

Waveguide Assemblies, Flexible W/G

ATM manufactures a high quality line of flexible waveguides, waveguide assemblies, subassemblies of components, and assemblies in packages specially designed to meet all of your requirements.

Please note: *All of our flexible waveguide is made from brass material.*

For more information feel free to call us and discuss your needs with one of our design engineers.

See Also:

[Waveguide Assemblies, Rectangular](#)

Rectangular Flex-Twist Waveguide

ATM Type "125" Flex-Twist W/G assemblies:

- Used in requirements where both bending and twisting of the Waveguide is needed.
- Supplied with Neoprene® jacket in order to hold pressure, as a standard model.
- Silicone jacket available upon request.



Standard Models

WG Size	Freq GHz	Max I.L. (dB/ft)	VSWR		Power Rating avg (kW)	Pressure max (psig)	Flex-Twist with Jacket Model No.*
			<36"	>36"			
WR284	2.60 - 3.95	0.04	1.04	1.07	6.50	20	284-125-(L)-6-6
WR229	3.30 - 4.90	0.04	1.05	1.07	4.00	30	229-125-(L)-2-2
WR187	3.95 - 5.85	0.05	1.05	1.07	3.00	30	187-125-(L)-6-6
WR159	4.90 - 7.05	0.08	1.05	1.08	2.50	30	159-125-(L)-2-2
WR137	5.85 - 8.20	0.09	1.05	1.09	2.00	30	137-125-(L)-2-2
WR112	7.05 - 10.0	0.12	1.07	1.10	1.30	35	112-125-(L)-6-6
WR90	8.20 - 12.4	0.15	1.07	1.10	1.00	45	90-125-(L)-6-6
WR75	10.0 - 15.0	0.18	1.08	1.10	0.95	45	75-125-(L)-6-6
WR62	12.4 - 18.0	0.28	1.10	1.13	0.40	45	62-125-(L)-6-6
WR51	15.0 - 22.0	0.55	1.15	1.18	0.20	45	51-125-(L)-6-6
WR42	18.0 - 26.5	0.70	1.18	1.23	0.15	45	42-125-(L)-6-6
WR34	22.0 - 33.0	0.45	1.17	1.20	0.10	45	34-125-(L)-6-6
WR28	26.5 - 40.0	0.60	1.30-36" max		0.10	45	28-125-(L)-6-6

See [ATM Flange](#) page for more information on flanges.

***Important note:** When creating a model number to place for order, please substitute the *letter* (L) as shown above, with the *number* of inches your assembly will be.

Mechanical Specifications

WG Size	Bending Rating				Twisting Rating	
	Static		Repeated		Static	Repeated
	E-plane Rad (in)	H-plane Rad (in)	E-plane Rad (in)	H-plane Rad (in)	Tolerance (+/- deg/ft)	Twist (+/- deg/ft)
WR284	7.0	14.0	28.0	56.0	32	8
WR229	6.5	13.0	26.0	52.0	40	10
WR187	6.5	13.0	26.0	52.0	48	12
WR159	5.0	10.0	20.0	40.0	56	14
WR137	4.0	8.0	16.0	32.0	64	16
WR112	3.0	6.0	12.0	24.0	80	20
WR90	2.5	5.0	10.0	20.0	96	24
WR75	2.5	4.5	10.0	20.0	112	28
WR62	2.0	4.0	8.0	16.0	136	34
WR51	2.0	4.0	8.0	16.0	136	34
WR42	1.5	3.0	6.0	12.0	155	45
WR34	1.5	3.0	6.0	12.0	155	45
WR28	1.0	2.0	4.0	8.0	180	70

Ordering Information

Typical Part#: **WGSize-125 -Length -Flange1 -Flange2**

Basic Model #:

Length: ^{See note below}

Flange1: 1=CPRG, 2=CPRF, 6=Cover, 7=Choke

Flange2: 1=CPRG, 2=CPRF, 6=Cover, 7=Choke

*Standard Lengths are 6", 12", 18", 24", 30", 48", 60", 72" 50CM, & 100CM. Other lengths up to 10' are available in 6" increments.
Replace the L in model number with desired length

Example P/N Description

187-125-48-6-6 WR187 flex twist w/ jacket - 48 inches long - Cover Flg - Cover Flg

137-125-36-2-2 WR137 flex twist w/ jacket - 36 inches long - Cprf Flg - Cprf Flg.

***Important note:** When creating a model number to place for order, please substitute the *letter* (L) in the model number examples with the *number* of inches your assembly will be.

