

MINIB[®] 

MANUFACTURER OF HEATING CONVECTORS

... more than just heat

2009/2010

www.minib.com

TABLE OF CONTENTS

- 4 INTRODUCTION
- 6 Cross sections of convectors

8 FLOOR CONVECTORS WITHOUT FAN

- 9 COIL - P
- 10 COIL - P80
- 11 COIL - PT
- 12 COIL - PT80
- 13 COIL - PT105
- 14 COIL - PT4
- 15 COIL - PT180
- 16 COIL - PT300
- 17 COIL - PO
- 18 COIL - PO4
- 19 COIL - PMW90
- 20 COIL - PMW125
- 21 COIL - PMW165
- 22 COIL - PMW205

23 FLOOR CONVECTORS WITH FAN

- 24 COIL - KT
- 26 COIL - KT110
- 28 COIL - KO
- 30 COIL - KTO
- 32 COIL - KT1
- 34 COIL - KT2
- 36 COIL - KO2
- 38 COIL - KT3
- 40 COIL - KT3 105
- 42 COIL - T50
- 44 COIL - T60
- 46 COIL - T80
- 48 COIL - MT
- 50 COIL - MO
- 52 COIL - HC
- 54 COIL - HC4pipe
- 56 COIL - HCM
- 58 COIL - HCM4pipe
- 60 COIL - MT2

62 SPECIAL

- 64 COIL - TE
- 65 COIL - SK
- 66 COIL - KP

- 67 COIL - LP
- 68 COIL - DP

69 WALL AND SELF-STANDING CONVECTORS

WITH FAN

- 70 COIL - NK1
- 72 COIL - NK2
- 74 COIL - SK1
- 76 COIL - SK2
- 78 COIL - SK PTG, NK PTG

WITHOUT FAN

- 79 COIL - NU1
- 80 COIL - NU2
- 81 COIL - SU1
- 82 COIL - SU2
- 83 COIL - NP1/4
- 84 COIL - NP2/4
- 85 COIL - SP0
- 86 COIL - SP1/4
- 87 COIL - SP2/4
- 88 COIL - NW170
- 89 COIL - NW340
- 90 COIL - SW250
- 91 COIL - SW420

92 REGULATION

- 92 Control A1 (wet interior)
- 93 Control A
- 94 Control B
- 95 Control C
- 96 Control D
- 97 Control E1 (wet interior)
- 98 Control E
- 99 Control MT-2, TE

100 PHYSICAL PROPERTIES AND CONNECTIONS

- 102 Examples of convector connections

104 ACCESSORIES

- 105 Antivibration foil

106 ASSEMBLY INSTRUCTION MANUALS

Dear customers,

We thank you for your interest in our products and would like to introduce you to a number of MINIB's innovations.

1. As a result of increased requirements for cooling our innovations have especially centred on units which provide both high heat outputs and the ability to add effective cooling to the space. Units in question are the single circuit HCM fan assisted convector capable of 2kW of heat output and 0.75kW of cooling output from a 1m length of trench. This unit is suitable for inclusion in a 2-pipe heating/cooling changeover system. Also new to the range is the HCM4pipe which has separate heating and cooling circuits to suit a 4-pipe system.
2. Minib has released the PTG range of fan assisted convectors using 12V DC fans but with no power supply required due to the innovative thermoelectric generators which provide power to the fans from the hot water flowing through the heating pipes.
3. Many of the range of floor and wall-mounted convectors are now supplied with thermostatic valve head as standard (see catalogue for details).
4. All fan-assisted convectors are now supplied with temperature sensors to prevent the fans from running when the water temperatures are low.

A reminder of the standard features of MINIB units

ECONOMICAL HEATING

MINIB has been supplying energy efficient 12V DC fan motors for over three years. Compared to more commonly used AC fan motors an energy saving of around 80% is to be expected (average consumption of 12V DC fan motor is only 7W per metre of convector length). In addition, the DC motors can be readily equipped with advanced electronic controls to provide optimal comfort levels and energy efficiency. Unlike many other heat emitters, trench elements minimise the volume of water within the heat exchanger ensuring fast response and short warm-up times.

STANDARD MINIB CONTROLS

- a) On/off control – Type A, B, A1
- b) On/off and 3 speed control – Type C
- c) IQ intelligent electronic control – Type E, D, E1

OTHER NEW PRODUCTS AND IMPROVEMENTS

As of 1st July 2009 the following innovations are available:

- Fan assisted convectors: New models SK PTG, NK PTG. Reduced height on models KT110, KT 105.
- Natural convectors: New high output models PMW90, PMW125, PMW165, PMW205, NW170, NW340, SW250, SW420. Reduced height on model PT105.
- Special convectors: Increased output on models LP, KP.
- As of 1st May 2009 end fitting have been supplied in 3/8" to ease installation on models HC, HC4pipe, HCM, HCM4pipe, KT-0, T50.

FURTHER FEATURES AND INFORMATION

- 1/ Trenches are manufactured from food quality A2 stainless steel as standard. A4 quality (chrome-molybdenum) is used in wet environments (not designed for salt water environments).
- 2/ The company manufactures its own, high quality, heat exchangers and fans.
- 3/ Angle connection pieces are available on all types of floor convectors.
- 4/ Curved convectors can be manufactured (see catalogue for details or consult company for special requirements). The use of energy efficient 12V DC motors with a consumption of only around 7W per metre length of trench (not swimming pool applications or TE electric heated unit). 80% energy saving compared with traditional AC motors.
- 5/ Tangential fans providing even spread of air across the length of the entire convector.

- 6/ Convector outputs up to 6kW.
- 7/ Special convectors for winter heating and partial summer space cooling.
- 8/ Minimum floor convector height of 50mm (T50 unit).
- 9/ Minimum floor convector width of 106mm (KTO unit).
- 10/ Minimal internal water volume allowing quick thermal response.
- 11/ Non-standard convector lengths available in multiples of 50mm.
- 12/ On/off and 3-speed control plus automatic step control and continuous speed control available.
- 13/ Ex-works delivery in 2 to 15 days depending on style of unit.
- 14/ Stainless steel flexible hose connectors allow angling of heating element for easy cleaning of the trench.
- 15/ Fan assisted convectors should have the fan wheels greased annually to ensure low noise levels and longevity.
- 16/ All convectors are delivered, as standard, with water connections on the RHS when looking from the window.
- 17/ Opposite connections can be supplied if requested.

MINIB are able to provide testing facilities at their factory in their accredited test chamber. Tests provide documented heating outputs in line with EN 442-2.

STANDARD FEATURES

- Stainless steel trough.
- Stainless steel flexible connection hoses to facilitate piping-up and cleaning.
- Shut off cock and adjustable valve.
- Any type of segmented aluminium or wooden grille for standard convector lengths. Convectors with widths of 380mm and above are supplied with roll-up grille. Stainless steel grilles available at additional cost. Decorative surrounds also available at extra charge.
- Safe low voltage fan motors.

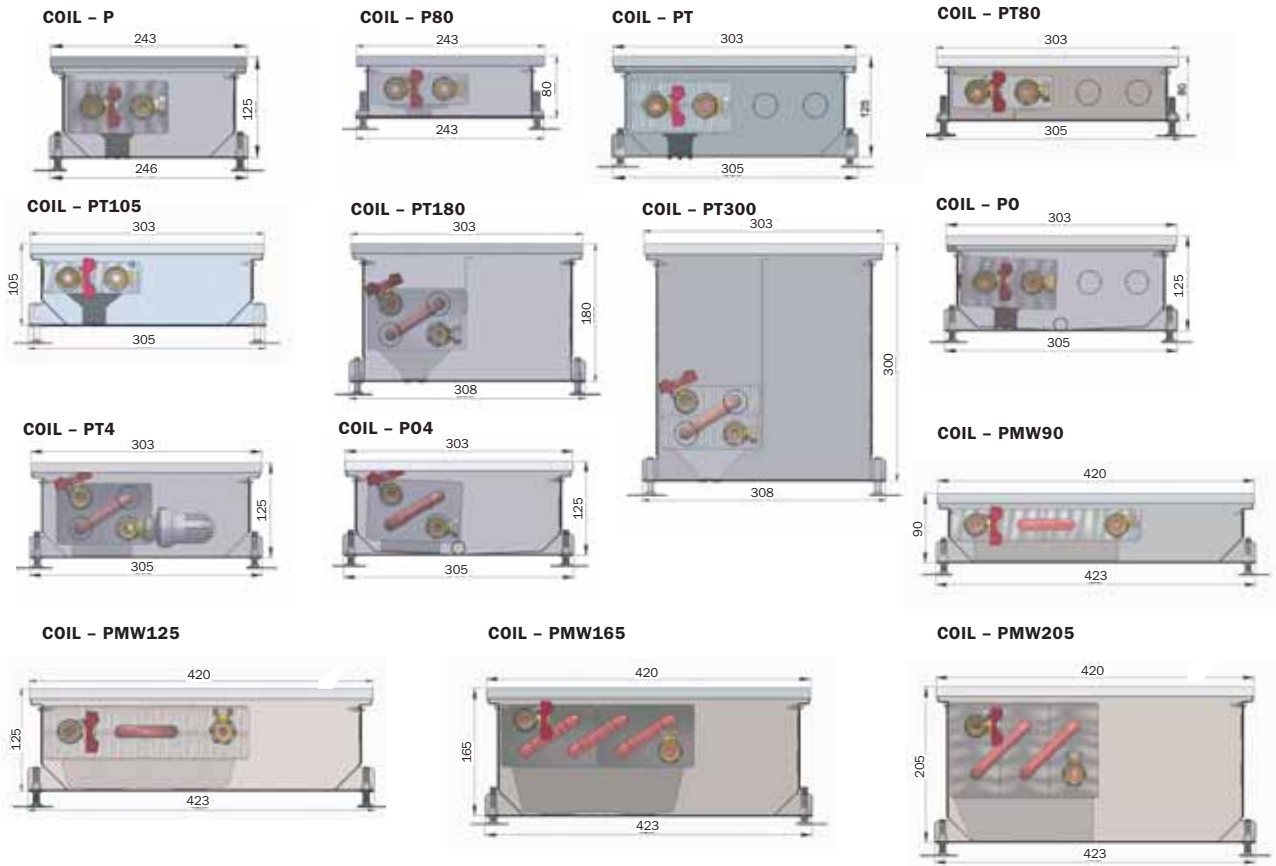
WARRANTIES

Full warranty of 2 years is provided for MINIB convectors as of the invoice date. Warranty on the stainless steel trough and the heat exchanger is extended to 10 years. The warranties do not cover damage caused by incorrect handling, incorrect installation, use in corrosive or salt-laden environments nor does it cover normal wear and tear.

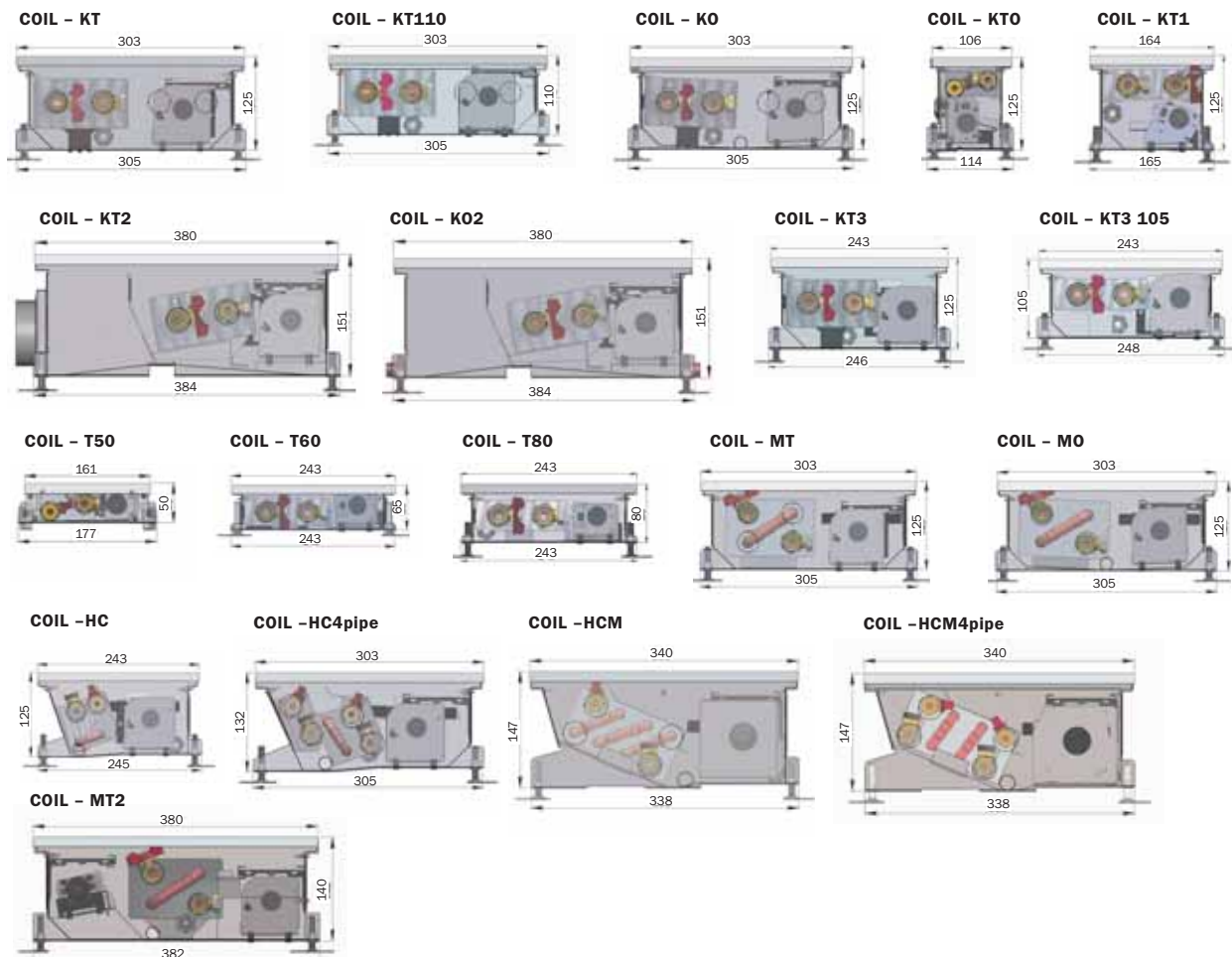


cross sections of convectors

FLOOR CONVECTORS WITHOUT A FAN

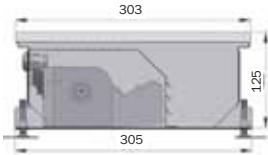


FLOOR CONVECTORS WITH A FAN

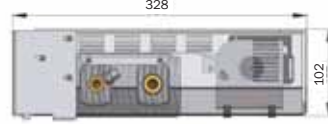


SPECIAL

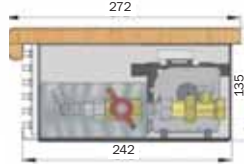
COIL - TE



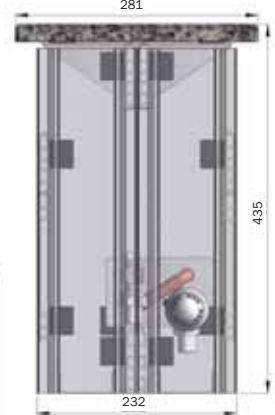
COIL - SK



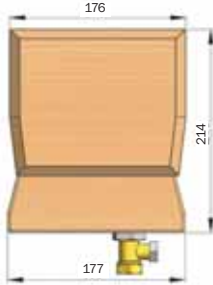
COIL - KP



COIL - LP



COIL - DP



WALL AND SELF-STANDING CONVECTORS

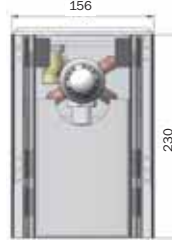
COIL - NK 1



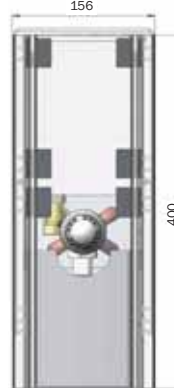
COIL - NK 2



COIL - SK 1



COIL - SK 2



COIL - SK PTG



COIL - NK PTG



COIL - NU 1



COIL - NU 2



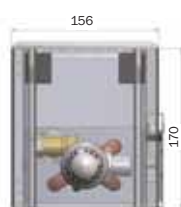
COIL - SU 1



COIL - SU 2



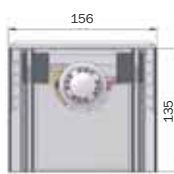
COIL - NP1/4



COIL - NP2/4



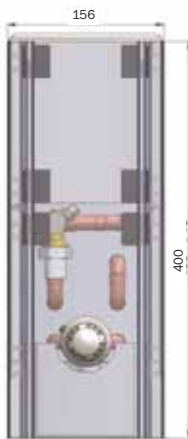
COIL - SP0



COIL - SP1/4



COIL - SP2/4



COIL - NW170



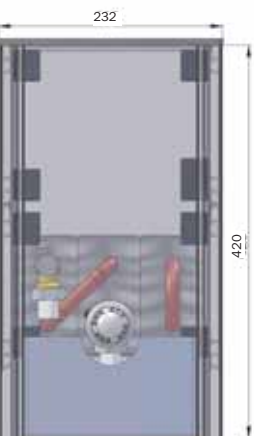
COIL - NW340

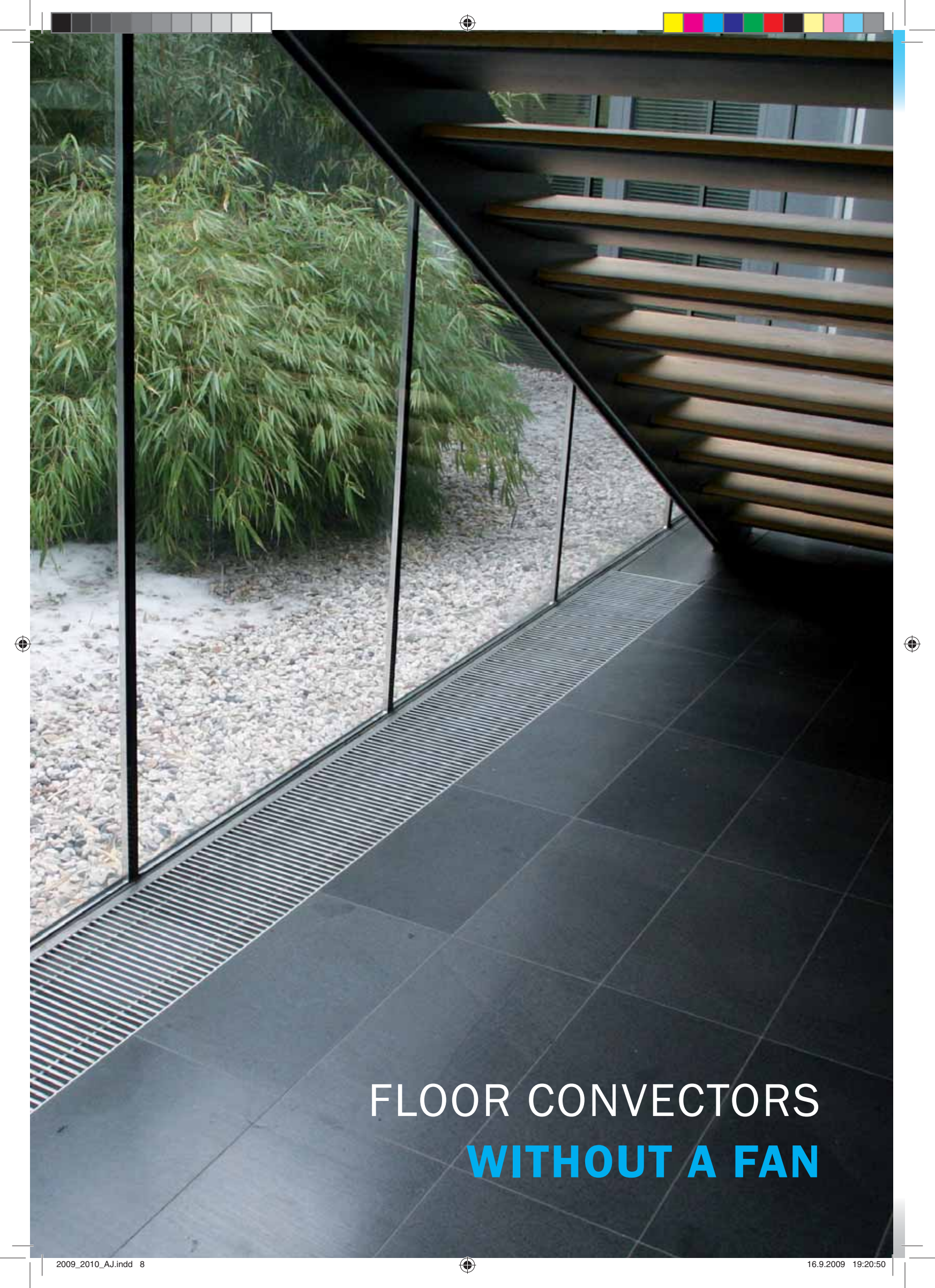


COIL - SW250



COIL - SW420





FLOOR CONVECTORS **WITHOUT A FAN**

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 EQUATION

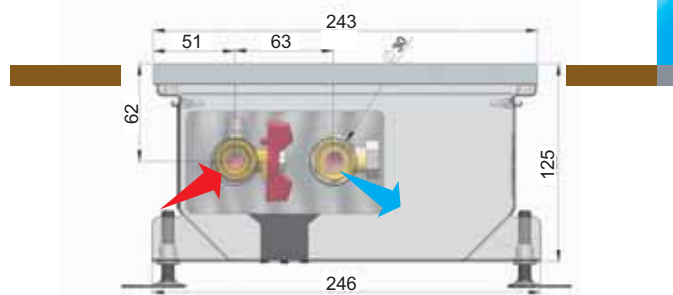
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:
m= 1,4633 temperature exponent
t_{w, A} mean heating water temperature, mean air temperature in the interior [°C]
Q_N nominal heat transfer rate for difference of 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]

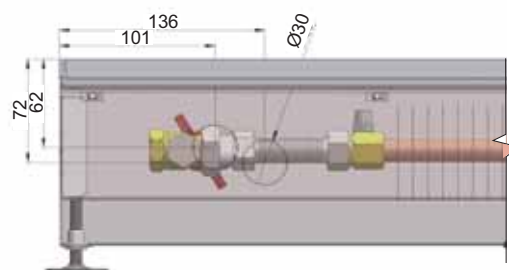
HEAT TRANSFER RATE Q [W] COIL - P

		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	329	299	287
	80	269	240	229
	70	213	186	176
	50	113	91	82
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	384	348	335
	80	314	281	268
	70	248	217	205
	50	131	106	96
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	521	473	454
	80	426	381	363
	70	337	295	278
	50	178	144	130
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	658	597	574
	80	538	481	459
	70	426	372	351
	50	225	181	165
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	795	722	693
	80	650	581	554
	70	514	450	425
	50	272	219	199
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	933	846	812
	80	763	681	650
	70	603	527	498
	50	319	257	233
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	1 207	1 095	1 051
	80	987	882	841
	70	780	682	644
	50	413	333	302
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	1 481	1 344	1 290
	80	1 211	1 082	1 032
	70	958	837	791
	50	507	408	371

CROSS SECTION OF COIL-P



LONGITUDINAL SECTION COIL-P





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	245	221	212
	80	199	177	168
	70	156	135	127
	50	80	64	58
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	286	258	248
	80	232	206	196
	70	181	158	149
	50	94	75	68
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	388	351	336
	80	315	280	266
	70	246	214	202
	50	127	101	92
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	490	443	424
	80	397	353	336
	70	311	271	255
	50	161	128	116
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	592	535	513
	80	480	427	406
	70	376	327	308
	50	194	155	140
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	694	627	601
	80	563	501	476
	70	441	383	361
	50	227	182	164
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	898	812	778
	80	728	648	616
	70	570	496	467
	50	294	235	212
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	1102	996	955
	80	894	795	757
	70	700	609	574
	50	361	288	261

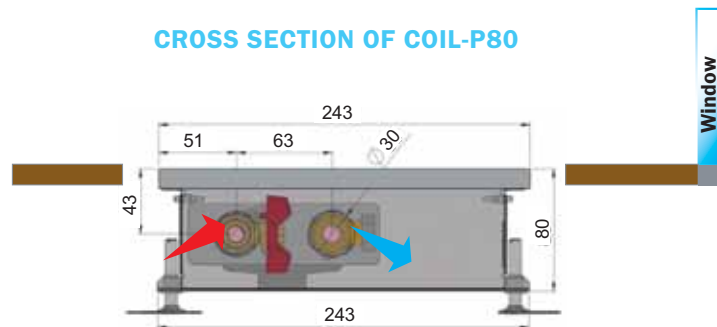
TEMPERATURE EQUATION

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

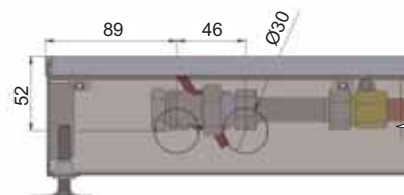
where:

- m=** 1,4062 temperature exponent for P 80
- t_{w, A}** mean heating water temperature, mean air temperature in the interior [°C]
- Q_N** nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-P80



LONGITUDINAL SECTION 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 - KO that have a higher heat output.



TEMPERATURE EQUATION

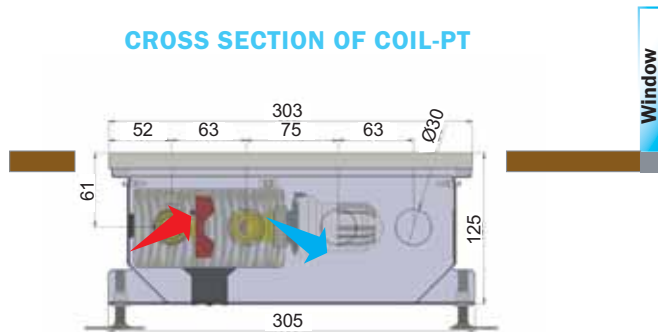
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m = temperature exponent 1,3932
- t_w, A = mean heating water temperature, mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °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]

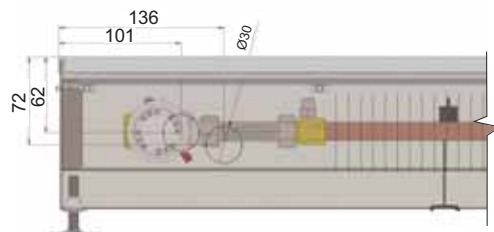
HEAT TRANSFER RATE Q [W] COIL - PT

		length L (mm) 900		
		mean air temperature tA		
		15	20	22
mean water temperature t _w	90	436	396	381
	80	358	320	305
	70	283	248	234
	50	151	122	111
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	509	462	444
	80	417	373	356
	70	331	289	273
	50	176	142	129
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	691	628	603
	80	566	506	483
	70	449	393	371
	50	239	193	175
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	873	793	761
	80	715	640	610
	70	567	496	469
	50	302	244	221
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	1055	958	920
	80	864	773	737
	70	685	600	566
	50	365	294	267
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	1237	1123	1079
	80	1013	906	864
	70	803	703	664
	50	428	345	313
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	1600	1454	1396
	80	1311	1173	1119
	70	1039	910	859
	50	553	446	406
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	1964	1784	1713
	80	1609	1439	1373
	70	1275	1116	1055
	50	679	548	498

CROSS SECTION OF COIL-PT



LONGITUDINAL SECTION COIL-PT





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

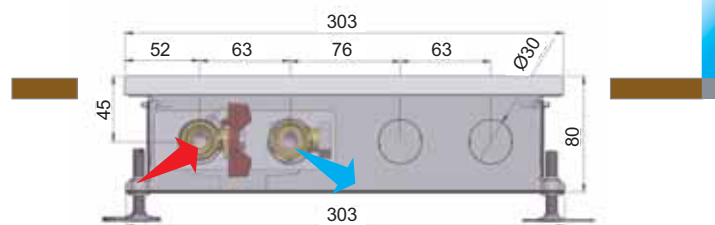
		length L (mm) 900	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	282	245
	80	230	196
	70	182	159
	50	96	70
		length L (mm) 1000	
		15	20
mean water temperature t _w	90	328	286
	80	268	229
	70	212	186
	50	112	82
		length L (mm) 1250	
		15	20
mean water temperature t _w	90	446	388
	80	364	310
	70	288	252
	50	152	111
		length L (mm) 1500	
		15	20
mean water temperature t _w	90	563	490
	80	460	392
	70	364	318
	50	192	141
		length L (mm) 1750	
		15	20
mean water temperature t _w	90	680	593
	80	556	474
	70	440	384
	50	233	170
		length L (mm) 2000	
		15	20
mean water temperature t _w	90	798	695
	80	652	555
	70	515	451
	50	273	199
		length L (mm) 2500	
		15	20
mean water temperature t _w	90	1032	899
	80	844	719
	70	667	583
	50	353	258
		length L (mm) 3000	
		15	20
mean water temperature t _w	90	1267	1104
	80	1036	882
	70	818	716
	50	433	316

TEMPERATURE EQUATION

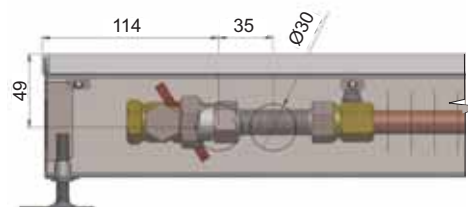
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m= temperature exponent 1,4085
- t_{w, A} mean heating water temperature, mean air temperature in the interior [°C]
- Q_N nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PT80



LONGITUDINAL SECTION 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

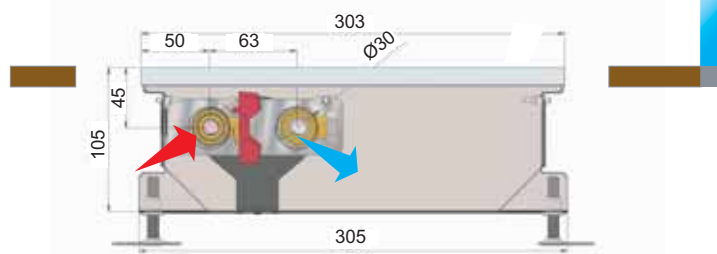
		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	363	330	317
	80	297	266	254
	70	235	206	195
	50	125	101	91
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	424	385	370
	80	347	310	296
	70	275	240	227
	50	146	118	107
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	576	523	502
	80	471	421	402
	70	373	326	308
	50	198	159	145
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	727	660	634
	80	595	532	507
	70	471	412	389
	50	250	201	183
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	878	798	766
	80	719	643	613
	70	569	498	470
	50	302	243	221
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	1 030	935	898
	80	843	753	719
	70	667	584	551
	50	354	285	259
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	1 333	1 210	1 162
	80	1 091	975	930
	70	863	755	713
	50	458	369	335
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	1 636	1 485	1 426
	80	1 339	1 197	1 141
	70	1 059	927	875
	50	562	453	412

TEMPERATURE EQUATION

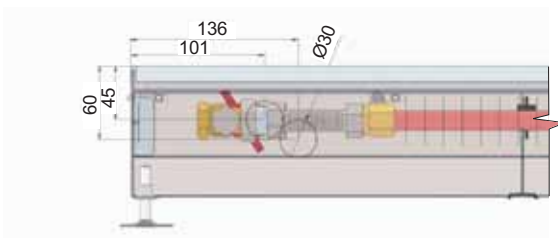
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m= temperature exponent 1,4006
- t_{w, A} mean heating water temperature, mean air temperature in the interior [°C]
- Q_N nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- μ = 1 (select μ according to the diagram for other than nominal flow values)
- Q heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-PT105



LONGITUDINAL SECTION COIL-PT105





COIL - PT4

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ identical in dimension to convectors PT, PO 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 or MT, which have a significantly higher heat output.

