RADIO FREQUENCY SYSTEMS

AWS Microwave Antenna System Relocation Kit

Key Products for 7 GHz Point-to-Point Applications

The Clear Choice™

Radio Frequency Systems is the wireless and broadcast infrastructure company with the strength and resources to serve the global market with a commanding array of antenna systems and sub-system solutions.

RFS spans the continents with strategically located operations, encompassing design, manufacturing, distribution, sales and service operations for markets in North America, South America, Europe, Africa, the Middle East, Australia, Southeast Asia and China.

Radio Frequency Systems brings a long tradition of design, engineering and manufacturing expertise to carriers, OEMs, distributors and systems integrators in the broadcast, cellular, land-mobile, microwave and government markets.

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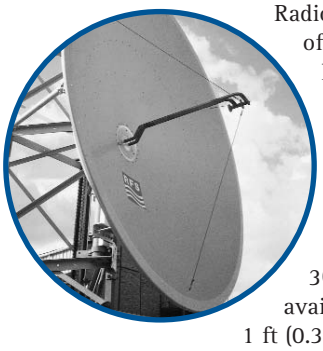
Solid Parabolic Microwave Antennas

Introduction and Antenna Descriptions



Radio Frequency Systems offers the most comprehensive line of highest quality microwave antennas in the industry. Antennas are available in all the common frequency bands ranging from 3GHz to 60GHz. They are available in diameters from 1 ft (0.3 m) to 15 ft (4.60 m). System design becomes easy and efficient with such a comprehensive antenna offering.

The antennas are available in four performance classes offering complete flexibility when designing a network.

The antennas meet the pattern requirements according to EN 300 631, EN 300 833 and FCC depending on the frequency range.

In addition to the different electrical classes of antennas Radio Frequency Systems offers the system design engineers different options of survival wind speeds. This allows the use of antennas in areas where extreme wind conditions are normal.

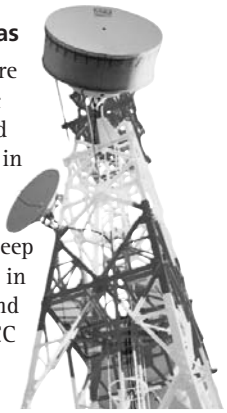
Standard Performance Antennas

Standard Performance Antennas are economical solutions for systems where side lobe suppression is of less importance. The antennas consist of a reflector, feed and tower mount. Low VSWR versions are available for low echo distortion.

STANDARD PERFORMANCE ANTENNAS	
Single polarized	PA & PAL series
Single polarized, spread spectrum	PSF series
Dual polarized	PAX series

Improved Performance Antennas

Improved Performance Antennas are unshrouded and offer an economic solution for systems requiring good radiation performance particularly in the back region. The improved F/B ratio is achieved by use of an efficient feed design together with a deep dish reflector. These features result in an improved front to back ratio, and were specially designed to meet FCC category A standards.



IMPROVED PERFORMANCE ANTENNAS	
Single polarized	PAD series
Dual polarized	PADX series

High Performance Antennas

High Performance Antennas are similar to Ultra High Performance Antennas in construction. They are ideally suited for systems where a good level of side lobe suppression is required.

HIGH PERFORMANCE ANTENNAS	
Single polarized	DA series
Dual polarized	DAX series

Ultra High Performance Antennas

Ultra High Performance Antennas are the optimum choice for systems where a high level of pattern performance is required because of high local radio congestion. The antennas are supplied with low VSWR feed, planar radome, tower mount and shroud with RF absorber.

ULTRA HIGH PERFORMANCE ANTENNAS	
Single polarized	UA series
Dual polarized	UDA series

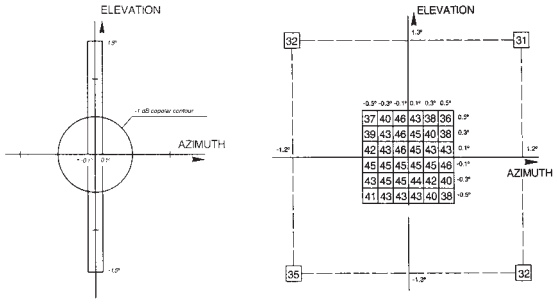
High Cross Polar Discrimination Antennas

UXA series of antennas are based on Ultra High Performance Antennas. These antennas offer high side lobe suppression. In addition UXA antennas offer extremely high cross-polar discrimination. They are therefore ideally suited for very high capacity systems utilizing extensive frequency reuse in highly congested environments. This outstanding performance is achieved by use of a special corrugated illuminator, a rigid torsion box back structure which ensures the reflector maintains its shape in the field and strict quality control during manufacture.

The cross-polar characteristics for radiation angles close to bore sight meet the highest XPD requirements according to EN 300 833 and FCC.

High cross-polar discrimination antennas are available for frequencies from 4 GHz to 23 GHz.

ULTRA HIGH PERFORMANCE ANTENNAS	
Dual Polarized	UXA series

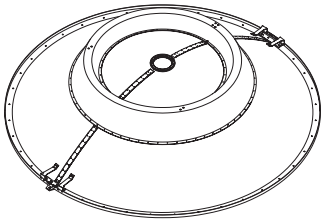


Example of a cross polar contour

Solid Parabolic Microwave Antennas

Introduction and Antenna Descriptions

Reflectors



Antennas with diameters up to 10ft (3.0m) are supplied with reflectors in one piece. Antennas with diameters 12ft (3.7m) are supplied with a two piece reflector (except UXA-types). Antennas with diameters of 15ft (4.6m) are supplied with a 3 piece reflector.

8ft and 10ft antennas are available in 2 pieces optional for easy transportation.

Colors

Standard color for RFS Microwave Antennas is white. Custom colors are available upon request.

Molded fiberglass radomes are white. High Performance, Ultra High Performance and High Cross Polarization Discrimination antenna are supplied with planar white radomes. Custom colors are available upon request.

SlimLine and CompactLine Antennas

Radio Frequency Systems recognizes that mobile operators and private microwave users have requirements for cost effective solutions for their microwave antenna systems. These needs include products, which are easy and quick to install while maintaining good electrical performance. In response to these needs Radio Frequency Systems developed the SlimLine and CompactLine series of antennas.

The SlimLine series of antennas utilize a conventional feed system and are available in Standard, High and Ultra High performance versions. The SlimLine series of antennas are available in diameters from 1ft (0.3 m) to 6 ft (1.8 m).

RFS SLIMLINE® ANTENNAS		
Single polarized	Standard	SP
	Standard, non-pressurized	SPF
	High performance	SD
	Ultra High Performance	SU
Dual Polarized	Standard	SPX
	High performance	SDX
	Ultra High Performance	SUX

The CompactLine series of antennas use a special feed system which results in a reduced shroud length and consequently a lower profile antenna. These antennas are lighter in weight than standard antennas for reduced tower loading and shipping costs. Furthermore CompactLine antennas up to 2ft (0.6m) diameter are very rugged, with a wind loading rating of 250 km/h (155mph). Their type designation is SB for single polarization and SBX for dual polarization. CompactLine antennas are available in 1ft (0.3 m), 2 ft (0.6 m), 3ft (0.9 m) and 4ft (1.2 m) diameters.

RFS COMPACTLINE® ANTENNAS		
Single polarized	Ultra High Performance	SB
Dual Polarized	Ultra High Performance	SBX

1ft and 2 ft antennas consist of an integrated reflector/shroud system avoiding any RF-leakage. This is a further contribution offering excellent radiation performance especially in the back direction.

