

waterloo



# Waterloo technical note

## D Type blanking

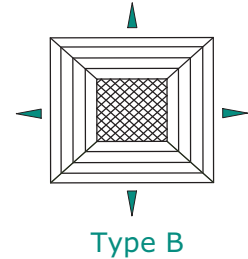


**DF Core 41 for 375 x 375 Neck - o/a 525 x 525**  
**Tegular 8mm & 16mm Drop 375 x 375 Neck - o/a 500 x 500**  
**DE Core 41 for 375 x 375 Neck - o/a 450 x 450**

**Type B core 41 - 4 way (Neck 375 x 375)**

UNBLANKED					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	141	211	281	352	422
dBA Level	<20	<20	24	29	33
Min Rad	1.6	2.0	2.0	2.5	3.5
Max Rad	2.8	3.5	4.5	5.5	6.5

BLANK B 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	118	177	236	295	354
dBA Level	<20	<20	22	27	31
Min Rad	1.5	1.7	2.0	2.2	3.0
Max Rad	2.4	3.0	4.0	5.0	5.7



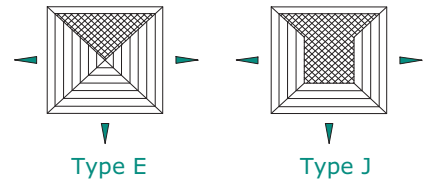
BLANK B 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	90	135	180	225	270
dBA Level	<20	<20	20	25	29
Min Rad	1.1	1.5	2.0	2.0	2.5
Max Rad	1.9	2.5	3.5	4.5	5.5

Blank B 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	51	76	101	127	152
dBA Level	<20	<20	<20	<20	23
Min Rad	0.7	1.0	1.5	2.0	2.0
Max Rad	1.6	2.0	2.5	3.5	4.0

**Type E & J core 41 - 3 way (Neck 375 x 375)**

BLANK E					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	105	158	211	264	316
dBA Level	<20	<20	24	28	33
Min Rad	1.6	2.0	2.2	2.8	3.5
Max Rad	2.8	3.5	4.5	5.5	6.6

BLANK J 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	89	133	177	221	266
dBA Level	<20	<20	23	28	31
Min Rad	1.3	1.7	2.0	2.4	3.0
Max Rad	2.5	3.0	3.8	4.7	5.5



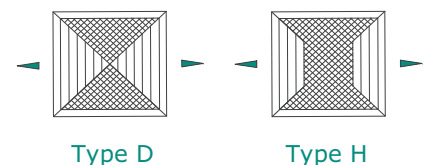
BLANK J 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	68	101	135	169	203
dBA Level	<20	<20	21	26	30
Min Rad	1.0	1.4	1.8	2.2	2.7
Max Rad	2.0	2.6	3.4	4.2	5.1

BLANK J 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	38	57	76	95	114
dBA Level	<20	<20	<20	24	28
Min Rad	0.7	1.0	1.6	2.0	2.3
Max Rad	1.6	2.2	3.0	3.7	4.7

**Type D & H core 41 - 2 way opposite (Neck 375 x 375)**

BLANK D					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	70	105	141	176	211
dBA Level	<20	<20	22	27	31
Min Rad	1.2	1.7	2.3	2.7	3.0
Max Rad	2.1	3.0	4.2	5.5	6.5

BLANK H 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	59	89	118	148	177
dBA Level	<20	<20	<20	24	28
Min Rad	1.0	1.5	1.8	2.3	2.6
Max Rad	1.9	2.4	3.4	4.7	5.1



BLANK H 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	45	68	90	113	135
dBA Level	<20	<20	<20	22	26
Min Rad	0.8	1.2	1.5	1.9	2.3
Max Rad	1.8	2.2	3.0	3.9	4.0

BLANK H 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	25	38	51	63	76
dBA Level	<20	<20	<20	20	24
Min Rad	0.7	1.0	1.1	1.5	2.0
Max Rad	1.5	2.0	2.5	3.0	3.5

