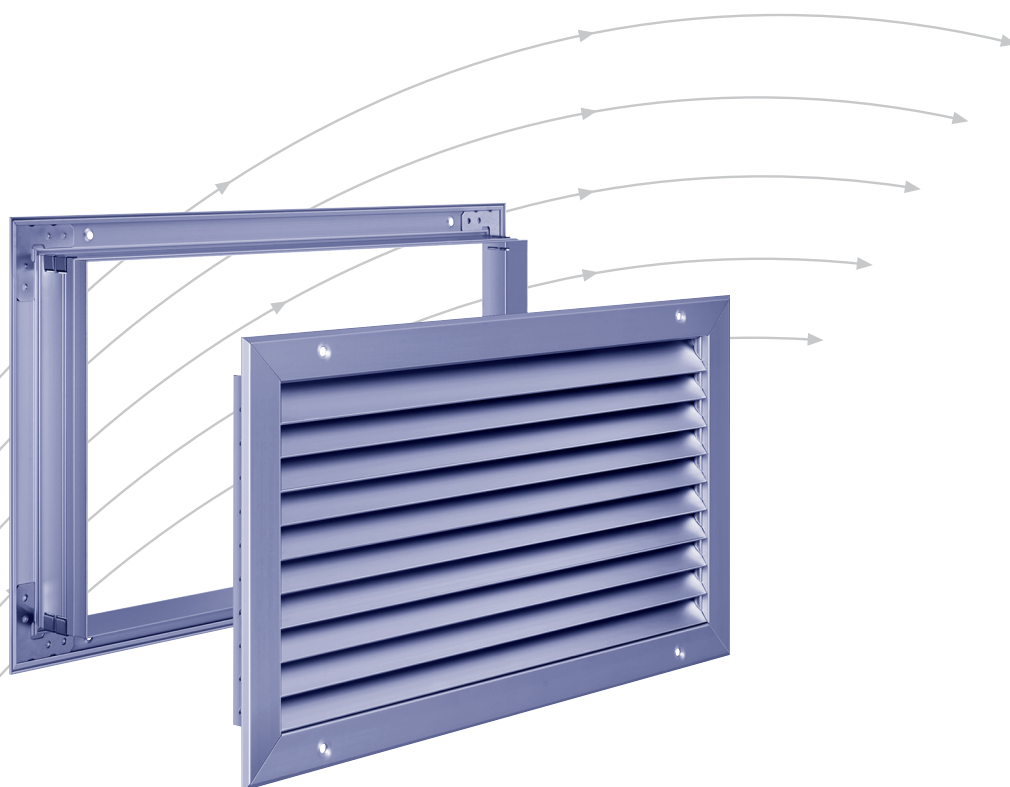


Screen grilles

Type SR / SRAR



TROX[®] / TECHNIK



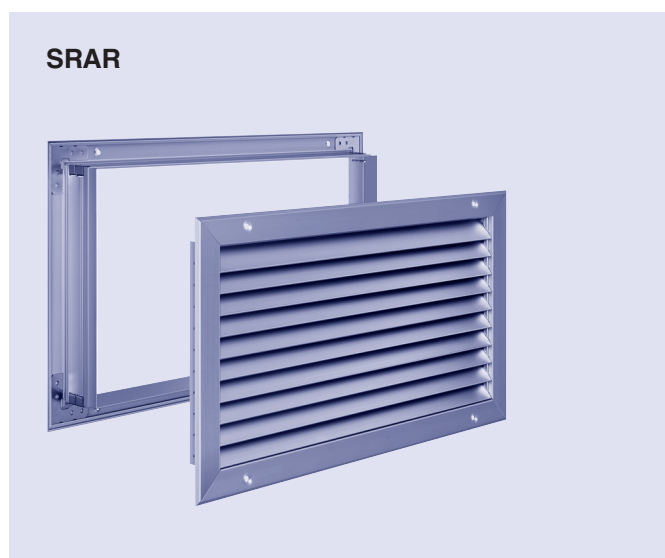
The art of handling air

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SRAR

Application

Bypass grille with stable, V-shaped louvers. The design chosen ensures perfect screening. May be installed in walls, doors, etc.

Execution

The well-designed screen grilles are made of colorless anodized aluminum sections. Other colors on request.

