AZ KLIMA
ČLEN ČEZ ESCO

PRODUCT CATALOG

Ventilation ducts

Ventilation accessories

Air handling units

The manufacturer reserves the right to make changes to product designs or technical specifications.

The stated weight values are approximate. Technical parameters of the products were measured under optimal operating conditions.

The catalog version number is provided at the bottom of the page and follows the format mm/yyyy (month/year).
The current version of the catalog is available for download on the website www.azklima.com.

AZ KLIMA
ČLEN ČEZ ESCO

AZ KLIMA a.s. specializes in design, manufacturing, installation and servicing of air conditioning equipment and cooling technology for industrial and residential buildings, mixed-use developments and residential structures. Since its establishment in 1992, we have completed projects in the Czech Republic, Slovakia, Hungary, England, Japan and even Antarctica.

Operating in its own production plant in Milovice near Mikulov, where it continues a tradition of over fifty years of manufacturing air conditioning components in the region, the company produces ducts, accessories and air conditioning units. In addition to standard catalog products, we are capable of producing customized products according to customer specifications. Since 2018, production has expanded to a new manufacturing plant in Hodonín, specializing in circular ducts. This facility also houses extensive storage space, allowing customers to immediately pick-up circular ducts of standard dimensions up to diameter 315 mm.

In the company, we emphasize quality, reliability, and flexibility in both the delivered products and the provided services. The company adheres to quality management rules according to ISO 9001:2016, ISO 14001:2016, ISO 45001:2018, ISO 50001:2019, and ISO 27001:2017.

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VENTILATION ACCESSORIES NON-STANDARD DESIGN

Non-standard dimensions
NER Stainless-steel
TIT ZN Titanzinc
CU Copper
AL Aluminum
AL ZN Aluzinc
LAK Painted sheet metal
KOX Powder coating
NAT Coating
ZN Hot-dip galvanization
ELX Anodizing
HYG Hygienic design

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Distribution elements

Terminal elements

Roof elements

Special elements

AIR HANDLING UNITS 120

VENTILATION

DUCTS

Rectangular ventilation ducts – basic shapes and order codes

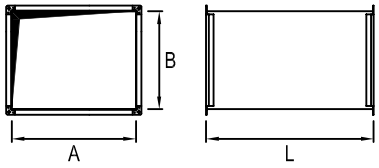
Product name	Order code																	Note
Rectangular duct	**TR**	**A**	**x**	**B**	**/**	**L**	K	**,**	K1									
Rectangular end cap	**ZAS**	**A**	**x**	**B**	K													
Rectangular take-off (mesh)	**TRU**	**A**	**x**	**B**	**/**	L	**/**	FI	K	mesh*								**FI standard = 45°**
Rectangular bend	**OL**	**A**	**x**	**B**	**/**	**FI**	**/**	**R**	K	**,**	K1	L	L1					**FI < 45: R=50**
Rectangular reducer bend	**OLP**	**A**	**x**	**B**	**–**	**A1**	**/**	**FI**	**/**	**R**	K	**,**	K1					**FI < 45: R=50**
Rectangular elbow	**KO**	**A**	**x**	**B**	**/**	**FI**	**/**	**R**	K	**,**	K1	L	L1					**FI < 45: R=50**
Rectangular reducer elbow	**KOP**	**A**	**x**	**B**	**–**	**A1**	**/**	**FI**	**/**	**R**	K	**,**	K1					**FI < 45: R=50**
Rectangular offset	**ODC**	**A**	**x**	**B**	**/**	**hA**	**/**	**L**	K	**,**	K1							
Rectangular concentric reducer	**PRS**	**A**	**x**	**B**	**–**	**A1**	**/**	**B1**	**/**	**L**	K	**,**	K1					
Rectangular eccentric reducer	**PRA**	**A**	**x**	**B**	**–**	**A1**	**x**	**B1**	**/**	**hB**	**,**	**hA**	**/**	**L**	K	K1		
Rectangular straight T-piece	**OCR**	**A**	**x**	**B**	**–**	**A1**	**–**	**A2**	**/**	**R**	**R2**	L	K	**,**	K1	**,**	K2	
Rectangular skewed T-piece	**OCS**	**A**	**x**	**B**	**–**	**A1**	**–**	**A2**	**/**	**L**	**/**	**hA**	K	**,**	K1	**,**	K2	
Rectangular concentric square-to round reducer	**PCKS**	**A**	**x**	**B**	**–**	**ØD**	**/**	**L**	K	**,**	N							
Rectangular eccentric square-to round reducer	**PCKA**	**A**	**x**	**B**	**–**	**ØD**	**/**	**hB**	**,**	**hA**	**/**	**L**	K	**,**	N			
Rectangular straight collar	**NCH**	**A**	**x**	**B**	**/**	L	K											
Rectangular bevelled collar	**NCZ**	**A**	**x**	**B**	**/**	L	K		**t**									**R=L, R ≥ 100**
Rectangular skewed collar	**NCA**	**A**	**x**	**B**	**/**	L	R		K									**R ≥ 100**

Optional parameter – if not specified = standard according to the catalog:
• K, K1, K2, – rectangular end – size of the used flange, see TAB. 2 in chapter 1.01 PCI

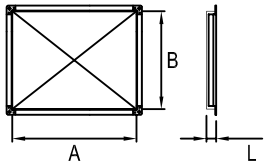
N – circular end (standard = VKT free end with seal)

*types of fillings: mesh (91%), expanded metal (75%), perforated sheet metal (43%)

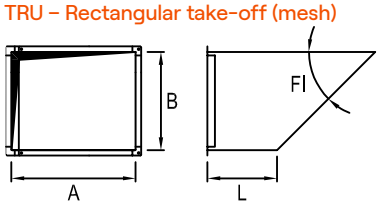
TR – Rectangular duct



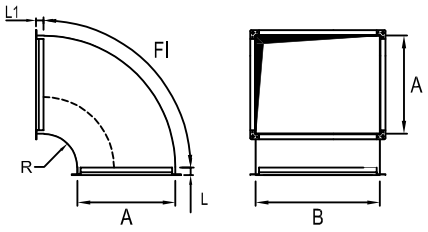
ZAS – Rectangular end cap



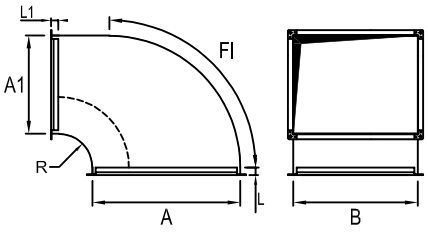
TRU – Rectangular take-off (mesh)



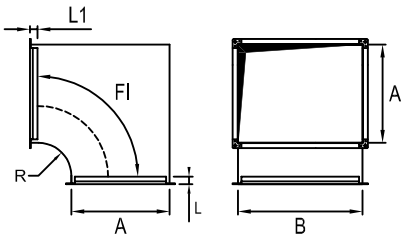
OL – Rectangular bend



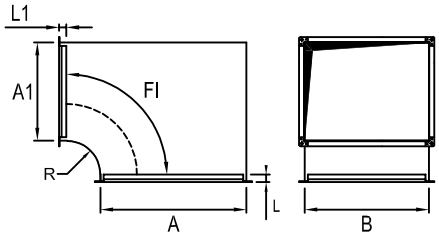
OLP – Rectangular reducer bend



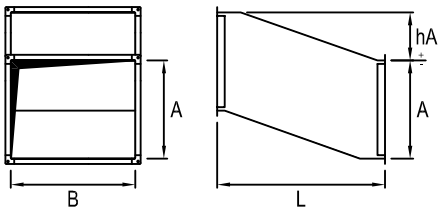
KO – Rectangular elbow



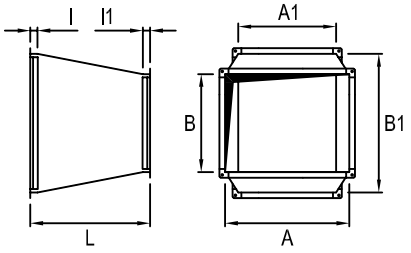
KOP – Rectangular reducer elbow



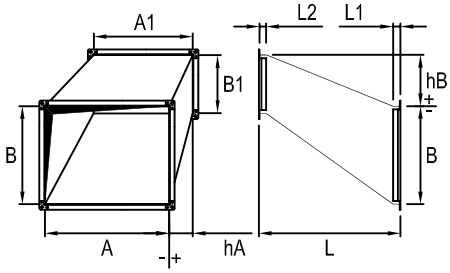
ODC – Rectangular offset



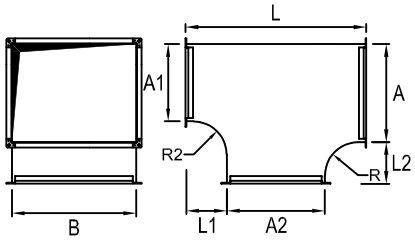
PRS – Rectangular concentric reducer



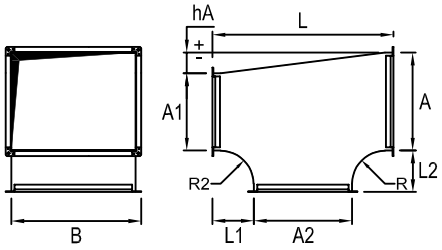
PRA – Rectangular eccentric reducer



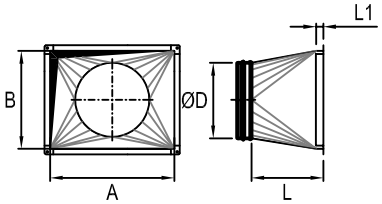
OCR – Rectangular straight T-piece



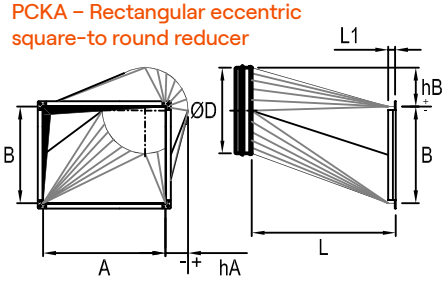
OCS – Rectangular skewed T-piece



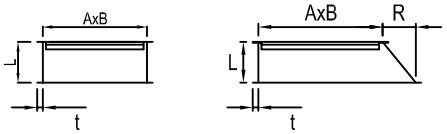
PCKS – Rectangular concentric square-to round reducer



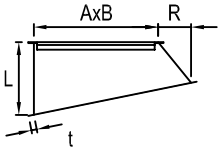
PCKA – Rectangular eccentric square-to round reducer



NCH, NCZ – Rectangular straight collar, Rectangular bevelled collar



NCA – Rectangular skewed collar



1.01 PCI

Rectangular ducts made of galvanized sheet class I

APPLICATION

Rectangular ducts PCI, made of galvanized sheet class I, are intended for air conditioning, ventilation and exhaust systems without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of steel or zinc. The ducts are used for permissible overpressures or underpressures, as specified in TAB. 1, in standard air handling and technological equipment. The reinforced design production needs to be consulted in advance.

TECHNICAL DATA

Max. temperatures:	standard design: 80 °C
Max. air flow velocity:	16 m/s
Max. static pressure difference:	according to ČSN EN 1507 – see TAB. 1

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC – sheet thickness, see TAB. 1
Straight ducts	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Straight duct standard length	- L = 1000 mm; L = 1500 mm
Duct fittings	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Duct sealing	- polyurethane sealant (neither the ducts nor its components contain silicone)
Duct connection	- ends of ducts are fitted with flanges (size of the used flange, see TAB. 2) - flanges are clinched to the ends of the duct (spot welded for higher tightness requirements) - polyurethane sealant is used to seal the flange for higher tightness requirements (tight flange)
Duct construction according to tightness classes	- tightness classes according to EN 1507 (see TAB. 3) - **class A:** flanges are clinched, the corners of the flanges are sealed - **class B:** rebated joints of straight ducts are filled with sealing material, flanges are spot welded, the corners of the flanges are sealed - **class C:** rebated joints of straight ducts are filled with sealing material, rebated joints of duct fittings are sealed from the inside, tight flanges are spot welded, the corners of the flanges are sealed (e.g., for hygienic or waterproof duct installations)
Internal reinforcement	- internal reinforcement of ducts according to the manufacturer's specifications (galvanized pipes are secured into the duct walls, at the intersections they are fixed into nylon central crosses)
Method of delivery	- ducts are typically supplied in bulk
Additional options	- ducts of excessive dimensions can be supplied disassembled - ends of the ducts or the entire ducts can be delivered wrapped - outdoor ducts without insulation can be produced in way that prevents water ingress into the ducts (rebated joints of ducts and the connection of flanges and duct walls are sealed from the outside, flanges are spot welded, the corners of the flanges are sealed)

TAB. 1: PRESSURE LEVELS, SHEET THICKNESS

Pressure level			
1 + 1000 Pa Nominal size (mm)	4 - 630 Pa Sheet thickness (mm)	2 + 2500 Pa Nominal size (mm)	5 - 1000 Pa Sheet thickness (mm)
100 – 750	0,60	100 – 530	0,70
751 – 1200	0,70	531 – 1000	0,90
1201 – 1400	0,90	1001 – 2000	1,10
1401 – 2000	1,00	over 2000	1,25
over 2000	1,10		

TAB. 2: FLANGE SIZES

Nominal size (mm)	Flange
70 – 1000	P20
1001 – 2500	P30
over 2500	P40

TAB. 3: TIGHTNESS CLASSES ACCORDING TO EN 1507

Tightness class according to EN 1507	Air leakage limits (fmax) $m^3 \times s^{-1} \times m^{-2}$	Static overpressure limits (Pa)			
		Underpressure for all pressure classes	Overpressure according to pressure class		
			1	2	3
A	$0{,}027 \times p_T^{0,65} \times 10^{-3}$	200	400		
B	$0{,}009 \times p_T^{0,65} \times 10^{-3}$	500	400	1000	2000
C	$0{,}003 \times p_T^{0,65} \times 10^{-3}$	750	400	1000	2000
D	$0{,}001 \times p_T^{0,65} \times 10^{-3}$	750	400	1000	2000

p_T – difference between pressure in the surroundings and in the duct

Note:
The tightness and final level of leakage of the installed duct system largely depend on the method of installation, the materials used for installation, transportation and storage of duct parts.

TAB. 4: DUCT WEIGHT ACCORDING TO THE SHEET THICKNESS

PCI – Rectangular ducts made of galvanized sheet class I					
Sheet thickness (mm)	0,6	0,7	0,9	1,1	1,25
Used flanges	Weight kg / 1m²				
Standard	5,9	6,7	8,3	9,9	11,1
P30	6,3	7,1	8,7	10,3	11,5
P40	7,7	8,5	10,1	11,7	12,9

1.02 PCO Rectangular ducts made of galvanized sheet SHEVS

APPLICATION

Rectangular ducts PCO, made of galvanized sheet, are intended for heat and smoke extraction. It can also be used for ventilation and exhaust systems in normal conditions without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of steel or zinc. Smoke and heat exhaust ventilation system (SHEVS) equipment creates a smoke-free layer above the floor of the building by extracting smoke, thus improving conditions for safe evacuation or rescue of people or animals, protecting property and allowing fire suppression while it is still in its initial stage.

TECHNICAL DATA

Max. temperatures during standard use:	80 °C; in case of fire 600 °C
Max. air flow velocity:	16 m/s
Max. static pressure difference:	+2500 Pa ÷ -1000 Pa
Fire resistance according to ČSN EN 13501-4:	E600 120 (h0) 1500 single

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC – sheet thickness 1,1 mm to 1,25 mm
Straight ducts	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Straight duct standard length	- L = 1000 mm; L = 1500 mm
Duct fittings	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Duct sealing	- corners of the flanges are sealed with heat-resistant stable sealant (neither the duct nor its components contain silicone)
Duct connection	- ends of ducts are fitted with flanges (size of the used flange, see TAB. 2) - flanges are spot welded to the ends of the duct
Internal reinforcement	- internal reinforcement of ducts according to the manufacturer's specifications (galvanized pipes are secured into the duct walls, at the intersections they are fixed into nylon central crosses)
Method of delivery	- ducts are typically supplied in bulk

INSTALLATION

Suspension	- ducts are installed according to project documentation and required fire resistance - maximum spacing of support strut channels is 2000 mm
Thermal expansion	- ducts should be placed on the strut channels loosely to ensure their thermal expansion without mechanical deformation of the ducts - if it is not possible to ensure duct expansion on strut channels, use Temperature Expansion Compensator (1.03 KOM)
Wall penetration	- when passing through a wall or other structural construction, the duct at the penetration point should be placed in incombustible mineral wool with a minimum thickness of 50 mm - do not anchor the duct; ensure its thermal expansion through the wall penetration

TAB. 1: FLANGE SIZES

Nominal size (mm)	Flange
70 – 1000	P20
1001 – 2500	P30
over 2500	P40

TAB. 2: DUCT WEIGHT ACCORDING TO SHEET THICKNESS

PCO - Rectangular ducts made of galvanized sheet SHEVS		
Sheet thickness (mm)	1,1	1,25
Used flanges	Weight kg / 1m²	
Standard	5,9	7,5
P30	6,3	7,9
P40	7,7	8,2

1.03 KOM

Thermal expansion compensator for SHEVS ducts

ORDER CODE

KOM	A	x	B
	I		I
	1		2

1	A	Compensator width
2	B	Compensator height

Order code example:
KOM 1000x500

Thermal expansion compensator for SHEVS ducts, width 1000 mm, height 500 mm

APPLICATION

Thermal expansion compensator is used to eliminate the thermal expansion of SHEVS ducts. It is used in areas where the placement of the duct route does not allow the expansion of individual duct parts during temperature increases. It prevents deformation of ducts during temperature increases in duct systems up to 600 °C for 120 minutes. The maximum shrinkage length of the compensator is 180 mm.

ANY INTERVENTION INTO THE STRUCTURE OF THE COMPENSATOR OR ITS MODIFICATION IS STRICTLY PROHIBITED. THERE IS A RISK OF LOSING THE PROPERTIES GUARANTEED BY THE MANUFACTURER!

TECHNICAL DATA

Max. temperatures during standard use:	80 °C; in case of fire 600 °C
Max. air flow velocity:	16 m/s
Max. static pressure difference:	+2500 Pa ÷ −1000 Pa
Fire resistance according to ČSN EN 13501-4:	E600 120 (h0) 1500 single

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC – sheet thickness 1,1 mm, angle 30x30x3, flat steel 30x6 and heat resistant layered fabric
Design	- individual parts of the compensator are joined by welding, spot welding and bolting up the length of the thermally unaffected compensator is **460 mm**

INSTALLATION

Application	- maximum length of the duct route between two fixed points of the building structure for one compensator is 25,18 m - if the distance between two fixed points of the building structure exceeds 25,18 m, additional compensators must be installed - maximum distance between two compensators is 25,18 m - the installation rules for the compensator are illustrated in FIG. 1 and FIG. 2
Method of connection	- connecting duct sections are placed on the strut channels, to which the compensator is bolted using flanges - after installing the compensator into the pipeline, remove the wooden retaining dowels inserted between the flanges
Requirements	- when installing the compensator, it is necessary to maintain the maximum flatness of the inlet and outlet flanges (+/- 3 mm) - the compensator must be installed in way that in case of fire it is ensured its smooth shrinkage and there are no obstacles within its active area that would prevent or limit its shrinkage in any way

INSTALLATION RULES FOR THE THERMAL EXPANSION COMPENSATOR FOR SHEVS DUCTS (TEMPERATURE RESISTANCE OF 600 °C FOR 120 MINUTES – E600 120 (h0) 1500 SINGLE)

FIG. 1:

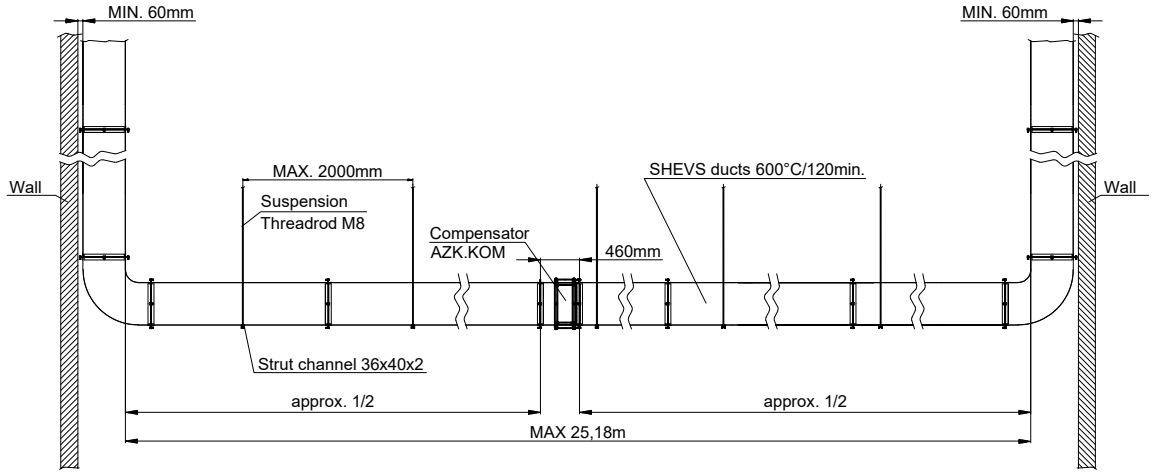
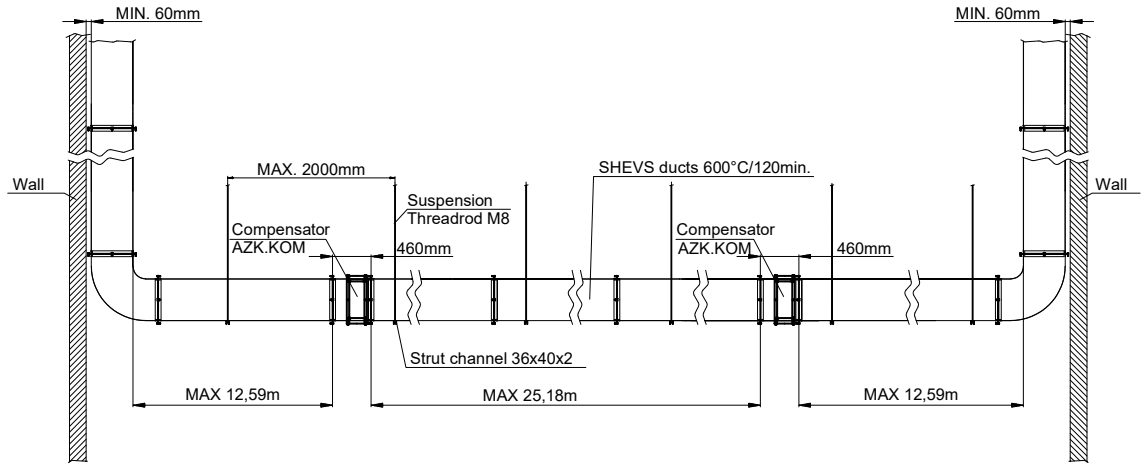


FIG. 2:



TAB. 1: WEIGHT (kg)

A \ B	250	315	400	500	630	710	800	1000
400	23,5	25,8	28,9	32,5	37,2	40,1	43,3	50,5
450	25,3	27,6	30,7	34,3	39,0	41,9	45,1	52,3
500	27,1	29,4	32,5	36,1	40,8	43,7	46,9	54,1
560	29,2	31,6	34,7	38,3	43,0	45,8	49,1	56,3
630	31,8	34,1	37,2	40,8	45,5	48,4	51,6	58,8
710	34,7	37,0	40,1	43,7	48,4	51,3	54,5	61,7
800	37,9	40,2	43,3	46,9	51,6	54,5	57,8	65,0
1000	45,1	47,5	50,5	54,1	58,8	61,7	65,0	72,2
1120	49,5	51,8	54,9	58,5	63,2	66,1	69,3	76,5
1250	54,1	56,5	59,6	63,2	67,9	70,7	74,0	81,2

1.04 PCN Rectangular ducts made of stainless-steel sheet class I

APPLICATION

Rectangular ducts PCN, made of stainless-steel sheet class I, are intended for air conditioning, ventilation and exhaust systems without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of stainless steel. The ducts are used for permissible overpressures or underpressures in standard air handling and technological equipment. The ducts are frequently used for exhaust systems in gastronomy, from hoods, in food-processing industry or for higher aesthetic requirements.

TECHNICAL DATA

Max. temperatures:	standard design: 200 °C*
Max. air flow velocity:	16 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

*applies only to duct parts, not to stainless-steel accessories

MATERIAL AND DESIGN

Material	- stainless-steel AISI 304 (ČSN 17.240, DIN 1-4301), thickness according to TAB. 1 (stainless-steel AISI 316 is available upon request)
Straight ducts	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Straight duct standard length	- L = 1000 mm; L = 1500 mm
Duct fittings	- cross broken duct walls for reinforcement - longitudinal joint (rebated, spot welded)
Duct sealing	- polyurethane sealant is used for temperature resistance up to 80 °C (neither the duct nor its components contain silicone); heat-resistant sealant is used for higher temperature resistance requirements
Duct connection	- ends of ducts are fitted with flanges (size of the used flange, see TAB. 2) - flanges are spot welded to the ends of the duct
Duct construction according to tightness classes	- tightness classes according to EN 1507 (see TAB. 3) - **class A:** flanges are clinched, the corners of the flanges are sealed - **class B:** rebated joints of straight ducts are sealed from the inside, flanges are spot welded, the corners of the flanges are sealed - **class C:** rebated joints of straight ducts and duct fittings are sealed from the inside, flanges are spot welded, flange connection with duct wall is sealed from the inside, the corners of the flanges are sealed (e.g., for hygienic or waterproof duct installations)
Method of delivery	- ducts are typically supplied in bulk
Additional options	- ducts of excessive dimensions can be supplied disassembled - ends of the ducts or the entire ducts can be delivered wrapped - outdoor ducts without insulation can be produced in way that prevents water ingress into the ducts (rebated joints of ducts and the connection of flanges to duct wall are sealed from the outside, flanges are spot welded, the corners of the flanges are sealed)

TAB. 1: SHEET THICKNESS

Nominal size (mm)	Sheet thickness (mm)
70 – 750	0,6
751 – 2000	0,8

TAB. 2: FLANGE SIZES

Nominal size (mm)	Flange
70 – 1000	P20
1001 – 2000	P30

TAB. 3: TIGHTNESS CLASSES ACCORDING TO EN 1507

Tightness class according to EN 1507	Air leakage limits (fmax) $m^3 \times s^{-1} \times m^{-2}$	Static overpressure limits (Pa)			
		Underpressure for all pressure classes	Overpressure according to pressure class		
			1	2	3
A	$0{,}027 \times p_r^{0{,}65} \times 10^{-3}$	200	400		
B	$0{,}009 \times p_r^{0{,}65} \times 10^{-3}$	500	400	1000	2000
C	$0{,}003 \times p_r^{0{,}65} \times 10^{-3}$	750	400	1000	2000
D	$0{,}001 \times p_r^{0{,}65} \times 10^{-3}$	750	400	1000	2000

p_r – difference between pressure in the surroundings and in the duct

Note:
The tightness and final level of leakage of the installed duct system largely depend on the method of installation, the materials used for installation, transportation and storage of duct parts.

TAB. 4: DUCT WEIGHT ACCORDING TO SHEET THICKNESS

PCN – Stainless-steel rectangular duct		
Sheet thickness (mm)	0,6	0,8
Used flanges	Weight kg / $1m^2$	
Standard	5,9	7,5
P30	6,3	7,9

1.05 PPC

Rectangular flange

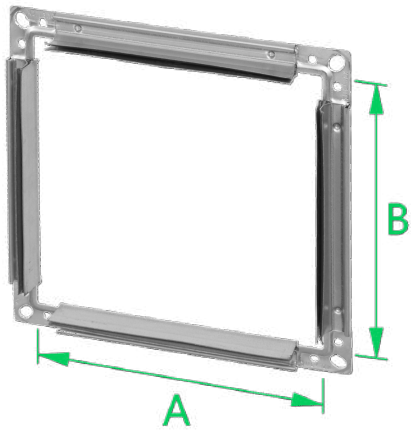
ORDER CODE

PPC	A	x	B	/	V
	I		I		I
	1		2		3

1	A	Flange width
2	B	Flange height
3	P20	Flange size 20 mm
	P30	Flange size 30 mm
	P40	Flange size 40 mm

Order code example:
PPC 450x315 / P20

Rectangular flange, width 450 mm, height 315 mm, size P20



APPLICATION

Rectangular flanges are used for connecting ducts and accessories.

TECHNICAL DATA

Max. temperatures:	80 °C
Max. air flow velocity:	16 m/s
Max. static pressure difference:	+2500 Pa ÷ -1000 Pa

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC - corner pieces are made of galvanized steel class II
Design	- size of the flange depends on its dimensions according to TAB. 1 and TAB. 2 - after assembly, the corner pieces are fixed by clinching in the strip - for higher tightness requirements, during the production of galvanized strips L20 and L30, the profile is filled with polyurethane sealant (flanges do not contain silicone), galvanized flanges size P40 and stainless-steel flanges must be sealed after fitting onto the duct
Method of connection	- flanges are clinched or spot welded to the ends of the duct - during installation, the flange can be fastened to the ends of the duct with self-tapping screws or pop rivets
Non-standard design	NER, HYG

TAB. 1: SIZE OF THE GALVANIZED FLANGE DEPENDING ON ITS DIMENSIONS

Nominal size (mm)	Flange
70 – 1000	P20
1001 – 2500	P30
over 2500	P40

TAB. 2: SIZE OF THE STAINLESS-STEEL FLANGE DEPENDING ON ITS DIMENSIONS

Nominal size (mm)	Flange
70 – 1000	P20
1001 – 2000	P30

TAB. 3: WEIGHT OF FLANGES ACCORDING TO CIRCUMFERENCE (kg)

Flange circumference	P20	P30	P40
650	0,43	0,73	1,28
800	0,53	0,90	1,58
1050	0,69	1,18	2,07
1200	0,79	1,35	2,36
1430	0,94	1,61	2,82
1600	1,05	1,80	3,15
1890	1,24	2,12	3,72
2260	1,49	2,54	4,45
2630	1,73	2,96	5,18
3000	1,97	3,37	5,91
3500	2,30	3,93	6,90
4000	2,63	4,50	7,88
4460	2,93	5,01	8,79
5000	3,29	5,62	9,85
5660	3,72	6,36	11,15
6240	4,11	7,01	12,29
7000	4,61	7,87	13,79
8000	5,26	8,99	15,76
9000	5,92	10,12	17,73
10000	6,58	11,24	19,70

1.06 OCP

Storm collar for rectangular ducts

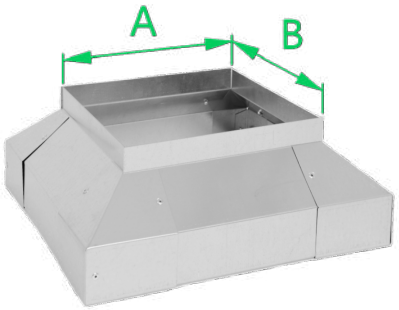
ORDER CODE

OCP	A	x	B
	I		I
	1		2

1	A	Storm collar width
2	B	Storm collar height

Order code example:
OCP 500x400

Storm collar for rectangular ducts, width 500 mm, height 400 mm



APPLICATION

Storm collar for rectangular ducts is installed on horizontal flange joints in outdoor environments where external thermal insulation is not required. The collar prevents water from flowing through the flange joint.

TECHNICAL DATA

Max. temperatures:	80 °C
Max. air flow velocity:	-
Max. static pressure difference:	-

MATERIAL AND DESIGN

Material	- the corner and strip of the storm collar for rectangular ducts are made of galvanized sheet DX51 D+Z 200 MAC
Design	- the corner of the collar is bent and riveted
Installation	- the storm collar is supplied unassembled (4 corners and 4 strips to cover one flange joint) - after assembly, individual parts are riveted, the joints are sealed
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	300	400	500	600	800	1000	1400	1800
200	0,7	0,9	1,1	1,2	1,4	1,8	2,1	2,8	3,5
300	0,9	1,1	1,2	1,4	1,6	1,9	2,3	3,0	3,7
400	1,1	1,2	1,4	1,6	1,8	2,1	2,5	3,2	3,9
500	1,2	1,4	1,6	1,8	1,9	2,3	2,6	3,3	4,0
600	1,4	1,6	1,8	1,9	2,1	2,5	2,8	3,5	4,2
800	1,8	1,9	2,1	2,3	2,5	2,8	3,2	3,9	4,6
1000	2,1	2,3	2,5	2,6	2,8	3,2	3,5	4,2	4,9
1400	2,8	3,0	3,2	3,3	3,5	3,9	4,2	4,9	5,6
1800	3,5	3,7	3,9	4,0	4,2	4,6	4,9	5,6	6,3

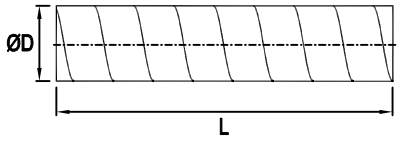
Circular ventilation ducts – basic shapes and order codes

Product name	Order code																		Note
SPIRO duct	**TS**	**ØD**	**/**	**L**	N	**,**	N_1												
Smooth circular duct	**TKH**	**ØD**	**/**	**L**	N	**,**	N_1												
Circular fabricated bend	**OS**	**FI**	**ØD**	N	**,**	N_1													
Circular T-piece	**OBJ**	**FI**	$ØD_1$		$ØD_2$	**/**	L	N	**,**	N_1	**,**	N_2							**FI standard = 90°**
Circular X-piece	**OBO**	FI_2	**/**	FI_3		$ØD_1$		$ØD_2$		$ØD_3$	**/**	L	N	**,**	N_1	**,**	N_2	**,**	N_3	$FI_{2,3}$ **standard = 90°**
Circular Y-piece	**KKK**	**FI**		**ØD**		$ØD_{1,2}$	/	L	N	**,**	N_1	**,**	N_2							
Circular concentric reducer	**PRO**	**ØD**		$ØD_1$	/	L	N	**,**	N_1											
Circular eccentric reducer	**PRE**	**ØD**		$ØD_1$	/	L	N	**,**	N_1											
Saddle piece	**SO**	**FI**		**ØD**		**Ød**	/	L	N											**FI standard = 90°**
Circular take-off (mesh)	**TKU**	**ØD**		FI	/	L	N	**mesh***												**FI standard = 45°**
Male coupling	**N**	**ØD**																		
Female coupling	**M**	**ØD**																		
Duct end cap	**KKTR**	**ØD**																		
Fitting end cap	**KKTV**	**ØD**																		

Optional parameter – if not specified = standard according to the catalog:
- N, N1, N2, N3 – circular end (standard = VKT free end with seal)

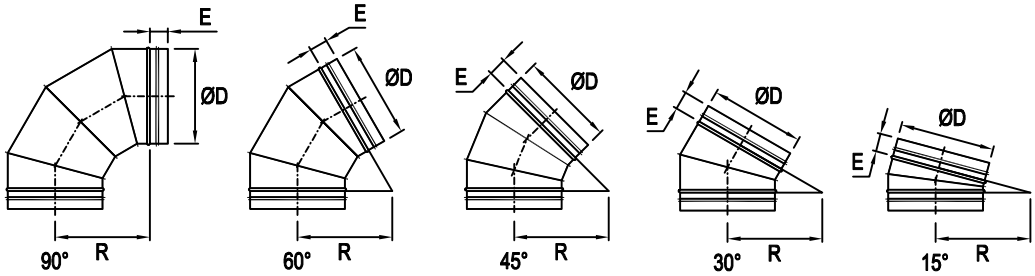
*types of fillings: mesh (91%), expanded metal (75%), perforated sheet metal (43%)

TS – SPIRO duct

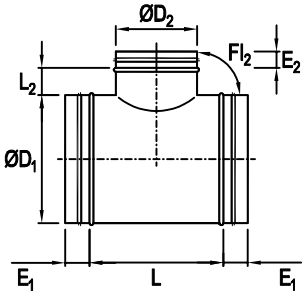


THK – Smooth circular duct

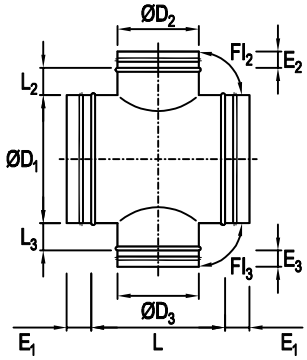
OS – Circular fabricated bend



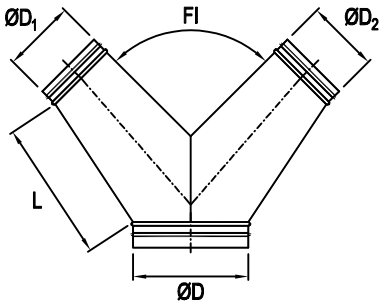
OBJ – Circular T-piece



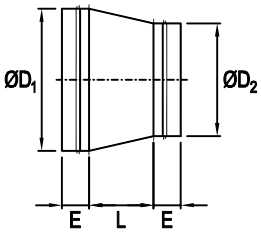
OBO – Circular X-piece



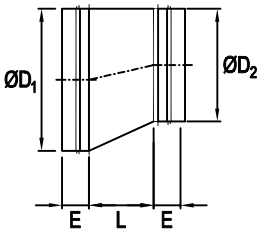
KKK – Circular Y-piece



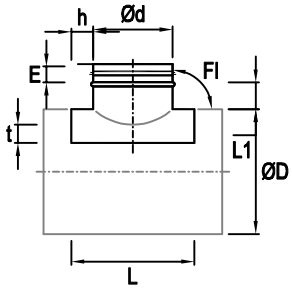
PRO – Circular concentric reducer



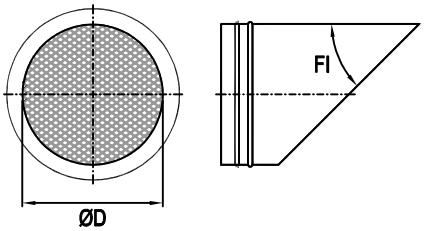
PRE – Circular eccentric reducer



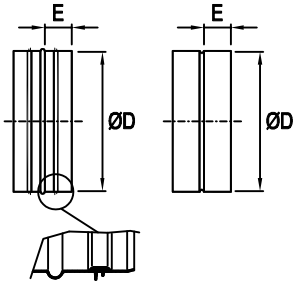
SO – Saddle piece



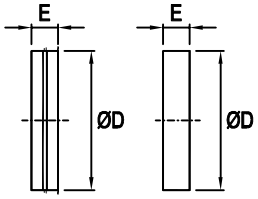
TKU – Circular take-off (mesh)



N, M – Male coupling, Female coupling



KKTR, KKTV – Duct end cap, Fitting end cap



2.01 PKI

Circular ducts made of galvanized sheet class I

APPLICATION

Circular ducts PKI, made of galvanized sheet class I, are intended for air conditioning, ventilation and exhaust systems without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of steel or zinc. The reinforced design production needs to be consulted in advance.

