



PACKAGED GEOTHERMAL UNITS 16 - 21 E.E.R. - R-410A

1 stage - 208/230 volt - 1 phase

GS Serenity Series

Features...

- High efficiency Copeland scroll compressor
- Appliance white powder coated steel construction
- Cabinets bolted together for easy access
- Coated air coils for extended life
- Stainless steel drain pans
- Flow switch protected
- Copper Coaxial coils
- Solid state controls with “re-try” to eliminate nuisance service calls
- Hot water generator (desuperheater) with factory installed pump
- Field installed internal electric heat



10 YEAR WARRANTY
ON SEALED REFRIGERANT COMPONENTS

5 YEAR WARRANTY
ON PARTS



The GS Serenity Series products are highly efficient, reliable and quiet; providing exceptional operating efficiency throughout a wide range of entering water temperatures. Insulated cabinets and coaxial heat exchangers reduce noise, condensation, and corrosion at all rated operating temperatures. Oversized air coils coupled with bi-directional expansion valve, and choice of PSC, or ECM motors.

VERTICAL - UPFLOW MODELS WITH ECM MOTORS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G120	GS024A11LT1CA	2	Left	12.3	25	48 oz	190
10G120R	GS024A11RT1CA	2	Right	12.3	25	48 oz	190
10G121	GS036A11LT1CB	3	Left	19.4	40	64 oz	270
10G121R	GS036A11RT1CB	3	Right	19.4	40	64 oz	270
10G122	GS048A11LT1CC	4	Left	26.1	50	64 oz	310
10G122R	GS048A11RT1CC	4	Right	26.1	50	64 oz	310
10G123	GS060A11LT1CD	5	Left	29.7	60	80 oz	360
10G123R	GS060A11RT1CD	5	Right	29.7	60	80 oz	360

VERTICAL - UPFLOW MODELS WITH PSC MOTORS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G130	GS024A11LT0CA	2	Left	12.3	25	48 oz	190
10G130R	GS024A11RT0CA	2	Right	12.3	25	48 oz	190
10G131	GS036A11LT0CB	3	Left	19.4	40	64 oz	270
10G131R	GS036A11RT0CB	3	Right	19.4	40	64 oz	270
10G132	GS048A11LT0CC	4	Left	26.1	50	64 oz	310
10G132R	GS048A11RT0CC	4	Right	26.1	50	64 oz	310
10G133	GS060A11LT0CD	5	Left	29.7	60	80 oz	360
10G133R	GS060A11RT0CD	5	Right	29.7	60	80 oz	360

VERTICAL - COUNTERFLOW (DOWNFLOW) MODELS WITH ECM MOTORS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G125	GS024A11LB1CA	2	Left	12.3	25	48 oz	190
10G125R	GS025A11RB1CA	2	Right	12.3	25	48 oz	190
10G126	GS036A11LB1CB	3	Left	19.4	40	64 oz	270
10G126R	GS036A11RB1CB	3	Right	19.4	40	64 oz	270
10G127	GS048A11LB1CC	4	Left	26.1	50	64 oz	310
10G127R	GS048A11RB1CC	4	Right	26.1	50	64 oz	310
10G128	GS060A11LB1CD	5	Left	29.7	60	80 oz	360
10G128R	GS060A11RB1CD	5	Right	29.7	60	80 oz	360

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Contractor Qualification Required – Limited Dealer Opportunities Available

AIR CONDITIONING & HEATING EQUIPMENT



VERTICAL - COUNTERFLOW (DOWNFLOW) MODELS WITH PSC MOTORS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G134	GS024A11LB0CA	2	Left	12.3	25	48 oz	190
10G134R	GS024A11RB0CA	2	Right	12.3	25	48 oz	190
10G135	GS036A11LB0CB	3	Left	19.4	40	64 oz	270
10G135R	GS036A11RB0CB	3	Right	19.4	40	64 oz	270
10G136	GS048A11LB0CC	4	Left	26.1	50	64 oz	310
10G136R	GS048A11RB0CC	4	Right	26.1	50	64 oz	310
10G137	GS060A11LB0CD	5	Left	29.7	60	80 oz	360
10G137R	GS060A11RB0CD	5	Right	29.7	60	80 oz	360

