

TERM



INTENDED USE

TERM heating units with axial fans, metal casings and II and III rows heaters adapted for supplying with water of temperature up to 150/100°C or with steam under pressure up to 0,6 MPa are the most universal offer of the devices for heating such compartments as: **production warehouses, workshops, storage warehouses, retail pavilions, show and sports halls etc.**

Heating-ventilating units are manufactured by adding to the heating TERM units TERM the roof or wall intakes and the intake boxes which enable to determine the proportion of mixing fresh and circulating air.

Units are adapted to operate in horizontal position as the ceiling units as well as in vertical position as the wall units. In both positions the heaters construction ensures the opportunity of complete deaeration and dehydration.

Regarding the air capacity TERM 0; 1; 2; units has the same capacity as the TROPIC heating units with the simultaneous increasing of achieved thermal power, thermal mediums and the opportunity for using them for heating and ventilating.

Whereas TERM 3; 4 units complete the current application area of the UGW/S and UGW/O type heating/ventilating units.

DEVICE DESCRIPTION

Series of types of units include 5 sizes.

The unit consists of:

- axial fan;
- water heater (metal louvre or bimetal) or steam heater (bimetal);
- external casing;
- single-row inlet grid

Fin water heaters are made of the copper pipes with internal diameter of 12mm and of aluminum fins with spacing $s=2,4$ mm.

Bimetal water heaters are made of steel pipes with external diameter $d=16$ mm as well as of spirally rolled aluminum ribbing with external diameter of the element $D=38$ mm and the ribs spacing $s=2,8$ mm. Steam heaters are made of steel pipes with the external diameter $d=25$ mm and spirally threaded aluminum ribbing with external diameter $D=58$ mm and the ribs spacing 2,8mm or 5mm.

Units with fin water heaters or bimetal heaters are with internal threads and units with steam heaters are with external threads.

In the units which are intended to operate as the ceiling units the outlet grid can be replaced with the slot diffuser or with the exhaust nozzle.

Slot diffuser enables heating people staying zone with secondary air stream.

Exhaust nozzle enables the increase the range of the supply air stream. For mounting the units on the brackets at the wall or on the floor feet (TERM 0;1; 2;) or arms (TERM 3;4) located in the lower part of the casing are used.

In order to undersling the units to the ceiling 4 screws located on the both sides of the casing (TERM 0; 1; 2) are used or blind rivets nuts which enable suspending with use of the threaded bars (TERM 3;4).

WORKING CONDITIONS

Units with fin water heater can be supplied with water of temperature 110/70°C or lower and with the operational pressure up to 1MPa, and with bimetal water heater they can be supplied with water of temperature up to 150/70°C and with operational pressure up to 1,6 MPa.

Units with steam heater (**only wall mounted**) can be supplied with steam under pressure of up to 0,6 Mpa.

TERM 0;1 units fans are supplied only with single phase motors 230 V, 50 Hz.

TERM 2 units fans are supplied with three phase motors 400 V, 50 Hz or with single phase motors 230V; 50Hz.

TERM 3; 4 units fans are supplied only with the three-phase motors 400V; 50Hz.

Three-phase motors of units 2; 3; 4; can be connected in λ or Δ .

On buyer's request units TERM 1;2; 3; 4; can be equipped with the motors with the increased level of anti-explosive protection.

DESIGNATIONS

Heating and ventilation unit	TERM - 2 - W; 90/70; 0,6 - L; III - K - T
Size	0÷4
Heating medium	water (W), temp. (°C) and permissible pressure (MPa) steam (P), pressure (MPa)
Heater	metal louvre (L), number of rows (II, III) water bimetal (B) number of rows (II, III) steam bimetal (B), number of rows (II/2.8, II/5)
Equipment	single-row grid (K); slot diffuser (N) exhaus nozzle (D)
Fan motor	three phase (T); single phase (J);

ADDITIONAL EQIPMENT DESIGNATIONS

Roof intake	CD - 1 - 2xOs
Size	0÷4
Additional shields	1÷4pcs
Wall intake	CS - 1
Size	0÷4
Roof base	PD - 1
Size	0÷4
Air intake box	SC - 1 - F - P
Size	0÷4
Additional equipment	filter (F) circulating air throttles (P)

EXAMPLE OF DESIGNATION

Of ceiling operating unit equipped with roof air intake box, roof base and air intake box with the hanging elements.

TERM - 2 - W; 90/70; 0,6 - L; III - K - T

Additional equipment: **CD - 2 + PD - 2 + SC - 2**

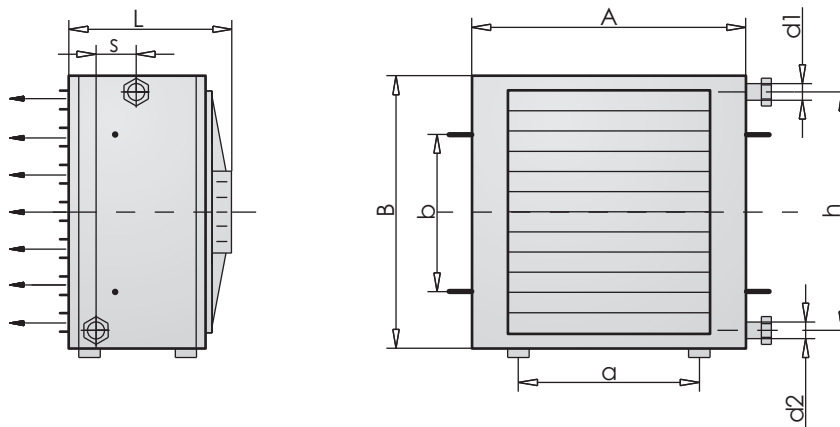
Hanging elements: **EZ** (according to the designations in the „Hangings“ division).

TERM HEATING AND VENTILATION UNITS

TECHNICAL DATA

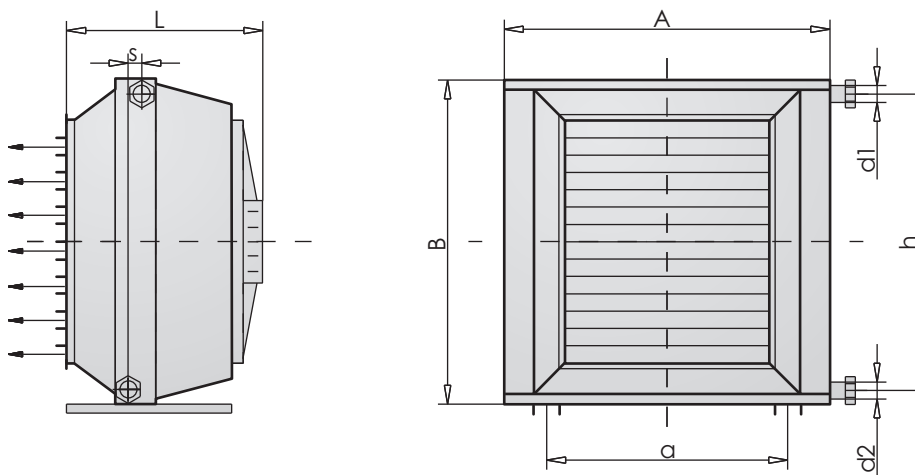
Basic dimensions

TERM 0; 1; 2



Unit size	A [mm]	B [mm]	L [mm]	a [mm]	b [mm]	Metal louvre heater units					Bimetal water heater units					Bimetal steam heater units			
						d ₁ =d ₂		h [mm]	s [mm]	Weight [kg]	d ₁ =d ₂		h [mm]	s [mm]	Weight [kg]	d ₁ /d ₂		h [mm]	Weight [kg]
						II	III				II	III				II;2,8	II;5		
0	412	412	330	280	200	1/2"	1/2"	300	70	16	3/4"	3/4"	320	60	30	3/4"/1/2"	3/4"/1/2"	360	35
1	556	526	420	420	290	3/4"	3/4"	460	70	26	3/4"	3/4"	445	60	38	1"/3/4"	1"/3/4"	460	45
2	677	684	436	420	380	3/4"	1"	620	70	46	1"	1 1/4"	610	45	84	1 1/4"/1"	1 1/4"/1"	620	72

TERM 3; 4



Unit size	A [mm]	B [mm]	L [mm]	a [mm]	d ₁ =d ₂		d ₁ /d ₂		h [mm]	s [mm]	Weight [kg]
					II	III	II; 2,8	II; 5			
Metal louvre heater units											
3	1080	1017	589	860	1 1/4"	1 1/2"	-	-	930	70	105
4	1350	1257	630	1080	1 1/2"	2"	-	-	1160	70	157
Bimetal water heater units											
3	990	990	805	830	1 1/4"	1 1/2"	-	-	790	40	175
4	1220	1220	890	1070	1 1/2"	2"	-	-	990	30	215
Bimetal steam heater units											
3	1090	1090	805	830	-	-	2"/1 1/2"	1 1/2"/1 1/4"	930	-	180
4	1320	1320	890	1070	-	-	2"/1 1/2"	2"/1 1/2"	1160	-	255

In the table were presented the weights and the spacing of connectors of units with the III row water heaters, the weights and spacing of connectors of units with the II row steam heaters with the ribs spacing 2,8mm.

