



Comparison Novoseal products

SINGLE	MULTIPLE
	
Pipe cap	Pipe cap
	 <div data-bbox="801 1077 911 1115">Plug in</div> <div data-bbox="1082 1077 1235 1115">Push over</div>
Universal plug	Assembly endstop
	
Accessible endstop	Assembly endstop (splittable)
	
Splittable microduct endstop	DB bundle break out seal

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SINGLE MICRODUCTS






	Pipe cap	PE protection cap	Universal plug	Accesible endstop	Splittable microduct endstop
					
Cable seal	☹	☹	☺	☺	☺
Novomicro DI	☺	☺	☺	☺	☺
Novomicro DB	☺	☺	☺	☺	☺
Assemblies	☺**	☹**	☹	☹	☹
Splittable	☹	☹	☺	☺	☺
Re-openable	☺	☺	☺	☺	☺
Nr of parts	1	1	1	2	4
Diameter pipe	4-50 mm	4-50 mm	32 – 50 mm	7 (4,5,6, 8) mm	10 – 20 mm
Diameter cable	Not relevant	Not relevant	6 – 20 mm	1,25 – 2,5 mm	2,5 – 12 mm
Sand tight	☺	☺	☺	☺	☺
Water tight Splash	☺	☺	☺	☺	☺
Water tight (0,25 b)	☹	☹	☹	☺	☺
Gas tight (0,25 bar)	☹	☹	☹	☺	☺
Min temperature			-15 °C	-15 °C	-15 °C
Max temperature					
Pull out force duct*				>60 N	>100 N
Pull out force cable*				4N	3 – 45 N
Material	PVC	LDPE	TPE	TPE+PC	TPE+PAGF

*Depend on size

**to be checked



MULTIPLE MICRODUCTS

	Pipe cap	Endstop – plug in	Endstop – push over	Assembly endstop	DB bundle break out
					
Cable seal	☹	☹	☹	☹	☹
Single microduct	☺	☺	☺	☺	☺
Novospace	☺	☹	☹ ***	☹	☺
Novospeed	☺	☹	☹ ***	☹	☺
Novosplit	☺*****	☹	☹	☹	☺
Novonet	☺*****	☹	☹	☹	☺
Splittable	☹	☹	☹	☺	☺
Re-openable	☺	☺	☺	☺	☺
Nr of parts	1	1	1	5	11
Diameter opto pipe	4-50 mm	40 mm	40-60 mm	32 – 63 mm	32 – 63 mm
Diameter microduct	Not relevant	7 + 10	7+10	4, 7, 10, 12, 14, 15 mm	4, 7, 10, 12, 14, 15 mm
Sand tight	☺	☺	☺	☺	☺
Water tight Splash	☺	☺	☺	☺	☺
Water tight (0,25 b)	☹	☹	☹	☺	☺
Gas tight (0,25 bar)	☹	☹	☹	☺	☺
Tightness 0,5 bar**	☹	☹	☹	☺	☺
Min temperature		-15 °C	-15 °C	-15 °C	-15 °C
Max temperature					
Pull out microduct*				>50 N	>50 N
Pull out optoducts				± 600 N	± 600 N
Material	PVC	TPE	TPE	TPE+PAGF	TPE+PAGF +PE

*Depend on size

** Special instruction to be followed

*** To be checked if sheet can be removed

*****Right dimension to be tested




 guiding
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NOVOSEAL: UNIVERSAL

PRODUCT DESCRIPTION

This product is a divisible endstops for cable filled ducts or wall inlets.

The universal plug is specially designed to safeguard the dirt and splash water tightness with these products.



APPLICATION AREA

The Novoseal – Universal plug will be used to seal the space between one microduct or cable and the protective pipe. The application is typical for using it in a above ground application like street cabinets to prevent dirt in the pipe network or for wall connections.

As the inlet is closed without cable it can also be used a temporary plug before the cable is installed.

Application temperatures: as from -15 °C.

