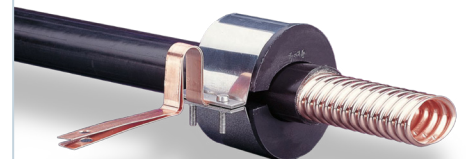


RFS Waveguides and Accessories

A Comprehensive **Selection Guide**

Edition 2



RADIO FREQUENCY SYSTEMS
The Clear Choice®



Table of contents

[PAGE 1](#)

FLEXWELL® Elliptical Waveguide Portfolio Overview

[PAGE 2 TO 16](#)

FLEXWELL® Elliptical Waveguide Specifications, Connectors and Accessories

[PAGE 17](#)

Twistflex Products

[PAGE 18](#)

Dehydration Systems

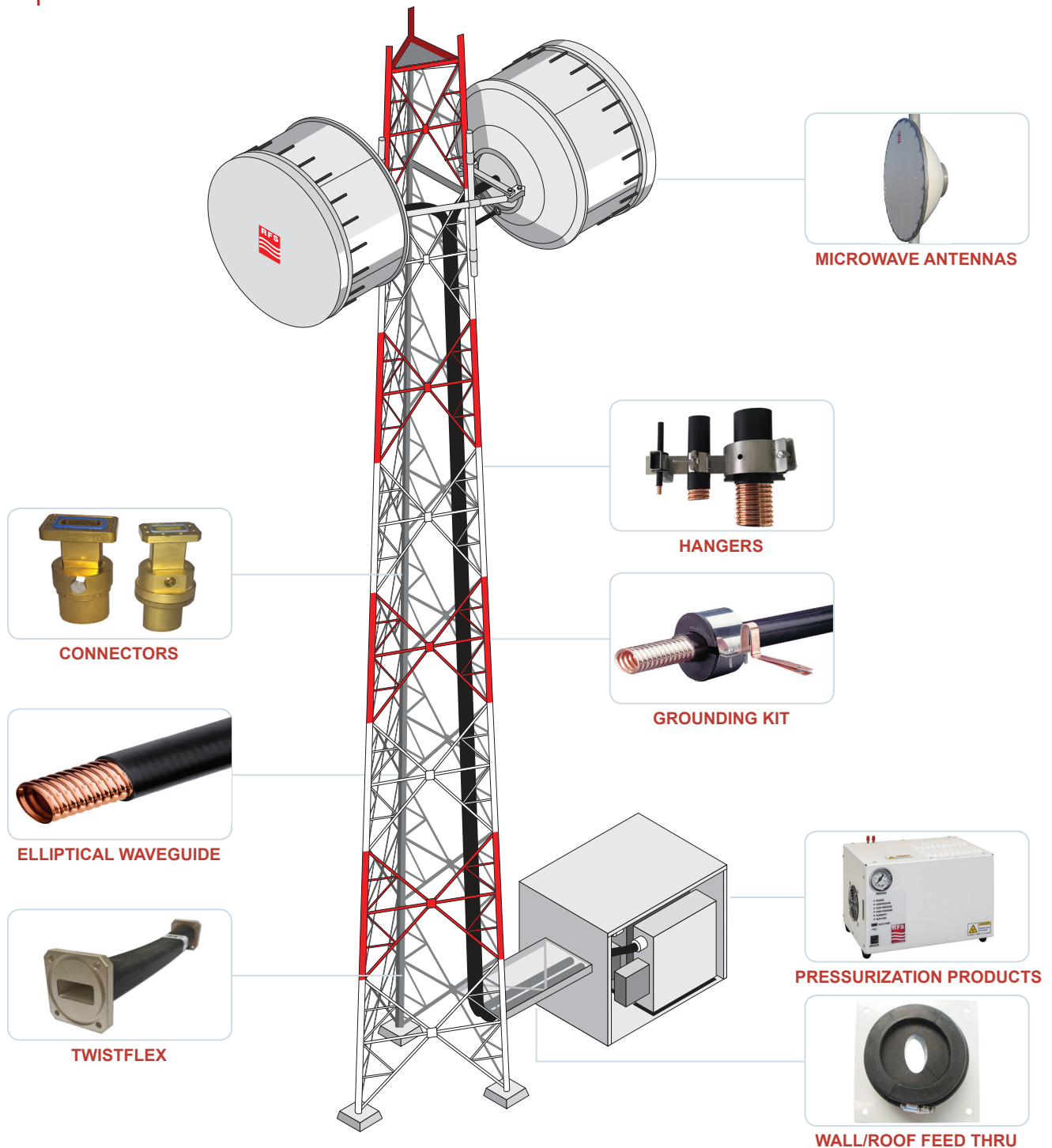
[PAGE 19](#)

Pressurization Products

[PAGE 20](#)

Rectangular Waveguide Components

Complete Microwave Site Solutions From RFS



RFS Twistflex Selection Guide

RFS twistflex is fabricated from spiral wound silver plated bronze strip. Includes pressure tight (15 psig) protective neoprene jacket. Allowable twist is 100°/ft for WR75 to 45°/ft. for WR229. Includes mounting hardware for one flange connection except, in cases where flanges are different on each end, hardware is supplied for both flanges. Standard lengths are 12", 24" and 36." Contact factory for special lengths.



