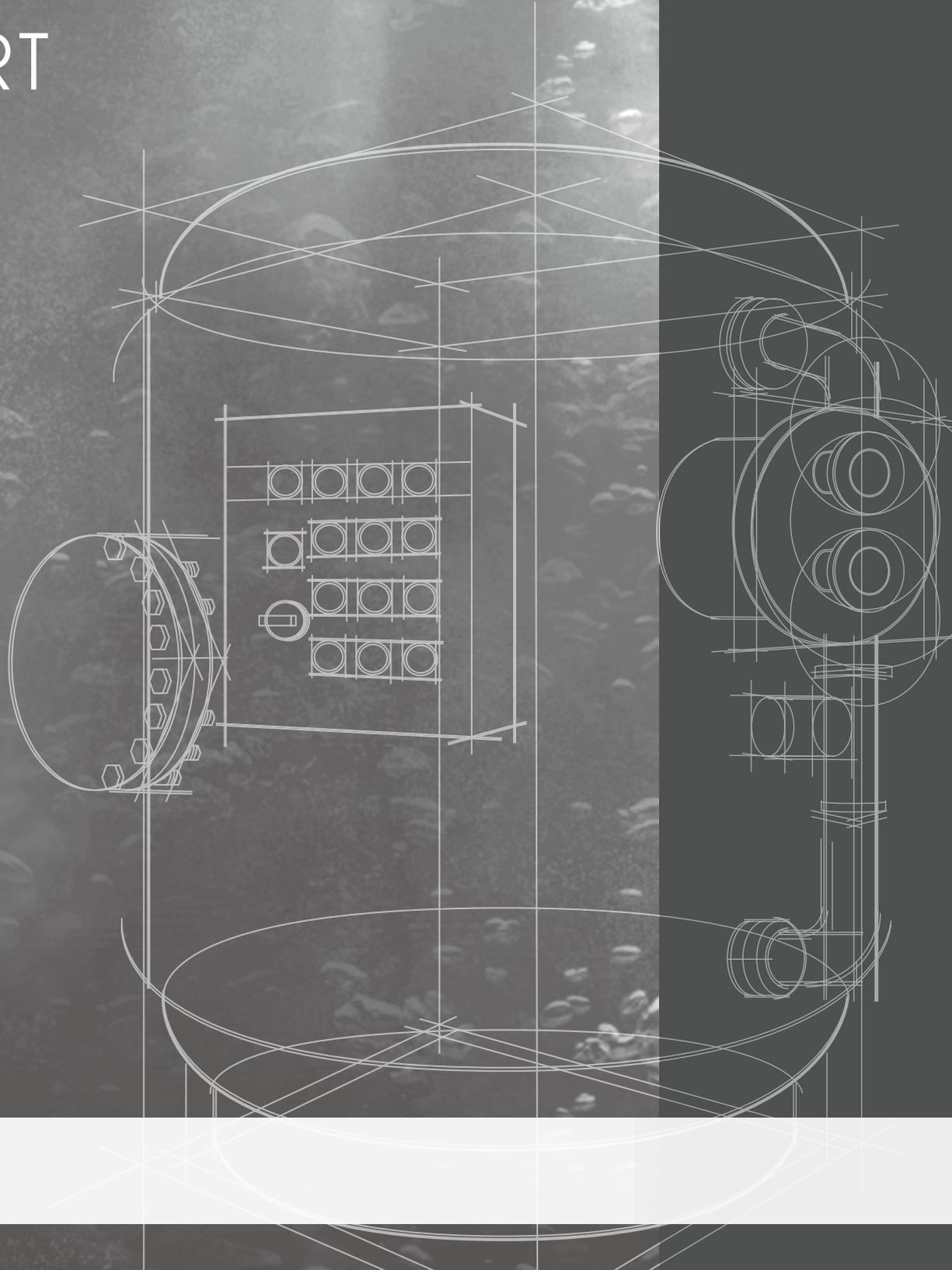


# THE HOT WATER TANK EXPERT



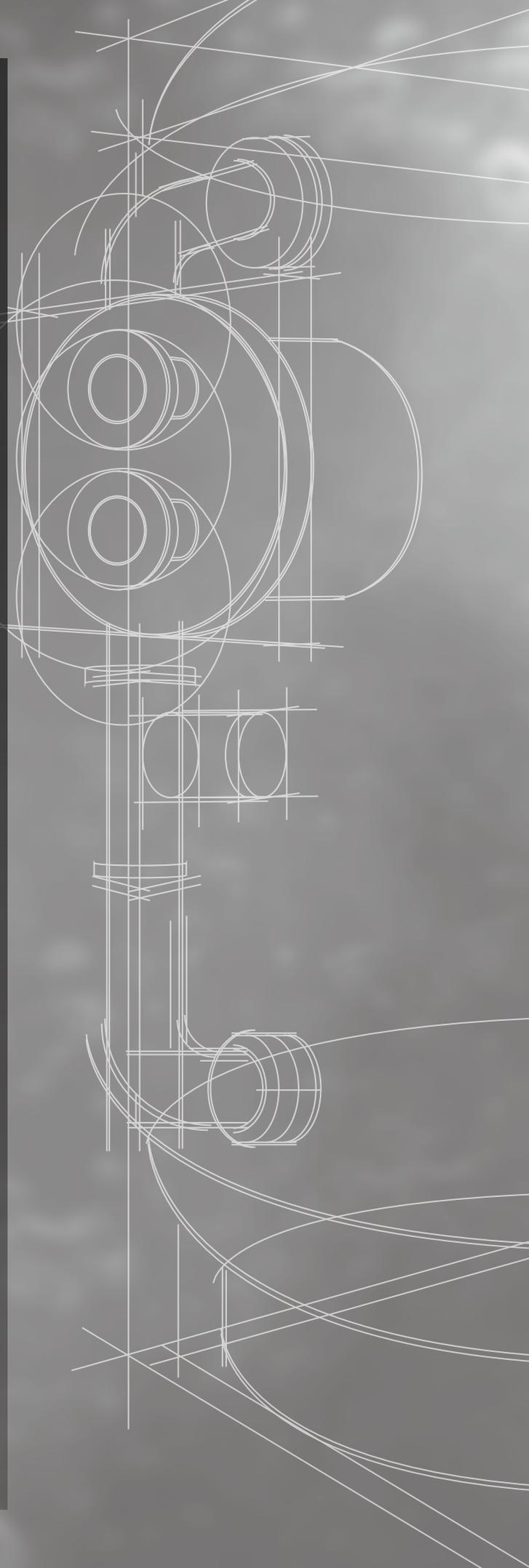


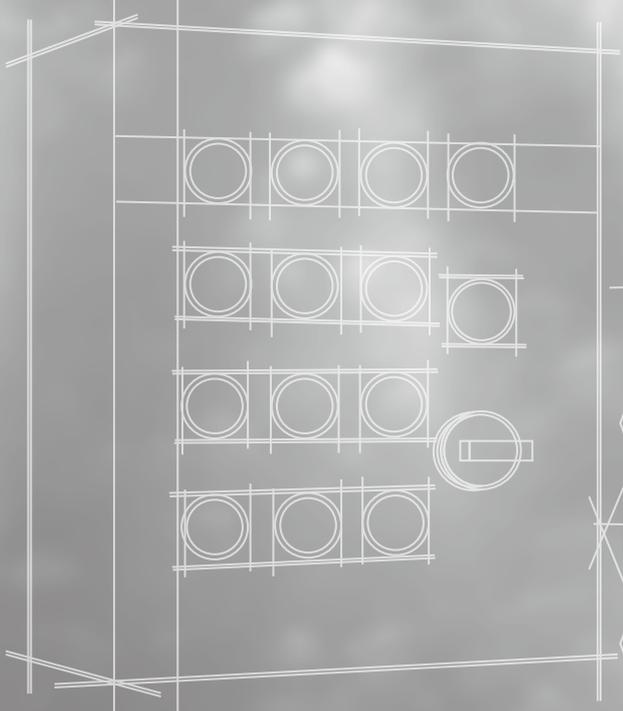
# OUR COMPANY

IES Group was established in 1998 and headquartered in Hong Kong. With perseverance and commitment to the "creation of excellence", IES has experienced steady development and continued growth since its establishment.

IES Group has over 20 years of industry experience manufacturing heat exchangers, as well as the integration of automated control systems. Our expertise ranges from R&D, manufacturing, and sales & service; offering our customers a complete product and service experience. We specialize in the design and manufacture of various types of high-efficiency heat exchangers, energy-saving and environmental protection products based on market requirements. Our design & products adhere to ISO 9001:2008, BS PD5500, DIN4753, ISO 3834 and other related industry standards. IES products are widely used in air conditioning, central heating systems, space heating and pool heating. Our products can be found across multiple industries including electrical, metallurgy, petrochemical, food, and pharmaceutical covering China, Hong Kong, Macau and Southeast Asia.

IES Group's production base located in Guangdong. Our plant covers over 10,000m<sup>2</sup>, and features multiple production lines, providing customers with a combination of production such as Hot Water Storage Tank, Semi-Storage Calorifier, Storage Type Calorifier, Electric Calorifier and Pressure Vessel.





## **INTERNATIONAL STANDARDS OF QUALITY**

Complete customer satisfaction is our goal, and IES strives to develop, implement, maintain and enhance effectiveness of our products to the highest international standards.



# OUR PRODUCTS

IES products are designed for high performance and sustainability, with minimal maintenance, and all of our products are constructed from high graded stainless steel (304L/316L or Ti) for their durability. Our products combine advanced technology and innovative designs tailoring for wide range of commercial and industrial applications.

