



PRODUCT DATASHEET
HJA318-50A
3-1/8" HELICABLE™ Air-Dielectric Coaxial Cable

HELICABLE™ 3-1/8" low loss air dielectric

FEATURES

- **VSWR**
HELICABLE™ coaxial cables have low VSWR that contribute to low system performance.
- **Shielding**
HELICABLE™ coaxial cables feature a solid outer conductor which creates a continuous electromagnetic shield that means interference in your system is very low.
- **Attenuation**
HELICABLE™ coaxial cables have low attenuation resulting in extremely efficient transfer of your RF signal.
- **Power Rating**
HELICABLE™ coaxial cables provides long term operating life at high transmission power levels because of low attenuation and heat transfer properties.



3-1/8" HELICABLE™
Air-Dielectric Coaxial Cable

Technical Details

STRUCTURE

Size		3-1/8"
Jacket Option		Black
Inner Conductor Diameter	mm (in)	34.7 (1.37)
Inner Conductor Material		Corrugated copper tube
Dielectric Diameter	mm (in)	75.2 (2.96)
Dielectric Material		Polyethylene Helical strip
Outer Conductor Diameter	mm (in)	85.4 (3.36)
Outer Conductor Material		Corrugated copper tube
Jacket Diameter	mm (in)	91 (3.58)
Jacket Material		Polyethylene, PE
Cable Type		Air-Dielectric, Corrugated

ENVIRONMENTAL

Fire Performance		Halogen Free
Installation Temperature	°C (°F)	-40 to 60 (-40 to 140)
Storage Temperature	°C (°F)	-45 to 85 (-49 to 185)
Operating Temperature	°C (°F)	-45 to 85 (-49 to 185)

**PRODUCT DATASHEET****HJA318-50A****3-1/8" HELICABLE™ Air-Dielectric Coaxial Cable****ELECTRICAL SPECIFICATION**

Impedance	Ω	50 \pm 0.5
Maximum Frequency	GHz	1.55
Velocity	%	96
Capacitance	pF/m	70
Inductance	μ H/m	0.175
Peak Power Rating	kW	940
RF Peak Voltage	kV	9.7
Return loss (VSWR) Performance		Standard
Inner Conductor dc Resistance	Ω /1000m	0.4
Outer Conductor dc Resistance	Ω /1000m	0.15
Min. Return Loss (Max. VSWR)		Typical 20.8dB (1.2 VSWR) or better within the typical operating bands.

MECHANICAL SPECIFICATION

Cable Weight, Nominal	Kg/m	3.54
Minimum Bending Radius, Single Bend	mm (in)	380 (15)
Minimum Bending Radius, Repeated Bend	mm (in)	1100 (43)
Bending Moment	Nm	215
Tensile Strength	N	180
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1.2 (2.6 / 3.9)
Maximum Hoisting Grip Spacing	m (ft)	61 (200)

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ATTENUATION @ 20°C AND POWER RATING @ 40°C

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.03	0.01	790
1	0.04	0.01	560
1.5	0.04	0.01	440
2	0.05	0.02	300
10	0.11	0.03	175
20	0.16	0.05	123
30	0.19	0.06	103
50	0.25	0.08	79
88	0.34	0.1	58.3
100	0.36	0.11	55.2
108	0.38	0.12	52.5
150	0.45	0.14	44.3
174	0.48	0.15	41.1
200	0.52	0.16	38.3
300	0.65	0.2	31.2
400	0.76	0.23	27
450	0.81	0.25	25.4
500	0.86	0.26	24.1
512	0.87	0.27	23.9
600	0.95	0.29	22.0
700	1.03	0.31	20.4
800	1.11	0.34	19.1
824	1.13	0.34	18.8
894	1.18	0.36	18
900	1.19	0.36	17.8
925	1.21	0.37	17.5
960	1.23	0.37	17.2
1000	1.26	0.38	16.8



PRODUCT DATASHEET
318EIA-HJA318-001

3-1/8" EIA Connector for 3-1/8" HELICABLE™ HJA318-50A Air-Dielectric Coaxial Cable, Gas Stop / Gas Pass

HELICABLE™ High Performance Coaxial cable connectors have very low losses and provide a gas tight seal when installed to 3-1/8" HJA318-50A air dielectric cable. HELICABLE™ connectors can be installed with common basic hand tools. Tab flare flange of outer & inner connection and simple O-ring and gasket seal eases installation of the connector.