Solid Parabolic Microwave Antennas

Antenna Types, Overview

STANDARD PERFORMANCE

PAD
Single polarized, standard, (FCC part 101, category “A” compliant)

PADX
Dual polarized, standard, (FCC part 101, category “A” compliant)

PA, SP
Single polarized
PAL
Single polarized, low VSWR

PAX, SPX
Dual polarized

PSF, SPF
Single polarized, non-pressurized, Spread Spectrum

HIGH PERFORMANCE

DA, SD, SDF
Single polarized

DAX, SDX
Dual polarized

ULTRA HIGH PERFORMANCE

UA, SU
Single polarized

UDA, SUX
Dual polarized

UXA
Dual polarized, high XPD

SB
CompactLine, single polarized

SBX
CompactLine, dual polarized

LA
Lens, single polarized

Technical Data Sheet **SP6-W71BC**

SlimLine Standard Performance Antenna, Single Polarized, 6 ft

Product Description

RFS SlimLine® Antennas are designed for microwave systems in all common frequency ranges from 6 GHz to 40 GHz. The antennas are cost-effective products for microwave point-to-point transmission links. The antennas utilise a conventional feed system and are available in Standard, High and Ultra High performance radiation characteristic. The Standard Performance antennas are available in single polarised (SP) as well as in dual polarised versions (SPX). Antennas with Standard Performance radiation characteristics are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 6 ft (1.8m) diameters. The antennas are easy to install. A side strut is required only for 6 ft-antennas.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	6 (1.8)
Profile	SlimLine
Performance	Standard
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1.5
Antenna Input	CPR112G
Low Band Gain, dBi	40.1
Mid Band Gain, dBi	40.8
High Band Gain, dBi	41.6
F/B Ratio, dB	48
XPD, dB	30
Max VSWR / R L, dB	1.15 / 23.1
ETSI Standard	Range 1, class 1
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)

SlimLine Standard Performance Antenna, Single Polarized, 6 ft

Radome	Optional
Radome Material	Fiberglass
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	0.6 (2.0)
Approximate Weight, kg (lb)	50 (110) *
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	880 (197)
F a Axial force max. at 110 kph (68 mph), N (lb)	2995 (670)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	925 (690)
Fs Side force max. at 200 kph (125 mph), N (lb)	2910 (651)
Fa Axial force max. at 200 kph (125 mph), N (lb)	9900 (2217)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	3055 (2270)

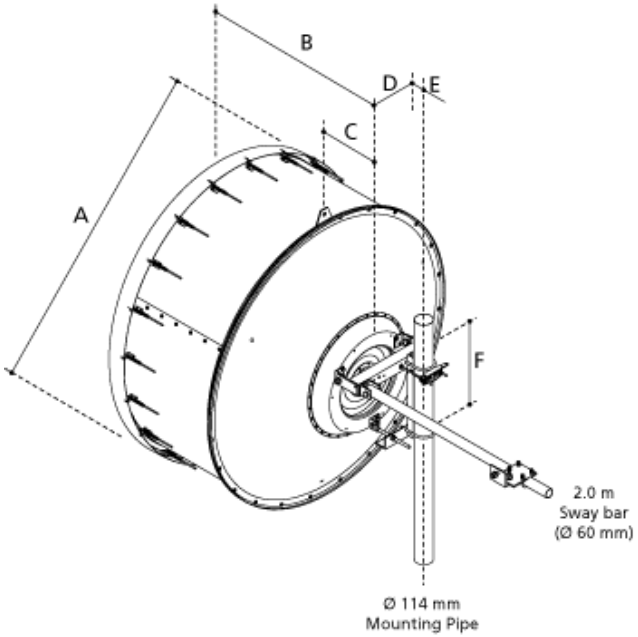
Note

For the A revision antenna, weight is 70kg (154lbs)

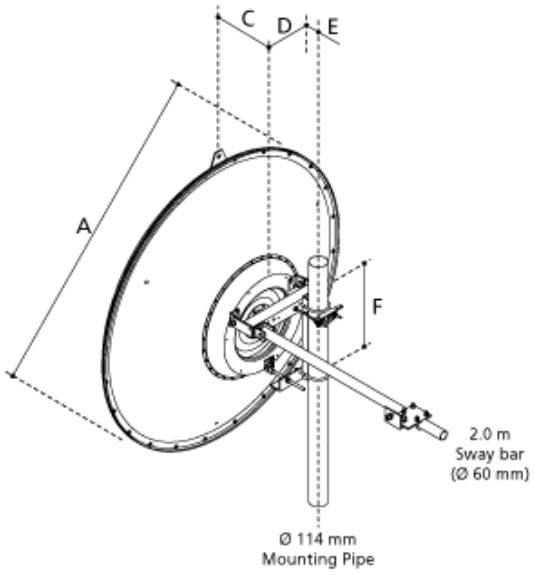
6 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX, SD, SDX, SU, SUX



PA, PAL, PAX, SP, SPX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2000(79)	1242(48.9)	364(14.3)	175(6.9)	283(11.1)	590(23.2)
	1342(52.8)*				

*f < 4.4 GHz

NOTE: For the A revision antenna, please contact RFS Applications Engineering at applications.engineering@rfsworld.com

Technical Data Sheet **PAL8-W71AC**

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 8 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The Standard Performance antennas are available in dual polarised (PAX) as well as in single polarised versions (PA and PAL). The PAL version offers a low VSWR value for low echo distortion. Antennas up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	8 (2.4)
Profile	Standard
Performance	Standard Low VSWR
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1,1
Antenna Input	CPR112G
Low Band Gain, dBi	42.6
Mid Band Gain, dBi	43.3
High Band Gain, dBi	44.0
F/B Ratio, dB	50
XPD, dB	30

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 8 ft

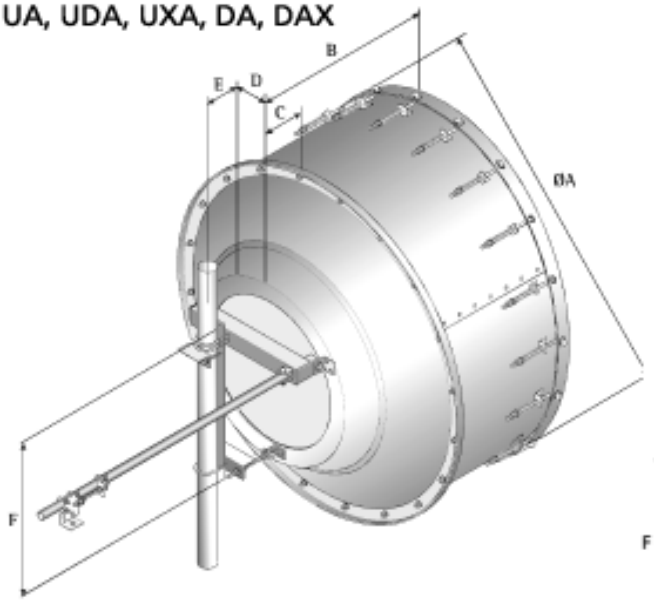
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 1
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Optional
Radome Material	Fiberglass
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.2 (3.9)
Approximate Weight, kg (lb)	120 (264)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1500 (336)
F a Axial force max. at 110 kph (68 mph), N (lb)	5120 (1147)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	1960 (1460)
Fs Side force max. at 200 kph (125 mph), N (lb)	4980 (1115)
Fa Axial force max. at 200 kph (125 mph), N (lb)	16940 (3795)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	6470 (4800)

