

**Overview**

**12 Months  
Warranty**

# STOCKED RANGE Bevelled Edge Diffusers

**Description**

For supply air, multi-core pattern design with quick release core, suitable for heating and cooling. Available in a range of different core patterns and sizes giving total flexibility for all surface mounting applications while providing anti-smudge protection for the ceiling.

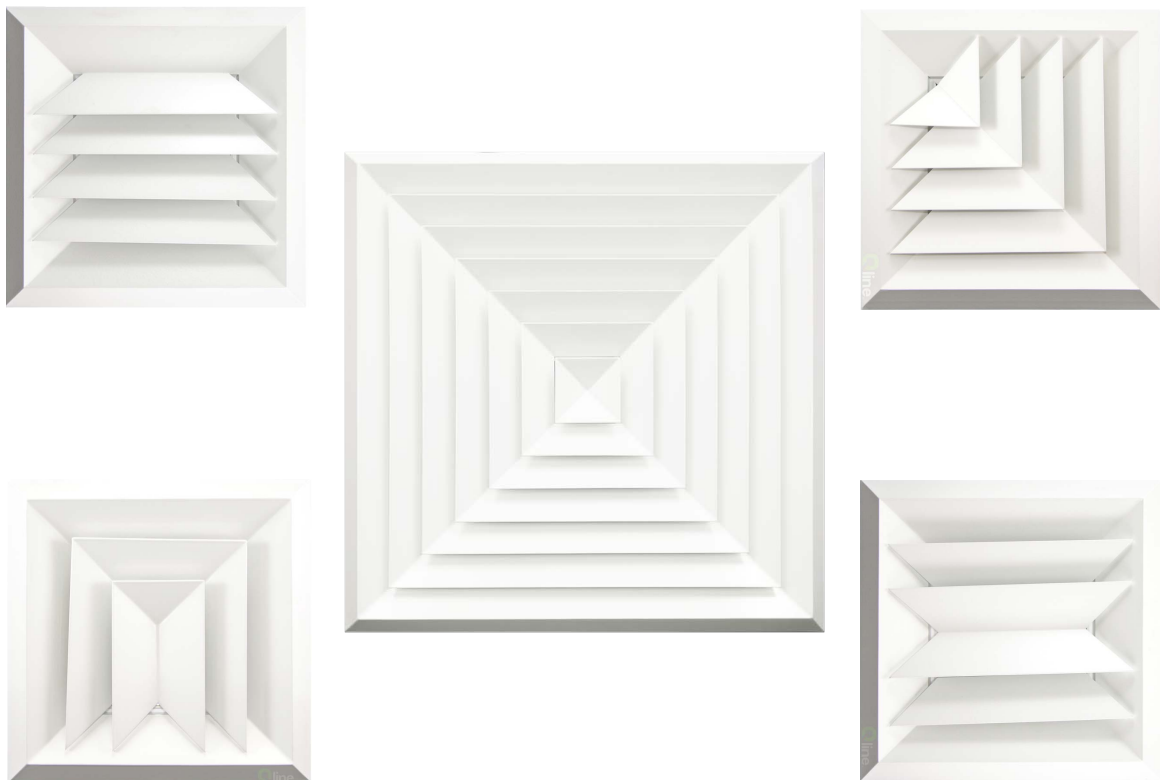
**Construction**

From extruded aluminium sections. Hairline mitred joints mechanically held. Optional Opposed Blade Dampers manufactured from extruded aluminium.

PRODUCT CODE	DESCRIPTION
BED	Bevelled Edge 1, 2OPP, 2CNR, 3 or 4-Way Blow Diffuser

**Note:**

- Custom sizes and colours are available upon request
- Available in 5 different core patterns
- Powder coated white as standard
- [For product performance data, see pages 301 - 303](#)



QAE strive to provide products that best suit the market's requirements. As such, QAE reserve the right to supply products which may differ slightly from those shown in this and other publications. For product warranties please refer to our standard terms and conditions.

