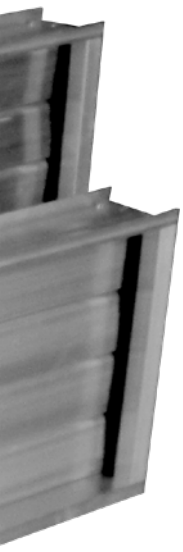
Air Flow Solutions

Product Catalog

MODULAR
FRAMING
SYSTEMS, INC.

APAPS AROSIC



Products

QUALITY CONSTRUCTION BUILT TO SIZE AND BUILT TO LAST.

Features

UNIQUE ALUMINUM CONSTRUCTION

INTERNAL GEARING SYSTEM

FIBERGLASS REINFORCED NYLON GEARS

LONG LASTING

LIGHT WEIGHT

BUILT TO SIZE

DURABLE

Opposed Blade Aluminum Damper

Materials Used

BLADE

Extruded aluminum, 4 in. nominal dimension
Thermoplastic rubber gasket

Material: Aluminum 6063
Treatment: T5
Finish: Mill

FRAME

U-shaped extruded aluminum, 5 in. nominal dimension

BLADE BLOCKS

Polyammide and fiberglass
Material: PA6 + GF 20%
Color: Black

GEARS

Copolymer polypropylene and fiberglass
Optional flame retardant V-5

CONTROLS

Square Control Pin 12mm / 0.5 in.
Optional die-cast aluminum handle

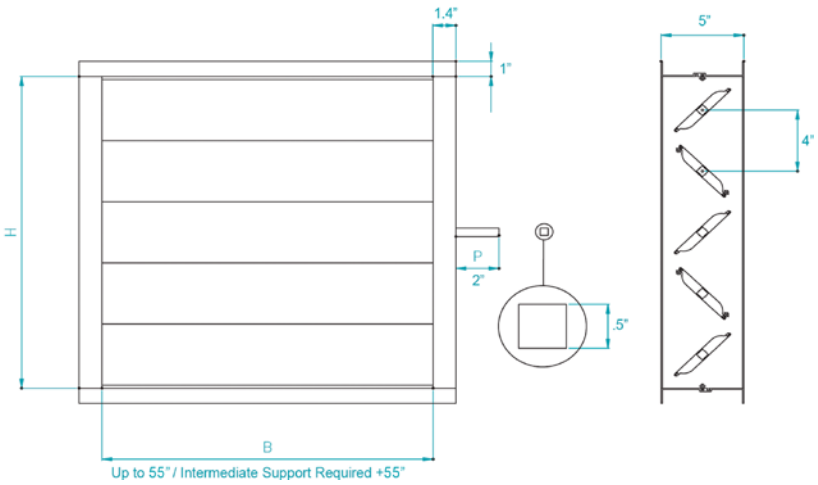
WORKING TEMPERATURE

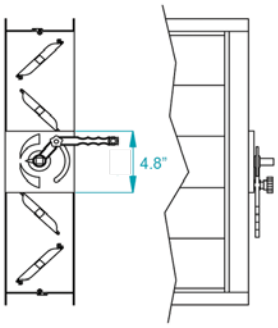
Minimum: -15 °C / 5 °F
Maximum: 80 °C / 176 °F

SINGLE BLADE MAXIMUM WIDTH

Without intermediate support: 55 in.

Construction

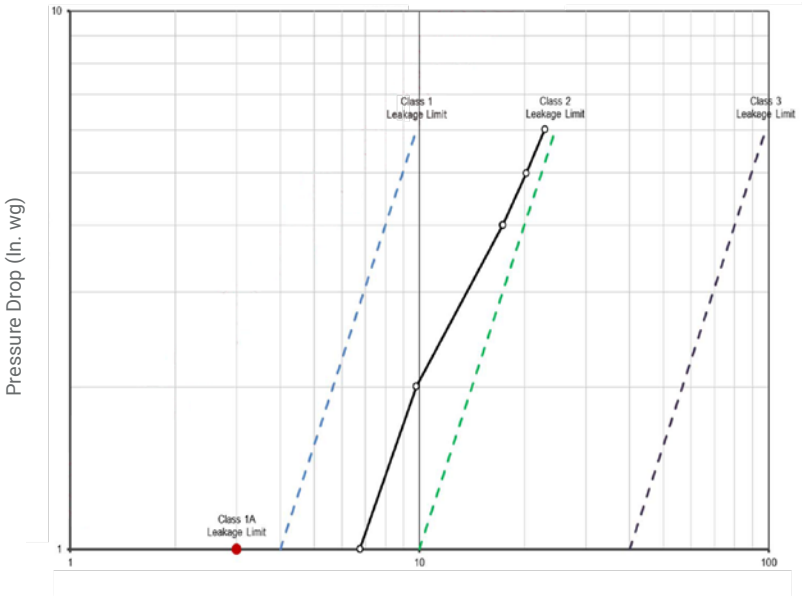




OPTIONAL MANUAL HANDLE PART NO. MPS93

Taller dampers may require additional drive shafts which can be linked together. Automated actuators may be used. Actuators not sold in house.

Performance Testing



AIR LEAKAGE

Product Name: Standard Damper

Damper Type: Volume Control

Blade Action: Opposed

Blade Orientation: Horizontal

Model Number: SD 55" x 36" h

Size: 55" x 36" x 5" nominal OD

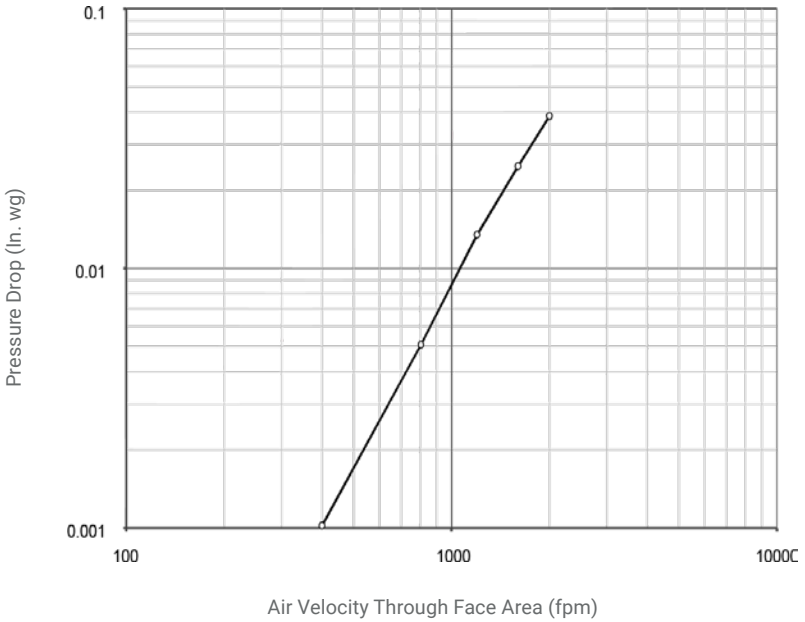
Face Area: 13.75 ft²

Flow Direction: Exhaust

Applied Torque: 5.75 Lb-in./ft²
(To seat damper during test)

