

Thread spec. (S02)

17E [ISO11363-1 (UN)]

25E [ISO11363-1 (UN)]

W21.8mmx1/14" [DIN477 N°6]

25T [BS341-1991 (GB)]

1x14BS [BS341-1991 (GB)]

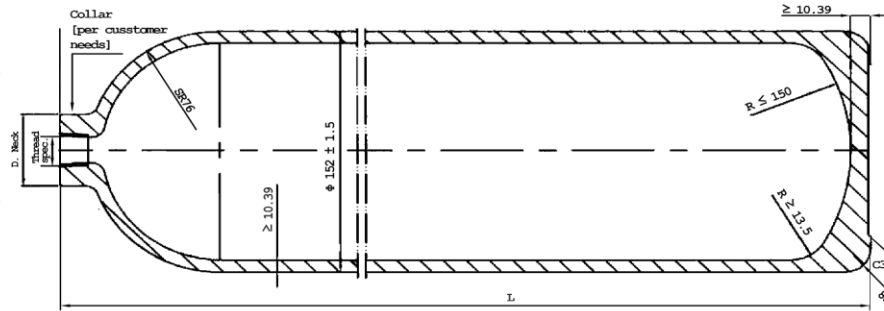
3/4"-14NPT [-ANSIB57.1]

3/4"-14NPSM [ASME B1.20.1-2013]

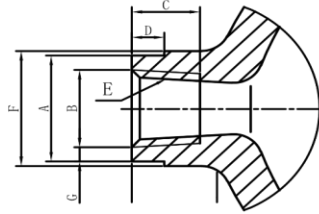
M25x2 (25F) [ISO15245-1]

★ D. Neck $\geq T_{min} \times 2$ + Thread Max. major diameter

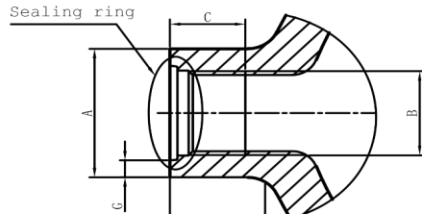
★ More thread spec. are available



Schematic diagram of bottle mouth cone thread



Schematic diagram of bottle mouth straight thread



	Name
A	Outer diameter of bottle mouth
B	Large diameter of thread base
C	Thread depth
D	Height of steps
E	Thread taper
F	Outer diameter
G	Wall thickness (not less T _{min})

Note: ★ Customers can freely choose thread models that meet different thread standards. Correspondingly, the thread parameters in the chart will also change.

★ The size of the straight thread sealing groove is related to the valve structure, which is usually provided by the customer, or designed according to the valve structure drawings provided by the customer.

WORKING PRESSURE TO (P.W.)	P.W.		TEST PRESSURE (P.H.)	P.H.		BURST PRESSURE min (P.B.)	P.B.	
	Bar	psi		Bar	psi		Bar	psi
	207	3000		310.5	4503		496.8	7205

MODEL	WATER CAPACITY -0/+5% LITERS	LENGTH "L" ±20mm MM	APPROX. WEIGHT -5/+10% KG	PED CATEGORY (GROUP 1 GASES)	PED CATEGORY (GROUP 2 GASES)
HPAL20.7H-152(10.39)-S02-4L	4.0	400	6.3	III	II
HPAL20.7H-152(10.39)-S02-7L	7.0	625	9.2	IV	III
HPAL20.7H-152(10.39)-S02-10L	10.0	850	12.2	IV	III
Note: Model HPAL20.7H-152(10.39)-S02-7L is the design qualification test cylinder. V _{min} and V _{max} represent the range covered by the same design family. ★ PED CATEGORY (GR.1): III for 4L ≤ V < 4.83L; IV for 4.83L ≤ V ≤ 10L.					
HPAL20.7H-152(10.39)-S02-5L	5.0	475	7.3	IV	III
HPAL20.7H-152(10.39)-S02-5.8L	5.8	535	8.0	IV	III
HPAL20.7H-152(10.39)-S02-6L	6.0	550	8.2	IV	III
HPAL20.7H-152(10.39)-S02-8L	8.0	700	10.2	IV	III

