WiSecure™ W801
(For embedding)

A specially designed seal for use in embeds in concrete walls and concrete floors. It is engineered to perform reliably under both high and low water pressure.

Characteristics
Movement Friendly: Allows axial movement at the embedment point, which accommodates structural shifts or movements.
Flexible adjustment: The seal can be adjusted accordingly molding, which ensures a precise and secure fit.
Flexible installation: Suitable for mounting on both the inside and outside of concrete walls, as needed.

Application
Ideal for ensuring watertightness in concrete structures, as walls and floors at the same time as it provides it necessary flexibility for long-term structural movements.

Compatibility: The seal can be used for all types of pipe materials, such as plastic, steel, concrete, cast iron, etc., and enables significant axial movements on pipes with smooth surfaces.

Functionality
Effective sealing: The specially designed profile of the rubber ring ensures an effective seal between the pipe and the concrete.
Lubrication for movement and tightness: A cavity in the larger ring is filled with grease, which makes axial movements easy and prevents water from penetrating any scratches on the tube.
Tension ring pressure: The pressure from the tension ring gets the seal to expand, which simultaneously increases the pressure against the surrounding concrete and forces the grease out through groove of the seal for additional tightness.

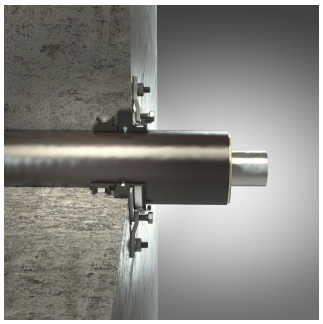
Benefits
This construction not only ensures a watertight seal, but also provides flexibility and durability in specific applications with moving pipes and unevenness on the surface.

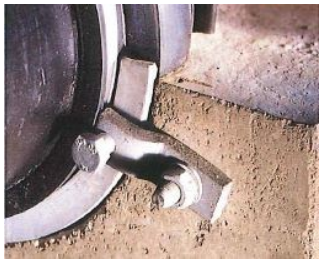
Material properties and specifications
The sealing ring is made of EPDM rubber with a hardness of 40°± 5° IRHD. The material meets the requirements of the European standard **EN 681-1**, table 2.
The seal has excellent durability against alkaline impact after embedding in concrete. **Straps** are supplied as standard in acid-resistant steel (W5, AISI 316),
Tension ring and tension dogs in hot-dip galvanized steel (S235). **Expansion bolts** in hot-dip galvanized steel and grease in polyalkylene glycol.

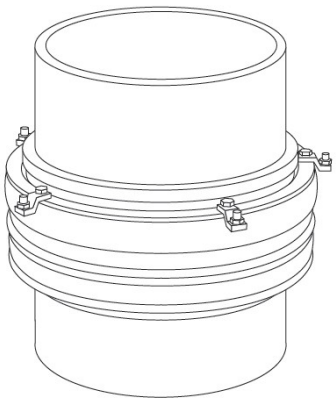
Temperature range:
Maximum continuous working temperature of the rubber material is +45°C. The seal can withstand a short time exposure up to +95°C.

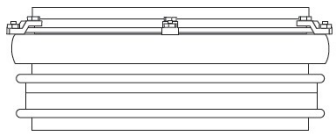
Watertight
Up to 0.74 bar at small axial movement (<5 mm) and 0.2 bar for greater axial movement. Internal tests show, that the seal can handle 2.5 bar internal and external water pressure.

Test result
The seals in the W800-systems have succesfully passed the function sealing test at **Studsvik AB, Sweden and Fernvärme-Forschungsinstitut in Hannover, Germany.**









Axial movement

From 110 mm and upwards

All types of pipes

Temperature range

Smart auto lubrication

Tested by FFI Institute

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Mounting instruction W801

1. Make a round hole in the inner mould wall for the grease groove sealing flange. The hole in the outer mould wall should be a little larger than the pipe's diameter.