Pressure drop tested per ANSI/AMCA Standard 500-D-07, Figure 5.4 Alternate.

Air Leakage based on operation between temperatures of 0–49 °C (32–120 °F).



PRESSURE DROP

Product Name: Standard Damper

Damper Type: Volume Control

Blade Action: Opposed

Blade Orientation: Horizontal

Model Number: SD 24" x 24" h

Size: 24" x 24" x 5" nominal OD

Face Area: 4 ft²

Flow Direction: Exhaust

Blade Position: Open

Pressure drop tested per ANSI/AMCA Standard 500-0-07, Figure 5.3.

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL ®
amca INTERNATIONAL

MEMBER

Backdraft Damper

Materials Used

BLADE

Extruded aluminum, 3 in. or 4 in.nominal dimension with thermoplastic rubber gasket

Material: Aluminum EN AW 6060
Treatment: T6
Finish: Mill

FRAME

U-shaped extruded aluminum, 5 in. nominal dimension

Material: Aluminum 6063
Treatment: T5
Finish: Mill

BLADE BLOCKS

Polyammide and fiberglass
Material: PA6 + GF 20%
Color: Black

WORKING TEMPERATURE

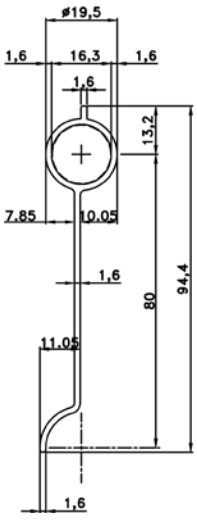
Minimum: -15 °C / 5 °F
Maximum: 70 °C / 158 °F

SINGLE BLADE MAXIMUM WIDTH

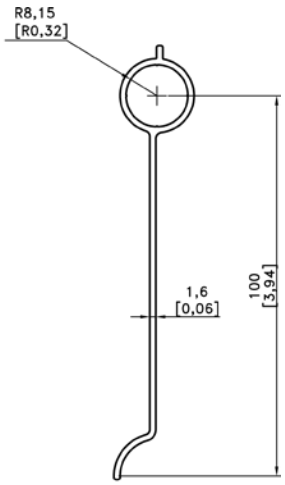
Without intermediate support: 55 in.

Blade Designs & Assembly

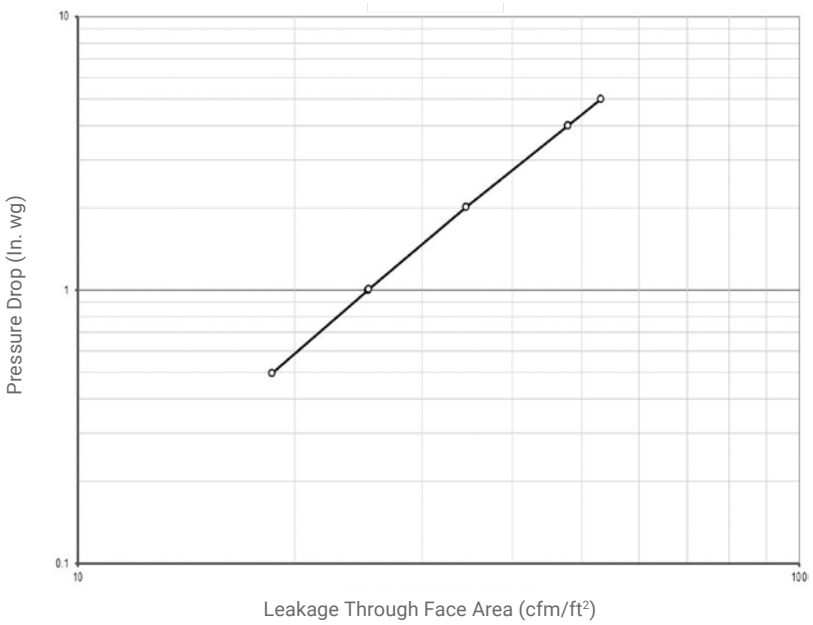
80MM / 3IN



100MM / 4IN



Performance Testing



AIR LEAKAGE

Product Name: Backdraft Damper

Damper Type: Backdraft

Blade Action: Parallel

Blade Orientation: Horizontal

Model Number: BDD 24" x 24" h ID

Size: 24" x 24" ID

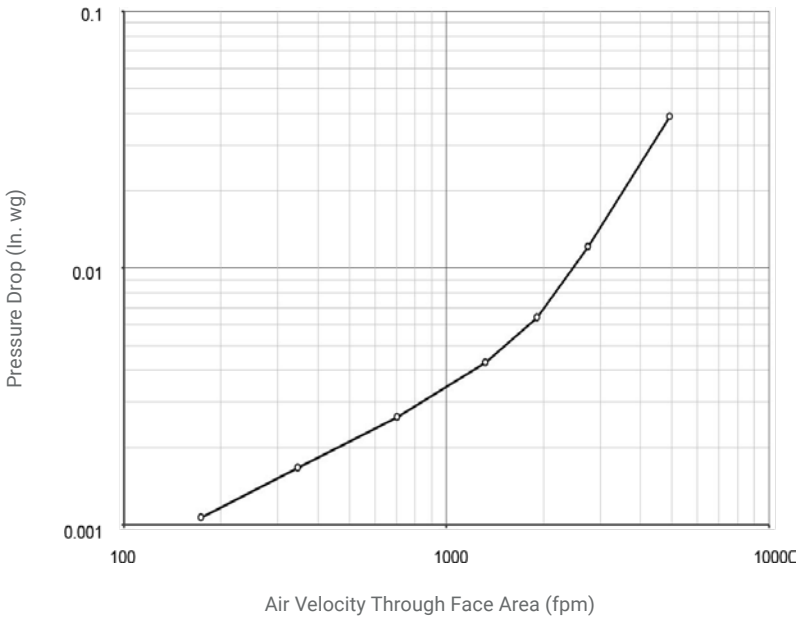
Face Area: 4 ft²

Flow Direction: Exhaust

Applied Torque: 0 Lb-in./ft²

Pressure drop tested per ANSI/AMCA Standard 500-D-07, Figure 5.4 Alternate.

