

## FiberExpress Distribution Cables Tight Buffer – Indoor Riser & Plenum Rated

Fast installation, easy termination.  
Sub-unitized cables provide easy routing and 900 μm tight-buffered fiber supporter fast and robust field-termination.

### Applications:

- Horizontal distribution for Fiber-to-the-desk
- In-building backbone
- Factory floor automation
- Data Center EDA areas

### Additional Options

- MSHA (Mining) Approvals

### Indoor Specifications

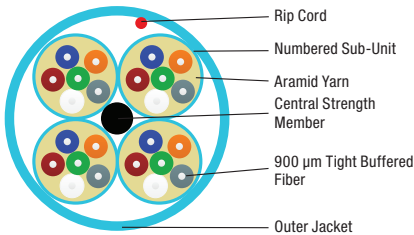
#### Bend Radius (vs. Cable OD)

Installation	15 x OD
Operation	10 x OD

#### Temperature Range

Storage	-40°C to 70°C (-40°C to 158°F)
Installation (Plenum/LSZH)	0°C to 60°C (32°F to 140°F)
Installation (Riser)	-10°C to 60°C (14°F to 140°F)
Operation (Plenum/LSZH)	0°C to 70°C (32°F to 158°F)
Operation (Riser)	-20°C to 70°C (-4°F to 158°F)

### Legend



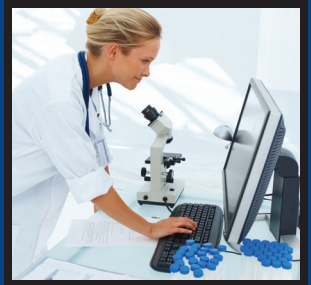
### Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-409-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR/OFN FT.4 (RISER - PVC)
- NEC/CEC OFNR/OFN FT.4 (LSZH - FRPE)
- NEC/CEC OFNP/OFN FT.6 (PLENUM - PVC or PVDF)
- ICEA S-83-596

Description	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
					mm	in.	Kg/km	lb/1000 ft.	Operation		Installation	
									N	lbs-f	N	lbs-f
Non-Unitized		2	900 μm TB	N/A	4.8	0.19	22	15	222	50	556	125
		4			4.8	0.19	25	17	222	50	556	125
		6	900 μm TB	N/A	5.8	0.23	36	24	334	75	667	150
		8										
		10										
		12										
	16	900 μm TB	N/A	8.8	0.35	64	43	556	125	1112	250	
	24											
Unitized 6-Fiber Sub-Units		24	900 μm TB	4.5	13.1	0.52	145	97	1001	225	2002	450
		36			16.0	0.63	221	148	1668	375	3336	750
Unitized 12-Fiber Sub-Units		36	900 μm TB	5.5	14.1	0.56	162	109	1001	225	2002	450
		48			15.5	0.61	207	139	1423	320	2847	640
		72			19.0	0.75	321	216	2002	450	4226	950
		96			22.8	0.90	536	360	2780	625	5560	1250
		144			25.4	1.00	602	404	4226	950	8452	1900

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

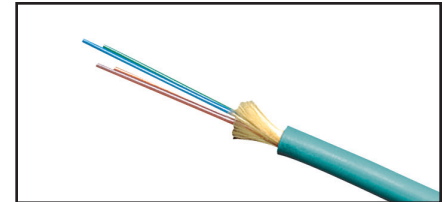
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**FiberExpress Distribution Cables** (continued)  
Tight Buffer — Indoor Riser & Plenum Rated

