

FLOWBAR

Architectural High Capacity Linear Slot Diffuser



QUICK FACTS

- High capacity single slot diffuser available in five slot widths of 25mm, 38mm, 51mm, 63mm and 76mm
- Architectural appearance
- Integrates into a variety of ceiling & wall types
- 8 configurations & 5 slot widths
- High Throw 36 l/s/m - 180 l/s/m
- Jet Throw 31 l/s/m - 480 l/s/m
- Mounting – Ceiling/Bulkhead/Sidewall/Recessed
- Modular or Continuous lengths
- Custom curving available to meet designer's requirements
- Heavy wall extruded aluminium construction



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Technical Description

Design

FlowBar is an architecturally designed high capacity linear slot diffuser. It is designed to combine a high air handling capacity with maximum flexibility and is suitable for either ceiling or sidewall applications. The flexibility of the system can blend into a design or provide contrast with its striking but simple design.

FlowBar is a flexible system that can provide straight lines or curves to blend with other architectural elements and enhance the overall concept of the project.

The FlowBar systems satisfy both the Architects and Engineer's requirements for designing an air distribution system that will maintain optimum room air conditions whilst being efficient yet inconspicuous.

Material and Surface Treatment

Manufactured from heavy wall extruded aluminium

Type 66

As Standard frame are polyester powder coated to RAL9010 – Matt (20%) finish to external frame surfaces. Polyester powder coated to RAL9005 matt (30%) finish to Internal surfaces.

Alternative standard RAL colours to select from:

- RAL 9016 Matt (20%) finish - White
- RAL 9003 Matt (40%) finish - White
- RAL 9006 Matt (40%) finish - Silver
- RAL 9005 Matt (30%) finish - Black

Type 22, 55 & 11

As Standard frames & internals are polyester powder coated to a RAL 9005 matt (30%) finish to all surfaces.

Other colours available to special order.

Accessories

Flowbar is available with optional blanking plate (non-air handling) or return (air-handling) light baffle. Both are ordered in 1m lengths, black etched RAL 9005.

Installation

For our range of fixing details, please see our installation, operation & maintenance manual.

Maintenance

For maintenance guidelines please see our installation, operation & maintenance manual.

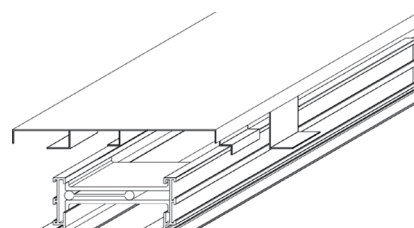
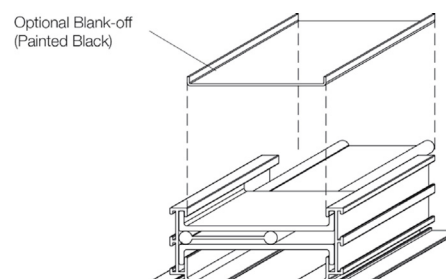
Environment

Our standard power coating process is suitable for a C3 Internal environment classification, ISO 12944-2. Design life 15 - 25 years.

High Throw Series (HT)



Jet Throw Series (JT)



FLOWBAR

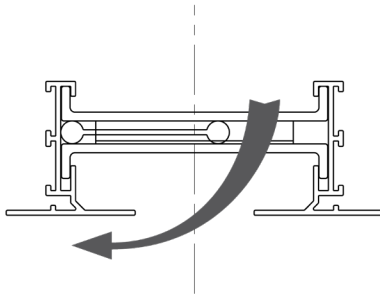
Model Types

High Throw Series (HT)

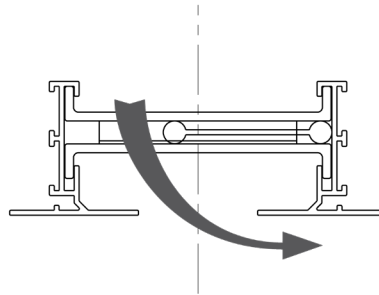
The High Throw series is primarily designed for ceiling applications and allows the air diffuser to become inconspicuous, whilst fully integrating into the ceiling system.

Integral pattern controllers are 600mm in length allowing the airstream to be directed left and right for horizontal and vertical airflow.

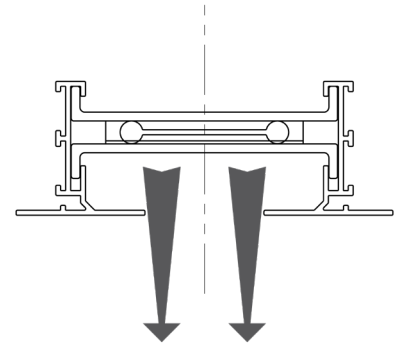
Pattern Controller Setting



Horizontal Left



Horizontal Right



Vertical

Configurations

- HT-10 / 25mm Slot
- HT-15 / 38mm Slot
- HT-20 / 51mm Slot
- HT-25 / 63mm Slot
- HT-30 / 76mm Slot

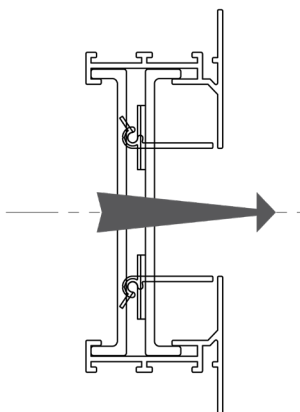
Jet Throw Series (JT)

The Jet Throw series has pattern flow controllers to allow the airstream to be jetted in a horizontal direction (sidewall mounted) whilst fully integrating into the wall system.

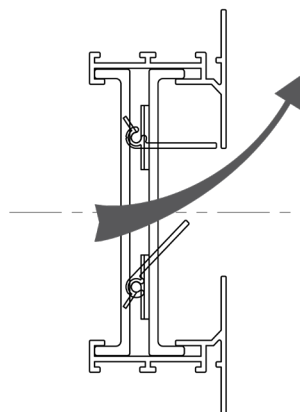
Jet Throw pattern controllers allow extended throws in typical high bay applications for heated and/or cooled air. Jet Throw pattern controllers are useful along perimeter walls where heated air can be directed downward.

Integral pattern controllers 600mm in length allow the airstream to be directed vertically left and right (ceiling application) and up and down (sidewall application) at a 45° angle.

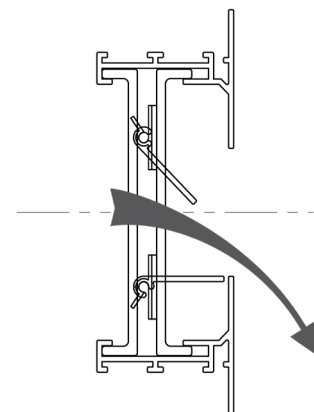
Pattern Controller Setting



Horizontal



Upward



Downward

Configurations

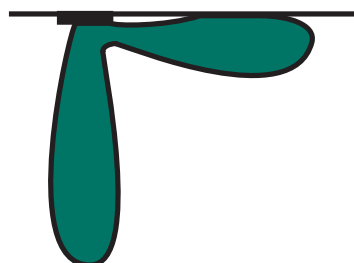
- JT-10 / 25mm Slot
- JT-15 / 38mm Slot
- JT-20 / 51mm Slot
- JT-25 / 63mm Slot
- JT-30 / 76mm Slot

Project Planning

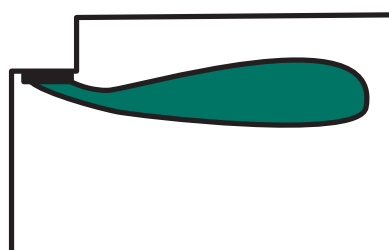
The below details are taken from the Waterloo Green book; Chapter 5. Comparative Selection Data, 5.1 Supply Terminal location & type of Distribution

High Throw Series (HT)

Ceiling placement
Horizontal or Vertical Distribution

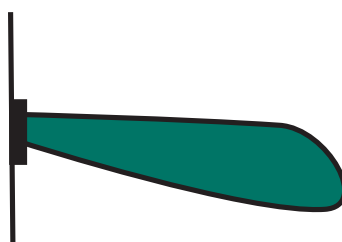


Bulkhead Underside placement
Horizontal Distribution

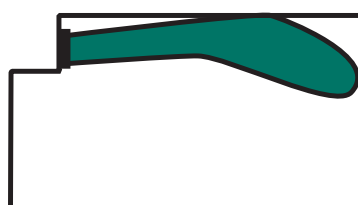


Jet Throw Series (JT)

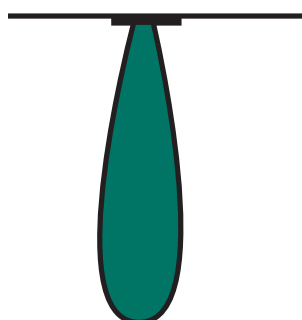
Sidewall Placement
Horizontal Distribution
Confined Jet & Free Jet



Bulkhead vertical face placement
Horizontal Distribution



Ceiling Placement
Vertical Distribution



For additional design guidance please consult the Waterloo Greenbook;

Chapter 2. Air flow Patterns

2.1 Mixed Airflow Characteristics

2.2 Jet Characteristics

Chapter 4. Selection of Air Terminal Devices

Chapter 6. VAV & CAV

6.6.1 Sculptured or coffered ceilings

Chapter 7. Comfort Criteria

Sizing

- Aerodynamic testing carried out in general accordance to BS EN 12238:2001 (Ventilation for buildings - Air terminal devices - Aerodynamic testing and rating for mixed flow applications).
- Isothermal throw values are given for terminal velocities of 0.5 and 0.25m/sec respectively.
- Alternative air supply temperatures & terminal velocities are available using RUD selection tool.
- Throw values for High Throw units are based on a 1-way discharge from the slot with ceiling coanda.
- Throw values for Jet throw are based on pattern controller set at 0° discharge in a free jet application.
- Pressure loss measurements are shown as static pressure given in pascal (Pa)
- Acoustic testing carried out in general accordance to BS EN ISO 5135:1999 acoustics. Determination of sound power levels of noise from air-terminal devices, air-terminal units, dampers and valves by measurement in a reverberation room.
- Each NR value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th, with a room absorption of 10dB, re 10-12 watts.
- For supply units used as a return, add NR 3.

Selection Example

1800mm long active area

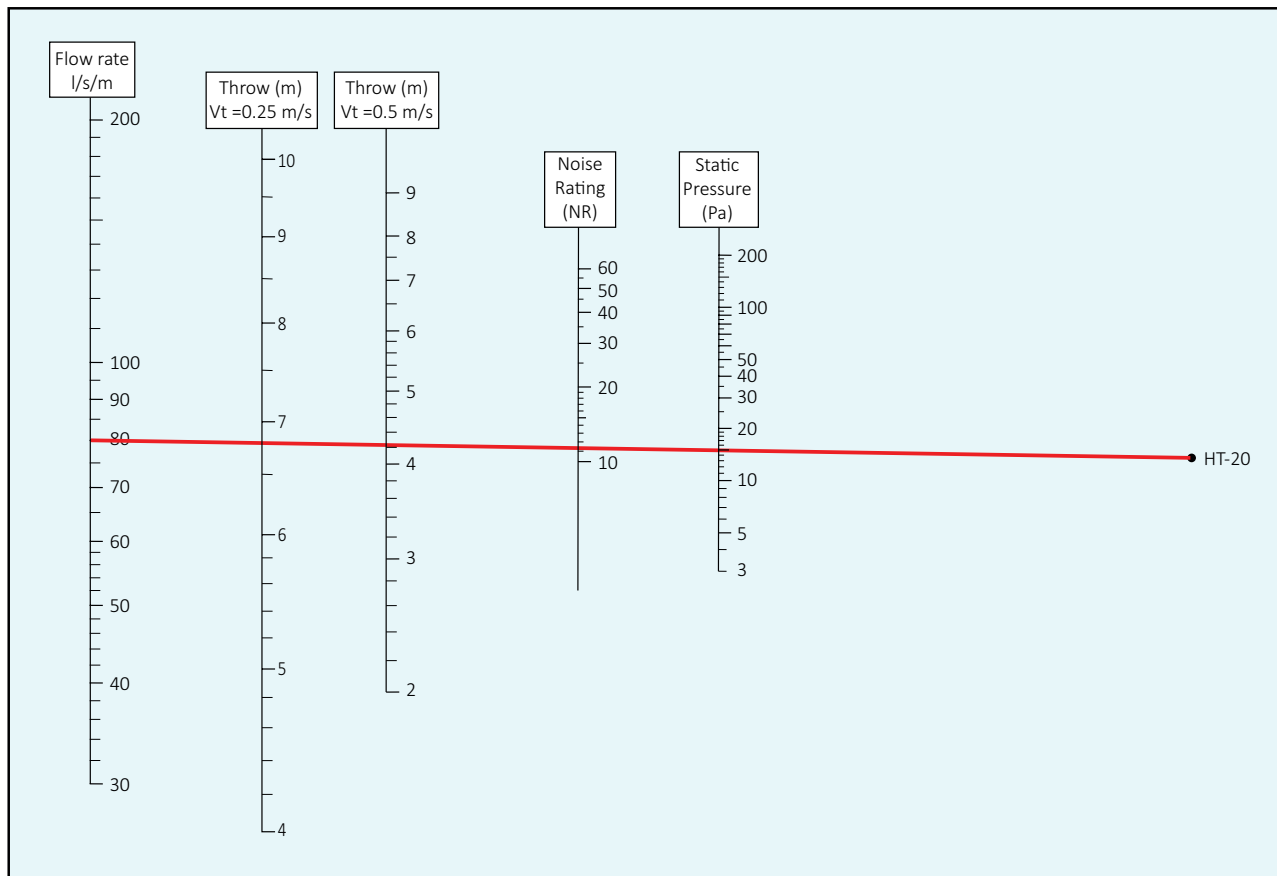
Total flow rate 144 l/s ÷ 1.8m
= 80 l/s/m

