



**Young Regulator Co.**

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Submit 9100 – 11-2014

**Model 9100 -E**  
Variable Air Volume (VAV)  
Ceiling Diffuser

**Application and Design**

The Young Regulator 9100 series (Model 9100-E) 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 a disk damper 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.



*Shown without plaque style faceplate to expose modulating disk.*

STANDARD CONSTRUCTION	
Back Cone	Unitary Stamped Seamless Steel Construction w/ 4 Way Discharge Pattern
Face Plate	Removable Plaque Style
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-720 For Proportional Modulation T-422 For Proportional Modulation T-312-CE For Floating Modulation Add Supply Air Sensor for Automatic Heat/Cool Changeover
Drone	Use 9100-E, up to 8 Unit Off One Thermostat

Belimo LMB24-3	
Non-spring return direct-coupled actuators. Floating actuators used with single pole / double throw (SPDT) proportional and integral thermostats.	
Power Supply	24VAC +/- 20%
Power Draw	1.5 W (0.2W hold) 2.5 VA max.
Control	On/Off, Floating Point Modulation
Torque	45 in-lb
Ambient Temp /Humidity	-22°F to 122°F /5-95% noncondensing
Timing	95 Seconds
Noise	< 35 dB(A)
Warranty	5 year parts
Agency Listings	UL/CSA/CE

Built in motor stop for minimum and maximum air

OTHER OPTIONS - Contact Factory	
Pneumatic Motor	Relief Ring
Other Direct Drive Motors	

QUANTITY	NECK	FACE	FRAME	NOTES

<b>PROJECT</b>	<b>LOCATION</b>
<b>CONTRACTOR</b>	<b>DESIGN SPECIFIER</b>