**Standard Indoor Configurations**

Fiber Count	Belden Part Number			
	OM1 Orange	OM3 Aqua	OM4 Erika Violet	OS2 Yellow
<b>Non-Unitized - Riser</b>				
2	F1D002R9	F3D002R9	F4D002R9	FISD002R9
6	F1D006R9	F3D006R9	F4D006R9	FISD006R9
12	F1D012R9	F3D012R9	F4D012R9	FISD012R9
24	F1D024R9	F3D024R9	F4D024R9	FISD024R9
<b>Non-Unitized - Plenum</b>				
2	F1D002P9	F3D002P9	F4D002P9	FISD002P9
6	F1D006P9	F3D006P9	F4D006P9	FISD006P9
12	F1D012P9	F3D012P9	F4D012P9	FISD012P9
24	F1D024P9	F3D024P9	F4D024P9	FISD024P9
<b>Unitized 6 Fiber subunits riser</b>				
24	F1D024RJ	F3D024RJ	F4D024RJ	FISD024RJ
<b>Unitized 6 Fiber subunits plenum</b>				
24	F1D024PJ	F3D024PJ	F4D024PJ	FISD024PJ
<b>Unitized 12 Fiber subunits plenum</b>				
36	F1D036PK	F3D036PK	F4D036PK	FISD036PK
48	F1D048PK	F3D048PK	F4D048PK	FISD048PK
72	F1D072PK	F3D072PK	F4D072PK	FISD072PK
96	F1D096PK	F3D096PK	F4D096PK	FISD096PK
144	F1D144PK	F3D144PK	F4D144PK	FISD144PK



Optical Fiber Distribution Cable

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

## FiberExpress Distribution Cables (continued) Tight Buffer – Indoor/Outdoor Riser, Plenum & LSZH Rated

### Indoor/Outdoor Specifications

- Environmental Protection
  - UV Resistant Jacket
  - Moisture Resistant Jacket
  - Fungus Resistant Jacket
  - Water Blocking Aramid
  - Water Blocking Tape

### Additional Options

- MSHA (Mining) Approvals

### Indoor/Outdoor Specifications

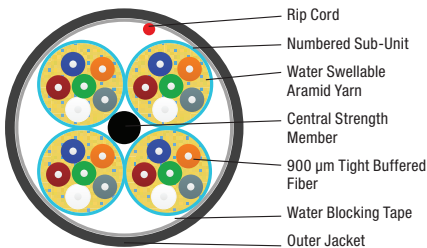
#### Bend Radius (vs. Cable OD)

Installation	20 x OD
Operation	10 x OD

#### Temperature Range

Storage	-40°C to 70°C (-40 to 158°F)
Installation	-20 to 70°C (-4 to 158°F)
Operation	-40 to 70°C (-40 to 158°F)

### Legend



### Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-20-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR/OFN FT.4 (RISER - PVC)
- NEC/CEC OFNR/OFN FT.4 (LSZH - FRPE)
- NEC/CEC OFNP/OFN FT.6 (PLENUM - PVC or PVDF)
- ICEA S-104-696

Description	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
					mm	in.	Kg/km	lb/1000 ft.	Operation		Installation	
									N	lbs-f	N	lbs-f
Non-Unitized		2	900 µm TB	N/A	4.8	0.19	22	15	222	50	556	125
		4	900 µm TB	N/A	4.8	0.19	25	17	222	50	556	125
		6					31	21				
		8			5.8	0.23	36	24	334	75	667	150
		10					39	26				
		12					43	29				
16	8.8	0.35	64	43	556	125	1112	250				
24			80	54								
Unitized 6-Fiber Sub-Units		24	900 µm TB	4.5	13.1	0.52	145	97	1001	225	2002	450
		36			16.0	0.63	221	148	1668	375	3336	750
Unitized 12-Fiber Sub-Units		36	900 µm TB	5.5	14.1	0.56	162	109	1001	225	2002	450
		48			15.5	0.61	207	139	1423	320	2847	640
		72			19.0	0.75	321	216	2002	450	4226	950
		96			22.8	0.90	536	360	2780	625	5560	1250
		144			25.4	1.00	602	404	4226	950	8452	1900

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

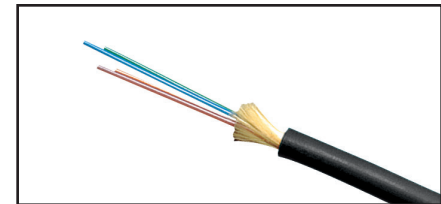
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**FiberExpress Distribution Cables** (continued)  
Tight Buffer — Indoor/Outdoor Riser, Plenum & LSZH Rated

