

Steam Sterilizers Rotasil® R3i Series



Specifications	Type	Chamber - Internal Dimensions		Volume	
		inches	mm	cf	l
	150	16 x 16 x 38	406 x 406 x 965	5.6	159
	500	24 x 24 x 47	610 x 610 x 1193	15.6	432
	550 ³	26 x 26 x 49	660 x 660 x 1250	19.0	545
	600	36 x 24 x 48	914 x 610 x 1219	24.0	679
	800	36 x 24 x 60	914 x 610 x 1524	30.0	850
	1000	36 x 24 x 72	914 x 610 x 1829	36.0	1,019
	1200	36 x 24 x 80	914 x 610 x 2032	42.0	1,189
	800H	26 x 38 x 50	660 x 960 x 1270	28.5	809
	1000H	26 x 38 x 65	660 x 960 x 1650	48.6	1,045
	1500H	38 x 38 x 65	960 x 960 x 1650	54.3	1,520

Utilities	Type	Steam ¹				Water ²			
		Peak		AVG		Peak		AVG	
		lbs/m	Kg/m	lbs/h	Kg/h	gpm	lpm	gph	lph
	150	-	-	-	-	2.7	10	42	159
	500	3.4	1.5	88	40	4.0	15	48	182
	550 ³	4.0	1.8	105	48	4.9	19	58	219
	600	4.2	1.9	143	65	5.3	20	66	250
	800	5.1	2.3	176	80	5.3	20	93	352
	1000	6.6	3.0	209	95	8.0	30	132	500
	1200	8.0	3.6	242	110	8.0	30	160	606
	800H	4.9	1.3	166	72	6.2	23	77	292
	1000H	9.3	4.2	280	128	9.2	35	185	700
	1500H	14.0	6.3	420	192	13.5	51	280	1,060

Power requirements	Type	With Esg ⁷		Ext. Steam Supply		Type	Ext. Steam Supply	
		Kw ⁵	A ⁶	Kw ⁵	A ⁶		Kw ⁵	A ⁶
		150	15	8	-		-	1000
500	40	12	4	12	1200	6	15	
550 ³	40	12	4	1	800H	5	13	
600	52	12	4	12	1000H	6	15	
800	71	13	4	12	1500H	8	15	

1. Only for external steam supply; Max. differential pressure: 38-44 psig (2.6-3.0 Bar) Dryness fraction: Better than 0.95 / No hydrazine. 2. Cold water: Pressure: 15-45psig (1.0-3.0 Bar) Temperature: 50-70 °F (10-20 °C) Hardness (CO₃Ca): max. 20 ppm (external supply: max 60ppm). 3. ISO/DIN 58.946. 4. H: Horizontal Sliding Door. 5. 460v 60Hz. 6. Monofasic 110v 60Hz. 7. ESG.: Electric steam generator. 8. ESG.: Attached to Chamber block

Teleservice

Quetzal's Teleservice System is based on a modem and communication software (both included) that interconnect the Programmable Logic Controller (PLC) in the control device of the sterilizer with our Teleservice Department. With this System, Quetzal's technical experts are able to assess the sterilization control status,

functioning of the sterilizer, cycle selection, software operation, configuration of the main parameters, and operating conditions at our customers' facilities. The **Teleservice Systems** brings **Quetzal** close to its customers enabling immediate correction of deviations, and inexpensive, certified **Quetzal** assistance.



Quetzal International Inc. reserves the right to make changes in the products and services described in this catalogue at any time without notice.

Sliding Doors



R3i - 550



Rotasil Steam Sterilizers Series 08-2003

Catalogue Number: PDF-R3i-SERIES-001-1



Quetzal International Inc.

116 Village Blvd. Suite 200 Princeton, 08540 5799 NJ, USA - Phone: 609 734 4339
info@quetzalint.com / www.quetzalint.com

Steam Sterilizers R3i



Construction

The **Rotasil R3i** Series is a new generation of steam sterilizers especially designed and manufactured for Health Care and Laboratory applications. All sterilizers of this new Series have single or double vertical Sliding Door/s. The sterilizers are fully assembled and tested at Quetzal's manufacturing facilities. All sterilizers are rigorously tested for quality control to ensure compliance with the Standards. All sterilizers of the **Rotasil R3i Series** are designed and constructed as a Pack Type Sterilizer to significantly reduce installation time. **Rotasil R3i** introduces a new vacuum plant design. With its exclusive dual controlled vacuum system **Rotasil R3i** reduces the duration of the cycles, improves the sterilizer efficiency and extends the life of the vacuum pump.



Chamber

The sterilizer pressure vessel (chamber block) is manufactured in 316L stainless steel (other stainless steels by request). The external wall (jacket) and door/s are insulated with non-toxic mineral wool. The chamber includes a vacuum safety relief valve. The sterilizer is floor mounted, presenting stainless steel, mat-polished front panels. The panels can be individually removed for fast, simple and easy access to inspect the door mechanisms and instruments.



