

SLN

Linear Slot Diffuser



- Horizontal or vertical plane jet air supply (suitable also for exhaust)
- Ceiling or wall installation, suitable also for continuous “wall to wall” installations
- Adjustable throw pattern, flexibility of orientation with different configurations.
- Detachable diffuser allows cleaning of the terminal unit and ductwork

Accessories

- Plenum with a circular duct connection(s) D160...250mm with rubber gasket
- Plenum options with measurement and adjustment functions
- Sound insulation for plenum

MATERIAL AND FINISHING

PART	MATERIAL	FINISHING
Outer frame	Aluminium	Anodised Polyester-painted / White RAL 9010 / 50% gloss
End caps / T profiles	Anodised Aluminium	Polyester-painted / White RAL 9010 / 50% gloss
Flow deflection vanes	Anodised Aluminium	Polyester-painted / White RAL 9010 / 50%
Plenum	Galvanised steel	

QUICK SELECTION

qv	Pa	288	384	480	576	768	960	1152	1344	1536	1728	1920	2112	2400	2688	3072
	l/s	30	40	50	60	80	100	120	140	160	180	200	220	250	280	320
	m ³ /h	108	144	180	216	288	360	432	504	576	648	720	792	900	1008	1152
SLN-2-600 + PLD	LpA	23	30	37	44											
	ΔPst	6	11	18	26											
	ΔPtot	7	12	19	28											
	Ld	5,2	6,6	7,8	9,0											
	L0.2	8,0	10,0	12,6	14,0											
SLN-2-900 + PLD	LpA		21	27	32	41	49									
	ΔPst		5	8	12	21	32									
	ΔPtot		6	10	14	25	39									
	Ld		5,0	6,2	7,0	8,8	10,4									
	L0.2		8,8	10,8	12,6	15,4	18,6									
SLN-2-1200 + PLD	LpA			22	26	34	40	46								
	ΔPst			5	7	12	19	27								
	ΔPtot			6	9	16	25	36								
	Ld			5,0	5,8	7,4	9,0	10,2								
	L0.2			9,4	11,4	14,6	17,6	20,0								
SLN-2-1500 + PLD	LpA				21	29	35	40	45							
	ΔPst				5	8	13	19	25							
	ΔPtot				5	9	14	21	28							
	Ld				5,0	6,4	7,8	9,0	10,2							
	L0.2				10,4	14,0	16,8	19,0	21,0							
SLN-2-1800 + PLD	LpA				17	24	31	37	42	46						
	ΔPst				3	5	9	12	17	22						
	ΔPtot				4	6	10	14	20	26						
	Ld				4,4	5,6	7,0	8,2	9,2	10,6						
	L0.2				9,6	13,4	16,4	19,0	21,0	22,0						
SLN-3-600 + PLD	LpA	16	22	29	35	45										
	ΔPst	3	6	10	14	25										
	ΔPtot	4	7	11	16	29										
	Ld	4,2	5,2	6,2	7,2	8,8										
	L0.2	7,0	9,2	11,2	12,6	14,8										
SLN-3-900 + PLD	LpA			20	24	33	39	45	50							
	ΔPst			4	6	11	16	24	32							
	ΔPtot			6	8	14	22	32	44							
	Ld			4,6	5,4	6,8	8,2	9,2	10,4							
	L0.2			8,6	10,4	13,0	15,0	16,4	19,0							
SLN-3-1200 + PLD	LpA				19	27	33	39	43	48						
	ΔPst				3	6	9	13	18	24						
	ΔPtot				6	10	15	22	30	39						
	Ld				4,2	5,6	6,6	7,8	8,8	9,8						
	L0.2				8,6	11,4	13,6	15,6	17,0	18,2						
SLN-3-1500 + PLD	LpA				15	21	27	32	36	40	44	47				
	ΔPst				2	4	6	8	11	14	18	22				
	ΔPtot				3	5	7	10	14	18	23	28				
	Ld				3,6	4,8	5,6	6,6	7,6	8,4	9,2	10,0				
	L0.2				7,2	10,0	12,6	14,6	16,2	17,8	19,0	20,0				
SLN-3-1800 + PLD	LpA					18	23	28	32	36	40	44	47			
	ΔPst					2	4	5	7	9	12	15	18			
	ΔPtot					3	5	7	10	13	17	21	25			
	Ld					4,2	5,0	5,8	6,6	7,4	8,2	9,0	9,8			
	L0.2					9,0	11,4	13,8	15,6	17,2	18,6	19,8	21,0			

