

## LEADING THE INDUSTRY: THE TITUS ESV SINGLE DUCT VAV TERMINAL

Single duct terminals are the fundamental building blocks for a variable air volume (VAV) system. Their primary function is to regulate airflow to a zone, in response to zone temperature requirements. The Titus ESV is unique as it incorporates many design features that increase performance, decrease installation and service cost and offers increased value, over and above this basic function.

All VAV terminals are not equal! By specifying the Titus ESV, you are assured of accurate, AHRI Certified performance ratings. All units are tested, and data shown, in accordance with AHRI Standards. A wide selection of unit configurations, accessories and control types provide considerable scope for problem solving and cost-effective innovation.

The ESV's compact size and easy access for service saves time and expense in installation. The ESV fits easily in cramped mechanical spaces, either in new building construction or retrofit.

Building owners will benefit from the energy efficient low leakage design, reducing utility expenses. Control accuracy, especially at minimum flow rates, is easier to achieve with a Titus multi-point inlet velocity sensor. Control accuracy is critical in maintaining good air quality reducing energy waste.

The ESV's standard insulation is a dual density liner. The skin resists abrasion and erosion from air movement. The body maximizes thermal and acoustical performance. The Titus single blade damper design helps reduce noise levels too, for a quieter work environment.

ESV Casing Leakage, cfm

INLET SIZE	Δ PS, IN WG			
	0.5	1.0	2.0	3.0
4, 5, 6	2	3	4	5
7, 8	4	5	7	9
9, 10	4	6	8	10
12	5	7	10	12
14	6	9	13	16
16	7	10	14	17

Damper Leakage, cfm

INLET SIZE	Δ PS, IN WG			
	1.0	2.0	4.0	6.0
4, 5, 6	3	4	6	7
7, 8	3	4	6	7
9, 10	3	4	6	7
12	3	4	6	7
14	3	5	7	8
16	4	5	7	9

## MORE REASONS TO SPECIFY AND SELECT THE TITUS ESV:

Titus innovation carries through the widest array of standard single duct terminal configurations. ETL listed electric coils, manufactured by Titus, are installed, wired and functionally tested as an integral unit before shipment for quicker, trouble-free job-site installation. Multiple outlets with standard locking balancing dampers and integral attenuators are also available.

Titus continues to offer the most innovative and popular lining alternatives for special applications including Fibre Free; the industry benchmark SteriLoc; and the premium double wall liner, UltraLoc and EcoShield which is the only natural fiber insulation on the market.

Fibre Free eliminates the requirement for foil linings and solid inner liners since there is no fiberglass in the airstream. Additionally, Fibre Free minimizes mold growth since it holds no moisture, is acoustically preferable to foil or solid metal linings and maintains acceptable thermal protection. All of these benefits are available at a competitive price and significantly less than solid metal liners.

SteriLoc provides a smooth, nonporous skin to guard against mold and bacteria growth. Erosion is eliminated, as there is no glass fiber exposure to the airstream. It has reinforced surfaces that can be wiped down.

SteriLoc adds the feature of a very high density, rigid insulation and special "Z-Strip" construction for an extremely rigid terminal. Sound

Levels are generally superior to dual wall construction, while offering virtually identical levels of protection.

EcoShield is a sustainable liner comprised of recycled denim making it environmentally friendly and contains no harmful irritants or chemicals.

Titus - experts in DDC zone control!

With a detailed understanding developed through years of selling and supporting the powerful TD1 digital controller, and now the Titus BACnet OEM controls, Titus has industry leading experience in the application of Direct Digital Control (DDC) to terminals. This same expertise is made available when your project requires quality engineering, coordination and manufacturing for factory mounting when controls are supplied by others.

Count on Titus - the industry leader in VAV!

Titus adds flexibility to project schedules and execution by providing factory mounted valve packages to control hydronic heating. By removing expensive piece by piece on sight installation and utilizing lean manufacturing techniques provided by our state of the art manufacturing facilities, we can reduce expensive on sight labor cost during construction and decrease the overall time for installation. This will reduce the total installed cost to any building owner.

Removable flow sensor (optional)

Beaded inlet for consistent roundness and low leakage construction, sized to fit standard round duct

AeroCross™ multi-point, center averaging sensor amplifies flow signal for best control of low flow rates. Center averaging feature provides signal accuracy regardless of inlet duct configuration.

Flow measurement taps for easy balancing connections

DESV

Unique integral fold fabrication method increases lining and casing integrity and minimizes leakage

Standard insulation is 1/2 inch dual density fiberglass, to resist erosion at surface velocities up to 5,000 fpm. Meets requirements of NFPA 90A and UL181.

Delrin® damper bearings provide smoother damper operation

Damper design provides smoother airflow for reduced sound levels and lower leakage

NEMA 1 control enclosure available for protection of electronic controls. Double backplane construction for strength and easier control installation, with no exposed screw tips for safe handling.

UL Class II transformers and disconnect switches available installed for use with any electronic control configuration

Multiple knockouts in sizes from 7/16-inch to 1 1/8-inch to accommodate almost any field connection requirement

DESV

Optional Fibre Free, reinforced sealed skin SteriLoc, or metal lined UltraLoc liners guard against environments favoring bacteria and mold growth. Fibre Free & EcoShield are ideal IAQ insulation providing acoustical and thermal characteristics of fiberglass insulation without the concern of fiberglass in the airstream. All liners meet UL 181 and NFPA 225 (25/50).