RADIO FREQUENCY SYSTEMS

HELIFLEX® SELECTION GUIDE

Edition 1 / 9.2023

RFS TRANSMISSION LINE SOLUTIONS

RADIO FREQUENCY SYSTEMS

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EIFFEL TOWER - PARIS, FRANCE
HELIFLEX installed on The Iron Lady

HELIFLEX®
BY AN RFS SPECIALIST

Gerd Bohnet, Product Line Manager Waveguide & Air Dielectric Cable at RFS talks us through the solution and how it is used.

A SIMPLE FIRST QUESTION, WHAT IS HELIFLEX®?

HELIFLEX is RFS's portfolio of corrugated coaxial air dielectric cables. The HELIFLEX cables are air filled coaxial cables where the inner conductor is centered by dielectric spacers. This gives the RFS solution several advantages versus alternative options. The first is indicated in the name, HELIFLEX is so named due to the helix corrugation. This makes this cable flexible, allowing it to be wound onto a drum and manufactured in single long length pieces. This is the big advantage compared to rigid lines which can handle similar power but in shorter length and without any flexibility. Additionally, when compared with foam dielectric cables it has the advantage of a higher power rating due to lower attenuation at the same dimension. This gives our customers a number of benefits when they select HELIFLEX for projects.

HOW LONG HAS RFS OFFERED THIS TYPE OF SOLUTION AND HOW HAS IT EVOLVED?

RFS began production of HELIFLEX in 1951 and has continued to evolve its portfolio of this product over the last 70 years. We are now able to offer larger cable sizes up to 8" and 9" allowing us to cater for a great range of applications. In addition to the cables themselves, we have also committed to developing a range of essential accessories together with selected suppliers to improve the deployment process and address the needs of our customers.

CAN YOU GIVE AN EXAMPLE OF AN APPLICATION USING HELIFLEX?

The main application for HELIFLEX cables is in the broadcast sector, specifically in applications where there is a need to transport high power signals from the transmitter to the antenna with lowest possible attenuation and signal distortion. The solutions are not limited to broadcast applications, but can be used for all high power application where attenuation is an issue.

HELIFLEX HAS BEEN DEPLOYED IS USED ALL OVER THE WORLD, HOW DO YOU ENSURE CUSTOMERS GET THE MOST OUT OF THE SOLUTION?

One of the real strengths for customers selecting HELIFLEX is that we are able to provide both the cable and the required accessories to ensure an efficient and effective solution. With dedicated accessories like clamps, grounding kits, and connectors which are optimized to our cables the customer minimized the risk of performance loss during installation and operation over the years.

At RFS, we take great pride in the fact our solutions are built to last. As an example, RFS delivered 9" cable for the at the Wertachtal transmitter site in Bavaria, Germany to support broadcasting for the 1972 Olympic Games in Munich. From 1972 to 2013 this was the biggest shortwave broadcasting facility in Europe and is still operating 50 years later without performance degradation, demonstrating a solution that is still standing the test of time.

WHAT DOES THE FUTURE HOLD FOR THE HELIFLEX PORTFOLIO?

As long as radio stations are installed, there will be a need for cable. The HELIFLEX option helps to guarantee an efficient installation with highest possible performance. RFS is one of only a handful of manufacturers specializing in this style of cable and our heritage in the space allows us to develop best in class solutions for an ongoing challenge faced by broadcasters.

GERD BOHNET
Product Line Manager Waveguide, Air Dielectric Cable & Accessories

This guide looks at the full HELIFLEX portfolio of cables and accessories, with case study examples **to help identify the best solution for any deployment.**

Transmission Line Solutions

HELIFLEX: SETTING THE STANDARD
FOR DECADES

HIGH PERFORMANCE WITH LOW ATTENUATION

HELIFLEX is a high-performance cable with a design that offers the lowest possible attenuation and signal distortion. This allows HELIFLEX solutions to have a higher power rating compared to foam dielectric cables of the same dimension, making it ideal for broadcast applications needing to transport high-power signals from the transmitter to the antenna.

EASY INSTALLATION

As the flexible cable can be shipped as long single pieces, the deployment process is streamlined. The cable is simple for field engineers to install and the potential infrastructure weaknesses that come from cable joins are removed.

SIMPLE LOGISTICS

The flexibility of the solution allows longer pieces to be wound onto a drum. This facilitates easier and more compact transportation for lower cost and lower environmental impact.

RUGGEDIZED

The solution is designed for outside deployment and to withstand severe weather conditions. HELIFLEX can be deployed on-site for decades with no impact on its ongoing performance.

COMPLETE SOLUTION

In addition to the cables themselves, RFS offers a complete range of essential accessories; clamps, grounding kits, and connectors. They are designed to minimize the risk of performance loss during installation and ensure operation without degradation for the life of the cables over the years.

HELIFLEX®
ON AIR

HELIFLEX cables are air-filled coaxial cables where the inner conductor is centered by dielectric spacers. **Designed and patented by RFS over 70 years ago, this style of cable has become the de-facto industry standard, with RFS's premium HELIFLEX solutions installed across the globe.** Available in cable sizes between 7/8" and 6 1/8" (larger sizes available on request), the unique helix corrugation makes for a flexible and versatile cable that offers big advantages for a range of applications.

