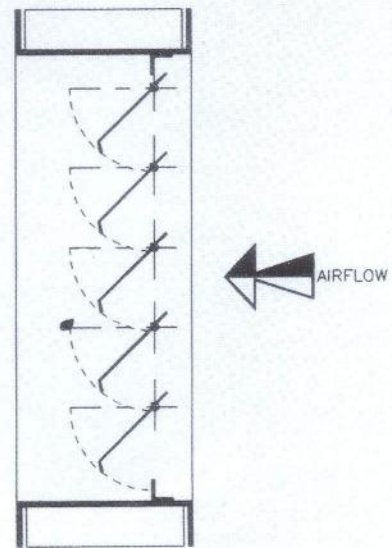
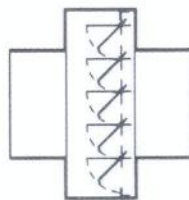
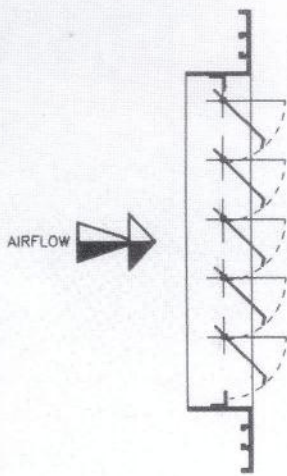


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CHAPTER - 10 NON - RETURN DAMPERS / GRAVITY LOUVERS



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NON-RETURN DAMPERS/ GRAVITY LOUVRES

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NON-RETURN DAMPERS/GRAVITY LOUVRES

"AIRTRON" Non- Return Dampers are also known as Gravity Dampers/Back Draught Dampers/Pressure Relief Dampers.

The above dampers are basically Air operated, opening or closing dampers for Air intake, discharge and or pressure relief vents in Airconditioning and Ventilation system.

SILENT FEATURES

- #.....Frame is manufactured from high quality aluminium / galvanised sheet steel of 1.2mm thickness.
- #.....The blades are manufactured from high quality aluminium sheets of 0.5mm/0.7mm thickness.
- #.....The blades are fitted with Nylon bushes to give rattle free and smooth performance.
- #.....The nylon bushes are used through galvanised steel rods to main frame for strong and rigid construction for smooth performance during variable air pressure
- #.....The frame is fitted internally with an aluminium / galvanised sheet steel angle to prevent over movement of the blade.
- #.....Additional centre Partition shall be provided if L or H dimension is more than 900mm.

AVAILABLE STANDARD SIZES

(any combination of LxH)

L mm	150	200	300	400	500	600	700	800	900	1000
H mm	150	200	300	400	500	600	700	800	900	1000

Other "H" sizes are available in 50mm increments.



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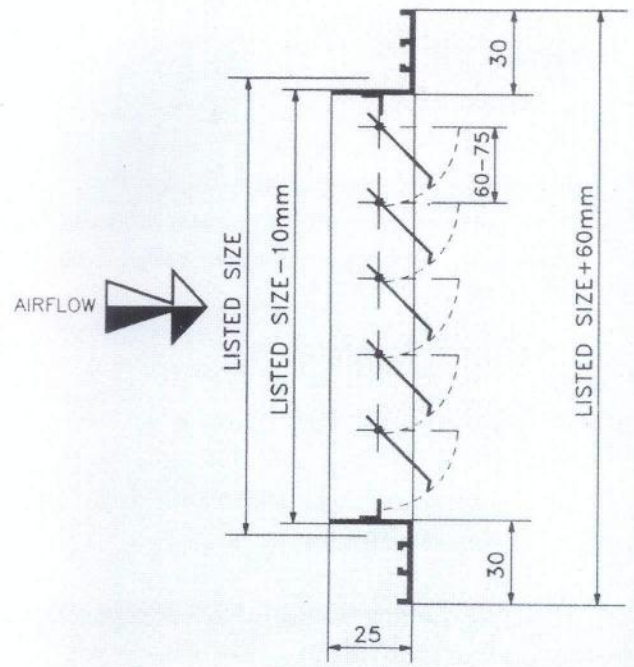
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DIMENSIONAL DETAILS

