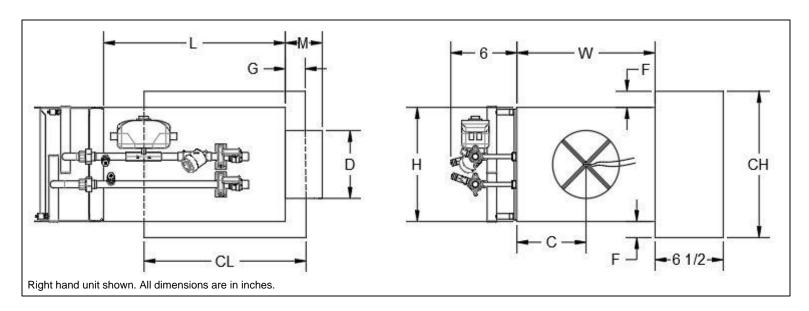


# Submittal

### **ESV Standard With Opposite Side Valve Package**

Single Duct Terminal Unit Digital Control, Pressure Independent



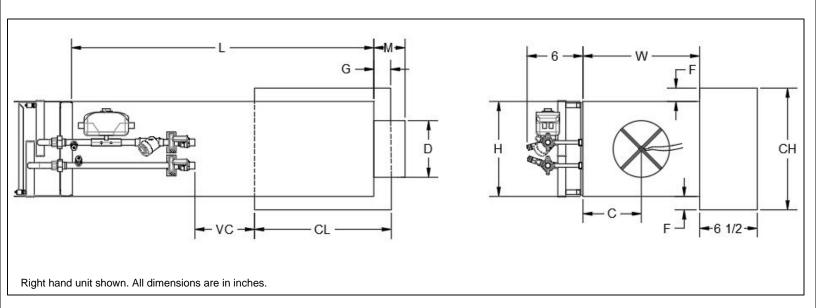
Size	CFM Range	D (HxW)	С	F	G	Н	L	М	W	CH	CL
4	0-225	3 <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	8	15 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	12	12 <sup>1</sup> / <sub>4</sub>	18
5	0-350	<b>4</b> <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	8	15 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	12	12 <sup>1</sup> / <sub>4</sub>	18
6	0-500	5 <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	8	15 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18
7	0-650	6 <sup>7</sup> / <sub>8</sub>	6	<b>1</b> <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	15 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18
8	0-900	<b>7</b> <sup>7</sup> / <sub>8</sub>	6	<b>1</b> <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	15 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	12	12 <sup>1</sup> / <sub>4</sub>	18
9	0-1050	8 7/8	7	-	<b>5</b> <sup>3</sup> / <sub>8</sub>	<b>12</b> <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3 3/8	14	12 <sup>1</sup> / <sub>4</sub>	18
10	0-1400	9 <sup>7</sup> / <sub>8</sub>	7	-	$5^{3}/_{8}$	12 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3 3/8	14	12 <sup>1</sup> / <sub>4</sub>	18
12	0-2000	<b>11</b> <sup>7</sup> / <sub>8</sub>	8	-	$5^{3}/_{8}$	15	15 <sup>1</sup> / <sub>2</sub>	3 3/8	16	12 <sup>1</sup> / <sub>4</sub>	18
14	0-3000	13 <sup>7</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	-	3 3/8	<b>17</b> <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3 3/8	20	12 <sup>1</sup> / <sub>4</sub>	18
16	0-4000	<b>15</b> <sup>7</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>2</sub>	-	$3^{3}/_{8}$	18	15 <sup>1</sup> / <sub>2</sub>	3 3/8	24	12 <sup>1</sup> / <sub>4</sub>	18
20	0-2000	$7^{1/2} \times 12^{1/4}$	8	1/4	3	10	15 <sup>1</sup> / <sub>2</sub>	3 3/8	16	10 1/4	15 <sup>1</sup> / <sub>4</sub>
5E	0-350	<b>4</b> <sup>7</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	10	15 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18
6E	0-500	5 <sup>7</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	10	15 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18
7E	0-650	6 <sup>7</sup> / <sub>8</sub>	7	<b>1</b> <sup>1</sup> / <sub>8</sub>	<b>5</b> <sup>3</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	14	12 <sup>1</sup> / <sub>4</sub>	18
8E	0-900	<b>7</b> <sup>7</sup> / <sub>8</sub>	7	<b>1</b> <sup>1</sup> / <sub>8</sub>	<b>5</b> <sup>3</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	14	12 <sup>1</sup> / <sub>4</sub>	18
1E	0-1400	<b>9</b> <sup>7</sup> / <sub>8</sub>	8	-	<b>5</b> <sup>3</sup> / <sub>8</sub>	15	<b>15</b> <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	16	12 <sup>1</sup> / <sub>4</sub>	18
2E	0-2000	<b>11</b> <sup>7</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	-	3 3/8	<b>17</b> <sup>1</sup> / <sub>2</sub>	<b>15</b> <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	20	12 <sup>1</sup> / <sub>4</sub>	18
4E	0-3000	13 <sup>7</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>2</sub>	-	3 3/8	18	15 <sup>1</sup> / <sub>2</sub>	3 3/8	24	12 <sup>1</sup> / <sub>4</sub>	18



