HEATAWAY

HYGIENIC WATER CHILLER

FALLING FILM CHILLER



www.heataway.net

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FALLING FILM CHILLER



CLEAN AND SAFE IN COMPLIANCE WITH GHP STANDARDS.

Designed to minimize contamination with a hygienic structure that is easy to clean and sanitize.

REDUCE PROCESSING TIME BY UP TO 3 TIMES WHILE PRESERVING PRODUCT FRESHNESS AT A COOLING TEMPERATURE OF 0.5°C

Significantly shorten preparation time for chilling and temperature reduction processes. Ensure rapid preservation of product quality with a chiller operating between 0.5°C and 2.0°C.

Reference: Chiller Cooling Process.

ENGINEERED TO ENSURE LEAK-FREE PER FORMANCE.

Backed by over 30 years of expertise, our ice-making plates are manufactured using advanced laser welding technology. Each plate is precisely engineered and rigorously tested in accordance with ASME standards, undergoing pressure tests at 1.3 times the design pressure to ensure long-term durability and leak-free performance.









TRUST IN THE GLOBALLY RECOGNIZED STANDARD QUALITY.

ISO 9001:2015 certified quality management systems, and utilizing stainless steel grade 304, our water chilling machines are manufactured by reputable producers adhering to global standards. They meet the stringent criteria of international standards such as ASTM and ASME.

SAVE UP TO 20% WITH GHP STANDARD WATER TANKS.

Prefabricated water receiving tanks, designed to GHP standards, can accommodate water chilling machines without the need for separate procurement. This results in a fast and cost-effective solution, saving more than 20%.

Referenced from: reducing expenses in design, manufacturing, and installation processes.

Note: Prefabricated water receiving tanks are additional features.







CHILLED AND CLEAN WATER AT A LOW TEMPERATURE OF 0.5 DEGREES CELSIUS.

A water chilling machine that brings water temperature close to 0 degrees Celsius, allowing for a maximum reduction of production preparation time by up to 3 times. Chilled and clean water at a low temperature can effectively preserve the quality of raw materials.

REDUCING THE TEMPERATURE TO PRESERVE THE QUALITY OF RAW MATERIALS.



Cleaning and temperature reduction for poultry



Cleaning and chilling fresh seafood



Cleaning fruits and vegetables

COOLING TEMPERATURE AFTER THE STERILIZATION PROCESS.



Milk production



Beverage production



Production of liquid seasonings

ENHANCING FOOD PROCESSING PRODUCTION PROCESSES

WITH A COLD-WATER SYSTEM IN COMPLIANCE WITH FOOD PRODUCTION STANDARDS.
GHP (GOOD HYGIENE PRACTICE)

- **Non-toxic to food,** made of smooth-surfaced, corrosion-resistant stainless steel 304, resistant to corrosion.
- **Free from external contamination**, with a tightly sealed unit.
- **Reduce bacterial accumulation with a compact,** low-profile design to minimizecorners.
- **Thoroughly clean, sanitize,** and disinfect from all angles, as it allows comprehensive cleaning with its open design.
- **Clean cold water with low temperature,** suitable for use in food production and direct contact with food.



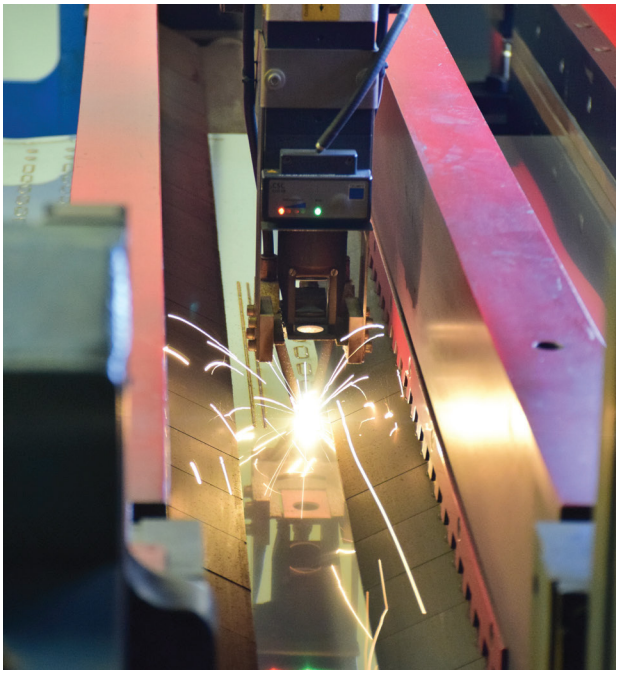


Remark: Additional Features

ENGINEERED TO ENSURE LEAK-FREE PERFORMANCE

With over 30 years of expertise in falling film chiller design and production, our engineering team ensures every plate is crafted with precision using cutting-edge laser welding technology from Europe. Each chilling plate is rigorously tested in accordance with ASME standards and subjected to pressure tests exceeding 1.3 times the design limit.