← V_{min}

← Type

← V_{max}

← Variants

TECHNICAL REQUIREMENTS

1	DESIGN SPECIFICATION(S):	EN ISO 7866:2012						
2	SUPERVISING PROVISION(S):	ADR/RID 2021 & DIRECTIVE 2010/35/EU (TPED) ADR/RID 2021 & DIRECTIVE 2014/68/EU (PED)						
3	Maximal/Minimal allowable Temperature, TSmax/min:	-40℃ to +65℃						
	Material:	AA6061A CHEMICAL COMPOSITION (%)						
4		Si	Fe	Cu	Mn	Mg	Cr	Zn
		0.40~0.80	MAX.0.70	0.15~0.40	MAX.0.15	0.80~1.20	0.04~0.35	MAX.0.25
		Ti	Pb	Bi	Other each	Other total	Al	
		MAX.0.15	MAX.0.003	MAX.0.003	MAX.0.050	MAX.0.150	Remain	
5	Heat treatment:	solution 540 ¹¹⁰ ℃ for 120±36 min ageing 180 ±5℃ for 480±96 min						
	CYLINDER MACHANICAL PROPERTIES AT ROOM TEMPERATURE, AFTER HEAT TREATMENT:							
6		YIELD [MPa]	TENSILE [Mpa]	ELONG A [%]	Hardness [HBR]	Hardness [HB]		
		280	325	≥ 12	76~45	90~125		
7	The body of the bottle shall be free of wrinkles, deformations, and visible cracks that would affect strength.							
8	Filling content	For DIRECTIVE 2010/35/EU (TPED): see "Filling Gas Table-HPAL20.7H-S02-GASES" For DIRECTIVE 2014/68/EU (PED): diving breathing gas group 1.						
9	Corrosion allowance: 0 mm.							
10	Pressure-cycling test:The gas cylinders to successive reversals the hydraulic test pressure. The gas cylinders shall withstand 12000 cycles without failure.							
11	The inner and external surface shall be free of any cracks and the defects shown in ISO10461 annex B table B.1 and B.2.							
12	The out-of-roundness of the cylindrical shell shall not exceed 2% of the diameters,the straightness of the cylindrical shell shall not exceed 3% and the vertical shall not exceed 10%.							

SINOGES INDUSTRY EQUIPMENT (WUHAN) CO., LTD.

DESCRIPTION		REFILLABLE SEAMLESS ALUMINIUM GAS CYLINDER			
SCALE	NOT TO SCALE		DRAWING NUMBER	HPAL20.7H-152(10.39)- S02	
DRAWN BY		2026/7/28			
CHECKED BY		2026/7/28	REV.	A01	
APPROVED BY		2026/7/28	SHEET NO. 1	OF 3 SHEET(S)	

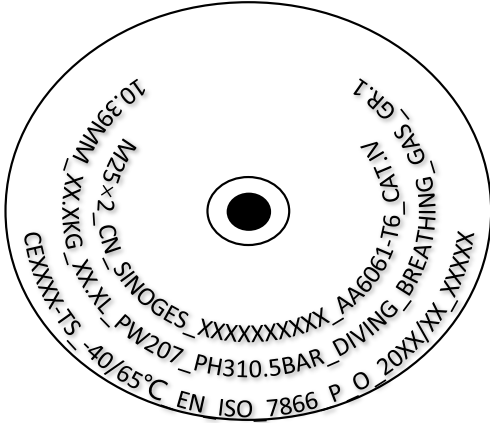


★ Where:

3/4-14NPSM Identification of cylinder thread;
CN Country of origin;
SINOGES Manufacture's identification;
XXXXXXXXXX Serial No.;
AA6061 T6 Material of cylinder;
H Only for contents with a risk of hydrogen embrittlement;

10.39MM Minimum guaranteed wall thickness;
XX.XKG Empty weight of cylinder;
XX.XL Actual water capacity of cylinder;
PW207 Max. service pressure (NOT NEEDED FOR FILLING LIQUID GAS SUCH AS LIQUID NITROGEN);
PH310.5BAR Hydraulic test pressure;
TAREXX.XKG Tare weight (optional);
X.XXKG_XXX Weight & name of gas to be filled (OPTIONAL);
TXXXX CE mark and the ID of notified body;
-40°C Service Temperature (optional);
EN ISO 7866 Applied Standard;
P Country of approval;
O The inspector's mark;
20XX/XX Date of initial inspection (year/month);
XXXXX Customer required information (optional).