TECHNICAL DATA

Max. temperatures:	standard design: 80 °C
Max. air flow velocity:	16 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC – sheet thickness, see TAB. 2
Straight ducts	- **SPIRO:** spiral ducts made from a strip, connected by a spiral rebate - **Smooth circular duct:** rolled sheet with a longitudinal seam (rebated, spot welded)
Straight duct standard length	- SPIRO d80 to d450 L = 3000 mm - SPIRO d500 and above L = 2700 mm - Smooth round duct L = 1500 mm, L = 1000 mm
Duct fittings	- rolled with a longitudinal seam (rebated, seam welded, spot welded)
Duct sealing	- polyurethane sealant (neither the ducts nor its components contain silicone)
Duct connection	- **insertion** (standard design): duct fittings are inserted into the straight ducts (SPIRO or smooth circular ducts), double-lip seal is attached to the plug ends of the duct fittings; straight ducts are connected by female coupler; duct fittings are connected by male coupler (lengths of plug ends: up to d280 E = 50mm, d315 – d355 E = 60 mm, d400 – d630 E = 80 mm, above d710 E = 100 mm) - **flanges** (upon request): galvanized flanges are attached to the ends of straight ducts and duct fittings according to ON 120517 (pressed flanges up to d800 mm, rolled angle flanges above d800 mm) - **METU flanges** (upon request): circular METU flanges are attached to the edges of the ducts; the flanges are secured together with clamping rings with seals; the joint ensures a smooth internal space in the ducts without protruding self-tapping screws or rivets
Duct construction according to tightness classes	- tightness classes according to EN 1507 (see TAB. 3) - **class A:** rebated or spot-welded joints, the ducts are connected by insertion; double-lip seal is attached to the plug ends of the duct fittings - **class B:** all joints of the duct fittings are sealed from the inside; double-lip seal is attached to the plug ends of the duct fittings - **class C:** all joints of the smooth circular ducts and duct fittings are sealed from the inside; double-lip seal is attached to the plug ends of the duct fittings
Method of delivery	- ducts are typically supplied in bulk
Additional options	- ends of the ducts or the entire ducts can be delivered wrapped - outdoor ducts without insulation can be produced in a way that prevents water ingress into the ducts (rebated joints of ducts are sealed from the outside)

TAB. 1: TIGHTNESS CLASSES ACCORDING TO EN 1507

Tightness class according to EN 1507	Air leakage limits (fmax) $m^3 \times s^{-1} \times m^{-2}$	Static overpressure limits (Pa)			
		Underpressure for all pressure classes	Overpressure according to pressure class		
			1	2	3
A	$0{,}027 \times p_T^{0{,}65} \times 10^{-3}$	200	400		
B	$0{,}009 \times p_T^{0{,}65} \times 10^{-3}$	500	400	1000	2000
C	$0{,}003 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000
D	$0{,}001 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000

p_T - difference between pressure in the surroundings and in the duct

Note:
The tightness and final level of leakage of the installed duct system largely depend on the method of installation, the materials used for installation, transportation and storage of duct parts.

TAB. 2: DUCT WEIGHT ACCORDING TO SHEET THICKNESS

PKI - Circular ducts made of galvanized sheet class I					
Connection by insertion			Connection by flanges		
d	kg / m	Sheet thickness	d	kg / m	Sheet thickness
80	1,2	0,5	**80**	1,5	0,5
100	1,5		**100**	1,8	
125	1,8		**125**	2,2	
140	2,1		**140**	2,6	
150	2,2		**150**	2,7	
160	2,3		**160**	2,8	
180	2,6		**180**	3,2	
200	2,9		**200**	3,5	
224	3,3		**224**	4,0	
250	3,7		**250**	4,4	
280	4,1		**280**	5,0	
315	4,6		**315**	6,0	
355	5,2		**355**	6,6	
400	7,0	0,6	**400**	9,0	0,6
450	7,9		**450**	10,1	
500	8,8		**500**	11,4	
560	8,9		**560**	12,0	
630	10,0		**630**	13,4	
710	13,1	0,7	**710**	17,1	0,7
800	14,8		**800**	19,0	
900	16,6		**900**	30,2	
1000	21,1	0,8	**1000**	44,7	0,8
1120	23,6		**1120**	47,9	
1250	26,4		**1250**	52,1	

2.02 PKO

Circular ducts made of galvanized sheet (thickness of 1,25 mm)

APPLICATION

Circular ducts PKO, made of galvanized sheet (thickness of 1,25 mm), are intended for air conditioning, ventilation and exhaust systems without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of steel or zinc. All ducts are produced according to the project documentation, which also specifies the temperature resistance of the ducts.

TECHNICAL DATA

Max. temperatures:	up to 150 °C*
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+2500 Pa ÷ -1000 Pa

*temperatures above 150 °C may cause irreversible degradation of the galvanized layer

MATERIAL AND DESIGN

Dimensional limits	- minimum duct diameter d = 160 mm
Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC – sheet thickness 1,25 mm
Straight ducts	- Smooth circular duct: rolled sheet with a longitudinal seam (rebated, spot welded)
Straight duct standard length	- L = 1500 mm, L = 1000 mm
Duct fittings	- rolled with a longitudinal seam (rebated, seam welded, spot welded)
Duct sealing	- heat-resistant sealant
Duct connection	- **flanges**: galvanized flanges are attached to the ends of straight ducts and duct fittings according to ON 120517 (pressed flanges up to d800 mm, rolled angle flanges above d800 mm)
Duct construction according to tightness classes	- tightness classes according to EN 1507 (see TAB. 3) - **class A**: rebated or spot-welded joints, ducts are connected by flanges - **class B**: rebated or spot-welded joints, all joints of the duct fittings are sealed from the inside, ducts are connected by flanges - **class C**: all joints of the smooth circular ducts and duct fittings are sealed from the inside, ducts are connected by flanges
Method of delivery	- ducts are typically supplied in bulk
Additional options	- ends of the ducts or the entire ducts can be delivered wrapped - outdoor ducts without insulation can be produced in a way that prevents water ingress into the ducts (rebated joints of ducts are sealed from the outside)

TAB. 1: TIGHTNESS CLASSES ACCORDING TO EN 1507

Tightness class according to EN 1507	Air leakage limits (fmax) $m^3 \times s^{-1} \times m^{-2}$	Static overpressure limits (Pa)			
		Underpressure for all pressure classes	Overpressure according to pressure class		
			1	2	3
A	$0{,}027 \times p_T^{0{,}65} \times 10^{-3}$	200	400		
B	$0{,}009 \times p_T^{0{,}65} \times 10^{-3}$	500	400	1000	2000
C	$0{,}003 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000
D	$0{,}001 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000

p_T - difference between pressure in the surroundings and in the duct

Note:
The tightness and final level of leakage of the installed duct system largely depend on the method of installation, the materials used for installation, transportation and storage of duct parts.

TAB. 2: DUCT WEIGHT ACCORDING TO SHEET THICKNESS

PKO Circular ducts made of galvanized sheet (thickness of 1,25 mm)	
Connection by flanges	
d	kg / bm
160	2,9
180	3,3
200	3,6
224	4,1
250	4,5
280	5,1
315	6,1
355	6,8
400	8,0
450	9,0
500	12,6
560	14,4
630	16,1
710	18,3
800	20,3
900	36,2
1000	48,7

2.03 PKS

Circular ducts made of stainless-steel sheet class I

APPLICATION

Circular ducts PKS, made of stainless-steel sheet class I, are intended for air conditioning, ventilation and exhaust systems without mechanical impurities, aggressive vapors or substances that promote wear or excessive corrosion of stainless steel. The ducts are used for permissible overpressures or underpressures in standard air handling and technological equipment. The ducts are frequently used for exhaust systems in gastronomy, from hoods, in food-processing industry or for higher aesthetic requirements.

TECHNICAL DATA

Max. temperatures:	connection by insertion with double-lip seal: 80 °C connection by insertion without double-lip seal or flanges: 200 °C*
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

*applies only to duct parts, not to stainless-steel accessories

MATERIAL AND DESIGN

Material	- stainless-steel AISI 304 (ČSN 17.240, DIN 1-4301), thickness according to TAB. 2 (stainless-steel AISI 316 is available upon request)
Straight ducts	- **SPIRO**: spiral ducts made from a strip, connected by a spiral rebate - **Smooth circular duct**: rolled sheet with a longitudinal seam (rebated, spot welded)
Straight duct standard length	- SPIRO d80 to d450 L = 3000 mm - SPIRO d500 and above L = 2700 mm - Smooth round duct L = 1500 mm, L = 1000 mm
Duct fittings	- rolled with a longitudinal seam (rebated, spot welded)
Duct sealing	- polyurethane sealant is used for temperature resistance requirements up to 80 °C (neither the ducts nor its components contain silicone); heat-resistant sealant is used for higher temperature resistance requirements
Duct connection	- **insertion** (standard design): the duct fittings are inserted into the straight ducts (SPIRO or smooth circular ducts), double-lip seal is attached to the plug ends of the duct fittings; straight ducts are connected by female coupler; duct fittings are connected by male coupler (lengths of plug ends: up to d280 E = 50mm, d315 – d355 E = 60 mm, d400 – d630 E = 80 mm, above d710 E = 100 mm) - **flanges** (upon request): galvanized flanges are attached to the ends of straight ducts and duct fittings according to ON 120517 (pressed flanges up to d800 mm, rolled angle flanges above d800 mm)
Duct construction according to tightness classes	- tightness classes according to EN 1507 (see TAB. 3) - **class A**: rebated or spot-welded joints, the ducts are connected by insertion; double-lip seal is attached to the plug ends of the duct fittings - **class B**: all joints of the duct fittings are sealed from the inside; double-lip seal is attached to the plug ends of the duct fittings - **class C**: all joints of the smooth circular ducts and duct fittings are sealed from the inside; double-lip seal is attached to the plug ends of the duct fittings
Method of delivery	- ducts are typically supplied in bulk
Additional options	- ends of the ducts or the entire ducts can be delivered wrapped - outdoor ducts without insulation can be produced in a way that prevents water ingress into the ducts (rebated joints of ducts are sealed from the outside)

TAB. 1: TIGHTNESS CLASSES ACCORDING TO EN 1507

Tightness class according to EN 1507	Air leakage limits (fmax) $m^3 \times s^{-1} \times m^{-2}$	Static overpressure limits (Pa)			
		Underpressure for all pressure classes	Overpressure according to pressure class		
			1	2	3
A	$0{,}027 \times p_T^{0{,}65} \times 10^{-3}$	200	400		
B	$0{,}009 \times p_T^{0{,}65} \times 10^{-3}$	500	400	1000	2000
C	$0{,}003 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000
D	$0{,}001 \times p_T^{0{,}65} \times 10^{-3}$	750	400	1000	2000

p_T - difference between pressure in the surroundings and in the duct

Note:
The tightness and final level of leakage of the installed duct system largely depend on the method of installation, the materials used for installation, transportation and storage of duct parts.

TAB. 2: DUCT WEIGHT ACCORDING TO SHEET THICKNESS

PKS - Circular ducts made of stainless-steel sheet class I					
Connection by insertion			Connection by flanges		
d	kg / m	Sheet thickness	d	kg / m	Sheet thickness
100	1,5	0,6	**100**	1,8	0,6
125	1,9		**125**	2,3	
140	2,1		**140**	2,6	
160	2,4		**160**	2,9	
180	2,7		**180**	3,3	
200	3,0		**200**	3,7	
224	3,4		**224**	4,1	
250	3,8		**250**	4,5	
280	4,2		**280**	5,1	
315	4,7		**315**	6,1	
355	5,4		**355**	6,9	
400	6,0		**400**	8,1	
450	6,8		**450**	9,1	
500	10,0	0,8	**500**	12,7	0,8
560	11,3		**560**	14,5	
630	12,7		**630**	16,3	
710	14,3		**710**	18,5	
800	16,1		**800**	20,5	
900	18,1		**900**	32,4	
1000	20,1		**1000**	44,9	

2.04 OKP

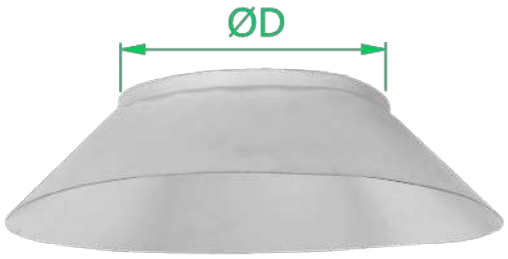
Storm collar for circular ducts

ORDER CODE

OKP	D
	I
	1

1	D	Storm collar diameter

Order code example:
OKP 400
Storm collar for circular ducts, diameter 400 mm



APPLICATION

Storm collar for circular ducts is installed on horizontal flange joints in outdoor environments where external thermal insulation is not required. Storm collar prevents water from flowing through the flange joint.

TECHNICAL DATA

Max. temperatures:	80 °C
Max. air flow velocity:	-
Max. static pressure difference:	-

MATERIAL AND DESIGN

Material	- the corner and strip of the storm collar for circular ducts are made of galvanized sheet DX51 D+Z 200 MAC
Design	- the storm collar is supplied in two halves, one half is equipped with plates for riveting after assembly
Installation	- both halves of the storm collar are joined by riveting, the joints are sealed
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Diameter D	100	125	160	200	250	315	400
Weight (kg)	0,2	0,2	0,2	0,3	0,4	0,5	0,6
Diameter D	500	630	710	800	900	1000	1250
Weight (kg)	0,8	1,0	1,1	1,2	1,4	1,5	1,7

VENTILATION

ACCESSORIES

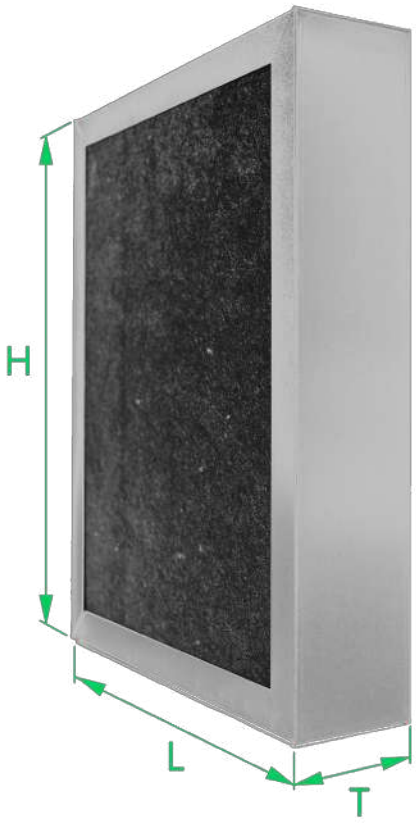
3.01 KTH Acoustic splitter

ORDER CODE

KTH	T	x	H	/	L	.	inlet	.	outlet	.	design
	1		2		3		4		5		6

1	T	Splitter width
2	H	Splitter height
3	L	Splitter length
4	0	Without inlet
	1	With inlet
5	0	Without outlet
	1	With outlet
6		Standard design
	HYG	Hygienic design
	POL	Half-plated design
	HYG,POL	Hygienic half-plated design

Order code example:
KTH 100x400/1000.1.1.HYG
Accoustic splitter, width 100 mm, height 400 mm, length 1000 mm, with inlet and outlet, hygienic design



ROZMĚROVÁ ŘADA

T	splitter width:	100, 200, 300 mm
H	splitter height:	100 – 1500 mm*
L	splitter length:	500, 750, 1000, 1250, 1500 mm*

*if larger size is required, the splitter can be made in segments and connected using the supplied connector

APPLICATION

Acoustic splitter is used to reduce noise in ducts. The splitter can be made with inlet and outlet for better airflow circulation. The manufacturer recommends using the hygienic design of splitter for ducts with higher requirements for cleanliness of the transported air.
Half plated design of the splitter increases efficiency of the sound attenuation. Acoustic splitter is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures standard design:	100 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- splitter frame - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - splitter filling (standard design) - acoustically absorbent non-combustible filling, protected by a glass cloth - splitter filling (hygienic design) - acoustically absorbent non-combustible filling, protected by hygienically resistant laminated glass fabric
Design	- the splitter is produced in the same lengths as the duct it is installed into, therefore it is necessary to consider that the inlet and outlet will protrude into the adjacent duct parts, see FIG. 1
Attenuation	- the attenuation levels of the splitter are listed in TAB. 1
Installation	- the splitters are installed into the designated duct parts with uniform gaps between them; the gap between the outermost splitters and the duct wall is half the size
Non-standard design	

TAB. 1: ATTENUATION LEVELS

Splitter width T = 100 mm, Splitter lenght L = 500 mm / 1000 mm / 1500 mm									The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)		
The attenuation D_e (dB) in the frequency range f (Hz)											
Gap width (mm)	63	125	250	500	1000	2000	4000	8000	4	7	10
50	3 / 4 / 6	5 / 8 / 10	9 / 17 / 24	15 / 25 / 35	30 / 39 / 46	34 / 44 / 46	25 / 33 / 40	18 / 26 / 32	5 / 6 / 8	17 / 23 / 29	38 / 51 / 64
75	3 / 4 / 5	4 / 6 / 7	7 / 13 / 18	13 / 20 / 29	24 / 34 / 42	26 / 36 / 43	17 / 26 / 32	13 / 18 / 25	4 / 5 / 6	15 / 18 / 21	30 / 39 / 46
100	3 / 4 / 5	3 / 4 / 5	5 / 9 / 14	11 / 17 / 24	25 / 30 / 38	23 / 30 / 40	13 / 18 / 25	9 / 13 / 16	4 / 4/ 5	13 / 15 / 18	29 / 34 / 39

Splitter width T = 200 mm, Splitter lenght L = 500 mm / 1000 mm / 1500 mm									The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)		
The attenuation D_e (dB) in the frequency range f (Hz)											
Gap width (mm)	63	125	250	500	1000	2000	4000	8000	4	7	10
50	2 / 6 / 8	11 / 14 / 20	18 / 21 / 31	29 / 41 / 46	40 / 46 / 46	38 / 46 / 46	27 / 33 / 44	20 / 24 / 28	10 / 11 / 12	36 / 42 / 48	81 / 92 / 105
100	2 / 3 / 5	4 / 8 / 12	9 / 15 / 22	18 / 30 / 43	22 / 42 / 46	18 / 34 / 46	16 / 41 / 29	11 / 14 / 18	5 / 6 / 7	18 / 22 / 25	41 / 48 / 55
150	2 / 3 / 4	3 / 6 / 9	7 / 12 / 18	13 / 23 / 33	14 / 28 / 39	10 / 21 / 30	8 / 13 / 18	7 / 9 / 11	4 / 4 / 5	13 / 15 / 17	28 / 32 / 38

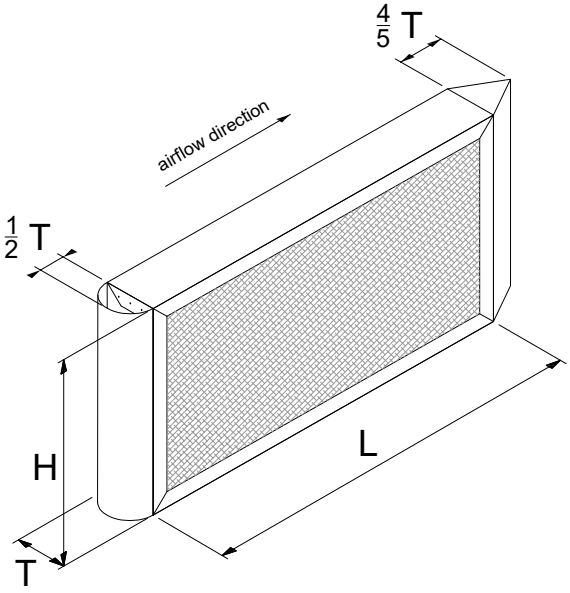
TAB. 2: WEIGHT ACCORDING TO DIMENSIONS (kg)

Splitter width T = 100 mm												
L \ H	200	250	315	400	500	630	710	800	900	1000	1250	1400
500	1,8	2,0	2,2	2,5	2,9	3,4	3,7	4,1	4,5	4,9	5,8	6,4
1000	3,1	3,4	3,8	4,4	5,0	5,8	6,3	6,9	7,5	8,1	9,7	10,6
1500	4,5	4,9	5,5	6,2	7,1	8,2	8,9	9,7	10,5	11,4	13,6	14,9

Splitter width T = 200 mm												
L \ H	200	250	315	400	500	630	710	800	900	1000	1250	1400
500	3,0	3,4	3,8	4,4	5,1	6,1	6,6	7,3	8,0	8,7	10,5	11,5
1000	5,4	6,0	6,8	7,8	9,0	10,5	11,5	12,5	13,7	14,9	17,9	19,7
1500	7,8	8,6	9,7	11,1	12,8	15,0	16,3	17,8	19,5	21,1	25,3	27,8

Splitter width T = 300 mm												
L \ H	200	250	315	400	500	630	710	800	900	1000	1250	1400
500	4,3	4,8	5,5	6,3	7,4	8,7	9,5	10,4	11,5	12,5	15,1	16,6
1000	7,7	8,6	9,7	11,2	12,9	15,2	16,6	18,2	19,9	21,7	26,1	28,7
1500	11,1	12,3	14,0	16,0	18,5	21,7	23,7	25,9	28,4	30,9	37,0	40,7

FIG. 1: DIMENSIONS OF INLET AND OUTLET PLATES

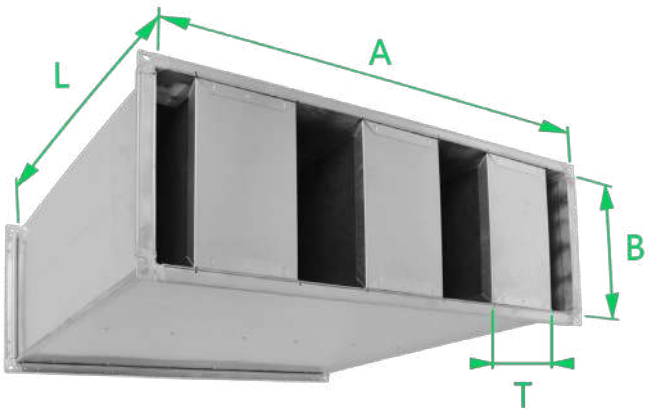


3.02 THC Rectangular silencer

ORDER CODE

THC	T	.	A	x	B	/	L	-	n	.	inlet	.	outlet	.	design	.	K	.	K1
	1		2		3		4		5		6		7		8		9		10

1	T	Splitter width
2	A	Silencer width
3	B	Silencer height
4	L	Silencer length
5	n	Number of splitters
6	0	Without inlet
	1	With inlet
7	0	Without outlet
	1	With outlet
8		Standard design
	HYG	Hygienic design
	POL	Half-plated design
	HYG,POL	Hygienic half-plated design
9	K	Rectangular input end (flange P20, P30, P40, free end...)
10	K1	Rectangular output end (flange P20, P30, P40, free end...)



Order code example:

THC 100.500x300/1000.3.1.1.HYG.P20.P20

Rectangular silencer, splitter width 100 mm, silencer width 500 mm, silencer height 300 mm, silencer length 1000 mm, 3 pieces of splitters, splitters with inlet and outlet, hygienic design, 2 flanges P20

DIMENSION SERIES

T	splitter width:	100, 200, 300 mm
A	silencer width:	up to 2500 mm*
B	silencer height:	up to 2000 mm*
L	silencer length:	500, 750, 1000, 1250, 1500 mm**

* large size silencer's splitters and silencer casing are supplied separately due to weight
** if a different size is needed, the silencer can be assembled from standard lengths

APPLICATION

Rectangular silencer is used to reduce noise in ducts. The splitter can be made with inlet and outlet for better airflow circulation. The manufacturer recommends using the hygienic design of the silencer for ducts with higher requirements for the cleanliness of the transported air. Half-plated design of the splitter increases the efficiency of the sound attenuation. The position, quantity and type of the splitters are defined in the project documentation according to the required attenuation values. Rectangular silencer is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures standard design:	80 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- silencer casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - splitter frame - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - splitter filling (standard design) - acoustically absorbent non-combustible filling, protected by a glass cloth - splitter filling (hygienic design) - acoustically absorbent non-combustible filling, protected by hygienically resistant laminated glass fabric
Design	- uniform gaps between the splitters; the gap between the outermost splitters and the duct wall is half the size - when using splitters with inlet and outlet plates, it should be considered that the inlets and outlets will protrude into the adjacent duct parts - size of the used flange, see TAB. 2 in chapter 1.01 PCI
Attenuation	- the attenuation levels of the rectangular silencer are listed in TAB. 1
Installation	- rectangular silencer is connected to adjacent duct parts using flanges mounted on the silencer's casing
Non-standard design	

TAB. 1: ATTENUATION LEVELS

Splitter width T = 100 mm, Splitter lenght L = 500 mm / 1000 mm / 1500 mm									The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)		
The attenuation D_e (dB) in the frequency range f (Hz)											
Gap width (mm)	63	125	250	500	1000	2000	4000	8000	4	7	10
50	3 / 4 / 6	5 / 8 / 10	9 / 17 / 24	15 / 25 / 35	30 / 39 / 46	34 / 44 / 46	25 / 33/ 40	18 / 26 / 32	5 / 6 / 8	17 / 23 / 29	38 / 51 / 64
75	3 / 4 / 6	4 / 6 / 7	7 / 13 / 18	13 / 20 / 29	24 / 34 / 42	26 / 36 / 43	17 / 26 / 32	13 / 18 / 25	4 / 5 / 6	15 / 18 / 21	30 / 39 / 46
100	3 / 4 / 6	3 / 4 / 5	5 / 9 / 14	11 / 17 /24	25 / 30 / 38	23 / 30 / 40	13 / 18 / 25	9 / 13 / 16	4 / 4 / 5	13 / 15 / 18	29 / 34 / 39

Splitter width T = 200 mm, Splitter lenght L = 500 mm / 1000 mm / 1500 mm									The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)		
The attenuation D_e (dB) in the frequency range f (Hz)											
Gap width (mm)	63	125	250	500	1000	2000	4000	8000	4	7	10
50	2 / 6 / 8	11 / 14 / 20	18 / 21 / 31	29 / 41 / 46	40 / 46 / 46	38 / 46 / 46	27 / 33 / 44	20 / 24 / 28	10 / 11 / 12	36 / 42 / 48	81 / 92 / 105
100	2 / 3 / 5	4 / 8 / 12	9 / 15 / 22	18 / 30 / 43	22 / 41 / 46	18 / 34 / 46	16 / 41 / 29	11 / 14 / 18	5 / 6 / 7	18 / 22 / 25	41 / 48 / 55
150	2 / 3 / 4	3 / 6 / 9	7 / 12 / 18	13 / 23 / 33	14 / 28 / 39	10 / 21 / 30	8 / 13 / 18	7 / 9 / 11	4 / 4 / 5	13 / 15 / 17	28 / 32 / 38

Splitter width T = 300 mm, Splitter lenght L = 500 mm / 1000 mm / 1500 mm									The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)		
The attenuation D_e (dB) in the frequency range f (Hz)											
Gap width (mm)	63	125	250	500	1000	2000	4000	8000	4	7	10
100	3 / 4 / 6	6 / 12 / 17	14 / 21 / 29	19 / 32 / 41	22 / 36 / 46	20 / 35 / 45	15 / 23 / 30	11 / 16 / 19	8 / 9 / 9	29 / 32 / 36	62 / 71 / 79
200	1 / 2 / 3	4 / 8 / 11	9 / 15 / 22	11 / 20 / 28	13 / 23 / 30	10 / 17 / 22	7 / 10 / 13	6 / 7 / 8	4 / 5 / 5	15 / 16 / 18	32 / 36 / 40
300	1 / 2 / 2	3 / 6 / 8	7 / 12 / 16	9 / 16 / 20	10 / 16 / 21	7 / 11 / 13	6 / 7 / 8	5 / 5 / 6	3 / 3 / 4	11 / 12 / 13	23 / 24 / 27

TAB. 2: WEIGHT ACCORDING TO DIMENSIONS (kg)

T= 100 mm number of splitters		Weight (kg)							
		1	2	3	4	5	6	7	8
L	B \ A	200	400	600	800	1000	1200	1400	1600
1000 mm / 1500 mm	250	9 / 13	16 / 22	22 / 31	31 / 45	38 / 54	46 / 65	53 / 75	59 / 85
	315	11 / 15	17 / 24	24 / 34	34 / 48	41 / 59	49 / 70	57 / 80	64 / 91
	400	12 / 18	19 / 28	26 / 38	37 / 53	45 / 64	54 / 76	62 / 88	70 / 99
	500	14 / 20	22 / 31	30 / 42	41 / 59	50 / 71	59 / 84	68 / 96	76 / 108
	630	17 / 24	25 / 36	34 / 48	47 / 67	56 / 80	67 / 94	76 / 107	85 / 120
	710	18 / 26	27 / 39	36 / 51	50 / 71	60 / 85	71 / 100	81 / 114	91 / 128
	800	23 / 33	34 / 48	44 / 62	54 / 77	64 / 91	76 / 107	86 / 122	97 / 136
	900	26 / 37	37 / 52	47 / 67	58 / 83	69 / 98	81 / 115	92 / 130	103 / 146
	1000	28 / 40	39 / 56	51 / 72	62 / 88	74 / 105	87 / 122	99 / 139	110 / 155

T = 200 mm number of splitters		Weight (kg)							
		1	2	3	4	5	6	7	8
L	B \ A	400	800	1200	1600	1800	2000	2200	2400
1000 mm / 1500 mm	250	15 / 21	29 / 42	43 / 61	62 / 89	72 / 103	82 / 118	92 / 132	102 / 147
	315	16 / 23	32 / 46	47 / 66	66 / 95	77 / 111	88 / 126	99 / 142	110 / 157
	400	18 / 26	35 / 51	51 / 73	72 / 103	84 / 120	96 / 137	108 / 154	120 / 171
	500	21 / 30	39 / 56	56 / 80	79 / 113	92 / 131	105 / 150	118 / 169	131 / 187
	630	24 / 34	45 / 64	63 / 90	88 / 125	102 / 146	117 / 167	132 / 188	146 / 209
	710	26 / 37	48 / 68	67 / 96	93 / 133	109 / 155	124 / 177	140 / 199	156 / 222
	800	32 / 46	52 / 74	72 / 102	99 / 142	116 / 165	133 / 189	149 / 213	166 / 236
	900	35 / 50	56 / 79	78 / 110	106 / 151	124 / 177	142 / 202	160 / 227	177 / 253
	1000	38 / 54	60 / 85	83 / 117	113 / 161	132 / 188	151 / 215	17 / 242	189 / 269

T = 300 mm number of splitters		Weight (kg)							
		1	2	3	4	5	6	7	8
L	B \ A	600	1200	1800	2200	2600	3200	4000	4600
1000 mm / 1500 mm	250	20 / 28	42 / 60	68 / 97	85 / 121	103 / 147	125 /178	150 / 214	172 /245
	315	22 / 31	46 / 65	73 / 104	90 / 130	111 / 157	133 / 189	160 / 227	182 / 259
	400	25 / 35	50 / 71	79 / 113	98 / 140	120 / 170	144 / 205	170 / 245	196 / 279
	500	28 / 39	55 / 79	86 / 123	107 / 153	132 / 186	156 / 222	186 / 265	212 / 302
	630	32 / 45	62 / 88	96 / 136	119 / 170	145 / 206	173 / 246	205 / 291	233 / 331
	710	34 / 48	66 / 94	101 / 145	126 / 180	154 / 218	183 / 260	217 / 308	246 / 349
	800	41 / 59	71 / 101	108 / 154	134 / 192	163 / 232	194 / 276	229 / 326	260 / 370
	900	45 / 64	76 / 108	118 / 164	143 / 204	174 / 247	207 / 294	244 / 346	277 / 393
	1000	48 / 69	81 / 116	123 / 175	152 / 217	185 / 263	219 / 312	258 / 366	293 / 415

3.03 BTH

Silencer chamber

ORDER CODE

BTH	T	x	H	/	L	.	inlet	.	design
	1		2		3		4		5

1	T	Chamber width
2	H	Chamber height
3	L	Chamber length
4	0	Without inlet
	1	With one inlet
	2	With two inlets
5		Standard design
	HYG	Hygienic design

Order code example:
BTH 200x500/1000.2.HYG

Silencer chamber, width 200 mm, height 500 mm, length 1000 mm, with two inlets, hygienic design

DIMENSION SERIES

T	chamber width:	200, 250, 300, 400, 500 mm
H	chamber height:	200, 250, 300, 350, 400, 450, 500 mm
L	chamber length:	500, 1000, 1500 mm

APPLICATION

Silencer chamber is used to reduce noise in ducts.
The chambers are typically manufactured with two inlets for better airflow circulation. The manufacturer recommends using the hygienic design of the chamber for ducts with higher requirements for the cleanliness of the transported air.
The position, quantity and type of the chambers are defined in the project documentation according to the required attenuation values. Silencer chamber is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures standard design:	100 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- chamber frame - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - chamber filling (standard design) - acoustically absorbent non-combustible filling, protected by a glass cloth - chamber filling (hygienic design) - acoustically absorbent non-combustible filling, protected by hygienically resistant laminated glass fabric
Design	- in case of arranging the chambers in series, it is possible to produce chambers without an inlet to prevent swirling of the flowing air at the contact points
Attenuation	- the attenuation levels of the chamber are listed in TAB. 1
Installation	- the chambers are installed into the designated duct parts without any gaps between them
Non-standard design	

TAB. 1: ATTENUATION LEVELS AND WEIGHT

Chamber width T = 200 mm, chamber height H = 500 mm												
Chamber length (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)			Weight (kg)
	63	125	250	500	1000	2000	4000	8000	4	7	10	
1000	8	10	17	23	25	22	16	9	6	21	45	12,4
1500	10	13	20	34	37	35	23	14	7	27	59	17,7

Chamber width T = 250 mm, chamber height H = 500 mm												
Chamber length (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)			Weight (kg)
	63	125	250	500	1000	2000	4000	8000	4	7	10	
1000	9	11	16	21	23	20	15	8	6	21	47	13,0
1500	12	15	22	32	35	32	21	13	7	26	58	18,6

Chamber width T = 400 mm, chamber height H = 500 mm												
Chamber length (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)			Weight (kg)
	63	125	250	500	1000	2000	4000	8000	4	7	10	
1000	10	12	16	20	22	18	12	6	3	12	22	14,8
1500	14	16	23	26	30	28	20	12	4	13	30	21,2

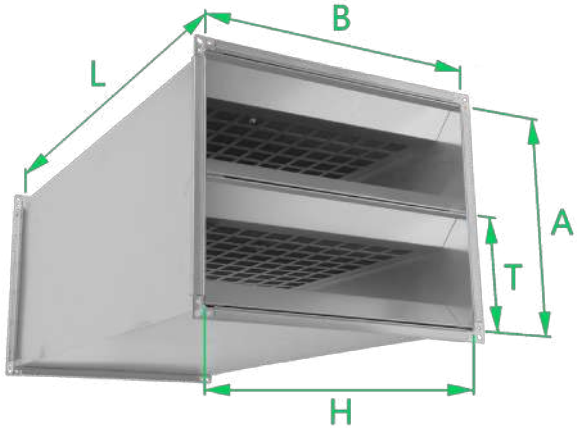
Chamber width T = 500 mm, chamber height H = 500 mm												
Chamber length (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)			Weight (kg)
	63	125	250	500	1000	2000	4000	8000	4	7	10	
1000	11	13	15	18	20	17	11	6	3	9	19	15,9
1500	14	18	20	22	28	26	18	10	3	10	23	22,9

3.04 THB Chamber silencer

ORDER CODE

THB	T	.	A	x	B	/	L	-	H	.	n	.	inlet	.	design	.	K	.	K1
	1		2		3		4		5		6		7		8		9		10

1	T	Chamber width
2	A	Silencer width
3	B	Silencer height
4	L	Silencer length
5	H	Chamber height
6	n	Number of chambers
7	0	Without inlet
	1	With one inlet
	2	With two inlets
8		Standard design
	HYG	Hygienic design
9	K	Rectangular input end (flange P20, P30, P40, free end...)
10	K1	Rectangular output end (flange P20, P30, P40, free end...)



