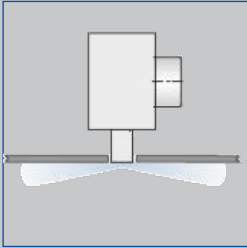
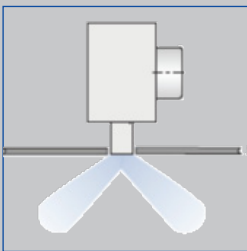




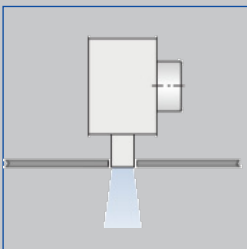
New design possibilities with white, grey and black air control blades



Horizontal airflow



Slanted airflow



Vertical airflow

Slot diffusers for ceiling installation Type PURELINE35



The clean solution for significantly lower ceiling contamination

Perfectly integrable slot diffuser with sleek appearance – for discreet installation in the suspended ceiling

- Very high comfort due to lower sound power levels and improved temperature and speed reduction
- Improved energy efficiency due to lower pressure losses
- Simple and fast installation – tool-free fastening of the front rail
- New areas of application – including as air curtains for food counters
- High flexibility thanks to numerous standard variants

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	Technical data	PL35 – 7
	Quick sizing	PL35 – 8
	Specification text	PL35 – 12
	Order code	PL35 – 13
	Variants	PL35 – 16
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	Installation examples	PL35 – 24
	Installation details	PL35 – 25
	Commissioning	PL35 – 28
	Basic information and nomenclature	PL35 – 29

Application

Application

- Type PURELINE35 slot diffusers are used as supply air or extract air devices in comfort zones
- Suitable as mixed ventilation system for many applications due to the variety of variants and high flexibility
- Discreet integration in suspended ceilings
- For rooms up to approx. 4 m in height (bottom edge of finished ceiling)
- For suspended ceilings, even with low gaps, due to the low height of the plenum box
- One-way or alternate air distribution can be adapted to the structural conditions on site
- High induction causes rapid reduction of temperature difference and airflow velocity (with supply air)
- For constant and variable volume flow rates
- For supply air to room air temperature differences of –10 to +10 K

Special features

- Uniform air pattern reduces dirt deposits due to induced compartment air on the ceiling
- Horizontal, slanted or vertical supply air distribution through manually adjustable air control blades
- Comfortable room climate due to high induction and rapid reduction of temperature differences and airflow velocities
- High-quality appearance due to surface-treated extruded aluminium sections with anodised or powder coating according to RAL Classic colour scale
- Face plate optimised for maximum volume flow at low sound power levels
- Continuous linear arrangement possible for continuous visual appearance

Nominal sizes

- L_N : 600, 750, 900, 1050, 1200, 1350, 1500, 1650, 1800, 1950 mm
- Front rail can also be ordered in mm steps, also in intermediate lengths

Description

Variants

- PL35-*: 1 to 4 slots
- PL35-*DF: Only front rail with B00 section and spring clip
- PL35-*DS: Only front rail with B00 section and screw fixing
- PL35-*PB: Only plenum box (for combination with DS)
- PL35-*PF: Combination of front rail and plenum box with fixed connection
- PL35-*SF: Combination of front rail and plenum box with releasable screw fixing
- PL35-*CS: Corner section

Position of plenum box on the front diffuser

- Central position of the plenum box
- Plenum box left (LE)
- Plenum box right (RI)

Plenum box variant

- Symmetrical plenum box with horizontal connection (HS)
- Symmetrical plenum box with vertical connection (VS)
- Asymmetrical plenum box with horizontal connection (HA)

Construction

Diffuser face finish

- With anodised finish, E6-C-0, natural colour
- P1: Powder-coated RAL 9010, pure white, gloss level 50 %
- P1: Powder-coated RAL 9006, white aluminium, gloss level 30 %
- P1: Powder-coated in additional RAL CLASSIC colours, gloss level 70 %

Attachments

- D: Damper unit for volume flow rate balancing
- LS: Lip seal
- L: Internal lining
- EP: Two end plates
- EA: Two end angles

The end plates or end angles of individual devices are already mounted at the factory. Either end plates or end angles can be used as the end piece.

Accessories

- EP: Two end plates
- EA: Two end angles

For devices that are mounted in a continuous linear arrangement, the end plates or end angles must be ordered separately and installed on site. 2 Alignment plates for connecting the slot diffusers to each other are supplied loose with each slot diffuser without a factory-fitted end piece.

Construction features

- Spigot matching round ducting according to EN 1506 or EN 13180
- 4 suspension points on the plenum box for fixing to be performed by others
- Manually adjustable air control blades with detent for defined adjustment of the air distribution
- Factory-set air distribution, manually adjustable on site
- Spigot with bead for lip seal (only for accessories with lip seal)
- Front rail available in mm steps between 600 and 1950 mm
- If the front rail is longer than the plenum box, the protruding areas of the front rail are covered at the rear.
- Plenum boxes only available in nominal lengths
- Extract air variant with air control blades optionally possible without air control blades (E0)
- The optionally available neck extension in the standard dimensions 30, 55, 80, 105 and 129 mm can be used to compensate for structural conditions

Materials and surfaces

- Face plate made of extruded aluminium section
- Air control blades made of ABS plastic, to UL94, V-0, flame-retardant
- Plenum box made of galvanised sheet steel
- End plates and end angles made of aluminium
- Lip seal made of Evoprene
- Lining of mineral wool and closed cell vinyl foam
- Face plate with anodised finish, E6-C-0, natural colour
- P1: Powder-coated colour according to RAL Classic
- Air control blades similar to RAL 9005, black
- G: Air control blades similar to RAL 9006, grey
- W: Air control blades similar to RAL 9010, white

Mineral wool

- Mineral wool faced with glass fibre fabric on the surfaces in contact with the air, erosion-resistant up to 20 m/s
- According to EN 13501, material classification A1, non-flammable
- RAL quality mark RAL-GZ 388
- Hygienically safe due to high biosolubility, according to TRGS 905 and EU Directive 97/69/EC
- Inert to the growth of fungus and bacteria

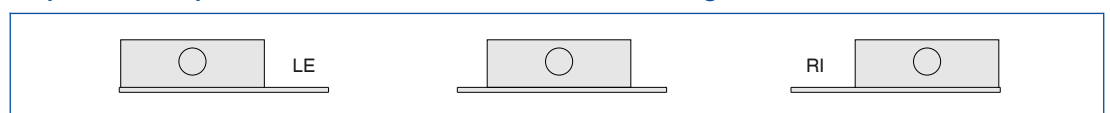
Standards and guidelines

- Sound power level of the air-regenerated noise measured according to EN ISO 5135
- Compliant with VDI 6022

Maintenance

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

PL plenum box, positioned on the left, in the centre, on the right



Functional description

Slot diffusers allow the supply air of ventilation and air conditioning systems to flow horizontally, obliquely or vertically into the room.

The flow takes place with high induction of indoor air and consequently with a rapid reduction of air-flow velocity and temperature difference between supply air and indoor air.

The result is mixed flow air distribution for comfort zones with good room purging and low turbulence levels in the occupied zone.

Type PURELINE35 slot diffusers are factory fitted with manually adjustable air control elements.

Different airflow directions allow adaptation to different local conditions at any time.

Horizontal air distribution takes place with a one-way or alternating flow

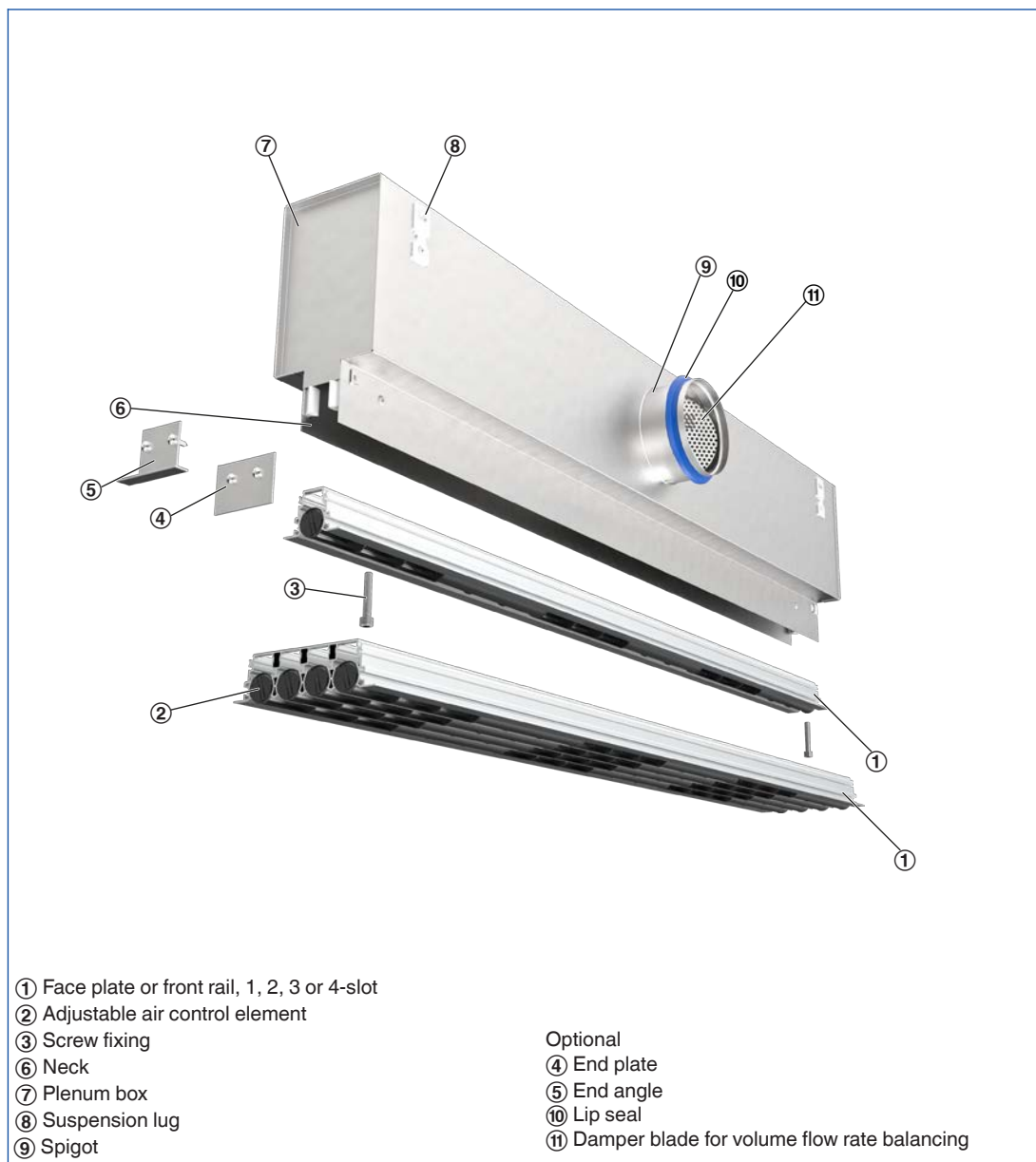
Heating operation with vertical flow is possible, as is a slanted supply air distribution.

