CUSTOMER: .....

REFERENCE: .....

GETINGE 88-SERIES WASHER DISINFECTORS

PRODUCT SPECIFICATION

PRODUCT

The Getinge 88-Series (GETINGE 88 TURBO) is a fully automatic, microprocessor controlled, washer disinfector (WD). The washer has a capacity of 15 DIN trays with extremely short process time including drying.

Processing cycles are factory programmed with recommanded treatment parameters for pre-rinsing, cleaning, post-rinsing. thermal disinfection, final rinsing and drying. Validated programs are secured by access code. Detergents and rinse agents are automatically dispensed during cycle. The Getinge 88-Series washer is available as double door model with automatically operated doors. If the disinfector has not completed a full cycle, the doors can not be opened.

INTENDED USE

The Getinge 88-Series are Washer Disinfectors for washing, intermediate level of disinfection and drying of surgical instruments (rigid and tubular), hollow ware, wash bowls and baby bottles, containers, laboratory glass and anesthetic accessories (critical items, such as invasive surgical instruments and anesthesia devices, must be further processed by terminal sterilization before use in any procedure).

The receptacles should be loaded in correct loading equipment recommended by Getinge Disinfection AB to comply with EN ISO 15883. The customer is responsible that Installation Qualification, Operating Qualification and Performance Qualification are performed according to EN ISO 15883 before product usage.

KEY FEATURES

- Getinge 88-Series is standard WD equipped with process tank, booster tank and drain tank.
- For shorterst possible filling and draining phases, large quick opening valves are used thus a unique short total process time is achieved. The design is focused on saving the enviroment through reduced consumptions of all utilities.
- Cleansable spray arms are located at the top and bottom of the chamber.
- Wash carts are equipped with cleansable spray arms between each shelf to allow water to reach all surfaces to be cleaned.
- Injection wash carts automatically connect to water and drying air in order to clean and dry the inside of tubular items.
- The drying air is pre-heated in a unique heat exchanger, which also is a condensor for the outgoing air. This energy-saving process means shorter drying times and reduced energy consumption.
- The Getinge 88-Series is standard equipped with independent temperature monitoring and validation test port according to EN ISO 15883.
- Ciruclating water pressure monitoring is a standard feature.
- Data interface RS232 + RS485 are standard as well as differential pressure monitoring of HEPA filter for drying.
- All electrical components are easily accessibly via a sliding cabinet.
- Getinge 88-Series has a built in self cleaning debris filter. Upon completion of the wash phase, the flow through the filter reversed and debris is back-flushed into the effluent drain.
- Getinge 88-Series is equipped with audible alarm that alerts if error code occurs.

QUALITY STATEMENT

Confidence in the Getinge Groupe is the most important quality criterion. It must be the hallmark of all our external and internal commitments, activities and products. Products and service supplied by Getinge must conform to the agreed terms and expectations to ensure recommendations for further business. The achievement of these quality goals is the basis for continued completive and successful enterprise.

CUSTOMER: .....

REFERENCE: .....

STANDARDS AND CODES

Getinge 88-Series Washer Disinfectors complies with following standards and codes:

- MDD 93/42/EEC (Medical Device Directive)
  Certificate 41314824 issued by Intertek Semko AB, Code 0413
- ETL/SEMKO (Testing Laboratories Inc.)
  Standard: IEC 61010-1, EN 61010-1, IEC 61010-2-040, UL 61010A-1, CAN/CSA-C22.2 No 1010.1-92
- EMC (Electromagnetic Compatibility)
  Product Standard: 61326-1
  Product Family Standard: EN IEC 60601-1-2:2004
- DVGW (Deutscher Verein des Gas- und Wasserfaches EV.)
  Standard: DVGW W 507
- Microbiological test
  Standard: SPRI Specification 74203
- EN ISO 15883

ORDERING INFORMATION

PRODUCT SELECTION FOR ORDERING

For ordering tick in your selections.

❑ Standard choice ❍ Optional choice

CONFIGURATION

❑ Double door with window, automatic
❑ Single door with window, automatic. Delivered with two doors but only one can be opened.

FRAME WORK

❑ Painted steel
❍ AISI 304 steel

HEATING ALTERNATIVS

❑ Electrical sump, booster tank & dryer heating.
❑ Steam washer and booster heating with floor connection of steam. Electrical dryer heating.
❍ Steam washer and booster heating with top connection of steam. Electrical dryer heating.