HEAT TRANSFER RATE Q [W] COIL - PT4

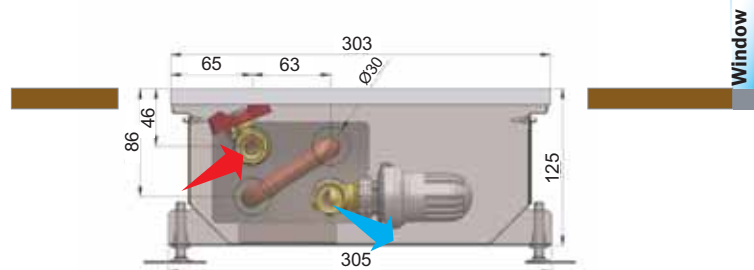
		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	514	464	445
	80	416	370	352
	70	326	283	267
	50	168	134	121
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	599	542	519
	80	486	432	411
	70	380	331	311
	50	196	156	141
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	813	735	705
	80	659	586	558
	70	516	449	423
	50	266	212	192
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 027	929	890
	80	833	741	705
	70	652	567	534
	50	336	268	242
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 242	1 122	1 075
	80	1 006	895	852
	70	788	685	645
	50	406	324	293
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 456	1 316	1 261
	80	1 180	1 049	998
	70	924	803	756
	50	476	380	343
		length L (mm) 2500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 884	1 702	1 632
	80	1 527	1 358	1 292
	70	1 195	1 039	979
	50	616	491	444
		length L (mm) 3000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 312	2 089	2 002
	80	1 874	1 667	1 586
	70	1 467	1 276	1 201
	50	756	603	545

TEMPERATURE EQUATION

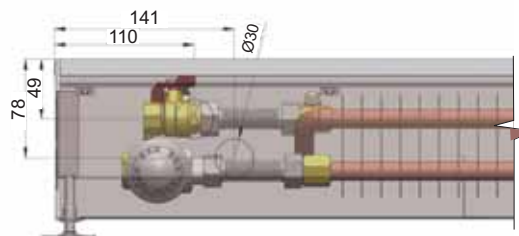
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m = temperature exponent 1,4667
- t_w, t_A = mean heating water temperature, mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PT/4



LONGITUDINAL SECTION 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.



HEAT TRANSFER RATE Q [W] COIL - PT180

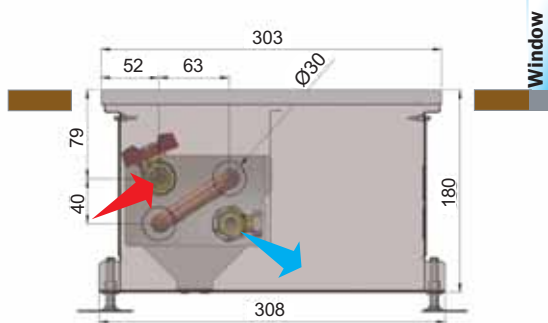
		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	564	511	490
	80	459	410	390
	70	362	315	298
	50	189	152	138
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	658	596	572
	80	536	478	455
	70	422	368	347
	50	221	177	161
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	892	809	776
	80	727	648	618
	70	573	500	471
	50	300	240	218
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	1127	1021	980
	80	918	819	780
	70	723	631	595
	50	379	304	275
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	1362	1234	1184
	80	1110	990	943
	70	874	762	719
	50	458	367	333
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	1597	1447	1388
	80	1301	1160	1105
	70	1024	894	843
	50	537	430	390
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	2067	1872	1796
	80	1684	1502	1431
	70	1326	1157	1091
	50	694	557	504
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	2536	2298	2204
	80	2067	1843	1756
	70	1627	1420	1339
	50	852	683	619

TEMPERATURE EQUATION

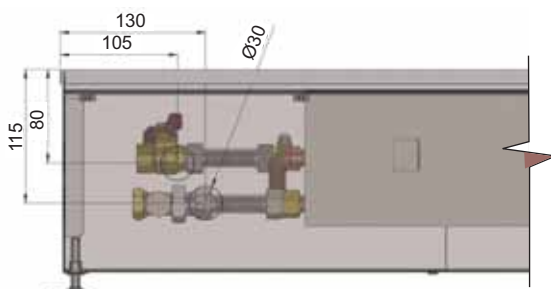
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m = temperature exponent 1,4312
- t_w, t_A = mean heating water temperature, mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PT180



LONGITUDINAL SECTION COIL-PT180





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

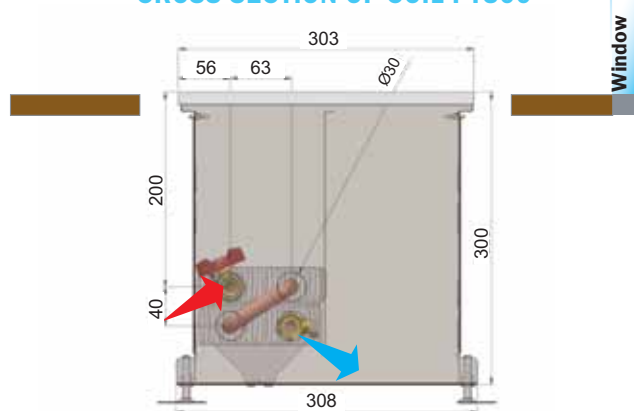
		length L (mm) 900	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	630	572
	80	516	462
	70	409	358
	50	218	176
		length L (mm) 1000	
		15	20
mean water temperature t _w	90	735	667
	80	602	539
	70	477	418
	50	254	205
		length L (mm) 1250	
		15	20
mean water temperature t _w	90	997	906
	80	817	731
	70	648	567
	50	345	279
		length L (mm) 1500	
		15	20
mean water temperature t _w	90	1 259	1 144
	80	1 032	923
	70	818	716
	50	436	352
		length L (mm) 1750	
		15	20
mean water temperature t _w	90	1 522	1 382
	80	1 247	1 116
	70	988	866
	50	527	425
		length L (mm) 2000	
		15	20
mean water temperature t _w	90	1 784	1 621
	80	1 462	1 308
	70	1 159	1 015
	50	618	499
		length L (mm) 2500	
		15	20
mean water temperature t _w	90	2 309	2 097
	80	1 892	1 693
	70	1 500	1 314
	50	800	645
		length L (mm) 3000	
		15	20
mean water temperature t _w	90	2 833	2 574
	80	2 322	2 077
	70	1 841	1 612
	50	982	792

TEMPERATURE EQUATION

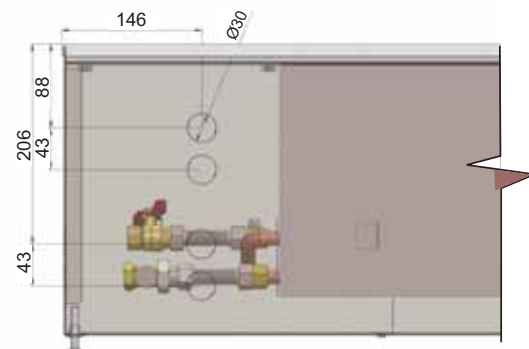
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m = temperature exponent 1,3909
- t_{w, A} = mean heating water temperature, mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PT300



LONGITUDINAL SECTION 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 - KT or COIL - MO, which have a significantly higher heat output. These convectors are equipped with an 18 mm CU outlet tube placed in the front of the convector. **The convector cannot be installed to swimming pools with salt or other aggressive water.**

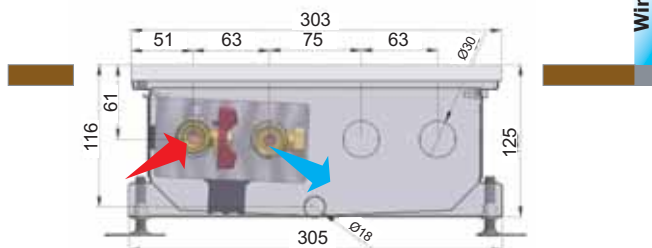


TEMPERATURE EQUATION

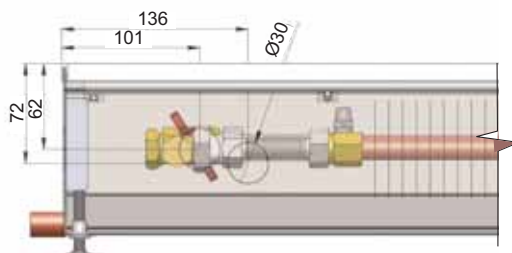
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- m = temperature exponent 1,3932
- t_w = mean heating water temperature, °C
- t_A = mean air temperature in the interior [°C]
- Q_N = nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °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]

CROSS SECTION OF COIL-PO



LONGITUDINAL SECTION COIL-PO



HEAT TRANSFER RATE Q [W] COIL - PO

		length L (mm) 900		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	436	396	381
	80	358	320	305
	70	283	248	234
50	151	122	111	
		length L (mm) 1000		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	509	462	444
	80	417	373	356
	70	331	289	273
50	176	142	129	
		length L (mm) 1250		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	691	628	603
	80	566	506	483
	70	449	393	371
50	239	193	175	
		length L (mm) 1500		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	873	793	761
	80	715	640	610
	70	567	496	469
50	302	244	221	
		length L (mm) 1750		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	1055	958	920
	80	864	773	737
	70	685	600	566
50	365	294	267	
		length L (mm) 2000		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	1237	1123	1079
	80	1013	906	864
	70	803	703	664
50	428	345	313	
		length L (mm) 2500		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	1600	1454	1396
	80	1311	1173	1119
	70	1039	910	859
50	553	446	406	
		length L (mm) 3000		
		mean air temperature t _A		
mean water temperature t _w	15	20	22	
	90	1964	1784	1713
	80	1609	1439	1373
	70	1275	1116	1055
50	679	548	498	



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 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.**

HEAT TRANSFER RATE Q [W] COIL - P04

mean water temperature t_w	length L (mm) 900		
	mean air temperature t_A		
	15	20	22
90	514	464	445
80	416	370	352
70	326	283	267
50	168	134	121
mean water temperature t_w	length L (mm) 1000		
	mean air temperature t_A		
	15	20	22
90	599	542	519
80	486	432	411
70	380	331	311
50	196	156	141
mean water temperature t_w	length L (mm) 1250		
	mean air temperature t_A		
	15	20	22
90	813	735	705
80	659	586	558
70	516	449	423
50	266	212	192
mean water temperature t_w	length L (mm) 1500		
	mean air temperature t_A		
	15	20	22
90	1 027	929	890
80	833	741	705
70	652	567	534
50	336	268	242
mean water temperature t_w	length L (mm) 1750		
	mean air temperature t_A		
	15	20	22
90	1 242	1 122	1 075
80	1 006	895	852
70	788	685	645
50	406	324	293
mean water temperature t_w	length L (mm) 2000		
	mean air temperature t_A		
	15	20	22
90	1 456	1 316	1 261
80	1 180	1 049	998
70	924	803	756
50	476	380	343
mean water temperature t_w	length L (mm) 2500		
	mean air temperature t_A		
	15	20	22
90	1 884	1 702	1 632
80	1 527	1 358	1 292
70	1 195	1 039	979
50	616	491	444
mean water temperature t_w	length L (mm) 3000		
	mean air temperature t_A		
	15	20	22
90	2 312	2 089	2 002
80	1 874	1 667	1 586
70	1 467	1 276	1 201
50	756	603	545

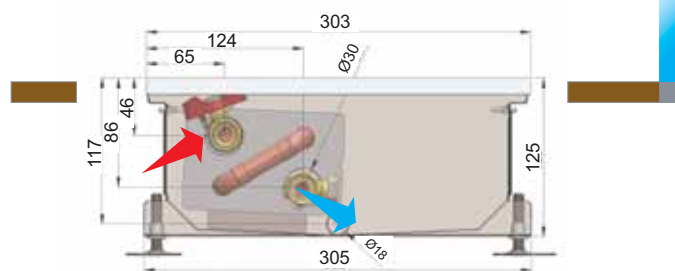
TEMPERATURE EQUATION

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

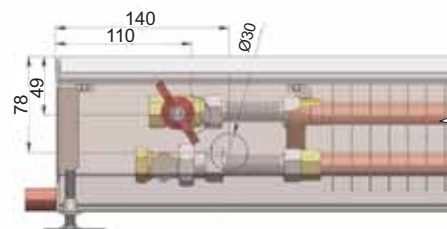
where:

- $m =$ temperature exponent 1,4667
- $t_{w,A}$ mean heating water temperature, mean air temperature in the interior [°C]
- Q_N nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °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]

CROSS SECTION OF COIL-PO/4



LONGITUDINAL SECTION 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

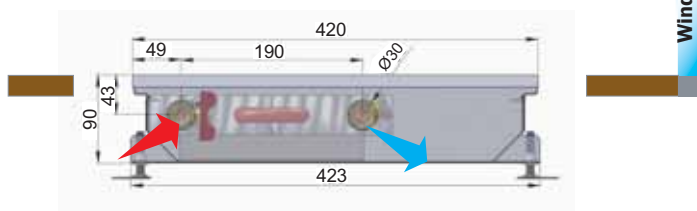
TEMPERATURE EQUATION

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

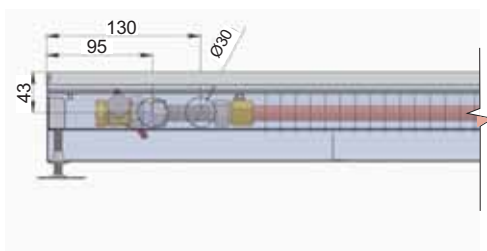
where:

- $m =$ temperature exponent 1,3577
- $t_{w, A}$ mean heating water temperature, mean air temperature in the interior [°C]
- Q_N nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °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]

CROSS SECTION OF COIL-PMW90



LONGITUDINAL SECTION COIL-PMW90



		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	521	475	456
	80	429	385	368
	70	342	301	284
	50	185	150	137
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	608	554	532
	80	501	449	429
	70	399	351	332
	50	216	175	160
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	826	752	723
	80	680	610	582
	70	542	476	450
	50	293	238	217
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	1 043	950	913
	80	859	770	736
	70	684	601	569
	50	370	301	274
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	1 260	1 147	1 103
	80	1 037	931	889
	70	827	727	687
	50	448	363	331
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	1 477	1 345	1 293
	80	1 216	1 091	1 042
	70	970	852	806
	50	525	426	388
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	1 912	1 741	1 674
	80	1 574	1 412	1 349
	70	1 255	1 102	1 043
	50	679	551	502
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	2 346	2 136	2 054
	80	1 932	1 733	1 655
	70	1 540	1 353	1 280
	50	834	676	616



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

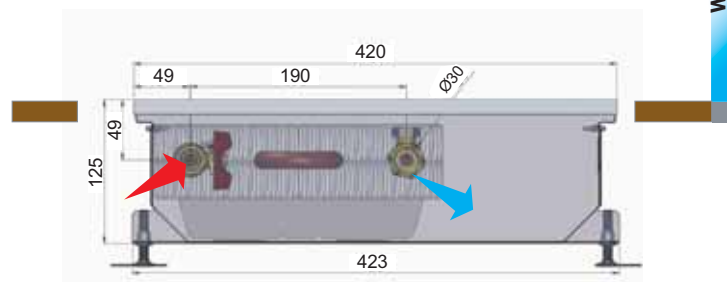
		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	619	562	540
	80	508	455	434
	70	403	353	334
	50	216	174	159
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	722	656	630
	80	592	530	506
	70	470	412	390
	50	252	204	185
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	980	891	856
	80	804	720	687
	70	638	559	529
	50	342	276	251
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	1 237	1 125	1 081
	80	1 015	909	868
	70	806	707	668
	50	432	349	317
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	1 495	1 359	1 306
	80	1 227	1 099	1 048
	70	974	854	807
	50	522	422	383
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	1 753	1 594	1 531
	80	1 439	1 288	1 229
	70	1 142	1 001	946
	50	612	494	449
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	2 269	2 062	1 981
	80	1 862	1 667	1 590
	70	1 478	1 296	1 225
	50	792	640	582
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	2 784	2 531	2 432
	80	2 285	2 046	1 952
	70	1 814	1 590	1 503
	50	971	785	714

TEMPERATURE EQUATION

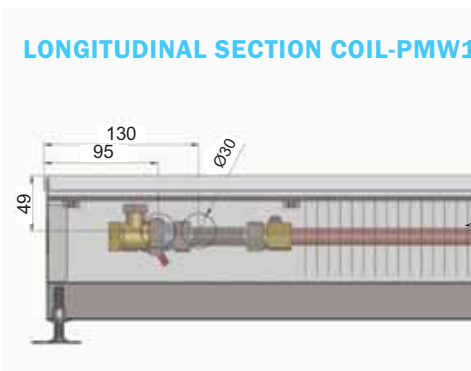
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

- where:
- m**= temperature exponent 1,3816
 - t_{w, A}** mean heating water temperature, mean air temperature in the interior [°C]
 - Q_N** nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PMW125



LONGITUDINAL SECTION 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.



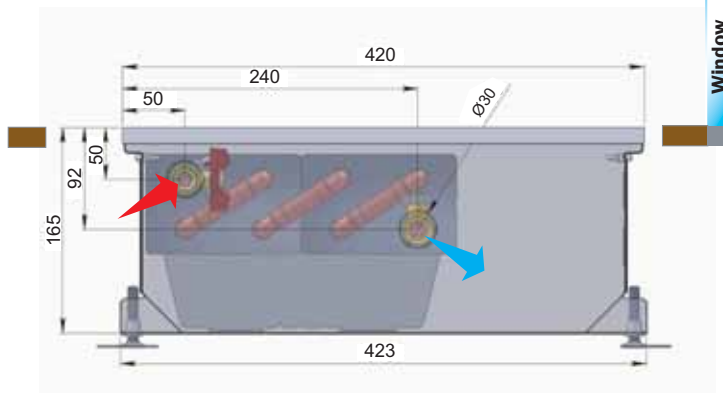
TEMPERATURE EQUATION

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

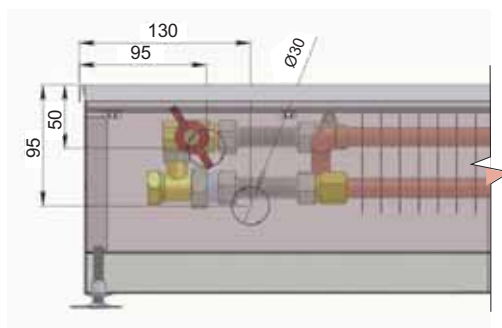
where:

- m** = temperature exponent 1,3854
- t_{w, A}** = mean heating water temperature, mean air temperature in the interior [°C]
- Q_N** = nominal heat transfer rate for difference of 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]

CROSS SECTION OF COIL-PMW165



LONGITUDINAL SECTION 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	823	748	718
	80	675	604	576
	70	535	469	443
	50	286	231	210
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	960	873	838
	80	787	705	672
	70	625	547	517
	50	334	270	245
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	1303	1184	1138
	80	1069	956	913
	70	848	743	702
	50	453	366	333
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	1646	1496	1437
	80	1350	1208	1153
	70	1071	938	887
	50	573	462	420
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	1989	1807	1736
	80	1631	1460	1393
	70	1294	1134	1072
	50	692	559	508
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	2331	2119	2036
	80	1912	1711	1633
	70	1517	1329	1256
	50	811	655	595
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	3017	2742	2634
	80	2475	2215	2113
	70	1963	1720	1626
	50	1050	848	771
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	3703	3365	3233
	80	3037	2718	2594
	70	2410	2111	1995
	50	1288	1040	946



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

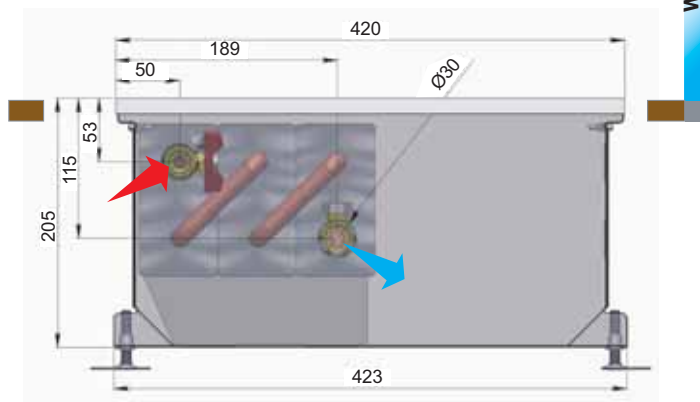
		length L (mm) 900		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	961	871	836
	80	784	700	667
	70	618	540	509
	50	325	261	236
		length L (mm) 1000		
		15	20	22
mean water temperature t _w	90	1 121	1 016	975
	80	915	816	778
	70	721	630	594
	50	379	304	276
		length L (mm) 1250		
		15	20	22
mean water temperature t _w	90	1 522	1 379	1 324
	80	1 241	1 108	1 055
	70	979	854	806
	50	514	413	374
		length L (mm) 1500		
		15	20	22
mean water temperature t _w	90	1 922	1 742	1 672
	80	1 568	1 399	1 333
	70	1 236	1 079	1 018
	50	650	522	473
		length L (mm) 1750		
		15	20	22
mean water temperature t _w	90	2 323	2 105	2 020
	80	1 895	1 691	1 611
	70	1 494	1 304	1 230
	50	785	630	571
		length L (mm) 2000		
		15	20	22
mean water temperature t _w	90	2 723	2 468	2 369
	80	2 221	1 982	1 889
	70	1 751	1 529	1 443
	50	920	739	670
		length L (mm) 2500		
		15	20	22
mean water temperature t _w	90	3 524	3 194	3 065
	80	2 875	2 565	2 444
	70	2 266	1 979	1 867
	50	1 191	956	867
		length L (mm) 3000		
		15	20	22
mean water temperature t _w	90	4 325	3 920	3 762
	80	3 528	3 148	3 000
	70	2 781	2 428	2 291
	50	1 461	1 174	1 064

TEMPERATURE EQUATION

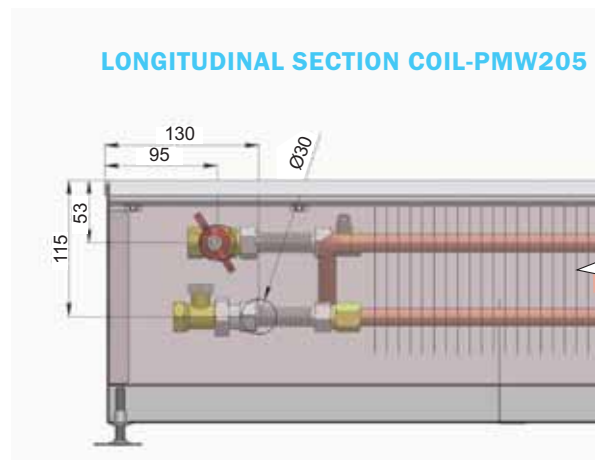
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

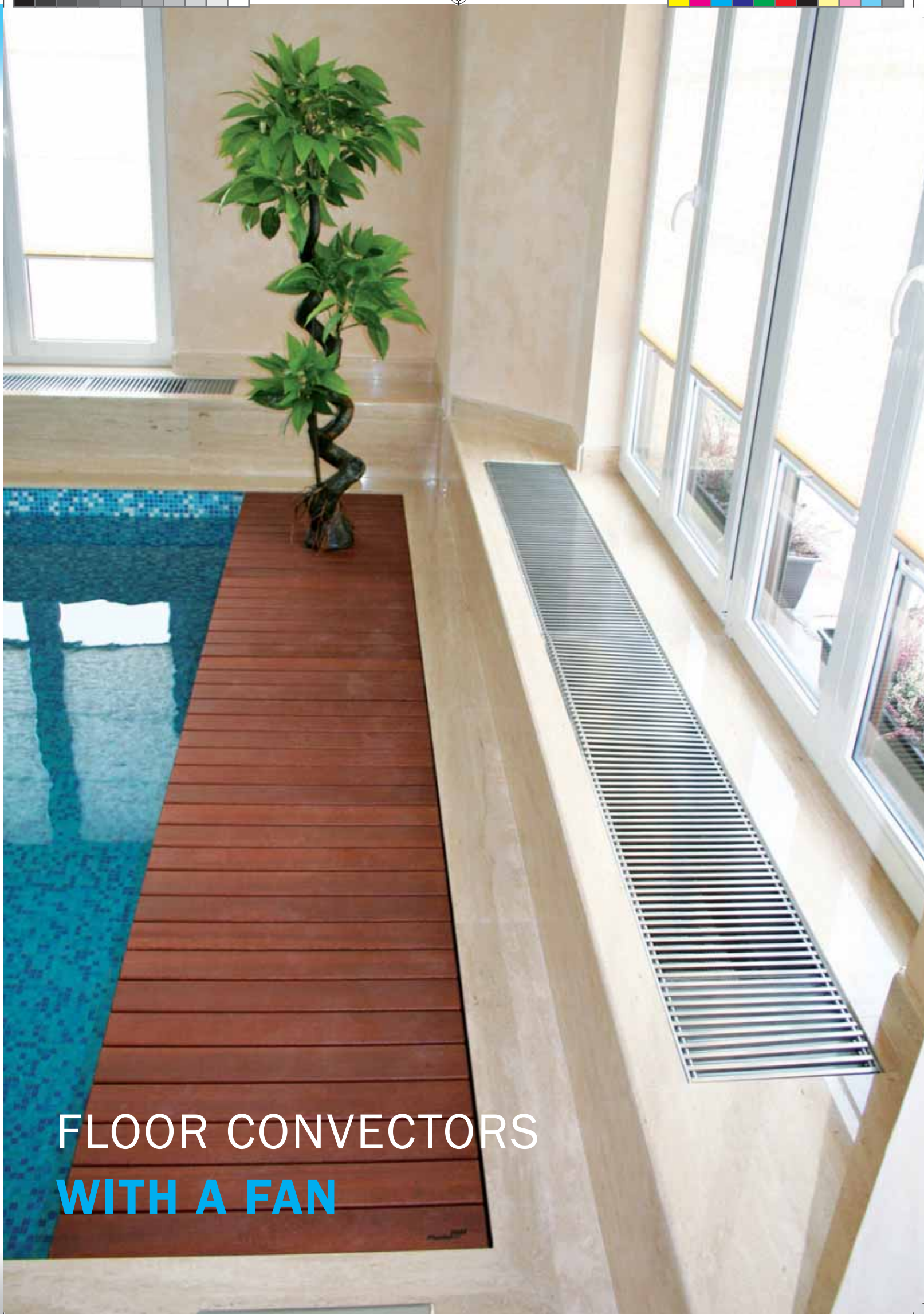
- where:
- m = temperature exponent 1,4236
 - t_{w, A} = mean heating water temperature, mean air temperature in the interior [°C]
 - Q_N = nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
 - μ = μ=1 (select μ according to the diagram for other than nominal flow values)
 - Q = heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-PMW205



LONGITUDINAL SECTION COIL-PMW205





FLOOR CONVECTORS WITH A FAN





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 out-put 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.

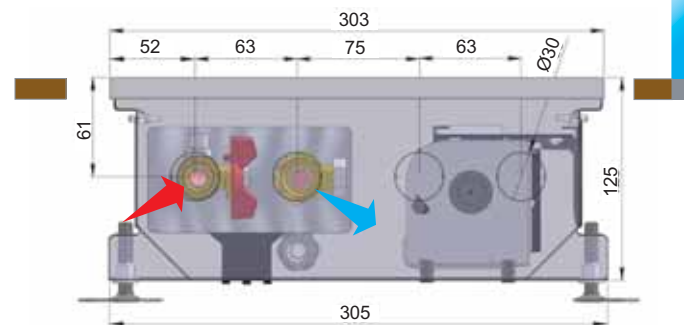
TEMPERATURE EQUATION

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

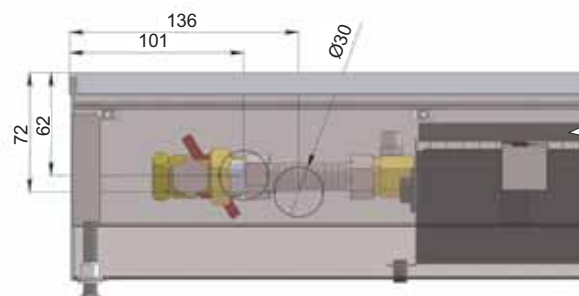
where:

- m** = temperature exponent 1,0127
- t_w** = mean heating water temperature, mean air temperature [°C]
- t_A** = mean air temperature [°C]
- Q_N** = nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °C [W]
- Q** = heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 161	1 070	1 034	80	1 268	1 169	1 129	80	1 414	1 304	1 260
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	50	620	530	495	50	677	579	540	50	755	646	602
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 354	1 249	1 206	80	1 479	1 364	1 318	80	1 649	1 521	1 469
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	50	723	619	577	50	790	676	630	50	881	754	703
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 837	1 694	1 637	80	2 007	1 851	1 788	80	2 238	2 064	1 994
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	50	982	840	783	50	1 072	917	855	50	1 196	1 023	954
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 321	2 140	2 068	80	2 535	2 338	2 259	80	2 827	2 607	2 519
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	50	1 240	1 061	989	50	1 354	1 159	1 081	50	1 510	1 292	1 205
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 805	2 586	2 499	80	3 063	2 825	2 730	80	3 416	3 150	3 044
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	50	1 498	1 282	1 195	50	1 637	1 400	1 306	50	1 825	1 561	1 456
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 288	3 032	2 930	80	3 592	3 312	3 200	80	4 005	3 693	3 569
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	50	1 757	1 503	1 401	50	1 919	1 641	1 531	50	2 140	1 830	1 707
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 255	3 924	3 791	80	4 648	4 286	4 141	80	5 183	4 780	4 618
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	50	2 273	1 945	1 814	50	2 483	2 124	1 981	50	2 769	2 369	2 209
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	5 222	4 816	4 653	80	5 704	5 260	5 083	80	6 361	5 866	5 668
	70	4 409	4 004	3 842	70	4 817	4 373	4 196	70	5 371	4 877	4 679
	50	2 790	2 387	2 226	50	3 048	2 607	2 431	50	3 398	2 907	2 711



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 out-put 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.

