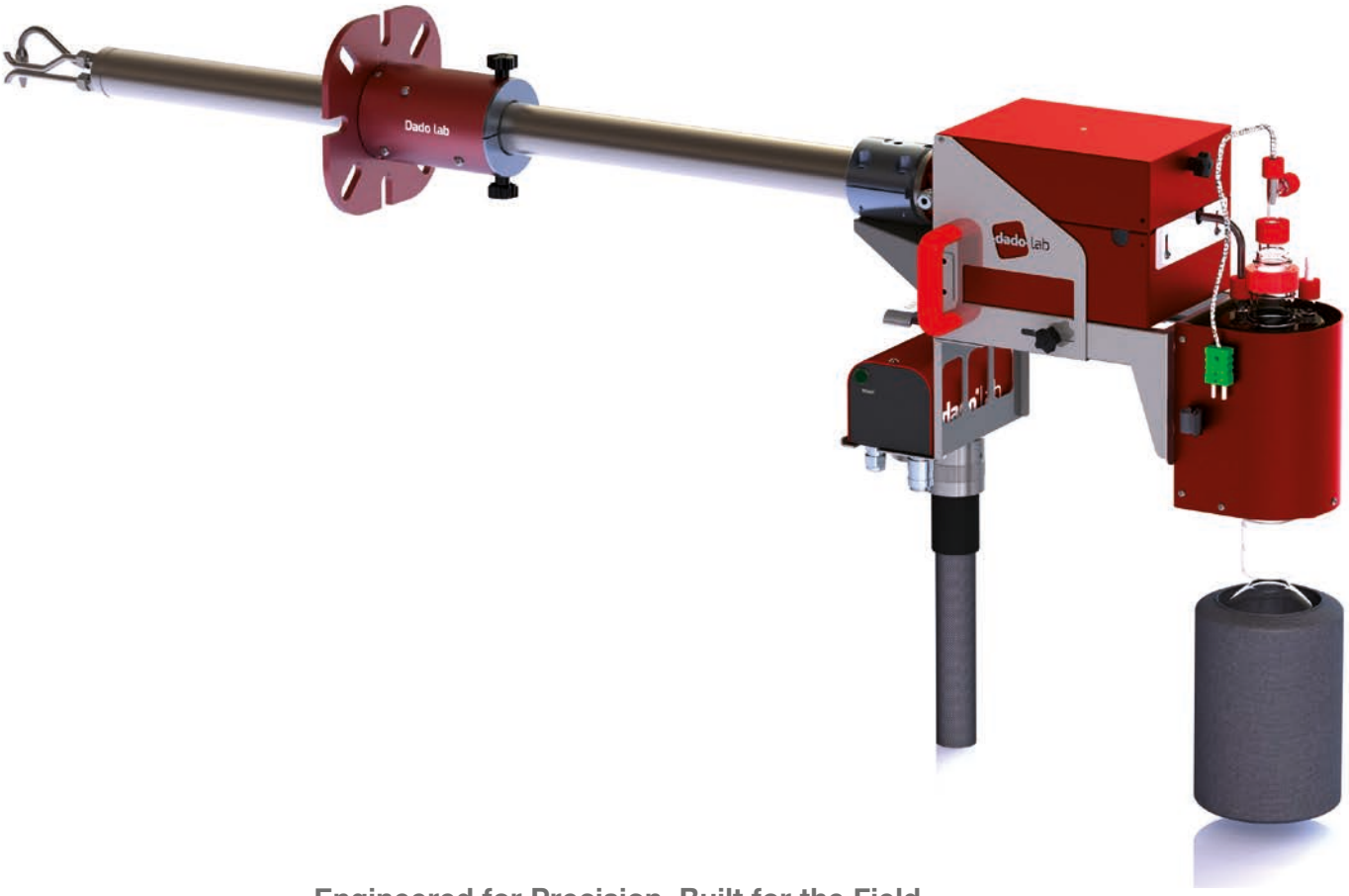
Dado Lab HP5: The Revolution That Redefined Sampling



Engineered for Precision. Built for the Field.

The HP5 by Dado Lab is more than a probe: it's the next-generation isokinetic sampling system for particulate matter, micro-pollutants, and PFAS.

Delivering unmatched accuracy, modularity, and ease of use, it empowers technicians to work smarter, faster, and with complete confidence.

A Game-Changer from Day One.

When launched, HP5 didn't follow the market: it redefined it.

It set new, rigorous standards for quality and innovation, transforming the industry and raising the bar for everyone else.

Today, paired with the ST5 automatic isokinetic sampler, HP5 stands as the most advanced, complete, and reliable sampling solution available, anywhere.

No imitation comes close. Nothing compares to HP5.