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 8 ft

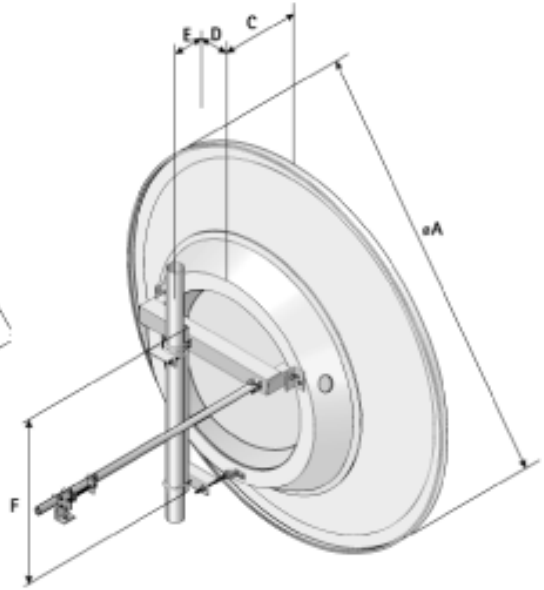
8 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2616(103.4)	1455(57.5) 1645(65)*	465(18.4)	190(7.5)	310(12.3)	1125(44.5)

*f < 4.4 GHz

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 10 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The Standard Performance antennas are available in dual polarised (PAX) as well as in single polarised versions (PA and PAL). The PAL version offers a low VSWR value for low echo distortion. Antennas up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	10 (3.0)
Profile	Standard
Performance	Standard Low VSWR
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.9
Antenna Input	CPR112G
Low Band Gain, dBi	44.6
Mid Band Gain, dBi	45.3
High Band Gain, dBi	46.0
F/B Ratio, dB	52
XPD, dB	30

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 10 ft

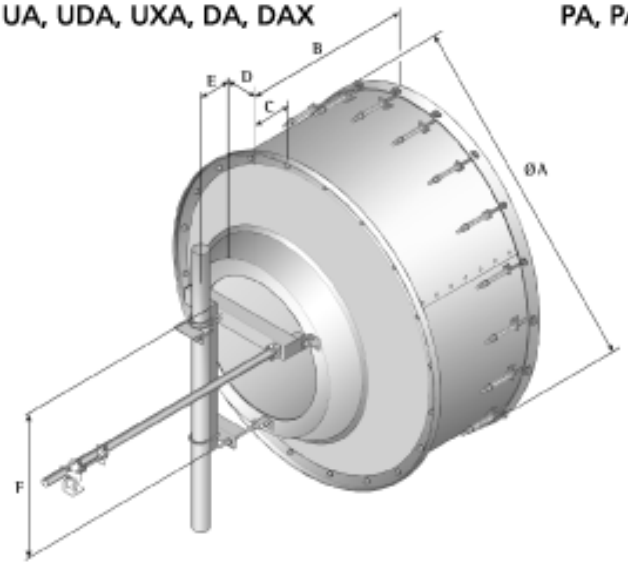
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 1
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Optional
Radome Material	Fiberglass
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.5 (4.9)
Approximate Weight, kg (lb)	215 (473)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	2270 (508)
F a Axial force max. at 110 kph (68 mph), N (lb)	7730 (1730)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	3410 (2523)
Fs Side force max. at 200 kph (125 mph), N (lb)	7520 (1684)
Fa Axial force max. at 200 kph (125 mph), N (lb)	25570 (5728)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	11260 (8400)

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 10 ft

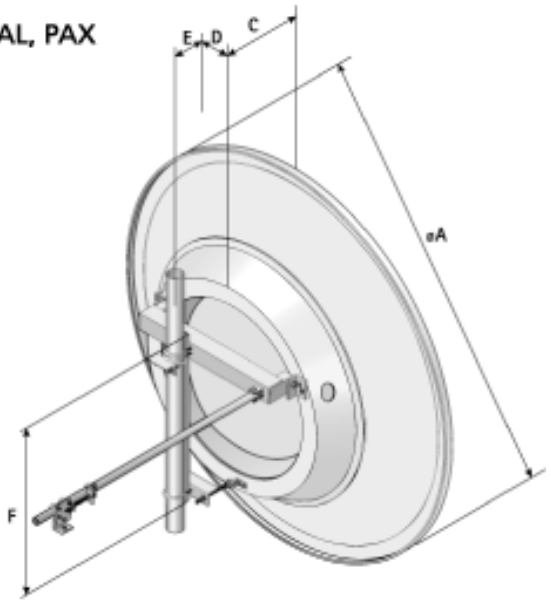
10 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3170(125.3)	1645(65) 1845(72.9)*	550(21.7)	190(7.5)	370(14.6)	1440(56.9)

*f < 4.4 GHz

Technical Data Sheet **PAL12-W71AC**

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 12 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The Standard Performance antennas are available in dual polarised (PAX) as well as in single polarised versions (PA and PAL). The PAL version offers a low VSWR value for low echo distortion. Antennas up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	12 (3.7)
Profile	Standard
Performance	Standard Low VSWR
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.7
Antenna Input	CPR112G
Low Band Gain, dBi	46.2
Mid Band Gain, dBi	47.0
High Band Gain, dBi	47.7
F/B Ratio, dB	54
XPD, dB	30
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 1
Elevation Adjustment, degrees	± 5

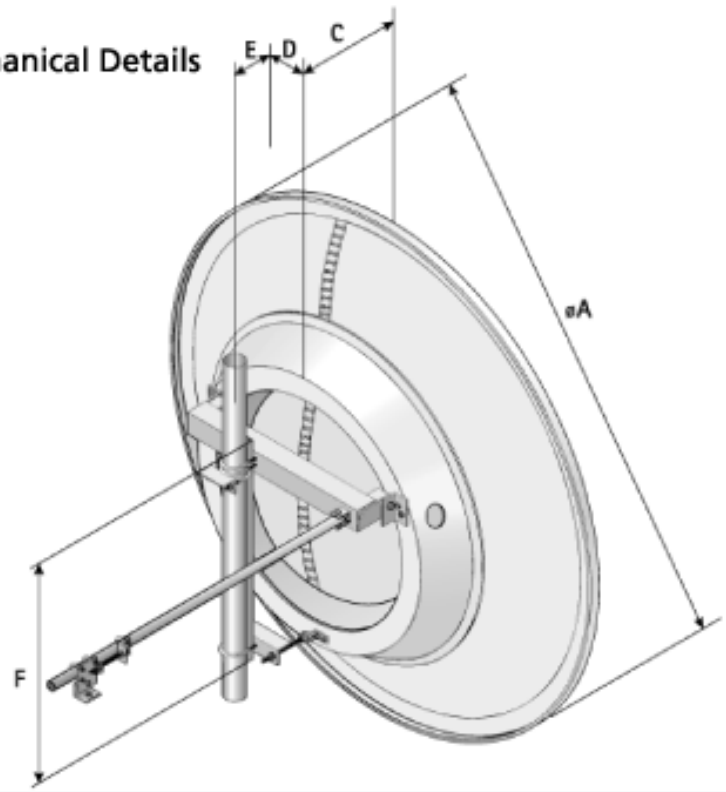
Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 12 ft

Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Optional
Radome Material	Fiberglass
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.7 (5.6)
Approximate Weight, kg (lb)	310 (682)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	3250 (728)
F a Axial force max. at 110 kph (68 mph), N (lb)	11050 (2475)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	5580 (4129)
Fs Side force max. at 200 kph (125 mph), N (lb)	10740 (2405)
Fa Axial force max. at 200 kph (125 mph), N (lb)	36500 (8182)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	18450 (13700)