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 7/8" Series: 3 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA78-50J	HELIFLEX 7/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA78-50JB	HELIFLEX 7/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA78-50JFN	HELIFLEX 7/8in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	7/8
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	25
Cable Volume	L/m	0,34
Cable Weight	kg/m	0,68

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	3
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	93
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	73
RF Peak Voltage	V	2700
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85
Flame Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	100
Minimum Bending Radius, Repeated Bend	mm	250
Bending Moment	Nm	27
Tensile Strength	N	1600
Recommended / Maximum Clamp Spacing	m	0.5 / 0.9

RELATED PRODUCTS

Model Number	Type
NM-HCA78-020	Connector for HELIFLEX Cable HCA 7/8-50, N Male (Plast2000 sealing)
NF-HCA78-020	Connector for HELIFLEX Cable HCA 7/8-50, N Female (Plast2000 sealing)
716M-HCA78-020	Connector for HELIFLEX Cable HCA 7/8-50, 7-16 Female (Plast2000 sealing)
716F-HCA78-020	Connector for HELIFLEX Cable HCA 7/8-50, 7-16 Male (Plast2000 sealing)
78EIA-HCA78-019	Connector for HELIFLEX Cable HCA 7/8-50, 7/8 EIA (O-Ring sealing)
158EIA-HCA78-020	Connector for HELIFLEX Cable HCA 7/8-50, 1 5/8 EIA (Plast2000 sealing)
78EIA-CE-002	Coupling Element for 7/8 EIA Connectors
158EIA-CE-002	Coupling Element for 1 5/8 EIA Connectors

Model Number	Type
WF-78	Wall Feed Through for Cable HCA78/LCF78 Single Entry Kit (without Feed Through Plate)
EAR-78	Grounding Kit for HELIFLEX Cable HCA78
HCH-78-1L4	Hanger for HELIFLEX Cable HCA78 Cable Angle Iron 40 mm (1.575in)
HCH-78-1R	Hanger for HELIFLEX Cable HCA78 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-78-1C	Hanger for HELIFLEX Cable HCA78 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
HOIST1-78L	Hoisting grip, open, LCF/UCF/HCA78, E100, E105, EO19

Transmission Line Solutions

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 1-1/8" Series: 3 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA118-50J	HELIFLEX 1 1/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA118-50JB	HELIFLEX 1 1/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA118-50JFN	HELIFLEX 1 1/8in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	1 1/8
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	36,4
Cable Volume	L/m	0,6
Cable Weight	kg/m	1,1

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	3
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	92
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	137
RF Peak Voltage	V	3700
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85
Flame Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	130
Minimum Bending Radius, Repeated Bend	mm	400
Bending Moment	Nm	42
Tensile Strength	N	2200
Recommended / Maximum Clamp Spacing	m	0.5 / 0.9

RELATED PRODUCTS

Model Number	Type
158EIA-HCA118-001	Connector for HELIFLEX Cable HCA 1 1/8-50, 1 5/8 EIA (Plast2000 sealing)
158EIA-CE-002	Coupling Element for 1 5/8 EIA Connectors
HCH-118-1L4	Hanger for HELIFLEX Cable HCA118 Cable Angle Iron 40 mm (1.575in)
HCH-118-1R	Hanger for HELIFLEX Cable HCA118 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-118-1C	Hanger for HELIFLEX Cable HCA118 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
RSB-118	RSB-Clip for HCA 118
RSB-STRAP	RSB Straptite for tube mounting L=30m
RSB-310	RSB Cleat for RSB Clip

Model Number	Type
RSB-315	RSB Clamping plate for anchor bar
RSB-FAST	RSB Fastener for straptite
HOIST1-114L	Hoisting grip, open, UCF/LCFS114, HCA118, E70, E78, EO15
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)
FDIE-B118	Flaring die for the Basic Tool HCA 118-50

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 1-5/8" Series: 3 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA158-50J	HELIFLEX 1 5/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA158-50JB	HELIFLEX 1 5/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA158-50JFN	HELIFLEX 1 5/8in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	1 5/8
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	50,4
Cable Volume	L/m	1,4
Cable Weight	kg/m	1,3

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	3
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	95
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	270
RF Peak Voltage	V	5200
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85

Flame Retardant Jacket Specifications	Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	180
Minimum Bending Radius, Repeated Bend	mm	550
Bending Moment	Nm	42
Tensile Strength	N	1500
Recommended / Maximum Clamp Spacing	m	0.8 / 1.2

