English v 2.1

Since 1986

D.S. INDUSTRY

PRODUCT CATALOGUE

Pursuing clean and comfortable environment
for human and nature

VENTURE COMPANY
(주)디. 에스. 인더스트리
D.S. INDUSTRY CO., LTD.

Delivering customer value...

We owe our recent success to customers' trust in our products and services.
Creating human-oriented values in harmony with high technology and nature, our efforts to enhance and innovate in our products and services shall be continued.

MANAGEMENT PHILOSOPHY

- CUSTOMER-ORIENTED
- DISCIPLINED MANAGEMENT
- GROWTH THROUGH CHANGE AND INNOVATION
- RESPECT FOR HUMAN AND NATURE
- CONTINUOUS RESEARCH AND DEVELOPMENT

Corporate Overview

Corporate Growth

Nov., 1986	Established "DAESUNG JABARA" and started a business (Suwon-si).
Jul., 1989	Completed reconstruction of office and factory (Yongin-si).
Jan., 2001	Changed the name of company to "D.S. INDUSTRY CO., LTD." and incorporated a business.
Jan., 2003	Completed reconstruction of office and factory.
Mar., 2007	Completed construction of new office and factory (Hwaseong-si).

Facilities





Jun., 1989	Introduced manufacture facilities to produce spiral and flexible ducts.
May, 1996	Expanded manufacture facilities to produce spiral and flexible ducts.
Jul., 2000	Expanded manufacture facilities to insulate flexible ducts.
Jun., 2004	Expanded manufacture facilities to produce spiral ducts.
Jan., 2006	Expanded manufacture facilities to produce duct fixtures.
Jan., 2007	Expanded manufacture facilities to produce oval ducts.
Nov., 2007	Expanded manufacture facilities to produce spiral ducts.
Aug., 2008	Expanded manufacture facilities to produce spiral duct fittings finished EPDM rubber gasket.

Business Relationship

Jan., 2005	Contracted as a provider of duct products for air-conditioning systems with HISYS ENG Co., Ltd. (an associated company of LG Electronics Co., Ltd.).
Jun., 2006	Contracted as a provider of duct products for air-conditioning systems with Samsung Electronics Logitech Co., Ltd.
Dec., 2008	Registered as a cooperation company of Hyundai Engineering & Construction Co., Ltd.

International Business and Marketing

Feb., 2008	Made a contract with a Japanese company to export flexible ducts.
Nov., 2013	Participated in the international exhibition 'The Big 5 – International Building and Construction Show (Dubai, U.A.E)'
Nov., 2014	Participated in the international exhibition 'The Big 5 – International Building and Construction Show (Dubai, U.A.E)'
Mar., 2015	Participated in the international exhibition 'HARFKO(Heating, Air-Conditioning, Refrigeration and Fluid) 2015 (KINTEX, Korea)'

Certification and Evaluation

May, 1999	Accredited the certification of approval for the quality management system, KS Q 9001:2009 / ISO 9001:2008, by Korea Management Association Registration and Assessment Inc.
Jun., 2005	Awarded the grand prize of customer satisfaction by Herald Media Inc.
Jun., 2007	Accredited the certification of approval for technology innovation, INNOBIZ, by Small and Medium Business Administration.
May, 2008	Carried out RoHS (Restriction of Hazardous Substances) test of aluminum foil and tarpaulin by Korea Textile Inspection & Testing Institute.
Jul., 2011	Accredited the certification of approval for UL181 (AIR CONNECTORS) by Underwriters Laboratories.

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"D.S. Industry promises
the superlative quality through research and development
that is ceaseless with challenge and creative mind."

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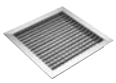	**Grilles**	GR	28
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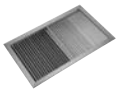	**Transfer grilles**	TG	29
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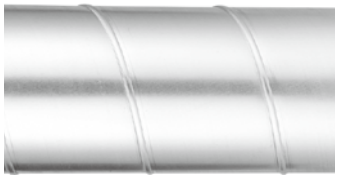
SP/SSD



SP



SSD

Description

Exterior spiral lockseam that maintains complete tube roundness. Tubing with perfectly smooth interior for non-turbulent flow. No welded, soldered or riveted seams to distort material or mar coated surfaces.

SP has up to 2 external corrugations between seams and can be used for slab work.

SSD has 3 external corrugations between seams.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

SP[/SSD] aaa

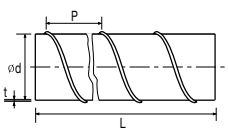
Product

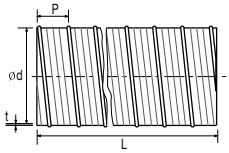
Φd

When ordering, please specify material and thickness.

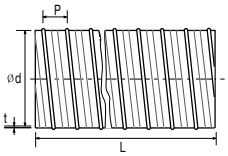
Dimensions

SP | **SSD**





With external corrugation



With external corrugation

Thickness t mm	Length L m	Pitch P mm
0.5 ~ 2.5	4	115

Dimensions

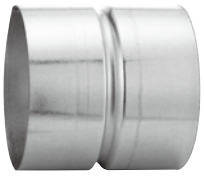
Nominal inside diameter		
Φd		πd
mm	inch	m
75	2.95	0.236
100	3.94	0.314
125	4.92	0.393
150	5.91	0.471
175	6.89	0.550
200	7.87	0.628
225	8.86	0.707
250	9.84	0.785
275	10.83	0.864
300	11.81	0.942
325	12.80	1.021
350	13.78	1.099
375	14.76	1.178
400	15.75	1.256
425	16.73	1.335
450	17.72	1.413
475	18.70	1.492
500	19.69	1.570
550	21.65	1.727
600	23.62	1.884
650	25.59	2.041
700	27.56	2.198
750	29.53	2.355
800	31.50	2.512
850	33.46	2.669
900	35.43	2.826
950	37.40	2.983
1000	39.37	3.140
1050	41.34	3.297
1100	43.30	3.454
1150	45.28	3.611
1200	47.24	3.768
1250	49.21	3.925
1300	51.18	4.082
1350	53.15	4.239
1400	55.12	4.396
1450	57.09	4.553
1500	59.06	4.710

Couplings

CPM/CPF



CPM



CPF

Description

CPM is male coupling connector for joining circular ducts. Its sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.
CPF is female coupling connector for joining fittings.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

CPM a bbb

Product
Without sealing gasket S
With sealing gasket G
Φd1

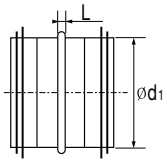
CPF aaa

Product
Φd

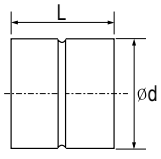
When ordering, please specify material and thickness.

Dimensions

CPM



CPF



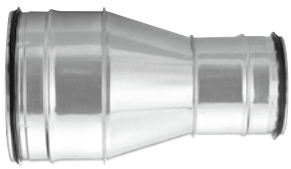
Nominal outside diameter Φd1		Nominal inside diameter Φd	
mm	inch	mm	inch
100	3.94	100	3.94
125	4.92	125	4.92
150	5.91	150	5.91
200	7.87	200	7.87
250	9.84	250	9.84
300	11.81	300	11.81

Reducers

RDCP/RDCA/RDEA



RDCP



RDCA

Description

Used to connect ducts with different diameter.
Φd2 is less than Φd1. Sealing gasket is optional.
RDCP: Centric and pressed.
RDCA: Centric and assembled.
RDEA: Eccentric and assembled.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

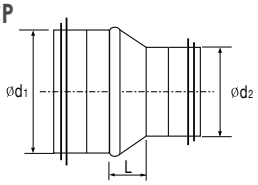
RDCP[/RDCA/RDEA] a bbb ccc

Product
Without sealing gasket S
With sealing gasket G
Φd1
Φd2

When ordering, please specify material and thickness.