Solid Microwave Parabolic Antenna, Standard Performance, Low VSWR, Single Polarized, 12 ft

12 ft Antenna

Mount Outlines and Mechanical Details
PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3840(151.8) P-type	-	670(26.5)	190(7.5)	410(16.2)	1580(62.5)

Technical Data Sheet **DA6-W71BC**

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 6 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network.High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential.Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	6 (1.8)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1.5
Antenna Input	CPR112G
Low Band Gain, dBi	40.1
Mid Band Gain, dBi	40.8
High Band Gain, dBi	41.6
F/B Ratio, dB	66
XPD, dB	30
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 6 ft

Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	0.6 (2.0)
Approximate Weight, kg (lb)	95 (209) *
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1125 (252)
F a Axial force max. at 110 kph (68 mph), N (lb)	2270 (508)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	860 (640)
Fs Side force max. at 200 kph (125 mph), N (lb)	3715 (832)
Fa Axial force max. at 200 kph (125 mph), N (lb)	7500 (1680)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	2835 (2100)

Note

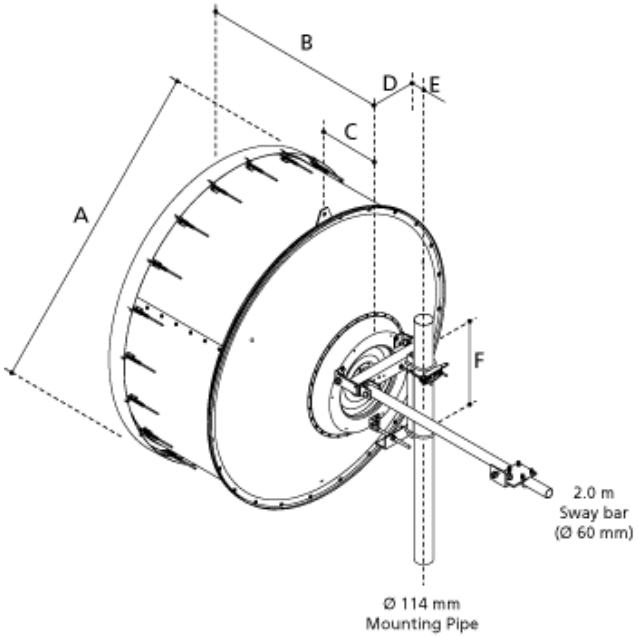
For the A revision antenna, weight is 120kg (264lbs)

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 6 ft

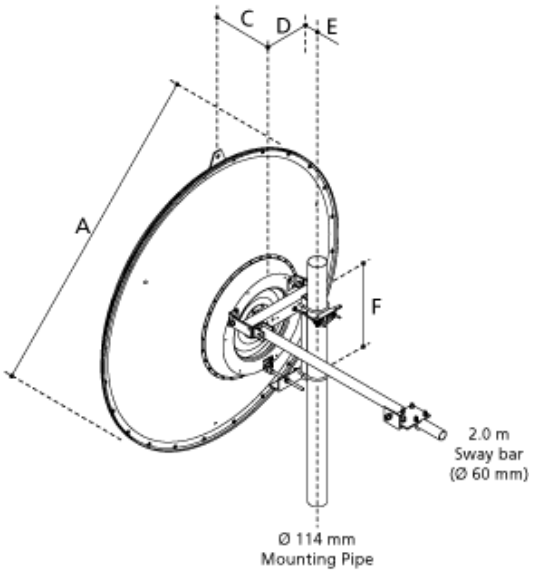
6 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX, SD, SDX, SU, SUX



PA, PAL, PAX, SP, SPX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2000(79)	1242(48.9)	364(14.3)	175(6.9)	283(11.1)	590(23.2)
	1342(52.8)*				

*f < 4.4 GHz

NOTE: For the A revision antenna, please contact RFS Applications Engineering at applications.engineering@rfsworld.com

Technical Data Sheet **DA8-W71AC**

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network.High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential.Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	8 (2.4)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1,1
Antenna Input	CPR112G
Low Band Gain, dBi	42.6
Mid Band Gain, dBi	43.3
High Band Gain, dBi	44.1
F/B Ratio, dB	68
XPD, dB	30
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

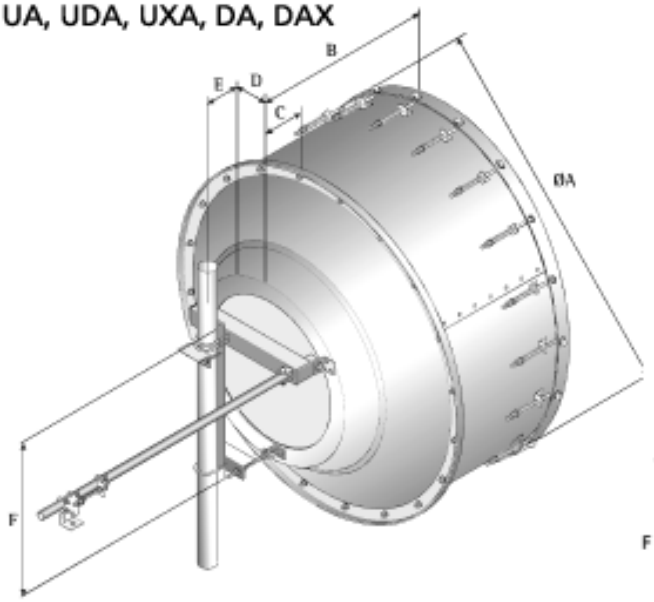
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.2 (3.9)
Approximate Weight, kg (lb)	180 (396)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1920 (430)
F a Axial force max. at 110 kph (68 mph), N (lb)	3880 (870)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	1800 (1340)
Fs Side force max. at 200 kph (125 mph), N (lb)	6350 (1422)
Fa Axial force max. at 200 kph (125 mph), N (lb)	12380 (2773)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	5960 (4400)

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

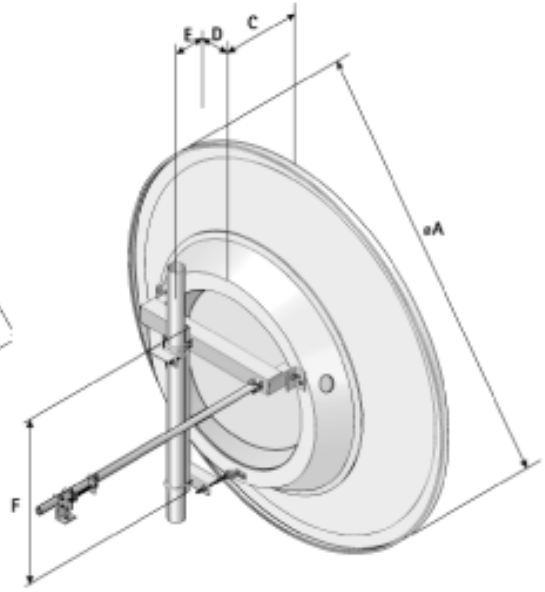
8 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2616(103.4)	1455(57.5) 1645(65)*	465(18.4)	190(7.5)	310(12.3)	1125(44.5)

*f < 4.4 GHz

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 10 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network.High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential.Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	10 (3.0)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.9
Antenna Input	CPR112G
Low Band Gain, dBi	44.6
Mid Band Gain, dBi	45.3
High Band Gain, dBi	46.1
F/B Ratio, dB	70
XPD, dB	30
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 10 ft

