



technical sheet

CERTIFICATION OF

VITRIFIED CLAY PIPE SYSTEMS

BENOR

This technical data sheet was printed on 29/04/2024.  
The validity of this technical data sheet can be checked on  
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TECHNICAL DATA SHEET		
QUICK CODE	VERSION	VALIDITY
<b>0015/0003</b>	<b>6.0 - 22/01/2024</b>	<b>CERTIFIED</b>
CERTIFICATE HOLDER	PRODUCTION UNIT	CERTIFICATE NUMBER
STEINZEUG-KERAMO Europaallee 63 D-50226 Frechen +49 22 34 50 70 <a href="mailto:info@steinzeug-keramo.com">info@steinzeug-keramo.com</a>	STEINZEUG-KERAMO 'WERK 1' Verlängerte Torgauerstrasse 1 D-06905 Bad Schmiedeberg +49 34 92 57 50 <a href="mailto:info@steinzeug-keramo.com">info@steinzeug-keramo.com</a>	BENOR 015/95 Vitrified clay pipe systems

PRODUCT																
OFFICIAL NAME	COMMERCIAL NAME															
<b>PIPES, FITTINGS AND JOINTS</b>	<b>VITRIFIED CLAY JUNCTIONS</b>															
CAPTION ON THE PRODUCT																
BENOR Production date Production unit EN 295-1 PTV 895-1 Nominal size (DN...) Joint system Crushing strength FN in kN/m Angle																
APPLICATION																
<table border="0"> <tr> <td><input checked="" type="checkbox"/> CCT/TB 2015</td> <td><input checked="" type="checkbox"/> PTV 895-1 (3.0)</td> <td><input checked="" type="checkbox"/> EN 295-1 (2013)</td> </tr> <tr> <td><input checked="" type="checkbox"/> CCT Qualiroutes (2017)</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> SB 250 - versie 4.1</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> CCT Qualiroutes (2021)</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> SB 250 - versie 4.1 + errata</td> <td></td> <td></td> </tr> </table> <p>This product was not checked according to the crossed-out reference documents or does not comply with them.</p> <p><b>Use:</b> Drains and sewers.</p>		<input checked="" type="checkbox"/> CCT/TB 2015	<input checked="" type="checkbox"/> PTV 895-1 (3.0)	<input checked="" type="checkbox"/> EN 295-1 (2013)	<input checked="" type="checkbox"/> CCT Qualiroutes (2017)			<input checked="" type="checkbox"/> SB 250 - versie 4.1			<input checked="" type="checkbox"/> CCT Qualiroutes (2021)			<input checked="" type="checkbox"/> SB 250 - versie 4.1 + errata		
<input checked="" type="checkbox"/> CCT/TB 2015	<input checked="" type="checkbox"/> PTV 895-1 (3.0)	<input checked="" type="checkbox"/> EN 295-1 (2013)														
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<input checked="" type="checkbox"/> SB 250 - versie 4.1																
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<input checked="" type="checkbox"/> SB 250 - versie 4.1 + errata																

**EXPLANATIONS (THIS DOES NOT COME UNDER SUPERVISION IN THE CONTEXT OF BENOR CERTIFICATION)**

ATTENTION POINTS - TO BE CHECKED BY CUSTOMER (NOT LIMITED)

- \* Is there a delivery note for each delivery?
- \* Is there reference to the technical data sheet on the delivery document?
- \* Does the technical data sheet code mentioned on the delivery note correspond with the code mentioned on the product?
- \* Does the product meet the requirements from the tender?

## FORM OF DELIVERY

## EXTRA INFORMATION

- \* In case vulcanized rubber sealing elements are supplied as separate components, they should be marked with reference to PTV 8681-1 and the classification for high chemical resistance.
- \* Coupling materials such as polypropylene sleeve couplings should be marked with reference to PTV 895-1.
- \* The KeraMat Lubricant shall be used for all vitrified clay joint systems.
- \* The conformity of the rubber components according to PTV 895-1 and EN 681-1 is demonstrated by an equivalence procedure, which is part of the BENOR certification of the vitrified clay product.

