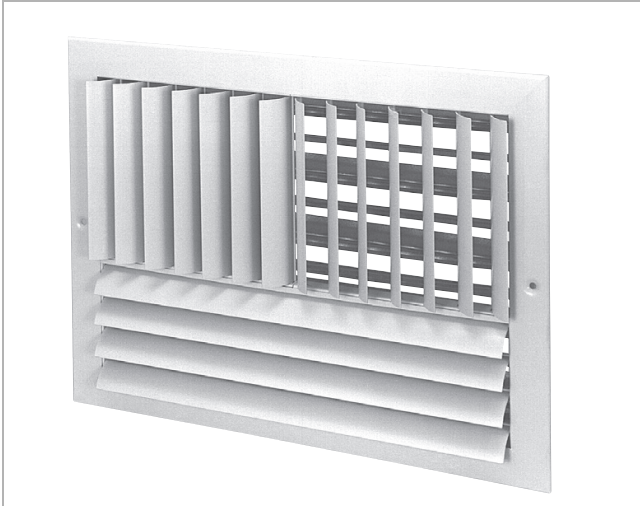




Curved blade grilles

CBRW



Description

Curved blade grilles carefully constructed to be unobtrusive in appearance for architectural excellence. They are suitable for Variable Air Volume Systems.

Models are available which incorporate a set of rear vanes that are individually adjustable for complete directional control and flow equalisation.

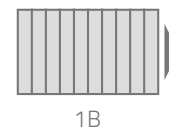
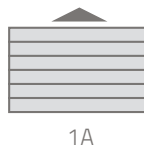
Features

- Blades are formed to an engineered contoured cross-section. Both ends of each blade are mounted in friction pivots to allow individual blade adjustment without loosening or clattering.
- The grille blades are easily adjustable to provide a horizontal one-way, two-way, three-way or four-way air path from a ceiling location. A full down-blow position is also available as required.
- Optional opposed blade damper has a screwdriver slot operator for adjustment through the face of the grille.
- Manufactured in high quality extruded aluminium with a RAL 9010 semi-gloss white polyester powder finish .
- Screw holes in the frame are counter-sunk for neat appearance (standard). 38mm long oval-head screws, painted to match grille, are supplied.
- Concealed mountings are available.
- Maximum single size: 1,800 x 600 mm or 1,200 x 1,200 mm

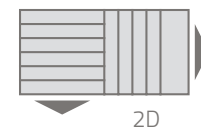
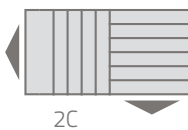
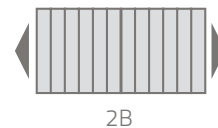
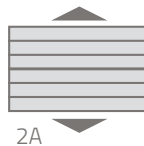
Available discharge patterns

The grilles are available in any of the discharge patterns shown below. The blades are individually adjustable for each discharge direction, they can control both volume and angle discharge.

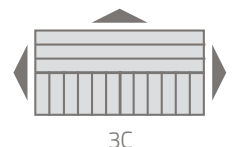
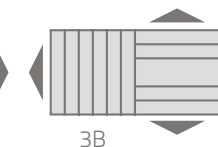
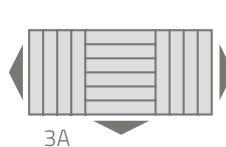
One-way blow



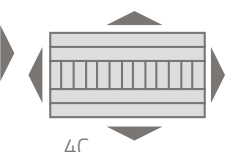
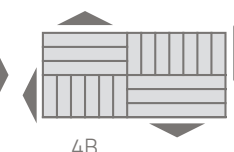
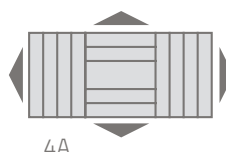
Two-way blow



Three-way blow



Four-way blow





One/ Two-way supply



Description

Supply grilles which incorporate individually adjustable curved blades. The blades can be positioned to provide one-way, two-way, and two-way corner blow discharge patterns. They are commonly used in ceiling and/ or side wall locations and are recommended for use in both heating and cooling applications.

