

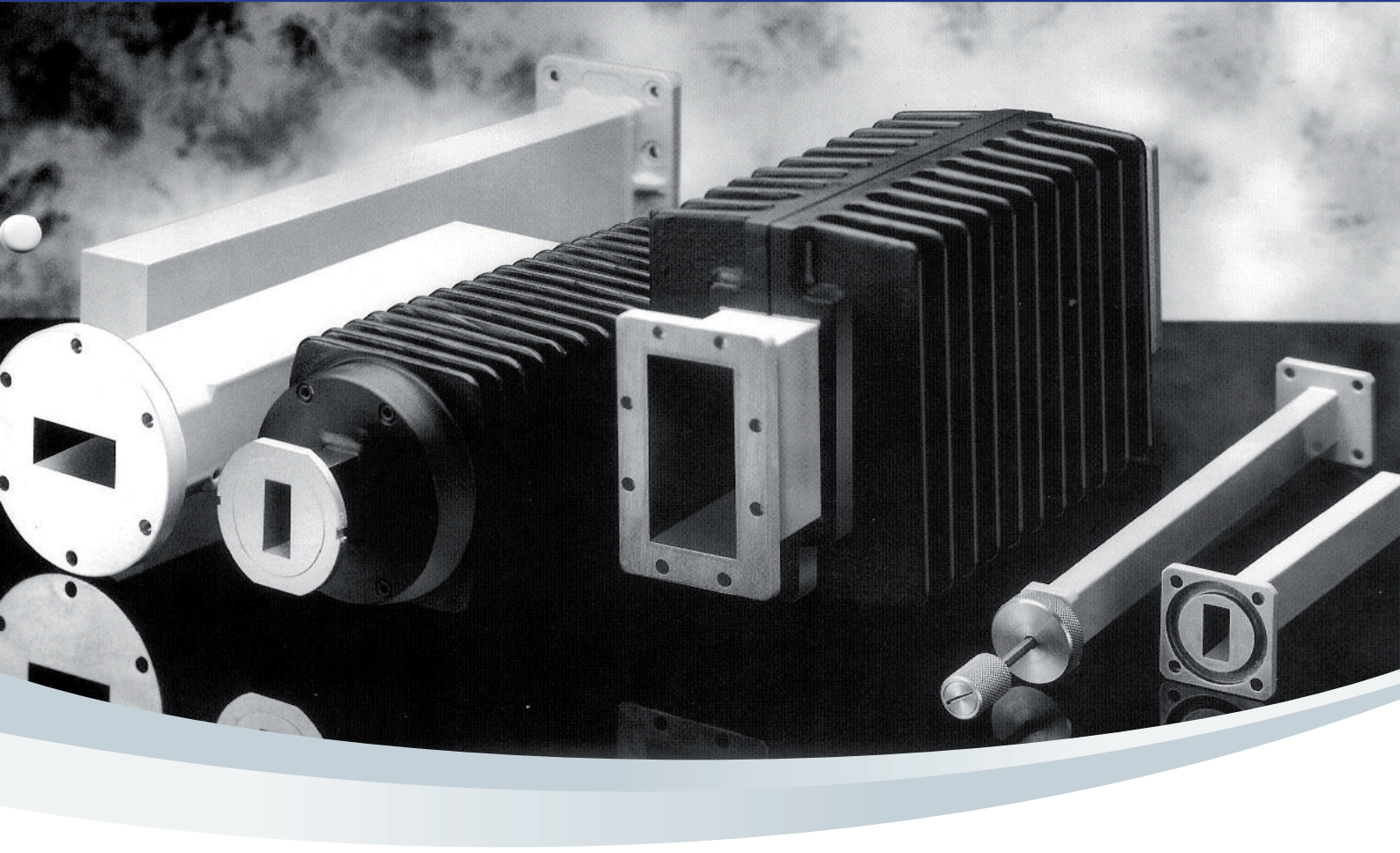


The Waveguide Solution  
a global **invacom** company

## Waveguide Load Terminations

Fixed Loads / **FL SERIES**

Sliding Loads / **SL SERIES**



**The Waveguide Solution range of Low Power and Sliding load terminations has been designed to offer optimum Return Loss Performance.**

The dissipative element is mounted in the waveguide in such a way as to give minimal reflection over the full band WG range. The FL and SL series of loads are manufactured to the highest quality standards. Loads are manufactured with

the full range of International Flange Styles as shown in the TWS Flange Catalogue and can be offered with alternative plated finishes on request. All TWS Loads are offered with an attractive, hardwearing, epoxy paint finish.