QUICK SELECTION

qv	Pa	288	384	480	576	768	960	1152	1344	1536	1728	1920	2112	2400	2688	3072
	l/s	30	40	50	60	80	100	120	140	160	180	200	220	250	280	320
	m ³ /h	108	144	180	216	288	360	432	504	576	648	720	792	900	1008	1152
SLN-4- 600 + PLD	LpA			18	22	30	37	43	49							
	ΔPst			6	8	14	22	32	44							
	ΔPtot			6	9	16	25	36	49							
	Ld			5,2	6,0	7,6	9,0	10,2	11,2							
	L0.2			10,2	11,8	14,0	15,8	17,0	18,0							
SLN-4- 900 + PLD	LpA			18	26	32	38	44	49							
	ΔPst			3	6	9	13	18	23							
	ΔPtot			4	7	11	16	22	29							
	Ld			4,4	5,6	6,6	7,8	8,6	9,4							
	L0.2			8,6	11,2	13,2	14,8	16,0	17,0							
SLN-4- 1200 + PLD	LpA			18	24	29	33	38	41	45	48					
	ΔPst			3	5	7	10	12	16	19	24					
	ΔPtot			5	7	11	14	19	24	29	36					
	Ld			4,4	5,4	6,2	7,2	8,0	8,6	9,2	10,0					
	L0.2			9,0	11,2	12,8	14,2	15,4	16,4	17,2	18,0					
SLN-4- 1500 + PLD	LpA			20	24	27	30	33	35	38	40	43	46	49		
	ΔPst			2	3	4	6	8	10	12	15	19	24	32		
	ΔPtot			2	4	5	7	10	12	15	18	23	29	38		
	Ld			3,6	4,4	5,4	6,0	6,6	7,4	8,0	8,6	9,4	10,2	11,4		
	L0.2			7,4	9,6	11,2	12,8	14,2	15,2	16,2	17,0	18,2	19,0	20,0		
SLN-4- 1800 + PLD	LpA			18	21	25	28	31	34	37	40	44	48			
	ΔPst			2	3	4	5	6	8	9	12	15	19			
	ΔPtot			3	4	5	6	8	10	12	16	20	26			
	Ld			3,8	4,6	5,2	5,8	6,4	7,0	7,6	8,4	9,2	10,2			
	L0.2			8,2	10,0	11,6	13,0	14,2	15,2	16,2	17,4	18,4	19,4			

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

Pa Supply air cooling capacity, W
LpA A-weighted sound pressure level, reduced by total equivalent absorption surface of 10m², dB(A) red 10m² - sab
ΔPst Static pressure drop, Pa

ΔPtot Total pressure drop, Pa
Ld Distance from the supply unit, at which air jet detaches from ceiling, m
L0,2 Isothermal throw length, m when residual velocity of supply air jet 0,2 m/s
Room temperature (Tr) = 24 °C
Supply air temperature (Ta) = 16 °C

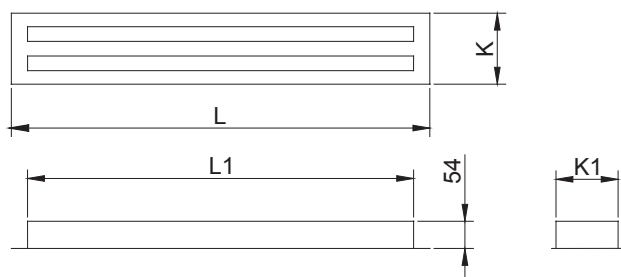
ACCESSORIES

ACCESSORY	CODE	DESCRIPTION
Plenum	PLL	Plenum for duct connection (with or without attenuation material)
Plenum	PLD	Straight plenum for duct connection (with or without attenuation material)
Airflow measurement and adjustment module	MSM	For supply installation
End caps	E1	For modular ceiling, Width = 5 mm (2 pcs)
Sound attenuation	IN	Mineral wool

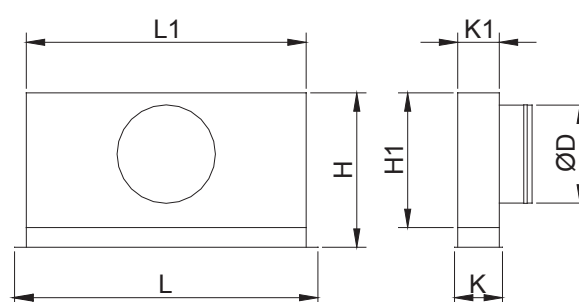
Special end caps for modular ceilings are available.

