Location	: Water purifying plant in Fukuoka Prefecture
Model	: SF7.5×15×2.5H, 2 tanks
Tank specification	: SUS single panel
Base specification	: Flat base
Earthquake resistance standard	: 1.0G

G-panel type	
Location	: College in Kanagawa Prefecture
Model	: GSH2×2×1.5H
Tank specification	: FRP composite panel
Base specification	: steel-tower base with catwalk
Earthquake resistance standard	: 1.5G

G-panel type	Stainless panel type
Location	: Junior high school in Kanagawa Prefecture
Model	: GSF2×3×3H+SF1×3×3H (with intermediate pump chamber SUS)
Tank specification	: FRP composite panel + SUS single panel
Base specification	: Special flat base
Earthquake resistance standard	: 1.0G

G-panel type	Stainless panel type
Location	: Elementary school in Kanagawa Prefecture
Model	: GSF3×3×2H (with pump chamber SUS)
Tank specification	: FRP composite panel
Base specification	: Flat base
Earthquake resistance standard	: 1.0G