



2010/2011

MINIB[®] 

... more than just heat

MANUFACTURER OF HEATING CONVECTORS

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Dear customers,

Welcome to the new Minib s.r.o catalogue for the year 2010/2011. Along with continuous improvements to existing products we will also be introducing new products and product ranges that we have developed for this year.

- 1) Important market innovations for the year are represented by ranges of products which combine aesthetically pleasing design with effective heat transfer through either convection or radiation. The innovative wall-mounted units are notable for their flat construction which enables the use of materials such as granite, glass or composites (units DS, GS and PS).
- 2) A further unique innovation is the convector KZ, which is designed for mounting into walls. The convector is equipped with a 12V DC fan and thanks to its low built-in depth of 60 or 90 mm it enables installation into e.g. plaster crossbars, window sections or into the wall.
- 3) For swimming pool convectors we have satisfied the requirements of customers for a lower depth unit by introducing the type TO85 with a construction height of only 85 mm.
- 4) The most important innovation of the year is the introduction of the revolutionary new control units designed for all the convectors using the 12V DC fans. The general benefit of these control units is in electronic fan speed control which, compared to existing control systems, offers the following advantages:
 - ✓ stable output power of convectors during their full lifetime
 - ✓ optimised setting of output power based on the requirements of the control circuits
 - ✓ whisper quiet operation at the lowest speed
 - ✓ electronic isolation of the motor in the case of the blockage, e.g. objects dropped into the convector casing
 - ✓ simplification of installation and electrical wiring cost reduction
 - ✓ possibility of fitting thermostatic heads directly in the convector casings
 - ✓ electronic board is protected against moisture and water spray by electrical sealing resin
- 5) This year we have also improved our website, which now provides increased information for end users and specifiers..
- 6) We have also expanded our operations to other markets in Europe and globally.

We thank you for your interest in our products!

Eng. Monika Nováková
Executive Head

GENERAL INFORMATION ABOUT THE COMPANY

The company, MINIB s.r.o., belongs to the sector of European manufacturers of floor, wall and self-standing convectors. It has been operating in the Czech market since 1999 with the focus being on customer satisfaction. There is also a high level of interest in MINIB's high-quality products in markets beyond Europe, with the company now becoming internationally recognised.

The unique advantage of MINIB is its flexibility; owning production facilities in both the Czech Republic and Slovakia, which are equipped with the most advanced technology, enabling the company to satisfy the most complex requirements of the most exacting clients. The company puts great emphasis on its own research, as it has done since its foundation, and this research capacity has enabled the company to bring the most advanced solutions to market. The company leads its competitors in the field of control systems thanks to its application of active control and corresponding advantages in terms of energy efficiency and low noise. A further feature of the company is its unrivalled product portfolio; over 100 types of convectors are now offered for variable usage in all types of interiors. We also offer a wide selection of accessories to suit individual types of convectors and different situations and requirements. The MINIB convectors are of consistent high quality, thanks not only to the use of high quality materials, but also to their unrivalled low demand on water and electricity consumption. Of course the company, through its products, also ensures a high standard of user comfort and installer satisfaction; all products are designed to be simple to both install and maintain.

WHY ARE WE UNIQUE?

- ✓ consistent high quality – the use of only high-quality materials
- ✓ unrivalled range of convectors – continuous extension of designs based on customer demand
- ✓ all accessories included in the price of the convectors – no extra charge
- ✓ energy saving – the use of low-energy DC motors
- ✓ 11-year experience with own research department
- ✓ uniqueness of products – wide range of special convectors (e.g. parapet convector, skirt convector, electric convector, granite heating board, wall convector and PTG convector)
- ✓ guaranteed performance – heating outputs measured in the approved (accredited) test chamber according to EN 442-2
- ✓ flexibility – possibility of production of non-standard dimensions, curved convectors and angular connection of troughs; all based on consultation with the company

The company is able to manufacture most styles of convectors according to the customer's specific requirements. With prior agreement the company can provide performance testing of individual units in the approved (accredited) test chamber according to EN 442-2.

FREQUENTLY ASKED QUESTIONS

1) When is it suitable to choose MINIB convectors?

MINIB water heated convectors are specifically designed for installation below large window surfaces, under terraced doors, in winter gardens and in swimming pool areas. The units are produced in many standard lengths, but it is also possible to make any length to order. They are suitable for all types of interiors and can be used as individual or additional sources of heat in your property; they also provide a modern and reliable solution for heating of office spaces.

2) What should we look for during the selection of a convector?

The convector has an optimal output at a mean water temperature of 70 °C (75/65 °C) and higher fan stop. At lower temperatures it is necessary to calculate requirements against a lower output and to use a correspondingly longer convector or one that is fan assisted.

3) What is it necessary to know before selecting the convector?

- the floor structure (the floor structure determines the depth of the convector)
- heat losses of the room (heat losses of the room determine the selection of the convector type)
- position of the thermostat and transformer that are parts of the electronic control of fan assisted convectors
- type of final floor covering and its colour (determines selection of the grille and decorative frame)

4) How to proceed during the selection of the convector?

- contact a building contractor for inspection of the floor structure
- contact a heating system designer to determine heat losses from the rooms
- contact your regional Minib representative for unit selection

Whenever you need help, please contact your representative or our trade department, where they will always be pleased to help you!
Tel.: +420 604 767 677, e-mail: office@minib.cz

5) In which environments can MINIB products be used?

MINIB products can be placed in both dry and wet environments (swimming pools, bathrooms), but only a selected range of convectors with moisture drainage are designed for wet environments.

6) What controls are possible for MINIB products?

During the last number of years much knowledge has been collected relating to installation, operation and maintenance of MINIB convectors and their controls. As a result, standard single-speed controls (On/Off), manual three-speed controls and automatic three-speed controls are all available.

7) What is included in the price of the MINIB convector?

The company supplies all accessories, which are required for the installation, included in the price of the convector, except the controls which are priced separately.

8) How does the new type of convector SK PTG work?

The fan assisted convector is equipped with thermoelectric devices – PTG, which provide the source of electric power supply for the electric fan motors, i.e. the electric energy is generated from the hot water supplied to the heat exchanger. As a result, this convector can replace existing convectors without fans, where a higher heat output is required and a power supply would be difficult to arrange.

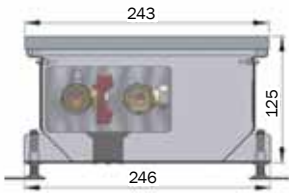
MINIB

Official representations in Europe



FLOOR CONVECTORS WITHOUT A FAN

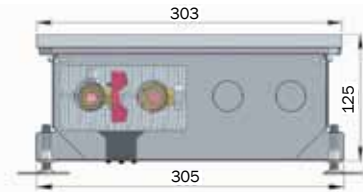
COIL - P



COIL - P80



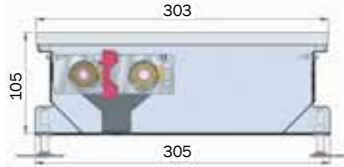
COIL - PT



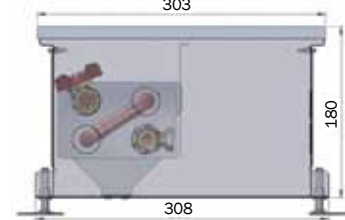
COIL - PT80



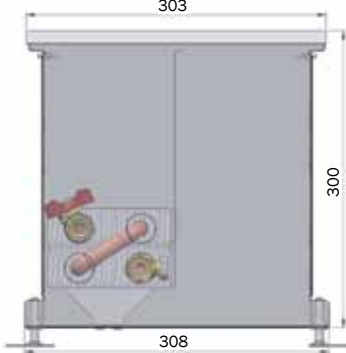
COIL - PT105



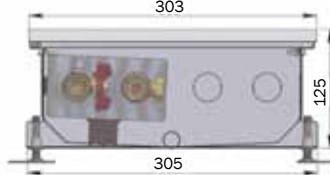
COIL - PT180



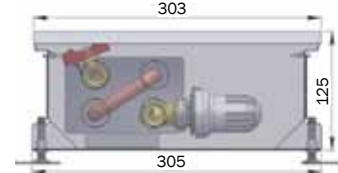
COIL - PT300



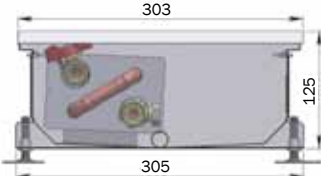
COIL - P0



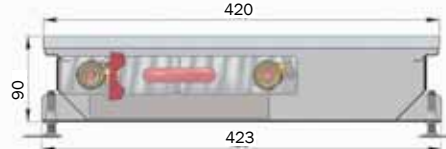
COIL - PT4



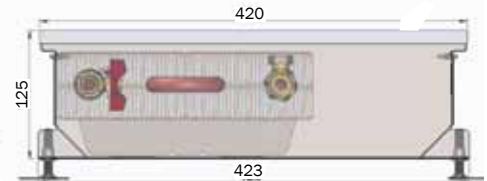
COIL - P04



COIL - PMW90



COIL - PMW125



COIL - PMW165

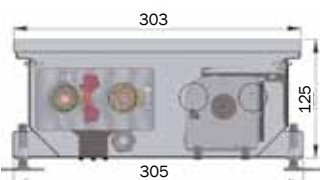


COIL - PMW205



FLOOR CONVECTORS WITH A FAN

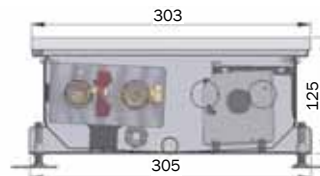
COIL - KT



COIL - KT110



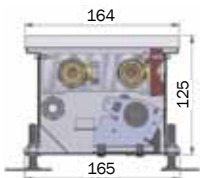
COIL - KO



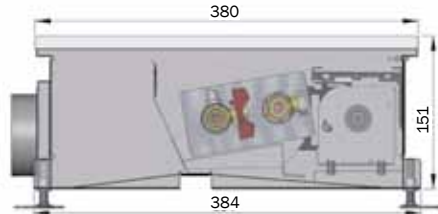
COIL - KTO



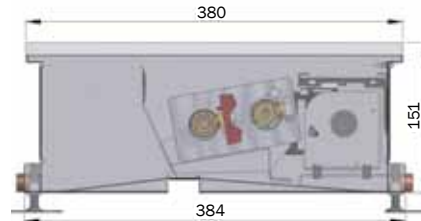
COIL - KT1



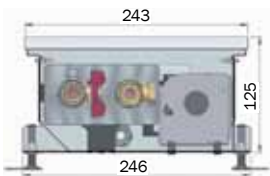
COIL - KT2



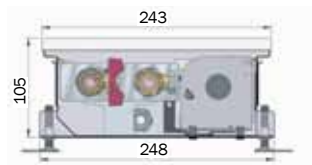
COIL - K02



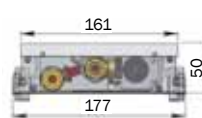
COIL - KT3



COIL - KT3 105



COIL - T50



COIL - T60

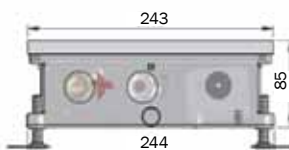


COIL - T80

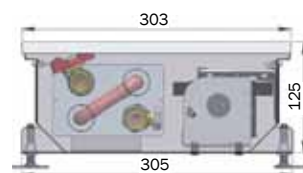


COIL - T085

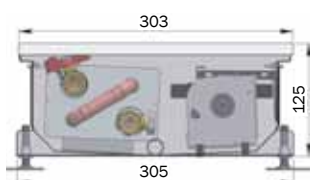
INNOVATION 2010



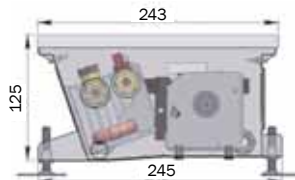
COIL - MT



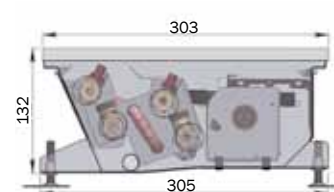
COIL - M0



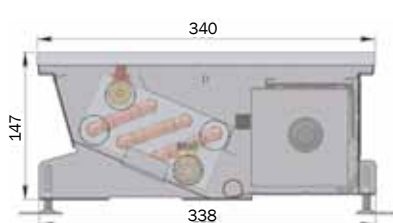
COIL - HC



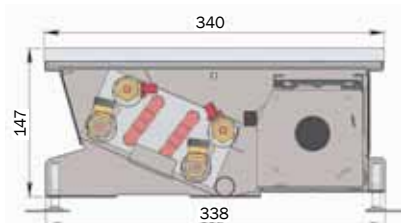
COIL - HC4pipe



COIL - HCM

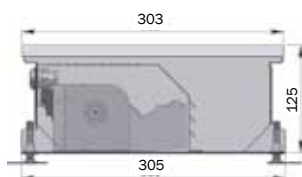


COIL - HCM4pipe



SPECIAL

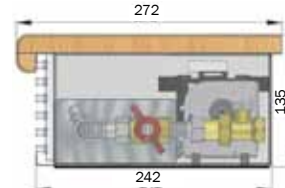
COIL - TE



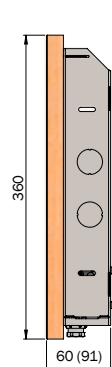
COIL - SK



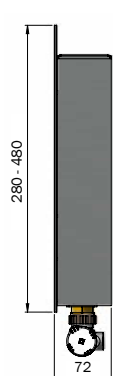
COIL - KP



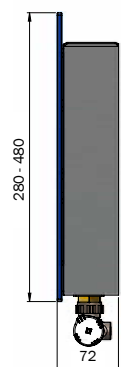
COIL - KZ **INNOVATION 2010**



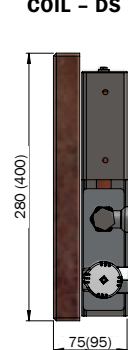
COIL - PS **INNOVATION 2010**



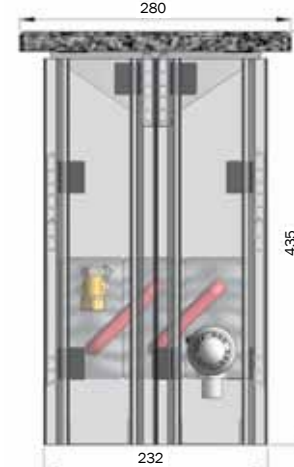
COIL - GS **INNOVATION 2010**



COIL - DS **INNOVATION 2010**

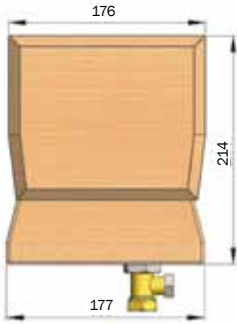


COIL - LP



WALL AND SELF-STANDING CONVECTORS

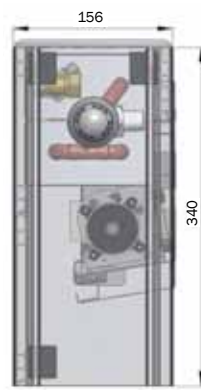
COIL - DP



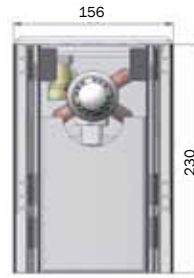
COIL - NK 1



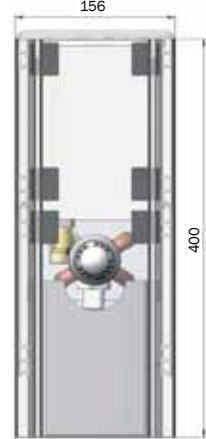
COIL - NK 2



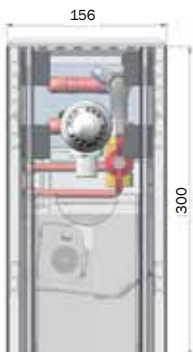
COIL - SK 1



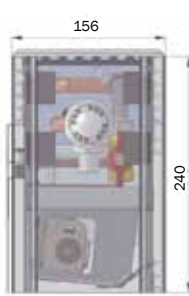
COIL - SK 2



COIL - SK PTG



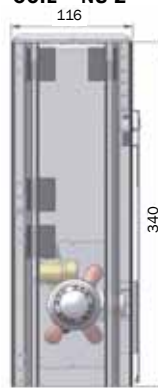
COIL - NK PTG



COIL - NU 1



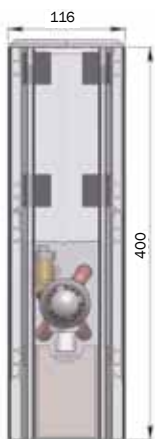
COIL - NU 2



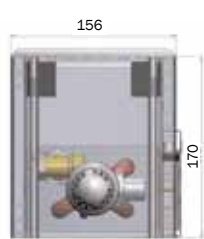
COIL - SU 1



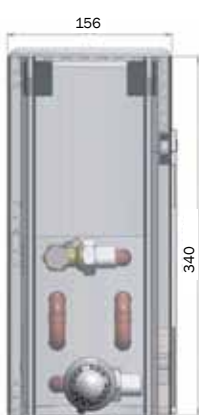
COIL - SU 2



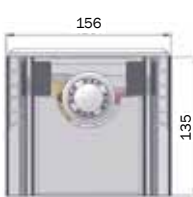
COIL - NP1/4



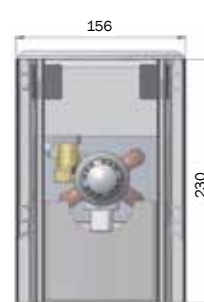
COIL - NP2/4



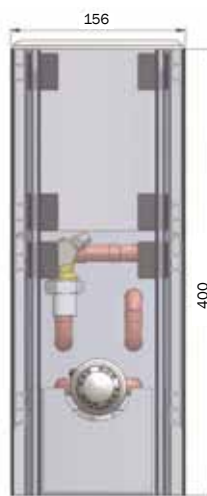
COIL - SP0



COIL - SP1/4



COIL - SP2/4



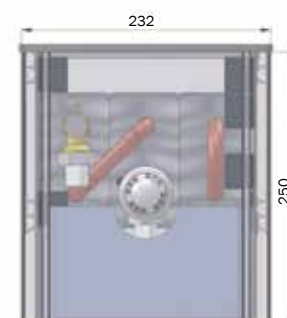
COIL - NW170



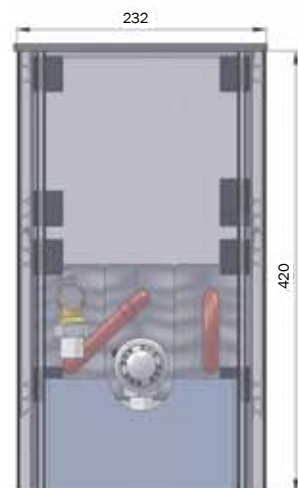
COIL - NW340



COIL - SW250



COIL - SW420



FLOOR CONVECTORS WITHOUT FANS



HOW TO CORRECTLY CHOOSE A FLOOR CONVECTOR WITHOUT A FAN:

- determine the heat loss in the room according to the project
- determine the mean heating water temperature
- selection of the required temperature in the room
- selection of the convector type according to the environment (dry or wet)*
- preliminary selection of a suitable type of convector according to the dimensional limits (construction height, length and width) and check of the required output according to tabulated values
- selection of the length and number of convectors
- selection of the walkway grille and covering surrounds

* dry and wet environment is defined by the standard CSN 038900 – design of electric objects – Classification of the environment

PRICE OF THE STANDARD CONVECTOR INCLUDES:

- stainless steel trough
- stainless steel flexible connection hoses, enabling tilting of the heat exchanger during cleaning of the convector
- upper coverplate over hoses
- 2 x adjusting valves or adjusting valve and shut-off valve
- any type of segmented aluminium or wooden grid (only for standard convector lengths).*
- grilles for convectors with a width of over 340 mm are only supplied as roll-up, spring type.
- decorative surround*

* Stainless steel grille and decorative covering surround – at extra cost

OPTIONAL ACCESSORIES:

You will find examples of optional accessories on page no. 103

EXAMPLES OF COVER GRILLES ARE ON PAGE NO. 104
PRESSURE LOSSES, ACOUSTIC PRESSURE AND OTHER
PHYSICAL PROPERTIES CAN BE FOUND ON PAGE NO. 100

TEMPERATURE EQUATION:

where:

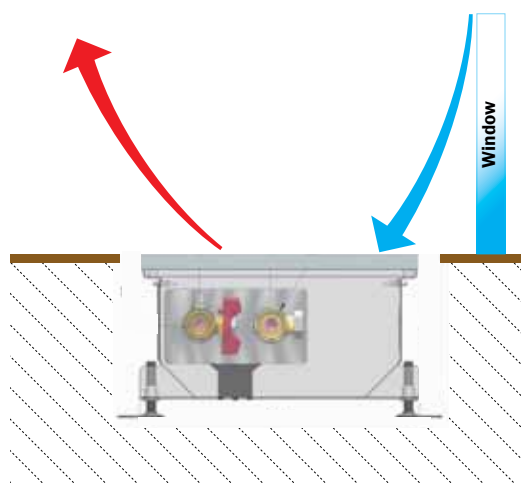
- m = temperature exponent
- $t_{w, A}$ = mean heating water temperature
mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for temperatures t_w/t_A 70/20 °C [W]
- μ = $\mu=1$ (select μ according to the diagram for other than nominal flow values)
- Q = heat transfer rate for other temperatures [W]

$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

CALCULATION OF THE OUTPUT FOR THE PARTICULAR TEMPERATURES:

Use the temperature equation for calculation of the output at other than the tabulated value of heating water and air in the room. Enter the required mean temperature of heating water and air in the room and calculate the heat output. These values can be also simply calculated on our website on the specific convector page.

EXAMPLE OF AIR FLOW IN THE ROOM



COIL - P

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ lower heat output
- ✘ standard variant from P convector series

DIMENSIONS

total width 243 mm
 construction height 125 mm
 length 900 to 3000 mm

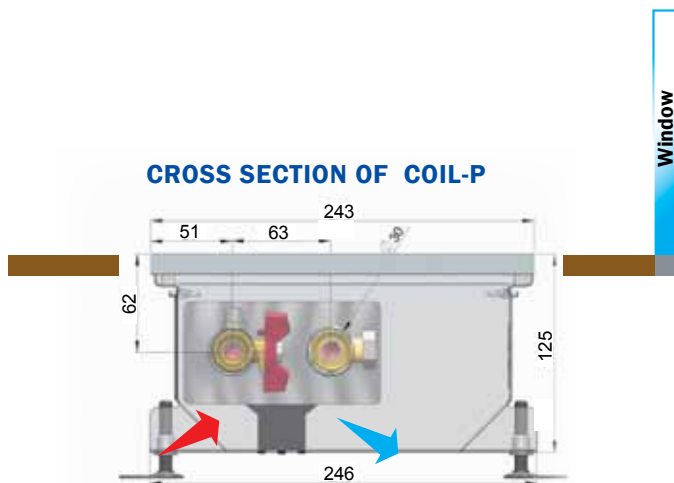
USAGE

It is recommended to be combined with another heating system or to be used individually in interiors with lower heat demands. These convectors can be combined with the Coil – KT-3 with the 12V fan that has a significantly higher heat output at the same width.

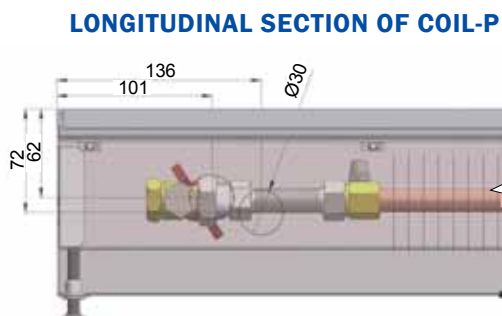


TEMPERATURE EXPONENT

$$m = 1,4200$$



CROSS SECTION OF COIL-P



LONGITUDINAL SECTION OF COIL-P

HEAT TRANSFER RATE Q [W]

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	376	341	327
	70	242	211	200
	60	182	154	143
	45	102	79	70
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	439	398	382
	70	282	247	233
	60	212	180	167
	45	119	92	82
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	596	540	518
	70	383	335	316
	60	288	244	227
	45	162	125	111
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	752	682	655
	70	484	423	399
	60	364	308	286
	45	205	158	140
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	909	824	791
	70	585	511	482
	60	440	372	346
	45	247	191	170
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	1 066	966	927
	70	686	599	565
	60	516	436	406
	45	290	224	199
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	1 379	1 250	1 200
	70	888	775	732
	60	668	565	525
	45	375	290	257
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	1 692	1 535	1 473
	70	1 090	952	898
	60	819	693	645
	45	461	356	316



COIL - P80

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ lower heat output
- ✘ lower and dimensionally more acceptable variant of the convector COIL-P

DIMENSIONS

total width 243 mm
 construction height 80 mm
 length 900 to 3000 mm

USAGE

It is recommended for individual use in dry interiors with lower heat demands on intensity of heating and low construction height.

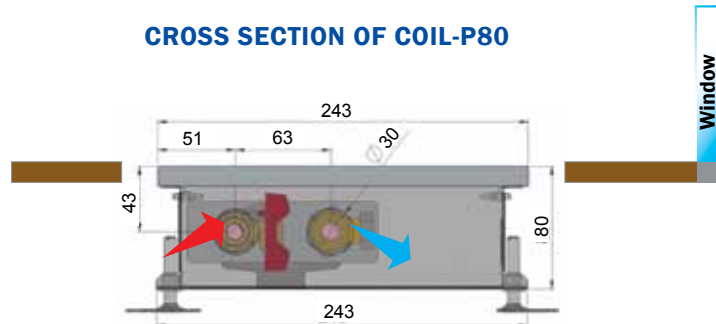
HEAT TRANSFER RATE Q [W] COIL - P80

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	281	254	244
	70	180	156	147
	60	134	113	105
	45	75	57	51
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	328	297	285
	70	209	183	172
	60	157	132	123
	45	87	67	59
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	445	403	386
	70	284	248	234
	60	213	179	167
	45	118	91	81
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	562	509	488
	70	359	313	295
	60	269	227	210
	45	150	115	102
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	679	615	589
	70	434	378	356
	60	325	274	254
	45	181	139	123
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	796	721	691
	70	509	443	418
	60	381	321	298
	45	212	163	144
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	1 030	933	894
	70	658	574	541
	60	493	416	386
	45	274	211	187
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	1 264	1 145	1 098
	70	808	704	664
	60	605	510	474
	45	337	259	229

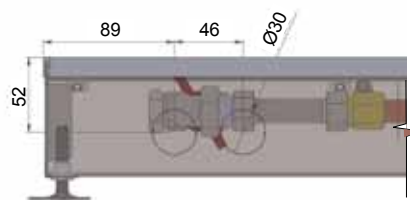
TEMPERATURE EXPONENT

$m = 1,4445$

CROSS SECTION OF COIL-P80



LONGITUDINAL SECTION OF COIL-P80



COIL - PT

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ the most popular convector without a fan
- ✘ supplied with thermostatic head as standard

DIMENSIONS

total width	303 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

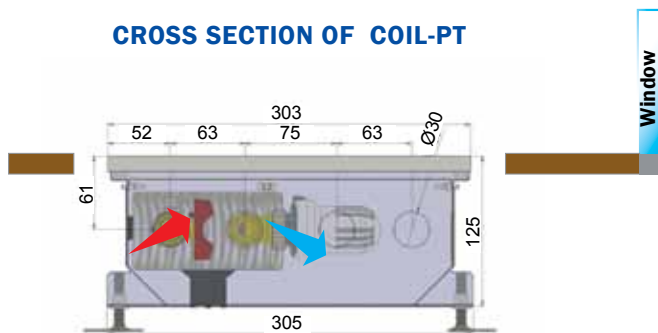
COIL – PT is recommended to be used individually for dry interiors with lower heating demands. The convector can be combined with the COIL – KT or COIL – MT that has a higher heat output.



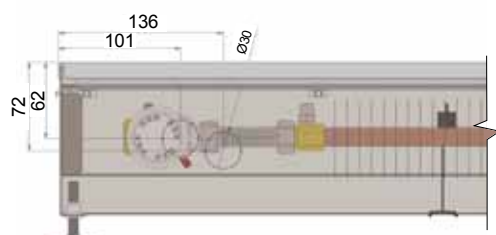
TEMPERATURE EXPONENT

$m = 1,4085$

CROSS SECTION OF COIL-PT



LONGITUDINAL SECTION OF COIL-PT



HEAT TRANSFER RATE Q [W] COIL – PT

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	456	414	397
	70	295	258	243
	60	222	188	175
	45	125	97	86
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	532	483	463
	70	344	300	284
	60	259	219	204
	45	146	113	101
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	722	655	629
	70	466	408	385
	60	352	298	277
	45	199	154	137
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	912	827	794
	70	589	515	486
	60	444	376	350
	45	251	194	173
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	1 102	1 000	960
	70	712	622	588
	60	537	454	423
	45	303	234	208
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	1 292	1 172	1 125
	70	834	730	689
	60	629	533	496
	45	355	275	244
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	1 671	1 517	1 456
	70	1 080	944	891
	60	814	690	642
	45	460	356	316
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	2 051	1 861	1 787
	70	1 325	1 159	1 094
	60	999	846	787
	45	564	437	388



COIL – PT80

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ lower heat output
- ✘ construction height only 80 mm

DIMENSIONS

total width	303 mm
construction height	80 mm
length	900 to 3000 mm

USAGE

Designed for use in dry interiors with lower heat demands on intensity of heating and low construction height.

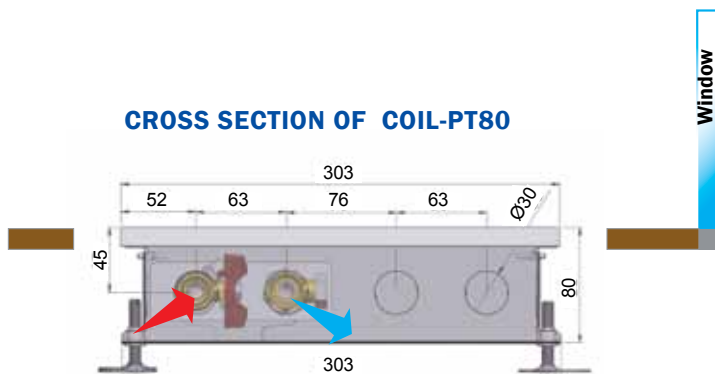
HEAT TRANSFER RATE Q [W] COIL – PT80

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_{w1}	90	295	267	257
	70	191	167	158
	60	144	122	114
	45	82	63	56
		length L (mm) 1000		
mean water temperature t_{w1}	90	344	312	300
	70	223	195	184
	60	168	142	133
	45	95	74	66
		length L (mm) 1250		
mean water temperature t_{w1}	90	466	423	407
	70	302	264	250
	60	228	193	180
	45	129	100	89
		length L (mm) 1500		
mean water temperature t_{w1}	90	589	535	514
	70	382	334	315
	60	288	244	227
	45	163	126	113
		length L (mm) 1750		
mean water temperature t_{w1}	90	712	646	620
	70	461	403	381
	60	348	295	275
	45	197	153	136
		length L (mm) 2000		
mean water temperature t_{w1}	90	834	758	727
	70	540	473	447
	60	408	346	322
	45	231	179	159
		length L (mm) 2500		
mean water temperature t_{w1}	90	1 080	980	941
	70	699	612	578
	60	528	448	417
	45	299	232	206
		length L (mm) 3000		
mean water temperature t_{w1}	90	1 325	1 203	1 155
	70	858	751	709
	60	648	550	512
	45	367	285	253

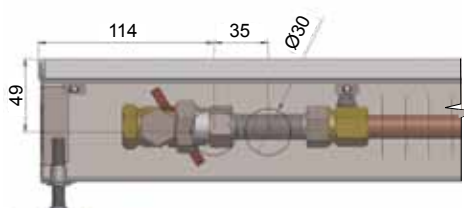
TEMPERATURE EXPONENT

$m = 1,4002$

CROSS SECTION OF COIL-PT80



LONGITUDINAL SECTION OF COIL-PT80



COIL – PT105

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ lower heat output
- ✘ construction height only 105 mm

DIMENSIONS

total width	303 mm
construction height	105 mm
length	900 to 3000 mm

USAGE

Designed for use in dry interiors with lower heat demands on intensity of heating and low construction height.

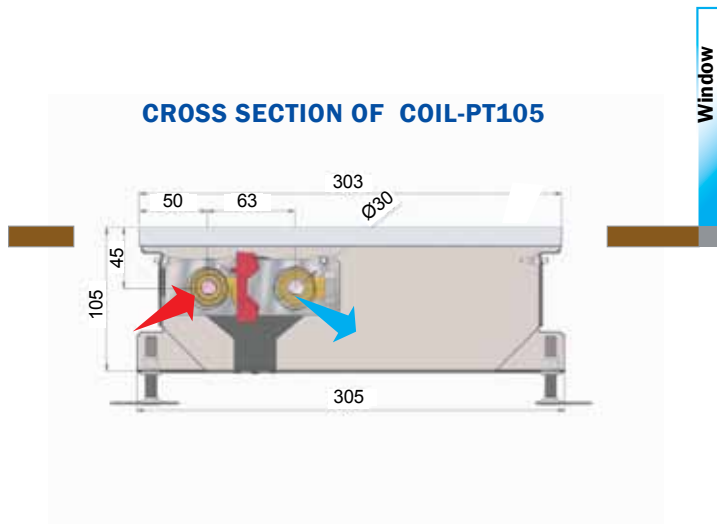


HEAT TRANSFER RATE Q [W] COIL – PT105

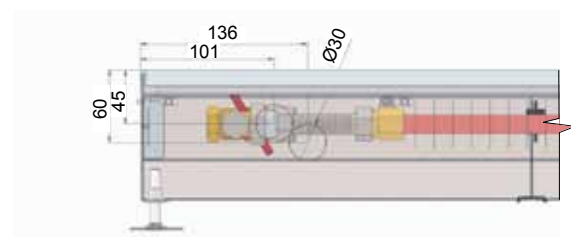
TEMPERATURE EXPONENT

$m = 1,3691$

CROSS SECTION OF COIL-PT105



LONGITUDINAL SECTION OF COIL-PT105



		length L (mm)		900
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	379	344	331
	70	248	217	205
	60	188	160	149
	45	108	84	75
		length L (mm)		1000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	442	402	386
	70	289	254	240
	60	219	187	174
	45	126	98	88
		length L (mm)		1250
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	599	545	524
	70	392	344	325
	60	298	253	236
	45	171	133	119
		length L (mm)		1500
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	757	689	662
	70	495	435	411
	60	376	320	298
	45	216	168	150
		length L (mm)		1750
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	915	832	800
	70	598	525	497
	60	455	387	361
	45	261	203	181
		length L (mm)		2000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 073	976	938
	70	702	616	582
	60	533	454	423
	45	306	238	213
		length L (mm)		2500
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 388	1 263	1 214
	70	908	797	753
	60	690	587	547
	45	396	308	275
		length L (mm)		3000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 704	1 550	1 490
	70	1 114	978	925
	60	847	720	672
	45	486	379	338



COIL – PT4

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ identical in dimension to convectors PT but it has a higher output Q
- ✘ supplied with thermostatic head as standard

DIMENSIONS

total width	303 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

COIL PT/4 is recommended for individual use in interiors where COIL PT does not efficiently cover the heat requirement. COIL PT/4 can be also combined with COIL KT and MT, which have a significantly higher heat output.

