

Base Ending:

Compressed cartridge heaters, base ending Ref. "T1"

The cartridge is fully compressed, with a heat-resistant ceramic paste which seals the entry.

The remaining cartridges are made from this base.

Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"	1"
Diameter nominal	0.375"	0.500"	0.625"	0.750"	1.000"
H7 minimum	0.373	0.497	0.621	0.746	0.994
B (inches)	0.276 +1%L	0.394 +1%L	0.591 +1%L	0.591 +1%L	0.787 +1%L
L (inches)	minimum	2.953	3.937	7.874	
	maximum	47.244	59.055		
F (inches)	Standard	9.843			
	Customer	∞			

mm

D Ø Diameter (mm)	10	12.5	16	20	25
Diameter nominal	9.85	12.35	15.85	19.85	24.85
H7 minimum	9.85	12.35	15.85	19.85	24.85
B (mm)	7 +1%L	10 +1%L	15 +1%L	15 +1%L	20 +1%L
L (mm)	minimum	75	100	200	
	maximum	1200	1500		
F (mm)	Standard	250			
	Customer	∞			

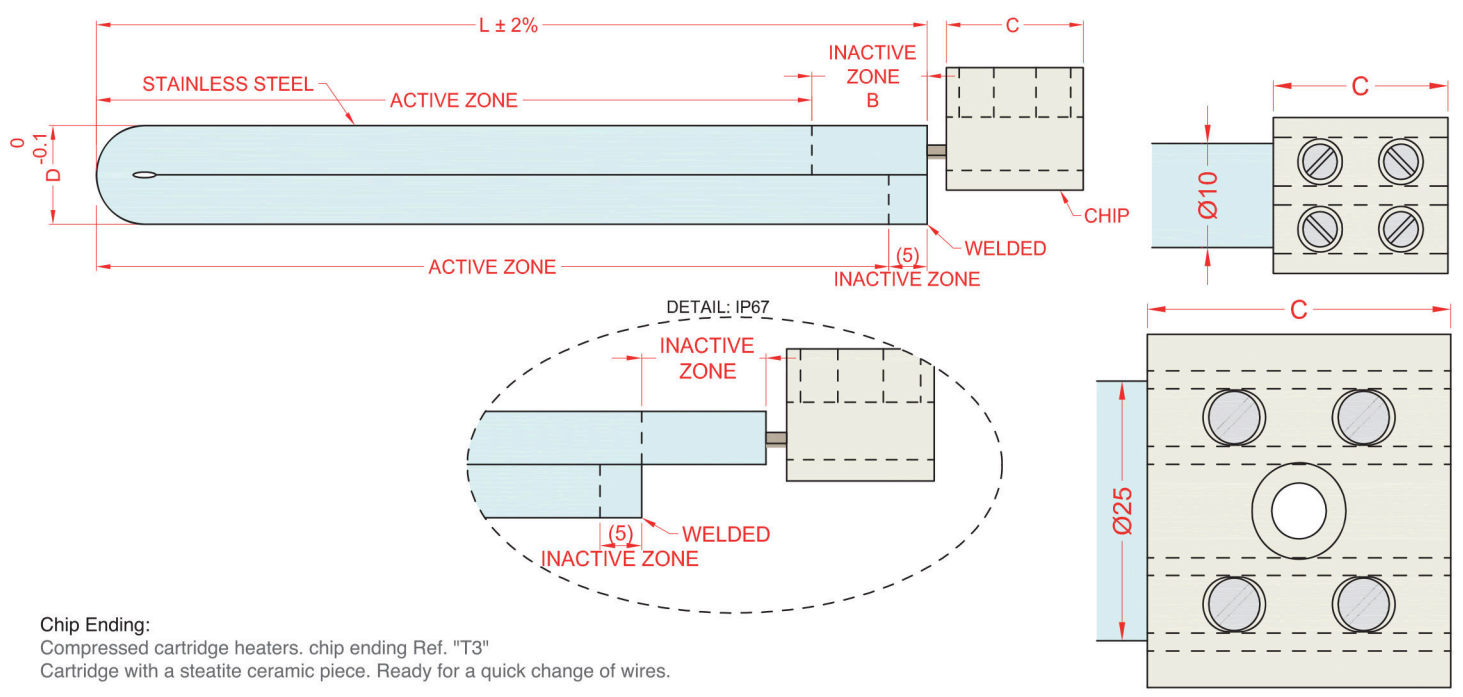
Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage 500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15 inch -0,003937 -0,0059055

*TESTED AT ENVIRONMENTAL TEMPERATURE

Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- IP67: For extremely environments (wetness and dust)
- Different ends and protections.



