Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment

ETA-19/0871 of 12 February 2020

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	CUBE-Tank
Product family to which the construction product belongs	Tanks
Manufacturer	CEMO GmbH In den Backenländern 5 71384 Weinstadt GERMANY
Manufacturing plant	CEMO GmbH Kappelweg 2 91625 Schnelldorf GERMANY
This European Technical Assessment contains	15 pages including 1 annex which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 280017-00-0109

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Specific part

1 Technical description of the product

The rotational moulded tank combinations (storage tanks with secondary containment) for storage liquids are factory made polyethylene (PE) tanks. The tanks have the following boundaries:

- Rectangular tanks with two horizontally extending tubular bandages made of galvanized steel
- Storage tank with an secondary containment (optional with a gatefold lid for outdoor installation)
- storage capacities 1000, 1500 und 2500 litres
- The tanks have connecting nozzles for filling, for ventilation, to protect against overfilling, for emptying and for fill level and leakage detection and other equipment parts, which are arranged on top of the inner tank. (The peripheral parts are not part of this European Technical Assessment)
- Made of the material DOWLEX NG 2432, Lupolen 4021 K RM or Revolve N with a maximum color pigment addition (gray) of 0.3% by weight based on the PE proportion.
- Bandage tubes made of galvanized steel S195T, Material number 1.0026 and associated tube bends made of steel E235, Material number 1.0308

A depiction of the tanks with the dimensions is shown in Annex 1. The storage tank and secondary containment are made of polyethylene (PE-LLD). The operating temperature is between 0 ° C and +40 ° C.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the tanks are used in compliance with the following specifications and conditions.

The tanks can be used at a maximum temperature of the storage liquids of 40 ° C for stationary, pressureless storage of the following water polluting liquids. A mixture of the storage liquids is not allowed:

1. heating oil,
2. diesel fuels according to EN 590[1] with the admixtures of biogenous fuels,
3. used and non-used lubricants, flashpoint > 55 °C, origin and flashpoint must be proven by the operator;
4. aqueous urea solution (AUS 32) according to DIN 70070[2], with a density of max. 1,15 g/cm³.

The tanks must not be exposed to wind, snow or earthquake loads. Installation in flood areas is not allowed.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the storage tank of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

1 DIN EN 590:2010-05 Automotive fuels - Diesel - Requirements and test methods
2 DIN 70070:2005-08 Diesel engines - NOx-Reduction agent AUS 32 - Quality requirements

3 Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	**Performance**
Density (material)	0,935 g/cm³
Melt flow rate 190 °C/2,16 kg (material)	3,75 g/10 min
Tensile strength (material)	20,5 MPa
Elongation (material)	10,3 %
Chemical resistance against the storage liquid (material)	resistant
Resistance to weathering (material)	No performance evaluated
Impact resistance	leak tight
Deformation	≤ 1,2 %
Pressure resistance 1000 l - tank 1500 l - tank 2500 l - tank	 0,145 MPa 0,140 MPa 0,130 MPa
Leak tightness	leak tight
Wall thickness inner tank 1000 l - tank 1500 l - tank 2500 l - tank	 ≥ 5,1 mm ≥ 5,2 mm ≥ 5,4 mm
Wall thickness secondary containment 1000 l - tank 1500 l - tank 2500 l - tank	 ≥ 4,0 mm ≥ 4,0 mm ≥ 4,0 mm
Mass inner tank 1000 l - tank 1500 l - tank 2500 l - tank	 ≥ 53,5 kg ≥ 67,0 kg ≥ 93,6 kg
Mass secondary containment 1000 l - tank 1500 l - tank 2500 l - tank	 ≥ 29,0 kg ≥ 34,2 kg ≥ 44,5 kg
Capacity 1000 l - tank 1500 l – tank 2500 l - tank	 1000 l 1500 l 2500 l
Visual appearance	no cracks, pinholes, blisters or malformed sections

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	E according to EN 13501-1
Resistance against heat effects	After 30 minutes still leak tight

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Leak tightness	The tanks are leak tight. This was proved by the following evidence: • Pressure test with 1.3 times the operating pressure.

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Tank connections for filling, extraction, ventilation, leak detector and overfill prevention sensor	The connections and their geometric arrangement are shown in Annex 1.

3.5 General aspects

The proof of durability is part of the examination of the essential characteristics. Durability is only ensured if the provisions on the purpose of use according to section 2 of the Special Section are ensured.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 280017-00-0109 the applicable European legal act is: 99/472/EC.

The system to be applied is: 1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 12 February 2020 by Deutsches Institut für Bautechnik

Dirk Brandenburger
Head of Department

beglaubigt:
Brämer

Deutsches Institut für Bautechnik DIBt

CUBE-Tank Indoor installation	CUBE-Tank Outdoor installation	CUBE-Altöltank Indoor installation	CUBE-Altöltank Outdoor installation
1000 l 			1000 l 
1500 l 			1500 l 
2500 l 			2500 l 

