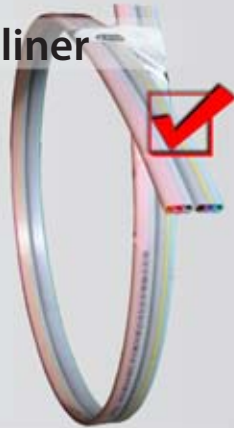


# Facts about the Flatliner

- No overlength
- Fast and easy branch-off
- Easy handling & fast roll out
- No gas seals needed
- Colourcodesystem
- Easy cornering
- Stabilization sticks
- Easy backfilling
- Microtrenching optimized

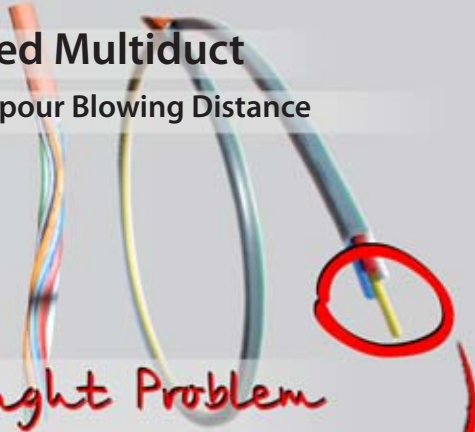


● Flatliner



Twisted Multiduct

= Stress & pour Blowing Distance



Overlength Problem

● Flatliner

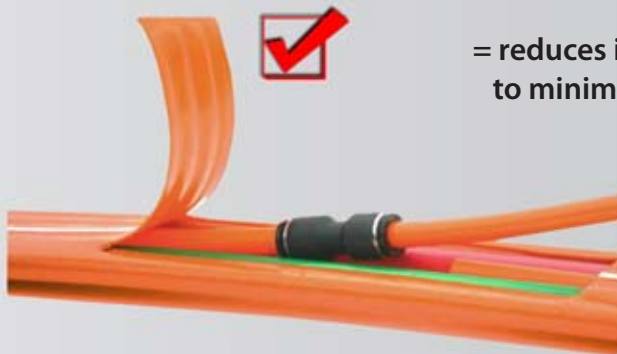
all microducts has same length when on the drum



● Flatliner

Fast & Easy branch off

= reduces installation costs to minimum



Saves use of GAS-SEALS in MAN-HOLES and STRETCABINETS



● Flatliner



Simple Colourcode

= minimize the number of human errors



● Flatliner



Easy cornering

= most flexible ductsystem



● Flatliner



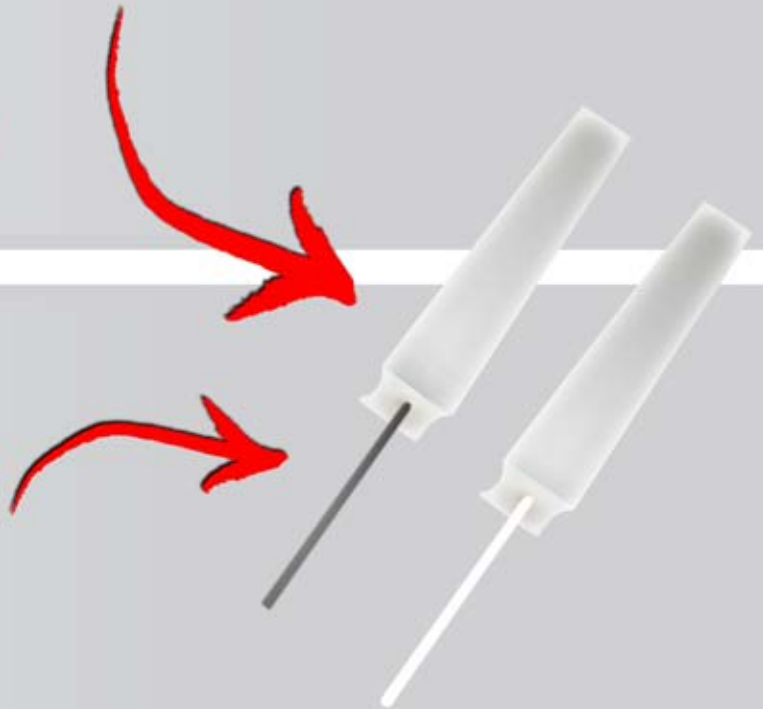
- Easy Handling & Fast Rollout  
( up to 12 microducts in 1 handling )

