

Halton URH

Valve



Halton reserves the right to alter products without notice

- Exhaust valve with adjustable pressure loss
- Ceiling or wall installation with a separate installation frame
- Attenuates duct noise
- Airflow rate adjustment and measurement facility

Product model options and Accessories

- Alternative installation with fixed springs
- Alternative installation frame options

MATERIAL AND FINISHING

PART	MATERIAL	NOTE
Collar	Steel	
Central cone	Steel	
Gasket	Polyurethane	
Installation frame	Galvanised steel	Gasket of rubber compound
Protection ring	Steel	
Sound attenuator	Mineral wool	
Finishing	Painted White RAL 9010	Special colours available

QUICK SELECTION

qv	l/s m³/h	15	20	25	30	40	50	60	70	80	90	100
		54	72	90	108	144	180	216	252	288	324	360
URH/A-100	LpA	13	20	26	30	37						
	ΔP _{tot}	26	46	72	104	184						
	dP _t	157	152	161	148	-						
URH/A-125	LpA			14	19	27	33	38				
	ΔP _{tot}			31	44	79	123	177				
	dP _t			207	188	165	145	-				
URH/A-160	LpA					15	21	27	32	36		
	ΔP _{tot}					38	59	85	116	152		
	dP _t					176	160	155	147	-		
URH/A-200	LpA						17	21	26	29	33	35
	ΔP _{tot}						39	57	77	102	129	159
	dP _t						147	154	150	154	155	-

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 10m² - sab):
LpA - 4dB.

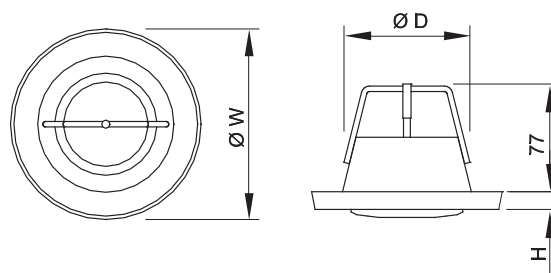
LpA A-weighted sound pressure level, reduced by total equivalent absorption surface of 10m², dB(A) red 10m² - sab
ΔP_{tot} Total pressure drop, Pa
dP_t Maximum ΔP_{tot} (Pa), when a-weighted sound pressure level (Lp) is 35 dB(A)

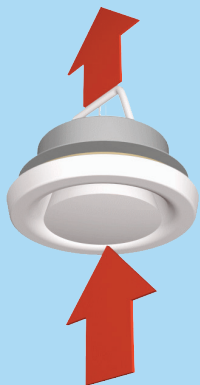
ACCESSORIES

ACCESSORY	CODE	DESCRIPTION
Protection ring	CS	For protection of the surfaces from smudging and for directing the air jet in a grid-structured ceiling
Extension part	EP	Extension part for detaching the valve from the surface/ standard height 50 mm
Installation frame	LF	Installation frame without gasket/height 50 mm
Installation frame	GF	Installation frame with gasket/height 50 mm
Installation frame	DF	Installation frame with duct dimensions can be installed directly to duct parts such as bending or T-branch etc

DIMENSIONS

NS	ØW	H	ØD
100	140	13	96
125	165	13	122
160	200	13	158
200	251	13	198





Function

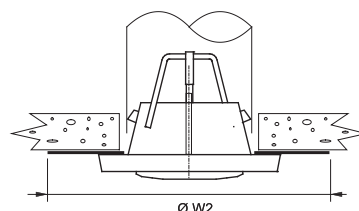
The valve throttles the exhaust airflow and attenuates the duct noise. The pressure drop is dependant on the position of the central cone. The desired exhaust airflow rate is adjusted during the balancing of the airflows in a ductwork system. After the adjustment the valve is locked at the required adjustment position.

Installation

The exhaust valve is mounted with the aid of a separate installation frame LF, GF or DF. Push the installation frame into the duct and fix it. Push the valve into the installation frame and turn until it is firmly attached.

Alternatively model URH/B can be installed directly into a duct without an installation frame.

Installation with protection ring CS



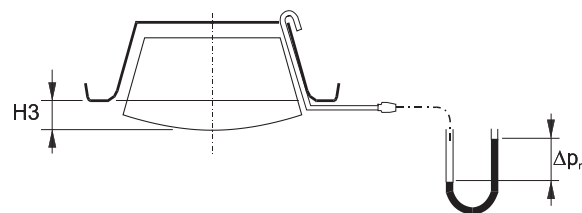
NS	Ø W2
100	290
125	315
150	350
160	350
200	400

Adjustment

The valve is adjusted by rotating the central cone. Measure the opening (A) position (in mm) of the central cone. Set a probe inside the valve and measure the differential pressure with a manometer. The airflow rate is calculated using the formula below.

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

After the adjustment, lock the central cone with the locking nut.