## Submittal

## **ESV Attenuated With Same Side Valve Package**

Single Duct Terminal Unit Digital Control, Pressure Independent



Size	CFM Range	D(HxW)	С	F	G	Н	L	М	W	CH	CL	VC
4	0-225	<b>3</b> <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	8	<b>39</b> <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	12	12 <sup>1</sup> / <sub>4</sub>	18	15
5	0-350	<b>4</b> <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	8	39 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	12	12 <sup>1</sup> / <sub>4</sub>	18	15
6	0-500	5 <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	8	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	12	12 <sup>1</sup> / <sub>4</sub>	18	15
7	0-650	6 <sup>7</sup> / <sub>8</sub>	6	1 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	39 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18	15
8	0-900	<b>7</b> <sup>7</sup> / <sub>8</sub>	6	1 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	12	12 <sup>1</sup> / <sub>4</sub>	18	15
9	0-1050	8 7/8	7	-	5 <sup>3</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	14	12 <sup>1</sup> / <sub>4</sub>	18	13
10	0-1400	9 <sup>7</sup> / <sub>8</sub>	7	-	$5^{3}/_{8}$	12 <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	14	12 <sup>1</sup> / <sub>4</sub>	18	13
12	0-2000	<b>11</b> <sup>7</sup> / <sub>8</sub>	8	-	$5^{3}/_{8}$	15	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	16	12 <sup>1</sup> / <sub>4</sub>	18	13
14	0-3000	<b>13</b> <sup>7</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	-	$3^{3}/_{8}$	<b>17</b> <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	20	12 <sup>1</sup> / <sub>4</sub>	18	11
16	0-4000	<b>15</b> <sup>7</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>2</sub>	-	3 <sup>3</sup> / <sub>8</sub>	18	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	24	12 <sup>1</sup> / <sub>4</sub>	18	11
20	0-2000	$7^{1/2} \times 12^{1/4}$	8	1/4	3	10	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	16	10 1/4	15 <sup>1</sup> / <sub>4</sub>	13
5E	0-350	<b>4</b> <sup>7</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	39 <sup>1</sup> / <sub>2</sub>	3 3/8	12	12 <sup>1</sup> / <sub>4</sub>	18	15
6E	0-500	5 <sup>7</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>8</sub>	<b>7</b> <sup>3</sup> / <sub>8</sub>	10	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	12	12 <sup>1</sup> / <sub>4</sub>	18	15
7E	0-650	6 <sup>7</sup> / <sub>8</sub>	7	<b>1</b> <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	<b>12</b> <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	14	12 <sup>1</sup> / <sub>4</sub>	18	13
8E	0-900	<b>7</b> <sup>7</sup> / <sub>8</sub>	7	1 <sup>1</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	<b>12</b> <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	14	12 <sup>1</sup> / <sub>4</sub>	18	13
1E	0-1400	9 <sup>7</sup> / <sub>8</sub>	8	-	5 <sup>3</sup> / <sub>8</sub>	15	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	16	12 <sup>1</sup> / <sub>4</sub>	18	13
2E	0-2000	<b>11</b> <sup>7</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	-	$3^{3}/_{8}$	<b>17</b> <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	20	12 <sup>1</sup> / <sub>4</sub>	18	14
4E	0-3000	<b>13</b> <sup>7</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>2</sub>	-	$3^{3}/_{8}$	18	39 <sup>1</sup> / <sub>2</sub>	$3^{3}/_{8}$	24	12 <sup>1</sup> / <sub>4</sub>	18	16

### **General Description**

- Heavy gauge steel housing. Mechanically sealed and gasketed, leak resistant construction. Less than 2% of nominal cfm at 1.5" sp wg.
- Dual density internal insulation, treated to resist air erosion.
   Meets requirements of NFPA 90A and UL 181.
- Units equipped with the Titus II velocity controller can either be direct acting or reverse acting, with the damper either normally open or normally closed. Controller maintains constant span and start point. (Span and start point are adjustable.)

