

VOLUME CONTROL DAMPERS



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 are ruggedly built dampers 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.

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 and Maximum Single Section Size:
100 x 100mm minimum and 1000 x 1800mm maximum. Please see "Air Performance" for the minimum and maximum sizes tested by AMCA.

Consult SAFID for multiple section assembly details.


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.

Optional: Blades from stainless steel Grade 316 or 316L.

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.

Optional: Frame and blades from stainless steel Grade 316 or 316L.

Catalog ID: SPK 30 - 100 September 30, 2013



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.

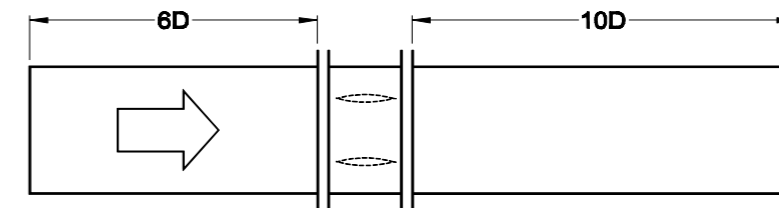
SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

Pressure Drop

The tests for pressure prop 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.



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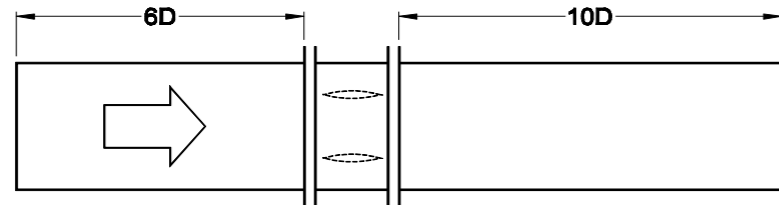
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

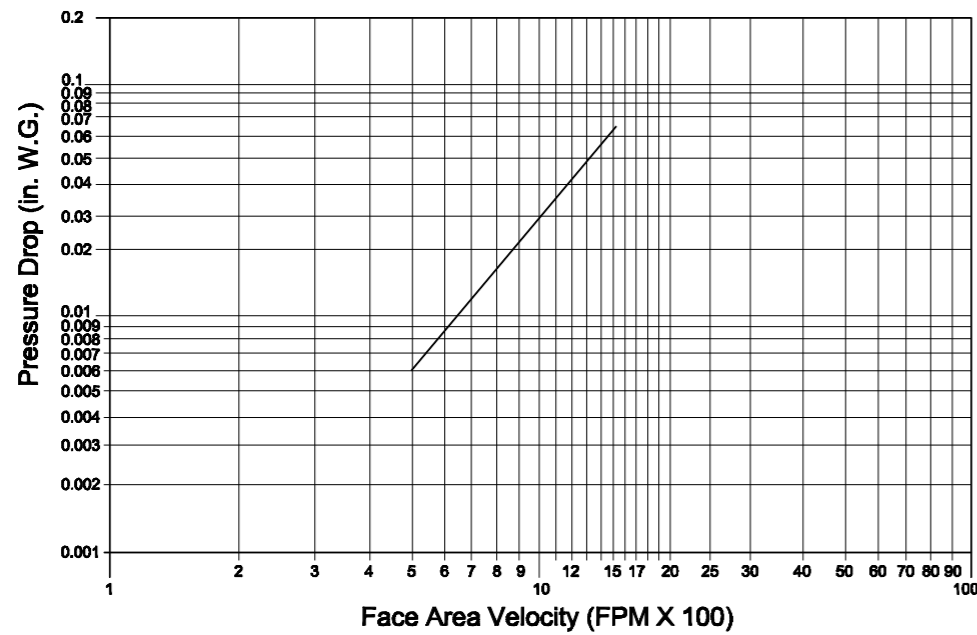
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 12 in. - Fully Open Blades



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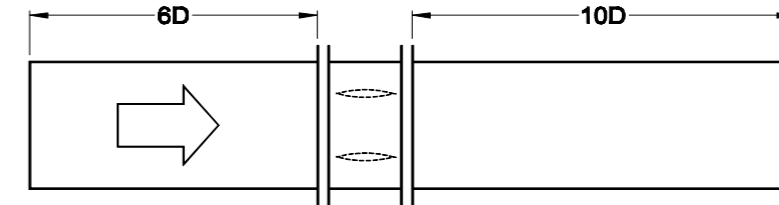
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

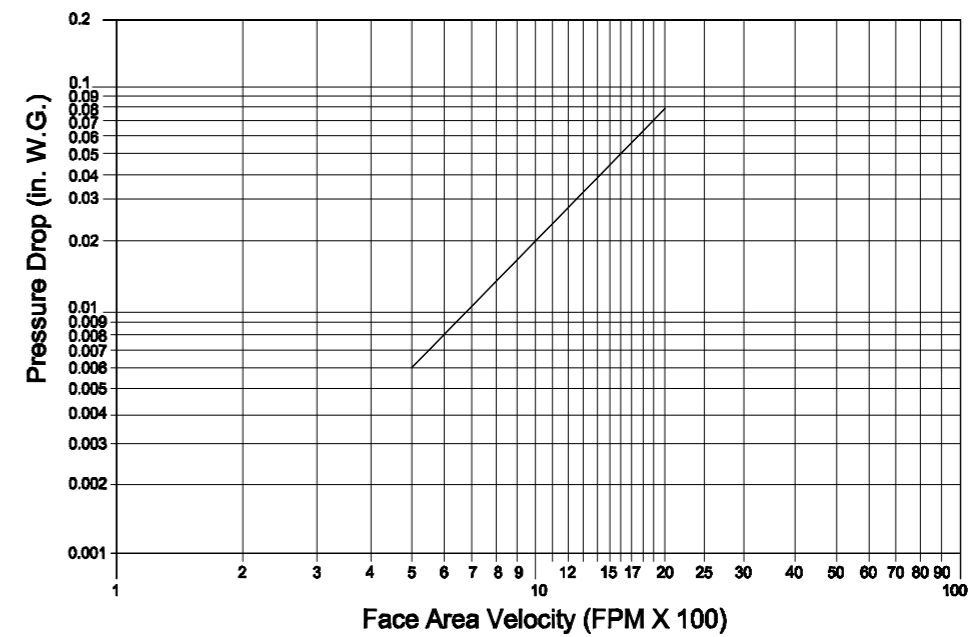
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 24 in. x 24 in. - Fully Open Blades



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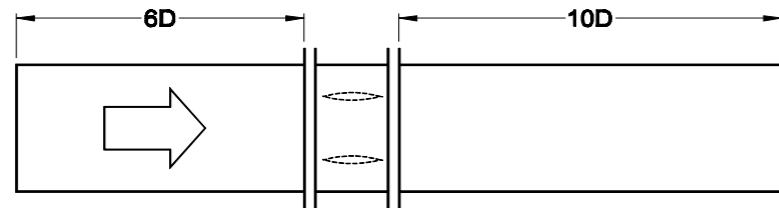
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

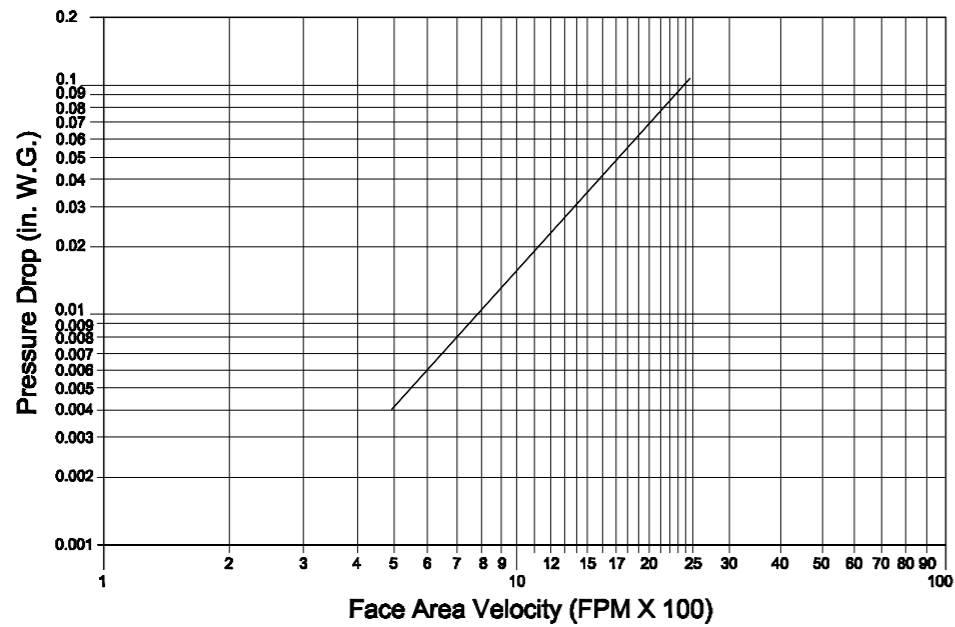

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 36 in. x 36 in. - Fully Open Blades

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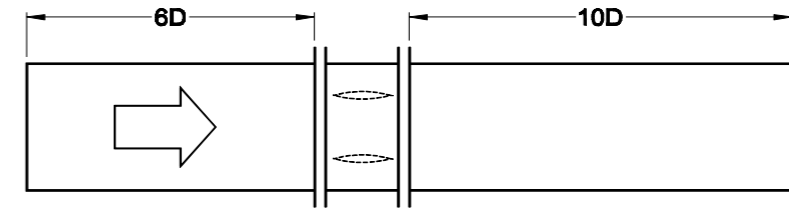
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

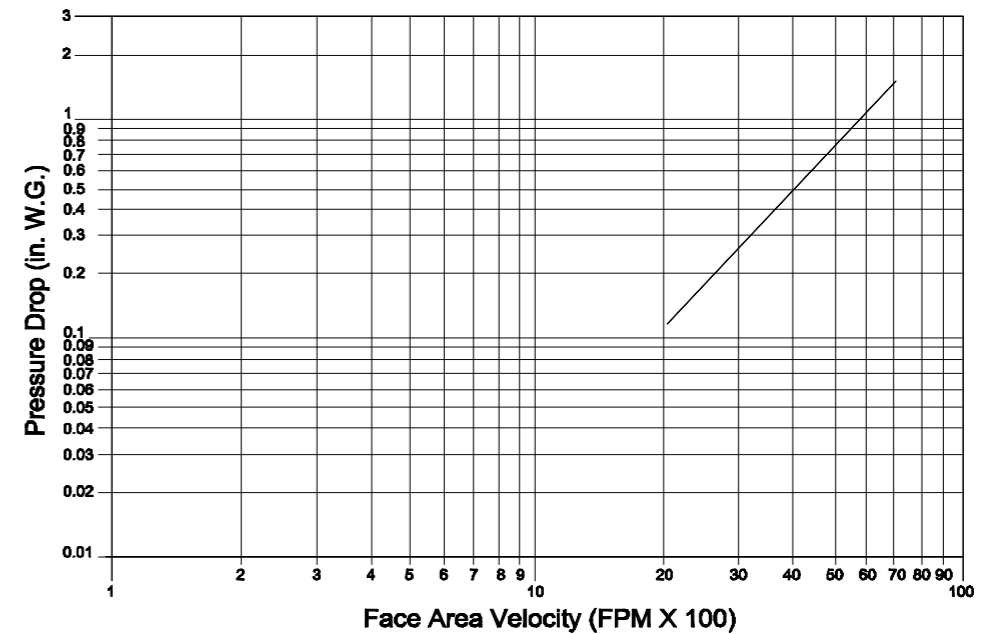

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 48 in. - Fully Open Blades

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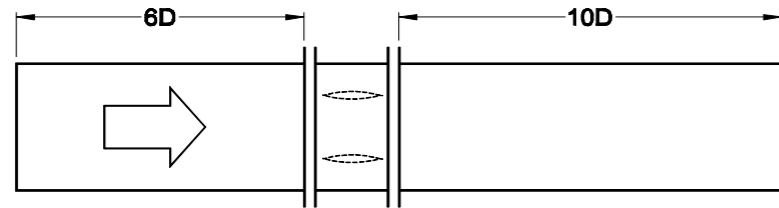
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Air Performance

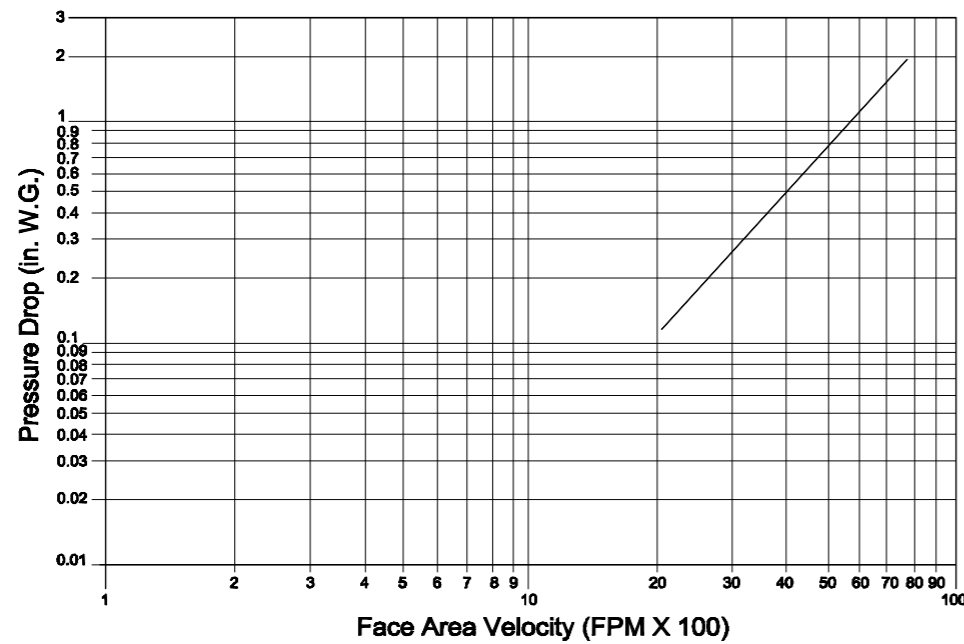

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 48 in. x 12 in. - Fully Open Blades

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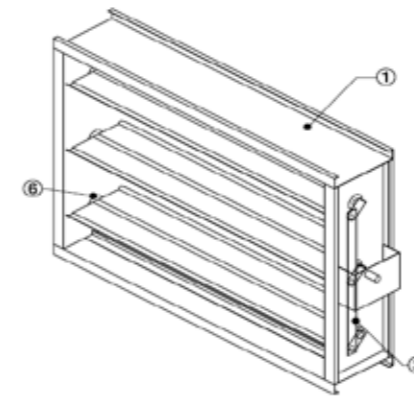
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

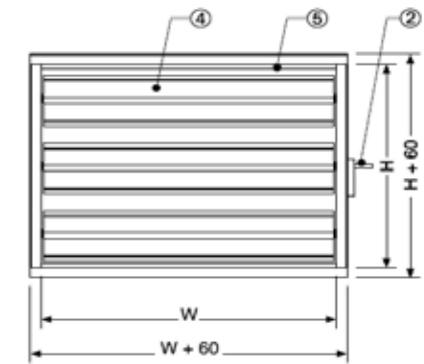
Dimensions

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

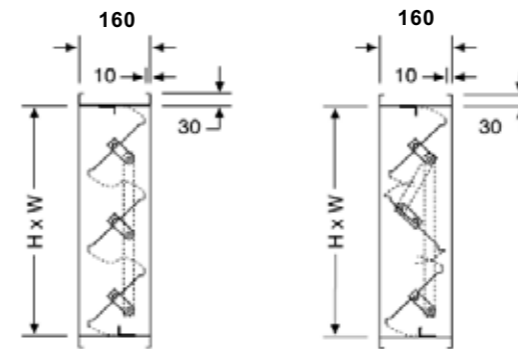
Flange Type



Flange Type



Flange Type, Parallel/Opposed Blades



Parallel Blades (PB)

Opposed Blades (OB)

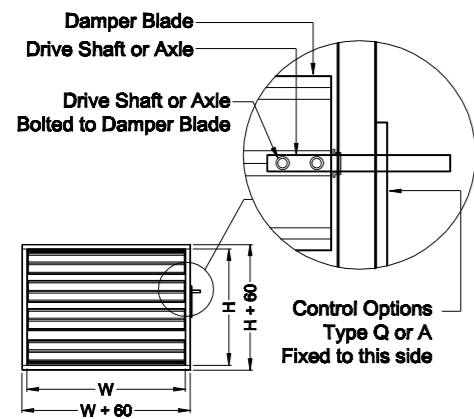
Standard Sizes

Width (mm)	Height (mm)	No. 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

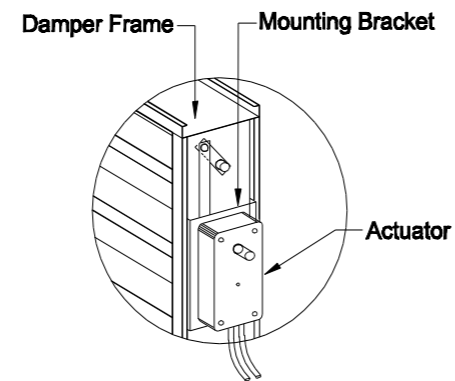
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Axle and Drive Shaft Fixing Details



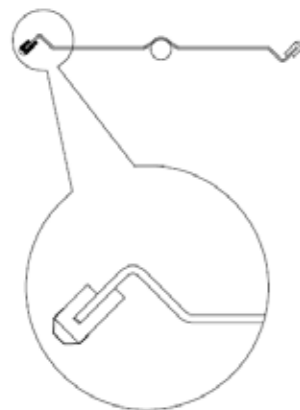
Damper with Control Option Type A



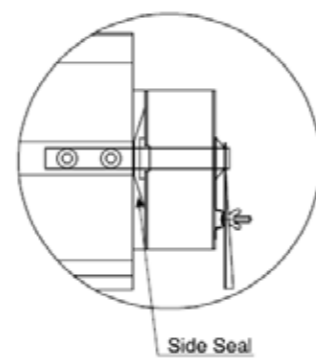
Blade Seal (Optional)

Side Seal or Jamb Seal (Optional)

Type S1



Type S2 (Stainless Steel Type 304)



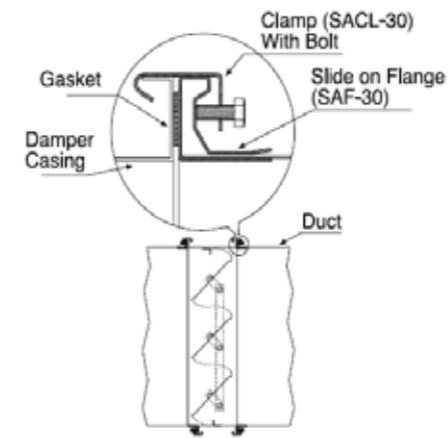
NOTE

1. Type S3 (Combination of S1 and S2)
2. Hand locking quadrant is shown above - Control Type Q

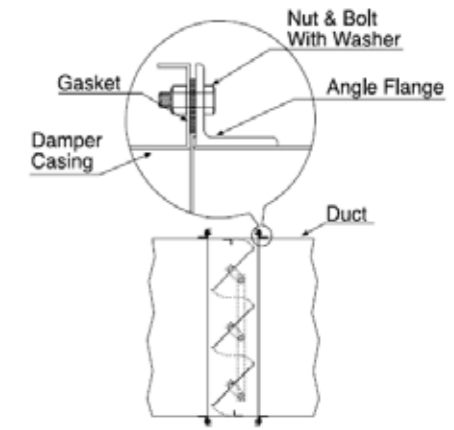
Catalog ID: SPK 30 - 100 September 30, 2013

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

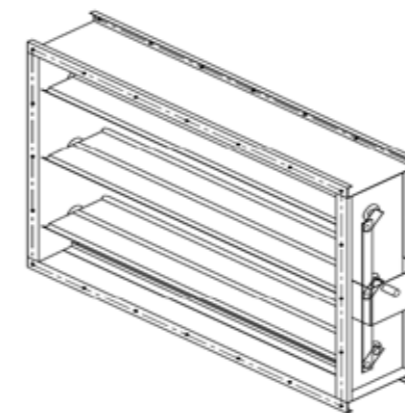
Damper to Slide on Flange Connection



Damper to Angle Flange Connection



Flange Drilling Details



Width (mm)	Height (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

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

SPK 30 SERIES [SPK 30 - 100, SPK 30 - 110, SPK 30 - 120]

Seals

Construction Variants	Description
S	No Seals.
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.
S2	Side seals. Fitted to close gap between frame and blades (jamb seal) to minimize air leakage.
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.

