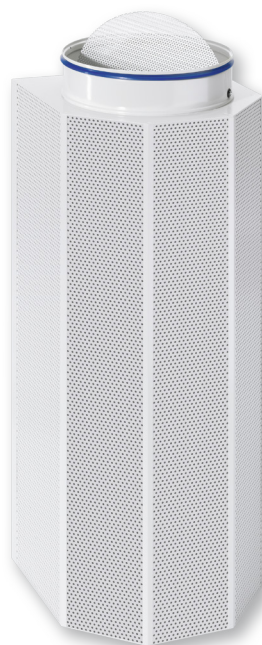


Displacement flow diffusers for installation on a wall

Type QLV



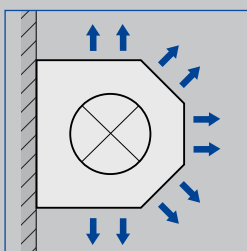
Polygon casing, 90° or 180° air discharge, for comfort and industrial zones

Polygon displacement flow diffusers

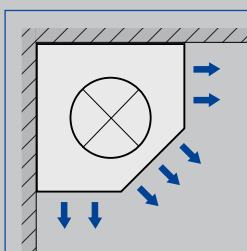
- Spigot diameter 160 – 630 mm, nominal height 500 – 1750 mm
- Volume flow rate range 17 – 915 l/s or 62 – 3295 m³/h
- Perforated plate, square pitch
- Circular duct connection
- Duct connection at the top or bottom
- Integral airflow straightener and conical equalising element

Optional equipment and accessories

- Wall mount
- Damper blade for volume flow rate balancing
- Exposed surface in RAL CLASSIC colours



QLV-180



QLV-90

Type		Page
QLV	General information	QLV – 2
	Function	QLV – 3
	Technical data	QLV – 5
	Quick sizing	QLV – 6
	Specification text	QLV – 11
	Order code	QLV – 12
	Variants	QLV – 13
	Accessories	QLV – 14
	Dimensions and weight	QLV – 15
	Installation details	QLV – 17
	Basic information and nomenclature	QLV – 18

Application

Application

- Type QLV displacement flow diffusers are used as supply air units for industrial and comfort zones
- Attractive design element for building owners and architects with demanding aesthetic requirements
- Floor-standing installation on walls or in corners
- Low-velocity airflow, causing only low levels of induction and resulting in low-turbulence displacement ventilation.
- Excellent air quality in the occupied zone
- Draught-free and economical ventilation and air conditioning also of larger internal spaces such as shop floors or auditoriums, with several

displacement flow diffusers in a regular arrangement

- For variable and constant volume flows
- For supply air to room air temperature differences from –6 to –1 K

Special characteristics

- Three-way or five-way air discharge
- Duct connection at the top or bottom
- Optional damper blade for volume flow rate balancing

Nominal sizes

- ØD: 160, 200, 250, 315, 400, 500, 630 mm
- H: 500, 600, 800, 1000, 1250, 1500, 1750 mm

Description

Variants

- QLV-90: 90° air discharge
- QLV-180: 180° air discharge
- QLV-...-O: Spigot at the top
- QLV-...-U: Spigot at the bottom

Parts and characteristics

- Polygon casing
- Equalising element and airflow straightener that ensure a uniform supply air discharge
- Lip seal, optional for QLV-...-O

Attachments

- Damper blade for volume flow rate balancing

Accessories

- Lip seal
- Wall mount

Construction features

- Spigot suitable for circular ducts to EN 1506 or EN 13180

Materials and surfaces

- Top cover, base, spigot and side parts made of galvanised sheet steel
- S7: Top cover and base made of aluminium
- Corner and edge trims are extruded aluminium sections
- Airflow straightener made of plastic
- Equalising element made of synthetic fibres
- Lip seal made of rubber
- Surface powder-coated RAL 9010, pure white
- P1: Powder-coated, RAL CLASSIC colour
- S7: Surface galvanised

Standards and guidelines

- Sound power level of the air-regenerated noise measured according to EN ISO 5135

Maintenance

- Maintenance-free as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

Functional description

Displacement flow diffusers discharge the air from air conditioning systems with a low velocity and near the floor. The low-turbulence airflow creates a pool of fresh air that covers the entire floor area. The convection from people and other heat sources causes the fresh air from the pool to rise and create comfortable conditions in the occupied zone.

This draught-free and economical type of ventilation is also suitable for large internal spaces, such as auditoriums or shop floors, with several regularly arranged units. Displacement ventilation is characterised by low airflow velocities and low turbulence. The air

