



STERIVAPH

... new line steam sterilizers



Original without compromises



protecting human health

Tradition, quality, innovation

Long-term experiences of BMT Medical Technology s.r.o., advanced patented solutions and the latest technology become the quality mark and standard in sterilisation technique.

Steam sterilizers line STERIVAP HP with chamber volume of 148–1490 litres (1–21 STM) finds application in medical material processing in sterilization worksites of various health care facilities.

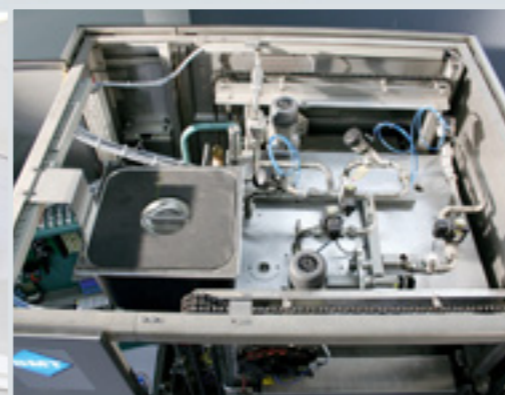
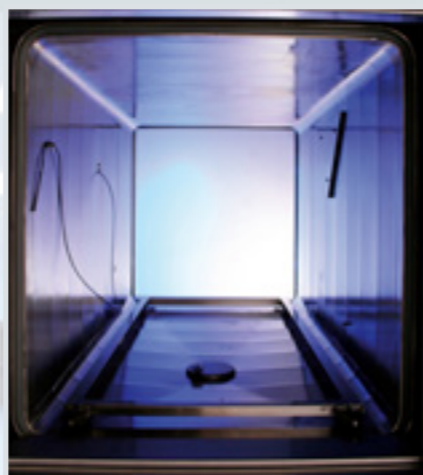
Offer of services

Besides of traditional supplies of instrumentation we offer further range of services, related to building of central sterilizations and sterilizations by the surgeries.

- consultancy and project elaboration including logistics and capacity calculation
- providing of substitute sterilisation by lending of instruments or mobile sterilization in container
- turn key supply of instrumentation including unified information system

More than you can see at first sight

- the all stainless steel instrument jacket
- divided all stainless steel instrument frame with attractive dimensions and width only 100 cm
- the massive chamber, door and the heating jacket are made of high-quality stainless steel AISI 316 L with polished surface with surface roughness of Ra 1,25 µm (50 µinch)
- the outer insulating jacket of the sterilising chamber is made of dip galvanised sheet (optionally of aluminium or stainless steel AISI 304) with high-quality insulation, which reduces substantially the heat losses
- innovative, colour, large-scale, ergonomically adjustable touch-screen 12"
- double-processor control by two independent systems (Master-Slave) for highest safety
- cycle control by dual independent sensors of absolute pressure and temperature, ensuring operating accuracy, control and independent cycle documentation
- integrated drain – due to dampness elimination in the instrument all pipes are led to one common sump



Meeting the latest standards

The machines are manufactured in certified quality system according to European Directive for manufacturing of medical devices No. 93/42/EEC, pressure chamber and steam generator are designed according to European Directive No. 97/23/EC or in case of individual requirement according to standards ASME Code, Section VIII, Division 1 (for USA and Canada) or according to licence rules AQCIQ (for China). The instruments fulfil requirements of many technical standards as e.g. EN 285+A2, and they are may be validated according to the EN ISO 17 665-1.

- validation if sterilization instruments by accredited testing laboratory
- consultancy in implementation of quality system ISO 9001:2008 on the sterilization sites

- integrated device for supply water saving for suction pump, which saves approx. 15 % of operating costs
- unique divided double chamber jacket with new system of steam filling to the sterilising chamber, which reduces the demi-water consumption by approx. 20 %
- thermo-degassing of demi-water for the steam generator with minimising of content of the incondensable gasses for higher sterilizing reliability
- high-performance, noiseless, two-stage suction pump for higher efficiency and reliability (except of STERIVAP HP 6612 and higher)

- unique solution of steam distribution for heating and sterilising process – enables accurate meeting of physical requirements standards
- simple mechanical filter on steam and supply water inlet
- the integrated steam generator is equipped as a standard by automatic clarifying device and is made as well as the heating elements of stainless steel AISI 316 Ti, optionally AISI 316 L

- motor driven door of sterilizing chamber with unique spring-loaded mechanism reduces the instrument weight approx. by 50–100 kg
- piping distributions and fittings leading steam to the chamber are as a standard made of stainless steel

