



Northern Heat Pump Inc.

Product Catalog





NORTHERN HEAT PUMP

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Manufacturer of:

XTERRA SERIES
ENERGY EXTRACTION SYSTEM

High Efficient Ground Source Heat Pumps



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Introduction

Northern Heat Pump is a manufacturer of ground source heat pumps (GSHP). Ground source heat pumps get their name from the fact that they transfer energy to and from the earth. The source can be an open loop or closed ground loop heat exchanger. Each can be installed using a variety of methods. Since ground source heat pumps only move heat and do not create heat, the efficiencies are three to four times greater than fossil fuel systems. Heat pumps are inherently safe and environmentally friendly as they run entirely on electricity and no combustion is required to produce heat.

Northern Heat Pump produces five types of XTERRA SERIES units:

1. **ForcAir and ForcAir2** (water to air)
2. **Aqua2 and Aqua3** (water to water)
3. **Sourc3** (combination air/water to water)

Forced air heat pumps can be used typically where ever forced air heating and cooling is required. Proper application and correct installation will ensure excellent performance, comfort and customer satisfaction.

Water to water heat pumps can be used in a wide variety of applications residentially and commercially. Some include: hydronic baseboard heating, radiant in-floor heating, space heating/cooling using fan coils, swimming pool applications and many other system design possibilities.

Designed and built in Canada, Northern Heat Pump units perform well in the most extreme to moderate climates all around the world. Northern Heat Pump is committed to quality as every unit is performance checked before leaving our facility. This is just one more step to ensure customer satisfaction.

Features and Benefits:

Cabinet

The cabinet, which allows easy access for installation and service, is constructed of heavy gauge stainless steel. The stainless steel cabinet offers the best in corrosion resistance and durability.

Insulation

Cabinets and refrigerant piping are insulated to reduce condensation and compressor noise. Cabinets are insulated with 1/2" thick acoustical fiberglass insulation.

Compressor

All XTERRA SERIES heat pumps use high efficiency scroll compressors for reliability and efficient operation. The scroll compressor's unique design lends itself to having one of the lowest sound levels in the industry. The compressor is mounted on rubber cushions to further reduce vibration and noise. A dual capacity compressor is used on ForcAir2 units.

Heat Exchangers

The water to refrigerant heat exchangers are canister style heat exchangers with an enhanced internal heat exchange surface.

Refrigeration Circuit

All low-side copper tubing in the refrigeration circuit is insulated to reduce condensation at low entering fluid temperatures.

Filter Drier

All heat pumps have a factory installed filter drier for dehydration and cleaning of the refrigerant circuit. This feature adds to the life of the unit.

Expansion Valve

Northern Heat Pump provides a bi-flow balanced port externally equalized thermal expansion valve. This valve precisely meters refrigerant flow through the refrigerant circuit to achieve the desired heating or cooling over a wide range of operating conditions.

Reversing Valve

The reversing valve enables the unit to operate in heating or cooling mode. It is controlled by 24 VAC circuit set to failsafe at heating position.



Water Connections

All water connections feature $\frac{3}{4}$ " NPT female fittings. All connections are flush mounted therefore a back up wrench is not required when tightening.

24 Volt Controls

Electrical controls and safety devices are factory wired and tested. The controls include: compressor contactor, 24 volt transformer, solid state lockout board, reversing valve and desuperheater fuse (optional desuperheater).

Safety Devices

Each Northern Heat Pump unit contains safety devices to prevent compressor damage. These include: low pressure switch, high pressure switch, flow switch and internal overload protection.

Low Pressure Switch

The low pressure switch prevents compressor operation under low charge, loss of refrigerant or extremely low temperature conditions.

High Pressure Switch

For internal overload protection a high pressure switch is provided. This de-energizes the compressor should the discharge pressure become excessive.

Lockout Protection

When the safety controls are activated to prevent short cycling and compressor damage, the lockout board interrupts the compressor circuit preventing compressor operation. The board can be reset at the thermostat or by shutting off power to the unit and switching back on.

Thermostat Hook-up

Low voltage and high voltage knockouts are provided on both the left and right sides of the unit. All control wiring is 24 volt.

Desuperheater Option

The desuperheater option is a heat recovery system packaged within the heat pump. This option captures extra heat energy from the heat pump for domestic hot water savings. The Desuperheater remains active in both heating and cooling mode. This provides hot water at a reduced cost in heating mode, and virtually free hot water while in cooling mode. The internal desuperheater option includes; a double walled heat exchanger suitable for potable water, internal circulating pump, high temperature control (120°F de-energizes circulation pump), fuse, flush mounted $\frac{3}{4}$ " NPT female water connections.

Flow Switch

De-energizes the unit when ground loop fluid flow drops below a minimal GPM.