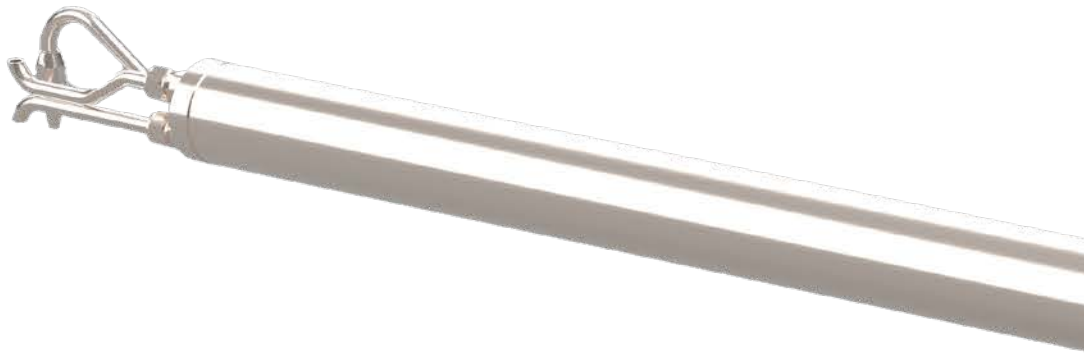
dado lab

One probe, multiple missions: sample from dust to micro-pollutants

With full compatibility across leading EN and EPA international standards, the HP5 can be configured for the precise determination of a wide range of micro-pollutants, including:

EN 13284-1 / EPA Method 5 – Low-concentration particulate matter / ISO 9096 – Low/high concentration PM / EN ISO 1948-1 / EPA Method 23 – Dioxins, furans, and PCBs / ISO 11338-1 – PAHs / EN UNI 13211 / OHM – Total mercury /EN 14385 / EPA Method 29 – Heavy metals / FprCEN/TS EN 13740 – Fluorides / FprCEN/TS 17638 – Formaldehyde / ISO 21877 – Ammonia / OTM 45 PFAS

Built to Last. Designed to Perform.
The HP5 is engineered for durability and precision in the most demanding sampling environments: it integrates all tubing bundles, including the Pitot tube, into a single, streamlined unit.
All components exposed to flue gases are crafted from AISI 316 stainless steel, ensuring exceptional resistance to corrosion and high temperatures. Every pneumatic connection is equipped with Swagelok-type fittings, delivering a secure, leak-free seal you can rely on no matter the conditions.



Accurate Sampling
The HP5 features 8 mm internal diameter sampling lines, specifically designed to reduce particulate buildup and maximize recovery efficiency. These tubes are fully interchangeable and available in a variety of materials, including AISI 316 stainless steel, Titanium Grade 2, Glass, and Quartz, ensuring the right solution for every sampling challenge.

Pitot Terminal – Type “S”
Crafted from AISI 316 stainless steel, the Type “S” Pitot Terminal is built for durability and accuracy. Each unit is individually serial-numbered and supplied with a calibration report detailing the Pitot constant, determined using a certified reference series in full compliance with EN 16911.
For enhanced traceability, ISO 17025 certification is available upon request.

All-in-One Sampling Solution
Its advanced heating distribution system is specifically engineered to maintain a stable temperature above the dew point, effectively preventing condensation and preserving sample integrity. Temperature control is seamlessly managed by the ST5 automatic isokinetic sampler, which also logs all data for full traceability.

The HP5 is fully compatible with any EPA console or standalone controller.

Slide & Locking Device: Smart Design. Solid Performance.

Engineered for maximum field efficiency, the Slide and Locking Device simplifies every step of stack sampling.

Thanks to its integrated roller system, the probe glides into position with minimal effort, even in challenging setups. Its innovative design also enables precise axial rotation, allowing for quick and accurate swirl angle measurements in full compliance with EN and EPA standards.

Readings can be taken via the digital indicator mounted on the HUB or directly from the sliding assembly, where the laser-engraved scale ensures fast and immediate visibility.

