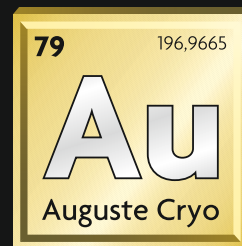


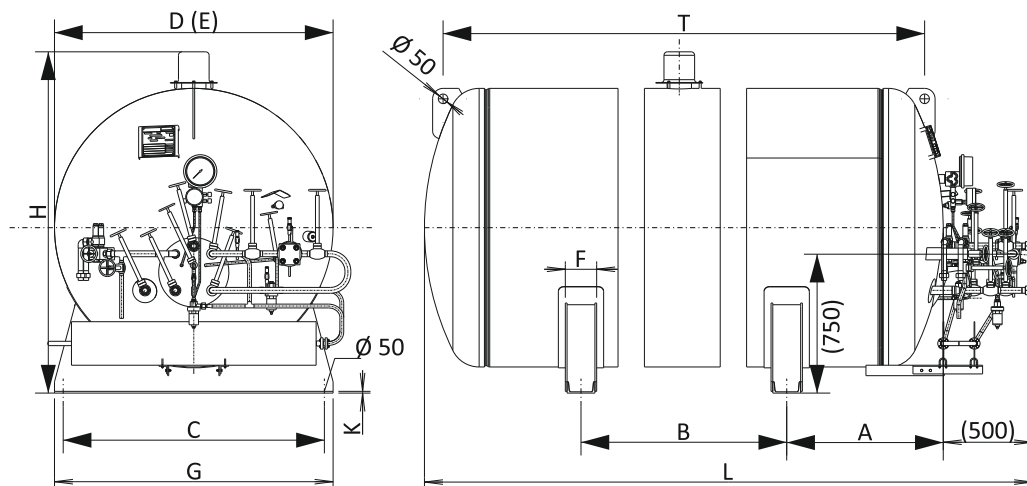
HSCS Horizontal Cryogenics Bulk Tanks



**Auguste
Cryogenics**

Technical Data of the HSCS cryogenic bulk tank line

Specification Standard Pressures (MAWP): 18.5 bar – 22.0 bar – 37.0 bar



General Specifications of the SCS Cryogenic bulk tank lines	
Outer vessel	Carbon steel
Inner vessel	Stainless steel
Insulation	Vacuum Perlite or multilayer Super Insulation
Cleaning	For oxygen service
Pressure range	Standard MAWP* from 18,5 to 37 bar
Coating	Blasted ground (to SA 2 1/2, DIN 559281) Hempadur UNIQ 47741 Hempaxane Classic 55000