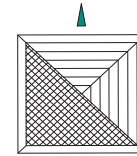


**DF Core 41 for 375 x 375 Neck - o/a 525 x 525**  
**Tegular 8mm & 16mm Drop 375 x 375 Neck - o/a 500 x 500**  
**DE Core 41 for 375 x 375 Neck - o/a 450 x 450**

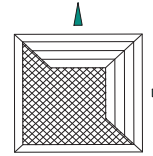
Type C & G core 41 - 2 way corner (Neck 375 x 375)

BLANK C					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	70	105	141	176	211
dBA Level	<20	<20	22	27	31
Min Rad	1.2	1.7	2.3	2.7	3.0
Max Rad	2.1	3.0	4.2	5.5	6.5

BLANK G 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	59	89	118	148	177
dBA Level	<20	<20	<20	24	28
Min Rad	1.0	1.5	1.8	2.3	2.6
Max Rad	1.9	2.4	3.4	4.7	5.1



Type C



Type G

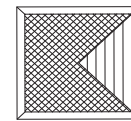
BLANK G 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	45	68	90	113	135
dBA Level	<20	<20	<20	22	26
Min Rad	0.8	1.2	1.5	1.9	2.3
Max Rad	1.8	2.2	3.0	3.9	4.0

BLANK G 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	25	38	51	63	76
dBA Level	<20	<20	<20	20	24
Min Rad	0.7	1.0	1.1	1.5	2.0
Max Rad	1.5	2.0	2.5	3.0	3.5

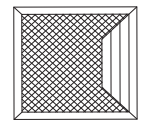
Type F & K core 41 - 1 way (Neck 375 x 375)

BLANK F					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	35	53	70	88	105
dBA Level	<20	<20	<20	24	27
Min Rad	1.4	1.9	2.4	3.3	3.8
Max Rad	2.8	3.9	5.3	6.2	7.6

BLANK K 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	30	44	59	74	89
dBA Level	<20	<20	<20	22	26
Min Rad	1.2	1.7	2.2	2.8	3.2
Max Rad	2.3	3.2	4.4	5.4	6.5



Type F



Type K

BLANK K 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	23	34	45	56	68
dBA Level	<20	<20	<20	20	24
Min Rad	1.1	1.5	2.0	2.2	2.5
Max Rad	1.7	2.5	3.5	4.5	5.5

BLANK K 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	13	19	25	32	38
dBA Level	<20	<20	<20	<20	20
Min Rad	0.7	1.0	1.6	1.8	2.2
Max Rad	1.0	2.1	3.0	3.5	4.0

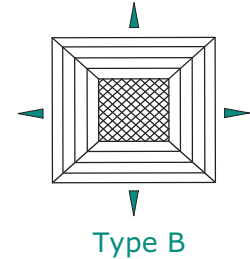


**DF Core 41 for 450 x 450 Neck - o/a 600 x 600**  
**Tegular 8mm & 16mm Drop 450 x 450 Neck - o/a 600 x 600**  
**DE Core 41 for 450 x 450 Neck - o/a 525 x 525**

**Type B core 41 - 4 way (Neck 450 x 450)**

UNBLANKED					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	203	304	405	506	608
dBA Level	26	30	35	39	42
Min Rad	1.7	2.0	2.5	3.5	4.0
Max Rad	3.4	4.0	5.0	6.5	8.0

BLANK B 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	180	270	360	450	540
dBA Level	25	29	34	38	41
Min Rad	1.6	2.0	2.4	3.3	3.9
Max Rad	3.3	3.9	4.9	6.3	7.6



BLANK B 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	152	228	304	380	456
dBA Level	25	29	33	37	40
Min Rad	1.5	1.7	2.2	2.7	3.7
Max Rad	2.9	3.7	4.7	5.7	6.8

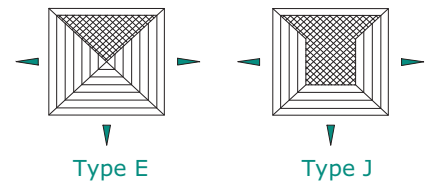
Blank B 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	113	169	225	281	338
dBA Level	-	26	30	34	38
Min Rad	1.5	1.7	2.0	2.2	2.8
Max Rad	2.0	2.8	3.8	4.8	5.5

