

WCS Group
 The H₂O experts
 MARLOWE Critical Services

GUARDIAN
 Air & Water Hygiene Specialists

A WCS Group Company

Clearwater
 A WCS Group Company

GENOX

Safe alternative to ClO₂

Low hazard HOCl biocide

Cost effective – from 4 pence/
 m³ of treated water

DWI approved

HSG274 - HOCl is the most
 effective form of Chlorine

Used widely in the NHS

Suitable for...

Hot / cold systems

Primary disinfection

Secondary disinfection

Hospitals

Hotels

Care homes

Schools

Legionella control

Drinking water

Horticulture

Breweries

Dairies

Food processing

And more ...



GENOX

Produces low hazard, HOCl biocide NEUTHOX[®] for primary and secondary disinfection.



Cost effective, safe and powerful biocide for large and small systems

A specially developed GENOX Generator System uses electrolysis of brine to generate a biocide (NEUTHOX[®]) on demand. NEUTHOX[®] is a powerful, proven disinfectant that controls biofilm and destroys Legionella and Pseudomonas and is effective even at 40-50°C. The active ingredient in NEUTHOX[®] is hypochlorous acid (HOCl) which is produced naturally in the human body within white blood cells to fight infection.

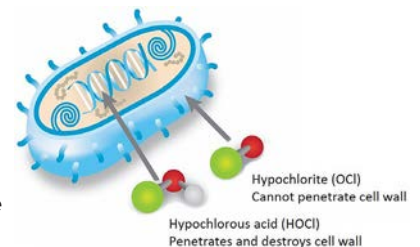
HOCl is lethal to pathogens. It is low hazard, easy to handle and easy to dose. Generation is inexpensive and HOCl is stored securely in a drum. The unit merely requires water, Genox salt and electricity.

A wide range of units are available and all are compact allowing for simple retro fitting to areas with small available space footprints. Horticultural units are also available.

How it works

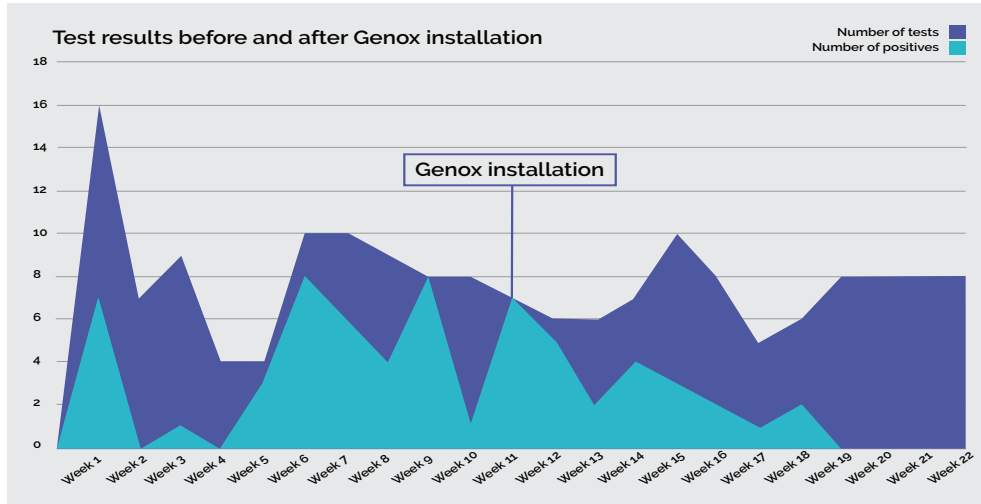
HOCl renders bacteria inactive and achieves its results by a two-stage disruptive process. On breaching the bacteria cell wall, it interacts chemically with the cell's proteins, attacking the cell's DNA and causing the whole cell to die.

The cell floods with water and acidic fluid and dies. Once the bacteria has been destroyed, its co-dependent relationship with the biofilm is disrupted and the biofilm begins to break up, bringing Legionella and Pseudomonas levels back or permanently under control to acceptable levels.



NEUTHOX[®] is approved with food and has no impact on water pH.

A UK school experienced persistent *Legionella* bacteria counts despite daily flushing, efforts to increase water flow and improve pipework and thermal pasteurisation of the water distribution system. Genox was trialled and eradicated *Legionella* bacteria counts below detectable levels within weeks.



