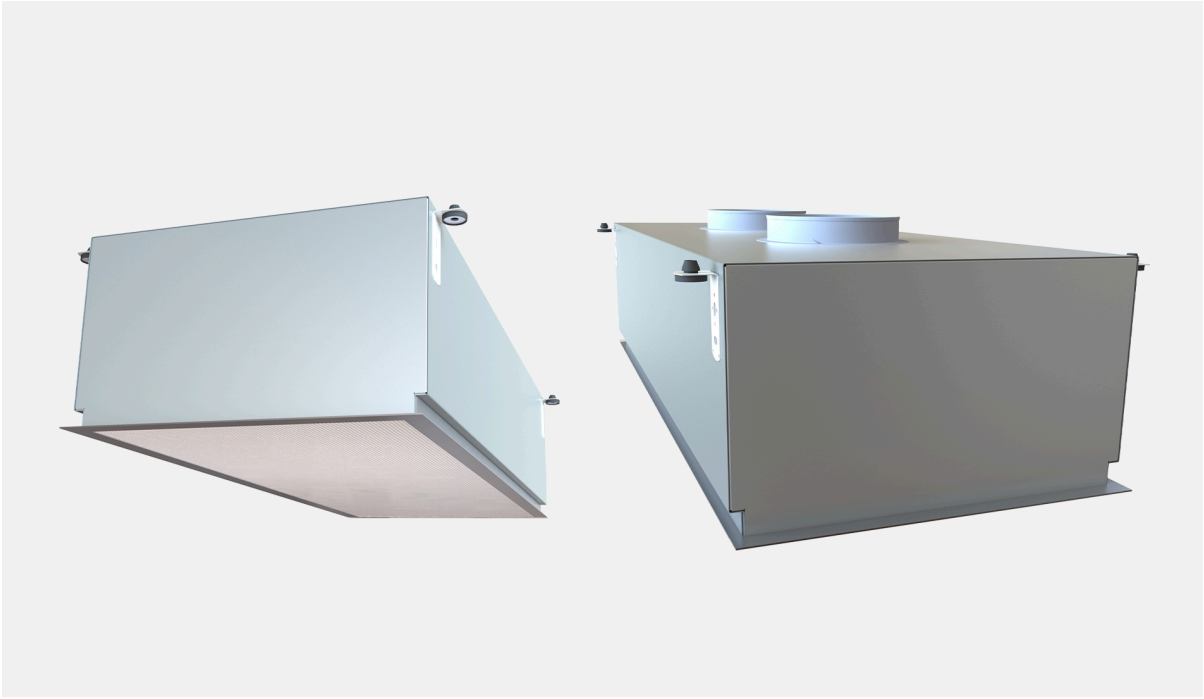
LFU – Ceiling Laminar Flow Unit (CE)