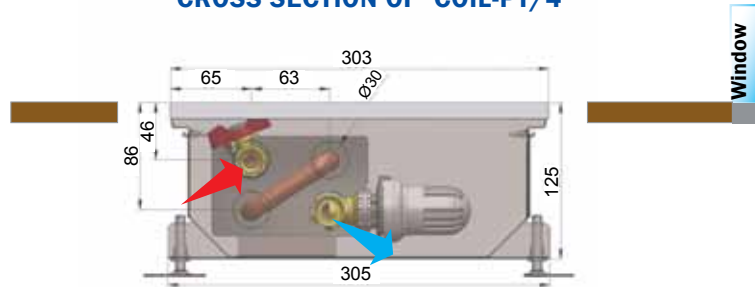
HEAT TRANSFER RATE Q [W] COIL – PT4

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	553	501	480
	70	353	307	289
	60	264	222	206
	45	146	112	99
		length L (mm) 1000		
mean water temperature t_w	90	645	584	560
	70	411	358	338
	60	307	259	241
	45	171	131	116
		length L (mm) 1250		
mean water temperature t_w	90	876	792	760
	70	558	486	458
	60	417	352	326
	45	232	178	157
		length L (mm) 1500		
mean water temperature t_w	90	1 107	1 001	960
	70	705	614	579
	60	527	444	412
	45	293	225	199
		length L (mm) 1750		
mean water temperature t_w	90	1 337	1 210	1 160
	70	852	742	699
	60	637	537	498
	45	353	271	240
		length L (mm) 2000		
mean water temperature t_w	90	1 568	1 418	1 360
	70	999	870	820
	60	747	629	584
	45	414	318	282
		length L (mm) 2500		
mean water temperature t_w	90	2 029	1 835	1 760
	70	1 293	1 126	1 061
	60	966	814	756
	45	536	412	365
		length L (mm) 3000		
mean water temperature t_w	90	2 490	2 252	2 160
	70	1 587	1 382	1 302
	60	1 186	999	928
	45	658	505	448

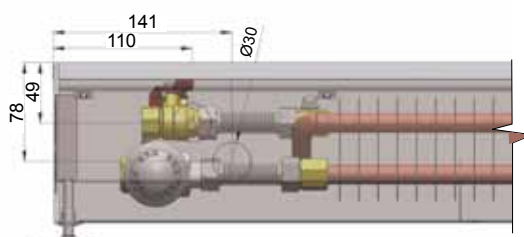
TEMPERATURE EXPONENT

$m = 1,4519$

CROSS SECTION OF COIL-PT/4



LONGITUDINAL SECTION OF COIL-PT/4



COIL – PT180

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan

DIMENSIONS

total width	303 mm
construction height	180 mm
length	900 to 3000 mm

USAGE

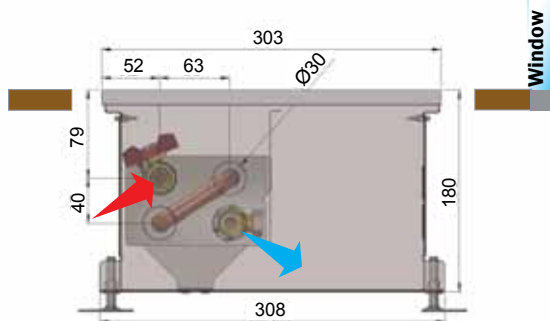
It is recommended for individual use in dry interiors with medium heat demand where the construction height is not a limiting factor.



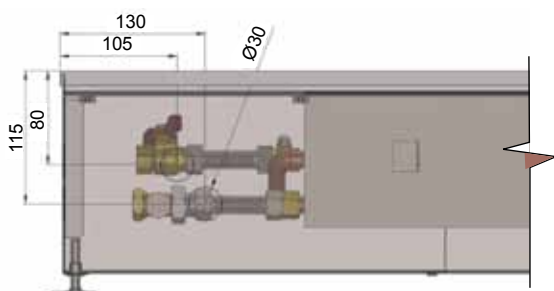
TEMPERATURE EXPONENT

$m = 1,4180$

CROSS SECTION OF COIL-PT180



LONGITUDINAL SECTION OF COIL-PT180



HEAT TRANSFER RATE Q [W] COIL – PT180

		length L (mm)		900
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	596	540	519
	70	384	335	316
	60	289	244	227
	45	162	125	111
		length L (mm)		1000
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	695	630	605
	70	448	391	369
	60	337	285	265
	45	190	146	130
		length L (mm)		1250
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	943	855	821
	70	608	531	501
	60	457	387	360
	45	257	199	177
		length L (mm)		1500
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 192	1 081	1 037
	70	768	671	633
	60	578	489	454
	45	325	251	223
		length L (mm)		1750
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 440	1 306	1 253
	70	928	810	765
	60	698	591	549
	45	393	303	269
		length L (mm)		2000
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 688	1 531	1 469
	70	1 087	950	897
	60	818	692	644
	45	460	356	316
		length L (mm)		2500
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 185	1 981	1 901
	70	1 407	1 229	1 160
	60	1 059	896	833
	45	596	460	409
		length L (mm)		3000
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 681	2 431	2 333
	70	1 727	1 509	1 424
	60	1 299	1 100	1 022
	45	731	565	502



COIL – PT300

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan

DIMENSIONS

total width	303 mm
construction height	300 mm
length	900 to 3000 mm

USAGE

It is recommended for individual use in dry interiors with medium heat demand where the construction height is not a limiting factor.

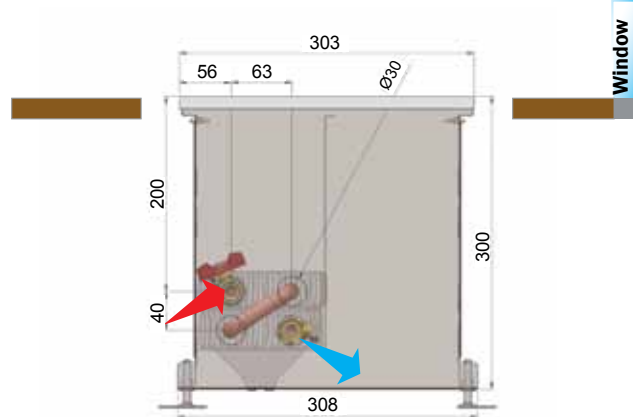
HEAT TRANSFER RATE Q [W] COIL – PT300

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	679	618	594
	70	445	391	369
	60	338	288	269
	45	194	152	135
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	792	721	693
	70	519	456	431
	60	395	336	313
	45	227	177	158
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 076	979	941
	70	704	618	585
	60	536	456	425
	45	308	240	214
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 359	1 236	1 188
	70	890	781	739
	60	677	576	537
	45	389	303	271
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 642	1 494	1 436
	70	1 075	944	893
	60	817	696	649
	45	470	366	327
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 925	1 752	1 684
	70	1 260	1 107	1 047
	60	958	816	761
	45	551	430	383
		length L (mm) 2500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 491	2 267	2 179
	70	1 631	1 432	1 354
	60	1 240	1 056	985
	45	713	556	496
		length L (mm) 3000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 057	2 782	2 674
	70	2 002	1 758	1 662
	60	1 522	1 296	1 208
	45	875	682	609

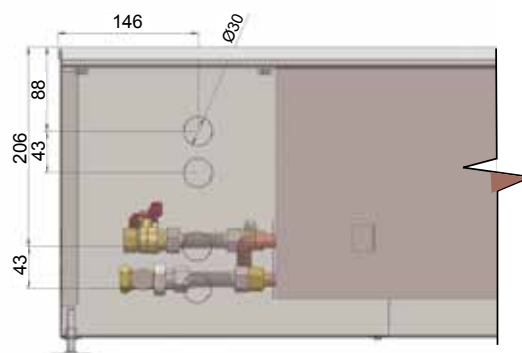
TEMPERATURE EXPONENT

$m = 1,3649$

CROSS SECTION OF COIL-PT300



LONGITUDINAL SECTION OF COIL-PT300



COIL – PO

CHARACTERISTICS

- ✘ for heating **wet** interiors
- ✘ the most popular convector without a fan

DIMENSIONS

total width	303 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

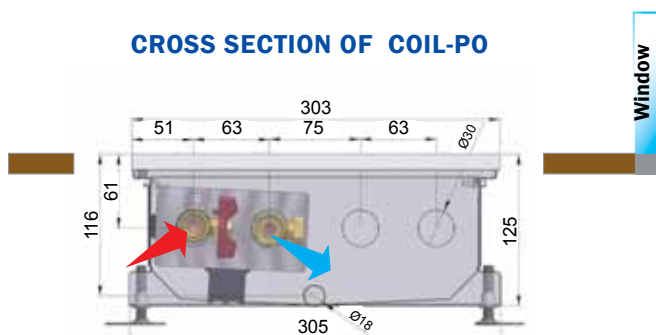
COIL PO has a formed drain pan to provide drainage of stored water from the trough drain pan. COIL PO can be combined with the COIL – KO and COIL – MO, which have a significantly higher heat output. These convectors are equipped with an 18 mm CU drain tube placed in the front of the convector. **The convector cannot be installed to swimming pools with salt or other aggressive water.** An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.



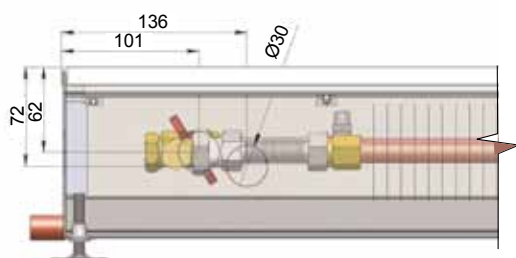
TEMPERATURE EXPONENT

$m = 1,4147$

CROSS SECTION OF COIL-PO



LONGITUDINAL SECTION OF COIL-PO



HEAT TRANSFER RATE Q [W] COIL – PO

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	455	413	396
	70	293	256	242
	60	221	187	174
	45	124	96	85
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	531	482	462
	70	342	299	282
	60	258	218	203
	45	145	112	100
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	721	654	627
	70	465	406	383
	60	350	296	275
	45	197	152	135
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	910	826	792
	70	587	513	484
	60	442	374	348
	45	249	192	171
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	1 100	998	958
	70	709	620	585
	60	534	452	420
	45	301	232	207
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	1 290	1 170	1 123
	70	832	727	686
	60	626	530	493
	45	353	273	242
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	1 669	1 514	1 453
	70	1 076	940	888
	60	810	686	638
	45	456	353	313
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	2 048	1 858	1 783
	70	1 321	1 154	1 089
	60	994	842	783
	45	560	433	385



COIL – P04

CHARACTERISTICS

- ✘ for heating wet interiors
- ✘ identical in dimension to convectors PO but it has the 4 – tube heat exchanger and therefore a higher output Q

DIMENSIONS

total width	303 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

COIL PO/4 is recommended for individual use in interiors where COIL PO does not efficiently cover the heat requirement. COIL PO/4 has a profiled drain pan to provide drainage of stored water from the trough drain pan. COIL PO/4 can be combined with COIL – KO or COIL – MO, which have a significantly higher heat output. These convectors are equipped with the 18 mm CU drain tube placed in the front of the convector. **The convector cannot be installed to swimming pools with salt or other aggressive water.** An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

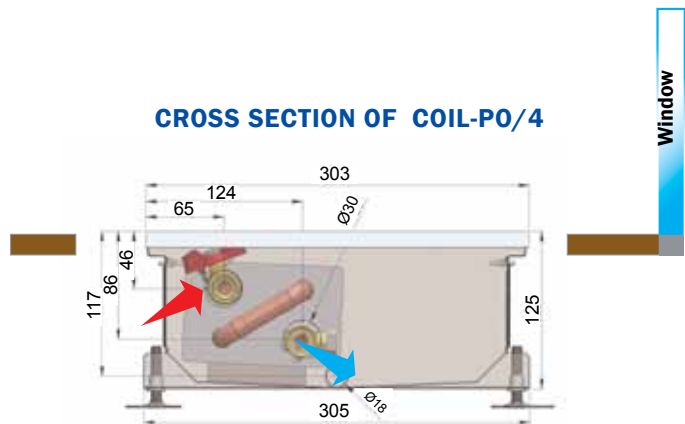
HEAT TRANSFER RATE Q [W] COIL – P04

		length L (mm) 900		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	567	513	492
	70	362	315	297
	60	270	228	212
	45	150	115	102
		length L (mm) 1000		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	662	599	574
	70	422	368	346
	60	315	266	247
	45	175	135	119
		length L (mm) 1250		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	898	812	779
	70	573	499	470
	60	428	361	335
	45	238	183	162
		length L (mm) 1500		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 134	1 026	984
	70	723	630	594
	60	541	456	423
	45	300	231	204
		length L (mm) 1750		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 370	1 240	1 189
	70	874	761	718
	60	653	551	511
	45	363	279	247
		length L (mm) 2000		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 607	1 454	1 394
	70	1 025	893	841
	60	766	646	600
	45	426	327	290
		length L (mm) 2500		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 079	1 881	1 804
	70	1 326	1 155	1 089
	60	991	836	776
	45	551	423	375
		length L (mm) 3000		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 552	2 309	2 214
	70	1 628	1 418	1 336
	60	1 217	1 026	952
	45	676	519	460

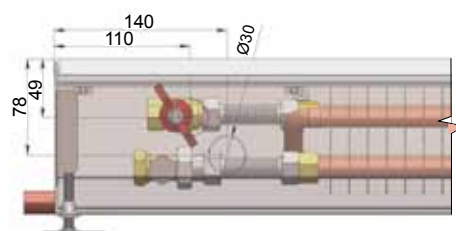
TEMPERATURE EXPONENT

m = 1,4497

CROSS SECTION OF COIL-PO/4



LONGITUDINAL SECTION OF COIL-PO/4



COIL – PMW90

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan
- ✘ construction height only 90 mm

DIMENSIONS

total width 420 mm
 construction height 90 mm
 length 900 to 3000 mm

USAGE

It is recommended for individual use in dry interiors with medium heat demands in places where the construction height is not a limiting factor.

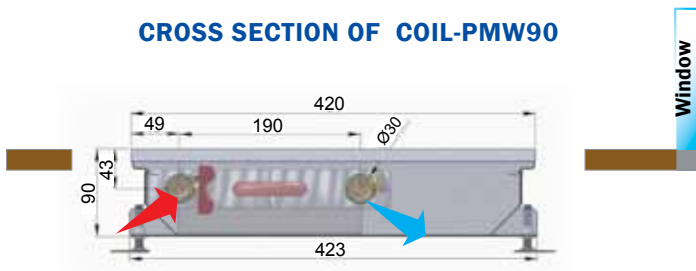


HEAT TRANSFER RATE Q [W] COIL – PMW90

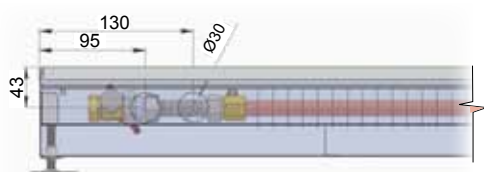
TEMPERATURE EXPONENT

$m = 1,4389$

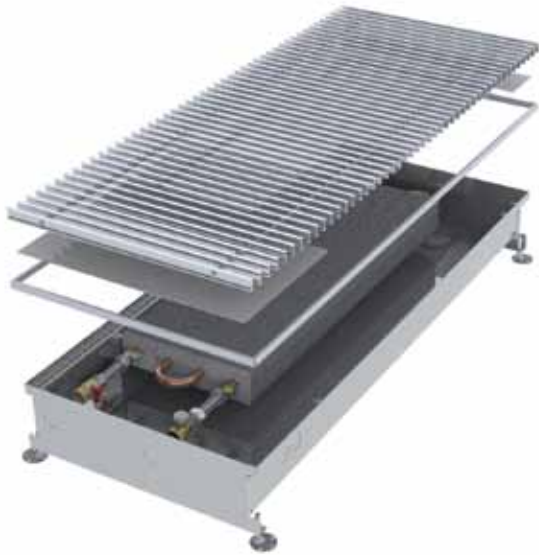
CROSS SECTION OF COIL-PMW90



LONGITUDINAL SECTION OF COIL-PMW90



		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	466	422	405
	70	299	260	245
	60	224	189	175
	45	125	96	85
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	544	493	473
	70	348	304	286
	60	261	220	205
	45	146	112	99
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	738	669	641
	70	473	412	389
	60	354	299	278
	45	198	152	135
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	933	845	810
	70	597	520	491
	60	447	378	351
	45	250	192	170
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	1 127	1 021	979
	70	721	629	593
	60	540	456	424
	45	302	232	206
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	1 321	1 197	1 148
	70	846	737	695
	60	634	535	497
	45	354	272	241
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	1 710	1 549	1 485
	70	1 095	954	900
	60	820	692	643
	45	458	352	312
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	2 099	1 900	1 823
	70	1 343	1 171	1 104
	60	1 006	849	789
	45	562	432	383



COIL – PMW125

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan

DIMENSIONS

total width	420 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

It is recommended for individual use in dry interiors with medium heat demands in places where the construction height is not a limiting factor.

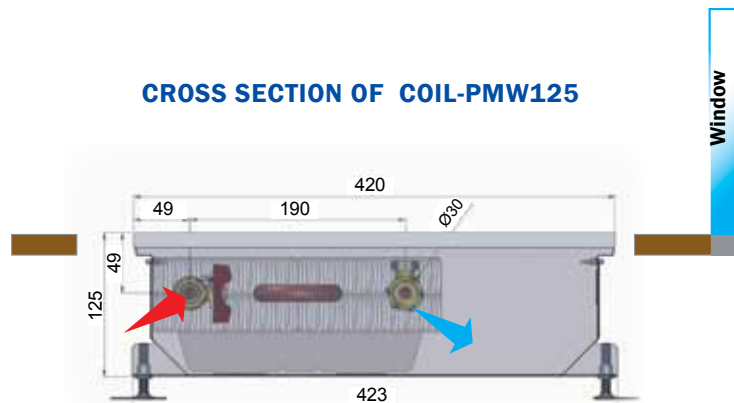
HEAT TRANSFER RATE Q [W] COIL – PMW125

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	643	583	560
	70	414	362	341
	60	311	263	245
	45	175	135	120
		length L (mm) 1000		
		15	20	22
mean water temperature t_w	90	751	681	653
	70	483	422	398
	60	363	307	286
	45	204	158	140
		length L (mm) 1250		
		15	20	22
mean water temperature t_w	90	1 019	924	886
	70	656	573	540
	60	493	417	388
	45	277	214	190
		length L (mm) 1500		
		15	20	22
mean water temperature t_w	90	1 287	1 167	1 120
	70	828	723	683
	60	623	527	490
	45	350	270	240
		length L (mm) 1750		
		15	20	22
mean water temperature t_w	90	1 555	1 410	1 353
	70	1 001	874	825
	60	753	637	592
	45	423	327	290
		length L (mm) 2000		
		15	20	22
mean water temperature t_w	90	1 823	1 653	1 586
	70	1 174	1 025	967
	60	882	747	694
	45	496	383	340
		length L (mm) 2500		
		15	20	22
mean water temperature t_w	90	2 359	2 139	2 053
	70	1 519	1 326	1 252
	60	1 142	966	898
	45	642	496	440
		length L (mm) 3000		
		15	20	22
mean water temperature t_w	90	2 895	2 625	2 519
	70	1 864	1 628	1 536
	60	1 402	1 186	1 102
	45	788	608	540

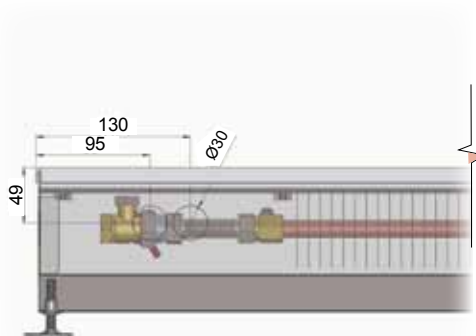
TEMPERATURE EXPONENT

$m = 1,4202$

CROSS SECTION OF COIL-PMW125



LONGITUDINAL SECTION OF COIL-PMW125



COIL – PMW165

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan

DIMENSIONS

total width	420 mm
construction height	165 mm
length	900 to 3000 mm

USAGE

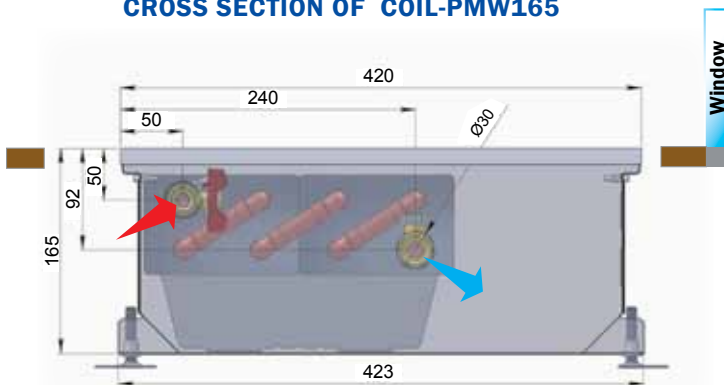
It is recommended for individual use in dry interiors with demand on higher heat output where the construction height is not a limiting factor.



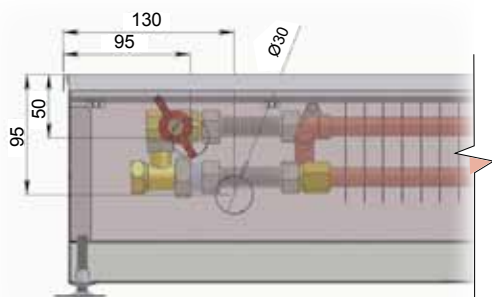
TEMPERATURE EXPONENT

$$m = 1,4131$$

CROSS SECTION OF COIL-PMW165



LONGITUDINAL SECTION OF COIL-PMW165



HEAT TRANSFER RATE Q [W] COIL – PMW165

		length L (mm)		900
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	937	850	815
	70	604	528	498
	60	455	385	358
	45	257	198	176
		length L (mm)		1000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 093	991	951
	70	705	616	582
	60	531	449	418
	45	299	231	206
		length L (mm)		1250
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 483	1 345	1 291
	70	957	836	789
	60	720	610	567
	45	406	314	279
		length L (mm)		1500
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 873	1 699	1 631
	70	1 208	1 056	997
	60	910	770	717
	45	513	397	352
		length L (mm)		1750
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 263	2 053	1 971
	70	1 460	1 276	1 205
	60	1 100	931	866
	45	620	479	426
		length L (mm)		2000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 653	2 407	2 310
	70	1 712	1 496	1 412
	60	1 289	1 092	1 015
	45	727	562	499
		length L (mm)		2500
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	3 434	3 115	2 990
	70	2 215	1 936	1 828
	60	1 668	1 413	1 314
	45	941	727	646
		length L (mm)		3000
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	4 214	3 823	3 669
	70	2 719	2 376	2 243
	60	2 048	1 734	1 612
	45	1 155	892	793



COIL – PMW205

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output without fan

DIMENSIONS

total width	420 mm
construction height	205 mm
length	900 to 3000 mm

USAGE

It is recommended for individual use in dry interiors with demand on higher heat output where the construction height is not a limiting factor.

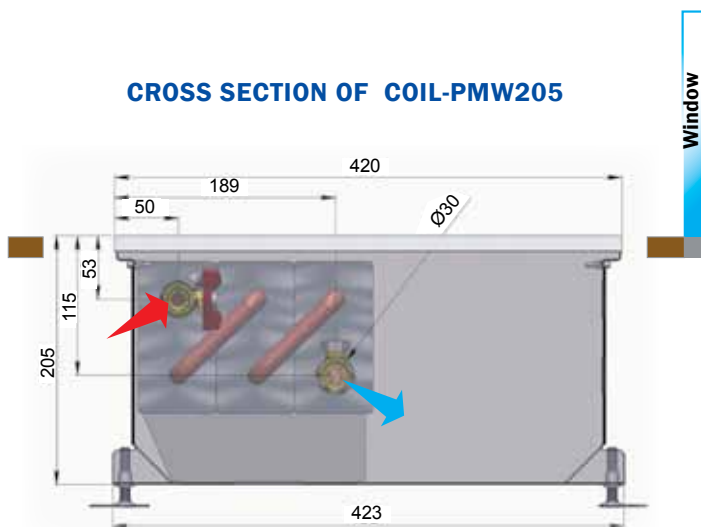
HEAT TRANSFER RATE Q [W] COIL – PMW205

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_{w1}	90	1 019	921	883
	70	647	563	531
	60	483	406	377
	45	267	204	181
		length L (mm) 1000		
		15	20	22
mean water temperature t_{w1}	90	1 189	1 075	1 030
	70	755	657	619
	60	563	474	440
	45	311	238	211
		length L (mm) 1250		
		15	20	22
mean water temperature t_{w1}	90	1 613	1 458	1 398
	70	1 025	892	840
	60	764	643	597
	45	422	324	286
		length L (mm) 1500		
		15	20	22
mean water temperature t_{w1}	90	2 038	1 842	1 766
	70	1 295	1 126	1 061
	60	965	813	754
	45	534	409	362
		length L (mm) 1750		
		15	20	22
mean water temperature t_{w1}	90	2 462	2 226	2 134
	70	1 565	1 361	1 282
	60	1 167	982	911
	45	645	494	437
		length L (mm) 2000		
		15	20	22
mean water temperature t_{w1}	90	2 887	2 610	2 502
	70	1 834	1 596	1 503
	60	1 368	1 151	1 068
	45	756	579	513
		length L (mm) 2500		
		15	20	22
mean water temperature t_{w1}	90	3 736	3 378	3 237
	70	2 374	2 065	1 945
	60	1 770	1 490	1 382
	45	978	749	663
		length L (mm) 3000		
		15	20	22
mean water temperature t_{w1}	90	4 585	4 145	3 973
	70	2 913	2 534	2 387
	60	2 172	1 829	1 696
	45	1 201	920	814

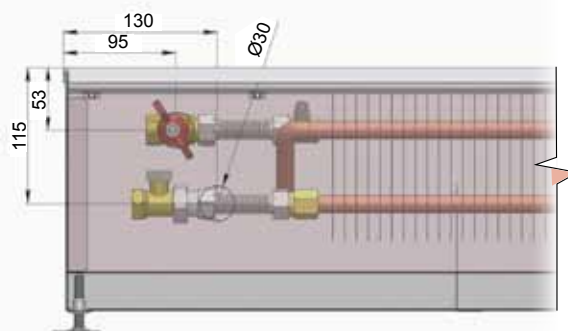
TEMPERATURE EXPONENT

$m = 1,4624$

CROSS SECTION OF COIL-PMW205



LONGITUDINAL SECTION OF COIL-PMW205



FLOOR CONVECTORS WITH FANS

HOW TO CORRECTLY CHOOSE A FLOOR CONVECTOR WITH A FAN:

- determination of the heat loss in the room according to the project
- determination of the mean heating water temperature
- setting of the required temperature in the room
- setting of the convector type according to the environment (dry or wet)*
- to preliminary select a suitable type of the convector according to the dimension limit (construction height, length and width) and to check a required output according to table values
- specification of the length and number of convectors
- selection of the walkway grille and covering surrounds
- selection of the suitable control and thermostat – the example on page no. 99

* *dry and wet environment is defined by the standard CSN 038900 – design of electric objects – Classification of the environment*

CALCULATION OF THE OUTPUT FOR THE PARTICULAR TEMPERATURES:

Use the temperature equation for calculation of the output at other than the tabulated value of heating water and air in the room. Enter the required mean temperature of heating water and air in the room and calculate the heat output. These values can be also simply calculated on our website on the specific convector page.

PRICE OF THE STANDARD CONVECTOR INCLUDES:

- stainless steel trough
- stainless steel flexible connection hoses, enabling tilting of the heat exchanger during cleaning of the convector
- upper coverplate over hoses
- 2 x adjusting valves or adjusting valve and shut-off valve
- any type of segmented aluminium or wooden grid (only for standard convector lengths).*
- grilles for convectors with a width of over 340 mm are only supplied as roll-up, spring type.
- decorative surround*

* *Stainless steel grille and decorative covering surround – at extra cost*
 - cross flow fans only for the safe voltage 12V

OPTIONAL ACCESSORIES:

You will find examples of optional accessories on page no. 103

EXAMPLES OF COVER GRILLES ARE ON PAGE NO. 104
PRESSURE LOSSES, ACOUSTIC PRESSURE AND OTHER PHYSICAL PROPERTIES CAN BE FOUND ON PAGE NO. 100

TEMPERATURE EQUATION FOR HEATING

$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:

m= temperature exponent
t_{w, A} mean heating water temperature
 mean air temperature in the interior [°C]
Q_N nominal heat transfer rate for temperatures t_w/t_a 70/20 °C [W]
μ μ=1 (select μ according to the diagram for other than nominal flow values)
Q heat transfer rate for other temperatures[W]

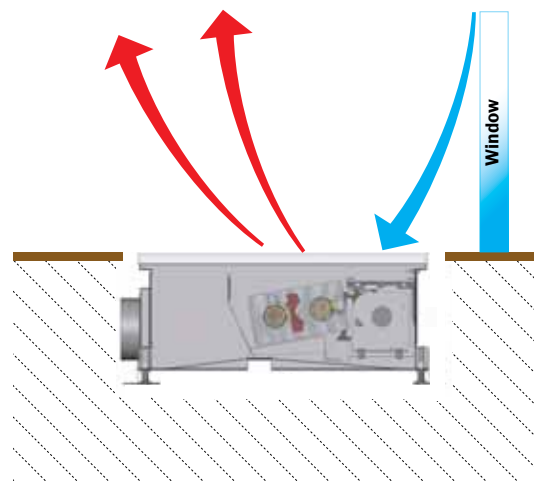
TEMPERATURE EQUATION FOR COOLING

$$Q = Q_{NC} \left(\frac{t_w - t_A}{17} \right)^m$$

where:

m= temperature exponent
t_{w, A} mean heating water temperature
 mean air temperature in the interior [°C]
Q_{NC} nominal heat transfer rate for cooling for temperatures t_w/t_a = 9/26 °C [W]
Q heat transfer rate for other temperatures [W]

EXAMPLE OF AIR FLOW IN THE ROOM



INNOVATION OF THE YEAR 2010



COIL – T085

CHARACTERISTICS

- ✘ for heating wet interiors
- ✘ very low convector (height only 85 mm)

DIMENSIONS

Total width	243 mm
Construction height	85 mm
Total length	900 to 3000 mm

USAGE

Fan assisted convector for heating of wet interiors with a low construction height (only 85mm).

Thanks to the voltage 12 V (AC motor) these MINIB convectors are safe for applications in wet areas. The convector COIL-T085 is equipped with an 18mm diameter drain pipe placed in the front of the convector. **The convector cannot be installed in swimming pools with salty or other aggressive water.**

Recommended control A1 or E1.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT

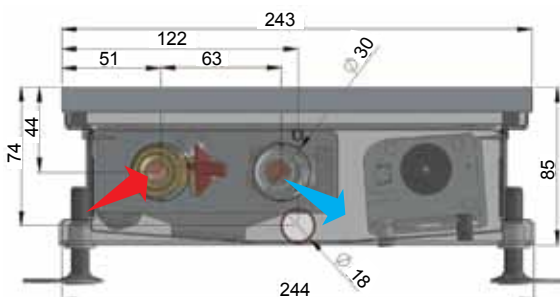
$$m = 1,1523$$

ELECTRIC INPUT FOR FANS

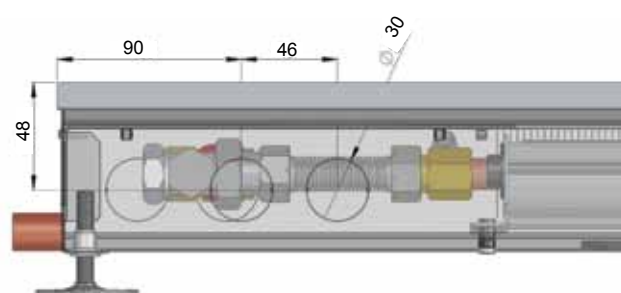
length	power input
900	33 VA
1000	33 VA
1250	33 VA
1500	66 VA
1750	66 VA
2000	66 VA
2500	99 VA
3000	99 VA



CROSS SECTION OF COIL - T085



LONGITUDINAL SECTION OF COIL - T085



HEAT TRANSFER RATE Q [W] COIL – T085

		1 min. speed				2 med. speed				3 max. speed			
		length L (mm) 900				length L (mm) 900				length L (mm) 900			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	789	729	705	90	1 126	1 040	1 005	90	1 280	1 182	1 143	
	70	552	495	472	70	787	705	673	70	895	802	765	
	60	438	382	360	60	625	545	514	60	711	620	585	
	45	275	223	202	45	392	317	288	45	445	361	328	
		length L (mm) 1000				length L (mm) 1000				length L (mm) 1000			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	921	850	822	90	1 313	1 213	1 173	90	1 493	1 379	1 334	
	70	644	577	550	70	919	823	785	70	1 045	936	893	
	60	511	446	421	60	729	636	600	60	829	724	682	
	45	320	260	236	45	457	370	336	45	520	421	383	
		length L (mm) 1250				length L (mm) 1250				length L (mm) 1250			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	1 249	1 154	1 116	90	1 782	1 646	1 592	90	2 027	1 872	1 810	
	70	874	783	747	70	1 247	1 117	1 066	70	1 418	1 270	1 212	
	60	694	606	571	60	989	864	814	60	1 125	982	926	
	45	435	352	320	45	620	503	456	45	705	572	519	
		length L (mm) 1500				length L (mm) 1500				length L (mm) 1500			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	1 578	1 458	1 410	90	2 251	2 079	2 011	90	2 560	2 365	2 287	
	70	1 104	989	944	70	1 575	1 411	1 346	70	1 791	1 605	1 531	
	60	876	765	721	60	1 250	1 091	1 028	60	1 421	1 241	1 170	
	45	549	445	404	45	783	635	577	45	891	722	656	
		length L (mm) 1750				length L (mm) 1750				length L (mm) 1750			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	1 907	1 761	1 703	90	2 720	2 512	2 430	90	3 094	2 857	2 763	
	70	1 334	1 195	1 140	70	1 903	1 705	1 626	70	2 164	1 939	1 850	
	60	1 059	924	871	60	1 510	1 318	1 243	60	1 717	1 499	1 413	
	45	663	538	488	45	946	767	697	45	1 076	872	792	
		length L (mm) 2000				length L (mm) 2000				length L (mm) 2000			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	2 236	2 065	1 997	90	3 189	2 945	2 849	90	3 627	3 350	3 240	
	70	1 564	1 401	1 337	70	2 231	1 999	1 907	70	2 537	2 273	2 169	
	60	1 241	1 084	1 021	60	1 770	1 546	1 457	60	2 013	1 758	1 657	
	45	778	630	573	45	1 109	899	817	45	1 262	1 023	929	
		length L (mm) 2500				length L (mm) 2500				length L (mm) 2500			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	2 893	2 672	2 585	90	4 127	3 812	3 686	90	4 694	4 335	4 193	
	70	2 024	1 813	1 730	70	2 887	2 587	2 468	70	3 283	2 942	2 807	
	60	1 606	1 402	1 322	60	2 291	2 000	1 885	60	2 605	2 275	2 144	
	45	1 007	816	741	45	1 436	1 164	1 057	45	1 633	1 323	1 202	
		length L (mm) 3000				length L (mm) 3000				length L (mm) 3000			
		mean air temperature t _a				mean air temperature t _a				mean air temperature t _a			
		15	20	22		15	20	22		15	20	22	
mean water temperature t _w	90	3 551	3 280	3 172	90	5 065	4 678	4 524	90	5 760	5 320	5 145	
	70	2 484	2 226	2 123	70	3 543	3 174	3 029	70	4 029	3 610	3 444	
	60	1 971	1 721	1 622	60	2 812	2 455	2 314	60	3 198	2 792	2 631	
	45	1 235	1 001	910	45	1 762	1 428	1 297	45	2 004	1 624	1 475	



COIL – KT

CHARACTERISTICS

- ✘ the most popular convector with fan
- ✘ for heating dry interiors
- ✘ high heat output
- ✘ also heating when the fan is switched off

DIMENSIONS

total width	303 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

The most universal MINIB convector for dry applications. The convector produces high levels of heat output with the 12V fan switched on but it also heats – tempers the interior when the fan is switched off. A high heat output and ability to keep low levels of natural convection when the fan is switched off provide a wide range of uses for interiors with a variety of safety and heating demands.

