



Developer SMD-200-E
Cleaning, developing and etching
with high process performance



The development of the exposed photoresist is one of the most critical process steps, therefore special care need to be given to the selection of the development process and its parameters (temperature, development time, etc.). The SAWATEC developers can be used for puddle or spray development, in which the optimum process being chosen based on application-technical and economic criteria.

Each substrate is individually developed respectively etched in the spray development and the exposed areas are continuously sprayed with fresh developing or etching agent to prevent that the developer getting saturated. The advantage of the spray development compared to the puddle development is that very small structures can be released and a significantly lower developer solution respectively etching agent is required.

The SMD series is designed to clean, develop and to etch wafers up to 8" or substrates up to 6"x6" (150 x 150mm). The process-chamber works up to Ø 212mm.

The SMD developers by SAWATEC are convincing due to their high process performance, low chemical consumption as well as reliable repeatability, even with thick photoresist layers. Due to the user-friendly operation and easy cleaning, these instruments are ideally suited for laboratories, R&D, institutes and pilot projects.

The instrument is available as bench-mounted or mobile cabinet unit.

FEATURES (BASIC CONFIGURATION)

- Up to 50 programmes with 24 segments each can be programmed
- Quick start function for repeat processes
- User-friendly process configuration with touch screen panel
- Process parameter: speed, acceleration, process time, speed of the spray arm, developing spray time
- Electrical driven spray arm, with dynamic or static function
- Developer line and media tank for one developer included
- Nozzle for DI-water-rinse and N2 drying on the spray arm
- Control elements for dosing of the compressed air and vacuum
- Rotational direction can be selected (CW, CCW)
- Manual loading and unloading of the substrates
- Mechanical substrate fixation
- Acoustic signal when the process has finished

PERFORMANCE DATA

- Speed range: 0 to 3'000rpm +/-1rpm 1)
- Speed acceleration: 0 to 5'000rpm in 0.5 seconds 1)
- Process time up to 2376 seconds
- Developer spray time 99 seconds/segment
- Speed of the spray arm 10 to 200mm/seconds
- Rinse and N2 drying 99 seconds/segment
- Heatable process hood up to 50°C
- Spray nozzle made from stainless steel 0,8mm

1) Slower speed and acceleration for the process recommended

ADDITIONAL FUNCTIONS (OPTIONS)

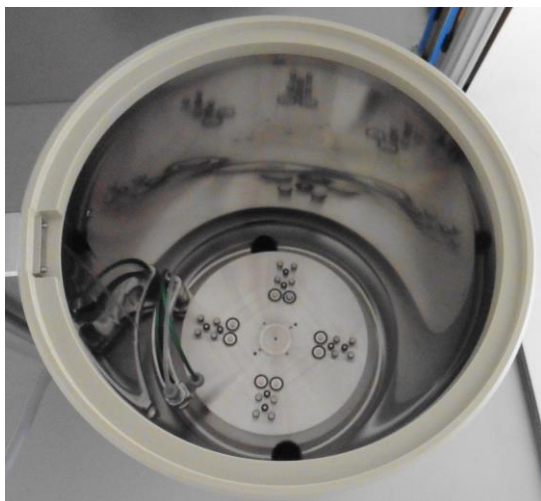
- Additional developer lines (up to 4 developer lines possible)
- Start/stop foot switch for ease of operation (cable length 1.8m)
- Separation unit for media exhaust (tank and laboratory equipment)
- Developer tank heating system (2 litre)
- Spray nozzle made of stainless steel (0,3 / 0,5mm)



SPIN CHUCK RANGE

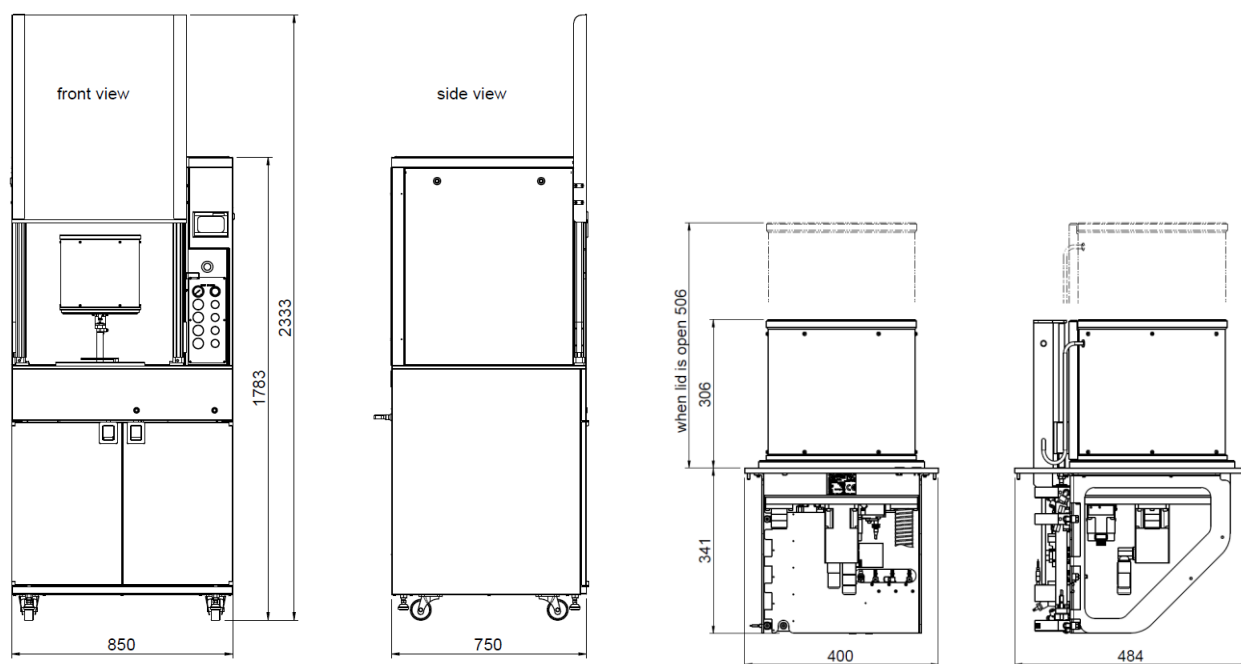
The Spin Chucks are available in various sizes, materials and designs for an optimal development process. Depending on the application, mechanical or combi-spin chucks are used. Replacing of the spin chucks is very easy and does not require any tools.