RELATED PRODUCTS

Model Number	Type
716F-HCA158-001	Connector for HELIFLEX Cable HCA 1 1/8-50, 7-16 Female (Plast2000 sealing)
716M-HCA158-001	Connector for HELIFLEX Cable HCA 1 1/8-50, 7-16 Male (Plast2000 sealing)
78EIA-HCA158-001	Connector for HELIFLEX Cable HCA 1 1/8-50, 7/8 EIA (Plast2000 sealing)
158EIA-HCA158-019	Connector for HELIFLEX Cable HCA 1 5/8-50, 1 5/8 EIA (O-Ring sealing)
78EIA-CE-002	Coupling Element for 7/8 EIA Connectors
158EIA-CE-002	Coupling Element for 1 5/8 EIA Connectors
WF-158	Wall Feed Through for Cable HCA158/LCF158 Single Entry Kit (without Feed Through Plate)
EAR-158	Grounding Kit, Pre-formed Copper Strap for HELIFLEX Cable HCA158
HCH-158-1L4	Hanger for HELIFLEX Cable HCA158 Cable Angle Iron 40 mm (1.575in)
HCH-158-1R	Hanger for HELIFLEX Cable HCA158 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)

Model Number	Type
HCH-158-1C	Hanger for HELIFLEX Cable HCA158 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
CLAMP-158-S	Hanger for HELIFLEX Cable HCA158 Standard
ANGLE-CLPM10	Angle Adapter for HELIFLEX Cable HCA Standard Hanger
HOIST1-158L	Hoisting grip, open, LCF/HCA158, E58, E60, E65, EO11
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)
FDIE-B158	Flaring die for the Basic Tool HCA 158-50

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 3" Series: 1,63 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA300-50J	HELIFLEX 3in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA300-50JB	HELIFLEX 3in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA300-50JFN	HELIFLEX 3in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	3
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	76
Cable Volume	L/m	3
Cable Weight	kg/m	2,1

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	1,63
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	640
RF Peak Voltage	V	8000
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85

Flame Retardant Jacket Specifications	Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	270
Minimum Bending Radius, Repeated Bend	mm	760
Bending Moment	Nm	145
Tensile Strength	N	1800
Recommended / Maximum Clamp Spacing	m	0.8 / 1.2

RELATED PRODUCTS

Model Number	Type
318EIA-HCA300-019	Connector for HELIFLEX Cable HCA 300-50, 3 1/8 EIA (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
WF-300	Wall Feed Through for HELIFLEX Cable HCA300 Single Entry Kit (without Feed Through Plate)
EAR-300	Grounding Kit for HELIFLEX Cable HCA300
HCH-300-1L4	Hanger for HELIFLEX Cable HCA300 Cable Angle Iron 40 mm (1.575in)
HCH-300-1R	Hanger for HELIFLEX Cable HCA300 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-300-1C	Hanger for HELIFLEX Cable HCA300 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
CLAMP-300-S	Hanger for HELIFLEX Cable HCA300 Standard
ANGLE-CLPM10	Angle Adapter for HELIFLEX Cable HCA Standard Hanger

Model Number	Type
HOIST2-L08	Hoisting Grip open for HCA295, HCA300, E38
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)
FDIE-B300	Flaring die for the Basic Tool HCA 300-50

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 4" Series: 1,66 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA400-50J	HELIFLEX 4in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA400-50JB	HELIFLEX 4in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA400-50JFN	HELIFLEX 4in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	4
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	90,5
Cable Volume	L/m	5
Cable Weight	kg/m	3,1

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	1
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	940
RF Peak Voltage	V	9700
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85

Flame Retardant Jacket Specifications	Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	380
Minimum Bending Radius, Repeated Bend	mm	890
Bending Moment	Nm	215
Tensile Strength	N	1800
Recommended / Maximum Clamp Spacing	m	0.8 / 1.2

RELATED PRODUCTS

Model Number	Type
318EIA-HCA400-019	Connector for HELIFLEX Cable HCA 400-50, 3 1/8 EIA (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
WF-400	Wall Feed Through for HELIFLEX Cable HCA400 Single Entry Kit (without Feed Through Plate)
EAR-400	Grounding Kit for HELIFLEX Cable HCA400
HCH-400-1L4	Hanger for HELIFLEX Cable HCA400 Cable Angle Iron 40 mm (1.575in)
HCH-400-1R	Hanger for HELIFLEX Cable HCA400 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-400-1C	Hanger for HELIFLEX Cable HCA400 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
CLAMP-400-S	Hanger for HELIFLEX Cable HCA400 Standard
ANGLE-CLPM10	Angle Adapter for HELIFLEX Cable HCA Standard Hanger

Model Number	Type
HOIST2-L09	Hoisting Grip open for HCA400, E30
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)
FDIE-E400	Flaring die for the Basic Tool HCA 400-50 (HCA318-50)
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)

Transmission Line Solutions

HELIFLEX AIR DIELECTRIC
COAXIAL CABLE

HCA 5" Series: 1 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA495-50J	HELIFLEX 5in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA495-50JB	HELIFLEX 5in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA495-50JFN	HELIFLEX 5in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	5
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	115,1
Cable Volume	L/m	8,3
Cable Weight	kg/m	4,5

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	1
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	97
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	1560
RF Peak Voltage	V	12500
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85

