

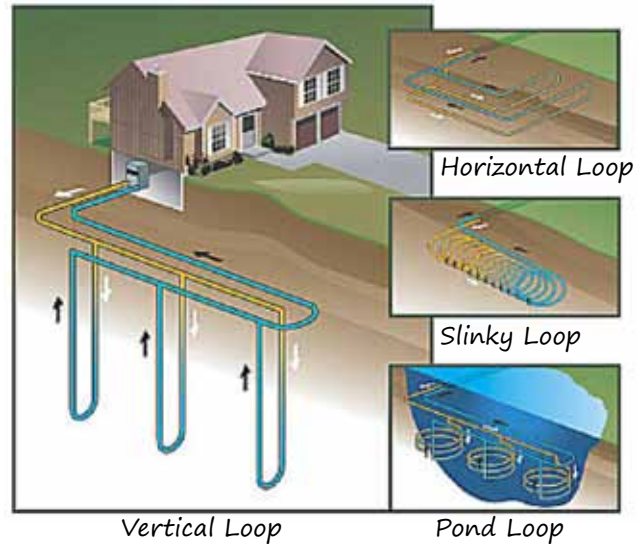
GEO THERMAL SUPPLIES

HDPE Geothermal Pipe

Heat + Pressure... Don't risk it, go with a strong pipe rating:
PIPE TYPE: PE 4710



Types of Geothermal Loops




5 REASONS TO USE ENDOPOLY GEOTHERMAL PIPE

- ENDOPOLY** is produced using Premium **PE 4710 Polyethylene resin** that exceeds the requirements of IGSHA (International Ground Source Heat Pump Association).
- ENDOPOLY** is produced from **Virgin High Density Polyethylene Resin** with a cell classification of 445574.
- ENDOPOLY** is backed by a **Lifetime Warranty** (50 years for commercial), which is backed by one of the largest and oldest PE extruders in the nation.
- ENDOPOLY** pipe quality is continuously monitored and third party **Certified by NSF**, the National Sanitation Foundation.
- ENDOPOLY** is available in standard coils and custom lengths with or without U-bends to meet your needs.

U-Bend Loops PE 4710

3/4"	1-1/4"	3.104"	3.272"	3.815"
10885 410'	11107 260'			
	12528 390'			
	10926 510'			
1"	10653 610'			
10625 410'	11606 650'			
10626 510'	10652 710'			
11120 560'	11104 760'			
10621 610'	10623 810'			
10627 710'	10654 910'			
10655 810'	10829 1010'			
	10983 1210'			



Loops are total length down & back

Straight Pipe PE 4710

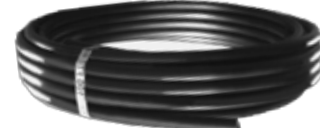
20' GEO STRAIGHT PIPE	
10664	10 3/4"
10624	1 1"
10616	10 1-1/4"
10617	10 1-1/2"
10660	10 2"
10661	1 3"




Endot Industries, Inc.

Coil Pipe PE 4710

10787	300'	10669	200'
10901	500'	10667	300'
10950	600'		
10666	800'		
		10642	300'
11489	200'	10682	200'
10615	300'	10677	300'
10836	600'		



WARNING! This fusing chart is for PE 4710 only! Any lower grades will most likely cause the pipe to melt.

PIPE TYPE: PE 4710
fusion time at 500°F

IPS SIZE	BUTT FUSION		SOCKET FUSION	
	HEATING TIME	HOLDING TIME	HEATING TIME	HOLDING TIME
1/2"	8-10 Sec	50 Sec	9-10 Sec	30 Sec
3/4"	14-16 Sec	50 Sec	12-14 Sec	30 Sec
1"	16-19 Sec	50 Sec	15-17 Sec	40 Sec
1-1/4"	18-21 Sec	70 Sec	17-20 Sec	40 Sec
1-1/2"	24-30 Sec	90 Sec	20-23 Sec	40 Sec
2"	30-34 Sec	90 Sec	24-27 Sec	40 Sec

SPECIFICATIONS

ASTM D3350	Cell Classification	445574 C
ASTM D1505	Density	0.959 g/cc
ASTM D1238	Melt Index	>0.08 g/10 min
ASTM D638	Tensile Strength	>3600 PSI
ASTM D2837	Hydrostatic Design Basis	1600 PSI @ 23°C 1000 PSI @ 60°C
ASTM D790	Flexural Modulus	150,000 PSI
ASTM D746	Brittleness Temp	<-103°F
ASTM F1473	PENT	>4,000 hours

Exceeds IGSHA minimum standards!

