

For highest demands regarding performance & comfort

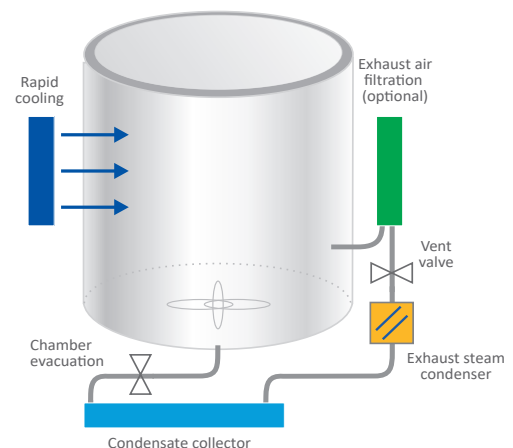
Features at first glance:

- > Certified according to the Pressure Equipment Directive 2014/68/EU
- > Available in 4 sizes with 50, 80, 113, 133 liters of effective usable volume
- > Innovative locking system with motorized lid including pressure and temperature monitoring
- > Steam generation in the chamber
- > High energy efficiency and long service life
- > Rapid cooling for short cooling times
- > Electrical, mechanical and constructional factors guarantee the highest level of quality and user protection



The HG family *Premium autoclaves*

Advanced functionality with many configuration options for a wide range of applications



Are you looking for...

... intuitive operation and higher working comfort?



Our solutions for you:

- > The membrane keypad with **LED program display** is **absolutely self-explanatory**. You will easily find your way around. There won't be any difficulties during loading and unloading the autoclave. Further advantages are the **low loading height** and the **smooth surface**. There are no obstructive locks or edges on which the baskets could get caught.
- > Fully automatic microprocessor control, the **feed water level is monitored** and water shortage indicated.
- > The **innovative exhaust steam condensation system** reduces odor and steam pollution to a minimum. Any condensate draining off the lid is collected and fed into the exhaust steam condenser. The collecting vessel for the condensate has a level indicator in the display and can be emptied easily. **The device and floor stay dry.**
- > Stainless-steel cover for heating element.
- > For the 50 and 80 liters models only a **single-phase power supply** (220/240 V; 50/60 Hz) is required.

Vertical autoclaves premium line HG-Series

HMC
EUROPE

Sterilization Technology

Are you looking for...

... **low life-cycle-costs** as well as high **energy efficiency** because the protection of the environment is important to you?



... a maximum of user protection?



... a variety of programs which meet your requirements?

... a simple way of cleaning your laboratory even below the autoclave?

Our solutions for you:

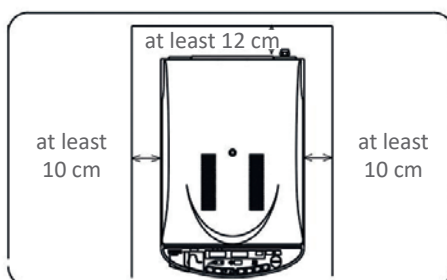
- > **Japanese steel with titanium components** is used to manufacture high-tech chambers with reduced mass. This does not only provide a consistently high quality and long service life of the autoclaves, it also **ensures energy efficiency with short heating and cooling phases**. You will save time and money on electricity and repairs. **No electronics in the lid** - impervious to steam and heat.
- > **Electrical heating with maximum efficiency**, directly in the feed water; **Dual sensor system (temperature and pressure)** for a controlled excess of pressure during the heating process which reduces the batch time; The standard air cooling RL (**rapid cooling for liquid sterilisation**) can be switched on at the push of a button: time saving compared to self-cooling approx. 40 %; fan cooling of the chamber (or radiator/water cooler for HG 133 with closed circuit), therefore no cooling water and no on-site measures required.
- > **The V-seal or double V-seal gasket** is embedded in the lid to protect it against any damage which may arise during loading and unloading. It can be replaced quickly if necessary.
- > **Electrical, mechanical and constructional factors** guarantee the highest level of quality and user protection: **electric and mechanical manometer** for alternating validation; **Safety valve (Made in Germany)**; Integrated **residual current circuit breaker**; Safety thermostat for the chamber and heating elements; **Certified according to 2014/68/EU by TÜV Rheinland (CE0035)**.
- > **Locking system with motorized lid** including pressure and temperature monitoring: opening and closing of the autoclave chamber are triggered via a single button. The lid is lowered gently and locked automatically. The program starts automatically; The door lock is sensor-monitored. This prevents your hands from being pinched or injured.
- > **Innovative passive sealing system** for a maximum imperviousness and at the same time a simple and durable construction; Unintentional opening of the lid under pressure is prevented by the design of the device; The sterilization parameters can no longer be changed after the start of the program; **Opening temperature pre-select between 60-97 °C**, **Thermolock** (optional); **Exhaust air filtration for applications in a S2 laboratory** (optional).
- > **Timer function and 4 program groups** with 3 sub-groups each, including night and dissolution program. **Adaptions for customized programs are always possible**.
- > **No water/waste-water installation required** except automatic feed water (optional), **casters** for mobile use, **easy to clean plastic surface with rounded edges** in contact areas (no burns or injuries), electropolished interior, drain valve for easy cleaning of the sterilization chamber; the main switch is set back and thus protected against unintentional operation.

It is your choice - different autoclaving programs of the HG-Series



- > Sterilization of solids: with fast release of steam for short processing times
- > Sterilization of liquids: with variable natural cooling or with rapid cooling for thermolabile materials
- > Sterilization program for Agar with subsequent warming cycle
- > Dissolution program: pressure cooker program (100 °C) with subsequent warming cycle
- > Timer-controlled program: loading the autoclave in the evening - sterile and ready for punctual removal in the morning
- > Automatic standby operation: saves energy
- > **Adaptions for customized programs are always possible**

Instructions for installation



Please place the unit at least 10 cm from the side and at least 12 cm from the wall at the rear.
Please note that the unit should not be installed in places where the room temperature is below 5°C or above 35°C.

Please find loading options and baskets/cans on the following pages - for more comfort during sterilization!

Technical data and accessories of the HG-Series



Sterilization Technology

Vertical autoclaves HG-Series	Unit	HG 50	HG 80	HG 113	HG 133
Art.-Nr.		21001	21002	21003	21004
Chamber volume	liters	60	85.1	131.7	152.2
Effective usable volume	liters	50.2	76	108	129
Chamber dimensions (Ø x H)	mm	364 x 482	364 x 730	500 x 552	500 x 656
External dimensions (W x D x H)	mm	455 x 691 x 890	455 x 691 x 1030	686 x 870 x 930	686 x 870 x 1034
Loading height	mm	750	890	810	920
Required space (W x D x H)	mm	465 x 970 x 1250	465 x 970 x 1390	700 x 1150 x 1350	700 x 1150 x 1450
Electrical power	kW	3	3.8	5.8	5.8
Weight	kg	62	73	137	145
Power Supply	V	AC 230 V/240 V - 50/60 Hz - 1 phase		AC 400 V 50/60 Hz - 3 phase	
Allowed operating temperature	°C	135	135	138	138
Selectable operat. temperature	°C	105 - 135			
Warming temperature	°C	45 - 60			
Max. operating pressure	bar	2.5			
Timer function		variable, 1 minute to 7 days			
Sterilization time	min.	variable, 1 to 300 minutes			
Locking system		automatic			
Certification		according to 2014/68/EU, CE 0035			
Vessel material		SUS304 (high-grade stainless steel)			
Integrated steam generator		No	No	No	No
Vacuum		No	No	No	No
Safety systems		Electro-magnetic safety lock, safety valve, low-water interrupt, overpressure protection switch, overheating protection switch, circuit breaker, fault indicator (visual and audible)			
Documentation		Integrated printer/RS232 (optional)		Integrated printer/USB (optional)	