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.

Actuators

Code	Type/Model
A1	BF230-ME, BF24-M3 Spring-return
A1S	BF230-S-ME, BF24-S-M3 Spring-return
A01	BF230 Spring-return
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

Note:
Contact SAFID for technical data sheet of actuators.

Catalog ID: SPK 30 - 100 September 30, 2013

Order Code SPK 30 - 100 - OB - S - B - R - 500 x 500 - Q A1

Variants - Code

SPK 30 -100
SPK 30 -110
SPK 30 -120

Blade Operation

OP = Opposed Blade Operation
PB = Parallel Blade Operation

Optional Variants - Seals

*S = No Seals (as tested by AMCA)
S1 = Blade's Edge Seals
S2 = Side Seal (Jamb Seal)
S3 = Side Seal and Blade's Edge Seal

Actuator

Control Option Type A
(See Page 16)

Hand Locking

Quadrant
Control Option Type Q
(for manual operation)

Duct Size

External Controls

*R = Right Hand
(Standard Supply)
L = Left Hand

Variants - Bearings

*B1 = Sintered Bronze
(oilite)
B2 = Stainless Steel

* - 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

FLANGE TYPE VOLUME CONTROL DAMPER WITH EXTRUDED ALUMINUM AIRFOIL BLADES



FLANGE TYPE VOLUME CONTROL DAMPER WITH EXTRUDED ALUMINUM AIRFOIL BLADES

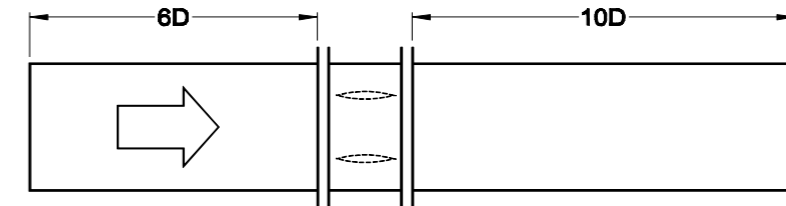


SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Air Performance

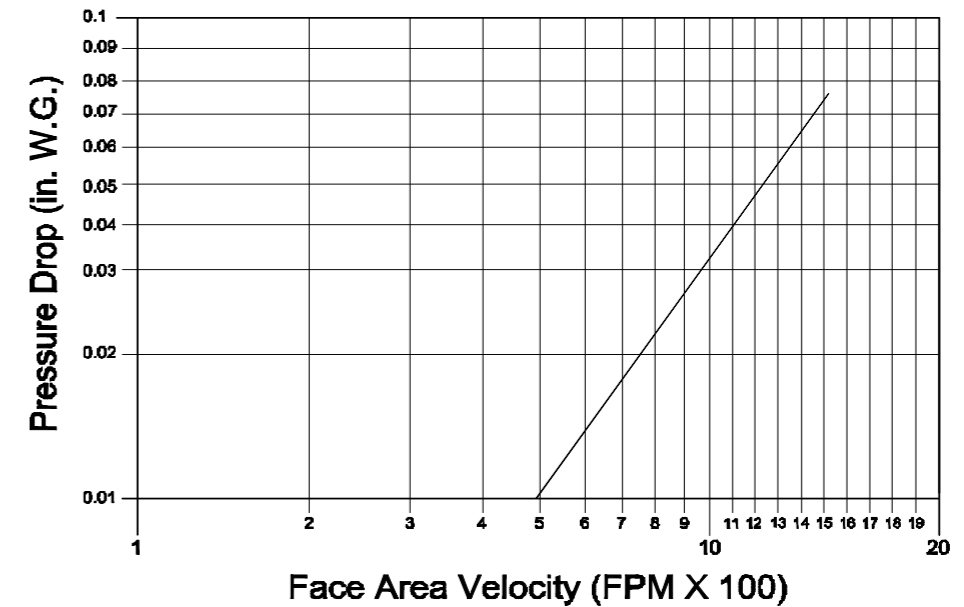
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 12 in. - Fully Open Blades



Description

The single and multi-leaf volume control dampers with extruded aluminum airfoil blades are designed for quite, efficient and reliable air volume control in air conditioning and ventilation systems.

The SPK 30 dampers are ruggedly built dampers with a casing of robust assembly, formed from a channel frame for flanged connection to ductworks.

The blades with airfoil construction provides a low pressure drop in the open position for smooth airflow and reduced air turbulence.

Standard Construction

Frame:

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

Blades:

100mm, 125mm and 150mm wide airfoil shaped blades extruded aluminum.

Finish:

Frame of mill galvanized.
Blades of mill aluminum.

Linkage:

Galvanized steel side linkage concealed in frame for parallel or opposed blade operation.
Hard PVC gear side linkage for opposed blade operation.

Case Bearing:

Brass bearing as standard.
Sintered bronze oilite (optional).
Hard PVC gear integrated with 12mm x 12mm axle for opposed blade operation only.

Control Shaft:

12mm square or round zinc plated mild steel.

Minimum and Maximum Single Section Size:

100 x 100mm minimum and 1000 x 1000mm maximum.

Consult SAFID for multiple section assembly details.

SPK 30 - 310

General construction as type SPK 30 - 300 damper but with frame, linkage, case bearing, axles and control shaft are from stainless steel (Grade 304).

Catalog ID: SPK 30 - 300 December 19, 2013



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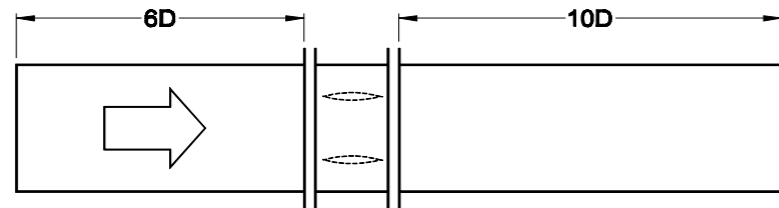
Catalog ID: SPK 30 - 300 December 19, 2013

SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Air Performance

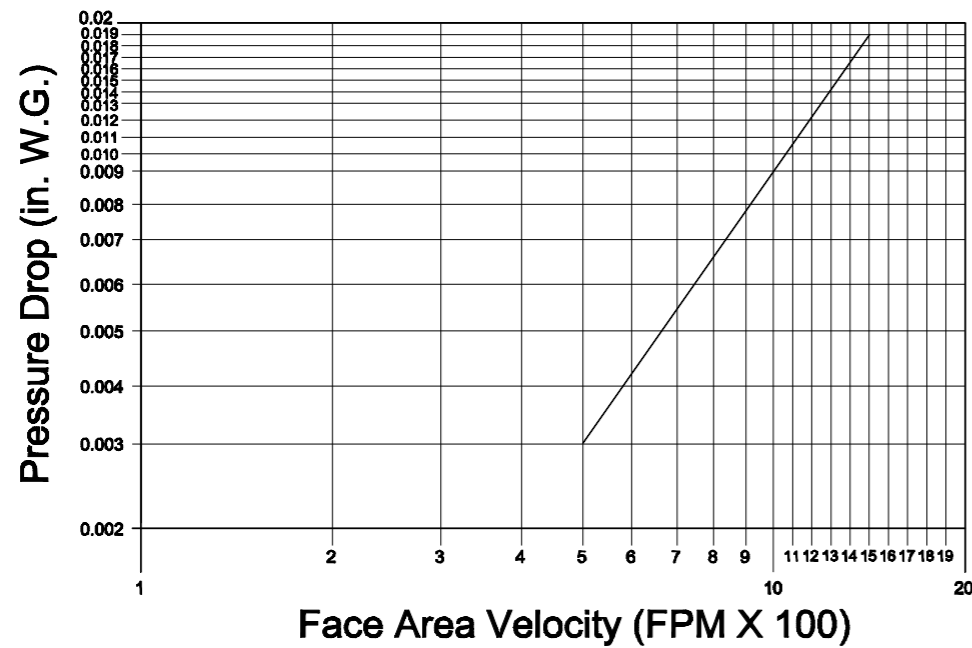

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 24 in. x 24 in. - Fully Open Blades

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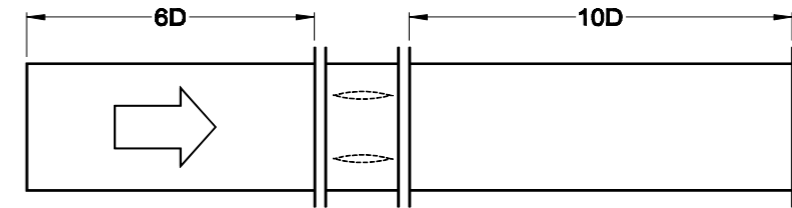
Catalog ID: SPK 30 - 300 December 19, 2013

SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Air Performance

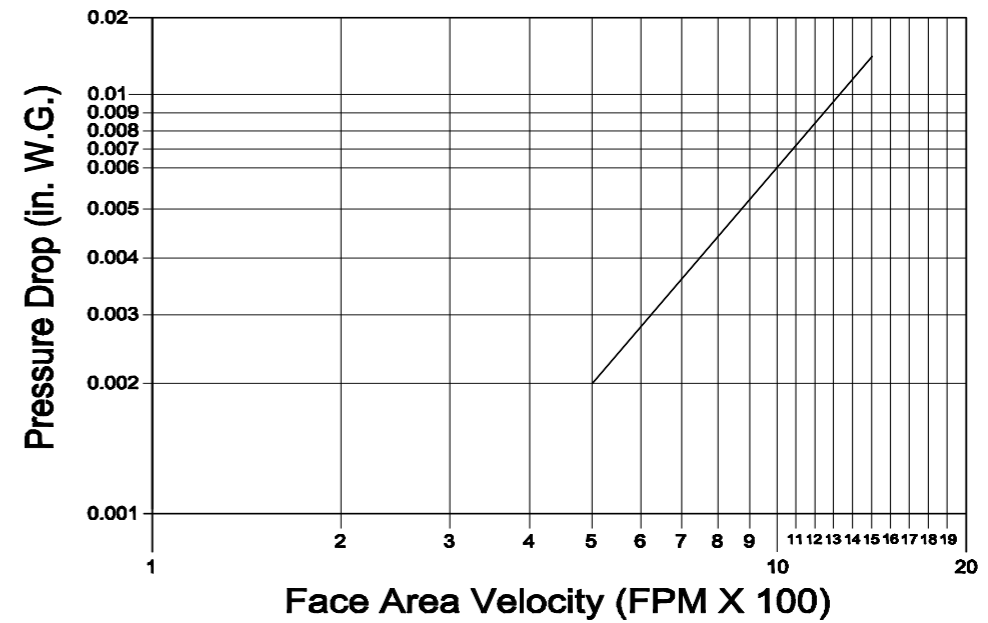

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 36 in. x 36 in. - Fully Open Blades

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Catalog ID: SPK 30 - 300 December 19, 2013

**FLANGE TYPE VOLUME CONTROL DAMPER
WITH EXTRUDED ALUMINUM AIRFOIL BLADES**

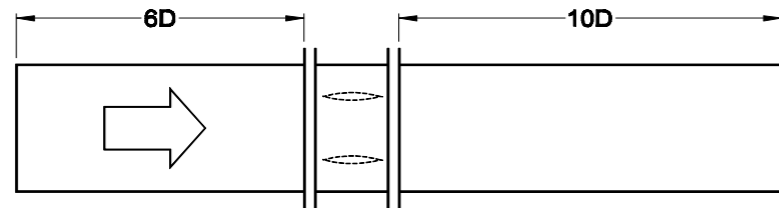


SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Air Performance

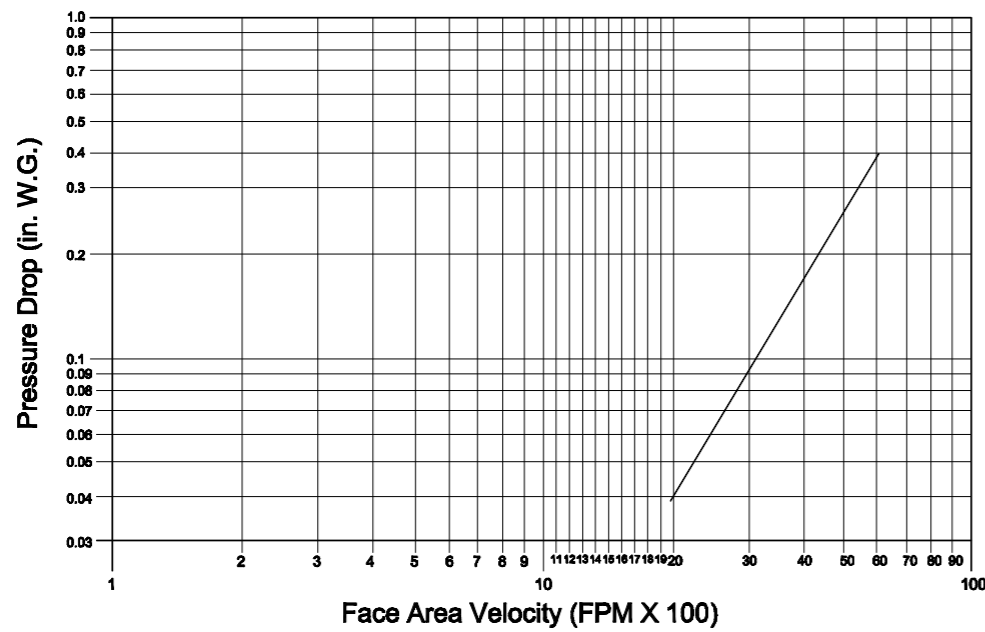
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 48 in. - Fully Open Blades



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Catalog ID: SPK 30 - 300 December 19, 2013



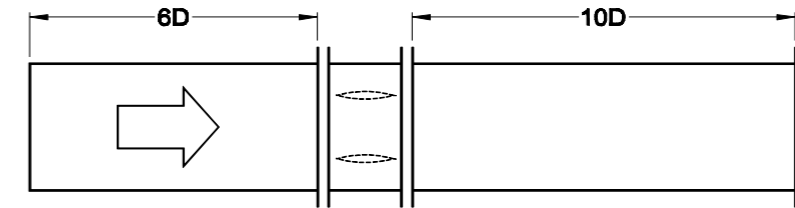
**FLANGE TYPE VOLUME CONTROL DAMPER
WITH EXTRUDED ALUMINUM AIRFOIL BLADES**

SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Air Performance

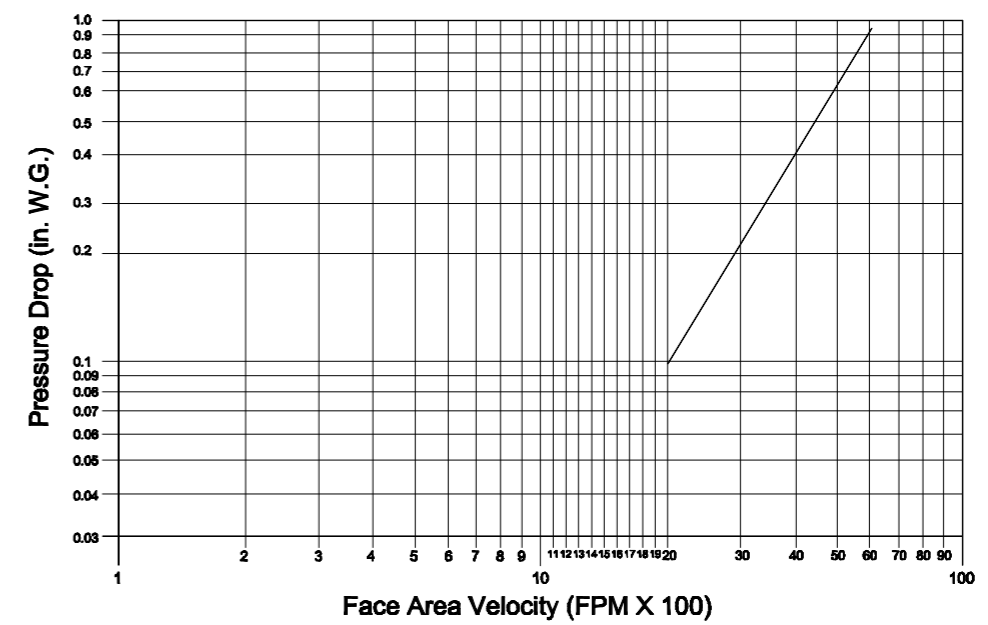
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 48 in. x 12 in. - Fully Open Blades



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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 - 300 December 19, 2013

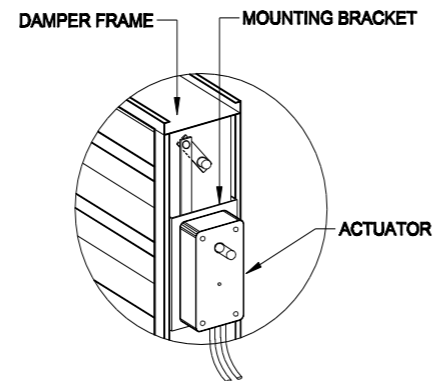
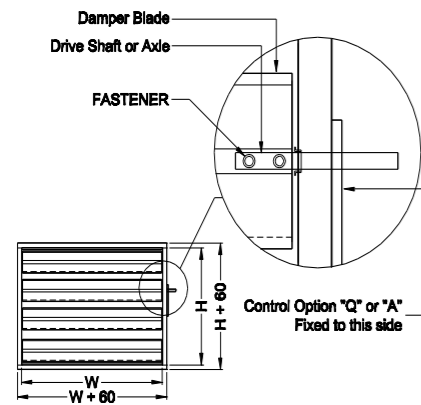
SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Blade Profile (Standard)