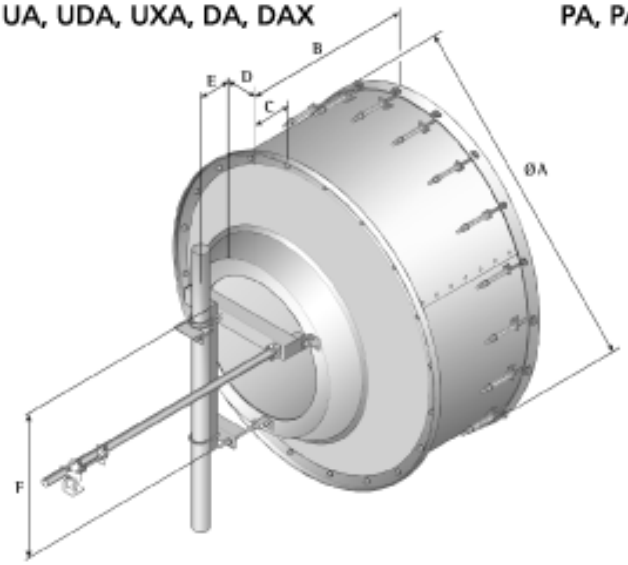
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.5 (4.9)
Approximate Weight, kg (lb)	290 (638)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	2900 (650)
F a Axial force max. at 110 kph (68 mph), N (lb)	5860 (1312)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	3100 (2300)
Fs Side force max. at 200 kph (125 mph), N (lb)	9590 (2148)
Fa Axial force max. at 200 kph (125 mph), N (lb)	19370 (4340)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	10240 (7600)

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 10 ft

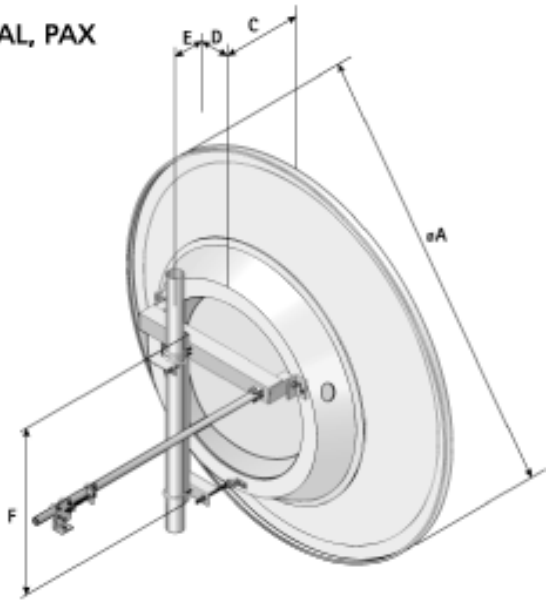
10 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3170(125.3)	1645(65) 1845(72.9)*	550(21.7)	190(7.5)	370(14.6)	1440(56.9)

*f < 4.4 GHz

Technical Data Sheet **DA12-W71AC**

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 12 ft

Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network.High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential.Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 8.5
Diameter, ft (m)	12 (3.7)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.7
Antenna Input	CPR112G
Low Band Gain, dBi	46.2
Mid Band Gain, dBi	47.0
High Band Gain, dBi	47.7
F/B Ratio, dB	71
XPD, dB	30
Max VSWR / R L, dB	1.10 / 26.4
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5

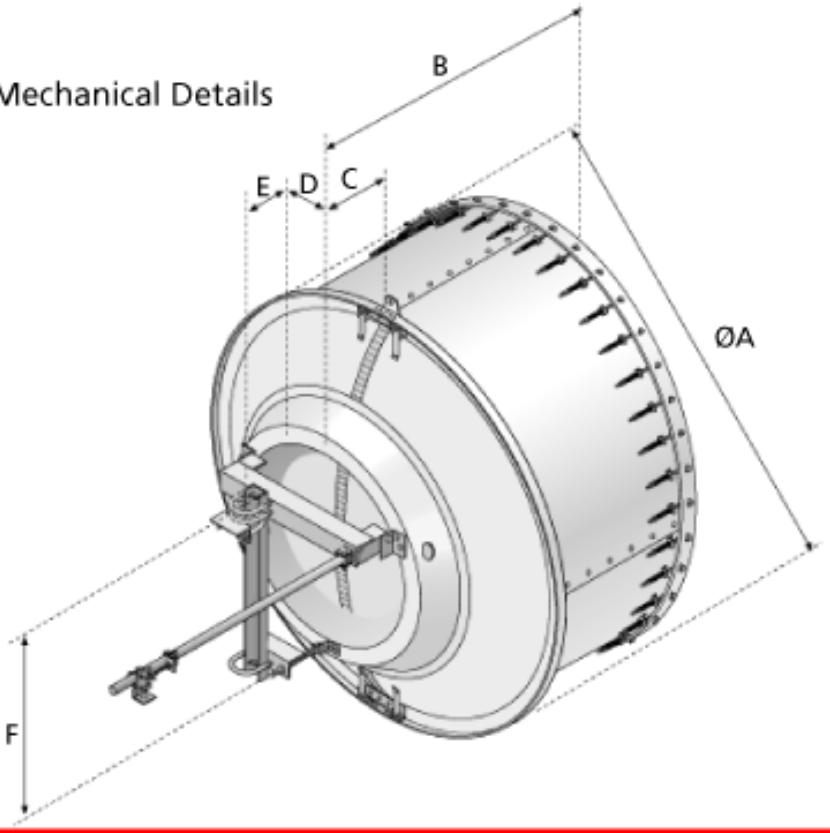
Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 12 ft

Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.7 (5.6)
Approximate Weight, kg (lb)	420 (924)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	4150 (930)
F a Axial force max. at 110 kph (68 mph), N (lb)	8370 (1875)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	5040 (3750)
Fs Side force max. at 200 kph (125 mph), N (lb)	13710 (3071)
Fa Axial force max. at 200 kph (125 mph), N (lb)	27670 (6200)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	16650 (12400)

Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 12 ft

12 ft Antenna

Mount Outlines and Mechanical Details
UA, UDA, DA, DAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3800(150)	1880(74.3)	670(26.5)	190(7.5)	410(16.2)	1580(62.5)
	2070(81.8)*				

*f < 4.4 GHz

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 6 ft

Product Description

UXA series of antennas are based on dual polarised Ultra High Performance antennas. In addition UXA antennas offer extremely high cross polar discrimination. High cross polar discrimination antennas are the optimum choice for very high capacity systems utilizing extensive frequency reuse in highly congested environments. UXA Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 23 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The outstanding performance is achieved by use of a special corrugated illuminator, a rigid torsion box back structure which ensures the reflector maintains its shape in the field and strict quality control during manufacture. Antennas are available in 2 ft (0.3m) to 15 ft (4.5m) diameters. All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 7.75
Diameter, ft (m)	6 (1.8)
Profile	Standard
Performance	Ultra High, High Cross Polar Discrimination
Polarization	Dual
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1.5
Antenna Input	CPR137G
Low Band Gain, dBi	39.9
Mid Band Gain, dBi	40.3
High Band Gain, dBi	40.6
F/B Ratio, dB	68
XPD, dB	40
IPI, dB	45
Max VSWR / R L, dB	1.06 / 30.7
ETSI Standard	Range 1, class 3, XPD

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 6 ft

Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	0.6 (2.0)
Approximate Weight, kg (lb)	95 (209) *
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1125 (252)
F a Axial force max. at 110 kph (68 mph), N (lb)	2270 (508)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	860 (640)
Fs Side force max. at 200 kph (125 mph), N (lb)	3715 (832)
Fa Axial force max. at 200 kph (125 mph), N (lb)	7500 (1680)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	2835 (2100)