Air Leakage based on operation between temperatures of 0–49 °C (32–120 °F).



PRESSURE DROP

Product Name: Backdraft Damper

Damper Type: Backdraft

Blade Action: Parallel

Blade Orientation: Horizontal

Model Number: BDD 24"x 24" h ID

Size: 24" x 24" ID

Face Area: 4 ft²

Flow Direction: Exhaust

Blade Position: Open

Pressure drop tested per ANSI/AMCA Standard 500-D-07, Figure 5.4.

Louver 50 mm

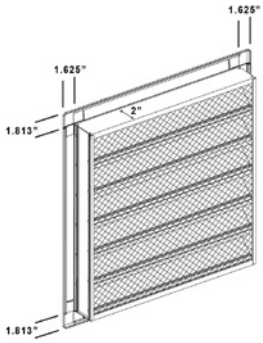
Construction

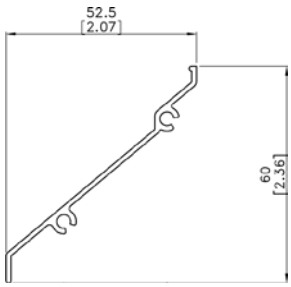
The Louver 50 matches great protection from the outside elements with an attractive and easy installation design. It features all aluminum construction which keeps it lightweight and long lasting. The 2" deep, “L” shaped frame facilitates easy installation in spaces where a 4" or 6" deep louver will not go.

FRAME
Nominal 2" deep, “L” shaped, aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish

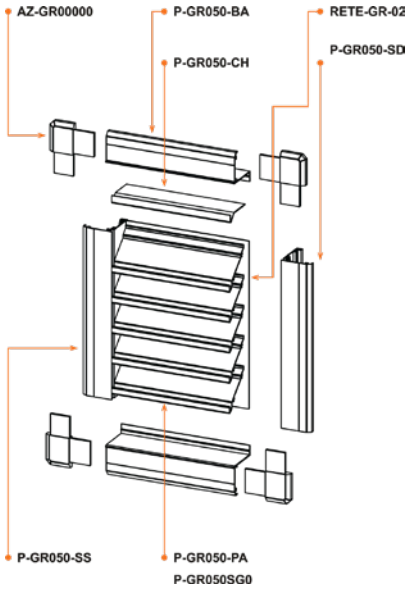
BLADES
Aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish, non-drainable, fixed at 40 degrees, spacing is approx. 2" centers

SCREEN
5/8" x .050, expanded aluminum, inserted into channel of perimeter frame





Materials Used



AZ-GR00000
Corners for louver

RETE-GR-02
Protection wire gauze

P-GR050-BA
Top/bottom profile for louver

P-GR050-PA
Blade profile for louver

P-GR050-SG
Blade profile without gutter for louver

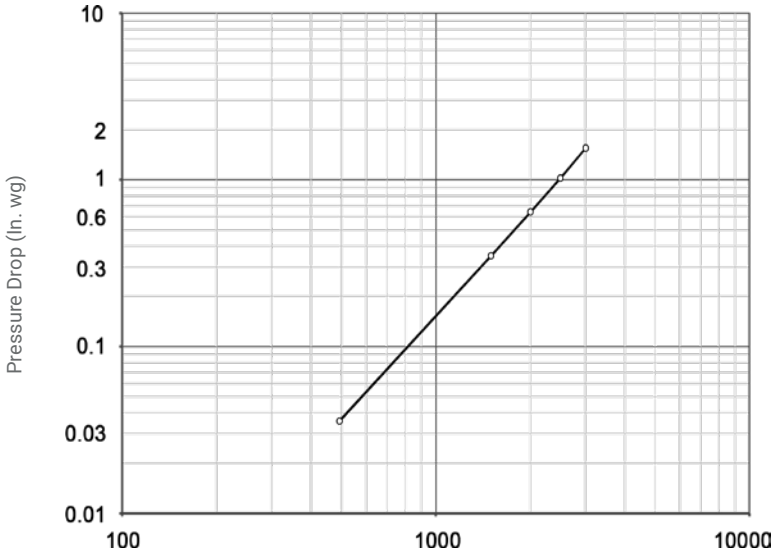
P-GR050-CH
Finishing profile for louver

P-GR050-SS
Left shoulder profile for louver

P-GR050-SD
Right shoulder profile for louver

PZGR050-00
Aluminium profile 25x2mm for louver more than 1000 mm length

Performance Testing



PRESSURE DROP

Product Name: Louver 50 mm

Louver Type: Non-Drainable

Blade Type: Fixed

Blade Orientation: Horizontal

Model Number: 48" x 48" OD

Size: 48" x 48" x 2" nominal OD

Free Area: 7 .81 ft²

Flow Direction: Intake

Pressure drop tested per ANSI/AMCA Standard 500-L-12, Figure 5.5.

Data corrected to standard air density.

Water Penetration

Test Results			
Det.	Q_s	$V_{free\ area}$	Net Weight (oz./sq ft.)
1	3531.2	452.1	0.005
2	3950.5	505.8	0.007
3	4329.6	554.4	0.014
4	4715.3	603.7	0.028

WATER PENETRATION

Product Name: Louver 50 mm

Louver Type: Non-Drainable

Blade Type: Fixed

Blade Orientation: Horizontal

Model Number: 48" x 48" OD

Size: 48" x 48" x 2" nominal OD

Free Area: 7.81 ft²

Beginning of water penetration tested per AMCA Publication 511 Section 8.3.2 based on AMCA measured free area: 521.4 fpm.