TEMPERATURE EXPONENT

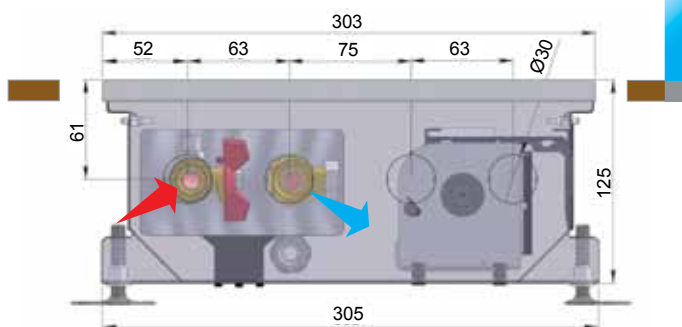
$m = 1,012688$

ELECTRIC INPUT FOR FANS

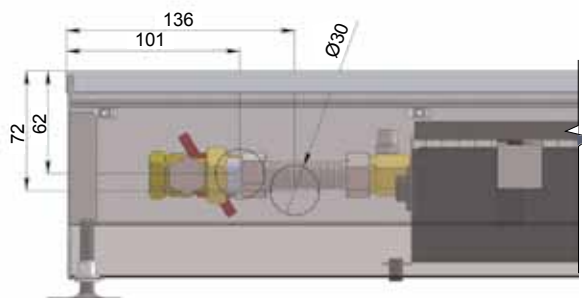
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



CROSS SECTION OF COIL-KT



LONGITUDINAL SECTION OF COIL-KT



HEAT TRANSFER RATE Q [W] COIL – KT

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 341	1 251	1 215	90	1 465	1 366	1 327	90	1 634	1 524	1 480
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	60	800	710	674	60	874	775	736	60	974	865	821
	45	530	441	405	45	579	482	443	45	646	537	494
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 565	1 459	1 417	90	1 710	1 594	1 548	90	1 906	1 778	1 726
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	60	933	828	786	60	1 019	905	859	60	1 136	1 009	958
	45	619	514	473	45	676	562	516	45	754	627	576
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 124	1 981	1 923	90	2 320	2 164	2 101	90	2 587	2 413	2 343
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	60	1 266	1 124	1 067	60	1 383	1 228	1 165	60	1 542	1 369	1 300
	45	840	698	642	45	917	763	701	45	1 023	850	782
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 683	2 502	2 430	90	2 931	2 733	2 654	90	3 268	3 047	2 959
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	60	1 599	1 420	1 348	60	1 747	1 551	1 472	60	1 948	1 729	1 642
	45	1 061	882	811	45	1 159	963	885	45	1 292	1 074	987
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 242	3 023	2 936	90	3 541	3 302	3 207	90	3 949	3 682	3 576
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	60	1 933	1 715	1 628	60	2 111	1 874	1 779	60	2 354	2 089	1 984
	45	1 282	1 066	979	45	1 400	1 164	1 070	45	1 561	1 298	1 193
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 801	3 544	3 442	90	4 152	3 872	3 760	90	4 630	4 317	4 192
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	60	2 266	2 011	1 909	60	2 475	2 197	2 085	60	2 760	2 450	2 326
	45	1 503	1 249	1 148	45	1 641	1 365	1 254	45	1 830	1 522	1 399
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 919	4 587	4 454	90	5 373	5 010	4 865	90	5 991	5 587	5 425
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	60	2 932	2 602	2 471	60	3 203	2 843	2 699	60	3 572	3 170	3 010
	45	1 945	1 617	1 486	45	2 124	1 766	1 623	45	2 369	1 969	1 810
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	6 037	5 629	5 466	90	6 594	6 149	5 971	90	7 353	6 857	6 658
	70	4 409	4 004	3 842	70	4 817	4 373	4 196	70	5 371	4 877	4 679
	60	3 599	3 194	3 032	60	3 931	3 489	3 312	60	4 383	3 890	3 694
	45	2 387	1 984	1 824	45	2 607	2 168	1 992	45	2 907	2 417	2 221



COIL – KT 110

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ high heat output
- ✘ also heating when the fan is switched off
- ✘ KT110 variant with lower demands on construction height

DIMENSIONS

total width	303 mm
construction height	110 mm
length L	900 to 3000 mm

USAGE

The most universal MINIB convector for dry applications. The convector produces high levels of heat output with the 12V fan switched on but it also heats – tempers the interior when the fan is switched off. A high heat output and ability to keep low levels of natural convection when the fan is switched off provide a wide range of uses for interiors with a variety of safety and heating demands.

TEMPERATURE EXPONENT

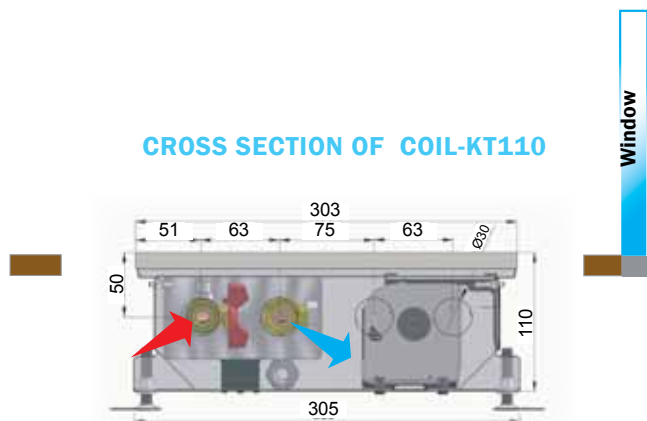
m = 1.0543

ELECTRIC INPUT FOR FANS

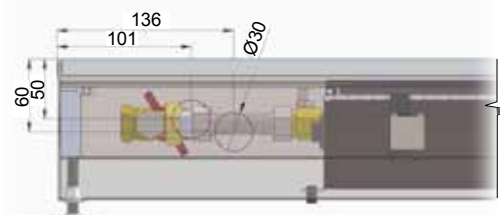
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



CROSS SECTION OF COIL-KT110



LONGITUDINAL SECTION OF COIL-KT110



HEAT TRANSFER RATE Q [W] COIL – KT 110

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 114	1 036	1 005	90	1 220	1 134	1 100	90	1 374	1 278	1 239
	70	804	727	696	70	880	796	762	70	991	896	858
	60	650	574	544	60	712	629	596	60	802	708	671
	45	424	350	320	45	464	383	351	45	523	432	395
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 300	1 209	1 172	90	1 423	1 324	1 284	90	1 603	1 491	1 446
	70	937	848	812	70	1 026	928	889	70	1 156	1 046	1 002
	60	759	670	635	60	831	734	695	60	936	826	783
	45	495	408	374	45	542	447	409	45	610	503	461
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 764	1 641	1 591	90	1 932	1 796	1 742	90	2 176	2 023	1 962
	70	1 272	1 151	1 102	70	1 393	1 260	1 207	70	1 569	1 419	1 359
	60	1 030	909	862	60	1 127	996	943	60	1 270	1 122	1 062
	45	671	554	507	45	735	607	556	45	828	683	626
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 229	2 072	2 010	90	2 440	2 269	2 201	90	2 748	2 556	2 479
	70	1 607	1 453	1 392	70	1 760	1 591	1 524	70	1 982	1 792	1 717
	60	1 301	1 149	1 088	60	1 424	1 258	1 192	60	1 604	1 417	1 342
	45	848	700	641	45	929	766	702	45	1 046	863	790
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 693	2 504	2 429	90	2 949	2 742	2 659	90	3 321	3 088	2 995
	70	1 942	1 756	1 682	70	2 126	1 923	1 842	70	2 395	2 166	2 075
	60	1 572	1 388	1 315	60	1 721	1 520	1 440	60	1 938	1 712	1 622
	45	1 025	846	774	45	1 122	926	848	45	1 264	1 043	955
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 157	2 936	2 847	90	3 457	3 214	3 118	90	3 894	3 620	3 511
	70	2 277	2 059	1 972	70	2 493	2 254	2 159	70	2 808	2 539	2 432
	60	1 843	1 627	1 542	60	2 017	1 782	1 688	60	2 272	2 007	1 901
	45	1 202	991	908	45	1 316	1 086	994	45	1 482	1 223	1 120
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 086	3 799	3 685	90	4 474	4 160	4 035	90	5 039	4 685	4 544
	70	2 946	2 665	2 552	70	3 226	2 917	2 795	70	3 633	3 286	3 148
	60	2 384	2 106	1 995	60	2 611	2 306	2 184	60	2 941	2 597	2 460
	45	1 555	1 283	1 175	45	1 703	1 405	1 287	45	1 918	1 582	1 449
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	5 014	4 663	4 522	90	5 490	5 105	4 951	90	6 184	5 750	5 577
	70	3 616	3 270	3 132	70	3 959	3 581	3 430	70	4 459	4 033	3 863
	60	2 926	2 585	2 449	60	3 204	2 830	2 681	60	3 609	3 187	3 020
	45	1 908	1 575	1 442	45	2 090	1 724	1 579	45	2 354	1 942	1 779



COIL – KO

CHARACTERISTICS

- ✘ the most popular convector with the fan
- ✘ for heating wet interiors
- ✘ high heat output
- ✘ also heating when the fan is switched off

DIMENSIONS

total width	303 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

The universal MINIB convector for wet applications. The convector produces high levels of heat out-put with the 12V fan switched on but it also heats – tempers the interior when the fan is switched off with the heat output of ca. 300W/1m. A high heat output and ability to keep low levels of natural convection when the fan is switched off provide a wide range of uses for interiors with a variety of safety and heating demands.

Thanks to **the voltage 12 V** (AC motor) the all MINIB convectors are also safe for applications in wet areas. COIL-KO is supplied with the 18mm diameter tube placed in the front of the convector to ensure water drainage from the drain pan. **The convector cannot be installed to swimming pools with salt or other aggressive water.** The convector is equipped with 12V AC motors; recommended control A1 or E1.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT

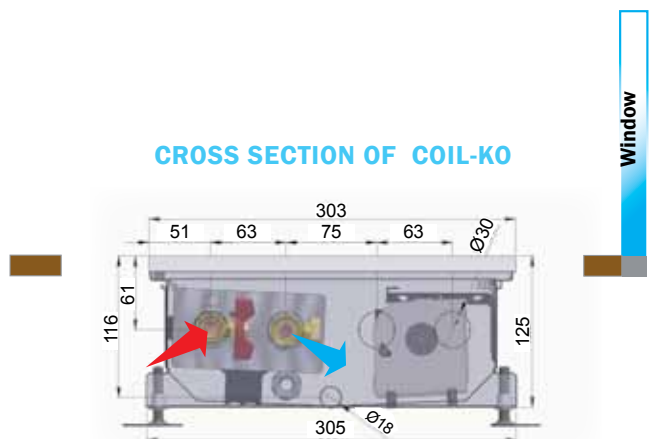
$m = 1,012688$

ELECTRIC INPUT FOR FANS

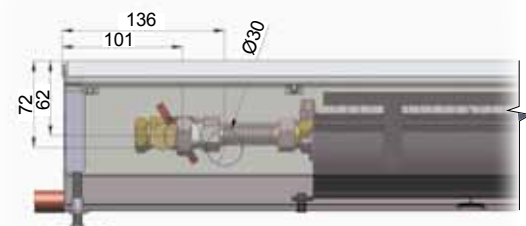
length	power input
900	32 VA
1000	37 VA
1250	37 VA
1500	64 VA
1750	74 VA
2000	74 VA
2500	106 VA
3000	111 VA



CROSS SECTION OF COIL-KO



LONGITUDINAL SECTION OF COIL-KO



HEAT TRANSFER RATE Q [W] COIL – KO

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 341	1 251	1 215	90	1 465	1 366	1 327	90	1 634	1 524	1 480
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	60	800	710	674	60	874	775	736	60	974	865	821
	45	530	441	405	45	579	482	443	45	646	537	494
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 565	1 459	1 417	90	1 710	1 594	1 548	90	1 906	1 778	1 726
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	60	933	828	786	60	1 019	905	859	60	1 136	1 009	958
	45	619	514	473	45	676	562	516	45	754	627	576
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 124	1 981	1 923	90	2 320	2 164	2 101	90	2 587	2 413	2 343
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	60	1 266	1 124	1 067	60	1 383	1 228	1 165	60	1 542	1 369	1 300
	45	840	698	642	45	917	763	701	45	1 023	850	782
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 683	2 502	2 430	90	2 931	2 733	2 654	90	3 268	3 047	2 959
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	60	1 599	1 420	1 348	60	1 747	1 551	1 472	60	1 948	1 729	1 642
	45	1 061	882	811	45	1 159	963	885	45	1 292	1 074	987
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 242	3 023	2 936	90	3 541	3 302	3 207	90	3 949	3 682	3 576
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	60	1 933	1 715	1 628	60	2 111	1 874	1 779	60	2 354	2 089	1 984
	45	1 282	1 066	979	45	1 400	1 164	1 070	45	1 561	1 298	1 193
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 801	3 544	3 442	90	4 152	3 872	3 760	90	4 630	4 317	4 192
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	60	2 266	2 011	1 909	60	2 475	2 197	2 085	60	2 760	2 450	2 326
	45	1 503	1 249	1 148	45	1 641	1 365	1 254	45	1 830	1 522	1 399
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 919	4 587	4 454	90	5 373	5 010	4 865	90	5 991	5 587	5 425
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	60	2 932	2 602	2 471	60	3 203	2 843	2 699	60	3 572	3 170	3 010
	45	1 945	1 617	1 486	45	2 124	1 766	1 623	45	2 369	1 969	1 810
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	6 037	5 629	5 466	90	6 594	6 149	5 971	90	7 353	6 857	6 658
	70	4 409	4 004	3 842	70	4 817	4 373	4 196	70	5 371	4 877	4 679
	60	3 599	3 194	3 032	60	3 931	3 489	3 312	60	4 383	3 890	3 694
	45	2 387	1 984	1 824	45	2 607	2 168	1 992	45	2 907	2 417	2 221



COIL – KTO

CHARACTERISTICS

- ✘ the narrowest available MINIB floor convector, total width only 106 mm
- ✘ for heating dry interiors

DIMENSIONS

total width	106 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

The convector COIL – KTO is MINIB's narrowest available floor convector. It is a fast-responding heater from the lower heat output series of MINIB convectors with the 12V fan. Despite the extremely narrow design, the convector can achieve heat outputs of approx. 420 W/m of length. Their use is recommended in cases when an extremely narrow profile of floor convector is required.

Connection of heat exchanger by 3/8 thread.

TEMPERATURE EXPONENT

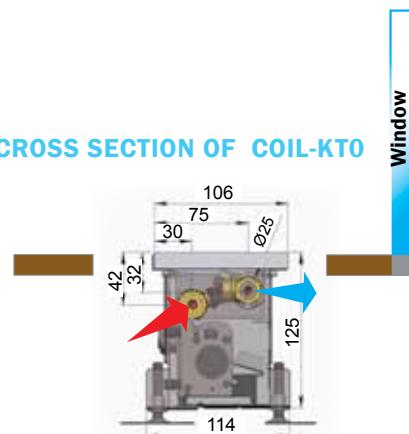
$m = 1.107577$

ELECTRIC INPUT FOR FANS

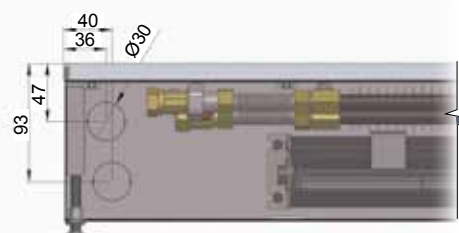
length	power input
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA
2500	12 VA
3000	16 VA



CROSS SECTION OF COIL-KTO



LONGITUDINAL SECTION OF COIL-KTO



HEAT TRANSFER RATE Q [W] COIL – KTO

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	469	435	421	90	560	519	502	90	723	670	649
	70	333	299	286	70	397	357	342	70	513	462	441
	60	266	234	221	60	318	279	264	60	411	360	341
	45	170	139	127	45	203	166	151	45	262	214	195
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	547	507	491	90	653	605	586	90	844	782	757
	70	388	349	334	70	463	417	398	70	598	538	515
	60	311	273	258	60	371	326	308	60	479	421	397
	45	198	162	148	45	237	193	176	45	306	250	228
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	743	688	666	90	887	821	795	90	1 145	1 061	1 027
	70	527	474	453	70	629	566	541	70	812	731	698
	60	422	370	350	60	503	442	418	60	650	571	539
	45	269	220	201	45	321	263	239	45	415	339	309
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	938	869	842	90	1 120	1 037	1 005	90	1 446	1 340	1 298
	70	665	599	572	70	794	715	683	70	1 026	923	882
	60	533	468	442	60	636	558	527	60	821	721	681
	45	340	278	253	45	406	332	302	45	524	428	391
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 134	1 050	1 017	90	1 353	1 254	1 214	90	1 748	1 619	1 568
	70	804	723	691	70	960	864	825	70	1 240	1 115	1 066
	60	644	565	534	60	768	674	637	60	993	871	823
	45	411	336	306	45	490	401	365	45	633	518	472
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 329	1 231	1 192	90	1 586	1 470	1 423	90	2 049	1 898	1 838
	70	943	848	811	70	1 125	1 012	968	70	1 453	1 308	1 250
	60	755	662	626	60	901	791	747	60	1 164	1 021	965
	45	482	394	359	45	575	470	428	45	743	607	553
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 720	1 593	1 543	90	2 053	1 902	1 842	90	2 652	2 457	2 379
	70	1 220	1 098	1 049	70	1 456	1 310	1 252	70	1 881	1 692	1 618
	60	977	857	810	60	1 166	1 023	967	60	1 506	1 322	1 249
	45	623	509	464	45	744	608	554	45	961	785	716
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 111	1 955	1 894	90	2 520	2 334	2 261	90	3 254	3 015	2 920
	70	1 497	1 347	1 288	70	1 787	1 608	1 537	70	2 308	2 077	1 985
	60	1 199	1 052	994	60	1 431	1 256	1 187	60	1 848	1 622	1 533
	45	765	625	570	45	913	746	680	45	1 180	964	879



COIL – KT1

CHARACTERISTICS

- ✦ narrow but powerful convector
- ✦ for heating dry interiors

DIMENSIONS

total width	164 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

COIL-KT1 is the very narrow MINIB floor convector. It is a very fast responding heating unit that forms a part of the medium power series of MINIB convectors with the 12 V fan. The design is based on an arrangement whereby the heat exchanger is located above the fan (while maintaining a convector standard depth of 125mm). Air is both drawn and then blown across the surfaces of the heat exchanger. Due to the aesthetic design only the heat exchanger is visible from above; the fan cannot be seen.

TEMPERATURE EXPONENT

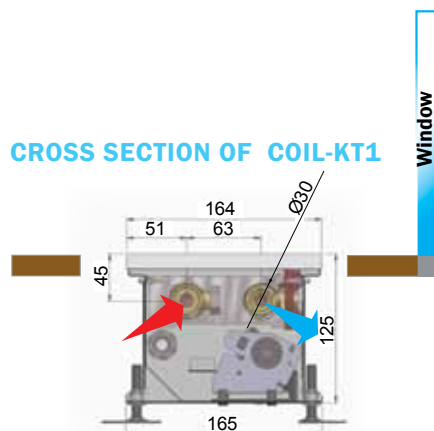
m = 1,1887

ELECTRIC INPUT FOR FANS

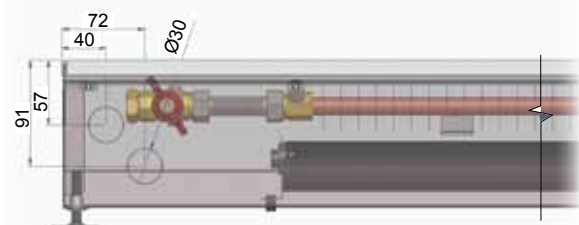
length	power input
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA
2500	12 VA
3000	16 VA



CROSS SECTION OF COIL-KT1



LONGITUDINAL SECTION OF COIL-KT1



HEAT TRANSFER RATE Q [W] COIL – KT1

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	712	656	633	90	757	697	674	90	861	794	767
	70	492	440	419	70	524	468	445	70	596	532	507
	60	388	337	317	60	412	359	337	60	469	408	384
	45	239	193	175	45	255	205	186	45	290	233	211
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	830	765	739	90	883	814	786	90	1 005	926	895
	70	574	513	488	70	611	545	520	70	695	621	591
	60	452	393	370	60	481	418	394	60	548	476	448
	45	279	225	204	45	297	239	217	45	338	272	247
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 127	1 038	1 003	90	1 199	1 104	1 067	90	1 364	1 257	1 214
	70	779	696	663	70	829	740	705	70	943	842	802
	60	614	534	502	60	653	568	534	60	743	646	608
	45	379	305	276	45	403	325	294	45	459	370	335
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 423	1 311	1 267	90	1 514	1 395	1 348	90	1 723	1 587	1 533
	70	984	879	837	70	1 047	935	891	70	1 192	1 064	1 014
	60	776	674	634	60	825	717	675	60	939	816	768
	45	479	386	349	45	509	410	371	45	580	467	423
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 720	1 584	1 531	90	1 829	1 685	1 628	90	2 082	1 918	1 853
	70	1 190	1 062	1 012	70	1 265	1 130	1 076	70	1 440	1 286	1 225
	60	937	815	766	60	997	867	815	60	1 134	986	928
	45	579	466	422	45	616	496	449	45	701	564	511
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 016	1 858	1 795	90	2 145	1 976	1 909	90	2 441	2 249	2 172
	70	1 395	1 245	1 186	70	1 483	1 325	1 262	70	1 688	1 507	1 436
	60	1 099	955	899	60	1 169	1 016	956	60	1 330	1 156	1 088
	45	678	546	495	45	722	581	526	45	821	661	599
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 609	2 404	2 323	90	2 776	2 557	2 471	90	3 159	2 910	2 811
	70	1 805	1 612	1 535	70	1 920	1 714	1 633	70	2 185	1 951	1 858
	60	1 422	1 236	1 163	60	1 512	1 315	1 237	60	1 721	1 496	1 408
	45	878	707	640	45	934	752	681	45	1 063	856	775
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	3 203	2 950	2 850	90	3 407	3 138	3 032	90	3 877	3 571	3 450
	70	2 215	1 978	1 884	70	2 356	2 104	2 004	70	2 681	2 394	2 281
	60	1 745	1 517	1 427	60	1 856	1 614	1 518	60	2 112	1 836	1 728
	45	1 078	868	786	45	1 146	923	836	45	1 304	1 050	951



COIL – KT2

CHARACTERISTICS

- ✘ universal convector, which also provides heat with the fan switched off
- ✘ high heat output
- ✘ it can be connected to air diffuser with an 80 mm diameter

DIMENSIONS

total width	380 mm
construction height	151 mm
length L	900 to 2500 mm

USAGE

COIL-KT2 is the universal convector suitable for heating of interiors with a possibility of using the air diffuser with the diameter of 80mm for inlet of conditioned air supplied to the interior. For this purpose, a part of the convector is separated by a longitudinal partition from the heat exchanger and fan sections.

TEMPERATURE EXPONENT

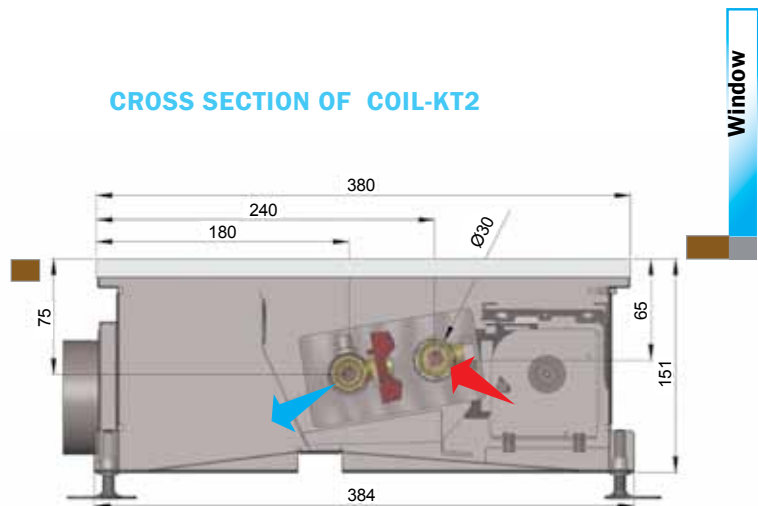
m = 1,012688

ELECTRIC INPUT FOR FANS

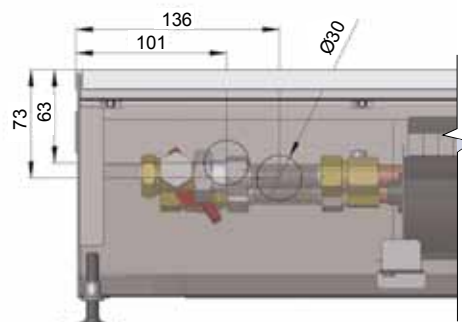
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA



CROSS SECTION OF COIL-KT2



LONGITUDINAL SECTION OF COIL-KT2



HEAT TRANSFER RATE Q [W] COIL – KT2

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 341	1 251	1 215	90	1 465	1 366	1 327	90	1 634	1 524	1 480
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	60	800	710	674	60	874	775	736	60	974	865	821
	45	530	441	405	45	579	482	443	45	646	537	494
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 565	1 459	1 417	90	1 710	1 594	1 548	90	1 906	1 778	1 726
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	60	933	828	786	60	1 019	905	859	60	1 136	1 009	958
	45	619	514	473	45	676	562	516	45	754	627	576
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 124	1 981	1 923	90	2 320	2 164	2 101	90	2 587	2 413	2 343
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	60	1 266	1 124	1 067	60	1 383	1 228	1 165	60	1 542	1 369	1 300
	45	840	698	642	45	917	763	701	45	1 023	850	782
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 683	2 502	2 430	90	2 931	2 733	2 654	90	3 268	3 047	2 959
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	60	1 599	1 420	1 348	60	1 747	1 551	1 472	60	1 948	1 729	1 642
	45	1 061	882	811	45	1 159	963	885	45	1 292	1 074	987
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 242	3 023	2 936	90	3 541	3 302	3 207	90	3 949	3 682	3 576
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	60	1 933	1 715	1 628	60	2 111	1 874	1 779	60	2 354	2 089	1 984
	45	1 282	1 066	979	45	1 400	1 164	1 070	45	1 561	1 298	1 193
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 801	3 544	3 442	90	4 152	3 872	3 760	90	4 630	4 317	4 192
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	60	2 266	2 011	1 909	60	2 475	2 197	2 085	60	2 760	2 450	2 326
	45	1 503	1 249	1 148	45	1 641	1 365	1 254	45	1 830	1 522	1 399
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 919	4 587	4 454	90	5 373	5 010	4 865	90	5 991	5 587	5 425
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	60	2 932	2 602	2 471	60	3 203	2 843	2 699	60	3 572	3 170	3 010
	45	1 945	1 617	1 486	45	2 124	1 766	1 623	45	2 369	1 969	1 810



COIL – K02

CHARACTERISTICS

- ✘ universal convector, which also provides heat with the fan switched off
- ✘ high heat output
- ✘ COIL – K02 is designed for heating of **wet** interiors especially where flooding is possible (heating of swimming pools)

DIMENSIONS

total width	380 mm
construction height	151 mm
length L	900 to 2500 mm

USAGE

COIL-K02 is the universal convector suitable for use especially in wet spaces, where intensive flooding of the trough space occurs – e.g. swimming pools. The convector body is divided into 2 sections with a longitudinal partition. The narrower (empty) section of the trough is used to collect most of the water coming into the convector from the swimming pool area thus protecting the wider section of the convector with the fan and heat exchanger from excessive flooding. Both longitudinal separated sections of the convector are fitted with drain pipes for the removal of the water from the bottom of the trough. The partition wall includes fall-over openings. The wider section of the trough with the fan and the heat exchanger is used for standard heating or partial cooling of the interior. The whole body of the unit is covered with an integral grille. The convector features high heat transfer levels when the fan is switched on but it also tempers the space when the fan is switched off. With 12V operation (AC motor) MINIB convectors are safe for applications in wet interiors as well. **The convector cannot be installed to swimming pools with salt or other aggressive water.** The convector is equipped with 12V AC motors; recommended control A1 or E1.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT

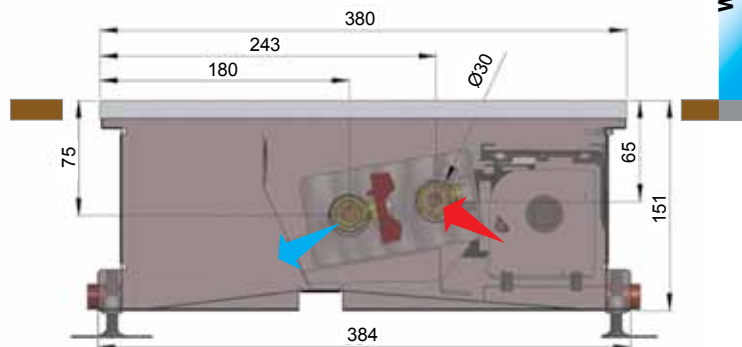
$m = 1,012688$

ELECTRIC INPUT FOR FANS

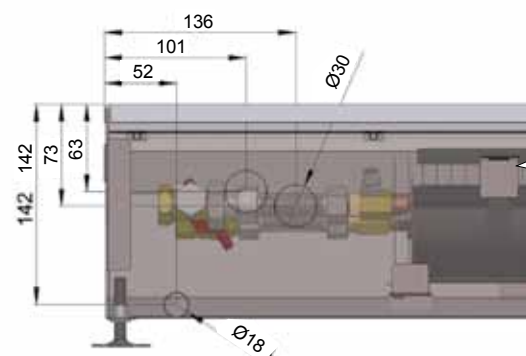
length	power input
900	32 VA
1000	37 VA
1250	37 VA
1500	64 VA
1750	74 VA
2000	74 VA
2500	106 VA



CROSS SECTION OF COIL-K02



LONGITUDINAL SECTION OF COIL-K02



HEAT TRANSFER RATE Q [W] COIL – K02

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 341	1 251	1 215	90	1 465	1 366	1 327	90	1 634	1 524	1 480
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	60	800	710	674	60	874	775	736	60	974	865	821
	45	530	441	405	45	579	482	443	45	646	537	494
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 565	1 459	1 417	90	1 710	1 594	1 548	90	1 906	1 778	1 726
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	60	933	828	786	60	1 019	905	859	60	1 136	1 009	958
	45	619	514	473	45	676	562	516	45	754	627	576
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 124	1 981	1 923	90	2 320	2 164	2 101	90	2 587	2 413	2 343
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	60	1 266	1 124	1 067	60	1 383	1 228	1 165	60	1 542	1 369	1 300
	45	840	698	642	45	917	763	701	45	1 023	850	782
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 683	2 502	2 430	90	2 931	2 733	2 654	90	3 268	3 047	2 959
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	60	1 599	1 420	1 348	60	1 747	1 551	1 472	60	1 948	1 729	1 642
	45	1 061	882	811	45	1 159	963	885	45	1 292	1 074	987
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 242	3 023	2 936	90	3 541	3 302	3 207	90	3 949	3 682	3 576
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	60	1 933	1 715	1 628	60	2 111	1 874	1 779	60	2 354	2 089	1 984
	45	1 282	1 066	979	45	1 400	1 164	1 070	45	1 561	1 298	1 193
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 801	3 544	3 442	90	4 152	3 872	3 760	90	4 630	4 317	4 192
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	60	2 266	2 011	1 909	60	2 475	2 197	2 085	60	2 760	2 450	2 326
	45	1 503	1 249	1 148	45	1 641	1 365	1 254	45	1 830	1 522	1 399
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 919	4 587	4 454	90	5 373	5 010	4 865	90	5 991	5 587	5 425
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	60	2 932	2 602	2 471	60	3 203	2 843	2 699	60	3 572	3 170	3 010
	45	1 945	1 617	1 486	45	2 124	1 766	1 623	45	2 369	1 969	1 810



COIL – KT3

CHARACTERISTICS

- ✘ trough identical with the COIL – P; width 243 mm
- ✘ dry environment heating

DIMENSIONS

total width	243 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

COIL-KT3 is a fast reacting heating unit from the medium power series of MINIB convectors with the 12V fan. The convector COIL-KT3 is an economically advantageous alternative to the COIL-KT unit for applications where heating demands on interior heating are lower and the COIL-KT would be oversized for the space heat losses.

TEMPERATURE EXPONENT

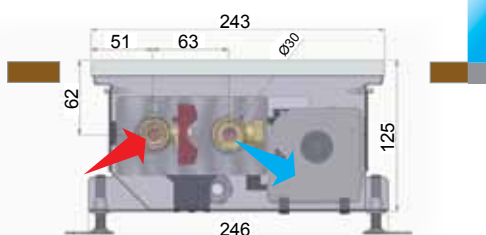
m = 1,1059

ELECTRIC INPUT FOR FANS

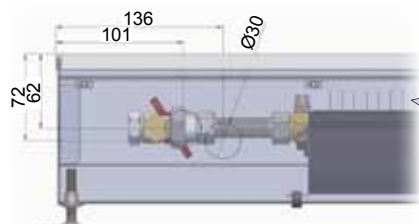
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



CROSS SECTION OF COIL-KT3



LONGITUDINAL SECTION OF COIL-KT3



HEAT TRANSFER RATE Q [W] COIL – KT3

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	911	844	818	90	978	906	878	90	1 137	1 054	1 020
	70	647	582	556	70	694	625	597	70	807	726	694
	60	518	455	430	60	556	488	461	60	646	567	536
	45	331	270	247	45	355	290	265	45	413	337	308
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 063	985	954	90	1 141	1 057	1 024	90	1 327	1 229	1 190
	70	754	679	649	70	810	729	697	70	941	847	810
	60	604	531	501	60	649	569	538	60	754	662	626
	45	386	315	288	45	414	339	309	45	482	394	359
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 443	1 337	1 295	90	1 549	1 435	1 389	90	1 801	1 668	1 616
	70	1 024	922	881	70	1 099	989	945	70	1 278	1 150	1 099
	60	820	720	680	60	880	773	730	60	1 023	898	849
	45	524	428	390	45	562	459	419	45	654	534	487
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 823	1 689	1 635	90	1 956	1 812	1 755	90	2 274	2 107	2 041
	70	1 293	1 164	1 113	70	1 388	1 249	1 194	70	1 614	1 453	1 388
	60	1 036	909	859	60	1 112	976	922	60	1 293	1 135	1 072
	45	662	541	493	45	710	580	529	45	826	675	615
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 202	2 041	1 976	90	2 364	2 190	2 121	90	2 748	2 546	2 466
	70	1 563	1 407	1 344	70	1 677	1 509	1 443	70	1 950	1 755	1 678
	60	1 252	1 099	1 038	60	1 343	1 179	1 114	60	1 562	1 371	1 296
	45	799	653	596	45	858	701	640	45	998	815	744
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 582	2 392	2 317	90	2 771	2 567	2 486	90	3 222	2 985	2 891
	70	1 832	1 649	1 576	70	1 966	1 770	1 692	70	2 286	2 058	1 967
	60	1 468	1 288	1 217	60	1 575	1 383	1 306	60	1 831	1 608	1 519
	45	937	766	699	45	1 006	822	750	45	1 170	956	872
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 341	3 096	2 998	90	3 586	3 323	3 218	90	4 170	3 863	3 741
	70	2 371	2 134	2 040	70	2 545	2 290	2 189	70	2 959	2 663	2 545
	60	1 899	1 667	1 575	60	2 038	1 789	1 691	60	2 370	2 081	1 966
	45	1 213	991	904	45	1 302	1 064	970	45	1 514	1 237	1 128
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 101	3 800	3 680	90	4 401	4 078	3 949	90	5 117	4 741	4 592
	70	2 910	2 619	2 503	70	3 123	2 811	2 687	70	3 631	3 268	3 124
	60	2 331	2 046	1 933	60	2 502	2 196	2 075	60	2 909	2 553	2 413
	45	1 489	1 217	1 110	45	1 598	1 306	1 191	45	1 858	1 518	1 385



COIL – KT3 105

CHARACTERISTICS

- ✘ dry environment heating
- ✘ KT3 105 is the variant with lower demands on the construction height

DIMENSIONS

total width	243 mm
construction height	105 mm
length L	900 to 3000 mm

USAGE

COIL-KT3 105 is a fast reacting heating unit from the medium power series of MINIB convectors with the 12V fan. The convector COIL-KT3 is an economically advantageous alternative for applications where heating demands on interior heating are lower and the COIL-KT would be oversized for the space heat losses.

