



**CONSTRUCTION
SOLUTIONS**
IRELAND



SWELLING TAPES

JOINT SHEET METALS

**INJECTION HOSES
CONSTRUCTION CHEMISTRY**

**PRESSURE WATER-TIGHT
SERVICE DUCTS**

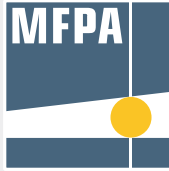
LIGHTNING PROTECTION

FORMWORK ACCESSORIES

PRODUCT RANGE
2022/2023

Product safety

Our products are certified by testing institutes for the various areas of application.



Dr. J. Kemski

Sachverständigenbüro
ö.b.u.v. Sachverständiger für Radon (IHK Bonn/Rhein-Sieg)

IAF - Radioökologie GmbH

Labor für Radionuklidanalytik
Radiologische Gutachten
Consulting



Our pictograms

Testing of impermeability to pressurised water



Testing of fire resistance class according to DIN EN 13501-2 and construction materials class according to DIN EN 13501-1 and DIN 4102-1



Testing of resistance to various media



Standard sound level differential testing according to DIN EN ISO 10140-2



Approved by the building authorities for storage and filling facilities of slurry/liquid manure/silage effluent and biogas facilities



Testing of impermeability to the naturally-occurring radioactive inert gas Radon



Testing of the impact sound reduction based on DIN EN ISO 140-8



Testing of the maximum static load



Testing of the lightning current carrying capacity class according to DIN EN 62561-1



Compliance with the European requirements for construction technology



Compliance with a European harmonised standard



You can find the technical information about the relevant product here.

Technology

PRESSURE WATER-TIGHT SERVICE DUCTS



RONDO sealing collars

pages 96 – 100



Lining pipes & accessories

pages 101 – 108



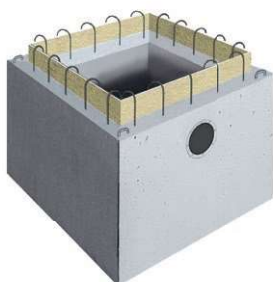
Gasket inserts, modular seals, FLEX 2000

pages 109 – 118



Pipe bushings and ground drains

pages 119 – 125



PILO pump sumps

pages 126 – 130

RONDO sealing collars

Water pressure-tight sealing for pipe ducts through concrete parts



RONDO Standard

page 98

- Pressure water-tight for up to 10 bar
- Radon-tight
- Good resistances



RONDO Protect

page 99

- Pressure water-tight for up to 10 bar
- DIBt approval for slurry/liquid manure/silage effluent facilities
- Also for agricultural buildings
- Highest resistances



RONDO Ecco

page 100

- Pressure water-tight for up to 8 bar



RONDO Base

page 100

- Pressure water-tight for up to 7 bar

Wherever pipes or other lines are routed through concrete parts, they must be sealed against the permeation of water and/or gases present, such as methane gas or the radioactive radon gas that is sometimes present in the soil.

The RONDO sealing collars create a cost-effective and easy-to-install solution for sealing penetrations. They are available in all common nominal diameters of pipes and lines as standard.



The RONDO, shortly before placement of concrete. The drainpipes are securely and permanently sealed against rising moisture.

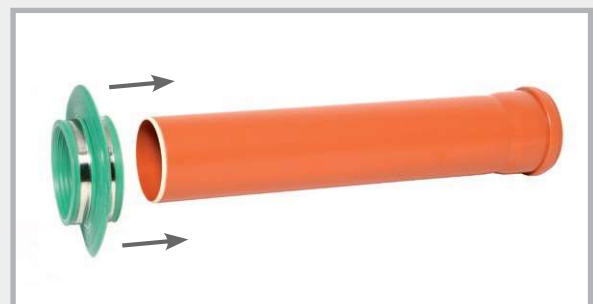
Technical data

	RONDO Standard	RONDO Protect	RONDO Ecco	RONDO Base
Colour	green	red	green	green
Material	TPE	modified TPE	TPE	TPE
Size	10-710 mm	10-710 mm	110-200 mm	90-315 mm
Height of waterstop	4 cm	4 cm	3 cm	1.5 cm
Number of waterstops	1	1	1	2
Bearing width	6 cm	6 cm	4.5 cm	2.5 cm
Pressure test	100 m water column	100 m water column	80 m water column	70 m water column
Resistance				
Diluted acids	✓	✓	✓	✓
Alkalis	✓	✓	✓	✓
Ground water	✓	✓	✓	✓
Radon	✓	✓	✓	✓
Liquid manure	✓	✓	✓	✓
Slurry	✓	✓	✓	✓
Fermentation mash		✓		
Methane gas		✓		
Animal excretions		✓		
Silage effluent		✓		
Diluted sulphuric acid		✓		
Further resistances are available on request				

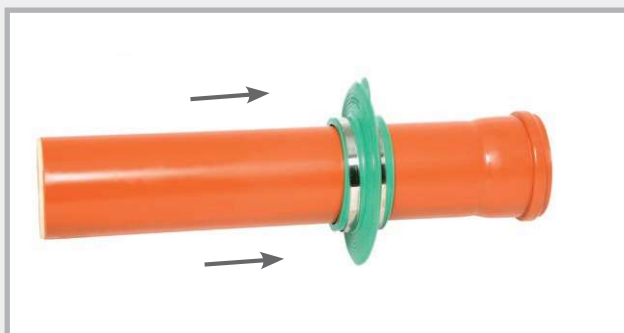
Installation using the example of the RONDO Standard sealing collar



Sewage pipe and RONDO Standard 110



Pushing on the sealing collar



Positioning the sealing collar



Securing by tightening the fastening straps

The surface of the pipe should be cleaned, if dirty.

RONDO Standard

Sealing collars

Reliable waterproofing against penetrating water and radon



Dimensions

Technical details pages 96 – 97

Art. no.	Type	for pipe outer diameters/mm	Suitable for outer dia. from (mm) to (mm)		PU	Secondary packaging	Weight per pc.
090890	RO 10	for lightning protection round conductors	8	10	1 pc.	Carton of 100 pcs.	0.13 kg
090892	RO flat	for earthing strap	30x3.5 + 30x3		1 pc.		0.15 kg
090988	RO EFP	for hexagon fixed earthing terminal			1 pc.	Bag of 25 pcs.	0.04 kg
090900	RO 25	25	25	25	1 pc.		0.25 kg
090902	RO 32	32	31	32	1 pc.		0.25 kg
090904	RO 40	40	39	42	1 pc.		0.26 kg
090906	RO 50	50	48	53	1 pc.		0.29 kg
090908	RO 63	63	61	64	1 pc.		0.32 kg
090910	RO 75	75	72	80	1 pc.		0.36 kg
090912	RO 90	90	87	92	1 pc.		0.45 kg
090914	RO 110	Sewage pipe DN 100 110	107	115	1 pc.	Carton of 50 pcs.	0.48 kg
090916	RO 125	Sewage pipe DN 125 125	123	130	1 pc.	Carton of 40 pcs.	0.51 kg
090918	RO 140	140	137	147	1 pc.		0.54 kg
090920	RO 160	Sewage pipe DN 150 160	157	166	1 pc.	Carton of 35 pcs.	0.62 kg
090921	RO 170	170	167	177	1 pc.		0.66 kg
090922	RO 180	180	177	187	1 pc.		0.68 kg
090924	RO 200	Sewage pipe DN 200 200	197	207	1 pc.	Carton of 30 pcs.	0.70 kg
090926	RO 225	225	220	230	1 pc.		0.81 kg
090928	RO 250	Sewage pipe DN 250 250	245	260	1 pc.		0.89 kg
090930	RO 280	280	275	290	1 pc.		0.92 kg
090932	RO 315	Sewage pipe DN 300 315	310	324	1 pc.		1.07 kg
090934	RO 355	355	350	365	1 pc.		1.18 kg
090936	RO 400	Sewage pipe DN 400 400	395	410	1 pc.		1.31 kg
090938	RO 450	450	445	460	1 pc.		1.90 kg
090940	RO 500	Sewage pipe DN 500 500	495	510	1 pc.		2.15 kg
090942	RO 560	560	555	570	1 pc.		2.60 kg
090944	RO 630	630	625	640	1 pc.		2.90 kg
090946	RO 710	710	705	720	1 pc.		3.00 kg

Other sizes are available on request.

Installation note: The sealing collars are even easier to install if placed in warm water beforehand (10 minutes).

RONDO Protect

Sealing collars for use in slurry/liquid manure/silage effluent and biogas facilities and where maximum resistance is required.

National technical approval (abZ): Z-74.9-198



Dimensions

Technical details pages 96 – 97

Art. no.	Type	for pipe outer diameters/mm	Suitable for outer dia. from (mm) to (mm)		PU	Weight per pc.
091225	ROPRO 10	for lightning protection round conductors	8	10	1 pc.	0.13 kg
091226	ROPRO flat	for earthing strap	30x3.5 + 30x3		1 pc.	0.15 kg
091227	ROPRO 25	25	25	25	1 pc.	0.25 kg
091228	ROPRO 32	32	31	32	1 pc.	0.25 kg
091229	ROPRO 40	40	39	42	1 pc.	0.26 kg
091230	ROPRO 50	50	48	53	1 pc.	0.29 kg
091231	ROPRO 63	63	61	64	1 pc.	0.32 kg
091232	ROPRO 75	75	72	80	1 pc.	0.36 kg
091233	ROPRO 90	90	87	92	1 pc.	0.45 kg
091234	ROPRO 110	Sewage pipe DN 100 110	107	115	1 pc.	0.48 kg
091235	ROPRO 125	Sewage pipe DN 125 125	123	130	1 pc.	0.51 kg
091236	ROPRO 140	140	137	147	1 pc.	0.54 kg
091237	ROPRO 160	Sewage pipe DN 150 160	157	166	1 pc.	0.62 kg
091238	ROPRO 170	170	167	177	1 pc.	0.66 kg
091239	ROPRO 180	180	177	187	1 pc.	0.68 kg
091240	ROPRO 200	Sewage pipe DN 200 200	197	207	1 pc.	0.70 kg
091241	ROPRO 225	225	220	230	1 pc.	0.81 kg
091242	ROPRO 250	Sewage pipe DN 250 250	245	260	1 pc.	0.89 kg
091243	ROPRO 280	280	275	290	1 pc.	0.92 kg
091244	ROPRO 315	Sewage pipe DN 300 315	310	324	1 pc.	1.07 kg
091245	ROPRO 355	355	350	365	1 pc.	1.18 kg
091246	ROPRO 400	Sewage pipe DN 400 400	395	410	1 pc.	1.31 kg
091248	ROPRO 450	450	445	460	1 pc.	1.50 kg
091250	ROPRO 500	500	495	510	1 pc.	1.70 kg
091252	ROPRO 560	560	555	570	1 pc.	1.90 kg
091254	ROPRO 630	630	625	640	1 pc.	2.10 kg
091256	ROPRO 710	710	705	720	1 pc.	2.40 kg

Installation note: The sealing collars are even easier to install if placed in warm water beforehand (10 minutes).

RONDO Ecco



The economical sealing collar for waterproofing of pipes and cables



80 m water column

Dimensions

Art. no.	Type	Suitable for from to	PU	Secondary packaging	Weight per pc.
091050	RO Ecco 110	107-115 mm	1 pc.	Carton of 80 pcs.	0.30 kg
091053	RO Ecco 125	122-130 mm	1 pc.	Carton of 70 pcs.	0.34 kg
091056	RO Ecco 160	157-170 mm	1 pc.	Carton of 60 pcs.	0.40 kg
091059	RO Ecco 200	197-210 mm	1 pc.	Carton of 50 pcs.	0.47 kg

RONDO Base

The sealing collar with only one fastening strap



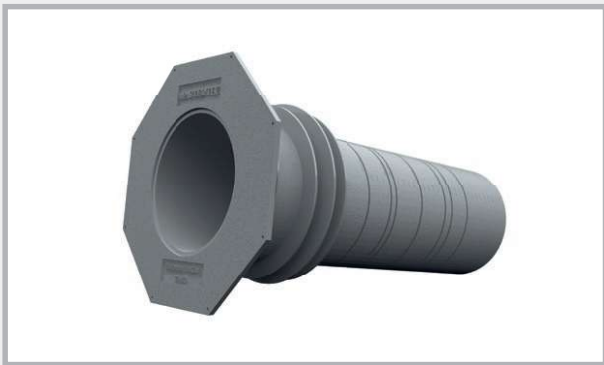
70 m water column

Dimensions

Art. no.	Type	for pipe outer diameters/mm	PU	Secondary packaging	Weight per pc.
090970	RO Base 90	90	1 pc.	Carton of 25 pcs.	0.13 kg
090978	RO Base 110	110	1 pc.	Carton of 25 pcs.	0.16 kg
090980	RO Base 125	125	1 pc.	Carton of 25 pcs.	0.17 kg
090984	RO Base 160	160	1 pc.	Carton of 25 pcs.	0.22 kg
090990	RO Base 200	200	1 pc.	Carton of 25 pcs.	0.24 kg
090994	RO Base 250	250	1 pc.	Carton of 10 pcs.	0.32 kg
090998	RO Base 315	315	1 pc.	Carton of 10 pcs.	0.40 kg

Lining pipes

Pressure water-tight recess pipes for installation flush with formwork



Lining pipe UniCut

page 102



FASO lining pipe

page 103



WELLO active lining pipe

page 104



DURO Plus
High-pressure lining pipe

page 105



MKD cable bushing

page 106



STEELO lining pipe
Lining pipe accessories
Closure plugs + MASTERTEC Connector
connection seal

pages 107 – 108

For the subsequent, professional introduction of pipes and lines into buildings, the use of lining pipes is essential. The components are manufactured for the corresponding wall thickness, enable installation flush with the formwork and form a pressure water-tight bond with the surrounding concrete component.

