Geoflex model GFXX-120WW-4 Fluid-to-Fluid Heat Pump & Chiller Specifications

Geoflex, Multi-flex Systems have been designed to allow for the stacking/ganging of 2, 3, 4 or more heat pump / chiller systems, offering the benefits of built-in redundancy, maintenance without complete shut-down, unparalleled operating efficiency and unloading characteristics. The stacking/ganging of systems allows increased capacity without increasing the very small footprint of the equipment. The individual components will go into most elevators fit through most doors, eliminating the need for door widening, taking out walls or cranes in high rise buildings.

The Multi-flex design offers built-in system redundancy for servicing and higher operating efficiency by staging the systems, accordingly to the load. The fluid inlets and outlets are staggered both vertically and horizontally to simplify piping connections to the heat pumps / chiller. Service panels surround the system, however, the Multi-flex systems are designed for complete service access by removing the front panel.

The electrical and performance specifications are provide for a unit with a single compressor. If the units are stacked the performance and electrical specifications must be doubled. Fluid-to-fluid heat pump / chiller systems should be designed to operate at fluid temperatures lower than 120 F (50 C). Specifying operating temperatures higher than this will result in less efficient operation and can shorten the longevity of the compressor. Units must be operating within specified operating ranges.

GF1-120-WW-4 Performance Specifications - R410

Evaporator									Condenser								Heating & Cooling Capacity							
EFT		LFT		Flow		PD			EFT		LFT		Flow		PD		Heating Capacity		COP_h	Chilling Capacity		COP_c	EER	kW
°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	MBH	(/kW)		MBH	(/kW)			
53.6	12.0	46.0	7.8	25.3	1.6	14.2	42.7	6.2	77.0	25.0	86.4	30.2	25.3	1.6	12.0	36.0	5.2	115.9	34.0	5.4	94.3	27.6	4.4	14.9	6.3
32.0	0.0	27.3	-2.6	25.3	1.6	16.0	47.9	6.9	104.0	40.0	111.0	43.9	25.3	1.6	10.7	32.0	4.6	86.8	25.4	3.0	57.4	16.8	2.0	6.7	8.6
53.5	11.9	45.3	7.4	25.3	1.6	14.3	42.8	6.2	59.0	15.0	68.6	20.3	25.3	1.6	13.2	39.5	5.7	118.6	34.7	6.8	101.2	29.7	5.8	19.9	5.1
50.0	10.0	43.7	6.5	25.3	1.6	14.5	43.4	6.3	104.0	40.0	112.7	44.8	25.3	1.6	10.6	31.9	4.6	107.3	31.5	3.6	77.5	22.7	2.6	8.9	8.7
53.6	12.0	46.3	7.9	25.3	1.6	14.2	42.7	6.2	86.0	30.0	95.3	35.2	25.3	1.6	11.5	34.5	5.0	114.5	33.6	4.8	90.5	26.5	3.8	12.8	7.0
68.0	20.0	59.8	15.4	25.3	1.6	13.2	39.5	5.7	104.0	40.0	114.7	45.9	25.3	1.6	10.6	31.7	4.6	131.4	38.5	4.3	101.0	29.6	3.3	11.4	8.9
50.0	10.0	43.0	6.1	25.3	1.6	14.5	43.5	6.3	85.0	29.4	93.9	34.4	25.3	1.6	11.6	34.7	5.0	109.8	32.2	4.6	86.2	25.3	3.6	12.4	6.9
68.0	20.0	59.0	15.0	25.3	1.6	13.2	39.6	5.7	86.0	30.0	97.0	36.1	25.3	1.6	11.4	34.3	5.0	135.7	39.8	5.5	111.1	32.6	4.5	15.4	7.2
10.0	-12.2	6.5	-14.2	25.3	1.6	18.1	54.2	7.8	85.0	29.4	90.3	32.4	25.3	1.6	11.7	35.0	5.0	65.2	19.1	2.9	42.9	12.6	1.9	6.5	6.5
15.0	-9.4	11.1	-11.6	25.3	1.6	17.6	52.7	7.6	85.0	29.4	90.7	32.6	25.3	1.6	11.6	34.9	5.0	70.1	20.5	3.1	47.6	13.9	2.1	7.2	6.6

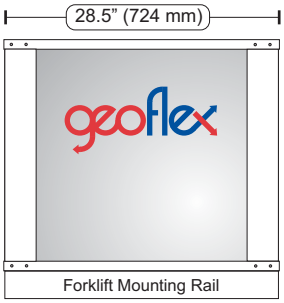
** Outputs and Efficiency Ratings are based on a 25% methanol and water mixture, which will increase or decrease based on anti-freeze levels*
*** Pressure drop is shown in feet of head, using 25% methanol & water as the test fluid. Multipliers for other fluids are as follows:*
- water: 0.85
- 30% ethanol: 1.17
- 35% propylene glycol: 1.23

ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI 550 - Chiller Rating Points
ARI 550 - Chiller Rating Points
Ice Making Rating Points
Ice Making Rating Points

GF1-120WW-4 Electrical Specifications - R410A

Voltage/Phase/Hz	Compressor RLA	Compressor LRA	Min. Circuit Ampacity	Max. Fuse Breaker Size
200-230/3/60	33.6	225.0	47.0	50
460/3/60	18.6	114.0	26.0	30
575/3/60	13.6	80.0	19.0	20

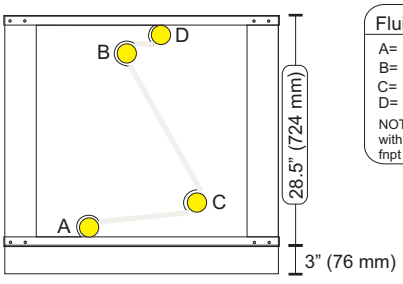
Note: Pumps or any other external portions, have not been included in the electrical specifications
System Weight 430 Shipping Weight 450



Notes to Cabinet Sizing & Physical Characteristics...

System sizing and weights may vary, if optional alternate heat exchangers are specified.

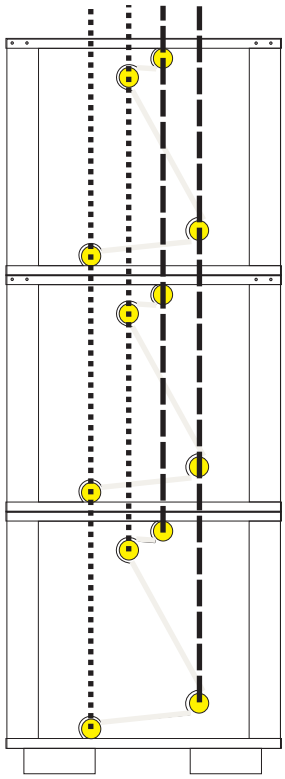
System Footprint
28.5" (724mm) X 28.5" (724mm)



Fluid Connections
A= 1.25" CSF - Loop In
B= 1.25" CSF - Loop Out
C= 1.25" CSF - Warm/Chiller Fluid In
D= 1.25" CSF - Heated/Chilled Fluid Out
NOTE: All water connections come standard with copper sweat fitting (CSF) but optional fnpt fittings can installed, upon request.

Model GF1A-120WW-4

Model GF2A-120WW
(240 Nominal)



Model GF3A-120WW
(360 Nominal)

GF1-120WW - Fluid-to-Fluid heat pump / chiller

517 McCormick Blvd.,
London, ON N5W 4C8
P: 519.488.1653 F:519.913.1259
E: plant@geoflexsystems.com
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Geoflex model GFXX-140WW-4 Fluid-to-Fluid Heat Pump & Chiller Specifications

Geoflex, Multi-flex Systems have been designed to allow for the stacking/ganging of 2, 3, 4 or more heat pump / chiller systems, offering the benefits of built-in redundancy, maintenance without complete shut-down, unparalleled operating efficiency and unloading characteristics. The stacking/ganging of systems allows increased capacity without increasing the very small footprint of the equipment. The individual components will go into most elevators fit through most doors, eliminating the need for door widening, taking out walls or cranes in high rise buildings.

The Multi-flex design offers built-in system redundancy for servicing and higher operating efficiency by staging the systems, accordingly to the load. The fluid inlets and outlets are staggered both vertically and horizontally to simplify piping connections to the heat pumps / chiller. Service panels surround the system, however, the Multi-flex systems are designed for complete service access by removing the front panel.

The electrical and performance specifications are provide for a unit with a single compressor. If the units are stacked the performance and electrical specifications must be doubled. Fluid-to-fluid heat pump / chiller systems should be designed to operate at fluid temperatures lower than 120 F (50 C). Specifying operating temperatures higher than this will result in less efficient operation and can shorten the longevity of the compressor. Units must be operating within specified operating ranges.

