

Delivery Range

Skolan dB

Soundproof Pipe System



ORIGINAL Skolan dB





Skolan dB

Silence is an important essential of human living. Only seldom we experience true silence in our surroundings. It is precisely this pleasant quietness which distinguishes the Skolan dB discharge system from others.

Benefits and Advantages of the System

- WALL THICKNESS = QUIETNESS
= COMFORTABLE LIVING
- 20 DB (A) ACC. TO DIN EN 14366
FULFILLS THE REQUIREMENTS OF
INCREASED SOUND INSULATION
RESP. VDI SOUND INSULATION LEVEL III
- CORROSION RESISTANT
- EASY TO INSTALL
- INSTALLATION WITH USUAL STANDARD
PIPE CLAMP
- FULL WALL TECHNOLOGY, HOMOGENOUS
WALL CONSTRUCTION
- PULL-OUT PROTECTION FOR HIGH
REQUIREMENTS IN THE AREAS OF PRESSURE
AND NEGATIVE PRESSURE (RAIN DOWN
PIPES / LIFTING SYSTEMS)
- FULFILLS ECONOMIC AND
ECOLOGICAL CRITERIA
- CAN BE USED IN ALL FIELDS OF
BUILDING CONSTRUCTION
- EXCELLENT MECHANICAL AND
ACOUSTIC PROPERTIES
- EXTREME SOUND INSULATION
- PREVENTION OF SOUND TRANSMISSION
- AIRBORNE SOUND IS REDUCED
BY HIGH BASIS WEIGHT
- SAME WALL THICKNESS OF PIPES
AND FITTINGS

Quality without compromise

Material Properties Skolan dB

Soundproof Pipes and Fittings

Commercial Name

Skolan dB

Material

mineral-reinforced polypropylene (PP)
normal inflammability as per DIN 4102 B2

Production

DiBT approval Z-42.1-217

Application

Sound proof pipe system
Drainage within the building structure
until the transfer chamber
- waste water pipe
- rain water pipe
- ventilation pipe
(see also areas of application: DIN 1986-4)

Nominal diameters DN(OD)

58 / 78 / 90 / 110 / 135 / 160 / 200

Colour

Light grey RAL 7035

Seal

Factory inlaid SBR lip seal acc. to DIN 681

Chemical Resistance

Discharge of aggressive media in the range of pH2 – pH12
see also www.ostendorf-kunststoffe.com

Marking

Pipes and Fittings
Permanent marking with manufacturer label, Skolan dB, nominal diameter, approval Z-42.1-217, date of manufacture, material, building material class (fire behaviour)
(Fittings additionally bear information about the nominal angle.)

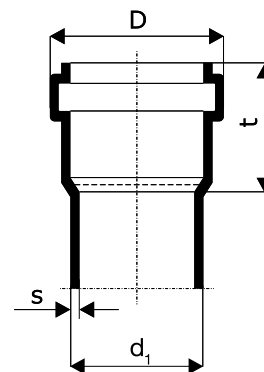
Sound insulation

Measured value: 20 dB (A)
Sound insulation test acc. to DIN EN 14366 (Fraunhofer Institut)

Central vacuum cleaning system

Test certificate by MPA Darmstadt

„Trust is good,
Skolan dB by
Ostendorf is better.“



DN(OD)	s [mm]	D [mm]	t [mm]
58	4,0	76	55
78	4,5	97	61
90	4,5	110	55
110	5,3	132	76
135	5,3	160	61
160	5,3	188	95
200	6,2	234	123

Increased Living Comfort with increased Sound Insulation



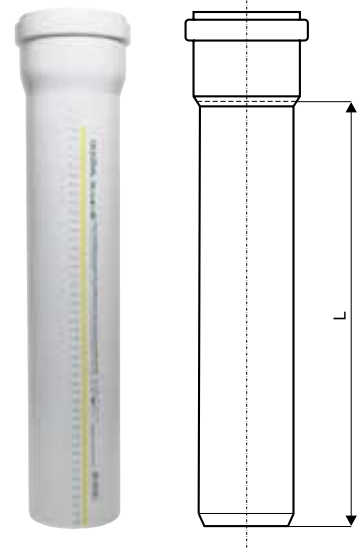
PRODUCT RANGE

SKOLAN DB

Skolan – Pipe

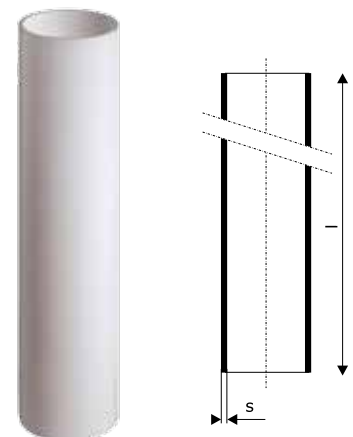
SKEM – Single socket pipe (push-fit)

	No.	DN(OD)	L [mm]	Unit
	332000	58	150	4/660
	332010	58	250	4/440
	332020	58	500	4/220
	332040	58	1000	1/114
	332060	58	2000	1/114
NEW!	332070	58	3000	1/114
	333300	78	150	4/360
	333010	78	250	4/240
	333020	78	500	4/152
	333040	78	1000	1/70
	333060	78	2000	1/70
NEW!	333070	78	3000	1/70
	334000	90	150	4/224
	334010	90	250	4/168
	334020	90	500	4/100
	334040	90	1000	1/60
	334060	90	2000	1/60
NEW!	334070	90	3000	1/60
	335000	110	150	4/180
	335010	110	250	4/120
	335020	110	500	2/78
	335040	110	1000	1/40
	335060	110	2000	1/40
NEW!	335070	110	3000	1/40
	336000	135	150	1/120
	336010	135	250	1/96
	336020	135	500	1/48
	336040	135	1000	1/24
	336060	135	2000	1/24
NEW!	336070	135	3000	1/24
	337000	160	150	1/84
	337010	160	250	1/48
	337020	160	500	1/35
	337040	160	1000	1/21
	337060	160	2000	1/21
NEW!	337070	160	3000	1/21
	338000	200	150	1/45
	338010	200	250	1/30
	338020	200	500	1/20
	338040	200	1000	1/15
	338060	200	2000	1/15
NEW!	338070	200	3000	1/15