They leave a circular recess with a smooth surface in the wall, into which pipes and cables can subsequently be fed then sealed with MASTER-Ring gasket inserts or MASTER-SEAL modular seals.

UniCut lining pipe

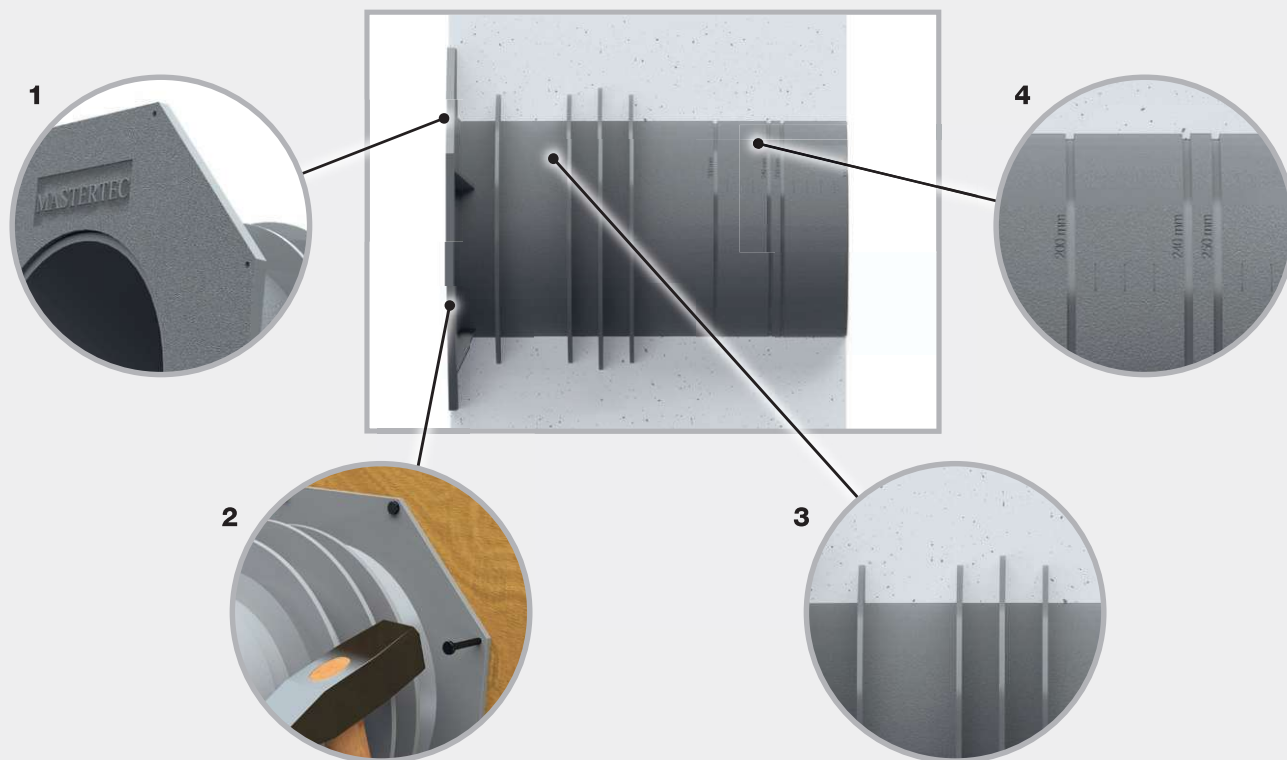
NEW! The lining pipe for stock keeping. 21 installation options with 3 products

- Applicable for wall thickness 200 to 400 mm
- Easy on-site cutting on saw groove
- Pressure water-tight “Novo” waterstop
- Trowel flange for the connection of the outer seal
- Suitable for MASTER-RING gasket inserts and MASTER-SEAL modular seals



Dimensions

Inner Ø	Art. no.	Saw groove for wall thickness / mm							PU	Weight per pc.
		200	240	250	300	350	365	400		
100 mm	082510	200	240	250	300	350	365	400	1 pc.	1.35 kg
150 mm	082515	200	240	250	300	350	365	400	1 pc.	1.95 kg
200 mm	082520	200	240	250	300	350	365	400	1 pc.	2.50 kg



1. Water-side trowel flange with non-slip, rough surface for the connection of exterior sealing materials.
2. Nail holes for fixing to the formwork.
3. “Novo” waterstop + additional waterstop in the area of the outer shell for cavity wall elements.
4. Embossed length scale with integrated saw groove for easy on-site cutting.

FASO lining pipe

Our fibre cement lining pipes are available immediately ex stock in sizes DN 50 to DN 800. The pipe is smooth on the inside and corrugated and rough on the outside.



The bond formed by the corrugated exterior of the pipe with the concrete prevents water permeation. If you wet the lining pipes prior to placement of the concrete, the bond with the concrete will be even more effective.



FASO inner Ø mm	outer Ø mm	Standard lengths											
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm	1250 mm
NEW! DN 50 Weight/pc.	90	080020 1.7 kg	080021 2.0 kg	080022 2.1 kg	080023 2.5 kg	080024 3.0 kg	080025 3.1 kg	080026 3.4 kg	080027 4.2 kg	080028 5.1 kg	080029 6.8 kg	080030 8.5 kg	080031 10.6 kg
DN 80 Weight/pc.	120	080210 2.4 kg	080211 2.8 kg	080212 3.0 kg	080213 3.5 kg	080214 4.1 kg	080215 4.3 kg	080216 4.7 kg	080217 5.9 kg	080218 7.0 kg	080918 9.4 kg	080950 11.7 kg	080219 14.6 kg
DN 100 Weight/pc.	140	080220 2.9 kg	080221 3.4 kg	080222 3.6 kg	080223 4.3 kg	080224 5.0 kg	080225 5.2 kg	080226 5.7 kg	080227 7.1 kg	080228 8.5 kg	080921 11.4 kg	080952 14.2 kg	080229 17.8 kg
DN 125 Weight/pc.	165	080230 3.6 kg	080231 4.3 kg	080232 4.5 kg	080233 5.4 kg	080234 6.3 kg	080235 6.6 kg	080236 7.2 kg	080237 9.0 kg	080238 10.7 kg	080922 14.3 kg	080954 17.9 kg	080239 22.4 kg
DN 150 Weight/pc.	190	080240 4.1 kg	080241 4.9 kg	080242 5.1 kg	080243 6.1 kg	080244 7.1 kg	080245 7.4 kg	080246 8.1 kg	080247 10.1 kg	080248 12.1 kg	080924 16.2 kg	080956 20.1 kg	080249 25.1 kg
DN 200 Weight/pc.	250	080250 6.5 kg	080251 7.8 kg	080252 8.1 kg	080253 9.7 kg	080254 11.3 kg	080255 11.8 kg	080256 12.9 kg	080257 16.1 kg	080258 19.3 kg	080926 25.8 kg	080958 32.2 kg	080259 40.2 kg
DN 250 Weight/pc.	300	080260 8.1 kg	080261 9.7 kg	080262 10.1 kg	080263 12.1 kg	080264 14.2 kg	080265 14.8 kg	080266 16.2 kg	080267 20.2 kg	080268 24.2 kg	080928 32.3 kg	080960 40.1 kg	080269 50.2 kg
DN 300 Weight/pc.	350	080270 9.8 kg	080271 11.8 kg	080272 12.3 kg	080273 14.7 kg	080274 17.1 kg	080275 17.9 kg	080276 19.6 kg	080277 24.4 kg	080278 29.3 kg	080930 39.1 kg	080962 48.9 kg	080279 61.1 kg
DN 350 Weight/pc.	400	080280 11.2 kg	080281 13.4 kg	080282 14.0 kg	080283 16.7 kg	080284 19.5 kg	080285 20.4 kg	080286 22.3 kg	080287 27.9 kg	080288 33.4 kg	080932 44.6 kg	080964 55.7 kg	080289 69.6 kg
DN 400 Weight/pc.	460	080290 15.4 kg	080291 18.5 kg	080292 19.3 kg	080293 23.1 kg	080294 26.9 kg	080295 28.1 kg	080296 30.8 kg	080297 38.5 kg	080298 46.1 kg	080934 61.5 kg	080966 76.9 kg	080299 96.1 kg
DN 450 Weight/pc.	510	080300 17.5 kg	080301 21.0 kg	080302 21.9 kg	080303 26.2 kg	080304 30.6 kg	080305 31.9 kg	080306 35.0 kg	080307 43.7 kg	080308 52.4 kg	080936 69.6 kg	080968 87.4 kg	080309 109.3 kg
DN 500 Weight/pc.	570	080310 22.4 kg	080311 26.8 kg	080312 28.0 kg	080313 33.5 kg	080314 39.1 kg	080315 40.8 kg	080316 44.7 kg	080317 55.9 kg	080318 67.0 kg	080938 89.4 kg	080970 111.7 kg	080319 139.6 kg
DN 600 Weight/pc.	670	080320 26.8 kg	080321 32.1 kg	080322 33.5 kg	080323 40.1 kg	080324 45.9 kg	080325 48.8 kg	080326 53.5 kg	080327 66.9 kg	080328 80.2 kg	080940 107.0 kg	080972 133.7 kg	080329 167.1 kg
DN 700 Weight/pc.	780	080330 38.0 kg	080331 45.6 kg	080332 47.5 kg	080333 57.0 kg	080334 66.5 kg	080335 69.4 kg	080336 76.0 kg	080337 95.0 kg	080338 114.0 kg	080942 152.0 kg	080974 190.0 kg	080339 237.5 kg
DN 800 Weight/pc.	880	080340 42.5 kg	080341 51.0 kg	080342 53.2 kg	080343 63.8 kg	080344 74.7 kg	080345 77.6 kg	080346 85.0 kg	080347 106.3 kg	080348 127.5 kg	080944 170.0 kg	080976 212.5 kg	080349 265.6 kg

Special lengths: Any intermediate lengths can be supplied.

DN 50 to DN 800 can be extended up to 1600 mm.

Delivery: From DN 200 only by forwarding agent; up to DN 150 by parcel service with restrictions, clarify dispatch methods

We recommend installation with closure plugs

WELLO active lining pipe



When the use of sealing collars is not possible, lining pipes are installed, which enable the subsequent water-tight lead-through of the medium pipe into the building. The cost-efficient PE lining pipe is available at short notice ex stock in dia. 100 to 400 mm. Its inner surface is smooth. The corrugated outside ensures a firm bond with the concrete. Two swelling tapes applied centrally around the lining pipe act as waterstops.