Throw @ 0.5m/s Vt – 4.2m

Throw @ 0.25m/s Vt – 6.8m

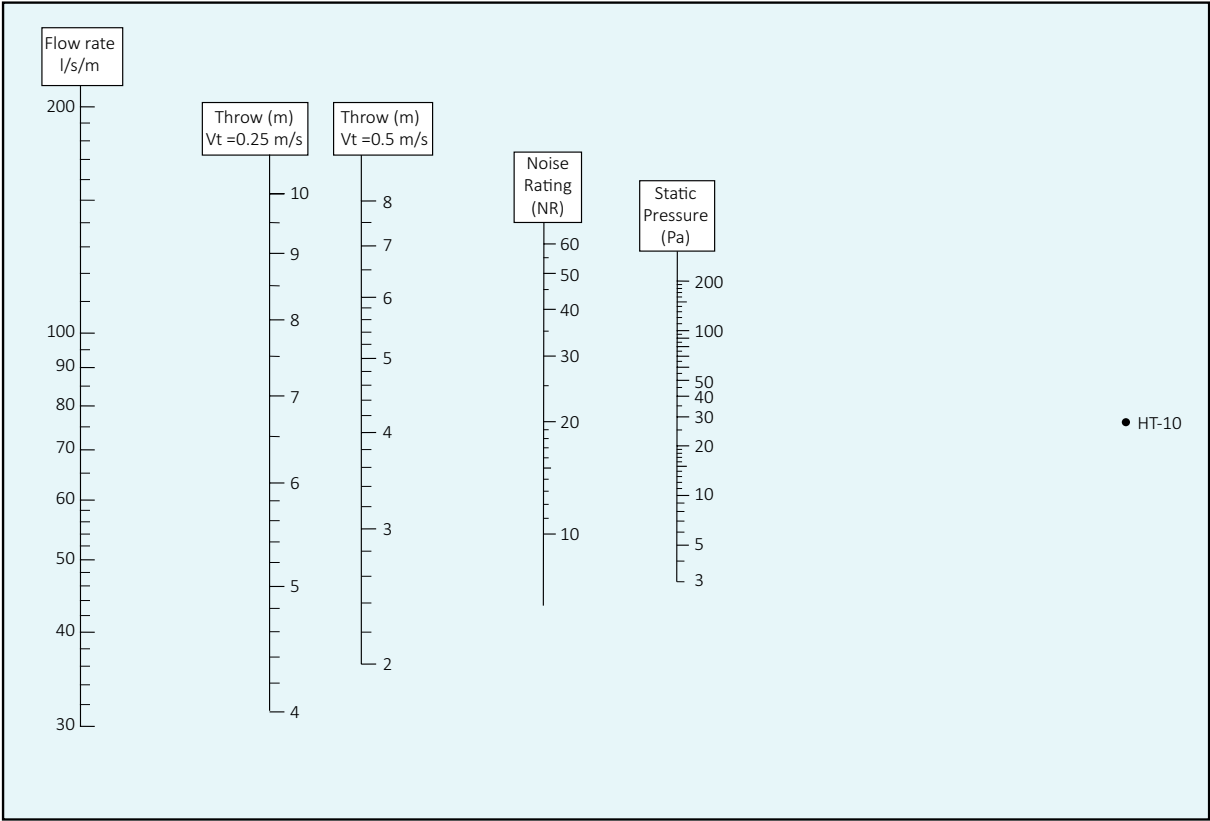
Static pressure loss – 15pa

Room Noise Rating – <NR 15

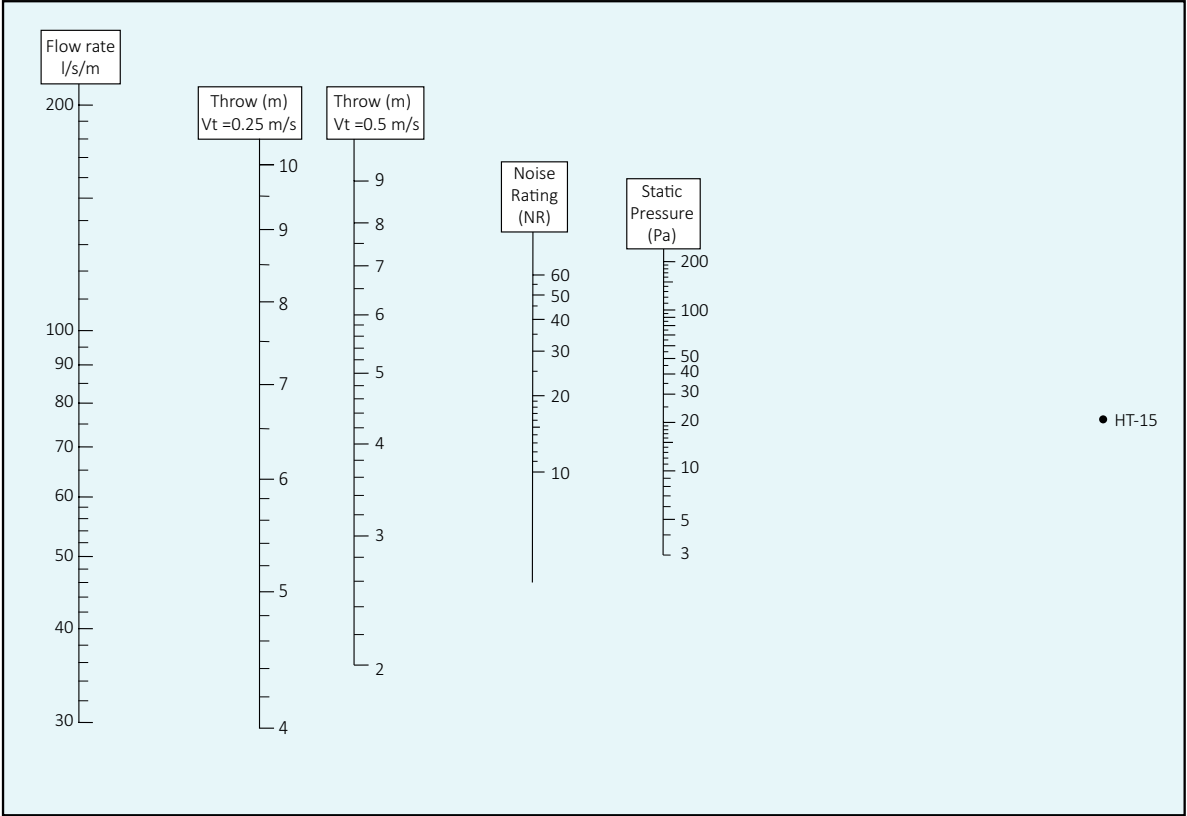


Performance Data – High Throw (continuous)

HT-10 (25mm slot)

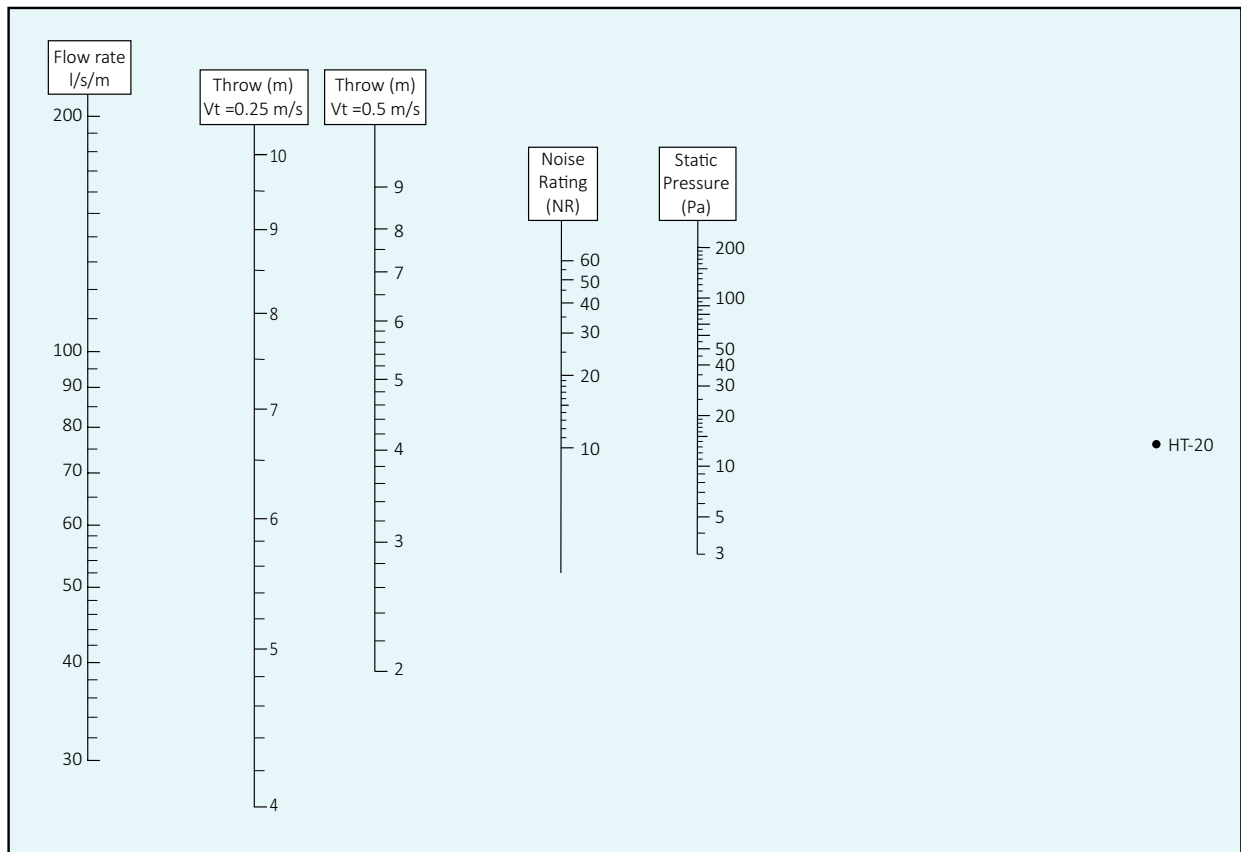


HT-15 (38mm slot)

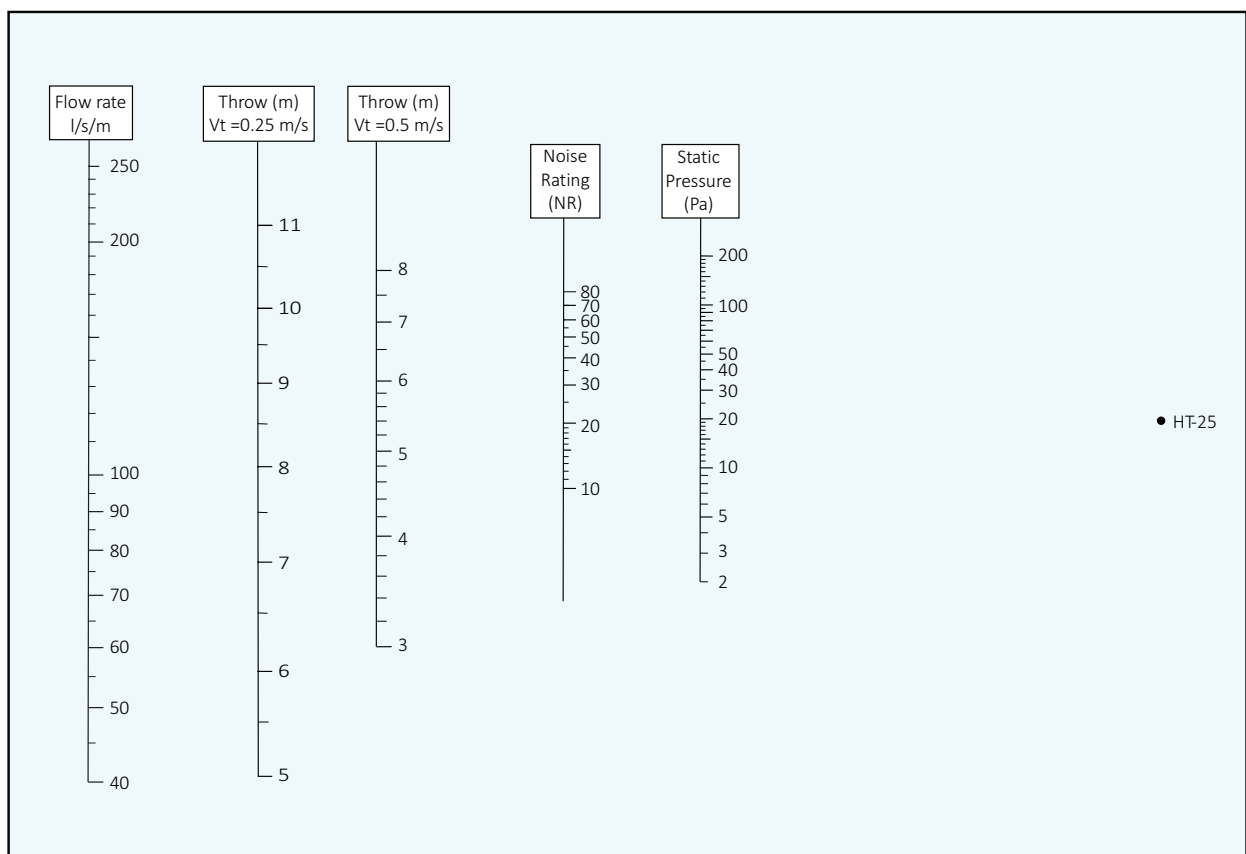


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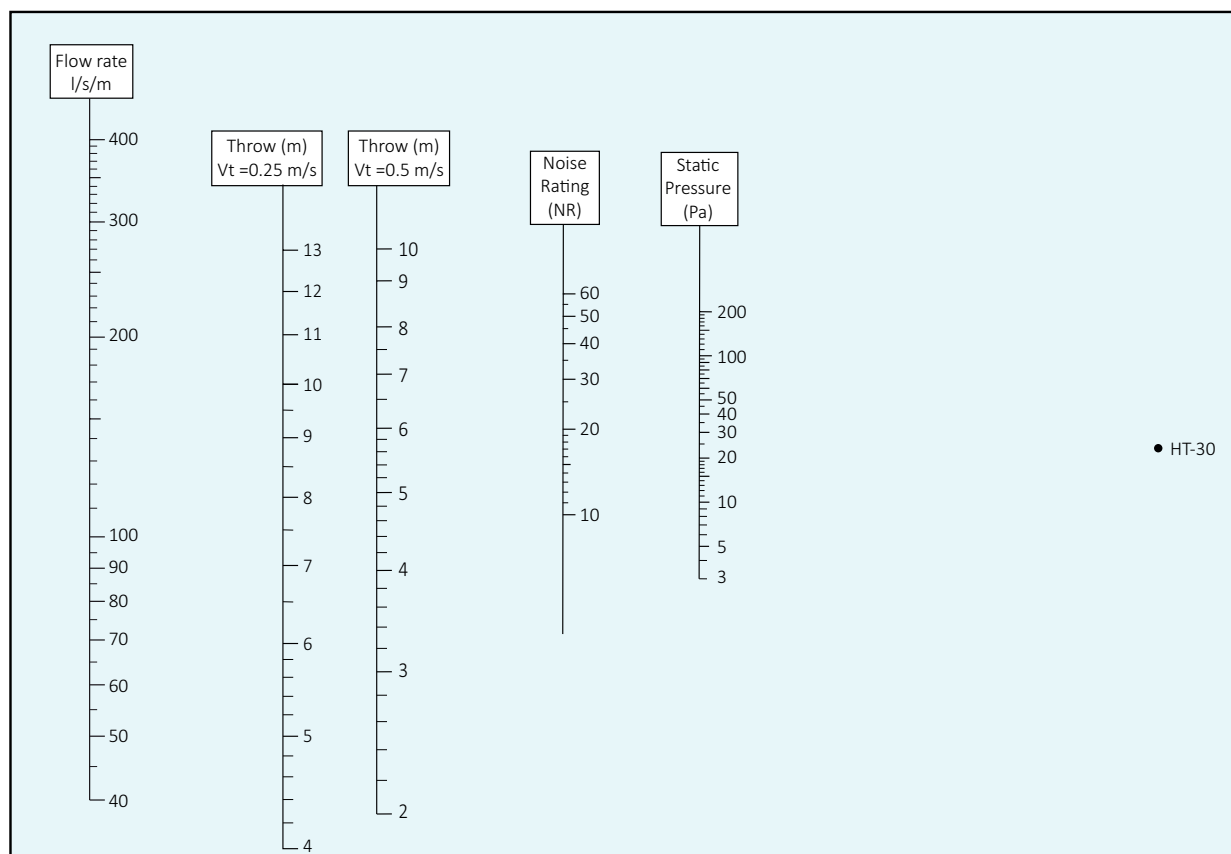
HT-20 (51mm slot)