The supply air to room air temperature difference can be -10 to +10 K.

A damper unit (optional) enables volume flow rate balancing for commissioning.

To give rooms an aesthetic, uniform look, PURELINE35 diffusers may also be used for extract air.

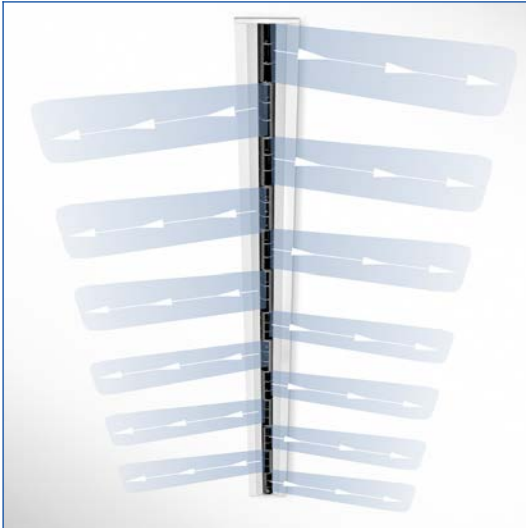
Schematic illustration of PL35-*-SF



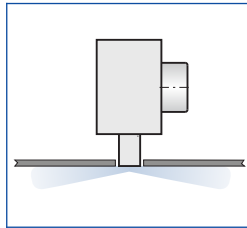
Air patterns

The diagrams are schematic and serve for a better understanding of the setting of the air control blades.

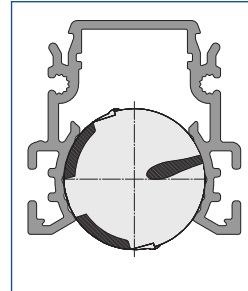
Alternating horizontal air discharge



Horizontal, alternating air discharge

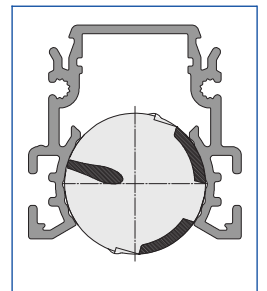


Setting of the air control blades



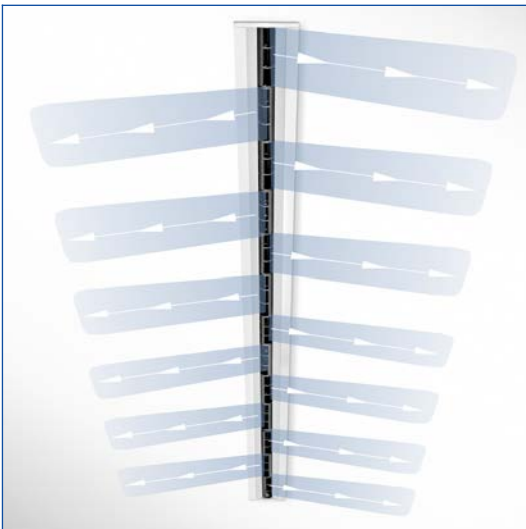
Air outlet horizontal right

Setting of the air control blades

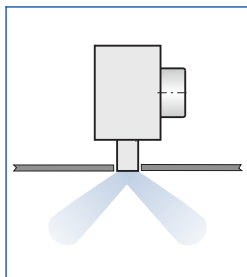


Air outlet horizontal left

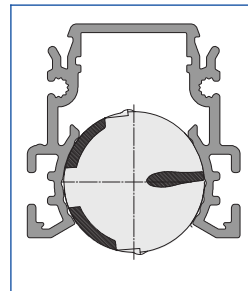
Alternating angled air discharge



Slanted, alternating air discharge (AS)

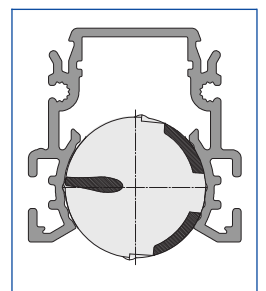


Setting of the air control blades



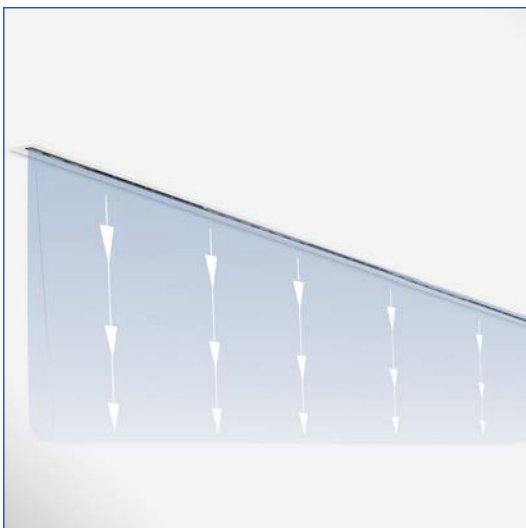
Air outlet slanted right

Setting of the air control blades

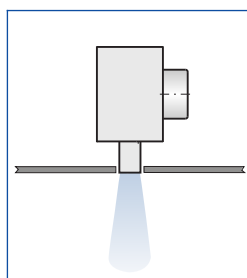


Air discharge: angled left

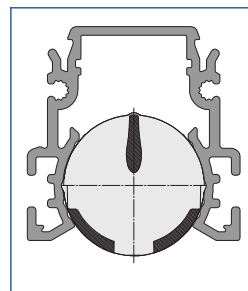
Vertical air discharge



Vertical flow (V)



Setting of the air control blades

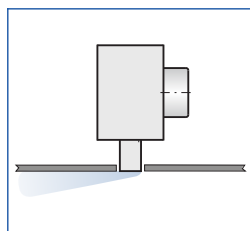


Air discharge: vertical

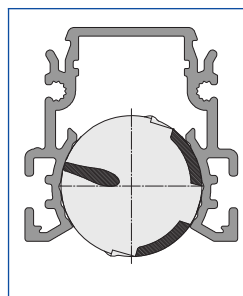
One-way horizontal air discharge to the left



Horizontal, one-way flow left (HL)



Setting of the air control blades

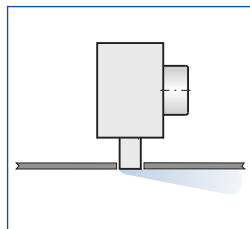


Air outlet horizontal left

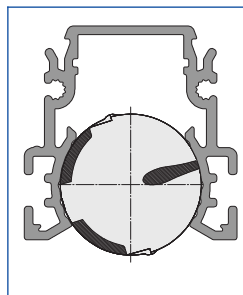
One-way horizontal air discharge to the right



Horizontal, one-way flow right (HR)



Setting of the air control blades



Air outlet horizontal right

Nominal length	600 – 1950 mm, in increments of 150 mm
Number of slots	1, 2, 3 or 4
Neck extension	0, 30, 55, 80, 105, 129
Minimum volume flow rate at $\Delta t_z = -10$ K	7 l/s or 24 m ³ /h
Maximum volume flow rate, at $L_{WA} \cong 50$ dB(A)	225 l/s or 808 m ³ /h
Supply air to room air temperature difference	-10 to +10 K

The quick sizing table gives a good overview of the possible volume flow rates and the corresponding sound power levels and differential pressures.

Sizing with our Easy Product Finder design programme will provide the exact values, taking all parameters into account.

The quick sizing table with one spigot applies up to 1200 mm, from 1350 mm and larger two spigots are taken into account.