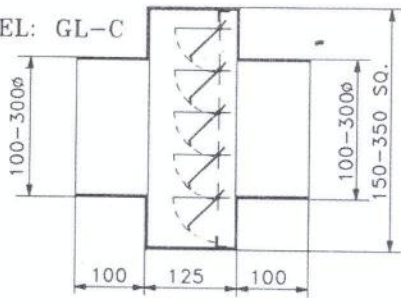
MODEL: GL-RC-E

"AIRTRON" Models GL-RC-E is a Gravity Louvre/Back Draught Damper, for the installation on the External face of the wall,



MODEL: GL-RC-E

MODEL: GL-C

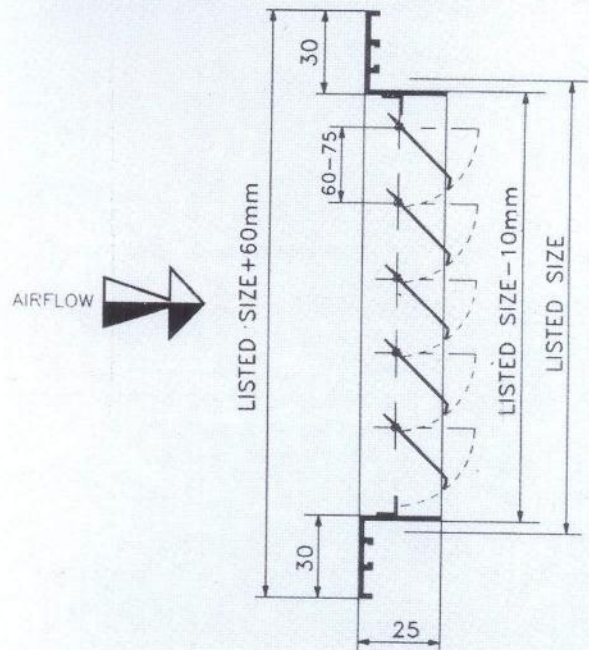


MODEL: GL-C

"AIRTRON" Models GL-C is a Gravity Louvre/Back Draught Damper, with round neck for the installation on the round duct.

MODEL: GL-RC-I

"AIRTRON" Models GL-RC-I is a Gravity Louvre/Back Draught Damper, for the installation on the Internal face of the wall,



MODEL: GL-RC-I



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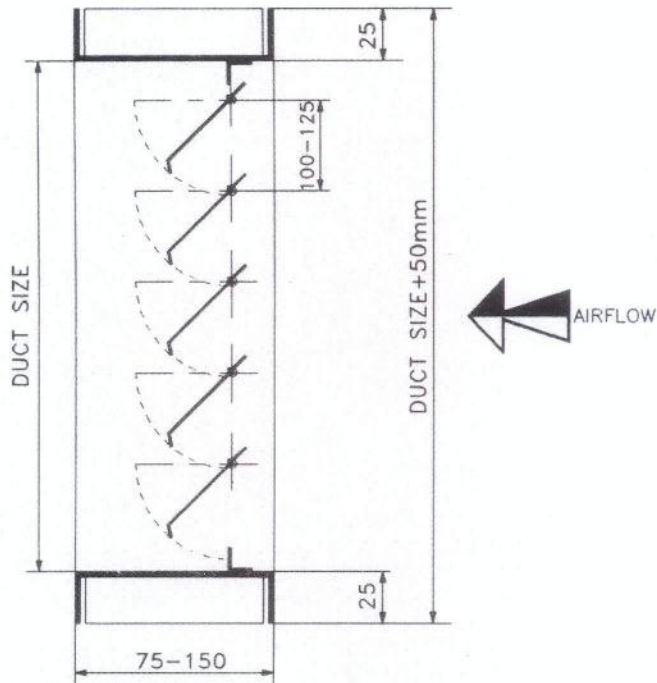
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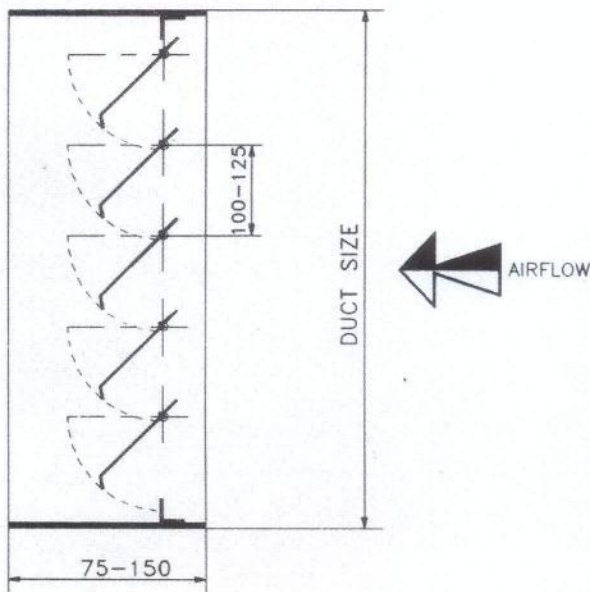
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DIMENSIONAL DETAILS