Chip Ending:
Compressed cartridge heaters. chip ending Ref. "T3"
Cartridge with a steatite ceramic piece. Ready for a quick change of wires.

Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"	1"
Diameter nominal	0.375"	0.500"	0.625"	0.750"	1.000"
H7 minimum	0.373	0.497	0.621	0.746	0.994
B (inches)	0.276 +1%L	0.394 +1%L	0.591 +1%L	0.591 +1%L	0.787 +1%L
C (inches)	0.68	0.70	0.70	0.70	1.32
L (inches)	minimum	2.953		3.937	7.874
	maximum	47.244		59.055	

mm

D Ø Diameter (mm)	10	12.5	16	20	25
Diameter nominal	9.85	12.35	15.85	19.85	24.85
H7 minimum					
B (mm)	7 +1%L	10 +1%L	15 +1%L	15 +1%L	20 +1%L
C (mm)	17.25	17.80	17.80	17.80	33.60
L (mm)	minimum	75		100	200
	maximum	1200		1500	

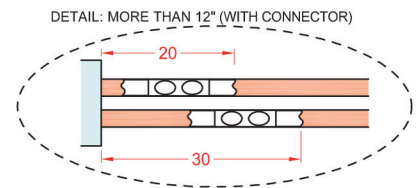
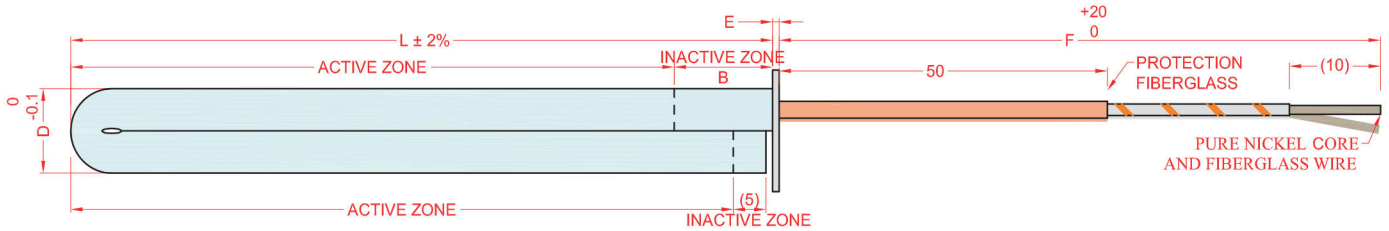
Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage 500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15 inch -0,003937 -0,0059055

*TESTED AT ENVIRONMENTAL TEMPERATURE

Options:

- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- IP67: For extremely environments (wetness and dust)
- Different endings and protections.

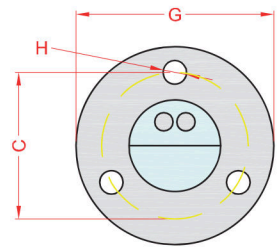


Disc Plate Ending:

Compressed cartridge heaters. (pletina) iron plate ending Ref. "T7"
Fully compressed and reinforced cartridge. Ready for fastening the object to be heated.
Ideal for areas with motion and vibration.

Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"	1"
Diameter nominal	0.375"	0.500"	0.625"	0.750"	1.000"
H7 minimum	0.373	0.497	0.621	0.746	0.994
B (inches)	0.276 +1%L	0.394 +1%L	0.591 +1%L	0.591 +1%L	0.787 +1%L
C (inches)	0.787	0.787	1.008	1.008	1.299
E (inches)	0.039	0.059	0.059	0.059	0.059
G (inches)	1.063	1.063	1.299	1.299	1.614
H (inches)	0.126	0.126	0.165	0.165	0.205
L (inches)	minimum	2.953		3.937	7.874
	maximum	47.244		59.055	
F (inches)	Standard	9.843			
	Customer	∞			



mm

D Ø Diameter (mm)	10	12.5	16	20	25
Diameter nominal	9.85	12.35	15.85	19.85	24.85
H7 minimum	9.85	12.35	15.85	19.85	24.85
B (mm)	7 +1%L	10 +1%L	15 +1%L	15 +1%L	20 +1%L
C (mm)	20	20	25.6	25.6	33
E (mm)	1	1.5	1.5	1.5	1.5
G (mm)	27	27	33	33	41
H (mm)	3.2	3.2	4.2	4.2	5.2
L (mm)	minimum	75		100	200
	maximum	1200		1500	
F (mm)	Standard	250			
	Customer	∞			