## Bevelled Edge Diffusers

STOCKED RANGE

Bevelled Edge 4-WAY BLOW DIFFUSERS						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED466	150 x 150	145 x 145	170 x 170	265 x 265	10	
BED499	225 x 225	220 x 220	245 x 245	340 x 340	10	
BED41212	300 x 300	295 x 295	320 x 320	415 x 415	10	
BED41515	375 x 375	370 x 370	395 x 395	490 x 490	10	
BED41818	450 x 450	445 x 445	470 x 470	565 x 565	10	
BED42121	525 x 525	520 x 520	545 x 545	640 x 640	4	
BED42424	600 x 600	595 x 595	620 x 620	715 x 715	4	

Bevelled Edge 4-Way Blow Diffusers with Fixing Clip Reducing Necks						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	SPIGOT SIZE (mm)	
FCBED4998	225 x 225	220 x 220	245 x 245	340 x 340	200 Dia	
FCBED412128	300 x 300	295 x 295	320 x 320	415 x 415	200 Dia	
FCBED4121210	300 x 300	295 x 295	320 x 320	415 x 415	250 Dia	
FCBED4121212	300 x 300	295 x 295	320 x 320	415 x 415	300 Dia	


Bevelled Edge 4-Way Rectangular Diffuser						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE (mm)	PIECES/CARTON	
BED4189	450 x 225	445 x 220	470 x 245	565 x 340	10	

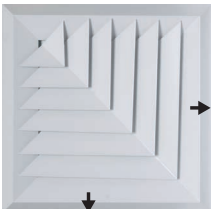
Bevelled Edge 3-Way Blow Diffusers						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED366	150 x 150	145 x 145	170 x 170	265 x 265	10	
BED399	225 x 225	220 x 220	245 x 245	340 x 340	10	
BED31212	300 x 300	295 x 295	320 x 320	415 x 415	10	
BED31515	375 x 375	370 x 370	395 x 395	490 x 490	10	
BED31818	450 x 450	445 x 445	470 x 470	565 x 565	8	

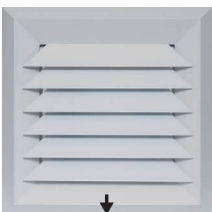
Bevelled Edge 3-Way Rectangular Diffuser						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED3156	375 x 150	370 x 145	395 x 170	490 x 265	10	


Related Products for Bevelled Edge Diffusers						
CB	FCB	BP	OBD	ALPBF	ALPBM	
see pg.267	see pg.275	see pg.273	see pg.68	see pg.226	see pg.227	

## Bevelled Edge Diffusers

BEVELLED EDGE 2-WAY OPPOSITE BLOW DIFFUSERS						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED2OPP66	150 x 150	145 x 145	170 x 170	265 x 265	10	
BED2OPP99	225 x 225	220 x 220	245 x 245	340 x 340	10	
BED2OPP1212	300 x 300	295 x 295	320 x 320	415 x 415	10	
BED2OPP1515	375 x 375	370 x 370	395 x 395	490 x 490	10	
BED2OPP1818	450 x 450	445 x 445	470 x 470	565 x 565	10	

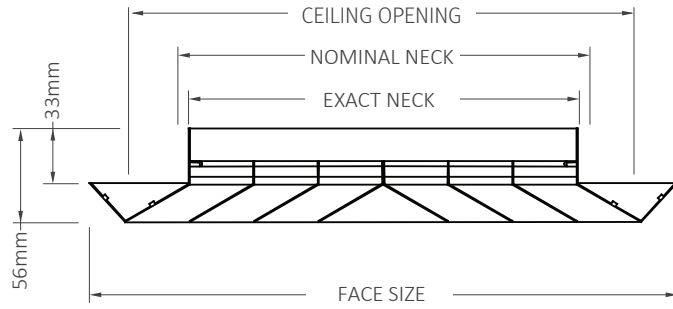
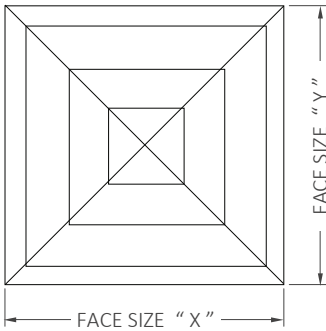
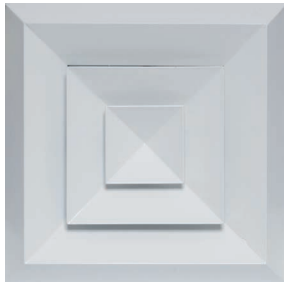
BEVELLED EDGE 2-WAY CORNER BLOW DIFFUSERS						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED2CNR66	150 x 150	145 x 145	170 x 170	265 x 265	10	
BED2CNR99	225 x 225	220 x 220	245 x 245	340 x 340	10	
BED2CNR1212	300 x 300	295 x 295	320 x 320	415 x 415	10	
BED2CNR1515	375 x 375	370 x 370	395 x 395	490 x 490	10	
BED2CNR1818	450 x 450	445 x 445	470 x 470	565 x 565	10	