- Rectangular discharge opening is designed for slip and drive cleat duct connection.
- Multipoint center averaging inlet velocity sensor.
- Control packages can be factory mounted by Titus.
- Choice of right hand or left hand
- · control location.
- Units equipped with the Titus I velocity controller are available in both direct acting / normally open and reverse acting / normally closed operating modes.
- Model DESV without coils can be installed horizontally, vertically, or at any angle. Operation is not affected by position. For units with coils, consult technical support.
- Gauge tees for cfm measurement.
- OSHPD Seismic Certification: OSP-0352-10
- Only Titus Alpha digital and pneumatic controls approved for seismic installation.

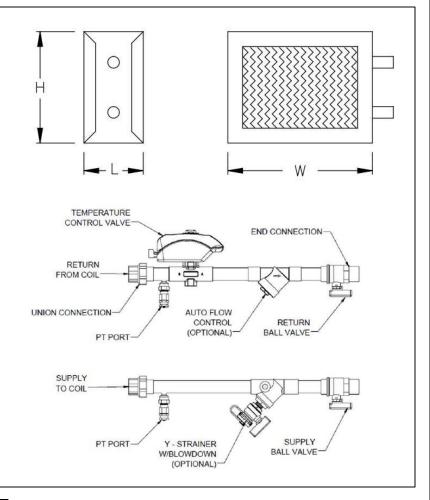
Acc	essories (Option	onal) ————		
Check	if provided.	•		
	24 V Control Transformer	1" Fiberglass Liner	UltraLoc Liner	Removable Air Flow Sensor
	Dust Tight Enclosure Seal	1" EcoShield Liner	2" EcoShield Liner (Foil Face	) Bottom Access Door
	Fibre Free Liner	1" Fibre Free Liner	1" EcoShield Liner (Foil Face)	
	½" EcoShield Liner	Low Leakage Seal/Test C	ertify Disconnect Switch	
	½" Fibre Free Liner	SteriLoc Liner	Hanger Brackets	



## **Submittal**

#### **Accessories**

Hot Water Coil  Aluminum ripple fins, 10 per inch  Coil is installed at discharge of unit for standard units. Attenuated units have the comounted before the attenuator  Coils rated and certified to AHRI Standard 410	☐ 1 Row ☐ 2 Row ☐ 3 Row ☐ 4 Row
Valve Package Provided By:	
☐ Titus ☐ Others	
Titus Provided 2 Way Valve Package  Valve packages produced using ½" OD pipi  Valve package connection to water coil is ½ Union. With ½" sweat field end connection  Factory pressure tested to 100 psi.  Pressure/Temperature test ports provided.  Air vent and drain provided at coil headers.  Supply and return connections to receive ½ OD tube.  Valve package mounted opposite of control except on attenuated units which allow for same hand package.	,
☐ On/Off, normally closed ☐ 3-Point Floating, fail in place Flow Control ☐ Y- Strainer w/ blowdown	



Size	Н	\\/	Water Coil			
Size	П	W	L (1-2 Row)	L (3-4 Row)		
4	8	12	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
5	8	12	5 5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
6	8	12	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
7	10	12	5 5	7 <sup>1</sup> / <sub>4</sub>		
8	10	12	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
9	12 <sup>1</sup> / <sub>2</sub>	14	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
10	12 <sup>1</sup> / <sub>2</sub>	14	5	7 1/4		
12	15	16	5	7 1/4		
14	<b>17</b> <sup>1</sup> / <sub>2</sub>	20	<b>7</b> <sup>1</sup> / <sub>2</sub>	$9^{3}/_{4}$		
16	18	24	<b>7</b> <sup>1</sup> / <sub>2</sub>	$9^{3}/_{4}$		
20	10	16	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
5E	10	12	5 5	$7^{1/_{4}}$		
6E	10	12	5	7 <sup>1</sup> / <sub>4</sub>		
7E	12 <sup>1</sup> / <sub>2</sub>	14	5	7 <sup>1</sup> / <sub>4</sub>		
8E	<b>12</b> <sup>1</sup> / <sub>2</sub>	14	5	7 1/4		
1E	15	16	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		
2E	<b>17</b> <sup>1</sup> / <sub>2</sub>	20	5	7 1/4		
4E	18	24	5	<b>7</b> <sup>1</sup> / <sub>4</sub>		

The total length of the ESV unit is the summation of the unit length (with or without attenuator) and the length of the optional water coil.

This submittal is meant to demonstrate general dimensions of this product. The drawings are not meant to detail every aspect of the product. Drawings are not to scale. Titus reserves the right to make changes without written notice.