Technical Key

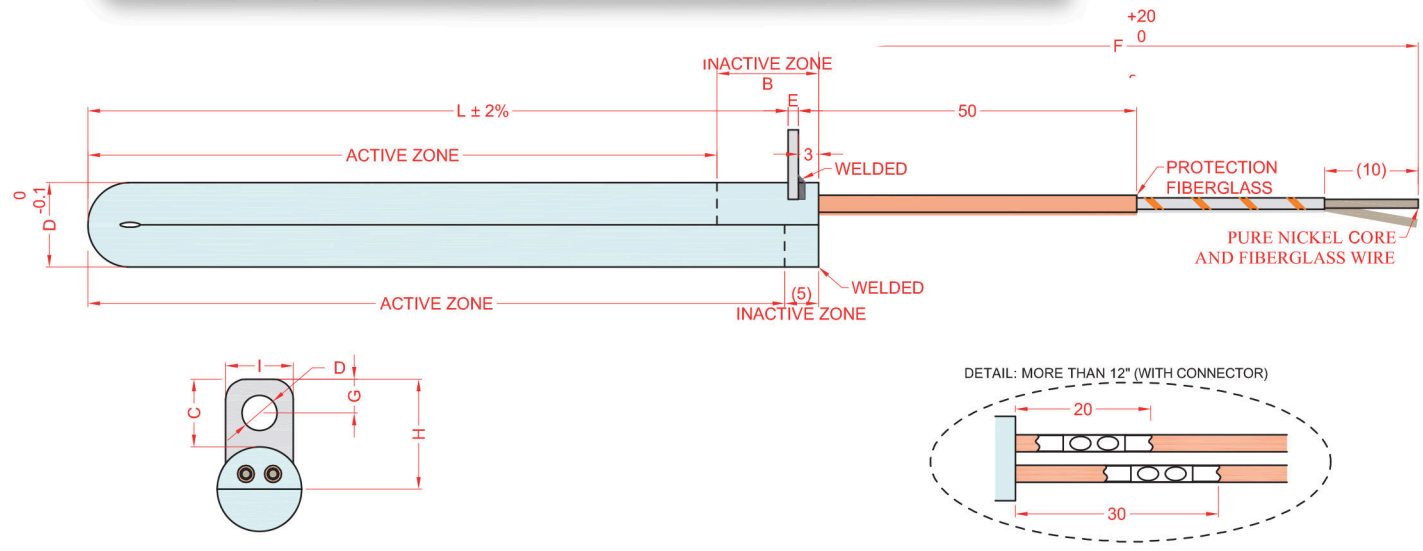
Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage
	500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15
	inch -0,003937 -0,0059055

*TESTED AT ENVIRONMENTAL TEMPERATURE

Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- Different endings and protections.

High Density ● **Expan T7B**



Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"
Diameter nominal	0.375"	0.500"	0.625"	0.750"
H7 minimum	0.373	0.497	0.621	0.746
B (inches)	0.276 +1%L	0.394 +1%L	0.591 +1%L	0.591 +1%L
C (inches)	0.354	0.394	0.433	0.512
Ø D (inches)	0.165	0.205	0.205	0.244
E (inches)	0.079	0.059	0.079	0.079
G (inches)	0.177	0.197	0.217	0.256
H (inches)	0.551	0.640	0.748	0.906
I (inches)	0.374	0.394	0.472	0.709
L (inches)	minimum	2.953		3.937
	maximum	47.244		59.055
F (inches)	Standard	9.843		
	Customer	∞		

mm

D Ø Diameter (mm)	10	12.5	16	20
Diameter nominal	9.85	12.35	15.85	19.85
H7 minimum				
B (mm)	7 +1%L	10 +1%L	15 +1%L	15 +1%L
C (mm)	9	10	11	13
Ø D (mm)	4.2	5.2	5.2	6.2
E (mm)	2	1.5	2	2
G (mm)	4.5	5	5.5	6.5
H (mm)	14	16.25	19	23
I (mm)	9.5	10	12	18
L (mm)	minimum	75		100
	maximum	1200		1500
F (mm)	Standard	250		
	Customer	∞		

Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage 500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15 inch -0,003937 -0,0059055