HT-25 (63mm slot)



HT-30 (76mm slot)



NR Correction for length

Length (mm)	600	1200	1800	2400	3000
Supply	-3	0	+2	+3	+5
Return	0	+3	+5	+6	+8

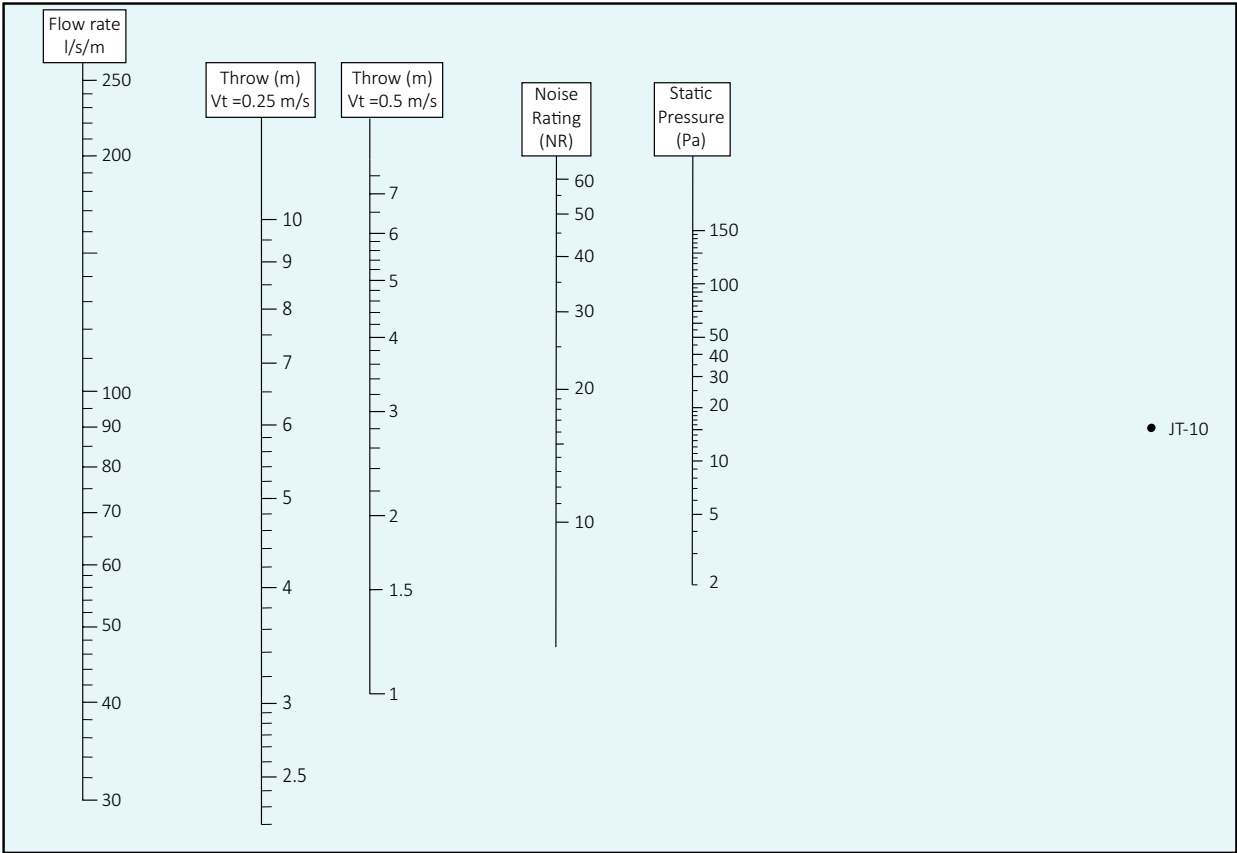
The continuous performance tests were conducted with no Plenum effect for pressure or sound using a 1200mm long section of Flowbar diffuser.

Throw Correction for length

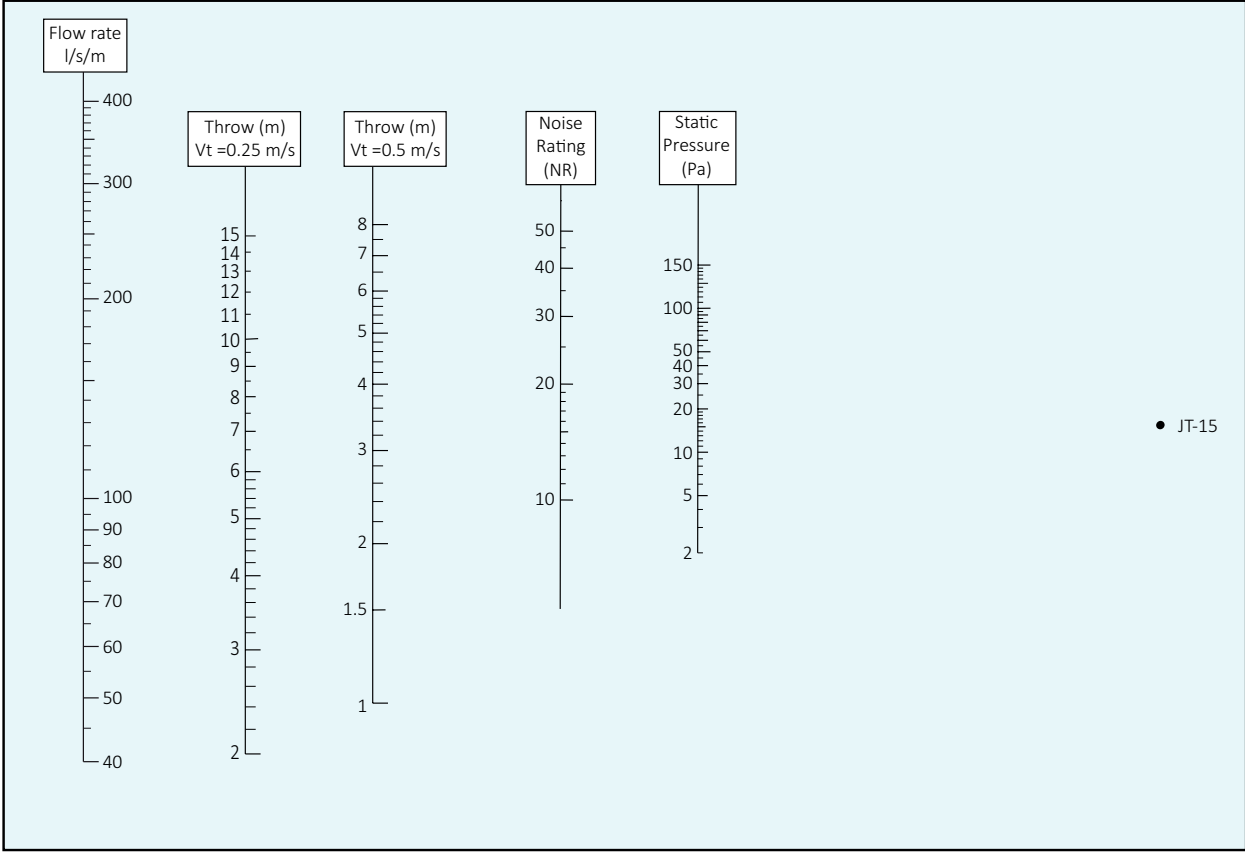
Length (mm)	<600	<800	<1000	>1000
	0.7	0.85	0.9	1

Performance Data – Jet Throw (continuous)

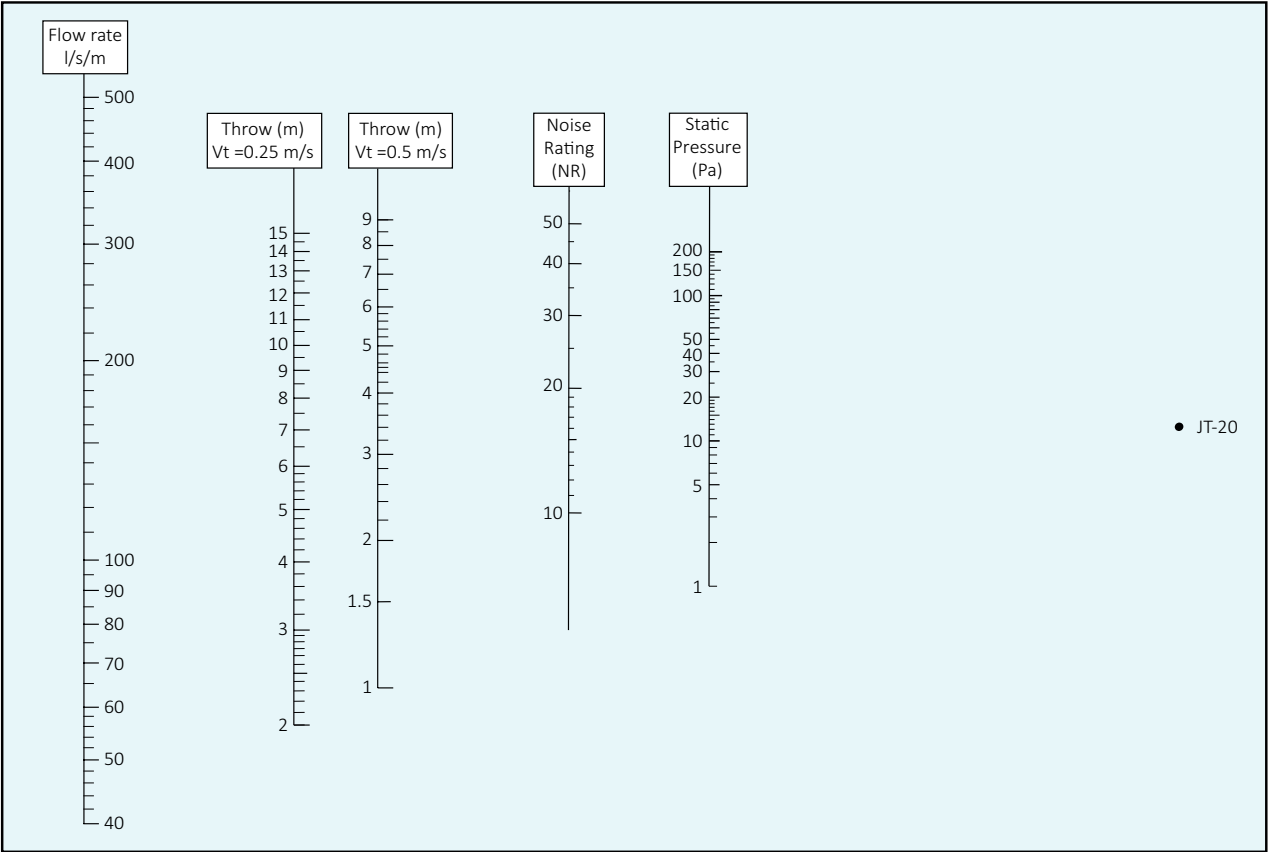
JT-10 (25mm slot)



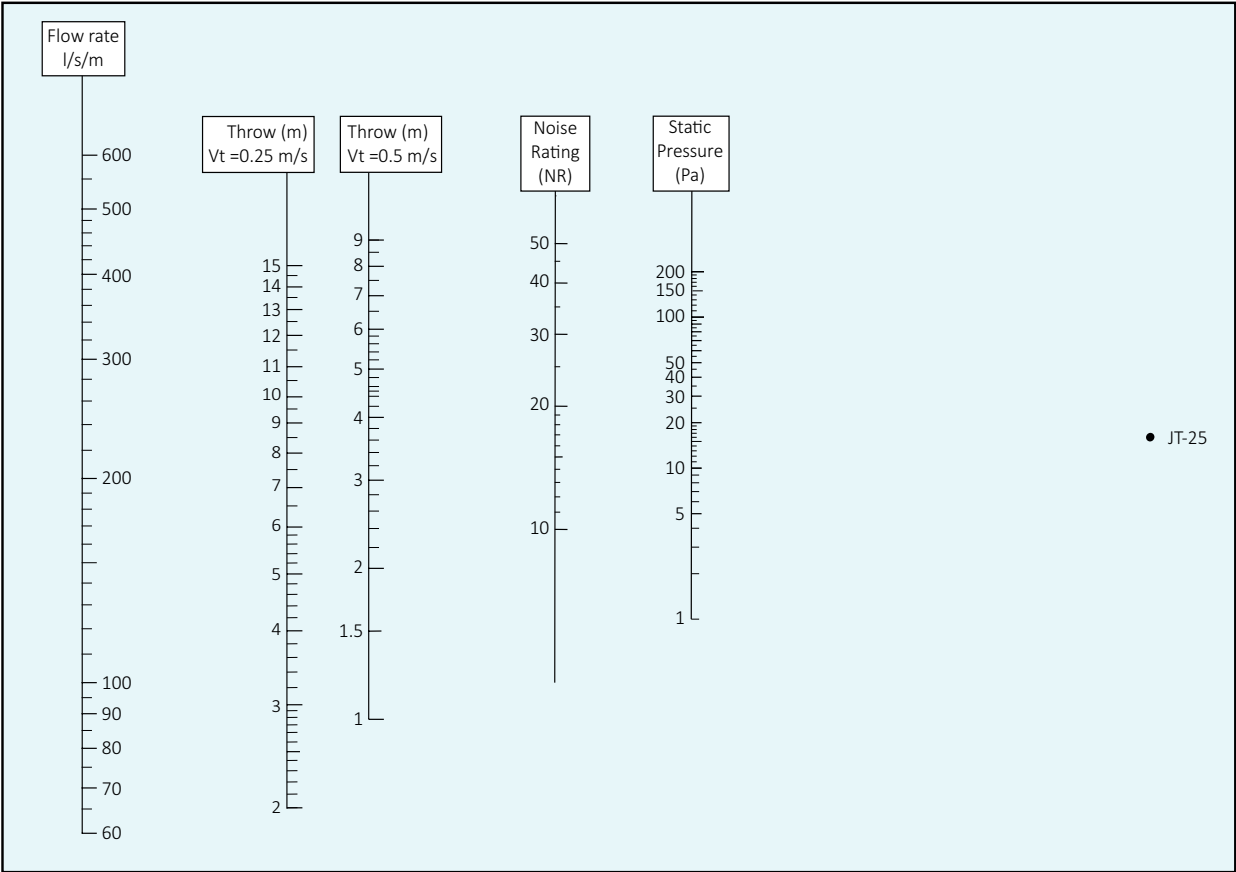
JT-15 (38mm slot)



