

TWINPIPES

THE OPTIMAL HEATING SYSTEM FOR ALL FARMS!



THE BEST SYSTEM FOR FARROWING HOUSES



CAN EASILY BE INSTALLED IN THE AIR INLET CHANNELS

THE TWINPIPES HEATING SYSTEM

It is impossible to achieve an optimal climate during colder periods without a proper heating system. Genugten Agri supplies all materials for installing central heating in all type of farms. The key products of such a system are the twin-pipe heating system and diffusion-tight PE-hoses for floor heating. The most suitable system for floor heating is the twin-pipe system. This system can be installed anywhere, inside the air channels, along the walls or under the ventilation ceiling. We will calculate the required heating capacity for you, per compartment, building, and if necessary, for the entire farm.

230 OR 280 WATTS/METER

ANODISED

MAINTENANCE-FREE/NO DUST

EASY TO INSTALL

PERFECT FOR RENOVATIONS

SUPPLIED DIRECTLY FROM STOCK

HIGH HEAT EMISSION

Due to the pipes tapered connection with the fins, heat is channeled to the fins with maximum efficiency. Our Twin-Pipes therefore provide exceptionally high heat emission. The twin-pipe heat emission was tested by the German research centre DLG. At a 70 °C supply temperature the standard Twin-pipe heat emission is 230 watts/m. The black Twinpipes have a heat emission of 280 Watt per meter. Although these twin-pipes are more expensive, the total costs are lower because the total number of couplings and the installation costs are lower.

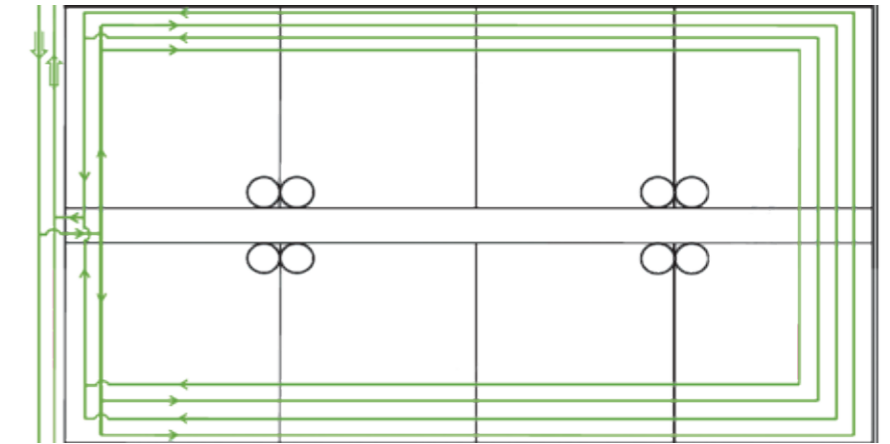
When the twin-pipe system is installed in the air inlet channels, they must be filled with glycol and a heat exchanger is also mandatory. The use of glycol prevents the Twinpipes from bursting due to freezing. Because the temperature difference in the event of low outside temperatures is much greater when the twin-pipes are installed in the air inlet channels than when they are installed directly in the room, the heat emission for this application is much greater. Standard Twin-pipes can be counted on to provide a heat emission of 400 watts at an outside temperature of -10 °C and a water temperature of 70 °C. In that case the black Twin-pipes will have a heat emission of 500 Watts. Due to the possible dirt accumulation on the Twin-pipes and the fluctuating water temperatures of the heating system, we recommend to install 10% more Twin-pipes than needed according to the calculations.



The heat emission after stalling in broiler houses is approximately 20% lower due to the high room temperature. The quantity of Twin-pipes per animal indicated above includes this additional quantity. If the Twin-pipes are installed in an air inlet channel, the required length can be reduced by approx 25%.

INSTALLATION EXAMPLE

The Twin-pipe heating system can be attached to the wall as indicated in this example. Combined with a 'Soft-Air' ventilation ceiling with a 'Ventu-flow' system, the room will be evenly heated because of the optimal air circulation. It is always recommended to install the supply and return pipes alongside each other.



