

Slot Diffuser Type LS20

LS20 is a multi slot diffuser suited to short or long runs and both internal and external mitres, at any angle can be achieved. Due to its construction, straight lines are not a problem and its use as a ceiling support system is well-proved. Non-active sections can be used for return application and the injected nylon pattern blades can be set for horizontal or vertical throw.

Specification and Construction:

Manufactured from HE9TF and HE30 aluminium extrusion and jig assembled to provide accurate tolerances.

Sizes:

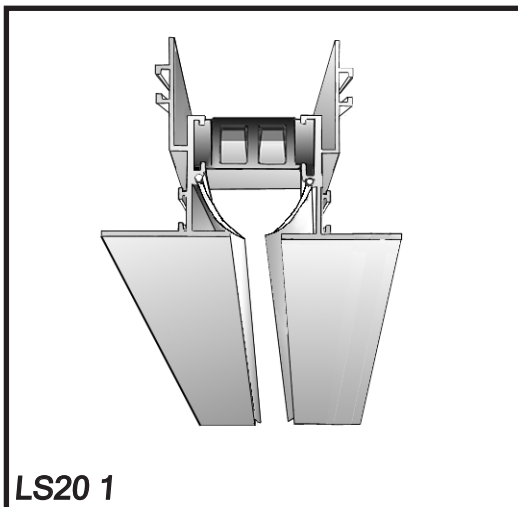
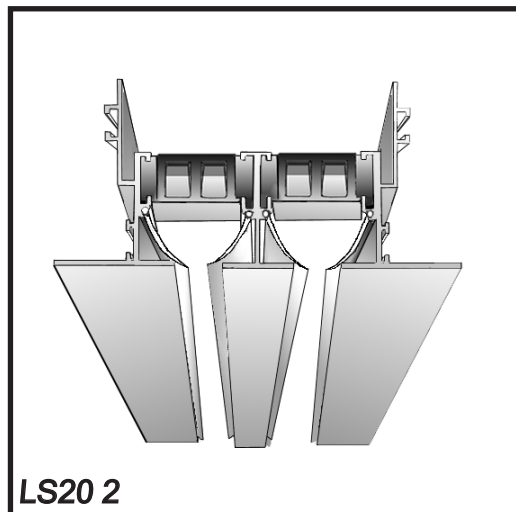
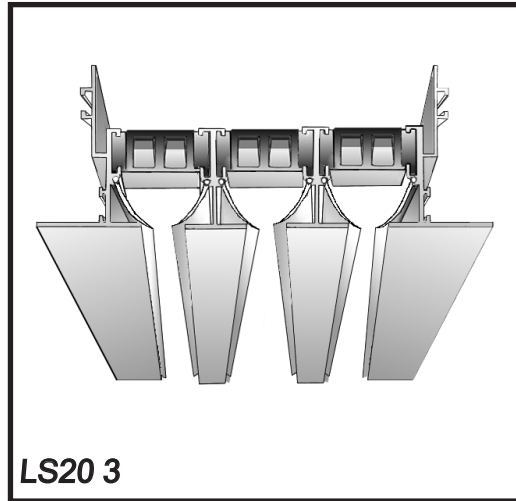
Standard slot width is 20mm with 25 & 30mm width of slot and frame being available. 1 to 10 slots are available for Ceiling and Side-wall Supply Systems. Total run lengths are unrestricted.

Finish:

The base finish is satin anodised AA25 with black pattern control blades. However, in line with current trends, all R.A.L. powder finish patterns can be applied.

Alternative Designs:

This unit has been successfully incorporated into a bulkhead extrusion which supports both the ceiling and partitioning, and



handles air on supply or return. An acoustic crosstalk kit is available to isolate individual offices.

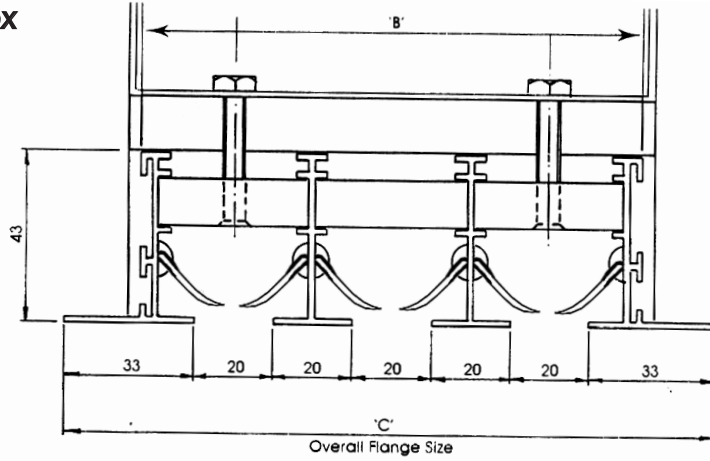
Fixing:

A detail of the unique fixing method has been shown overleaf, alternatively an integral carriage, allowing the units to be mounted first with the boxes being clipped into place can be provided.