Order code example:

THB 200.1000x500/1000-500.5.2.HYG.P20.P20

Chamber silencer, chamber width 200 mm, silencer width 1000 mm, silencer height 500 mm, silencer length 1000 mm, chamber height 500 mm, 5 chambers, with two inlets, hygienic design, 2 flanges P20

DIMENSION SERIES

T	chamber width:	200, 250, 300, 400, 500 mm
A	silencer width:	multiples of chamber widths
B	silencer height:	multiples of chamber heights (200, 250, 300, 350, 400, 450, 500 mm)
L	silencer length:	500, 1000, 1500 mm

APPLICATION

Chamber silencer is used to reduce noise in ducts.
The chambers are typically manufactured with two inlets for better airflow circulation. The manufacturer recommends using the hygienic design of the silencer for ducts with higher requirements for the cleanliness of the transported air.
The position, quantity and type of the chambers are defined in the project documentation according to the required attenuation values. Chamber silencer is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures standard design:	80 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- silencer casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - chamber frame - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - chamber filling (standard design) - acoustically absorbent non-combustible filling, protected by a glass cloth - chamber filling (hygienic design) - acoustically absorbent non-combustible filling, protected by hygienically resistant laminated glass fabric
Design	- the chambers are installed in the silencer without gaps between them - in case of arranging the chambers in series, it is possible to produce chambers without an inlet to prevent swirling of the flowing air at the contact points - size of the used flange, see TAB. 2 in chapter 1.01 PCI
Installation	- the chamber silencer is connected to adjacent duct parts using flanges mounted on the silencer's casing
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

T = 200 mm H = 500 mm		Weight (kg)					
L	B \ A	200	400	600	800	1000	1200
1000 mm / 1500 mm	500	22,5 / 32,8	37,8 / 54,8	53,0 / 76,9	68,3 / 98,9	83,6 / 120,9	98,9 / 142,9
	1000	42,1 / 61,3	69,8 / 101,0	97,4 / 140,8	125,1 / 180,5	152,8 / 220,2	180,5 / 259,9
	1500	61,7 / 89,8	101,8 / 147,2	141,8 / 204,7	181,9 / 262,1	222,0 / 319,5	262,1 / 376,9
	2000	81,2 / 118,3	133,8 / 193,4	186,2 / 268,6	238,7 / 343,7	291,2 / 418,8	343,7 / 493,9

T = 250 mm H = 500 mm		Weight (kg)					
L	B \ A	250	500	750	1000	1250	1500
1000 mm / 1500 mm	500	23,8 / 34,8	40,4 / 58,8	570,0 / 82,8	73,6 / 106,8	90,2 / 130,8	106,8 / 154,8
	1000	44,0 / 64,2	73,6 / 106,8	103,2 / 149,4	132,8 / 192,0	162,4 / 234,6	192,0 / 277,2
	1500	64,2 / 93,6	106,8 / 154,8	149,4 / 216,0	192,0 / 277,2	234,6 / 338,4	277,2 / 399,6
	2000	84,4 / 123,0	140,0 / 202,8	195,6 / 282,6	251,2 / 362,4	306,8 / 442,2	362,4 / 522,0

T = 400 mm H = 500 mm		Weight (kg)					
L	B \ A	400	800	1200	1600	2000	2400
1000 mm / 1500 mm	500	27,8 / 40,6	48,3 / 70,5	68,8 / 100,3	89,4 / 130,2	110,0 / 160,0	130,5 / 189,8
	1000	49,8 / 72,6	85,1 / 123,7	120,5 / 174,7	155,8 / 225,8	191,2 / 276,8	226,5 / 327,8
	1500	71,8 / 104,6	121,9 / 176,9	172,1 / 249,1	222,2 / 321,4	272,4 / 393,6	322,5 / 465,8
	2000	93,8 / 136,6	158,7 / 230,1	223,7 / 323,5	288,6 / 417,0	353,6 / 510,4	418,5 / 603,8

T = 500 mm H = 500 mm		Weight (kg)					
L	B \ A	500	1000	1500	2000	2500	3000
1000 mm / 1500 mm	500	30,3 / 44,5	53,4 / 78,2	76,5 / 111,9	99,6 / 145,6	122,7 / 179,3	145,8 / 213,0
	1000	53,4 / 78,2	92,4 / 134,8	131,4 / 191,4	170,4 / 248,0	209,4 / 304,6	248,4 / 361,2
	1500	76,5 / 111,9	131,4 / 191,4	186,3 / 270,9	241,2 / 350,4	296,1 / 429,9	351,0 / 509,4
	2000	99,6 / 145,6	170,4 / 248,0	241,2 / 350,4	312,0 / 452,8	382,8 / 555,2	453,6 / 657,6

3.05 THK Circular silencer

ORDER CODE

THK	D	/	L	.	pod	.	design	.	K	.	K1
	1		2		3		4		5		6

1	D	Silencer diameter
2	L	Silencer length
3	0	Without pod
	1	With pod
4		Standard design
	HYG	Hygienic design
5	K	Circular input end (see TAB. 2)
6	K1	Circular output end (see TAB. 2)

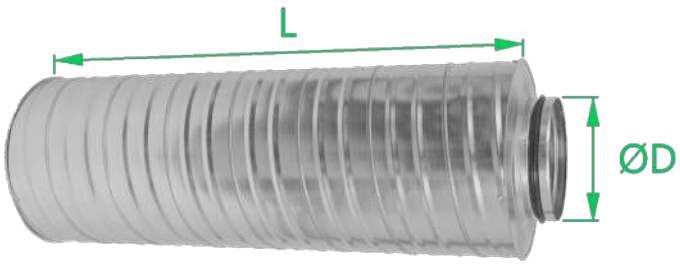
DIMENSION SERIES

D	silencer diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250 mm
L	silencer length:	300, 600, 900, 1200, 1500 mm*

* if longer lenght is needed, silencers can be arranged in series

APPLICATION

Circular silencer is used to reduce noise in ducts.
The manufacturer recommends using the hygienic design of the silencer for ducts with higher requirements for the cleanliness of the transported air. The dimensions of the circular silencer are defined in the project documentation according to the required attenuation values. Circular silencer is not resistant to aggressive chemical substances and vapors.



Order code example:
THK 315.900.0.HYG.VKT.VKT

Circular silencer, diameter 315 mm, length 900 mm, without a pod, hygienic design, both free ends for insertion with double-lip seal

TECHNICAL DATA

Max. temperatures standard design:	80 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- silencer casing - galvanized SPIRO circular duct - silencer inner wall - made of spirally wound perforated galvanized steel strip - silencer filling (standard design) - acoustically absorbent non-combustible filling, protected by a glass cloth - silencer filling (hygienic design) - acoustically absorbent non-combustible filling, protected by hygienically resistant laminated glass fabric, separated from the flowing air by a PE foil
Design	- circular end options - see TAB. 2 - noise attenuating filler thickness - see TAB. 1 it is possible to install a pod inside the silencer to achieve higher noise attenuation levels - from a diameter of 315 mm and above
Attenuation	- the attenuation levels of the circular silencer are listed in TAB. 1
Installation	- the circular silencer is connected to adjacent duct parts using selected methods of circular ends (either by insertion or by using a flange)
Non-standard design	NER, LAK, KOX, NAT, HYG

TAB. 1: THE ATTENUATION LEVELS AND WEIGHT

Silencer length L = 600 mm / 900 mm / 1500 mm (silencer without the pod)									Weight (kg)	Thickness of the noise attenuating filler (mm)
Silencer diameter D (mm)	The attenuation D_e (dB) in the frequency range f (Hz)									
	63	125	250	500	1000	2000	4000	8000		
100	3 / 7 / 10	4 / 10 / 11	9 / 21 / 27	17 / 38 / 44	24 / 50 / 50	21 / 50 / 50	12 / 29 / 37	10 / 22 / 30	4,1 / 7,8 / 11,6	50
125	2 / 5 / 7	3 / 7 / 9	7 / 16 / 21	14 / 32 / 41	20 / 50 / 50	16 / 42 / 46	11 / 25 / 33	9 / 22 / 27	4,7 / 9,0 / 13,4	50
140	2 / 5 / 6	3 / 6 / 8	6 / 14 / 19	13 / 29 / 39	18 / 49 / 49	15 / 38 / 44	10 / 22 / 28	7 / 18 / 22	5,2 / 9,9 / 14,6	50
160	2 / 4 / 5	2 / 5 / 7	6 / 12 / 17	12 / 26 / 37	17 / 47 / 48	14 / 34 / 42	8 / 20 / 24	6 / 16 / 19	5,7 / 10,9 / 16,1	50
180	2 / 3 / 5	2 / 5 / 6	6 / 12 / 15	12 / 25 / 37	16 / 46 / 48	12 / 30 / 38	7 / 18 / 21	5 / 14 / 17	6,2 / 11,9 / 17,6	50
200	1 /3 / 4	2 / 5 / 6	5 / 11 / 14	12 / 25 / 37	16 / 45 / 48	11 / 26 / 34	6 / 16 / 18	5 / /13 / 15	6,8 / 12,9 / 19,1	50
224	1 / 2 / 3	2 / 5 / 5	4 / 10 / 12	12 / 25 / 36	16 / 42 / 46	10 / 22 / 29	6 / 14 / 16	4 / 12 / 13	7,5 / 14,2 / 21,0	50
250	1 / 2 / 3	2 / 4 / 5	4 / 9 11	12 / 25 /35	15 / 40 / 45	8 / 19 / 25	5 / 12 /14	4 / 10 / 11	8,1 / 15,4 / 22,8	50
280	1 / 1 / 2	1 / 4 / 5	4 / 9 / 10	11 / 24 / 30	14 / 34 / 40	7 / 16 / 23	4 / 12 / 13	3 / 9 / 10	8,9 / 17,0 / 25,0	50
315	1 / 1 / 2	1 / 4 / 4	3 / 8 / 10	9 / 22 / 26	12 / 28 / 35	6 / 13 / 19	4 / 12 / 12	3 / 8 / 10	10,2 / 19,1 / 28,0	50
355	1 / 1 / 2	1 / 4 / 4	3 / 8 / 10	8 / 20 / 23	11 / 26 / 30	6 / 12 / 18	4 / 11 / 11	3 / 7 / 9	11,3 / 21,1 / 31,0	50
450	2 / 2 / 3	3 / 5 / 7	6 / 8 / 13	8 / 12 / 18	9 / 15 / 21	9 / 14 / 17	9 / 12 / 14	5 / 8 / 9	14,4 / 26,5 / 38,6	100
500	2 / 2 / 3	3 / 5 / 7	6 / 8 / 13	8 / 12 / 18	9 / 15 / 21	9 / 14 / 17	9 / 12 / 14	5 / 8 / 9	15,9 / 29,2 / 42,5	100
560	1 / 2 / 2	3 / 4 / 5	5 / 8 / 10	7 / 11 / 15	8 / 11 / 15	8 / 12 /14	8 / 9 / 10	4 / 6 / 9	17,8 / 32,6 / 47,3	100
630	1 / 2 / 2	3 / 4 / 5	5 / 8 / 10	7 / 11 / 15	8 / 11 / 15	8 / 12 / 14	8 / 9 / 10	4 / 6 / 9	19,9 / 36,3 / 52,7	100
710	1 / 1 / 3	4 / 4 / 5	4 / 7 / 10	5 / 10 / 14	7 / 8 / 13	7 / 8 / 13	7 / 8 / 10	3 / 5 / 8	22,4 / 40,7 / 59,0	100
800	1 / 1 / 3	4 / 4 / 5	4 / 7 / 10	5 / 10 / 14	7 / 8 / 13	7 / 8 / 13	7 / 8 / 10	3 / 5 / 8	24,7 / 45,1 / 65,6	100
900	0 / 1 / 2	3 / 4 /4	3 / 6 / 9	5 / 9 / 12	6 / 7 / 11	7 / 8 / 11	5 / 7 / 9	2 / 4 / 7	36,5 / 59,4 / 82,3	100
1000	0 / 1 / 2	3 / 4 / 4	3 / 6 / 9	5 / 9 / 12	6 / 7 / 11	7 / 8 / 11	5 / 7 / 9	2 / 4 / 7	48,9 / 74,1 / 99,3	100
1120	0 / 0 / 1	1 / 2 / 3	2 / 4 / 8	4 / 7 / 10	5 / 6 / 9	5 / 7 / 9	3 / 6 / 7	1 / 2 / 4	54,6 / 82,7 / 110,8	100
1250	0 / 0 / 1	1 / 2 / 3	2 / 4 / 8	4 / 7 / 10	5 / 6 / 9	5 / 7 / 9	3 / 6 / 7	1 / 2 / 4	60,7 / 91,9 / 123,2	100

TAB. 2: CIRCULAR END OPTIONS

VKT	Free end with double-lip seal which slides into the duct = **standard**
VKM	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

3.06 HTZ Acoustic louver

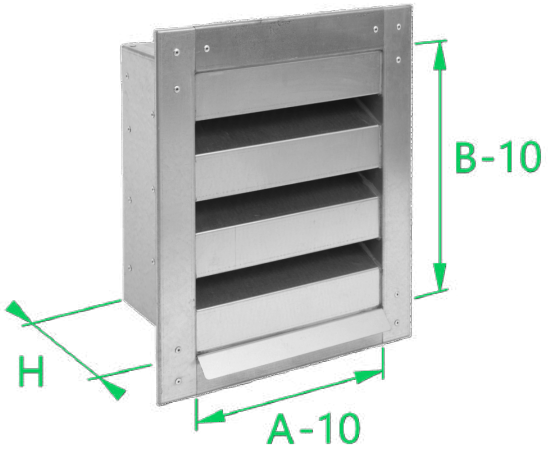
ORDER CODE

HTZ	A	x	B	.	H	.	mesh	.	RAL
	1		2		3		4		5

1	A	Grille width
2	B	Grille height
3	H	Grille depth
4	0	Without mesh
	1	With mesh
5	RAL	Color finish - specify RAL shade

Order code example:
HTZ 1250x1000/400.1.RAL9010

Acoustic louver, width 1250 mm, height 1000 mm, depth 400mm, with mesh, RAL – shade 9010



DIMENSION SERIES

A	grille width:	250 – 2500 mm*
B	grille length:	300 – 2500 mm*
H	grille depth:	200, 300, 400, 500, 600 mm

* if larger size is required, multiple louvers can be arranged into one frame

APPLICATION

Acoustic louver is a facade element designed to cover openings for air intake or exhaust while reducing noise spreading through ventilation openings. The louvers also prevent rain or snow from entering the duct system. The louvers' blades are perforated on the underside, allowing noise to pass through to the sound-absorbing insulation with which the blades are filled. Typically, the louvers come with galvanized mesh, serving as protection against bird ingress. Acoustic louvers are not resistant to aggressive chemicals or vapors.

TECHNICAL DATA

Max. temperatures standard design:	100 °C
Max. air flow velocity:	up to 2.5 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- frame and blades - galvanized sheet DX51 D+Z 200 MAC - blade filling - acoustically absorbent non-combustible filling, protected by a glass cloth - mesh - galvanized wire with a thickness of 1 mm, mesh size 12x12 mm
Design	- the frame is riveted at the corners, the blades are riveted into the frame
Attenuation	- the attenuation levels of the rectangular silencer are listed in TAB. 1 - a greater depth of the louver increases noise attenuation
Installation	- acoustic louver can be installed in ducts or integrated into building openings
Non-standard design	

TAB. 1: ATTENUATION LEVELS

Depth H (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)			
	63	125	250	500	1000	2000	4000	8000	1	2	3	4
200	3	5	6	10	10	11	12	13	10	35	75	115
300	6	7	7	15	15	17	16	16	12	37	78	125
400	8	9	10	20	21	20	20	18	16	52	84	150
500	9	12	14	24	25	24	24	20	15	54	125	178
600	11	14	17	27	29	26	26	22	19	58	140	192

Depth H (mm) 200 / 300 / 400 / 500 / 600	Noise of the louver $L_{wž}$ (dB) in the frequency range f (Hz)							
Airflow velocity m/s	63	125	250	500	1000	2000	4000	8000
1	32 / 32 / 39 / 48 / 52	37 / 37 / 44 / 53 / 59	39 / 39 / 43 / 52 / 57	30 / 30 / 37 / 46 / 50	27 / 27 / 34 / 43 / 48	24 / 24 / 33 / 42 / 46	20 / 20 / 30 / 39 / 42	12 / 12 / 24 / 33 / 36
2	40 / 46 / 54 / 55 / 57	45 / 51 / 59 / 60 / 64	47 / 53 / 58 / 59 / 61	38 / 44 / 52 / 53 / 55	35 / 41 / 49 / 50 / 52	32 / 38 / 48 / 49 / 51	28 / 34 / 45 / 46 / 48	20 / 26 / 39 / 40 / 42
3	54 / 57 / 63 / 67 / 71	59 / 62 / 68 / 72 / 77	61 / 64 / 67 / 71 / 75	52 / 55 / 61 / 65 / 70	49 / 52 / 58 / 62 / 67	46 / 49 / 57 / 61 / 65	42 / 45 / 54 / 58 / 61	34 / 37 / 48 / 52 / 55
4	67 / 72 / 75 / 77 / 79	72 / 77 / 80 / 82 / 86	74 / 79 / 79 / 81 / 84	65 / 70 / 73 / 75 / 78	62 / 67 / 70 / 72 / 76	59 / 64 / 69 / 71 / 74	55 / 60 / 66 / 68 / 70	47 / 52 / 60 / 62 / 64

TAB. 2: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
250	20	29	39	52	66	82	100	119	140	163	188	215
315	21	30	40	53	67	83	100	120	141	164	189	216
355	22	30	41	53	67	83	101	121	142	165	190	217
400	22	31	42	54	68	84	102	121	142	166	191	217
450	23	32	42	55	69	85	102	122	143	166	191	218
500	24	32	43	55	69	85	103	123	144	167	192	219
560	24	33	44	56	70	86	104	123	145	168	193	220
630	25	34	45	57	71	87	105	124	146	169	194	221
710	26	35	46	58	72	88	105	126	147	170	195	222
800	28	36	47	59	74	90	107	127	148	171	196	223
900	29	38	48	61	75	91	109	128	150	173	198	225
1000	30	39	50	62	76	92	10	130	151	174	199	226
1120	32	41	51	64	78	94	112	131	153	176	201	228
1200	33	42	52	65	79	95	113	133	154	177	202	229
1400	36	45	55	68	82	98	116	135	157	180	205	232
1600	38	47	58	70	85	101	119	138	160	183	208	235
1800	41	50	61	73	87	104	121	141	163	186	211	238

TAB. 3: NET SURFACE AREA

Height B	Number of blades	Gap between blades	Net surface area
400	2	46	35%
500	3	46	36%
600	4	45	38%
700	5	45	39%
800	6	45	39%
900	7	45	40%
1000	8	45	40%
1100	9	45	41%
1200	10	45	41%
1300	11	45	41%
1400	12	45	41%
1500	13	45	42%

3.07 TVC

Rectangular flexible duct connector

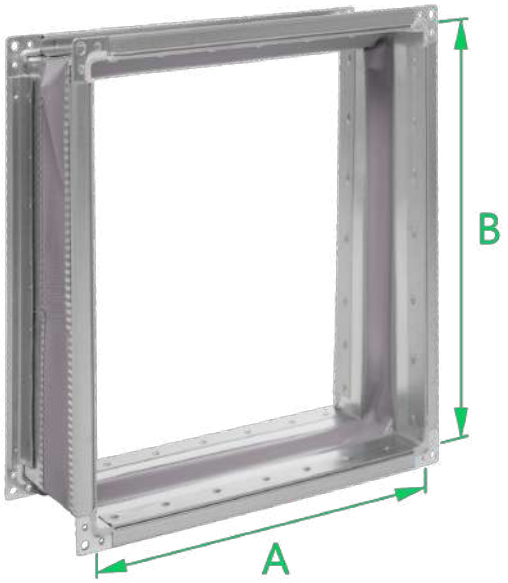
ORDER CODE

TVC	A	x	B	.	K	.	K1	.	°C	.	design
	1		2		3		4		5		6

1	A	Connector width
2	B	Connector height
3	K	Rectangular input end (flange P20, P30, P40, free end...)
4	K1	Rectangular output end (flange P20, P30, P40, free end...)
5		Temperature resistance 70 °C
	200	Temperature resistance 200 °C
6		Standard design
	HYG	Hygienic design

Order code example:
TVC 800x500.P20.P20

Rectangular flexible duct connector, width 800 mm, height 500 mm, 2 flanges P20, temperature resistance 70°C, standard design



DIMENSION SERIES

A	connector width:	100 – 3500 mm
B	connector height:	100 – 3000 mm
L	connector length:	150 mm when tensioned*

* rectangular flexible duct connector functions within 100-130 mm lenght range

TECHNICAL DATA

Max. temperatures – standard design:	70 °C
Max. temperatures – heat resistant design:	200 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

APPLICATION

Rectangular flexible duct connector is an airtight flexible element used to prevent the transmission of vibrations in ducts. The connector can be provided with higher temperature resistance - up to 200 °C. The manufacturer recommends using the hygienic design of the connector for ducts with higher requirements for the cleanliness of the transported air. Rectangular flexible duct connector is not resistant to aggressive chemical substances and vapors.

MATERIAL AND DESIGN

Material	- standard design (heat resistance up to 70°C): polyester fabric, PVC coated on both sides, securely attached on both sides to a galvanized sheet metal plate, galvanized flange - heat resistant design (heat resistance up to 200°C): fiberglass fabric with polyurethane, firmly attached on both sides to a stainless-steel sheet metal plate, stainless steel flange
Design	- fabric is crosswise hot air welded - flanges are attached according to sealing requirements (clinched or spot welded) - size of the used flange, see TAB. 2 in chapter 1.01 PCI - the rectangular flexible duct connector includes a conductive connection (grounding wire)
Installation	- the rectangular flexible duct connector is connected to adjacent duct parts by flanges
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	315	400	500	630	710	800	900	1000	1250	1400	1600	1800	2000	2200
200	1,5	1,7	2,0	2,3	2,7	3,1	3,4	3,8	4,2	4,5	6,7	7,4	8,4	9,3	10,2	11,2
250	1,7	1,9	2,1	2,5	2,8	3,3	3,6	4,0	4,4	4,7	7,0	7,7	8,6	9,5	10,5	11,4
315	2,0	2,1	2,4	2,7	3,1	3,6	3,9	4,2	4,6	5,0	7,3	8,0	8,9	9,8	10,8	11,7
400	2,3	2,5	2,7	3,0	3,4	3,9	4,2	4,5	4,9	5,3	7,7	8,4	9,3	10,2	11,2	12,1
500	2,7	2,8	3,1	3,4	3,8	4,3	4,6	4,9	5,3	5,7	8,1	8,8	9,8	10,7	11,6	12,5
630	3,1	3,3	3,6	3,9	4,3	4,8	5,1	5,4	5,8	6,2	8,7	9,4	10,4	11,3	12,2	13,1
710	3,4	3,6	3,9	4,2	4,6	5,1	5,4	5,7	6,1	6,5	9,1	9,8	10,7	11,7	12,6	13,5
800	3,8	4,0	4,2	4,5	4,9	5,4	5,7	6,1	6,4	6,8	9,5	10,2	11,2	12,1	13,0	13,9
900	4,2	4,4	4,6	4,9	5,3	5,8	6,1	6,4	6,8	7,2	10,0	10,7	11,6	12,5	13,5	14,4
1000	4,5	4,7	5,0	5,9	5,7	6,2	6,5	6,8	7,2	7,6	10,5	11,2	12,1	13,0	13,9	14,9
1250	6,7	7,0	7,3	7,7	8,1	8,7	9,1	9,5	10,0	10,5	11,6	12,3	13,2	14,2	15,1	16,0
1400	7,4	7,7	8,0	8,4	8,8	9,4	9,8	10,2	10,7	11,2	12,3	13,0	13,9	14,9	15,8	16,7
1600	8,4	8,6	8,9	9,3	9,8	10,4	10,7	11,2	11,6	12,1	13,2	13,9	14,9	15,8	16,7	17,7
1800	9,3	9,5	9,8	10,2	10,7	11,3	11,7	12,1	12,5	13,0	14,2	14,9	15,8	16,7	17,7	18,6
2000	10,2	10,5	10,8	11,2	11,6	12,2	12,6	13,0	13,5	13,9	15,1	15,8	16,7	17,7	18,6	19,5
2200	11,2	12,3	12,6	13,0	13,5	14,1	14,5	14,9	14,4	14,9	16,0	16,7	17,7	18,6	19,5	20,4

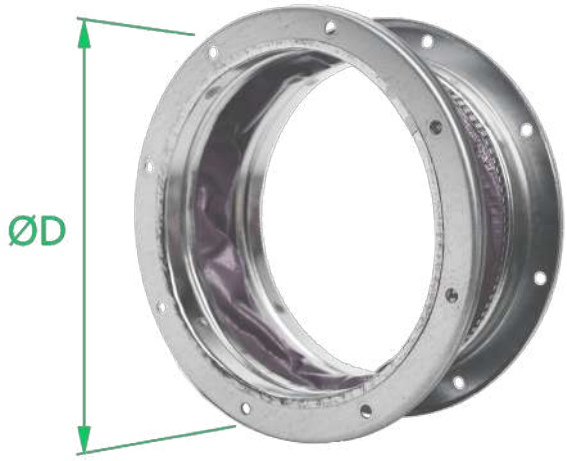
3.08 TVK

Circular flexible duct connector

ORDER CODE

TVK	D	/	K	.	K1	.	°C	.	design
	1		2		3		4		5

1	D	Connector diameter
2	K	Circular input end (flange KPL, angle flange KPW, free end FE)
3	K1	Circular output end (flange KPL, angle flange KPW, free end FE)
4		Temperature resistance 70 °C
	200	Temperature resistance 200 °C
5		Standard design
	HYG	Hygienic design



Order code example:
TVK 315 / KPL.KPL

Circular flexible duct connector, diameter 315 mm,
2 circular galvanized flanges, temperature resistance 70°C,
standard design

DIMENSION SERIES

D	connector diameter:	100 – 1250 mm
L	connector length:	150 mm when tensioned*

* circular flexible duct connector functions within 100 -130 mm lenght range

APPLICATION

Circular flexible duct connector is an airtight flexible element used to prevent the transmission of vibrations in ducts. The connector can be provided with higher temperature resistance - up to 200 °C. The manufacturer recommends using the hygienic design of the connector for ducts with higher requirements for the cleanliness of the transported air. Circular flexible duct connector is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	70 °C
Max. temperatures – heat resistant design:	200 °C
Max. air flow velocity:	20 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- standard design (heat resistance up to 70°C): polyester fabric, PVC coated on both sides, securely attached on both sides to a galvanized sheet metal plate - heat resistant design (heat resistance up to 200°C): fiberglass fabric with polyurethane, firmly attached on both sides to a stainless-steel sheet metal plate
Design	- fabric is crosswise hot air welded - diameter 80 - 800 mm - circular pressed flanges made of galvanized or stainless-steel - diameter above 800 mm - circular angle flanges made of galvanized or stainless-steel - the circular flexible duct connector includes a conductive connection (grounding wire)
Installation	- the circular flexible duct connector is connected to adjacent duct parts using selected methods of circular ends (either by insertion or by using a flange)
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Diameter D	100	125	160	200	250	315	400	500	630	710	800	900	1000	1250
2 free ends	0,2	0,2	0,2	0,3	0,4	0,5	0,6	0,8	1,0	1,1	1,2	1,4	1,5	1,7
2 flanges	0,5	0,6	0,7	0,9	1,1	1,8	2,6	3,2	4,3	5,0	5,3	14,5	25,0	31,1
Type of the flange	flange (KPL)											angle flange (KPW)		

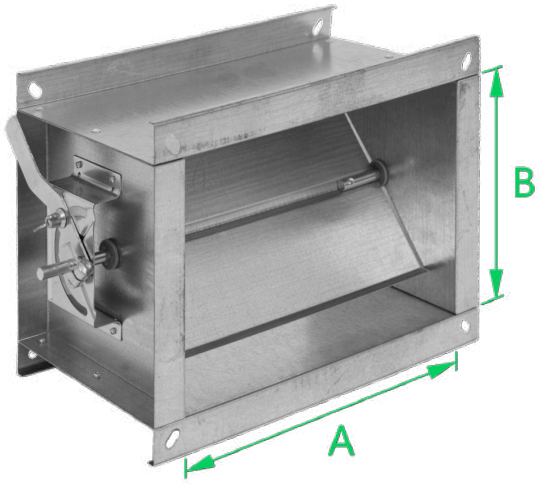
4.01 RKJ

Rectangular single blade damper

ORDER CODE

RKJ	A	x	B	.	control	.	K	.	K1	.	design
	1		2		3		4		5		6

1	A	Damper width
2	B	Damper height
3	R	Manual control
	S	Servo-motor preparation
4	K	Rectangular input end (flange P20, P30, P40, free end...)
5	K1	Rectangular output end (flange P20, P30, P40, free end...)
6		Standard design
	HYG	Hygienic design



Order code example:
RKJ 400x200.R.P20.P20

Rectangular single blade damper, width 400 mm, height 200 mm, manual control, 2 flanges P20, standard design

DIMENSION SERIES

A	damper width:	100 – 1250 mm
B	damper height:	100 – 500 mm
L	damper length:	L=B

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference	+1000 Pa ÷ -630 Pa

APPLICATION

Rectangular single blade damper is used to regulate the airflow in rectangular ducts. Damper is not intended for airtight sealing of the duct. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. Rectangular single blade damper is not resistant to aggressive chemical substances and vapors.

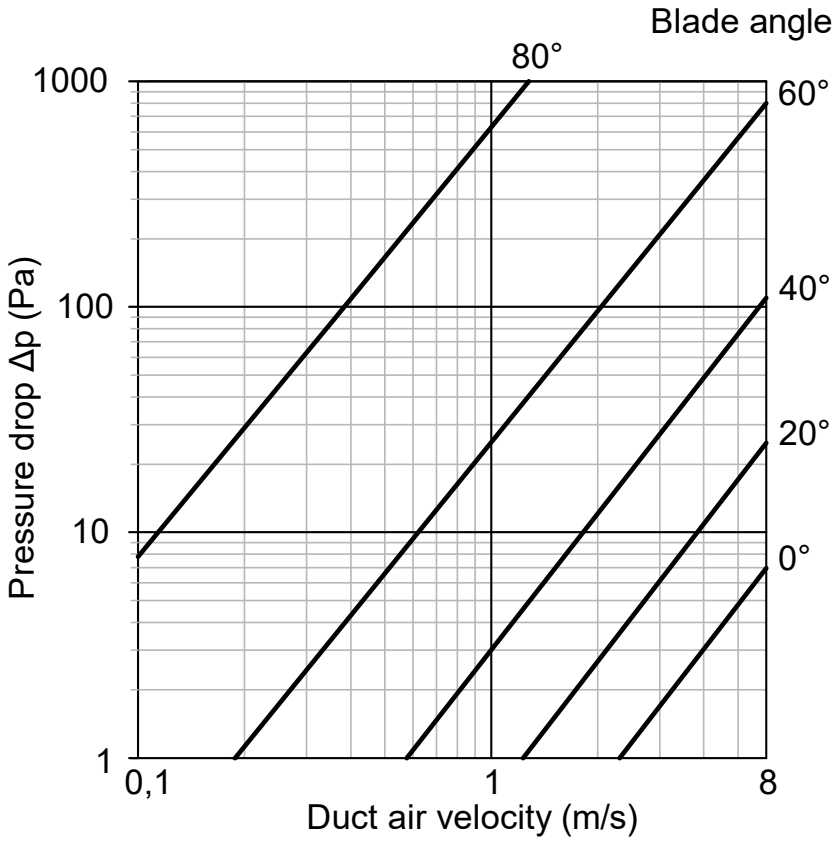
MATERIAL AND DESIGN

Material	- damper casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - damper blade - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - manual control - plastic casings, aluminum shafts of the blade, galvanized shaft holders, galvanized manual control with arrestment mechanism - servo-motor preparation - plastic casings, Ø13 mm aluminum shafts of the blade for servo motor connection, galvanized shaft holders
Design	- the damper frame includes a bent flange with oval holes for installation on adjacent duct parts with flanges P20 and P30
Installation	- rectangular single blade damper is connected to adjacent duct parts using a bent flange on the damper frame - once the blade position is set, it is necessary to secure it with a wing nut on the control handle
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	315	400	500
200	2,1	2,7	3,7	5,2	7,3
250	2,3	3,1	4,1	5,8	8,0
315	2,7	3,5	4,7	6,4	8,9
400	3,1	4,0	5,4	7,3	10,0
500	3,6	4,7	6,2	8,4	11,3
630	4,3	5,6	7,3	9,8	13,0
710	4,8	6,1	8,0	10,6	14,1
800	5,2	6,7	8,7	11,6	15,3

CHART 1: PRESSURE DROP



4.02 RKZ

Rectangular galvanized damper

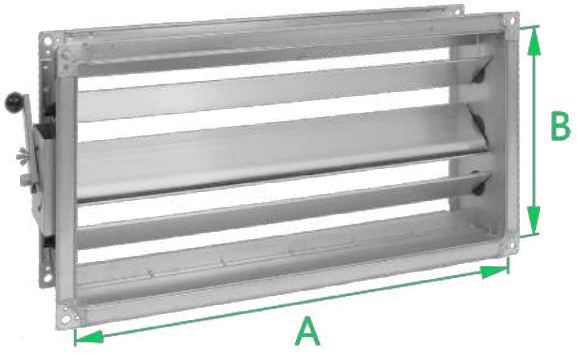
ORDER CODE

RKZ	A	x	B	.	control	.	design
	1		2		3		4

1	A	Damper width
2	B	Damper height
3	R	Manual control
	S	Servo-motor preparation
4		Standard design
	HYG	Hygienic design

Order code example:
RKZ 800x500.S.HYG

Rectangular galvanized damper, width 800 mm, height 500 mm, servo-motor preparation, hygienic design



DIMENSION SERIES

A	damper width:	200 – 2000 mm*
B	damper height:	200 – 2000 mm**
L	damper length:	170 mm

* width A > 1400 mm, damper is divided in a single frame
** height B > 1400 mm, two manual controls are installed
** height B > 1400 mm, two combined outlets are installed for servo-motor preparation

APPLICATION

Rectangular galvanized damper is used to regulate the airflow in rectangular ducts. Damper is not intended for airtight sealing of the duct. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. Rectangular galvanized damper is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

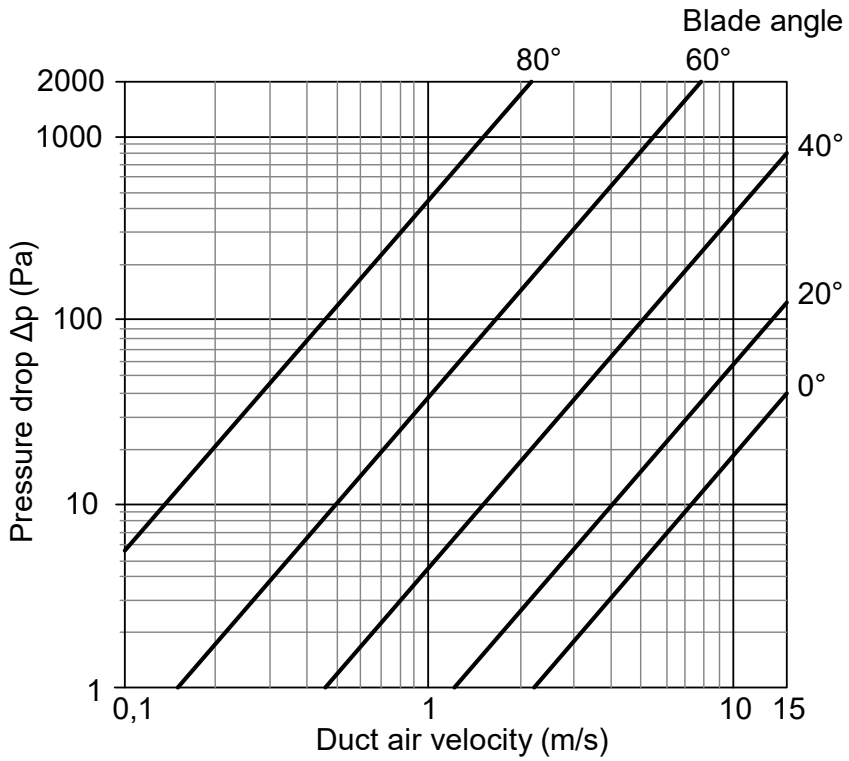
MATERIAL AND DESIGN

Material	- damper casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - damper blade - aluminum profile, blades are inserted into the frame using casings and shafts made of PA - gears – PA - manual control including arrestment mechanism - galvanized sheet - servo-motor preparation - galvanized square bar 12x12 mm
Design	- size of the used flange, see TAB. 2 in chapter 1.01 PCI - the blades of the damper move in opposite directions using external gear wheels
Installation	- rectangular galvanized damper is connected to adjacent duct parts using a bent flange on the damper frame - once the blade position is set, it is necessary to secure it with a wing nut on the control handle
Non-standard design	KOX NAT ELX HYG

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	315	400	500	630	710	800	900	1000	1250	1400
200	2,8	3,1	3,2	3,7	3,8	4,4	4,6	5,2	7,1	7,9	8,8	9,7
250	3,1	3,3	3,4	4,0	4,1	4,7	4,9	5,5	7,5	8,4	9,3	10,3
315	3,3	3,5	3,6	4,2	4,3	5,0	5,1	5,8	7,9	8,8	9,7	10,7
400	3,5	3,7	3,8	4,4	4,6	5,3	5,4	6,1	8,3	9,2	10,2	11,3
500	3,7	3,9	4,0	4,7	4,9	5,6	5,8	6,5	8,8	9,8	10,6	11,9
630	4,0	4,2	4,3	5,0	5,2	6,0	6,2	7,0	9,3	10,4	11,5	12,6
710	4,3	4,5	4,6	5,4	5,6	6,4	6,6	7,5	9,9	11,0	12,2	13,4
800	4,6	4,8	4,9	5,8	5,9	6,8	7,0	8,0	10,5	11,7	12,9	14,2
900	6,5	6,9	7,0	8,1	8,3	9,4	9,7	10,8	11,2	12,5	13,8	15,2
1000	7,1	7,4	7,6	8,7	9,0	10,2	10,5	11,7	12,0	13,4	14,8	16,3
1250	7,8	8,1	8,2	9,5	9,7	11,0	11,3	12,6	13,0	14,4	16,0	17,5
1400	8,5	8,8	9,0	10,3	10,6	12,0	12,3	13,7	14,1	15,6	17,3	18,9

CHART 1: PRESSURE DROP



4.03 RKA Rectangular aluminum damper

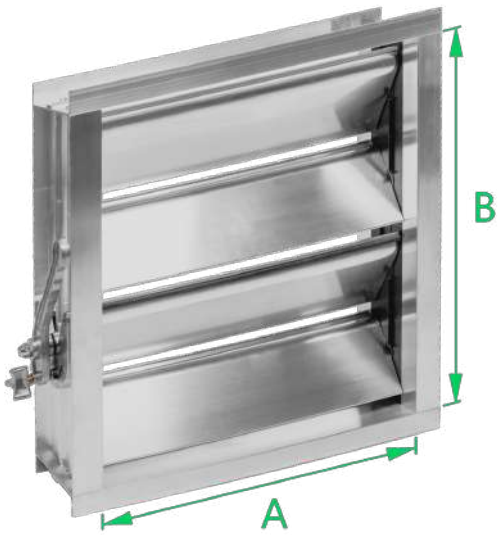
ORDER CODE

RKA	A	x	B	.	control	.	design	.	EXE
	1		2		3		4		5

1	A	Damper width
2	B	Damper height
3	R	Manual control
	S	Servo-motor preparation
4		Standard design
	HYG	Hygienic design
5		Standard design
	EXE	Non-explosive design

Order code example:
RKA 800x500.S.HYG

Rectangular aluminum damper, width 800 mm, height 500 mm, servo-motor preparation, hygienic design