BLANK B 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	62	93	124	155	186
dBA Level	-	-	27	30	33
Min Rad	0.9	1.2	1.7	2.0	2.2
Max Rad	1.7	2.2	2.8	3.8	4.5

**Type E & J core 41 - 3 way (Neck 450 x 450)**

BLANK E					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	152	228	304	380	456
dBA Level	25	30	34	38	40
Min Rad	2.2	2.5	2.7	3.3	4.0
Max Rad	3.7	4.5	5.5	7.0	8.1

BLANK J 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	135	203	270	338	405
dBA Level	-	29	32	36	39
Min Rad	1.4	1.8	2.2	2.7	3.7
Max Rad	2.7	3.6	4.7	5.7	6.7



BLANK J 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	114	171	228	285	342
dBA Level	-	28	31	34	37
Min Rad	1.3	1.7	2.0	2.5	3.1
Max Rad	2.4	3.2	4.1	4.8	5.5

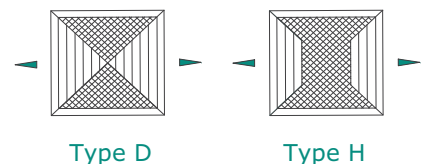
BLANK J 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	84	127	169	211	253
dBA Level	-	26	30	34	36
Min Rad	1.2	1.5	1.9	2.3	2.5
Max Rad	2.2	2.8	3.4	4.0	4.4

BLANK J 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	46	70	93	116	139
dBA Level	-	-	27	31	35
Min Rad	0.8	1.0	1.4	1.8	2.3
Max Rad	1.7	2.0	2.9	3.6	4.7

**Type D & H core 41 - 2 way opposite (Neck 450 x 450)**

BLANK D					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	101	152	203	253	304
dBA Level	-	28	32	36	39
Min Rad	1.8	2.2	2.7	3.5	4.3
Max Rad	3.7	4.0	5.5	6.7	8.5

BLANK H 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	90	135	180	225	270
dBA Level	-	27	31	35	38
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5



BLANK H 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	76	114	152	190	228
dBA Level	-	26	30	34	38
Min Rad	1.2	1.8	2.0	2.5	3.1
Max Rad	2.1	3.0	4.2	5.7	6.5

BLANK H 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	56	84	113	141	169
dBA Level	-	25	29	33	36
Min Rad	1.0	1.5	2.0	2.5	2.7
Max Rad	1.9	2.5	3.5	5.0	5.5

BLANK H 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	31	46	62	77	93
dBA Level	-	-	25	30	34
Min Rad	0.8	1.2	1.5	2.0	2.3
Max Rad	1.7	2.2	3.0	4.0	4.5

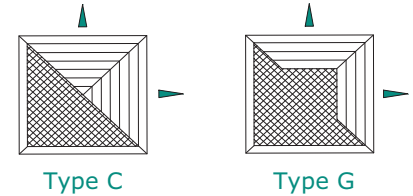


**DF Core 41 for 450 x 450 Neck - o/a 600 x 600**  
**Tegular 8mm & 16mm Drop 450 x 450 Neck - o/a 600 x 600**  
**DE Core 41 for 450 x 450 Neck - o/a 525 x 525**

Type C & G core 41 - 2 way corner (Neck 450 x 450)

BLANK C					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	101	152	203	253	304
dBA Level	-	28	32	36	39
Min Rad	1.8	2.2	2.7	3.5	4.3
Max Rad	3.7	4.0	5.5	6.7	8.5

BLANK G 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	90	135	180	225	270
dBA Level	-	27	31	35	38
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5



BLANK G 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	76	114	152	190	228
dBA Level	-	26	30	34	38
Min Rad	1.2	1.8	2.0	2.5	3.1
Max Rad	2.1	3.0	4.2	5.7	6.5

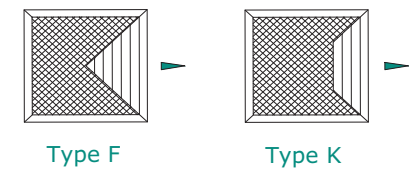
BLANK G 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	56	84	113	141	169
dBA Level	-	25	29	33	36
Min Rad	1.0	1.5	2.0	2.5	2.7
Max Rad	1.9	2.5	3.5	5.0	5.5