SKGL – Plain ended pipe

No.	DN(OD)	s [mm]	l [mm]	Unit
332080	58	4,0	3000	1/114
333080	78	4,5	3000	1/70
334065	90	4,5	2000	1/60
334080	90	4,5	3000	1/60
335080	110	5,3	3000	1/40
336080	135	5,3	3000	1/24
337080	160	5,3	3000	1/21
338080	200	6,2	3000	1/15



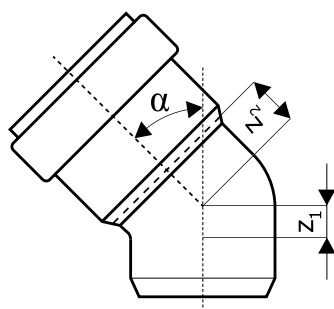
Skolan – Fitting

SKB – Bend 15°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	Unit
332100	58	15°	6	8	4/1000
333100	78	15°	7	11	4/600
334100	90	15°	6	12,5	4/500
335100	110	15°	9	16	4/300
336100	135	15°	10	16	4/180
337100	160	15°	23	22	4/100
338100	200	15°	15	31	1/40

SKB – Bend 30°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	Unit
332110	58	30°	10	15	4/1000
333110	78	30°	12	15	4/600
334110	90	30°	13	18,5	4/480
335110	110	30°	17	21	4/300
336110	135	30°	20	24,5	4/160
337110	160	30°	24	34	4/100
338110	200	30°	29	46	1/40



SKB – Bend 45°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	Unit
332120	58	45°	14	16	4/1000
333120	78	45°	18	31	4/520
334120	90	45°	20	25,5	4/400
335120	110	45°	25	29	4/240
336120	135	45°	30	34	4/140
337120	160	45°	37	45	4/60
338120	200	45°	46	57	1/38

Unit changed



SKB – Bend 67°

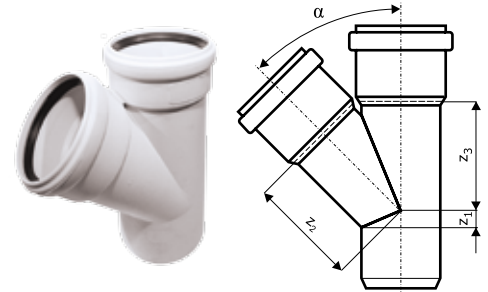
No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	Unit
332130	58	67°	23	21	4/880
333130	78	67°	28	31	4/500
335130	110	67°	40	44	4/200

SKB – Bend 87°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	Unit
332140	58	87°	32	35	4/880
333140	78	87°	40	43	4/480
334140	90	87°	46	49,4	4/320
335140	110	87°	57	61	4/220
336140	135	87°	69	71	4/96
337140	160	87°	84	91	2/60

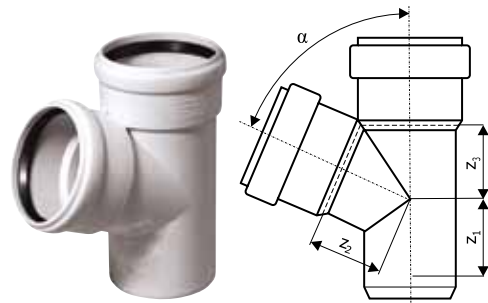
SKEA – Branch 45°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	Unit
332200	58/58	45°	13	74	74	4/440
333210	78/58	45°	3	88	85	4/320
333200	78/78	45°	20	98	98	4/260
334220	90/58	45°	3	97	84	4/264
334210	90/78	45°	12	105	103	4/216
334200	90/90	45°	20	110	110	4/180
335220	110/58	45°	17	108	95	4/180
335210	110/78	45°	6	122	115	4/140
335200	110/110	45°	25	136	136	4/100
336210	135/110	45°	11	155	152	2/70
336200	135/135	45°	49	169	169	2/56
337210	160/110	45°	2	168	162	2/46
337200	160/160	45°	37	195	195	2/28
338210	200/160	45°	19	221	218	1/20
338200	200/200	45°	46	244	244	1/15



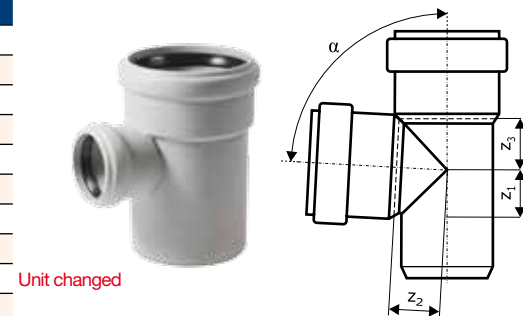
SKEA – Branch 67°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	Unit
332300	58/58	67°	22	45	45	4/500
333310	78/58	67°	18	55	51	4/360
333300	78/78	67°	29	61	61	4/280
335320	110/58	67°	21	73	57	4/180
335310	110/78	67°	22	81	67	4/140
335300	110/110	67°	40	84	84	4/120



