



COMMITMENT IS THE DIFFERENCE

FIREBLOCK DAMPERS

technical

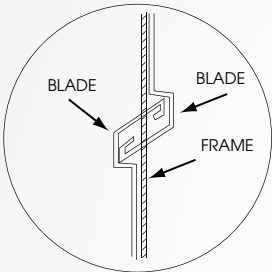
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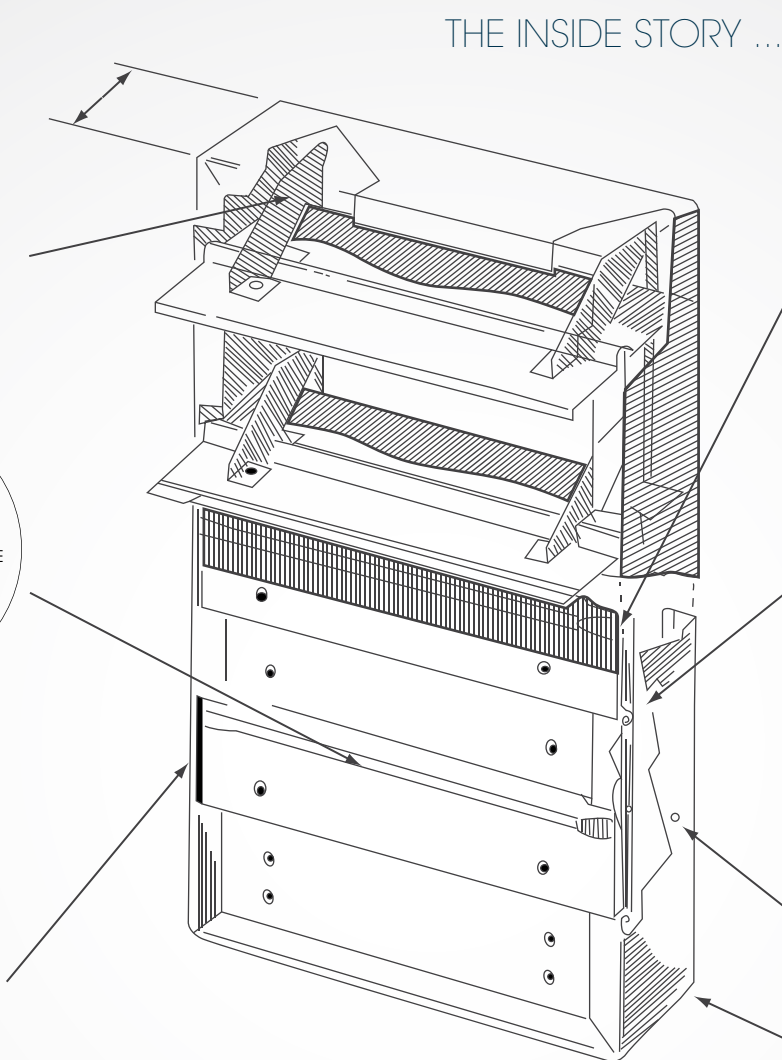
THE INSIDE STORY ...

LINKAGE POSITION AND COMPONENTS WERE CONCEIVED FROM MINIMAL AIR FLOW RESISTANCE WHILE PROVIDING PRECISION ACTION. STAINLESS STEEL BEARINGS ROTATE IN THE 14GA. STEEL BLADE PIVOT BRACKET.

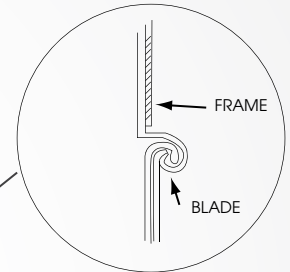


THE BLADE EDGE TO EDGE SEAL IS A DEAD AIR CHAMBER MADE BETWEEN TANGENTIAL ACTION SCALING TIPS ON EACH BLADE

FICTION - FREE BLADE END LAP SCALING BY SPECIAL OFFSET CRIMP DESIGN ALLOWS LOW LEAKAGE SEALING WITHOUT FRICTION WIPING SIDE SEALS.



