

SPIREX™

PATENTED DESIGN & TECHNOLOGY

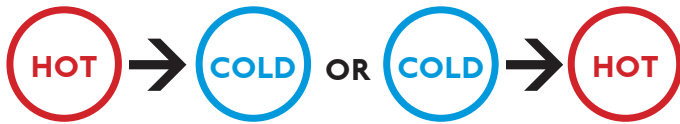
saving energy • heating or cooling • temperature transfer

GP1000 SERIES

GENERAL PURPOSE

www.vaportec.co.nz

gp@vaportec.co.nz



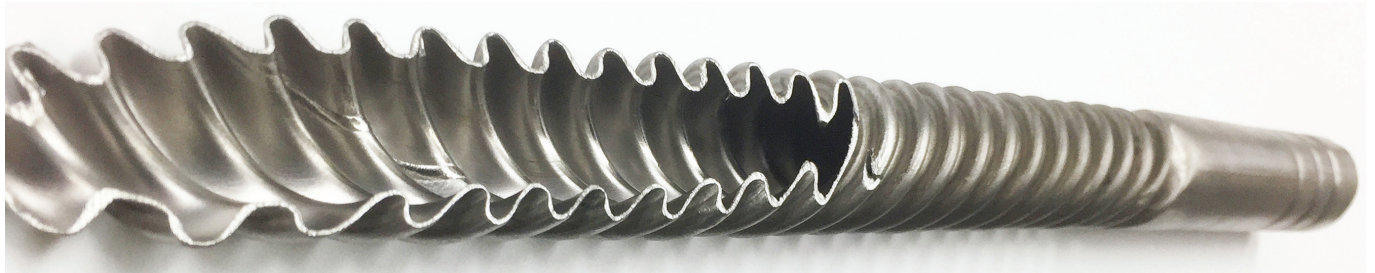
SPIREX thermal transfer tubes make saving energy easy.

The **GP1000 Series** can heat or cool as your purpose requires.

This is generally a multi-purpose tube in tube straight **SPIREX** heat exchanger that can be used for a multitude of applications. **SPIREX** provides the thermal transfer solution for your home, business or industry.

SPIREX - helically corrugated thermal transfer tube.

Available standard in copper, stainless steel, and titanium.



Double wall (vented) shown below - a copper tube formed onto a titanium tube creating a double wall protection.



The GP SERIES applications of the **SPIREX** tube offers new and effective alternatives in:

- Pneumatic to Liquid
- Liquid to Liquid
- Refrigerant to Liquid
- Hydraulic Oil to Water
- Marine Engine Oil to Seawater
- Seawater to Seawater
- Freshwater to Freshwater
- Geothermal Liquid to Water
- Seawater to Freshwater
- Solar Heated Liquid to Potable Water
- Solar Heated Liquid to Swimming Pool Water

Sectors that can benefit from **SPIREX**:

dairy industry • swimming pools & spas • salt water • aquariums • gymnasium • hotel • schools
• solar (hot water) • hydroponics • chemical processing • aquaculture • wine & juice making
• beer brewing • processing (food) • hazardous waste • hydraulics • pneumatics (air/gas)



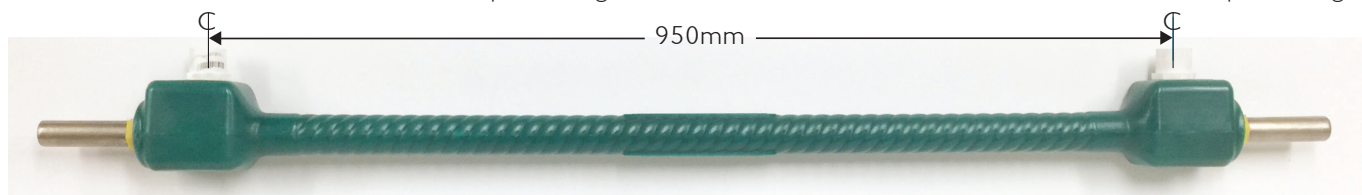
A

Inner tube (Primary)

Grade I Titanium or 316 Stainless Steel
Temperature range up to 120°C at 200Psi
Chemical resistant • Cleanable • Compact and light

