

Flange to Flange Waveguide Straights, Adaptors and Spacers series 441 / 445

Manufactured in:-

- Brass
- Copper
- Aluminium

The Flann Series 441/445 of Waveguide Straights and Flange to Flange Adaptors are available in waveguide bands from 1.14 GHz to 173 GHz.

The overall length and flange types fitted at each end, must be specified at time of enquiry.

Note: Waveguide Straights are supplied fitted with Flann standard flanges unless otherwise specified by the customer. See page 108 for standard flange types and recommendations.

Customers requiring precision waveguide sections offering greater aperture and length dimensional accuracy are requested to refer to the Waveguide Calibration Kit section, (starting on page 96) for details.



Model
17441-140

Model 17441-120, fitted with a non standard flange type PDR 120 and a standard flange, 120mm long

Waveguide Straights and Flange to Flange Adaptors

Model	Frequency range (GHz)	Waveguide		
		WG	R	WR
06441	1.14 - 1.73	6	14	650
08441	1.72 - 2.61	8	22	430
10441	2.60 - 3.95	10	32	284
11A441	3.30 - 4.90	11A	40	229
12441	3.94 - 5.99	12	48	187
13441	4.64 - 7.05	13	58	159
14441	5.38 - 8.18	14	70	137
15441	6.58 - 10.0	15	84	112
16441	8.20 - 12.5	16	100	90
17441	9.84 - 15.0	17	120	75
18441	11.9 - 18.0	18	140	62
19441	14.5 - 22.0	19	180	51
20441	17.6 - 26.7	20	220	42
22441	26.4 - 40.1	22	320	28
23441	33.0 - 50.1	23	400	22
24441	39.3 - 59.7	24	500	19
25441	49.9 - 75.8	25	620	15
26441	60.5 - 92.0	26	740	12
27441	73.8 - 112	27	900	10
28441	92.3 - 140.0	28	1200	8
29441	114.0 - 173.0	29	1400	6

Waveguide Spacers

Model	Frequency range (GHz)	Waveguide		
		WG	R	WR
16445	8.20 - 12.5	16	100	90
17445	9.84 - 15.0	17	120	75
18445	11.9 - 18.0	18	140	62
19445	14.5 - 22.0	19	180	51
20445	17.6 - 26.7	20	220	42
22445	26.4 - 40.1	22	320	28
23445	33.0 - 50.1	23	400	22
24445	39.3 - 59.7	24	500	19
25445	49.9 - 75.8	25	620	15
26445	60.5 - 92.0	26	740	12
27445	73.8 - 112	27	900	10
28445	92.3 - 140.0	28	1200	8
29445	114.0 - 173.0	29	1400	6



Model 22445-10

Model 22445-5

For standard flange types and recommendations see pages 108 onwards

ORDERING INFORMATION

Model: Overall Length: Input Flange Type: Output Flange Type: Description

If the adaptor Spacer is required to be manufactured in aluminium please suffix the order information with \ AL

Straights / Adaptors - Series 441

Example: Model 22441-120-UG599/U. UBR 320 WG flange to flange Adaptor, 120 mm long, flange UG599/U. And PBR 320

Spacers - Series 445

Example: Model 22445-5-UG599/U WG22 Spacer, 5mm long, flange detail: UG.599/U

Series 441/445

Rectangular to Circular Waveguide Transitions

Series 64*

Features

- Low Ellipticity Ratio
- Precision Electroformed
- Linear to Linear Polarisation Versions
- Linear to Circular Polarisation Versions

Each transition consists of a short length of rectangular waveguide and a stepped or tapered section leading into circular waveguide.

Models are available optionally fitted with combinations of rectangular port flanges, circular port flanges, resistive elements and dielectric elements. The standard rectangular flange types are listed in the table below. Alternative flange types can be fitted to order. The circular waveguide ports are fitted with the flange as detailed below or to customers requirements as other flange styles are available to special order.

The simple rectangular to circular waveguide transition will launch linearly polarized waves into the circular waveguide section (10643 to 28643). However, line reflections from the circular waveguide section may interact with the incident wave resulting in cross polarization.