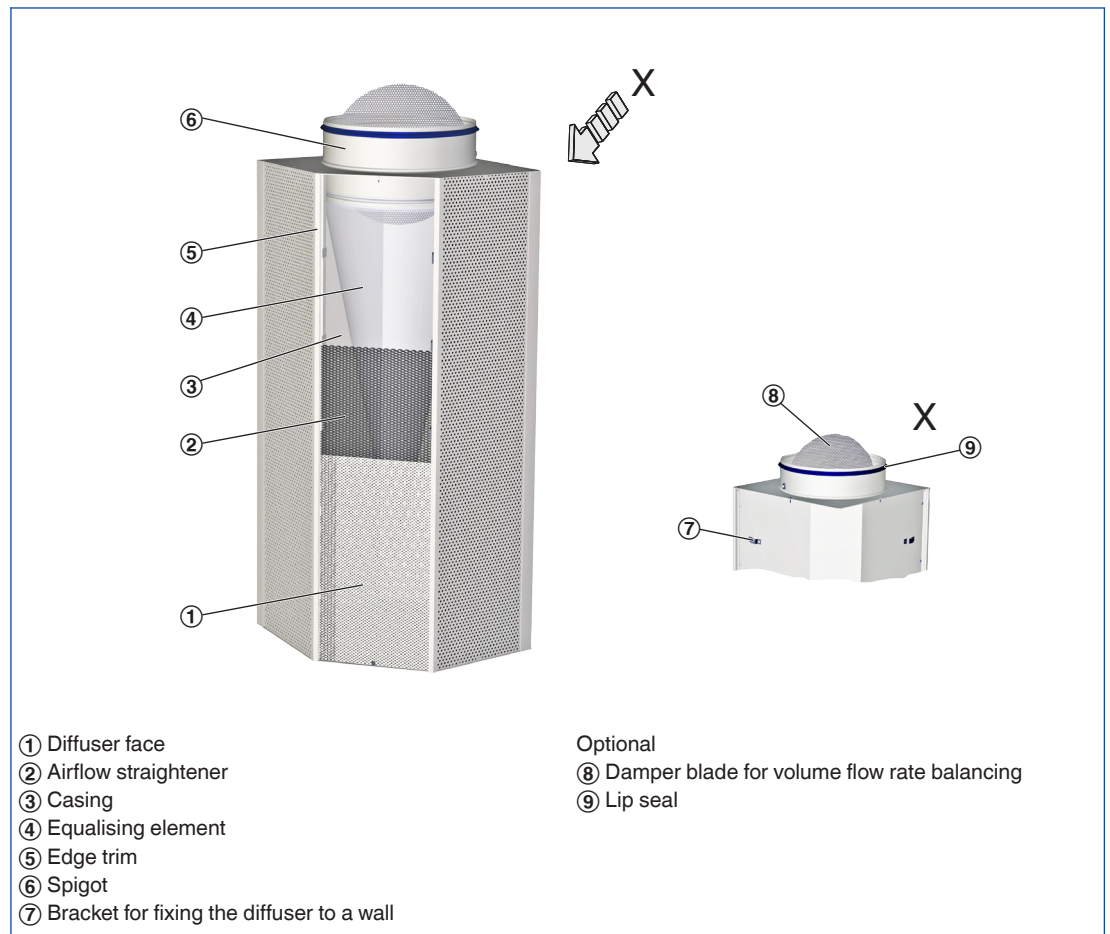
quality in the occupied zone is very high.

Displacement ventilation with air discharge near the floor is suitable only for cooling. The maximum supply air to room air temperature difference is -6 K.

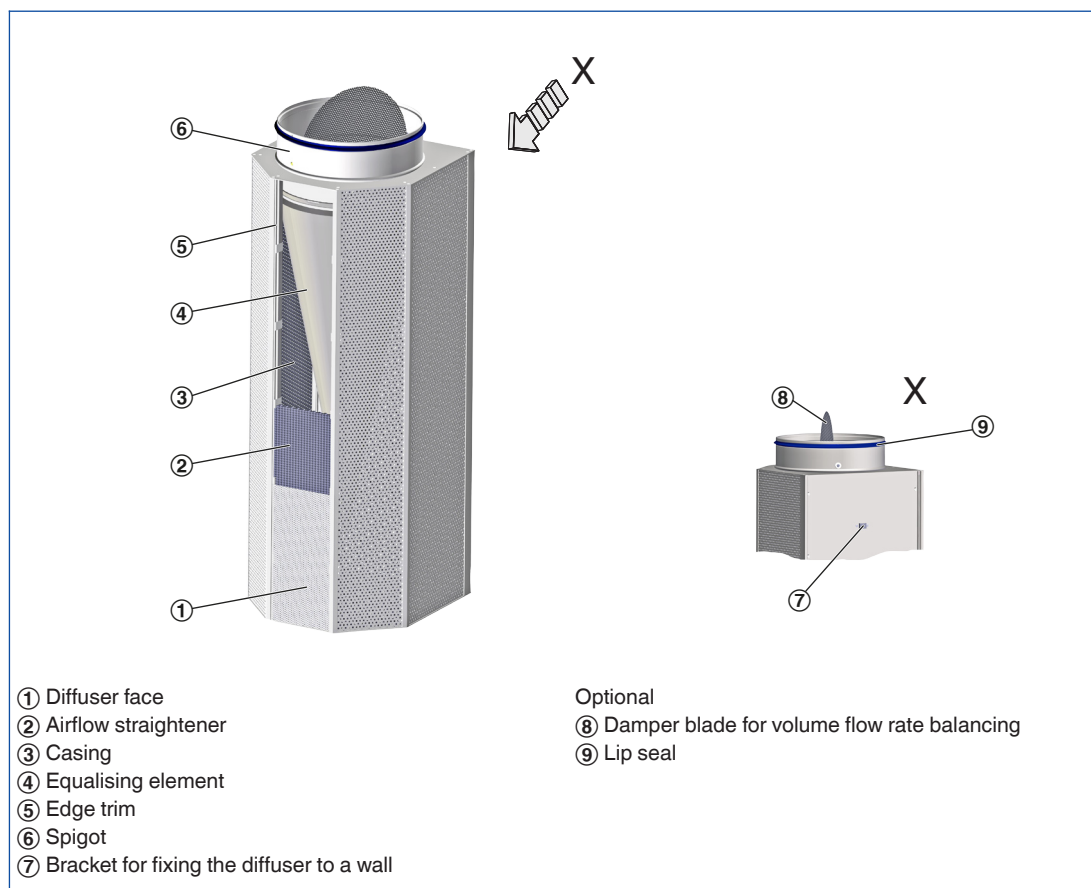
Type QLV displacement flow diffusers include an equalising element and air straightener that ensure a uniform air distribution across the entire diffuser area. The perforated sheet metal diffuser face helps to equalise the airflow further. Three-way (90°) or five-way (180°) air discharge.

