



SUSS MicroTec Lithography GmbH Schleissheimer Str. 90 85748 Garching GERMANY

**UAB Labostera**

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**LITHUANIA**

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Garching, 22.05.2019

**Quotation No. 094981vqrev3**

**SUSS LabCluster (Coat/ Develop/ Hotplate)**

Dear Mr. Aikevicius

Thank you very much for your interest in our products. We take pleasure in submitting our quotation for

**SUSS LabCluster**

and we are looking forward to discuss further details with you.

SUSS MicroTec as leading edge supplier of wafer processing equipment for R&D as well as volume production ensures to provide state-of-the-art solutions to your individual requirements, which enables you to stay competitive in terms of technology.

Please do not hesitate to contact us for any additional information.

Best regards

A handwritten signature in blue ink that reads "V. Quet".

Virginie Quet

Director Sales EMEA

**SUSS MicroTec Lithography GmbH**

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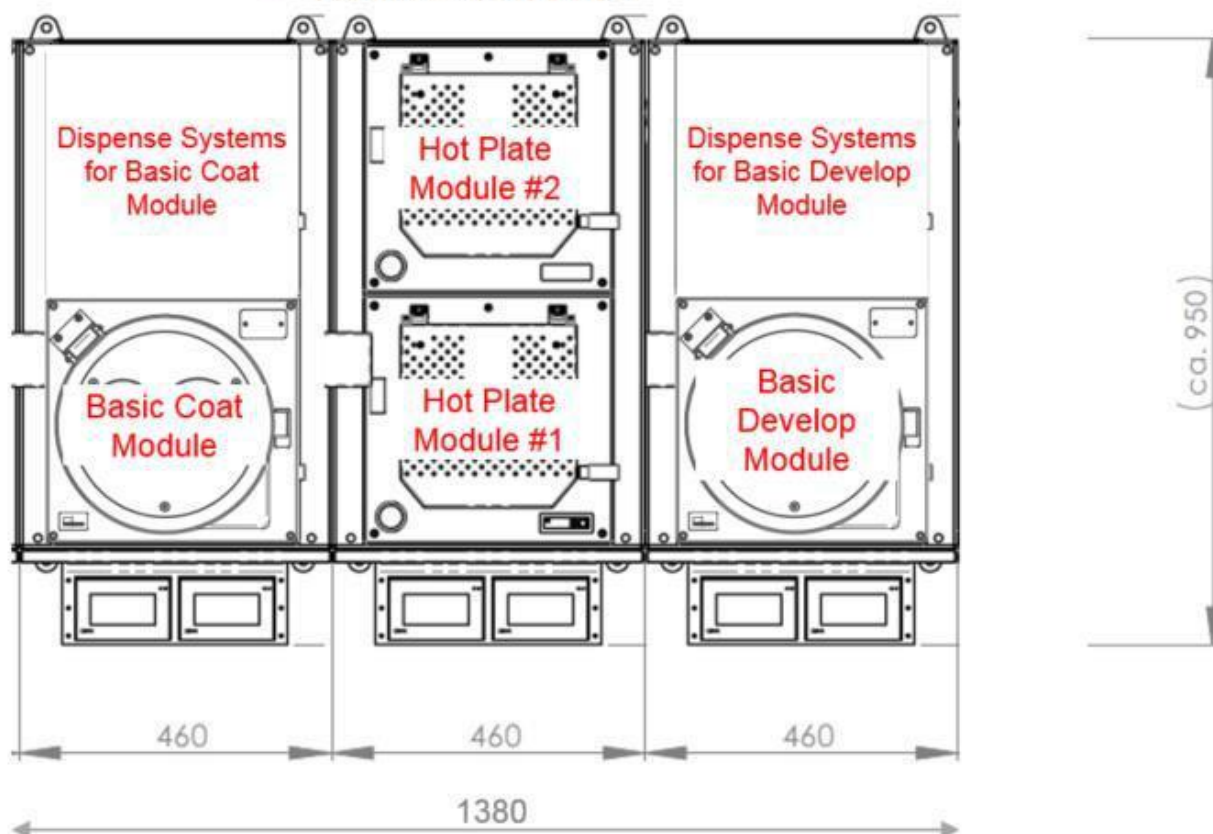
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## A. SUSS LabCluster

POS.	QTY.	PART #	DESCRIPTION
Preliminary Layout			

**+** Labcluster with 3 cabinets consisting of

- 1x Basic Spin Coat Module
- 1x Basic Develop Module
- 2x Hot Plate Modules



**Note:**

*Changes may apply upon technical demands;  
 final layout will be provided ~ 14 days after PO*

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POS.	QTY.	PART #	DESCRIPTION
<b>Basic Frames</b>			
1	3	100088423P	<b>SUSS LABCLUSTER BASE FRAME</b> + LabCluster base frame for up to two process modules. + Can be equipped with up to two of the following modules: Basic Spin Coater, basic aq. Puddle Developer, Primer Plate, Cooling Plate, Hot Plate <b>Note:</b> When LabSpin is equipped with dispense option, LabSpin must be in the front location and back location must be blank plate (for dispense systems, bottles, etc.)
<b>Basic Spin Coat Module</b>			
2	1	100056474	<b>Labcluster Spin coat module basic</b> Bench mounted system for wafer up to 150 mm round or up to 100 mm square substrates Consisting of:  + Spinner module + Control unit + Bowl cover made of safety glass + Process bowl made of polypropylene + digital vacuum gauge + safety features: + vacuum monitoring + cover open interlock + Tool documentation on CD (only), includes "Declaration of Incorporation" <b>Technical data:</b> + 115/230 VAC; 60/50 Hz; 5/3 A single phase + Speed: 50 - 99 rpm, 100 - 8,000 rpm (+/- 1 rpm) with 150 mm chuck + Acceleration: 4,000 rpm/sec + Spinning time: 1 s up to 999 s + 200 recipes with 40 steps each + Waste bottle 0.5 l + exhaust connection Dimensions (W x D x H): Spinner module: 320 x 310 x 415 mm <sup>3</sup> Controller: 160 x 120 x 67 mm <sup>3</sup>
3	1	100057682	<b>LABSPIN6 COVER UPGRADE FOR ADDITIONAL FUNCTIONS</b> Replaces standard cover and is required for any additional function like: + Center and edge coating + Edge bead removal + Developer dispense option + Nitrogen drying

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POS.	QTY.	PART #	DESCRIPTION
4	1	100007253	<b>MINI CARTRIDGE DISPENSE SYSTEM PRESSURIZED</b> A syringe dispense system capable of dispensing small quantities of material without filtration for experimental or low volume purposes + function to be set in the recipe + For syringes ranging from 10ml to 55ml (subject to change without notice) + