

The **Safest** Heating Method...

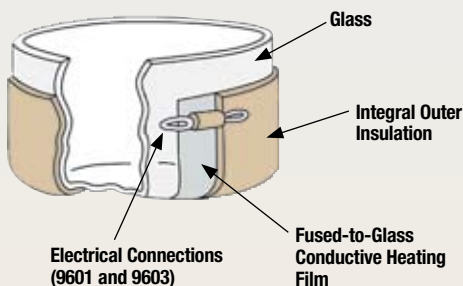
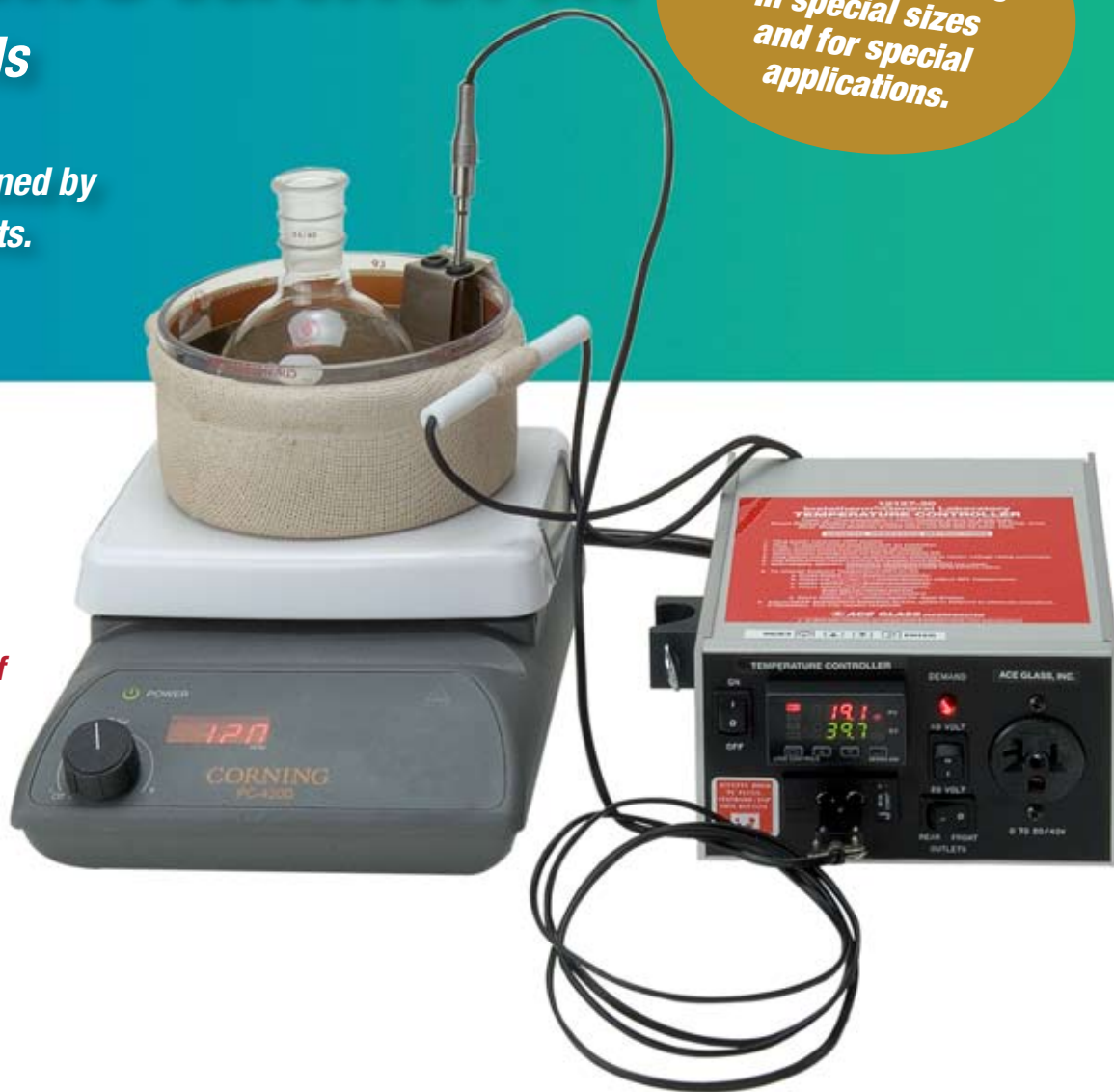
ACE Instatherm®

