

- A wide range of waveguides are available with different flanges standards and offer high performances up to 40 GHz.
- Both Machining and 3D printing technologies can be used to manufacture these waveguides.
- They can be customized on demand for other flange standards, for higher frequencies or high power applications.
- The length of the waveguide has to be specified, as specific functions (p.2) if needed : Twist, H-plan bend, E-plan bend, Tee junction, etc.



Electrical specifications

	Unit	WR340	WR284	WR229	WR187	WR159	WR137	WR112	WR90
Min. Frequency	[GHz]	2.2	2.6	3.3	3.95	4.9	5.85	7.05	8.2
Max. Frequency	[GHz]	3.3	3.95	4.9	5.85	7.05	8.2	10	12.4
S₁₁	[dB]	≤ -25	≤ -25	≤ -25	≤ -25	≤ -25	≤ -25	≤ -25	≤ -25
VSWR	–	≤ 1.12	≤ 1.12	≤ 1.12	≤ 1.12	≤ 1.12	≤ 1.12	≤ 1.12	≤ 1.12
Power (CW)	[W]	–	–	–	–	–	–	–	–
Power (Impulse)	[W]	–	–	–	–	–	–	–	–
Acces*	–	–	–	–	–	–	–	UBR84	UBR100
		–	UAR32	UAR40	UAR48	UAR58	UAR70	–	–
		UDR26	UDR32	UDR40	UDR48	UDR58	UDR70	UDR84	UDR100
		–	UER32	UER40	UER48	UER58	UER70	UER84	UER100

	Unit	WR75	WR62	WR51	WR42	WR34	WR28
Min. Frequency	[GHz]	10	12.4	15	18	22	26.5
Max. Frequency	[GHz]	15	18	22	26.5	33	40
S₁₁	[dB]	≤ -25	≤ -25	≤ -20	≤ -20	≤ -20	≤ -20
VSWR	–	≤ 1.12	≤ 1.12	≤ 1.22	≤ 1.22	≤ 1.22	≤ 1.22
Power (CW)	[W]	–	–	–	–	–	–
Power (Impulse)	[W]	–	–	–	–	–	–
Acces*	–	UBR120	UBR140	UBR180	UBR220	UBR260	UBR320
		–	–	–	–	–	–
		UDR120	UDR140	UDR180	–	–	–
		–	–	–	–	–	–

Higher frequencies available on demand

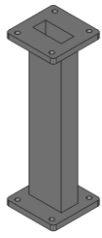
* UBR : Square Flange - UAR : Round Flange - UDR : Rectangular Flange - UER : Small Rectangular Flange.
See Standard technical drawing p.3-4 for more information