SDR 11-200PSI SIZE	O.D.	MIN WALL	WT/ 100 FT.
3/4"	1.050"	0.095"	12.9 Lbs
1"	1.315"	0.120"	19.9 Lbs
1-1/4"	1.660"	0.151"	31.4 Lbs.
1-1/2"	1.900"	0.173"	41.1 Lbs.
2"	2.375"	0.216"	63.9 Lbs.
3"	3.500"	0.318"	140.5 Lbs.
4"	4.500"	0.409"	229.0 Lbs.

Elkridge, MD
P: (410) 796-7700
T: (800) 796-7700

Fredericksburg, VA
P: (540) 371-0686
T: (866) 645-2982

Frederick, MD
P: (240) 529-0841
T: (855) 529-0841

Purcellville, VA
P: (540) 751-9924
T: (888) 426-7663

Westminster, MD
P: (443) 592-9200
T: (855) 708-3091



REDUCING TEES

- 8532 1 X 1 X 3/4"
- 6383 1-1/4 X 3/4 X 3/4"
- 6504 1-1/4 X 1 X 1"
- 259 1-1/4 X 1-1/4 X 3/4"
- 2784 1-1/4 X 1-1/4 X 1"
- 10919 1-1/2 X 1 X 1"
- 10599 1-1/2 X 1-1/4 X 1"
- 10611 1-1/2 X 1-1/4 X 1-1/4"
- 12472 1-1/2 X 1-1/2 X 3/4"
- 10600 1-1/2 X 1-1/2 X 1"
- 10614 1-1/2 X 1-1/2 X 1-1/4"
- 6730 2 X 1-1/4 X 3/4"
- 10460 2 X 1-1/4 X 1-1/4"
- 10637 2 X 1-1/2 x 1"
- 10559 2 X 1-1/2 X 1-1/4"
- 6738 2 X 2 X 3/4"
- 9874 2 X 2 x 1"
- 10200 2 X 2 X 1-1/4"

ELBOWS

- 5684 3/4"
- 4010 1"
- 2435 1-1/4"
- 6282 1-1/2"
- 3412 2"
- 13502 3"
- 10659 3" Butt Fusion



45 DEGREE ELBOWS

- 11038 1-1/4"
- 11418 2"
- 10978 3" Butt Fusion

REDUCING ELBOWS

- 8124 1-1/4 X 1"
- 3506 1-1/4 X 3/4"
- 13859 3 X 1-1/4" Butt Fusion



STREET ELBOWS

- 3513 3/4"
- 10714 1"
- 10713 1-1/4"



All items are Socket Fusion, unless otherwise noted.



COUPLINGS

- 5985 3/4"
- 4001 1"
- 2020 1-1/4"
- 1912 1-1/2"
- 764 2"
- 13503 3"



TEES

- 5690 3/4"
- 2513 1"
- 2453 1-1/4"
- 260 1-1/2"
- 9683 2"



REDUCING COUPLINGS

- 4914 1 x 3/4"
- 5677 1-1/4 x 3/4"
- 2465 1-1/4 x 1"
- 9801 1-1/2 x 1"
- 9802 1-1/2 x 1-1/4"
- 9803 2 x 1"
- 776 2 x 1-1/4"
- 9684 2 x 1-1/2"
- 10329 3 x 2" Butt Fusion



SLIM LINE

Ideal for indoor applications where pipe insulation is being used

COUPLING

- 10705 1-1/4"
- 10706 2"



ELBOW

- 10707 1-1/4"
- 10708 2"



End x End x Branch



FLANGE ADAPTER

- 10330 2" Butt Fusion
- 10890 3" Butt Fusion



BACKUP RING FOR FLANGE ADAPTER

- 10331 2"
- 10889 3"



SOCKET X BUTT REDUCING TEE

- 11464 3 x 2 x 1-1/4"
- 10828 3 x 3 x 1-1/4"