DIMENSIONS

SLN

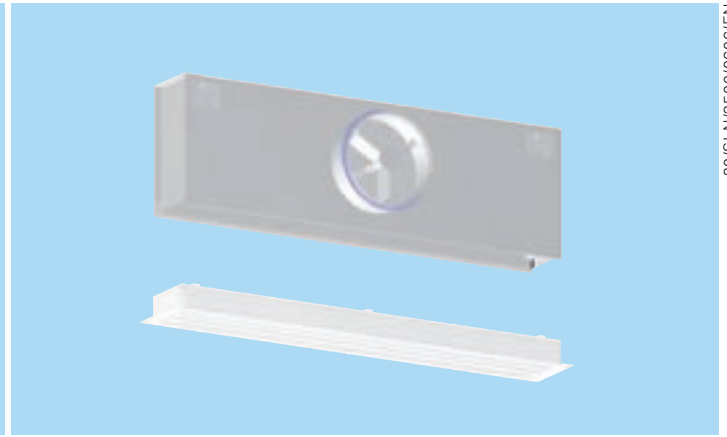
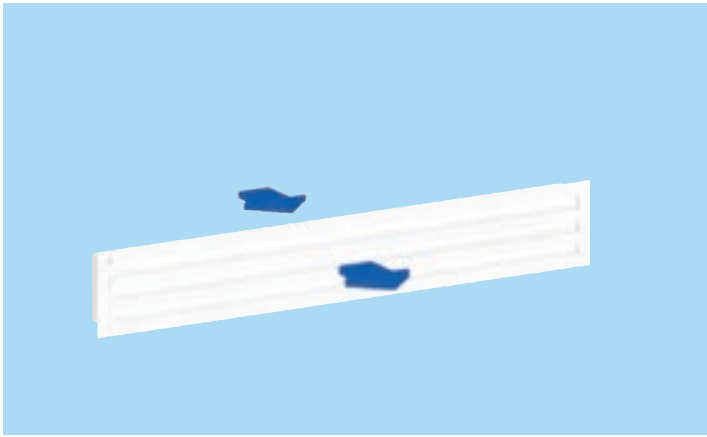


SLN + PLD



Standard dimensions of SLN + PLD unit with standard end caps are presented in the table below.

Active length	Slots	L	L1	H	H1	K	K1	ØD
572	2	618	570	300..315	275	105	85	1x200
872	2	918	870	300..315	275	105	85	1x200
1172	2	1218	1170	300..315	275	105	85	1x200
1472	2	1518	1470	300..315	275	105	85	2x200
1772	2	1818	1770	300..315	275	105	85	2x200
572	3	618	570	300..315	275	143	123	1x200
872	3	918	870	300..315	275	143	123	1x200
1172	3	1218	1170	300..315	275	143	123	1x200
1472	3	1518	1470	300..315	275	143	123	2x200
1772	3	1818	1770	300..315	275	143	123	2x200
572	4	618	570	350..365	325	181	161	1x250
872	4	918	870	350..365	325	181	161	1x250
1172	4	1218	1170	350..365	325	181	161	1x250
1472	4	1518	1470	350..365	325	181	161	2x250
1772	4	1818	1770	350..365	325	181	161	2x250



Function

Supply air is supplied through the linear slots of the diffuser, either horizontally along the ceiling surface or vertically into the occupied zone.

For wall installation, the plane jet air is supplied horizontally or directed to the ceiling surface, which increases the throw length.

The design is the same for the supply and exhaust applications.

Installation

The SLN linear diffuser is connected directly to the PLD (or PLL) plenum.

The plenum is installed into the suspended ceiling with M8 drop rods (not included in the delivery) and connected to the ductwork.

Remove the T-profiles of the SLN by gently pulling until access has been gained to the transversal bars located just behind the profiles.