STAMP MARKINGS ACCORDING TO ADR/RID 2021 & DIRECTIVE 2010/35/EU (TPED)



★ Where:

M25×2 Identification of cylinder thread;
CN Country of origin;
SINOGES Manufacture's identification;
XXXXXXXXXX Serial No.;
AA6061 T6 Material of cylinder;
CAT. IV Category of the pressure vessel
(PED CATEGORY: III for 4L ≤ V < 4.83L; IV for 4.83L ≤ V ≤

10.39MM Minimum guaranteed wall thickness;
XX.XKG Empty weight of cylinder;
XX.XL Actual water capacity of cylinder;
PW207 PH310.5BAR Maximum allowed service pressure and hydraulic tested pressure;
DIVING_BREATHING_ Gas name and gas group;
GAS_GR.1

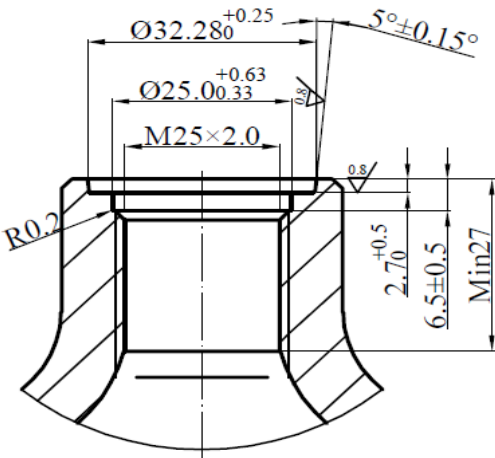
CE1155 CE mark and the ID of notified body;
TS -40/65°C Service Temperature (optional);
EN ISO 7866 Applied Standard;
P Country of approval;
O The inspector's mark;
20XX/XX Date of initial inspection (year/month);
XXXXX Customer required information (optional).

STAMP MARKINGS ACCORDING TO ADR/RID 2021 & DIRECTIVE 2014/68/EU (PED)

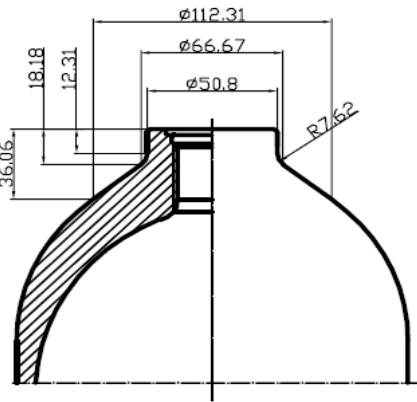
Note:
Each "_" in the stamped picture shown is a space between characters, and there is no need to type any content in actual production. 所示钢印图中每一个“_”为一个字符间距的留空，实际生产中不用打任何内容。

SINOGES INDUSTRY EQUIPMENT (WUHAN) CO., LTD.

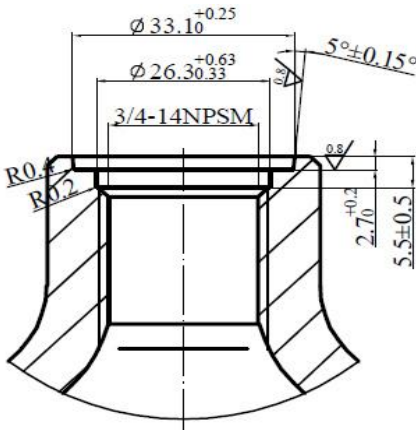
STAMP MARKINGS OF REFILLABLE SEAMLESS ALUMINIUM GAS CYLINDER				
DESCRIPTION				
SCALE	NOT TO SCALE		DRAWING NUMBER	HPAL20.7H-152(10.39)- S02-STP
DRAWN BY		2026/7/28		
CHECKED BY		2026/7/28	REV.	A01
APPROVED BY		2026/7/28	SHEET NO. 2	OF 3 SHEET(S)



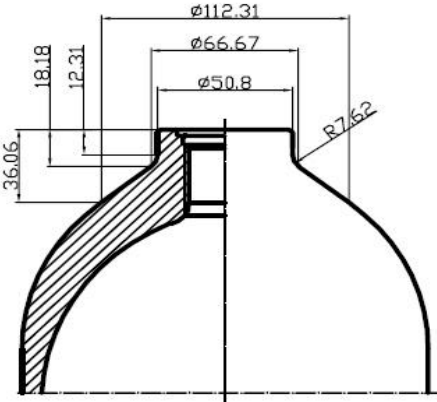
Thread For M25×2.0



Neck for thread M25×2



小径: 24.34-24.63
Thread For 3/4-14NPSM



Neck for thread 3/4-14NPSM

SINOGES INDUSTRY EQUIPMENT (WUHAN) CO., LTD.

DESCRIPTION STAMP MARKINGS OF REFILLABLE SEAMLESS ALUMINIUM GAS CYLINDER

SCALE	NOT TO SCALE		DRAWING NUMBER	HPAL20.7H-152(10.39)-S02-NECK
DRAWN BY		2023/5/19	REV.	01
CHECKED BY		2023/5/19	SHEET NO.	3
APPROVED BY		2023/5/19	OF 3 SHEET(S)	