* individual MAWP customizations available on request

	Type	2200	3300	5000	6100	10000	11000	12000	13400	17000	20000	28000	32000	37000	41000	50000	60000	100000
Volume ¹ (l)	gross	2040	3130	4750	5830	9700	10880	12030	12150	16800	19170	26900	31810	35090	40000	50500	60830	104300
	net (95%)	1940	2975	4510	5540	9215	10340	11430	11540	15960	18210	25555	30220	33335	38000	47975	57790	99085
Average loss rate/day		0,48	0,45	0,38	0,32	0,28	0,26	0,24	0,23	0,23	0,21	0,18	0,17	0,15	0,14	0,13	0,13	0,12
Pressure building capacity at given pressure (Nmt/h/8h)	12 bar	260	260	260	260	530	530	530	800	530	530	800	800	800	800	800	800	800
	8 bar	400	400	400	400	820	820	820	1240	820	820	1240	1240	1240	1240	1240	1240	1240
	2 bar	1400	1400	1400	1400	2900	2900	2900	4400	2900	2900	4400	4400	4400	4400	4400	4400	4400
Dimensions (mm)	A	800	815	855	890	990	1050	1155	1600	1610	1390	1775	1775	1750	2275	2520	3120	4255
	B	1500	2400	4000	4800	3200	3600	3800	3200	5000	6500	6200	7700	8800	9000	6000	7000	6000
	C	1500	1500	1500	1500	1700	1700	1700	1900	1700	1700	1900	1900	1900	1900	2260	2260	2800
	D	1600	1600	1600	1600	2200	2200	2200	2500	2200	2200	2500	2500	2500	2500	3000	3000	3600
	E	1600	1600	1600	1600	2200	2200	2200	2500	2200	2200	2500	2500	2500	2500	3150	3150	3800
	F	180	180	180	180	250	250	250	250	250	250	250	250	250	250	300	300	400
	G	1600	1600	1600	1600	1900	1900	1900	2000	1900	1900	2000	2000	2000	2000	2480	2480	3000
	H	1960	1960	1960	1960	2570	2570	2570	2870	2570	2570	2870	2870	2870	2870	3460	3460	3900
	K	10	10	10	10	15	15	15	15	15	15	15	15	15	15	20	20	20
	L	3240	4530	6210	7080	5700	6200	6610	5750	8720	9780	10250	11750	12800	14050	11540	13740	15000
	T	2600	3890	5570	6440	4905	5400	5815	4910	7925	8985	9410	10910	11960	13210	10550	12750	6000
Net weight (kg)	18,5 bar	2250	3000	3950	4500	6700	7150	7600	9000	10150	11500	15100	16900	18700	23500	25800	30900	41500
	22,0 bar	2300	3100	4100	4700	7200	7700	8100	9500	11000	12600	16100	17900	19900	24900	27400	32800	44500
	37,0 bar	2650	3550	4800	5500	8600	9200	9700	11700	13100	15000	20000	22300	24800	30200	32300	38330	-

¹ Volumes can deviate as consequence of the cold stretching process.



HSCS horizontal cryogenic bulk tanks by **Auguste Cryogenics** are high performance bulk tanks that can be used for a broad spectrum of applications. The tanks are also available in vertical configuration in our SCS line. Available in sizes from 2,200 up to 350,000 litres, all vessels are built to our customer's requirements and specifications. Features of the HSCS Horizontal Cryogenic Bulk Tank line include:

- Superior vacuum technology for highest thermal performance.
- All stainless steel piping for strength and corrosion resistance.
- In-house design and construction of aluminum fin tube pressure-building vaporizers.
- Updated all stainless steel leg support position is ergonomically designed for compact footprint and easy access to front mounting points.

HSCS tanks are stationary, vacuum-insulated pressure vessels for storage of cryogenic liquefied gases such as nitrogen (N_2), oxygen (O_2), argon (Ar), Liquefied Natural Gas (LNG), carbon dioxide (CO_2), nitrous oxide (N_2O) and Ethen (aka Etylen, C_2H_4). Carefully selected components and outstanding build quality guarantee a high degree of reliability and longevity of the vessel. The low evaporation rate and the ergonomic layout of instruments and controls ensure economy as well as ease of operation.

The HSCS cryogenic bulk tanks are designed and built on the principle of superior vacuum integrity and complete thermal insulation. Our vessels have been in use all around the world for decades and offer superior quality and reliability. Our 12,000m² production facility is ISO:9001 certified and in compliance with the European Pressure Equipment Directive 2014/68/EU (PED) or to the majority of the pressure vessel codes used in the global marketplace.