**Standard Indoor/Outdoor Configurations**

Fiber Count	Belden Part Number			
	OM1 Black	OM3 Black	OM4 Black	OS2 Black
<b>Non-Unitized - Riser/LSZH</b>				
2	FD1D002L9	FD3D002L9	FD4D002L9	FSD002L9
6	FD1D006L9	FD3D006L9	FD4D006L9	FSD006L9
12	FD1D012L9	FD3D012L9	FD4D012L9	FSD012L9
24	FD1D024L9	FD3D024L9	FD4D024L9	FSD012L9
<b>Non-Unitized - Riser</b>				
2	FD1D002R9	FD3D002R9	FD4D002R9	FSD002R9
6	FD1D006R9	FD3D006R9	FD4D006R9	FSD006R9
12	FD1D012R9	FD3D012R9	FD4D012R9	FSD012R9
24	FD1D024R9	FD3D024R9	FD4D024R9	FSD024R9
<b>Non-Unitized Plenum</b>				
2	FD1D002P9	FD3D002P9	FD4D002P9	FSD002P9
6	FD1D006P9	FD3D006P9	FD4D006P9	FSD006P9
12	FD1D012P9	FD3D012P9	FD4D012P9	FSD012P9
24	FD1D024P9	FD3D024P9	FD4D024P9	FSD024P9
<b>Unitized 6-Fiber Sub-Units - Riser</b>				
24	FD1D024RJ	FD3D024RJ	FD4D024RJ	FSD024RJ
<b>Unitized 6-Fiber Sub-Units - Plenum</b>				
24	FD1D024PJ	FD3D024PJ	FD4D024PJ	FSD024PJ
<b>Unitized 12-Fiber Sub-Units - Riser/LSZH</b>				
48	FD1D048LK	FD3D048LK	FD4D048LK	FSD048LK
72	FD1D072LK	FD3D072LK	FD4D072LK	FSD072LK
96	FD1D096LK	FD3D096LK	FD4D096LK	FSD096LK
144	FD1D144LK	FD3D144LK	FD4D144LK	FSD144LK
<b>Unitized 12-Fiber Sub-Units - Plenum</b>				
48	FD1D048PK	FD3D048PK	FD4D048PK	FSD048PK
72	FD1D072PK	FD3D072PK	FD4D072PK	FSD072PK
96	FD1D096PK	FD3D096PK	FD4D096PK	FSD096PK
144	FD1D144PK	FD3D144PK	FD4D144PK	FSD144PK



Optical Fiber Distribution Cable, Indoor/Outdoor

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

## FiberExpress Armored Distribution Cables Tight Buffer – Indoor, Riser and Plenum Rated

Heightened Protection with simple termination. Augmenting the easy termination of Distribution cable with interlocking armor to provide an elevated resistance to cutting, crushing and the gnawing of rodents all while eliminating the additional expense of innerduct.

### Applications:

- Campus/Inter Building
- Telecom Trunks
- Industrial
- Rugged Environments

### Indoor Specifications

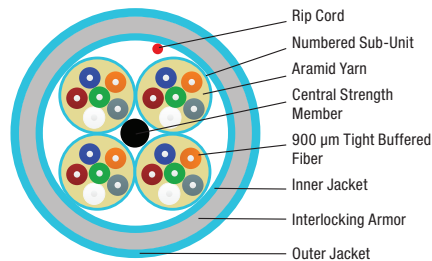
#### Bend Radius (vs. Cable OD)

Installation	20 x OD
Operation	15 x OD

#### Temperature Range

Storage	-40°C to 70°C (-40°F to 158°F)
Installation (Plenum/LSZH)	0°C to 60°C (32°F to 140°F)
Installation (Riser)	-10°C to 60°C (14°F to 140°F)
Operation (Plenum/LSZH)	0°C to 70°C (32°F to 158°F)
Operation (Riser)	-20°C to 70°C (-4°F to 158°F)

### Legend



Description	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
					mm	in.	Kg/km	lb/1000 ft.	Operation		Installation	
									N	lbs-f	N	lbs-f
Non-Unitized		6	900 µm TB	N/A	14.5	0.57	189	127	360	81	1201	270
		12			15.7	0.62	150	223	400	90	1334	300
		24			17.0	0.67	335	225				
Unitized 6-Fiber Sub-Units		24	900 µm TB	4.5	21.5	0.85	391	263	890	200	2700	600
		36			25.3	1.00	548	368				
Unitized 12-Fiber Sub-Units		48	900 µm TB	5.5	24.6	0.97	540	363	890	200	2700	600
		72			27.8	1.09	716	481				
		96			32.5	1.28	930	625				
		144			35.6	1.40	1005	675				