Shell outer (Secondary)

Nylon II
Temperature range up to 110°C at 200Psi
Chemical resistant • Cleanable • Compact and light



B

Inner tube (Primary)

Grade I Titanium or 316 Stainless Steel
Temperature range up to 98°C at 150Psi
Chemical resistant • Cleanable • Compact and light

Shell outer (Secondary)

Polyethylene
Temperature range up to 30°C at 50Psi
Chemical resistant • Cleanable • Compact and light



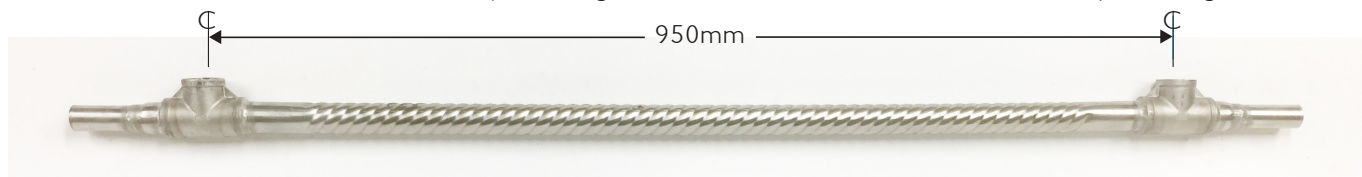
C

Inner tube (Primary)

316 Stainless Steel
Temperature range up to 350°C at 900Psi
Chemical resistant • Cleanable • Compact and light

Shell outer (Secondary)

316 Stainless Steel
Temperature range up to 350°C at 250Psi
Chemical resistant • Compact and light



D

Inner tube (Primary)

Grade I Titanium or 316 Stainless Steel
Temperature range up to 120°C at 250Psi
Chemical resistant • Cleanable • Compact and light

Shell outer (Secondary)

316 Stainless Steel (dismantles for cleaning)
Temperature range up to 150°C at 200Psi
Chemical resistant • Cleanable • Compact and light



E

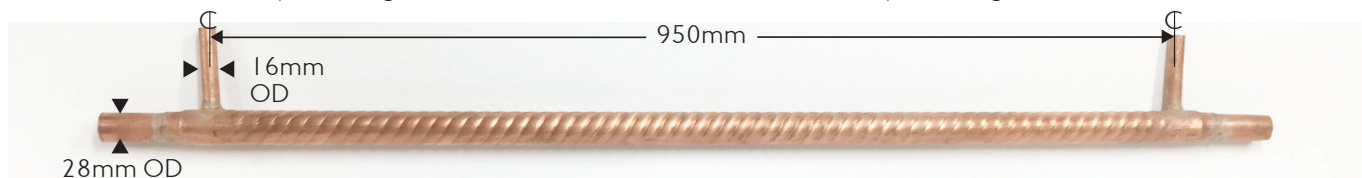
Inner tube (Primary)

Copper
Temperature range up to 320°C at 900Psi
Cleanable • Compact and light

(Non vented)

Shell outer (Secondary)

Copper
Temperature range up to 320°C at 900Psi
Compact and light



F

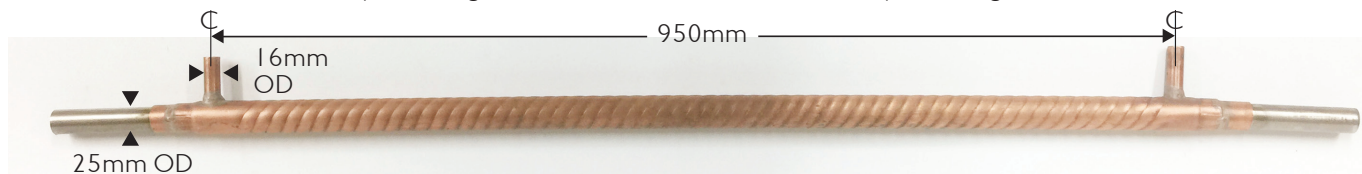
Inner tube (Primary)

Grade I Titanium or 316 Stainless Steel or Copper
Temperature range up to 120°C at 900Psi
Chemical resistant • Compact and light