RESIDENTIAL MODEL # DESCRIPTION

RA VE 502 - C 1 3 1

UNIT DESIGNATION
R=RESIDENTIAL

UNIT TYPE

A=STANDARD
M=MULTI
D=DUAL COMPRESSOR
S=SPECIAL
W=HEAT ONLY
T=TWO SPEED
P=MINI

UNIT STYLE

W=HYDRONIC
V=VERTICAL
D=DOWNFLOW
H=HORIZONTAL
S=SPLIT

REFRIGERANT TYPE

E=R410A REFRIGERANT
F=R22 REFRIGERANT

NORMAL SIZE

X 1000 BTU/H

DESUPERHEATER OPTION

1=NONE
2=PARTIAL DESUPERHEATER
3=FULL TIME

POWER SUPPLY

1=208/230V 1Ph
2=208/230V 3Ph
3=575V 3Ph
4=460/480V 3PH
5=220/240V 1PH 50HZ
6=380V 3PH 50HZ

BLOWER TYPE

1=None
2=Standard PSC 3 Speed Blower
3=ECM Blower

CONFIGURATION

1=LEFT SIDE RETURN (STD)
2=RIGHT SIDE RETURN
3=NONE

HEAT EXCHANGER

C=COPPER
F=S.S. FLATPLATE
H=CUPRO HYDRONIC LOOP
N=CUPRO NICKEL

SERIAL # DESCRIPTION

XL 08 01 A 1000 A

BILL OF MFG

YEAR OF MFG

MONTH OF MFG

MFG LOCATION

A=SOUTH RAILWAY PLANT

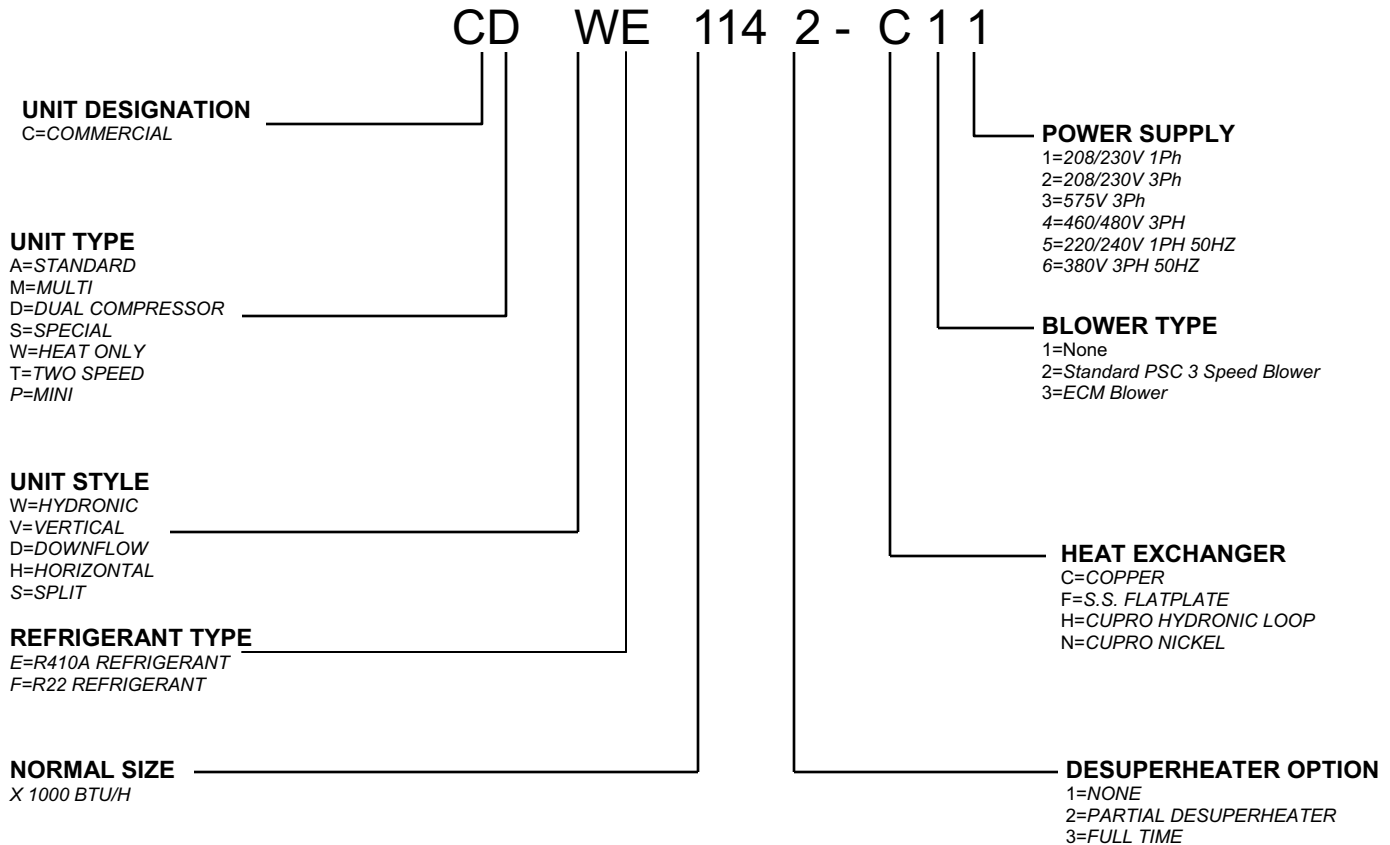
SEQUENTIAL NUMBER

FUTURE USE

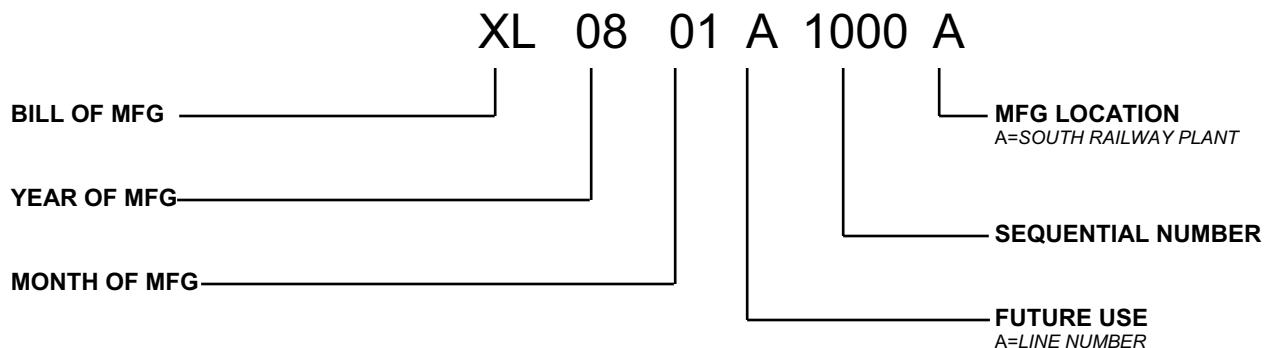
A=LINE NUMBER



COMMERCIAL MODEL # DESCRIPTION



SERIAL # DESCRIPTION



FORCAIR

Efficiently heats and cools by transferring natural earth energy into the space, creating a comfortable indoor environment.

Effectively heats and cools through forced air distribution using conventional ductwork systems.

FORCAIR units are ideal for new construction and retrofit applications.