PRODUCT FEATURES

- Splittable seal
- Dirt and splash water tight
- Compact design
- Suitable for low temperature installation
- Easy installation
- In combination with special sealing pasta the plugs fulfill NEN 2768 (limited gas penetration and water tightness) *information on request*

PRODUCT VARIATIONS

Type	Entrance pipe [mm]	Seal inner diameter for cable/duct [mm]	Article nr (SAP)
32 mm	27 – 28,5	6 - 16	3030189
40 mm thin wall	34,4 - 36	6 - 22	3030190
40 mm	31,5 – 33,0	5 - 22	3030192
50 mm	39,5 – 41,5	8 - 20	3030191

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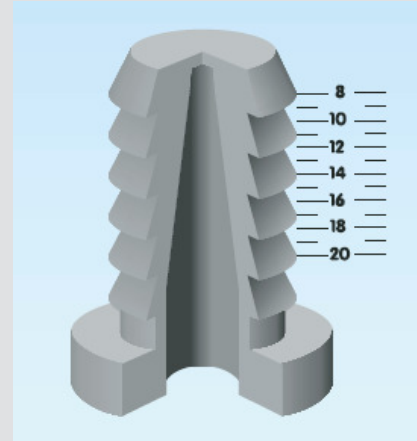
PRODUCT SPECIFICATIONS

Material

Seal : TPE shore 40 A

Dimensions

Type	Length [mm]	Outer diameter [mm]
32 mm	49,0	28,9
40 mm thin wall	63,5	36,8
40 mm	60,0	35,7
50 mm	84,0	42,5



The special inside design allows the user to adjust it to the needed size depending on the cable to be installed. Therefor limited plugs are needed.

Colour

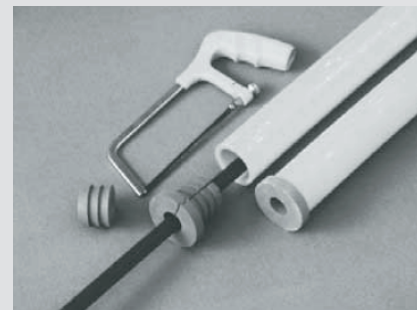
Seals : Blue

PRODUCT PERFORMANCE

Dirt and splash water tight.

INSTALLATION

For installation method we refer to the quick reference manual for this on every product box.





NOVOSEAL : SPLITTABLE MICRODUCT ENDSTOP

PRODUCT DESCRIPTION

This product is a divisible endstops for cable filled microducts.

The seal is specially designed to safeguard the water tightness with these products.

APPLICATION AREA

The Novoseal – splittable microduct endstop will be used to seal the space between microduct and the cable. The application is typical for using it in an underground manhole application to prevent water in the pipe network.

Application temperatures: as from -15 °C.

PRODUCT FEATURES

Splittable (support and seal)

- Water tight up to 0,5 bar
- Gas tight up to 0,5 bar (14 days test)
- Compact design
- Suitable for low temperature installation
- Easy installation
- Small number of components

PRODUCT COMPONENTS

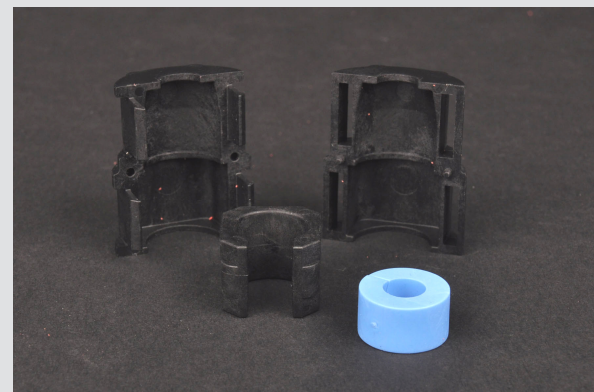
<u>Part</u>	<u>Description</u>	<u>No of parts</u>
A.	Plastic scales	2
B.	Cutting blocks	1
C.	Rubber seal	1

Different seals are available depending on the cable installed.

PRODUCT VARIATIONS

Products is available for 10, 12, 14, 16, 18 and 20 mm microducts for cable sizes from 1,0 – 12 mm in diameter see the table below.