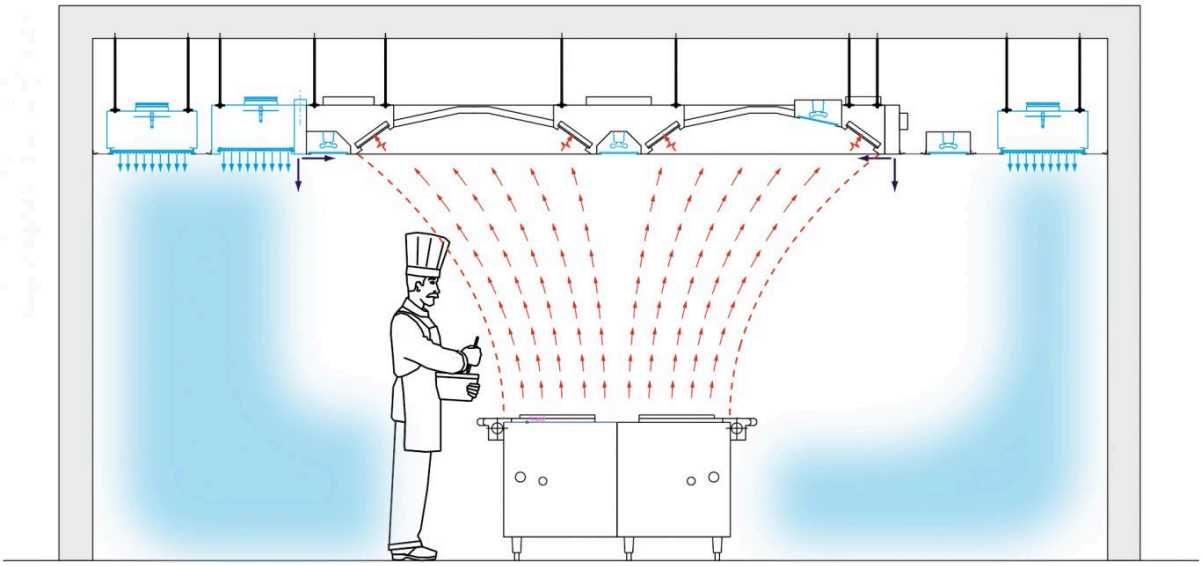
Overview

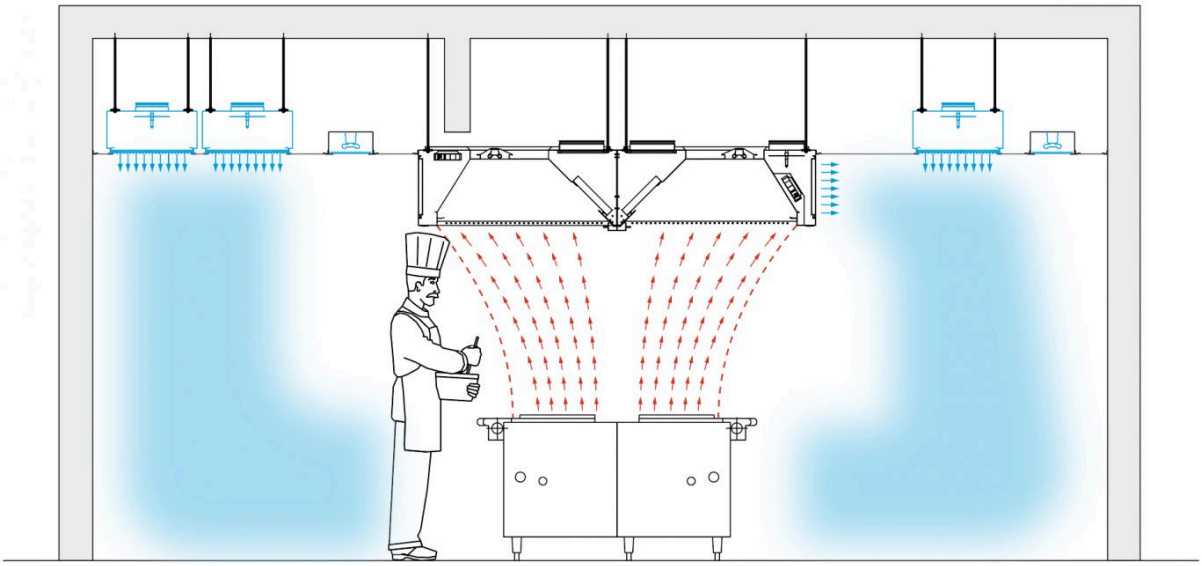
Uncontrolled draughts – even the smallest ones – can totally ruin the Capture & Containment capacity of hoods and ventilated ceilings. A well designed make up air strategy contributes not only to guarantee this efficiency but also to the final Indoor Air Quality (IAQ) inside the kitchen. It should always be considered as an inherent part of the kitchen ventilation solution.

Laminar Flow Units LFU considerably reduce the draughts in the kitchen compared to “traditional” diffusers. They are designed to break the speed of the fresh air carried by the supply ductwork, distribute it equally inside the units and «laminarise» the flow. The fresh air is then diffused at a very low speed in a very homogeneous way and without drafts.