INTERNATIONAL STANDARD QUALITY



CERTIFIED STAINLESS STEEL GRADE 304

The stainless steel grade 304 used in our refrigeration equipment is sourced from reputable manufacturers with a proven track record of meeting international standards such as ASTM and ASME.

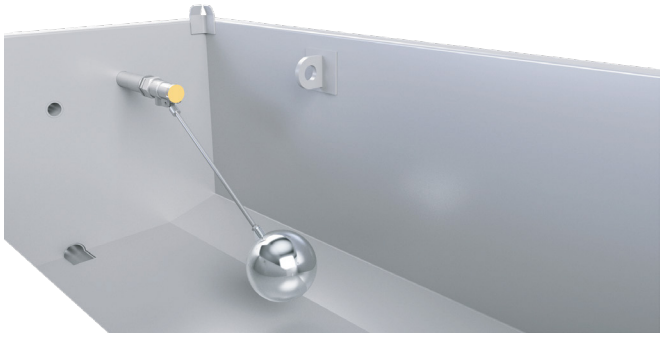
Experienced quality engineers supervise the production and inspection processes, employing Positive Material Identification (PMI) technology to verify the chemical composition and ensure full compliance with ASME material specifications.

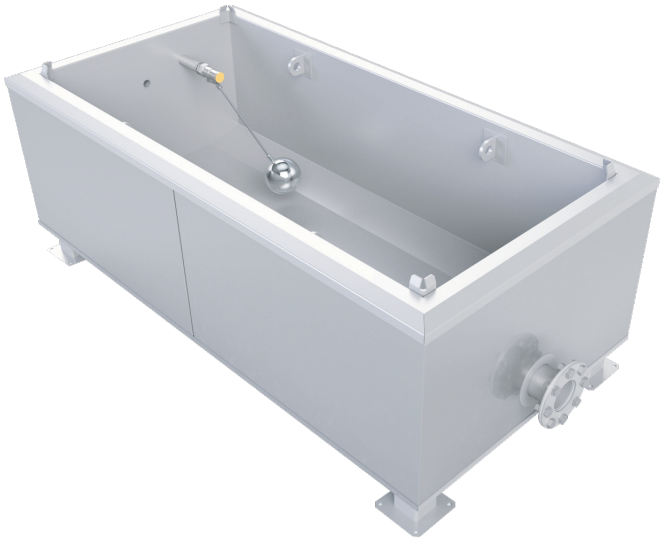
ADDITIONAL FEATURE

GHP-COMPLIANT COOLING WATER BASIN – REDUCE INSTALLATION COSTS AND SAVE UP TO 20% ON ENERGY CONSUMPTION

The prefabricated, insulated GHP-standard cooling water basin eliminates the need for custom design or on-site fabrication. It helps maintain stable chilled water temperatures and can be installed easily without the use of special tools offering both time and energy savings.



