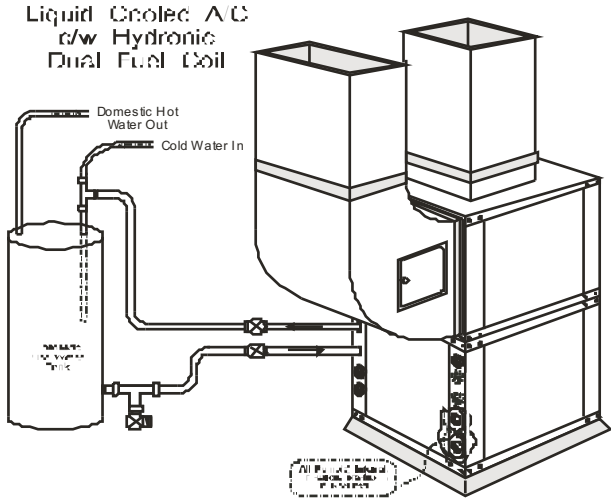


# The Geoflex Hybrid, Dual Fuel or Passive Cooling Option

Commonly used in conjunction with a Geoflex Geothermal Heat Pump, Liquid Cooled A/C or Chiller System

## Description

The Geoflex Dual Fuel option or system uses the same advanced technology as with all Geoflex heat pump systems. The Dual Fuel Option can be included into any Geoflex, Forced Air Heat Pump or Liquid Cooled Air Conditioning System and will operate as a forced air hydronic back-up, emergency or can be configured as a dual fuel system. The Dual Fuel System/Option allows the homeowner to take heated water from any hot water source and circulate it through the Dual Fuel Hydronic Coil, allowing the heat to be circulated throughout the space via the existing forced air system.



## Operational

When the dual fuel or hydronic back-up option is chosen, the room thermostat will energize a small internal or external circulating pump and will circulate hot water from any hot water source but commonly from a hot water tank, to the dual fuel hydronic coil within the system. The blower fan forces cooler return air over the dual fuel heat transfer coil and the heat from the water will transfer to the cooler incoming air and the heated air will transfer and be circulated throughout the homes ducting system.



## Advantages

As fuel commodity prices are constantly changing, a "Geoflex Dual Fuel System" offer a building owner the opportunity to choose which source they want to use, based on best commodity pricing, at any given time.

As an option to a Geothermal or Liquid Cooled Air Conditioning System or as a stand alone, the Dual Fuel Hydronic Coil can be sized to match virtually any load even when exceeding cooling loads.

In many cases, utilities offer incentives for specified, dual fuel systems.

Highest efficiency, water cooled air conditioning combined with Geothermal Loop or even a Swimming Pool.

Simultaneous air conditioning and pool heating. When a Liquid Cooled Air Conditioner is combined with a Swimming Pool, the homeowner will automatically heat the pool with the normally wasted rejection process heat from air conditioning the space. This essentially doubles the efficiency.

Geoflex Hydronic, Dual Fuel or Passive Optional "Coil" Output Specifications

CFM	Air Press. Drop. In in/wc.	Heating *									Air Press. Drop. In in/wc.	Chilling **									
		Capacity in BTU's, based on Entering Water Temperature, as listed below.										Capacity in BTU's, based on Entering Water Temperature, as listed below.									
		90 °F	100 °F	110 °F	120 °F	125 °F	130 °F	140 °F	160 °F	180 °F		40°F TC	40°F SC	45°F TC	45°F SC	50°F TC	50°F SC	55°F TC	55°F SC	60°F TC	60°F SC
800	0.05	13,827	21,509	29,190	36,872	40,713	44,554	52,235	67,598	82,962	0.08	38,970	26,662	31,899	23,523	24,829	20,597	17,758	17,758	10,688	10,688
900	0.06	15,216	23,670	32,124	40,577	44,804	49,031	57,484	74,391	91,298	0.09	42,051	29,074	34,422	25,736	26,792	22,613	19,162	19,162	11,533	11,533
1000	0.07	16,562	25,763	34,963	44,164	48,765	53,365	62,566	80,968	99,370	0.11	45,075	31,450	36,897	27,914	28,718	24,597	20,540	20,540	12,362	12,362
1100	0.09	17,862	27,786	37,709	47,633	52,595	57,556	67,480	87,327	107,174	0.13	47,922	33,736	39,228	30,017	30,533	26,520	21,838	21,838	13,143	13,143
1200	0.10	19,106	29,720	40,334	50,949	56,256	61,563	72,177	93,406	114,634	0.15	50,279	35,795	41,157	31,939	32,034	28,303	22,912	22,912	13,789	13,789
1300	0.12	20,071	31,222	42,373	53,524	59,099	64,674	75,825	98,127	120,428	0.17	52,210	37,660	42,737	33,705	33,264	29,966	23,791	23,791	14,319	14,319
1400	0.13	20,988	32,648	44,308	55,968	61,798	67,629	79,289	102,609	125,929	0.20	54,029	39,472	44,226	35,424	34,423	31,587	24,620	24,620	14,818	14,818
1500	0.15	21,850	33,989	46,129	58,268	64,337	70,407	82,546	106,824	131,102	0.22	55,735	41,228	45,623	37,094	35,511	33,166	25,398	25,398	15,286	15,286
1600	0.16	22,652	35,237	47,821	60,406	66,698	72,990	85,575	110,744	135,913	0.25	57,330	42,929	46,928	38,716	36,526	34,704	26,125	26,125	15,723	15,723
1700	0.18	23,529	36,601	49,673	62,745	69,281	75,816	88,888	115,032	141,176	0.27	58,820	44,579	48,148	40,292	37,476	36,203	26,804	26,804	16,132	16,132
1800	0.20	24,361	37,895	51,429	64,963	71,730	78,497	92,031	119,099	146,167	0.30	60,240	46,192	49,311	41,836	38,381	37,672	27,451	27,451	16,521	16,521
1900	0.22	25,144	39,112	53,081	67,050	74,034	81,018	94,987	122,924	150,862	0.33	61,588	47,767	50,414	43,345	39,240	39,112	28,065	28,065	16,891	16,891
2000	0.24	25,873	40,247	54,621	68,994	76,181	83,368	97,742	126,490	155,237	0.36	62,856	49,302	51,451	44,819	40,047	40,047	28,643	28,643	17,238	17,238
Water Press Drop in R/hd***		9.72	9.55	9.38	9.22	9.13	9.05	8.88	8.55	8.21		8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12

\* Entering Air Temperature for heating = 72 db ° F

\*\* Entering Air Temperature for Cooling = 80.6°F db/66.2°F wb

\*\*\* Water Flow based on 8 gpm

OTE: A capacities are based on coil only, fan & internal pump wattsm to be added to heated capacities and taken away from cooling.

NOTE: In Coding TC = Total Coil Capacity & SC = Sensible Capacity



Note: All Geoflex Systems are CSA (Canadian Standards Association) Approved

GF-DF-Dual Fuel-Hybrid Specs 23-08-11  
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Due to ongoing research and development Geoflex reserves the right to change or alter specifications and configurations without notice!

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