SERVICE SADDLE

- 13921 1-1/2 x 1-1/4" Butt Fusion
- 13922 2 x 1-1/4"
- 11856 3 x 1-1/4"
- 13923 4 x 1-1/4"



UBEND

- 449 3/4"
- 10752 1"
- 10699 1-1/4"



- 11343 1 3/4"
- 10543 25 1"
- 10544 25 1-1/4"
- 10662 25 1-1/4 x 1"
- 11197 10 1-1/2"
- 10691 15 2"

GEO SXM BRASS MALE TRANSITION ADAPTER



GEO SXM STEEL MALE TRANSITION ADAPTER

- 13574 3"



SPECIALTY FITTINGS

HEAT PUMP CONNECTION ASSEMBLY

- 11775 1-1/4 x 1 x 1/2" SXM XF
- 13075 1-1/4 x 1-1/4 x 1/2" SXM XF



FUSION BALL VALVE

- 11680 1" SPEV-55C



HEAT PUMP TEE

- 11677 1 x 1 x 1/2" SXM XF



MALE X INSERT ADAPTER (1/4" TAPPED)

13302 10 1" BMA-100T



Lead Free




Example




INSERT X MALE HYDRANT ELBOW (1/4" TAPPED)


12298 10 1"
12297 10 1 x 3/4"



Lead Free



Example



BRASS BALL VALVES

13294 10 1/2"
13295 8 3/4"
13296 6 1"
13297 6 1-1/4"
13298 2 2"



Lead Free



13468 10 3/4" SWEAT BALL & WASTE
13470 10 3/4" THD BALL & WASTE
13469 6 1" THD BALL & WASTE

MALE X INSERT ADAPTER

2814 25 3/4" MAB3
2824 20 1" MAB4
2833 20 1-1/4" MAB5



Lead Free



DIGITAL THERMOMETER

10967 1 1/8"



Example




PRO-BALANCE XL MANIFOLD

11853 WITH 4 STATIONS



FEMALE X INSERT ADAPTER

2859 20 1" FAB4
2865 20 1-1/4" FAB5




Lead Free





MALE P/T PLUG

10831 35 1/4"
11661 10 1/2"



Example

Not for use in potable water applications

EVERLOC COUPLING

12347 1-1/4"




M X SWIVEL CONNECTOR

11835 10 1" Brass

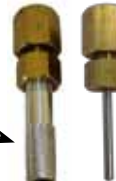



PRESSURE GAUGE PROBE

10697 5 1/4x1/8" FEMALE



Includes protective cover



Not for use in potable water applications

1" 200 PSI HOSE

11019 1 Per Foot



Make your own hose kit:

HOSE KIT

- 12298 1" Ins x M Elbow (tapped) x 2
- 10831 1/4" Male P/T Plug x 2
- 2824 1" M x Ins Adapter x 2
- 2060 1 x 3/4" Hygear Clamp x 4
- 11019 1" 200PSI Hose

Temp & Pressure Gauge

11876 100 2 in 1

2 1/2" Tridicator

- Pressure Range 0-75PSI
- Temperature Range 30-250°F
- 1/4" Center Back Mount





LIQUID FILLED GAUGES



9318 50 PGS-100-G

Stainless Steel Case
100 PSI



1/4" Stainless Steel

PG25CBM-100-GNL

12809 50 BACKMOUNT

Stainless Steel Case
100 PSI



1/4" Brass

PGS25CBM-100-G

11152 50 BACKMOUNT

Stainless Steel Case
100 PSI



1/4" Stainless Steel

6' TUBOLIT SPLIT PIPE INSULATION

1/2" WALL

11806	50	5/8"
11807	40	7/8"
8492	25	1-3/8"
8619	20	1-5/8"
9528	14	2-1/8"
11117	12	2-3/8"
10992	10	2-5/8"
10993	8	3-1/8"
11808	6	3-5/8"



6' ARMAFLEX SOLID PIPE INSULATION

3/8" WALL

11883	20	1-5/8"
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1/2" WALL

12775	15	1-5/8"
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3/4" WALL

11797	10	1-7/8"
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6' ARMAFLEX SPLIT PIPE INSULATION

