



guiding
connections

NOVOSPLIT+

PRODUCT DESCRIPTION

This TDS describe the standard Novosplit+ products, It is a bundle of thick-walled microducts (DB) fixed together with a thin tight jacket,

This Novosplit+ is a Microduct assembly for direct buried (DB) applications,

Remark: The product designed for subducting is Novospeed (assembly of Novomicro DI pipes),

Available for Microduct sizes 4 – 16 mm,
For diameter > 16, see Novomulti product program.

Two versions:

- Symmetrically shaped
- Non- symmetrically shaped (can be ordered on request)

Detection wire or rib cords can be included on request

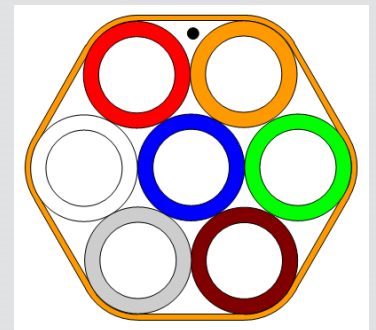
APPLICATION AREA

- Direct buried
- Can be used for subducting
- Feeder
- Drop
- Micro-trenching
- Creating new line

PRODUCT FEATURES


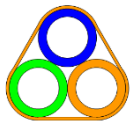
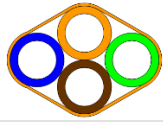
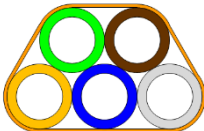
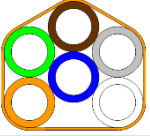
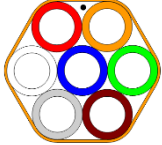
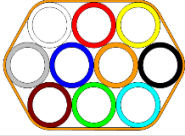
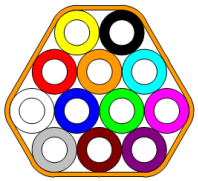
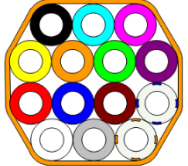
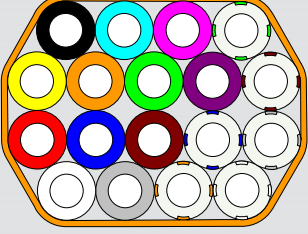
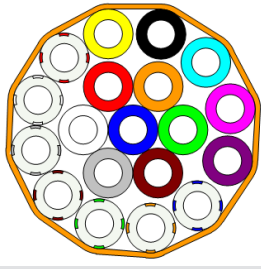
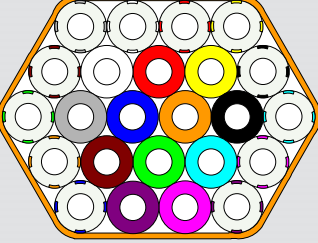
- Available in lubrication system UD (micro cables) or on request antistatic UF (fibre bundles)
- Inner friction of the microducts < 0,1
- Microducts are DB design with improved impact and strength
- Outer skin can be peeled off, non-sticking,
- UV stabilised skin and microducts
- The bundle will resist most of the soil set,
- Some resistance against impact, crush and stones,
- Length differences in Microduct on drum is under control by respecting internal undulation test limits
- Easy to access for branching, No special connector needed, Novofit connector Novofit will fulfil
- No fixing of microducts needed at duct ends during laying

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PRODUCT RANGES

Table 1 Standard configuration and colours ¹⁾

			
2	3	4	5
			
6	7	10	12
			
14	18	19	24
For duct sizes and performance see group TDS Micoroduct DB			

PRODUCT COMPONENTS

Part description	No of parts
1. Microducts DB	max 24
2. Assembly sheet	1

PRODUCT SPECIFICATIONS

Materials

1, Microducts DB	HDPE
2, Assembly sheet	HDPE

Dimensions

Sheet thickness:	0,75 mm ± 0,2 mm
Width/Height	See table 2.

