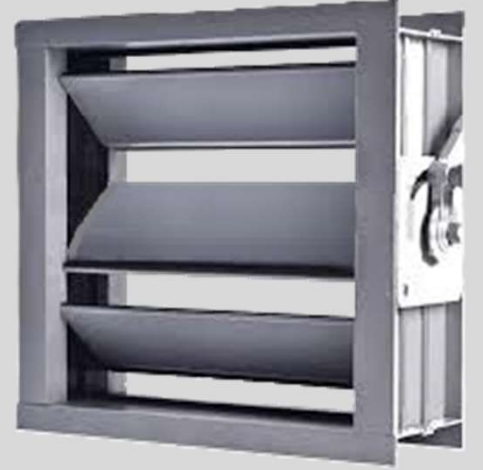




Gulf Grilles Company (GGC)

شركة الخليج لفتحات التكييف المركزي

Volume Control Dampers



Catalog ID: Gulf Grilles Company (GGC),
Volume Control Dampers, Model: TVD36-A
August, 2026



Product Description

- **Frame**: 16-gauge Extruded Aluminum Alloy.
- **Blades**: 18-gauge Extruded Aluminum Alloy, Aerofoil type.
- **Axles**: ½" Extruded Aluminum Alloy, square type.
- **Linkage/Mechanism**: Concealed gears in high grade nylon construction.
- **Hand Quadrant**: For manual operation.
- **Finish**: Aluminum mill finish.
- **Seal**: Neoprene, sponge or rubber gasket at blades edges.
- **Size Ranges**:
Square/Rectangular Type:
 - A) Minimum Size: 6" x 6".
 - B) Maximum Size (Single Section – without partitions): 40" x 40".
 - C) Maximum Size (Single Unit – with partitions): 120" x 60".
 - D) Larger Sizes: Fabricated in multiple units design, to be assembled at project site as requested.