Water penetration tested per AMCA Standard 500-L-07 Water Penetration, Figure 5.6-6.3.

Free Area (ft²)

Height (Nominal OD - Inches) \ Width (Nominal OD - Inches)	12	18	24	30	36	42	48	54	60	66	72	78
12	0.23	0.4	0.57	0.75	0.92	1.09	1.26	1.43	1.61	1.78	1.95	2.12
18	0.43	0.75	1.07	1.39	1.71	2.03	2.35	2.67	3	3.31	3.63	3.95
24	0.63	1.1	1.57	2.04	2.5	2.97	3.44	3.91	4.38	4.85	5.32	5.79
30	0.83	1.45	2.06	2.68	3.3	3.91	4.54	5.15	5.77	6.39	7	7.62
36	1.03	1.79	2.56	3.33	4.09	4.85	5.63	6.39	7.16	7.92	8.69	9.45
42	1.23	2.14	3.05	3.97	4.88	5.79	6.72	7.63	8.55	9.46	10.37	11.28
48	1.43	2.49	3.55	4.62	5.68	6.73	7.81	8.87	9.93	10.99	12.05	13.11
54	1.63	2.84	4.04	5.26	6.47	7.68	8.9	10.11	11.32	12.53	13.74	14.95
60	1.83	3.18	4.54	5.9	7.26	8.62	9.99	11.35	12.71	14.07	15.42	16.78
66	2.03	3.53	5.04	6.55	8.05	9.56	11.08	12.58	14.1	15.6	17.11	18.61
72	2.23	3.88	5.53	7.19	8.85	10.5	12.17	13.82	15.49	17.14	18.79	20.44
78	2.43	4.23	6.03	7.84	9.64	11.44	13.26	15.06	16.87	18.67	20.47	22.27

Louver 50 mm DR

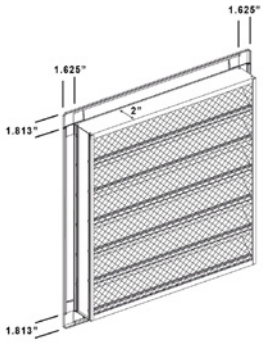
Construction

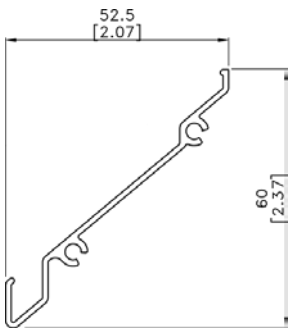
The Louver 50 DR has all the same benefits of our standard Louver 50 with the added benefit of a drainable blade. It features all aluminum construction which keeps it light weight and long lasting. The 2" deep “L” shaped frame facilitates easy installation in spaces where a 4" or 6" deep louver will not go.

FRAME
Nominal 2" deep, “L” shaped, aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish

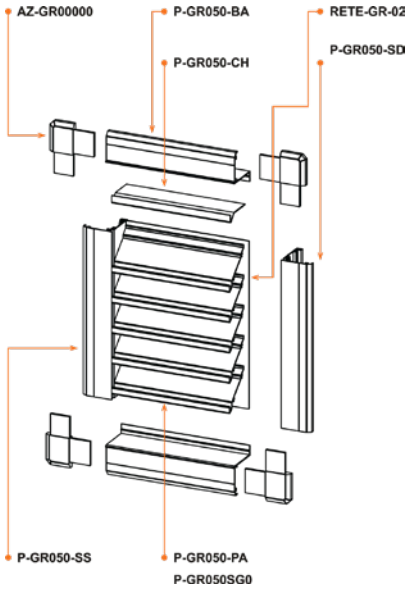
BLADES
Aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish, non-drainable, fixed at 40 degrees, spacing is approx. 2"centers

SCREEN
5/8" x .050, expanded aluminum, inserted into channel of perimeter frame





Materials Used



AZ-GR00000
Corners for louver

RETE-GR-02
Protection wire gauze

P-GR050-BA
Top/bottom profile for louver

P-GR050-PA
Blade profile for louver

P-GR050-SG
Blade profile without gutter for louver

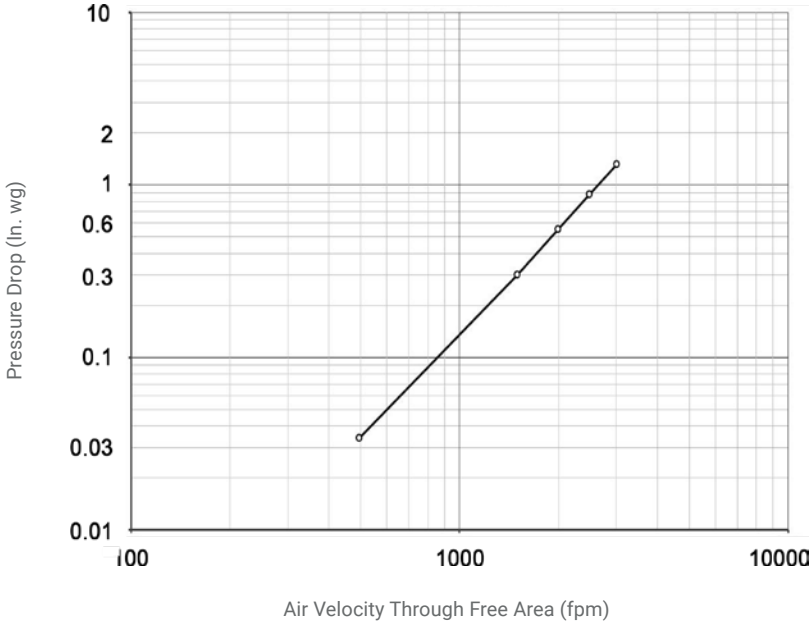
P-GR050-CH
Finishing profile for louver

P-GR050-SS
Left shoulder profile for louver

P-GR050-SD
Right shoulder profile for louver

PZGR050-00
Aluminium profile 25x2mm for louver more than 1000 mm length

Performance Testing



PRESSURE DROP

Product Name: Louver 50 mm DR

Louver Type: Drainable

Blade Type: Fixed

Blade Orientation: Horizontal

Model Number: 48" x 48" OD

Size: 48" x 48" x 2.25" nominal OD

Free Area: 7 .38 ft²

Flow Direction: Intake

Pressure drop tested per ANSI/AMCA Standard 500-L-12, Figure 5.5.