Flame Retardant Jacket Specifications	Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	500
Minimum Bending Radius, Repeated Bend	mm	1200
Bending Moment	Nm	335
Tensile Strength	N	3000
Recommended / Maximum Clamp Spacing	m	1.0 / 2.0

RELATED PRODUCTS

Model Number	Type
318EIA-HCA495-001	Connector for HELIFLEX Cable HCA 495-50, 3 1/8 EIA (Plast2000 sealing)
412IEC-HCA495-019	Connector for HELIFLEX Cable HCA 495-50, 4 1/2 IEC (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
412EIA-CE-002	Coupling Element for 4 1/2 EIA Connectors
WF-495	Wall Feed Through for HELIFLEX Cable HCA495 Single Entry Kit (without Feed Through Plate)
EAR-495	Grounding Kit for HELIFLEX Cable HCA495
HCH-495-1L4	Hanger for HELIFLEX Cable HCA495 Cable Angle Iron 40 mm (1.575in)
HCH-495-1R	Hanger for HELIFLEX Cable HCA495 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)

Model Number	Type
HCH-495-1C	Hanger for HELIFLEX Cable HCA495 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
CLAMP-495-S	Hanger for HELIFLEX Cable HCA495 Standard
ANGLE-CLPM10	Angle Adapter for HELIFLEX Cable HCA Standard Hanger
HOIST2-L11	Hoisting Grip open for HCA495, E20
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)
FDIE-E495	Flaring die for the Basic Tool HCA 495-50 (HCA418-50)

HELIFLEX AIR DIELECTRIC COAXIAL CABLE

HCA 5-1/2” Series: 0,86 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA550-50J	HELIFLEX 5 1/2in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA550-50JB	HELIFLEX 5 1/2in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA550-50JFN	HELIFLEX 5 1/2in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	5,5
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	147,1
Cable Volume	L/m	14
Cable Weight	kg/m	7,5

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	0,86
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable’s model datasheet
Peak Power Rating	KW	2250
RF Peak Voltage	V	15000
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85
Flame Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	800
Minimum Bending Radius, Repeated Bend	mm	1500
Bending Moment	Nm	580
Tensile Strength	N	4000
Recommended / Maximum Clamp Spacing	m	1.0 / 2.0

RELATED PRODUCTS

Model Number	Type
412IEC-HCA550-019	Connector for HELIFLEX Cable HCA 550-50, 4 1/2 IEC (O-Ring sealing)
618EIA-HCA550-019	Connector for HELIFLEX Cable HCA 550-50, 6 1/8 EIA (O-Ring sealing)
412EIA-CE-002	Coupling Element for 4 1/2 EIA Connectors
618EIA-CE-002	Coupling Element for 6 1/8 EIA Connectors
WF-500	Wall Feed Through for HELIFLEX Cable HCA550 Single Entry Kit (without Feed Through Plate)
EAR-550	Grounding Kit for HELIFLEX Cable HCA550
HCH-550-1L4	Hanger for HELIFLEX Cable HCA550 Cable Angle Iron 40 mm (1.575in)
HCH-550-1R	Hanger for HELIFLEX Cable HCA550 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-550-1C	Hanger for HELIFLEX Cable HCA550 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
HOIST2-L12	Hoisting Grip open for HCA550
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)
FDIE-E550	Flaring die for the Basic Tool HCA 550-50 (HCA500-50)

Transmission Line Solutions

HELIFLEX AIR DIELECTRIC COAXIAL CABLE

HCA 6-1/8” Series: 0,86 GHz

ORDERING INFORMATION

MODEL NUMBER	JACKETING OPTION
HCA618-50J	HELIFLEX 6 1/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage
HCA618-50JB	HELIFLEX 6 1/8in Low Loss Air Dielectric Cable Standard Jacket intended for Outdoor Usage, Self-Healing Jacket
HCA618-50JFN	HELIFLEX 6 1/8in Low Loss Air Dielectric Cable Flame retardant / Halogen free Jacket

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS		
Nominal Size	inch	6 1/8
Jacket Color		Black
Jacket Material		Polyethylene, PE
Diameter Over Jacket	mm	169
Cable Volume	L/m	19
Cable Weight	kg/m	10

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/-0.5
Maximum Frequency	GHz	0,86
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	97
Attenuation	dB	See cable’s model datasheet
Peak Power Rating	KW	2890
RF Peak Voltage	V	17000
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	
High Power performance	High Power cable is available upon request.	

TEMPERATURE SPECIFICATIONS			
		STANDARD JACKET J	FLAME RETARDANT JACKET JFN
Installation	°C	-40 to +60	-25 to +60
Storage	°C	-70 to +85	-70 to +85
Operation	°C	-50 to +85	-50 to +85
Flame Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

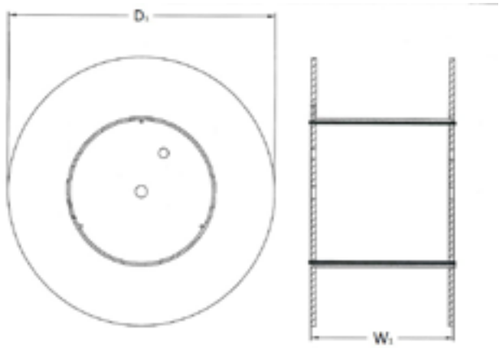
* Premium return loss cable available. Contact Sales for options in your specific frequency band.

