

## ....effective, tightly controlled, CIP cleaning of your process equipment..



Our C-series CIP units are specifically designed and developed for validated cleaning processes on small to mid-sized production equipment within the highly regulated life science and pharmaceutical industries.

The C-series CIP units utilize an advanced technology platform that facilitates full use and tight control of all critical cleaning parameters (TACCT) for very efficient, reproducible, cleaning operations.

The C-series CIP units are designed as self-contained, compact & portable, skids that - due to our unique modular hardware and software design philosophy - can be configured and adapted in many ways to best meet your specific installation, operational, and performance requirements.

- Suited for cleaning of smaller to mid-sized process equipment
- Full TACCT cleaning performance & flexibility
- Designed for high end cGMP and FDA regulated facilities
- Highly configurable, compact & portable, cleaning unit
- S88 based software platform with our unique PLC driven recipe system
- Full monitoring & reporting of critical process parameters

### Typical uses & applications:

#### **Sterile (liquid):**

- Formulation tanks
- Filling tanks
- Transfer lines (up to 1½")
- Filling lines (aseptic)

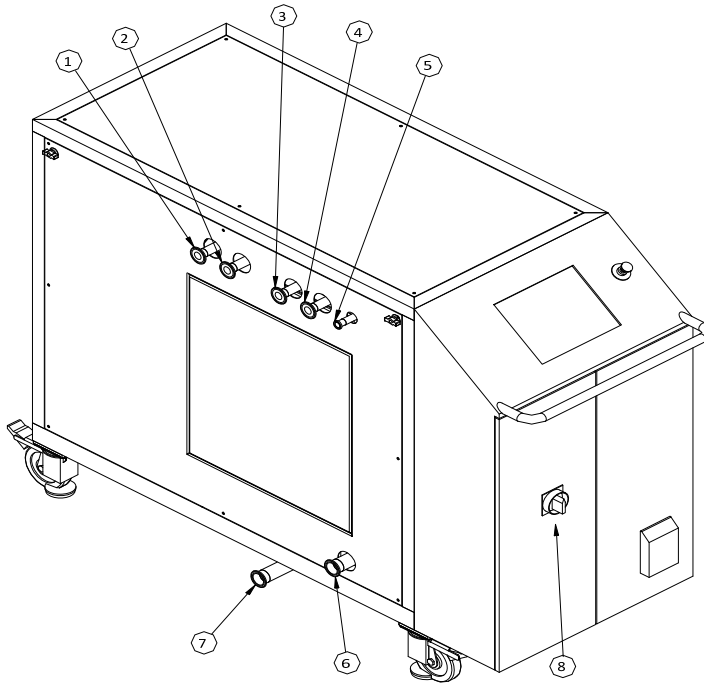
#### **Biotech:**

- Bio reactors
- Transfer lines & manifolds
- Holding tanks
- Filling lines (aseptic)

C-series CIP unit					
<b>Process &amp; Mechanical</b>	Tank	Single tank			
		Atmospheric	Volume:	40 gallon /150 Liter	
		Fully welded insulation	<i>Vent filter available</i>		
	Supply	CIPS pump	Pressure:	<120 psi /8 bar	
		Frequency controlled	Flow	<40 gpm /<150 lpm	
	Heating	Steam heating	Temp.:	<200 °F /<95°C	
		Plate type HX	<i>Electrical heating module available</i>		
	Return	CIPR pump	Flow	<40 gpm /<150 lpm	
		Divert valve arrangement for re-circ and single pass to drain operations			
	Chemicals	Automatic dosing of up to two (2) detergents			
		Chemical concentration verified by high range conductivity			
	Instrumentation	Level; CIP buffer vessel			
		Pressure, flow and temperature; CIP supply			
		High range conductivity; Chemical concentration			
Low range conductivity; Final rinse verification					
Materials	Product contact	AISI 316L, mech polish to RA 25 µin			
		FDA approved elastomers			
	Non product contact	AISI 304			
<b>Controls</b>	Automated	NEMA 4x enclosure			
		Allen-Bradley Compact Logix PLC			
		10" touch screen HMI panel - running RS View			
		Standard Software - including our flexible cleaning recipe system			
		Stack-light			
		Design, documentation, qualification, testing as per GAMP4			
<b>Dimensions &amp; Weight</b>	Length:	62" / 160 cm			
	Width:	26" / 65 cm	Compact frame		
	Height:	50" / 130 cm	Four (4) wheels		
	Weight	600 lbs / 270 kg			
<b>Documentation</b>	Standard documentation package	PID, Layout and Arrangement drawings, component lists, electrical and			
		pneumatic schematics, operator & admin manuals, GAMP/S88 docs			
		CD w/technical literature			
	QA documentation	Certificate of manufacturing, Full welding certification			
		Traceable Material certificates	<i>Various QA packages available</i>		
		3D Isometrics for welding, slope etc			