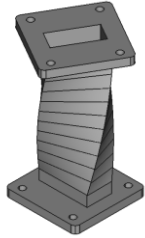
Standard Waveguides

2.2 – 40+ GHz

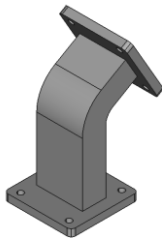
Waveguide functions - Overview



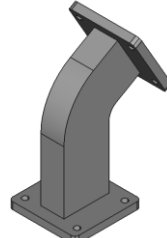
Straight



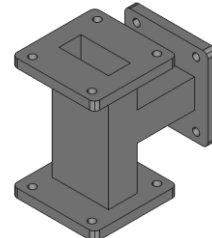
Twist



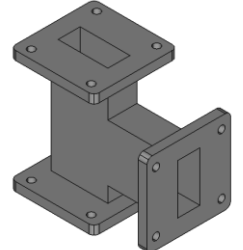
E-Plan Bend



H-Plan Bend



E-Plan Tee Junction

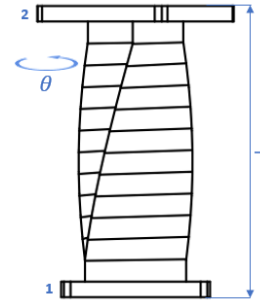


H-Plan Tee Junction

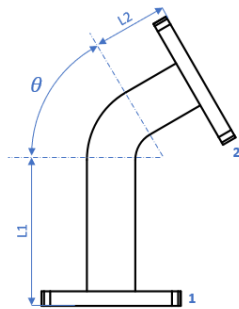
Waveguide functions – Drawing Detail



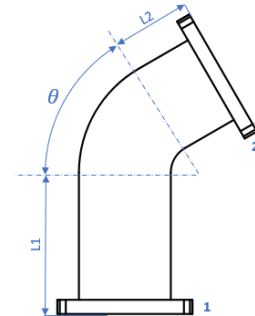
Straight



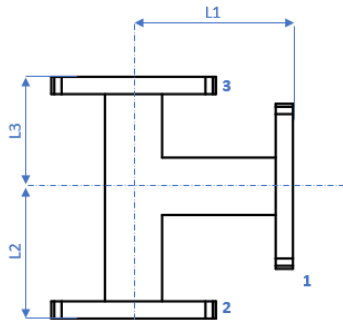
Twist



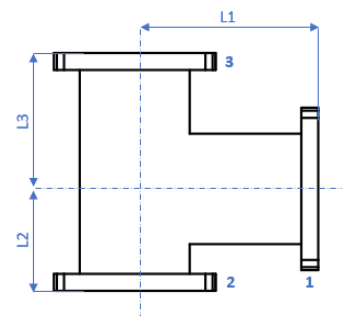
E-Plan Bend



H-Plan Bend

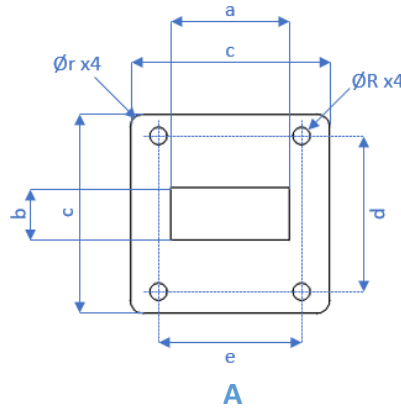


E-Plan Tee Junction



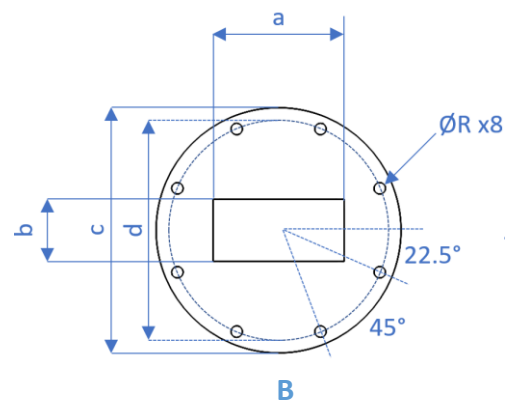
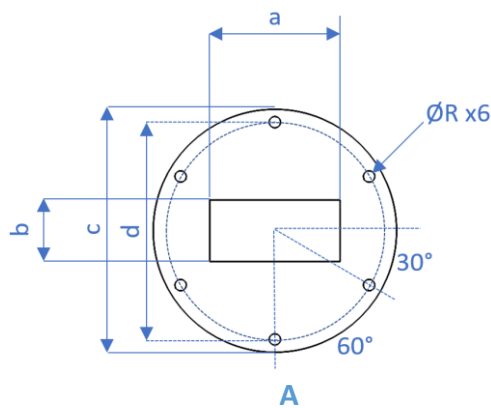
H-Plan Tee Junction

Square Flange – UBR (IEC Std. Flange)



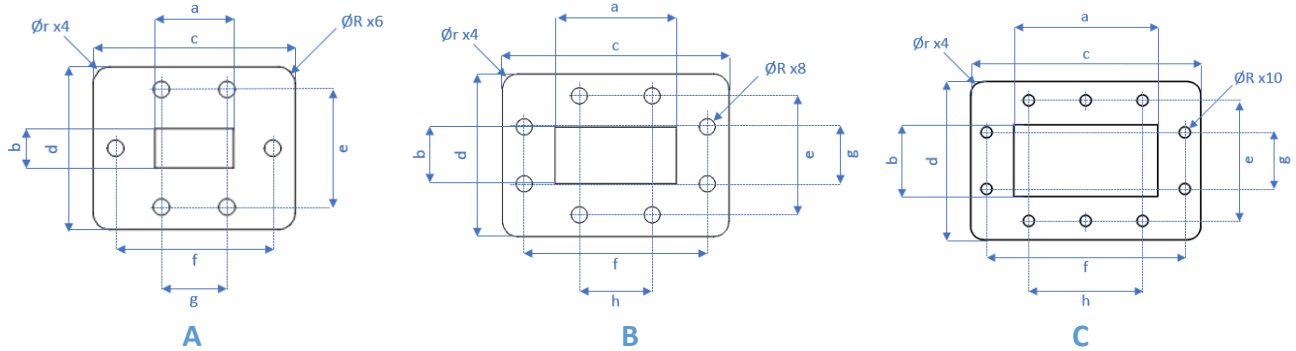
(mm)	Model	r	R	a	b	c	d	e	f	g	h	i
UBR84	A	3.00	4.17	28.50	12.62	47.80	37.44	34.34	-	-	-	-
UBR100	A	3.00	4.17	22.86	10.16	41.40	32.51	30.99	-	-	-	-
UBR120	A	3.00	4.00	19.05	9.52	38.00	28.50	26.42	-	-	-	-
UBR140	A	3.00	4.00	15.80	7.90	33.30	24.28	25.25	-	-	-	-
UBR180	A	3.00	4.00	12.95	6.48	30.20	22.50	20.57	-	-	-	-
UBR220	A	2.00	3.00	10.67	4.32	22.40	17.02	16.26	-	-	-	-
UBR260	A	2.00	3.00	8.64	4.32	21.20	15.75	15.00	-	-	-	-
UBR320	A	2.00	3.00	7.11	3.56	19.10	13.46	12.70	-	-	-	-