For Glass Vessels

Replaces open-coil
immersion heaters banned by
most safety departments.

ACE Instatherm®
items are available
in special sizes
and for special
applications.

- Rapid, even heat — low thermal lag
- No super-heating
- Suitable for magnetic stirrers
- Accommodates variety of vessel sizes and shapes
- Higher temperatures on special orders
- Extremely accurate heating



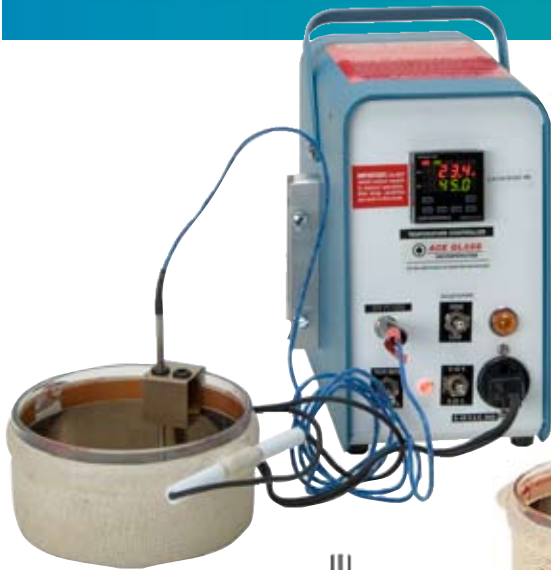
Instatherm: no mantles, no heat tapes, no immersion heaters, just a safer and more precise method of heating in your laboratory.

Instatherm® by **Ace Glass** is a unique process whereby a noble metal alloy is fused directly to the surface of the glass and then covered with a tough silicone rubber layer and a glass insulation layer which serves as both a thermal barrier and protects against physical shock. Instatherm gives excellent temperature control and heating. The bottom of the vessel is not heated and the vessel can be placed on a temperature resistant counter top or on a magnetic stirrer when stirring and heating are both needed. Instatherm, as it is a coating process, can be applied to any shape borosilicate glass vessel.



ACE Instatherm® Oil Bath/Controller Kits

*Complete
Bath Kits
for your
convenience*



**9601-345
Bath Kit Complete** ★

Consists of one each 9601-12, 9601-14 and 9601-16 bath, one 9601-30 clip, plus one 12107-46 Digital Temperature Controller with one 12103-20 RTD Type Temperature Sensor and cord.

