

Integrated Seals for Concrete Applications

SECIL integrated sealing for gravity and low pressure concrete pipes and manholes. The sealing ring is cast-in and becomes a part of the pipe socket.
SECIL Integrated seal is in accordance with the requirements of TSE and EN 681-1 / DIN 4060 – seals made of EPDM rubber.
SECIL connection for concrete pipes and reinforced concrete pipes according to DIN EN 1916 and DIN EN 1917, whereby the seal is firmly embedded in the socket during manufacture of the pipe.

Company

SECIL's highly automated factory in Turkey and Belarus produce thousands of different seals every year, with a high level of quality management for different sectors. We have know-how regarding rubber mixing, moulding, machinery, rubber extrusion, and injection. Experience on different production processes like covered seals, mono, co-ex, tri-ex, with cord, metal insert or many others.

Seal Quality & Performance

SECIL quality controls from incoming raw materials to finished products are made by specialists independent of the production process of Secil. Tests are also made by third part controlling company upon demand. This double quality control guarantees a constant quality of all **SECIL** products.

Integrated Sealings

Seals for Concrete Applications

Material

- **EPDM** rubber mixing is our main strength.
- SBR, NBR or different material are available on inquiry.
- In all cases, we use compound from our own mixing facilities.
- Ready **EPDM** compound 40-50-60-70 IRHD according to TSE and EN 681-1
- Other standards are available on request.
- **EPDM** is the most popular material protected against ozone and high chemical resistance.
- Oil resistant grades are available on request.

Seal Packing & Marking

- Different packing possibilities prepared on our customer needs.
- Secil seals are marked with seal dimension and the date of manufacture.
- The box is labelled with the corresponding data.

CERTIFICATIONS

SECIL KAUCUK extensively involved with standardization committees and collaboration with leading testing institutes and authorities around the world. **SECIL KAUCUK** is also a customer-driven company. If customers require certificates that demonstrate compliance with various standards **SECIL KAUCUK** will apply for the certification process at the competent institutions.



Example of authorities **Seçil Kauçuk** cooperating with



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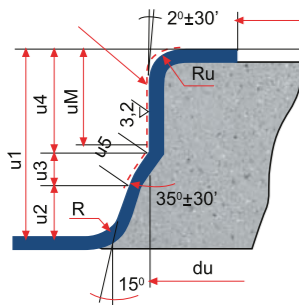
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Pipe requirements for high performance of SECIL Integrated Seal

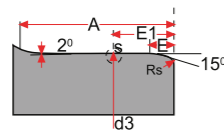
(All dimensions in mm)

Concrete pipes and reinforced concrete pipes must comply with the requirements of DIN EN 1916.

Socket end dimensions

DN	U1	U2	U3	U4 -0/+0,5	U5 min	Ru	du 4032 4035	Tolerance du
150	60	16,6	10,9	32,5	13	10	199,4 213,4	-0/+0,5
200	-	-	-	-	-	-	257,4 263,4	-
250	80	22,6	13,9	43,5	16	13	315,6 341,6	-0/+0,5
300	-	-	-	-	-	-	377,6 395,6	-
400	85	20	16	49	18	13	486,2 495,5	-0/+0,5
500	90	25	-	-	-	-	600,2	-
600	-	-	-	-	-	-	716,2	-
700	100	22,6	23	54,4	26	15	831,4	-0,4/+0,8
800	-	-	-	-	-	-	949,4	-
900	-	-	-	-	-	-	1067,4	-
1000	-	-	-	-	-	-	1185,4	-
1100	-	-	-	-	-	-	1303,4	-
1200	-	-	-	-	-	-	1421,4	-
1300	125	30	28	67	32	17	1536,6	-0,7/+0,7
1400	-	-	-	-	-	-	1654,6	-
1500	-	-	-	-	-	-	1772,6	-
1600/2000	145	30	35	80	41	19	d3+2w-2dr	-0,8/+0,8

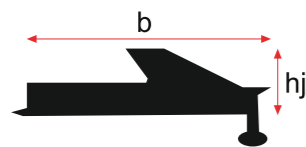
Spigot end dimensions



Recommended sealing ring deformation is 30% to 40%. Extreme sealing ring deformation due to concrete tolerances 26,5% to 43,5%. With milled spigot ends recommended deformation is equal to extreme tolerance value.