We manufacture a wide range of tanks from horizontal and vertical tanks to pressure vessels and calorifiers. Our engineering and production teams can assist you to design and manufacture tanks that will best match your application requirements and specification.

# STAINLESS STEEL - THE ADVANTAGE

Designed for high performance and durability with minimal maintenance, each IES tank is constructed from high graded stainless steel.



## **CORROSION RESISTANCE**

Stainless steel contains sufficient chromium to form a passive film of chromium oxide, which prevents further surface corrosion and blocks corrosion from spreading into the metal's internal structure.

## **HYGIENCE**

The antibacterial properties of stainless steel stop bacteria growing in the stored water makes it the first choice for strict hygiene conditions, such as hospitals, kitchens, abattoirs and other food processing plants.

## **FIRE AND HEAT RESISTANCE AND STRENGTH**

Stainless steel prevents scaling and retain strength at high temperatures. The work-hardening property of austenitic grades, results in significant strengthening of the material from cold-working alone, and the high strength duplex grade, allows reduced material thickness over conventional grades.

## **ECO FRIENDLY MATERIAL**

Stainless steel products are durable. There is less concern about disposal since this material is 100% recyclable. An average stainless steel object is composed of about 60% recycled material of which approximately 40% originates from end-of-life products and about 60% comes from manufacturing processes.





# HOT WATER STORAGE TANK

Hot Water Storage Tanks are designed for potable water application for hygienic purposes and food industries. It is commonly used in District Heating System, Central Hot Water System, Boiler System, Heat Pump System, Solar Plant and Waste Heat Recovery System.