DIMENSION SERIES

A	damper width:	200 – 2800 mm*
B	damper height:	200 – 2800 mm**
L	damper length:	125 mm

* width A > 1400 mm, damper is produced with a vertical divider
** height B > 1000 mm, damper is produced with a horizontal divider
** height B > 1400 mm, two manual controls are installed
** height B > 1400 mm, two combined outlets are installed for servo-motor preparation

APPLICATION

Rectangular aluminum damper is used to regulate the airflow in rectangular ducts. Damper is not intended for airtight sealing of the duct. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. The damper meets the tightness class 2 requirement according to EN 1751:2003. Upon consultation with the manufacturer, it can be produced as non-explosive or as seismic resistant. Rectangular aluminum damper is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

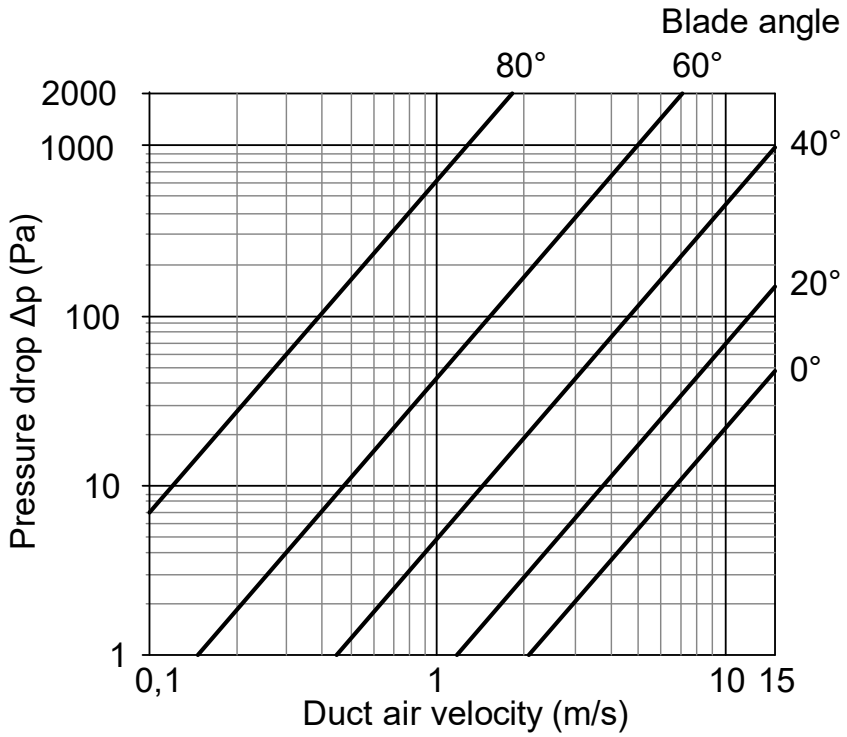
Material	- damper casing - aluminum profile - damper blade - aluminum profile, blades are inserted into the frame using casings and shafts made of PA - gears – PA - manual control including arrestment mechanism – aluminum cast - servo-motor preparation - galvanized square bar 12x12 mm
Design	- a rubber sealing strip is inserted into the profile of each blade - the blades of the damper move in opposite directions using external gear wheels - gear wheels are inserted into the side profiles of the damper frame (they are not in contact with the supplied air or the external environment)
Installation	- rectangular aluminum damper is connected to adjacent duct parts using holes drilled into the damper frame, always intended for connection with a flange P30 - once the blade position is set, it is necessary to secure it with a wing nut on the control handle
Non-standard design	

KOX NAT ELX HYG

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	315	400	500	630	710	800	900	1000	1250	1400	1600	1800	2000
200	1,5	1,8	2,0	2,4	2,8	3,3	3,6	4,0	4,4	4,8	5,8	6,4	7,2	8,1	8,9
250	1,7	2,0	2,3	2,6	3,1	3,7	4,1	4,5	5,0	5,4	6,6	7,3	8,2	9,1	10,1
315	1,9	2,2	2,6	3,0	3,5	4,2	4,7	5,2	5,7	6,2	7,6	8,4	9,4	10,5	11,6
400	2,2	2,5	3,0	3,5	4,1	4,9	5,5	6,0	6,6	7,3	8,9	9,8	11,1	12,3	13,6
500	2,6	2,9	3,4	4,1	4,8	5,8	6,4	7,0	7,8	8,5	10,4	11,5	13,0	14,5	16,0
630	3,0	3,5	4,0	4,8	5,7	6,8	7,0	8,4	9,2	10,1	12,2	13,7	15,5	17,2	19,0
710	3,3	3,8	4,4	5,2	6,2	7,5	8,3	9,2	10,1	11,1	13,6	15,0	17,0	18,9	20,9
800	3,6	4,1	4,8	5,8	6,8	8,2	9,1	10,1	11,2	12,2	14,9	16,6	18,7	20,9	23,0
900	3,9	4,5	5,3	6,3	7,5	9,1	10,0	11,1	12,3	13,5	16,4	18,2	20,6	23,0	25,4
1000	4,3	4,9	5,8	6,9	8,2	9,9	10,9	12,1	13,4	14,7	18,0	19,9	22,5	25,1	27,7
1250	5,1	5,9	7,0	8,3	9,9	11,9	13,2	14,6	16,2	17,8	21,8	24,1	27,3	30,5	33,6
1400	6,0	7,0	8,3	10,0	11,9	14,5	16,0	17,8	19,7	21,7	26,6	29,5	33,4	37,3	41,2
1600	6,7	7,8	9,2	11,1	13,3	16,1	17,8	19,8	22,0	24,2	29,6	32,9	37,2	41,6	46,0
1800	7,4	8,6	10,2	12,2	14,6	17,7	19,7	21,8	24,2	26,6	32,6	36,3	41,1	45,9	50,7
2000	8,1	9,4	11,1	13,4	16,0	19,4	21,5	23,9	26,5	29,1	35,7	39,6	44,9	50,1	55,4

CHART 1: PRESSURE DROP



4.04 RKT

Tight rectangular aluminum damper

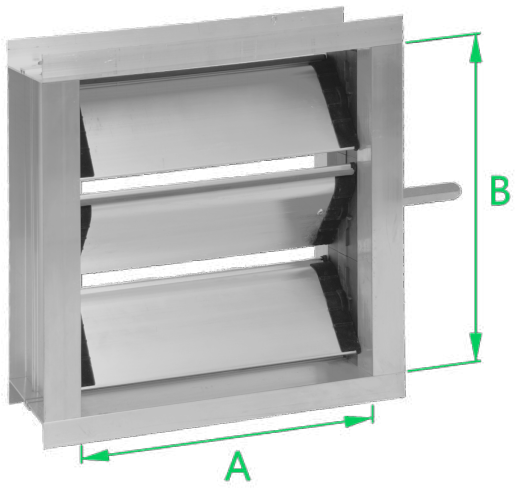
ORDER CODE

RKT	A	x	B	.	control	.	TC	.	design
	1		2		3		4		5

1	A	Damper width
2	B	Damper height
3	R	Manual control
	S	Servo-motor preparation
4	3	Tightness class 3
	4	Tightness class 4
5		Standard design
	HYG	Hygienic design

Order code example:
RKT 800x500.S.3.HYG

Tight rectangular aluminum damper, width 800 mm, height 500 mm, servo-motor preparation, tightness class 3, hygienic design



DIMENSION SERIES

Tightness class 3

A	damper width:	200 – 800 mm
B	damper height:	200, 300, 400, 500, 600, 700, 800 mm
L	damper length:	125 mm

Tightness class 4

A	damper width:	200 – 2500 mm
B	damper height:	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500 mm
L	damper length:	125 mm

APPLICATION

Tight rectangular aluminum damper is used to regulate the airflow in rectangular ducts. The damper meets the tightness class 3 requirement according to EN 1751:2003. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. Rectangular galvanized damper is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

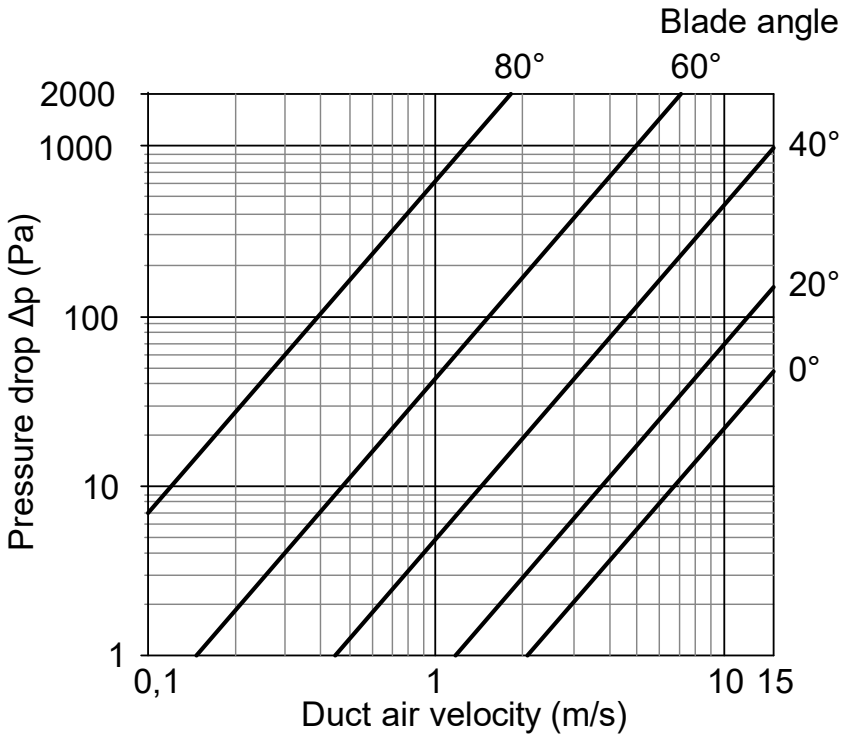
MATERIAL AND DESIGN

Material	- damper casing - aluminum profile damper blade - aluminum profile, blades are inserted into the frame using casings and shafts made of PA - blade ends, the space between the blade and the side of the frame – flocked rubber profile - gears – tightness class 3: PA; tightness class 4: aluminum cast - manual control including arrestment mechanism – aluminum cast - servo-motor preparation - galvanized square bar 12x12 mm
Design	- a rubber sealing strip is inserted into the profile of each blade - the blades of the damper move in opposite directions using external gear wheels - tightness class 3: the gears are inserted into the side profiles of the damper frame (they are not in contact with the conveyed air or the external environment) - tightness class 4: the gears are mounted outside on the damper frame (they are not in contact with the conveyed air)
Installation	- rectangular aluminum damper is connected to adjacent duct parts using holes drilled into the damper frame, always intended for connection with a flange P30 - once the blade position is set, it is necessary to secure it with a wing nut on the control handle
Non-standard design	KOX NAT ELX HYG

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	315	400	500	630	710	800	900	1000	1250	1400	1600	1800	2000
200	1,5	1,8	2,0	2,4	2,8	3,3	3,6	4,0	4,4	4,8	5,8	6,4	7,2	8,1	8,9
250	1,7	2,0	2,3	2,6	3,1	3,7	4,1	4,5	5,0	5,4	6,6	7,3	8,2	9,1	10,1
315	1,9	2,2	2,6	3,0	3,5	4,2	4,7	5,2	5,7	6,2	7,6	8,4	9,4	10,5	11,6
400	2,2	2,5	3,0	3,5	4,1	4,9	5,5	6,0	6,6	7,3	8,9	9,8	11,1	12,3	13,6
500	2,6	2,9	3,4	4,1	4,8	5,8	6,4	7,0	7,8	8,5	10,4	11,5	13,0	14,5	16,0
630	3,0	3,5	4,0	4,8	5,7	6,8	7,0	8,4	9,2	10,1	12,2	13,7	15,5	17,2	19,0
710	3,3	3,8	4,4	5,2	6,2	7,5	8,3	9,2	10,1	11,1	13,6	15,0	17,0	18,9	20,9
800	3,6	4,1	4,8	5,8	6,8	8,2	9,1	10,1	11,2	12,2	14,9	16,6	18,7	20,9	23,0
900	3,9	4,5	5,3	6,3	7,5	9,1	10,0	11,1	12,3	13,5	16,4	18,2	20,6	23,0	25,4
1000	4,3	4,9	5,8	6,9	8,2	9,9	10,9	12,1	13,4	14,7	18,0	19,9	22,5	25,1	27,7
1250	5,1	5,9	7,0	8,3	9,9	11,9	13,2	14,6	16,2	17,8	21,8	24,1	27,3	30,5	33,6
1400	6,0	7,0	8,3	10,0	11,9	14,5	16,0	17,8	19,7	21,7	26,6	29,5	33,4	37,3	41,2
1600	6,7	7,8	9,2	11,1	13,3	16,1	17,8	19,8	22,0	24,2	29,6	32,9	37,2	41,6	46,0
1800	7,4	8,6	10,2	12,2	14,6	17,7	19,7	21,8	24,2	26,6	32,6	36,3	41,1	45,9	50,7
2000	8,1	9,4	11,1	13,4	16,0	19,4	21,5	23,9	26,5	29,1	35,7	39,6	44,9	50,1	55,4

CHART 1: PRESSURE DROP



4.05 RKK Circular damper

ORDER CODE

RKK	D	.	control	.	K	.	K1	.	design
	1		2		3		4		5

1	D	Damper diameter
2	R	Manual control
	S	Servo-motor preparation
3	K	Circular input end (see TAB. 2)
4	K1	Circular output end (see TAB. 2)
5		Standard design
	HYG	Hygienic design

Order code example:
RKK 315.R.VKT.VKT.HYG

Circular damper, diameter 315 mm, manual control, both free ends with sealing, hygienic design

DIMENSION SERIES

D	damper diameter:	80, 100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000 mm
L	damper length:	D80 - 125 mm L=125 mm; above L=D

APPLICATION

Circular damper is used to regulate the airflow in circular ducts. Damper is not intended for airtight sealing of the duct. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. Circular damper is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

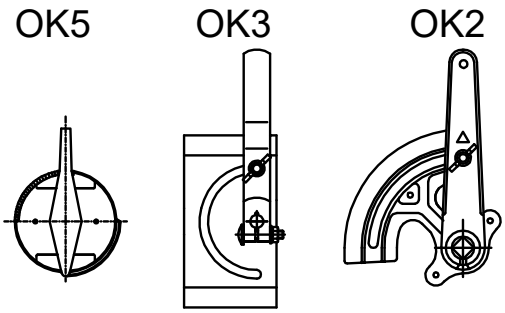
MATERIAL AND DESIGN

Material	- damper casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - damper blade - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - manual control (see FIG. 1) – up to Ø250 mm: plastic (OK5); Ø280 – Ø630 mm: plastic casings, aluminum shafts of the blade, galvanized shaft holders, galvanized manual control with arrestment mechanism (OK3); Ø710 – Ø1000 mm: galvanized shafts of the blades, galvanized manual control with arrestment mechanism (OK2) - servo-motor preparation - up to Ø630 mm plastic casings, Ø13 mm aluminum shafts of the blade for servo connection, galvanized shaft holders; Ø710 – Ø1000 mm 12x12 mm galvanized shafts of the blades for servo connection, galvanized shaft holders
Design	- longitudinal seam of the damper casing is seam welded or spot welded - circular end options - see TAB. 2
Installation	- circular damper is connected to adjacent duct parts using selected circular ends (either by insertion or by a flange)
Non-standard design	NER, LAK, KOX, NAT, HYG

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Type of manual control	OK5					OK3				OK2	
Diameter D	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**710**	**800**
RKK (2x KPL)	0,7	0,8	1,2	1,5	2,1	3,5	6,5	9,6	17,1	21,5	26,3
RKK (2x VKM)	0,4	0,5	0,7	0,9	1,4	2,5	4,5	7,1	13,7	17,4	22,1
RKK (2x VKT)	0,4	0,5	0,7	0,9	1,4	2,5	4,5	7,1	13,7	17,4	22,1

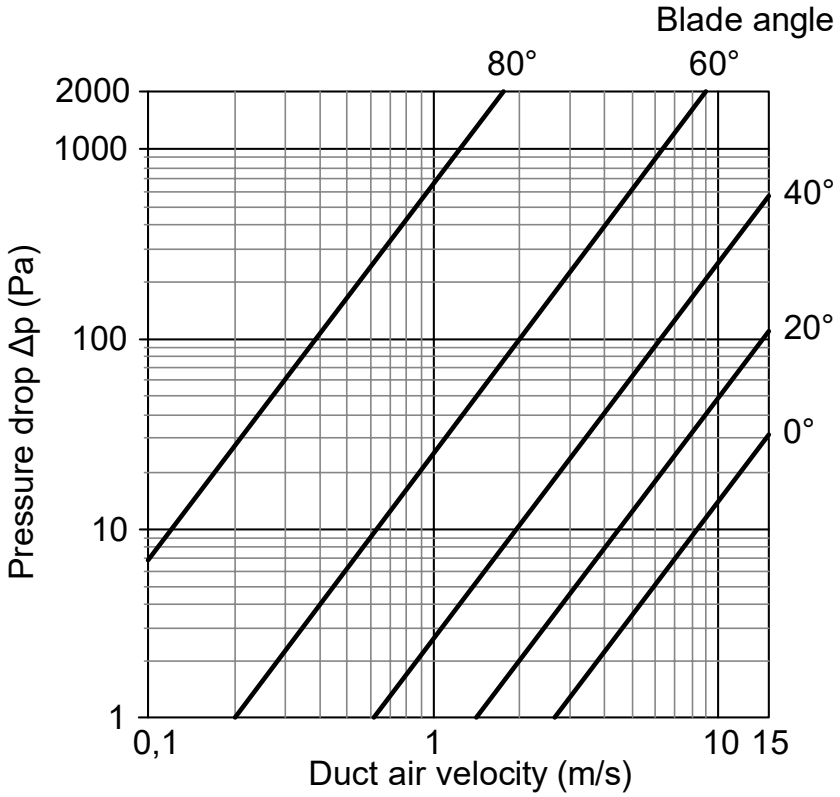
FIG. 1: TYPE OF MANUAL CONTROL



TAB. 2: CIRCULAR END OPTIONS

VKT	Free end with double-lip seal which slides into the duct = **standard**
VKM	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

CHART 1: PRESSURE DROP



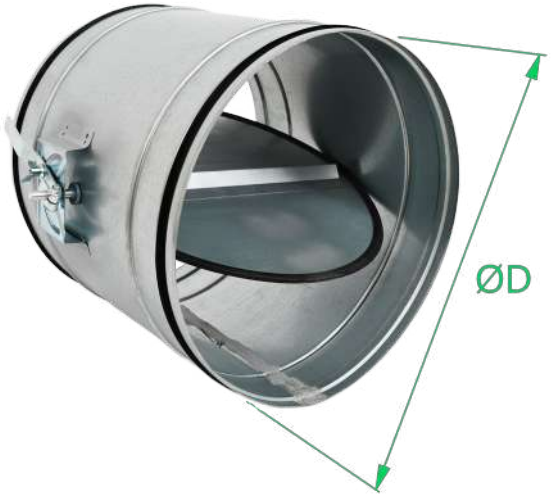
4.06 UKK Circular shut-off damper

ORDER CODE

UKK	D	.	control	.	K	.	K1	.	design
	1		2		3		4		5

1	D	Damper diameter
2	R	Manual control
	S	Servo-motor preparation
3	K	Circular input end (see TAB. 2)
4	K1	Circular output end (see TAB. 2)
5		Standard design
	HYG	Hygienic design

Order code example:
UKK 315.R.VKT.VKT.HYG
Circular shut-off damper, diameter 315 mm, manual control, both free ends with seal, hygienic design



DIMENSION SERIES

D	damper diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630 mm
L	damper length:	D100 - 125 mm L=125 mm; above 125 mm L=D

APPLICATION

Circular shut-off damper is used to regulate or to shut off the airflow in circular air ducts. The manufacturer recommends using the hygienic design of the damper for ducts with higher requirements for the cleanliness of the transported air. Circular shut-off damper is not resistant to aggressive chemical substances and vapors.





TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- damper casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - damper blade - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - manual control – plastic casings, aluminum shafts of the blade, galvanized shaft holders, galvanized manual control with arrestment mechanism (OK3) - servo-motor preparation – plastic casings, Ø13 mm aluminum shafts of the blade for servo, galvanized shaft holders
Design	- longitudinal seam of the damper case is seam welded or spot welded - the blade is fitted with a rubber seal circular end options - see TAB. 2
Installation	- circular damper is connected to adjacent duct parts using selected circular ends (either by insertion or by a flange)
Non-standard design	NER, LAK, KOX, NAT, HYG

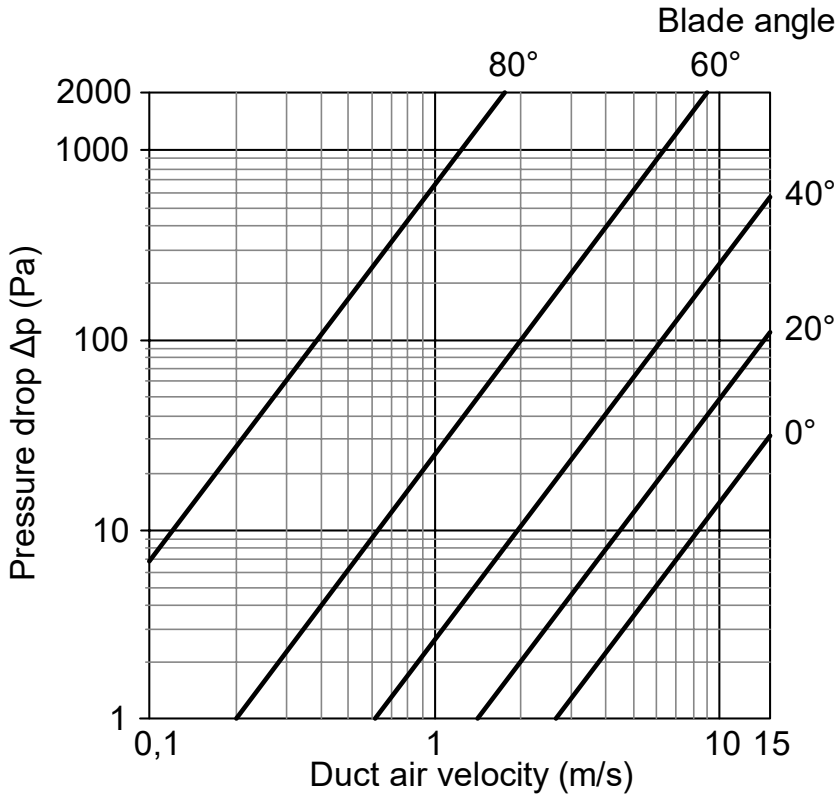
TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Type of manual control	OK3								
Diameter D	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**
RKK (2x KPL)	0,7	0,8	1,2	1,5	2,1	3,5	6,5	9,6	17,1
RKK (2x VKM)	0,4	0,5	0,7	0,9	1,4	2,5	4,5	7,1	13,7
RKK (2x VKT)	0,4	0,5	0,7	0,9	1,4	2,5	4,5	7,1	13,7

TAB. 2: CIRCULAR END OPTIONS

VKT	Free end with double-lip seal which slides into the duct = **standard**
VKM	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517

CHART 1: PRESSURE DROP



4.07 KRP Overpressure damper

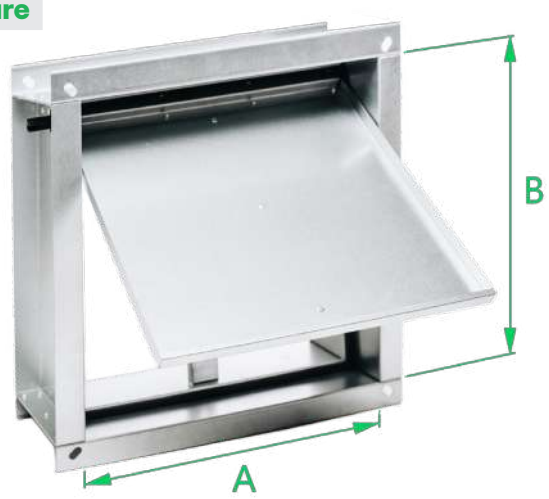
ORDER CODE

KRP	A	x	B	.	design	.	placement	.	overpressure
	1		2		3		4		5

1	A	Damper width
2	B	Damper height
3	1	Conjoined blades with a weight
	2	Adjustable blade stop
	3	Permanent magnet
4	1	Placement within the duct
	2	Placement within the wall
5	xx	Required overpressure value (Pa)

Order code example:
KRP 800x500.3.1.50

Overpressure damper, width 800 mm, height 500 mm, permanent magnet design, placement within the duct, required overpressure 50 Pa



DIMENSION SERIES

A	damper width:	200 – 2000 mm
B	damper height:	200 – 1920 mm
L	damper length:	180 mm

APPLICATION

Overpressure damper is used to automatically close or separate ventilation systems with different pressures, for example, to maintain pressure in escape routes. The adjustment to the required pressure is carried out during production. The damper adjustment protocol is provided by the manufacturer. Overpressure damper is not resistant to aggressive chemical substances and vapors. The damper design with conjoined blades is used in systems with variable airflow volume. The damper design with blade stops is suitable for systems with constant air volume. The damper design with a permanent magnet is used in systems with a risk of excessive pressure or in systems where pressure spikes may occur.
Overpressure damper is only intended for installation in horizontal ducts.






TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	2 ÷ 6 m/s
Range of pressure differentials Δp	30 ÷ 100 Pa
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

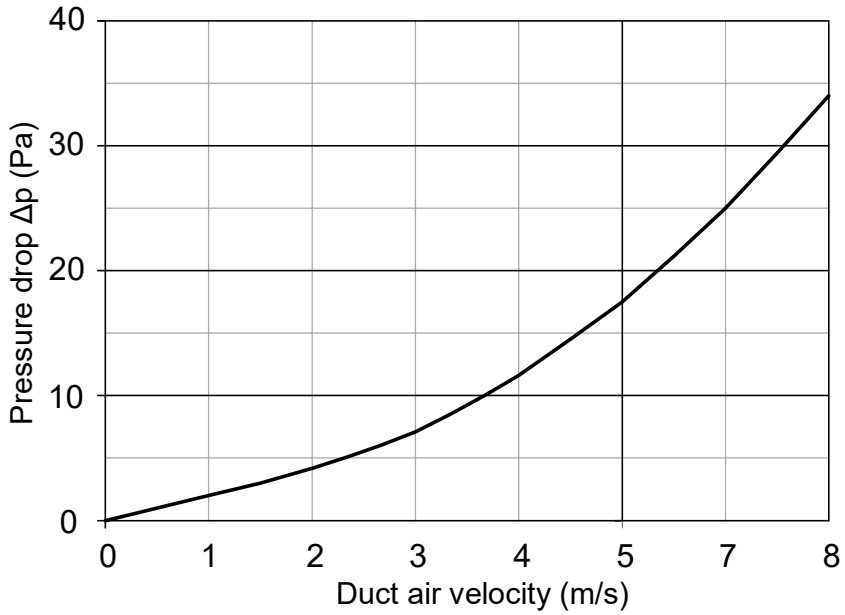
MATERIAL AND DESIGN

Material	- damper casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - damper blade - deep drawing quality galvanized sheet DX51 D+Z 200 MAC, blades are mounted into the frame using casing and shafts made of PA
Design	- **conjoined blades with a weight** – the blades of the damper are conjoined and weighted so they open only after reaching the required pressure - **adjustable blade stop** – the adjustable blade stops allow the blades to open only to the extent necessary to maintain the required pressure - **permanent magnet** - when the set pressure is exceeded, the blade detaches from the magnet that holds it; once the pressure decreases, the magnet pulls the blade back and holds it closed again - **placement within the duct** - the damper frame includes a bent flange with oval holes intended for connection with a duct parts using flanges P20 and P30 - **placement within the wall** - the damper frame includes a flange for wall installation
Installation	- the overpressure damper in placement within the duct design is connected to adjacent ducts parts by a bent flange on the damper casing - the overpressure damper in placement within the wall design is attached by its edge; it is necessary to ensure smooth rotation of the shafts of the damper's blades.
Non-standard design	NER, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B (Number of blades)	320 (1)	640 (2)	960 (3)	1280 (4)	1600 (5)	1920 (6)
200	9,1	14,7	20,3	25,9	31,5	37,1
315	11,1	16,7	22,3	27,9	33,5	39,1
400	12,6	18,2	23,8	29,4	35,0	40,6
500	14,3	19,9	25,5	31,1	36,7	42,3
600	16,1	21,7	27,3	32,9	38,5	44,0
710	18,0	23,6	29,2	34,8	40,4	46,0
800	19,6	25,2	30,8	36,4	42,0	47,5
1000	23,1	28,7	34,3	39,9	45,4	51,0
1120	25,2	30,8	36,4	42,0	47,5	53,1
1250	27,4	33,0	38,6	44,2	49,8	55,4

CHART 1: PRESSURE DROP

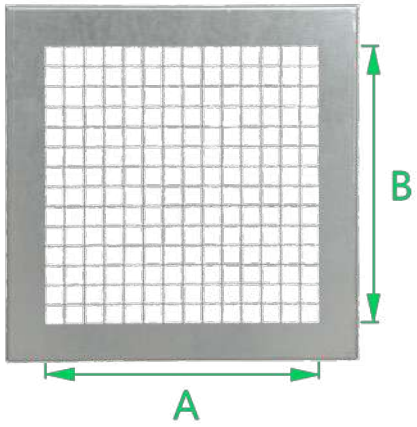


5.01 KMC Rectangular wall grille

ORDER CODE

KMC	A	x	B	.	filling	.	frame	.	RAL
	1		2		3		4		5

1	A	Grille width
2	B	Grille height
3	Mesh	91% permeability
	Expanded metal	75% permeability
	Perforated fill	43 % permeability
4	0	Without a frame
	1	With a frame
5	RAL	Color finish - specify RAL shade



Order code example:

KMC 500x400.expanded metal.1.RAL9010

Rectangular wall grille, width 500 mm, height 400 mm, expanded metal - 75% permeability, with a frame, RAL – shade 9010

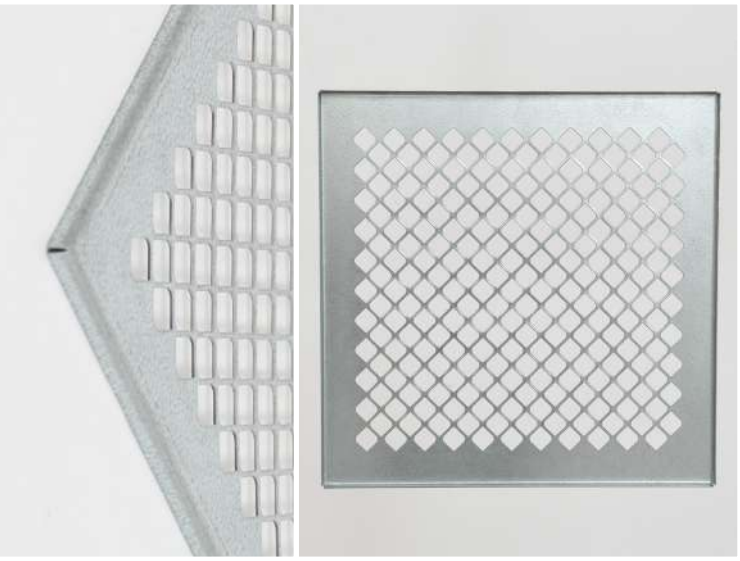
DIMENSION SERIES

A	grille width:	50 ÷ 2400 mm*
B	grille height:	50 ÷ 1400 mm*
t	frame width:	A, B ≤ 1000 mm, t=25 mm 1000 mm < A, B ≤ 2200 mm, t=35 mm

* larger dimensions can be assembled from multiple grilles

APPLICATION

Rectangular wall grille is used to cover the ends of rectangular ducts or to cover construction openings, passages, etc. The grille is not intended to prevent the ingress of water or snow. Rectangular wall grille is not resistant to aggressive chemical substances and vapors.



TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	6 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

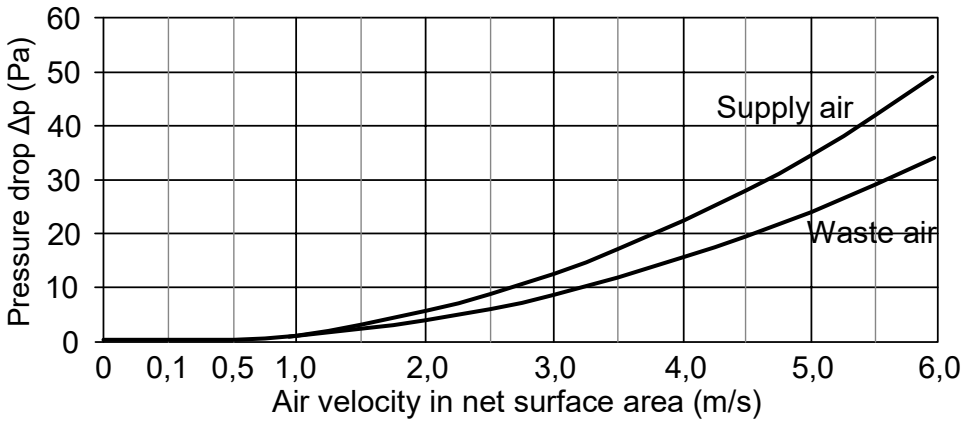
Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC
Design	- **mesh** – holes 13 x 13 mm, gap 1 mm, permeability 91% - **expanded metal** - rhombic holes, permeability 75% - **perforated fill** - circular holes d9 mm with 13 mm spacing; permeability 43% - different filling is available upon agreement with the manufacturer
Installation	- rectangular wall grille can be attached to the duct or to the construction opening by its edge; alternatively, the opening for the grille can be prepared by bricking in the frame, to which the grille can then be attached
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg) – APPLIES TO KMC WITH MESH FILLING

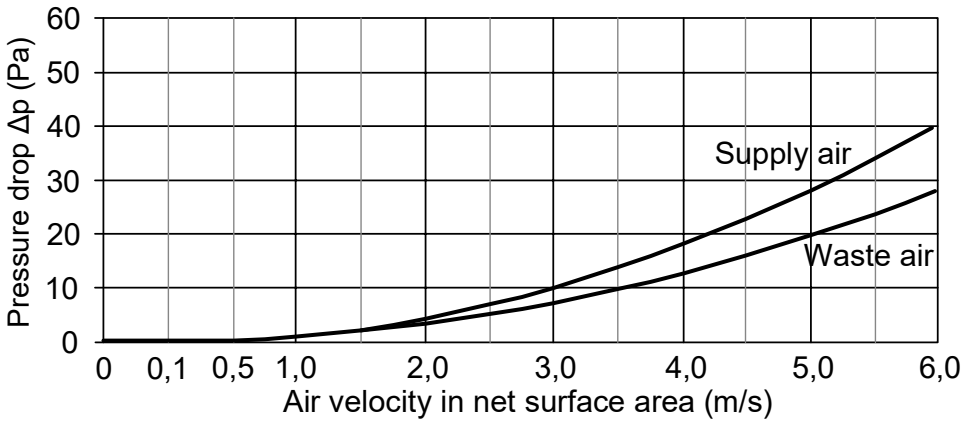
A \ B	100	125	160	200	250	315	400	500
100	0,2	0,2	0,3	0,3	0,4	0,4	0,5	0,6
125	0,2	0,3	0,3	0,4	0,4	0,5	0,6	0,7
160	0,3	0,3	0,4	0,4	0,5	0,6	0,7	0,9
200	0,3	0,4	0,4	0,5	0,6	0,7	0,8	1,0
250	0,4	0,4	0,5	0,6	0,7	0,8	1,0	1,2
315	0,4	0,5	0,6	0,7	0,8	1,0	1,2	1,4
400	0,5	0,6	0,7	0,8	1,0	1,2	1,4	1,7
500	0,6	0,7	0,9	1,0	1,2	1,4	1,7	2,1
630	0,8	0,9	1,0	1,2	1,4	1,7	2,1	2,5
710	0,9	1,0	1,2	1,4	1,6	1,9	2,3	2,8
800	1,0	1,1	1,3	1,5	1,8	2,1	2,6	3,1
900	1,1	1,2	1,4	1,7	2,0	2,4	2,9	3,5
1000	1,2	1,4	1,6	1,9	2,2	2,6	3,2	3,9

CHART 1: PRESSURE DROP RATES – APPLIES TO KMC AND KMK

Permeability 75%



Permeability 91%

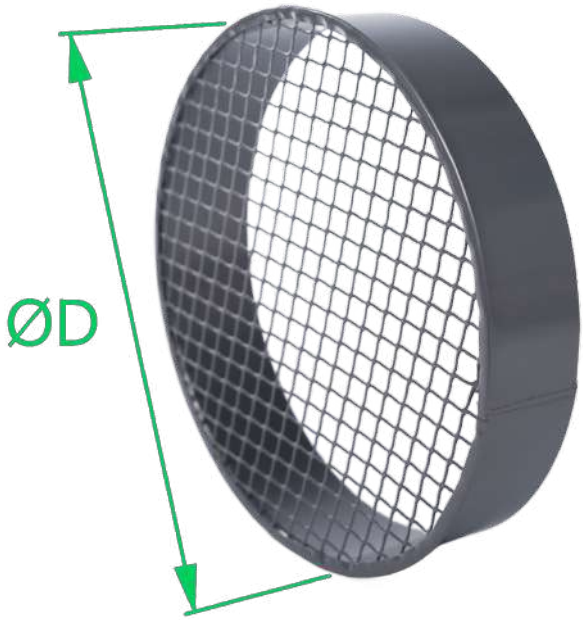


5.02 KMK Circular wall grille

ORDER CODE

KMK	D	.	filling	.	installation	.	RAL
	I		I		I		I
	1		2		3		4

1	D	Grille diameter
2	Mesh	91% permeability
	Expanded metal	75% permeability
	Perforated fill	43 % permeability
3	MZ	Installation on the surface
	VKM	Installation into the duct
	VKP	Installation onto the duct
4	RAL	Color finish - specify RAL shade



Order code example:
KMK 400.expanded metal.VKM.RAL9010

Circular wall grille, diameter 400 mm, 75% permeability (expanded metal), installation into the duct, RAL – shade 9010

DIMENSION SERIES

D	grill diameter:	80, 100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250 mm

TECHNICAL DATA

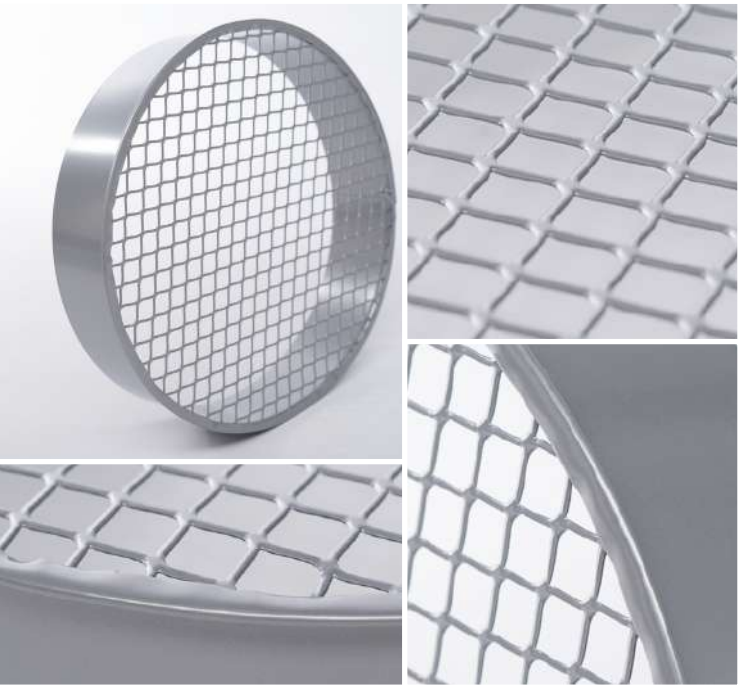
Max. temperatures – standard design:	100 °C
Max. air flow velocity:	6 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

APPLICATION

Circular wall grille is used to cover the ends of circular ducts or to cover construction openings, passages, etc. The grille is not intended to prevent the ingress of water or snow. Circular wall grille is not resistant to aggressive chemical substances and vapors.