SUPPLY VOLTAGE

Steam Heated Washer

On the steam heated models the water heating elements in booster tank and circulation system are heated by facility steam. The dryer is always electrically heated.

❑ 415 V, 3N+PE 60 Hz
❑ 415 V, 3N+PE 50 Hz
❑ 400 V, 3N+PE 60 Hz
❑ 400 V, 3N+PE 50 Hz
❑ 380 V, 3+PE 60 Hz
❑ 380 V, 3+PE 50 Hz
❑ 240 V, 3+PE 60 Hz
❑ 240 V, 3+PE 50 Hz
❑ 230 V, 3+PE 50 Hz
❑ 208 V, 3+PE 60 Hz
❑ 208 V, 3+PE 50 Hz
❑ 200 V, 3+PE 60 Hz
❑ 200 V, 3+PE 50 Hz

Electrically Heated Washers

On electrically heated models the heating elements for water (booster tank and for circulating water) as well as the dryer are heated by electricity.

❑ 415 V, 3N+PE 60 Hz
❑ 415 V, 3N+PE 50 Hz
❑ 400 V, 3N+PE 60 Hz
❑ 400 V, 3N+PE 50 Hz
❑ 380 V, 3+PE 60 Hz
❑ 380 V, 3+PE 50 Hz

WATER VALVES AND CONNECTIONS

❑ Cold + warm water, top connection with valves.
❍ Cold + warm + purified water, top connection with valves.
❍ Cold + warm water, bottom connection with valves.
❍ Cold + warm + purified water, bottom connection with valves.

DOSING PUMPS

As standard two dosing pumps for process chemicals are supplied, 3rd and 4th pump are optional. The third pump may be used for either instrument lubrication or enzyme wash. The third pump determines which program group will be delivered with the washer.

❑ 2 dosing pumps.
❍ Dosing pump 3 for instrument lubricant.
❍ Dosing pump 3 for enzyme wash.
❍ Dosing pump 4 for chemical disinfection.
❍ Flow monitoring and control of dosing pumps 1 + 2. *
❍ Flow monitoring and control of dosing pump 3. *
❍ Flow monitoring and control of dosing pump 4. *

* Flow controll is required to fulfil EN ISO 15883.

EXTRA COVER PANELS

When installing Getinge 88-Series built in to a wall, extra cover plates may be needed. The cover plate option includes side plates, top plates, plates between the units and base frames. For units that are not installed in a wall, base frames can still be needed to cover the legs of the unit.

❑ No panels
❑ AGS installation**
❑ Cover plates (including base frame)
❑ Base frame only

** When washers are installed with an AGS, the required panels are included in the delivery.

CUSTOMER: .....
REFERENCE: .....

PREPARATION FOR AUTOMATIC LOADING EQUIPMENT
Getinge 88-Series is designed for manual or automatic loading/unloading. When using automatic loading/unloading the washer needs to be prepared with interfaces to the loading/unloading systems.

- ❑ No automatic loading.
- ❍ AGS.
- ❍ Loading station only.
- ❍ Unloading station only.
- ❍ Loading & unloading station.

ADDITIONAL OPTIONS

- ❍ Built-in printer, soiled side. ***
- ❍ Built-in printer, clean side. ***
- ❍ External A4 printer type Lexmark.
- ❍ Built-in conductivity control of final rinse water with repeated rinse function.
- ❍ Drain cooling.
- ❍ Supervisor for HTM 2030 compliance (UK).

*** Documentaion of process is required to fulfil EN ISO 15883

SCANNER
The purpose of the bar code scanner is to automatically select the correct wash program for each cart. The manual scanner can not be selected together with the automatic loading and AGS.

- ❑ Without scanner
- ❍ Stationary scanner built into the washer

LANGUAGE
Operator displays and manuals are available in the following languages:

❑	Swedish	❑	English
❑	Dutch	❑	Finnish
❑	French	❑	German
❑	Czech	❑	Portuguese
❑	Greek	❑	Italian
❑	Spanish	❑	Polish
❑	Danish	❑	Norwegian
❑	Hungarian	❑	Estonian
❑	Lithuainian	❑	Latvia
❑	Slovakian	❑	Slovenian

Other documentations and manuals are in English, French, German or Swedish.

