



## Calibration

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[Home](#) > [Products](#) > [Temperature Calibration](#) > [Industrial Calibrators](#) > [Handheld Calibrators](#) > [9100S, 9102S Handheld Dry-Wells](#) > 9100S, 9102S Handheld Dry-Wells

# 9100S, 9102S Handheld Dry-Wells

## Highlights

### World's smallest, lightest and most portable dry-wells

- Smallest dry-wells in the world
- Ranges from  $-10^{\circ}\text{C}$  to  $375^{\circ}\text{C}$
- Accuracy to  $\pm 0.25^{\circ}\text{C}$ , stability of  $\pm 0.05^{\circ}\text{C}$  at  $0^{\circ}\text{C}$
- RS-232 interface

Fluke Calibration's line of portable dry-wells is incredible. They're the smallest, lightest, and most portable dry-wells in the world. And now they're better than ever!

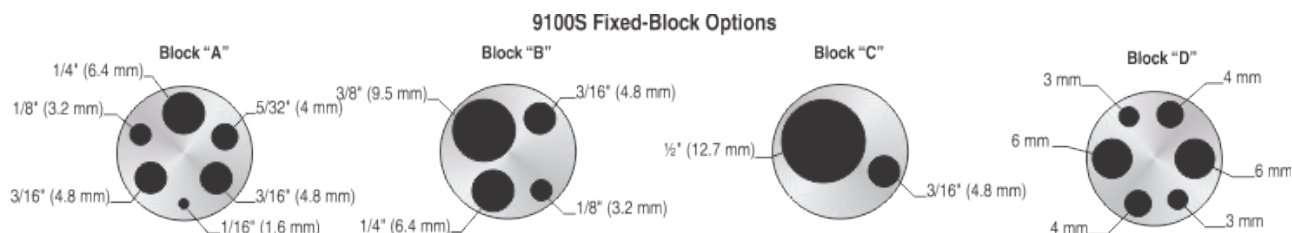
## Description

### 9100S Dry-Well

Since we introduced the world's first truly handheld dry-well, many have tried to duplicate it—in vain. Despite its small size (2¼ inches high and 5 inches wide) and light weight, the 9100S outperforms every dry-well in its class in the world.

It's simple and convenient, too. Anyone can learn to use one in less than 15 minutes. It has a range to  $375^{\circ}\text{C}$  ( $707^{\circ}\text{F}$ ) and is perfect for checking RTDs, thermocouples, and small bimetal thermometers in the field.

Plug it in, switch it on (Note, these wells are fixed and not interchangeable,) set the temperature with the front-panel buttons, and insert your probe into the properly sized well. Compare the reading of your device to the display temperature or to an external reference, and the difference is the error in your device. With a proprietary Fluke Calibration temperature controller, the 9100S has a display resolution of 0.1 degrees, an accuracy of  $\pm 0.5^{\circ}\text{C}$ , a stability of  $\pm 0.1^{\circ}\text{C}$ , and a stabilization time of just five minutes.



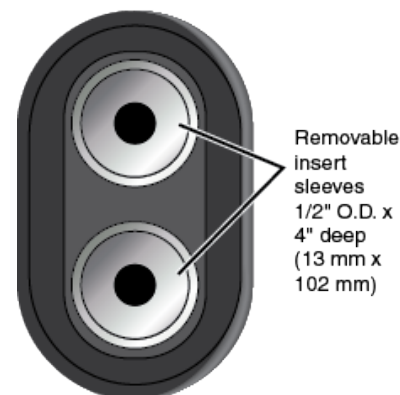
# 9102S Dry-Well

For work in the temperature range of  $-10^{\circ}\text{C}$  to  $122^{\circ}\text{C}$ , our Model 9102S dry-well is another first in the industry, featuring stability to  $\pm 0.05^{\circ}\text{C}$ .

This dry-well is only four inches high and six inches wide, achieves temperatures as low as  $-10^{\circ}\text{C}$ , includes a NIST-traceable calibration, and is stable to  $\pm 0.05^{\circ}\text{C}$ . The Model 9102S is excellent for dial gauges, digital thermometers, bulb switches, and other sensors that need calibration below ambient.

The 9102S has two wells so you can use one for a reference thermometer to increase accuracy. Both wells are 1/2 inch in diameter, and each has inserts available for almost any sensor size. The 9102S also has a battery pack option that gives you approximately four hours of field use when AC power is unavailable.

