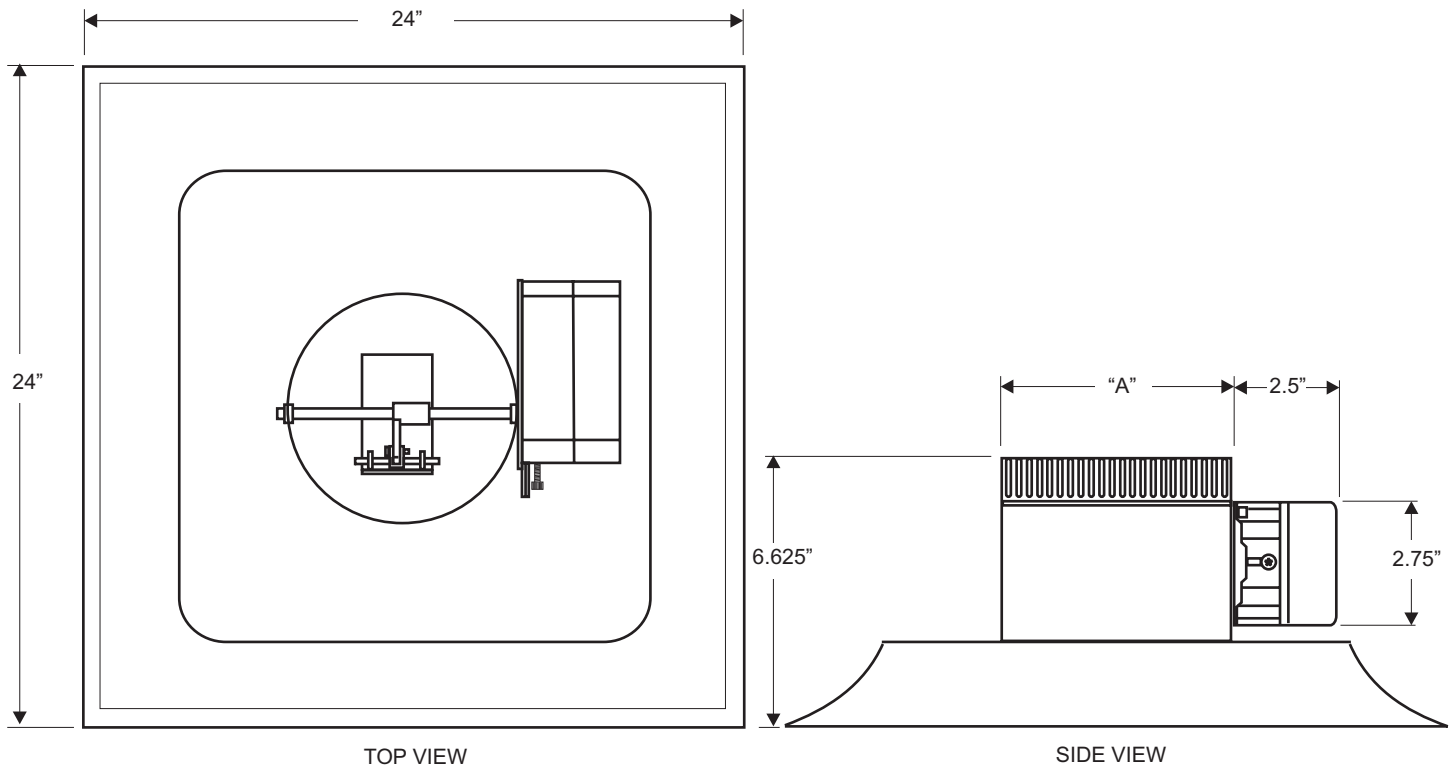


# SPECIFICATION SHEET

## VD-XX Fully Modulating VAV Diffuser



### SPECIFICATIONS

#### DIMENSIONS:

VD-XX are available in 12" x 12" and 24" x 24" face sizes with "A" neck sizes in 6", 8", 10", 12" and 14" diameters.

#### APPLICATION:

Used to vary the supply air volume from a wall-mounted (Z-1600-T) thermostat. Diffuser is designed to maintain coanda effect (draft free) of discharge air along the ceiling, providing a sustained discharge velocity throughout the volume range of 118 to 710 CFM.

#### OPERATION:

Incorporates an integral modulating disk that continually regulates the volume of supply air in response to the wall-mounted thermostat.

#### CONSTRUCTION:

Unitary stamped seamless backbone with removable face plate  
Steel construction with baked white enamel finish  
4-way discharge pattern

#### ELECTRICAL:

24 Volt, 2 VA, floating point  
90 second timing  
44 lb.-in.

Drawings are intended to show general, overall product dimensions and provide guidance for installation clearance. Drawings are not to scale.  
Jackson Systems reserves the right to make product changes without notification or obligation.