MODEL: NRD-RC-F



MODEL: NRD-RC-S

MODEL: NRD-RC-F

"AIRTRON" Models NRD-RC-F is a Flanged type Duct mounted Non-return Damper, the outer frame is manufactured from Galvanised sheet steel of 1.2mm thickness. The blades are manufactured from aluminium sheet of 0.5mm/0.7mm thickness in Mill finish. Blades are fixed to main frame by means of galvanised steel rod of 2mm or 3mm dia.

MODEL: NRD-RC-S

"AIRTRON" Models NRD-RC-S is a Straight ends Duct mounted Non-return Damper, the outer frame is manufactured from Galvanised sheet steel of 1.2mm thickness. The blades are manufactured from aluminium sheet of 0.5mm/0.7mm thickness in Mill finish. Blades are fixed to main frame by means of galvanised steel rod of 2mm or 3mm dia.



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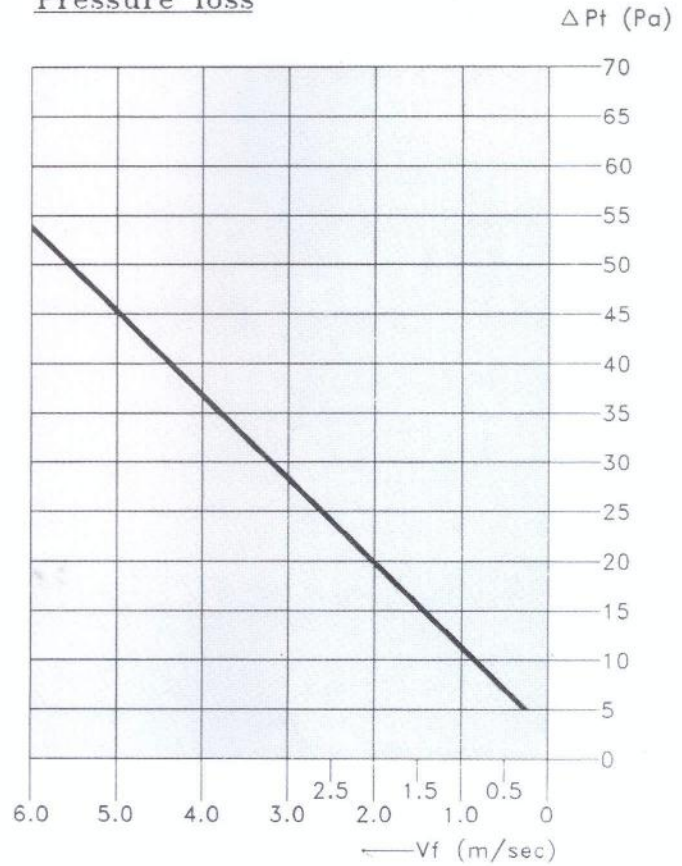
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PERFORMANCE DATA