Data corrected to standard air density.

Water Penetration

Test Results			
Det.	Q_s	$V_{free\ area}$	Net Weight (oz./sq ft.)
1	3314.6	449.1	0.002
2	3708.3	502.5	0.002
3	5186.5	702.8	0.014
4	5933.5	804.0	0.469

Free Area (ft²)

Height (Nominal OD - Inches) \ Width (Nominal OD - Inches)	12	18	24	30	36	42	48	54	60	66	72	78
12	0.20	0.36	0.51	0.66	0.81	0.96	1.12	1.27	1.42	1.57	1.72	1.87
18	0.40	0.69	0.98	1.28	1.57	1.86	2.16	2.45	2.75	3.04	3.33	3.63
24	0.59	1.02	1.46	1.89	2.33	2.76	3.20	3.64	4.08	4.51	4.95	5.38
30	0.78	1.35	1.93	2.51	3.09	3.66	4.25	4.82	5.40	5.98	6.56	7.13
36	0.97	1.69	2.40	3.13	3.85	4.56	5.29	6.01	6.73	7.45	8.17	8.89
42	1.16	2.02	2.88	3.74	4.60	5.46	6.34	7.20	8.06	8.92	9.78	10.64
48	1.35	2.35	3.35	4.36	5.36	6.36	7.38	8.38	9.39	10.39	11.39	12.39
54	1.54	2.68	3.83	4.98	6.12	7.26	8.42	9.57	10.72	11.86	13.00	14.15
60	1.73	3.02	4.30	5.60	6.88	8.17	9.47	10.75	12.04	13.33	14.61	15.90
66	1.92	3.35	4.78	6.21	7.64	9.07	10.51	11.94	13.37	14.80	16.23	17.65
72	2.11	3.68	5.25	6.83	8.40	9.97	11.55	13.12	14.70	16.27	17.84	19.41
78	2.31	4.02	5.73	7.45	9.16	10.87	12.60	14.31	16.03	17.74	19.45	21.16

WATER PENETRATION

Product Name: Louver 50 mm DR

Louver Type: Drainable

Blade Type: Fixed

Blade Orientation: Horizontal

Model Number: 48" x 48" OD

Size: 48" x 48" x 2.25" nominal OD

Free Area: 7.81 ft²

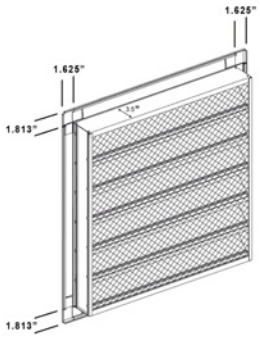
Beginning of water penetration tested per AMCA Publication 511 Section 8.3.2 based on AMCA measured free area: 521.4 fpm.

Water penetration tested per AMCA Standard 500-L-07 Water Penetration, Figure 5.6-6.3.

Louver 100 mm DR

Construction

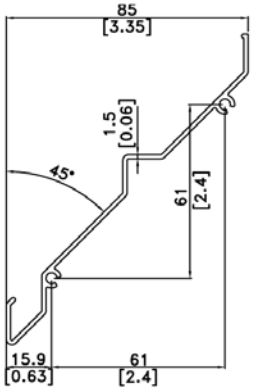
The Louver 100 DR has all the same benefits of our standard Louver 50 DR packaged in a nominal 4” deep frame. It features all aluminum construction which keeps it light weight and long lasting. The 3.5" deep “L” shaped frame facilitates easy installation in spaces where a 2" or 6" deep louver will not go.



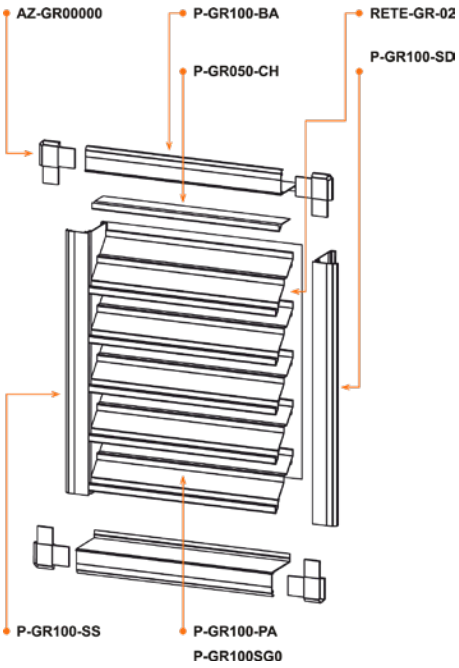
FRAME
Nominal 4" deep, “L” shaped, aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish

BLADES
Aluminum extrusion, EN AW 6060 T6, thickness of 0.06, mill finish, non-drainable, fixed at 45 degrees, spacing is approx. 4"centers

