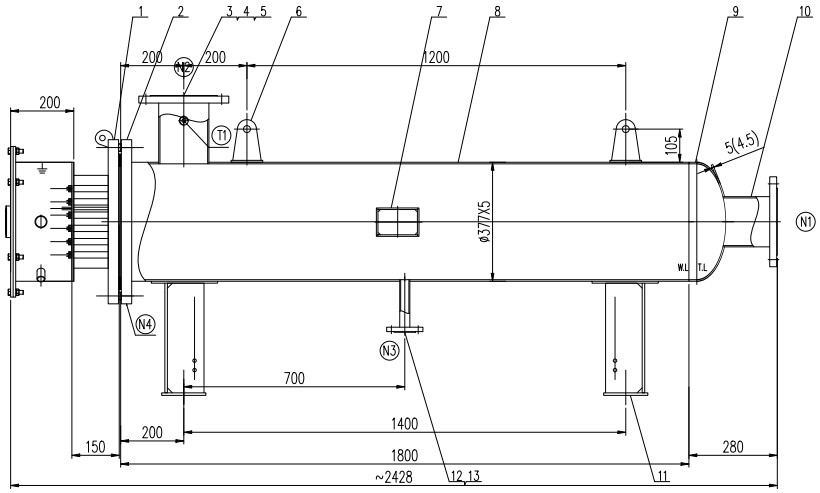
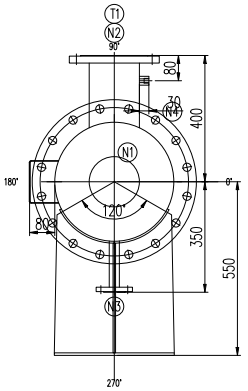
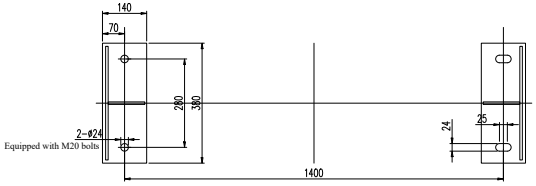


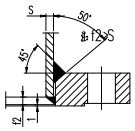


Saddle Layout Detail



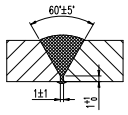
Detailed drawings of tank and flange

Not in proportion



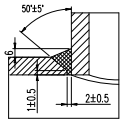
Detailed drawing of Class B welded joint nodes

Not in proportion



Detailed welding drawing of the tank

Not in proportion



Design data sheet

Design parameters		Design, manufacturing and inspection standards
Tank category	Class I	TSG 21-2016《Safety Technical Supervision Regulations for Fixed Pressure Vessels》 GB/T 150.1-150.4-2024《Pressure Vessel》 NB/T 47015-2023《According to Pressure Vessels Welding Standard》 NB/T 47018-2017(2022)《Technical Specifications for Ordering Welding Materials for Pressure Equipment》
Work pressure MPa	0.7	
Design pressure MPa	1.0	
Maximum allowable working pressure MPa	/	
Working temperature ℃	150	Manufacturing and Inspection Requirements
Design temperature (maximum/minimum) ℃	0/180	Except as noted in the figure, the type and size of the welded joint shall be in accordance with the provisions of HG/T20583-2020. The toe size of the fillet weld shall be based on the thickness of the thinner plate, and the flange welding shall be in accordance with the provisions of the corresponding flange standard.
Medium	Air	
Medium characteristics	Non-toxic and non-explosive	
Medium density Kg/m³	/	

Main pressure-bearing tank materials	S30408 S30408II	Welding	Welding between ×× and ×	Electrode/ Wire model
Corrosion allowance mm	0		Welding between S30408 stainless steels	E308-16/ S308(ER308)
Welding joint coefficient Φ(Vertical/circular)	1.0(Seamless pipe) /0.85		Welding between stainlesssteel and carbon steel	E309-16
Full volume m³	0.19			
filling coefficient	/			
Setting pressure of safety valve MPa	/	Non-destructive testing	Implementation standards	NB/T 47013.1~6-2015(2023)Non-destructive testing of pressure-bearing equipment
Thermal insulation material	/		Welded joint / Testing method / Testing rate % / Qualified level Technical level	
Insulation thickness mm	/		A / / /	
Seismic fortification intensity /Ground roughness	/		B / RT / ≥20% and length≥250mm / III/AB level	
Site soil category /Seismic grouping	/		C.D.E / / / /	
Paint, packaging and transportation	NB/T10558-2021	Test	Hydraulic test pressure MPa	1.3
Equipment weight Kg	~366		Air pressure test pressure MPa	/
Equipment water filling quantity Kg	~556	Heat treatment		/
Gate and support orientation	According to this diagram	Design operating life Year		10