MFG. NO.	DIMENSIONS H x W x D	DUCT CONNECTIONS SUPPLY	DUCT CONNECTIONS RETURN	LOOP CONNECTION	DESUPERHEATER CONNECTION	FILTER SIZE
GS024A	50-1/4 x 22 x 27-7/8"	12 x 14"	28.2 x 20.7"	3/4"	3/4"	18 x 36 x 1"
GS036A	54-1/4 x 26 x 32-7/8"	14 x 16"	30.2 x 25.7"	3/4"	3/4"	18 x 48 x 1"
GS048A	60-1/4 x 26 x 32-7/8"	16 x 16"	34.2 x 25.7"	1"	1"	20 x 50 x 1"
GS060A	60-1/4 x 28 x 32-7/8"	16 x 16"	34.2 x 25.7"	1"	1"	20 x 50 x 1"

UNIT PERFORMANCE: AHRI DATA - GROUND LOOP HEAT PUMP

MODEL	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GS018	14,100	3.7	17,600	18.9
GS024	21,100	3.7	26,400	18.0
GS030	27,200	3.7	34,100	18.5
GS036	31,600	3.4	39,600	16.4
GS042	36,900	3.6	46,200	18.0
GS048	44,500	3.5	56,100	17.8
GS060	50,200	3.5	62,700	16.2
GS072	61,000	3.4	75,800	16.0

Note: Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties. Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature. Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature. Entering water temperatures: 32°F heating / 77°F cooling.

UNIT PERFORMANCE: AHRI DATA - GROUND WATER HEAT PUMP

MODEL	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GS018	16,200	4.3	18,400	21.7
GS024	24,200	4.3	27,700	20.7
GS030	31,200	4.3	35,500	21.3
GS036	36,300	3.9	41,500	18.9
GS042	42,400	4.1	48,500	20.7
GS048	51,100	4.0	58,900	20.5
GS060	57,700	4.0	65,800	18.6
GS072	70,100	3.9	79,500	18.4

Note: Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties. Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature. Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.

GEOHERMAL UNIT ACCESSORIES FOR ALL UNITS

AUXILIARY ELECTRIC HEATER & CONTROL BOX

Field Insertion Into Unit

CAT. NO.	MFG. NO.	DESCRIPTION	USE WITH	EACH
10G200	AHTR101A	10 KW heater assembly	024 thru 072 units	
10G201	AHTR151A	15 KW heater assembly	036 thru 072 units	
10G202	AHTR201A	20 KW heater assembly	048 thru 072 units	

HOSE KITS

CAT. NO.	MFG. NO.	DESCRIPTION	EACH
10G207	AGHK5B	10' hose kit with "O" ring x 1" hose conn. for AGFC-A centers	
10G208	AGHK4B	10' hose kit with "O" ring x 3/4" hose conn. for AGFC-A centers	
10G209	AGHK5C	10' hose kit with 1" hose x 1" IPS conn. for ABFC-A & AGFC-B centers	
10G212	AGA5FPT	Double "O" Ring x Swivel for non-pressurized pump kits (set of 2)	

FLOW CENTERS - NON-PRESSURIZED

CAT. NO.	MFG. NO.	DESCRIPTION	USE WITH	EACH
10G203	ABFC1A	Single pump center	024 & 036 units	
10G204	ABFC2A	Double pump center	036 thru 072 units	

FLOW CENTERS - PRESSURIZED

CAT. NO.	MFG. NO.	DESCRIPTION	USE WITH	EACH
10G205	AGFC1B	Single pump center	024 & 036 units	
10G206	AGFC2B	Double pump center	036 thru 072 units	



PACKAGED GEOTHERMAL UNITS 16 - 27 E.E.R. - R-410A

2 stage - 208/230 volt - 1 phase

GT Serenity Series

Features...

- High efficiency Copeland UltraTech scroll compressor
- Appliance white powder coated steel construction
- Cabinets bolted together for easy access
- Coated air coils for extended life
- Stainless steel drain pans
- Flow switch protected
- ECM blower motor
- Solid state controls with “re-try” to eliminate nuisance service calls
- Hot water generator (desuperheater) with factory installed pump
- Field installed internal electric heat



10 YEAR
WARRANTY
ON SEALED REFRIGERANT
COMPONENTS

5 YEAR
WARRANTY
ON PARTS



The GT Serenity Series products are highly efficient, reliable and quiet; providing exceptional operating efficiency throughout a wide range of entering water temperatures. Insulated cabinets and coaxial heat exchangers reduce noise, condensation, and corrosion at all rated operating temperatures. Oversized air coils coupled with bi-directional expansion valves, and ECM motors delivers optimum efficiencies.

VERTICAL - UPFLOW MODELS WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G100	GT024B11LT1CA	2	Left	7.3	15	48 oz	190
10G100R	GT024B11RT1CA	2	Right	7.3	15	48 oz	190
10G101	GT036B11LT1CB	3	Left	15.0	30	64 oz	270
10G101R	GT036B11RT1CB	3	Right	15.0	30	64 oz	270
10G102	GT048B11LT1CC	4	Left	20.4	45	64 oz	310
10G102R	GT048B11RT1CC	4	Right	20.4	45	64 oz	310
10G103	GT060B11LT1CD	5	Left	26.5	55	80 oz	360
10G103R	GT060B11RT1CD	5	Right	26.5	55	80 oz	360
10G104	GT072B11LT1CD	6	Left	29.3	60	N/A	410
10G104R	GT072B11RT1CD	6	Right	29.3	60	N/A	410

VERTICAL - UPFLOW MODELS WITH CUPRONICKEL COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G110	GT036B11LT1NB	3	Left	15.0	30	64 oz	270
10G110R	GT036B11RT1NB	3	Right	15.0	30	64 oz	270
10G111	GT048B11LT1NC	4	Left	20.4	45	64 oz	310
10G111R	GT048B11RT1NC	4	Right	20.4	45	64 oz	310
10G112	GT060B11LT1ND	5	Left	26.5	55	80 oz	360
10G112R	GT060B11RT1ND	5	Right	26.5	55	80 oz	360

VERTICAL - UPFLOW MODELS FOR HYDRONIC HEAT WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G113	GT036B13LT1CB	3	Left	15.0	30	64 oz	270
10G113R	GT036B13RT1CB	3	Right	15.0	30	64 oz	270
10G114	GT048B13LT1CC	4	Left	20.4	45	64 oz	310
10G114R	GT048B13RT1CC	4	Right	20.4	45	64 oz	310
10G115	GT060B13LT1CD	5	Left	26.5	55	80 oz	360
10G115R	GT060B13RT1CD	5	Right	26.5	55	80 oz	360

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Contractor Qualification Required – Limited Dealer Opportunities Available



VERTICAL - CONTERFLOW (DOWNFLOW) MODELS WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	SIDE RETURN	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G105	GT024B11LB1CA	2	Left	7.3	15	48 oz	190
10G105R	GT024B11RB1CA	2	Right	7.3	15	48 oz	190
10G106	GT036B11LB1CB	3	Left	15.0	30	64 oz	270
10G106R	GT036B11RB1CB	3	Right	15.0	30	64 oz	270
10G107	GT048B11LB1CC	4	Left	20.4	45	64 oz	310
10G107R	GT048B11RB1CC	4	Right	20.4	45	64 oz	310
10G108	GT060B11LB1CD	5	Left	26.5	55	80 oz	360
10G108R	GT060B11RB1CD	5	Right	26.5	55	80 oz	360
10G109	GT072B11LB1CD	6	left	29.3	60	N/A	410
10G109R	GT072B11RB1CD	6	Right	29.3	60	N/A	410

MFG. NO.	DIMENSIONS H x W x D	DUCT CONNECTIONS SUPPLY	DUCT CONNECTIONS RETURN	LOOP CONNECTION	DESUPERHEATER CONNECTION	FILTER SIZE
GT024B	50-1/4 x 22 x 27-7/8"	12 x 14"	28.2 x 20.7"	3/4"	3/4"	30 x 24 x 1"
GT036B	54-1/4 x 26 x 32-7/8"	14 x 16"	30.2 x 25.7"	3/4"	3/4"	32 x 28 x 1"
GT048B	60-1/4 x 26 x 32-7/8"	16 x 16"	34.2 x 25.7"	1"	1"	36 x 28 x 1"
GT060B	60-1/4 x 28 x 32-7/8"	16 x 18"	34.2 x 25.7"	1"	1"	36 x 28 x 1"
GT072B	60-1/4 x 28 x 32-7/8"	16 x 18"	34.2 x 25.7"	1"	1"	n/a

**UNIT PERFORMANCE:
AHRI DATA - GROUND LOOP HEAT PUMP**

MFG. NO.	CAPACITY	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GT024A	Full Load	22,200	3.7	29,000	16.0
	Part Load	16,500	4.2	21,500	20.0
GT036A	Full Load	31,400	3.6	39,400	18.0
	Part Load	20,900	4.5	26,300	24.0
GT048A	Full Load	45,500	3.5	57,200	17.6
	Part Load	30,300	4.3	37,900	23.8
GT060A	Full Load	52,200	3.5	65,400	17.4
	Part Load	36,500	4.3	45,700	23.6
GT072A	Full Load	59,700	3.6	72,000	14.1
	Part Load	46,600	3.5	57,500	19.1

Note: Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties. Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature. Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature. Entering water temperatures Full Load: 32°F heating / 77°F cooling. Entering water temperatures Part Load: 41°F heating / 68°F cooling.

**UNIT PERFORMANCE:
AHRI DATA - GROUND WATER HEAT PUMP**

MFG. NO.	CAPACITY	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GT024	Full Load	25,500	4.1	30,400	18.4
	Part Load	18,900	4.8	22,500	23.0
GT036	Full Load	36,100	4.1	41,300	20.7
	Part Load	24,000	5.2	27,600	27.6
GT048	Full Load	52,400	4.0	60,000	20.2
	Part Load	34,800	4.9	39,700	27.4
GT060	Full Load	60,000	4.0	68,600	20.0
	Part Load	41,900	4.9	47,900	27.1
GT072	Full Load	68,600	4.1	75,600	16.2
	Part Load	53,500	4.0	60,300	22.1

Note: Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties. Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature. Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature. Entering water temperatures: 50°F heating / 59°F cooling.



GSC/GTC Series

SPLIT SYSTEM GEOTHERMAL COMPRESSOR SECTIONS 16 - 26 E.E.R. - R-410A

1 & 2 stage - 208/230 volt - 1 phase



10 YEAR
WARRANTY
ON SEALED REFRIGERANT
COMPONENTS

5 YEAR
WARRANTY
ON PARTS



Features...

- High efficiency Copeland scroll compressor (single stage models)
- High efficiency Copeland UltraTech scroll compressor (two stage models)
- Appliance white powder coated steel construction
- Cabinets bolted together for easy access
- Coated air coils for extended life
- Flow switch protected
- ECM blower motor
- Solid state controls with “re-try” to eliminate nuisance service calls
- Hot water generator (desuperheater) with factory installed pump

The GC Series products are highly efficient, reliable and quiet; providing exceptional operating efficiency throughout a wide range of entering water temperatures. Insulated cabinets and coaxial heat exchangers reduce noise, condensation, and corrosion at all rated operating temperatures. Oversized air coils coupled with bi-directional expansion valves, delivers optimum efficiencies. Designed for use with the GSE Series evaporator/air handlers.

SINGLE STAGE MODELS WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G148	GSC024A11CA	2	12.3	25	60 Oz.	115 Lbs.
10G149	GSC036A11CB	3	19.4	35	75 Oz.	160 Lbs.
10G150	GSC048A11CC	4	26.1	50	84 Oz.	180 Lbs.
10G151	GSC060A11CD	5	29.7	60	110 Oz.	220 Lbs.

TWO STAGE MODELS WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G140	GTC024A11CA	2	7.3	15	60 Oz.	115 Lbs.
10G141	GTC036A11CB	3	15.0	30	78 Oz.	160 Lbs.
10G142	GTC048A11CC	4	20.4	45	85 Oz.	180 Lbs.
10G143	GTC060A11CD	5	26.5	55	110 Oz.	220 Lbs.

MFG. NO.	DIMENSIONS H x W x D	LOOP CONNECTION	DESUPERHEATER CONNECTION	CONNECTIONS LIQUID	CONNECTIONS SUCTION
GSC/GTC024	18 x 22 x 25-1/2"	3/4"	3/4"	3/8"	5/8"
GSC/GTC036	20 x 26 x 30-1/2"	3/4"	3/4"	3/8"	3/4"
GSC/GTC048	22 x 26 x 30-1/2"	1"	1"	3/8"	3/4"
GSC/GTC060	22 x 28 x 30-1/2"	1"	1"	1/2"	7/8"



PACKAGED GEOTHERMAL COMPRESSOR SECTIONS 16 - 20 E.E.R. - R-410A
2 stage - 208/230 volt - 1 phase



10 YEAR WARRANTY
 ON SEALED REFRIGERANT COMPONENTS

5 YEAR WARRANTY
 ON PARTS

GSC/GTC Series



Features...

- High efficiency Copeland UltraTech scroll compressor
- Appliance white powder coated steel construction
- Cabinets bolted together for easy access
- Coated air coils for extended life
- Flow switch protected
- ECM blower motor
- Solid state controls with “re-try” to eliminate nuisance service calls
- Hot water generator (desuperheater) with factory installed pump

The GCS Series products are highly efficient, reliable and quiet; providing exceptional operating efficiency throughout a wide range of entering water temperatures. Insulated cabinets and coaxial heat exchangers reduce noise, condensation, and corrosion at all rated operating temperatures. Oversized air coils coupled with bi-directional expansion valves, delivers optimum efficiencies. Designed for use with the GSE Series evaporator/air handlers.

TWO STAGE MODELS WITH CUPRONICKEL COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	REFRIG. CHG.	WEIGHT EACH
10G144	GTC024A11NA	2	7.3	15	60 Oz.	115 Lbs.
10G145	GTC036A11NB	3	15.0	30	78 Oz.	160 Lbs.
10G146	GTC048A11NC	4	20.4	45	85 Oz.	180 Lbs.
10G147	GTC060A11ND	5	26.5	55	110 Oz.	220 Lbs.

MFG. NO.	DIMENSIONS H x W x D	LOOP CONNECTION	DESUPERHEATER CONNECTION	CONNECTIONS LIQUID	CONNECTIONS SUCTION
GSC/GTC024	18 x 22 x 25-1/2"	3/4"	3/4"	3/8"	5/8"
GSC/GTC036	20 x 26 x 30-1/2"	3/4"	3/4"	3/8"	3/4"
GSC/GTC048	22 x 26 x 30-1/2"	1"	1"	3/8"	3/4"
GSC/GTC060	22 x 28 x 30-1/2"	1"	1"	1/2"	7/8"



EVAPORATOR/AIR HANDLERS - LEFT SIDE RETURN

For use with GSC/GTC compressor bearing units



VERTICAL DISCHARGE MODELS

Evaporator/air handlers for use with GSC/GTC compressor bearing units.