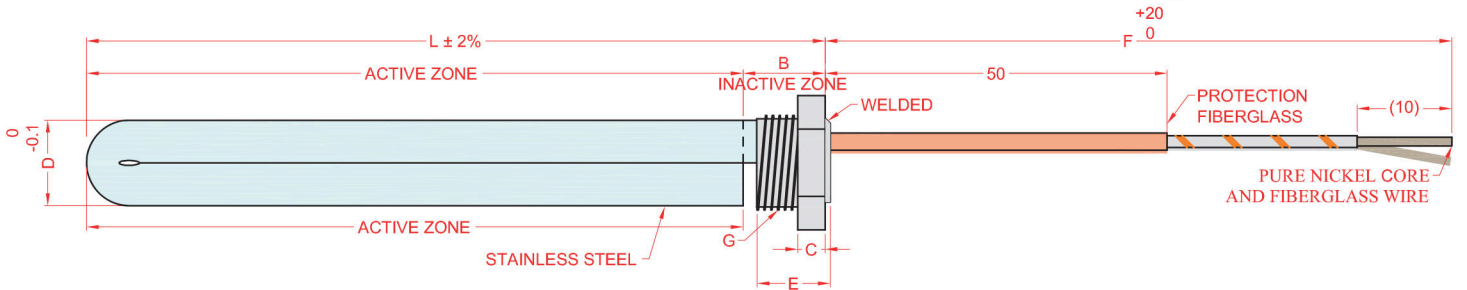
*TESTED AT ENVIRONMENTAL TEMPERATURE

Iron Plate Ending:

Compressed cartridge heaters. (pletina) iron plate ending Ref. "T7B"
Fully compressed and reinforced cartridge. Ready for fastening the
object to be heated. Ideal for areas with motion and vibration.

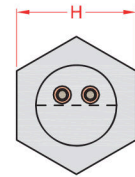
Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- Different endings and protections.



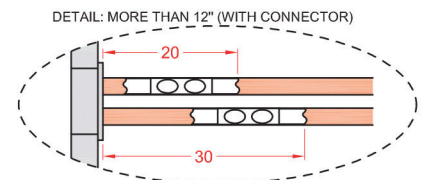
Nipple Ending:

Compressed cartridge heaters. nipple ending Ref. "T8"
Fully water resistant and reinforced cartridge. Ready for removal by means of a screw, should the cartridge become dislodged. Ideal for areas where pressure and fluids are watertight. The ending Ref. T8 is indicate for heating of areas with internal pressure (oil tanks, water, glue, plastic) or deflagration.



Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"
Diameter nominal	0.375"	0.500"	0.625"	0.750"
H7 minimum	0.373	0.497	0.621	0.746
B (inches)	E+1%L	E+1%L	E+1%L	E+1%L
C (inches)	0.157	0.157	0.157	0.157
E (inches)	0.423	0.502	0.591	0.591
G (inches)	1/4"	3/8"	1/2"	3/4"
H (inches)	0.669	0.748	0.945	1.063
L (inches)	minimum	2.953		3.937
	maximum	47.244		59.055
F (inches)	Standard	9.843		
	Customer	∞		



mm

D Ø Diameter (mm)	10	12.5	16	20
Diameter nominal	9.85	12.35	15.85	19.85
H7 minimum	9.85	12.35	15.85	19.85
B (mm)	E+1%L	E+1%L	E+1%L	E+1%L
C (mm)	4	4	4	4
E (mm)	10.75	12.75	15	15
G (mm)	M14	M16	M20	M26
H (mm)	17	19	24	27
L (mm)	minimum	75		100
	maximum	1200		1500
F (mm)	Standard	250		
	Customer	∞		