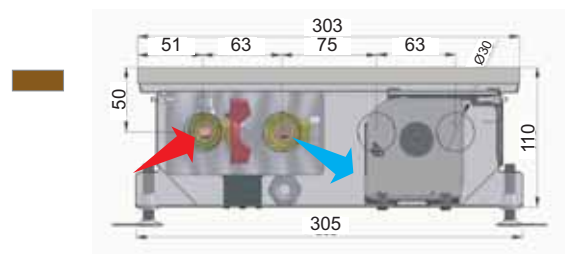
TEMPERATURE EQUATION

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

where:

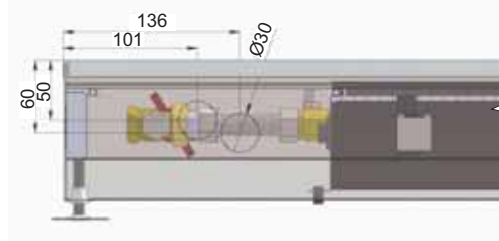
- m** = 1,0543 temperature exponent pro mean heating water temperature, mean air temperature [°C]
- t_w** = mean heating water temperature, mean air temperature [°C]
- Q_N** = nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** = heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT110



Window

LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	958	881	850	80	1 049	964	930	80	1 182	1 086	1 048
	70	804	727	696	70	880	796	762	70	991	896	858
	50	499	424	394	50	546	464	432	50	615	523	486
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 118	1 028	991	80	1 224	1 125	1 086	80	1 379	1 267	1 223
	70	937	848	812	70	1 026	928	889	70	1 156	1 046	1 002
	50	582	495	460	50	637	542	504	50	718	610	567
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 517	1 394	1 346	80	1 661	1 527	1 473	80	1 871	1 720	1 659
	70	1 272	1 151	1 102	70	1 393	1 260	1 207	70	1 569	1 419	1 359
	50	790	671	624	50	865	735	684	50	974	828	770
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 917	1 761	1 700	80	2 098	1 929	1 861	80	2 364	2 172	2 096
	70	1 607	1 453	1 392	70	1 760	1 591	1 524	70	1 982	1 792	1 717
	50	998	848	789	50	1 093	929	864	50	1 231	1 046	973
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 316	2 128	2 054	80	2 536	2 330	2 249	80	2 856	2 625	2 533
	70	1 942	1 756	1 682	70	2 126	1 923	1 842	70	2 395	2 166	2 075
	50	1 206	1 025	953	50	1 320	1 122	1 043	50	1 487	1 264	1 175
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 715	2 495	2 408	80	2 973	2 732	2 636	80	3 348	3 077	2 969
	70	2 277	2 059	1 972	70	2 493	2 254	2 159	70	2 808	2 539	2 432
	50	1 414	1 202	1 117	50	1 548	1 316	1 223	50	1 743	1 482	1 378
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 514	3 229	3 116	80	3 847	3 536	3 412	80	4 333	3 982	3 843
	70	2 946	2 665	2 552	70	3 226	2 917	2 795	70	3 633	3 286	3 148
	50	1 829	1 555	1 446	50	2 003	1 703	1 583	50	2 256	1 918	1 783
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 312	3 963	3 824	80	4 721	4 339	4 187	80	5 318	4 888	4 716
	70	3 616	3 270	3 132	70	3 959	3 581	3 430	70	4 459	4 033	3 863
	50	2 245	1 908	1 775	50	2 458	2 090	1 943	50	2 769	2 354	2 188



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 the all MINIB convectors are also safe for applications in wet areas. COIL-KO is supplied with an 18mm diameter pipe 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.**

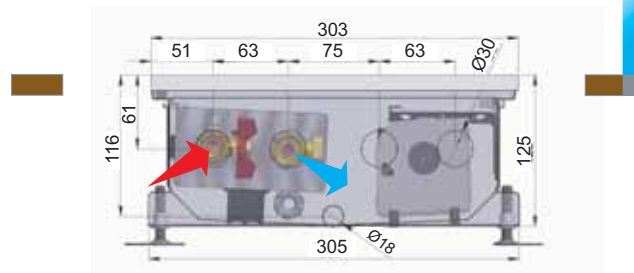
TEMPERATURE EQUATION

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

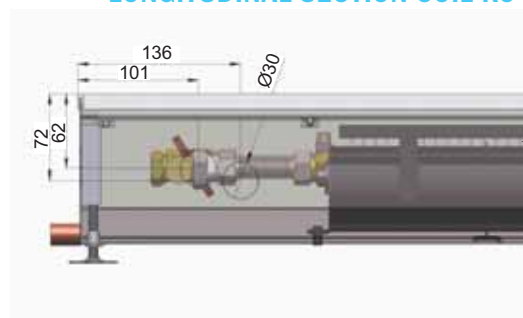
where:

- m** = 1,013 temperature exponent
- t_w** = mean heating water temperature, [°C]
- t_A** = mean air temperature [°C]
- Q_N** = nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** = heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KO



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 161	1 070	1 034	80	1 268	1 169	1 129	80	1 414	1 304	1 260
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	50	620	530	495	50	677	579	540	50	755	646	602
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 354	1 249	1 206	80	1 479	1 364	1 318	80	1 649	1 521	1 469
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	50	723	619	577	50	790	676	630	50	881	754	703
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 837	1 694	1 637	80	2 007	1 851	1 788	80	2 238	2 064	1 994
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	50	982	840	783	50	1 072	917	855	50	1 196	1 023	954
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 321	2 140	2 068	80	2 535	2 338	2 259	80	2 827	2 607	2 519
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	50	1 240	1 061	989	50	1 354	1 159	1 081	50	1 510	1 292	1 205
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 805	2 586	2 499	80	3 063	2 825	2 730	80	3 416	3 150	3 044
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	50	1 498	1 282	1 195	50	1 637	1 400	1 306	50	1 825	1 561	1 456
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 288	3 032	2 930	80	3 592	3 312	3 200	80	4 005	3 693	3 569
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	50	1 757	1 503	1 401	50	1 919	1 641	1 531	50	2 140	1 830	1 707
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 255	3 924	3 791	80	4 648	4 286	4 141	80	5 183	4 780	4 618
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	50	2 273	1 945	1 814	50	2 483	2 124	1 981	50	2 769	2 369	2 209
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	5 222	4 816	4 653	80	5 704	5 260	5 083	80	6 361	5 866	5 668
	70	4 409	4 004	3 842	70	4 817	4 373	4 196	70	5 371	4 877	4 679
	50	2 790	2 387	2 226	50	3 048	2 607	2 431	50	3 398	2 907	2 711



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. The use is recommended in cases when the extremely narrow profile of the floor convector is required. This convector has been supplied with connection fittings and flexible hoses "3/8" for connection of the heat exchanger since 1st May 2009.

info:

COIL-KTO convectors are newly supplied with levelling screws for height adjustment of the convector before concreting but only with the Al transverse grill.

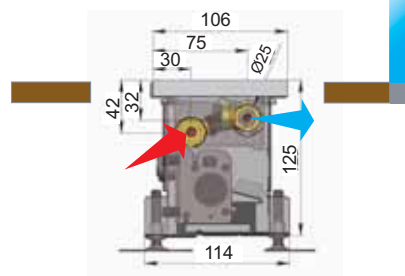
TEMPERATURE EQUATION

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

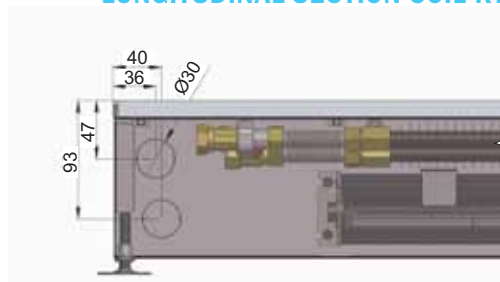
where:

- m**= 1,1076 temperature exponent
- t_w** mean heating water temperature, [°C]
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KTO



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	400	366	353	80	478	437	421	80	617	565	544
	70	333	299	286	70	397	357	342	70	513	462	441
	50	202	170	157	50	241	203	188	50	311	262	243
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	467	427	412	80	557	510	491	80	720	659	635
	70	388	349	334	70	463	417	398	70	598	538	515
	50	235	198	184	50	281	237	219	50	363	306	283
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	634	580	559	80	757	692	667	80	977	894	861
	70	527	474	453	70	629	566	541	70	812	731	698
	50	319	269	249	50	381	321	298	50	492	415	384
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	801	733	706	80	956	875	842	80	1 234	1 130	1 088
	70	665	599	572	70	794	715	683	70	1 026	923	882
	50	403	340	315	50	481	406	376	50	622	524	486
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	967	885	853	80	1 155	1 057	1 018	80	1 492	1 365	1 315
	70	804	723	691	70	960	864	825	70	1 240	1 115	1 066
	50	487	411	381	50	582	490	454	50	751	633	587
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 134	1 038	1 000	80	1 354	1 239	1 193	80	1 749	1 600	1 541
	70	943	848	811	70	1 125	1 012	968	70	1 453	1 308	1 250
	50	571	482	446	50	682	575	533	50	881	743	688
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 468	1 343	1 294	80	1 752	1 603	1 544	80	2 263	2 071	1 995
	70	1 220	1 098	1 049	70	1 456	1 310	1 252	70	1 881	1 692	1 618
	50	739	623	577	50	883	744	689	50	1 140	961	890
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 801	1 649	1 588	80	2 150	1 968	1 895	80	2 777	2 542	2 448
	70	1 497	1 347	1 288	70	1 787	1 608	1 537	70	2 308	2 077	1 985
	50	907	765	709	50	1 083	913	846	50	1 399	1 180	1 093



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.

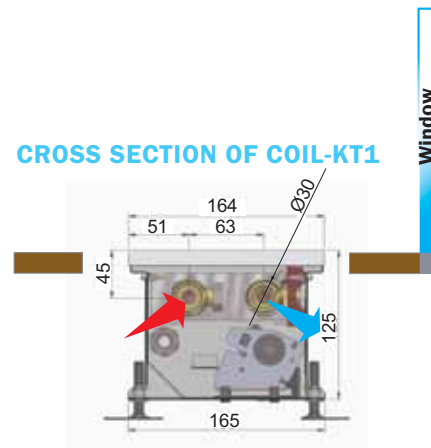
TEMPERATURE EQUATION

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

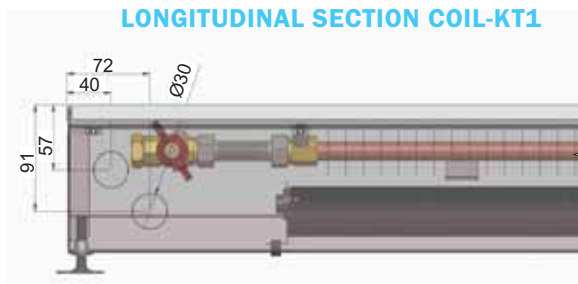
where:

- m**= 1,1887 temperature exponent
- t_w** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT1



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	600	546	524	80	639	581	558	80	727	661	635
	70	492	440	419	70	524	468	445	70	596	532	507
	50	288	239	221	50	306	255	235	50	348	290	267
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	700	637	612	80	745	677	651	80	848	771	740
	70	574	513	488	70	611	545	520	70	695	621	591
	50	336	279	257	50	357	297	274	50	406	338	312
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	951	864	830	80	1 011	919	883	80	1 151	1 046	1 005
	70	779	696	663	70	829	740	705	70	943	842	802
	50	455	379	349	50	484	403	372	50	551	459	423
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 201	1 092	1 049	80	1 277	1 161	1 115	80	1 453	1 321	1 269
	70	984	879	837	70	1 047	935	891	70	1 192	1 064	1 014
	50	575	479	441	50	612	509	469	50	696	580	534
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 451	1 319	1 267	80	1 543	1 403	1 348	80	1 756	1 597	1 534
	70	1 190	1 062	1 012	70	1 265	1 130	1 076	70	1 440	1 286	1 225
	50	695	579	533	50	739	616	567	50	841	701	645
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 701	1 547	1 486	80	1 809	1 645	1 580	80	2 059	1 872	1 798
	70	1 395	1 245	1 186	70	1 483	1 325	1 262	70	1 688	1 507	1 436
	50	815	678	625	50	867	722	665	50	986	821	757
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 201	2 001	1 922	80	2 342	2 129	2 045	80	2 665	2 423	2 327
	70	1 805	1 612	1 535	70	1 920	1 714	1 633	70	2 185	1 951	1 858
	50	1 055	878	809	50	1 122	934	860	50	1 277	1 063	979
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 702	2 456	2 359	80	2 874	2 613	2 510	80	3 270	2 973	2 856
	70	2 215	1 978	1 884	70	2 356	2 104	2 004	70	2 681	2 394	2 281
	50	1 294	1 078	993	50	1 377	1 146	1 056	50	1 567	1 304	1 202



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.

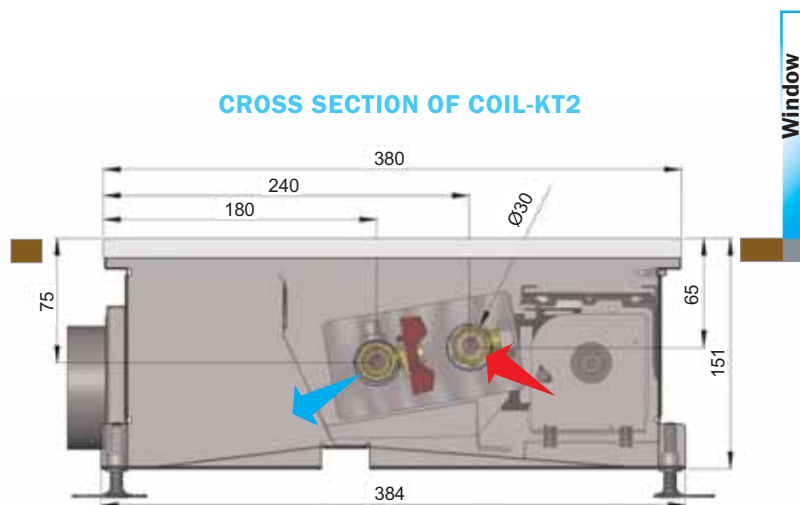
TEMPERATURE EQUATION

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

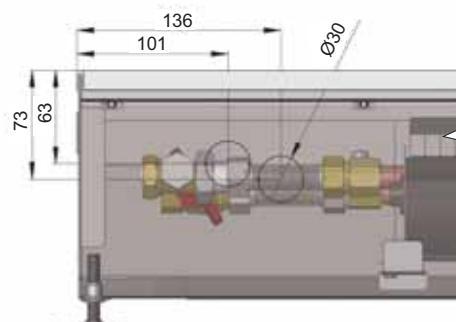
where:

- m**= 1.0127 temperature exponent
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT2



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	1 341	1 251	1 215	90	1 465	1 366	1 327	90	1 634	1 524	1 480
	80	1 161	1 070	1 034	80	1 268	1 169	1 129	80	1 414	1 304	1 260
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	50	620	530	495	50	677	579	540	50	755	646	602
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	1 565	1 459	1 417	90	1 710	1 594	1 548	90	1 906	1 778	1 726
	80	1 354	1 249	1 206	80	1 479	1 364	1 318	80	1 649	1 521	1 469
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	50	723	619	577	50	790	676	630	50	881	754	703
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	2 124	1 981	1 923	90	2 320	2 164	2 101	90	2 587	2 413	2 343
	80	1 837	1 694	1 637	80	2 007	1 851	1 788	80	2 238	2 064	1 994
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	50	982	840	783	50	1 072	917	855	50	1 196	1 023	954
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	2 683	2 502	2 430	90	2 931	2 733	2 654	90	3 268	3 047	2 959
	80	2 321	2 140	2 068	80	2 535	2 338	2 259	80	2 827	2 607	2 519
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	50	1 240	1 061	989	50	1 354	1 159	1 081	50	1 510	1 292	1 205
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	3 242	3 023	2 936	90	3 541	3 302	3 207	90	3 949	3 682	3 576
	80	2 805	2 586	2 499	80	3 063	2 825	2 730	80	3 416	3 150	3 044
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	50	1 498	1 282	1 195	50	1 637	1 400	1 306	50	1 825	1 561	1 456
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	3 801	3 544	3 442	90	4 152	3 872	3 760	90	4 630	4 317	4 192
	80	3 288	3 032	2 930	80	3 592	3 312	3 200	80	4 005	3 693	3 569
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	50	1 757	1 503	1 401	50	1 919	1 641	1 531	50	2 140	1 830	1 707
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature _w	90	4 919	4 587	4 454	90	5 373	5 010	4 865	90	5 991	5 587	5 425
	80	4 255	3 924	3 791	80	4 648	4 286	4 141	80	5 183	4 780	4 618
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	50	2 273	1 945	1 814	50	2 483	2 124	1 981	50	2 769	2 369	2 209



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 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.**

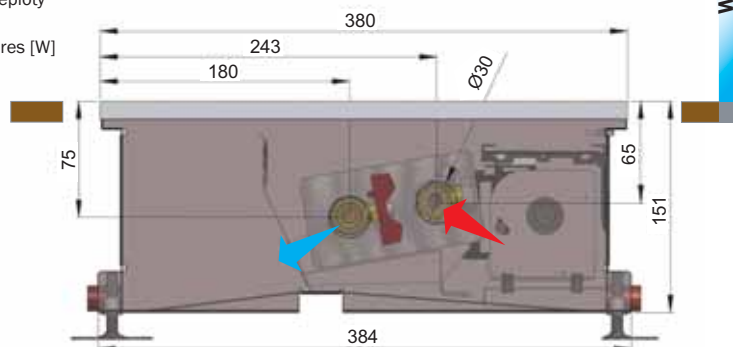
TEMPERATURE EQUATION

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

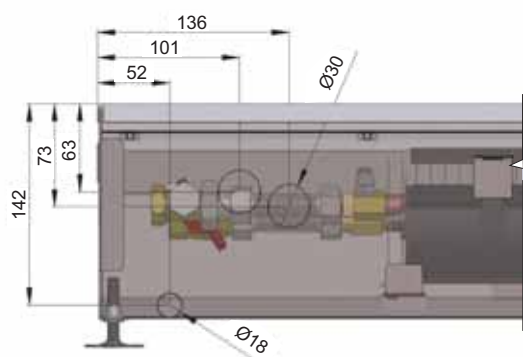
where:

- m=** 1.0127 temperature exponent
- t_w** mean heating water temperature, vzduchu [°C]
- t_A** jmenovitý HEAT TRANSFER RATE pro teploty
- Q_N** t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-K02



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 161	1 070	1 034	80	1 268	1 169	1 129	80	1 414	1 304	1 260
	70	980	890	854	70	1 070	972	933	70	1 194	1 084	1 040
	50	620	530	495	50	677	579	540	50	755	646	602
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 354	1 249	1 206	80	1 479	1 364	1 318	80	1 649	1 521	1 469
	70	1 143	1 038	996	70	1 249	1 134	1 088	70	1 392	1 264	1 213
	50	723	619	577	50	790	676	630	50	881	754	703
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 837	1 694	1 637	80	2 007	1 851	1 788	80	2 238	2 064	1 994
	70	1 551	1 409	1 352	70	1 695	1 539	1 476	70	1 890	1 716	1 646
	50	982	840	783	50	1 072	917	855	50	1 196	1 023	954
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 321	2 140	2 068	80	2 535	2 338	2 259	80	2 827	2 607	2 519
	70	1 960	1 779	1 707	70	2 141	1 944	1 865	70	2 387	2 167	2 080
	50	1 240	1 061	989	50	1 354	1 159	1 081	50	1 510	1 292	1 205
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 805	2 586	2 499	80	3 063	2 825	2 730	80	3 416	3 150	3 044
	70	2 368	2 150	2 063	70	2 587	2 349	2 254	70	2 884	2 619	2 513
	50	1 498	1 282	1 195	50	1 637	1 400	1 306	50	1 825	1 561	1 456
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 288	3 032	2 930	80	3 592	3 312	3 200	80	4 005	3 693	3 569
	70	2 776	2 521	2 419	70	3 033	2 754	2 642	70	3 382	3 071	2 946
	50	1 757	1 503	1 401	50	1 919	1 641	1 531	50	2 140	1 830	1 707
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 255	3 924	3 791	80	4 648	4 286	4 141	80	5 183	4 780	4 618
	70	3 593	3 262	3 130	70	3 925	3 563	3 419	70	4 376	3 974	3 813
	50	2 273	1 945	1 814	50	2 483	2 124	1 981	50	2 769	2 369	2 209





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.

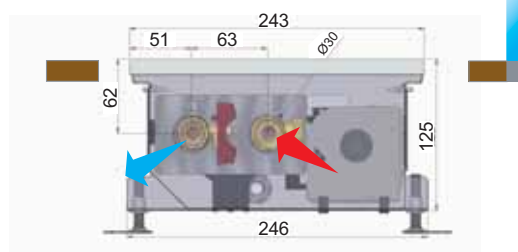
TEMPERATURE EQUATION

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

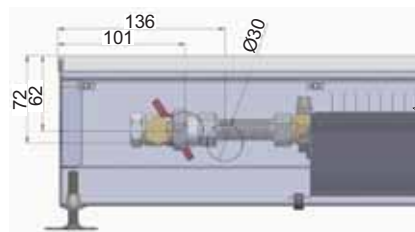
where:

- m=** 1,1059 temperature exponent
- t_w** mean heating water temperature, °C
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT3



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	778	712	686	80	835	764	736	80	971	888	856
	70	647	582	556	70	694	625	597	70	807	726	694
	50	392	331	307	50	421	355	329	50	490	413	382
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	908	831	800	80	974	891	859	80	1 133	1 037	998
	70	754	679	649	70	810	729	697	70	941	847	810
	50	458	386	358	50	491	414	384	50	571	482	446
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 232	1 127	1 086	80	1 322	1 210	1 165	80	1 537	1 407	1 355
	70	1 024	922	881	70	1 099	989	945	70	1 278	1 150	1 099
	50	621	524	485	50	667	562	521	50	775	654	606
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 556	1 424	1 372	80	1 670	1 528	1 472	80	1 941	1 777	1 712
	70	1 293	1 164	1 113	70	1 388	1 249	1 194	70	1 614	1 453	1 388
	50	785	662	613	50	842	710	658	50	979	826	765
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 880	1 721	1 657	80	2 018	1 847	1 779	80	2 346	2 147	2 068
	70	1 563	1 407	1 344	70	1 677	1 509	1 443	70	1 950	1 755	1 678
	50	948	799	741	50	1 017	858	795	50	1 183	998	924
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 204	2 017	1 943	80	2 365	2 165	2 085	80	2 750	2 517	2 425
	70	1 832	1 649	1 576	70	1 966	1 770	1 692	70	2 286	2 058	1 967
	50	1 112	937	868	50	1 193	1 006	932	50	1 387	1 170	1 084
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 852	2 611	2 515	80	3 061	2 802	2 699	80	3 559	3 258	3 138
	70	2 371	2 134	2 040	70	2 545	2 290	2 189	70	2 959	2 663	2 545
	50	1 438	1 213	1 124	50	1 544	1 302	1 206	50	1 795	1 514	1 402
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 501	3 204	3 086	80	3 757	3 439	3 312	80	4 368	3 998	3 851
	70	2 910	2 619	2 503	70	3 123	2 811	2 687	70	3 631	3 268	3 124
	50	1 765	1 489	1 379	50	1 895	1 598	1 480	50	2 203	1 858	1 721



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.

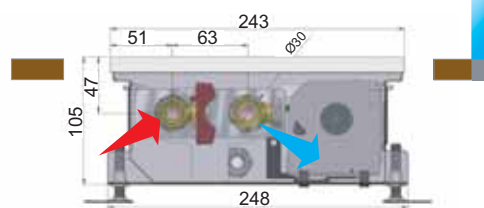
TEMPERATURE EQUATION

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

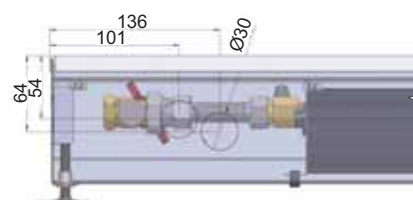
where:

- m=** 1,10542 temperature exponent
- t_w** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KT3 105



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 019	936	903	80	1 157	1 064	1 026	80	1 368	1 257	1 213
	70	854	773	740	70	970	878	841	70	1 147	1 037	993
	50	530	451	419	50	603	512	476	50	712	605	563
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 189	1 092	1 054	80	1 350	1 241	1 197	80	1 595	1 466	1 415
	70	997	901	863	70	1 132	1 024	981	70	1 338	1 210	1 159
	50	619	526	489	50	703	598	556	50	831	706	657
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 613	1 483	1 431	80	1 832	1 684	1 625	80	2 165	1 990	1 920
	70	1 353	1 223	1 172	70	1 537	1 390	1 331	70	1 816	1 642	1 573
	50	840	714	664	50	954	811	754	50	1 127	958	891
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 038	1 873	1 807	80	2 315	2 127	2 053	80	2 735	2 514	2 426
	70	1 709	1 545	1 480	70	1 941	1 755	1 681	70	2 293	2 074	1 987
	50	1 061	902	839	50	1 205	1 024	953	50	1 424	1 211	1 126
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 462	2 263	2 183	80	2 797	2 571	2 480	80	3 305	3 038	2 931
	70	2 065	1 867	1 789	70	2 345	2 121	2 032	70	2 771	2 506	2 401
	50	1 282	1 090	1 013	50	1 456	1 238	1 151	50	1 721	1 463	1 360
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 887	2 653	2 560	80	3 279	3 014	2 908	80	3 875	3 561	3 436
	70	2 420	2 189	2 097	70	2 750	2 487	2 382	70	3 249	2 939	2 815
	50	1 503	1 278	1 188	50	1 707	1 451	1 350	50	2 018	1 715	1 595
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 736	3 433	3 313	80	4 244	3 900	3 763	80	5 014	4 609	4 447
	70	3 132	2 833	2 714	70	3 558	3 218	3 083	70	4 205	3 803	3 643
	50	1 945	1 653	1 537	50	2 210	1 878	1 746	50	2 611	2 219	2 064
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 585	4 214	4 066	80	5 208	4 787	4 619	80	6 154	5 656	5 457
	70	3 844	3 477	3 330	70	4 367	3 950	3 783	70	5 160	4 667	4 470
	50	2 387	2 029	1 887	50	2 712	2 305	2 143	50	3 204	2 724	2 533



COIL - T50

CHARACTERISTICS

- ✘ lowest height MINIB convector with fan
- ✘ construction height only 50 mm
- ✘ supplied only with 12.7 mm high Al grille

DIMENSIONS

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

CHARAKTERISTIKA

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 it and is made from aluminium. The convector body is manufactured to match the colour of the grille – either silver eloxal coating or light bronze.

This convector has been supplied with connection fittings and flexible hoses “3/8” for connection of the heat exchanger since 1st May 2009.

Info:

This convector is newly supplied with levelling screws.

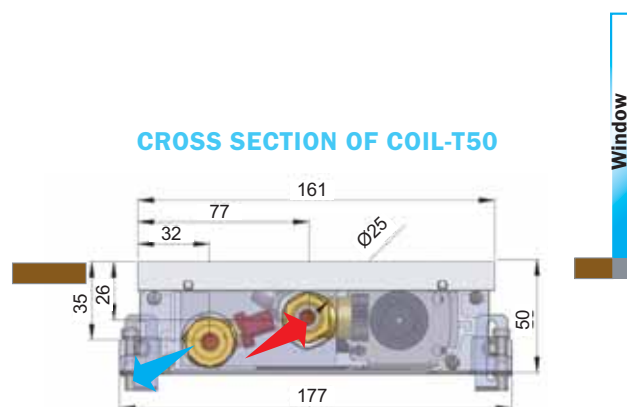
TEMPERATURE EQUATION

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

where:

- m**= 0,9955 temperature exponent
- t_w, t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-T50



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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	390	360	348	80	503	464	449	80	729	673	651
	70	330	300	288	70	426	387	372	70	617	561	539
	50	210	180	168	50	271	233	217	50	394	338	315
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	454	420	406	80	586	541	524	80	851	785	759
	70	385	350	336	70	497	452	434	70	720	655	629
	50	245	210	197	50	317	272	254	50	459	394	368
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	617	570	551	80	796	735	710	80	1 154	1 066	1 030
	70	522	475	456	70	674	613	588	70	977	889	854
	50	333	286	267	50	430	369	344	50	623	535	499
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	779	719	696	80	1 005	928	897	80	1 458	1 346	1 302
	70	660	600	576	70	851	774	743	70	1 235	1 123	1 078
	50	421	361	337	50	543	466	435	50	787	675	630
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	941	869	840	80	1 215	1 122	1 084	80	1 762	1 627	1 573
	70	797	725	696	70	1 029	935	898	70	1 492	1 357	1 303
	50	508	436	407	50	656	563	525	50	951	816	762
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 104	1 019	985	80	1 424	1 315	1 271	80	2 066	1 907	1 844
	70	935	850	816	70	1 206	1 097	1 053	70	1 749	1 591	1 527
	50	596	511	477	50	769	660	616	50	1 115	957	893
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 428	1 319	1 275	80	1 843	1 702	1 645	80	2 673	2 468	2 386
	70	1 209	1 100	1 056	70	1 561	1 419	1 363	70	2 263	2 059	1 977
	50	771	661	618	50	995	854	797	50	1 443	1 238	1 156
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 753	1 619	1 565	80	2 262	2 089	2 019	80	3 281	3 029	2 929
	70	1 484	1 350	1 296	70	1 915	1 742	1 673	70	2 778	2 526	2 426
	50	946	812	758	50	1 221	1 047	978	50	1 771	1 519	1 418



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.

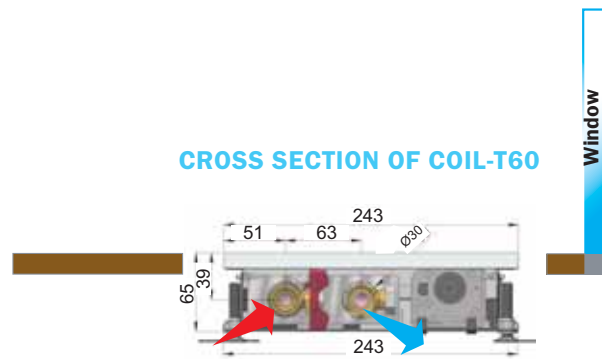
TEMPERATURE EQUATION

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

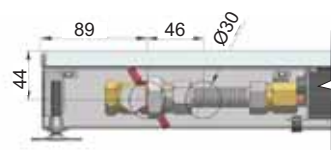
where:

- m=** 1,0966 temperature exponent
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-T60



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	728	667	643	80	877	804	774	80	1 131	1 036	998
	70	606	546	522	70	730	658	629	70	941	848	811
	50	369	312	289	50	445	376	348	50	573	484	449
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	849	778	750	80	1 024	938	903	80	1 319	1 208	1 164
	70	707	637	609	70	852	768	734	70	1 098	989	946
	50	431	364	337	50	519	438	406	50	669	565	524
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 153	1 056	1 017	80	1 389	1 272	1 226	80	1 790	1 640	1 580
	70	960	865	827	70	1 157	1 042	996	70	1 491	1 343	1 284
	50	585	494	458	50	705	595	552	50	908	767	711
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 456	1 334	1 285	80	1 755	1 607	1 549	80	2 261	2 071	1 996
	70	1 212	1 092	1 044	70	1 461	1 316	1 258	70	1 883	1 696	1 622
	50	739	624	578	50	890	752	697	50	1 147	969	898
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 759	1 612	1 553	80	2 120	1 942	1 871	80	2 733	2 503	2 412
	70	1 465	1 320	1 262	70	1 765	1 590	1 521	70	2 275	2 049	1 960
	50	892	754	699	50	1 075	908	842	50	1 386	1 170	1 085
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 063	1 889	1 820	80	2 486	2 277	2 194	80	3 204	2 934	2 827
	70	1 717	1 547	1 479	70	2 070	1 864	1 783	70	2 667	2 403	2 297
	50	1 046	883	819	50	1 261	1 065	987	50	1 625	1 372	1 272
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 669	2 445	2 356	80	3 217	2 947	2 839	80	4 146	3 798	3 659
	70	2 223	2 002	1 914	70	2 678	2 413	2 307	70	3 452	3 109	2 973
	50	1 354	1 143	1 060	50	1 632	1 378	1 277	50	2 103	1 776	1 646
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 276	3 001	2 891	80	3 948	3 616	3 484	80	5 088	4 661	4 491
	70	2 728	2 457	2 349	70	3 287	2 961	2 831	70	4 236	3 816	3 649
	50	1 662	1 403	1 301	50	2 002	1 691	1 568	50	2 581	2 179	2 021



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

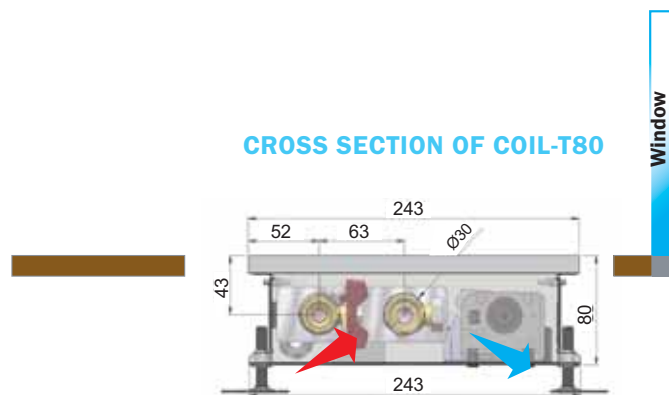
Designed for individual use in dry interiors with higher heating demands on intensity of heating and low construction height requirements (up to 80 mm) when the deeper COIL-KT or COIL-KT3 units cannot be used.

TEMPERATURE EQUATION

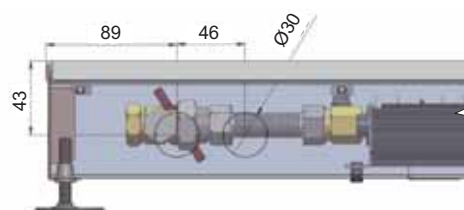
$$Q = Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:

- $m = 1,0966$ temperature exponent
- t_w mean heating water temperature,
- t_A mean air temperature [°C]
- Q_N nominal heat transfer rate for difference of temperatures $t_w - t_A = 50$ °C [W]
- Q heat transfer rate for other temperatures [W]



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	870	797	767	80	1 047	959	924	80	1 350	1 237	1 192
	70	724	652	624	70	872	786	751	70	1 124	1 013	968
	50	441	372	345	50	531	449	416	50	685	578	536
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 015	929	895	80	1 222	1 119	1 078	80	1 576	1 443	1 390
	70	845	761	728	70	1 017	916	876	70	1 312	1 182	1 130
	50	515	435	403	50	620	523	485	50	799	675	626
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 377	1 261	1 215	80	1 658	1 519	1 464	80	2 138	1 959	1 887
	70	1 146	1 033	987	70	1 381	1 244	1 189	70	1 780	1 604	1 533
	50	698	590	547	50	841	710	659	50	1 084	916	849
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 739	1 593	1 535	80	2 095	1 919	1 849	80	2 701	2 474	2 384
	70	1 448	1 304	1 247	70	1 744	1 571	1 502	70	2 249	2 026	1 937
	50	882	745	691	50	1 063	897	832	50	1 370	1 157	1 073
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 102	1 925	1 855	80	2 531	2 319	2 234	80	3 264	2 989	2 880
	70	1 750	1 576	1 507	70	2 108	1 898	1 815	70	2 717	2 448	2 340
	50	1 066	900	835	50	1 284	1 084	1 005	50	1 655	1 398	1 296
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 464	2 257	2 175	80	2 968	2 718	2 619	80	3 826	3 505	3 377
	70	2 051	1 848	1 767	70	2 471	2 226	2 128	70	3 186	2 870	2 744
	50	1 250	1 055	978	50	1 505	1 271	1 178	50	1 941	1 639	1 519
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 189	2 921	2 814	80	3 841	3 518	3 389	80	4 952	4 536	4 370
	70	2 655	2 391	2 287	70	3 198	2 880	2 754	70	4 123	3 714	3 551
	50	1 617	1 366	1 266	50	1 948	1 645	1 525	50	2 511	2 121	1 966
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 913	3 584	3 454	80	4 713	4 317	4 160	80	6 077	5 566	5 363
	70	3 258	2 935	2 806	70	3 924	3 535	3 380	70	5 060	4 558	4 358
	50	1 985	1 676	1 554	50	2 391	2 019	1 872	50	3 082	2 603	2 413



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.

