

STERILE PHARMACEUTICAL WATER DISTRIBUTION SKID CONFIGURATION

PHARMACEUTICAL / VETERINARY SECTOR

WATER	Type of water	<ul style="list-style-type: none"> ○ Water for injections ○ Purified water
	Purified water distribution temperature	Between 10°C and 80°C
ACCUMULATION TANK	Accumulation tank volume*	Between 500L and 10,000L
	Tank insulation	<ul style="list-style-type: none"> ○ Rock wool and welded jacket ○ Rock wool and detachable jacket ○ No insulation
	Instrumentation of the buffer bank	<ul style="list-style-type: none"> ○ Pressure transmitter ○ Radar level ○ Guided microwave level ○ Digital maximum level ○ Digital minimum level ○ Vent filter 0.22 µm unheated ○ Vent filter 0.22 µm heated ○ Temperature probe with sheath ○ Security valve ○ Manhole ○ Washing balls
	Tank discharge valve	<ul style="list-style-type: none"> ○ Welded Diaphragm Relief Valve ○ Valve with clamp connection
	Tank interior finishes	<ul style="list-style-type: none"> ○ AISI316L Ra< 0,5 µm ○ AISI316L Ra< 0,8 µm
	Tank exterior finishes	<ul style="list-style-type: none"> ○ Satin polished (including weldings) ○ Mirror polished (including weldings) ○ Technical area finish (without polished weldings)
	Tank connections	<ul style="list-style-type: none"> ○ Tri-Clamp ○ NA-Connect

* Other options available on request.

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DISTRIBUTION OF THE RING	Connections*	Tri-Clamp ASME-BPE-SF1
	Number of points of use*	Between 1 and 30 points of use
	Points of use opening simultaneity factor	Between 0.1 and 1
	Ring pipe diameter*	Between 1" and 4"
	Point of use flow	Between 500 L/h and 4,000 L/h
	Point of use diameters	Between ½" and 2"
	Minimum Ring Return Flow*	Between 1,000 L/h and 4,000 L/h
TECHNICAL FEATURES	Ring Sanitization / Sterilization*	<ul style="list-style-type: none"> ○ 124°C clean steam sterilization and purge control of the point of use ○ Overheated water sterilization ○ 80°C purified water sanitization
	Ring regulations	<ul style="list-style-type: none"> ○ Pump delivery pressure ○ Ending ring pressure ○ Pump delivery flowmeter ○ Ending ring flowmeter ○ Ending ring pressure automatic control valve ○ Ending ring pressure regulator ○ Ending ring temperature probe ○ Return steam exchanger ○ Return cold exchanger ○ Pump frequency inverter
	Ring quality controls*	<ul style="list-style-type: none"> ○ Ending ring minimum pressure control ○ Ending ring minimum flow control ○ Return conductivity control ○ Return TOC control ○ UV disinfection system ○ Discharge sampling valve ○ Return sampling valve ○ Ring return temperature control ○ Ring availability management
	Points of use opening	<ul style="list-style-type: none"> ○ Manual ○ Automatic ○ Automatic-Manual ○ Opening limiter ○ Configuration of automatic opening of points of use ○ Simultaneity management of points of use ○ ZDL valves ○ Multiport valves with integrated sampling

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TECHNICAL FEATURES	Pumping system	<ul style="list-style-type: none"> ○ 1 open impeller centrifugal pump ○ 2 redundant open impeller centrifugal pumps ○ Sterilizable pump/s option ○ Pump protection with level detector ○ Tank level pump protection
	Ring valves	<ul style="list-style-type: none"> ○ EPDM membrane valves ○ EPDM-PTFE membrane valves
DOCUMENTATION		<ul style="list-style-type: none"> ○ GMP ○ ATEX
AUTOMATION		<ul style="list-style-type: none"> ○ Keypad ○ HMI ○ SCADA ○ 21CFR ○ User configurable recipes ○ Remote access

* Other options available on request.

NON-STERILE PHARMACEUTICAL WATER DISTRIBUTION SKID CONFIGURATION

PHARMACEUTICAL / VETERINARY / COSMETIC SECTOR

WATER	Type of water	<ul style="list-style-type: none"> ○ Cold purified water ○ Hot purified water
	Purified water distribution temperature	Between 10°C and 80°C
ACCUMULATION TANK	Accumulation tank volume*	Between 500L and 10,000L
	Tank insulation	<ul style="list-style-type: none"> ○ Rock wool and welded jacket ○ Rock wool and detachable jacket ○ No insulation
	Instrumentation of the buffer bank	<ul style="list-style-type: none"> ○ Pressure transmitter ○ Radar level ○ Guided microwave level ○ Digital maximum level ○ Digital minimum level ○ Vent filter 0.22 µm unheated ○ Vent filter 0.22 µm heated ○ Temperature probe with sheath ○ Security valve ○ Manhole ○ Washing balls
	Tank discharge valve	<ul style="list-style-type: none"> ○ Welded Diaphragm Relief Valve ○ Valve with clamp connection
	Tank interior finishes	<ul style="list-style-type: none"> ○ AISI316L Ra< 0,5 µm ○ AISI316L Ra< 0,8 µm
	Tank exterior finishes	<ul style="list-style-type: none"> ○ Satin polished (including weldings) ○ Mirror polished (including weldings) ○ Technical area finish (without polished weldings)
	Tank connections	<ul style="list-style-type: none"> ○ Tri-Clamp ○ NA-Connect

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	Point of use diameters	Between ½" and 2"
	Minimum Ring Return Flow*	Between 1,000 L/h and 4,000 L/h
TECHNICAL FEATURES	Ring Sanitization / Sterilization*	<ul style="list-style-type: none"> ○ 80°C purified water sanitization
	Ring regulations	<ul style="list-style-type: none"> ○ Pump delivery pressure ○ Ending ring pressure ○ Pump delivery flowmeter ○ Ending ring flowmeter ○ Ending ring pressure automatic control valve ○ Ending ring pressure regulator ○ Ending ring temperature probe ○ Return steam exchanger ○ Return cold exchanger ○ Pump frequency inverter
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	Ring valves	<ul style="list-style-type: none"> ○ EPDM membrane valves ○ EPDM-PTFE membrane valves 	
DOCUMENTATION		○ GMP	○ ATEX
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