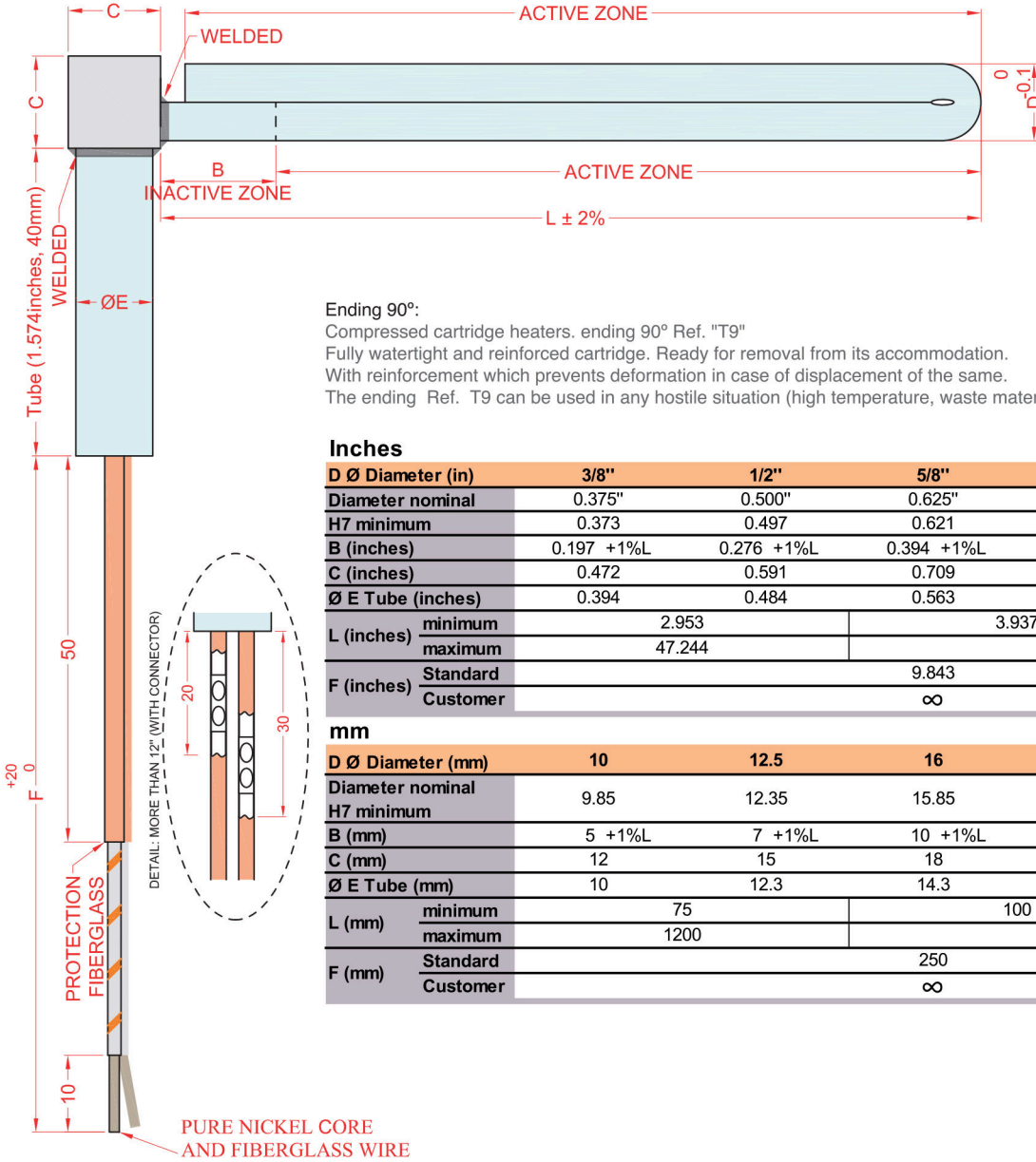
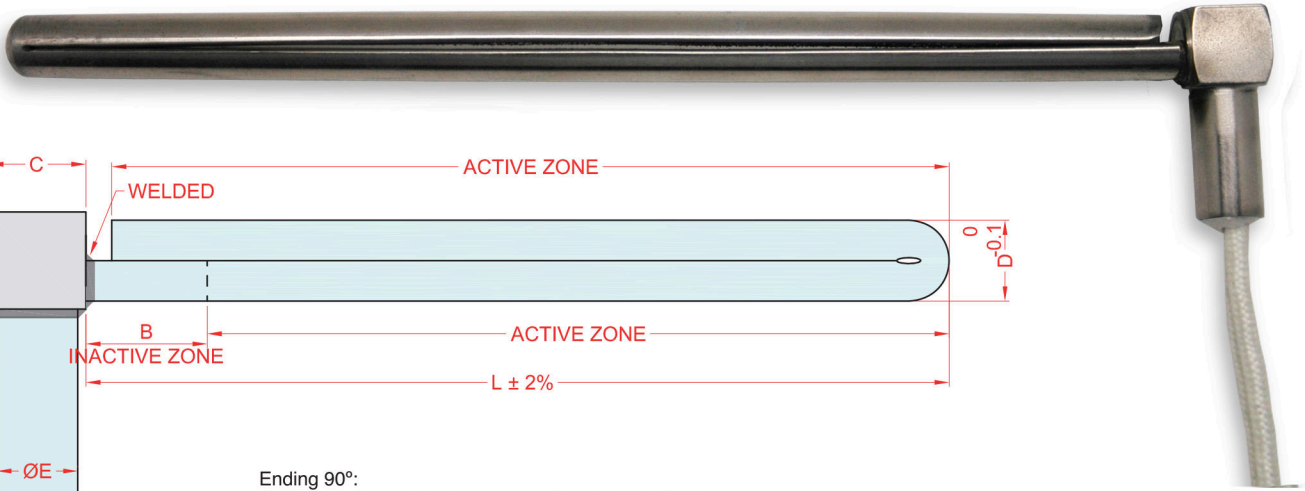
Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage
	500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15
	inch -0,003937 -0,0059055