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC
Design	- **mesh** – holes 13 x 13 mm, gap 1 mm, permeability 91 % - **expanded metal** - rhombic holes, permeability 75 % - **perforated fill** - circular holes d9 mm with 13 mm spacing; permeability 43 % - different filling available upon agreement with the manufacturer
Installation	- circular wall grille can be attached to the surface of duct or to the construction opening by its ring frame - VKM grille is intended for insertion into straight duct - VKP grille is intended for sliding onto the end of duct fitting
Non-standard design	NER, LAK, KOX, NAT

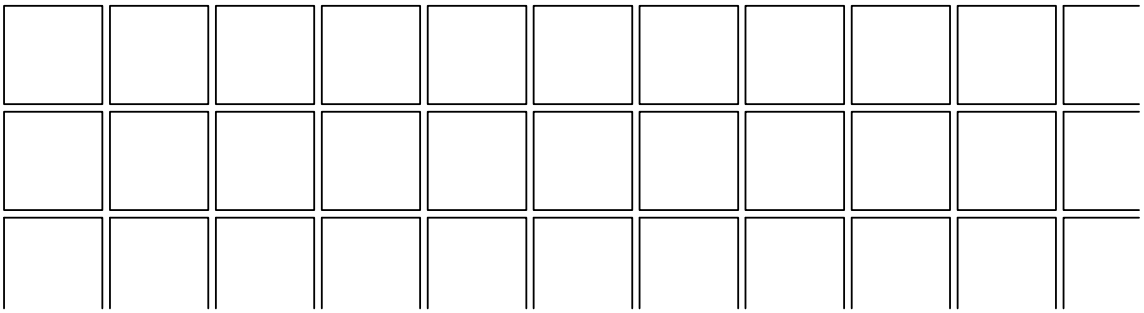


TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

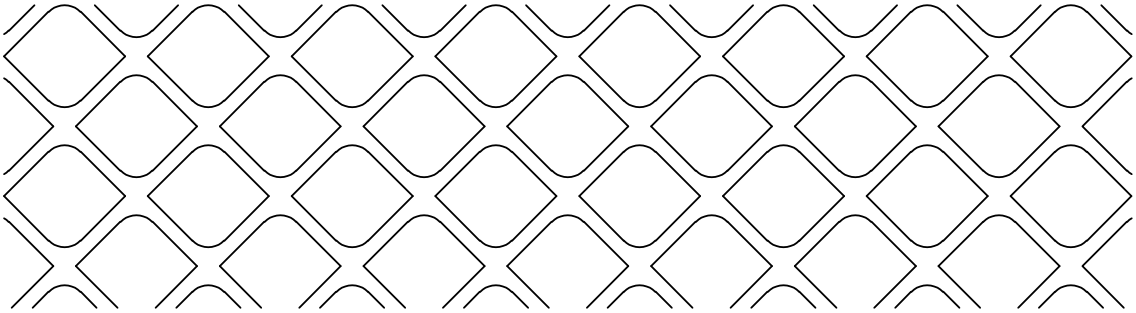
Diameter D	100	125	160	200	250	315	400	500	630	710	800	900	1000	1250
KMK . D . mesh . MZ	0,1	0,1	0,2	0,3	0,5	0,7	1,2	1,3	2,0	2,5	3,2	4,1	5,0	7,6
KMK . D . expanded metal . MZ	0,2	0,3	0,5	0,7	1,1	1,7	2,8	4,4	7,0	8,9	11,3	14,2	17,6	27,5
KMK . D . perforated fill . MZ	0,2	0,3	0,5	0,8	1,3	2,0	3,2	5,0	8,0	10,1	12,9	16,3	20,1	31,4
KMK . D . mesh . VKM	0,6	0,7	1,0	1,3	1,7	2,3	3,2	3,8	5,2	6,1	7,2	8,6	10,0	14,1
KMK . D . expanded metal . VKM	0,7	0,9	1,3	1,7	2,4	3,3	4,8	6,9	10,1	12,4	15,3	18,8	22,6	33,8
KMK . D . perforated fill . VKM	0,7	0,9	1,3	1,8	2,5	3,6	5,2	7,5	11,1	13,7	16,9	20,8	25,1	37,7

KMK AND KMC STANDARD FILL

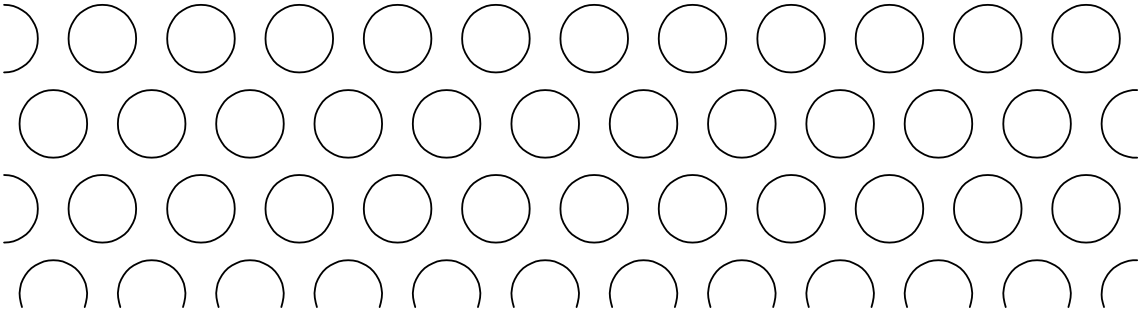
mesh (91% permeability)



expanded metal (75% permeability)



perforated fill (43 % permeability)



5.03 PKC Rectangular plenum box

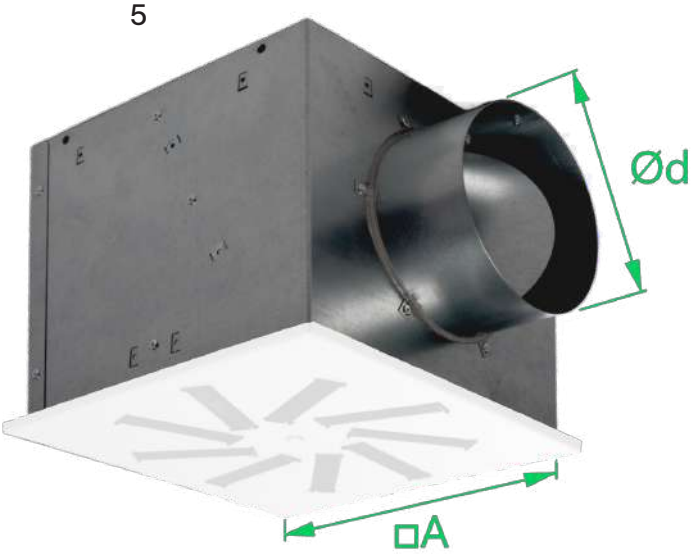
ORDER CODE

PKC	V	.	design	.	connection	.	regulation	.	RAL
	1		2		3		4		5

1	V	Plenum box size
2	P	Supply box
	O	Exhaust box
3	H	Horizontal duct connection
	V	Vertical duct connection
4	0	Without a damper blade
	1	With a damper blade
5	RAL	Color finish - specify RAL shade

Order code example:
PKC 600.P.H.1.RAL9010

Rectangular plenum box, size 600 mm, supply box, horizontal connection, with a damper blade, RAL – shade 9010



DIMENSION SERIES

V	box size:	300, 400, 500, 600, 625, 825*

* see TAB. 1

APPLICATION

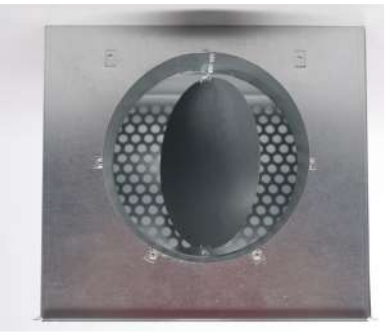
Rectangular plenum box together with the swirl diffuser 5.05 VVA forms the terminal element of the air distribution system. Casing of the box includes the cross bar for fixing the swirl diffuser. The set of the box and swirl diffuser can be used for both air supply and exhaust in spaces with ceiling height between 2,5 and 4 m. Rectangular plenum box is not resistant to aggressive chemical substances and vapors.

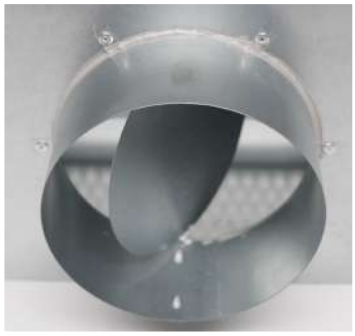
TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	4,5 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC
Design	- supply box includes perforated sheet metal for optimal distribution of the supplied air - spigot can be placed on the box for horizontal or vertical connection, the damper for regulation of supplied or exhausted air is optional; spigot diameter is reduced for connecting hose or straight duct
Installation	- elements for box suspension are pre-installed on the casing of the box
Non-standard design	NER, LAK, KOX, NAT, HYG





TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Size	Dimensions (mm)				Weight (kg)	
	A / A	d	Box height (horizontal connection)	Box height without spigot (vertical connection)	m (horizontal connection)	m (vertical connection)
300	275	160	250	200	4,5	3,6
400	375	200	290	200	6,6	5,3
500	475	200	290	200	8,7	7,0
600	575	250	340	250	12,2	9,8
625	610	250	340	250	14,5	11,6
825	800	315	400	300	21,6	17,3

5.04 PKK Circular plenum box

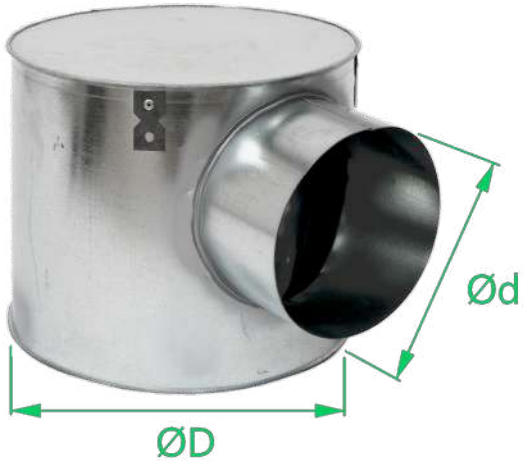
ORDER CODE

PKK	V	.	design	.	connection	.	regulation	.	RAL
	1		2		3		4		5

1	V	Plenum box size
2	P	Supply box
	O	Exhaust box
3	H	Horizontal duct connection
	V	Vertical duct connection
4	0	Without a damper blade
	1	With a damper blade
5	RAL	Color finish - specify RAL shade

Order code example:
PKK 600.P.H.1.RAL9010

Circular plenum box, size 600 mm, supply box, horizontal connection, with a damper blade, RAL – shade 9010



DIMENSION SERIES

V	box size:	300, 400, 500, 600, 625, 825*

* see TAB. 1

APPLICATION

Circular plenum box together with the swirl diffuser 5.05 VVA forms the terminal element of the air distribution system. Casing of the box includes the cross bar for fixing the swirl diffuser. The set of the box and swirl diffuser can be used for both air supply and exhaust in spaces with ceiling height between 2,5 and 4 m. Circular plenum box is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	4,5 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- deep drawing quality galvanized sheet DX51 D+Z 200 MAC
Design	- supply box includes perforated sheet metal for optimal distribution of the supplied air - spigot can be placed on the box for horizontal or vertical connection, the damper for regulation of supplied or exhausted air is optional; spigot diameter is reduced for connecting hose or straight duct
Installation	- elements for box suspension are pre-installed on the casing of the box
Non-standard design	NER, LAK, KOX, NAT, HYG

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Size	Dimensions (mm)				Weight (kg)	
	D	d	Box height (horizontal connection)	Box height without spigot (vertical connection)	m (horizontal connection)	m (vertical connection)
300	275	160	300	200	2,8	3,2
400	375	200	300	200	4,0	3,2
500	475	200	300	200	7,2	6,6
600	575	250	350	250	10,4	9,6
625	610	250	350	300	10,9	10,1
825	800	315	415	300	17,6	15,2

5.05 VVA

Swirl diffuser

ORDER CODE

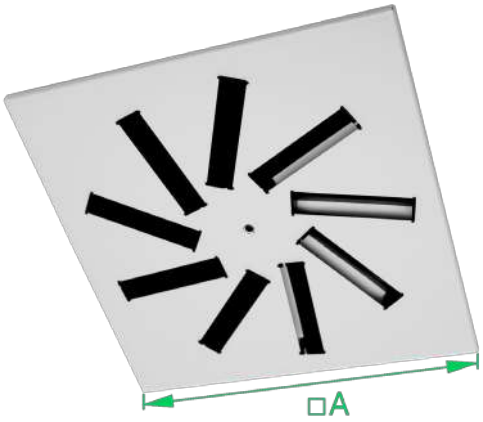
VVA	diffuser face	.	V	.	n	.	design
	1		2		3		4

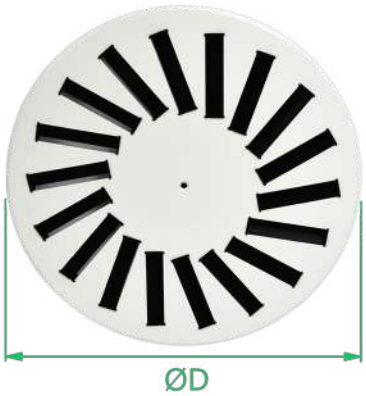
1	C	Rectangular diffuser face
	K	Circular diffuser face
2	V	Size
3	n	Number of holes
4	P	Supply diffuser (with blades)
	O	Exhaust diffuser (without blades)

Order code example:
VVAC 600.45.P
Rectangular swirl diffuser, size 600, 45 blades, supply diffuser

DIMENSION SERIES

size	dimensions A, D (mm)	number of holes						
		9	18	27	45	54	63	90
300	298	x						
400	398	x	x					
500	498	x	x	x				
600	598	x	x	x	x	x		
625	630	x	x	x	x	x	x	
825	830	x	x	x	x	x	x	x





APPLICATION

Swirl diffuser serves as a terminal visual element for both air supply and exhaust. For optimal air distribution, the supply diffuser is fitted with fixed blades; the exhaust diffuser is typically provided without blades. The diffuser is typically supplied in RAL 9010 color shade; it can be produced in a different color according to the RAL color standard. Swirl diffuser is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures:	standard design: 80 °C
Recommended installation height:	2,5-4 m above the floor
Recommended outlet air flow velocity:	8 m/s

MATERIAL AND DESIGN

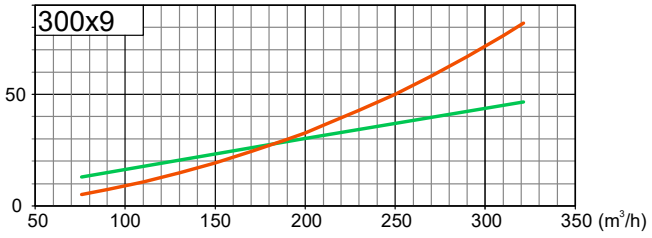
Material	- diffuser face - painted sheet metal RAL 9010, thickness 1,0 mm - blades – PE material in black, white color is available upon request
Design	- supply diffuser - for optimal air distribution, the openings are equipped with fixed blades - exhaust diffuser - the openings are standardly without blades
Installation	- swirl diffuser is typically installed on rectangular plenum box 5.03 PKC or circular plenum box 5.04 PKK; the diffuser is attached using a fixing screw (included in the package)
Non-standard design	

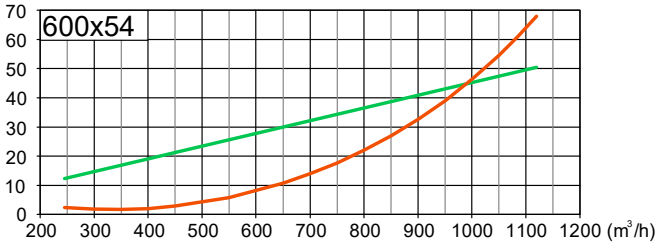
TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

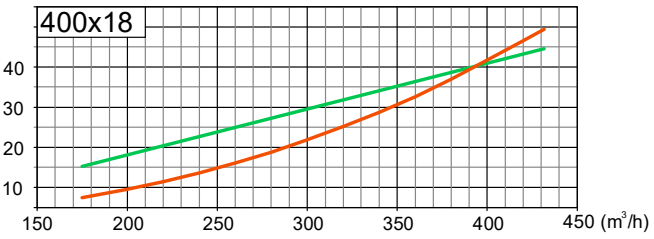
Diffuser face size	Number of holes	VVAC		VVAK		Net surface area of the holes (m²)
		without blades (exhaust)	with blades (supply)	without blades (exhaust)	with blades (supply)	
300	9	0,62	0,70	0,51	0,59	0,0162
400	18	1,03	1,19	0,85	1,00	0,0324
500	27	1,59	1,83	1,31	1,55	0,0486
600	9	2,65	2,54	1,64	2,11	0,0162
600	18	2,53	2,58	1,76	2,16	0,0324
600	27	2,41	2,65	2,02	2,26	0,0486
600	45	2,18	2,69	2,15	2,31	0,0810
600	54	2,06	2,73	2,28	2,36	0,0972
625	63	2,28	2,95	2,50	2,58	0,1134
825	90	4,03	4,82	3,24	4,03	0,1620

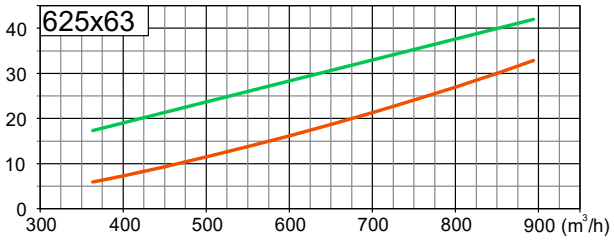
CHART: NOISE, PRESSURE DROP, VOLUME FLOW RATE

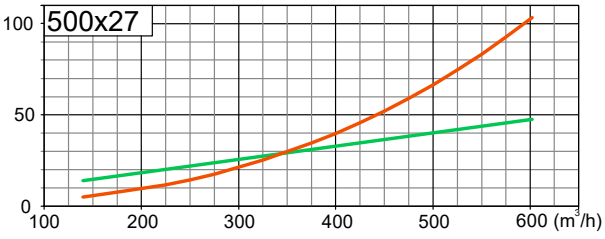
Pressure drop rate Δp (Pa)
Noise L_{WA} (dB)

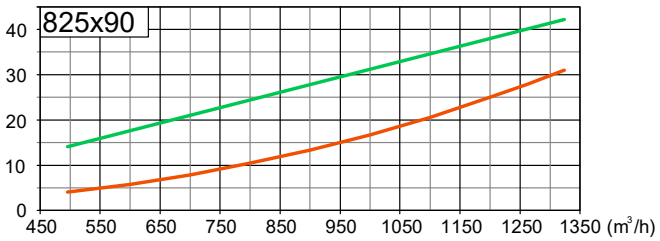


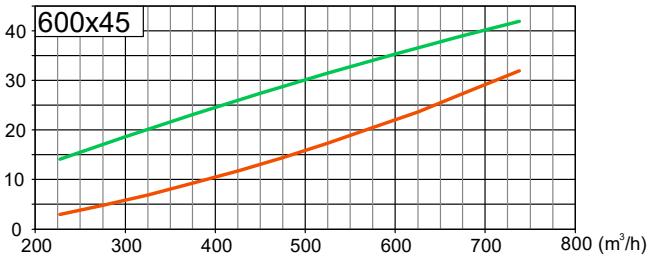












5.06 ZVV / ZVH

Displacement vertical / horizontal diffuser

ZNAČENÍ

ZV	type	.	D	/	control	-	Q	-	l	-	regulation damper	-	K
	1		2		3		4		5		6		7

1	V	Vertical diffuser
	H	Horizontal diffuser
2	D	Diameter of the displacement flow
3	R	Control damper with a chain
	S	Control damper with a servo-motor preparation
4	Q	Air flow rate (m³/hour)
5	l	Chain length (m)
6	0	Without regulation damper
	1	With regulation damper
7	K	Circular inlet end (options see TAB. 2)

Order code:
ZVV 400/R 1500-2.5-1-VKT

Displacement diffuser, vertical, diameter 400 mm, manual control, flow rate 1500 m³/h, control chain length of 2,5 m, with regulation damper, connection to the free end with sealing

DIMENSION SERIES

D	outlet diameter:	250, 280, 315, 355, 400, 450, 500, 560, 630 mm
Q	airflow:	according to TAB. 1

APPLICATION

Displacement diffuser is used for supplying air mainly in large spaces, with the possibility of airflow in both vertical and horizontal directions for summer and winter operation. During summer operation (with the control damper closed), the air is supplied horizontally through the perforated section of the diffuser. During the winter operation (with the control damper open), the air is supplied vertically through the lower part of the diffuser (vertical diffuser), or through the lower perforated part (horizontal diffuser). Recommended installation height for the vertical outlet is 2,5 - 5 m above the floor, for the horizontal outlet, it is 0 - 2 m above the floor. Displacement flow diffuser is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Maximální rychlost vzduchu	4,5 m/s
Maximální statický tlakový rozdíl	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

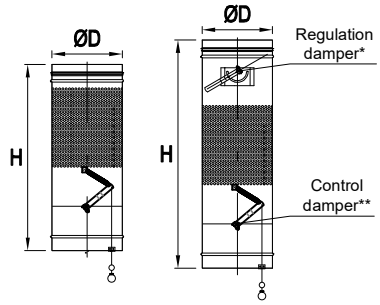
Material	- diffuser casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - control damper - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - manual control - plastic casings, aluminum flap shafts, galvanized flap holders, galvanized manual control with locking mechanism
Design	- longitudinal joint of the case is spot welded or seam welded - tension spring holding the control damper in the closed position - after opening the control damper with a chain, it is necessary to secure it with locking mechanism
Installation	- displacement diffuser is connected to adjacent duct parts using selected circular ends (either by insertion or by a flange)
Non-standard design	

TAB. 1: AIRFLOW RATES AND DIMENSIONS

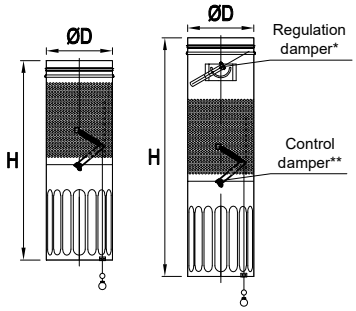
ZVV	Airflow rate Q (m³/hour)																				
Diameter of the displacement diffuser D (mm)	500	750	1000	1250	1500	1750	2000	2250	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
	Height of the diffuser H (mm) – with control damper																					
250	1000								1500													
280	1000								1500													
315	1000								1500													
355	1000								1500													
400	1000								1500													
450	1000								1500													
500	1000								1500													
560	1000								1500													
630	1000								1500													

ZVH	Airflow rate Q (m³/hour)																				
Diameter of the displacement diffuser D (mm)	500	750	1000	1250	1500	1750	2000	2250	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
	Height of the diffuser H (mm) – without control damper																					
250	1000								1500													
280	1000								1500													
315	1000								1500													
355	1000								1500													
400	1000								1500													
450	1000								1500													
500	1000								1500													
560	1000								1500													
630	1000								1500													

ZVV



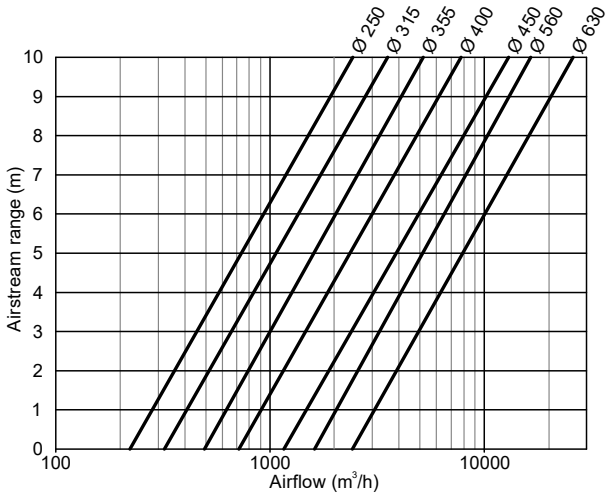
ZVH



TAB. 2: CIRCULAR END OPTIONS

VKT	Free end with double-lip seal which slides into the duct = **standard**
VKM	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517

CHART 1: AIRFLOW DIAGRAM



5.07 OZP / OZS

Extraction cover (room / wall design)

ORDER CODE

OZ	type		A	x	B	/	connection	-	n	.	LAT	.	VAN	.	OSV	.	mat.
	1		2		3		4		5		6		7		8		9

1	P	Room design
	S	Wall design
2	A	Cover width
3	B	Cover depth
4	ØD	Circular connection size
	a x b	Square connection size
5	n	Number of honeycomb grease filters
6	LAT	Honeycomb grease filter size
7		Without grease cup
	VAN	With grease cup
8		Without lighting
	OSV	With lighting
9	ne	Stainless steel AISI 304
	zn	Galvanized sheet

Order code example:
OZS 2000x1000/Ø250-2-LAT350x350.VAN.OSV.ne

Extraction cover, wall mounted, width 2000 mm, depth 1000 mm, circular connection size Ø250 mm, 2 honeycomb grease filters size 350x350mm, with grease cup, with lightning, stainless steel AISI 304

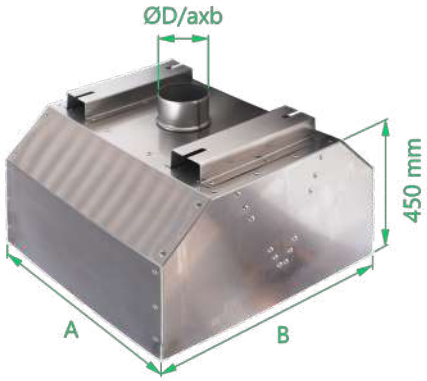
DIMENSION SERIES

A	cover width	600 – 2500 mm*
B	cover depth	600 – 2500 mm*
H	cover height	450 mm**

* larger dimensions can be assembled from multiple covers
** can be supplied in custom heights as an atypical design

APPLICATION

Extraction cover serves as a terminal element for the elimination of stale air and vapors generated in cooking areas in gastronomy or industrial facilities with the production of harmful substances, without mechanical impurities, aggressive fumes or substances that promote wear or excessive corrosion of steel, zinc or stainless materials. The placement and size of the extraction cover must be set in the project documentation.



TECHNICAL DATA

Max. temperatures – stainless-steel:	100 °C*
Max. temperatures – galvanized:	80 °C*
Max. air flow velocity:	6 m/s (at connection)
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

* temperature resistance of the light is 60 °C

MATERIAL AND DESIGN

Material	- stainless steel cover - AISI 304 - galvanized cover - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - honeycomb grease filter - layered stainless steel expanded metal
Design	- riveted casing with a gutter along the bottom perimeter for condensate retention, watertight welded in the corners (stainless steel version) or sealed (galvanized version) - grease cup with a capacity of approximately 0,5 liters, positioned in the right rear section for OZS; other positions or for OZP needs to be specified in the order (a shut-off valve can be installed on the gutter upon request instead of the grease cup) - lighting - LED light, without wiring and bushings (only qualified personnel should perform wiring) - the standard length of connecting attachment is 100 mm
Installation	- the cover is installed using hinges located at the top of the cover - the cover should be slightly sloped towards the grease cup
Operation	- the honeycomb grease filter needs to be kept clean (clean with standard cleaning detergents suitable for stainless steel utensils, filter can also be cleaned in a dishwasher, not with high-pressure water) - the grease cup needs to be kept clean, wipe the gutter if it gets dirty (be careful of sharp edges)
Non-standard design	

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

OZP Room extraction cover:

Width A (mm)	Depth B (mm)											
	700		800		900		1000		1100		1200	
	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT
800	15,3	19,5	16,6	21,2	18,0	22,9	19,4	24,6	20,7	26,2	22,1	27,9
1000	17,8	24,6	19,4	26,6	20,9	28,5	22,4	30,4	23,9	32,3	25,4	34,2
1250	21,0	28,5	22,8	30,8	24,5	33,0	26,2	35,2	27,9	37,4	29,6	39,6
1500	24,2	34,4	26,2	37,0	28,1	39,5	30,0	42,0	31,9	44,5	33,8	47,0
2000	30,6	42,2	33,0	45,4	35,3	48,5	37,6	51,6	39,9	54,7	42,2	57,8
2500	37,0	54,0	39,8	57,8	42,5	61,5	45,2	65,2	47,9	68,9	50,6	72,6

OZS Wall extracton cover:

Width A (mm)	Depth B (mm)											
	800		1000		1200		1400		1600		1800	
	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT	W/O LAT	W/ LAT
800	16,6	21,2	19,4	24,6	22,1	27,9	24,8	31,3	27,5	34,6	30,2	41,4
1000	19,4	26,6	22,4	30,4	26,4	34,2	28,5	38,1	31,5	41,9	37,6	49,6
1250	22,8	30,8	26,2	35,2	29,6	39,6	33,1	44,1	36,5	48,5	43,4	57,4
1500	26,2	37,0	30,0	42,0	33,8	47,0	37,7	52,1	41,5	57,1	49,2	67,2
2000	33,0	45,4	37,6	51,6	42,2	57,8	46,9	64,1	51,5	70,3	60,8	82,8
2500	39,8	57,8	45,2	65,2	50,6	72,6	56,1	80,1	61,5	87,5	72,4	102,4

5.08 LAT

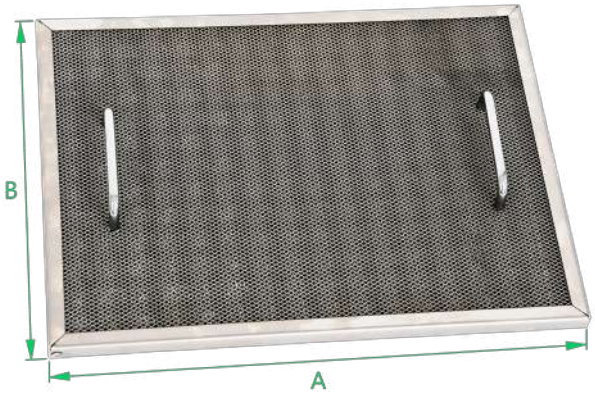
Honeycomb grease filter

ORDER CODE

LAT	A	x	B
	I		I
	1		2

1	A	Filter width
2	B	Filter height

Order code example:
LAT 400x300
Honeycomb grease filter, width 400 mm, height 300 mm



DIMENSION SERIES

Table of recommended air flow rates Q (m^3/h) for standard dimensions of LAT

A \ B	200	250	300	350	400
200	151	189	227	265	302
250	189	236	284	331	378
300	227	284	340	397	454
350	265	331	397	463	529
400	302	378	454	529	605
450	340	425	510	595	680
500	378	473	567	662	756
550	416	520	624	728	832
600	454	567	680	794	907

APPLICATION

Honeycomb grease filter serves as a terminal element for eliminating contaminated air and vapors generated in cooking areas in gastronomy or industrial facilities prone to emissions, excluding mechanical impurities, aggressive vapors or substances promoting excessive corrosion of stainless-steel materials. The filter can be used in extraction hoods or installed directly on ducts. When the filter becomes clogged, it is necessary to remove it and clean it.

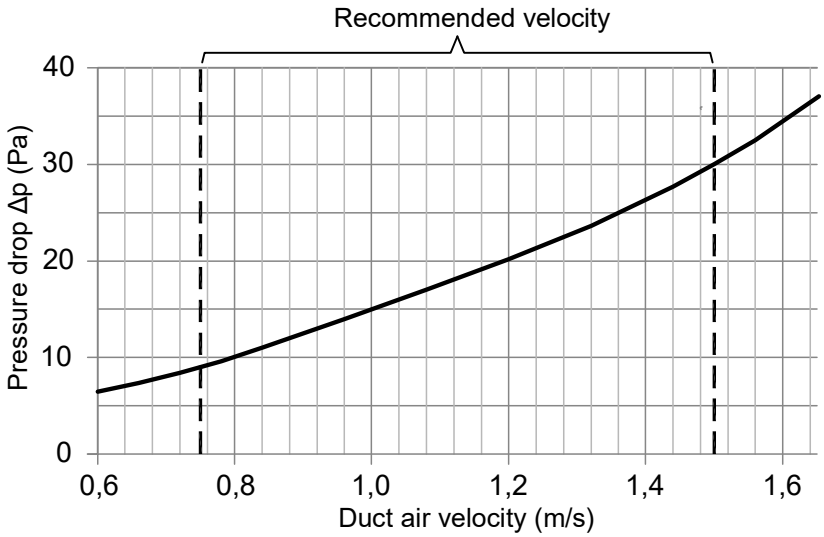
TECHNICAL DATA

Max. temperatures – stainless-steel:	100 °C
Recommended air flow velocity:	0,75 – 1,5 m/s

MATERIAL AND DESIGN

Material	- frame – stainless-steel sheet AISI 304 - filling - layered stainless-steel expanded metal AISI 304
Design	- several layers of stainless-steel expanded metal are inserted in a riveted frame (frame width 16 mm) - chrome-plated handles are installed for easier manipulation
Operation	- grease from the exhausted air adheres on the stainless-steel mesh filling - honeycomb grease filter needs to be kept clean to prevent a decrease in airflow through it - clean the filter with regular cleaning detergents suitable for stainless steel utensils; it is also possible to clean the filter in a dishwasher, but not with high-pressure water
Non-standard design	

CHART 1: PRESSURE DROP RATES



6.01 PRZ

External weather louvre

ORDER CODE

PRZ	A	x	B	.	mesh	.	frame	.	RAL
	I		I		I		I		I
	1		2		3		4		5

1	A	Louvre width
2	B	Louvre height
3	0	Without a mesh
	1	With a mesh
4	0	Without a frame
	1	With a frame
5	RAL	Color finish – specify RAL shade

Order code example:
PRZ 1000x800.1.1.RAL9010

External weather louvre, width 1000 mm, height 800 mm, with a mesh, with a frame, RAL – shade 9010

DIMENSION SERIES

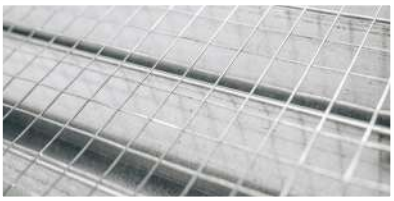
A	louvre width:	200 – 2000 mm*
B	louvre height:	200 – 2500 mm**

* 2001 - 3000 mm made from two pieces
3001 - 4000 mm made from three pieces
** larger dimensions can be assembled from multiple louvers

APPLICATION

External weather louvre is a facade element designed to cover an opening for air supply or exhaust. It prevents rain or snow from entering the duct system, typically the louvre features galvanized mesh serving as protection against bird ingress.

The manufacturer cannot guarantee that under extreme weather conditions, rain or snow will not be drawn in through the louver, as strong winds may increase suction speed. External weather louvres are not resistant to aggressive chemicals or vapors.