K COEFFICIENTS

URH 100 A	Exhaust 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

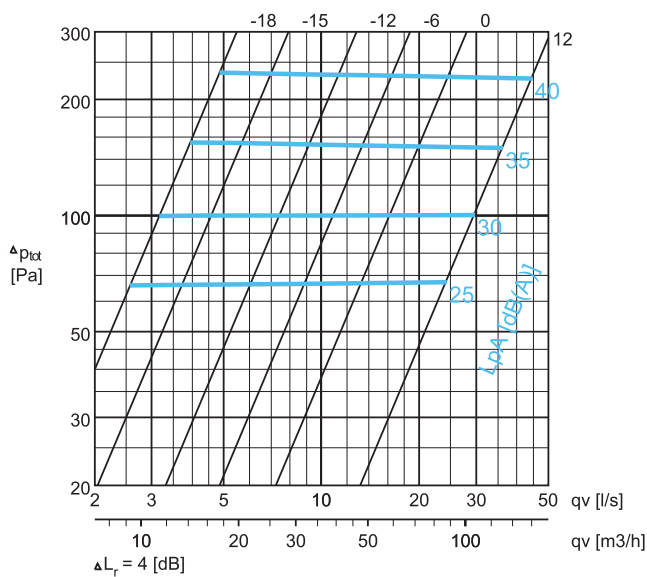
URH 125 A	Exhaust k
-15	0,65
-12	0,92
-9	1,22
-6	1,53
-3	1,84
0	2,17
3	2,52
6	2,83
9	3,14
12	3,46
15	3,77

URH 160 A	Exhaust 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

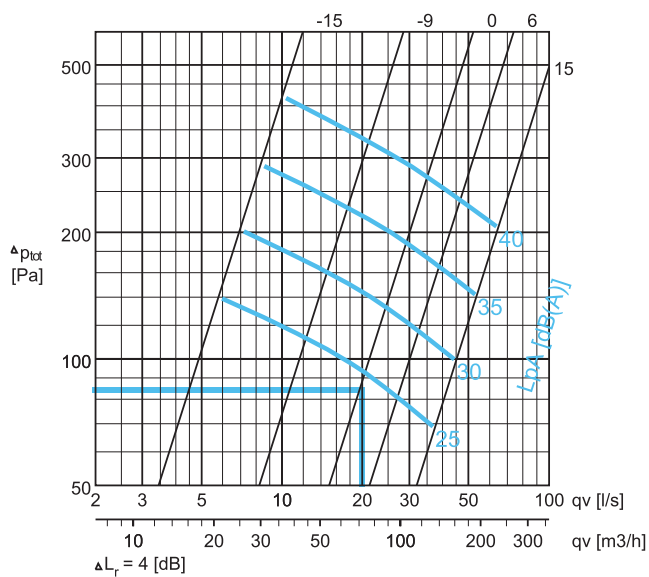
URH 200 A	Exhaust k
3	1,78
6	2,46
9	3,24
12	3,97
15	4,69
20	5,88
25	6,95

URH	←	↶ ↷
100	$\Delta p_m = \Delta p$	$\Delta p_m = \Delta p$
125	$\Delta p_m = \Delta p$	$\Delta p_m = 0,98 \cdot \Delta p$
160	$\Delta p_m = \Delta p$	$\Delta p_m = 1,04 \cdot \Delta p$
200	$\Delta p_m = \Delta p$	$\Delta p_m = 1,04 \cdot \Delta p$

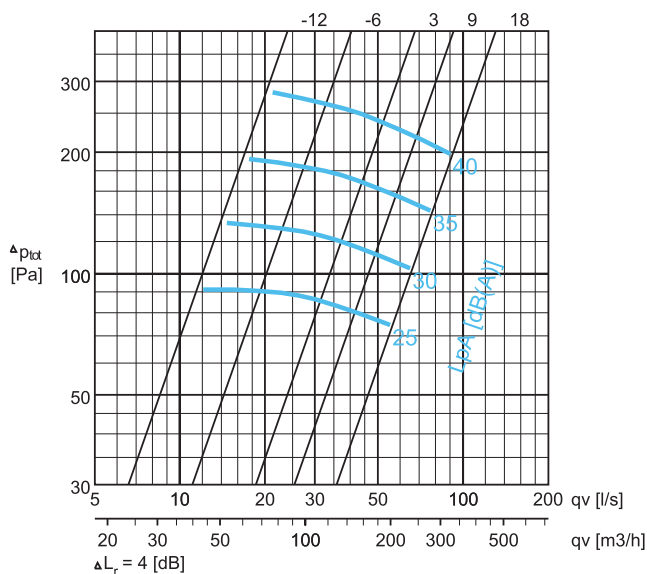
SOUND LEVEL DATA URH-100



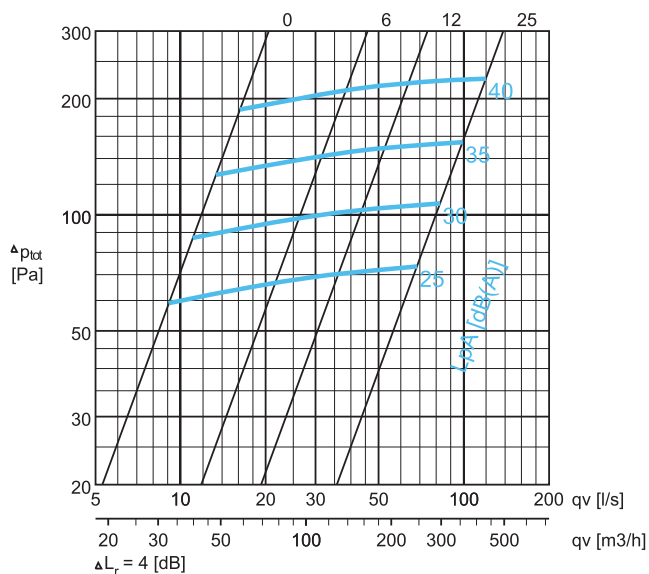
URH-125



URH-160



URH-200



Selection example :