CUBE-Tank	Annex 1 Page 1 of 10
Overview	

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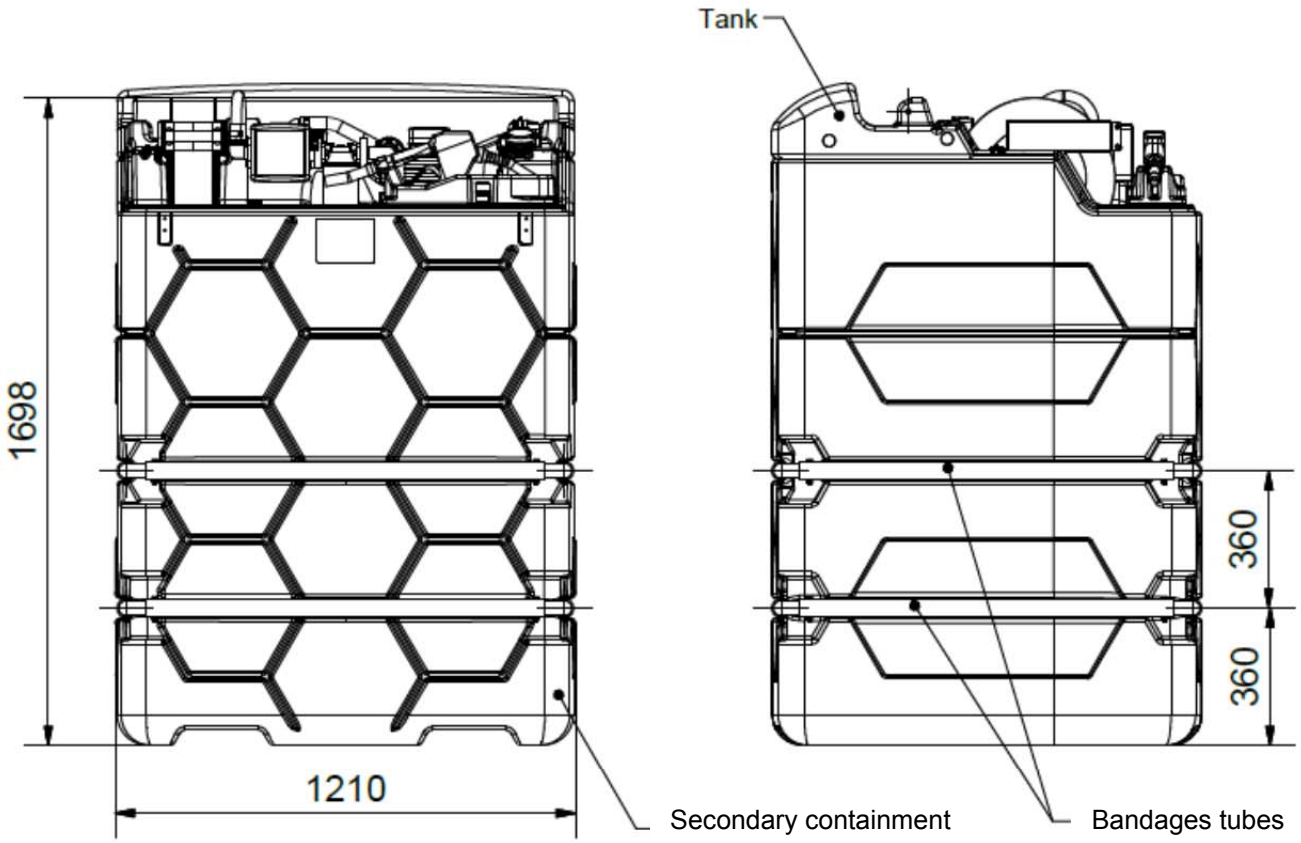

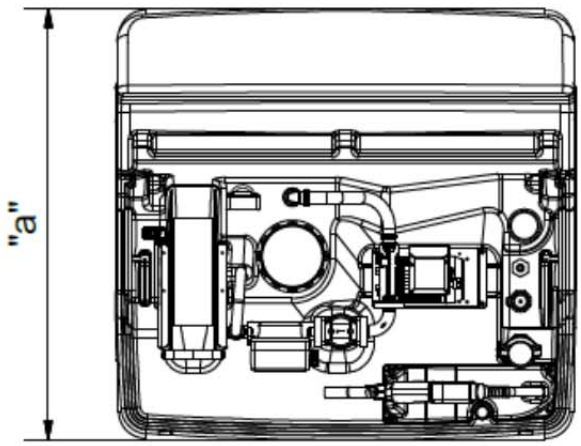

	1000 l	1500 l	2500 l
Maß "a"	800	1130	1790

CUBE-Tank

Inner tank with secondary containment indoor installation complete

Annex 1
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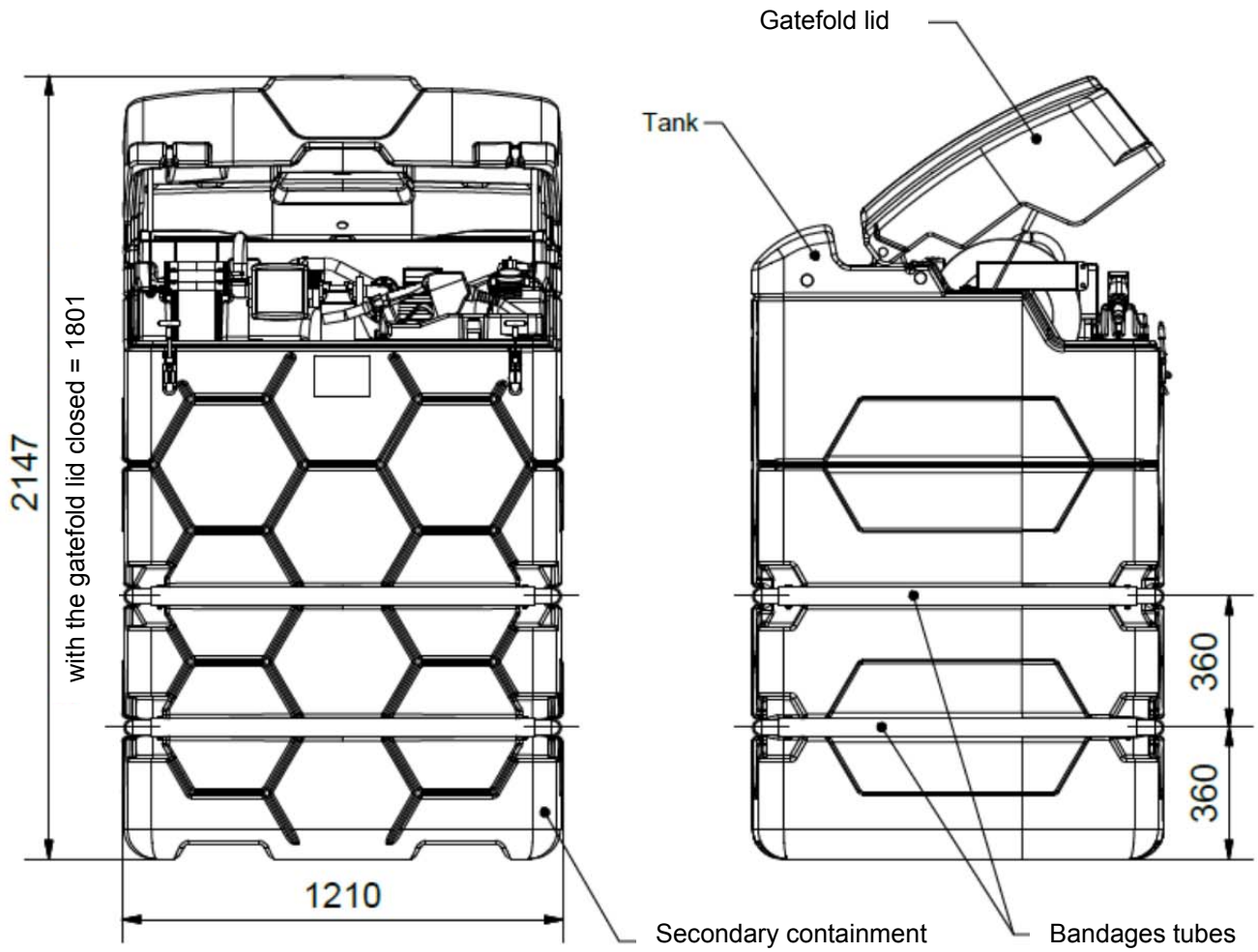

