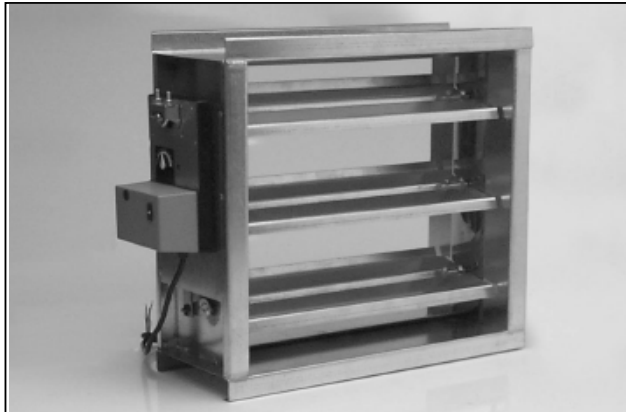


## Volume Control Damper

## SPK 30 Series

( Flange Type )

### SPK 30 - 100



### Standard Construction

**FRAME:**

160mm x 30mm x 1.5mm (16 Ga.) galvanized steel formed channel for flange connection.

**BLADES:**

250mm max. width, 1.5mm (16 Ga.) galvanized steel.

**FINISH:**

Mill galvanized.

**LINKAGE:**

Side linkage concealed in frame for parallel and opposed blade operation.

**CASE BEARING:**

Brass bearing as standard.  
Sintered bronze oilite (optional).

**CONTROL SHAFT:**

12mm diameter zinc plated mild steel.

**MINIMUM & MAXIMUM SINGLE SECTION SIZE:**

100 x 100mm minimum & 1000 x 1800mm maximum.  
Please see "Air Performance" for the minimum and maximum sizes tested by AMCA.

Consult SAFID for multiple section assembly details.

### Description

The single and multi-leaf volume control dampers are designed for quiet, efficient and reliable air volume control in air conditioning and ventilation systems.

The SPK 30 dampers is ruggedly built damper with a casing of robust assembly, formed from channel frame for flanged connection to ductwork. The blades are formed single skin and reinforced with longitudinal structurally designed triple vee shape.

Blade's action can be opposed blades or parallel blades.



SAFID certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

**Test Information**

Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

### SPK 30 - 110

General construction as type SPK 30-100 damper but with blades, shafts and blade to shaft fixing are from stainless steel (Grade 304).

### SPK 30 - 120

General construction as type SPK 30-100 damper but with frame, blades, linkage, case bearing, axles and control shaft are from stainless steel (Grade 304).

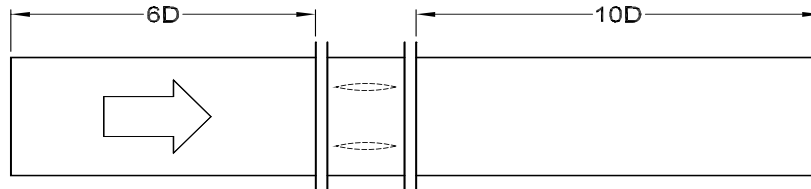
Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

#### Pressure Drop

The tests for pressure drop of Volume Control Dampers were conducted as per ANSI / AMCA Standard 500-D, Figure 5.3 which simulate the actual site condition when installed in ventilation, supply and return air conditioning ductworks.



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

305 x 305 12 in. x 12 in.		610 x 610 24 in. x 24 in.		914 x 914 36 in. x 36 in.		305 x 1219 12 in. x 48 in.		1219 x 305 48 in. x 12 in.	
Velocity (FPM)	Pressure Drop (in. W.G.)	Velocity (FPM)	Pressure Drop (in. W.G.)	Velocity (FPM)	Pressure Drop (in. W.G.)	Velocity (FPM)	Pressure Drop (in. W.G.)	Velocity (FPM)	Pressure Drop (in. W.G.)
1519	0.065	2000	0.079	2494	0.110	7706	1.899	7713	1.957
1262	0.046	1752	0.060	1991	0.068	7075	1.585	7079	1.650
1006	0.030	1497	0.044	1494	0.035	6049	1.139	6042	1.156
755	0.022	1001	0.020	994	0.016	4016	0.500	4015	0.492
494	0.006	498	0.006	493	0.004	2043	0.122	2057	0.121

#### Note:

Extrapolation below the minimum test static pressure drop shall be permitted as per AMCA 511-10, Section 13.2.1.1. The air performance shall not be extrapolated more than 50% of the static pressure range of test downward.



