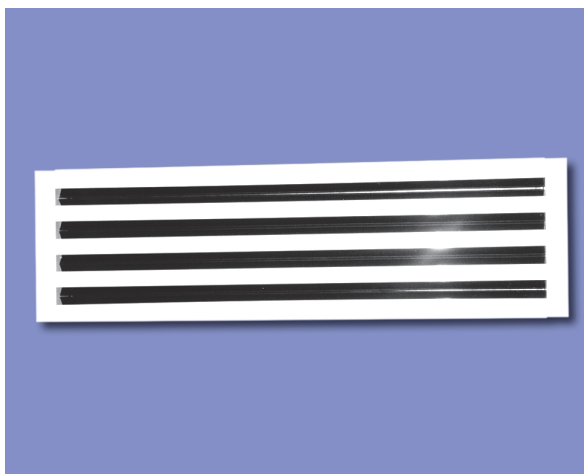


Aluminum slot grilles ARS with movable louvers and ALS without louvers



Aluminum slot grilles ARS are intended for supply of air into rooms intended for various purposes by ventilation and air conditioning systems, including those with variable airflow rate. ARS grilles ensure stability of supplied air jet within the range of volumetric flow rates from 100% to 25% even in the cooling down mode. Slot grilles can also be used for exhaust of air out of rooms.

ARS grilles are made of aluminum shapes with the number of slots from 1 to 6. In each slot two perforated dampers are mounted which act as the airflow divider and the airflow rate regulator, and two guiding louvers, which turn through an angle from 0° to 45° thus changing the direction of the discharge flow from

vertical to horizontal one. As a rule ARS grilles shall be used with plenum boxes. From the point of design plenum boxes are fabricated in two options: with and without sound absorbing material. There is also an option of slot grilles without turning louvers (ALS).

Standard types and sizes of grilles:

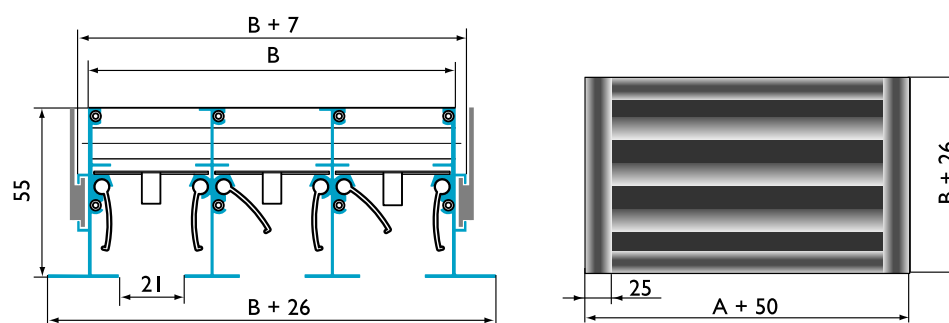
A – length – from 300 mm to 2000 mm;

B – width – from 41 mm (1 slot) to 236 mm (6 slots), spacing – 39 mm.

Sophisticated T-shaped and angular grilles can be fabricated as well.

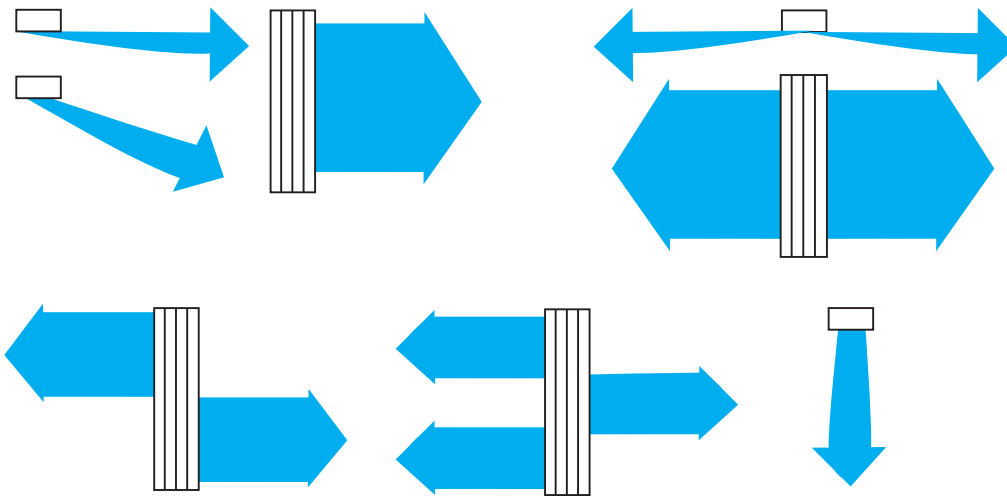
During assembling slot grilles are inserted into the space of the suspended ceiling and connected to air ducts and cleated to steel structures.