1/2" WALL

13816	15	1-5/8"
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PIPE INSULATION		
Pipe Covering Size	CTS	IPS
3/8"	1/4"	-
5/8"	1/2"	3/8"
7/8"	3/4"	1/2"
1-3/8"	1-1/4"	1"
1-5/8"	1-1/2"	1-1/4"
2-1/8"	2"	-
2-3/8"	-	2"
2-5/8"	2-1/2"	-
3-1/8"	3"	-
3-5/8"	3-1/2"	3"

FLUSH CART

11023 2 HP GT-304SS-2



1 1/4" Full Port Ball Valves with 1 1/4" Hoses

Anti-freeze Flush Drain

2 HP Motor 115 V

Pump 90 gpm @ 62 FT Head



CAUTION DETECTION TAPE

11776	10	2" X 1000'
10892	6	3" x 1000'
11918	4	6" X 1000'



YELLOW CAUTION TAPE

12930 27 3" X 300'



HOSE CLAMPS (All Stainless Steel)

2047	10	6816 11/16 to 1 1/2"
2060	10	6820 3/4 to 1 3/4"
266	10	6824 1 to 2"



PIPE ROLLER

11656 WPR-B



FLOW REGULATING DOLE VALVES

3/4" F x F

5246	1GPM
11454	2GPM
8884	5GPM
1085	6GPM
250	8GPM

1" F x F

253	3GPM
255	4GPM
262	5GPM
1448	6GPM
1866	7GPM
2823	8GPM
273	10GPM
243	12GPM
1874	15GPM



SLIP X FEMALE ADAPTERS STAINLESS STEEL REINFORCED

SCH 40

610	25	3/4"
3213	25	1"
2384	10	1-1/4"
2388	10	1-1/2"
2411	10	2"

SCH 80

13435	25	3/4"
5268	25	1"
8810	10	1-1/4"
6773	10	1-1/2"
9484	10	2"



PVC BALL VALVES

SLIP

1344	50	3/4"
1360	50	1"
898	25	1-1/4"
4512	48	1-1/2"
5262	24	2"



THREADED

2404	20	1/2"
1335	20	3/4"
1351	5	1"



PIPE WRAP TAPE

12855 48 2" x 60'

7 Mil.

1065 24 2" x 100'

10 Mil. | Sleeve = 6



INSULATION TAPE

15050 2" x 30' 3 mm



RATCHETING PIPE CUTTER

9982 METAL RATCHETING PVC PIPE CUTTER



Cut up to 1-1/4" pipe

REPLACEMENT BLADES

9984	OLD STYLE
14841	NEW STYLE



RECHARGABLE PLASTIC PIPE CUTTER

13163 1/2-1-1/4"



13243 REPLACEMENT BLADE

2" RATCHETING PIPE CUTTER

11319 Up to 2"



Cut up to 2" pipe!



Non-Pressurized Flow Centers



QT FLOW CENTERS

- 10897** 1 PUMP 1-230QFC-G (26-99F)
- 10898** 2 PUMPS 2-230QFC-G (26-99F)



GT FLOW CENTER

- 14085** 2 PUMPS 2-230PFC-SS



- Non-Pressurized Flow Center** Eliminates callback
- Removable Lid** Fast installation, easy to fill, check flow rates and add antifreeze
- Air Separation Chamber** Continually performs purging function
- Foam Insulation** Eliminates unsightly condensation
- Solid, Durable Construction** Long Life
- Check Valve** Pump protection
- Hanging Handles** Ease of handling and installation

QT-EA FLOW CENTERS

- 13088** 2 PUMPS (1 PUMP PER CIRCUIT)

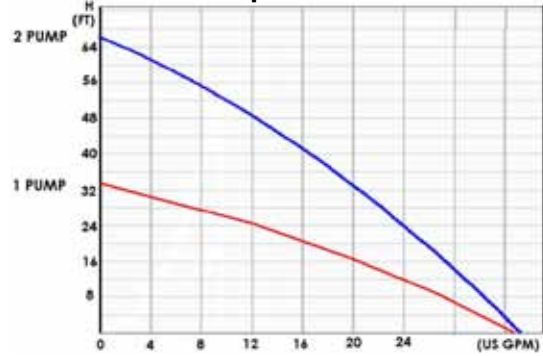
DESIGNED FOR 6 TO 10 TON SPLIT COILS OR TOTAL 28 GPM WITH 2 PUMPS ON EACH CIRCUIT FOR ONE COMMON LOOP FIELD.