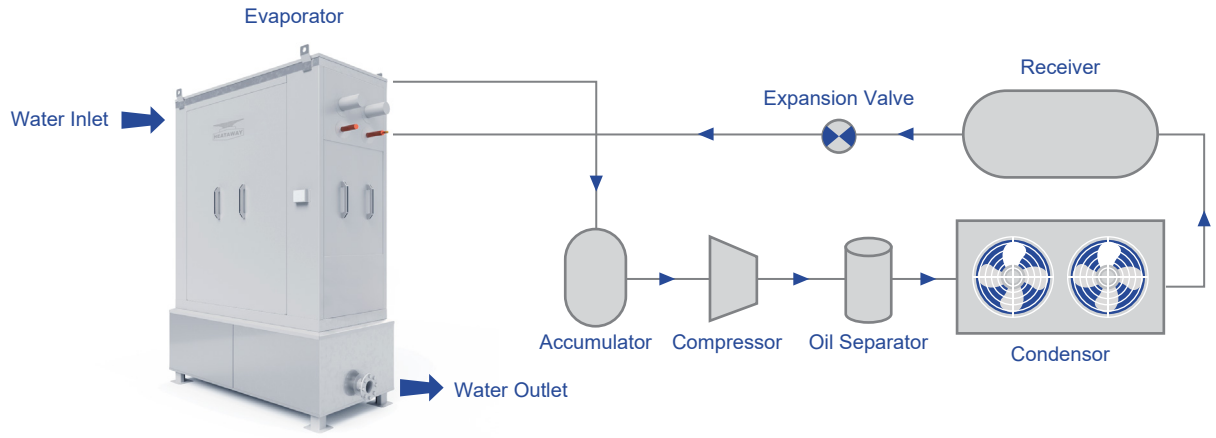




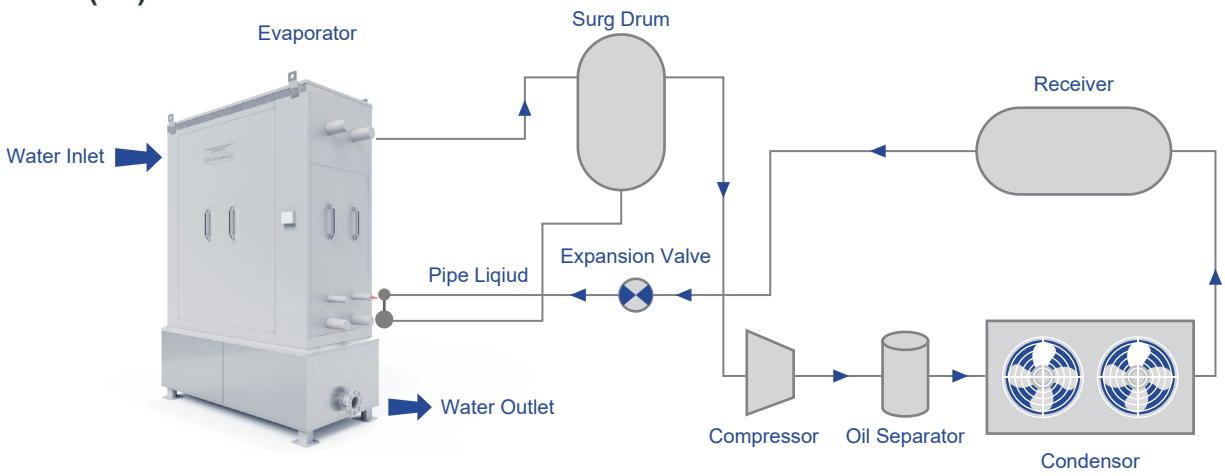
Water basin equipped with a float control device for water level management.

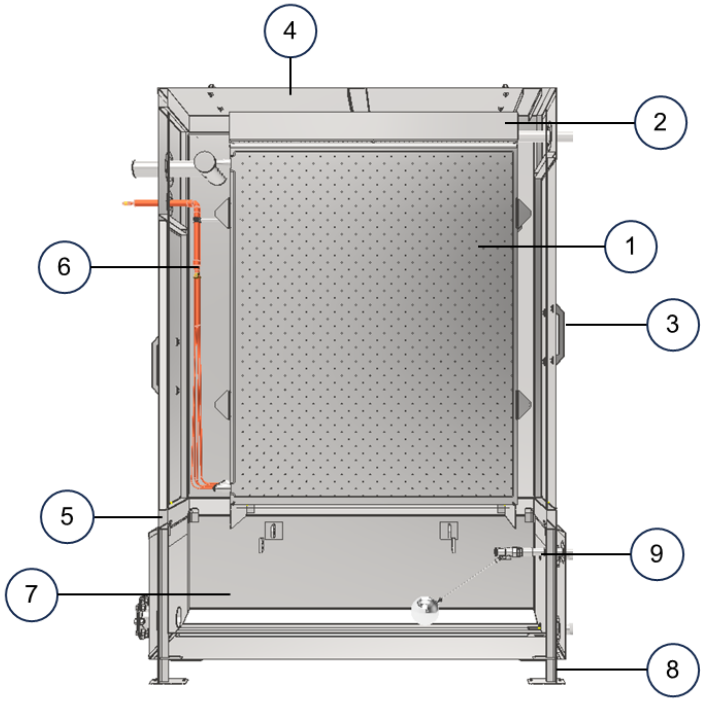
SPECIFICATION

DIRECT EXPANSION (DX) OPERATION



FLOODED (FF) OPERATION





No.	Detail	Material	Remark
1	Evaporator plate	Stainless steel 304	
2	Upper tray	Stainless steel 304	
3	Cover	Body : Stainless steel 304	
4	Top Cover	Body : Stainless steel 304	
5	Structure	Stainless steel 304	
6	Nozzle Distributor	Braze and copper	For DX system
7	Water tank	Body : Stainless steel 304	Additional
		Insulation : Polyurethane (PU)	
8	Leg	Stainless steel 304	
9	Float switch	Stainless steel 304	