Rectangular Flex Waveguide, High Power, Non-Twistable

ATM Type "124" flexible, non twist W/G assemblies:

- For use in Hi Power Applications.
- Finished with high temperature paint.
- For a brushed on neoprene jacket change basic model number to "123"



Standard Models

WG Size	Freq GHz	Max I.L. (dB/ft)	VSWR		Power Rating		Pressure max (psig)	Flex Non-Twist w/o Jacket Model No*
			<36"	>36"	avg (kW)	peak (kW)		
WR284	2.60 - 3.95	0.04	1.04	1.07	33.8	1500	30	284-124-(L)-6-6
WR229	3.30 - 4.90	0.04	1.05	1.07	28.0	1200	30	229-124-(L)-2-2
WR187	3.95 - 5.85	0.05	1.05	1.07	13.5	650	30	187-124-(L)-6-6
WR159	4.90 - 7.05	0.08	1.05	1.08	11.2	550	30	159-124-(L)-2-2
WR137	5.85 - 8.20	0.09	1.05	1.09	7.5	390	30	137-124-(L)-2-2
WR112	7.05 - 10.0	0.12	1.07	1.10	4.5	250	45	112-124-(L)-6-6
WR90	8.20 - 12.4	0.15	1.07	1.10	2.2	150	45	90-124-(L)-6-6
WR75	10.0 - 15.0	0.18	1.08	1.10	2.1	125	60	75-124-(L)-6-6
WR62	12.4 - 18.0	0.28	1.10	1.13	1.3	100	60	62-124-(L)-6-6
WR51	15.0 - 22.0	0.55	1.15	1.18	1.0	75	60	51-124-(L)-6-6
WR42	18.0 - 26.5	0.70	1.18	1.23	0.6	35	60	42-124-(L)-6-6
WR34	22.0 - 33.0	1.00	1.25-36" max		0.5	20	60	34-124-(L)-6-6
WR28	26.5 - 40.0	1.00	1.30-36" max		0.5	20	60	28-124-(L)-6-6

See [ATM Flange page](#) for more information on flanges.

***Important note:** When creating a model number to place for order, please substitute the *letter* (L) as shown above, with the *number* of inches your assembly will be.

Mechanical Specifications

WG Size	Bending Rating				Length (In) Available in sizes between
	Static		Repeated		
	E-plane Rad (in)	H-plane Rad (in)	E-plane Rad (in)	H-plane Rad (in)	
WR284	2.75	5.00	8.00	16.00	4.0 - 60.0
WR229	2.50	4.75	7.50	15.00	4.0 - 60.0
WR187	2.25	4.00	7.00	14.00	4.0 - 60.0
WR159	2.00	3.00	6.00	12.00	4.0 - 60.0
WR137	1.75	2.50	5.00	10.00	4.0 - 47.0
WR112	1.50	2.00	4.50	9.00	2.0 - 47.0
WR90	1.12	1.75	4.00	8.00	2.0 - 47.0
WR75	0.87	1.50	3.50	7.00	2.0 - 47.0
WR62	0.75	1.50	3.00	6.00	2.0 - 47.0
WR51	0.70	1.40	2.75	5.50	2.0 - 47.0
WR42	0.62	1.25	2.50	5.00	2.0 - 35.0
WR34	0.62	1.25	2.50	5.00	2.0 - 35.0
WR28	0.50	1.00	2.00	4.00	2.0 - 35.0

Ordering Information

Typical Part#: **WGSize-124 -Length -Flange1 -Flange2**

Basic Model #: _____

Length: *see note below

Flange1: 1=CPRG, 2=CPRF, 6=Cover, 7=Choke

Flange2: 1=CPRG, 2=CPRF, 6=Cover, 7=Choke

*Replace the L in the model number with your desired length (in inches). See the mechanical specifications chart below for available lengths.

Example: P/N 187-124-30-6-6 is WR187 flex non-twist w/o jacket -30 inches -Cover Flg -Cover Flg

Example P/N:	Description
187-124-48-6-6	WR187 flex w/ jacket - 48 inches long - Cover Flg - Cover Flg
137-124-30-2-2	WR137 flex w/ jacket - 30 inches long - Cprf Flg - Cprf Flg.

***Important note:** When creating a model number to place for order, please substitute the *letter* (L) in the model number examples with the *number* of inches your assembly will be.

Double Ridge Flex Waveguide (Twist and Non-Twist Models)

WG Size	Freq (GHz)	Flex-Twist with Jacket *	Flexible Hi-Power No Jacket *
WRD750	7.5 - 18.0	–	750-124-L-C3-C3
WRD650	6.5 - 18.0	–	650-124-L-C3-C3
WRD580	5.8 - 16.0	–	580-124-L-C3-C3
WRD475	4.75 - 11.0	–	475-124-L-C3-C3

* Replace L in above P/N's with required length in inches as shown below

Example P/N: 475-124-24-C3-C3 is:

475 Waveguide - 124 Type - 24 inches length - All Thru Cover Flange - All Thru Cover Flange

	DOUBLE RIDGE WAVEGUIDE FLANGE TYPES		
	*The Standard Model Numbers shown above are the <i>most common</i> parts ordered for size, material and flange. However, these models can easily be altered to accommodate your needs, see table at right for available flange types.	C1	COVER
C2		COVER	ALL TAPPED
C3		COVER	ALL THRU
G1		GROOVE	ALTERNATE TAP/THRU HOLES
G2		GROOVE	ALL TAPPED
G3		GROOVE	ALL THRU