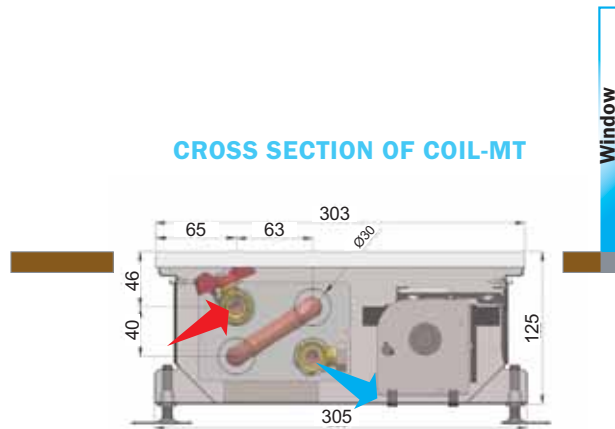
TEMPERATURE EQUATION

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

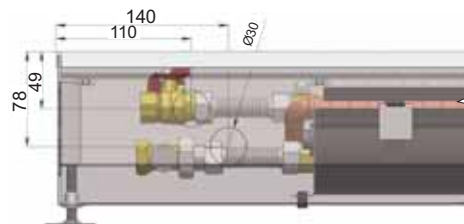
where:

- m**= 1,0435 temperature exponent
- t_w** mean heating water temperature, °C
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-MT



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 499	1 379	1 331	80	1 571	1 445	1 395	80	1 718	1 580	1 525
	70	1 259	1 140	1 092	70	1 320	1 195	1 145	70	1 443	1 307	1 252
	50	786	669	622	50	824	701	653	50	900	767	713
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 749	1 609	1 553	80	1 833	1 686	1 628	80	2 004	1 844	1 780
	70	1 469	1 330	1 275	70	1 540	1 394	1 336	70	1 684	1 524	1 461
	50	917	780	726	50	961	818	761	50	1 051	894	832
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 373	2 183	2 107	80	2 488	2 289	2 209	80	2 720	2 502	2 415
	70	1 994	1 805	1 730	70	2 090	1 892	1 813	70	2 285	2 069	1 982
	50	1 244	1 059	986	50	1 304	1 110	1 033	50	1 426	1 214	1 130
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 998	2 758	2 662	80	3 143	2 891	2 790	80	3 436	3 161	3 051
	70	2 518	2 280	2 185	70	2 640	2 390	2 290	70	2 886	2 613	2 504
	50	1 571	1 338	1 245	50	1 647	1 402	1 305	50	1 801	1 533	1 427
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 623	3 332	3 216	80	3 797	3 493	3 372	80	4 152	3 819	3 686
	70	3 043	2 755	2 640	70	3 190	2 888	2 767	70	3 488	3 157	3 026
	50	1 899	1 617	1 504	50	1 990	1 695	1 577	50	2 176	1 853	1 724
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 247	3 907	3 771	80	4 452	4 095	3 953	80	4 868	4 477	4 322
	70	3 568	3 230	3 095	70	3 740	3 386	3 245	70	4 089	3 702	3 547
	50	2 226	1 895	1 764	50	2 334	1 987	1 849	50	2 551	2 172	2 021
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	5 496	5 056	4 880	80	5 762	5 300	5 116	80	6 299	5 794	5 593
	70	4 617	4 180	4 006	70	4 840	4 382	4 199	70	5 291	4 791	4 591
	50	2 881	2 453	2 282	50	3 020	2 571	2 393	50	3 302	2 811	2 616
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	6 746	6 205	5 989	80	7 071	6 504	6 278	80	7 731	7 111	6 864
	70	5 666	5 130	4 916	70	5 940	5 378	5 153	70	6 494	5 879	5 634
	50	3 536	3 010	2 801	50	3 706	3 156	2 936	50	4 052	3 450	3 210



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. 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.**

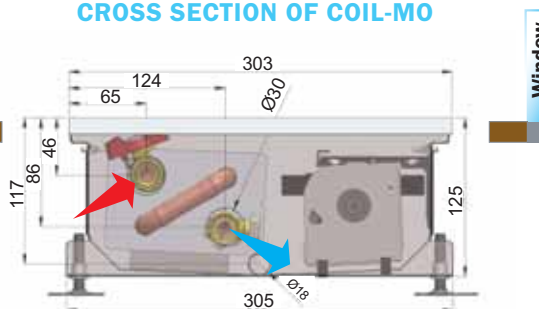
TEMPERATURE EQUATION

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

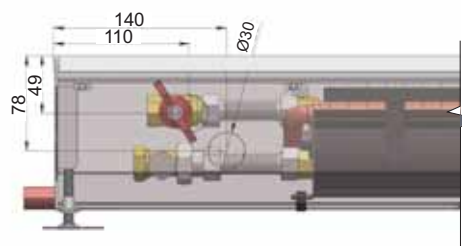
where:

- m=** 1,0435 temperature exponent
- t_w / t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-MO



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 499	1 379	1 331	80	1 571	1 445	1 395	80	1 718	1 580	1 525
	70	1 259	1 140	1 092	70	1 320	1 195	1 145	70	1 443	1 307	1 252
	50	786	669	622	50	824	701	653	50	900	767	713
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 749	1 609	1 553	80	1 833	1 686	1 628	80	2 004	1 844	1 780
	70	1 469	1 330	1 275	70	1 540	1 394	1 336	70	1 684	1 524	1 461
	50	917	780	726	50	961	818	761	50	1 051	894	832
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 373	2 183	2 107	80	2 488	2 289	2 209	80	2 720	2 502	2 415
	70	1 994	1 805	1 730	70	2 090	1 892	1 813	70	2 285	2 069	1 982
	50	1 244	1 059	986	50	1 304	1 110	1 033	50	1 426	1 214	1 130
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 998	2 758	2 662	80	3 143	2 891	2 790	80	3 436	3 161	3 051
	70	2 518	2 280	2 185	70	2 640	2 390	2 290	70	2 886	2 613	2 504
	50	1 571	1 338	1 245	50	1 647	1 402	1 305	50	1 801	1 533	1 427
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 623	3 332	3 216	80	3 797	3 493	3 372	80	4 152	3 819	3 686
	70	3 043	2 755	2 640	70	3 190	2 888	2 767	70	3 488	3 157	3 026
	50	1 899	1 617	1 504	50	1 990	1 695	1 577	50	2 176	1 853	1 724
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 247	3 907	3 771	80	4 452	4 095	3 953	80	4 868	4 477	4 322
	70	3 568	3 230	3 095	70	3 740	3 386	3 245	70	4 089	3 702	3 547
	50	2 226	1 895	1 764	50	2 334	1 987	1 849	50	2 551	2 172	2 021
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	5 496	5 056	4 880	80	5 762	5 300	5 116	80	6 299	5 794	5 593
	70	4 617	4 180	4 006	70	4 840	4 382	4 199	70	5 291	4 791	4 591
	50	2 881	2 453	2 282	50	3 020	2 571	2 393	50	3 302	2 811	2 616
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	6 746	6 205	5 989	80	7 071	6 504	6 278	80	7 731	7 111	6 864
	70	5 666	5 130	4 916	70	5 940	5 378	5 153	70	6 494	5 879	5 634
	50	3 536	3 010	2 801	50	3 706	3 156	2 936	50	4 052	3 450	3 210

Cooling effect of the convector COIL - MO:

For water flow temperatures of 6/12.C take an estimated cooling output of 200W/per linear metre at speed 2 and approximately 350W per linear metre at speed 3.



COIL - HC

CHARACTERISTICS

- ✘ very effective convector for heating and cooling
- ✘ 2-pipe connection
- ✘ air is blown tangentially into the interior
- ✘ cooling output approximately 1000 W for the 2-meter long convector
- ✘ implied condensate outlet

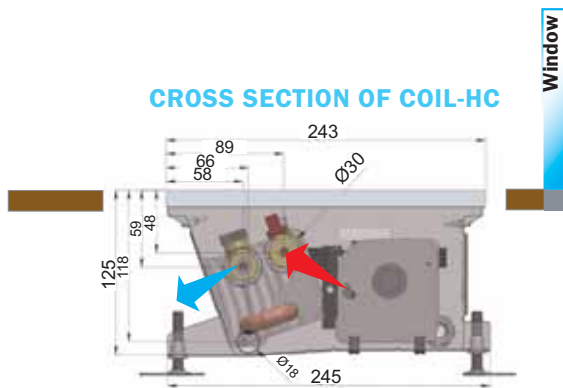
DIMENSIONS

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

USAGE

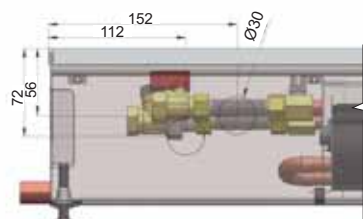
COIL - HC is the MINIB floor convector specially designed for both heating and cooling of the space. The convector has the 2-pipe connection and common cooling and heating circuit. The air is tangentially blown across the floor of the room to a distance of 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows.

This convector has been supplied with connection fittings and flexible hoses “3/8” for connection of the heat exchanger since 1st May 2009.



CROSS SECTION OF COIL-HC

LONGITUDINAL SECTION COIL-HC



TEMPERATURE EQUATION FOR HEATING

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

where:
m= 1,0455 temperature exponent
t_w / t_A mean heating water temperature, mean air temperature [°C]
Q_N nominal heat transfer rate for temperatures t_w / t_A = 70/20 °C [W]
Q heat transfer rate for other temperatures [W]

TEMPERATURE EQUATION FOR COOLING

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

where:
m= 0,864 teplotní exponen
t_w / t_A mean heating water temperature, mean air temperature [°C]
Q_N nominal heat transfer rate for temperatures t_w / t_A = 9/26 °C [W]
Q heat transfer rate for other temperatures [W]

HEAT TRANSFER RATE Q [W] COIL - HC

COOLING TRANSFER RATE Q [W] COIL - HC



		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 317	1 225	1 189	90	1 446	1 345	1 305	90	1 734	1 613	1 565
	80	1 134	1 043	1 007	80	1 245	1 145	1 105	80	1 493	1 373	1 325
	70	952	862	826	70	1 045	946	907	70	1 253	1 135	1 087
	50	594	505	470	50	652	555	516	50	781	665	619
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 537	1 430	1 387	90	1 687	1 569	1 523	90	2 022	1 882	1 825
	80	1 323	1 217	1 175	80	1 452	1 336	1 289	80	1 741	1 602	1 546
	70	1 111	1 006	964	70	1 220	1 104	1 058	70	1 462	1 324	1 268
	50	693	590	549	50	760	647	602	50	912	776	722
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 085	1 940	1 882	90	2 289	2 130	2 066	90	2 745	2 554	2 477
	80	1 796	1 652	1 594	80	1 971	1 813	1 750	80	2 363	2 174	2 098
	70	1 508	1 365	1 308	70	1 655	1 498	1 436	70	1 985	1 796	1 721
	50	940	800	744	50	1 032	878	817	50	1 237	1 053	980
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 634	2 451	2 378	90	2 892	2 691	2 610	90	3 467	3 226	3 129
	80	2 268	2 086	2 013	80	2 490	2 290	2 210	80	2 985	2 746	2 650
	70	1 905	1 724	1 652	70	2 091	1 893	1 813	70	2 507	2 269	2 174
	50	1 187	1 011	940	50	1 303	1 109	1 032	50	1 563	1 330	1 238
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 183	2 962	2 873	90	3 494	3 251	3 154	90	4 189	3 898	3 781
	80	2 741	2 521	2 433	80	3 009	2 767	2 671	80	3 607	3 318	3 202
	70	2 302	2 083	1 996	70	2 526	2 287	2 191	70	3 029	2 742	2 627
	50	1 435	1 221	1 136	50	1 575	1 341	1 247	50	1 888	1 607	1 495
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 732	3 472	3 369	90	4 097	3 812	3 698	90	4 912	4 570	4 433
	80	3 213	2 955	2 852	80	3 527	3 244	3 131	80	4 229	3 890	3 754
	70	2 698	2 442	2 340	70	2 962	2 681	2 569	70	3 551	3 214	3 080
	50	1 682	1 432	1 332	50	1 847	1 572	1 462	50	2 214	1 884	1 753
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 830	4 493	4 359	90	5 302	4 933	4 785	90	6 356	5 914	5 737
	80	4 158	3 825	3 691	80	4 565	4 198	4 052	80	5 473	5 034	4 858
	70	3 492	3 161	3 029	70	3 833	3 470	3 325	70	4 596	4 160	3 986
	50	2 177	1 853	1 724	50	2 390	2 034	1 892	50	2 865	2 439	2 269
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	5 927	5 515	5 350	90	6 507	6 054	5 873	90	7 801	7 258	7 041
	80	5 104	4 694	4 530	80	5 602	5 153	4 973	80	6 717	6 177	5 962
	70	4 286	3 879	3 717	70	4 704	4 258	4 080	70	5 640	5 105	4 892
	50	2 672	2 274	2 116	50	2 933	2 496	2 322	50	3 516	2 993	2 784

		2 med. speed				3 max. speed				
		length L (mm) 900				length L (mm) 900				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	306	324	341	359	9 <td>340</td> <td>360</td> <td>379</td> <td>398</td>	340	360	379	398
	11	271	289	306	324	11 <td>301</td> <td>321</td> <td>340</td> <td>360</td>	301	321	340	360
	13	234	253	271	289	13 <td>260</td> <td>281</td> <td>301</td> <td>321</td>	260	281	301	321
	15	197	216	234	253	15 <td>219</td> <td>240</td> <td>260</td> <td>281</td>	219	240	260	281
16	178	197	216	234	16 <td>198</td> <td>219</td> <td>240</td> <td>260</td>	198	219	240	260	
		length L (mm) 1000				length L (mm) 1000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	357	378	398	418	9 <td>397</td> <td>420</td> <td>442</td> <td>465</td>	397	420	442	465
	11	316	337	357	378	11 <td>351</td> <td>374</td> <td>397</td> <td>420</td>	351	374	397	420
	13	273	295	316	337	13 <td>304</td> <td>327</td> <td>351</td> <td>374</td>	304	327	351	374
	15	230	252	273	295	15 <td>255</td> <td>280</td> <td>304</td> <td>327</td>	255	280	304	327
16	208	230	252	273	16 <td>231</td> <td>255</td> <td>280</td> <td>304</td>	231	255	280	304	
		length L (mm) 1250				length L (mm) 1250				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	485	513	540	568	9 <td>539</td> <td>570</td> <td>600</td> <td>631</td>	539	570	600	631
	11	429	457	485	513	11 <td>476</td> <td>508</td> <td>539</td> <td>570</td>	476	508	539	570
	13	371	400	429	457	13 <td>412</td> <td>444</td> <td>476</td> <td>508</td>	412	444	476	508
	15	312	342	371	400	15 <td>347</td> <td>380</td> <td>412</td> <td>444</td>	347	380	412	444
16	282	312	342	371	16 <td>313</td> <td>347</td> <td>380</td> <td>412</td>	313	347	380	412	
		length L (mm) 1500				length L (mm) 1500				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	613	648	682	717	9 <td>681</td> <td>720</td> <td>758</td> <td>797</td>	681	720	758	797
	11	541	577	613	648	11 <td>602</td> <td>641</td> <td>681</td> <td>720</td>	602	641	681	720
	13	469	505	541	577	13 <td>521</td> <td>561</td> <td>602</td> <td>641</td>	521	561	602	641
	15	394	431	469	505	15 <td>438</td> <td>480</td> <td>521</td> <td>561</td>	438	480	521	561
16	356	394	431	469	16 <td>395</td> <td>438</td> <td>480</td> <td>521</td>	395	438	480	521	
		length L (mm) 1750				length L (mm) 1750				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	740	783	825	866	9 <td>822</td> <td>870</td> <td>916</td> <td>963</td>	822	870	916	963
	11	654	697	740	783	11 <td>727</td> <td>775</td> <td>822</td> <td>870</td>	727	775	822	870
	13	566	610	654	697	13 <td>629</td> <td>678</td> <td>727</td> <td>775</td>	629	678	727	775
	15	476	521	566	610	15 <td>529</td> <td>579</td> <td>629</td> <td>678</td>	529	579	629	678
16	430	476	521	566	16 <td>478</td> <td>529</td> <td>579</td> <td>629</td>	478	529	579	629	
		length L (mm) 2000				length L (mm) 2000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	868	917	967	1 016	9 <td>964</td> <td>1 020</td> <td>1 074</td> <td>1 129</td>	964	1 020	1 074	1 129
	11	767	818	868	917	11 <td>852</td> <td>908</td> <td>964</td> <td>1 020</td>	852	908	964	1 020
	13	664	716	767	818	13 <td>738</td> <td>795</td> <td>852</td> <td>908</td>	738	795	852	908
	15	558	611	664	716	15 <td>620</td> <td>679</td> <td>738</td> <td>795</td>	620	679	738	795
16	504	558	611	664	16 <td>560</td> <td>620</td> <td>679</td> <td>738</td>	560	620	679	738	
		length L (mm) 2500				length L (mm) 2500				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	1 123	1 187	1 251	1 315	9 <td>1 248</td> <td>1 319</td> <td>1 390</td> <td>1 461</td>	1 248	1 319	1 390	1 461
	11	992	1 058	1 123	1 187	11 <td>1 103</td> <td>1 176</td> <td>1 248</td> <td>1 319</td>	1 103	1 176	1 248	1 319
	13	859	926	992	1 058	13 <td>955</td> <td>1 029</td> <td>1 103</td> <td>1 176</td>	955	1 029	1 103	1 176
	15	722	791	859	926	15 <td>803</td> <td>879</td> <td>955</td> <td>1 029</td>	803	879	955	1 029
16	652	722	791	859	16 <td>725</td> <td>803</td> <td>879</td> <td>955</td>	725	803	879	955	
		length L (mm) 3000				length L (mm) 3000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	1 378	1 457	1 536	1 613	9 <td>1 531</td> <td>1 619</td> <td>1 706</td> <td>1 793</td>	1 531	1 619	1 706	1 793
	11	1 218	1 298	1 378	1 457	11 <td>1 353</td> <td>1 443</td> <td>1 531</td> <td>1 619</td>	1 353	1 443	1 531	1 619
	13	1 054	1 136	1 218	1 298	13 <td>1 171</td> <td>1 263</td> <td>1 353</td> <td>1 443</td>	1 171	1 263	1 353	1 443
	15	886	971	1 054	1 136	15 <td>985</td> <td>1 079</td> <td>1 171</td> <td>1 263</td>	985	1 079	1 171	1 263
16	801	886	971	1 054	16 <td>890</td> <td>985</td> <td>1 079</td> <td>1 171</td>	890	985	1 079	1 171	



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
- ✘ 4 pipe connection

DIMENSIONS

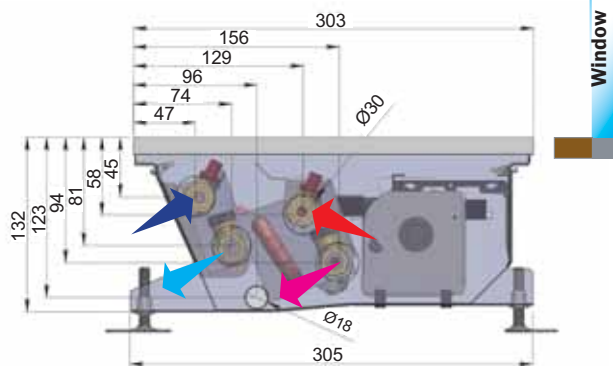
total width	303 mm
construction height	132 mm
length L	900 to 3000 mm

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.

This convector has been supplied with connection fittings and flexible hoses "3/8" for connection of the heat exchanger since 1st May 2009.

CROSS SECTION OF COIL-HC4pipe



TEMPERATURE EQUATION FOR HEATING

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

where:
m= 1,0864 temperature exponent
t_w / t_A mean heating water temperature, mean air temperature [°C]
Q_N nominal heat transfer rate for temperatures t_w / t_A = 70/20 °C [W]
Q heat transfer rate for other temperatures [W]

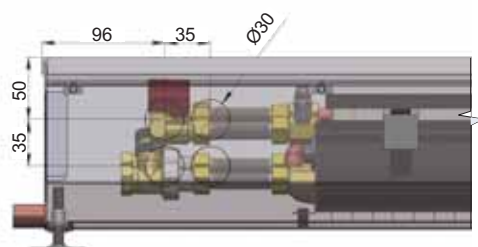
TEMPERATURE EQUATION FOR COOLING

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

where:
m= 0,907 temperature exponent
t_w / t_A mean heating water temperature, mean air temperature [°C]
Q_N nominal heat transfer rate for temperatures t_w / t_A = 9/26 °C [W]
Q heat transfer rate for other temperatures [W]

LONGITUDINAL SECTION COIL-HC4pipe

- outlet = heating circuit
- inlet = cooling circuit
- inlet = heating circuit
- outlet = cooling circuit



HEAT TRANSFER RATE Q [W] COIL - HC4P

COOLING TRANSFER RATE Q [W] COIL - HC4P

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 100	1 020	989	90	1 202	1 115	1 081	90	1 320	1 224	1 186
	80	941	863	832	80	1 029	943	909	80	1 130	1 035	998
	70	785	708	677	70	858	774	740	70	942	849	813
	50	480	406	377	50	525	444	412	50	577	488	452
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 283	1 190	1 153	90	1 402	1 301	1 261	90	1 539	1 428	1 384
	80	1 098	1 007	970	80	1 200	1 100	1 061	80	1 318	1 208	1 164
	70	916	826	790	70	1 001	903	863	70	1 099	991	948
	50	561	474	440	50	613	518	481	50	673	569	528
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	1 741	1 615	1 565	90	1 903	1 766	1 711	90	2 089	1 938	1 878
	80	1 490	1 366	1 317	80	1 629	1 493	1 439	80	1 788	1 640	1 580
	70	1 243	1 121	1 072	70	1 359	1 225	1 172	70	1 492	1 345	1 287
	50	761	643	597	50	831	703	652	50	913	772	716
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 199	2 040	1 977	90	2 404	2 230	2 161	90	2 639	2 449	2 373
	80	1 883	1 726	1 663	80	2 058	1 886	1 818	80	2 259	2 071	1 996
	70	1 570	1 416	1 354	70	1 716	1 547	1 480	70	1 884	1 699	1 625
	50	961	813	754	50	1 050	888	824	50	1 153	975	905
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	2 657	2 465	2 389	90	2 904	2 695	2 611	90	3 189	2 959	2 867
	80	2 275	2 085	2 010	80	2 486	2 279	2 197	80	2 730	2 502	2 412
	70	1 897	1 711	1 636	70	2 074	1 870	1 789	70	2 277	2 053	1 964
	50	1 161	982	911	50	1 269	1 073	996	50	1 393	1 178	1 093
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	3 116	2 891	2 801	90	3 405	3 159	3 061	90	3 739	3 469	3 361
	80	2 667	2 445	2 356	80	2 915	2 672	2 576	80	3 200	2 934	2 828
	70	2 224	2 006	1 919	70	2 431	2 192	2 097	70	2 669	2 407	2 302
	50	1 361	1 151	1 068	50	1 488	1 258	1 168	50	1 634	1 382	1 282
		length L (mm) 2500			length L (mm) 2500			length L (mm) 2500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 032	3 741	3 625	90	4 407	4 089	3 962	90	4 838	4 489	4 350
	80	3 451	3 164	3 049	80	3 772	3 458	3 333	80	4 142	3 797	3 660
	70	2 879	2 595	2 483	70	3 146	2 837	2 714	70	3 454	3 115	2 979
	50	1 762	1 490	1 382	50	1 925	1 629	1 511	50	2 114	1 788	1 659
		length L (mm) 3000			length L (mm) 3000			length L (mm) 3000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature t _w	90	4 948	4 591	4 449	90	5 408	5 018	4 862	90	5 938	5 509	5 338
	80	4 236	3 883	3 743	80	4 630	4 244	4 091	80	5 083	4 660	4 491
	70	3 533	3 185	3 047	70	3 861	3 481	3 330	70	4 239	3 822	3 657
	50	2 162	1 829	1 697	50	2 363	1 999	1 854	50	2 595	2 194	2 036

		2 med. speed				3 max. speed				
		length L (mm) 900				length L (mm) 900				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	314	333	351	370	9	339	359	379	399
	11	276	295	314	333	11	297	318	339	359
	13	237	256	276	295	13	256	277	297	318
	15	197	217	237	256	15	213	234	256	277
	16	177	197	217	237	16	191	213	234	256
		length L (mm) 1000				length L (mm) 1000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	366	388	410	432	9	395	419	443	466
	11	321	344	366	388	11	347	371	395	419
	13	276	299	321	344	13	298	323	347	371
	15	230	253	276	299	15	249	273	298	323
	16	207	230	253	276	16	223	249	273	298
		length L (mm) 1250				length L (mm) 1250				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	497	527	556	586	9 <td>536</td> <td>568</td> <td>601</td> <td>632</td>	536	568	601	632
	11	436	467	497	527	11	471	504	536	568
	13	375	406	436	467	13	405	438	471	504
	15	313	344	375	406	15	337	371	405	438
	16	281	313	344	375	16 <td>303</td> <td>337</td> <td>371</td> <td>405</td>	303	337	371	405
		length L (mm) 1500				length L (mm) 1500				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	627	665	703	740	9 <td>677</td> <td>718</td> <td>759</td> <td>799</td>	677	718	759	799
	11	551	589	627	665	11 <td>595</td> <td>636</td> <td>677</td> <td>718</td>	595	636	677	718
	13	474	512	551	589	13 <td>511</td> <td>553</td> <td>595</td> <td>636</td>	511	553	595	636
	15	395	434	474	512	15 <td>426</td> <td>469</td> <td>511</td> <td>553</td>	426	469	511	553
	16	355	395	434	474	16 <td>383</td> <td>426</td> <td>469</td> <td>511</td>	383	426	469	511
		length L (mm) 1750				length L (mm) 1750				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	758	804	849	894	9 <td>818</td> <td>868</td> <td>917</td> <td>965</td>	818	868	917	965
	11	666	712	758	804	11 <td>719</td> <td>769</td> <td>818</td> <td>868</td>	719	769	818	868
	13	572	619	666	712	13 <td>618</td> <td>668</td> <td>719</td> <td>769</td>	618	668	719	769
	15	477	525	572	619	15 <td>515</td> <td>566</td> <td>618</td> <td>668</td>	515	566	618	668
	16	429	477	525	572	16 <td>463</td> <td>515</td> <td>566</td> <td>618</td>	463	515	566	618
		length L (mm) 2000				length L (mm) 2000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	889	942	996	1 049	9 <td>959</td> <td>1 017</td> <td>1 075</td> <td>1 132</td>	959	1 017	1 075	1 132
	11	781	835	889	942	11 <td>843</td> <td>901</td> <td>959</td> <td>1 017</td>	843	901	959	1 017
	13	671	726	781	835	13 <td>724</td> <td>784</td> <td>843</td> <td>901</td>	724	784	843	901
	15	559	615	671	726	15 <td>604</td> <td>664</td> <td>724</td> <td>784</td>	604	664	724	784
	16	503	559	615	671	16 <td>542</td> <td>604</td> <td>664</td> <td>724</td>	542	604	664	724
		length L (mm) 2500				length L (mm) 2500				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	1 150	1 220	1 289	1 357	9 <td>1 241</td> <td>1 316</td> <td>1 391</td> <td>1 465</td>	1 241	1 316	1 391	1 465
	11	1 010	1 081	1 150	1 220	11 <td>1 090</td> <td>1 166</td> <td>1 241</td> <td>1 316</td>	1 090	1 166	1 241	1 316
	13	868	940	1 010	1 081	13 <td>937</td> <td>1 014</td> <td>1 090</td> <td>1 166</td>	937	1 014	1 090	1 166
	15	724	796	868	940	15 <td>781</td> <td>859</td> <td>937</td> <td>1 014</td>	781	859	937	1 014
	16	650	724	796	868	16 <td>702</td> <td>781</td> <td>859</td> <td>937</td>	702	781	859	937
		length L (mm) 3000				length L (mm) 3000				
		mean air temperature tA				mean air temperature tA				
		24	25	26	27	24	25	26	27	
mean water temperature t _w	9	1 412	1 497	1 581	1 666	9 <td>1 524</td> <td>1 615</td> <td>1 707</td> <td>1 798</td>	1 524	1 615	1 707	1 798
	11	1 240	1 326	1 412	1 497	11 <td>1 338</td> <td>1 431</td> <td>1 524</td> <td>1 615</td>	1 338	1 431	1 524	1 615
	13	1 066	1 153	1 240	1 326	13 <td>1 150</td> <td>1 244</td> <td>1 338</td> <td>1 431</td>	1 150	1 244	1 338	1 431
	15	888	977	1 066	1 153	15 <td>959</td> <td>1 055</td> <td>1 150</td> <td>1 244</td>	959	1 055	1 150	1 244
	16	798	888	977	1 066	16 <td>862</td> <td>959</td> <td>1 055</td> <td>1 150</td>	862	959	1 055	1 150





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
- ✘ 2-pipe connection

DIMENSIONS

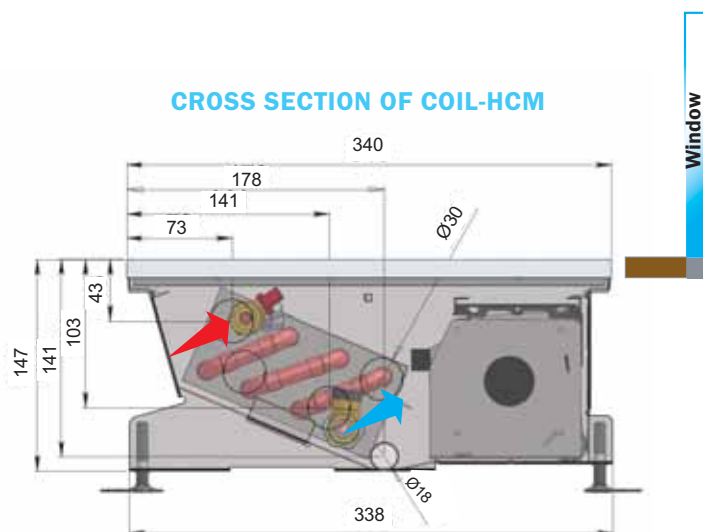
total width	340 mm
construction height	147 mm
length L	900 to 2000 mm

USAGE

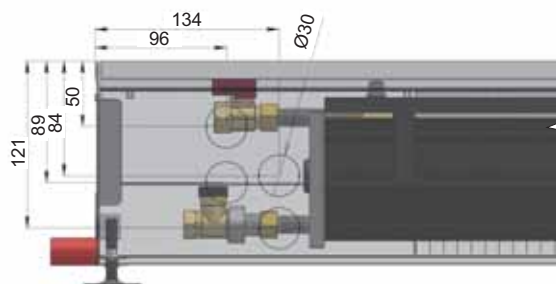
COIL-HCM is a MINIB floor convector specially designed for intensive heating and cooling of the space. The convector has the 2-pipe connection, which achieves the maximum heating and cooling output. The air is tangentially blown to the floor of the room up to a distance of 3 to 4 m – so that in summer there is a lightly flowing cool air effect in locations remote from the windows.

This convector has been supplied with connection fittings and flexible hoses “3/8” for connection of the heat exchanger since 1st May 2009.