BEVELLED EDGE 1-WAY BLOW DIFFUSERS						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
BED166	150 x 150	145 x 145	170 x 170	265 x 265	10	
BED199	225 x 225	220 x 220	245 x 245	340 x 340	10	
BED11212	300 x 300	295 x 295	320 x 320	415 x 415	10	
BED11515	375 x 375	370 x 370	395 x 395	490 x 490	10	
BED11818	450 x 450	445 x 445	470 x 470	565 x 565	10	

BEVELLED EDGE DUMP DIFFUSERS						
PRODUCT CODE	NOMINAL NECK (mm)	EXACT NECK (mm)	CEILING OPENING (mm)	FACE SIZE X & Y (mm)	PIECES/CARTON	
DUMP99	225 x 225	220 x 220	245 x 245	340 x 340	10	
DUMP1212	300 x 300	295 x 295	320 x 320	415 x 415	10	

Related Products for Bevelled Edge Diffusers						
CB	FCB	BP	OBD	ALPBF	ALPBM	
						
see pg.267	see pg.275	see pg.273	see pg.68	see pg.226	see pg.227	

Bevelled Edge Diffusers: BED



BED in application

## Bevelled Edge Diffusers: BED

### Air Patterns and Throw

**Plan View**

$L_{bh}$        $b_h$

**Air Pattern (with isothermal air supply)**

$b_h = \text{Active Length} + (L_{0.25} \times 0.03)$

$L_{bh} = L_{0.25} \times 0.65$

**Side View**

$L_{bv}$        $b_v$

$b_v = L_{0.25} \times 0.06$

$L_{bv} = L_{0.25} \times 0.65$

**Note:**

- L = Throw in M (refer graphs)
- $L_{0.25}$  = Throw at 0.25m/s terminal velocity
- Active Length = supply air plenum Length

### Sound data

NR levels for the grille may be determined from engineering charts.

Sound power level  $L_w$

The generated sound power level  $L_w$  dB is calculated by adding the correction factor  $K_{ok}$  (see table on the right) to the sound level NR dB according to the formula:

$$L_w = NR + K_{ok}$$

Frequency (cycles per second)							
Size	125	250	500	1000	2000	4000	8000
150	+17	+13	+10	+8	+3	-5	-15
225	+14	+11	+10	+8	+1	-10	-16
300	+13	+9	+9	+8	-3	-15	-18
450	+13	+9	+11	+7	-6	-21	-21
525	+12	+8	+10	+7	-4	-23	-24
600	+12	+7	+9	+7	-4	-23	-24
Tol+/-	2	2	2	2	2	2	2