SAFID certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

#### Test Information

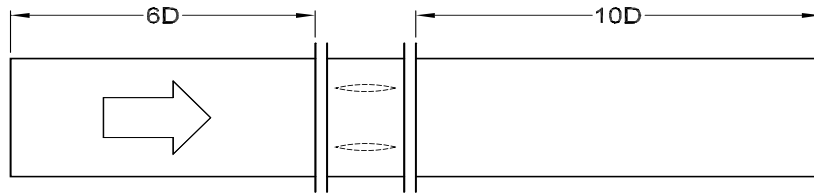
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

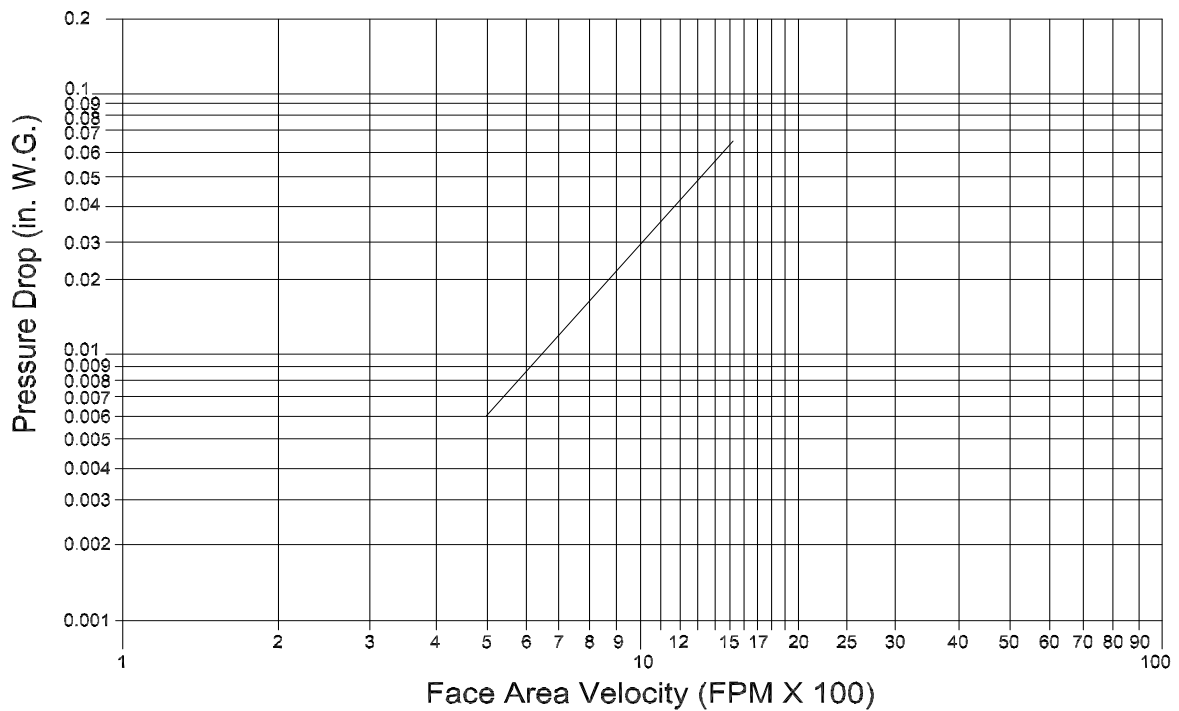
#### Pressure Drop



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

Damper Size: 12in. x 12in. - Fully open blades



SAFID certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

#### Test Information

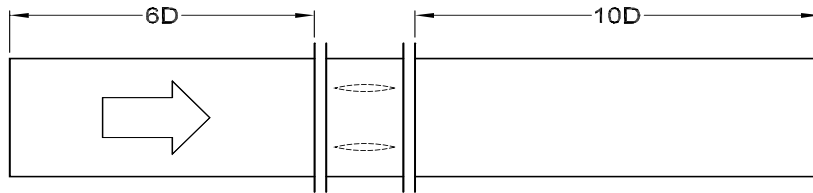
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