Both one-way and two-way pattern grilles can be adjusted to full or partial down-blow position. The curved streamlined blades are adjusted to a uniform partially closed position to deflect the air path horizontally while retaining an effective area capacity of 35% of the next area. In the full down-blow position grille effective area is increased to 75%.

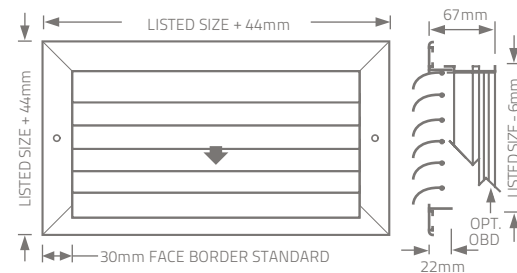
Features

- High quality, extruded aluminium construction.
- 30 mm wide face border with a 25 mm overlap margin standard, supplied with countersunk screw holes and mounting screws. Narrow frame with 25mm border optional. Concealed mounting optional.
- Extruded aluminium frames, mechanically interlocked with reinforced mitred corners.
- Extruded blades- curved streamlined aluminium blades on 25 mm centres. Blades formed with tenons to fit snugly into the side margin, friction loaded to firmly hold deflection setting.
- Integral dampers- aluminium. Opposed blade design with a screwdriver slot operator.
- Adjustable pattern- grille blades easily adjustable to provide horizontal one-way or two-way air path from a ceiling location. Adjustable to a full down-blow position as required.
- White polyester powder finish RAL 9010 semi-gloss is standard. Other finishes are also available.

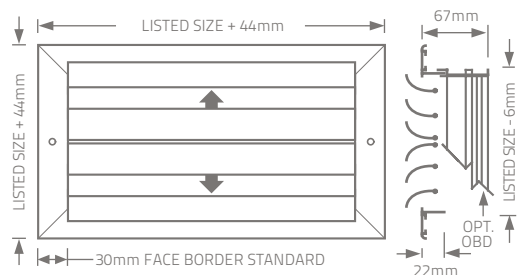
Dimensions

Standard sizes are available from 150 x 100 mm to 900 x 900 mm. Other sizes are available on request but are subject to manufacturing limitations.

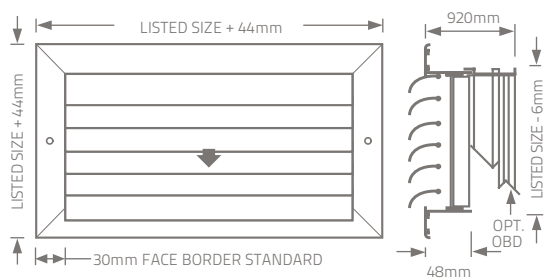
One-way blow (1A)



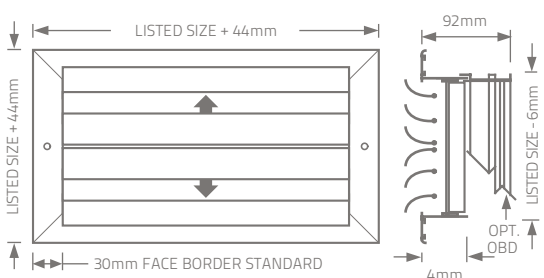
Two-way blow (2A)



One-way blow (1A) with rear directional vanes



Two-way blow (2A) with rear directional vanes



Three/ Four-way supply



Description

Pattern 3A, 3B or 3C supply ceiling grilles have individually adjustable curved blades arranged to provide a three-way ceiling air pattern. Pattern 4A, 4B or 4C supply ceiling grilles have individually adjustable curved blades arranged to provide a four-way ceiling air pattern. They are recommended for applications in ceiling locations for heating and cooling systems.

Both three-way and four-way pattern grilles can be adjusted to full or partial down-blow position. The curved streamlined blades are adjusted to a uniform partially closed position to deflect the air path horizontally while retaining an effective area capacity of 35% of the next area. In the full down-blow position grille effective area is increased to 75%.