WASH CARTS
The Getinge 88-Series is very flexible when it comes to the varity of items to be cleaned and disinfected. For most purposes standard wash carts are available. For more detailed information we refer to catalogue “Loading Equipment Getinge Washer-Disinfector”

FINE FILTER FOR TUBULAR INSTRUMENTS
A fine filter must be used when cleaning and disinfecting tubular instruments with a passage smaller than 2 mm, to prevent particles getting stuck in the instruments. Blocked or reduced water flow may result in cleaning and disinfection failing to take place.

DOCUMENTATION
Machine delivery includes 1 set of the following documentation:

- User Manual
- Service Manual
- Installation Manual
- Standard Spare Part List
- Quality Inspection Certificate
- Test temperature diagram
- Declaration of Conformity

The documentation is supplied as paper copy apart from Standard Spare Part List and Service Manual, which are supplied in CD format.

DISCLAMIER
Do not use this product specification for installation of equipment. Subject to change without notice.

Advisory Note: Getinge 88-Series Washer/Disinfectors perform a critical cleaning and microbial reduction step in the processing of soiled reusable medical devices. Medical devices that will be used in sterile areas of the human body or will be contacting compromised tissues, must be terminally sterilized before each subsequent use in a human patient.

STANDARD DESIGN FEATURES

VIP Glass Doors (VIP = View-in-process) – Glass doors provide a full-size viewing inside the chamber. The door consist of two layers of safety tempered glass, which provides excellent sound and heat abatement, as well as an extra measure of operator safety.

Double Door Pass Through – Door interlocks assure integrity of barrier wall by allowing only one door to be open at any given time. The single door model includs two doors but only one can be operated.

Fine and Gross Debris Filters – One self cleaning fine debris filter is located at the chamber bottom to filter water before entering the drain. Upon completion of the draining phase the filter is back-flushed and cleaned from debris. The gross debris filter is located on the top of the filter arrangement and is easily removable for mannual cleaning.

Top or Bottom Mounted Filling Valves – There are up to three water inlets on the top of the chamber. Filling through top of chamber eliminates dead legs and provides the air-break to protect potable water from cross-contamination. The conection point (two for hot and cold water are standard) can either be top or bottom mounted.

Process tank - Hot and cold incoming process water will fill the Process tank before entering the wash chamber. During a wash cycle the Process tank is always filled with water to be used in the next wash phase. This way of waterfilling the chamber reduces the cycle time significantly.

High-Volume/Low-Pressure Wash – Solution from the sump is pressuriezed by a pump and sent through the steam/electric heat exchanger before entering the upper and lower spray arms and cart docking systems. The pump has a speed controlled motor. Low speed is always kept during rinse phases. This way of operation saves cycle time and consumption of utilities.

External Process Heat Exchanger – Solutions from the wash pump are forced through a powerful external steam/electrical to water heat exchanger to rapidly elevate and maintain process water temperature at specified set point. The heat exchanger is integrated in the manifold pipe.

Booster Tank - A standard steam/electrical to water heat exchanger enclosed in a separate stainless tank to raise the water temperature for final rinse/disinfection water. The water is pumped to the process tank before filling of the chamber.

Jet-Spray Washing – Spray arms are fixed at the top and bottom of the chamber. Wash carts are equipped with spray arms under each shelf to allow water and detergent to reach all surfaces to be cleaned. Carts with spray arms and injection wash carts automatically connect to water and drying air system.

Automatic Chemical Dispensing – Getinge 88-Series provides chemical dosing pumps with time/volume base control. Flow monitoring and control is offerd as an option, which is a pulse base control unit of dosing.

Drain Pump – Wash and rinse solutions are pumped to the building waste system from the drain tank via the water trap.

Drain Tank – Hot process solutions from the wash chamber is gravity drained to the drain tank via a big drain valve.

Drain Cooling – As hot solutions from drain tank and condensate from the heat exchanger enter the water trap, cold water is automatically injected to reduce the temperature to 60°C (140F) or less before the discharge enters the building waste system.

Process piping – valves, external heat exchanger, steam coils, manifold tubes, sump base, removable filter screens and chamber are made of AISI 316 stainless steel. AISI 316L stainless steel sanitary tri-clamp fittings are used for easy removal of key process components. Gaskets and hoses are EPDM, PTFE or Silicone.

PACS Cycle Printer – Cycle performance data is printed during the cycle and at cycle completion. The printed cycle information includes cycle number, cycle start date and time, phase transition points, disinfection quality and cycle alarms that occurred during the cycle.