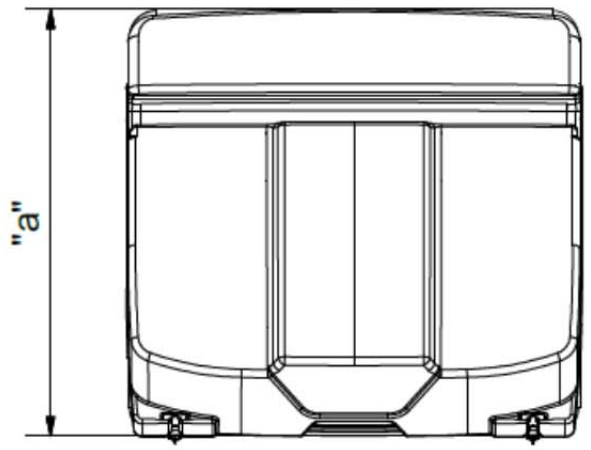

	1000 l	1500 l	2500 l
Maß "a"	800	1130	1790

CUBE-Tank

Inner tank with secondary containment outdoor installation complete

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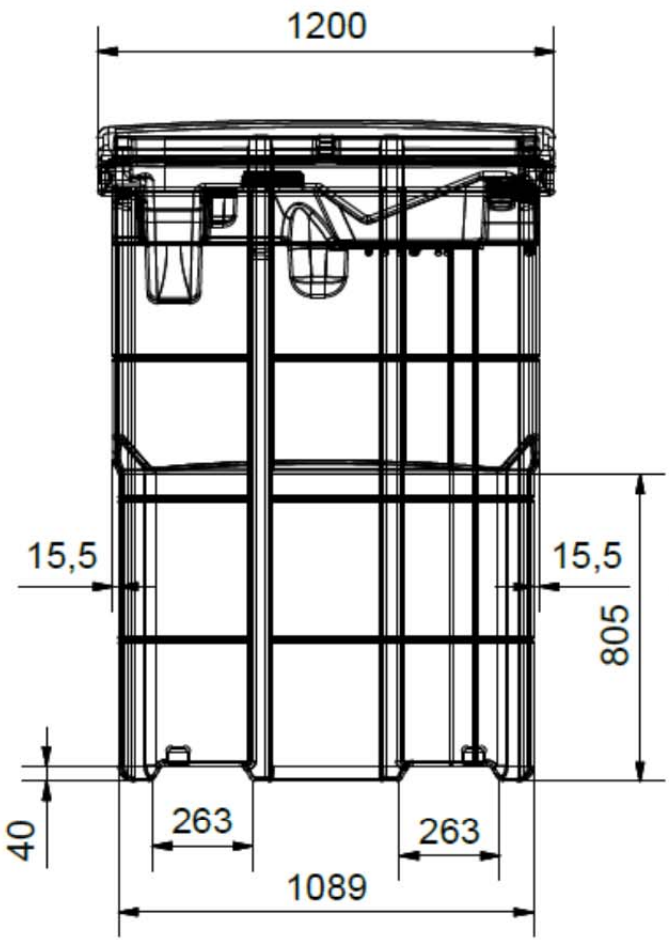