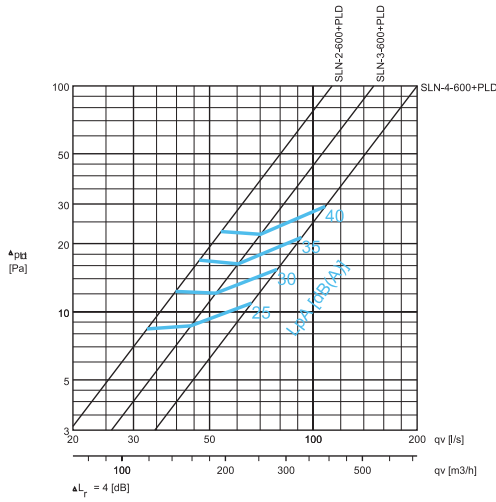
Fit the installation brackets into the grooves of the plenum and secure fixing with the screws supplied with the unit.

Slot each screw into the holes of the transversal bars. Screw on until the diffuser is flush to the ceiling. A space of 10 mm between the transversal bars and the brackets should be maintained. Replace the T-profiles.

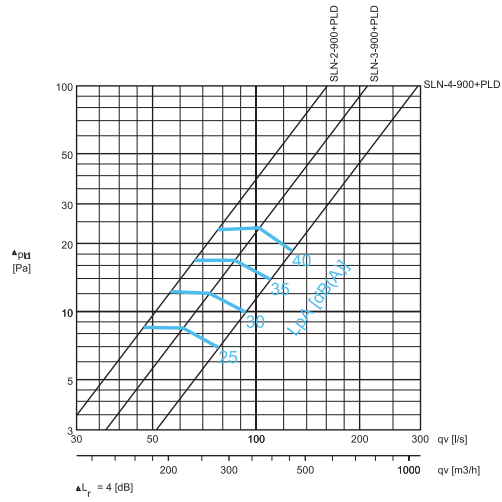
The unit can be installed on a suspended ceiling by using the optional end caps; either E1 with 5 mm flange.

Pressure drop, throw pattern and sound data

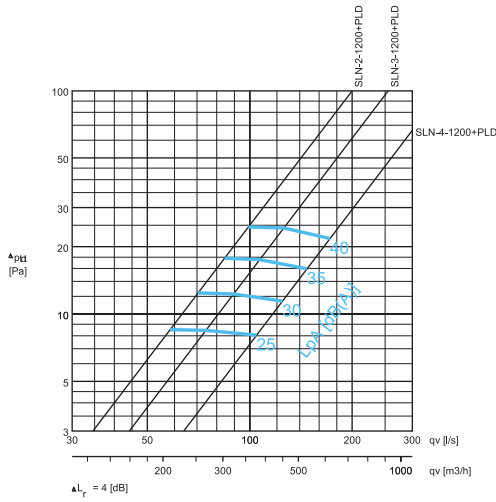
SLN-2-600 + PLD, SLN-3-600 + PLD, SLN-4-600 + PLD



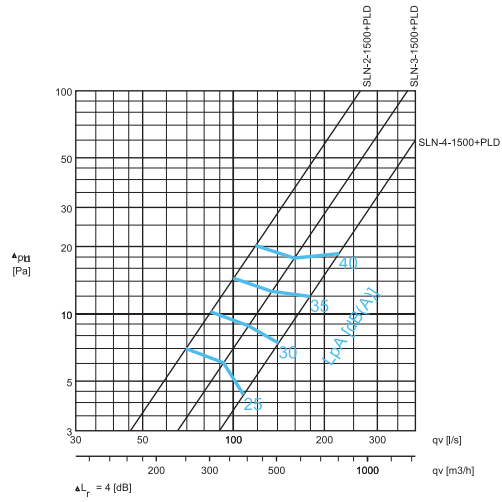
SLN-2-900 + PLD, SLN-3-900 + PLD, SLN-4-900 + PLD