Modular system and optional accessories

- single and double door type
(type 446 – 6612 vertically and type 9612 – 9621 horizontally sliding door)
- optional steam source
FD – steam supply
ED – steam supply from an internal steam generator
FDD – steam supply from internal steam/steam exchanger (steam/steam exchanger is supplied by technical steam)
FD ED – steam supply from an external medicinal steam source, or steam supply from an internal steam generator (original FED)
ED FDT – steam supply from an internal steam generator, and heating jacket supply by technical steam
FD FDT – steam supply from an external medicinal steam source, and heating jacket supply by technical steam

Sterivap HP 050220

P2 Universal 134, 134.0 °C, 7.0 min
Start 09:47:54 19.05.2011
T = 94.9 °C p = 100.6 kPa

Charge 000075

Evacuation (1) 09:50:28 19.05.2011
T = 90.1 °C p = 7.9 kPa
Evacuation (2) 09:3:14 19.05.2011
T = 94.3 °C p = 10.0 kPa
Evacuation (3) 09:57:04 19.05.2011
T = 100.6 °C p = 10.0 kPa
Evacuation (4) 10:01:12 19.05.2011
T = 104.2 °C p = 10.0 kPa

Preheating (1) 10:03:11 19.05.2011
T = 113.7 °C p = 170.2 kPa

Heating 10:03:25 19.05.2011
T = 116.0 °C p = 124.6 kPa

Start Of Sterilization 10:07:01 19.05.2011
T = 135.1 °C p = 311.2 kPa

End Of Sterilization 10:14:01 19.05.2011
T = 135.9 °C p = 312.6 kPa

Drying (1) 10:15:15 19.05.2011
T = 106.8 °C p = 90.1 kPa

T = 102.4 °C p = 5.3 kPa

Drying (2) 10:22:06 19.05.2011
T = 89.3 °C p = 88.3 kPa

T = 98.0 °C p = 5.3 kPa

End 10:28:46 19.05.2011

Faultfree
System



Remote monitoring

Statistics

Invoicing

Hospital standards

Broad range of operating programmes options

The steam sterilizers line STERIVAP HP can be used for sterilization of solid, porous and plastic materials and solutions in open bottles.

The sterilizer is standardly equipped with "Preheating program" (134 °C/1 min).

In basic program design we offer up to 20 standard programmes.

Examples of standard and validated programs:

- Unwrapped tools 134 °C/4 min
- Wrapped materials 134 °C/7 min
- Wrapped materials with intensive subsequent drying 134 °C/7 min
- Wrapped products of glass, rubber and plastics 121 °C/20 min

Standard testing programs for routine testing:

- Vacuum test
- Bowie&Dick test

The program equipment can be extended and modified by means of chip cards and special service software. Programs according to specific requirements must be validated at the customer's!

Special programs with parameters according to the customer's specifications:

- Prions 134 °C/60 min
- Disinfection 105 °C/20 min
- Solutions in open bottles 121 °C/20 min
- Automatic starting the instrument at the morning – pre-heating and Vacuum test – without operator



User friendly operation

Advanced "touch-screen" 12" technology with ergonomically adjustable panel ensures clear and simple operation. Standard equipment of the instrument is the built-in printer for documentation of sterilization processes.

Service

Built-in automatic diagnosis and set of service programs together with ON-LINE internet diagnosis and monitoring of sterilisation device ensures an optimal service.

- possibility of built-in device for cooling of condensate
- stainless steel valves, fittings
- optional polished surface of sterilising chamber with roughness of Ra 0,8 µm (32 µinch) or Ra 0,125 µm (5 µinch)
- double sided construction, enabling joining of two service rooms into one
- "Air detector" – device, evaluating quantity of air and incondensable gases in the sterilization chamber during the sterilization cycle; eventual leakages, not detected by the Vacuum test in the morning are identified immediately and the process is interrupted
- more than 60 other optional specific additives

Versatile using

A broad range of accessories is available to the sterilizers.

Systems for manual material inserting or systems of transport and charging carts are adapted according to sterilizer size, optional container system and sterilization baskets. Modular system enables to build in the instruments into stainless steel partition walls.

For sterilising of solutions the sterilizer can be equipped by movable temperature sensor PT 100 and dripping tank for solutions.

Synoptic documentation of batches can be ensured:

- standard built-in printer
- connecting of sterilizer to the computer and "Printer Archiv" software
- connecting of sterilizer to the computer network (LAN)

If the pressurised air or demi-water is not available, we offer supply of compressors or water treatment device.

In case of built-in steam generator we offer monitoring of maximum of power take-off.

Validation

We offer the validation of the instruments (IQ, OQ, PQ) according to EN ISO 17 665-1 to our clients on place of installation.