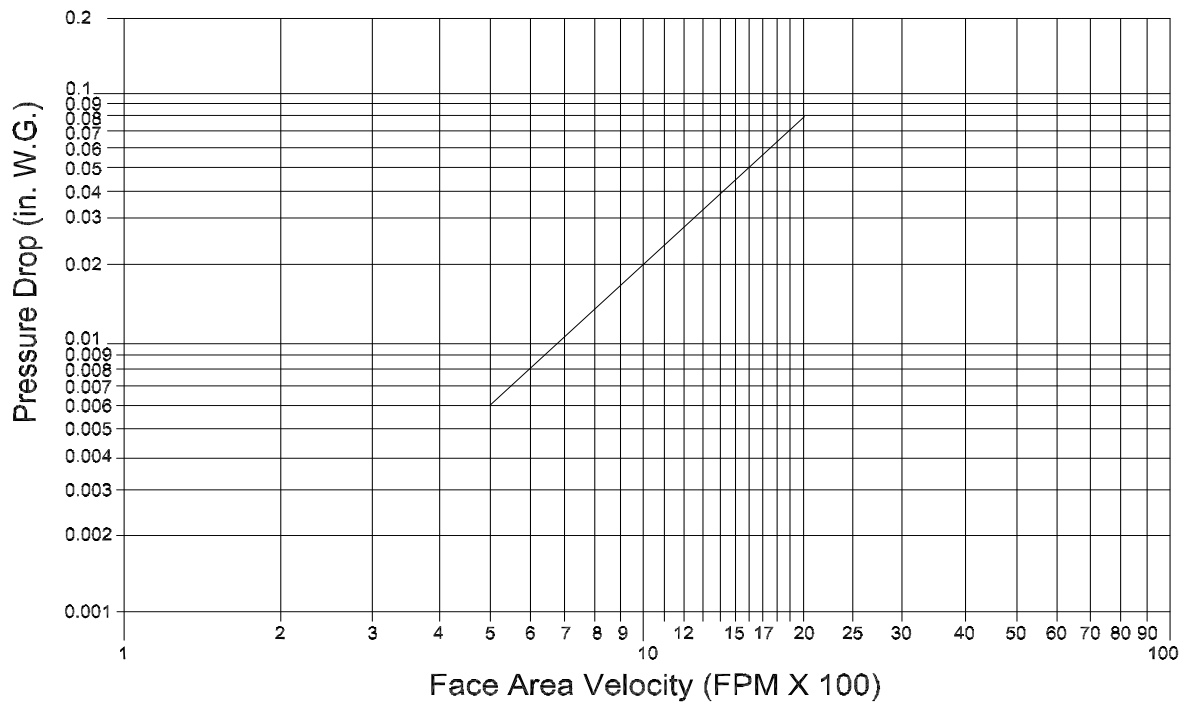
#### Pressure Drop



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

Damper Size: 24in. x 24in. - Fully open blades



SAFID certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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.

**Test Information**

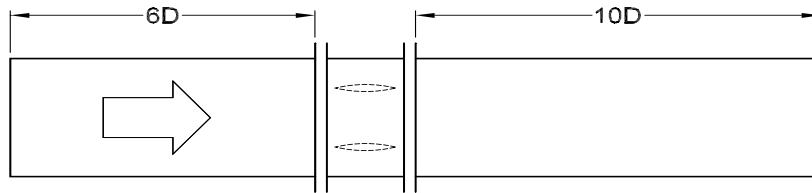
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

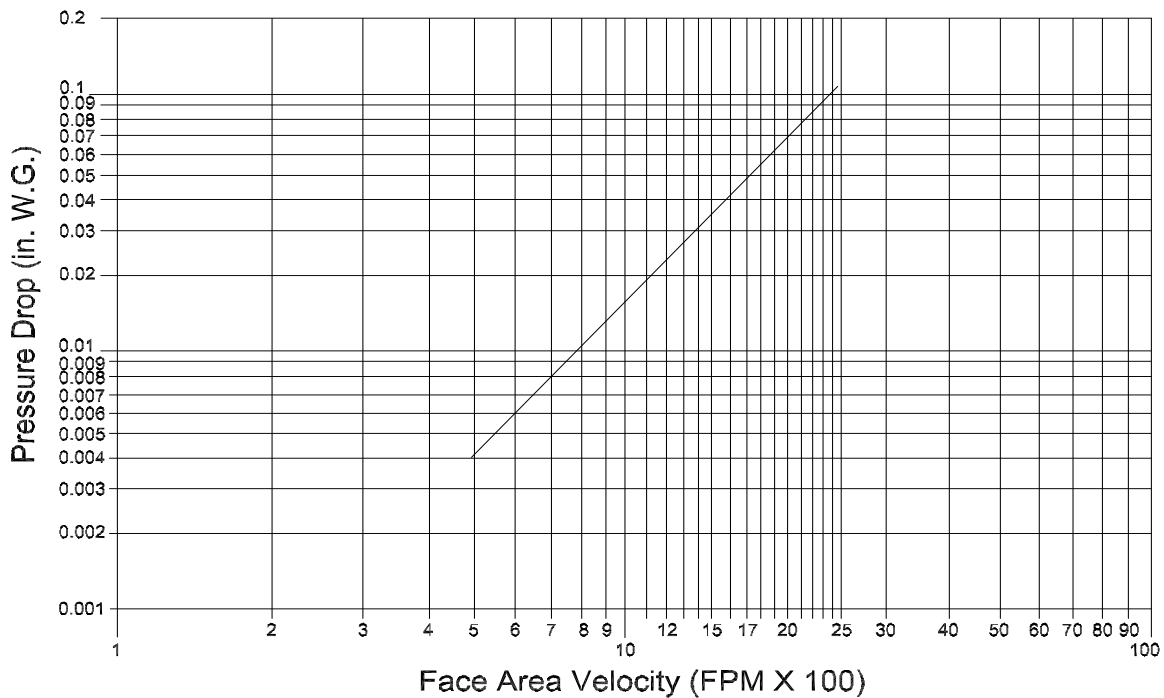
#### Pressure Drop



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

Damper Size: 36in. x 36in. - Fully open blades



Safid certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

**Test Information**

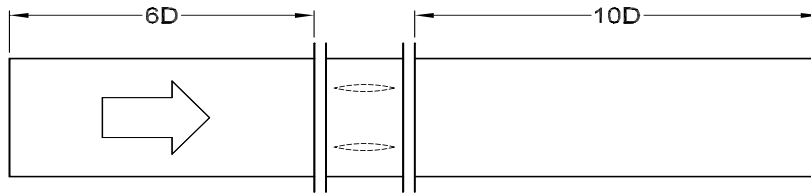
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