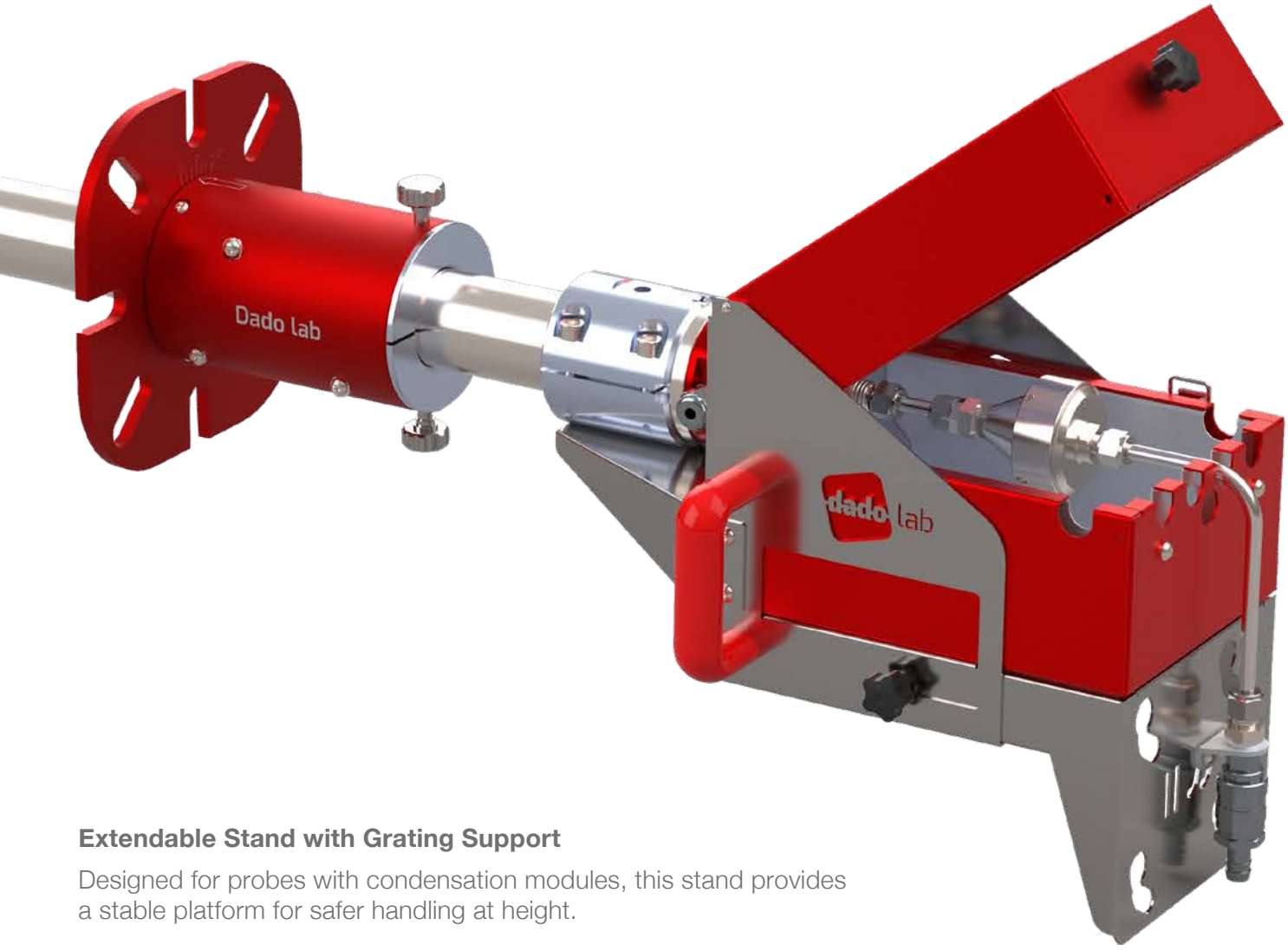
Dual locking jaws securely clamp the probe, dramatically reducing flue gas leakage at the sampling port, ensuring a cleaner, safer, and more efficient operation.

Lightweight Strength

Crafted from high-grade aluminum, the device weighs less than 1.5 kg, offering the perfect balance of durability and portability for fieldwork.

Universal Fit, Effortless Mounting

The rotating counterflange with open elliptical slots allows for quick, flexible installation on flanged ports ranging from 4" to 5" (DN80, DN100, DN125): no hassle, no delays.



Extendable Stand with Grating Support

Designed for probes with condensation modules, this stand provides a stable platform for safer handling at height.

The HUB: Smart Sample Distribution: One Probe, Multiple Possibilities

The HP5 redefines flexibility in isokinetic sampling. Thanks to its modular design, it can be configured to collect multiple pollutants simultaneously, distributing the sample across up to 4 condensing lines using just one probe.

This makes it the ideal solution when only a single sampling port is available, while also cutting down sampling time by enabling multiple analyses during a single isokinetic run.

After filtration, the HP5 can be equipped with a single or multi-sidestream titanium or glass manifold, allowing you to direct sample aliquots to different adsorption trains, fully compliant with official methods like EN 14385, EN 13211, EN 14791, EN 1911, and ISO 15713.

Modular by Design

Switch between vertical and horizontal stack configurations in seconds. The HUB connection allows seamless rotation, while a quick-release clamp and four hex screws make probe changes fast and tool-friendly.