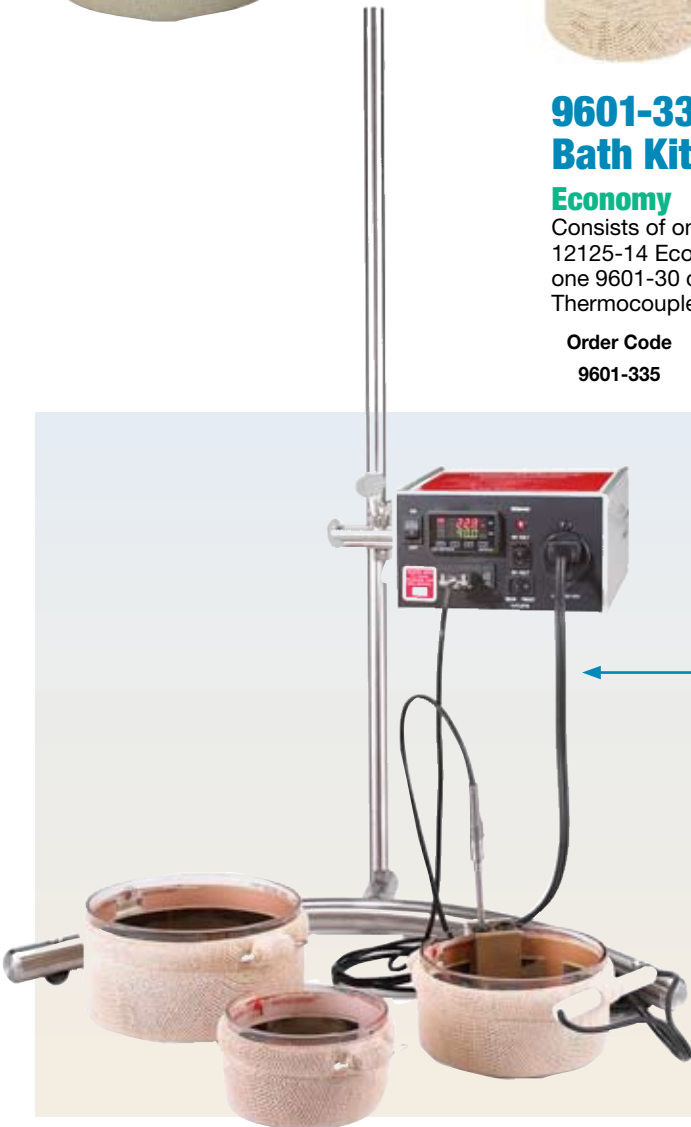
Order Code	Each
9601-345	2,995.46

**9601-335
Bath Kit Complete** ★

Economy

Consists of one 9601-16 bath plus one 12125-14 Economy Temperature Controller, one 9601-30 clip, and one 12110-17 Type "J" Thermocouple Temperature Sensor and cord.

Order Code	Each
9601-335	1,146.62



**9601-352
Bath Kit Complete** ★

With Removable Cord

Consists of one each 9601-12, 9601-14 and 9601-16 baths, three 9601-30 clips, three 9698-16 cords, plus one 12127-30 Temperature Controller with one 12110-17 Type "J" Thermocouple Temperature Sensor.

Order Code	Each
9601-352	2,402.24

Also available with permanent chord:

Order Code	Each
9602-364	2,479.52

ACE temperature controllers are compact, lightweight, mountable...

■ Programmable, tunable and adaptable to your needs



12107-46 Digital-Type Temperature Controller ★

Digital Temperature Controller with automatic over-temperature cut-off, plus 120 volt alarm rear output. 100 ohm RTD temperature sensor input for all size oil baths. Output power has three selectable voltages: 20 and 40 (front outlet), 120 volt (rear outlet), 15 amp maximum. Portable or bar mountable. 120 volt/60 Hz input. Single-loop time proportional output: 10 seconds cycle rate. Solid state relay control contact.

Range is -50° to $+800^{\circ}$ C, 0.1° C resolution. Accuracy of ranges: 0.25% (max 2° C). Set-point accuracy: $\pm 0.1^{\circ}$ C. Microprocessor-based $1/16$ DIN module, dual process and set-point value display. Auto tuned PID with fuzzy logic. Programmable: ramp and soak (16 segment).

Size: $9\frac{1}{4}$ "H x $5\frac{1}{2}$ "W x 11"D;
Weight: 17 lbs.

Warranty: 3 years

	Order Code	Each
Controller, only	12107-46	1,583.27



12125-14 Economy Temperature Controller ★

Economy Temperature Controller with "J" thermocouple input; output power 120 volt/60 Hz, 15 amp maximum. Portable or bar mountable. 120 volt/60 Hz input. Single-loop time proportional output: 10 seconds cycle rate. Solid state relay control contact.