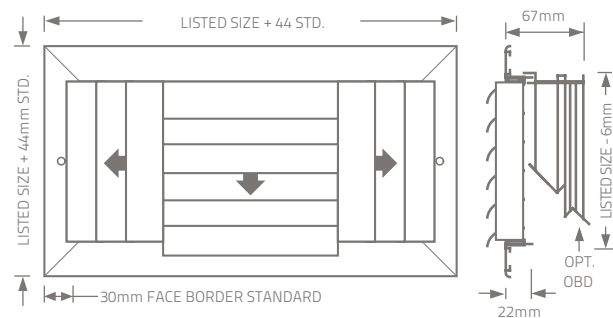
Features

- High quality, extruded aluminium construction.
- 30 mm wide face border with a 25 mm overlap margin standard, supplied with countersunk screw holes and mounting screws. Narrow frame with 25mm border optional. Concealed mounting optional.
- Extruded aluminium frames, mechanically interlocked with reinforced mitred corners.
- Extruded blades- curved streamlined aluminium blades on 25 mm centres. Blades formed with tenons to fit snugly into the side margin, friction loaded to firmly hold deflection setting.
- Integral dampers- aluminium. Opposed blade design with a screwdriver slot operator.
- Adjustable pattern- grille blades easily adjustable to provide horizontal one-way or two-way air path from a ceiling location. Adjustable to a full down-blow position as required.
- White polyester powder finish RAL 9010 semi-gloss is standard. Other finishes are also available.

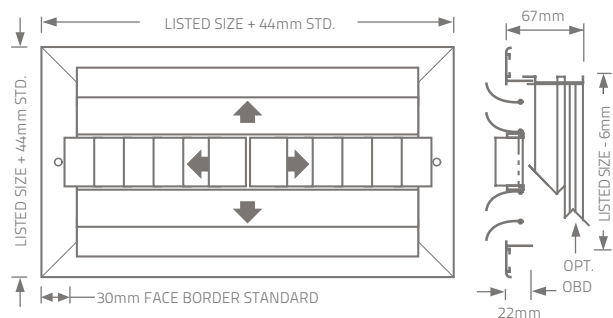
Dimensions

Standard sizes are available from 150 x 100 mm to 900 x 900 mm.

Three-way blow (3A)



Four-way blow (4C)