### Contact at

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- \* **Certificate holder:** René van Veldhoven +32 11 21 02 32 R.vanVeldhoven@steinzeug-keramo.com

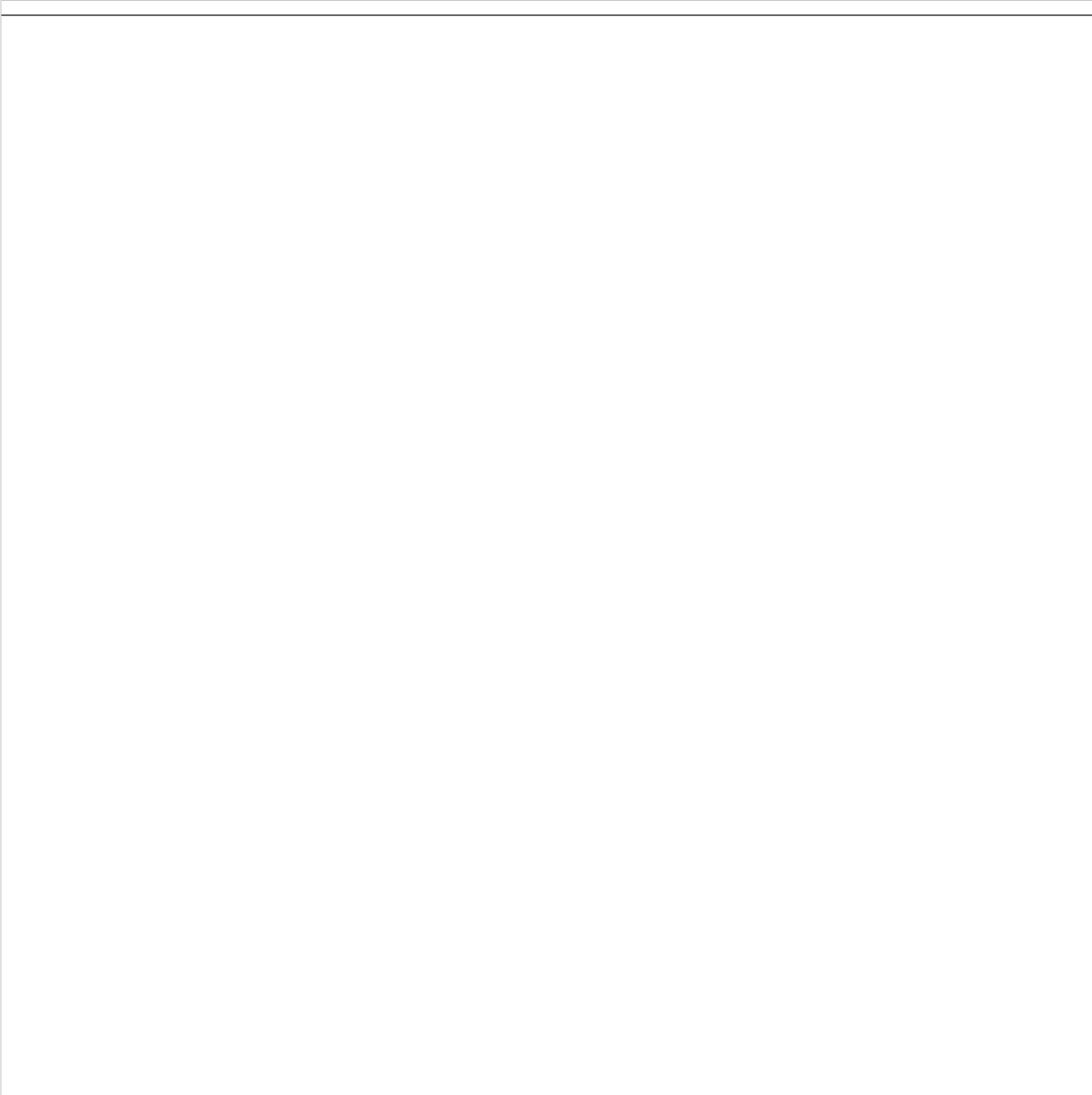
## PRODUCT CHARACTERISTICS

GENERAL REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Water absorption	PTV 895-1, Clause 3.4.2	%	-	-	6
Appearance	PTV 895-1, Clause 3.4.3		Glazed	-	-
DIMENSIONAL REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Internal diameter (*)	PTV 895-1, Clause 3.4.4	mm	See drawing	-	-
Length (*)	PTV 895-1, Clause 3.4.5	m	See drawing	-	-
Squareness of ends (*)	PTV 895-1, Clause 3.4.6	mm	See drawing	-	-
Branch angle of junctions (*)	PTV 895-1, Clause 3.4.10	°	See drawing	-	-
OTHER REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Watertightness of pipes and junctions (*)	PTV 895-1, Clause 3.4.16		Pass	-	-
Chemical resistance (*)	PTV 895-1, Clause 3.4.17	%	-	-	0,15
Abrasion resistance	PTV 895-1, Clause 3.4.19	Class	AH/AN	-	0,25
Airtightness (*)	PTV 895-1, Clause 3.4.20		Pass	-	-
Resistance against high pressure water jetting (*)	PTV 895-1, Clause 3.4.22		Pass	-	-
REQUIREMENTS FOR JOINT ASSEMBLIES	ACCORDING	UNIT	VALUE	MIN	MAX
Watertightness of joint assemblies (*)	PTV 895-1, Clause 3.5.2		-	-	-
<i>Under deflection</i>		mm	see drawing	-	-
<i>Under shear load</i>			Pass	-	-