CAT. NO.	MFG. NO.	MOTOR	DIMENSIONS H x W x D	CONNECTIONS LIQUID	CONNECTIONS SUCTION	COND. CONN. EACH
10G158	GSE024A1LT1A	ECM	32 x 22 x 25-1/2"	3/8"	5/8"	3/4"
10G154	GSE024A1LT0A	PSC	32 x 22 x 25-1/2"	3/8"	5/8"	3/4"
10G159	GSE036A1LT0B	PSC	34 x 26 x 30-1/2"	3/8"	3/4"	3/4"
10G155	GSE036A1LT1B	ECM	34 x 26 x 30-1/2"	3/8"	3/4"	3/4"
10G160	GSE048A1LT0C	PSC	38 x 26 x 30-1/2"	3/8"	3/4"	3/4"
10G156	GSE048A1LT1C	ECM	38 x 26 x 30-1/2"	3/8"	3/4"	3/4"
10G161	GSE060A1LT0D	PSC	38 x 28 x 30-1/2"	1/2"	7/8"	3/4"
10G157	GSE060A1LT1D	ECM	38 x 28 x 30-1/2"	1/2"	7/8"	3/4"

LINE SIZING REQUIREMENTS

For GSC/GTC units with GSE air handlers

MFG. NO.	20 ft. Length LIQUID	20 ft. Length SUCTION	50 ft. Length LIQUID	50 ft. Length SUCTION
GSC/GTC024 w/ GSE	3/8"	5/8"	3/8"	3/4"
GSC/GTC036 w/ GSE	3/8"	3/4"	1/2"	7/8"
GSC/GTC048 w/GSE	1/2"	7/8"	1/2"	1-1/8"
GSC/GTC060 w/ GSE	1/2"	7/8"	1/2"	1-1/8"

UNIT PERFORMANCE - FORCED AIR COMPRESSORS

GROUND LOOP HEAT PUMP APPLICATION

Forced Air Models (ECM Fan Motor)
1-Stage Single Compressor

MODEL	GPM	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GS018C/E	5.0	13,300	3.5	16,700	18.0
GS024C/E	6.0	20,000	3.5	25,000	17.1
GS030C/E	7.0	25,800	3.5	32,300	17.6
GS036C/E	9.0	30,000	3.4	37,600	17.1
GS042C/E	11.0	35,000	3.4	43,800	17.1
GS048C/E	13.0	42,200	3.3	53,200	16.9
GS060C/E	15.0	47,600	3.3	59,500	15.4
GS072C/E	18.0	57,900	3.2	72,000	15.2

Note: Heating at 32°F EWT. Cooling at 77°F EWT.

GROUND WATER HEAT PUMP APPLICATION

Forced Air Models (ECM Fan Motor)
1-Stage Single Compressor

MODEL	GPM	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GS018C/E	5.0	15,300	4.0	17,400	20.6
GS024C/E	6.0	22,900	4.0	26,300	19.7
GS030C/E	7.0	29,600	4.0	34,000	20.2
GS036C/E	9.0	34,400	3.9	39,400	19.7
GS042C/E	11.0	40,200	3.9	46,000	19.7
GS048C/E	13.0	48,500	3.8	55,900	19.4
GS060C/E	15.0	54,800	3.8	62,500	17.7
GS072C/E	18.0	66,500	3.7	75,500	17.5

Note: Heating at 50°F EWT. Cooling at 59°F EWT.

GROUND WATER HEAT PUMP APPLICATION

Forced Air Models (ECM Fan Motor) Dual Capacity/Single Compressor

MODEL	GPM	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER	Part Load HEATING BTU/HR	Part Load HEATING COP	Part Load COOLING BTU/HR	Part Load COOLING EER
GTC024	7.0	-	-	-	-	-	-	-	-
GSE024	4.0	-	-	-	-	-	-	-	-
GTC036	9.0	34,200	3.9	39,200	19.7	-	-	-	-
GSE036	5.0	-	-	-	-	22,800	4.9	36,200	26.2
GTC048	12.0	49,700	3.8	57,000	19.2	-	-	-	-
GSE048	7.0	-	-	-	-	33,000	4.7	37,700	26.0
GTC060	15.0	57,000	3.8	65,100	19.0	-	-	-	-
GSE060	10.0	-	-	-	-	39,800	4.7	45,500	25.8

Note: Heating at 50°F EWT. Cooling at 59°F EWT. Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties. Heating capacities based on 68°F DB, 59°F WB entering air temperature. Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.



