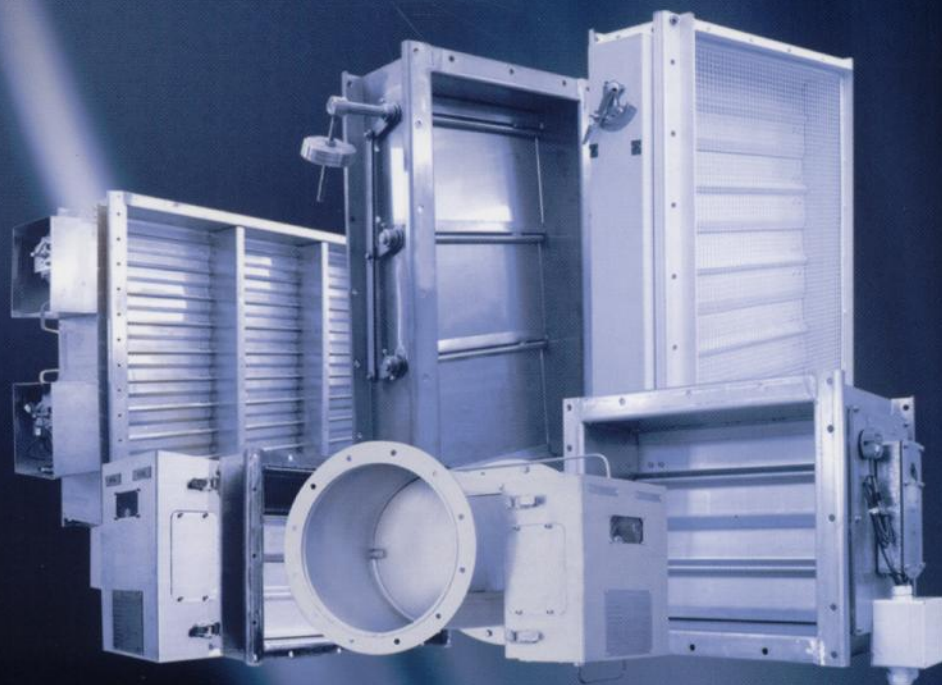




# DaeJin

## DAMPER SOLUTION

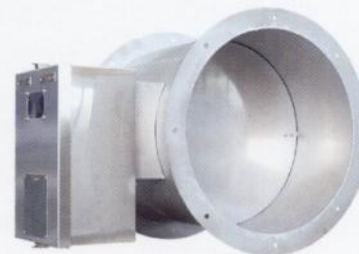




### Pneumatic Fire & Gas Damper

A0/A60 FIRE CLASS

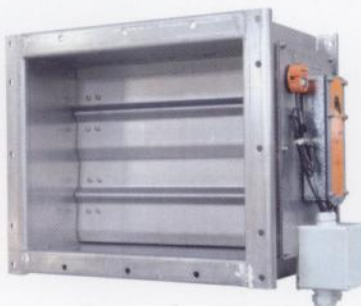
DAEJIN Pneumatic Fire & Gas Damper has been developed for A-0/A-60 class bulkheads/decks, to prevent fire and gas spreading through ductworks. The damper is open on pneumatic actuation and closed by spring, ensuring fail-safe operation in case of emergency situation such as power failure. Flexible control options are available to suit various customer needs.



### Electric Fire & Gas Damper

A0/A60 FIRE CLASS

DAEJIN Electric Fire & Gas Damper has been developed for A-0/A-60 class bulkheads/decks, to prevent fire and gas spreading through ductworks. The damper is open on electric actuation and closed by spring, ensuring fail-safe operation in case of emergency situation such as power failure. Flexible control options are available to suit various customer needs.

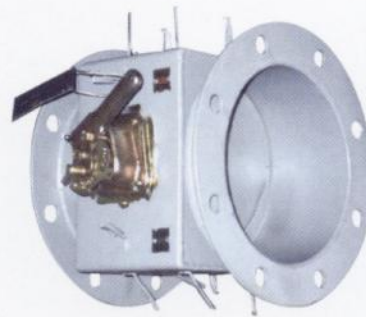


ANTI-EXPLOSION TYPE

### Automatic Fire Damper

A0/A60 FIRE CLASS

DAEJIN Automatic Fire Damper has been developed for A-0 class bulkheads/decks, to prevent fire and gas spreading through ductworks. The damper is normally open and automatically closed by means of fusible links, or manually operated by manipulating the attached handle or remote wire levers.



### Balancing (Volume) Damper

DAEJIN Balancing (Volume) Damper has been designed for controlling airflow through ventilation systems. Adjusting mechanism can be implemented in manual, pneumatic or electric actuation.