Requirements :

$qv = 20$ l/s
 $\Delta p_{tot} \leq 100$ Pa
 $L_{pA} \leq 30$ dB(A)

Selection : URH-100

$\Delta p_{tot} = 90$ Pa
 $L_{pA} = 24$ dB(A)
 Opening $A = 0$ mm

SOUND ATTENUATION

		qv		ΔPst (Pa)	ΔPtot (Pa)	F (Hz)					LpA [dB(A)]	NR	NC	
		(l/s)	(m³/h)			125	250	500	1000	2000				4000
URH-100	max	3	11	66	66	23	23	23	24	24	13	25	24	21
		3	11	100	100	28	28	28	29	29	18	30	28	26
		4	14	155	155	33	33	33	34	34	23	35	34	31
		5	18	235	235	38	38	38	39	39	28	40	38	36
	min	24	86	73	67	23	23	23	24	24	13	25	24	21
		30	108	109	100	28	28	28	29	29	18	30	29	26
		36	130	162	150	33	33	33	34	34	23	35	34	31
		45	162	245	226	39	39	39	40	40	29	40	39	36
URH-125	max	6	22	139	139	27	25	24	22	25	16	25	24	21
		7	25	201	201	32	30	29	27	30	21	30	29	27
		9	32	288	287	37	35	34	32	35	26	35	34	32
		10	36	417	416	42	40	39	37	40	31	40	39	37
	min	37	133	74	69	27	25	24	22	25	16	25	24	21
		44	158	108	100	32	30	29	27	30	21	30	29	27
		53	191	154	143	37	35	34	32	35	26	35	34	32
		64	230	223	207	42	40	39	37	40	31	40	39	37
URH-160	max	12	43	92	91	27	25	24	26	20	15	25	22	20
		15	54	134	133	32	30	29	31	25	20	30	27	26
		18	65	193	193	37	35	34	36	30	25	35	32	31
		21	76	282	281	42	40	39	41	35	30	40	37	36
	min	55	198	79	75	27	25	24	26	20	15	25	22	20
		65	234	110	103	32	30	29	31	25	20	30	27	26
		77	277	152	144	37	35	34	36	30	25	35	32	31
		90	324	211	199	42	40	39	41	35	30	40	37	36
URH-200	max	9	32	59	59	27	23	24	26	21	12	25	22	20
		11	40	87	87	32	28	29	31	26	17	30	27	26
		13	47	127	127	37	33	34	36	31	22	35	32	31
		16	58	188	187	42	38	39	41	36	27	40	37	36
	min	69	248	76	73	27	23	24	26	21	12	25	22	20
		83	299	111	107	32	28	29	31	26	17	30	27	26
		99	356	160	154	37	33	34	36	31	22	35	32	31
		120	432	235	226	42	38	39	41	36	27	40	37	36

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 25m² - sab): LpA - 4dB.
NR/NC noise criteria

	ΔL([dB]) f[Hz]					
	125	250	500	1000	2000	4000
URH-100	23	18	15	13	11	6
URH-125	18	16	13	11	9	6
URH-160	18	14	10	11	8	7
URH-200	13	12	9	9	8	5



CODE	DESCRIPTION
1	Central cone
2	Locking nut
3	Sleeve

Servicing

Loosen the valve from the ductwork by turning counter-clockwise. Note the adjusted opening position of the central cone.

Wipe the parts with a damp cloth, instead of immersing in water. Reassemble valve in reverse order after cleaning.

Suggested specifications

The URH exhaust valve shall have an adjustable central cone and sleeve made of painted steel, with a white (RAL 9010) standard colour. The URH shall be fitted with a galvanised steel installation frame. The installation frame shall incorporate a sealing gasket.

Alternative: The valve shall be fixed with springs directly into a duct.

The opening position of the central cone shall be adjusted during balancing in order to achieve required pressure loss and airflow rate. After balancing the central cone shall be locked to the selected adjustment position.

Product code

URH/S-D

S = Model

A	Standard
B	With fastening springs

D = Diameter of duct connection
100, 125, 160, 200

Specifics and accessories

CO = Colour

W	White
X	Special colour

Code example

URH/A-100, CO=W

Sub products

DF	Installation frame for duct parts
GF	Installation frame with gasket
LF	Installation frame without gasket
CS	Cover plate (ULA)
EP	Extension part

Pressure drop and sound data, exhaust