Blade Seal (Optional)

Axle & Drive Shaft Fixing Details

Mounting Bracket for Actuator

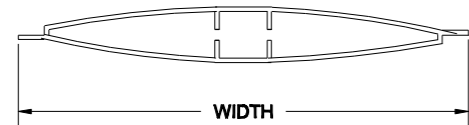


Blade Profile (Standard)

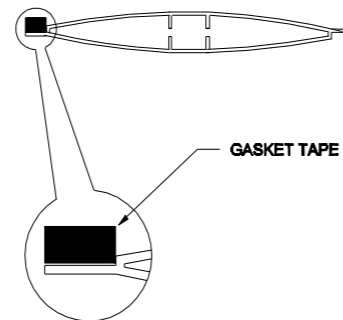
Blade Seal (Optional)

No Blade Seal - Type S

Type S1



100 mm and 150 mm Wide Blade

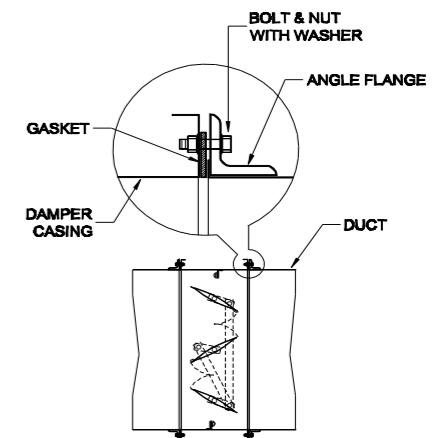
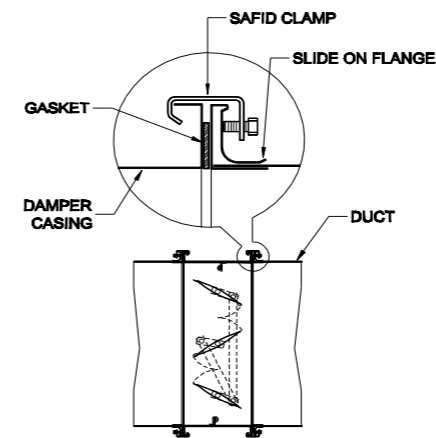


Catalog ID: SPK 30 - 300 September 30, 2013

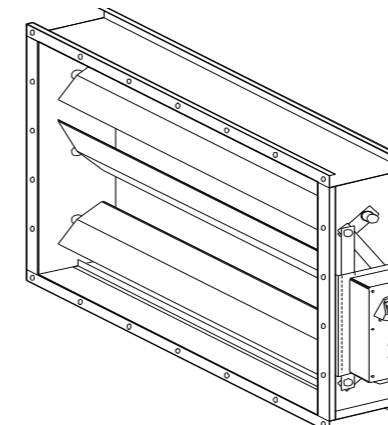
SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Damper to Slide on Flange Connection

Damper to Angle Flange Connection



Flange Drilling Details



Width (mm)	Height (mm)	No. of Holes W Dim.	No. of Holes H Dim.
200	200	2	2
300	200	3	2
300	300	3	3
400	300	4	3
400	400	4	4
500	400	4	4
600	400	5	4
500	500	4	4
600	500	5	4
700	500	6	4
600	600	5	5
700	600	6	5
800	600	7	5
700	700	6	6
800	700	7	6
900	700	8	6
800	800	7	7
900	800	8	7
900	900	8	8

Catalog ID: SPK 30 - 300 December 19, 2013

SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

SPK 30 SERIES [SPK 30 - 300, SPK 30 - 310]

Seals

Construction Variants	Description
S	No Seals.
S1	Blade's edge seals. Fitted to seal blades to blade's joint. Blade seal is a gasket tape 6mm wide.

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

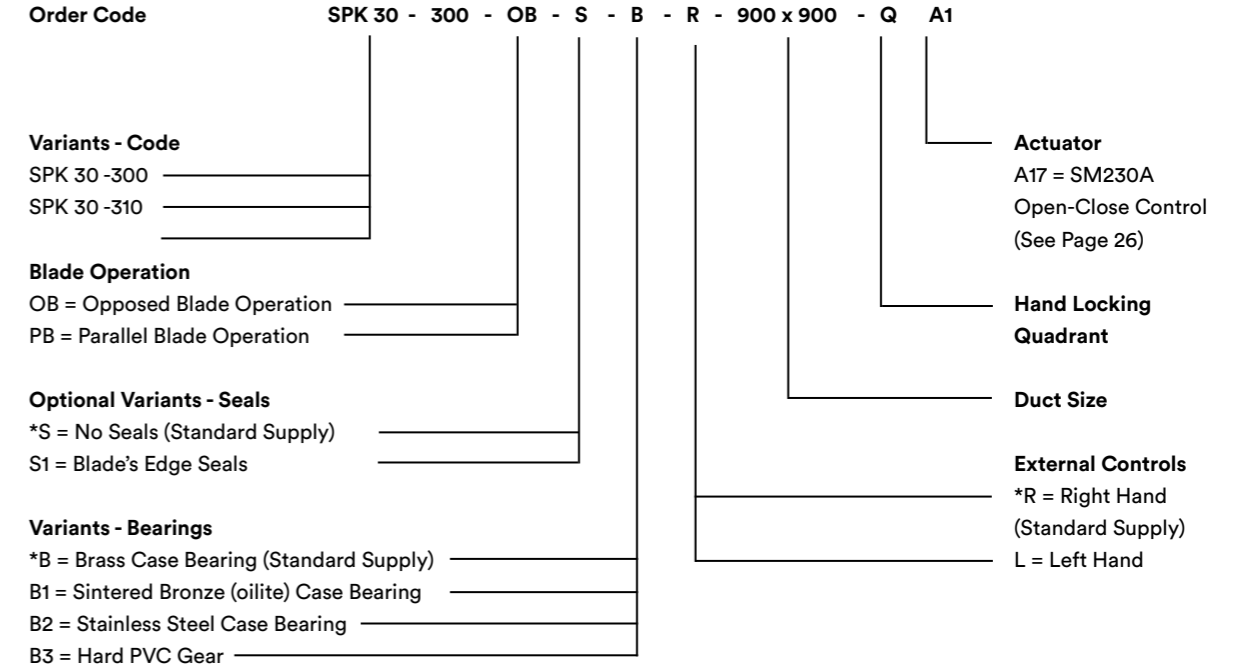
Construction Variants	Description
B	Brass (Standard Supply)
B1	Sintered Bronze Oilite
B2	Stainless Steel
B3	Hard PVC gear integrated with 12mm x 12mm axle (for opposed blades operation only).

Actuators

Code	Type/Model
A1	BF230-ME, BF24-M3 Spring-return
A1S	BF230-S-ME, BF24-S-M3 Spring-return
A01	BF230 Spring-return
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

Note:
Contact SAFID for technical data sheet of actuators.

Catalog ID: SPK 30 - 300 December 19, 2013



* - Stands for Standard Supply

Order Example

- Standard**
Make: SAFID
- Type :** SPK 30 - 300 - OB - S - B - R - 900 x 900 - A
 - Type :** SPK 30 - 300 - OB - S - B - R - 900 x 900 - Q
 - Type :** SPK 30 - 300 - OB - S - B3 - R - 900 x 900 - A

Catalog ID: SPK 30 - 300 December 19, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

**LOW LEAKAGE VOLUME CONTROL DAMPER
SPK 30 - 300L**

**SPK 30 SERIES
FLANGE TYPE**



Description

SPK 30 - 300L low leakage volume control dampers are recommended for use in multiple Air Conditioning Units with one common air duct system on which one or two A/C Units needs to be isolated during standby mode while the other A/C Unit is on operational mode.

In building pressurization it can be used as an isolation damper to maintain the required pressure in the space.

In office buildings where some occupants are outside most of the time, this type of damper is recommended to shutdown the flow of air when the space is unoccupied on which can save energy consumption.

It is also being used as a fresh air intake damper for Air Conditioning Units where it needs a fresh air damper to be closed upon detection of heavy dust on the fresh air side.

The blades with airfoil construction provides a low pressure drop in the open position for smooth airflow and reduced air turbulence.

Standard Construction

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

Blades:
100mm, 125mm and 150mm wide airfoil shaped blades extruded aluminum.
250mm max. width, 1.5mm (16 Ga.) galvanized steel.

Finish:
Frame of mill galvanized.
Blades of mill aluminum.

Linkage:
Galvanized steel side linkage concealed in frame for opposed blade and parallel blade operation.

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Control Shaft:
12mm diameter zinc plated mild steel.

Tip Seal:
Gasket tape 6mm wide.


Side Seal (Jamb Seal):
Compression type stainless steel grade 304 to close gap between frame and blades.

Minimum and Maximum Single Section Size:
200 x 200mm minimum and 900 x 900mm maximum.

Consult SAFID for multiple section assembly details.

SPK 30 - 310L
General construction as type SPK 30 - 300L damper but with frame, linkage, case bearing, axles and control shaft are from stainless steel (Grade 304).

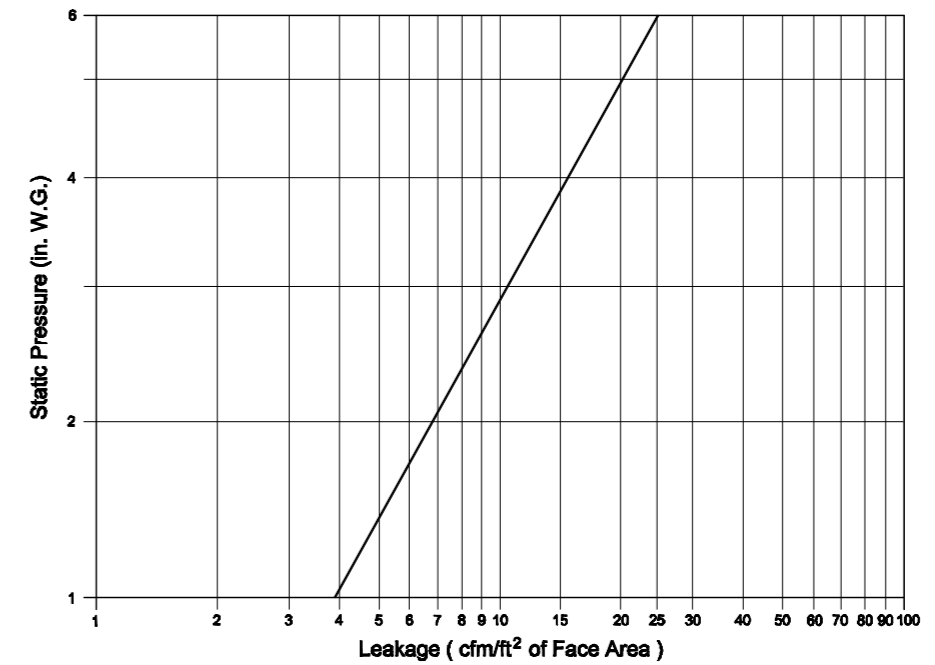
Catalog ID: SPK 30 - 300L December 18, 2013



SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.
Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
Only 100mm blade width and opposed blade action is AMCA certified.

Air Leakage Performance


Air Leakage Data



36 in. x 36 in. (914 mm x 914 mm) (Face Area = 9 ft²)		
Static Pressure (in. W.G.)	Leakage (cfm/ft²)	Air Leakage Classification
1	3.9	Class 1
2	6.8	Class 2
4	15.6	Class 2
6	25.1	Class 3

36 in. x 36 in. (914 mm x 914 mm) (Face Area = 9 ft²)				
Leakage Class	at 1 in. W.G.	at 2 in. W.G.	at 4 in. W.G.	at 6 in. W.G.
1A	3	N/A	N/A	N/A
1	4	5.6	8	9.8
2	10	14	20	24.5
3	40	56.5	80	98

The torque applied holding the damper blades at closed position is 133 in-lb.



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Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
Only 100mm blade width and opposed blade action is AMCA certified.

Catalog ID: SPK 30 - 300L December 18, 2013

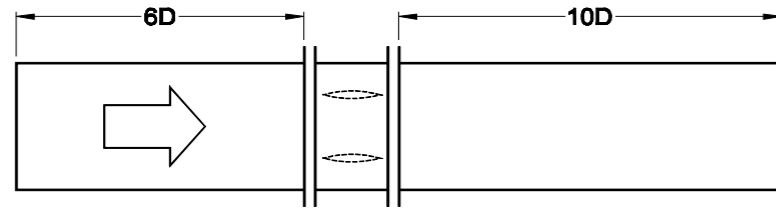
SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

Pressure Drop


The tests for pressure prop 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

12 in. x 12 in. 305 x 305		24 in. x 24 in. 610 x 610		36 in. x 36 in. 914 x 914		12 in. x 48 in. 305 x 1219		48 in. x 12 in. 1219 x 305	
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	0.076	1500	0.019	1502	0.015	6059	0.398	6061	0.942
1263	0.052	1249	0.013	1246	0.009	5007	0.266	5023	0.633
1006	0.033	1000	0.009	997	0.006	4044	0.181	4053	0.416
755	0.020	746	0.006	748	0.004	3000	0.093	3018	0.223
493	0.010	499	0.003	500	0.002	1971	0.039	1993	0.098



SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.

Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Only 100mm blade width and opposed blade action is AMCA certified.

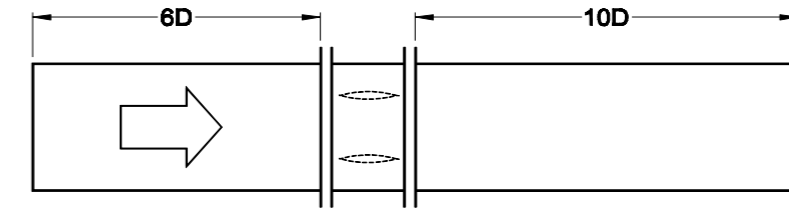
Catalog ID: SPK 30 - 300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

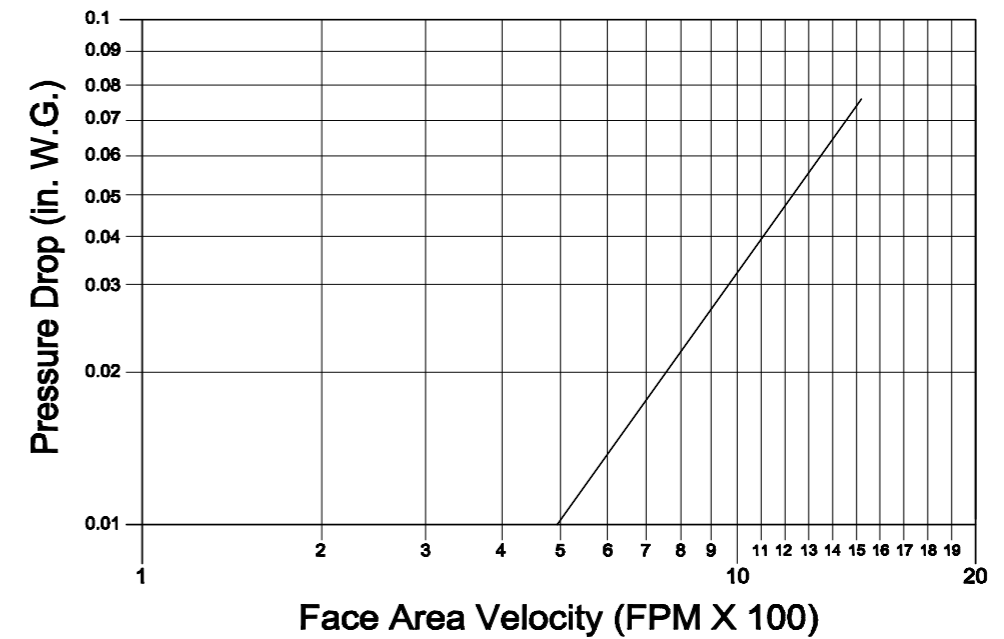

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 12 in. - Fully Open Blades

SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.

Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Only 100mm blade width and opposed blade action is AMCA certified.

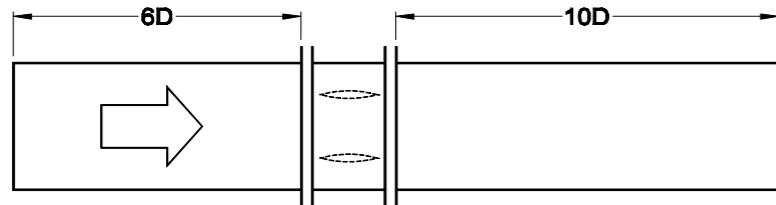
Catalog ID: SPK 30 - 300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

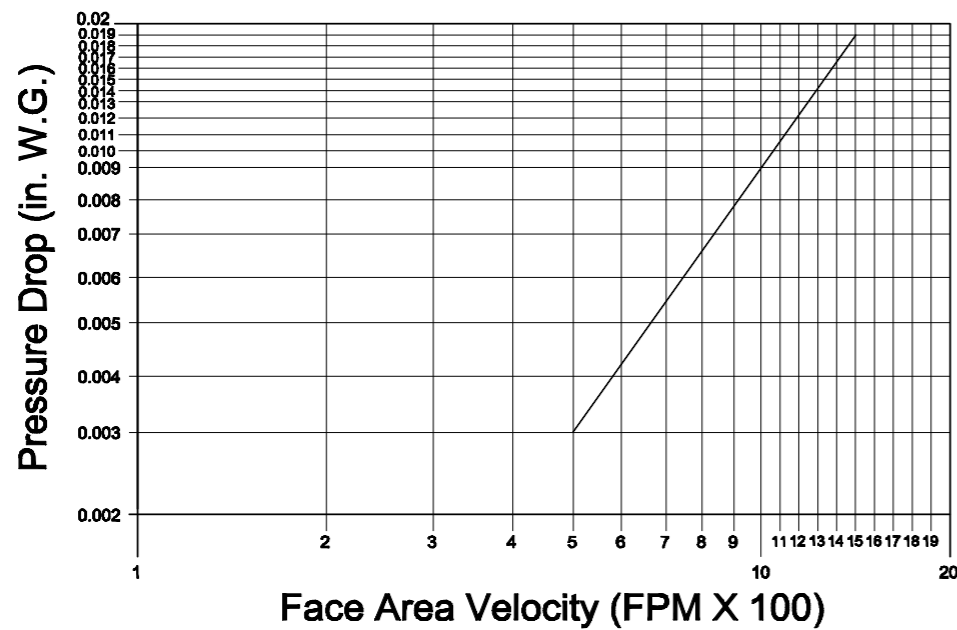

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 24 in. x 24 in. - Fully Open Blades

SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.
 Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
 Only 100mm blade width and opposed blade action is AMCA certified.