2. Mount both the rubber rings on the pipe. Turn the grease groove inside-out and fill with grease. Turn the ring to its original position and mount both rings next to each other. Press the rings against the inner wall (the larger ring clamping flange will go through the wall), tighten the hose clips so that good contact is achieved with the pipe. Should the pipe be exposed to axial movement, the part of the not covered by the rubber rings should be protected with, for example, tar paper. This is to avoid direct contact with the pipe during casting.

3. Reinforce and cast the concrete wall. Vibrate the concrete to ensure a good connection against the rubber rings.

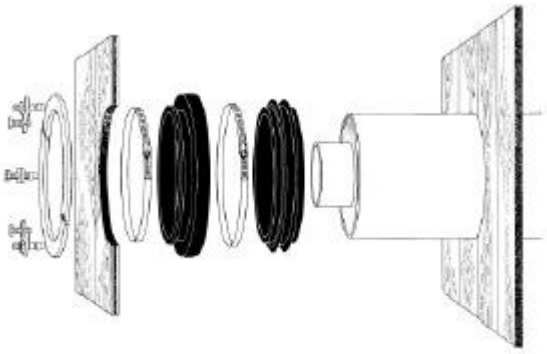
4. After removing the mould walls drill holes in the wall for the clamping bolts. Use a clamping dog as a jig. Position the end tension dogs max. 50 mm from the open end of the tension rings. Position the remaining clamping dogs evenly around the pipe.

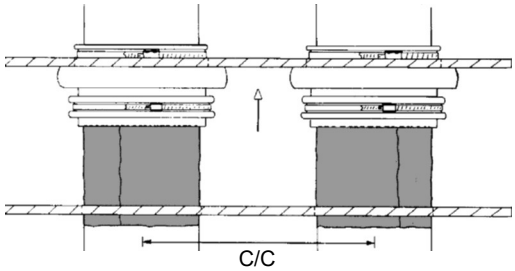
5. Mount the tension rings and the tension dogs. Adjust the tension ring so that it presses against the rubber rings only and not against the wall. Tighten the tension dogs so that the grease-groove sealing is pressed against the concrete wall. Check that the outer hose ring clip i tightened.

The number of tension dogs required for the pipes:

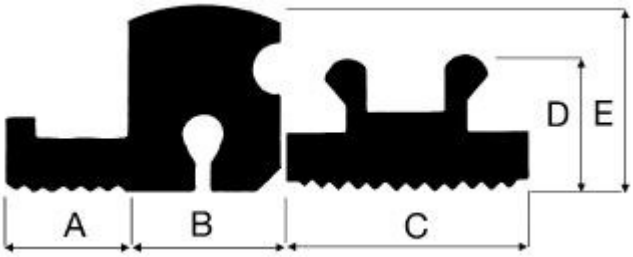
110-315 mm….. 8 units
355-560 mm….. 10 units
630-710 mm….. 12 units
800-1000 mm… 16 units

W801 - seal can be partly dismantled and adjusted after casting. Please contact us for alternative suggestions for mounting.





Grease-groove seal W801 sealing ring



Dim.	A	B	C	D	E
110-180	26	25	40	22	37
200-1000	26	31	50	27	44

All dimensions in mm

Dimensions in mm / item no.

Pipe OD mm	Min c/c mm	Item no.	Pipe OD mm	Min c/c mm	Item no.	Pipe OD mm	Min c/c mm	Item no.
110	300	238-10110	250	400	238-10250	560	810	238-10560
125	350	238-10125	280	430	238-10280	630	880	238-10630
140	350	238-10140	315	465	238-10315	710	960	238-10710
160	350	238-10160	355	505	238-10355	800	1100	238-10800
180	350	238-10180	400	600	238-10400	900	1200	238-10900
200	350	238-10200	450	650	238-10450	1000	1300	238-11000
225	375	238-10225	500	700	238-10500			

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WiSecure™ W802
(For embedding)

W802 is used for water and/or radon sealing at embedments in concrete walls and floors

Characteristics

The unique profile of the ring, together with the hose clip provides an effective seal between the pipe and the concrete. This effective sealing is partly due to the ability of the hose clip to hold the rubber ring in close contact to the pipe during the concreting process. The flanges of the ring are effectively fastened in the concrete during the setting process.