Table 2 Average width-height of standard configurations (with sheet 0,75 mm)

Microduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7 (7x1,5)	15,5	15,5	20,6	22,5	20,6	22,5	29,5	29,5	29,5	36,5	36,5	43,5
	8,5	14,6	15,5	14,6	19,0	20,6	20,6	26,7	27,7	27,7	36,5	32,7
10 (10x2)	21,5	21,5	28,8	31,5	28,8	31,5	41,5	41,5	41,5	51,5		
	11,5	20,2	21,5	20,2	26,5	28,8	28,8	37,5	38,8	38,8		
12 (12x2)	25,5	25,5	34,3	37,5	34,3	37,5	49,5	49,5	49,5	61,5		
	13,5	23,9	25,5	23,9	31,5	34,3	34,3	44,7	46,3	46,3		
14 (14x2)	29,5	29,5	39,7	43,5	39,7	43,5	57,5	57,5				
	15,5	27,6	29,5	27,6	36,5	39,7	39,7	51,9				
16 (16x2)	33,5	33,5	45,2	49,5	45,2	49,5						
	17,5	31,5	33,5	31,4	41,5	45,2						
Tolerance¹⁾	0,6	0,6	0,7	0,7	0,7	0,7	0,8	0,8	0,8	0,8	0,8	0,8

¹⁾ Tolerance on width and height
 Not possible
 Tools are available

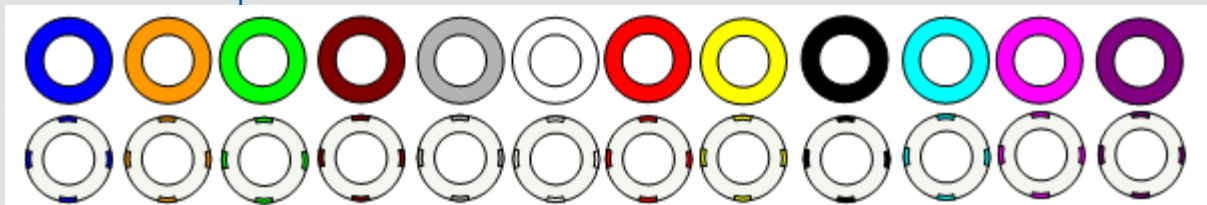
Table 3 Weight (kg/km)

Microduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	75	104	133	152	191	216	301	354	408	516	545	673
10	131	186	240	295	348	397	555	656	759	962		
12	162	230	298	366	432	494	689	816	943	1198		
14	194	275	356	437	516	590	824	976				
16	225	319	413	508	600	686						

Colours

See for RAL numbers TDS Novomicro DB

Fixed colour sequence:



If more than 12 colours needed, the second set will be striped microducts,

Outer sheet colour : Opaque orange RAL 2003, no stripes

PRODUCT PERFORMANCE

Lubricant system:	UD for micro cable (on request UF for fibre bundles)
Ovality (Novotech method):	< 5 %
Flexibility (IEC 60794-21):	OK (10 loops, 30 min < 15 % deformation)
Nominal hydrostatic pressure resistance:	Identical to TDS Novomicro DB
Minimum bending radius:	Identical to TDS Novomicro DB
Vertical undulation (Novotech method):	< 5 mm
Horizontal undulation (Novotech method):	< 5 cm

Table 4 Maximum pulling force (N)

Microduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	760	1140	1520	1900	2280	2660	3800	4560	5320	6840	7220	9120
10	1500	2250	3000	3750	4500	5250	7500	9000	10500	13500		
12	1880	2820	3760	4700	5640	6580	9400	11280	13160	16920		
14	2260	3390	4520	5650	6780	7910	11300	13560				
16	2620	3930	5240	6550	7860	9170						

Table 5 Crush resistance [N] at 5 % (EN 61386-24)

Microduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	>750	>750	1500	-	-	4700	>750	4500	>2000	7000	>2000	8000
10	-	-	>750	-	-	>2000	-	3500	-	-		
12	>750	2500	2100	>4300	-	5500	-	-	-	-		
14	4300	>750	2100	4300	1800	2000	>750	-				
16	3700	1800	>750	-	1500	>750						

Table 6 Impact resistance [Joules] at -25 °C + 50 °C (IEC 60794-5-10)

Microduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	-	-	-	-	-	43 36	-	14 7	-	45 21	-	30 25
10	-	-	-	-	-	-	-	-	-	-		
12	-	24 15	-	-	-	-	-	-	-	-		
14	19 9	-	25 15	28 18	19 18	24 17 18 10	-	-				
16	25 22	70 30	-	-	35 27	-						

Grey data are for product with 1 mm PP sheet

Life time

Products have a expected life time of 50 years when transported, stored and installed in a good way,

UV resistance and storage conditions : See TG 12,

INSTALLATION

For installation guidelines see IDS 18,
Tips for near surface installation are given in TG 07,

PRACTICAL RECOMMENDATIONS

Ends of Novosplit+ must be protected by appropriate end-stop shrinkable materials, in order to prevent ducts from environment pollution.

PACKAGING AND LABELLING

Packaging

Standard: Lost wooden drum
Length: 1000 or 2000 meter, see table 7 and 8

Table 7 Drum size delivery 1000 meter

Miroduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	N255B	N255B	N255B	N255B	N255B	N255b	N074	N072	N072	N086	N130	N130
10	N255B	N255B	N074	N255B	N072	N072	N086	N130	N130	N140		
12	N255B	N074	N072	N086	N086	N130	N130	N180	N180	N180		
14	N255B	N072	N086	N086	N130	N130	N180	¹⁾				
16	N074	N086	N130	N130	N140	N180						
Lost wooden drums : N255B=1300x520x500 N060=1400x800x600 N074=1450x600x670 N072=1400x800x1000 N086=1600x800x1000						N130=1900x1000x1000 N140=2100x1100x1000 N180=2400x1200x1000 ¹⁾ Drum N270=2400x1400x1000 with maximum length 875 meter						

Table 8 Drum size delivery 2000 meter

Miroduct diameter	Configuration (nr of microducts DB)											
	2	3	4	5	6	7	10	12	14	18	19	24
7	N255B	N060	N074	N074	N072	N086	N086	N130	N130	N140	N180	N180
10	N060	N072	N086	N086	N130	N140	N180	-	-	-		
12	N074	N086	N130	N140	N140	N180	-	-	-	-		
14	N086	N130	N180	N180	N180	-	-	-				
16	N086	N140	N180	-	-	-						
Codes refers to drums indicated in table 7.												

Labelling

Elementary duct: " 0000 m – YYYY/MM/DD " (every 1 m)
Central duct: " 0000 m – YYYY/MM/DD " (every 1 m)
Assembly sheet: " 0000 m WAVIN 35 NOVOSPLIT+ nr ducts*diameter duct x wall thickness(+central duct size) *lubrication code YYYY/MM/DD " (every 1 m)

ALTERNATIVES

NEW DEVELOPMENT

In case the following parameters are requested a new development has to be started,

- Combination of different pipe sizes, or assemblies with central duct
- Other assembly configurations
- Sizes exceed maximum duct size as given in the table
- Other stripes
- Non-standard colours
- Other Microduct designs than standard (see Novomicro DB)

EASY ORDERING

Small changes like the following, do not need a development,

- Other (standard) Microduct colours or colour sequence
- Other colour outer sheet
- Four stripes, approximately 3mm width
- Including a detection wire or rip cord
- Other marking
- Other lengths on standard drums
- The (non-standard) configurations as given in table 9.
- UF lubrication for 7x1,5 mm ducts.



Table 9 Non standard products (tools available, colours are examples)

4+1	5+1	22x7+1x12	8x8+2x20
12x7+1x14	6x8+3x14	12x7+2x14	8x14
9x7+1x14	24x7+1x14		