

PTC DOWNHOLE TOOL CALIBRATION OVENS



PREMIUM QUALITY INDUSTRIAL OVENS

Despatch has worked at the forefront of thermal processing technology for more than 120 years. The company's success is based on innovation, with an unwavering commitment to quality and reliability. Manufacturers trust Despatch ovens to deliver the uniform and repeatable thermal processing required for critical components to operate flawlessly and ensure reliable product performance. Despatch never cuts corners, ovens are manufactured to the highest standards and deliver invariable, uniform temperature for as long as the oven is in service.

The combined knowledge and experience of the ITW EAE group that Despatch belongs to is driving further innovation and speeding the development of next generation technology. Using proven ITW manufacturing practices, Despatch is able to move products to market much faster, providing the shortest lead times in our industry.

◆ PTC Downhole Tool Calibration Ovens

PTC ovens are specially designed for downhole drilling tools. Burn-in testing is done to make sure the electronics can operate accurately at elevated temperatures. In the field, these ovens are used for periodic calibration of the electronics on the drill tool. Downhole drilling tools perform many functions.

Video Inspections provide a continuous, permanent visual record of the well casing, screen, or open hole. A video camera built into a waterproof stainless steel housing is lowered into the well via a triple-armored coaxial cable. The image is transmitted back via the cable to a VHS recorder and monitor at the surface. This arrangement provides a permanent videotape recording, as well as real-time viewing, which facilitates detailed inspections of features of interest.

Geophysical Logging (sometimes erroneously called "electric logging") is a generic term encompassing a wide variety of techniques. Simply put, geophysical logging is the measurement of various physical parameters by the lowering of a probe or sonde containing sensors into a well or borehole. These parameters can then be used to evaluate the geology and well construction.

Natural Gamma Ray Logging is done by measuring the amount of emitted gamma radiation as a function of depth so we can paint an accurate "picture" of the nature of the material penetrated by the well. Electric Logging uses the marked differences in electrical properties between fine-grained sediments (shale, clay and silt) and coarser-grained material (sandstone, sand and gravel), to identify stratigraphic units from logs of electrical resistivity and natural electric potentials. Caliper Logging is simply a record of the changes in hole diameter with depth.

Despatch's unique chamber size and force-convected airflow provide uniform heat over the length of the tool. Multiple ovens can be connected end-to-end to accommodate any required length. The marinite end caps can be machined to insert instruments or tooling. A digital, three-mode PID control allows precise temperature control while a separate high-limit control with manual reset provides over-temperature protection. Designed with silicone door seals and positive-latching clamps to hold the door securely in place, the PTC ovens are also provided with a dolly for easy moving.

We offer two standard top-loading sizes and can build to special requirements including a front-loading design. We also offer a non-magnetic, non-metallic version.



Non-magnetic,
non-conductive option



PTC2-12 with gas cylinder
door lift assist option

For burn-in and qualification testing of downhole electronic logging equipment

STANDARD FEATURES:

- ◆ Temperatures up to 260°C (500°F)
- ◆ Chamber size: 2.7, 4, 12 or 48 cubic feet (76.5, 113.3, 339 or 1360 liters)
- ◆ 2.4 or 3.6 m (8 or 12 ft) chamber length
- ◆ Removable end caps to allow several ovens to be connected end-to-end
- ◆ Horizontal airflow
- ◆ Digital, three-mode PID control for precise temperature control
- ◆ High-limit control with manual reset for protection against over-temperature
- ◆ Silicone door seals and positive latching clamps for security

OPTIONS:

- ◆ Non-magnetic, non-metallic models available
- ◆ Front-load model available
- ◆ Programmable controller
- ◆ Custom configurations available

NON-MAGNETIC FEATURES

- ◆ Fiberglass oven body construction with fiberglass structural supports
- ◆ 3.6, 4.5 and 7.3 m (12, 15 and 24 ft) lengths
- ◆ Temperatures up to 180°C (356°F)
- ◆ Non-magnetic/non-metallic model
- ◆ High-velocity vertical-down airflow for uniform airflow, even with varying load conditions



Small Footprint – The PTC ovens are designed with fans and controls located below the work chamber to minimize floor space, which is at a premium in the field offices where the ovens are most commonly used.

