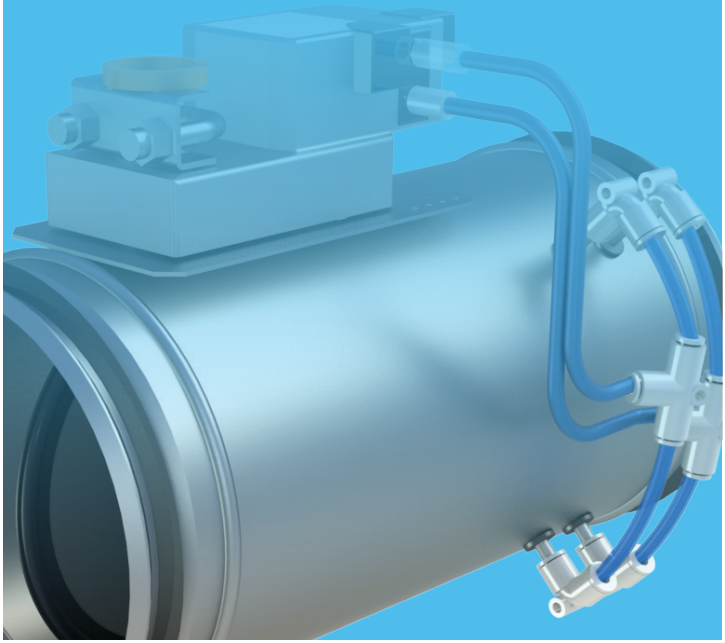
Testing and Balancing Guide 2023

Halton Säätöopas
Guide de mesure et d'équilibrage
Handbuch für Einregulierung und Prüfung
Halton Injusteringsguide
Инструкция по регулированию



Enabling Wellbeing

Halton

Diffusers and terminal units
Hajottimet ja pääteyksiköt
Diffuseurs et unités terminales
Zuluftdurchlässe und Anschlussteile
Tilluftsdon
Диффузоры и воздухораспределители

Grilles
Säleiköt
Grilles
Gitter
Galler
Решетки

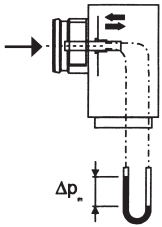
Plenums
Liitäntälaatikot
Plénums
Balken
Lådor
Статические камеры

Valves
Venttiilit
Bouches petit débit
Ventile
Ventiler
Клапаны

Chilled beams
Ilmastointi- ja jäähdytyspalkit
Poutres de refraîchissement et de chauffage ventilées
Kühlbalken
Kylbafflar
Охладительные блоки

Air flow management
Ilmavirtojen hallinta
Systèmes de débit variable ou constant
Luftstromsteuerung
Luftflödes injustering
Регулирование воздушных потоков

SLL+PLL
SLL+ PLD
SLN+PLL
SLN+PLD
SLM+PLM



Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

Pituus Längd Lenght Longueur Länge Длина	Rako Spalt Slot Fente Schlitz Щель	ø D	>6xD k	min. 3xD k
572	1	1 x 160	19	22
	2-3	1 x 200	28	32
	4	1 x 250	49	51
872	1	1 x 160	19	22
	2-3	1 x 200	28	32
	4	1 x 250	49	51
1172	1	1 x 160	19	22
	2-3	1 x 200	28	32
	4	1 x 250	49	51
1472	1	2 x 160	19	22
	2-3	2 x 200	28	32
	4	2 x 250	49	51
1772	1	2 x 160	19	22
	2-3	2 x 200	28	32
	4	2 x 250	49	51

q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

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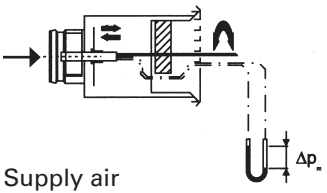
TLB



TLB/B TLB/E	k	k
100	6,2	6,8
125	10,5	12,9
160	18,8	22,4
200	27,8	32,9
250	45,7	55,5

Supply air
Tuloilma
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Zuluft
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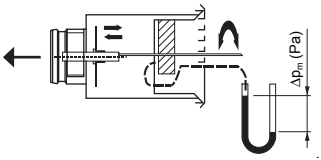
Приток