With displacement ventilation, i.e. air discharge near the floor, extract air units should be installed in the upper part of a room, above the occupied zone.

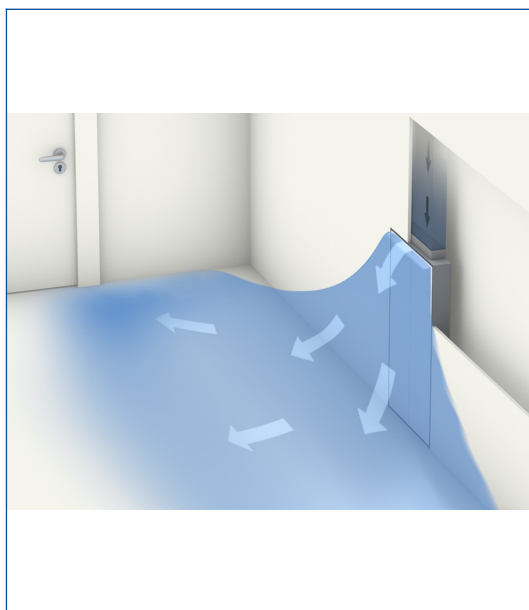
Schematic illustration of QLV-90 with circular spigot at the top



Schematic illustration of QLV-180 with circular spigot at the top

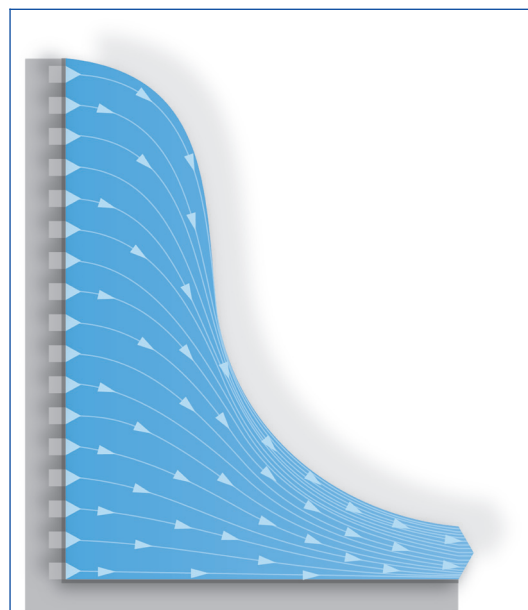


Low-turbulence displacement ventilation airflow pattern



Three-dimensional representation

Low-turbulence displacement ventilation airflow pattern



Side view

Nominal sizes	160 × 500 to 630 × 1750 mm
Minimum volume flow rate, at 0.1 m/s	17 – 305 l/s or 62 – 1098 m ³ /h
Maximum volume flow rate, at 0.3 m/s	52 – 915 l/s or 185 – 3295 m ³ /h
Supply air to room air temperature difference	–6 to –1 K
Sound power level, at 0.3 m/s	43 dB(A) max.

Quick sizing tables provide a good overview of the volume flow rates and corresponding sound power levels and differential pressures.

QLV-90, height 500 – 800, sound power level, total differential pressure and near zone

Nominal size	\dot{V} l/s	\dot{V} m ³ /h	v_0 m/s	Damper blade position						L_{nz} m
				0°		45°		90°		
				Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	
				Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	
160 × 500	17	62	0.10	<3	<15	3	<15	5	<15	<
	26	93	0.15	4	<15	6	<15	11	<15	<
	34	124	0.20	7	<15	11	<15	20	16	<
	52	185	0.30	16	<15	25	21	45	28	<
200 × 500	21	75	0.10	<3	<15	<3	<15	3	<15	<
	31	113	0.15	3	<15	4	<15	7	<15	<
	42	151	0.20	4	<15	7	<15	13	<15	<
	63	226	0.30	10	<15	17	16	28	23	<
250 × 500	26	92	0.10	<3	<15	<3	<15	<3	<15	<
	39	139	0.15	<3	<15	3	<15	5	<15	<
	51	185	0.20	3	<15	5	<15	8	<15	<
	77	277	0.30	7	<15	11	<15	18	19	<
160 × 600	21	74	0.10	<3	<15	4	<15	7	<15	<
	31	111	0.15	5	<15	9	<15	16	<15	<
	41	149	0.20	9	<15	16	<15	28	21	<
	62	223	0.30	20	19	35	26	62	32	<
200 × 600	25	91	0.10	<3	<15	<3	<15	4	<15	<
	38	136	0.15	3	<15	6	<15	10	<15	<
	50	181	0.20	6	<15	10	<15	17	16	<
	75	272	0.30	13	<15	22	21	39	28	<
250 × 600	31	111	0.10	<3	<15	<3	<15	3	<15	<
	46	167	0.15	<3	<15	4	<15	6	<15	<
	62	222	0.20	4	<15	7	<15	11	<15	<
	93	333	0.30	9	<15	15	16	25	23	<
315 × 600	38	138	0.10	<3	<15	<3	<15	<3	<15	<
	57	206	0.15	<3	<15	<3	<15	4	<15	<
	76	275	0.20	3	<15	4	<15	7	<15	<
	115	413	0.30	6	<15	10	<15	16	19	<
160 × 800	28	99	0.10	4	<15	7	<15	12	<15	<
	41	149	0.15	8	<15	15	<15	27	20	<
	55	198	0.20	14	<15	26	23	47	28	<
	83	298	0.30	32	26	59	34	107	40	<
200 × 800	34	121	0.10	<3	<15	4	<15	7	<15	<
	50	181	0.15	5	<15	9	<15	17	16	<
	67	242	0.20	9	<15	17	17	30	24	<
	101	363	0.30	20	21	38	29	66	35	<
250 × 800	41	148	0.10	<3	<15	3	<15	5	<15	<
	62	223	0.15	3	<15	6	<15	11	<15	<
	82	297	0.20	6	<15	11	<15	19	20	<
	124	445	0.30	13	16	24	24	42	31	<
315 × 800	51	184	0.10	<3	<15	<3	<15	3	<15	<
	77	276	0.15	<3	<15	4	<15	7	<15	<
	102	367	0.20	4	<15	7	<15	12	15	<
	153	551	0.30	9	<15	16	18	27	27	<
400 × 800	64	230	0.10	<3	<15	<3	<15	<3	<15	<
	96	344	0.15	<3	<15	3	<15	4	<15	<
	128	459	0.20	<3	<15	5	<15	7	<15	<
	191	689	0.30	6	<15	10	<15	17	22	<