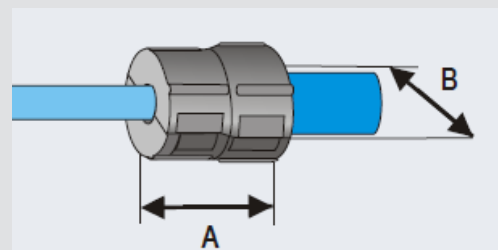
Other sizes are on request



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PRODUCT SPECIFICATIONS
Material

Plastic scales : glass fibre reinforced polyamide
 Cutting blocks : glass fibre reinforced polyamide
 Seal : TPE

Dimensions


Dimensions

Duct size OD [mm]	Cable diameter [mm]	A [mm]	B [mm]	Weight [g]	Wavin article no
10	2,5 – 1,0	32	25	20	4058717
	3,5 – 2,5				4037142
	5,0 – 3,5				4037143
	6,5 – 5,0				4037144
	7,5 – 6,5				4037145
12	2,5 – 1,0	32	25	20	4058718
	3,5 – 2,5				4037146
	5,0 – 3,5				4037147
	6,5 – 5,0				4037148
	8,0 – 6,5				4037149
	8,5 – 7,0				4058719
14	2,5 – 1,0	34	29	25	4058720
	3,5 – 2,5				4058721
	5,0 – 3,5				4057369
	6,5 – 5,0				4048107
	8,0 – 6,5				4037150
	10,0 – 8,0				4037151
16	2,5 – 1,0	34	29	25	4058722
	3,5 – 2,5				4058723
	5,0 – 3,5				4048095
	6,5 – 5,0				4048106
	8,0 – 6,5				4037152
	10,0 – 8,0				4037153
18	3,5 – 2,5	36	34	30	4058724
	5,0 – 3,5				4058725
	8,0 – 6,5				4057371
	9,5 – 8,0				4057370
	12,0 – 9,4				4037154
20	5,0 – 3,5	36	34	32	4058736
	6,5 – 5,0				4058737
	8,0 – 6,5				4057373
	9,5 – 8,0				4057372
	12,0 – 9,4				4037155

Colour

Scales + keys : Black
 Seals : Blue



PRODUCT PERFORMANCE

Gas tightness	: 0,5 bar (14 days test)
Water tightness	: 0,5 bar
Impact resistance	: 3 Joule at -15 °C
Pull out force pipe	: 10 mm; 135 N / 12 mm; 240 N
Pull out force cable	: 6,5 mm; 3N / 7,2 mm; 27 N / 8,0 mm; 45 N

INSTALLATION

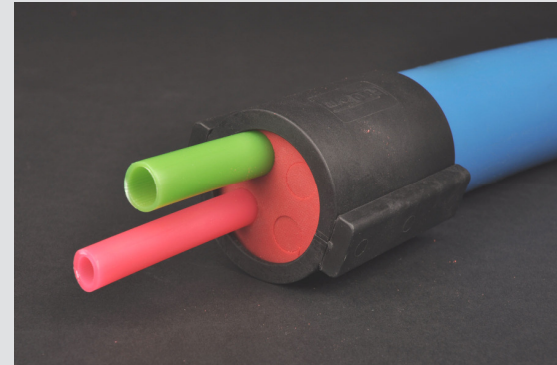
For installation method we refer to the quick reference manual for this in every product bag.



NOVOSEAL: SPLITTABLE ASSEMBLY ENDSTOP

PRODUCT DESCRIPTION

This Novoseal product is a divisible end stops for protective PE pipes filled with Microducts. Products are available for diameter 32, 40, 50 and 63 mm. The protective pipes should fulfil EN 14281, NF 330, DIN 8074 or similar standards with respect to dimensions. The microducts shall fulfil EN 50411-6-1. The seal is specially designed to safeguard the water tightness with these products and can be used as all cores are accessible from the sides.



APPLICATION AREA

The Novoseal splittable assembly end stop will be used to seal the space between Microduct and the pipe. The application is typical for using it in a underground manhole application to prevent water in the pipe network.

Application temperatures: as from -15 °C.

PRODUCT FEATURES

Splittable (support and seal)

- Suitable for pipes with diameters 32, 40, 50 and 63 mm
 - Gas and water tight up to 0,5 bar*
 - Compact design
 - Suitable for low temperature installation
 - Easy installation
 - Small number of components
- *0,25 bar for cables*



PRODUCT COMPONENTS

Part	Description	No of parts
A.	Plastic scales	2
B.	Closing keys	2
C.	Rubber seal	1

Different seals are available depending on the pipe to be installed.