Environmentally Friendly

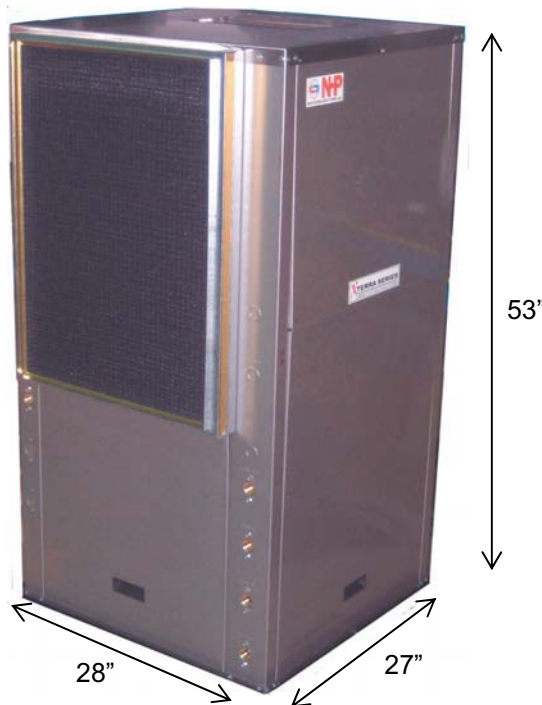
Xterra Series heat pumps transfer usable energy (heating & cooling) without the production of unhealthy gases. Xterra Series heat pumps use non-ozone depleting R410A refrigerant.

Optional Hot Water Generation

Extra cost savings may be realized by choosing a desuperheater option. This feature extracts superheated refrigerant gas to supplement domestic hot-water heating.

Performance Tested

Xterra Series units are run tested and supplied with actual performance data prior to being shipped from the factory. This is another way to ensure the highest quality in every Northern Heat Pump unit.

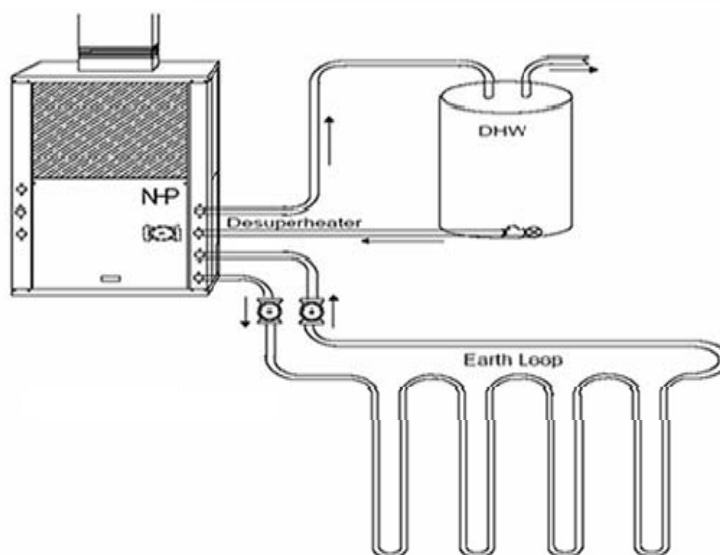
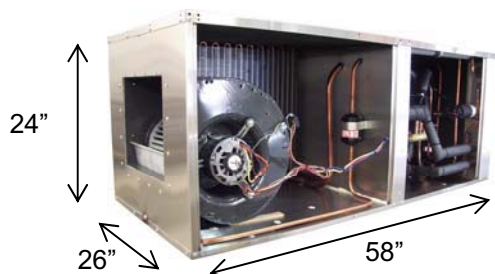


Features:

- **Stainless Steel, Non Corrosive Cabinet**
Attractive appearance; promotes longevity
- **Single Capacity Compressor**
- **Removable Side Panels**
Accommodates ease of service and installation
- **User Friendly**
Using market familiar components, provides ease of availability & service
- **Energy Efficient/Cost Effective**
Efficiencies up to 400% provide ongoing energy savings
- **Variable Speed ECM Blower Motors**
Quiet, efficient, and factory programmed for optimal performance and added savings
- **Optimally Sized Heat Exchangers**
Provide superior performance and added efficiency
- **Quiet Operation**
Acoustical cabinet insulation and compressor blanket ensure quiet operation
- **Warranty**
5 year standard; 10 year optional*

* optional packages

Typical Piping Diagram:



Standard Features:

- Insulated Stainless Steel Cabinets
- Removable Side Panels
- Top Discharge (Vertical)
- Left Side Return
- CuproNickel Heat Exchanger
- ECM Blower Motor
- Single Phase Electrical 208/230 Volt
- LED Electronic Diagnostics
- Copeland Scroll Compressor
- Compressor Blanket
- 5 Year Warranty

Options:

- Horizontal Discharge
- Right Side Return
- 3 Phase Electrical; 208, 230, 460, 575 Volt.
- PSC 3 Speed Blower Motor
- Desuperheater supplements DHW up to 65%
- Electric Auxiliary Heater 5KW, 10KW, 15KW, 20KW
- 10 Year Warranty

Performance Chart:

GLHP 32F EWT (Heating); 77F EWT (Cooling)

Model #	BTU (Cooling)	EER	CFM (Cooling)	GPM (loop)	BTU (Heating)	COP	CFM (Heating)
RA*E 36	33800	14.3	1100	8	27430	3.2	1050
RA*E 50	47000	15.2	1550	11	37100	3.1	1475
RA*E 57	62400	15.3	1700	14	44800	3.2	1700
RA*E 70	65650	16.0	1900	15	50790	3.6	1900

Due to ongoing product R&D, specifications and performance data may change without notice.

FORCAIR²

Efficiently heats and cools by transferring natural earth energy into the space, creating a comfortable indoor environment.

Effectively heats and cools through forced air distribution using conventional ductwork systems.

FORCAIR units are ideal for new construction and retrofit applications.

Environmentally Friendly

Xterra Series heat pumps transfer usable energy (heating & cooling) without the production of unhealthy gases. Xterra Series heat pumps use non-ozone depleting R410A refrigerant.

Optional Hot Water Generation

Extra cost savings may be realized by choosing a desuperheater option. This feature extracts superheated refrigerant gas to supplement domestic hot-water heating.

Performance Tested

Xterra Series units are run tested and supplied with actual performance data prior to being shipped from the factory. This is another way to ensure the highest quality in every Northern Heat Pump unit.

