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.

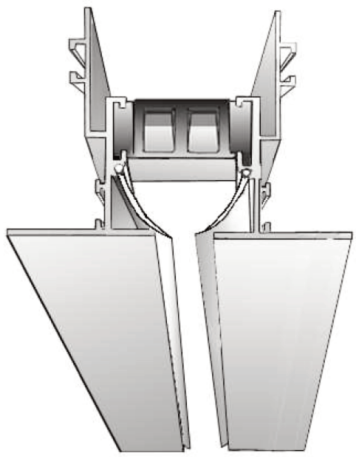
Specification & Construction:
Manufactured from HE9TF and HE30 aluminium extrusion and jig assembled to provide accurate tolerances.

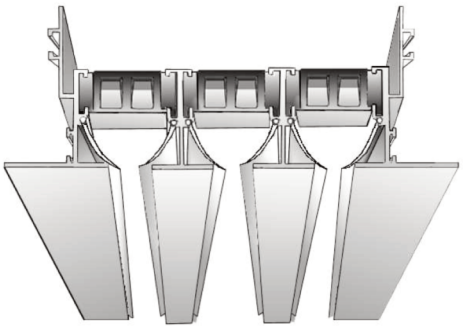
Sizes:
From 1 to 10 slots are available for Ceiling and Sidewall Supply Systems. Total run lengths are unrestricted.

Finish:
Any standard RAL powder coat with black or white blades.

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.

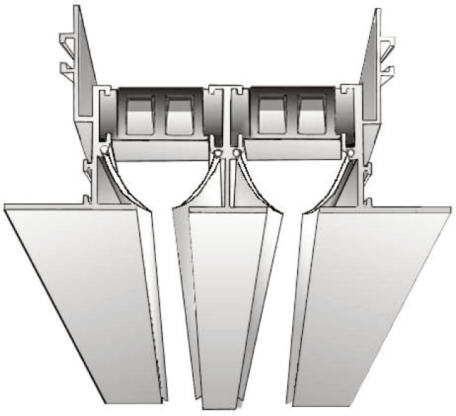
Type **LS20** 1 Slot





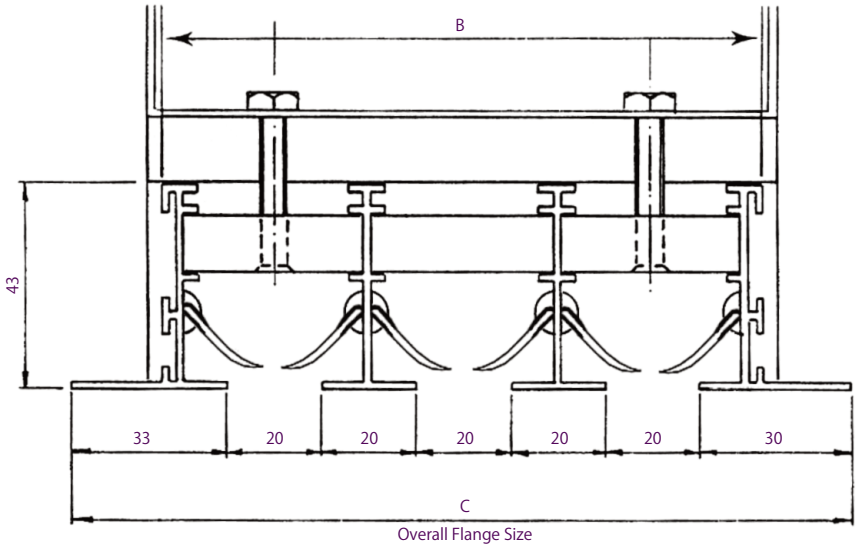
Type **LS20** 3 Slot

Type **LS20** 2 Slot



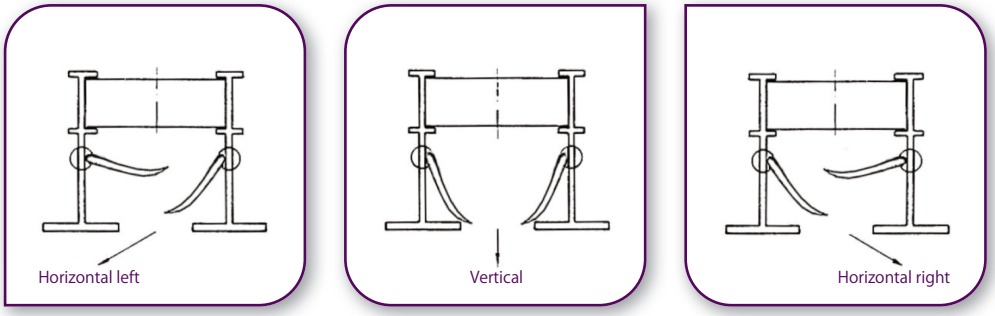
Fixing:
A detail of the unique fixing method has been shown overleaf, alternatively an integral carriage, allowing the units to be mounted first with the boxes being clipped into place can be provided.