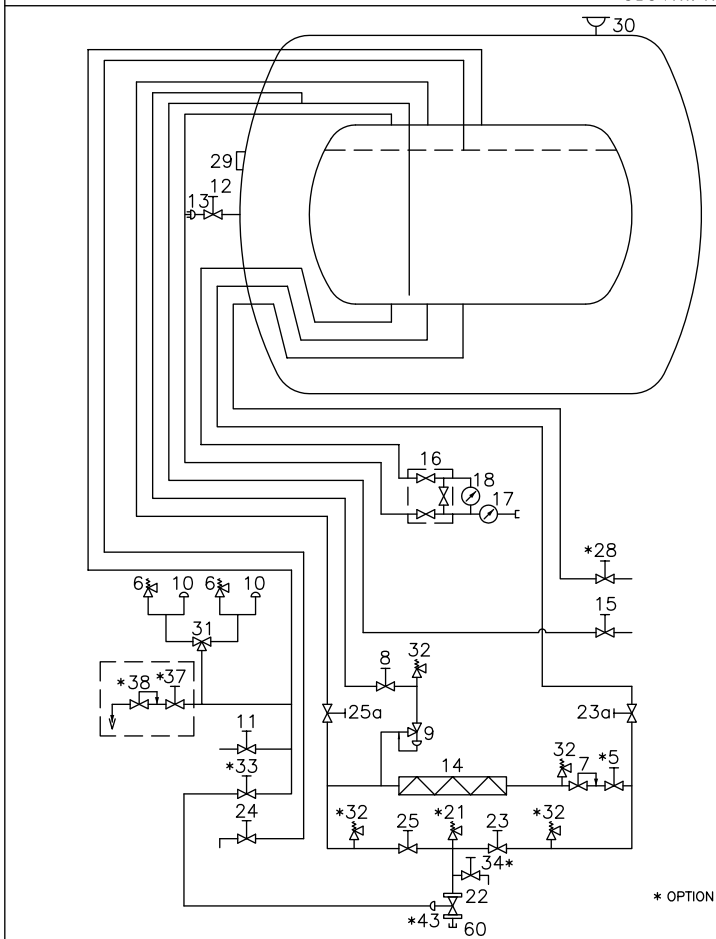
HSCS cryogenic bulk tanks consist of an inner and an outer vessel. The inner vessel, which is suspended concentrically in the outer vessel, is used for storage of cryogenic liquefied gases and is manufactured from stainless steel while the outer container is made from carbon steel. The vessels' inner space is filled with high quality insulating material, perlite or multilayer wrap, and then evacuated to the point where virtually zero atmosphere remains. The integrity of the welded joints is checked by leak-testing, using a helium mass spectrometer. This insures long-term vacuum integrity. In addition, sieve material absorbs any off-gassing or moisture that develops over time thus offering highly superior vacuum performance throughout the working life of the vessel.

HSCS Horizontal Cryogenic Bulk Tanks

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POS.	DESCRIPTION	DETAILS
5	Shut-off valve in pressure building system	DN20 K
6	Main safety valve	1/2"-1"
7	Pressure building regulator	
8	Shut-off valve in pressure reducing system	DN15 L
9	Pressure reducing regulator (economizer)	
10	Inner tank bursting head	1/2"
11	Vent valve	DN20 K
12	Vacuum probe valve	DN6
13	Vacuum probe	
14	Pressure building vaporizer	
15	Product withdrawal valve	DN40 L
16	Three valve manifold	DN3
17	Pressure gauge	
18	Liquid level indicator	
21	Section safety valve	1/4"
22	Fill connection	DN40
23	Liquid phase fill valve	DN40 L
23a	Liquid phase service valve	DN40 L
24	Over flow valve	DN15 L
25	Gas phase fill valve	DN40 L
25a	Gas phase service valve	DN40 L
28	Additional liquid withdrawal valve	DN40 L
29	Evacuation connection	2"
30	Vacuum bursting disc for outer tank	4"
31	Change over valve	DN15
32	Section safety valve	1/4"
33	Vent valve	DN15 K
34	Purge valve	DN15 K
37	Shut-off valve for process protection	DN15 K
38	Pressure reducing regulator for process protection	
43	Safety isolating valve	DN40
60	Filling adapter	

K = short spindle
L = long spindle

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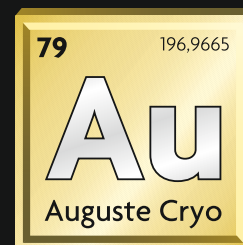
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