

Trench Technology

MODUS.80

Natural Convection Floor Convector



- Heating Floor Convector / Natural Convection

- **POWERFULLY SIMPLE.** A special design of Gerhman Modus.80 floor convector system. Modus floor convectors is a testament to the power of a simple solution. With best-in-class, Gerhman-made components and no primary/secondary additional equipment required, the MODUS.80 is the perfect choice for residential and light commercial applications – including high rise buildings, airports, offices, residential complex and multi-zone systems.

INTELLIGENT, DECENTRALISED ROOM CLIMATE CONTROL

Trench Technology

MODUS.80



POWERFULLY SIMPLE. The Modus.80, floor convector is a testament to the power of a simple solution. With best-in-class, Gerhman-made components and no additional primary/secondary equipment required, the Modus is the perfect choice for residential and light commercial applications – including high rise buildings, airports, residential applications, offices and multi-zone systems

- **Decentralized climate** concepts differ from centralized systems because they are planned and installed 'room by room'. The space to be ventilated can be extended to several rooms by taking clever additional measures.

There are many reasons for using decentralized climate systems:

- Protection and conservation of the building fabric
- Prevention of mould formation
- Assistance in eliminating moisture damage
- Domestic ventilation according to DIN1946-6 in the living area and the basement in order to achieve a good air quality
- Preservation of a constant climate to protect the valuables in museums and archives
- and many more

Energy-efficient solution

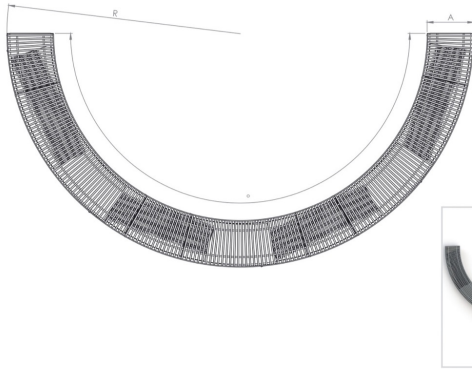
A much more energy-efficient and reliable solution is an intelligent indoor climate control system.



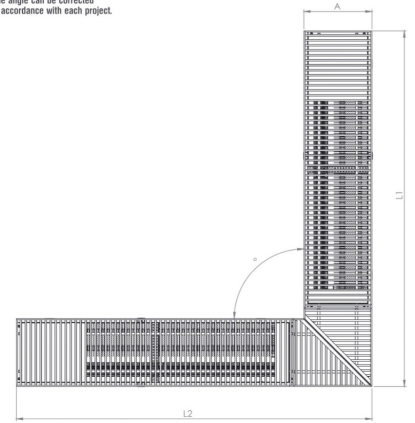
Height
80 mm

MITRED CORNERS

CURVED TRENCH TECHNOLOGY



The angle can be corrected
in accordance with each project.



GRILLS

MODUS



ALUMINIUM GRILLS

ROLL-UP GRILLS

The spacing between spring loaded transverse lamellas of aluminium alloy is delimited by residual rollers made of cured plastic. The lamellas have anodized and tinted surface. Any RAL shade may be reached by powder colour coating.



LINEAR GRILLS

Lengthwise perforated aluminium lamellas are linked by carrying steel bar. Residual rollers of cured plastic delimitate the spacing.



Information on design

MODUS.80 are suitable for use in all kinds of buildings.

They are generally positioned directly in front of the external façade without a large gap. MODUS.80 can provide cost-effective heating, particularly in front of large areas of glazing.

Heat performance

The heat outputs were calculated based on EN442-2

Outlet

MODUS.80 are positioned with output on the façade side. If it is arranged on the room side, the high air output would result in lower levels of comfort in the occupied zone.

Modus.80:

Heating from the floor
with double row
heating element.

Product data

MODUS.80 31 / 32 / 33

- Natural convection floor convectors principle of operation is natural air convection.
- Range up to 2,0 kW
- They are distinguished for their silent operation.
- Extensive range of control accessories
- Roll-up and linear grilles with colour-coordinated spacers



Performance data

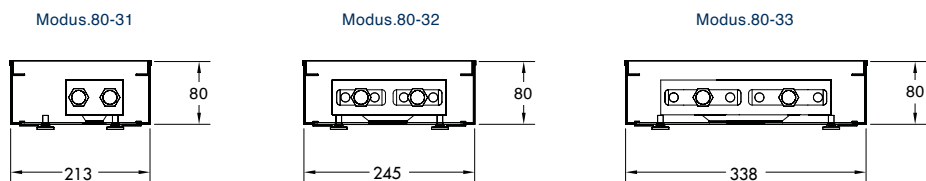
Heat output (W)¹ 138-2075

1.1) at LPHW 90/70 °C, tL1 = 20 °C

Operating limits

- Max. operating pressure: 12 bar
- Max. entering water temperature: 120 °C` Min. entering water temperature: 5 °C` Inlet air temperature: 40 °C
- Max. glycol volume: 50 %