TECHNICAL DATA

Max. temperatures: standard design:	100 °C
Max. air flow velocity:	up to 2,5 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

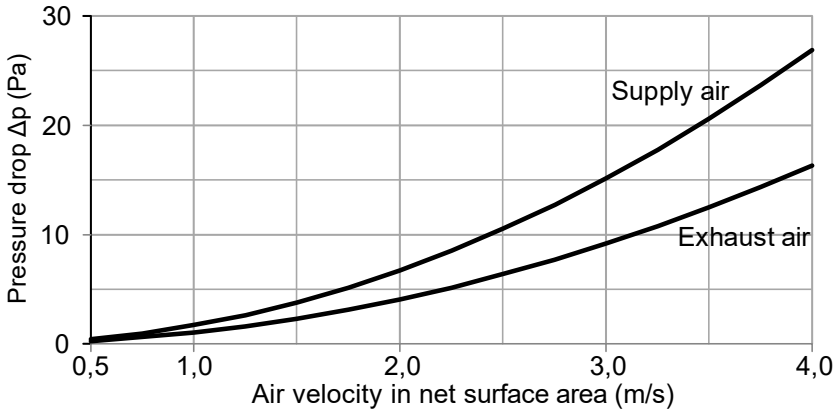
MATERIAL AND DESIGN

Material	- frame and blades – galvanized sheet DX51 D+Z 200 MAC - mesh - galvanized wire with a thickness of 1 mm, mesh size 12x12 mm
Design	- the frame is riveted at the corners, the blades are riveted into the frame - the depth of louvre is 45 mm, the frame is typically 45 mm wide (customization available upon request)
Installation	- the louvre can be installed into ducts or building openings; alternatively, the opening for the louvre can be prepared by bricking in the frame, to which the louvre can then be attached
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120
200	2,2	2,6	2,9	3,0	3,3	3,7	4,0	4,4	4,8	5,2	5,7	2,2	7,1	7,9	8,7
250	2,5	2,9	3,2	3,4	3,7	4,1	4,5	4,9	5,3	5,8	6,3	2,5	7,8	8,6	9,4
280	2,7	3,1	3,5	3,6	4,0	4,4	4,8	5,2	5,6	6,1	6,6	2,7	8,2	9,0	9,9
315	3,0	3,4	3,7	3,9	4,3	4,7	5,1	5,5	6,0	6,5	7,0	3,0	8,7	9,5	10,4
355	3,2	3,7	4,0	4,2	4,6	5,0	5,4	5,9	6,4	6,9	7,5	3,2	9,2	10,1	11,1
400	3,5	4,0	4,4	4,5	4,9	5,4	5,8	6,3	6,8	7,4	8,0	3,5	9,8	10,7	11,8
450	3,8	4,3	4,7	4,9	5,3	5,8	6,3	6,8	7,3	7,9	8,5	3,8	10,5	11,5	12,5
500	4,1	4,7	5,1	5,2	5,7	6,2	6,8	7,3	7,8	8,4	9,1	4,1	11,1	12,2	13,3
560	4,5	5,1	5,5	5,7	6,2	6,7	7,3	7,9	8,4	9,1	9,8	4,5	11,9	13,1	14,3
630	5,0	5,6	6,1	6,2	6,8	7,3	7,9	8,5	9,2	9,8	10,5	5,0	12,9	14,1	15,3
710	5,5	6,1	6,7	6,8	7,4	8,0	8,7	9,3	10,0	10,7	11,4	5,5	13,9	15,2	16,6
800	6,0	6,7	7,3	7,5	8,1	8,8	9,5	10,2	10,9	11,6	12,4	6,0	15,2	16,5	18,0
900	6,7	7,4	8,1	8,2	8,9	9,6	10,4	11,1	11,9	12,7	13,6	6,7	16,5	18,0	19,5
1000	7,3	8,1	8,8	9,0	9,7	10,5	11,3	12,1	12,9	13,8	14,7	7,3	17,8	19,4	21,1
1120	8,1	8,9	9,7	9,8	10,7	11,5	12,4	13,2	14,1	15,1	16,0	8,1	19,4	21,1	22,9

CHART 1: PRESSURE DROP RATES



6.02 PKZ

Recessed external weather cover

ORDER CODE

PKZ	A	x	B	.	mesh	.	RAL
	I		I		I		I
	1		2		3		4

1	A	Cover width
2	B	Cover height
3	0	Without a mesh
	1	With a mesh
4	RAL	Color finish - specify RAL shade

Order code example:
PKZ 1000x1000.1.RAL9010

Recessed external weather cover, width 1000 mm, height 1000 mm, with a mesh, RAL – shade 9010

DIMENSION SERIES

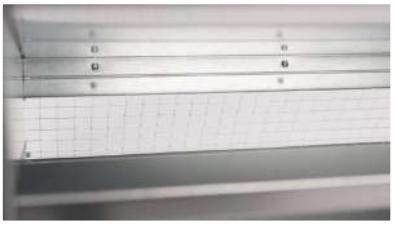
A	cover width:	200 – 2500 mm*
B	cover height:	200 – 2500 mm*
H	cover depth:	240 mm

* if larger size is needed, multiple covers can be assembled together

APPLICATION

Recessed external weather cover is a facade element used to cover air supply or exhaust openings. The cover prevents rain or snow from entering the duct system, typically the cover features galvanized mesh serving as protection against bird ingress.

The manufacturer cannot guarantee that under extreme weather conditions, rain or snow will not be drawn in through the louver, as strong winds may increase suction speed. Recessed external weather cover is not resistant to aggressive chemicals or vapors.



TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	up to 4 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- frame and blades – galvanized sheet DX51 D+Z 200 MAC - mesh - galvanized wire with a thickness of 1 mm, mesh size 12x12 mm
Design	- the frame is riveted at the corners, the blades are riveted into the frame, the frame is typically 45 mm wide (customization available upon request)
Installation	- the cover can be installed into ducts or building openings - minimum height of the bottom edge of the cover above a flat surface is 350 mm (see FIG. 1)
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2200
200	4,9	6,2	7,4	8,7	9,9	11,2	12,4	13,7	14,9	16,2	17,4	19,5
250	5,6	7,0	8,4	9,8	11,2	12,6	14,0	15,4	16,8	18,2	19,6	22,0
280	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,4	17,9	19,4	20,9	23,4
315	6,5	8,1	9,7	11,3	12,9	14,5	16,1	17,7	19,3	20,9	22,5	25,1
355	7,0	8,7	10,4	12,2	13,9	15,6	17,3	19,0	20,8	22,5	24,2	27,1
400	7,6	9,4	11,3	13,2	15,0	16,9	18,7	20,6	22,4	24,3	26,2	29,3
450	8,3	10,3	12,3	14,3	16,3	18,3	20,3	22,3	24,3	26,3	28,3	31,7
500	8,9	11,1	13,2	15,4	17,6	19,7	21,9	24,0	26,2	28,4	30,5	34,1
560	9,7	12,1	14,4	16,8	19,1	21,4	23,8	26,1	28,5	30,8	33,1	37,0
630	10,7	13,2	15,8	18,3	20,9	23,4	26,0	28,5	31,1	33,6	36,2	40,5
710	11,7	14,5	17,3	20,1	22,9	25,7	28,5	31,3	34,1	36,9	39,7	44,3
800	12,9	16,0	19,1	22,1	25,2	28,3	31,3	34,4	37,5	40,6	43,6	48,7
900	14,3	17,7	21,0	24,4	27,8	31,1	324,5	37,9	41,2	44,6	48,0	53,6
1000	15,6	19,3	23,0	26,6	30,3	34,0	37,7	41,3	45,0	48,7	52,3	58,5
1120	17,2	21,3	25,3	29,3	33,4	37,4	41,4	45,5	49,5	53,5	57,6	64,3
1250	19,0	23,4	27,8	32,3	36,7	41,1	45,5	50,0	54,4	58,8	63,3	70,6
1400	21,0	25,9	30,7	35,6	40,5	45,4	50,3	55,2	60,0	64,9	69,8	77,9

CHART 1: AIRFLOW

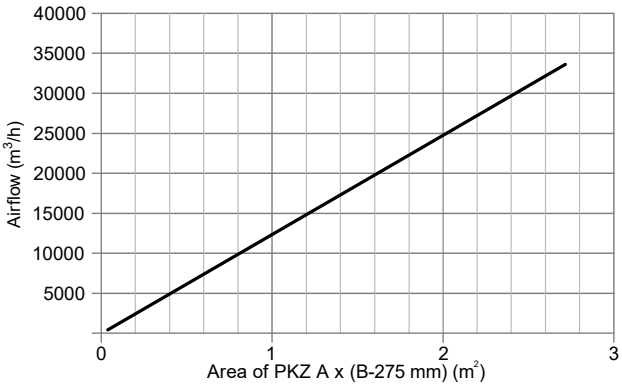


CHART 2: PRESSURE DROP RATES

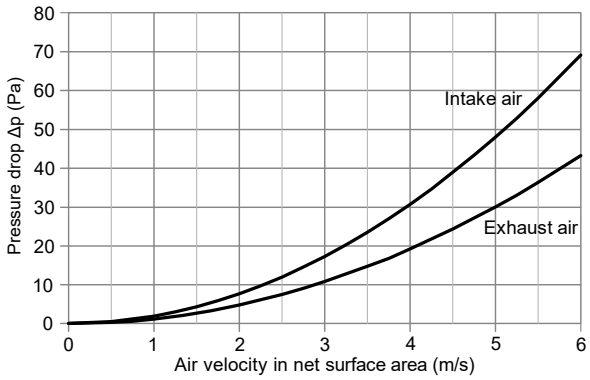
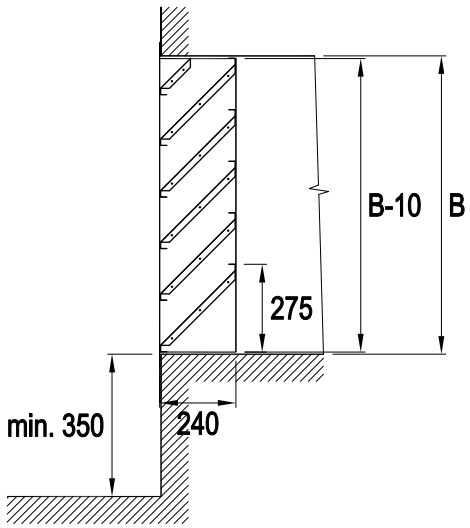


FIG. 1:



6.03 PKN

Surface external weather cover

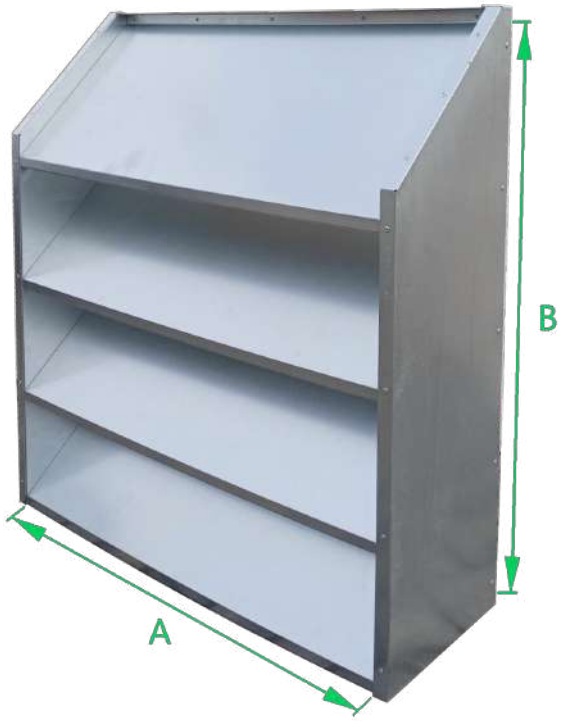
ORDER CODE

PKN	A	x	B	.	mesh	.	RAL
	I		I		I		I
	1		2		3		4

1	A	Cover width
2	B	Cover height
3	0	Without a mesh
	1	With a mesh
4	RAL	Color finish - specify RAL shade

Order code example:
PKN 1000x1000.1.RAL9010

Surface external weather cover, width 1000 mm, height 1000 mm, with a mesh, RAL – shade 9010



DIMENSION SERIES

A	cover width:	200 – 1450 mm*
B	cover height:	200 – 2500 mm*
H	cover depth:	240 mm

* if larger size is needed, multiple covers can be assembled together

APPLICATION

Surface external weather cover is a facade element used to cover air supply or exhaust openings. The cover prevents rain or snow from entering the duct system, typically the cover features galvanized mesh serving as protection against bird ingress.

The manufacturer cannot guarantee that under extreme weather conditions, rain or snow will not be drawn in through the louver, as strong winds may increase suction speed. Surface external weather cover is not resistant to aggressive chemicals or vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	up to 4 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- frame and blades – galvanized sheet DX51 D+Z 200 MAC - mesh - galvanized wire with a thickness of 1 mm, mesh size 12x12 mm
Design	- the frame is riveted at the corners, the blades are riveted into the frame
Installation	- the cover can be installed into ducts, building openings, air handling unit etc. - minimum height of the bottom edge of the cover above a flat surface is 350 mm (see FIG. 1)
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2200
200	4,9	6,2	7,4	8,7	9,9	11,2	12,4	13,7	14,9	16,2	17,4	19,5
250	5,6	7,0	8,4	9,8	11,2	12,6	14,0	15,4	16,8	18,2	19,6	22,0
280	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,4	17,9	19,4	20,9	23,4
315	6,5	8,1	9,7	11,3	12,9	14,5	16,1	17,7	19,3	20,9	22,5	25,1
355	7,0	8,7	10,4	12,2	13,9	15,6	17,3	19,0	20,8	22,5	24,2	27,1
400	7,6	9,4	11,3	13,2	15,0	16,9	18,7	20,6	22,4	24,3	26,2	29,3
450	8,3	10,3	12,3	14,3	16,3	18,3	20,3	22,3	24,3	26,3	28,3	31,7
500	8,9	11,1	13,2	15,4	17,6	19,7	21,9	24,0	26,2	28,4	30,5	34,1
560	9,7	12,1	14,4	16,8	19,1	21,4	23,8	26,1	28,5	30,8	33,1	37,0
630	10,7	13,2	15,8	18,3	20,9	23,4	26,0	28,5	31,1	33,6	36,2	40,5
710	11,7	14,5	17,3	20,1	22,9	25,7	28,5	31,3	34,1	36,9	39,7	44,3
800	12,9	16,0	19,1	22,1	25,2	28,3	31,3	34,4	37,5	40,6	43,6	48,7
900	14,3	17,7	21,0	24,4	27,8	31,1	324,5	37,9	41,2	44,6	48,0	53,6
1000	15,6	19,3	23,0	26,6	30,3	34,0	37,7	41,3	45,0	48,7	52,3	58,5
1120	17,2	21,3	25,3	29,3	33,4	37,4	41,4	45,5	49,5	53,5	57,6	64,3
1250	19,0	23,4	27,8	32,3	36,7	41,1	45,5	50,0	54,4	58,8	63,3	70,6
1400	21,0	25,9	30,7	35,6	40,5	45,4	50,3	55,2	60,0	64,9	69,8	77,9

CHART 1: AIRFLOW

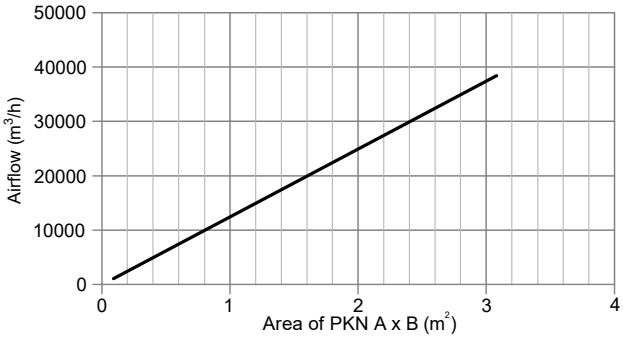


CHART 2: PRESSURE DROP RATES

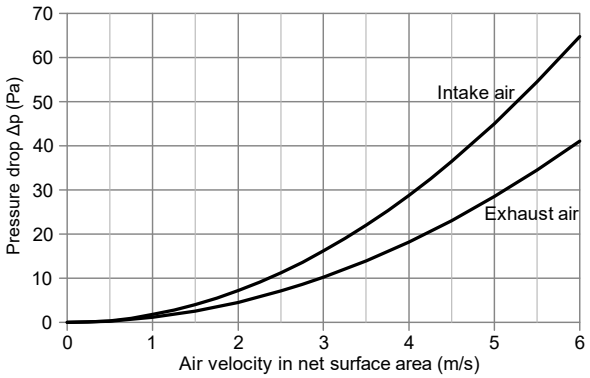
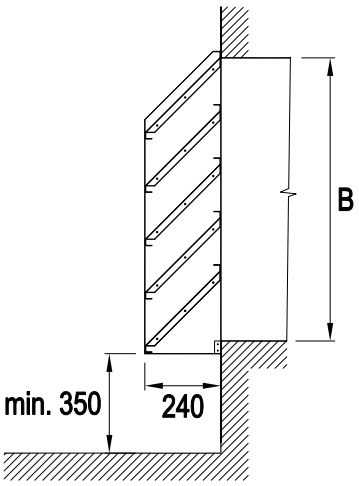


FIG. 1



6.04 SKC

Automatic rectangular damper

ORDER CODE

SKC	A	x	B	.	design	.	frame
	1		2		3		4

1	A	Damper width
2	B	Damper height
3	V	Exhaust design
	S	Supply design
	P	Duct insertion design
4	0	Without a frame
	1	With a frame

Order code example:
SKC 500x500.V.1

Automatic rectangular damper, width 500 mm, height 500 mm, exhaust design, with a frame

DIMENSION SERIES

A	damper width:	200 – 2000 mm
B	damper height:	200 – 2000 mm

APPLICATION

Automatic rectangular damper in the exhaust design serves as a facade element for automatic room ventilation. It can also be used to equalize pressure differences between adjoining rooms; as a self-closing damper on fans, air handling units, etc. Upon request, the damper can be produced with attached flanges to a frame for insertion into a duct system. **In the supply design, the damper is not suitable for installation on the facade since the strong winds could open the damper and allow rain or snow to enter.**

The manufacturer cannot guarantee that under extreme weather conditions, rain or snow will not be drawn in through the louver. Increased noise levels should be expected during operation. Automatic rectangular damper cover is not resistant to aggressive chemicals or vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Max. air flow velocity:	up to 4 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

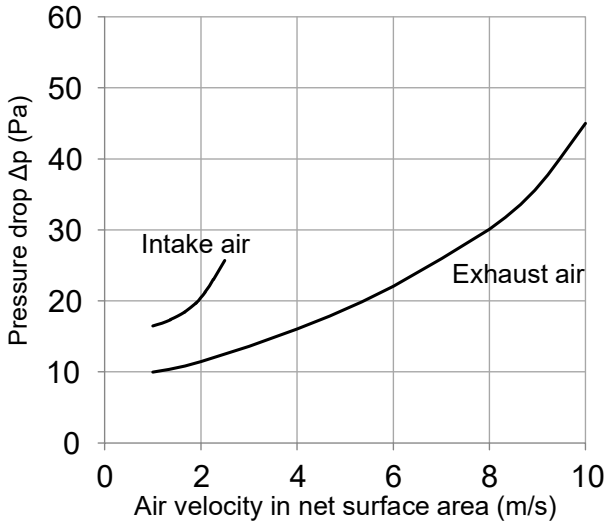
Material	- frame – galvanized sheet DX51 D+Z 200 MAC blades – aluminum sheet
Design	- depth of the damper is 45 mm, standard width of the damper frame is 45 mm (can be changed upon request) - the damper is divided by a vertical partition for dimensions A ≥ 900 mm - the length of the damper frame is 150 mm for the duct version; the standard sizes of flanges are determined according to TAB. 2 in chapter 1.01 PCI.
Installation	- the damper can be installed as a terminal element into ducts or building openings; alternatively, the opening for the damper can be prepared by bricking in the frame, to which the damper can then be attached
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, ELX




TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400
200	1,8	2,1	2,1	2,4	2,6	2,9	3,1	3,4	3,7	4,1	4,5	4,9	5,5	6,0	6,6	7,3	8,1
250	2,0	2,3	2,3	2,7	2,9	3,2	3,4	3,7	4,0	4,4	4,8	5,3	5,9	6,4	7,1	7,7	8,6
280	2,2	2,5	2,5	2,8	3,1	3,3	3,6	3,9	4,2	4,6	5,0	5,5	6,1	6,7	7,3	8,0	8,9
315	2,3	2,6	2,6	3,0	3,2	3,5	3,8	4,1	4,4	4,8	5,2	5,8	6,4	6,9	7,6	8,3	9,2
355	2,5	2,8	2,8	3,2	3,5	3,7	4,0	4,3	4,7	5,1	5,5	6,1	6,7	7,3	7,9	8,7	9,6
400	2,7	3,1	3,1	3,4	3,7	4,0	4,3	4,6	5,0	5,4	5,8	6,4	7,0	7,6	8,3	9,1	10,0
450	3,0	3,3	3,3	3,7	4,0	4,3	4,6	4,9	5,3	5,7	6,1	6,7	7,4	8,0	8,8	9,5	10,5
500	3,2	3,5	3,5	3,9	4,2	4,5	4,9	5,2	5,6	6,0	6,5	7,1	7,8	8,4	9,2	10,0	11,0
560	3,5	3,8	3,8	4,2	4,6	4,9	5,2	5,6	6,0	6,4	6,9	7,5	8,2	8,9	9,7	10,5	11,6
630	3,8	4,2	4,2	4,6	7,9	5,3	5,6	6,0	6,4	6,8	7,3	8,0	8,7	9,5	10,3	11,1	12,2
710	4,2	4,6	4,6	5,0	5,4	5,7	6,1	6,5	6,9	7,4	7,9	8,6	9,4	10,1	11,0	11,8	13,0
800	4,6	5,0	5,0	5,5	5,8	6,2	6,6	7,0	7,5	7,9	8,5	9,2	10,0	10,8	11,7	12,7	13,9
900	5,1	5,5	5,5	6,0	6,4	6,8	7,2	7,6	8,1	8,6	9,1	10,0	10,8	11,7	12,6	13,6	14,8
1000	5,5	6,0	6,0	6,5	6,9	7,3	7,8	8,2	8,7	9,2	9,8	10,7	11,6	12,5	13,4	14,4	15,8
1120	6,1	6,6	6,6	7,1	7,5	8,0	8,5	9,0	9,5	10,0	10,6	11,5	12,5	13,4	14,5	15,5	16,9
1250	6,7	7,2	7,2	7,8	8,2	8,7	9,2	9,7	10,3	10,9	11,5	12,5	13,5	14,5	15,6	16,7	18,2
1400	7,4	8,0	8,0	8,5	9,0	9,6	10,1	10,6	11,2	11,8	12,5	13,5	14,6	15,7	16,8	18,0	19,6

CHART 1: PRESSURE DROP RATES



7.01 TSV

Damping roof stand

ORDER CODE

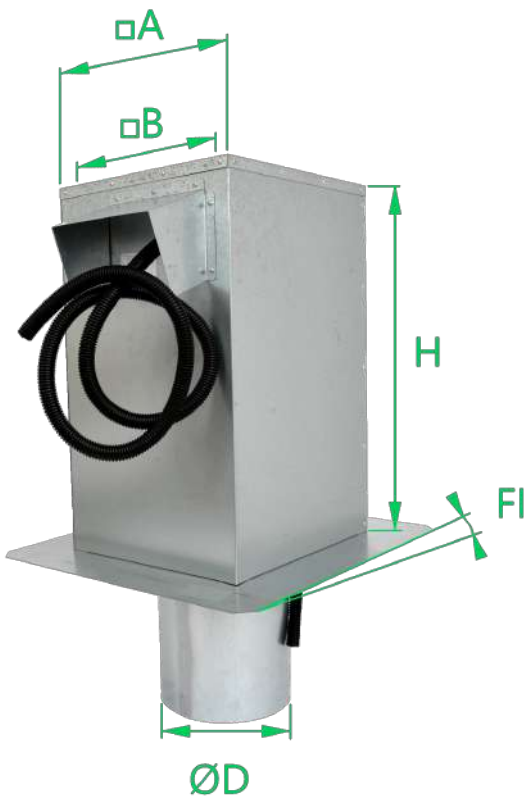
TSV	A	-	B	-	D	/	FI	/	H	-	l	-	K	/	n
	1		2		3		4		5		6		7		8

1	A	Stand outer dimensions
2	B	Rivet nut spacing
3	D	Stand connection diameter
4	FI	Base plate angle
5	H	Stand height
6	l	Circular input end length
7	K	Circular input end (options see TAB. 3)
8	0	Without acoustic splitter
	1	With damping splitter (1 pc)
	2	With damping splitters (2 pcs)

Order code example:

TSV 555-450-315/0°/850-300-VKM/1

Damping roof stand, outer dimensions of the stand 555 mm, nut spacing for fan connection 450 mm, stand connection diameter 315 mm, base plate angle 0°, stand height (from the base plate) 850 mm, circular input end length 300 mm, circular connection for insertion, 1 pc of acoustic splitter



DIMENSION SERIES

A	stand outer dimensions:	according to the fan dimensions
B	rivet nut spacing:	according to the fan dimensions
l	circular input end length:	300 mm
H	stand height:	650, 850, 1050, 1250 mm
t	insulation width:	50, 100 mm according to TAB. 1

APPLICATION

Damping roof stand is designated for roof fan installation. Mineral insulation isolates the internal air from the external environment, preventing condensation of water on the inner walls of ducts. Additionally, it also reduces the noise in ducts. For higher attenuation, acoustic splitter can be installed in large size stands. Damping roof stand is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 10 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC - stand insulation, splitters filling - acoustically absorbent, non-flammable filling, protected by a glass cloth
Design	- all joints of the stand are sealed from the outside to prevent water ingress - the connection end of the stand is typically circular; rectangular end can be provided upon request
Installation	- the stand is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - the input end is connected to the internal duct system - the roof fan is anchored to the stand with the rivet nuts
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: ATTENUATION LEVELS

Stand outer dimensions A (mm)	Number of splitters (n)	Insulation width (mm)	The attenuation D_e (dB) in the frequency range f (Hz)								The pressure loss Δp_t (Pa) for velocity in a net surface area (m/s)				
			63	125	250	500	1000	2000	4000	8000	4	8	12	16	20
300	0	50	2	4	8	10	11	8	7	6	3	12	28	49	77
400	0	50	2	3	6	8	8	7	5	5	3	11	24	42	66
560	1	100	2	4	9	18	22	18	16	11	4	15	34	60	94
630	1	100	2	3	7	13	14	10	8	7	3	12	28	49	77
710	1	100	2	2	6	10	12	9	5	4	2	10	22	34	54
800	2	100	2	3	8	15	18	14	12	9	5	17	40	71	108
900	2	100	2	2	7	12	13	10	6	5	4	13	32	55	86
1000	2	100	2	2	6	10	12	9	5	4	3	12	28	49	77
1100	2	100	1	3	8	10	12	9	6	5	4	16	34	62	97
1200	2	100	1	3	8	10	11	8	6	5	3	15	31	56	84
1300	2	100	1	3	7	9	10	7	6	5	3	13	28	50	78

TAB. 2: WEIGHT ACCORDING TO DIMENSIONS (kg)

Without splitters

Stand outer dimensions A (mm)	300	400	560	630	710	800	900	1000	1100	1200	1300
Angle FI 0°	11,2	15,5	24,2	30,7	35,1	40,0	47,9	53,7	59,5	65,2	71,0
Angle FI up to 15°	11,7	16,2	25,3	32,2	36,8	42,0	49,5	55,5	61,5	67,4	73,4
Angle FI up to 30°	12,3	17,0	26,7	33,9	38,7	44,2	52,6	59,0	65,3	71,7	78,0
Angle FI up to 45°	13,2	18,2	28,5	36,3	41,5	47,4	56,2	63,0	69,8	76,6	83,4

With splitters

Stand outer dimensions A (mm)	300	400	560	630	710	800	900	1000	1100	1200	1300
Angle FI 0°	-	-	26,4	33,1	37,8	46,1	54,7	61,3	67,8	74,3	80,9
Angle FI up to 15°	-	-	27,5	34,5	39,5	48,0	56,3	63,1	69,8	76,5	83,2
Angle FI up to 30°	-	-	28,8	36,2	41,4	50,2	59,4	66,5	73,6	80,7	87,8
Angle FI up to 45°	-	-	30,6	38,7	44,2	53,4	63,0	70,6	78,1	85,7	93,2

TAB. 3: CIRCULAR END OPTIONS

VKM	Free end with double-lip seal which slides into the duct = **standard**
VKT	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517

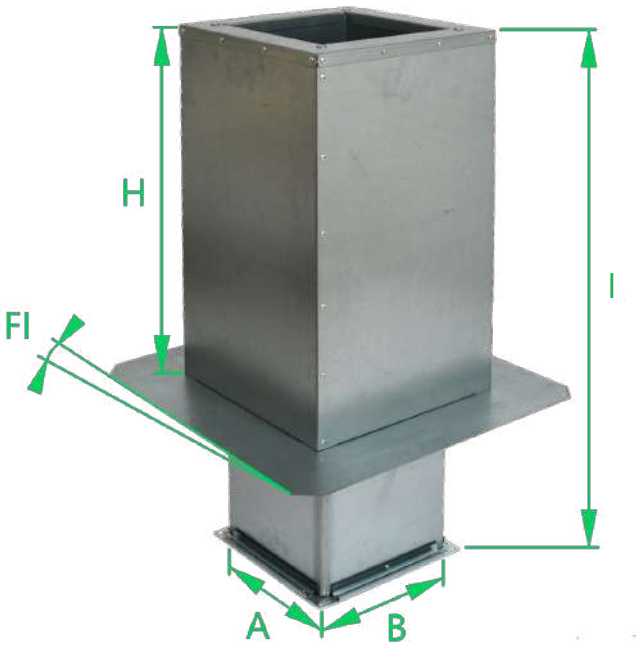
7.02 SIC

Rectangular insulated roof stand

ORDER CODE

SIC	A	x	B	/	FI	/	H	-	l	-	t	-	K	-	K1
	1		2		3		4		5		6		7		8

1	A	Connection dimension A
2	B	Connection dimension B
3	FI	Base plate angle (A side)
4	H	Insulated part of the stand height
5	l	Stand total height
6	t	Insulation thickness
7	K	Rectangular input end (profiled flange P20, P30, P40, free end...)
8	K1	Rectangular output end (profiled flange P20, P30, P40, free end...)



Order code example:

SIC 630x560/0°/850-1500-50-P20-P20

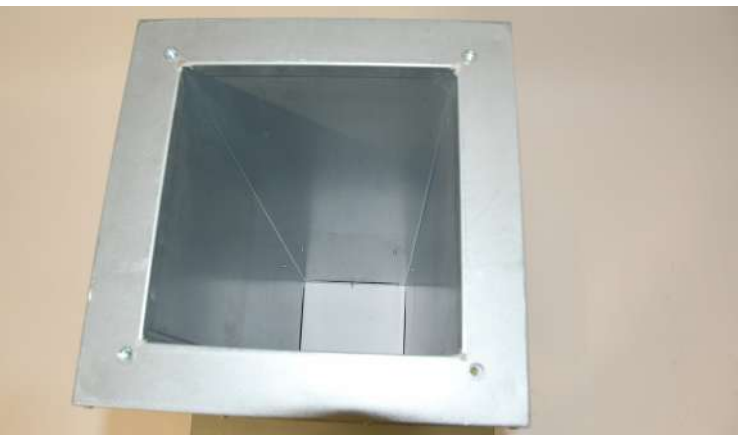
Rectangular insulated roof stand, dimensions 630x560 mm, base plate angle 0°, insulated part of the stand height 850 mm, stand total height 1500 mm, insulation thickness 50 mm, rectangular end with a flange P20, preparation for upper flange P20 connection

DIMENSION SERIES

A	connection dimension:	100 – 2900 mm
B	connection dimension:	100 – 2900 mm
H	insulated part of the stand height:	650, 850, 1050, 1250 mm
t	insulation width:	50, 100 mm
l	stand total height:	max. 1500 mm

APPLICATION

Rectangular insulated roof stand serves for passage of the rectangular ducts through the roof. Mineral insulation isolates the internal air from the external environment, preventing condensation of water on the inner walls of ducts. Rectangular insulated roof stand is not resistant to aggressive chemical substances and vapors.



TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 10 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC - stand insulation - non-flammable filling
Design	- all joints of the stand are sealed from the outside to prevent water ingress
Installation	- the stand is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - the input end is connected to the internal duct system - the upper insulated part of the stand can be fitted with rivet nuts, onto which ducts, exhaust hood, etc. can be connected - the manufacturer recommends using a storm collar for rectangular ducts to cover the joint between the stand and adjacent duct parts
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)
Insulated part of the base height 850 mm, base plate angle 0°

A \ B	200	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400
200	17,0	18,7	19,8	21,0	22,4	24,0	25,8	27,5	29,6	32,1	34,9	38,1	41,6	45,1	49,3	53,9	59,2
250	18,7	20,5	21,6	22,8	24,2	25,8	27,6	29,4	31,5	34,0	36,8	40,0	43,6	47,1	51,4	53,0	61,3
280	19,8	21,6	22,6	23,9	25,3	26,9	28,7	30,5	32,6	35,1	38,0	41,2	44,8	48,4	52,7	57,3	62,7
315	21,0	22,8	23,9	25,1	26,6	28,2	30,0	31,8	34,0	36,5	39,4	42,6	46,2	49,8	54,1	58,8	64,2
355	22,4	24,2	25,3	26,6	28,0	29,7	31,5	33,3	35,5	38,0	40,9	44,2	47,8	51,4	55,8	60,5	65,9
400	24,0	25,8	26,9	28,2	29,7	31,3	33,1	35,0	37,2	39,7	42,7	46,0	49,6	53,3	57,7	62,4	67,9
450	25,8	27,6	28,7	30,0	31,5	33,1	35,0	36,8	39,1	41,6	44,6	47,9	51,6	55,3	59,8	64,5	70,1
500	27,5	29,4	30,5	31,8	33,3	35,0	36,8	38,7	40,9	43,6	46,5	49,9	53,6	57,4	61,8	66,7	72,3
560	29,6	31,5	32,6	34,0	35,5	37,2	39,1	40,9	43,2	45,9	48,9	52,3	56,0	59,8	64,4	69,3	74,9
630	32,1	34,0	35,1	36,5	38,0	39,7	41,6	43,6	45,9	48,5	51,6	55,0	58,9	62,7	67,3	72,2	78,0
710	34,9	36,8	38,0	39,4	40,9	42,7	44,6	46,5	48,9	51,6	54,7	58,2	62,1	66,0	70,6	75,7	81,5
800	38,1	40,0	41,2	42,6	44,2	46,0	47,9	49,9	52,3	55,0	58,2	61,7	65,7	69,6	74,4	79,5	85,4
900	41,6	43,6	44,8	46,2	47,8	49,6	51,6	53,6	56,0	58,9	62,1	65,7	69,7	73,7	78,6	83,8	89,8
1000	45,1	47,1	48,4	49,8	51,4	53,3	55,3	57,4	59,8	62,7	66,0	69,6	73,7	77,8	82,7	88,1	94,2
1120	49,3	51,4	52,7	54,1	55,8	57,7	59,8	61,8	64,4	67,3	70,6	74,4	78,6	82,7	87,8	93,2	99,5
1250	53,9	56,0	57,3	58,8	60,5	62,4	64,6	66,7	69,3	72,2	75,7	79,5	83,8	88,1	93,2	98,7	105,1
1400	59,2	61,3	62,7	64,2	65,9	67,9	70,1	72,3	74,9	78,0	81,5	85,4	89,8	94,2	99,5	105,1	111,7

7.03 SIK

Circular insulated roof stand

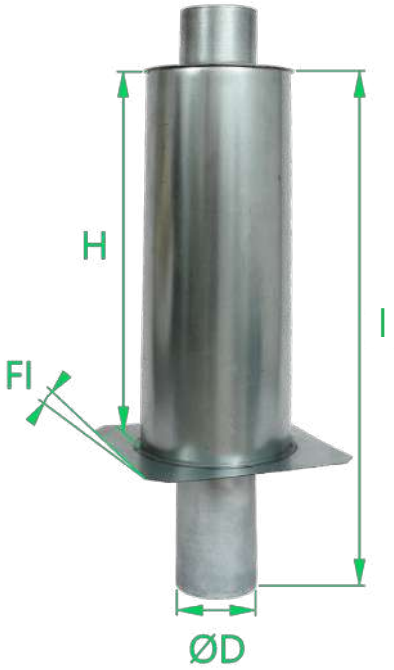
ORDER CODE

SIK	D	/	FI	/	H	-	l	-	t	-	K	.	K1
	1		2		3		4		5		6		7

1	D	Stand diameter
2	FI	Base plate angle
3	H	Insulated part of the stand height
4	l	Stand total height
5	t	Insulation thickness
6	K	Circular input end (options see TAB. 2)
7	K1	Circular output end (options see TAB. 2)

Order code example:
SIK 315/0°/850-1500-50-VKM.VKM

Circular insulated roof stand, diameter 315 mm, base plate angle 0°, insulated part of the stand height 850 mm, stand total height 1500 mm, insulation thickness 50 mm, bottom circular for insertion (male end), top circular connection for insertion (male end)



DIMENSION SERIES

D	stand connection diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250 mm
H	stand height:	650, 850, 1050, 1250 mm
t	insulation width:	50, 100 mm
l	stand total height:	max. 1500 mm*

* standard height of the top connection attachment = 100 mm

APPLICATION

Circular insulated roof stand serves for a passage of the circular ducts through the roof. Mineral insulation isolates the internal air from the external environment, preventing condensation of water on the inner walls of ducts. Circular insulated roof stand is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 10 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC - stand insulation - non-flammable filling
Design	- all joints of the stand are sealed from the outside to prevent water ingress - circular end options according to TAB. 2
Installation	- the stand is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - the input end is connected to the internal duct system - the connection attachment (height 100 mm) is fitted to the upper insulated part of the stand, onto which ducts, exhaust hood, etc. can be connected - the manufacturer recommends using a storm collar for circular ducts to cover the joint between the stand and adjacent duct parts
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)
Base plate angle 0°

Stand diameter D (mm)	100	125	160	200	250	315	355	400	450	500	560	630	710
Stand height H = 650 mm	4,7	5,4	6,5	7,8	9,3	11,3	14,0	15,6	17,3	20,8	23,1	25,7	28,8
Stand height H = 850 mm	5,5	6,5	7,8	9,3	11,1	13,5	16,8	18,7	20,7	25,0	27,7	30,9	34,6
Stand height H = 1050 mm	6,7	7,9	9,5	11,3	13,5	16,5	20,6	22,8	25,4	30,6	33,9	37,9	42,3
Stand height H = 1250 mm	8,2	9,6	11,5	13,8	16,6	20,2	25,3	28,0	31,1	37,6	41,7	46,5	52,0

TAB. 2: CIRCULAR END OPTIONS

VKM	Free end with double-lip seal which slides into the duct = **standard**
VKT	Free end which slides into the duct (male end)
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

7.04 PCH

Copper pipes roof passage

ORDER CODE

PCH	A	x	B	/	FI	-	H	-	design
	1		2		3		4		5

1	A	Connection inner dimension A
2	B	Connection inner dimension B
3	FI	Base plate angle (A side)
4	H	Insulated part of the stand height
5	0	Non-insulated single-wall passage;
	1	Insulated double-wall passage

Order code example:
PCH 100x300/0°-850-1

Copper pipes roof passage, inner dimensions 100x300 mm, base plate angle 0°, insulated part of the stand height 850 mm, insulated double-wall passage

DIMENSION SERIES

A	inner dimension:	100, 200 mm
B	inner dimension:	100, 200, 300, 400, 500 mm
H	passage height:	650, 850, 1050, 1250 mm