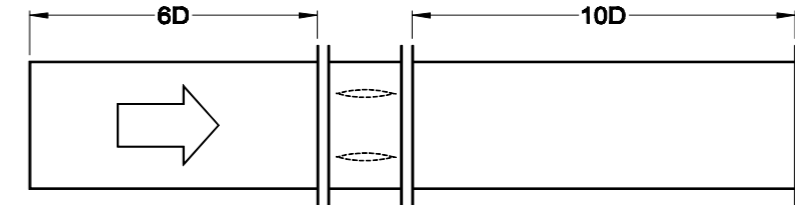
Catalog ID: SPK 30 - 300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

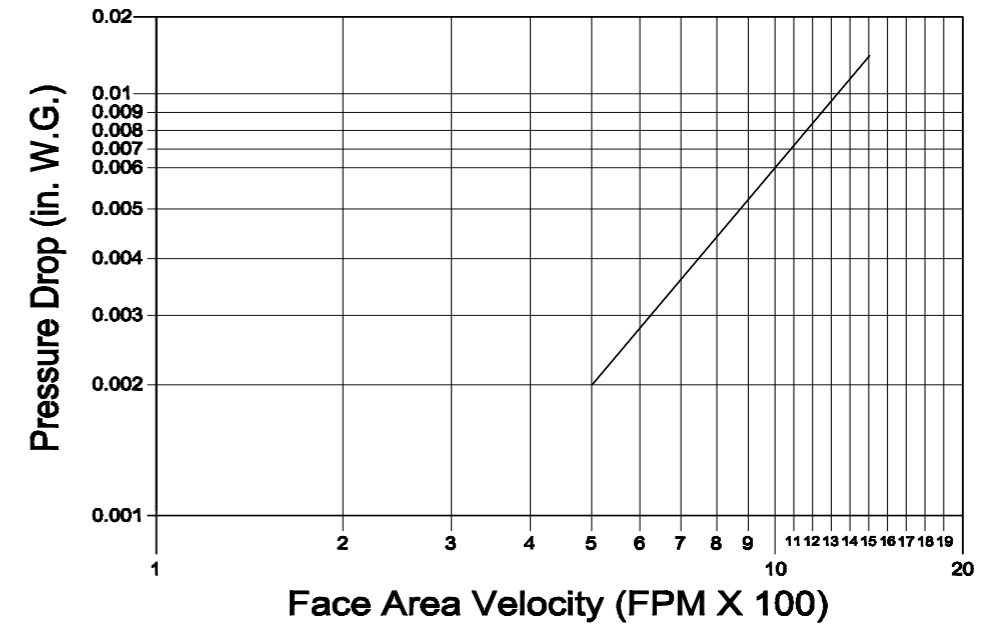
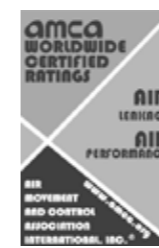
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 36 in. x 36 in. - Fully Open Blades

SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.
 Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
 Only 100mm blade width and opposed blade action is AMCA certified.

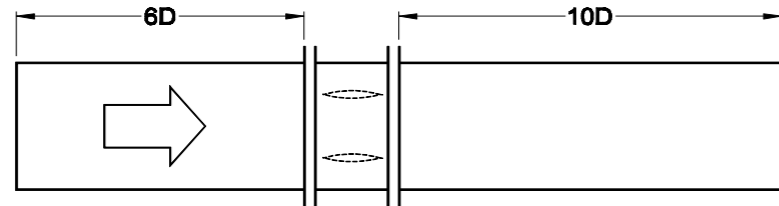
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SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

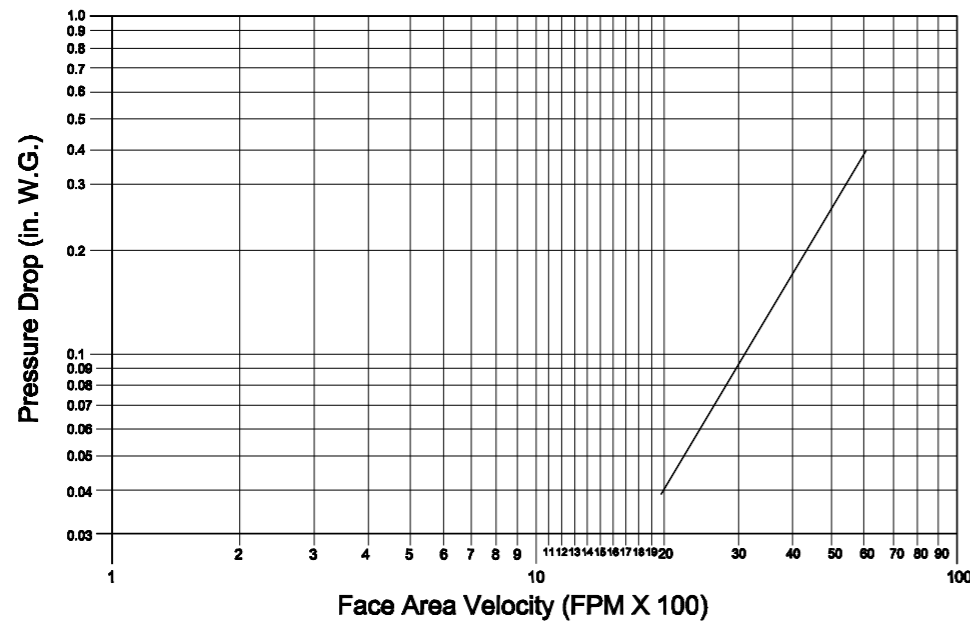

Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 48 in. - Fully Open Blades

SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.
 Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
 Only 100mm blade width and opposed blade action is AMCA certified.

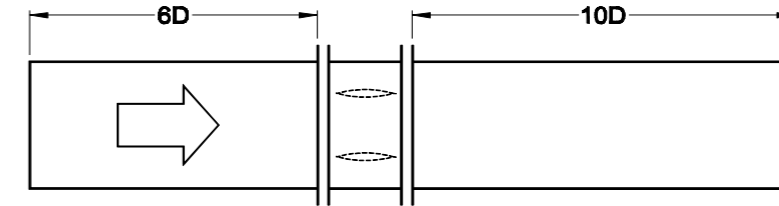
Catalog ID: SPK 30-300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Air Performance

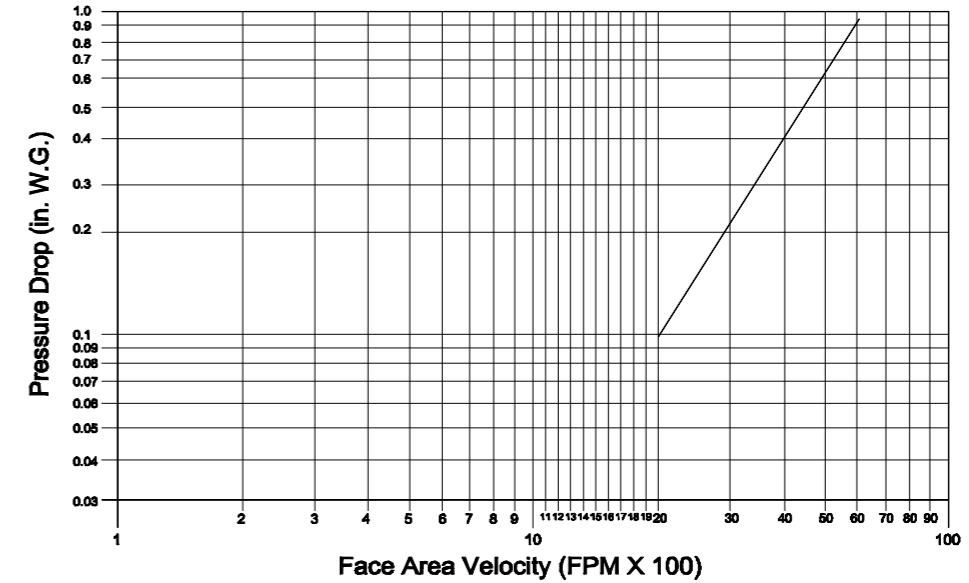
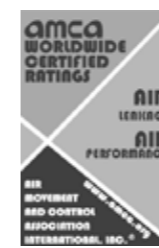
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 48 in. x 12 in. - Fully Open Blades

SAFID certifies that the Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-300L. 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 Leakage and Air Performance Ratings.
 Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.
 Only 100mm blade width and opposed blade action is AMCA certified.

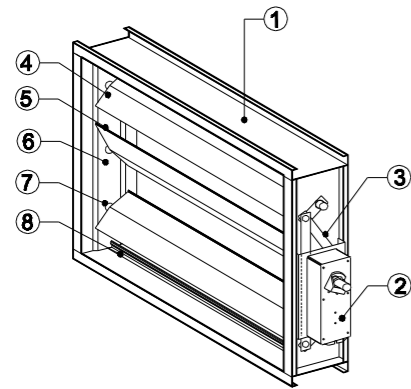
Catalog ID: SPK 30-300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

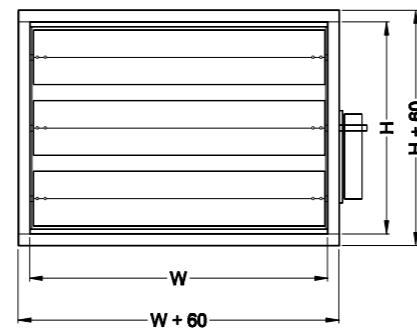
Dimensions

1 - Casing 2 - Actuator 3 - Side Linkage 4 - Blade 5 - Tip Seal 6 - Side Seal (Jamb Seal) 7 - Bearing 8 - Landing Angles

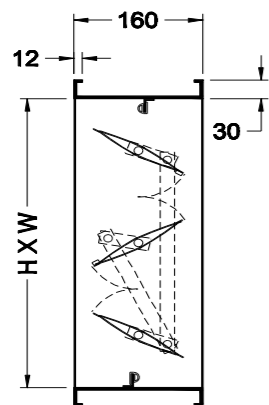
Flange Type



Flange Type



Flange Type, Opposed Blades



Standard Sizes

Width (mm)	Height (mm)	No. of Blades
200	200	2
300	200	2
300	300	3
400	300	3
400	400	4
500	400	4
600	400	4
500	500	5
600	500	5
700	500	5
600	600	6
700	600	6
800	600	6
700	700	7
800	700	7
900	700	7
800	800	8
900	800	8
900	900	9

Catalog ID: SPK 30 - 300L December 18, 2013

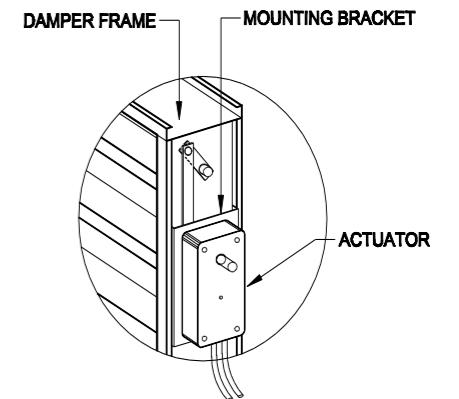
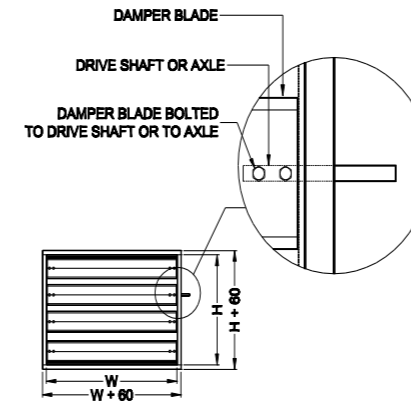
SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Drive Shaft

Mounting Bracket

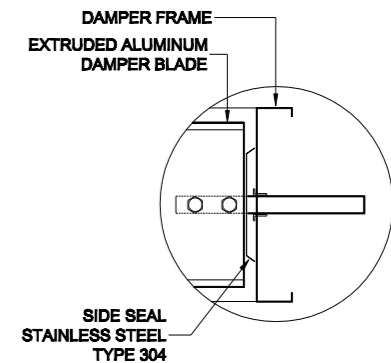
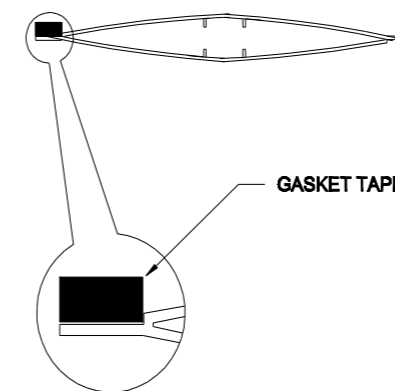
Axle and Drive Shaft Fixing Details

Mounting Bracket for Actuator



Blade Seal

Side Seal or Jamb Seal



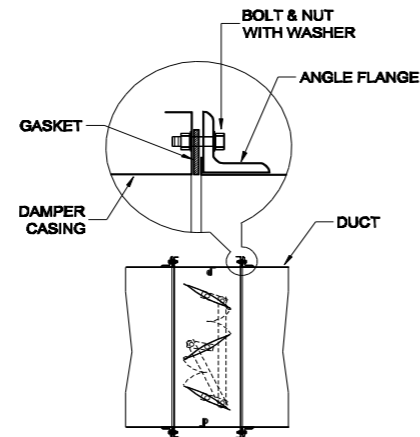
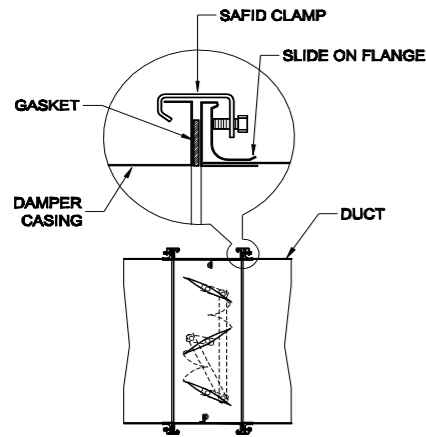
Catalog ID: SPK 30 - 300L December 18, 2013

SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

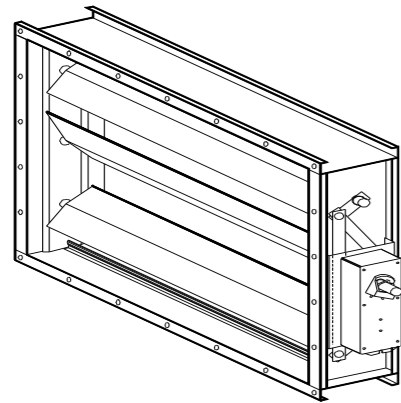
SPK 30 SERIES [SPK 30 - 300L, SPK 30 - 310L]

Damper to Slide on Flange Connection

Damper to Angle Flange Connection



Flange Drilling Details



Width (mm)	Height (mm)	No. of Holes W Dim.	No. of Holes H Dim.
200	200	2	2
300	200	3	2
300	300	3	3
400	300	4	3
400	400	4	4
500	400	4	4
600	400	5	4
500	500	4	4
600	500	5	4
700	500	6	4
600	600	5	5
700	600	6	5
800	600	7	5
700	700	6	6
800	700	7	6
900	700	8	6
800	800	7	7
900	800	8	7
900	900	8	8

Catalog ID: SPK 30 - 300L December 18, 2013

Order Code

SPK 30 - 300L - OB - B - R - 900 x 900 - A

Variants - Code

SPK 30 -300L
SPK 30 -310L

Blade Operation

OP = Opposed Blade Operation
PB = Parallel Blade Operation

Variants - Bearings

*B = Brass Case Bearing (Standard Supply)
B1 = Sintered Bronze (oilite) Case Bearing
B2 = Stainless Steel Case Bearing

Actuator

SM230A
or equivalent
Open-close control

Duct Size

External Controls

*R = Right Hand
(Standard Supply)
L = Left Hand

* - Stands for Standard Supply

Order Example

Standard

Make: SAFID

- Type : SPK 30 - 300L - OB - B - R - 900 x 900 - A
- Type : SPK 30 - 300L - PB - B - R - 900 x 900 - A

Catalog ID: SPK 30 - 300L December 18, 2013

**CLASS 1A AND CLASS 1
LOW LEAKAGE VOLUME
CONTROL DAMPER
SPK 30 - 400**

**SPK 30 SERIES
FLANGE TYPE**



Description

SPK 30 - 400 Class 1A and Class 1 low leakage volume control dampers are recommended for use in multiple Air Conditioning Units with one common air duct system on which one or two A/C Units needs to be isolated during standby mode while the other A/C Unit is on operational mode.

In building pressurization it can be used as an isolation damper to maintain the required pressure in the space.

In office buildings where some occupants are outside most of the time, this type of damper is recommended to shutdown the flow of air when the space is unoccupied on which can save energy consumption.

It is also being used as a fresh air intake damper for Air Conditioning Units where it needs a fresh air damper to be closed upon detection of heavy dust on the fresh air side.

The blades with airfoil construction provides a low pressure drop in the open position for smooth airflow and reduced air turbulence.

Standard Construction

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

Blades:
100mm, 125mm and 150mm wide airfoil shaped blades extruded aluminum.

Finish:
Frame of mill galvanized.
Blades of mill aluminum.

External Linkage:
Galvanized steel side linkage concealed in frame for opposed blade operation.

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Control Shaft:
12mm diameter zinc plated mild steel.

Tip Seal:
Bubble type seal.
For Air Leakage "Class 1A" and "Class 1".

Side Seal (Jamb Seal):
Compression type stainless steel grade 304 to close gap between frame and blades.

Minimum and Maximum Single Section Size:
100 x 100mm minimum and 900 x 900mm maximum.

SPK 30 - 410
General construction as type SPK 30 - 400 damper but with frame, linkage, case bearing, axles and control shaft are from stainless steel (Grade 304).

Catalog ID: SPK 30 - 400 January 23, 2014

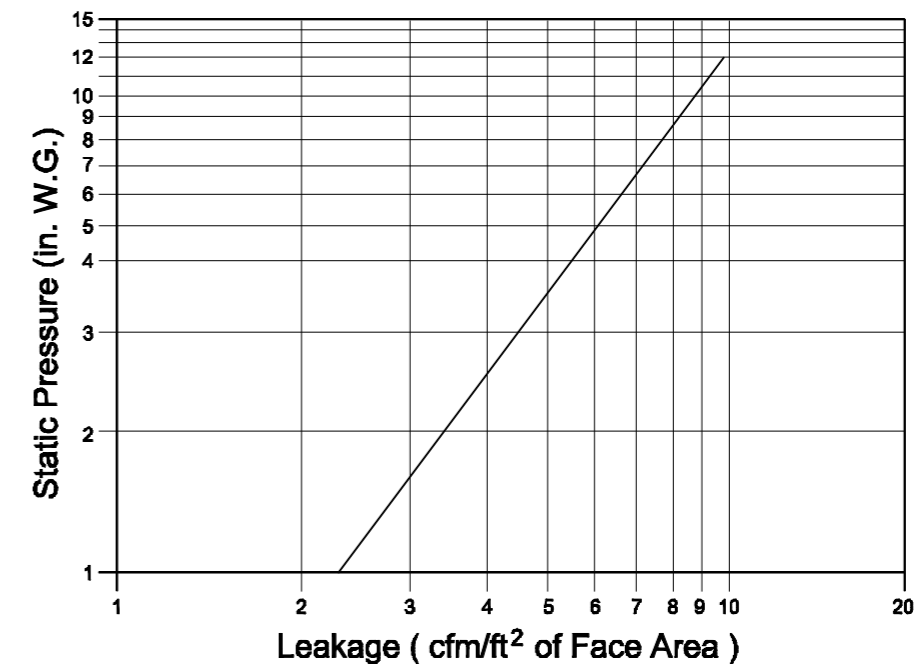


SAFID certifies that the Class 1A & Class 1 Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-400. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.
Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3. Only 150mm blade width is AMCA certified.