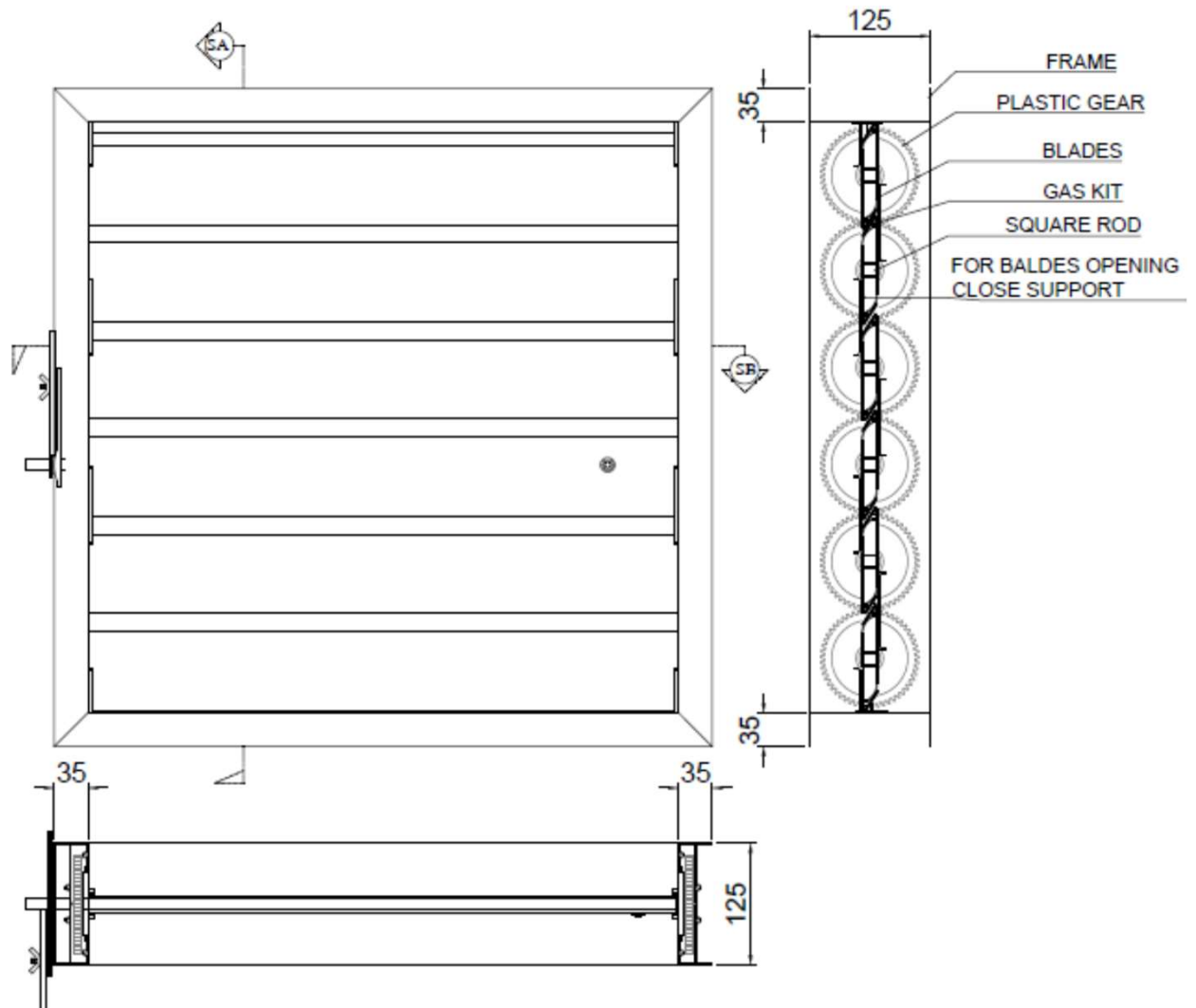
Notes:-

- 1) **VCDs** are provided with motors for automatic operation on request (Brands: Belimo, Siemens, or others...).
- VCDs** are provided with multiple connection options:
- A) Standard design: 35 mm Flange (Built in with U channel Frame).
 - B) TDC Flange – 1.38" (35mm).
 - C) Plain "S" Slip & C Drive Slip Joint.
 - D) Angle Bar – 1.97" x 1.97" x 0.197" (50x50x5mm).
- 3) **VCDs** are provided with Fire Rated Paint or additional accessories on request.

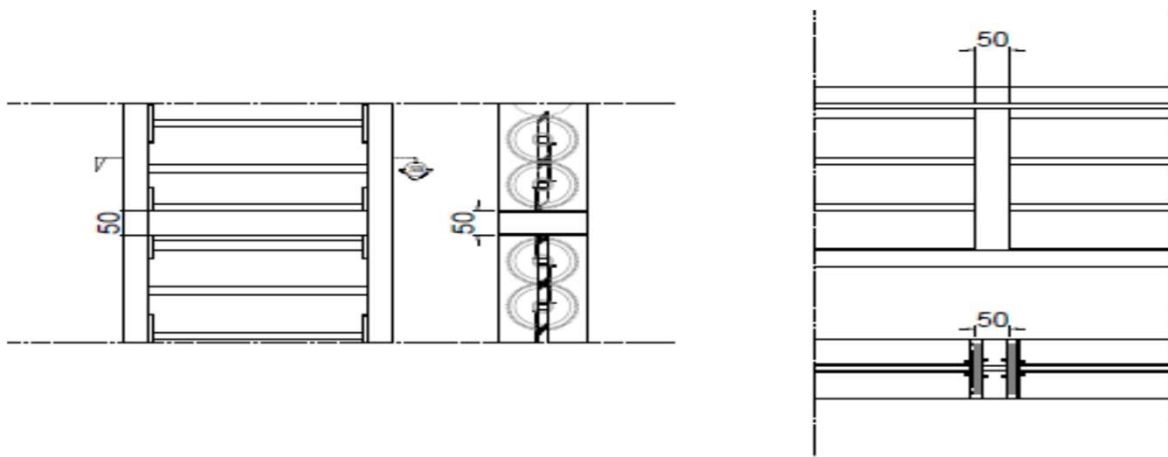
DESIGN DETAILS AND SIZE RANGES

Listed Models

- **TVD36-A** : Toothed Volume Control Damper.



Dampers fabricated with sizes larger than 40"x40" will may be provided in multi section design, with dividers / supports in width, height or both.





