



# Waveguide Bends and Twists

## QWB/QWT

### Characteristics

- ◆ 30°, 45°, 60° and 90° Bends
- ◆ 45° and 90° Twists
- ◆ Minimum Insertion Loss

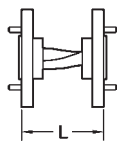


### Product Description

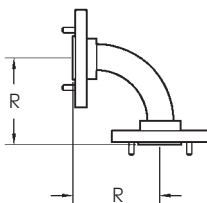
QuinStar Technology's **QWB** and **QWT** series **waveguide bends and twists** cover the frequency range of 18 to 220 GHz in ten waveguide bands. E-Plane and H-Plane formed bends are available with angles of 30°, 45°, 60°, and 90°. The twists allow changing the orientation in a waveguide

assembly. They are available with angles of 45° in either a left- or right-hand twist or a standard 90°. The bends and twists are built with high precision and then gold plated for low insertion loss and high corrosion resistance. Typical VSWR is 1.10:1 over entire frequency band.

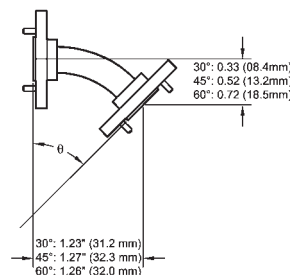
### Outline Drawings/Mechanical Specifications



Waveguide Twist  
(round flange pattern shown)



Right Angle



Waveguide Bends  
(round flange pattern shown)

| FREQUENCY BAND                         | K        | Ka        | Q, U       | V, E, W, F, D, G            |
|--|----------|-----------|------------|-----------------------------|
| Waveguide Size                         | WR-42    | WR-28     | WR-22, -19 | WR-15, -12, -10, -8, -6, -5 |
| Twist Length, inches/mm                | 2.5/63.5 | 1.75/44.5 | 1.25/31.8  | 1.00/25.4                   |
| Right Angle (90°) Bend Radius, inch/mm | 1.5/38.1 | 1.5/38.1  | 1.5/38.1   | 1.0/25.4                    |

### Ordering Information

#### Model Number

**QW - A BC D E**

#### model prefix

B = bend  
T = twist

#### waveguide band designator

K = K-band      E = E-band  
A = Ka-band     W = W-band  
Q = Q-band      F = F-band  
U = U-band      D = D-band  
V = V-band      G = G-band

#### flange type

R = round  
S = square  
Z = custom

#### type of twist or bend

L = left-handed twist      E = E-plane bend  
R = right-handed twist    H = H-plane bend  
0 = 90° twist

#### angle of twist or bend

30 = 30° / 60 = 60° / 45 = 45° / 90 = 90°