Double wall
(vented)

Shell outer (Secondary)

Copper
Temperature range up to 320°C at 900Psi
Compact and light



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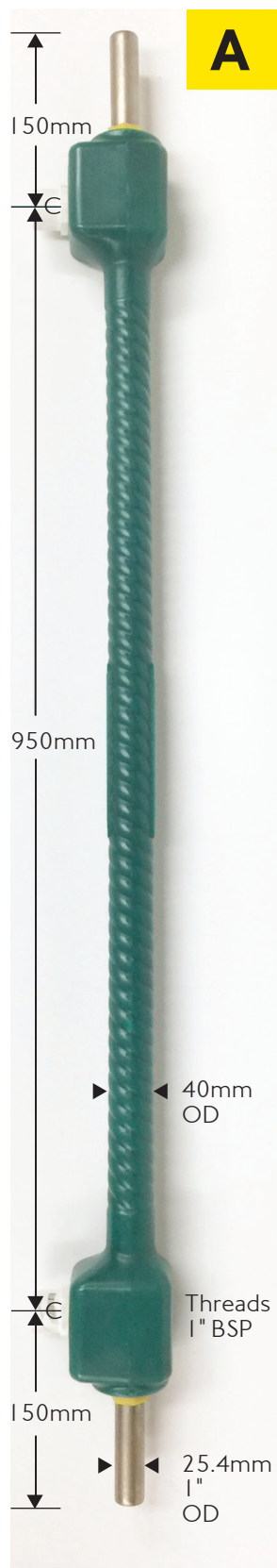
GPI000 SERIES

A

GENERAL PURPOSE

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Inner tube (Primary)

Grade 1 Titanium or 316 Stainless Steel
Temperature range up to 120°C at 200Psi
Chemical resistant inner tube
Cleanable
Compact and light

Shell outer (Secondary)

Nylon II (dismantles for cleaning)
Temperature range up to 110°C at 200Psi
Chemical resistant shell
Cleanable
Compact and light

Some usage examples:

- aquaculture
- beer brewing
- wine & juice making
- swimming pools & spas
- processing (food)
- hydroponics
- dairy industry
- salt water
- solar hot water
- hydraulics
- pneumatics (air/gas)

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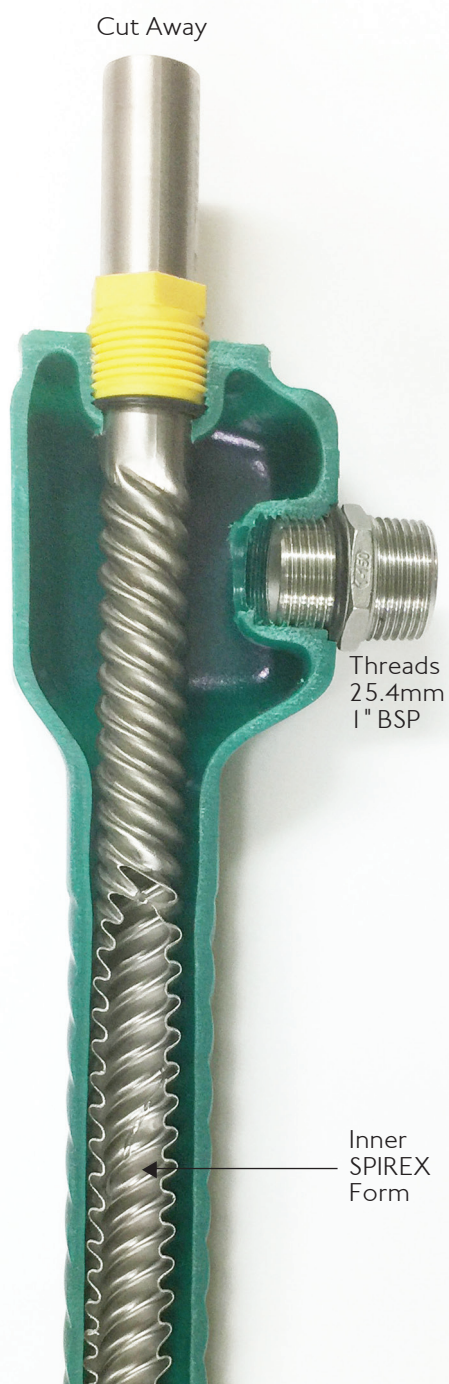
GPI000 SERIES