NON-RECIRCULATED VENTED DRYING SYSTEM

Brushless Fan Motor – Fresh air is pulled into the dryer unit by two powerful fans. Unique brushless motor produces no carbon dust that can contaminate air filters and heating elements, resulting in longer fan life and lower maintenance costs.

Drying Heater and HEPA Filter – The fans forces air through the electric heating elements at high velocity. Drying air is quickly heated and filtered in a H14 HEPA filter before entering the chamber via the manifold pipe. By spray arms and cart docking openings, the hot air rapidly reaches all surfaces of the load. Heat and air turbulence combine to quickly dry loads and shortens process times.

Drying Heat Exchanger – Hot air leaving the chambe passes through the heat exchanger in vanes touching the incoming fresh air. Heat energy is transferred to the colder. Incoming air, increasing its temperature before it reaches the heating element. Warmed fresh air reduces the energy required to achieve maximum temperature. Meanwhile, the cool fresh air creates condensation in the moist hot air leaving the heat exchanger. The condensation droplets are piped to the water trap and then to drain.

Non-Recirculated Drying Air – In accordance with European standards to reduce risk of cross-contamination, hot chamber air is not recirculated over the load.

CONTROL SYSTEM

PACS 350 Microcomputer Controls

The PACS 350 modular PLC control system is dedicated to the control, operation and maintenance of Getinge sterilizers and washer/disinfectors, featuring:

- 8 MB RAM CPU processor with battery backup
- Digital inputs and outputs for machine control
- Analog measuring inputs
- 2x RS-232 COM port for serial communication
- RS-232/RS-485 COM port for T-DOC connection
- 10-30 cycle program memory

The PACS 350 controls all system functions, monitors-system operations, both visually and audibly alerts the operator of cycle malfunction and on demand, provides-visual indication of the chamber temperature.

OPERATOR CONTROL PANEL

The machine is controlled and operated from the control panel to the left of the soiled-side door. The panel interface is a durable LCD display with two rows with 20 character on each row. A screen saver extends the life of the backlit LCD display. Touching any key illuminates and reactivates the display.

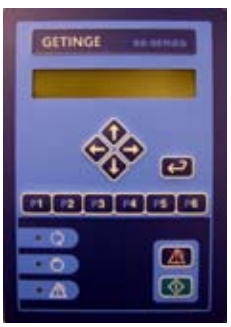
Following indicators and function keys are located on the display:

- Process Running
- Process Complete
- Alarms
- Reset Alarms
- Start Cycle
- Program selection 1-6

The software has a memory for up to 60 programs. However, there are normally 10-30 standard programs installed. Below the screen there are six programmable bottoms for the most common programs. The other programs are reachable by entering the menu.

Double door pass-through units are provided with a small operating panel at the unload door.

- Cycle status indicators
- Door Open Button
- Close Door Buttons



Operating panel on Soil side

CYCLE DESCRIPTION

Here are descriptions of the different possible phases and these vary from program to program.

Prerinse – The chamber is filled from the prefilled process tank. The circulating pump is soft started and water is circulated through the spray system under pump pressure.

Wash – Cold or warm water from the prefilled process tank is dumped into the chamber via the quick opening process valve. A peristaltic dosing pump automatically adds a programmed amount of chemical cleaning agent. Once set point temperature has been achieved, the controller will time the wash and then terminate the wash phase.

Rinse – Fresh hot water fills the chamber from the process tank. Water is forced through the external heat exchanger into the spray manifold nozzles and onto the load.

Final Rinse / Disinfection – Fresh water from the booster tank is pumped to the process tank and then fills the chamber. If chemical is using, a programmed amount of liquid is automatically added. Once set point temperature has been achieved, the controller will time the thermal rinse.

Drying – After Final Rinse/Disinfection the drying starts. Once the set dyring time has elapsed the cycle is completed and the door can be opened.