Performance Data

Core Area (m ²)	Nominal Duct Size (mm)	Core Velocity (m/s)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
		Pressure Drop (Pa)	1	4	8	15	24	35	46	59
0.01	150x100	Flowrate (l/s)	5	12	17	24	28	33	40	45
		NC Level	-	-	-	14	20	23	27	30
		Throw (m)				2.1 - 3.4	2.4 - 4.0	3.1 - 4.9	3.7 - 5.5	4.0 - 6.1
		4-Way				2.1 - 3.7	1.8 - 4.3	3.4 - 4.9	3.7 - 5.8	4.3 - 6.7
		3-Way				2.4 - 4.0	3.1 - 4.9	3.7 - 5.5	4.3 - 6.4	4.9 - 7.3
2-Way				3.1 - 4.9	3.7 - 5.5	4.3 - 6.7	4.9 - 7.9	5.5 - 8.8		
1-Way										
0.01	200x100	Flowrate (l/s)	7	14	24	31	38	45	52	61
		NC Level	-	-	-	15	20	25	29	31
		Throw (m)			1.8 - 2.7	2.1 - 3.7	2.7 - 4.3	3.4 - 4.9	3.7 - 5.8	4.3 - 6.4
		4-Way			1.8 - 3.1	2.4 - 4.0	2.7 - 4.6	3.7 - 5.5	4.3 - 6.4	4.6 - 7.0
		3-Way			2.1 - 3.4	2.7 - 4.3	3.4 - 4.9	4.0 - 6.1	4.6 - 7.0	4.9 - 7.9
2-Way			3.1 - 4.9	3.4 - 4.9	4.0 - 6.1	4.9 - 7.3	5.2 - 8.5	5.8 - 9.5		
1-Way										
0.02	250x100 150x150	Flowrate (l/s)	9	19	28	38	47	57	66	76
		NC Level	-	-	-	15	21	26	29	32
		Throw (m)			1.8 - 2.7	2.4 - 4.0	2.7 - 4.6	3.4 - 5.2	4.0 - 6.1	4.6 - 7.0
		4-Way			1.8 - 3.1	2.7 - 4.3	3.1 - 4.9	3.7 - 5.8	4.3 - 6.7	4.9 - 7.6
		3-Way			2.1 - 3.4	2.7 - 4.6	3.4 - 5.2	4.3 - 6.4	4.9 - 7.3	5.2 - 8.5
2-Way			2.7 - 4.3	3.4 - 5.2	4.3 - 6.4	4.9 - 7.6	5.5 - 8.8	6.1 - 10.1		
1-Way										
0.02	300x100 200x150	Flowrate (l/s)	12	24	38	50	61	73	85	99
		NC Level	-	-	-	16	22	27	30	33
		Throw (m)		1.2 - 2.1	1.8 - 3.1	2.7 - 4.3	3.1 - 4.9	3.7 - 5.8	4.3 - 6.7	4.9 - 7.6
		4-Way		1.2 - 2.1	2.1 - 3.4	2.7 - 4.6	3.4 - 5.2	4.0 - 6.1	4.6 - 7.0	4.9 - 7.9
		3-Way		1.5 - 2.4	2.1 - 3.7	3.1 - 4.9	3.7 - 5.8	4.6 - 7.0	4.9 - 7.9	5.5 - 9.2
2-Way		1.8 - 3.1	2.7 - 4.6	3.7 - 5.5	4.6 - 7.0	5.2 - 8.2	5.8 - 9.5	6.7 - 11.0		
1-Way										
0.03	350x100	Flowrate (l/s)	14	28	42	57	71	85	99	113
		NC Level	-	-	-	17	22	27	31	34
		Throw (m)		1.2 - 2.1	1.8 - 3.1	2.7 - 4.3	3.4 - 4.9	4.0 - 6.1	4.6 - 7.0	4.9 - 7.9
		4-Way		1.5 - 2.4	2.1 - 3.4	2.7 - 4.6	3.7 - 5.5	4.3 - 6.4	4.9 - 7.3	5.2 - 8.5
