

IVT GEO

Ground Source Heat Pump



A+++ - higher SCOP by unique tandem compressor and injection technology

Withstands high temperature with 68°C hot water production without additional heat

Flexible installation - standing or landscape chassis with multiple connections

Open protocol for Building Management System (BMS) as standard

Brought to the UK exclusively by Alto Energy

Introducing the Pioneering Range of Commercial Ground Source Heat Pumps

The IVT GEO is the latest generation state of the art ground source heat pump from IVT.



5 year warranty as standard

Model shown is the IVT GEO 20-40 from the GEO Product Range. Other models in this line may vary.



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Ground Source Heat Pump

IVT Geo is a heat pump with ground-breaking technology that reduces your heating costs. However the key feature of the IVT Geo is the potential scale of the heat output that can be achieved. IVT Geo has been manufactured in eight different power sizes, with the capability of cascading up to six units together. This allows you to put together a solution that fits the exact needs of any commercial or large domestic project.

To provide heat and hot water at the lowest cost, IVT has developed new technology for the IVT Geo. IVT has been designed using only the latest components to create a heat pump with a performance of the highest standards.

IVT Geo is available in eight different power sizes, four with upright chassis and four lying. Additionally, you can connect the heat pump from several directions, providing a cleaner, easier installation.

Technical Specification for the IVT GEO Range

Model	G222	G228	G238	G248	G254	G264	G272	G280
Performance Data								
Energy Class - high temperature	A+++							
Heating output (Bo/W35) ¹⁾	23 kW	29 kW	39 kW	47 kW	55 kW	64 kW	73 kW	79 kW
Heating output (Bo/W55) ¹⁾	23 kW	29 kW	39 kW	48 kW	57 kW	64 kW	74 kW	81 kW
Input power (Bo/W35) ¹⁾	5.0 kW	6.3 kW	8.6 kW	10.9 kW	11.5 kW	14.0 kW	16.1 kW	17.6 kW
Input power (Bo/W55) ¹⁾	7.7 kW	9.6 kW	12.6 kW	15.4 kW	18.3 kW	21.6 kW	24.7 kW	26.7 kW
COP (Bo/35) step 1 ²⁾	4.91	4.95	4.78	4.72	4.82	4.77	4.70	4.72
COP (Bo/35) step 2 ¹⁾	4.57	4.59	4.50	4.36	4.53	4.42	4.39	4.30
COP (Bo/55) step 2 ¹⁾	3.01	3.05	3.08	3.10	3.12	2.96	2.99	3.04
SCOP - Underfloor Heating ⁶⁾	5.62	5.61	5.48	5.27	5.54	5.39	5.33	5.30
SCOP - Radiators ⁶⁾	4.42	4.45	4.49	4.41	4.44	4.34	4.36	4.33
Brine System								
Ground loop nominal flow ⁵⁾	1.3 l/s	1.7 l/s	2.2 l/s	2.8 l/s	3.1 l/s	3.7 l/s	4.3 l/s	4.6 l/s
Max operating pressure	6 bar							
Operating temperature	-5 / 30°C							
Internal pressure drop ⁵⁾	-	-	-	-	19 kPa	24 kPa	18 kPa	21 kPa
Permitted pressure drop	79 kPa	72 kPa	80 kPa	91 kPa	-	-	-	-
Compressor								
Compressor type/number/cooling circuits	Scroll / 2 / 1							
Refrigerant	R410A							
GWP ⁸⁾	2088 kg CO ₂ e							
CO ₂ equivalent (to CO ₂ e)	4500 kg	5000 kg	6300 kg	7500 kg	9500 kg	9300 kg	10600 kg	10800 kg
Hermetically sealed	Yes							
Connection	DN40	DN40 (in) DN50 (out)	DN50	DN50	Flange 76.1			

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Technical Specification for the IVT GEO Range Continued

Model	G222	G228	G238	G248	G254	G264	G272	G280
Heating System								
Max flow/return temperature	68°C ³⁾ / 60°C							
Nominal flow (Δ 8°C)	0.7 l/s	0.8 l/s	1.1 l/s	1.4 l/s	1.6 l/s	1.9 l/s	2.2 l/s	2.4 l/s
Min flow (Δ 10°C)	0.5 l/s	0.7 l/s	0.9 l/s	1.1 l/s	1.3 l/s	1.5 l/s	1.8 l/s	1.9 l/s
Operating pressure max/min	6 / 1.5 bar							
Tank permitted pressure drop	43 kPa	17 kPa	38 kPa	29 kPa	-	-	-	-
Internal pressure drop heat carrier	-	-	-	-	13 kPa	14 kPa	16 kPa	15 kPa
Connection	DN40				Flange 76.1			
Electrical Data								
Electrical supply	400 V							
Integrated Immersion	6/9/15kW	6/9/15kW	-	-	-	-	-	-
Integrated circulation pumps	Yes				No (accessory)			
Fuse without / with immersion	25/50 A	25/50 A	40 A	50 A	50 A	63 A	80 A	80 A
Starting current without / with soft start ⁴⁾	43/22 A	54/30 A	78/39 A	100/48 A	98/40 A	105/47 A	141/63.5 A	135/61.3 A
Max operating current excl. circ. pumps ⁹⁾	-	-	-	-	45 A	55 A	69 A	72 A
Max operating current inc. circ. pumps ⁹⁾	20 A	26 A	36 A	43 A	-	-	-	-
Max operating current inc. immersion ⁹⁾	42 A	47 A	-	-	-	-	-	-
Controller	Rego 5200							
Connectivity	Modbus / Backnet IP							
Other								
Stackable	-	-	-	-	2 pcs			
Dimensions (H x W x D)	1620 x 700 x 750 mm				1000 x 1450 x 750 mm			
Weight	350 kg	360 kg	370 kg	380 kg	460 kg	470 kg	480 kg	490 kg
Sound level dBA ⁷⁾	48-52	48-52	49-54	49-54	57-63	57-63	57-63	57-63
Cascading	Up to 5							
Pipe connections (brine)	top				side / back / top			
Pipe connections (heating)	top				side / back / top			

1) According to EN 14511 and EN 14825 2) According to EN 14825 3) At -5 °C incl. refrigerants 4) According to EN 61000-3-11 5) Glycol 25% 6) According to EN 14825
7) The sound effect is the acoustic energy that the heat pump emits and is not affected by the surroundings. The sound pressure level is, however, affected by the environment and is approximately 11 dB (A) lower measured at 1 m distances in the free field
8) Global warming potential 9) B12/W68