STANDARD SAFETY FEATURES

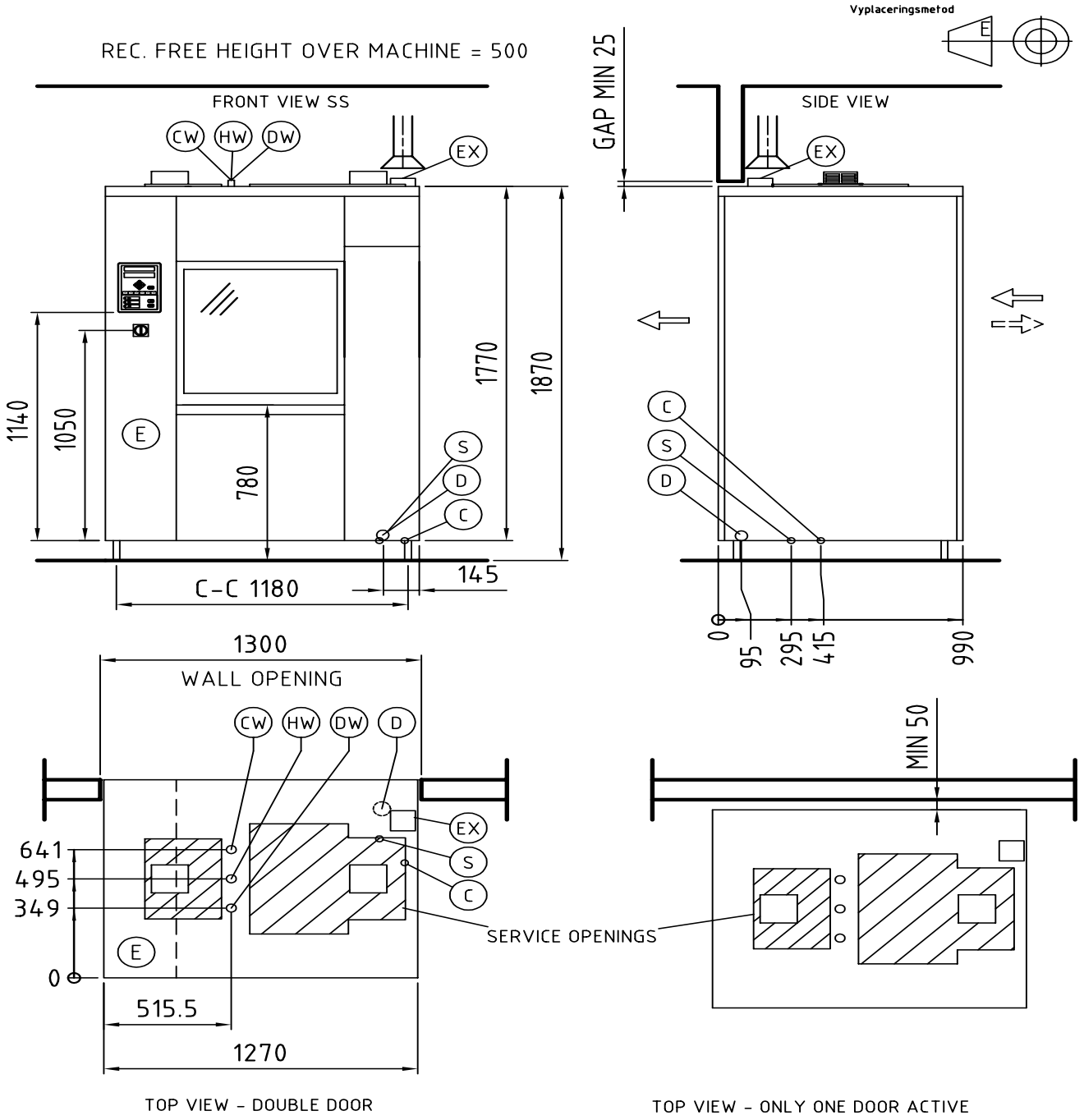
Illuminated Chamber – Wash chamber is equipped with one (1) halogen lamps mounted through the ceiling to illuminate the chamber for safe operations.

Door Obstruction – If the moving door contacts an obstruction while the washer is closing the door, the door will reverse and go back to open position. The door can then be closed again when the obstruction is removed.

Door Interlock Switches – The PACS controls will permit only one door to be unsealed and open at any given time during normal operations. Alternating door operation helps maintain integrity of the barrier wall.