		3-Way		1.8 - 2.7	2.4 - 4.0	3.4 - 4.9	4.0 - 6.1	4.6 - 7.0	5.2 - 8.2	5.8 - 9.5
2-Way		1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.3	5.3 - 8.5	6.1 - 10.1	7.0 - 11.3		
1-Way										
0.03	400x100 250x150 200x200	Flowrate (l/s)	17	33	50	66	83	99	116	132
		NC Level	—	—	10	18	23	28	31	35
		Throw (m)		1.2 - 2.1	2.1 - 3.4	2.7 - 4.6	3.4 - 5.2	4.0 - 6.1	4.9 - 7.3	5.2 - 8.2
		4-Way		1.5 - 2.4	2.1 - 3.7	2.7 - 4.6	3.7 - 5.5	4.3 - 6.7	4.9 - 7.6	5.5 - 8.8
		3-Way		1.8 - 2.7	2.4 - 4.0	3.4 - 4.9	4.0 - 6.1	4.9 - 7.3	5.2 - 8.5	6.1 - 9.8
2-Way		1.8 - 3.1	3.1 - 4.9	4.0 - 6.1	4.9 - 7.3	5.5 - 8.8	6.4 - 10.4	7.3 - 11.9		
1-Way										
0.04	450x100 300x150	Flowrate (l/s)	19	38	57	76	94	113	132	151
		NC Level	—	—	12	19	24	29	32	35
		Throw (m)		1.5 - 2.4	2.1 - 3.4	2.7 - 4.6	3.7 - 5.5	4.3 - 6.4	4.9 - 7.6	5.2 - 8.5
		4-Way		1.5 - 2.4	2.1 - 3.7	3.1 - 4.9	3.7 - 5.8	4.6 - 7.0	4.9 - 7.9	5.5 - 9.2
		3-Way		1.8 - 2.7	2.7 - 4.3	3.4 - 5.2	4.3 - 6.4	4.9 - 7.6	5.5 - 8.8	6.1 - 10.1
2-Way		1.8 - 3.1	3.1 - 4.9	4.3 - 6.4	4.9 - 7.6	5.5 - 9.2	6.4 - 10.7	7.6 - 12.2		
1-Way										
0.04	500x100 350x150 250x200	Flowrate (l/s)	21	42	64	85	106	127	149	170
		NC Level	—	—	12	19	25	29	32	36
		Throw (m)		1.5 - 2.4	2.1 - 3.7	2.7 - 4.6	3.7 - 5.5	4.3 - 6.7	4.9 - 7.6	5.5 - 8.8
		4-Way		1.5 - 2.4	2.4 - 4.0	3.4 - 4.9	4.0 - 6.1	4.6 - 7.0	5.2 - 8.2	5.8 - 9.5
		3-Way		1.8 - 2.7	2.7 - 4.3	3.7 - 5.5	4.3 - 6.7	4.9 - 7.9	5.5 - 9.2	6.4 - 10.4
2-Way		2.1 - 3.4	3.4 - 4.9	4.3 - 6.4	4.9 - 7.9	5.8 - 9.5	6.7 - 11.0	7.6 - 12.5		
1-Way										
0.05	600x100 400x150 300x200	Flowrate (l/s)	26	52	78	104	130	156	182	208
		NC Level	—	—	13	20	25	29	33	37
		Throw (m)	0.9 - 1.2	1.5 - 2.4	2.1 - 3.7	3.1 - 4.9	3.7 - 5.8	4.6 - 7.0	5.2 - 8.2	5.5 - 9.2
		4-Way	0.9 - 1.5	1.8 - 2.7	2.4 - 4.0	3.4 - 5.2	4.3 - 6.4	4.9 - 7.6	5.5 - 8.8	6.1 - 9.8
		3-Way	0.9 - 1.5	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.6 - 7.0	5.2 - 8.5	7.9 - 9.8	6.7 - 11.0
2-Way	1.2 - 1.8	2.1 - 3.7	3.4 - 5.2	4.3 - 6.7	5.2 - 8.5	6.1 - 10.1	7.0 - 11.6	7.9 - 13.1		
1-Way										



