

THE Junction

with adjustable socket 0° - 11°

for lateral connections
into drainage and
sewer pipes



SEWERAGE SYSTEM

Connex[®]

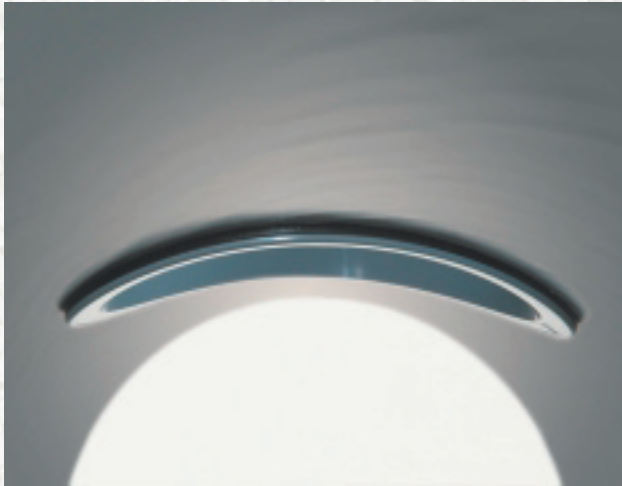
The product

Lateral connections can be quickly and simply made to the main sewer on new or existing pipes. Now the junction has an integral adjustable socket allowing movement in all direction from 0° to 11°. The CONNEX-Junction thus complies with the requirements of ATV - DVWK - A 139, according to which "Lateral pipes must be manufactured and connected so that they can allow for movement. Possible settlement and the loadings this can impose in the area of the joint must be allowed for".



The advantages

The use of the CONNEX-Junction considerably simplifies conventional working methods: Exposing a metre wide section of the main sewer for the subsequent connection of pipes is no longer necessary. The pipe bed remains untouched during the assembly work. The installing of pre-formed junctions with couplers after cutting the main sewer is also done away with. The precise, quick fitting saves time and money.



Internal view of a CONNEX DN/OD 400 sewer pipe with correctly fitted CONNEX-Junction

The alternatives

The new CONNEX-Junction comes in three versions: 200 mm bore with 200 mm socket for the DN/OD 250 to 1500 nominal diameter range, 200 mm bore with 160 mm socket for the DN/OD 400 to 1500 nominal diameter range and the smaller version 162 mm bore with 160 mm socket for the DN/OD 200 to 315 nominal diameter range.



CONNEX DN/OD 160/162 junction on HS® sewer pipe, 162 ± 1 mm bore



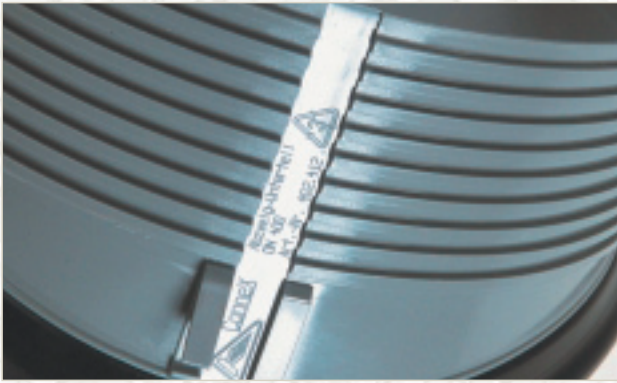
CONNEX DN/OD 160/200 junction on CONNEX sewer pipe, 200 ± 1 mm bore



CONNEX DN/OD 200/200 junction on HS® sewer pipe, 200 ± 1 mm bore

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The CONNEX-Junction with adjustable socket



The groove in the junction lower section contains details of the nominal size and also the Article No. of the complete set