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Product variations 32 – 63 mm ¹⁾

Type	Suitable for pipes	7 mm	10 mm	12 mm	14 mm	15 mm	16 mm	Other (i.e. for cables)	Wavin nr. (SAP)
32 mm	32* 2,9 SDR 11/HDPE (ID 26,2)	2		1					8226601F
		3	1						8226602F
		7							3060107
			1	1				1x 7,5 mm	3030211
			2					1x K8-14 mm ²⁾	8226601F*
			3						3030210
			4						3060105
				3					3060106
					1				4041673
40 mm	40*3,7 SDR 11/HDPE (ID 32,6)							24x 4 mm	822623F*
		2		1					822681F*
					1				4059309
		3	1						822642F*
		8		1					3030212
		10							3030198
			3					1x K8-18mm ²⁾	822662F*
			5						3030203
				2				1x K8-18mm ²⁾	822663F*
				4					3030214
					3				822643F*
						2		2x 8,4-13,4 mm ²⁾	822641F*
	ID ≥ 36 ³⁾		7						822659F*
50 mm	50*4,6 SDR11/HDPE (ID 40,8)	7						1x K8-18,5 mm ²⁾	822670F*
		8			1				8226701F*
		8					1		822684F*
		10		1					3030219
	50*3,7 SDR13,6/HDPE (ID 42,6)	12			1				822678F*
		18							3030220
			5					1x K8-18,5 mm ²⁾	822673F*
			7						3030200
			8						822689F*
				3				1x K15,5 mm	3030216
				5				1x K8-18,5 mm ²⁾	822685F*
				7					3030218
					7				4038064
							4		822688F*
	ID ≥ 44 ³⁾		9						822674F*
63 mm	63*4,7 SDR13,6/HDPE (ID 53,6)	22		1					822664F*
		24							4041674
		24			1				4037141
				9					822675F*
	63*3,6 SDR17/HDPE (ID 55,8)				7				4037478
							6		822677F*
							7		4059184
	ID ≥ 57 ³⁾		15						822668FV*
				12					822665FV*

1) The cores of the seals are included in the package for using as (temporary) plug.

2) Foam tape is supplied to adjust the dimension for getting a tight connection.

3) Pipe used in DB break out seal

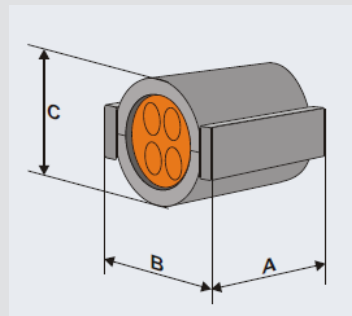
* Supplier reference nr, Wavin article nr on request.

PRODUCT SPECIFICATIONS

Material

Plastic scales	: glass fibre reinforced plastic
Closing keys	: glass fibre reinforced plastic
Seal	: EPDM

Dimension



Type	A [mm]	B [mm]	C [mm] Inner diameter	C [mm] Outer diameter
32 mm	70	50		38
40 mm	70	58	32	47
50 mm	70	67	43	56
63 mm	70	80		69

Colour

Scales + closing keys : Black

PRODUCT PERFORMANCE

Test	32 mm	40 mm	50 mm	63 mm
Gas and water tightness (microducts)	0,5 bar	0,5 bar	0,5 bar	0,5 bar
Gas and water tightness (cables)	0,25 bar*	0,25 bar*	0,25 bar*	0,25 bar*
Impact resistance caps (-15 °C)	10 joule	10 joule	15 Joule	-
Pull out force HDPE optoducts SDR11	>1000 N	>1000 N	>1200 N	>1200 N
Minimum pull out force bundle In combination with HDPE pipe		>550 N	>700 N	>700 N

* Water tightness for sealing cables can be further improved until 0,5 bar. Please contact our sales department for further information.

INSTALLATION

For installation method we refer to the quick reference manual for this in every product bag.

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NOVOSEAL: DB-BUNDLE BREAK OUT SEAL

PRODUCT DESCRIPTION

This product is an effective and simple sealing solution for microduct assemblies like Novonet, Novosplit, Novospace and Novospeed.

Products are available for diameter 32, 40, 50 and 63 mm.

Depending on the type of DB-bundle, space is created in a 32, 40, 50 or 63mm duct to spread the microducts from the microduct assembly.

The seal is specially designed to safeguard the water and gas tightness with these products.

The total product is divisible.