Dimensions

RDCP



Nominal outside diameter Φd1, Φd2			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

EB90/EB45



EB90 EB45

Description

Pressed and seam welded bend. Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.
EB90: 90˚ angle.
EB45: 45˚ angle.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

EB90[/EB45] a bbb

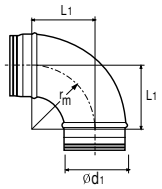
- Product
- Without sealing gasket S / With sealing gasket G
- Φd1

When ordering, please specify material and thickness.

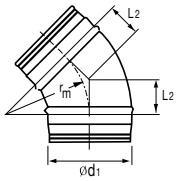
Dimensions

Centerline radius rm = 1 × d1

EB90



EB45



Nominal outside diameter Φd1		Installation length L1	L2
mm	inch	mm	mm
75	2.75	90	41
80	3.14	100	41
100	3.94	100	41
125	4.92	125	52
150	5.91	150	62
160	6.29	160	66
200	7.87	200	83
250	9.84	250	104
300	11.81	300	124

EBS90/EBS45



EBS90 EBS45

Description

Segmented and lockseamed bend.
EBS90: 90˚ angle.
EBS45: 45˚ angle.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

EBS90[/EBS45] aaa

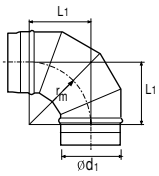
- Product
- Φd1

When ordering, please specify material and thickness.

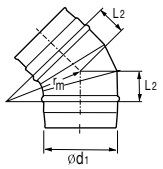
Dimensions

Centerline radius rm = 1 × d1

EBS90



EBS45



Nominal outside diameter Φd1		Installation length L1	L2
mm	inch	mm	mm
350	13.78	350	-
400	15.75	400	162
450	17.72	450	186
500	19.69	500	204
550	21.65	550	-
600	23.62	600	249

Bends

TWEB90/TWEB45



TWEB90



TWEB45

Description

Segmented and lockseamed. Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.
TWEB90: Branch 90˚.
TWEB45: Branch 45˚.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

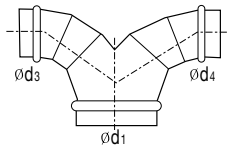
TWEB90[/TWEB45] a bbb ccc ddd

- Product
- Without sealing gasket S
- With sealing gasket G
- Φd1
- Φd3
- Φd4

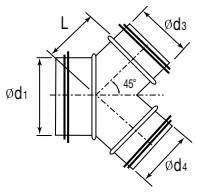
When ordering, please specify material and thickness.

Dimensions

TWEB90



TWEB45



Nominal outside diameter Φd1, Φd3, Φd4			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

T-pieces

T/CNT/CMT/CRT



T



CNT



CMT



CRT

Description

Segmented and seam welded. Sealing gasket is optional.
T, CNT, CRT: Centric.
CMT: Eccentric.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

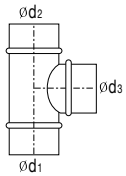
T[/CNT/CMT] a bbb ccc ddd
CRT a bbb ccc ddd eee

- Product
- Without sealing gasket S
- With sealing gasket G
- Φd1
- Φd2
- Φd3
- Φd4

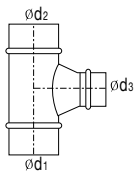
When ordering, please specify material and thickness.

Dimensions

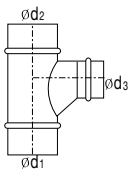
T



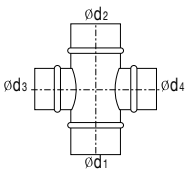
CNT



CMT



CRT



Nominal outside diameter Φd1, Φd2, Φd3, Φd4			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

T-pieces

RT/RCNT/RCMT/RCRT



RT



RCNT



RCMT



RCRT

Description

Segmented and seam welded. Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations. Φd2 is less than Φd1.
RT, RCNT, RCRT: Centric.
RCMT: Eccentric.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

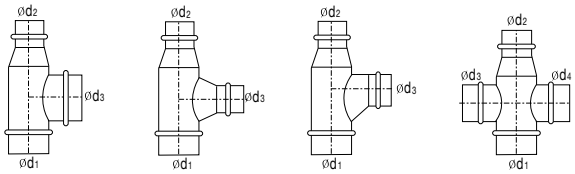
RT[/RCNT/RCMT] a bbb ccc ddd
RCRT a bbb ccc ddd eee

- Product
- Without sealing gasket — S
- With sealing gasket — G
- Φd1
- Φd2
- Φd3
- Φd4

When ordering, please specify material and thickness.

Dimensions

RT RCNT RCMT RCRT



Nominal outside diameter Φd1, Φd2, Φd3, Φd4			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

YB/RYB/CRYB/RCRYB



YB



RYB



CRYB



RCRYB

Description

Branch 45°. Segmented and seam welded. Sealing gasket is optional.
RYB, RCRYB: Φd2 is less than Φd1.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

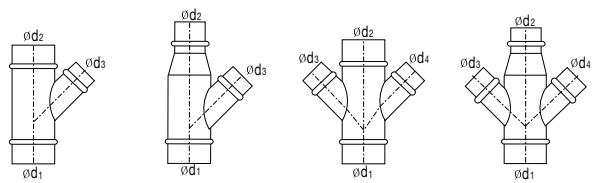
YB[/RYB] a bbb ccc ddd
CRYB[/RCRYB] a bbb ccc ddd eee

- Product
- Without sealing gasket — S
- With sealing gasket — G
- Φd1
- Φd2
- Φd3
- Φd4

When ordering, please specify material and thickness.

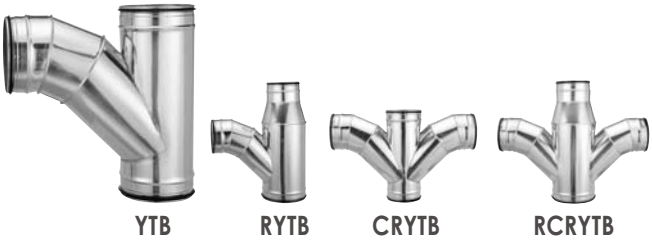
Dimensions

YB RYB CRYB RCRYB



Nominal outside diameter Φd1, Φd2, Φd3, Φd4			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

YTB/RYTB/CRYTB/RCRYTB



Description

Branch 90°. Segmented and seam welded. Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.
RYTB, RCRYTB: Φd2 is less than Φd1.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

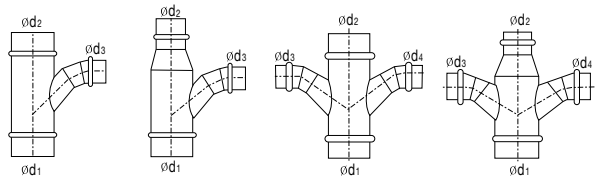
YTB[/RYTB] **a bbb ccc ddd**
CRYTB[/RCRYTB] **a bbb ccc ddd eee**

- Product
- Without sealing gasket S / With sealing gasket G
- Φd1
- Φd2
- Φd3
- Φd4

When ordering, please specify material and thickness.

Dimensions

YTB | RYTB | CRYTB | RCRYTB



Nominal outside diameter Φd1, Φd2, Φd3, Φd4			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

SDTC/SDTE



Collar saddle
Centric collar saddle.
Sealing gasket is optional.