JT-20 (51mm slot)

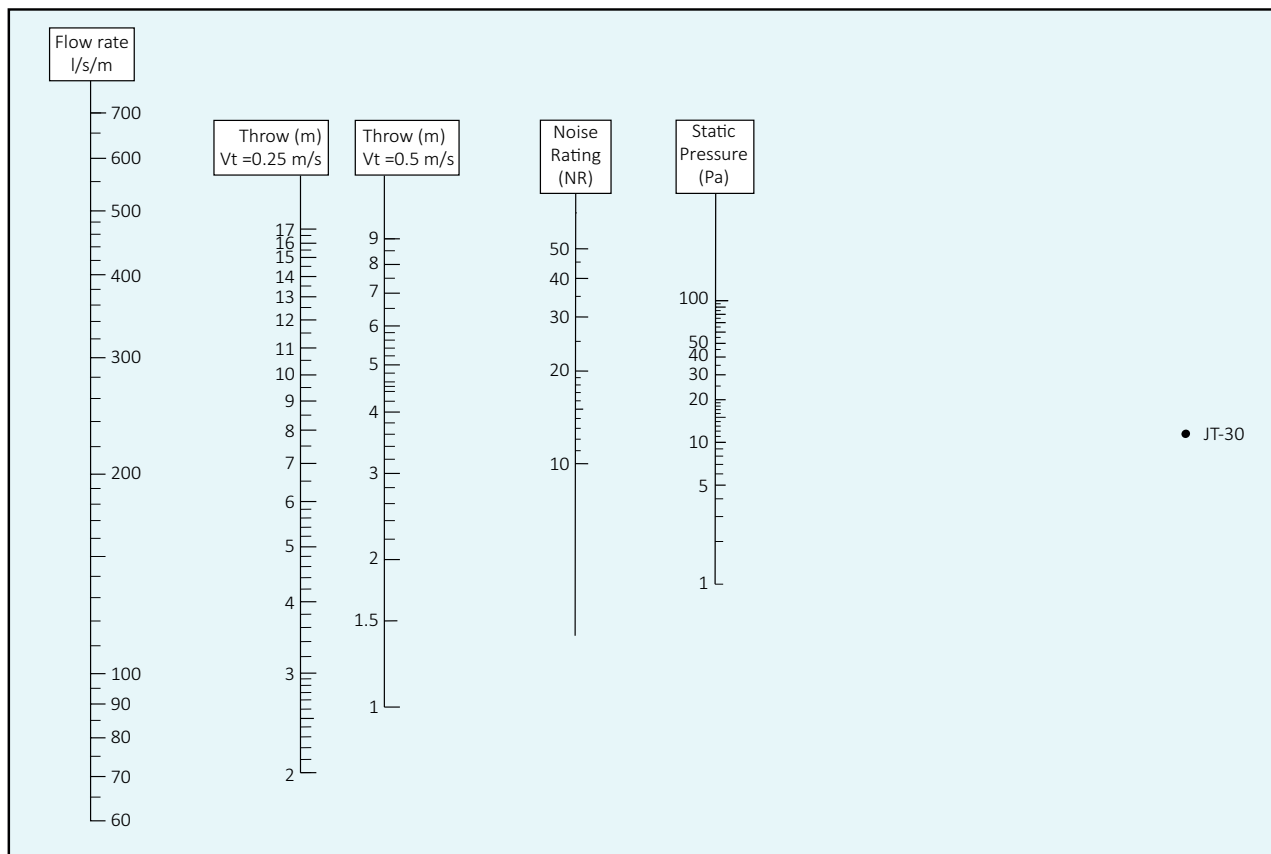


JT-25 (63mm slot)



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JT-30 (76mm slot)



NR Correction for length

Length (mm)	600	1200	1800	2400	3000
Supply	-3	0	+2	+3	+5
Return	0	+3	+5	+6	+8

The continuous performance tests were conducted with no Plenum effect for pressure or sound using a 1200mm long section of Flowbar diffuser.

Throw Correction for length

Length (mm)	<600	<800	<1000	>1000
	0.7	0.85	0.9	1

Performance Data - High Throw with Plenum

FL-10 with 150mm inlet

25mm Slot Width	Length 600mm	Air Flow, l/s	12	24	35	47	59	71	83
		Total Pressure, Pa	2	8	18	32	50	72	98
		Static Pressure, Pa	2	7	16	28	44	63	86
		NR (Noise Rating)	<10	<10	<10	20	28	35	40
		Throw, m	0.3 - 0.6 - 1.8	0.9 - 1.8 - 3.0	1.8 - 2.7 - 3.7	2.4 - 3.0 - 4.3	2.7 - 3.4 - 4.9	3.0 - 3.7 - 5.5	3.4 - 4.0 - 5.8
	Length 1200mm	Air Flow, l/s	19	38	57	76	94	113	132
		Total Pressure, Pa	2	7	16	28	44	63	87
		Static Pressure, Pa	1	4	10	18	28	40	55
		NR (Noise Rating)	<10	<10	<10	16	24	31	37
		Throw, m	0.3 - 0.6 - 1.8	0.9 - 1.8 - 4.0	1.8 - 3.0 - 4.9	2.7 - 4.0 - 5.5	3.4 - 4.3 - 6.1	4.0 - 4.9 - 6.7	4.3 - 5.2 - 7.3
	Length 1500mm	Air Flow, l/s	24	47	71	94	118	142	165
		Total Pressure, Pa	2	8	19	34	53	77	104
		Static Pressure, Pa	1	4	10	18	28	40	55
		NR (Noise Rating)	<10	<10	<10	18	26	33	38
		Throw, m	0.3 - 0.6 - 2.1	0.9 - 2.1 - 4.3	2.1 - 3.4 - 5.5	3.0 - 4.3 - 6.1	3.7 - 4.9 - 7.0	4.3 - 5.5 - 7.6	4.9 - 5.8 - 8.2

FL-10 with 200mm inlet

25mm Slot Width	Length 600mm	Air Flow, l/s	24	35	47	59	71	83	94
		Total Pressure, Pa	7	16	29	46	66	90	117
		Static Pressure, Pa	7	16	28	44	63	86	112
		NR (Noise Rating)	<10	<10	19	27	34	40	44
		Throw, m	0.9 - 1.8 - 3.0	1.8 - 2.7 - 3.7	2.4 - 3.0 - 4.3	2.7 - 3.4 - 4.9	3.0 - 3.7 - 5.5	3.4 - 4.0 - 5.8	3.7 - 4.3 - 6.1
	Length 1200mm	Air Flow, l/s	33	52	71	90	109	127	146
		Total Pressure, Pa	4	10	19	30	44	60	80
		Static Pressure, Pa	3	8	16	25	37	51	67
		NR (Noise Rating)	<10	<10	13	22	29	35	40
		Throw, m	0.6 - 1.5 - 3.4	1.8 - 2.7 - 4.6	2.4 - 3.7 - 5.5	3.0 - 4.3 - 6.1	3.7 - 4.6 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.6
	Length 1500mm	Air Flow, l/s	38	61	85	109	132	156	179
		Total Pressure, Pa	4	10	19	30	45	63	83
		Static Pressure, Pa	3	7	14	24	35	49	65
		NR (Noise Rating)	<10	<10	13	22	29	35	40
		Throw, m	0.6 - 1.5 - 3.7	1.8 - 2.7 - 4.9	2.7 - 4.0 - 5.8	3.4 - 4.6 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5

FL-15 with 150mm inlet

38mm Slot Width	Length 600mm	Air Flow, l/s	19	33	47	61	76	90	104
		Total Pressure, Pa	4	13	26	45	68	96	128
		Static Pressure, Pa	3	11	22	38	57	81	109
		NR (Noise Rating)	<10	<10	16	25	33	40	46
		Throw, m	0.6 - 1.5 - 2.7	1.5 - 2.4 - 3.7	2.4 - 3.0 - 4.3	2.7 - 3.7 - 4.9	3.1 - 4.0 - 5.5	3.4 - 4.3 - 6.1	3.7 - 4.6 - 6.4
	Length 1200mm	Air Flow, l/s	38	57	76	94	113	132	151
		Total Pressure, Pa	6	14	25	39	55	76	99
		Static Pressure, Pa	3	8	14	22	32	44	57
		NR (Noise Rating)	<10	<10	12	20	27	33	38
		Throw, m	0.9 - 1.8 - 4.0	1.8 - 3.0 - 4.9	2.7 - 4.0 - 5.5	3.4 - 4.3 - 6.1	4.0 - 4.9 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.9
	Length 1500mm	Air Flow, l/s	42	66	90	113	137	160	184
		Total Pressure, Pa	6	15	28	44	64	88	116
		Static Pressure, Pa	3	7	13	21	30	42	55
		NR (Noise Rating)	<10	<10	12	20	27	33	39
		Throw, m	0.9 - 1.8 - 4.0	1.8 - 3.0 - 5.2	2.7 - 4.3 - 6.1	3.4 - 4.9 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.8 - 8.2	4.9 - 6.1 - 8.5

FL-15 with 200mm inlet

38mm Slot Width	Length 600mm	Air Flow, l/s	19	33	47	61	76	90	104
		Total Pressure, Pa	4	12	24	40	61	86	115
		Static Pressure, Pa	3	11	22	38	57	81	109
		NR (Noise Rating)	<10	<10	14	24	32	38	45
		Throw, m	0.6 - 1.5 - 2.7	1.5 - 2.4 - 3.7	2.4 - 3.0 - 4.3	2.7 - 3.7 - 4.9	3.1 - 4.0 - 5.5	3.4 - 4.3 - 6.1	3.7 - 4.6 - 6.4
	Length 1200mm	Air Flow, l/s	38	61	85	109	132	156	179
		Total Pressure, Pa	4	12	22	36	54	75	100
		Static Pressure, Pa	3	9	18	30	44	61	81
		NR (Noise Rating)	<10	<10	15	24	32	38	43
		Throw, m	0.9 - 1.8 - 4.0	2.1 - 3.0 - 4.9	3.0 - 4.3 - 5.8	3.7 - 4.6 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5
	Length 1500mm	Air Flow, l/s	42	71	99	127	156	184	212
		Total Pressure, Pa	4	11	21	36	53	74	99
		Static Pressure, Pa	3	8	16	26	39	55	73
		NR (Noise Rating)	<10	<10	14	24	31	37	43
		Throw, m	0.9 - 1.8 - 4.0	2.1 - 3.4 - 5.5	3.0 - 4.6 - 6.4	4.0 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4

FL-20 with 200mm inlet

51mm Slot Width	Length 600mm	Air Flow, l/s	24	40	57	73	90	106	123
		Total Pressure, Pa	4	11	22	37	55	78	104
		Static Pressure, Pa	3	10	20	34	51	71	95
		NR (Noise Rating)	<10	<10	12	21	28	35	40
		Throw, m	0.6 - 1.5 - 3.0	1.8 - 2.7 - 4.0	2.4 - 3.4 - 4.9	3.0 - 4.0 - 5.5	3.4 - 4.3 - 6.1	3.7 - 4.6 - 6.7	4.0 - 4.9 - 7.0
	Length 1200mm	Air Flow, l/s	42	71	99	127	156	184	212
		Total Pressure, Pa	4	11	21	35	52	73	97
		Static Pressure, Pa	3	8	16	26	38	54	71
		NR (Noise Rating)	<10	<10	20	29	36	42	48
		Throw, m	0.9 - 1.8 - 4.0	2.1 - 3.4 - 5.5	3.0 - 4.6 - 6.4	4.0 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4
	Length 1500mm	Air Flow, l/s	47	78	109	139	170	201	231
		Total Pressure, Pa	3	10	19	31	46	64	85
		Static Pressure, Pa	2	6	12	20	29	41	54
		NR (Noise Rating)	<10	<10	19	28	36	42	47
		Throw, m	0.6 - 1.5 - 4.0	1.8 - 3.0 - 5.5	3.0 - 4.6 - 6.7	4.0 - 5.2 - 7.6	4.6 - 5.8 - 8.2	5.2 - 6.4 - 9.1	5.5 - 7.0 - 9.8

FL-20 with 300mm inlet

51mm Slot Width	Length 600mm	Air Flow, l/s	24	42	61	80	99	118	137
		Total Pressure, Pa	3	12	24	42	63	90	121
		static Pressure, Pa	3	11	24	41	62	88	119
		NR (Noise Rating)	<10	<10	<10	13	20	27	32
		Throw, m	0.6 - 1.5 - 3.0	1.8 - 2.7 - 4.3	2.7 - 3.7 - 4.9	3.4 - 4.0 - 5.8	3.7 - 4.6 - 6.4	4.0 - 4.9 - 7.0	4.3 - 5.2 - 7.3
	Length 1200mm	Air Flow, l/s	42	78	113	149	184	219	255
		Total Pressure, Pa	3	10	22	38	57	82	110
		static Pressure, Pa	3	10	20	35	54	76	103
		NR (Noise Rating)	<10	<10	13	23	31	37	43
		Throw, m	0.9 - 1.8 - 4.0	2.4 - 3.7 - 5.5	3.4 - 4.9 - 6.7	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4	5.8 - 7.3 - 10.1
	Length 1500mm	Air Flow, l/s	47	90	132	175	217	260	302
		Total Pressure, Pa	2	9	20	34	53	76	103
		static Pressure, Pa	2	8	18	31	48	68	93
		NR (Noise Rating)	<10	<10	15	25	33	39	45
		Throw, m	0.6 - 1.5 - 4.0	2.4 - 3.7 - 6.1	3.7 - 5.2 - 7.3	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4	5.8 - 7.3 - 10.4	6.4 - 7.9 - 11.0

FL-25 with 250mm inlet

63mm Slot Width	Length 600mm	Air Flow, l/s	47	68	90	111	132	153	175
		Total Pressure, Pa	9	19	33	50	71	96	124
		Static Pressure, Pa	8	18	31	47	67	90	117
		NR (Noise Rating)	<10	<10	17	26	33	39	44
		Throw, m	1.8 - 3.0 - 4.3	2.7 - 3.7 - 5.2	3.4 - 4.3 - 6.1	4.0 - 4.9 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5
	Length 1200mm	Air Flow, l/s	66	104	142	179	217	255	293
		Total Pressure, Pa	5	13	24	38	56	77	102
		Static Pressure, Pa	4	10	19	31	45	62	82
		NR (Noise Rating)	<10	<10	20	29	37	44	49
		Throw, m	1.5 - 2.7 - 5.2	3.0 - 4.6 - 6.4	4.3 - 5.5 - 7.6	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4	5.8 - 7.3 - 10.1	6.4 - 7.6 - 11.0
	Length 1500mm	Air Flow, l/s	71	113	156	198	241	283	326
		Total Pressure, Pa	4	11	21	33	49	68	90
		Static Pressure, Pa	3	8	15	24	36	49	65
		NR (Noise Rating)	<10	<10	18	28	36	43	49
		Throw, m	1.2 - 2.7 - 5.5	3.0 - 4.6 - 6.7	4.0 - 5.5 - 7.9	5.2 - 6.4 - 8.8	5.8 - 7.0 - 9.8	6.1 - 7.6 - 10.7	6.7 - 8.2 - 11.6