Baskets and Cans Loading capacities	Basket HG 50/80 with w/o bowl	Basket HG 80 with w/o bowl	Double Basket HG 50/80 w. bowl	Triple Basket HG 80 w. bowl	Can with hole	Can w/o hole	Can HG 50/80, 21 liters
Art.-Nr.	51009 51010	51019 51023	51005	51034	51007	51008	51006
Ext. dimensions (Ø x H) in mm	346 x 230	346 x 310	352 x 465	352 x 705	350 x 186	345 x 190	335 x 310
Int. dimensions (Ø x H) in mm	340 x 220	342 x 300	330 x 448	330 x 693	330 x 185	331 x 185	300 x 293
HG 50 (Baskets p. device)	2	1	1	-	2	2	X ¹
HG 80 (Baskets p. device)	3	2	1	1	3	3	1

Baskets and Cans Loading capacities	Basket A HG 113/133 small with w/o bowl	Basket B HG 113/133 medium with w/o bowl	Basket C HG 113/133 tall with w/o bowl	Can HG 113/133 with w/o lid
Art.-Nr.	51024 51025	51026 51027	51032 51033	51028 51029
Ext. dimensions (Ø x H) in mm	505 x 228	495 x 277	495 x 325	490 x 340
Int. dimensions (Ø x H) in mm	482 x 215	474 x 265	475 x 310	455 x 308
HG 113 (Baskets p. device)	2	1	1	1
HG 133 (Baskets p. device)	2	2	2	1

Overview of all configuration options			
Type	Art.-Nr.	Type	Art.-Nr.
Exhaust air filtration (for safety level S2 & higher)	51011	GLP Set (printer and exhaust air filter)	51030
Automatic feed water HG 50	51012	Lifting device	51035
Automatic feed water HG 80	51013	USB port for HG 50/80 (standard for 113/133)	63135
Automatic feed water HG 113/133	51036	Sego® Process documentation	on request
Integrated printer	51016	Validation port (for IQ / OQ)	51080
Flexible temperature sensor / thermolock	51001		

All data on loading capacities in the tables are non-binding guidance for you to help you find your perfect accessory.

Configuration options of the HG-Series in detail



Sterilization Technology

Exhaust air filtration

Art-Nr. 51011:

For sterilizing the exhaust air of infectious materials. The air displaced during the deaeration phase (heating) must be filtered sterile. The High Flow BioX filter has a retention rate of 0.01 µm, is housed in a separate stainless steel housing and is sterilized with each batch (in-line sterilization). This allows a safe filter change. Required installation depth: 870 mm.

Automatic feed water

Art-Nr. depending on device see table:

It checks the feed water level before starting the program and refills the unit automatically if necessary (from storage tank or deionised water pipe).

Integrated printer



Art-Nr. 51016:

For simple and reliable documentation, alternatively available with USB port (No. 63135).

Flexible temperature sensor



Art-Nr. 51001:

For a precise sterilization time triggering via the media temperature; Thermolock according to TRB 402 and DIN 61010-2 with opening temperatures of 95 °C (open pots), 90 °C (closed plastic pots), 80 °C (pressure-tight sealed glass bottles).

Lifting device

Art-Nr. 51035:

For an easy transportation of heavy and hot baskets.

USB port

Art-Nr. 63135:

For an easy connection of a USB cable to the autoclave housing for transferring data to the PC.

Sego® Process documentation

Art-Nr. on request:

For paperless, automatic documentation of all sterilization parameters (temperature, time and pressure), data output as graphic and chart as a PDF file with digital signature.

Validation port

Art-Nr. 51080:

For Installation Qualification (IQ) and Operation Qualification (OQ).

Loading baskets & cans



Art-Nr. depending on device see table:

Made of electropolished stainless steel in various designs and sizes.

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