APPLICATION

Copper pipes roof passage serves as a passage for copper pipes through the roof. It prevents water ingress under the roof covering and condensation within the passage. Copper pipes roof passage stand is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC - stand insulation - non-flammable filling
Design	- all joints of the stand are sealed from the outside to prevent water ingress - passage can be produced as uninsulated (single-wall - without thermal insulation filling) or insulated (double-wall - with thermal insulation filling)
Installation	- the stand is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - after pulling the copper pipes through the passage, the space between the pipes and the inner case of the passage is filled with foam insulation; the passage is covered with a top cap, which is fastened to the outer case of the passage with self-tapping screws
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

B	100	200	300	400	500
PCH 100 x B / 0° - 850 - 0	7,1	9,0	11,0	12,9	14,8
PCH 100 x B / 0° - 850 - 1	11,5	14,6	17,9	20,5	23,3

7.05 PSK

Circular roof rain cap

ORDER CODE

PSK	D	.	K
	I		I
	1		2

1	D	Cap diameter
2	K	Circular input end (options see TAB. 2)

Order code example:
PSK 315.VKP
Circular roof rain cap, diameter 315 mm, female end

DIMENSION SERIES

D	cap diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 630 mm

APPLICATION

Circular roof rain cap serves as an exhaust and supply element on the roof. It is installed on the duct or roof passage. The manufacturer recommends additional anchoring of the larger-sized cap to withstand extreme weather conditions. Circular roof rain cap is not resistant to aggressive chemicals and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 6 m/s
Recommended air flow velocity for supply:	up to 3 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- circular end options according to TAB. 2 - installation of the cap by insertion into duct or sliding onto duct is recommended only up to a maximum diameter of 500 mm, for diameters above 500 mm the manufacturer recommends using flanges
Installation	- the cap is inserted or slided onto a circular duct according to the design of the connection end; alternatively it is installed using a circular flange - for larger diameters, additional anchoring of the cap is recommended to withstand extreme weather conditions
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Diameter D	100	125	160	200	250	315	355	400	450	500	560	630
Weight (kg)	1,4	1,8	2,3	4,9	6,3	9,5	11,4	13,7	18,6	21,9	31,3	38,3

TAB. 2: CIRCULAR END OPTIONS

VKP	Free end with double-lip seal which slides into the duct = **standard**
VKM	Free end which slides into the duct (male end)
VKT	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517

7.06 CHK Cagi hood

ORDER CODE

CHK	D	.	K
	I		I
	1		2

1	D	Hood diameter
2	K	Round input end (options see TAB. 2)

Order code example:
CHK 315.VKP
Cagi hood, diameter 315 mm, female end

DIMENSION SERIES

D	cap diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 630, 710, 800, 900, 1000, 1120, 1250 mm

APPLICATION

Cagi hood serves as a terminal exhaust element on the roof. It is installed on ducts or roof passage. The construction of the hood is not suitable for use on supply ducts; droplets may be drawn into the duct by the suction airflow. The manufacturer recommends additional anchoring of the larger-sized hood to withstand extreme weather conditions. Cagi hood is not resistant to aggressive chemicals and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	6 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- circular end options according to TAB. 2 - installation of the hood by insertion into duct or sliding onto duct is recommended only up to a maximum diameter of 630 mm, for diameters above 630 mm the manufacturer recommends using flanges
Installation	- the hood is inserted or slided onto a circular duct according to the design of the connection end; alternatively it is installed using a circular flange - for larger diameters, additional anchoring of the hood is recommended to withstand extreme weather conditions
Non-standard design	

TAB. 1: WEIGHT (kg) AND DIMENSIONS (mm)

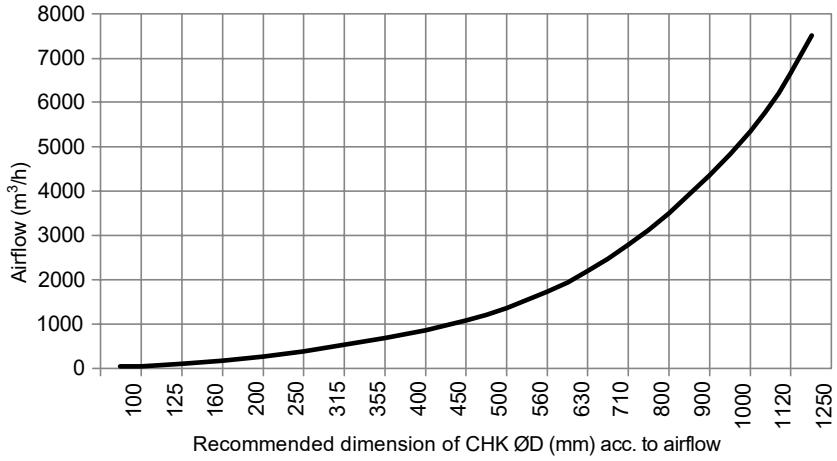
Diameter D	100	125	160	200	250	315	355	400	450
Diameter d_1	180	225	288	360	450	567	639	720	810
Diameter d_2	200	250	320	400	500	630	710	800	900
Height H	184	230	294	368	460	580	653	736	828
Weight (kg)	1,6	2,0	2,7	3,8	8,0	11,5	14,1	17,3	21,3

Diameter D	500	560	630	710	800	900	1000	1120	1250
Diameter d_1	900	1008	1134	1278	1440	1620	1800	2016	2250
Diameter d_2	1000	1200	1260	1420	1600	1800	2000	2240	2500
Height H	920	1030	1159	1306	1472	1656	1840	2061	2300
Weight (kg)	25,9	42,0	51,7	64,2	80,0	99,8	121,9	151,5	187,3

TAB. 2: CIRCULAR END OPTIONS

VKP	Free end which slides onto the duct fitting (female end) = **standard**
VKM	Free end which slides into the duct (male end)
VKT	Free end with double-lip seal which slides into the duct
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

CHART 1: AIRFLOW



7.07 VHK Circular roof hood

ORDER CODE

VHK	D	.	K
	I		I
	1		2

1	D	Hood diameter
2	K	Round input end (options see TAB. 2)

Order hood example:
VHK 315.VKP
Circular roof hood, diameter 315 mm, female end

DIMENSION SERIES

D	hood diameter:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 630, 710, 800, 900, 1000, 1120, 1250 mm

APPLICATION

Circular roof hood serves as a terminal exhaust element on the roof. It is installed on ducts or roof passage and allows exhaust of the air upwards. The construction of the hood is not suitable for use on supply ducts; droplets may be drawn into the duct by the suction airflow. The manufacturer recommends additional anchoring of the larger-sized hood to withstand extreme weather conditions. Circular roof hood is not resistant to aggressive chemicals and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- circular end options according to TAB. 2 - installation of the hood by insertion into duct or sliding onto duct is recommended only up to a maximum diameter of 630 mm, for diameters above 630 mm the manufacturer recommends using flanges
Installation	- the hood is inserted or slided onto a circular duct according to the design of the connection end; alternatively it is installed using a circular flange - for larger diameters, additional anchoring of the hood is recommended to withstand extreme weather conditions
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT (kg) AND DIMENSIONS (mm)

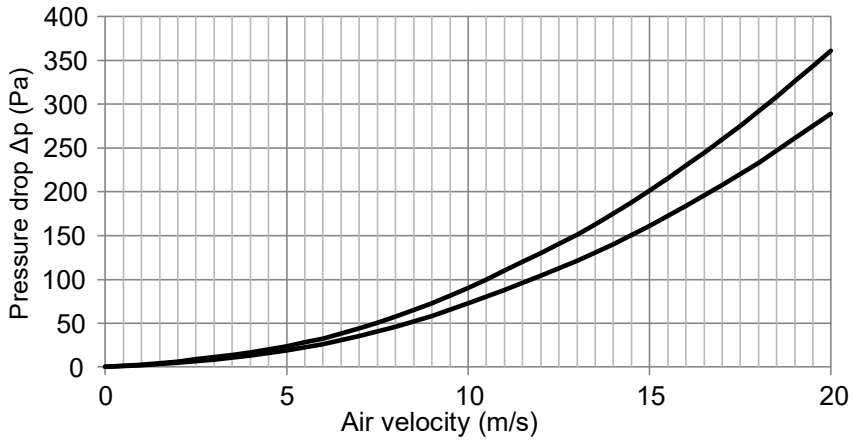
Diameter D	200	250	315	355	400	450	500
Diameter d_1	220	270	350	390	445	500	550
Diameter d_2	340	420	520	580	670	740	820
Height H	480	590	725	785	875	965	1055
Weight (kg)	12,5	17,5	25,6	30,3	41,5	49,5	58,7

Diameter D	630	710	800	900	1000	1120	1250
Diameter d_1	700	760	860	970	1080	1210	1350
Diameter d_2	1030	1155	1300	1460	1620	1820	2025
Height H	1285	1465	1640	1830	2015	2255	2500
Weight (kg)	87,2	112,5	138,6	175,3	215,4	266,1	324,3

TAB. 2: CIRCULAR END OPTIONS

VKP	Free end which slides onto the duct fitting (female end) = **standard**
VKM	Free end which slides into the duct (male end)
VKT	Free end with double-lip seal which slides into the duct
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

CHART 1: AIRFLOW



7.08 VHC Rectangular roof hood

ORDER CODE:

VHC	A	x	B	.	K
	I		I		I
	1		2		3

1	A	Connection dimension A
2	B	Connection dimension B
3	K	Rectangular input end (flange P20, P30, P40, free end...)

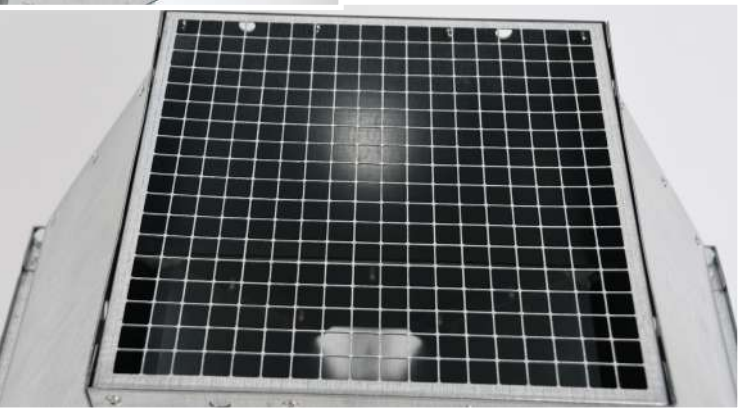
Order code example:
VHC 500x315.P20
Rectangular roof hood, dimensions 500x315 mm, flange P20

DIMENSION SERIES

A	hood connection	200 – 1000 mm
B	hood connection	200 – 1000 mm

APPLICATION

Rectangular roof hood serves as a terminal exhaust element on the roof. It is installed on ducts or roof passage and allows exhaust of the air upwards. The construction of the hood is not suitable for use on supply ducts; droplets may be drawn into the duct by the suction airflow. The manufacturer recommends additional anchoring of the larger-sized hood to withstand extreme weather conditions. Circular roof hood is not resistant to aggressive chemicals and vapors.



TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- the hood casing is made from one piece up to a size A x B ≤ 500, it is made from two pieces for sizes A x B ≥ 500 mm - the top part of the hood is covered with a wire mesh, thickness 1 mm, mesh size 12x12 mm - size of the used flange, see TAB 2 in chapter 1.01 PCI
Installation	- the hood is connected to the adjacent ducts or roof passages using a flange - for larger diameters, additional anchoring of the hood is recommended to withstand extreme weather conditions
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	200	250	280	315	355	400	450	500	560	630	710	800	900	1000
200	4,49	5,17	5,60	6,12	6,73	7,45	8,30	9,18	10,29	11,67	13,33	15,33	17,71	20,26
250	6,11	6,90	7,39	7,97	8,67	9,48	10,42	11,40	12,63	14,13	15,95	18,12	20,69	23,42
280	7,21	8,07	8,59	9,23	9,97	10,84	11,84	12,87	14,17	15,76	17,67	19,94	22,62	25,47
315	8,62	9,55	10,13	10,81	11,62	12,55	13,62	14,73	16,11	17,79	19,81	22,21	25,02	28,00
355	10,38	11,41	12,04	12,79	13,66	14,67	15,83	17,02	18,50	20,30	22,44	24,98	27,95	31,08
400	12,56	13,69	14,39	15,21	16,17	17,27	18,52	19,81	21,41	23,34	25,63	28,33	31,47	34,78
450	15,22	16,48	17,24	18,15	19,20	20,41	21,77	23,18	24,90	26,98	29,44	32,32	35,67	39,17
500	18,13	19,51	20,35	21,35	22,49	23,81	25,29	26,80	28,66	30,90	33,53	36,60	40,15	43,86
560	21,95	23,49	24,42	25,52	26,78	28,22	29,85	31,51	33,53	35,95	38,80	42,10	45,91	49,86
630	26,87	28,58	29,62	30,84	32,25	33,84	35,64	37,46	39,69	42,34	45,43	49,02	53,13	57,38
710	33,08	35,00	36,16	37,53	39,09	40,87	42,87	44,89	47,34	50,26	53,65	57,57	62,03	66,64
800	40,83	42,98	44,29	45,81	47,56	49,55	51,77	54,01	56,73	59,95	63,69	67,99	72,87	77,88
900	50,38	52,80	54,25	55,96	57,92	60,13	62,61	65,11	68,13	71,70	75,83	80,55	85,91	91,38
1000	60,92	63,60	65,22	67,10	69,27	71,72	74,45	77,21	80,53	84,45	88,98	94,14	99,98	105,92

7.09 HCH Square roof hood

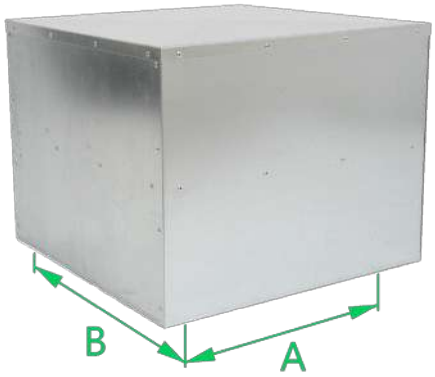
ORDER CODE

HCH	A	x	B	.	K
	I		I		I
	1		2		3

1	A	Connection dimension A
2	B	Connection dimension B
3	K	Rectangular input end (flange P20, P30, P40, free end...)

Order code example:
HCH 1000x1000.P20

Square roof hood, connection dimension 1000x1000 mm, connection flange P20



DIMENSION SERIES

A	hood connection	200 – 1500 mm
B	hood connection	200 – 1500 mm

APPLICATION

Square roof hood serves as a terminal supply or exhaust element on the roof. It is installed on ducts or roof passage.
If the square hood is installed on the rectangular insulated roof stand, the connecting dimensions of the hood AxB are the outer dimensions of the stand.
The manufacturer recommends additional anchoring of the larger-sized hood to withstand extreme weather conditions.
Square roof hood is not resistant to aggressive chemicals and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 4 m/s (in net surface area)
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

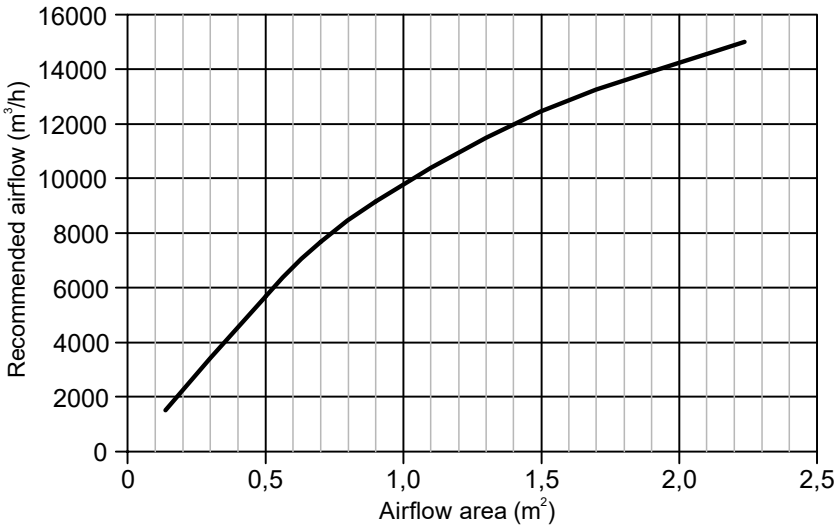
MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- the inner frame is attached to the casing of the hood, the frame includes a mesh, thickness 1 mm, mesh size 12x12 mm - size of the used flange, see TAB 2 in chapter 1.01 PCI
Installation	- the hood is connected to the adjacent ducts or roof passages using prepared attachment to a flange in the inner frame - for larger diameters, additional anchoring of the hood is recommended to withstand extreme weather conditions
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

a \ b		415	510	620	690	770	960	1060	1310	1460	1560	1800
	A \ B	200	250	315	355	400	500	630	710	800	900	1000
415	**200**	9,0	10,2	11,6	12,5	13,5	16,0	17,2	20,4	22,3	23,6	26,7
510	**250**	10,2	11,5	13,0	14,0	15,1	17,6	19,0	22,4	24,4	25,8	29,1
620	**315**	11,6	13,0	14,6	15,6	16,8	19,6	21,0	24,7	26,9	28,3	31,8
690	**355**	12,5	14,0	15,6	16,7	17,9	20,8	22,3	26,1	28,4	29,9	33,6
770	**400**	13,5	15,1	16,8	17,9	19,2	22,2	23,8	27,8	30,2	31,8	35,6
960	**500**	16,0	17,6	19,6	20,8	22,2	25,6	27,3	31,7	34,4	36,2	40,4
1060	**630**	17,2	19,0	21,0	22,3	23,8	27,3	29,2	33,8	36,6	38,5	42,9
1310	**710**	20,4	22,4	24,7	26,1	27,8	31,7	33,8	39,0	42,1	44,2	49,2
1460	**800**	22,3	24,4	26,9	28,4	30,2	34,4	36,6	42,1	45,5	47,7	53,0
1560	**900**	23,6	25,8	28,3	29,9	31,8	36,2	38,5	44,2	47,7	50,0	55,5
1800	**1000**	26,7	29,1	31,8	33,6	35,6	40,4	42,9	49,2	53,0	55,5	61,6

CHART 1: AIRFLOW



7.10 HCA

Rectangular Al-frame roof hood

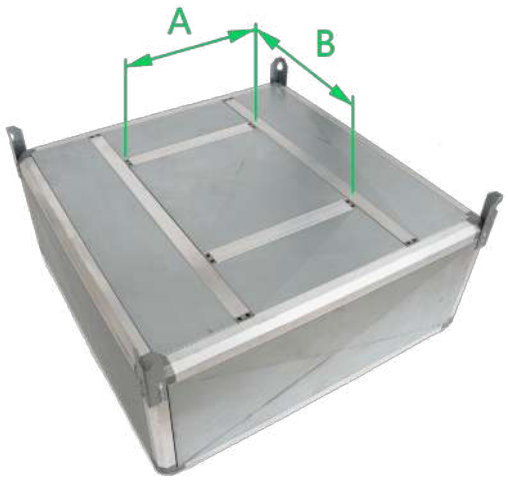
ORDER CODE

HCA	A	x	B	.	K
	I		I		I
	1		2		3

1	A	Connection dimension A
2	B	Connection dimension B
3	K	Rectangular input end (flange P20, P30, P40, free end...)

Order code example:
HCA 1250x1250.P30

Rectangular Al-frame roof hood, connection dimensions 1250x1250 mm, connection flange P30



DIMENSION SERIES

A	hood connection	500, 800, 900, 1000, 1120, 1250, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3200, 3500 mm
B	hood connection	500, 800, 900, 1000, 1120, 1250, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3200, 3500 mm

APPLICATION

Rectangular Al-frame roof hood serves as a terminal supply or exhaust element on the roof. It is installed on ducts or roof passage. If the square hood is installed on the rectangular insulated roof stand, the connecting dimensions of the hood AxB are the outer dimensions of the stand.
The manufacturer recommends, depending on the hood weight, appropriate reinforcement of the ducts on which the hood will be installed. After its installation, it is necessary to anchor all four corners of the head to withstand extreme weather conditions.
Rectangular Al-frame roof hood is not resistant to aggressive chemicals and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 4 m/s (in net surface area)
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- hood frame - aluminum profile - hood casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC
Design	- the hood is connected to the rectangular duct or the stand using an internal reinforced frame made of aluminum profile - size of the used flange, see TAB 2 in chapter 1.01 PCI
Installation	- the hood is connected to the adjacent reinforced ducts or roof passages using pre-installed attachment to a flange in the inner frame - the minimum height above a flat or sloping surface is 350 mm from the bottom edge of the hood - for larger diameters, additional anchoring of the hood is recommended to withstand extreme weather conditions
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

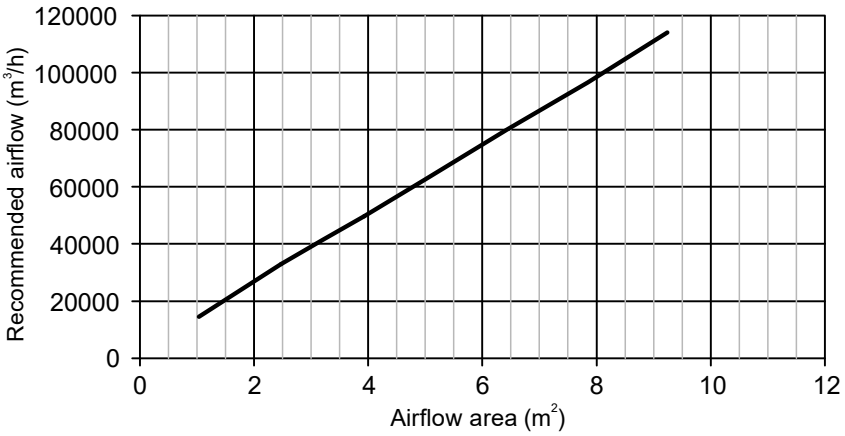
TAB. 1: RECOMMENDED HEIGHT OF THE HOOD (mm)

a \ b		1390	1560	1740	1940	2170	2430	2780	3120	3470	3820	4160
	A \ B	800	900	1000	1120	1250	1400	1600	1800	2000	2200	2400
1390	**800**	550	570	580	590	600	610	620	630	640	650	650
1560	**900**	570	580	590	600	620	630	640	650	670	670	680
1740	**1000**	580	590	600	620	630	650	660	680	670	700	710
1940	**1120**	590	600	620	630	650	670	680	700	710	730	740
2170	**1250**	600	620	630	650	670	690	710	720	740	750	770
2430	**1400**	610	630	650	670	690	700	730	750	770	780	800
2780	**1600**	620	640	660	680	710	730	750	780	800	820	830
3120	**1800**	630	650	680	700	720	750	780	800	830	850	870
3470	**2000**	640	670	690	710	740	770	800	830	850	880	900
3820	**2200**	650	670	700	730	750	780	820	850	880	900	930
4160	**2400**	650	680	710	740	770	800	830	870	900	930	950

TAB. 2: WEIGHT ACCORDING TO DIMENSIONS (kg)

a \ b		1390	1560	1740	1940	2170	2430	2780	3120	3470	3820	4160
	A \ B	800	900	1000	1120	1250	1400	1600	1800	2000	2200	2400
1390	**800**	85	101	108	116	126	139	154	186	203	224	241
1560	**900**	101	116	124	132	143	157	172	205	223	244	262
1740	**1000**	111	126	134	144	154	169	185	219	237	260	278
1940	**1120**	120	136	144	154	165	181	197	232	250	275	294
2170	**1250**	130	147	156	166	178	194	212	246	267	291	311
2430	**1400**	145	162	172	183	195	211	231	267	288	313	334
2780	**1600**	161	178	189	200	214	232	252	290	312	339	361
3120	**1800**	194	212	224	236	250	269	291	329	354	382	406
3470	**2000**	216	236	247	260	276	296	319	359	384	414	439
3820	**2200**	235	254	267	282	297	318	343	385	411	442	469
4160	**2400**	257	278	292	307	324	346	371	414	442	475	502

CHART 1: AIRFLOW



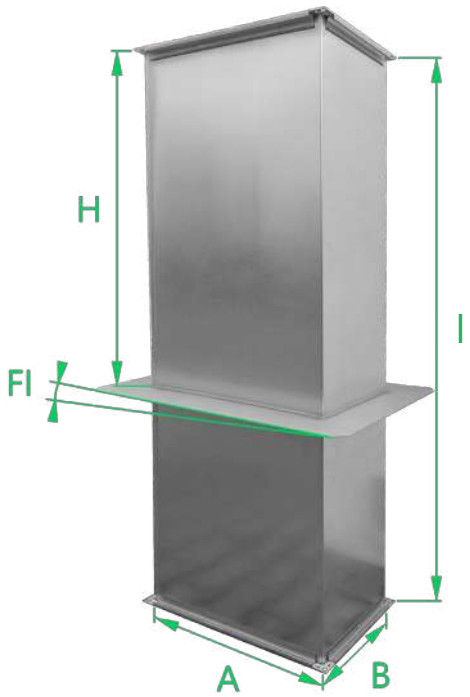
7.11 JPC

Rectangular single wall passage

ORDER CODE

JPC	A	x	B	/	FI	/	H	-	I	-	K	-	K1
	1		2		3		4		5		6		7

1	A	Connection dimension A
2	B	Connection dimension B
3	FI	Base plate angle (A side)
4	H	Passage height above the base plate
5	I	Passage total height
6	K	Rectangular input end (profiled flange P20, P30, P40, free end...)
7	K1	Rectangular output end (profiled flange P20, P30, P40, free end...)



Order code example:

JPC 630x560/0°/850-1500-P20-P20

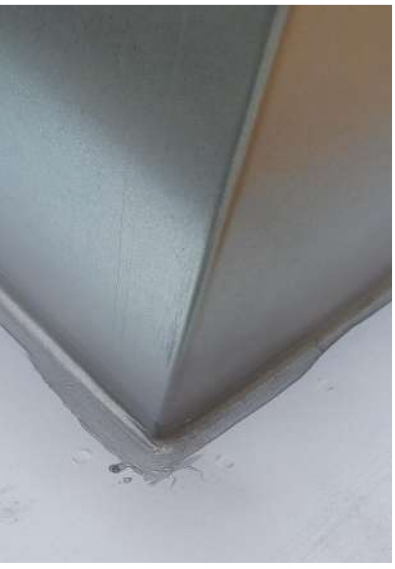
Rectangular single wall passage, dimensions 630x560 mm, base plate angle 0°, height above the base plate 850 mm, total height 1500 mm, rectangular bottom connection flange P20, preparation for the upper flange P20

DIMENSION SERIES

A	passage connection:	100 – 1400 mm
B	passage connection:	100 – 1400 mm
H	passage height:	650, 850, 1050, 1250 mm
I	total passage height:	max 1500 mm

APPLICATION

Rectangular single wall passage serves for a passage of rectangular ducts through the roof. It does not include thermal insulation; additional thermal insulation is required to prevent potential water condensation. Rectangular single wall passage is not resistant to aggressive chemical substances and vapors.



TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust: up to	10 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- all joints of the passage are sealed from the outside to prevent water ingress
Installation	- the passage is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - the internal duct system is connected to the bottom end of the passage - exhaust hood, etc. can be installed to the upper end of the passage - the manufacturer recommends using a storm collar for rectangular ducts to cover the joint between the stand and adjacent duct parts
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)
base plate angle 0°, total passage height L = 1500 mm

A \ B	200	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400
200	8,7	9,5	10,1	10,7	11,4	12,2	13,2	14,0	15,1	16,4	17,8	19,4	21,2	23,0	25,1	27,5	30,2
250	9,5	10,5	11,0	11,6	12,3	13,2	14,1	15,0	16,1	17,3	18,8	20,4	22,2	24,0	26,2	27,0	31,3
280	10,1	11,0	11,5	12,2	12,9	13,7	14,6	15,6	16,6	17,9	19,4	21,0	22,8	24,7	26,9	29,2	32,0
315	10,7	11,6	12,2	12,8	13,6	14,4	15,3	16,2	17,3	18,6	20,1	21,7	23,6	25,4	27,6	30,0	32,7
355	11,4	12,3	12,9	13,6	14,3	15,1	16,1	17,0	18,1	19,4	20,9	22,5	24,4	26,2	28,5	30,9	33,6
400	12,2	13,2	13,7	14,4	15,1	16,0	16,9	17,9	19,0	20,2	21,8	23,5	25,3	27,2	29,4	31,8	34,6
450	13,2	14,1	14,6	15,3	16,1	16,9	17,9	18,8	19,9	21,2	22,7	24,4	26,3	28,2	30,5	32,9	35,8
500	14,0	15,0	15,6	16,2	17,0	17,9	18,8	19,7	20,9	22,2	23,7	25,4	27,3	29,3	31,5	34,0	36,9
560	15,1	16,1	16,6	17,3	18,1	19,0	19,9	20,9	22,0	23,4	24,9	26,7	28,6	30,5	32,8	35,3	38,2
630	16,4	17,3	17,9	18,6	19,4	20,2	21,2	22,2	23,4	24,7	26,3	28,1	30,0	32,0	34,3	36,8	39,8
710	17,8	18,8	19,4	20,1	20,9	21,8	22,7	23,7	24,9	26,3	27,9	29,7	31,7	33,7	36,0	38,6	41,6
800	19,4	20,4	21,0	21,7	22,5	23,5	24,4	25,4	26,7	28,1	29,7	31,5	33,5	35,5	37,9	40,5	43,6
900	21,2	22,2	22,8	23,6	24,4	25,3	26,3	27,3	28,6	30,0	31,7	33,5	35,5	37,6	40,1	42,7	45,8
1000	23,0	24,0	24,7	25,4	26,2	27,2	28,2	29,3	30,5	32,0	33,7	35,5	37,6	39,7	42,2	44,9	48,0
1120	25,1	26,2	26,9	27,6	28,5	29,4	30,5	31,5	32,8	34,3	36,0	37,9	40,1	42,2	44,8	47,5	50,7
1250	27,5	28,6	29,2	30,0	30,9	31,8	32,9	34,0	35,3	36,8	38,6	40,5	42,7	44,9	47,5	50,3	53,6
1400	30,2	31,3	32,0	32,7	33,6	34,6	35,8	36,9	38,2	39,8	41,6	43,6	45,8	48,0	50,7	53,6	57,0

7.12 JPK

Circular single wall passage

ORDER CODE

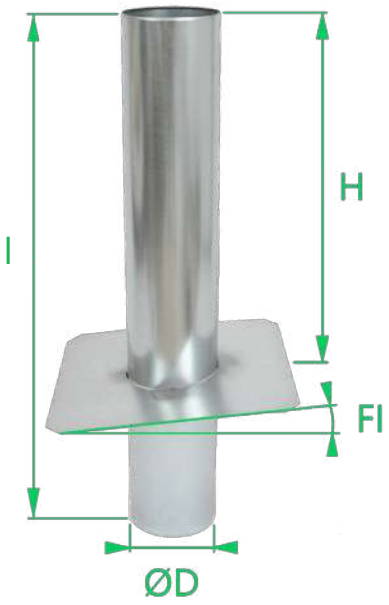
JPK	D	/	FI	/	H	-	I	-	K	.	K1
	1		2		3		4		5		6

1	D	Passage diameter
2	FI	Base plate angle (A side)
3	H	Passage height above the roof
4	I	Passage total height
5	K	Circular input end, bottom (options see TAB. 2)
6	K1	Circular output end, top (options see TAB. 2)

Order code example:

JPK 315/0°/850-1500-VKM.VKM

Circular single wall passage, diameter of 315 mm, base plate angle 0°, height above the base plate 850 mm, total height 1500 mm, circular bottom end - male end, circular top end – male end



DIMENSION SERIES

D	passage connection:	100, 125, 140, 150, 160, 180, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1120, 1250 mm
H	passage height:	650, 850, 1050, 1250 mm
I	total passage height:	max 1500 mm

APPLICATION

Circular single wall passage serves for a passage of circular ducts through the roof. It does not include thermal insulation; additional thermal insulation is required to prevent potential water condensation. Circular single wall passage is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	100 °C
Recommended air flow velocity for exhaust:	up to 10 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- galvanized sheet DX51 D+Z 200 MAC
Design	- all joints of the passage are sealed from the outside to prevent water ingress - circular end options according to TAB. 2
Installation	- the passage is anchored to the roof using a base plate, angle of the base plate can be adjusted to match the roof slope; if the roof slope is low, the base plate can be underlaid and leveled - the internal duct system is connected to the bottom end of the passage - exhaust hood, etc. can be installed to the upper end of the passage - the manufacturer recommends using a storm collar for circular ducts to cover the joint between the passage and adjacent duct parts
Non-standard design	NER, TIT ZN, CU, AL, AL ZN, LAK, KOX, NAT

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)
base plate angle 0°, total passage height L = 1500 mm

Passage diameter D (mm)	100	125	160	200	250	315	355	400	450	500	560	630	710
Passage height H = 650 mm	2,4	2,8	3,3	4,0	4,7	5,8	7,1	8,0	8,8	10,6	11,8	13,1	14,7
Passage height H = 850 mm	2,8	3,3	4,0	4,7	5,7	6,9	8,6	9,5	10,6	12,8	14,1	15,8	17,6
Passage height H = 1050 mm	3,4	4,0	4,8	5,8	6,9	8,4	10,5	11,6	13,0	15,6	17,3	19,3	21,6
Passage height H = 1250 mm	4,2	4,9	5,9	7,0	8,5	10,3	12,9	14,3	15,9	19,2	21,3	23,7	26,5

TAB. 2: CIRCULAR END OPTIONS

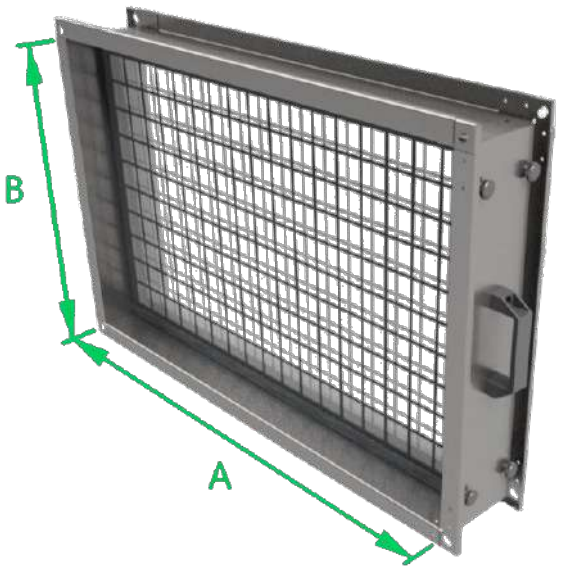
VKM	Free end which slides into the duct (male end) = **standard**
VKT	Free end with double-lip seal which slides into the duct
VKP	Free end which slides onto the duct fitting (female end)
KPL	Circular flange, pressed and drilled according to ON 12 0517 (up to diameter 800 mm, larger diameters KPW)
KPW	Circular rolled angle flange

8.01 PFR Rectangular duct filter

ZNAČENÍ

PFR	A	x	B	.	filtration class	.	material
	1		2		3		4

1	A	Duct width
2	B	Duct height
3	G2	Filtration class G2
	G3	Filtration class G3
	G4	Filtration class G4
	M5	Filtration class M5
4	zn	Galvanized steel
	ne	Stainless-steel



Order code example:
PFR 800x500.G4.zn

Rectangular duct filter, width 800 mm, height 500 mm, filtration media class G4, galvanized

DIMENSION SERIES

A	duct width:	300 – 2500 mm
B	duct height:	300 – 2500 mm
L	duct length:	140 mm*

* length of the duct part is fixed

APPLICATION

Rectangular duct filter is used as an additional filtration component, which is directly installed into the duct route. The filter is connected to the duct by a flange. The filtration medium comes in 4 filtration classes. The filtration medium inside the frame is not regenerative and needs to be replaced with a new one. Rectangular duct filter is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

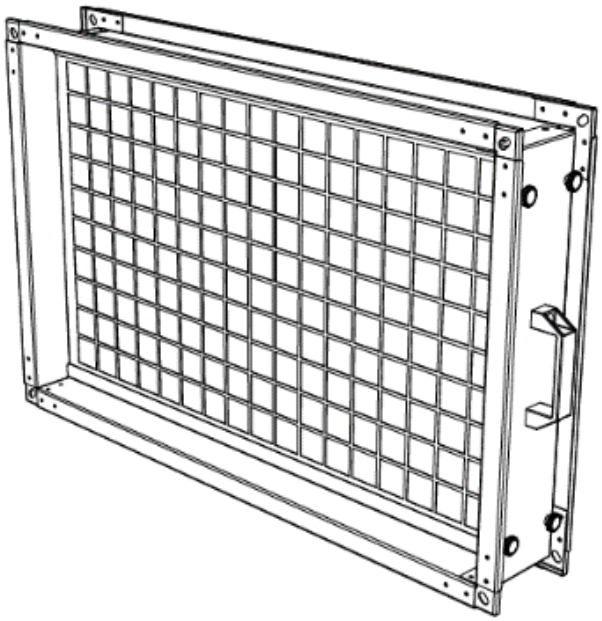
Max. temperatures – standard design:	80 °C
Max. air flow velocity:	3 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

MATERIAL AND DESIGN

Material	- duct casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - handle – PA plastic - filtration medium according to the filtration class - access doors are fastened with a plastic head M6 screw
Design	- the duct filter includes a bent flange with oval holes for installation on connecting duct parts with flanges P20 and P30
Installation	- rectangular duct filter is connected to adjacent duct parts using a bent flange

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	300	500	630	800	1000	1250	1500	2000	2500
300	3,4	4,7	5,6	6,8	8,3	10,5	12,3	15,9	19,7
500	4,7	6,6	7,7	9,3	11,4	14,4	16,8	21,6	27,2
630	5,6	7,7	10,2	12,4	15,3	18,5	22,1	28,3	34,5
800	6,8	9,3	13,1	15,8	19,5	23,5	27,7	35,9	43,9
1000	8,3	11,4	15,9	19,3	23,8	27,4	33,2	42,2	50,8
1250	10,5	14,4	18,5	23,5	27,4	30,4	35,8	46,8	57,8
1500	12,3	16,8	22,1	27,7	33,2	35,8	42,4	55,2	68,2
2000	15,9	21,6	28,3	35,9	42,2	46,8	55,2	72,0	88,8
2500	19,7	27,2	34,5	43,9	50,8	57,8	68,2	88,8	109,6



8.02 VYF Pleated filter

ORDER CODE

VYF	A	x	B	.	L	.	filtration class	.	material
	1		2		3		4		5

1	A	Filter width
2	B	Filter height
3	L	Filter length
4	G2	Filtration class G2
	G3	Filtration class G3
	G4	Filtration class G4
	M5	Filtration class M5
5	zn	Galvanized steel
	ne	Stainless-steel