B

GENERAL PURPOSE

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Inner tube (Primary)

Grade 1 Titanium or 316 Stainless Steel
Temperature range up to 98°C at 150Psi
Chemical resistant inner tube
Cleanable
Compact and light

Shell outer (Secondary)

Polyethylene (dismantles for cleaning)
Temperature range up to 30°C at 50Psi
Chemical resistant shell
Cleanable
Compact and light

Some usage examples:

- aquaculture
- beer brewing
- wine & juice making
- swimming pools & spas
- processing (food)
- hydroponics
- dairy industry
- salt water
- solar hot water
- hydraulics
- pneumatics (air/gas)

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GP1000 SERIES

C

GENERAL PURPOSE

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Inner tube (Primary)

316 Stainless Steel

Temperature range up to 350°C at 900Psi

Chemical resistant inner tube
(check chemical compatibility)

Cleanable

Compact and light

Shell outer (Secondary)

316 Stainless Steel

Temperature range up to 350°C at 900Psi

Chemical resistant shell
(check chemical compatibility)

Compact and light

Some usage examples:

- aquaculture
- beer brewing
- wine & juice making
- processing (food)
- hydroponics
- dairy industry
- solar hot water
- hydraulics
- pneumatics (air/gas)
- oils
- glycols
- saturated steam

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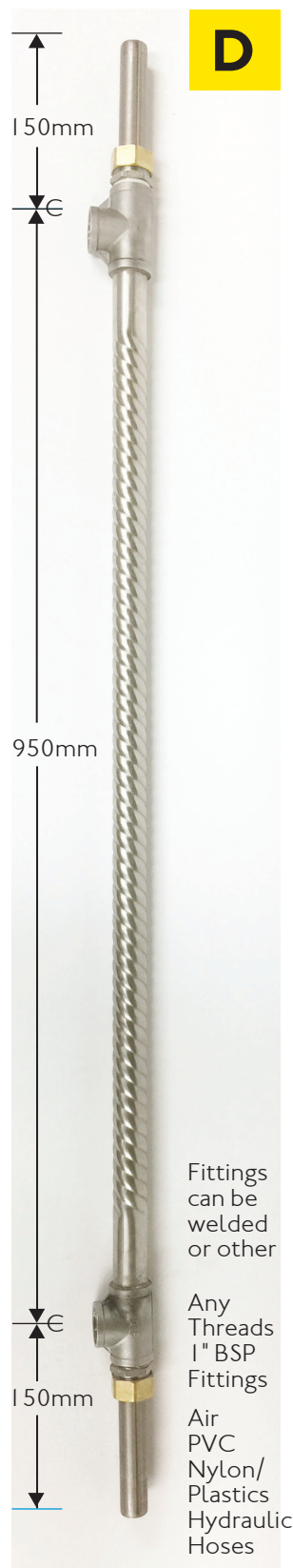
GP1000 SERIES

D

GENERAL PURPOSE

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Inner tube (Primary)

316 Stainless Steel or Grade 1 Titanium
Temperature range up to 120°C at 250Psi
Chemical resistant inner tube
Cleanable
Compact and light

Shell outer (Secondary)

316 Stainless Steel (dismantles for cleaning)
Temperature range up to 150°C at 200Psi
Chemical resistant shell
Cleanable
Compact and light

Some usage examples:

- aquaculture
- beer brewing
- wine & juice making
- swimming pools & spas
- processing (food)
- hydroponics
- dairy industry
- salt water
- solar hot water
- hydraulics
- pneumatics (air/gas)
- oils
- glycols

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GP1000 SERIES

E

GENERAL PURPOSE

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Inner tube (Primary)

Copper

Temperature range up to 320°C at 900Psi

Cleanable

Compact and light

(Non vented)

Shell outer (Secondary)

Copper

Temperature range up to 320°C at 900Psi

Compact and light

Some usage examples:

- refrigeration use
- beer brewing
- wine & juice making
- hydroponics
- dairy industry
- heat/cool fresh water
- solar hot water
- hydraulics
- pneumatics (air/gas)
- oils
- glycols
- evaporators
- condensers

Nominal Performances

7.5kW@2.2°C Diff@50L/m

4.7kW@1.7°C Diff@40L/m

Note 1: Condenser applications where rejected heat goes to waste, insulation is not required and increased heat rejection is achieved from the outer shell depending upon ambient temperature.