MECHANICAL SPECIFICATION		
Minimum Bending Radius, Single Bend	mm	1000
Minimum Bending Radius, Repeated Bend	mm	1500
Bending Moment	Nm	1000
Tensile Strength	N	6000
Recommended / Maximum Clamp Spacing	m	1.0 / 2.0

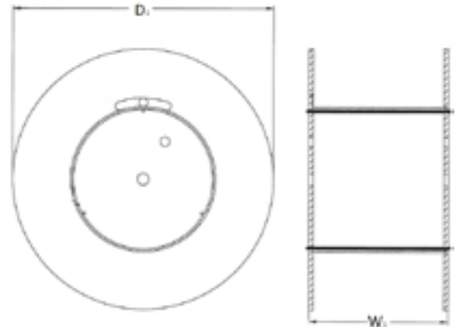
RELATED PRODUCTS

Model Number	Type
618EIA-HCA618-019	Connector for HELIFLEX Cable HCA 6 1/8-50, 6 1/8 EIA (O-Ring sealing)
618EIA-CE-002	Coupling Element for 6 1/8 EIA Connectors
WF-618	Wall Feed Through for HELIFLEX Cable HCA618 Single Entry Kit (without Feed Through Plate)
EAR-618	Grounding Kit for HELIFLEX Cable HCA618
HCH-618-1L4	Hanger for HELIFLEX Cable HCA618 Cable Angle Iron 40 mm (1.575in)
HCH-618-1R	Hanger for HELIFLEX Cable HCA618 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-618-1C	Hanger for HELIFLEX Cable HCA618 Cable Anchor Bar 18 - 22 mm (0.7 - 0.9in)
HOIST2-L13	Hoisting Grip open for HCA618
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)

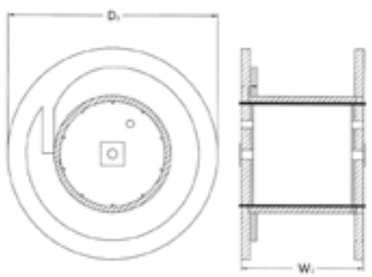
HELIFLEX
SHIPPING & DRUM INFORMATION



Drum Type (former ref.)	Drum Type (new ref.)	Width (W1)	Diameter without planking* (D1)	Weight
L 1192 / 1180	11-077-X	770mm	1120mm	52Kg
L 1390 / 1380	13-073-X	722mm	1350mm	76Kg
L 1590 / 1580	15-097-X	964mm	1500mm	96Kg



Drum Type (former ref.)	Drum Type (new ref.)	Width (W1)	Diameter without planking* (D1)	Weight
A 1552 / 1583	15-097-M	948mm	1500mm	92Kg
A 1850 / 1883	18-066-M	638mm	1800mm	154Kg
A 2150 / 2180	21-114-M	1120mm	2140mm	229Kg
A 2157 / 2187	21-115-M	1136mm	2150mm	226Kg
A 2159 / 2189	21-195-M	1946mm	2150mm	329Kg
A 2550 / 2580	25-141-M	1405mm	2500mm	537Kg
A 2551 / 2581	25-143-M	1430mm	2500mm	535Kg



Drum Type (former ref.)	Drum Type (new ref.)	Width (W1)	Diameter without planking* (D1)	Weight
H 2576 / 2586	25-156-S	1560mm	2500mm	541Kg
H 3272	32-157-S	1570mm	3150mm	845Kg
H 3672	36-165-S	1650mm	3600mm	1362Kg
H 3972	39-235-X	2350mm	3900mm	1587Kg
H 4272	42-235-S	2350mm	4200mm	1765Kg

Transmission Line Solutions

HELIFLEX
SHIPPING & DRUM INFORMATION

RFS offers L, A and H drums to accommodate your shipping and packing requirements.

Radio Frequency Systems (RFS) carefully selects the appropriate reel sizes based on the length and overall diameter of the cable to be wound. A reel not matched to the weight of the cable could be damaged during shipment. Additionally, all cable has a minimum safe bending radius. If it is subjected to bends sharper than the minimum radius, damage to the material is likely. L, A & H drum types enhanced outdoor storage capabilities for typically > 6 months.