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

Air Leakage Performance

Air Leakage Data



36 in. x 36 in. (914 mm x 914 mm) (Face Area = 9 ft²)		
Static Pressure (in. W.G.)	Leakage (cfm/ft²)	Air Leakage Classification
1	2.336	Class 1A
2	3.549	Class 1
4	5.498	Class 1
6	6.646	Class 1
12	9.796	Class 1

Allowable Air Leakage To Achieve Leakage Classification (cfm/ft²)					
Leakage Class	At 1 in. W.G.	At 2 in. W.G.	At 4 in. W.G.	At 6 in. W.G.	At 12 in. W.G.
1A	3	N/A	N/A	N/A	N/A
1	4	5.6	8	9.8	9.8
2	10	14	20	24.5	24.5
3	40	56.5	80	98	98

Data are based on a torque of 24.6 in.-lb/ft² applied to close and seat the damper during the test.



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Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3. Only 150mm blade width is AMCA certified.

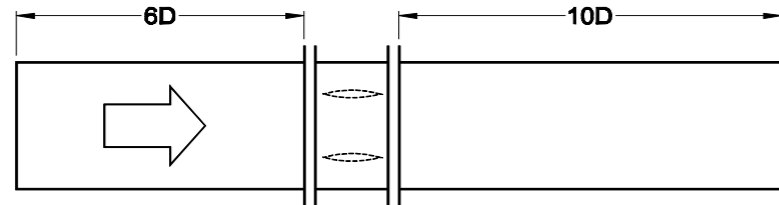
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

Air Performance

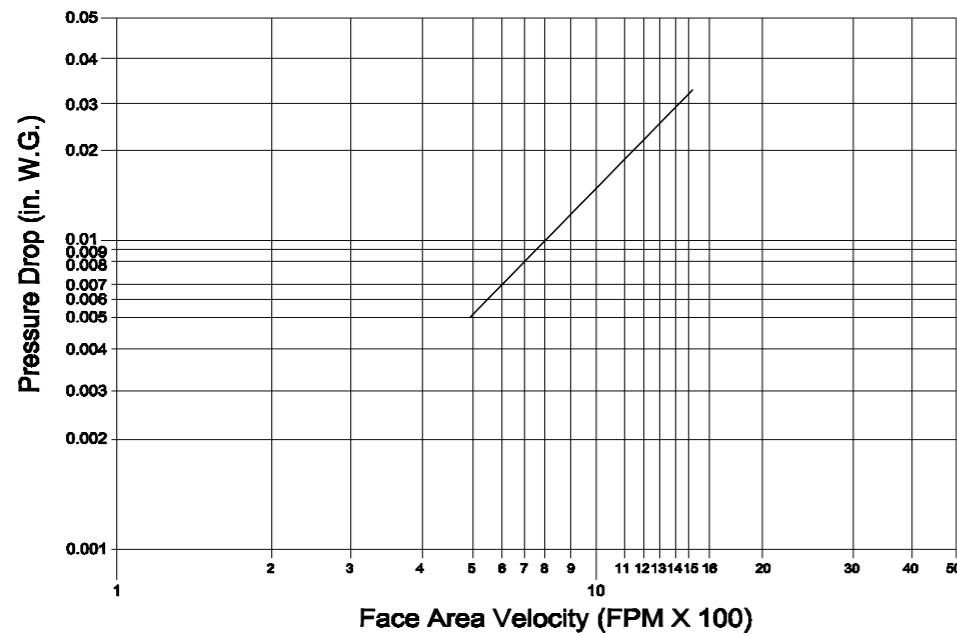
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 12 in. x 12 in. - Fully Open Blades



SAFID certifies that the Class 1A & Class 1 Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-400. 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 Leakage and Air Performance Ratings. Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3. Only 150mm blade width is AMCA certified.

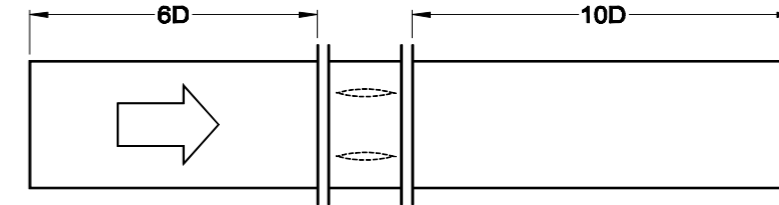
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

Air Performance

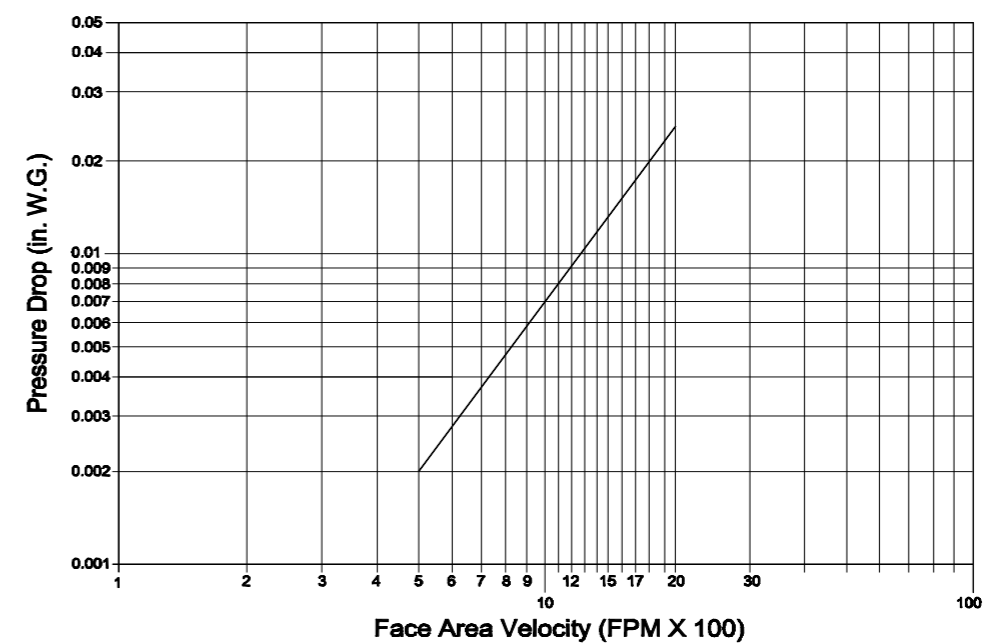
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 24 in. x 24 in. - Fully Open Blades



SAFID certifies that the Class 1A & Class 1 Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-400. 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 Leakage and Air Performance Ratings. Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3. Only 150mm blade width is AMCA certified.

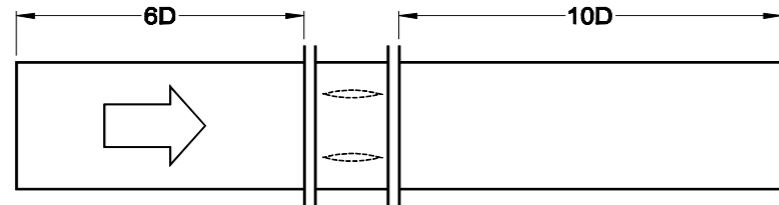
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

Air Performance

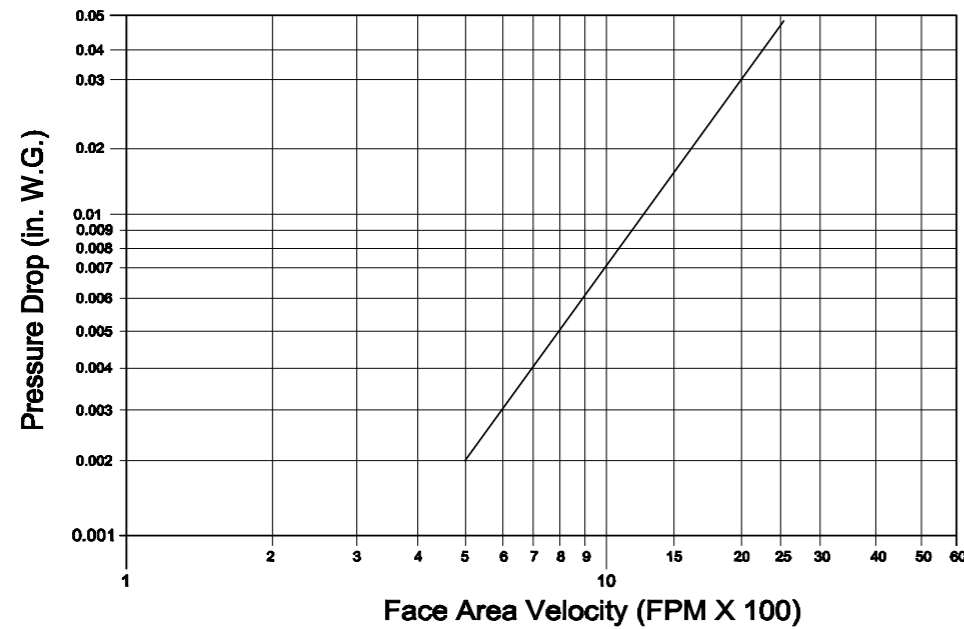
Pressure Drop

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

Damper Size 36 in. x 36 in. - Fully Open Blades



SAFID certifies that the Class 1A & Class 1 Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-400. 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 Leakage and Air Performance Ratings.
 Test Information: Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F. Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3. Only 150mm blade width is AMCA certified.

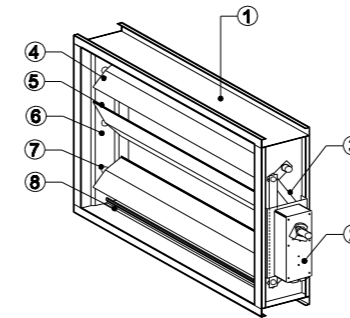
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

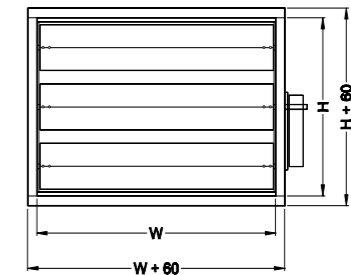
Dimensions

1 - Casing 2 - Actuator 3 - Side Linkage 4 - Blade 5 - Tip Seal 6 - Side Seal (Jamb Seal) 7 - Bearing 8 - Landing Angles

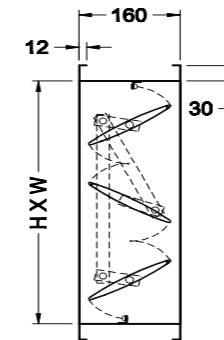
Flange Type



Flange Type



Flange Type, Opposed Blades



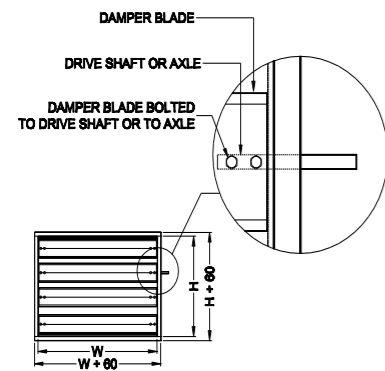
Standard Sizes

Width (mm)	Height (mm)	No. of Blades		
		100 mm	125 mm	150 mm
150	100	1	-	-
200	150	-	-	1
200	200	2	-	-
250	250	-	2	-
300	300	-	-	2
350	350	1	2	-
400	400	1	-	2
450	450	-	-	3
500	500	2	-	2
550	550	-	2	2
600	600	-	-	4
650	650	2	-	3
700	700	1	-	4
750	750	-	-	5
800	800	2	-	4
850	850	1	-	5
900	900	-	-	6

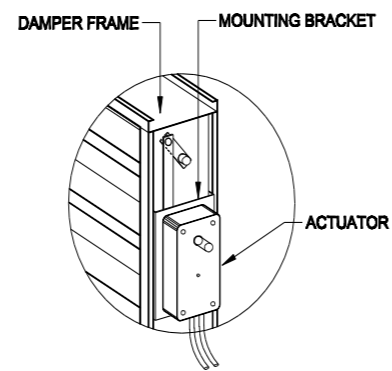
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

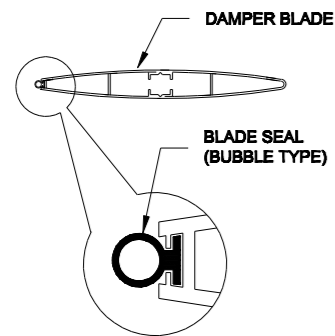
Axle & Drive Shaft Fixing Details



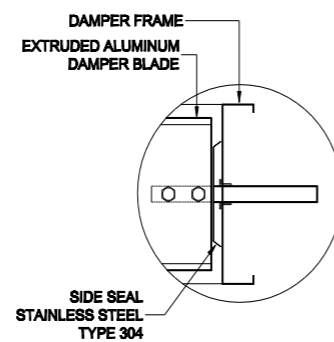
Mounting Bracket for Actuator



Seal



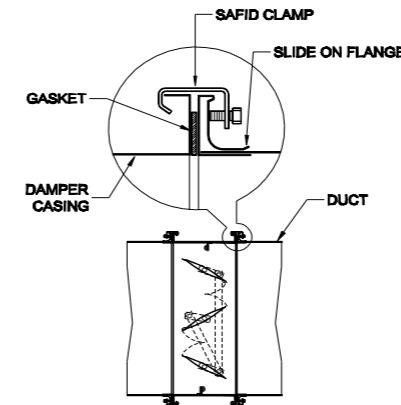
Side Seal or Jamb Seal



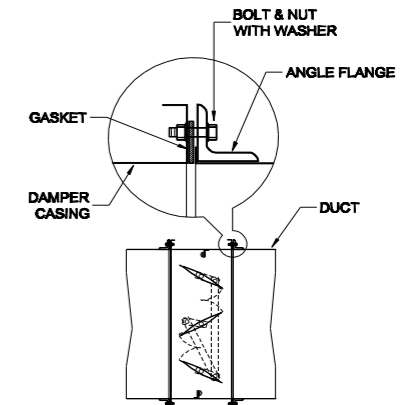
Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]

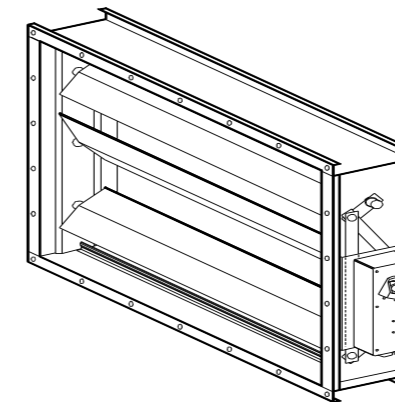
Damper to Slide on Flange Connection



Damper to Angle Flange Connection



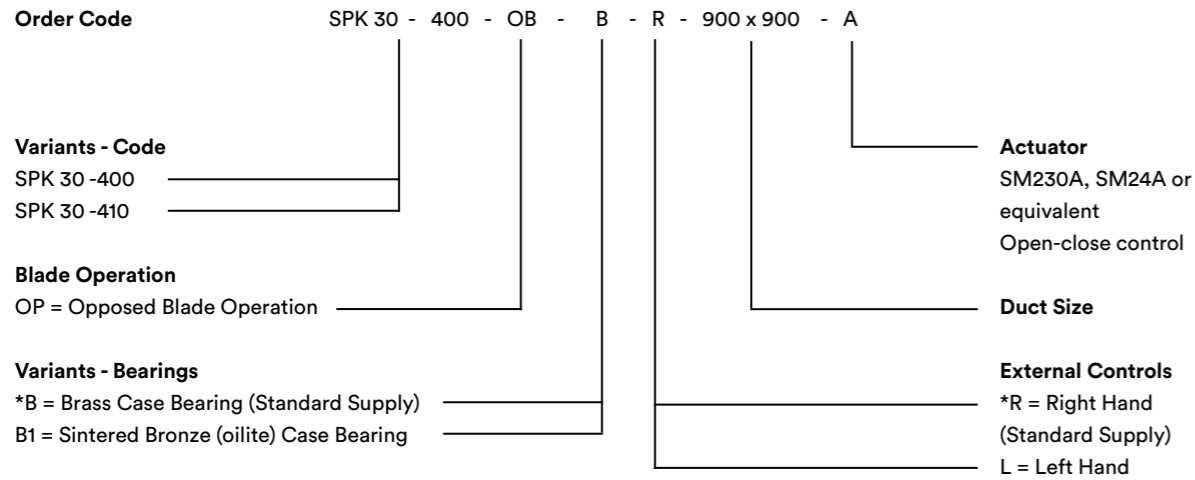
Flange Drilling Details



Width (mm)	Height (mm)	No. of Holes W Dim.	No. of Holes H Dim.
150	150	2	2
200	150	2	2
300	300	3	3
400	300	4	3
500	300	4	3
450	450	4	4
500	450	4	4
600	450	5	4
700	450	6	4
800	450	7	4
900	450	8	4
600	600	5	5
700	600	6	5
800	600	7	5
900	600	8	5
750	750	6	5
800	750	7	5
900	750	8	5
900	900	8	8

Catalog ID: SPK 30 - 400 January 23, 2014

SPK 30 SERIES [SPK 30 - 400, SPK 30 - 410]



* - Stands for Standard Supply

Order Example

- Standard**
 Make: SAFID
1. **Type** : SPK 30 - 400 - OB - B - R - 900 x 900 - A
 2. **Type** : SPK 30 - 400 - PB - B - R - 900 x 900 - A

Catalog ID: SPK 30 - 400 January 23, 2014



Description

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

The SPK 40 damper are ruggedly built dampers, with a case of robust structurally designed hat section to slide in ducting for duct connection. The blades are formed single skin reinforced, with longitudinal structurally designed vee.

Blade action is standard as parallel but can be supplied as opposed blade action at no additional charge.

Blade edge seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

- Frame:**
 100mm x 40mm x 1.5mm (16 ga.) galvanized steel, structurally designed hat section.
- Blades:**
 300mm max. width, 1.5mm (16 ga.) galvanized steel.
- Finish:**
 Mill Galvanized
- Linkage:**
 Face linkage parallel blade operation.
- Case Bearing:**
 Brass bearing as standard.
 Sintered bronze oilite (optional).
- Axles:**
 12mm diameter zinc plated mild steel.

Control Shaft:
 12mm diameter zinc plated mild steel. (Removable for sleeve shaft).

Minimum Size:
 100 x 100mm, damper up to 300mm high are single blade construction.