*TESTED AT ENVIRONMENTAL TEMPERATURE

Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- Different endings and protections.



Ending 90°:
Compressed cartridge heaters, ending 90° Ref. "T9"
Fully watertight and reinforced cartridge. Ready for removal from its accommodation.
With reinforcement which prevents deformation in case of displacement of the same.
The ending Ref. T9 can be used in any hostile situation (high temperature, waste material).

Inches

D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"	1"
Diameter nominal	0.375"	0.500"	0.625"	0.750"	1.000"
H7 minimum	0.373	0.497	0.621	0.746	0.994
B (inches)	0.197 +1%L	0.276 +1%L	0.394 +1%L	0.591 +1%L	0.591 +1%L
C (inches)	0.472	0.591	0.709	0.984	1.181
Ø E Tube (inches)	0.394	0.484	0.563	0.709	0.787
L (inches)	minimum	2.953	3.937	59.055	7.874
	maximum	47.244			
F (inches)	Standard	9.843			
	Customer	∞			

mm

D Ø Diameter (mm)	10	12.5	16	20	25
Diameter nominal	9.85	12.35	15.85	19.85	24.85
H7 minimum	9.85	12.35	15.85	19.85	24.85
B (mm)	5 +1%L	7 +1%L	10 +1%L	15 +1%L	15 +1%L
C (mm)	12	15	18	25	30
Ø E Tube (mm)	10	12.3	14.3	18	20
L (mm)	minimum	75	100	1500	200
	maximum	1200			
F (mm)	Standard	250			
	Customer	∞			