MODEL SELECTION METHOD

Selection procedure

- Determine total refrigeration load (kcal/hr)
  Total refrigeration load (kcal/hr) = water flow rate (m3/hr) x 1000 x [Temperature of water inlet - Temperature of water outlet] (°C)
- Select the model whose operation and refrigerant used.
- Select the model whose total refrigeration load is not greater than value in the table.

Selection example

Water flow rate (m3/hr)		:	2
Temperature of water inlet (°C)		:	30
Temperature of water outlet (°C)		:	2
Refrigerant		:	R404a
Operation		:	dx (dry expansion)
Total refrigeration load		=	2 x 1000 x (30 – 2)
		=	56,000 kcal/hr
	Or	=	65.1 kW

From table 1, dx operation and R404a are selected.
Total refrigeration load 65.1 kW and select model FR3-1.

Remark: The model selection for other refrigerant, please contact HEATAWAY representative.



DIRECT EXPANSION (DX) OPERATION

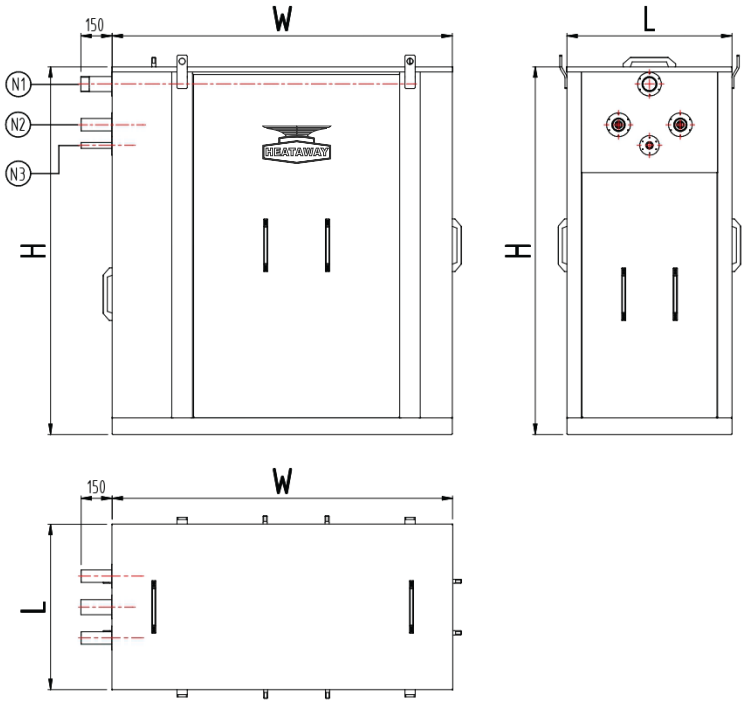


TABLE 1: TOTAL REFRIGERATION LOAD, DIMENSION AND WEIGHT OF DX OPERATION

Refigerant	Model	Cooling cap (kW)	Overall Dimension (mm)			Weight (kg)				Container size
			W	L	H	Shipping	Empty	Operating	Refrigerant	
R404A	FR3-1	88	1650	500	1835	610	610	670	40	20 ft
	FR3-2	150	1650	800	1835	920	920	1020	70	20 ft
	FR3-3	224	1650	1100	1835	1270	1270	1420	105	20 ft

Remark : Nominal capacity is base on operating condition: evaporating temperature -4°C, condensing temperature 40 °C and wet bulb temperature 24 °C, temperature water inlet 30°C and outlet 2°C

TABLE 2: PIPE CONNECTION OF DX OPERATION

Description	Mark	Connecting type	DX		
			FR3-1	FR3-2	FR3-3
Water Inlet (NB pipe)	N1	Tread-NPT	1-1/2” x 1	2” x 1	2” x 2
Gas Suction Outlet (NB pipe)	N2	Welded	2-1/2” x 1	2-1/2” x 2	2-1/2” x 2
Liquid Inlet (CU tube)	N3	Welded	1-1/8” x 1	1-1/8” x 2	1-3/8” x 2

