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TECHNICAL OFFICE
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STERILE CIP/SIP EQUIPMENT CONFIGURATION

PHARMACEUTICAL / VETERINARY SECTOR

MATERIALS IN CONTACT WITH THE PRODUCT	**Material**	AISI316L		
	Interior finishes	ASME-BPE SF1 (Ra<0,5 µm)		
	Connections*	○ Tri-Clamp ASME-BPE	○ Tri-Clamp ISO 1127	
TYPOLOGY OF CIP/SIP	**Cleaning (CIP) Sterilization (SIP) Drying (DIP)**	○ CIP/DIP	○ SIP/DIP	○ CIP/SIP/DIP
	Equipment mobility	○ Fixed	○ Mobile	
CLEANING OF TANKS	**Tank volume to be cleaned***	Between 10L and 4000L		
	Tank diameter to clean/sterilize	Up to 3m		
	Number of intrusive elements inside the tank [OPTIONAL]	Up to 5 elements		
CLEANING OF PIPES / EXCHANGERS / HOSES	**Installation length to clean**	Up to 100m		
	Installation diameter to clean / sterilize	Between 1/2* and 4"		
	Serial lines to be cleaned / sterilize	Between 1 and 5 lines		
	Lines to be cleaned / sterilize in parallel	Between 1 and 5 lines		
EQUIPMENT	**CIP valves***	○ Membrane valves ○ Butterfly clamp valves (High pressure lines)		
	CIP pump*	○ Sterilizable centrifugal pump with open impeller ○ Pump protection with level detector		

*Other options available on request

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PHARMACEUTICAL / VETERINARY SECTOR

AUTOMATIC CONTROLS	**CIP cleaning automatic controls**	○ Pipe cleaning speed/flow control ○ Tank balls cleaning pressure control ○ Cleaning mixture temperature control		
	Chemical dosing	**Up to 2 chemicals** ○ Mix conductivity control ○ Dosed quantity control ○ Percentage of dosed quantity control		
	Final water quality controls	○ Conductivity ○ TOC ○ Conductivity and TOC		
	Automatic SIP sterilization controls	○ Steam saturation pressure regulation ○ Steam saturation temperature regulation ○ Minimum condensate temperature control ○ Sterilization time control ○ Control f0		
	Automatic DIP drying controls	○ Drying pressure regulation ○ Drying flow regulation ○ Drying temperature control ○ Drying air mass control		
	CIP/SIP options	○ Pulsating vacuum	○ Vacuum test	○ Pressure test
UTILITIES	**SIP required utilities** (minimum pressure 2 barg)	○ Clean steam ○ Filtered compressed air 0,22 µm		
	CIP required utilities (minimum pressure 2 barg)	○ Cold purified water ○ Filtered compressed air 0,22 µm		
	CIP optional utilities (minimum pressure 2 barg)	○ Softened cold water ○ Softened hot water ○ WFI		
	Accumulation tank volume* [OPTIONAL]	Between 50 and 2000L		
	Accumulation tank instrumentation	○ Pressure ○ Temperature ○ Radar level	○ Guided microwave level ○ Filter 0,22µm ○ Heated filter 0,22 µm	
DOCUMENTATION		○ GMP	○ ATEX	
AUTOMATION		○ Keypad ○ HMI ○ SCADA	○ 21CFR ○ User configurable recipes ○ Remote access	

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NON-STERILE CIP EQUIPMENT CONFIGURATION

PHARMACEUTICAL / VETERINARY / COSMETICS SECTOR

MATERIALS IN CONTACT WITH THE PRODUCT	**Material**	AISI316L	
	Interior finishes	ASME-BPE SF1 (Ra<0,5 µm)	
	Connections*	○ Tri-Clamp ASME-BPE	○ Tri-Clamp ISO 1127
TYPOLOGY OF CIP/SIP	**Cleaning (CIP) Drying (DIP)**	○ CIP ○ CIP / DIP	
	Equipment mobility	○ Fixed	○ Mobile
CLEANING OF TANKS	**Tank volume to be cleaned**	Between 10L and 4000L	
	Tank diameter to clean	Up to 3m	
	Number of intrusive elements inside the tank	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
CLEANING OF PIPES / EXCHANGERS / HOSES	**Installation length to clean**	Up to 100m	
	Installation diameter to clean up*	Between 1/2* and 4"	
	Serial lines to be cleaned	Between 1 and 5 lines	
	Lines to be cleaned in parallel	Between 1 and 5 lines	
EQUIPMENT	**CIP valves***	○ Membrane valves ○ Butterfly clamp valves (High pressure lines)	
	CIP pump*	○ Open impeller centrifugal pump ○ Multistage centrifugal pump ○ Pump protection with level detector	

