

WGF-12 / WGF-6 / WGF-461 / WGF-4

WAVEGUIDE FILTER



Overview

The WGF series provide a way of bringing pre-terminated fiber optic cables into a shielded enclosure while maintaining the enclosure's radio frequency isolation integrity. All versions except the WGF-4 feature a patented design with removable center plug so that connectorized fiber optic cables can be inserted into the peripheral cable-sized slots when the plug is removed.

WGF-12

The WGF-12 has twelve bores to accept pre-terminated fiber optic cables with attached connectors.



WGF-6

The WGF-6 has six bores to accept pre-terminated fiber optic cables with attached connectors.



WGF-461

The WGF-461 was designed to meet MIL-461 EMC specifications by providing 100 dB attenuation for frequencies up to 40 GHz. It has six bores to accept pre-terminated fiber optic cables with attached connectors.



WGF-4

The WGF-4 accepts up to four pre-terminated fiber optic cables with either LC or ST connectors through fixed bores. It accepts up to four pre-terminated fiber optic cables with attached connectors.



Features:

- 4, 6, or 12 Channel Waveguide Filter
- WGF-12, WGF-6 and WGF-461 exceed NSA 65-6 shielding specifications
- WGF-12, WGF-6 and WGF-461 have patented removable core to allow easy pass through of pre-terminated cable
- WGF-461 meets MIL-461 EMC specification

Applications:

- SCIF / TEMPEST Enclosures
- EMC Testing
- RF Testing
- Manufacturing
- MRI / Medical
- Anechoic Chambers



WGF-6 Shown with ST fiber installed



WGF-12 Shown with 24 strand fiber installed

WGF-12 / WGF-6 / WGF-461 / WGF-4

WAVEGUIDE FILTER



Typical Applications

**Telecommunications
Information Technology
Audio / Video
Security**

**Telecommunications
Information Technology
Audio / Video
Security**

Shielded Enclosure / SCIF

**Sensors and Controls
Information Technology
Audio Communication
Video Observation**

**Sensors and Control
Information Technology
Audio Communication
Video Observation**

Magnetic Resonance Imaging Suite

**Serial Data
Video Observation
Sensors and Controls**

**Serial Data
Video Observation
Sensors and Controls**

EMC Testing / Anechoic Chamber

Specifications

THEORETICAL ATTENUATION (dB)											
Model	43 GHz	40 GHz	35 GHz	30 GHz	25 GHz	20 GHz	18 GHz	15 GHz	10 GHz	4 GHz	100 MHz
WGF-12	-	-	-	-	60.32	114.91	128.59	144.63	162.11	176.02	176.02
WGF-6	-	-	-	-	63.32	-	131.59	147.63	165.77	179.02	179.02
WGF-461	64.67	123.02	179.33	217.00	-	-	-	-	-	-	-
WGF-4							70.33	106.69	155.63	178.88	-
PHYSICAL SPECIFICATIONS											
	WGF-12		WGF-6		WGF-461		WGF-4				
Cut-Off Frequency	27 GHz		27 GHz		44.2 GHz		18.5 GHz				
Waveguide Bore Qty	12		6		6		4				
Waveguide Bore Diameter	0.257 x 0.159 in (6.5 x 4.0 mm)		0.257 x 0.159 in (6.5 x 4.0 mm)		0.157 x 0.118 in (4.0 x 3.0 mm)		0.375 in (9.5 mm)				
Body Thread Size	1-5/8", 20 NEF		1-1/8", 18 NEF		1-1/8", 18 NEF		1-1/8", 18 NEF				
Clearance Hole Diameter	1-21/32 in (42 mm)		1-5/32 in (29.5 mm)		1-5/32 in (29.5 mm)		1-5/32 in (29.5 mm)				
Effective Length	1.5 in (38 mm)		1.5 in (38 mm)		1.5 in (38 mm)		2.25 in (57 mm)				
Overall Length	2.31 in (59 mm)		2.125 in (54 mm)		2.125 in (54 mm)		2.25 in (57 mm)				
Plug Bore Diameter	1.0 in (25.5 mm)		0.5 in (12.7 mm)		0.5 in (12.7 mm)		n/a				
Material	Steel, Electroless Nickel Finish										