Tested for impermeability up to 20 m water column

WELLO inner Ø mm	Standard lengths								
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm
DN 100 Weight/pc.	080130 0.28 kg	080131 0.31 kg	080132 0.32 kg	080133 0.35 kg	080134 0.39 kg	080135 0.40 kg	080136 0.43 kg	080137 0.50 kg	080138 0.57 kg
DN 125 Weight/pc.	080140 0.33 kg	080141 0.36 kg	080142 0.37 kg	080143 0.42 kg	080144 0.46 kg	080145 0.48 kg	080146 0.51 kg	080147 0.60 kg	080148 0.69 kg
DN 150 Weight/pc.	080150 0.44 kg	080151 0.49 kg	080152 0.51 kg	080153 0.57 kg	080154 0.64 kg	080155 0.66 kg	080156 0.70 kg	080157 0.84 kg	080158 1.01 kg
DN 200 Weight/pc.	080160 0.67 kg	080161 0.75 kg	080162 0.77 kg	080163 0.88 kg	080164 0.99 kg	080165 1.02 kg	080166 1.10 kg	080167 1.31 kg	080168 1.53 kg
*DN 250 Weight/pc.	080170 0.94 kg	080171 1.07 kg	080172 1.10 kg	080173 1.27 kg	080174 1.43 kg	080175 1.48 kg	080176 1.59 kg	080177 1.92 kg	080178 2.24 kg
DN 300 Weight/pc.	080180 1.19 kg	080181 1.36 kg	080182 1.41 kg	080183 1.62 kg	080184 1.83 kg	080185 1.90 kg	080186 2.04 kg	080187 2.47 kg	080188 2.89 kg
*DN 350 Weight/pc.	080190 1.70 kg	080191 1.96 kg	080192 2.02 kg	080193 2.35 kg	080194 2.67 kg	080195 2.77 kg	080196 3.00 kg	080197 3.65 kg	080198 4.30 kg
DN 400 Weight/pc.	080200 2.14 kg	080201 2.47 kg	080202 2.56 kg	080203 2.98 kg	080204 3.40 kg	080205 3.52 kg	080206 3.82 kg	080207 4.66 kg	080208 5.50 kg

Special lengths: Any intermediate lengths can be supplied.
Maximum length of lining pipe: 2000 mm

* DN 250 + DN 350 waterproofing with modular seal only

We recommend installation with closure plugs

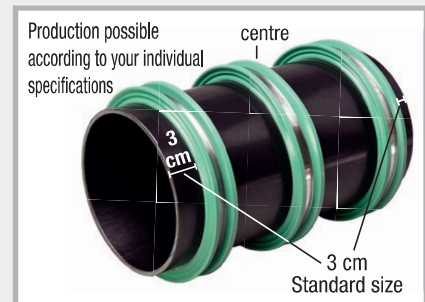
DURO Plus

High-pressure lining pipe



DURO Plus are high pressure-resistant lining pipes for secure and permanent routing of pipes and cables in buildings. A sealing collar which can withstand water pressures of up to 7 bar is fitted to the lining pipes at the factory and reliably protects against radon penetration.

The diameters DN 50 to DN 300 are available within a few days. When ordering, please state whether you require the lining pipes with or without plugs.



DURO Plus with and without foil flange

DURO Plus in formwork

Special version:
DURO Plus Type DW3
for double wall elements

DURO inner Ø mm	outer Ø mm	Standard lengths											
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm	1200 mm
DN 50 Weight/pc.	54	090010 0.31 kg	090013 0.37 kg	090016 0.39 kg	090019 0.46 kg	090022 0.54 kg	090025 0.56 kg	090028 0.62 kg	090031 0.78 kg	090034 0.93 kg	090037 1.24 kg	090040 1.56 kg	090043 1.87 kg
DN 80 Weight/pc.	85	090050 0.30 kg	090053 0.36 kg	090056 0.38 kg	090059 0.45 kg	090062 0.53 kg	090065 0.55 kg	090068 0.60 kg	090071 0.76 kg	090074 0.91 kg	090077 1.21 kg	090080 1.52 kg	090083 1.82 kg
DN 100 Weight/pc.	110	090110 0.60 kg	090113 0.72 kg	090116 0.76 kg	090119 0.91 kg	090122 1.06 kg	090125 1.10 kg	090128 1.21 kg	090131 1.52 kg	090134 1.82 kg	090137 2.43 kg	090140 3.04 kg	090143 3.64 kg
DN 125 Weight/pc.	137	090150 0.75 kg	090153 0.90 kg	090156 0.94 kg	090159 1.12 kg	090162 1.31 kg	090165 1.37 kg	090168 1.50 kg	090171 1.88 kg	090174 2.25 kg	090177 3.00 kg	090180 3.76 kg	090183 4.51 kg
DN 150 Weight/pc.	162	090210 0.86 kg	090213 1.03 kg	090216 1.08 kg	090219 1.29 kg	090222 1.51 kg	090225 1.57 kg	090228 1.72 kg	090231 2.16 kg	090234 2.59 kg	090237 3.45 kg	090240 4.32 kg	090243 5.18 kg
DN 200 Weight/pc.	214	090250 1.31 kg	090253 1.57 kg	090256 1.64 kg	090259 1.96 kg	090262 2.29 kg	090265 2.39 kg	090268 2.62 kg	090271 3.28 kg	090274 3.93 kg	090277 5.24 kg	090280 6.56 kg	090283 7.87 kg
DN 250 Weight/pc.	264	090310 1.63 kg	090313 1.95 kg	090316 2.04 kg	090319 2.44 kg	090322 2.85 kg	090325 2.97 kg	090328 3.26 kg	090331 4.08 kg	090334 4.89 kg	090337 6.52 kg	090340 8.16 kg	090343 9.79 kg
DN 300 Weight/pc.	316	090350 2.48 kg	090353 2.98 kg	090356 3.11 kg	090359 3.73 kg	090362 4.35 kg	090365 4.54 kg	090368 4.97 kg	090371 6.22 kg	090374 7.46 kg	090377 9.95 kg	090380 12.44 kg	090383 14.92 kg

Special lengths: Any intermediate lengths can be supplied.
Lengths up to 3000 mm are available.

We recommend installation with closure plugs

MASTERTEC

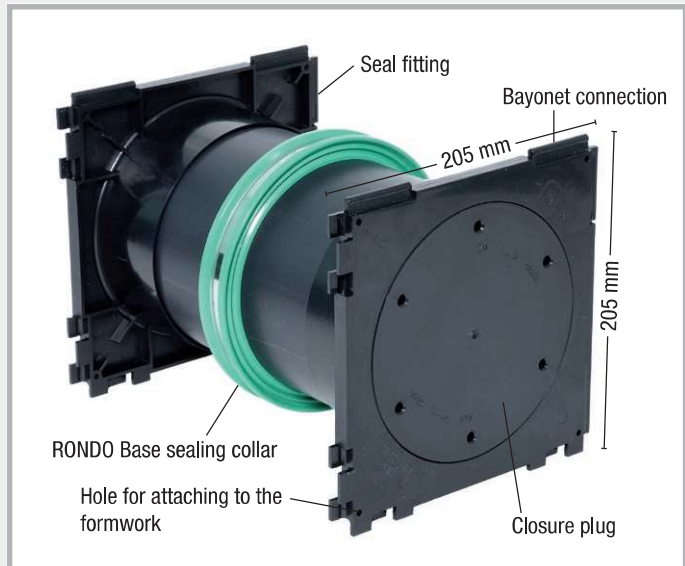
MKD 150 cable bushing



Stay flexible with the MKD 150 cable bushing

The MKD 150 cable bushing is manufactured in the corresponding wall thickness and consists of 2 seal fittings, a factory-installed high-pressure waterstop and a closure plug which is pressure-tight up to 3 bar. The bayonet connections are compatible with all standard systems.

- Flexible connection of cables in new buildings
- Sealing with RONDO Base sealing collar
- Stable design due to solid wall material
- Compatible with all standard systems



We recommend using gasket inserts for the waterproofing. You can achieve maximum pressure resistance using this system.



Seal fitting on both sides



Seal fitting on one side; closure plug on the other side

Product range

MKD 150 – double version				MKD 150 – single version			
Art. no.	Wall thickness	PU	Weight per pc.	Art. no.	Wall thickness	PU	Weight per pc.
162410	180 mm	1 pc.	1.30 kg	162460	180 mm	1 pc.	1.10 kg
162415	200 mm	1 pc.	1.40 kg	162465	200 mm	1 pc.	1.20 kg
162420	240 mm	1 pc.	1.50 kg	162470	240 mm	1 pc.	1.30 kg
162425	250 mm	1 pc.	1.60 kg	162475	250 mm	1 pc.	1.30 kg
162430	300 mm	1 pc.	1.70 kg	162480	300 mm	1 pc.	1.50 kg
162435	350 mm	1 pc.	1.90 kg	162485	350 mm	1 pc.	1.70 kg
162440	365 mm	1 pc.	2.00 kg	162490	365 mm	1 pc.	1.70 kg
162445	400 mm	1 pc.	2.10 kg	162495	400 mm	1 pc.	1.90 kg
162400	Key for opening the closure plug						

Other wall thicknesses are available on request

MASTER-RING gasket inserts are available on request. You will need to let us know the outer diameters of the cables and pipes to be led through.

STEELO stainless steel lining pipe

with watertight centre flange against
pressurised and non-pressurised water

STEELO lining pipes are manufactured from V2A or V4A stainless steel.
The centre flange is welded watertight.

- Very good chemical and thermal resistance



STEELO V2A lining pipe Price available on request

STEELO inner Ø mm	Dimensions						
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm
DN 80	081200	081240	081250	081300	081350	081365	081400
DN 100	082200	082240	082250	082300	082350	082365	082400
DN 125	083200	083240	083250	083300	083350	083365	083400
DN 150	084200	084240	084250	084300	084350	084365	084400
DN 200	085200	085240	085250	085300	085350	085365	085400
DN 250	086200	086240	086250	086300	086350	086365	086400
DN 300	087200	087240	087250	087300	087350	087365	087400

Version V4A = on request

Accessories for lining pipe

Closure plug +
installation aid for lining pipes



	Diameter mm									
	50	80	100	125	150	200	250	300	350	400
Art. no.	090403	090401	090400	090402	090404	090406	090408	090410	090412	090414
Weight/pc.	0.02 kg	0.02 kg	0.02 kg	0.04 kg	0.04 kg	0.10 kg	0.16 kg	0.24 kg	0.39 kg	0.45 kg

Foil flange dim. 50 x 50 cm
for lining pipes incl. mounting strap

	Lining pipe diameter in mm					
	50	80	100	125	150	200
Art. no.	090388	090389	090390	090391	090392	090393
Weight/pc.	0.47 kg	0.47 kg	0.47 kg	0.46 kg	0.46 kg	0.45 kg



For fixing the foil flange to the component, we recommend the **POWER** swelling tape adhesive on page 8.

Foil flange made of 1.5 mm PVC foil, resistant to oil and bitumen, weldable with hot air gun, bondable with solvent welding agent

MASTERTEC Connector



NEW! Connection seal

With the MASTERTEC Connector connection seal, corrugated cable conduits (corrugated pipes) or sewage pipes can be professionally connected to core drill holes or lining pipes.

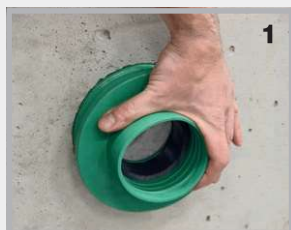


- Pressure water-tight Corrugated pipe: 1.0 bar
 Sewage pipe: 2.0 bar
- Easy installation
- Adapted to common corrugated pipe outer diameters and sewage pipe Ø 110 mm

Dimensions

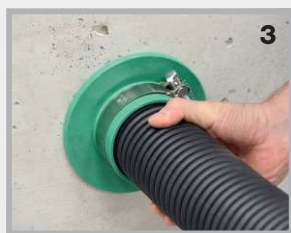
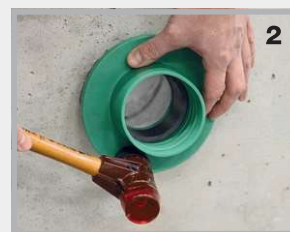
Art. no.	Type	Ø lining pipe/core drill hole	Ø connection pipe	PU	Weight per pc.
090850	MC 100 / 75 W	100 mm	Corrugated pipe Ø 75 mm	1 pc.	0.6 kg
090852	MC 150 / 90 W	150 mm	Corrugated pipe Ø 90 mm	1 pc.	1.1 kg
090854	MC 150 / 110 W	150 mm	Corrugated pipe Ø 110 mm	1 pc.	1.0 kg
090856	MC 150 / 110 KG	150 mm	Sewage pipe Ø 110 mm	1 pc.	0.9 kg

Installation with corrugated pipe



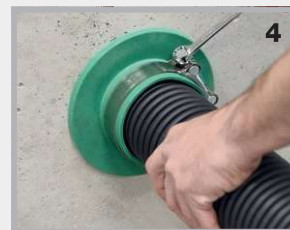
1 The connection seal is positioned in the core drill hole/lining pipe ...