PL35-1, supply air, alternating horizontal air discharge, sound power level and total differential pressure

Nominal length	\dot{V}		Damper blade position											
			0°				45°				90°			
			D = 98		D = 123		D = 98		D = 123		D = 98		D = 123	
			Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}
l/s	m³/h	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	
600	7	24	2	<15	2	<15	3	<15	2	<15	5	<15	3	<15
	17	62	15	28	13	26	21	29	15	27	33	30	20	27
	28	99	37	41	32	39	55	42	39	39	86	43	52	40
	38	137	17	50	61	48	105	51	75	48	163	51	99	49
750	8	30	3	<15	2	<15	4	<15	3	<15	7	<15	4	<15
	20	72	14	29	12	27	24	30	15	27	40	31	22	28
	32	114	36	42	29	39	59	42	38	40	100	43	55	40
	43	156	67	50	54	48	111	51	72	48	188	52	103	49
900	10	36	3	<15	2	<15	5	<15	3	<15	9	<15	5	<15
	23	82	15	30	11	27	27	31	16	28	48	31	25	28
	36	128	36	42	27	39	65	43	39	40	117	44	60	40
	48	174	66	50	50	48	121	51	72	48	216	52	110	49
1050	12	42	3	<15	2	<15	7	<15	4	<15	12	<15	6	<15
	25	92	16	30	11	28	31	31	17	28	57	32	28	29
	39	141	37	42	26	39	72	43	41	40	135	44	66	41
	53	190	67	50	47	47	132	51	74	48	245	52	119	49
1200	13	49	4	<15	3	<15	8	<15	4	<15	15	<15	7	<15
	28	101	17	31	11	28	35	32	19	29	67	33	31	30
	42	153	38	42	26	39	80	43	42	40	154	44	72	41
	57	205	69	50	46	47	144	51	76	48	277	52	130	49
1350	15	55	2	<15	2	<15	4	<15	3	<15	6	<15	4	<15
	34	122	12	30	10	28	18	31	13	28	30	31	17	28
	52	188	28	42	24	39	44	42	30	40	72	43	41	40
	71	255	52	50	43	48	81	51	55	48	133	51	76	48
1500	17	61	3	<15	2	<15	4	<15	3	<15	7	<15	4	<15
	36	131	12	30	10	28	20	31	13	28	33	32	18	29
	56	201	28	42	22	39	46	43	30	40	78	43	43	40
	76	272	51	50	41	48	84	51	55	48	142	52	78	49
1650	19	67	3	<15	2	<15	5	<15	3	<15	8	<15	4	<15
	39	140	12	31	9	28	21	31	13	28	36	32	19	29
	59	214	28	42	22	40	49	43	30	40	85	44	45	41
	80	288	51	50	39	48	88	51	54	48	153	52	81	49
1800	20	73	3	<15	2	<15	5	<15	3	<15	9	<15	5	<15
	42	149	12	31	9	28	22	32	13	29	40	33	20	29
	63	226	28	42	21	40	51	43	30	40	91	44	47	41
	84	303	50	50	38	48	92	51	55	48	164	52	84	49
1950	22	79	3	<15	2	<15	6	<15	3	<15	11	<15	5	<15
	44	158	13	31	9	29	24	32	14	29	44	33	22	30
	66	238	28	42	21	40	54	43	31	40	98	44	49	41
	88	317	51	50	37	47	96	51	55	48	175	52	87	49

PL35-2, supply air, alternating horizontal air discharge, sound power level and total differential pressure

Nominal length	\dot{V}		Damper blade position											
			0°				45°				90°			
			D = 123		D = 138		D = 123		D = 138		D = 123		D = 138	
			Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}
	l/s	m ³ /h	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)
600	13	49	3	<15	3	<15	5	<15	4	<15	9	<15	7	<15
	29	106	14	29	13	28	22	30	18	28	42	31	31	29
	45	163	33	41	31	40	52	42	42	40	100	43	73	41
	61	221	59	50	56	48	94	51	78	49	182	52	134	50
750	17	61	3	<15	3	<15	6	<15	5	<15	12	<15	9	<15
	34	124	13	30	12	29	24	31	19	29	51	33	36	30
	52	187	30	42	27	40	54	43	43	41	117	44	83	42
	69	250	53	50	49	48	97	51	77	49	210	52	148	50
900	20	73	3	<15	3	<15	7	<15	5	<15	17	15	12	<15
	39	141	13	31	12	29	27	32	20	30	62	34	43	32
	58	208	28	42	25	40	59	43	44	41	137	45	94	43
	77	276	49	50	44	48	104	51	78	49	241	53	165	51
1050	24	85	4	<15	3	13	9	16	7	<15	22	17	15	15
	43	157	13	32	11	30	30	33	22	31	74	35	50	33
	63	228	28	42	24	40	65	44	47	42	158	45	106	43
	83	300	48	50	41	48	111	52	82	49	273	53	184	51
1200	27	97	4	16	4	<15	11	18	8	16	28	19	18	17
	48	172	13	32	11	30	34	34	24	32	88	36	58	33
	69	247	27	42	23	41	71	44	50	42	180	46	120	44
	89	322	47	50	39	48	120	52	86	50	307	53	203	51
1350	30	109	3	<15	3	<15	5	13	4	<15	10	<15	7	<15
	59	211	11	31	10	29	19	32	15	30	39	33	28	31
	87	313	25	42	23	40	42	43	34	41	86	44	62	42
	115	414	43	50	40	48	74	51	59	49	151	52	108	50
1500	34	121	3	<15	3	<15	6	15	4	<15	12	16	9	<15
	63	227	11	31	10	30	20	32	16	30	43	34	30	32
	93	333	24	42	22	40	43	43	34	41	93	45	66	42
	122	439	41	50	38	48	75	51	59	49	162	52	114	50
1650	37	133	3	15	3	<15	6	16	5	<15	14	17	10	15
	68	243	11	32	10	30	21	33	16	31	48	34	33	32
	98	353	23	42	21	41	45	44	35	42	101	45	70	43
	129	463	39	50	36	48	77	51	60	49	174	53	121	50
1800	40	146	3	16	3	<15	7	17	5	15	17	19	12	17
	72	259	11	32	10	31	23	33	17	31	53	35	39	33
	103	372	22	42	20	41	47	44	36	42	109	45	75	43
	135	485	38	50	34	48	80	51	60	49	186	53	127	51
1950	44	158	4	17	3	15	8	18	6	16	19	20	13	18
	76	274	11	33	10	31	24	34	18	32	58	36	39	33
	108	390	22	43	19	41	49	44	36	42	118	46	80	43
	141	507	37	50	33	48	83	51	62	49	198	53	135	51

PL35-3, supply air, alternating horizontal air discharge, sound power level and total differential pressure

Nominal length	\dot{V}		Damper blade position											
			0°				45°				90°			
			D = 138		D = 158		D = 138		D = 158		D = 138		D = 158	
			Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}
	l/s	m ³ /h	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)
600	20	73	4	<15	4	<15	6	<15	5	<15	12	<15	8	<15
	41	149	16	30	15	28	27	32	21	29	50	34	34	31
	63	226	37	42	34	40	61	43	48	41	114	45	79	42
	84	302	67	50	60	48	110	52	85	49	205	53	141	51
750	25	91	4	13	4	<15	8	15	6	<15	17	17	11	<15
	48	173	16	31	14	29	30	33	22	31	61	35	40	32
	71	255	34	42	30	40	65	44	48	42	132	46	87	43
	93	336	59	50	52	48	113	52	83	49	230	54	151	51
900	30	109	5	16	4	<15	11	18	7	15	23	21	15	17
	54	195	16	32	13	30	34	35	24	32	73	37	47	34
	78	280	32	43	27	40	69	45	49	42	151	47	96	44
	102	365	55	50	46	48	118	52	83	50	257	55	163	52
1050	35	127	6	18	5	16	13	21	9	18	30	23	19	20
	60	215	16	33	13	31	38	36	26	33	86	38	54	35
	84	303	32	43	26	41	75	45	51	43	171	48	106	45
	109	391	53	50	43	48	125	53	85	50	284	55	177	52
1200	40	146	6	21	5	18	16	23	11	21	38	26	24	23
	65	235	17	34	13	32	43	37	28	34	100	39	62	36
	90	325	32	43	25	41	82	5346	54	43	191	49	118	45
	115	414	52	50	40	48	133	18	88	50	311	55	191	52
1350	46	164	4	17	4	15	7	34	5	16	14	20	10	17
	80	289	13	32	11	30	23	44	17	32	44	36	30	33
	115	414	26	43	23	41	46	52	35	42	91	46	61	43
	150	539	44	50	39	48	79	20	59	49	154	54	103	51
1500	51	182	4	18	4	16	8	35	6	17	17	22	11	19
	86	310	13	33	11	31	24	45	18	32	49	37	32	34
	122	438	25	43	22	41	48	52	35	42	98	47	64	44
	157	566	42	50	37	48	80	22	59	49	163	54	107	51
1650	56	200	5	20	4	17	9	36	7	19	20	24	13	21
	92	331	13	34	11	32	26	45	18	33	54	38	35	35
	128	461	25	43	21	41	50	52	36	42	105	47	68	44
	164	592	40	50	35	48	52	23	59	49	173	54	112	51
1800	61	218	5	21	4	19	11	23	7	20	23	25	15	22
	97	351	13	34	11	32	27	36	19	34	59	39	38	36
	134	483	24	43	20	41	52	45	36	43	112	48	71	45
	171	616	39	50	33	48	84	52	59	50	182	55	116	52
1950	66	237	5	22	4	20	12	24	8	22	26	27	17	24
	103	370	13	35	11	32	29	37	20	34	65	40	41	36
	140	504	24	43	20	41	54	46	37	43	120	48	75	45
	177	638	38	50	31	48	86	52	59	50	192	55	121	52

PL35-4, supply air, alternating horizontal air discharge, sound power level and total differential pressure