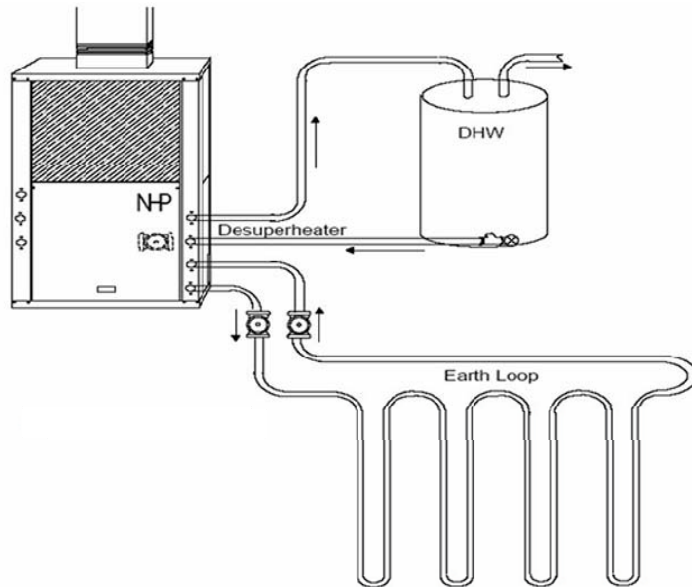


Features:

- **Stainless Steel, Non Corrosive Cabinet**
Attractive appearance; promotes longevity
- **Dual Capacity Compressor**
Provides greater efficiencies by running at either 65% or 100% capacity
- **Removable Side Panels**
Accommodates ease of service and installation
- **User Friendly**
Using market familiar components, provides ease of availability & service
- **Energy Efficient/Cost Effective**
Efficiencies up to 400% provide ongoing energy savings
- **Variable Speed ECM Blower Motors**
Quiet, efficient, and factory programmed for optimal performance and added savings
- **Optimally Sized Heat Exchangers**
Provide superior performance and added efficiency
- **Quiet Operation**
Acoustical cabinet insulation and compressor blanket ensure quiet operation
- **Warranty**
5 year standard; 10 year optional*

* optional packages

Typical Piping Diagram:



Standard Features:

- Insulated Stainless Steel Cabinet
- Removable Side Panels
- Top Discharge (Vertical)
- Left Side Return
- CuproNickel Heat Exchanger
- ECM Blower Motor
- Single Phase Electrical 208/230 Volt
- LED Electronic Diagnostics
- Copeland Scroll Compressor
- Compressor Blanket
- 5 Year Warranty

Options:

- Horizontal Discharge
- Right Side Return
- 3 Phase Electrical; 208, 230, 460, 575 Volt.
- Desuperheater supplements DHW up to 65%
- Electric Auxiliary Heater 5KW, 10KW, 15KW, 20KW
- 10 Year Warranty

Performance Chart:

GLHP 41F EWT Part Load Heating / 68F EWT Part Load Cooling

Model #	BTU (Cooling)	EER	CFM (Cooling)	GPM	BTU (Heating)	COP	CFM (Heating)
Part Load Data							
RT*E30	26700	23.0	700	7	16800	3.3	700
RT*E40	34300	21.8	750	9	28800	3.3	800
RT*E51	48000	23.0	1100	11	29600	3.5	1150
RT*E60	54700	21.1	1350	13	47240	3.1	1350
GLHP 32F EWT Full Load Heating / 77F EWT Full Load Cooling							
Full Load Data							
RT*E30	34100	20.4	1000	7	24000	3.3	1050
RT*E40	44000	15.4	1200	9	36700	3.3	1200
RT*E51	57200	16.1	1550	11	37850	3.5	1600
RT*E60	65120	14.9	1980	13	50200	3.4	1850

Due to ongoing product R&D, specifications and performance data may change without notice.

AQUA²

Efficiently heats and cools by transferring natural earth energy into the space, creating comfortable environments and performing other useful utility tasks.

Effectively heats and cools water for hydronic applications such as radiant in-floor heating, fan coil units, radiators, pools, domestic hot water, etc.

AQUA2 units are ideal for new construction and retrofit applications.

Environmentally Friendly

Xterra Series heat pumps transfer usable energy (heating & cooling) without the production of unhealthy gases. Xterra Series heat pumps use non-ozone depleting R410A refrigerant.

Optional Hot Water Generation

Extra cost savings may be realized by choosing a desuperheater option. This feature extracts superheated refrigerant gas to supplement domestic hot-water heating.

Performance Tested

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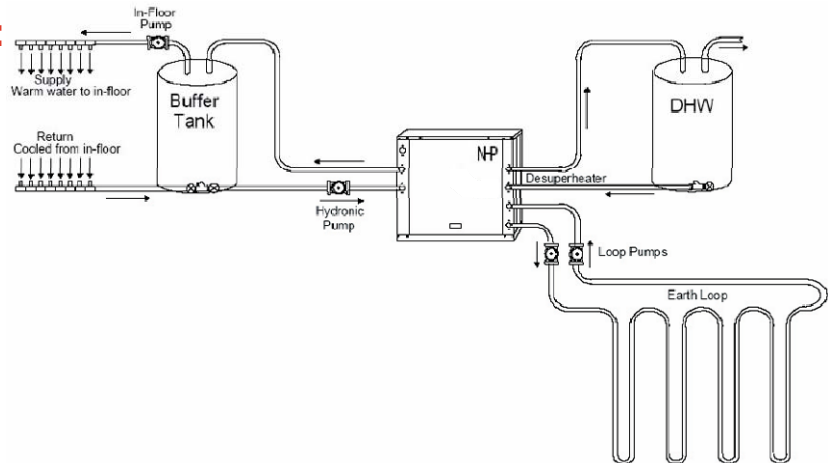


Features:

- **Stainless Steel, Non Corrosive Cabinet**
Attractive appearance; promotes longevity
- **Compact Size**
Allows for placement almost anywhere
Stackable for large project applications
- **Energy Efficient/Cost Effective**
Efficiencies up to 400% provide ongoing energy savings
- **Cooling Available**
Built in reversing valve provides chilled water typically for fan coil or industrial process applications
- **Optimally Sized Heat Exchangers**
Provide superior performance and added efficiency
- **Quiet Operation**
Acoustical cabinet insulation and compressor blanket ensure quiet operation.
- **Warranty**
5 year standard; 10 year optional*

* optional packages

Typical Piping Diagram:



Standard Features:

- Insulated Stainless Steel Cabinet
- Removable Side Panels
- CuproNickel Heat Exchangers
- Single Phase Electrical 208/230 Volt
- LED Electronic Diagnostics
- Copeland Scroll Compressor
- Compressor Blanket
- 5 Year Warranty

Options:

- 3 Phase Electrical; 208, 230, 460, 575 Volt.
- Desuperheater supplements DHW up to 65%
- Dual Compressor Models CDWE 6, 8, 10, 12 Ton Nominal Size (Larger Custom Models Available)
- 10 Year Warranty

Performance Chart:

GLHP 32F EWT HYD EWT 45F Load

Model #	BTU (Cooling)	EER	GPM (loop)	GPM (load)	BTU (Heating)	COP
RAWE 36	38000	16.8	8	5	28200	4.0
RAWE 50	46600	16.5	11	8	41700	3.7
RAWE 57	64500	15.4	14	9	52500	4.0
RAWE 70	65800	13.7	15	12	60400	3.8

Due to ongoing product R&D, specifications and performance data may change without notice.