DIE FORMED BLADE CORNERS COMPLETE BLADE FRAME LAP SEAL.



HIGH SURFACE AREA. EXTRA LONG INTERFITTING BEARINGS ARE FORMED FROM THE FRAME FLANGE AND ROLLED INTO THE BLADE SHAPE. THIS DESIGN CLIMINATES ELECTROLYSIS & EXTENDS LIFECYCLE OF THE BEARINGS. EXTRA LOW COST INSTALLATION BECAUSE FLAT WEB MOUNTING IS EASIER AND PROVIDES FOR TIGHT SEAL. USE OF COMMON FASTENERS FOR DAMPER/SLEEVE/MOUNTING ANGLE ATTACHMENT REDUCES INSTALLATION COSTS.

TABLE 13.1
UL555S LEAKAGE CLASSIFICATIONS

Leakage, $\text{ft}^3/\text{min}/\text{ft}^2 (\text{m}^3/\text{s}/\text{m}^2 \times 196)$

Classification	At 1.0 Inches Water	At 4.0 Inches Water
	(0.249 kPa)	(0.995 kPa)
0	0	0
I	4	8
II	10	20
III	40	80
IV	60	120

This page reprinted from page 9 of the UL - 555S Standard

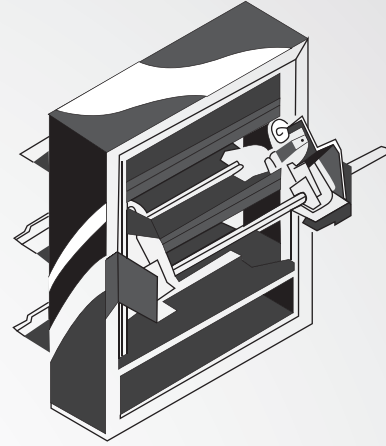
U.L. GENERIC MULLION

Throughout this publication you will see reference to increased U.L. size ranges through the use of a new "Generic Mullion". In Vertical Position Fire Damper applications, this mullion allows a U.L. installation which would normally exceed our size range. This steel tubular mullion CAN be fabricated by the installation contractor. For further details, contact our local factory representative or our factory

5000 SERIES

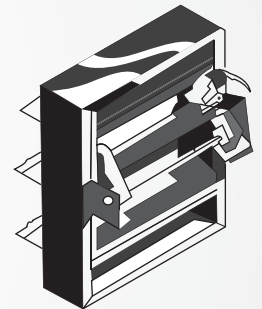
MODEL 5020- - RESETTABLE COMBINATION AIR/SMOKE/FIRE DAMPER WITH "SMART" OVERRIDE CAPABILITY

The model 5020-1 combination air/smoke/fire damper incorporates the reopenable/resettable bimetallic McCablen1 link in its operator to sense a rise in duct temperature. In an elevated temperature situation the link releases the damper blades & physically disconnects them from the actuator drive shaft, thus disallowing unwanted reopenability in the actual fire zone. The damper is fully reopenable and override-able, but only up to the chosen link-disconnect temperature: thus preventing a possible "hung" damper due to actuator failure when temperature exceeds its operational limit. The damper mechanically locks in the closed position via a patented knee action lock, then upon return to link reset temperature (controlled fire condition), the "smart link" can be automatically re-engaged for purging by cycling the actuator. This damper meets UL555 as a 1-1/2 or 3 Hr. rated fire damper. UL555S as a Class L Class II, Class III or Class IV smoke damper up to a temperature of 8500F. U133 Recyclable Link & UL873 Releasing Devices. This damper uses no petrochemical or otherwise degradable seal as a means of maintaining its ultimate Class III UL555S Leakage Rating. The 5020-1'S knee-action lock operator incorporated on all units over 9" in height allows the 5020-1 and all Prefco 5000 Series multiblade dampers to perform linear flow control superior to opposed blade dampers.