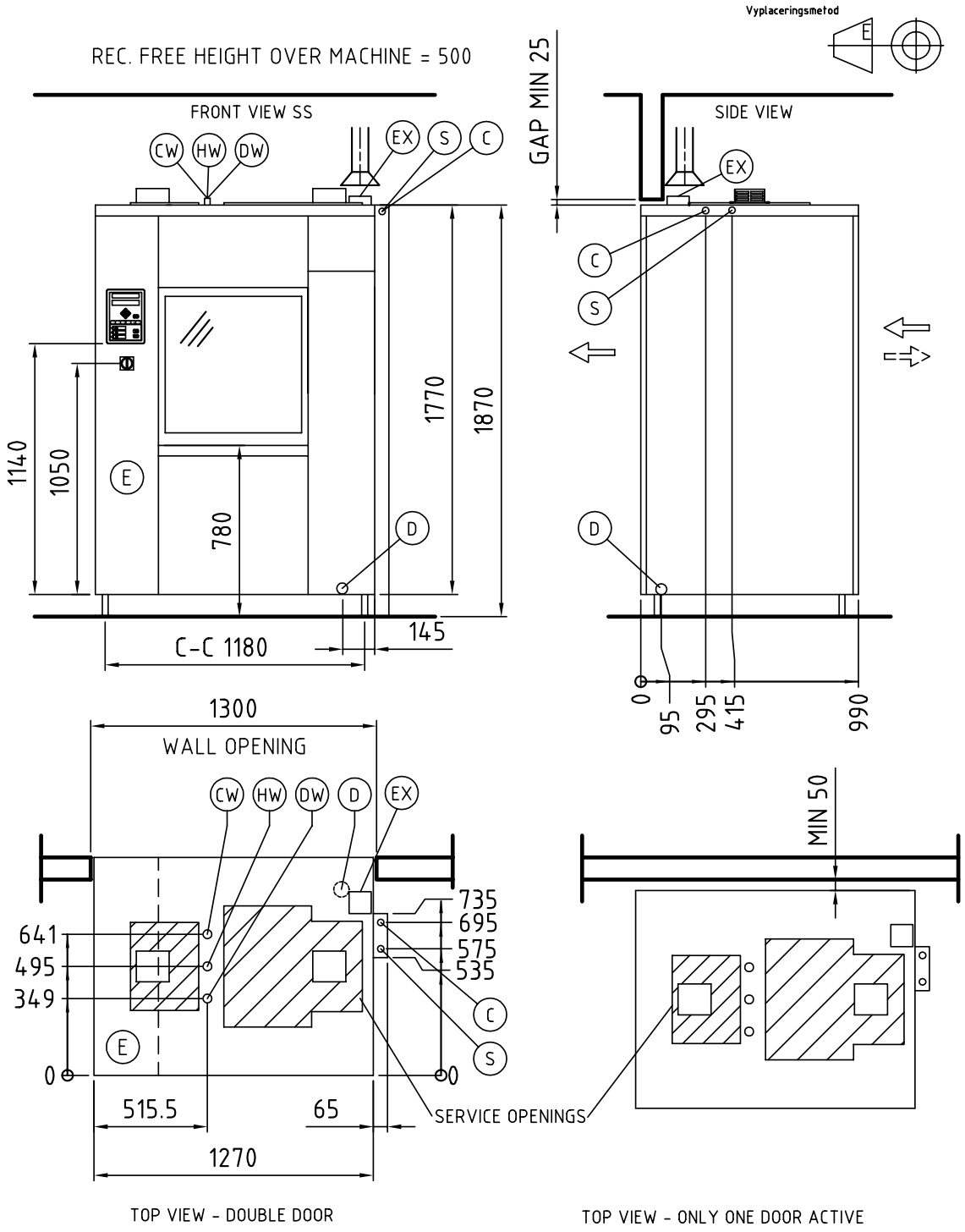
Low Chemical Alarm – Low level sensor in the suction tube assembly will automatically send a low chemical alarm to the message screen to alert operators. Controller allows error cycle to run with liquid in the lines. Chemical container must be replaced or re-filled before controller will allow subsequent cycles to be run.