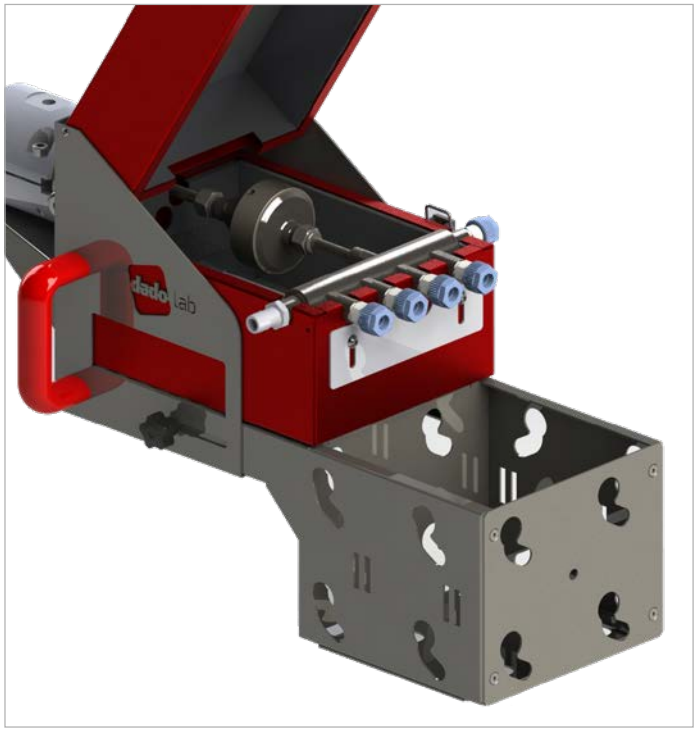
Field-Ready Ergonomics

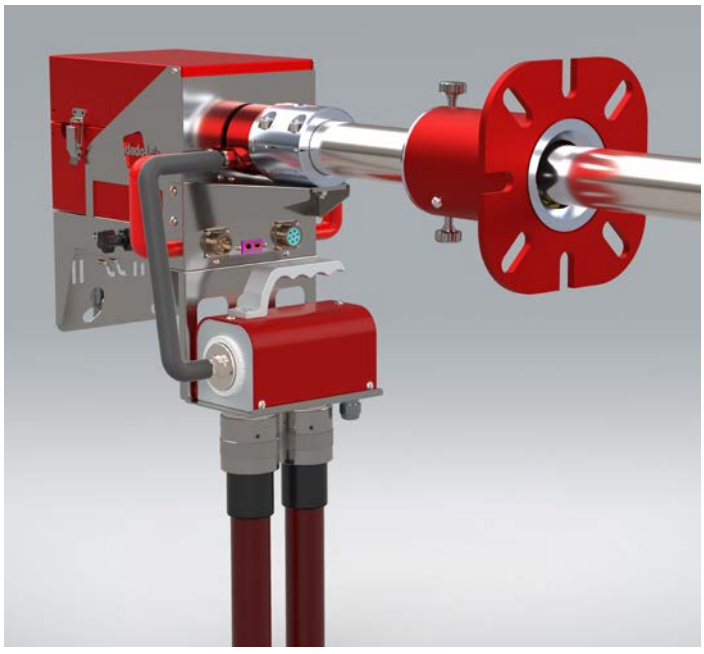
Two ergonomic handles make it easy to insert the probe into stacks or lift it to elevated positions—streamlining workflow and reducing technician fatigue.

Heated HUB, No Tools Required

All condensation modules attach directly to the HUB using a screwless locking system ensuring a secure, efficient, and frustration-free setup.

At the 4DL HUB outlet, you can mount one or two athermical boxes, capable of housing up to four impinger trains, giving you the power to run complex sampling campaigns with ease.





Additional Gas Sampling Line

The HP5 offers an optional secondary gas line for simultaneous gas analysis during sampling.

When paired with the HP1 heated gas filter probe, it enables real-time monitoring using FID and FTIR analyzers. Combined with the GD1 gas cooling system, it also supports portable combustion gas analyzers.

The HP1 includes a zero/span gas inlet for dynamic calibration upstream of the filter, ensuring full compliance with regulatory standards.

In its most advanced configuration, the HP5 can handle sampling through the main line, four sidestreams, and two gas lines simultaneously, all using a single port.

The Dadolab Condensing Systems

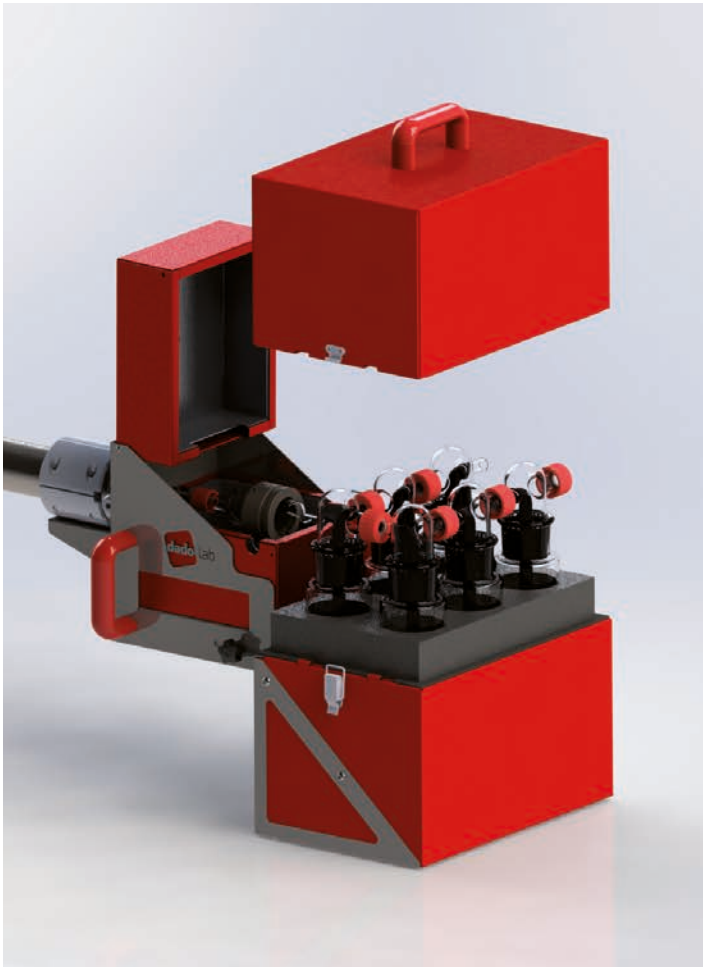
Athermal Boxes

Strong yet lightweight, these athermal boxes are made of high-strength steel and aluminum with integrated thermal insulation.