Description

Assembled with circular duct and collar saddle.
SDTC: Centric.
SDTE: Tangential.

Material

G/L	Aluminum-Zinc alloy coated steel sheet

Ordering

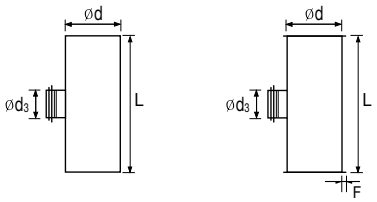
SDTC[/SDTE] **a b ccc ddd**

- Product
- Without flange N / With flange F
- Without sealing gasket S / With sealing gasket G
- Φd
- Φd3

When ordering, please specify material and thickness.

Dimensions

Without flange | With flange



Nominal inside diameter Φd Nominal outside diameter Φd3			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Installation length L
up to 2000mm/78.74 inch

End caps

CAPM/CAPF



CAPM



CAPF

Description

Assembled.
CAPM fits inside ducts. CAPF fits outside fittings.
Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

CAPM a bbb

Product
Without sealing gasket S
With sealing gasket G
Φd1

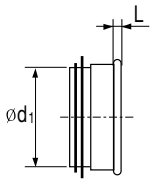
CAPF aaa

Product
Φd

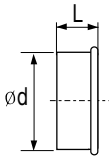
When ordering, please specify material and thickness.

Dimensions

CAPM



CAPF



Nominal inside diameter Φd Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Take-offs

TO



Description

Take-off with radius which fits inside ducts.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

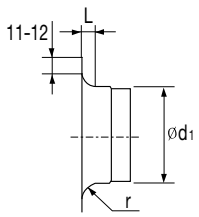
Ordering

TO aaa

Product
Φd1

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Mounting brackets

HG/UB



HG



UB

Description

HG brackets for mounting ducts to the ceiling. UB brackets for mounting ducts to the ceiling or the wall. Recommended bearing distance approx. 2 meters.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

HG[/UB] aaa

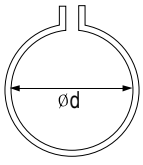
Product

Φd

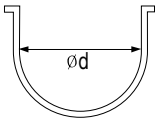
When ordering, please specify material and thickness.

Dimensions

HG



UB



Nominal inside diameter Φd			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Flanges

VB



Description

VB flanges are mounted direct in circular ducts and can be locked.

Material

G/L	Aluminum-Zinc alloy coated steel sheet

Ordering

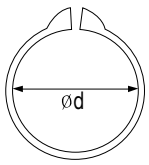
VB aaa

Product

Φd

When ordering, please specify material and thickness.

Dimensions



Nominal inside diameter Φd			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Sleeves

SL



Description

Used for concrete work. Closed with sleeve cap to prevent from keeping off concrete.

Material

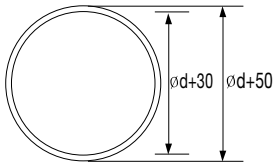
G/L	Aluminum-Zinc alloy coated steel sheet

Ordering

SL	aaa
Product	
Φd	

When ordering, please specify material and thickness.

Dimensions



Nominal inside diameter Φd			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Wall/ceiling lead-ins

OB



Description

The purpose of OB lean-ins to finish off ventilation ducts passing through walls or ceilings.

Material

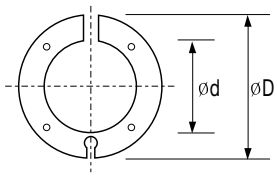
G/L	Aluminum-Zinc alloy coated steel sheet

Ordering

OB	aaa
Product	
φd	

When ordering, please specify material and thickness.

Dimensions



Nominal inside diameter Φd		ΦD	
mm	inch	mm	inch
100	3.94	124	4.88
125	4.92	149	5.87
150	5.91	174	6.85
200	7.87	224	8.82
250	9.84	274	10.79
300	11.81	324	12.76

Ventilation caps

VC



Description

VC ventilation caps have been developed specially to achieve an architectonic finish to air input and exhaust systems placed on roofs.
Sealing gasket is optional. EPDM rubber used for sealing gasket is very resistant to ozone and UV rays, and at the same time unaffected by temperature fluctuations.

Material

G/L	Aluminum-Zinc alloy coated steel sheet

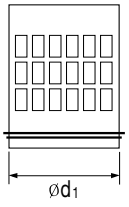
Ordering

VC a bbb

- Product
- Flange type F / Gasket type G
- Φd1

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Drains

DRC/DRE



Description

Used for draining water and other substance in ducts.
Sealing gasket is optional.
DRC: Centric
DRE: Eccentric

Material

G/L	Aluminum-Zinc alloy coated steel sheet

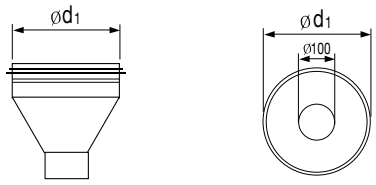
Ordering

DRC[/DRE] a bbb

- Product
- Flange type F / Gasket type G
- Φd1

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Oval Ducts

OD



Description

Oval duct combines the advantages of round duct and rectangular duct because it may fit in spaces where there is not enough room for round duct. Exterior spiral lockseam that maintains complete tube roundness. Tubing with perfectly smooth interior for non-turbulent flow. No welded, soldered or riveted seams to distort material or mar coated surfaces.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

OD aaa bbb

Product

Φd

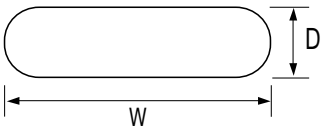
D

When ordering, please specify material and thickness.

Dimensions

Thickness t mm	Pitch P mm	Width D	
		mm	inch
0.5 ~ 2.5	115	40	1.57
		50	1.97
		60	2.36
		75	2.95
		100	3.94
		125	4.92
		150	5.91
		200	7.87
		250	9.84
		300	11.81
		350	13.78
		400	15.75
		450	17.72
		500	19.69

Dimensions



W = ((Φd-D) × 3.14 / 2) + D

Nominal inside diameter Φd		Width D
mm	inch	mm
150	5.91	40~75
175	6.89	40~125
200	7.87	40~150
225	8.86	50~200
250	9.84	60~200
275	10.83	75~200
300	11.81	75~200
325	12.80	75~200
350	13.78	100~200
375	14.76	150~200
400	15.75	150~200
425	16.73	150~200
450	17.72	150~250
475	18.70	150~350
500	19.69	150~350
550	21.65	150~400
600	23.62	200~500
650	25.59	200~500
700	27.56	200~500
750	29.53	250~500
800	31.50	250~500
850	33.46	250~500
900	35.43	250~500
950	37.40	300~500
1000	39.37	300~500

OEB90/OEB45/OEB/OSB/OT/OTOS



Description

Fittings for oval ducts. Segmented and seam welded.
OEB90: Oval bends of 90˚ in angle.
OEB45: Oval bends of 45˚ in angle.
OEB: Oval bends of 22.5˚ in angle.
OSB: Oval square bends of 90˚ in angle.
OT: Oval T-pieces connecting oval ducts.
OTOS: Oval T-pieces connecting oval and circular ducts.

Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

OEB90[/OEB45/OEB/OSB/OT/OTOS] a bbb ccc

- Product
- V type V
- H type H
- Φd1
- D

When ordering, please specify material and thickness.