## TECHNICAL DESCRIPTION

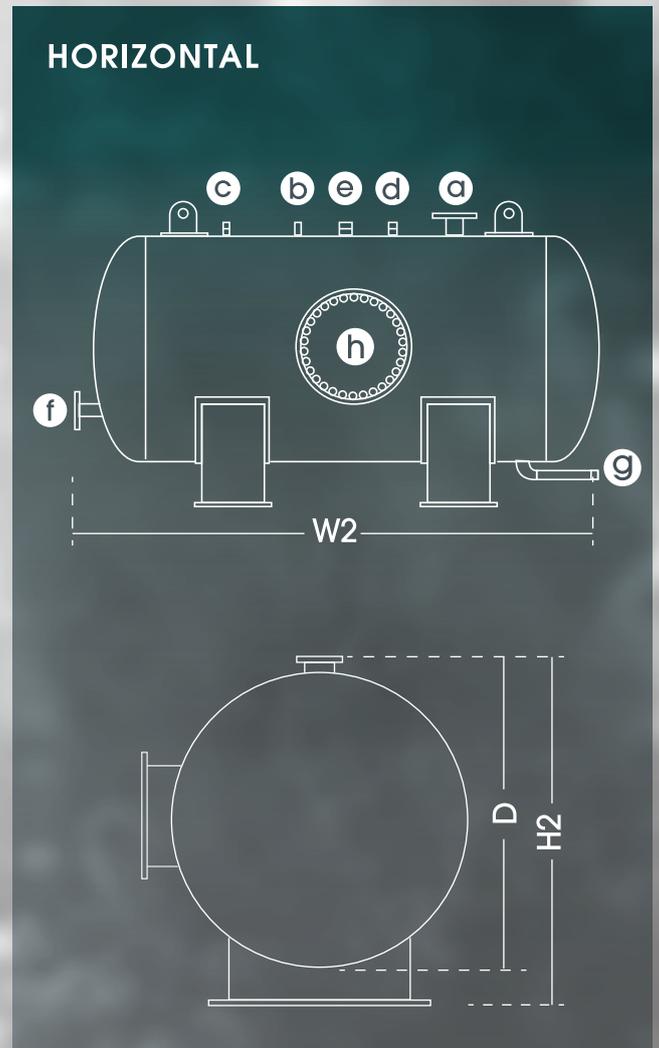
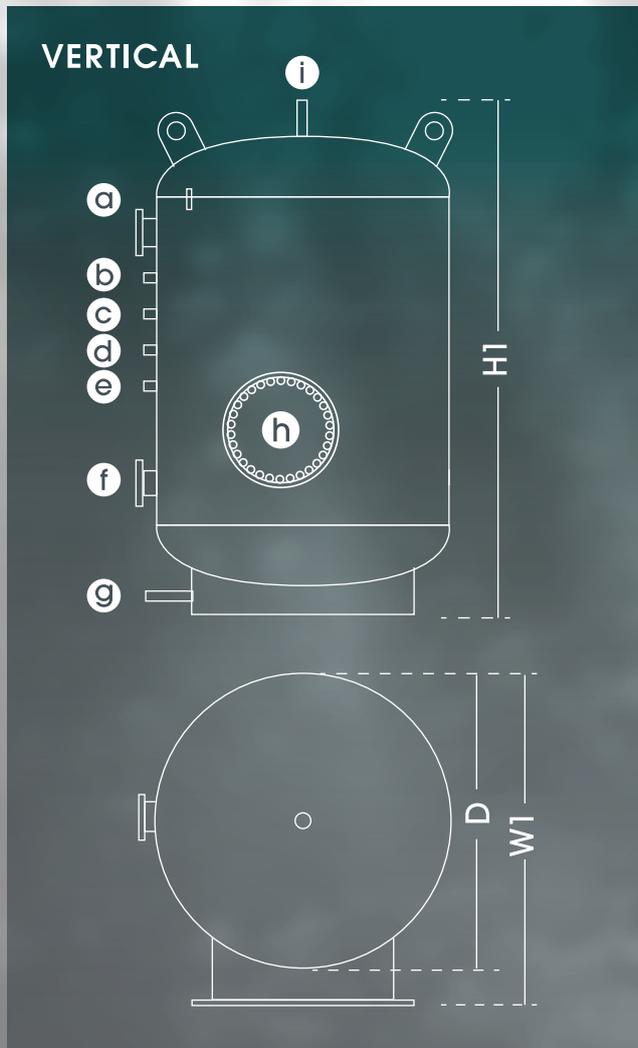
Tanks are manufactured from material Austenitic Stainless Steel 304, 316, 316L or 316Ti with the most corrosive resistance. Automatic plasma and TIG welding is used to ensure uniform of surface and to minimize the risk of corrosion.

## FEATURES:

- Pressure rating upto 25 bar, storage capacity from 100 Litres to 15,000 Litres
- 100% Austenitic stainless steel 304, 316, 316L or 316Ti
- Fully hygienic for drinking water without sacrificial anode or anti vacuum valve
- World approved high quality Flux Cored Wire Welding and Plasma Arc Welding technique are used
- Standard conformity: BS PD5500, DIN4753 or ISO 3834

## INSULATION

50mm soft polyurethane foam or fiberglass with conductivity 32kg/m<sup>2</sup> or on request



- |                           |                             |                  |
|---------------------------|-----------------------------|------------------|
| <b>a</b> Hot water supply | <b>d</b> Temperature sensor | <b>g</b> Drain   |
| <b>b</b> Thermometer      | <b>e</b> Circulation        | <b>h</b> Manhole |
| <b>c</b> Pressure gauge   | <b>f</b> Cold feed          | <b>i</b> Vent    |

Capacity	Diameter	Width		Height		Weight		Connection Size		
	D	W1	W2	H1	H2	10Bar	16Bar	Water inlet	Water outlet	Return
	mm	mm		mm		kg		Connector/Flange		mm
IET-200	500	560	1170	1250	760	50	80	32	32	25
IET-500	650	710	1665	1985	910	80	120	40	40	25
IET-750	750	810	1885	2000	1010	130	160	50	50	25
IET-800	800	860	1786	1910	1060	145	200	50	50	25
IET-1000	900	960	1800	1810	1160	195	280	50	50	25
IET-1500	1000	1060	2150	2180	1260	280	370	50	50	25
IET-2000	1100	1200	2305	2470	1400	390	480	50	50	32
IET-2500	1300	1450	2100	2290	1630	480	630	50	50	32
IET-3000	1300	1450	2500	2642	1620	580	820	50	50	32
IET-4000	1300	1450	3320	3410	1620	800	1150	*65	*65	32
IET-5000	1500	1650	3020	3190	1820	1050	1450	*65	*65	32
IET-6000	1600	1750	3260	3400	1920	1320	1880	*80	*80	50
IET-7000	1600	1750	3760	3910	1920	1650	2160	*100	*100	50
IET-8000	1800	1950	3500	3630	2120	1820	2380	*100	*100	50
IET-9000	1800	1950	3890	4015	2120	1910	2650	*100	*100	50
IET-10000	2000	2150	3560	3680	2350	1980	2930	*100	*100	50

Remarks : 1 = Vertical 2 = Horizontal 3 = \*Flange connection



# SEMI-STORAGE CALORIFIER

Semi-Storage Calorifiers are designed for use in environments where there is high-peak hot water demand, but limited plant room space.