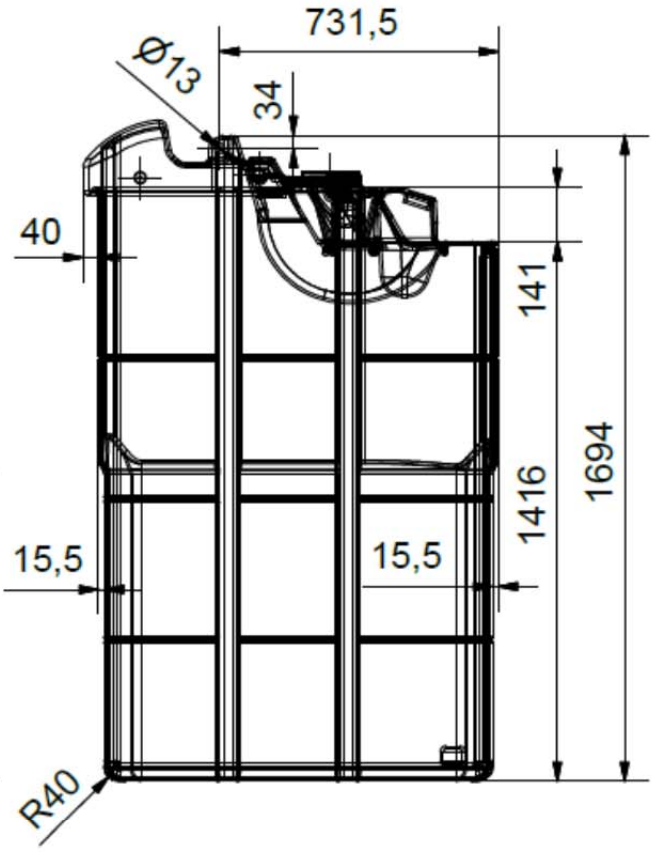

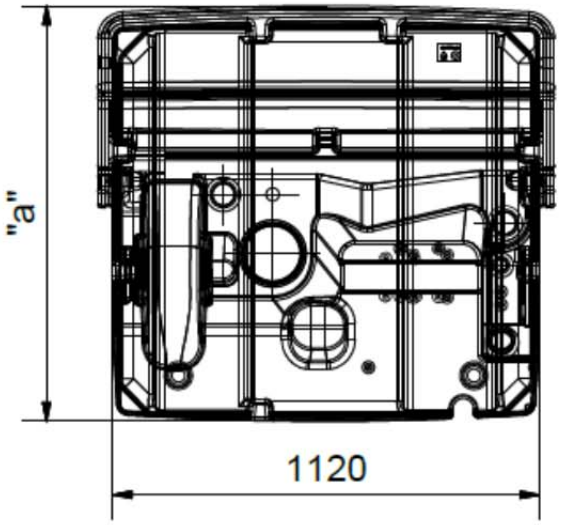

	1000 l	1500 l	2500 l
Maß "a"	760	1090	1750

Material: PE-LLD

CUBE-Tank

Inner tank type CUBE-Tank

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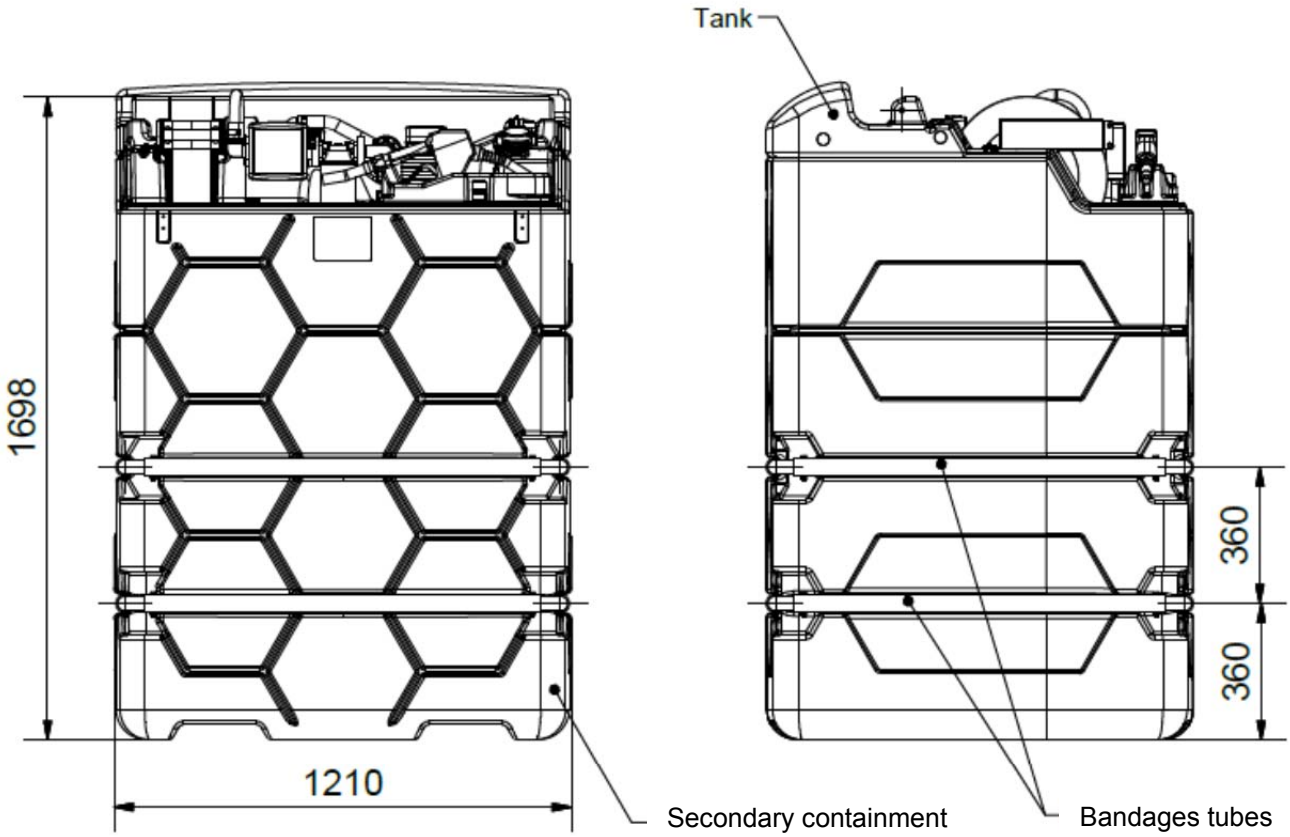

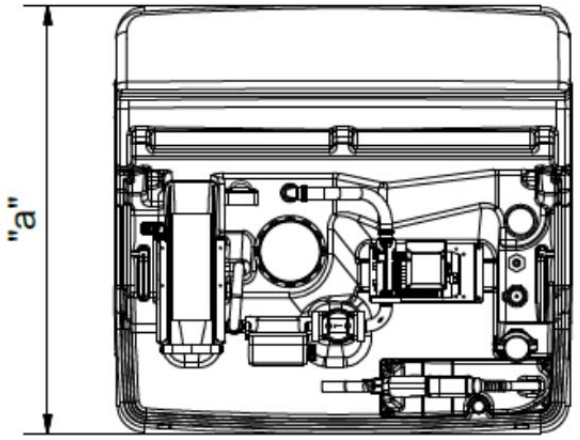

	1000 l	1500 l	2500 l
Maß "a"	800	1130	1790

CUBE-Tank

Inner tank with secondary containment used lubricants indoor installation complete

