

# E20715JCASS-12.7MB DUCT

## E20® Coaxial/Microduct Hybrid Buried Cable



- E20 is a solution that enables service providers the ability to bridge HFC networks to FTTx. The E20 composite coaxial/fiber product line combines fiber, microducts, and coaxial cable under one jacket
- Serves businesses in a new commercial serving area
- Mitigates future cost of fiber installation
- Saves on initial installation due to “single sheath” vs. multiple sheaths
- Ideal for commercial data customers that also require video
- All products tested to industry standards

**OBSOLETE**

### Product Classification

<b>Product Type</b>	Hybrid cable, coax and fiber
<b>Product Brand</b>	E20®

### General Specifications

<b>Cable Series</b>	QR 715
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### Dimensions

<b>Height</b>	34.163 mm   1.345 in
<b>Width</b>	21.463 mm   0.845 in
<b>Outer Jacket Thickness, nominal</b>	0.762 mm   0.03 in

### Material Specifications

<b>Outer Jacket Material</b>	Medium density polyethylene (MDPE)
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### Mechanical Specifications

<b>Minimum Bend Radius</b>	152.4 mm   6 in
<b>Pulling Tension, maximum</b>	86.183 kg   190 lb

### Environmental Specifications

<b>Environmental Space</b>	Buried
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# E20715JCASS-12.7MB DUCT

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## Packaging and Weights

**Weight, gross** 380.97 kg/km | 256 lb/kft

## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015



### Classification

Designed, manufactured and/or distributed under this quality management system

## Included Products

- 360000000  
12.7MB DUCT EMPTY – ConQuest® Empty Conduit, 12.7 mm, black
- 360000013  
12.7MB DUCT EMPTY – ConQuest® Empty Conduit, 12.7 mm, black
- 5513592  
QR® 715 JCASS – 75 Ohm QR® Trunk and Distribution Cable, black PE jacket, flooded for underground

# 360000000 | 12.7MB DUCT EMPTY

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ConQuest® Empty Conduit, 12.7 mm, black



## Product Classification

<b>Product Type</b>	Empty conduit
<b>Product Brand</b>	ConQuest®

## General Specifications

<b>Color</b>	Black
<b>Conduit Type</b>	Non-toneable
<b>Density Test Method</b>	ASTM D792A
<b>Density, maximum</b>	0.955 g/cm <sup>3</sup>   0.035 lb/in <sup>3</sup>
<b>Density, minimum</b>	0.941 g/cm <sup>3</sup>   0.034 lb/in <sup>3</sup>
<b>Design Standard</b>	ASTM D3350-05
<b>Wall Type</b>	Smooth

## Dimensions

<b>Inner Diameter, nominal</b>	10.008 mm   0.394 in
<b>Outer Diameter, nominal</b>	12.7 mm   0.5 in
<b>Wall Thickness, minimum</b>	1.346 mm   0.053 in
<b>Nominal Size</b>	12.7 mm

## Material Specifications

<b>Flexural Modulus, minimum</b>	551.581 N/mm <sup>2</sup>   80000 psi
<b>Flexural Property Test Method</b>	ASTM D790
<b>Hydrostatic Design Basis</b>	Not pressure rated
<b>Hydrostatic Design Test Method</b>	ASTM D2837
<b>Material Type</b>	High density polyethylene (HDPE)

# 360000000 | 12.7MB DUCT EMPTY

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**Melt Flow Rate Test Method** ASTM D1238

**Melt Flow Rate, maximum** 0.39 g/10 min

## Mechanical Specifications

**Minimum Bend Radius, unsupported** 152.4 mm | 6 in

**Tensile Property Test Method** ASTM D638

**Tensile Strength at yield, minimum** 20.684 N/mm<sup>2</sup> | 3000 psi

**Pulling Tension, maximum** 86.183 kg | 190 lb

## Environmental Specifications

**Environmental Stress Crack Resistance** Failure rate of 10% within 96 hours

**Environmental Stress Test Method** ASTM D1693, ESCR Condition B

## Packaging and Weights

**Weight, net** 46.133 kg/km | 31 lb/kft

## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015

### Classification

Designed, manufactured and/or distributed under this quality management system



## \* Footnotes

**Environmental Stress Crack Resistance** ESCR—Environmental Stress Crack Resistance

# 360000013 | 12.7MB DUCT EMPTY

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ConQuest® Empty Conduit, 12.7 mm, black



## Product Classification

<b>Product Type</b>	Empty conduit
<b>Product Brand</b>	ConQuest®

## General Specifications

<b>Color</b>	Black
<b>Conduit Type</b>	Non-toneable
<b>Density Test Method</b>	ASTM D792A
<b>Density, maximum</b>	0.955 g/cm <sup>3</sup>   0.035 lb/in <sup>3</sup>
<b>Density, minimum</b>	0.941 g/cm <sup>3</sup>   0.034 lb/in <sup>3</sup>
<b>Design Standard</b>	ASTM D3350-05
<b>Wall Type</b>	Smooth

## Dimensions

<b>Inner Diameter, nominal</b>	10.008 mm   0.394 in
<b>Outer Diameter, nominal</b>	12.7 mm   0.5 in
<b>Wall Thickness, minimum</b>	1.346 mm   0.053 in
<b>Nominal Size</b>	12.7 mm