Each unit incorporates a buffer vessel and combining a packaged plate heat exchanger, U-tube battery or "shell & plate" heat exchanger together with circulation pump and isolation valve. It also makes a tail-on range of semi-storage calorifier with varying capacities and heat exchanger power ratings.

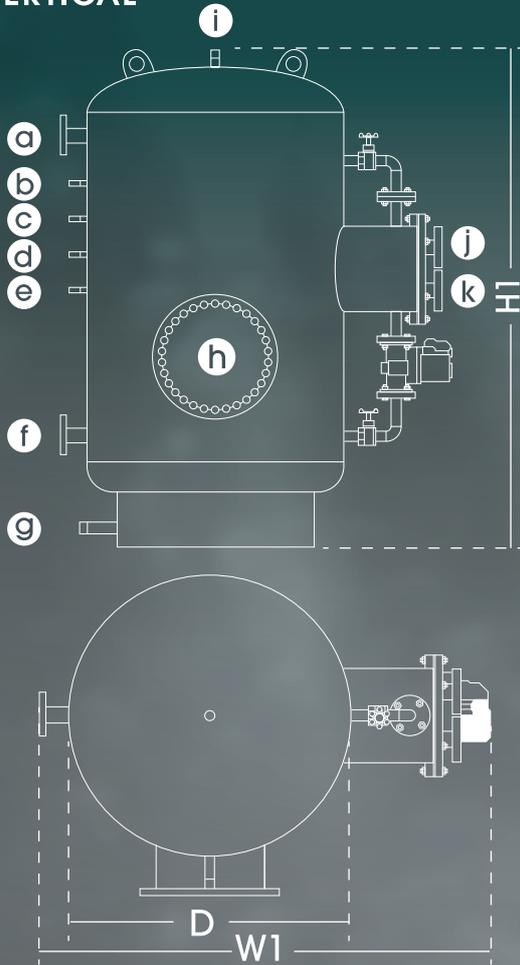
The principle of semi-storage calorifier is equipped with a built-in circulation pump ensuring a constant flow rate through the stainless steel heat exchanger and into the storage tank. The capacity of heat exchanger is set above the calculated peak hourly demand. The heat exchanger is designed to raise the temperature of the secondary water to desired temperature through the heat exchanger. The thermostat/controller can stop the circulation pump when the desired temperature is achieved.

The required storage volume is typically only a quarter of an equivalent storage calorifier. This not only assures a maximum reserve of hot water but also eliminates any areas of cool water to decrease the chance of growth of *Legionella pneumophila*.

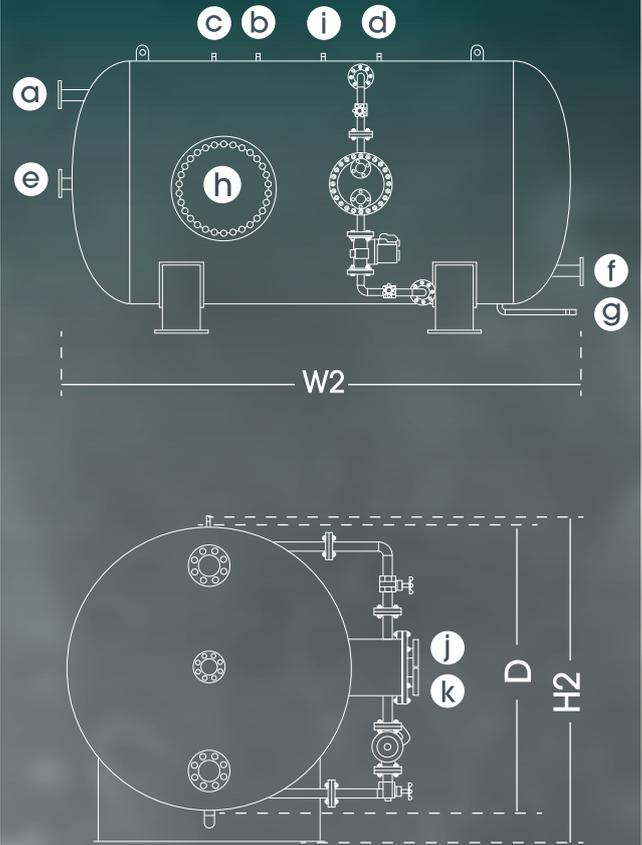
## FEATURES:

- Pressure rating upto 25 bar, storage capacity from 100 Litres to 15,000 Litres
- 100% Austenitic stainless steel 304, 316, 316L or 316Ti
- Fully hygienic for drinking water without sacrificial anode or anti vacuum valve
- Storage capacity shall be 100% usage
- Even water temperature distribution
- High K-value of "Shell & plate" heat exchanger in order to minimize the heat transfer area.
- "Shell & plate" heat exchanger has compact size which is suitable for the limited plant room
- Easy for installation, maintenance and service
- Higher efficiency thermal exchange
- Integrated control panel with digital display controller to monitor and control the water temperature. Data can be transfer to BMS.
- Standard conformity: BS PD 5500, DIN4753 or ISO 3834

## VERTICAL



## HORIZONTAL



- a** Hot water supply      **d** Temperature sensor      **g** Drain      **j** Heat source(in)
- b** Thermometer      **e** Circulation      **h** Manhole      **k** Heat source(out)
- c** Pressure gauge      **f** Cold feed      **i** Vent