... completely hammered in with a rubber mallet ...



3 ... the clamp is placed over the connection seal and the connection pipe pushed in as far as it will go ...

... the clamp is hand-tightened with a ring spanner ...



5 ... the cable conduit is connected to the core drill hole or the lining pipe and is pressure water-tight.

Installation with sewage pipe



1 The installation is the same as for the cable conduit ...

... the sewage pipe is pushed completely through the seal and the clamp is hand-tightened with a ring spanner.



Gasket inserts, modular seals + FLEX 2000



MASTER-RING
Gasket insert

page 110



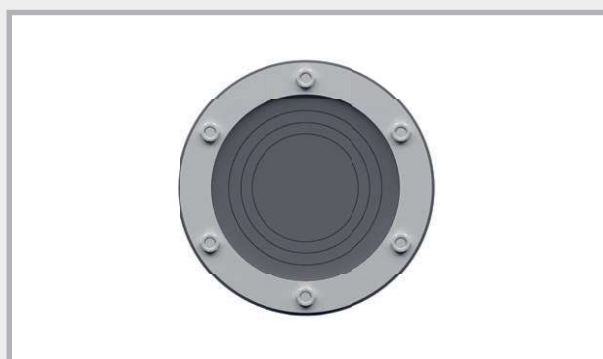
MASTER-RING Supersoft

page 111



MASTER-RING blind plug

page 111



MASTER-RING Multi

pages 112 – 113



MASTER-RING Multi Multiple

page 114



MASTER-RING Multiple

page 115



MASTER-SEAL
Modular seal

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FLEX 2000

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MASTER-RING

Stainless steel V2A gasket inserts

Gasket inserts for lining pipes and core drill holes

- One seal against pressurised and non-pressurised water
- Pressure-tight up to 30 m water column, in fixed and secure position up to 50 m
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel
- Satisfy the requirements of the FHRK testing principles GE 101



Installation: Once the gasket insert has been inserted and the medium pipe has been led through, the screws are tightened crosswise. Give each screw one turn and repeat this procedure several times so the rubber is pressed out uniformly. Maximum torque M6 = 5 Nm, M8 = 10 Nm, M10 = 15 Nm, M12 = 20 Nm. Retighten the nuts after 2–3 hours.

Ø lining pipe/ core drill hole	Medium pipe in mm		Weight per pc.	Closed version	NEW! Split version
	from	to		Art. no.	Art. no.
50	6	12	0.38 kg	120080	
80	20	28	0.41 kg	120100	
80	32	40	0.42 kg	120105	
80	48	50	0.41 kg	120095	
100	15	22	0.59 kg	120107	
100	20	28	0.59 kg	120110	
100	25	32	0.59 kg	120112	
100	32	40	0.64 kg	120115	
100	36	44	0.64 kg	120120	
100	46	56	0.54 kg	120125	120125T
100	55	65	0.52 kg	120130	
125	45	54	1.05 kg	120140	
125	55	64	0.84 kg	120145	
125	70	78	0.75 kg	120150	
150	46	54	1.37 kg	120152	
150	56	66	1.32 kg	120153	
150	69	78	1.22 kg	120155	
150	79	91	1.18 kg	120160	
150	85	94	1.07 kg	120165	
150	98	110	0.96 kg	120170	120170T
200	88	103	2.00 kg	120172	
200	108	115	1.96 kg	120175	120175T
200	116	126	1.88 kg	120180	120180T
200	132	141	1.63 kg	120185	
200	135	144	1.46 kg	120190	
200	150	160	1.40 kg	120192	120192T
250	135	144	2.90 kg	120195	
250	140	149	2.90 kg	120197	
250	150	159	2.60 kg	120200	
250	157	162	2.60 kg	120205	120205T
250	174	181	2.55 kg	120210	
250	178	187	2.15 kg	120215	
250	197	202	2.10 kg	120216	120216T
250	204	210	2.05 kg	120218	
300	193	204	3.50 kg	120225	
300	218	226	3.15 kg	120230	
350	224	233	5.25 kg	120235	
350	249	258	4.85 kg	120240	
350	270	282	4.55 kg	120242	
400	270	280	5.70 kg	120245	
400	279	288	5.65 kg	120250	
400	304	313	5.10 kg	120255	
400	314	323	4.60 kg	120260	
400	320	330	4.20 kg	120265	

Additional supply options: Steel parts + screws in V4A stainless steel; rubber made of NBR or compliant with potable water quality standards available on request

MASTER-RING Supersoft

NEW! Gasket insert for corrugated and thin-walled medium pipes

- Pressure-tight up to 10 m water column
- Rubber thickness 2 x 40 mm
- Soft rubber compound for corrugated and thin-walled medium pipes
- Steel parts and screws made of V2A stainless steel



Core drill hole mm Lining pipe FASO/ WELLO/DURO Plus	Art. no.	Medium pipe in mm		PU	Weight per pc.
		from	to		
100	120280	46	56	1 pc.	0.71 kg
100	120282	55	65	1 pc.	0.76 kg
150	120284	69	78	1 pc.	1.95 kg
150	120286	85	94	1 pc.	1.65 kg
150	120288	98	110	1 pc.	1.39 kg
200	120290	108	115	1 pc.	3.11 kg
200	120292	119	128	1 pc.	2.51 kg
200	120294	150	160	1 pc.	2.07 kg
250	120296	156	165	1 pc.	3.78 kg

Stainless steel V2A blind plugs for core drill hole and lining pipe

- Pressure-tight up to 15 m water column
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel



DN	Art. no.	PU	Weight/pc.
NEW! 50	120518	1 pc.	0.25 kg
80	120520	1 pc.	0.49 kg
100	120525	1 pc.	0.75 kg
125	120530	1 pc.	1.25 kg
150	120535	1 pc.	2.10 kg
200	120540	1 pc.	3.40 kg
250	120545	1 pc.	6.10 kg
300	120550	1 pc.	8.80 kg

Blind plugs up to DN 1500 mm available on request

MASTER-RING Multi



Gasket inserts with “onion ring” technology

A large number of installation options with only 4 sizes

- Pressure-resistant: 30-metre water column = 3 bar
- Pressure plate material: V2A
- Screws and nuts: V2A
- Design: Closed ring
- Rubber material: EPDM
- Width of rubber: 40 mm
- Resistances: Excellent resistance to ageing, weathering and ozone



	100 mm	150 mm	200 mm	250 mm
	MASTER-RING Multi 100 Art. no. 120135 Medium pipe in mm from to	MASTER-RING Multi 150 Art. no. 120171 Medium pipe	MASTER-RING Multi 200 Art. no. 120193 Medium pipe	MASTER-RING Multi 250 Art. no. 120222 Medium pipe
After removing the inner plug	18-20 mm	62-64 mm	108-110 mm	158-160 mm
1st ring	21-25 mm	74-76 mm	123-125 mm	168-170 mm
2nd ring	26-30 mm	88-90 mm	138-140 mm	178-180 mm
3rd ring	31-35 mm	108-110 mm	158-160 mm	198-200 mm
4th ring	36-40 mm			208-210 mm
5th ring	41-45 mm			
6th ring	46-50 mm			
7th ring	51-55 mm			
8th ring	56-60 mm			
9th ring	61-65 mm			
Weight/pc.	0.64 kg	1.35 kg	2.20 kg	2.50 kg

Installation of MASTER-RING Multi

Once you have determined the outer diameter of the pipe to be waterproofed, prepare the MASTER-RING Multi for installation.

Example: Multi 100

Example: core drill hole DN 100 and medium pipe with 18 mm outer diameter

Example: core drill hole DN 100 and medium pipe with 23 mm outer diameter



Only remove the inner plug.



After removing the inner plug, release the first ring ...



... and push it through the gasket insert.



Pushed-through 1st ring



Simply cut off the pushed-through ring using a cutter.



Multi 100 ready for installation

Example: Multi 200

Example: core drill hole DN 200 and medium pipe with 110 mm outer diameter

Example: core drill hole DN 200 and medium pipe with 125 mm outer diameter



Only remove the inner plug.



Release the first ring and push it through the gasket.



Cut off the pushed-through ring using a cutter – the gasket is now ready for installation.

Protection of the core drill hole with epoxy resin

- PROTECT EP resin ensures lasting preservation of the core drill hole.
- Application on dry substrate

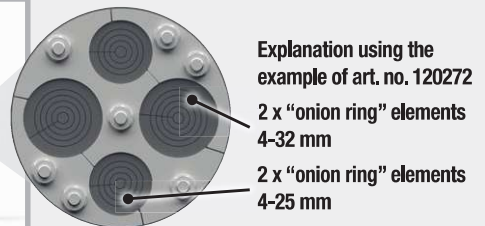


MASTER-RING Multi Multiple

Pressure-resistant: 15 metre water column = 1.5 bar
 Steel parts: V2A
 Version: split
 Rubber material: EPDM
 Width of rubber: 40 mm
 Resistances: Excellent resistance to ageing, weathering and ozone



Ø lining pipe/ core drill hole	Art. no.	Media area				Weight per pc.
		Number of "onion ring" elements	Ø /mm	Number of "onion ring" elements	Ø /mm	
100	120270	3	4-32			0.71 kg
NEW! 100	120272	2	4-32	2	4-25	0.76 kg
NEW! 150	120274	3	22-54			1.95 kg
NEW! 150	120276	6	4-32			1.65 kg
NEW! 150	120278	2	4-32	2	22-54	1.39 kg



Explanation using the example of art. no. 120272
 2 x "onion ring" elements 4-32 mm
 2 x "onion ring" elements 4-25 mm



SERVICE DUCTS

4

Installation of Multi Multiple

Example for DN 100 core drill hole and medium pipe outer diameter 15 mm with art. no. 120270



1 Open the split gasket insert and take out the required segmented plug.



2 Pull out the ring segment you want to remove and sever it with a cutter.

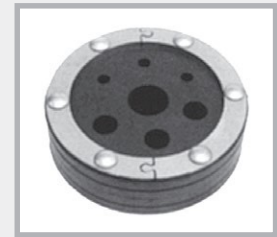


3 After cutting the plug to the required size, reinsert it and the gasket insert can be installed.

MASTER-RING Multiple

V2A stainless steel multiple wall duct gasket inserts for cables and pipes

- Pressure-tight up to 10 m water column
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel



Split version



Mounted

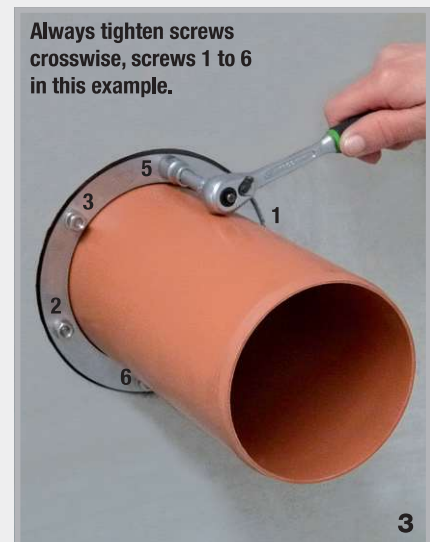
Core drill hole Lining pipe FASO / WELLO / DURO Plus	Art. no.	Outer diameter Medium pipe in mm	Weight per pc.
50	120515	4 to 20	0.39 kg
80	120410	4 to 33 or 40 or 42	0.43 kg
100	120415	4 to 33 or 40 or 42 or 50	0.62 kg
125	120420	4 to 33 or 40 or 42 or 50	0.93 kg
150	120425	4 to 33 or 40 or 42 or 50	1.31 kg
	120495	Additional borehole	

As a basic rule, the technical feasibility of the combination of number and diameter of the media in relation to the minimum diameter of the core drill hole or lining pipe must be checked. Please contact our sales office for assistance.

Tightening the MASTER-RING Multi

All 4 types of screw should be tightened to a torque of 5 Nm.

1. Insert the gasket insert into the lining pipe or the core drill hole.
2. Push the medium pipe through.
3. Tighten the screws cross-wise through one turn. Repeat this process until all screws are tightened to 5 Nm. Retighten the screws after 24 hours.



Always tighten screws crosswise, screws 1 to 6 in this example.