BLANK G 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	31	46	62	77	93
dBA Level	-	-	25	30	34
Min Rad	0.8	1.2	1.5	2.0	2.3
Max Rad	1.7	2.2	3.0	4.0	4.5

Type F & K core 41 - 1 way (Neck 450 x 450)

BLANK F					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	51	76	101	127	152
dBA Level	-	26	29	33	36
Min Rad	1.5	2.0	2.5	3.5	4.0
Max Rad	3.0	4.0	5.5	6.5	8.0

BLANK K 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	45	68	90	113	135
dBA Level	-	24	29	32	34
Min Rad	1.4	1.9	2.4	3.3	3.8
Max Rad	2.8	3.9	5.3	6.2	7.6



BLANK K 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	38	57	76	95	114
dBA Level	-	-	27	30	34
Min Rad	1.2	1.8	2.3	3.1	3.5
Max Rad	2.5	3.7	4.8	5.8	6.7

BLANK K 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	28	42	56	70	84
dBA Level	-	-	26	30	33
Min Rad	1.1	1.6	2.2	2.8	3.1
Max Rad	2.3	3.5	4.2	5.3	6.4

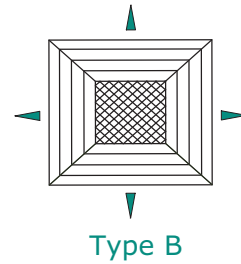
BLANK K 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	15	23	31	39	46
dBA Level	-	-	-	27	31
Min Rad	0.8	1.3	1.9	2.1	2.5
Max Rad	1.8	2.3	3.4	4.4	5.3



**DF Core 41 for 525 x 525 Neck - o/a 675 x 675**  
**DF Core 41 for 525 x 525 Neck - o/a 600 x 600**

Type B core 41 - 4 way (Neck 525 x 525)

UNBLANKED					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	276	413	551	689	827
dBA Level	20	25	31	36	39
Min Rad	2.0	2.5	3.0	4.0	4.5
Max Rad	3.5	5.0	6.0	8.0	9.0



BLANK B 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	253	380	506	633	759
dBA Level	<25	24	30	35	38
Min Rad	1.8	2.4	2.8	3.8	4.3
Max Rad	3.3	4.7	5.8	7.5	8.7

BLANK B 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	225	338	450	563	675
dBA Level	<20	23	29	34	37
Min Rad	1.6	2.1	2.6	3.6	4.1
Max Rad	3.2	4.3	5.3	7.0	8.3

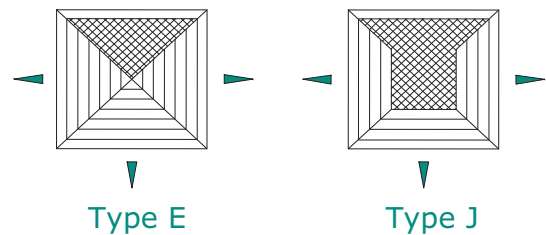
Blank B 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	186	278	371	464	557
dBA Level	<20	20	27	32	35
Min Rad	1.6	2.0	2.4	3.3	3.9
Max Rad	3.3	3.9	4.9	6.3	7.6

BLANK B 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	135	203	270	338	405
dBA Level	<20	<20	23	28	32
Min Rad	1.5	1.8	1.9	2.4	3.4
Max Rad	2.8	3.4	4.4	5.4	6.4

BLANK B 450 x 450					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	73	110	146	183	219
dBA Level	<20	<20	<20	22	27
Min Rad	0.9	1.3	1.8	2.0	2.3
Max Rad	1.5	2.3	3.1	4.1	4.9

Type E & J core 41 - 3 way (Neck 525 x 525)

BLANK E					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	207	310	413	517	620
dBA Level	<20	21	27	32	35
Min Rad	2.5	3.0	3.3	3.7	4.5
Max Rad	5.6	6.2	6.4	7.0	9.0



BLANK J 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	190	285	380	475	570
dBA Level	<20	20	26	31	35
Min Rad	2.2	2.6	3.0	3.4	4.2
Max Rad	4.8	5.2	5.4	6.5	8.3

