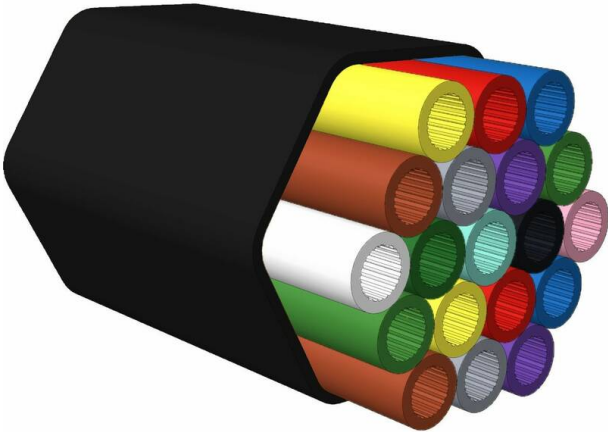


# Excel Enbeam 19 Way External 5/3.5 mm Blowing Tube Black

Item Code: 208-828



✕ Duct-installable

✕ PE Sheath

✕ Available up to 24x5mm bundles

✕ Crush and Impact Resistant

✕ RoHS compliant

✕ 25 Year system warranty

## Product Overview

Enbeam Fibre Units are designed specifically for blown-fibre applications and are optimised for installation within our range of blown-fibre tubes. The fibres are contained within a soft acrylate layer which cushions the fibres. This layer is coated with a hard layer for strength and finally a low-friction coating to ensure low drag and maximise blowing distances within the tubes. The acrylate coatings are easy to remove to expose the 250-micron primary-coated fibres for quick splicing. The fibres are colour-coded according to TIA-598-C.

The tubes are easy to terminate and branch-off using suitable Excel connection closures and push-fit connectors. The tubes are supplied on disposable wooden drums and capped at both ends to prevent ingress of moisture or contamination.

## Product Specifications

Feature	Values
Suitable for	Outdoor
Outer sheath colour	Black

## Additional specifications

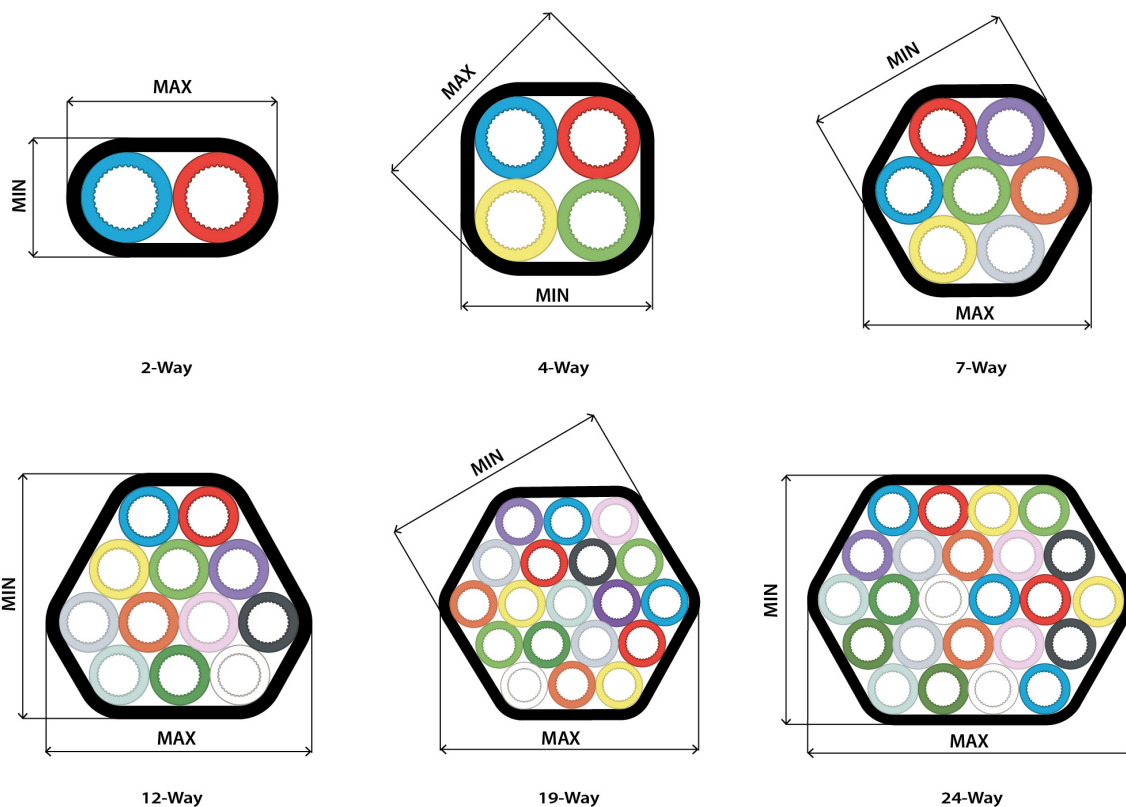
Features	Values
Transport and storage temperature range	-40°C to +70°C
Installation temperature range	-10°C to +50°C
Operating temperature range	-40°C to +70°C
Outdoor exposure limit in Central Europe	max. 12 months

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**excel**  
without compromise.