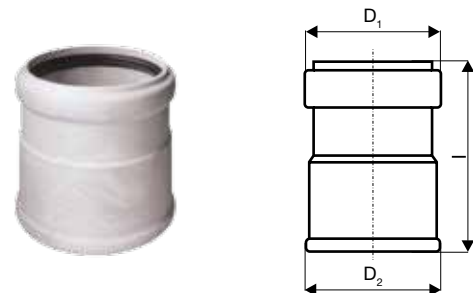
SKEA – Branch 87°

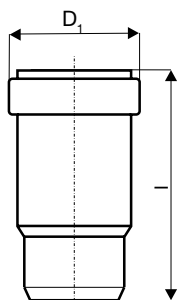
No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	Unit
332400	58/58	87°	33	34	34	4/500
333410	78/58	87°	32	43	32	4/360
333400	78/78	87°	40	43	43	4/320
334420	90/58	87°	32	48	31	4/320
334410	90/78	87°	43	49	40	4/240
334400	90/90	87°	56	70	51	4/160
335420	110/58	87°	28	60	32	4/200
335410	110/78	87°	40	60	45	4/160
335400	110/110	87°	57	59	59	4/112
336410	135/110	87°	70	73	72	4/80
336400	135/135	87°	70	72	72	2/80
NEW! 337410	160/110	87°	55	68	85	2/46
NEW! 337400	160/160	87°	81	91	91	2/32



SKAM – Single socket

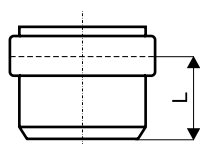
No.	DN(OD)	D_1 [mm]	D_2 [mm]	l [mm]	Unit
332810	58	76	79	120	4/860
333810	78	97	100	120	4/640
334810	90	110	110	120	4/416
335810	110	132	132	123	4/300
336810	135	160	159	142	4/160
337810	160	188	184	143	4/120
338810	200	239	225	229	1/45





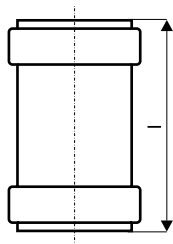
SKL – Long socket

No.	DN(OD)	D ₁ [mm]	L [mm]	Unit
335930	110	110	196	4/200



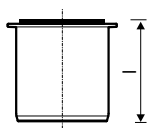
SKM – Plug

No.	DN(OD)	L [mm]	Unit
332620	58	49	4/1700
333620	78	52	4/1000
334620	90	36	4/720
335620	110	57	4/580
336620	135	60	4/376
337620	160	70	4/260
338620	200	85	2/160



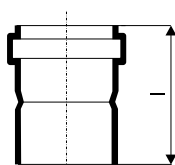
SKU – Coupler

No.	DN(OD)	L [mm]	Unit
332500	58	105	4/1100
333500	78	107	4/640
334500	90	98	4/320
335500	110	125	4/300
336500	135	123	4/180
337500	160	129	4/96
338500	200	239	1/54



Connection to HT Old design, short

No.	DN(OD)	L [mm]	I [mm]	Unit
332820	58	50	52	4/2200



Connection to HT New design (since March 2016)

Art.	DN(OD)	L [mm]	VPE
332830	58	116	20/480
333830	78	96,5	20/480

Connection to HT/KG*

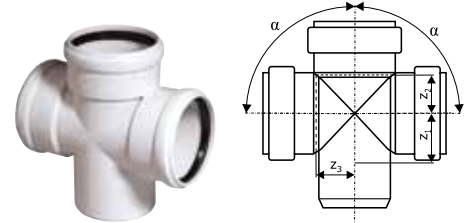
No.	DN(OD)	L [mm]	l [mm]	Unit
336820	135	64	255	4/160

* (delivered with socket DN(OD) 125)



SKDA – Double branch 87°

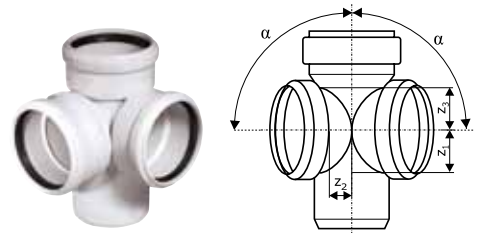
No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	Unit
334900	90/90/90	87°	46	51	51	1/121
335900	110/110/110	87°	56	60	60	4/80



SKED – Double corner branch 87°

NEW!

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	Unit
334910	90/90/90	87°	-	-	-	1/72
335910	110/110/110	87°	59	73	62	1/72

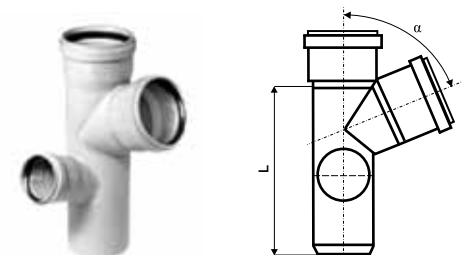


SKEP – Double Corner Branch, lower inlet

NEW!

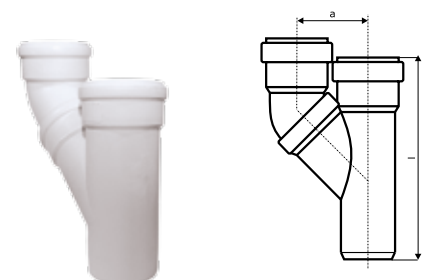
NEW!

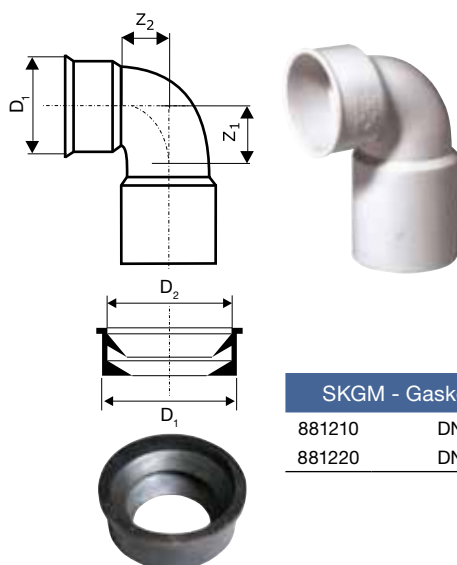
No.	DN(OD)	α	L [mm]	Unit
335975	110/110/78 left	87°	295	1/60
335985	110/110/78 right	87°	295	1/60