GF1-140-WW-4 Performance Specifications - R410

Evaporator									Condenser								Heating & Cooling Capacity							
EFT		LFT		Flow		PD			EFT		LFT		Flow		PD		Heating Capacity		COP_h	Chilling Capacity		COP_c	EER	kW
°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	MBH	(/kW)		MBH	(/kW)			
53.6	12.0	45.4	7.4	29.6	1.9	11.8	35.4	5.1	77.0	25.0	86.9	30.5	29.6	1.9	9.9	29.8	4.3	142.9	41.9	5.7	117.8	34.5	4.7	16.0	7.4
32.0	0.0	27.2	-2.7	29.6	1.9	13.2	39.7	5.7	104.0	40.0	111.2	44.0	29.6	1.9	8.8	26.5	3.8	103.4	30.3	3.0	69.4	20.3	2.0	7.0	10.0
53.6	12.0	44.8	7.1	29.6	1.9	11.8	35.5	5.1	59.0	15.0	69.3	20.7	29.6	1.9	10.9	32.7	4.7	148.3	43.5	6.8	126.6	37.1	5.8	19.9	6.4
50.0	10.0	43.4	6.3	29.6	1.9	12.0	36.0	5.2	104.0	40.0	113.0	45.0	29.6	1.9	8.8	26.4	3.8	128.9	37.8	3.8	94.6	27.7	2.8	9.4	10.1
53.6	12.0	45.8	7.7	29.6	1.9	11.8	35.4	5.1	86.0	30.0	95.7	35.4	29.6	1.9	9.5	28.5	4.1	140.1	41.1	5.1	112.4	32.9	4.1	13.9	8.1
68.0	20.0	59.4	15.2	29.6	1.9	10.9	32.8	4.7	104.0	40.0	115.1	46.1	29.6	1.9	8.8	26.3	3.8	159.1	46.6	4.5	124.1	36.4	3.5	12.1	10.3
50.0	10.0	42.5	5.9	29.6	1.9	12.0	36.1	5.2	85.0	29.4	94.3	34.6	29.6	1.9	9.6	28.7	4.1	134.4	39.4	4.9	107.2	31.4	3.9	13.4	8.0
68.0	20.0	58.4	14.7	29.6	1.9	11.0	32.9	4.7	86.0	30.0	97.5	36.4	29.6	1.9	9.5	28.4	4.1	166.0	48.6	5.9	137.6	40.3	4.9	16.6	8.3
10.0	-12.2	6.3	-14.3	29.6	1.9	15.0	45.0	6.5	85.0	29.4	90.5	32.5	29.6	1.9	9.7	29.0	4.2	79.3	23.2	3.1	53.3	15.6	2.1	7.0	7.6
15.0	-9.4	10.9	-11.7	29.6	1.9	14.6	43.7	6.3	85.0	29.4	90.9	32.7	29.6	1.9	9.6	28.9	4.2	84.9	24.9	3.3	58.9	17.3	2.3	7.7	7.6

** Outputs and Efficiency Ratings are based on a 25% methanol and water mixture, which will increase or decrease based on anti-freeze levels*
*** Pressure drop is shown in feet of head, using 25% methanol & water as the test fluid. Multipliers for other fluids are as follows:*
- water: 0.85
- 30% ethanol: 1.17
- 35% propylene glycol: 1.23

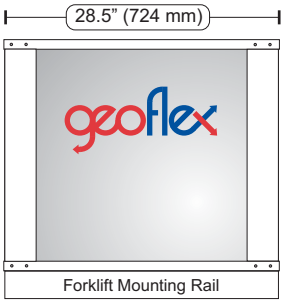
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI 550 - Chiller Rating Points
ARI 550 - Chiller Rating Points
Ice Making Rating Points
Ice Making Rating Points

GF1-140WW-4 Electrical Specifications - R410A

Voltage/Phase/Hz	Compressor RLA	Compressor LRA	Min. Circuit Ampacity	Max. Fuse Breaker Size
200-230/3/60	37.1	239.0	51.9	60
460/3/60	20.0	125.0	28.0	30
575/3/60	14.3	80.0	20.0	25

Note: Pumps or any other external portions, have not been included in the electrical specifications

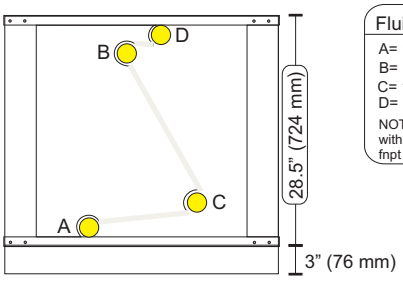
System Weight 430 Shipping Weight 450



Notes to Cabinet Sizing & Physical Characteristics...

System sizing and weights may vary, if optional alternate heat exchangers are specified.

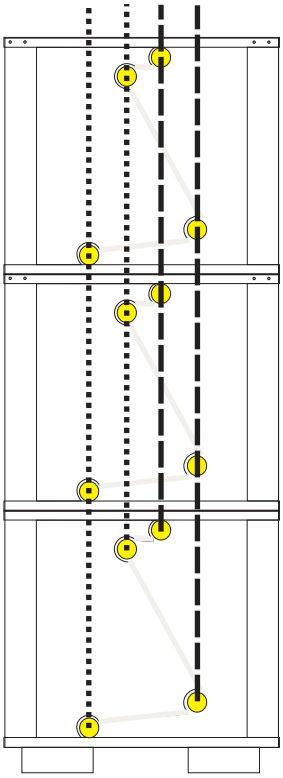
System Footprint
28.5" (724mm) X 28.5" (724mm)



Fluid Connections
A= 1.25" CSF - Loop In
B= 1.25" CSF - Loop Out
C= 1.25" CSF - Warm/Chiller Fluid In
D= 1.25" CSF - Heated/Chilled Fluid Out
NOTE: All water connections come standard with copper sweat fitting (CSF) but optional fnpt fittings can installed, upon request.