They can be mounted directly onto the HP5 probe or used as standalone units, ensuring effective condensation control with minimal setup.

Tool-free installation and a stainless-steel protective lid make them a practical, ready-to-use solution for field operations.

Thanks to interchangeable supports, each box can hold up to six bubblers in various materials—glass, PTFE, or polycarbonate—making them perfect for demanding applications in full compliance with EN standards such as EN 14385 and EN 13211.



Peltier Box with Active Cooling

PLT Boxes deliver consistent performance thanks to advanced Peltier technology, making them ideal for cooling in situations where ice is not an option.

Lightweight and practical, weighing only 4.5 kg, they can be easily mounted on the HP5 HUB and lower the internal temperature by up to 20°C below ambient.

A perfect solution for moderate conditions where reliability and ease of use are essential.

FC5 Condenser & Trap – Compact Power for Dioxin and PAH Sampling

FC5: The Compact, High-Efficiency Condenser

Designed to pair seamlessly with the HP5 probe, FC5 complies with EN 1948-1 (filter/condenser method for PCDD/PCDF and dioxin-like PCBs) and ISO 11338 for PAH determination. It also supports EPA Method 23 with a dedicated option.

The adsorption cartridge is positioned inside the condenser body to maximize capture efficiency while protecting it from shocks and sunlight. The upward flow design minimizes the risk of water breakthrough.

FC5 features a thermocouple for accurate condensation temperature monitoring, ensuring full data traceability.

Two hose connectors allow connection to a recirculating chiller with counterflow for superior cooling efficiency.

FC5 and its accessories come in a convenient transport case for easy handling in the field.

The PFAS with OTM 45 Method: new challenge, new solution.

Dado Lab consistently rises to every challenge, setting the standard for technical innovation and continuously adapting to meet the market's toughest demands.

The entire line is completely free from PTFE contact, even the filter holder grid.

The PFAS KIT is supplied in a sturdy, convenient Pelican-style case to ensure maximum protection against impacts.

Thanks to its intelligent modular design, the HP5-ST5 system makes OTM 45 compliance simple: just integrate the FC5 line and unlock the full potential of our most advanced sampling solution, with or without the Knock-Out Impinger

SC6 – Cooling Power Meets Practical Design

SC6 – Compact Power, Dual-Mode Cooling

Versatility meets performance with the SC6, Dado Lab's light and high-efficiency cooling system engineered for the most demanding field applications.

Whether you're sampling heavy metals, PFAS or micro-pollutants like PCDD/PCDF, the SC6 adapts seamlessly to your workflow, delivering two powerful cooling modes in one compact, rugged unit: an integrated cooling bath for impinger trains and a recirculating chiller for condensers like the FC5 or PFAS.

Designed for mobility and built to endure

The SC6 combines a lightweight, compact form with a robust steel and aluminum frame.

Two stainless-steel handles make transport effortless, even to elevated or hard-to-reach sampling points.

Its generously sized tank accommodates up to six impingers, delivering powerful, uninterrupted cooling throughout even the longest sampling sessions: no ice, no glycol, just pure performance driven by an advanced refrigeration unit.

Smart features enhance usability in the field: recirculation pump control allows you to disable the pump when not needed, a clearly visible coolant level simplifies monitoring, and the quick-fill and drain system eliminates the need for tools or funnels.

From setup to shutdown, the SC6 streamlines your workflow with efficiency, ergonomic design, and field-ready durability.

You can focus on precision, wherever your sampling takes you.