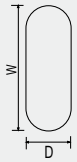
Dimensions

Width D		Nominal outside diameter Φd1		Width D
mm	inch	mm	inch	mm
40	1.57	150	5.91	40~75
50	1.97	175	6.89	40~125
60	2.36	200	7.87	40~150
75	2.95	225	8.86	50~200
100	3.94	250	9.84	60~200
125	4.92	275	10.83	75~200
150	5.91	300	11.81	75~200
200	7.87			
250	9.84			
300	11.81			

W = ((Φd1-D) × 3.14 / 2) + D
Refer to page 16 for diameters > 300mm.

Dimensions

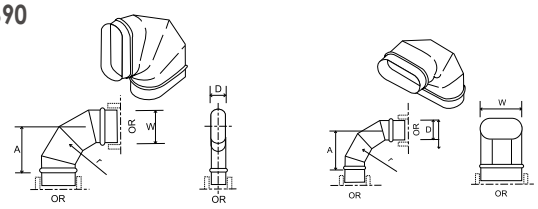
V type



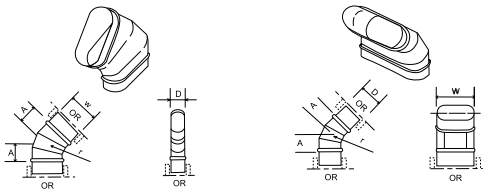
H type



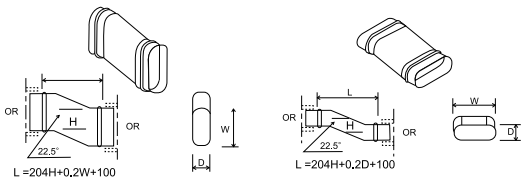
OEB90



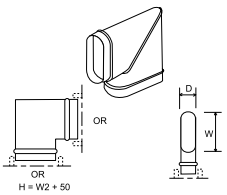
OEB45



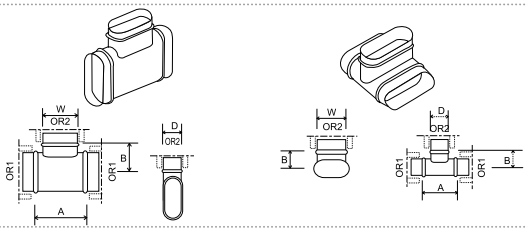
OEB



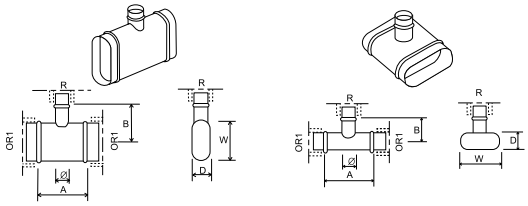
OSB



OT



OTOS



ORD/ORDOS/OB/OCP/OSCP/OCAP

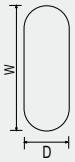


Description

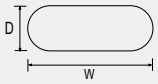
Fittings for oval ducts. Segmented and seam welded.
ORD/OB: Oval reducers used to connect oval ducts with different size.
ORDOS: Oval reducers used to connect oval and circular ducts with different size.
OCP/OSCP: Oval couplings used for joining oval ducts or oval fittings.
OCAP: Oval end-caps.

Dimensions

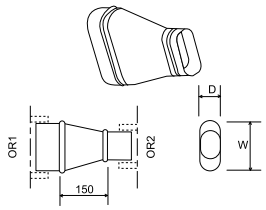
V type



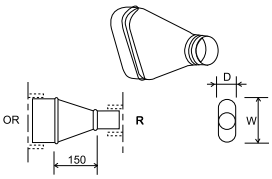
H type



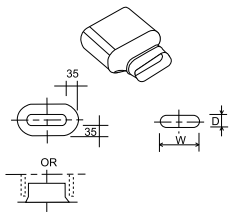
ORD



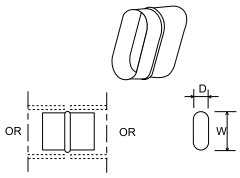
ORDOS



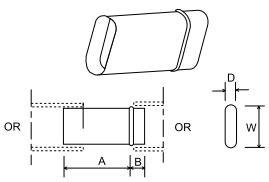
OB



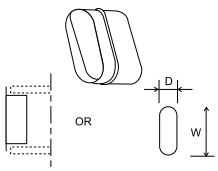
OCP



OSCP



OCAP



Material

GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

Ordering

ORD[/ORDOS/OB/OCP/OSCP/OCAP] a bbb ccc

- Product
- V type V
- H type H
- Φd1
- D

When ordering, please specify material and thickness.

Dimensions

Width D		Nominal outside diameter Φd1		Width D
mm	inch	mm	inch	mm
40	1.57	150	5.91	40~75
50	1.97	175	6.89	40~125
60	2.36	200	7.87	40~150
75	2.95	225	8.86	50~200
100	3.94	250	9.84	60~200
125	4.92	275	10.83	75~200
150	5.91	300	11.81	75~200
200	7.87			
250	9.84			
300	11.81			

W = ((Φd1-D) × 3.14 / 2) + D
Refer to page 16 for diameters > 300mm.

CS



Description

The circular silencers are designed with an external, spiral-seam pipe and an inner casing of perforated sheet steel. The cavity is filled with sound-absorbent mineral wool.

Material

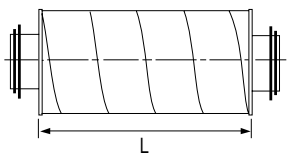
GI	Galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet
STS	Stainless steel sheet

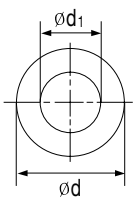
Ordering



When ordering, please specify material and thickness.

Dimensions





Dimensions

100mm insulation

Nominal outside diameter Φd1 mm inch	Inside diameter Φd mm inch	Installation length L mm inch
80	280	300/600/900/1000
3.15	11.02	11.81/23.62/35.43/39.37
100	315	300/600/900/1000
3.94	12.40	11.81/23.62/35.43/39.37
125	315	300/600/900/1000
4.92	12.40	11.81/23.62/35.43/39.37
160	355	300/600/900/1000
6.30	13.98	11.81/23.62/35.43/39.37
200	400	300/600/900/1000
7.87	15.75	11.81/23.62/35.43/39.37
250	450	300/600/900/1000
9.84	17.72	11.81/23.62/35.43/39.37

150mm insulation

Nominal outside diameter Φd1 mm inch	Inside diameter Φd mm inch	Installation length L mm inch
80	400	1000
3.15	15.75	39.37
100	400	1000
3.94	15.75	39.37
125	450	1000/1200
4.92	17.72	39.37/47.24
160	450	1000/1200
6.30	17.72	39.37/47.24
200	500	1000/1200
7.87	19.69	39.37/47.24
250	560	1000/1200
9.84	22.05	39.37/47.24

Corrugated steel pipes

CSP/PCSP



CSP



PCSP

Description

CSP: Corrugated steel pipes for water. Not perforated.
PCSP: Corrugated steel pipes for subterranean water. Perforated and covered with non-woven.

Material

HGI	Hot-dip galvanized steel sheet
G/L	Aluminum-Zinc alloy coated steel sheet

Ordering

CSP[/PCSP] aaa

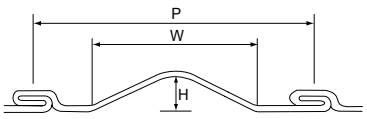
Product

Φd

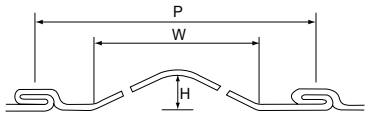
When ordering, please specify material and thickness.