The Waveguide Solution facility is approved to ISO 9001: 2000.

# TWS Waveguide Load Terminations

## Standard Fixed Loads

These devices are manufactured from selected waveguide tube. The flange interface is precisely controlled to offer the optimum performance.

## Sliding Loads

The standard sliding loads are assembled in the same way as the standard fixed loads using selected waveguide tube and precise positioning of the flange interface. Operation of the sliding element is by a push/pull mechanism and a locking screw is provided for repetitive measurements.

## High Power Loads

Designs for a limited range of rectangular high power/medium power loads are available on request.

## SLIDING LOADS

### Standard Rectangular

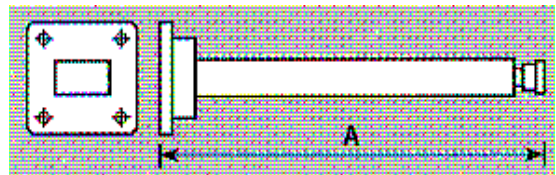
Specification:

VSWR: See table (based on spot frequency Operation)

Material: Brass

Load Material: Iron Loaded Resin

Finish: Blue Paint, Silver Plated Flanges



Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Overall Length "A" (mm)
	UK WG	IEC R	E.I.A. WR				
2.60 – 3.95	10	32	284	SL 10 –SQB- (***)-B	1.01	3	790
3.30 – 4.90	11A	40	229	SL 11A –SQB- (***)-B	1.01	2	526
3.95 – 5.85	12	48	187	SL 12 –SQB- (***)-B	1.01	2	414
4.90 – 7.05	13	58	159	SL 13 –SQB- (***)-B	1.01	2	332
5.85 – 8.20	14	70	137	SL 14 –SQB- (***)-B	1.01	1	336
7.05 – 10.0	15	84	112	SL 15 –SQB- (***)-B	1.01	1	323
8.20 – 12.40	16	100	90	SL 16 –SQB- (***)-B	1.01	0.8	331
10.0 – 15.0	17	120	75	SL 17 –SQB- (***)-B	1.01	0.8	321
12.4 – 18.0	18	140	62	SL 18 –SQB- (***)-B	1.01	0.6	321
15.0 – 22.0	19	180	51	SL 19 –SQB- (***)-B	1.02	0.6	225
18.0 – 26.5	20	220	42	SL 20 –SQB- (***)-B	1.02	0.6	107
22.0 – 33.0	21	260	34	SL 21 –SQB- (***)-B	1.02	0.6	107
26.5 – 40.0	22	320	28	SL 22 –SQB- (***)-B	1.035	0.5	100

\*\*\* For 3 Digit Rectangular Flange part number, refer to the 1999 Catalogue, or consult the factory.

## FIXED LOADS

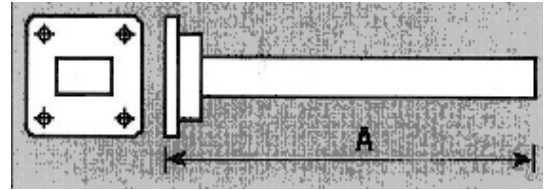
### Standard Rectangular

Specification:

Body Material: Brass

Load Material: Iron Loaded Resin

Finish: Blue Paint, Silver Plated Flanges



Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Overall Length "A" (mm)
	UK WG	IEC R	E.I.A. WR				
2.60 – 3.95	10	32	284	FL 10 –SQB- (***)-B	1.02	5	540
3.30 – 4.90	11A	40	229	FL 11A –SQB- (***)-B	1.02	4	440
3.95 – 5.85	12	48	187	FL 12 –SQB- (***)-B	1.02	3.5	407
4.90 – 7.05	13	58	159	FL 13 –SQB- (***)-B	1.02	3.5	350
5.85 – 8.20	14	70	137	FL 14 –SQB- (***)-B	1.02	2	305
7.05 – 10.0	15	84	112	FL 15 –SQB- (***)-B	1.02	2	250
8.20 – 12.40	16	100	90	FL 16 –SQB- (***)-B	1.02	1.3	210
10.0 – 15.0	17	120	75	FL 17 –SQB- (***)-B	1.02	1.3	195
12.4 – 18.0	18	140	62	FL 18 –SQB- (***)-B	1.02	1	169
15.0 – 22.0	19	180	51	FL 19 –SQB- (***)-B	1.025	1	150
17.7 – 26.5	20	220	42	FL 20 –SQB- (***)-B	1.035	0.8	128
22.0 – 33.0	21	260	34	FL 21 –SQB- (***)-B	1.035	0.8	128
26.5 – 40.0	22	320	28	FL 22 –SQB- (***)-B	1.05	0.6	100

\*\*\* For 3 Digit Rectangular Flange part number, refer to the 1999 Catalogue, or consult the factory.

## FIXED LOADS

### Double Ridge

Specification:

Body Material: Aluminium Alloy

Load Material: Iron Loaded Resin

Finish: Blue Paint, Chromated / Iridited  
Aluminium Flanges

Operating Frequency Band (GHz)	Waveguide Designation	TWS Part Number	Max V.S.W.R.	Max Power Watts C.W.	Overall Length "A" (mm)
4.75 – 11.0	WRD475 D24	FL 475–SQH- (***)-A	1.04	11	386
5.8 – 16.0	WRD580 D28	FL 580 –SQH- (***)-A	1.04	8	300
6.5 – 18.0	WRD650 D28	FL 650 –SQH- (***)-A	1.05	7	252
7.5 – 18.0	WRD750 D24	FL 750 –SQH- (***)-A	1.05	7	237
18.0 – 40.0	WRD180 C24	FL 180 –SQH- (***)-A	1.06	5	128

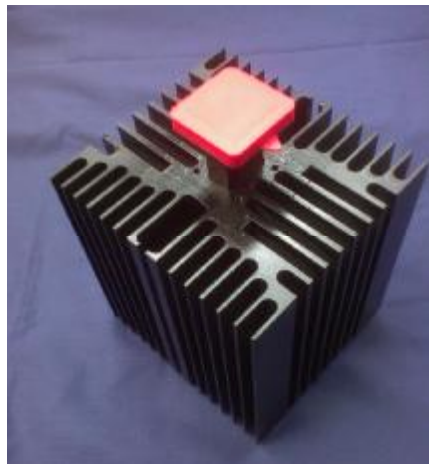
\*\*\* For 3 digit Double Ridge Waveguide Flange Part number, please consult the factory.

Various lengths available on request.

## HIGH POWER FIXED LOADS

### Standard Rectangular

Specification:  
 Pressurisation: Up to 50psi if required (please specify)  
 Body Material: Brass/Aluminium Alloy Tube/  
 Aluminium Alloy  
 Load Material: Silicon Carbide  
 Finish: Matt Black Paint /  
 Chromated / Iridited Aluminium Flanges



Fin designs are available for horizontal and vertical mounting and with power ratings of 400 and 800W. Please consult the factory for mounting brackets and higher power ratings.

Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Max V.S.W.R.
	UK WG	IEC R	E.I.A. WR		
2.60 – 3.95	10	32	284	FL 10 –HBH- (***)-B	1.1
3.30 – 4.90	11A	40	229	FL 11A –HBH- (***)-B	1.1
3.95 – 5.85	12	48	187	FL 12 –HBH- (***)-B	1.1
4.90 – 7.05	13	58	159	FL 13 –HBH- (***)-B	1.1
5.85 – 8.20	14	70	137	FL 14 –HBH- (***)-B	1.1
7.05 – 10.0	15	84	112	FL 15 –HBH- (***)-B	1.1
8.20 – 12.40	16	100	90	FL 16 –HBH- (***)-B	1.1
10.0 – 15.0	17	120	75	FL 17 –HBB- (***)-B	1.1
12.4 – 18.0	18	140	62	FL 18 –HBB- (***)-B	1.1
18.0 – 26.5	20	220	42	FL 20 –HBB- (***)-B	1.1
26.5 – 40.0	22	320	28	FL 22 –HBB- (***)-B	1.1

\*\*\* For 3 Digit Rectangular Flange part number, refer to the TWS Flange catalogue, or consult the factory.



