

MINIB[®]



DESIGN CONVECTORS

●●● more than just heat

ABOUT US



ABOUT THE COMPANY

MINIB is a Czech business through and through, and it ranks among the leading manufacturers of convectors in the Czech Republic. It currently exports to thirty countries in Europe, Asia, Australia, and America.

Since 1999, MINIB has been systematically innovating its production technology and its products and has invested considerable sums in proprietary development and design, with the goal of offering our customers solutions that are mature both from the technical and esthetic points of view.

MINIB's business is economically sound and the company consistently turns a profit. This allows us to invest in R&D, technology, and above all, human capital, so as to ensure our long-term prosperity.

ABOUT THE MANUFACTURING PROCESS

The manufacturing facility is located in Býkev near Mělník and has excellent transport connections. It is furnished with state-of-the-art production technology. Most manufacturing operations are carried out on CNC machines, which allows us to accommodate even the most sophisticated wishes of our exacting customers.

In response to individual calls for customization, we are able to create a wide variety of non-standard, one-of-a-kind products that satisfy specific needs.

All products are made from high-grade material with a useful life of many years, which is why we offer a 10-year warranty on heat exchangers and our stainless-steel convector vats.

MINIB holds an ISO 9001:2008 certificate in addition to numerous utility models and patents.

The entire range of products is submitted to testing in the independent, accredited test chamber of HEATEST, s.r.o. pursuant to the European Standard EN 442-2, which is why we are able to guarantee the advertised heating and cooling output.

ABOUT THE PRODUCTS

MINIB's production portfolio consists of over 70 convector types. Customers can thus choose the right convector for any interior.

The main advantage of convectors is that they are efficient, modern, economical, and esthetic heaters suitable for both dry and humid environments. Significant power savings are achieved thanks to low water requirements for the immediate heating or cooling of a given area. This leads to low consumption of electricity required for its heating. In addition to water and energy savings, a great heating and cooling dynamics is also important. The space saving design is another important feature of these products. Our convectors do not disturb interior esthetics, have a modern design, and - last but not least - are safe thanks to their 12V power supply.

The product range comprises various types of convectors:

- › **FLOOR** convectors without fans that work on the natural convection principle. Convectors with fans utilize the principle of forced convection.
- › **FREE STANDING AND WALL MOUNTED** convectors with and without fans are also available. Heating benches with granite and wooden top panels are available for humid environments (swimming pools, bathrooms).
- › **DESIGN** convectors are a unique patent series that use both the convection and heat radiation principle for heating. These convectors have aluminum composite front panels available in a number of modern designs from smooth glass with various colors or from glass with sand blasted decorations. The company also offers granite front panels.

MINIB can satisfy any individual, non-standard requirements of its customers such as angular or arc-shaped convectors with various connections and tailor them to their demands. MINIB emphasizes high user comfort. All products place low demands on installation and maintenance.

Numerous accessories are available for individual convector types. MINIB products have won a number of national and foreign awards.