View showing how to mount a Plenum Box



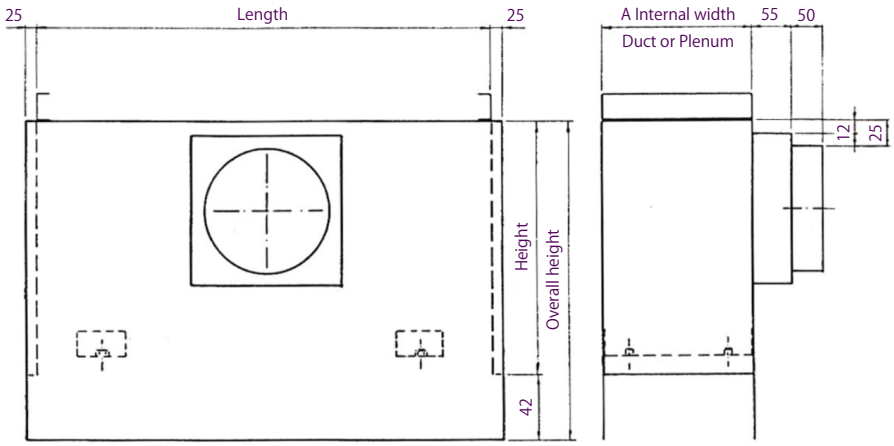
Section through Slot Diffuser and Plenum Box

No. of Slots	1	2	3	4	5	6	7	8	9	10
B	50	90	130	170	210	250	290	330	370	410
C	86	126	166	206	246	286	326	366	406	446



Air Adjustment Blade Patterns

Type **B Plenum Box** - Width and Height of Standard Plenum Box
(Boxes can be supplied lined or unlined)



No. of Slots	1	2	3	4	5	6	7	8	9	10
A	54	94	134	174	214	254	294	334	374	414

LS20 Sidewall Performance Data

Air Volume per metre m^3/s	No. of Slots	^Ps N/m^2	Throw M	Sound Rating NC
0.030	1	7	2.4-3.2	
0.040	1 2	10 4	3.2-4.2 1.6-2.2	
0.050	1 2	17 5	3.9-5.3 1.9-2.7	
0.060	1 2	24 6	4.7-6.3 2.4-3.3	21
0.070	1 2	32 8	5.5-7.3 2.8-3.8	27
0.080	1 2	41 11	6.2-8.4 3.2-4.3	30
0.090	1 2 3	52 14 7	6.8-9.4 3.6-4.8 2.7-3.7	31 16
0.100	1 2 3 4	64 17 9 5	7.7-10.3 3.9-5.4 2.9-4.1 2.5-3.6	36 18
0.120	2 3 4 5	25 11 7 4	4.7-6.5 3.6-4.9 2.9-4.3 2.4-3.5	24
0.140	2 3 4 5 6	33 16 8 6 4	5.5-7.5 4.1-5.6 3.5-4.9 2.8-3.8 2.3-3.3	30 20
0.160	2 3 4 5 6 7	44 19 12 8 5 3	6.3-8.5 4.7-6.3 3.9-5.7 3.2-4.6 2.6-3.8 2.3-3.4	33 21
0.180	2 3 4 5 6 7 8	55 24 14 9 7 5 4	7.0-9.6 5.3-7.2 4.5-6.5 3.6-5.2 2.9-4.2 2.5-3.8 2.1-3.6	34 25 19
0.220	2 3 4 5 6 7 8	81 37 20 14 9 7 4	8.6-11.6 6.5-8.7 5.4-7.8 4.3-6.3 3.5-5.1 2.9-4.5 2.6-4.3	40 32 25 19
0.240	3 4 5 6 7 8	44 24 16 12 8 7	7.0-9.5 5.9-8.6 4.6-6.7 3.9-5.6 3.3-4.9 2.8-4.7	35 27 22 17
0.260	3 4 5 6 7 8	51 29 18 12 8 8	7.7-10.3 6.4-9.3 5.1-7.4 4.2-6.1 3.5-5.3 2.9-4.8	38 30 24 18
0.280	3 4 5 6 7 8	59 34 21 14 12 9	8.2-10.9 6.9-9.8 5.4-7.9 4.5-6.5 3.8-5.7 3.2-5.4	39 32 26 23 17 16
0.300	3 4 5 6 7 8	69 39 24 16 12 8	8.6-11.8 7.4-10.7 5.9-8.5 4.8-6.9 3.9-6.1 3.5-5.7	41 34 27 22 20 18