- Contributes to saving energy compared to traditional diffusers by contributing to exhaust airflow rates reduction of the hoods and ventilated ceilings.
- Improves the Indoor Air Quality (IAQ) and the perceived temperature.
- Contributes directly to good working conditions and productivity improvement.
- Standards dimensions to fit false ceilings with a 600×600 mm grid.
- The specific design of the dampers and the association of a honeycomb structure to the perforated front face “laminarise” the air flow.
- Wide range of units to match any integration requirements. Possibilities of customisation.
- Creation of supply “beams” by combining supply units together.
- Designed to facilitate easy cleaning.
- Anti-vibration fixings available.
- Special dimensions or finishes on request.

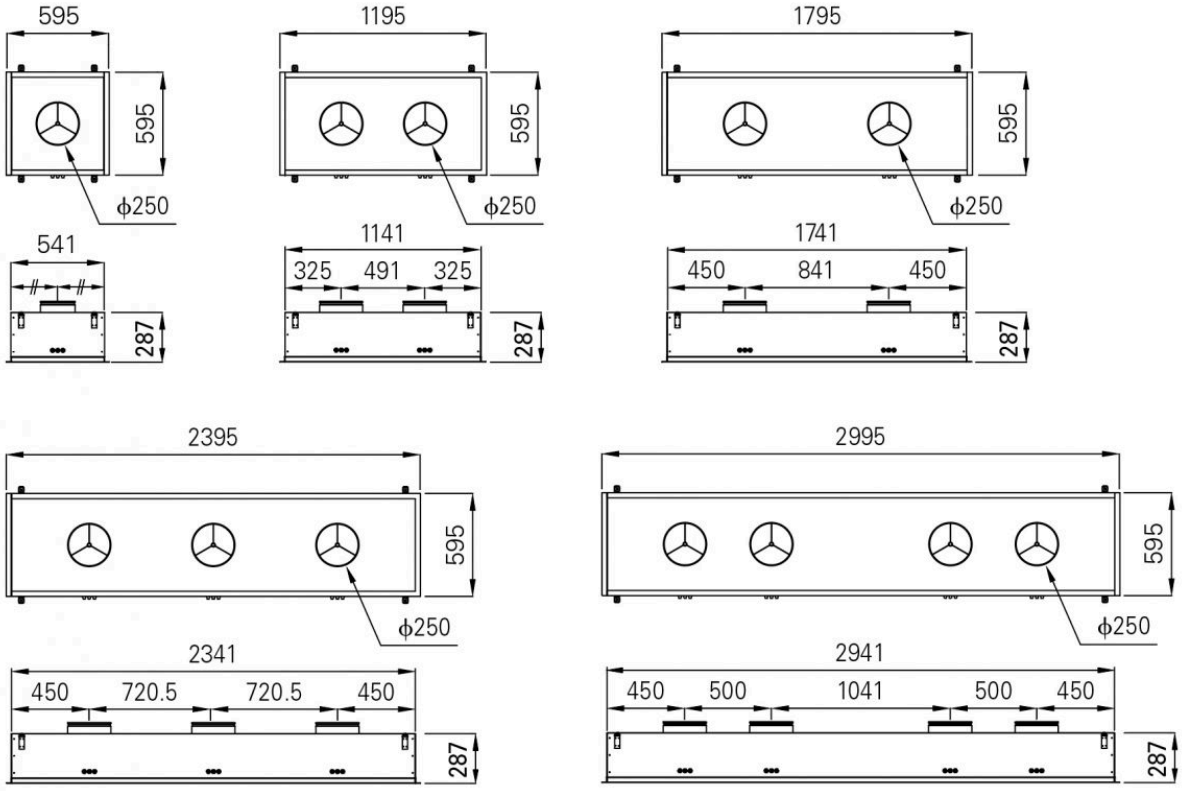
Principle of operation



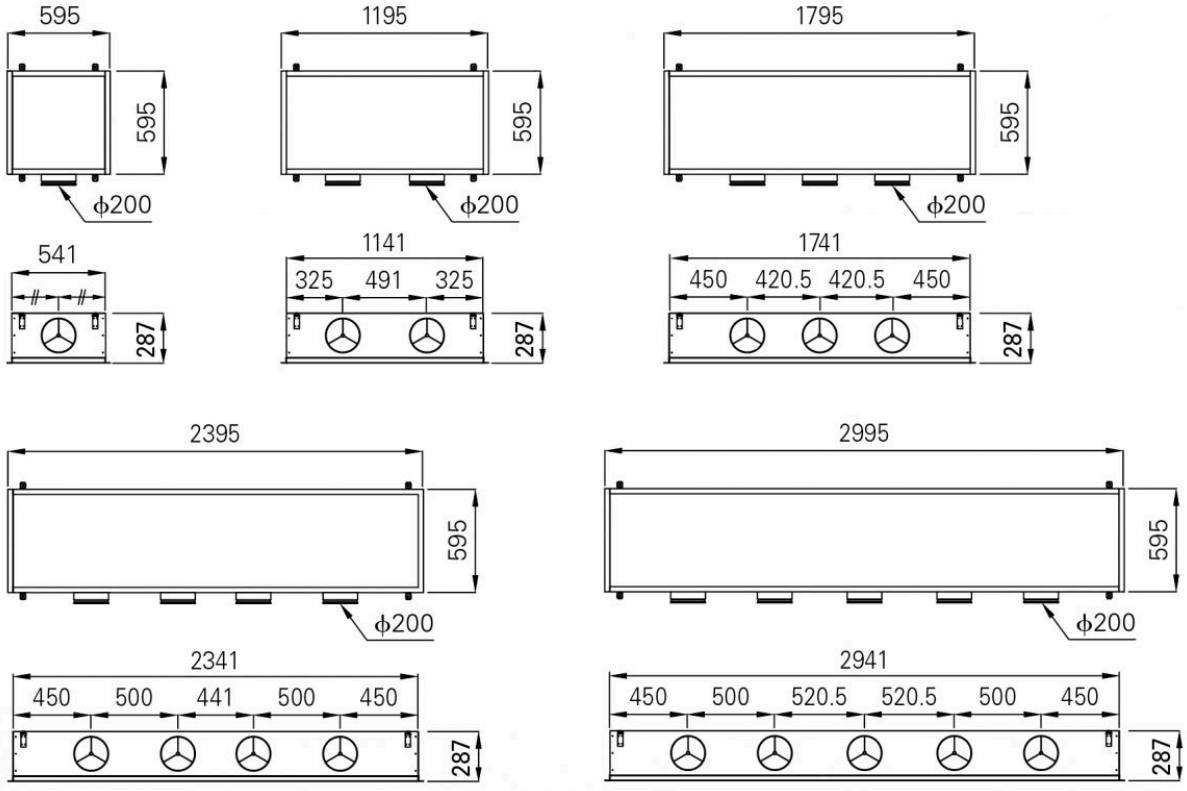


Dimensions

LFU-SA Vertical connections



LFU-SA Horizontal connections



Quick selection data

Recommended values in blue
(1) Air velocity at diffuser connection

(2) Static pressure drop at diffuser connection
(3) Acoustic power level
(4) Sound pressure level with ΩLr=4 dB