CROSS SECTION OF COIL-HCM



LONGITUDINAL SECTION 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 tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
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
	80	1 999	1 849	1 789	80	2 424	2 243	2 170	80	3 008	2 782	2 692
	70	1 699	1 549	1 488	70	2 060	1 878	1 805	70	2 556	2 330	2 239
	50	1 094	942	880	50	1 327	1 142	1 068	50	1 646	1 417	1 325
	length L (mm) 1000			length L (mm) 1000			length L (mm) 1000					
	mean air temperature tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
mean water temperature t _w	90	2 681	2 507	2 437	90	3 251	3 040	2 955	90	4 034	3 772	3 667
	80	2 332	2 158	2 088	80	2 828	2 616	2 531	80	3 509	3 246	3 141
	70	1 982	1 807	1 736	70	2 404	2 191	2 105	70	2 982	2 718	2 612
	50	1 276	1 099	1 027	50	1 548	1 332	1 246	50	1 920	1 653	1 545
	length L (mm) 1250			length L (mm) 1250			length L (mm) 1250					
	mean air temperature tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
mean water temperature t _w	90	3 639	3 402	3 308	90	4 413	4 126	4 011	90	5 475	5 119	4 976
	80	3 166	2 928	2 833	80	3 839	3 551	3 435	80	4 762	4 405	4 262
	70	2 690	2 452	2 356	70	3 262	2 973	2 857	70	4 047	3 689	3 545
	50	1 732	1 491	1 394	50	2 101	1 808	1 690	50	2 606	2 243	2 097
	length L (mm) 1500			length L (mm) 1500			length L (mm) 1500					
	mean air temperature tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
mean water temperature t _w	90	4 596	4 298	4 178	90	5 574	5 212	5 066	90	6 915	6 466	6 286
	80	3 999	3 699	3 579	80	4 849	4 485	4 339	80	6 016	5 565	5 384
	70	3 398	3 097	2 976	70	4 121	3 755	3 609	70	5 113	4 659	4 478
	50	2 188	1 883	1 761	50	2 654	2 284	2 135	50	3 292	2 833	2 649
	length L (mm) 1750			length L (mm) 1750			length L (mm) 1750					
	mean air temperature tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
mean water temperature t _w	90	5 554	5 193	5 049	90	6 735	6 297	6 122	90	8 356	7 813	7 596
	80	4 832	4 469	4 324	80	5 859	5 420	5 244	80	7 269	6 724	6 506
	70	4 106	3 742	3 596	70	4 979	4 538	4 361	70	6 178	5 630	5 411
	50	2 644	2 276	2 128	50	3 206	2 759	2 580	50	3 978	3 424	3 201
	length L (mm) 2000			length L (mm) 2000			length L (mm) 2000					
	mean air temperature tA			mean air temperature tA			mean air temperature tA					
	15	20	22	15	20	22	15	20	22			
mean water temperature t _w	90	6 512	6 089	5 919	90	7 896	7 383	7 178	90	9 797	9 160	8 905
	80	5 665	5 240	5 070	80	6 869	6 354	6 148	80	8 522	7 883	7 627
	70	4 814	4 387	4 216	70	5 838	5 320	5 113	70	7 243	6 601	6 344
	50	3 100	2 668	2 495	50	3 759	3 235	3 025	50	4 664	4 014	3 753

COOLING TRANSFER RATE Q [W] COIL - HCM

	2 med. speed				3 max. speed					
	length L (mm) 900				length L (mm) 900					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
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
	length L (mm) 1000				length L (mm) 1000					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	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
	15	400	444	488	533	15	467	518	570	622
	16	355	400	444	488	16	415	467	518	570
	length L (mm) 1250				length L (mm) 1250					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	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
	15	542	602	663	723	15	633	703	774	844
	16	482	542	602	663	16	563	633	703	774
	length L (mm) 1500				length L (mm) 1500					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	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
	15	685	761	837	913	15	800	889	977	1 066
	16	609	685	761	837	16	711	800	889	977
	length L (mm) 1750				length L (mm) 1750					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	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
	15	828	920	1 012	1 104	15	966	1 074	1 181	1 288
	16	736	828	920	1 012	16	859	966	1 074	1 181
	length L (mm) 2000				length L (mm) 2000					
	mean air temperature tA				mean air temperature tA					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	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
	15	970	1 078	1 186	1 294	15	1 133	1 259	1 385	1 511
	16	863	970	1 078	1 186	16	1 007	1 133	1 259	1 385



TEMPERATURE EQUATION FOR HEATING

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

- where:
- m= 0,9738 temperature exponent
 - t_w, t_A mean heating water temperature, mean air temperature [°C]
 - Q_N nominal heat transfer rate for temperatures t_w / t_A = 70/20 °C [W]
 - Q heat transfer rate for other temperatures [W]

TEMPERATURE EQUATION FOR COOLING

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

- where:
- m= 1 temperature exponent
 - t_w, t_A mean heating water temperature, mean air temperature [°C]
 - Q_N nominal heat transfer rate for temperatures t_w / t_A = 9/26 °C [W]
 - Q heat transfer rate for other temperatures [W]



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 4-pipe system with the separated heating and cooling circuit
- ✘ implied condensate outlet

DIMENSIONS

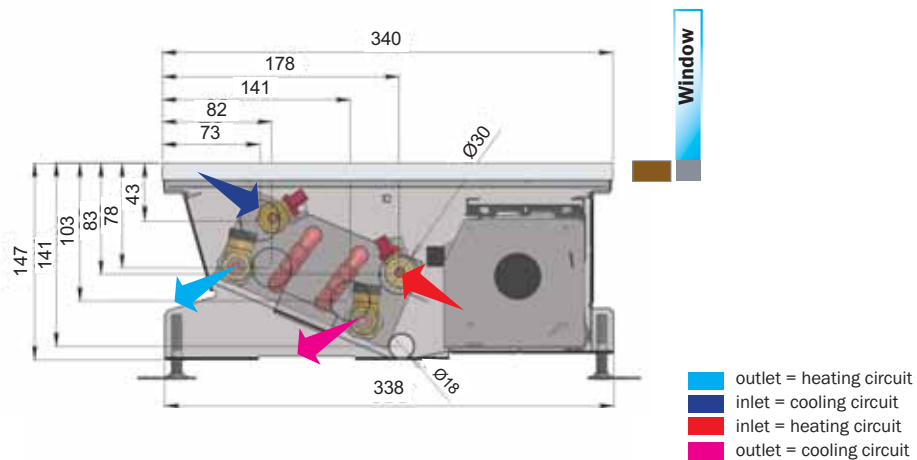
total width	340 mm
construction height	147 mm
length L	900 to 2000 mm

USAGE

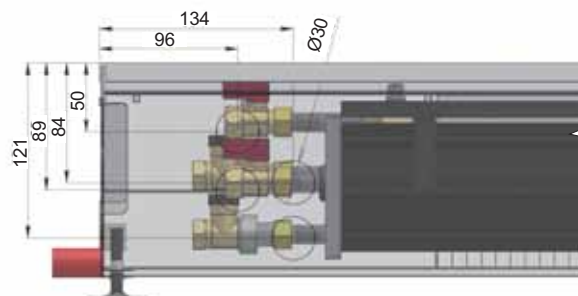
COIL-HCM4pipe is a MINIB floor convector specially designed for intensive heating and cooling of the space. The convector has the 4-pipe connection. The air is tangentially blown to the floor of the room up to a distance of 3 to 4 m - so that in summer there is a lightly flowing cool air effect in locations remote from the windows.

This convector has been supplied with connection fittings and flexible hoses "3/8" for connection of the heat exchanger since 1st May 2009.

CROSS SECTION OF COIL-HCM4pipe



LONGITUDINAL SECTION COIL-HCM4pipe



HEAT TRANSFER RATE Q [W] COIL - HCM4P

	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	1 292	1 201	1 165	90	1 445	1 343	1 303	90	1 625	1 510	1 464
	80	1 110	1 020	984	80	1 242	1 141	1 101	80	1 396	1 283	1 237
	70	930	841	805	70	1 040	941	901	70	1 170	1 057	1 013
	50	576	490	455	50	645	548	509	50	725	616	572
	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	1 507	1 401	1 359	90	1 686	1 567	1 520	90	1 895	1 762	1 709
	80	1 295	1 190	1 148	80	1 449	1 331	1 284	80	1 629	1 496	1 444
	70	1 085	981	940	70	1 214	1 097	1 051	70	1 365	1 234	1 181
	50	672	571	530	50	752	639	594	50	845	718	668
	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	2 046	1 902	1 844	90	2 288	2 127	2 063	90	2 572	2 391	2 319
	80	1 758	1 615	1 558	80	1 966	1 806	1 743	80	2 210	2 031	1 959
	70	1 473	1 331	1 275	70	1 647	1 489	1 426	70	1 852	1 674	1 603
	50	913	775	720	50	1 021	867	806	50	1 147	975	906
	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	2 584	2 402	2 329	90	2 890	2 687	2 605	90	3 249	3 020	2 929
	80	2 221	2 040	1 968	80	2 484	2 282	2 201	80	2 792	2 565	2 475
	70	1 861	1 682	1 611	70	2 081	1 881	1 801	70	2 339	2 115	2 025
	50	1 153	979	910	50	1 289	1 095	1 018	50	1 449	1 231	1 144
	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	3 122	2 902	2 815	90	3 492	3 246	3 148	90	3 926	3 649	3 539
	80	2 683	2 465	2 378	80	3 001	2 757	2 660	80	3 374	3 100	2 990
	70	2 248	2 032	1 946	70	2 514	2 273	2 177	70	2 827	2 555	2 447
	50	1 393	1 183	1 100	50	1 558	1 323	1 230	50	1 751	1 488	1 383
	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	3 661	3 403	3 300	90	4 094	3 806	3 691	90	4 603	4 279	4 149
	80	3 146	2 890	2 788	80	3 519	3 233	3 119	80	3 956	3 634	3 506
	70	2 636	2 383	2 282	70	2 948	2 665	2 552	70	3 314	2 996	2 869
	50	1 633	1 387	1 289	50	1 826	1 551	1 442	50	2 053	1 744	1 621

COOLING TRANSFER RATE Q [W] COIL - HCM4P

	2 med. speed				3 max. speed					
	length L (mm) 900				length L (mm) 900					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	479	511	543	575	9	624	666	708	749
	11	415	447	479	511	11	541	583	624	666
	13	351	383	415	447	13	458	499	541	583
	15	287	319	351	383	15	375	416	458	499
	16	255	287	319	351	16	333	375	416	458
	length L (mm) 1000				length L (mm) 1000					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	559	596	633	670	9	728	777	826	874
	11	484	521	559	596	11	631	680	728	777
	13	410	447	484	521	13	534	583	631	680
	15	335	372	410	447	15	437	486	534	583
	16	298	335	372	410	16	388	437	486	534
	length L (mm) 1250				length L (mm) 1250					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	758	809	859	910	9	989	1 054	1 120	1 186
	11	657	708	758	809	11	857	923	989	1 054
	13	556	606	657	708	13	725	791	857	923
	15	455	505	556	606	15	593	659	725	791
	16	404	455	505	556	16	527	593	659	725
	length L (mm) 1500				length L (mm) 1500					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	958	1 021	1 085	1 149	9	1 249	1 332	1 415	1 498
	11	830	894	958	1 021	11	1 082	1 165	1 249	1 332
	13	702	766	830	894	13	916	999	1 082	1 165
	15	575	638	702	766	15	749	832	916	999
	16	511	575	638	702	16	666	749	832	916
	length L (mm) 1750				length L (mm) 1750					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	1 157	1 234	1 311	1 389	9	1 509	1 609	1 710	1 811
	11	1 003	1 080	1 157	1 234	11	1 308	1 408	1 509	1 609
	13	849	926	1 003	1 080	13	1 106	1 207	1 308	1 408
	15	694	771	849	926	15	905	1 006	1 106	1 207
	16	617	694	771	849	16	805	905	1 006	1 106
	length L (mm) 2000				length L (mm) 2000					
	mean air temperature t _A				mean air temperature t _A					
	24	25	26	27	24	25	26	27		
mean water temperature t _w	9	1 357	1 447	1 538	1 628	9	1 769	1 887	2 005	2 123
	11	1 176	1 266	1 357	1 447	11	1 533	1 651	1 769	1 887
	13	995	1 085	1 176	1 266	13	1 297	1 415	1 533	1 651
	15	814	904	995	1 085	15	1 061	1 179	1 297	1 415
	16	724	814	904	995	16	943	1 061	1 179	1 297

TEMPERATURE EQUATION FOR HEATING

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

- m= 1,0592 temperature exponent
- t_w t_A mean heating water temperature, mean air temperature [°C]
- Q_N nominal heat transfer rate for temperatures t_w/t_A = 70/20 °C [W]
- Q heat transfer rate for other temperatures [W]

TEMPERATURE EQUATION FOR COOLING

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

- m= 1,0 temperature exponent
- t_w t_A mean heating water temperature, mean air temperature [°C]
- Q_N nominal heat transfer rate for temperatures t_w/t_A = 9/26 °C [W]
- Q heat transfer rate for other temperatures [W]





COIL - MT2

CHARACTERISTICS

- ✘ the most universal MINIB convector
- ✘ automatic angle of airflow
- ✘ heating of dry and wet interiors
- ✘ automatic blowing to window surfaces for demisting
- ✘ partial cooling of the space in the summer
- ✘ use possible only with the MT 2 control

DIMENSIONS

total width	380 mm
construction height	140 mm
length L	900 to 2000 mm

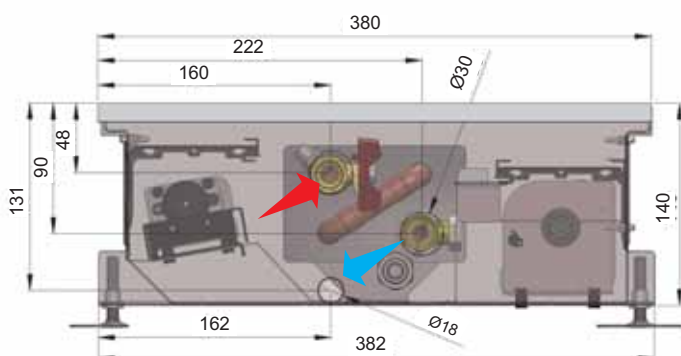
USAGE

This convector includes 12 V DC motors with an extremely low power consumption and economical heating is ensured during operation. It uses the newly developed electronic IQ controller MINIB MT-2. This controller includes automatic continuous speed control of the fan (thus the heat output of the convector) via a microprocessor, automatic angle of airflow, user adjustable max. speed level, night speed reduction, user selection of the operation mode, disabling of fan at low water temperature and contactless, noiseless switching of the thermostat. The multifunctional convector enables automatic inclination of airflow with an extremely high heat output at very low speed. (At temperatures of 75/65/20 °C, the convector achieves a heat output of approx. 1600 W for 1m length at medium speed.). The inclination of the warm airflow to different directions provides (based on the pulse from the sensor) either automatic demisting of steamed up windows by warm air from the convector or intensive heating of objects in the room into the interior by declined airflow. In standard mode, the convector generates the vertical heat curtain providing either heating of the interior or demisting of the window. Thanks to an arrangement of fans the convector can be used for cooling of the space in the summer as the cool air is directed into the room at an angle and not vertically. The fast-acting heat exchanger reacts very quickly to changing requirements and provides user's optimum levels of comfort.

Cooling effect of the convector COIL - MT2:

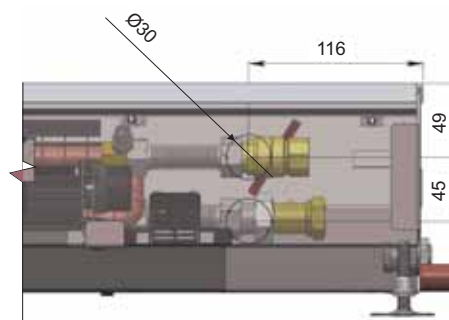
For water flow temperatures of 6/12.C take an estimated cooling output of 300W/per linear metre at speed 2 and approximately 400W per linear metre at speed 3.

CROSS SECTION OF COIL-MT2



Window

LONGITUDINAL SECTION COIL-MT2



HEAT TRANSFER RATE Q [W] COIL - MT2

		1 min. speed			2 med. speed			3 max. speed				
		length L (mm) 900			length L (mm) 900			length L (mm) 900				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	1 983	1 841	1 784	90	2 134	1 980	1 919	90	2 392	2 220	2 152
	80	1 699	1 558	1 502	80	1 828	1 677	1 616	80	2 050	1 880	1 812
	70	1 418	1 280	1 225	70	1 526	1 377	1 318	70	1 711	1 544	1 477
	50	871	737	684	50	937	793	736	50	1 050	889	825
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	2 313	2 147	2 081	90	2 489	2 310	2 239	90	2 791	2 591	2 511
	80	1 982	1 818	1 753	80	2 133	1 956	1 886	80	2 391	2 193	2 114
	70	1 655	1 493	1 429	70	1 781	1 606	1 537	70	1 997	1 801	1 724
	50	1 016	860	798	50	1 093	925	859	50	1 225	1 037	963
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	3 140	2 914	2 824	90	3 378	3 135	3 039	90	3 788	3 516	3 407
	80	2 690	2 467	2 378	80	2 894	2 655	2 559	80	3 245	2 977	2 870
	70	2 246	2 026	1 939	70	2 416	2 180	2 086	70	2 710	2 445	2 339
	50	1 378	1 167	1 083	50	1 483	1 256	1 165	50	1 663	1 408	1 307
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	3 966	3 681	3 568	90	4 267	3 961	3 839	90	4 785	4 441	4 304
	80	3 398	3 116	3 004	80	3 656	3 353	3 233	80	4 099	3 760	3 625
	70	2 837	2 559	2 449	70	3 052	2 754	2 635	70	3 423	3 088	2 955
	50	1 741	1 474	1 368	50	1 873	1 586	1 472	50	2 101	1 778	1 651
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	4 792	4 448	4 311	90	5 156	4 786	4 638	90	5 781	5 366	5 201
	80	4 106	3 766	3 630	80	4 418	4 052	3 906	80	4 953	4 543	4 380
	70	3 428	3 093	2 959	70	3 688	3 328	3 184	70	4 136	3 731	3 570
	50	2 104	1 781	1 653	50	2 264	1 916	1 779	50	2 538	2 149	1 995
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		15	20	22	15	20	22	15	20	22		
mean water temperature tw	90	5 618	5 215	5 054	90	6 045	5 611	5 438	90	6 778	6 291	6 097
	80	4 814	4 415	4 256	80	5 179	4 750	4 580	80	5 807	5 326	5 135
	70	4 019	3 626	3 469	70	4 324	3 901	3 733	70	4 849	4 374	4 186
	50	2 467	2 088	1 938	50	2 654	2 247	2 086	50	2 976	2 519	2 339

TEMPERATURE EQUATION

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

where:

- m**= 1,080 temperature exponent
- t_w** mean heating water temperature, vzduchu [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

SPECIAL CONVECTORS







COIL - TE

CHARACTERISTICS

- ✘ electrical heating of dry interiors
- ✘ electric direct heating convector with 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.

FUNKCE

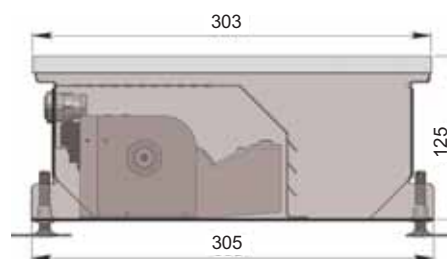
The heat is generated by electrical heating coils that are transversally cooled by fan. The thermal protection of the unit is ensured with temperature limiters reacting to the temperature of the discharge air. The convector has a single fan speed and heat output is fixed at 750 W per 500 mm long convector 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 under skirting, 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. min. speed				2. med. speed				3. max. speed			
		length L (mm)		556	length L (mm)		556	length L (mm)		556	length L (mm)		556
		mean air temperature tA				mean air temperature tA				mean air temperature tA			
		15	20	22	15	20	22	15	20	22	15	20	22
mean water temperature tw	90	526	491	477	554	518	503	714	667	648			
	80	456	422	408	481	444	430	620	573	554			
	70	387	352	338	408	371	356	525	478	459			
	50	247	212	198	261	224	209	336	288	269			

TEMPERATURE EQUATION

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

where:
m= 0,99 temperature exponent
t_w, t_A mean heating water temperature, mean air temperature [°C]
Q_N nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
Q heat transfer rate for other temperatures [W]

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.

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
	80	986	907	876	80	1 235	1 136	1 097	80	1 525	1 404	1 355
	70	829	751	720	70	1 038	941	902	70	1 282	1 162	1 114
	50	519	442	412	50	650	554	516	50	803	684	637
		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
	80	1 150	1 059	1 022	80	1 441	1 326	1 280	80	1 779	1 637	1 581
	70	967	876	840	70	1 212	1 098	1 052	70	1 496	1 355	1 299
	50	606	516	480	50	758	646	602	50	937	798	743
		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
	80	1 561	1 437	1 387	80	1 955	1 799	1 737	80	2 414	2 222	2 146
	70	1 313	1 189	1 140	70	1 644	1 490	1 428	70	2 031	1 840	1 763
	50	822	700	652	50	1 029	877	817	50	1 271	1 083	1 009
		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
	80	1 972	1 815	1 752	80	2 469	2 273	2 194	80	3 050	2 807	2 710
	70	1 658	1 502	1 440	70	2 077	1 882	1 804	70	2 565	2 324	2 227
	50	1 038	885	824	50	1 300	1 108	1 032	50	1 606	1 368	1 274

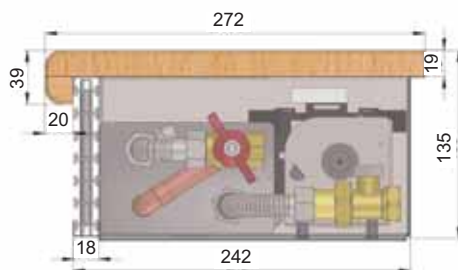
TEMPERATURE EQUATION

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

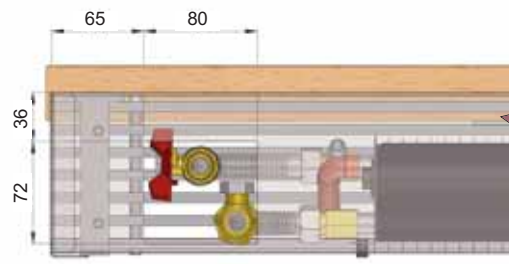
where:

- m= 1,0365 temperature exponent
- t_w mean heating water temperature, mean air temperature [°C]
- t_A mean air temperature [°C]
- Q_N nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-KP



LONGITUDINAL SECTION 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 marble
- ✘ load capacity of the bench up to 150 kg
- ✘ equipped with the thermostatic head

DIMENSIONS

total width 281 mm
 construction height 435 mm
 length L rámu tělesa 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.

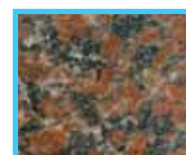
This bench heater is an aesthetic heating option for interiors and swimming pool areas. Marble tops are provided in a range of designs - see details on left. The bench heater is designed for a load up to 150 kg.

Info:

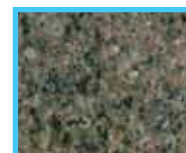
Lengths 1000 and 1250 mm are supplied with the marble top and the convector length of 1500 mm with the beech wooden top.



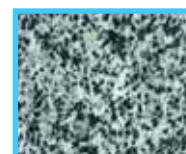
TYPES OF GENUINE GRANITE



red



brown-green



white

TEMPERATURE EQUATION

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

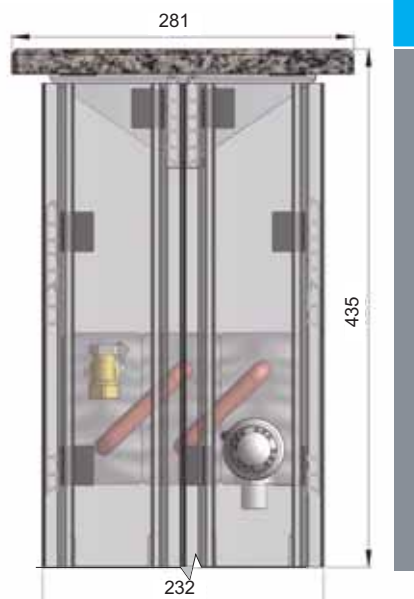
where:

- m**= 1,4035 temperature exponent pro LP+
- t_w t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	1 923	1 719	1 639
	70	1 521	1 331	1 257
	50	807	650	590
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 072	2 789	2 678
	80	2 513	2 246	2 142
	70	1 988	1 739	1 642
	50	1 054	849	771
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 794	3 443	3 306
	80	3 103	2 774	2 645
	70	2 455	2 147	2 028
	50	1 302	1 048	952

CROSS SECTION OF COIL-LP





COIL - DP

CHARACTERISTICS

- ✘ for heating dry interiors
- ✘ easthetic 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.

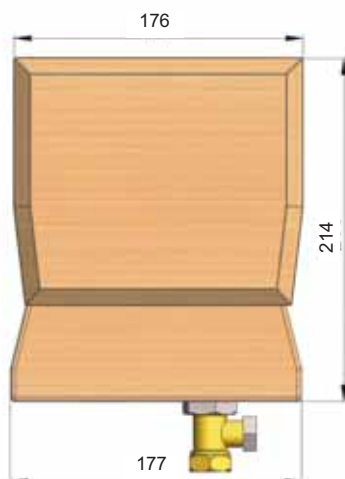
TEMPERATURE EQUATION

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

where:

- m=** 1,3788 temperature exponent
- t_w, t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	747	669	639
	70	594	521	492
	50	318	257	234
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 062	966	928
	80	872	781	745
	70	693	607	574
	50	371	300	273
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 821	1 656	1 591
	80	1 495	1 339	1 277
	70	1 187	1 041	984
	50	637	515	468
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 579	2 345	2 254
	80	2 118	1 896	1 810
	70	1 682	1 475	1 394
	50	902	729	663

WALL AND SELF-STANDING CONVECTORS





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.

Info:

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

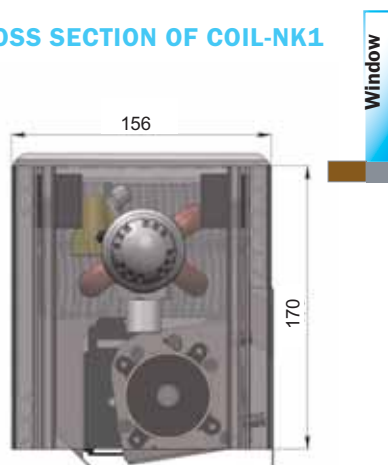
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,0952
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-NK1



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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 159	1 061	1 023	80	1 239	1 135	1 094	80	1 614	1 478	1 425
	70	965	869	831	70	1 032	930	889	70	1 344	1 211	1 158
	50	588	497	461	50	629	531	493	50	819	692	642
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 352	1 238	1 193	80	1 446	1 325	1 276	80	1 883	1 725	1 662
	70	1 126	1 014	970	70	1 204	1 085	1 037	70	1 568	1 413	1 351
	50	686	580	537	50	734	620	575	50	956	807	749
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 834	1 680	1 619	80	1 963	1 798	1 732	80	2 555	2 341	2 255
	70	1 528	1 376	1 316	70	1 634	1 472	1 408	70	2 128	1 917	1 833
	50	931	787	729	50	996	841	780	50	1 297	1 096	1 016
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 317	2 123	2 045	80	2 479	2 271	2 188	80	3 228	2 957	2 849
	70	1 930	1 738	1 662	70	2 064	1 860	1 779	70	2 688	2 422	2 316
	50	1 176	994	921	50	1 258	1 063	986	50	1 638	1 384	1 283
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 800	2 565	2 471	80	2 995	2 744	2 644	80	3 900	3 573	3 443
	70	2 332	2 101	2 009	70	2 495	2 247	2 149	70	3 248	2 926	2 798
	50	1 421	1 201	1 113	50	1 521	1 284	1 191	50	1 980	1 672	1 551
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 283	3 007	2 898	80	3 512	3 217	3 100	80	4 573	4 189	4 036
	70	2 734	2 463	2 355	70	2 925	2 635	2 520	70	3 808	3 431	3 281
	50	1 666	1 408	1 305	50	1 783	1 506	1 396	50	2 321	1 961	1 818



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 od	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.

Info:

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

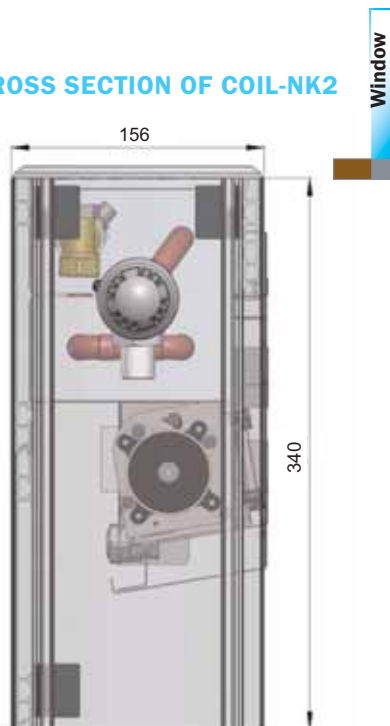
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,171
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 714	1 560	1 500	80	1 802	1 641	1 577	80	2 042	1 859	1 787
	70	1 409	1 260	1 202	70	1 482	1 326	1 264	70	1 679	1 502	1 432
	50	830	693	639	50	873	729	672	50	989	826	762
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 999	1 820	1 750	80	2 103	1 915	1 840	80	2 382	2 169	2 085
	70	1 644	1 470	1 402	70	1 729	1 547	1 474	70	1 959	1 752	1 670
	50	968	808	746	50	1 019	850	784	50	1 154	963	889
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 713	2 471	2 374	80	2 854	2 599	2 497	80	3 233	2 944	2 829
	70	2 231	1 996	1 902	70	2 347	2 099	2 001	70	2 659	2 378	2 267
	50	1 314	1 097	1 012	50	1 382	1 154	1 065	50	1 566	1 307	1 206
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 427	3 121	2 999	80	3 605	3 282	3 155	80	4 084	3 719	3 574
	70	2 818	2 521	2 403	70	2 964	2 651	2 528	70	3 358	3 004	2 864
	50	1 660	1 386	1 278	50	1 746	1 458	1 345	50	1 978	1 652	1 523
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 141	3 771	3 624	80	4 356	3 966	3 812	80	4 935	4 493	4 319
	70	3 406	3 046	2 904	70	3 582	3 204	3 054	70	4 058	3 630	3 460
	50	2 006	1 675	1 545	50	2 110	1 762	1 625	50	2 390	1 996	1 841
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 855	4 421	4 249	80	5 107	4 650	4 469	80	5 786	5 268	5 063
	70	3 993	3 571	3 404	70	4 200	3 756	3 581	70	4 758	4 255	4 057
	50	2 352	1 963	1 811	50	2 474	2 065	1 905	50	2 803	2 340	2 158



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 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.

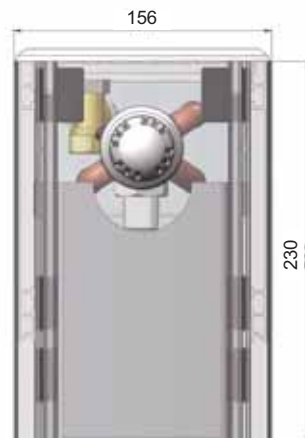
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,0953
- t_w**, **t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-SK1



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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 159	1 061	1 023	80	1 239	1 135	1 094	80	1 614	1 478	1 425
	70	965	869	831	70	1 032	930	889	70	1 344	1 211	1 158
	50	588	497	461	50	629	531	493	50	819	692	642
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 352	1 238	1 193	80	1 446	1 325	1 276	80	1 883	1 725	1 662
	70	1 126	1 014	970	70	1 204	1 085	1 037	70	1 568	1 413	1 351
	50	686	580	537	50	734	620	575	50	956	807	749
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 834	1 680	1 619	80	1 963	1 798	1 732	80	2 555	2 341	2 255
	70	1 528	1 376	1 316	70	1 634	1 472	1 408	70	2 128	1 917	1 833
	50	931	787	729	50	996	841	780	50	1 297	1 096	1 016
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 317	2 123	2 045	80	2 479	2 271	2 188	80	3 228	2 957	2 849
	70	1 930	1 738	1 662	70	2 064	1 860	1 779	70	2 688	2 422	2 316
	50	1 176	994	921	50	1 258	1 063	986	50	1 638	1 384	1 283
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 800	2 565	2 471	80	2 995	2 744	2 644	80	3 900	3 573	3 443
	70	2 332	2 101	2 009	70	2 495	2 247	2 149	70	3 248	2 926	2 798
	50	1 421	1 201	1 113	50	1 521	1 284	1 191	50	1 980	1 672	1 551
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 283	3 007	2 898	80	3 512	3 217	3 100	80	4 573	4 189	4 036
	70	2 734	2 463	2 355	70	2 925	2 635	2 520	70	3 808	3 431	3 281
	50	1 666	1 408	1 305	50	1 783	1 506	1 396	50	2 321	1 961	1 818



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 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.