Note 2: Specifications are subject to change without notice due to the manufacturers ongoing research and development programme.

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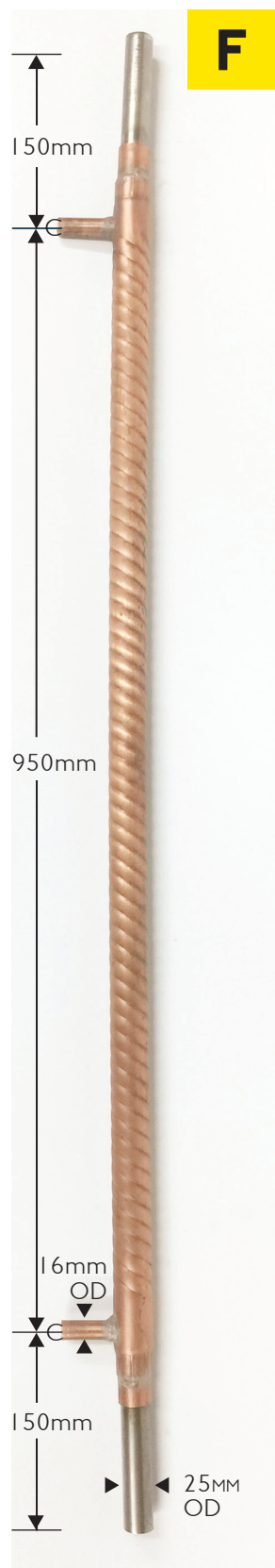
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GP1000 SERIES

F

GENERAL PURPOSE

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Note 1: Condenser applications where rejected heat goes to waste, insulation is not required and increased heat rejection is achieved from the outer shell depending upon ambient temperature.

Note 2: Specifications are subject to change without notice due to the manufacturers ongoing research and development programme.

Inner tube (Primary)

Copper or Titanium or Stainless Steel 316
Temperature range up to 120°C at 900Psi
Chemical resistant Titanium
Compact and light
Cleanable

Double wall (vented)

Shell outer (Secondary)

Copper
Temperature range up to 320°C at 900Psi
Compact and light

Some usage examples:

- aquaculture
- beer brewing
- wine & juice making
- swimming pools & spas
- processing (food)
- hydroponics
- dairy industry
- salt water
- solar hot water
- hydraulics
- pneumatics (air/gas)
- oils
- glycols
- refrigeration
- evaporators
- condensers

Nominal Performances

5.0kW@1.2°C Diff@60L/m

2.5kW@1.1°C Diff@33.3L/m



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A B C D

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Example Tests with Fresh Water H²O

Inner Tube Water (Primary)					Outer Tube Water (Secondary)				
LPM	IN°C	OUT°C	DIFF°C	kW	LPM	IN°C	OUT°C	DIFF°C	kW
4	34°C	20°C	14°C	3.90kW	4	8°C	19°C	11°C	3.06kW
10	35°C	24°C	11°C	7.66kW	10	8°C	17°C	9°C	6.90kW
20	40°C	35°C	5°C	6.97kW	4	8°C	27°C	19°C	5.29kW
30	47°C	42.5°C	5°C	10.45kW	10	9°C	25°C	16°C	11.50kW
60	47°C	43°C	4°C	16.70kW	10	9°C	26°C	17°C	11.80kW

Note 1: Heat exchanges should be mounted vertically or slightly angled up with inlet and outlet fittings upwards to prevent airlocking. If possible, counter flow with primary flowing up (flooding), secondary low flow is recommended the same way to stop airlock for best performance.

Note 2: Results show higher flows provide improved performance.