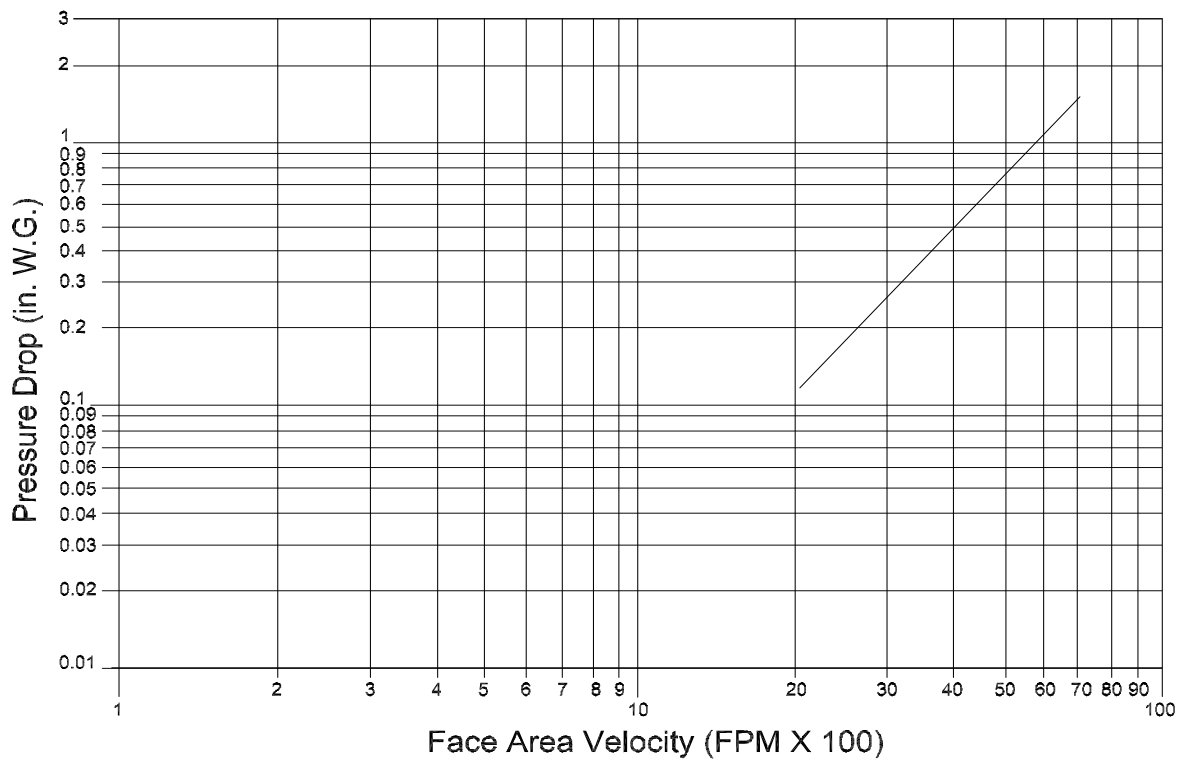
#### Pressure Drop



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

Damper Size: 12in. x 48in. - Fully open blades



Safid certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

**Test Information**

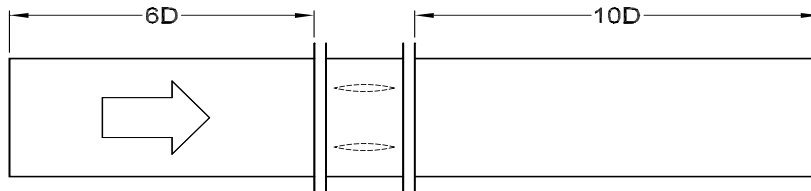
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Air Performance

