RAYPA

Leading Lab Technologies

TLV SERIES

SAFETY
MANAGEMENT
AUTOMATIC
RAPIDITY
TRACEABILITY

SMART AUTOCLAVES FOR SMART LABS

Sterilization

TLV-75

TLV-50

RAYPA

RAYPA

FDA
21 CFR Part 11

GMP
Annex 11

TLV SERIES STERILIZATION WITH TOTAL CONNECTIVITY

REPORTING
• Custom reports
• Data printing
• Editable data formats

STORAGE
• 10 years data storage to fulfil documentation requirements
• Secure backup

SECURITY
• SSL encryption
• Secure server
• 100% data privacy

RAYPA CLOUD

DEVICE MANAGEMENT
• Combine all devices in one account
• Create programs
• Disseminate programs to all devices

USER MANAGEMENT
• Individual accounts
• Accounts linked to devices
• User hierarchy

ANNOUNCEMENTS
• Alerts
• Cycle completion
• Data processing

RAYPA CONTROL

RAYPA SUPPORT

⚙ **TEAM VIEWER**

⚙ **DIRECT EMAIL OR SMS TO TECHNICAL SERVICE**

⚙ **REMOTE OPERATION MONITORING**

⚙ **REMOTE MAINTENANCE AND DIAGNOSIS**

WI-FI

ETHERNET

TLV-50

RAYPA

☞ DEFINE CUSTOM PROGRAMS
• Long term cycles programming in minutes, hours and days.
• Programs can be labeled.

☞ CHOOSE PROGRAM
• All programs are displayed as icons with name and key data.
• Programs can be added and deleted.
• Full list steps of each program can be displayed.

☞ VIDEO INSTRUCTIONS
• All operations are explained in step-by-step videos.
• Videos for on place staff training.

☞ RUNNING PROGRAM STATUS
• Current program progress displayed.
• Actual data displayed.
• Elapsed and remaining time displayed.
• Alarms management.

☞ PROTOCOL HISTORY
• Protocols are stored on the device.
• Target temperature and actual temperature are graphically displayed in numerical format.
• Error messages displayed with detailed explanation.

TLV SERIE BASIC

MULTI-PURPOSE AUTOCLAVE FOR STERILIZING SOLIDS AND LIQUIDS

THE TLV SERIES ARE DESIGNED TO COVER THE BASIC STERILIZATION NEEDS IN ALL TYPE OF LABORATORIES OF INDUSTRIES AND EDUCATIONAL INSTITUTIONS.

- Integrated steam generator (separated into the housing) with automatic filling
- 7" capacitive colour touch screen
- Connectivity to PC, cloud, intranet, LIMS *
- Bacteriological filter

- Automatic block/unblock system with mechanical assisted door
- Casters with brake
- Filtration of exhaust gases
- Water cooled discharge
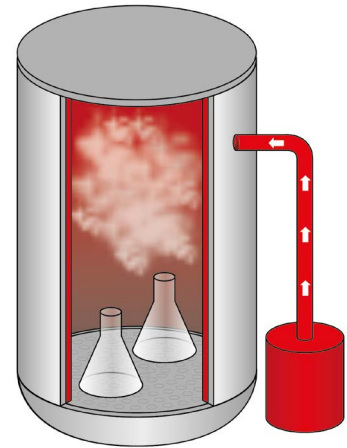
SERIE TLV-PD WITH SUPER-DRYING SYSTEM
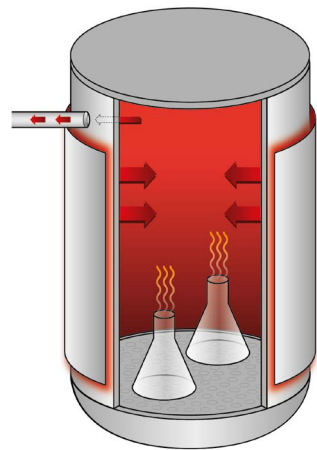
IT IS THE IDEAL AUTOCLAVE TO STERILIZE SOLIDS THANKS TO ITS DRYING SYSTEM. VERSATILE FOR SOLIDS AND LIQUIDS.

THE TLV-PD SERIES ARE THE BEST ALLY FOR LABORATORIES THAT MUST STERILIZE ALL TYPES OF SOLID PRODUCTS SUCH AS GLASS, PLASTIC VIALS, POROUS OR HOLLOW MATERIAL, WRAPPED AND UNWRAPPED, IN A SAFE, FAST AND VERIFIABLE WAY.

- Integrated steam generator (separated into the housing) with automatic filling
- 7" capacitive colour touch screen
- Connectivity to PC, cloud, intranet, LIMS *
- Bacteriological filter
- Automatic block/unblock system with mechanical assisted door

- Casters with brake
- Filtration of exhaust gases
- Water cooled discharge
- Water-ring pump for quick pre and post vacuum cycles
- Heating jacket for dry cycle

SERIE TLV-FA WITH FAST COOLING SYSTEM

IT IS THE IDEAL AUTOCLAVE FOR STERILIZING LIQUIDS THANKS TO ITS RAPID COOLING SYSTEM. VERSATILE FOR SOLIDS AND LIQUIDS

STERILIZATION OF LIQUIDS IS A COMPLEX TASK THAT REQUIRES A PRECISE CONTROL OF THE LIQUID TEMPERATURE AND A GOOD MANAGEMENT OF THE THERMAL BALANCE DURING THE COOLING PHASE IN THE MINIMUM POSSIBLE TIME.