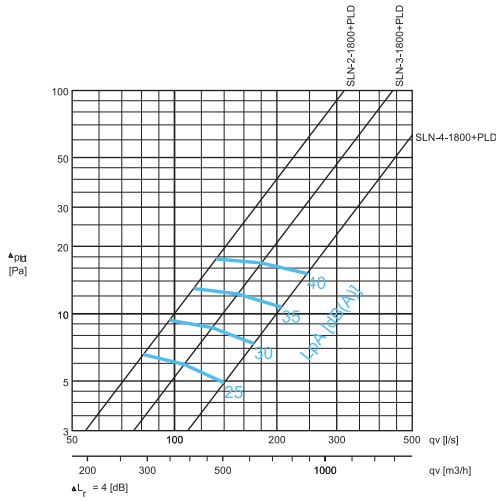
SLN-2-1200 + PLD, SLN-3-1200 + PLD, SLN-4-1200 + PLD



SLN-2-1500 + PLD, SLN-3-1500 + PLD, SLN-4-1500 + PLD



SLN-2-1800 + PLD, SLN-3-1800 + PLD, SLN-4-1800 + PLD



SOUND LEVEL DATA

	qv		ΔP_{st} (Pa)	ΔP_{tot} (Pa)	F (Hz)							LpA [dB(A)]	NR	NC
	(l/s)	(m ³ /h)			125	250	500	1000	2000	4000	8000			
SLN-2-600	33	119	8	8	42	33	24	15	6	10	16	25	19	17
	40	144	11	12	44	40	30	23	12	12	17	30	25	23
	47	169	16	17	46	45	36	30	17	13	18	35	31	29
	54	194	21	23	47	50	40	36	21	14	18	40	37	35
SLN-2-900	47	169	7	9	39	34	23	16	8	11	16	25	20	17
	56	202	10	12	42	40	29	23	15	13	17	30	26	23
	66	238	14	17	45	45	35	30	21	15	17	35	31	29
	77	277	19	23	48	49	40	36	26	17	18	40	36	34
SLN-2-1200	58	209	6	8	38	35	23	15	6	10	17	25	21	18
	70	252	9	12	42	40	30	23	11	11	17	30	26	23
	84	302	13	18	45	45	36	31	16	13	18	35	31	29
	99	356	19	25	48	49	42	38	21	14	18	40	35	33
SLN-2-1500	70	252	6	7	40	35	23	14	8	11	16	25	20	17
	84	302	9	10	44	40	29	22	14	13	17	30	26	23
	100	360	13	14	47	45	35	29	20	14	17	35	31	28
	118	425	18	20	51	49	41	36	26	16	18	40	36	34
SLN-2-1800	81	292	6	7	40	34	22	11	5	11	15	25	20	17
	97	349	8	9	45	40	29	20	10	12	16	30	25	23
	114	410	11	13	49	44	35	28	14	12	18	35	31	28
	133	479	15	18	52	49	41	35	18	13	19	40	36	34
SLN-3-600	44	158	7	9	40	34	25	15	7	11	12	25	19	16
	52	187	10	12	43	40	30	22	12	12	13	30	26	23
	60	216	14	16	45	45	35	28	16	14	13	35	31	29
	70	252	19	22	48	50	40	34	20	15	14	40	37	35
SLN-3-900	61	220	6	8	38	35	24	14	8	12	11	25	21	18
	73	263	9	12	41	40	30	21	14	14	12	30	26	24
	87	313	12	17	44	46	35	29	20	16	12	35	32	29
	102	367	17	23	47	50	40	35	25	18	13	40	37	35
SLN-3-1200	74	266	5	8	37	36	23	13	7	11	10	25	21	18
	90	324	8	12	41	41	29	21	13	13	11	30	27	24
	107	385	11	18	45	46	35	29	18	15	12	35	32	30
	126	454	15	24	48	50	41	36	23	17	13	40	37	35
SLN-3-1500	93	335	5	6	39	35	22	12	8	12	12	25	21	18
	112	403	7	9	43	40	28	20	14	13	14	30	26	24
	134	482	10	13	46	45	34	28	20	15	15	35	32	30
	159	572	14	18	49	50	40	35	25	16	17	40	37	35
SLN-3-1800	107	385	4	6	41	35	21	10	7	11	12	25	20	17
	129	464	6	9	44	40	28	19	11	12	14	30	26	23
	154	554	9	12	48	45	35	28	16	12	17	35	31	29
	180	648	12	17	51	50	41	35	20	13	19	40	37	35
SLN-4-600	66	238	10	11	35	35	25	16	9	9	11	25	21	18
	79	284	14	16	41	39	32	24	16	14	12	30	25	22
	92	331	19	21	46	43	37	30	22	18	12	35	29	28
	108	389	26	29	52	47	43	37	28	22	13	40	35	34
SLN-4-900	78	281	5	7	33	37	19	10	9	9	11	25	22	20
	93	335	8	10	38	41	27	19	13	13	12	30	27	25
	110	396	11	14	43	46	36	27	17	16	14	35	32	30
	127	457	14	18	47	49	43	35	20	19	15	40	36	34
SLN-4-1200	105	378	5	8	39	36	21	14	7	12	12	25	21	18
	125	450	8	11	42	41	27	21	12	13	12	30	27	24
	147	529	11	16	45	46	34	28	17	14	13	35	32	30
	172	619	14	22	49	50	40	34	21	15	13	40	37	35
SLN-4-1500	108	389	4	4	41	34	21	11	8	11	12	25	19	16
	141	508	6	7	45	40	28	19	13	11	12	30	26	23
	179	644	10	12	48	45	35	27	16	12	13	35	31	29
	224	806	16	19	51	50	41	34	20	12	13	40	37	35
SLN-4-1800	140	504	4	5	41	34	20	11	7	6	14	25	20	17
	172	619	6	7	45	40	28	19	11	9	15	30	26	23
	207	745	8	11	49	45	34	26	14	12	17	35	31	29
	246	886	11	15	52	50	41	33	17	15	18	40	37	35