TERM HEATING AND VENTILATION UNITS

Units fans parameters

Unit size	Fan type	Voltage [V]	Motor power [kW]	Current [A]	Revolutions [rpm]	IP	Insulation class	Operating temperature [°C]
TERM-0	HXM-300	230	0,055	0,40	1300	40	B	+40
TERM-1	FN035-4E	230	0,18	0,77	1300	54	F	+60
TERM-2	FN045-4E	230	0,55	2,2	1350	54	F	+60
	Δ FN045-VD connection	400	0,54	1,1	1370	54	F	+70
	λ connection	400	0,37	0,68	1070	54	F	+70
TERM-3	Δ FE056-VD connection	400	1,2	2,4	1330	54	F	+50
	λ connection	400	0,65	1,25	980	54	F	+50
TERM-4	Δ FE063-VD connection	400	2,6	4,8	1330	54	F	+65
	λ connection	400	1,6	2,7	1040	54	F	+65

Manufacturer reserves the rights to implement modifications.

Thermal power of units with metal louvre heaters

Unit size		TERM-0					
Air capacity [m³/h]		1150			1100		
Number of heater rows		II			III		
Water capacity [dm³]		1,0			1,2		
Water temperature [°C]	Inflow air temperature [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]					
		kW	°C	kPa	kW	°C	kPa
110/80	-15	15,0	20	1,5	20,0	34	1,5
	0	12,5	31	1,2	16,5	43	1,1
	+15	10,0	41	1,0	13,3	52	1,0
90/70	-15	13,6	17	2,9	18,0	29	2,6
	0	11,0	27	1,8	14,4	38	1,9
	+15	8,4	37	1,1	11,1	46	1,4
80/60	-15	11,9	13	2,2	15,8	24	2,0
	0	9,3	23	1,6	12,4	32	1,5
	+15	6,9	33	1,2	9,2	40	1,2
70/50	-15	10,3	9	1,6	13,2	19	1,5
	0	7,8	19	1,3	10,3	27	1,3
	+15	5,4	29	1,1	7,2	35	1,1
60/40	-15	8,6	5	1,2	11,5	13	1,2
	0	6,2	15	1,1	8,3	22	1,1
	+15	4,0	25	1,0	5,3	30	1,0

TERM HEATING AND VENTILATION UNITS

Thermal power of units with metal louvre heaters

Unit size		TERM-1					
Air capacity [m ³ /h]		2700			2600		
Number of heater rows		II			III		
Water capacity [dm ³]		1,5			2,0		
Water temp. [°C]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]					
		kW	°C	kPa	kW	°C	kPa
110/80	-15	41,0	24	12,0	54,6	40	11,0
	0	34,1	35	8,4	45,2	48	8,0
	+15	27,4	44	5,5	36,4	56	5,2
90/70	-15	38,0	21	23,0	48,9	34	21,1
	0	30,5	31	15,0	39,4	42	13,6
	+15	23,6	40	9,1	34,0	49	8,1
80/60	-15	33,3	17	18,2	43,1	28	16,3
	0	26,1	26	11,0	33,8	36	10,0
	+15	19,3	36	6,0	25,1	43	5,5
70/50	-15	28,7	13	13,0	37,3	22	12,2
	0	21,7	22	7,7	28,3	30	7,0
	+15	15,2	31	3,8	19,9	37	3,4
60/40	-15	24,2	9	9,0	31,6	17	8,8
	0	17,2	18	5,1	22,9	24	4,6
	+15	11,2	27	2,1	14,8	31	1,9

Thermal power of units with metal louvre heaters

Unit size		TERM-2											
Air capacity [m ³ /h]		6200			6000			4750			4600		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		2,4			3,2			2,4			3,2		
Water temp. [°C]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
110/80	-15	83,1	24	19,5	108,3	39	19,0	71,6	29	14,0	92,4	45	14,0
	0	68,9	34	13,0	89,7	48	13,5	59,3	39	10,1	76,5	53	9,8
	+15	55,4	44	8,8	72,2	56	8,7	47,7	48	6,5	61,6	60	6,4
90/70	-15	76,4	21	40,0	97,8	34	33,9	66,2	26	33,9	83,5	38	24,5
	0	61,4	31	30,6	78,6	41	21,7	53,2	35	21,7	67,2	46	16,6
	+15	47,2	40	19,0	60,5	49	14,3	40,9	44	14,3	51,6	53	8,4
80/60	-15	67,0	17	37,3	86,1	28	27,4	58,1	21	27,4	73,6	32	19,0
	0	52,5	26	21,7	67,4	35	16,6	45,5	30	16,6	57,7	39	12,2
	+15	38,7	36	12,2	49,9	43	8,4	33,6	38	8,4	42,7	46	6,8
70/50	-15	57,8	13	27,4	74,5	22	19,0	50,2	16	19,0	63,8	26	14,3
	0	43,7	22	14,3	56,4	30	10,3	38,0	25	12,2	48,4	33	8,4
	+15	30,5	31	6,8	39,5	37	5,4	26,5	33	5,9	33,9	40	4,1
60/40	-15	48,7	8	19,0	63,1	16	14,3	42,4	11	14,3	54,2	20	10,2
	0	35,1	18	10,2	45,6	24	6,8	30,6	20	7,9	39,2	26	5,8
	+15	22,4	27	4,1	29,4	31	3,0	19,6	28	3,2	22,5	33	2,4

TERM HEATING AND VENTILATION UNITS

Thermal power of units with metal louvre heaters

Unit size		TERM-3											
Air capacity [m ³ /h]		10850			10500			8280			8000		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		4,8			7,5			4,8			7,5		
Water temp. [°C]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
110/80	-15	170,8	26	15,0	224,0	41	12,0	150,5	30	12,6	195,2	46	9,8
	0	141,5	36	10,9	186,0	49	7,9	124,7	40	7,8	161,6	53	6,3
	+15	113,8	45	6,3	149,8	57	4,9	100,3	49	5,0	130,0	60	3,8
90/70	-15	157,8	23	17,2	201,7	35	13,1	138,5	27	14,1	178,5	39	10,5
	0	127,0	32	11,3	162,2	43	8,1	111,4	35	8,1	143,6	46	6,7
	+15	97,6	41	6,7	124,7	50	5,0	85,6	44	5,4	110,4	53	3,9
80/60	-15	138,4	18	13,1	177,5	29	9,6	121,6	22	11,3	157,3	32	8,1
	0	108,5	27	8,1	139,2	36	6,3	95,3	30	6,7	123,4	39	4,9
	+15	80,1	37	4,3	102,9	44	3,5	70,4	39	3,6	91,3	46	2,7
70/50	-15	119,5	14	9,6	153,7	23	6,7	105,1	16	8,1	136,4	26	6,2
	0	90,4	23	6,0	116,6	30	4,5	79,5	25	4,7	103,5	33	3,5
	+15	63,1	32	2,9	81,6	38	2,2	55,5	34	2,2	72,6	40	1,7
60/40	-15	100,8	9	6,7	130,4	17	5,4	88,8	12	5,8	115,9	20	4,4
	0	72,7	18	3,2	94,4	25	2,9	64,1	20	3,0	83,9	27	2,3
	+15	46,5	27	1,7	60,7	32	1,4	41,1	29	1,2	54,2	33	1,1

Thermal power of units with metal louvre heaters

Unit size		TERM-4											
Air capacity [m ³ /h]		19000			18500			14840			14500		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		7,5			11,5			7,5			11,5		
Water temp. [°C]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
110/80	-15	260,5	20	4,0	348,8	34	3,1	228,0	25	3,1	298,3	40	2,2
	0	215,9	31	2,7	289,0	43	2,0	188,9	35	2,1	249,7	48	1,5
	+15	173,7	41	1,6	232,7	52	1,2	152,0	45	1,3	201,0	56	1,0
90/70	-15	241,4	18	4,2	314,8	29	3,2	210,7	22	3,3	271,3	34	2,4
	0	194,2	28	2,8	253,2	38	2,1	169,4	31	2,2	218,2	42	1,6
	+15	150,5	37	1,7	196,9	45	1,3	131,5	40	1,4	170,0	48	1,1
80/60	-15	211,5	14	3,3	276,6	24	2,5	184,8	17	2,6	238,8	28	1,9
	0	165,6	24	2,0	216,7	32	1,5	144,7	27	1,6	187,2	36	1,2
	+15	123,2	33	1,1	162,1	40	1,1	107,9	35	1,1	140,2	42	1,0
70/50	-15	182,2	10	2,5	239,1	18	1,9	159,3	13	1,9	206,7	22	1,4
	0	137,7	20	1,5	181,1	27	1,1	120,5	22	1,1	156,6	30	1,1
	+15	96,7	29	1,0	128,0	34	1,0	84,8	31	1,0	111,0	37	1,0
60/40	-15	153,5	6	1,7	202,3	13	1,3	134,4	8	1,3	175,1	16	1,1
	0	110,6	16	1,1	146,1	22	1,0	97,0	18	1,0	126,7	24	1,0
	+15	71,0	25	1,0	94,7	29	1,0	62,4	27	1,0	82,4	31	1,0