Dimensions

CSP



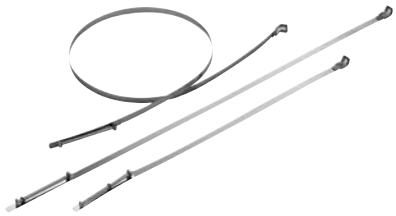
PCSP



Nominal inside diameter Φd		Pitch P	Corrugation width W	Corrugation Height H
mm	inch	mm	mm	mm
300~2500	11.81~98.43	115	60	10

Fitting bands

SB



Description

Fitting bands for connecting flexible ducts to circular ducts or fittings.
8mm in width and 0.25mm in thickness.

Material

Stainless steel

Ordering

SB aaa

Product

Φd

When ordering, please specify material and thickness.

Dimensions

Nominal inside diameter Φd	
mm	inch
75~500	2.95~19.69

FDTP/FDTPFR



Description

Flexible duct made of tarpaulin, standard length 10m, manufactured in dimensions from Φ50 up to Φ1000, withstands from –40˚C up to 80˚C.
FDTPFR has higher fire resistance than FDTP.
Insulation is optional.

Material

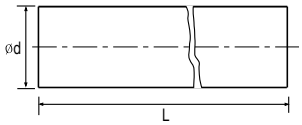
Tarpaulin(PVC laminated polyester)
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDTP[/FDTPFR] 1P[/2P] [G/P] [A/V] aaa

- Product
- Ply
- Insulation
- Outer cover
- Φd

Dimensions



Without insulation

Ply	Nominal inside diameter Φd	
	mm	inch
1P	50 ~ 1000	1.97 ~ 39.37
2P	100 ~ 1000	3.94 ~ 39.37

Insulated

Ply	Nominal inside diameter Φd	
	mm	inch
1P	100 ~ 500	3.94 ~ 19.69
2P	100 ~ 500	3.94 ~ 19.69

FDAL



Description

UL listed. Flexible duct made of aluminum foil, standard length 10m, manufactured in dimensions from Φ50 up to Φ500, withstands from –30˚C up to 120˚C.
Insulation is optional.

Material

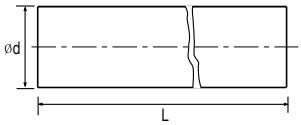
Aluminum foil(polyester film laminated)
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDAL 2P[/3P/4P] [G/P] [A/V] aaa

- Product
- Ply
- Insulation
- Outer cover
- Φd

Dimensions



Without insulation

Ply	Nominal inside diameter Φd	
	mm	inch
2P	50 ~ 500	1.97 ~ 19.69
3P	50 ~ 500	1.97 ~ 19.69
4P	50 ~ 500	1.97 ~ 19.69

Insulated

Ply	Nominal inside diameter Φd	
	mm	inch
2P	100 ~ 500	3.94 ~ 19.69
3P	100 ~ 500	3.94 ~ 19.69
4P	100 ~ 500	3.94 ~ 19.69

FDGF



Description

Flexible duct made of glass fiber fabric, standard length 10m, manufactured in dimensions from Φ75 up to Φ1000, withstands from –20˚C up to 120˚C.
Insulation is optional.

Material

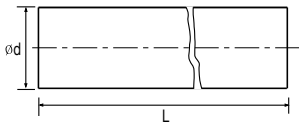
Glass fiber fabric
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDGF 1P[/2P] [G/P] [A/V] aaa

- Product
- Ply
- Insulation
- Outer cover
- Φd

Dimensions



Without insulation

Ply	Nominal inside diameter Φd	
	mm	inch
1P	75 ~ 1000	2.95 ~ 39.37
2P	75 ~ 1000	2.95 ~ 39.37

Insulated

Ply	Nominal inside diameter Φd	
	mm	inch
1P	100 ~ 500	3.94 ~ 19.69
2P	100 ~ 500	3.94 ~ 19.69

FDHC



Description

Flexible duct made of aluminum foil laminated tarpaulin or glass fiber fabric, standard length 10m, manufactured in dimensions from Φ100 up to Φ500, withstands from –20˚C up to 120˚C.
Insulation is optional.

Material

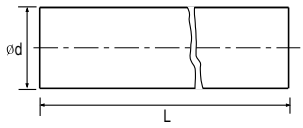
Aluminum foil laminated tarpaulin or
Aluminum foil laminated glass fiber fabric
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDHC 1P [G/P] [A/V] aaa

- Product
- Ply
- Insulation
- Outer cover
- Φd

Dimensions



Without insulation

Ply	Nominal inside diameter Φd	
	mm	inch
1P	100 ~ 500	3.94 ~ 19.69

Insulated

Ply	Nominal inside diameter Φd	
	mm	inch
1P	100 ~ 500	3.94 ~ 19.69

FDSAAF/FDSANW



Description

Sound-attenuated flexible duct made of perforated aluminum foil or non-woven, standard length 10m, manufactured in dimensions from Φ100 up to Φ500.
FDSAAF, made of 2-ply aluminum foil, withstands from –30˚C up to 140˚C.
FDSANW, made of 1-ply non-woven, withstands from –20˚C up to 80˚C.
Insulation is optional but outer cover is necessary.

Material

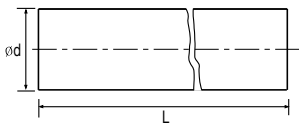
Perforated aluminum foil or perforated non-woven
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDSAAF[/FDSANW] [G/P] [A/V] aaa

- Product
- Insulation
- Outer cover
- Φd

Dimensions



Without insulation

Product	Nominal inside diameter Φd	
	mm	inch
FDSAAF	100 ~ 500	3.94 ~ 19.69
FDSANW	100 ~ 500	3.94 ~ 19.69

Insulated

Product	Nominal inside diameter Φd	
	mm	inch
FDSAAF	100 ~ 500	3.94 ~ 19.69
FDSANW	100 ~ 500	3.94 ~ 19.69

FDSP



Description

Flexible duct made of aluminum, standard length 10m, manufactured in dimensions from Φ65 up to Φ500, withstands from –50˚C up to 500˚C.
Insulation is optional.

Material

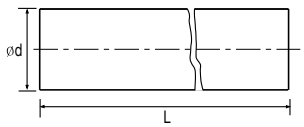
Aluminum sheet
Insulation Glass wool(G) or PET(PolyEthylene Terephthalate)(P)
Outer cover Aluminum foil(A) or vapor barrier(V)

Ordering

FDSP [G/P] [A/V] aaa

- Product
- Insulation
- Outer cover
- Φd

Dimensions



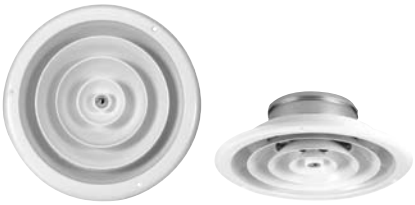
Without insulation

Product	Nominal inside diameter Φd	
	mm	inch
FDSP	65 ~ 500	2.56 ~ 19.69

Insulated

Product	Nominal inside diameter Φd	
	mm	inch
FDSP	65 ~ 500	2.56 ~ 19.69

DR/DS/DSR



Description

Ceiling diffusers with multiple fans for air conditioning and ventilation. Diffused air throws in every direction(360˚).
DR: Round fans and face
DS: Square fans and face
DSR: Round fans and square face

Material

Cold rolled steel sheet
Aluminum
Stainless steel

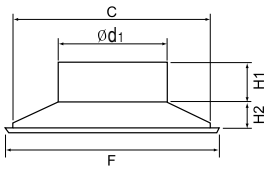
Ordering

DR[/DS/DSR] aaa

Product
Φd1

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

PDR/PDS/PDSR



Description

Ceiling diffusers with closed front plate for air conditioning and ventilation. Diffused air throws in every direction(360˚). Horizontal and vertical throw can be adjusted by plate.
PDR: Round plate and face
PDS: Square plate and face
PDSR: Round plate and square face

Material

Cold rolled steel sheet
Aluminum
Stainless steel

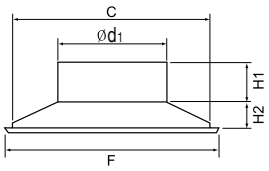
Ordering

PDR[/PDS/PDSR] aaa

Product
Φd1

When ordering, please specify material and thickness.