Note

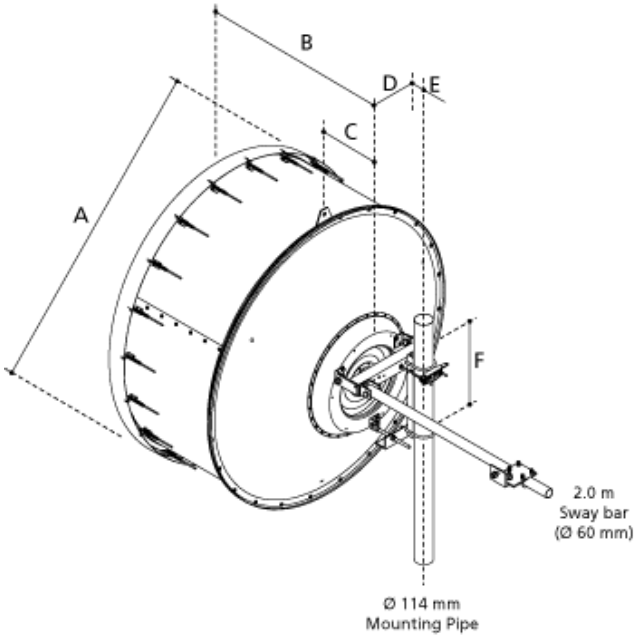
For the A revision antenna, weight is 120kg (264lbs)

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 6 ft

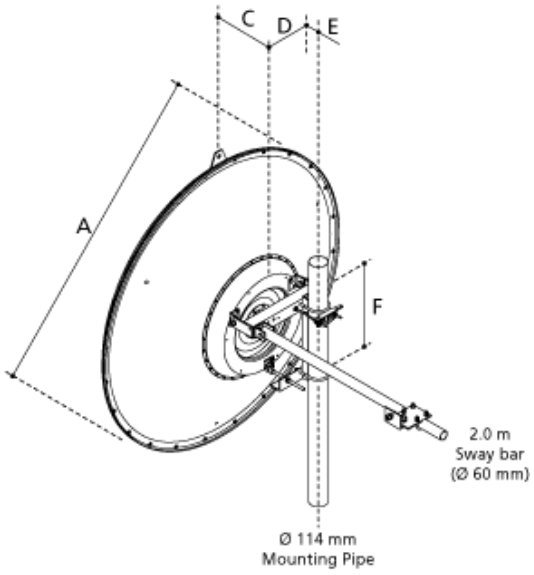
6 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX, SD, SDX, SU, SUX



PA, PAL, PAX, SP, SPX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2000(79)	1242(48.9)	364(14.3)	175(6.9)	283(11.1)	590(23.2)
	1342(52.8)*				

*f < 4.4 GHz

NOTE: For the A revision antenna, please contact RFS Applications Engineering at applications.engineering@rfsworld.com

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 8 ft

Product Description

UXA series of antennas are based on dual polarised Ultra High Performance antennas. In addition UXA antennas offer extremely high cross polar discrimination. High cross polar discrimination antennas are the optimum choice for very high capacity systems utilizing extensive frequency reuse in highly congested environments. UXA Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 23 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The outstanding performance is achieved by use of a special corrugated illuminator, a rigid torsion box back structure which ensures the reflector maintains its shape in the field and strict quality control during manufacture. Antennas are available in 2 ft (0.3m) to 15 ft (4.5m) diameters. All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 7.75
Diameter, ft (m)	8 (2.4)
Profile	Standard
Performance	Ultra High, High Cross Polar Discrimination
Polarization	Dual
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	1.1
Antenna Input	CPR137G
Low Band Gain, dBi	42.4
Mid Band Gain, dBi	42.8
High Band Gain, dBi	43.1
F/B Ratio, dB	72
XPD, dB	40
IPI, dB	45
Max VSWR / R L, dB	1.06 / 30.7
ETSI Standard	Range 1, class 3, XPD

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 8 ft

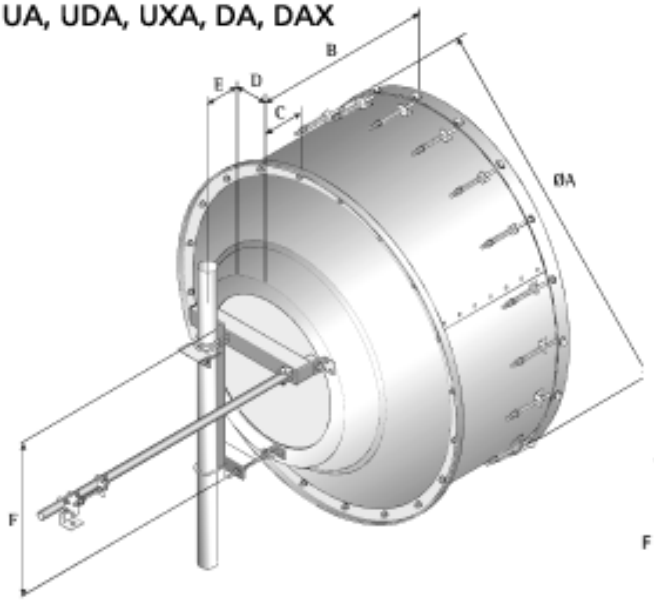
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.2 (3.9)
Approximate Weight, kg (lb)	180 (396)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1920 (430)
F a Axial force max. at 110 kph (68 mph), N (lb)	3880 (870)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	1800 (1340)
Fs Side force max. at 200 kph (125 mph), N (lb)	6350 (1422)
Fa Axial force max. at 200 kph (125 mph), N (lb)	12380 (2773)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	5960 (4400)

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 8 ft

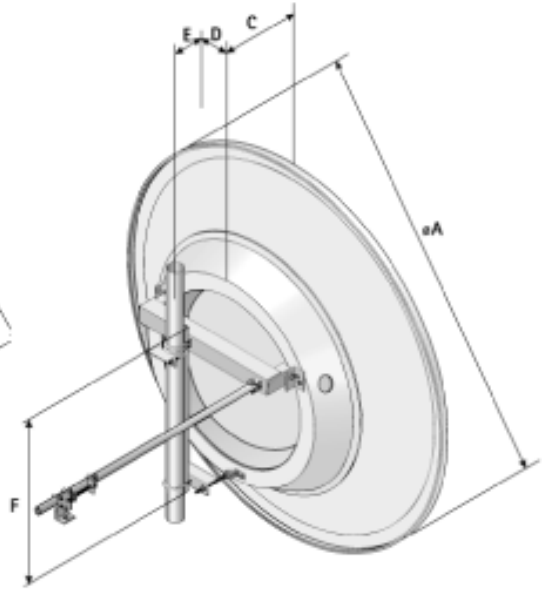
8 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2616(103.4)	1455(57.5) 1645(65)*	465(18.4)	190(7.5)	310(12.3)	1125(44.5)

*f < 4.4 GHz

Technical Data Sheet **UXA10-71AC**

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 10 ft

Product Description

UXA series of antennas are based on dual polarised Ultra High Performance antennas. In addition UXA antennas offer extremely high cross polar discrimination. High cross polar discrimination antennas are the optimum choice for very high capacity systems utilizing extensive frequency reuse in highly congested environments. UXA Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 23 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The outstanding performance is achieved by use of a special corrugated illuminator, a rigid torsion box back structure which ensures the reflector maintains its shape in the field and strict quality control during manufacture. Antennas are available in 2 ft (0.3m) to 15 ft (4.5m) diameters. All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 7.75
Diameter, ft (m)	10 (3.0)
Profile	Standard
Performance	Ultra High, High Cross Polar Discrimination
Polarization	Dual
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.9
Antenna Input	CPR137G
Low Band Gain, dBi	44.4
Mid Band Gain, dBi	44.7
High Band Gain, dBi	45.1
F/B Ratio, dB	74
XPD, dB	40
IPI, dB	45
Max VSWR / R L, dB	1.06 / 30.7
ETSI Standard	Range 1, class 3, XPD