Genox compared with conventional chlorine dioxide

ClO₂

- Complex Generator maintenance
- Requires supply and dosing of two chemicals
- Danger of Chlorite and Chlorate overdose
- Pre-stabilised ClO₂ has a limited shelf life
- ClO₂ in solution can sometimes be tasted
- Complex control
- Hazardous
- Handling issues
- Relatively expensive to generate

GENOX producing NEUTHOX®

- Simple, fast Generator maintenance
- No hazardous chemical handling
- HOCl is produced at a low hazard concentration
- HOCl stored in secure 50-200L tanks
- No taste, no colour, reduced danger of over-dosing
- Easy monitoring, control and adjustment remotely (optional)
- Ecologically safe
- PPE equipment for low hazard
- Inexpensive and cost effective to generate
- Easy training to measure the system reserve

Multiple applications with units tailored to needs, flow and application



Model T05



Model T10



Model T20

T00

Owner / Operator Manual
Install Guide (we will fit)
pH: 8.5
9-15L/hour options
500 x 640 x 250mm (W x H x D)
Lease finance option



T05

Owner / Operator Manual
Install Guide (we will fit)
ORP sensor and transmitter
Injection kit
pH: 8.5
9-15L/hour options
500 x 640 x 250mm (W x H x D)
Lease finance option



T10

Owner / Operator Manual
Install Guide (we will fit)
pH 6-8.5
30-100L/hour options
708 x 840 x 333mm (W x H x D)
Lease finance option



T15

Owner / Operator Manual
Install Guide (we will fit)
Dosing pump
Dosing kit
pH: 6-8.5
40-100L/hour options
708 x 840 x 333mm (W x H x D)
Lease finance option



T20

Owner / Operator Manual
Install Guide (we will fit)
pH: 6-8.5
125-400L/hour options
850 x 1440 x 460mm (W x H x D)
Lease finance option



T10

Owner / Operator Manual
Install Guide (we will fit)
Brine Tank – KCl (160L)
Brine Tank – NaCl (140L)
NEUTHOX® Buffer Tank (100L)
40-100L/hour options
pH: 8.5
708 x 840 x 333 (W x H x D)
Lease finance option



T15

Owner / Operator Manual
Install Guide (we will fit)
Brine Tank (160L)
Brine Tank – NaCl (140L)
NEUTHOX® Buffer Tank (100L)
40-100L/hour options
pH: 8.5
708 x 840 x 333 (W x H x D)
Lease finance option



T20

Owner / Operator Manual
Install Guide (we will fit)
Brine Tank - KCl (400L)
Brine Tank – NaCl (140L)
200-400L/hour options
pH: 8.5
708 x 840 x 333 (W x H x D)
Lease finance option



GENOX Generator

Version	L/hour*
NEUTHOX® Production Capacity (+ or - 10%)	mg/L*
Chloride Content in NEUTHOX®	mg/L*
Chlorate ClO ₃ Content in NEUTHOX®	mg/L*
Perchlorate ClO ₄ Content in NEUTHOX®	ppm*
Free Active Chlorine	pH
pH Value	Kg/day**
Approx NaCl Consumption	A
Max Pre-fuse	W
Max Power Consumption	v.Hz
Voltage	mg/L*
Power Cable Length	IP
Enclosure Class, Electrical Cabinet	Bar
Required Water Pressure	Bar
Max Drain Back Pressure	oC
Ambient Temperature Tolerance	m ³ /h
Min Required Room Ventilation	h/day
Recommended Running Hours	h/day
Max Running Hours	m
Water Connection Hose Length	Inch
Water Connection (BSP Male)	mm
Drain Connection (Push-in)	mm
Drain Hose (Min Inner Diameter)	m
Drain Hose (Max Length)	
Dosing Pump	
Max Flow Rate	L/h
Max Pressure	Bar
Suction Head	mWg
Max Pre-fuse	A
Max Power Consumption	W
Voltage (EU)	V.Hz
Placement	
Dimensions (Width, Height, Depth)	mm
Brine Tank Capacity, NEUTHOX® Tank Capacity	L
Weight	Kg
Sound Pressure	dB(A)

T00			T05 inc dosing pump							
LC	LC	STD	LC	LC	LC	LC	LC	LC	STD	
9	15	15	9							15
1,000	1,700	2,000	1,000	1,000	1,000	1,700	1,700	2,000		
14	14	15	14	14	14	14	14	15		
N/A			N/A							
500			500							
8.5			8.5							
0.4	0.8	1	0.4	0.4	0.4	0.8	0.8	1		
13			13							
380	400	400	410	410	410	430	430	430		
200-240 VAC (+ or - 10%); 50-60Hz			200-240 VAC (+ or - 10%); 50-60Hz							
3			3							
54			54							
1.5-6.2			1.5-6.2							
0.2			0.2							
5<T<40			5<T<40							
7	12	12	7	7	7	12	12	12		
15			15							
20			20							
1			1							
1/2 inch			1/2 inch							
6			6							
4			4							
5			5							
N/A			Grundfos	Grundfos	Grundfos	Grundfos	Grundfos	Grundfos	Grundfos	
			6	6	6	20	17	20		
			6	7	10	7	7	7		
			3							
			13							
			40	23	22	35	24	35		
			230 VAC (+ or - 10%); 50-60Hz							
			External							
500 x 640 x 250			500 x 640 x 50							
33,33			33,33							
30	30.6	30.6	30.5						30.6	
51			52							