AQUA³

Efficiently heats and cools by transferring natural earth energy into the space, creating comfortable environments and performing other useful utility tasks.

Effectively heats and cools water for hydronic applications such as radiant in-floor heating, fan coil units, radiators, pools, domestic hot water, etc.

AQUA3 units provide an additional hot water circuit and are ideal for new construction and retrofit applications.

Environmentally Friendly

Xterra Series heat pumps transfer usable energy (heating & cooling) without the production of unhealthy gases. Xterra Series heat pumps use non-ozone depleting R410A refrigerant.

Additional Hot Water Generation

An extra hot water hydronic circuit is added to provide on extra function such as 100% DHW, pool heating, etc.

Performance Tested

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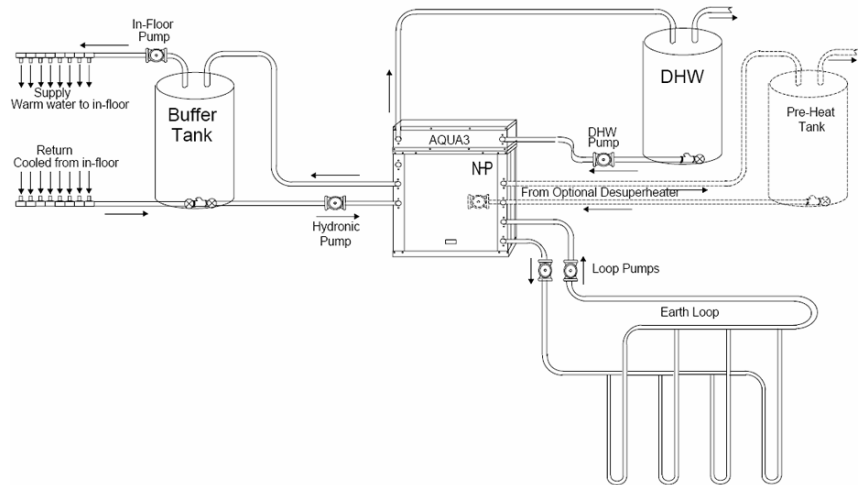


Features:

- **Stainless Steel, Non Corrosive Cabinet**
Attractive appearance; promotes longevity
- **Compact Size**
Allows for placement almost anywhere
Stackable for large project applications
- **Energy Efficient/Cost Effective**
Efficiencies up to 400% provide ongoing energy savings
- **Cooling Available**
Built in reversing valve provides chilled water typically for fan coil or industrial process applications
- **Optimally Sized Heat Exchangers**
Provide superior performance and added efficiency
- **Quiet Operation**
Acoustical cabinet insulation and compressor blanket ensure quiet operation
- **Warranty**
5 year standard; 10 year optional*

* optional packages

Typical Piping Diagram:



Standard Features:

- Insulated Stainless Steel Cabinet
- Removable Side Panels
- CuproNickel Heat Exchangers
- Double Wall Heat Exchanger for 100% DHW
- Single Phase Electrical 208/230 Volt
- LED Electronic Diagnostics
- Copeland Scroll Compressor
- Compressor Blanket
- 5 Year Warranty

Options:

- 3 Phase Electrical; 208, 230, 460, 575 Volt.
- Desuperheater supplements DHW up to 65%
- Dual Compressor Models CSWE 6, 8, 10, 12 Ton Nominal Size (Larger Custom Models Available)
- 10 Year Warranty

Performance Chart:

GLHP 32F EWT HYD EWT 45F Load

Model #	BTU (Cooling)	EER	GPM (loop)	GPM (load)	BTU (Heating)	COP
RSWE 36	38000	16.8	8	5	28200	4.0
RSWE 50	46600	16.5	11	8	41700	3.7
RSWE 57	64500	15.4	14	9	52500	4.0
RSWE 70	65800	13.7	15	12	60400	3.8

Due to ongoing product R&D, specifications and performance data may change without notice.

SOURC3

Efficiently heats and cools by transferring natural earth energy into the space, creating a comfortable indoor environment.

Effectively heats and cools through forced air distribution using conventional ductwork systems.

SOURC3 also heats water for hydronic applications such as radiant in-floor heating, radiators, pools, and domestic hot water.

SOURC3 units are ideal for new construction and retrofit applications.

Environmentally Friendly

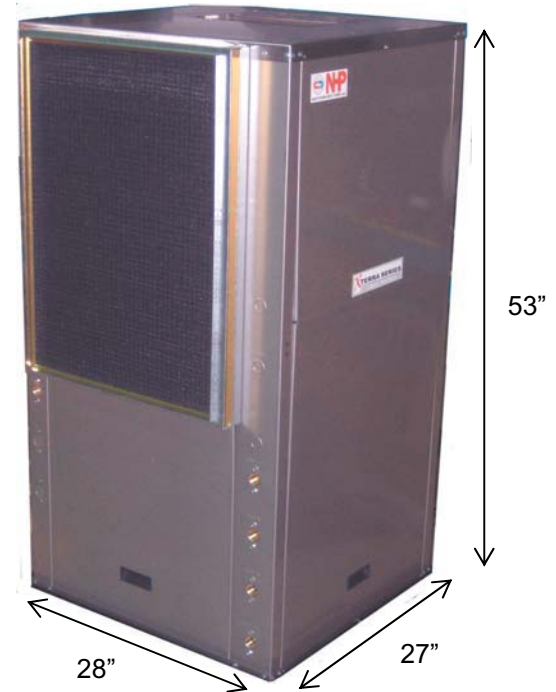
Xterra Series heat pumps transfer usable energy (heating & cooling) without the production of unhealthy gases. Xterra Series heat pumps use non-ozone depleting R410A refrigerant.

Optional Hot Water Generation

Extra cost savings may be realized by choosing a desuperheater option. This feature extracts superheated refrigerant gas to supplement domestic hot-water heating.