LFU-SA Vertical connections

Qv		595 x 595 mm 1 x Ø250 mm				1195 x 595 mm 2 x Ø250 mm				1795 x 595 mm 2 x Ø250 mm				2395 x 595 mm 3 x Ø250 mm				2995 x 595 mm 4 x Ø250 mm			
[m³/h]	[l/s]	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)
400	111	2.3	8	<25	<25																
600	167	3.4	18	30	26																
800	222	4.5	32	38	34	2.3	8	<25	<25	2.3	8	<25	<25								
1000	278	5.7	50	45	41	2.8	13	27	<25	2.8	13	27	<25	1.9	6	<25	<25				
1200	333	6.8	73	51	47	3.4	18	33	29	3.4	18	33	29	2.3	8	<25	<25				
1400	389	7.9	99	55	51	4.0	25	37	33	4.0	25	37	33	2.6	11	27	<25	2.0	6	<25	<25
1600	444	9.1	129	59	55	4.5	32	41	37	4.5	32	41	37	3.0	14	31	27	2.3	8	<25	<25
1800	500	10.2	163	63	59	5.1	41	45	41	5.1	41	45	41	3.4	18	35	31	2.5	10	27	<25
2000	556					5.7	50	48	44	5.7	50	48	44	3.8	22	38	34	2.8	13	30	26
2200	611					6.2	61	51	47	6.2	61	51	47	4.1	27	41	37	3.1	15	33	29
2400	667					6.8	73	54	50	6.8	73	54	50	4.5	32	43	39	3.4	18	36	32
2600	722					7.4	85	56	52	7.4	85	56	52	4.9	38	46	42	3.7	21	38	34
2800	778					7.9	99	58	54	7.9	99	58	54	5.3	44	48	44	4.0	25	40	36
3000	833					8.5	113	60	56	8.5	113	60	56	5.7	50	50	46	4.2	28	43	39
3200	889					9.1	129	62	58	9.1	129	62	58	6.0	57	52	48	4.5	32	44	40
3400	944													6.4	65	54	50	4.8	36	46	42
3600	1 000													6.8	73	55	51	5.1	41	48	44
3800	1 056													7.2	81	57	53	5.4	46	50	46
4000	1 111													7.5	90	58	54	5.7	50	51	47
4300	1194													8.1	104	61	57	6.1	58	53	49
4600	1278													8.7	119	63	59	6.5	67	55	51
4900	1361																	6.9	76	57	53
5200	1444																	7.4	85	59	55
5500	1528																	7.8	95	61	57
5800	1611																	8.2	106	62	58
6100	1694																	8.6	117	64	60

LFU-SA Horizontal connections

Qv		595 x 595 mm 1 x Ø200 mm				1195 x 595 mm 2 x Ø200 mm				1795 x 595 mm 3 x Ø200 mm				2395 x 595 mm 4 x Ø200 mm				2995 x 595 mm 5 x Ø200 mm			
[m³/h]	[l/s]	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)	V (1) [m/s]	ΔPst (2) [Pa]	LwA (3) [dB(A]	LpA (4)
200	56	1.8	5	<25	<25																
400	111	3.5	20	38	34	1.8	5	<25	<25												
600	167	5.3	44	48	44	2.7	11	34	30	1.8	5	26	<25								
800	222	7.1	78	55	51	3.5	20	41	37	2.4	9	33	29	1.8	5	27	<25				
1000	278	8.8	122	60	56	4.4	31	46	42	2.9	14	38	34	2.2	8	32	28				
1200	333					5.3	44	51	47	3.5	20	43	39	2.7	11	37	33				
1400	389					6.2	60	54	50	4.1	27	46	42	3.1	15	41	37	2.5	10	36	32
1600	444					7.1	78	58	54	4.7	35	50	46	3.5	20	44	40	2.8	13	39	35
1800	500									5.3	44	52	48	4.0	25	47	43	3.2	16	42	38
2000	556									5.9	54	55	51	4.4	31	49	45	3.5	20	45	41
2200	611									6.5	66	57	53	4.9	37	52	48	3.9	24	47	43
2400	667									7.1	78	59	55	5.3	44	54	50	4.2	28	49	45
2600	722									7.7	92	61	57	5.7	52	56	52	4.6	33	51	47
2800	778									8.3	107	63	59	6.2	60	57	53	5.0	38	53	49
3000	833									8.8	122	65	61	6.6	69	59	55	5.3	44	55	51
3200	889									9.4	139	66	62					5.7	50	56	52
3400	944																	6.0	57	58	54
3600	1 000																	6.4	63	59	55