



# Microduct Assembly 5/3.5 mm Indoor – High Grade

FRD 5/3.5 mm 1-24 -way HG

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## Features

- For indoor installation
- 5/3.5 mm microducts
- Halogen-free, flame-retardant, high grade
- 1, 4, 7, 12, 19 or 24 over-sheathed ducts
- Low friction inner surface for maximum installation lengths

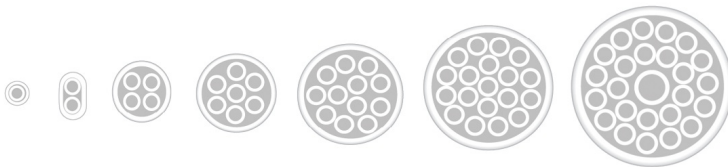
## Application

The indoor tight protected duct assemblies consist of a number of microducts with an inner low friction, antistatic surface that enables installation of air-blown fibers. These microducts are highly flame retardant and therefore suitable for indoor use.

## Design

The duct assemblies are available in several versions from 1 to 24 microducts . Each microduct has an outer/inner diameter of 5/3.5 mm. The microducts and duct assemblies including the outer sheath are made of halogen-free, flame-retardant polymer. One unsheathed single duct version for minimal cross section is available for installation in existing external protective microducts or sheaths.

## Product Information



**Microducts and sheath:** Halogen-free, flame-retardant polyolefin

## Technical Information

|                                |                           |
|--------------------------------|---------------------------|
| Temperature, Operation [°C]    | -20 to +60                |
| Temperature, Storage [°C]      | -20 to +60                |
| Temperature, Installation [°C] | -20 to +50                |
| Reaction to Fire               | IEC60332-3-24, IEC60332-1 |

**Conformance**

**Abrasion:** IEC 60794-1-2-E2B(1)  
**Kink:** IEC 60794-1-2-E10, 20 x outer diameter  
**Impact:** IEC 60794-1-2-E4  
**Crush:** IEC 60794-1-2-E3  
**Tensile:** IEC 60794-1-2-E  
**Bend:** IEC 60794-1-2-E11A  
**Torsion:** IEC 60794-1-2-E  
**Flexibility:** IEC 60794-1-2-E8  
**Inner Clearance:** IEC 60794-5-20, IEC 60794-5-10, Ann. D  
**Flammability:** IEC60332-3-24, IEC60332-1  
**Smoke density:** .IEC61034-2  
**Smoke volume:** ASTM E662  
**Halogen Content:** IEC 60754-1, 0%  
**Acidity/Halogen contents:** IEC60754-1/-2  
**Toxicity index:** DEFSTAN 02-713

**Marking**

Duct assemblies have markings showing the tube length.  
 The individual microducts are numbered.

**Installation Notes**

Flammability according to IEC60332-3-24 refers to sheathed empty ducts and sheathed ducts installed with typical versions of Hexatronic blown fiber units. 1-way unsheathed duct MPB30246/01 excluded. The unsheathed duct shall be installed in flame resistant protective cover for best fire performance.

**Articles**

| Article name                                                 | Color | Layout  | Bend Radius [mm] |     | Tensile Force, Installation [N] | Crush [N/100 mm] | Impact [J] | Dimensions [mm] | Weight [kg/km]                 | Length [m] |
|--------------------------------------------------------------|-------|---------|------------------|-----|---------------------------------|------------------|------------|-----------------|--------------------------------|------------|
| <b>Microduct 5/3.5 ID HiGrade</b><br>MPB30202/1              | White | 5/3.5   | 50               | 60  | 450                             | 2                | 5          | 15              | 500/PLAST                      |            |
| <b>Microduct 5/3.5 ID HiGrade 100 m PAN</b><br>MPB30202/1-10 | White | 5/3.5   | 50               | 60  | 450                             | 2                | 5          | 15              | 100/PAN                        |            |
| <b>Microduct 5/3.5 ID HiGrade 500 m</b><br>MPB30202/1-2      | White | 5/3.5   | 50               | 60  | 450                             | 2                | 5          | 15              | 500/PLAST                      |            |
| <b>Microduct 1x5/3.5 ID HiGrade</b><br>MPB30201/1            | White | 1x5/3.5 | 60               | 110 | 450                             | 2                | 6          | 29              | 1000/K5,<br>2000/K6,<br>500/K4 |            |