Former Drum Type		HCA78-50	HCA118-50	HCA158-50	HCA300-50	HCA400-50	HCA495-50	HCA550-50	HCA618-50
	Carton	60m							
	Drum type	not terminated	not terminated	not terminated	not terminated	not terminated	not terminated	not terminated	not terminated
L1192/1180	11-077-X	530m							
L1390/1380	13-073-X		240m						
A1552/1583	15-097-M	1050m							
L1590/1580	15-097-X		530m						
A1850/1883	18-066-M			160m					
A2150/2180	21-114-M		1050m	630m					
A2157/2187	21-115-M				120m				
A2159/2189	21-195-M			750m	230m				
A2550/2580	25-141-M					250m	120m		
A2551/2581	25-143-M			900m					
H2576/2586	25-156-S			1110m	375m				
H3272	32-157-S				685m	500m			
H3672	36-165-S				800m	710m	345m	110m	
H3972	39-235-X					860m	465m	250m	215m
H4272	42-235-S						655m	380m	345m

HELIFLEX ACCESSORY
AUTOMATIC DEHYDRATOR

ORDERING INFORMATION

MODEL NAME	PRODUCT DESCRIPTION
BD552W	Dehydrator 208-253VAC, 50/60HZ
BD1502W	Dehydrator 208-253VAC, 50/60HZ
BD4202W	Dehydrator 208-253VAC, 50/60HZ
BD8402W	Dehydrator 208-253VAC, 50/60HZ

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS					
		BD552W	BD1502W	BD4202W	BD8402W
"max. System Volume @Sea Level"	l	5,455	14,863	41,615	83,23
Output Capacity	l/h	Normal: 413 Continuous; Maximum: 649 Emergency	Normal: 1416 Continuous; Maximum: 1770 Emergency	Normal: 3068 Continuous; Maximum: 4955 Emergency	Normal: 7670 Continuous; Maximum: 9911 Emergency
Output Pressure	kPa (PSIG)	13.8 - 103.4 (2 - 15)	13.8 - 103.4 (2 - 15)	35 - 138 (5 - 20)	0 - 103.4 (0 - 15)
Ouput Air Relative Humidity	%	>2 RH			
Number of Outlets		1			
Output Fitting		Single, 3/8" Press-to-Lock tube fitting		Single, 1/2" NPT female	
Noise Level at 3m	dBA	48		63	78,8
Network Management		via Web Browser or SNMP through RJ-45 Ethernet Connection			

ELECTRICAL SPECIFICATIONS					
		BD552W	BD1502W	BD4202W	BD8402W
Operating Voltage	V	208 - 253 VAC, 50 / 60Hz			220-230 VAC, 50 / 60Hz
OperatingCurrent	A	3,5		3,9	15

MECHANICAL SPECIFICATION					
		BD552W	BD1502W	BD4202W	BD8402W
Dimension H x D x W	cm	68.6 x 30.8 x 43.8		124.5 x 53.3 x 64.8	124.5 x 53.3 x 64.1
Weight	Kg	33,6	36,3	100	120

ENVIRONMENTAL					
		BD552W	BD1502W	BD4202W	BD8402W
Ambient Temperature Range	°C	+5 to +30 Note: Unit will go into SHUTDOWN mode if cabinet temperature exceeds 49°C			

Transmission Line Solutions

HELIFLEX ACCESSORY
AUTOMATIC DEHYDRATOR

BD552W
BD1502W
Dehydrator Series

BD4202W
Dehydrator Series

BD8402W
Dehydrator Series

RELATED PRODUCTS

	BD552W	BD1502W	BD4202W	BD8402W
6-Month Maintenance Kit	P013478	P018302	P012314	P011766
8000 Hour Maintenance Kit	P013479	P012252	P011471	P011813
16000 Hour Maintenance Kit				P011814
Universal Rack Mnt Kit	P011674	P011674		
Wall Mounting Kit	P011773	P011773	2 x P011773	
Installation Kit			P011752	P011752
2-Port Manifold w/ Pres Gauges	PWM2G			
2-Port Manifold w/ Pres Gauges & Valves	PWM2GC			
4-Port Manifold w/Pressure Gauges	PW4MG			
4-Port Manifold w/ Pres Gauges & Valves	PW4MGC			
8-Port Manifold w/ Pres Gauges	PWM8G			
8-Port Manifold w/ Pres Gauges & Valves	PWM8GC			
Single Pipe Panel	P8741SFM			
Dual Pipe Panel	P8741DFM			
Flow Distribution Panel	PFMP2310			
Kit, Start up, Dehydrator	GLK-1			
Kit, Start up, 2 - Port Manifold	MLK-2			
Kit, Start up, 4 - Port Manifold	MLK-4			
Kit, Start up, 8 - Port Manifold	MLK-8			
Gas inlet adaptor 1/8" NPT for 3/8" OD tube	TUBE-38OD-PON			
Gas inlet adaptor M12-G1/8"	TUBE-M12-G18			

HELIFLEX ACCESSORY
ADAPTERS

RFS offers a huge variety of adapters to allow the customers **to connect RFS Heliflex cable with existing equipment even the interfaces have different sizes**.

The **high-performance adapters** allow maximal flexibility for planning and installation with **minimal performance degradation between cable and broadcast equipment**.

The integration of coupling elements on all adapters with EIA interface **allows a design with the shortest space requirement**.

For installation, where these adapters are not suitable, RFS offers a wide range of 90-degree elbows as a perfect solution where limited space makes a straight cable installation on antennas, switches and combiners impossible.