<: 0.2 m/s are not achieved

The near zone values are based on a supply air to room air temperature difference of –3 K

QLV-90, height 1000 – 1250, sound power level, total differential pressure and near zone

Nominal size	\dot{V} l/s	\dot{V} m ³ /h	v_0 m/s	Damper blade position						L_{nz} m
				0°		45°		90°		
				Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	
160 × 1000	34	124	0.10	5	<15	10	<15	18	<15	0.8
	52	186	0.15	11	<15	22	21	40	26	1.0
	69	248	0.20	20	21	40	29	72	34	<
	103	373	0.30	46	32	89	40	162	45	<
200 × 1000	42	151	0.10	3	<15	6	<15	11	<15	0.8
	63	227	0.15	7	<15	14	15	25	22	1.0
	84	303	0.20	13	15	25	23	45	30	<
	126	454	0.30	29	27	56	35	100	41	<
250 × 1000	52	186	0.10	<3	<15	4	<15	7	<15	0.8
	77	279	0.15	5	<15	9	<15	16	17	1.0
	103	372	0.20	8	<15	16	18	28	25	<
	155	557	0.30	18	21	36	30	63	37	<
315 × 1000	64	230	0.10	<3	<15	3	<15	4	<15	0.8
	96	345	0.15	3	<15	6	<15	10	<15	1.0
	128	460	0.20	5	<15	10	<15	18	21	<
	192	690	0.30	12	16	23	24	40	32	<
400 × 1000	80	287	0.10	<3	<15	<3	<15	3	<15	0.8
	120	431	0.15	<3	<15	4	<15	6	<15	1.0
	160	574	0.20	3	<15	7	<15	11	17	<
	239	862	0.30	8	<15	15	19	25	28	<
500 × 1000	98	354	0.10	<3	<15	<3	<15	<3	<15	0.8
	147	531	0.15	<3	<15	3	<15	4	<15	1.0
	197	708	0.20	<3	<15	4	<15	7	<15	<
	295	1062	0.30	5	<15	10	<15	16	24	<
315 × 1250	80	288	0.10	<3	<15	4	<15	7	<15	1.1
	120	431	0.15	4	<15	9	<15	15	19	1.4
	160	575	0.20	7	<15	15	19	26	27	1.6
	240	863	0.30	16	22	34	30	60	38	2.0
400 × 1250	100	359	0.10	<3	<15	<3	<15	4	<15	1.1
	150	539	0.15	3	<15	5	<15	9	<15	1.4
	200	719	0.20	5	<15	10	<15	16	22	1.6
	299	1078	0.30	10	16	22	25	37	34	2.0
500 × 1250	123	443	0.10	<3	<15	<3	<15	3	<15	1.1
	184	664	0.15	<3	<15	4	<15	6	<15	1.4
	246	886	0.20	3	<15	6	<15	11	18	1.6
	369	1328	0.30	7	<15	15	20	24	30	2.0
630 × 1250	153	551	0.10	<3	<15	<3	<15	<3	<15	1.1
	230	827	0.15	<3	<15	<3	<15	4	<15	1.4
	306	1103	0.20	<3	<15	4	<15	7	<15	1.6
	459	1654	0.30	5	<15	10	15	15	25	2.0

<: 0.2 m/s are not achieved

The near zone values are based on a supply air to room air temperature difference of -3 K

QLV-90, height 1500 – 1750, sound power level, total differential pressure and near zone