Performance Tested

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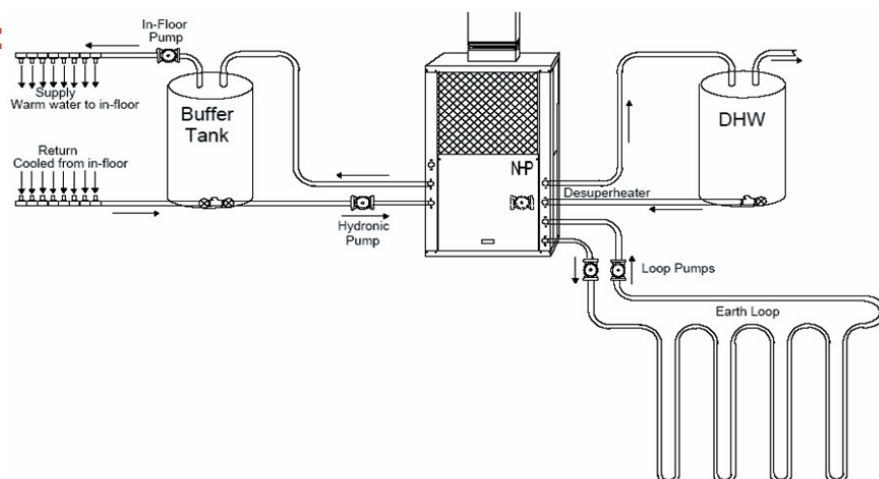


Features:

- **Stainless Steel, Non Corrosive Cabinet**
Attractive appearance; promotes longevity
- **Combination Unit**
Cost effectively combines two units into one
- **Removable Side Panels**
Accommodates ease of service and installation
- **User Friendly**
Using market familiar components, provides ease of availability & service
- **Energy Efficient/Cost Effective**
Efficiencies up to 400% provide ongoing energy savings
- **Variable Speed ECM Blower Motors**
Quiet, efficient, and factory programmed for optimal performance and added savings
- **Optimally Sized Heat Exchangers**
Provide superior performance and added efficiency
- **Quiet Operation**
Acoustical cabinet insulation and compressor blanket ensure quiet operation.
- **Warranty**
5 year standard; 10 year optional*

* optional packages

Typical Piping Diagram:



Standard Features:

- Insulated Stainless Steel Cabinets
- Removable Side Panels
- Top Discharge (Vertical)
- Left Side Return
- CuproNickel Heat Exchangers
- ECM Blower Motor
- Single Phase Electrical 208/230 Volt
- LED Electronic Diagnostics
- Copeland Scroll Compressor
- Compressor Blanket
- 5 Year Warranty

Options:

- Right Side Return
- 3 Phase Electrical; 208, 230, 460, 575 volt.
- PSC 3 Speed Blower Motor
- Desuperheater supplements DHW up to 65%
- Electric Auxiliary Heater 5KW, 10KW, 15KW, 20KW
- 10 Year Warranty

Performance Chart:

GLHP 32F EWT (Heating); 77F EWT (Cooling) Forced Air Side

Model #	BTU (Cooling)	EER	CFM (Cooling)	GPM (Loop)	BTU (Heating)	COP	CFM (Heating)
RM*E 36	33800	14.3	1100	8	27430	3.2	1050
RM*E 50	47000	15.2	1550	11	37100	3.1	1475
RM*E 57	62400	15.3	1700	14	44800	3.2	1700
RM*E 70	65650	16.0	1900	15	50790	3.6	1900

GLHP 32F EWT HYD EWT 45F Load Hydronic Side

Model #	BTU (Cooling)	EER	GPM (loop)	GPM (load)	BTU (Heating)	COP
RM*E 36	38000	16.8	8	5	28200	4.0
RM*E 50	46600	16.5	11	8	41700	3.7
RM*E 57	64500	15.4	14	9	52500	4.0
RM*E 70	65800	13.7	15	12	60400	3.8

Due to ongoing product R&D, specifications and performance data may change without notice.

Geothermal Accessories

Controls:

30-1F951277

White Rodgers 90 Series Blue Touchscreen Thermostat



- Remote sensing indoor/outdoor
- Programmable fan
- Circulator fan cycling
- Automatic daylight savings options
- Battery or Hardwire powered
- Dual-fuel heat pump control
- Patented cool savings
- Enhanced security settings
- 3 wire zone valve.

30-1F951277	White-Rodgers 90 Series Blue - Heat Pump Thermostat
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30-CT03TS***

Climatouch Touch Screen Thermostat



- Menu driven screens
- Adjustable time and temp.
- Auto changeover
- Humidify/dehumidify option
- Vacation mode
- Filter monitor
- Energy calculator
- Compatible with: gas, oil, electric, heat pump, A/C and Multistage HVAC
- Optional wireless outdoor temp sensor*

Terminal Connections:

30-CT03TS32 C, Y2, R, O/B/W, W2, G, Y1
30-CT03TS32H C, Y2, R, O/B/W, W2, G, Y1, DH, H

*Wireless Outdoor Sensor

30-217S31

30-CT03TS21	Climatouch Prog. 2 heat, 1 cool, Auto Change
30-CT03TS32	Climatouch Prog. 3 heat, 2 cool, Auto Change
30-CT03TS32H	Climatouch Prog. 3 heat, 2 cool, Auto w/Humidistat
30-217S31	Climatouch Outdoor Wireless Temperature Sensor



24 VAC POWERED



30-RS8425

Robertshaw Programmable Thermostat

2 Heat/2 Cool Heat Pump, 7 day programmable



- Compatible with all standard 24 VAC heat pump systems,
- Up to two stage heat and two stage cool
- Adjustable 1st and 2nd Stage Temperature Differential
- Larger back lit display
- Temporary program override
- Automatic compressor short cycle protection
- 5-2 day programming



24 VAC POWERED

Robertshaw

30-RS8425	Robertshaw Prog. Thermostat, 2 heat 2 cool
30-RS8625	Robertshaw Non-Prog. Thermostat 2 heat 2 cool

Controls:

30-ETC1120



ETC Electronic Thermostat (Hot Water Storage Thermostat)

- Selectable Fahrenheit or Celsius modes.
- One Horsepower output relay.
- Concealed lockout switch to prevent tampering.
- Both one and two stage models available.
- 0-10 VDC analog output available.
- Settings retained in the event of a power failure.
- Sensor included with control.
- Wide temperature range (-30° F to 220° F).
- Adjustable differential range (1° F to 30° F).
- LCD Digital Display shows
 - Temperature at the sensor.
 - Control settings.
 - Relay status
 - Onboard diagnostics.
- Simple Key Pad settings.
- Remote temperature sensing up to 400 feet.
- Selectable Heat or Cool modes.