## Material Specifications

<b>Flexural Modulus, minimum</b>	551.581 N/mm <sup>2</sup>   80000 psi
<b>Flexural Property Test Method</b>	ASTM D790
<b>Hydrostatic Design Basis</b>	Not pressure rated
<b>Hydrostatic Design Test Method</b>	ASTM D2837
<b>Material Type</b>	High density polyethylene (HDPE)

# 360000013 | 12.7MB DUCT EMPTY

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<b>Melt Flow Rate Test Method</b>	ASTM D1238
<b>Melt Flow Rate, maximum</b>	0.39 g/10 min

## Mechanical Specifications

<b>Minimum Bend Radius, unsupported</b>	152.4 mm   6 in
<b>Tensile Property Test Method</b>	ASTM D638
<b>Tensile Strength at yield, minimum</b>	20.684 N/mm <sup>2</sup>   3000 psi
<b>Pulling Tension, maximum</b>	86.183 kg   190 lb

## Environmental Specifications

<b>Environmental Stress Crack Resistance</b>	Failure rate of 10% within 96 hours
<b>Environmental Stress Test Method</b>	ASTM D1693, ESCR Condition B

## Packaging and Weights

<b>Weight, net</b>	46.133 kg/km   31 lb/kft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



## \* Footnotes

**Environmental Stress Crack Resistance** ESCR—Environmental Stress Crack Resistance

75 Ohm QR® Trunk and Distribution Cable, black PE jacket, flooded for underground



## Product Classification

<b>Product Type</b>	Coaxial hardline cable
<b>Product Brand</b>	QR®

## General Specifications

<b>Cable Type</b>	715 Series
<b>Construction Type</b>	Welded
<b>Jacket Color</b>	Black
<b>Short Description</b>	QR 715 JCASS SM PR997

## Dimensions

<b>Cable Length</b>	914.4 m   3000 ft
<b>Diameter Over Center Conductor, nominal</b>	4.216 mm   0.166 in
<b>Diameter Over Dielectric, nominal</b>	17.424 mm   0.686 in
<b>Diameter Over Jacket, nominal</b>	19.939 mm   0.785 in
<b>Diameter Over Outer Conductor, nominal</b>	18.161 mm   0.715 in
<b>Jacket Thickness, nominal</b>	0.889 mm   0.035 in
<b>Outer Conductor Thickness, nominal</b>	0.368 mm   0.014 in

## Electrical Specifications

<b>Capacitance</b>	50.197 pF/m   15.3 pF/ft
<b>Capacitance Tolerance</b>	±1.0 pF/ft
<b>Characteristic Impedance</b>	75 ohm
<b>Characteristic Impedance Tolerance</b>	±2 ohm
<b>dc Resistance Note</b>	Nominal values based on a standard condition of 20 °C (68 °F)

# 5513592 | QR® 715 JCASS

<b>dc Resistance, Inner Conductor, nominal</b>	1.903 ohms/km   0.58 ohms/kft
<b>dc Resistance, Loop, nominal</b>	3.281 ohms/km   1 ohms/kft
<b>dc Resistance, Outer Conductor, nominal</b>	1.378 ohms/km   0.42 ohms/kft
<b>Jacket Spark Test Voltage</b>	5000 Vac
<b>Nominal Velocity of Propagation (NVP)</b>	88 %
<b>Operating Frequency Band</b>	5–3000 MHz
<b>Structural Return Loss</b>	24 dB @ 1003–1218 MHz   24 dB @ 1219–1794 MHz   30 dB @ 5–1002 MHz
<b>Structural Return Loss, Grade N</b>	=24 dB @ 1003–1218 MHz   =24 dB @ 1219–1794 MHz   =30 dB @ 5–1002 MHz

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5.0	0.36	0.11
55.0	1.21	0.37
85.0	1.51	0.46
204.0	2.4	0.73
211.0	2.43	0.74
250.0	2.66	0.81
300.0	2.92	0.89
350.0	3.18	0.97
400.0	3.44	1.05
450.0	3.67	1.12
500.0	3.9	1.19
550.0	4.1	1.25
600.0	4.3	1.31
750.0	4.89	1.49
865.0	5.31	1.62
1002.0	5.76	1.75
1218.0	6.43	1.96
1500.0	7.44	2.27
1794.0	8.3	2.53
1800.0	8.32	2.54
2000.0	8.88	2.71
2200.0	9.42	2.87



# 5513592 | QR® 715 JCASS

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<b>2500.0</b>	10.21	3.11
<b>2700.0</b>	10.72	3.27
<b>3000.0</b>	11.46	3.49

## Material Specifications

<b>Center Conductor Material</b>	Copper-clad aluminum
<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
<b>Outer Conductor Material</b>	Aluminum

## Mechanical Specifications

<b>Pulling Tension, maximum</b>	154.221 kg   340 lb
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## Environmental Specifications

<b>Corrosion Protection</b>	Migraheal®
<b>Environmental Space</b>	Buried

## Packaging and Weights

<b>Packaging Type</b>	Reel
<b>Weight, gross</b>	305.074 kg/km   205 lb/kft

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