Maximum Size:
 1200 x 1800mm, as single section.
 Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

Temperature Limits:
 -40 °C to + 100 °C.

SPK 40 - 110
 General construction as type SPK 40 - 100 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 40 - 120
 General construction as type SPK 40 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

SPK SERIES [SPK 40 - 100, SPK 40 - 110, SPK 40 - 120]

Dimensions

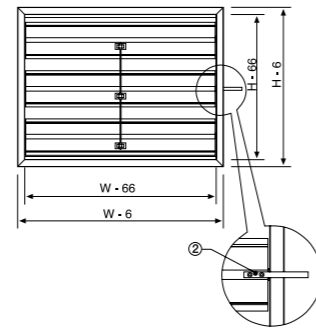
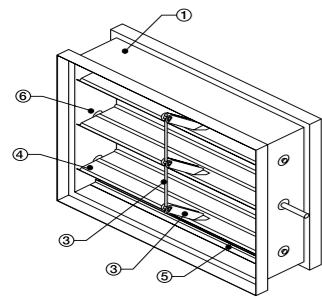
1 - Casing 2 - Drive Shaft/ Removable Spindle (when required) 3 - Bar Linkage 4 - Blade 5 - Landing Angles
6 - BearingAngles

Sleeve Type

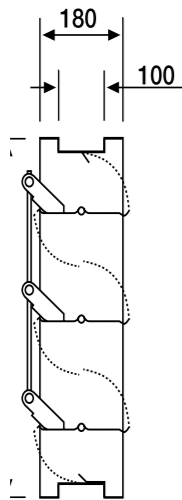
SPK 40 - 100, 110, 120

Sleeve Type

SPK 40 - 100, 110, 120



Sleeve Type, Parallel Blades



Parallel Blades (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	2
500	500	2
550	600	3
600	700	4
650	800	4
700	900	5
750	1000	6
800	1100	6
850	1200	7
900	1300	8
950	1400	8
1000	1500	9
1050	1600	10
1100	1700	11
1200	1800	12

SPK 50 - 100

SPK SERIES
CIRCULAR SPIGOT TYPE



Description

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

The SPK 50 dampers are ruggedly built dampers, with a spigot case of robust assembly formed circular spigot connection to ductworks. The blades are formed single skin reinforced, with longitudinal structurally designed vee.

Blade action is standard as parallel but can be supplied as opposed blade action at no additional charge.

Blade edge seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame:
180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with circular spigot duct 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.
Face linkage available (optional).

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Axles:
12mm diameter zinc plated mild steel.

Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:
From 100 mm diameter damper up to 200 mm diameter high are single blade construction.

Maximum Size:
1000 mm diameter as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

Temperature Limits:
-40 °C to + 100 °C.

SPK 50 - 110
General construction as type SPK 50 - 100 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 50 - 120
General construction as type SPK 50 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

SPK SERIES [SPK 50 - 100, SPK 50 - 110, SPK 50 - 120]

Dimensions

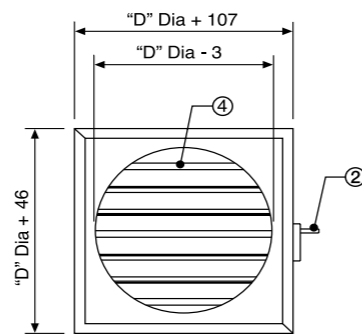
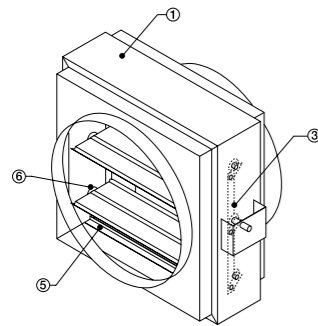
1 - Casing 2 - Drive Shaft/ Removable Spindle (when required) 3 - Bar Linkage 4 - Blade 5 - Landing Angles
6 - BearingAngles

Circular Spigot Type

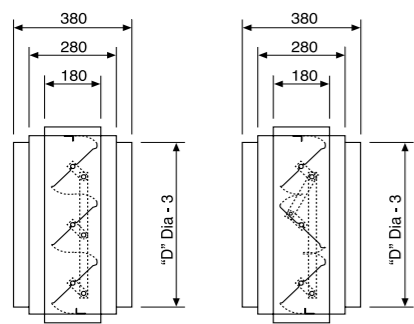
SPK 50 - 100, 110, 120

Circular Spigot Type

SPK 50 - 100, 110, 120



Circular Spigot Type, Parallel/Opposed Blades



Parallel Blades (PB)

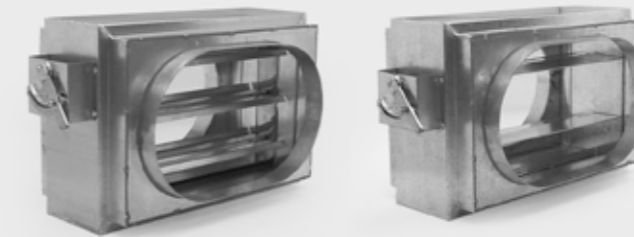
Opposed Blades (OB)

Standard Sizes

Diameter (mm)	No. of Blades
100	1
150	1
200	1
250	2
300	2
350	2
400	2
450	3
500	4
600	4
700	4
800	5
900	6
1000	7
1100	7
1150	7

SPK 60 - 100

SPK SERIES OVAL SPIGOT TYPE



Description

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

The SPK 60 Dampers are ruggedly built dampers, with a spigot case of robust assembly formed oval spigot connection to ductworks. The blades are formed single skin reinforced, with longitudinal structurally designed vee.

Blade action is standard as parallel but can be supplied as opposed blade action at no additional charge.

Blade edge seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame:
180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with oval spigot duct 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.
Face linkage available (optional).

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Axles:
12mm diameter zinc plated mild steel.

Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:
200 x 100 mm, damper up to 20 mm high are single blade construction.

Maximum Size:
1000 x 950 mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

Temperature Limits:
-40 °C to + 100 °C.

SPK 60 - 110
General construction as type SPK 60 - 100 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 60 - 120
General construction as type SPK 60 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

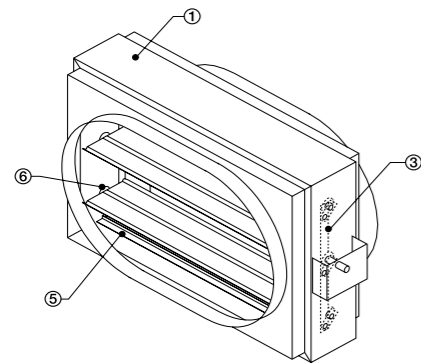
SPK SERIES [SPK 60 - 100, SPK 60 - 110, SPK 60 - 120]

Dimensions

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

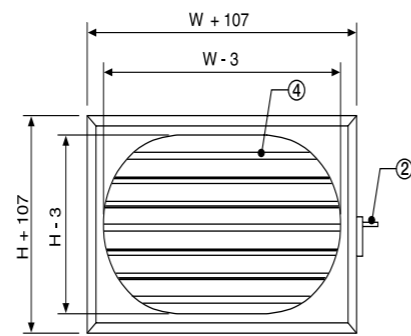
Oval Spigot Type

SPK 60 - 100, 110, 120

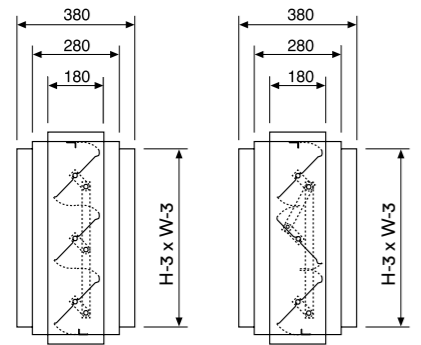


Oval Spigot Type

SPK 60 - 100, 110, 120



Oval spigot Type, Parallel/Opposed Blades



Parallel Blades (PB) Opposed Blades (OB)

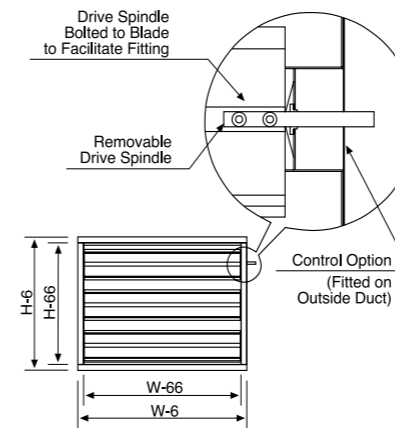
Standard Sizes - Single Section

Width (mm)	Height (mm)	No. of Blades
200	100	1
250	150	1
300	200	1
350	250	2
400	300	2
450	350	2
500	400	2
550	450	3
600	500	4
650	600	4
700	700	4
750	800	5
800	900	6
850		
900		
950		
1000		

SPK SERIES [SPK 60 - 100, SPK 60 - 110, SPK 60 - 120]

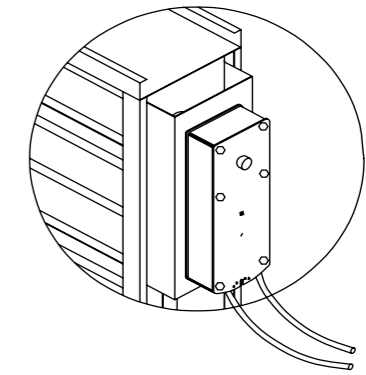
Removable Spindle

For Sleeve Type Only



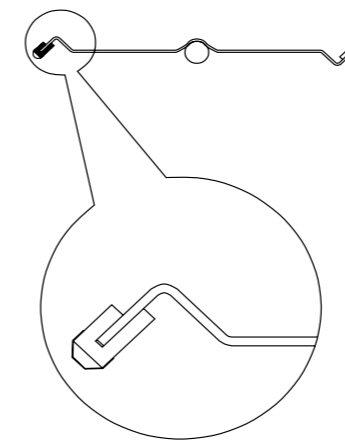
Mounting Bracket

Damper with Mounting Bracket for Actuator



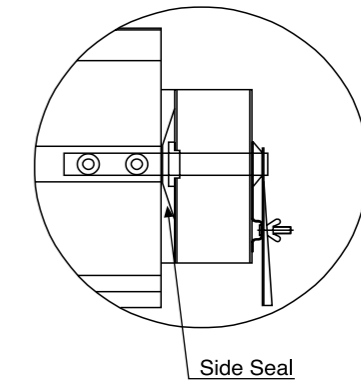
Blade Seal

Type S1



Side Seal (Jamb Seal)

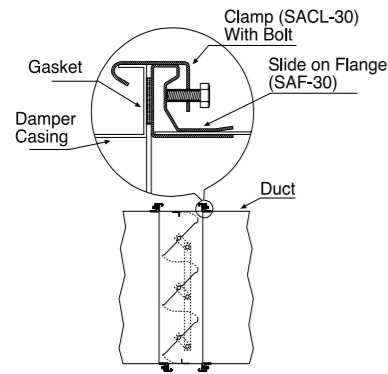
Type S2 (Stainless Steel Type 304)



Note:
Type S3 (Combination of S1 & S2)

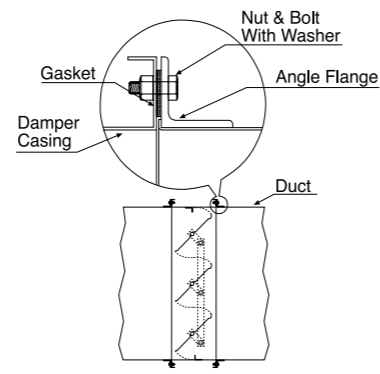
Flange Type SPK 30

Damper to Slide on Flange Connection

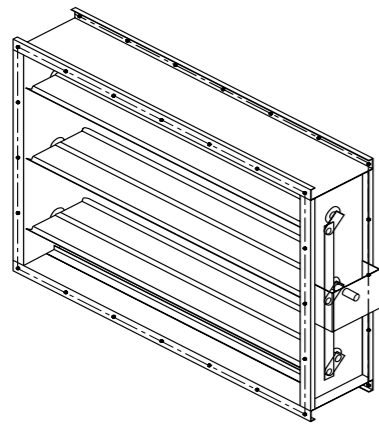


Flange Type SPK 30

Damper to Angle Flange Connection

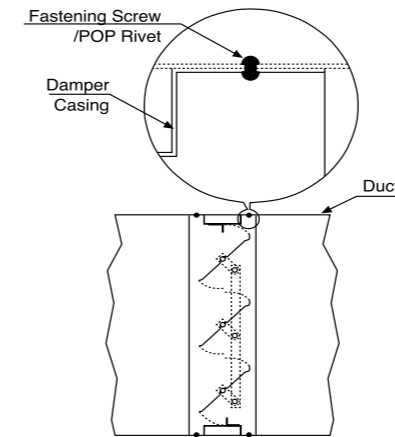


Flange Drilling Details

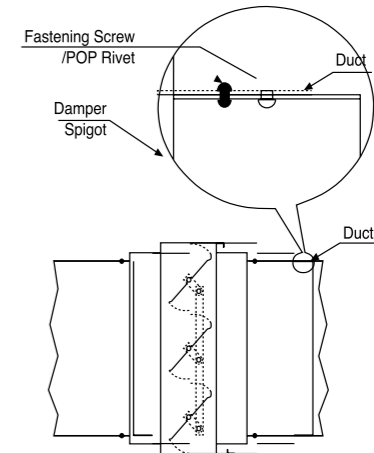


Width (mm)	Height (mm)	No. of Holes W Dim.	No. of Holes H Dim.
100	100	1	2
150	150	2	2
200	200	2	2
250	250	2	3
300	300	3	3
350	350	3	4
400	400	4	4
450	450	4	4
500	500	4	5
600	600	5	6
700	700	6	6
800	800	7	7
900	900	8	8
1000	1000	8	9
1100	1100	9	10
1200	1200	10	10
	1300		11
	1400		12
	1500		13
	1600	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

Sleeve Type SPK 40

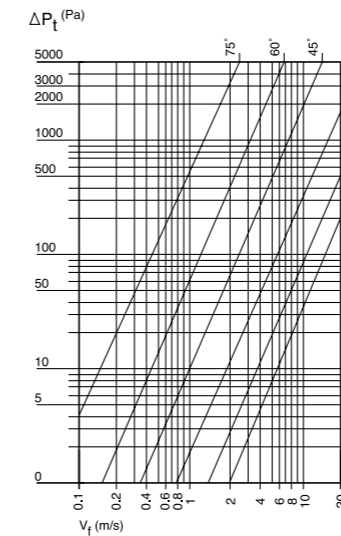


Circular Type SPK 50 and Oval type SPK 60

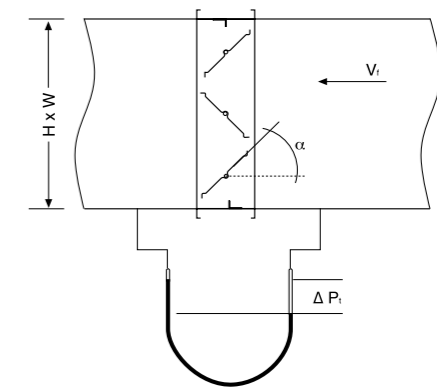


Technical Data

Pressure Loss



ΔP_t in Pa = Total Pressure Drop.
 V_f in m/s = Face Velocity based on A.
 A in m^2 = Damper cross-sectional area.



α = Blade angle, when $\alpha = 0^\circ$, blades are fully open.

Seals

Construction Variants	Description
S	Standard supply construction. No side seals or blade seals.
S1	Blade edge seal to seal blade to blade joint for low leakage characteristic.
S2	Side seals. Fitted to close gap between frame and blades.
S3	Combination of side seals & blade seals to close gap between frame and blades and blade seals to seal blade to blade joint for ultra low leakage characteristic.

Linkage

Construction Variants	Description
PB	Side linkage concealed in frame for parallel blade operation. Face linkage available (optional)
OB	External side linkage for opposed blade operation.

Bearings

Construction Variants	Description
B	Brass (Standard Supply)
B1	Construction sintered bronze oilite.
B2	Sintered bronze oilite.

Belimo Actuators

Code	Type/Model
A01	BF230 Spring Return
A02	BF24 Spring Return
A03	AF230 Spring Return
A04	AF230-S Spring Return With Limit Switch
A05	AF230 US Spring Return
A06	AF120 US Spring Return
A07	AF230-S US Spring Return With Limit Switch
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

Note:
Other Belimo Actuators models and voltages are available, for inquiry contact SAFID.

Order Code SPK 40 - 100 - PB - S - B - R / 500 x 500 / A17

Variants - Case

SPK40 = Sleeve
 SPK50 = Circular Spigot
 SPK60 = Oval Spigot

Type

*100 (Standard Supply)
 110
 120

Variants - Blade Operation

*PB = Slide Linkage Parallel (Standard Supply)
 OB = Opposed Blade

Variants - Seals

*S = None (Standard Supply)
 S1 = Blade Seals Only
 S2 = Side Seal (Jamb)
 S3 = Side Seal & Blade Seals

Variants - Bearings

*B = Brass (Standard Supply)
 B1 = Sintered Bronze (oilite)
 B2 = Stainless Steel

* - Stands for Standard Supply

Actuator
(See Page 58)

Duct Size
 Square or rectangular
 Dimensions 'W' x 'H'
 mm. Circular 'D' mm
 dia. Flat oval 'W' x 'H'
 mm. All damper spigots are manufactured down on duct size to fit inside ductwork connections.

External Controls
 *R = Right Hand
 (Standard Supply)
 L = Left Hand

Specifications

Volume control dampers designed for volume flow and pressure control or to isolate sections of ducting in ventilation systems, shall be of the SPK series as specified. Damper casing shall be constructed of Ga. 16 galvanized steel. Blades shall be single skin reinforced constructed of Ga. 16 galvanized steel (optional with blade seals and/or side seals). Shafts to be 12mm mild plated steel with brass or sintered bronze bearings (optional). Blades to be connected by side or face linkage. Parallel or opposed blade operation dampers; with manual or motorized operation. Limit switches and closed blade low leakage constructions are optional readily available.

Order Example

Standard
Make: SAFID
Type : SPK 40 - 100 PB - S - B - R / 500 x 500
Qty: 1

FLANGE TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES



Description

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

The SPK 30 - 200 dampers are ruggedly built dampers, with a casing of robust assembly formed from channel frame for flanged connections to ductwork. The blades are formed of double skin airfoil providing lower pressure drop in the open position for smooth airflow with reduced turbulence.

Blade seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame:
180mm x 30mm x 1.5mm (16 ga.) galvanized steel.
Formed channel for flange connections.

Blades:
Airfoil shaped galvanized steel double skin construction, 16 gauge equivalent thickness, 250mm max. width.

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).

Axles and Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:

150 x 150mm, damper up to 250mm high are single blade construction.

Maximum Size:

1050 x 1800mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SPK 30 - 210

General construction as type SPK 30 - 200 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 30 - 220

General construction as type SPK 30 - 200 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).



