

# PROXICLEAN

## Close proximity cleaning-in-place unit using lost or recovered solutions

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# PROXICLEAN CLOSE PROXIMITY CLEANING-IN-PLACE UNIT



## Control hygiene to secure your processes

- > The design of the Proxiclean cleaning station includes all EHEDG, 3A and GMP recommendations
- > The complete automation of these units guarantees the **safety, reproducibility** and **traceability** of the cycles as well as the control of all the cleaning parameters.
- > Moreover, aware of the environmental impact of cleaning, PIERRE GUERIN provides its expertise to enable **sustainable development** of your industrial tool by minimizing energy consumption.

## Configuration of Proxiclean functions and tanks

It is possible to select the desired functions among the 6 possible (cold rinse, hot rinse, detergent 1, detergent 2, disinfectant, recovery) and to assign each one to a dedicated tank or to use a common tank, according to the following criteria:

### Use of one product per dedicated tank

- > The solution is recovered: energy and product savings
- > Shorter cleaning time
- > Higher equipment cost
- > Larger overall dimensions

### Use of one product per CIP tank

- > The solution is lost Longer cleaning time Optimized
- > equipment cost Smaller
- > overall dimensions

	Dedicated tank	CIP tank 185L on base	In line	From network
Cold water	✓			✓
Hot water	✓	✓		✓
Detergent 1	✓	✓	✓	
Detergent 2	✓	✓	✓	
Disinfectant	✓	✓	✓	
Recovered water	✓	✓		

## Selection guide

\*Several choices are possible

CIP tank			Dedicated tank		
Code	Options	Selection	Code	Options	Selection
R	Clean water tank (CIP tank)	X	R	Clean water tank (CIP tank)	X
R1*	Hot water (CIP tank)	<input type="checkbox"/>	Ec*	Dedicated hot water tank	<input type="checkbox"/>
R2*	Detergent 1 (with dosage) (CIP tank)	<input type="checkbox"/>	D1*	Dedicated detergent tank (with dosage)	<input type="checkbox"/>
R3*	Detergent 2 (with dosage) (CIP tank)	<input type="checkbox"/>	D2*	Dedicated detergent tank (with dosage)	<input type="checkbox"/>
R4*	Recovery (CIP tank)	<input type="checkbox"/>	Re*	Dedicated recovery tank	<input type="checkbox"/>
R5*	Disinfectant (with dosage) (CIP tank)	<input type="checkbox"/>	Dc*	Dedicated Disinfectant tank (with dosage)	<input type="checkbox"/>

\*\* only one choice possible

### Common selections regardless of the choice of CIP or Dedicated Tank

Code	Options	Selection
P1**	185L vertical tank	<input type="checkbox"/>
P2**	400L vertical tank	<input type="checkbox"/>
P3**	800L vertical tank	<input type="checkbox"/>
Isc1	tank insulation	<input type="checkbox"/>
Ch1**	Heating with steam	<input type="checkbox"/>
Ch2**	Heating with hot water	<input type="checkbox"/>
Ch3**	Heating with electric resistance	<input type="checkbox"/>
Rc1	1 <sup>st</sup> rinse with hot water	<input type="checkbox"/>
Ed**	Direct in-line water	<input type="checkbox"/>
Ve1**	Water valve on each tank	<input type="checkbox"/>
Ri1	With feedback sensors switches	<input type="checkbox"/>
Rp1	With product recovery	<input type="checkbox"/>
Di1	With in-line disinfection	<input type="checkbox"/>
Lic1	With continuous level on each tank	<input type="checkbox"/>
Fte1	With flow meter	<input type="checkbox"/>
Ftr1	With return flow meter	<input type="checkbox"/>
Fsl1	With return flow sensor	<input type="checkbox"/>
Tu1	With turbidimeter	<input type="checkbox"/>
Fta1	With water flow meter	<input type="checkbox"/>
Sa1	With air blowing	<input type="checkbox"/>
Pr1	With return pump	<input type="checkbox"/>
Pe1	With supply pressure sensor	<input type="checkbox"/>
Fi1	Filter	<input type="checkbox"/>
Fi2	Return filter	<input type="checkbox"/>
Ai1	With stainless steel cabinet	<input type="checkbox"/>

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## Reduced environmental impact

The choice of cleaning devices is decisive in order to combine performance and low flow, water and energy consumption.