Model GF1A-140WW-4

Model GF2A-140WW
(280 Nominal)



Model GF3A-140WW
(420 Nominal)

GF1-140WW - Fluid-to-Fluid heat pump / chiller

517 McCormick Blvd.,
London, ON N5W 4C8
P: 519.488.1653 F:519.913.1259
E: plant@geoflexsystems.com
W: www.geoflexsystems.com

Geoflex model GFXX-180WW-4 Fluid-to-Fluid Heat Pump & Chiller Specifications

Geoflex, Multi-flex Systems have been designed to allow for the stacking/ganging of 2, 3, 4 or more heat pump / chiller systems, offering the benefits of built-in redundancy, maintenance without complete shut-down, unparalleled operating efficiency and unloading characteristics. The stacking/ganging of systems allows increased capacity without increasing the very small footprint of the equipment. The individual components will go into most elevators fit through most doors, eliminating the need for door widening, taking out walls or cranes in high rise buildings.

The Multi-flex design offers built-in system redundancy for servicing and higher operating efficiency by staging the systems, accordingly to the load. The fluid inlets and outlets are staggered both vertically and horizontally to simplify piping connections to the heat pumps / chiller. Service panels surround the system, however, the Multi-flex systems are designed for complete service access by removing the front panel.

The electrical and performance specifications are provide for a unit with a single compressor. If the units are stacked the performance and electrical specifications must be doubled. Fluid-to-fluid heat pump / chiller systems should be designed to operate at fluid temperatures lower than 120 F (50 C). Specifying operating temperatures higher than this will result in less efficient operation and can shorten the longevity of the compressor. Units must be operating within specified operating ranges.

GF1-180-WW-4 Performance Specifications - R410

Evaporator									Condenser									Heating & Cooling Capacity							
EFT		LFT		Flow		PD			EFT		LFT		Flow		PD			Heating Capacity		COP_h	Chilling Capacity		COP_c	EER	kW
°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	MBH	(/kW)		MBH	(/kW)			
53.6	12.0	45.7	7.6	38.0	2.4	14.0	42.1	6.1	77.0	25.0	86.7	30.4	38.0	2.4	11.8	35.5	5.1	179.1	52.5	5.5	146.7	43.0	4.5	15.4	9.5
32.0	0.0	27.0	-2.8	38.0	2.4	15.8	47.3	6.8	104.0	40.0	111.2	44.0	38.0	2.4	10.5	31.5	4.5	133.3	39.1	3.2	91.6	26.8	2.2	7.5	12.2
53.6	12.0	45.0	7.2	38.0	2.4	14.1	42.2	6.1	59.0	15.0	69.0	20.6	38.0	2.4	13.0	38.9	5.6	185.1	54.2	6.9	158.1	46.3	5.9	20.0	7.9
50.0	10.0	43.4	6.4	38.0	2.4	14.3	42.8	6.2	104.0	40.0	112.9	44.9	38.0	2.4	10.5	31.4	4.5	164.4	48.2	3.8	121.3	35.5	2.8	9.6	12.6
53.6	12.0	46.0	7.8	38.0	2.4	14.0	42.1	6.1	86.0	30.0	95.6	35.3	38.0	2.4	11.3	34.0	4.9	176.5	51.7	4.9	140.8	41.3	3.9	13.5	10.5
68.0	20.0	59.5	15.3	38.0	2.4	13.0	39.0	5.6	104.0	40.0	114.9	46.0	38.0	2.4	10.4	31.3	4.5	201.0	58.9	4.5	156.4	45.8	3.5	12.0	13.1
50.0	10.0	42.7	6.0	38.0	2.4	14.3	42.9	6.2	85.0	29.4	94.2	34.5	38.0	2.4	11.4	34.2	4.9	169.3	49.6	4.8	134.2	39.3	3.8	13.1	10.3
68.0	20.0	58.7	14.8	38.0	2.4	13.0	39.1	5.6	86.0	30.0	97.3	36.3	38.0	2.4	11.3	33.8	4.9	209.3	61.3	5.7	172.3	50.5	4.7	15.9	10.8
10.0	-12.2	6.2	-14.3	38.0	2.4	17.8	53.5	7.7	85.0	29.4	90.5	32.5	38.0	2.4	11.5	34.5	5.0	101.8	29.8	3.2	69.6	20.4	2.2	7.4	9.4
15.0	-9.4	10.9	-11.7	38.0	2.4	17.3	52.0	7.5	85.0	29.4	90.9	32.7	38.0	2.4	11.5	34.4	5.0	109.0	31.9	3.3	76.4	22.4	2.3	8.0	9.5