Range is -50° to $+800^{\circ}$ C, 0.1° C resolution. Accuracy over range: 0.25% (max 2° C). Set-point control accuracy: $\pm 0.1^{\circ}$ C. Microprocessor-based $1/32$ DIN module, dual process and set-point value display. Auto tuned PID with fuzzy logic. Programmable: ramp and soak (16 segment).

Size: 2"H x $5\frac{1}{4}$ "W x $5\frac{1}{4}$ "D;
Weight: 2 lbs, 2 oz.

Warranty: 3 years

	Order Code	Each
Controller, only	12125-14	627.42

ACE Instatherm —
heat with confidence...
save time...eliminate
hotspots!



12127-30 Digital Temperature Controller ★

Designed Especially For Instatherm®

Smaller, compact, 3.5" high design, with digital readout. Range -50° to 870° C (can be reset for Degrees F), with 0.1° C resolution. Absolute accuracy $\pm 2^{\circ}$ C. Unit has 2 x 120V rear outlets for Instatherm or heating mantles and both 20V and 40V front outlets. Ramp and soak, 16 segment with hold or shut-off. Bench or Rack mountable. Power 120V, 50/60Hz, 15 amp max.

Measures $3\frac{1}{2}$ "H x $6\frac{3}{8}$ "W x 8"D;
Weight: 3.4 lbs.

Warranty: 3 years

	Order Code	Each
Controller, only	12127-30	1,062.75

IMPORTANT!

A line voltage controller should not be used on ACE Instatherm low voltage oil baths unless it incorporates a step-down transformer that limits the voltage to the heater rating, e.g. 20 volts or 40 volts.

For complete information on Temperature Controllers, see listing in our general catalog, or visit us online at www.aceglass.com.

Ace Instatherm®-heated glass oil baths, for use with time-proportional temperature controllers, offer safety and efficiency

- No exposed-coil heater for greater safety
- Rapid, even heat with low thermal lag
- Suitable for magnetic stirrers

Low Form Instatherm Baths
Allows small Mini-Lab size flasks to be stirred internally with magnetic stirrer bars while being heated in baths



9601-16

9601 INSTATHERM OIL BATH, Low Form ★

Low form, glass open vessels coated with Instatherm. Designed to operate up to 250° C, heating response time is very rapid, (5° per minute), with very low thermal lag. This style bath has integral stainless steel banana plug connectors for attaching the power cord. The bottom is uncoated so the bath can be put on any popular magnetic stirrer for stirring while heating. Baths are designed to run with oil or a heating media. Never run Instatherm baths dry or breakage can occur, especially at higher temperatures. Capacity is without a vessel. Connector plug is designed to work with ACE Temperature Controllers where the output voltage can be automatically limited to match the bath. Bath can also be matched with ACE temperature thermocouple sensors for complete automatic operation. If using another type temperature controller, make sure that the voltage does not exceed the rated voltage (see below). Complete comes with cord and thermocouple clip.

Approx. Dia. x Hght., mm	Cap., mL	Volt/Amp Rating	Order Code	Bath only	Order Code	Complete
70 x 50	160	20/5	9601-08	311.19	9601-38	379.40
100 x 50	340	40/6	9601-12	337.58	9601-42	405.79
125 x 65	700	40/8	9601-14	346.29	9601-44	414.50
150 x 75	1200	120/5	9601-16	380.95	9601-46	449.16
190 x 100	2600	120/10	9601-18	446.21	9601-48	514.42



9601-23

9601 INSTATHERM OIL BATH, Large ★

Large version bath that can accept round bottom flask up to 5 L and other larger vessels. Bath measure 300mm (11.8") I.D. by 250mm (9.8") Depth. The bath has a rolled lip for easy of handling. The maximum temperature on this bath is 100° C. The full capacity is 15L with out a vessel. And typically should have a minimum of 6 liters when using a vessel like a 5L round bottom flask. Complete comes with cord and thermocouple clip. Baths must be run with a heating media or oil.