MASTER-SEAL

Modular seal



- Pre-assembled
- Fast and easy installation
- Tested up to 30 m water column
- Can be retrofitted (all gasket inserts are also separable)

Area of installation of core drill hole in mm Lining pipe FASO / WELLO / DURO Plus	Medium pipe Outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
50	11	19	4 x 275	0.08 kg	110250	110600
50	20	25	4 x 200	0.08 kg	110255	110605
80	20	33	4 x 350	0.32 kg	110260	110610
80	34	44	5 x 300	0.30 kg	110265	110615
80	45	49	6 x 250	0.14 kg	110267	110617
80	50	55	7 x 200	0.14 kg	110268	110618
100	27	38	4 x 375	0.52 kg	110270	110620
100	39	50	6 x 350	0.48 kg	110275	110625
100	56	64	6 x 300	0.36 kg	110280	110630
100	65	69	8 x 250	0.16 kg	110281	110631
100	70	75	9 x 200	0.18 kg	110282	110632
125	41	44	4 x 475	1.04 kg	110283	110633
125	45	52	4 x 415	0.96 kg	110284	110634
125	53	63	5 x 375	0.65 kg	110285	110635
125	64	78	7 x 350	0.56 kg	110290	110640
125	79	90	8 x 300	0.48 kg	110295	110645
125	90	94	11 x 250	0.22 kg	110296	110646
125	96	100	11 x 200	0.22 kg	110297	110647
150	58	69	5 x 475	1.30 kg	110298	110648
150	63	76	5 x 415	1.20 kg	110300	110650
150	75	82	6 x 375	0.75 kg	110305	110655
150	88	103	9 x 350	0.68 kg	110310	110660
150	106	115	10 x 300	0.60 kg	110315	110665
150	113	118	14 x 250	0.28 kg	110316	110666
150	120	124	14 x 200	0.28 kg	110317	110667
200	88	107	6 x 575	2.50 kg	110320	110670
200	108	118	7 x 475	1.82 kg	110325	110675
200	115	122	7 x 415	1.68 kg	110330	110680
200	125	138	9 x 375	1.17 kg	110335	110685
200	140	153	13 x 350	0.98 kg	110340	110690
200	156	165	14 x 300	0.84 kg	110345	110695
200	164	168	19 x 250	0.38 kg	110346	110696
200	171	174	19 x 200	0.38 kg	110347	110697



Place MASTER-SEAL around the medium pipe and seal



Push MASTER-SEAL into the annular gap



Tighten each screw one by one in a circular direction by turning once until all modules are evenly tightened



MASTER-SEAL installation complete

MASTER-SEAL

Modular seal



Area of installation of core drill hole in mm Lining pipe FASO / WELLO / DURO Plus	Medium pipe Outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
250	114	130	6 x 500	3.72 kg	110350	110700
250	137	158	8 x 575	3.32 kg	110355	110705
250	159	166	9 x 475	2.34 kg	110360	110710
250	166	178	7 x 400	2.17 kg	110365	110715
250	178	185	12 x 375	1.50 kg	110370	110720
250	182	189	7 x 425	1.75 kg	110371	110721
250	192	200	17 x 350	1.28 kg	110372	110722
250	194	202	9 x 325	1.22 kg	110373	110723
250	208	213	18 x 300	1.08 kg	110374	110724
300	188	204	10 x 575	4.18 kg	110375	110725
300	206	217	12 x 475	3.12 kg	110380	110730
300	215	226	12 x 415	2.88 kg	110385	110735
300	228	236	15 x 375	1.88 kg	110386	110736
300	232	242	9 x 425	2.25 kg	110387	110737
300	244	253	11 x 325	1.49 kg	110388	110738
300	258	263	22 x 300	1.32 kg	110389	110739
350	219	231	9 x 500	5.58 kg	110390	110740
350	239	253	12 x 575	4.98 kg	110395	110745
350	265	275	14 x 415	3.36 kg	110400	110750
350	276	286	18 x 375	2.25 kg	110405	110755
350	314	317	35 x 250	0.70 kg	110408	110758
400	239	256	10 x 650	9.50 kg	110410	110760
400	265	274	11 x 500	6.82 kg	110415	110765
400	314	328	12 x 400	3.66 kg	110420	110770
400	343	350	15 x 325	2.03 kg	110425	110775
450	358	370	19 x 475	4.94 kg	110430	110780
450	366	379	14 x 400	4.27 kg	110435	110785
450	393	405	17 x 325	2.30 kg	110440	110790
500	311	326	8 x 600	14.56 kg	110443	110793
500	340	358	13 x 650	12.38 kg	110445	110795
500	390	407	18 x 575	7.47 kg	110450	110800
500	409	419	21 x 475	5.46 kg	110455	110805
550	390	408	14 x 650	13.30 kg	110460	110810
550	415	435	15 x 500	9.30 kg	110465	110815
550	440	457	20 x 575	8.30 kg	110470	110820
550	457	470	23 x 475	5.98 kg	110475	110825
600	410	440	10 x 600	18.20 kg	110480	110830
600	440	458	16 x 650	15.20 kg	110485	110835
600	490	505	22 x 575	9.13 kg	110490	110840
600	515	528	19 x 400	5.80 kg	110495	110845

Additional sizes available immediately ex stock

Installation: After insertion of the modular seal and lead-through of the medium pipe, the screws are tightened one by one in a clockwise direction. Give each screw one turn and repeat this procedure several times so the rubber is pressed out uniformly.

Maximum torques	TYPE	200/250/275	3 Nm	500/525	60 Nm	650	85 Nm
		300/325/350/375	15 Nm	575	50 Nm	600	130 Nm
		400/415/425/475	35 Nm				

FLEX 2000



Plastic, vapour- and waterproof sealing compound for waterproofing of pipe and cable ducts below ground level. Also suitable for leakage sealing in case of inflowing water.

Annular gap sealing

(tested by MFPA Leipzig) up to 7.5 m water column



Art. no.	Description	PU	Secondary packaging	Weight
120610	FLEX 2000 sealing compound Foil bag 850 g	1 pc.	Carton of 20 tubular bags	0.94 kg
120620	Cartridge applicator with flexible nozzle	1 pc.		1.25 kg
120630	Flexible nozzle	1 pc.		0.06 kg

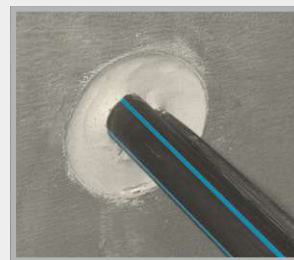


Technical data

Consistency	Paste-like, non-sagging
Heat resistance	+50°C
Processing temperature	+5°C to +35°C
Usage	Approx. 1.6 kg per litre void
Storage	2 years at 20°C

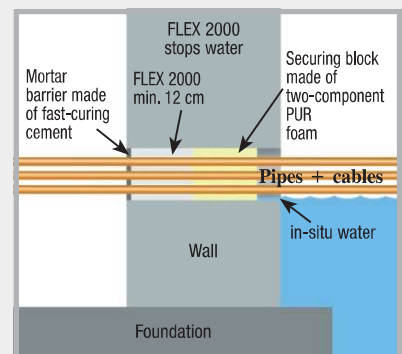
Substrate

The substrate may be dry, damp or wet. The substrate must be free from grease, tar, oil and loose particles. Suitable substrates are: concrete, brick, mortar, plaster and all other mineral construction materials as well as ceramics, PVC, polyethylene and polypropylene.



Application

Prior to application, FLEX 2000 is heated to approx. 30-40°C by placing it in warm water for at least 30 minutes to ensure optimum consistency and workability. Clean the inside of the duct using a suitable brush to remove dust, sand, and any loose particles. Before applying FLEX 2000, a securing block of a two-component PUR foam is applied at a depth of approx. 10 cm. The FLEX 2000 foil bag is then placed in the cartridge applicator and the material is pressed through the flexible nozzle into the duct from back to front so that the resulting layer is at least 12 cm thick. After sealing cable ducts, jiggle the cable slightly and press FLEX 2000 into any voids that form. Always ensure that the cable is free of tension and strain after sealing. Finally, the sealing compound set back approx. 1 cm is pressed in well and smoothed with a metal filler knife. As an additional safeguard, the opening of the duct is closed with fast-curing cement. If a new cable is to be installed later on, the mortar barrier is removed and the cable is pushed through the sealing compound. The duct is subsequently sealed using FLEX 2000.



Pipe bushing systems

Pressure water-tight products for wall and floor slab penetration of sewer pipes



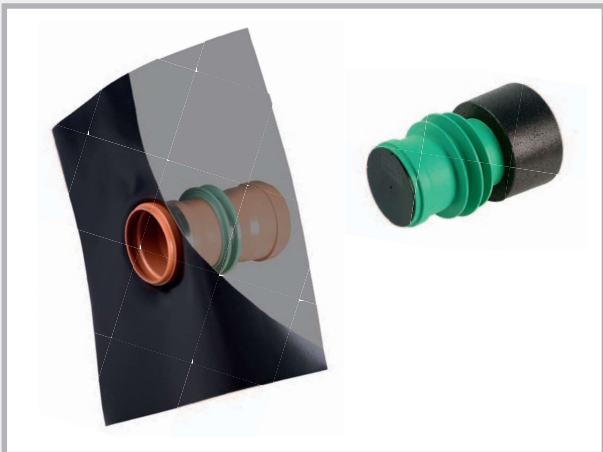
**Pipe bushing
UniCut**

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**Pipe bushing
Base / Novo**

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**Pipe bushing
Special versions**

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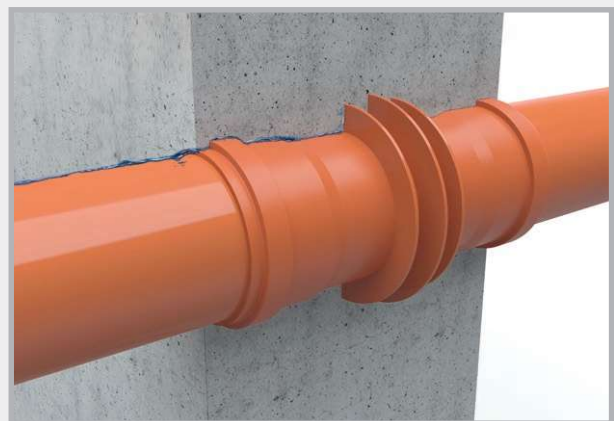


**Ground drains
+ Accessories**

pages 124 – 125

Sewer pipes are among the most common kinds of pipes to pass through concrete parts.

Our pipe bushing systems offer ready-to-install system solutions for wall and floor slab ducts for the common materials (KG and KG 2000).



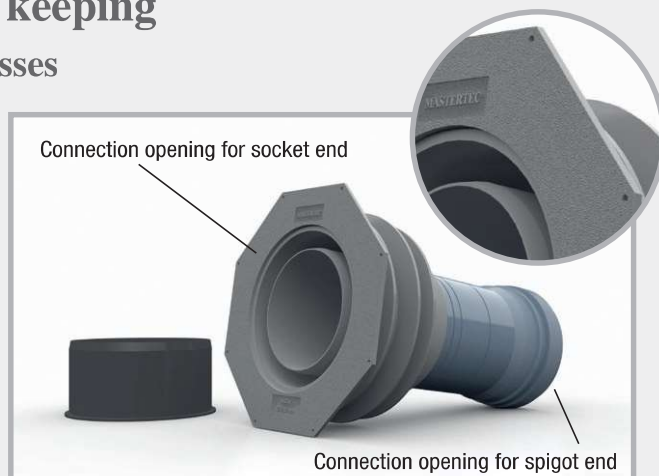
Pipe bushing Novo as a pressure water-tight wall duct.