** Outputs and Efficiency Ratings are based on a 25% methanol and water mixture, which will increase or decrease based on anti-freeze levels*
*** Pressure drop is shown in feet of head, using 25% methanol & water as the test fluid. Multipliers for other fluids are as follows:*
- water: 0.85
- 30% ethanol: 1.17
- 35% propylene glycol: 1.23

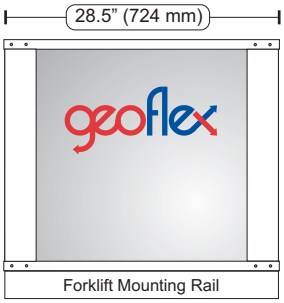
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI 550 - Chiller Rating Points
ARI 550 - Chiller Rating Points
Ice Making Rating Points
Ice Making Rating Points

GF1-180WW-4 Electrical Specifications - R410A

Voltage/Phase/Hz	Compressor RLA	Compressor LRA	Min. Circuit Ampacity	Max. Fuse Breaker Size
200-230/3/60	57.1	300.0	79.9	90
460/3/60	25.7	150.0	36.0	40
575/3/60	22.1	109.0	30.9	30

Note: Pumps or any other external portions, have not been included in the electrical specifications

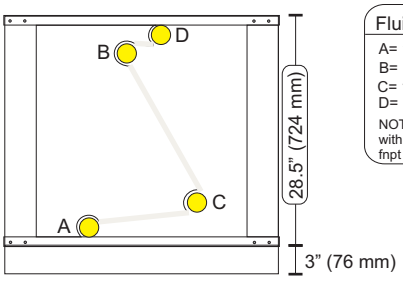
System Weight 430 Shipping Weight 450



Notes to Cabinet Sizing & Physical Characteristics...

System sizing and weights may vary, if optional alternate heat exchangers are specified.

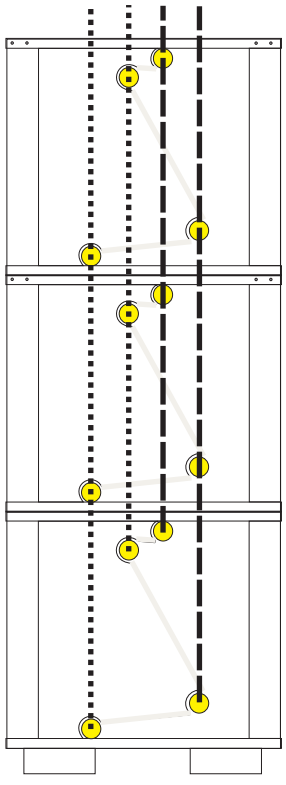
System Footprint
28.5" (724mm) X 28.5" (724mm)



Fluid Connections
A= 1.25" CSF - Loop In
B= 1.25" CSF - Loop Out
C= 1.25" CSF - Warm/Chiller Fluid In
D= 1.25" CSF - Heated/Chilled Fluid Out
NOTE: All water connections come standard with copper sweat fitting (CSF) but optional fnpt fittings can installed, upon request.

Model GF1A-180WW-4

Model GF2A-180WW
(360 Nominal)



Model GF3A-180WW
(540 Nominal)

GF1-180WW - Fluid-to-Fluid heat pump / chiller

517 McCormick Blvd.,
London, ON N5W 4C8
P: 519.488.1653 F:519.913.1259
E: plant@geoflexsystems.com
W: www.geoflexsystems.com

Geoflex model GFXX-210WW-4 Fluid-to-Fluid Heat Pump & Chiller Specifications

Geoflex, Multi-flex Systems have been designed to allow for the stacking/ganging of 2, 3, 4 or more heat pump / chiller systems, offering the benefits of built-in redundancy, maintenance without complete shut-down, unparalleled operating efficiency and unloading characteristics. The stacking/ganging of systems allows increased capacity without increasing the very small footprint of the equipment. The individual components will go into most elevators fit through most doors, eliminating the need for door widening, taking out walls or cranes in high rise buildings.

The Multi-flex design offers built-in system redundancy for servicing and higher operating efficiency by staging the systems, accordingly to the load. The fluid inlets and outlets are staggered both vertically and horizontally to simplify piping connections to the heat pumps / chiller. Service panels surround the system, however, the Multi-flex systems are designed for complete service access by removing the front panel.

The electrical and performance specifications are provide for a unit with a single compressor. If the units are stacked the performance and electrical specifications must be doubled. Fluid-to-fluid heat pump / chiller systems should be designed to operate at fluid temperatures lower than 120 F (50 C). Specifying operating temperatures higher than this will result in less efficient operation and can shorten the longevity of the compressor. Units must be operating within specified operating ranges.