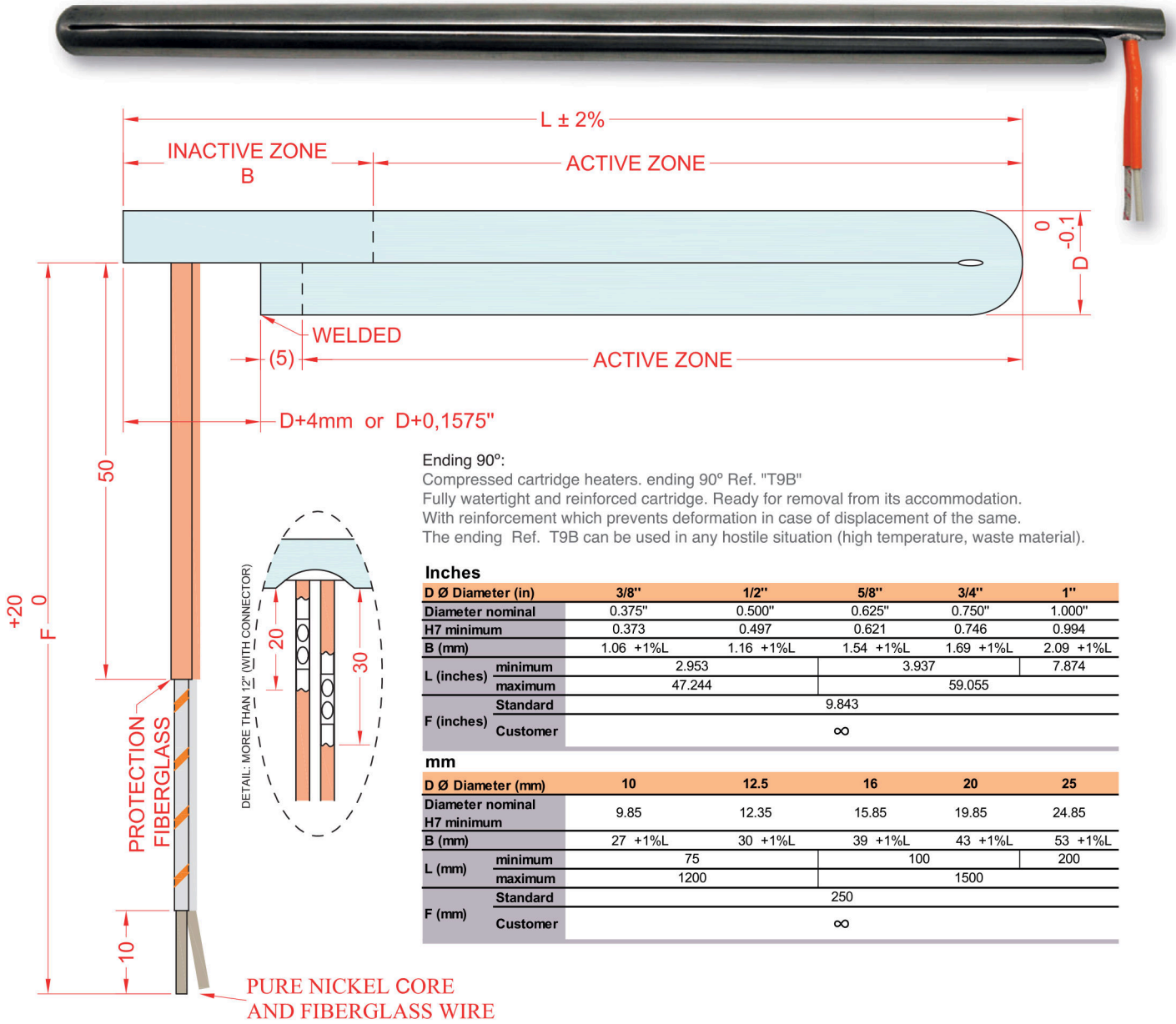
Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage 500 V at <= 24 V operation voltage
Insulation resistance*	> 5 M.Ω at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15
	inch -0,003937 -0,0059055

*TESTED AT ENVIRONMENTAL TEMPERATURE

Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- IP67: For extremely environments (wetness and dust)
- Different endings and protections.



Technical Key

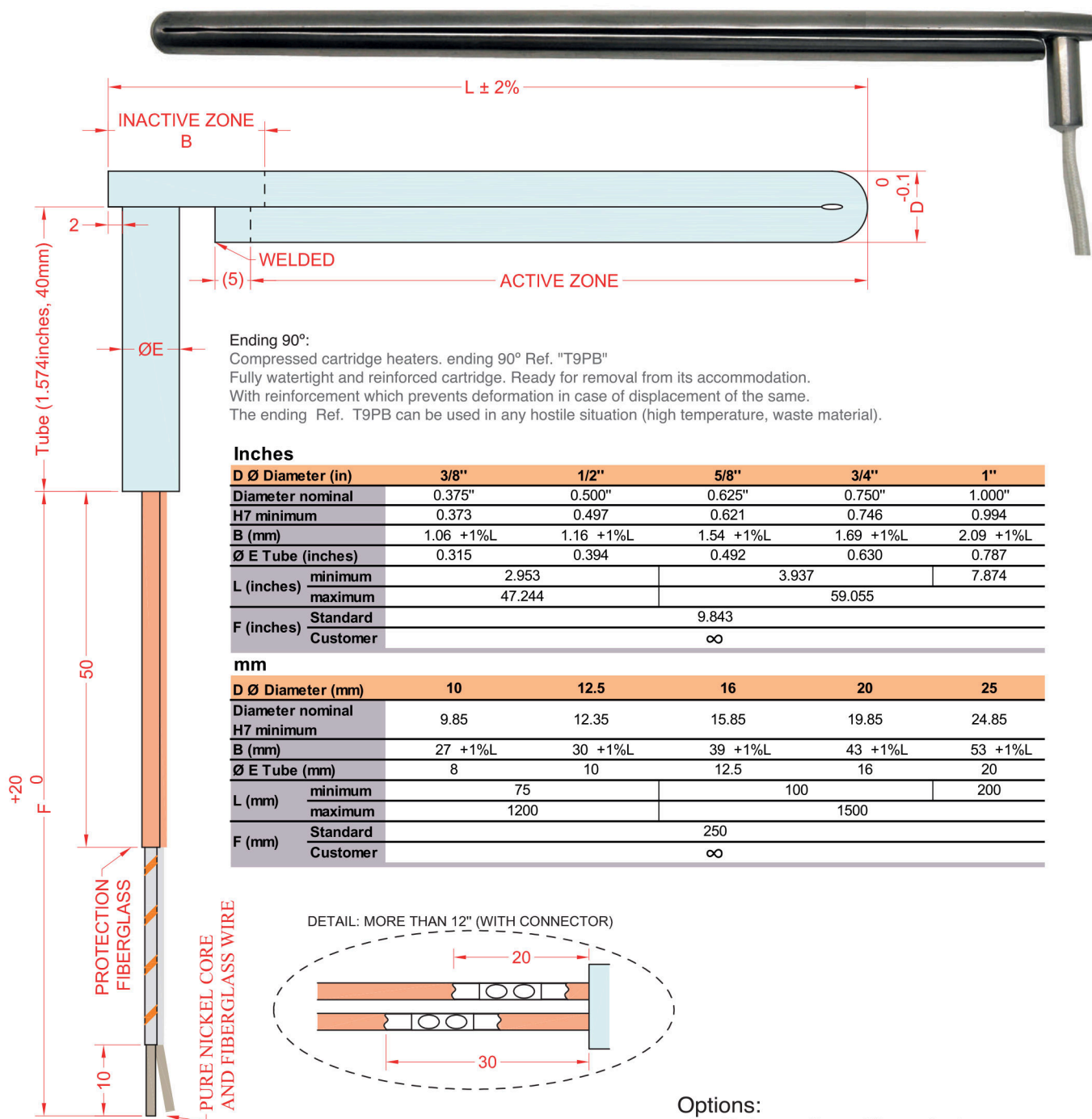
Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage
	500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15
	inch -0,003937 -0,0059055