Part Number and accessories

Description	PN				Voltage	
	AISI	Titanium	Glass	Quartz	110 Vac	230 Vac
Leak test cap	101 102 2080					
Nozzle diam. 3mm		101 102 2061				
Nozzle diam. 4mm	101 102 2082	101 102 2062	101 102 2161	101 102 2261		
Nozzle diam. 5mm	101 102 2083	101 102 2063	101 102 2162	101 102 2262		
Nozzle diam. 6mm	101 102 2084	101 102 2064	101 102 2163	101 102 2263		
Nozzle diam. 7mm	101 102 2085	101 102 2065	101 102 2164	101 102 2264		
Nozzle diam. 8mm	101 102 2086	101 102 2066	101 102 2165	101 102 2265		
Nozzle diam. 9mm	101 102 2087	101 102 2067	101 102 2166	101 102 2266		
Nozzle diam. 10mm	101 102 2088	101 102 2068	101 102 2167	101 102 2267		
Nozzle diam. 11mm	101 102 2089	101 102 2069	101 102 2168	101 102 2268		
Nozzle diam. 12mm	101 102 2090	101 102 2070	101 102 2169	101 102 2269		
Nozzle diam. 14mm	101 102 2091	101 102 2071	101 102 2170	101 102 2270		
Nozzle diam. 15mm	101 102 2092	101 102 2072				
Nozzle diam. 16mm	101 102 2093	101 102 2073				
Gooseneck for nozzles	101 102 2081	101 102 2050				
Union tee d.10 for quartz						
glass inner tubes			101 102 2300			
HP5 Inner tube L = 0,5m	101 102 2021	101 102 2001	101 102 2101	101 102 2201		
HP5 Inner tube L = 1,0m	101 102 2022	101 102 2002	101 102 2102	101 102 2202		
HP5 Inner tube L = 1,5m	101 102 2023	101 102 2003	101 102 2103	101 102 2203		
HP5 Inner tube L = 2,0m	101 102 2024	101 102 2004	101 102 2104	101 102 2204		
HP5 Inner tube L = 2,5m	101 102 2025	101 102 2005	101 102 2105	101 102 2205		
HP5 Inner tube L = 3,0m	101 102 2026	101 102 2006	101 102 2106	101 102 2206		
Gas sampling line for HP5 probe 0,5m	101 102 2011					
Gas sampling line for HP5 probe 1,0m	101 102 2012					
Gas sampling line for HP5 probe 1,5m	101 102 2013					
Gas sampling line for HP5 probe 2,0m	101 102 2014					
Gas sampling line for HP5 probe 2,5m	101 102 2016					
Gas sampling line for HP5 probe 3,0m	101 102 2017					
HP5 Probe L = 0,5m					101 102 1021	101 102 1001
HP5 Probe L = 1,0m					101 102 1022	101 102 1002
HP5 Probe L = 1,5m					101 102 1023	101 102 1003
HP5 Probe L = 2,0m					101 102 1024	101 102 1004
HP5 Probe L = 2,5m					101 102 1025	101 102 1005
HP5 Probe L = 3,0m					101 102 1026	101 102 1006
HUB 4DL for HP5 probe					101 102 1112	101 102 1102
25x100 Thimbleholder		101 102 1415	101 102 1403	101 102 1404		
47mm filterholder	101 102 1430	101 102 1410	101 102 1401	101 102 1402		
EPA 8 47mm Glass filterholder			101 102 1441			

Part Number and accessories

Pitot

101 102 2030 ..... "S" Type Pitot - Out Stack Version
101 102 2032 ..... "S" Type Pitot Extension for Impactor
101 102 1431 ..... Instack adapters for filterholder and Pitot

Probe support

101 102 2401 ..... Sliding device with rollers for CP5/HP5 Probes
101 102 2405 ..... Sliding device with rollers for CP5/HP5 Probes > 2.5m
101 102 1150 ..... Monorail and trolley for HP5 probe
101 102 1151 ..... Afnor plate with 2" port and handles
101 102 2451 ..... Adapting flange for unichim stack port
101 102 2500 ..... Extensible stand for HP5 probe

Filters spares

101 102 1411 ..... Spare titanium cartdrige for 47mm filters
101 102 1412 ..... Box of 5 PTFE coated grids for 47mm titanium cartridge
101 102 1435 ..... Spare AISI 316 cartdrige for 47mm filters
101 102 1432 ..... Box of 5 AISI316 grids for 47mm Filterholder cartridge
101 102 1440 ..... Spare Tempcoat© cartdrige for PFAS kit
101 102 2039 ..... Vertical filterholder AISI 316 adapter
101 102 2040 ..... Vertical filterholder Titanium adapter
101 102 1501 ..... 2-stages impactor for PM10/2.5
101 102 1425 ..... AISI316 Connector for filterholder w/ quick connector
101 102 4010 ..... Set of 10 pcs 10 mm PTFE nuts
101 102 4011 ..... Set of 10 pcs 8 mm PTFE nuts
101 102 1450 ..... Set of 10 Viton gaskets for 47mm filterholder, max T 200°
101 102 1451 ..... Set of 10 GF gaskets for 47mm filterholder, max T 350°
101 102 1452 ..... Set of 10 high temp gaskets (850°C) for 47mm filterholder
101 102 4111 ..... HP5 Gas sampling line sinter filter

Side sampling

101 102 1413 ..... 1DL titanium manifold
101 102 1416 ..... 2DL titanium manifold
101 102 1417 ..... 4DL titanium HT manifold w/ TC
101 102 1422 ..... 4DL derivation adapter for horizontal installation
101 102 1203 ..... PVDF Ball valve for derived line
101 102 1103 ..... Support cube for two athermal boxes
101 102 1418 ..... Thermocouple and fitting for derived lines
101 102 1405 ..... 47mm Glass filterholder 1DL
101 102 1406 ..... 47mm Quartz filterholder 1DL
101 102 1408 ..... 2DL glass derivation

Part Number and accessories

Cooling system
101 102 1201 .....HP5 athermic box for impingers
101 103 2001 .....Support foam for 500cc impingers
101 103 2003 .....Support foam for derived line
101 103 2005 .....Support foam for 6 250cc impingers
101 102 1211 .....PLT athermal box for impingers
101 103 2007 .....Support foam for PLT box - 500cc
101 103 2008 .....Support foam for PLT box - 250cc

