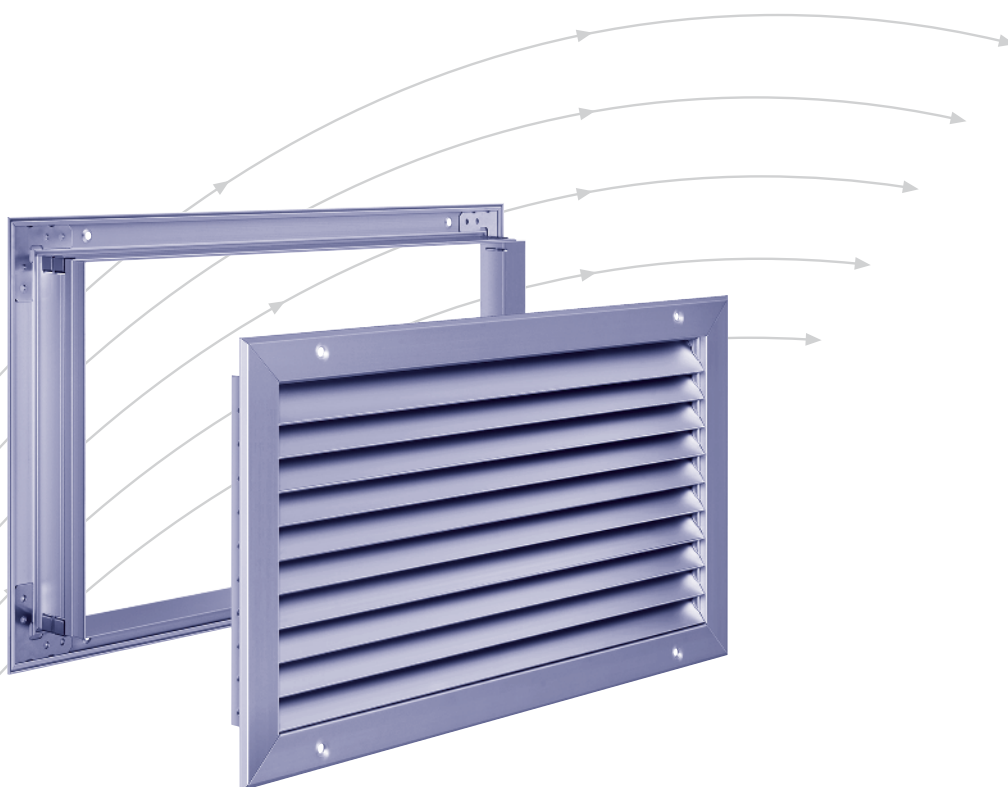


# Screen grilles

Type SR / SRAR



**TROX**® **TECHNIK**



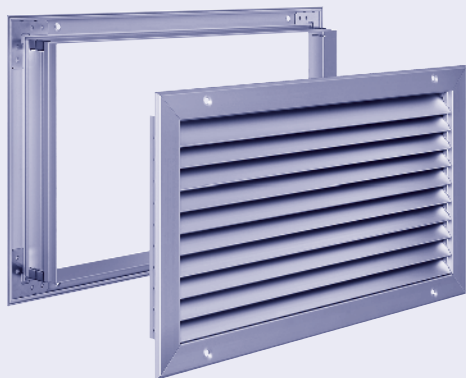
TROX HESCO Schweiz AG  
Walderstrasse 125  
Postfach 455  
CH - 8630 Rüti ZH

Tel. +41 (0)55 250 71 11  
Fax +41 (0)55 250 73 10  
[www.troxhesco.ch](http://www.troxhesco.ch)  
[info@troxhesco.ch](mailto:info@troxhesco.ch)

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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 anodised aluminium 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)