Performance Data

Core Area (m ²)	Nominal Duct Size (mm)	Core Velocity (m/s)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	
		Pressure Drop (Pa)	1	4	8	15	24	35	46	59	
0.06	450x150 250x250	Flowrate (l/s)	28	59	87	118	146	175	205	234	
		NC Level	—	—	12	20	26	30	34	37	
		Throw (m)	4-Way	0.9 - 1.2	1.8 - 2.7	2.4 - 4.0	3.4 - 4.9	4.0 - 6.1	4.9 - 7.3	5.2 - 8.2	5.8 - 6.4
			3-Way	0.9 - 1.5	1.8 - 2.7	2.7 - 4.3	3.4 - 5.2	4.3 - 6.4	4.9 - 7.9	5.5 - 9.2	6.1 - 10.1
			2-Way	0.9 - 1.5	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.3	5.2 - 8.5	6.1 - 10.1	7.0 - 11.3
1-Way	1.2 - 1.8	2.1 - 3.7	3.4 - 5.3	4.6 - 8.2	5.5 - 8.8	6.4 - 7.3	7.6 - 12.2	8.5 - 13.7			
0.07	750x100 500x150 350x200 300x250	Flowrate (l/s)	33	66	99	132	165	198	231	264	
		NC Level	—	—	14	20	26	30	34	38	
		Throw (m)	4-Way	0.9 - 1.5	1.8 - 2.7	2.4 - 4.0	3.4 - 4.9	4.0 - 6.1	4.9 - 7.3	5.8 - 8.5	6.1 - 9.8
			3-Way	0.9 - 1.5	1.8 - 2.7	2.7 - 4.3	3.7 - 5.5	4.3 - 6.7	4.9 - 7.9	5.8 - 9.5	6.4 - 10.7
			2-Way	1.2 - 1.8	2.1 - 3.4	3.1 - 4.9	4.0 - 6.1	4.9 - 7.3	5.5 - 8.8	6.4 - 10.4	7.3 - 11.9
1-Way	1.2 - 2.1	2.4 - 4.0	3.7 - 5.5	4.9 - 7.3	5.5 - 8.8	6.4 - 10.7	7.6 - 12.5	8.5 - 14.0			
0.08	900x100 600x150 400x200 350x250	Flowrate (l/s)	38	76	116	153	191	229	267	307	
		NC Level	—	—	15	21	27	31	35	38	
		Throw (m)	4-Way	0.9 - 1.5	1.8 - 2.7	2.7 - 4.3	3.4 - 5.2	4.3 - 6.4	4.9 - 7.6	5.5 - 8.8	6.1 - 10.1
			3-Way	0.9 - 1.5	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.6	5.2 - 8.2	6.1 - 9.8	7.6 - 11.0
			2-Way	1.2 - 1.8	2.1 - 3.4	3.1 - 4.9	4.3 - 6.4	4.9 - 7.6	5.5 - 9.2	6.4 - 10.7	7.6 - 12.2
1-Way	1.2 - 2.1	2.4 - 4.0	3.7 - 5.5	4.9 - 7.6	5.8 - 9.5	7.0 - 11.3	7.9 - 13.1	9.2 - 14.6			
0.08	450x200 300x300	Flowrate (l/s)	40	83	123	165	205	245	288	328	
		NC Level	—	—	15	21	27	31	35	38	
		Throw (m)	4-Way	0.9 - 1.5	1.8 - 2.7	2.7 - 4.3	3.7 - 5.5	4.3 - 6.7	4.9 - 7.9	5.5 - 9.2	6.4 - 10.4
			3-Way	1.2 - 1.8	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.3	5.2 - 8.5	6.1 - 9.8	7.0 - 11.3
			2-Way	1.2 - 1.8	2.1 - 3.4	3.4 - 4.9	4.3 - 6.4	4.9 - 7.9	5.8 - 9.5	6.7 - 11.0	7.6 - 12.5
1-Way	1.2 - 2.1	2.7 - 4.3	3.7 - 5.8	4.9 - 7.6	5.8 - 9.2	7.0 - 11.6	8.2 - 13.4	9.2 - 14.9			
0.09	750x150 500x200 400x250 350x300	Flowrate (l/s)	47	97	144	194	241	288	337	385	
		NC Level	—	—	15	22	28	32	36	39	
