



technical sheet

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
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TECHNICAL DATA SHEET

| QUICK CODE | VERSION | VALIDITY |
|---|---|--|
| 0001/0009 | 6.1 - 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 |
|---------------------------------|---------------------------|
| METAL BANDED FLEXIBLE COUPLINGS | KERAMAT FLEXIBLE COUPLING |

CAPTION ON THE PRODUCT

- * BENOR + PTV 895-4
- * Nominal size
- * Rubber type
- * Manufacturer's identification
- * Type of application (WC)
- * Hardness class
- * Production date or production period

APPLICATION

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> CCT/TB 2015 | <input checked="" type="checkbox"/> PTV 895-4 (3.0) | <input checked="" type="checkbox"/> EN 295-4 (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 product meet the requirements from the tender?

FORM OF DELIVERY

| | | | |
|--|--------------------|-----------------|-------------------------------------|
| Individual pieces | | | |
| EXTRA INFORMATION | | | |
| Type of coupling: type 2A & 2B | | | |
| The conformity of the rubber components according to PTV 895-4 and EN 681-1 is demonstrated by an equivalence procedure, which is part of the BENOR certification of the vitrified clay product. | | | |
| The Keramat Lubricant shall be used. | | | |
| 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 | VOLGENS | EENHEID | VALUE | MIN | MAX |
| Appearance | | | Pass | - | - |
| PERFORMANCE REQUIREMENTS FOR JOINT ASSEMBLIES | VOLGENS | EENHEID | VALUE | MIN | MAX |
| Watertightness under angular deflection | PTV 895-4, Clause 3.5.3 | | See drawing | - | - |
| Watertightness under shear load | PTV 895-4, Clause 3.5.4 | | Pass | - | - |
| Chemical and physical resistance to effluent | PTV 895-4, Clause 3.5.5 | | CH | - | - |
| Thermal cycling stability | PTV 895-4, Clause 3.5.6 | | Pass | - | - |
| Long-term thermal stability | PTV 895-4, Clause 3.5.7 | | Pass | - | - |
| Increased watertightness at 1 bar | PTV 895-4, Clause 3.5.8 | | Pass | - | - |
| PROPERTIES OF THE COMPONENTS | VOLGENS | EENHEID | VALUE | MIN | MAX |
| Rubber component | | | - | - | - |
| All characteristics (bushes and bodies) | PTV 832-1 | | Conforming | - | - |
| Dimensional tolerances | ISO 3302-1 | | E3/M3 | - | - |
| Stainless steel component | | | - | - | - |
| Tension band strength | | | Pass | - | - |
| Steel grading | | | Class 1.4301 | - | - |
| Dimensions | | | See drawing | - | - |

| TECHNICAL DRAWING | |
|-------------------|--|
| | |
| | |

| Product naam | Spanbereik (uitwendig diameter buis) | Maten | | | | | | Hoek- verdraaiing |
|----------------------------|--|------------|---------------------------------------|---|---|-----------------------------------|-------------------------------------|-------------------------|
| Product name | Clamping range (external diameter pipe) | Dimensions | | | | | | Angular deflection |
| Nom du produit | Plage de serrage (diamètre extérieur tuyaux) | Dimension | | | | | | Déviatiion angulaire |
| Typ 2A | | breedte | dikte onder spanband | breedte shear band | dikte shear band | breedte spanband | dikte spanband | mm/m |
| | | width | thickness under tension band | width of shear band | thickness of shear band | width of tension band | thickness of tension band | |
| | | largeur | epaisseur sous la bande de tension | largeur du renfort contre le cisaillement | epaisseur du renfort contre le cisaillement | Largeur de la bande de tension | epaisseur de la bande de tension | |
| | | mm | mm | mm | mm | mm | mm | |
| Manchette.Basic (DN 100 N) | 120 - 135 | 102 | 3,4 | 46,5 | 0,4 | 13,5 | 0,6 | 100 |
| Manchette.Basic (DN 125 N) | 150 - 165 | | | | | | | |
| Manchette.Basic (DN 150 N) | 175 - 190 | | | | | | | |
| Manchette.Basic (DN 200 N) | 235 - 250 | | | | | | | |