Increased watertightness of jointed pipes at 1 bar		PTV 895-1, Clause 3.5.3		Pass	-	-
Continuity of invert in joint assemblies (*)		PTV 895-1, Clause 3.5.4		See drawing	-	-
Joint interchangeability of pipes and fittings (*)		PTV 895-1, Clause 3.5.5		-	-	-
<i>Joining system</i>			Class	See drawing	-	-
Chemical and physical resistance to effluent (*)		PTV 895-1, Clause 3.5.6	Class	CH	-	-
Thermal cycling stability of joint assemblies (*)		PTV 895-1, Clause 3.5.7		Pass	-	-
Long-term thermal stability of joint assemblies (*)		PTV 895-1, Clause 3.5.8		Pass	-	-
Airtightness of jointed pipes		PTV 895-1, Clause 3.5.9		Pass	-	-

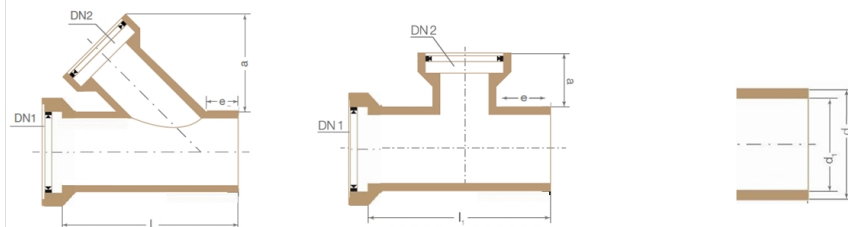
(\*) These product characteristics are a statement by the producer taken from its declaration of performance. The certificate holder declares that the values listed are in accordance with its declaration of performance.