Approx. Dia. x Hght., mm	Cap., Liters	Volt/Amp Rating	Order Code	Bath only	Order Code	Complete
300 x 250	15	120/14	9601-23	1,848.77	9601-55	1,937.18



9602

9602 INSTATHERM OIL BATH, Low Form, with Permanent Cord ★

The same vessels as listed under 9601 series except with permanently attached cord for increased safety. Cord is 12' in length and is PTFE clad. Opposite end has two pronged plug for insertion into ACE temperature controllers. Watch voltage rating and never run over max voltage and never run Instatherm baths dry. Complete comes with thermocouple clip.

Approx. Dia. x Hght., mm	Cap., mL	Volt/Amp Rating	Order Code	Bath Only	Order Code	Complete
70 x 50	160	20/5	9602-07	405.04	9602-37	426.92
100 x 50	340	40/6	9602-11	411.15	9602-41	433.03
125 x 65	700	40/8	9602-13	430.19	9602-43	452.07
150 x 75	1200	120/5	9602-15	439.75	9602-45	461.63
190 x 100	2600	120/10	9602-17	461.90	9602-47	483.78

9603 INSTATHERM OIL BATH, High Form ★

High form, heavy walled glass vessels coated with Instatherm to accommodate larger and taller vessels. A thermocouple well is imbedded in the insulation in this series. Do not run baths dry or above max voltage or breakage can occur. Bottom is uncoated so it can be used with or without magnetic stirrers. Complete comes with cord and thermocouple clip.

Size, mm	Volt/Amp Rating	Takes Flask Size, mL	Order Code	Bath only	Order Code	Complete
100 x 100	40/10	300 & smaller	9603-02	454.40	9603-20	522.61
150 x 150	120/8	1000 & smaller	9603-04	549.31	9603-22	617.52
190 x 180	120/10	3000 & smaller	9603-06	690.50	9603-24	767.69



9603

9605 INSTATHERM BEAKER, Griffin Low Form ★

With lip and pouring spout. With silicone rubber treated glass cloth insulation for use up to 360°C. Use only 9698-16 cord for connection to ACE 12103 or 12125 Proportional Temperature Controller, or other power source. Includes power cord.

Height x Diam., mm	Capacity, mL	Volt/Amp Rating	Order Code	Each
88 x 68	250	20/6.5	9605-40	224.00
106 x 77	400	20/7	9605-42	242.98
122 x 88	600	25/7	9605-44	265.68



9605

14115 BATH OIL ★

An extremely stable, medium viscosity silicone oil. Available in two temperature ranges:

Low Temp — maximum 180°C; or

HighTemp — maximum 230°C.

Type	Order Code	Size	Each
Low Temp (180°C)	14115-05	.9L (1 Qt.)	44.04
High Temp (230°C)	14115-12	.9L (1 Qt.)	61.33

Type	Order Code	Size	Each
Low Temp (180°C)	14115-10	1.8L (½ Gal.)	71.64
High Temp (230°C)	14115-14	1.8L (½ Gal.)	109.01

Low temp oil color is CLEAR. High temp oil color is AMBER.

14115

**9601/9698 CONNECTING CORD & CLIPS** ★

Power Cord with bayonet connection for connecting all Instatherm vessels to temperature controllers:

Description	Order Code	Each
Connecting cord	9698-16	46.33

Clip for thermocouple or thermometer:

Description	For Bath Series	Order Code	Each
Small clip with one hole	9601-07 and -08	9601-29	21.88
Medium clip with two different sized holes	All other baths	9601-30	21.88
Medium clip with two ¼" holes	All other baths	9601-32	21.88
Large clip with two ¼" holes	9603-06	9601-34	30.86
Extra large clip with two ¼" holes	9603-23	9601-36	42.08



9698

9610 INSTATHERM FUNNEL, Addition ★

Graduated addition funnel with Instatherm coating for critical heating. The funnel has a bottom inner standard taper joint and an outer joint on top. The funnel can be hooked to an ACE temperature controller and heated for liquefying solids or keeping liquids at a set temperature for addition to system or a reactor. Comes with one Instatherm cord.