TERM HEATING AND VENTILATION UNITS

Thermal power of units with bimetal water heaters

Unit size		TERM-0					
Air capacity [m ³ /h]		1150			1100		
Number of heater rows		II			III		
Water capacity [dm ³]		1,2			1,7		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]					
		kW	°C	kPa	kW	°C	kPa
80/60	-15	11,0	11	1,8	13,8	19	1,2
	0	8,7	22	1,3	10,9	28	1,1
	+15	6,5	32	1,1	8,2	37	1,0
90/70	-15	12,5	15	2,2	15,7	24	1,5
	0	10,1	25	1,5	12,7	33	1,3
	+15	7,9	36	1,2	9,9	42	1,1
110/80	-15	14,0	18	1,3	17,5	28	1,2
	0	11,6	29	1,1	14,6	38	1,0
	+15	9,4	40	1,0	11,8	48	1,0
130/90	-15	15,4	22	1,1	19,5	33	1,1
	0	13,1	33	1,0	16,5	43	1,0
	+15	10,9	44	1,0	13,8	53	1,0
150/100	-15	17,0	25	1,0	21,3	38	1,0
	0	14,6	37	1,0	18,5	48	1,0
	+15	12,5	48	1,0	15,7	59	1,0

Thermal power of units with bimetal water heaters

Unit size		TERM-1					
Air capacity [m ³ /h]		2700			2600		
Number of heater rows		II			III		
Water capacity [dm ³]		1,8			2,5		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]					
		kW	°C	kPa	kW	°C	kPa
80/60	-15	23,6	8	11,0	31,9	17	9,2
	0	18,6	19	7,0	25,2	27	5,7
	+15	13,9	30	3,9	18,8	36	3,2
90/70	-15	26,9	11	14,0	36,3	21	11,8
	0	21,7	22	9,6	29,3	31	7,7
	+15	16,9	33	5,8	22,8	40	4,7
110/80	-15	29,8	14	7,0	40,4	25	6,5
	0	24,8	25	5,5	33,6	36	4,5
	+15	20,1	36	3,6	27,2	45	3,0
130/90	-15	32,9	17	5,5	44,8	30	4,5
	0	28,0	28	4,0	38,1	40	3,2
	+15	23,4	40	2,7	31,7	51	2,3
150/100	-15	36,1	20	4,2	49,3	34	3,5
	0	31,3	32	3,2	42,6	45	2,7
	+15	26,6	44	2,3	36,3	56	2,0

TERM HEATING AND VENTILATION UNITS

Thermal power of units with bimetal water heaters

Unit size		TERM-2											
Air capacity [m ³ /h]		6200			6000			4750			4600		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		3,7			5,6			3,7			5,6		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
80/60	-15	52,9	10	16,5	70,1	20	12,9	44,8	13	11,8	59,0	24	9,1
	0	41,7	21	10,3	55,3	29	8,0	35,4	23	7,4	46,5	32	5,7
	+15	31,2	31	5,7	41,4	38	4,5	26,4	33	4,1	34,8	40	3,2
90/70	-15	60,3	13	19,1	79,6	25	16,6	51,0	17	15,3	67,0	29	11,7
	0	48,8	24	14,0	64,4	34	10,8	41,3	27	10,0	54,2	38	7,7
	+15	37,9	35	8,4	51,0	43	6,6	32,1	37	6,0	42,1	46	4,6
110/80	-15	66,8	16	11,7	88,9	29	9,2	56,7	20	8,4	74,9	34	6,5
	0	55,7	28	8,1	74,0	39	6,4	47,2	31	5,8	62,3	43	4,5
	+15	45,1	39	5,4	59,9	49	4,2	38,2	41	3,8	50,5	52	3,0
130/90	-15	73,9	20	8,0	98,6	35	6,4	62,7	24	5,8	83,2	40	4,5
	0	63,0	31	5,8	83,9	45	4,6	53,4	35	4,2	70,8	49	3,3
	+15	52,5	43	4,0	69,9	54	3,0	44,5	46	3,0	59,0	58	2,3
150/100	-15	81,2	23	6,2	108,6	39	4,9	69,0	28	4,5	91,8	45	3,5
	0	70,3	35	4,6	94,0	50	3,7	59,7	39	3,4	79,3	55	2,6
	+15	59,9	47	3,4	80,0	60	2,7	50,8	50	2,3	67,5	65	2,0

Thermal power of units with bimetal water heaters

Unit size		TERM-3											
Air capacity [m ³ /h]		10850			10500			8280			8000		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		6,7			9,9			6,7			9,9		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
80/60	-15	93	7	5,8	127	16	4,8	81	9	4,4	110	19	3,6
	0	73	18	3,6	100	26	3,0	64	20	2,8	87	28	2,2
	+15	55	29	2,0	75	35	1,7	48	31	1,5	65	37	1,2
90/70	-15	106	10	7,5	144	21	6,2	92	13	5,7	125	24	4,6
	0	86	21	4,9	116	30	4,0	75	24	3,7	101	33	3,0
	+15	67	33	3,0	91	40	2,5	58	34	2,3	78	42	1,8
110/80	-15	117	13	4,1	161	24	3,4	106	16	3,1	139	28	2,5
	0	98	25	2,8	133	35	2,4	85	27	2,2	116	38	1,8
	+15	79	36	1,8	108	45	1,6	69	38	1,5	94	48	1,2
130/90	-15	129	16	2,8	178	29	2,4	113	19	2,2	154	33	1,8
	0	110	28	2,0	151	40	1,7	97	31	1,6	131	43	1,3
	+15	92	39	1,4	125	50	1,2	80	42	1,1	109	53	1,0
150/100	-15	142	19	2,2	195	33	1,8	124	22	1,7	170	37	1,4
	0	123	31	1,6	169	44	1,4	108	34	1,3	147	49	1,0
	+15	105	43	1,2	144	55	1,0	92	46	1,0	125	59	1,0

TERM HEATING AND VENTILATION UNITS

Thermal power of units with bimetal water heaters

Unit size		TERM-4											
Air capacity [m ³ /h]		19000			18500			14840			14500		
Motor connection		Δ						λ					
Number of heater rows		II			III			II			III		
Water capacity [dm ³]		10,6			16,0			10,6			16,0		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]											
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
80/60	-15	164	7	16,9	223	16	13,0	141	10	12,5	191	19	10,0
	0	129	18	10,0	176	26	8,6	111	21	7,8	151	29	6,3
	+15	96	29	5,8	131	36	4,8	83	31	4,3	113	37	3,5
90/70	-15	186	10	21,0	253	21	18,0	161	16	16,0	217	24	13,0
	0	151	22	14,0	205	30	11,0	131	23	10,0	176	33	8,6
	+15	117	33	8,6	159	40	7,1	101	35	6,4	136	42	5,2
110/80	-15	201	13	11,0	282	24	9,9	178	16	8,9	242	28	7,3
	0	187	25	8,2	235	35	6,8	149	27	6,1	202	38	5,0
	+15	139	36	5,4	190	45	4,5	120	38	4,0	163	48	3,3
130/90	-15	228	15	8,0	313	29	6,8	197	19	6,1	268	33	5,0
	0	194	29	6,2	266	40	5,0	169	31	4,4	228	44	3,6
	+15	162	40	4,1	222	50	3,4	140	42	3,0	190	53	2,5
150/100	-15	250	19	6,3	344	33	5,3	216	23	4,7	296	38	3,9
	0	217	31	4,7	298	44	4,0	187	35	3,5	256	49	2,9
	+15	184	43	3,4	253	55	2,8	160	46	2,5	218	59	2,1

Thermal power of units with steam heaters

Unit size		TERM-0					
Air capacity [m ³ /h]		1100					
Ribs spacing [mm]		2,8			5,0		
Steam pressure [Mpa]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and quantity of steam [kg/h]					
		kW	°C	kg/h	kW	°C	kg/h
0,05	-15	22,7	39	47	14,6	19	30
	0	19,6	49	41	12,7	32	26
	+15	16,7	59	35	10,9	44	23
0,1	-15	24,3	43	51	15,6	22	33
	0	21,3	54	44	13,7	34	29
	+15	18,3	64	38	11,9	46	25
0,2	-15	26,7	48	56	17,1	26	36
	0	23,6	59	49	15,2	38	32
	+15	20,6	70	43	13,4	50	28
0,4	-15	30,2	57	63	19,4	31	40
	0	27,0	68	57	17,4	44	36
	+15	23,9	79	50	15,6	56	32
0,6	-15	32,5	62	68	20,9	34	44
	0	29,3	74	62	18,9	48	39
	+15	26,2	85	55	17,0	60	36