Execution possibilities

1. Type: SR Screen grille **without** cover frame, fixed with chipboard screws (included in delivery)
2. Type: SRAR Screen grille **with** cover frame, fixed with stabilizing screws (to be ordered separately)

Safety instructions

CAUTION!

Risk of injury from sharp edges and corners, ridges and thin-walled sheet metal parts!

- Proceed carefully with all work.
- Wear protective gloves, safety shoes and protective helmet.

WARNING!

Risk of injury due to insufficient qualifications!

- Improper handling may lead to considerable personal harm or material damage.
- All activities may only be carried out by suitably qualified staff in building services.

WARNING!

Danger from incorrect use. Misuse of the product may lead to dangerous situations.

The product must not be used:

- in areas subject to explosion hazards;
- in the open air without sufficient protection against weather effects;
- in atmospheres that may have a damaging and/or corrosive effect on the product due to scheduled or unscheduled chemical reactions.

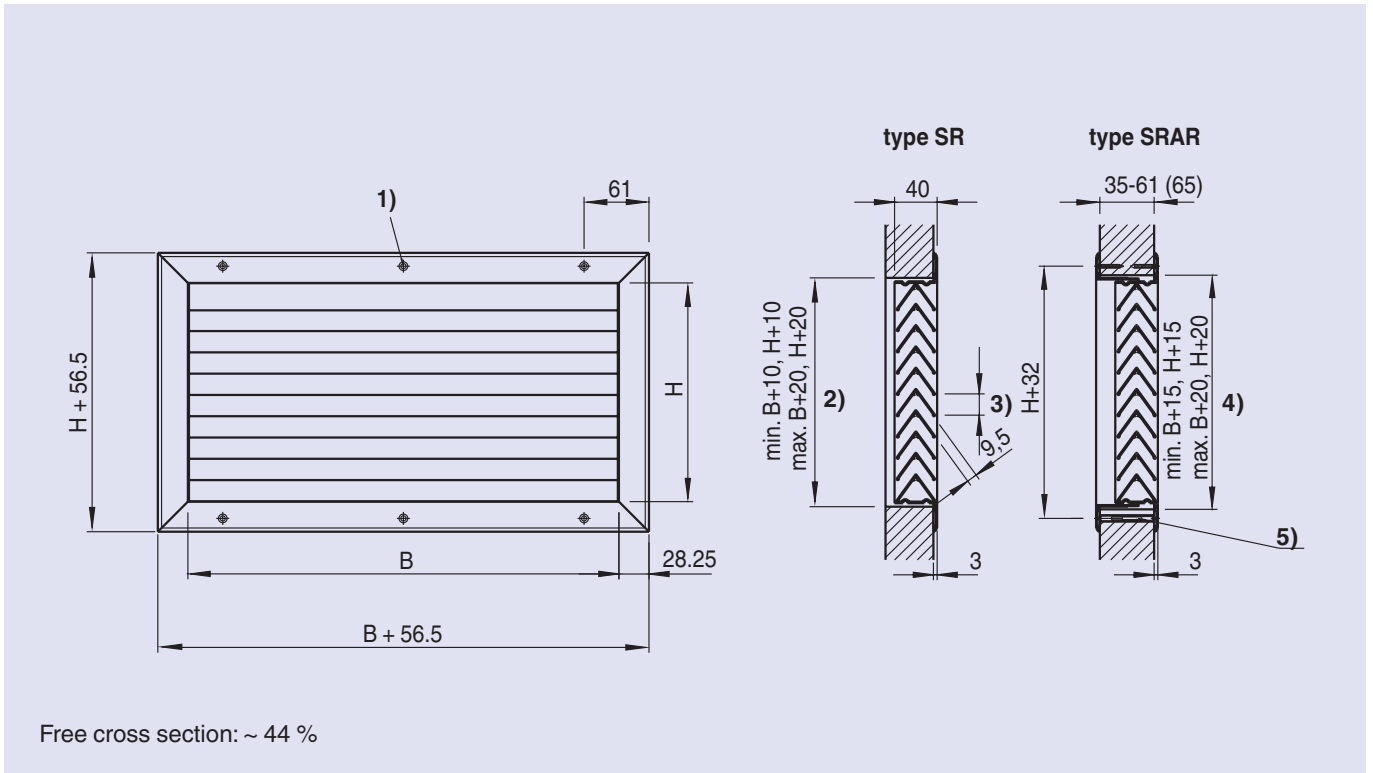
CAUTION!