SKPA – Parallel branch

No.	DN(OD)	z_1 [mm]	a [mm]	l [mm]	Unit
335920	110/110	199,5	129	320	2/90

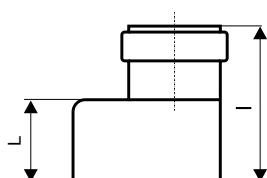




SKSW – Siphon bend 90°

No.	DN(OD)	D ₁ [mm]	z ₁ [mm]	z ₂ [mm]	Unit
335940*	58/40	50	30,5	25	4/1200

SKGM - Gasket		d ₁	d ₂	suitable for HTSW	iron pipe diameter
881210	DN 40/30 B	50	28–34	DN 50/40	28–34 mm
881220	DN 40/40 C	50	38–44		38–44 mm



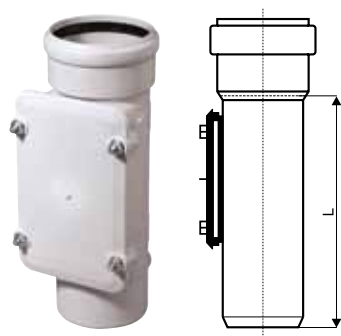
SKR – Reducer, eccentric

No.	DN(OD)	l [mm]	L [mm]	Unit
333710	78/58	102	60	4/860
334720	90/58	84	65	4/800
334710	90/78	105	60	4/640
335720	110/58	104	61	4/660
335710	110/78	104	61	4/640
335700	110/90	127	58	4/440
336710	135/110	133	90	4/240
337710	160/110	195	100	4/212
337700	160/135	190	100	4/120
338710	200/160	272	143	2/60



SKRHT – Reducer Skolan/HT

No.	DN(OD)	l [mm]	L [mm]	Unit
332750	58/40	89	60	4/1000
333750	78/50	110	78	4/1140

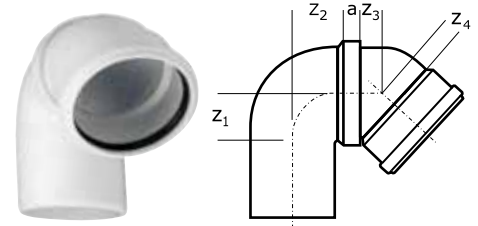


SKRE – Inspection pipe

No.	DN(OD)	L [mm]	Unit
332600	58	-	4/480
333600	78	136	4/320
334600	90	172	4/240
335600	110	275	4/96
336600	135	344	2/40
337600	160	380	1/40
338600	200	410	1/20

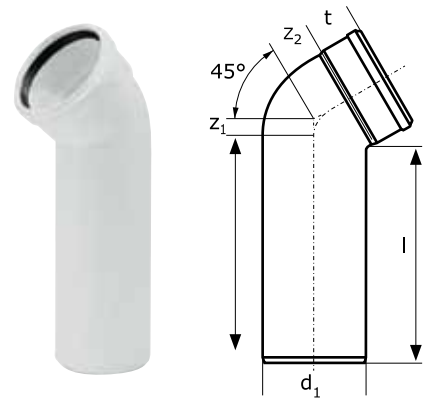
Return air bend 135°

No.	DN(OD)	α	z_1 [mm]	z_2 [mm]	z_3 [mm]	z_4 [mm]	a [mm]	Unit
335950	110/110/110	135°	78	58	44	44	19,5	1/110



Long bend 45°

No.	DN(OD)	α	t [mm]	l [mm]	D ₁ [mm]	z ₁ [mm]	z ₂ [mm]	Unit
335960	110	45°	57	250	110	24	28	2/112



Skolan – Accessories

SK – Lip seal

No.	DN	Unit
880600	58	-
880610	78	-
880040	90	-
880050	110	-
880640	135	-
880420	160	-
880430	200	-



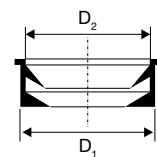
SK – NBR gasket (resistant against oils, petrol and fats (animal, vegetable, mineral))

No.	DN	Unit
880700	58	-
880710	78	-
880240	90	-
880260	110	-
880740	135	-
880520	160	-
880530	200	-



SK – Gasket for siphon bend

No.	DN	D ₁	D ₂	Unit
881210	40/30 B	50	28-34	20/4800
881220	40/40 C	50	38-44	20/4800



Skolan – Accessories



SK – Pull-out protection

No.	DN(OD)	pipe-outside-Ø mm	Carton	Unit
881505	58	58	50	1
881515	78	78	30	1
881520	90	90	20	1
881530	110	110	20	1
881545	135	135	9	1
881550	160	160	10	1

Further information and installation instruction at www.ostendorf-kunststoffe.com



SK – Safety clamps for plugs

No.	DN(OD)	Unit
839010	58	-
839020	78	-
839030	90	-
839040	110	-
839050	135	-
839060	160	-