Nominal length	\dot{V}		Damper blade position											
			0°				45°				90°			
			D = 158		D = 198		D = 158		D = 198		D = 158		D = 198	
			Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}
	l/s	m ³ /h	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)	Pa	dB(A)
600	27	97	3	<15	3	<15	6	15	4	<15	11	16	6	<15
	50	179	11	31	9	27	20	32	13	28	38	33	20	28
	72	260	23	42	19	38	43	43	26	38	81	44	42	39
	95	342	40	50	32	46	74	51	46	46	141	52	73	47
750	34	121	4	17	3	<15	8	18	5	<15	16	19	8	<15
	58	209	12	32	8	28	24	34	14	29	49	35	24	30
	83	297	23	42	17	38	49	44	27	39	99	45	48	40
	107	386	39	50	29	46	82	51	46	47	166	52	80	47
900	40	146	5	19	3	15	11	20	6	16	23	22	11	17
	66	238	13	33	8	29	29	35	15	30	61	36	28	31
	92	331	24	43	16	38	56	44	29	39	118	46	54	40
	118	424	40	50	27	46	91	51	48	47	193	53	89	48
1050	47	170	6	21	4	17	14	23	7	18	30	24	14	19
	74	266	14	34	9	30	34	36	17	31	74	37	33	32
	101	363	25	43	16	39	63	45	31	40	138	46	62	41
	128	459	41	50	26	45	101	52	50	47	221	53	99	48
1200	54	194	7	23	4	18	17	25	8	20	39	26	17	21
	81	293	15	35	9	30	40	37	19	32	89	38	39	33
	109	392	27	43	16	39	71	45	34	40	158	47	69	41
	136	491	42	50	25	45	112	52	53	47	248	53	109	48
1350	61	218	4	18	3	<15	7	19	4	<15	14	20	7	15
	102	368	10	33	8	29	20	34	12	29	39	35	19	30
	144	517	20	43	15	38	39	44	23	39	77	45	38	40
	185	667	33	50	25	46	65	51	38	46	128	52	64	47
1500	67	243	4	19	3	15	8	20	5	16	16	22	8	17
	110	397	10	33	8	29	22	35	12	30	44	36	21	31
	153	551	20	43	15	39	42	44	24	39	85	45	41	40
	196	705	33	50	24	46	69	51	39	46	139	52	67	47
1650	74	267	4	20	3	16	9	22	5	17	19	23	9	18
	118	425	11	34	8	30	24	35	13	30	49	36	23	31
	162	583	20	43	14	39	45	44	24	40	93	46	44	41
	206	741	33	50	23	46	72	51	39	47	150	53	71	48
1800	81	291	5	22	3	17	11	23	6	18	23	24	10	19
	126	453	11	34	8	30	26	36	14	31	55	37	25	32
	171	614	21	43	14	39	48	45	25	40	101	46	47	41
	215	776	33	50	22	46	76	51	40	47	162	53	75	48
1950	88	316	5	23	3	18	12	24	6	19	26	25	12	20
	133	480	12	35	8	30	28	36	14	31	61	38	28	33
	179	644	21	43	14	39	51	45	26	40	110	46	50	41
	225	808	33	50	22	45	81	52	41	47	173	53	78	48

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

Slot diffusers of Type PURELINE35 with individually, manually adjustable air control blades and 1, 2, 3 or 4 slots.

Air distribution optionally horizontal alternating, alternating angled, vertical, one-way horizontal left or one-way horizontal right possible.

The slot diffusers can be used for supply or extract air and are intended for installation in the suspended ceiling. Ready-to-install component consisting of the face plate with optional black, grey or white air control blades.

Variants with plenum boxes have 1 or 2 spigots which are arranged horizontally or vertically for symmetrical plenum boxes and horizontally for asymmetrical plenum boxes.

The plenum boxes all have 4 suspension lugs for suspension.

The connection between the face plate and plenum box is made as a fixed or detachable connection.

The spigots are suitable for circular ducts according to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.

Special features

- Uniform air pattern reduces dirt deposits due to induced compartment air on the ceiling
- Horizontal, slanted or vertical supply air distribution through manually adjustable air control blades
- Comfortable room climate due to high induction and rapid reduction of temperature differences and airflow velocities
- High-quality appearance due to surface-treated extruded aluminium sections with anodised or powder coating according to RAL Classic colour scale
- Face plate optimised for maximum volume flow at low sound power levels
- Continuous linear arrangement possible for continuous visual appearance

Materials and surfaces

- Face plate made of extruded aluminium section
- Air control blades made of ABS plastic, to UL94, V-0, flame-retardant
- Plenum box made of galvanised sheet steel
- End plates and end angles made of aluminium
- Lip seal made of rubber
- Lining of mineral wool and closed cell vinyl foam
- Face plate with anodised finish, E6-C-0, natural colour
- P1: Powder-coated colour according to RAL Classic
- Air control blades similar to RAL 9005, black
- G: Air control blades similar to RAL 9006, grey
- W: Air control blades similar to RAL 9010, white

Mineral wool

- Mineral wool faced with glass fibre fabric on the surfaces in contact with the air, erosion-resistant up to 20 m/s
- According to EN 13501, material classification A1, non-flammable
- RAL quality mark RAL-GZ 388
- Hygienically safe due to high biosolubility, according to TRGS 905 and EU Directive 97/69/EC
- Inert to the growth of fungus and bacteria

Construction

Diffuser face finish

- With anodised finish, E6-C-0, natural colour
- P1: Powder-coated RAL 9010, pure white, gloss level 50 %
- P1: Powder-coated RAL 9006, white aluminium, gloss level 30 %
- P1: Powder-coated in additional RAL CLASSIC colours, gloss level 70 %

Technical data

- Nominal lengths: 600 – 1950 mm in steps of 150 mm
- Number of slots: 1, 2, 3 or 4
- Minimum volume flow rate at $\Delta t_z = -10$ K: 7 l/s or 24 m³/h
- Maximum volume flow rate, at $L_{WA} \approx 50$ dB(A): 225 l/s or 808 m³/h
- Supply air to room air temperature difference: -10 to +10 K

Sizing data

- V _____
[m³/h]
- Δp_t _____
[Pa]

Air-regenerated noise

- L_{WA} _____
[dB(A)]

PURELINE35

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PL35 – 1 – S – SF – HS / 1200x1050x123x30 / 2 – D – LS – L – RI / AS / B00 / EA / P1 – RAL 9016 / W															

1 Type PURELINE35 Slot diffuser	600 750 900 1050 1200 1350 1500 1650 1800 1950	Plenum box L _N	12 Airflow setting (length of air control blades 150 mm) No entry: Alternating horizontal AS Alternating slanted HL Horizontal left HR Horizontal right V Vertical E0 Without air control blades (only extract air)
2 Number of slots 1 1 air slot 2 2 air slots 3 3 air slots 4 4 air slots		Spigot diameter ØD 1 air slot 1 and 2 air slot(s) 2 and 3 air slots 3 and 4 air slots 4 air slots	13 Extended border No entry: Without B00 With section B00
3 System S Supply air E Extract air (standard with air control blades, optional without air control blades)		Neck extension Y No entry: 0	14 End pieces No entry: Without EP End plate EA End angle
4 Connection DF Front rail with B00 section and spring clip DS Front rail with B00 section and screw accessories PB Plenum box PB Only plenum box (for combination with DS) PF With fixed connection between plenum box and front rail SF With releasable connection between plenum box and front rail (only with B00)	98 123 138 158 198 30 55 80 105 129	7 No. of spigots 1 1 spigot (up to length 1200 mm) 2 2 spigots (from length 900 mm)	15 Surface No entry: with anodised finish, E6-C-0, natural colour P1 Powder-coated, specify RAL Classic colour Gloss level RAL 9010 50 % RAL 9006 30 % All other RAL colours 70 %
5 Plenum box construction variant HS Standard plenum box with horizontal connection VS Standard plenum box with vertical connection HA Asymmetrical plenum box with horizontal connection		8 Damper blade for volume flow rate balancing No entry: Without D With damper unit	16 Colour of air control elements No entry: Similar to RAL 9005, black W Similar to RAL 9010, white G Similar to RAL 9006, grey
6 Nominal size [mm] Front rail x plenum box x spigot diameter x neck extension Nominal length L _N	600 750 900 1050 1200 1350 1500 1650 1800 1950	9 Accessories No entry: Without LS With lip seal 10 Plenum box lining No entry: Without L With 11 Position of plenum box No entry: centre LE Left RI Right	

Order example: PL35-1-S-PF-HS/1200x1200x98/1

Number of slots	1
System	Supply air
Variant	With fixed connection between plenum box and face plate
Plenum box variant	Standard plenum box with horizontal connection
Nominal size	Front rail 1200 mm, plenum box 1200 mm, spigot diameter 98 mm
No. of spigots	1
Damper unit for volume flow rate balancing	Without
Lip seal	Without
Lining	Without
Position of plenum box	Central position
Air pattern	Alternating horizontal
Extended border	Without
End pieces	Without
Surface	Anodised, E6-C-0, natural colour
Colour of air control blades	black

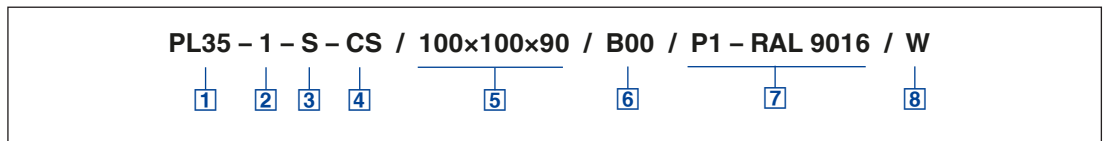
Order example: PL35-2-S-SF-HS/1200x1050x123/2-D-LS-L-LE/AS/B00/EA/P1-RAL 9010/W

Number of slots	2
System	Supply air
Variant	With releasable connection between plenum box and front rail
Plenum box variant	Standard plenum box
Nominal size	Front rail 1200 mm, plenum box 1050 mm, spigot diameter 123 mm
No. of spigots	2
Damper unit for volume flow rate balancing	With
Lip seal	With
Lining	With
Position of plenum box	Left side
Air pattern	Alternating angled
Extended border	With
End pieces	With end angle
Surface	Powder-coated RAL 9010, pure white, gloss level approx. 50 %
Colour of air control blades	white