### Shut-Off Damper

DAEJIN Shut-Off Damper has been designed for isolating airflow through ventilation systems. Controlling mechanism can be implemented in manual, pneumatic or electric actuation.



### Pressure Relief Damper (Modulating Damper)

DAEJIN Pressure Relief Damper (Modulating Damper) has been developed for controlling airflow in the ventilation system to be unidirectional. The damper flap is switched on the designated air pressure set by appropriate weighting.



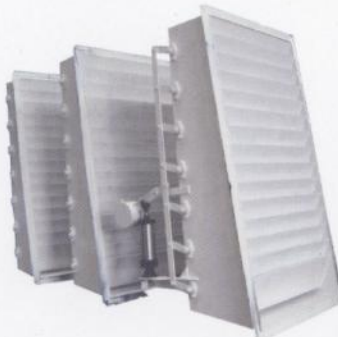
### Non-Return (Back Draft) Damper

DAEJIN Non-Return (Back Draft) Damper has been developed for controlling airflow in the ventilation system to be unidirectional.



### Jalousie Damper

DAEJIN Jalousie Damper has been designed for isolating airflow through ventilation systems. Controlling mechanism can be implemented in manual, pneumatic or electric actuation.





### Fire Shutter

DAEJIN Fire Shutter is a robust safety device made of Stainless steel 304. The shutter can be closed automatically by fusible link when ambient temperature rises over 72°C, and it can be operated manually. Also electric magnetic equipped for emergency operation, maximizing safe and reliable nature of device. The shutter is produced to meet the standards specified in IMO regulation and certified by KR, ABS, DNV, LR, GL, BV etc., also acquired CE Mark.



FUSIBLE TYPE



ELECTRIC MAGNET TYPE

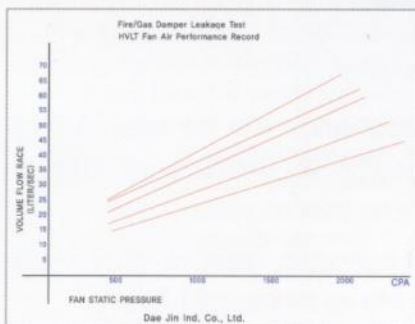
### Leak Test of Fire & Gas Damper



### Damper Test



### Leak Test Report of Fire & Gas Damper



**TEST REPORT**

1. Name of test: Air Leakage Test

2. Subject: Door for Substation (S-104)  
(S-104), Substation, Gangnam-gu, Seoul, Korea

3. Manufacturer: DAEJIN

4. Test specified:  
1) Name: Fire Shutter  
2) Title: Subst. Air Leakage test - for a test  
3) App. Drawing: Refer to Appendix 2

5. Applied standard: KSR/KS, KS A 5010-1993, Sec. 4, Item 2(1)

6. Test date: May 6, 2004

7. Test result: The specimen satisfied the above standard (refer to Appendix 1)

This is to certify that the above mentioned test has been properly carried out

Tested and reported by: [Signature]  
Checked by: [Signature]  
Date: May 11, 2004

(This report consists of 3 pages)

**Fire & Gas Damper Air Leakage Test Report**

General: Test No. JIS-001-001

Tested: [Signature]