Order code example:
VYF 800x500.100.G4.zn

Pleated filter, width 800 mm, height 500 mmm, lenght 100 mm, filtration media class G4, galvanized

DIMENSION SERIES

A	duct width:	300 – 2500 mm
B	duct height:	300 – 2500 mm
L	duct length:	90-200 mm*

* standard length of the filter is 100 mm

APPLICATION

Pleated filter is a suitable alternative for lower filtration classes both in ducts and in air handling units. It is inserted into prepared rails, which can be installed, for example, in a duct parts, unit, etc. Neither the duct parts nor the rails are standard components supplied with the filter. Pleated filter is not resistant to aggressive chemical substances and vapors.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	3 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

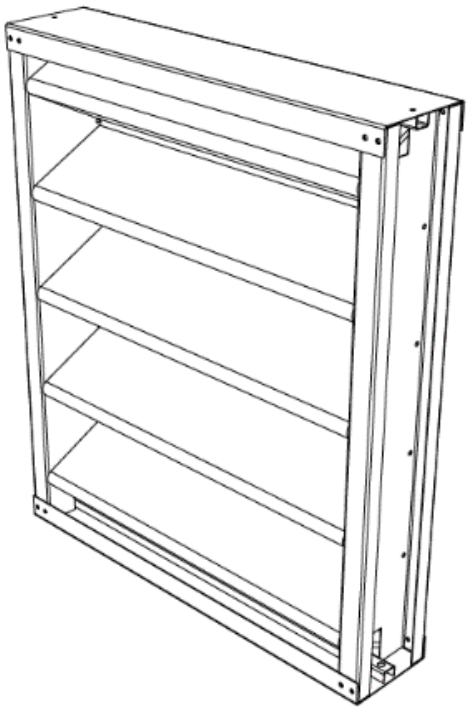
MATERIAL AND DESIGN

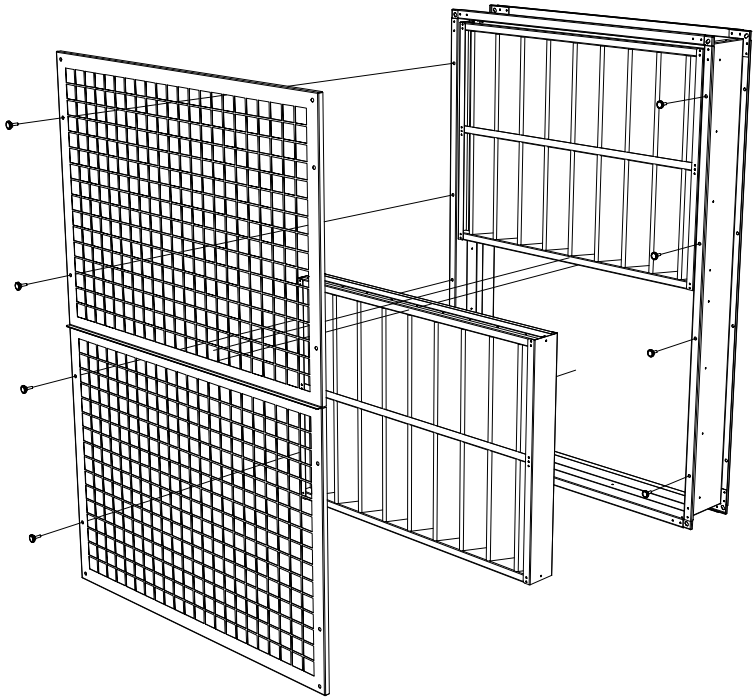
Material	- filter casing - deep drawing quality galvanized sheet DX51 D+Z 200 MAC - filtration medium - according to the filtration class G2, G3, G4 and M5 - tension element – copper rod
Design	- bent galvanized frame - fitted with a copper rod - filtration medium
Installation	- the filter is inserted into prepared rails, installed in ducts, units, etc. - the filtration medium is not regenerative

TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

A \ B	300	500	630	800	1000	1250	1500	2000	2500
300	2,4	3,2	3,7	4,4	5,2	6,2	7,2	9,2	11,2
500	3,2	4,0	4,5	5,2	6,0	7,0	8,0	10,0	12,0
630	3,7	4,5	5,0	5,7	6,5	7,5	8,5	10,5	12,5
800	4,4	5,2	5,7	6,4	7,2	8,2	9,2	11,2	13,2
1000	7,3	8,4	9,1	10,1	11,2	12,6	14,0	16,8	19,6
1250	8,7	9,8	10,5	11,5	12,6	14,0	15,4	18,2	21,0
1500	10,1	11,2	11,9	12,9	14,0	15,4	16,8	19,6	22,4
2000	12,9	14,0	14,7	15,7	16,8	18,2	19,6	22,4	25,2
2500	15,7	16,8	17,5	18,5	19,6	21,0	22,4	25,2	28,0

PLEATED FILTER – REMOVAL FROM THE FRONT THROUGH THE GRILLE COVER





8.03 VCP

Industrial air curtain

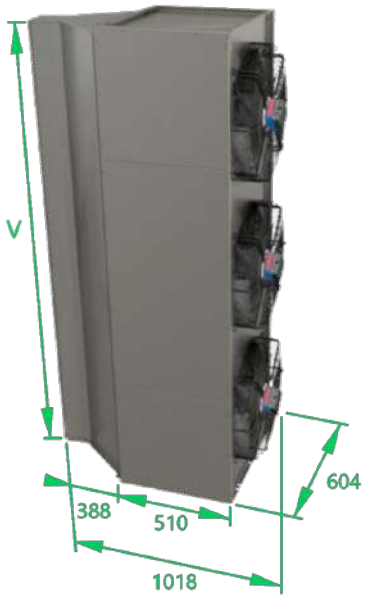
ORDER CODE

VCP	size	-	configuration	.	design
	I		I		I
	1		2		3

1	1000	Size 1000 mm
	1500	Size 1500 mm
	2000	Size 2000 mm
2	VP	Vertical right configuration (when viewed from the interior)
	VL	Vertical left configuration (when viewed from the interior)
	H	Horizontal configuration
3	zn	Galvanized
	RAL 9010	RAL 9010 shade

Order code example:
VCP 2000-H.zn

Industrial air curtain, size 2000 mm, horizontal, galvanized



DIMENSION SERIES

The air curtain is supplied in length modules of 2000, 1500 and 1000 mm. The desired size can be assembled from these modules. The air flow of the installed fans is listed in TAB 1.

APPLICATION

Industrial air curtain is used to create an air barrier between environments with different temperatures, most commonly between interior and exterior spaces, such as in production halls, warehouses, etc. In the basic configuration, the air curtain is supplied without heating. The air curtain does not contain any filters and is controlled by relay switch without time delay.

TECHNICAL DATA

Max. temperatures – standard design:	80 °C
Max. air flow velocity:	8 m/s
Max. static pressure difference:	+1000 Pa ÷ -630 Pa

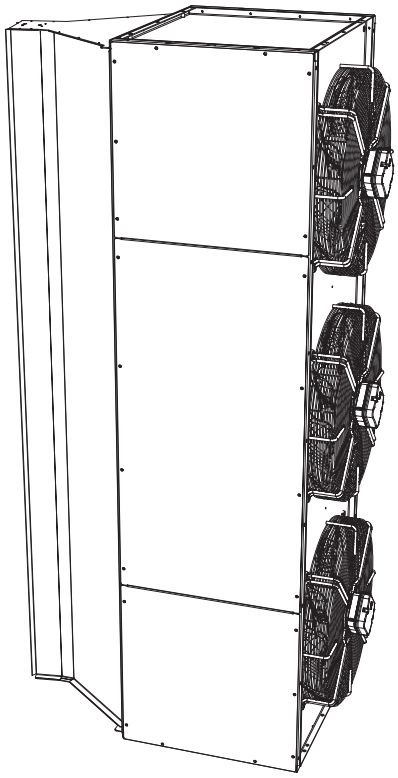
MATERIAL AND DESIGN

Material	- air curtain casing and diffuser – according to the design: deep drawing quality galvanized sheet DX51 D+Z 200 MAC, alternatively metal sheet RAL 9010 - fans with a free-running impeller and an EC motor
Design	- vertical right or left side configuration (when viewed from the interior towards the outside) - horizontal configuration - diffuser equipped with a blade for manually adjusting the direction of airflow
Installation	- vertical configuration – anchored to the floor or wall - horizontal configuration – strut channels or other type of brackets need to be used - anchoring elements are not included

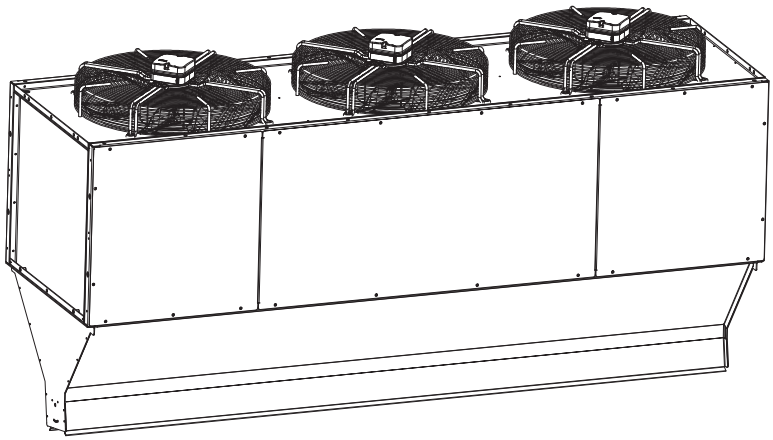
TAB. 1: WEIGHT ACCORDING TO DIMENSIONS (kg)

Air curtain size V (mm)	Number of fans	Air flow (m^3/h)	Weight (kg)
1000	1	1 x 3501	50
1500	2	2 x 3501	75
2000	3	3 x 3501	100

AIR CURTAIN – VERTICAL CONFIGURATION



AIR CURTAIN – HORIZONTAL CONFIGURATION



8.04 VSP / VSM

Air shower personnel / material

ORDER CODE

VS	design	/	specification according to customer requirements
	1		2

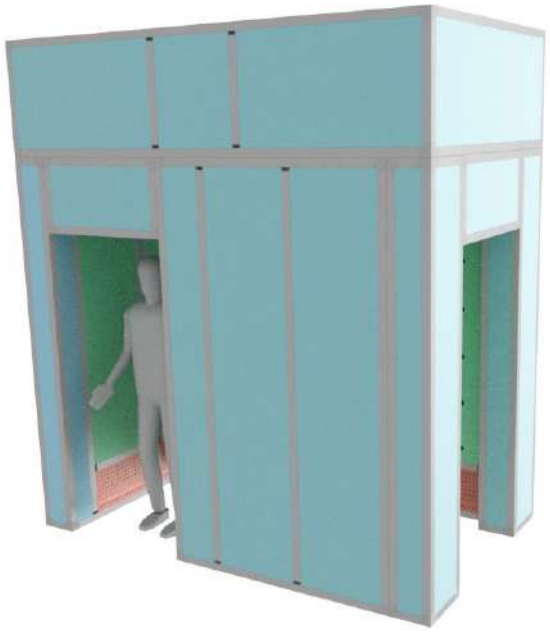
1	P	Personnel decontamination
	M	Material decontamination
2		Specification according to customer requirements

DIMENSION SERIES

The dimensions of the air showers are designed according to project requirements.

APPLICATION

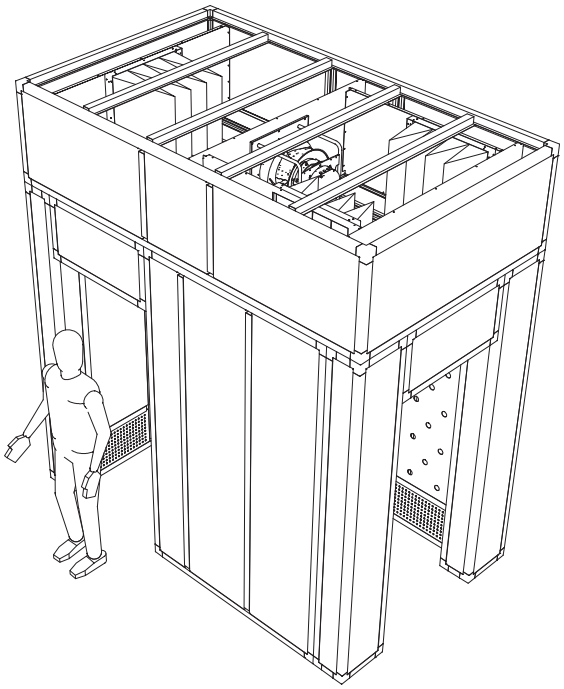
The air shower serves as a barrier between clean and contaminated working areas. The air is drawn through vertical panels of the shower from the room, passes through multi-stage filtration at the top of the air shower, and returns through nozzles in the vertical panels into the room. The entire process is controlled by an autonomous MaC system.
The personnel air shower is used to remove the finest contaminants from workers' clothing before and after entering clean areas. Decontamination involves removing dust and particulate matter captured on workers' clothing in clean areas using a high-speed stream of clean air through nozzles.
The material air shower is used to remove contaminants and impurities from materials and tools. They are most commonly used in laboratories, hospitals and manufacturing facilities for semiconductors and other highly specialized production environments.



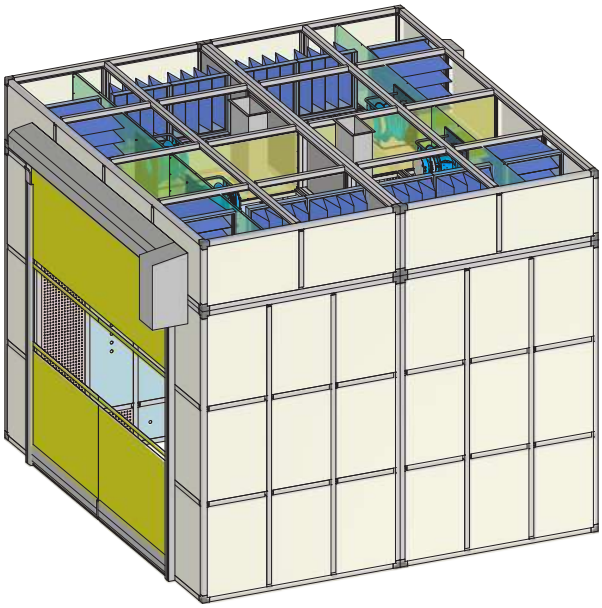
MATERIAL AND DESIGN

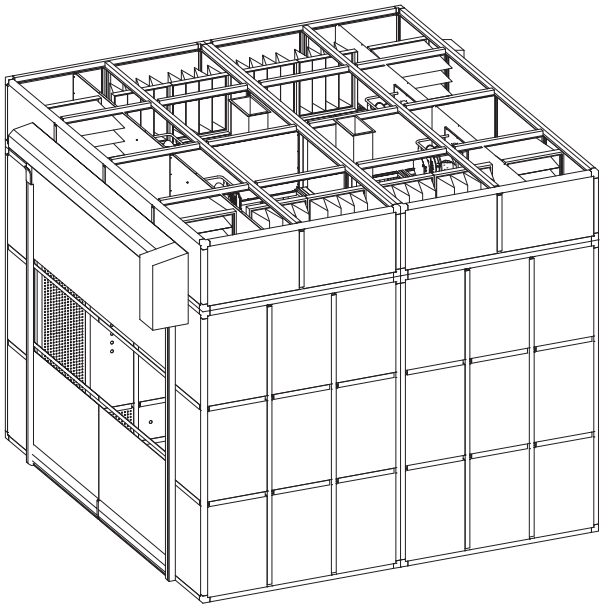
Material	- air shower casing - sheet metal color according to the RAL color standard; aluminum profiles designated for clean areas - filters are supplied with the air shower according to project requirements; generally, filtration classes range from class M5 to H13 filtration class - fans with a free-running impeller and EC motor
Design	- indoor air shower, air shower for clean areas - the material air shower can be supplied including roller doors - controlled via autonomous MaC
Installation	- air shower is supplied in a disassembled state due to dimensions - assembly takes place on-site at the designated location

PERSONNEL AIR SHOWER DRAFT



MATERIAL AIR SHOWER WITH ROLLER DOORS DRAFT





AIR HANDLING UNITS

9.01 AIR COM DEC

PARAMETERS:

Airflow:	300 m³/h – 1.200 m³/h	**Design:**	indoor
Heating capacity:	0,5 kW – 0,8 kW	**Installation:**	floor-mounted, ceiling-mounted, wall-mounted
Cooling capacity:	2,0 kW – 8,5 kW	**Sizes:**	see TAB. 1

APPLICATION

A compact flat unit designed for installation in false ceilings, as well as on the floor or wall. The main components of the unit in the basic configuration include a counterflow heat exchanger, a pair of filters, shut-off dampers, and a pair of fans with EC motors with continuous speed regulation. It can be supplemented with heating (electric, water), cooling (direct evaporator, water cooler), filters higher filtration class, circulation damper, or mixing.

Units are designed with compliance to the ECODESIGN 2018 standard.

MATERIAL AND DESIGN

Material	- unit frame: frameless construction - unit casing: deep drawing quality galvanized sheet DX51 D+Z 200 MAC, filled with noise-absorbing non-combustible filler
Used components	- from renowned manufacturers Ziehl-Abegg, Hoval, Recutech, Siemens, Klingenburg, Danfoss, HPM Therm and others
Basic configuration	- shut-off dampers, pair of filters, counterflow heat exchanger including bypass, pair of fans, water heater, water cooler
Optional components	- heating (water, or electric heater), cooling (direct evaporator), filters in higher filtration class, circulation damper
Assembly	- **floor-mounted** - the unit includes a stand on which the unit is mounted - **ceiling-mounted** - the unit includes hangers - **wall-mounted** - the unit is mounted on cantilever (not included in the delivery of the unit)
Delivery method	- units are standardly supplied on plinths, hangers can be attached upon request

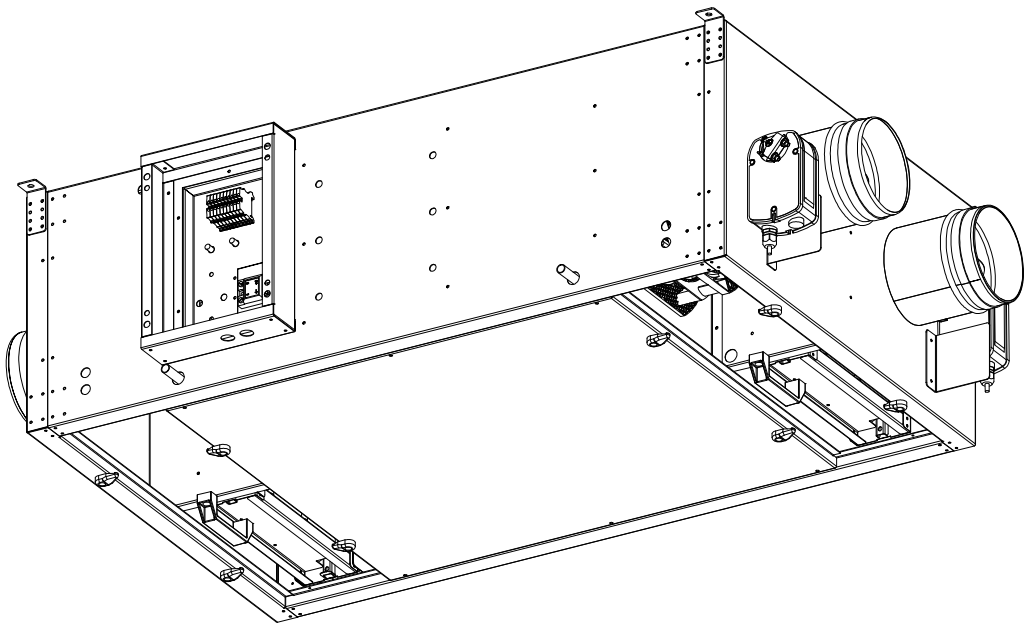
TAB. 1: AIR COM DEC UNIT SIZES

Production line	Size	Width A (mm)	Height B (mm)
AIR COM DEC	00.30	870	420
AIR COM DEC	00.50	890	420
AIR COM DEC	00.80	1030	420
AIR COM DEC	01.00	1090	420
AIR COM DEC	01.20	1310	420

* the unit dimension are variable

TAB. 2: AIR COM DEC UNITS CONFIGURATION OPTIONS

AIR COM DEC CONFIGURATION					
Fan	✓		Gas heater	✗
Plate heat exchanger	✓		Water coil cooler	✓
Rotary heat exchanger	✗		Evaporator	✓
Basic filtration	✓		Sound attenuator	✗
Additional filtration	✓		Mixing chamber	✓
Water coil heater	✓		Humidification	✗
Electric heater	✓		MaC system	✓



9.02 AIR INO / INE

PARAMETERS:

Airflow:	1.000 m³/h – 91.000 m³/h	**Design:**	indoor, outdoor
Heating capacity:	5,0 kW – 400,0 kW	**Installation:**	floor-mounted, ceiling-mounted, rooftop-mounted
Cooling capacity:	2,0 kW – 500,0 kW	**Sizes:**	see TAB. 1

APPLICATION

Block ventilation unit designed for installation both indoors (AIR INO) and outdoors (AIR INE), available in vertical or horizontal configurations. The unit features great variability in design and connections. It can be supplied in various chamber configurations - up to 16 basic chambers.

The unit can be assembled with chambers with heating (electric, water, and gas heating), cooling (direct evaporator, water cooler), filtration, noise dampers, heat exchangers (plate counterflow heat exchanger, rotary heat exchanger, with or without bypass), or mixing. Optional features include chamber lighting or external heating sources. Outdoor design - panel thickness 45 mm. Indoor design - standard thickness 45 mm or alternatively 25 mm.

Units are designed with compliance to the ECODESIGN 2018 standard.

MATERIAL AND DESIGN

Material	- unit frame: aluminum profile - unit casing: deep drawing quality galvanized sheet DX51 D+Z 200 MAC, filled with noise-absorbing non-combustible filler (standard thickness 45 mm, alternatively 25 mm)
Used components	- from renowned manufacturers Ziehl-Abegg, Hoval, Recutech, Siemens, Klingenburg, Danfoss, HPM Therm and others
Basic configuration	- damping inserts, shut-off dampers, pair of filters, counterflow heat exchanger including bypass, pair of fans, water heater, water cooler
Optional components	- heating (water, gas, or electric heater), cooling (direct evaporator), filters in higher filtration class, circulation damper, noise damper, mixing, humidification. Multi-zone configuration
Assembly	- **floor-mounted** - the unit includes a stand on which the unit is mounted - **ceiling-mounted** - the unit includes hangers - **wall-mounted** - the unit is mounted on cantilever (not included in the delivery of the unit)
Delivery method	- units are standardly supplied on plinths, hangers can be attached upon request

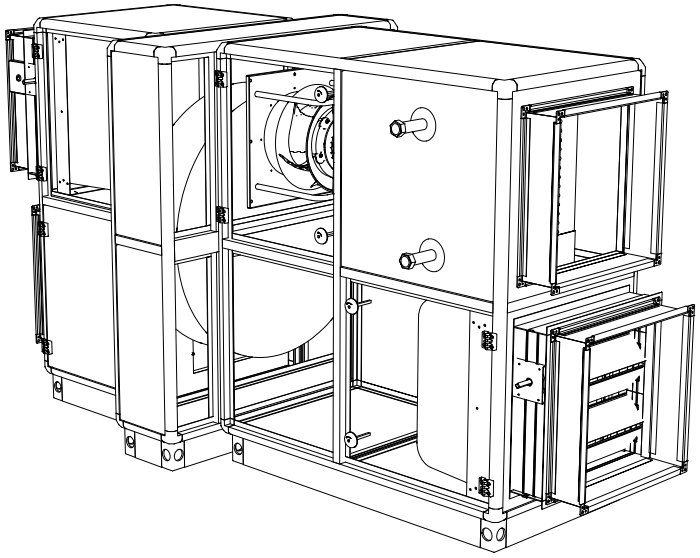
TAB. 1: AIR INO / INE UNIT SIZES

Production line	Size	Width A (mm)	Height B (mm)
AIR INO/INE	03.15	624	624
AIR INO/INE	05.00	936	624
AIR INO/INE	08.00	936	936
AIR INO/INE	10.00	1 248	936
AIR INO/INE	14.00	1 248	1 248
AIR INO/INE	18.00	1 560	1 248
AIR INO/INE	22.50	1 560	1 560
AIR INO/INE	28.00	1 872	1 560
AIR INO/INE	31.50	1 872	1 872
AIR INO/INE	40.00	2 184	1 872
AIR INO/INE	45.00	2 184	2 184
AIR INO/INE	50.00	2 496	2 184
AIR INO/INE	56.00	2 496	2 496
AIR INO/INE	63.00	2 808	2 496
AIR INO/INE	71.00	2 808	2 808
AIR INO/INE	80.00	3 120	2 808

The dimensions specify the flow in the net surface area (internal cross-section of the unit).

TAB. 2 AIR INO/INE UNITS CONFIGURATION OPTIONS

AIR INO / INE CONFIGURATION					
EC AC	Fan	✓		Gas heater	✓
	Plate heat exchanger	✓		Water coil cooler	✓
	Rotary heat exchanger	✓	DX	Evaporator	✓
	Basic filtration	✓		Sound attenuator	✓
	Additional filtration	✓		Mixing chamber	✓
	Water coil heater	✓		Humidification	✓
	Electric heater	✓		MaC system	✓



9.03 AIR INOH / INEH

PARAMETERS:

Airflow:	1.000 m³/h – 91.000 m³/h	**Design:**	indoor, outdoor
Heating capacity:	5,0 kW – 400,0 kW	**Installation:**	floor-mounted, ceiling-mounted, rooftop-mounted
Cooling capacity:	2,0 kW – 500,0 kW	**Sizes:**	see TAB. 1

APPLICATION

Air handling units of the AIR INOH and AIR INEH series are suitable for use in hospitals, laboratories, the pharmaceutical industry and other applications with clean rooms. Due to a special aluminum profile, the inner part of the unit is completely smooth without sharp edges and is easily cleanable.

The unit is intended for installation both indoors (AIR INOH) and outdoors (AIR INEH), in vertical or horizontal configurations. The air handling unit can be supplied in various chamber configurations. It can be equipped with basic (M5-F7) or multi-stage filtration (M5-H13), a plate counterflow or rotary heat exchanger (with or without bypass), heating (electric, water, gas heating), cooling (direct evaporator, water cooler), hygienic noise dampers, mixing, or adiabatic or steam humidification. Optional features include chamber lighting or an external heating source.

The construction consists of aluminum profiles with a thickness of 40 mm. The unit casing can be made of stainless steel, RAL sheet metal, galvanized steel, or a combination of these materials, applicable for both indoor and outdoor designs.

Units are designed with compliance to the ECODESIGN 2018 standard and meet the requirements of VDI 6022 directive.

MATERIAL AND DESIGN

Material	- unit frame: aluminum profile - unit casing: deep drawing quality galvanized sheet DX51 D+Z 200 MAC, filled with noise-absorbing non-combustible filler, hygienic profile thickness 40mm
Used components	- from renowned manufacturers Ziehl-Abegg, Hoval, Recutech, Siemens, Klingenburg, Danfoss, HPM Therm and others
Basic configuration	- damping inserts, shut-off dampers, pair of filters, multi-stage filtration, counterflow heat exchanger including bypass, pair of fans, water heater, water cooler
Optional components	- heating (water, gas, or electric heater), cooling (direct evaporator), higher filtration class, circulation damper, noise damper, mixing, humidification. Multi-zone configuration
Assembly	- **floor-mounted** - the unit includes a stand on which the unit is mounted - **ceiling-mounted** - the unit includes hangers - **wall-mounted** - the unit is mounted on cantilever (not included in the delivery of the unit)
Delivery method	- units are standardly supplied on plinths, hangers can be attached upon request

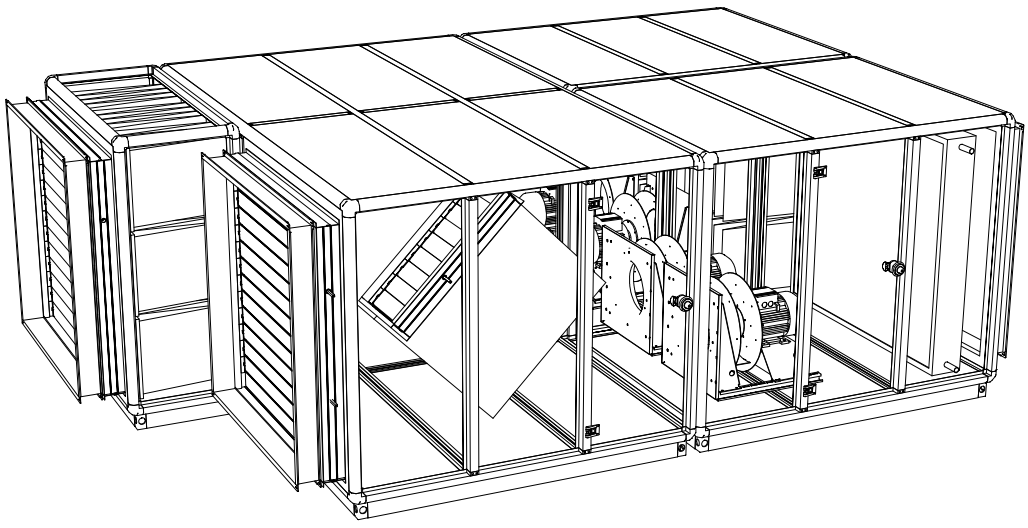
TAB. 1: AIR INOH / INEH UNIT SIZES

Production line	Size	Width A (mm)	Height B (mm)
AIR INOH / INEH	03.15	624	624
AIR INOH / INEH	05.00	936	624
AIR INOH / INEH	08.00	936	936
AIR INOH / INEH	10.00	1 248	936
AIR INOH / INEH	14.00	1 248	1 248
AIR INOH / INEH	18.00	1 560	1 248
AIR INOH / INEH	22.50	1 560	1 560
AIR INOH / INEH	28.00	1 872	1 560
AIR INOH / INEH	31.50	1 872	1 872
AIR INOH / INEH	40.00	2 184	1 872
AIR INOH / INEH	45.00	2 184	2 184
AIR INOH / INEH	50.00	2 496	2 184
AIR INOH / INEH	56.00	2 496	2 496
AIR INOH / INEH	63.00	2 808	2 496
AIR INOH / INEH	71.00	2 808	2 808
AIR INOH / INEH	80.00	3 120	2 808

The dimensions specify the flow in the net surface area (internal cross-section of the unit).

TAB. 2: AIR INOH / INEH UNITS CONFIGURATION OPTIONS

AIR INOH / INEH CONFIGURATION					
EC AC	Fan	✓		Gas heater	✓
	Plate heat exchanger	✓		Water coil cooler	✓
	Rotary heat exchanger	✓	DX	Evaporator	✓
	Basic filtration	✓		Sound attenuator	✓
	Additional filtration	✓		Mixing chamber	✓
	Water coil heater	✓		Humidification	✓
	Electric heater	✓		MaC system	✓



9.04 ROOFTOP

PARAMETERS:

Airflow:	5.000 m³/h – 10.000 m³/h	**Design:**	outdoor
Heating capacity:	2.0 kW – 65.0 kW	**Installation:**	rooftop-mounted
Cooling capacity:	2.0 kW – 85.0 kW	**Sizes:**	05.00, 07.00, 10.00

APPLICATION

The rooftop compact ventilation unit is constructed from 45 mm thick aluminum panels with optional casing. The standard configuration features a sandwich panel made of galvanized sheet metal filled with mineral wool.

At the inlet and outlet, there is basic filtration class - M5 on the exhaust and F7 on the supply. It includes a high-efficiency plate heat exchanger, which comes with a bypass damper; it is possible to add a mixing damper. Energy-efficient fans with EC motors ensure smooth air distribution, and integrated MaC controls the rooftop unit's operation.

The rooftop unit can be equipped with water heating, direct evaporator cooling or a water chiller.

Units are designed with compliance to the ECODESIGN 2018 standard.

MATERIAL AND DESIGN

Material	- unit frame: aluminum profile - Unit casing: deep drawing quality galvanized sheet DX51 D+Z 200 MAC, filled with noise-absorbing non-combustible filler, profile thickness 45 mm
Used components	- from renowned manufacturers Ziehl-Abegg, Hoval, Recutech, Siemens, Klingenburg, Danfoss, HPM Therm and others
Basic configuration	- shut-off dampers, pair of filters, counterflow heat exchanger including bypass, pair of fans, water heater, water chiller
Assembly	- rooftop - installed directly on the passage
Delivery method	- units are standardly supplied on plinths, hangers can be attached upon request

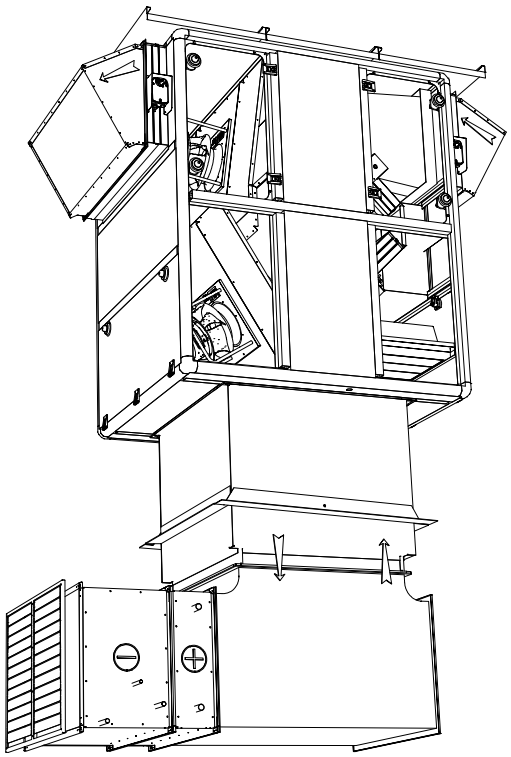
TAB. 1: ROOFTOP SIZES

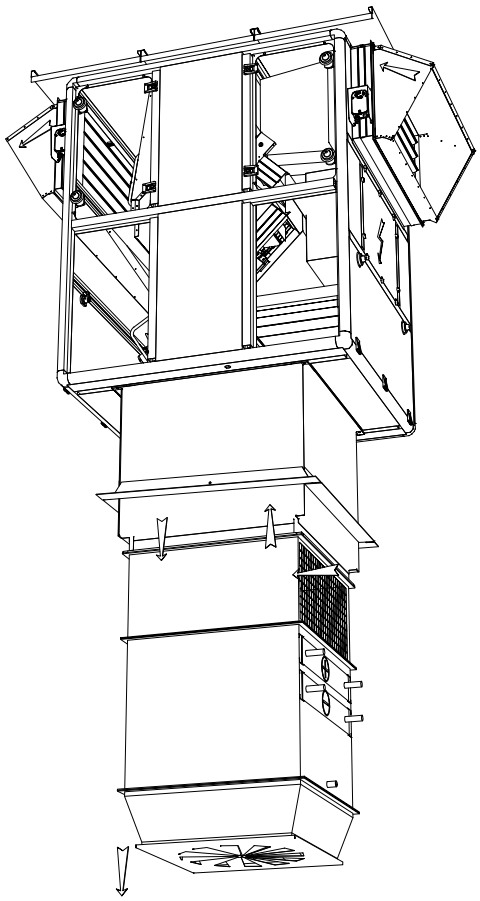
Production line	Size	Width A (mm)	Height B (mm)	Length (mm)
ROOFTOP	05.00	1760	2022	1500
ROOFTOP	07.00	1760	2022	2000
ROOFTOP	10.00	1760	2022	2800

The dimensions specify the flow in the net surface area (internal cross-section of the unit).

TAB. 2: ROOFTOP CONFIGURATION OPTIONS

ROOFTOP CONFIGURATION					
Fan	✓		Gas heater	✗
Plate heat exchanger	✓		Water coil cooler	✓
Rotary heat exchanger	✗		Evaporator	✓
Basic filtration	✓		Sound attenuator	✗
Additional filtration	✗		Mixing chamber	✓
Water coil heater	✓		Humidification	✗
Electric heater	✓		MaC system	✓





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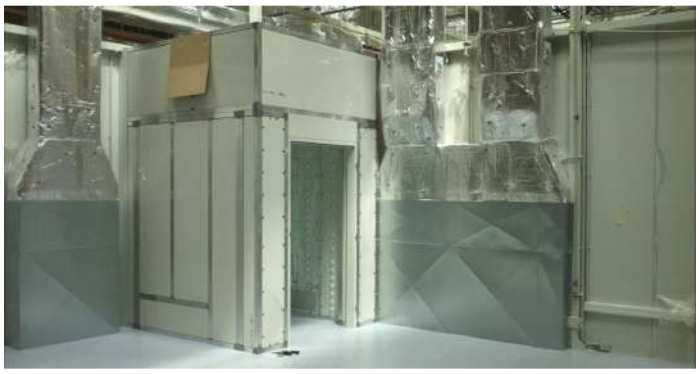


CZ – SMS InfoComm, Brno


CZ – Koito, Žatec


SK – Jaguar, Nitra

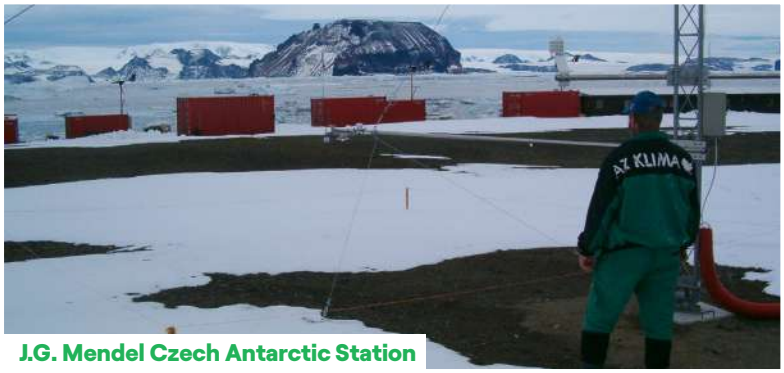
AZ KLIMA
ČLEN ČEZ ESCO



CZ – TPCA Kolín

SK – INOBAT

SK – KIA Motors, Žilina

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