SCREEN
5/8" x .050, expanded aluminum, inserted into channel of perimeter frame



Materials Used



AZ-GR00000
Corners for louver

RETE-GR-02
Protection wire gauze

P-GR100-BA
Top/bottom profile for louver

P-GR100-PA
Blade profile for louver

P-GR100-SG
Blade profile without gutter for louver

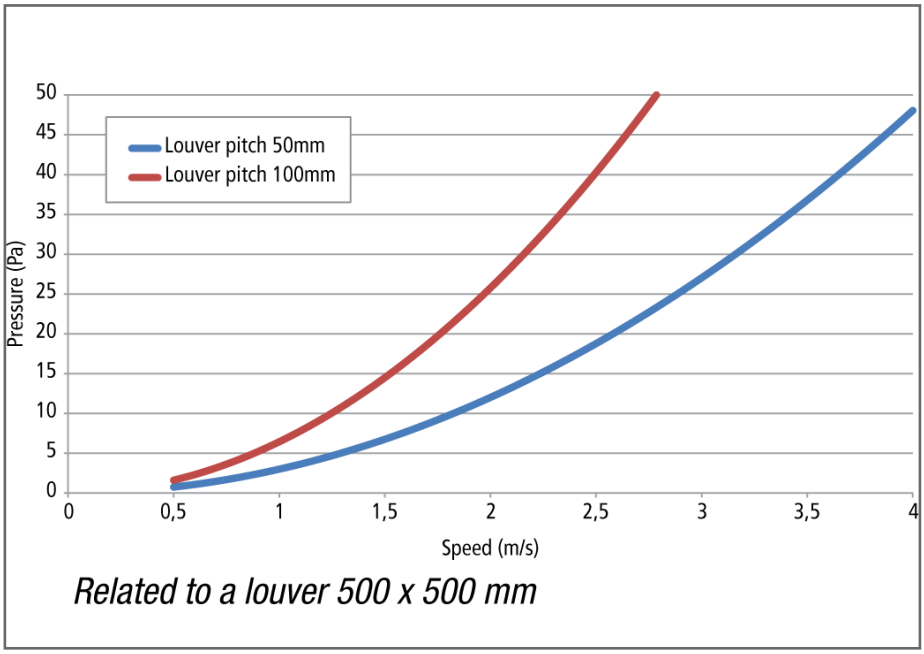
P-GR100-CH
Finishing profile for louver

P-GR100-SS
Left shoulder profile for louver

P-GR100-SD
Right shoulder profile for louver

PZGR100-00
Aluminium profile 25x2mm for louver more than 1000 mm length

Performance Testing



Related to a louver 500 x 500 mm

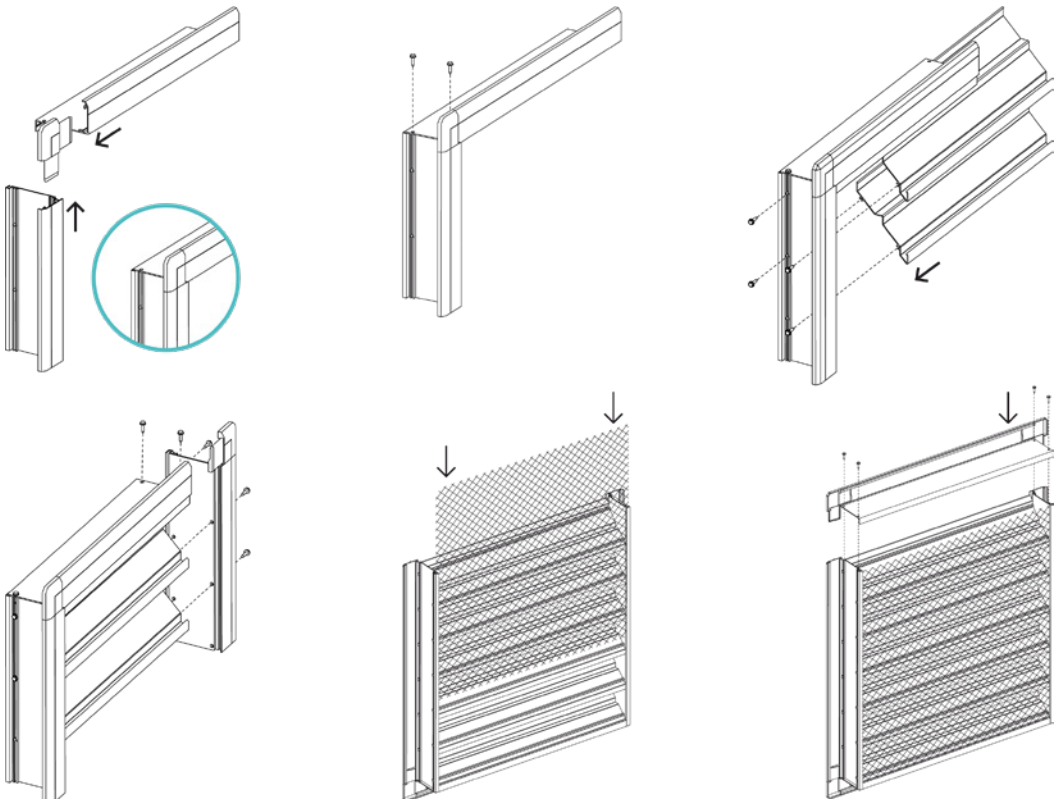
PRESSURE DROP

Results based on testing completed by APS Arosio in cooperation with services provided by Istituto Giordano.

A.P.S. AROSIO S.R.L.
Via Rogorino, 1 – 20060
Gessate, Milano – Italy

Istituto Giordano, S.p.A.
Via Gioacchino Rossini, 2
47814 Bellaria-Igea Marina (RN) - Italia

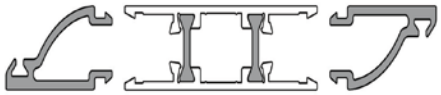
Assembly Diagram



Thermal Break Damper

What once controlled air flow only, now controls heat exchange as well.

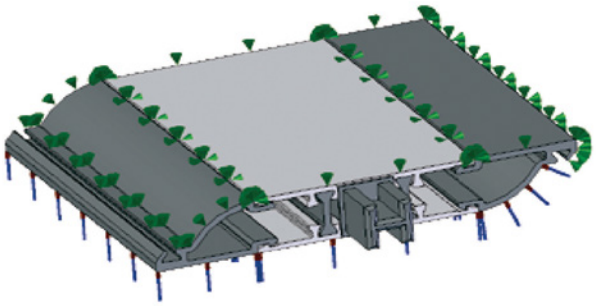
Our original damper design was centralized around air flow control, but the new blade design enables a reduction of thermal exchange on 90% of the damper's surface while maintaining the quality and benefits of the original design. The thermal break damper blade, which is the same size as the standard damper blade, is comprised of two sections of aluminum profile joined with PA6.6 profiles finished off with PVC gasketing. An automated special clamping process that prevents movement, shifting, or slipping during cutting and daily operation is used to join the components. This damper can be installed using the same simple installation procedures as its predecessor.



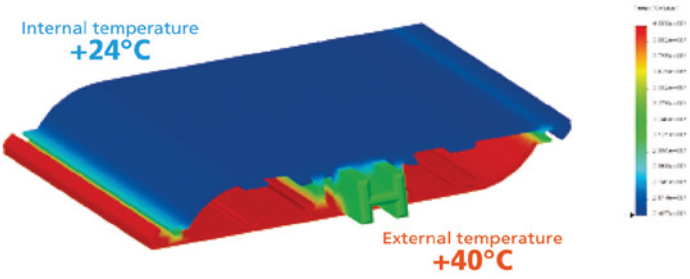
PS100TT-00
THERMAL BREAK BLADE

Damper with thermal break blade profile- pitch 100 mm/ 3.937 in.