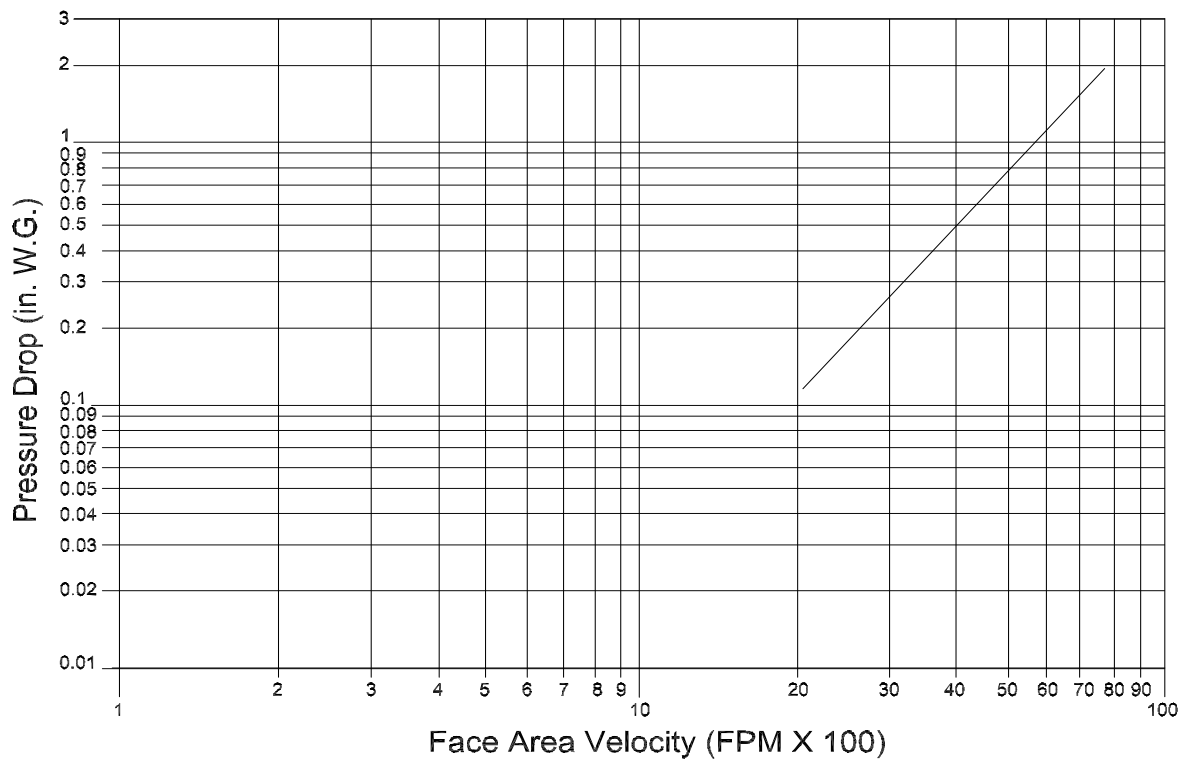
#### Pressure Drop



AMCA Test Figure 5.3

#### Pressure Drop at Face Area Velocity

Damper Size: 48in. x 12in. - Fully open blades



Safid certifies that the Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-100-OB-S-B-R. 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 Seal applies to Air Performance Ratings.

#### Test Information

Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

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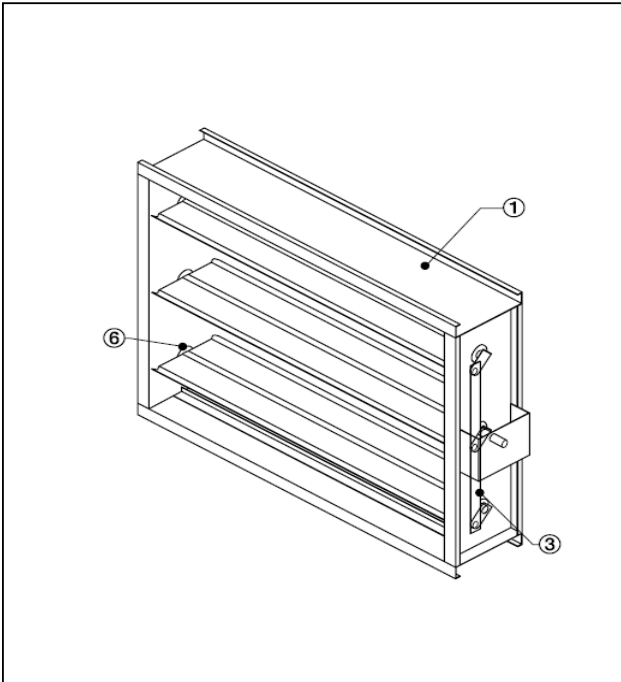
## Volume Control Damper

## SPK 30 Series

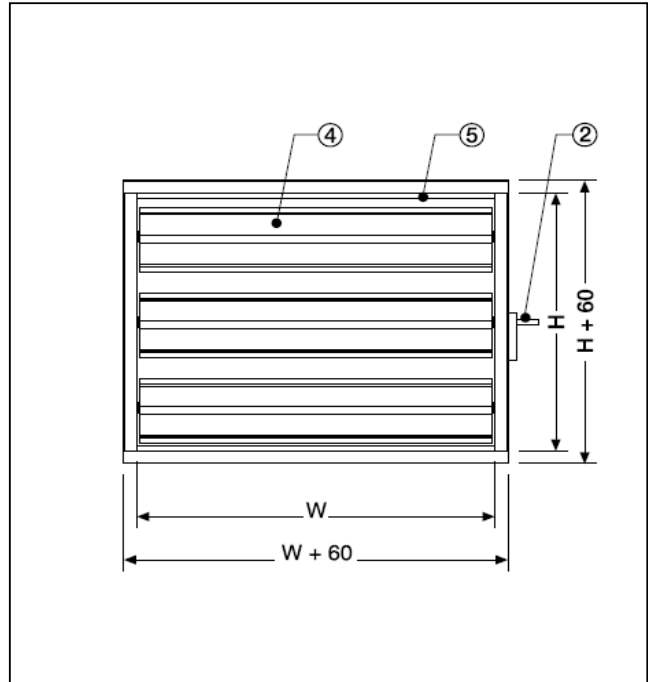
### Dimensions

1 - Casing	3 - Side Linkage	5 - Landing Angles
2 - Drive Shaft	4 - Blade	6 - Bearing