List of main pressure-bearing components

Component name	Materials	Type	Standard Number	Supply status	Additional requirements
Head	S30408	Plate	GB/T713.7-2023	Solid solution	Surface processing type of plate 1D level
Tank ,Connecting pipe	S30408	Pipe	GB/T14976-2012	Solid solution	
Flange ,Flange cover	S304081I	Forging Parts	NB/T47010-2017	Solid solution	

Other technical requirements:
1.Class B,D welded joints should adopt a fully penetrated structure, and the surface of the weld seam must not have cracks, pores, arc pits or spatter. All the corner welding joints of the connecting pipes and the tank body should be ground smooth and have a smooth transition. The ends of the connecting pipes should be ground smooth (without sharp corners).
2.Unless otherwise specified, the unit of dimensions on the drawing is mm. Dimensions without marked tolerances and those not present in the standards are based on the general tolerance table.
3.The pressure source of this equipment comes from the outside and is effectively controlled. The safety relief device is installed in the system pipeline, and the safety accessories and instruments are to be borne by the user.
4.This equipment should be well grounded, with a grounding resistance not exceeding 10Ω.
5.The dimensions of the nameplate and the nameplate bracket of the container shall be determined by the manufacturer.
6.The medium for the hydraulic test is clean water. The chloride ion content of the water should be controlled not to exceed 25mg/L, and the test temperature should not be lower than 0℃. After the test, the water should be dried with compressed air.
7.All processed parts have no burrs on the sharp edges. The fillet is not marked with R0.2, and the chamfer is not marked with 0.2x45°. The linear dimensions are not marked with tolerances in accordance with GB1804-200O-M.
8.The lifting lugs are only used to lift the empty weight of the equipment.
9.This equipment is subject to regular inspection in accordance with the requirements of TSG 21-2016 "Safety Technical Supervision Regulations for Fixed Pressure Vessels".
Note :1. The design service life refers to the service life of the container determined under normal and stable operation and maintenance conditions based on the principle that the total uniform corrosion of the metal wall by the given medium does not exceed the corrosion allowance.
2. The wire junction is formed by processing a metal plate directly.
3.For cold-formed chromium-nickel austenitic stainless steel head caps, pressure vessel manufacturing units should retest the ferrite content of each formed head in accordance with the requirements of Article 4.3.2.1 (b) of GB/T150.4-2024. The ferrite content measured in GB/T1954 should not exceed 25%; otherwise, performance recovery heat treatment should be carried out.
4.Inlet and outlet matching flanges, gaskets, installation studs, nuts, washers and other fasteners.
5.The welded joint between the electric heating sleeve and the flange cover is subjected to kerosene penetration testing.

NOZZLE SCHEDULE

ITEM	NPS DN	CLASS PN	CONNECT.STD.	TYPE	FACING	FACE FROM C.L.	DESIGNATION	REMARK
N1	150	16	HG/T20592-2009	PL	RF	See figure	Medium inlet	/
N2	150	16	HG/T20592-2009	PL	RF	See figure	Medium outlet	/
N3	25	16	HG/T20592-2009	PL	RF	See figure	Sewage discharge interface	/
N4	350	16	HG/T20592-2009	PL	RF	See figure	Electric heating interface	/
T1	M16*1.5	/	/	/	Internal thread	See figure	Temperature measurement interface	/

		Nozzle parts					
13	HG/T20592-2009	Flange PL25(B)-16 RF	1	S30408	/	1.01	N3
12	GB/T14976-2012	Connecting pipe ø32X3 L=163	1	S30408	/	0.35	
11	NB/T47065.1-2018	Saddle B 377-S h=361.5	2	Q235B/S30408	20.17	40.34	
10	GB/T14976-2012	Connecting pipe ø159X4 L=176	1	S30408	/	2.72	
9	GB/T25198-2023	Head EHB377X5(4.5)	1	S30408	/	6.06	
8	GB/T14976-2012	Tank ø377X5 L=1794	1	S30408	/	82.52	
7	25.4361-1	Nameplate	1	Assembly	/	0.6	
6	HG/T21574-2018	Hanging lug t=8	2	S30408	6.25	12.5	
5	/	Internal thread interfaceM16X1.5	1	S30408	/	0.14	T1
4	HG/T20592-2009	Flange PL150(B)-16 RF	2	S30408	7.07	14.14	N2.N1
3	GB/T14976-2012	Connecting pipe ø159X4 L=229	1	S30408	/	3.54	
2	HG/T20592-2009	Flange PL350(B)-16 RF	1	S30408	/	28.29	N4
1		Heating part (including flange cover, junction box, heating tube, etc.)	1	S30408/Q235B	/	173.5	
PART NO.	DWG.OR STD. NO.	DESCRIPTION	QT'Y	MATERIAL	SIN. WEI.(Kg)	TOT. WEI.(Kg)	REMARK
DETAIL DESCRIPTION							

Mark	No.	File number	Signature	Date

Design	CHEN	Standard	
Check			
Crafts		Approve	

XTGD-180

Stage Marking	Quality	Scale
		1:15

Sinton Electric Co.,Ltd.

Pipeline heater

REV 00

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