● Flatliner



Stabilization sticks

- = higher stability
- = higher cross resistance and pull force



● Flatliner

additional features :

- trace wire
- fiber rods



● Flatliner



- Power Flatliner
- Aerial Flatliner
- Temperature Stable Flatliner



● Flatliner



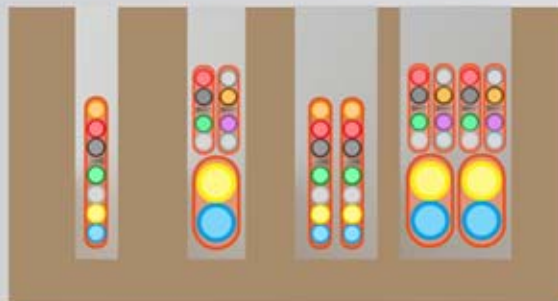
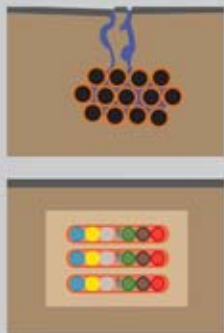
400-700% stronger  
than a 50mm multiduct



● Flatliner



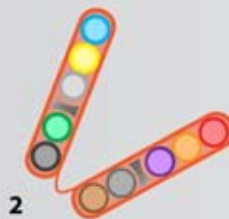
Damage resistant  
- Optimized for microtrenching