- 11086** WITH GRUNDFOS (26-99F) 4 PUMPS (2 PUMPS PER CIRCUIT)

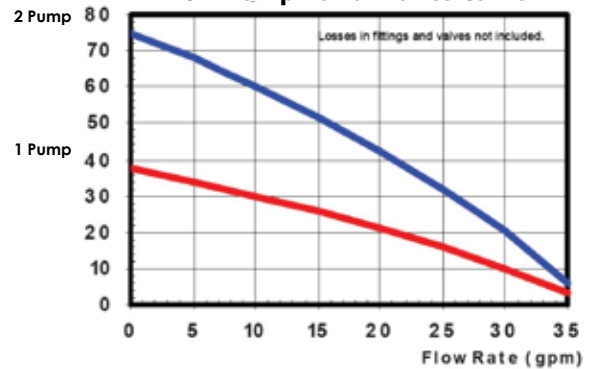
- 11110** WITH GRUNDFOS (26-116F) 4 PUMPS (2 PUMPS PER CIRCUIT)



99F Pump Performance Curve



116F Pump Performance Curve



Pressurized Flow Centers



Flush valves
To direct flow, the two brass valves rotate to four positions.

PRESSURIZED FLOW CENTER

- 11079** 2 PUMP

MOUNTS ON WALL



LIQUID SOLUTIONS

- Methanol
- Exoendosol
- Propylene
- Glycol



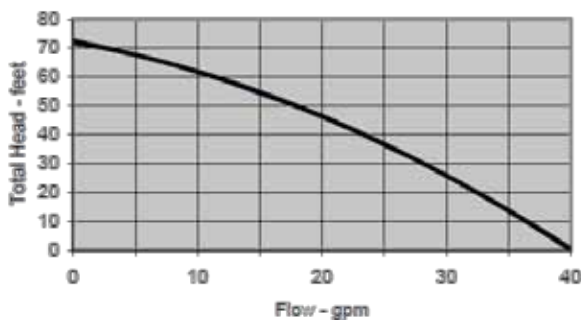
PRESSURIZED Failsafe Unit

- 11264**

1-1/4" Connections

STABILIZE LOOP PRESSURES AND PROTECT LOOP FAILURE

Bleed out air while keeping system pressure



GRUNDFOS CIRCULATION PUMPS

- 11090** G-2-2699 26-99F
- 10965** G-2-116F 26-116



TEMP CRAYON

- 10049 500 DEG
- 10050 525 DEG



BDFB-1 FUSION HEATER MUFF BAG

11039



COLD RINGS

- 10058 3/4"
- 9710 1"
- 9822 1-1/4"
- 7824 1-1/2"
- 7827 2"



DEPTH GAUGE / CHAMFER TOOL

- 10057 3/4"
- 9703 1"
- 9821 1-1/4"
- 7823 1-1/2"
- 7826 2"



Ritmo Socket Fusion Tool

RITMO FUSION TOOL

10565



- On when heating up, flashing during temperature adjustment
- On when connected to power
- End of heating phase, temperature adjustment starts
- Incorrect temperature alarm



SOCKET FUSION FACES

- 11265 3/4"
- 11275 1"
- 11266 1-1/4"
- 11276 1-1/2"
- 11277 2"

Also works with integrity kit



1 Long Bolt!

11449 DIGITAL TIMER



Connectra Socket Fusion Faces

SOCKET FUSION FACES

- 8819 1"
- 7825 2"



2 Short Bolts!

Geothermal Financial Incentives

FEDERAL RESIDENTIAL RENEWABLE ENERGY TAX CREDIT

Eligible: Solar-Electric, Solar Water-Heating, Fuel Cell, Small Wind-Energy, Geothermal Heat Pumps.

Applicable sectors: Personal Tax Credit

Amount: 30% for systems placed in service by 12/31/19
26% for systems placed in service between 1/1/20 and 12/31/20.
22% for systems placed in service between 1/1/21 and 12/31/21.



MD SALES & USE TAX EXEMPTION FOR RENEWABLE ENERGY

Applicable Sectors: Commercial, Industrial, Residential, Agricultural
Eligible: Solar Water Heat, Solar Space Heat, Solar Photovoltaics, Wind (Small), Geothermal Heat Pumps

Rebate Amount: 100% exemption