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

Adjustment

The air pattern can be changed through 180° by manually adjusting the flow deflection vanes. Each deflection vane section can be individually adjusted without removing the T-profiles, to provide flexibility in supply air pattern orientation.

In order to enable airflow adjustment and measurement of airflow rate it is recommended to connect the diffuser to the PLD (or PLL) balancing plenum equipped with the MSM module in supply. The supply flow rate is determined by using the measurement and adjustment module MSM. Disconnect the linear diffuser and pass the tubes and control spindle through the linear diffuser. Measure the differential pressure using a manometer. The airflow rate is calculated using the formula below.

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

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved.

Lock the damper position with a screw.

Replace the tubes and spindle into the plenum and replace the linear diffuser.

K-factor for installations with different safety distances (D= duct diameter)

PLD	>6XD	min 3XD
160	19	22
200	49	32
250	51	51

Servicing

Remove the T-profiles.

Remove the linear diffuser by unscrewing the screws of the transversal bars.

Clean the parts by wiping with a damp cloth.

Push the linear diffuser back into place by screwing the transversal bars to the installation brackets.

Option: with balancing plenum PLD + MSM (or PLL + MSM)

Remove the measurement and adjustment module by gently pulling the shaft (not the control spindle or measurement tubes!).

Wipe the parts with a damp cloth, instead of immersing in water.

Reassemble the measurement and adjustment module by pushing the shaft into place until the module meets the stopper.

Push the linear diffuser back into place by screwing the transversal bars to the installation brackets.

Suggested specifications

The linear slot diffuser shall have an extruded aluminium outer frame, flow deflection vanes and T-profiles, polyester-painted to white (RAL 9010) colour. The flow deflection vanes shall be fixed by leaf springs.

The airflow pattern shall be directable by turning the deflection vanes without any significant change in the appearance of the diffuser.

The linear slot diffuser shall be connected to the ductwork using a plenum with mineral wool as sound attenuation material.

The removable linear slot diffuser shall be mounted into the plenum with invisible screws.

The plenum shall comprise an airflow measurement and adjustment unit.

The linear diffuser shall be removable, in order to provide access to the measurement and adjustment module in the plenum.

T-profiles shall be easily removable for access to the installation brackets.

Product code

SLN-N-L

N = Number of slots
2, 3, 4

L = Length
400,+1,...,50000

Specifics and accessories

SE = End caps (Y/N)
Y Yes
N No

ST = Type of end caps
NA Not assigned
N1 Standard 23 mm
E1 Type E1

FI = Finishing
AN Anodised
PN Painted

CO = Colour
W White
N No painting

Code example

SLN-2-400, SE=Y,ST=N1,CO=W

Sub products

PLL Plenum (Linear slot diffusers)
PLD Plenum (Diffusers)