Order example: PL35-2-E-DF/1200/V/B00/EP/P1-RAL 9006/G

Number of slots	2
System	Extract air
Variant	Diffuser face with extended border and spring clip
Plenum box variant	No plenum box
Nominal size	Diffuser face 1200 mm
No. of spigots	Without
Damper unit for volume flow rate balancing	Without
Lip seal	Without
Lining	Without
Position of plenum box	No plenum box
Air pattern	Vertical
Extended border	With extended border
End pieces	With end plate
Surface	Powder-coated RAL 9006, white aluminium, gloss level approx. 30 %
Colour of air control blades	grey

PURELINE35 CS (corner section)



1 Type

PURELINE35 Slot diffuser

2 Number of slots

- 1** 1 air slot
- 2** 2 air slots
- 3** 3 air slots
- 4** 4 air slots

3 System

- S** Supply air
- E** Extract air

4 Variant

CS Corner section

5 Dimensions [mm]

- E** 100 to 300 mm (in mm steps)
- F** 100 to 300 mm (in mm steps)
- W** 45° to 175° (in ° steps)

6 Extended border

- No entry: Without
- B00** With section B00

7 Surface

- No entry: with anodised finish, E6-C-0, natural colour
- P1** Powder-coated, specify RAL Classic colour

Gloss level
RAL 9010 50 %
RAL 9006 30 %
All other RAL colours 70 %

8 Colour of air control blades

- No entry: Similar to RAL 9005, black
- W** Similar to RAL 9010, white
- G** Similar to RAL 9006, grey
- E0** Without control blades

Order example: PL35-1- -CS/100x100x90

Number of slots	1
Variant	Corner section
Dimensions	Leg dimension E: 100 mm Leg dimension F: 100 mm Angle: 90°
Extended border	Without
Surface	Anodised, E6-C-0, natural colour
Colour of air control blades	Black, similar to RAL 9005

Order example: PL35-2- -CS/150x250x45/B00/P1-RAL 9016/W

Number of slots	2
Variant	Corner section
Dimensions	Leg dimension E: 150 mm Leg dimension F: 250 mm Angle: 45°
Extended border	With
Surface	Powder-coated RAL 9016, gloss level 70%
Colour of air control blades	White, similar to RAL 9010

Asymmetrically positioned plenum box



Plenum box with two top entry spigots



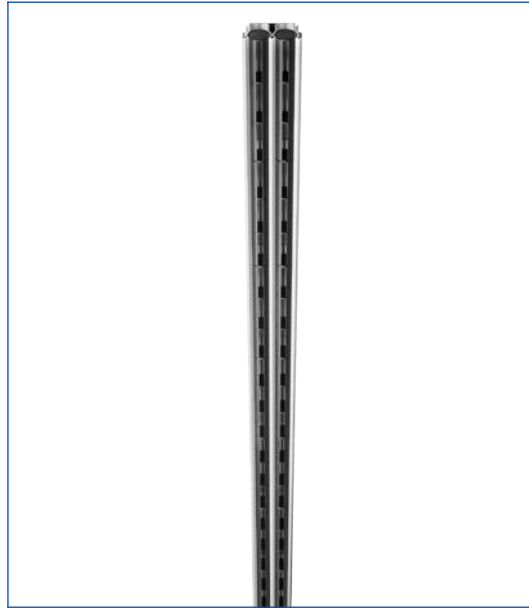
Plenum box shorter than front rail, positioned on left with 2 horizontal spigots



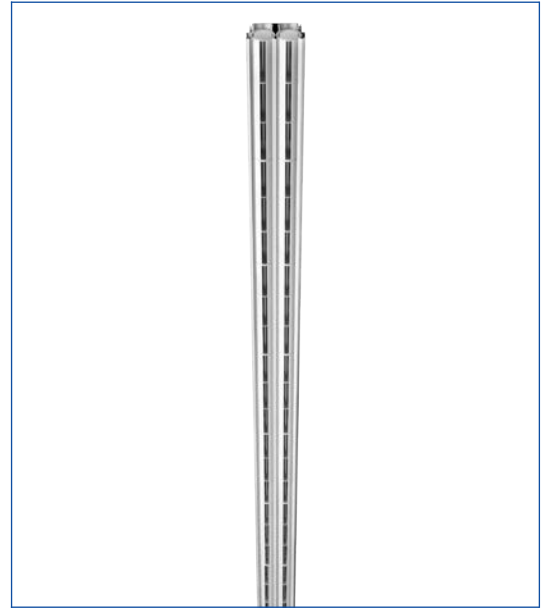
Plenum box shorter than front rail, positioned in centre with one horizontal spigot



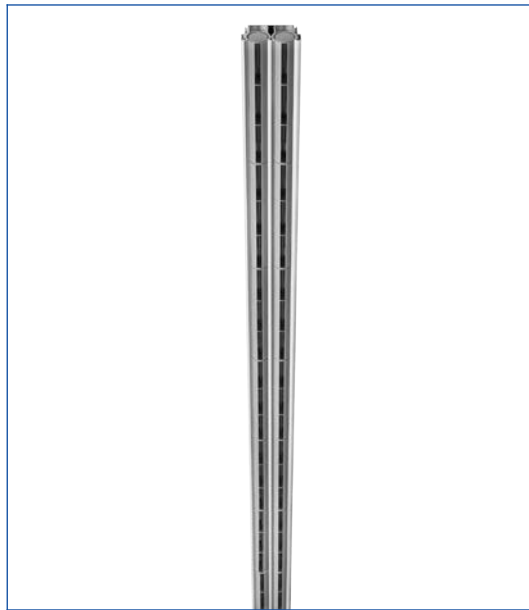
Diffuser face with black air control elements



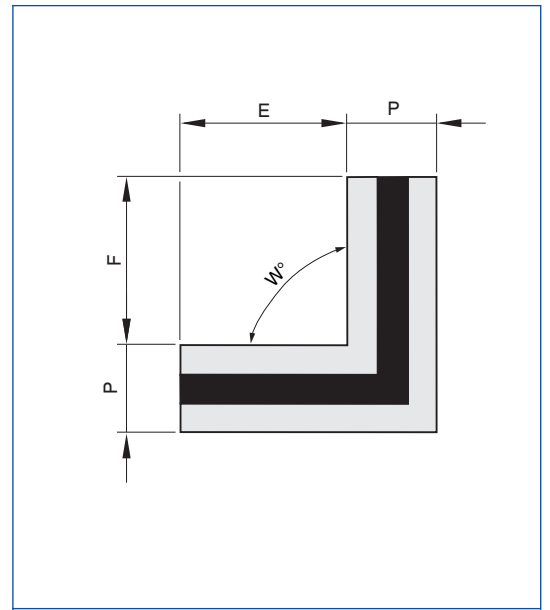
Diffuser face with white air control elements



Diffuser face with grey air control elements

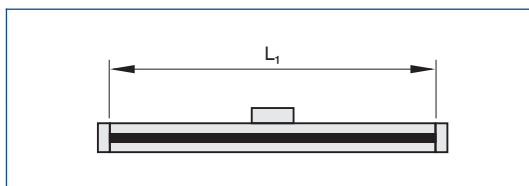


Corner section

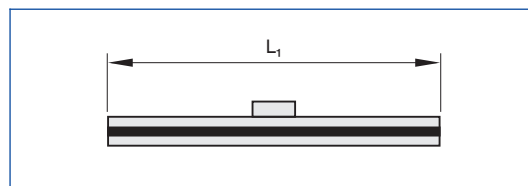


Diffuser face

End angles on both ends



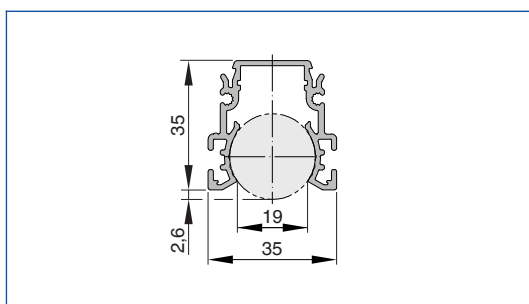
Without end piece



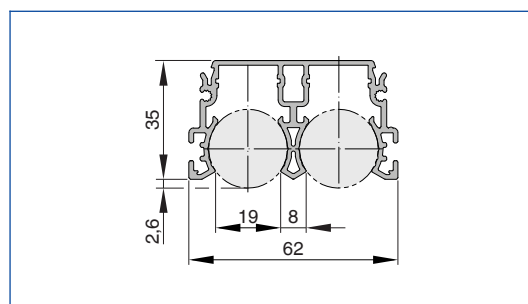
Nominal length	L ₁	
	mm	
600		600
750		750
900		900
1050		1050
1200		1200
1350		1350
1500		1500
1650		1650
1800		1800
1950		1950

Section

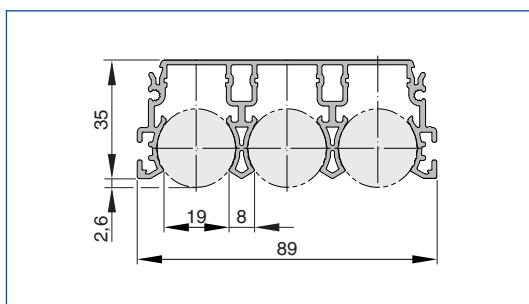
Section PL35-1 (without extended border)



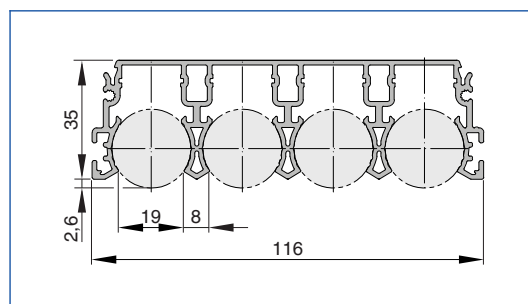
Section PL35-2 (without extended border)