## Product drawing



## Additional specifications

Features	2x5/3.5	4x5/3.5	7x5/3.5	12x5/3.5	19x5/3.5	24x5/3.5
MAX (mm)	11.5	13.6	16.5	21.5	26.5	31.5
MIN (mm)	6.5	11.5	15.5	20	24	24
Sheath thickness (mm)	0.75	0.75	0.75	0.75	0.75	0.75
Installation tensile force, max	270 N	540 N	945 N	1620 N	2565 N	3240 N
Min. bending radius $\perp$ MAX (mm)	65	136	165	200	265	240
Min. bending radius $\perp$ MIN (mm)	115	115	N/A	N/A	N/A	315

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Weight (kg/km)	36	60	96	160	230	280
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## Standards

Applicable standard	Detail
EN ISO 291:2008	Plastics – Standard atmospheres for conditioning and testing
EN ISO 2505:2005	Thermoplastics pipes – Longitudinal reversion – Test method
ČSN 010254:1976	Sampling inspection by attributes
EN ISO 1167-1:2006	Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure
EN 12201-1:2011	Plastics piping systems for water supply, and for drainage and sewerage under pressure – PE
EN 12201-2:2011+A1:2013	Plastics piping systems for water supply, and for drainage and sewerage under pressure – Polyethylene (PE) – Part 2: Pipes
EN ISO 3127:2017	Plastics piping and ducting systems – Thermoplastics pipes – Test method for resistance to external blows by the round-the-clock method
IEC 60 794-1-1:2015	Optical fibre cables – Part 1-1: Generic specification – General
IEC 60 794-1-2:2017	Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance
IEC 60794-1-21:2015+AMD1:2020	Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical tests methods
IEC 60 794-1-22:2017	Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental tests methods
IEC 60 794-1-23:2019	Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable element test methods
EN IEC 60 794-1-24:2014	Optical fibre cables – Part 1-24: Generic specification – Basic optical cable test procedures – Electrical test methods
IEC 60 794-2:2017	Optical fibre cables – Part 2: Indoor cables – Sectional specification
ASTM D 1894-14	Standard Test Method for Static and Kinetic Coefficient of

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## Friction of Plastic Film and Sheet

ASTM D2122-16	Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
EN 13501-1:2018	Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests
ISO 6259-1,2,3:1997-2015	Thermoplastic pipes – Determination of tensile properties
ISO 3126:2005	Plastics piping systems – Plastics components – Determination of dimensions
ISO 527-1:2019	Plastics – determination of tensile properties – Part 1: General principles
ISO 1133-1:2011	Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics
EN 61386-24:2010	Conduit systems for cable management – Part 24: Particular requirements – Conduit systems buried underground.
ISO 1183-1:2019	Plastics – Methods for determining the density of non-cellular plastics – Part 1: Immersion method, liquid pycnometer method and titration method
ISO 1183-2:2019	Part 2: Density gradient column method
ISO 6964:2019	Polyolefin pipes and fittings – Determination of carbon black content by calcination and pyrolysis – Test method
ISO 18553:2002+Amd 1:2007	Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds
ISO 9969:2016	Thermoplastics pipes – Determination of ring stiffness
EN ISO 13263:2017	Thermoplastics piping systems for non-pressure underground drainage and sewerage – Thermoplastics fittings – Test method for impact strength
IEC 60304:1982	Color code
ASTM D 1693:2015	Standard Test Method for Environmental Stress Cracking of Ethylene Plastics
ISO 11357-6:2018	Plastics – Differential scanning calorimetry (DSC) – Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)
ČSN EN ISO 899-2:2003/A1:2015	Plastics – Determination of creep behavior – Part 2: Flexural creep by three-point loading – Amendment 1
IEC 60 794-3-20:2016	Optical fibre cables – Part 3-20: Outdoor cables – Family specification for self-supporting aerial telecommunication cables
IEC 60794-4:2018	Optical fibre cables – Part 4: Sectional specification – Aerial optical cables along electrical power lines

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IEC 60 794-5:2014

Optical fibre cables – Sectional specification – Microduct cabling for installation by blowing

RoHS-II/-III (2011/65/EU & 2015/863): 2023

Our products, demonstrate full adherence to the regulatory stipulations of the EU Directive 2011/65/EU (RoHS-II) and its corresponding delegated directive 2015/863 (RoHS-III).

WFD: 2023

Compliant to Waste Framework Directive

SCIP: 2023

Compliant - Does Not Contain Substances of Concern In articles as such or in complex objects (Products)

POPs (EU) No 2019/1021

EU Regulation for the restriction of Persistent Organic Pollutants.

## Part Number Table

Part Number	Description
208-800	Excel Enbeam 2 Way External 5/3.5 mm Blowing Tube Black
208-801	Excel Enbeam 4 Way External 5/3.5 mm Blowing Tube Black
208-802	Excel Enbeam 7 Way External 5/3.5 mm Blowing Tube Black
208-803	Excel Enbeam 12 Way External 5/3.5 mm Blowing Tube Black
208-804	Excel Enbeam 24 Way External 5/3.5 mm Blowing Tube Black
208-828	Excel Enbeam 19 Way External 5/3.5 mm Blowing Tube Black

Excel is a world class premium performing end to end infrastructure solution designed, Manufactured, supported and delivered without compromise.

Contact us at [sales@excel-networking.com](mailto:sales@excel-networking.com)



E&OE. Excel is a registered trade name of Mayflex Holdings Ltd.