GF1-210-WW-4 Performance Specifications - R410A

Evaporator									Condenser									Heating & Cooling Capacity							
EFT		LFT		Flow		PD			EFT		LFT		Flow		PD			Heating Capacity		COP_h	Chilling Capacity		COP_c	EER	kW
°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	MBH	(/kW)		MBH	(/kW)			
53.6	12.0	45.7	7.6	44.6	2.8	14.5	43.6	6.3	77.0	25.0	86.6	30.3	44.6	2.8	12.2	36.7	5.3	208.6	61.1	5.4	170.1	49.8	4.4	15.1	11.3
32.0	0.0	27.2	-2.7	44.6	2.8	16.3	48.8	7.0	104.0	40.0	111.1	43.9	44.6	2.8	10.9	32.6	4.7	154.0	45.1	3.1	104.8	30.7	2.1	7.3	14.4
53.6	12.0	45.2	7.3	44.6	2.8	14.5	43.6	6.3	59.0	15.0	68.9	20.5	44.6	2.8	13.4	40.3	5.8	214.0	62.7	6.6	181.5	53.2	5.6	19.0	9.5
50.0	10.0	43.6	6.4	44.6	2.8	14.8	44.3	6.4	104.0	40.0	112.8	44.9	44.6	2.8	10.8	32.5	4.7	190.4	55.8	3.8	139.7	40.9	2.8	9.4	14.8
53.6	12.0	46.1	7.8	44.6	2.8	14.5	43.5	6.3	86.0	30.0	95.5	35.3	44.6	2.8	11.7	35.1	5.1	205.4	60.2	4.9	163.3	47.9	3.9	13.2	12.3
68.0	20.0	59.6	15.4	44.6	2.8	13.4	40.3	5.8	104.0	40.0	114.8	46.0	44.6	2.8	10.8	32.4	4.7	233.5	68.4	4.4	181.0	53.0	3.4	11.8	15.4
50.0	10.0	42.8	6.0	44.6	2.8	14.8	44.4	6.4	85.0	29.4	94.1	34.5	44.6	2.8	11.8	35.3	5.1	197.0	57.7	4.8	155.6	45.6	3.8	12.8	12.1
68.0	20.0	58.8	14.9	44.6	2.8	13.5	40.4	5.8	86.0	30.0	97.2	36.2	44.6	2.8	11.7	35.0	5.0	243.3	71.3	5.6	199.7	58.5	4.6	15.6	12.8
10.0	-12.2	6.3	-14.3	44.6	2.8	18.4	55.3	8.0	85.0	29.4	90.4	32.5	44.6	2.8	11.9	35.6	5.1	118.0	34.6	3.1	79.9	23.4	2.1	7.1	11.2
15.0	-9.4	11.0	-11.7	44.6	2.8	17.9	53.8	7.8	85.0	29.4	90.8	32.7	44.6	2.8	11.9	35.6	5.1	126.2	37.0	3.3	87.6	25.7	2.3	7.7	11.3

** Outputs and Efficiency Ratings are based on a 25% methanol and water mixture, which will increase or decrease based on anti-freeze levels*

*** Pressure drop is shown in feet of head, using 25% methanol & water as the test fluid. Multipliers for other fluids are as follows:*

- *water: 0.85*
- *30% ethanol: 1.17*
- *35% propylene glycol: 1.23*

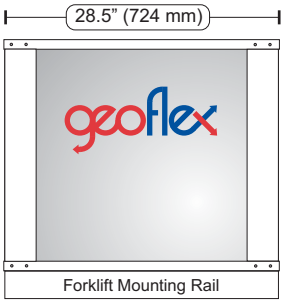
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI 550 - Chiller Rating Points
ARI 550 - Chiller Rating Points
Ice Making Rating Points
Ice Making Rating Points

GF1-210-WW-4 Electrical Specifications - R410A

Voltage/Phase/Hz	Compressor RLA	Compressor LRA	Min. Circuit Ampacity	Max. Fuse Breaker Size
200-230/3/60	62.1	340.0	87	90
460/3/60	30.0	173.0	42	50
575/3/60	26.4	132.0	37	40

Note: Pumps or any other external portions, have not been included in the electrical specifications

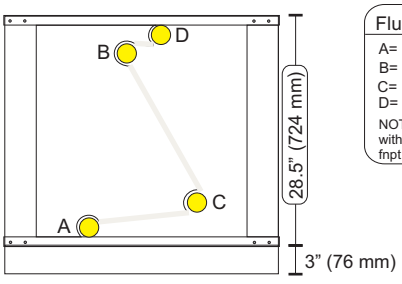
System Weight 480 Shipping Weight 500



Notes to Cabinet Sizing & Physical Characteristics...

System sizing and weights may vary, if optional alternate heat exchangers are specified.