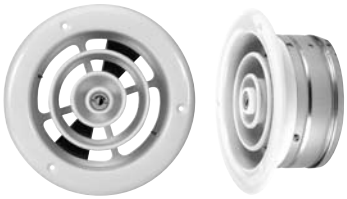
Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

Nozzle diffusers

ND



Description

Nozzle diffusers for spot injection. Less pressure drop and longer throw. Volume flow can be adjusted by front handle.

Material

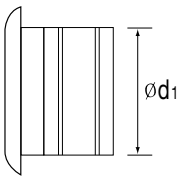
Cold rolled steel sheet
Aluminum
Stainless steel

Ordering

	ND	aaa
Product		
Φd1		

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

PKND



Description

Punka nozzle diffusers for spot injection. Less pressure drop and longer throw. Volume flow can be adjusted by front handle.

Material

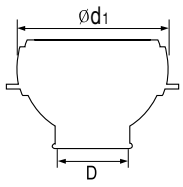
Cold rolled steel sheet
Aluminum
Stainless steel

Ordering

	PKND	aaa
Product		
Φd1		

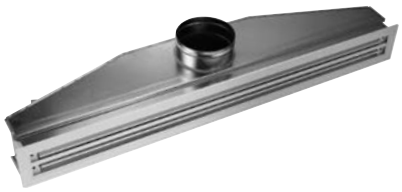
When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1			
mm	inch	mm	inch
100	3.94	125	4.92
150	5.91	200	7.87
250	9.84	300	11.81

BLDS/BLDD



Description

Linear diffusers with blades. The direction of diffused air can be adjusted right and left up to 45 degrees by blades.
BLDS: single slot and single blade
BLDD: double slots and double blades

Material

Chamber	Galvanized steel sheet
Diffuser	Aluminum

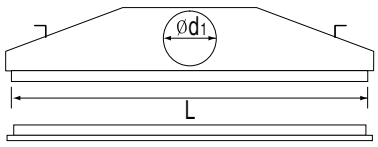
Ordering

BLDS[/BLDD] aaa bbb

Product
Φd1
L

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1		Chamber length L	
mm	inch	mm	inch
100	3.94	1000	39.37
150	5.91	1200	47.24

TLD



Description

Linear diffusers with vanes that can be opened or closed entirely or partially. The direction of diffused air can be adjusted right and left up to 45 degrees by vanes. The width of slot is 19mm or 25mm.

Material

Chamber	Galvanized steel sheet
Diffuser	Aluminum

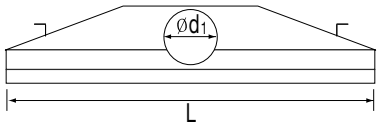
Ordering

TLD aaa bbb ccc

Product
Φd1
L
Slot width 19 / 25

When ordering, please specify material and thickness.

Dimensions



Nominal outside diameter Φd1		Chamber length L	
mm	inch	mm	inch
100	3.94	1000	39.37
150	5.91	1200	47.24

Grilles for circular ducts

GRSP



Description

Ventilation grille with vertical adjustable vanes for direct mounting on circular ducts. The grille can be supplied with horizontal guiding vanes, a straight or inclined slide damper, and a blade damper.

Material

Galvanized steel sheet

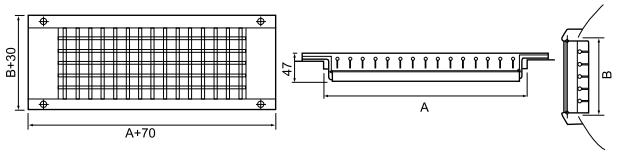
Ordering

GRSP a bbb ccc

- Product
- Accessories
- A dimension
- B dimension

When ordering, please specify material and thickness.

Dimensions

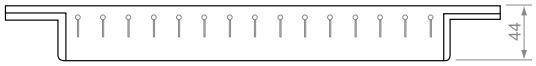


Dimension A × B mm(inch)	Min. duct dimension mm(inch)	Diameter C mm(inch)
325×75 (12.80×2.95)	160 (6.30)	106 (4.17)
425×75 (16.73×2.95)	160 (6.30)	116 (4.57)
525×75 (20.67×2.95)	160 (6.30)	126 (4.96)
625×75 (24.61×2.95)	160 (6.30)	131 (5.16)
825×75 (32.48×2.95)	160 (6.30)	151 (5.94)
325×125 (12.80×4.92)	250 (9.84)	106 (4.17)
425×125 (16.73×4.92)	250 (9.84)	116 (4.57)
525×125 (20.67×4.92)	250 (9.84)	126 (4.96)

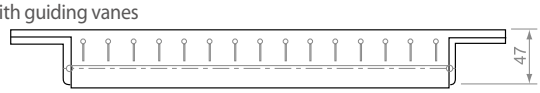
Dimensions

Accessories

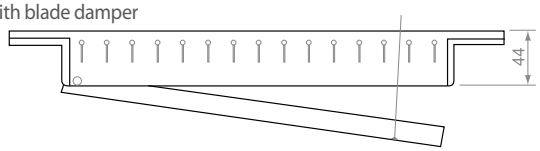
0 No Accessories



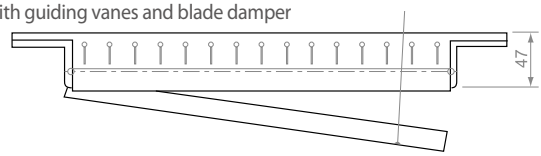
1 With guiding vanes



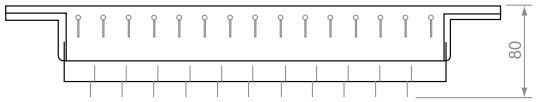
2 With blade damper



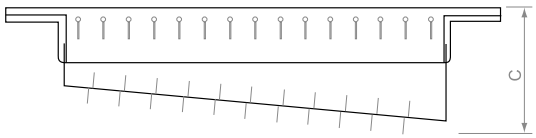
3 With guiding vanes and blade damper



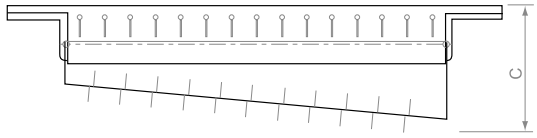
4 With straight sliding damper



5 With inclined sliding damper



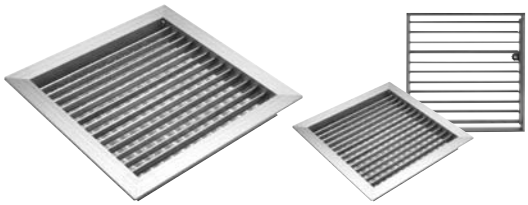
6 With guiding vanes and inclined slide



Dimension A × B mm(inch)	Min. duct dimension mm(inch)	Diameter C mm(inch)
625×125 (24.61×4.92)	250 (9.84)	131 (5.16)
825×125 (32.48×4.92)	250 (9.84)	151 (5.94)
325×150 (12.80×5.91)	315 (12.40)	106 (4.17)
425×150 (16.73×5.91)	315 (12.40)	116 (4.57)
525×150 (20.67×5.91)	315 (12.40)	126 (4.96)
625×150 (24.61×5.91)	315 (12.40)	131 (5.16)
825×150 (32.48×5.91)	315 (12.40)	151 (5.94)

Grilles

GR/GRS/GRD



GR GRD

Description

Ventilation grilles which are suitable for supply and exhaust air with horizontal and vertical, adjustable vanes.
GRS has a shutter which openness can be adjusted by the handle.
GRR has a blade damper which openness can be adjusted by the handle.