Nomenclature

Pt (Pa).....Pressure drop

Vf (m/sec).....Air Velocity based
on nominal size.
(free discharge)Pressure lossAVAILABLE STANDARD TYPES & MODELS

MODEL	TYPES
GL-RC-E	Gravity louvres for External wall mounting
GL-C	Gravity louvres with round neck
GL-RC-I	Gravity louvres for Internal wall mounting
NRD-RC-F	Non-return Damper flange type for duct mounting
NRD-RC-S	Non-return Damper with straight ends for duct mounting

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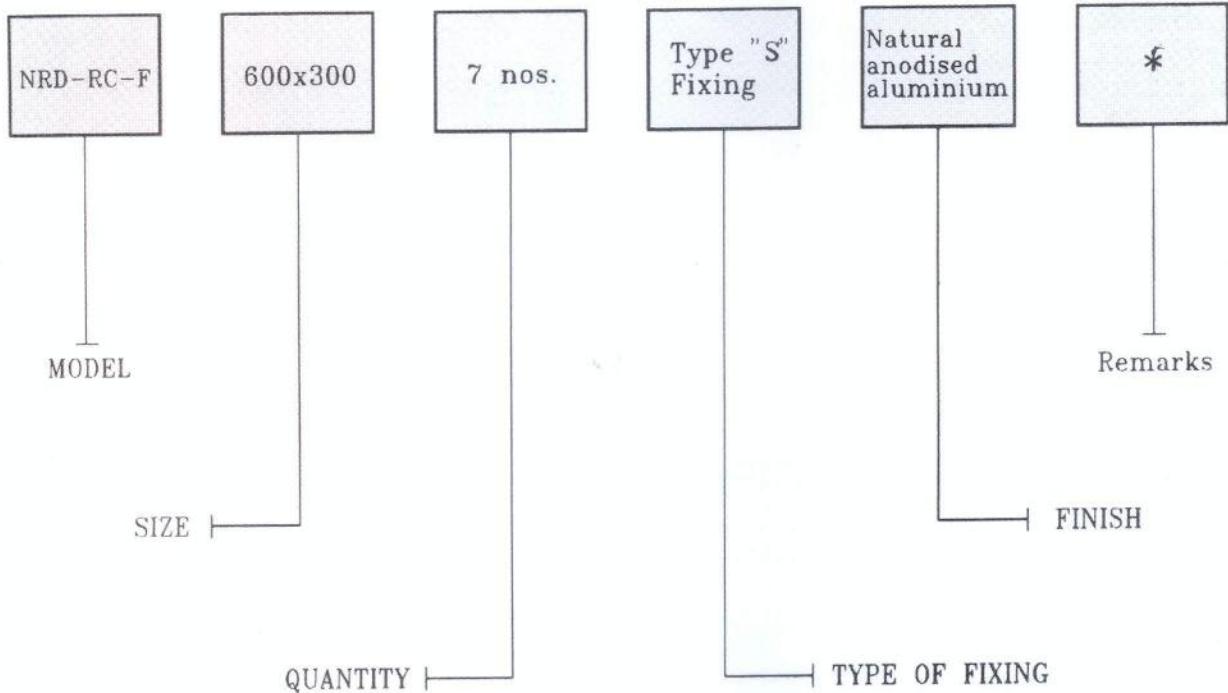
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ORDERING PROCEDURES

AVAILABLE FINISH

- *.....Powder Coated colour Finish
- *.....Natural Anodised Aluminium
- *.....Mill finish Aluminium
- *.....Galvanised sheet steel frame for duct mounted type and Round neck type

TYPE OF FIXING

- *.....Counter sunk screw fixing Suffix "S" (standard supply)
(Recommended for side wall applications)
- *.....Spring clip concealed fixing suffix "C"