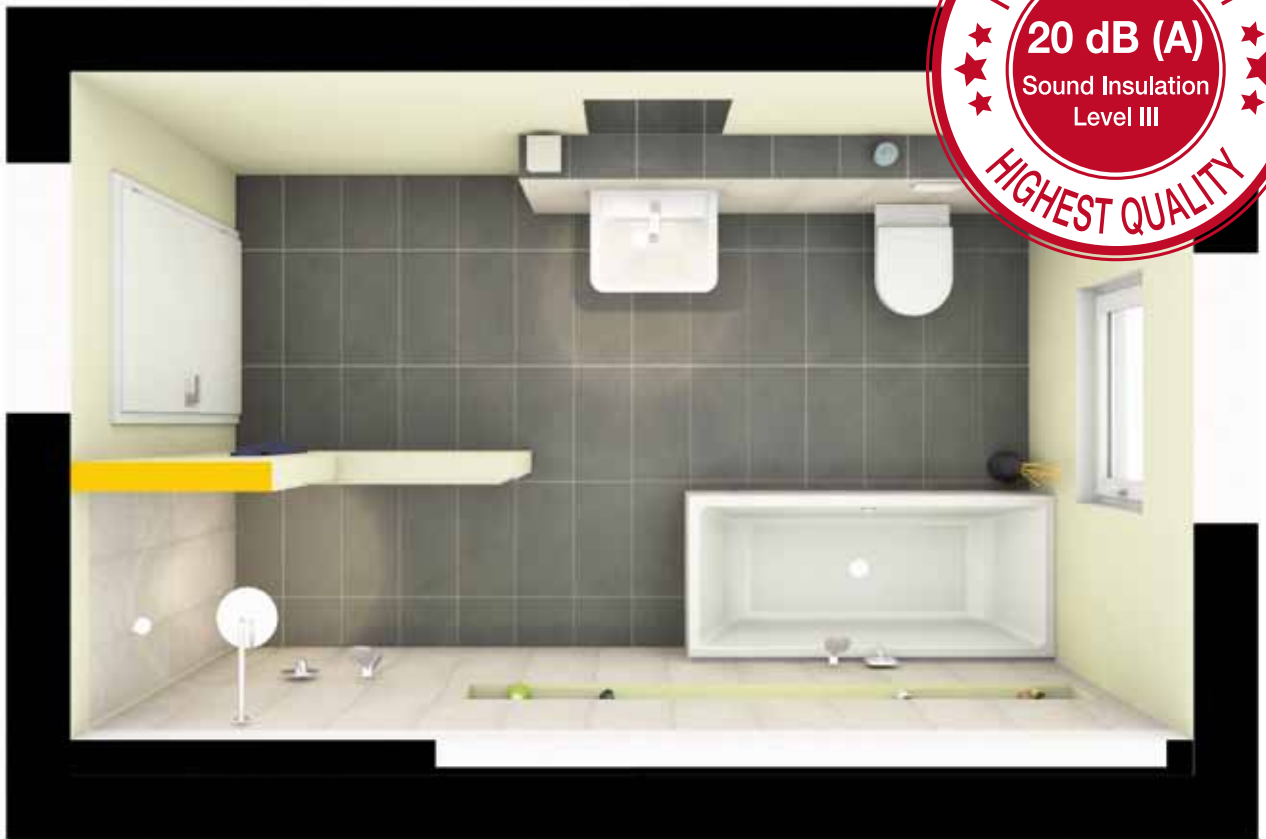
SK – Connection clamp to cast iron pipes/steel pipes

No.	DN(OD)	Unit
839080	58	-
839090	78	-
839100	90	-
839110	110	-
839120	135	-
839130	160	-



SK – Lubricant

No.	ml	Unit
881800	150	50/1750
881810	250	50/1800
881820	500	24/864
881830	1000	12/432



SKOLAN DB THE COMFORT PROTECTION

AGAINST WASTE WATER NOISES



Sound Insulation

THE SKOLAN dB HOUSE DISCHARGE PIPE SYSTEM – High degree of sound insulation

System description

Skolan dB represents a complete range available to you in DN(OD) 58 to DN(OD) 200 nominal diameter. It is suitable for all pressureless waste water pipes in acc. with DIN EN 12056 and DIN 1986-100.

Pipes and fittings consist of mineral-reinforced polypropylene and are resistant to hot water. The consistently thick-walled pipes and fittings meet the raised requirements of Sound Insulation Class III of DIN 4109 / VDI 4100.

Just as with all synthetic materials, Skolan dB is corrosion-proof, long-lasting and resistant to chemically aggressive waste water in the range of pH 2 to pH 12. The smooth inner surfaces and high degree of resistance to abrasion make sure that no deposits develop and this, in turn, ensures that the pipes can be reliably operated for a very long time.

Sound insulation

Tests conducted by the Fraunhofer Institut in 2010 in accordance with DIN EN 14366 confirmed the excellent sound insulation properties and the maximum Sound Insulation Class III requirements. It has been proved for many years now on the physical construction side that thick-walled pipe systems with very high molecular weight minerals have excellent sound insulation properties.

The high density of 1.6 g/cm³ (+/- 0,05) contributes to the absorption of sound which is transmitted by air and conducted by solids.

Sources of noise in building equipment

The sources of noise in building services installations are:

- Filling noises
- Intake noises
- Noises from fittings
- Draining noises
- Impact noises

How does sound develop in building equipment?

The biggest problem in building equipment is where structure-borne noise is transmitted at the point of pipe fixing and where pipes are installed in walls and ceilings.

The following are the most important steps in actively furthering sound insulation:

- No sound bridges to adjacent rooms with pre-wall installation. The pre-wall installation is to be acoustically disconnected
- No exposed installation of waste water pipes on the walls of rooms to be sound insulated
- Use of low-noise fittings of Group I as per DIN 52218
- Use of walls which are suitable for installations, e.g. 220 kg/m² (large mass)
- In waste water system pipe planning, no waste water pipes are to be installed in partition walls between flats/houses

- Skolan dB pipes are to be jacketed in insulating material as conforming to the requirements of sound/heat insulation and fire protection when installed in walls and ceilings/floors
- Acoustically favourable floor plans should be drawn up so that rooms in need of sound insulation are not arranged directly next to rooms with sanitary installation-equipped walls or under bathrooms/toilets.

