

KOOLAIR

series

31-LT

Linear grilles

ISO 9001

BUREAU VERITAS
Certification

Sistema de Gestión



www.koolair.com

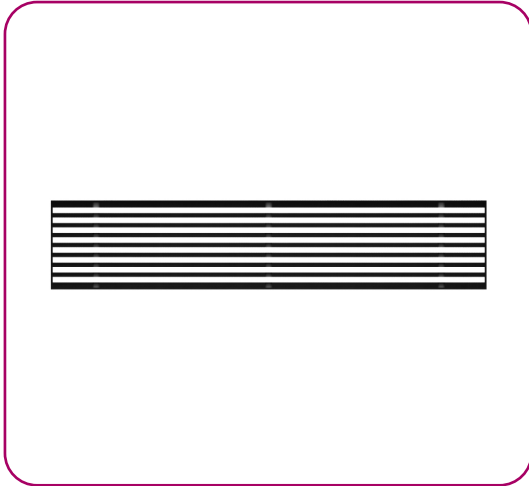
31-1-LT

Linear grille with concealed frame

CONTENTS

Description	2
General dimensions	3
Technical data	6
Coding	10

31-1-LT. Linear grille with concealed frame



Description

KOOLAIR linear grille for supply or return air with concealed perimeter frame, model **31-1-LT**, dimensions LxH (mm), with fixed horizontal blades (0° deflection), for installation in suspended ceiling or wall. Fin block that can be detached manually by means of pressure clips to access the interior of the unit or duct for cleaning, inspection or to access the filter etc.

Characterised by the absence of a visible profile, with only the horizontal blades of the grille visible, providing an overall pleasing aesthetic appearance.

Option to fit a control damper (-**O**) and individually moveable vertical blades to provide secondary deflection (-**G**).

Anodised aluminium finish or painted in RAL colour of choice. Frame and auxiliary parts painted in black RAL9005 to obscure from below and prevent from standing out once installed.

Possibility of forming continuous lines of a determined length composed of sections manufactured to be joined on site. Installation of changes of direction in ceilings or walls at angles to be determined with the objective of creating a continuous linear grille installation. (Maximum length per section 2000 mm).



Mounting

Standard design. Includes a specially designed frame to facilitate wall mounting and finishing with plasterboard paste or similar to conceal.

-PFL. With fixed galvanised sheet steel plenum with lateral connection. (-**A** Interior insulated).

-PFS. With fixed galvanised sheet steel plenum with top connection. (-**A** Interior insulated).

-PDL. With fixed galvanised sheet steel plenum with lateral connection, not mounted directly to grille (independent part). (-**A** Interior insulated).

-PDS. With fixed galvanised sheet steel plenum with top connection, not mounted directly to grille (independent part). (-**A** Interior insulated).

Other models

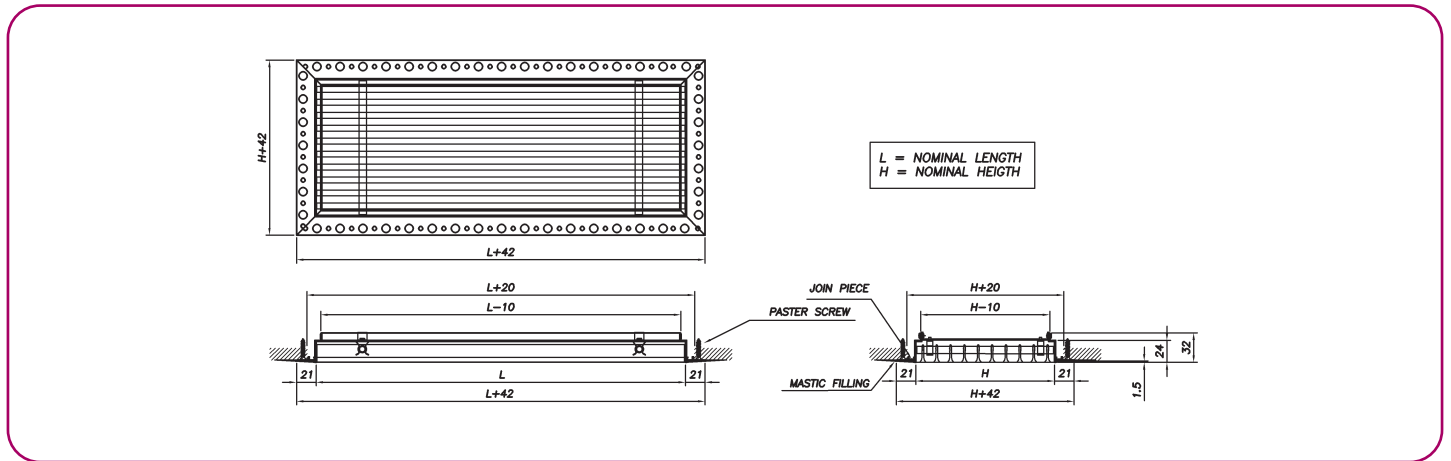
31-15-LT. Linear grille with concealed frame and fixed blades (15° deflection).