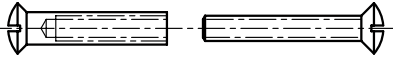
# Installation · Quick selection

## Installation

SPAX multipurpose screws  $\varnothing 4 \times 16$  mm (chipboard screws with raised countersunk head wood  $90^\circ$ ) 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	<b>74</b>	<b>98</b>	<b>123</b>	<b>147</b>	196	245	294	$\dot{V}$
	15	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	20	21	22	$L_{wA}$
	60	<b>90</b>	<b>120</b>	<b>150</b>	<b>180</b>	240	300	360	$\dot{V}$
	26	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	31	32	33	$L_{wA}$
205	98	147	<b>196</b>	<b>245</b>	<b>294</b>	392	490	588	$\dot{V}$
	18	19	<b>20</b>	<b>21</b>	<b>22</b>	23	24	25	$L_{wA}$
	120	180	<b>240</b>	<b>300</b>	<b>360</b>	480	600	720	$\dot{V}$
	29	30	<b>31</b>	<b>32</b>	<b>33</b>	34	35	36	$L_{wA}$
305	147	220	294	<b>367</b>	<b>440</b>	<b>587</b>	73	880	$\dot{V}$
	20	21	22	<b>23</b>	<b>24</b>	<b>25</b>	26	27	$L_{wA}$
	180	270	360	<b>450</b>	<b>540</b>	<b>720</b>	900	1080	$\dot{V}$
	31	32	33	<b>34</b>	<b>35</b>	<b>36</b>	37	38	$L_{wA}$
405	196	294	392	490	588	784	980	1176	$\dot{V}$
	21	22	23	24	24	26	27	28	$L_{wA}$
	240	360	480	600	720	960	1200	1440	$\dot{V}$
	32	33	34	35	36	37	38	39	$L_{wA}$
505	245	367	490	612	734	979	1224	1468	$\dot{V}$
	22	23	24	25	26	27	28	29	$L_{wA}$
	300	450	600	750	900	1200	1500	1800	$\dot{V}$
	33	34	35	36	37	38	39	40	$L_{wA}$
605	294	440	587	734	880	1174	1467	1760	$\dot{V}$
	23	24	25	26	27	28	29	30	$L_{wA}$
	360	540	720	900	1080	1440	1800	2160	$\dot{V}$
	34	35	36	37	38	39	40	41	$L_{wA}$

Figures in bold type = Preferred sizes in stock

### Example:

$$\left. \begin{array}{l} \dot{V} = 440 \text{ m}^3/\text{h} \\ L_{wA} = 24 \text{ dB(A)} \end{array} \right\} \text{Base } v_{\text{eff}} = 1.31 \text{ m/s} \hat{=} \Delta p_t = 6 \text{ Pa}$$

$$\left. \begin{array}{l} \dot{V} = 540 \text{ m}^3/\text{h} \\ L_{wA} = 35 \text{ dB(A)} \end{array} \right\} \text{Base } v_{\text{eff}} = 1.60 \text{ m/s} \hat{=} \Delta p_t = 9 \text{ Pa}$$

### Legend:

$\Delta p_t$	Pa	Total pressure drop
$v_{\text{eff}}$	m/s	eff. discharge velocity
$\dot{V}$	$\text{m}^3/\text{h}$	Volume flow rate
$L_{wA}$	dB(A)	A-weighted sound power level

## Selection diagram type SR and type SRAR

## Legend:

### Example:

#### Given :

$\dot{V} = 540 \text{ m}^3/\text{h}$ ,  $B \times H = 605 \times 305 \text{ mm}$

#### Sought:

a)  $v_{\text{eff}}$    b)  $\Delta p_t$    c)  $L_{\text{WA}}$    d)  $L_{\text{Wokt}}$ ,  $L_{\text{wNC}}$ ,  $L_{\text{wNR}}$