TEMPERATURE EXPONENT

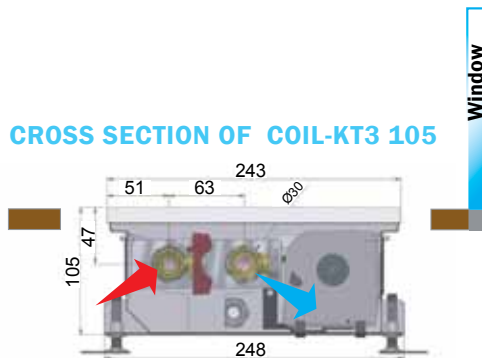
m = 1,10542

ELECTRIC INPUT FOR FANS

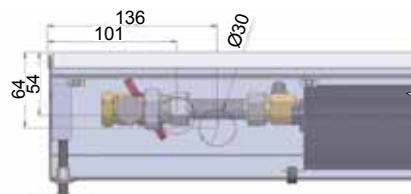
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



CROSS SECTION OF COIL-KT3 105



LONGITUDINAL SECTION OF COIL-KT3 105



HEAT TRANSFER RATE Q [W] COIL – KT3 105

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 185	1 102	1 068	90	1 346	1 251	1 214	90	1 590	1 479	1 434
	70	854	773	740	70	970	878	841	70	1 147	1 037	993
	60	691	611	579	60	785	694	657	60	928	820	777
	45	451	372	341	45	512	423	387	45	605	499	457
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 382	1 285	1 246	90	1 570	1 460	1 416	90	1 855	1 725	1 673
	70	997	901	863	70	1 132	1 024	981	70	1 338	1 210	1 159
	60	807	712	675	60	916	809	767	60	1 083	956	906
	45	526	434	398	45	598	493	452	45	706	583	534
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 876	1 744	1 692	90	2 131	1 981	1 922	90	2 518	2 341	2 271
	70	1 353	1 223	1 172	70	1 537	1 390	1 331	70	1 816	1 642	1 573
	60	1 095	967	916	60	1 244	1 098	1 041	60	1 469	1 298	1 230
	45	714	589	540	45	811	669	613	45	958	791	724
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 369	2 203	2 137	90	2 692	2 503	2 427	90	3 180	2 957	2 868
	70	1 709	1 545	1 480	70	1 941	1 755	1 681	70	2 293	2 074	1 987
	60	1 383	1 221	1 157	60	1 571	1 387	1 314	60	1 856	1 639	1 553
	45	902	744	682	45	1 024	845	774	45	1 211	999	915
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 863	2 662	2 582	90	3 252	3 024	2 933	90	3 843	3 573	3 466
	70	2 065	1 867	1 789	70	2 345	2 121	2 032	70	2 771	2 506	2 401
	60	1 671	1 476	1 398	60	1 898	1 676	1 588	60	2 243	1 981	1 877
	45	1 090	899	824	45	1 238	1 021	935	45	1 463	1 207	1 105
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	3 357	3 121	3 027	90	3 813	3 546	3 439	90	4 506	4 190	4 064
	70	2 420	2 189	2 097	70	2 750	2 487	2 382	70	3 249	2 939	2 815
	60	1 959	1 730	1 639	60	2 225	1 966	1 862	60	2 630	2 323	2 200
	45	1 278	1 054	965	45	1 451	1 198	1 097	45	1 715	1 415	1 296
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	4 344	4 039	3 918	90	4 935	4 588	4 450	90	5 831	5 422	5 259
	70	3 132	2 833	2 714	70	3 558	3 218	3 083	70	4 205	3 803	3 643
	60	2 535	2 239	2 121	60	2 880	2 544	2 410	60	3 403	3 006	2 847
	45	1 653	1 364	1 249	45	1 878	1 550	1 419	45	2 219	1 831	1 677
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	5 331	4 957	4 808	90	6 056	5 631	5 462	90	7 156	6 654	6 454
	70	3 844	3 477	3 330	70	4 367	3 950	3 783	70	5 160	4 667	4 470
	60	3 111	2 748	2 603	60	3 534	3 122	2 957	60	4 176	3 689	3 495
	45	2 029	1 674	1 533	45	2 305	1 902	1 742	45	2 724	2 247	2 058



COIL – T50

CHARACTERISTICS

- ✘ lowest height MINIB convector with fan
- ✘ construction height only 50 mm
- ✘ supplied only with 12.7 mm high Al grille
- ✘ straight connection as standard, side connection only at joints

DIMENSIONS

total width	161 mm
construction height	50 mm
length L	900 to 3000 mm

CHARACTERISTICS

A newly developed convector with minimal construction height of only 50 mm and a heat output up to 600 W/m of the convector. It can be placed into the final layer of the floor concrete or into a very low step of the floor. The convector body is made from aluminium alloy and forms one compact unit with the fan. COIL-T50 is equipped with MINIB 12 V DC specially-modified fan motors, which provided minimal consumption of approx. 7 W of electric energy per meter length of the convector. The convector grille is designed for walking on and is made from aluminium. The convector body is manufactured to match the colour of the grille – either silver anodised coating or light bronze.

Connection of heat exchanger by 3/8 thread.

Info: The decorative covering surround cannot be fitted on edges of the convector T50.

TEMPERATURE EXPONENT

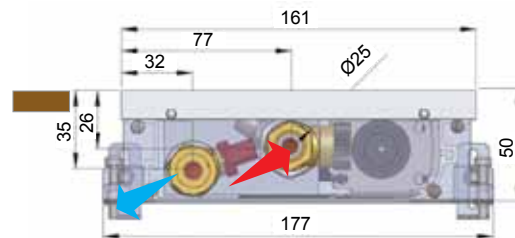
$m = 0,995571$

ELECTRIC INPUT FOR FANS

length	power input
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA
2500	12 VA
3000	16 VA



CROSS SECTION OF COIL-T50



Window

HEAT TRANSFER RATE Q [W] COIL – T 50

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	449	419	407	90	580	541	526	90	841	785	763
	70	330	300	288	70	426	387	372	70	617	561	539
	60	270	240	228	60	349	310	295	60	506	450	427
	45	180	150	138	45	233	194	179	45	338	282	259
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	524	489	475	90	676	631	613	90	981	916	890
	70	385	350	336	70	497	452	434	70	720	655	629
	60	315	280	266	60	407	362	344	60	590	525	498
	45	210	176	162	45	272	226	208	45	394	329	302
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	711	664	645	90	918	857	832	90	1 331	1 243	1 207
	70	522	475	456	70	674	613	588	70	977	889	854
	60	428	380	361	60	552	491	466	60	800	712	676
	45	286	238	219	45	369	307	283	45	535	446	410
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	898	839	815	90	1 159	1 082	1 051	90	1 681	1 570	1 525
	70	660	600	576	70	851	774	743	70	1 235	1 123	1 078
	60	540	480	457	60	697	620	589	60	1 011	899	854
	45	361	301	277	45	466	388	357	45	675	563	518
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 086	1 013	985	90	1 401	1 308	1 270	90	2 032	1 897	1 843
	70	797	725	696	70	1 029	935	898	70	1 492	1 357	1 303
	60	653	581	552	60	842	749	712	60	1 222	1 087	1 032
	45	436	364	335	45	563	469	432	45	816	680	626
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 273	1 188	1 154	90	1 642	1 533	1 490	90	2 382	2 224	2 160
	70	935	850	816	70	1 206	1 097	1 053	70	1 749	1 591	1 527
	60	765	681	647	60	988	878	835	60	1 432	1 274	1 210
	45	511	426	392	45	660	550	506	45	957	798	734
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 647	1 538	1 494	90	2 125	1 984	1 928	90	3 082	2 878	2 796
	70	1 209	1 100	1 056	70	1 561	1 419	1 363	70	2 263	2 059	1 977
	60	990	881	837	60	1 278	1 137	1 080	60	1 854	1 648	1 566
	45	661	552	508	45	854	712	655	45	1 238	1 032	950
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 021	1 887	1 834	90	2 608	2 435	2 366	90	3 783	3 532	3 431
	70	1 484	1 350	1 296	70	1 915	1 742	1 673	70	2 778	2 526	2 426
	60	1 216	1 081	1 027	60	1 568	1 395	1 325	60	2 275	2 023	1 922
	45	812	677	623	45	1 047	874	804	45	1 519	1 267	1 166



COIL –T60

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ very low MINIB convector(only 65 mm in the floor)
- ✘ COIL – T60 is supplied only with the 16.5 mm high aluminium grille

DIMENSIONS

total width	243 mm
construction height	65 mm
length L	900 to 3000 mm

USAGE

Designed for individual use in dry interiors with higher heating demands on intensity of heating and low construction height requirements (up to 65 mm) when the deeper COIL-KT or COIL-KT3 units cannot be used.

TEMPERATURE EXPONENT

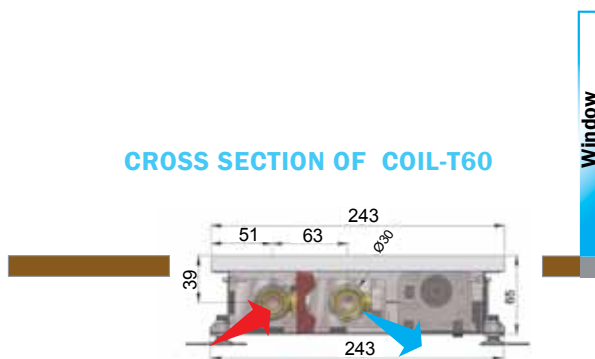
m = 1,09663

ELECTRIC INPUT FOR FANS

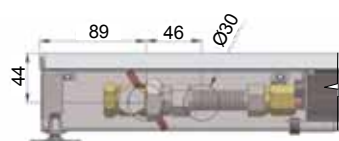
length	power input
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA
2500	12 VA
3000	16 VA



CROSS SECTION OF COIL-T60



LONGITUDINAL SECTION OF COIL-T60



HEAT TRANSFER RATE Q [W] COIL – T 60

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	852	790	765	90	1 026	952	922	90	1 323	1 226	1 188
	70	606	546	522	70	730	658	629	70	941	848	811
	60	486	427	404	60	586	515	487	60	755	664	628
	45	312	255	233	45	376	308	281	45	484	397	362
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	994	921	892	90	1 198	1 110	1 076	90	1 543	1 431	1 386
	70	707	637	609	70	852	768	734	70	1 098	989	946
	60	567	499	471	60	684	601	568	60	881	775	732
	45	364	298	272	45	438	359	328	45	565	463	422
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 349	1 250	1 211	90	1 625	1 507	1 460	90	2 094	1 942	1 881
	70	960	865	827	70	1 157	1 042	996	70	1 491	1 343	1 284
	60	770	677	640	60	928	816	771	60	1 196	1 051	994
	45	494	404	369	45	595	487	445	45	767	628	573
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 703	1 579	1 530	90	2 053	1 903	1 844	90	2 646	2 453	2 376
	70	1 212	1 092	1 044	70	1 461	1 316	1 258	70	1 883	1 696	1 622
	60	973	855	808	60	1 172	1 030	974	60	1 511	1 328	1 255
	45	624	511	466	45	752	615	562	45	969	793	724
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 058	1 908	1 849	90	2 481	2 300	2 228	90	3 197	2 964	2 871
	70	1 465	1 320	1 262	70	1 765	1 590	1 521	70	2 275	2 049	1 960
	60	1 176	1 033	977	60	1 417	1 245	1 177	60	1 826	1 604	1 517
	45	754	617	563	45	908	744	679	45	1 170	958	875
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 413	2 237	2 167	90	2 908	2 696	2 612	90	3 748	3 475	3 366
	70	1 717	1 547	1 479	70	2 070	1 864	1 783	70	2 667	2 403	2 297
	60	1 378	1 211	1 145	60	1 661	1 460	1 380	60	2 140	1 881	1 778
	45	883	723	660	45	1 065	872	796	45	1 372	1 124	1 025
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 123	2 895	2 805	90	3 764	3 489	3 380	90	4 850	4 497	4 356
	70	2 223	2 002	1 914	70	2 678	2 413	2 307	70	3 452	3 109	2 973
	60	1 784	1 567	1 482	60	2 149	1 889	1 786	60	2 770	2 434	2 301
	45	1 143	936	854	45	1 378	1 128	1 030	45	1 776	1 454	1 327
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 833	3 553	3 442	90	4 619	4 282	4 148	90	5 953	5 519	5 346
	70	2 728	2 457	2 349	70	3 287	2 961	2 831	70	4 236	3 816	3 649
	60	2 189	1 924	1 818	60	2 638	2 318	2 191	60	3 400	2 988	2 824
	45	1 403	1 149	1 049	45	1 691	1 385	1 264	45	2 179	1 784	1 628



COIL –T80

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ very low MINIB convector (only 80 mm in the floor)
- ✘ supplied with any aluminium or wooden grille

DIMENSIONS

total width	243 mm
construction height	80 mm
length	900 to 3000 mm

USAGE

Designed for individual use in dry interiors with higher heating demands on intensity of heating and low construction height requirements (up to 85 mm) when the deeper COIL-KT or COIL-KT3 units cannot be used.

TEMPERATURE EXPONENT

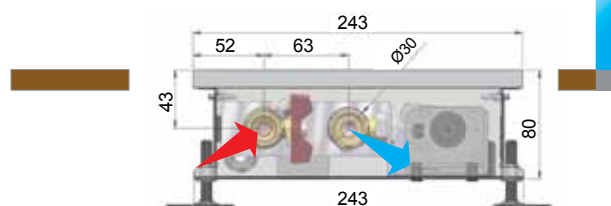
m = 1,096629

ELECTRIC INPUT FOR FANS

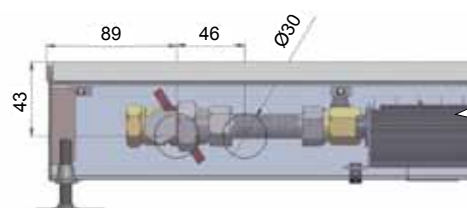
length	power input
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA
2500	12 VA
3000	16 VA



CROSS SECTION OF COIL-T80



LONGITUDINAL SECTION OF COIL-T80



HEAT TRANSFER RATE Q [W] COIL – T 80

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 017	943	914	90	1 225	1 136	1 101	90	1 580	1 465	1 419
	70	724	652	624	70	872	786	751	70	1 124	1 013	968
	60	581	511	483	60	700	615	581	60	902	793	750
	45	372	305	278	45	449	367	335	45	578	474	432
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 187	1 100	1 066	90	1 430	1 325	1 284	90	1 843	1 709	1 655
	70	845	761	728	70	1 017	916	876	70	1 312	1 182	1 130
	60	678	596	563	60	816	718	678	60	1 053	925	875
	45	435	356	325	45	523	429	391	45	675	553	504
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 611	1 493	1 447	90	1 940	1 799	1 743	90	2 502	2 319	2 247
	70	1 146	1 033	987	70	1 381	1 244	1 189	70	1 780	1 604	1 533
	60	920	808	764	60	1 108	974	921	60	1 429	1 256	1 187
	45	590	483	441	45	710	582	531	45	916	750	684
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 035	1 887	1 827	90	2 451	2 272	2 201	90	3 160	2 930	2 838
	70	1 448	1 304	1 247	70	1 744	1 571	1 502	70	2 249	2 026	1 937
	60	1 162	1 021	965	60	1 400	1 230	1 163	60	1 805	1 586	1 499
	45	745	610	557	45	897	735	670	45	1 157	947	864
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 459	2 280	2 208	90	2 961	2 746	2 660	90	3 818	3 540	3 429
	70	1 750	1 576	1 507	70	2 108	1 898	1 815	70	2 717	2 448	2 340
	60	1 404	1 234	1 167	60	1 691	1 486	1 405	60	2 181	1 916	1 811
	45	900	737	673	45	1 084	888	810	45	1 398	1 145	1 045
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 883	2 673	2 589	90	3 472	3 219	3 118	90	4 476	4 150	4 020
	70	2 051	1 848	1 767	70	2 471	2 226	2 128	70	3 186	2 870	2 744
	60	1 646	1 447	1 368	60	1 983	1 743	1 647	60	2 556	2 247	2 124
	45	1 055	864	789	45	1 271	1 041	950	45	1 639	1 342	1 225
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 730	3 459	3 350	90	4 493	4 166	4 035	90	5 793	5 371	5 203
	70	2 655	2 391	2 287	70	3 198	2 880	2 754	70	4 123	3 714	3 551
	60	2 130	1 872	1 770	60	2 566	2 255	2 132	60	3 308	2 908	2 748
	45	1 366	1 118	1 021	45	1 645	1 347	1 229	45	2 121	1 737	1 585
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 578	4 245	4 112	90	5 514	5 113	4 953	90	7 110	6 592	6 385
	70	3 258	2 935	2 806	70	3 924	3 535	3 380	70	5 060	4 558	4 358
	60	2 615	2 298	2 172	60	3 149	2 768	2 616	60	4 060	3 568	3 373
	45	1 676	1 372	1 252	45	2 019	1 653	1 509	45	2 603	2 131	1 945



COIL – MT

CHARACTERISTICS

- ✦ very powerful MINIB floor convector
- ✦ COIL – MT: for heating dry interiors

DIMENSIONS

total width	303 mm
construction height	125 mm
length	900 to 3000 mm

USAGE

Convector COIL – MT is a fast reacting heating unit suitable for heating of interiors with high demands on intensity of heating.

TEMPERATURE EXPONENT

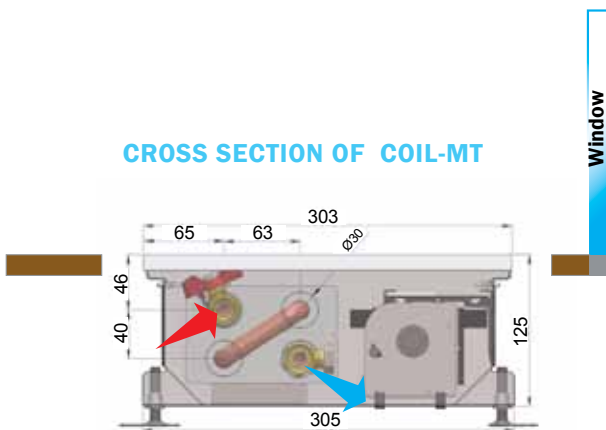
$m = 1,0435$

ELECTRIC INPUT FOR FANS

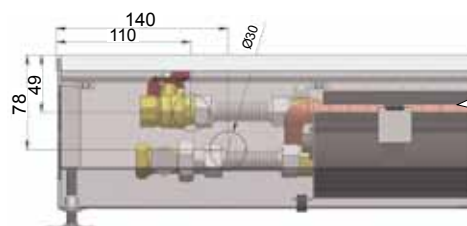
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



CROSS SECTION OF COIL-MT



LONGITUDINAL SECTION OF COIL-MT



HEAT TRANSFER RATE Q [W] COIL – MT

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 740	1 620	1 571	90	1 824	1 698	1 647	90	1 995	1 856	1 801
	70	1 259	1 140	1 092	70	1 320	1 195	1 145	70	1 443	1 307	1 252
	60	1 021	903	856	60	1 071	947	897	60	1 170	1 035	981
	45	669	553	507	45	701	580	531	45	767	634	581
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 030	1 889	1 833	90	2 128	1 981	1 922	90	2 327	2 165	2 101
	70	1 469	1 330	1 275	70	1 540	1 394	1 336	70	1 684	1 524	1 461
	60	1 192	1 054	999	60	1 249	1 105	1 047	60	1 366	1 208	1 145
	45	780	645	591	45	818	676	620	45	894	739	678
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 756	2 564	2 488	90	2 889	2 688	2 608	90	3 158	2 939	2 851
	70	1 994	1 805	1 730	70	2 090	1 892	1 813	70	2 285	2 069	1 982
	60	1 617	1 430	1 356	60	1 695	1 499	1 421	60	1 853	1 639	1 553
	45	1 059	876	803	45	1 110	918	841	45	1 214	1 004	920
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 481	3 239	3 143	90	3 649	3 395	3 294	90	3 989	3 712	3 602
	70	2 518	2 280	2 185	70	2 640	2 390	2 290	70	2 886	2 613	2 504
	60	2 043	1 806	1 712	60	2 141	1 894	1 795	60	2 341	2 070	1 962
	45	1 338	1 106	1 014	45	1 402	1 160	1 063	45	1 533	1 268	1 162
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 206	3 914	3 797	90	4 409	4 103	3 980	90	4 820	4 485	4 352
	70	3 043	2 755	2 640	70	3 190	2 888	2 767	70	3 488	3 157	3 026
	60	2 468	2 183	2 069	60	2 587	2 288	2 169	60	2 829	2 502	2 371
	45	1 617	1 337	1 225	45	1 695	1 401	1 284	45	1 853	1 532	1 404
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 931	4 589	4 452	90	5 169	4 810	4 667	90	5 651	5 259	5 102
	70	3 568	3 230	3 095	70	3 740	3 386	3 245	70	4 089	3 702	3 547
	60	2 894	2 559	2 426	60	3 033	2 683	2 543	60	3 316	2 933	2 780
	45	1 895	1 567	1 436	45	1 987	1 643	1 506	45	2 172	1 796	1 646
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	6 382	5 938	5 761	90	6 689	6 225	6 039	90	7 314	6 806	6 603
	70	4 617	4 180	4 006	70	4 840	4 382	4 199	70	5 291	4 791	4 591
	60	3 745	3 312	3 139	60	3 925	3 471	3 291	60	4 292	3 795	3 598
	45	2 453	2 028	1 859	45	2 571	2 126	1 949	45	2 811	2 324	2 130
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	7 832	7 288	7 071	90	8 210	7 640	7 412	90	8 976	8 352	8 103
	70	5 666	5 130	4 916	70	5 940	5 378	5 153	70	6 494	5 879	5 634
	60	4 596	4 064	3 853	60	4 818	4 260	4 038	60	5 267	4 658	4 415
	45	3 010	2 489	2 281	45	3 156	2 609	2 391	45	3 450	2 852	2 615



COIL – MO

CHARACTERISTICS

- ✘ very powerful MINIB floor convector
- ✘ heating of any interior (in winter) and interior cooling (in summer) with the possibility of moisture condensation in the trough
- ✘ heating of swimming pools
- ✘ implied condensate outlet

DIMENSIONS

total width	303 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

Convector COIL – MO is used as a fast reacting heating unit suitable for heating of interiors with high heat loads. Convector COIL – MO is also suitable for use in wet spaces, where pooling of water in the trench can occur. The convector has a specially profiled base enabling draining of collected water (eventually condensed water) through the outlet pipe at the bottom of the trough. The fan operates at the safe voltage of 12V (AC motor). If there is a source of chilled water (6/12 °C) available the COIL-MO may also be used for cooling of the interior. The convector will cause formation of cool air curtain by the window where it prevents room heating through convection from heated window surfaces. The cooling effect is most evident especially in the vicinity of windows so that the interior air is not fully cooled as in case of when using standard air conditioning. **The convector cannot be installed to swimming pools with salt or other aggressive water.** The convector is equipped with 12V AC motors; recommended control A1 or E1.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT

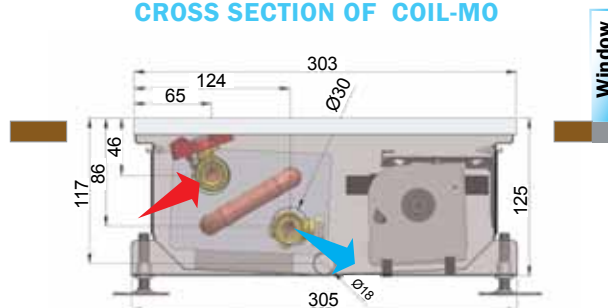
$m = 1,0435$

ELECTRIC INPUT FOR FANS

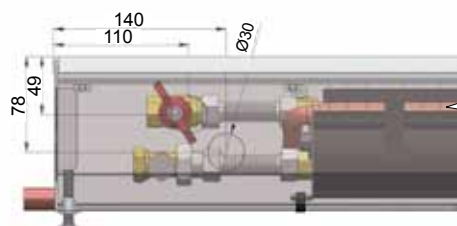
length	power input
900	32 VA
1000	37 VA
1250	37 VA
1500	64 VA
1750	74 VA
2000	74 VA
2500	106 VA
3000	111 VA



CROSS SECTION OF COIL-MO



LONGITUDINAL SECTION OF COIL-MO



HEAT TRANSFER RATE Q [W] COIL – MO

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 740	1 620	1 571	90	1 824	1 698	1 647	90	1 995	1 856	1 801
	70	1 259	1 140	1 092	70	1 320	1 195	1 145	70	1 443	1 307	1 252
	60	1 021	903	856	60	1 071	947	897	60	1 170	1 035	981
	45	669	553	507	45	701	580	531	45	767	634	581
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 030	1 889	1 833	90	2 128	1 981	1 922	90	2 327	2 165	2 101
	70	1 469	1 330	1 275	70	1 540	1 394	1 336	70	1 684	1 524	1 461
	60	1 192	1 054	999	60	1 249	1 105	1 047	60	1 366	1 208	1 145
	45	780	645	591	45	818	676	620	45	894	739	678
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 756	2 564	2 488	90	2 889	2 688	2 608	90	3 158	2 939	2 851
	70	1 994	1 805	1 730	70	2 090	1 892	1 813	70	2 285	2 069	1 982
	60	1 617	1 430	1 356	60	1 695	1 499	1 421	60	1 853	1 639	1 553
	45	1 059	876	803	45	1 110	918	841	45	1 214	1 004	920
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 481	3 239	3 143	90	3 649	3 395	3 294	90	3 989	3 712	3 602
	70	2 518	2 280	2 185	70	2 640	2 390	2 290	70	2 886	2 613	2 504
	60	2 043	1 806	1 712	60	2 141	1 894	1 795	60	2 341	2 070	1 962
	45	1 338	1 106	1 014	45	1 402	1 160	1 063	45	1 533	1 268	1 162
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 206	3 914	3 797	90	4 409	4 103	3 980	90	4 820	4 485	4 352
	70	3 043	2 755	2 640	70	3 190	2 888	2 767	70	3 488	3 157	3 026
	60	2 468	2 183	2 069	60	2 587	2 288	2 169	60	2 829	2 502	2 371
	45	1 617	1 337	1 225	45	1 695	1 401	1 284	45	1 853	1 532	1 404
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 931	4 589	4 452	90	5 169	4 810	4 667	90	5 651	5 259	5 102
	70	3 568	3 230	3 095	70	3 740	3 386	3 245	70	4 089	3 702	3 547
	60	2 894	2 559	2 426	60	3 033	2 683	2 543	60	3 316	2 933	2 780
	45	1 895	1 567	1 436	45	1 987	1 643	1 506	45	2 172	1 796	1 646
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	6 382	5 938	5 761	90	6 689	6 225	6 039	90	7 314	6 806	6 603
	70	4 617	4 180	4 006	70	4 840	4 382	4 199	70	5 291	4 791	4 591
	60	3 745	3 312	3 139	60	3 925	3 471	3 291	60	4 292	3 795	3 598
	45	2 453	2 028	1 859	45	2 571	2 126	1 949	45	2 811	2 324	2 130
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	7 832	7 288	7 071	90	8 210	7 640	7 412	90	8 976	8 352	8 103
	70	5 666	5 130	4 916	70	5 940	5 378	5 153	70	6 494	5 879	5 634
	60	4 596	4 064	3 853	60	4 818	4 260	4 038	60	5 267	4 658	4 415
	45	3 010	2 489	2 281	45	3 156	2 609	2 391	45	3 450	2 852	2 615



COIL – HC

CHARACTERISTICS

- ✘ very effective convector for heating and cooling
- ✘ single circuit
- ✘ air is blown tangentially into the interior
- ✘ cooling output approximately 1kW for the 2-meter long convector
- ✘ implied condensate outlet

DIMENSIONS

total width	243 mm
construction height	125 mm
length L	900 to 3000 mm

USAGE

COIL – HC is the MINIB floor convector specially designed for both heating and cooling of the space. The convector has a single circuit which can be used for heating or cooling. The air is tangentially blown across the floor of the room to a distance of 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows.

Connection of heat exchanger by 3/8 thread.

This convector is supplied as standard with the DC fan motor and with AC fan motor in case of application in wet interiors. Suitable controls are on page no. 94.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT FOR HEATING

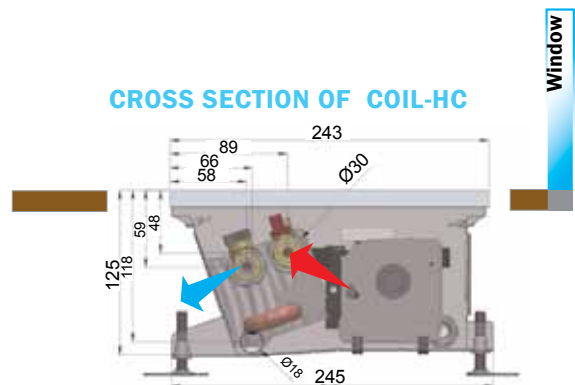
m = 1,0435

TEMPERATURE EXPONENT FOR COOLING

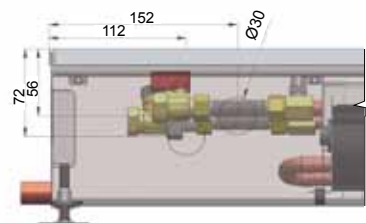
m = 0,864

ELECTRIC INPUT FOR FANS

DC MOTOR		AC MOTOR	
length	power input	length	power input
900	12 VA	900	32 VA
1000	12 VA	1000	37 VA
1250	24 VA	1250	37 VA
1500	24 VA	1500	64 VA
1750	24 VA	1750	74 VA
2000	36 VA	2000	74 VA
2500	48 VA	2500	106 VA
3000	48 VA	3000	111 VA



LONGITUDINAL SECTION OF COIL-HC





COIL – HC4pipe

CHARACTERISTICS

- ✘ heating and cooling of interiors
cooling output higher than 1 kW for 2 metre long convector
- ✘ directed air is blown far into the space
- ✘ active demisting of window surfaces
- ✘ implied condensate outlet
- ✘ double circuit

DIMENSIONS

total width	303 mm
construction height	132 mm
length L	900 to 3000 mm

USAGE

COIL-HC4pipe is a MINIB floor convector specially designed for heating and cooling of the space. The convector has the 4-pipe connection and completely separated cooling and heating circuit. The air is tangentially blown to the floor of the room up to the distance of approximately 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows. Connection of heat exchanger by 3/8 thread.

This convector is supplied as standard with the DC fan motor and with AC fan motor in case of application in wet interiors. Suitable controls are on page no. 94.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT FOR HEATING

m = 1,0864

TEMPERATURE EXPONENT FOR COOLING

m = 0,907

ELECTRIC INPUT FOR FANS

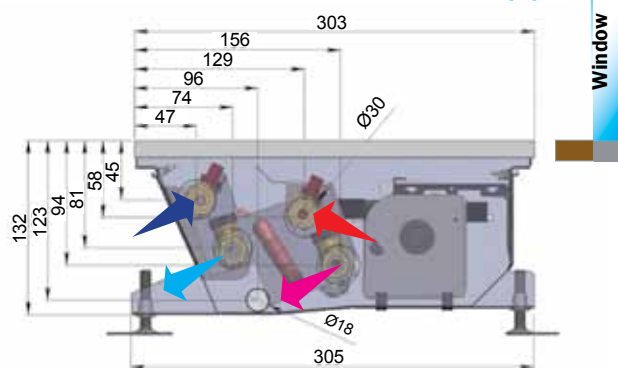
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA
2500	48 VA
3000	48 VA



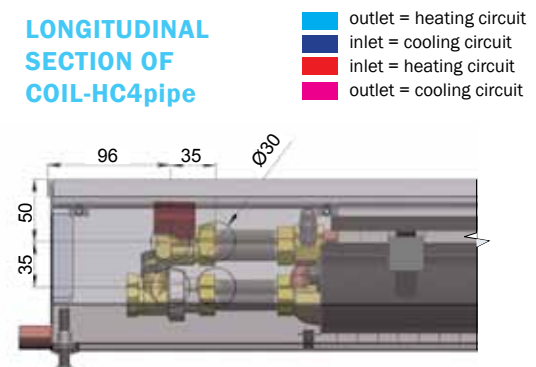
length	power input
900	32 VA
1000	37 VA
1250	37 VA
1500	64 VA
1750	74 VA
2000	74 VA
2500	106 VA
3000	111 VA



CROSS SECTION OF COIL-HC4pipe



LONGITUDINAL SECTION OF COIL-HC4pipe





COIL – HCM

CHARACTERISTICS

- ✘ heating output higher than 6.5 kW and cooling output higher than 2 kW for 2-meter long convector
- ✘ directed air is blown far into the space
- ✘ active demisting of window surfaces
- ✘ the most powerful MINIB floor convector
- ✘ implied condensate outlet
- ✘ Single circuit

DIMENSIONS

total width	340 mm
construction height	147 mm
length L	900 to 2000 mm

USAGE

COIL-HCM is a MINIB floor convector specially designed for intensive heating and cooling of the space. The convector has the 1-circuit connection, which achieves the maximum heating and cooling output. The air is tangentially blown to the floor of the room up to a distance of 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows. Connection of heat exchanger by 3/8 thread.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT FOR HEATING

m = 0,9738

TEMPERATURE EXPONENT FOR COOLING

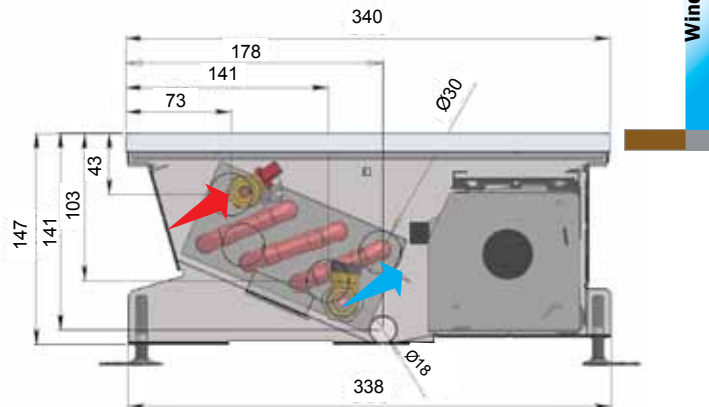
m = 1

ELECTRIC INPUT FOR FANS

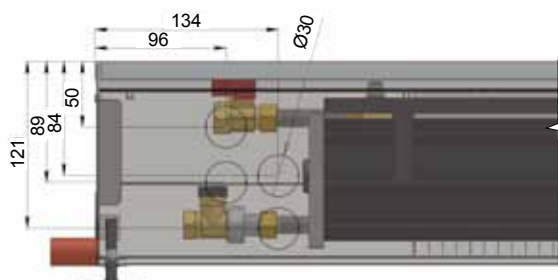
length	power input
900	8 VA
1000	14 VA
1250	15 VA
1500	16 VA
1750	23 VA
2000	24 VA



CROSS SECTION OF COIL-HCM



LONGITUDINAL SECTION OF COIL-HCM



HEAT TRANSFER RATE Q [W] COIL – HCM

	1 min. speed			2 med. speed			3 max. speed					
	length L (mm) 900			length L (mm) 900			length L (mm) 900					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
mean water temperature t _w	90	2 298	2 149	2 089	90	2 787	2 606	2 533	90	3 458	3 233	3 143
	70	1 699	1 549	1 488	70	2 060	1 878	1 805	70	2 556	2 330	2 239
	60	1 398	1 246	1 185	60	1 695	1 511	1 437	60	2 103	1 875	1 783
	45	942	788	727	45	1 142	956	882	45	1 417	1 186	1 094
mean water temperature t _w	length L (mm) 1000			length L (mm) 1000			length L (mm) 1000					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
	90	2 681	2 507	2 437	90	3 251	3 040	2 955	90	4 034	3 772	3 667
	70	1 982	1 807	1 736	70	2 404	2 191	2 105	70	2 982	2 718	2 612
mean water temperature t _w	length L (mm) 1250			length L (mm) 1250			length L (mm) 1250					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
	90	3 639	3 402	3 308	90	4 413	4 126	4 011	90	5 475	5 119	4 976
	70	2 690	2 452	2 356	70	3 262	2 973	2 857	70	4 047	3 689	3 545
mean water temperature t _w	length L (mm) 1500			length L (mm) 1500			length L (mm) 1500					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
	90	4 596	4 298	4 178	90	5 574	5 212	5 066	90	6 915	6 466	6 286
	70	3 398	3 097	2 976	70	4 121	3 755	3 609	70	5 113	4 659	4 478
mean water temperature t _w	length L (mm) 1750			length L (mm) 1750			length L (mm) 1750					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
	90	5 554	5 193	5 049	90	6 735	6 297	6 122	90	8 356	7 813	7 596
	70	4 106	3 742	3 596	70	4 979	4 538	4 361	70	6 178	5 630	5 411
mean water temperature t _w	length L (mm) 2000			length L (mm) 2000			length L (mm) 2000					
	mean air temperature t _a			mean air temperature t _a			mean air temperature t _a					
	90	6 512	6 089	5 919	90	7 896	7 383	7 178	90	9 797	9 160	8 905
	70	4 814	4 387	4 216	70	5 838	5 320	5 113	70	7 243	6 601	6 344

COOLING TRANSFER RATE Q [W] COIL – HCM

	2 med. speed				3 max. speed					
	length L (mm) 900				length L (mm) 900					
	mean air temperature t _a				mean air temperature t _a					
mean water temperature t _w	9	571	609	647	685	9	666	711	755	800
	11	495	533	571	609	11	578	622	666	711
	13	419	457	495	533	13	489	533	578	622
	15	342	381	419	457	15	400	444	489	533
	16	304	342	381	419	16	355	400	444	489
mean water temperature t _w	length L (mm) 1000				length L (mm) 1000					
	mean air temperature t _a				mean air temperature t _a					
	9	666	710	755	799	9	778	829	881	933
	11	577	622	666	710	11	674	726	778	829
	13	488	533	577	622	13	570	622	674	726
mean water temperature t _w	length L (mm) 1250				length L (mm) 1250					
	mean air temperature t _a				mean air temperature t _a					
	9	904	964	1 024	1 084	9	1 055	1 126	1 196	1 266
	11	783	843	904	964	11	915	985	1 055	1 126
	13	663	723	783	843	13	774	844	915	985
mean water temperature t _w	length L (mm) 1500				length L (mm) 1500					
	mean air temperature t _a				mean air temperature t _a					
	9	1 142	1 218	1 294	1 370	9	1 333	1 422	1 511	1 599
	11	989	1 065	1 142	1 218	11	1 155	1 244	1 333	1 422
	13	837	913	989	1 065	13	977	1 066	1 155	1 244
mean water temperature t _w	length L (mm) 1750				length L (mm) 1750					
	mean air temperature t _a				mean air temperature t _a					
	9	1 379	1 471	1 563	1 655	9	1 611	1 718	1 825	1 933
	11	1 195	1 287	1 379	1 471	11	1 396	1 503	1 611	1 718
	13	1 012	1 104	1 195	1 287	13	1 181	1 288	1 396	1 503
mean water temperature t _w	length L (mm) 2000				length L (mm) 2000					
	mean air temperature t _a				mean air temperature t _a					
	9	1 617	1 725	1 833	1 941	9	1 888	2 014	2 140	2 266
	11	1 402	1 509	1 617	1 725	11	1 637	1 762	1 888	2 014
	13	1 186	1 294	1 402	1 509	13	1 385	1 511	1 637	1 762



COIL – HCM4pipe

CHARACTERISTICS

- ✖ cooling output higher than 2 kW for 2-meter long convector
- ✖ directed air is blown far into the space
- ✖ active demisting of window surfaces
- ✖ the most powerful MINIB floor convector
- ✖ the convector is suitable for connection to the 2-circuit system with the separated heating and cooling circuit
- ✖ implied condensate outlet

DIMENSIONS

total width	340 mm
construction height	147 mm
length L	900 to 2000 mm

USAGE

space. The convector has the 2-circuit connection. The air is tangentially blown to the floor of the room up to a distance of 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows.

