Ground Source Heat Pump Estimated Useful Life

A primary consideration in program design



According to the American Society of Heating, Refrigerating and Air-Conditioning Engineers, **GSHPs have an average equipment life of greater than 24 years**.

THE REPLECT OF THE PARTY OF THE	Median Service Life, Years		Sume and unpersonal sound	Median Service Life, Years	
Equipment Item	Abramson et al. (2005)		Equipment Item	Abramson et al. (2005)	
Air Conditioners	Liche Lie		Air Terminals	and and all	
Window unit	N/A*	10	Diffusers, grilles, and registers	N/A*	27
Residential single or split package	N/A*	15	Induction and fan-coil units	N/A*	20
Commercial through-the-wall	N/A*	15	VAV and double-duct boxes	N/A*	20
Water-cooled package	>24	15	Air washers	N/A*	17
Heat pumps			Ductwork	N/A*	30
Residential air-to-air	N/A*	15 ^b	Dampers	N/A*	20
Commercial air-to-air	N/A*	15	Fans	N/A*	
Commercial water-to-air	>24	19	Centrifugal	N/A*	25
Roof-top air conditioners			Axial	N/A*	20
Single-zone	N/A*	15	Propeller	N/A*	15



Source: 2015 ASHRAE HVAC Applications Section 37.3

GSHP Ground Heat Exchangers are constructed of high-density polyethylene and are generally warrantied by the manufacturer for greater than 50 years.

Their estimated useful life is greater than 100 years.

GeoLink 55-Year "No Leak" Earth Loop Warranty

The WaterFurnace GeoLink earth loop pipe and fittings are protected against rust, rot, electrolytic corrosion and defects in materials and workmanship for 55 years. WaterFurnace also offers an optional **55-Year No Leak Loop Warranty** that covers material and labor for repairs due to materials or workmanship. WaterFurnace "Geo-Link" pipe and fittings must be used and the loop must be installed with WaterFurnace equipment by a WF Geothermal Services Contractor (GSC). **55-Year No Leak Loop Warranty** applications are available directly from WF customer service. Contact WF Training for GSC certification requirements.

Product	Standard Coverage	Optional Coverage	
GeoLink Loop Pipe	55 years ຸ,ວipe and fittings only)	55 Year "No Leak" Warranty* 55YR-LOOP-WARR	

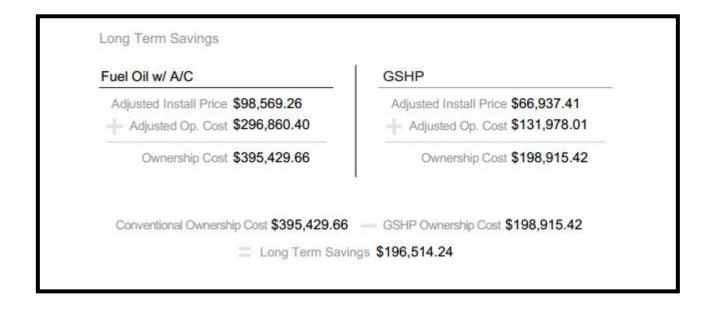
^{*}In order to process a claim under this warranty, a quote must be submitted to warranty and approved before any work can be started. HyperLoop not included in this warranty.

The 55-Year No Leak Loop Warranty is transferable for a fee Contact warranty for more details or to process a transfer.



Lifetime costs of the <u>entire system</u>, not just the heat pump itself, need to be taken into account.

These lifetime savings are especially important to LMI customers.



Source: Achieve Renewable Energy modeling



Thank you!
Ryan Dougherty, COO
Geothermal Exchange Organization

Ryan@GeoExchange.org (217) 572-1261