FL-25 with 300mm inlet

63mm Slot Width	Length 600mm	Air Flow, l/s	47	68	90	111	132	153	175
		Total Pressure, Pa	9	18	32	49	69	93	120
		static Pressure, Pa	8	18	31	47	67	90	117
		NR (Noise Rating)	<10	<10	12	21	28	34	40
		Throw, m	1.8 - 3.0 - 4.3	2.7 - 3.7 - 5.2	3.4 - 4.3 - 6.1	4.0 - 4.9 - 6.7	4.3 - 5.2 - 7.3	4.6 - 5.5 - 7.9	4.9 - 6.1 - 8.5
	Length 1200mm	Air Flow, l/s	66	106	146	186	227	267	307
		Total Pressure, Pa	5	12	23	37	55	76	101
		static Pressure, Pa	4	11	20	33	49	68	90
		NR (Noise Rating)	<10	<10	16	26	34	41	46
		Throw, m	1.5 - 2.7 - 5.2	3.0 - 4.6 - 6.7	4.3 - 5.5 - 7.6	5.2 - 6.1 - 8.8	5.5 - 6.7 - 9.8	6.1 - 7.3 - 10.4	6.4 - 7.9 - 11.3
	Length 1500mm	Air Flow, l/s	71	118	165	212	260	307	354
		Total Pressure, Pa	4	10	20	33	49	68	91
		static Pressure, Pa	3	8	17	28	41	58	77
		NR (Noise Rating)	<10	<10	16	26	34	41	47
		Throw, m	1.2 - 2.7 - 5.5	3.0 - 4.6 - 7.0	4.3 - 5.8 - 8.2	5.5 - 6.7 - 9.4	5.8 - 7.3 - 10.4	6.4 - 7.9 - 11.3	7.0 - 8.5 - 11.9

FL-30 with 250mm inlet

76mm Slot Width	Length 600mm	Air Flow, l/s	59	80	101	123	144	165	186
		Total Pressure, Pa	13	24	38	55	76	100	128
		static Pressure, Pa	12	22	35	52	71	94	119
		NR (Noise Rating)	<10	<10	15	23	30	36	41
		Throw, m	2.1 - 3.4 - 4.9	3.0 - 4.0 - 5.8	3.7 - 4.6 - 6.4	4.0 - 4.9 - 7.0	4.6 - 5.5 - 7.6	4.9 - 5.8 - 8.2	5.2 - 6.1 - 8.8
	Length 1200mm	Air Flow, l/s	94	130	165	201	236	271	307
		Total Pressure, Pa	10	18	30	44	61	81	103
		static Pressure, Pa	8	14	23	35	48	63	81
		NR (Noise Rating)	<10	<10	17	25	32	39	44
		Throw, m	2.4 - 4.0 - 6.1	3.7 - 5.2 - 7.3	4.6 - 5.8 - 8.2	5.2 - 6.4 - 9.1	5.8 - 7.0 - 9.8	6.1 - 7.3 - 10.4	6.4 - 7.9 - 11.3
	Length 1500mm	Air Flow, l/s	104	146	189	231	274	316	359
		Total Pressure, Pa	8	17	28	42	59	78	101
		static Pressure, Pa	6	12	20	29	41	55	71
		NR (Noise Rating)	<10	<10	17	25	33	40	46
		Throw, m	2.4 - 3.7 - 6.4	3.7 - 5.2 - 7.6	4.6 - 6.1 - 8.8	5.5 - 7.0 - 9.8	6.1 - 7.3 - 10.7	6.4 - 7.9 - 11.3	7.0 - 8.5 - 12.2

FL-30 with 300mm inlet

76mm Slot Width	Length 600mm	Air Flow, l/s	59	80	101	123	144	165	186
		Total Pressure, Pa	12	23	37	54	74	97	123
		static Pressure, Pa	12	22	35	52	71	94	119
		NR (Noise Rating)	<10	<10	11	19	26	32	37
		Throw, m	2.1 - 3.4 - 4.9	3.0 - 4.0 - 5.8	3.7 - 4.6 - 6.4	4.0 - 4.9 - 7.0	4.6 - 5.5 - 7.6	4.9 - 5.8 - 8.2	5.2 - 6.1 - 8.8
	Length 1200mm	Air Flow, l/s	94	137	179	222	264	307	349
		Total Pressure, Pa	9	18	31	48	68	92	119
		static Pressure, Pa	8	16	28	42	60	81	105
		NR (Noise Rating)	<10	<10	16	26	33	40	45
		Throw, m	2.4 - 4.0 - 6.1	3.7 - 5.2 - 7.3	4.9 - 6.1 - 8.5	5.5 - 6.7 - 9.4	6.1 - 7.3 - 10.4	6.4 - 7.9 - 11.3	7.0 - 8.5 - 11.9
	Length 1500mm	Air Flow, l/s	104	156	208	260	311	363	415
		Total Pressure, Pa	7	16	29	45	64	88	114
		static Pressure, Pa	6	13	24	37	54	73	95
		NR (Noise Rating)	<10	<10	17	26	34	41	47
		Throw, m	2.4 - 3.7 - 6.4	3.7 - 5.5 - 7.9	4.9 - 6.4 - 9.1	5.8 - 7.3 - 10.4	6.4 - 7.9 - 11.3	7.0 - 8.5 - 12.2	7.6 - 9.1 - 13.1

The tests were conducted with the FlowBar and plenums as a composite assembly

Plenums not provided by Waterloo may demonstrate performance variations from the published data and therefore Waterloo would not be able to subsequently guarantee that performance matches our data.

- Pressures are given in Pascal (Pa)
- Isothermal throw values are given for terminal velocities of 0.8, 0.5 and 0.3m/sec respectively
- Each NR value represents the noise rating curve which will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th, with a room absorption of 10dB, re 10-12 watts

Performance Data - Jet Throw with Plenum

FL-10 with 200mm inlet

25mm Slot Width	Length 600mm	Air Flow, l/s	24	45	66	87	109	130	151
		Total Pressure, Pa	3	11	23	41	63	90	121
		static Pressure, Pa	3	9	21	36	56	80	108
		NR (Noise Rating)	<10	<10	16	23	29	34	39
		Throw, m	0.6 - 0.9 - 1.8	1.2 - 1.8 - 3.4	1.5 - 2.4 - 4.3	2.1 - 3.4 - 4.9	2.7 - 4.0 - 5.5	3.4 - 4.3 - 6.1	3.7 - 4.6 - 6.7
	Length 1200mm	Air Flow, l/s	47	83	118	153	189	224	260
		Total Pressure, Pa	4	12	25	41	63	89	119
		static Pressure, Pa	3	8	16	28	42	60	80
		NR (Noise Rating)	<10	<10	18	25	30	34	38
		Throw, m	0.9 - 1.2 - 2.4	1.5 - 2.1 - 4.3	2.1 - 3.0 - 5.8	2.7 - 4.0 - 6.7	3.4 - 5.2 - 7.3	4.0 - 5.8 - 7.9	4.6 - 6.1 - 8.5
	Length 1500mm	Air Flow, l/s	52	92	132	172	212	252	293
		Total Pressure, Pa	3	11	23	40	60	85	114
		static Pressure, Pa	2	6	13	23	34	49	65
		NR (Noise Rating)	<10	<10	17	24	29	33	37
		Throw, m	0.9 - 1.2 - 2.4	1.5 - 2.1 - 4.3	2.1 - 3.0 - 6.1	2.7 - 4.0 - 7.0	3.4 - 5.2 - 7.9	4.0 - 6.1 - 8.5	4.6 - 6.4 - 9.1

FL-10 with 250mm inlet

25mm Slot Width	Length 600mm	Air Flow, l/s	24	45	66	87	109	130	151
		Total Pressure, Pa	3	10	22	38	59	84	114
		static Pressure, Pa	3	9	21	36	56	80	108
		NR (Noise Rating)	<10	<10	16	22	28	33	38
		Throw, m	0.6 - 0.9 - 1.8	1.2 - 1.8 - 3.4	1.5 - 2.4 - 4.3	2.1 - 3.4 - 4.9	2.7 - 4.0 - 5.5	3.4 - 4.3 - 6.1	3.7 - 4.6 - 6.7
	Length 1200mm	Air Flow, l/s	47	85	123	160	198	236	274
		Total Pressure, Pa	3	10	21	37	56	79	107
		static Pressure, Pa	3	8	18	31	47	66	89
		NR (Noise Rating)	<10	<10	18	25	30	35	39
		Throw, m	0.9 - 1.2 - 2.4	1.5 - 2.1 - 4.6	2.1 - 3.4 - 5.8	2.7 - 4.3 - 6.7	3.7 - 5.2 - 7.6	4.3 - 5.8 - 8.2	4.9 - 6.4 - 8.8
	Length 1500mm	Air Flow, l/s	52	99	146	193	241	288	335
		Total Pressure, Pa	3	10	21	37	58	82	112
		static Pressure, Pa	2	7	16	28	44	63	85
		NR (Noise Rating)	<10	<10	19	26	31	35	40
		Throw, m	0.9 - 1.2 - 2.4	1.5 - 2.4 - 4.9	2.4 - 3.4 - 6.4	3.0 - 4.6 - 7.3	4.0 - 5.8 - 8.2	4.6 - 6.4 - 9.1	5.5 - 7.0 - 9.8

FL-15 with 200mm inlet

38mm Slot Width	Length 600mm	Air Flow, l/s	28	52	76	99	123	146	170
		Total Pressure, Pa	3	11	24	42	64	91	122
		static Pressure, Pa	2	6	14	24	37	52	70
		NR (Noise Rating))	<10	<10	<10	16	24	31	37
		Throw, m	0.3 - 0.9 - 1.5	0.9 - 1.5 - 2.7	1.5 - 2.1 - 4.3	1.8 - 2.7 - 5.2	2.1 - 3.4 - 5.8	2.7 - 4.0 - 6.4	3.0 - 4.6 - 7.0
	Length 1200mm	Air Flow, l/s	57	85	113	142	170	198	227
		Total Pressure, Pa	8	17	31	49	70	95	124
		static Pressure, Pa	2	4	8	12	17	24	31
		NR (Noise Rating)	<10	<10	<10	<10	16	22	27
		Throw, m	0.6 - 1.2 - 2.1	1.2 - 1.5 - 3.4	1.5 - 2.1 - 4.6	1.8 - 2.7 - 5.5	2.1 - 3.4 - 6.7	2.4 - 4.0 - 7.6	3.0 - 4.6 - 7.9
	Length 1500mm	Air Flow, l/s	66	94	123	151	179	208	236
		Total Pressure, Pa	10	20	33	50	71	95	122
		static Pressure, Pa	2	3	6	9	12	17	22
		NR (Noise Rating)	<10	<10	<10	<10	12	17	22
		Throw, m	0.6 - 1.2 - 2.4	1.2 - 1.5 - 3.4	1.5 - 2.1 - 4.3	1.8 - 2.7 - 5.2	2.1 - 3.0 - 6.4	2.4 - 3.7 - 7.3	2.7 - 4.3 - 8.2

FL-15 with 300mm inlet

38mm Slot Width	Length 600mm	Air Flow, l/s	28	59	90	120	151	182	212
		Total Pressure, Pa	2	9	20	37	58	84	115
		static Pressure, Pa	2	8	20	35	55	80	110
		NR (Noise Rating)	<10	<10	<10	18	27	35	43
		Throw, m	0.3 - 0.9 - 1.5	1.2 - 1.5 - 3.4	1.5 - 2.4 - 4.9	2.1 - 3.4 - 5.8	2.7 - 4.3 - 6.7	3.4 - 5.2 - 7.3	4.0 - 5.5 - 7.9
	Length 1200mm	Air Flow, l/s	57	113	170	227	283	340	396
		Total Pressure, Pa	2	9	21	37	58	83	113
		static Pressure, Pa	2	8	17	31	49	70	96
		NR (Noise Rating)	<10	<10	10	21	30	37	45
		Throw, m	0.6 - 1.2 - 2.1	1.5 - 2.1 - 4.6	2.1 - 3.4 - 6.7	3.0 - 4.6 - 7.9	3.7 - 5.5 - 9.1	4.6 - 6.7 - 9.8	5.2 - 7.6 - 10.7
	Length 1500mm	Air Flow, l/s	66	132	198	264	330	396	463
		Total Pressure, Pa	2	9	20	35	55	79	107
		static Pressure, Pa	2	7	15	27	43	61	83
		NR (Noise Rating)	<10	<10	10	21	29	36	43
		Throw, m	0.6 - 1.2 - 2.4	1.5 - 2.4 - 4.6	2.4 - 3.4 - 7.0	3.0 - 4.6 - 8.8	4.0 - 5.8 - 9.8	4.6 - 7.0 - 10.7	5.5 - 8.2 - 11.6

FL-20 with 200mm inlet

51mm Slot Width	Length 600mm	Air Flow, l/s	33	66	99	132	165	198	231
		Total Pressure, Pa	2	8	18	33	51	74	100
		static Pressure, Pa	1	6	13	23	36	51	70
		NR (Noise Rating)	<10	<10	14	21	27	33	38
		Throw, m	0.3 - 0.6 - 1.5	0.9 - 1.5 - 3.0	1.5 - 2.1 - 4.6	2.1 - 3.0 - 6.1	2.4 - 3.7 - 7.0	3.0 - 4.6 - 7.6	3.7 - 5.2 - 8.2
	Length 1200mm	Air Flow, l/s	66	113	160	208	255	302	349
		Total Pressure, Pa	4	11	23	39	58	82	109
		static Pressure, Pa	1	4	8	14	21	30	40
		NR (Noise Rating)	<10	12	21	27	32	36	40
		Throw, m	0.3 - 0.9 - 2.1	1.2 - 1.8 - 3.7	1.8 - 2.7 - 5.2	2.1 - 3.4 - 6.7	2.7 - 4.3 - 8.2	3.4 - 4.9 - 9.1	3.7 - 5.8 - 10.1
	Length 1500mm	Air Flow, l/s	71	123	175	227	278	330	382
		Total Pressure, Pa	4	12	24	40	60	85	114
		static Pressure, Pa	1	3	6	11	16	23	31
		NR (Noise Rating)	<10	13	21	27	32	36	40
		Throw, m	0.3 - 0.9 - 2.1	0.9 - 1.8 - 3.7	1.8 - 2.4 - 5.2	2.1 - 3.4 - 6.7	2.7 - 4.0 - 8.2	3.0 - 4.9 - 9.4	3.7 - 5.5 - 10.4