| Product naam | Spanbereik (uitwendig diameter buis) | Maten | | | | | | Hoek- verdraaiing | |
|----------------------------|--|------------|---------------------------------------|---|---|-----------------------------------|-------------------------------------|-------------------------|--|
| Product name | Clamping range (external diameter pipe) | Dimensions | | | | | | Angular deflection | |
| Nom du produit | Plage de serrage (diamètre extérieur tuyaux) | Dimension | | | | | | Déviatiion angulaire | |
| Typ 2B | | breedte | dikte onder spanband | breedte shear band | dikte shear band | breedte spanband | dikte spanband | mm/m | |
| | | width | thickness under tension band | width of shear band | thickness of shear band | width of tension band | thickness of tension band | | |
| | | largeur | epaisseur sous la bande de tension | largeur du renfort contre le cisaillement | epaisseur du renfort contre le cisaillement | Largeur de la bande de tension | epaisseur de la bande de tension | | |
| | | mm | mm | mm | mm | mm | mm | | |
| Manchette.Basic (DN 100 N) | 120 - 137 | 150 | 7,7 | 68,5 | 0,36 | 13,5 | 0,6 | 100 | |
| Manchette.Basic (DN 125 N) | 140 - 165 | | | 78 | | 15,5 | | | |
| Manchette.Basic (DN 150 N) | 175 - 200 | | | | | | | | |
| Manchette.Basic (SON 190) | 190 - 215 | | | | | | | | |
| Manchette.Basic (SON 200) | 200 - 225 | | | | | | | | |
| Manchette.Basic (DN 200 N) | 225 - 250 | | | | | | | | |
| Manchette.Basic (DN 200 H) | 245 - 275 | | | | | | | | |
| Manchette.Basic (SON 265) | 265 - 290 | 185 | 9,2 | 97 | 0,75 | 15,5 | 0,65 | 50 | |
| Manchette.Basic (DN 250 N) | 285 - 310 | | | | | | | | |
| Manchette.Basic (SON 295) | 295 - 320 | | | | | | | | |
| Manchette.Basic (DN 250 H) | 305 - 335 | | | | | | | | |
| Manchette.Basic (SON 315) | 315 - 345 | | | | | | | | |
| Manchette.Basic (DN 300 N) | 335 - 360 | | | | | | | | |
| Manchette.Basic (DN 300 H) | 355 - 385 | | | | | | | | |
| Manchette.Basic (SON 385) | 385 - 410 | | | | | | 0,75 | | |
| Manchette.Basic (DN 350 N) | 400 - 425 | | | | | | | | |
| Manchette.Basic (SON 405) | 405 - 430 | | | | | | | | |
| Manchette.Basic (DN 350 H) | 420 - 445 | | | | | | | | |
| Manchette.Basic (SON 435) | 435 - 465 | | | | | | | | |
| Manchette.Basic (DN 400 N) | 460 - 490 | | | | | | | | |
| Manchette.Basic (DN 400 H) | 480 - 510 | | | | | | | | |
| Manchette.Basic (SON 495) | 495 - 525 | | | | | | | | |
| Manchette.Basic (SON 510) | 510 - 540 | | | | | | | | |
| Manchette.Basic (SON 520) | 520 - 550 | | | | | | | | |
| Manchette.Basic (DN 450 H) | 530 - 560 | | | | | | | | |
| Manchette.Basic (SON 555) | 555 - 580 | | | | | | | | |
| Manchette.Basic (DN 500 N) | 570 - 600 | | | | | | | | |
| Manchette.Basic (DN 500 H) | 590 - 620 | | | | | | | | |