**Jackson**  
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08-1026-012508

# ENGINEERING DATA

## Comfort System™ 24" x 24" VD-XX Fully Modulating VAV Diffuser

Part Number and Neck Size	Neck Velocity (FPM)	300	400	500	600	700	800	900	1000	1200	1400
	Velocity Pressure	0.006	0.01	0.016	0.022	0.031	0.04	0.051	0.062	0.09	0.122
VD-06 6" Ak = 0.19	Airflow (CFM)	60	80	100	120	140	160	180	200	240	280
	Total Pressure	0.009	0.011	0.017	0.025	0.034	0.044	0.057	0.070	0.100	0.135
	Horizontal Throw	1-1-2	1-1-4	1-2-4	1-3-5	2-3-6	2-4-7	3-4-8	3-4-9	4-5-11	4-6-11
	Noise Criteria	<15	<15	<15	<15	<15	<15	17	21	28	34
VD-08 8" Ak=0.26	Airflow (CFM)	105	140	175	210	245	280	315	350	420	490
	Total Pressure	0.011	0.018	0.028	0.040	0.055	0.072	0.091	0.112	0.162	0.220
	Horizontal Throw	1-2-4	2-3-6	2-4-7	3-4-9	3-5-10	4-6-12	4-6-12	5-7-13	6-9-14	7-10-15
	Noise Criteria	<15	<15	<15	<15	<15	17	21	25	32	38
VD-10 10" Ak=0.34	Airflow (CFM)	165	220	275	330	385	440	495	550	660	770
	Total Pressure	0.017	0.029	0.043	0.060	0.082	0.108	0.136	0.168	0.243	0.331
	Horizontal Throw	2-3-7	3-4-8	3-5-10	4-6-12	5-7-13	5-8-14	6-9-15	7-10-16	8-12-18	10-13-19
	Noise Criteria	<15	<15	<15	<15	15	20	24	28	35	41
VD-12 12" Ak=0.40	Airflow (CFM)	240	310	390	470	550	630	710	790	940	1100
	Total Pressure	0.023	0.037	0.059	0.085	0.115	0.151	0.191	0.237	0.338	0.461
	Horizontal Throw	2-4-7	4-5-11	5-7-14	5-8-15	6-9-16	7-11-17	8-12-18	9-14-19	11-15-21	13-16-23
	Noise Criteria	<15	<15	<15	<15	18	23	27	31	38	43
VD-14 14" Ak=0.51	Airflow (CFM)	320	430	530	640	750	860	960	1070	1280	1500
	Total Pressure	0.031	0.050	0.078	0.114	0.155	0.202	0.256	0.316	0.453	0.619
	Horizontal Throw	3-4-8	4-7-13	6-8-16	7-10-17	8-12-19	9-13-20	10-15-21	11-16-23	13-17-25	15-19-27
	Noise Criteria	<15	<15	<15	<15	20	25	29	33	40	45

### Notes:

1. Tests conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
2. Tests conducted with a straight rigid inlet condition. Other inlet conditions may alter performance.
3. Units: Total Pressure = in. wc; Velocity Pressure = in. wc; Effective Area (Ak) = ft.<sup>2</sup>.
4. Throw - feet at 150 fpm, 100 fpm and 50 fpm terminal velocities.
5. NC is based upon 10dB room absorption (Re: 10<sup>-12</sup>watts) evaluated at 125 thru 4000 Hz octave bands.
6. Flow hoods are recommended for system balancing.

## Specification Guide

Comfort System™ VAV pneumatically or electrically driven thermostatically controlled variable air volume diffusers shall be as manufactured by Jackson System, LLC. Removable face plate shall be constructed of a minimum 18 gauge steel and attached to a unitary stamped seamless backbone. The face plate and backbone shall be coated with corrosion resistant baked enamel white paint. Diffusers shall incorporate an integral modulating disk that continually regulates the volume of supply air in response to a wall-mounted thermostat. Diffusers relying on integral induction air ceiling-located sensors or methods of set point adjustment other than from wall-mounted thermostats shall not be acceptable.

On electrically-driven units, the electric 24 Vac actuators shall be a drive-open, drive-closed motors to ensure finite control of temperature by modulation. Actuators that incorporate an expanding substance which only drives the unit open when subjected to heat-causing electrical current, necessitating a spring return mechanism to force the diffuser to a closed position, shall not be acceptable.

Electronic modulating wall-mounted thermostatic control shall be either a 2 to 10 Vdc or floating-point. All field wiring, labor and materials shall be furnished and installed by others.

Pneumatically-driven diffusers shall be direct-acting and normally open. Pneumatic thermostats and actuators shall be supplied with the diffuser. Thermostat and pneumatic tubing shall be installed by others.



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