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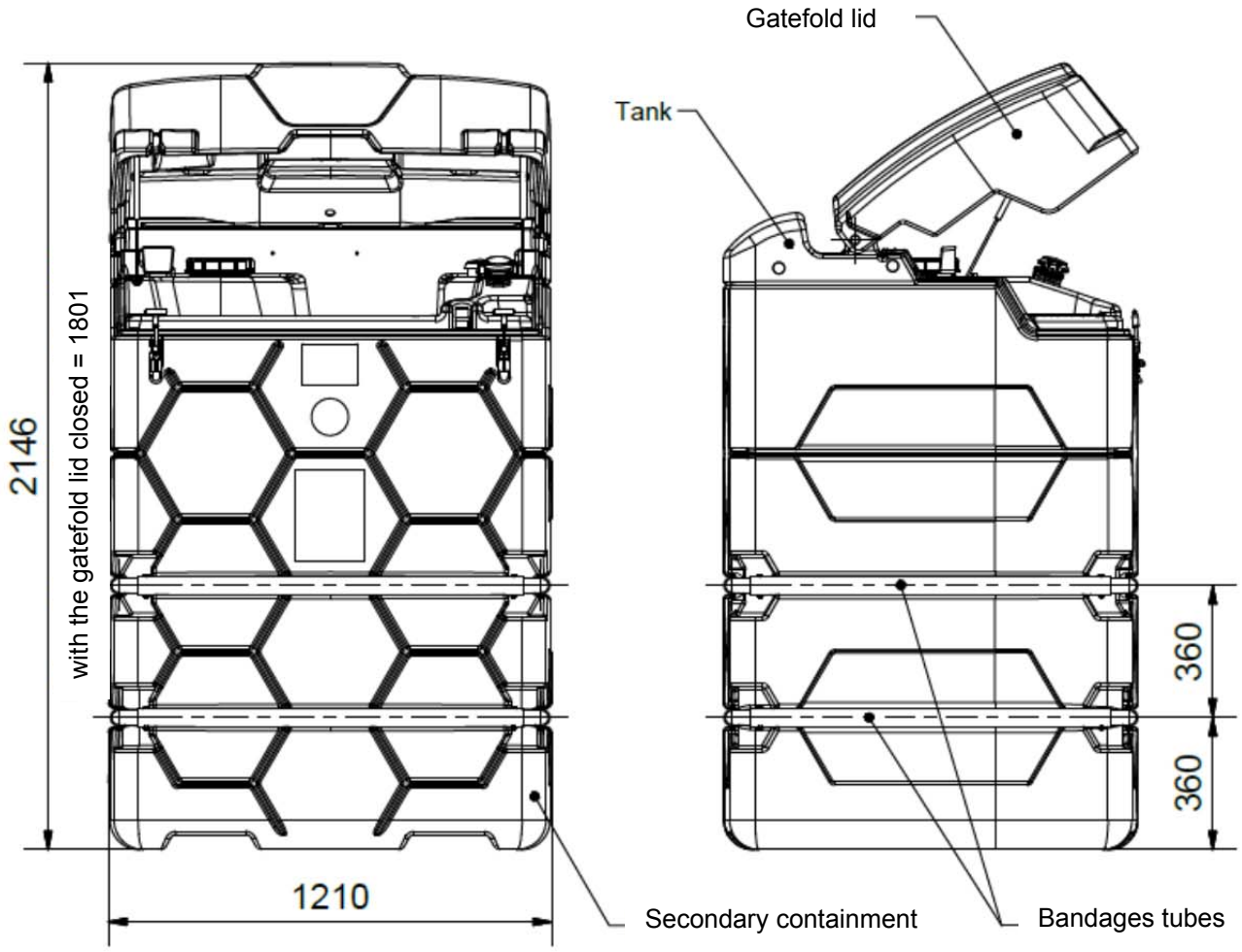

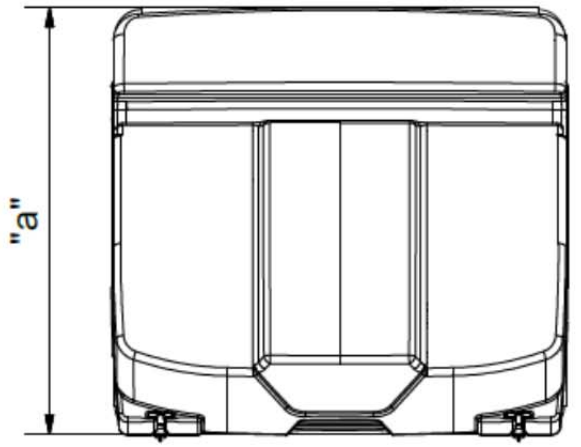

	1000 l	1500 l	2500 l
Maß "a"	800	1130	1790

CUBE-Tank

Inner tank with secondary containment for used lubricants outdoor installation complete

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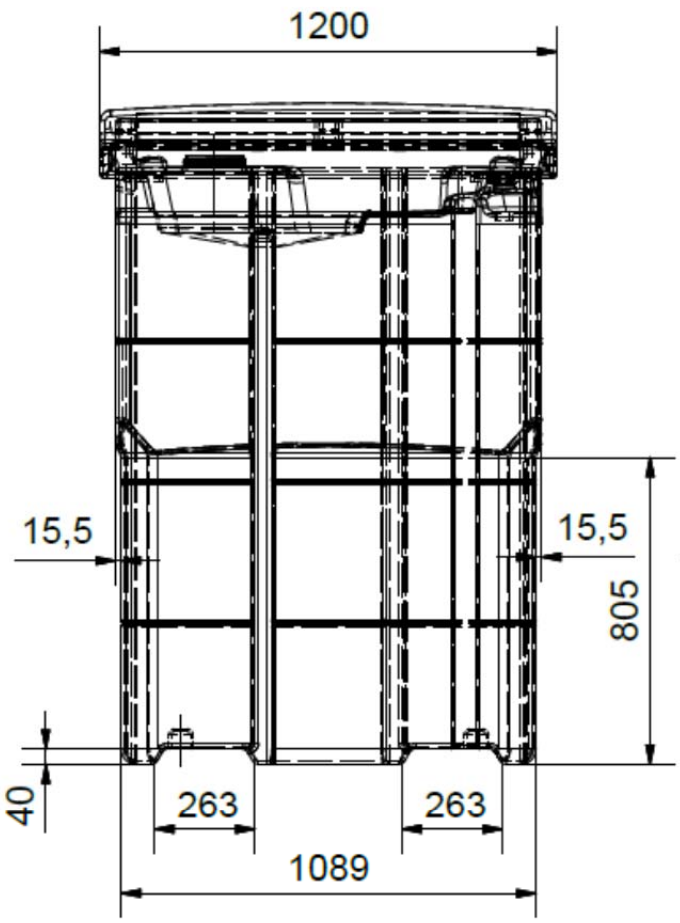