Benefits DN(OD) 90

DN(OD) 90 can now be used for collecting pipes, downpipes and pipelines. As a result, a complete discharge pipe can now be installed with only two dimensions (DN(OD) 56 and 90). DN(OD) 90 also provides other benefits such as little space needed in the supply shaft and in pre-wall installation. The smaller diameter ensures effective automatic cleaning in the pipe. A DN(OD) 90 collecting pipe can be used:

- Up to a 10 m length
- For connecting a maximum of 2 six litre flushing tanks
- For connecting a maximum of 6 sanitary items
- Given a gradient of 1 cm/m (1:100)
- With a max. 3 changes of direction of 90° or 2 x 45°



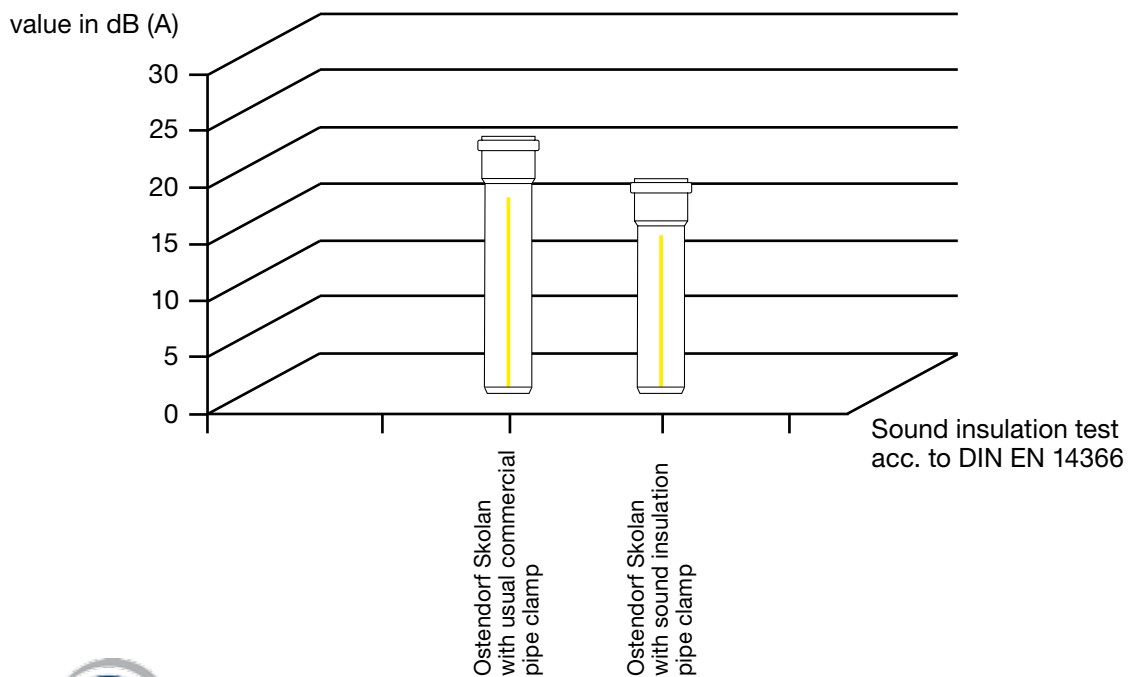
Sound insulation in building construction

The minimum requirements for sound insulation according the building authorities are specified in the standard DIN 4109/A1.

According to DIN 4109/A1 the characteristic sound pressure level due to installation noise of sewage systems in rooms in need of protection must not be more than 30 dB (A) for living and bed rooms resp. not more than 35 dB (A) for teaching rooms and offices.

Sound insulation advice for sanitary installations acc. to VDI

- valid for sewage systems inside buildings
- VDI 4100 specifies three different sound insulation levels
- Sound insulation level I – requirements of DIN 4109 corresponding to 30 dB (A)
- Sound insulation level II – higher sound insulation corresponding to 25 dB (A)
- Sound insulation level III – increased sound insulation corresponding to 20 dB (A)



VDI sound insulation levels and classification



One family houses
Sound insulation level I
or on agreement



Apartment buildings, residential and office buildings, comfort appartments
Sound insulation level II or higher



Hotels, hospitals, residential complexes
Sound insulation level III enhanced agreements

Sound insulation – value

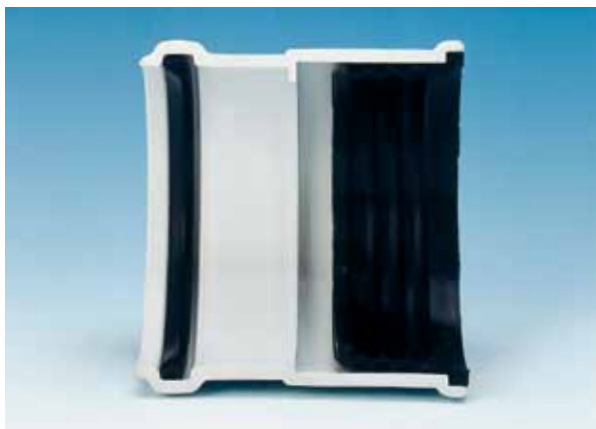
Installation Instructions

1. TRANSPORT, HANDLING AND STORAGE

Skolan-dB pipes must not be bent during transport; the full length of the pipes should be supported. The pipes are to be laid down in such a manner that no damage occurs through deformation. Sockets must be unencumbered all around. At the construction site, stacking must not be carried out in excess of 1.50 m even if wood is laid down in between layers. Sealing elements may not be stored outside for longer than 2 years.

2. CUTTING THE PIPES TO LENGTH

The pipes can be cut to length with a commercial pipe cutter or with a fine-toothed saw. The cuts are to be made at an angle of 90° to the pipe shaft. Remove any trimmings or bumps at the disconnecting point. The cutting edges are to be smoothed on the inside and on the outside.