BLANK J 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	169	253	338	422	506
dBA Level	<20	<20	24	30	34
Min Rad	1.9	2.3	2.7	3.2	3.9
Max Rad	3.0	4.2	4.7	6.2	6.5

BLANK J 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	139	209	278	348	418
dBA Level	<20	<20	250	30	34
Min Rad	1.6	2.0	2.3	3.0	3.7
Max Rad	3.2	3.7	4.2	5.7	7.0

BLANK J 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	101	152	203	253	304
dBA Level	<20	<20	23	28	31
Min Rad	1.3	1.7	2.0	2.4	3.0
Max Rad	2.5	3.0	3.8	4.7	5.5

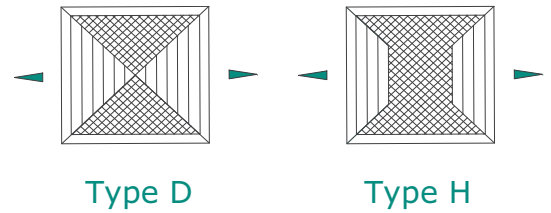
BLANK J 450 x 450					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	55	82	110	137	165
dBA Level	<20	<20	20	25	29
Min Rad	0.7	1.0	1.5	2.0	2.3
Max Rad	1.8	2.2	3.0	3.7	4.7



**DF Core 41 for 525 x 525 Neck - o/a 675 x 675**  
**DF Core 41 for 525 x 525 Neck - o/a 600 x 600**

Type D & H core 41 - 2 way opposite (Neck 525 x 525)

BLANK D					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	138	207	276	345	413
dBA Level	<20	<20	25	30	34
Min Rad	2.0	2.4	2.9	3.9	4.9
Max Rad	3.2	4.4	5.9	7.4	9.4



BLANK H 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	127	190	253	316	380
dBA Level	<20	<20	24	29	34
Min Rad	1.8	2.3	2.6	3.5	4.4
Max Rad	2.9	4.2	5.6	6.8	8.8

BLANK H 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	113	169	225	281	338
dBA Level	<20	<20	23	28	33
Min Rad	1.6	2.2	2.3	3.0	3.9
Max Rad	2.6	3.8	5.3	6.3	8.2

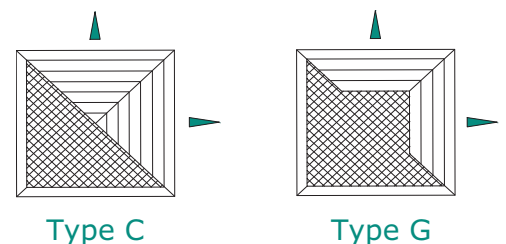
BLANK H 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	93	139	186	232	278
dBA Level	<20	<20	23	28	32
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5

BLANK H 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	68	101	135	169	203
dBA Level	<20	<20	21	25	30
Min Rad	1.2	1.8	2.1	2.5	3.0
Max Rad	2.0	3.0	4.5	5.2	6.2

BLANK H 450 x 450					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	37	55	73	91	110
dBA Level	<20	<20	<20	23	28
Min Rad	0.8	1.3	2.3	2.3	2.4
Max Rad	1.6	2.3	4.8	4.5	5.0

Type C & G core 41 - 2 way corner (Neck 525 x 525)

BLANK C					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	138	207	276	345	413
dBA Level	<20	<20	25	30	34
Min Rad	2.0	2.4	2.9	3.9	4.9
Max Rad	3.2	4.4	5.9	7.4	9.4



BLANK G 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	127	190	253	316	380
dBA Level	<20	<20	24	29	34
Min Rad	1.8	2.3	2.6	3.5	4.4
Max Rad	2.9	4.2	5.6	6.8	8.8

BLANK G 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	113	169	225	281	338
dBA Level	<20	<20	23	28	33
Min Rad	1.6	2.2	2.3	3.0	3.9
Max Rad	2.6	3.8	5.3	6.3	8.2

BLANK G 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	93	139	186	232	278
dBA Level	<20	<20	23	28	32
Min Rad	1.5	2.0	2.2	2.5	3.5
Max Rad	2.4	3.5	5.0	6.0	7.5