Round Flange – UAR (IEC Std. Flange)



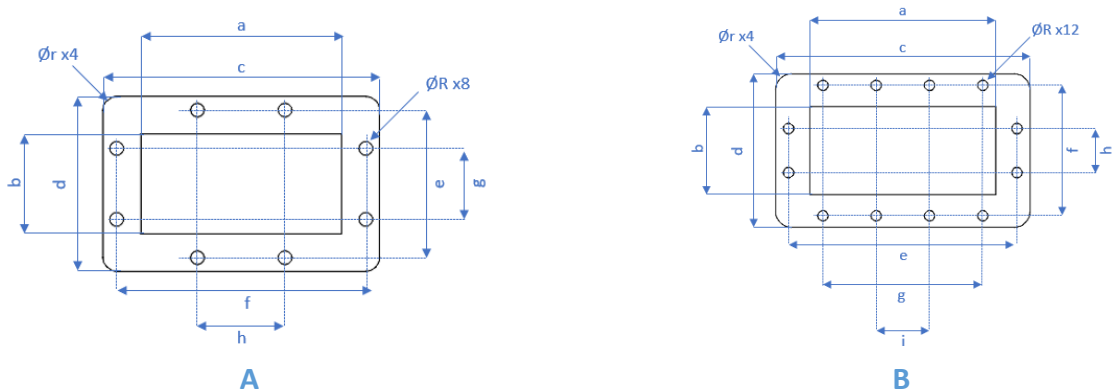
(mm)	Model	r	R	a	b	c	d	e	f	g	h	i
UAR32	B	-	6.35	72.14	34.04	134.90	120.65	-	-	-	-	-
UAR40	B	-	6.35	58.17	29.08	115.60	101.38	-	-	-	-	-
UAR48	B	-	5.00	47.55	22.15	92.20	82.55	-	-	-	-	-
UAR58	A	-	5.00	40.39	20.19	85.90	76.20	-	-	-	-	-
UAR70	A	-	5.00	34.85	15.80	79.50	69.85	-	-	-	-	-

Rectangular Flange – UDR (IEC Std. Flange)



(mm)	Model	r	R	a	b	c	d	e	f	g	h	i
UDR26	C	8.00	6.73	86.36	43.18	138.20	95.30	72.60	119.06	34.08	68.28	-
UDR32	C	6.00	6.35	72.14	34.04	114.30	76.20	59.14	97.22	29.36	65.08	-
UDR40	C	6.00	6.35	58.17	29.08	98.40	69.90	53.34	82.30	25.40	54.36	-
UDR48	B	6.00	6.35	47.55	22.15	88.90	63.50	46.44	71.82	22.22	28.58	-
UDR58	B	6.00	6.35	40.39	20.19	81.00	61.91	44.46	64.66	19.04	25.40	-
UDR70	B	4.00	5.00	34.85	15.80	68.30	49.20	36.52	55.58	15.88	22.22	-
UDR84	B	4.00	4.00	28.50	12.62	63.50	44.50	32.54	48.42	15.88	19.04	-
UDR100	B	4.00	4.00	22.86	10.16	53.20	40.50	29.36	42.06	15.88	15.88	-
UDR120	A	4.00	4.00	19.05	9.52	49.00	39.50	28.58	38.10	15.88	-	-
UDR140	A	4.00	4.00	15.80	7.90	44.50	36.50	25.40	33.34	11.94	-	-
UDR180	A	4.00	4.00	12.95	6.48	42.00	35.50	25.40	31.75	11.94	-	-

Small Rectangular Flange – UER (IEC Std. Flange)



(mm)	Model	r	R	a	b	c	d	e	f	g	h	i
UER32	B	6.00	8.00	72.14	34.04	98.70	59.50	50.54	88.64	62.04	17.02	20.68
UER40	A	4.00	4.00	58.17	29.08	80.20	50.80	42.88	72.24	20.62	25.40	-
UER48	A	4.00	4.00	47.55	22.15	70.60	45.20	36.32	61.72	23.78	20.58	-
UER58	A	4.00	4.00	40.39	20.19	63.50	44.50	33.68	53.90	24.34	18.38	-
UER70	A	4.00	4.00	34.85	15.80	57.90	38.90	29.98	49.02	17.42	16.36	-
UER84	A	4.00	4.00	28.50	12.62	51.20	34.90	26.26	42.16	14.22	14.08	-
UER100	A	4.00	4.00	22.86	10.16	44.90	32.20	23.12	35.82	11.42	11.94	-