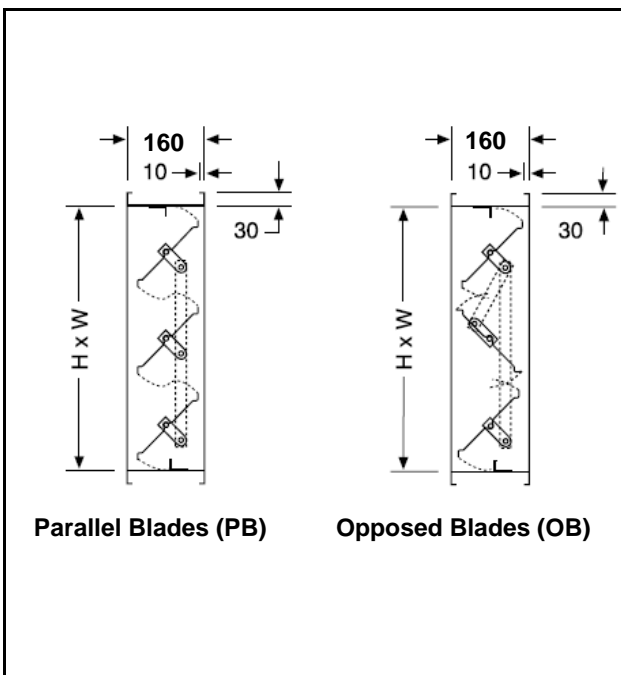
### Flange Type



### Flange Type



### Flange Type, Parallel / Opposed Blades



### Standard Sizes

WIDTH (mm)	HEIGHT (mm)	Number of Blades
100	100	1
150	150	1
200	200	1
250	300	2
300	400	2
350	500	3
400	600	3
450	700	4
500	800	5
550	900	5
600	1000	6
650	1100	7
700	1200	7
750	1300	8
800	1400	9
850	1500	9
900	1600	10
950	1700	11
1000	1800	12

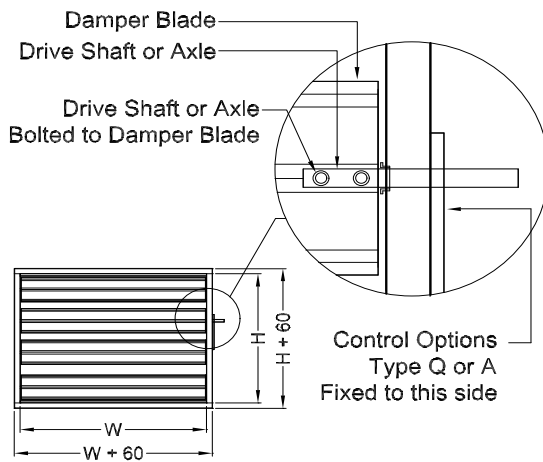
Catalog ID: SPK 30 - 100 September 30, 2013

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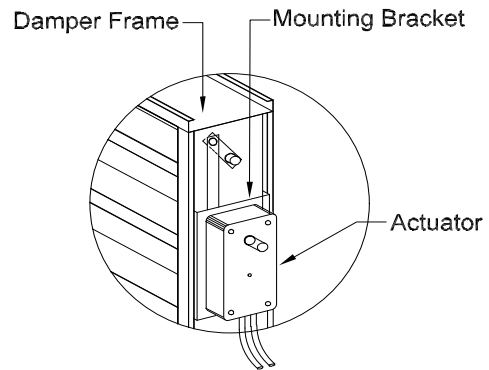


### Materials - Construction

#### Axle and Drive Shaft fixing details

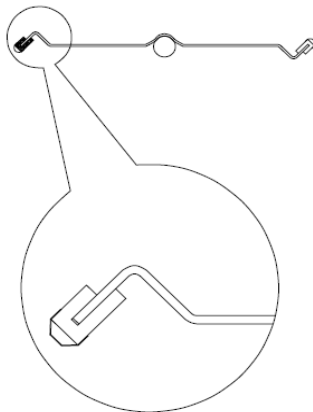


#### Damper with Control Option Type A



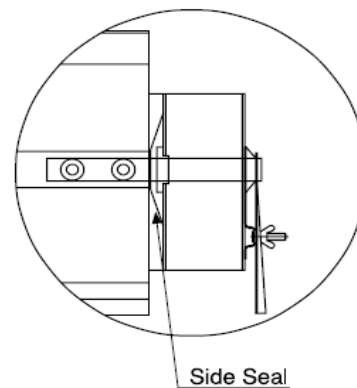
#### Blade Seal (Optional)