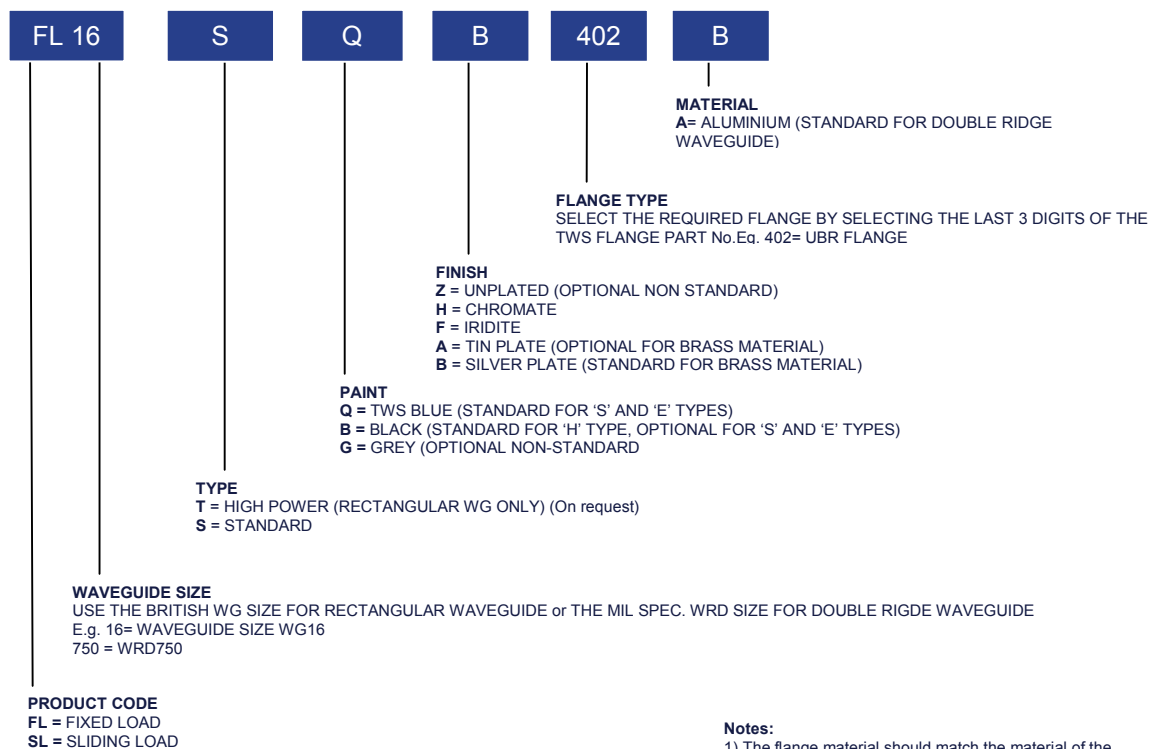
## LOAD TERMINATIONS



The Waveguide Solution offers standard and custom Waveguide Load Terminations. All designs have been optimised to offer high performance within a compact outline.

Contact our Sales Department for more information.

# Ordering Information



For assistance selecting RoHS compliant options please contact the factory



## The Waveguide Solution Limited

KING CHARLES BUSINESS PARK OLD NEWTON ROAD HEATHFIELD NEWTON ABBOT DEVON TQ12 6UT UNITED KINGDOM

Tel: +44 (0) 1626 835255 Fax: +44 (0) 1626 836166 E-mail: [enquiries@waveguidesolution.co.uk](mailto:enquiries@waveguidesolution.co.uk)

[www.waveguidesolution.co.uk](http://www.waveguidesolution.co.uk)

Specifications shown on this document are offered as a guide only. Components may be modified to suit the mechanical or electrical parameters requested, or may be optimized to suit the operating frequency range. Frequency range of operation shall be advised when ordering.

Information provided in this brochure is for reference only. Dimensions or specifications are typical values. All designs, specifications and availabilities of products and services presented in this document may be subject to change without notice. For confirmation of details please consult your agent or manufacturer. Issue 1.0b