Reliability/Repeatability – The PTC offer consistent, repeatable performance in a small package. A rugged design allows for long term reliability and all units are low maintenance.

Adaptable – Removable ends allow multiple units to be connected together for use with longer tools.

	PTC1-27	PTC1-40	PTC2-12	PTC2-48
PHYSICAL SPECIFICATIONS				
Work chamber dimensions (width x depth x height)	96 x 8 x 6 in. 244 x 20 x 15 cm	144 x 8 x 6 in. 366 x 20 x 15 cm	144 x 12 x 12 in. 366 x 30 x 30 cm	144 x 24 x 24 in. 366 x 61 x 61 cm
Capacity in cubic feet (liters)	2.7 (76.5)	4 (113.3)	12 (339)	48 (1360)
Overall dimensions (width x depth x height) <i>*Does not include dolly which adds 9 inches (23 cm)</i>	100 x 24 x 24* in. 254 x 61 x 61* cm	148 x 26 x 26* in. 376 x 66 x 66* cm	148 x 37 x 36* in. 376 x 94 x 91* cm	148 x 60 x 76* in. 376 x 152 x 193* cm
Electrical	Three Phase: 480v - 60Hz or 380v - 50Hz or 208v, 220-240v, 415v - 50/60Hz Single phase: 208v, 220-240 - 50/60Hz		220v - 240v, 480v, 380v Three Phase, 50/60Hz	480v/60Hz or 380v Three Phase, 50Hz
Heater capacity	9 kW	12 kW	16 kW	32kW
Approximate weight	1100 lbs / 500 kg	1800 lbs / 820 kg	2330 lbs / 1057 kg	3500lbs / 1588kg
FUNCTIONAL SPECIFICATIONS				
Operating range Based on 20° C (68° F) ambient temperature	51° C - 260° C (125° F - 500° F)	51° C - 260° C (125° F - 500° F)	66° C - 260° C (150° F - 500° F)	66° C - 260° C (150° F - 500° F)
Recirculating system - 1/3 HP motor	400 CFM (188.8 lps)	600 CFM (283.2 lps)	2 HP Motor 1700 CFM (802 lps)	5 HP Motor 3400 CFM (1605 lps)
Maximum load capacity (evenly distributed)	500 lbs / 227kg	750 lbs / 340kg	1000 lbs / 454kg	1200 lbs / 544kg

PTC models are not to be used with flammable solvents, materials or enclosed containers. If your process involves flammable solvents, consult the factory.

PTC NON-MAGNETIC	3.6M (12 FT) LENGTH	4.5M (15 FT) LENGTH	7.3M (24 FT) LENGTH
PHYSICAL SPECIFICATIONS			
Work chamber dimensions (width x depth x height)	144 x 7 x 12 in. 365.8 x 17.8 x 30.5 cm	180 x 7 x 12 in. 457.2 x 17.8 x 30.5 cm	288 x 9 x 12 in. 731.5 x 22.9 x 30.5 cm
Overall dimensions (width x depth x height) <i>*Does not include dolly which adds 22.9 cm (9 inches)</i>	181 x 57 x 63.5* in. 459.7 x 144.8 x 161.3* cm	221 x 60 x 64.5* in. 561.3 x 152.4 x 163.8* cm	326.5 x 61.5 x 70.5* in. 829.3 x 156.2 x 179.1* cm
Workspace length (Custom lengths available)	365.8 cm (12 ft)	457.2 cm (15 ft)	731.5 cm (24 ft)
Single-phase voltage (Additional options available)	208v or 240v	208v or 240v	208v or 240v
FUNCTIONAL SPECIFICATIONS			
Operating range Based on 20° C (68° F) ambient temperature	130° C to 180° C (266° F to 356° F)	130° C to 180° C (266° F to 356° F)	130° C to 180° C (266° F to 356° F)
Chamber temperature uniformity	+/- 5° F (2.8° C)	+/- 5° F (2.8° C)	+/- 5° F (2.8° C)
Recirculating fan motor (Custom sizes available)	1 HP - 1100 CFM (519 LPS)	3 HP - 2000 CFM (944 LPS)	5 HP - 3600 CFM (1699 LPS)
Heater capacity (Other sizes available)	12 kW	16 kW	16 kW

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