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 10 ft

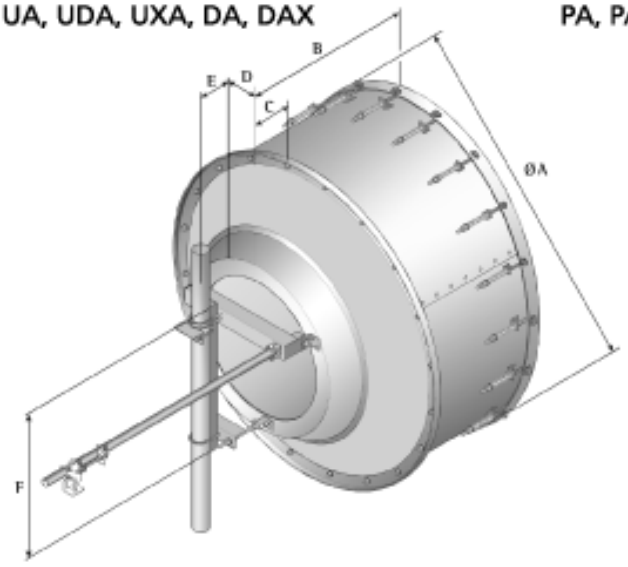
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.5 (4.9)
Approximate Weight, kg (lb)	290 (638)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	2900 (650)
F a Axial force max. at 110 kph (68 mph), N (lb)	5860 (1312)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	3100 (2300)
Fs Side force max. at 200 kph (125 mph), N (lb)	9590 (2148)
Fa Axial force max. at 200 kph (125 mph), N (lb)	19370 (4340)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	10240 (7600)

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 10 ft

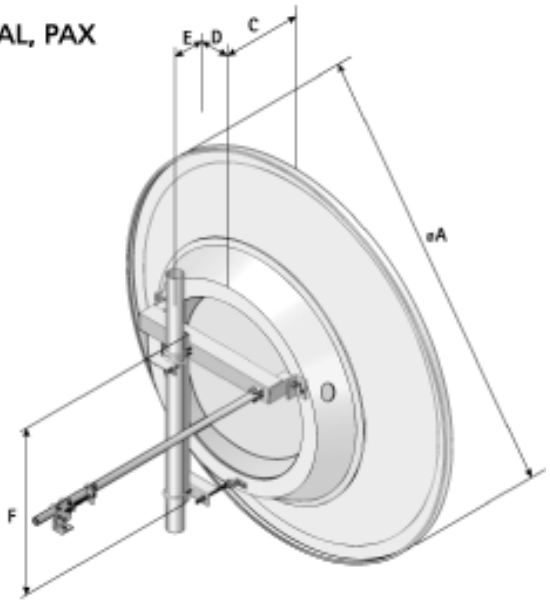
10 ft Antenna

Mount Outlines and Mechanical Details

UA, UDA, UXA, DA, DAX



PA, PAL, PAX



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3170(125.3)	1645(65) 1845(72.9)*	550(21.7)	190(7.5)	370(14.6)	1440(56.9)

*f < 4.4 GHz

Technical Data Sheet **UXA12-71AC**

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 12 ft

Product Description

UXA series of antennas are based on dual polarised Ultra High Performance antennas. In addition UXA antennas offer extremely high cross polar discrimination. High cross polar discrimination antennas are the optimum choice for very high capacity systems utilizing extensive frequency reuse in highly congested environments. UXA Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 23 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The outstanding performance is achieved by use of a special corrugated illuminator, a rigid torsion box back structure which ensures the reflector maintains its shape in the field and strict quality control during manufacture. Antennas are available in 2 ft (0.3m) to 15 ft (4.5m) diameters. All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.

Technical Features

Product Type	Point to point antennas
Frequency, GHz	7.125 - 7.75
Diameter, ft (m)	12 (3.7)
Profile	Standard
Performance	Ultra High, High Cross Polar Discrimination
Polarization	Dual
Regulatory Compliance	Standard, EN 300833
3dB beamwidth, (degrees)	0.7
Antenna Input	CPR137G
Low Band Gain, dBi	46
Mid Band Gain, dBi	46.4
High Band Gain, dBi	46.8
F/B Ratio, dB	76
XPD, dB	40
IPI, dB	45
Max VSWR / R L, dB	1.06 / 30.7
ETSI Standard	Range 1, class 3, XPD

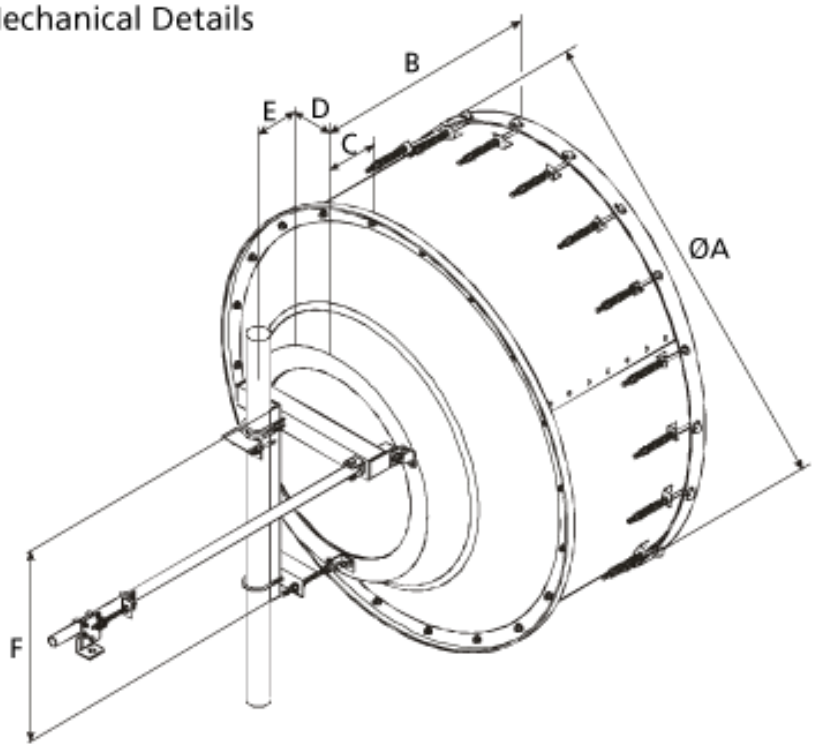
Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 12 ft

Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	white
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.7 (5.6)
Approximate Weight, kg (lb)	420 (924)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	4150 (930)
F a Axial force max. at 110 kph (68 mph), N (lb)	8370 (1875)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	5040 (3750)
Fs Side force max. at 200 kph (125 mph), N (lb)	13710 (3071)
Fa Axial force max. at 200 kph (125 mph), N (lb)	27670 (6200)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	16650 (12400)

Solid Microwave Parabolic Antenna, High Cross Polar Discrimination, Dual Polarized, 12 ft

12 ft Antenna

Mount Outlines and Mechanical Details
UXA



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
3800(150)	1880(74.3)	670(26.5)	190(7.5)	410(16.2)	1580(62.5)
	2070(81.8)*				

*f < 4,4 GHz

FLEXWELL® Standard Elliptical Waveguide

Product Description

FLEXWELL® elliptical waveguide is constructed of longitudinally continuous seam welded, highly conductive copper tube, corrugated and precision formed into an elliptical cross section. It is manufactured in continuous lengths using a special seam welding process developed by the RFS organization.