IEC Twistflex

EC Twistflex						Length, cm						
Frequency, GHz	Twistflex	R	Flange 1	Flange 2	Plating	30	60	90	120	180		
3.3 - 4.9	TF	040	D	V	1-	-	060M	090M	-	-		
3.95 - 5.85		048	D	V		-	060M	090M	120M	-		
5.85 - 8.2		070	D	V		030M	060M	090M	120M	180M		
				D		030M	060M	090M	120M	180M		
7.05 - 10		084	D	V		-	060M	090M	120M	-		
				D		-	-	090M	120M	-		
			B	W		-	060M	090M	120M	-		
				B		-	060M	090M	120M	-		
			8.2 - 12.4	100		D	V	030M	060M	090M	120M	-
							D	-	-	090M	-	-
B		W				030M	060M	090M	120M	-		
		B				-	-	090M	120M	180M		
10 - 15		120	D	V		-	060M	090M	120M	-		
				W		030M	060M	090M	120M	-		
			B	B		-	060M	090M	120M	180M		
12.4 - 18		140	D	V		-	060M	090M	120M	-		
				D		-	-	090M	-	-		
			B	W		030M	060M	090M	120M	-		
				B		-	060M	090M	120M	-		
18 - 26.5		220	B	W		030M	060M	090M	120M	-		
22 - 33		260	B	W		030M	060M	090M	120M	-		
				B		030M	060M	090M	120M	-		
26.5 - 40		320	B	W		030M	060M	090M	120M	-		
				B		030M	060M	090M	120M	-		
40.5 - 43.5		400	U	U		-	-	090M	-	180M		
			X	X		-	-	090M	-	-		

IEC Flange	D	PDR
	V	UDR
	B	PBR
	W	UBR
	X	UG modified
	U	UG Cover

IEC Model Name Example

TF 084 - D V 1 - 090M

Twistflex size R84, flange PDR/UDR, length 900 mm, plating brass coated

EIA Twistflex

EIA Twistflex						Length, in				
Frequency, GHz	Twistflex	WR	Flange 1	Flange 2	Plating	12	24	36	48	60
3.3 - 4.9	TF	229	C	C	1-	012I	024I	036I	-	-
3.95 - 5.85		187	C	C		012I	024I	036I	-	-
			U	Z		012I	024I	036I	-	-
4.9 - 7.05		159	C	C		-	024I	036I	-	-
5.85 - 8.2		137	C	C		012I	024I	036I	048I	060I
				M		012I	024I	036I	-	-
				U		012I	024I	036I	-	-
			M	U		012I	024I	036I	-	-
			U	Z		012I	024I	036I	-	-
			C	C		012I	024I	036I	048I	-
7.05 - 10		112	U	Z		-	024I	-	-	-
			U	Z		012I	024I	036I	-	-
8.2 - 12.4		090	C	C		012I	024I	036I	048I	060I
			U	Z		012I	024I	036I	-	-
10 - 15		075	U	Z		012IW	024IW	036IW	-	-
						012I*	024I*	036I*	-	-
18 - 26.5		042	U	Z		012IL**	024IL**	036IL**	-	-
						012IH***	024IH***	036IH***	-	-

EIA Flange	C	CPR G
	M	CMR
	U	UG Cover
	Z	UG Choke

EIA Model Name Example

TF 112 - C C 1 - 036I

Twistflex size WR112, flange CPR/CPR, length 36 inch, plating brass coated

* Frequency range = 12.2-13.2 GHz
** Frequency range = 17.7-19.7 GHz
***Frequency range = 21.2-23.6 GHz

RFS Dehydration Systems

For Large, Medium and Small Capacity

Prevent moisture condensation and degradation in performance

The RFS digital dehydrator allows for increased system flexibility to suit individual customer requirements – easily configure options in the field as needed!

The APD-D Series Automatic Pressurization Dehydrator is available in standard system capacity and large system capacity models. The APD-D Series will provide reliable pressurization of elliptical waveguide, coaxial cable and rigid transmission line systems – and the new digital design will now enable easy on-site configuration of options such as humidity alarm, high pressure alarm, run time alarm and system purge.