FEATURES

- **VSWR**
HELICABLE™ Coaxial cable connectors have low VSWR that contribute to system performance.
- **Sealing**
HELICABLE™ Coaxial cable connectors have firm gas tight fittings maintaining sealed pressure throughout the system.
- **Attenuation**
HELICABLE™ Coaxial cable connectors have low attenuation resulting in extremely efficient transfer of your RF signal.
- **Installation**
HELICABLE™ Coaxial cable connectors are easily installed using common basic hand tools.



EIA Connector for
HELICABLE™
Air-Dielectric Coaxial Cable
For illustration purposes only

Technical Details

GENERAL SPECIFICATIONS

Transmission Line Type		Coaxial Cable
Cable Size		3-1/8"
Cable Type		Air Dielectric
Model		HJA318-50A
Connector Interface		3-1/8" EIA
Connector Type		Gas stop / Gas pass* (drill through predrilled holes in the insulator)
Sealing Method		O-ring & gasket
Gender		Female, with separate Male inner anchor connector

ELECTRICAL SPECIFICATION

Impedance	Ω	50
Insertion Loss	dB	0.05
VSWR, Return Loss	VSWR (dB)	≤1.06 (-30.7)

MECHANICAL SPECIFICATION

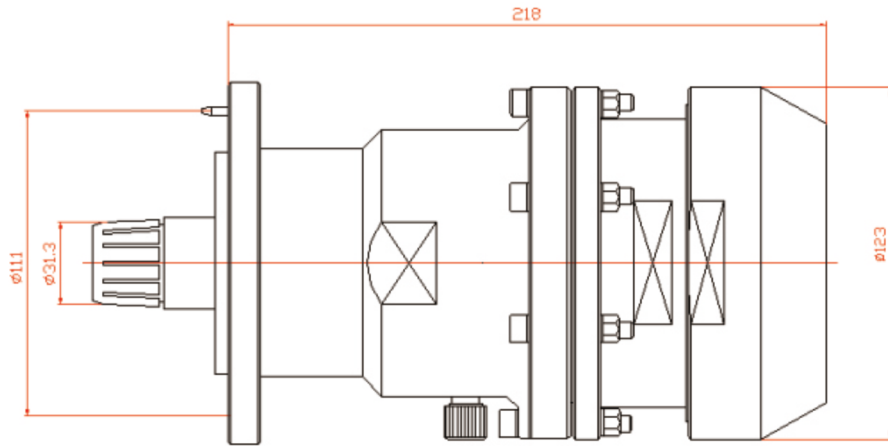
Plating Inner (contact faces)		Silver
Plating Outer		Nickel
Length	mm (in)	218 (8.6)
Outer Diameter	mm (in)	130 (5.1)
Gas Inlet		1/8" NPT



PRODUCT DATASHEET

318EIA-HJA318-001

3-1/8" EIA Connector for 3-1/8" HELICABLE™ HJA318-50A Air-Dielectric Coaxial Cable, Gas Stop / Gas Pass



318EIA-HJA318-001 connector, dimensions in mm

**PRODUCT DATASHEET****CLAMP-KIT-318**

Clamp and Hanger Kit for 3-1/8" HELICABLE™ HJA318-50A Air-Dielectric Coaxial Cable

HELICABLE™ Hangers for the installation of Coaxial cable on angle steel and cable trays.

FEATURESCLAMP-KIT-318 for
3-1/8" HELICABLE™ HJA318-50-A
Air-Dielectric Coaxial Cable**Technical Details****GENERAL SPECIFICATIONS**

Product Line		Coaxial Cable Accessories
Product Type		Hanger Kit
Hanger Type		Angle Clamp
Transmission Line Type		HJA318-50A
Cable Type		Air-Dielectric Coaxial Cable

MECHANICAL SPECIFICATION

Cable Size		3-1/8"
Material		Angle Clamp, Cable Clamp, Hardware : Stainless Steel Cable Support & Protection : Rubber
Recommended / Maximum Clamp Spacing	m	0.8 / 1.2