GETINGE 88-SERIES OUTER DIMENSIONS IN MM



CW = Cold water 450 mm from floor
HW = Hot water 450 mm from floor
DW = Distilled/de-ionized water 450 mm from floor
Ex = Exhaust air at roof
E = Electrical connection 350 mm from floor
D = Drain connection 175 mm from floor

DRAWING 5024503
REV A



STEAM CONNECTION ROOF

DRAWING 5025258

CW = Cold water 450 mm from floor
HW = Hot water 450 mm from floor
DW = Distilled/de-ionized water 450 mm from floor
Ex = Exhaust air at roof
E = Electrical connection 350 mm from floor
D = Drain connection 175 mm from floor

GETINGE 88-SERIES - TECHNICAL DATA

UTILITY REQUIREMENTS

Utility	Unit connection	Supply Pressure requirements	Flow requirement	Comments
Cold water (CW)	ISO G-¾ " Treaded	100 - 800 kPa	> 40 l/min	See Notes 1, 7, 8
Hot water (HW)	ISO G-¾ " Treaded	100 - 800 kPa	> 40 l/min	See Notes 2, 7, 8
Purified water (DW)	ISO G-¾ " Treaded	100 - 800 kPa	> 40 l/min	See Notes 3, 7, 8
Compressed air (CA)		400 - 800 kPa	Option	See Note 4
Drain (D)	Ø 75 mm	N/A	> 50 l/min	See Notes 5, 9
Steam (S)	ISO G-½ " Treaded	300 - 500 kPa	< 1,5 kg/min	See Notes 6, 7, 8
Condansate (C)	ISO G-½ " Treaded	Minimum back pressure		See Note 6
Exhaust (Ex)	100 x 100 mm	N/A		See Note 10

Electrical (E)	Recommended service disconnect	Full load amps	See Notes 11 and 12
Steam heated			
415 V, 3n+PE, 50/60 Hz	C20	14A	
400 V, 3N+PE, 50/60 Hz	C20	14A	
380 V, 3+PE, 50/60 Hz	C20	14A	
240 V, 3+PE, 50/60 Hz	C25	21A	
230 V, 3+PE, 50/60 Hz	C25	22A	
208 V, 3+PE, 50/60 Hz	C30	24A	
200 V, 3+PE, 50/60 Hz	C32	25A	
Electrical heated			
415 V, 3N+PE, 50/60 Hz	C40	36A	
400 V, 3N+PE, 50/60 Hz	C40	35A	
380 V, 3+PE, 50/60 Hz	C40	34A	
IP class, general	IP 21		

OPERATING CONDITIONS

Room temperature	5-40° C (41-104° F)	
Air humidity	< 80% at 31°C (87° F)	
Radiant heat loss	Max 1500 W at 90°C (194° F) on soiled and clean side	
Heat to exhaust	Max 6000 W during drying	
Max surface temperature	50° C (123° F)	

Noise level
Calculated sound power level Lw for washer, dB ref 1 pW

Octave band (Hz)	125	250	500	1000	2000	4000	8000	LwA	LwAFmax	The sound power level as linear octave band levels are presented as A-leveled sound power level, both LwA and LwAFmax.
Correction (Kok)	65	66	67	63	63	60	58	70	76	

Noise level
Estimated LpA levels for Getinge 88-Series located in a 70 m³ room, db ref 20 µPa

Type of room	Description	Operator location *	3 m from washer	The calculated sound power levels are different LpA levels in different types of rooms. With bigger room volume the noise level is reduced and vice versa. Here are three examples of expected LpA levels. * See Note 13
Hard	All walls from concrete etc no absorbing elements	69	69	
Normal	Some sound absorbing elements like furniture and textiles.	65	64	
Subdeued	Some absorbing elements in celing and textiles	62	60	

TECHNICAL DATA COMPONENTS	
Water Circulation System	
Design pressure	300 kPa
Operating pressure normal	130 kPa
Design temperature	100° C (212F)
Operating temperature max	93° C (199°C)
Material of construction	Stainless steel EN 1.4404, ASTM 316 L
Drain Tank	
Type of vessel	Not closed
Material of construction	Polypropylene (PP)
Volume	50 liter (13,21 gallons)
Design temperature	95°C (203F)
Process Tank	
Type of vessel	Not closed
Material of construction	Polypropylene (PP)
Volume	50 liter (13,21 gallons)
Design temperature max	95°C (203F)
Booster Tank	
Type of vessel	Not closed
Material of construction	Stainless steel EN 1.4404, ASTM 316L
Volume	35 liter (9.24 gallons)
Desgin temperature max	99°C (210F)
Circulation Pump	
Max flow	1000 liter/min
Motor	2,2 kW
Material of construction	Housing: Stainless steel EN 1.4404, ASTM 316L Impeller: PP
Drain Pump	
Max flow	50 liter/min
Motor	0,17 kW
Material of construction	PP
External Water Heater, Steam	
Heating velocity	Up to 14°C/min at 450 kPa steam pressure
Steam consumption	< 1,5 kg/min at 300 kPa steam for external and booster heaters
External Water Heater, Electrical	
Heating velocity	Up to 5°C/min
Installed power	2 x 9 kW
Booster Heater, Steam	
Heating velocity	Up to 8°C/min
Booster Heater, Electrical	
Heating velocity	Up to 4°C/min
Installed motor power	1 x 9 kW
Dryer	
Installed power, heaters	4 x 2kW
Installed Motors	2 x 1,1 kW