30-ETC1120	ETC Control Thermostat 24 Volt Single Stage
30-ETC2120	ETC Control Thermostat 24 Volt Dual Stage

30-89057



Sensor Bulb Well with 1/2" MIP

30-89057	Sensor Bulb Well with 1/2" MIP
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Loop Pumps, Pump Packs & Accessories

40-2230QFCM



B&D QT Single Pump Loop Module

- Designed for open loop systems
- Eliminate the hassles of air in closed loop systems
- Constructed of metal outer jacket
- Open cell insulation with PVC tank
- E-Coated Grundfos pumps
- Brass ball valves on both sides of pump

MODEL	DESCRIPTION	Inlet/Outlet	Volts	Amps	Height	Wdth	Dpth
40-1230QFCM	Single 26-116 Pump	1" Swivel (FPT)	230	1.07	36"	7.75"	16"
40-2230QFCM	Double 26-116 Pumps	1" Swivel (FPT)	230	2.14	36"	7.75"	16"
40-22EASSQM	Double 26-116 Pumps	1" Swivel (FPT)	230	3.5	36"	7.75"	16"

40-GFM1161



Grundfos Single Loop Pump Module - Cast

- Fully insulated, composite cabinet
- No assembly required
- Standard 3 way brass valve for easy loop flushing and filling
- Standard 1" NPT connections
- Measures 13"x 12 3/4 x 6 1/2" for a compact unit
- Available Pumps: GRUNDFOS, BELL AND GOSSETT, ARMSTRONG and Commercial Pumps
- Also Available: Non Insulated single and double pump modules, Remote Flush Valves, Dual Heat Pump Module Control
- 5 Year Warranty

40-GFM1161	Grundfos Single Loop Pump Module - Cast
40-GFM1161B	Grundfos Single Loop Pump Module - Bronze

40-GFM1162



Grundfos Twin Loop Pump Module - Cast

- Fully insulated, composite cabinet
- No assembly required
- Standard 3 way brass valve for easy loop flushing and filling
- Standard 1" NPT connections
- Measures 13"x 12 3/4 x 6 1/2" for a compact unit
- Available Pumps: GRUNDFOS, BELL AND GOSSETT, ARMSTRONG and Commercial Pumps
- Also Available: Non Insulated single and double pump modules, Remote Flush Valves, Dual Heat Pump Module Control
- 5 Year Warranty

40-GFM1162	Grundfos Twin Loop Pump Module - Cast
40-GFM1162B	Grundfos Twin Loop Pump Module - Bronze
40-UP26-116F	Replacement Cast Pump
40-UP26-116FB	Replacement Bronze Pump

Loop Pumps, Pump Packs & Accessories

40-UP26116F



Grundfos Circulating Pump - Cast 230 Volt

- Circulates hot water between storage tank and Aqua2 or Sourc3 units
- Same pumping capacity as single cast loop pump

40-UPS1558F



40-UP26116F	Grundfos Circulating Pump - Cast 230 Volt
40-UP26116BF	Grundfos Circulating Pump - Bronze 230 Volt
40-UP2699F	Grundfos Circulating Pump - Cast 230 Volt
40-UP2699BF	Grundfos Circulating Pump - Bronze 230 Volt
40-UPS1558F	Grundfos Circulating Pump (3 speed) - Cast 115 Volt

40-HK



Hose Kit

- Includes:
 - 2 elbows-3/4" MPTx1" brass barb with P/T plugs
 - 2-1" x 1" MPT BRIMA
 - 4-hose clamps
 - 10ft hose

40-HK	Hose Kit
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40-HKAPT



Heat Pump Adaptor Elbow

- 3/4" MIP x 1" Barb, 1/4" FPT
- Complete with p/t Plug

40-HKAPT	Heat Pump Adaptor Elbow
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Loop Pumps, Pump Packs & Accessories

40-PT250A



1/4" p/t Plug

- 1/4" Brass p/t Plug

40-PT250A	1/4" p/t Plug
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40-OPNLPKIT



Open Loop Kit

- 1" Strainer
- 24v solenoid valve
- 3/4" flow meter

40-OPNLPKIT	Open Loop Kit
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20-SRV101G



24 Volt Solenoid Valve

- 24 Volt AC Solenoid valve
- Adjustable flow
- 1" FIP ports

20-SRV101G	Solenoid Valve, 1" FIP ports, 24 Volt
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40-556G



Taco Zone Valve

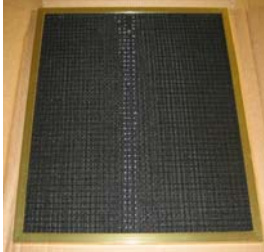
- Designed for high-head, open-system zone control.
- Unique end switch design permits control of the heat pump by the valve
- Allows cold water into the coil before the heat pump starts
- Available in 3/4" and 1" sweat connections.

40-556G	Taco 3/4" 2 Way Geothermal Zone Valve
40-557G	Taco 1" 2 Way Geothermal Zone Valve

Replacement Filters

60-20x24E
60-22x30E

Electrostatic Filter



- Washable
- Re-Useable
- 1" thick
- Designed for heat pump air flows
- Life time warranty

60-20x24E	Electrostatic Filter 20"x24"
60-22x30E	Electrostatic Filter 22"x30"

Loop Fluid Items

60-ETHBRL

Glycol, Non Toxic Propylene In Floor Only (45 Gal)



- In Floor Antifreeze

60-ETHBRL	Ethanol/163 kgs (45 gallon) barrel
60-METHBRL	Methanol/163 kgs (45 gallon) barrel
60-8039G	Glycol, non toxic Propylene/per gallon (infloor only)
60-8039B	Glycol, non toxic Propylene/220 kgs barrel (infloor only)

60-LC4

Loop Start-Up Conditioner (4 oz)



- Helps condition and eliminate small leaks or drips in connections.