BLANK G 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	68	101	135	169	203
dBA Level	<20	<20	21	25	30
Min Rad	1.2	1.8	2.1	2.5	3.0
Max Rad	2.0	3.0	4.5	5.2	6.2

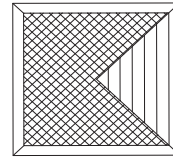
BLANK G 450 x 450					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	37	55	73	91	110
dBA Level	<20	<20	<20	23	28
Min Rad	0.8	1.3	2.3	2.3	2.4
Max Rad	1.6	2.3	4.8	4.5	5.0



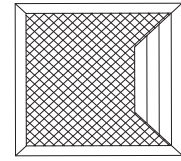
DF Core 41 for 525 x 525 Neck - o/a 675 x 675  
 DF Core 41 for 525 x 525 Neck - o/a 600 x 600

T Type F & K core 41 - 1 way (Neck 525 x 525)

BLANK F					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	69	103	138	172	207
dBA Level	<20	<20	22	27	31
Min Rad	1.4	2.4	3.4	4.4	4.9
Max Rad	4.4	5.4	6.4	8.4	9.8



Type F



Type K

BLANK K 150 x 150					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	63	95	127	158	190
dBA Level	<20	<20	21	26	30
Min Rad	1.4	2.2	3.0	4.0	4.5
Max Rad	3.7	4.7	5.8	7.5	8.9

BLANK K 225 x 225					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	56	84	113	141	169
dBA Level	<20	<20	20	25	29
Min Rad	1.5	2.1	2.6	3.6	4.1
Max Rad	3.0	4.1	5.6	6.6	8.0

BLANK K 300 x 300					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	46	70	93	116	139
dBA Level	<20	<20	<20	24	27
Min Rad	1.4	1.9	2.4	3.3	3.8
Max Rad	2.8	3.9	5.3	6.2	7.6

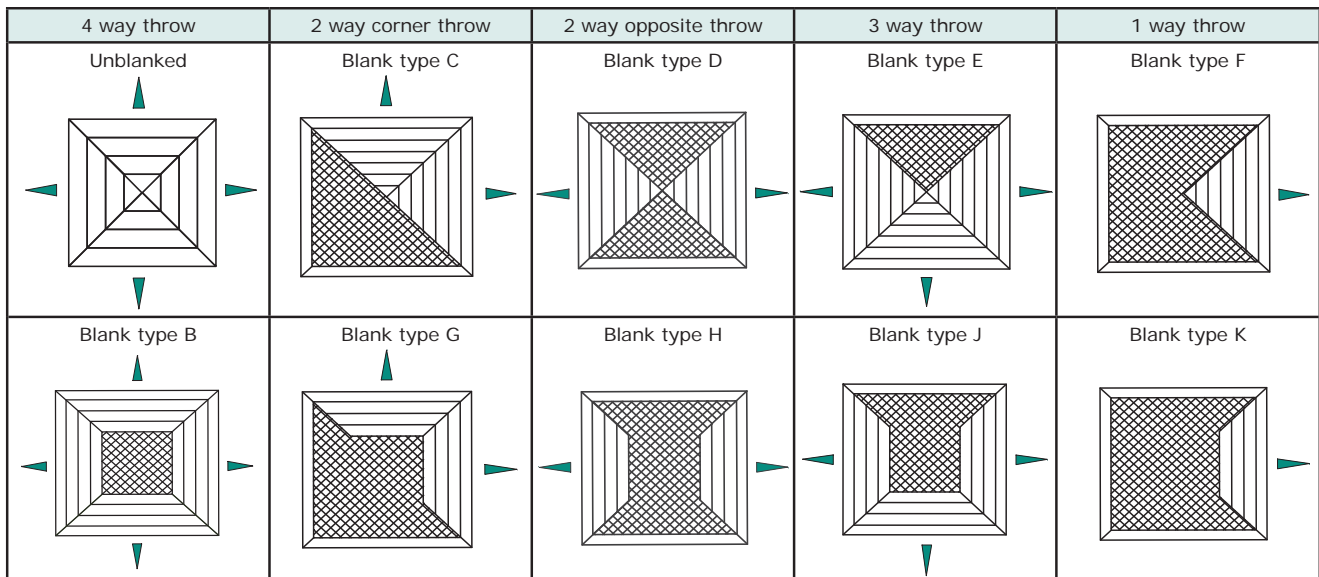
BLANK K 375 x 375					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	34	51	68	84	101
dBA Level	<20	<20	<20	21	25
Min Rad	1.1	1.6	2.2	2.8	3.1
Max Rad	2.3	3.5	4.2	5.3	6.4