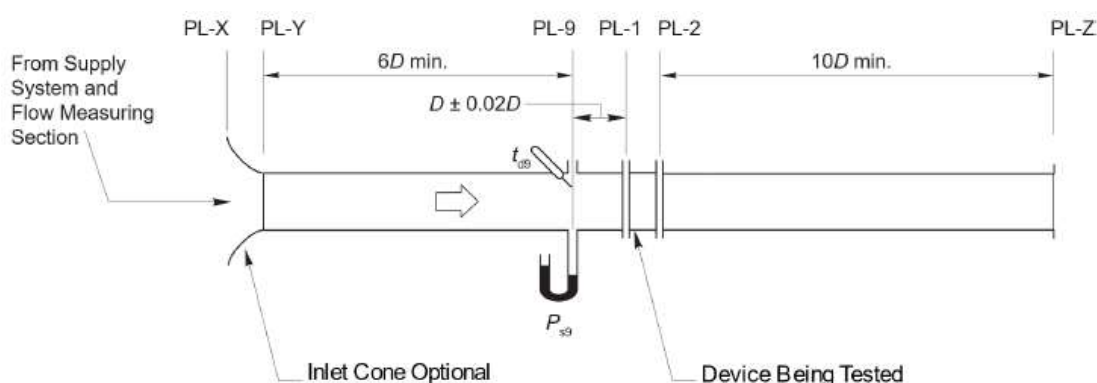
PERFORMANCE

Test Information:

- Tested in accordance to ANSI/AMCA 500-D-18 (Pressure Drop), Figure 5.3.
- Tested in accordance to ANSI/AMCA 500-D-18 (Leakage), Figure 5.4 Alternate.
- All data has been corrected to represent standard air at a density of 1.2250 kg/m³ (0.076 lb./ft³).
- Air leakage is based on operation between 0°C-49°C (32°F-120°F).
- Dampers are tested for pressure drop with fully open blades position.

Pressure Drop (Figure 5.3)

A) INTAKE: Unit tested in the direction of airflow.



Velocity (fpm)	ΔP (in.wg)
Size 12"x12"	
303	0.003
731	0.02
1220	0.06
1717	0.11
2315	0.2

Velocity (fpm)	ΔP (in.wg)
Size 24"x24"	
351	0.004
1002	0.03
1505	0.06
2010	0.1
2587	0.17

Velocity (fpm)	ΔP (in.wg)
Size 36"x36"	
391	0.003
1268	0.04
1775	0.08
2281	0.13
2862	0.24

Velocity (fpm)	ΔP (in.wg)
Size 12"x48"	
362	0.006
1001	0.05
1507	0.11
2212	0.23
2720	0.35

Velocity (fpm)	ΔP (in.wg)
Size 48"x12"	
467	0.007
997	0.03
1500	0.07
2007	0.12
2606	0.2



Gulf Grilles Company (GGC) certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model **TVD36-A**. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA Certified Ratings Program Seal applies to Air Performance/Leakage Ratings.

Test Information

Tested for air performance in accordance with ANSI / AMCA Standard 500-D-18 (Pressure Drop), Figure 5.3.

Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-18 (Leakage), Figure 5.4 Alternate.

Data are based on a torque of 30 in. lb/ft² applied to close and seat the damper during the test (for size 12"x48"). Data are based on a torque of 15.1 in. lb/ft² applied to close and seat the damper during the test (for size 39.37"x36").