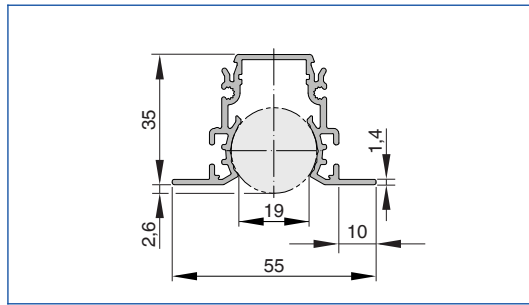
Section PL35-3 (without extended border)



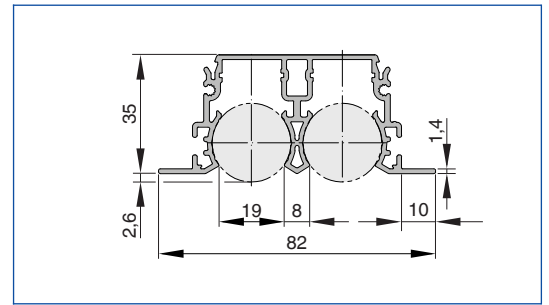
Section PL35-4 (without extended border)



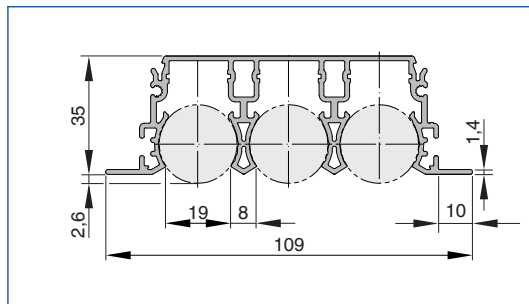
Section PL35-1/B00 (with extended border)



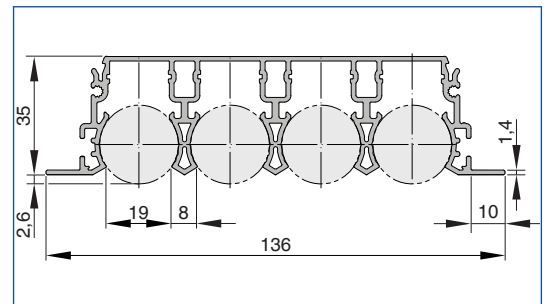
Section PL35-2/B00 (with extended border)



Section PL35-3/B00 (with extended border)

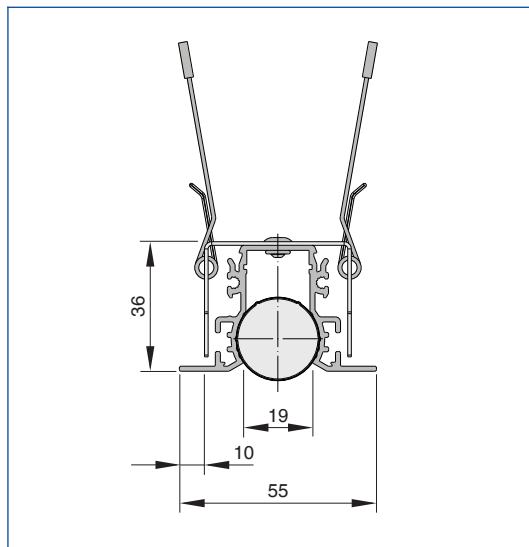


Section PL35-4/B00 (with extended border)

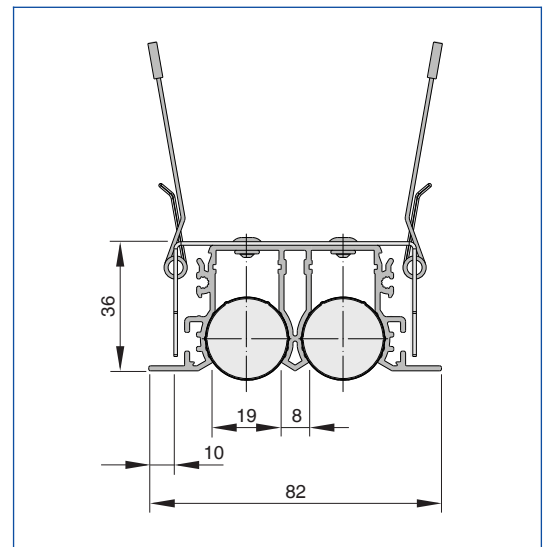


Front rail with spring clip

PL35-1-DF/.../B00

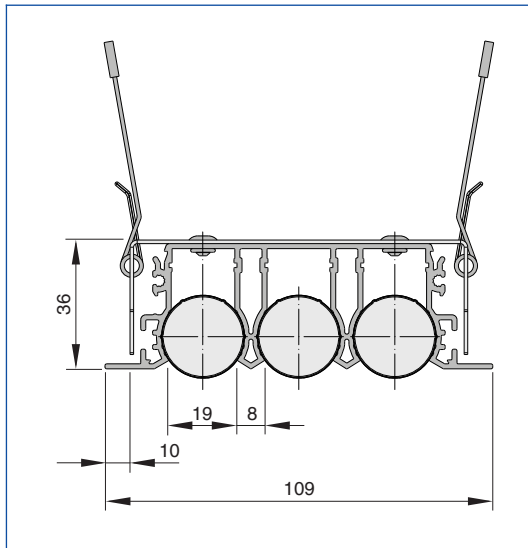


PL35-2-DF/.../B00

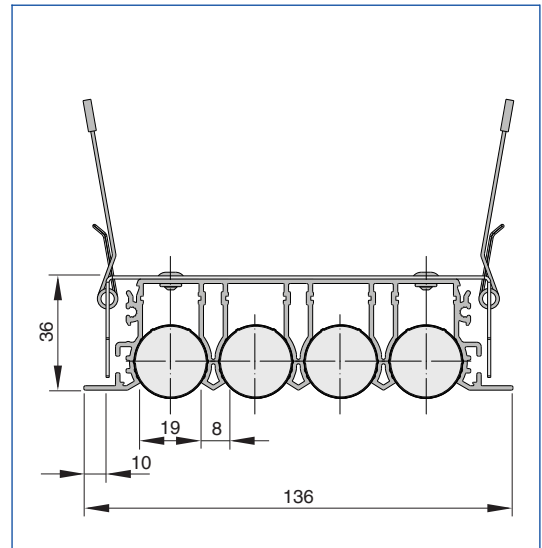


Front rail with spring clip

PL35-3-DF/.../B00



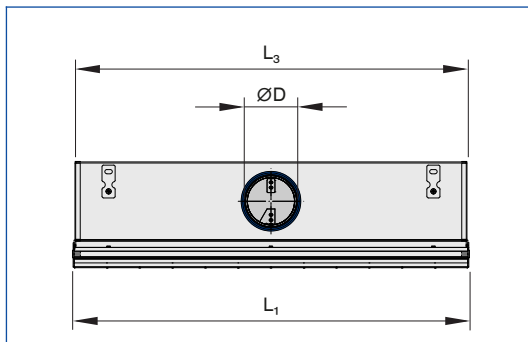
PL35-4-DF/.../B00



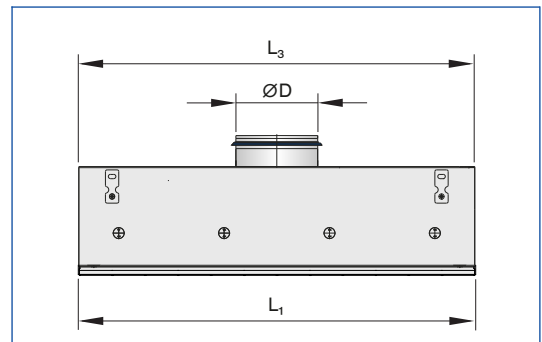
Variant	With extended border	
	P	
	mm	
PL35-1		55
PL35-2		82
PL35-3		109
PL35-4		136

Combinations of front rail with plenum box

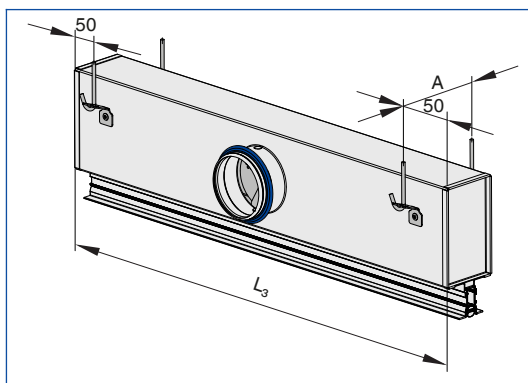
Plenum box with horizontal connection (HS / HA)



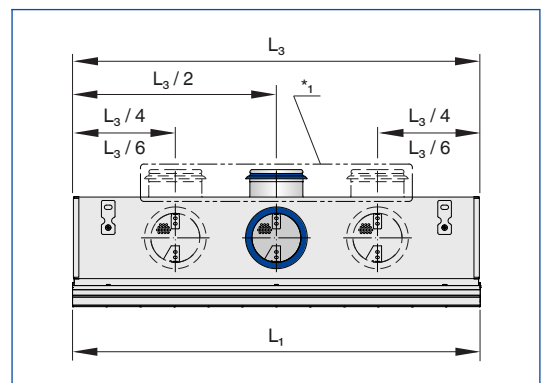
Plenum box with vertical connection (VS)