● Flatliner



Easy Foldable



# New and improved Flatliner

-Higher pull force

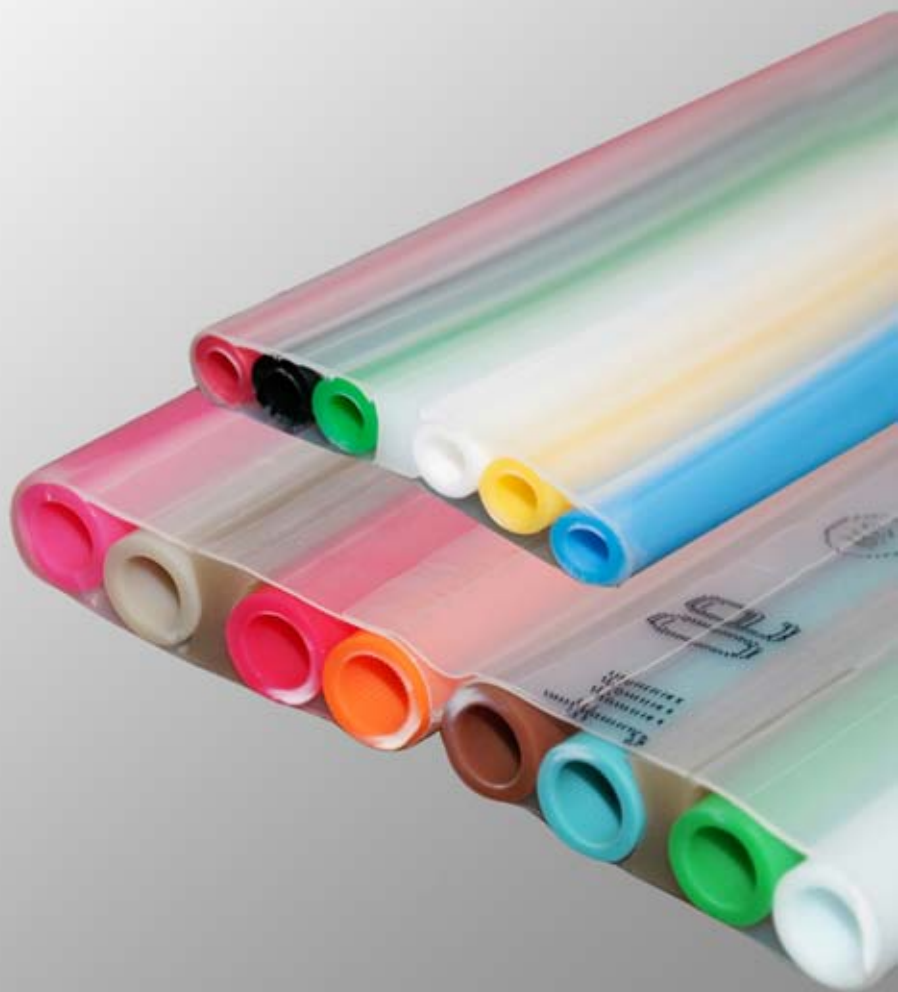
-Higher cross resistance

-Better blowing performance

-Better for micro trenching

-Real easy to fold

+2 New additional features





**GM Plast** never stops looking for perfection, never stops developing better products that can save time and costs in your network.

With the latest design **GM Plast** has build in a small profile as a “**spacer**” between the micro ducts, this gives the product a higher stability and therefore also better blowing performance.



The new **spacer** supports also the micro ducts in the case of cross or tensile that can appear when installers are building millions of meters of new trenches.

We have analyzed hundreds of thousands of meters of pipes in the ground and carefully reviewed the installation techniques, our conclusion has been that many of the product on the market are too fragile when it comes to “real rollout”.

Most products pass the desk trail and the small scale test, but when you have to build 10.000 houses every year, we have to make the products **easy to handle, easy to understand, easy to repair** and **strong enough** that normal civil workers can use it.

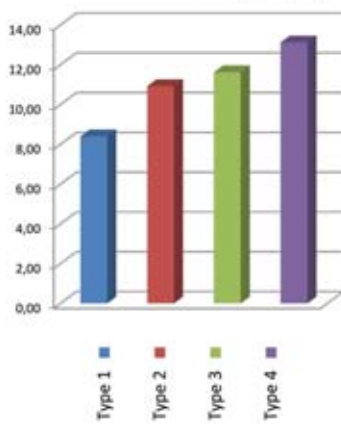
The change does not look like much, and it does not change much in the way it is handled, but we can recognize a big difference in the quality of the installed network. Best proven by the blowing teams that install the cables.



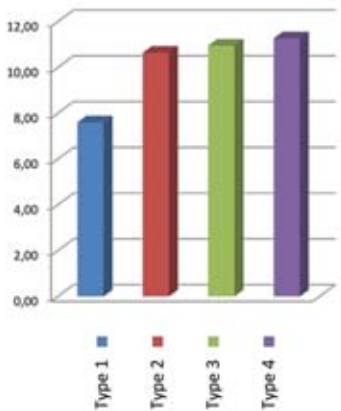


“Higher pull force ,  
Higher crush resistance”

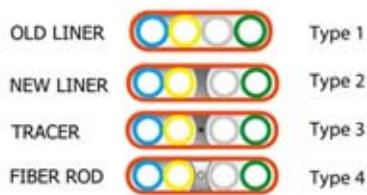
Tensile Strength (kN)



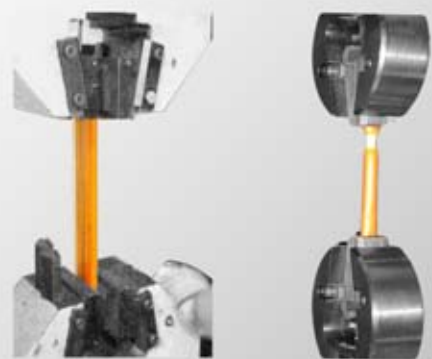
Compression Strength (kN)



Flatliner evolution



20% higher tension strength



30% higher crush resistance



Stabilization sticks







37 years of innovation and knowledge

## NEW ADDITIONAL FEATURES

**-TRACE WIRE**

**-FIBER RODS**

TRACE WIRE



EASY TO LOCATE



FIBER ROD



HIGH PULL STRENGTH



The new spacer can be produced with a trace wire or a fiber rod inside.