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DESIGN CONVECTORS

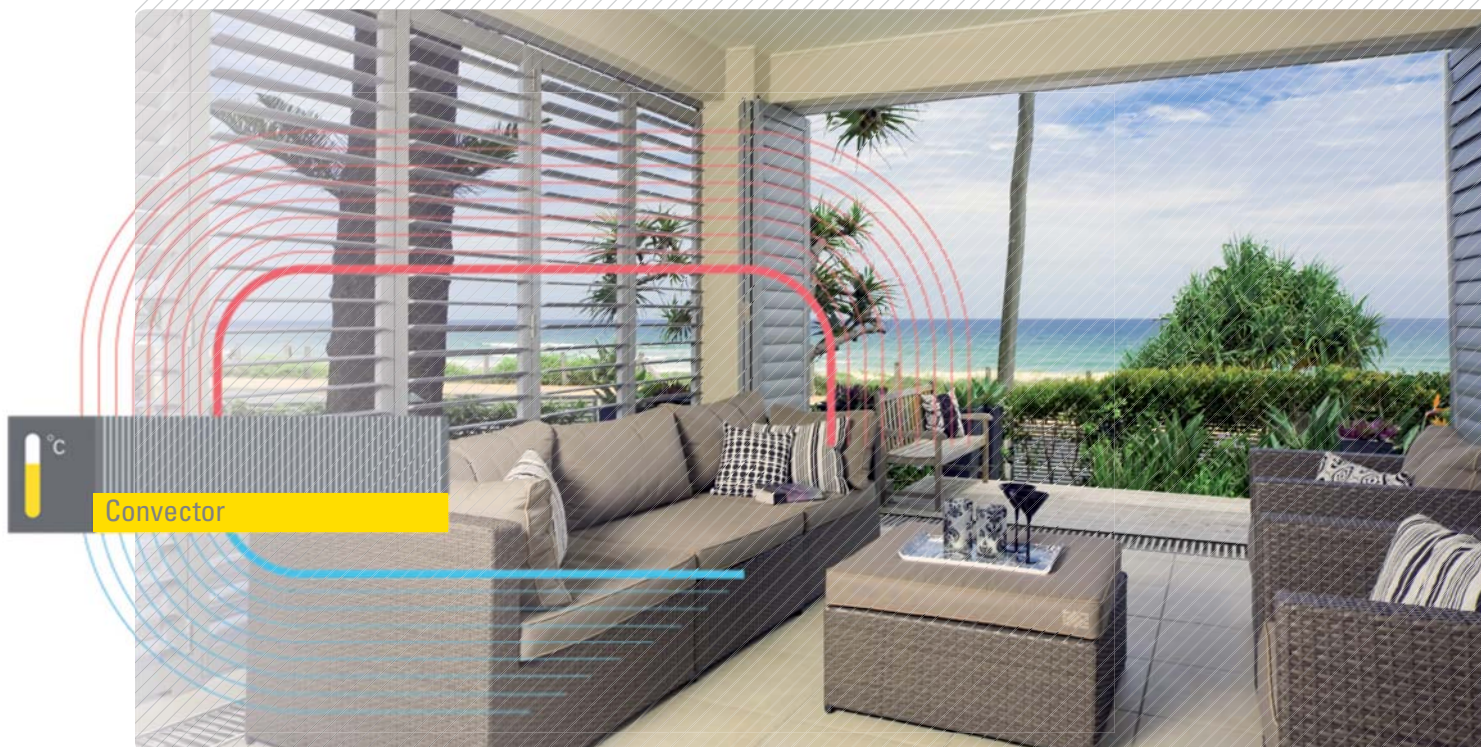
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THERMAL EQUATION

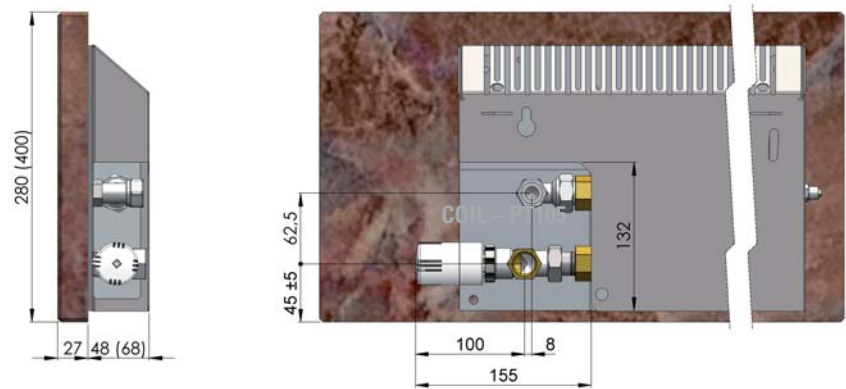
$$Q = \mu Q_N \left(\frac{t_w - t_A}{50} \right)^m$$

where:

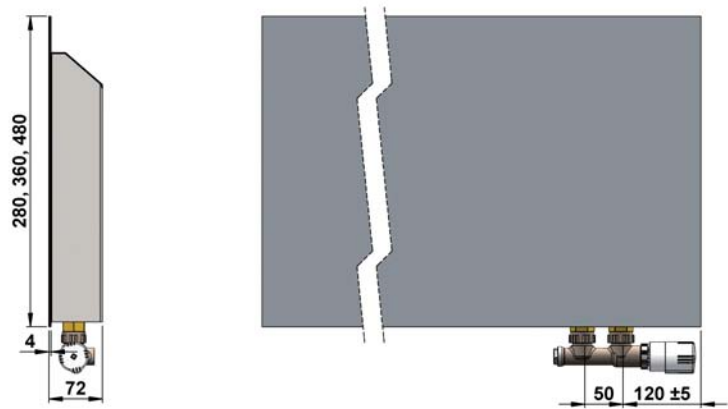
- m = thermal exponent
- t_w, t_A = mean heating water temperature, interior air temperature [°C]
- Q_N = nominal heat output for temperatures t_w/t_A 70/20°C [W]
- μ = $\mu=1$ (for other than nominal flow values, determine from the graph)
- Q = heat output for other temperatures [W]



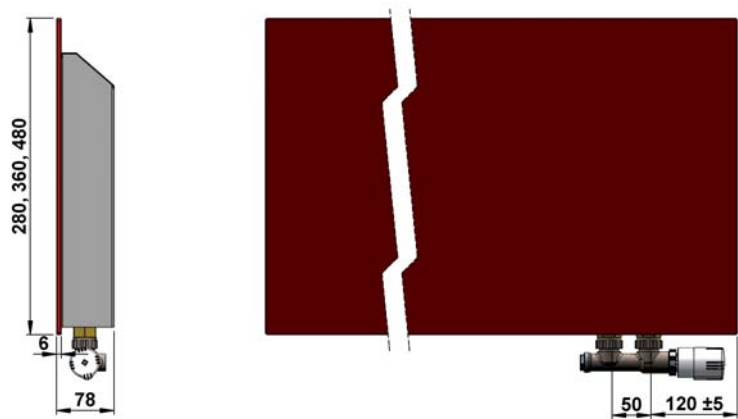
CONVECTOR CROSS-SECTIONS



COIL – DS



COIL – PS



COIL – GS

COIL-DS



A unique design convector combining the benefits of convection and radiation with a GRANITE front panel.

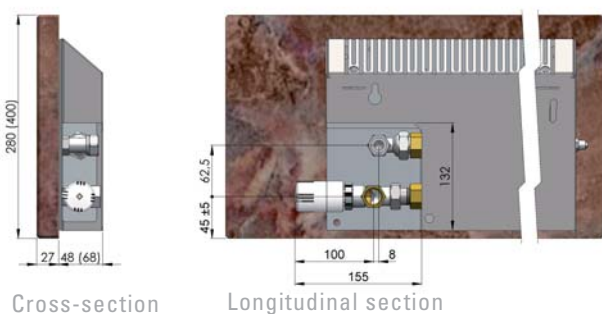


CHARACTERISTICS

- high natural convection output
- significant share of radiation component
- increased user comfort
- intended for installation on the wall of a room
- short response time

DIMENSIONS

width	75 and 95 mm
height	280 and 400 mm
length	1150 and 1350 mm
connection	G½"



HEAT OUTPUT Q [W]

DS 280 width 75 mm

DS 400 width 95 mm

		air temperature t_a					air temperature t_a			
		15	20	22			15	20	22	
		length L (mm)		1150			length L (mm)		1150	
mean water temperature t_w	80	529	473	451	80	917	815	775		
		419	367	346		70	717	623	587	
		317	269	250			60	533	448	416
		180	139	124				45	293	224
	15	20	22		15				20	22
	length L (mm)		1350		length L (mm)				1350	
	80	654	585		558	80	1 113		1 007	958
		518	453		428		70	886	770	725
		391	332	309	60			659	554	514
		222	172	153				45	363	277
	15	20	22			15			20	22

COIL-PS



A unique design convector combining the benefits of convection and radiation with a COMPOSITE front panel.