TLB



TLB/C	k
100	8,2
125	9,7
160	12,1
200	21,5
250	31,1

TLB/F	k
100	8,2
125	9,2
160	13,4
200	23,5

Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

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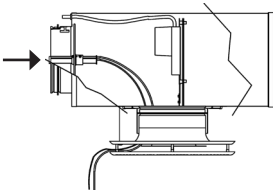
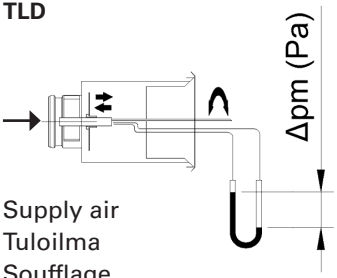
VHB / VHD



VHB/VHD	k
160	15,9
200	26,2
250	44,5

TLD

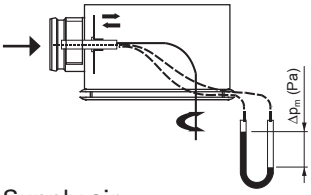


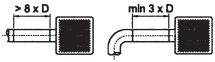
Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

TLD ø D	k	k
100	5,8	6,4
125	9,4	12,6
160	16,1	22,0
200	26,9	32,7
250	45,8	55,5

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

TCV, DRV

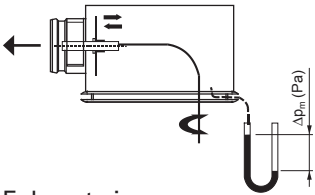




TCV DRV ø D	k	k
100	6,0	8,5
125	10,0	13,0
160	17,1	22,8
200	27,5	32,1
250	47,9	55,5

Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

TCV

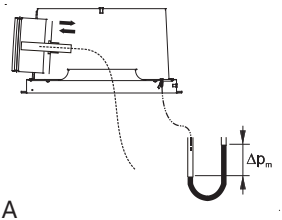


TCV ø D	k
100	8,7
125	21,6
160	21,6
200	53,1
250	53,1

Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка

DCS

Supply air
Tuloilma
Soufflage
Zuluft
Tilluft



A

A = Conical with centre plate
A = Kartio, jossa on keskilevy
A = Directionnel avec plaque centrale
A = Abgeschrägt mit Mittelplatte
A = Konisk med central platta
A = Конический с центральной пластиной

Neck	K-value	K-value 0-opening
340	33,1	27,7
250	26,6	0.07 x D + 2.82
160	13,8	11,3
125	8,2	6,6

J

(J = Swirl, J = Pyörre, J = Jet rotatif,
J = Wirbel, J = Virvel, J = Вихревой)

Neck	K-value	K-value 0-opening
340	33,1	26,3
250	26,1	0.06 x D + 4.31
160	14,1	11,4
125	8,4	6,6

C

(C = Conical, C = Kartio, C = Directionnel, C = Abgeschrägt, C = Konisk, C = Конический)

Neck	Directioning	K-value	K-value 0-opening
340	R4	52,9	0.24 x D - 31.75
340	R3	49,7	0.24 x D - 31.75
340	R2	44	0.24 x D - 31.75
250	R4	32	0.08 x D + 2.73
250	R3	32,6	0.08 x D + 2.73
250	R2	29,2	0.08 x D + 2.73
160		14,5	11,4
125		8,3	6,6

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

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N

(N = Nozzle, N = Suutin, N = Buse, N = Düse, N = Dysa, N = Сопло)

Neck	Directioning	K-value	K-value 0-opening
80	315, 250	48,1	0.18 x D - 13.12
80	200	40,5	0.18 x D - 13.12
36		27,4	0.08 x D + 2.37
16		13,2	0.06 x D + 1.00

P

(P = Perforated, P = Rei'itetty, P = Perforé, P = perforiert, P = Perforerad, P = Перфорированный)

Neck	Directioning	K-value	K-value 0-opening
340	R4	50,6	0.22 x D - 26.91
340	R3	47,7	0.22 x D - 26.91
340	R2	46,3	0.22 x D - 26.91
250	R4	30,3	0.08 x D + 3.94
250	R3	29,6	0.08 x D + 3.94
250	R2	28,6	0.08 x D + 3.94
160		13,4	11,1
125		8	6,3

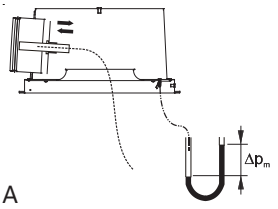
A, C, J, N, P =Type of front panel
A, C, J, N, P = Etulevy malli
A, C, J, N, P =Type de panneau de façade
A, C, J, N, P = Art des Frontpaneels
A, C, J, N, P =Typ av frontpanel
A, C, J, N, P = Тип передней панели

ATTN: D = diameter of duct connection in mm
Huom: D = Lähtökauluksen halkaisija millimetreissä
ATTN : D = diametre de la connection réseau en mm
ATTN: D = Durchmesser des Kanalanschlusses in mm
Obs: D = kanalanslutningsdiameter i mm
ATTN : D =Размер соединительного патрубка мм

$$q_v\ [l/s] = k \times \sqrt{\Delta p_m\ [Pa]}$$

DCS

Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка



A

A = Conical with centre plate
A = Kartio, jossa on keskilevy
A = Directionnel avec plaque centrale
A = Abgeschrägt mit Mittelplatte
A = Konisk med central platta
A = Конический с центральной пластиной

Ø	k
340	32,3
250	27,9
160	17,6
125	9,7

J

(J = Swirl, J = Pyörre, J = Jet rotatif,
J = Wirbel, J = Virvel, J = Вихревой)

Ø	k
340	28,9
250	21,2
160	13,6
125	8

A, C, J, N, P = Type of front panel
A, C, J, N, P = Etulevy malli
A, C, J, N, P = Type de panneau de façade
A, C, J, N, P = Art des Frontpaneels
A, C, J, N, P = Typ av frontpanel
A, C, J, N, P = Тип передней панели

C

(C = Conical, C = Kartio, C = Directionnel,
C = Abgeschrägt, C = Konisk, C = Конический)

Ø	k
340	69,6
250	47,2
160	21,4
125	11,1

N

(N = Nozzle, N = Suutin, N = Buse, N = Düse,
N = Dysa, N = Сопло)

Ø	k
80	52,8
36	27,2
16	12,9

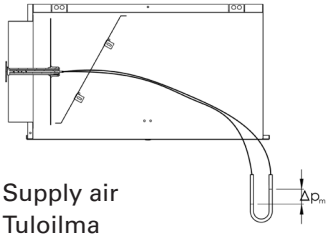
P

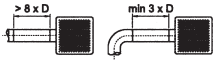
(P = Perforated, P = Rei'itetty,
P = Perforé, P = perforiert, P = Perforerad,
P = Перфорированный)

Ø	k
340	79,3
250	51,8
160	23,2
125	12

$$q_v\ [l/s] = k \times \sqrt{\Delta p_m\ [Pa]}$$

Halton Jaz JTH

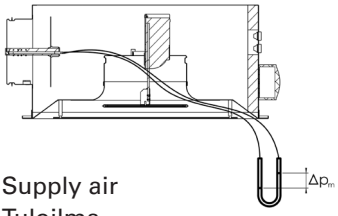


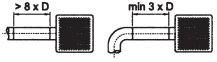


JTH ø D	k	k
125	9,9	12,6
160	16,9	21,9
200	28,3	32,0
250	47,9	51,5

Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

Halton Jaz Conical VAV





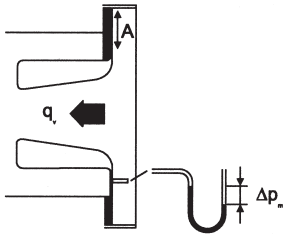
JDS ø D	k	k
125	9,5	12,6
160	18,0	22,2
200	28,6	32,9
250	44,6	46,0

Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

EVA



Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка

300 x 150

A	k
0	1,90
1	2,68
2	4,02
3	5,77
4	7,07
5	9,00
6	10,61
7	12,50

500 x 150

A	k
0	3,54
1	5,66
2	8,49
3	11,18
4	14,14
5	16,43
6	18,97
7	21,00

800 x 150

A	k
0	6,00
1	10,95
2	14,61
3	18,26
4	23,57
5	28,00
6	32,27
7	35,00

q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

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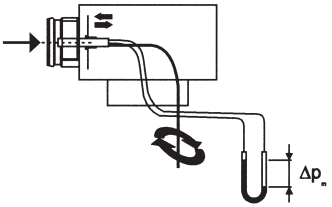
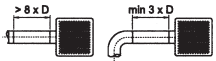
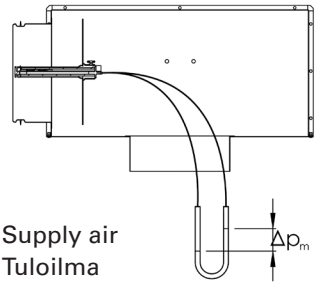
TRI / S

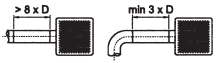




TRI ø D	k	k
100	6,0	7,5
125	9,9	12,6
160	16,9	21,9
200	28,3	32,0
250	47,9	51,5
315	78,6	-