| Product naam | Spanbereik (uitwendig diameter buis) | Maten | | | | | | Hoek- verdraaiing |
|-----------------------------|--|------------|---------------------------------------|---|---|-----------------------------------|-------------------------------------|-------------------------|
| Product name | Clamping range (external diameter pipe) | Dimensions | | | | | | Angular deflection |
| Nom du produit | Plage de serrage (diamètre extérieur tuyaux) | Dimension | | | | | | Déviatiion angulaire |
| Typ 2B | | breedte | dikte onder spanband | breedte shear band | dikte shear band | breedte spanband | dikte spanband | mm/m |
| | | width | thickness under tension band | width of shear band | thickness of shear band | width of tension band | thickness of tension band | |
| | | largeur | epaisseur sous la bande de tension | largeur du renfort contre le cisaillement | epaisseur du renfort contre le cisaillement | Largeur de la bande de tension | epaisseur de la bande de tension | |
| | | mm | mm | mm | mm | mm | mm | |
| Manchette.Basic (DN 600 N) | 670 - 700 | 185 | 9,2 | 97 | 0,75 | 18,5 | 0,85 | 30 |
| Manchette.Basic (DN 600 H) | 705 - 735 | | | | | | | |
| Manchette.Basic (DN 700 N) | 775 - 805 | | | | | | | |
| Manchette.Basic (DN 700 H) | 820 - 850 | | | | | | | |
| Manchette.Basic (DN 800 N) | 885 - 915 | | | | | | | |
| Manchette.Basic (DN 800 H) | 920 - 950 | | | | | | | |
| Manchette.Basic (SON 610) | 610 - 640 | | | | | | | |
| Manchette.Basic (SON630) | 630 - 660 | | | | | | | |
| Manchette.Basic (SON 650) | 650 - 680 | | | | | | | |
| Manchette.Basic (SON 685) | 685 - 715 | | | | | | | |
| Manchette.Basic (SON 730) | 730 - 760 | | | | | | | |
| Manchette.Basic (SON 750) | 750 - 780 | | | | | | | |
| Manchette.Basic (SON 800) | 800 - 830 | | | | | | | |
| Manchette.Basic (SON 820) | 820 - 850 | | | | | | | |
| Manchette.Basic (SON 845) | 845 - 875 | | | | | | | |
| Manchette.Basic (SON 860) | 860 - 890 | | | | | | | |
| Manchette.Basic (SON 900) | 900 - 930 | | | | | | | |
| Manchette.Basic (SON 920) | 920 - 950 | | | | | | | |
| Manchette.Basic (SON 945) | 945 - 975 | | | | | | | |
| Manchette.Basic (SON 970) | 970 - 999 | | | | | | | |
| Manchette.Basic (SON 1000) | 1000 - 1099 | | | | | | | |
| Manchette.Basic (DN 900 H) | 1060 - 1090 | | | | | | | |
| Manchette.Basic (SON 1100) | 1100 - 1199 | | | | | | | |
| Manchette.Basic (1165) | 1145 - 1175 | | | | | | | |
| Manchette.Basic (SON 1200) | 1200 - 1299 | | | | | | | |
| Manchette.Basic (DN 1000 H) | 1247 - 1277 | | | | | | | |

| Product naam | Spanbereik (uitwendig diameter buis) | Maten | | | | | | Hoek- verdraaiing |
|-----------------------------|--|------------|---------------------------------------|---|---|-----------------------------------|-------------------------------------|-------------------------|
| Product name | Clamping range (external diameter pipe) | Dimensions | | | | | | Angular deflection |
| Nom du produit | Plage de serrage (diamètre extérieur tuyaux) | Dimension | | | | | | Déviati on angulaire |
| Typ 2B | | breedte | dikte onder spanband | breedte shear band | dikte shear band | breedte spanband | dikte spanband | mm/m |
| | | width | thickness under tension band | width of shear band | thickness of shear band | width of tension band | thickness of tension band | |
| | | largeur | épaisseur sous la bande de tension | largeur du renfort contre le cisaillement | épaisseur du renfort contre le cisaillement | Largeur de la bande de tension | épaisseur de la bande de tension | |
| | | mm | mm | mm | mm | mm | mm | |
| Manchette.Basic (SON 1300) | 1300 - 1399 | 185 | 9,2 | 97 | 0,75 | 18,5 | 0,85 | 30 |
| Manchette.Basic (SON 1400) | 1400 - 1499 | | | | | | | |
| Manchette.Basic (DN 1200 H) | 1430 - 1470 | | | | | | | |
| Manchette.Basic (SON 1500) | 1500 - 1599 | | | | | | | |
| Manchette.Basic (SON 1600) | 1600 - 1699 | | | | | | | |
| Manchette.Basic (DN 1400 H) | 1600 - 1630 | | | | | | | |
| Manchette.Basic (SON 1700) | 1700 - 1799 | | | | | | | |
| Manchette.Basic (SON 1800) | 1800 - 1899 | | | | | | | |
| Manchette.Basic (SON 1900) | 1900 - 1999 | | | | | | | |
| Manchette.Basic (SON 2000) | 2000 - 2099 | 185 | 9,5 | 185 | 0,8 | 16 | 0,8 | 50 |
| Manchette.Pro (DN 200) | 230 - 265 | | | | | | | |
| Manchette.Pro (DN 250) | 290 - 330 | | | | | | | |
| Manchette.Pro (DN 300) | 345 - 385 | | | | | | | |

Manchet Type 2B / Flexible coupling Type 2 B / Manchette Type 2 B



Manchette.Basic



Manchette.Basic spanband vanaf DN 600 N



Manchette.Pro

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:

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