Correction factor  $K_{ok}$

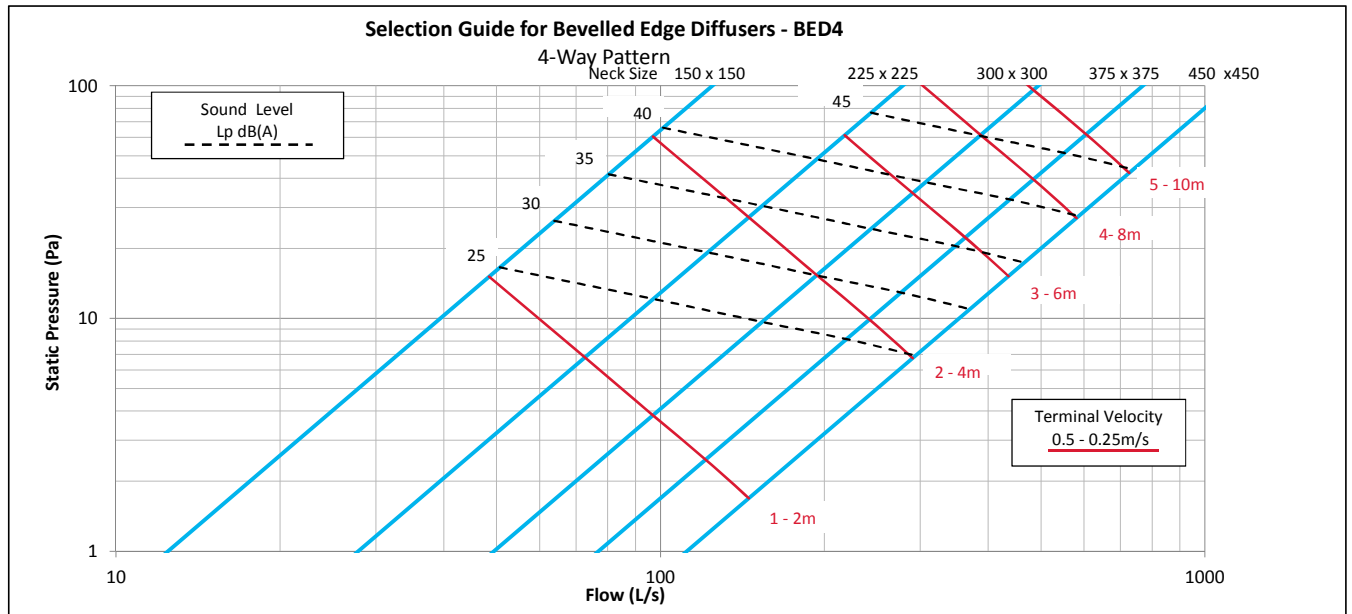
Bevelled Edge Ceiling Diffuser Data							
q (l/s)	A x B	Static Pressure (Pa)	Sound Level dB(A)	THROW (m)			
				4-way	3-way	2-way	1-way
35	150x150	8	<20	0.7 - 1.4	0.8 - 1.7	0.9 - 1.8	1.4 - 2.8
	225x225	2	<20	0.4 - 0.9	0.5 - 1.1	0.6 - 1.2	0.9 - 1.8
60	150x150	23	29	1.2 - 2.4	1.5 - 3.0	1.6 - 3.2	2.4 - 4.8
	225x225	5	<20	0.8 - 1.6	1.0 - 2.0	1.0 - 2.1	1.6 - 3.2
82	150x150	43	35	1.6 - 3.3	2.1 - 4.2	2.2 - 4.4	3.3 - 6.6
	225x225	9	21	1.1 - 2.2	1.4 - 2.8	1.4 - 2.9	2.2 - 4.4
100	150x150	64	40	2.0 - 4.1	2.5 - 5.1	2.6 - 5.3	4.0 - 8.0
	225x225	13	26	1.3 - 2.7	1.7 - 3.4	1.7 - 3.5	2.6 - 5.3
125	225x225	20	31	1.7 - 3.4	2.1 - 4.2	2.2 - 4.4	3.3 - 6.7
	300x300	6	21	1.2 - 2.5	1.6 - 3.2	1.6 - 3.3	2.5 - 5.0
150	225x225	29	34	2.0 - 4.1	2.5 - 5.1	2.6 - 5.3	4.0 - 8.0
	300x300	9	24	1.5 - 3.0	1.9 - 3.8	2.0 - 4.0	3.0 - 6.0
175	225x225	39	38	2.4 - 4.8	2.9 - 5.9	3.1 - 6.2	4.7 - 9.4
	300x300	13	28	1.8 - 3.6	2.2 - 4.4	2.3 - 4.7	3.5 - 7.0
	375x375	5	20	1.4 - 2.8	1.7 - 3.5	1.8 - 3.7	2.8 - 5.6
200	300x300	16	31	2.0 - 4.1	2.5 - 5.1	2.6 - 5.3	4.0 - 8.0
	375x375	7	23	1.6 - 3.3	2.0 - 4.0	2.1 - 4.3	3.2 - 6.4
	450x450	3	<20	1.3 - 2.7	1.7 - 3.4	1.7 - 3.5	2.6 - 5.3
250	300x300	26	36	2.5 - 5.1	3.2 - 6.4	3.3 - 6.7	5.0 - 10.
	375x375	11	28	2.0 - 4.1	2.5 - 5.1	2.6 - 5.3	4.0 - 8.0
	450x450	5	21	1.7 - 3.4	2.1 - 4.2	2.2 - 4.4	3.3 - 6.7
300	300x300	37	40	3.0 - 6.1	3.8 - 7.6	4.0 - 8.0	6.0 - 12.
	375x375	15	32	2.4 - 4.9	3.0 - 6.1	3.2 - 6.4	4.8 - 9.7
	450x450	7	25	2.0 - 4.1	2.5 - 5.1	2.6 - 5.3	4.0 - 8.0

