



CERTIFICATION OF

VITRIFIED CLAY PIPE SYSTEMS

BENOR

This technical data sheet was printed on 2/04/2025.
The validity of this technical data sheet can be checked on
<http://extranet.copro.eu/>



TECHNICAL DATA SHEET

QUICK CODE	VERSION	VALIDITY
0001/0006	7.1 - 28/05/2024	CERTIFIED
CERTIFICATE HOLDER	PRODUCTION UNIT	CERTIFICATE NUMBER
STEINZEUG-KERAMO 'WERK 2' Paalsteenstraat 36 BE-3500 Hasselt +32 11 21 02 32 info@steinzeug-keramo.com	STEINZEUG-KERAMO 'WERK 2' Paalsteenstraat 36 BE-3500 Hasselt +32 11 21 02 32 info@steinzeug-keramo.com	BENOR 001/95 Vitrified clay pipe systems

PRODUCT

OFFICIAL NAME	COMMERCIAL NAME
COMPONENTS OF MANHOLES AND INSPECTION CHAMBERS	VITRIFIED CLAY MANHOLES

CAPTION ON THE PRODUCT

BENOR

Production date

Production unit

EN 295-6

PTV 895-6

Nominal size (DN...) of manhole or inspection chamber

Nominal size (DN...) of pipeline connection components

Joint system of manhole and inspection chamber sections

Joint system of pipeline connections with their crushing strength or class number

Crushing strength of manhole and inspection chamber components FN in kN/m

Design depth (if greater than 5m)

APPLICATION

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> CCT/TB 2015 | <input checked="" type="checkbox"/> PTV 895-6 (3.0) | <input checked="" type="checkbox"/> EN 295-6 (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 | | |

This product was not checked according to the crossed-out reference documents or does not comply with them.

Use: Drains and sewers.

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 895-6.
- * Prefabricated synthetic liners should be marked with reference to PTV 8450-1.
- * Prefabricated concrete elements should be marked with reference to PTV 21-101.
- * The KeraMat Lubricant shall be used for all vitrified clay joint systems.
- * The conformity of the rubber components according to PTV 895-6 and EN 681-1 is demonstrated by an equivalence procedure, which is part of the BENOR certification of the vitrified clay product.

Contact at

* **COPRO:** Koen Van Daele +32 2 468 00 95 koen.vandaele@copro.eu
 * **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 895-6, Clause 3.4.2	%	-	-	6
Appearance	PTV 895-6, Clause 3.4.3		Glazed	-	-
DIMENSIONAL REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Internal diameter (*)	PTV 895-6, Clause 3.4.4	mm	See drawing	-	-
Height (*)	PTV 895-6, Clause 3.4.5	mm	See drawing	-	-
Angle of curvature and radius of channel bends (*)	PTV 895-6, Clause 3.4.6	°	See drawing	-	-
Branch angle of channel junctions (*)	PTV 895-6, Clause 3.4.7	°	See drawing	-	-
OTHER REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Crushing strength (*)	PTV 895-6, clause 3.4.8	kN/m	See drawing	-	-
Bending tensile strength	PTV 895-6, Clause 3.4.9	N/mm ²	-	18	-
Bond strength of adhesive for fixing clay parts	PTV 895-6, Clause 3.4.10		-	-	-
<i>Minimum bending tensile strength of the bond</i>		N/mm ²	-	5	-
<i>Minimum strength after immersion</i>		N/mm ²	-	5	-
Fatigue strength under cyclic load	PTV 895-6, Clause 3.4.11		Pass	-	-
Chemical resistance (*)	PTV 895-6, Clause 3.4.12	%	-	-	0.15
REQUIREMENTS FOR ASSEMBLED COMPONENTS	ACCORDING	UNIT	VALUE	MIN	MAX

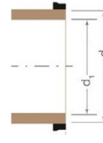
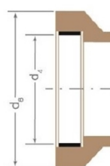
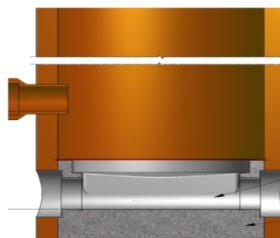
Watertightness of assembled components (*)	PTV 895-6, Cla use 3.5.2		Pass	-	-
Pull-off resistance of the synthetic liner	PTV 895-6, Cla use 3.5.3	MPa	-	0,4	-
Pull-off resistance after 1 year synthetic liner	PTV 895-6, Cla use 3.5.4	MPa	-	0,4	-