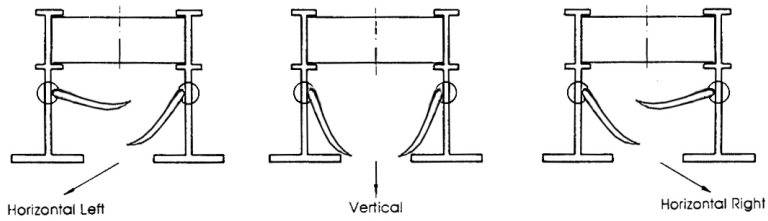
LS20

Technical Specification

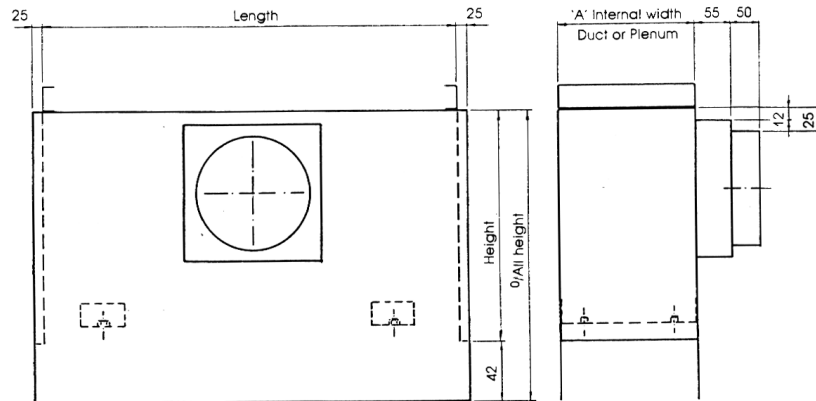
Section Through Slot Diffuser and Plenum Box



Air Adjustment Blade Patterns



Type B Plenum Box



No of Slots	1	2	3	4	5	6	7	8	9	10
A	54	94	134	174	214	254	294	334	374	414
B	50	90	130	170	210	250	290	330	370	410
C	86	126	166	206	246	286	326	366	406	446

LS20 Sidewall Application Performance Data

Performance Data				
Air Volume per metre m ³ /s	No of Slots	ΔPs N/m ²	Throw M	Sound Rating
.030	1	7	2.4-3.2	
.040	1	10	3.2-4.2	
	2	4	1.6-2.2	
.050	1	17	3.9-5.3	
	2	5	1.9-2.7	
.060	1	24	4.7-6.3	21
	2	6	2.4-3.3	
.070	1	32	5.5-7.3	27
	2	8	2.8-3.8	
.080	1	41	6.2-8.4	30
	2	11	3.2-4.3	
.090	1	52	6.8-9.4	31
	2	14	3.6-4.8	16
	3	7	2.7-3.7	
.100	1	64	7.7-10.3	36
	2	17	3.9-5.4	18
	3	9	2.9-4.1	
	4	5	2.5-3.6	
.120	2	25	4.7-6.5	24
	3	11	3.6-4.9	
	4	7	2.9-4.1	
	5	4	2.4-3.4	
.140	3	33	5.5-7.7	30
	4	16	4.1-5.5	20
	5	8	3.3-4.4	
	6	4	2.8-3.8	
.160	4	44	6.3-8.6	33
	5	19	4.7-6.3	21
	6	12	3.9-5.1	
	7	8	3.3-4.4	
.180	5	55	7.0-9.6	34
	6	24	5.3-7.7	25
	7	14	4.4-5.9	19
	8	9	3.9-5.1	
.220	6	77	8.6-11.6	40
	7	44	6.6-8.7	32
	8	20	5.4-7.3	25
	9	14	4.3-5.6	19
.240	7	99	9.5-12.6	43
	8	55	7.5-10.1	37
	9	33	6.1-8.1	30
	10	20	5.1-6.6	25
.260	8	111	10.3-13.8	45
	9	64	8.3-11.1	40
	10	44	7.0-9.5	35
	11	24	5.9-8.6	27
.280	9	136	11.1-14.8	48
	10	81	9.1-12.1	42
	11	55	7.7-10.3	38
	12	39	6.4-9.3	30
.300	10	152	11.9-15.8	50
	11	99	10.1-13.4	45
	12	64	8.6-11.6	40
	13	44	7.4-10.7	34

General Notes:

Data based on 2.7 ceiling height and horizontal throw. Max cooling differential 10°C on a flat ceiling with no downstands. The throw figure is determined as the distance from the edge of the diffuser to the wall or as half way between two diffusers discharging towards each other. Sound ratings given are based on a room absorption figure of 9Db RE10-12 taken at 30° angle 1.5 metres from the grille with a damper

in the fully open position. Minimum terminal velocity is .37 metres per second, maximum is .25. Where diffusers have no ceiling effect, throws are reduced to 70%. Consult Sales Office regarding comfort conditions. Pressure drops measured in Pascals are given without the effect of the terminal damper.