TERM HEATING AND VENTILATION UNITS

Thermal power of units with steam heaters

Unit size		TERM-1					
Air capacity [m ³ /h]		2700					
Ribs spacing [mm]		2,8			5,0		
Steam pressure [Mpa]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and quantity of steam[kg/h]					
		kW	°C	kg/h	kW	°C	kg/h
0,05	-15	50,6	34	106	32,8	17	70
	0	43,9	45	92	28,6	29	60
	+15	37,4	55	78	24,5	41	51
0,1	-15	54,3	37	114	36,2	19	74
	0	47,5	49	100	31,0	32	65
	+15	40,9	59	86	26,9	44	56
0,2	-15	59,5	42	125	38,6	22	81
	0	52,7	54	110	34,4	35	72
	+15	46,1	65	96	30,2	48	63
0,4	-15	67,2	50	141	43,7	27	91
	0	60,3	62	126	39,3	40	82
	+15	53,5	73	112	35,1	53	74
0,6	-15	72,5	55	152	47,1	30	98
	0	65,5	67	137	42,7	44	89
	+15	58,7	78	123	38,5	57	81

Thermal power of units with steam heaters

Unit size		TERM-2											
Air capacity [m ³ /h]		6200						4750					
Motor connection		Δ						λ					
Ribs spacing [mm]		2,8			5,0			2,8			5,0		
Steam pressure [Mpa]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and quantity of steam[kg/h]											
		kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h
0,05	-15	94,3	30	198	60,3	13	126	81,0	35	168	51,9	17	109
	0	81,0	41	172	52,6	26	110	69,4	46	145	45,2	30	95
	+15	69,8	52	143	45,1	39	94	59,1	56	124	38,7	42	81
0,1	-15	101,0	33	212	64,7	16	135	85,8	38	180	55,6	19	117
	0	88,6	45	186	57,0	29	120	75,1	50	157	48,9	32	102
	+15	76,4	56	160	49,4	41	103	64,4	60	136	42,4	44	89
0,2	-15	110,9	38	232	70,9	19	149	94,2	44	197	61,0	23	128
	0	98,2	50	206	63,2	32	132	83,3	55	178	54,3	36	114
	+15	86,0	61	180	55,6	44	116	72,8	66	153	47,7	48	100
0,4	-15	125,2	45	263	81,0	23	168	106,4	51	223	68,9	28	145
	0	112,4	57	236	72,3	36	152	95,3	63	200	62,1	41	130
	+15	100,0	68	210	64,6	49	135	84,7	74	177	55,4	54	116
0,6	-15	136,0	49	283	86,4	26	181	114,7	57	240	74,3	31	156
	0	122,1	62	256	78,5	40	165	103,5	69	217	67,5	45	141
	+15	109,5	73	230	70,8	53	148	92,7	79	194	60,8	57	127

TERM HEATING AND VENTILATION UNITS

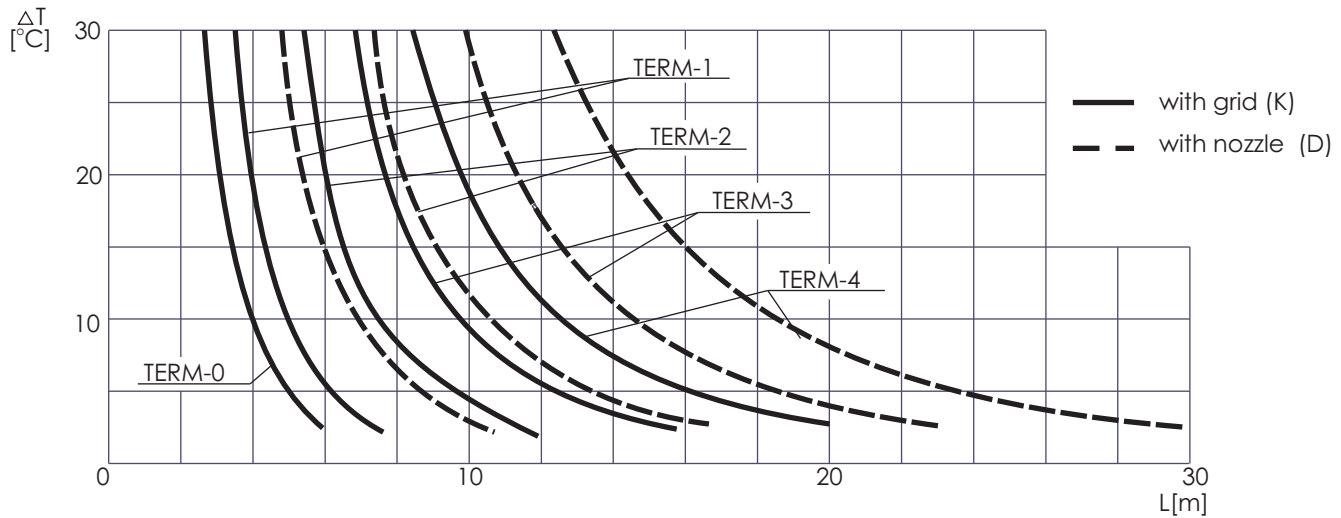
Thermal power of units with steam heaters

Unit size		TERM-3											
Air capacity [m ³ /h]		10850						8280					
Motor connection		Δ						λ					
Ribs spacing [mm]		2,8			5,0			2,8			5,0		
Steam pressure [Mpa]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and quantity of steam[kg/h]											
		kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h
0,05	-15	189	30	398	121	14	255	165	35	347	107	17	225
	0	164	42	346	106	27	223	143	46	301	94	30	196
	+15	140	53	295	91	39	191	122	50	256	80	42	168
0,1	-15	203	34	427	130	16	274	177	38	372	115	19	241
	0	178	45	374	115	29	241	155	50	326	101	32	212
	+15	153	56	323	99	42	209	133	60	287	87	45	184
0,2	-15	223	38	469	143	19	301	194	44	408	126	23	265
	0	197	50	415	127	32	268	172	55	361	112	36	235
	+15	173	62	363	112	45	235	150	66	316	98	48	207
0,4	-15	252	45	529	161	24	339	219	51	461	142	28	299
	0	226	58	475	146	37	306	197	63	413	128	41	269
	+15	201	69	424	130	50	274	174	74	367	114	54	240
0,6	-15	271	50	571	174	27	366	237	56	497	153	31	322
	0	245	63	516	157	42	330	214	68	449	139	44	293
	+15	220	74	463	143	53	300	191	80	402	125	57	263

Thermal power of units with steam heaters

Unit size		TERM-4											
Air capacity [m ³ /h]		19000						14840					
Motor connection		Δ						λ					
Ribs spacing[mm]		2,8			5,0			2,8			5,0		
Steam pressure [Mpa]	Inflow air temp.[°C]	Thermal power [kW], outflow air temperature [°C] and quantity of steam[kg/h]											
		kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h	kW	°C	kg/h
0,05	-15	320	29	673	204	13	430	276	33	580	178	16	375
	0	278	40	585	178	26	375	239	45	503	154	30	324
	+15	237	51	499	153	38	322	204	55	492	133	41	280
0,1	-15	343	32	722	219	15	461	296	37	622	191	18	402
	0	301	44	633	193	28	406	259	48	544	168	31	353
	+15	260	55	546	167	41	352	223	59	469	146	44	306
0,2	-15	377	37	792	240	18	506	325	42	682	209	22	441
	0	334	49	702	214	31	451	287	54	604	186	35	392
	+15	292	60	615	188	44	396	251	64	528	164	47	345
0,4	-15	426	43	894	272	22	571	367	49	771	237	26	498
	0	382	56	803	245	36	516	329	61	691	213	40	449
	+15	340	67	715	219	49	461	292	73	614	191	52	401
0,6	-15	459	48	964	293	25	613	395	54	831	255	30	537
	0	415	60	872	266	39	560	357	67	751	232	43	487
	+15	372	72	783	240	52	505	320	78	673	209	56	439

Directed downwards hot air streams ranges



L - directed vertically down air stream range

ΔT - temperature difference between supplied air and air inside the compartment

Isothermal air stream ranges

Unit size	Isothermal stream ranges [m]*	
	with grid	with nozzle
TERM-0	9	-
TERM-1	13	18
TERM-2	22	31
TERM-3	30	47
TERM-4	42	65

* - at the final velocity in air stream axe 0,5 m/s and average velocity in air stream $\sim 0,2$ m/s.