PACKAGED SYSTEM GEOTHERMAL UNITS
16 - 18 E.E.R. - R-410A
1 stage - 208/230 volt - 1 phase



10 YEAR WARRANTY
 ON SEALED REFRIGERANT COMPONENTS

5 YEAR WARRANTY
 ON PARTS

GWS Series



Features...

- High efficiency Copeland scroll compressor
- Appliance white powder coated steel construction
- Cabinets bolted together for easy access
- Flow switch protected
- Solid state controls with “re-try” to eliminate nuisance service calls
- Hot water generator (desuperheater) with factory installed pump

The GWS Series products are highly efficient, reliable and quiet; providing exceptional operating efficiency throughout a wide range of entering water temperatures. Insulated cabinets and coaxial heat exchangers reduce noise, condensation, and corrosion at all rated operating temperatures. Designed for use with hydronic coils/air handlers.

WATER TO WATER MODELS WITH COPPER COAXIAL COILS

CAT. NO.	MFG. NO.	NOMINAL TONS	CIRCUIT AMPACITY	MAX. FUSE AMPACITY	WEIGHT EACH
10G152	GWSR048A11CC	4	21.8	45	320 Lbs.
10G153	GWSR060A11CC	5	24.7	55	370 Lbs.

MFG. NO.	DIMENSIONS H x W x D	LOOP CONNECTION	DESUPERHEATER CONNECTION	LOAD
GWS048	24 x 26 x 34"	1"	3/4"	1"
GWS060	24 x 26 x 36"	1"	3/4"	1"

UNIT PERFORMANCE - GROUND LOOP HEAT PUMP

Water-to-Water Models Single Compressor

MODEL	CAPACITY	HEATING BTU/HR	HEATING COP	COOLING BTU/HR	COOLING EER
GWS036	Nominal	31,600	3.7	34,200	18.1
GWS048	Nominal	44,700	3.6	48,400	17.9

Note: Rated in accordance with ISO Standard 13256-2 which includes Pump Penalties. Heating capacities based on 32°F EST and 104°F ELT. Cooling capacities based on 77°F EST and 53.6°F ELT. Entering load temperature over 120°F heating and under 45°F cooling is not permissible. Floor heating is most generally designed for 85°F entering load temperature.

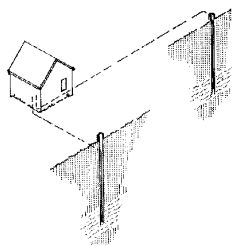
Geothermal Pipe & Fittings



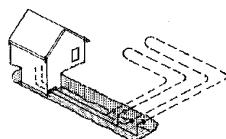
PIPING SYSTEMS for Water Source and Earth-Coupled Heat Pumps

The water source heat pumps shown on previous pages are the mechanical part of a geothermal energy system. The second part of the system is a circuit of piping which transfers heat from the earth to the indoor living space during winter and from the living space to be absorbed by the earth in summer.