The Article No. for replacement orders can be found on the spacer ring

DN/OD Main pipe	Internal Ø Main pipe mm	Pipe wall Thickness max. mm	DN/OD Junction mm	Bore ±1 mm mm	Code-No. Junction complete
200	185-191	15,0	160	162	CO201.191
250	231-242	15,0	160	162	CO253.242
300	291-306	15,0	160	162	CO302.306
400	364-380	31,8	160	200	CO403.380
400	392-412	31,8	160	200	CO404.412
500	461-513	31,8	160	200	CO502.513
600	582-607	31,8	160	200	CO602.607
700-800	665-809	31,8	160	200	CO702.809
900-1500	856-1500	31,8	160	200	CO902.1212
250	233-241	31,8	200	200	CO251.241
250	249-259	31,8	200	200	CO252.259
300	295-313	31,8	200	200	CO301.313
400	364-380	31,8	200	200	CO401.380
400	392-412	31,8	200	200	CO402.412
500	461-513	31,8	200	200	CO501.513
600	582-607	31,8	200	200	CO601.607
700-800	665-809	31,8	200	200	CO701.809
900-1500	856-1500	31,8	200	200	CO901.1212

The selection of the right CONNEX-Junction depends on the internal diameter of the main pipe. For each nominal diameter there are various possible connection pipe options. N.B.: There are several CONNEX-Junctions available for each of the nominal diameters DN/OD 250 and DN/OD 400. It is important to state the appropriate Reference No. when ordering.



The Set

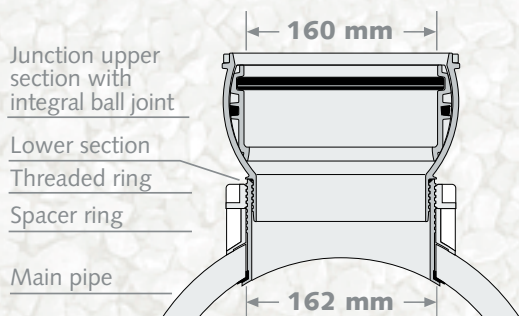
The CONNEX set consists of an upper and lower section, a spacer ring and a threaded ring. A tube of lubricant and a product information sheet with installation instructions are although supplied.

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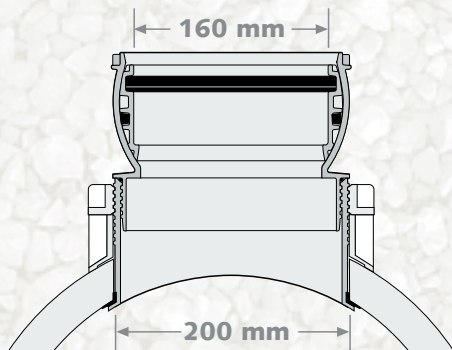
The CONNEX-Junction with adjustable socket

Technical data / Installation sequence

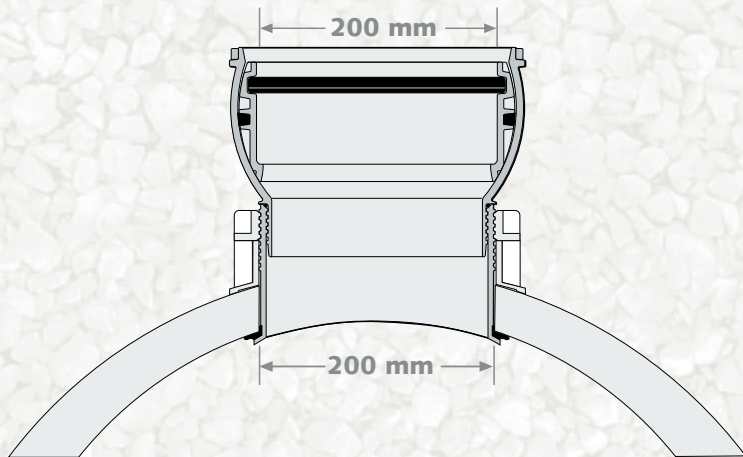
The CONNEX-Junction DN/OD 160/162



The CONNEX-Junction DN/OD 160/200

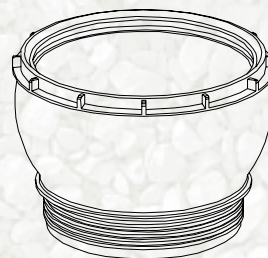


The CONNEX-Junction DN/OD 200/200



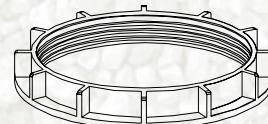
4.