- Integrated steam generator (separated into the housing) with automatic filling
- 7" capacitive colour touch screen
- Connectivity to PC, cloud, intranet, LIMS *
- Bacteriological filter
- Automatic block/unblock system with mechanical assisted door
- Casters with brake

- Filtration of exhaust gases
- Water cooled discharge
- Cooling coil refrigeration circuit
- Internal radial fan
- Flexible PT-100 temperature sensor
- Air ballast
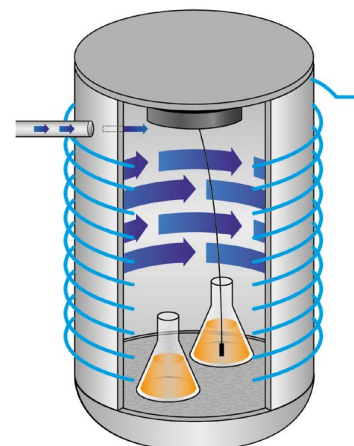
* LIMS: Laboratory Information Management System

TECHNICAL DATA
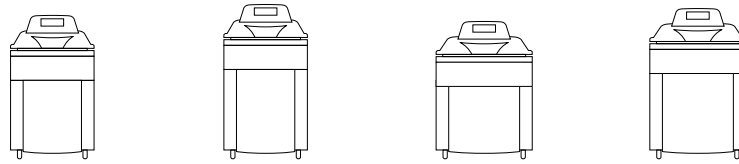
Features

	TLV-50	TLV-75	TLV-110	TLV-150
Chamber dimensions Ø x H usable	400 x 450 mm	400 x 650 mm	500 x 600 mm	500 x 850 mm
Chamber volume total / usable	58 / 56 L	83 / 81 L	124 / 118 L	169 / 155 L
External dimensions L x D x H	610 x 870 x 1060 mm	610 x 876 x 1110 mm	710 x 980 x 1160 mm	710 x 980 x 1310 mm
Weight	140 Kg	150 Kg	195 Kg	210 Kg
Power	3600 W	3600 W	9000 W	9000 W
Electrical voltage*	230 (1P+N+E) V	230 (1P+N+E) V	400 (3P+N+E) V	400 (3P+N+E) V
Frequency	50 / 60 Hz			
Working temperature range	105 - 140 ºC			
Maximum working pressure	2,6 barg			
Maximum design Temperature / Pressure	143 ºC / 2,9 barg			

* Ask for other voltages.

Specifications

		TLV	TLV-PD	TLV-FA
Integrated steam generator separated into the housing		✔	✔	✔
Automatic block/unblock system		✔	✔	✔
Mechanical assisted door		✔	✔	✔
Fast cooling		-	-	✔
Pre-vacuum		✔	✔	✔
Post-vacuum		-	✔	-
Air exhaust filtration		✔	✔	✔
Water ring vacuum pump		-	✔	-
Internal radial fan		-	-	✔
Steam exhaust condensation with cold water		✔	✔	✔
Autofill: automatic purified water feed for steam generation		✔	✔	✔
Temperature holding function after the end of program for liquids		✔	✔	✔
Housing and basic frame construction in stainless steel		✔	✔	✔
Lid and pressure vessel construction		316L	316L	316L
Pressure gauge		✔	✔	✔
4 casters (with brakes in two of them)		✔	✔	✔
Flexible PT-100 temperature sensor		O	O	✔
Second flexible PT-100 temperature sensor		O	O	O
Printer for batch documentation	Integrated	O	O	O
	External	O	O	O
Barcode scanner with label printer		O	O	O
Number of sterilization programs		50	50	50
Password secured access rights for parameterization		✔	✔	✔
Automatic microprocessor control		✔	✔	✔
7" capacitive colour touch screen		✔	✔	✔
External data transfer (network compatible)	RS-232	✔	✔	✔
	USB	✔	✔	✔
	ETHERNET	✔	✔	✔
	WI-FI	✔	✔	✔
RAYPA CLOUD Basic (extensive documentation/network compatible)		O	O	O
RAYPA CLOUD Premium (extensive documentation/network compatible)		O	O	O
Private cloud server		O	O	O
Internal memory for documentation for sterilization cycles		up to 1.000.000	up to 1.000.000	up to 1.000.000
Data backup via USB reader		✔	✔	✔
Timer for programmable start time		✔	✔	✔
Calculation of F_0 value in combination with flexible PT-100		O	O	✔
FDA 21 CFR Part 11 and GMP Annex 11 compliance		O	O	O
Connection to LIMS***		✔	✔	✔

✔ STANDARD   O OPTIONAL   *** LIMS: Laboratory Information Management System

FDA 21 CFR Part 11   GMP Annex 11

CE   RoHS COMPLIANT

TÜVRheinland INSPECTED   ISO 9001 SGS