Plenum box fixing points

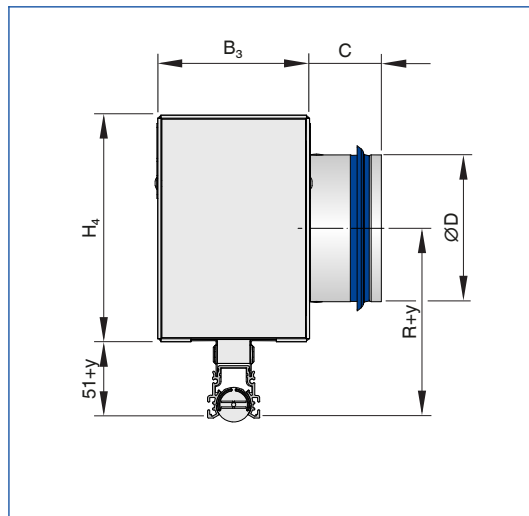


Spigot arrangement



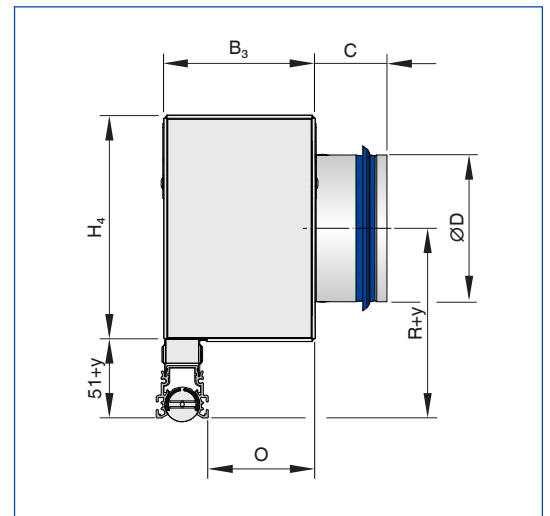
* only with construction VS

PL35-PF-*-HS (symmetrical plenum box with horizontal connection)



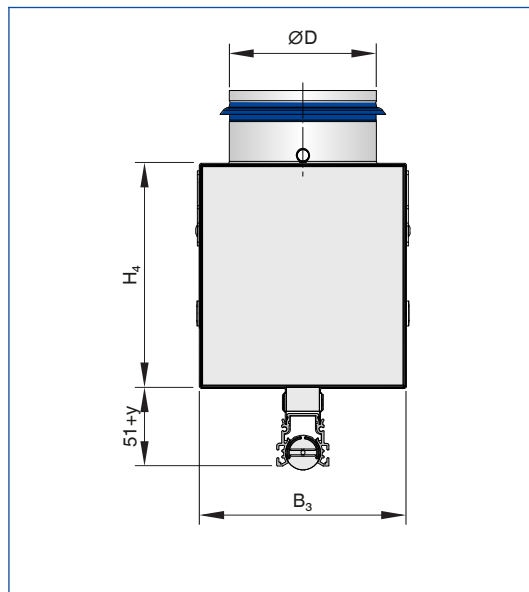
Drawing shows PL35-1-PF-HS

PL35-PF-*-HA (asymmetrical plenum box with horizontal connection)



Drawing shows PL35-1-PF-HA

PL35-PF-*-VS (symmetrical plenum box with vertical connection)



Drawing shows PL35-1-PF-VS

Dimensions [mm]

No. of spigots	Nominal length	L_1	L_3
1	600	600	595
	750	750	745
1 or 2	900	900	895
	1050	1050	1045
	1200	1200	1195
2	1350	1350	1345
	1500	1500	1495
	1650	1650	1645
	1800	1800	1795
	1950	1950	1945

Variant	B3		H4		R	A		O	
	HS/HA	VS	HS/HA	VS		HS/HA	VS	PF-HA	SF-HA
PL35-1	100	138	150	150	126 + Y	140	178	72	64
PL35-2	138	160	180		141 + Y	178	200	83	75
PL35-3	176	176	198		150 + Y	216	216	94	86
PL35-4	214	214	230		166 + Y	254	254	106	97

Neck extension Y = 0 / 30 / 55 / 80 / 105 / 129

Variant	ØD	C
PL35-1	98/123	50/48
PL35-2	123/138	48/42
PL35-3	138/158	42/50
PL35-4	158/198	50/50

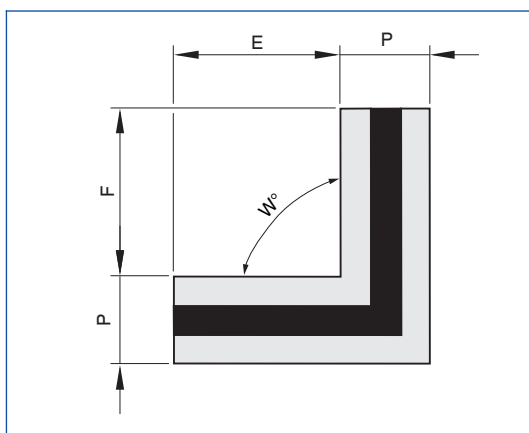
Weights

Variant	Number of slots	kg/m
Diffuser face	1-/2-/3-/4-slot	0.8/1.2/1.6/2.1
Plenum box HS/HA		3.3/3.9/4.6/5.2
Plenum box HS/HA+L		4.0/4.7/5.5/6.2
Plenum box VS		3.7/3.9/4.1/4.3
Plenum box VS+L		4.5/4.7/4.9/5.2

Total weight = weight of diffuser face + weight of plenum box

Corner section

PL35-+-CS

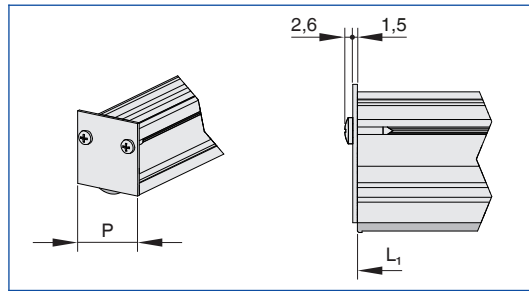


Variant	Without extended border	With extended border
	P mm	
PL35-1	35	55
PL35-2	62	82
PL35-3	89	109
PL35-4	116	136

	E	F	W
Min. entry value	100	100	45°
Max. entry value	300	300	175°

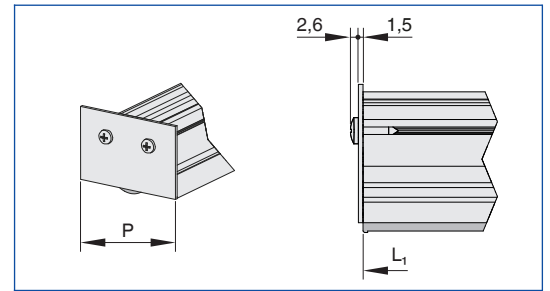
End plate

End plate EP



Profile without extended border

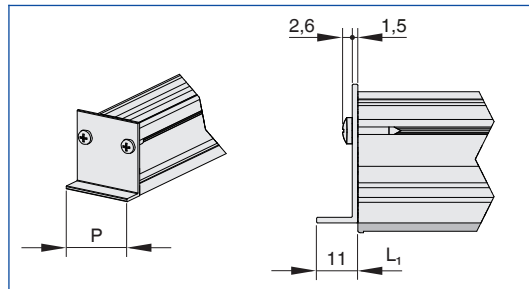
End plate EP



Profile with extended border

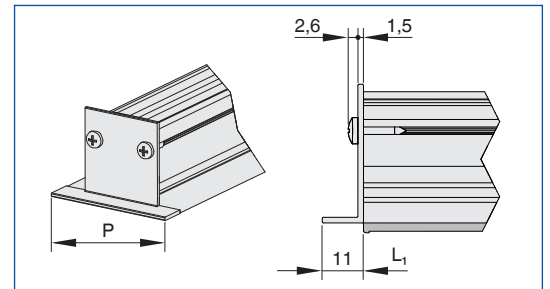
End angle

End angle EA



Profile without extended border

End angle EA



Profile with extended border

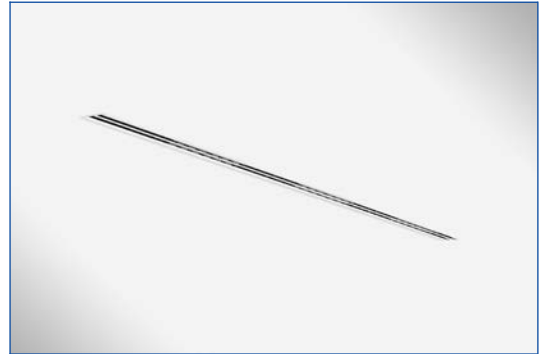
Variant	Without extended border		With extended border	
	P			
	mm			
PL35-1	35		55	
PL35-2	62		82	
PL35-3	89		109	
PL35-4	116		136	

PL35-1/.../B00, installation in continuous ceilings



Anodised, E6-C-0, natural colour

PL35-2/.../B00/P1-RAL 9010, installation in continuous ceiling



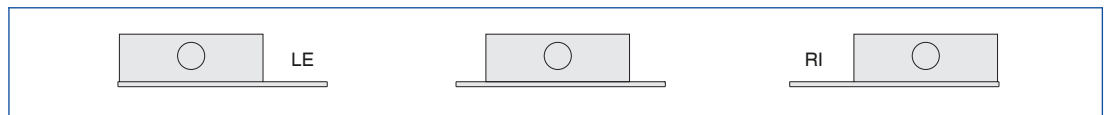
Powder-coated RAL 9010, pure white

Installation and commissioning

- Preferably for clear room heights up to 4.0 m
- Flush ceiling installation
- Duct connection horizontal or vertical
- For face plates with shorter plenum boxes and non-active diffusers, there is a slot cover on the rear
- For continuous linear arrangement, connect face plates to one another with alignment plates
- If necessary, carry out volume flow rate balancing on the damper unit
- Suitable fixing material for fixing the slot diffusers must be provided by others