## Bevelled Edge Diffusers: BED

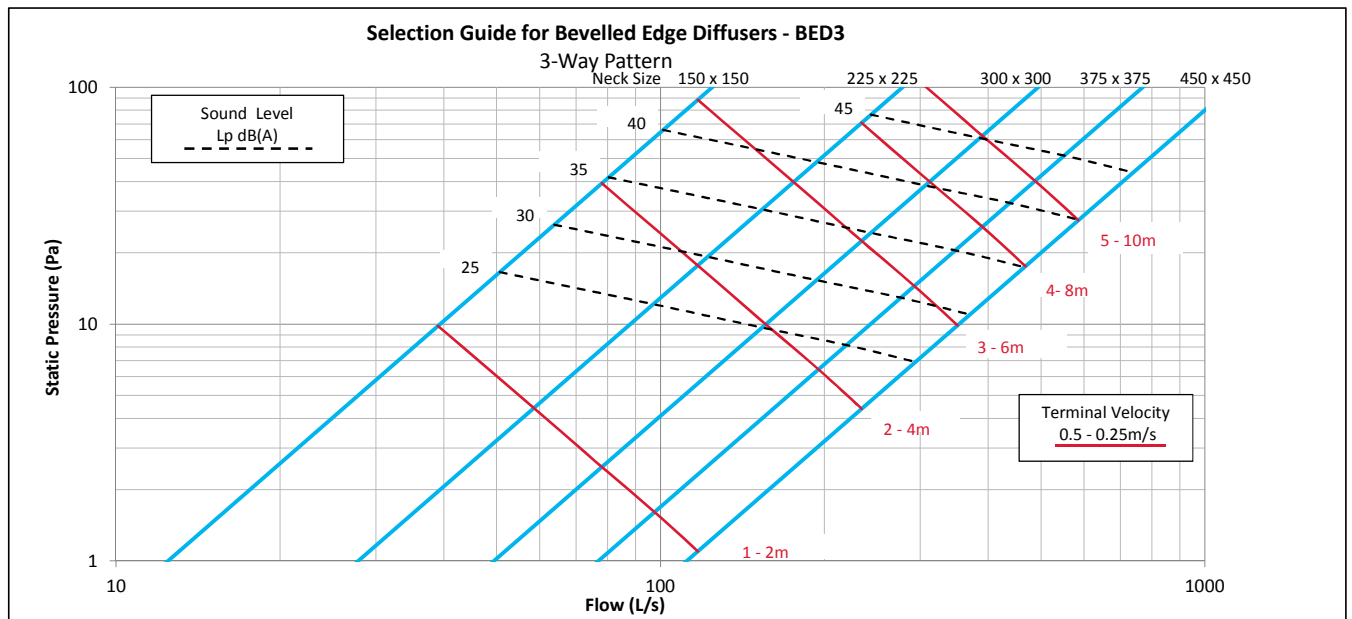
### Test Conditions

Throws are based at Isothermal conditions to a terminal velocity of 0.5m/s and 0.25m/s respectively, with a ceiling height of 2.7m. The diffuser is mounted in ceiling. Throw factors are for throws in one direction only. Noise Ratings are based on a room absorption level of 10db.

**Note:** Please refer to the table “Comparing Noise Criteria” on page no. 297 when evaluating “sound pressure level dB(A).”



These graphs are for selection only and should not be used for commissioning.