TRH





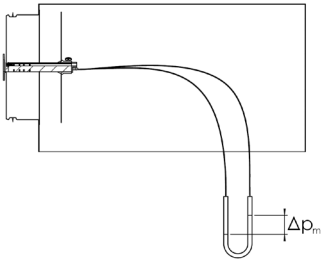
TRH ø D	k	k
100	6,5	7,5
125	10,8	12,6
160	19,4	21,9
200	29,7	31,0
250	48,8	51,5
315	81,3	83,1

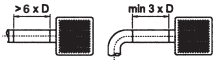
Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

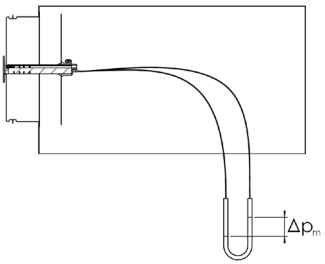
PDA

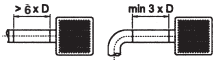




PDA ø D	k	k
200	28,0	32,0
250	49,0	51,0
315	78,0	-

PDF



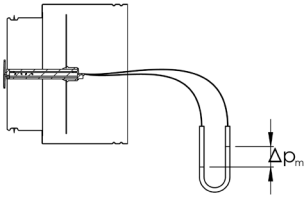


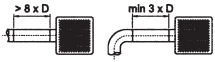
PDF ø D	k	k
100	6,0	7,0
125	10,0	12,0
160	19,0	22,0
200	28,0	32,0
250	49,0	51,0
315	78,0	-

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

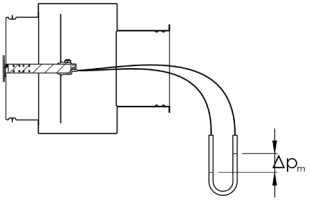
BDR

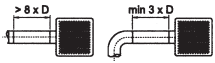


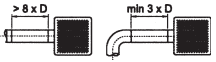


BDR ø D	k	k
125	9,9	12,6
160	16,9	21,9
200	28,3	31,0
250	47,9	51,5
315	78,6	-

PRL







ø 125	k	k
200 x 100	8,2	12,6

ø 160	k	k
300 x 100	14,1	21,7
400 x 100	17,7	21,7

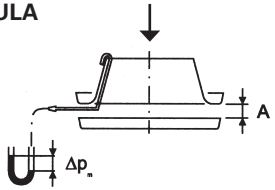
ø 200	k	k
500 x 100	34,6	33,9
300 x 150	20,1	33,9

ø 250	k	k
400 x 150	30,0	55,5
500 x 150	34,6	50,1

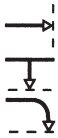
ø 315	k	k
800 x 150	34,6	83,3
400 x 200	55,9	55,5
500 x 200	27,4	83,3
800 x 200	50,0	83,3

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

ULA



Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток



ø 100 360°

A	k
3	1,40
6	3,09
9	4,52
12	5,61

ø 100 180°

A	k
3	0,82
6	1,65
9	2,33
12	3,00

ø 100 360°

A	k
3	1,41
6	3,05
9	4,38
12	5,31

ø 100 180°

A	k
3	0,90
6	1,64
9	2,31
12	2,90

ø 100 360°

A	k
3	1,41
6	3,06
9	4,40
12	5,36

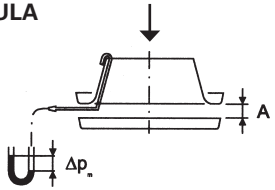
ø 100 180°

A	k
3	0,90
6	1,63
9	2,31
12	2,95

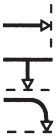
q_v [l/s] = k x $\sqrt{\Delta p_m\,[Pa]}$

Halton

ULA



Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток



ø 125 360°

A	k
3	1,61
6	3,52
9	5,39
12	8,25

ø 125 180°

A	k
3	1,04
6	1,98
9	2,82
12	4,45

ø 125 360°

A	k
3	1,60
6	3,51
9	5,33
12	8,07

ø 125 180°

A	k
3	1,03
6	1,95
9	2,84
12	4,46

ø 125 360°

A	k
3	1,60
6	3,51
9	5,33
12	8,07

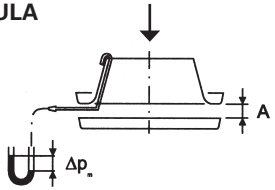
ø 125 180°

A	k
3	1,03
6	1,95
9	2,84
12	4,46

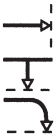
q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