The tests are performed according to EN 285+A2 and according to the authorised methodologies by our accredited laboratory No. 1325.

Technical parameters



Model SP HP	Dimensions (hxd) [mm]		Number of sterilization modules	Chamber volume [l]	Weight [kg]		Max. input [kW]/ fuses [A]		Max. consumption per 1 sterilization cycle				
	Internal dim. of the chamber	External dim. of the unit			ED	FD	ED	FD	Water [m ³]	Demineralized water [m ³ **]	Steam [kg]	Electric energy [kWh]**	Electric energy [kWh]*
446-1	480x450x 700	1918x1200x 970	1	148	720	670	24,5/63	2/10	0,06	0,006	5,0	5,0	0,3
446-2	480x450x 700	1918x1200x 990	1	148	770	720	24,5/63	2/10	0,06	0,006	5,0	5,0	0,3
559-1	509x509x 990	1918x1200x1270	1	254	910	850	24,5/63	2/6	0,07	0,008	7,0	6,0	0,3
559-2	509x509x 990	1918x1200x1290	1	254	930	870	24,5/63	2/6	0,07	0,008	7,0	6,0	0,3
636-1	670x350x 700	1918x1000x 970	2	160	820	770	24,5/63	2/10	0,06	0,006	5,0	5,0	0,3
636-2	670x350x 700	1918x1000x 990	2	160	880	830	24,5/63	2/10	0,06	0,006	5,0	5,0	0,3
666-1	700x650x 690	1918x1300x 970	4	314	900	840	38/63	2/10	0,07	0,008	7,0	6,0	0,4
666-2	700x650x 690	1918x1300x 990	4	314	1000	940	38/63	2/10	0,07	0,008	7,0	6,0	0,4
669-1	700x650x 990	1918x1300x1270	6	453	1010	950	47/80	2/10	0,08	0,009	9,0	7,5	0,4
669-2	700x650x 990	1918x1300x1290	6	453	1080	1020	47/80	2/10	0,08	0,009	9,0	7,5	0,4
6612-1	700x650x1340	1918x1300x1620	8	610	1100	1000	48/80	3/10	0,09	0,011	11,0	9,0	0,6
6612-2	700x650x1340	1918x1300x1640	8	610	1260	1160	48/80	3/10	0,09	0,011	11,0	9,0	0,6
6618-2	700x650x1940	1918x1300x2240	12	885	1750	1500	66/100	4/16	0,20	0,013	15,0	15,0	1,4
9612-1	1000x650x1340	1918x1900x1620	12	868	1400	1250	66/100	4/16	0,20	0,013	15,0	16,0	1,4
9612-2	1000x650x1340	1918x1900x1640	12	868	1550	1400	66/100	4/16	0,20	0,013	15,0	16,0	1,4
9618-1	1000x650x1940	1918x1900x2220	18	1260	1950	1700	76/125	5/16	0,30	0,025	23,0	23,0	1,7
9618-2	1000x650x1940	1918x1900x2240	18	1260	2100	1850	76/125	5/16	0,30	0,025	23,0	23,0	1,7
9621-2	1000x650x2300	1918x1900x2600	21	1490	-	2400	-	5/16	0,40	-	26,0	-	2,0

Model 9612, 9618, 9621 – with horizontally sliding door(s).
 Model xxx-1 single-door type, model xxx-2 double-door type.
 Connecting voltage 3P/PE 400 V, 50/60 Hz.
 Connecting voltage model 559 – 3P/N/PE 480 V, 60 Hz (for USA)

Noise level max. 78 dB.
 Model 6618, 9612, 9618, 9621 – steam generator is placed above or beside the sterilizer
 FD – steam supply
 ED – steam supply from an internal steam generator

Changes in the design and make reserved.



STERIVAP
 – high utility value for reasonable price



STERIVAP HP
 – more individuality and comfort

**New design, ergonomic panel...
 Protected by industrial design...**

More information
is available direct from
our internet web site

www.bmt.cz



Make acquaintance with our further offers...



Small steam sterilizers 15 – 25 litre



Steam sterilizer 70 litre



Laboratory drying devices and incubators 22 – 707 litre



Stainless steel instrumentation



Formaldehyde sterilizer 110 litre



Exchanger steam/steam



Tests of sterilization efficiency



Cleaning and disinfection agents



MMM Group



BMT Medical Technology s.r.o., Cejl 50, CZ 656 60 BRNO
Tel.: +420 545 537 111, fax: +420 545 211 750, e-mail: mail@bmt.cz, www.bmt.cz

STERIVAP HP – 06/2011 – EN/0471

© Photo T. Benda