Capacity	Diameter	Width		Height		Weight		Capacity		Connection Size		
	D	W1	W2	H1	H2	10Bar	16Bar	Steam to water	Water to water	Water inlet	Water outlet	Return
L	mm	mm		mm		kg		1st : 4kg 2nd : 15-60	1st : 75/35°C 2nd : 15/60°C	Connector/Flange		
								kW		mm		
IHT-200	500	810	1170	1250	760	200	230	42	31	32	32	25
IHT-500	650	960	1665	1985	910	230	270	105	78	40	40	25
IHT-750	750	1060	1885	2000	1010	280	310	157	118	50	50	25
IHT-800	800	1110	1785	1910	1060	295	350	167	125	50	50	25
IHT-1000	900	1210	1800	1810	1160	345	430	209	157	50	50	25
IHT-1500	1000	1460	2150	2180	1260	430	520	314	235	50	50	25
IHT-2000	1100	1600	2305	2470	1400	590	680	418	314	50	50	32
IHT-2500	1300	1850	2100	2290	1630	680	830	523	392	50	50	32
IHT-3000	1300	1850	2500	2645	1620	780	1020	627	470	50	50	32
IHT-4000	1300	1850	3320	3410	1620	1000	1350	836	627	*65	*65	32
IHT-5000	1500	2050	3020	3190	1820	1250	1650	1045	784	*65	*65	32
IHT-6000	1600	2350	3260	3400	1920	1620	2180	1254	941	*80	*80	50
IHT-7000	1600	2350	3760	3910	1920	1950	2460	1463	1097	*100	*100	50
IHT-8000	1800	2550	3500	3630	2120	2120	2680	1672	1254	*100	*100	50
IHT-9000	1800	2550	3890	4015	2120	2210	2950	1881	1411	*100	*100	50
IHT-10000	2000	2750	3560	3680	2350	2280	3230	2090	1568	*100	*100	50

Remarks : 1 = Vertical 2 = Horizontal 3 = \*Flange connection



# STORAGE TYPE CALORIFIER

WITH U-TUBE HEAT EXCHANGER OR SPIRAL HEATING COIL

Storage Calorifier is an indirect water heating equipment (with one or more than one heating source), which accumulates heat to produce hot water in a period of time. Calorifier ensures to achieve excellent thermal stratification with renewable and back up energy source. Heating source shall be boiler, heat pump, solar collectors or electric heater.

## TECHNICAL DESCRIPTION

Storage Calorifier is a storage buffer vessel completed with U-Tube Heat Exchanger or spiral heating coil to deliver hot water for different application. Calorifiers and heating coils are manufactured from material Austenitic Stainless Steel 304, 316, 316L or 316Ti with the most corrosive resistance.

## FEATURES:

- Pressure rating upto 25 bar, storage capacity from 100 Litres to 15,000 Litres
- High heating capacity from 10kW to 1400kW
- Heat exchanger can be U-Tube bundle or spiral heating coil
- Heat exchanger can be removable, flexibility for system upgrading or modification
- Easy for maintenance and cleaning
- Available in variety material of SS304, SS316L, SS316Ti, SUS444 or Titanium
- High conductivity heating element made of Copper Nickel, Stainless Steel 304, Stainless Steel 316Ti, Incoloy, Steel or other material available
- Entirely hygienic for domestic hot water system
- Standard conformity: BS PD5500, DIN4753 or ISO 3834

## INSULATION

Factory standard of 50mm soft polyurethane foam or fiberglass with conductivity 32kg/m<sup>2</sup> or on request

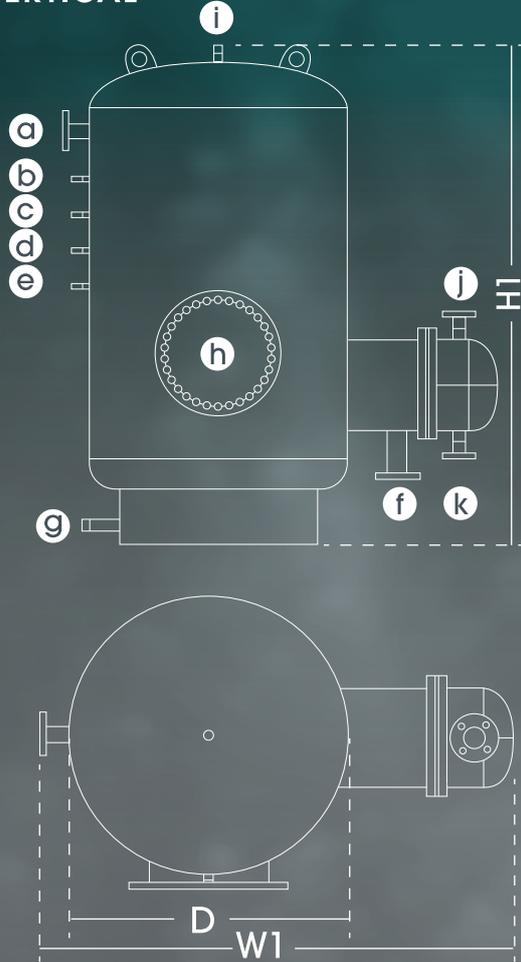
## HEATING EXCHANGER

Flange mounted U-tube Bundle, built-in spiral heating coil.

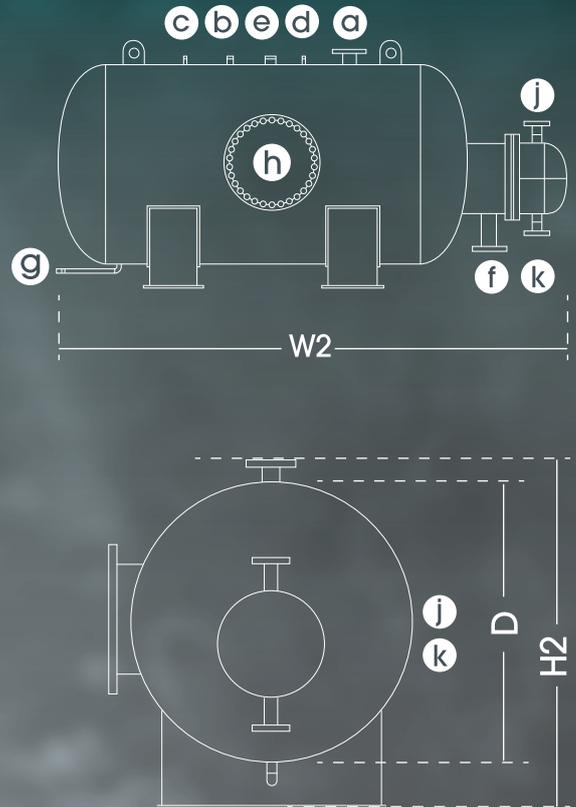
## STANDARD ACCESSORIES AND COMPONENTS:

- Pressure Gauge
- Temperature Gauge
- Thermostat
- Pressure Relief Valve
- Low Water Level Limiter

## VERTICAL



## HORIZONTAL



- a** Hot water supply      **d** Temperature sensor      **g** Drain      **j** Heat source(in)
- b** Thermometer          **e** Circulation              **h** Manhole      **k** Heat source(out)
- c** Pressure gauge          **f** Cold feed                **i** Air vent

Capacity	Diameter	Width		Height		Weight		Capacity		Connection Size		
	D	W1	W2	H1	H2	10Bar	16Bar	Steam to water	Water to water	Water inlet	Water outlet	Returns
L	mm	mm		mm		kg		1st : 4kg 2nd : 15-60	1st : 75/35°C 2nd : 15/60°C	Connector/Flange		
								kW		mm		
IBS-200	500	1060	1567	1250	760	180	210	21	10	32	32	25
IBS-500	650	1110	2065	1985	910	210	250	52	26	40	40	25
IBS-750	750	1210	2285	2000	1010	260	290	78	39	50	50	25
IBS-800	800	1060	2185	1910	1060	295	350	84	42	50	50	25
IBS-1000	900	1060	2200	1810	1160	345	430	105	52	50	50	25
IBS-1500	1000	1460	2560	2180	1260	430	520	157	78	50	50	25
IBS-2000	1100	1850	2850	2470	1400	620	710	209	105	50	50	32
IBS-2500	1300	1900	2750	2290	1630	710	860	261	131	50	50	32
IBS-3000	1300	1900	2750	2650	1620	840	1080	314	157	50	50	32
IBS-4000	1300	1900	2750	3410	1620	1060	1410	418	209	*65	*65	32
IBS-5000	1500	2300	3650	3190	1820	1310	1710	523	261	*65	*65	32
IBS-6000	1600	2400	3850	3400	1920	1620	2180	627	314	*80	*80	50
IBS-7000	1600	2400	3850	3910	1920	1950	2460	732	366	*100	*100	50
IBS-8000	1800	2600	4150	3630	2120	2170	2730	836	418	*100	*100	50
IBS-9000	1800	2600	4150	4015	2120	2260	3000	941	470	*100	*100	50
IBS-10000	2000	2650	4320	3680	2350	2430	3380	1045	523	*100	*100	50

Remarks : 1 = Vertical 2 = Horizontal 3 = \*Flange connection



# ELECTRIC CALORIFIER

Electric Calorifier is mostly used in district heating, solar plants, domestic hot water system and space heating operation in hospital, hotels, sports stadium & multi-purpose building. It provides stand-a-lone solution for different application to minimize complicated system and installation area.

## TECHNICAL DESCRIPTION

Electric Calorifier is a storage buffer vessel integrated with electrical immersion heater with thermostat and control panel to deliver hot water for different application. Calorifiers are manufactured from material Austenitic Stainless Steel 304, 316, 316L or 316Ti with the most corrosive resistance.

## FEATURES:

- Pressure rating upto 25 bar, storage capacity from 100 Litres to 15,000 Litres
- Compact in size, easy to be installed
- No other heat source required, minimize plant room space
- Quiet in operation and clean with no waste gas produced
- Available in variety material of SS304, SS316L, SS316Ti, SUS444 or Titanium
- High conductivity heating element made of Copper Nickel, Stainless Steel 304, Stainless Steel 316Ti, Incoloy, Steel or other material available
- Technical innovation for water hygiene
- Electronic display control mounted on calorifier to maintain high "safety temperature" against Legionnaires
- Standard conformity: BS PD5500, DIN4753 or ISO 3834



## INSULATION

50mm soft polyurethane foam or fiberglass with conductivity  $32\text{kg/m}^2$

## HEATING ELEMENT

Flange mounted electric heater are available in element sheath of Copper Nickel, Stainless Steel 304, Stainless Steel 316Ti, Titanium, Incoloy, Nicalloy 800, Nicalloy 825 or other specified.

Kilowatts rating from 20kW to 800kW, voltage in 220V or 380V in single phase or three phase

Less Watts Density of heating element provides longer service life (approx.  $5.5\text{W/cm}^2$ )



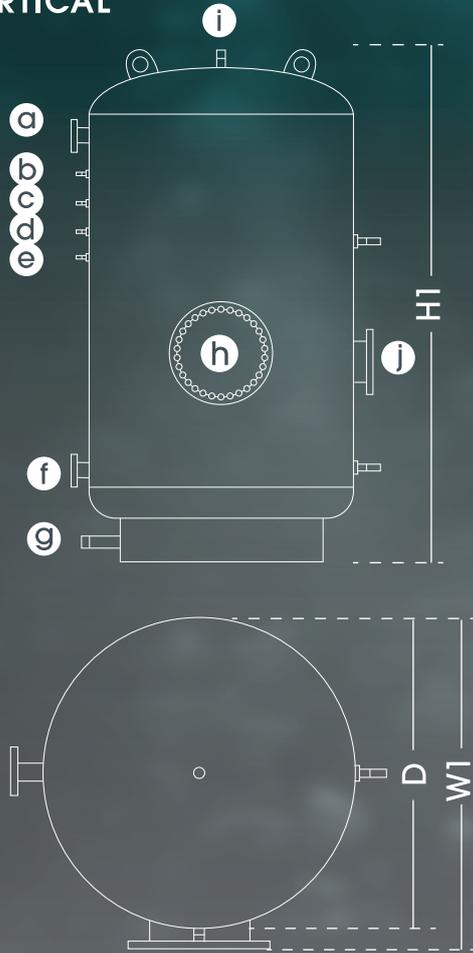
## CONTROL PANEL

Cabinet is made of factory standard 1.5mm thick steel construction with powder coating. Electrical components conform to European Standard with CE Mark. Control panel is designed to meet client requirements with stage control basis. Reliability temperature controller, protective circuit breaker, relay, step controller, timer, control circuit and safety switch provided in control panel for Calorifier on/off operation. Modulating control sequence is available for space heating application. The feedback output signal converted to building automation system indicates the operating status of the calorifier.