DN	E	Rs	Isp	E1	dsp 4032 4035	Tolerance dsp recom. (extreme value)
150	12,5	8	65	28	206 220	-0,5/+1,0 (-1,2/+1,7)
200	-	-	-	-	264 270	-
250	17	13	85	39	324 350	-0,7/+1,2 (-1,5/+2,0)
300	-	-	-	-	386 404	-
400	20	13	90	43	496 505,3	-0,9/+1,4 (-1,9/+2,4)
500	-	-	95	-	610	-
600	-	-	-	-	726	-
700	20	15	105	47	844	-1,0/+1,4 (-2,2/+2,6)
800	-	-	-	-	962	-
900	-	-	-	-	1080	-
1000	-	-	-	-	1198	-
1100	-	-	-	-	1316	-
1200	-	-	-	-	1434	-
1300	25	16	130	58	1552	-1,5/+1,5 (-3,0/+3,0)
1400	-	-	-	-	1670	-
1500	-	-	-	-	1788	-
1600/2000	30	18	150	69	variable	-1,8/+1,8 (-3,6/+3,6)

PS Seal



DN	profile type	hj	b
225 - 300	PS Seal	12	29,9
400 - 1000	PS Seal	14	33,8
500 - 1000	PS Seal	18	43,4
1000 - 1500	PS Seal	22	53,0
1500 - 2000	PS Seal	26	62,4



Integrated Seal Requirements

SECIL work closely together with pipe producers for their needs of correct concrete pipe seals or manhole seals. We have know-how regarding pipe production and seal assembly. We can also provide technical support to our customers with sales support in different languages in a big range of different countries. SECIL Integrated seal can be easily connected with the pipe or manhole. It is mounted on the base ring and is anchored during manufacture of the pipe in the pipe socket. After removal of the base ring the SECIL Integrated socket is ready for installation.

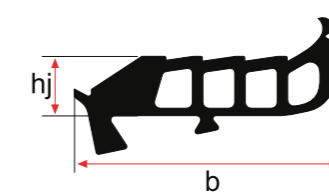
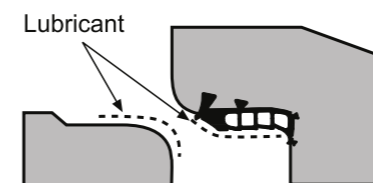


Producing Pipes with Secil Integrated Seals and Secil Integrated Seal Dimensions



SECIL Integrated seal stretch on the cleaned and lightly oiled base ring. Ensure correct seating and even pre-stretching of the sealing ring. Before vibrating ensure that the socket is completely filled with concrete. Then produce concrete pipe in normal manner.

After removal of the pipe mould, place inner and outer supporting rings on the spigot end and leave them there until concrete has cured. Pull base ring centrally, remove supporting rings.



SECIL Integrated seal pipe connections can be installed without any problems using normal construction site equipment. Cover thoroughly the spigot end with SECIL lubricant. The additional use of lubricant on the seal is recommended as this reduces the mounting forces. Move spigot end centrally into socket and pull pipes together.



DN	profile type	hj	b
150 - 200	SECIL 10	10	46,51
250 - 300	SECIL 12	12	62,80
400 - 600	SECIL 14	14	70,75
700 - 1200	SECIL 18	18	80,90
1300 - 1500	SECIL 22	22	102,25
1600 - 2600	SECIL 26	26	122,26

* Values and properties shown in diagrams and tables are not subject to any guarantees. Our warranty is limited to the values and properties as required by the relevant standards.
* Our literature, data sheets and recommendations represent our knowledge at the time of printing but are in no way legally binding on us. Our "General Conditions of Sale" apply to all sales.

