thermoscientific

INSTRUMENT SERVICE SOLUTIONS

Service & Electronic Spares Kits

Process mass spectrometers

Maximize uptime with on-site spares

The Thermo Scientific™ Prima PRO, Prima BT and Sentinel PRO Process Mass Spectrometers (MS) have been deployed worldwide in a wide range of industrial applications requiring precise gas analysis, including process optimization, enhanced safety and regulatory compliance. The current Prima and Sentinel systems were designed to provide next-generation performance with significant improvements in accuracy, precision and stability in a highly reliable and easy-to-use package.

A key element of the product design was to utilize much simpler maintenance procedures. For this reason, we provide customers with a standard spares kit (Figure 1) containing all the parts that might be needed to support the unit over the standard three year warranty period.



Figure 1 The standard spares kit with the tested ion source supplied in its own internal carry case. Dimensions: $55 \times 42 \times 26$ cm.

The standard spares kit includes:

- Tested ion source
- Vacuum gauge
- Seals kit
- Fuse kit
- Tools

- Spare rotary pump oil*
- Molecular leak or membrane
- Pressure/flow sensor board
- Micro-capillary
- FEP tubing

The parts are shipped in a rugged waterproof, dustproof case designed to protect the contents in harsh environments, meeting MIL standards for resistance to corrosion, impact, UV, solvents and fungus. So, rather than change filaments or clean the source, users simply change the entire source, replacing it with the fully tested spare from the service kit.

This kit is included with all Prima PRO and Sentinel PRO MS, and optional with the Prima BT MS.

* Not supplied with Fomblin pump system.



Figure 2 The strategic electronics spares kit. Dimensions: $65 \times 65 \times 36$ cm.

Strategic electronic spares—your choice

We now offer a strategic electronics spares kit (Figure 2) designed to support sites with multiple Prima and Sentinel systems, or for individual systems critical to process control that cannot afford to wait for electronics to ship to the site.

The kit, supplied in the same type of rugged carry case as the standard spares kit, contains a complete set of electronics for the Prima PRO, Prima BT and Sentinel PRO MS. The analyzer control architecture consists of integrated circuit boards interconnected with RS-485 network cables. All the electronic components, except the power supplies unit, can be replaced without powering down the instrument.

The kit also includes the heart of the control electronics, the Central Processing Unit, which runs our Thermo Scientific™ GasWorks™ software under an industrial real time operating system (RTOS). The processor's mother board was designed specifically for the Prima and Sentinel analyzers, providing a flexible range of communication options, including Modbus and OPC.



The table below summarizes our offerings:

Instrument	Standard inclusion	Optional
Thermo Scientific™ Prima PRO/Ex Process MS	Service spares kit	Electronics spares kit
Thermo Scientific™ Sentinel PRO/Ex Environmental MS	Service spares kit	Electronic spares kit
Thermo Scientific™ Prima BT Bench Top MS		Service spares kit, electronic spares kit

The strategic electronics spares kit, part number 208-760-020, contains the following items:

Part number	Description
204-765-003	Prima PRO Power Distribution Unit
204-765-004	Prima PRO Analyzer Supplies Unit
202-305-507	Prima PRO Power Supplies Unit
204-765-006	Prima PRO Amplifier Assembly
204-766-052	Prima PRO Magnet Power & Control Assembly
204-766-007	Prima PRO Inlet Control PCB
204-766-009	Prima PRO RMS Opto Sensor PCB
204-766-050	Prima PRO CPU & I/O Assembly

A set of spare network cables is also included in the kit. It is available as an option with all our mass spectrometers; the service spares kit is included as standard with our Prima PRO and Sentinel PRO systems and available as an option with the Prima BT mass spectrometer.

Lifetime support from Thermo Fisher Scientific

We understand the importance of keeping your process up and running. In addition to the service spares kit and strategic electronics kit, we offer a range of support options to ensure optimum system performance and maximum availability throughout the life of the mass spectrometer. These include:

- Factory training programs
- Service contracts
- Technical support
- Warranty upgrades

Further information on these support options is available upon request.

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