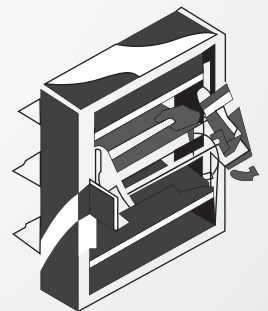
MODEL 5015 - PNEUMATICALLY SIGNALABLE COMBINATION AIR/SMOKE/FIRE/DAMPER

The combination air/smoke/fire damper also with smart override capability is based entirely on the model 5020-1. Model 5015 was developed for the quick release suppression gas market, namely Halon systems. Also perfect for highly volatile & combustible environments, the Model 5015 incorporates a pneumatic cylinder releasing device with tile McCabe link to provide instantaneous closure of the damper (less than 100 milliseconds) upon pneumatic signal (12-125 psi). CO2, nitrogen, air or many other gases can be used. Like the Model 5010, this can also be used to respond directly to a detector signal to close the damper, with actuator needed only for automatic reset/reopen. With a pneumatic damper actuator employed the entire assembly is non-electric and explosion proof. The 5010 can be used with a hand quadrant for reset and still be a UL555S leakage rated combination damper by utilizing the detector signable pneumatic link.



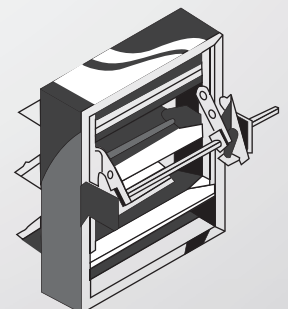
MODEL 5010 - ELECTRICALLY SIGNALABLE COMBINATION AIR/SMOKE/FIRE/DAMPER

The combination air/smoke/fire damper also with smart override capability is also based entirely on the 5020-1 above with a unique additional feature. The 5010 damper incorporates an electrically energised heating element laminated directly to the bimetallic McCabe link on the damper's operator. This (or an elevated temperature condition) releases the damper blades and physically disconnects them from the actuator drive shaft. Therefore, an actuator is only needed for automatic reset/reopen. The 5010 can be used with a hand quadrant for reset and still be a UL555S leakage rated combination damper by utilizing the detector signable electric link.



MODEL 5020 - ECONOMY

The Model 5020 combination air/smoke/fire damper is our basic model which incorporates the standard one time fusible link to respond to a rise in duct temperature. the cost contingency economical alterative Model 5020 utilizes all of the same technology as the 5020-1, 5010 & 5015 in blade design, bearing technology and leakage performance, and is reopenable only up to the chosen link-disconnect temperature For additional models with other design variations (no extended shaft), internal mount motors, retrofit space constraints) to suit more applications, please contact our local representative in your area, or contact us directly.



THE MCCABE LINK

Periodic full cycle safety systems testing can be run regularly; and the link you test is the link you leave in your fire/smoke/safety system. Fireblock dampers incorporate the McCabe reuseable fire link. This is a bimetallic heat responsive link which can be thermally, electrically or pneumatically operated. This unique link operates in the time, and at least 17% less air temperature than conventional links. The link releases at predetermined temperatures, but can be automatically reset when temperatures revert to normal.

ACCESSORIES

Electric motor for remote damper resetting after alarm condition or testing.

Cast alloy 1100 quadrant, for air volume setting and manual resetting.