FLANGE TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES

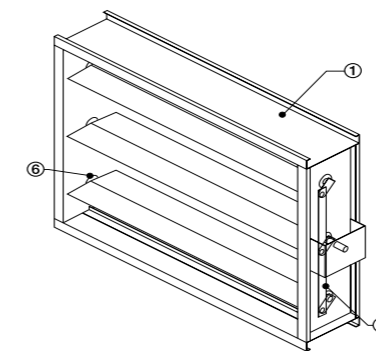
SPK SERIES [SPK 30 - 200, SPK 30 - 210, SPK 30 - 220]

Dimensions

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

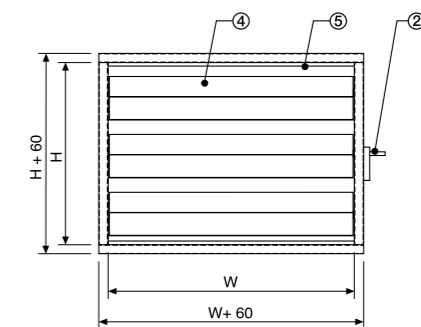
Flange Type

SPK 30 - 200, 210, 220

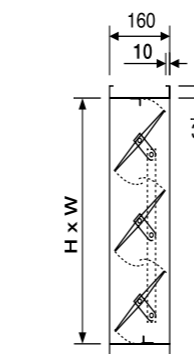


Flange Type

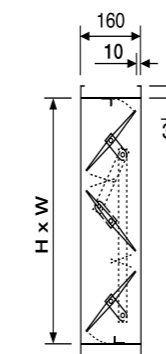
SPK 30 - 200, 210, 220



Flange Type, Parallel/Opposed Blades



Parallel Blades (PB)



Opposed Blades (OB)

Standard Sizes - Single Section

Width (mm)	Height (mm)	No. of Blades
150	150	1
200	200	1
250	250	1
300	300	2
350	450	3
400	600	4
450	750	5
500	900	6
550	1050	7
600	1200	8
650	1350	9
700	1500	10
750	1650	11
800	1800	12
850		
900		
950		
1000		
1050		

SLEEVE TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES



Description

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

The SPK 40 - 200 dampers are ruggedly built dampers, with a casing of robust assembly formed from channel frame for flanged connections to ductwork. The blades are formed of double skin airfoil providing lower pressure drop in the open position for smooth airflow with reduced turbulence.

Blade seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame:
180mm x 30mm x 1.5mm (16 ga.) galvanized steel.
Formed channel for flange connections.

Blades:
Airfoil shaped galvanized steel double skin construction, 16 gauge equivalent thickness, 250mm max. width.

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).

Axles and Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:

150 x 150mm, damper up to 250mm high are single blade construction.

Maximum Size:

1050 x 1800mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SPK 40 - 210

General construction as type SPK 40 - 200 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 40 - 220

General construction as type SPK 40 - 200 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).



SLEEVE TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES

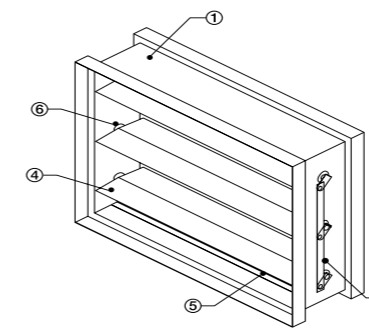
SPK SERIES [SPK 40 - 200, SPK 40 - 210, SPK 40 - 220]

Dimensions

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

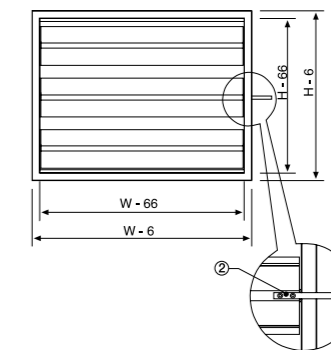
Sleeve Type

SPK 40 - 200, 210, 220

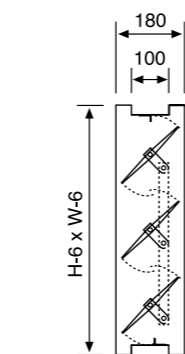


Sleeve Type

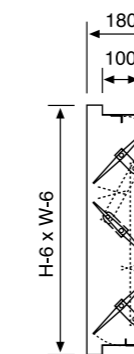
SPK 40 - 200, 210, 220



Sleeve Type, Parallel Blades



Parallel Blades (PB)

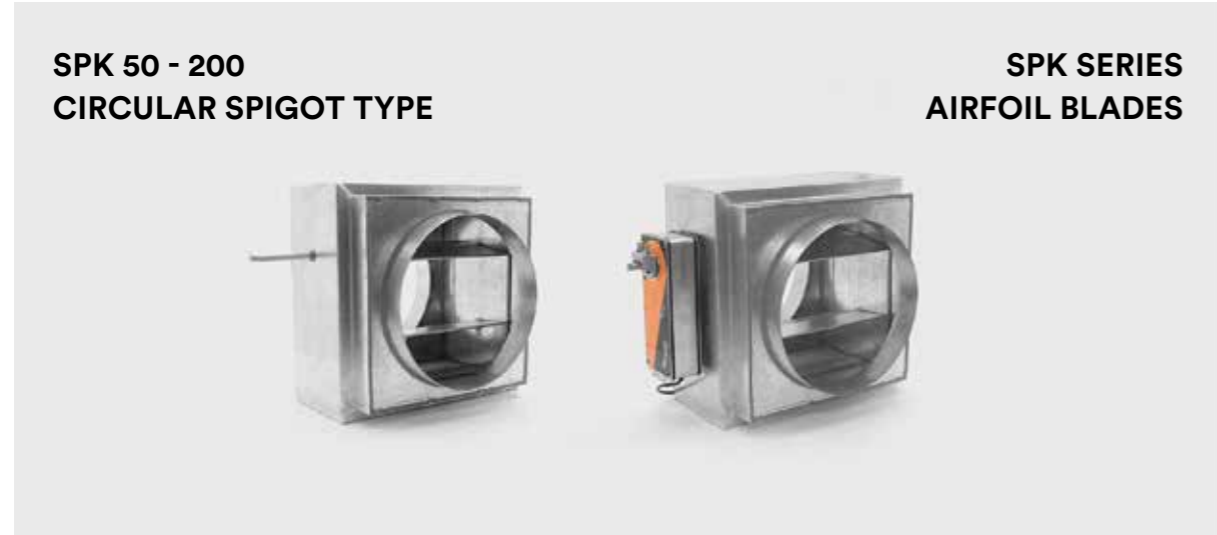


Opposed Blades (OB)

Standard Sizes - Single Section

Width (mm)	Height (mm)	No. of Blades
150	150	1
200	200	1
250	250	1
300	350	2
350	450	3
400	600	4
450	750	5
500	900	6
550	1050	7
600	1200	8
650	1350	9
700	1500	10
750	1650	11
800	1800	12
850		
900		
950		
1000		
1050		

CIRCULAR SPIGOT TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES



**SPK 50 - 200
CIRCULAR SPIGOT TYPE**

**SPK SERIES
AIRFOIL BLADES**

Description

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

The SPK 50 - 200 dampers are ruggedly built dampers, with a casing of robust assembly formed top hat sleeve to slide in ductwork. The blades are formed of double skin airfoil providing lower pressure drop in the open position for smooth airflow with reduced turbulence.

Blade seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame (Spigot Type):

180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with circular spigot duct connection.

Blades:

Airfoil shaped galvanized steel double skin construction, 16 gauge equivalent thickness, 250mm max. width.

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).

Axles and Control Shaft:

12mm diameter zinc plated mild steel.

Minimum Size:

150mm diameter, damper up to 200 mm high are single blade construction.

Maximum Size:

1000 mm diameter, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SPK 50 - 210

General construction as type SPK 50 - 200 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 50 - 220

General construction as type SPK 50 - 200 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).



CIRCULAR SPIGOT TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES

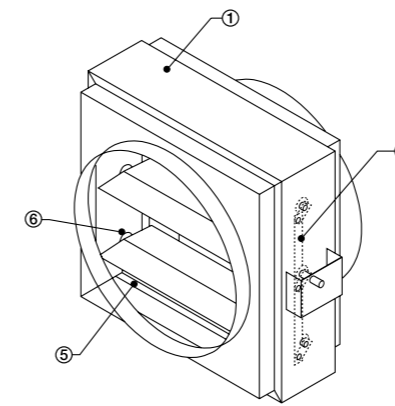
SPK SERIES [SPK 50 - 200, SPK 50 - 210, SPK 50 - 220]

Dimensions

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

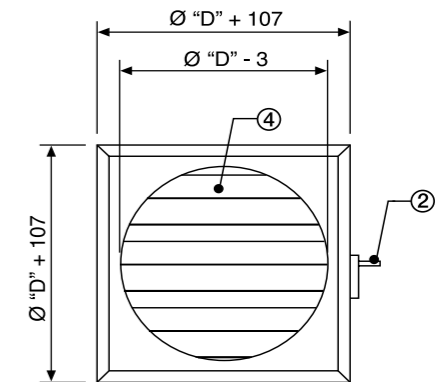
Circular Spigot Type

SPK 50 - 100, 110, 120

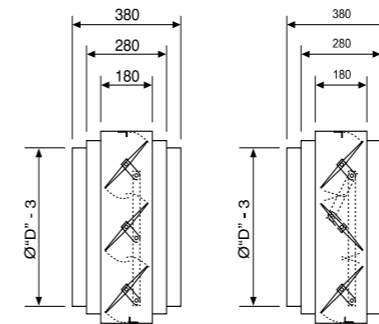


Circular Spigot Type

SPK 50 - 100, 110, 120



Circular Spigot Type, Parallel/Opposed Blades



Parallel Blades (PB)

Opposed Blades (OB)

Standard Sizes

Diameter (mm)	No. of Blades
150	1
200	1
250	2
300	2
450	3
600	4
750	5
900	6
1000	7

OVAL SPIGOT TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES



Description

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

The SPK 60 - 200 dampers are ruggedly built dampers, with a casing of robust assembly formed top hat sleeve to slide in ductwork. The blades are formed of double skin airfoil providing lower pressure drop in the open position for smooth airflow with reduced turbulence.

Blade seals and jamb (side) seals can be fitted for low leakage requirements. Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Frame (Spigot Type):

180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with ova spigot duct connection.

Blades:

Airfoil shaped galvanized steel double skin construction, 16 gauge equivalent thickness, 250mm max. width.

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).

Axles and Control Shaft:

12mm diameter zinc plated mild steel.

Minimum Size:

200 x 150 mm, damper up to 200 mm high are single blade construction.

Maximum Size:

1000 x 950 mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SPK 60 - 210

General construction as type SPK 60 - 200 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SPK 60 - 220

General construction as type SPK 60 - 200 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).



OVAL SPIGOT TYPE VOLUME CONTROL DAMPER WITH AIRFOIL BLADES

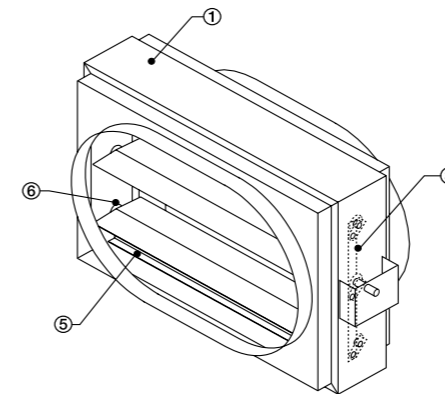
SPK SERIES [SPK 60 - 200, SPK 60 - 210, SPK 60 - 220]

Dimensions

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

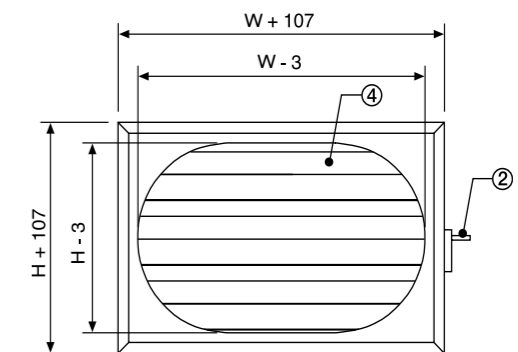
Oval Spigot Type

SPK 60 - 200, 210, 220

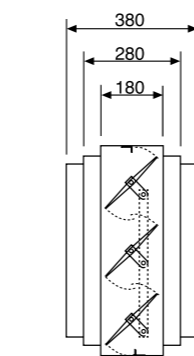


Oval Spigot Type

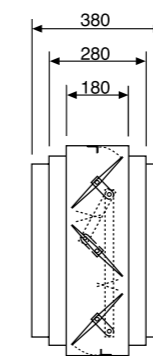
SPK 60 - 200, 210, 220



Oval Spigot Type, Parallel/Opposed Blades



Parallel Blades (PB)



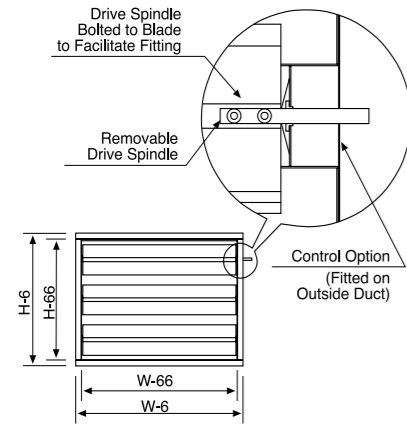
Opposed Blades (OB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
200	150	1
250	200	1
300	300	2
350	350	2
400	450	3
450	600	4
500	750	5
550	900	6
600	950	6
650		
700		
750		
800		
850		
900		
950		
1000		

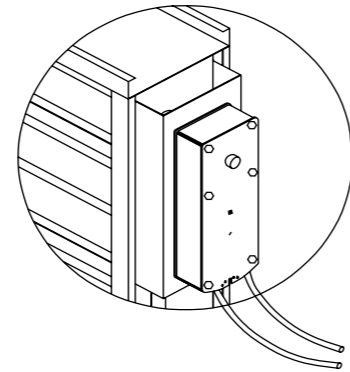
Removable Spindle

Sleeve type SPK 40



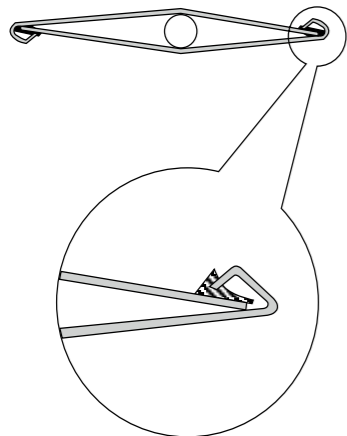
Mounting Bracket

Damper with Mounting Bracket for Actuator



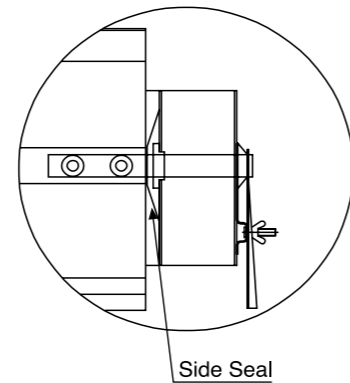
Blade Seal

Type S1



Side Seal (Jamb Seal)

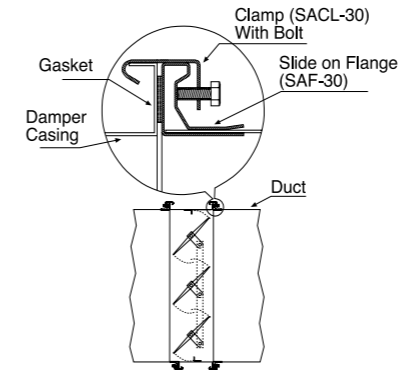
Type S2 (Stainless Steel Type 304)



Note:
Type S3 (Combination of S1 & S2)

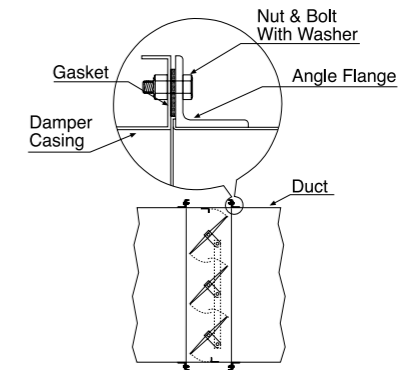
Flange Type SPK 30

Damper to Slide on Flange Connection

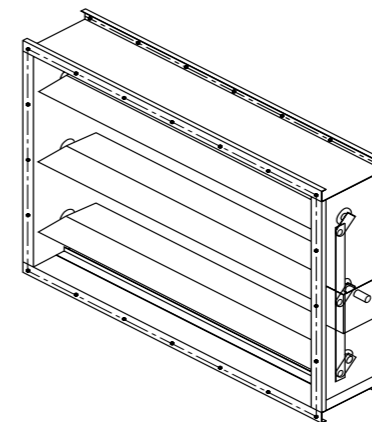


Flange Type SPK 30

Damper to angle Flange Connection



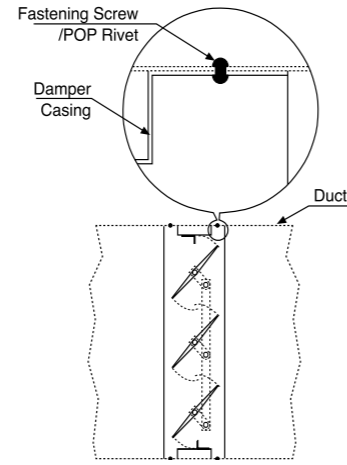
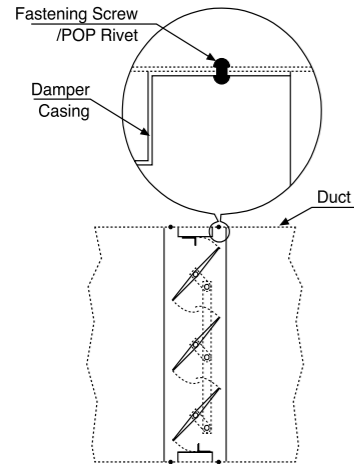
Flange Drilling Details



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	250	2	3
300	300	3	3
350	350	3	4
400	400	4	4
450	450	4	4
500	500	4	5
600	600	5	6
700	700	6	6
800	800	7	7
900	900	8	8
1000	1000	8	9
1100	1100	9	10
1200	1200	10	10
	1300		11
	1400		12
	1500		13
	1600		14
	1700		14
	1800		15

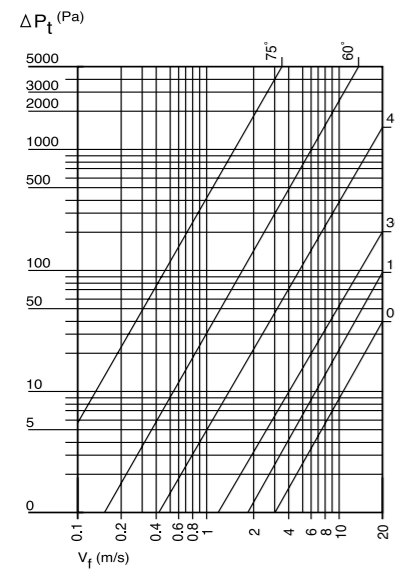
Sleeve type SPK 40

Circular type SPK50 & Oval type SPK60

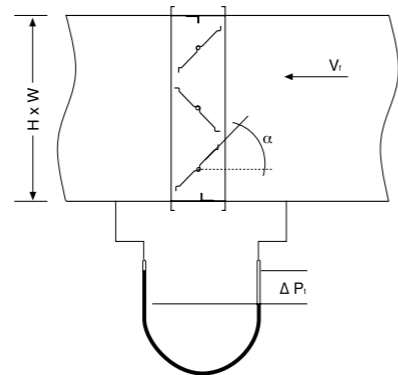


Technical Data

Pressure Loss



ΔP_t in Pa = Total Pressure Drop.
 V_f in m/s = Face Velocity based on A.
 A in m² = Damper cross-sectional area.



