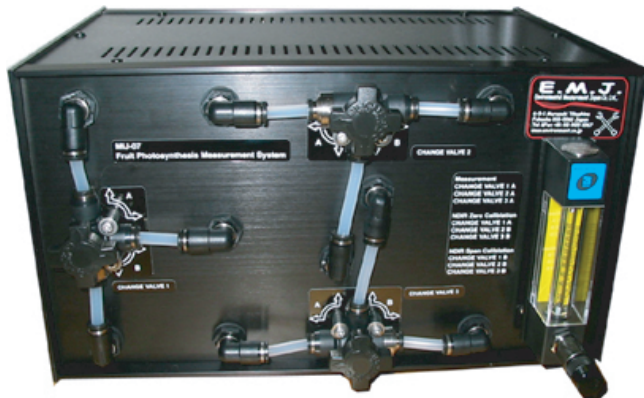


The Fruit Photosynthesis Measurement System MIJ-07

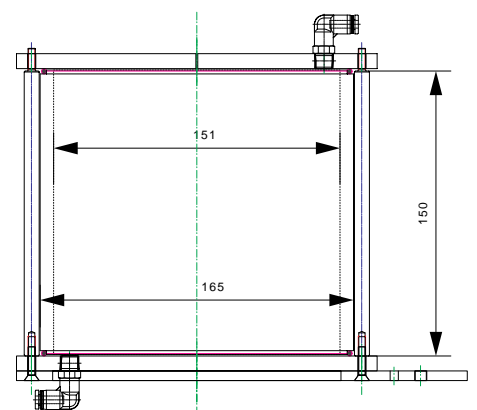
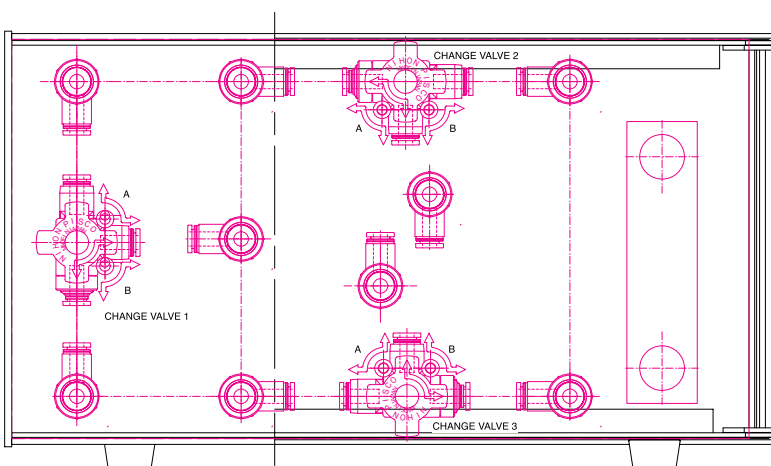


Control system



Fruit chamber

MIJ-07 is consist of 2 parts that are chamber for the fruit and main controller. All system don't require the electric power supply it can work with full human hand control because this system was designed for field use. Many other Photosynthesis measurement system use the closed circuit (Gas connection) to monitor the CO₂ concentration in the chamber but the fruit generates the ethylene gas by their selves and this gas rots the fruit. This is most important problem to measure the Photosynthesis of the fruit. This is a reason why this system adopts flow through circuit. Weak point of the flow through circuit is dynamic range of the measurement of CO₂. This influences to the accuracy of the measurement. So the flow rate must be small than closed circuit. MIJ-07 flow range can be control to so small. On the other hand, the good point of the flow through circuit system is measurement interval. It can be continuousness actually. Also it is possible to disregard the small leakage of the gas in the flow through circuit system. Because internal pressure of the flow through circuit is a little higher than out side pressure (atmospheric pressure). This mean that the leakage from out side intercepted by the leakage from inside. And the leakage from inside don't intercept to the measurement accuracy. The chamber designed to mount to the tripod for the camera. It is easy to fix and user can adjust the height of the chamber in the field. Chamber top was designed to separate to 2 pieces. It make easy to cover the fruit stem.



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