



## Description

Mi-Wave's 355 Rotary Joints are available in standard circular waveguide sizes from 11.6 to 150 GHz. Each rotary joint consists of two circular waveguide sections mounted on a ball bearings.

- *Negligible Variation During Rotation*
- *Minimum Effects on Transferred Signals*

connections to the guides are made at standard male and female circular flanges. Precise alignment of the waveguide sections prevents spurious mode generation, and the very small gap between abutting surfaces contributes a negligible loss in the TE-01 circular mode. In all models, amplitude variation with rotation is less than 0.2 dB and phase variation is less than 2 degrees.

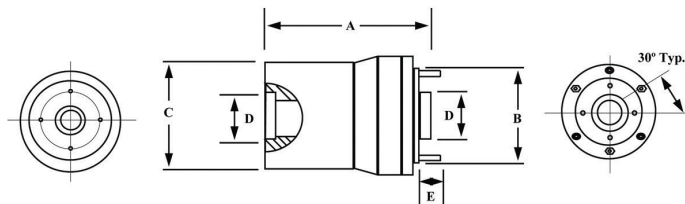
## Applications

The 355 Series Rotary Joints provide efficient energy transfer in radar antenna systems or in other applications requiring relative rotation between two sections of waveguide. Designed for low phase variation, low insertion loss, they are also useful in special laboratory test set-ups for the measurement of millimeter wave parameters including phase variation in radiated fields. Operating in the low-loss TE01 circular mode, these rotary joints are designed for use in circular waveguide transmission lines.

The 355 Series Rotary Joint can also be fitted with two series 330 mode transitions and a 340 Series mode filter to provide a rotary joint assembly for rectangular waveguide applications. Despite the assembly's size, it is a usual design at frequencies that are too high for conventional rotary joints. For use in rectangular waveguide systems, they must be adapted with Mi-Wave's Series 330 mode transitions.

### Technical Specifications (typical)

Frequency Band (GHz)	11.6–48.0	48.0–96.0	96.0–150
Insertion TE Loss (dB) max <sup>1</sup>	0.3	0.4	0.5
VSWR Min.	1.10	1.10	1.15
Weight (oz)	30	24	15



Consult Miwave for current dimensions

### Dimensional Specifications

Model No.	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
<b>355-180</b>	2.35	59.69	1.82	46.23	1.38	35.05	.180	4.57	.211	5.36
<b>355-250</b>	2.35	59.69	1.82	46.23	1.38	35.05	.291	7.39	.211	5.36
<b>355-291</b>	2.35	59.69	1.82	46.23	1.38	35.05	.375	9.53	.211	5.36
<b>355-353</b>	2.35	59.69	1.82	46.23	1.38	35.05	.437	11.10	.264	6.71
<b>355-495</b>	3.35	85.09	3.01	76.45	2.50	63.5	.625	15.88	.264	6.71
<b>355-545</b>	3.35	85.09	3.01	76.45	2.50	63.5	.625	15.88	.264	6.71
<b>355-634</b>	3.35	85.09	3.01	76.45	2.50	63.5	.750	19.05	.264	6.71

## Ordering Information

355 - XXX

Three Digit of Waveguide Inside Diameter (See Appendix L)

### FOR EXAMPLE:

Mi-Wave's model number 355-250 is a rotary joint for a frequency range of 69.7 to 95.9 GHz with an inside pipe diameter of 0.250.

Please Note: Due to non-standardization of this product line, we recommend that you contact Mi-Wave for more specific information about your requirements.