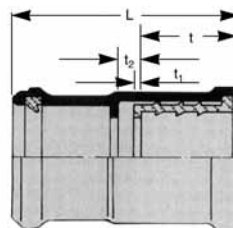
3. SKOLAN-DB CONNECTIONS

3.1 PUSH-FIT CONNECTIONS WITH GASKET (SINGLE SOCKET)

Single sockets are equipped with larger sealing element: These gaskets are the standard connection between pipes and fittings. They have an extension compensator so that no measures need to be taken to allow for changes in length. The following procedure is to be observed:

- Trim the spigot end of the pipe and clean if necessary. Chamfering is not required
- Remove the gasket from the socket and pull it - without any lubricant - onto the spigot end of the pipe
- Smear the outside of the gasket with lubricant (do not use oil or grease) and also provide the inside of the socket with lubricant

- Push the spigot end with the gasket into the socket
- Push the single socket onto the spigot end until it resists
- Check the correct position of the gasket



DN(OD)	L [mm]	t [mm]	t ₁ [mm]	t ₂ [mm]
58	126	49	5	15
78	119	48	6	16
90	123	47	6	16
110	125	63	6	16
135	132	63	6	16
160	144	63	6	16
200	228,5	109	6	16



3.2 OTHER PUSH-FIT CONNECTIONS

Push-fit connections between pipes and fittings which are not produced with a single socket must, in the case of a maximum pipe length of 3 metres, compensate thermal changes in length of maximum 10 mm. Therefore pipes are to be pulled back 10 mm in the socket after the connection has been made.

- Clean the spigot end, the socket and the gasket if necessary
- Check the position and the intactness of the gasket in the socket corrugation
- Smear the spigot end with lubricant.
- Place the spigot end in a central position and push it into the socket until it resists
- Pull the pipe – not the fitting – back by 10 mm and - in case of a vertical position - protect the pipe from subsequent slipping by means of clamps

Additional connection couplings (such as those required in the case of cast-iron pipes) are not necessary with Skolan dB.

Push-fit connections are easier and quicker. This saves time and material.

4. INSTALLATION

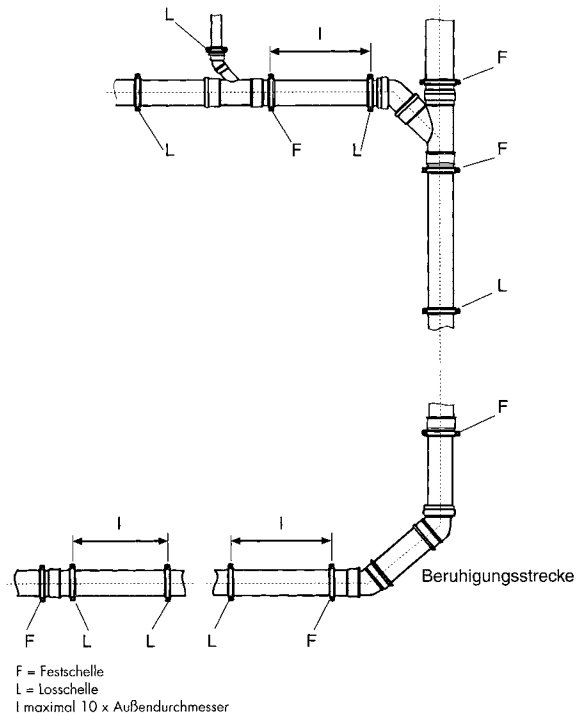
Skolan dB pipes are to be installed in such a manner that they are free of tension and that changes in lengths are not hindered. The Skolan dB soundproof pipe system is installed by using commercial pipe clamps with inserting tapes made of profile rubber.

Arranging the pipe clamps:

- The distance between the pipe clamps in the case of horizontal piping is approx. 10 x the exterior pipe diameter
- In the case of vertical installation the distance between clamps should be 1–2 metres, however, 2 metres should not be exceeded
- If possible, do not install pipe clamps directly at the zones of impact
- A fixed clamp and a loose clamp per pipe length (storey height of more than 2.50 m) are recommended for drop pipe lines
- Fixed clamps are fixed points in the piping system. In the case of pipes without sockets, the fixed clamp is to be placed directly above the shaped part at the bottom end of the pipe. Fittings or groups of shaped parts are always to be located as fixed points
- Even when they are installed, loose clamps enable unhindered lengthways movements in order to allow for thermal changes in length
- In multi-storey buildings, drop pipes are to be secured against subsidence. The use of an adjustment length with a fixed clamp under the socket is recommended



Pipe clamp with inserting tape as a loose clamp



Examples for the arrangement of fixed clamps and loose clamps

5. INSTALLATION IN CONCRETE/ BRICKWORK

Skolan-dB pipes and fittings can be directly set in concrete or plaster provided that adequate care is taken. In order to prevent the concrete mixture from seeping into the socket gap, it should be sealed with adhesive tape. Open piping components are to be closed. The piping is to be installed in such a manner that it is prevented from moving during the cementing process. Should the piping be plastered under a gap in the wall, a layer of plaster of at least 1.5 cm should be applied onto a plaster support (e.g. metal mesh). No acoustic bridge for structure-borne sound should be allowed to develop between the piping and the plaster support. In order to prevent this, the piping should be fully covered with sound insulation material (e.g. mineral wool, insulating sheaths).

6. RAIN DOWN PIPES

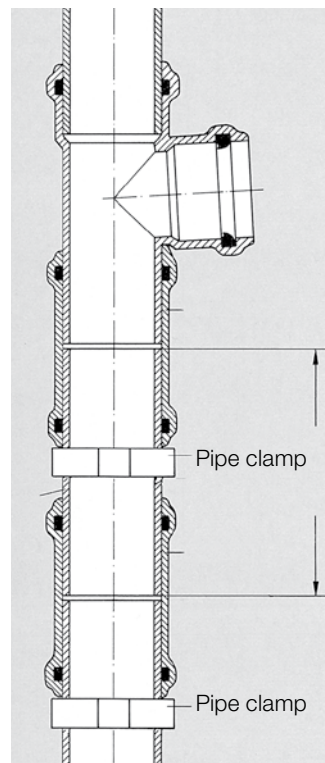
If rain down pipes are installed through living areas, a condensate insulation is recommended also for the Skolan dB, measurement and evaluation according to DIN EN 14366, test result of the Fraunhofer Institut (test report P-BA 63/2010) 20 dB (A) sound insulation with a usual standard pipe clamp. Installation instruction of the pull-out protection at www.ostendorf-kunststoff.com.