UniCut pipe bushing

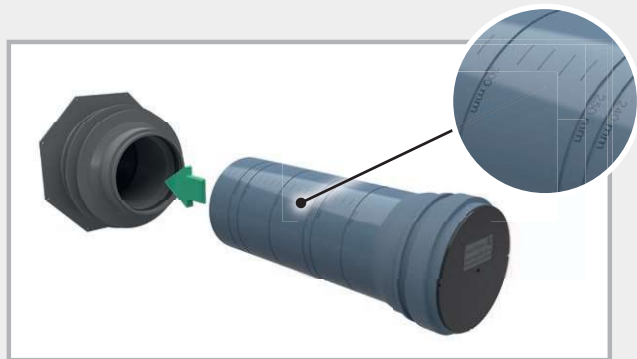
NEW! The pipe bushing for stock keeping

One product for 7 different wall thicknesses

- Diameter: 110 mm
- Simple length adjustment on site
Saw groove for wall thickness:
at 200/240/250/300/350/365 mm
- Pressure water-tight “Novo” waterstop
- Trowel flange for the connection of the outer seal
- Nail holes for fixing to the formwork
- Maintains the flow direction



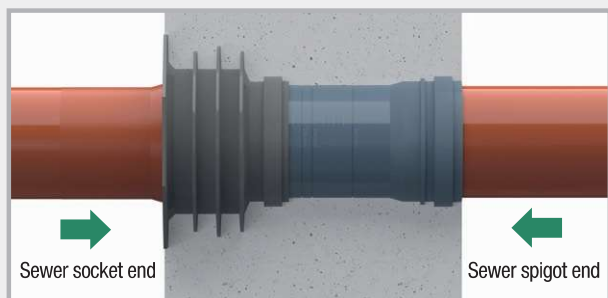
Art. no.	Description	PU	Secondary packaging	Weight	
081500	UniCut pipe bushing Ø 110 mm Consists of: UniCut flange part “SOLO” with plug and seal UniCut saw pipe with plug and seal For wall thickness: 200/240/250/300/350/365/400 mm	1 pc.	Carton of 10 pcs.	1.40 kg	
081510	UniCut flange part “SOLO” Ø 110 mm with plug and seal for on-site connection of KG and KG 2000 pipes Ø 110 mm	1 pc.	Carton of 20 pcs.	0.65 kg	



The UniCut pipe bushing is cut to the required wall thickness on site. For a clean cut, a saw groove is incorporated in the UniCut saw pipe. After cutting, the saw pipe is pushed into the UniCut flange part.



For fixing to the formwork, the UniCut flange part has 8 nail holes for ensuring a secure position.



After concreting, the UniCut pipe bushing sits flush in the wall. After removing the assembly cover and inserting the supplied seal into the socket of the saw pipe, the sewer pipes can then be connected.



With the UniCut flange part “SOLO”, a pressure water-tight pipe bushing can be created on site with commercially available Ø 110 mm sewer pipes. The sewer pipe is cut to the wall thickness **minus 85 mm** (length of UniCut flange part) and inserted with the spigot end into the socket of the UniCut flange part.

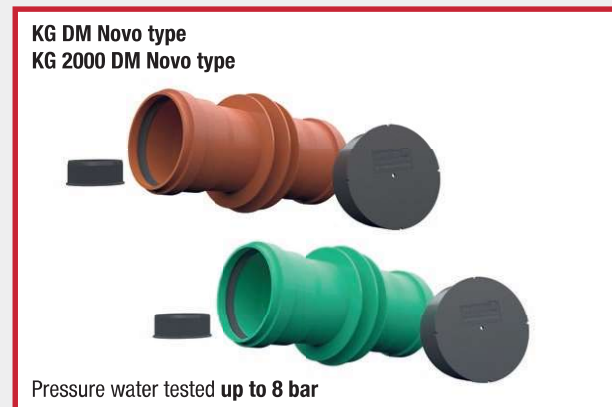
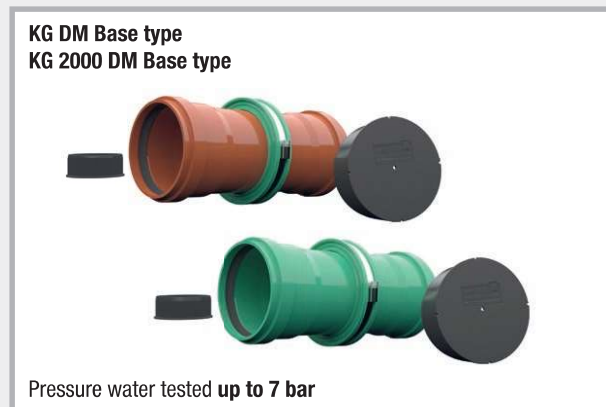
Sewage pipe bushing systems

Double socket type (DM)



Advantages of the Base and Novo double socket

- Delivered as solid wall version
- With lip seal
- Manufactured for corresponding wall thickness
- Radon-tight
- incl. 2 covers as installation aid
- Pre-installed waterstop



KG DM type product range [Technical details page 123](#)

Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base double socket		Novo double socket				
DN 110 Weight/pc.	080404 0.75 kg	080405 0.80 kg	080350 0.60 kg	080351 0.62 kg	080352 0.70 kg	080353 0.77 kg	080354 0.81 kg
DN 125 Weight/pc.	080419 1.00 kg	080420 1.00 kg	080355 0.77 kg	080356 0.82 kg	080357 0.91 kg	080358 0.98 kg	080359 1.04 kg
DN 160 Weight/pc.	not producible	080433 1.75 kg	080434 1.85 kg	080436 1.85 kg	080438 2.05 kg	080440 2.25 kg	080442 2.50 kg
DN 200 Weight/pc.	not producible	080443 2.80 kg	080444 3.00 kg	080445 3.00 kg	080446 3.35 kg	080448 3.60 kg	080450 3.70 kg

KG 2000 DM type product range

KG 2000 Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base double socket	Novo double socket				
DN 110 Weight/pc.	080750 0.80 kg	080800 0.60 kg	080801 0.62 kg	080802 0.68 kg	080803 0.77 kg	080804 0.81 kg
DN 125 Weight/pc.	080762 1.10 kg	080805 0.77 kg	080806 0.82 kg	080807 0.91 kg	080808 0.98 kg	080809 1.04 kg
DN 160 Weight/pc.	080774 1.60 kg	080776 1.80 kg	080778 2.00 kg	080780 2.30 kg	080782 2.60 kg	080784 2.80 kg
DN 200 Weight/pc.	080786 2.80 kg	080788 3.00 kg	080790 3.20 kg	080792 3.40 kg	080794 3.70 kg	080796 3.85 kg

The Base double socket version is available for further wall thicknesses.

Flow direction (FR) type Base + Novo



The flow direction types are manufactured in one piece for the corresponding wall thickness. You can also prepare any wall thickness yourself on the building site with a ground drain and socket ring. The FR type facilitates the wastewater flow in one direction.

KG FR type product range

Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base flow direction			NEW! Novo flow direction			
DN 110 Weight/pc.	090710 0.75 kg	090713 0.80 kg	090716 0.90 kg	090719 0.90 kg	090722 1.00 kg	090725 1.10 kg	090728 1.20 kg
DN 125 Weight/pc.	090731 1.00 kg	090734 1.00 kg	090737 1.10 kg	090740 1.10 kg	090743 1.25 kg	090749 1.45 kg	090752 1.60 kg
DN 160 Weight/pc.	not producible	not producible	090758 1.85 kg	090761 1.85 kg	090764 2.05 kg	090770 2.25 kg	090773 2.50 kg
DN 200 Weight/pc.	not producible	not producible	090779 3.00 kg	090782 3.00 kg	090785 3.35 kg	090788 3.60 kg	090791 3.70 kg

Other wall thicknesses available

KG 2000 FR type product range

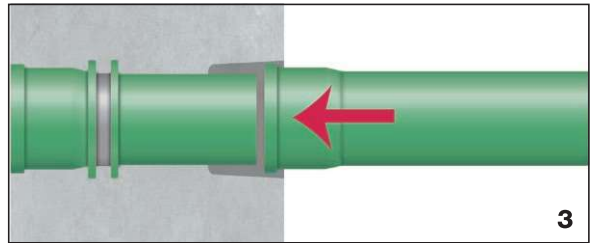
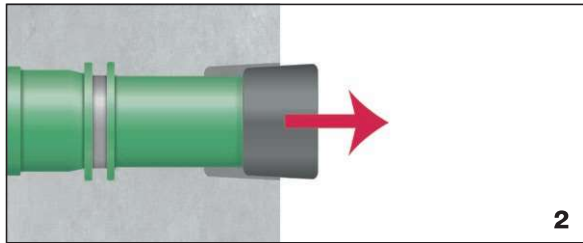
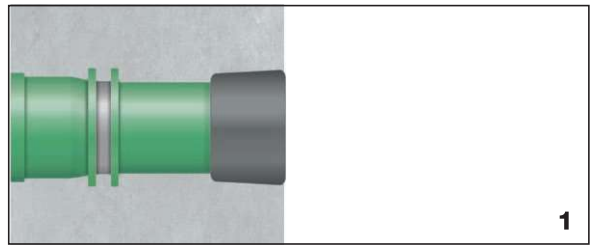
KG 2000 Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base flow direction		NEW! Novo flow direction			
DN 110 Weight/pc.	080820 0.80 kg	080825 0.85 kg	080830 0.90 kg	080835 1.10 kg	080845 1.30 kg	080850 1.40 kg
DN 125 Weight/pc.	080855 1.10 kg	080860 1.20 kg	080865 1.20 kg	080870 1.30 kg	080880 1.50 kg	080885 1.65 kg
DN 160 Weight/pc.	not producible	080890 1.80 kg	080895 2.00 kg	080905 2.30 kg	080915 2.60 kg	080920 2.80 kg
DN 200 Weight/pc.	not producible	080923 3.10 kg	080925 3.20 kg	080933 3.20 kg	080935 3.70 kg	080945 3.85 kg

Other wall thicknesses available

Flow direction (FR) type

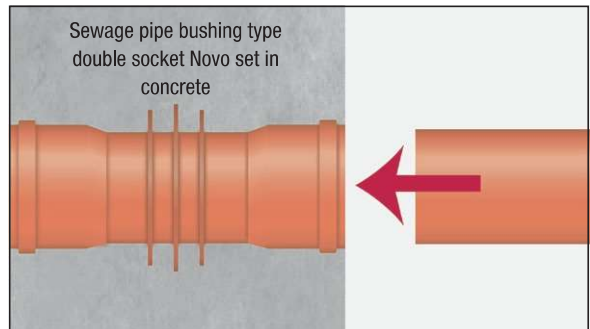
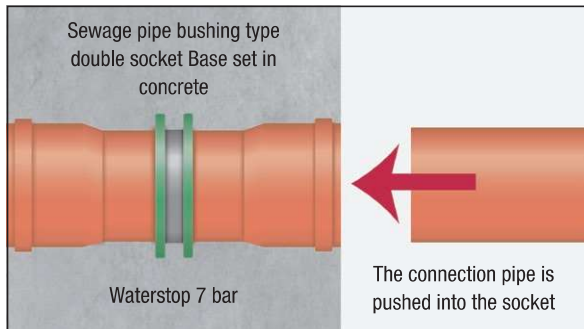
Function and technology

1. KG 2000 flow direction type pipe bushing, concreted into the wall
2. The socket ring is removed before the next pipe is connected.
3. The next pipe is connected. The flow direction of the water is retained.



KG type Base and Novo double socket

Function and technology



The double socket is cast into concrete. After concreting, the closure plugs are removed and the seals inserted. The next pipe can be connected.

Double socket double wall (DM DW) type

Additional waterstops in the shell area of cavity walls.



Sewage pipe bushing DM DW type



KG 2000 pipe bushing DM DW type



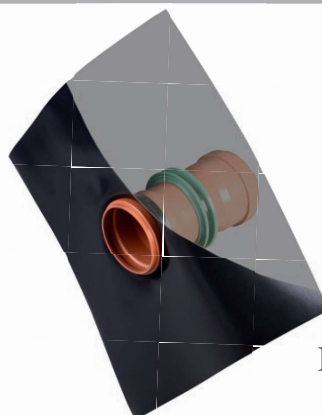
Price available on request

Foil flange (FFL) type



In addition to the pressure water and radon-resistant seal in the concrete provided by the RONDO Base, the foil flange enables the pipe bushing to be integrated into an outer sealing plane.