Technical drawing



Performance data | Modus.80

Height 80 mm



**Height
80 mm**

Functions

- Room heating (primary or secondary heating),
- Maintenance of uniform air circulation field in the room, and thereby, uniform distribution of heat throughout the room,
- Increasing of cold areas surface temperature,
- Prevention of condensation build-up on glass surfaces,
- Prevention of ingress of cold outside air through big glass surfaces,

		90 / 70°C			80 / 60°C			70 / 55°C			55 / 45°C			50 / 40°C		
		Modus.80 Type														
Casing Length (mm)	Coil Length (mm)	Modus.80-31	Modus.80-32	Modus.80-33	Modus.80-31	Modus.80-32	Modus.80-33	Modus.80-31	Modus.80-32	Modus.80-33	Modus.80-31	Modus.80-32	Modus.80-33	Modus.80-31	Modus.80-32	Modus.80-33
950	650	138	224	296	109	174	227	89	140	179	57	87	108	46	68	82
1250	950	201	327	433	160	255	332	130	204	261	84	127	156	67	99	120
1550	1250	264	429	570	210	335	436	171	268	344	110	167	206	88	130	157
1850	1550	328	532	707	260	415	540	212	332	426	136	207	255	108	161	195
2150	1850	391	636	844	311	496	645	253	396	508	163	247	304	130	192	233
2450	2150	455	739	980	361	576	750	294	461	590	189	286	354	151	224	271
2750	2450	518	841	1117	412	656	854	335	525	672	216	326	403	172	254	308
3050	2750	581	944	1254	462	736	959	376	589	755	242	366	452	192	285	346
3350	3050	644	1048	1391	512	816	1064	417	654	837	268	406	502	213	316	384
3650	3350	708	1150	1528	562	896	1168	458	718	920	295	446	551	234	348	421
3950	3650	772	1253	1664	612	976	1272	499	782	1002	321	486	600	256	379	459
4250	3950	835	1356	1801	663	1057	1377	540	846	1084	348	526	649	276	410	496
4550	4250	898	1460	1938	713	1137	1482	581	911	1167	374	566	699	297	441	535
4850	4550	961	1562	2075	764	1217	1586	622	975	1249	400	605	748	318	472	572

Heating Capacity (W)

1.Values rounded up within the measurement tolerances.
2.Performance tested according to EN442-2



Information on design

MODUS.80 DOUBLE are suitable for use in all kinds of buildings.

They are used where the natural convection type floor Convectors are selected as Primary heating system. Double row coil with 2-pipe operation.

Outlet

MODUS.80 DOUBLE are positioned with output on the façade side. If it is arranged on the room side, the high air output would result in lower levels of comfort in the occupied zone.

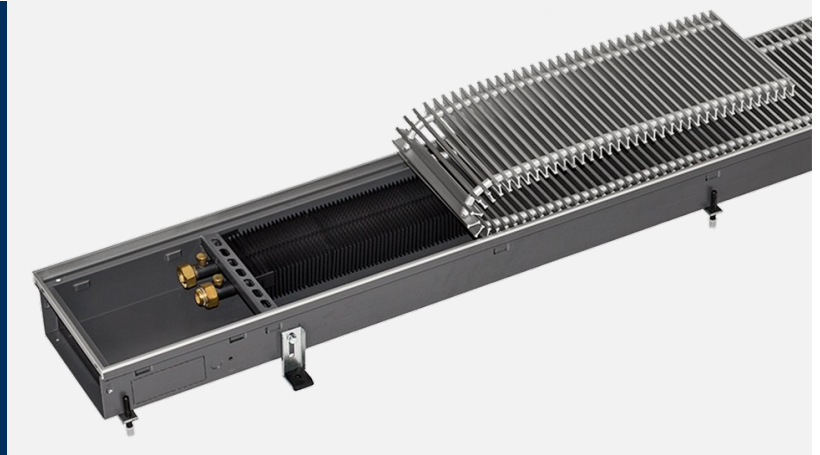
Heat performance

The heat outputs were calculated based on EN442-2

Product data

MODUS.80 DOUBLE 31-D / 32-D / 33-D

- Naturally powered convection floor convectors principle of operation is natural air convection.
- Range up to 3,7 kW
- They are distinguished for their silent operation.
- Extensive range of control accessories
- Roll-up and linear grilles with colour-coordinated spacers
- Double row coil with 2-pipe operation
- High heat output