If cross polarization is undesirable then the transition selected should be one fitted with a resistive film element to absorb the cross polarized waves (models 10644 to 28644).

For circular polarization, the transitions are fitted with resistive film element and have an extended circular waveguide section containing a dielectric quarter wave plate (models 10648 to 28648).



Model 17648-RH

Model 17648-LH

ORDERING INFORMATION
Model: polarization suffix (Series 648 only); description

Example: Model 18648-RH rectangular to circular waveguide transition-right hand polarization (fitted with a dielectric quarter wave plate producing right hand polarization)

Series	Rectangular Port Flange Fitted	Circular Port Flange Fitted	Resistive Vane Fitted	Dielectric Quarter Wave Plate Fitted
643	Yes	Yes	No	No
644	Yes	Yes	Yes	No
648-*	Yes	Yes	Yes	Yes

↑ LH for left hand polarization (standard)
↓ RH for right hand polarization (optional)

Series 64*

ØH
ØB
A
E
8 x C holes
Equispaced on D PCD

Model	Frequency Range (GHz)	Waveguide			Overall Length A		Rectangular Port Flange Type	Circular Port Flange Dimensions					Weight (kg) Series 643/4 Only
		WG	R	WR	Series 643 & 644	Series 648		B	C	D (PCD)	E	H	
1064*	2.60 - 3.95	10	32	284	241	on request	5985-99-083-1560/0010	146	6.9	132.0	11	73.9	4.30
11A64*	3.30 - 4.90	11A	40	229	178	330	UDR 40	101	5.4	93.0	7	59.7	1.90
1264*	3.94 - 5.99	12	48	187	140	249	UAR 48	89	5.4	80.0	7	48.8	1.50
1364*	4.64 - 7.05	13	58	159	120	on request	UAR 58	89	5.4	80.0	7	41.4	1.10
1464*	5.38 - 8.18	14	70	137	102	232	UAR 70	76	4.4	60.3	7	35.8	0.80
1564*	6.58 - 10.0	15	84	112	82.5	222	UBR 84	60	3.2	52.0	7	28.6	0.30
1664*	8.20 - 12.5	16	100	90	76.0	174	UBR 100	56	3.2	48.0	6	23.4	0.25
1764*	9.84 - 15.0	17	120	75	64.0	149	UBR 120	56	3.2	48.0	6	19.4	0.20
1864*	11.9 - 18.0	18	140	62	51.0	120	UBR 140	50	3.2	41.0	6	16.1	0.10
1964*	14.5 - 22.0	19	180	51	51.0	120	UBR 180	50	3.2	41.0	6	13.3	0.10
2064*	17.6 - 26.7	20	220	42	77.5	141	UBR 220	50	3.2	41.0	5	10.9	0.10
2164*	21.7 - 33.0	21	260	34	67.5	122.5	UBR 260	50	3.2	41.0	5	8.8	0.10
2264*	26.4 - 40.1	22	320	28	51.5	79.5	UG-599/U	44	3.2	35.0	3.5	7.3	0.06
2364*	33.0 - 50.1	23	400	22	46.0	on request	UG-383/U	Fixing detail as for UG- 383/U				5.8	0.06
2464*	39.3 - 59.7	24	500	19	43.0	68	UG-383/U MOD	Fixing detail as for UG- 383/U				4.8	0.05
2564*	49.9 - 75.8	25	620	15	33.5	61.5	UG-385/U	Fixing detail as for UG- 385/U				3.9	0.03
2664*	60.5 - 92.0	26	740	12	28.0	51.5	UG-387/U	Fixing detail as for UG- 387/U				3.1	0.03
2764*	73.8 - 112	27	900	10	28.0	43	UG 387/U MOD	Fixing detail as for UG- 387/U				2.6	0.03
2864*	92.3 - 140	28	1200	8	28.0	on request	UG 387/U MOD	Fixing detail as for UG- 387/U				2.0	0.03

For standard flange types and recommendations see pages 108 onwards