78EIA-716M
Coaxial Adapter
7/8" EIA - 7-16 male

78EIA-716F
Coaxial Adapter
7/8" EIA - 7-16 female

412EIA-318EIA
Coaxial Adapter
4 1/2" EIA to 3 1/8"

618EIAM-318EIAM
Coaxial Adapter
6 1/8" EIA to 3 1/8" with Coupling Element

318EIA Elbow
90° Coaxial Adapter
318EIA-R-318EIA

ORDERING INFORMATION

MODEL NAME	INTERFACE 1	INTERFACE 2	DESCRIPTION
78EIA-716M	78EIA	7/16 male	Adapter 7/8" EIA to 7-16 Male
78EIA-716F	78EIA	7/16 female	Adapter 7/8" EIA to 7-16 Female
78EIA-NF	78EIA	N female	Adapter 7/8"EIA to N Female
1330M-158EIA	1330 male	158EIA	Adapter 13-30 Male to 1 5/8" EIA
1330F-158EIA	1330 female	158EIA	Adapter 13-30 Female to 1 5/8" EIA
158EIA-78EIA	158EIA	78EIA	Adapter 1 5/8" EIA to 7/8" EIA
158EIAM-78EIAM	158EIA	78EIA	Adapter 1 5/8" EIA to 7/8" EIA with Coupling Element
158EIA-716F	158EIA	7/16 female	Adapter 1 5/8" EIA to 7-16 Female
158EIA-NF	158EIA	N female	Adapter 1 5/8" EIA to N Female
318EIA-158EIA	318EIA	158EIA	Adapter 3 1/8" EIA to 1 5/8" EIA
318EIAM-158EIAM	318EIA	158EIA	Adapter 3 1/8» EIA to 1 5/8» EIA with Coupling Element
318EIA-716F	318EIA	7/16 female	Adapter 3 1/8 "EIA to 7-16 Female
318EIA-NF	318EIA	N female	Adapter 3 1/8 "EIA to N Female
412EIA-318EIA	412EIA	318EIA	Adapter 4 1/2" EIA to 3 1/8" EIA
412EIAM-318EIAM	412EIA	318EIA	Adapter 4 1/2" EIA to 3 1/8" EIA with Coupling Element
412EIA-716F	412EIA	7/16 female	Adapter 4 1/2 "EIA to 7-16 Female
618EIAM-412EIAM	618EIA	412EIA	Adapter 6 1/8" EIA to 4 1/2" EIA with Coupling Element
618EIA-318EIA	618EIA	318EIA	Adapter 6 1/8" EIA to 3 1/8" EIA
618EIAM-318EIAM	618EIA	318EIA	Adapter 6 1/8" EIA to 3 1/8" EIA with Coupling Element
78EIA-R-78EIA	78EIA	78EIA	Coaxial line elbow 90° 7/8" EIA
158EIA-R-158EIA	158EIA	158EIA	Coaxial line elbow 90° 1 5/8" EIA
318EIA-R-318EIA	318EIA	318EIA	Coaxial line elbow 90° 3 1/8" EIA
412EIA-R-412EIA	412EIA	412EIA	Coaxial line elbow 90° 4 1/2" EIA
618EIA-R-618EIA	618EIA	618EIA	Coaxial line elbow 90° 6 1/8" EIA

HELIFLEX ACCESSORY
CONNECTORS WITH PERFECT SEALING

RFS offers connectors with O-ring and silicon component Plast 2000 sealing depending on connector size and application. **Small connectors with N, 7/16" DIN and some EIA interfaces uses Plast 2000 sealing which has proved itself for decades in the field installation.** The easy use and reliability make it the perfect solution for these connectors.

Larger connectors with EIA interface have O-ring sealing which allows an easy reinstallation in case the cable must be adjusted due to equipment replacement, etc. The reuse makes these connectors to the most efficient solution in the field.

			SEALING METHOD	
Cable size	Interface	Model name	Plast 2000	O-ring
7/8"	N male	NM-HCA78-020	x	
	N female	NF-HCA78-020	x	
	7/16" male	716M-HCA78-020	x	
	7/16" female	716F-HCA78-020	x	
	7/8" EIA	78EIA-HCA78-019		x
	1 5/8" EIA	158EIA-HCA78-020	x	
1 1/8"	1 5/8" EIA	158EIA-HCA118-001	x	
1 5/8"	7/16" male	716F-HCA158-001	x	
	7/16" female	716M-HCA158-001	x	
	7/8" EIA	78EIA-HCA158-001	x	
	1 5/8" EIA	158EIA-HCA158-019		x
3"	3 1/8" EIA	318EIA-HCA300-019		x
4"	3 1/8" EIA	318EIA-HCA400-019		x
5"	3 1/8" EIA	318EIA-HCA495-001	x	
	4 1/2" EIA	412IEC-HCA495-019		x
5 1/2"	4 1/2" EIA	412IEC-HCA550-019		x
	6 1/8" EIA	618EIA-HCA550-019		x
6 1/8"	6 1/8" EIA	618EIA-HCA618-019		x

