SANTAC CAP FD

Earthquake-resistant joints for maintenance hatch

Certification No. 1641
This product has been certified and certified by the New Sewerage Technology Promotion Organization based on the Guidelines for Implementation of Construction Technology Certification Projects (Sewerage Technology).

These level 2 earthquake-resistant joints have proven outstanding earthquake resistance, water cut-off, and workability.

● Shortening of construction period

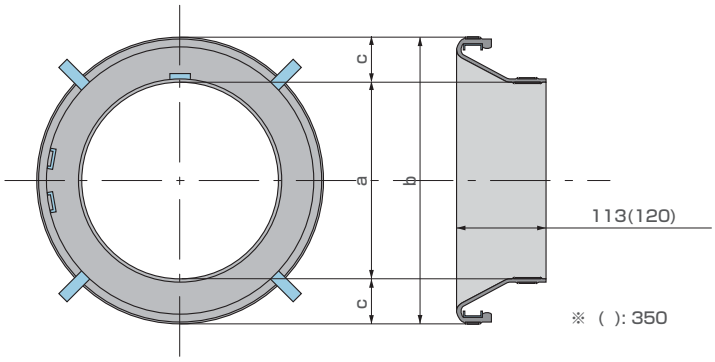
It does not require a curing time and can be immediately filled back after installation.

● This is a fumed method that does not require adhesives.

● Excellent waterproofing and earthquake resistance

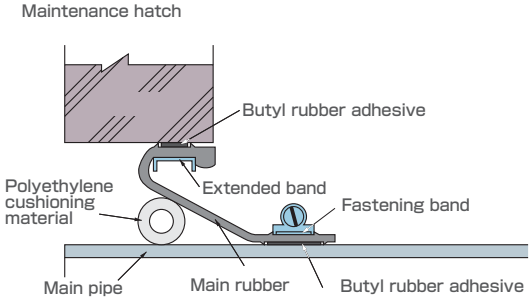
- ○ Waterproofing(External water pressure 0.1MPa / Internal water pressure0.05MPa)
- ○ Bending angle : 15°
- ○ Displacement in the direction perpendicular to the tube axis : ±20mm
- ○ Displacement in the axial direction of the tube : ±60mm
- ○ Earthquake resistance(External water pressure 0.1MPa / Internal water pressure 0.05MPa)
- ○ Bending angle of 1°and shifting in the direction of the pipe axis : ±60mm

■ Dimensions



■ Mounting cross-sectional view

(The type 2 products will be made-to-order.)



※ The specifications and appearance are subject to change without notice for product improvement.

■ Types and standard maintenance hatch drilling diameters and dimensions of each part

Application	Product Number	Standard maintenance hatch drilling diameter	Dimensions(㎜)		
			a	b	c
PVC pipe	V-100A	206㎜	118	200	41.0
	V-100B	210㎜	118	204	43.0
	V-125A	252㎜	144	246	51.0
	V-125B	262㎜	144	256	55.0
	V-125C	259㎜	144	256	55.0
	V-150A	252㎜	169	246	38.5
	V-150B	262㎜	169	256	43.5
	V-150C	259㎜	169	256	43.5
	V-200A	304㎜	220	298	39.0
	V-200B	314㎜	220	308	44.0
	V-200C	309㎜	220	298	39.0
	V-250A	356㎜	271	350	39.5
	V-250B	366㎜	271	360	44.5
	V-250C	358㎜	271	350	39.5
	V-300A	410㎜	322	404	41.0

Application	Product Number	Standard maintenance hatch drilling diameter	Dimensions(㎜)		
			a	b	c
PVC pipe	V-300B	420㎜	322	414	46.0
	V-300C	409㎜	322	404	41.1
	V-350A	455㎜	374	449	37.5
	V-350AA	464㎜	374	449	37.5
Hume pipe	H-200B	366㎜	258	360	51.0
	H-250B	420㎜	310	414	52.0
Ceramics pipe	T-200B	366㎜	253	360	53.5
	T-250B	420㎜	310	414	52.0
High ceramic pipe	S-150A	304㎜	182	298	58.0
	S-150B	314㎜	182	308	63.0
	S-150C	309㎜	182	298	58.0
	S-200A	356㎜	241	350	54.5
	S-200B	366㎜	241	360	59.5
	S-200C	358㎜	241	350	54.5

※ Tolerances for drilling diameters are standard drilling diameters +1mm and-2 mm.

