



Young Regulator Co.

7100 Krick Rd • Walton Hills, OH 44146

P: 440-232-9700 • F: 440-232-8266

www.youngregulator.com

Submit 9100 – 1-10

Model 9100AC

*Ceiling Diffuser
Auto Changeover*

Application and Design

The Young Regulator 9100 series (Model 9100-AC) VAV ceiling diffusers are used to vary air volume from a wall-mounted thermostat. The diffusers are designed to maintain coanda effect of discharge air along the ceiling. This provides a sustained discharge velocity throughout the volume range, and effectively induces room air to achieve true VAV in both heating and cooling modes.

A direct-coupled actuator, installed outside the airstream on the neck of the diffuser, modulates to vary the supply air discharge opening. This varies the supply air volume in response to changes in the room temperature. Locating the actuator outside of the airstream makes servicing and troubleshooting convenient.

Operating diffusers from individual wall thermostats enables users to choose their own desired comfort level. This eliminates the problem of having to rely on inaccurate, slow acting, wax-type thermally powered actuators.

These modulating diffusers are operated by a 3-wire, 24-volt, stall type reversing motor. They are controlled with a single pole/double throw/center off thermostat like the Young models # T-312 and T-641, ordered separately. In a heat/cool system, they vary the volume of air into a zone to maintain room temperature. They are used independent of a zone control panel to solve isolated over heating and/or over cooling problems.

The automatic changeover relay consists of a duct sensor and relay board. The duct sensor is factory installed on our damper to be positioned upstream to sense supply air temperature. When the supply duct air temperature is 72 degrees or greater, the relay board will switch the damper into heating mode. The damper will begin to close when room temperature is greater than the wall thermostat set point. When the supply duct air temperature is less than 72 degrees, the relay board will switch the damper into cooling mode, and in this case the damper will begin to open when room temperature is greater than the wall thermostat set point.



Shown without plaque style face plate to expose modulating disk.

STANDARD CONSTRUCTION	
Back Cone	Unitary Stamped Seamless Steel Construction w/ 4 Way Discharge Pattern
Face Plate	Removable
Finish	Baked Enamel
SIZE INFORMATION	
Size	24" x 24" 6" Neck through 14" Neck, -1/4" Nominal 12" x 12" 6" and 8" Neck, -1/4" Nominal
Frame	Surface Mount Standard. Lay in Frame Optional.
Thermostats	T-312 Thermostat T-641 Thermostate
Drone	Use 9100-E, up to 8 Units Off One Thermostat

HONEYWELL ML6161 ACTUATOR	
Non-spring return direct-coupled actuators. Floating actuators used with single pole / double throw (SPDT) proportional and integral thermostats.	
Volts	24V
Watts	2.0
VA	2.2
Amp	0.085
Timing	7 min
Torque	35 in. lb.

QUANTITY	NECK	FACE	FRAME	NOTES

PROJECT	LOCATION
CONTRACTOR	DESIGN SPECIFIER