Junction upper section with integral ball joint



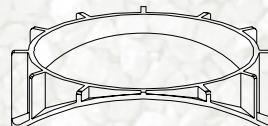
3.

Threaded ring



2.

Spacer ring



1.

Junction lower section



Main pipe



Junction nominal diameter	Ø Bore	Main pipe nominal diameter
DN/OD	mm	DN/OD
160	162 ± 1 mm	200 - 315
160	200 ± 1 mm	400 - 1500
200	200 ± 1 mm	250 - 1500



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The CONNEX-Junction with adjustable socket

Tests and test certificates



Internal view after the Hamburg flushing trials



Shear loading test – 200 kg load



Test set-up for Hamburg flushing trials



Test set-up for shear loading test

Test Certificates



DIBt Test Certificate



MPA Test Certificate



Suissetec-VSA
Test Certificate



WRC Test Certificate



INSTAL Test Certificate

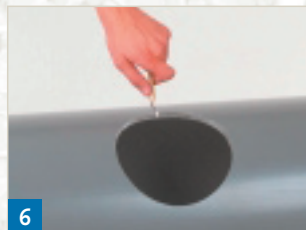
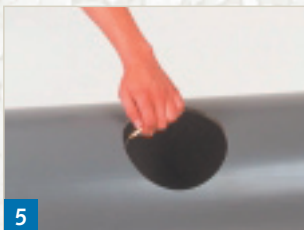
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Installation instructions CONNEX-Junction with adjustable socket

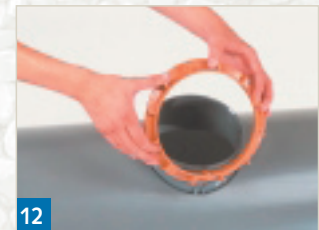
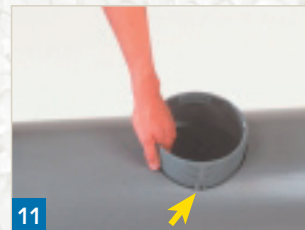
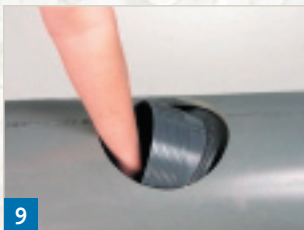
Installation lower section DN/OD 160 and DN/OD 200



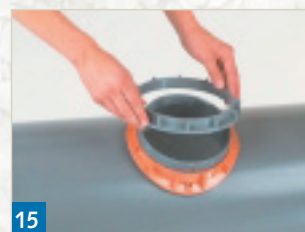
Mark position for installation point on the sewer pipe, here a CONNEX sewer pipe, using a suitable marker (1). Pre-drill the interface with an 8 mm twist drill bit (2). Fit the guide pin of the core drill into this drilled hole (3). Make the core drilling centrally at 90° to the pipe axis. Bore diameter must be 162 or 200 mm +/- 1mm. (4). **Always ensure the drilled hole is free of splintering.**



After correctly drilling the hole, deburr edges with a suitable tool inside (5) and outside (6). Push the lower section of the CONNEX-Junction into the main pipe through the drilled hole. (7 + 8 + 9). **Do not apply any lubricant to the lower seal.**



Rotate the CONNEX-Junction in the main pipe and pull upwards to fit into the pipe radius (10) until the retainer clips (see arrow) (11) fold out to secure the junction. Place the redbrown coloured spacer ring onto the guide groove of the lower section (12).

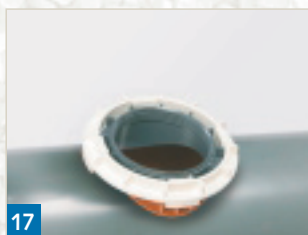


Important – Centralise the lower section in the bored hole so that a uniform annular gap is produced all round (13). Apply the lubricant to the inside of the grey threaded ring (14). Position the grey threaded ring so that it is not tilted, and can be screwed easily (15). With one hand, pull up the lower part of the junction to position it on the inside radius of the main pipe. With the other hand tighten the grey threaded ring hand tight (16).