Material

Aluminum

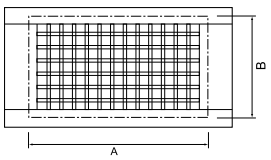
Ordering

GR[/GRS/GRD] aaa bbb

- Product
- A dimension
- B dimension

When ordering, please specify material and thickness.

Dimensions



Dimension A×B mm(inch)
50~(1.97~)

Return grilles

GRR



Description

Grille for filtering return air.

Material

Grille	Aluminum
Filter adaptor	Galvanized steel sheet

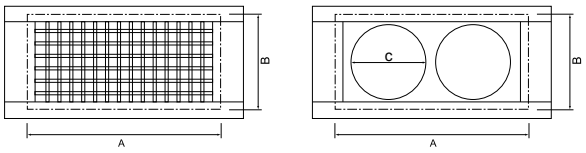
Ordering

GRR a bbb ccc ddd

- Product
- Number of intakes
- A dimension
- B dimension
- C dimension

When ordering, please specify material and thickness.

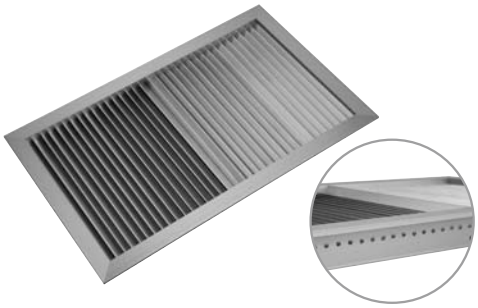
Dimensions



Number of intakes EA	Dimension A×B mm(inch)	Dimension C mm(inch)
1	300×300 (11.81×11.81)	200 (7.87) 250 (9.84)
2	600×300 (23.62×11.81)	
4	600×600 (23.62×23.62)	

Transfer grilles

TG



Description

In an air-conditioning system, a grille that permits air to flow from one space to another; may be one of a pair if installed on opposite sides of a wall or door. Generally used for reducing pressure deviation. "V" shape blades, called as gull type blades, allow to prevent the direct pass of outdoor air, or to hide the inner view.

Material

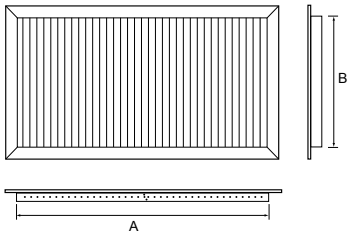
Aluminum

Ordering

TG	aaa	bbb
Product		
A dimension		
B dimension		

When ordering, please specify material and thickness.

Dimensions



Dimension A×B mm

Specification of order

Sand trap louvers

STL



Description

A grille that filters out sands in air.

Material

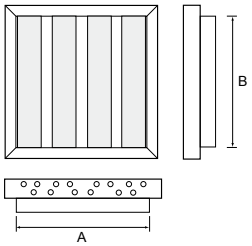
Aluminum
Aluminum-Zinc alloy coated steel sheet

Ordering

STL	aaa	bbb
Product		
A dimension		
B dimension		

When ordering, please specify material and thickness.

Dimensions



Dimension A×B mm

Specification of order

Louvers

LVF/LVA



LVF



LVA

Description

Ventilation louvers, with fixed or adjustable vanes, which are suitable for supply and exhaust air.

Material

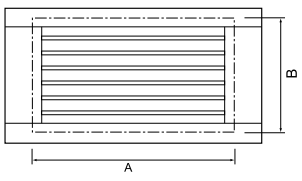
Cold rolled steel sheet
Aluminum
Stainless steel

Ordering

	LVF[/LVA]	aaa	bbb
Product			
A dimension			
B dimension			

When ordering, please specify material and thickness.

Dimensions



Dimension A×B mm(inch)
50~ (1.97~)

Chambers

CB



Description

Chambers for air supply and return. Return chambers are insulated with cross-linked polyethylene foam.
Polyethylene foam is attached inside for sound-absorbing material.

Material

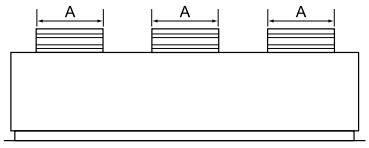
Galvanized steel sheet

Ordering

	CB	a	b	ccc	d
Product					
Supply		S			
Return		R			
Built-in			B		
Low static pressure			L		
High static pressure			H		
High static pressure with filter			HF		
A dimension					
Number of ducts to be connected					

When ordering, please specify material and thickness.

Dimensions



Air dividers

AD



Description

Chambers for branching air between chambers and diffusers.
Insulated with cross-linked polyethylene foam.

Material

Galvanized steel sheet

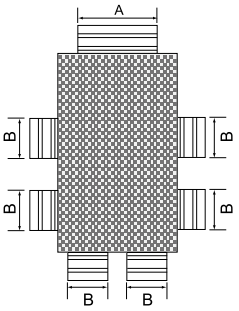
Ordering

AD aaa bbb c

- Product
- A dimension
- B dimension
- Number of branches

When ordering, please specify material and thickness.

Dimensions



Number of branches EA	Dimension A×B	
	mm	inch
2, 3	200×150	7.87×5.91
	200×200	7.87×7.87
	250×150	9.84×5.91
	250×200	9.84×7.87
4, 6	150×100	5.91×3.94
	200×100	7.87×3.94
	250×150	9.84×5.91
5	150×100	5.91×3.94
	250×150	9.84×5.91

Non-return dampers

BDDR/BDDS



BDDR



BDDS

Description

Non-return dampers used when you wish/need to control the volume flow in a specific direction and to prevent a return flow in the opposite direction.
BDDR : round shape
BDDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

BDDR aaa

- Product
- D dimension

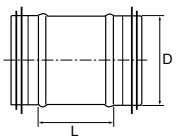
BDDS aaa bbb

- Product
- W dimension
- H dimension

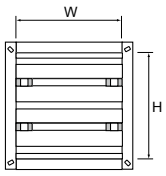
When ordering, please specify material and thickness.

Dimensions

BDDR



BDDS



Dimension D mm	Height L mm
75~150	170
200~1000	200

Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

VDR/VDS



VDR



VDS

Description

Regulating dampers with a handle for use when control of the air flow is required.
The volume flow can be controlled by handle.
VDR : round shape
VDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

VDR aa

Product
D dimension

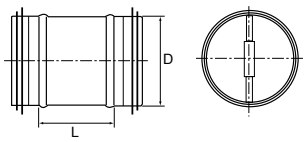
VDS aaa bbb

Product
W dimension
H dimension

When ordering, please specify material and thickness.

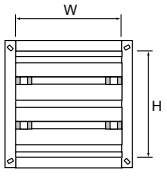
Dimensions

VDR



Dimension D mm	Height L mm
75~150	170
200~1000	200

VDS



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

MVDR/MVDS



MVDR



MVDS

Description

Regulating dampers with a motor for use when control of the air flow is required.
The volume flow can be controlled by on/off motor.
MVDR : round shape
MVDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

MVDR aaa

Product
D dimension

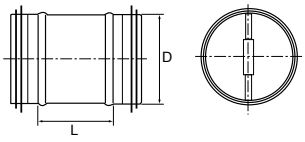
MVDS aaa bbb

Product
W dimension
H dimension

When ordering, please specify material and thickness.