NF-HCA78-020
N Female Connector for 7/8" Coaxial Cable, RAPID FIT™ Sealing compound

716M-HCA158-001
7/16" DIN male connector for 1 5/8" Coaxial Cable

618EIA-HCA618-019
618" EIA Connector for 6-1/8" Coaxial Cable, Gas stop / Gas pass, O-Ring Sealing

NM-HCA78
N Male Connector for 7/8" Coaxial Cable, RAPID FIT™ Sealing compound

ORDERING INFORMATION

		P2000-001 (20 CM³)		P2000-002 (70 CM³)		P2000-003
Cable size	Connector	cm³	No of tubes	cm³	No of tubes	No of tubes
7/8"	NM-HCA78-020	5	1/4			
	NF-HCA78-020	5	1/4			
	716M-HCA78-020	5	1/4			
	716F-HCA78-020	5	1/4			
	158EIA-HCA78-020	5	1/4			
1 1/8"	158EIA-HCA118-001	10	1/2			
1 5/8"	716F-HCA158-001	20	1			
	716M-HCA158-001	20	1			
	78EIA-HCA158-001	20	1			
5"	318EIA-HCA495-001			120	2	1

Case Study

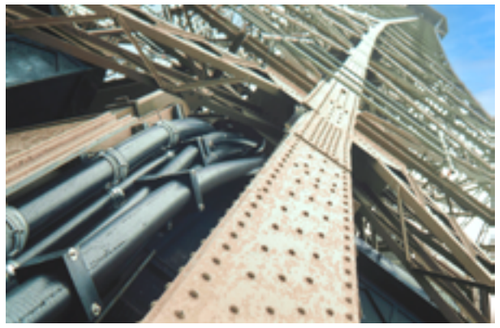
EIFFEL TOWER

OVERVIEW

Standing at 330 meters, the Eiffel Tower is one of the most iconic structures in the world. As well as attracting over 7 million visitors per year, the Eiffel Tower houses key connectivity equipment, with its high vantage point making it ideal as a broadcast tower to serve Paris and the surrounding area. However, installing the equipment to make the iconic building act as a powerful transmission site is not without challenges.

The challenges

Many of our customers have hurdles to overcome when deploying equipment, especially with buildings that have an alternative use. They may need equipment to be concealed to ensure there is no visual impact from the deployment. There may be tight working schedules that limit access for the purposes of installation. They may need our solutions to be tailored to meet the exact needs of their project. When working to upgrade broadcast equipment on the Eiffel Tower, RFS had to find ways to overcome all three challenges.



The solution

In addition to previous projects to provide equipment to bolster the Eiffel Tower's broadcast capabilities, RFS was selected to deliver the broadcast cabling needed as part of the Digital TV upgrade. For this, RFS provided 450 meters of HELIFLEX 4'' cable, 810 meters of HELIFLEX 6'' cable, along with all required terminations and radio electrical measurements.

Rapid deployment

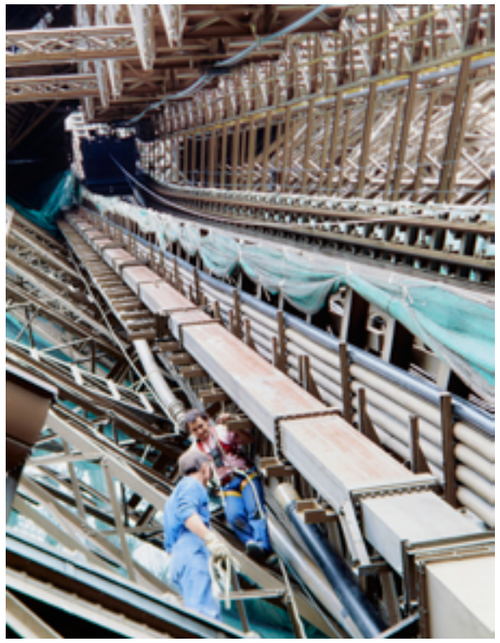
A priority for the project was to ensure minimal disruption to one of the main tourist attractions in Paris. RFS needed to install the 6'' cable in a single night to ensure the Eiffel Tower could remain open to tourists.
Discrete installation
The team worked to design and deploy a solution that could be installed with no visual impact on the iconic building.

Tailored requirements

RFS worked with the broadcaster to ensure the cable being deployed would meet both current and future requirements. This would allow the cable to sit in situ, without the need for replacement for the longest possible period of time, minimizing upgrade costs.

Powerful capabilities

The cable installed was used to feed all system antennas situated on one of the highest masts in France, allowing it to serve all inhabitants in the greater Paris area.



The result

RFS oversaw a smooth and successful installation on the Eiffel Tower that continues to meet the demands of the customer. Alongside the Eiffel Tower, RFS broadcast equipment is at work on sites including Bilsdale TV and Radio Tower in the UK, Emitel sites in Poland and for broadcast sites in Kazakhztan; highlighting RFS's status as the world's leading provider of broadcasting cable solutions.

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RADIO FREQUENCY SYSTEMS

TO SERVE YOU BETTER
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