* These values can vary by + or - 10%
 ** At 20°C, water hardness 400ppm, 20-hour operation

GENOX Generator

Version	L/hour*
NEUTHOX® Production Capacity (+ or - 10%)	mg/L*
Chloride Content in NEUTHOX®	mg/L*
Chlorate ClO ₃ Content in NEUTHOX®	mg/L*
Perchlorate ClO ₄ Content in NEUTHOX®	ppm*
Free Active Chlorine	pH
pH Value	Kg/day**
Approx NaCl Consumption	A
Max Pre-fuse	W
Max Power Consumption	v.Hz
Voltage	mg/L*
Power Cable Length	IP
Enclosure Class, Electrical Cabinet	Bar
Required Water Pressure	Bar
Max Drain Back Pressure	oC
Ambient Temperature Tolerance	m ³ /h
Min Required Room Ventilation	h/day
Recommended Running Hours	h/day
Max Running Hours	m
Water Connection Hose Length	Inch
Water Connection (BSP Male)	Inch
Drain Connection (BSP Male)	mm
Drain Hose (Min Inner Diameter)	mm
Drain Hose (Max Length)	m
Dosing Pump	
Max Flow Rate	L/h
Max Pressure	Bar
Suction Head	mWg
Max Pre-fuse	A
Max Power Consumption	W
Voltage (EU)	V.Hz
Placement	
Dimensions (Width, Height, Depth)	mm
Brine Tank Capacity, NEUTHOX® Tank Capacity	L
Weight	Kg
Sound Pressure	dB(A)

T10					T15 inc dosing pump		
LC	LC	LC	STD	STD	STD	STD	
30	50	75	40	100	40	100	
14		14	15	3,800			
1,700			3,800				
N/A			N/A				
500			500				
8.5			6 - 8.5	6 - 8.5	6 - 8.5		
1.9	3	4.9	4	11.3	4	11.3	
13			13				
775	1,125	1,325	675	1,590	675	1,590	
200-240 VAC (+ or - 10%); 50-60Hz			200-240 VAC (+ or - 10%); 50-60Hz				
3			3				
54			54				
2.5-6.2			2.5-6.2				
0.2			0.2				
5 < T < 40			5 < T < 40				
18	24	30	15	36	15	36	
15			15				
20			20				
1.3			1.3				
1/2 inch			1/2 inch				
1/2 inch			1/2 inch				
12			12				
5			5				
N/A			Grundfos	Grundfos			
			60	150			
			10	4			
			2				
			13				
			62	110			
			230 VAC (+ or - 10%); 50-60Hz				
			External				
708 x 840 x 333			708 x 840 x 333				
100,100			100,100				
55	53	55	53	55			
51			51				

* These values can vary by + or - 10%
 ** At 20°C, water hardness 400ppm, 20-hour operation

GENOX Generator

Version
 NEUTHOX® Production Capacity (+ or - 10%) L/hour*
 Chloride Content in NEUTHOX® mg/L*
 Free Active Chlorine ppm*
 pH Value pH
 Approx NaCl Consumption Kg/day**
 Max Pre-fuse A
 Max Power Consumption W
 Voltage v.Hz
 Power Cable Length mg/L*
 Enclosure Class, Electrical Cabinet IP
 Required Water Pressure Bar
 Max Drain Back Pressure Bar
 Ambient Temperature Tolerance oC
 Min Required Room Ventilation m3/h
 Recommended Running Hours h/day
 Max Running Hours h/day
 Water Connection Hose Length m
 Water Connection (BSP Male) Inch
 Drain Connection (BSP Male) Inch
 Drain Hose (Min Inner Diameter) mm
 Drain Hose (Max Length) m
Dosing Pump
 Max Flow Rate L/h
 Max Pressure Bar
 Suction Head mWg
 Max Pre-fuse A
 Max Power Consumption W
 Voltage (EU) V,HZ
 Placement
 Dimensions (Width, Height, Depth) mm
 Brine Tank Capacity, NEUTHOX® Tank Capacity L
 Weight Kg
 Sound Pressure dB(A)

T20						
LC	LC	LC	LC	LC	LC	STD
125	160	250	200	300	300	400
1,700			3,800			
500			3,800			
6 - 8.5						
12.2	15.6	24.3	29.5	34.3	38.9	
16						
2,260	2,740	4,420	2,620	3,820	5,140	
200-240 VAC (+ or - 10%); 50-60Hz						
3						
54						
2.5-6.2			3-6.2			
0.2						
5 < T < 40						
34	79	114	63	93	128	
15						
20						
1.3						
1/2 inch						
1/2 inch						
12						
5						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
850 x 1440 x 460						
350, 350						
180	185	190	185	185	190	
70						