α = Blade angle, when $\alpha = 0^\circ$, blades are fully open.

Seals

Construction Variants	Description
S	Standard supply construction. No side seals or blade seals.
S1	Blade edge seal to seal blade to blade joint for low leakage characteristic.
S2	Side seals. Fitted to close gap between frame and blades.
S3	Combination of side seals & blade seals to close gap between frame and blades and blade seals to seal blade to blade joint for ultra low leakage characteristic.

Linkage

Construction Variants	Description
PB	Side linkage concealed in frame for parallel blade operation. Face linkage available (optional)
OB	External side linkage for opposed blade operation.

Bearings

Construction Variants	Description
B	Brass (Standard Supply)
B1	Construction sintered bronze oilite.
B2	Sintered bronze oilite.

Belimo Actuators

Code	Type/Model
A01	BF230 Spring Return
A02	BF24 Spring Return
A03	AF230 Spring Return
A04	AF230-S Spring Return With Limit Switch
A05	AF230 US Spring Return
A06	AF120 US Spring Return
A07	AF230-S US Spring Return With Limit Switch
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

Note:
 For Belimo Actuators details, models and voltages see pages 230 - 249 or contact SAFID.

REFERENCE DETAILS



Order Code SPK 30 - 200 - PB - S - B - R / 500 x 500 / A17

Frame Type

- *SPK30 = Flange (Standard Supply) _____
- SPK40 = Sleeve _____
- SPK50 = Circular Spigot _____
- SPK60 = Oval Spigot _____

Type

- *200 (Standard Supply) _____
- 210 _____
- 220 _____

Variants - Blade Operation

- *PB = Slide Linkage Parallel (Standard Supply) _____
- OB = Opposed Blade _____

Variants - Seals

- *S = None (Standard Supply) _____
- S1 = Blade Seals Only (175 °C) _____
- S2 = Side Seal (Jamb) _____
- S3 = Side Seal & Blade Seals (175 °C) _____

Variants - Bearings

- *B = Brass (Standard Supply) _____
- B1 = Sintered Bronze oilite (optional) _____
- B2 = Stainless Steel _____

* - Stands for Standard Supply

Actuator
(See Page 71)

Duct Size
Square or Rectangular
Dimensions 'W' x 'H'
mm Circular 'D' mm
dia. Flat oval 'W' x 'H'
mm. All damper spigots
are manufactured
down on duct size to
fit insideductwork
connections.

External Controls
*R = Right Hand
(Standard Supply)
L = Left Hand



ORDER REFERENCE DETAILS

Specifications

Airfoil blades volume control dampers designed for volume flow and pressure control or to isolate sections of ducting in ventilation systems, shall be of the SPK 200 series as specified.

Damper casing will be constructed of Ga. 16 galvanized steel. Blades shall be double skin (airfoil section blades of Ga. 22 galvanized steel (optional) with blade seals and/or side seals).

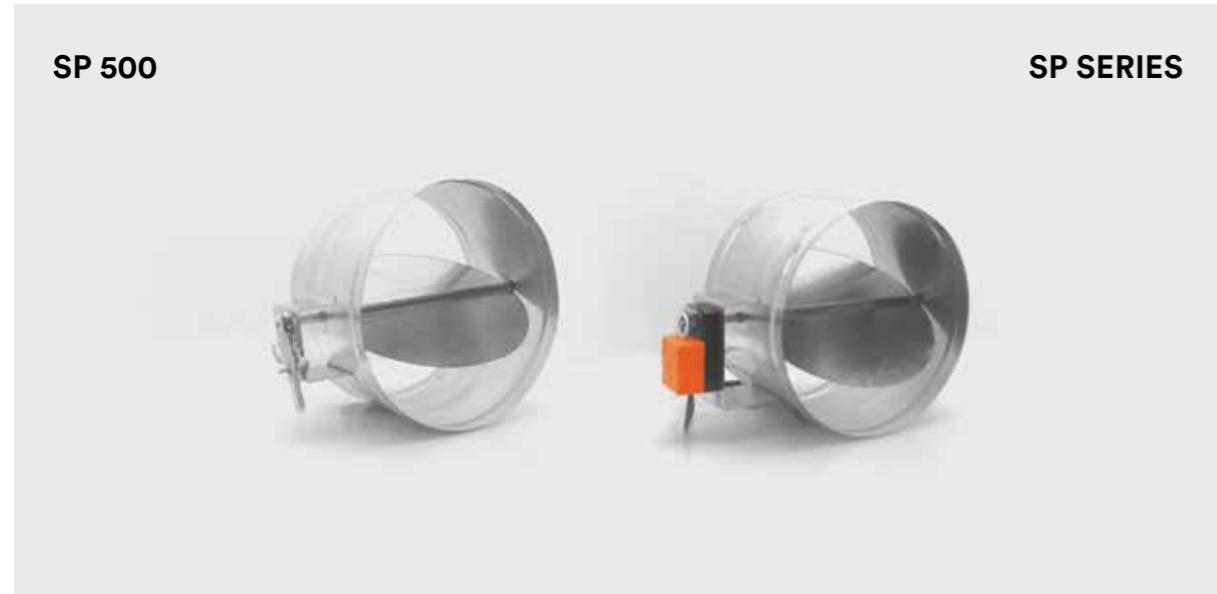
Shafts to be 12mm mild plated steel with brass or sintered bronze bearings. Blades to be connected by face or external linkage.

Parallel or opposed blade operation dampers; with manual or motorized operation. Limit switches and closed blade low leakage constructions are optional readily available.

Order Example

Standard
Make: SAFID
Type : SPK 30 - 200 - PB - S - B - R / 500 x 500
Qty: 1





Description

Casing and blades made from galvanized steel sheet.

Adjustable damper blade mounted on brass bushes with manually operated quadrant and position indicator. The damper is used for regulating air flow or as shutt-off damper when complete sealing against air flow is not required.

Dampers can be manual with locking quadrant or motorized with a wide range of electrical actuators readily available.

Standard Construction

Body:
Galvanized steel sheet.
Gauge 20 : from Dia. 80mm to 500mm.
Gauge 18 : above 500 Dia.

Blade:
Plain galvanized steel sheet.
Gauge 18: from Dia. 80mm to 500mm.
Gauge 16: above 500 Dia.
Galvanized steel perforated blade (optional).

Finish:
Mill Galvanized

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Control Shaft:
12mm diameter zinc plated mild steel.

Minimum and Maximum Size:
80mm Dia. damper up to 610 Dia. are single blade construction.

Note: Sizes above 610 Dia. are multiblade type.

SP 510
General construction as type SP 500 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SP 520
General construction as type SP 500 damper but with frame, blades shafts and blade to shaft fixing all from stainless steel (Grade 304).

SP SERIES [SP 500, SP 510, SP 520]

Dimensions

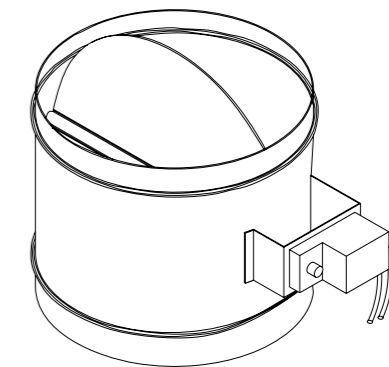
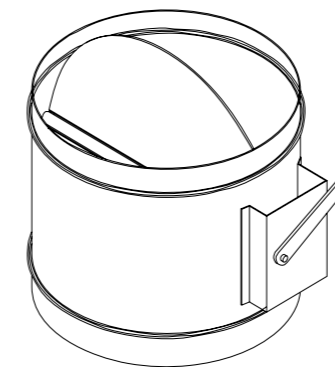
1 - Casing 2 - Blade 3 - Drive Shaft

Standard Construction

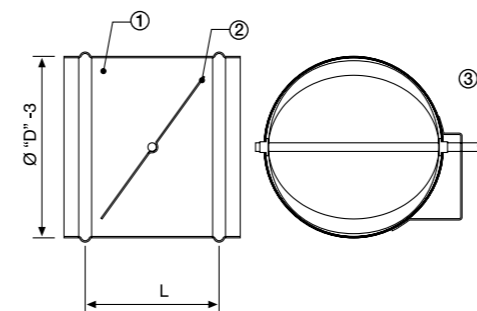
SP 500, 510, 520

Mounting Bracket

Damper with Mounting Bracket and Motor



Section Details



Standard Sizes

Dia (mm)	Dia (mm)
80	305
100	315
125	350
140	400
150	450
160	500
180	550
200	600
224	610
250	
280	

The end joints are also available with factory applied self sealing gaskets.



Description

Casing and blades made from galvanized steel sheet.

Adjustable damper blade mounted on brass bushes and blades with rubber seal, when complete sealing of air flow is required.

Dampers can be manual with locking quadrant and position indicator or motorized with a wide range of electrical actuators readily available.

Standard Construction

Body:
Galvanized steel sheet.
Gauge 20 : from Dia. 80mm to 500mm.
Gauge 18 : above 500 Dia.

Blade:
Gauge 14 (2mm thk) : 2 layers gauge 20 plain galvanized steel bolted together equivalent to gauge 14 with full circumference.

Finish:
Mill Galvanized

Case Bearing:
Brass bearing as standard.
Sintered bronze oilite (optional).

Control Shaft:
12mm diameter zinc plated mild steel.

Minimum and Maximum Size:
80mm Dia. damper up to 610 Dia. are single blade construction.

Note: Sizes above 610 Dia. are multiblade type.

SP 610
General construction as type SP 600 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SP 620
General construction as type SP 600 damper but with frame, blades shafts and blade to shaft fixing all from stainless steel (Grade 304).

SP SERIES [SP 600, SP 610, SP 620]

Dimensions

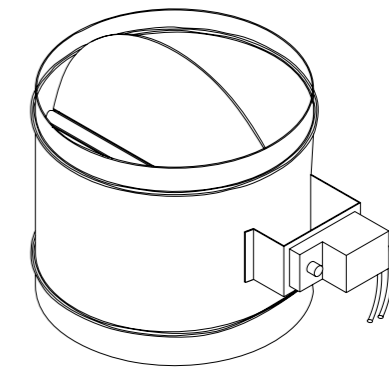
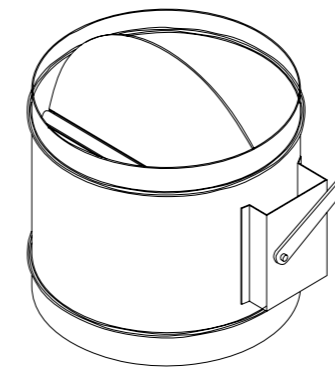
1 - Casing 2 - Blade 3 - Drive Shaft

Standard Construction

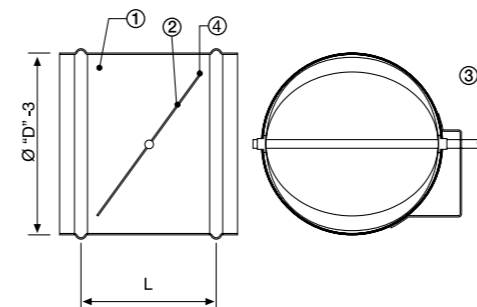
SP 600, 610, 620

Mounting Bracket

Damper with Mounting Bracket and Motor



Section Details



Standard Sizes

Dia (mm)	Dia (mm)
80	305
100	315
125	350
140	400
150	450
160	500
180	550
200	600
224	610
250	
280	

The end joints are also available with factory applied self sealing gaskets.



Description

Casing and blades made from heavy galvanized steel sheet.

Adjustable damper blade mounted on brass bushes with manually operated quadrant damper. The movement of the blade permits regulation from fully open to almost complete shut off.

Option:
Damper with Airtight Blade:
 Stopper end for airtight blade, code AT.

Dampers can be manual with locking quadrant and position indicator or motorized with a wide range of electrical actuators readily available.

Standard Construction

- Body:**
Galvanized steel sheet.
- Blades:**
Plain galvanized steel sheet gauge 10 (3.5mm thk)
- Finish:**
Mill Galvanized
- Case Bearing:**
Brass bearing as standard.
Sintered bronze oilite (optional).
- Control Shaft:**
12mm diameter zinc plated mild steel.

Minimum and Maximum Size:
 80mm Dia. damper up to 610 Dia. are single blade construction.

Note: Sizes above 610 Dia. are multiblade type.

- SP 710**
 General construction as type SP 700 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).
- SP 720**
 General construction as type SP 700 damper but with frame, blades shafts and blade to shaft fixing all from stainless steel (Grade 304).

SP SERIES [SP 700, SP 710, SP 720]

Dimensions

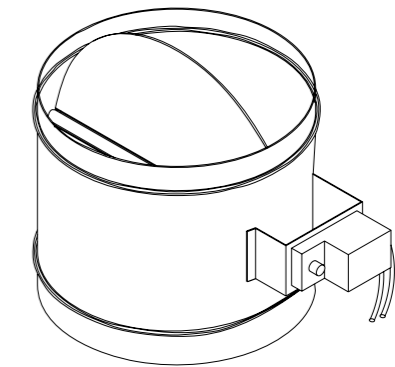
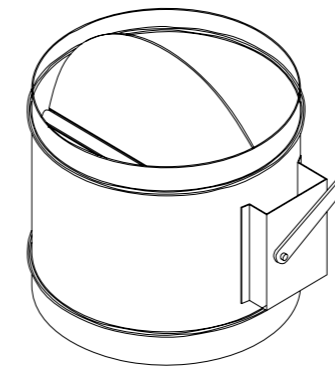
- 1 - Casing
- 2 - Blade
- 3 - Drive Shaft
- 4 - Stopper Ends for Airtight Blade

Standard Construction

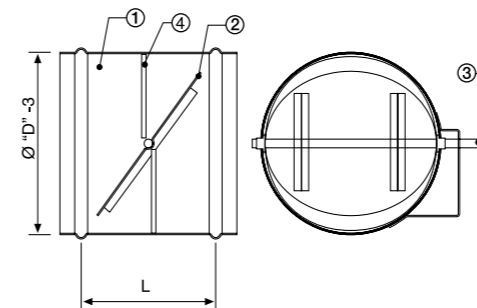
SP 700, 710, 720

Mounting Bracket

Damper with Mounting Bracket and Motor



Section Details

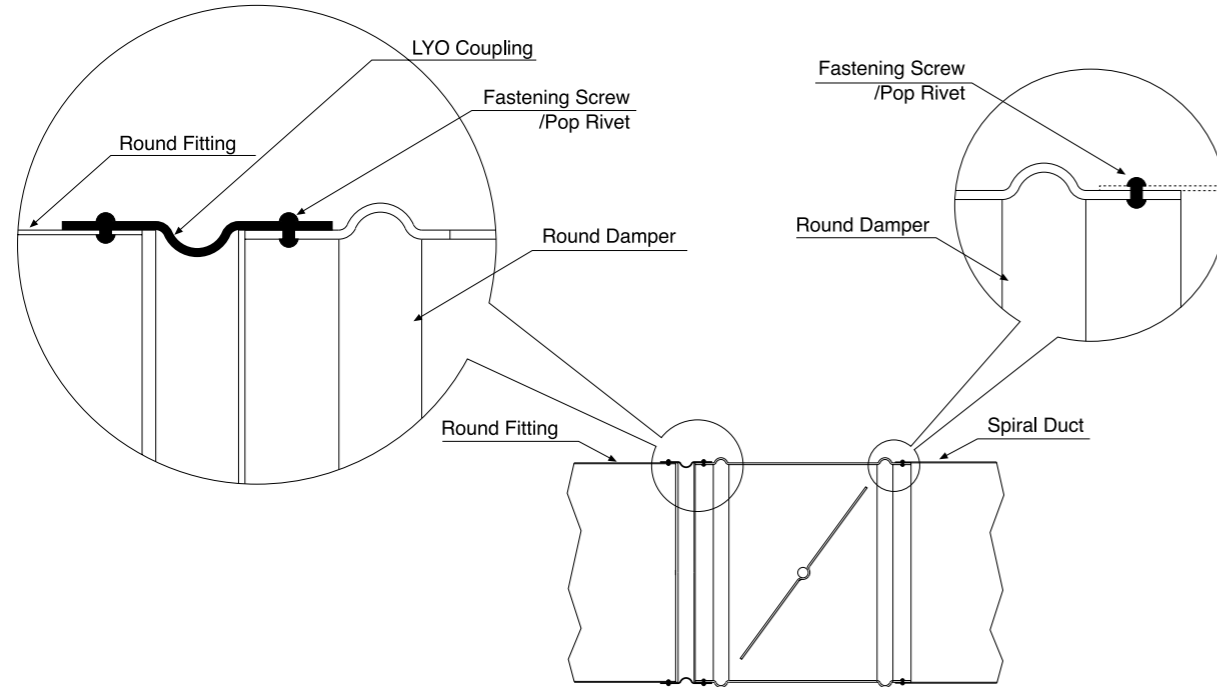


Standard Sizes

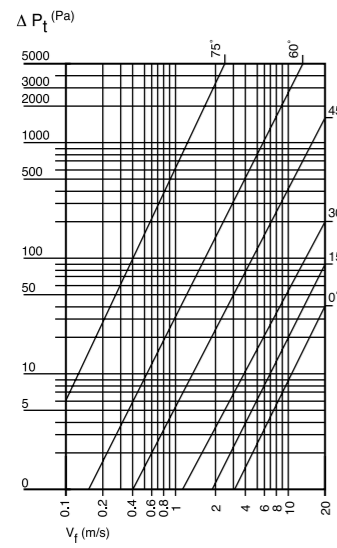
Dia (mm)	Dia (mm)
80	305
100	315
125	350
140	400
150	450
160	500
180	550
200	600
224	610
250	
280	

The end joints are also available with factory applied self sealing gaskets.

Installation Details



Pressure Loss



Order Reference Details

Order Example

Product Code: SP 500 - a

Type
 SP 500 _____
 SP 600 _____
 SP 700 _____

Diameter _____

For Motorized Dampers:
 Wide range of electrical actuators are readily available, see pages 226 - 245 or contact SAFID.