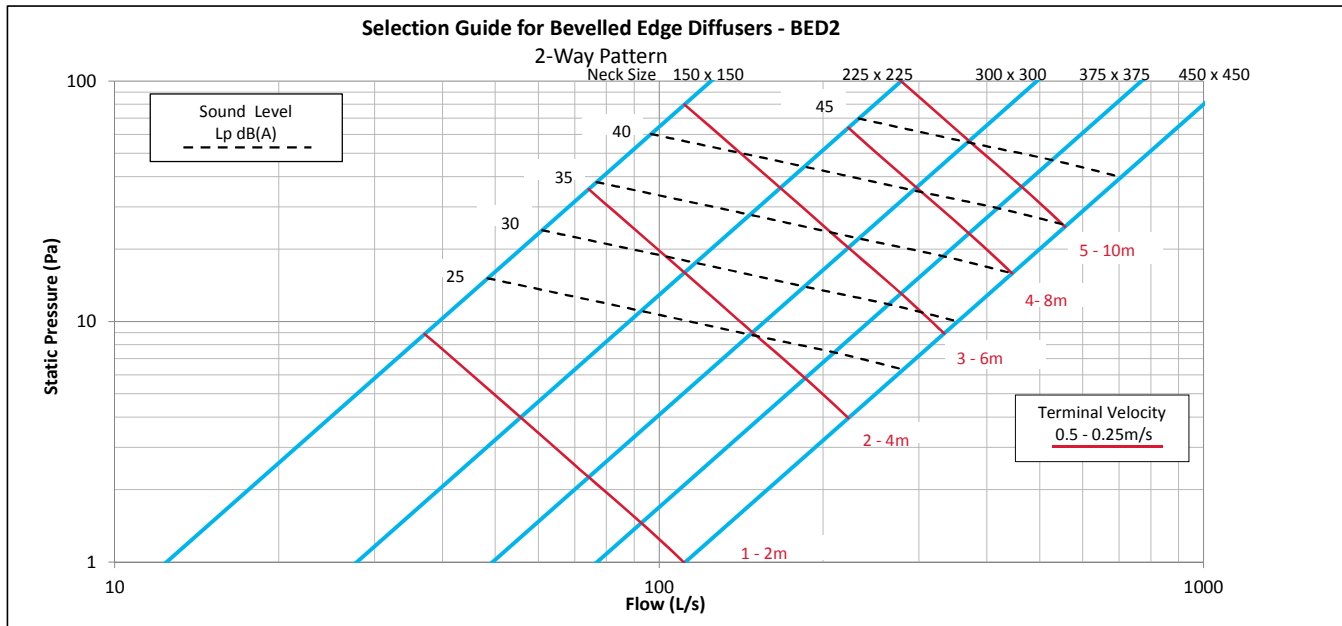
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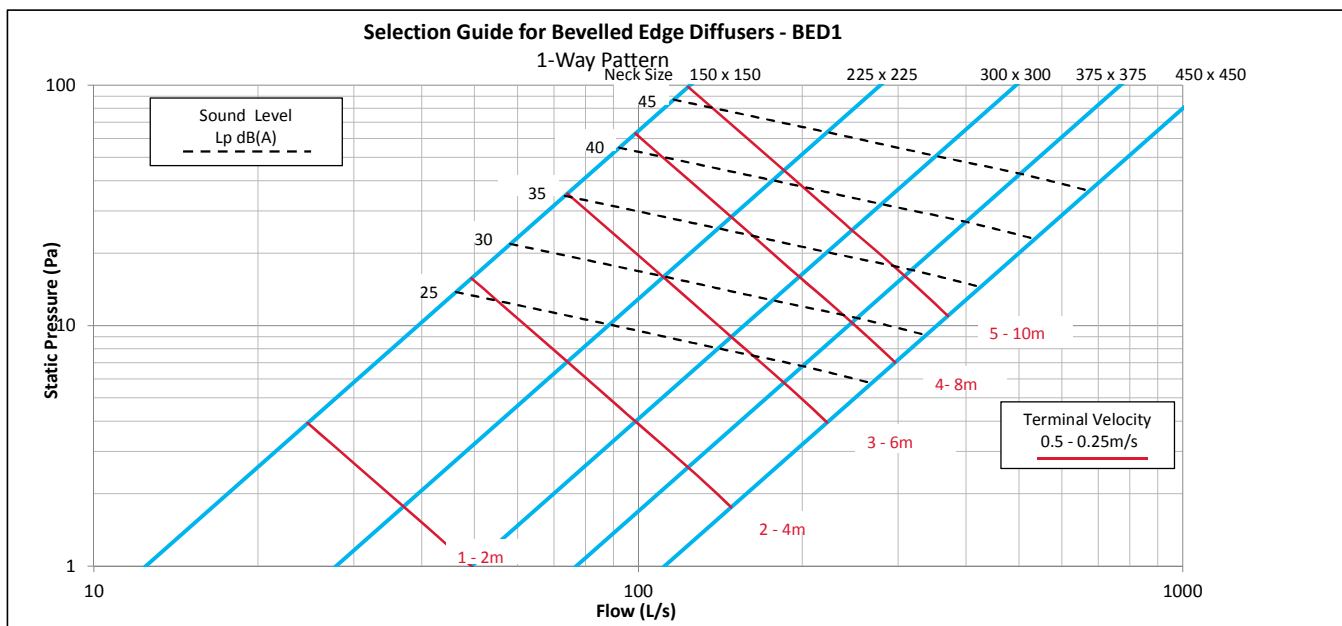
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