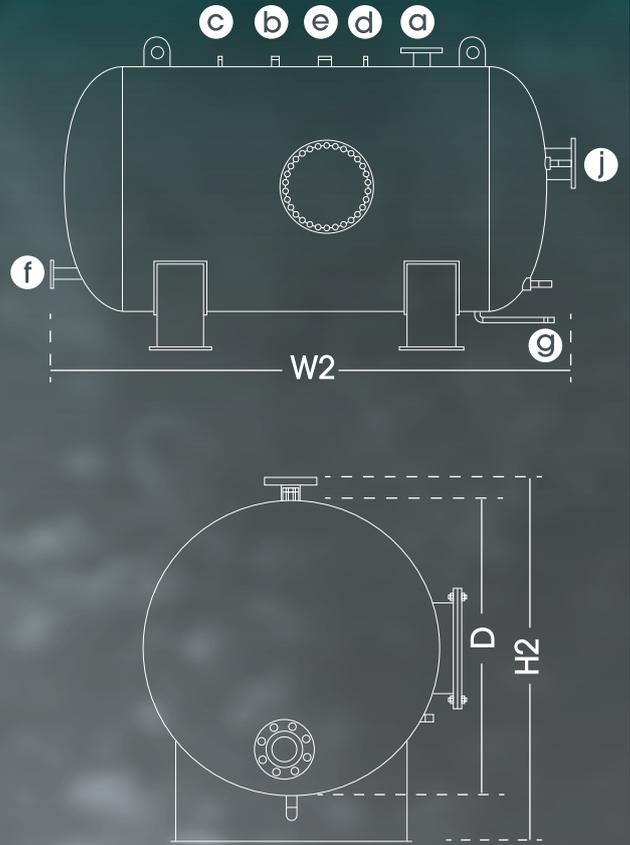
## STANDARD ACCESSORIES AND COMPONENTS

- Pressure Gauge
- Temperature Gauge
- Thermostat
- Pressure Relief Valve
- Low Water Level Limiter
- High Temp Alarm and Cut-out
- Digital Temp Display
- Electric Heater / Stages On/Off Status Indicator
- Cabinet Door Lock
- Test Button
- Power On

## VERTICAL



## HORIZONTAL



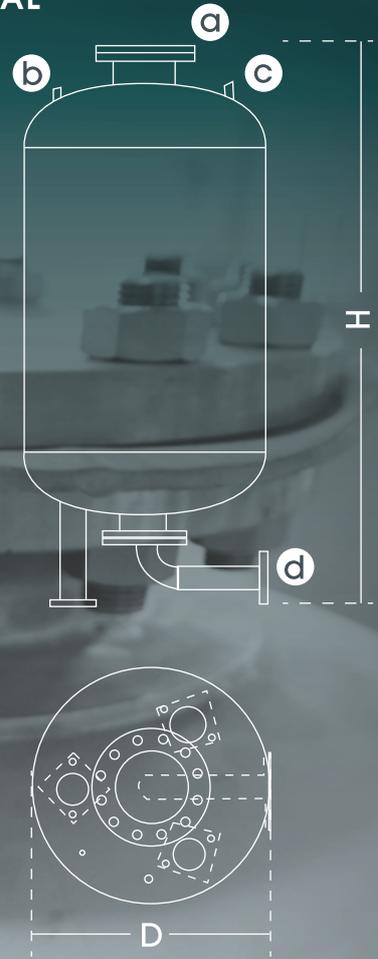
- a** Hot water supply      **d** Temperature sensor      **g** Drain      **j** Electric Heater
- b** Thermometer          **e** Circulation              **h** Manhole
- c** Pressure gauge        **f** Cold feed                **i** Vent

Capacity	Diameter	Width		Height		Weight		Capacity		Connection Size		
	D	W1	W2	H1	H2	10Bar	16Bar	Steam to water	Water to water	Water inlet	Water outlet	Return
L	mm	mm		mm		kg		1st : 4kg 2nd : 15-60	1st : 75/35°C 2nd : 15/60°C	Connector/Flange		
								kW		mm		
IEC-200	500	560	1170	1250	760	80	110	21	10	32	32	25
IEC-500	650	710	1665	1985	910	110	150	52	26	40	40	25
IEC-750	750	810	1885	2000	1010	160	190	78	39	50	50	25
IEC-800	800	860	1785	1910	1060	195	250	84	42	50	50	25
IEC-1000	900	960	1800	1810	1160	245	330	105	52	50	50	25
IEC-1500	1000	1060	2150	2180	1260	350	440	157	78	50	50	25
IEC-2000	1100	1200	2305	2470	1400	460	550	209	105	50	50	32
IEC-2500	1300	1450	2100	2290	1630	550	700	261	131	50	50	32
IEC-3000	1300	1450	2500	2645	1620	680	920	314	157	50	50	32
IEC-4000	1300	1450	3320	3410	1620	900	1250	418	209	*65	*65	32
IEC-5000	1500	1650	3020	3190	1820	1200	1600	523	261	*65	*65	32
IEC-6000	1600	1750	3260	3400	1920	1470	2030	627	314	*80	*80	50
IEC-7000	1600	1750	3765	3910	1920	1830	2340	732	366	*100	*100	50
IEC-8000	1800	1950	3500	3630	2120	2000	2560	836	418	*100	*100	50
IEC-9000	1800	1950	3890	4015	2120	2160	2900	941	470	*100	*100	50
IEC-10000	2000	2150	3558	3680	2350	2230	3180	1045	523	*100	*100	50