Capacity, mL	Volt/Amp Rating	⌘ Joints	⌘ Stopcock	Order Code	Each
125	40/5	24/40	2	9610-08	248.00
250	40/6	24/40	2	9610-10	297.00
500	40/10	24/40	2	9610-12	350.00
500	40/10	29/42-24/40	4	9610-14	350.00



9610



9625 INSTATHERM DESICCATOR, Vacuum Oven

250mm diameter with bottom Instatherm heated (low voltage: 40 volts, 10 amps max.). Top is not heated, but has insulation cover. May be used as a vacuum oven at temperatures up to 180°C continuously.

The top has an observation stripe for visibility and is supplied with vacuum take-off valve. Insulation is resilient silicone rubber impregnated glass cloth, and electrical connections are covered. Temperatures can be regulated by means of ACE Temperature Controllers or 12081 Powerstat. Also available with uncoated top. Supplied complete with detachable cord, -10-250°C. 100mm immersion 10/30 ground joint thermometer, thermometer adapter and porcelain plate.

	Order Code	Each		Order Code	Each
Desiccator	9625-04	★1,003.73	Thermometer	8314-31	▲ 50.90
Bottom Cord	9698-16	★ 46.33	Plate	13254-06	★ 55.07
Adapter	9061-10	▲ 23.20	Complete	9625-10	★1,179.22

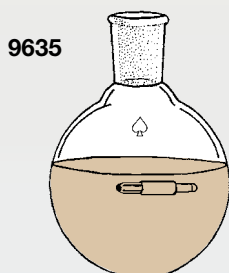
9625-04 and 9625-10 supplied with cord.



9632 INSTATHERM DRYING APPARATUS, Vacuum, Abderhalden

Instantly variable jacket temperature, to 200°C, enables programmed drying. The jacket is coated with Instatherm with a viewing strip. Temperatures are monitored by means of an adjustable depth thermometer inserted into end, or the thermometer may be removed and a thermo-well, 6-7mm O.D., may be substituted for the purpose of employing a thermistor, controlled probe, etc. The heater operates on AC or DC up to 40v, 3 amps.

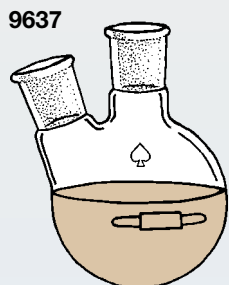
	Order Code	Each
Desiccant Tube	9632-02	▲175.31
Drying Chamber	9632-04	★390.74
Cord	9698-16	★ 46.33
Thermometer	8294-33	▲ 10.75
Nylon Bushing	5029-10	▲ 2.04
Complete	9632-10	★625.17



9635 INSTATHERM FLASK, High Temp Type, Single Neck ★

Distilling, round bottom with $\text{F}24/40$ joint. With silicone rubber treated glass cloth insulation for use up to 360°C. No clamp needed, use **ONLY 9698-16** cord (supplied).

Cap., mL	Volt/Amp Rating	Order Code	Each
500	30/9	9635-158	240.90
1000	40/10	9635-160	258.51



9637 INSTATHERM FLASK, High Temp Type, Two Necks ★

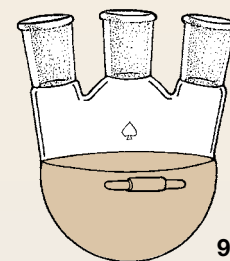
Distilling, round bottom with F joints. With silicone rubber treated glass cloth insulation for use up to 360°C. No clamp needed, use **ONLY 9698-16** cord (supplied).