- Mechanical spin chuck 100mm (4") up to 200mm (8") made of stainless steel
- Mechanical spin chuck 125x125mm (5x5") made of stainless steel
- Mechanical combi-spin chuck made of stainless steel for small and large substrates
- Spin chucks in special design on request



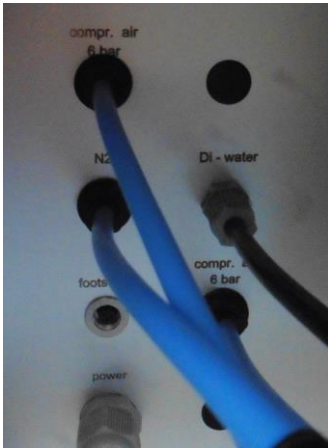
DESIGN AND DIMENSIONS

- Mobile cabinet made of electro polished stainless steel
- Process bowl and hood made of stainless steel for high degree of material compatibility
- Closed process chamber for process safety
- Glass front door to observe the process
- Dynamic AC servomotor for precise speed
- Cabinet size: 850 x 750 x 2333mm (L x W x H)
- Bench mounted size: 484 x 400 x 847mm (L x W x H)
- Weight: approx. 240kg



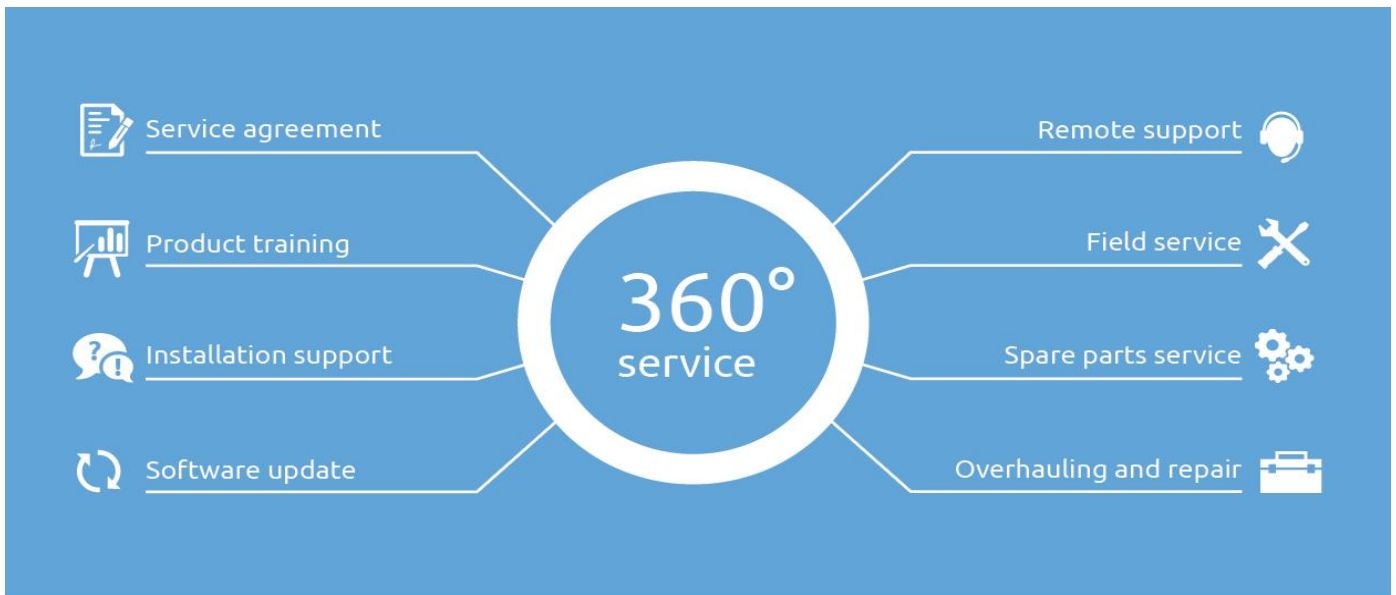
Cabinet

Bench mounted version (BM)



REQUIRED MEDIA

- 230 VAC 50/60Hz 16A
- Plug connector for foot switch
- Compressed air tube Ø6/4mm (6bar)
- N2 nitrogen tube Ø6/4mm (6bar)
- DI water tube Ø6/4mm (3bar)
- Exhaust connector cabinet Ø76mm (40–60m3/h)



If you would like a personal consultation or have a specific request, please do not hesitate to call us. Our technical experts will be pleased to help you.

Headquarters Switzerland

SAWATEC AG
Eschagger 2
CH-9468 Sax
Switzerland

T +41 81 750 44 00
F +41 81 750 44 01

Email: sales@sawatec.com

Sales and Service Center Greater China

Suzhou SAWATEC Semiconductor Systems Co., Ltd.
Room 403-1, Yixin Building, No.88 Jixian Street
Suzhou Industrial Park
CN-Suzhou, Jiangsu 215123
China

T +86 512 87660235
F +86 512 87660239

Email: cn.sales@sawatec.com

Distribution partners:



SAWATEC
www.sawatec.com