60-LC4	Loop Conditioner 4oz.
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Noise/Vibration Reduction

60-BASEPAD



Silent Base Pad 28" x 28"

- 5/8" rubber
- Made from recycled materials

60-BASEPAD	Silent Base Pad 28"x28"
60-BASEPAD2	Silent Base Pad 28"x40"

Hose & Fittings

45-075SWIV



3/4" MPT x 1" Swivel Nut (Brass)

45-075SWIV	3/4" MPT x 1" Swivel Nut (Brass)
45-100SWIV	1" MPT x 1" Swivel Nut (Brass)

45-125500



Geothermal Hose

- Rated to 160 psi
- Available in 600, 800, 1000 ft

45-125500	1-1/4" SDR 11 Loop Pipe (600, 800, 1000 ft)
45-75SDR11	3/4" SDR 11 Loop Pipe (600, 800, 1000ft)

50-TRV1000



Clear Braided Hose

- 100ft ID clear braided hose

50-TRV1000	1" ID PVC Clear Braided Hose
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Hose Cross
Section



Hose and Fittings

45-1BRIMA



1" Brass Barb x 1" MPT (left)

- Also available in Nylon (right)

45-1BRIMA	1" Brass Barb x 1" MPT
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Flow Meters

20-LDF359N



Vertical In-line Flowmeter

- 3/4" FIP ports
- 2-16 GPM and LPM calibrations

20-LDF359N	Vertical In-line Flowmeter 3/4" FIP Ports
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20-F301001P



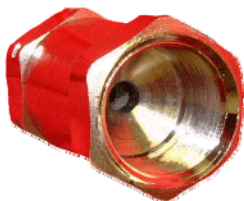
Horizontal Flowmeter

- For 1" schedule 40 or 80 pipe. 5-40 GPM or 20 to 150 LPM calibrations
- Other models available for 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6" and 8" pipe OR copper tubing.

20-F301001P	Horizontal Flowmeter for 1" Pipe (quick install)
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Fittings and Miscellaneous Items

20-GC10



Flow Restrictor

- 3/4" FIP for 5 - 10 GPM
- 1" FIP for 12 - 15 GPM

20-GC5	Flow Restrictor 3/4" FIP 5GPM
20-GC10	Flow Restrictor 3/4" FIP 10GPM
20-GC12	Flow Restrictor 1" FIP 12GPM
20-GC15	Flow Restrictor 1" FIP 15GPM

20-SDF100



Spin Down Sediment Filter

- With PVC flush valve for easy maintenance
- 100 Mesh poly screen spin down filter body with clear bowl.
- Suited for higher flow rates and ease of maintenance.

20-SDF100	1" PVC Spin Down Sed. Filter-100 Mesh & Valve
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60-214903



Socket Fusion Tool Kit

- With depth gauge and cold ring tools for 3/4" and 1 1/4" pipe.
- Includes heater sling bag. 120volt.
- Other pipe sizes available.

60-214903	Socket Fusion Tool Kit
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60-PGA



PT Adapter

- Adaptor for PT port complete with Pressure Gauge (not shown)

60-PGA	Adapter for PT Port with Pressure Gauge
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60-T220



Digital Pocket Thermometer

- Digital Diagnostic Thermometer
- Digital Display

60-T220	Digital Pocket Thermometer
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**Xterra Series Heat Pumps
Residential and Commercial Warranty Schedule**

Residential Applications Only:

All Parts-1 Year and Labor

On Year 1, NHP will replace defective parts, F.O.B Winkler MB, prepaid freight only. Defective parts include only parts that fail due to defective material or workmanship and not improper installation. NHP will cover the cost of the labor to replace the defective part according to, and not exceeding, NHP Labor Allowance Schedule

All Parts-2 Years

Years 1 and 2, Northern Heat Pump Inc. (NHP) will replace defective parts, F.O.B Winkler, MB, prepaid freight only. Defective parts include only parts that fail due to defective material or workmanship and not improper installation.

Refrigeration Components-5 Years (Optional 10 years)

On years 3 through 5, NHP will replace defective refrigerant components including compressor, expansion valve, evaporator, condenser and reversing valve F.O.B Winkler, MB, prepaid freight only, that fail due to defective material or workmanship and not from improper servicing, misapplication, or neglect.

Stainless Steel Cabinet-Lifetime

NHP will warranty all stainless steel cabinet panels, due to defective material, for the lifetime of the unit.

Commercial Applications Only:

All Parts 1 Year and Labor

On Year 1, Northern Heat Pump will replace defective parts, F.O.B Winkler MB, prepaid freight only. Defective parts include only parts that fail due to defective material or workmanship and not improper installation. NHP will cover the cost of the labor to replace the defective part according to, and not exceeding, NHP Labor Allowance Schedule

Refrigeration Components-3 Years

On years 2 through 3, NHP will replace defective refrigerant components including compressor, expansion valve, evaporator, condenser and reversing valve, F.O.B Winkler, MB, prepaid freight only, that fail due to defective material or workmanship and not from improper servicing, misapplication, or neglect.

Exceptions To Warranty

This Warranty does not apply to:

1. Any portion of the system not supplied by Northern Heat Pump.
2. Scratches, dents or discoloration, on or in surfaces of products or units.
3. Air filters, fuses, refrigerant and oil.
4. Products or components that have had I.D. nametags or faceplates altered, removed or defaced.
5. Products that have defects or are damaged due to a harsh environment, including corrosive liquid or air supply or operation at abnormal temperatures.
6. Products or units damaged during shipment.
7. Products or units damaged from: improper service, installation, wiring, electrical, inadequate air flows, fire, floods, misapplication, modification, acts of God, rupture or breakage of the water condenser coil or tubing if subject to freezing applications without proper protection.
8. Products or components that are field altered from original factory design.
9. Products that are disconnected or moved from original installation.
10. Any products that have not been paid for, in full, to the authorized NHP dealer or contractor.

How To Obtain Warranty

If you have a problem with your unit or system or if you may have a warranty issue, please promptly notify your dealer within thirty (30) days of the issue. If it is determined that the Northern Heat Pump unit or component is the result of the problem, defective parts should be returned to the Northern Heat Pump factory, prepaid at your expense. All warranty claims and questions are to be directed to: Northern Heat Pump Warranty, Unit#3 201 South Railway Ave., Winkler, MB, Canada, R6W 1J9. Northern Heat Pump is not responsible for any delay in shipment of components and will make every effort to process claims as quickly as possible.

Limitations to Warranty

Warranty begins on the date of shipment of unit or return of product warranty registration card to Northern Heat Pump. All service must be performed by an authorized Northern Heat Pump service person. Northern Heat Pump will not be liable for consequential or incidental expenses, damages or losses with regards to any product or service. This warranty is given in lieu of all other express warranties, whether written or oral, and does not extend beyond the warranty duration set forth above.