







Rectangular Waveguide Flanges Application Notes

Non pressurised Contact Flanges

Waveguide Type	Flange Series Equivalents		Style	Dimensions Inches (Millimeters)
	EIA	IEC		
WR90	CMR90	UER100		1.77 x 1.27 (45.0 x 32.3)
WR112	CMR112	UER84		2.02 x 1.38 (51.3 x 35.1)
WR137	CMR137	UER70		2.28 x 1.53 (57.9 x 38.9)
WR159	CMR159	UER58		2.50 x 1.75 (63.5 x 44.5)
WR187	CMR187	UER48		2.78 x 1.78 (70.6 x 45.2)
WR229	CMR229	UER40		3.16 x 2.00 (80.3 x 50.8)




























Flange Availability

Waveguide Size

Flange Type	WR28	WR42	WR51	WR62	WR75	WR90	WR112	WR137	WR159	WR187	WR229
Choke	•	•		•	•	•	•	•		•	
Cover	•	•		•	•	•	•	•		•	
CPRG					•	•	•	•	•	•	•
CPRF						•	•	•	•	•	•
CMR						•	•	•	•	•	•
CMR Through								•			
CMR Tapped								•			
PDR		•	•	•	•	•	•	•	•	•	•
PBR	•	•		•	•	•	•				
UDR				•	•	•	•				
UBR	•	•	•	•	•	•	•				
PAR								•		•	
CBR	Please contact DrawCom Sales department										
BRJ	Please contact DrawCom Sales department										
UER								•			
UAR	Please contact DrawCom Sales department										
Cover/Gasket	•	•		•	•	•	•	•		•	

Choke, Cover and Cover/Gasket Flanges

The following flanges are square or round, depending on waveguide size. Flanges are pressurisable when used with appropriate gasket kits.

Choke, Cover and Cover/Gasket Flanges									
Waveguide	Choke Flanges			Cover Flanges			Cover/Gasket Flanges		Flange Dimensions
Type, EIA	U.S. MIL	IEC	Style	U.S. MIL	IEC	Style	IEC	Style	Inches (Millimeters)
WR42	UG-596A/U	CAR220		UG-595/U	UBR220		PBR220		0.88 (22.4) sq.
WR62	UG-541A/U	CBR140		UG-419/U	UBR140		PBR140		1.31 (33.3) sq.
WR75	51752*	CBR120		51745	UBR120		PBR120		1.50 (38.1) sq.
WR90	UG-40B/U	CBR100		UB-39/U	UBR100		PBR100		1.63 (41.4) sq.
WR112	UG-52B/U	CBR84		UG-51/U	UBR84		PBR84		1.88 (47.8) sq.
WR137	UG-343B/U	CAR70		UG-344/U	UAR70		PAR70		3.13 (79.5) dia.
WR159	–	CAR58		–	UAR58		PAR58		3.38 (85.9) dia.
WR187	UG-148C/U	CAR48		UG-149A/U	UAR48		PAR48		3.63 (92.2) dia.
WR284	UG-54B/U	CAR32		UG-53/U	UAR32		PAR32		5.31 (134.9) dia.

**Bolt hole positions are rotated 22.5° from the positions shown.




















Choke Flanges - CBR, CAR and Equivalent UG Series include a gasket groove, choke, and tapped holes for mating with cover flanges. Two choke flanges cannot be mated.

Cover Flanges - UBR, UAR and Equivalent UG Series are flat, without a gasket groove, and have clear holes for mating with choke flanges and other cover flanges. Use of a special seal is required for pressurization of two mating cover flanges.

Cover/Gasket Flanges - PBR and PAR Series are flat, include a gasket groove, and have clear holes for mating with cover, choke, or other cover/gasket flanges. Cover/gasket flanges use a single gasket when mated with cover flanges and a double gasket when mated with choke flanges or other cover/gasket flanges.

Pressurisable Contact Flanges

Contact flanges are rectangular and have clear holes secured with bolts and nuts. The flanges are pressurisable when used with the appropriate gaskets.