31-1/15-LT-G. Linear grille with concealed frame and fixed blades (0° or 15° deflection), with individually moveable vertical blades for secondary deflection.

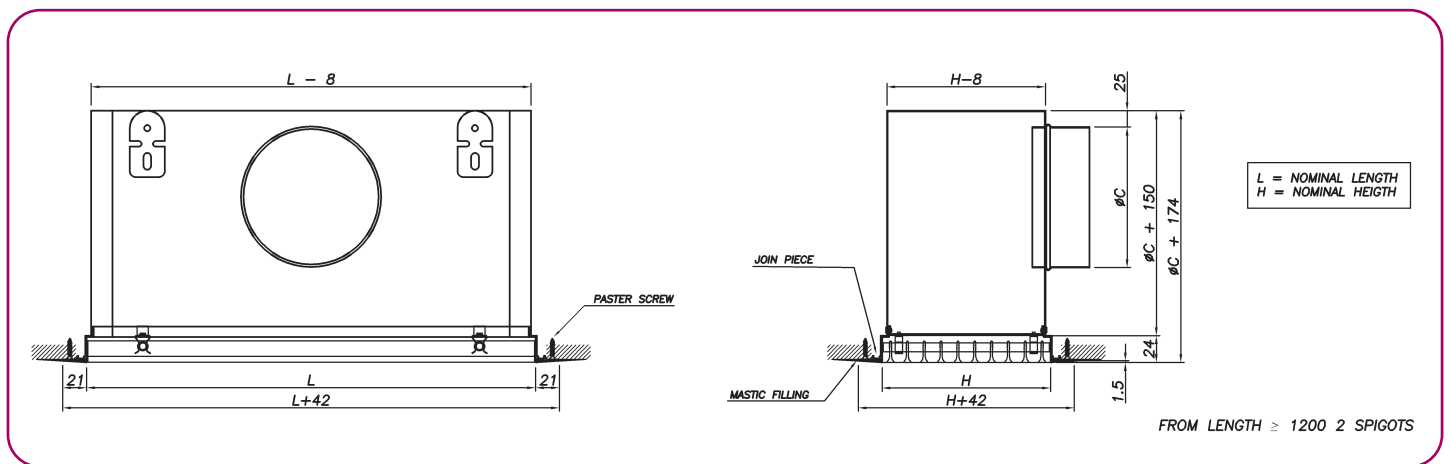
31-1/15-LT-O. Linear grille with concealed frame and fixed blades (0° or 15° deflection), with volume control damper (-**O**).