Halton

ULA



Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток



ø 160 360°

A	k
3	2,00
6	4,11
9	6,61
12	8,78
18	12,92

ø 160 180°

A	k
3	1,18
6	2,41
9	3,47
12	4,55
18	6,65

ø 160 360°

A	k
3	2,01
6	4,13
9	6,78
12	8,86
18	12,85

ø 160 180°

A	k
3	1,23
6	2,42
9	3,41
12	4,39
18	6,68

ø 160 360°

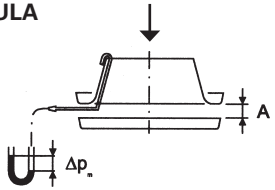
A	k
3	2,01
6	4,13
9	6,78
12	8,86
18	12,85

ø 160 180°

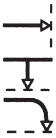
A	k
3	1,23
6	2,42
9	3,41
12	4,39
18	6,68

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

ULA



Supply air
Tuloilma
Soufflage
Zuluft
Tilluft
Приток



ø 200 360°

A	k
3	2,46
6	5,11
9	8,01
12	10,96
20	17,90

ø 200 180°

A	k
3	1,39
6	2,96
9	4,37
12	5,78
20	9,30

ø 200 360°

A	k
3	2,44
6	5,16
9	8,00
12	10,69
20	17,65

ø 200 180°

A	k
3	1,44
6	3,06
9	4,36
12	5,79
20	9,26

ø 200 360°

A	k
3	2,44
6	5,16
9	8,00
12	10,69
20	17,65

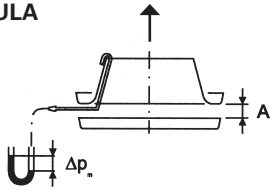
ø 200 180°

A	k
3	1,44
6	3,06
9	4,36
12	5,79
20	9,26

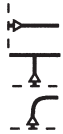
q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

ULA



Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка



ø 100

A	k
3	1,43
6	2,63
9	3,52
12	4,16

ø 125

A	k
3	1,65
6	2,99
9	3,96
15	5,85

ø 100

A	k
3	1,44
6	2,64
9	3,52
12	4,14

ø 125

A	k
3	1,65
6	2,99
9	3,97
15	5,85

ø 100

A	k
3	1,45
6	2,63
9	3,53
12	4,17

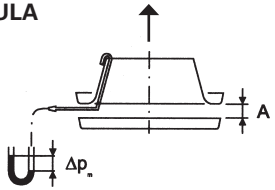
ø 125

A	k
3	1,65
6	2,99
9	3,97
15	5,85

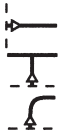
q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

ULA



Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка



ø 160

A	k
3	1,58
6	3,61
9	5,19
15	7,56

ø 200

A	k
3	2,53
6	4,72
9	6,48
15	10,11

ø 160

A	k
3	1,54
6	3,60
9	5,19
15	7,58

ø 200

A	k
3	2,28
6	4,80
9	6,55
15	10,13

ø 160

A	k
3	1,54
6	3,60
9	5,19
15	7,58

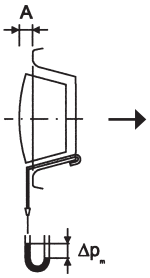
ø 200

A	k
3	2,40
6	4,75
9	6,60
15	10,13

q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

URH, FDV



Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка

$\Delta p_m = \Delta p$

$\Delta p_m = \Delta p$

ø 100

A	k
-15	0,43
-12	0,63
-9	0,83
-6	1,02
-3	1,22
0	1,42
3	1,65
6	1,88
9	2,11
12	2,33

$\Delta p_m = \Delta p$

$\Delta p_m = 0{,}98\ \Delta p$

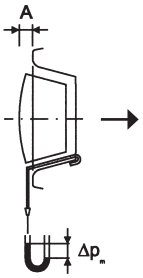
ø 125

A	k
-15	0,65
-12	0,92
-9	1,22
-6	1,53
-3	1,84
0	2,17
3	2,52
6	2,83
9	3,14
12	3,46
15	3,77

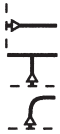
$q_v\ [l/s] = k \times \sqrt{\Delta p_m\ [Pa]}$

Halton

URH, FDV



Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка



$\Delta p_m = \Delta p$

$\Delta p_m = 1{,}04\ \Delta p$

ø 160

A	k
-12	1,16
-9	1,51
-6	1,90
-3	2,31
0	2,75
3	3,25
6	3,73
9	4,22
12	4,67
15	5,12
18	5,58