##### TYPE S1



#### Side Seal or Jamb Seal (Optional)

##### TYPE S2 (Stainless Steel Type 304)



**NOTE:**

1. TYPE S3 (Combination of S1 & S2).
2. Hand locking quadrant is shown, Control Type Q.

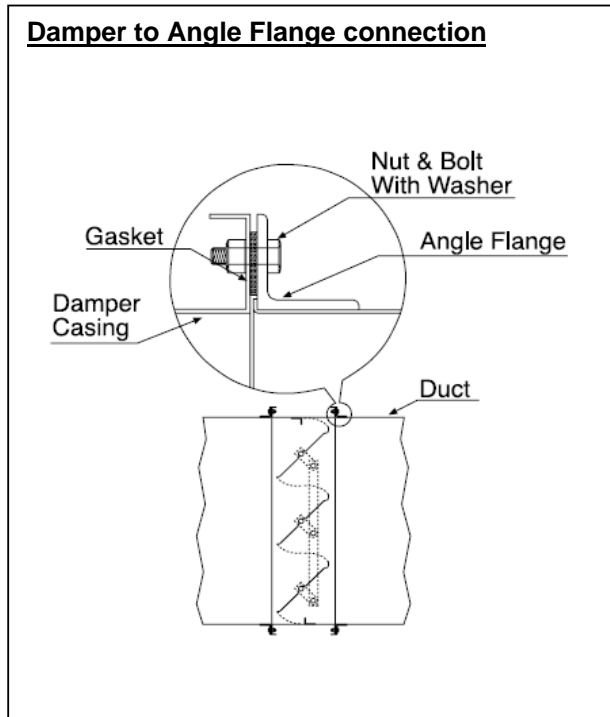
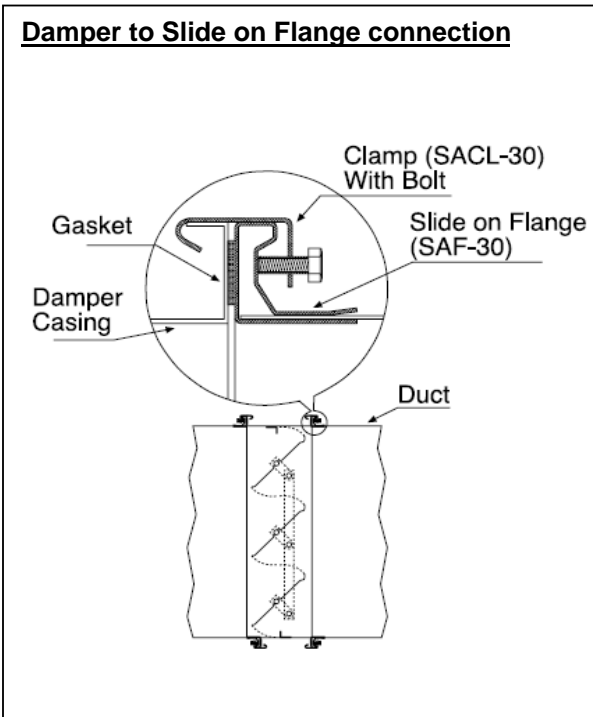
Catalog ID: SPK 30 - 100 September 30, 2013

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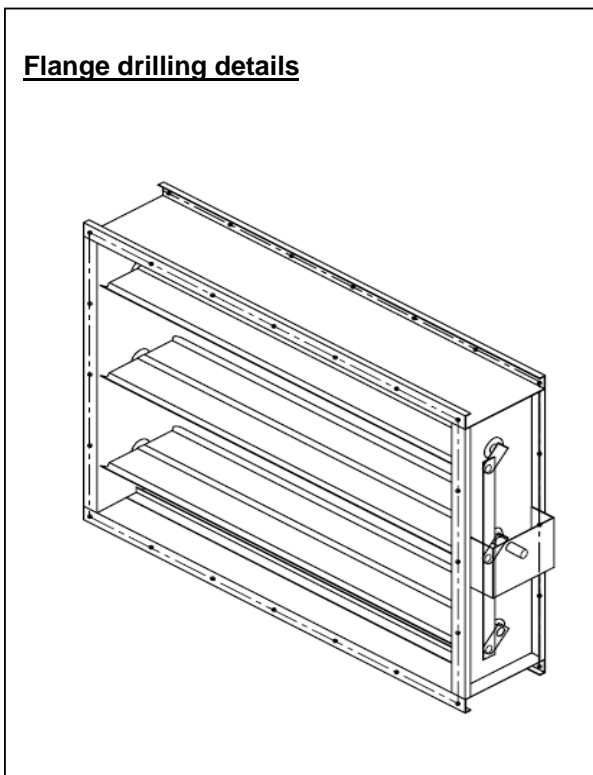
## Volume Control Damper

## SPK 30 Series

### Installation Details



### Flange Drilling Details



**Flange Drilling Details**

W in mm	H in mm	No. of Holes W Dim.	No. of Holes H Dim.
100	100	1	2
150	150	2	2
200	200	2	2
250	300	2	3
300	400	3	4
350	500	3	5
400	600	4	6
450	700	4	6
500	800	4	7
550	900	4	8
600	1000	5	9
650	1100	5	10
700	1200	6	10
750	1300	6	11
800	1400	7	12
850	1500	7	13
900	1600	8	14
950	1700	8	14
1000	1800	9	15