Nominal size	\dot{V} l/s	\dot{V} m ³ /h	v_0 m/s	Damper blade position						L_{nz} m
				0°		45°		90°		
				Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	
400 × 1500	120	432	0.10	<3	<15	3	<15	6	<15	1.5
	180	647	0.15	3	<15	8	<15	13	19	1.8
	240	863	0.20	6	<15	13	19	23	27	2.1
	360	1295	0.30	14	21	30	30	51	38	2.7
500 × 1500	148	532	0.10	<3	<15	<3	<15	4	<15	1.5
	222	797	0.15	<3	<15	5	<15	8	<15	1.8
	295	1063	0.20	4	<15	9	<15	15	23	2.1
	443	1595	0.30	9	15	20	25	33	34	2.7
630 × 1500	184	662	0.10	<3	<15	<3	<15	<3	<15	1.5
	276	993	0.15	<3	<15	3	<15	5	<15	1.8
	368	1324	0.20	3	<15	6	<15	9	19	2.1
	552	1986	0.30	6	<15	13	20	21	30	2.7
630 × 1750	215	773	0.10	<3	<15	<3	<15	3	<15	1.9
	322	1159	0.15	<3	<15	4	<15	7	<15	2.4
	429	1545	0.20	3	<15	8	<15	12	23	2.8
	644	2318	0.30	7	<15	17	24	28	34	3.6

<: 0.2 m/s are not achieved.

The near zone values are based on a supply air to room air temperature difference of –3 K.

QLV-180, height 500 – 600, sound power level, total differential pressure and near zone

Nominal size	\dot{V} l/s	\dot{V} m ³ /h	v_0 m/s	Damper blade position						L_{nz} m
				0°		45°		90°		
				Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	Δp_t Pa	L_{WA} dB(A)	
160 × 500	25	89	0.10	3	<15	5	<15	10	<15	<
	37	134	0.15	8	<15	12	<15	23	20	<
	49	178	0.20	13	<15	22	21	40	28	<
	74	267	0.30	30	25	49	32	91	39	<
200 × 500	30	108	0.10	<3	<15	3	<15	6	<15	<
	45	162	0.15	5	<15	8	<15	14	15	<
	60	217	0.20	9	<15	14	15	25	23	<
	90	325	0.30	19	19	31	27	57	35	<
250 × 500	37	132	0.10	<3	<15	<3	<15	4	<15	<
	55	198	0.15	3	<15	5	<15	9	<15	<
	73	263	0.20	6	<15	9	<15	16	19	<
	110	395	0.30	13	<15	20	21	36	30	<
160 × 600	30	107	0.10	4	<15	8	<15	14	<15	<
	45	160	0.15	10	<15	17	17	32	24	<
	59	214	0.20	17	18	30	26	56	32	<
	89	320	0.30	39	29	68	37	126	44	<
200 × 600	36	130	0.10	3	<15	5	<15	9	<15	<
	54	195	0.15	6	<15	11	<15	20	20	<
	72	260	0.20	11	<15	19	20	35	28	<
	108	390	0.30	25	24	43	32	79	39	<
250 × 600	44	158	0.10	<3	<15	3	<15	5	<15	<
	66	237	0.15	4	<15	7	<15	12	15	<
	88	316	0.20	7	<15	12	<15	22	23	<
	132	474	0.30	16	18	27	26	49	35	<
315 × 600	54	196	0.10	<3	<15	<3	<15	3	<15	<
	82	294	0.15	3	<15	4	<15	8	<15	<
	109	391	0.20	5	<15	8	<15	14	19	<
	163	587	0.30	11	<15	18	21	31	30	<

<: 0.2 m/s are not achieved

The near zone values are based on a supply air to room air temperature difference of –3 K

QLV-180, height 800 – 1000, sound power level, total differential pressure and near zone

Nominal size	\dot{V}	\dot{V}	v_0	Damper blade position						L_{nz}	
				0°		45°		90°			
				Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}		
				Pa	dB(A)	Pa	dB(A)	Pa	dB(A)		
	l/s	m³/h	m/s								m
160 × 800	40	142	0.10	7	<15	13	<15	24	21	<	
	59	214	0.15	16	17	29	25	54	32	<	
	79	285	0.20	28	25	51	33	96	40	<	
	119	427	0.30	63	37	116	45	216	51	<	
200 × 800	48	173	0.10	4	<15	8	<15	15	16	<	
	72	260	0.15	10	<15	18	20	33	27	<	
	96	346	0.20	18	20	32	28	59	36	<	
	144	520	0.30	39	31	72	39	134	47	<	
250 × 800	59	211	0.10	3	<15	5	<15	9	<15	<	
	88	316	0.15	6	<15	11	<15	21	23	<	
	117	421	0.20	11	<15	20	23	37	31	<	
	176	632	0.30	25	26	46	34	83	42	<	
315 × 800	72	261	0.10	<3	<15	3	<15	6	<15	<	
	109	391	0.15	4	<15	7	<15	13	19	<	
	145	522	0.20	7	<15	13	18	23	27	<	
	217	783	0.30	16	20	29	29	52	38	<	
400 × 800	91	326	0.10	<3	<15	<3	<15	4	<15	<	
	136	489	0.15	3	<15	5	<15	8	<15	<	
	181	652	0.20	5	<15	8	<15	15	22	<	
	272	978	0.30	10	<15	19	24	33	33	<	
160 × 1000	49	178	0.10	10	<15	20	20	37	26	0.8	
	74	267	0.15	22	23	44	31	82	38	1.0	
	99	356	0.20	40	31	78	39	146	46	<	
	148	534	0.30	90	43	176	51	329	57	<	
200 × 1000	60	217	0.10	6	<15	12	<15	22	22	0.8	
	90	325	0.15	14	17	27	26	51	33	1.0	
	120	433	0.20	25	25	49	34	90	41	<	
	180	650	0.30	56	37	109	45	202	53	<	
250 × 1000	73	263	0.10	4	<15	8	<15	14	17	0.8	
	110	395	0.15	9	<15	17	21	31	29	1.0	
	146	527	0.20	16	20	30	29	55	37	<	
	219	790	0.30	35	31	68	40	125	48	<	
315 × 1000	91	326	0.10	<3	<15	5	<15	9	<15	0.8	
	136	489	0.15	6	<15	11	15	19	24	1.0	
	181	652	0.20	10	<15	19	23	35	32	<	
	272	978	0.30	22	26	43	35	78	44	<	
400 × 1000	113	408	0.10	<3	<15	3	<15	5	<15	0.8	
	170	611	0.15	4	<15	7	<15	12	20	1.0	
	226	815	0.20	6	<15	12	18	22	28	<	
	340	1223	0.30	14	20	27	29	48	39	<	
500 × 1000	140	503	0.10	<3	<15	<3	<15	3	<15	0.8	
	210	755	0.15	<3	<15	5	<15	8	16	1.0	
	280	1006	0.20	4	<15	8	<15	14	24	<	
	419	1509	0.30	9	<15	18	25	31	35	<	