$\Delta p_m = \Delta p$

$\Delta p_m = 1{,}04\ \Delta p$

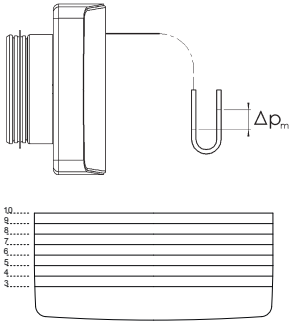
ø 200

A	k
3	1,78
6	2,46
9	3,24
12	3,97
15	4,69
20	5,88
25	6,95

$q_v\ [l/s] = k \times \sqrt{\Delta p_m\ [Pa]}$

Halton

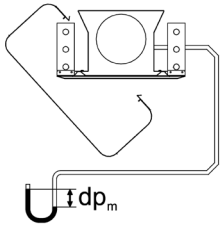
BOS



$$q_v = k \times l_{eff} \sqrt{\Delta p_m}$$

BOS-100/125 kuristinlevy trimming plate justeringsplatta plaque de fixation einstellplatte регулировочная пластина	k
10	1,60
9	1,80
8	2,11
7	2,39
6	2,66
5	2,91
4	3,22
3	3,45
Auki/open/öppet/ouvert/geöffnet/открыто	4,08

Halton Rex Exposed



$$q_v = k \times l_{eff} \sqrt{\Delta p_m}$$

REE	k / m
A	0,71
B	0,99
C	1,36
D	2,09
E	3,33

REE & HAQ

$$q_{v2} = a \times 0{,}17 \times \sqrt{\Delta p_m}$$

$$q_v = q_{v1} + q_{v2}$$

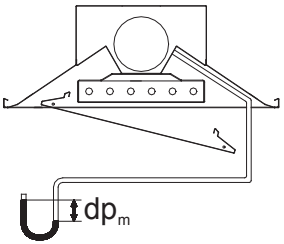
a = HAQ position
a = HAQ asento
a = HAQ position

a = HAQ position
a = HAQ позиция

HAQ airflow rate
HAQ ilman tilavuusvirta
HAQ débit d'air

HAQ luftflödet
HAQ расход воздуха

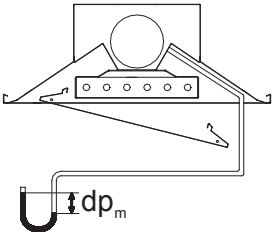
Halton Rex 600 Basic



$$q_v = k \times l_{eff} \sqrt{\Delta p_m}$$

R6B	k / m
A	0,71
B	0,99
C	1,36
D	2,09
E	3,33

Halton Rex 600



RE6	k / m
A	0,71
B	0,99
C	1,36
D	2,09
E	3,33

$$q_{v1} = k \times l_{eff} \sqrt{\Delta p_m}$$

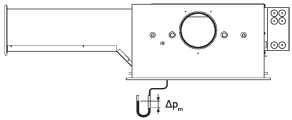
RE6 & HAQ

$$q_{v2} = a \times 0{,}17 \times \sqrt{\Delta p_m}$$

$$q_v = q_{v1} + q_{v2}$$

a = HAQ position	a = HAQ position	HAQ airflow rate	HAQ luftflödet
a = HAQ asento	a = HAQ позиция	HAQ ilman tilavuusvirta	HAQ расход воздуха
a = HAQ position		HAQ débit d'air	

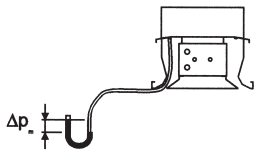
CHB



$$q_v \text{ [l/s]} = k \times \sqrt{\Delta p_m}$$

CHB	k [l/s]
CHB/A-1000	2,14
CHB/A-1200	2,83
CHB/A-1400	3,59
CHB/B-1000	2,93
CHB/B-1200	3,90
CHB/B-1400	4,97
CHB/C-1000	4,00
CHB/C-1200	5,39
CHB/C-1400	6,94