General dimensions

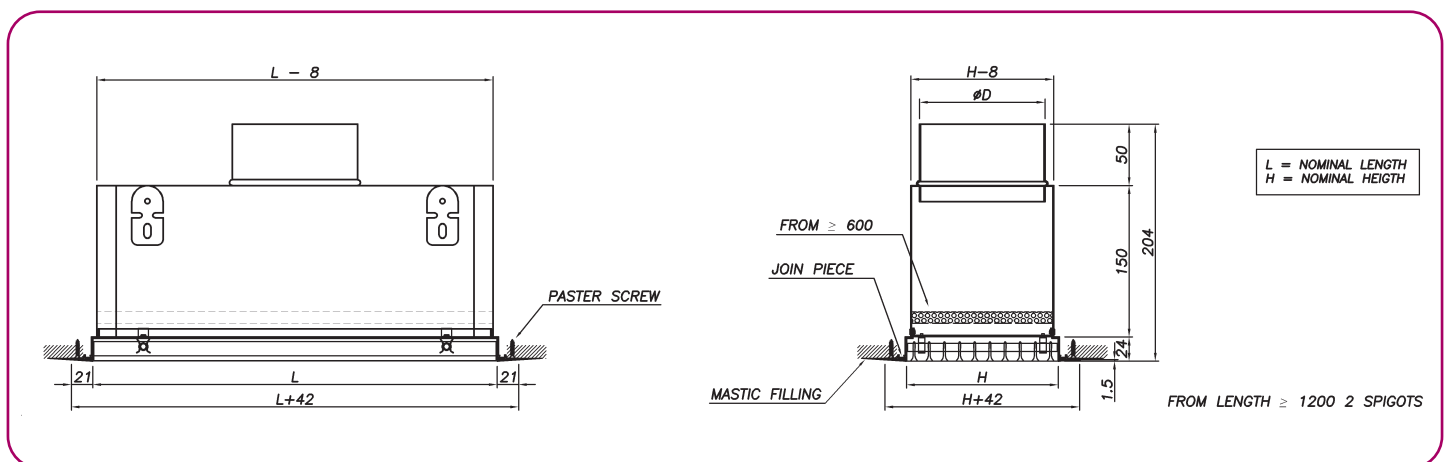
Grille 31-1-LT



Grille 31-1-LT+PFL

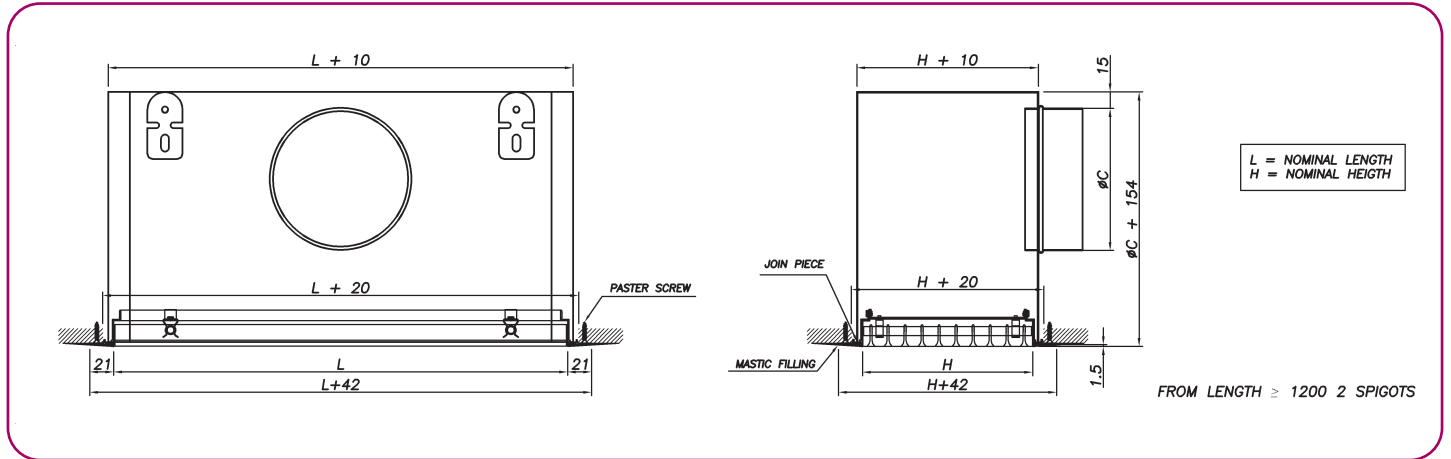


Grille 31-1-LT+PFS

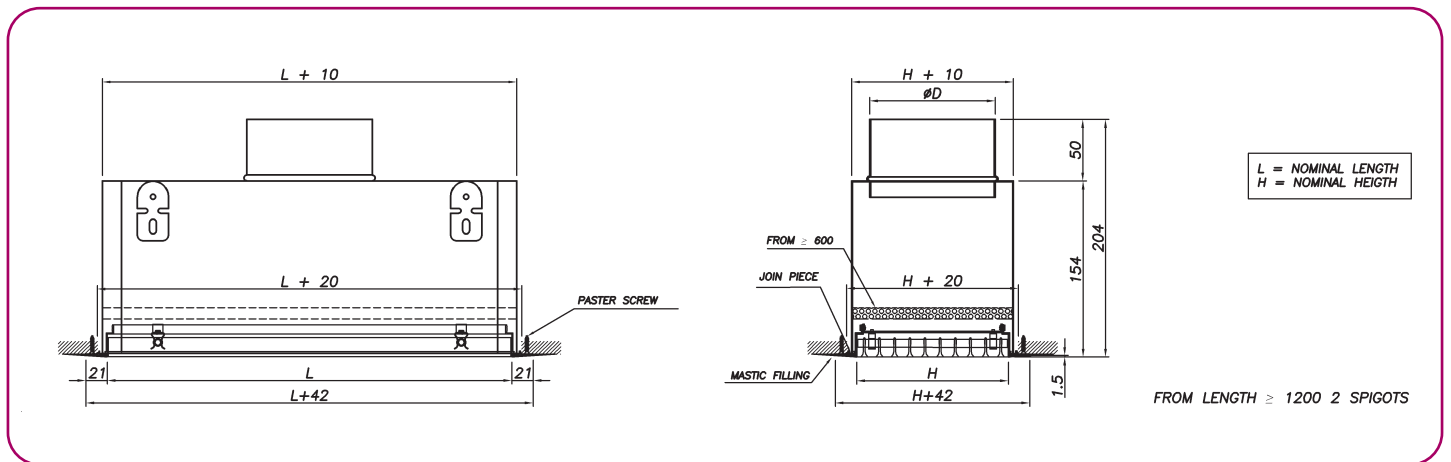


General dimensions

Grille 31-1-LT+PDL

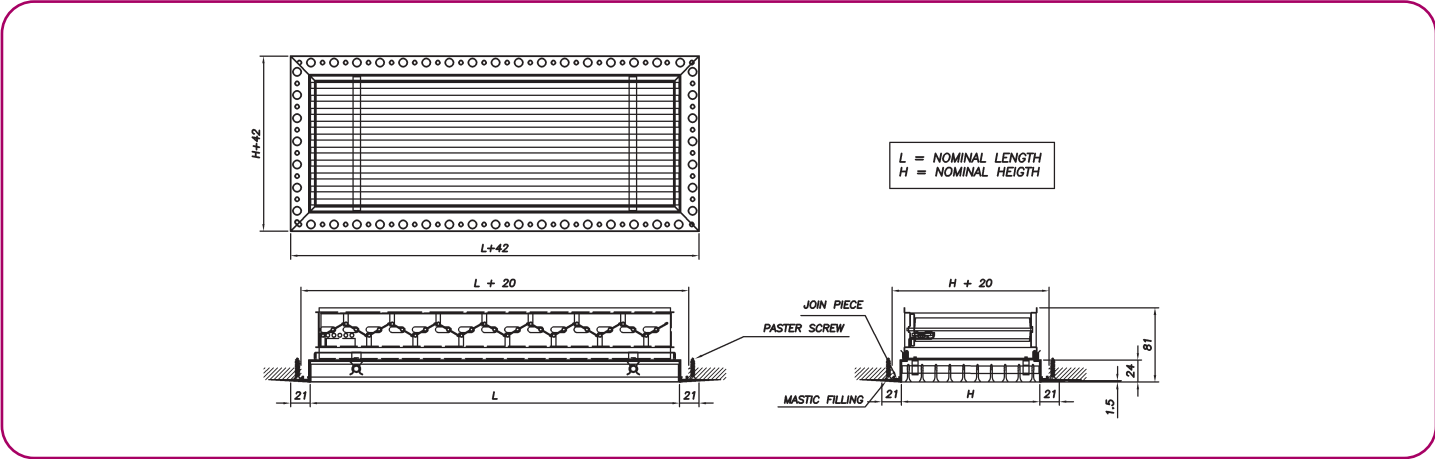


Grille 31-1-LT+PDS

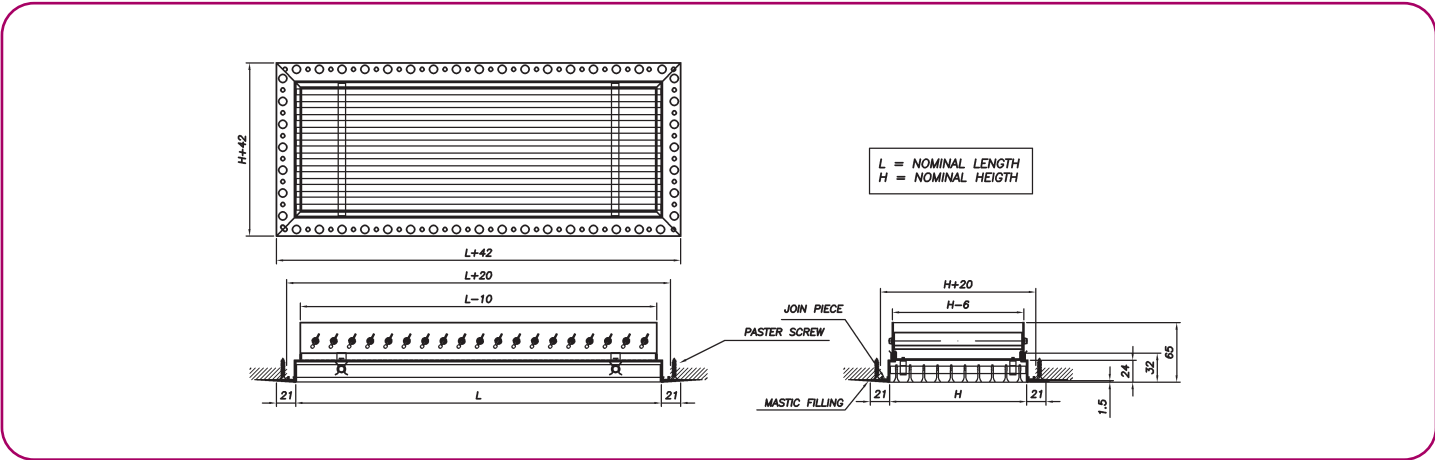


General dimensions

Grille 31-1-LT+O



Grille 31-1-LT+G



Technical data

		H (mm)	L(mm)				
		50	200	300	400	500	600
		75		200			400
		100			200		300
		125				200	