System Footprint
28.5" (724mm) X 28.5" (724mm)



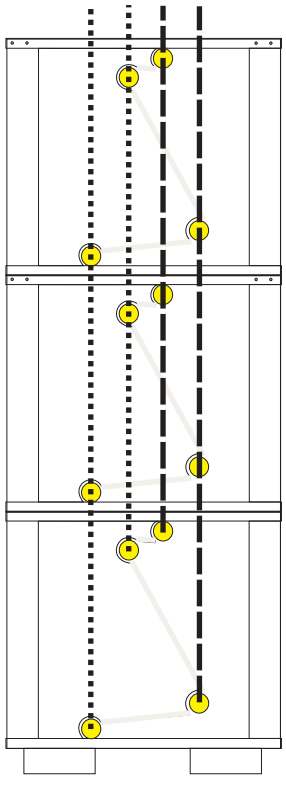
Fluid Connections

A= 1.25" CSF - Loop In
B= 1.25" CSF - Loop Out
C= 1.25" CSF - Warm/Chiller Fluid In
D= 1.25" CSF - Heated/Chilled Fluid Out

NOTE: All water connections come standard with copper sweat fitting (CSF) but optional fnpt fittings can installed, upon request.

Model GF1A-210WW-4

Model GF2A-210WW
(420 Nominal)



Model GF3A-210WW
(630 Nominal)

GF1-210WW-4 - Fluid-to-Fluid heat pump / chiller

517 McCormick Blvd.,
London, ON N5W 4C8
P: 519.488.1653 F:519.913.1259
E: plant@geoflexsystems.com
W: www.geoflexsystems.com

Geoflex model GFXX-450WW-4 Fluid-to-Fluid Heat Pump & Chiller Specifications

Geoflex, Multi-flex Systems have been designed to allow for the stacking/ganging of 2, 3 heat pump / chiller systems, offering the benefits of built-in redundancy, maintenance without complete shut-down, unparalleled operating efficiency and unloading characteristics. The stacking/ganging of systems allows increased capacity without increasing the very small footprint of the equipment.

The Multi-flex design offers built-in system redundancy for servicing and higher operating efficiency by staging the systems, accordingly to the load. The fluid inlets and outlets are staggered both vertically and horizontally to simplify piping connections to the heat pumps / chiller. Service panels surround the system, however, the Multi-flex systems are designed for complete service access by removing the front panel.

The electrical and performance specifications are provide for a unit with a single compressor. If the units are stacked the performance and electrical specifications must be doubled. Fluid-to-fluid heat pump / chiller systems should be designed to operate at fluid temperatures lower than 120 F (50 C). Specifying operating temperatures higher than this will result in less efficient operation and can shorten the longevity of the compressor. Units must be operating within specified operating ranges.

GF1-450-WW-4 Performance Specifications - R410A

Evaporator									Condenser									Heating & Cooling Capacity							
EFT		LFT		Flow		PD			EFT		LFT		Flow		PD			Heating Capacity		COP_h	Chilling Capacity		COP_c	EER	kW
°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	°F	°C	°F	°C	GPM	L/S	ft/h	kPa	psi	MBH	(/kW)		MBH	(/kW)			
53.6	12.0	45.5	7.5	90.0	5.7	18.1	54.2	7.8	77.0	25.0	87.0	30.5	90.0	5.7	15.5	46.6	6.7	442.6	129.7	5.5	361.4	105.9	4.5	15.2	23.8
32.0	0.0	27.0	-2.8	90.0	5.7	20.0	59.9	8.6	104.0	40.0	111.3	44.1	90.0	5.7	14.0	42.1	6.1	326.2	95.6	3.1	222.5	65.2	2.1	7.3	30.4
53.6	12.0	44.9	7.2	90.0	5.7	18.1	54.3	7.8	59.0	15.0	69.3	20.7	90.0	5.7	16.9	50.6	7.3	455.4	133.4	6.7	387.1	113.4	5.7	19.3	20.0
50.0	10.0	43.3	6.3	90.0	5.7	18.3	55.0	7.9	104.0	40.0	113.1	45.1	90.0	5.7	14.0	41.9	6.0	404.7	118.6	3.8	297.6	87.2	2.8	9.5	31.4
53.6	12.0	45.8	7.7	90.0	5.7	18.1	54.2	7.8	86.0	30.0	95.8	35.5	90.0	5.7	15.0	44.9	6.5	435.9	127.7	4.9	346.9	101.6	3.9	13.3	26.1
68.0	20.0	59.3	15.2	90.0	5.7	16.9	50.7	7.3	104.0	40.0	115.2	46.2	90.0	5.7	13.9	41.8	6.0	496.2	145.4	4.5	384.9	112.8	3.5	11.8	32.6
50.0	10.0	42.6	5.9	90.0	5.7	18.4	55.1	8.0	85.0	29.4	94.4	34.7	90.0	5.7	15.0	45.1	6.5	417.9	122.5	4.8	330.5	96.8	3.8	12.9	25.6
68.0	20.0	58.4	14.7	90.0	5.7	16.9	50.8	7.3	86.0	30.0	97.6	36.5	90.0	5.7	14.9	44.7	6.5	516.9	151.4	5.6	424.4	124.4	4.6	15.7	27.1
10.0	-12.2	6.2	-14.3	90.0	5.7	22.3	66.8	9.6	85.0	29.4	90.6	32.6	90.0	5.7	15.2	45.5	6.6	248.9	72.9	3.1	168.4	49.4	2.1	7.1	23.6
15.0	-9.4	10.8	-11.8	90.0	5.7	21.7	65.2	9.4	85.0	29.4	91.0	32.8	90.0	5.7	15.1	45.4	6.6	266.2	78.0	3.3	184.9	54.2	2.3	7.8	23.8