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 0.37 metres per second, maximum is 0.25.

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 N/m^2	Throw M	Sound Rating NC
0.015	1	2	1.66-2.2	
0.20	1	5	2.0-2.9	
0.30	1 2	8 3	3.0-4.3 2.8-3.8	
0.40	1 2	16 4	4.2-5.7 3.4-4.5	20
0.50	1 2 3	25 7 2	5.8-7.0 4.2-5.4 2.8-3.6	23
0.60	1 2 3 4	33 9 4 3	6.3-8.5 4.9-6.7 3.5-4.7 2.7-3.8	31
0.70	1 2 3 4	45 11 6 3	7.3-9.7 5.6-7.5 4.0-5.3 3.3-4.5	35 20
0.80	1 2 3 4	57 15 5 4	8.4-12.2 6.3-8.2 4.5-6.3 3.8-5.0	36 24
0.90	1 2 3 4	75 19 8 6	9.4-12.6 6.9-9.3 5.2-6.8 4.2-5.7	37 27
0.100	2 3 4 5	20 11 6 4	7.6-11.2 5.8-7.8 4.6-6.3 3.9-5.3	29 19
0.120	2 3 4 5 6	32 14 7 6 3	8.8-12.0 6.9-9.4 5.5-7.5 4.7-6.3 4.0-5.5	34 24 19
0.140	2 3 4 5 6 7	41 19 12 7 6 5	10.4-13.0 8.1-10.9 6.4-8.6 5.4-7.3 4.7-6.3 4.2-5.8	38 28 23
0.160	3 4 5 6 7 8	26 16 9 7 6 4	9.2-11.4 7.1-9.8 6.2-8.3 5.3-7.2 4.8-6.5 4.0-5.6	32 28 20
0.180	3 4 5 6 7 8	33 19 13 7 6 4	10.4-13.0 8.1-10.9 6.9-9.3 5.9-8.1 5.4-7.3 4.7-6.3	36 30 26 21
0.200	3 4 5 6 7 8	38 23 16 10 7 6	11.4-16.0 8.8-12.0 7.6-10.3 6.6-8.8 5.9-8.1 5.2-6.8	39 32 29 22 20
0.220	3 4 5 6 7 8	48 28 19 11 8 7	12.6-17.1 9.8-13.3 8.4-11.3 7.3-9.8 6.6-8.9 5.7-7.7	42 35 30 26 22 21
0.240	4 5 6 7 8	32 21 15 11 8	10.8-14.5 9.1-12.3 7.9-10.7 7.0-9.7 6.2-8.4	37 32 28 24 22
0.260	4 5 6 7 8	38 25 18 13 10	11.8-15.7 9.9-13.3 8.6-11.6 7.7-10.0 6.8-9.2	40 34 29 27 24
0.280	4 5 6 7 8	45 29 18 14 12	12.5-16.8 10.0-14.3 9.2-12.5 8.3-11.2 7.3-9.9	41 36 31 29 27
0.300	4 5 6 7 8	53 34 23 17 13	13.3-17.9 11.4-15.8 9.8-13.4 8.9-11.0 7.8-10.6	44 38 33 31 29
0.320	5 6 7 8	38 26 18 15	10-16.3 10.5-14.2 9.5-12.8 8.4-11.3	40 36 33 31
0.360	5 6 7 8	47 33 24 18	13.5-16.2 11.8-15.9 10.7-14.3 9.4-12.7	42 39 34 33
0.400	6 7 8	41 29 22	13.1-17.6 11.8-15.9 10.5-14.1	42 39 35

General Notes:
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.

Terminal velocities at 1.5 metres high are 0.37metre 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 the terminal damper.