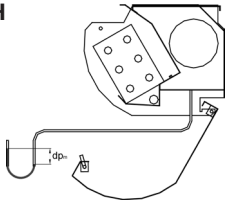
CBD



CBD	k / m
CBD/A	0,71
CBD/B	0,99
CBD/C	1,33
CBD/D	2,00

$$q_v = k \times l_{eff} \sqrt{\Delta p_m}$$

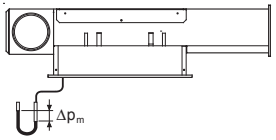
CBH



CBH	k / m
CBH/F,K	0,73
CBH/G,M	1,04

$$q_v = k \times l_{eff} \sqrt{\Delta p_m}$$

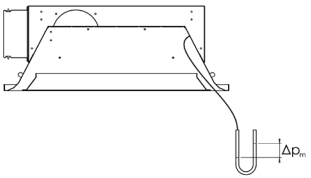
CHH



CHH	k
CHH/A	2,11
CHH/B	3,03
CHH/C	4,15

$$q_v\ [l/s] = k \times \sqrt{\Delta p_m\ [Pa]}$$

Halton Rex Expander



$q_v = k \times \sqrt{\Delta p_m}$

a = HAQ position
a = HAQ asento
a = HAQ position

a = HAQ position
a = HAQ позиция

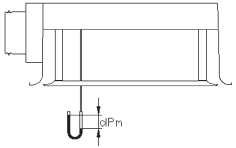
RXP 600

a	RXP/C k	RXP/D k	RXP/E k
0	1,1	1,6	2,5
1	1,7	2,1	3,1
2	2,2	2,7	3,6
3	2,7	3,2	4,1
4	3,2	3,7	4,6
5	3,7	4,1	5,1
6	4,1	4,6	5,5
7	4,5	5,0	5,9
8	4,9	5,4	6,3
9	5,3	5,7	6,7

RXP 1200

a	RXP/C k	RXP/D k	RXP/E k
0	2,1	2,9	4,7
1	2,6	3,5	5,3
2	3,1	4,0	5,8
3	3,7	4,5	6,3
4	4,1	5,0	6,8
5	4,6	5,5	7,3
6	5,0	5,9	7,7
7	5,5	6,3	8,1
8	5,9	6,7	8,5
9	6,2	7,1	8,9

CSW



CSW	k
k1	0,73
k2	0,097

$q_{v1} = (k1 + k2 \times N) \times \sqrt{\Delta p_m}$

CSW & HAQ

$q_{v2} = a \times k \times \sqrt{\Delta p_m}$

$q_v = q_{v1} + q_{v2}$

a = HAQ position
a = HAQ asento
a = HAQ position

a = HAQ position

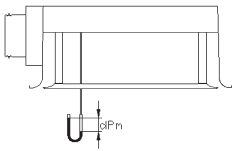
HAQ airflow rate
HAQ ilman tilavuusvirta
HAQ débit d'air

HAQ luftflödet
HAQ расход воздуха

Nozzle	k
k1	0.73
k2	0.097
$q_{v1} = (k1 + k2 \times N) \times \sqrt{\Delta P_m}$	
k1 = 24 small nozzles	
k2 = 1 big nozzles	
N = number of open big nozzles	

CSW + HAQ
$q_{v2} = a \times k \times \sqrt{\Delta P_m}$
a = HAQ position
HAQ k = 0.08
$q_v = q_{v1} + q_{v2}$

CSW exhaust



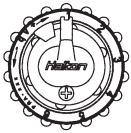
Exhaust air
Poistoilma
Extraction
Abluft
Frånluft
Вытяжка

HAQ exhaust			
q_v	$k \times (a_1 + a_2) \times \sqrt{\Delta p_m}$	a_2	HAQ_2 position
a_1	HAQ_1 position	k	0,165

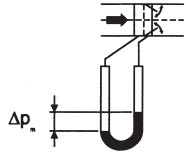
q_v [l/s] = $k \times \sqrt{\Delta p_m}$ [Pa]

Halton

PRA



100 ... 315



ø 100

A	k
1	1,8
1,5	2,1
2	2,4
2,5	2,7
3	3,1
3,5	3,6
4	4,1
4,5	4,7
5	5,5
5,5	6,4
6	7,8

ø 125

A	k
1	2,5
1,5	2,9
2	3,3
2,5	3,8
3	4,4
3,5	5,0
4	5,9
4,5	6,8
5	7,9
5,5	9,5
6	11,6

ø 160

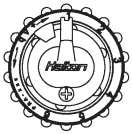
A	k
1	4,1
1,5	4,7
2	5,5
2,5	6,4
3	7,6
3,5	9,0
4	10,6
4,5	12,6
5	15,0
5,5	18,2
6	22,9

ø 200

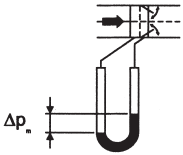
A	k
1	7,1
1,5	8,0
2	8,8
2,5	10,0
3	11,4
3,5	13,1
4	15,1
4,5	17,5
5	20,5
5,5	24,2
6	29,0

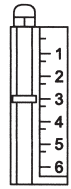
q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

PRA



100 ... 315





350 ... 1000

ø 250

A	k
1	10,5
1,5	11,9
2	13,8
2,5	16,1
3	18,9
3,5	22,0
4	25,6
4,5	30,1
5	35,8
5,5	42,9
6	52,8