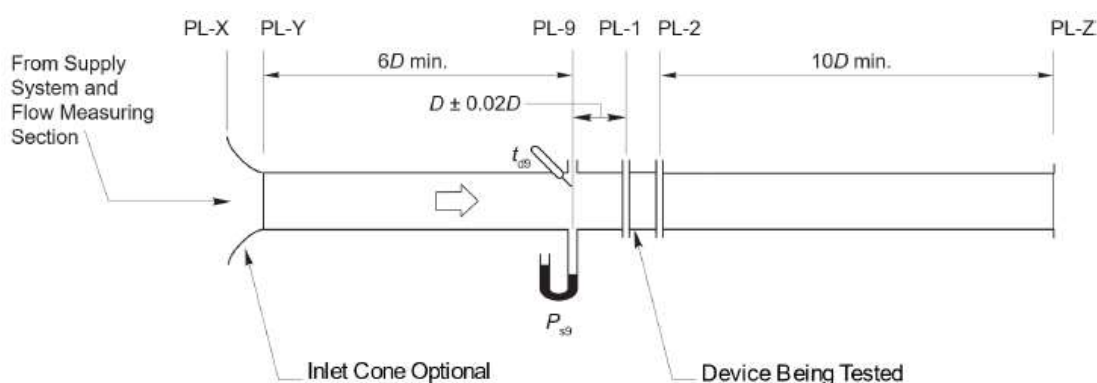
PERFORMANCE

Test Information:

- Tested in accordance to ANSI/AMCA 500-D-18 (Pressure Drop), Figure 5.3.
- Tested in accordance to ANSI/AMCA 500-D-18 (Leakage), Figure 5.4 Alternate.
- All data has been corrected to represent standard air at a density of 1.2250 kg/m³ (0.076 lb./ft³).
- Air leakage is based on operation between 0°C-49°C (32°F-120°F).
- Dampers are tested for pressure drop with fully open blades position.

Pressure Drop (Figure 5.3)

B) EXHAUST: Unit tested against the direction of airflow.



Velocity (fpm)	ΔP (in.wg)
Size 12"x12"	
305	0.002
732	0.01
1221	0.05
1718	0.1
2316	0.19

Velocity (fpm)	ΔP (in.wg)
Size 24"x24"	
352	0.003
1002	0.04
1510	0.07
2012	0.12
2599	0.2

Velocity (fpm)	ΔP (in.wg)
Size 36"x36"	
393	0.004
1269	0.04
1772	0.08
2278	0.13
2857	0.22

Velocity (fpm)	ΔP (in.wg)
Size 12"x48"	
372	0.006
1004	0.04
1505	0.09
2213	0.21
2721	0.32

Velocity (fpm)	ΔP (in.wg)
Size 48"x12"	
472	0.007
999	0.03
1504	0.06
2008	0.1
2610	0.19



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Test Information

Tested for air performance in accordance with ANSI / AMCA Standard 500-D-18 (Pressure Drop), Figure 5.3.

Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-18 (Leakage), Figure 5.4 Alternate.

Data are based on a torque of 30 in. lb/ft² applied to close and seat the damper during the test (for size 12"x48"). Data are based on a torque of 15.1 in. lb/ft² applied to close and seat the damper during the test (for size 39.37"x36").



PERFORMANCE

Air Leakage (Figure 5.4 Alternate)

Allowable Air Leakage to Achieve Classification					
Class	Maximum Allowable Leakage cfm/ft2				
	at 0.5 in.wg	at 1 in.wg	at 2 in.wg	at 3 in.wg	at 4 in.wg
1A	N/A	3	N/A	N/A	N/A
1	2.8	4	5.7	6.9	8
2	7.1	10	14.1	17.3	20
3	28.3	40	56.6	69.3	80

A) Air Leakage – Intake: unit tested in the direction of airflow.

GGC VCD Leakage Class						
Damper Size WxH (in)	Model	ΔP (in.wg)				
		at 0.5 in.wg	at 1 in.wg	at 2 in.wg	at 3 in.wg	at 4 in.wg
12"x48"	TVD36-A	3	3	3	3	3
39.37"x36"	TVD36-A	3	3	3	3	3

B) Air Leakage – Exhaust: unit tested against the direction of airflow.

GGC VCD Leakage Class						
Damper Size WxH (in)	Model	ΔP (in.wg)				
		at 0.5 in.wg	at 1 in.wg	at 2 in.wg	at 3 in.wg	at 4 in.wg
12"x48"	TVD36-A	3	3	3	3	3
39.37"x36"	TVD36-A	3	3	3	3	3



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Test Information

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Data are based on a torque of 30 in. lb/ft2 applied to close and seat the damper during the test (for size 12"x48"). Data are based on a torque of 15.1 in. lb/ft2 applied to close and seat the damper during the test (for size 39.37"x36").