Cap., mL	Volt/Amp Rating	Order Code	$\text{F}24/40$	Order Code	$\text{F}29/42$
250	25/7	9637-136	181.93	—	—
500	30/9	9637-138	292.36	—	—
3000	120/10	—	—	9637-170	338.12

9642 INSTATHERM FLASK, High Temp, Three Necks ★

Distilling, round bottom with three 24/40 joints. With silicone rubber treated glass cloth insulation for use up to 360°C. No clamp needed, use **ONLY 9698-16** cord (supplied).

Capacity, mL	Volt/Amp Rating	Order Code	Each
250	25/7	9642-127	260.99
500	30/9	9642-129	303.40
1000	40/10	9642-131	344.23



9642

9655 INSTATHERM REACTION FLASK AND HEAD ★

Rugged cylindrical reaction flask and head with Schott, flat, ground 4" flange with O-Ring groove for use with 6517-25 Quick Release Clamp and integral heating element that eliminates the local superheating commonly associated with more conventional heating methods and eliminates cumbersome and dangerous oil baths. The response is rapid and accurate — the attention can be directed toward contents instead of the pot. Supplied with silicone coating for insulation and protection. End contacts are standard banana plugs. Use with 9698-16 connecting cord to power source. O-Ring, supplied with flask, is a CAPFE (PTFE encapsulated silicone O-Ring). Flask is coated to within approximately 38 mm of the flange for 200 °C operation. 360°C max. on special order. Interchangeable with ACE reaction top, code -33, -37, -39, and non-heated tops listed in the Ace complete catalog. Order Flask, Head and Clamp separately. Use **ONLY 9698-16** cord (supplied with both flask and head).

9655-39



Flask, only				
Cap., mL	Volt/Amp Rating	Watts	Order Code	Each
1000	40/8	400	9655-17	581.08
2000	120/5	600	9655-22	659.24

Head, Four Necks, only				
Center ⚓ Joint	Side ⚓ Joints	Volt/Amp Rating	Order Code	Each
24/40	24/40	40/8	9655-33	397.72
29/42	24/40	40/8	9655-37	404.46
45/50	24/40	40/8	9655-39	417.12
	Clamp, only		6517-25	75.80
	Connecting Cord, only		9698-16	46.33



9655-17

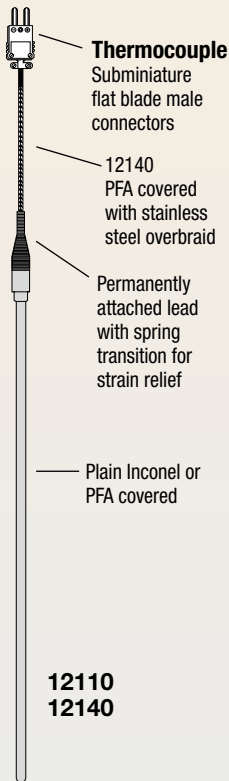
9656 INSTATHERM REACTION FLASK ★

This integral heating element eliminates the local superheating commonly associated with more conventional heating methods and eliminates cumbersome and dangerous oil baths. The response is rapid and accurate — the attention can be directed toward contents instead of the pot. Supplied with silicone coating for insulation and protection. End contacts are standard banana plugs. Use **ONLY 9698-16** cord (supplied). Flask is coated to within approximately 38mm of the flange for 200°C operation. 360°C max. on special order. Interchangeable with all ACE reaction tops.