* These values can vary by + or - 10%
 ** At 20°C, water hardness 400ppm, 20-hour operation

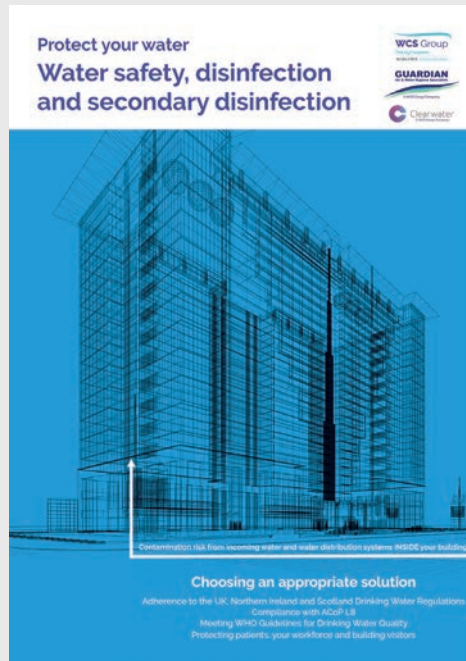
GENOX Generator

Version
 NEUTHOX® Production Capacity (+ or - 10%) L/hour*
 Chloride Content in NEUTHOX® mg/L*
 Free Active Chlorine ppm*
 pH Value pH
 Approx KCl Consumption Kg/day**
 Approx NaCl Consumption Kg/day**
 Max Pre-fuse A
 Max Power Consumption W
 Voltage v.Hz
 Power Cable Length mg/L*
 Enclosure Class, Electrical Cabinet IP
 Required Water Pressure at 15L/min Bar
 Max Drain Back Pressure Bar
 Ambient Temperature Tolerance oC
 Min Required Room Ventilation m3/h
 Recommended Running Hours h/day
 Max Running Hours h/day
 Water Connection Hose Length m
 Water Connection (BSP Male) Inch
 Drain Connection (BSP Male) Inch
 Drain Hose (Min Inner Diameter) mm
 Drain Hose (Max Length) m
Dosing Pump
 Max Flow Rate L/h
 Max Pressure Bar
 Suction Head mWg
 Max Pre-fuse A
 Max Power Consumption W
 Voltage (EU) V,HZ
 Placement
 Dimensions (Width, Height, Depth) mm
 Brine Tank (KCl) Capacity L
 Brine Tank (NaCl) Capacity L
 NEUTHOX® Tank Capacity L
 Weight Kg
 Sound Pressure dB(A)

T10 HORTICULTURE		T15 HORTICULTURE		T20 HORTICULTURE		
STD_HC	STD-HC	STD-HC	STD-HC	STD_HC	STD_HC	STD_HC
40	100	40	100	200	300	400
3,800		3,800		3,800		
500		500		500		
8.5		8.5		8.5		
4.5	12	4.5	12	34	39	45
0.7	1.6	0.7	1.6	3.5	5.1	6.9
13		13		16		
776.25	1828.5	839	1,891	3,013	4,393	5,911
200-240 VAC (+ or - 10%); 50-60Hz		200-240 VAC (+ or - 10%); 50-60Hz		3 x 400 VAC (+ or = 10%); 50/60 Hz		
3		3		3 x 400 VAC (+ or = 10%); 50/60 Hz		
54		54		54		
2.5-6.2		2.5-6.2		2.5-6.2	2.5-6.2	3-6.2
0.2		0.2		0.2		
5 < T < 40		5 < T < 40		5 < T < 40		
15	36	15	36	63	93	128
15		15		15		
20		20		20		
1.3		1.3		1.3		
1/2 inch		1/2 inch		1/2 inch		
1/2 inch		1/2 inch		1/2 inch		
12		12		12		
5		5		5		
N/A		Grundfos	Grundfos	N/A	N/A	N/A
		60	150			
		10	4			
		2	2			
		13	13			
		62	110			
		230 VAC (+ or - 10%); 50-60Hz				
		External	External			
708 x 840 x 333		708 x 840 x 333		850 x 1440 x 460		
160		160		400		
140		140		140		
100		100		Not included		
53	55	53	55	185	185	190
51		51		70		

* These values can vary by + or - 10%
 ** At 20°C, water hardness 400ppm, 20-hour operation

Further reading



A water safety, secondary disinfection overview is available on the WCS Group website.

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www.wcs-group.co.uk | www.gwtltd.com | www.clearwater.eu.com



Cert No. 11011
ISO 9001, ISO 14001,
OHSAS 18001

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