LENGTH AND PACKAGING

The Twin-pipes are supplied in standard lengths of 580, 290, 193 and 145 cm. These lengths make it possible to outfit all lengths of compartment and building with a maximum length differential of approximately 50 cm.

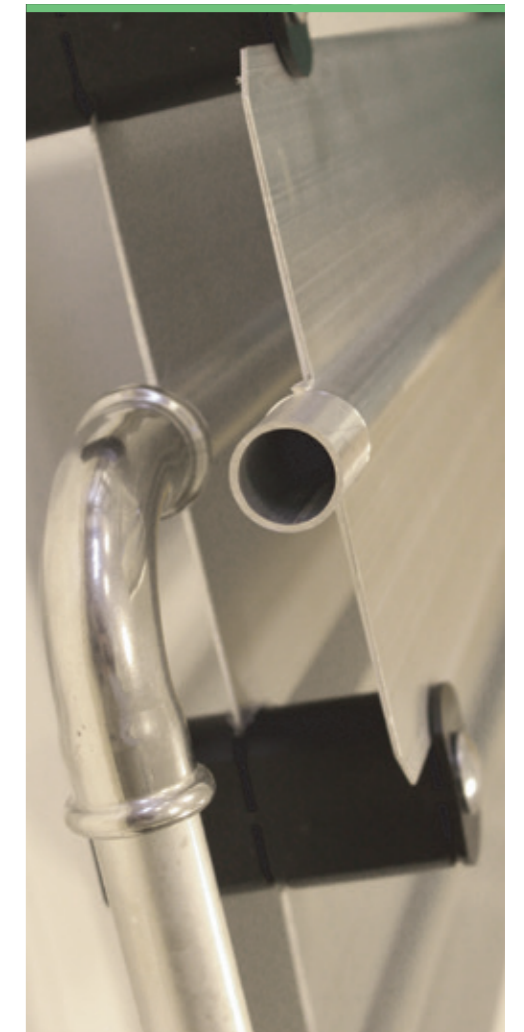
GUIDELINES FOR THE RECOMMENDED TWIN-PIPES

The basic assumption underlying this overview is that the buildings are well insulated and that the heat generated by the animals is sufficient to offset the buildings transmission loss. In this case, the Twin-pipes are only used for heating the ventilation air. Because the heat production of young animals is still only slight when they are first stalled in, additional heat will be recommended in the first weeks. This additional heating can not be delivered with the amount of Twin-pipes calculated below. If the aim is to heat the farm with only the Twin-pipe system, we recommend that at least 30% more have to be installed than indicated below. Additional heating needs must also be taken into account when a new facility is first put into use.

Assumptions: Outside temperature: -15 °C, room temperature as indicated.