Units noise level

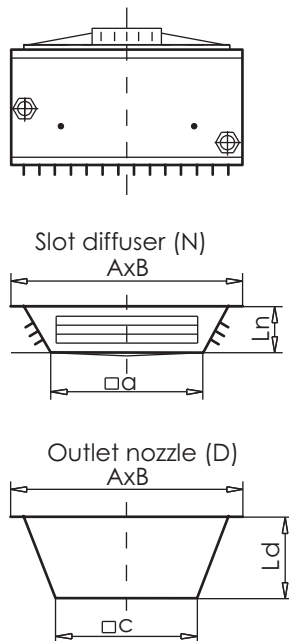
Unit size	Fan type	Operation noise level dB(A) at the distance							
		1m		5m		1m		5m	
		with 1~230V;50Hz motor				with 3~400V;50Hz motor			
		Δ		Δ		Δ		Δ	
TERM-0 *	HXM-300	53	48	-	-	-	-	-	-
TERM-1 **	FN-035-4E	60,5	54	-	-	-	-	-	-
TERM-2 **	FN045-4E/FN045-VD	65	57,5	65	57,5	61	53,5		
TERM-3 ***	FE056-VD	-	-	76	66,5	68,5	59		
TERM-4 ***	FE063-VD	-	-	80,5	71	74,5	65		

Operational noise level – acoustic pressure level with taking into consideration directional coefficient $Q=2$ and compartment * $A=50\text{m}^2$; ** $A=100\text{m}^2$; *** $A=300\text{m}^2$ absorption ability.

INLET DIFFUSERS FOR THE UNITS

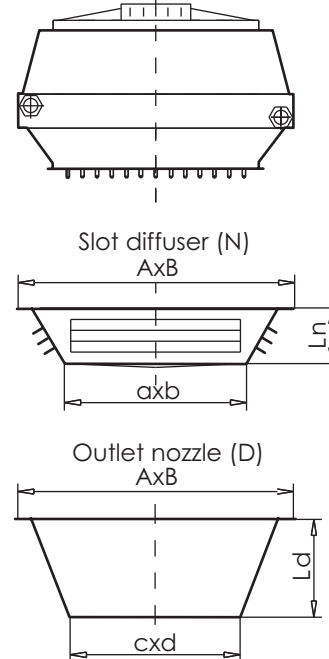
TERM 0; 1; 2

Unit with single-row outlet grid (K)



TERM 3; 4

Unit with single-row outlet grid (K)



Slot diffuser (N)

Unit size	A x B [mm x mm]	a x b [mm x mm]	Ln [mm]
TERM-0	412 x 412	275 x 275	83
TERM-1	555 x 525	355 x 355	100
TERM-2	677 x 684	445 x 445	135
TERM-3	886 x 1010	670 x 794	145
TERM-4	1110 x 1251	895 x 1035	145

Outlet nozzle (D)

Unit size	AxB [mm x mm]	c x d [mm x mm]	Ld [mm]
TERM-1	555 x 525	350 x 350	190
TERM-2	677 x 684	450 x 450	240
TERM-3	886 x 1010	626 x 750	360
TERM-4	1110 x 1251	850 x 990	460

The units are supplied with the single-row grid as a standard.

Grids have the movable blades enabling the air stream direction and reach adjustment.

Ceiling units can be equipped with:

- **slot diffusers (N)** (air supply to 4 sides);
- **outlet nozzles (D).**

Wall units can be also equipped with outlet nozzles (D).

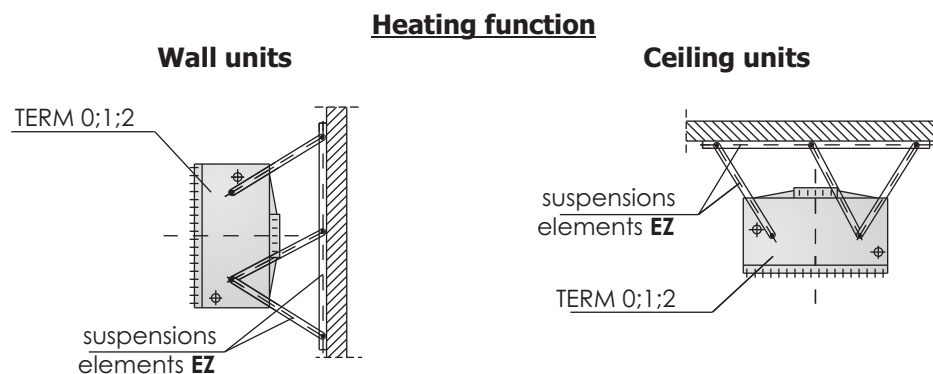
We don't supply the outlet nozzle for the TERM 0 unit.

Slot diffusers are enabling heating people staying zones with the secondary air stream.

Unit TERM 0; 1 with slot diffuser can be suspended on the height **max. 4 m** whereas unit TERM with slot diffuser can be suspended on the height **max. 6 m**.

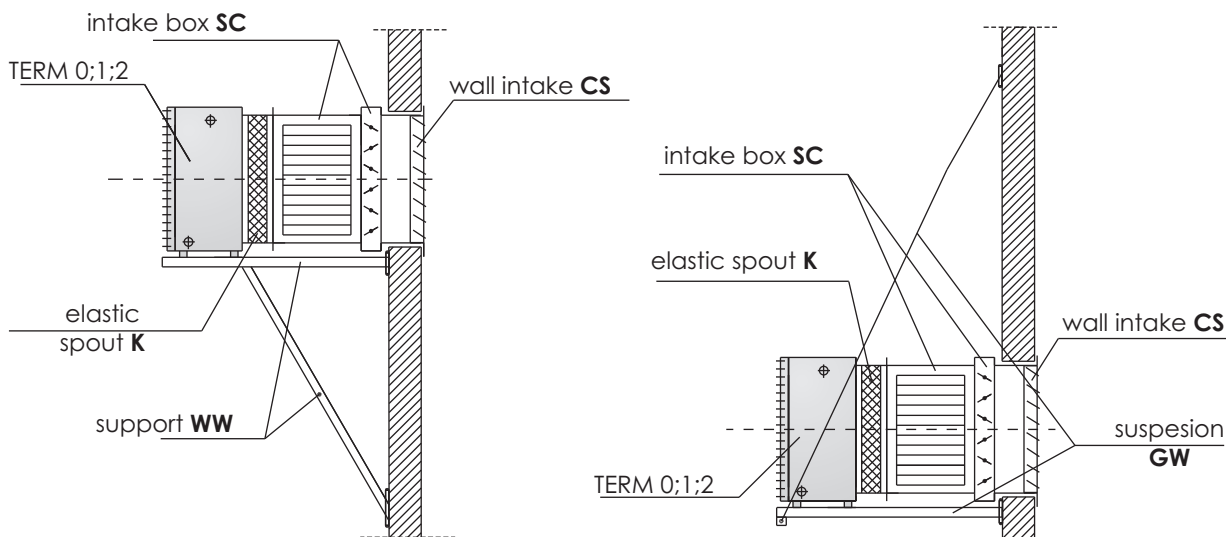
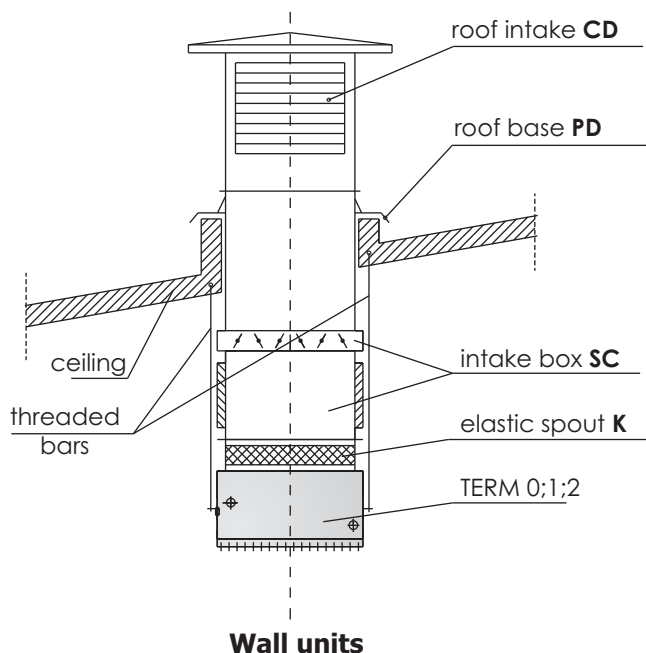
Outlet nozzles enable increase of air supply range.