FL-20 with 300mm inlet

51mm Slot Width	Length 600mm	Air Flow, l/s	33	76	118	160	203	245	288
		Total Pressure, Pa	1	8	20	37	58	85	117
		static Pressure, Pa	1	7	18	34	54	79	108
		NR (Noise Rating)	<10	<10	<10	17	25	31	36
		Throw, m	0.3 - 0.6 - 1.5	1.2 - 1.8 - 3.4	1.8 - 2.7 - 5.5	2.4 - 3.7 - 6.7	3.0 - 4.6 - 7.6	3.7 - 5.5 - 8.2	4.3 - 6.4 - 9.1
	Length 1200mm	Air Flow, l/s	66	137	208	278	349	420	491
		Total Pressure, Pa	2	8	19	34	54	77	106
		static Pressure, Pa	1	6	14	25	40	57	79
		NR (Noise Rating)	<10	<10	17	24	31	37	41
		Throw, m	0.3 - 0.9 - 2.1	1.5 - 2.1 - 4.6	2.1 - 3.4 - 6.7	3.0 - 4.6 - 8.8	3.7 - 5.8 - 10.1	4.6 - 6.7 - 11.0	5.2 - 7.9 - 11.9
	Length 1500mm	Air Flow, l/s	71	156	241	326	411	496	580
		Total Pressure, Pa	1	8	19	34	54	79	108
		static Pressure, Pa	1	5	12	22	35	51	70
		NR (Noise Rating)	<10	<10	19	26	32	38	43
		Throw, m	0.3 - 0.9 - 2.1	1.5 - 2.1 - 4.6	2.4 - 3.4 - 7.0	3.0 - 4.9 - 9.4	4.0 - 6.1 - 11.0	4.9 - 7.3 - 11.9	5.5 - 8.5 - 12.8

FL-25 with 300mm inlet

63mm Slot Width	Length 600mm	Air Flow, l/s	38	90	142	193	245	297	349
		Total Pressure, Pa	1	8	19	36	57	84	116
		static Pressure, Pa	1	7	17	31	51	74	103
		NR (Noise Rating)	<10	<10	<10	12	20	26	33
		Throw, m	0.3 - 0.6 - 1.5	1.2 - 1.8 - 3.7	1.8 - 2.7 - 5.8	2.7 - 4.0 - 7.3	3.4 - 4.9 - 8.2	4.0 - 6.1 - 9.1	4.6 - 7.0 - 10.1
	Length 1200mm	Air Flow, l/s	71	158	245	333	420	507	595
		Total Pressure, Pa	2	8	19	36	57	83	114
		static Pressure, Pa	1	5	13	23	37	54	74
		NR (Noise Rating)	<10	<10	<10	18	26	32	38
		Throw, m	0.3 - 0.6 - 2.1	1.5 - 2.1 - 4.6	2.4 - 3.4 - 7.0	3.0 - 4.9 - 9.4	4.0 - 6.1 - 11.0	4.9 - 7.3 - 12.2	5.5 - 8.5 - 13.1
	Length 1500mm	Air Flow, l/s	76	175	274	373	472	571	670
		Total Pressure, Pa	1	7	19	34	55	81	111
		static Pressure, Pa	1	4	10	19	30	44	60
		NR (Noise Rating)	<10	<10	<10	18	26	32	38
		Throw, m	0.3 - 0.6 - 1.8	1.5 - 2.1 - 4.6	2.4 - 3.4 - 7.0	3.0 - 4.9 - 9.4	4.0 - 6.1 - 11.6	4.9 - 7.3 - 12.8	5.8 - 8.5 - 13.7

FL-30 with 250mm inlet

76mm Slot Width	Length 600mm	Air Flow, l/s	47	101	156	210	264	319	373
		Total Pressure, Pa	2	8	20	36	57	83	113
		static Pressure, Pa	1	6	14	26	41	59	81
		NR (Noise Rating)	<10	<10	<10	<10	15	24	31
		Throw, m	0.3 - 0.5 - 1.8	1.3 - 1.8 - 3.8	1.8 - 2.8 - 5.5	2.5 - 3.8 - 7.5	3 - 5 - 8.8	3.8 - 5.8 - 9.5	4.5 - 6.8 - 10.3
	Length 1200mm	Air Flow, l/s	94	170	245	321	396	472	547
		Total Pressure, Pa	3	11	23	39	60	85	114
		static Pressure, Pa	1	4	9	15	23	32	44
		NR (Noise Rating)	<10	<10	<10	<10	13	21	27
		Throw, m	0.3 - 1 - 2.5	1.3 - 2.3 - 4.3	2.3 - 3 - 6	2.8 - 4 - 8.3	3.3 - 5 - 10	4 - 6 - 11.5	4.5 - 7 - 12.5
	Length 1500mm	Air Flow, l/s	113	193	274	354	434	514	595
		Total Pressure, Pa	4	12	25	41	62	87	116
		static Pressure, Pa	1	3	7	12	18	25	33
		NR (Noise Rating)	<10	<10	<10	<10	10	18	24
		Throw, m	0.3 - 1 - 2.5	1.3 - 2.3 - 4.3	2.3 - 3 - 6	2.8 - 4 - 8	3.3 - 5 - 9.8	4 - 5.8 - 11.5	4.5 - 6.8 - 13

FL-30 with 300mm inlet

76mm Slot Width	Length 600mm	Air Flow, l/s	47	106	165	224	283	342	401
		Total Pressure, Pa	1	8	19	35	56	81	112
		static Pressure, Pa	1	6	16	29	47	68	94
		NR (Noise Rating)	<10	<10	<10	<10	15	24	31
		Throw, m	0.3 - 0.6 - 1.8	1.2 - 1.8 - 3.7	1.8 - 3.0 - 5.8	2.7 - 4.0 - 7.9	3.4 - 5.2 - 9.1	4.0 - 6.1 - 9.8	4.9 - 7.3 - 10.7
	Length 1200mm	Air Flow, l/s	94	189	283	378	472	566	661
		Total Pressure, Pa	2	9	21	37	57	83	113
		static Pressure, Pa	1	5	12	21	32	47	63
		NR (Noise Rating)	<10	<10	<10	<10	17	25	32
		Throw, m	0.3 - 0.9 - 2.4	1.5 - 2.4 - 4.9	2.4 - 3.7 - 7.3	3.0 - 4.9 - 9.4	4.0 - 6.1 - 11.6	4.9 - 7.3 - 12.8	5.5 - 8.2 - 13.7
	Length 1500mm	Air Flow, l/s	113	217	321	425	529	632	736
		Total Pressure, Pa	3	10	21	37	57	82	112
		static Pressure, Pa	1	4	10	17	26	37	51
		NR (Noise Rating)	<10	<10	<10	<10	15	24	30
		Throw, m	0.3 - 0.9 - 2.4	1.5 - 2.4 - 4.9	2.4 - 3.7 - 7.3	3.4 - 4.9 - 9.8	4.0 - 6.1 - 11.9	4.9 - 7.0 - 13.4	5.5 - 8.2 - 14.6

The tests were conducted with the FlowBar and plenums as a composite assembly

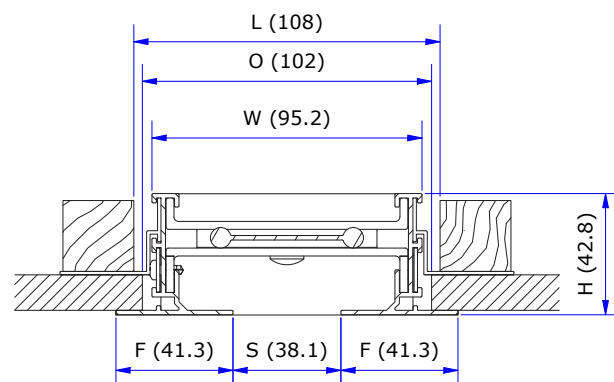
Plenums not provided by Waterloo may demonstrate performance variations from the published data and therefore Waterloo would not be able to subsequently guarantee that performance matches our data.

- Pressures are given in Pascal (Pa)
- Isothermal throw values are given for terminal velocities of 0.8, 0.5 and 0.3m/sec respectively
- Each NR value represents the noise rating curve which will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th, with a room absorption of 10dB, re 10-12 watts

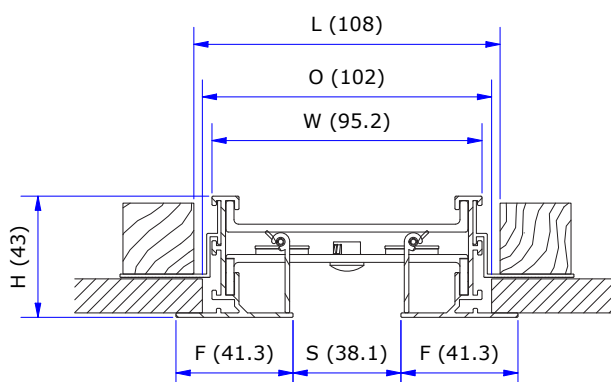
Dimensions

Border Type 66

TYPE 66 DIMENSIONS						
SLOT	F	S	W	H	O	L
FL10 (25mm)	35	25	70	43	76	83
FL15 (38mm)	41	38	95	43	102	108
FL20 (51mm)	48	51	121	43	127	133
FL25 (63mm)	54	63	146	59	152	159
FL30 (76mm)	60	76	171	59	178	184



FL - HT

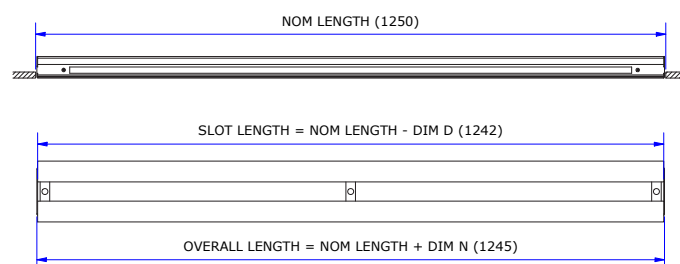


FL - JT

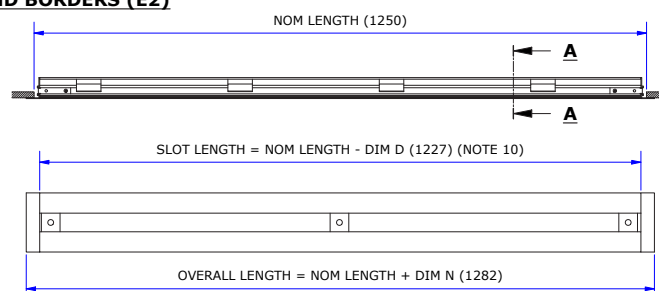
OVERALL LENGTH		
END TYPE	DESCRIPTION	DIM N
E0	PLAIN ENDS	0
E1	END BORDER (LH/RH)	16
E2	END BORDER (LH&RH)	32
EP1	END PLATE (LH/RH)	-2.5
EP2	END PLATE (LH&RH)	-5

END OPTIONS PLAIN/BORDERS/PLATES		
END TYPE	DESCRIPTION	DIM D
E0	PLAIN ENDS	0
E1	END BORDER (LH/RH)	11.5
E2	END BORDER (LH&RH)	23
EP1	END PLATE (LH/RH)	4
EP2	END PLATE (LH&RH)	8

END PLATES (EP2)

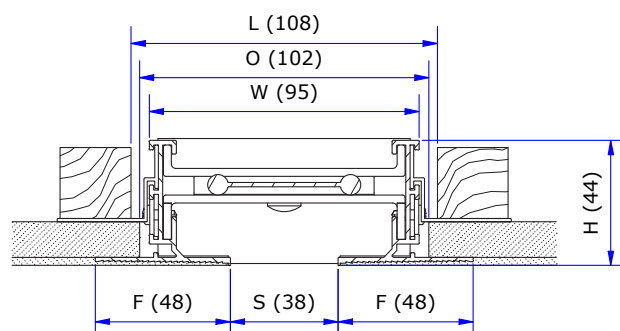


END BORDERS (E2)



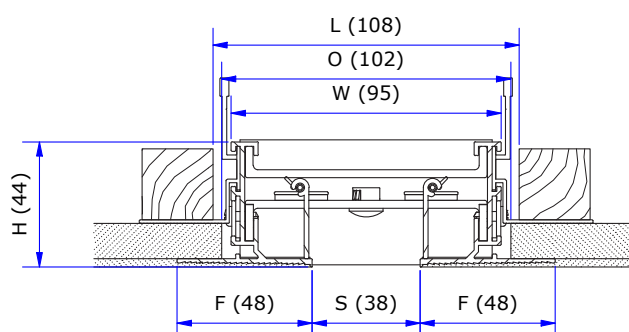
Border Type 22

TYPE 22 DIMENSIONS						
SLOT	F	S	W	H	O	L
FL10 (25mm)	41	25	70	43	76	83
FL15 (38mm)	48	38	95	43	102	108
FL20 (51mm)	54	51	121	43	127	133
FL25 (63mm)	54	63	146	59	152	159
FL30 (76mm)	60	76	171	59	178	184



FL - HT

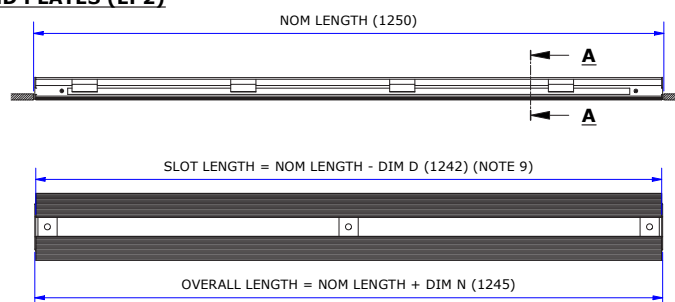
OVERALL LENGTH		
END TYPE	DESCRIPTION	DIM N
E0	PLAIN ENDS	0
EP1	END PLATE (LH/RH)	-2.5
EP2	END PLATE (LH&RH)	-5
ME1 (FL10/FL15/FL20)	MITRED (LH/RH)	16.5
ME1 (FL25/FL30)	MITRED (LH/RH)	10
ME2 (FL10/FL15/FL20)	MITRED (LH&RH)	33
ME2 (FL25/FL30)	MITRED (LH&RH)	20