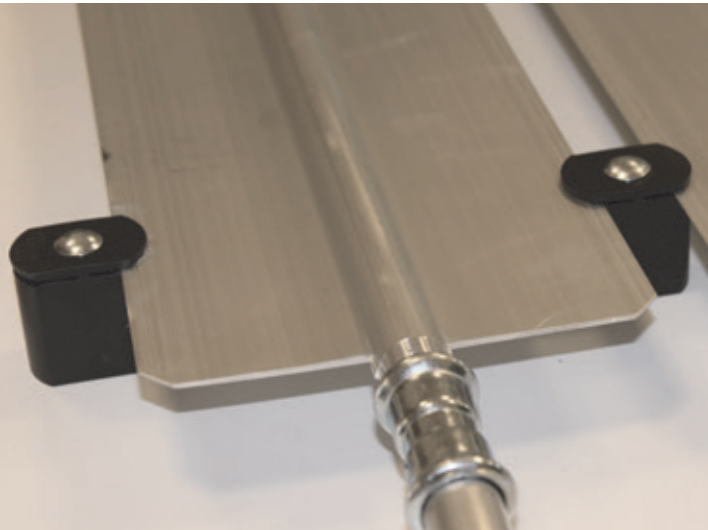
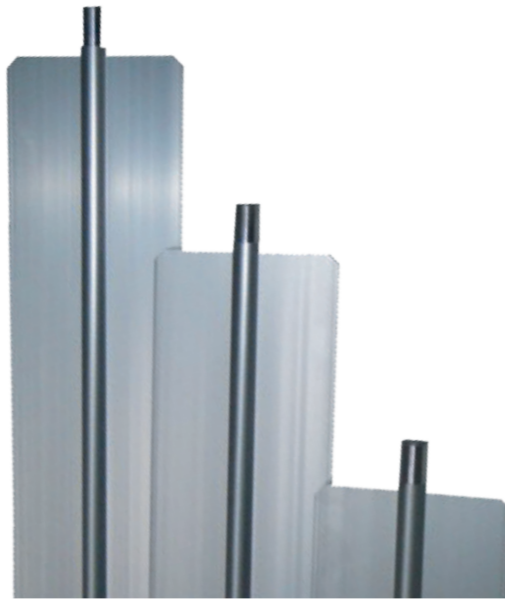
Animal type	Weight	Min. Ventilation m ³ /hour	Room temp. °C	Watts/stall m.	Twinpipe in m/animal	
					Blank	Black
Farrowing		18-35	23	340	1,5	1,2
Nursery	8-25 kg	2-6	27	60	0,26	0,21
Finishers	25-115 kg	6-8	23	90	0,4	0,32
Broilers	per kg	0,5-1,5	35	125W/m ²	125 /m ²	0,55 /m ²

Pipe 1	Pipe 2	Pipe 3	Pipe 4	Pipe 5	Total length	Extra length
5,80					5,80	
2,90	1,93	1,45			5,28	0,48
2,90	1,93	1,93			6,76	0,48
5,80	5,80	1,45			7,25	0,49
5,80	5,80	1,93			7,73	0,48
2,90	1,93	1,93	1,45		8,21	0,48
5,80	2,90	1,45			8,70	0,49
5,80	1,93	1,45			9,18	0,48
5,80	1,93	1,93			9,66	0,48
5,80	2,90	1,45			10,15	0,40
5,80	2,90	1,93			10,63	0,48
5,80	1,93	1,93	1,45		11,11	0,48
5,80	5,80				11,60	0,49
5,80	2,90	1,93	1,45		12,08	0,48
5,80	2,90	1,93	1,93		12,56	0,48
5,80	5,80	1,45			13,05	0,49
5,80	5,80	1,93			13,53	0,48
5,80	2,90	1,93	1,93	1,45	14,01	0,48
5,80	5,80	2,90	2,90		14,50	0,49
5,80	5,80	1,93	1,45		14,98	0,48
5,80	5,80	1,93	1,93		15,46	0,48
5,80	5,80	2,90	1,45		15,95	0,49
5,80	5,80	2,90	1,93		16,43	0,48
5,80	5,80	1,93	1,93	1,45	16,91	0,48
5,80	5,80	5,80			17,40	0,49



For easy installation and the expansion of the Twin-pipes, we recommend not to install any Twin-pipes within 50 to 100 cm of the front wall of the compartment. In this way, the twin-pipes can be connected to the central heating pipes with a stainless steel duct.

22 mm aluminium pipes can be used for connecting the Twin-pipes at the front or end of the compartment. These pipes are part of the standard package and can be ordered at the same time as the Twin-pipes. The twin-pipes in each compartment, always need to be supplied with stainless steel valves so the pipes can be shut without having to shut down the entire heating system.



TECHNICAL SPECIFICATIONS

Material	ALMgSi, 6063
Surface treatment	anodized
Standard lengths	1.45, 1.93, 2.90, 5.80 m.
Connection	22 mm.
Wall thickness	2 mm.
Profile thickness	1,5 mm.
Water content	0,25 liter per meter
Heat emission - blank	230 W / m*
Heat emission - black	280 W / m*
Waterflow	minimal 900 liter / hour
Pressure loss	6kPa / 100 m.



Twinpipe black, for an 20% increase in heat emission

* For a supply temperature of approx 70 °C and a room temperature of 20°C.



GENUGTEN AGRI

PROFESSIONALS IN ANIMAL HOUSING

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