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

### Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-409-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR/OFN FT.4 (RISER - PVC)
- NEC/CEC OFNR/OFN FT.4 (LSZH - FRPE)
- NEC/CEC OFNP/OFN FT.6 (PLENUM - PVC or PVDF)
- ICEA S-83-596

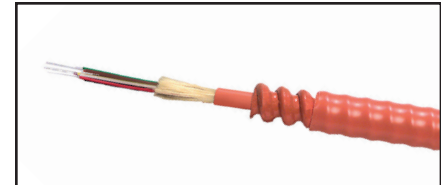
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**FiberExpress Armored Distribution Cables** (continued)  
Tight Buffer — Indoor Riser & Plenum Rated

**Standard Indoor Armored Configurations**

Fiber Count	Belden Part Number			
	OM1 Orange	OM3 Aqua	OM4 Erika Violet	OS2 Yellow
<b>Non-Unitized Riser</b>				
6	F1D006F9	F3D006F9	F4D006F9	FISD006F9
12	F1D012F9	F3D012F9	F4D012F9	FISD012F9
24	F1D024F9	F3D024F9	F4D024F9	FISD024F9
<b>Non-unitized Plenum</b>				
6	F1D006A9	F3D006A9	F4D006A9	FISD006A9
12	F1D012A9	F3D012A9	F4D012A9	FISD012A9
24	F1D024A9	F3D024A9	F4D024A9	FISD024A9
<b>Unitized 6 fiber sub-units plenum</b>				
24	F1D024AJ	F3D024AJ	F4D024AJ	FISD024AJ
<b>Unitized 12 fiber sub-units plenum</b>				
48	F1D048AK	F3D048AK	F4D048AK	FISD048AK
72	F1D072AK	F3D072AK	F4D072AK	FISD072AK
96	F1D096AK	F3D096AK	F4D096AK	FISD096AK
144	F1D144AK	F3D144AK	F4D144AK	FISD144AK



Armored Optical Fiber Distribution Cable

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

## FiberExpress Armored Distribution Cables (continued) Tight Buffer – Indoor/Outdoor, Riser and Plenum Rated

### Indoor/Outdoor Specifications

- Environmental Protection
  - UV Resistant Jacket
  - Moisture Resistant Jacket
  - Fungus Resistant Jacket
  - Water Blocking Aramid
  - Water Blocking Tape

### Additional Options

- MSHA (Mining) Approvals

### Indoor/Outdoor Specifications

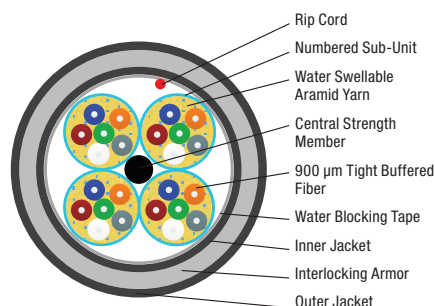
#### Bend Radius (vs. Cable OD)

Installation	20 x OD
Operation	15 x OD

#### Temperature Range

Storage	-40°C to 70°C (-40°F to 158°F)
Installation	-20°C to 70°C (-4°F to 158°F)
Operation	-40°C to 70°C (-40°F to 158°F)

### Legend



Description	Construction	Fiber Count	Fiber	Sub-Unit OD	Cable OD		Weight		Tensile Strength			
					mm	in.	Kg/km	lb/1000 ft.	Operation		Installation	
									N	lbs-f	N	lbs-f
Non-Unitized		6	900 µm TB	N/A	14.5	0.57	189	127	360	81	1201	270
		12			15.7	0.62	150	223	400	90	1334	300
		24			17.0	0.67	335	225				
Unitized 6-Fiber Sub-Units		24	900 µm TB	4.5	21.5	0.85	391	263	890	200	2700	600
		36			25.3	1.00	548	368				
Unitized 12-Fiber Sub-Units		48	900 µm TB	5.5	24.6	0.97	540	363				
		72			27.8	1.09	716	481				
		96			32.5	1.28	930	625	890	200	2700	600
		144			35.6	1.40	1005	675				

Above specifications provide a general representation for the product family. Improved specifications may exist for Riser, Plenum or LSZH constructions. Consult individual technical data sheets for exact specifications.