#### Solution:

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

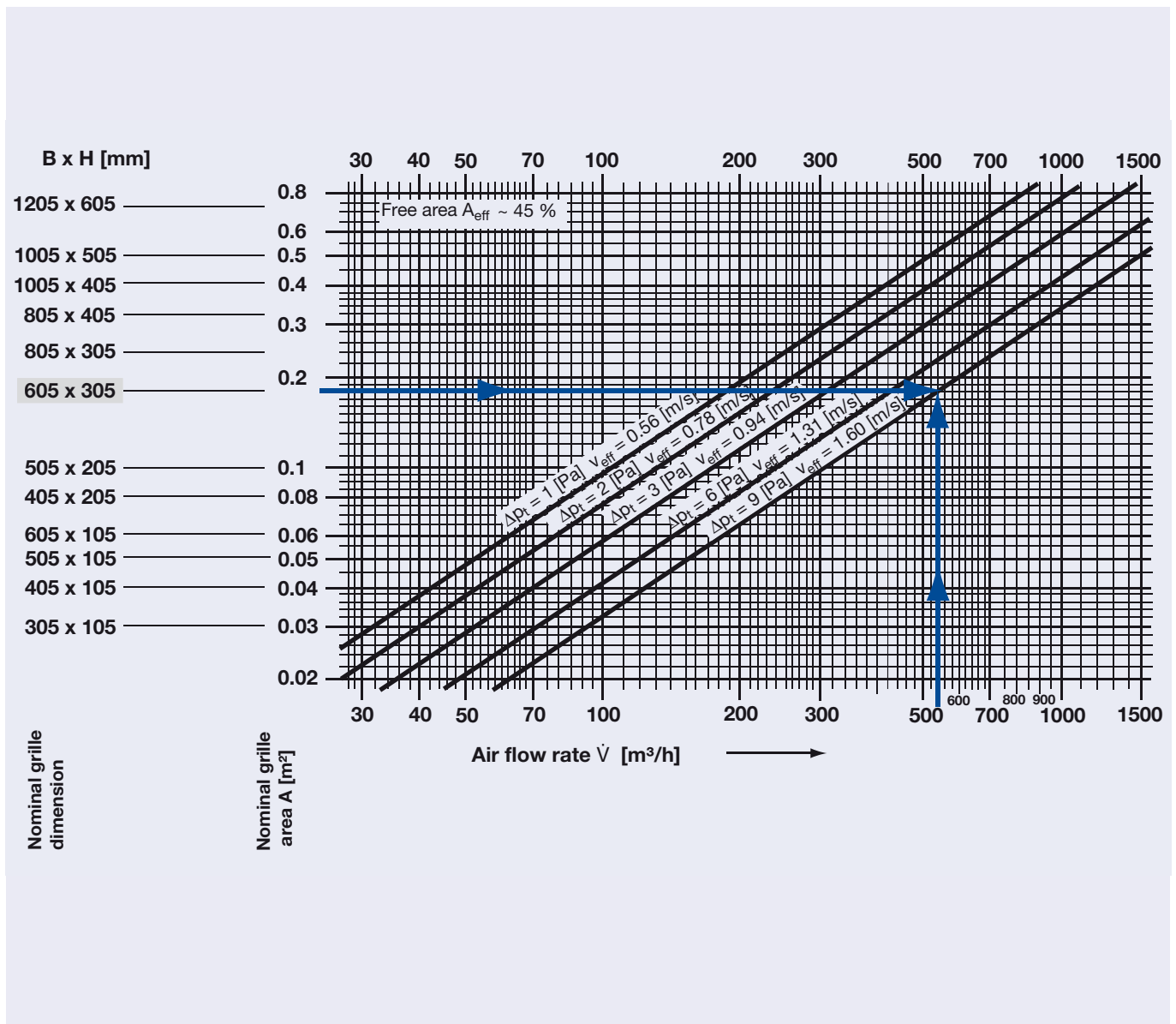
b)  $\Delta p_t = 9 \text{ [Pa]}$

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)  $L_{\text{Wokt}}$  see table 'Oktave spectrum', page 6