Damage to the product due to improper handling. Check the device for damage and contamination prior to operation!

Improper handling may lead to considerable material damage of the product.

- Do not use any acid or abrasive cleaning agents.
- Adhesives from sticky tape may lead to colour damage.
- Excessive moisture may lead to colour damage and corrosion.
- Use only cleaning agents, greases and oils that are expressly specified.

Dimensions



- 1) As of size $B \geq 605$
- 2) Recess of type SR
- 3) T = division 20 mm
- 4) Recess of type SRAR
- 5) Openings $\varnothing 6$ mm in the door /wall - for the stabilizing screws

H [mm]	B [mm]							
	205	305	405	505	605	805	1005	1205
105	4	4	4	4	6	6	6	8
205	4	4	4	4	6	6	6	8
305	4	4	4	4	6	6	6	8
405	4	4	4	4	6	6	6	8
505	4	4	4	4	6	6	6	8
605	4	4	4	4	6	6	6	8

 = Preferred sizes

4, 6, 8 = Number of openings for fixing (countersunk screws)

Installation · Quick selection

Installation

SPAX multipurpose screws $\varnothing 4 \times 16$ mm (chipboard screws with raised countersunk head wood 90°) are included.

Special accessories for SR: stabilizing screws (to be ordered separately)

clamping thicknesses:
 37 - 47 mm
 47 - 57 mm
 57 - 67 mm



Screw diameter: $\varnothing 4.5$ mm
 (openings in the door / wall = $\varnothing 6$ mm)

Quick selection

H [mm]	B [mm]								
	205	305	405	505	605	805	1005	1205	
105	49	74	98	123	147	196	245	294	‡ L _{wA}
	15	16	17	18	19	20	21	22	
	60	90	120	150	180	240	300	360	‡ L _{wA}
	26	27	28	29	30	31	32	33	
205	98	147	196	245	294	392	490	588	‡ L _{wA}
	18	19	20	21	22	23	24	25	
	120	180	240	300	360	480	600	720	‡ L _{wA}
	29	30	31	32	33	34	35	36	
305	147	220	294	367	440	587	73	880	‡ L _{wA}
	20	21	22	23	24	25	26	27	
	180	270	360	450	540	720	900	1080	‡ L _{wA}
	31	32	33	34	35	36	37	38	
405	196	294	392	490	588	784	980	1176	‡ L _{wA}
	21	22	23	24	24	26	27	28	
	240	360	480	600	720	960	1200	1440	‡ L _{wA}
	32	33	34	35	36	37	38	39	
505	245	367	490	612	734	979	1224	1468	‡ L _{wA}
	22	23	24	25	26	27	28	29	
	300	450	600	750	900	1200	1500	1800	‡ L _{wA}
	33	34	35	36	37	38	39	40	
605	294	440	587	734	880	1174	1467	1760	‡ L _{wA}
	23	24	25	26	27	28	29	30	
	360	540	720	900	1080	1440	1800	2160	‡ L _{wA}
	34	35	36	37	38	39	40	41	

 = Preferred sizes

Example:

‡ = 440 m³/h
 L_{wA} = 24 dB(A) } Base v_{eff} = 1.31 m/s Δ Δp_t = 6 Pa

 ‡ = 540 m³/h
 L_{wA} = 35 dB(A) } Base v_{eff} = 1.60 m/s Δ Δp_t = 9 Pa

Legend:

Δp_t Pa Total pressure drop
 v_{eff} m/s eff. discharge velocity
 ‡ m³/h Volume flow rate
 L_{wA} dB(A) A-weighted sound power level

Selection diagram type SR and type SRAR

Example:

Given :

$\dot{V} = 470 \text{ m}^3/\text{h}$, $B \times H = 605 \times 305 \text{ mm}$

Sought:

a) v_{eff} b) Δp_t c) L_{WA} d) L_{Wokt} , L_{wNC} , L_{wNR}

Solution:

a) $v_{\text{eff}} = 1.60 \text{ [m/s]}$

b) $\Delta p_t = 9 \text{ [Pa]}$

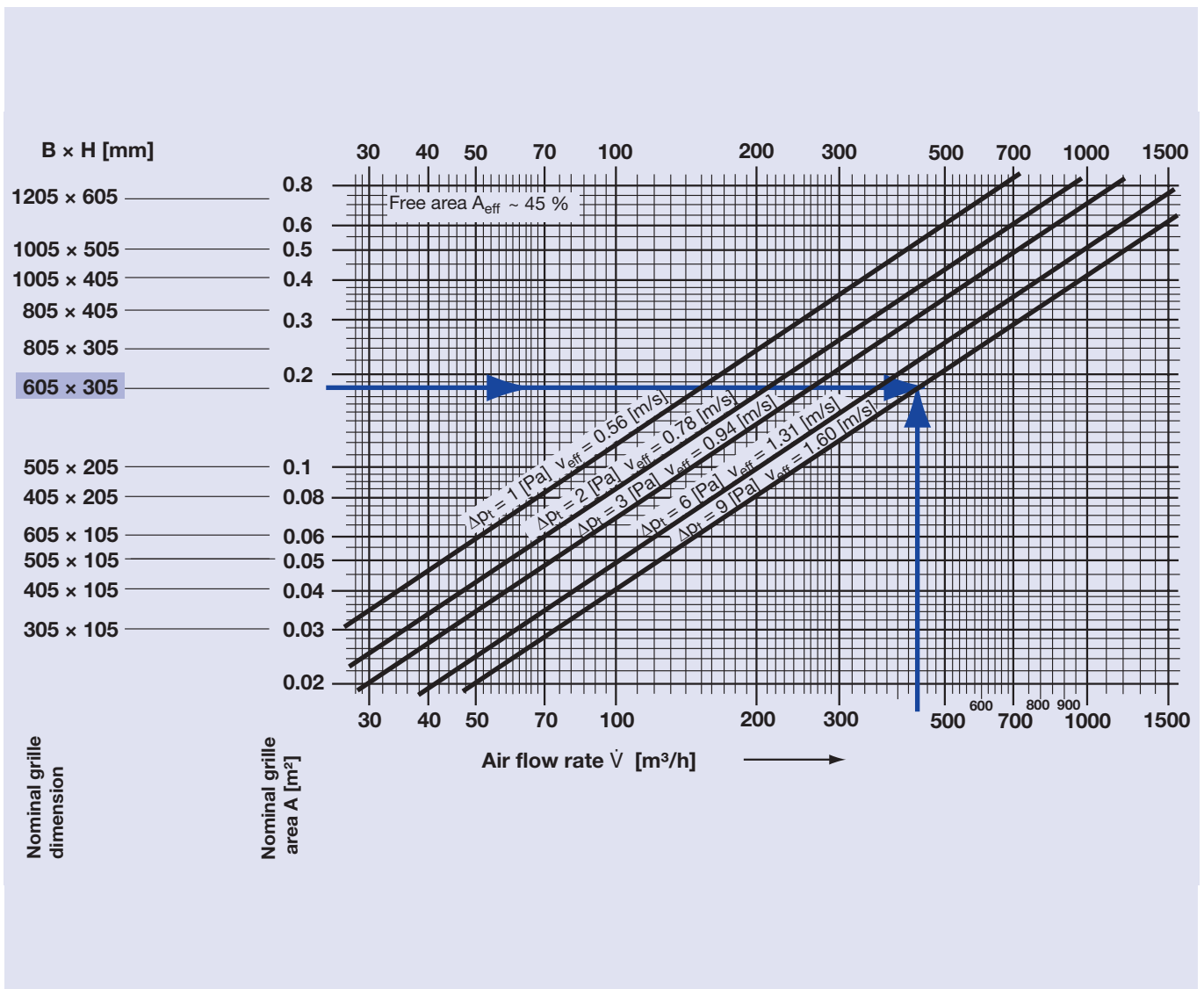
c) $L_{\text{WA}} = L_{\text{WAo}} + \Delta L_{\text{W2}}$
 $= 30 + 5 = 35 \text{ [dB(A)]}$

$\Delta L_{\text{W2}} = 10 \times \log \frac{A}{0.0635}$
 $= 10 \times \log \frac{0.605 \times 0.305}{0.0635}$
 $= 10 \times \log \frac{0.1845}{0.0635}$
 $= 4.632$

d) L_{Wokt} see table 'Oktave spectrum', page 6

Legend:

\dot{V}	m^3/h	Volume flow rate
v_{eff}	m/s	eff. discharge velocity
$B \times H$	mm	Nominal width x nominal height
A	m^2	Nominal area of the grille
A_{eff}	m^2	Effective air outlet surface area (free area)
A_o	m^2	reference nominal area ($0.605 \cdot 0.305 = 0.0635$)
Δp_t	Pa	Total pressure drop (supply air)
L_{WA}	dB(A)	A-weighted sound power level
L_{WAo}	dB(A)	A-weighted sound power level in relation to the reference nominal area
L_{Wokt}	dB	Sound power level in the octave-centre frequencies
ΔL_{W2}	dB	Correction for actual grille size
W_o	W	Reference sound power level
f	Hz	Octave-centre frequencies
ΔL_A	dB	Octave-centre frequencies, correction value
L_{wNC}	$=$	$L_{\text{WA}} - 6 = 35 - 6 = 29$
L_{wNR}	$=$	$L_{\text{WA}} - 4 = 35 - 4 = 31$



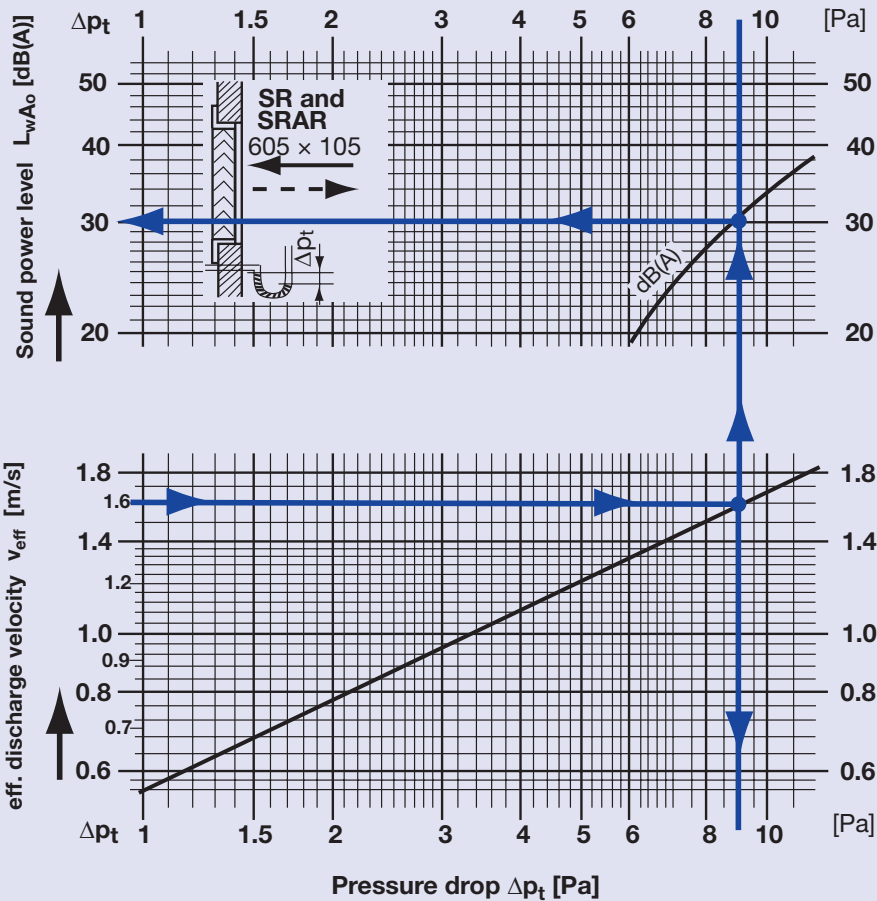
Technical Data

Sound power level L_{wA_0} and pressure drop Δp_t

Type SR and type SRAR = 605 × 105 mm

Reference nominal area $A_0 = 0.0635 \text{ [m}^2\text{]}$

Reference sound power level $W_0 = 10^{-12} \text{ [W]}$



Correction for actual grille size

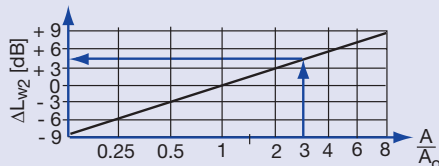
Actual: $L_{wA} = L_{wA_0} + \Delta L_{w2}$

whereas: $\Delta L_{w2} = 10 \times \log \frac{A}{A_0} = 10 \times \log \frac{A}{0.0635}$