Project Name: Fire & Gas Damper Leakage Test

Part 1 - Physical details

1. Location of damper to be tested: Subst. S-104 (S-104-1)

2. Damper description: Fire Shutter

3. Test static pressure: 100 Pa

4. Leakage volume: 1.0 L/min

5. Surface area of damper: 1.0 m²

6. Material of damper: Stainless Steel

Part 2 - Test Particulars

1. Test static pressure: 100 Pa

2. Test static pressure: 100 Pa

3. Test static pressure: 100 Pa

4. Test static pressure: 100 Pa

5. Test static pressure: 100 Pa

6. Test static pressure: 100 Pa

7. Test static pressure: 100 Pa

8. Test static pressure: 100 Pa

9. Test static pressure: 100 Pa

10. Test static pressure: 100 Pa

11. Test static pressure: 100 Pa

12. Test static pressure: 100 Pa

13. Test static pressure: 100 Pa

14. Test static pressure: 100 Pa

15. Test static pressure: 100 Pa

16. Test static pressure: 100 Pa

17. Test static pressure: 100 Pa

18. Test static pressure: 100 Pa

19. Test static pressure: 100 Pa

20. Test static pressure: 100 Pa

21. Test static pressure: 100 Pa

22. Test static pressure: 100 Pa

23. Test static pressure: 100 Pa

24. Test static pressure: 100 Pa

25. Test static pressure: 100 Pa

26. Test static pressure: 100 Pa

27. Test static pressure: 100 Pa

28. Test static pressure: 100 Pa

29. Test static pressure: 100 Pa

30. Test static pressure: 100 Pa

31. Test static pressure: 100 Pa

32. Test static pressure: 100 Pa

33. Test static pressure: 100 Pa

34. Test static pressure: 100 Pa

35. Test static pressure: 100 Pa

36. Test static pressure: 100 Pa

37. Test static pressure: 100 Pa

38. Test static pressure: 100 Pa

39. Test static pressure: 100 Pa

40. Test static pressure: 100 Pa

41. Test static pressure: 100 Pa

42. Test static pressure: 100 Pa

43. Test static pressure: 100 Pa

44. Test static pressure: 100 Pa

45. Test static pressure: 100 Pa

46. Test static pressure: 100 Pa

47. Test static pressure: 100 Pa

48. Test static pressure: 100 Pa

49. Test static pressure: 100 Pa

50. Test static pressure: 100 Pa

51. Test static pressure: 100 Pa

52. Test static pressure: 100 Pa

53. Test static pressure: 100 Pa

54. Test static pressure: 100 Pa

55. Test static pressure: 100 Pa

56. Test static pressure: 100 Pa

57. Test static pressure: 100 Pa

58. Test static pressure: 100 Pa

59. Test static pressure: 100 Pa

60. Test static pressure: 100 Pa

61. Test static pressure: 100 Pa

62. Test static pressure: 100 Pa

63. Test static pressure: 100 Pa

64. Test static pressure: 100 Pa

65. Test static pressure: 100 Pa

66. Test static pressure: 100 Pa

67. Test static pressure: 100 Pa

68. Test static pressure: 100 Pa

69. Test static pressure: 100 Pa

70. Test static pressure: 100 Pa

71. Test static pressure: 100 Pa

72. Test static pressure: 100 Pa

73. Test static pressure: 100 Pa

74. Test static pressure: 100 Pa

75. Test static pressure: 100 Pa

76. Test static pressure: 100 Pa

77. Test static pressure: 100 Pa

78. Test static pressure: 100 Pa

79. Test static pressure: 100 Pa

80. Test static pressure: 100 Pa

81. Test static pressure: 100 Pa

82. Test static pressure: 100 Pa

83. Test static pressure: 100 Pa

84. Test static pressure: 100 Pa

85. Test static pressure: 100 Pa

86. Test static pressure: 100 Pa

87. Test static pressure: 100 Pa

88. Test static pressure: 100 Pa

89. Test static pressure: 100 Pa

90. Test static pressure: 100 Pa

91. Test static pressure: 100 Pa

92. Test static pressure: 100 Pa

93. Test static pressure: 100 Pa

94. Test static pressure: 100 Pa

95. Test static pressure: 100 Pa

96. Test static pressure: 100 Pa

97. Test static pressure: 100 Pa

98. Test static pressure: 100 Pa

99. Test static pressure: 100 Pa

100. Test static pressure: 100 Pa

### WPS, Approved by Lloyd's

**WPS**

WPS-100-001-001

#1000-7 Sanggye-dong, Gangnam-gu, Seoul, Korea  
TEL: +82-51-451-4511-3  
FAX: +82-51-451-4541  
Website: http://www.daejin.co.kr  
E-mail: daejin@daejin.co.kr

DAE JIN INDUSTRIES CO., LTD.

**Lloyd's Register**

Working Procedure Specification (WPS)