** Outputs and Efficiency Ratings are based on a 25% methanol and water mixture, which will increase or decrease based on anti-freeze levels*
*** Pressure drop is shown in feet of head, using 25% methanol & water as the test fluid. Multipliers for other fluids are as follows:*
- water: 0.85
- 30% ethanol: 1.17
- 35% propylene glycol: 1.23

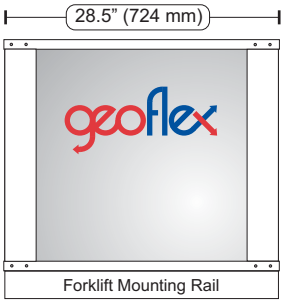
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Loop Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Ground Water Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI/ISO 13256-2 - Water Loop Heat Pump
ARI 550 - Chiller Rating Points
ARI 550 - Chiller Rating Points
Ice Making Rating Points
Ice Making Rating Points

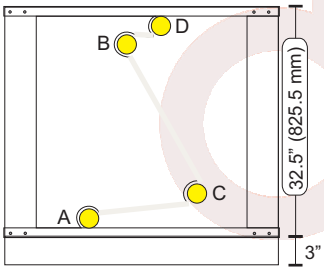
GF1-450WW-4 Electrical Specifications - R410A

Voltage/Phase/Hz	Compressor RLA	Compressor LRA	Min. Circuit Ampacity	Max. Fuse Breaker Size
208-230/3/60	122.1	599.0	171	175
460/3/60	60.7	310.0	85	95
575/3/60	55.0	239.0	77	70

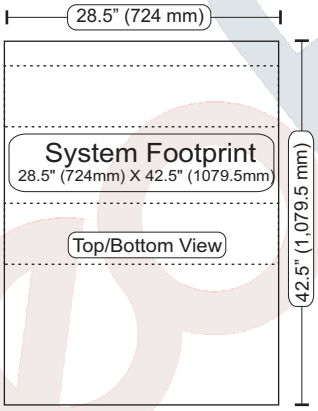
Note: Pumps or any other external portions, have not been included in the electrical specifications

System Weight Shipping Weight



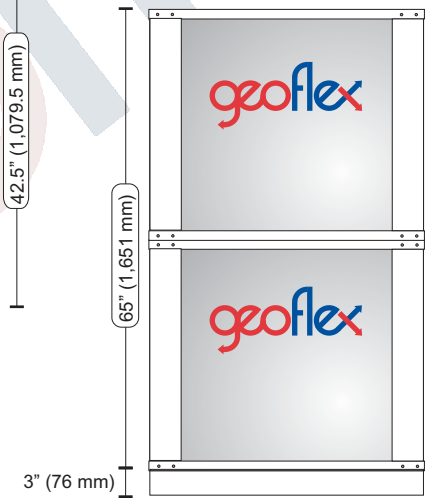


Model GF1A-450WW-4

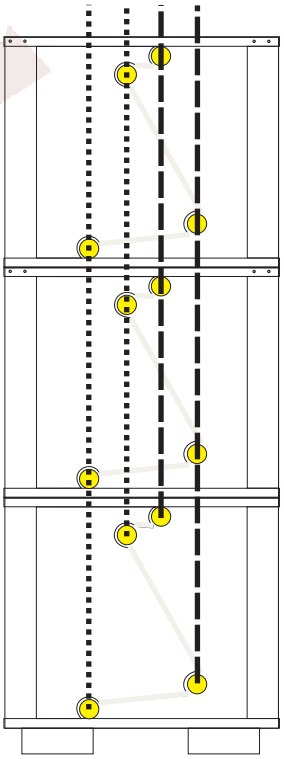


Fluid Connections
A= Loop In
B= Loop Out
C= Warm/Chiller Fluid In
D= Heated/Chilled Fluid Out

Notes to Cabinet Sizing & Physical Characteristics...
System sizing and weights may vary, when alternate heat exchangers are specified.



Model GF2A-450WW (900 Nominal)



Model GF3A-450WW (1200 Nominal)

GF1-450WW-4 - Fluid-to-Fluid heat pump / chiller

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W: www.geoflexsystems.com