Application

The W802 seal can be advantageously used where a pipe is not subjected to great axial movement. Where excessive axial movement is present we recommend our sealing rings W801, W803 or W804.

Compatibility:

The seal is suitable for all types of piping, e.g. plastic, steel, cast iron, concrete etc., and is fitted onto the pipe for complete embedment. In some cases the ring can be used on corrugated plastic pipes.

Functionality

A strong seal against water and radon: W802 is one of the most effective barriers against water and ground radon gas at embedments in concrete walls and floors

Advantage

The construction of the W802 ensures a water- and radon-tight seal by complete embedment.

Material properties and specifications

The sealing ring is made of EPDM-rubber with a hardness of 40° ± 5° IRHD. The materiale satifies the demands in the European standard **EN 681-1**.
W802 seal have a very good durability against alkaline grow after embedment in concrete
Hose clip is supplied as a standard component in aluzinc.

Working temperature

The maximum continuos working temperature for rubber material is +45°C. The seal can shortly be exposed to a temperature of +95°C.

Watertight

Tests show that the application can handle 0,4 bar water pressure at standstill and 0,1 bar at axial movement (≤ 4 mm). Renewed testers performed by SP 2014 confirm that the application is completely air and radon tight.

Test result

The seals in the W800 systems have successfully passed the functional seal test at: **Studsvik AB, Sverige** og **Fernvärme-Forschungs-Institut i Hannover**, **Tyskland**. In an official report, the Swedish Institute for Testing and Research has approved the W802´s ability to prevent radon gas.

Protects against water & radon

From 16 mm and upwards

All types of pipes

Temperature range

Testet af FFI Tyskland

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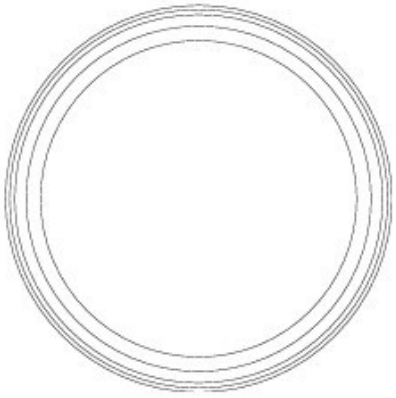
Mounting instructions W802

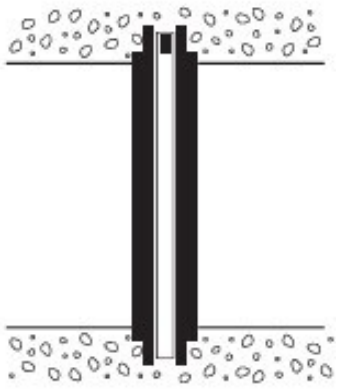
1. Mount the sealing ring and the hose clip onto the pipe.

2. Tighten all hose clips so that the ring cannot be moved axially or radially on the pipe and so that good contact is achieved between the pipe and the rubber ring around the entire circumference of the pipe.
   The effective sealing quality of the W802 is partly due to the ability of the hose clip to hold the ring close to the pipe during the concreting process.

3. Ensure that the ring is completely covered by concrete. This applies especially where a pipe is angled in a concrete floor, e.g. radon sealing of drains. In such cases it would be better to fit the ring onto the drain itself.

4. Vibrate the concrete so that it becomes a good connection to the rubber ring.





Placement of W802 in concrete floor and wall

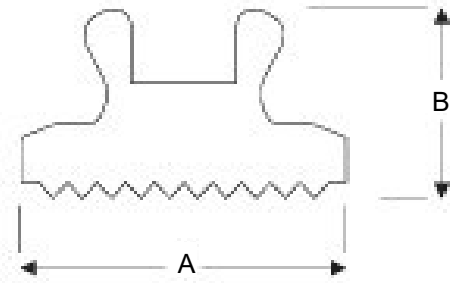
If the seal needs to be pushed along the pipe a greasing agent can be used or the ring can be ”rolled” along the pipe.