**TECHNICAL DRAWING**

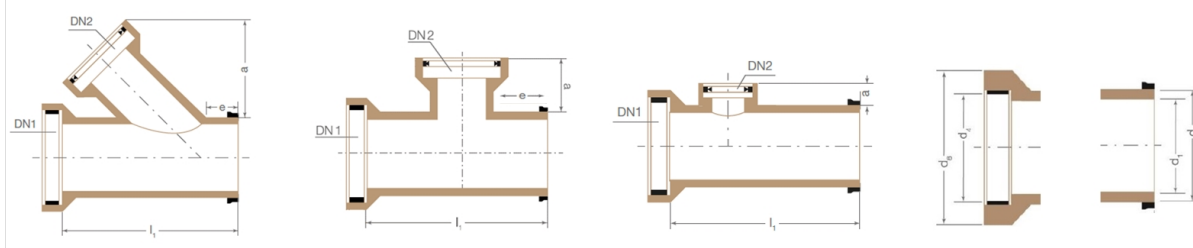


Nominaal diameter		Verbindings-systeem	DN 1				DN 2				Lengte	Haaksheid uiteinden	Bodemgelijkheid	Sterkte-klasse	Hoek-verdraaiing											
Maten			Hoek van aftakking en maten																							
Nominal size		Joint system	Dimensions				Branch angle of junctions and dimensions				Length	Squareness of ends	Continuity of invert in joint assemblies	Strength class	Angular deflection											
Dimension			Angle des branchements et dimension																							
Diamètre nominal		Système d'assemblage	Dimension				Angle des branchements et dimension				Longueur	Équerrage des extrémités	Continuité du fil d'eau dans les assemblages	Classe de résistance	Déviation angulaire											
DN 1	DN 2		binnenkant buis inner pipe intérieur tuyaux d <sub>1</sub> mm	buitenkant buis outer pipe extérieur tuyaux d <sub>3</sub> mm	e min mm	binnenkant mof inner socket intérieur du collet d <sub>4</sub> mm	binnenkant buis inner pipe intérieur tuyaux d <sub>1</sub> mm	a max 45° ± 5° 90° ± 5° mm mm	binnenkant mof inner socket intérieur du collet d <sub>4</sub> mm	l <sub>1</sub> cm						mm	mm	mm/m								
100	100	FF	100 ± 4	131 ± 1.5	70	-	100 ± 4	240	-	-	-	-	-	-	-											
100	125		126 ± 4	159 ± 2			100 ± 4	240	-																	
125	125		126 ± 4	159 ± 2			100 ± 4	260	160																	
150	125		126 ± 4	159 ± 2			100 ± 4	240	-																	
125	150		126 ± 4	159 ± 2			100 ± 4	260	-																	
150	150		126 ± 4	159 ± 2			100 ± 4	270	160																	
100	150		CF	200 ± 5	242 ± 3	75	-	100 ± 4	250	-	-	-	-	-	-	-										
100	125							100 ± 4	300	-																
125	125							100 ± 4	300	-																
150	125							100 ± 4	300	-																
125	150							100 ± 4	305	170																
150	150							100 ± 4	305	170																
100	200	CC						200 ± 5	242 ± 3	75							-	200 ± 5	350	180	-	-	-	-	-	-
100	125																	200 ± 5	350	180						
125	125																	200 ± 5	350	180						
150	125																	200 ± 5	350	180						
125	150																	200 ± 5	350	180						
150	150																	200 ± 5	350	180						
100	200	CF	200 ± 5	242 ± 3	75	-	200 ± 5	250	-	-	-	-	-	-	-											
100	125						200 ± 5	300	-																	
125	125						200 ± 5	300	-																	
150	125						200 ± 5	300	-																	
125	150						200 ± 5	305	170																	
150	150						200 ± 5	305	170																	
100	250	CF	250 ± 6	85	-	-	200 ± 5	300	170	-	-	-	-	-	-											
100	125						200 ± 5	300	170																	
125	125						200 ± 5	300	170																	
150	125						200 ± 5	300	170																	
125	150						200 ± 5	300	170																	
150	150						200 ± 5	300	170																	
100	250	CF	250 ± 6	85	-	-	200 ± 5	350	180	-	-	-	-	-	-											
100	125						200 ± 5	350	180																	
125	125						200 ± 5	350	180																	
150	125						200 ± 5	350	180																	
125	150						200 ± 5	350	180																	
150	150						200 ± 5	350	180																	
100	300	CF	300 ± 7	95	-	-	200 ± 5	300	170	-	-	-	-	-	-											
100	125						200 ± 5	300	170																	
125	125						200 ± 5	300	170																	
150	125						200 ± 5	300	170																	
125	150						200 ± 5	300	170																	
150	150						200 ± 5	300	170																	
100	300	CC	300 ± 7	95	-	-	200 ± 5	350	200	-	-	-	-	-	-											
100	125						200 ± 5	350	200																	
125	125						200 ± 5	350	200																	
150	125						200 ± 5	350	200																	
125	150						200 ± 5	350	200																	
150	150						200 ± 5	350	200																	
100	350	CF	348 ± 7	95	-	-	200 ± 5	350	180	-	-	-	-	-	-											
100	125						200 ± 5	350	180																	
125	125						200 ± 5	350	180																	
150	125						200 ± 5	350	180																	
125	150						200 ± 5	350	180																	
150	150						200 ± 5	350	180																	
100	400	CF	398 ± 8	95	-	-	200 ± 5	300	170	-	-	-	-	-	-											
100	125						200 ± 5	300	170																	
125	125						200 ± 5	300	170																	
150	125						200 ± 5	300	170																	
125	150						200 ± 5	300	170																	
150	150						200 ± 5	300	170																	
100	500	CF	496 ± 9	95	-	-	200 ± 5	350	200	-	-	-	-	-	-											
100	125						200 ± 5	350	200																	
125	125						200 ± 5	350	200																	
150	125						200 ± 5	350	200																	
125	150						200 ± 5	350	200																	
150	150						200 ± 5	350	200																	
100	600	CF	597 ± 12	95	-	-	200 ± 5	350	200	-	-	-	-	-	-											
100	125						200 ± 5	350	200																	
125	125						200 ± 5	350	200																	
150	125						200 ± 5	350	200																	
125	150						200 ± 5	350	200																	
150	150						200 ± 5	350	200																	

Aftakkingen verbindingssysteem F / Junctions jointing system F / Branchements système d'assemblage F



Aftakkingen verbindingssysteem C / Junctions jointing system C / Branchements système d'assemblage C



## ATTESTATION

The BENOR certification of the product states that there is, on the basis of a periodic external supervision, a sufficient degree of confidence that the certificate holder is in a position to continuously guarantee the conformity of the product as specified in the reference documents and TRA 95 BENOR (2.0), TRA 95 BENOR (3.0). This datasheet contains the performance characteristics specified by the manufacturer. The datasheet is verified by the certification body.

The certificate holder declares that the product supplier/delivered by it conforms to the datasheet as set out on the delivery note.

By making it available digitally, the producer declares that he agrees with this sheet

**Name:** René van Veldhoven  
**Date:** 22/01/2024

## COPRO

**Name:** Koen Van Daele  
**Date:** 22/01/2024  
**Signature:**



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