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

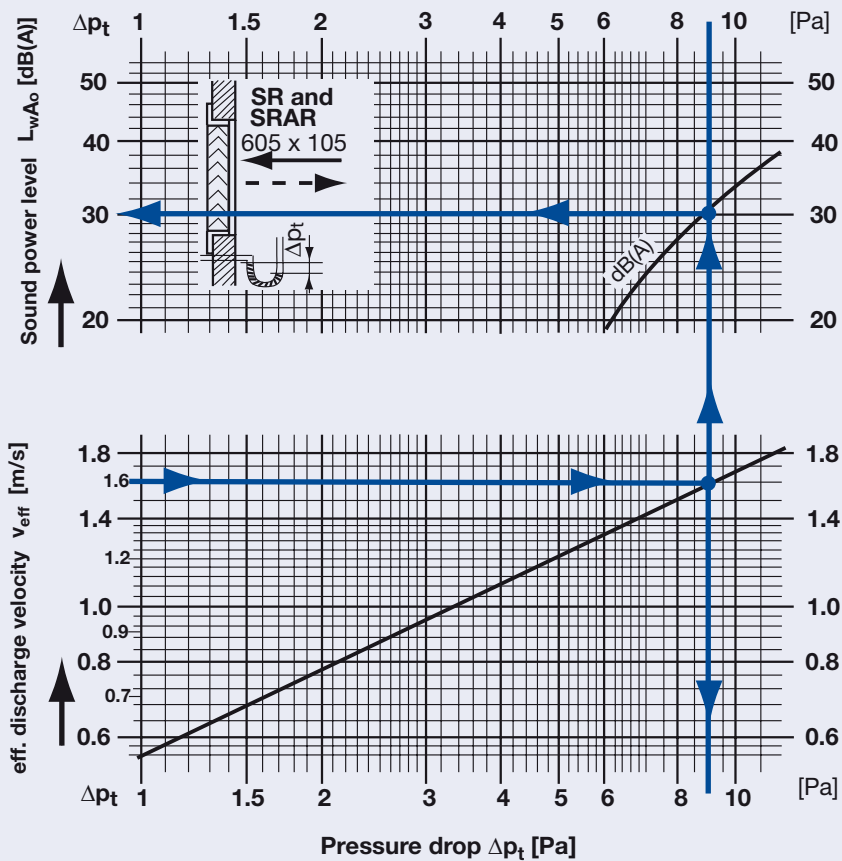


# Technical Data

## Sound power level $L_{wA0}$ and pressure drop $\Delta p_t$

Type SR and type SRAR = 605 x 105 mm

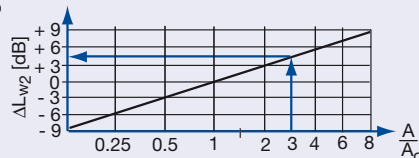
Reference nominal area  $A_0 = 0.0635 \text{ [m}^2\text{]}$   
 Reference sound power level  $W_0 = 10^{-12} \text{ [W]}$



### Correction for actual grille size

Actual:  $L_{wA} = L_{wA0} + \Delta L_{w2}$

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)]
$\Delta L_A$	+13	+4	-4	<20	[dB]
$L_{wOkt}$	48	39	31	>20	[dB]

### Tolerances

Linear sound power level  $\pm 2$  [dB]

Octave band sound power level  $\pm 4$  [dB]

## Order codes

No details for standard products



Type

### SR

Screen grille **without** cover frame, fixed with SPAX multipurpose screws Ø 4 x 16 mm (included in delivery)

### SRAR

Screen grille **with** cover frame, fixed with stabilizing screws (to be ordered separately)

### AR

Cover frame **without** screen grille

**B x H**  
Nominal dimensions

RAL 9006 silky sheen,  
60% brilliance

**0** = colourless anodised after E0-VSA200<sup>1)</sup> (Standard)

**P1** = Powder coated according to RAL (other RAL colours and brilliance on request)

**S2** = anodised according to E0-...

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...

