


Scope:

Roxtec specification for the sealing of HV single core power cables, multicore cables and earthing arrangements into a substation environment either below ground or at a higher level. The primary consideration of this specification is to prevent water ingress into the controlled switchroom environment, to assist in maintaining conditions within switchgear operational parameters in accordance with manufacturer's guidelines and **IEC62271-1 2007 / BSEN62271-1 2008**. This specification also provides protection against pollution from dust, smoke, corrosive and/or flammable gases, vapours and salt in accordance with the same, reducing the potential for equipment failure due to partial discharge.

The Roxtec system also provide a means of secure cable retention under normal loads and fault conditions and/or where the exterior of the building is subject to ground settlement post back-filling of the cable trench. They also provide ingress protection in both normal and flood conditions and can be installed in running water.

Technical Performance & Product Overview:

Roxtec Knock Out Sleeve UG (KOS) <ul style="list-style-type: none"> Used for formation of 100mm, 150mm and 200mm ducts – see casting guidelines for additional information. Complete solution comprising of a sleeve with an external puddle flange and integrated sealing plate – keeps building dry during and after construction. Cast installation for either new build or retrofit applications. IP68 tested and certified to 0.3bar constant water pressure & 1bar catastrophic water pressure. Gas tight to 0.3bar. 				
Article	W (mm)	Accommodates Seal	Accommodates Extension Conduit / Duct (mm)	
KOS 100/110 UG	180	R 100 UG RS 100 UG	110	184064
KOS 150/160 UG	230	R 150 UG RS 150 UG H3 150 UG	160	184066
KOS 200/200 UG	280	R 200 UG H3 200 UG	200	184068


Roxtec UG Rubber Seals


- Tested and certified to IP68 for constant water pressure to 0.3bar (3m head of water normal conditions) and catastrophic pressure to 1bar (10m head of water flood conditions). Gas tight to 0.3bar.
- Certified rodent / vermin ingress protection.
- Can be installed in running water conditions & retrofit around existing cable installations.
- Fittings manufactured from 316L stainless steel. Minimum clearance of 3mm between rubber and metal fittings to prevent direct contact between the cable and any metal components.
- Minimum seal depth 60mm to aid with cable retention. Preventing loss of seal when; movement occurs on the cable due to ground settlement post backfill, the weight of the cables and the flex during operation.
- Cable retention with a pull force of up to 10,000N and a weight load of up to 1,000kg, depending on size / seal selection.





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Roxtec RS UG Seal Manufactured from Roxylon EPDM rubber with Multidiameter peelable layers at 1mm increments, designed to seal a single cable between 9-204mm Ø. The unique indicator window allows for a simple check that the seal has been sufficiently tightened. Fully openable/split system allowing for easier installation / cable positioning.				
Article	Number of Cables	For Cable / Pipe Ø (mm)	For Aperture Dimension Ø (mm)	Article N°.
RS 100 UG	1	0+39-63	100-105	167236
RS 100 24-53 UG	1	0+24-53	100-105	186250
RS 125	1	0+55-88	125-130	167638
RS 150 UG woc	1	80-113	150-155	167246

Roxtec H3 UG Seal Manufactured from Roxylon EPDM rubber with Multidiameter peelable layers at 1mm increments, designed for use with HV single core cables between 23-68mm Ø in a trefoil formation. The unique indicator window allows for a simple check that the seal has been sufficiently tightened. Fully openable/split system allowing for easier installation / cable positioning.				
Article	Number of Cables	For Cable / Pipe Ø (mm)	For Aperture Dimension Ø (mm)	Article N°.
H3 150 UG	3	24-52	150-155	151561
H3 185 UG	3	48-64	185-190	126283
H3 200 UG	3	48-68	200-205	117842

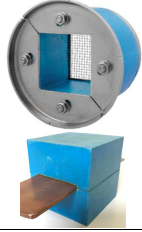
Roxtec R UG Seal Designed for entries with multiple LV / Multicore cables, including control / comms and aux cables. An openable/split round seal used in conjunction with Roxtec RM UG modules.				
Article	Module Packing Space (mm)	For Cable / Pipe Ø (mm)	For Aperture Dimension Ø (mm)	Article N°.
R 100 UG	60 x 60	Refer to Module Packing Space & Multidiameter Sealing Range of RM UG Modules	100-102	158522
R 150 UG	90 x 90		150-152	150071
R 200 UG	120 x 120		200-202	150075

Roxtec RM UG Modules Roxtec RM UG sealing modules feature Multidiameter, the Roxtec technology with removable layers so that they can easily be adapted to a wide range of cable sizes. The Roxtec RM UG sealing module is developed to be installed in the Roxtec R UG Seal.				
Article	Number of Cables	For Cable / Pipe Ø (mm)	Module Packing Space Dims (mm)	Article N°.
RM 30 UG	1	0+10-23.5	30 x 30	116837
RM 40 UG	1	0+9.5-31	40 x 40	116865
RM 60 UG	1	0+24-52	60 x 60	116869
RM 90 UG	1	0+48-68	90 x 90	174930
RM 20 UG	1	0+4-13	20 x 20	116871
RM 20w40 UG	2	0+2x4-13	20 x 40	116870



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Earthing Arrangements Flat earth tapes can be sealed using an R Seal (AISI 316L) and a water jet cut module in Roxylon EPDM rubber. Note that the Roxtec UG™ sealing system is not suitable for use with braided / twisted earth rope. Solid circular earth bar can be sealed using the standard Roxtec RM modules.				
Article	Packing Space / Module Dims (mm)	Earth Tape / Cable Dims Ø (mm)	For Aperture Dimension Ø (mm)	Article N°.
Seals:				
R 100 AISI 316L	60 x 60		100-102	R000001001021
R 125 AISI 316L	80 x 80		125-127	R000001251021
R 150 AISI 316L	90 x 90		150-152	R000001501021
R 200 AISI 316L	120 x 120		200-202	R000002001021

Earth Tape Modules:				
RM 60/SQ40x4	60 x 60 ET Module	40x4		118418
RM 60/SQ50x6	60 x 60 ET Module	50x6		118438
RM 60/SQ50x4	60 x 60 ET Module	50x4		107067
RM 20w60/31x6	20 x 60 ET Module	31x6		189962
RM 20w60/40x4	20 x 60 ET Module	40x4		172809
RM Customised	Customised	Customised		Contact Roxtec

RM Modules/Cable Packing Space:				
RM 30	30 x 30 Module	0+10-23.5		RM00100301000
RM 40	40 x 40 Module	0+21.5-34.5		RM00100401000
RM 60	60 x 60 Module	0+28-54		RM00100601000
RM 20	20 x 20 Module	0+4-14.5		RM00100201000
RM 20w40	20 x 40 Module	0+2x3.5-16.5		RM00120401000
RM40 (10-32)	40 x 40 Module	0+9.5-32.5		RM00140101000

Bespoke Solutions Contact Roxtec directly for design services for seals and customised sealing solutions, which fall outside the standard range.
Manufacturing / Quality Approvals <ul style="list-style-type: none"> • ISO 9001:2008 ISO 14001:2004 certified • Seals tested and certified to IP68 • Certified rodent / vermin ingress protection • Complies with recommendations outlined in EA Technology white paper – Humidity Effects in Substations - 2013