The trace wire will be then well protected and can actually be used in future when needed.

- **Easy to trace**

The fiber rod is for extra tensile strength, developed for directional drilling, plowing or long sub duct installations.

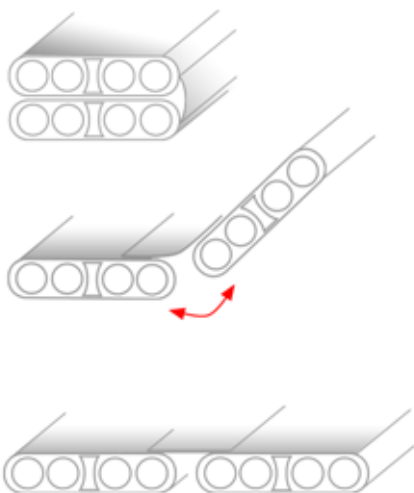
- **Overall strength improvement**



37 years of innovation and knowledge

“REALLY EASY TO FOLD”

**-EXTRA TOPSKIN**





















An extra topskin is applied onto the Flatliner. This secures a very flexible solution , that makes the folding easy.

- **Easy to fold**













# AVAILABLE FLATLINERS

PIPE DIAMETERS OD/ID IN MM









1		DIRECT	6/3,5 7/4 8/4,5 10/6 12/8 14/10 16/12 20/16
1		SUB	5/3,5 7/5,5 10/8 12/10 14/11,5
2			6 7 8 10 12 14 16 20
3			6 7 8 10 12 14 16 20
4			6 7 8 10
4			12 14 16 20
5			6 7 8 10 12 14 16 20
6			6 7 8 10 12 14 16 20
6			6 7 8 10 12 14 16 20
7			6 7 8 10
7			12 14 16 20
8			6 7 8 10
8			12 14 16 20
10			6 7 8 10 12 14 16 20
12			6 7 8 10
12			6 7 8 10
12			12 14 16
12			12 14 16

# COMBINATION EXAMPLES

	$1 + 2$
	$1 + 3$
	$1 + 4$
	$1 + 4$
	$1 + 5$
	$1 + 3 + 3$
	$1 + 6$
	$2 + 7$
	$2 + 4 + 3$
	$2 + 5 + 5$



## CABLE IN PIPE

GM FLATLINER AND DL PIPE	Pipe OD/ID	Cable size (mm)	Number of fibres
	6/3,5	1,1 - 1,6	2 - 12
	7/4	1,1 - 2,2	2 - 12
	8/4,5	1,1 - 2,5	2 - 1
	10/6	1,8 - 4	2 - 24
	12/8	3 - 5	2 - 48
	14/10	4 - 6	72
	16/12	6 - 8	96
	18/14	6 - 10	144
	20/16	6 - 12	192 - 288

AVAILABLE DRUMS

1-WAY DRUMS

400 x 800



800 x 800



Octodrum  
2200 x 1200



1215 x 1200



(Returnable) 2-WAY DRUMS

2200 x 1200



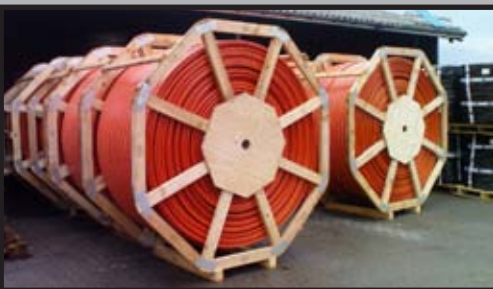
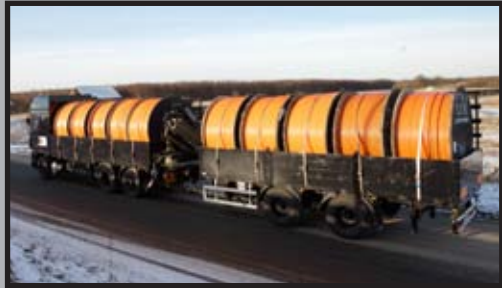
2800 x 1600





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LOADING TRUCKS





**37 years of innovation and knowledge**

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