PRESENTATION OF ADDITIONAL EQUIPMENT FOR TERM 0; 1; 2 UNITS



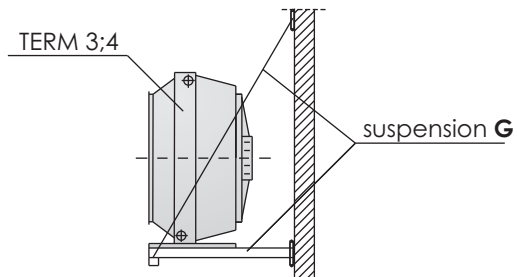
PRESENTATION OF ADDITIONAL EQUIPMENT FOR TERM 0; 1; 2 UNITS

Heating-ventilating function
Ceiling units

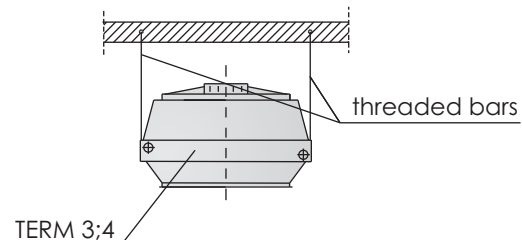


PRESENTATION OF ADDITIONAL EQUIPMENT FOR TERM 3; 4 UNITS

WALL UNIT

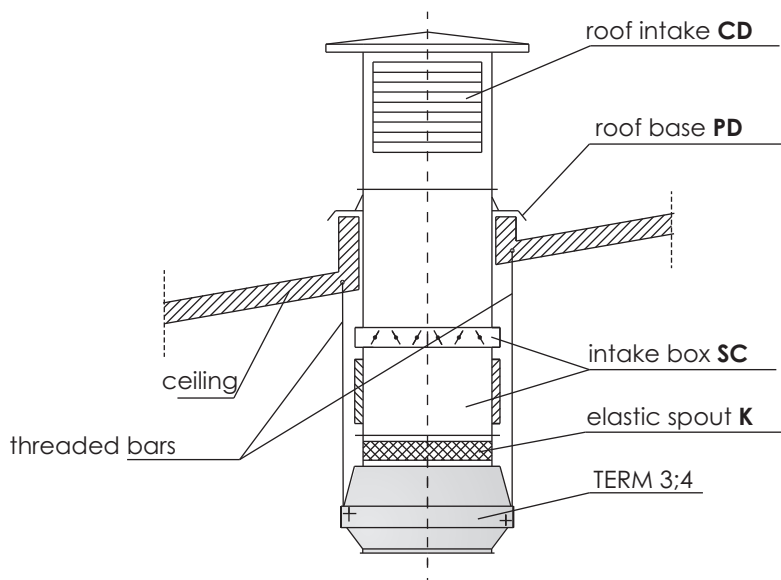


CEILING UNIT

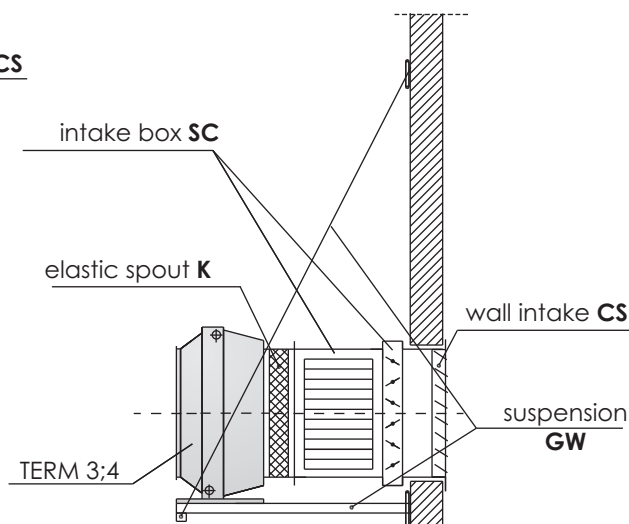
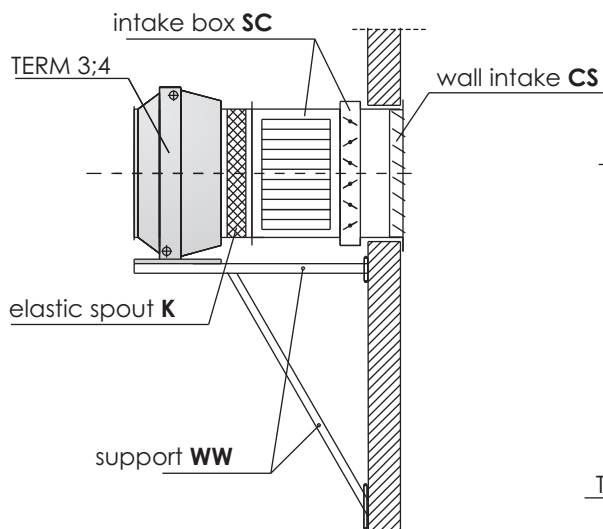


PRESENTATION OF ADDITIONAL EQUIPMENT FOR TERM 3; 4 UNITS

Heating-ventilating function CEILING UNITS



WALL UNITS



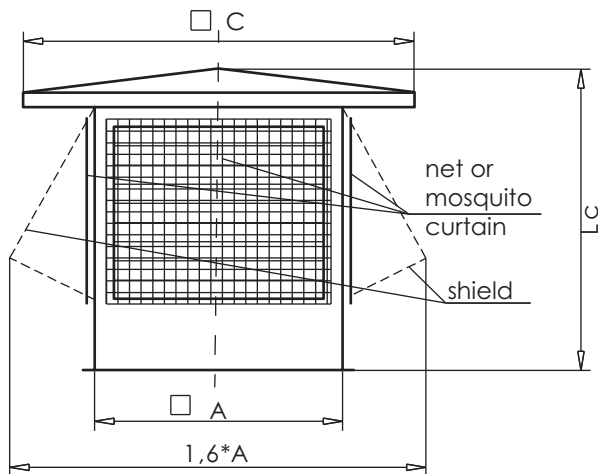
ADDITIONAL EQUIPMENT

CD ROOF INTAKE

Roof intakes are intended to draw fresh air from above the roof and to protect the object against precipitations. If case of strong winds above 30m/s at the intake it's recommended to install additionally shields.

In order to protect against pollution and insects the intakes have installed the nets or mosquito-curtains on 4 sides.

Air intakes are adapted for connecting with PD roof bases.

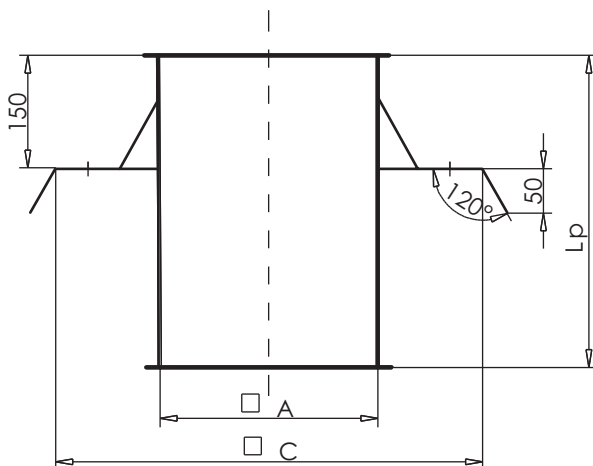


Unit size	Intake size	□A [mm]	Lc [mm]	□C [mm]	Weight [kg]
TERM-0	CD-0	470	530	770	21
TERM-1	CD-1	520	580	820	27
TERM-2	CD-2	660	700	1040	40
TERM-3	CD-3	720	800	1120	58
TERM-4	CD-4	810	950	1210	70

Roof bases are whole made of galvanized steel sheets.

PD ROOF BASE

Roof bases are intended for installing cd roof air intakes and sc intake boxes of the term units

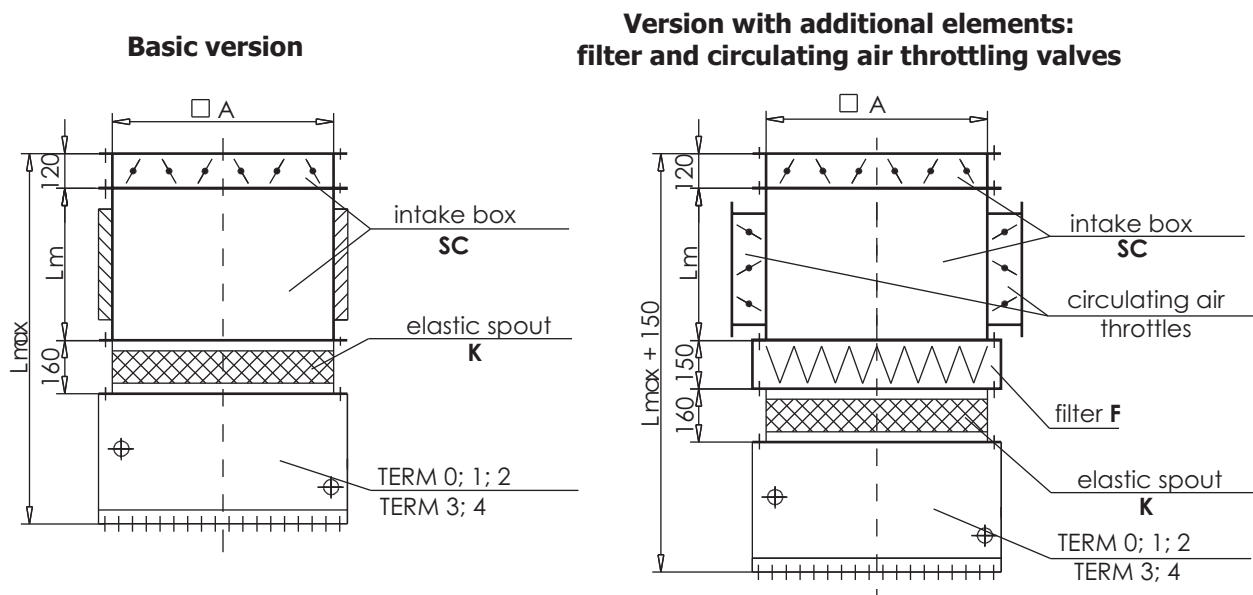


Unit size	Base size	□A [mm]	Lp [mm]	□C [mm]	Weight [kg]
TERM-0	CD-0	470	600	690	28
TERM-1	CD-1	520	600	740	31
TERM-2	CD-2	660	600	1000	39
TERM-3	CD-3	720	800	1080	50
TERM-4	CD-4	810	800	1170	56

Roof bases are made of galvanized steel sheets.