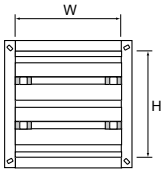
Dimensions

MVDR



Dimension D mm	Height L mm
75~150	170
200~1000	200

MVDS



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

Regulating dampers

WVDR/WVDS



WVDR WVDS

Description

Regulating dampers with a worm gear for use when control of the air flow is required.
The volume flow can be controlled by worm gear.
WVDR : round shape
WVDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

WVDR aaa

Product
D dimension

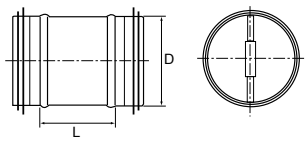
WVDS aaa bbb

Product
W dimension
H dimension

When ordering, please specify material and thickness.

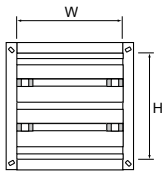
Dimensions

WVDR



Dimension D mm	Height L mm
75~150	170
200~1000	200

WVDS



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

Closing and regulating dampers

FVDR/FVDS



FVDR FVDS

Description

Closing/regulating dampers with a handle and a fuse for use when control or closure of the air flow is required.
Usually, the volume flow can be controlled by handle. When the fuse reaches its own limit, the damper is closed automatically.
FVDR : round shape
FVDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

FVDR aaa bbb

Product
Fuse(˚C) 72 / 103 / 280
D dimension

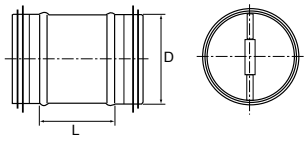
FVDS aaa bbb ccc

Product
Fuse(˚C) 72 / 103 / 280
W dimension
H dimension

When ordering, please specify material and thickness.

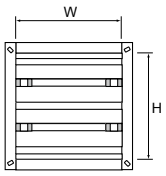
Dimensions

FVDR



Dimension D mm	Height L mm
75~150	170
200~1000	200

FVDS



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

FDR/FDS



FDR



FDS

Description

Closing dampers with a fuse for use when closure of the air flow is required. When the fuse reaches its own limit, the damper is closed automatically.
FDR : round shape
FDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

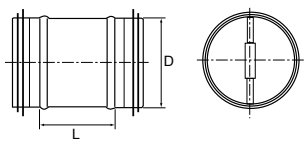
FDR aaa bbb
Product
Fuse(˚C) 72 / 103 / 280
D dimension

FDS aaa bbb ccc
Product
Fuse(˚C) 72 / 103 / 280
W dimension
H dimension

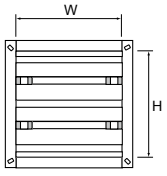
When ordering, please specify material and thickness.

Dimensions

FDR



FDS



Dimension D mm	Height L mm
75~150	170
200~1000	200

Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

MFDR/MFDS



MFDR



MFDS

Description

A motorized fire damper. Closing dampers with a motor and a heat sensor for use when closure of the air flow is required. When the temperature change is detected by the heat sensor, the damper is closed automatically by the motor.
MFDR: round shape
MFDS: rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

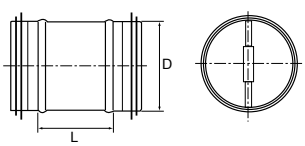
MFDR aaa bbb
Product
Fuse(˚C) 72 / 103 / 280
D dimension

MFDS aaa bbb ccc
Product
Fuse(˚C) 72 / 103 / 280
W dimension
H dimension

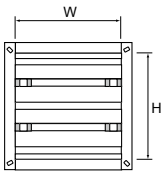
When ordering, please specify material and thickness.

Dimensions

MFDR



MFDS



Dimension D mm	Height L mm
75~150	170
200~1000	200

Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

Closing dampers

MSDS



Description

A motorized smoke damper. The fire-retardant silicon elastomer bonded on the blade shows excellent air-tightness when the damper is closed.
MSDS: rectangular shape

Material

Galvanized steel sheet
Stainless steel

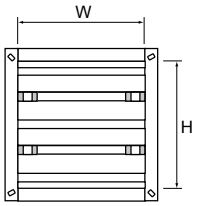
Ordering

MSDS aaa bbb

- Product
- W dimension
- H dimension

When ordering, please specify material and thickness.

Dimensions



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

MSFDS



Description

A motorized smoke and fire damper.
MSFDS: rectangular shape

Material

Galvanized steel sheet
Stainless steel

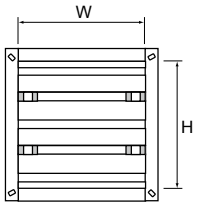
Ordering

MSFDS aaa bbb

- Product
- W dimension
- H dimension

When ordering, please specify material and thickness.

Dimensions



Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

Closing dampers

PRDR/PRDS



PRDR



PRDS

Description

Closing dampers with a piston releaser for use when closure of the air flow is required. When the piston releaser detects the release of halon gas, the damper is closed automatically to protect it.
PRDR : round shape
PRDS : rectangular shape

Material

Galvanized steel sheet
Stainless steel

Ordering

PRDR aaa

Product
D dimension

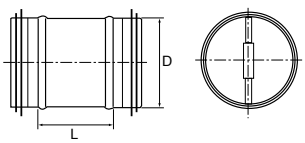
PRDS aaa bbb

Product
W dimension
H dimension

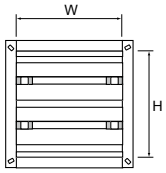
When ordering, please specify material and thickness.

Dimensions

PRDR



PRDS



Dimension D mm	Height L mm
75~150	170
200~1000	200

Dimension H mm	Number of blades EA
300~400	2
450~550	3
600~750	4
800~950	5
1000~1050	6

Ventilation caps

HCB/HC



HCB



HC

Description

Ventilation caps.
HCB: with insect net and bracket.
HC: with insect net.

Material

Aluminum
Stainless steel

Ordering

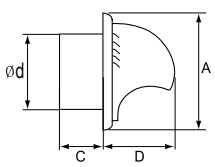
HCB[/HC] aaa

Product
Φd

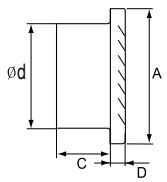
When ordering, please specify material and thickness.

Dimensions

HCB



HC



Nominal inside diameter Φd	
mm	inch
75~	2.95~

Access doors

AD



Description

Access doors for maintaining duct system.

Material

Door	Galvanized steel sheet
	Stainless steel
Hinge	Galvanized steel sheet
Insulation	Cross-linked polyethylene foam

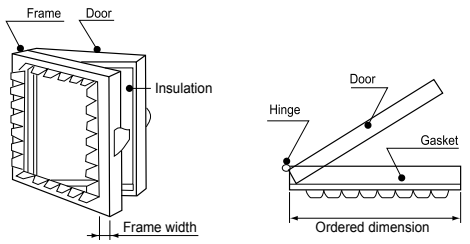
Ordering

AD aaa bbb

Product
A dimension
B dimension

When ordering, please specify material and thickness.

Dimensions



Dimension A×B	
mm	inch
200×200	7.87×7.87
250×250	9.84×9.84
300×300	11.81×11.81
350×250	13.78×9.84
400×400	15.75×15.75
450×450	17.72×17.72
500×500	19.69×19.69
600×600	23.62×23.62

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