BLANK K 450 x 450					
Neck Vel	1.0	1.5	2.0	2.5	3.0
Pressure	5	9	15	23	33
Volume	18	27	37	46	55
dBA Level	<20	<20	<20	<20	23
Min Rad	0.8	1.3	1.9	2.1	2.5
Max Rad	1.8	2.3	3.4	4.4	5.3

## General

Waterloo D-Type diffusers may have blanking plates fitted to modify their performance.

## Designation of blanking



## Units

In the previous pages these units are used:

- Neck vel** = neck velocity, measured in metres / second (m/s)
- Min Rad** = minimum radius of diffusion, measured in metres (m)
- Max Rad** = maximum radius of diffusion, measured in metres (m)

- Pressure** measured in pascals
- Volume** measured in litres / second (l/s)
- Nc Level** measured in dBA



# Waterloo Product Range



## Waterloo Product Range

### GRILLES

A complete range of products suitable for all wall, ceiling and floor applications. Most grilles are made from aluminium and have a range of fixed or moveable blades designed to give performance whilst remaining aesthetically pleasing to the eye. Grilles are made to customer specified sizes and colours (PPM/G); standard colour PPM9010 (20% Gloss White). The range is complemented by the Aircell range of polymer Grilles.



### DIFFUSERS

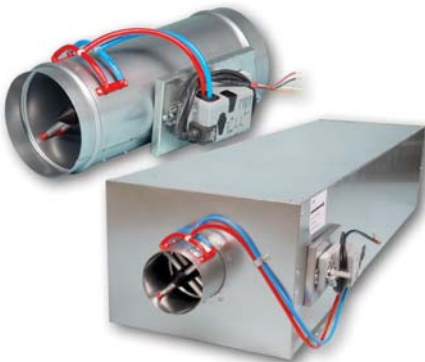
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetic requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); standard colour is PPM 9010 (20% Gloss White). This range is complemented by the Aircell range of polymer Diffusers.



### ACTIVE AND PASSIVE CHILLED BEAMS

The finest quality range of high output active beams, used for ventilated heating and cooling applications. These units have 4 pipe coils to allow heating and cooling circuits to run simultaneously, giving constant and responsive control. The design allows a large optimum capacity and also allows the customer to specify the nozzle type and pitch for individual circumstances.

Active beams are made from steel to a large range of customer specified sizes and as such are suitable for various different ceiling systems. Standard finish is PPM 9010, however other (PPM/G) colours are available on request.



### AIR VOLUME CONTROL DAMPERS

Pressure independent Variable Air Volume and Constant Air Volume dampers made from zintec plate. Most volume dampers are regulated with an electronic motor and sensors and are calibrated to customer specifications before delivery.

The Constant Air Volume damper requires no power source as it is controlled via a mechanical device and calibrated before delivery. All volume dampers can be ordered with a single or double (insulation) skin.

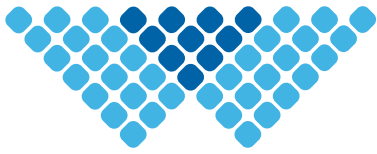
### EXTERNAL LOUVRES

A quality range of products for external wall applications. Made from aluminium, with birdscreen or insect screen options. All louvres are made to customer specified sizes and (PPM/G) colours; standard colour is PPM 9006.



### DISPLACEMENT

A full range of recessed, semi-recessed, floor, wall and corner units providing high ventilation efficiency and excellent comfort. The very low pressure involved also offer quiet installations. Displacement units are available as wall or floor mounted, or indeed integrated within the architectural design.



# waterloo

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