### Compliance

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd Edition
- Telcordia GR-20-CORE
- RoHS II 2011/65/EU
- REACH EC1907-2006
- NEC/CEC OFNR/OFN FT.4 (RISER - PVC)
- NEC/CEC OFNR/OFN FT.4 (LSZH - FRPE)
- NEC/CEC OFNP/OFN FT.6 (PLENUM - PVC or PVDF)
- ICEA S-104-696

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**FiberExpress Armored Distribution Cables** (continued)  
Tight Buffer — Indoor/Outdoor, Riser & Plenum Rated

**Standard Indoor / Outdoor Armored Configurations**

Fiber Count	Belden Part Number			
	OM1 Black	OM3 Black	OM4 Black	OS2 Black
<b>Non-Unitized Riser</b>				
6	FD1D006F9	FD3D006F9	FD4D006F9	FSD006F9
12	FD1D012F9	FD3D012F9	FD4D012F9	FSD012F9
24	FD1D024F9	FD3D024F9	FD4D024F9	FSD024F9
<b>Non-unitized Plenum</b>				
6	FD1D006A9	FD3D006A9	FD4D006A9	FSD006A9
12	FD1D012A9	FD3D012A9	FD4D012A9	FSD012A9
24	FD1D024A9	FD3D024A9	FD4D024A9	FSD024A9
<b>Unitized 6 fiber sub-units plenum</b>				
24	FD1D024AJ	FD3D024AJ	FD4D024AJ	FSD024AJ
<b>Unitized 12 fiber sub-units plenum</b>				
48	FD1D048AK	FD3D048AK	FD4D048AK	FSD048AK
72	FD1D072AK	FD3D072AK	FD4D072AK	FSD072AK
96	FD1D096AK	FD3D096AK	FD4D096AK	FSD096AK
144	FD1D144AK	FD3D144AK	FD4D144AK	FSD144AK

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.



## FiberExpress Hybrid Distribution Cables Tight Buffer – Indoor/Outdoor, Riser and Plenum Rated

Hybrid cables combine multiple grades of fiber in a single unitized cable easily supporting various applications in a single cable which minimize installation labor.

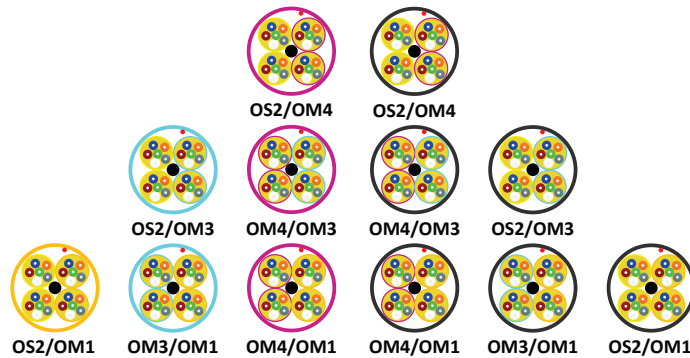
### Applications

- In building backbones
- Factory floor automation
- Broadcast and A/V in-building installation

### Additional Options

- Breakout Cable
- uMini-Distribution Cable
- 2-fiber to 144-fiber constructions
- Additional fiber grade combinations