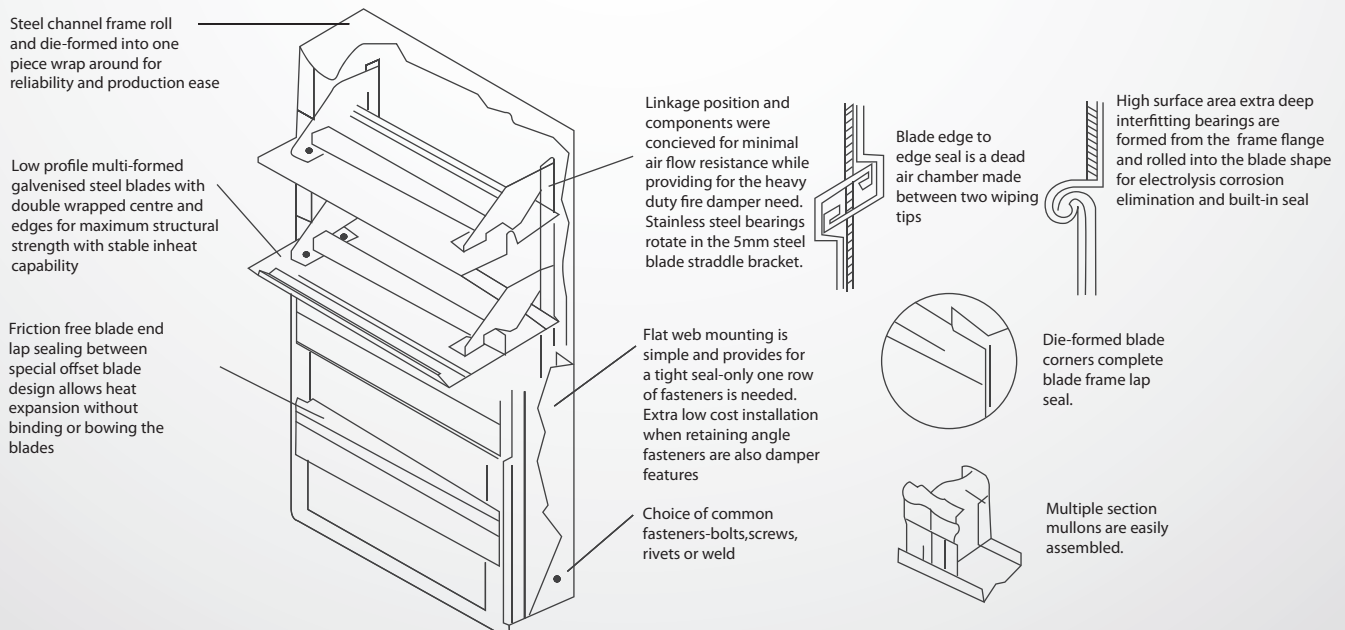
Pneumatic motor for remote damper resetting or closing.

ADD ON ACCESSORIES

- A. Microswitches
- B. Position Indicators
- C. Silicon Cables
- D. Terminal Box
- E. Quadrants CKLTR)
- F. Prefco Cable Drive (24V)

NOTES

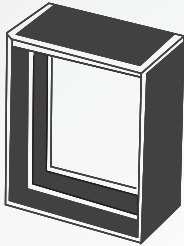
- A. Vertical Dampers higher than 1125 mm will have 2 operators/shafts.
- B. Horizontal Dampers higher than 840 mm will have 2 operators/shafts.
- C. Vertical Dampers exceeding 2000 x 1825 will be selected as 2 separate sections, bolted together on site.
- D. Same applies to horizontal dampers exceeding 1680 x 1574 as in note C.



5500 CURTAIN DAMPERS (VERTICAL)

TYPE A

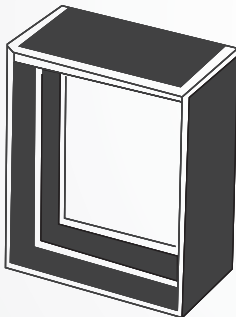
A dramatically different damper design (LPA: Low Profile A) Safe, efficient, easy to install and SABS approved



A new 4.5" blade, instead of the usual 2.5" blade, is combined with a new space saving blade configuration. The result: A fire damper with such a low profile that the blade stack barely enters the air stream. One damper design covers both type A & B applications.

TYPE B

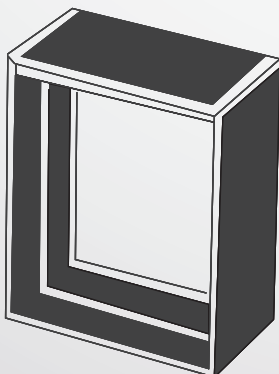
Low B type pressure loss (LPB: Low Profile B)



A new 4.5" blade, instead of the usual 2.5" blade, is combined with a new space saving blade configuration. The result: A fire damper with such a low profile that the blade stack barely enters the air stream. One damper design covers both type A & B applications.