■ Rubber properties

Item		Unit	Standard value	Test value	Testing method
Normal condition	Density	Mg/㎥	1.15±0.05	1.15	JIS K 6268
	Hardness	—	60±5	62	JIS K 6253
	Tensile strength	MPa	≥18	21.5	JIS K 6251
	Elongation	%	≥400	520	
Normal condition	Hardness change	—	0~7	+3	JIS K 6257 ※1
	Tensile strength change	%	≤-20	+7	
	Elongation change	%	≤-30~100	-6	

※1 Normal oven method 70±1℃ × 96 hours

■ Butler-based adhesive material properties

Item	Unit	Standard value	Test value	Testing method
Density	Mg/㎥	1.40±0.10	1.41	JIS K 6268
Penetration	—	75±15	77	JIS K 2207 ※2
Non volatility	%	≥97	99	150℃× Weight remaining ratio after 5 hours
Tensile strength	MPa	≥0.069	0.078	JIS K 6251
Elongation	%	≥1.000	1.120	

※2) 20℃ / Total weight 100g / Loading time 5 sec / Measuring stitches 1 mm

■ Installation Procedure

1

Confirm whether the bore is standard.
If the standard is set, use (blue) for the appropriate stopper.

2

Clean the drilled section with a cloth.
Repair smooth surfaces for cracks, chipping, or shortage.

3

With the expansion device insertion slot on the left side, push in until the misalignment prevention bracket touches the maintenance hatch outer wall without any gap.

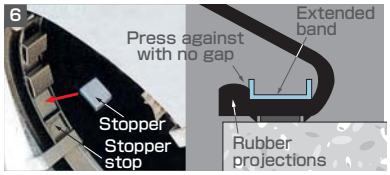
4

Peel off so that the protective film on the drilled cross section side is not left from the inside of the cylindrical part.

5

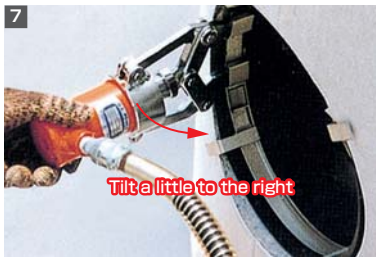
Turn the cylinder over and push it into the maintenance hatch.

6



Firmly press the projection of the body rubber against the expansion band to position the expansion band.Then set the appropriate stopper to the stopper stop.

7



Insert the expansion jig into the jig insertion slot and tilt it slightly to the right toward the drilling center.
Doing so will make it difficult for the anti-slip bracket to float.

8

Operate the hydraulic pump and expand it while observing the hydraulic gauge until the stopper enters.(※)
When the stopper is turned on, release the oil pressure and remove the jig.

9

Replace the inverted cylinder and attach the fastening band.
(The above is the work of the factory.)

10

After inserting and positioning the pipe, remove the protective film.
(From here on, this is the work at the site.)

11

Tighten the fastening band with a flat-blade screwdriver until it does not turn.

12

Tighten the fastening band with a flat-blade screwdriver until it does not turn.

13

When the position is determined, attach a polyethylene cushioning material from the inside of the maintenance hatch and fix it with shrimp, etc.

14

To prevent deformation of the pipe mouth, fill the lateral clearance with quick-setting cement at least 5cm.Also, insert a support bar until finishing work.

※ If the hydraulic pressure drops below 7Mpa, insert a larger stopper.
(If the red stop does not rise to 7Mpa, the bore size is too large.)

PVC pipe is a flexible pipe, so the pipe opening may be transformed by soil pressure.
This is because there is a gap between the maintenance hatch drilling diameter and the PVC pipe in the lateral direction, and this should be remedied before backfilling.

Precautions

Plant

● If you expand too far, be aware of product failures and safety issues. (Do not increase the hydraulic pressure above 12 Mpa.)

Site

● Secure the pipe with crushed stone sacs to prevent the pipe from sinking. Use protective equipment (gloves, etc.) to ensure safety.

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2020.12.03.SKD