Blade Design



The clamping system used to create the thermal break eliminates movement of the elements during the cutting or operation phases.



The thermal break design reduces thermal transfer between the internal and external surfaces of the damper blade.

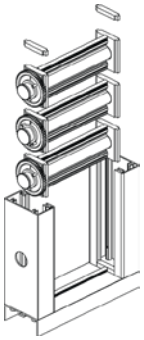
Micro Damper

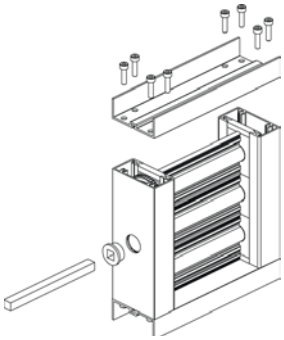
It is the ideal product for those who have little space but who don’t want to go without the top level performances of APS Arosio Dampers.

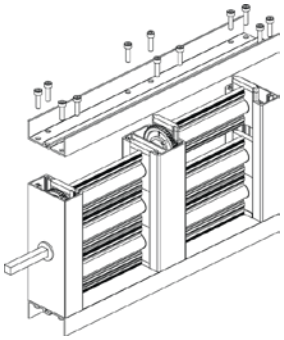
Carefully following the demand, APS Arosio develops diversified products to satisfy the most specific requests. The Micro Damper is one of these cases. With its 37mm / 1.45" blades and a 50 mm / 1.96" frame thickness, this damper offers a solution when limitations are imposed by little spaces. It has internal nylon gears, consistent with other APS Arosio dampers, which guarantees clean and safe operation.

Micro damper thickness 50 mm/ 1.96 in.

Assembly







Flexible Connection

Prevents leakage and tearing.

The APS Arosio flexible connection is designed to be attached between the fan/ blower and the discharge flange in an AHU to isolate vibration and reduce noise from within the system.

The air tight flexible joint is attached to the frame using Arosio stopper systems which do not require mechanical fasteners. The fabric is joined together at the seam using a thermal welder.

Construction

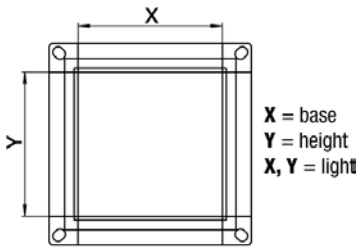
FRAME
Material: Aluminum EN AW 6060 Extrusion
Treatment: T6
Finish: Mill

DIE-CAST CORNERS
Material: ZAMA
Finish: Natural

FABRIC
Material: PVC
Color: Grey

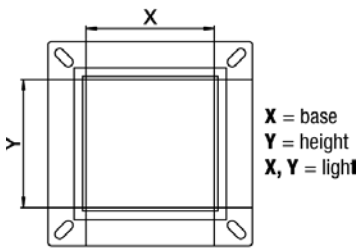
WORKING TEMPERATURE
Minimum: -25 °C / -13 °F
Maximum: 70 °C / 158 °F

30MM FRAME



External dimension = **X + 60 mm**
External dimension = **Y + 60 mm**

45MM FRAME



External dimension = **X + 89,2 mm**
External dimension = **Y + 89,2 mm**

Fabric Widths

171 mm / 6.73 in

121 mm / 4.76 in

71 mm / 2.79 in

Performance Testing

PRESSURE DROP

Results based on testing completed by APS Arosio in cooperation with services provided by Istituto Giordano.

A.P.S. AROSIO S.R.L.
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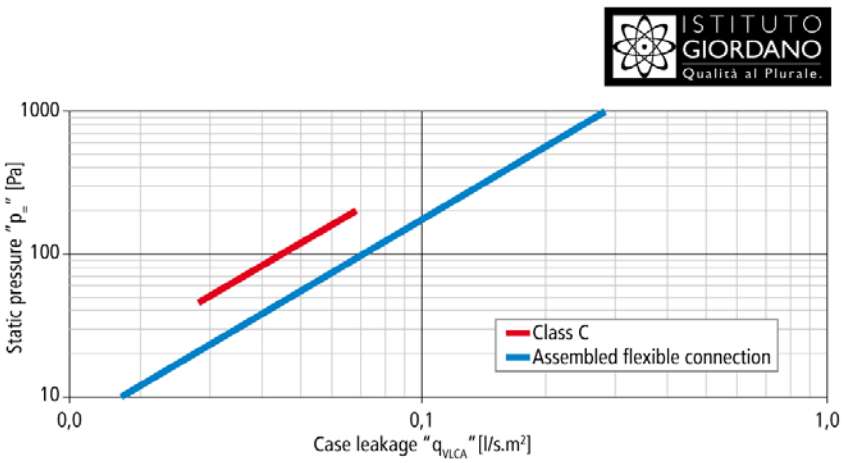
Gessate, Milano – Italy

Istituto Giordano, S.p.A.
Via Gioacchino Rossini, 2
47814 Bellaria-Igea Marina (RN) - Italia