FLOODED (FF) OPERATION

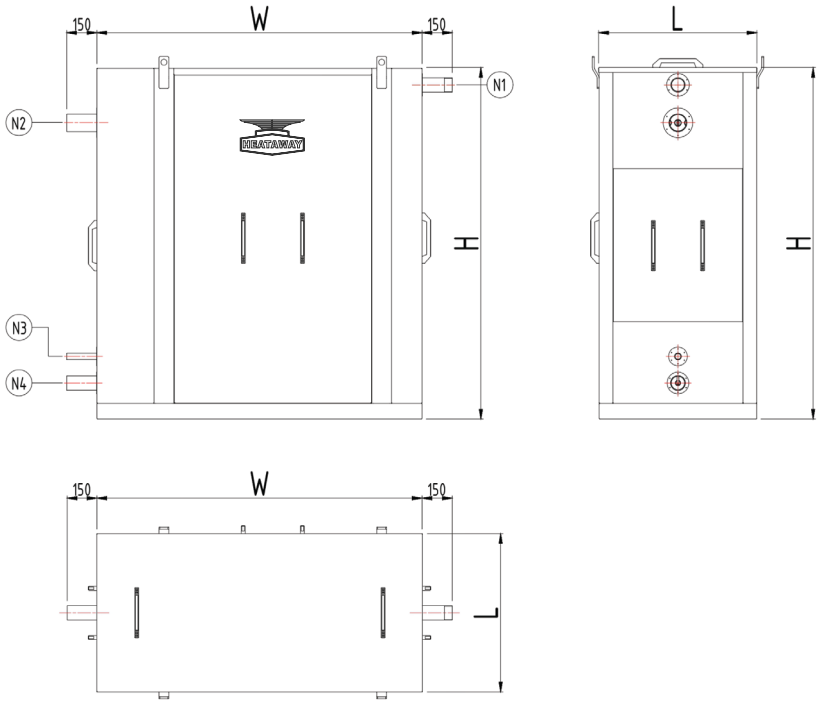


TABLE 3: TOTAL REFRIGERATION LOAD, DIMENSION AND WEIGHT OF FLOODED OPERATION

Refigerant	Model	Cooling cap (kW)	Overall Dimension (mm)			Weight (kg)				Container size
			W	L	H	Shipping	Empty	Operating	Refrigerant	
R404A	FR3-1	212	1650	500	1835	620	620	740	85	20 ft
	FR3-2	365	1650	800	1835	930	930	1130	155	20 ft
	FR3-3	547	1650	1100	1835	1300	1300	1590	230	20 ft
	FR3-4	729	1650	1400	1835	1640	1640	2030	300	20 ft
	FR3-5	973	1650	1750	1835	2100	2100	2620	385	20 ft
R717	FR3-1	234	1650	500	1835	620	620	700	50	20 ft
	FR3-2	400	1650	800	1835	930	930	1070	90	20 ft
	FR3-3	602	1650	1100	1835	1300	1300	1500	130	20 ft
	FR3-4	804	1650	1400	1835	1640	1640	1910	170	20 ft
	FR3-5	1071	1650	1750	1835	2100	2100	2460	220	20 ft

Remark : Nominal capacity is base on operating condition: evaporating temperature -4 °C, condensing temperature 40 °C and wet bulb temperature 24°C, temperature water inlet 30°C and outlet 2°C

TABLE 4: PIPE CONNECTION OF FLOODED OPERATION

Description	Mark	Connecting type	FF				
			FR3-1	FR3-2	FR3-3	FR3-4	FR3-5
Water Inlet (NB pipe)	N1	Tread-NPT	2” x 1	3” x 1	2-1/2” x 2	3” x 2	3” x 2
Gas Suction Outlet (NB pipe)	N2	Welded	3” x 1	3” x 2	4” x 2	4” x 2	5” x 2
Liquid Inlet (NB pipe)	N3	Welded	1-1/2” x 1	1-1/2” x 2	1-1/2” x 2	2” x 2	2” x 2
Liquid Return (NB pipe)	N4	Welded	2-1/2” x 1	2-1/2” x 2	3” x 2	3” x 2	3” x 2