When fitting in other types of hole (e.g. rectangular) there should be a space around the ring of at least 20 mm.

If a hole is drilled in a concrete wall in preparation for embedment of a pipe/sealing ring we recommend the following minimum drill holes:

Pipe dimension	Hole dimension
16 - 32	Pipe dimension + 80 mm
40 - 180	Pipe dimension + 100 mm
≥ 200	Pipe dimension + 120 mm

Dimensions in mm



Dim.	A	B
16 - 180	40	22
200-1000	50	27

Dimensions in mm

Dimensions in mm / item no.									
Pipe OD mm	**Item no.**	**Pipe OD mm**	**Item no.**	**Pipe OD mm**	**Item no.**	**Pipe OD mm**	**Item no.**	**Pipe OD mm**	**Item no.**
16 - 18	238-20016	75	238-20075	175	238-20175	355	238-20355	800	238-20800
22 - 25	238-20022	90	238-20090	180	238-20180	400	238-20400	900	238-20900
28 - 32	238-20028	110	238-20110	200	238-20200	450	238-20450	1000	238-21000
34	238-20034	125	238-20125	225	238-20225	500	238-20500	1500	238-21500
40	238-20040	132	238-20132	250	238-20250	560	238-20560	2000	238-22000
50	238-20050	140	238-20140	280	238-20280	630	238-20630		
63	238-20063	160	238-20160	315	238-20315	710	238-20710		

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WiSecure™ W803
(For retro-fitting)

W803 building entry repair seal is intended for sealing when leakage occurs between the pipe and wall/floor of an embedded pipe. The special profile of the rubber ring creates an effective seal between the pipe and the concrete.

Characteteristics
Movement friendly: Allows axial movement at the point of embedment, accommodating structural shifts or movements.
Flexible adjustment: The seal can be adjusted after embedment, ensuring a precise and secure fit.
Flexible installation: Suitable for installation on both the inside and outside of concrete walls, as required.

Application
Ideal for ensuring watertightness in concrete structures, such as walls and floors, while providing the necessary flexibility for long-term structural movements.

Compatibility: The seal can be used with all types of pipe materials, such as plastic, steel, concrete, cast iron, etc., and allows significant axial movements on pipes with smooth surfaces.

Functionality
Effective sealing: Lubrication for movement and tightness: A cavity in the larger ring is filled with grease, which makes axial movements easy and prevents water from penetrating through any scratches on the pipe.
Tension ring pressure: The pressure from the tension ring gets the seal to expand, which at the same time increases the pressure against the surrounding concrete and forces the grease out through the seal groove for additional tightness.

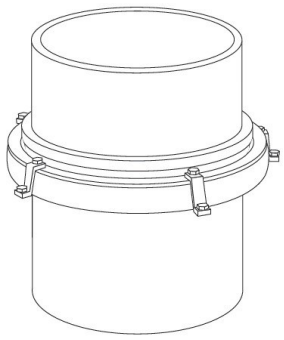
Benefits
This construction not only ensures a watertight seal, but also provides flexibility and durability in specific applications with moving pipes and unevenness on the surface.

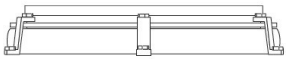
Material properties and specifications
The sealing is made of EPDM rubber with a hardness of 40° ± 5° IRHD. The material meets the requirements of the European standard **EN 681-1**, table 2. The seal has excellent durability against alkaline effects after embedding in concrete.
The tension ring is supplied as standard in acid-resistant steel (W5, AISI 316), the tension ring and tension dogs in hot-dip galvanized steel (S235). Expansion bolts in hot-dip galvanized steel and grease in polyalkylene glycol.