Standard color of grilles – white (RAL 9016), louvers and dampers are black.



Characteristics of ARS

| Number of slots | B, mm | F ₀ , m ² | Mass ARS, kg | Mass ALS, kg |
|-----------------|-------|---------------------------------|--------------|--------------|
| 1 | 41 | 0,03 | 1,5 | 1,3 |
| 2 | 80 | 0,07 | 2,6 | 2,1 |
| 3 | 119 | 0,11 | 3,7 | 3,0 |
| 4 | 158 | 0,15 | 4,7 | 3,8 |
| 5 | 197 | 0,19 | 5,7 | 4,7 |
| 6 | 236 | 0,23 | 6,8 | 5,5 |

Pattern of development of discharge flows formed by ARS grilles

Data for selection of ARS grilles 1 m long – supply air

| ARS | L _A < 20 dB(A) | | | L _A = 25 dB(A) | | | | L _A = 35 dB(A) | | | | L _A = 45 dB(A) | | | | |
|--------------------------|------------------------------------|----------------------|--------------------------------------|------------------------------------|----------------------|--------------------------------------|-----|------------------------------------|----------------------|--------------------------------------|-----|------------------------------------|----------------------|--------------------------------------|-----|-----|
| | L ₀ , m ³ /h | ΔP _v , Pa | jet range, m at V _x , m/s | L ₀ , m ³ /h | ΔP _v , Pa | jet range, m at V _x , m/s | | L ₀ , m ³ /h | ΔP _v , Pa | jet range, m at V _x , m/s | | L ₀ , m ³ /h | ΔP _v , Pa | jet range, m at V _x , m/s | | |
| | | | | | | 0,2 | 0,5 | | | 0,2 | 0,5 | | | 0,2 | 0,5 | 0,2 |
| Vertical jet (α = 0°) | | | | | | | | | | | | | | | | |
| 1ARS | 90 | 6 | 0,6 | 120 | 10 | 0,7 | 0,3 | 160 | 18 | 1,0 | 0,4 | 250 | 43 | 1,5 | 0,6 | 0,4 |
| 2ARS | 140 | 3 | 0,8 | 200 | 7 | 1,1 | 0,5 | 300 | 15 | 1,7 | 0,7 | 450 | 33 | 2,6 | 1,0 | 0,7 |
| 3ARS | 180 | 2 | 1,0 | 280 | 6 | 1,6 | 0,7 | 420 | 14 | 2,5 | 1,0 | 600 | 28 | 3,5 | 1,4 | 0,9 |
| 4ARS | 220 | 2 | 1,3 | 370 | 6 | 2,1 | 0,9 | 540 | 13 | 3,1 | 1,2 | 800 | 29 | 4,6 | 1,8 | 1,2 |
| 5ARS | 250 | 2 | 1,4 | 500 | 8 | 2,9 | 1,1 | 650 | 13 | 3,8 | 1,5 | 1000 | 32 | 5,8 | 2,3 | 1,5 |
| 6ARS | 270 | 2 | 1,6 | 530 | 7 | 3,1 | 1,2 | 750 | 15 | 4,4 | 1,8 | 1200 | 38 | 7,0 | 2,8 | 1,9 |
| Horizontal jet (α = 45°) | | | | | | | | | | | | | | | | |
| 1ARS | 60 | 3 | 0,5 | 85 | 6 | 0,7 | 0,3 | 130 | 14 | 1,1 | 0,4 | 180 | 27 | 1,5 | 0,6 | 0,4 |
| 2ARS | 120 | 3 | 1,0 | 150 | 5 | 1,2 | 0,5 | 220 | 10 | 1,8 | 0,7 | 320 | 21 | 2,6 | 1,1 | 0,7 |
| 3ARS | 150 | 2 | 1,3 | 220 | 5 | 1,9 | 0,7 | 300 | 10 | 2,5 | 1,0 | 460 | 22 | 3,8 | 1,5 | 1,0 |
| 4ARS | 180 | 2 | 1,4 | 280 | 5 | 2,2 | 0,9 | 400 | 10 | 3,2 | 1,3 | 570 | 21 | 4,5 | 1,8 | 1,2 |
| 5ARS | 220 | 2 | 1,7 | 340 | 5 | 2,7 | 1,1 | 500 | 11 | 4,0 | 1,6 | 700 | 23 | 5,6 | 2,2 | 1,5 |
| 6ARS | 250 | 2 | 2,1 | 400 | 6 | 3,3 | 1,3 | 580 | 13 | 4,7 | 1,9 | 820 | 26 | 6,7 | 2,7 | 1,8 |

For grilles with a length of A≠1 m values of airflow rate L₀ specified in the table shall be corrected proportionally to the length A of the make. Jet range and total pressure correspond to the values specified in the table.