Connection of heat exchanger by 3/8 thread.

An example of connection and bridging of several convectors with a copper drain tube is shown on page no. 102.

TEMPERATURE EXPONENT FOR HEATING

m = 1,0592

TEMPERATURE EXPONENT FOR COOLING

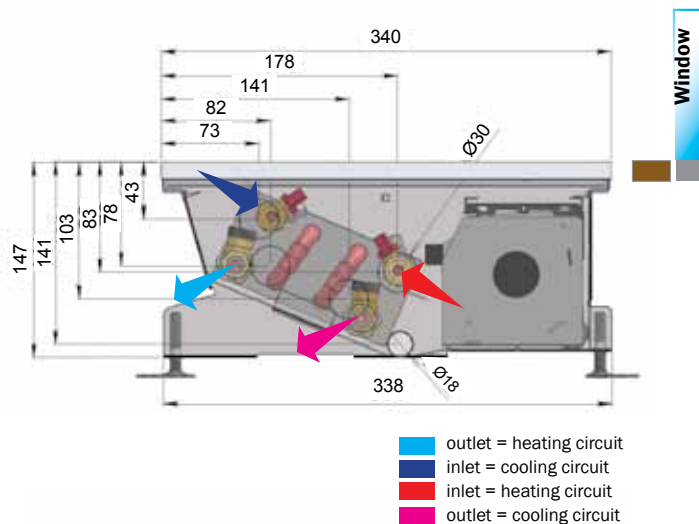
m = 1

ELECTRIC INPUT FOR FANS

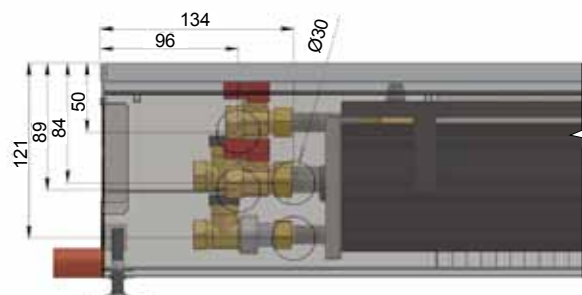
length	power input
900	8 VA
1000	14 VA
1250	15 VA
1500	16 VA
1750	23 VA
2000	24 VA



CROSS SECTION OF COIL-HCM4pipe



LONGITUDINAL SECTION OF COIL-HCM4pipe



SPECIAL CONVECTORS

HOW TO CORRECTLY CHOOSE A SPECIAL CONVECTOR:

Special design convectors work as the heat source in places which benefit from:

- their aesthetic appearance
- radiation heating transfer element with a comfortable surface temperature

Their design is calculated from:

- determine the heat loss in the room according to the project
- determine the mean heating water temperature
- select the required temperature in the room
- select the convector type according to the environment (dry or wet)*
- preliminary selection of a suitable type of convector according to the dimensional limits (construction height, length and width) and check required output according to the tabulated values
- selection of the length and number of convectors
- selection of a suitable control and thermostat – see example on page no. 99
- selection of optional parts, e.g. type of granite board
- selection of the suitable control and thermostat – see example on page no. 99

* *dry and wet environment is defined by the standard CSN 038900 – design of electric objects – Classification of the environment*

PRICE OF THE STANDARD CONVECTOR INCLUDES:

- the body
- connection hoses – stainless steel bellows type
- shut-off valve
- thermostatic valve with head - convectors DS, GS and LP

OPTIONAL ACCESSORIES:

You will find examples of optional accessories on page no. 103

PRESSURE LOSSES, ACOUSTIC PRESSURE AND OTHER PHYSICAL PROPERTIES CAN BE FOUND ON PAGE NO. 100

TEMPERATURE EQUATION:

$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

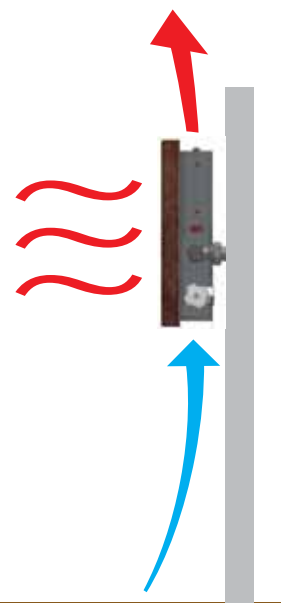
where:

m =	temperature exponent
t_w , t_A	mean heating water temperature mean air temperature in the interior [°C]
Q_N	nominal heat transfer rate for temperatures t _w - t _A = 50 °C [W]
μ	μ=1 (select μ according to the diagram for other than nominal flow values)
Q	heat transfer rate for other temperatures[W]

CALCULATION OF THE OUTPUT FOR THE PARTICULAR TEMPERATURES:

Use the temperature equation for calculation of the output at other than the tabulated value of heating water and air in the room. Enter the required mean temperature of heating water and air in the room and calculate the heat output. These values can be also simply calculated on our website on the specific convector page.

THE EXAMPLE OF AIR FLOW IN THE ROOM



COIL – DS

CHARACTERISTICS

- ✘ wall convector that combines the advantages of convection and radiation
- ✘ heating of dry and wet interiors
- ✘ visible front panel from natural stone
- ✘ the convector is equipped with a thermostatic head

DIMENSIONS

Total length	1150, 1350 mm
Construction height	280 (400) mm
Depth	75 (95) mm

USAGE

The convector DS is a fast reacting heater that meets high aesthetic requirements. Combination of radiation and convection enables control of the room temperature without high variations and therefore increased comfort. It is also the capacity to store heat in the high mass of the front panel.

INNOVATION OF THE YEAR 2010



TEMPERATURE EXPONENT OF DS 275

m = 1,3982

TEMPERATURE EXPONENT OF DS 400

m = 1,4735

Info: A narrower construction of convector DS400 can be also supplied, this must be calculated using a lower heat output. Colour shades shown on photos are only illustrative, the actual colour appearance cannot be achieved by printing technology.

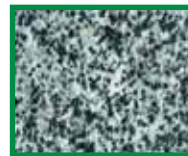
VARIANTS OF GRANITE BOARDS



red-black



brown-green



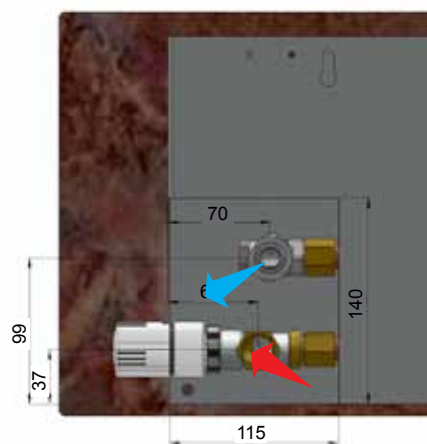
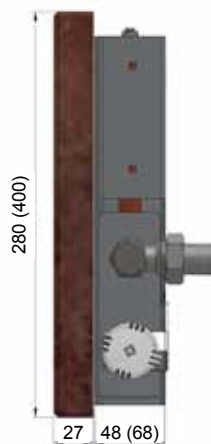
white-black

HEAT TRANSFER RATE Q [W] COIL – DS 275 (WIDTH 75mm)

	mean water temperature t_w	length L (mm) 1150		
		mean air temperature t_a		
		15	20	22
90	90	647	587	564
	70	419	367	346
	60	317	269	250
	45	180	139	124
	mean water temperature t_w	length L (mm) 1350		
		mean air temperature t_a		
		15	20	22
90	90	799	725	697
	70	518	453	428
	60	391	332	309
	45	222	172	153

CROSS SECTION OF COIL-DS

LONGITUDINAL SECTION OF COIL-DS



HEAT TRANSFER RATE Q [W] COIL – DS 400 (WIDTH 95mm)

	mean water temperature t_w	length L (mm) 1150		
		mean air temperature t_a		
		15	20	22
90	90	1 132	1 023	980
	70	717	623	587
	60	533	448	416
	45	293	224	198
	mean water temperature t_w	length L (mm) 1350		
		mean air temperature t_a		
		15	20	22
90	90	1 399	1 264	1 211
	70	886	770	725
	60	659	554	514
	45	363	277	245

INNOVATION OF THE YEAR 2010



COIL – KZ

CHARACTERISTICS

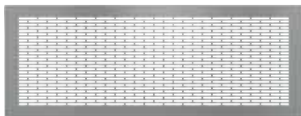
- ✖ fan assisted convector
- ✖ built-in convector designed for installation into the wall
- ✖ heating of dry interiors

DIMENSIONS

Depth	60, 91 mm
Construction height	360 mm
Total length	900-2000 mm

USAGE

The convector KZ is a fast reacting heater whose advantage is its small built-in depth in variants of 60 mm and 90 mm. The heater is supplied as standard with a wooden or stainless visible panel that meets high aesthetic requirements.



stainless steel



wood - oak

KZ 60 ELECTRIC INPUT FOR FANS

délka	příkon
900	4 VA
1000	4 VA
1250	8 VA
1500	8 VA
1750	8 VA
2000	12 VA



KZ 91 ELECTRIC INPUT FOR FANS

délka	příkon
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA



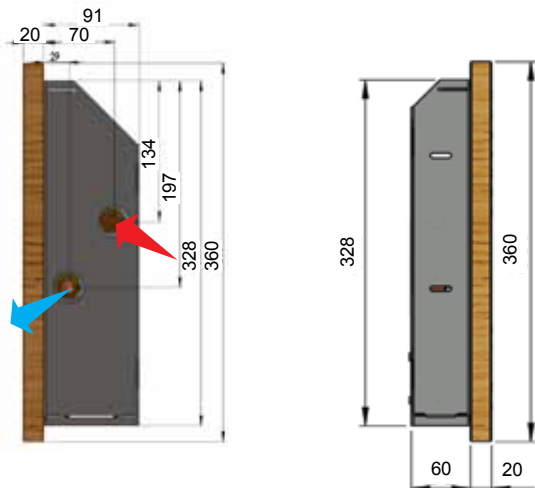
TEMPERATURE EXPONENT OF KZ 91

m = 1,0919

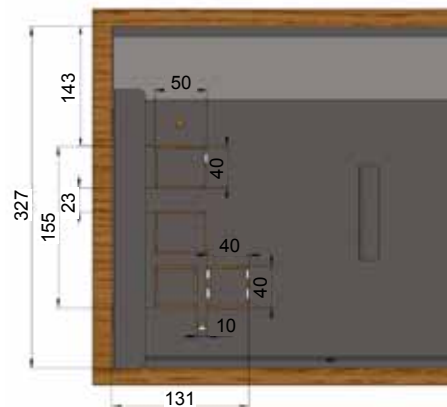
TEMPERATURE EXPONENT OF KZ 60

m = 1,0654

CROSS SECTION OF COIL-KZ



LONGITUDINAL SECTION OF COIL-KZ



**INNOVATION OF
THE YEAR 2010**



COIL – PS

CHARACTERISTICS

- ✘ visible front panel from aluminium composite
- ✘ wall convector with radiation element
- ✘ designed for installation on the wall of the room
- ✘ heating of dry interiors
- ✘ convector is equipped with a thermostatic head

DIMENSIONS

Depth	72mm
Construction height	280, 360, 480mm
Total length	1000 - 2000mm

USAGE

The convector body also contains an element of radiation heat transfer to the surrounding area. This new series of heaters is notable for its flat construction and aesthetic design.

Info: A narrower construction of the convector with 50 mm depth can be also supplied, for this it is necessary to calculate with a lower heat output.

TEMPERATURE EXPONENT OF PS 280/2

m = 1,3382

TEMPERATURE EXPONENT OF PS 360/4

m = 1,3825

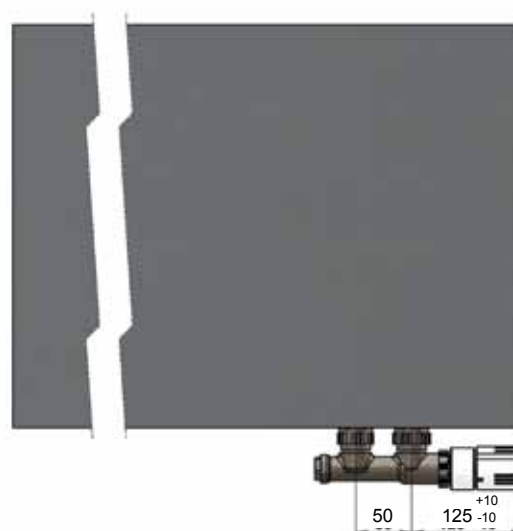
TEMPERATURE EXPONENT OF PS 480/4

m = 1,4014

CROSS SECTION OF COIL- PS



LONGITUDINAL SECTION OF COIL - PS



HEAT TRANSFER RATE Q [W] COIL – PS

PS 280/2

PS 360/4

PS 480/4

		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	677	617	594	90	907	824	792	90	1 070	971	933
	70	447	394	373	70	591	518	489	70	693	606	572
	60	342	292	273	60	448	380	354	60	523	443	413
	45	199	156	139	45	256	199	177	45	296	229	204
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	919	838	806	90	1 231	1 119	1 075	90	1 452	1 318	1 266
	70	607	534	506	70	802	703	664	70	940	823	777
	60	464	396	370	60	607	516	481	60	710	602	560
	45	270	211	189	45	347	270	240	45	402	311	277
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 161	1 058	1 018	90	1 555	1 413	1 358	90	1 834	1 665	1 599
	70	766	675	639	70	1 013	888	839	70	1 188	1 039	981
	60	586	501	467	60	767	652	607	60	896	760	707
	45	341	267	239	45	438	340	303	45	508	393	350
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 403	1 279	1 230	90	1 879	1 708	1 641	90	2 216	2 012	1 932
	70	926	815	772	70	1 224	1 073	1 014	70	1 435	1 256	1 186
	60	708	605	565	60	927	788	734	60	1 083	918	855
	45	412	322	288	45	529	411	367	45	614	475	423
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	1 644	1 499	1 442	90	2 203	2 002	1 924	90	2 598	2 359	2 265
	70	1 086	956	905	70	1 435	1 257	1 188	70	1 682	1 472	1 390
	60	830	709	662	60	1 087	924	860	60	1 270	1 077	1 002
	45	483	378	338	45	621	482	430	45	719	557	496

INNOVATION OF THE YEAR 2010



Info:
A narrower construction of the convector can be also supplied, it is necessary to calculate with a lower heat output. Colour shades shown on photos are only illustrative because the actual colour appearance cannot be achieved by printing technology.

VARIANTS OF GLASS COLOUR DESIGNS



dark green



tomato red



light beige

TEMPERATURE EXPONENT OF GS 280/2

m = 1,3429

TEMPERATURE EXPONENT OF GS 360/4

m = 1,3760

TEMPERATURE EXPONENT OF GS 480/4

m = 1,3819

COIL – GS

CHARACTERISTICS

- ✖ visible front panel from glass
- ✖ wall convector with radiation element
- ✖ designed for installation on the wall of the room
- ✖ heating of dry interiors
- ✖ convector is equipped with a thermostatic head
- ✖ possibility of design modification – a wide range of colours, sand-blasting of patterns (all to special request)

DIMENSIONS

Depth 72 mm
Construction height 280, 360, 480 mm
Total length 1000 - 1250 mm

USAGE

The convector body also contains an element of radiation heat transfer to the surrounding area. This new series of heaters is notable for its flat construction and aesthetic design.

As well as the standard colour variations it is also possible to order non-standard colour designs or sand-blasted patterns at extra cost and to special order (it is necessary allow a longer delivery term).

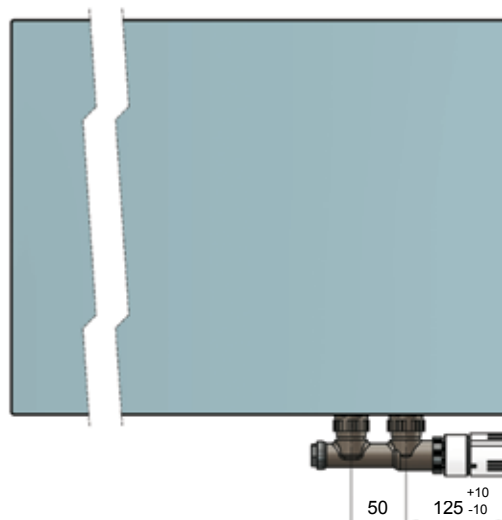
HEAT TRANSFER RATE Q [W] COIL – GS

		GS 280/2			GS 360/4			GS 480/4				
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	701	639	615	90	896	815	783	90	1 036	941	905
	70	462	407	385	70	585	513	485	70	675	591	559
	60	353	301	281	60	444	377	352	60	511	434	405
	45	205	160	143	45	254	198	176	45	292	227	202
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	952	867	834	90	1 216	1 106	1 063	90	1 406	1 278	1 228
	70	627	552	523	70	794	696	658	70	916	803	759
	60	479	409	382	60	602	512	477	60	694	590	549
	45	278	218	195	45	345	268	239	45	396	308	274

CROSS SECTION OF COIL- GS



LONGITUDINAL SECTION OF COIL - GS





COIL-SK PTG

COIL-NK PTG

COIL – SK PTG, NK PTG

CHARACTERISTICS

- ✘ self-standing or wall MINIB convector with the fan
- ✘ equipped with the thermoelectric generator of el. energy
- ✘ this convector does not require individual el. installation
- ✘ equipped with the thermostatic head
- ✘ heating of dry interiors

DIMENSIONS

total width	156 mm
construction height – self-standing	300 mm
construction height – wall	240 mm
length L	1000 to 2000 mm

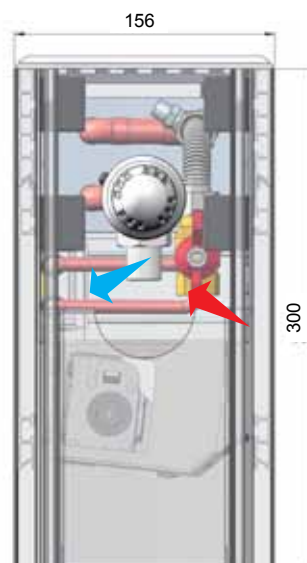
USAGE

PTG convector is a fast reacting heating unit equipped with the thermoelectric generator. There is no need to install any cable connection to convectors because electric energy is generated from the warm water supplied to the heat exchanger through the PTG system. The aluminium cover of the unit is supplied with varnished coating in colour tints – silver, white, light or dark bronze. The minimum height of the wall convector from the ground is 110 mm.

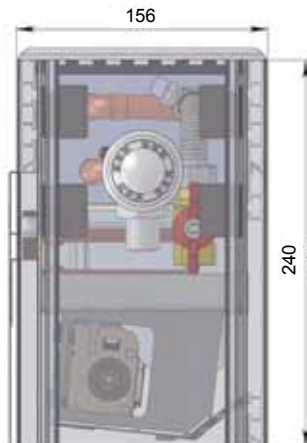
HEAT TRANSFER RATE Q [W] COIL – SK PTG, NK PTG

		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 610	1 503	1 460
	80	1 395	1 288	1 245
	70	1 108	1 007	967
	50	554	475	443
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 098	1 958	1 902
	80	1 818	1 678	1 622
	70	1 447	1 315	1 262
	50	734	629	587
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 659	2 482	2 411
	80	2 304	2 127	2 056
	70	1 836	1 669	1 602
	50	933	800	747
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 132	2 923	2 839
	80	2 714	2 505	2 422
	70	2 158	1 962	1 884
	50	1 083	928	866
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 572	3 334	3 239
	80	3 096	2 858	2 763
	70	2 465	2 241	2 151
	50	1 239	1 062	991

CROSS SECTION OF COIL-SK PTG



CROSS SECTION OF COIL-NK PTG





COIL – TE

CHARACTERISTICS

- ✘ electrical heating of dry interiors
- ✘ electric direct heating convector with the 230 V fan
- ✘ electrical cover protection IP20

DIMENSIONS

total width	303 mm
construction height	125 mm
length L	500 to 2500 mm

USAGE

Recommended for individual use in dry interiors with a variety of heating demands.

FUNCTION

The heat is generated by electrical heating coils that are transversally cooled by fan. The thermal protection of the unit is ensured with temperature limiters reacting to the temperature of the discharge air. The convector has a single fan speed and heat output is fixed at 750 W per 500 mm long convector module. Only control A - one speed - is available and the fan speed is fixed to the speed level 2.

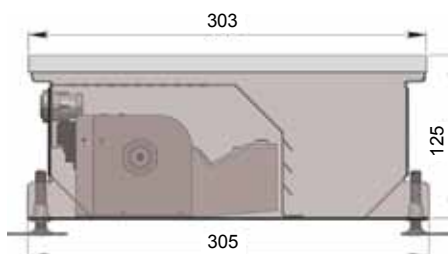
HEAT TRANSFER RATE COIL-TE

length L (mm)	500	1000	1500	2000	2500
Q (W)	750	1500	2250	3000	3750



Window

CROSS SECTION OF COIL-TE



COIL – SK

CHARACTERISTICS

- ✘ heating for kitchen and hall interiors
- ✘ **not** designed for mounting into the floor but for skirting or kick space mounting
- ✘ **installation of the convector under lockers, cabinets (kitchen cupboards etc.)**
- ✘ air inlet and outlet at the front

DIMENSIONS

total width	328 mm
construction height	102 mm
length L	556 mm



USAGE

The front section of the convector (97 x 500 mm) is covered with a decorative grille and is divided into upper and lower sections. The air is drawn from the space through the upper front section and heated air is delivered back to the space through the lower front section. All this provides a very compact unit design. The convector is suitable for kitchen heating as well as in stairs, bathroom and hallway skirting.

HEAT TRANSFER RATE Q [W] COIL – SK


		1 st level min. speed			2 nd level med. speed				3 rd level max. speed			
		length L (mm)		556	length L (mm)		556	length L (mm)		556		
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	526	491	477	554	518	503	714	667	648		
	70	387	352	338	408	371	356	525	478	459		
	60	317	282	268	334	297	283	431	383	364		
	45	212	177	163	224	187	172	288	241	222		

TEMPERATURE EXPONENT

m = 0,99

ELECTRIC INPUT FOR FANS

length	power input
500	7,2 VA



CROSS SECTION OF COIL-SK



COIL – KP

CHARACTERISTICS

- ✘ heating output higher than 2.3 kW for 1.5 m long convector
- ✘ heating of dry interiors
- ✘ the convector is designed for installation into the window sill incl. the window sill
- ✘ the sill is only supplied in beech or oak design without wood surface finish.

DIMENSIONS

total width 272 mm
 construction height 135 mm incl. the window sill
 length L 900 to 1500 mm

USAGE

The MINIB window sill convector is suitable for all types of windows with a sill of a minimum depth of 250 mm.



TEMPERATURE EXPONENT

m = 1,0365

ELECTRIC INPUT FOR FANS

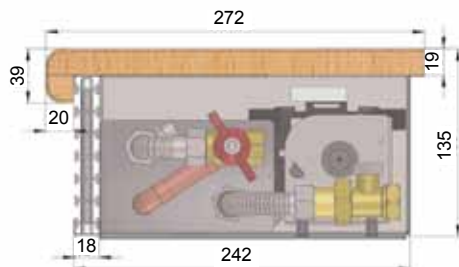
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA



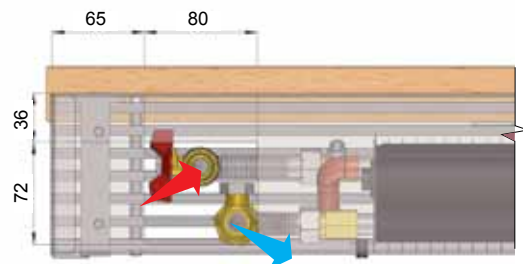
HEAT TRANSFER RATE Q [W] COIL – KP

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 144	1 065	1 033	90	1 432	1 333	1 294	90	1 769	1 647	1 598
	70	829	751	720	70	1 038	941	902	70	1 282	1 162	1 114
	60	673	596	565	60	843	746	708	60	1 042	922	874
	45	442	366	336	45	554	459	421	45	684	566	520
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 334	1 242	1 205	90	1 671	1 556	1 510	90	2 064	1 921	1 864
	70	967	876	840	70	1 212	1 098	1 052	70	1 496	1 355	1 299
	60	786	695	659	60	984	871	826	60	1 215	1 076	1 020
	45	516	427	392	45	646	535	491	45	798	661	606
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 811	1 686	1 636	90	2 268	2 111	2 049	90	2 801	2 607	2 530
	70	1 313	1 189	1 140	70	1 644	1 490	1 428	70	2 031	1 840	1 763
	60	1 066	944	895	60	1 335	1 182	1 121	60	1 649	1 460	1 384
	45	700	580	532	45	877	726	666	45	1 083	897	823
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 287	2 129	2 066	90	2 864	2 667	2 588	90	3 538	3 293	3 196
	70	1 658	1 502	1 440	70	2 077	1 882	1 804	70	2 565	2 324	2 227
	60	1 347	1 192	1 130	60	1 687	1 493	1 416	60	2 083	1 844	1 748
	45	885	732	672	45	1 108	917	841	45	1 368	1 133	1 039

CROSS SECTION OF COIL-KP



LONGITUDINAL SECTION OF COIL-KP



COIL – LP

CHARACTERISTICS

- ✘ Minib heating bench with heat output higher than 1.3 kW for 1 m long convector
- ✘ for heating dry and wet environments
- ✘ cover board from real granite
- ✘ load capacity of the bench up to 150 kg
- ✘ equipped with the thermostatic head

DIMENSIONS

total width 280 mm
 construction height 435 mm
 unit frame length 1000, 1250 a 1500 mm

USAGE

COIL-LP is a fast responding heating unit with a medium heat output. The bench heater is manufactured from silver, light or eventually dark bronze finish aluminium alloy or white Ral paint finish.

This bench heater is an aesthetic heating option for interiors and swimming pool areas. Granite tops are provided in a range of designs - see details on right. The bench heater is designed for a load up to 150 kg.

Info:

Lengths 1000 and 1250 mm are supplied with the granite top and the convector length of 1500 mm with the beech wooden top. Colour shades shown on photos are only illustrative because the actual colour appearance cannot be achieved by printing technology.



VARIANTS OF GRANITE BOARDS



red-black



brown-green

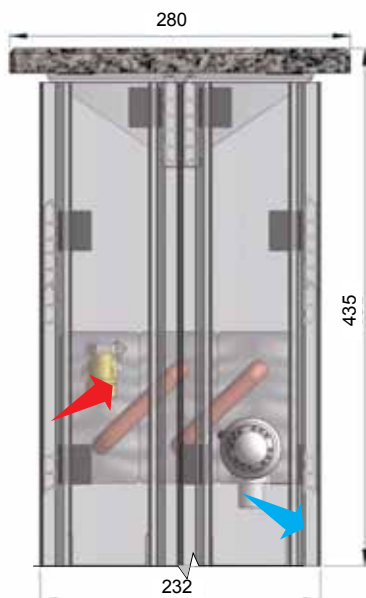


white-black

TEMPERATURE EXPONENT

$m = 1,4035$

CROSS SECTION OF COIL-LP



HEAT TRANSFER RATE Q [W] COIL-LP

		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 351	2 134	2 049
	70	1 521	1 331	1 257
	60	1 148	973	905
	45	650	503	448
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 072	2 789	2 678
	70	1 988	1 739	1 642
	60	1 500	1 271	1 183
	45	849	657	585
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 794	3 443	3 306
	70	2 455	2 147	2 028
	60	1 852	1 570	1 461
	45	1 048	812	722



COIL – DP

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ esthetic all wood self-standing convector
- ✘ medium heat output from natural convection

DIMENSIONS

total width	176 mm
construction height	214 mm
length L	900 to 2000 mm

USAGE

COIL – DP is the MINIB floor self-standing convector specially designed as an aesthetic interior option made from solid wood.

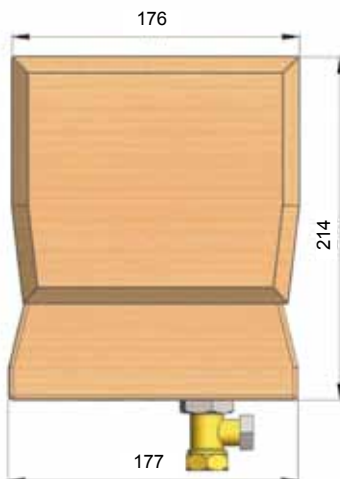
info:

The decorative all wood grille of the convector must not be covered or loaded. The convector is manufactured in beech with matt varnish finish.

TEMPERATURE EXPONENT

$m = 1,3788$

CROSS SECTION OF COIL-DP



HEAT TRANSFER RATE Q [W] COIL – DP

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	910	828	795
	70	594	521	492
	60	450	383	357
	45	257	200	178
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 062	966	928
	70	693	607	574
	60	525	446	416
	45	300	234	208
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 821	1 656	1 591
	70	1 187	1 041	984
	60	900	765	713
	45	515	400	357
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 579	2 345	2 254
	70	1 682	1 475	1 394
	60	1 275	1 084	1 010
	45	729	567	506

WALL AND SELF-STANDING CONVECTORS

HOW TO CORRECTLY CHOOSE

A WALL OR SELF-STANDING CONVECTOR:

- determine the heat loss in the room according to the project
- determine the mean heating water temperature
- select the required temperature in the room
- select the convector type according to the environment (dry or wet)*
- preliminary selection of a suitable type of convector according to the dimensional limits and check the required output according to tabulated values
- selection of the length and number of convectors
- selection of the covering grille and colour of the cover
- selection of a suitable control and thermostat – see example on page no. 99

* dry and wet environment is defined by the standard CSN 038900 – design of electric objects – Classification of the environment

CALCULATION OF THE OUTPUT

FOR THE PARTICULAR TEMPERATURES:

Use the temperature equation for calculation of the output at other than the tabulated value of heating water and air in the room. Enter the required mean temperature of heating water and air in the room and calculate the heat output. These values can be also simply calculated on our website on the specific convector page.

PRICE OF THE STANDARD CONVECTOR INCLUDES:

- aluminium cover of the unit in white, silver, light or dark bronze colour
- connection hoses – stainless steel bellows type
- thermostatic valve with the head and shut-off valve

OPTIONAL ACCESSORIES:

You will find examples of optional accessories on page no. 103

**EXAMPLES OF COLOUR DESIGNS ARE ON PAGE NO. 104
PRESSURE LOSSES, ACOUSTIC PRESSURE AND OTHER
PHYSICAL PROPERTIES CAN BE FOUND ON PAGE NO. 100**

TEMPERATURE EQUATION

$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:

$m =$

t_w, A

Q_N

μ

Q

temperature exponent

mean heating water temperature

mean air temperature in the interior [°C]

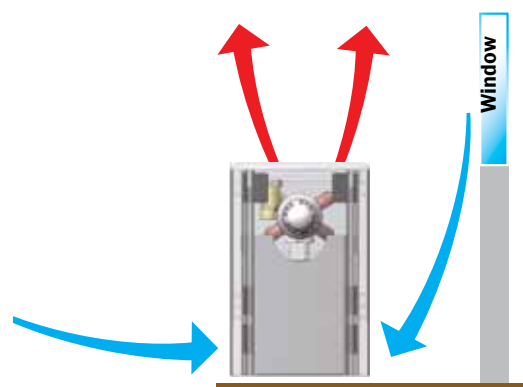
nominal heat transfer rate for

temperatures $t_w - t_A = 50$ °C [W]

$\mu = 1$ ((select μ according to the diagram for other than nominal flow values)

heat transfer rate for other temperatures [W]

THE EXAMPLE OF AIR FLOW IN THE ROOM





COIL – NK1

CHARACTERISTICS

- ✘ wall convector with the fan
- ✘ designed for installation on the wall of the room
- ✘ for heating dry interiors
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	170 mm
length L	900 to 2000 mm

USAGE

Wall convectors are fast responding heating units from a higher heat output series of MINIB convectors with 12V fans. They are also suitable for applications when the window sill is placed 25 to 30 cm above the floor so as not to reach the window area. The minimum height of the convector from the ground is 110 mm.

Info:

The decorative grille of the convector must not be covered or loaded..

HEAT TRANSFER RATE Q [W] COIL – NK1

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 355	1 257	1 217	90	1 450	1 344	1 302	90	1 888	1 750	1 696
	70	965	869	831	70	1 032	930	889	70	1 344	1 211	1 158
	60	774	681	644	60	829	728	689	60	1 079	948	896
	45	497	407	371	45	531	435	397	45	692	567	517
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 581	1 466	1 420	90	1 691	1 568	1 519	90	2 202	2 042	1 978
	70	1 126	1 014	970	70	1 204	1 085	1 037	70	1 568	1 413	1 351
	60	904	794	751	60	967	850	803	60	1 259	1 106	1 046
	45	580	475	433	45	620	508	463	45	807	661	603
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 146	1 990	1 927	90	2 296	2 128	2 062	90	2 989	2 771	2 685
	70	1 528	1 376	1 316	70	1 634	1 472	1 408	70	2 128	1 917	1 833
	60	1 226	1 078	1 019	60	1 312	1 153	1 090	60	1 708	1 501	1 419
	45	787	644	588	45	841	689	629	45	1 096	897	819
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 710	2 513	2 435	90	2 900	2 689	2 605	90	3 775	3 501	3 391
	70	1 930	1 738	1 662	70	2 064	1 860	1 779	70	2 688	2 422	2 316
	60	1 549	1 362	1 287	60	1 657	1 457	1 377	60	2 158	1 897	1 793
	45	994	814	743	45	1 063	871	795	45	1 384	1 133	1 035
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 275	3 037	2 942	90	3 504	3 249	3 147	90	4 562	4 230	4 098
	70	2 332	2 101	2 009	70	2 495	2 247	2 149	70	3 248	2 926	2 798
	60	1 872	1 645	1 555	60	2 002	1 760	1 664	60	2 607	2 292	2 166
	45	1 201	983	897	45	1 284	1 052	960	45	1 672	1 370	1 250
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 840	3 560	3 449	90	4 108	3 809	3 690	90	5 349	4 959	4 804
	70	2 734	2 463	2 355	70	2 925	2 635	2 520	70	3 808	3 431	3 281
	60	2 194	1 929	1 823	60	2 348	2 063	1 951	60	3 057	2 687	2 540
	45	1 408	1 153	1 052	45	1 506	1 233	1 126	45	1 961	1 606	1 466

ELECTRIC INPUT FOR FANS

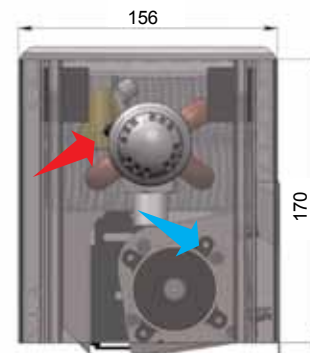
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA



TEMPERATURE EXPONENT

m = 1,09525

CROSS SECTION OF COIL-NK1



COIL – NK2

CHARACTERISTICS

- ✘ wall convector with the fan
- ✘ designed for installation on the wall of the room
- ✘ for heating dry interiors
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width 156 mm
 construction height 340 mm
 length L 900 to 2000 mm

USAGE

Wall convectors are fast responding heating units from a higher heat output series of MINIB convectors with 12V fans. They are also suitable for applications when the window sill is placed 50 to 60 cm above the floor so as not to reach the window area. The minimum height of the convector from the ground is 110 mm.

Info:

The decorative grille of the convector must not be covered or loaded..



