AIR DUCTS

radel&hahn
Building technologies - HVAC

Individual solutions

The main profile of the Hungarian Radel & Hahn embraces the whole area of air-engineering. Our corporation deals with planning, production, servicing and maintenace of air -engineering systems, clean room-engineering devices and building service systems. Thereby we can reach not only the leading position in production development, but our products correspond to the most austere engineering and environmental regulations.

- Planning
- Production
- Installation
- Projectmanagement
- Servicing

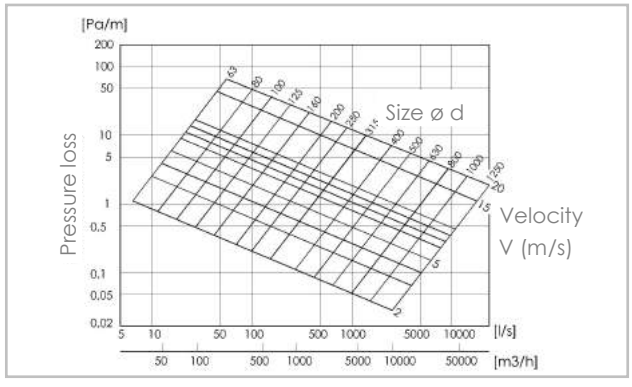
Round air ducts and profiles

Radel & Hahn Zrt produces circular cross, straight rigid pipes and profiles made of galvanized steel plate to be used by ventilation systems.

- They can be used for different purposes, if we take into consideration the needed airflow rate, the pressure diffrence, the air tight.
- We make ducts from plate strips, which are galvanized both–sided and suitable for mechanic seam.
- According to the customer's request, the material of the system can be stainless steel or aluminum too.

Nominal diamater (mm)	Minimal wall thickness	Maximal allowed pressure difference	
		Inlet	*Outlet*
80 - 315	0,5 mm	6300 Pa	2500 Pa
350 - 500	0,6 mm	5000 Pa	1600 Pa
560 - 800	0,8 mm	5000 Pa	1250 Pa
900 - 1250	0,9 - 1,2 mm	3000 Pa	1000 Pa

- If the diameter of the duct is more than 250 mm, one stiffening rib is applied; if the diameter is more than 500 mm, we use 2 stiffening ribs besides of seam.
- Nominal maximum length of duct elements is 6000 mm. The length of duct elements can be freely chosen within the boundaries of practicality and transportability.
- If there are no special requirements, our air ducts are manufactured with a permissible air leakage of 2.0 x 10^{-3} - 3.0 x 10^{-3} $m^3/sec/m^2$.



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The rectangular air ducts and fittings manufactured by Radel & Hahn Zrt. made of galvanized steel sheet with a rectangular cross-section, according to the Austrian standard ÖNORM M7615, are made for ventilation systems and can be used for various purposes, taking into account the required air velocity, pressure difference and airtightness.

- When assembling the air ducts, we use a Pittsburg seam. The sheet material of each air duct element is stiffened by mechanical ribbing, and in the case of larger cross-sections, it is provided with spacer bars.
- The nominal maximum side length of the air duct elements is 2000 mm, the minimum side length is 100 mm. The two side lengths can be chosen arbitrarily independent from each other within the limits of expediency.
- The air duct elements are produced with rolled sheet angle profile and corner element. The angle profiles are made in sizes 20 and 30, and the ÖNORM M7615 standard is taken into account when using them.

Nominal lenght (mm)	**Minimal wall thickness** in case of the folowing allowed pressure differences		
	max. 630 Pa	**max. 1600 Pa**	**max. 2500 Pa**
200-400 mm	0,7 mm	0,7 mm	0,7 mm
401-750 mm	0,7 mm	0,9 mm	0,9 mm
751-1000 mm	0,9 mm	0,9 mm	1,1 mm
1001-1400 mm	0,9 mm	1,1 mm	1,2 mm
over 1400 mm	1,1 mm	1,1 mm	1,2 mm

The maximum allowable **pressure difference** is

2500 Pa

by 8m/sec. air flow rate.

The air ducts are manufactured with a permissible air leakage of $2{,}0\times10^{-3}$ - $3{,}0\times10^{-3}$ $m^3/sec/m^2$

Material

- galvanized fine sheet
- aluminium sheet
- stainless steel

HEAT and SMOKE exhaust ventilation systems

Radel & Hahn Zrt. produces heat and smoke exhaust square or round ventilation systems. They can be installed as part of heat and smoke ventilation systems of the buildings or as separated fire sections consisting of horizontal, vertical and elbow heat and smoke ventilation ducts, if flue gas temperature doesn't exceed 600 °C.

- They are made from galvanized steel plate of min. 0,9 mm thickness.
- Pittsburgh seam is applied in case of air duct elements
- If air ducts are of big cross-section, standing seam is used on the inner surfaces. The material of every air duct unit is mechanical stiffened, if the crosss-section of the air duct is big, we equip them with spacer bars.

- Duct elements are produced with rolled sheet angle profile and corner profile. The widths of angle profiles are 20 or 30 mm. Sealing material of air duct elements Nr. 4209/ OF/0602 is used. It is fiber reinforced water-based duct sealant, thermostabile up to 1000 °C, one-component, solvent-free.

The heat and smoke air duct system can be installed only as separated fire sections. It cannot be routed to or through another fire section and cannot be directly connected to a building structure.

Maximal distance between duct suspensions is
1,65 m
Maximal distance between duct shorings is
2,00 m.

The maximum allowable pressure difference is

2500 Pa

by 8 m/sec. air flow rate.

Heat and smoke air ducts are classified into fire resistance class based on EN 12107-7:2011:

$E_{600}120(h_o)S$ 1500single
$E_{600}120(v_e)S$ 1500single

They belong to

A1

fire class based on OTSZ part 5. chapter I/3.

Our ÉMI-authorization nr.:

A-79/2010

The maximum sizes:

1250 x 1000 mm (widht x height)

Ø 1000 mm

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You may download the full referenclist from our web-seite **www.radel-hahn.hu.**

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SAMSUNG Gödöllő

ELECTROLUX Nyíregyháza

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