Page 1 of 1

1. Title: Fire Shutter Air Leakage Test

2. Revision: 1.0

3. Date: 2004.05.11

4. Author: [Signature]

5. Checked by: [Signature]

6. Approved by: [Signature]

7. Test static pressure: 100 Pa

8. Test static pressure: 100 Pa

9. Test static pressure: 100 Pa

10. Test static pressure: 100 Pa

11. Test static pressure: 100 Pa

12. Test static pressure: 100 Pa

13. Test static pressure: 100 Pa

14. Test static pressure: 100 Pa

15. Test static pressure: 100 Pa

16. Test static pressure: 100 Pa

17. Test static pressure: 100 Pa

18. Test static pressure: 100 Pa

19. Test static pressure: 100 Pa

20. Test static pressure: 100 Pa

21. Test static pressure: 100 Pa

22. Test static pressure: 100 Pa

23. Test static pressure: 100 Pa

24. Test static pressure: 100 Pa

25. Test static pressure: 100 Pa

26. Test static pressure: 100 Pa

27. Test static pressure: 100 Pa

28. Test static pressure: 100 Pa

29. Test static pressure: 100 Pa

30. Test static pressure: 100 Pa

31. Test static pressure: 100 Pa

32. Test static pressure: 100 Pa

33. Test static pressure: 100 Pa

34. Test static pressure: 100 Pa

35. Test static pressure: 100 Pa

36. Test static pressure: 100 Pa

37. Test static pressure: 100 Pa

38. Test static pressure: 100 Pa

39. Test static pressure: 100 Pa

40. Test static pressure: 100 Pa

41. Test static pressure: 100 Pa

42. Test static pressure: 100 Pa

43. Test static pressure: 100 Pa

44. Test static pressure: 100 Pa

45. Test static pressure: 100 Pa

46. Test static pressure: 100 Pa

47. Test static pressure: 100 Pa

48. Test static pressure: 100 Pa

49. Test static pressure: 100 Pa

50. Test static pressure: 100 Pa

51. Test static pressure: 100 Pa

52. Test static pressure: 100 Pa

53. Test static pressure: 100 Pa

54. Test static pressure: 100 Pa

55. Test static pressure: 100 Pa

56. Test static pressure: 100 Pa

57. Test static pressure: 100 Pa

58. Test static pressure: 100 Pa

59. Test static pressure: 100 Pa

60. Test static pressure: 100 Pa

61. Test static pressure: 100 Pa

62. Test static pressure: 100 Pa

63. Test static pressure: 100 Pa

64. Test static pressure: 100 Pa

65. Test static pressure: 100 Pa

66. Test static pressure: 100 Pa

67. Test static pressure: 100 Pa

68. Test static pressure: 100 Pa

69. Test static pressure: 100 Pa

70. Test static pressure: 100 Pa

71. Test static pressure: 100 Pa

72. Test static pressure: 100 Pa

73. Test static pressure: 100 Pa

74. Test static pressure: 100 Pa

75. Test static pressure: 100 Pa

76. Test static pressure: 100 Pa

77. Test static pressure: 100 Pa

78. Test static pressure: 100 Pa

79. Test static pressure: 100 Pa

80. Test static pressure: 100 Pa

81. Test static pressure: 100 Pa

82. Test static pressure: 100 Pa

83. Test static pressure: 100 Pa

84. Test static pressure: 100 Pa

85. Test static pressure: 100 Pa

86. Test static pressure: 100 Pa

87. Test static pressure: 100 Pa

88. Test static pressure: 100 Pa

89. Test static pressure: 100 Pa

90. Test static pressure: 100 Pa

91. Test static pressure: 100 Pa

92. Test static pressure: 100 Pa

93. Test static pressure: 100 Pa

94. Test static pressure: 100 Pa

95. Test static pressure: 100 Pa

96. Test static pressure: 100 Pa

97. Test static pressure: 100 Pa

98. Test static pressure: 100 Pa

99. Test static pressure: 100 Pa

100. Test static pressure: 100 Pa





## President Message

Since established on 1982, DAEJIN Industries Inc. Co., Ltd. has designed, produced and installed furniture, especially for marine vessels.

As the fire resistivity being the major requirement in the marine/offshore business, our vast experience and expertness in providing products meeting such purposes has been well recognized in the comprehensive areas of the field, including Ferry, LNG, LPG, FPSO, RIG, Offshore and so on.

As one of our diversification policy, we have developed complete solutions for fire safety devices for vessels, including pneumatic electric/ fire dampers and fusible type/ electric magnet type fire shutters.

Approved by major regulatory bodies such as LR, DNV, ABS, KR, NK, GL, BV and CE, they have been supplied to many shipyards with favorables who help and be helped by the evergrowing history of Korean shipbuilding market

We promise that we'll constantly exert our efforts to provide more strong, elegant and ergonomics furniture for your comforts, and more robust and secure fire devices for your safety. "The company believed in, and revisited by customers" our principle has been and will be

Thank you.

Sincerely Yours.

Bong Dae Lee



President  
DAEJIN industries Co.,Ltd

For decades, DAEJIN Industries Co., Ltd. has developed and supplied various types of dampers, which are effectively designed for air conditioning and ventilation systems in marine and offshore projects.

DAEJIN Dampers have been developed in compliance with the latest SOLAS regulations, and tested/approved for class A-0~A-60 divisions according to IMO Resolution A.754(18).

DAEJIN Dampers are constructed robust and corrosion-resistive, guaranteeing their long life span in harsh marine/offshore environments with large thermal/humid ranges, and precise operation even after suspended positioning at one state for long period of time. The dampers are easy to install/disassemble in a limited space, and give best accessibility for maintenance purposes after installation. Also various control options are provided to meet a wide range of customer requirements.

