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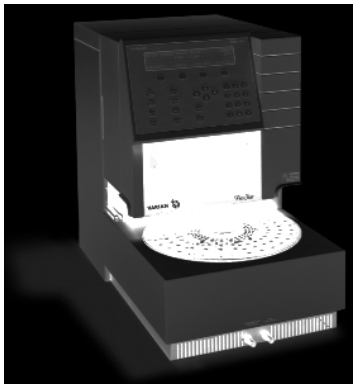
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ProStar™ 420 AutoSampler

- Low volume, no loss sampling
- Use of multiple sample vial formats
- Options include a biocompatible configuration and thermostatted sample tray

Intelligent Automation at Your Fingertips



The ProStar 420 AutoSampler is a versatile multifunctional instrument for HPLC. It is ideal for both routine analyses and for method development. With the ProStar 420's modular footprint requiring only 28 cm (11 in.) of space, your laboratory work area is efficiently used. Impressive sampling technology is used to achieve the highest injection precision allowing the ProStar 420 to inject from as little as 5 µL volumes. The flexibility of the ProStar 420 will astound you with features like integrated solvent stream switching and column selection valves, plus the ability to accept multiple vial sizes, even inexpensive PCR microtubes.

Advanced Injection System

The ProStar 420 utilizes a unique double needle design. This consists of a stainless steel outer needle which is used to puncture the septum, followed by a PEEK capillary which is used to aspirate the preprogrammed sample amount into the sample loop. No more septum coring, bending or plugging of the sample needle. The Pressure Assisted Sampling (PAS) technique slightly pressurizes the contents of the vial for unbeatable sampling accuracy and reproducibility. PAS in combination with the ProStar 420's 0.004 µL dispensing precision, gives excellent injection precisions down to 1 µL levels to satisfy the demands of research as well as for high throughput routine analysis laboratories. The ProStar 420's flexible sample tube can accommodate biomolecules by using either the nonmetal Silcosteel® or PEEK materials.

Variety of Vial Sizes

For maximum flexibility the sample carousel is composed of 8 segments, each containing different vial sizes that can be mixed and matched. Vials ranging from 0.16 to 10 mL sizes can be used for injecting volumes ranging from 1 to 1,000 µL. By using a vial height sensor, the ProStar 420 guarantees consistent depth penetration of the sampling needle, independent of vial height variations up to a 48 mm (1.9 in.) size. Maximum vial and volume options offer the user the greatest amount of flexibility.

Automated Features

A versatile reagent mixing routine enables aspirating and dispensing a programmed volume from any vial into any other vial in the sample carousel. Using an aspirating/dispensing cycle with a programmable syringe speed makes automated pre-column derivatizations, dilutions, pH adjustments, etc., possible. The programmable sampling height capability allows injections from difficult samples such as two-phase mixtures, or samples containing precipitates. The ProStar 420 can be fitted with two integrated stream selection valves for fully automated sample cleanup or preconcentration. The valve option can also be used as a column selection valve. For additional flexibility and performance, the ProStar 510 Column Thermostat can be mounted next to the ProStar 420. This allows the optional side mounted Valco Injection Valve and optional stream selection valves to be mounted inside the oven compartment, thus controlling the sample's temperature throughout the chromatographic process.

Specifications						
Sample capacity:	Standard 96 x 1.8 mL vials, 12 vials per segment					
Optional trays:	160 x 0.5 mL vials, 20 vials per segment 72 x 4 mL vials, 8 vials per segment 32 x 10 mL vials, 4 vials per segment					
Injection volume:	1 to 1,000 µL					
Injection methods:	Loop overfill, partial loop fill, µL pick-up with no sample loss					
Replicate injection number:	Up to 9					
Needle wash:	User programmable, 300 – 9,999 µL Separate needle wash port and waste					
Wash solvent:	250 mL integrated wash solvent bottle					
Syringe dispenser:	100 µL, 250 µL (standard), 500 µL or 1,000 µL					
Vial detection:	Missing Vial detection through vial sensor					
Reproducibility:	• **Loop Overfill**: less than 0.3% RSD • **Partial Loop**: fill less than 0.5% RSD for injection volumes greater than 5 µL • **Microliter Pick-up**: less than 1.0% RSD for injection volumes greater than 5 µL					
Carryover:	Less than 0.01% with needle wash					
Minimum sample volume:	• **Partial loop fill injections**: 35 µL • **Pick-up injections**: 5 µL					
Module/Computer Interface:	• **Communication Output**: Inject marker, Vial marker, Labeled vial marker, Stop I/O (contact closure and TTL), Vial number BCD or HEX (TTL), 4 Auxiliaries (contact closure), 2 programmable outputs (contact closure) • **Input**: Next Injection, Next vial, Freeze, Stop I/O, 4 programmable inputs (all TTL) • **Serial Interface**: RS 422/485 for Galaxie or Star Workstation • Optional tray cooling • Peltier type cooling elements. • **Range**: 4 to 40 °C programmable (Cooling capacity min. 20 °C below ambient)					
Power requirements:	115 Vac; 50/60 Hz; 250 VA 220 Vac; 50/60 Hz; 250 VA					
Dimensions and Weight						
Size:	**height**	17.3 in. 44 cm	**width**	11 in. 28 cm	**depth**	21.3 in. 54 cm
Weight:	48 lb / 22 kg 66 lb / 30 kg with cooling option installed					

ProStar 420 AutoSampler

Select the combination of features that fit your specific needs.