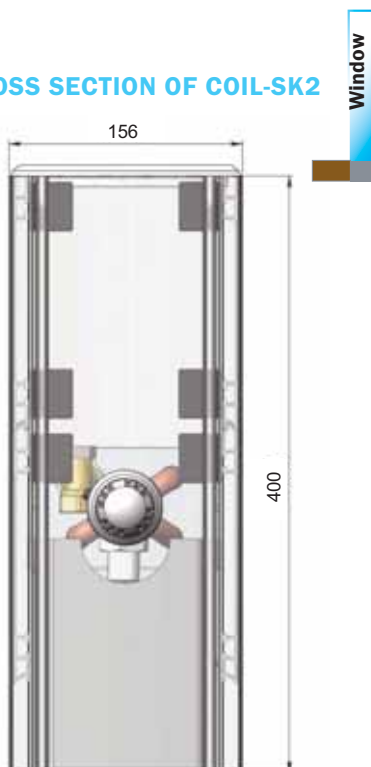
TEMPERATURE EQUATION

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

where:

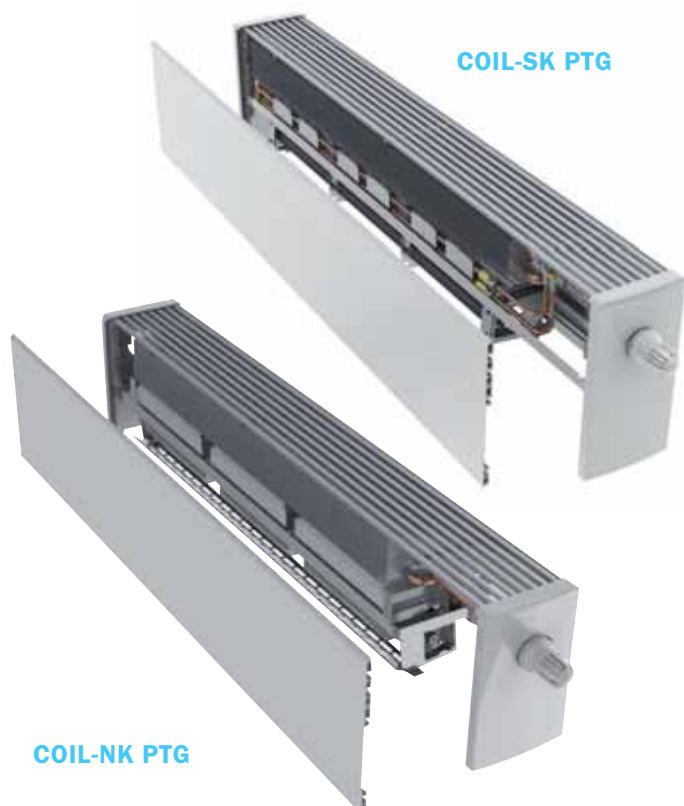
- m**= temperature exponent 1,171
- t_w** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-SK2



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 tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 714	1 560	1 500	80	1 802	1 641	1 577	80	2 042	1 859	1 787
	70	1 409	1 260	1 202	70	1 482	1 326	1 264	70	1 679	1 502	1 432
	50	830	693	639	50	873	729	672	50	989	826	762
		length L (mm) 1000			length L (mm) 1000			length L (mm) 1000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	1 999	1 820	1 750	80	2 103	1 915	1 840	80	2 382	2 169	2 085
	70	1 644	1 470	1 402	70	1 729	1 547	1 474	70	1 959	1 752	1 670
	50	968	808	746	50	1 019	850	784	50	1 154	963	889
		length L (mm) 1250			length L (mm) 1250			length L (mm) 1250				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	2 713	2 471	2 374	80	2 854	2 599	2 497	80	3 233	2 944	2 829
	70	2 231	1 996	1 902	70	2 347	2 099	2 001	70	2 659	2 378	2 267
	50	1 314	1 097	1 012	50	1 382	1 154	1 065	50	1 566	1 307	1 206
		length L (mm) 1500			length L (mm) 1500			length L (mm) 1500				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	3 427	3 121	2 999	80	3 605	3 282	3 155	80	4 084	3 719	3 574
	70	2 818	2 521	2 403	70	2 964	2 651	2 528	70	3 358	3 004	2 864
	50	1 660	1 386	1 278	50	1 746	1 458	1 345	50	1 978	1 652	1 523
		length L (mm) 1750			length L (mm) 1750			length L (mm) 1750				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 141	3 771	3 624	80	4 356	3 966	3 812	80	4 935	4 493	4 319
	70	3 406	3 046	2 904	70	3 582	3 204	3 054	70	4 058	3 630	3 460
	50	2 006	1 675	1 545	50	2 110	1 762	1 625	50	2 390	1 996	1 841
		length L (mm) 2000			length L (mm) 2000			length L (mm) 2000				
		mean air temperature tA			mean air temperature tA			mean air temperature tA				
		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
	80	4 855	4 421	4 249	80	5 107	4 650	4 469	80	5 786	5 268	5 063
	70	3 993	3 571	3 404	70	4 200	3 756	3 581	70	4 758	4 255	4 057
	50	2 352	1 963	1 811	50	2 474	2 065	1 905	50	2 803	2 340	2 158



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

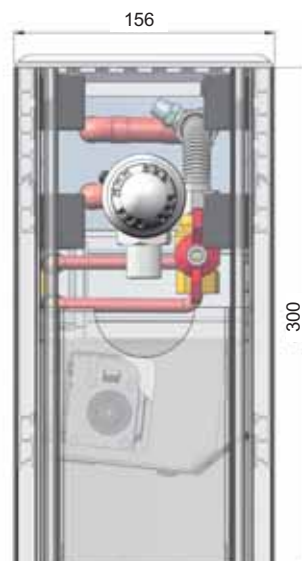
USAGE

PTG convector is a fast reacting heating unit equipped with the thermoelectric generator. There is not needed to install any cable connection to convectors because el. 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.

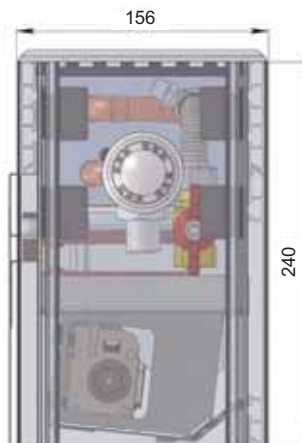
HEAT TRANSFER RATE Q [W] COIL – SK PTG, NK PTG

		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 – 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.

info:

The decorative grille of the convector must not be loaded.



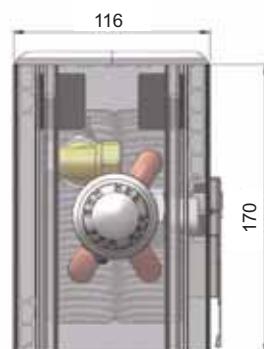
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,3667
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL-NU1



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
	80	675	605	577
	70	537	471	446
	50	289	234	213
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	935	851	818
	80	769	689	658
	70	612	537	508
	50	330	267	243
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 222	1 112	1 069
	80	1 005	901	860
	70	800	702	664
	50	431	349	318
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 509	1 373	1 320
	80	1 241	1 112	1 062
	70	987	867	820
	50	532	431	392
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 796	1 634	1 570
	80	1 477	1 324	1 264
	70	1 175	1 032	976
	50	634	513	467
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 082	1 895	1 821
	80	1 712	1 535	1 465
	70	1 363	1 196	1 131
	50	735	595	542



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.

info:

The decorative grille of the convector must not be loaded.

TEMPERATURE EQUATION

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

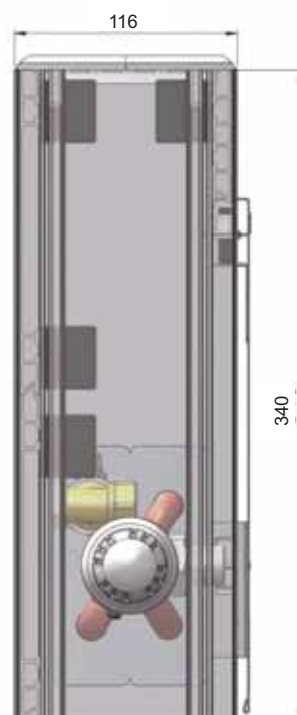
where:

- m**= temperature exponent 1,3667
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	873	782	747
	70	695	610	577
	50	375	303	276
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 210	1 101	1 058
	80	995	892	851
	70	792	695	657
	50	427	346	315
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 581	1 439	1 383
	80	1 300	1 165	1 113
	70	1 035	908	859
	50	558	452	411
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 952	1 776	1 707
	80	1 605	1 439	1 374
	70	1 277	1 121	1 061
	50	689	558	508
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 323	2 114	2 032
	80	1 910	1 712	1 635
	70	1 520	1 335	1 262
	50	820	664	604
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 694	2 452	2 356
	80	2 215	1 986	1 896
	70	1 763	1 548	1 464
	50	951	770	701

CROSS SECTION OF COIL-NU2



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	22	
mean water temperature t _w	90	817	743	714	
	80	671	601	573	
	70	533	467	442	
	50	286	231	210	
		length L (mm) 1000			
		mean air temperature t _A			
		15	20	22	
mean water temperature t _w	90	931	846	813	
	80	764	685	653	
	70	607	533	504	
	50	326	264	240	
		length L (mm) 1250			
		mean air temperature t _A			
		15	20	22	
mean water temperature t _w	90	1 216	1 106	1 063	
	80	999	895	854	
	70	794	696	658	
	50	426	345	313	
		length L (mm) 1500			
		mean air temperature t _A			
		15	20	22	
mean water temperature t _w	90	1 502	1 366	1 312	
	80	1 233	1 105	1 054	
	70	980	859	813	
	50	526	425	387	
		length L (mm) 1750			
		mean air temperature t _A			
		15	20	22	
mean water temperature t _w	90	1 787	1 625	1 562	
	80	1 468	1 315	1 255	
	70	1 166	1 023	967	
	50	626	506	461	
		length L (mm) 2000			
		mean air temperature t _A			
		15	20	22	
mean water temperature t _w	90	2 073	1 885	1 811	
	80	1 702	1 525	1 455	
	70	1 353	1 186	1 121	
	50	726	587	534	

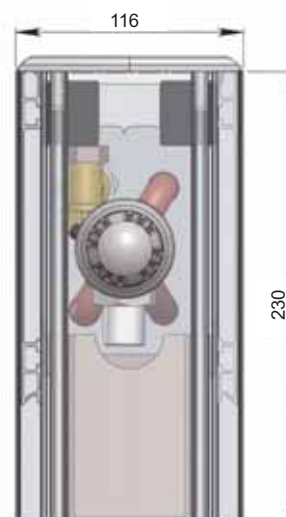
TEMPERATURE EQUATION

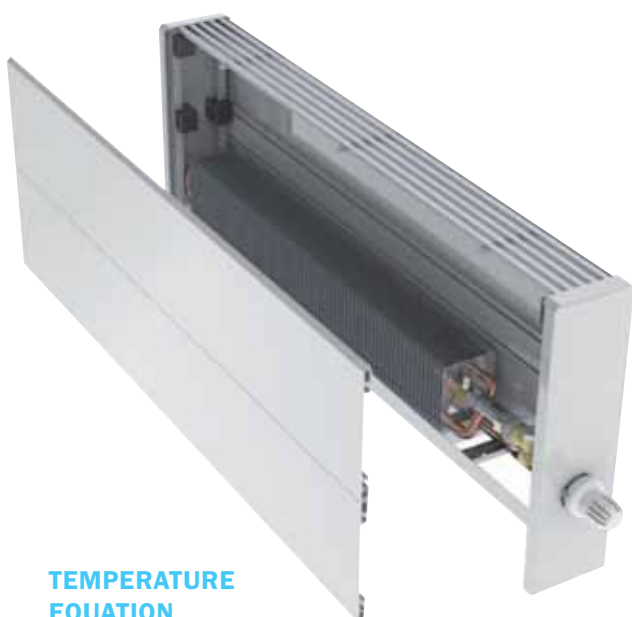
$$Q = Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:

- m**= temperature exponent 1,3764
- t_w** mean heating water temperature, vzduchu [°C]
- Q_N** jmenovitý HEAT TRANSFER RATE pro teploty t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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 EQUATION

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

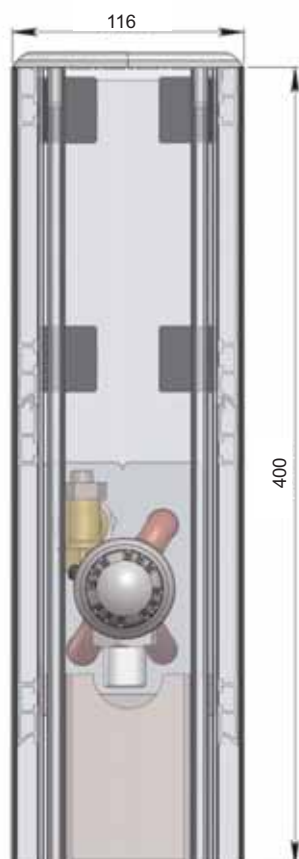
where:

- m**= temperature exponent 1,3764
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	858	768	733
	70	681	598	565
	50	366	296	269
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 190	1 082	1 040
	80	977	876	836
	70	777	681	644
	50	417	337	307
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 555	1 414	1 359
	80	1 277	1 144	1 092
	70	1 015	890	842
	50	545	441	401
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 920	1 747	1 678
	80	1 577	1 413	1 348
	70	1 253	1 099	1 039
	50	673	544	495
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 286	2 079	1 997
	80	1 877	1 681	1 605
	70	1 491	1 308	1 237
	50	801	648	589
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 651	2 411	2 316
	80	2 177	1 950	1 861
	70	1 730	1 517	1 434
	50	929	751	683

CROSS SECTION OF COIL-SU2



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.

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
	80	922	830
	70	740	652
	50	407	332
		length L (mm) 1000	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	1 269	1 159
	80	1 051	946
	70	843	743
	50	464	379
		length L (mm) 1250	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	1 659	1 514
	80	1 373	1 236
	70	1 102	971
	50	607	495
		length L (mm) 1500	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	2 048	1 870
	80	1 696	1 526
	70	1 360	1 199
	50	749	611
		length L (mm) 1750	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	2 438	2 225
	80	2 018	1 816
	70	1 619	1 427
	50	891	727
		length L (mm) 2000	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	2 827	2 581
	80	2 340	2 106
	70	1 877	1 655
	50	1 034	843

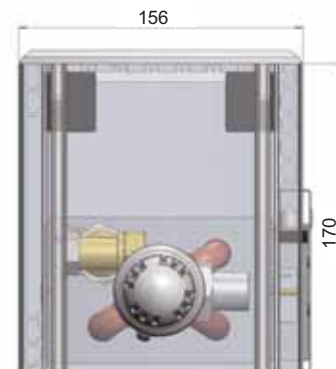
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,32
- t_w, t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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.

info:

The decorative grille of the convector must not be loaded.

HEAT TRANSFER RATE Q [W] COIL - NP2/4

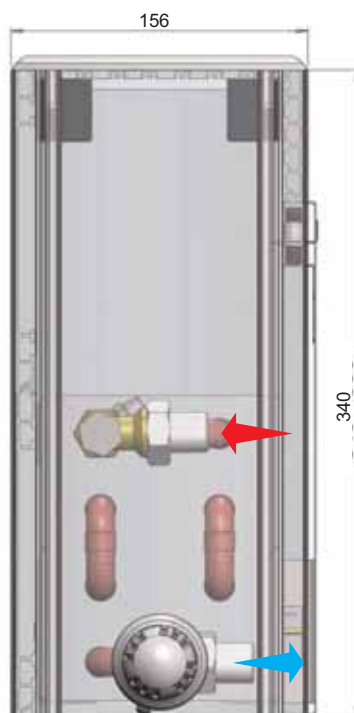
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,4153
- t_w, t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF 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
	80	1 324	1 182	1 127
	70	1 045	913	862
	50	551	443	402
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 848	1 676	1 609
	80	1 509	1 347	1 284
	70	1 191	1 041	983
	50	628	505	458
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 415	2 190	2 102
	80	1 972	1 761	1 678
	70	1 557	1 360	1 284
	50	821	660	599
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 981	2 704	2 595
	80	2 435	2 174	2 072
	70	1 922	1 680	1 585
	50	1 014	815	739
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 548	3 218	3 089
	80	2 898	2 587	2 466
	70	2 288	1 999	1 887
	50	1 207	970	880
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 115	3 732	3 582
	80	3 361	3 001	2 860
	70	2 653	2 318	2 188
	50	1 399	1 125	1 020

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
	80	456	412	395
	70	370	328	312
	50	210	173	159
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	621	570	550
	80	520	470	451
	70	422	374	356
	50	240	198	181
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	812	745	718
	80	679	614	589
	70	551	489	465
	50	313	258	237
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 003	920	887
	80	838	759	727
	70	680	604	574
	50	387	319	293
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 193	1 095	1 056
	80	998	903	865
	70	810	719	683
	50	460	380	348
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 384	1 269	1 224
	80	1 157	1 047	1 004
	70	939	834	792
	50	534	440	404

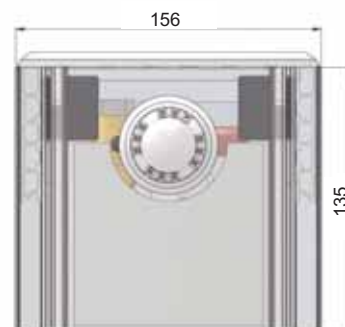
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,2497
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL - SPO





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:

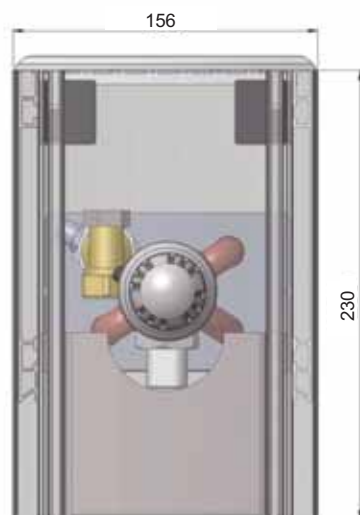
The decorative grille of the convector must not be loaded.

TEMPERATURE EQUATION

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

- where:
- m**= temperature exponent 1,277
 - t_w** mean heating water temperature,
 - t_A** mean air temperature [°C]
 - Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
 - Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL - SP1/4



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
	80	749	677	648
	70	605	536	509
	50	340	279	256
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 026	939	905
	80	854	771	739
	70	690	611	580
	50	388	318	291
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 340	1 227	1 183
	80	1 116	1 008	965
	70	902	799	758
	50	506	416	381
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 655	1 515	1 460
	80	1 378	1 244	1 192
	70	1 114	986	936
	50	625	514	470
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 969	1 803	1 738
	80	1 640	1 481	1 418
	70	1 325	1 173	1 114
	50	744	611	560
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 284	2 091	2 015
	80	1 903	1 718	1 645
	70	1 537	1 361	1 292
	50	863	709	649

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.

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
	80	1 307	1 169	1 116
	70	1 036	907	857
	50	552	446	405
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	1 818	1 652	1 586
	80	1 490	1 333	1 272
	70	1 181	1 034	977
	50	630	508	462
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 376	2 158	2 073
	80	1 947	1 742	1 662
	70	1 543	1 352	1 277
	50	823	664	603
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 934	2 665	2 560
	80	2 404	2 151	2 052
	70	1 906	1 669	1 577
	50	1 016	820	745
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 491	3 172	3 046
	80	2 861	2 560	2 442
	70	2 268	1 986	1 877
	50	1 209	976	887
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 049	3 678	3 533
	80	3 318	2 968	2 832
	70	2 630	2 303	2 176
	50	1 402	1 132	1 028



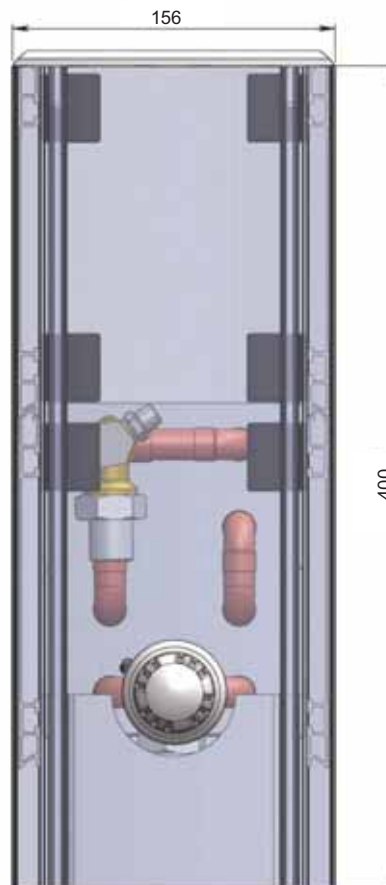
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,3911
- t_w - t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL - SP2/4





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.

info:

The decorative grille of the convector must not be loaded.

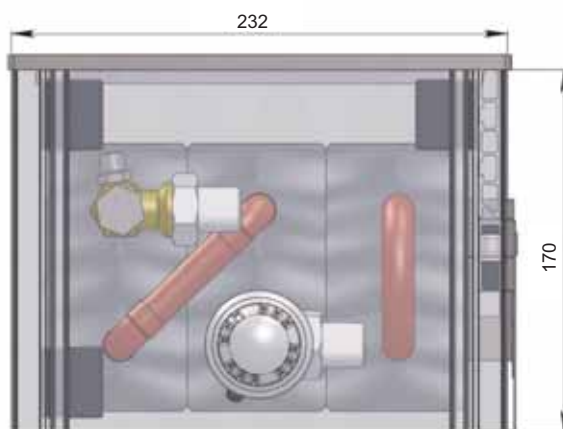
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,4173
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL - NW170



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
	80	1 533	1 369	1 305
	70	1 210	1 057	998
	50	638	512	465
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 141	1 941	1 863
	80	1 748	1 560	1 487
	70	1 379	1 205	1 137
	50	727	584	530
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 797	2 537	2 435
	80	2 284	2 039	1 943
	70	1 802	1 575	1 486
	50	950	763	692
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 454	3 132	3 006
	80	2 820	2 517	2 399
	70	2 225	1 944	1 835
	50	1 173	943	855
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 111	3 728	3 578
	80	3 356	2 996	2 856
	70	2 648	2 314	2 184
	50	1 396	1 122	1 017
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 767	4 323	4 149
	80	3 892	3 475	3 312
	70	3 072	2 683	2 533
	50	1 619	1 301	1 180

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.

info:

The decorative grille of the convector must not be loaded.



HEAT TRANSFER RATE Q [W] COIL - NW340

		length L (mm) 900	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	2 254	2 051
	80	1 854	1 662
	70	1 476	1 296
	50	796	645
		length L (mm) 1000	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	2 569	2 338
	80	2 113	1 894
	70	1 682	1 477
	50	908	735
		length L (mm) 1250	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	3 357	3 055
	80	2 761	2 476
	70	2 198	1 930
	50	1 186	961
		length L (mm) 1500	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	4 145	3 773
	80	3 410	3 057
	70	2 714	2 383
	50	1 465	1 187
		length L (mm) 1750	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	4 933	4 490
	80	4 058	3 638
	70	3 230	2 836
	50	1 743	1 412
		length L (mm) 2000	
		mean air temperature t _A	
		15	20
mean water temperature t _w	90	5 721	5 207
	80	4 706	4 219
	70	3 746	3 289
	50	2 021	1 638

TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,3651
- t_w, t_A** mean heating water temperature, mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

CROSS SECTION OF COIL - NW340





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.

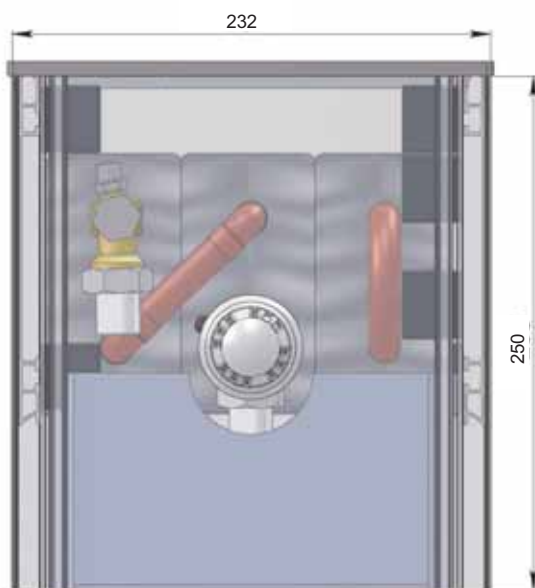
TEMPERATURE EQUATION

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

where:

- m**= temperature exponent 1,4173
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	1 533	1 369	1 305
	70	1 210	1 057	998
	50	638	512	465
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 141	1 941	1 863
	80	1 748	1 560	1 487
	70	1 379	1 205	1 137
	50	727	584	530
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 797	2 537	2 435
	80	2 284	2 039	1 943
	70	1 802	1 575	1 486
	50	950	763	692
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 454	3 132	3 006
	80	2 820	2 517	2 399
	70	2 225	1 944	1 835
	50	1 173	943	855
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 111	3 728	3 578
	80	3 356	2 996	2 856
	70	2 648	2 314	2 184
	50	1 396	1 122	1 017
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 767	4 323	4 149
	80	3 892	3 475	3 312
	70	3 072	2 683	2 533
	50	1 619	1 301	1 180

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.



TEMPERATURE EQUATION

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

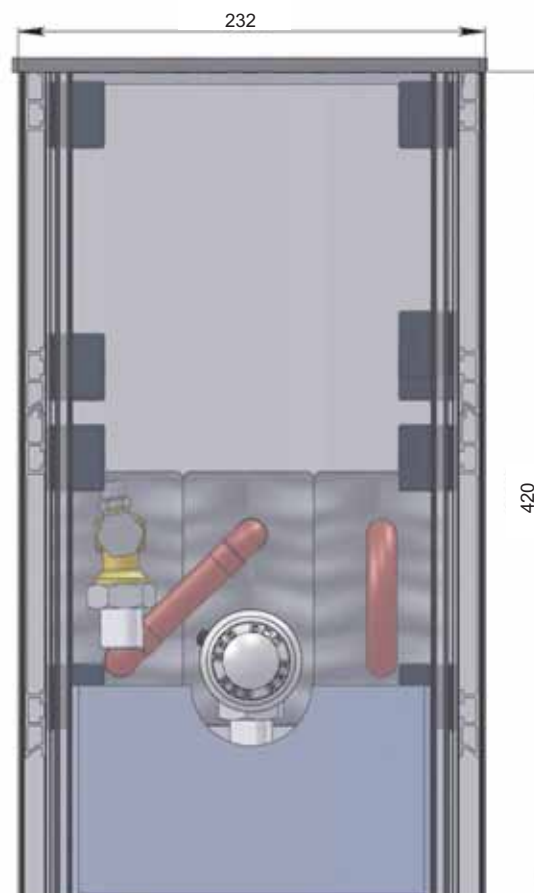
where:

- m**= temperature exponent 1,3752
- t_w** mean heating water temperature,
- t_A** mean air temperature [°C]
- Q_N** nominal heat transfer rate for difference of temperatures t_w - t_A = 50 °C [W]
- Q** heat transfer rate for other temperatures [W]

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
	80	1 857	1 663	1 588
	70	1 476	1 295	1 224
	50	793	641	583
		length L (mm) 1000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	2 577	2 344	2 252
	80	2 117	1 896	1 810
	70	1 682	1 476	1 395
	50	904	731	665
		length L (mm) 1250		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	3 368	3 063	2 943
	80	2 766	2 478	2 365
	70	2 198	1 928	1 823
	50	1 181	955	869
		length L (mm) 1500		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 158	3 782	3 634
	80	3 415	3 059	2 920
	70	2 714	2 381	2 251
	50	1 458	1 179	1 073
		length L (mm) 1750		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	4 949	4 501	4 325
	80	4 065	3 641	3 475
	70	3 230	2 833	2 679
	50	1 735	1 404	1 277
		length L (mm) 2000		
		mean air temperature t _A		
		15	20	22
mean water temperature t _w	90	5 739	5 220	5 016
	80	4 714	4 222	4 030
	70	3 746	3 286	3 107
	50	2 012	1 628	1 480

CROSS SECTION OF COIL - SW420



Control of MINIB convectors

CHARACTERISTICS

Application of 12 V DC fan motors that the company MINIB has been using for its convectors since the year 2005 brings energy savings up to 80% compared with normal AC motors.

Along with low energy consumption the control of the DC motor is also easier and gives improved user comfort. During last years there was collected a lot of knowledge related to installations, operation and maintenance of MINIB convectors and their controls. The catalogue for the year 2009 includes a set of recommended connections of control circuits that actually cover almost all made installations of MINIB convectors. For specific installations, e.g. very large areas or centrally controlled systems, the company MINIB is able to also provide necessary technical consultations under advantageous conditions.

DESCRIPTION OF INDIVIDUAL CONTROL SYSTEMS

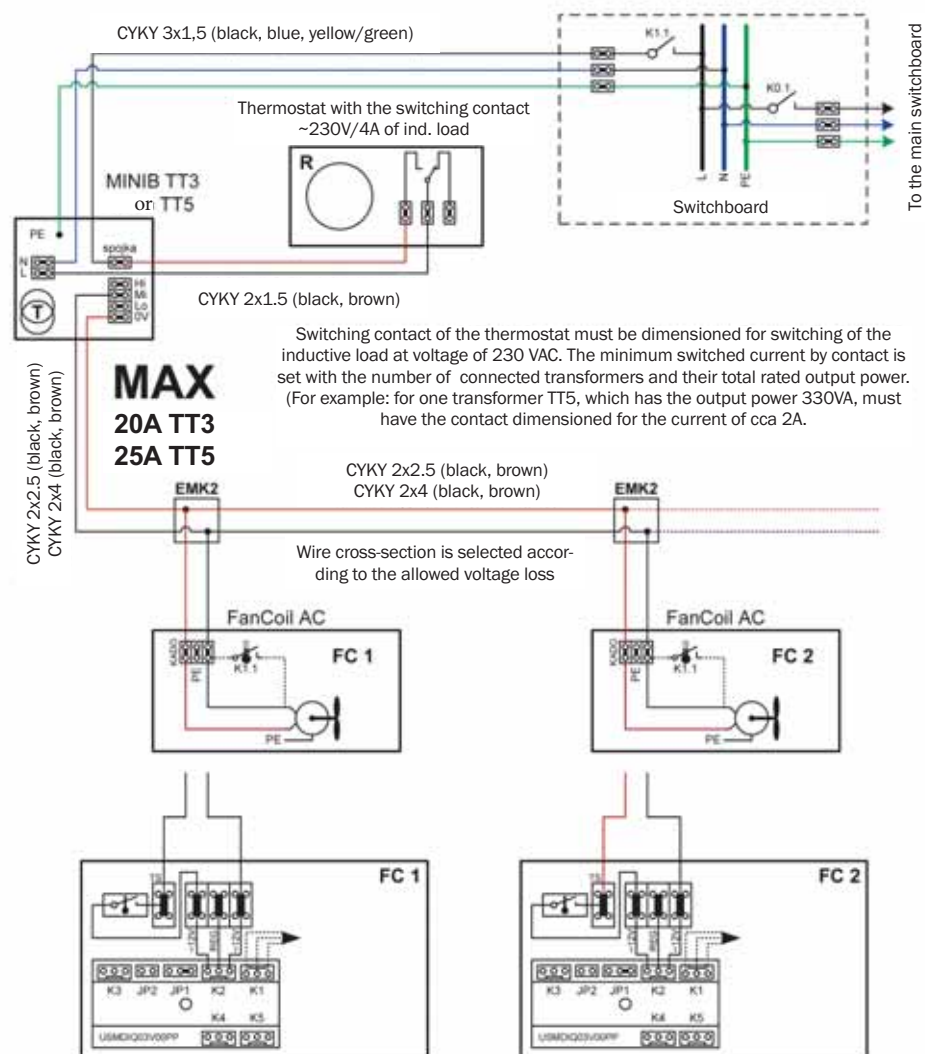
CONTROL A/A1 - the simplest type of a single speed control system for dry/wet environments. The thermostat directly switches the

current in either the primary or secondary circuit of the isolating transformer. Any suitable mechanical thermostat, whose contacts are rated appropriately, can be used. Thermostat contacts must be sized for either the maximum current of the secondary winding of the transformer or must be able to switch the line voltage 230 VAC/50 Hz and must be sufficiently protected against the dangerous contact voltage according to the environment, in which they will be installed when switching the primary winding of the isolating transformers.

The control A1 can also be used for convectors with AC asynchronous motors used in swimming pool applications. In this case thermostats used for swimming pools (control A1) must comply with the necessary standards for coverage of el. units in specified swimming pool zones, especially if they switch the supply voltage of the primary winding of the isolating transformer.