ENVIRONMENTAL SPECIFICATION

Working Temperature	°C (°F)	-40 to 70 (-40 to 158)
Installation Temperature	°C (°F)	-40 to 70 (-40 to 158)
Storage Temperature	°C (°F)	-40 to 70 (-40 to 158)

PACKING INFORMATION

Packing Quantity	pcs	1 in plastic bag
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**PRODUCT DATASHEET****GDK-318**

Grounding Kit for 3-1/8" HELICABLE™ HJA318-50A Air-Dielectric Coaxial Cable

HELICABLE™ Grounding Kit Copper Strap & Bonding Wire for HJA318-50-A Air-dielectric cable

FEATURES**• Installation**

HELICABLE™ Grounding Kit for Quick and easy installation

• Electrical Protection

HELICABLE™ Grounding Kit have Low contact transition resistance

• Environmental Protection

HELICABLE™ Grounding Kit is Weatherproof

GDK-318 for
3-1/8" HELICABLE™ HJA318-50-A
Air-Dielectric Coaxial Cable**Technical Details****GENERAL SPECIFICATIONS**

Product Line		Coaxial Cable Accessories
Product Type		Copper Strap & Bonding Wire
Transmission Line Type		HJA318-50A
Cable Type		Air-Dielectric Coaxial Cable
Cable Size		3-1/8"

MECHANICAL SPECIFICATION

Material		Ground Strap, Bonding Conductor Wire : Copper Screw, Flat Washer, Spring Washer, Nut : Stainless Steel
Bonding Wire Diameter	mm ²	16
Bonding Wire Length	mm (in)	1500 (59)
Lug Type		Two-hole
Lug Hole Size		M6
Screw Size	in	3/8 x 1

ELECTRICAL SPECIFICATION

Contact transition resistance	mΩ	≤5
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ENVIRONMENTAL SPECIFICATION

Working Temperature	°C (°F)	-40 to 70 (-40 to 158)
Storage Temperature	°C (°F)	-40 to 70 (-40 to 158)
Weatherproofing Method		Butyl and electrical Tape
Weatherproofing Standard		IP68

PACKING INFORMATION

Packing Quantity	pcs	1 in plastic bag
Included		Grounding Kit, 3/8" x 1" screw, 3/8" spring washer, 3/8" flat washer, 3/8" nut
Weight, gross	kg	0.65
Dimensions (H x W x L)	Mm (in)	155 x 305 x 355 (6.1 x 12 x 14)



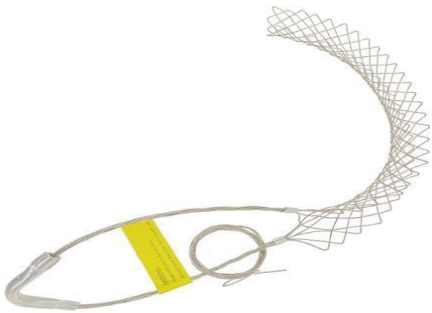
HELICABLE™ Hoisting Grips for the safe vertical installation of Coaxial Cable.

FEATURES

• Installation

HELICABLE™ hoisting grips distribute lifting forces over a length of cable avoid crushing, and are used to absorb additional strain from vibration, expansion, contraction and flexing.

HELICABLE™ open lace up hoisting grips allow for installation of cable runs that are already terminated with connectors, and also where the connector is installed after hoisting.



HOIST-318-O for
3-1/8" HELICABLE™ HJA318-50-A
Air-Dielectric Coaxial Cable

Technical Details

GENERAL SPECIFICATIONS

Product Line		Coaxial Cable Accessories
Product Type		Hoisting Grip
Transmission Line Type		HJA318-50A
Cable Type		Air-Dielectric Coaxial Cable
Configuration		1 Loop Attachment
Style		Lace Up, Open

MECHANICAL SPECIFICATION

Cable Size Range	mm (in)	88.9 - 101.3 (3.5 - 4)
Mesh Length	mm (in)	965.2 (38)
Eye Length	mm (in)	508 (20)
Weave Line Length	mm (in)	4000 (157.5)
Safe Working Load	kg (lbs)	590 (1300)
Maximum Spacing Interval	m (ft)	61 (200)
Mesh Material		Stainless Steel
Warning Label		Yellow Mylar

PACKING INFORMATION

Packing Quantity	pcs	1, in plastic bag
Weight, gross	kg (lbs)	0.6 (1.32)