**Foil flange made of PVC foil, 1.5 mm,
Size: 50 x 50 cm,
weldable with hot air gun,
bondable with solvent welding agent,
resistant to oil and bitumen**



Price available on request

Ground drains

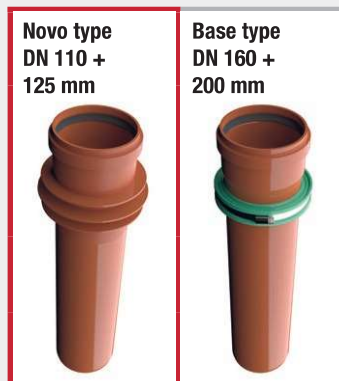


Sewage ground drains

Solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
080366	DL 110/500	110	500 mm	0.76 kg
080368	DL 125/500	125	500 mm	0.93 kg
080470	DL 160/500	160	500 mm	2.45 kg
080475	DL 200/500	200	500 mm	3.85 kg

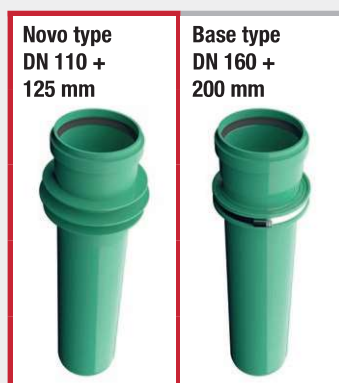


KG 2000 - ground drains

Solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

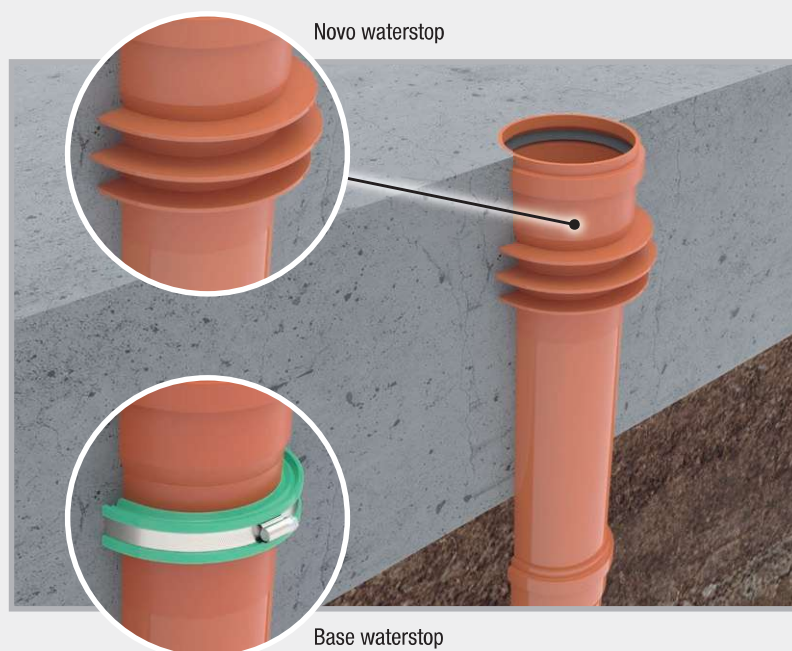
Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
080827	DL 110/500	110	500 mm	0.76 kg
080828	DL 125/500	125	500 mm	0.93 kg
080986	DL2000 160/500	160	500 mm	2.40 kg
080989	DL2000 200/500	200	500 mm	3.80 kg



Function and technology

KG and KG 2000 ground drains are used for floor slab penetrations.

The ground drains are connected to the sewer base lines and concreted in up to the top edge of the floor slab. The transition from the pipe to the concrete is reliably and permanently sealed against pressing water or gases rising from the ground by the "Novo" or "Base" waterstop.



Sewage ground drains with foil flange

Foil flange made of PVC foil 1.5 mm, size: 50 x 50 cm, weldable with hot air gun, bondable with solvent welding agent, resistant to oil and bitumen

Sewage ground drains with foil flange – solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
080451	DL 110/500 FFL	110	500 mm	1.70 kg
080452	DL 125/500 FFL	125	500 mm	2.15 kg
080454	DL 160/500 FFL	160	500 mm	3.00 kg
080456	DL 200/500 FFL	200	500 mm	4.40 kg

KG 2000 ground drains with foil flange

KG 2000 pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	KG 2000 Ø DN mm	Length	Weight per pc.
080992	DL2000 110/500 FFL	110	500 mm	1.70 kg
080994	DL2000 125/500 FFL	125	500 mm	2.00 kg
080996	DL2000 160/500 FFL	160	500 mm	2.90 kg
080998	DL2000 200/500 FFL	200	500 mm	4.20 kg

For fixing the foil flange to the part, we recommend the **POWER** swelling tape adhesive on page 8.



Accessories for lining pipes and pipe bushings

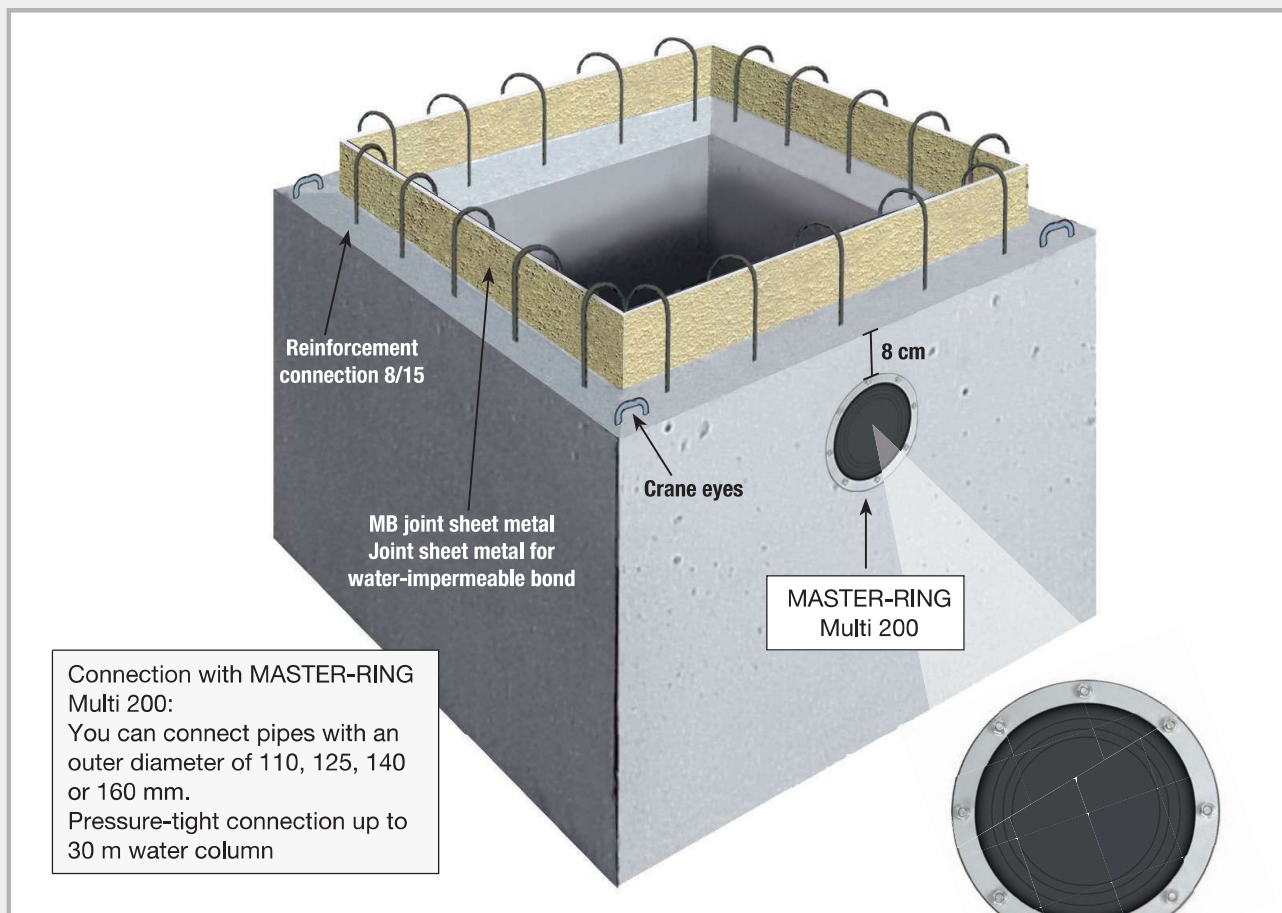
Sewage socket ring for sewage pipe bushings, flow direction type

Art. no.	Type	PU	Weight/pc.
080476	MFR 110	1 pc.	0.02 kg
080477	MFR 125	1 pc.	0.03 kg
080478	MFR 160	1 pc.	0.04 kg
080479	MFR 200	1 pc.	0.07 kg



PILO

Pump sump Multi "Standard"



Pressure-tight and flexible with MASTER RING Multi 200

The PILO pump sump is a precast concrete part made of water-impermeable concrete C 35/45.

- Reduces the construction time
- Eliminates difficult shuttering work
- Easy installation
- Manufactured from water-impermeable concrete
- Watertight connection thanks to use of MFPA-tested joint sheet metal
- Connection reinforcement
- Crane eyes

Sizes of PILO pump sump Multi "Standard"

Art. no.	Inner dimensions W x L x H	Wall thickness	Weight	Outer dimensions W x L x H	PU
090450	60 x 60 x 60 cm	12 cm	approx. 730 kg	84 x 84 x 72 cm	1 pc.
090452	80 x 80 x 80 cm	12 cm	approx. 1320 kg	104 x 104 x 92 cm	1 pc.
090454	100 x 100 x 80 cm	12 cm	approx. 1640 kg	124 x 124 x 92 cm	1 pc.
090455	100 x 100 x 100 cm	12 cm	approx. 1890 kg	124 x 124 x 112 cm	1 pc.
090456	120 x 120 x 80 cm	12 cm	approx. 2050 kg	144 x 144 x 92 cm	1 pc.

Due to the production process, the pump sumps are slightly tapered. The internal width-wise and length-wise dimensions reduce towards the base of the shaft.

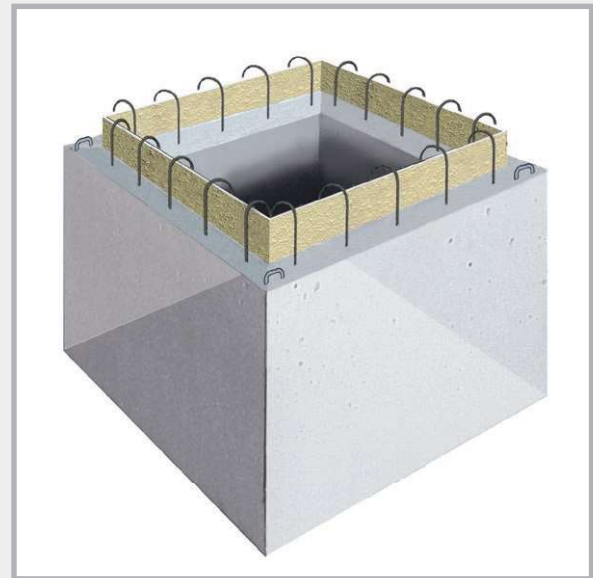
PILO

Pump sump

"Spezial"

- Water-impermeable concrete C35/45
- With joint sheet metal MB
- Connection reinforcement

The PILO pump sump "Spezial" has no borehole. These are made at short notice according to your specifications.

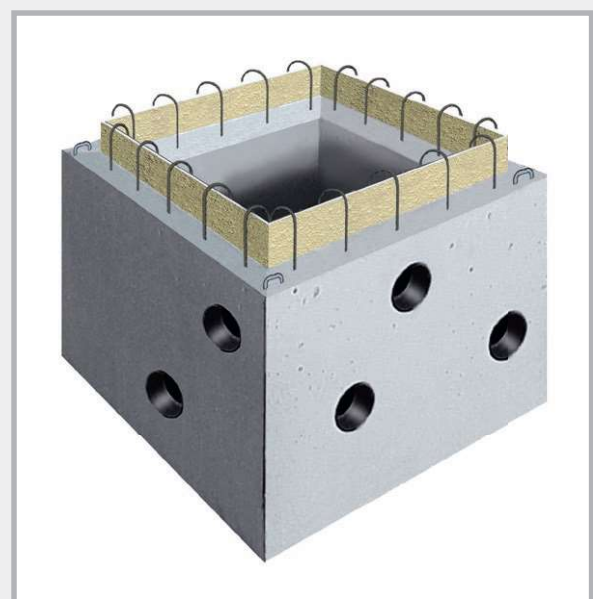


Sizes of PILO pump sump without borehole

Art. no.	Inner dimensions W x L x H	Wall thickness	Weight	Outer dimensions W x L x H	PU
090443	60 x 60 x 60 cm	12 cm	approx. 730 kg	84 x 84 x 72 cm	1 pc.
090445	80 x 80 x 80 cm	12 cm	approx. 1320 kg	104 x 104 x 92 cm	1 pc.
090447	100 x 100 x 80 cm	12 cm	approx. 1640 kg	124 x 124 x 92 cm	1 pc.
090448	100 x 100 x 100 cm	12 cm	approx. 1890 kg	124 x 124 x 112 cm	1 pc.
090449	120 x 120 x 80 cm	12 cm	approx. 2050 kg	144 x 144 x 92 cm	1 pc.