SC INTAKE BOXES

FOR CEILING AND WALL HEATING-VENTILATING UNITS



Intake boxes are used to draw the mix the fresh and circulating air.

In basic version they consist of:

- fresh air throttling valve
- mixing chamber with circulating air inlet grids.

As a standard we supply the intake boxes with elastic spout (K) enabling connection of the boxes with the units. Fresh air throttling valve is operated with the servo-motor.

Mixing chamber has 2 grids (manually adjusted) in the circulating air inlet holes enabling setting the participation of circulating air in total air capacity.

Unit size	Box size	□A [mm]	Lm [mm]	Lmax [mm]	Weight [kg]	
					SC basic version	SC version with filter and throttling valves
TERM-0	SC-0	470	310	830	19	28
TERM-1	SC-1	520	310	930	23	35
TERM-2	SC-2	660	410	1040	30	44
TERM-3	SC-3	720	510	1315	36	54
TERM-4	SC-4	810	610	1465	41	63

Intake boxes can be also have following additional elements:

- filter (F) class G3;
- circulating air throttling valves (P) with servo-motors.

Inlet boxes with additional elements are made after agreement with the manufacturer.

In agreement with the manufacturer Inlet vents Boxes can be also made with the mixing chamber **with one circulating air inlet grid.**

Unit size	Air capacity [m³/h]								
	HXM	FN035-4E	FN045-4E	FN045-VD		FE056-VD		FE063-VD	
				Δ	λ	Δ	λ	Δ	λ
TERM-0	1000	-	-	-	-	-	-	-	-
TERM-1	-	2340	-	-	-	-	-	-	-
TERM-2	-	-	5310	5400	4140	-	-	-	-
TERM-3	-	-	-	-	-	9450	7200	-	-
TERM-4	-	-	-	-	-	-	-	16650	13050

Thermal power of the units with SC intake boxes in the standard version are decreased by about~5%

ADJUSTING RANGES OF SC INTAKE BOXES IN THE STANDARD VERSION

SC Intake vent Boxes in the standard version for all the TERM units are supplied with the **constant recommended angle of circulating air closing equal 60°**.

The ranges of fresh air throttling valves adjustment, participation of fresh air in total air capacity **at the constant recommended angle of circulating air closing**

Unit size	Box size	The range of adjusting the fresh air throttling valve	Closing angle of circulating air grids	% of fresh air participation in total efficiency	Fresh air participation [m ³ /h]	Total air efficiency [m ³ /h]
TERM-0	SC-0	open-close	60°	10%÷75%	80÷750	830÷1000
TERM-1	SC-1	open-close	60°	10%÷75%	190÷1760	1940÷2340
TERM-2	SC-2	open-close	60°	10%÷75%	450÷4050*	4480÷5400*
TERM-3	SC-3	open-close	60°	10%÷75%	780÷7090*	7840÷9450*
TERM-4	SC-4	open-close	60°	10%÷75%	1380÷12490*	13820÷16650*

* air capacities of the units with three-phase motors connected in Δ .

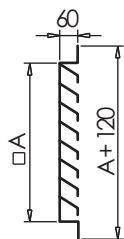
The range of adjusting the fresh air throttling valve in total air efficiency depending on different closing angles of circulating air grids

Fresh air throttling valve adjustment range	Closing angle of circulating valves grids	% of fresh air participation in total air efficiency
open-close	0°	1,5%÷57%
open-close	30°	3,5%÷62%
open-close	45°	5%÷67%
open-close.	60°	10%÷75%
open-close	75°	17%÷83%

If the extension of participation adjustment from 100% of fresh air to 100% of circulating air is required it is planned to replace the standard intake boxes with the circulating air grids with the boxes with the throttling valves (2 pcs) of increased tightness and with servo-motors.

CS WALL AIR INTAKE

Wall air intakes are intended for drawing fresh air from outside of the wall.



Unit size	Intake size	A [mm]	Weight [kg]
TERM-0	CS-0	470	6
TERM-1	CS-1	520	7
TERM-2	CS-2	660	10
TERM-3	CS-3	720	11
TERM-4	CS-4	810	13

Wall intake vents are made of steel sheets protected with the paint coatings.

Presentation of % participation of fresh air, for which wall intakes of dimensions equal with intake boxes meet the condition of air inlet velocity less than 2,5 m/s it means: they will not suck the rain.

Unit size	□A [mm]	Intake surface [m ²]	Total air efficiency [m ³ /h]	Fresh air efficiency at V<2,5m/s [m ³ /h]	Fresh air efficiency Total air efficiency
TERM-0	470	0,22	1000	>1000	>100%
TERM-1	520	0,27	2340	>2340	>100%
TERM-2	660	0,43	5400	3900	72%
TERM-3	720	0,52	9450	4700	50%
TERM-4	810	0,66	16650	5940	36%

TERM 0&1 units can operate totally on the outdoor air with the wall intakes dimensions equal with the cross-sections of the intake boxes.

For the TERM 2, 3 and 4 units and operated totally on the outdoor air the wall intakes are selected by the manufacturer (wall intakes will have the bigger surfaces area).

TERM HEATING AND VENTILATION UNITS

HANGERS

We can supply following hangers for the units:

TERM 0; 1; 2 (heating function)

Wall and ceiling units - **EZ hanging elements set**

TERM 3; 4 (heating function)

Wall units - **hangers G**

Ceiling units - **Planned hangings on the threaded bars**

TERM 0; 1; 2 (heating-venting function)

Wall units - **hangers GW**

- **brackets WW**

Ceiling units - **Planned hangers on the threaded bars**

TERM 3; 4 (heating-venting function)

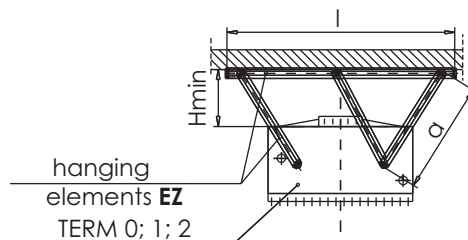
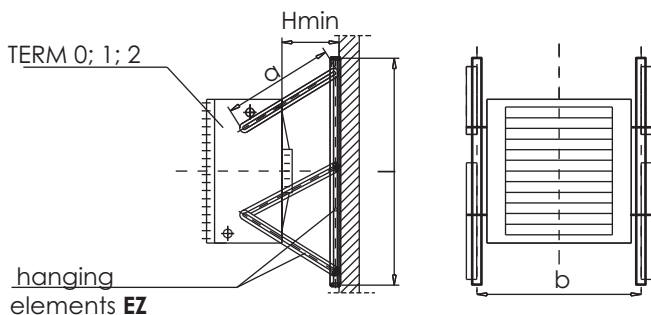
Wall units - **GW hangers**

- **Brackets WW**

Ceiling units - **planned for hanging on the threaded bars**

TERM 0; 1; 2 (heating function)

Wall and ceiling units



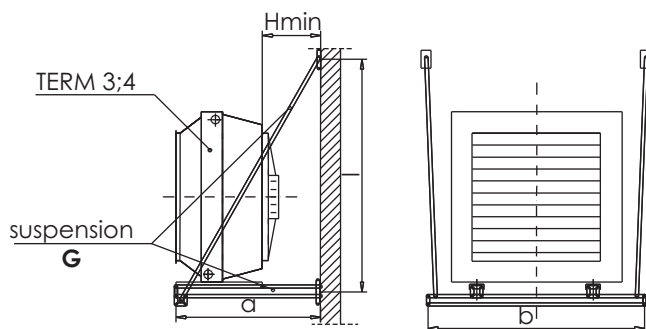
Set of elements for hanging the unit includes:
 - angle bars mounted to the building partition – 2 pcs
 - channel bars for hanging the unit - 6 pcs

all unit can operate in vertical position or inclined from plumb-line up to 20°.