Biocompatible	Stream Switching	Injection Valve	Standard Sample Tray	Sample Tray Cooling	Quantity (Each)
Yes	Yes	Standard	**393528907**	**393528908**	1
	No	Side-mounted		**393528909**	1
		Standard	**393528903**	**393528904**	1
No	Yes	Standard	**393528905**	**393528906**	1
	No	Standard	**393528901**	**393528902**	1

ProStar™ 420 AutoSampler Accessories

ProStar 420 Autosampler Tray Segments

Tray segments accept the following vial sizes: 0.5 mL/ 7 mm OD; 2 mL/ 12 mm OD; 4 mL/ 15 mm OD; 10 mL/ 23 mm OD
Vials per segment: 0.5 mL/ 20 vials; 2 mL/ 12 vials; 4 mL/ 9 vials; 10 mL/ 4 vials
The "10 mL" segments accept 6 mL or 10 mL vials.

Segment	0.5 mL	2 mL	4 mL	10 mL	Quantity (Each)
Segment #1	**392607731**	**392607771**	**392607741**	**392607751**	1
Segment #2	**392607732**	**392607772**	**392607742**	**392607752**	1
Segment #3	**392607733**	**392607773**	**392607743**	**392607753**	1
Segment #4	**392607734**	**392607774**	**392607744**	**392607754**	1
Segment #5	**392607735**	**392607775**	**392607745**	**392607755**	1
Segment #6	**392607736**	**392607776**	**392607746**	**392607756**	1
Segment #7	**392607737**	**392607777**	**392607747**	**392607757**	1
Segment #8	**392607738**	**392607778**	**392607748**	**392607758**	1

ProStar 420 Accessories

Description	Part No.	Quantity (Each)
Cable, RS-485/422 Serial Communication Cable For Star Workstation Control	**393546291**	1
Cable, Start In/Start Out Cable	**393516101**	1
EPROM Field Upgrade Kit, AI-1A to ProStar 420	**393614792**	1
Valve, Micro Injector Valve With Motor	**392607883**	1
Valve, Preparative Injector Valve With Motor	**392607882**	1
Valve, Valco Biocompatible Injection Valve	**392611061**	1
Valve, Valco Injection Valve	**392611060**	1

ProStar™ 420 and 430 AutoSampler Maintenance

Description	Part No.	Quantity
Bottle, Wash Solvent Bottle 250 mL	**R000088055**	1 Each
Needle Body	**R000088051**	1 Each
Needle Wash Insert Vial	**R000088050**	1 Each
Needle, Air/Prepuncturing Needle	**R000088053**	1 Each
Needle, Sample Needle, Extra Long, Fused Silica, With Tubing, Nuts & Ferrules	**392607839**	1 Each
Needle, Sample Needle, Extra Long, PEEK, With Tubing, Nuts & Ferrules	**R000088066**	1 Each
Needle, Sample Needle, Extra Long, With Tubing, Nuts & Ferrules	**R000088065**	1 Each
Needle, Sample Needle, Fused Silica, With Tubing, Nuts & Ferrules	**392607838**	1 Each
Needle, Sample Needle, Large Bore Prep	**R000088064**	1 Each
Needle, Sample Needle, Peek, With Tubing, Nuts & Ferrules	**R000088068**	1 Each
Needle, Sample Needle, With Tubing, Nuts & Ferrules	**R000088052**	1 Each

Description	Part No.	Quantity
Needle, Sample, Silica-coated Steel Needle, With Tubing, Nuts & Ferrules	**392607835**	1 Each
Plunger Tip for 100 µL Syringe	**392607831**	10 /Pk
Plunger Tip for 250 µL Syringe	**392607963**	10 /Pk
Plunger Tip for 500 µL Syringe	**392607832**	10 /Pk
Plunger Tip for 1000 µL Syringe	**392607964**	10 /Pk
Syringe, 100 µL	**R000088057**	1 Each
Syringe, 250 µL	**392607810**	1 Each
Syringe, 500 µL	**R000088059**	1 Each
Syringe, 1000 µL	**392607962**	1 Each
Syringe, 10 ml	**R000088067**	1 Each
Tubing, 500 µL Buffer Tubing	**392607804**	1 Each
Tubing, 2000 µL Buffer Tubing	**392607805**	1 Each
Tubing, 15 ml Buffer Tubing	**392607847**	1 Each
Tubing, Syringe Wash Tubing	**392607972**	1 Each
Tubing, Syringe-to-waste Tubing	**392607971**	1 Each

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