Boreholes

Art. no.	
090440	Core drill hole DN 200, flexible Connection options 110, 125, 140 and 160 mm, incl. MASTER-RING Multi DN 200
090430	Connection for sewage pipe DN 110 incl. connection seal
090432	Additional connection for sewage pipe DN 125 incl. connection seal
090433	Additional connection for sewage pipe DN 160 incl. connection seal
090436	Additional connection for sewage pipe DN 200 incl. connection seal



The connection bores are made according to your specifications. The options are listed in the table.

Shaft cover for pump sump

Walkable covers, galvanised

Pump sump L x W x H Dimensions	60 x 60 x 60 cm	80 x 80 x 80 cm	100 x 100 x 80 cm	120 x 120 x 80 cm
Clear dimension	65.5 x 65.5 cm	85.5 x 85.5 cm	105.5 x 105.5 cm	122 x 122 cm
Cover size	70 x 70 cm	90 x 90 cm	110 x 110 cm	126.5 x 126.5 cm
Frame outer dimension	71 x 71 cm	91 x 91 cm	111 x 111 cm	131 x 131 cm
Can withstand loads up to 750 kg				
Art. no.	090532	090534	090536	090538
Weight/pc.	15.0 kg	24.0 kg	44.0 kg	66.0 kg
Can be bolted down tightly to exclude surface water and odours, can withstand loads up to 750 kg				
Art. no.	090542	090544	090546	090548
Weight/pc.	26.0 kg	39.0 kg	55.0 kg	74.0 kg

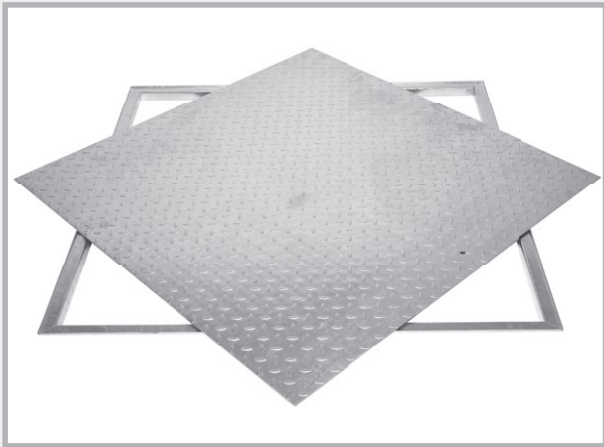
Traffic-bearing covers, galvanised

Pump sump L x W x H Dimensions	60 x 60 x 60 cm	80 x 80 x 80 cm	100 x 100 x 80 cm	120 x 120 x 80 cm
Clear dimension	63 x 63 cm	83 x 83 cm	103 x 103 cm	120 x 120 cm
Cover size	70 x 70 cm	90 x 90 cm	110 x 110 cm	126.5 x 126.5 cm
Frame outer dimension	74 x 74 cm	94 x 94 cm	114 x 114 cm	131 x 131 cm
Traffic-bearing up to 5000 kg Wheel pressure up to 1250 kg				
Art. no.	090552	090554	090556	090558
Weight/pc.	32.0 kg	51.0 kg	70.0 kg	112.0 kg
Traffic-bearing up to 15000 kg Wheel pressure up to 3750 kg				
Art. no.	090562	090564	090566	090568
Weight/pc.	43.0 kg	70.0 kg	97.0 kg	137.0 kg

Shaft cover for pump sump

Walkable

Frame and cover galvanised, with 1 borehole as lifting opening



Walkable

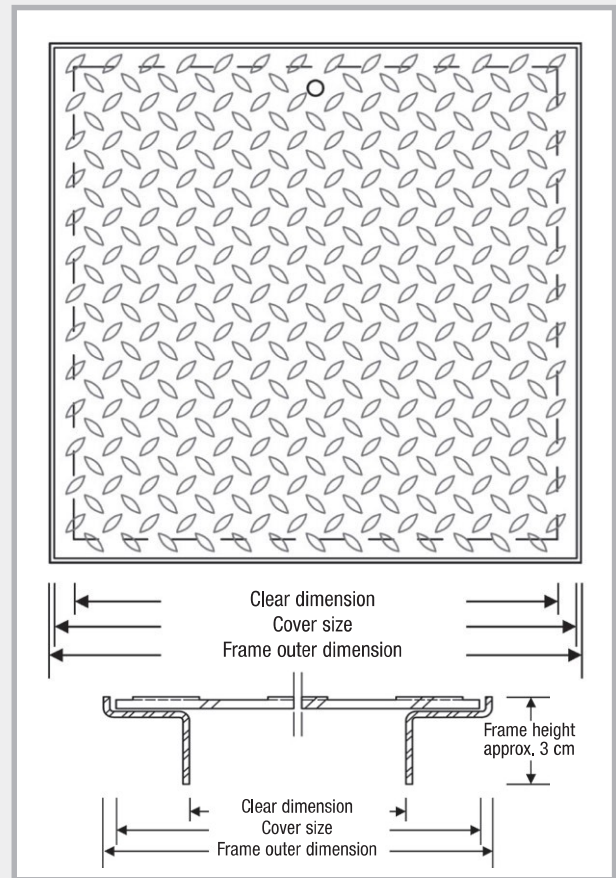
Can be bolted down tightly to exclude surface water and odours, galvanised frame and cover, EPDM cellular rubber seal in frame, cover can be screwed



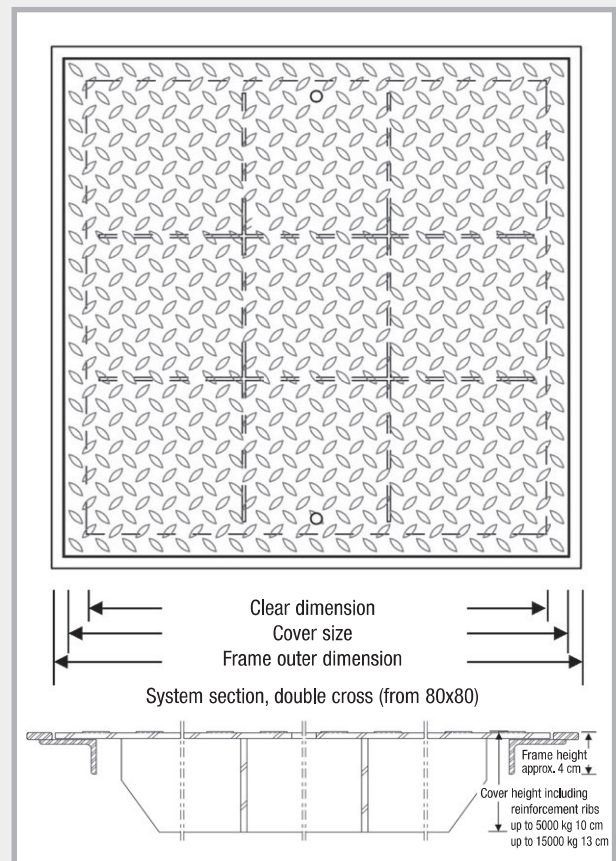
Traffic-bearing, galvanised



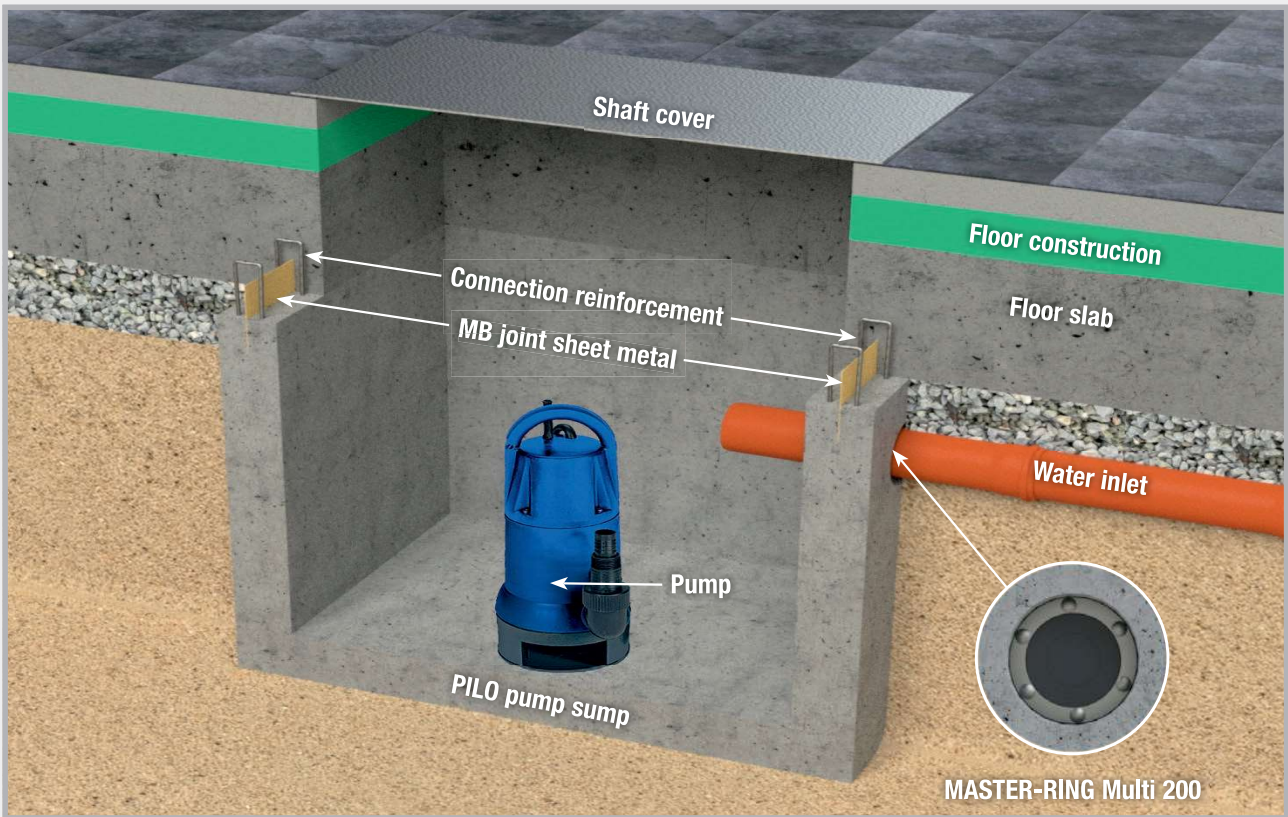
Dimensions, walkable



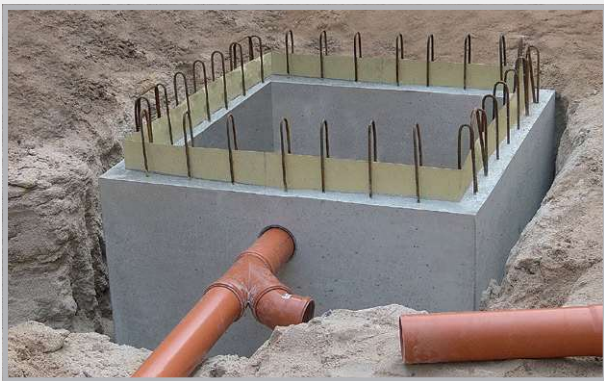
Dimensions, traffic-bearing



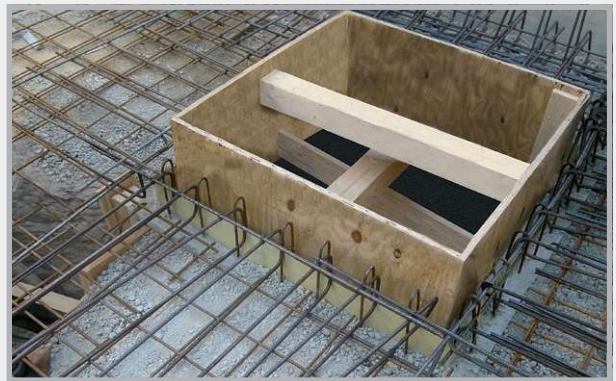
Principle of operation of the PILO pump sump



At the construction site



PILO pump sump with connected inlet.



PILO pump sump prior to concreting of foundation. The illustration shows the joint sheet metal which forms a pressure water-tight seal at the transition to the foundation. The connection reinforcement of the pump sump is connected to the foundation reinforcement.



Following concreting: illustration shows the pump sump (light grey) and concreted foundation (dark grey).

Compared to in-situ concrete construction you can save between 200 and 500 euro, depending on the size of the pump sump.



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