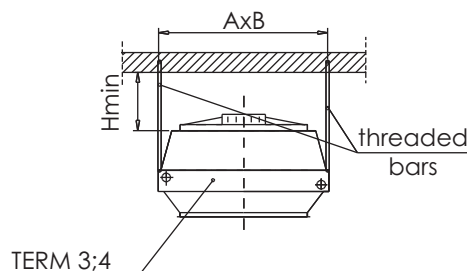
Unit size	a [mm]	b [mm]	l [mm]	Hmin [mm]
TERM-0	358	470	800	160
TERM-1	470	620	990	180
TERM-2	575	740	1140	230

TERM 3; 4 (heating function)

Wall units



Ceiling units

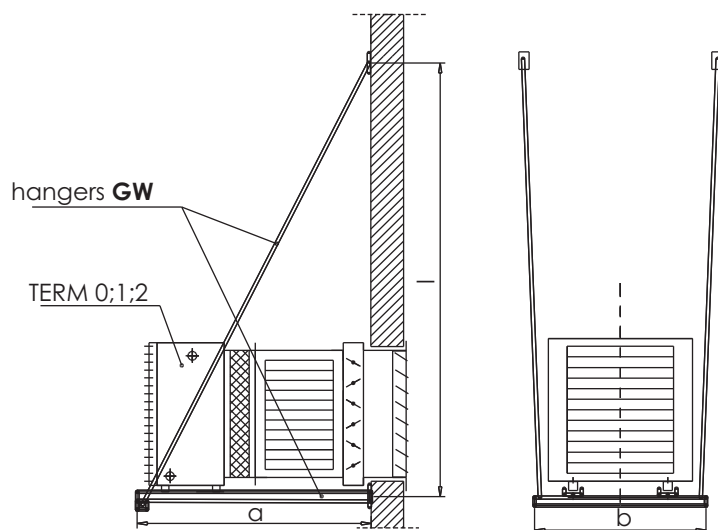


Unit size	a [mm]	b [mm]	l [mm]	Hmin [mm]
TERM-3	970	1200	1600	280
TERM-4	1050	1550	1990	320

Unit size	a x b [mm x mm]	Hmin [mm]
TERM-3	860 x 984	280
TERM-4	1080 x 1224	320

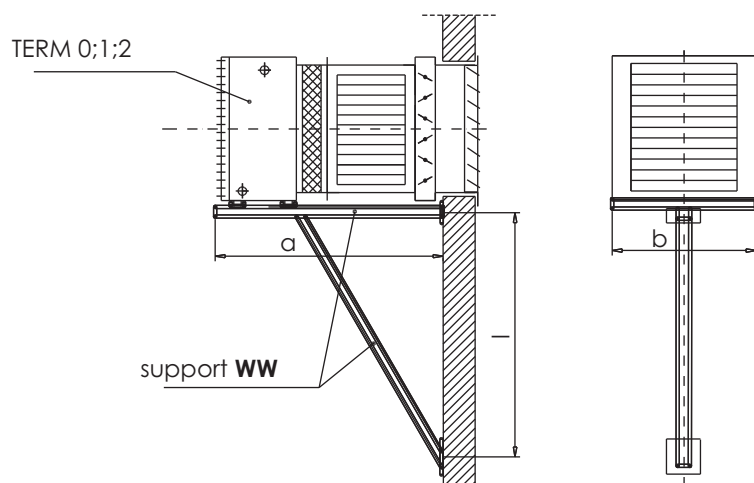
TERM 0; 1; 2 (heating-venting function)

Wall units (hangers)



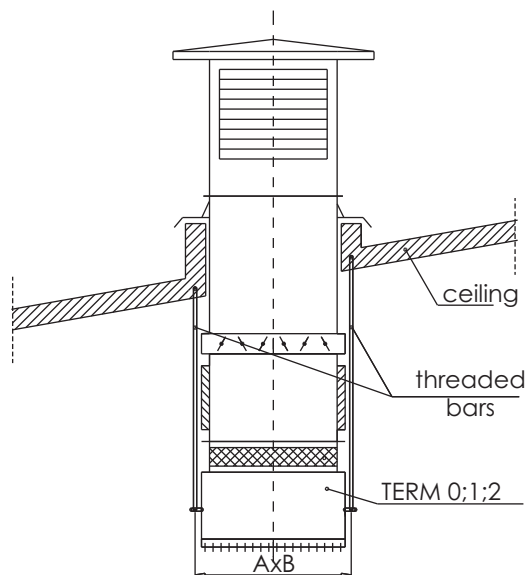
Unit size	a [mm]	b [mm]	l [mm]
TERM-0	830	550	1450
TERM-1	930	700	1550
TERM-2	1040	820	1750

Wall units (supports)



Unit size	a [mm]	b [mm]	l [mm]
TERM-0	830	360	850
TERM-1	930	560	950
TERM-2	1040	680	1050

Ceiling units (hangers)

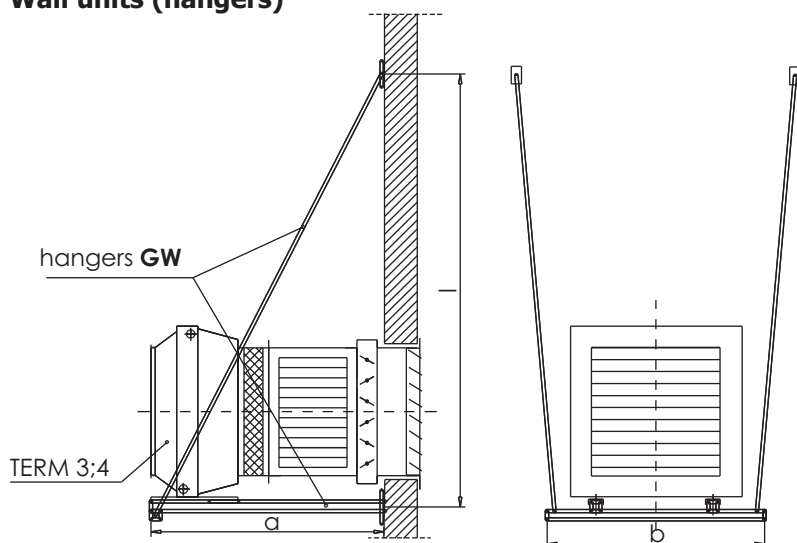


Unit size	a x b [mm x mm]
TERM-0	570x200
TERM-1	620x290
TERM-2	760x380

TERM HEATING AND VENTILATION UNITS

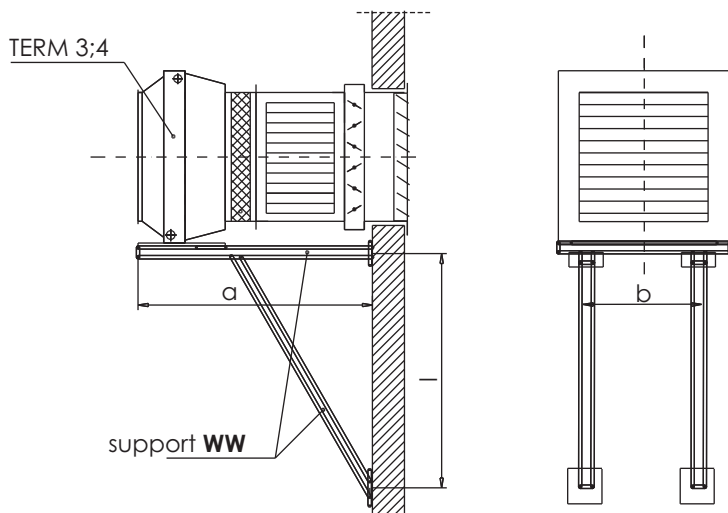
TERM 3; 4 (heating-venting function)

Wall units (hangers)



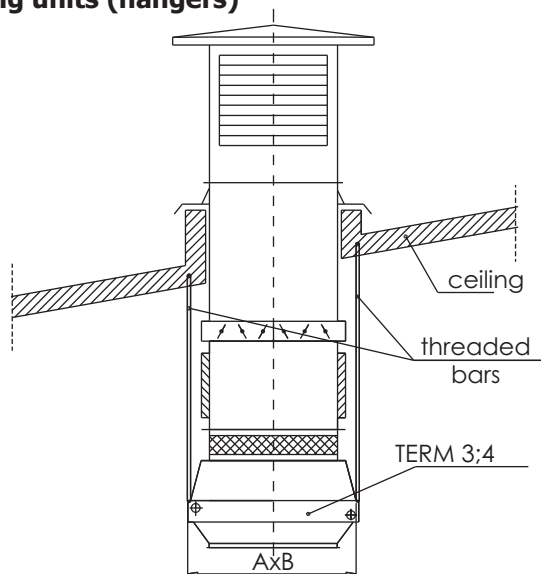
Unit size	a [mm]	b [mm]	l [mm]
TERM-3	1350	1200	2350
TERM-4	1500	1550	2700

Wall units (supports)



Unit size	a [mm]	b [mm]	l [mm]
TERM-3	1350	860	1300
TERM-4	1500	1080	1450

Ceiling units (hangers)



Unit size	a x b [mm x mm]
TERM-3	860x984
TERM-4	1080x1224

AUTOMATICS

Description of heating units automatics components selection are presented in the section: HEATING AND VENTILATION UNITS CONTROL AND AUTOMATICS in this catalogue