Glass impinger main line
101 103 2010 .....500cc free tube impinger
101 103 2011 .....500cc plate impinger
101 103 2012 .....GL25/GL18 90° Elbow connector
101 103 2013 .....Outlet gas 90° Elbow connector

Glass impinger side sampling
101 103 2014 .....250 cc Side Sampling Impinger w/schott
101 103 2019 .....250 cc Side Sampling Impinger w/frit
101 103 2023 .....250 cc Side Sampling Impinger w/frit and schott

Glass impinger kit with main line and 1 side line.
101 103 2050 .....1DL Glassware kit

Glass impinger determination of chemical species
101 103 2016 .....Type "A" impinger

Polymeric impinger
101 103 2017 .....500cc free tube Polycarbonate impinger
101 103 2018 .....250cc free tube Polycarbonate impinger
101 103 2025 .....250 cc PTFE Impinger
101 103 2026 .....250cc PE impinger
101 103 2020 .....Pack of 5 porous septum for polymeric impingers
101 103 2022 .....Kit of 4 fittings for PTFE tube for PC impingers

Silicagel trap
101 110 4002 .....Silica gel/Charcoal trap 100cc
101 110 4003 .....Silica gel/Charcoal trap 1 lt

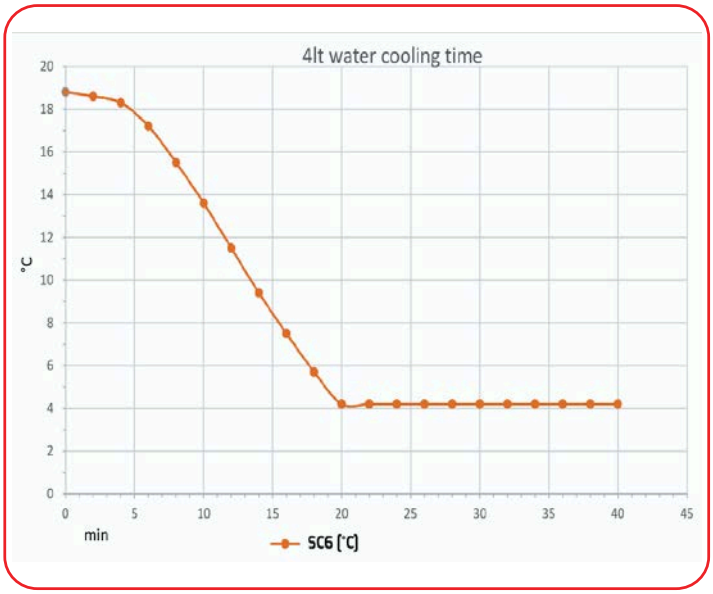
EN 1948-1 EPA 23 cooling system
101 102 1301 .....FC5 Micropollutants Filter/Condenser for HP5 w/ case
101 102 4001 .....XAD2/PUF Spare trap
101 102 4002 .....1 lt bottle with GL45 connection
101 102 4003 .....Backup XAD2/PUF trap
101 102 4004 .....EPA23A Glass Cartdridge
101 102 4005 .....PAH glass cartridge
101 102 4006 .....Outlet FC5/G500 T connector w/ temp sensor 8mm inlet
101 102 4007 .....Kit of spare schott caps and sil/ptfe gaskets for FC5

Smart Chiller SC6
101 103 1002 .....Smart Chiller SC6
101 103 2002 .....Support foam for 500cc impingers - SC6
101 103 2004 .....Support foam for derived line - SC6
101 103 2006 .....Support foam for 250cc impingers - SC6

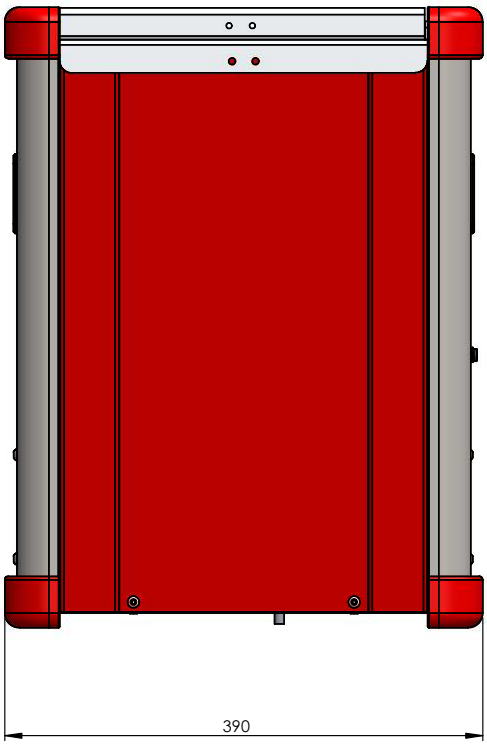
PFAS OTM 45
101 102 4051 .....PFAS OTM-45 glassware kit for FC5 no knock-out impinger
101 102 4053 .....PFAS OTM-45 glassware kit for FC5 w/ knock-out impinger

