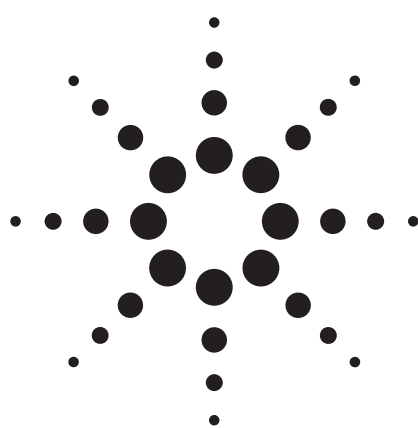




Specifications at a Glance

Specifications

General CombiPAL Specifications in Liquid Mode

System type:	XYZ robot with syringe-only concept	Sample capacity*:	• Up to 600 1 mL micro vials (78 1 mL vials standard) • Up to 294 2 mL standard vials (98 2 mL vials standard) • Up to 96 10 mL or 20 mL vials • Up to 4 deepwell microplates (96/384 wells) • Up to 8 standard microplates (96/384 wells)
Local user interface:	Control panel with 4 function keys, graphical LCD display, unique scroll knob for teach functions	Syringe cleaning:	Wash Station for 2 different solvents (standard)
Electrical control:	• 2 RS232C ports • 3 TTL input/3 TTL output • 2 Opto Coupler input • 2 Relay output	Options:	• PAL Headspace option (requires CombiPAL basic liquid version) • PAL SPMEoption (requires CombiPAL basic, including headspace option) • Cooled trayholders for 1 mL, 2 mL, 10 mL and 20 mL vials • SPME Fiber Cleaning Station • Stacks for 96/384 well micro- or deepwell plates • Solvent/reagent reservoir • Large Volume Wash Station
Dimensions:	Length 828 mm, depth 385 mm, height: 648 mm	Power requirements:	100 – 240 V, 120 W, 50/60 Hz
Weight:	10 kg (without accessories)	Environment:	4 °C – 40 °C constant temperature, < 80% humidity (noncondensing)
GC mounting kits:	Agilent 7890A, 6850, and 6890		
Syringe sizes:	1.2 µL, 5 µL, 10 µL (standard), 25 µL, 100 µL, 250 µL, and 500 µL		
Injection speed:	Selectable from 0.01 µL/sec up to 500 µL/sec		

Specifications in Headspace Mode (CombiPAL Only)

Syringe sizes:	• 1.0 mL (0.1 – 1.0 mL) • 2.5 mL (0.25 mL – 2.5 mL) • 5.0 mL (0.5 mL – 5.0 mL)	Heated syringe:	30 °C – 150 °C selectable in 1 °C increments
Injection speed:	Selectable from 0.01 µL/sec up to 5 mL/sec	Incubator oven:	6 heated vial positions for 2 mL/10 mL/20 mL vials
Sample capacity:	• Up to 294 2 mL standard vials • Up to 96 10 mL or 20 mL vials	Incubation temperature:	30 °C – 200 °C in 1 °C increments
Syringe cleaning:	Inert gas purging of heated syringe	Agitation:	Interval shaking 250 rpm – 750 rpm selectable in 1 rpm increments
		Incubation time:	Up to 999 minutes selectable in 1 second increments
		Option:	PAL SPME

GC PAL Specifications

System type:	XYZ robot with syringe-only concept	Injection speed:	Selectable from 0.01 µL/sec up to 500 µL/sec
Local user interface:	Control panel with 4 function keys, graphical LCD display, unique scroll knob for teach functions	Sample capacity*:	• Up to 600 1 mL micro vials (78 1 mL vials standard) • Up to 294 2 mL standard vials (98 2 mL vials standard) • Up to 96 10 mL or 20 mL vials • Up to 4 deepwell microplates (96/384 wells) • Up to 8 standard microplates (96/384 wells)
Electrical control:	• 2 RS232C ports • 3 TTL input/3 TTL output • 2 Opto Coupler input • 2 Relay output	Syringe cleaning:	Wash Station for 2 different solvents (standard)
Dimensions:	Length 828 mm, depth 385 mm, height 575 mm	Options:	• Thermostatted trayholders (4 °C – 70 °C) • Stack for 96/384 well micro- or deepwell plates • Solvent/reagent reservoir • Large Volume Wash Station
Weight:	10 kg (without accessories)	Power requirements:	100–240 V, 120 W, 50/60 Hz
GC mounting kits:	Agilent 7890A, 6850, and 6890	Environment:	4 °C – 40 °C constant temperature, < 80% humidity (noncondensing)
Syringe sizes:	1.2 µL, 5 µL, 10 µL (standard), 25 µL, 100 µL, 250 µL, and 500 µL		

*Depends on GC model

Note: Specifications on this page refer to the Combi Pal and GC Pal hardware. See page 2 for software driver capabilities.



Agilent Technologies

Agilent CTC Pal Control Software and EZChrom Elite Drivers

CTC Pal Autosampler Parameters Controlled Through GC ChemStation, GC/MSD ChemStation and EZChrom Elite in Various Modes

Liquid	Headspace	SPME
Syringe size	Syringe size	Fiber expose time
Sample volume	Sample volume	Pre inc time
Air volume	Incubat temp	Agi speed
Pre cln slv1	Incubat time	Agi on time
Pre cln slv2	Agi speed	Agi off time
Pre cln spl	Syring temp	Vial penetr (depth)
Fill speed	Fill speed	Extract time
Fill strokes	Pullup del	Desorb to
Inject to	Inject to	Inj penetr
Inject speed	Inject speed	Inj penetr (depth)
Pre inj delay	Pre inj del	Desorb time
Pst inj delay	Pst inj del	Fiber bakeout
Pst cln slv1	Syr flushing	
Pst cln slv2		

CTC Pal Autosampler control software or EZChrom Elite is required for integrated software control.

The Agilent CTC Pal ChemStation drivers currently feature next sample overlap. Multiple sample overlap is not a feature of the drivers. In general,

multiple sample overlap would only be required when the customer has methods in which the GC run time is less than the heating/agitation time of the Pal headspace accessory. Customers needing multiple sample overlap capability through ChemStation should consider the G1888A Headspace Sampler and associated software control. They may also consider standalone control of the Pal Autosampler.

With Agilent EZChrom Elite drivers, custom cycles can be imported which have been developed in Cycle Editor.

Note: Cycle Editor is not available for sale by Agilent.

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