ø 315

A	k
1	18,3
1,5	21,8
2	26,0
2,5	30,7
3	36,5
3,5	43,3
4	51,3
4,5	61,5
5	74,3
5,5	92,6
6	120,2

ø 350

A	k
1	17,6
2	24,3
3	35,2
4	50,0
5	71,6
6	99,0

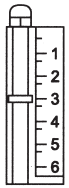
ø 400

A	k
1	20,5
2	26,5
3	36,5
4	55,0
5	86,0
6	137,0

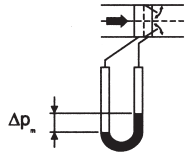
q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

Halton

PRA



350 ... 1000



ø 500

A	k
1	27,5
2	39,0
3	59,0
4	86,0
5	123,0
6	175,0

ø 630

A	k
1	65,0
2	90,0
3	115,0
4	154,0
5	202,0
6	295,0

ø 800

A	k
1	98,0
2	137,0
3	198,0
4	280,0
5	393,0
6	570,0

ø 1000

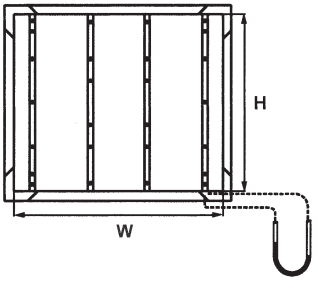
A	k
1	144,0
2	220,0
3	310,0
4	440,0
5	620,0
6	890,0

q_v [l/s] = k x $\sqrt{\Delta p_m [Pa]}$

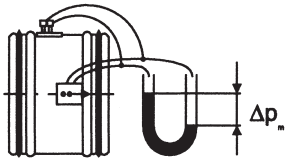
MSA

$q_v = k \times \sqrt{\Delta p_m}$

k = W (mm) x H (mm) x 0,001054

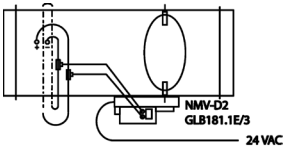


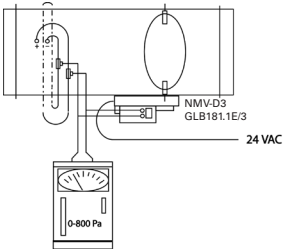
MSD



MSD	k
100	5,7
125	9,4
160	17,2
200	27,8
250	43,9
315	72,3
400	127,00
500	200,00

BOX



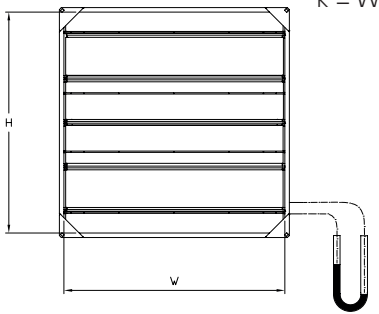


BOX	k
100	6,5
125	10,6
160	18,3
200	27,4
250	44,0
315	71,4
355	91,4
400	117,0
500	185,1

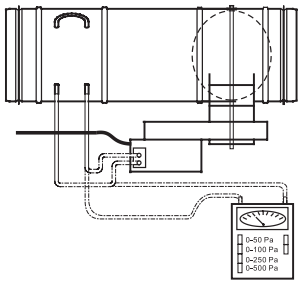
UKV

$q_v = k \times \sqrt{\Delta p_m}$

k = W (mm) x H (mm) x 0,001054

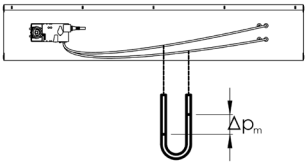


Halton Max One Circular



MOC	k
100	6,4
125	10,0
160	18,0
200	28,8
250	46,9
315	71,9
400	121,2
500	194,9
630	318,0

Halton Max Slim Box



MSB	k
200 x 150	18,5
300 x 150	28,0
300 x 250	62,5
400 x 250	83,5
600 x 250	125,0
800 x 250	166,5

Halton Max Ultra Circular (MUC)

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q_v [l/s] = k x $\sqrt{\Delta p_m \text{ [Pa]}}$

Halton

Notes

About us

Halton is the global technology leader in indoor air solutions for demanding spaces across industries – food service, healthcare, public spaces, marine, offshore and more. At Halton, our mission is to enable people's wellbeing in these environments.

For Halton's sales unit and distributor contact details please refer to our website:
www.halton.com