TYPE C

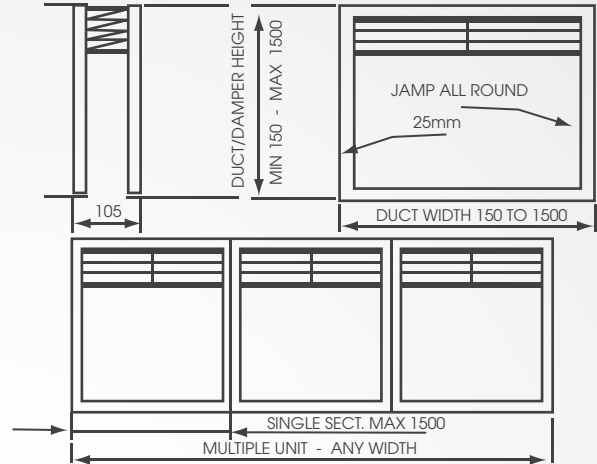
Combines the price of type B with the characteristics of type C (LPC: Low Profile C)



A damper design similar to LPB with the exception that the frame flange is longer to allow the contractor to make a flanged attachment to inside dimensions of the frame. The result is that very little of the blade stack and none of the frame intrudes into the air stream. Pressure loss differences between the new LPC and the conventional rectangular type C are barely noticeable, even at higher velocities of 6000 fpm.

TYPE A (VERTICAL)

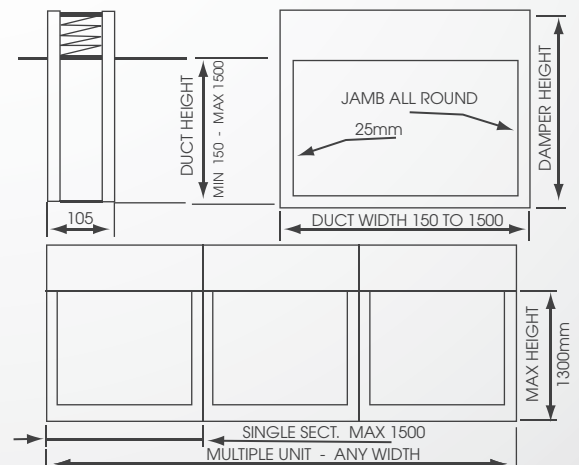
DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm
100	100	575	575	*1050	1050
125	125	600	600	*1075	1075
150	150	625	625	*1100	1100
175	175	650	650	*1125	1125
200	200	675	675	*1150	1150
225	225	700	700	*1175	1175
250	250	725	725	*1200	1200
275	275	750	750	*1225	1225
300	300	775	775	*1250	1250
325	325	800	800	*1275	1275
350	350	825	825	*1300	1300
375	375	850	850	*1325	1325
400	400	875	875	*1350	1350
425	425	900	900	*1375	1375
450	450	925	925	*1400	1400
475	475	950	950	*1425	1425
500	500	975	975	*1450	1450
525	525	1000	1000	*1475	1475
550	550	*1025	1025	*1500	1500



* Horizontal units available up to 1000 mm in height or width only.

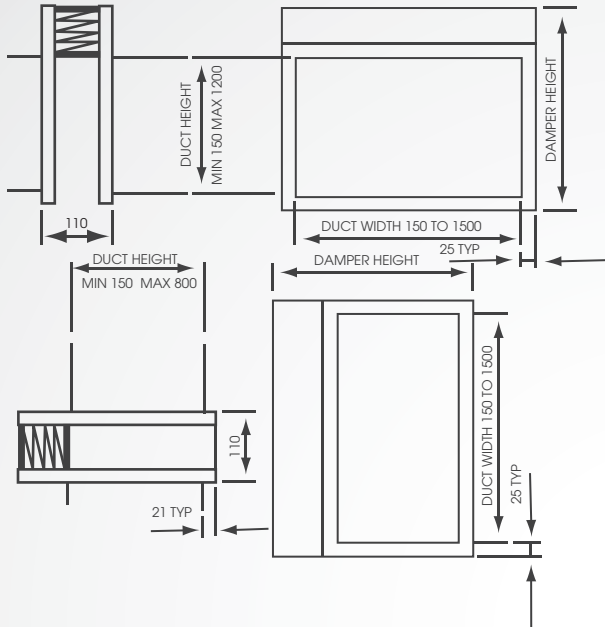
TYPE B (VERTICAL)

DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm
100	100	500	500	*900	900
125	125	525	525	*925	925
150	150	550	550	*950	950
175	175	575	575	*975	975
200	200	600	600	*1000	1000
225	225	625	625	*1025	1025
250	250	650	650	*1050	1050
275	275	675	675	*1075	1075
300	300	700	700	*1100	1100
325	325	725	725	*1125	1125
350	350	750	750	*1150	1150
375	375	775	775	*1175	1175
400	400	800	800	*1200	1200
425	425	*825	825	*1225	1225
450	450	*850	850	*1250	1250
475	475	*875	875	*1275	1275
				*1300	1300



* Horizontal units available up to 800 mm in height or 1000 mm width only.

TYPE C (VERTICAL)



DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm	DUCT HEIGHT mm	DAMPER HEIGHT mm
100	150	575	625	*1050	1100
125	175	600	675	*1100	1150
150	150	550	550	*950	950
175	225	650	700	*1150	1200
200	250	675	725	*1150	1200
225	275	700	750	*1175	1250
250	250	650	650	*1050	1050
275	325	750	800	*1225	1275
300	350	775	825	*1250	1300
325	375	800	850	*1275	1325
350	400	825	875	*1300	1350
375	425	850	900	*1325	1375
400	450	875	925	*1350	1400
425	475	900	950	*1375	1425
450	500	925	975	*1400	1450
475	525	950	1000	*1425	1475
500	550	975	1025	*1450	1500
525	575	1000	1050	*1475	1525
550	600	*1025	1075	*1500	1550

* Horizontal units available up to 1000 mm in height or width only

PREFCO

PREFCO TECHNOLOGY PASSES THE GRUELING 4-HR.AUSTRALIAN TEST

1

The largest Multiblade Combination Damper (108"x96") ever tested in one multiple assembly is shown with all sections open, prior to ignition. the top and bottom three sections are jackshaft coupled together as one operating assembly each with a direct release, UL33 linked operator at the right side.

2

As massive gas jets are ignited, the rising heat causes the top assembly to close first. The fine wires you may see lead to thermocouples fastened to the blades.

3

The elapsed time clock shows 1Q minutes into the test. Already some galvanising has burnt off.

4

4 With elapsed time showing 1 hour, 45 minutes a definite red glow can be seen. Note: at this time the domestic U.L. 1 112 hour fire test would have been over. No other combination A/S/F damper available in the U.S. (to our knowledge at time of going to print) has been fire tested beyond this point.

5

The 3-hour point shows how expansion of the hot side causes a bowing into the fire.

6

Prefco Technology Passes! 4-hours elapsed, ending near 2300 F with a 72 sq. foot damper assembly intact and still presenting a barrier to flame passage.

Mr Francis McCabe, Prefco President, has test proven - with over 30 years of fire experience - that the internal gradients produced through the thickness of heavy gauge blade components cause excessive warping, resulting in product failure during extended fire exposure.

IMPORTANT NOTE TO ENGINEERS:

This Australian 4-hour standard is the most stringent and demanding test we know of. After the 4-hour exposure

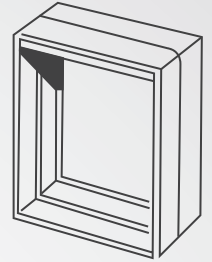
The entire damper assembly is closely inspected for cracks due to warping. If any crack greater 9 mm are found on the unit, it would fail. Prefco passed easily! It is interesting to compare the UL 555 1-112 test standard which allow 3/4" gaps to occur on dampers and still pass. Is it not comforting to know that when you use any model in the 5000 A/S/F Series as your design specification, that you have this kind of technology behind you?

