

*The Gill MicroVane and 3-Cup Anemometer measure horizontal wind direction and wind speed. Sensitive enough for detailed wind studies, these sensors are rugged enough for permanent installation with only periodic maintenance.*

The MicroVane has a balanced vane assembly which rotates on sealed stainless steel ball bearings. Vane angle is sensed by a precision conductive plastic potentiometer. Output signal is a DC voltage proportional to vane angle.

For maximum sensitivity, the Model 12002 and 12302

Microvanes employ a lightweight, highly responsive, expanded polystyrene (EPS) fin with a durable, UV resistant coating. For greater durability, the 12005 and 12305 Models have a thin aluminum fin. Aluminum fin models are somewhat less sensitive than the EPS fin models.

The 3-Cup Anemometer is constructed with lightweight, UV resistant plastic cups. Standard models utilize a sensitive DC tach-generator to measure wind speed. An optional photochopper transducer produces a 10 pulse per revolution DC square wave. Output is linearly proportional to wind speed.

Models 12002 and 12005 combine a MicroVane and 3-Cup Anemometer with a 76cm mounting crossarm to minimize potential wake effects. An optional 28cm crossarm is available for special applications. All sensors mount on standard 1 inch pipe.



## Specifications

### 12002/12302 EPS VANE

**Wind Speed:** 0-30 m/s (70 mph)  
**Gust Survival:** 35 m/s (80 mph)  
**Damping Ratio\*:** 0.51  
**Vane Delay Distance\*:** 0.9 m (3.0 ft)  
**Damped Natural Wavelength\*:** 4.6 m (15.1 ft)  
**Undamped Natural Wavelength\*:** 4.0 m (13.1 ft)

### 12005/12305 ALUMINUM VANE

**Wind Speed:** 0-50 m/s (110 mph)  
**Gust Survival:** 60 m/s (130 mph)  
**Damping Ratio\*:** 0.34  
**Vane Delay Distance\*:** 1.1 m (3.6 ft)  
**Damped Natural Wavelength\*:** 6.1 m (20.0 ft)  
**Undamped Natural Wavelength\*:** 5.7 m (18.7 ft)

### 12102 3-CUP ANEMOMETER

**Azimuth Range:** 360° mech., 355° electrical (5° open)  
**Cup Wheel Distance Constant\*:** 2.3 m (7.5 ft)  
**Threshold\*:**

Anemometer with tach-generator- 0.5 m/s (1.1 mph)  
 Anemometer with photochopper- 0.3 m/s (0.7 mph)  
 Vane at 10° displacement- 0.4 m/s (0.9 mph)  
 Vane at 5° displacement- 0.7 m/s (1.6 mph)

**Wind Speed Signal:** Standard tach-generator transducer provides analog DC voltage linearly proportional to wind speed. 1800 RPM (2400 mV) = 28.6 m/s (64.0 mph). Optional photochopper transducer provides DC pulse with frequency linearly proportional to wind speed. 10 pulses per revolution. 1800 RPM (300 Hz) = 28.6 m/s (64.0 mph).

**Wind Direction Signal:** Analog DC voltage from 10K ohm plastic potentiometer, 0.25% linearity, life expectancy: 50 million revolutions. Excitation 15 VDC max.

**Power Requirement:** Potentiometer excitation- 15 VDC maximum. Photochopper requires 5 to 15 VDC at 11 mA.

## DIMENSIONS

### Vane:

Overall Height: 46 cm (18.0 in)

Overall Length: 65 cm (25.6 in)

### Anemometer:

Overall Height: 32 cm (12.5 in)

Cupwheel Diameter: 17 cm (6.7 in)

### Crossarm Length:

76cm (30 in) standard

28cm (11 in) optional

### Mounting:

Standard 1 inch pipe

## WEIGHT:

Weight: (12005) 2.4 kg (5.2 lb)

Shipping Weight: (12005) 3.7 kg (8.2 lb)

## Ordering Information

## MODEL

### MICROVANE AND 3-CUP ANEMOMETER (WITH STD. CROSSARM)

WITH EPS FIN ..... 12002

WITH ALUMINUM FIN ..... 12005

WITH PHOTOCHOPPER TRANSDUCER ..... ADD SUFFIX "D"

### MICROVANE

WITH EPS FIN ..... 12302

WITH ALUMINUM FIN ..... 12305

### 3-CUP ANEMOMETER

WITH STANDARD TACH-GENERATOR TRANSDUCER ..... 12102

WITH PHOTOCHOPPER TRANSDUCER ..... ADD SUFFIX "D"

\*Nominal values determined in accordance with ASTM standard procedures.