(*) 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

Nominale diameter	Verbindings-systeem	Maten put		Kruindruk-weerstand	Sterkte-klasse	Maten aansluitingen		Verbindings-systeem	Sterkte-klasse	Krommingshoek en radius van bochten in het stroomprofiel	Hoek van aftakkingen in het stroomprofiel	Hoogte							
Nominal size	Joint system	Dimensions manhole		Crushing strength	Strength class	Dimensions connections		Joint system	Strength class	Angle of curvature and radius of channel bends	Branch angles of channel junctions	Height							
Diamètre nominal	Système d'assemblage	Dimension regard		Résistance à l'écrasement	Classe de résistance	Dimension raccords		Système d'assemblage	Classe de résistance	Rayon de courbure des demi-sections de pièce coudée	Angle des demi-sections de pièce en branchement	Hauteur							
DN		binnenkant buis inner pipe intérieur tuyaux d ₁ mm	binnenkant mof inner socket intérieur du collet d ₄ mm	FN kN/m		DN	binnenkant buis inner pipe intérieur tuyaux d ₁ mm	binnenkant mof inner socket intérieur du collet d ₄ mm		Specificatie klant Customer specification Spécification du client									
										°	°	mm							
300	C	300 ± 7	371,5 ± 0,5	48	160	100	100 ± 4	-	F	34	± 3°	± 3°	De grootste waarde van - 1 % / + 4 % of ± 10 mm. The biggest value of - 1 % / + 4 % or ± 10 mm. De grootste waarde van - 1 % / + 4 % of ± 10 mm. La plus grande valeur of - 1 % / + 4 % ou ± 10 mm.						
						125	126 ± 4			34									
						150	151 ± 5			34									
						200	200 ± 5			200									
						200	200 ± 5	260 ± 0,5		200									
400	C	398 ± 8	507,5 ± 0,5	64	160	100	100 ± 4	-	F	34									
						125	126 ± 4			34									
						150	151 ± 5			34									
						200	200 ± 5			200									
						200	200 ± 5	260 ± 0,5		200									
600	C	597 ± 12	720 ± 0,5	57	95	100	100 ± 4	-	F	34	± 1°	± 1°							
						125	126 ± 4			34									
						150	151 ± 5			34									
						200 N	200 ± 5			200									
						200 N	200 ± 5	260 ± 0,5		200									
800	C	796 ± 16	976 ± 0,5	96	120	200 H	200 ± 5	275 ± 0,5	C	240									
						250 N	250 ± 6	317,5 ± 0,5		160									
						250 H	250 ± 6	317,5 ± 0,5		240									
						300 N	300 ± 7	371,5 ± 0,5		160									
						300 H	300 ± 7	398,5 ± 0,5		240									
						350 N	348 ± 7	433,5 ± 0,5	160										
						400 N	398 ± 8	507,5 ± 0,5	160										
						400 H	398 ± 8	515,5 ± 0,5	200										
						500 N	496 ± 9	605 ± 0,5	120										
						500 H	496 ± 9	637 ± 0,5	160										
						1000	C	1000 ± 25	1204,2 ± 0,5	100	95	100		100 ± 4	-	F	34	± 1°	± 1°
												125		126 ± 4			34		
												150		151 ± 5			34		
												200 N		200 ± 5			200		
												200 N		200 ± 5	260 ± 0,5		200		
200 H	200 ± 5	275 ± 0,5	240																
250 N	250 ± 6	317,5 ± 0,5	160																
250 H	250 ± 6	341,5 ± 0,5	240																
300 N	300 ± 7	371,5 ± 0,5	C	160															
300 H	300 ± 7	398,5 ± 0,5		240															
350 N	348 ± 7	433,5 ± 0,5		160															
400 N	398 ± 8	507,5 ± 0,5		160															
400 H	398 ± 8	515,5 ± 0,5		200															
500 N	496 ± 9	605 ± 0,5		120															
500 H	496 ± 9	637 ± 0,5		160															
600 N	597 ± 12	720 ± 0,5		95															
600 H	597 ± 12	758 ± 0,5		160															
										± 3°	± 3°								

Put verbindingsysteem C / Manhole jointing system C / Regard 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 (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:



COPRO NPO - Z.1 Researchpark - Kranenberg 190 - B-1731
Zellik