ELECTRIC INPUT FOR FANS

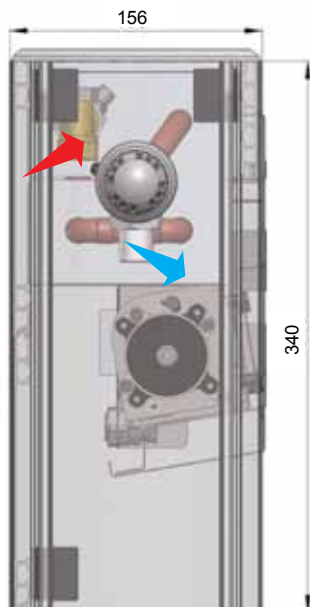
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA



TEMPERATURE EXPONENT

$m = 1,17097$

CROSS SECTION OF COIL-NK2



HEAT TRANSFER RATE Q [W] COIL – NK2

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 026	1 869	1 807	90	2 131	1 966	1 900	90	2 415	2 227	2 153
	70	1 409	1 260	1 202	70	1 482	1 326	1 264	70	1 679	1 502	1 432
	60	1 114	971	914	60	1 172	1 021	961	60	1 328	1 157	1 089
	45	693	560	508	45	729	589	534	45	826	667	605
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	2 364	2 181	2 108	90	2 487	2 294	2 217	90	2 817	2 598	2 512
	70	1 644	1 470	1 402	70	1 729	1 547	1 474	70	1 959	1 752	1 670
	60	1 300	1 132	1 066	60	1 367	1 191	1 122	60	1 549	1 349	1 271
	45	808	653	592	45	850	687	623	45	963	778	706
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	3 208	2 959	2 861	90	3 375	3 113	3 009	90	3 823	3 526	3 409
	70	2 231	1 996	1 902	70	2 347	2 099	2 001	70	2 659	2 378	2 267
	60	1 764	1 537	1 447	60	1 855	1 616	1 522	60	2 102	1 831	1 724
	45	1 097	886	804	45	1 154	932	846	45	1 307	1 056	958
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	4 053	3 738	3 613	90	4 263	3 932	3 801	90	4 829	4 454	4 306
	70	2 818	2 521	2 403	70	2 964	2 651	2 528	70	3 358	3 004	2 864
	60	2 228	1 941	1 828	60	2 344	2 042	1 923	60	2 655	2 313	2 178
	45	1 386	1 120	1 015	45	1 458	1 178	1 068	45	1 652	1 334	1 210
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	4 897	4 517	4 366	90	5 151	4 751	4 592	90	5 835	5 382	5 203
	70	3 406	3 046	2 904	70	3 582	3 204	3 054	70	4 058	3 630	3 460
	60	2 692	2 346	2 209	60	2 832	2 467	2 323	60	3 208	2 795	2 632
	45	1 675	1 353	1 227	45	1 762	1 423	1 291	45	1 996	1 612	1 462
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t_a			mean air temperature t_a			mean air temperature t_a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t_w	90	5 741	5 296	5 119	90	6 039	5 570	5 384	90	6 841	6 310	6 100
	70	3 993	3 571	3 404	70	4 200	3 756	3 581	70	4 758	4 255	4 057
	60	3 157	2 750	2 590	60	3 320	2 892	2 724	60	3 761	3 277	3 086
	45	1 963	1 586	1 438	45	2 065	1 668	1 513	45	2 340	1 890	1 714



COIL – NU1

CHARACTERISTICS

- ✘ MINIB wall convector with a width of only 116 mm
- ✘ only for heating of dry environments
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	116 mm
construction height	170 mm
length L	900 to 2000 mm

USAGE

Convector NU1 is a fast reacting heating unit from a new design series of MINIB wall convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white varnished or eloxal coating. The minimum height of the convector from the ground is 110 mm.

info:

The decorative grille of the convector must not be loaded.

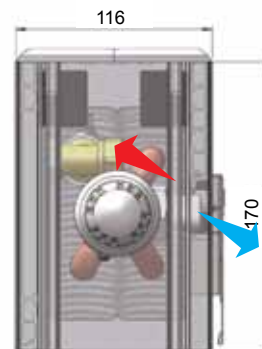
HEAT TRANSFER RATE Q [W] COIL – NU1

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	820	746	717
	70	537	471	446
	60	408	347	324
	45	234	183	163
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	935	851	818
	70	612	537	508
	60	465	396	369
	45	267	208	186
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 222	1 112	1 069
	70	800	702	664
	60	608	517	482
	45	349	272	243
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 509	1 373	1 320
	70	987	867	820
	60	751	639	596
	45	431	336	300
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 796	1 634	1 570
	70	1 175	1 032	976
	60	893	760	709
	45	513	400	357
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 082	1 895	1 821
	70	1 363	1 196	1 131
	60	1 036	882	822
	45	595	464	414

TEMPERATURE EXPONENT

$m = 1,3667$

CROSS SECTION OF COIL-NU1



COIL – NU2

CHARACTERISTICS

- ✘ MINIB wall convector with a width of only 116 mm
- ✘ only for heating of dry environments
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width 116 mm
 construction height 340 mm
 length L 900 to 2000 mm

USAGE

Convector NU2 is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating. The minimum height of the convector from the ground is 110 mm.

info:

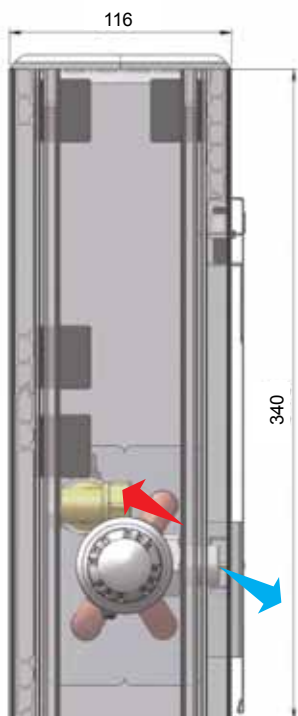
The decorative grille of the convector must not be loaded.



TEMPERATURE EXPONENT

m = 1,3667

CROSS SECTION OF COIL-NU2



HEAT TRANSFER RATE Q [W] COIL – NU2

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 061	966	928
	70	695	610	577
	60	528	449	419
	45	303	236	211
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 210	1 101	1 058
	70	792	695	657
	60	602	512	478
	45	346	270	240
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 581	1 439	1 383
	70	1 035	908	859
	60	786	670	624
	45	452	352	314
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 952	1 776	1 707
	70	1 277	1 121	1 061
	60	971	827	771
	45	558	435	388
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 323	2 114	2 032
	70	1 520	1 335	1 262
	60	1 156	984	917
	45	664	518	462
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 694	2 452	2 356
	70	1 763	1 548	1 464
	60	1 340	1 141	1 064
	45	770	600	536



COIL – NW170

CHARACTERISTICS

- ✘ MINIB wall convector with a width of 232 mm
- ✘ only for heating of dry environments
- ✘ very high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	232 mm
construction height	170 mm
length L	900 to 2000 mm

USAGE

Convector NW170 is a fast reacting heating unit that is a part of a new design series of MINIB wall convectors regarding its heat output and dimensions. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating. The minimum height of the convector from the ground is 110 mm.

info:

The decorative grille of the convector must not be loaded.

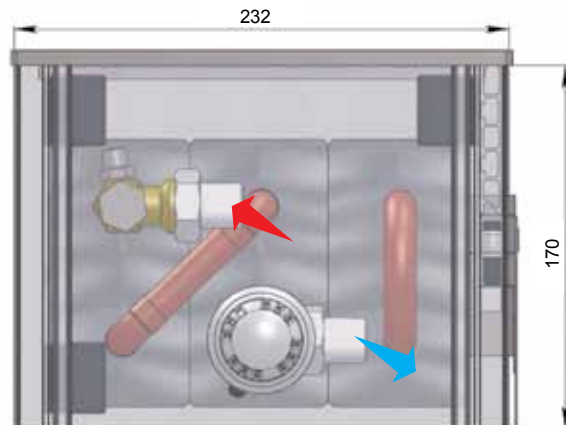
HEAT TRANSFER RATE Q [W] COIL – NW170

		length L (mm)	900		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	1 878	1 703	1 634	
	70	1 210	1 057	998	
	60	910	770	716	
	45	512	396	352	
		length L (mm)	1000		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	2 141	1 941	1 863	
	70	1 379	1 205	1 137	
	60	1 038	878	817	
	45	584	451	401	
		length L (mm)	1250		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	2 797	2 537	2 435	
	70	1 802	1 575	1 486	
	60	1 356	1 148	1 067	
	45	763	590	524	
		length L (mm)	1500		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	3 454	3 132	3 006	
	70	2 225	1 944	1 835	
	60	1 675	1 417	1 318	
	45	943	728	647	
		length L (mm)	1750		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	4 111	3 728	3 578	
	70	2 648	2 314	2 184	
	60	1 993	1 686	1 568	
	45	1 122	866	770	
		length L (mm)	2000		
		mean air temperature t_a			
		15	20	22	
mean water temperature t_w	90	4 767	4 323	4 149	
	70	3 072	2 683	2 533	
	60	2 311	1 956	1 819	
	45	1 301	1 005	893	

TEMPERATURE EXPONENT

$$m = 1,4173$$

CROSS SECTION OF COIL – NW170



COIL – NW340

CHARACTERISTICS

- ✘ MINIB wall convector with a width of 232 mm
- ✘ only for heating of dry environments
- ✘ very high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	232 mm
construction height	340 mm
length L	900 to 2000 mm

USAGE

Convector NW340 is a fast reacting heating unit that is a part of a new design series of MINIB wall convectors regarding its heat output and dimensions. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating. The minimum height of the convector from the ground is 110 mm.

info:

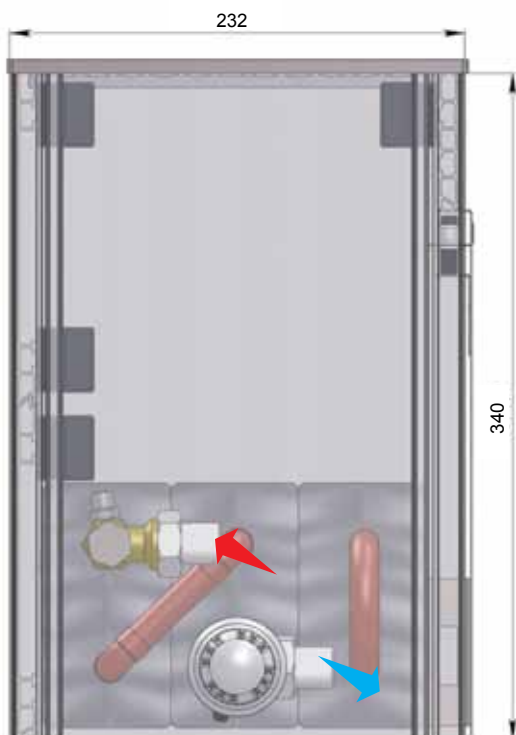
The decorative grille of the convector must not be loaded.



TEMPERATURE EXPONENT

m = 1,3651

CROSS SECTION OF COIL – NW340



HEAT TRANSFER RATE Q [W] COIL – NW340

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 254	2 051	1 972
	70	1 476	1 296	1 226
	60	1 122	956	891
	45	645	503	449
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 569	2 338	2 247
	70	1 682	1 477	1 397
	60	1 279	1 089	1 016
	45	735	573	512
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 357	3 055	2 937
	70	2 198	1 930	1 825
	60	1 672	1 423	1 327
	45	961	749	669
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	4 145	3 773	3 626
	70	2 714	2 383	2 254
	60	2 064	1 757	1 639
	45	1 187	925	826
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	4 933	4 490	4 316
	70	3 230	2 836	2 682
	60	2 456	2 091	1 950
	45	1 412	1 101	983
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	5 721	5 207	5 005
	70	3 746	3 289	3 111
	60	2 849	2 426	2 262
	45	1 638	1 277	1 140



COIL – NP1/4

CHARACTERISTICS

- ✘ MINIB wall convector with a width of 156 mm
- ✘ only for heating of dry environments
- ✘ high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	170 mm
length L	900 to 2000 mm

USAGE

Convector NP1/4 is a fast reacting heating unit from a new design series of MINIB wall convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating. The minimum height of the convector from the ground is 110 mm.

info:

The decorative grille of the convector must not be loaded.

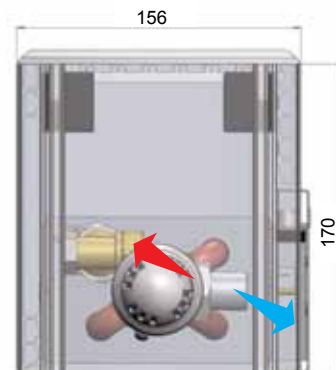
HEAT TRANSFER RATE Q [W] COIL – NP1/4

		length L (mm) 900	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	1 114	1 017
	70	740	652
	60	567	486
	45	332	261
		length L (mm) 1000	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	1 269	1 159
	70	843	743
	60	647	554
	45	379	298
		length L (mm) 1250	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	1 659	1 514
	70	1 102	971
	60	845	723
	45	495	389
		length L (mm) 1500	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	2 048	1 870
	70	1 360	1 199
	60	1 044	893
	45	611	480
		length L (mm) 1750	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	2 438	2 225
	70	1 619	1 427
	60	1 242	1 063
	45	727	572
		length L (mm) 2000	
		mean air temperature t_a	
		15	20
mean water temperature t_w	90	2 827	2 581
	70	1 877	1 655
	60	1 440	1 233
	45	843	663

TEMPERATURE EXPONENT

$$m = 1,32$$

CROSS SECTION OF COIL – NP1/4



COIL – NP2/4

CHARACTERISTICS

- ✘ MINIB wall convector with a width of 156 mm
- ✘ only for heating of dry environments
- ✘ high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	340 mm
length L	900 to 2000 mm

USAGE

Convector NP2/4 is a fast reacting heating unit from a new design series of MINIB wall convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating. The minimum height of the convector from the ground is 110 mm.

info:

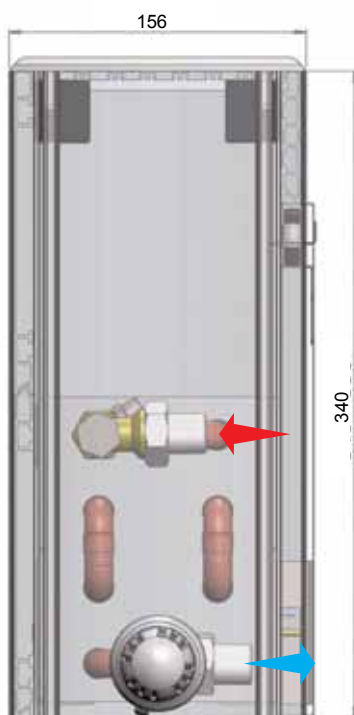
The decorative grille of the convector must not be loaded.



TEMPERATURE EXPONENT

$$m = 1,4153$$

CROSS SECTION OF COIL – NP2/4



HEAT TRANSFER RATE Q [W] COIL – NP2/4

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 621	1 470	1 411
	70	1 045	913	862
	60	787	666	619
	45	443	342	304
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 848	1 676	1 609
	70	1 191	1 041	983
	60	897	759	706
	45	505	390	347
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 415	2 190	2 102
	70	1 557	1 360	1 284
	60	1 172	992	922
	45	660	510	453
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 981	2 704	2 595
	70	1 922	1 680	1 585
	60	1 447	1 225	1 139
	45	815	630	560
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 548	3 218	3 089
	70	2 288	1 999	1 887
	60	1 722	1 458	1 356
	45	970	749	666
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	4 115	3 732	3 582
	70	2 653	2 318	2 188
	60	1 997	1 690	1 572
	45	1 125	869	772



COIL – SK1

CHARACTERISTICS

- ✘ self-standing convector with the fan
- ✘ for heating dry interiors
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	230 mm
length L	900 to 2000 mm

USAGE

Self-standing MINIB convector with the fan suitable for heating of interiors. The modern product made from aesthetically pleasing aluminium alloy and colour matched to MINIB floor convectors. Available in colour tints – silver, light bronze, dark bronze and white.

Info:

The decorative grille of the convector must not be covered or loaded.

HEAT TRANSFER RATE Q [W] COIL – SK1

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 355	1 257	1 217	90	1 450	1 344	1 302	90	1 888	1 750	1 696
	70	965	869	831	70	1 032	930	889	70	1 344	1 211	1 158
	60	774	681	644	60	829	728	689	60	1 079	948	896
	45	497	407	371	45	531	435	397	45	692	567	517
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 581	1 466	1 420	90	1 691	1 568	1 519	90	2 202	2 042	1 978
	70	1 126	1 014	970	70	1 204	1 085	1 037	70	1 568	1 413	1 351
	60	904	794	751	60	967	850	803	60	1 259	1 106	1 046
	45	580	475	433	45	620	508	463	45	807	661	603
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 146	1 990	1 927	90	2 296	2 128	2 062	90	2 989	2 771	2 685
	70	1 528	1 376	1 316	70	1 634	1 472	1 408	70	2 128	1 917	1 833
	60	1 226	1 078	1 019	60	1 312	1 153	1 090	60	1 708	1 501	1 419
	45	787	644	588	45	841	689	629	45	1 096	897	819
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 710	2 513	2 435	90	2 900	2 689	2 605	90	3 775	3 501	3 391
	70	1 930	1 738	1 662	70	2 064	1 860	1 779	70	2 688	2 422	2 316
	60	1 549	1 362	1 287	60	1 657	1 457	1 377	60	2 158	1 897	1 793
	45	994	814	743	45	1 063	871	795	45	1 384	1 133	1 035
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 275	3 037	2 942	90	3 504	3 249	3 147	90	4 562	4 230	4 098
	70	2 332	2 101	2 009	70	2 495	2 247	2 149	70	3 248	2 926	2 798
	60	1 872	1 645	1 555	60	2 002	1 760	1 664	60	2 607	2 292	2 166
	45	1 201	983	897	45	1 284	1 052	960	45	1 672	1 370	1 250
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 840	3 560	3 449	90	4 108	3 809	3 690	90	5 349	4 959	4 804
	70	2 734	2 463	2 355	70	2 925	2 635	2 520	70	3 808	3 431	3 281
	60	2 194	1 929	1 823	60	2 348	2 063	1 951	60	3 057	2 687	2 540
	45	1 408	1 153	1 052	45	1 506	1 233	1 126	45	1 961	1 606	1 466

ELECTRIC INPUT FOR FANS

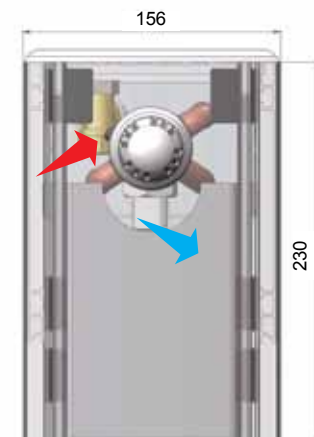
length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA



TEMPERATURE EXPONENT

$$m = 1,09525$$

CROSS SECTION OF COIL-SK1



COIL – SK2

CHARACTERISTICS

- ✘ self-standing convector with the fan
- ✘ for heating dry interiors
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width 156 mm
 construction height 400 mm
 length L 900 to 2000 mm

USAGE

Self-standing MINIB convector with the fan suitable for heating of interiors. The modern product made from aesthetically pleasing aluminium alloy and colour matched to MINIB floor convectors. Available in colour tints – silver, light bronze, dark bronze and white.

Info:

The decorative grille of the convector must not be covered or loaded.



ELECTRIC INPUT FOR FANS

length	power input
900	12 VA
1000	12 VA
1250	24 VA
1500	24 VA
1750	24 VA
2000	36 VA



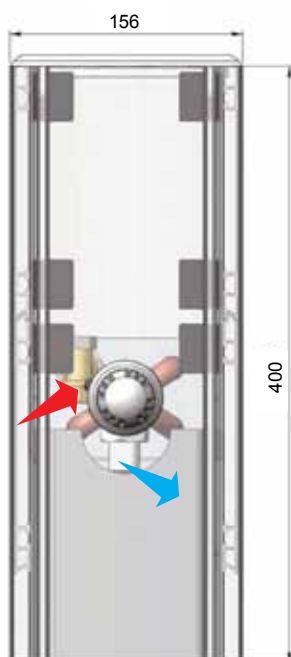
HEAT TRANSFER RATE Q [W] COIL – SK2

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 026	1 869	1 807	90	2 131	1 966	1 900	90	2 415	2 227	2 153
	70	1 409	1 260	1 202	70	1 482	1 326	1 264	70	1 679	1 502	1 432
	60	1 114	971	914	60	1 172	1 021	961	60	1 328	1 157	1 089
	45	693	560	508	45	729	589	534	45	826	667	605
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 364	2 181	2 108	90	2 487	2 294	2 217	90	2 817	2 598	2 512
	70	1 644	1 470	1 402	70	1 729	1 547	1 474	70	1 959	1 752	1 670
	60	1 300	1 132	1 066	60	1 367	1 191	1 122	60	1 549	1 349	1 271
	45	808	653	592	45	850	687	623	45	963	778	706
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 208	2 959	2 861	90	3 375	3 113	3 009	90	3 823	3 526	3 409
	70	2 231	1 996	1 902	70	2 347	2 099	2 001	70	2 659	2 378	2 267
	60	1 764	1 537	1 447	60	1 855	1 616	1 522	60	2 102	1 831	1 724
	45	1 097	886	804	45	1 154	932	846	45	1 307	1 056	958
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 053	3 738	3 613	90	4 263	3 932	3 801	90	4 829	4 454	4 306
	70	2 818	2 521	2 403	70	2 964	2 651	2 528	70	3 358	3 004	2 864
	60	2 228	1 941	1 828	60	2 344	2 042	1 923	60	2 655	2 313	2 178
	45	1 386	1 120	1 015	45	1 458	1 178	1 068	45	1 652	1 334	1 210
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 897	4 517	4 366	90	5 151	4 751	4 592	90	5 835	5 382	5 203
	70	3 406	3 046	2 904	70	3 582	3 204	3 054	70	4 058	3 630	3 460
	60	2 692	2 346	2 209	60	2 832	2 467	2 323	60	3 208	2 795	2 632
	45 <td>1 675</td> <td>1 353</td> <td>1 227</td> <td>45</td> <td>1 762</td> <td>1 423</td> <td>1 291</td> <td>45</td> <td>1 996</td> <td>1 612</td> <td>1 462</td>	1 675	1 353	1 227	45	1 762	1 423	1 291	45	1 996	1 612	1 462
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature t _a			mean air temperature t _a			mean air temperature t _a				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	5 741	5 296	5 119	90	6 039	5 570	5 384	90	6 841	6 310	6 100
	70	3 993	3 571	3 404	70	4 200	3 756	3 581	70	4 758	4 255	4 057
	60	3 157	2 750	2 590	60	3 320	2 892	2 724	60	3 761	3 277	3 086
	45	1 963	1 586	1 438	45	2 065	1 668	1 513	45	2 340	1 890	1 714

TEMPERATURE EXPONENT

$$m = 1,17097$$

CROSS SECTION OF COIL-SK2





COIL – SU1

CHARACTERISTICS

- ✘ self-standing floor convector with a width of only 116 mm
- ✘ only for heating of dry environments
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	116 mm
construction height	230 mm
length L	900 to 2000 mm

USAGE

Convector SU1 is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

The decorative grille of the convector must not be loaded.

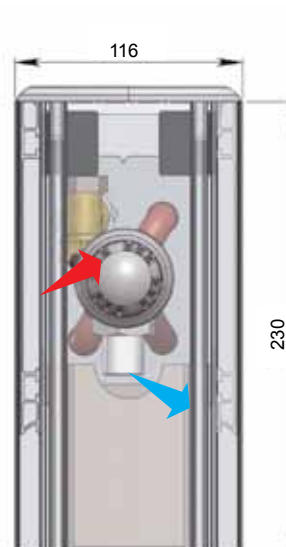
HEAT TRANSFER RATE Q [W] COIL – SU1

		length L (mm)	900		
		mean air temperature t_a		15	20
mean water temperature t_w	90	817	743	714	
	70	533	467	442	
	60	404	344	320	
	45	231	180	160	
		length L (mm)	1000		
		mean air temperature t_a		15	20
mean water temperature t_w	90	931	846	813	
	70	607	533	504	
	60	461	392	365	
	45	264	205	183	
		length L (mm)	1250		
		mean air temperature t_a		15	20
mean water temperature t_w	90	1 216	1 106	1 063	
	70	794	696	658	
	60	602	512	477	
	45	345	268	239	
		length L (mm)	1500		
		mean air temperature t_a		15	20
mean water temperature t_w	90	1 502	1 366	1 312	
	70	980	859	813	
	60	743	632	589	
	45	425	331	295	
		length L (mm)	1750		
		mean air temperature t_a		15	20
mean water temperature t_w	90	1 787	1 625	1 562	
	70	1 166	1 023	967	
	60	885	752	701	
	45	506	394	351	
		length L (mm)	2000		
		mean air temperature t_a		15	20
mean water temperature t_w	90	2 073	1 885	1 811	
	70	1 353	1 186	1 121	
	60	1 026	873	813	
	45	587	457	407	

TEMPERATURE EXPONENT

$$m = 1,3764$$

CROSS SECTION OF COIL-SU1



COIL – SU2

CHARACTERISTICS

- ✘ self-standing floor convector with a width of only 116 mm
- ✘ only for heating of dry environments
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	116 mm
construction height	400 mm
length L	900 to 2000 mm

USAGE

Convector SU2 is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

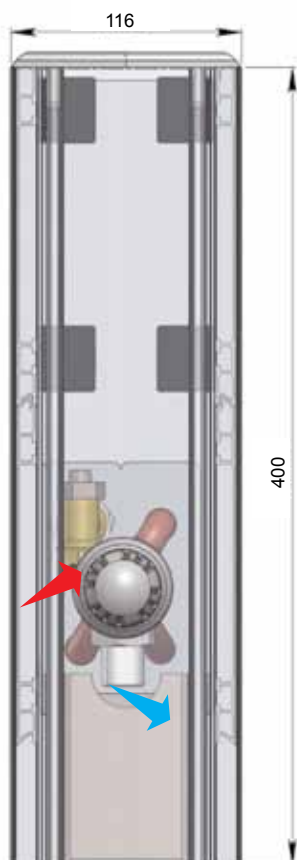
The decorative grille of the convector must not be loaded.



TEMPERATURE EXPONENT

$m = 1,3764$

CROSS SECTION OF COIL-SU2



HEAT TRANSFER RATE Q [W] COIL – SU2

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 044	950	912
	70	681	598	565
	60	517	440	410
	45	296	230	205
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 190	1 082	1 040
	70	777	681	644
	60	589	501	467
	45	337	262	234
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 555	1 414	1 359
	70	1 015	890	842
	60	770	655	610
	45	441	343	306
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 920	1 747	1 678
	70	1 253	1 099	1 039
	60	951	808	753
	45	544	423	377
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 286	2 079	1 997
	70	1 491	1 308	1 237
	60	1 131	962	897
	45	648	504	449
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 651	2 411	2 316
	70	1 730	1 517	1 434
	60	1 312	1 116	1 040
	45	751	584	521



COIL – SP1/4

CHARACTERISTICS

- ✘ MINIB self-standing convector with a width of 156 mm
- ✘ only for heating of dry environments
- ✘ high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	230 mm
length L	900 to 2000 mm

USAGE

Self-standing convector SP1/4 is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

The decorative grille of the convector must not be loaded.

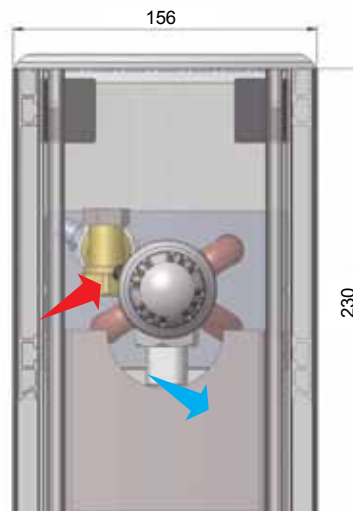
HEAT TRANSFER RATE Q [W] COIL – SP1/4

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	900	824	794
	70	605	536	509
	60	469	403	378
	45	279	221	199
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 026	939	905
	70	690	611	580
	60	534	460	430
	45	318	252	227
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 340	1 227	1 183
	70	902	799	758
	60	698	601	562
	45	416	330	296
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 655	1 515	1 460
	70	1 114	986	936
	60	862	742	694
	45	514	407	366
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 969	1 803	1 738
	70	1 325	1 173	1 114
	60	1 026	882	827
	45	611	484	435
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 284	2 091	2 015
	70	1 537	1 361	1 292
	60	1 190	1 023	959
	45	709	562	505

TEMPERATURE EXPONENT

$$m = 1,277$$

CROSS SECTION OF COIL – SP1/4



COIL – SP2/4

CHARACTERISTICS

- ✘ MINIB self-standing convector with a width of 156 mm
- ✘ only for heating of dry environments
- ✘ high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	156 mm
construction height	400 mm
length L	900 to 2000 mm

USAGE

Self-standing convector SP2/4 is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

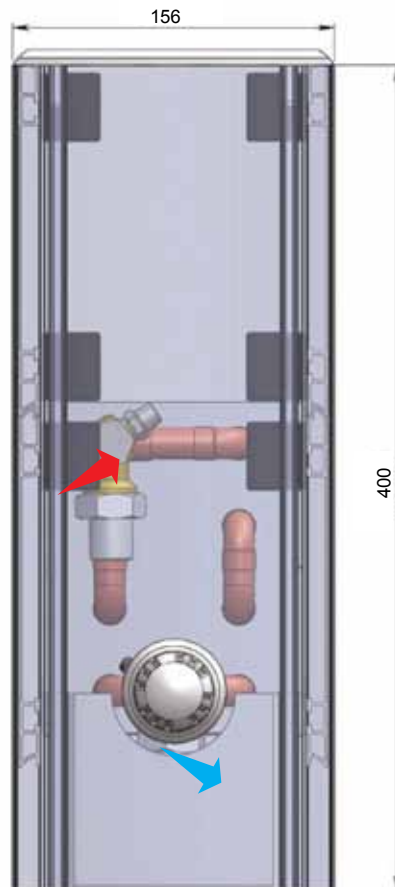
The decorative grille of the convector must not be loaded.



TEMPERATURE EXPONENT

m = 1,3911

CROSS SECTION OF COIL – SP2/4



HEAT TRANSFER RATE Q [W] COIL – SP2/4

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 595	1 449	1 392
	70	1 036	907	857
	60	784	665	619
	45	446	346	308
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 818	1 652	1 586
	70	1 181	1 034	977
	60	893	758	706
	45	508	394	351
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 376	2 158	2 073
	70	1 543	1 352	1 277
	60	1 167	991	923
	45	664	515	459
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	2 934	2 665	2 560
	70	1 906	1 669	1 577
	60	1 441	1 224	1 139
	45	820	636	567
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	3 491	3 172	3 046
	70	2 268	1 986	1 877
	60	1 715	1 456	1 356
	45	976	757	674
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	4 049	3 678	3 533
	70	2 630	2 303	2 176
	60	1 989	1 689	1 572
	45	1 132	878	782



COIL – SW250

CHARACTERISTICS

- ✘ MINIB self-standing convector with a width of 232 mm
- ✘ only for heating of dry environments
- ✘ very high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	232 mm
construction height	250 mm
length L	900 to 2000 mm

USAGE

Convector SW250 is a fast reacting heating unit that is a part of a new design series of MINIB self-standing convectors regarding its heat output and dimensions. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

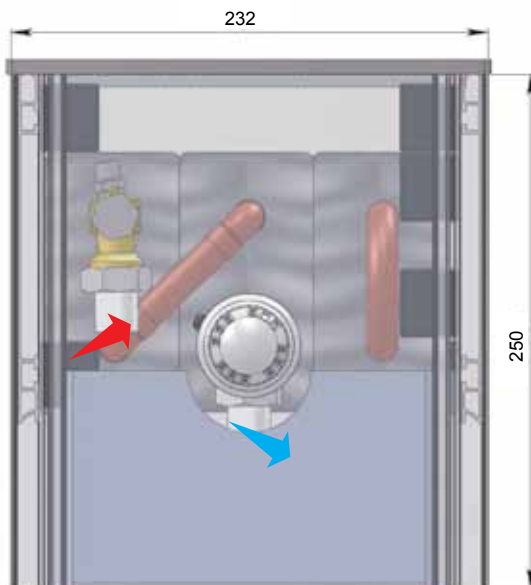
info:

The decorative grille of the convector must not be loaded.

TEMPERATURE EXPONENT

m = 1,4173

CROSS SECTION OF COIL – SW250



HEAT TRANSFER RATE Q [W] COIL – SW250

		length L (mm) 900		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	1 878	1 703	1 634
	70	1 210	1 057	998
	60	910	770	716
	45	512	396	352
		length L (mm) 1000		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 141	1 941	1 863
	70	1 379	1 205	1 137
	60	1 038	878	817
	45	584	451	401
		length L (mm) 1250		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	2 797	2 537	2 435
	70	1 802	1 575	1 486
	60	1 356	1 148	1 067
	45	763	590	524
		length L (mm) 1500		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	3 454	3 132	3 006
	70	2 225	1 944	1 835
	60	1 675	1 417	1 318
	45	943	728	647
		length L (mm) 1750		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	4 111	3 728	3 578
	70	2 648	2 314	2 184
	60	1 993	1 686	1 568
	45	1 122	866	770
		length L (mm) 2000		
		mean air temperature t _a		
		15	20	22
mean water temperature t _w	90	4 767	4 323	4 149
	70	3 072	2 683	2 533
	60	2 311	1 956	1 819
	45	1 301	1 005	893

COIL – SW420

CHARACTERISTICS

- ✘ MINIB self-standing convector with a width of 232 mm
- ✘ only for heating of dry environments
- ✘ very high heat output of the convector without the fan
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width	232 mm
construction height	420 mm
length L	900 to 2000 mm

USAGE

Convector SW420 is a fast reacting heating unit that is a part of a new design series of MINIB self-standing convectors regarding its heat output and dimensions. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

The decorative grille of the convector must not be loaded.



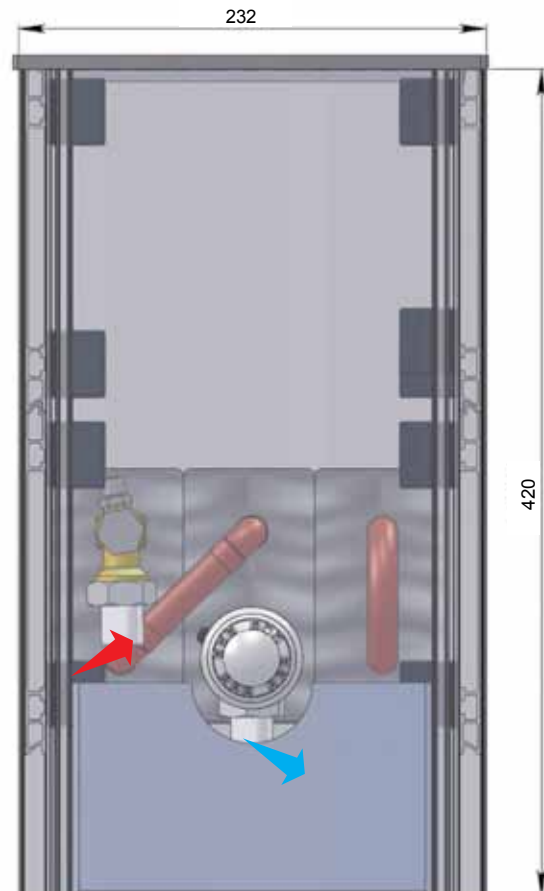
HEAT TRANSFER RATE Q [W] COIL – SW420

		length L (mm)	900			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	2 261	2 056	1 976		
	70	1 476	1 295	1 224		
	60	1 120	952	888		
	45	641	499	445		
		length L (mm)	1000			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	2 577	2 344	2 252		
	70	1 682	1 476	1 395		
	60	1 277	1 086	1 012		
	45	731	569	507		
		length L (mm)	1250			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	3 368	3 063	2 943		
	70	2 198	1 928	1 823		
	60	1 668	1 419	1 322		
	45	955	743	663		
		length L (mm)	1500			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	4 158	3 782	3 634		
	70	2 714	2 381	2 251		
	60	2 060	1 752	1 632		
	45	1 179	918	818		
		length L (mm)	1750			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	4 949	4 501	4 325		
	70	3 230	2 833	2 679		
	60	2 451	2 085	1 943		
	45	1 404	1 092	974		
		length L (mm)	2000			
		mean air temperature t_a				
		15	20	22		
mean water temperature t_w	90	5 739	5 220	5 016		
	70	3 746	3 286	3 107		
	60	2 843	2 418	2 253		
	45	1 628	1 267	1 130		

TEMPERATURE EXPONENT

$$m = 1,3752$$

CROSS SECTION OF COIL – SW420



COIL – SPO

CHARACTERISTICS

- ✘ self-standing convector with a width of 156 mm
- ✘ only for heating of dry environments
- ✘ equipped with the thermostatic head.