Control A1 (wet interior, on/off)

Max. length of connected convectors is 12 linear metres.



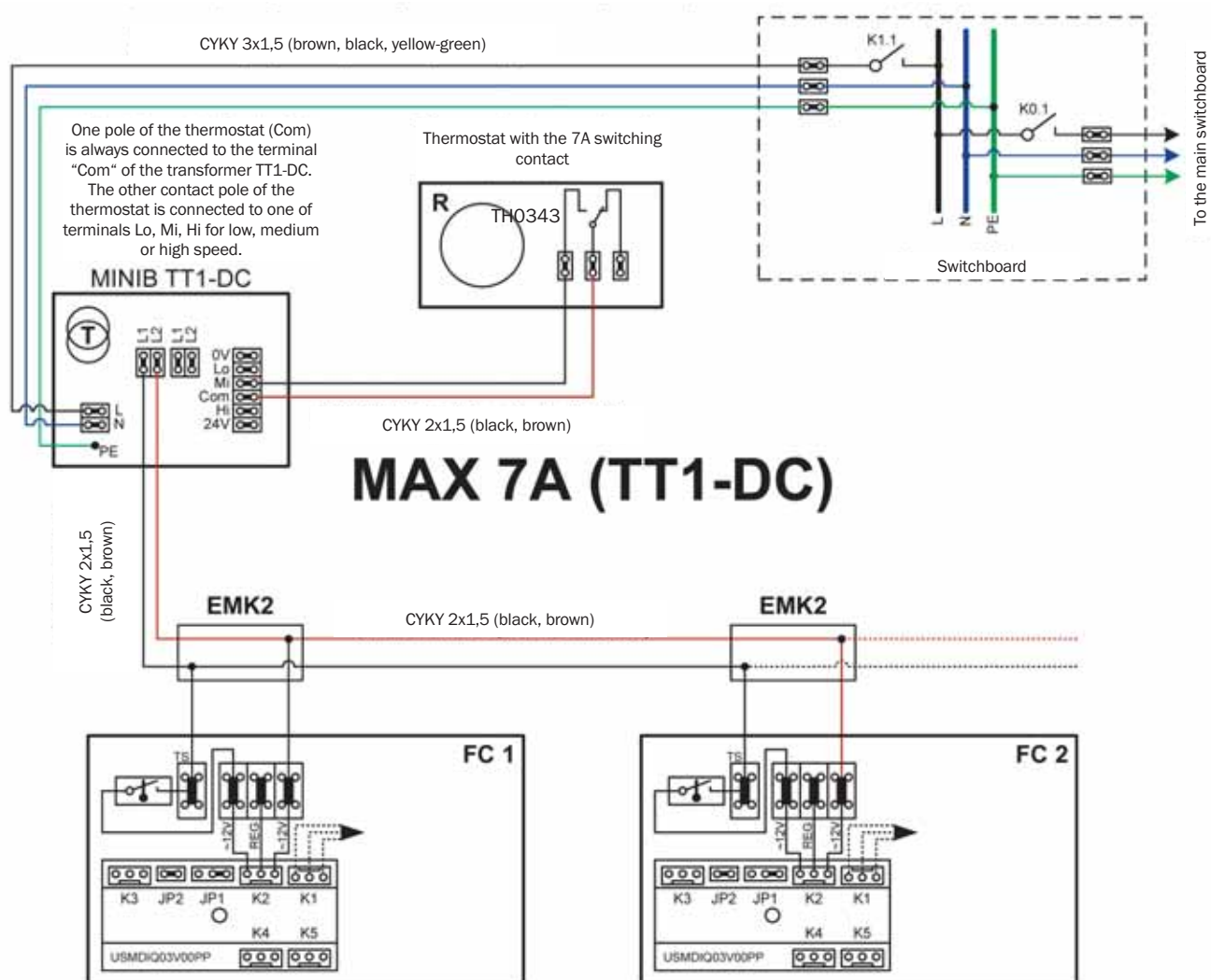
The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m.

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

Wires of the convector side terminals can be crossed. Middle terminals can remain unconnected. If the middle terminals are linked, there can be only interconnected the middle terminals. When the cable with colours "black", "black", "brown" is used, use the brown wire for interconnection of middle terminals of the convectors.

Control A (dry interior, on/off)

The control with the thermostat connected on the secondary circuit side of the safety isolating transformer. The switching contact must be dimensioned for the highest switched current of the secondary winding of the safety isolating transformer TT1-DC, which can be up to 8A. Recommended for the simplest control of convectors, especially with AC motors but also with DC motors.



There can be used convectors with DC and AC motors and also in their combination.

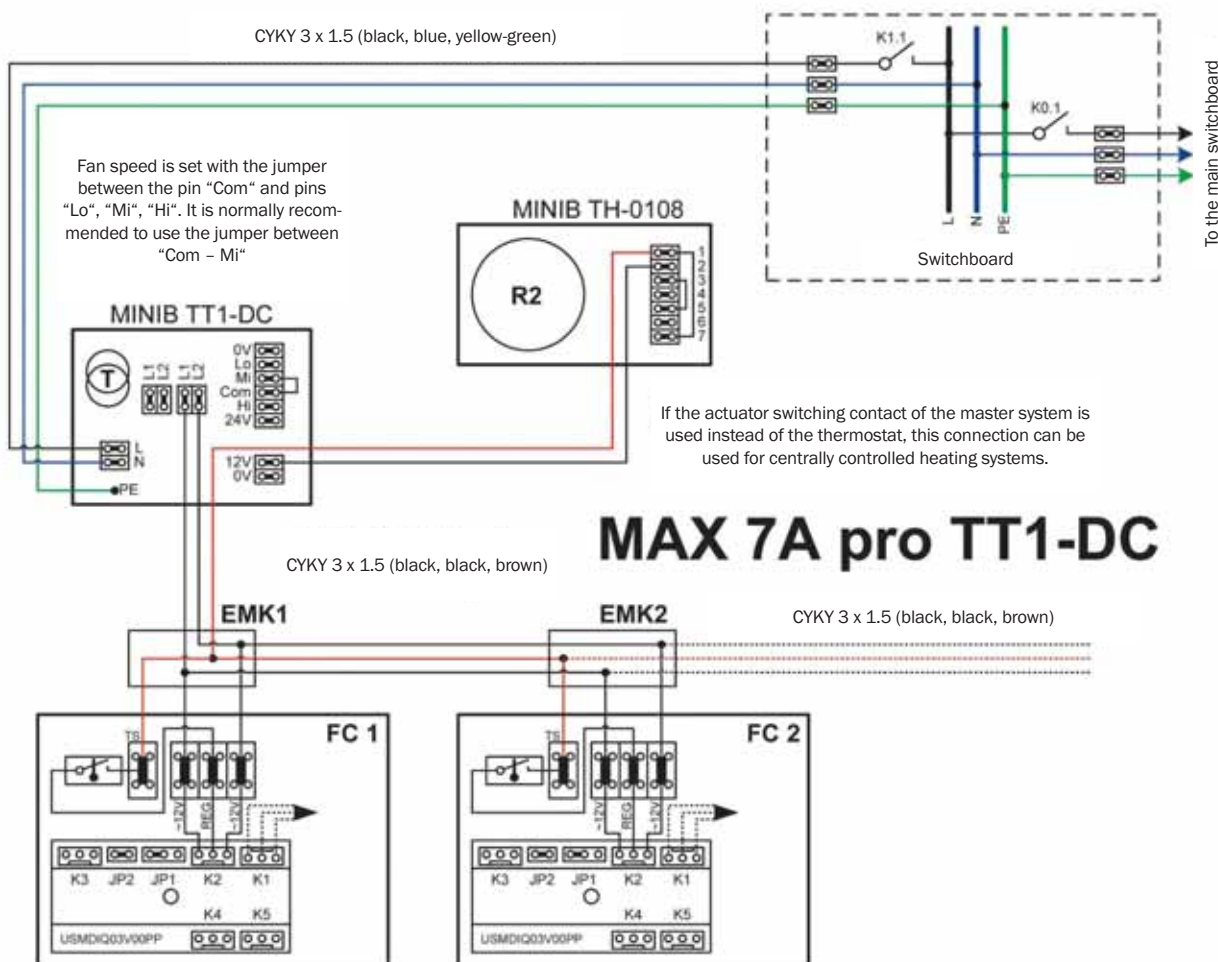
The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m. Tapping can be made in the electrical conduit box EMK on the wall or through WAGO terminals directly under the convector cover.

Wires of the convector side terminals can be crossed. Middle terminals can remain unconnected. If the middle terminals are linked, there can be only interconnected the middle terminals. When the cable with colours "black", "black", "brown" is used, use the brown wire for interconnection of middle terminals of the convectors.

Control B (dry interior, on/off, programmable thermostat)

The control for MINIB convectors with the weekly programmable thermostat MINIB TH-0108. In the year 2009 DC motors in convectors for wet interiors are supposed to be used as well so that it will be possible to use this control for convectors designed to wet interiors. Convectors are equipped with the contact thermal switch TS, which disables fan operation if the heating water temperature is too low. (This switch must be disconnected if fans are needed for forced ventilation or subcooling in summer periods).

The control with the programmable thermostat for simple control of convectors with DC motors up to the current load of ca. 7A, i.e. length of convectors is max. 12 linear metres.



MAX 7A pro TT1-DC

Attention: On this controller JP1 and JP2 must be set for control with active signal, i.e. both pins of the jumper JP2 connected and pins no. 2-3 of the jumper JP1! One pole of the thermal switch is connected from the terminal ~ 12V to terminal REG, the other remains connected on the fourth terminal of TS. If the system is used for subcooling, the thermal switch cannot be used and the control signal wire (brown) must be connected directly to terminal REG.

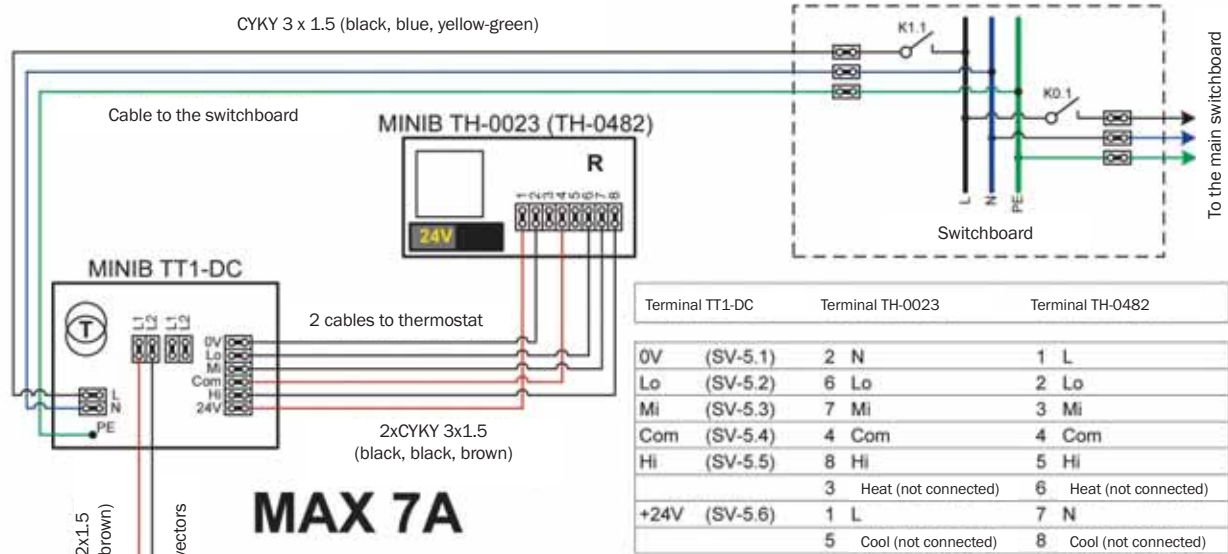
The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20 m.

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

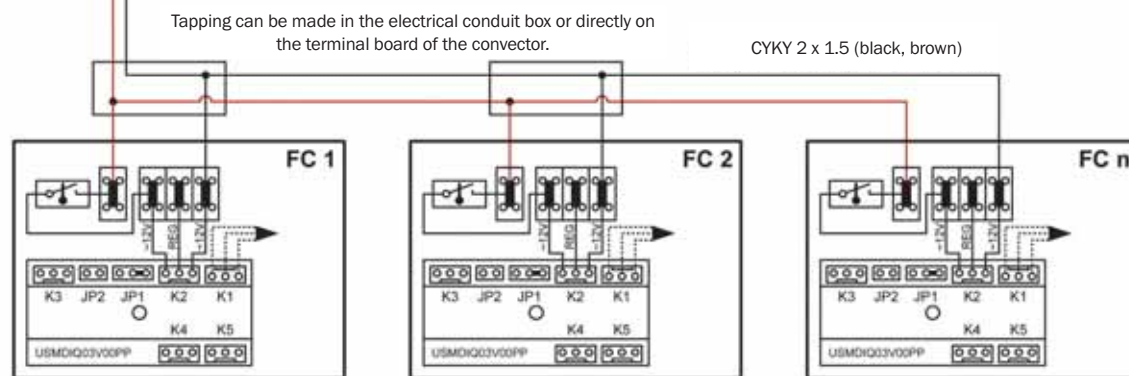
Wires of the convector side terminals can be crossed. There must be only interconnected middle terminals. If the cable with colours "black", "black", "brown" is used, use the brown wire for interconnection of middle terminals of the convectors.

Control C (dry environment, three-speed manual speed selection, programmable thermostat)

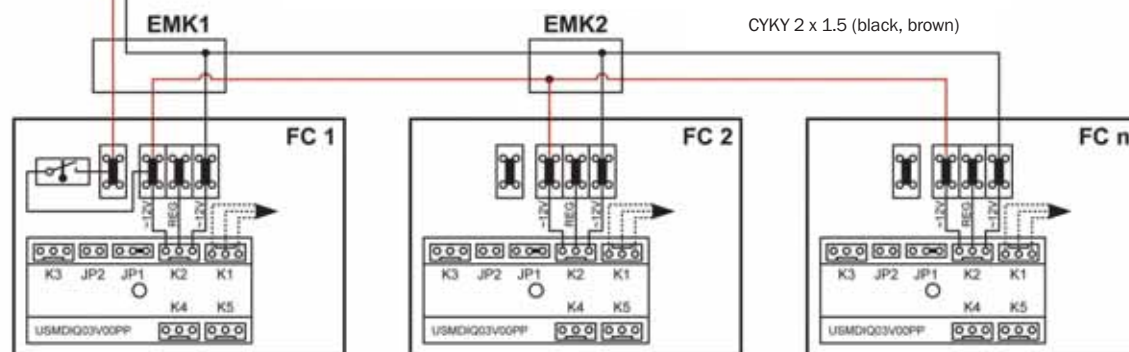
This control provides a manual speed selection. The control function is the same as control A, but in addition the manual speed selection is available. The control allows quick achievement of the set temperature after coming back from the weekend, dynamic response of the heating system during daily routine operation and quiet operation in night hours. The control with the programmable thermostat for simple control of convectors with the manual three-level fan speed setting with DC motors. The maximum current load is 7A, i.e. length of convectors with DC motors is max. 12 linear metres.



The current is set by characteristics of the thermostat switching contact.



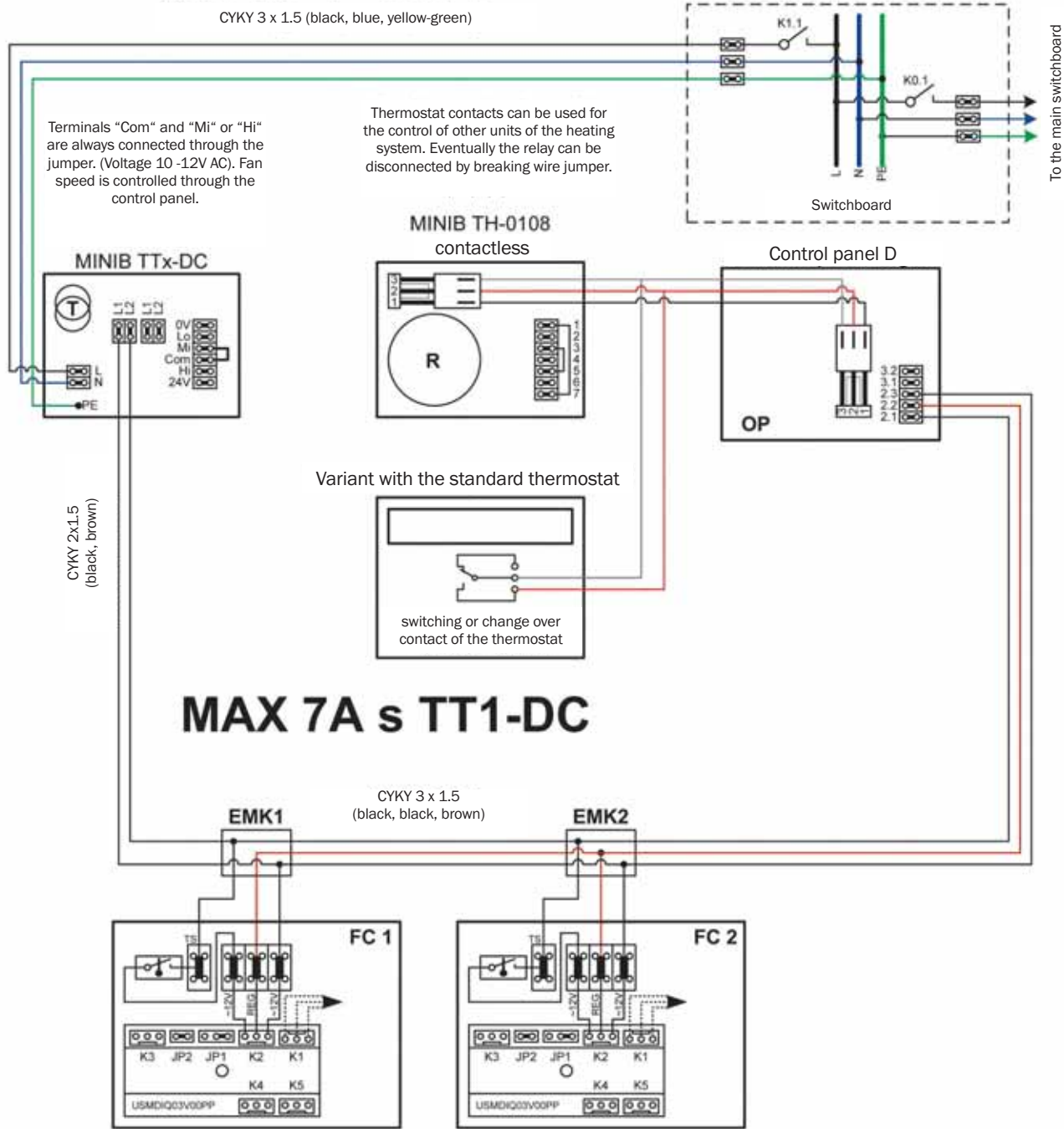
The variant with the use of only one thermal switch.



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.

Control D (dry environment, automatic step speed control, programmable thermostat)

Control D is the automatic step control suitable for dry and wet environment. **This control can be also used for heating modes in winters and subcooling in summers.** Automatic multi-level control with the programmable thermostat for the control of convectors with DC motors. Maximum current load is 7A. Length of convectors max. 20 linear metres.



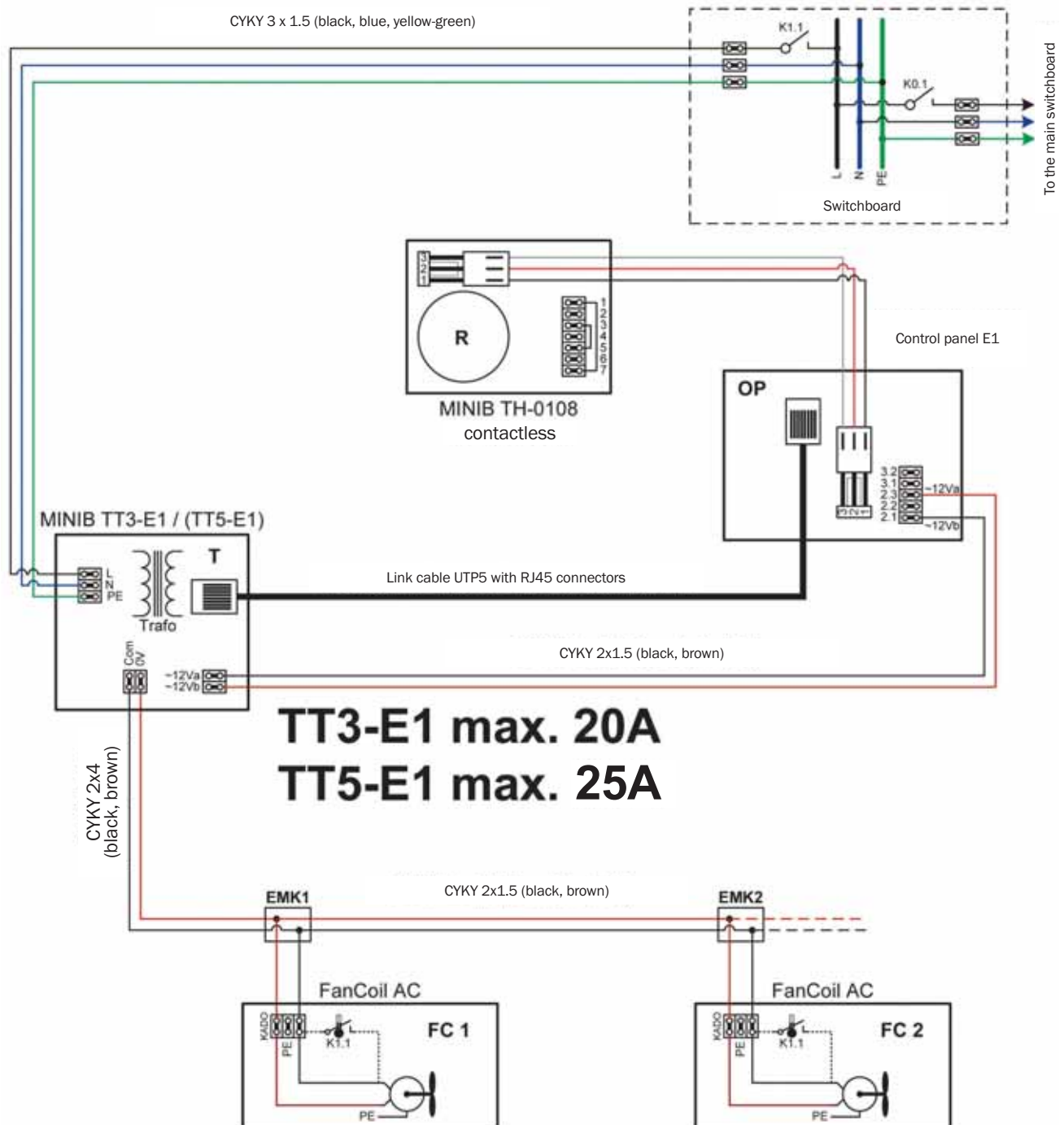
Control D also enables to control subcooling of the space, when sufficiently cool water is supplied to the heat exchanger. If the convector is only used for heating, it is possible to connect the thermal switch TS that will disable the function of fans when the temperature of heating water is not sufficiently high.

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.

Wires of the convector side terminals can be crossed. Middle terminals can remain unconnected. If the middle terminals are linked, there can be only interconnected the middle terminals. When the cable with colours "black", "black", "brown" is used, use the brown wire for interconnection of middle terminals of the convectors.

Control E1 (wet environment, automatic step speed control, programmable thermostat)

Automatic control for convectors used in wet environment. Automatic multi-level control with the programmable thermostat for the control of convectors with AC motors. Maximum current load is 20A (27A). The length of convectors max. 6m (8m).

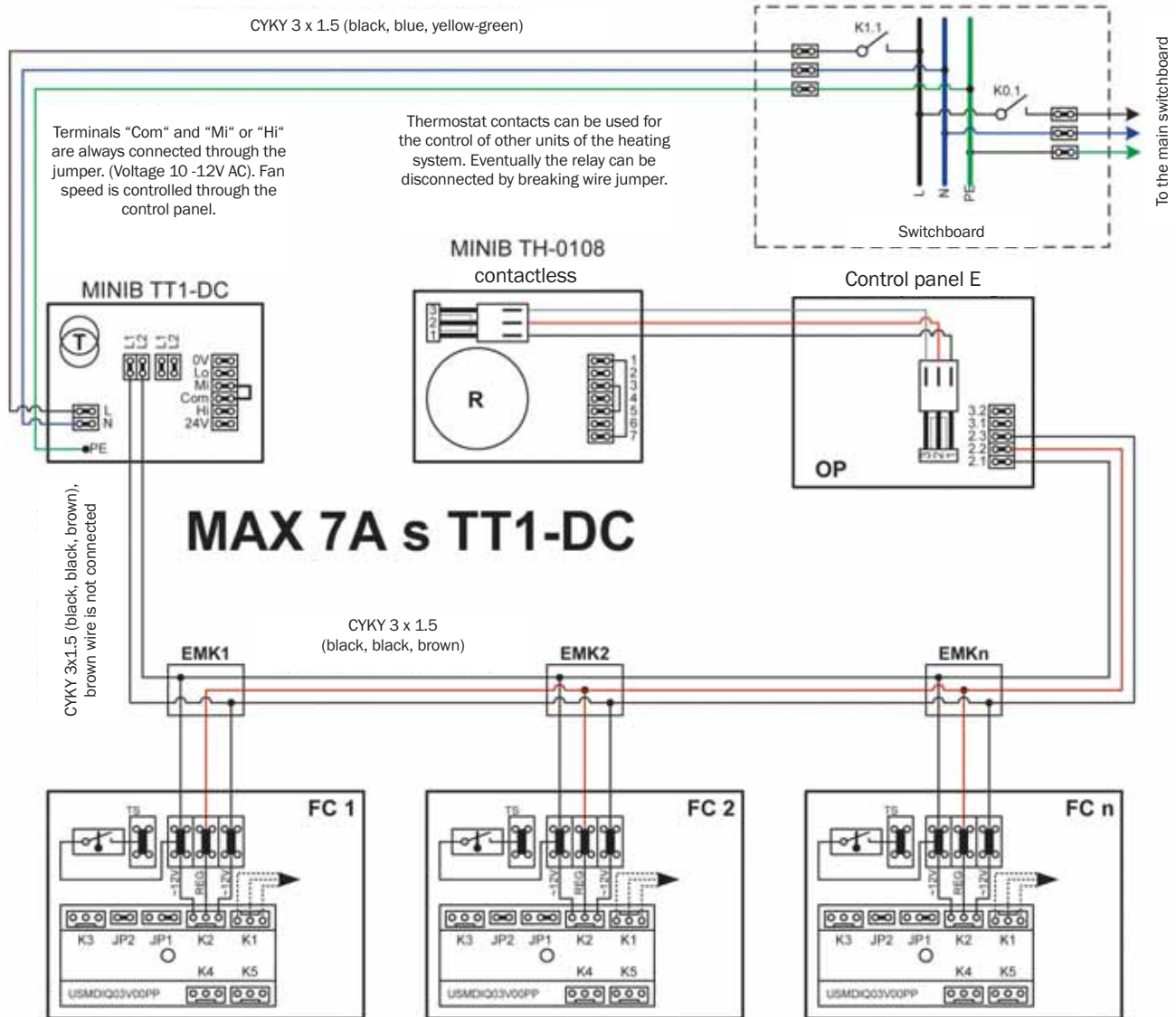


The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m. Tapping can be made in the electrical conduit box EMK on the wall or through WAGO terminals directly under the convector cover.

Regarding the electrical safety the thermostat can be placed in the wet environment because it is powered from batteries with the total voltage 3V and fan motors use the safe voltage 12V AC. But the thermostat should be installed in the place, where air humidity does not condensate to prevent batteries from corrosion.

Control E (dry and wet environment, automatic speed control, programmable thermostat)

Fully automatic control of convectors with continuous speed control. Automatic continuous control with the programmable thermostat for the control of convectors with DC motors. Maximum current load is 7A. The length of convectors is max. 12m.



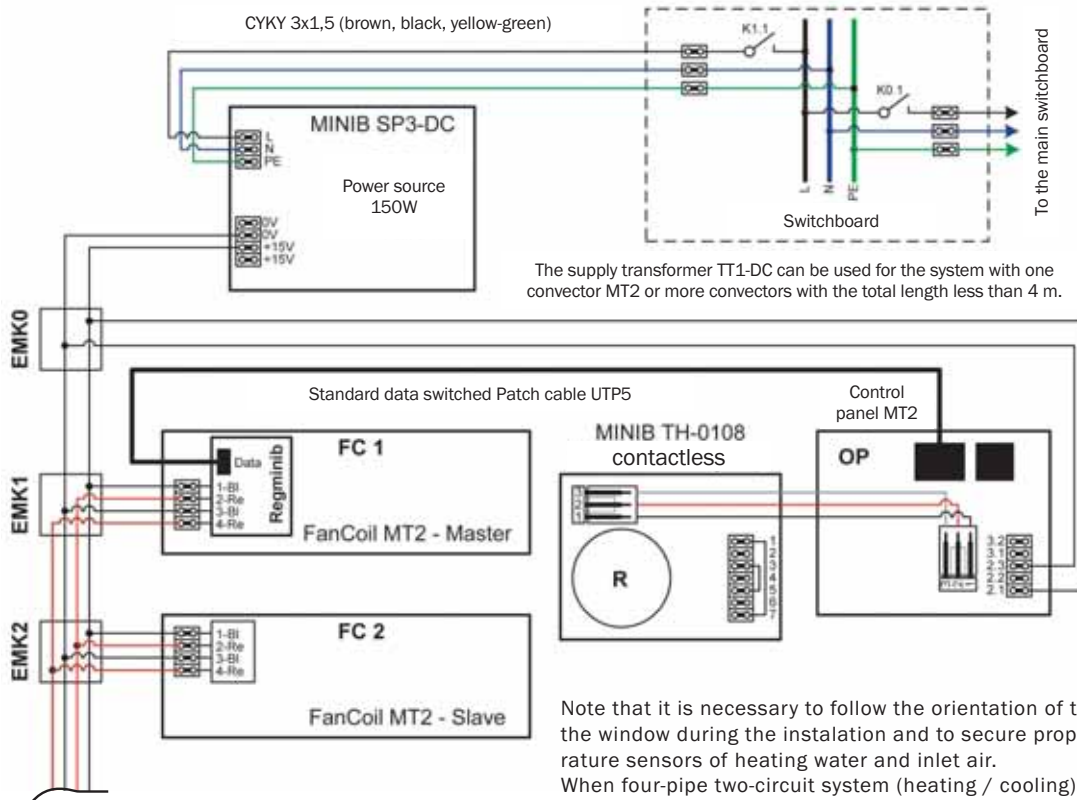
Control E does not allow subcooling of the space. A thermal switch TS can be used to disable fan operations. The convectors can be connected in series if the distance from the transformer is small. The Y-connection is more suitable when the distance to the furthest convector exceeds 20m. Tapping can be made in the electrical conduit box EMK on the wall or through WAGO terminals directly under the convector cover. Wires of the convector side terminals can be crossed. Middle terminals can remain unconnected. If the middle terminals are linked, there can be only interconnected the middle terminals. When the cable with colours "black", "black", "brown" is used, use the brown wire for interconnection of middle terminals of the convectors.

The electronic control was developed for the user to increase the heating comfort in the interior and to introduce floor convectors as the device that is able to react besides the standard modes "on - off" on outside conditions in more intelligent way. The automatic control includes:

- I) electronic contactless MINIB thermostat TH-0108 with a weekly program. The user is not disturbed by mechanical switching of contacts.
- II) automatic fan speed control. Revolutions are continuously increased or reduced on basis of the programmed algorithm. There can be set three modes of the automatic operation suitable for a) halls and offices, b) living rooms, c) bedrooms and very quiet areas. In all cases the fan speed is continuously changed, only maximum noise levels and fan activation times are different for a variety of environment.
- III) temperature sensor of the inlet water that will disable a fan operation in case, when the heating water is not heated enough. This prevents the not sufficiently heated air to be blown out from the convector.
- IV) light sensor - photosensor - detecting a presence of light and limiting the maximum fan speed during night hours so that the noise level during operation of the convector is minimum.
- V) user's possibility to set the maximum fan speed. The user can set an acceptable maximum noise level according to his own sensitivity, which will be never exceeded and this level is further reduced to minimum speed during the night.
- VI) initial fan calibration of all convectors to the same speed so as to eliminate a loss voltage for distant convectors connected to the common safety isolating transformer TT1-DC 230/12V.