### Standard Hybrid Cable Color



### Standard Hybrid Distribution Configurations

#### Building a SmartPart Number

1. Choose FX Fiber Cable	2. Choose Fiber Grade (Primary/Secondary)	3. Choose Family	4. Choose Fiber Configuration	5. Choose Flammability Rating and Protection	6. Choose Subunit Type/ Configuration																																																		
<b>FI</b>	<b>H</b>	<b>D</b>	<b>H22</b>	<b>P</b>	<b>J</b>																																																		
<table border="1"> <thead> <tr> <th colspan="2">FX Fiber Cable</th> </tr> </thead> <tbody> <tr> <td>FI</td> <td>Indoor Cable</td> </tr> <tr> <td>FD</td> <td>Indoor/Outdoor Cable</td> </tr> </tbody> </table>	FX Fiber Cable		FI	Indoor Cable	FD	Indoor/Outdoor Cable	<table border="1"> <thead> <tr> <th colspan="2">Fiber Grade (PRI/SEC)</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>OS2/OM4</td> </tr> <tr> <td>H</td> <td>OS2/OM3</td> </tr> <tr> <td>F</td> <td>OS2/OM1</td> </tr> <tr> <td>K</td> <td>OM4/OM1</td> </tr> <tr> <td>M</td> <td>OM3/OM1</td> </tr> </tbody> </table>	Fiber Grade (PRI/SEC)		E	OS2/OM4	H	OS2/OM3	F	OS2/OM1	K	OM4/OM1	M	OM3/OM1	<table border="1"> <thead> <tr> <th colspan="2">Family</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Distribution</td> </tr> </tbody> </table>	Family		D	Distribution	<table border="1"> <thead> <tr> <th colspan="2">Fiber Configuration</th> </tr> </thead> <tbody> <tr> <td>H13</td> <td>4 Subunits, 1 Primary Subunit, 3 Secondary subunits</td> </tr> <tr> <td>H22</td> <td>4 Subunits, 2 Primary Subunits, 2 Secondary Subunits</td> </tr> <tr> <td>H31</td> <td>4 Subunits, 3 Primary Subunits, 1 Secondary Subunit</td> </tr> </tbody> </table>	Fiber Configuration		H13	4 Subunits, 1 Primary Subunit, 3 Secondary subunits	H22	4 Subunits, 2 Primary Subunits, 2 Secondary Subunits	H31	4 Subunits, 3 Primary Subunits, 1 Secondary Subunit	<table border="1"> <thead> <tr> <th colspan="2">Flammability Rating and Protection</th> </tr> </thead> <tbody> <tr> <th colspan="2">Plenum Group</th> </tr> <tr> <td>P</td> <td>Plenum (OFNP)</td> </tr> <tr> <td>A</td> <td>Plenum Interlocked Aluminum Armor (OFCP)</td> </tr> <tr> <th colspan="2">Riser Group</th> </tr> <tr> <td>R</td> <td>Riser (OFNR)</td> </tr> <tr> <td>F</td> <td>Riser Interlocked Aluminum Armor (OFCR)</td> </tr> </tbody> </table>	Flammability Rating and Protection		Plenum Group		P	Plenum (OFNP)	A	Plenum Interlocked Aluminum Armor (OFCP)	Riser Group		R	Riser (OFNR)	F	Riser Interlocked Aluminum Armor (OFCR)	<table border="1"> <thead> <tr> <th colspan="2">Subunit Type/Configuration</th> </tr> </thead> <tbody> <tr> <td>J</td> <td>4.5 mm Subunit, 6 x 900 μm Fiber</td> </tr> <tr> <td>K</td> <td>5.5 mm Subunit, 12 x 900 μm Fiber</td> </tr> </tbody> </table>	Subunit Type/Configuration		J	4.5 mm Subunit, 6 x 900 μm Fiber	K	5.5 mm Subunit, 12 x 900 μm Fiber
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P	Plenum (OFNP)																																																						
A	Plenum Interlocked Aluminum Armor (OFCP)																																																						
Riser Group																																																							
R	Riser (OFNR)																																																						
F	Riser Interlocked Aluminum Armor (OFCR)																																																						
Subunit Type/Configuration																																																							
J	4.5 mm Subunit, 6 x 900 μm Fiber																																																						
K	5.5 mm Subunit, 12 x 900 μm Fiber																																																						

For an exhaustive selection contact Belden customer service or your local Belden Representative for more details.

### Examples:

**FIHDH22PJ** - Unitized – 6 fiber subunits and for FDEDH31AK's description to say Unitized 12 fiber subunits.

**FDEDH31AK** - FX Indoor/Outdoor Cable, Hybrid Distribution Tight Buffered Cable, Unitized, 48 fiber (36 fiber OS2, 12 fiber OM4), Plenum Armored, Black Jacket