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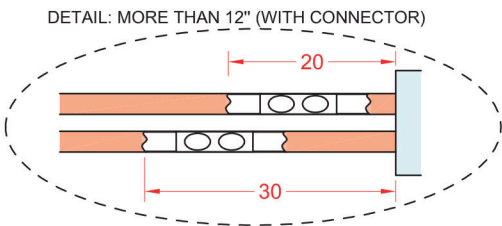
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- Ground lead.
- Different endings and protections.

High Density ● Expan T9PB



Inches					
D Ø Diameter (in)	3/8"	1/2"	5/8"	3/4"	1"
Diameter nominal	0.375"	0.500"	0.625"	0.750"	1.000"
H7 minimum	0.373	0.497	0.621	0.746	0.994
B (mm)	1.06 +1%L	1.16 +1%L	1.54 +1%L	1.69 +1%L	2.09 +1%L
Ø E Tube (inches)	0.315	0.394	0.492	0.630	0.787
L (inches)	minimum	2.953	3.937		7.874
	maximum	47.244		59.055	
F (inches)	Standard	9.843			
	Customer	∞			
mm					
D Ø Diameter (mm)	10	12.5	16	20	25
Diameter nominal	9.85	12.35	15.85	19.85	24.85
H7 minimum	9.85	12.35	15.85	19.85	24.85
B (mm)	27 +1%L	30 +1%L	39 +1%L	43 +1%L	53 +1%L
Ø E Tube (mm)	8	10	12.5	16	20
L (mm)	minimum	75	100		200
	maximum	1200		1500	
F (mm)	Standard	250			
	Customer	∞			



Technical Key

Sheath material	Stainless steel
Heating conductor material	NiCr 8020
Max. Sheath temperature	750 °C / 1380 °F
Max. Voltage	>120V <=480V (OTHER V.: TO CONSULT)
Wattage tolerance*	± 10%
High voltage resistance*	1500 V AC at > 24 V operation voltage 500 V at <= 24 V operation voltage
Insulation resistance*	> 5 MΩ at 500 V DC
Leakage current*	<= 0.5 mA at 253 V AC
Length tolerance	A 2%, min A 1mm
Standard diameter tolerance	metric -0'10-0'15 inch -0,003937 -0,0059055

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Options:

- Certified according to UL standards.
- Watt distribution:
- Isolated or non isolated thermocouples type "J" and "K", placed as customer's requirements.
- Ground lead.
- IP67: For extremely environments (wetness and dust)
- Different endings and protections.