

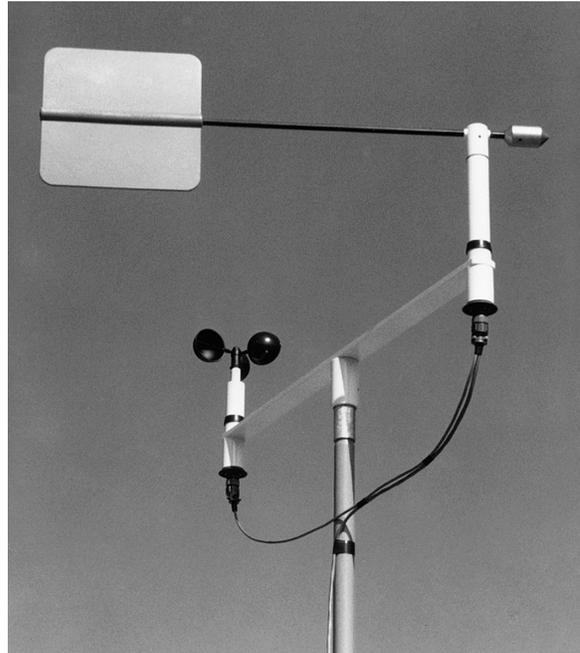
The Gill MicroVane and 3-Cup Anemometer measure horizontal wind direction and wind speed. Sensitive enough for detailed wind studies, these sensors are rugged enough for permanent installation with only periodic maintenance.

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)

*Nominal values determined in accordance with ASTM standard procedures.

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"



R. M. YOUNG COMPANY

2801 Aero Park Drive
 Traverse City, Michigan 49686 U.S.A.
 TEL: (231) 946-3980 FAX: (231) 946-4772
 E-mail: met.sales@youngusa.com
 Web Site: www.youngusa.com