5500 WIDE BLADE SERIES

- **The only Damper with 'Leakage' & 'Dynamic' UL Ratings.**
- **The only Damper with Reseatable "McCabe" Link.**
- **The only Damper with Streamliner Option.**
- **The only Damper with single row 'Common' Fasteners**

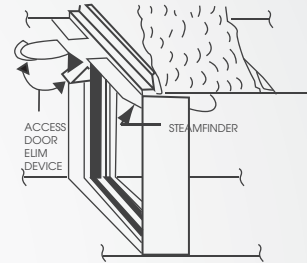
MODEL E6 LPB

This is the premier latest technology "Wide Blade" Curtain Fire Damper Line! While many competitors in this arena are making every effort to "cheapen" the Curtain damper, PREFCO uses Superior Technology to offer higher quality, wider-stronger integral sleeved dampers, at THE SAME PRICE AS THE CHEAP ONES. HOW? See the following page for a full technical explanation. NEW STREAMLINER simple aerodynamic blade flow baffle for 'A' price and installation with better than 'B' airflow performance. ACCESS DOOR ELIMINATOR compact manual cable operated release/reset device employing the McCabe Link for UL approved damper operation and elimination of the need for access doors.



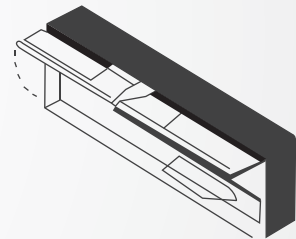
MODEL SF-LPB HEAVY ANGLE FRAME

This is the flagship of our lowest cost - latest technology "wide Blade" Curtain Fire Damper Line! The SF-LPB exhibits exactly the same flow performance as the LPB, but employs our 16 gauge frame, which eliminates the "bowing" problem of the typical low cost designs. Because of its 16 gauge heavy angle type frame, this damper is ideal for installer/jobsite sleeving. Since the heavy gauge frame can be easily welded (even stick welded), this design requires only one common row of fasteners, attaching the damper sleeve & mounting angles.



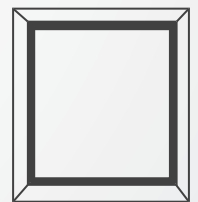
MODEL 5650F (RECTANGULAR SINGLE BLADE)

The Model 5650F is our "Wide Blade" technology damper for small opening. Because it employs a single, end pivot blade which tucks up completely behind the same frame flange, even 3" and 4" dampers can be provided with very high free area. The damper frame on small units presents only a 3/8" intrusion into the opening. This unit is highly recommended for opening sizes of 7" or below, as long as the blade depth can be accommodated. See inside page 13 for 5600F chart at end of catalogue



MODEL LPC

This is the 'C' PERFORMANCE damper of the "Wide Blade" Curtain Fire Damper Line. Instead of a variable "Cap Size" plus other oversizing additions, our PLC model is conveniently 1" oversize all the way around, (I.E. all ducts are oversize 2" x 2" - PERIOD). Offering 100% Free Area performance. This model exhibits pressure drop equivalent to 3-FEET of duct of the same size. Also, because of the consistent 1" oversizing, this model is an ideal choice for insulated and fibreglass duct applications. CR-CO Frames also available.



LPB E - 6 SERIES CHART

MODEL	MOUNTING OPERATION	UL555 FIRE RATING	SINGLE SECTION		MULTIPLE SECTION
			MINIMUM WIDTH & HEIGHT	MAXIMUM WIDTH & HEIGHT	MAXIMUM WIDTH & HEIGHT
LPB	VERTICAL	1-1/2 HOUR	5 X 8	48 X 48	120 X 72
LPB	HORIZONTAL	1-1/2 HOUR	5 X 8	50 X 54	113 X 60
SF-LPB	VERTICAL	1-1/2 HOUR	5 X 8	48 X 48	120 X 72
SF - LPB	HORIZONTAL	1-1/2 HOUR	5 X 8	50 X 54	113 X 60
LPC	VERTICAL	1-1/2 HOUR	4 X 6	46 X 46	118 X 70
LPC	HORIZONTAL	1-1/2 HOUR	4 X 6	48 X 48	111 X 58
LPB	VERTICAL	3 HOUR	5 X 8	30 X 30	60 X 60
LPB	HORIZONTAL	3 HOUR	5 X 3	35 X 35	N/A