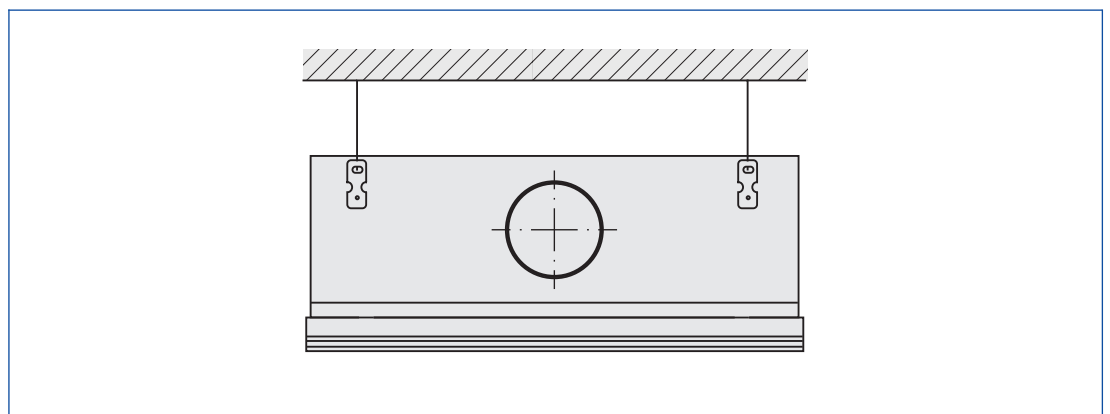
The illustrations are schematic and serve to better understand the installation details

PL plenum box, positioned on the left, in the centre, on the right

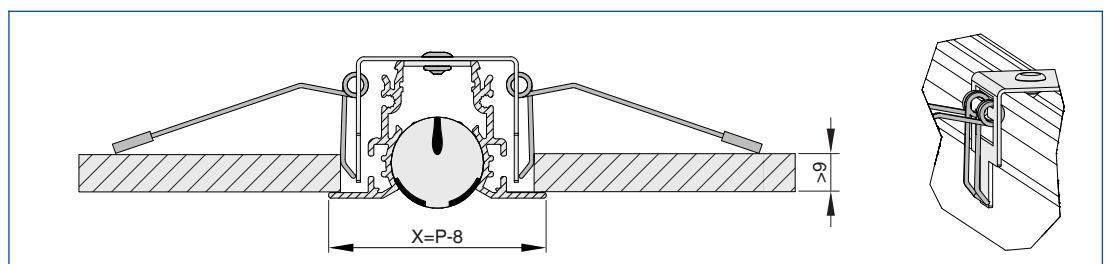


The illustrations are schematic and serve to better understand the installation details.

Suspension

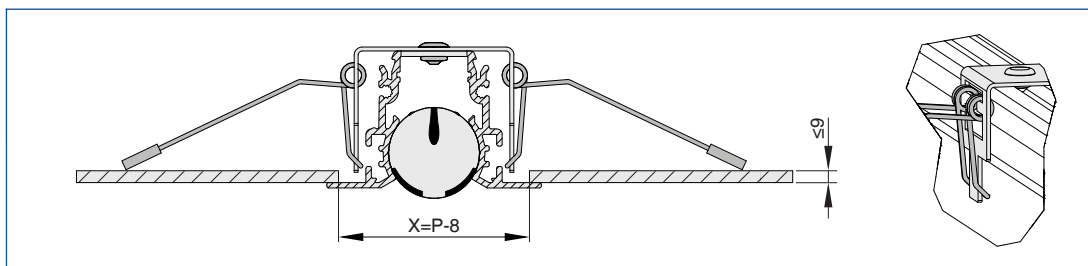


PL35-DF spring clip fixing



If ceiling thickness is > 9 mm

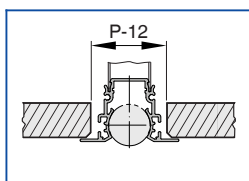
PL35-DF spring clip fixing



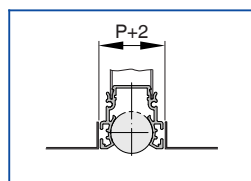
If ceiling thickness is ≤ 9 mm

Ceiling systems

**Continuous ceiling
(with extended border)**

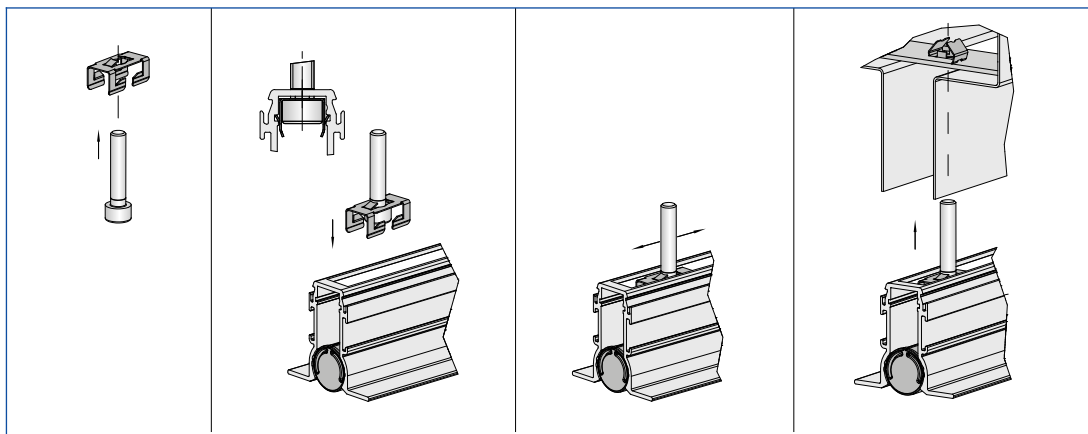


**Long field plates
(without extended border)**



**Releasable face plate
fixing**

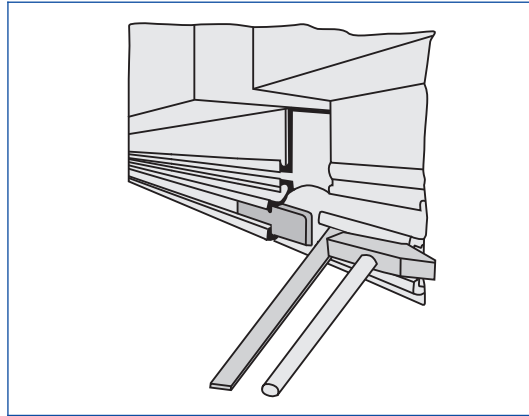
PL35 with detachable diffuser face fixing



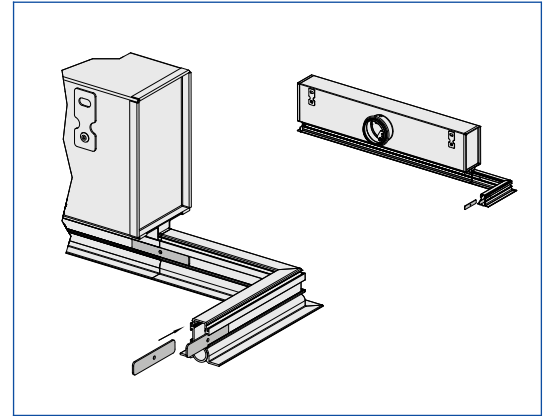
For the DS and SF versions, the fixing material for fixing the slotted rail to the plenum box is supplied in a bag.

Linear run

Continuous linear arrangement



Fitting corner sections



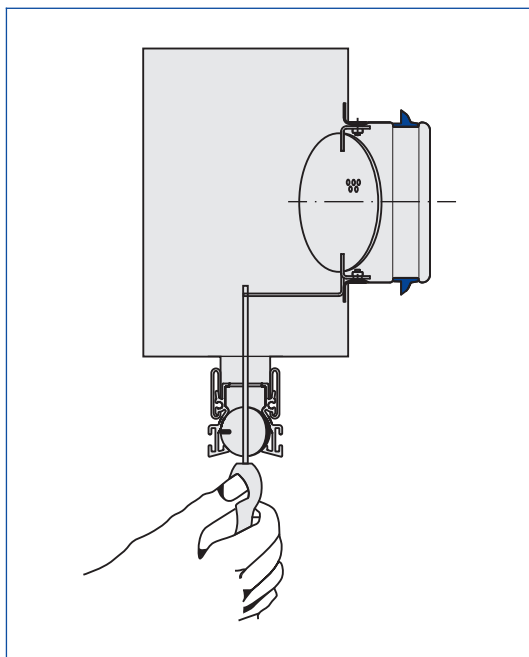
- Each slot diffuser (without end pieces) is supplied with two alignment plates

Volume flow rate balancing

If several slot diffusers are assigned to one volume flow controller, it may be necessary to balance the volume flow rates.

- Slot diffusers with plenum box and damper unit (variant -D): The flow adjustment damper can also be operated when the face plate is mounted.

Volume flow rate balancing



- Adjust the air control blades in the area of the spigot so that there is a passage for a screwdriver

Principal dimensions

ØD [mm]

Outer diameter of the spigot

C [mm]

Length of the spigot

m [kg]

Weight

L₁ [mm]

Length of front rail

L₃ [mm]

Length of plenum box

P [mm]

Width of slot section

H₄ [mm]

Height of plenum box

B₃ [mm]

Width of plenum box

Nomenclature

L_{WA} [dB(A)]

Sound power level of the air-regenerated noise,
A-rated

 \dot{V} [m³/h] and [l/s]

Volume flow rate

Δt_z [K]

Supply air to room air temperature difference, sup-
ply air temperature minus room temperature

Δp_t [Pa]

Total differential pressure