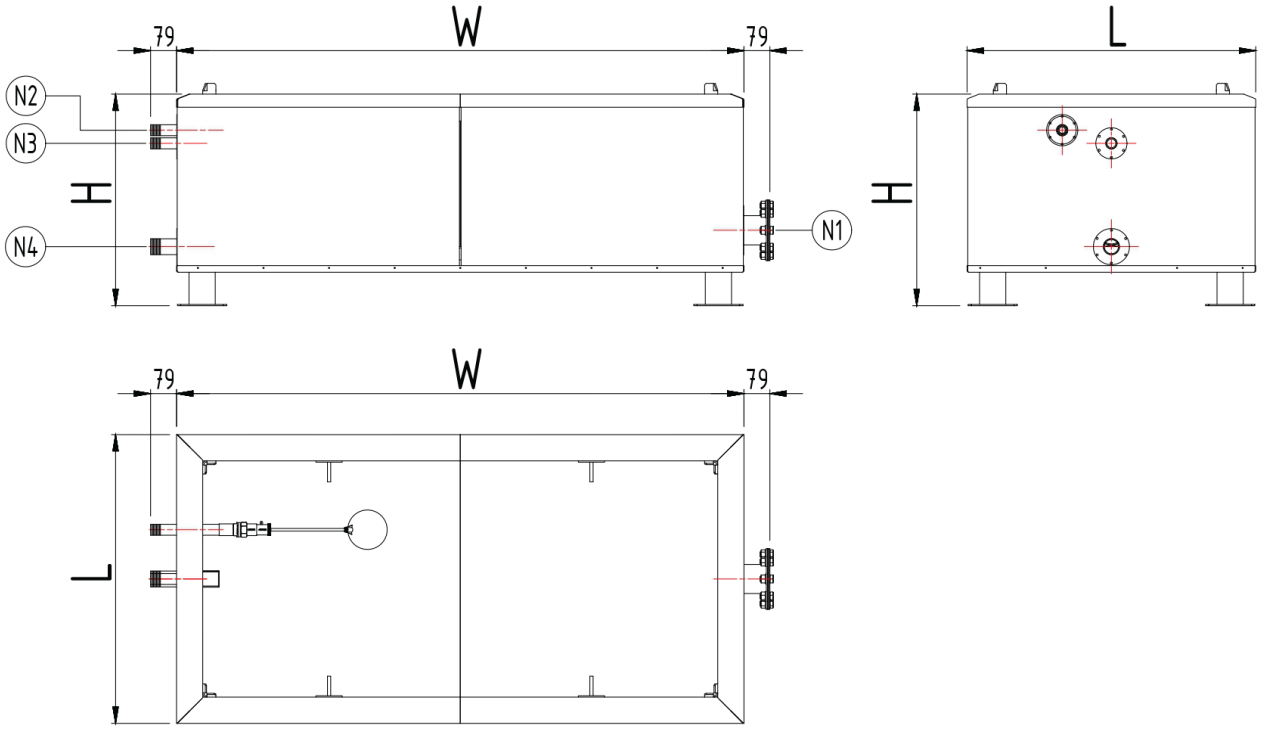


TABLE 5: CAPACITY, DIMENSION AND WEIGHT OF WATER SUMP TANK

Model	Overall Dimension (mm)			Weight (kg)			Water volume (liter)
	W	L	H	Shipping	Empty	Operating	
WT-1	1730	580	645	150	150	350	200
WT-2	1730	880	645	170	170	520	350
WT-3	1730	1180	645	200	200	690	490
WT-4	1730	1480	645	230	230	870	640
WT-5	1730	1830	645	260	260	1070	810

TABLE 6: PIPE CONNECTION OF WATER SUMP TANK

Description	Mark	Connecting type	FF				
			FR3-1	FR3-2	FR3-3	FR3-4	FR3-5
Water Outlet (NB pipe)	N1	Flanged	3” x 1	3” x 1	3” x 1	4” x 1	4” x 1
Make up Water (NB pipe)	N2	Tread-NPT	1” x 1	1” x 1	1” x 1	1” x 1	1” x 1
Over flow (NB pipe)	N3	Tread-NPT	1” x 1	1” x 1	1” x 1	1” x 1	1” x 1
Drain (NB pipe)	N4	Tread-NPT	1-1/2” x 1	1-1/2” x 1	1-1/2” x 1	1-1/2” x 1	1-1/2” x 1

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