The corrugation design achieves high transverse stability, flexibility and crush strength for superior handling and forming at an installation. The inherent strength and flexibility of FLEXWELL waveguide allows on location, a continuous length of waveguide to be run directly from a tower-mounted antenna to the equipment building, eliminating flange joint discontinuities and the use of bends, twists and flex sections associated with a rigid rectangular waveguide system. Because of its flexibility, FLEXWELL elliptical waveguide can be easily transported to an installation site in coils or on reels and then uncoiled as required during installation.

FLEXWELL elliptical waveguide has set an industry standard for excellent electrical performance. Each waveguide has been carefully designed for low loss and low VSWR in specific frequency bands. For optimum system performance, there is no substitute for FLEXWELL waveguide.

As part of the RFS manufacturing process, all elliptical waveguides undergo several different electrical tests. Prior to shipping, every length is 100% tested again for input VSWR, and undergoes a twenty-four hour pressure test. This additional testing is performed to guarantee conformance with published specifications and to avoid any problems in the field.

A FLEXWELL elliptical waveguide feeder requires less planning and reduces installation costs when compared to a feeder system using a rigid rectangular waveguide. FLEXWELL waveguide is available cut to length with factory attached connectors or in continuous lengths for termination in the field.

Technical Features

Typical Operating Band, GHz	7.1 - 8.5
Performance	Standard
Dimension over Jacket, mm (in)	44 x 26 (1.7 x 1.0)
Weight, kg/m (lb/ft)	0.7 (0.47)
Minimum Bending Radius E Plane, without rebending, mm (in)	200 (7.9)
Minimum Bending Radius H Plane, without rebending, mm (in)	500 (19.8)
Minimum Bending Radius E Plane, with rebending, mm (in)	250 (9.9)
Minimum Bending Radius H Plane, with rebending, mm (in)	600 (23.7)
Maximum Twist, degree/m (degree/ft)	5 (1.5)
Max. Operating Pressure, bar (psi)	0.5 (7.1)
Max. Pulling Length per Hoisting Grip, m (ft)	100 (305)
Standard Hanger Spacing, m (ft)	0.9 (3)
Recommended Installation Temperature Range, °C (°F)	-40 to +60 (-40 to +140)
Max. VSWR / Return Loss, dB	1.15 / 23.1
Cut-off Frequency, GHz	4.72

Note

VSWR values include connectors and are valid for frequency band of connectors.

Max. Operating Band: 5.90 - 8.50 GHz

E78/EP78

ATTENUATION, AVERAGE POWER, GROUP VELOCITY, GROUP DELAY

Frequency GHz	Attenuation dB / 100 m (ft)	Avg. Pow. kW	Group Vel. %c	Group Delay ns/100 m (ft)
7.10	6.19 (1.89)	3.44	74.7	446.5 (136.1)
7.20	6.11 (1.86)	3.48	75.5	441.7 (134.6)
7.30	6.05 (1.84)	3.52	76.3	437.3 (133.3)
7.40	5.99 (1.83)	3.56	77.0	433.1 (132.0)
7.50	5.94 (1.81)	3.59	77.7	429.2 (130.8)
7.60	5.89 (1.79)	3.62	78.4	425.6 (129.7)
7.70	5.84 (1.78)	3.65	79.0	422.2 (128.7)
7.80	5.80 (1.77)	3.67	79.6	419.0 (127.7)
7.90	5.76 (1.76)	3.70	80.2	416.0 (126.8)
8.00	5.73 (1.75)	3.72	80.7	413.1 (125.9)
8.10	5.70 (1.74)	3.74	81.3	410.5 (125.1)
8.20	5.67 (1.73)	3.76	81.8	407.9 (124.3)
8.30	5.64 (1.72)	3.77	82.3	405.5 (123.6)
8.40	5.62 (1.71)	3.79	82.7	403.2 (122.9)
8.50	5.60 (1.71)	3.81	83.2	401.1 (122.3)

For attenuation: VSWR 1.0, ambient temperature 20° C (68° F).

For average power: VSWR 1.0 and 42° C (76° F) temperature rise over 40° C (104° F) ambient.

APD-20 Automatic Dehydrator, with LP alarm, 0.2 SCFM, 115V 50/60 Hz

Product Description

The APD-20 series Automatic Pressurization Dehydrator is designed for reliable pressurization of elliptical waveguide, coaxial cable and rigid transmission line systems. The dehydrator includes a self contained completely automated air drying system that utilizes a pressure swing moisture absorption cycle to provide pressurized dry air while continuously purging the collected moisture to the atmosphere. This eliminates the need for replacement or manual reactivation of the desiccant and makes our APD-20 and APD-70 series dehydrators ideal for unattended operation at even remote sites. Dehydrators are also suitable for the average manned working environment since they typically run less than 5% of the time. In most normal applications, APD series dehydrators can be expected to operate for up to five years before any maintenance activities are required.

The APD-20 is rated at .2 SCFM(.09 liter/sec) and -40°F (-40°C) dry air dew point output at a 95°F (35°C) 95% relative humidity input. For normal room environments the dehydrator output air has a typical dew point of -55°F (-46°C). System pressure is controlled by the dehydrator pressure switch settings. Normally, this is factory adjusted to 3 psig (20.7kPa) “on” and 5 psig (34.5 kPa) “off”, but may be readjusted in the field to operate anywhere between 2 and 15 psig (13.8 kPa and 103.4 kPa). An internal 40 psig check valve guarantees that the customer system stays isolated from the dehydrator’s internal system and prevents loss of system pressure due to leakage in the dehydrator. For additional safety, a standard low pressure alarm switch factory-set at 1 psig (6.9 kPa), is installed in the dehydrator. The alarm switch contains a set of SPST contacts that can be used for both local and remote monitoring or alarming. Additional standard features include a 0-15 psig pressure gauge, indicating power light, and a visual moisture monitor which is dark blue when dry and turns pink when wet.

The units may be shelf mounted or placed in a 19” EIA relay rack. A vented back cover for the dehydrator may be ordered as an optional accessory.

Technical Features

APD-20 Automatic Dehydrator, with LP alarm, 0.2 SCFM, 115V 50/60 Hz

Product	Dehydrator
Dehydrator Type	Automatic
System Capacity	Standard
Operating Voltage	115V 50/60 Hz
60 Hz Output Capacity, liters/sec (SCFM)	0.09 (0.2)
50 Hz Output Capacity, liters/sec (SCFM)	0.08 (0.17)
Output Dew Point	-40°C (-40°F)
Ambient Inlet Temperature, °C (°F)	1 - 49 (33 -120)
Ambient Humidity % maximum	95
Factory Set Output Pressure (on/off), kPa (psig)	20.7-34.5 (3/5)
Field Adjustable Output Pressure (on/off), kPa (psig)	13.8-103.4 (2-15)
Output Differential Output Pressure (on/off), kPa (psig)	13.8 (2) minimum
Compressor Rating	1/12 hp
Pumping Power Consumption	350 watts
Idle Power Consumption, Watts	10
Low Pressure Alarm	Factory set for 1 psig. (P/N 916814-001) 0.5 psig differential.
Output Fitting	1/8" FPT to 3/8" plastic tube fitting
Dimensions, H x W x D, mm (in)	355 x 450 x 203 (14 x 17-11/16 x 8)
Net Weight, kg (lb)	22 (47)