		150					200
Q		A _k (m ²)	0,004725	0,0070875	0,00945	0,0118125	0,01512
(m ³ /h)	(l/s)						
75	20,8	V _k (m/s)	4,4				
		ΔP (Pa)	13				
		X(m)	1,7				
		Lw(dB(A))	21				
100	27,8	V _k (m/s)	5,9				
		ΔP (Pa)	23,6				
		X(m)	2,3				
		Lw(dB(A))	28				
125	34,7	V _k (m/s)	7,3	4,9			
		ΔP (Pa)	37	16			
		X(m)	2,8	2,3			
		Lw(dB(A))	34	25			
160	44,4	V _k (m/s)	9,4	6,3	4,7	3,8	
		ΔP (Pa)	61	27	15	10	
		X(m)	3,6	3,0	2,6	2,3	
		Lw(dB(A))	40	31	25	20	
200	55,6	V _k (m/s)	11,8	7,8	5,9	4,7	
		ΔP (Pa)	95	42	24	15	
		X(m)	4,5	3,7	3,2	2,9	
		Lw(dB(A))	46	37	31	26	
250	69,4	V _k (m/s)	14,7	9,8	7,3	5,9	4,6
		ΔP (Pa)	148	66	37	24	14
		X(m)	5,7	4,6	4,0	3,6	3,2
		Lw(dB(A))	51	43	37	32	27
300	83,3	V _k (m/s)		11,8	8,8	7,1	5,5
		ΔP (Pa)		95	53	34	21
		X(m)		5,6	4,8	4,3	3,8
		Lw(dB(A))		47	41	37	31

The Selection Table shows a summary of dimensions. Other sizes available. Consult the Sales Department.

Legend

Q (m³/h): Air flow.

L_{wA} [dB(A)]: Sound power level.

ΔP_t (Pa): Total pressure loss.

V_k (m/s): Effective velocity.