## 9102S Calibration Wells



## Specifications

Specifications	9100S	9102S
<b>Range</b>	35 °C to 375 °C (95 °F to 707 °F)	$-10^{\circ}\text{C}$ to $122^{\circ}\text{C}$ (14 °F to 252 °F) at $23^{\circ}\text{C}$ ambient
<b>Accuracy</b>	$\pm 0.25^{\circ}\text{C}$ at $50^{\circ}\text{C}$ ; $\pm 0.25^{\circ}\text{C}$ at $100^{\circ}\text{C}$ ; $\pm 0.5^{\circ}\text{C}$ at $375^{\circ}\text{C}$	$\pm 0.25^{\circ}\text{C}$
<b>Stability</b>	$\pm 0.07^{\circ}\text{C}$ at $50^{\circ}\text{C}$ ; $\pm 0.1^{\circ}\text{C}$ at $100^{\circ}\text{C}$ ; $\pm 0.3^{\circ}\text{C}$ at $375^{\circ}\text{C}$	$\pm 0.05^{\circ}\text{C}$
<b>Well-to-Well Uniformity</b>	$\pm 0.2^{\circ}\text{C}$ with sensors of similar size at equal depths within wells	
<b>Heating Times</b>	35 °C to 375 °C: 9.5 minutes	ambient to $100^{\circ}\text{C}$ : 10 minutes
<b>Stabilization</b>	5 minutes	7 minutes
<b>Cooling Times</b>	375 °C to $100^{\circ}\text{C}$ : 14 minutes	ambient to $0^{\circ}\text{C}$ : 10 minutes
<b>Well Depth</b>	102 mm (4 in); 1.6 mm (1/16 in) hole is 89 mm (3.5 in) deep	102 mm (4 in)
<b>Removable Inserts;</b>	N/A	Available in sizes from 1.6 mm (1/16 in) to 11.1 mm (7/16 in) [6.4 mm (1/4 in) and 4.8 mm (3/16 in) included]
<b>Power</b>	115 V ac ( $\pm 10\%$ ), 55–65 Hz, 1.5 A or 230 V ac ( $\pm 10\%$ ), 0.8 A, 45–55 Hz, 175 W	94-234 V ac ( $\pm 10\%$ ), 50/60 Hz, 60 W; or 12 VDC
<b>Size (HxWxD)</b>	57 x 125 x 150 mm (2.25 x 4.9 x 6.1 in)	99 x 140 x 175 mm (3.9 x 5.5 x 6.9 in)
<b>Weight</b>	1 kg (2 lb 3 oz)	1.8 kg (4 lb)
<b>Computer Interface</b>	RS-232 interface	
	Data at $50^{\circ}\text{C}$ , $100^{\circ}\text{C}$ , $150^{\circ}\text{C}$	Data at $-10^{\circ}\text{C}$ , $0^{\circ}\text{C}$ , $25^{\circ}\text{C}$ ,

<b>NIST-Traceable Calibration</b>	°C, 200 °C, 250 °C, 300 °C, and 375 °C	50 °C, 75 °C, 100 °C, and 122 °C
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## Models and Accessories

Model Name	Description
9100S-A	HDRC Handheld Dry-Well A
9100S-B	HDRC Handheld Dry-Well B
9100S-C	HDRC Handheld Dry-Well C
9100S-D	HDRC Handheld Dry-Well D
9102S	HDRC Handheld Dry-Well

### Accessories common to all models:

Accessory	Description
<a href="#">3102-0</a>	Insert, AL 1/2" X 4" blank
<a href="#">3102-1</a>	Insert, AL 1/2" X 4" 1/16"
<a href="#">3102-2</a>	Insert, AL 1/2" X 4" 1/8"
<a href="#">3102-3</a>	Insert, AL 1/2" X 4" 3/16"
<a href="#">3102-4</a>	Insert, AL 1/2" X 4" 1/4"
<a href="#">3102-5</a>	Insert, AL 1/2" X 4" 5/16"
<a href="#">3102-6</a>	Insert, AL 1/2" X 4" 3/8"

<a href="#">3102-7</a>	Insert, AL 1/2" X 4" 7/16"
<a href="#">3102-8</a>	Insert, AL 1/2" X 4" 5/32"
<a href="#">9300</a>	Rugged Carrying Case: 9100S
<a href="#">9308</a>	Rugged Carrying Case : 9102, 9132, 9140
<a href="#">HART DRYWELL CABLE</a>	An interface cable kit that includes a null modem to connect the Fluke 754 with Fluke Calibration dry-wells and Micro-Baths to automate and document the calibration of temperature sensors and transmitters in the field or at the bench.
Priority Gold Instrument CarePlan	Fluke Calibration Priority Gold Instrument CarePlans are available for most calibration products. Please contact your local Fluke Calibration sales representative for details or to request a quote. You may also call the Customer Care Center at 877-355-3225 or send email to <a href="mailto:careplans@flukecal.com">careplans@flukecal.com</a> .
Silver CarePlan	Fluke Calibration Silver CarePlans are available for most calibration products. Please contact your local Fluke Calibration sales representative for details or to request a quote. You may also call the Customer Care Center at 877-355-3225 or send email to <a href="mailto:careplans@flukecal.com">careplans@flukecal.com</a> .