FL - JT

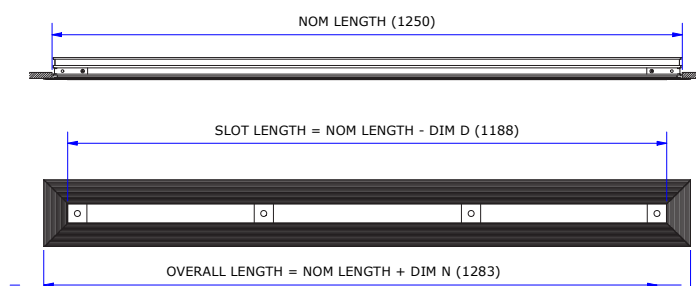
END OPTIONS PLAIN / BORDERS / PLATES		
END TYPE	DESCRIPTION	DIM D
E0	PLAIN ENDS	0
EP1	END PLATE (LH/RH)	4
EP2	END PLATE (LH&RH)	8

END PLATES (EP2)



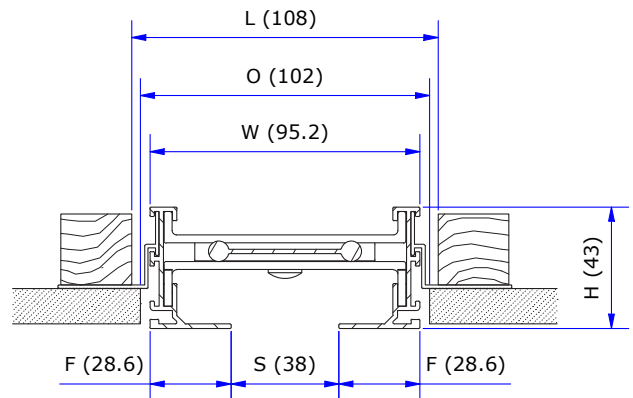
END OPTIONS MITRED		
END TYPE	DESCRIPTION	DIM D
ME1 (FL10)	MITRE END (LH/RH) FL10	25
ME1 (FL15)	MITRE END (LH/RH) FL15	31.5
ME1 (FL20)	MITRE END (LH/RH) FL20	37.5
ME1 (FL25)	MITRE END (LH/RH) FL25	37.5
ME1 (FL30)	MITRE END (LH/RH) FL30	43.5
ME2 (FL10)	MITRE END (LH&RH) FL10	49
ME2 (FL15)	MITRE END (LH&RH) FL15	63
ME2 (FL20)	MITRE END (LH&RH) FL20	75
ME2 (FL25)	MITRE END (LH&RH) FL25	75
ME2 (FL30)	MITRE END (LH&RH) FL30	87

MITRED END (ME2)



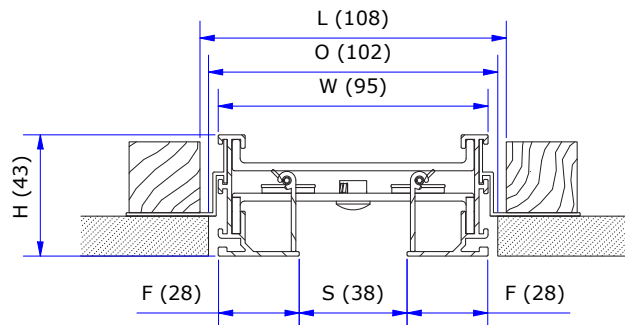
Border Type 11

TYPE 11 DIMENSIONS						
SLOT	F	S	W	H	O	L
FL10 (25mm)	22	25	70	43	76	83
FL15 (38mm)	29	38	95	43	102	108
FL20 (51mm)	35	51	121	43	127	133
FL25 (63mm)	41	63	146	59	152	159
FL30 (76mm)	48	76	171	59	178	184



FL - HT

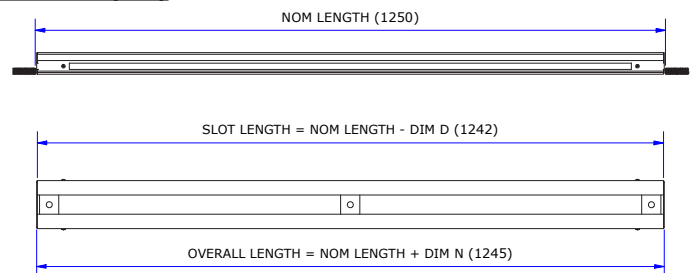
OVERALL LENGTH		
END TYPE	DESCRIPTION	DIM N
E0	PLAIN ENDS	0
E1	END BORDER (LH/RH)	16
E2	END BORDER (LH&RH)	32
EP1	END PLATE (LH/RH)	-2.5
EP2	END PLATE (LH&RH)	-5



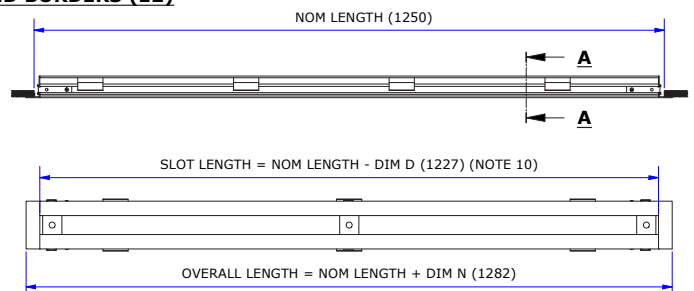
FL - JT

END OPTIONS PLAIN/BORDERS/PLATES		
END TYPE	DESCRIPTION	DIM D
E0	PLAIN ENDS	0
E1	END BORDER (LH/RH)	11.5
E2	END BORDER (LH&RH)	23
EP1	END PLATE (LH/RH)	4
EP2	END PLATE (LH&RH)	8

END PLATES (EP2)

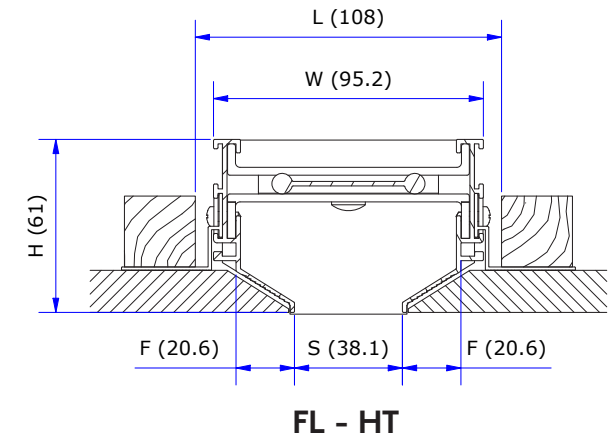


END BORDERS (E2)

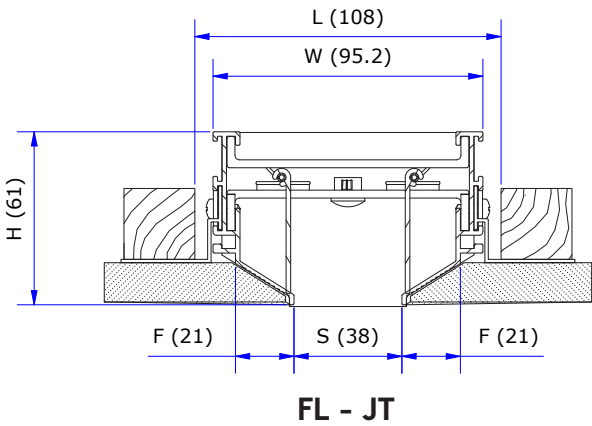


Border Type 55

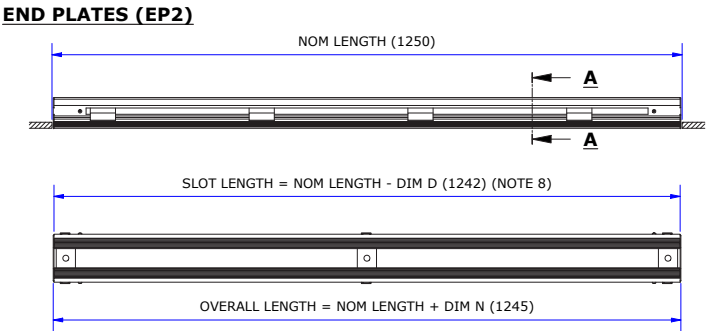
TYPE 55 DIMENSIONS					
SLOT	F	S	W	H	L
FL10 (25mm)	14	25	70	61	83
FL15 (38mm)	21	38	95	61	108
FL20 (51mm)	27	51	121	61	133
FL25 (63mm)	31	63	146	61	159
FL30 (76mm)	38	76	171	61	184



OVERALL LENGTH		
END TYPE	DESCRIPTION	DIM N
E0	PLAIN ENDS	0
EP1	END PLATE (LH/RH)	-2.5
EP2	END PLATE (LH&RH)	-5



END OPTIONS PLAIN / BORDERS / PLATES		
END TYPE	DESCRIPTION	DIM D
E0	PLAIN ENDS	0
EP1	END PLATE (LH/RH)	4
EP2	END PLATE (LH&RH)	8

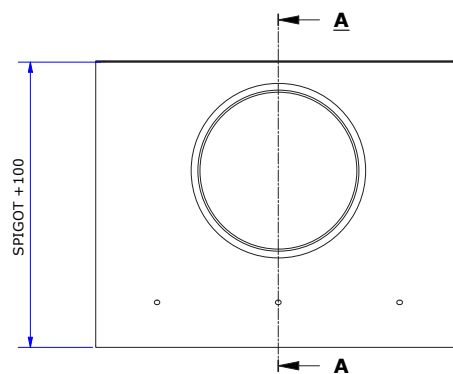
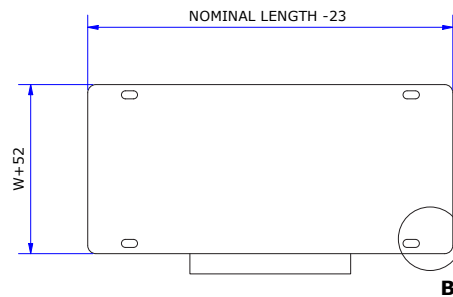
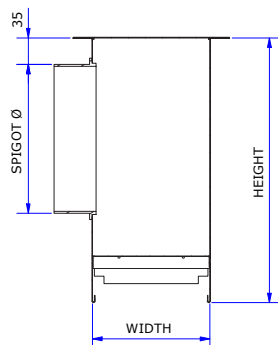
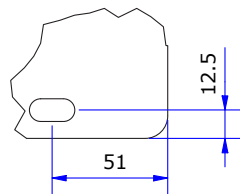
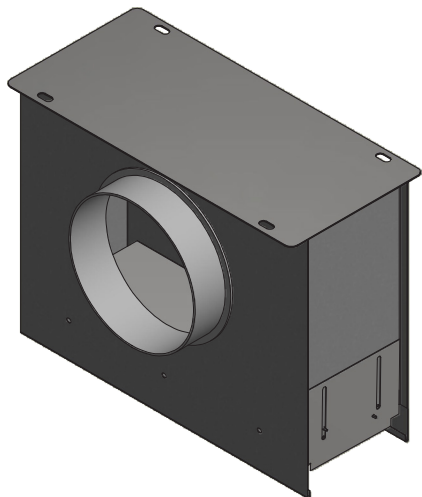


FLOWBAR

Plenum Dimensions

HT Border Type 22 & 66

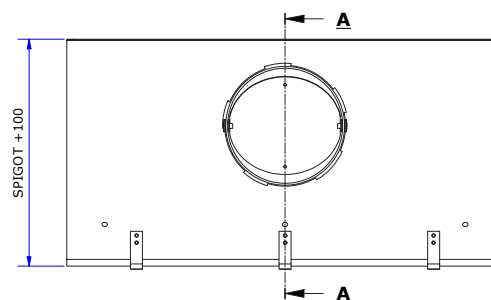
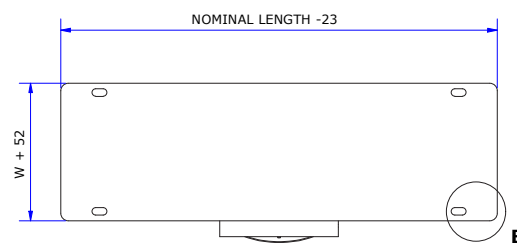
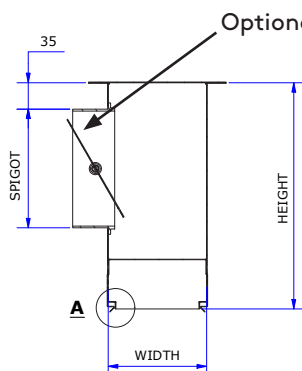
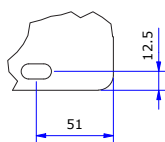
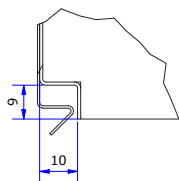
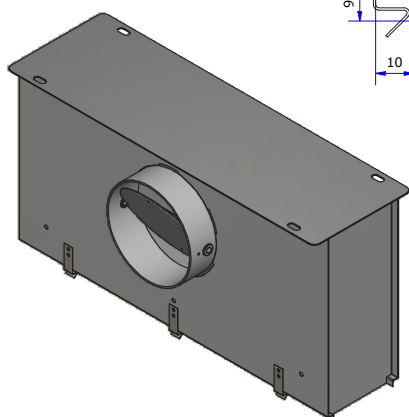
PBHL/FB (PLENUM BOX HIGH LINE/FLOWBAR)



	FL-10	FL-15	FL-20	FL-25	FL-30
Width	78	103	129	154	179

HT Border Type 11 & 55

PLS/FB (PLENUM LINEAR SLOT / FLOWBAR)