DIMENSIONS

total width 156 mm
 construction height 135 mm
 length L 900 to 2000 mm

USAGE

Self-standing convector SPO is a fast reacting heating unit from a new design series of MINIB self-standing convectors without the fan. The aluminium cover of the unit can be supplied with silver, light bronze, dark bronze or white-varnished coating.

info:

The decorative grille of the convector must not be loaded.



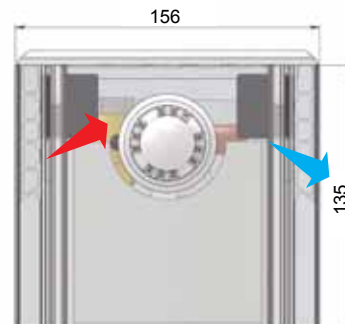
HEAT TRANSFER RATE Q [W] COIL – SPO

		length L (mm) 900		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	545	500	482
	70	370	328	312
	60	288	248	233
	45	173	138	124
		length L (mm) 1000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	621	570	550
	70	422	374	356
	60	328	283	266
	45	198	157	142
		length L (mm) 1250		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	812	745	718
	70	551	489	465
	60	429	370	347
	45	258	206	185
		length L (mm) 1500		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 003	920	887
	70	680	604	574
	60	529	457	429
	45	319	254	229
		length L (mm) 1750		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 193	1 095	1 056
	70	810	719	683
	60	630	544	510
	45	380	302	272
		length L (mm) 2000		
		mean air temperature t_a		
		15	20	22
mean water temperature t_w	90	1 384	1 269	1 224
	70	939	834	792
	60	731	631	592
	45	440	351	316

TEMPERATURE EXPONENT

$$m = 1,2497$$

CROSS SECTION OF COIL – SPO





CAPACITY CONTROL OF CONVECTORS FOR DRY INTERIORS

General division of controls

1/ dry interiors

Types EB-A – the possible use of transformers: TT100, TT240, TT300

EB-B (TT100, TT240, TT300)

EB-C (TT100, TT240, TT300)

TE

2/ humid and wet interiors

Types EB-A – the possible use of transformers:

TT100, TT240, TT300

A1 (TT240-E1, TT300-E1)

E1 (TT240-E1, TT300-E1)

Capacity control of convectors for dry interiors

Heat output of convectors is achieved by electronic speed control of the fans. If equipped with electromagnetic valves then the output can be reduced to zero by closing the valve to prevent water flow.

Capacity control of convectors in normal (dry) areas

Minib have used brushless 12V DC motors to power fans in dry areas since 2005. The advantages of low voltage DC fans compared to conventional AC is in their lower energy consumption, noise level and greater reliability.

The latest innovation in control uses microprocessor regulation of the DC motors and employs intelligent feedback. Features of the new control are:

- Stable heat output throughout lifetime – no reduction in output due to wear or fouling
- Optimised output via the control settings
- Very low noise generation
- Electronic disconnection of the motor in case of debris falling into the trench
- Simple installation with reduced wiring and a choice of manual or automatic control
- Electronic board sealed against the ingress of moisture

Fan speed of all convectors is controlled by the electronic board (EB) fitted inside each convector. The boards monitor control inputs and set the fan speed based upon their evaluation.

The electronic board is used for the following types of control:

Control EB-A – Simple on/off switching of the fans by a thermostat. Fan speed is set by a potentiometer which can be mounted next to the thermostat or within the convector.

Control EB-B – Fan speed is automatically set based upon the switching cycle of the thermostat and heat output is regulated based on the deviation of room temperature from set point temperature.

Control EB-C – In automatic mode control is as EB-B but the maximum fan speed is set using the switch on the thermostat. In manual mode the fan speed is set by the position of the switch on the thermostat but there is no further speed modulation.

The type of control is variable; only a jumper is required to be placed on the electronic block when 0 to 10V control is used (EB-A).

If several convectors are used in a single room then the control device (thermostat or potentiometer) can be placed on any of the convectors and will control all the units. The 12V DC terminals on the EB can be used as the power supply for thermostats such as TH0482 which require this type of supply.

Wireless thermostats can be used on control types EB-A and EB-B.

The thermostat transmitter can be sited in a representative space in the room and the receiver positioned near its power supply. The switching contacts of the receiver should be wired as a standard thermostat to the control terminals on one of the convectors.

A wireless thermostat can also be used with control EB-C but an adaptor ADA-EB must be used between the receiver and the convector terminals.

A new innovation involves the use of electromagnetic valves within the convectors. When the electronic control senses that the fans have been off for 30 minutes the valve is closed reducing the output to zero. As the thermostat calls for heating again the valve is re-opened.

There can also be a thermal switch within the convector which prevents the operation of the fans when the water temperature is low, preventing the convector from blowing cold air.

Note. The 12V DC is disconnected on the terminal block when the thermal switch opens. If this voltage is used as the supply to a thermostat then it is recommended that the thermal switch is not used.

Electrical power distribution is identical for all types of convectors. Between the power supply and the connectors and interconnection between convectors three core CYKY cable should be used with black, brown and grey colours. Black and brown distribute 12V AC from the transformer and the grey wire is used for interconnection of the EB control signal. Wire cross-section should be selected based on the length of the cable runs and current loadings. It is possible to use any suitably coloured cables between the thermostats the convector control terminals.

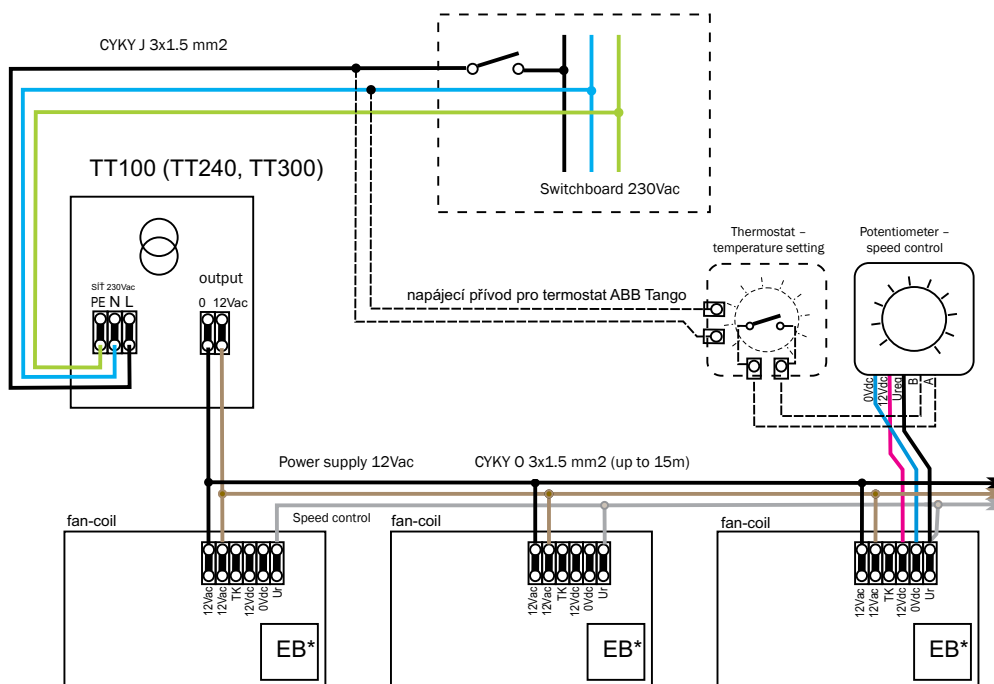
Connection of EB controls to a thermostat controlling other heating/cooling devices

Fan speed for all types of convectors is controlled by a 0 to 10V DC signal. In some cases it is not possible to connect the convector control directly to the output terminals of a thermostat. This is the case when the thermostat is powered by a 230V AC or 24 VAC supply and also controls other devices i.e. boilers or valves. In such cases an ADA-EB adaptor must be used which converts the 24 or 230V to the 0 to 10V required by the controller. The small dimensions of the adaptor (48x42x22mm) allow it to be fitted in a standard installation box under the thermostat.

An example of the use of the adaptor is shown with control EB-C. The fan speed can be controlled via the three position switch on the thermostat. The adaptor input (heat) is connected to the thermostat terminal whose voltage controls the boiler. Switching of the thermostat contacts will switch both the fans and the boiler.

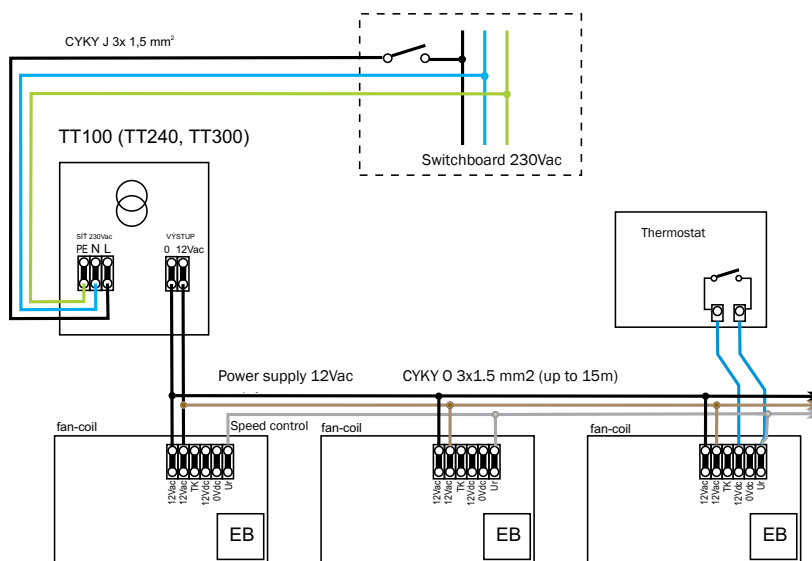
Consult Minib for use of the adaptor in other applications.

Controls EB-A

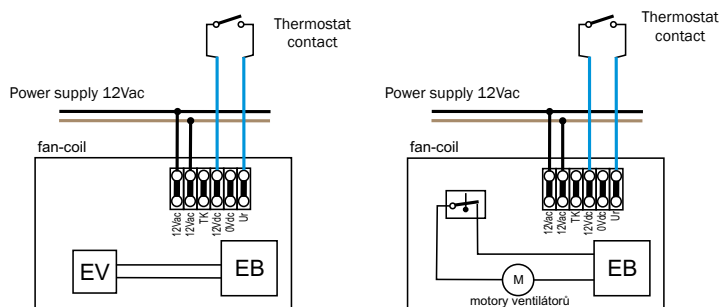


The basic connection of the control EB-A with a possibility of the continuous fan speed control. The set temperature is automatically maintained in the room when using the thermostat. The electronic control block EB* is set on the continuous speed control.

Controls EB-B



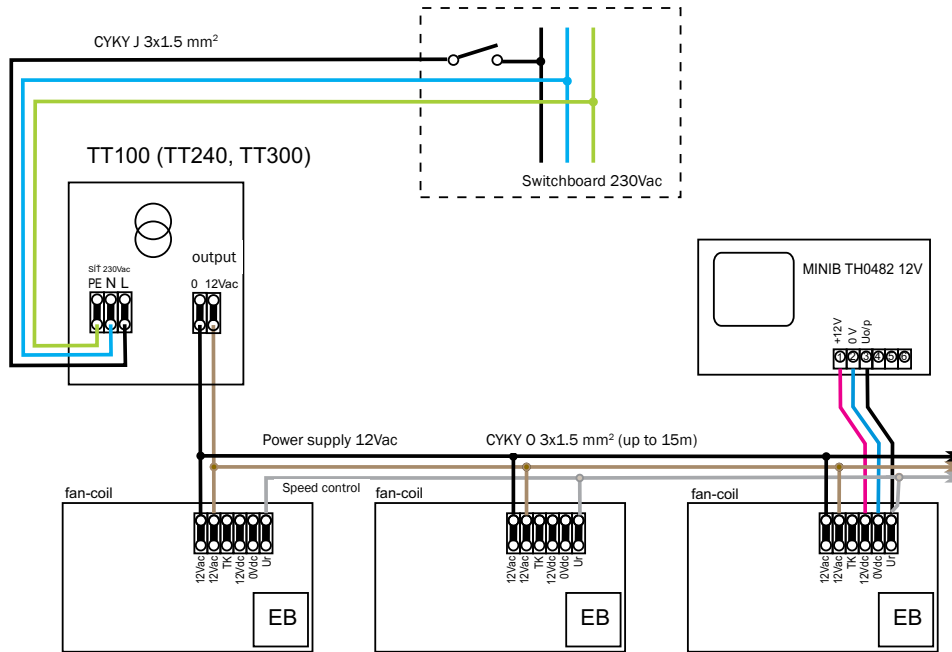
Basic connection of the control EB-B



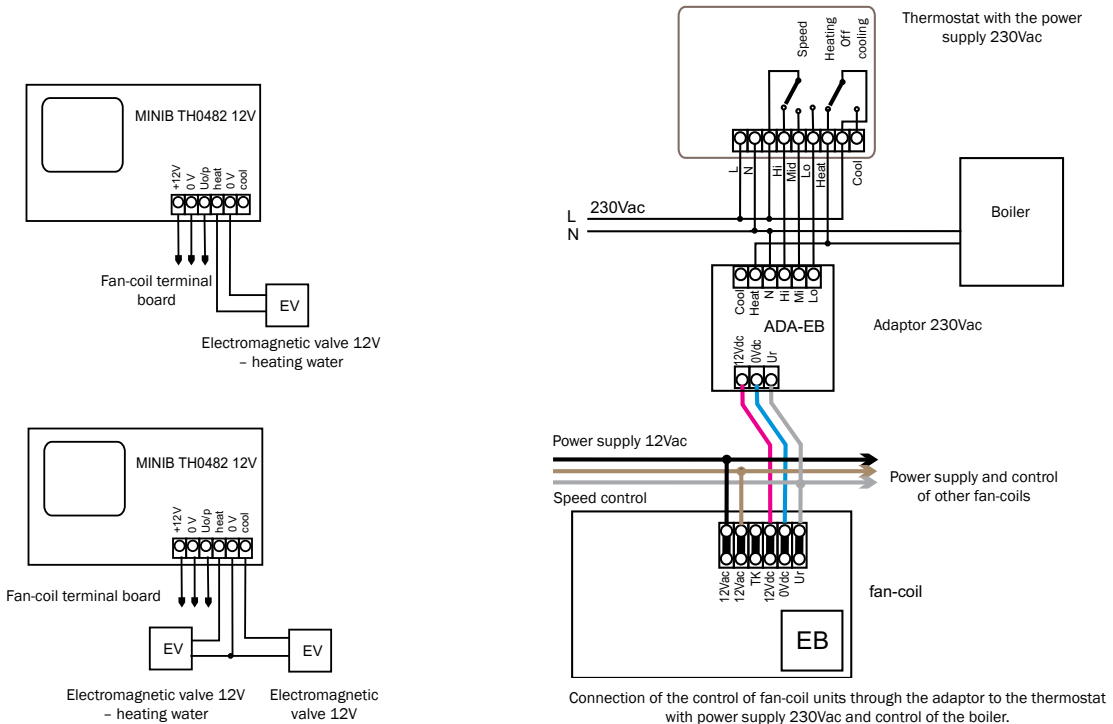
Fan-coil with the electromagnetic valve EV used for closing the heating water flow. The activity of EV is automatically controlled by the EB electronic circuit.

Fan-coil with the electromagnetic valve and thermal contact, which will disable the fan speed at lower temperature of heating water.

Controls EB-C

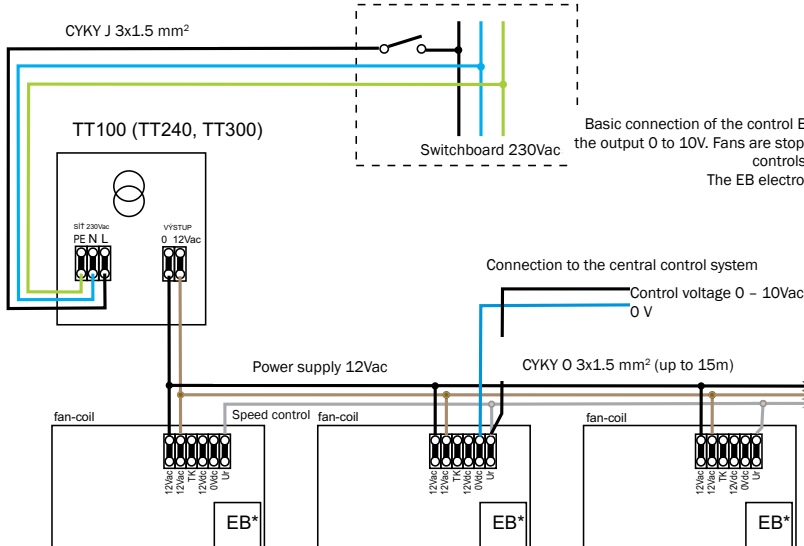


The basic connection of the control EB-C – automatic / manual fan three-speed control



Connection of the control of fan-coil units through the adaptor to the thermostat with power supply 230Vac and control of the boiler.

Wiring diagram for the control by the superset system:



Basic connection of the control EB with a possibility to control the fan speed through the central system with the output 0 to 10V. Fans are stopped in the range of the control voltage 0 to 3V; the voltage between 3 to 10 V controls the fan speed in the range minimum – maximum. The EB electronic control block* is set on the continuous speed control.

Capacity control of convectors for humid and wet environments

Minib use 12V AC motors for fan convectors positioned in humid and wet environments. The AC motors have proved themselves over many years in these difficult circumstances. There are two types of control available: A1 and E1.

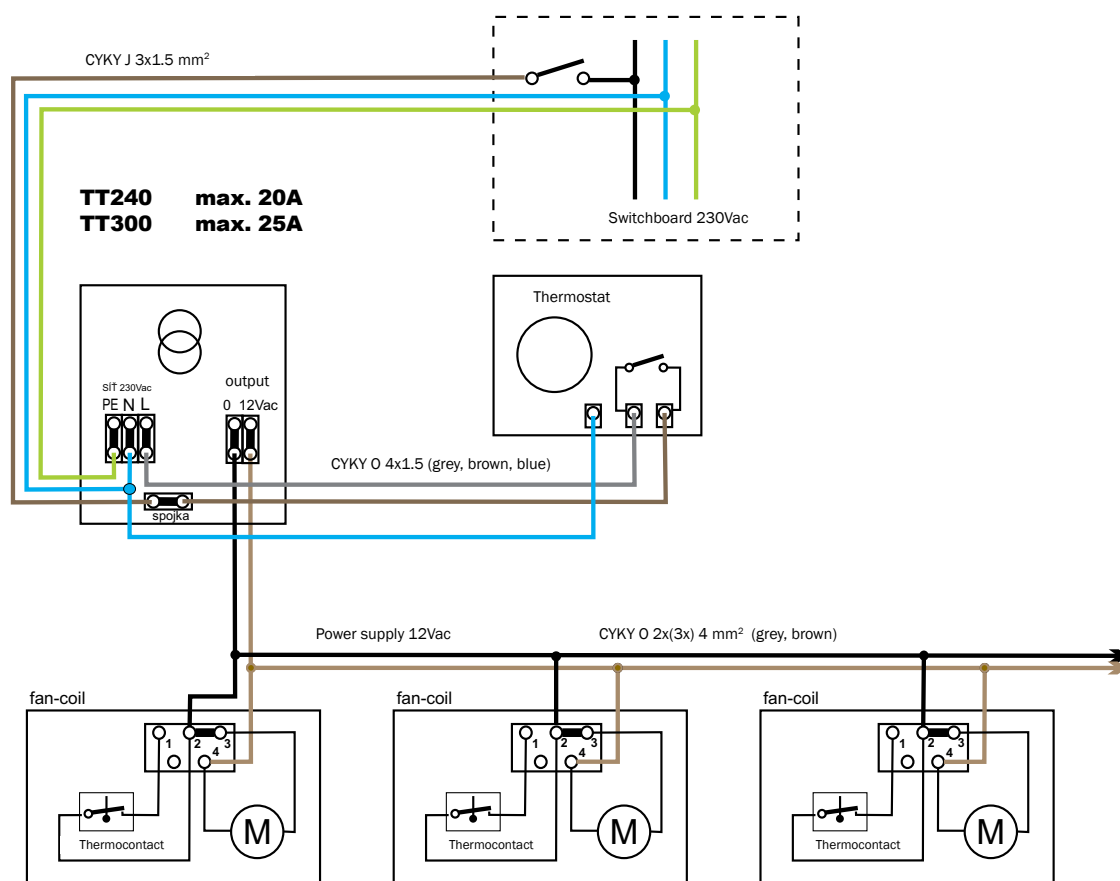
Control A1 – A thermostat switches the power from the transformer TT240-E1 (TT300-E1). Motors are connected to the output terminals of the transformer and fan speed is selected from the various transformer tapings (7, 9 or 12V AC).

Control E1 – Electronic circuits in control box Reg. E1 automatically evaluate the switching cycles of the thermostat and regulate the fan speed (low, medium, high) according to the deviation of set point from space temperature.

(wet interiors, On/Off)

Max. length of connected convectors is 12 linear meters.

Controls A1



Basic connection of the control A1

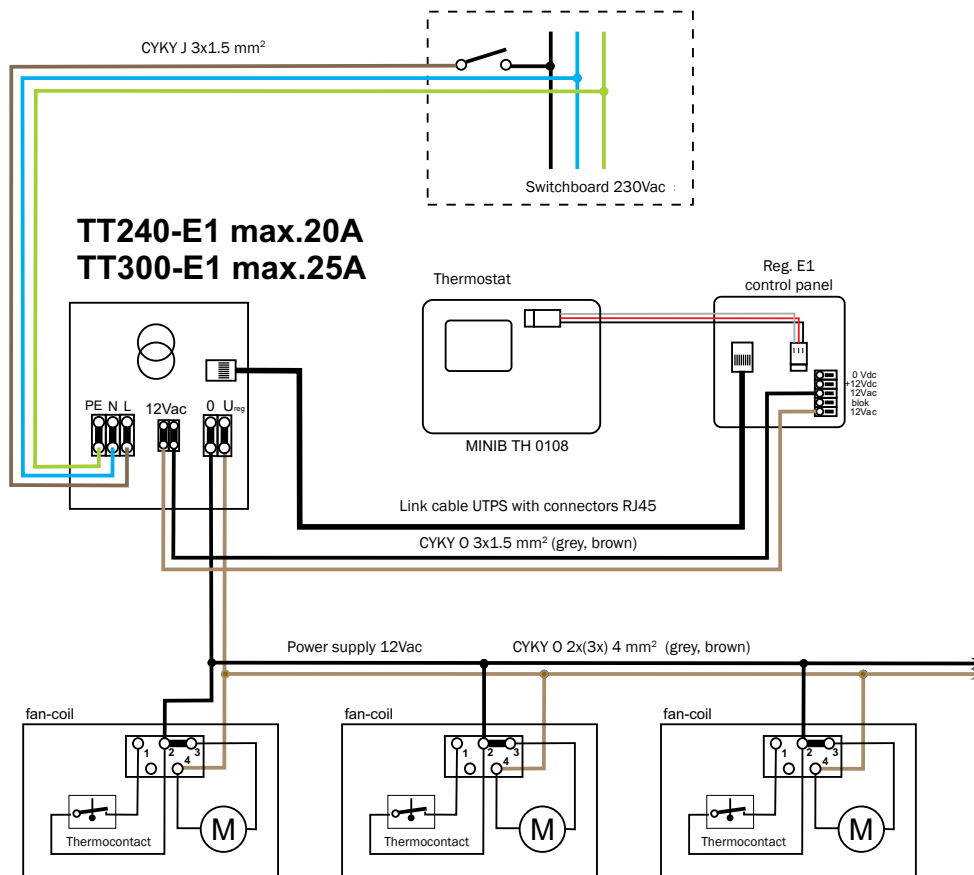
The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m.

Tapping can be made in the electrical conduit box EMK on the wall or through WAGO terminals directly under the convector cover.

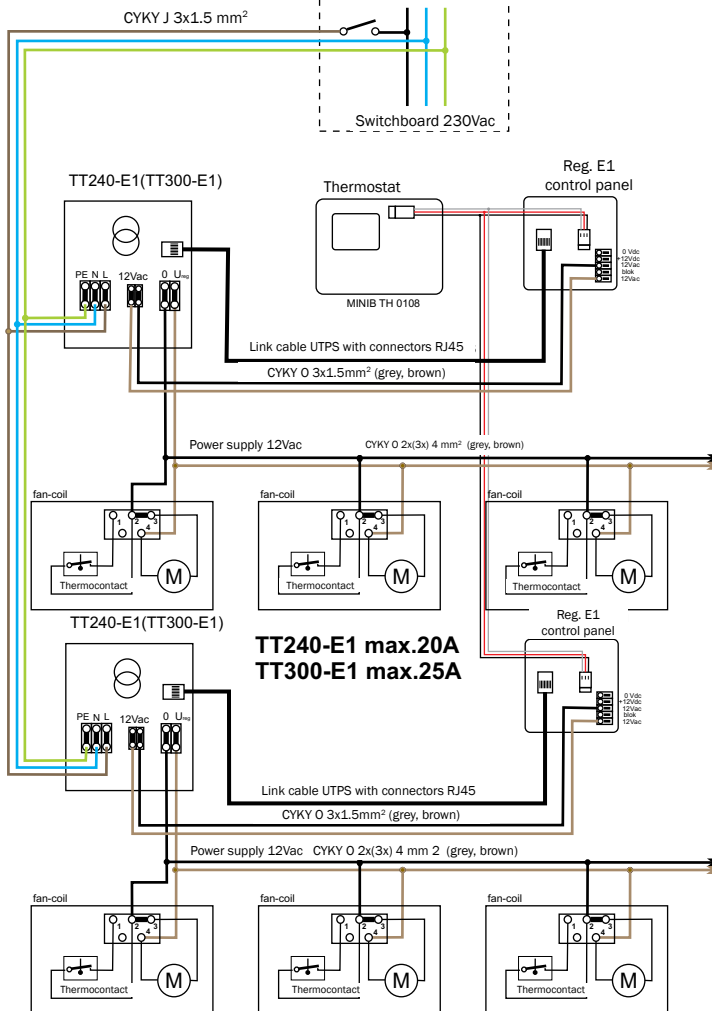
(wet interiors, automatic step speed control, programmable thermostat)

Automatic control for convectors used in wet interiors. The automatic multilevel control with the programmable thermostat for the control of convectors with AC motors. The maximum current load is 20A (25A). The max. length of convectors is 6m (8m).

Controls E1



Basic connection of the control E1



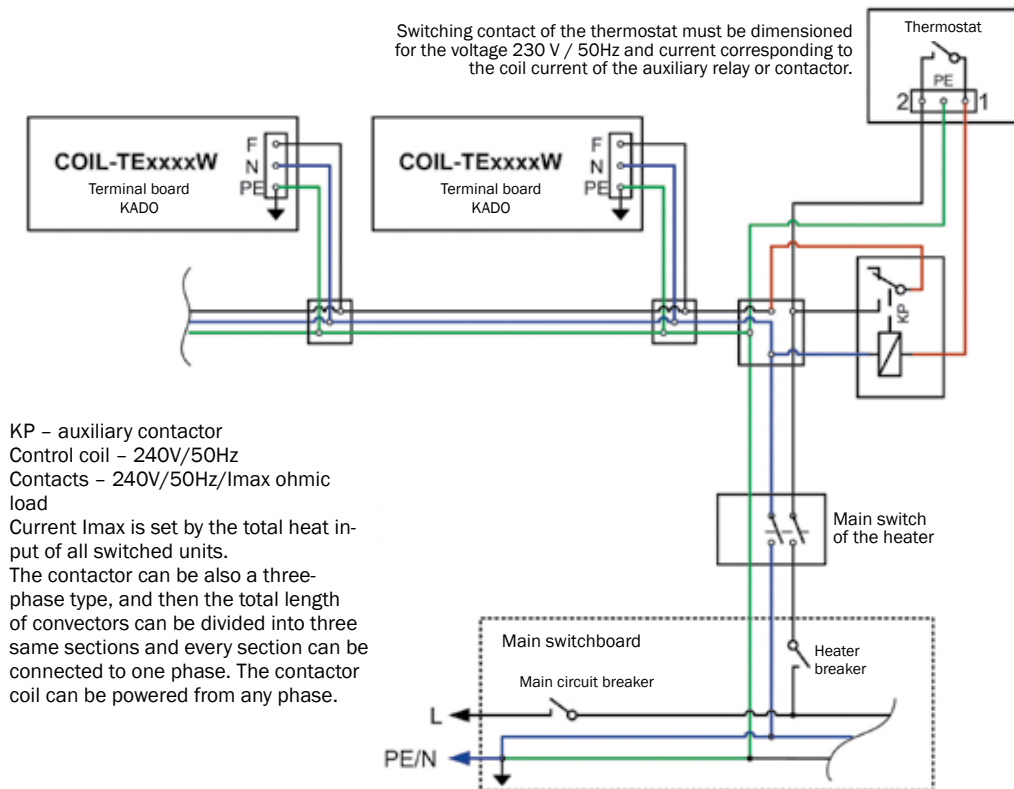
Connection of the control E1 with two power supply units

The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m.

Tapping can be made in the electrical conduit box EMK on the wall or through WAGO terminals directly under the convector cover. The thermostat can be also placed in term of electrical safety in the wet area because it is powered from batteries with the total voltage 3V and power supply of motors uses the safe voltage 12V AC. But it is recommended to place the thermostat on the place, where air humidity does not condensate in order to prevent batteries from their corrosion.

Controls TE

(On / Off control for electric direct heating convectors; the thermostat also switches on spiral heating wires)



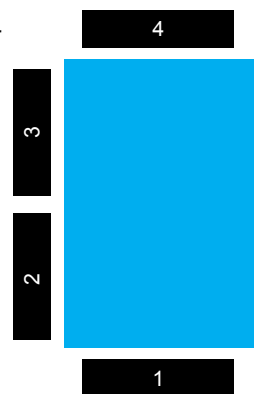
SELECTION PROCEDURE FOR SUITABLE CONTROLS:

- Select suitable control in terms of environment and comfort level
- Calculate total electrical power input from total number of convectors and their electrical inputs, calculate number of transformers required from the result
- If more than one transformer required contact Minib for correct selection of transformer for dry environments. For wet environments follow wiring diagram for connection with multiple transformers

EXAMPLE OF SUITABLE CONTROL SELECTION:

Task: Find a solution for the control of 4 convectors around a swimming pool as shown below.
Convector type: Coil KO - 2 pcs 2500mm long, 2 pcs 3000mm long

1. Select control type - two types of wet control are available A1 or E1; select E1 for greater comfort
2. Determine number of transformers required. Calculate electrical inputs from catalogue data: 2-off @106VA, 2-off @ 111VA = 434VA which is greater than the TT240 or TT300 can handle
3. As more than one transformer is required we need to use one transformer on two convectors and one transformer on the other two. Units 1 and 2 have a total requirement of 217VA and units 3 and 4 have a total requirement of 217VA. Select 2-off transformers TT240-E1.
4. Final step is to order the control units: Standard supply, with the units, 1-off control E1 with transformer (1-off thermostat TH0108, control panel Reg. E1, transformer TT240-E1, link cable). Extra order, 1-off transformer TT240-E1, 1-off control panel Reg. E1, 1-off link cable

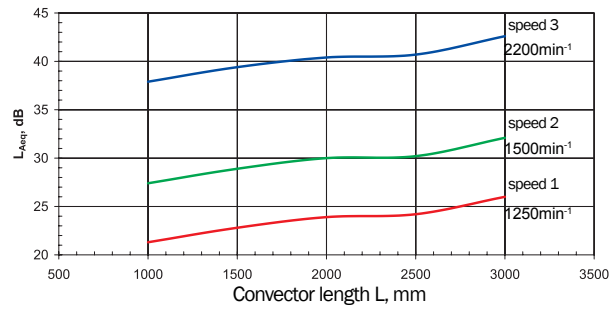


1. Acoustic pressure

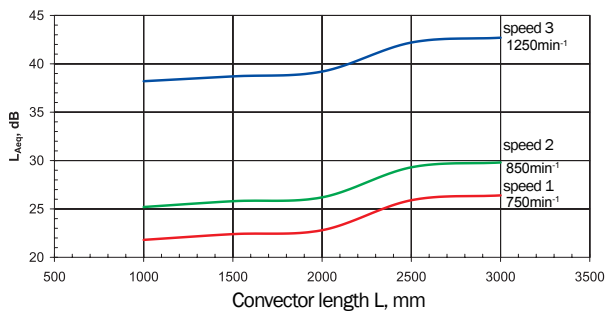
Experimental values for acoustic pressure levels associated with Minib convectors are shown on this page. Results are based on a sound pressure measurement taken at 1m from the outlet of the convector at an angle of 45° from the floor. The convectors were embedded in concrete in an acoustically hard room. If installed in a furnished and carpeted area it would be expected that the sound pressure levels would be 1 to 2 dB lower than those shown due to increased room absorption. For the purposes of comparison, a personal computer in the room used for the measurements gave a sound pressure level of 40.8 dB.

The results are shown individually for the different types of convector and fan diameters available. For all lengths and types of convector speed 1 & 2 give very low sound pressure levels and are suitable for both daytime and night time operation. We recommend that convectors are selected based on medium speed but for applications where noise levels must be minimised or there are a large number of units then minimum speed may be used.

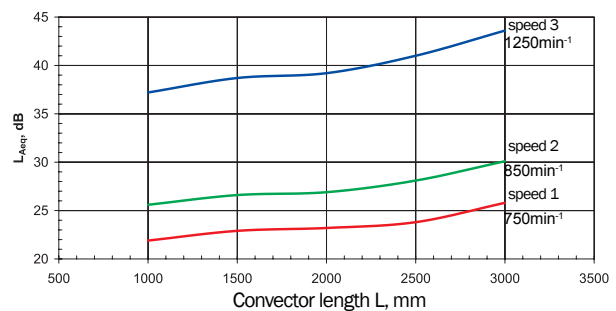
Acoustic pressure vs. fan speed (COIL-KT-0) Ø 30mm



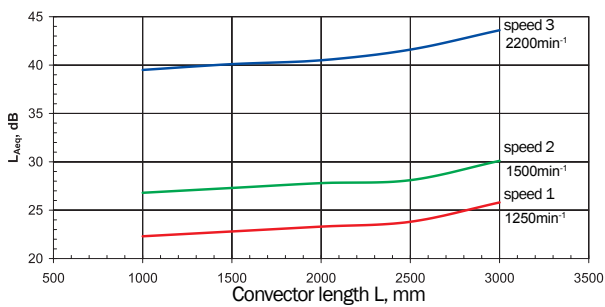
Acoustic pressure vs. fan speed, Ø 50mm (COIL-KT/KO, COIL-MT/MO, KT-2/KO-2, HC-4P, MT-2)



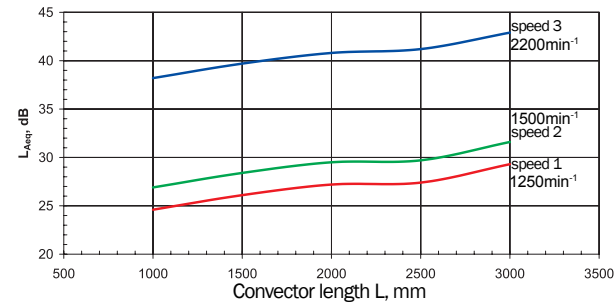
Acoustic pressure vs. fan speed, Ø 50mm (COIL-KT-3, HC, SK-1, NK-2, SK, KP)



Acoustic pressure vs. fan speed, Ø 30mm (COIL-T50)



Acoustic pressure vs. fan speed, Ø 30mm (COIL-KT-1)



2. Approximate airflow of MINIB convectors, m³/hour

Fan wheel diameter	Convector length	low speed	medium speed	max. speed
30 mm	1000 mm	100	120	250
50 mm	1000 mm	200	220	300

Info:

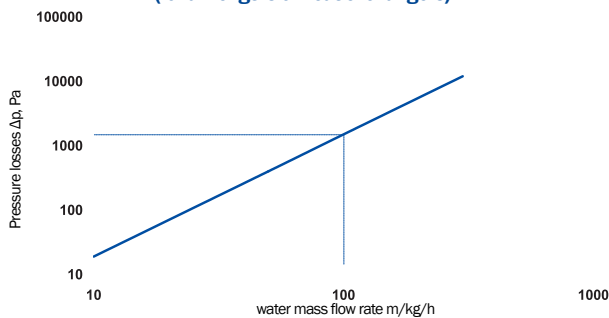
Airflow values listed in the table are valid for convector length of 1000 mm. For other lengths, multiply these unit flows by the relevant length of the convector in metres (e.g. COIL-KT at a length of 2 500mm has a flow 220 x 2.5 = 550 m³/hour for medium speed).