		Throw (m)	4-Way	0.9 - 1.5	1.8 - 3.1	2.7 - 4.6	3.7 - 5.5	4.6 - 7.0	5.2 - 8.2	5.8 - 9.5	6.4 - 10.7
			3-Way	1.2 - 1.8	1.8 - 3.1	3.1 - 4.9	4.0 - 6.1	4.9 - 7.3	5.5 - 8.8	6.4 - 10.4	7.0 - 11.6
			2-Way	1.2 - 1.8	2.1 - 3.7	3.4 - 4.9	4.3 - 6.7	5.2 - 8.2	6.1 - 9.8	7.0 - 11.6	7.9 - 12.8
1-Way	1.5 - 2.4	2.7 - 4.3	4.0 - 6.1	4.9 - 7.9	6.1 - 10.1	7.3 - 11.0	8.5 - 13.7	9.5 - 15.3			
0.11	600x200 450x250 400x350	Flowrate (l/s)	54	109	163	217	271	326	380	434	
		NC Level	—	—	16	23	29	32	36	40	
		Throw (m)	4-Way	0.9 - 1.5	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.3	5.2 - 8.5	6.1 - 9.8	7.0 - 11.3
			3-Way	1.2 - 1.8	2.1 - 3.4	3.1 - 4.9	4.0 - 6.1	4.9 - 7.6	5.5 - 9.2	6.4 - 10.7	7.6 - 12.2
			2-Way	1.2 - 1.8	2.1 - 3.7	3.4 - 5.2	4.3 - 6.7	5.2 - 8.5	6.1 - 10.1	7.3 - 11.9	8.2 - 13.4
1-Way	1.5 - 2.4	2.7 - 4.6	4.3 - 6.4	5.2 - 8.2	6.4 - 10.4	7.6 - 12.2	8.5 - 14.0	10.1 - 16.2			
0.12	900x100 500x250 350x350	Flowrate (l/s)	59	118	177	236	295	354	413	472	
		NC Level	—	—	16	23	29	33	37	40	
		Throw (m)	4-Way	1.2 - 1.8	1.8 - 3.1	2.7 - 4.6	3.7 - 5.8	4.9 - 7.3	5.2 - 8.5	6.1 - 10.1	7.0 - 11.3
			3-Way	1.2 - 1.8	2.1 - 3.4	3.1 - 4.9	4.3 - 6.4	4.9 - 8.5	5.8 - 9.5	6.7 - 11.0	7.6 - 12.2
			2-Way	1.2 - 2.1	2.1 - 3.7	3.4 - 5.2	4.6 - 7.0	5.5 - 8.8	6.4 - 10.4	7.6 - 12.2	8.5 - 13.7
1-Way	1.5 - 2.4	2.7 - 4.6	4.3 - 6.1	5.2 - 8.5	6.4 - 10.4	7.6 - 12.2	8.8 - 14.3	10.1 - 16.2			
0.13	400x350 450x300	Flowrate (l/s)	64	127	191	255	319	382	446	510	
		NC Level	—	—	16	23	29	33	37	40	
		Throw (m)	4-Way	1.2 - 1.8	1.8 - 3.1	3.1 - 4.9	4.0 - 6.1	4.9 - 7.3	5.5 - 8.8	6.4 - 10.4	7.0 - 11.6
			3-Way	1.2 - 1.8	2.1 - 3.4	3.4 - 4.9	4.3 - 6.4	4.9 - 8.5	5.8 - 9.5	6.7 - 11.0	7.6 - 12.5
			2-Way	1.2 - 2.1	2.4 - 4.0	3.7 - 5.5	4.9 - 7.3	5.5 - 8.8	6.4 - 10.7	7.6 - 12.5	8.5 - 14.0
1-Way	1.5 - 2.4	2.7 - 4.6	4.3 - 6.7	5.2 - 8.5	6.4 - 10.7	7.9 - 12.8	9.2 - 14.9	10.4 - 16.5			
0.14	750x200 600x250 500x300 450x350 400x400	Flowrate (l/s)	73	144	217	288	361	434	505	576	
		NC Level	—	—	17	24	29	34	38	41	
		Throw (m)	4-Way	1.2 - 1.8	2.1 - 3.4	3.1 - 4.9	4.0 - 6.1	4.9 - 7.6	5.5 - 9.2	6.4 - 10.7	7.3 - 11.9
			3-Way	1.2 - 1.8	2.1 - 3.7	3.4 - 4.9	4.3 - 6.4	5.2 - 8.2	6.1 - 9.8	7.0 - 11.6	7.9 - 13.1
			2-Way	1.2 - 2.1	2.4 - 4.0	3.7 - 5.5	4.9 - 7.3	5.8 - 9.5	6.7 - 11.0	7.9 - 12.8	8.8 - 14.0
1-Way	1.5 - 2.4	3.1 - 4.9	4.3 - 6.7	5.5 - 8.8	6.7 - 11.0	7.9 - 13.1	9.5 - 14.9	10.7 - 14.9			