APPLICATION AREA

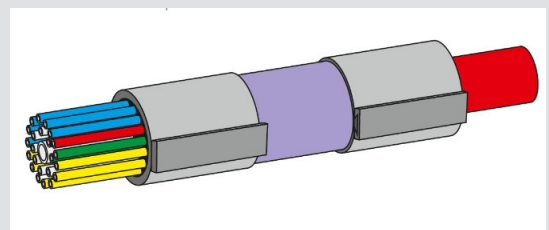
The DB_bundle break out is suitable for Novonet, Novonet, Novosplit, Novospace and Novospeed.

The product can be used in manholes or inside buildings.

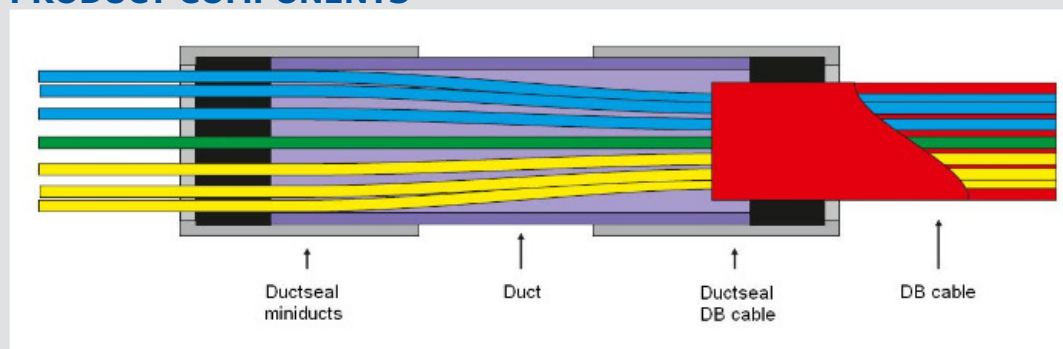
Application temperatures: as from -15 °C.

PRODUCT FEATURES

- Gas and Watertight up to 0.25 bar. (0.50 bar can be achieved, please contact out technical department)
- Easy installation
- Narrow design
- Suitable for low temperature installation
- Other versions available on request



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PRODUCT COMPONENTS


Part	Description	No of parts
A.	Plastic scales	2 x 2
B.	Closing keys	2 x 2
C.	Rubber seal	2
D.	Tape	1
E.	Pipe	1

Product variations

Type 1)	4 mm	7 mm	10 mm	12 mm	14 mm	15 mm	16 mm	Article nr (SAP)	Packaging
40 mm					3				
50 mm				7				4056697	2 per box
63 mm					7			4037479	2 per box
63 mm		24			1			4037480	2 per box

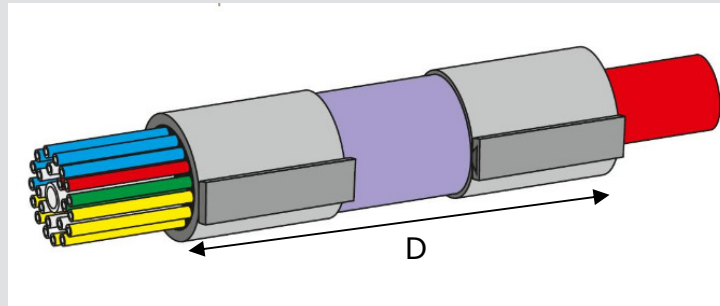
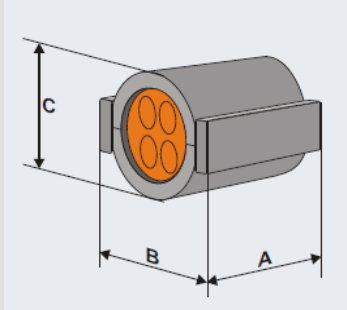
1) Depending on the implementation, the cores of the recesses are included in the package so this can have the functionality as (temporary) plug.

Other types on request

PRODUCT SPECIFICATIONS
Material

Plastic scales	: glass fibre reinforced plastic
Closing keys	: glass fibre reinforced plastic
Seal	: EPDM

Dimension



Type	A [mm]	B [mm]	C [mm]	D [mm]
32 mm	70	50	38	20
40 mm	70	58	47	20
50 mm	70	67	56	20
63 mm	70	80	69	20

Colour

Scales + keys : Black

PRODUCT PERFORMANCE

Test	32 mm	40 mm	50 mm	63 mm
Gas tightness (14 days test)	0,25 bar	0,25 bar	0,25 bar	0,25 bar
Water tightness	0,25 bar *	0,25 bar *	0,25 bar *	0,25 bar *
Impact resistance caps (-15 °C)	10 joule	10 joule	15 Joule	-
Pull out force optoducts	>1000 N	>1000 N	>1200 N	>1200 N
Minimum pull out force bundle		>550 N	>700 N	>700 N

* Water tightness can be further improved by applying a small quantity of grease on the rubber seal.