7. CEILING PIPES

Pipes installed through ceilings must be sound-insulated with structure-borne sound insulation material and be damp-proof. Should melted asphalt be put onto the floors, the piping parts in the region where the pipe runs through the ceiling must be protected by means of protective pipes or by means of being wrapped in heat-insulating materials.

8. SUBSEQUENT INSTALLATION OF PIPING PARTS

Subsequent connections can be produced by means of the installation of a branch or by using couplers. In order to install, a sufficiently long piece of pipe ($L = \text{length of the shaped part} + 2.5 d$) is removed and the branch is inserted. Cutting edges are to be cleaned and smoothened. A coupler is pushed onto both the remaining pipe without a socket and onto a piece of pipe equivalent to the gap. The piece of pipe is then inserted into the piping and the couplers are pushed over the cutting edges. The couplers are to be secured by means of clamps.



9. BENEFITS DN 90

According to the new DIN 1986-100 diameter DN(OD) 90 is required for water-saving toilets with 4,5 to 6 l flush volume. All over Europe water-saving toilets have been used for years with the dimension DN(OD) 90 without any problems. Further information at www.ostendorf-kunststoffe.com.



Pull-out protection

Convincing facts:

1. Increased safety through stronger hold at high pressure
2. Applicable for lifting systems up to max. 2 bar overpressure according to MPA Darmstadt (without pressure surges)
3. Use for rain down pipes up to max. 2 bar overpressure
4. Easy application with "clamp lock" – without screwing



Practical application:

The stability and the functionality of a discharge system have to be ensured by a secure fastening. Discharge systems within the buildings structure can be subject to bigger inner pressure caused by particular stresses (for example the rain down pipe at heavy rainfall events).

This can refer to the following pipe lines:

- rain pipes in the back water level (mostly in basements)
- rain down pipes, which go from the roof through more floors without further drain outlets
- rain water pipes in the area of distortions from the down pipe to the collection pipe (particularly at a falling pipe height of more than 22m)
- conveying pipes of discharge lifting systems

Installation instruction of the pull-out protection at www.ostendorf-kunststoffe.com

Fire protection application for Skolan dB

A constant challenge in the practice is the requirement for zero distance to other pipes during shaft installation. To meet this demand, various commercial sleeve pipes with zero clearance for the Skolan dB pipe system are available. The details of a zero distance solution and its approval prior to assembly are indispensable if the pipe seal is to be installed professionally.



Example 1a): Zero distance shaft installation

The wall and ceiling of Skolan pipelines are made correspondingly by separating elements according to building regulations. A combination of Skolan pipe and commercial fire sleeves facilitates the closing of the opening during occurrence of fires. The areas of pipe connection are according to the installation application with reference to (ABZ), and in conjunction with the appropriate pipe sleeve the target fire protection level is fulfilled.



Application example Zero spacing

With Ostendorf Skolan, the professional installer has the universal freedom of choice when it comes to installing fire sleeves. However, a guarantee for security can only be accomplished when the relevant regulations are respected.

For principles of fire protection engineering and design please refer to MLAR (Pattern management guidelines).

Product selection, further information and assembly instructions for fire protection solutions can be found on the respective websites* from the following manufacturers: www.walraven.com, www.rockwool.de

* We assume no liability for the use and content of the websites, the operators are solely responsible.

Products by **Gebr. Ostendorf Kunststoffe GmbH**

HT-System (PP)

Discharge Pipes and Fittings DN(OD) 32–DN(OD) 160 acc. to DIN EN 1451-1

Skolan dB

Soundproof Pipe System DN(OD) 58–DN(OD) 200 acc. to Z-42.1-217

KG 2000 SN 10

Waste Water Pipes and Fittings DN(OD) 110–DN(OD) 500 acc. to DIN 14758

KG-System SN 4 (PVC-U) - Coex SN 8 (PVC-U) - Full Wall SN 10 (PVC-U)

Drainage Pipes and Fittings DN(OD) 110–DN(OD) 500 acc. to DIN EN 13476-2 and DIN EN 1401

Ostendorf Chamber System DN 400 (PP) (PVC-U)

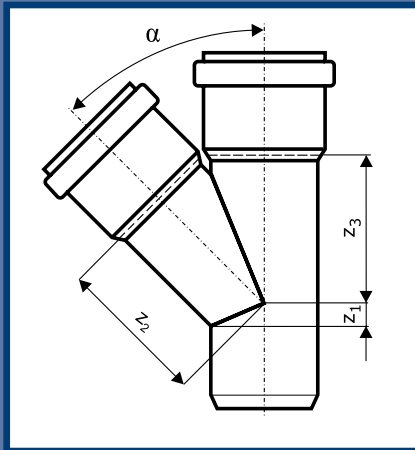
Chamber bases, Riser pipes and Telescopic covers DN 400 acc. to DIN 13598

Ostendorf Chamber System DN 600 (PP)

Chamber bases, Riser pipes and Telescopic covers DN 600 acc. to DIN 13598

PE Pressure Pipes Drinking Water

Pressure Pipes for Drinking Water DN(OD) 20–DN(OD) 63 acc. to DIN EN 12201



All information given in this catalogue – including pictures and illustrations – is provided to the best of our knowledge but without our guarantee. The user of the products has to decide on its own authority about the suitability for the intended application. The products can be changed with-out prior notice. Gebr. Ostendorf Kunststoffe GmbH reserves its right to change materials or processes which do not affect the compliance with relevant specifications without informing the buyers.

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