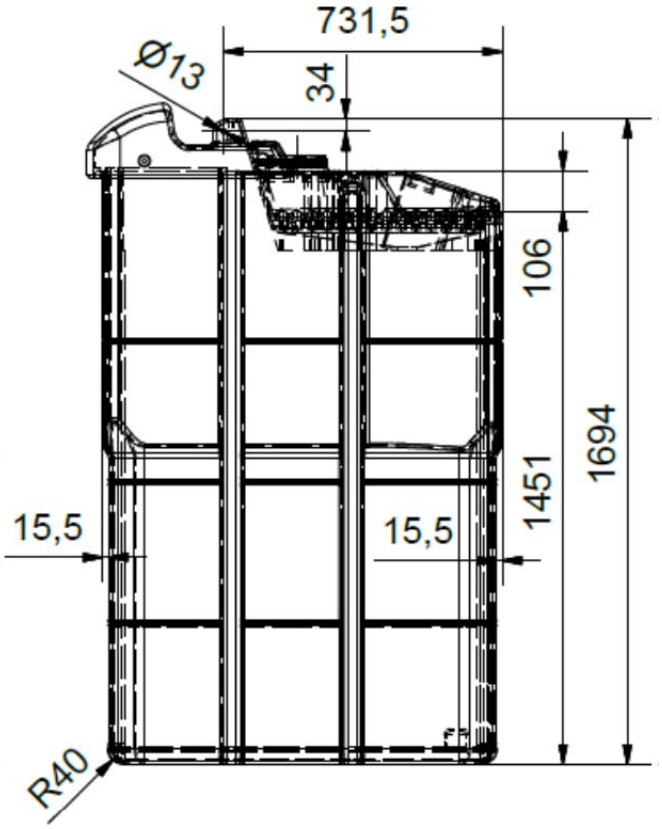

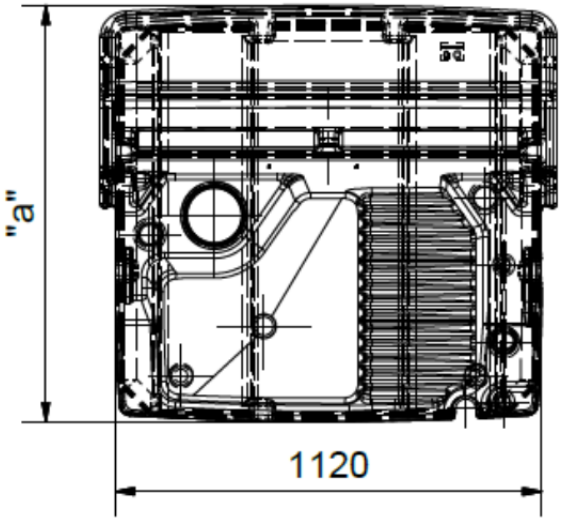

	1000 l	1500 l	2500 l
Maß "a"	760	1090	1750

Material: PE-LLD

CUBE-Tank

Inner tank type CUBE-Tank for used lubricants

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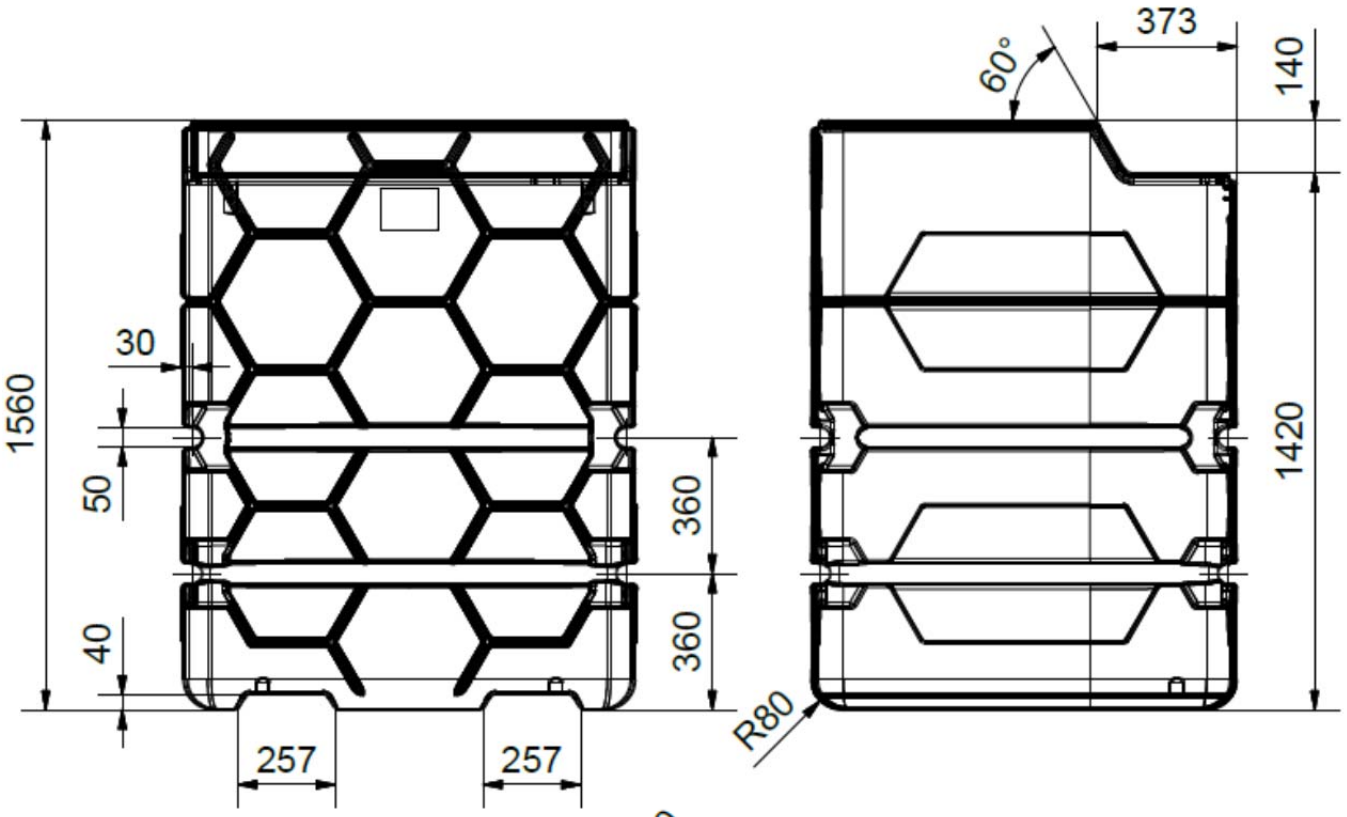