## Available Options:

Our C-series CIP units are configurable and can be delivered with various optional modules, such as pressure tested CIP buffer vessel (FV and 15 psi) w/vent filter, electric heaters replacing the steam operated heat exchanger, heated gas purge (sterile filtrated air or nitrogen), software integration to PCS.....or in complete custom designs!



1	USP water	min 10 GPM @ 20 psi
2	Process water	min 10 GPM @ 20 psi
3	CIP supply 1	<40 GPM @ 120 psi
4	CIP supply 2	<40 GPM @ 120 psi
5	Plant steam	min 15 psi, 100 lbs/hour
6	CIP return	<40 GPM
7	Drain	<40 GPM
8	Power	3 x 480 N+PE, 60 Hz, 30/50 Amps

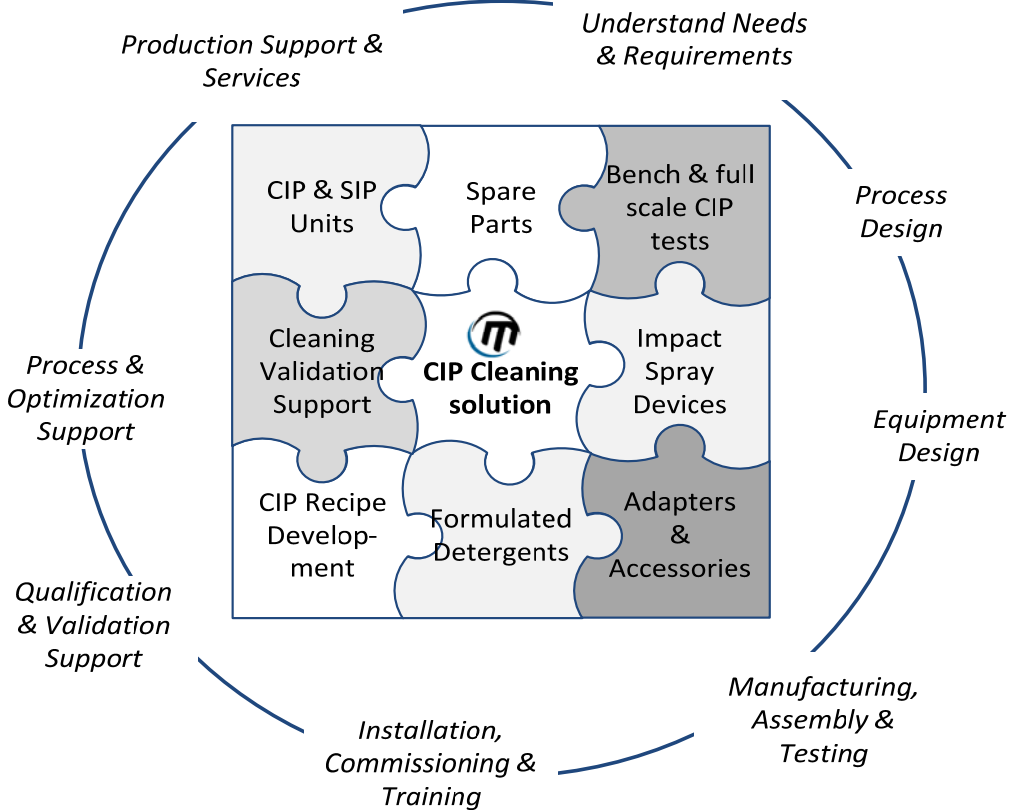
## Other Cleaning Related Equipment & Services:

- QA documentation packages
- Commissioning & SAT
- Equipment Qualification (IQ/OQ)
- Cleaning validation support
- Preventive maintenance
- Spare parts
- Phone support & emergency repairs
- CIP cycle development

# The McFlusion Difference



We specialize in providing complete (life-cycle) process solutions for cleaning and sterilization that are performance based & result oriented.....



...our services & equipment solutions optimize production through increased plant utilization, decreased fluid usage and labor-hours, minimize risks and meet all regulatory requirements.

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