PACKAGING

The product is packed by piece and includes:

- HDPE pipe
- Sealing set for the sealing between the individual ducts of the DB-bundle and the HDPE duct
- Sealing set for the sealing between the DB-bundle and the HDPE duct.
- Instruction manual

INSTALLATION

For installation method we refer to the quick reference manual for this in every product bag.

Typical application





NOVOSEAL : ASSEMBLY ENDSTOP

PRODUCT DESCRIPTION

This product is a endstops for microduct filled microducts.

The seal rings are specially designed to safeguard the water tightness with these products.

APPLICATION AREA

The Novoseal – Assembly endstop will be used to seal the space between microducts (and or cables) and the protective pipe. The application is typical for using it in a above ground application like street cabinets to prevent dirt in the pipe network.

Application temperatures: as from -15 °C.

PRODUCT FEATURES

- Dirt and splash water tight
- Compact design made from one piece of material
- Suitable for low temperature installation
- Easy installation
- Single plugs are fulfilling NEN2768
- Multiple plugs and caps are fulfilling NEN 2768 when used in combination with sealing pasta.
- Some products are splittable for easy use

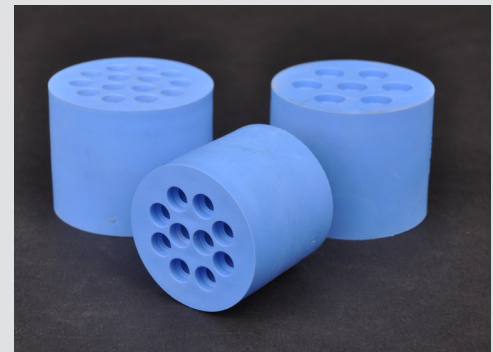
PRODUCT VARIATIONS

See next pages, three groups are available

Plugs for single cable (or microduct)

Plugs for multiple microducts

Caps for multiple microducts.



Push over (cap)



Plug in (plug)

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PRODUCT SPECIFICATIONS**Material**

Seal : TPE shore 40 A

Dimensions

Type	Length [mm]	Outer diameter [mm]	Inner diameter [mm]
40 mm Plug in	25	32 with ribs	NA
40 mm Push over	40	45	40 + ribs
50 mm Push over	44	55	50

Colour

Seals : Blue

PRODUCT PERFORMANCE








Dirt and splash water tight

Plugs for single cables

Product	Duct	Openings	Article nr (SAP)	Remark	Nr/package
	25*2,5	1x7 mm	43200	Plug single NEN2768	50
	25x2,5	7 with splitting line	4041669	Plug single	50
	50x3,2 mm	7 mm (coax 9/12)	4041671	Plug single NEN2768	50
	50x3,2 mm	14 mm	4041670	Plug single NEN 2768	25
	50x3,2 mm	25 mm	3030199	Plug single NEN2768	50

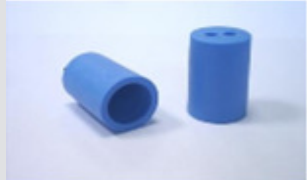







Grey = supplier article nr

Plugs for multiple cables/microducts

Product	Duct	Openings	Article nr (SAP)	Remark	Nr/package
	25*2,5	1x7 mm and 1x3,5-4,5	4034831	Plug multiple	50
	25x2,5	9 mm	822252C	Plug single	50
	40/33 mm	22 or 17 mm	3030194	Plug single	50
	40/33 mm	16,7 or 12,5 or 10,3 mm and 7 mm	3030196	Plug multiple	50
	40/33 mm	7 x 7 mm	3030195	Plug multiple	100
	40/33 mm	5 x 10 mm	3030197	Plug multiple	100
	40/33 mm	4 x 12 mm	3030204	Plug multiple	100