Cap., mL	Volt/Amp Rating	Watts	Order Code	Each
1000	40/8	400	9656-08	574.88
2000	120/5	600	9656-12	654.79



9656



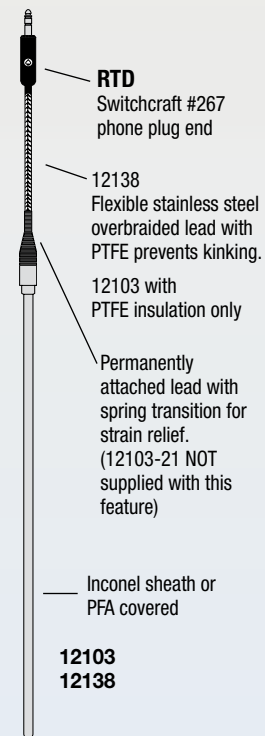
12110/12140/12141 THERMOCOUPLE SENSOR PROBES ★

Type	Lgth. of Inconel Sheath, mm	Sheath O.D.	Sheath Coating	Max. Sheath Temperature	Lead Lgth., Ft.	Lead Attachment	Order Code	Each
"J"	102 (4")	3/16"	Plain	550°C	6	Permanent	12110-17	70.04
"J"	305 (12")	1/16"	Plain	550°C	12	Permanent	12140-04	145.26
"J"	305 (12")	1/8"	Plain	550°C	12	Permanent	12140-05	145.26
"J"	305 (12")	1/4"	Plain	550°C	6	Permanent	12110-15	81.23
"J"	305 (12")	1/4"	Plain	550°C	12	Permanent	12140-06	144.20
"J"	600 (24")	1/4"	Plain	550°C	12	Permanent	12140-10	153.70
"J"	900 (36")	1/4"	Plain	550°C	12	Permanent	12140-14	174.11
"J"	1200 (48")	1/4"	Plain	550°C	12	Permanent	12140-16	197.82
"J"	1800 (72")	1/4"	Plain	550°C	12	Permanent	12140-18	228.52
"J"	305 (12")	1/16"	PFA	260°C	12	Permanent	12140-17	183.55
"J"	305 (12")	1/8"	PFA	260°C	12	Permanent	12140-19	183.55
"J"	305 (12")	1/4"	PFA	260°C	12	Permanent	12140-20	182.23
"J"	600 (24")	1/4"	PFA	260°C	12	Permanent	12140-21	189.75
"J"	900 (36")	1/4"	PFA	260°C	12	Permanent	12140-25	214.88
"J"	1200 (48")	1/4"	PFA	260°C	12	Permanent	12140-26	242.86
"J"	1800 (72")	1/4"	PFA	260°C	12	Permanent	12140-28	269.30

12110
12140

12103/12138/12139 RTD SENSOR PROBES ★

Lgth. of Inconel Sheath, mm	Sheath O.D.	Sheath Coating	Max. Sheath Temperature	Lead Lgth., Ft.	Lead Attachment	Order Code	Each
75 (3")	1/8"	Plain	550°C	6	Permanent	12103-21	149.38
102 (4")	3/16"	Plain	550°C	6	Permanent	12103-20	142.74
305 (12")	1/4"	Plain	550°C	6	Permanent	12103-18	147.28
305 (12")	3/16"	Plain	550°C	6	Permanent	12103-19	143.74
305 (12")	1/4"	Plain	550°C	12	Permanent	12138-08	250.01
600 (24")	1/4"	Plain	550°C	12	Permanent	12138-12	265.24
900 (36")	1/4"	Plain	550°C	12	Permanent	12138-25	285.62
1200 (48")	1/4"	Plain	550°C	12	Permanent	12138-27	294.80
1800 (72")	1/4"	Plain	550°C	12	Permanent	12138-29	305.37
305 (12")	1/4"	PFA	260°C	12	Permanent	12138-30	288.46
600 (24")	1/4"	PFA	260°C	12	Permanent	12138-33	306.02
900 (36")	1/4"	PFA	260°C	12	Permanent	12138-42	333.23
1200 (48")	1/4"	PFA	260°C	12	Permanent	12138-44	344.37
1800 (72")	1/4"	PFA	260°C	12	Permanent	12138-46	352.95



Inconel sheath or PFA covered

12103
12138

For a complete listing of ACE sensors, see our general catalog.



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www.aceglass.com email: sales@aceglass.com

ACE GLASS ACCEPTS



Prices and specifications subject to change without notice.