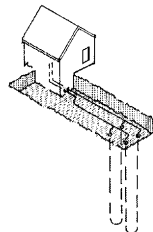
OPEN LOOP SYSTEM
with intake & return wells



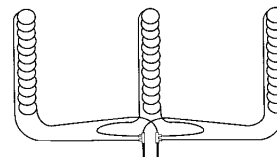
HORIZONTAL CLOSED LOOP SYSTEM



VERTICAL CLOSED LOOP SYSTEM



SLINKY LOOP DESIGN
for 3 horizontal closed loops



GEOTHERMAL POLYETHYLENE PIPE

SOCKET FUSION FITTINGS

STRAIGHT PIPE

CAT. NO.	SIZE Dia.xlength	EACH
20H809	3/4" x 20 ft.	
20H810	1" x 10 ft.	\$13.60
20H815	1" x 20 ft.	\$27.16
20H811	1-1/4" x 10 ft.	\$30.07
20H816	1-1/4" x 20 ft.	\$47.12

REDUCERS

CAT. NO.	SIZE	EACH
20H835	1" to 3/4"	\$12.06
20H842	1-1/4" to 3/4"	\$26.92
20H841	1-1/4" to 1"	\$26.92
20H849	1-1/2" to 3/4"	\$59.64
20H850	1-1/2" to 1"	\$37.83
20H851	1-1/2" to 1-1/4"	\$29.94

90° ELLS

CAT. NO.	SIZE	EACH
20H827	3/4"	\$10.62
20H832	1"	\$11.51
20H838	1-1/4"	\$14.37

COIL PIPE

CAT. NO.	SIZE Dia.xlength	EACH
20H805A	3/4" x 100 ft.	
20H805	3/4" x 300 ft.	\$286.80
20H804A	3/4" x 500 ft.	
20H804	3/4" x 600 ft.	\$342.00
20H806A	1" x 100 ft.	
20H806	1" x 300 ft.	\$407.73
20H807B	1-1/4" x 100 ft.	
20H807	1-1/4" x 300 ft.	\$635.57

CAPS

CAT. NO.	SIZE	EACH
20H829	3/4"	\$8.01
20H834	1"	\$10.62
20H840	1-1/4"	\$10.87

HEADERS

CAT. NO.	SIZE	EACH
20H865	1-1/4" Inlet x (3) 3/4" Outlet	
20H865A	1-1/4" Inlet x (4) 3/4" Outlet	
20H865B	1-1/4" Inlet x (5) 3/4" Outlet	
20H865C	1-1/4" Inlet x (6) 3/4" Outlet	

UNICOIL PIPE

CAT. NO.	SIZE Dia.xlength	EACH
20H800	3/4" x 310 ft.	\$257.83
20H802	3/4" x 410 ft.	\$296.48
20H801A	1" x 410 ft.	\$407.73

COUPLINGS

CAT. NO.	SIZE	EACH
20H825	3/4"	\$5.35
20H830	1"	\$5.35
20H836	1-1/4"	\$6.72

TRANSITIONS

CAT. NO.	SIZE	EACH
20H828	3/4" MPT to 3/4" tubing	\$46.88
20H833	1" MPT to 1" tubing	\$50.06
20H843	1" MPT to 1-1/4" tubing	\$63.50
20H839	1-1/4" MPT to 1-1/4" tubing	\$63.66

TEES

CAT. NO.	SIZE	EACH
20H826	3/4"	\$9.74
20H831	1"	\$11.11
20H831A	1-1/4"	
20H831B	1-1/4 x 1-1/4 x 3/4"	
20H831C	1-1/4 x 1-1/4 x 1"	

INSTALLATION TOOLS

ACCESSORIES

CAT. NO.	DESCRIPTION	EACH
20H861	Tempstick 500 Degrees	
20H862	Tempstick 525 Degrees	
1X476	PVC Tubing Cutter up to 1"	
3X218	PVC Ratchet Cutter up to 1-1/4"	
20H860	Socket Fusion Kit	\$3,036.16
20H866	Loop Flush Cart (Loop Flushing Tool)	

CAT. NO.	DESCRIPTION	EACH
2H552	Propylene Glycol - 5 gal. bucket	
2H553	Propylene Glycol - 55 gal. drum	
2H555	Hydrometer to Test Propylene Glycol	
2H553G	Ethanol (Pure Form) - 5 gal. bucket	
2H553H	Ethanol (Pure Form) - 55 gal. drum	