<: 0.2 m/s are not achieved

The near zone values are based on a supply air to room air temperature difference of -3 K

QLV-180, height 1250 – 1750, sound power level, total differential pressure and near zone

Nominal size	\dot{V}	\dot{V}	v_0	Damper blade position						L_{nz}	
				0°		45°		90°			
				Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}		
				Pa	dB(A)	Pa	dB(A)	Pa	dB(A)		
	l/s	m ³ /h	m/s								m
315 × 1250	113	408	0.10	3	<15	7	<15	13	19	1.1	
	170	612	0.15	8	<15	16	21	29	30	1.4	
	227	815	0.20	14	20	29	29	52	38	1.6	
	340	1223	0.30	31	32	65	41	117	49	1.9	
400 × 1250	142	509	0.10	<3	<15	5	<15	8	<15	1.1	
	212	764	0.15	5	<15	10	16	18	25	1.4	
	283	1019	0.20	9	<15	18	24	32	34	1.6	
	425	1528	0.30	20	26	41	35	72	45	2.0	
500 × 1250	175	629	0.10	<3	<15	3	<15	5	<15	1.1	
	262	943	0.15	3	<15	7	<15	12	21	1.4	
	349	1258	0.20	6	<15	12	19	21	29	1.7	
	524	1887	0.30	13	21	27	31	47	41	2.1	
630 × 1250	218	785	0.10	<3	<15	<3	<15	3	<15	1.1	
	327	1177	0.15	<3	<15	4	<15	7	17	1.4	
	436	1569	0.20	4	<15	8	<15	13	25	1.7	
	654	2354	0.30	9	15	18	26	30	37	2.1	
400 × 1500	170	611	0.10	3	<15	6	<15	11	19	1.5	
	255	917	0.15	6	<15	14	21	25	30	1.8	
	340	1223	0.20	12	19	25	29	45	38	2.2	
	509	1834	0.30	26	31	57	40	101	50	2.7	
500 × 1500	210	755	0.10	<3	<15	4	<15	7	<15	1.5	
	314	1132	0.15	4	<15	9	16	16	26	1.9	
	419	1509	0.20	8	<15	16	24	29	34	2.2	
	629	2264	0.30	17	25	37	36	65	46	2.8	
630 × 1500	262	941	0.10	<3	<15	3	<15	5	<15	1.5	
	392	1412	0.15	3	<15	6	<15	10	22	1.9	
	523	1883	0.20	5	<15	11	19	18	30	2.3	
	785	2824	0.30	11	20	24	31	41	41	2.9	
630 × 1750	305	1098	0.10	<3	<15	3	<15	6	<15	1.9	
	458	1648	0.15	3	<15	8	15	14	26	2.5	
	610	2197	0.20	6	<15	14	23	24	34	3.0	
	915	3295	0.30	14	24	31	35	54	45	4.0	

<: 0.2 m/s are not achieved.

The near zone values are based on a supply air to room air temperature difference of –3 K.

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Displacement flow diffusers for air discharge near the floor, suitable for comfort and industrial zones with special demands on architecture and design. With three-way (90°) or five-way (180°) air discharge for low-turbulence displacement ventilation. Polygon casing for installation on a wall.

Ready-to-install component which consists of a casing with spigot at the top or bottom, an equalising element and airflow straightener that ensure uniform supply air discharge, and a perforated sheet metal diffuser face. Spigot suitable for circular ducts.

Spigot suitable for ducts to EN 13180.

Sound power level of the air-regenerated noise measured according to EN ISO 5135.

Special characteristics

- Three-way or five-way air discharge
- Duct connection at the top or bottom
- Optional damper blade for volume flow rate balancing

Materials and surfaces

- Top cover, base, spigot and side parts made of galvanised sheet steel
- S7: Top cover and base made of aluminium

- Corner and edge trims are extruded aluminium sections
- Airflow straightener made of plastic
- Equalising element made of synthetic fibres
- Lip seal made of rubber
- Surface powder-coated RAL 9010, pure white
- P1: Powder-coated, RAL CLASSIC colour
- S7: Surface galvanised

Technical data

- Nominal sizes: 160 × 500 to 630 × 1750 mm
- Minimum volume flow rate, at 0.1 m/s:
17 – 305 l/s or 62 – 1098 m³/h
- Maximum volume flow rate, at 0.3 m/s:
52 – 915 l/s or 185 – 3295 m³/h
- Supply air to room air temperature difference:
-6 to -1 K
- Sound power level, at 0.3 m/s: 43 dB(A) max.