DAEJIN Dampers are designed and produced under the ISO9001 Standards qualified quality system.

## Introduction







## TYPE APPROVAL CERTIFICATE FOR FIRE DAMPER

TYPE	CERTIFICATE	C L A S S									
		KR	LR	ABS	DNV	USCG	GL	BV	NK	TC	MED
RECTANGULAR FD01 MIN(300×300) MAX(900×400)	CERT NO	GCH00834-FP002	SAS F020195	00-BK-53703-X	MED-B-2631		15207-99HH	09454/AO BV	01EQ198FPA	T.C.194.J1.060	MED-D-300
	ISSUE DATE	04-03-15	02-05-07	00-10-30	04-10-16		04-08-30	99-11-26	01-10-16	04-07-28	
	EXPIRATION DATE	09-03-07	07-05-06	05-10-30	09-10-19		09-08-29	04-11-26	06-10-15	09-07-31	01-10-20
WALL TYPE FD11 (450×600)	CERT NO	GCH00834-FP003	SAS F010349	00-BK-53703-X	MED-B-2632		15208-99HH	11859/AO BV	01EQ154FPA		MED-D-301
	ISSUE DATE	04-03-15	01-11-06	00-10-30	04-10-16		04-08-30	02-09-10	01-07-09		
	EXPIRATION DATE	09-03-07	06-11-05	05-10-30	09-10-19		09-08-29	07-09-10	06-07-08		04-10-20
SHUTTER FS02 (1840×1500)	CERT NO	BSN00834-FP006	SAS F020102		MED-B-1644			03927/C1 BV			MED-D-301
	ISSUE DATE	02-07-04	02-02-22		02-07-11			02-09-19			
	EXPIRATION DATE	07-07-03	07-02-21		07-07-11			05-03-15			07-07-10
PNEUMATIC A-0 PD01 (REC.TYPE) MIN(150×200) MAX(1500×2000)	CERT NO	BSN00834-FP004	SAS F010347	00-BK-53703-X	MED-B-1610		40959-01HH	09920/AO BV			MED-D-300
	ISSUE DATE	01-07-30	01-08-22	00-10-30	02-07-09		01-11-29	01-08-23			
	EXPIRATION DATE	06-07-29	06-08-21	05-10-30	07-07-09		06-11-15	06-08-23			07-07-09
PNEUMATIC A-0 PD02 (ROUND TYPE) MIN(∅200) MAX(∅500)	CERT NO	BSN00834-FP005	SAS F010348		MED-B-1642		40958-01HH				MED-D-300
	ISSUE DATE	01-07-30	01-08-22		02-07-09		01-11-29				
	EXPIRATION DATE	06-07-29	06-08-21		07-07-09		06-11-15				07-07-09
PNEUMATIC A-60 PD60-01-1 (REC.TYPE) MIN(150×150) MAX(1000×1000)	CERT NO	GCH00834-FP007	SAS F040050	00-BK-53703-X	MED-B-2056	164,139/3/0					MED-D-300
	ISSUE DATE	03-11-10	04-02-12	04-02-10	00-10-08	03-11-28					
	EXPIRATION DATE	08-11-09	09-02-11	09-02-10	08-10-08	08-11-28					08-10-08
PNEUMATIC A-60 PD60-02-1 (ROUND TYPE) MIN(∅114) MAX(∅500)	CERT NO	GCH00834-FP007	SAS F040049	00-BK-53703-X	MED-B-2057	164,139/3/0					MED-D-300
	ISSUE DATE	03-11-10	04-02-12	04-02-10	03-10-08	03-11-28					
	EXPIRATION DATE	08-11-09	09-02-11	09-02-10	08-10-08	08-11-28					08-10-08
SPIRAL A-0 FDP-01 MIN(∅80) MAX(∅500)	CERT NO	GCH00834-FP009	SAS F040048	00-BK-53703-X	MED-B-2242		20143-04HH				
	ISSUE DATE	04-04-06	04-02-10	04-02-27	04-03-04		04-02-10				
	EXPIRATION DATE	09-04-05	09-02-09	09-02-27	09-03-04		09-02-09				

## PRODUCTS FLOW OF DAMPER



sharing

CNC Punching

Bending

Welding

Assembly

Shot

Painting

Stock



**DAEJIN INDUSTRIAL CO., LTD.**

HEAD OFFICE

#1589-7, Songjung-Dong, Kangseo-Gu, Busan, Korea

Tel. +82-51-831-4551(Rep)

Fax. +82-51-831-4541

E-mail. [daejinqc@daejinqc.co.kr](mailto:daejinqc@daejinqc.co.kr)

<http://www.daejinqc.co.kr>