L_{wNC} , L_{wNR} values

$L_{wNC} = L_{wA} - 6$

$L_{wNR} = L_{wA} - 4$



Oktave spectrum

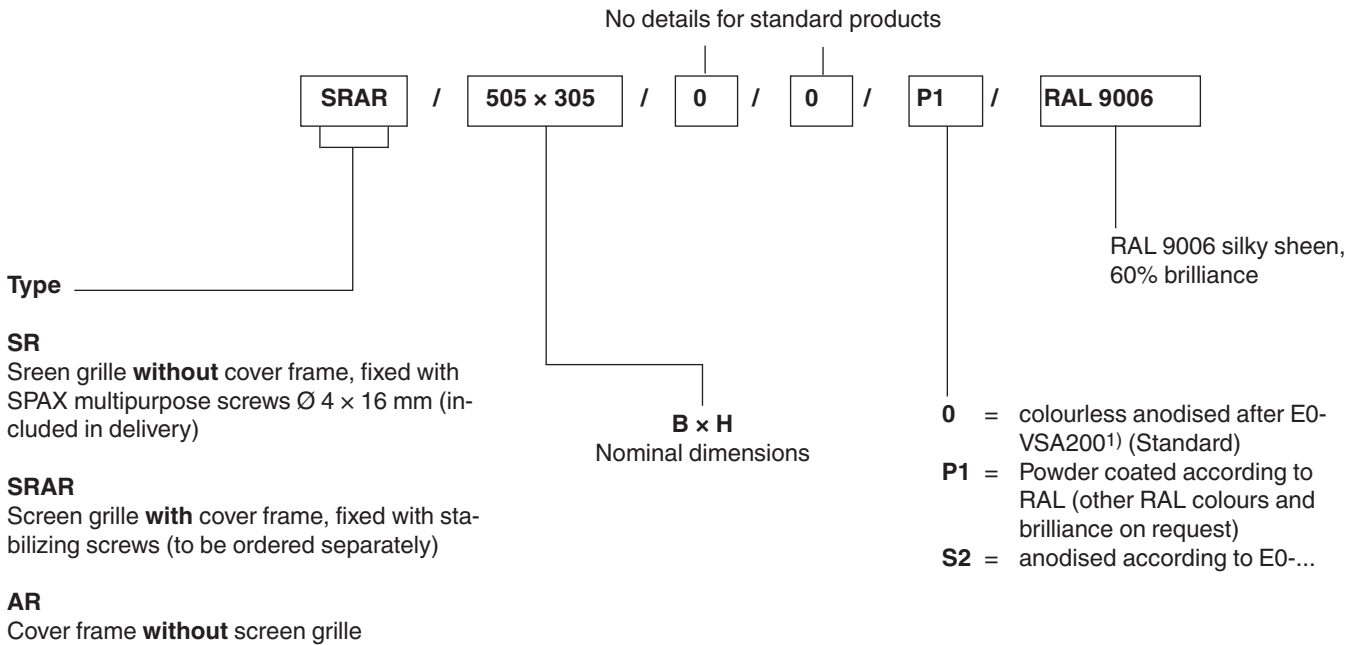
f	125	250	500	1k...8k	[Hz]
L_{wA}	35	35	35	35	[dB(A)]
ΔL_A	+13	+4	-4	<20	[dB]
L_{wOkt}	48	39	31	>20	[dB]

Tolerances

Linear sound power level ± 2 [dB]

Octave band sound power level ± 4 [dB]

Order codes



1) Explanations see L-02-2-02e

Order examples

- 8 off SR / 405x105
- 12 off SRAR / 605x305 / P1 / RAL9006
- 72 off stabilizing screws for clamping thickness 35-42mm

Text for tendering purposes

Screen grille with perfect screening type SR existing of aluminum louvers, colourless anodised.
Louvers: V-shaped, fixed in the cover frame.
Frame: with border of 28.25 mm and countersunk openings for fixing

Fixing screws included in delivery (SPAX).

Informations are specified to the different countries concerning to the quality of anodising:

- CH** : E0 - VSA - 200
- D** : E0 - EV1 - 10µ (DIN 17611)
- A** : E0 - C0 - 10µ (ÖNorm C2531)
- EU** : A0 - C0 - 10µ (ESTAL former EURAS)

Options:

- with cover frame, Type SRAR to be installed in doors, Recommendation: stabilizing screws for thickness 35...61mm as special accessories
- with wire mesh, galvanized
- coloured anodised
- coloured painted (powder coated) according to RAL...