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USEFUL CONVERSION FACTORS

Multiply	By	To Get	Multiply	By	To Get
mm	0.0393	in.	in.	25.4	mm
m	3.2807	ft.	ft.	0.3048	m
m ²	10.764	ft ²	ft ²	0.0929	m ²
m ³	35.31	ft ³	ft ³	0.0283	m ³
m ³ /sec.	1000	l/sec.	l/sec.	0.001	m ³ /sec.
m ³ /sec.	2119.5	cfm	cfm	0.00047	m ³ /sec.
m ³ /h	0.5886	cfm	cfm	1.6986	m ³ /h
m ³ /min.	35.32	cfm	cfm	0.0284	m ³ /min.
l/sec.	2.1195	cfm	cfm	0.4719	l/sec.
m ³ /sec.	264.18	gpm(U.S.)	gpm(U.S.)	0.00378	m ³ /sec.
m ³ /h	4.403	gpm(U.S.)	gpm(U.S.)	0.2268	m ³ /h
l/sec.	15.85	gpm(U.S.)	gpm(U.S.)	0.063	l/sec.
m/sec.	196.8	fpm	fpm	0.0051	m/sec.
m/sec.	3.28	fps	fps	0.3048	m/sec.
Kg.	2.2046	lbs.	lbs.	0.4536	Kg.
Kg.	15456	grain	grain	0.00006	Kg.
N	0.102	Kg(kp)	Kg(kp)	9.8066	N
N	0.2248	lb.f.	lb.f.	4.4482	N
Pa	1	N/m ²	N/m ²	1	Pa
Pa	0.000145	psi	psi	6896	Pa
Pa	0.000295	in.Hg.	in.Hg.	3386	Pa
Pa	0.0041	in. WG.	in. WG.	249	Pa
Pa	0.00033	ft. WG.	ft. WG.	2989	Pa
Pa	0.00001	bar	bar	100000	Pa
Pa	0.102	mm. WG.	mm. WG.	9.8066	Pa
Pa	0.0001	m. WG.	m. WG.	980.66	Pa
Pa	0.00001	At	At	98066	Pa
Pa	0.00001	Kg/cm ²	Kg/cm ²	98066	Pa
Kg/cm ²	14.223	psi.	psi.	0.0703	Kg/cm ²
Pa	0.0075	Tr.	Tr.	133.3	Pa
Kcal/hr.	3.968	BTU/hr.	BTU/hr.	0.2519	Kcal/hr.
Kcal/hr.	0.00033	Ref. ton	Ref. ton	3022.8	Kcal/hr.
W	1	J/s	J/s	1	W
W	0.861	Kcal./hr.	Kcal./hr.	1.163	W
W	3.412	BTU/hr.	BTU/hr.	0.2931	W
kW	0.285	Ref. ton	Ref. ton	3.517	kW
kW	1.36	HPmetric	HPmetric	0.7354	kW
kW	1.341	HP(UK)	HP(UK)	0.7457	kW
cal	4.1858	J	J	0.2389	cal
BTU	1111	J	J	0.0009	BTU
kWh	3.6	MJ	MJ	0.2778	kWh
kGm	9.8067	J	J	0.102	kGm
ft. lb.	1.3558	J	J	0.7376	ft. lb.
Kcal/kg.	4.1868	kJ/kg.	kJ/kg.	0.2388	Kcal/kg.
BTU/lb.	2.326	kJ/kg.	kJ/kg.	0.4299	BTU/lb.
lb/lb	1	kg/kg.	kg/kg.	1	lb/lb
grain/lb	0.143	g/kg	g/kg	6.993	grain/lb
m ³ /kg.	16.018	ft ³ /lb.	ft ³ /lb.	0.0624	m ³ /kg.
m ² degC hr.	5	ft ² degC hr.	ft ² degC hr.	0.2	m ² degC hr.
kcal.		BTU	BTU		kcal.

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