CHARACTERISTICS

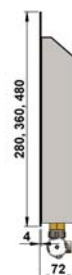
- high natural convection output
- short response time
- increased user comfort
- intended for installation on the wall of a room
- possibility of own design selection

HEAT OUTPUT Q [W]

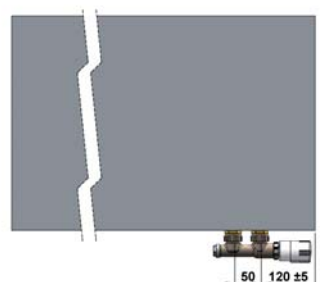
PS 280/2 width 72mm					PS 360/4 width 72mm				PS 480/4 width 72mm					
mean water temperature t_w	air temperature t_A					air temperature t_A				air temperature t_A				
	15	20	22	15		20	22	15		20	22			
	length L (mm)	1000			length L (mm)	1000			length L (mm)	1000				
	80	559	502		480	80	744		666	636	80	875	783	746
	70	447	394	373	70	591	518	489	70	693	606	572		
	60	342	292	273	60	448	380	354	60	523	443	413		
	45	199	156	139	45	256	199	177	45	296	229	204		
	15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22<th rowspan="2"></th><th>15</th><td>15</td><td>20</td><td>22</td></td>		15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22</td>		15	15	20	22
	length L (mm)	1250		length L (mm)		1250		length L (mm)	1250					
	80	759	682	652	80	1 010	904	863	80	1 188	1 062	1 013		
	70	607	534	506	70	802	703	664	70	940	823	777		
	60	464	396	370	60	607	516	481	60	710	602	560		
	45	270	211	189	45	347	270	240	45	402	311	277		
	15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22<th rowspan="2"></th><th>15</th><td>15</td><td>20</td><td>22</td></td>		15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22</td>		15	15	20	22
length L (mm)	1500		length L (mm)	1500		length L (mm)	1500							
80	959	861	823	80	1 276	1 142	1 090	80	1 501	1 342	1 279			
70	766	675	639	70	1 013	888	839	70	1 188	1 039	981			
60	586	501	467	60	767	652	607	60	896	760	707			
45	341	267	239	45	438	340	303	45	508	393	350			
15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22<th rowspan="2"></th><th>15</th><td>15</td><td>20</td><td>22</td></td>		15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22</td>		15	15	20	22	
length L (mm)	1750		length L (mm)		1750		length L (mm)	1750						
80	1 158	1 041	994	80	1 541	1 380	1 317	80	1 813	1 621	1 546			
70	926	815	772	70	1 224	1 073	1 014	70	1 435	1 256	1 186			
60	708	605	565	60	927	788	734	60	1 083	918	855			
45	412	322	288	45	529	411	367	45	614	475	423			
15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22<th rowspan="2"></th><th>15</th><td>15</td><td>20</td><td>22</td></td>		15	15	20	22 <th rowspan="2"></th> <th>15</th> <td>15</td> <td>20</td> <td>22</td>		15	15	20	22	
length L (mm)	2000		length L (mm)		2000		length L (mm)	2000						
80	1 358	1 220	1 166	80	1 807	1 618	1 544	80	2 126	1 901	1 812			
70	1 086	956	905	70	1 435	1 257	1 188	70	1 682	1 472	1 390			
60	830	709	662	60	1 087	924	860	60	1 270	1 077	1 002			
45	483	378	338	45	621	482	430	45	719	557	496			

DIMENSIONS

width 72 mm
height 280, 360, 480 mm
length 1000 to 2000 mm
connection G½"



Cross-section



Longitudinal section



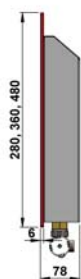
A unique design convector combining the benefits of convection and radiation with a GLASS front panel.

CHARACTERISTICS

- high natural convection output
- short response time
- increased user comfort
- intended for installation on the wall of a room
- glass panel adapted to customer's individual wishes

DIMENSIONS

width	78 mm
height	280, 360, 480 mm
length	1000 and 1250 mm
connection	G½"



Cross-section



Longitudinal section

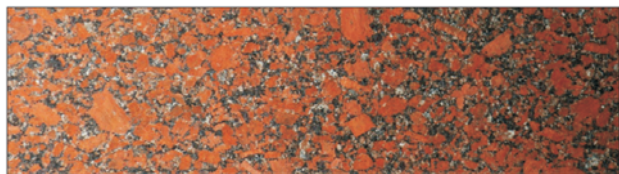
COIL-GS



HEAT OUTPUT Q [W]

GS 280/2 width 78 mm					GS 360/4 width 78 mm					GS 480/4 width 78 mm					
mean water temperature t_w		air temperature t_A				air temperature t_A				air temperature t_A					
		15	20	22		15	20	22		15	20	22			
		length L (mm)		1000		length L (mm)		1000		length L (mm)		1000			
		80	579	520	496	80	736	659	629	80	850	761	726		
		70	462	407	385	70	585	513	485	70	675	591	559		
		60	353	301	281	60	444	377	352	60	511	434	405		
mean water temperature t_w		45	205	160	143	45	254	198	176	45	292	227	202		
		15		20	22		15		20	22		15		20	22
		length L (mm)		1250		length L (mm)		1250		length L (mm)		1250			
		80	785	705	674	80	999	895	854	80	1 153	1 033	985		
		70	627	552	523	70	794	696	658	70	916	803	759		
		60	479	409	382	60	602	512	477	60	694	590	549		
mean water temperature t_w		45	278	218	195	45	345	268	239	45	396	308	274		