*Other options available on request

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NON-STERILE CIP EQUIPMENT CONFIGURATION

PHARMACEUTICAL / VETERINARY / COSMETICS SECTOR

AUTOMATIC CONTROLS	**CIP cleaning automatic controls**	○ Pipe cleaning speed/flow control ○ Tank balls cleaning pressure control ○ Cleaning mixture temperature control
	Chemical dosing	**Up to 2 chemicals** ○ Mix conductivity control ○ Dosed quantity control ○ Percentage of dosed quantity control
	Final water quality controls	○ Last washing water conductivity control
	Automatic DIP drying controls	○ Drying pressure regulation ○ Drying flow regulation ○ Drying temperature control ○ Drying air mass control
UTILITIES	**CIP required utilities** (minimum pressure 2 barg)	○ Cold purified water ○ Filtered compressed air 0.22 µm
	CIP optional utilities (minimum pressure 2 barg)	○ Softened cold water ○ Softened hot water
	Accumulation tank volume* [OPTIONAL]	Between 50 and 2000L
	Accumulation tank instrumentation	○ Pressure ○ Temperature ○ Radar level ○ Guided microwave level ○ Filter 0,22µm ○ Heated filter 0,22 µm
DOCUMENTATION		○ GMP ○ ATEX
AUTOMATION		○ Keypad ○ HMI ○ SCADA ○ 21CFR ○ User configurable recipes ○ Remote access

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CIP EQUIPMENT CONFIGURATION

FOOD SECTOR

MATERIALS IN CONTACT WITH THE PRODUCT	**Material**	○ AISI304L	○ AISI316L
	Interior finishes	○ ASME-BPE SF1 (Ra<0,5 µm) ○ DIN-11850 (Ra<0,8 µm)	
	Connections*	○ Tri-Clamp ○ DIN-11850... DIN-11851	
TYPOLOGY OF CIP/SIP	**Cleaning (CIP) Drying (DIP)**	○ CIP ○ CIP / DIP	
	Equipment mobility	○ Fixed	○ Mobile
CLEANING OF TANKS	**Tank volume to be cleaned**	Between 10L and 4000L	
	Tank diameter to clean/sterilize	Up to 3m	
	Number of intrusive elements inside the tank	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
CLEANING OF PIPES / EXCHANGERS / HOSES	**Installation length to be cleaned**	Up to 100m	
	Installation diameter to clean up*	Between 1/2* and 4"	
	Serial lines to be cleaned	Between 1 and 5 lines	
	Lines to be cleaned in parallel	Between 1 and 5 lines	
EQUIPMENT	**CIP valves***	○ Butterfly valve DIN-11850 ○ Clamp Butterfly valve	
	CIP pump*	○ Open impeller centrifugal pump ○ Multistage centrifugal pump ○ Pump protection with level detector	

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CIP EQUIPMENT CONFIGURATION
FOOD SECTOR

AUTOMATIC CONTROLS	**CIP cleaning automatic controls**	○ Pipe cleaning speed/flow control ○ Tank balls cleaning pressure control ○ Cleaning mixture temperature control
	Chemical dosing	**Up to 2 chemicals** ○ Mix conductivity control ○ Dosed quantity control ○ Percentage of dosed quantity control
	Drying automatic controls DIP	○ Drying pressure regulation ○ Drying flow regulation ○ Drying temperature control ○ Drying air mass control
	CIP options	Pressure test
UTILITIES	**CIP required utilities** (minimum pressure 2 barg)	Water and filtered compressed air
	CIP optional utilities (minimum pressure 2 barg)	○ Softened cold water ○ Softened hot water
	Accumulation tank volume*	Between 50 and 2000L
	Accumulation tank instrumentation	○ Pressure ○ Temperature ○ Radar level ○ Guided microwave level ○ Filter 0,22µm ○ Heated filter 0,22 µm
DOCUMENTATION		○ GMP ○ ATEX
AUTOMATION		○ Keypad ○ HMI ○ SCADA ○ User configurable recipes ○ Remote access

*Other options available on request