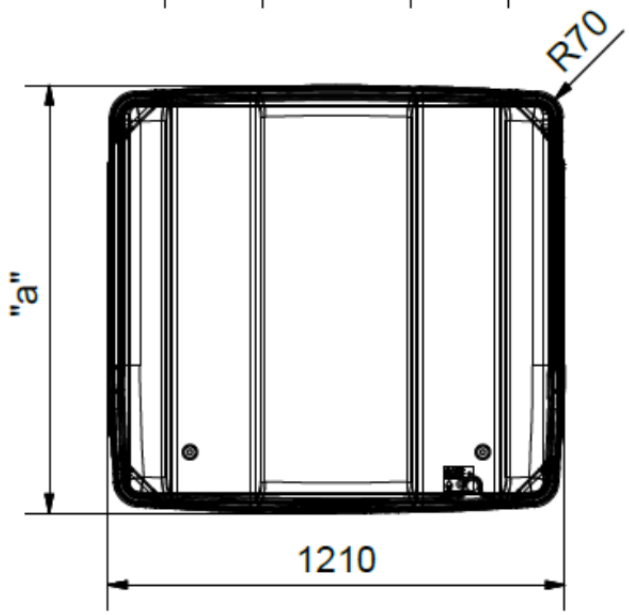

	1000 l	1500 l	2500 l
Maß "a"	800	1130	1790

Material: PE-LLD

CUBE-Tank

Secondary containment (outer tank)

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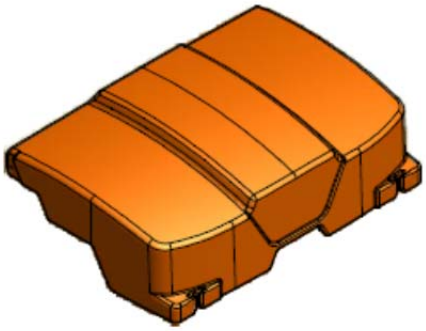