WEIGHTS AND DIMENSIONS	
Outer Dimensions	
Width	1270 mm
Depth	990 mm
Height	1870 mm
Material of construction	Stainless steel AISI 304, Finish: Ra 0,45-0,7
Effective Chamber dimensions	
Width	665 mm (26,18”)
Depth	800 mm (31,5”)
Height	667 mm (26,26)
Volume	340 liter (89,8 gallons)
Material of construction	Stainless steel EN 1.4404, ASTM 316 L, Finish: RA 0,04
Weight and Floor loading	
Total weight	800 kg
Loading per foot	200 kg (4 feet in total)
Specific floor loading	6.2 kN/m²

Notes:

1) CW recommend quality = drinking water (see Installation Manual) and temperature 5-20°C (41-68° F). Consumption 40 liter for pre-rinse or wash phases, 32 liter for all rinse phases (may vary depending on load).
2) HW recommend quality = drinking water (see Installation Manual) and temperature 45-60°C (113-140F). Consumption 40 liter for pre-rinse or wash phases, 32 liter for all rinse phases (may vary depending on load).
3) DW quality = customer selection. Maximum temperature 60°C (140F).
4) Compressed air only need with optional automatic loaders and unloaders. Shall be free from oil and water.
5) Without drain cooling is the volume > 50 liter/minute and temperature up to 90°C (194° F). With drain cooling >90liter/minute and 60°C (164°F), Recommended drain pipe size is Ø 75 mm (3“).
6) Demand is based on 300 kPa pressure and will vary with different loads. Supply pressure shall be dynamic pressure (pressure at inlet minus condensate back pressure.
7) It shall be the Users responsibility to insure by use of pressure regulators or other means that maximum specified pressures are not exceeded.
8) It shall be the Users responsibility to eliminate water or steam hammer conditions should they occur in the service piping.
9) It shall be the customers responsibility to provide a properly sized and located drainage system in accordance with the national plumbing code. Consider that other equipment is tied to drain to eliminate slow drainage or backup.
10) It shall be the customers responsibility to provide a venting system capable of exhausting 350 m³/h measured at the point of connection to the washer. The venting system shall have an air gap of at least 50 mm direct after the exhaust. This means that the exhaust air will be mixed with room temperature air. Maximum air temperature from washer will be 90° C (194° F). The exhaust air humidity will be 100% to start with and then drops to approximatly 45% and 45°C (113° F) after 2 minutes. The system should be a dedicated, corrosion proof and water tight vent, slope vent back to washer.
11) It shall be the User responsibility to complete all electrical connections using properly sized wiring in accordance with the national electrical code.
12) It shall be the customers responsibility to provide a fused disconnect switch in all electrical supply lines at the washer location.
13) LpA levels are measured according to EN ISO 3747:2000, 1 meter in front of the washer and 1.5 meter above the floor level.

Getinge provides complete solutions for effective and efficient cleaning, disinfection and sterilization in the healthcare and life science sectors. Our know-how comprises everything from architectural planning, production and handling equipment, to systems for full traceability of sterile goods. Our commitment covers expert advice, training and long-term technical support.

PS07-0001 Product specification, Edition A, 2007-02-06/hl

GETINGE

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GETINGE

GETINGE GROUP is a leading global provider of equipment and systems that contributes to quality enhancement and cost efficiency within healthcare and life sciences. Equipment, services and technologies are supplied under the brands **ARJO** for patient hygiene, patient handling and wound care, **GETINGE** for infection control and prevention within healthcare and life science and **MAQUET** for surgical workplaces, cardiopulmonary and critical care.

APPENDIX

Document History, PS07-0001 Getinge 88-Series

Date	Edition	Change	Updated by
2007-02-06	A	First edition	Hanna Lindblom
2007-04-03	B	Page 3 Removed the option manual scanner Page 3 Fine filter for tubular instruments	Jörgen Thernström