Sizing data

- \dot{V} _____
[m³/h]
- Δp_t _____
[Pa]
- Air-regenerated noise
- L_{WA} _____
[dB(A)]

QLV

QLV – 180 – O – M – L / 250 × 600 / W0 / P1 – RAL ...							
1	2	3	4	5	6	7	8

1 Type

QLV Displacement flow diffuser

2 Air discharge

90 Three-way

180 Five-way

3 Connection

Circular spigot

O Top

U Bottom

4 Damper blade for volume flow rate balancing

No entry: none

M With

5 Lip seal

No entry: none

L With (only for top spigot)

Bottom spigots always have a lip seal

6 Nominal size [mm]

ØD × H

Spigot diameter × nominal height

7 Fixing

No entry: none

W0 With material for wall fixing

8 Exposed surface

No entry: powder-coated

RAL 9010, pure white

P1 Powder-coated, specify RAL CLASSIC colour

S7 Uncoated (galvanised steel, untreated aluminium)

Gloss level

RAL 9010 50 %

RAL 9006 30 %

All other RAL colours 70 %

Order example: QLV-180-U/250×500/P1-RAL 9016

Air discharge	Five-way
Connection	Circular spigot at the bottom
Damper blade for volume flow rate balancing	Without
Lip seal	Without
Nominal size	250 × 500 mm
Fixing	Without
Exposed surface	RAL 9016, traffic white, gloss level 70 %

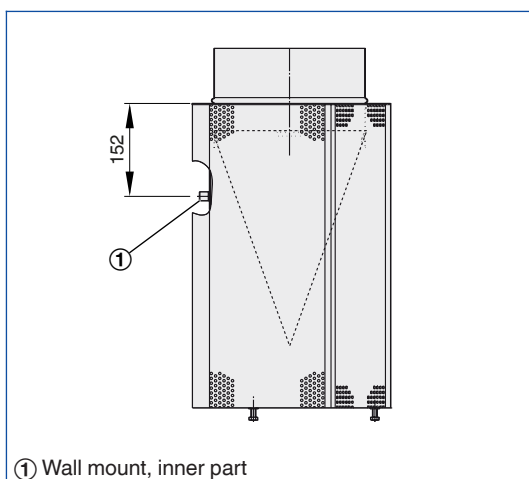
QLV-90-U



QLV-180-O

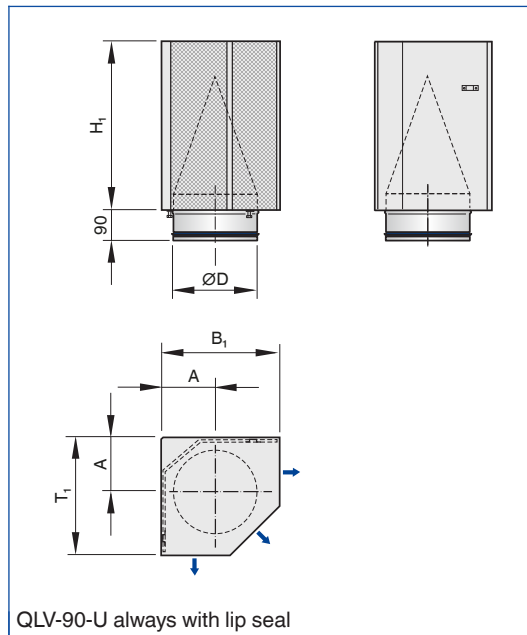


Wall fixing

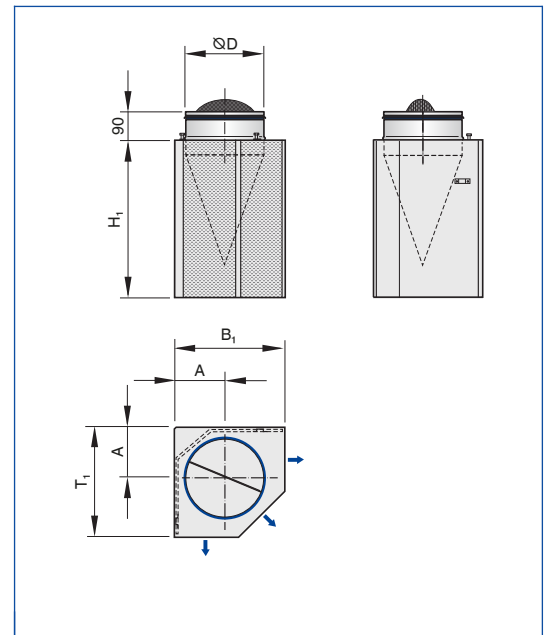


The nominal size (nominal width x nominal height) is equal to the discharge opening.