Control MT-2 (dry and wet environment, automatic speed control and control of warm air blow direction from the convector)

It is recommended to use the special control MT-2 for MT-2 convectors. These convectors are equipped with their own special electric, resp. electronic circuits. Control of MT-2 convectors with DC motors and control unit REGMINIB through the control system Reg. MT2 with the programmable thermostat. The control is made by combination of two logic signals (four-level control). Current load is max. 10A. Length of convectors is max. 8 linear metres.

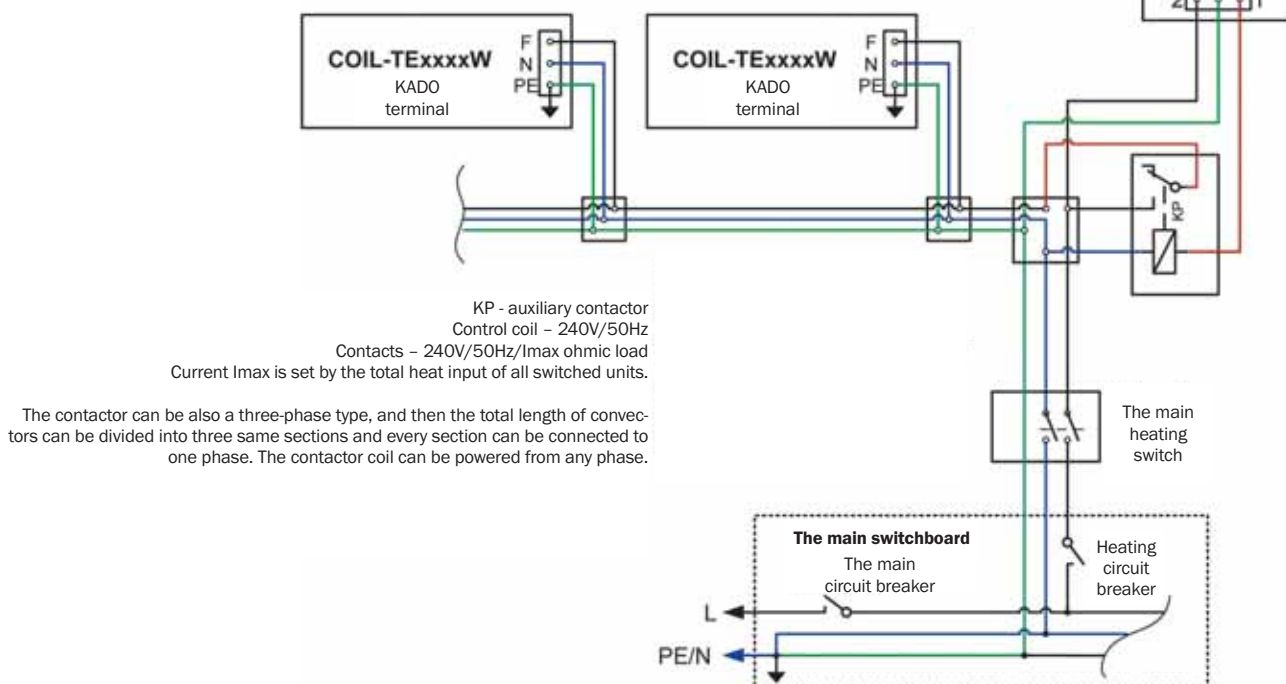


The supply transformer TT1-DC can be used for the system with one convector MT2 or more convectors with the total length less than 4 m.

Note that it is necessary to follow the orientation of the convector against the window during the installation and to secure proper assignment of temperature sensors of heating water and inlet air. When four-pipe two-circuit system (heating / cooling) is installed, it is necessary to consult a solution with MINIB technicians!

Control TE (on/off control for electric direct heating convectors, thermostats also switches on heating spirals)

Thermostat contacts must be rated for the voltage 230V/50Hz and for the current corresponding to the coil current of the auxiliary relay or contactor.



The contactor can be also a three-phase type, and then the total length of convectors can be divided into three same sections and every section can be connected to one phase. The contactor coil can be powered from any phase.

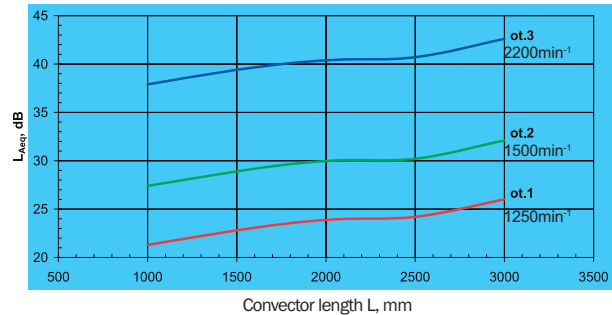
PHYSICAL CHARACTERISTICS OF MINIB CONVECTORS

1. Acoustic pressure

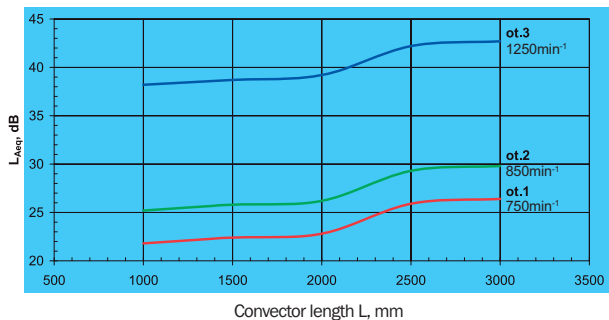
Shown on this page are experimental and calculated values of the acoustic pressure (noise) of MINIB convectors. The results were obtained by measuring of selected representative samples of convectors at the distance of 1m from the measured object at an angle of 45° from the floor. The convectors were embedded in concrete in an acoustically hard room. When the convector is installed, e.g. in a living room furnished with furniture and carpet, the resulting noise level can be considered lower by 1 to 2 dB than the level published here due to the influence of higher noise absorption of the furnished room. In addition we note that for the purpose of comparison the noise of a personal computer in the same room was measured and found to be 40.8 dB.

It results from the charts, which are always shown individually for the specific group of convectors, that minimum speed 1 and medium speed 2 of the fan meet standard requirements for daytime (up to 40 dB) and night operation (up to 30 dB) for all convector lengths in all cases. For these reasons we propose to project MINIB convectors for the speed 2 alias medium fan revolutions. In case of requirements to minimize noise levels in the room or where a large number of convectors should be placed, we recommend to project convectors for the minimum fan speed 1, when the acoustic pressure is almost indistinguishable from the normal noise background in the interior.

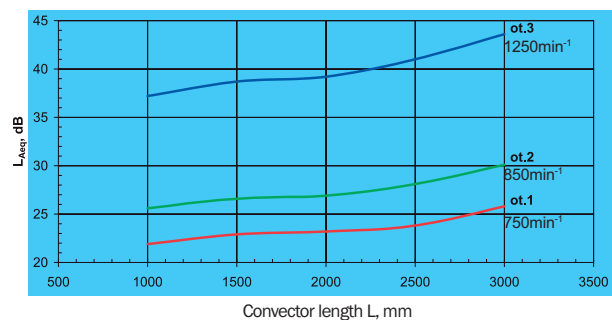
Acoustic pressure vs. fan speed
(COIL-KT-0) Ø 30mm



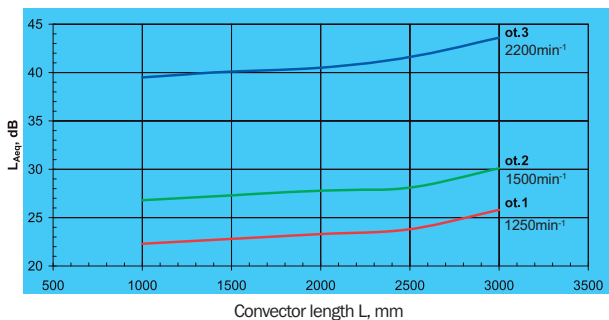
Acoustic pressure vs. fan speed, Ø 50mm
(COIL-KT/KO, COIL-MT/MO, KT-2/KO-2, HC-4P, MT-2)



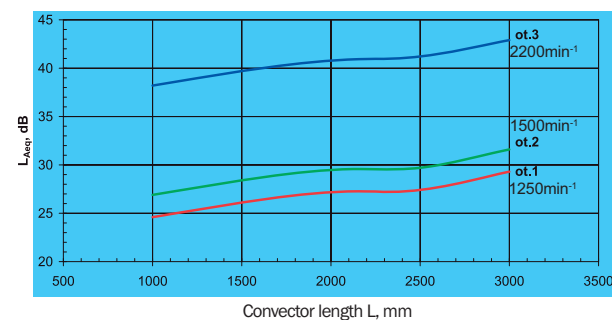
Acoustic pressure vs. fan speed, Ø 50mm
(COIL-KT-3, HC, SK-1, NK-2, SK, KP)



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

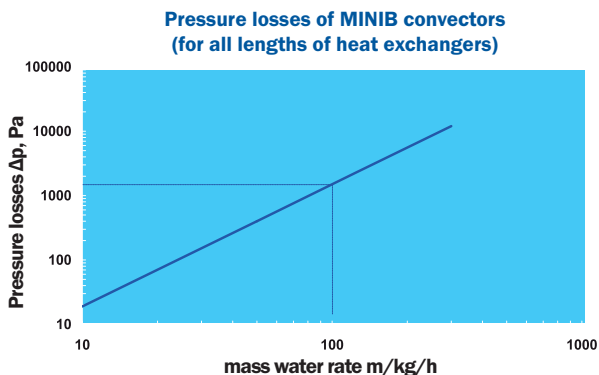
Info:

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).

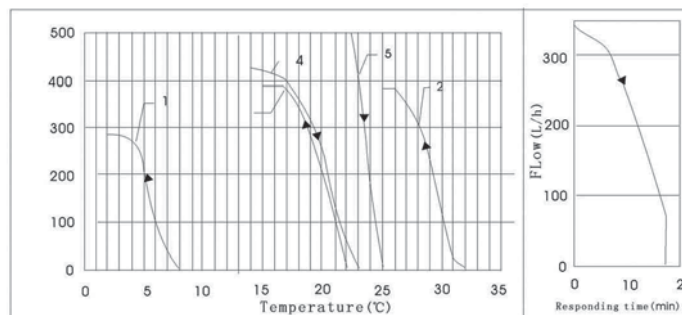
3. Water volume of MINIB convectors, dm3

Average water volume of MINIB convectors (two-pipe heat exchangers):									
Length of the convector, m	0,9	1,0	1,25	1,5	1,75	2,0	2,5	3,0	
Heat exchanger water volume, dm ³	0,6	0,65	0,8	1,0	1,2	1,4	1,8	2,2	

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



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

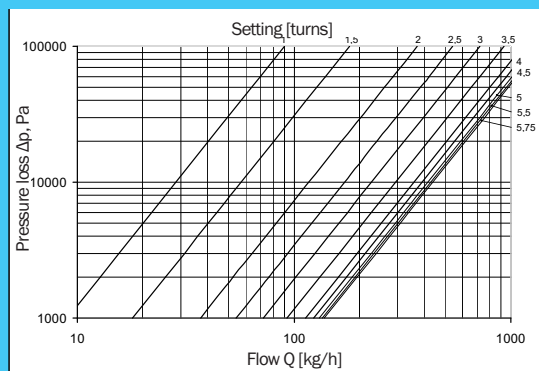
6. Characteristics of the screwed fitting (for MINIB convectors)

Example of necessary adjustment of fittings:

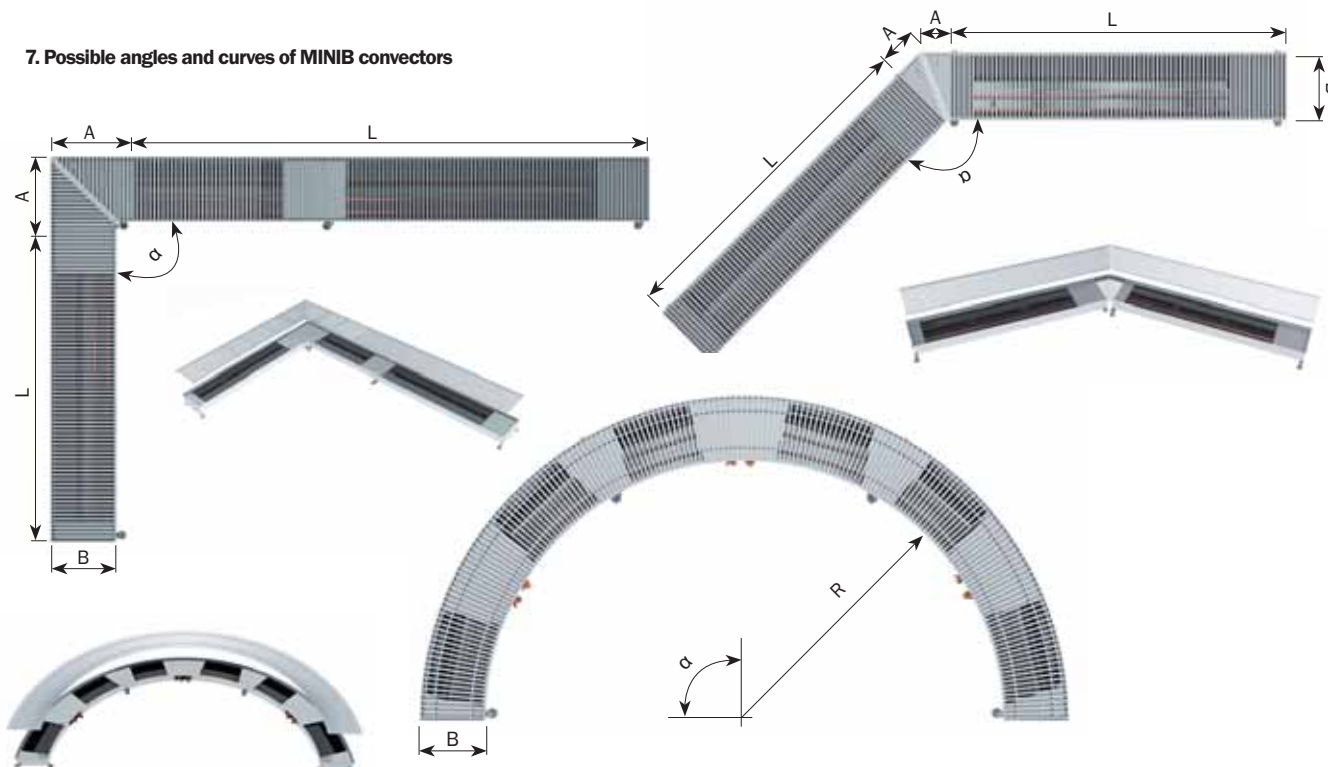
Set: Flow $Q = 180 \text{ kg/h}$
Requirement: Setting for differential pressure $\Delta p = 10\,000 \text{ Pa}$
Solution: Required setting is the intersection of values drawn on axes of the flow and pressure loss.
The result is the setting of 2.5 turns.

setting (turns)	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	5,75
K_v ($\text{m}^3 \cdot \text{h}^{-2}$)	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, K_v values



7. Possible angles and curves of MINIB convectors

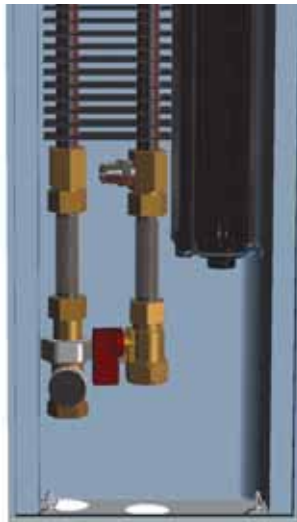


EXAMPLES OF CONVECTOR CONNECTIONS

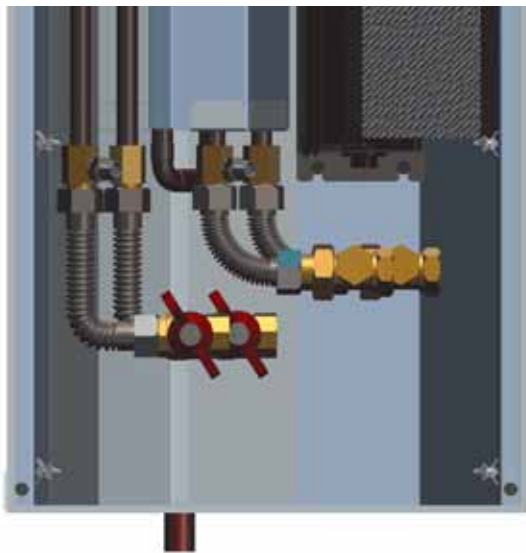
COIL KTO



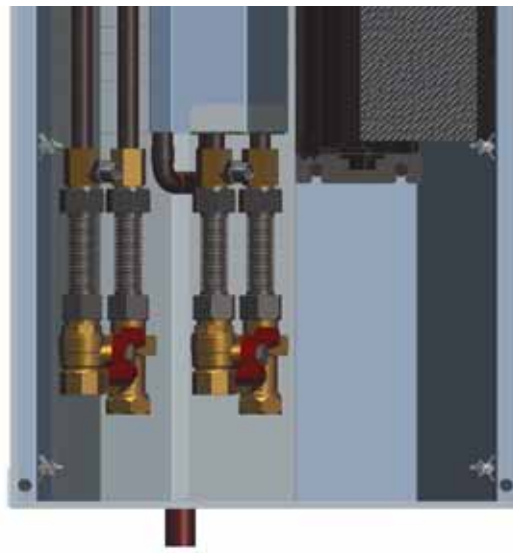
COIL T50



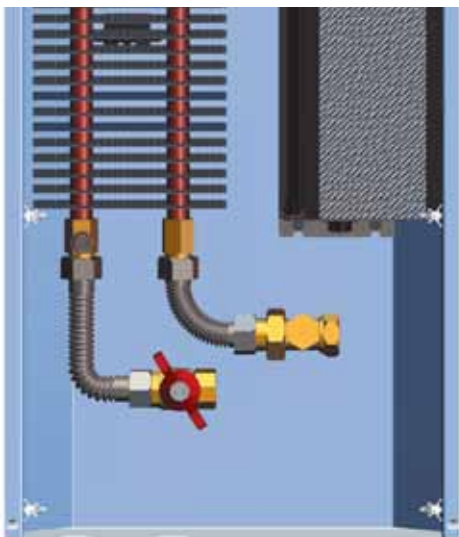
COIL HC 4pipe – from the side



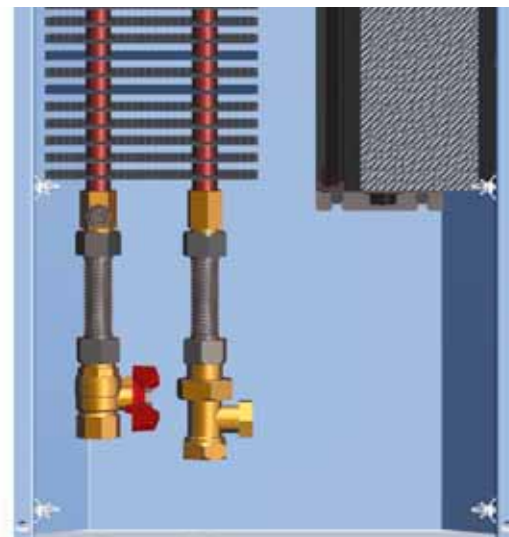
COIL HC 4pipe – from the front



COIL KT – from the side

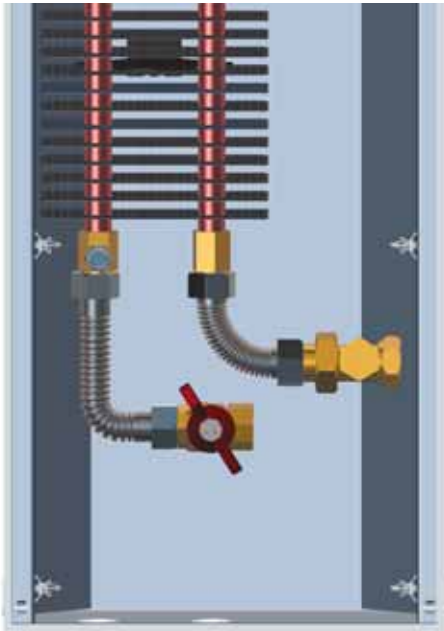


COIL KT – from the front

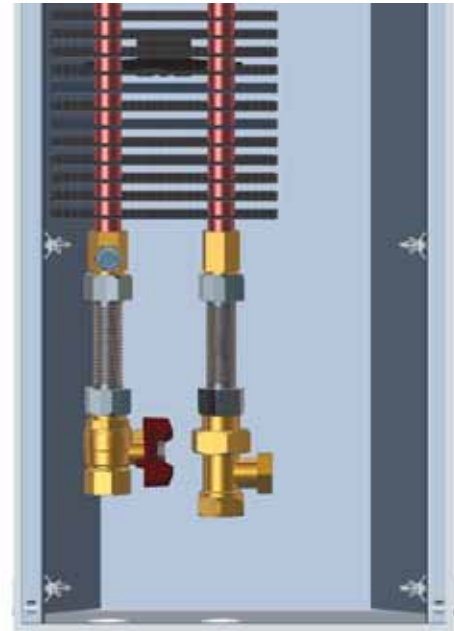


EXAMPLES OF CONVECTOR CONNECTIONS

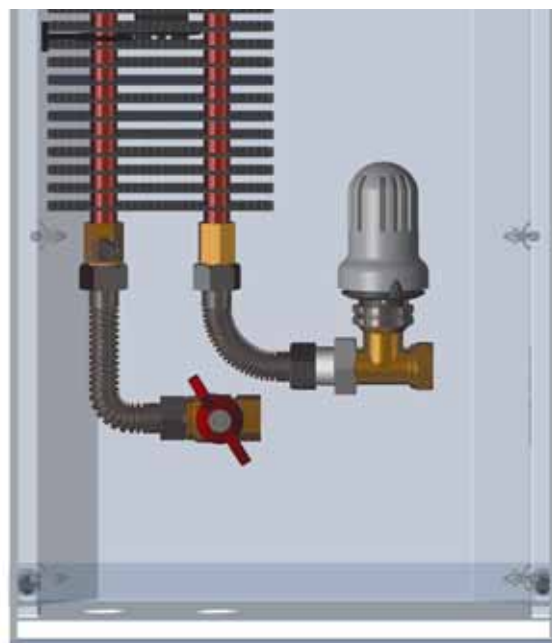
COIL P – from the side



COIL P – from the front



COIL PT – from the side



COIL PT – from the front



MINIB®

1. Thermostat TH-0023 / control C

(dimensions: 70x30x120mm)

replacement for the thermostat TH 0482



2. Thermostat TH0343 / control A

(dimensions: 74x74x30mm)



3. Thermostat Eberle 524 (IP54), control A1

(dimensions: 90x55x90mm)



4. Control panel D, E, E1, MT2

(dimensions: 70x25x70mm)



5. Thermostat TH-0108, control B, D, E, E1 and MT-2

(dimensions: 90x30x125mm)



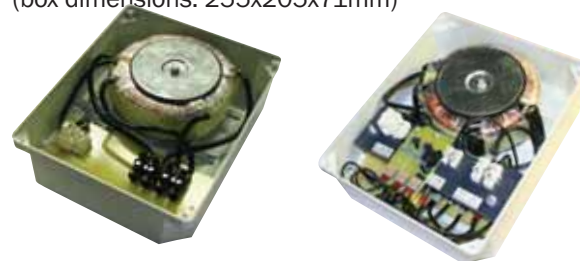
6. Transformer TT1-DC in the electric installation box

(box dimensions: 175x70x145mm)



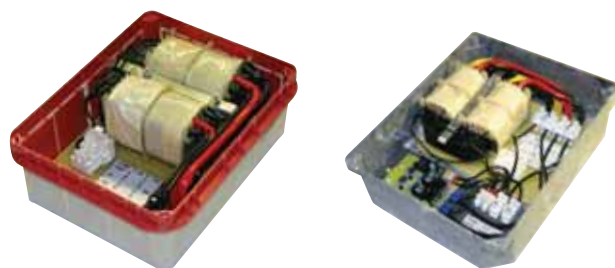
7. Transformer TT5 and TT5-E1 in the electric installation box

(box dimensions: 255x205x71mm)



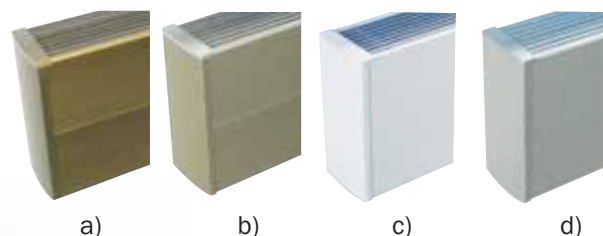
8. Transformer TT3 and TT3-E1 in the electric installation box

(box dimensions: TT3: 209x165x71mm, TT3-E1: 255x205x71mm)



9. Examples of colour designs of wall and self-standing convectors

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



10. 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



a place for supporting

Information for customers:

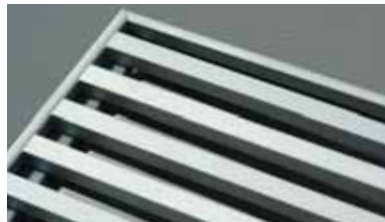
- a) Convectors are supplied as standard with the wooden or aluminium grille
- b) **In case of the interest in the stainless steel grille, it is necessary to order this grille together with the convector (the profile 10x10mm)**
- c) Convectors Coil-T50 and KT-0 are only supplied with the low aluminium 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

11. Examples of decorative frames

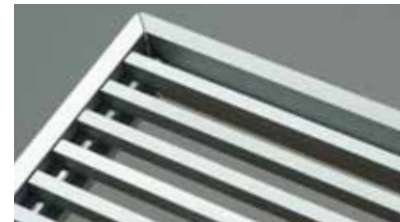
standard frame with the wooden grille



standard frame with the aluminium grille



cover decorative frame



12. Grille materials:

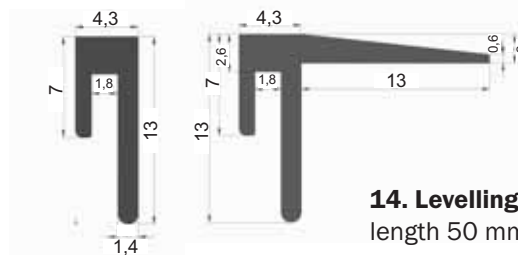
wood:



aluminium:



13. Decorative frame and cover decorative frame

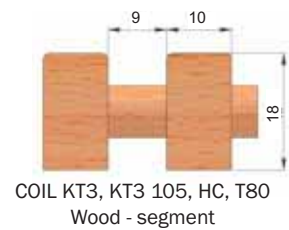
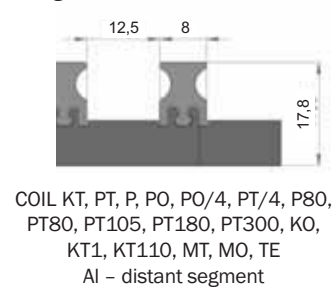
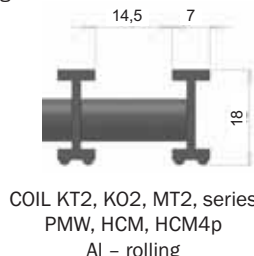
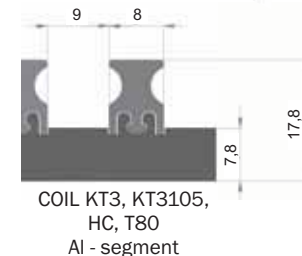
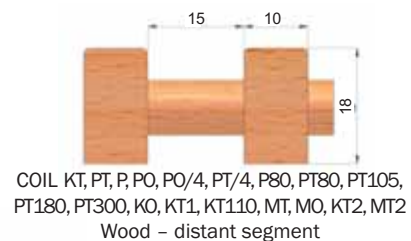
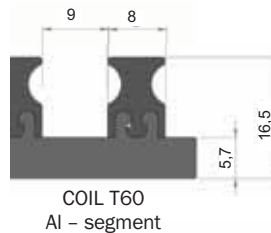
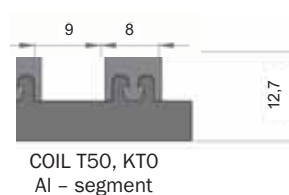
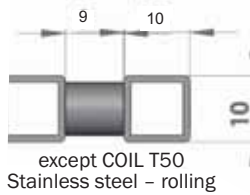


14. Levelling screw

length 50 mm, thread M8



15. Cross sections of grille partitions:



16. 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



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 – 5 to 130VA according to the length and number of fans.

Applications – dry and wet interiors depending on the specification.

Heat exchanger – Al fin/Cu tube construction – fins 0.25mm and 0.32mm thick – Cu tube diameter 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 bars permanently in the heat exchanger (0.6 MPa), outlet load tests made with the pressure of 15 bars (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 90 °C

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

Convector mounting

Install so that the heat exchanger is on the side of the unit furthest from the window or wall.

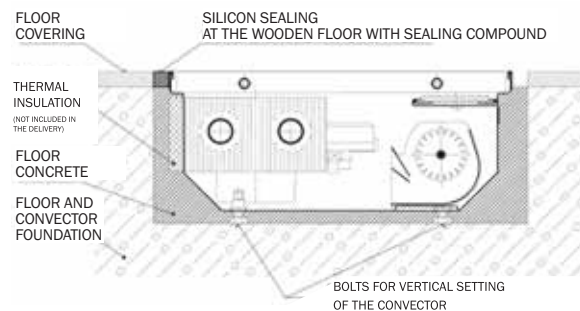
- ✘ Always connect the heat exchanger to the flow and return piping using the stainless steel hoses (if not recommended otherwise), control valve and shut-off valve supplied with the unit. Connections can be made straight out or at right angles to the heat exchanger.
- ✘ Convectors must be installed 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

Dimensions of the existing trench should be as follows:
trench depth = convector height + min. 20mm, trench width = convector width +min. 20 mm

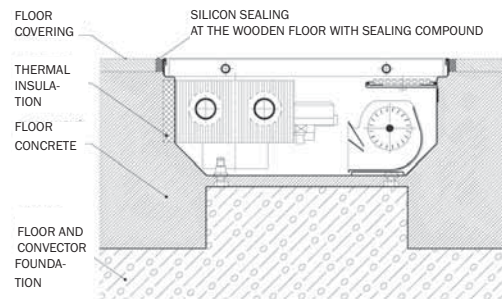
Installation procedure I.:

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



II. Installation of convectors prior to concreting the floor

- ✘ 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 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 3m

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

- ✘ Measure the total height of the convector.
- ✘ Remove the ornamental cover panels, mark and drill holes in the wall.
- ✘ Screw the back plate c/w fan and heat exchanger to the wall.
- ✘ Connect water and electrical services.
- ✘ Place the ornamental cover panels over the installed unit.

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 or flow rate 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 two 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 2x2.5mm, and for connections to individual convectors should be CYKY 2x1.5 mm.
- ✘ If only one convector is connected to the transformer TT1-DC, use the cable CYKY 2x1.5mm.
- ✘ To determine the maximum length of the convector to be connected to the power supplies (e.g. TT1-DC), calculate with the consumption value of 7W per one metre of the convector. TT1-DC = 96 VA and the length is approx. 13 m. TT3 = 240 VA – approx. 32 m, TT5 = 330VA – approx. 47m.
- ✘ TT1-DC 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 TT1-DC are 145 x 175 x 70 mm.
- ✘ Important: -Layout and installation of convectors fitted with fans must meet the relevant standards for safe positioning of all devices (TT1-DC, 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 27 A at 12V regarding the voltage drop (TT5).
- ✘ Connecting cables for a branch of convectors to one

transformer should be CYKY 2x4mm, and for connections to individual convectors should be CYKY 2x1.5 mm.

- ✘ If only one convector is connected to the transformer then the cable should be CYKY 2x2.5mm².
- ✘ If DC motors for wet areas are used (shaft sealing), you must calculate with the input power of approx. 14W, and maximum lengths of convectors to be connected to one power supply are half of the length in comparison with DC motors. When convectors with AC motors are used, calculate with the consumption of approx. 50 VA per one metre of the convector.
- ✘ The TT3 or TT5 transformer in its 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.
- ✘ Installation box sizes are as follows:
TT3 165mm x 210mm x 70mm and
TT5 205mm x 255mm x 70mm.
- ✘ 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 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.

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 it is recommended that the more durable stainless steel grille is used (available at an extra cost).

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 Rep.:**

MINIB s r. o.
Střešovická 49
162 00 Praha 6
Czech republic
Tel.: +420 220 180 780
Fax: +420 220 180 779
Email: office@minib.cz
www.minib.com