Installation instructions CONNEX-Junction with adjustable socket

Installation lower and upper section DN/OD 160 and DN/OD 200

Installation instructions CONNEX-Junction DN/OD 160/162



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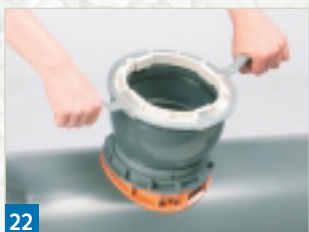
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Important: A specially developed spanner insert ensures that the spanner used previously for the threaded ring (fits DN/OD 200) can still be used for all installation variants! Fit the spanner insert (white) onto the threaded ring (17). Tighten the threaded ring firmly with the spanner (available in the range) (18). This will compress the inner seal between the lower section of the junction and the main pipe.

Check the lower section of the junction is correctly seated in the main pipe. Smear the O-ring and the thread of the upper section of the junction with the lubricant (19). Push the upper section of the junction (20) right into the lower section of the junction and turn it in without tilting it (21). Fit the spanner insert onto the upper section. Securely tighten the upper section of the junction down to the stop with the spanner (22). Check that the junction is correctly seated in the main pipe.

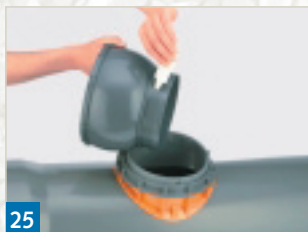
Installation instructions CONNEX-Junction DN/OD 160/200 und DN/OD 200/200



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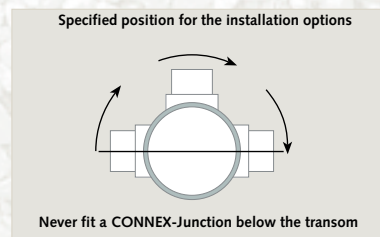
30

Tighten the threaded ring firmly with the spanner (available in the range) (23+24). This will compress the inner seal between the lower section of the junction and the main pipe. Check the lower section of the junction is correctly seated in the main pipe. Smear the O-ring and the thread of the upper section of the junction with the lubricant (25). Push the upper section of the junction (26) right into the lower section of the junction and turn it in without tilting it (27). Fit the spanner insert onto the upper section (28). Securely tighten the upper section of the junction down to the stop with the spanner (29). Check that the junction is correctly seated in the main pipe (30). **Important: Correct installation is only possible with the spanner and the spanner insert!**

Other installation tips for correct fitting: The nominal diameter, the junction type and the inside diameter, given in the guide groove of the CONNEX-Junction are to be checked before installation and compared with the inside diameter of the main pipe (31). Likewise the correct seating of the spacer ring must be checked again after fitting the lower section. **Important: The spacer ring must be firmly seated against the main pipe.**



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The CONNEX-Junction with adjustable socket now in DN/OD 160 and 200 mm

The advantages

- Designed especially for new connections
- Pipe joints can be adjusted from 0° to 11 °
- Can be connected to smaller pipes using reducers
- Complies with the requirements of ATV-DVWK-A 139
- Variable adaptation to wall thickness from 3.0 – 31.8 mm
- Ideal for pre or post construction connections
- Particularly suitable for areas prone to subsidence or increased ground movement
- Vast savings on installation due to reduced excavation
- No flow disruption to pipe as can be installed on live main
- Vast cost saving against existing junction insertion methods of sewer connections
- Variable connection to pipes with diameter DN 200 – 1500
- Pressure tested to 0.5 bar
- No disruption to pipe bedding during installation
- Easy quick installation of the lateral pipes due to the adjustable socket

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Junction-upper section DN/OD 160/162



Junction - upper section DN/OD 200/200



Junction-upper section DN/OD 160/200



Junction - lower section



CONNEX-Junction set



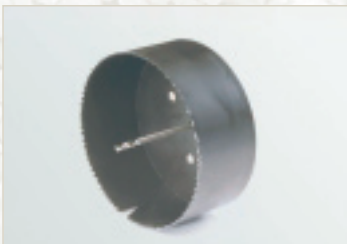
Spacer ring



GFK Core bit Ø 162 or 200 mm



Threaded screw ring



PVC Core bit Ø 162 or 200 mm



Spanner for screw ring



Lubricant



Spanner insert

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