QLV-90-U



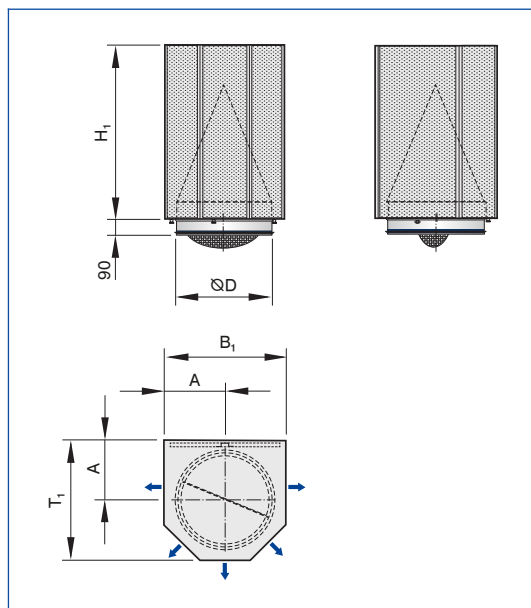
QLV-90-O



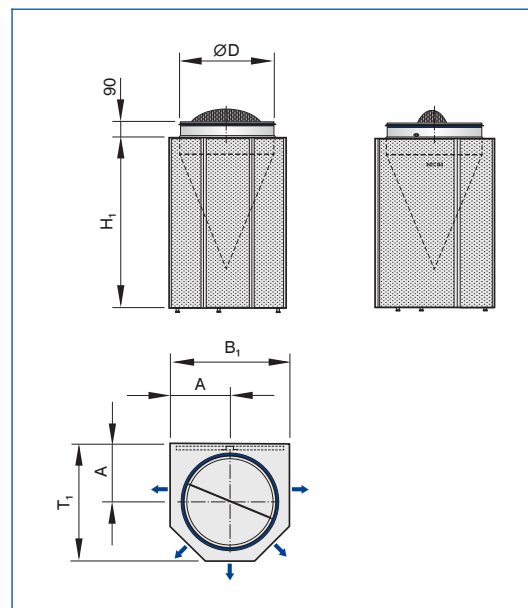
QLV-90

Nominal size	B ₁ mm	H ₁ mm	T ₁ mm	ØD mm	A mm	m kg
160x500	250	500	250	158	115	6
200x500	295	500	295	198	135	6
250x500	350	500	350	248	160	8
160x600	250	600	250	158	115	9
200x600	295	600	295	198	135	7
250x600	350	600	350	248	160	8
315x600	420	600	420	313	193	9
160x800	250	800	250	158	115	11
200x800	295	800	295	198	135	8
250x800	350	800	350	248	160	9
315x800	420	800	420	313	193	11
400x800	510	800	510	398	235	13
160x1000	250	1000	250	158	115	12
200x1000	295	1000	295	198	135	14
250x1000	350	1000	350	248	160	16
315x1000	420	1000	420	313	193	21
400x1000	510	1000	510	398	235	18
500x1000	615	1000	615	498	285	20
315x1250	420	1250	420	313	193	26
400x1250	510	1250	510	398	235	29
500x1250	615	1250	615	498	285	25
630x1250	750	1250	750	628	350	32
400x1500	510	1500	510	398	235	37
500x1500	615	1500	615	498	285	41
630x1500	750	1500	750	628	350	46
630x1750	750	1750	750	628	350	51

QLV-180-U



QLV-180-O



QLV-180

Nominal size	B ₁ mm	H ₁ mm	T ₁ mm	ØD mm	A mm	m kg
160x500	240	500	235	158	115	6
200x500	280	500	275	198	135	7
250x500	330	500	325	248	160	8
160x600	240	600	235	158	115	10
200x600	280	600	275	198	135	7
250x600	330	600	325	248	160	8
315x600	395	600	390	313	193	9
160x800	240	800	235	158	115	11
200x800	280	800	275	198	135	8
250x800	330	800	325	248	160	9
315x800	395	800	390	313	193	11
400x800	480	800	475	398	235	13
160x1000	240	1000	235	158	115	12
200x1000	280	1000	275	198	135	14
250x1000	330	1000	325	248	160	16
315x1000	395	1000	390	313	193	20
400x1000	480	1000	475	398	235	17
500x1000	580	1000	575	498	285	20
315x1250	395	1250	390	313	193	25
400x1250	480	1250	475	398	235	28
500x1250	580	1250	575	498	285	25
630x1250	710	1250	705	628	350	31
400x1500	480	1500	475	398	235	35
500x1500	580	1500	575	498	285	39
630x1500	710	1500	705	628	350	44
630x1750	710	1750	705	628	350	49

Installation and commissioning

- With displacement ventilation and air discharge near the floor, extract air devices should be installed in the upper part of a room, above the occupied zone.
- If necessary, carry out volume flow rate balancing with the damper blade

Principal dimensions

 B_1 [mm]

Width of diffuser face

 B_4 [mm]

Width of a rectangular spigot

 $\varnothing D$ [mm]

Outer diameter of the spigot

 $\varnothing D_1$ [mm]

Casing diameter

 H_1 [mm]

Height of diffuser face

 T_1 [mm]

Casing depth

 T_4 [mm]

Depth of a rectangular spigot

 m [kg]

Weight

Nomenclature

 L_{WA} [dB(A)]

A-weighted sound power level of air-regenerated noise

 \dot{V} [m^3/h] and [l/s]

Volume flow rate

 v_0 [m/s]

Theoretical airflow velocity across the diffuser area, at a distance of 0 m from the diffuser face

 L_{nz} [m]

Near zone of the displacement flow diffuser, where the comfort criteria may not be achieved
The near zone is at least 0.5 m, independent of

the airflow velocity

At distance L_{nz} the airflow velocity is 0.2 m/s max., measured 0.1 m above the floor

 Δt_z [K]

Supply air to room air temperature difference, i.e. supply air temperature minus room temperature

 Δp_t [Pa]

Total differential pressure

 A_{eff} [m^2]

Effective air discharge area

All sound power levels are based on 1 pW.