3. Water volume of MINIB convectors, dm³

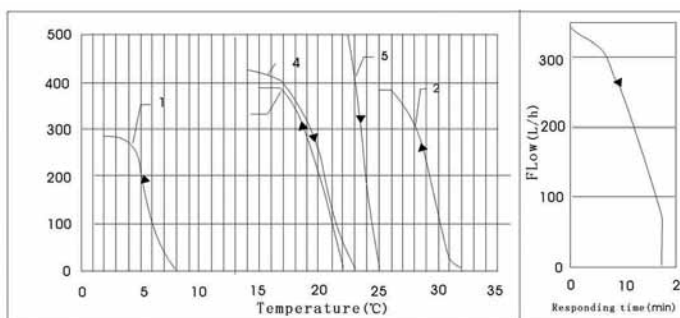
Length of the convector, m	0,9	1	1,25	1,5	1,75	2	2,5	3
Heat exchanger water volume, dm³ (for the pipe diameter 15 mm)	0,2	0,25	0,3	0,4	0,5	0,6	0,7	0,9
Heat exchanger water volume, dm³ (for the pipe diameter 12 mm)	0,13	0,15	0,2	0,25	0,3	0,35	0,4	0,5

4. Pressure losses of MINIB convectors (including the effect of the screwed fitting and manual shut-off valve)

Pressure losses of MINIB convectors (for all lengths of heat exchangers)

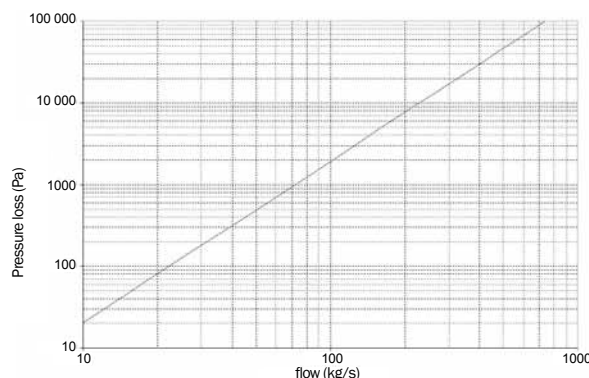
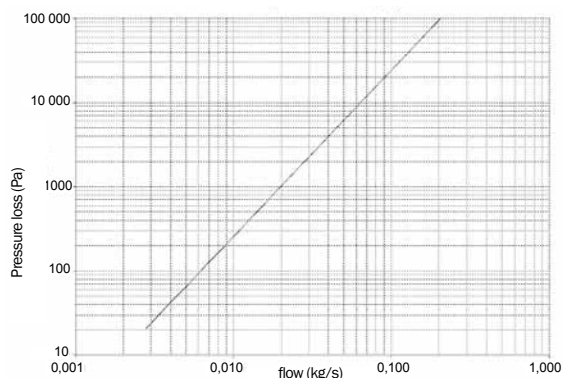


5. Characteristics of the thermostatic head (for MINIB convectors)

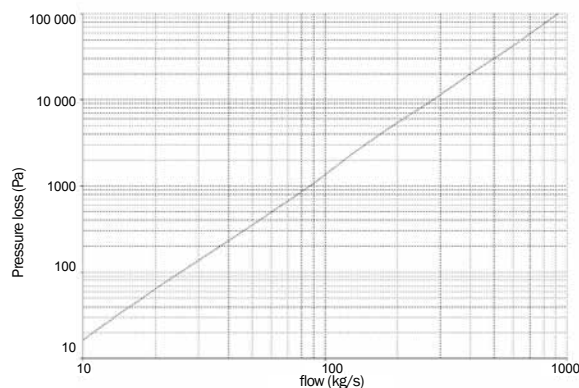
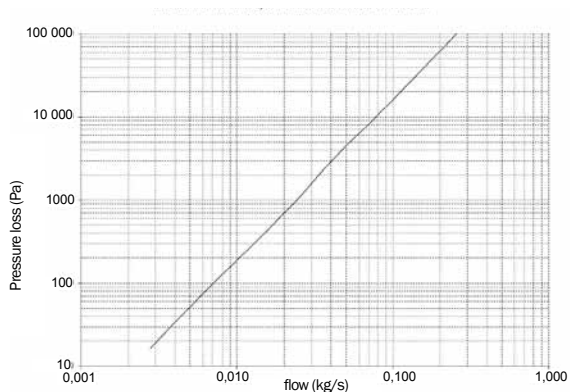


1. Setting of the minimum temperature, opening of the thermostatic head
2. Setting of the maximum temperature, opening of the thermostatic head
3. Setting of the mean temperature, opening of the thermostatic head
4. Setting of the mean temperature, closing of the thermostatic head
5. Setting of the mean temperature. Pressure difference is 60kPa when the thermostatic head is closed

6. Pressure loss of the straight-way thermostatic valve (Pa) - for MINIB convectors



7. Pressure loss of the angle thermostatic valve (Pa) - for MINIB convectors



8. Characteristics of the screwed fitting (for MINIB convectors)

Example of necessary adjustment of fittings:

Set: Flow $Q = 180 \text{ kg/h}$

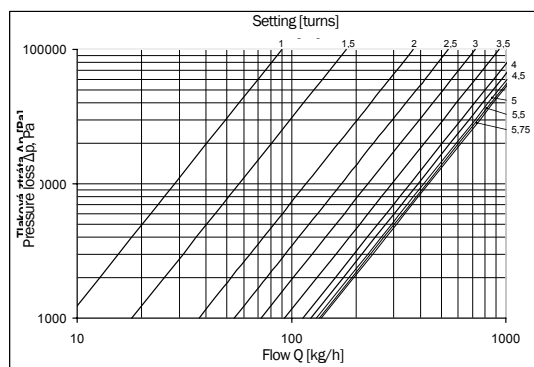
Requirement: Setting for differential pressure $\Delta p = 10\,000 \text{ Pa}$

Solution: Required setting is the intersection of values drawn on axes of the flow and pressure loss.

The result is the setting by 2.5 turns.

setting (turns)	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	5,75
Kv ($\text{m}^2 \cdot \text{h}^{-2}$)	0	0,9	0,18	0,37	0,54	0,72	0,93	1,13	1,23	1,31	1,35	1,38

Flow diagram of screwed fitting, Kv values



EXAMPLES OF CONVECTOR CONNECTIONS

COIL KT0 COIL T50

COIL HC 4pipe - from the side

COIL HC 4pipe - straight

COIL P - straight

COIL P - from the side



COIL KT - from the side

COIL KT - straight

COIL PT - from the side

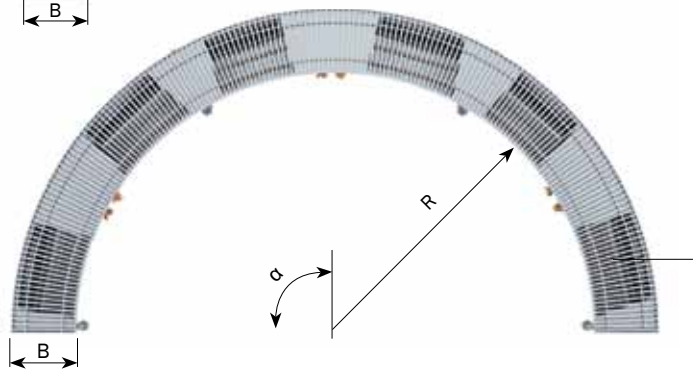
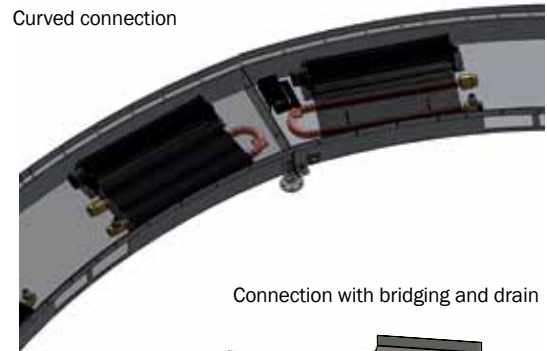
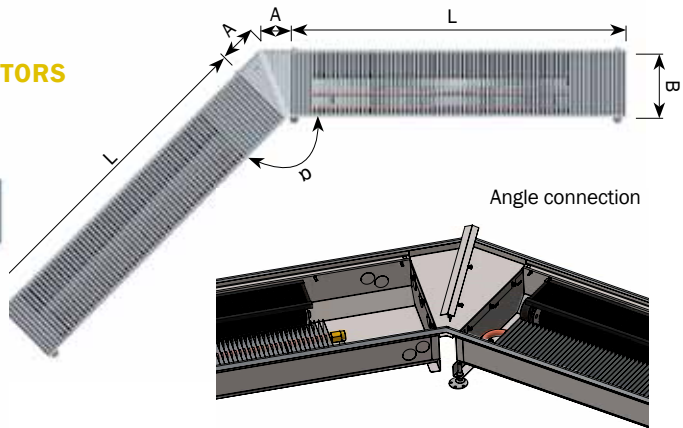
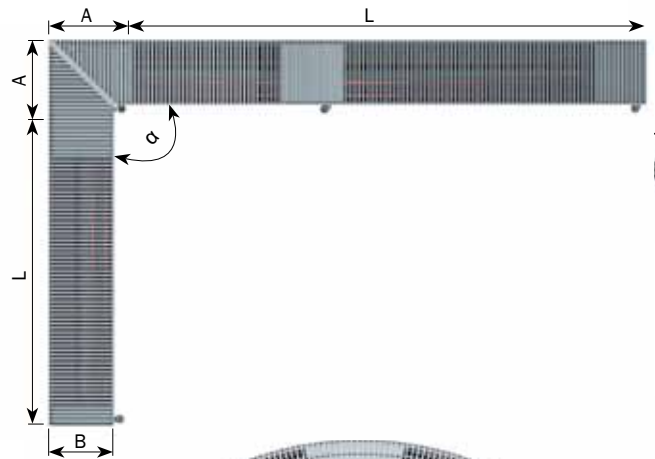
COIL PT - straight

to the room

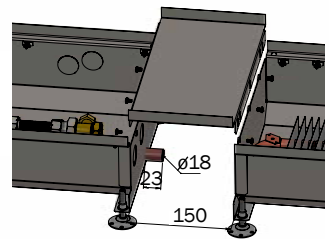


All flexible connectors are 1/2" female other than where written otherwise.

POSSIBLE ANGLES AND CURVES OF MINIB CONVECTORS

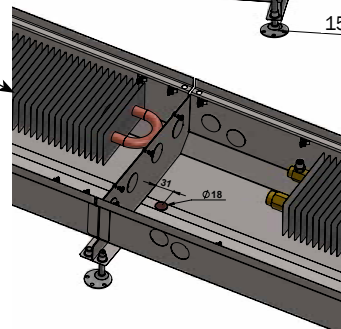
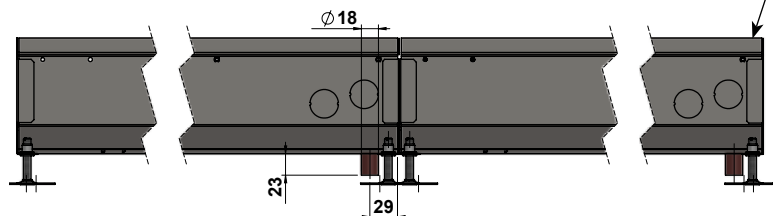


Connection with bridging and drain



PLACEMENT OF THE HOLE FOR CONDENSATE DRAIN

Connection with the drain to the bottom

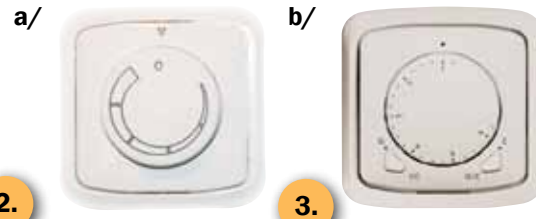


Thermostat TH 0482/12V, control EB-C, for heating and cooling
(dimensions: 70x30x120mm)



1.

a/ Potentiometer in the frame ABB Tango
b/ Rotary thermostat in the frame ABB Tango
(dimensions: 81x81mm)
standard design in white colour, other colour combinations must be individually ordered



2.

3.

Thermostat Eberle 524 (IP54), control A1
(dimensions: 90x55x90mm)



4.

Thermostat TH-0108, control E1
(dimensions: 90x30x125mm)
Control panel E1
(dimensions: 70x25x70mm)



5.

Thermostat CH-110, optional accessories
(dimensions: 85x82x22mm)



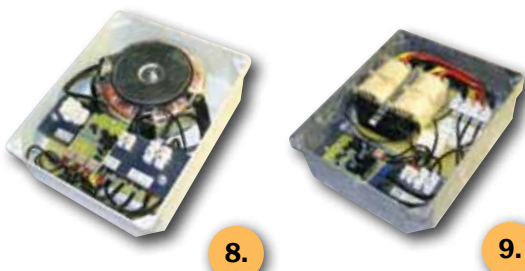
6.

Thermostat CH-150, optional accessories for heating and cooling
(dimensions: 155x92x21mm)



7.

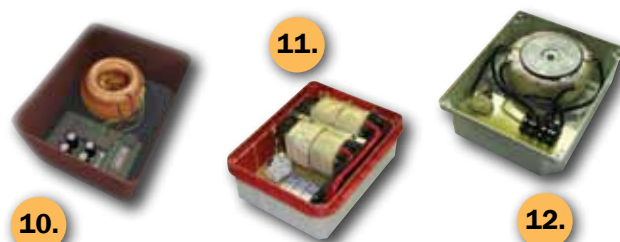
Transformer TT300-E1 in the electric installation box
(box dimensions: 255x205x71mm), output 300VA
Transformer TT240-E1 in the electric installation box
(box dimensions: 255x205x71mm), output 240VA



8.

9.

Transformer TT-100 in the electric installation box
(box dimensions: 175x70x145mm), output 100VA
Transformer TT-240 in the electric installation box
(box dimensions: 210x70x165mm), output 240VA
Transformer TT-300 in the electric installation box
(box dimensions: 255x71x205mm), output 300VA



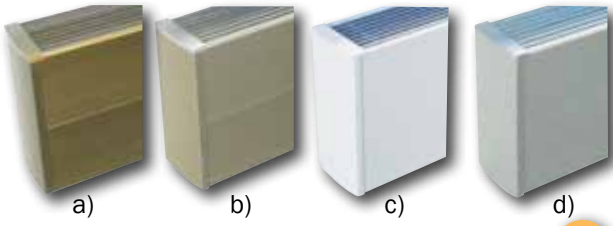
11.

10.

12.

Examples of colour designs of wall and self-standing convectors

a) dark bronze, b) light bronze, c) white, d) silver

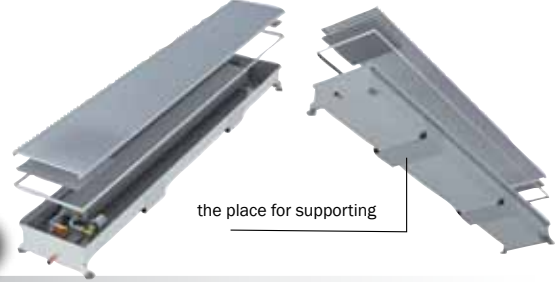


13.

Reinforcement frame:

It prevents the trough of the convector from deformation. It is recommended when convectors are placed in hollow floors.

Note: not included in the price of the convector



14.

Examples of decorative frames

(Grille and frame shades on photos are only illustrative)



a/ standard frame with the wooden grille

15.



b/ decorative cover frame with the aluminium grille

16.

Walkway grille materials:

(Colour shades on photos are only illustrative); real colour design cannot be achieved by printing technology)

wood:

a/ oak



b/ maple



c/ beech



aluminium:

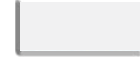
d/ dark bronze



e/ light bronze

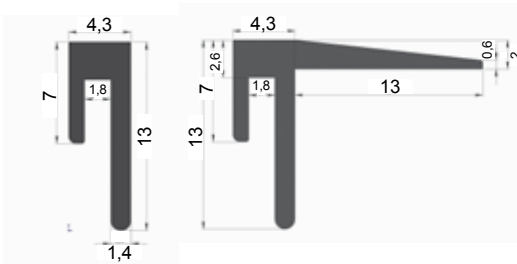


f/ silver elox



17.

Decorative frame and cover decorative frame - DIMENSIONS



18.

Antivibration foil

Intensively dampens noise when the convector is placed in hollow floors and cannot be embedded in concrete

Note: it is not included in the price of the convector

The convector embedded in concrete



The convector with antivibration foil placed in the hollow floor



19.

Thermostatic head T 1000

(dimensions: 65mm, Ø 41mm, 30x1,5mm)

20.



Thermostatic head MINIB

(dimensions: 75mm, Ø 51mm, 30x1,5mm)

21.



Electrothermic head 12V

(dimensions: 58mm, Ø 47mm, 30x1,5)

22.



Luxury valve HEIMEIER with the head

(dimensions: 185x65x Ø 48mm 1/2" x EK3/4")

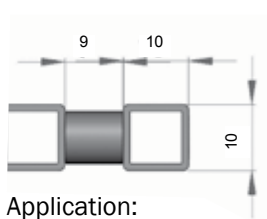
Application: GS, PS

23.



Cross sections of grille partitions:

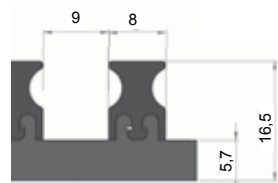
Stainless steel – rolling



Application:
except COIL T50

24.

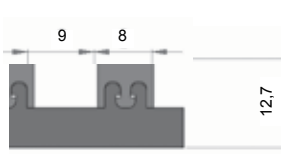
Al – segment



COIL T60

25.

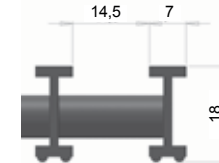
Al – segment



Application:
Coil T50, KT0

26.

Al - rolling

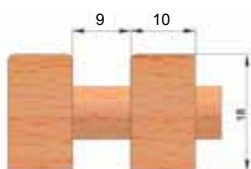


Coil KT2, KO2, MT2,
series PMW, HCM, HCM4p

27.

Wood – segment

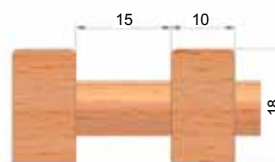
Wood – rolling: application after consultation
with the trade department



Application:
Coil KT3, KT3 105, HC, T80, T085

28.

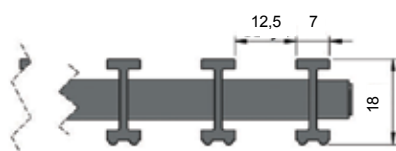
Wood – distant segment



Application:
Coil KT, PT, P, PO, PO/4, PT/4, P80,
PT80, PT105, PT180, PT300, KO,
KT1, KT110, MT, MO, KT2, MT2

29.

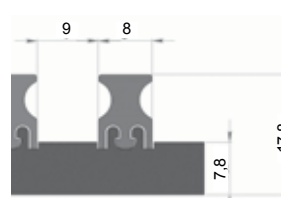
Al – longitudinal segment



Application:
PT, PT180, PT300, PO, PMW205,
KT1, KT2, KT3

30.

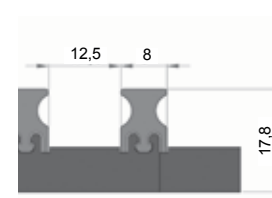
Al – segment



Application:
Coil KT3, KT3105,
HC, T80, T085

31.

Al – distant segment



Coil KT, PT, P, PO, PO/4,
PT/4, P80, PT80, PT105,
PT180, PT300, KO, KT1,
KT110, MT, MO, TE

32.

Adaptor ADA-EB

(dimensions: 48x42x23mm)
230V/12V AC, 24V/12V AC



33.

Valve M-R0-02, angle design

(dimensions: 105x42x42mm,
1/2" x EK3/4")
Application: SS, PS



34.

Axial radiator valve Heimeier

(dimensions: 61x47mm, 1/2")
Application: DS



35.

Information for customers:

a) Convector are supplied as standard with the wooden or aluminium grille b) In case of the interest in the stainless steel grille, it is necessary to order this grille together with the convector (the profile 10x10mm) c) Convectors Coil-T50 and KT-0 are only supplied with the low aluminium profile of the grille (the profile 8x7mm) d) Angled corner pieces are produced for all types of floor convectors e) Curved designs of convectors are produced as standard for COIL-PT, KT and T80 (change of width to 254mm) - other types - please consult

Other information and instruction manuals for Minib convectors

Minib convectors are supplied as standard in lengths of 0.9 to 3m. It is possible to produce other lengths to order.
 Non-standard convectors longer than 3m (i.e. a 6m unit) can be assembled from two 3m units connected with a single 6m walkway grille.
 Minib can also produce curved convectors and convectors joined at various angles.

Technical data

Voltage – 12V via safety isolating transformer (except wall radiators Coil-TE 230V).

Electrical input power – 4 to 111VA according to the length and number of motors.

Applications – dry and wet interiors depending on the specification.

Heat exchanger – Al fin/Cu tube construction – fins 0.2mm and 0.25mm thick – Cu tube diameter 12 and 15mm, working pressure 0.6 MPa, test pressure 1.5 MPa

Protection – provided by low safe voltage 12V. Motor protection IP2X where “X” indicates protection by low safe voltage 12V.

Working pressure – 6 atm permanently in the heat exchanger (0.6 MPa), outlet load tests made with the pressure of 15 atm (1.5 MPa), maximum load of connecting stainless steel hoses is 1.0 MPa

Heating medium – water; maximum permitted inlet temperature of heating water is 95 °C

Environment for applications – interiors with temperatures from +5 °C to +40 °C

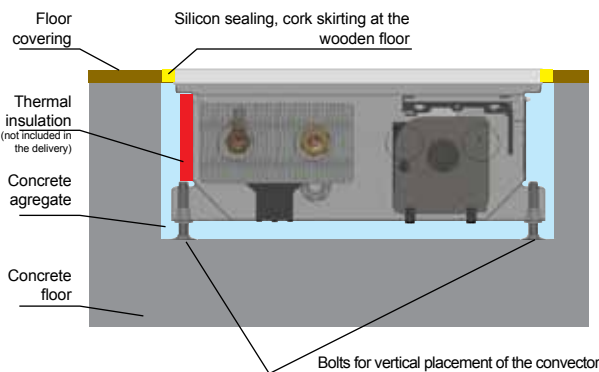
Convector mounting

For correct operation it is necessary to comply with the following general principles:

- ✘ Install so that the heat exchanger is on the side of the unit furthest from the window or wall.
- ✘ Always connect the heat exchanger to the flow and return piping using the stainless steel hoses (if not recommended otherwise), control valve and shut-off valve supplied with the unit. Connections can be made straight out or at right angles to the heat exchanger.
- ✘ Convectors must be installed horizontally with the upper edges of the trough unbuckled. This will ensure proper seating of the walkway grille and proper venting of the heat exchanger.
- ✘ Convectors with an ornamental edge cover strip, which should be installed on the level with the floor covering +/-1mm.
- ✘ Leave the protective top cover on the convector while performing any concrete work so as to prevent debris falling inside.
Note that this protective cover cannot be walked upon!
- ✘ When pouring concrete ensure that the convector is secured to the floor using clamping bolts in order to prevent any vertical movement. It is also possible to vertically load the convector during concrete pouring.

I. Installation of convectors into prepared floors

For the procedure, when installation trench or during reconstruction into the older floor, dimensions of the existing trench should be as follows:
 trench depth = convector height + min. 20mm, trench width = convector width + min. 60 mm



Installation procedure I.:

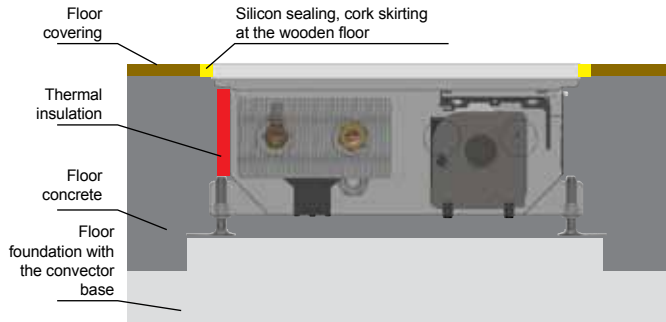
- ✘ set the convector in position by means of vertical adjusting bolts
- ✘ bolt the convector into the floor using the brackets and bolts

Installation procedure II.:

- ✘ Concrete the space below the convector so that the finished total height of the fitted convector equals the final floor height +/-1mm.
- ✘ Set the convector in position by means of the vertical setting bolts.
- ✘ Bolt the convector into the floor using the outer brackets and bolts.

Finishing of installation I and II:

- ✘ Connect piping and wiring.
- ✘ Check height, levelness, assembly braces and installation of ornamental cover strip. The walkway grille can be laid in as a check.
- ✘ Fit the protective cover over the convector and load and secure the convector to prevent shifting.



- ✘ Fix and provide noise insulation by pouring a thin layer of concrete around and under the convector.
- ✘ Embed the convector directly in concrete to achieve the optimum noise elimination.
- ✘ When the convector is installed into the free space in a wooden floor without using concrete, it is necessary to provide the convector body with special noise insulation (for additional charge).
- ✘ Lay the floor covering (tiles, carpet).
- ✘ Clean the space between the cover strip and the floor covering with silicone. When you install the convector into the wooden floor, it is recommended to fill the space between the convector and the floor with the cork dilatation tape.
- ✘ The floor convector must be solidly embedded in concrete. Adjusting bolts are used only for horizontal levelling of the convector trough. The convector must not stand on these bolts without being embedded in concrete.

Installation of convectors into hollow floors

- ✘ It is necessary to use reinforcement frames, refer to the Accessories section, clause 10.
- ✘ It is necessary to use the antivibration foil at convectors with a fan.

Installation of convectors in wet areas

This refers to KO, PO, KO2, MO and HC type units designed with a drain outlet. Proceed in accordance with the instructions I or II above as well as connecting the drainpipe at the bottom of the trough to an inclined drain line.

Mounting of non-standard convectors longer than 3 m

Convectors supplied in more than one section should be installed as above while paying special attention to the alignment of each. Such units are equipped with connecting plates, M4 inserts and M4x12mm screws to join the sections. It is recommended that the continuous walkway grille is laid down to check the alignment before proceeding with the concrete fill. Further proceed according to assembly instructions I or II listed above.

Installation of wall mounted and self-standing convectors

The detailed procedure is always included in the packaging of the convector.

- ✘ Measure the total height of the convector and mark holes for hanging using builder's level. Mark holes for anchor plates according to INSTALLATION TEMPLATE for self-standing convectors
- ✘ Remove the ornamental cover panels (according to the type of the product), mark and drill holes in the wall.
- ✘ Screw the back plate to wall/supporting beam.
- ✘ Connect water and electrical services.
- ✘ Fit the ornamental cover panels and grille.

Control of hot water convectors

Control is possible in two ways:

1. Water side control for convectors with or without fans.
2. Air side control for convectors fitted with fans.

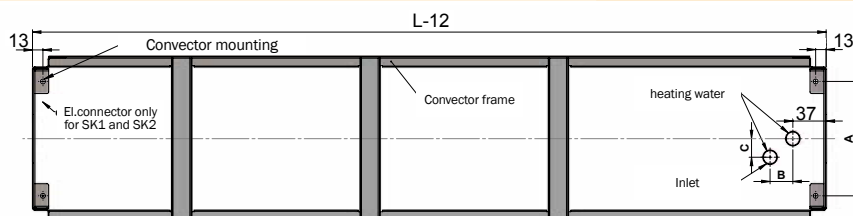
1) The convector's output can be controlled by regulating either the temperature (at boilers equipped with temperature regulation) or flow rate (by thermostatic head with separate sensor) of the water supplied to it. This can be achieved by either regulating the boiler temperature or using a thermostatic valve. The capillary sensor of the thermostatic valve should be positioned in a suitable position within the heated space. This type of control is recommended for convectors without fans.

2) It is recommended that convectors fitted with fans are controlled on the air side by switching the fan on and off. When the fan is switched on the output of the convector will increase, by approximately 200%. A thermostat placed in a representative position within the space is used to switch the fan on and off. Detailed descriptions of possible standard and "IQ" control systems are given earlier in the catalogue or on internet site www.minib.cz of the company MINIB s.r.o.

Electrical installation and input cable dimensioning

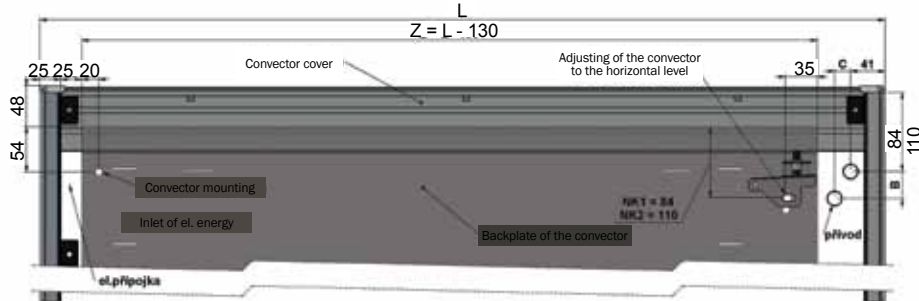
I. Convectors installed in dry areas – fans with 12V DC motors

- ✘ The three wire input cable CYKY to the convectors should be sized for currents of 10A at 12V regarding the voltage drop.
- ✘ Connecting cables for a branch of convectors to one transformer should be CYKY 3x2.5mm, and for connections to individual convectors should be CYKY 3x1.5 mm.

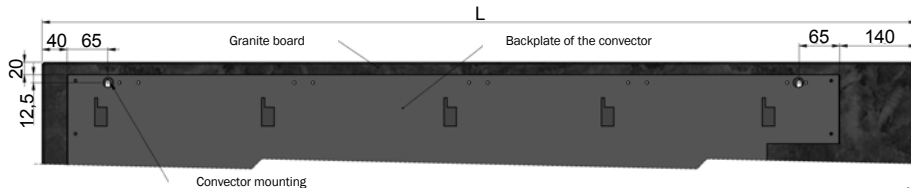


	A	B	C
SK1, SK2, SP0	66	80	32
SP1/4, SP2/4	66	13	32
SU1/4, SU2/4	33	80	20
SW250, SW420	138	5	65

Mounting of convectors SU, SP, SW, SK

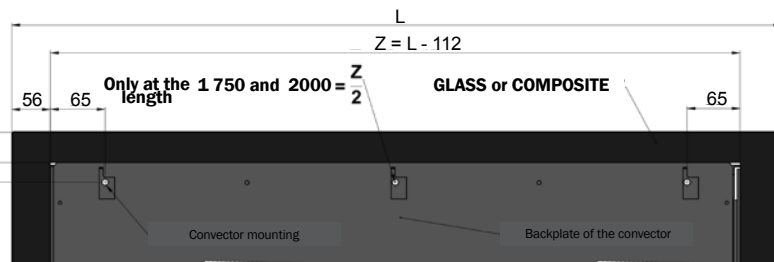


Mounting of convectors NK1, NK2

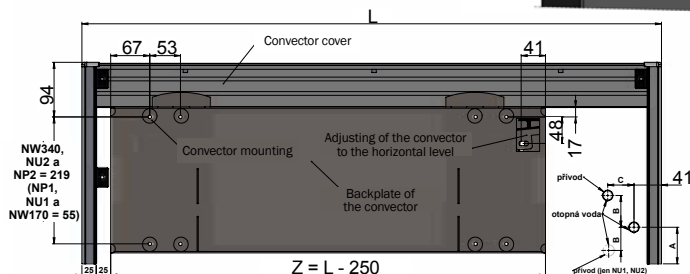


Mounting of convector DS

A: at height
 280 = 27
 360 = 37
 480 = 80



Mounting of convectors PS, GS



Mounting of convectors NP, NU, NW

	A	B	C
NP1	40	40	10
NP2	40	128	10
NU1, NU2	80	40	35
NW170, NW340	50	25	0

- ✘ If only one convector is connected to the transformer TT100, use the cable CYKY 3x1.5mm.
- ✘ Determine the maximum length of the convector to be connected to the power supplies (e.g. TT100), calculate with the value listed in the catalogue.
- ✘ TT100 transformers in the electrical installation box should be mounted in the wall or switchboard as close as possible to the convectors so as to prevent high voltage drops. Maximum allowable voltage drop is 1 to 2V.
- ✘ Dimensions of the electrical installation boxes with transformers TT100 are 175 x 70 x 145 mm, TT240: 210x70x165, TT300: 255x71x205mm.
- ✘ Important: - Layout and installation of convectors fitted with fans must meet the relevant standards for safe positioning of all devices (TT100, thermostat etc.).

II. Convectors installed in wet areas – fans with 12V AC motors

- ✘ The two wire input cable CYKY to the convectors should be sized for currents up to 25 A at 12V regarding the voltage drop (TT300-E1).
- ✘ Connecting cables for a branch of convectors to one transformer should be CYKY 3x4mm, and for connections to individual convectors should be CYKY 3x2.5 mm.
- ✘ If only the individual convector is connected to 1 transformer TT240 then the cable should be CYKY 3x2.5mm.
- ✘ When convectors with AC motors are used, calculate with the value listed in the catalogue in the table with outputs.
- ✘ Transformers TT240-E1 or TT300-E1 in the installation box must be mounted in the wall or switchboard as close as possible to the convectors so as to prevent high voltage drops. Maximum allowable voltage drop is 1 to 2V.
- ✘ Installation box sizes are as follows: TT240-E1 = 255mm x 205mm x 71mm and TT300-E1 = 255mm x 205mm x 71mm.
- ✘ Important - Layout and installation of convectors fitted with fans must meet the relevant

standards for safe positioning of all devices (transformer, thermostat etc.), on which there is no safe voltage, out of the swimming pool zone 0, 1 and 2.

- ✘ Convectors for wet areas, especially COIL-KO, MO, KO-2, COIL-HC equipped with a 12V fan motor and condense drain are developed and approved for use in zone 1 of wet areas.

The layout of electrical installation must be made by project designer with relevant qualification and must be in line with relevant standards (the list of relevant standards is listed in the detailed assembly instruction manual). Installation of electrical devices must be undertaken only by qualified personnel trained according to local standards CSN 33 2000-3 with respect to the project documentation and instructions laid down in this manual.

Make no other wiring connections at the convectors as these are protected by the low voltage supply from the transformer. In wet areas ensure that all drainage lines are non-conducting and perform all safety checks under local electrical regulations before putting the system into operation (in accordance with CSN 33 1500 – Electrical regulations – Revisions of electric devices, initial revision of the electric device).

Warranty

All Minib s.r.o. products are certified and carry a warranty. The manufacturer provides for a two-year warranty on all the parts of the convectors, additionally a ten-year warranty is provided for the MINIB heat exchanger and against rusting-through of the stainless steel trough. The warranty does not cover damage caused by incorrect handling or abnormal use. The warranty is only valid assuming that the stainless steel flexible hoses supplied with the convectors are used. The standard aluminium or wooden grille is designed for loads up to 120kg. For more extreme point loads or highly exposed areas (e.g. feet of the chair and etc.) it is recommended that the more durable stainless steel grille is used and is available at an extra cost.

In case of any complaint it is necessary to contact our service technician and not to disconnect the device before his arrival; there is a risk of warranty loss!

Minib s.r.o. guarantees that all convectors and parts thereof are tested, functional and free of defects before leaving the factory.

Head office and sales in the Czech Republic:

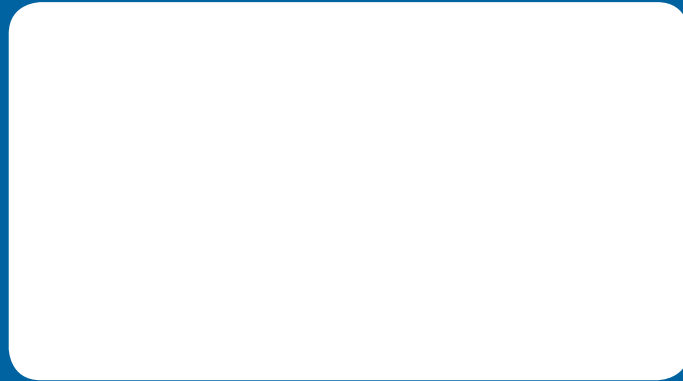
MINIB s.r.o.

Střešovická 405/49, 162 00 Praha 6, Czech Republic

Tel.: +420 220 180 780, GSM: +420 604 76 76 77,

Fax: +420 220 180 779

Email: office@minib.cz



MINIB[®] 

The logo graphic consists of several blue and white geometric shapes, including rectangles and lines, arranged in a stylized, abstract pattern.

www.minib.com