Door/s

The chamber is sealed by one vertical sliding door with a fully automatic* mechanism for opening / closing and locking / unlocking, featuring the legendary worldwide patented **Rotasil System**. The door is a solid 316L stainless steel plate reinforced with external beams. The hermetic sealing is obtained by controlled deformation of a durable, solid, Silicon rubber gasket; the approximation movement is achieved with a 180° rotation of two synchronized vertical camshafts. In seconds, **Rotasil** produces a high quality, real O-ring seal, a sealing technology only available in high vacuum or research Lab applications. The "passthrough" sterilizer has two doors and includes an interlock program for a safe door operation.

Flexidoor (exclusive from Quetzal)

The features of the Rotasil R3i Series ensure a safe working environment for the operators. The design of the sterilizer door makes it Intrinsically Safe. If the pressure inside the chamber is exceeded by 10% of the maximum hydraulic test pressure, the door will flex (within the elastic range) allowing a slow release of the steam from the chamber.



Electric Steam Generator

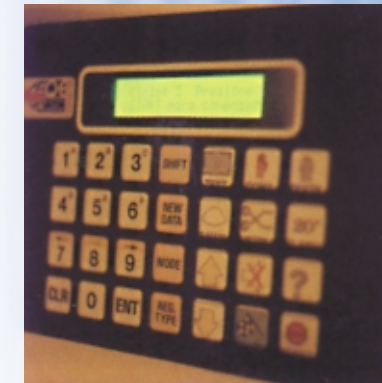
All sterilizers of the **Rotasil R3i** Series can be connected to the in-house steam supply source. An automatic built-in steam generator may be included as an optional. The steam generator is manufactured in AISI-304 stainless steel and insulated with non-toxic mineral wool. The steam generator includes water level controls, an injection pump, a steam separator, and heavy duty heaters (flanged type). All generators are tested following ASME CODE – part UG-99 recommendations.

*ROTASIL 3i-150 - Door: manual opening and closing / automatic locking unlocking.

Control

PLC

Each sterilizer is controlled by an industrial PLC (Programmable Logic Controller). The PLC program is stored in a non-volatile Flash memory and the data in a RAM memory with a battery backup. The PLC has control Inputs and Outputs and two serial ports for communication with the operator interface and the Modem. The PLC is stamped to UL and CE.



Operator Interface

The operator interface consists of an LCD display with 40 alphanumeric characters stamped to UL and CE, and a touch membrane keypad designed for harsh environments. Operation of the sterilizer is very easy following the prompts that appear on the screen. (A touch screen graphic display is offered as an optional)

Printer

A dot matrix model designed for heavy duty service prints the cycle reports and alarms.

Modem

The external modem is connected to the PLC for remote supervision of the sterilizer.

Maximum Flexibility in Sterilization Control Programs

Cycle type	°C	Application	Remarks
Preconditioning Cycles	Heating	134	Preheating of the Chamber
	Test	134	Bowie & Dick Test
Dedicated Cycles	Low temp.	121	Thermolabile materials, plastics
	Textiles	134	Non woven, linen, cotton
	Solutions	121	In glass flasks
	Instruments	134	Surgical instruments
Programmable	Gravity	121	Flash - mammary implants
	Pre-Vacuum	134	prosthesis
		121	Express
	Pulsing	121	Custom Cycle
Maintenance	Leak test		Chamber leak test

Warranty

A 15-year warranty is offered for the chamber block including the door/s. The design concept of the **Rotasil R3i** system minimizes downtime. All components are selected to withstand industrial environments.

```

*****
** QI Rotasil R3i **
** 17690/142 **
*****
** Jackson **
** Hospital **
*****
05/05/98 15:45
Batch#: 2501
Cycle:Textiles
Ster: 4m Drying: 5m
Temp:134.0°C (275°F)
-----
Time Press Temp
mm:ss KPAA °C
-----
00:15 Door Locking
-----
01:25 Steam 1
101.4 35.6
-----
02:10 Exhaust 1
-----
05:12 Vacuum 1
16.0 65.6
WARNING
Time exceeded,
call supervisor
-----
02:27 Steam 2
243.0 100.5
-----
01:35 Exhaust 2
-----
02:42 Vacuum 2
16.0 85.6
-----
02:35 Steam 3
304.0 134.0
-----
05:48 Sterilization
00:30 305.5 134.2
01:00 306.2 134.4
01:30 305.1 134.1
-----
01:48 303.6 133.8
WARNING
TIMER RESET
Low steam temp.
-----
00:00 305.5 134.2
00:30 309.5 134.5
01:00 310.9 134.8
01:30 313.1 135.1
02:00 317.3 135.5
02:30 320.8 135.8
03:00 318.5 135.6
03:30 312.0 134.9
04:00 309.5 134.5
-----
01:54 Exhaust 3
-----
02:49 Vacuum 3
16.0 85.0
-----
05:00 Ultra Drying
7.2 60.5
-----
01:15 Aireation
101.3 59.5
-----
Cycle time: 35m 07s
*****
*** STERILIZED ***
*****

```