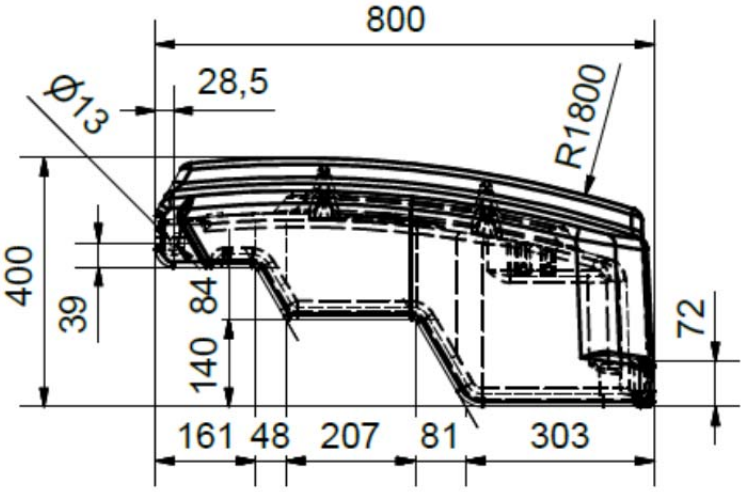

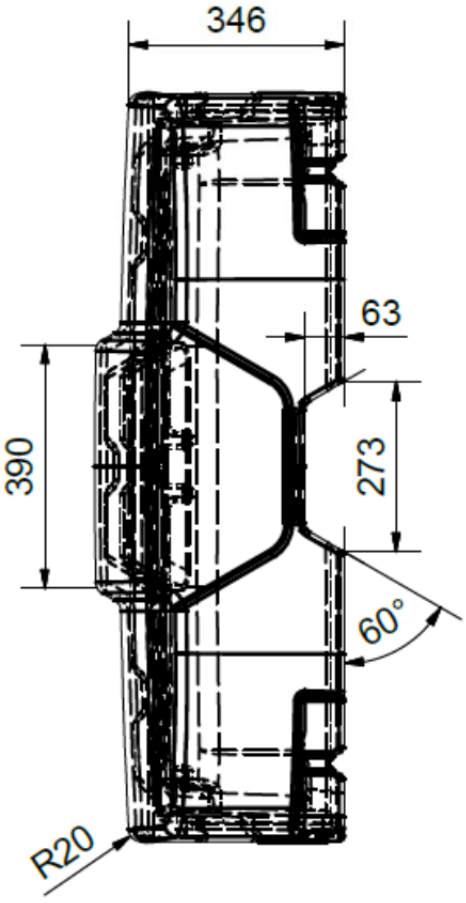

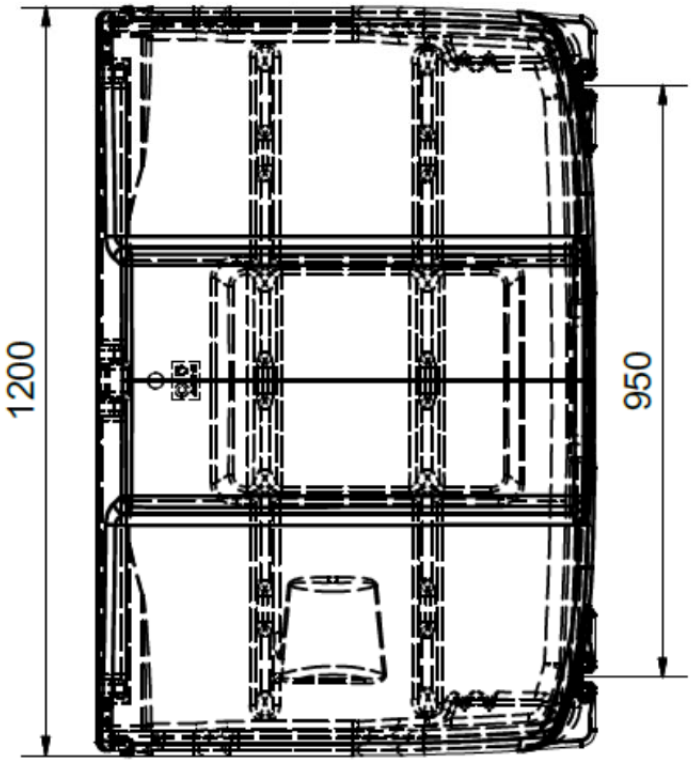

Material: PE-LLD

CUBE-Tank	Annex 1 Page 9 of 10
Gatefold lid	

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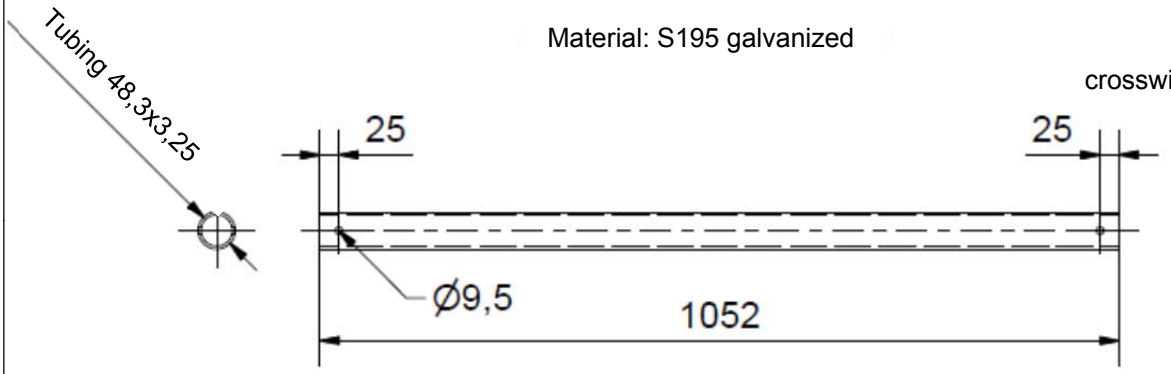
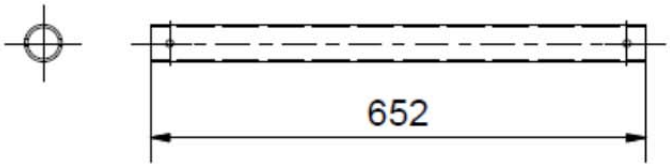
Material: S195 galvanized

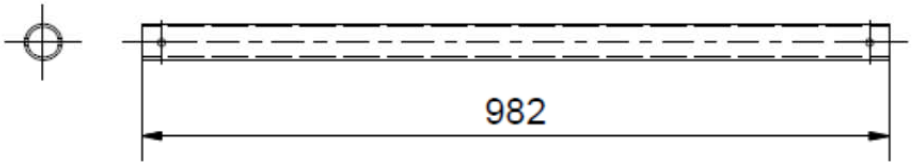
crosswise – 1000-2500 l



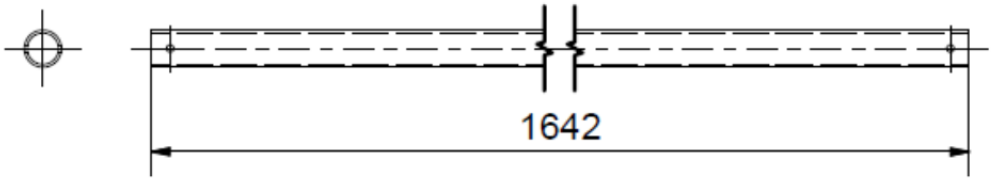
left/right 1000 l



left/right 1500 l

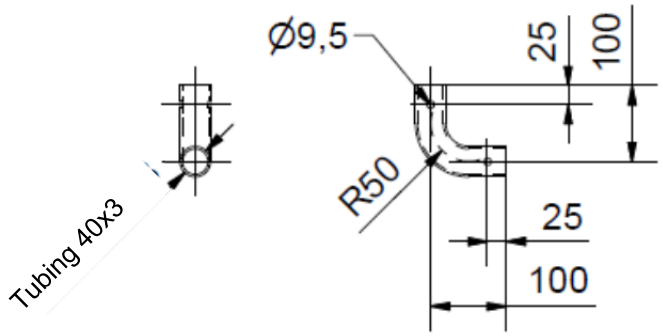


left/right 2500 l



corner connector

Material: E235 galvanized



CUBE-Tank	Annex 1 Page 10 of 10
Bandages	