Remarks : 1 = Vertical 2 = Horizontal 3 = \*Flange connection



## VERTICAL



# PRESSURE VESSEL

- a** Inspection hole
- b** Air inlet
- c** Pressure gauge
- d** Water connection

Capacity	Diameter	Height	Weight		Connection Size
	D	H	10Bar	16Bar	Water inlet
L	mm	mm	kg		DN
300	700	1620	170	230	65
400	700	1870	190	265	65
500	700	2140	205	290	65
600	850	1910	235	345	65
700	850	1950	240	410	65
800	850	2040	250	430	65
900	850	2190	265	440	65
1000	1000	2050	315	515	100
1100	1000	2090	410	565	100
1200	1000	2205	570	735	100
1500	1100	2235	656	895	100
1800	1200	2545	755	965	100
2000	1200	2695	825	1095	100

# JOB REFERENCE



**HONG KONG** Tamar Government Headquarter



**SINGAPORE** Marina Bay Sands



**MACAU** MGM Grand

## CHINA

外蒙香格里拉酒店  
广州白云万达希尔顿酒店  
广州天河城喜来登酒店  
丽思·卡尔顿酒店  
富力君悦酒店  
深圳京基100（瑞吉酒店）

## HONG KONG

Crowne Plaza Hotel  
Mandarin Oriental Hotel  
Hong Kong Central Landmark Hotel  
Disneyland Hollywood Hotel  
Renaissance New World Hotel  
Regal Riverside Hotel  
The Mira Hotel  
W Hotel  
  
Prince of Wales Hospital  
Princess Margaret Hospital  
  
Tamar Government Headquarter  
EMSD Headquarter  
Hong Kong Sports Institute  
The Hong Kong Institute of Education  
Cathay Pacific Passenger Lounge

## MACAU

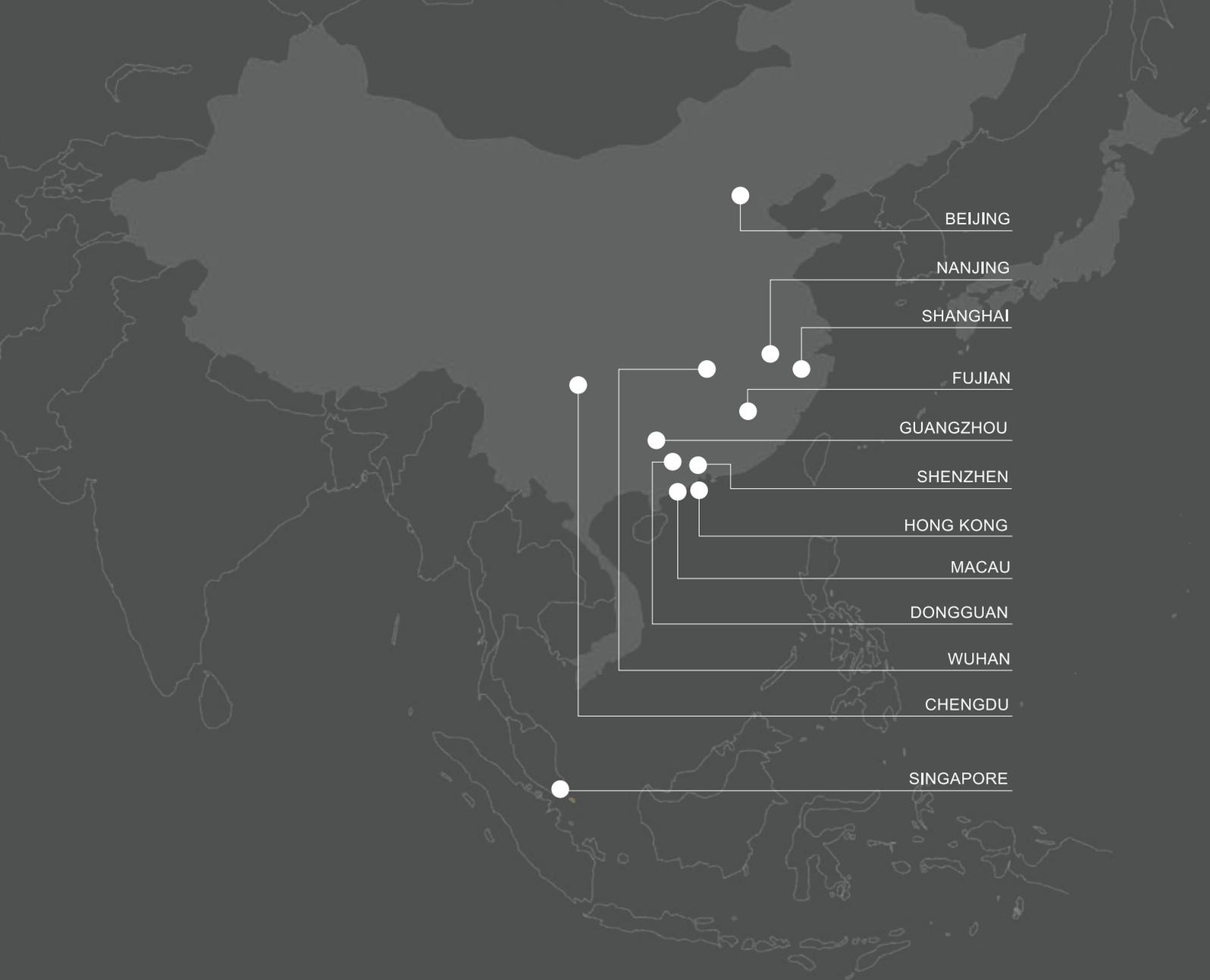
Sands Casino, Macau  
Venetian Parcel I  
Venetian Parcel II, Four Seasons Hotel  
Wynn Macau Hotel  
Galaxy Resort  
Alfira Hotel, Macau  
New Grand Lisboa, Macau  
Grand Waldo, Macau  
MGM Grand, Macau  
Ponte 16 Macau Hotel

## VIETNAM

Vietnam Best Western Sapaly Hotel  
Times Square

## SINGAPORE

Singapore Marina Bay Sands  
Singapore Island Country Club  
National University of Singapore  
V-Hotel  
Traders Hotel



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