X (m): Throw for a maximum velocity of 0.5 m/s.

Technical data

Q		H (mm)	L(mm)										
		50 75 100 125 150 200 250 300	300 400 500 600 1000	400 200 200 200 200 200 300 300	500 400 300 400 500 500 600 600	600 500 400 300 300 300 300 300	1000 1000 900 800 800 600 400 400	900 800 700 600 400 300 300 300	1000 800 600 400 400 300 300 300	800 600 400 300 300 300 300 300	700 600 400 300 300 300 300 300		
(m ³ /h)	(l/s)	A _k (m ²)	0,0070875	0,00945	0,0118125	0,01512	0,0252	0,039375	0,04725	0,0525	0,06804	0,07938	
350	97,2	V _k (m/s)	13,7	10,3	8,2	6,4	3,9						
		ΔP (Pa)	129	72	46	28	10						
		X(m)	6,5	5,6	5,0	4,4	3,4						
		Lw(dB(A))	51	45	41	35	24						
400	111,1	V _k (m/s)		11,8	9,4	7,3	4,4						
		ΔP (Pa)		95	61	37	13						
		X(m)		6,4	5,8	5,1	3,9						
		Lw(dB(A))		49	44	39	28						
450	125,0	V _k (m/s)			10,6	8,3	5,0	3,2					
		ΔP (Pa)			77	47	17	7					
		X(m)			6,5	5,7	4,4	3,5					
		Lw(dB(A))			47	42	31	21					
500	138,9	V _k (m/s)			11,8	9,2	5,5	3,5	2,9				
		ΔP (Pa)			95	58	21	9	6				
		X(m)			7,2	6,4	4,9	3,9	3,6				
		Lw(dB(A))			50	44	34	24	20				
600	166,7	V _k (m/s)				11,0	6,6	4,2	3,5	3,2			
		ΔP (Pa)				58	21	9	6	5			
		X(m)				7,6	5,9	4,7	4,3	4,1			
		Lw(dB(A))				49	38	29	25	23			
700	194,4	V _k (m/s)					7,7	4,9	4,1	3,7	2,9		
		ΔP (Pa)					41	17	12	9	6		
		X(m)					6,9	5,5	5,0	4,8	4,2		
		Lw(dB(A))					42	33	29	27	21		
800	222,2	V _k (m/s)						8,8	5,6	4,7	4,2	3,3	2,8
		ΔP (Pa)						53	22	15	12	7	5
		X(m)						7,9	6,3	5,8	5,5	4,8	4,4
		Lw(dB(A))						46	36	32	30	24	21

Technical data

		H (mm)	L(mm)								
		50 75 100 125 150 200 250 300	1000 1000 500 400 500 200	 900 600 600 300	1000 800 500 400	 800 600 700	1000 1000 600	 900 600 600	1000 1000		
Q		A _k (m ²)	0,0252	0,039375	0,04725	0,0525	0,06804	0,07938	0,08505	0,10206	0,17955
(m ³ /h)	(l/s)										
900	250,0	V _k (m/s)	9,9	6,3	5,3	4,8	3,7	3,1			
		ΔP (Pa)	67	28	19	16	9	7			
		X(m)	8,9	7,1	6,5	6,1	5,4	5,0			
		Lw(dB(A))	49	39	35	33	27	24			
1023	284,2	V _k (m/s)		7,2	6,0	5,4	4,2	3,6	3,3	2,8	
		ΔP (Pa)		36	25	20	12	9	8	5	
		X(m)		8,1	7,4	7,0	6,1	5,7	5,5	5,0	
		Lw(dB(A))		42	39	36	31	27	26	22	
1200	333,3	V _k (m/s)		8,5	7,1	6,3	4,9	4,2	3,9	3,3	
		ΔP (Pa)		49	34	28	16	12	11	7	
		X(m)		9,4	8,6	8,2	7,2	6,7	6,4	5,9	
		Lw(dB(A))		46	43	40	35	32	30	26	
1400	388,9	V _k (m/s)		9,9	8,2	7,4	5,7	4,9	4,6	3,8	
		ΔP (Pa)		67	46	38	22	16	14	10	
		X(m)		11,0	10,1	9,5	8,4	7,8	7,5	6,8	
		Lw(dB(A))		50	47	44	39	36	34	30	
1600	444,4	V _k (m/s)			9,4	8,5	6,5	5,6	5,2	4,4	2,5
		ΔP (Pa)			61	49	29	21	19	13	4
		X(m)			11,5	10,9	9,6	8,9	8,6	7,8	5,9
		Lw(dB(A))			50	48	42	39	37	34	22
1800	500,0	V _k (m/s)					7,3	6,3	5,9	4,9	2,8
		ΔP (Pa)					37	27	24	16	5
		X(m)					10,8	10,0	9,6	8,8	6,6
		Lw(dB(A))					45	42	40	37	25
2000	555,6	V _k (m/s)					8,2	7,0	6,5	5,4	3,1
		ΔP (Pa)					37	27	24	16	5
		X(m)					12,0	11,1	10,7	9,8	7,4
		Lw(dB(A))					48	45	43	39	27