Grey = supplier article nr

Push over caps for multiple cables/microducts

Product	Duct OD	Openings	Article nr (SAP)	Remark	Nr/package
	16 mm	2 x 4 mm	3030207	Cap multiple	10
	40 mm	10 x 7 mm	3030213	Cap Multiple	40
	40 mm	5 x 10 mm	3030215	Cap Multiple	40
	40 mm	4x10-12 mm	3030205	Cap Multiple	10
	40 mm	Closed endcap, Holes can be punched	3030206	Cap Multiple	25
	50 mm	7 x 12 mm (2 are closed)	4041668	Cap Multiple	25
	50 mm	7 x 10 mm	3030217	Cap Multiple	25
	50/42,6	14x7 mm	3030201	Cap Multiple	25



NOVOSEAL: ACCESSIBLE MICRODUCT END STOP

PRODUCT DESCRIPTION

This product is an accessible endstops for cable filled micro ducts.

The seal is specially designed to safeguard the water and gas tightness of the Microduct.

APPLICATION AREA

The Novoseal – accessible micro duct end stop will be used to seal the space between microduct and the cable. The application is typical for using it in a underground manhole and in-house application to prevent water and gas in the pipe network.

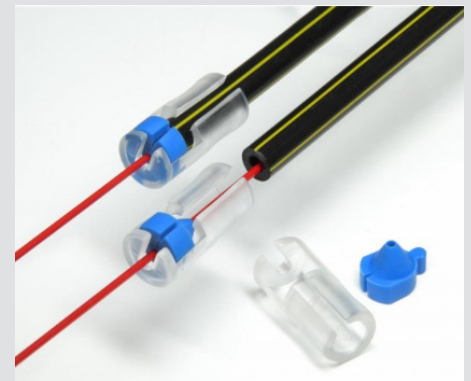
Application temperatures: as from -15 °C.
The product is not suitable for ribbed cable sheaths.

PRODUCT FEATURES

- Accessible (support and seal with longitudinal opening)
- Water tight up to 0,5 bar
- Gas tight up to 0,5 bar (14 days test)
- Compact design
- Suitable for low temperature installation
- Easy installation
- Small number of components

PRODUCT COMPONENTS

<u>Part</u>	<u>Description</u>	<u>No. of parts</u>
A.	Body	1
B.	Rubber seal	1



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Product variations

Type * Duct OD / Seal ID	Duct diameter [mm]	Cable diameter [mm]	Article no (SAP)
4 mm / 0,9 mm	4	Check in table: Gas tightness	4048180
4 mm / 1,25 mm			4048181
4 mm / 1,6 mm			4048182
4 mm / 2,1 mm			On request
5 mm /0,9 mm	5		4048184
5 mm /1,25 mm			4048185
5 mm / 1,6 mm			4048206
5 mm / 2,1 mm			4048207
5 mm / 2,5 mm			4048208
7 mm / 0,9 mm	7		4048209
7 mm / 1,25 mm			4037476
7 mm / 1,6 mm			4048210
7 mm / 2,1 mm			4048211
7 mm / 2,5 mm			4037477

**other dimensions on request, solution available for 6 and 8 mm duct*

PRODUCT SPECIFICATIONS
Material

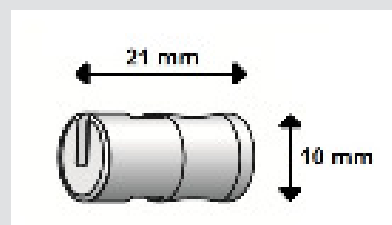
Body : Poly carbonate
 Rubberseal : TPE

Dimensions

Type	Length [mm]	Max OD [mm]
4 mm	21	10
5 mm	21	10
7 mm	21	10

Colour

Body : Transparent
 Rubber seal : Blue



Pull out performance 1)

Duct OD x wall	Accessible Microduct end stop		
	4 mm	5 mm	7 mm
4 x 0,75	40		
4x 0,5	25		
5 x 1		50	
5 x 0,75		45	
7 x 1,5			70
7x 0,75			65

1) Measured speed 100 mm/min, 20 °C. True values may depend on cables, duct and field installations

Gas tightness 0,5 bar / 30 minutes / 20 °C (tested with calibres) 2)

Pipe in test OD x wall (mm)	Seal ID (mm)								
	0,9		1,25		1,6	2,1		2,5	
	Tightness test with calibre OD (mm)								
	0,8	0,9 1,0 1,1	1,2	1,2	1,3 1,4 1,5	1,6 1,7 1,8	1,9 2,0	2,1 2,2	2,3 2,4 2,5
4 x 0,75									
4x 0,5									
5 x 1,25									
5 x 1									
5 x 0,75									
7 x 2									
7 x 1,5									
7x 0,75									

1) Tested with calibers, true values may depend on cables, duct and field installations

2) Red = not tight / green is tight

Note Values are indications, actual values will depend on proper installation and may vary depending on tolerances in cable an pipe diameters, composition and tolerances of the cable sheathing material etc.