Temperature range
Maximum continuous working temperature is +45°C. The seal can withstand short-term exposure up to +95°C.

Watertight
Up to 0.74 bar at small axial movement (<5 mm) and 0.2 bar for greater axial movement. Internal tests show, that the seal can handle 2.5 bar internal and external water pressure.

Test resultat
The seals in the W800-systems have succesfully passed the function sealing test at **Studsvik AB, Sweden and Fernvärme-Forschungsinstitut in Hannover, Germany**.





Axial movement

From 110 mm and upwards

All types of pipes

Temperature range

Smart auto lubrication

Tested by FFI Institute

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Mounting instruction W803

1. Check that the space between the pipe and wall does not exceed **10 mm** and also ensure that the pipe which is inserted in the wall is at least 80 mm.

2. Carefully clean the concrete fo at least 50 mm around the hole. The concrete should be smooth and even and the hole should be free of any residue, The pipe should also be clean where the seal is to be fitted.

3. Cut the ring just before fitting. Use a sharp knife which has been dipped in water. Before gluing read the instructions below as well as the instructions on the tube of glue. Then place the rubber ring around a part of the pipe which is of a smaller diameter. If this is not possible, straddle the pipe and stretch the rubber ring so that the ends can be glued together. The recommended temperature when gluing is a minimum of +7 °C. Before gluing, carefully check that the ring is in the correct position. The surface which is to be glued must be clean and free of grease. Spread the glue evenly on only one of the edges. Press the edges together andhold them press for appr. 30 seconds. Please note that the glue sticks immidiately. It is not possible to make further adjustments later.

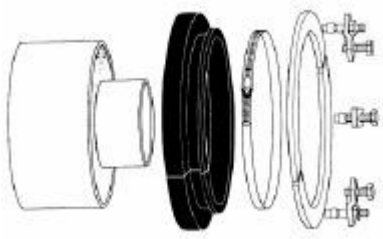
4. Fit the rubber ring onto the pipe. Turn the ring inside out and fill the groove with the special grease provided. The rest of the sealing compound can be used to fill the space between the pipe and the concrete wall.

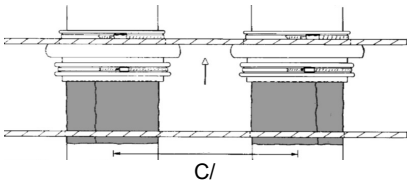
5. Turn the sealing ring back to its original position. Press the sealing ring against the concrete wall and fit the tension clip. Tighten the tension clip so that the sealing ring comes into close contact with the pipe. Bore holes in the wall for tension dogs' expanding bolts. Use a tension dog as a jig. **Place the end tension dogs at least 50 mm from the open ends of the tension rings.** Position the rest of the tension dogs evenly around the pipe.

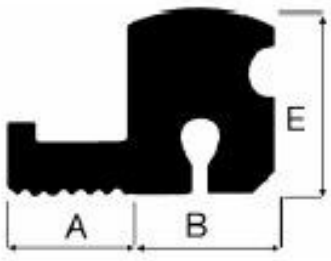
The number of tension dogs required for the pipes:

110-315 mm….. 8 units
355-560 mm….. 10 units
630-710 mm….. 12 units
800-1000 mm… 16 units

6. Mount the tension rings and tension dogs.
Adjust, if necessary, the tension ring so that it has good contact with the rubber ring. Please note that the tension ring should not come into contact with the concrete wall. Press the tension ring behind the screw holder of the hose dip. Tighten the tension dogs so that the seal is pressed against the wall making the unit watertight. Adjust and tighten the hose clip. Make further adjustments of the tension dogs and hose clip if necessary.







Dim.	A	B	E
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200-1000	26	31	44

All dimensions in mm

Dimensions in mm /item no.

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180	350	238-30180	400	600	238-30400	900	1200	238-30900
200	350	238-30200	450	650	238-30450	1000	1300	238-31000
225	375	238-30225	500	700	238-30500			

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