Ceiling Application Performance Data

Air Volume per metre m ³ /s	No of Slots	^Ps M/m ²	Throw m	Sound Rating NC
.015	1	2	1.66-2.2	
.020	1	5	2.0-2.9	
.030	1	8	3.0-4.3	
	2	3	2.8-3.8	
.040	1	16	4.2-5.7	20
	2	4	3.4-4.5	
.050	1	25	5.8-7.0	23
	2	7	4.2-5.4	
	3	2	2.8-3.6	
0.60	1	33	6.3-8.5	31
	2	9	4.9-6.7	
	3	4	3.5-4.7	
	4	3	2.7-3.8	
.070	1	45	7.3-9.7	35
	2	11	5.6-7.5	20
	3	6	4.0-5.3	
	4	3	3.3-4.5	
.080	1	57	8.4-12.2	36
	2	15	6.3-8.2	24
	3	5	4.5-6.3	
	4	4	3.8-5.0	
.090	1	75	9.4-12.6	37
	2	19	6.9-9.3	27
	3	8	5.2-6.8	
	4	6	4.2-5.7	
.100	2	20	7.6-11.2	29
	3	11	5.8-7.8	19
	4	6	4.6-6.3	
	5	4	3.9-5.3	
.120	2	32	8.8-12.0	34
	3	14	6.9-9.4	24
	4	7	5.5-7.5	19
	5	6	4.7-6.3	
	6	3	4.0-5.5	
.140	2	41	10.4-13.0	38
	3	19	8.1-10.9	28
	4	12	6.4-8.6	23
	5	7	5.4-7.3	
	6	6	4.7-6.3	
	7	5	4.2-5.8	
.160	3	26	9.2-11.4	32
	4	16	7.1-9.8	28
	5	9	6.2-8.3	20
	6	7	5.3-7.2	
	7	6	4.8-6.5	
	7	4	4.0-5.6	
	8			

Air Volume per metre m ³ /s	No of Slots	^Ps M/m ²	Throw m	Sound Rating NC
.180	3	33	10.4-13.0	36
	4	19	8.1-10.9	30
	5	13	6.9-9.3	26
	6	7	5.9-8.1	21
	7	6	5.4-7.3	
	8	4	4.7-6.3	
.200	3	38	11.4-16.0	39
	4	23	8.8-12.0	32
	5	16	7.6-10.3	29
	6	10	6.6-8.8	22
	7	7	5.9-8.1	20
	8	6	5.2-6.8	
.220	3	48	12.6-17.1	42
	4	28	9.8-13.3	35
	5	19	8.4-11.3	30
	6	11	7.3-9.8	26
	7	8	6.6-8.9	22
	8	7	5.7-7.7	21
.240	4	32	10.8-14.5	37
	5	21	9.1-12.3	32
	6	15	7.9-10.7	28
	7	11	7.0-9.7	24
	8	8	6.2-8.4	22
.260	4	38	11.8-15.7	40
	5	25	9.9-13.3	34
	6	18	8.6-11.6	29
	7	13	7.7-10.0	27
	8	10	6.8-9.2	24
.280	4	45	12.5-16.8	41
	5	29	10.0-14.3	36
	6	18	9.2-12.5	31
	7	14	8.3-11.2	29
	8	12	7.3-9.9	27
.300	4	53	13.3-17.9	44
	5	34	11.4-15.8	38
	6	23	9.8-13.4	33
	7	17	8.9-11.0	31
	8	13	7.8-10.6	29
.320	5	38	10-16.3	40
	6	26	10.5-14.2	36
	7	18	9.5-12.8	33
	8	15	8.4-11.3	31
.360	5	47	13.5-16.2	42
	6	33	11.8-15.9	39
	7	24	10.7-14.3	34
	8	18	9.4-12.7	33
.400	6	41	13.1-17.6	42
	7	29	11.8-15.9	39
	8	22	10.5-14.1	35

General Notes:

Data based on 2.7 ceiling height and horizontal throw.

Max cooling differential 10°C on a flat ceiling with no downstands. The throw figure is determined as the distance from the edge of the diffuser to the wall or as half way between two diffusers discharging towards each other. Sound ratings given are based on a room absorption figure of 9Db RE10¹² taken at 30° angle 1.5 metres from the grille with a damper in

the fully open position. Terminal velocities at 1.5 metres high are .37metre per second, minimum throw, reducing throw 0.25 metres per second on the maximum throw listed. Where diffusers have no ceiling effect, throws are reduced to 70%. Consult Sales Office regarding comfort conditions. Pressure drops measured in Pascals are given without the effect of