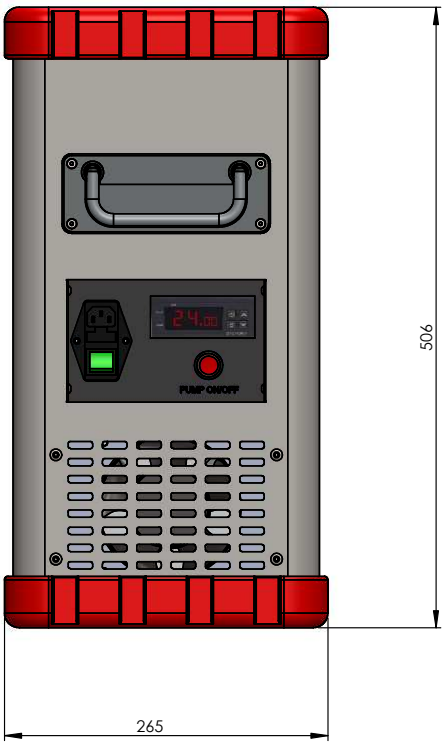
SC6 Smart Chiller Technical characteristics

Refrigerator power	2360 Btu/h
Recirculation pump flowrate	15 lt/min@1.5 meters difference in height
Bath temperature	Preset on optimal values
Operation conditions	-10 ÷ 43°C 95% RH
Stock conditions	-10 ÷ 50°C 95% RH
Bath size (WxDxH)	270x170x160 mm
Power supply	230 Vac ±10% 50/60Hz
Materials	Steel and Aluminum
Dimensions (WxDxH)	390x270x505 mm
Weight	16 kg
Power consumption	600 W



Dimensions (mm)





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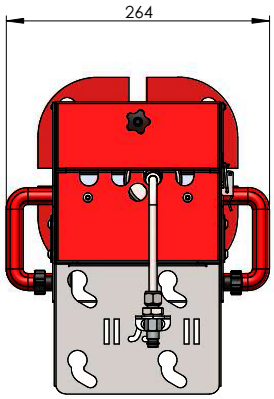

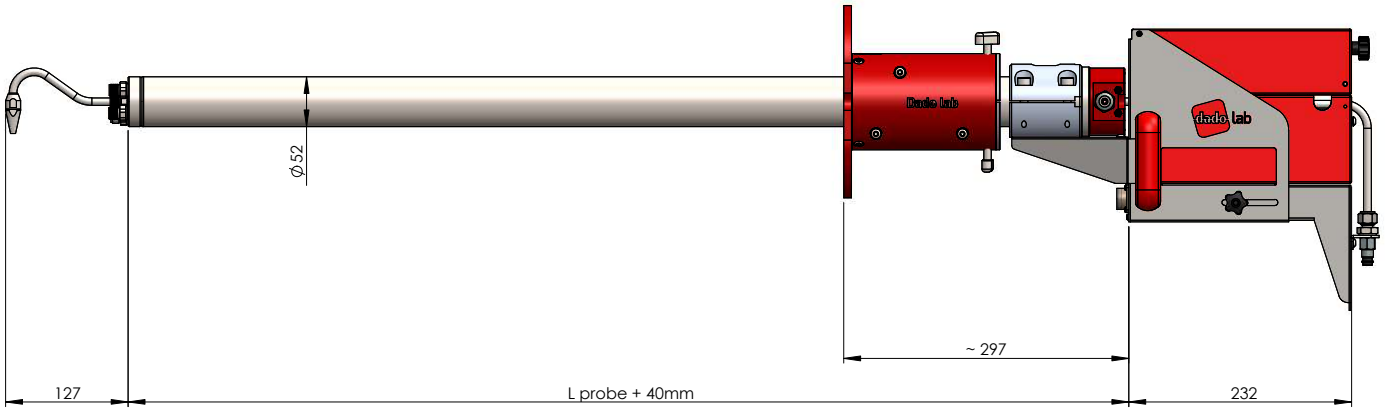

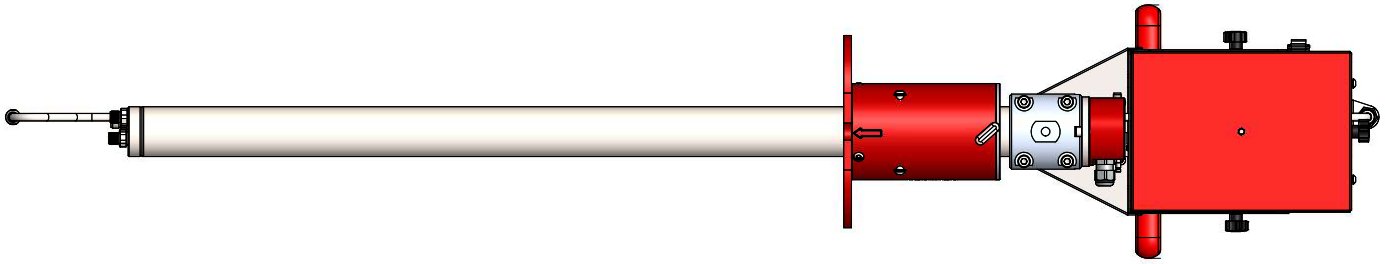

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