Catalog ID: SPK 30 - 100 September 30, 2013

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### Product Range

Seals		Actuators	
Construction Variants	Description	Code	Type / Model
S	No seals.	A1	BF230-ME, BF24-M3 Spring-return
S1	Blade's edge seals. Fitted to seal blades to blade's joint. Blade seal is silicone rubber with temperature resistance up to 175 °C, to minimize air leakage.	A1S	BF230-S-ME, BF24-S-M3 Spring-return
S2	Side seals. Fitted to close gap between frame and blades (jamb seal) to minimize air leakage.	A01	BF230 Spring-return
S3	Combination of S1 & S2. Fitted to close gap between frame and blades and blade's edge seals to seal blades to blade's joints. Blade seals is silicone rubber with temperature resistance up to 175 °C for low air leakage characteristic.	A02	BF24 Spring-return
		A03	AF230 Spring-return
		A04	AF230-S Spring-return with limit switch
		A05	AF230 US Spring-return
		A06	AF230-S US Spring-return with limit switch
		A07	AF120 US Spring-return
		A08	AF120-S US Spring-return with limit switch
		A09	AF24 US Spring-return
		A10	AF24-S US Spring-return with limit switch
		A11	AF24 SR Spring-return
		A12	NF24 US Spring-return
		A13	NF120 US Spring-return
		A14	NF24-S US Spring-return with limit switch
		A15	NF120-S US Spring-return with limit switch
		A16	NF24-SR US Modulating
		A17	SM230A open/closed
		A18	SM24A open/closed
		A19	SM230A-SR Modulating
		A20	NM230 open/closed
		A21	NM24 open/closed
		A22	NM24-SR Modulating
		A23	GM240 open/closed
		A24	GM24 open/closed
		A25	GM24-SR Modulating

Linkage	
Construction Variants	Description
PB	Side linkage concealed in frame for parallel blade operation.
OB	Side linkage concealed in frame for opposed blade operation.

Bearings	
Construction Variants	Description
B1	Sintered bronze oilite.
B2	Stainless steel.

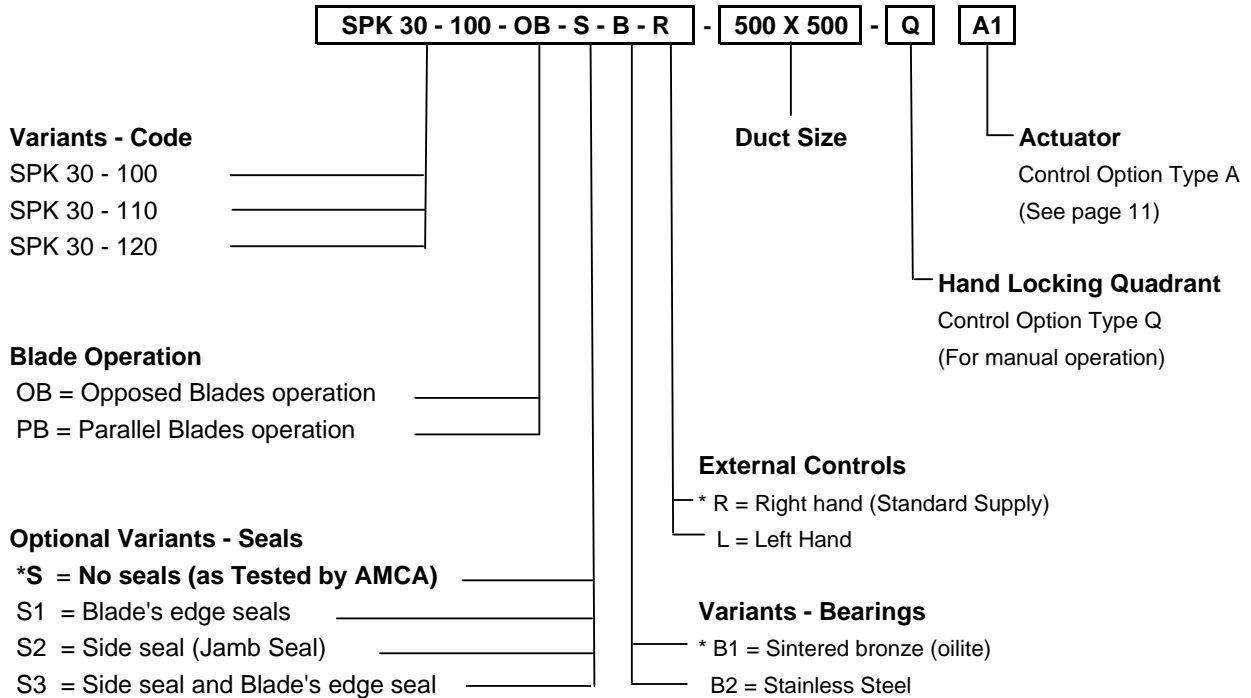
**NOTE:**  
Contact SAFID for technical data sheet of actuators.

Catalog ID: SPK 30 - 100 September 30, 2013

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### Order Details

#### Order Code



\* - Stands for standard supply.

#### ORDER EXAMPLE

##### STANDARD

Make: SAFID

1. Type : SPK 30 - 100 - OB - S - B - R - 500 x 500 - Q
2. Type : SPK 30 - 100 - OB - S - B - R - 500 x 500 - A17

Catalog ID: SPK 30 - 100 September 30, 2013

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