Technical data

		H (mm)	L(mm)			
		150 200 250 300	1000		900	
Q		A _k (m ²)	0,07938	0,08505	0,10206	0,17955
(m ³ /h)	(l/s)		0,07938	0,08505	0,10206	0,17955
2400	666,7	V _k (m/s)	8,4	7,8	6,5	3,7
		ΔP (Pa)	48	42	29	9
		X(m)	13,3	12,9	11,7	8,8
		Lw(dB(A))	49	48	44	32
2800	777,8	V _k (m/s)			7,6	4,3
		ΔP (Pa)			40	13
		X(m)			13,7	10,3
		Lw(dB(A))			48	36
3200	888,9	V _k (m/s)			5,0	
		ΔP (Pa)			17	
		X(m)			11,8	
		Lw(dB(A))			39	
3600	1000,0	V _k (m/s)			5,6	
		ΔP (Pa)			21	
		X(m)			13,3	
		Lw(dB(A))			42	
4000	1111,1	V _k (m/s)			6,2	
		ΔP (Pa)			26	
		X(m)			14,7	
		Lw(dB(A))			45	
4500	1250,0	V _k (m/s)			7,0	
		ΔP (Pa)			33	
		X(m)			16,6	
		Lw(dB(A))			48	

Coding

Model

31-1-LT	Linear grille for supply or return, 0° deflection
31-15-LT	Linear grille for supply or return, 15° deflection

Dimensions

L x H	in mm
-------	-------

Accessories

PFL-RL	fixed galvanised sheet steel plenum with lateral spigot, uninsulated with control damper accessible from below.
PFL-A-RL	fixed galvanised sheet steel plenum with lateral spigot, insulated with regulating damper accessible from below.
PFS-RC	fixed galvanised sheet steel plenum with top spigot, uninsulated with rope control damper.
PFS-A-RC	fixed galvanised sheet steel plenum with top spigot, insulated with rope control damper.
PDL	fixed galvanised sheet steel plenum with lateral spigot, uninsulated not mounted directly to grille (independent part).
PDL-A	fixed galvanised sheet steel plenum with lateral spigot, insulated not mounted directly to grille (independent part).
PDS	fixed galvanised sheet steel plenum with top spigot, uninsulated not mounted directly to grille (independent part).
PDS-A	fixed galvanised sheet steel plenum with top spigot, insulated not mounted directly to grille (independent part).
O	with volume control damper.
G	with individually moveable vertical blades to provide secondary deflection.

Treatment

Anodised aluminium	Anodised aluminium finish
RAL ...	painted in RAL colour (to be defined).

Coding example:

31-1-LT - 500 x 200 - PFL-RC - Anodised aluminium

500 x 200 mm linear grille for supply or return, 0° deflection with fixed galvanised sheet steel plenum with lateral spigot with control damper accessible from below, anodised aluminium finish.

THIS CATALOGUE IS INTELLECTUAL PROPERTY

Its reproduction either of a part or its full contents is prohibited without the expressed and authentic consent of KOOLAIR, S.L.



KOOLAIR

KOOLAIR, S.L.

Calle Urano, 26

Poligono industrial nº 2 – La Fuensanta

28936 Móstoles - Madrid - (España)

Tel: +34 91 645 00 33

Fax: +34 91 645 69 62

e-mail: info@koolair.com

www.koolair.com