Note Fibers with ribbed cable sheath cannot be sealed.

PACKAGING

100 pieces/bag

INSTALLATION

For installation method we refer to the quick reference manual for this in every product bag and IDS 23.

guiding
connections

NOVOSEAL TEMPORARY PIPE PLUG

PRODUCT DESCRIPTION

Flexible plug for temporary closing Microduct DB pipe ends.

For Microducts DB from 4 mm to 16 mm.

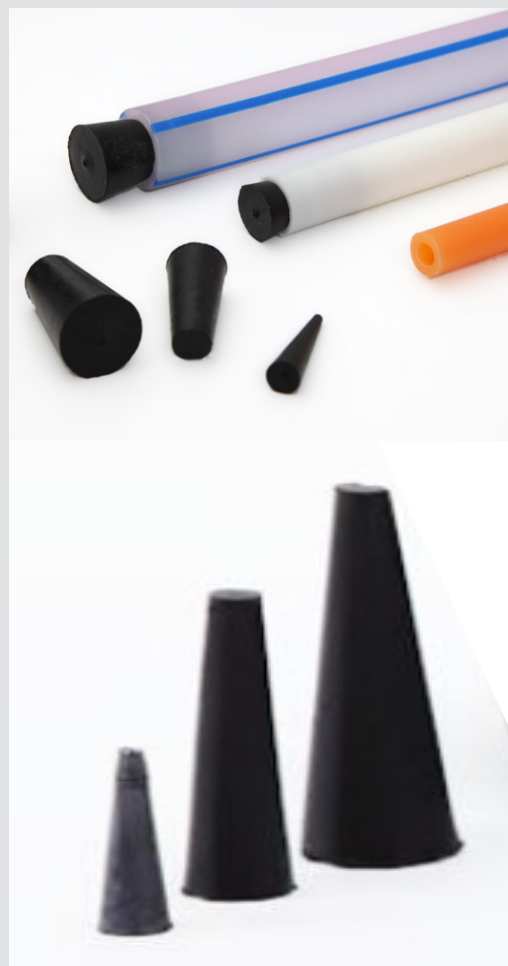
APPLICATION AREA

The cap can be used to temporary seal and protect buried Microducts DB providing protection against ingress of water and sand

For short term, the use of caps direct buried is no problem. In case long times are expected it is advised to use a water tight solution.

PRODUCT FEATURES

- Dirt and splash water tight
- Tapered to fit a variety of duct diameters
- Easy to apply due to flexibility
- Compressible for sealing smooth and ribbed inner wall of duct



Accessible & Watertight Solutions for
latest generation telecom networks

PRODUCT SPECIFICATIONS
Material

Plug : EPDM

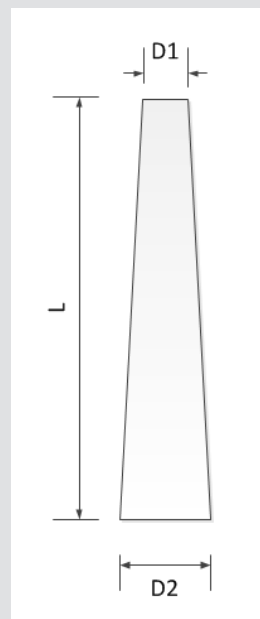
Colour

Plug : Black

Dimensions

SAP article nr	D1 [mm]	D2 [mm]	L [mm]	Suitable for microducts DB [mm]
4053470	1,6	5,1	19	7x1,5 7x1,75
	5,0	8,3	25	10x2
	6,0	8,9	19	12x2
4053472	8,0	12,7	21	14x2
	10,0	14,5	26	16x2

Other dimensions and applications on request.


PRODUCT PERFORMANCE

Good chemical resistance against water, oil, fat and strong acids.

Flexible

Temperature range -20 °C up to +60°C

PACKAGING

SAP nr	Nr/bag
4053470	1000
4053472	250