## Knowledge\_and\_information

### Product Manuals

 [9100S Users Guide \(Eng\) \(714.29 KB\)](#)

 [9100S Users Guide Supplement \(23.76 KB\)](#)

 [9100S Users Guide \(Ger\) \(891.75 KB\)](#)

 [9100S Users Guide \(Rus\) \(665.18 KB\)](#)

 [9102S Users Guide \(English\) \(758.49 KB\)](#)

 [9102S Users Guide Supplement \(35.15 KB\)](#)

 [9102S Kalibriergerät Bedienerhandbuch \(German\) \(752.33 KB\)](#)

### Brochures

 [Industrial Temperature Calibrators Workload Matrix \(96.74 KB\)](#)

 [Power and utilities industry calibration solutions \(5.03 MB\)](#)

 [Soluciones de calibración de la industria de energía y servicios \(Spanish\) \(6.52 MB\)](#)

 [Решения в области калибровки приборов для измерения при производстве электроэнергии и эксплуатации инженерно-технических систем \(6.98 MB\)](#)

 [Soluções de calibração do setor de serviços públicos e energia \(Portuguese\) \(6.97 MB\)](#)

 [Kalibrierungslösungen für die Energie- und Versorgungsindustrie \(German\) \(5.91 MB\)](#)

 [Solutions d'étalonnage pour le secteur de la distribution d'énergie \(French\) \(5.9 MB\)](#)

 [電力産業における校正ソリューション \(6.68 MB\)](#)

 [Temperature Calibration Applications and Solutions \(12.87 MB\)](#)

 [Etalonnage de la température APPLICATIONS ET SOLUTIONS \(9.22 MB\)](#)

 [Calibración de temperatura Aplicaciones y soluciones \(12.7 MB\)](#)

 [Calibração de Temperatura Aplicações e soluções \(12.52 MB\)](#)

 [Temperaturkalibrierung Anwendungen und Lösungen \(12.96 MB\)](#)

## Application Notes

 [Best Practices for Temperature Calibration \(2.13 MB\)](#)

 [Bewährte Methoden zur Temperaturkalibrierung \(German\) \(1.81 MB\)](#)

 [Meilleures pratiques pour la calibration de la température \(French\) \(1.98 MB\)](#)

 [Mejores prácticas para la calibración de la temperatura \(Spanish\) \(1.98 MB\)](#)

 [Improving loop calibration temperature accuracy \(991.83 KB\)](#)

 [Verbesserung der Temperaturgenauigkeit bei der Kalibrierung von Messketten \(German\) \(793.62 KB\)](#)

 [Selecting an Industrial Temperature Calibrator \(1.6 MB\)](#)

 [Auswahl eines Temperaturkalibrators für den Einsatz in der Industrie \(German\) \(1.43 MB\)](#)

 [Sélection d'un calibrateur de température industriel \(French\) \(1.42 MB\)](#)

 [Selección de un calibrador de temperatura industrial \(Spanish\) \(1.42 MB\)](#)

 [Выбор промышленного калибратора температуры \(Russian\) \(1.43 MB\)](#)

[Why calibrate temperature devices? \(977.05 KB\)](#)

## Papers / Articles

[Improving Dry-Well Calibrations](#)

[Selecting a Dry-Well Temperature Calibrator](#)

[The Development of a High-Temperature PRT Calibration Process Based on Dry-Block Calibrators \(60.55 KB\)](#)

## Product Catalogs

[Industrial Temperature Calibration Selection Guide \(1.83 MB\)](#)

[Industrielle Temperatur-Kalibrierung Produktübersicht \(German\) \(3.49 MB\)](#)

[Guide de sélection d'étalonnage industriel \(French\) \(3.99 MB\)](#)

[Guía de selección de equipos para calibraciones industriales \(Spanish\) \(3.45 MB\)](#)

[Guide alla selezione di strumenti per calibrazione industriale \(Italian\) \(3.52 MB\)](#)

[Указатель приборов для промышленной калибровки \(Russian\) \(3.59 MB\)](#)

## Product Images





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**Links:**  
[1] [https://eu.flukecal.com/lightboxform/webform\\_client\\_form\\_98799?product=9100S%2C%209102S%20Handheld%20Dry-Well&family=938581ef-589c-e611-80c4-00155dfe6b1a](https://eu.flukecal.com/lightboxform/webform_client_form_98799?product=9100S%2C%209102S%20Handheld%20Dry-Well&family=938581ef-589c-e611-80c4-00155dfe6b1a)  
[2] [https://eu.flukecal.com/print/products/process-calibration-tools/temperature-calibrators/field-temperature-sources/9100s-9102s-han?quicktabs\\_product\\_details=4#quicktabs-product\\_details](https://eu.flukecal.com/print/products/process-calibration-tools/temperature-calibrators/field-temperature-sources/9100s-9102s-han?quicktabs_product_details=4#quicktabs-product_details)