

Hamo[®] T-21/T-420 Washers

Validated Cleaning Systems



STERIS[®]



Life Sciences

Validating the Cleaning Process is a Vital Link in Your Operational Chain

T-21/T-420

The Hamo T-420 and the smaller T-21 washers were designed specifically for the high demands of the pharmaceutical sector and offer:

- > Internal cleaning and drying by means of hollow-guide jets using automatic coupling
- > Rinsing independent of the tank circulating system (both internal and external) by means of separate rinse pipework
- > Automatic movement of the wash load by means of rotation or vibration during the cleaning and drying process
- > Supply in accordance with customer's standard requirements, e.g. explosion-proof (ATEX)
- > Fully automatic transport of the wash load utilizing conveyors



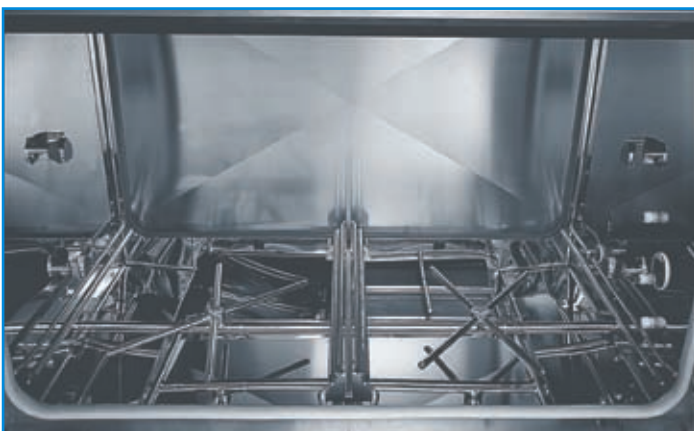
Hamo T-420 Washer

Made to Meet the Demanding Requirements of the Pharmaceutical Industry

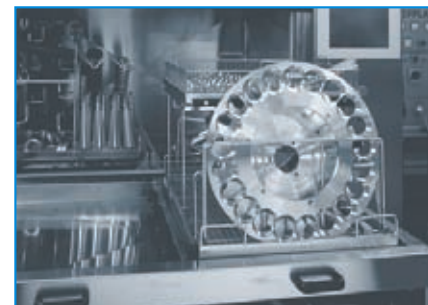
The system is self-cleaning and constructed in accordance with the latest standards of the pharmaceutical industry and conforms to cGMP and GAMP. The materials and components that come into contact with the process conform to FDA and BN2 (e.g. stainless steel 316L /1.4435 to Ra < 0,4µm).

Integrated Dryer

Integral drying capability, up to 110°C (240°F), uses HEPA-filtered, forced air directed into the chamber and also through the hollow jet spindles, allowing for quick drying times. This also provides for a self-cleaning system eliminating the extra space, extra time and damage associated with transferring loads into companion dryers.



Hamo T-420 Wash Chamber





Hamo T-21 Washer

Double-Door Execution

Double-door pass-through execution allows the use of barrier technology into clean areas or clean rooms. With the inclusion of automated conveyors, this concept produces maximum throughput where process logistics and manual handling are important.

Innovative and User-Friendly Control Concepts

The Hamo T-420 and the T-21 washers are available with the microprocessor controller infracontrol or with the new Hamo Sirius NT PC Control System.

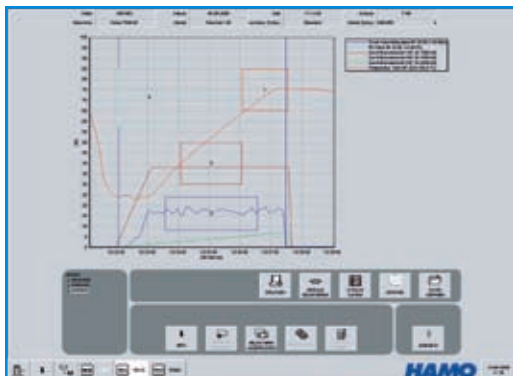
The design of the system control and documentation is carried out according to GAMP. Hamo washers enable the administration of the cleaning program data and are available in various forms such as printer data on the network, storage on various data media (disk, CD, tape) and on the system control screen.

Qualification of the System, Including Documentation (DQ, FAT, SAT, IQ & OQ)

The system and its controls were developed using the lifecycle principle to enable a certified system. The documentation available for qualification will assist customers in the validation process. Standard documentation can also be modified in accordance with the client's requirements.

Real-Time Process Data Validation System (PDVS)

The PDVS process data monitoring system is a unique monitoring system that permits online documentation of the wash process using sensors that are independent of the machine's control. This allows online independent monitoring of the process and ensures that the most exacting standards are met. The extensive documentation produced is provided in electronic data form.



Hamo Data Validation System



Hamo T-21 Washer Infracontrol

Hamo Washer Model Numbers	Maximum Rack Dimensions						Water	Control		Execution	
	Width mm	Height mm	Depth mm	Width inches	Height inches	Depth inches	Consumption per cycle liters (gallons)	Micro-Processor	PC Allen-Bradley	PC Siemens	Multi-Chamber
T-21	640	640/1000	640	25.25	25.25/39.5	25.25	35/40 (9.3/10.6)	x	x	x	
T-420	1290	700/1000	800/1200	50.75	27.5/39.5	31.5/47.25	60/65 (16/17.3)	x	x	x	
T-840	640	640	640	25.25	25.25	25.25	35 (9.3)	x	x	x	x
T-900	1290	700/1000	800	50.75	27.5/39.5	31.5	60/65 (16/17.3)	x	x	x	x
KG	1000-1200	1300-2200	1700-2900	39.5-47	51.25-86.5	67-114.25	220 (58.5)	x			
BCC	1200-1500	1500-2500	1200-1500	47.25-59	59-98.5	47.25-59	160 (42.3)		x	x	
T-BCC	1200-1500	1500-2500	1200-1500	47.25-59	59-98.5	47.25-59	160 (42.3)		x	x	x

Leading Technology and Quality



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