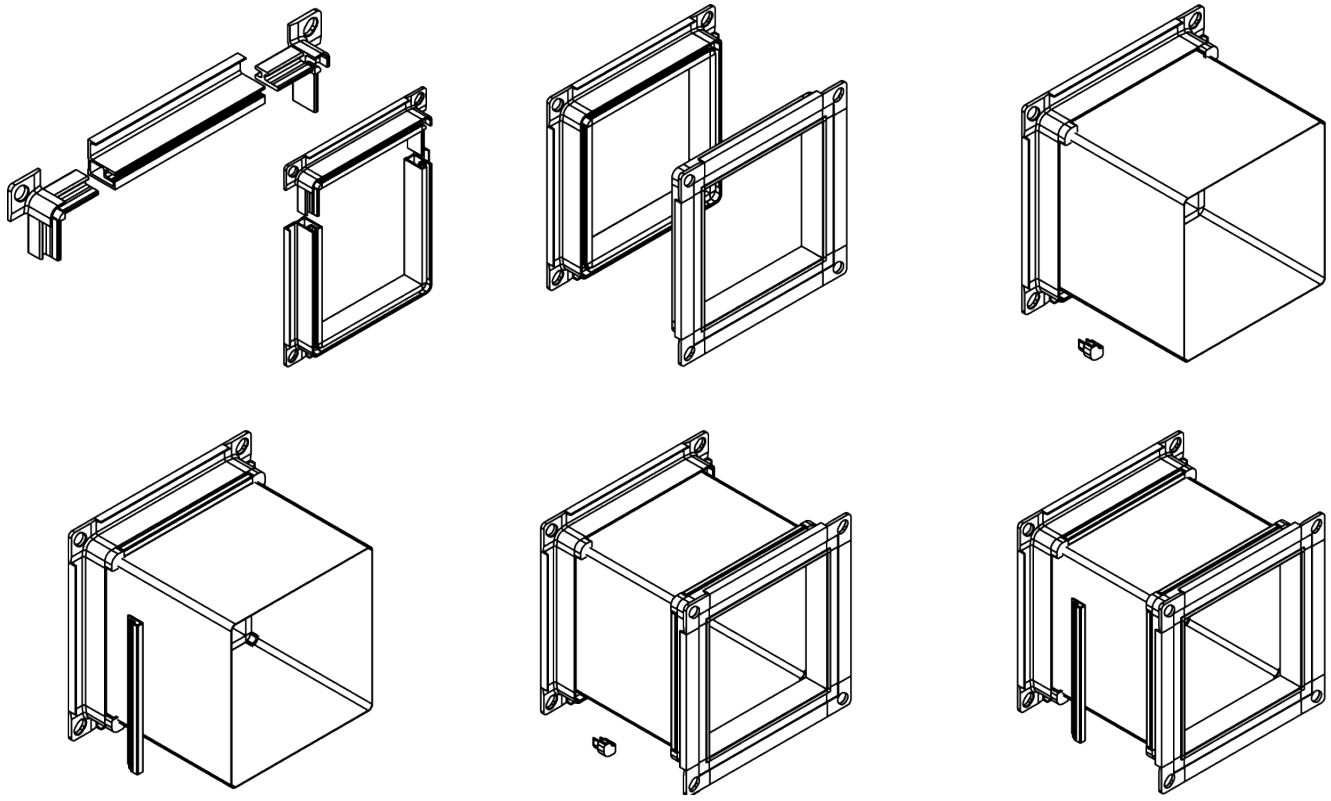
Test n. 263123
Certified Class C by Istituto Giordano Spa according to UNI EN 1751: 2003

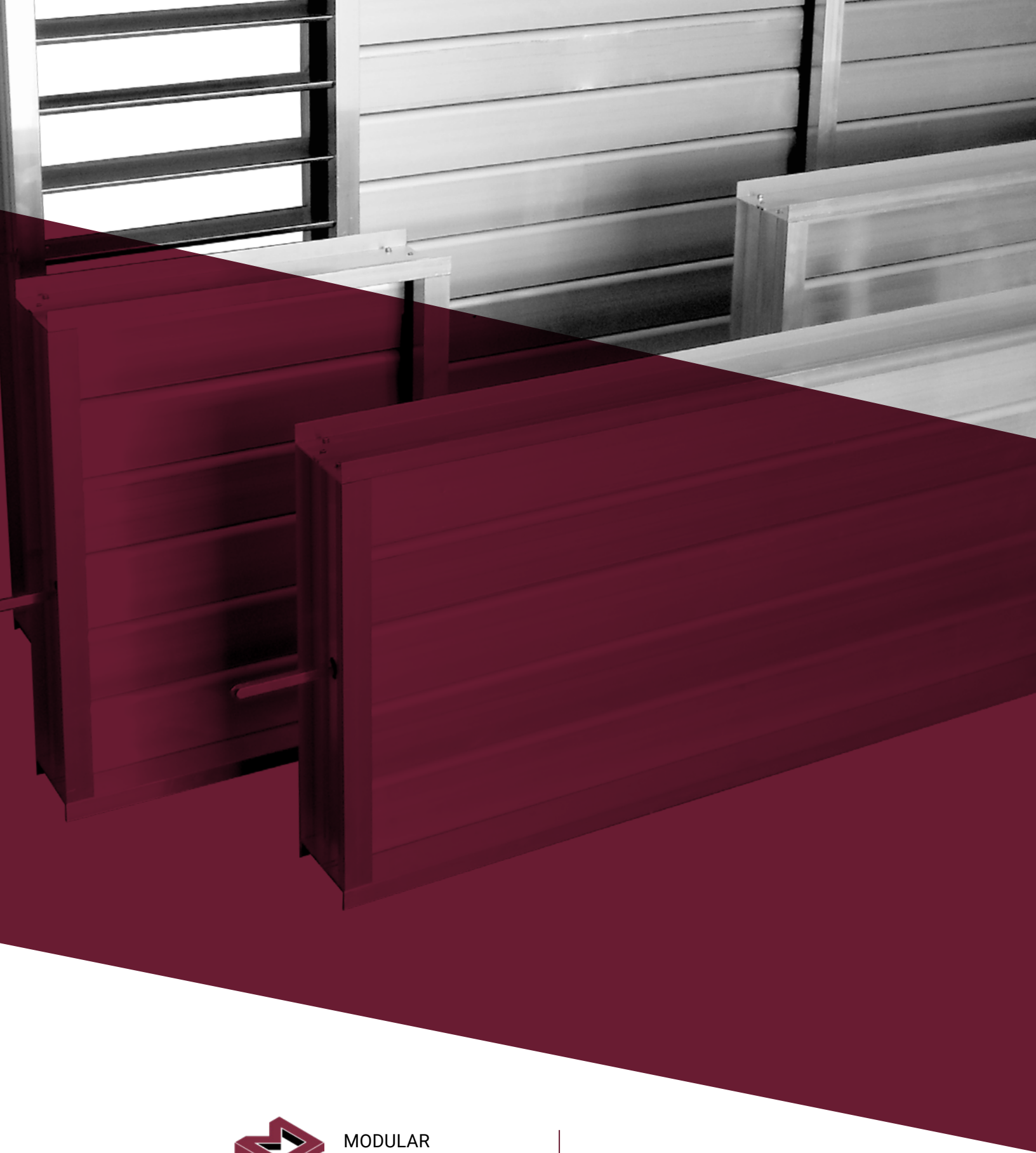
Test report No. 263123 dated 30.11.2009



Characteristic leakage "qVLCA"
Static pressure "ps" curve

Assembly Diagram





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