

Dynagage Sap Flow Sensors



The Dynagage Sap Flow Sensors are the latest technology for measuring the sap flow, and thus the water consumption of plants. These energy balance sensors measure the amount of heat carried by the sap which is converted into real-time sap flow in grams or kilograms per hour. The sensors are non-intrusive and not harmful to the plants. The principles of heat balance sensors are scientifically proven and references exist for most major crops and many tree species. Unlike other methods, Dynagages require no calibration since sap flux is directly determined by the energy balance and rates of heat convection by the sap flow.

Dynamax introduced the first sap flow sensor prototypes in 1988 and today offers a full range of sensors from 2 mm up to 150 mm.



Microsensors

The Dynagage Microsensors measure transpiration by small diameter crops, cereals, seedlings or floricultural species. Petiole and peduncle sap flow measurements are now possible.

Trunk Gages

Trunk flow gages have advanced designs that combine all temperature signals into three signal outputs and a heater voltage sensing output compatible with all other Dynagage signal connections.

With the capability to monitor sap flow in tree branches, important canopy studies can be performed. Water conductivity and tree transpiration may be partitioned into the flow rates related to the canopy level.



Features

- Direct transpiration measurement
- Strap-on sensor collar
- Non-invasive and flexible
- Constant heat-energy balance
- Real-time monitoring and recording
- Absolute measurement and no calibration required
- Reusable and portable
- Harmless and conforms to plant size
- Reliable and proven method





Specifications

Model	Min Dia. (mm)	Max Dia. (mm)	Height (mm)	Input Volts	Typical Power (w)	No TC Pairs	TC Gap dx (mm)
SGA2-WS	2.1	3.5	35	2.3	.05	1	0
SGA3-WS	2.7	4	35	2.3	.05	1	0
SGA5-WS	5	7	35	4.0	.08	2	3
SGB9-WS	8	12	70	4.0	.10	2	4
SGA10-WS	9	13	70	4.0	.10	2	4
SGA13-WS	12	16	70	4.0	.15	2	4
SGB16-WS	15	19	70	4.5	.20	2	5
SGB19-WS	18	23	130	4.5	.30	2	5
SGB25-WS	24	32	110	4.5	.50	2	7
SGB35-WS	32	45	255	6.0	.90	4	10
SGB50-WS	45	65	305	6.0	1.4	8	10
SGB70-WS	65	90	410	6.0	1.6	8	13
SGB100-WS	100	125	460	8.5	4.0	8	15
SGB150-WS	150	165	900	9	13	8	20

Ordering Information

All stem gages supplied with bubble shield, donuts and installation kit

SGA2-WS Stem gage 2 mm
SGA3-WS Stem gage 3 mm
SGA5-WS Stem gage 5 mm
SGB9-WS Stem gage 9 mm
SGA10-WS Stem gage 3/8" (9-13 mm)
SGA13-WS Stem gage 1/2" (12-16 mm)
SGB16-WS Stem gage 5/8" (15-19 mm)
SGB19-WS Stem gage 3/4" (18-23 mm)
SGB25-WS Stem gage 1" (24-32 mm)
SGB35-WS Stem gage 1 1/2" (32-45 mm)
SGB50-WS Trunk gage 2" (45-65 mm)
SGA70-WS Trunk gage 3" (70-95 mm)
SGA100-WS Trunk gage 4" (100-125 mm)
SGA150-WS Trunk gage 6" (150-165 mm)

All stem gages supplied with bubble shield, and installation kit

SGC5 Stem gage .2" (5 mm)
SGC9 Stem gage .35" (9 mm)
SGC10 Stem gage 3/8" (10 mm)
SGC13 Stem gage 1/2" (13 mm)
SGC16 Stem gage 5/8" (16 mm)
SGC19 Stem gage 3/4" (19 mm)
SGC25 Stem gage 1" (25 mm)
SGC40 Stem gage 1 1/2" (40 mm)
SGC50 Stem gage 2" (50 mm)