The APD-D dehydrator includes a self-contained, completely automated air drying system that utilizes a pressure swing adsorption cycle to provide pressurized dry air while continuously purging the collected moisture to the atmosphere. It can be retrofitted into any existing RFS dehydrator installation, easily integrating with existing microwave antenna system equipment. It also supports easy option upgrades with no system downtime required by enabling options to be added to the base model or reset based on customer specifications in the factory or in the field by working with RFS.

For applications where only DC power is available, RFS offers medium and small capacity dehydrators operating with voltage between 48 and 60 VDC.

These fully automatic dehydrators are factory pre-configured and include low / high pressure, high humidity and system and power alarms. An optional module for remote monitoring over Ethernet is available. The LAB4 dehydrator has 4 pressure ports and the MINILAB is delivered with 6 pressure ports that can be individually opened and closed.



RFS APD-D DIGITAL DEHYDRATOR SERIES



LAB4DC-B DEHYDRATOR

	Model Number	Air Flow		Power Supply	Output Pressure	
		NI/h	SCFM	V	kPa	psig
Large Capacity	APD70-D	1190	0.7	115 AC/60Hz	6.9-68.9	1-10
	APD72-D	990	0.58	230 AC/50Hz	6.9-68.9	1-10
Medium Capacity	APD20-D	340	0.2	115 AC/60Hz	6.9-68.9	1-10
	APD22-D	280	0.17	230 AC/50Hz	6.9-68.9	1-10
	LAB4DC-B	300	0.18	48-60 DC	1-6	0.15-0.87
Small Capacity	MINILAB-DC	150	0.09	48-60 DC	2	0.3

RFS Pressurization Products

Complete End-To-End Solutions

A vast array of products for installation, operation and maintenance



Gas Distribution Manifolds are used for pressure distribution to several transmission lines. They allow easy maintenance checks of individual lines. Includes 1/8" FPT input, distribution manifold block and one needle release valve. 0-15 psig pressure gauge, 15 ft. (4.5m) 3/8" plastic tubing for each outlet. Also included are four 3/8" plastic tubing racks (10 slots per rack), one roll of teflon tape and 24 nylon ties. Designate number of outlets by suffix number, i.e., GDM-2 for two outlets, GDM-4 for four outlets, etc.

Products for APD Dehydrator-Series

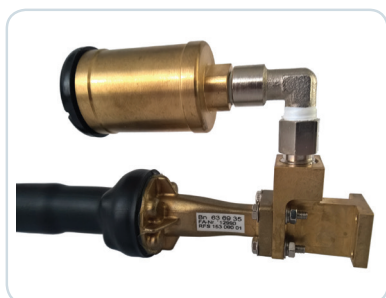
Model Number	Description
GDM-2	Gas Distribution Manifold 2-ports
GDM-4	Gas Distribution Manifold 4-ports
GDM-6	Gas Distribution Manifold 6-ports
GDM-8	Gas Distribution Manifold 8-ports
SHELF-APD-D	Shelf, Wall / Rack Mount for APD-D series dehydrators



RFS offers all the necessary components to connect the LAB4 and MINILAB dehydrators to the waveguide connectors. A flexible butyl hose is available in 10m and 50m length with all necessary adapters and clamps for secure air connection.

Products for LAB and MINILAB Dehydrator-Series

Model Number	Description
TUBE-01-010M	Butyl Hose, 6mm inner diameter, 10m length
TUBE-01-050M	Butyl Hose, 6mm inner diameter, 50m length
TUBE-01-G18	Tube Adaptor with G 1/8" thread for TUBE-01-xxxM
TUBE-SEAL	Teflon Sealing Tape
TUBE-0816	Hose Clamp from 8mm to 16mm



For waveguides with small air volume (< 2 liter) a humidity monitoring kit is deemed sufficient after filling the waveguide with dry air or nitrogen. For these applications RFS offers the cost-effective DC-Kits in several sizes. These kits can be used for 6m of RFS E105 waveguide and up to 75m of RFS E380 waveguide.

Desiccant cartridge Kits for moisture monitoring

Model Number	Description
DC-KIT-B	For E100 to E220
DC-KIT-220	For E250 and connectors with PBR220 flange
DC-KIT-260	For E250 and E300 with connectors with PBR260 flange
DC-KIT-320	For E300 and E380 with connectors with PBR320 flange

For more information, please contact
the nearest RFS sales office:

Southern Europe, Middle East, Africa & India
www.rfsworld.com/sales/semeai

Northern Europe
www.rfsworld.com/sales/euno

Latin America
www.rfsworld.com/sales/latam

North America
www.rfsworld.com/sales/na

Asia Pacific
www.rfsworld.com/sales/apac

www.rfsworld.com

RADIO FREQUENCY SYSTEMS
The Clear Choice®