Pressurisable Contact Flanges								
Waveguide Type, EIA	EIA	With Groove MIL Type	IEC	Style	EIA	Without Groove MIL Type	Style	Dimensions Inches (Millimeters)
WR75	–	–	PDR120		–	–	–	1.94 x 1.57 (49.2 x 39.9)
WR90	CPR90G	UG-1360/U	PDR100*		CPR90F	UG-1736/U		2.09 x 1.59 (53.1 x 40.4)
WR112	CPR112G	UG-1358/U	PDR84*		CPR112F	UG-1734/U		2.50 x 1.75 (63.5 x 44.5)
WR137	CPR137G	UG-1356/U	PDR70**		CPR137F	UG-1732/U		2.69 x 1.94 (68.3 x 49.3)
WR159	CPR159G	UG-1354/U	PDR58		CPR159F	UG-1730/U		3.19 x 2.44 (81.0 x 62.0)
WR187	CPR187G	UG-1352/U	PDR48		CPR187F	UG-1728/U		3.50 x 2.50 (88.9 x 63.5)
WR229	CPR229G	UG-1350/U	PDR40		CPR229F	UG-1726/U		3.88 x 2.75 (98.6 x 69.9)
WR284	CPR284G	UG-1348/U	PDR32		CPR284F	UG-1724/U		4.50 x 3.00 (114 x 76.2)
WR340	CPR340G	UG-1346/U	PDR26		CPR340F	UG-1712/U		5.44 x 3.75 (138 x 95.3)
WR430	CPR430G	UG-1344/U	PDR22		CPR430F	UG-1716/U		6.34 x 4.19 (161 x 106)

*Mates with equivalent CPR series flange with metric hardware only. **Mates with equivalent CPR series flange with imperial hardware only.

CPRG Series include a gasket groove and mate with another CPRG using the supplied full thickness gasket and imperial hardware.

PDR Series include a gasket groove and mate with another PDR using the supplied two gaskets and metric hardware. Compared with CPRG, PDR flanges have deeper gasket grooves and use different gaskets.

CPRF Series do not include a gasket groove and, when mated with another CPRF, require a special seal. CPRF mates with CPRG using a CPR half gasket.

To Mate CPRG with PDR use one CPR half thickness gasket and the gasket supplied with the PDR flange. Except where noted otherwise in the table, either imperial (CPR) or metric (PDR) hardware can be used. Small tolerance differences between imperial and metric hardware to mate CPR/PDR flanges result in negligible VSWR contributions.

Mating Information



Application Notes

Choke/Cover Flanges (Square or Round)					
	Choke UG	Choke CBR	Cover UG	Cover UBR,UAR	Cover/Gasket PBR, PAR
Choke UG	Does NOT Mate	Does NOT Mate	Mates	Mates	Mates
Choke CBR, CAR	Does NOT Mate	Does NOT Mate	Mates	Mates	Mates
Cover UG	Mates	Mates (NOT pressurizable)	Mates (NOT pressurizable)	Mates	Mates
Modified UG Cover w/ Gasket Groove	Mates	Mates	Mates	Mates	Mates
Cover UBR, UAR	Mates	Mates (NOT pressurizable)	Mates (NOT pressurizable)	Mates	Mates
Cover/Gasket PBR, PAR,	Mates	Mates	Mates	Mates	Mates

Contact Flanges (Rectangular)			
	CPRG	CPRF	PDR
CPR90G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric hardware
CPR112G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric hardware
CPR137G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and imperial hardware
CPR159G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric or imperial hardware
CPR187G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric or imperial hardware
CPR229G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric or imperial hardware
CPR284G	Mates using Full Height Gasket Kit	Mates using Half Height Gasket Kit	Mates using Half Height Gasket Kit and metric or imperial hardware
CPR90F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric hardware
CPR112F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric hardware
CPR137F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using imperial hardware
CPR159F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric or imperial hardware
CPR187F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric or imperial hardware
CPR229F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric or imperial hardware
CPR284F	Mates using Half Height Gasket Kit	Mates (NOT Pressurisable)	Mates using metric or imperial hardware
PDR180	Does NOT Mate	Does NOT Mate	Mates
PDR140	Does NOT Mate	Does NOT Mate	Mates
PDR120	Does NOT Mate	Does NOT Mate	Mates
PDR100	Mates using Half Height Gasket Kit and metric hardware	Mates using metric hardware	Mates
PDR84	Mates using Half Height Gasket Kit and metric hardware	Mates using metric hardware	Mates
PDR70	Mates using Half Height Gasket Kit and imperial hardware	Mates using imperial hardware	Mates
PDR48	Mates using Half Height Gasket Kit and metric or imperial hardware	Mates using metric or imperial hardware	Mates
PDR40	Mates using Half Height Gasket Kit and metric or imperial hardware	Mates using metric or imperial hardware	Mates
CMR	Mates with CMR and UER "ONLY"		
UER	Mates with CMR and UER "ONLY"		