CIP balls normal operating conditions	Action radius (m)	Pressure (bar)	Flow rate (m <sup>3</sup> /h)
Static ball (light mechanical action)	1	1.2	1.8
	3	1.2	4.8
	4	1.2	7.2
Rotating ball (mechanical action by sweeping)	1	2	1
	1.5	1.5	5
	2	3	3
Mechanised ball (mechanical action by impact)	2.5	5	3
	4	5	6
	5	5	9
Wall cleaner	2	3	4.5

- > Washing phases with recirculation are preferred to washing with direct delivery of solutions to the effluent
- > Stations with recovered solutions integrate a sorting strategy that limits water losses and detergent dilutions
- > Recovery of the last rinsing water used is activated as soon as possible
- > Tank insulation contributes to reducing energy consumption
- > The automatic system allows cleaning times and parameters to be optimised

## Cleaning sequence

Test modules allow you to adapt the cycles to your cleaning protocols according to the specificities of your products and equipment.

Type of CIP cycle	Fluids	Temperature	Time (mins)
Pre-wash equipment	Water	15°/ 20°C	5
Blowing & Purging piping	Air		3 <sup>(1)</sup>
Solution preparation detergent 1	Water + caustic solution	60°/ 85°C	7 <sup>(2)</sup>
Recirculation detergent solution detergent 1	Water + caustic solution	60°/ 85°C	15
Rinsing/blowing after detergent 1	Air / Water		3 <sup>(1)</sup>
Solution preparation detergent 2	Water + Acid	50°/ 55°C	7 <sup>(2)</sup>
Recirculation detergent solution detergent 2	Water + Acid	50°/ 55°C	10
Rinsing/blowing after detergent 2	Air / Water		3 <sup>(1)</sup>
Rinsing CIP station and equipment	Water	10°/ 15°C	5
Final rinse equipment	Process water		10
Blowing & Purging piping	Process air		5
<b>Total</b>			<b>60 to 70</b>

(1) Can be carried out as a background task

(2) Can be done as a background task only on a recovered solution station



**PIERRE GUERIN SAS**

Head office: 179 Grand'Rue  
BP 40012

79210 Mauzé-Sur-Le Mignon - France

Tel. +33 (0)5 49 04 78 00

[contact@pierreguerin.egkVdi.com](mailto:contact@pierreguerin.egkVdi.com)

**PIERRE GUERIN Ibérica S.A.U.**

c/ Valle de Tobalina, 6

P.I. Villalonquejar

09001 Burgos - Spain

Tel: +34 (0)947.259.100

[contact.spain@pierreguerin.egkVdi.com](mailto:contact.spain@pierreguerin.egkVdi.com)

**PIERRE GUERIN Deutschland  
GmbH**

Daimlerring 6d

D-31135 Hildesheim - Germany

Tel: +49 5121 708,160

[contact.germany@pierreguerin.egkVdi.com](mailto:contact.germany@pierreguerin.egkVdi.com)

**PIERRE GUERIN Ltd**

3B Swallowfield Courtyard

Wolverhampton Road,

Oldbury - West Midlands,

B69 2JG -United Kingdom

Tel: +44 (0) 1452.725.409

[contact.uk@pierreguerin.equans.com](mailto:contact.uk@pierreguerin.equans.com)

**PIERRE GUERIN China**

Room GHK, 4/F, Building N°3

lane 1505 #100 Qing Yun Road Zhang Jiang

High Tech Park Shanghai (201203) - China

Tel: +86 (21) 31.33.87.68

[contact.china@pierreguerin.equans.com](mailto:contact.china@pierreguerin.equans.com)



[contact@pierreguerin.equans.com](mailto:contact@pierreguerin.equans.com)  
[www.pierreguerin.com](http://www.pierreguerin.com)

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