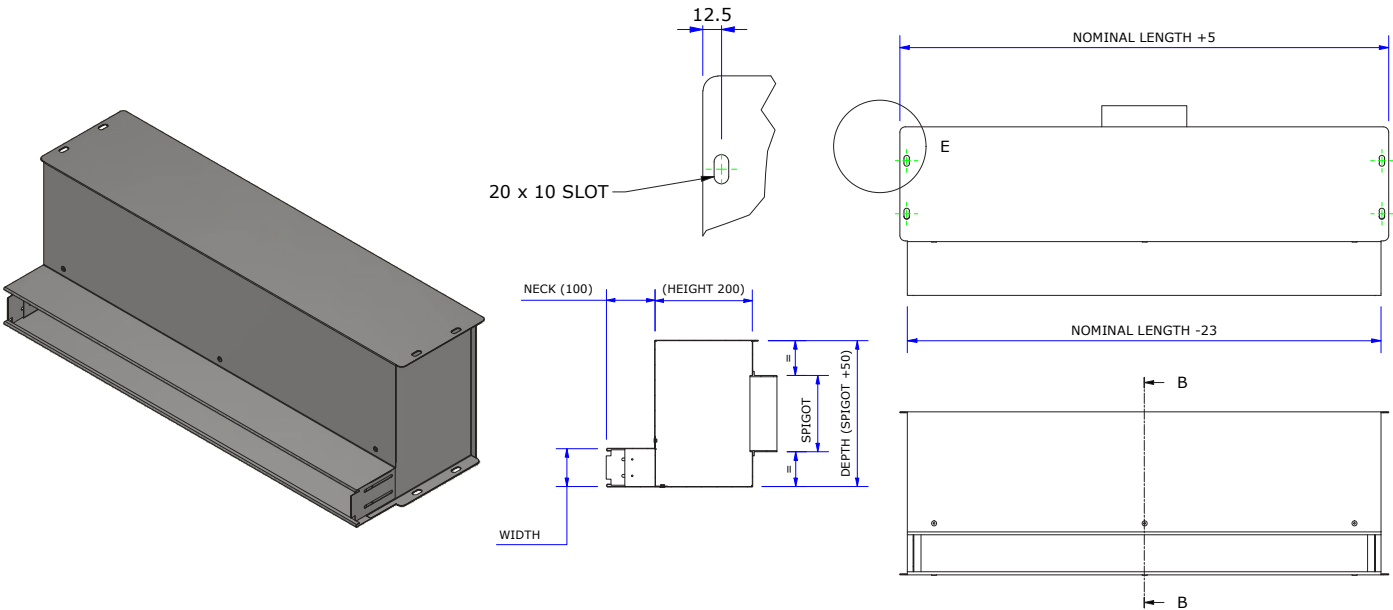


	FL-10	FL-15	FL-20	FL-25	FL-30
Width	70	95	121	146	171

Dimensions

JT Border Type 22 & 66

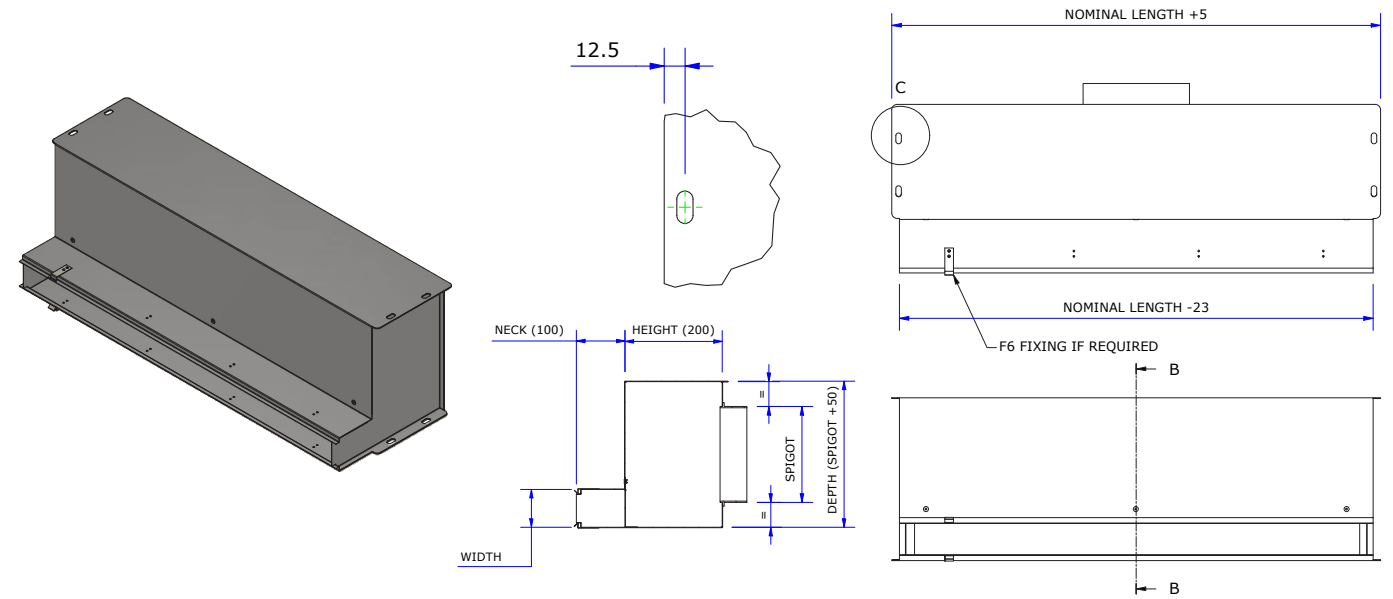
PBSW/FB (PLENUM BOX SIDE WALL / FLOWBAR)



	FL-10	FL-15	FL-20	FL-25	FL-30
Width	78	103	129	154	179

JT Border Type 11 & 55

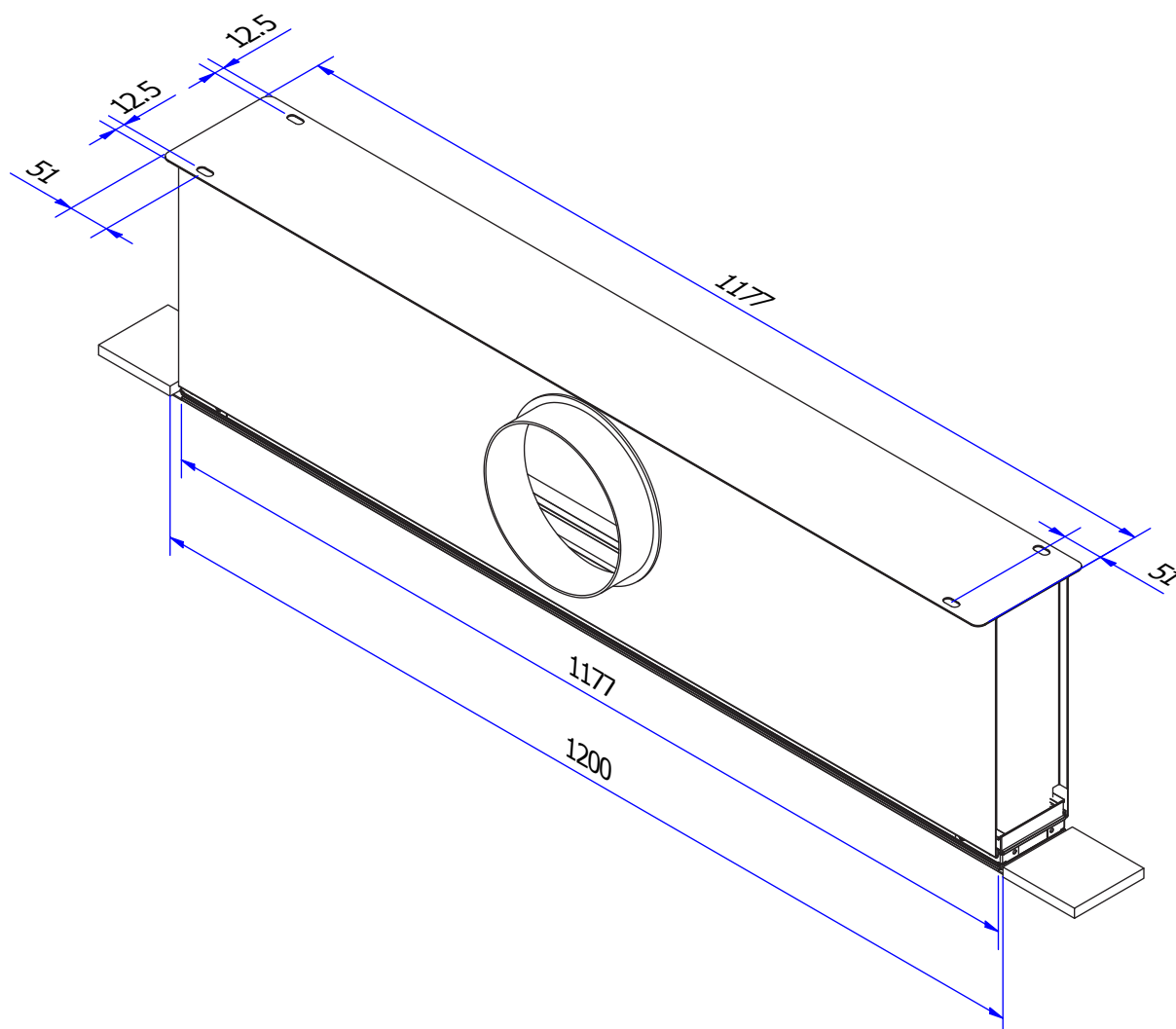
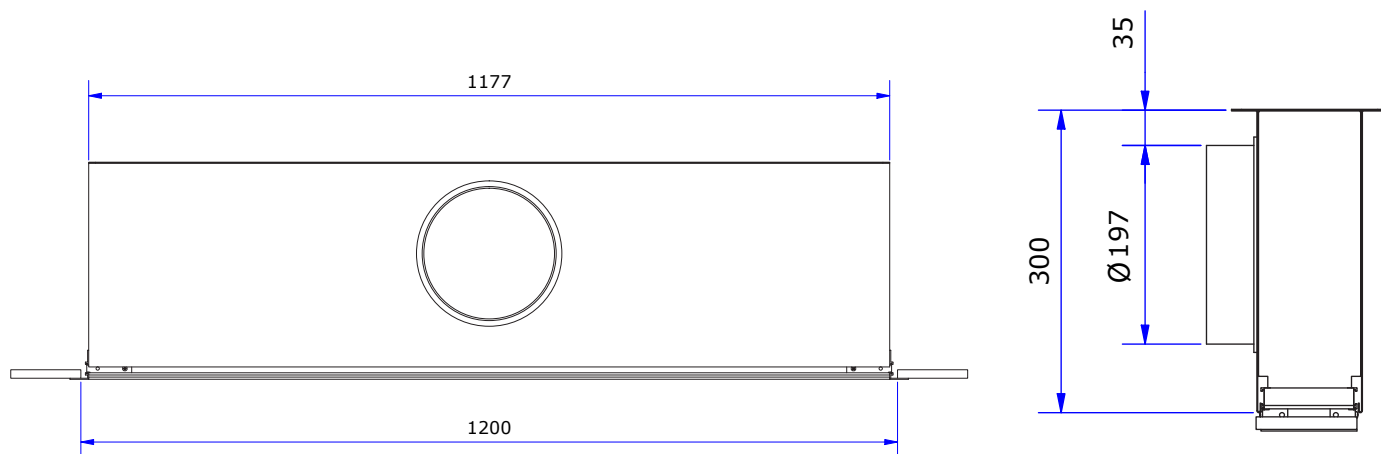
PBSWLS/FB (PLENUM BOX SIDE WALL LINEAR SLOT / FLOWBAR)



	FL-10	FL-15	FL-20	FL-25	FL-30
Width	70	95	121	146	171

Dimensions

Example - PBHL/FB/FL-15/1200



Order Key

Composite Reference: FLOWBAR/22/HT/20/EP2/H3/F6/1200/9005/9005

Diffuser Order Key

Order example:

FLOWBAR

1 2 3 4 5 6 7 8 9

22 HT 20 EP2 H3 F6 1200 9005 9005

Frame Type:

11	Narrow Frame border
22	Shallow Plaster frame border
55	Deep plaster frame border
66	Surface Mounted frame border

Model:

HT	High Throw
JT	Jet Throw

Width:

10	FL-10 25mm slot
15	FL-15 38mm slot
20	FL-20 51mm slot
25	FL-25 63mm slot
30	FL-30 76mm slot

End Border:

E0	No Ends
E1	End Border One Side (66 only)
E2	End Borders Both Sides (66 only)
EP1	End Plate One Side
EP2	End Plate Both Sides
ME1	Mitred End One Side (22 only)
ME2	Mitred Ends Both Sides (22 only)

Diffuser Fixing Method:

H2	Hard Ceiling Clip
H3	Hard Ceiling Clip
USH	Upper Support Hanger
WC3	Wall Clip

Plenum Fixing Method:

NF	None
F6	U-Bracket fixing
F9	Plenum clip

Length:

>2000mm	Lengths available in 1mm increments
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Frame Finish

9010	White RAL 9010 Matt (20%) finish (standard finish type 66)
9005	Black RAL 9005 Matt (30%) finish (standard Finish Type 22,11,55)
9006	Silver RAL 9006 Matt (40%) finish
9016	White RAL 9016 Matt (20%) finish
9003	White RAL 9003 Matt (40%) finish
SPC	Other colours available to special order

Blade Finish:

9005	Black RAL 9005 Matt (30%) finish
	Other colours available to special order

Accessory Order Key

Order example:

FLOWBAR

1 2

LB FL20

Type:

LB	Air handling light baffle
BP	Blanking plate

Size:

FL10	To suit FL10 diffusers
FL15	To suit FL15 diffusers
FL20	To suit FL20 diffusers
FL25	To suit FL25 diffusers
FL30	To suit FL30 diffusers

Specification Text

HT

The High Throw series is primarily designed for ceiling applications and allows the air diffuser to become inconspicuous, whilst fully integrating into the ceiling system.

The Flowbar systems satisfy both architectural and engineering requirements for designing an air distribution system that will maintain optimum room air conditions whilst being an integral component of the architectural concept of the project.

Integral pattern controllers are 600mm in length allowing the airstream to be directed left and right for horizontal and vertical airflow.

Standard slot sizes are 25mm, 38mm, 51mm, 63mm and 76mm with single section lengths available up to 2400mm.

Frame styles 66 (surface mounted), 22 and 55 (plaster frame border) and 11 flangeless are available as standard.

Factory engineered plenum boxes are supplied to ensure a trouble free installation and to ensure published performance data is met. Plenums not provided by Waterloo may demonstrate performance variations.

Heavy wall extruded aluminium construction

Aerodynamic testing carried out in general accordance to BS EN 12238:2001 (Ventilation for buildings - Air terminal devices – Aerodynamic testing and rating for mixed flow applications).

Acoustic testing carried out in general accordance to BS EN ISO 5135:1999 acoustics. Determination of sound power levels of noise from air-terminal devices, air-terminal units, dampers and valves by measurement in a reverberation room.

JT

The Jet Throw series has pattern flow controllers to allow the airstream to be jetted in a horizontal direction (sidewall mounted) whilst fully integrating into the wall system.

The FlowBar systems satisfy both architectural and engineering requirements for designing an air distribution system that will maintain optimum room air conditions whilst being an integral component of the architectural concept of the project.

Integral pattern controllers 600mm in length allow the airstream to be directed vertically left and right (ceiling application) and up and down (sidewall application) at a 45° angle.

Jet Throw pattern controllers allow extended throws in typical high bay applications for heated and/or cooled air.

Jet Throw pattern controllers are useful along perimeter walls where heated air can be directed downward.

Standard slot sizes are 25mm, 38mm, 51mm, 63mm and 76mm with single section lengths available up to 2400mm.

Frame styles 66 (surface mounted), 22 and 55 (plaster frames) and 11, flangeless are available as standard.

Factory engineered plenum boxes are supplied to ensure a trouble free installation and to ensure published performance data is met. Plenums not provided by Waterloo may demonstrate performance variations.

Heavy wall extruded aluminium construction.

Aerodynamic testing carried out in general accordance to BS EN 12238:2001 (Ventilation for buildings - Air terminal devices – Aerodynamic testing and rating for mixed flow applications).

Acoustic testing carried out in general accordance to BS EN ISO 5135:1999 acoustics. Determination of sound power levels of noise from air-terminal devices, air-terminal units, dampers and valves by measurement in a reverberation room.