Performance data

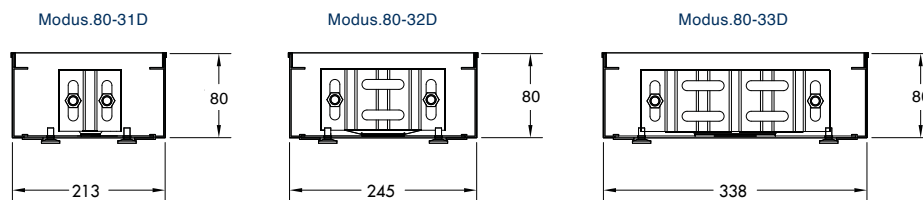
Heat output (W)¹ 246-3697

1.1) at LPHW 90/70 °C, tL1 = 20 °C

Operating limits

- Max. operating pressure: 12 bar
- Max. entering water temperature: 120 °C` Min. entering water temperature: 5 °C` Inlet air temperature: 40 °C
- Max. glycol volume: 50 %

Technical drawing



Performance data I Modus.80 D Height 80 mm



**Height
80 mm**

Functions

- Room heating (primary or secondary heating),
- Maintenance of uniform air circulation field in the room, and thereby, uniform distribution of heat throughout the room,
- Increasing of cold areas surface temperature,
- Prevention of condensation build-up on glass surfaces,
- Prevention of ingress of cold outside air through big glass surfaces,

Operation		90 / 70°C			80 / 60°C			70 / 55°C			55 / 45°C		50 / 40°C			
Casing Length (mm)	Coil Length (mm)	Modus Type														
		Modus.80 31-D	Modus.80 32-D	Modus.80 33-D	Modus.80 31-D	Modus.80 32-D	Modus.80 33-D	Modus.80 31-D	Modus.80 32-D	Modus.80 33-D	Modus.80 31-D	Modus.80 32-D	Modus.80 33-D	Modus.80 31-D	Modus.80 32-D	Modus.80 33-D
950	650	246	397	528	191	305	398	155	243	312	98	148	184	78	115	142
1250	950	358	581	772	280	448	582	226	355	456	143	216	268	114	168	204
1550	1250	471	765	1016	369	589	767	298	468	600	188	285	352	149	222	269
1850	1550	583	949	1259	457	730	950	371	581	744	233	353	436	185	275	333
2150	1850	696	1133	1503	546	871	1134	442	692	888	278	422	521	222	329	399
2450	2150	810	1317	1747	635	1012	1319	513	806	1030	324	489	606	258	383	464
2750	2450	923	1499	1991	723	1153	1502	584	917	1175	369	558	689	293	434	528
3050	2750	1035	1683	2235	812	1295	1686	657	1029	1318	414	627	775	329	488	592
3350	3050	1148	1867	2478	901	1436	1870	729	1143	1463	459	695	859	364	542	657
3650	3350	1260	2049	2722	988	1577	2055	799	1254	1606	504	764	943	400	595	721
3950	3650	1374	2233	2966	1076	1718	2238	871	1366	1751	549	832	1029	437	649	786
4250	3950	1488	2417	3210	1166	1859	2422	942	1478	1895	595	901	1111	473	702	850
4550	4250	1600	2601	3454	1254	2000	2607	1016	1592	2039	640	969	1197	509	755	915
4850	4550	1713	2784	3697	1343	2141	2789	1087	1703	2183	685	1036	1282	545	808	980

Heating Capacity (W)

1.Values rounded up within the measurement tolerances.
2.Performance tested according to EN442-2



Control options

Heating MODUS.80 units are designed to be installed in a floor void. One can distinguish two basic models of this product that are different through the way they are build and function:

2-PIPES MODUS UNITS

The heat exchanger has only a single pipe circuit that can be used for heating or cooling. Only one set of valves and thermal actuator is required.

As MODUS is a part of the heating system in the building they proper operation rely on:

- central heating installation being fitted correctly
- the valves and controls have been fitted, connected and configured properly.

The complete set of controls includes:

- room air controller that should be connected to the thermal actuators
- Temperature Controller measure the ambient temperature to keep it on the constant, required level:
- by adjusting the thermostatic valve opening/closing angle

Due to the ambient temperature sensor the Room Temperature Controller should not be covered by any obstacles such as furniture or curtains.

Each heating zone should be controlled by the single Room Temperature Controller.

For BMS systems Room Controller and Temperature sensor is usually split into 2 separate devices.





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