DS



K001



K002



K003

GS



P005



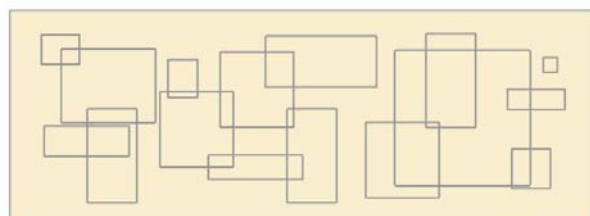
P001



P006



P002



P007



P003

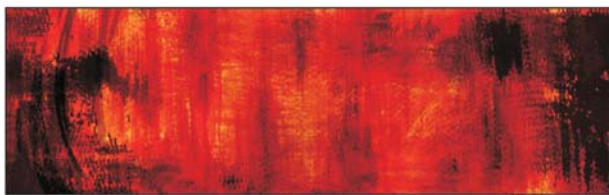


P008



P004

PS



T001



T005



T002



T006



T003



T007



T004



T008



T009



T011

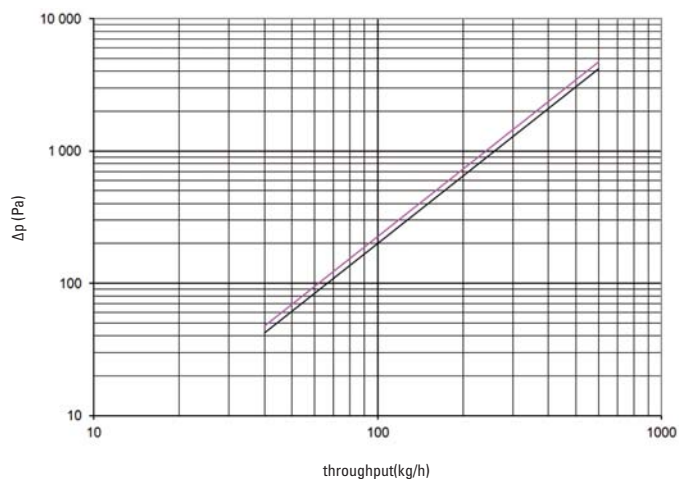


T010

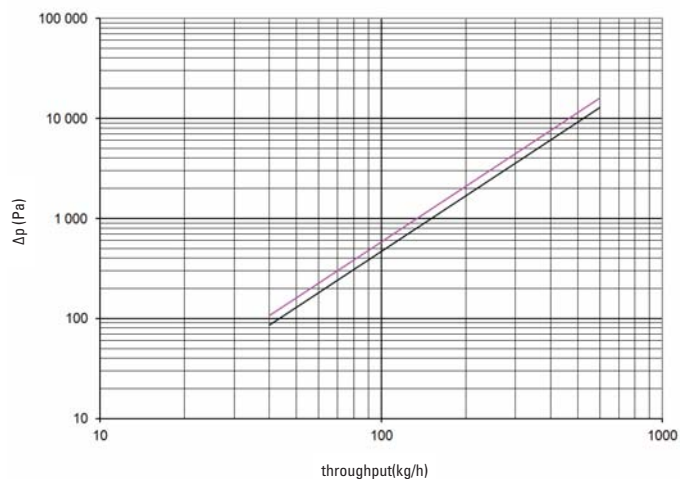


T012

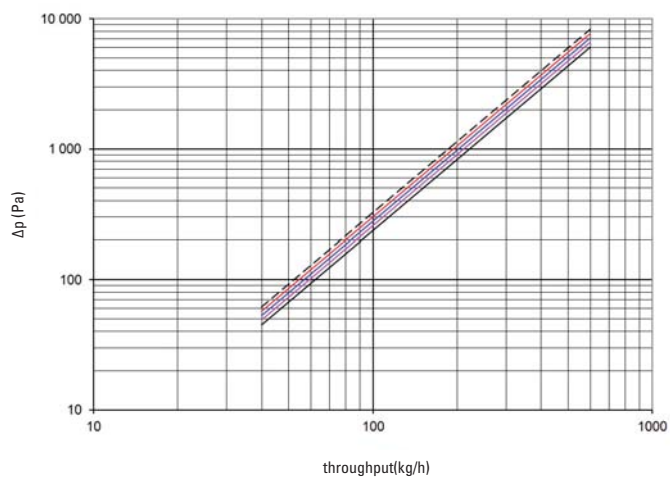
**Pressure loss of 2 pipe exchanger MINIB DS
ø 15mm Cu pipe**



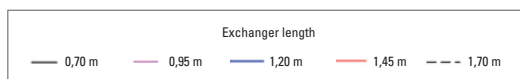
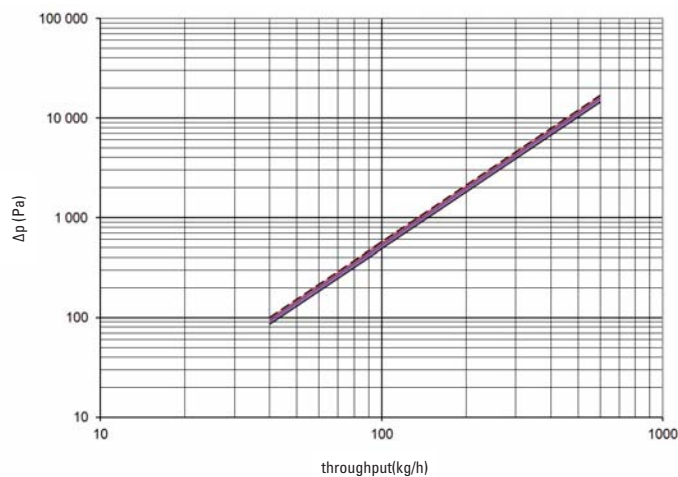
**Pressure loss of 4 pipe exchanger MINIB DS
ø 15mm Cu pipe**



**Pressure loss of 2 pipe exchanger MINIB GS/PS
ø 15mm Cu pipe**



**Pressure loss of 4 pipe exchanger MINIB GS/PS
ø 15mm Cu pipe**



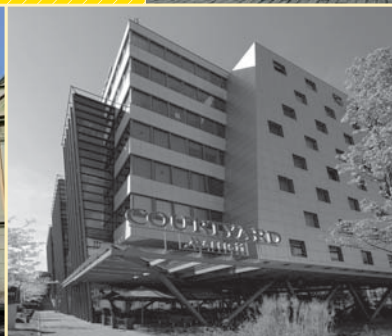
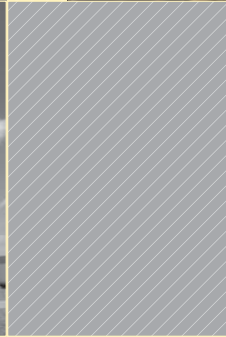
WATER VOLUME OF MINIB CONVECTORS, dm³