| Article name                                                | Color | Layout               | Bend Radius [mm] |      | Tensile Force, Installation [N] | Crush [N/100 mm] | Impact [J]  | Dimensions [mm] | Weight [kg/km]                                              | Length [m] |
|-------------------------------------------------------------|-------|----------------------|------------------|------|---------------------------------|------------------|-------------|-----------------|-------------------------------------------------------------|------------|
| <b>Microduct 1x5/3.5 ID HiGrade 500 m</b><br>MPB30201/1-2   | White | 1x5/3.5              | 60               | 110  | 450                             | 2                | 6           | 29              | 500/K4                                                      |            |
| <b>Microduct 2x5/3.5 ID HiGrade</b><br>MPB30203/2           | White | 2x5/3.5              | 150              | 300  | 900                             | 2                | 7.2 × 12.2  | 80              | 2000/K10,<br>1000/K7,<br>500/K6                             |            |
| <b>Microduct 2x5/3.5 ID HiGrade 500 m</b><br>MPB30203/2-2   | White | 2x5/3.5              | 150              | 300  | 900                             | 2                | 7.2 × 12.2  | 80              | 500/K6                                                      |            |
| <b>Microduct 4x5/3.5 ID HiGrade</b><br>MPB30203/4           | White | 4x5/3.5              | 150              | 400  | 1500                            | 5                | 12.2 × 12.2 | 130             | 1000/K9,<br>500/K9,<br>4000/K14,<br>2000/K10                |            |
| <b>Microduct 4x5/3.5 ID HiGrade 500 m</b><br>MPB30203/4-2   | White | 4x5/3.5              | 150              | 400  | 1500                            | 5                | 12.2 × 12.2 | 135             | 500/K6                                                      |            |
| <b>Microduct 7x5/3.5 ID HiGrade</b><br>MPB30204/7           | White | 7x5/3.5              | 220              | 600  | 1500                            | 10               | 17.2        | 198             | 4000/K20,<br>2000/K14,<br>1000/K11,<br>500/K11              |            |
| <b>Microduct 7x5/3.5 ID HiGrade 500 m</b><br>MPB30204/7-2   | White | 7x5/3.5              | 220              | 600  | 1500                            | 10               | 17.2        | 190             | 500/K9                                                      |            |
| <b>Microduct 12x5/3.5 ID HiGrade</b><br>MPB30205/12         | White | 12x5/3.5             | 300              | 950  | 1500                            | 10               | 22.9        | 305             | 4000/K22,<br>2000/K16,<br>1000/K12,<br>500/K11              |            |
| <b>Microduct 12x5/3.5 ID HiGrade 500 m</b><br>MPB30205/12-2 | White | 12x5/3.5             | 300              | 950  | 1500                            | 10               | 22.9        | 305             | 500/K10                                                     |            |
| <b>Microduct 19x5/3.5 ID HiGrade</b><br>MPB30206/19         | White | 19x5/3.5             | 350              | 1300 | 1500                            | 10               | 26.9        | 437             | 1000/K14,<br>3000/K24,<br>2000/K20,<br>4000/K24,<br>500/K12 |            |
| <b>Microduct 1x10/8+24x5/3.5 ID HiGrade</b><br>MPB30207/24  | White | 1x10/<br>8+24x5/ 3.5 | 500              | 1800 | 4000                            | 10               | 32.5        | 462             | 4000/K24,<br>2000/K22,<br>500/K14,<br>1000/K18              |            |