Average water volume of MINIB convectors (two-tube exchangers):

convector length m	0,9	1,0	1,25	1,5	1,75	2,0	2,5	3,0
water volume of exchanger, dm ³ (for tube diameter 15mm)	0,2	0,25	0,3	0,4	0,5	0,6	0,7	0,9
water volume of exchanger, dm ³ (for tube diameter 12mm)	0,13	0,15	0,2	0,25	0,3	0,35	0,4	0,5

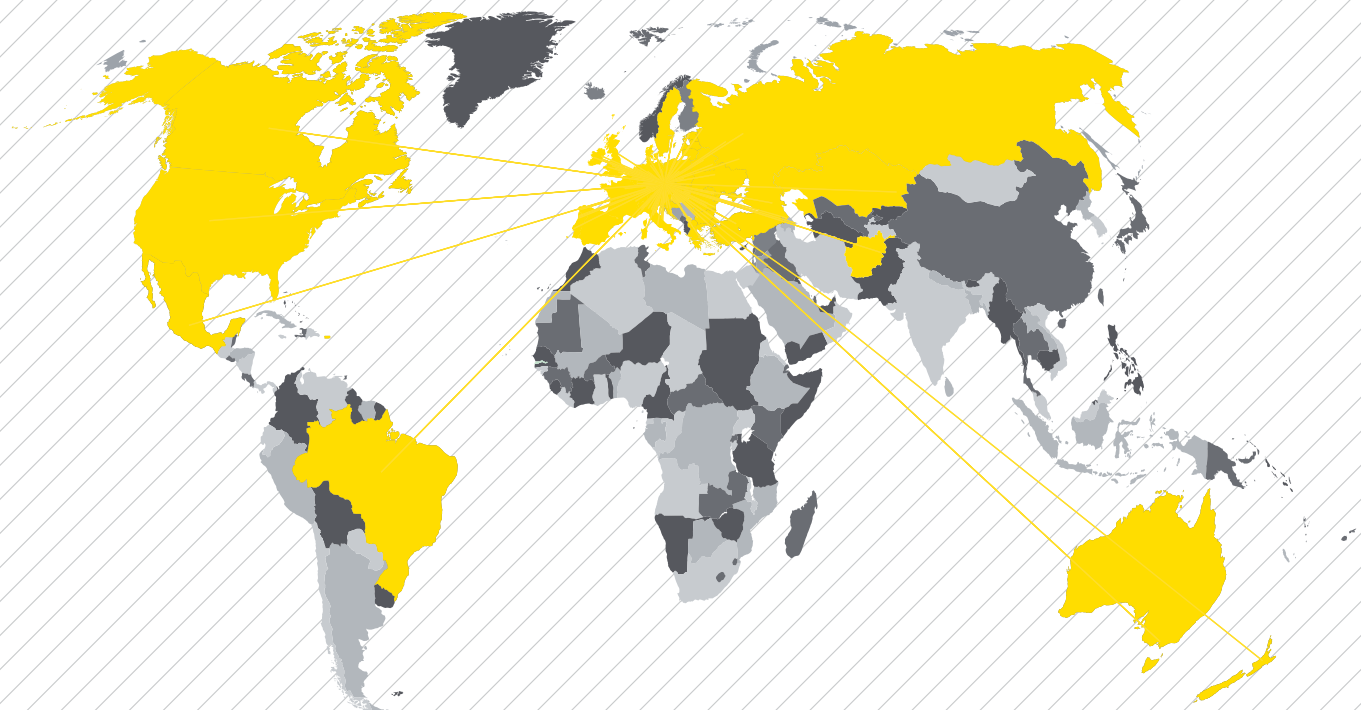
REFERENCES

Convectors are suitable for all building types.





... more than just heat



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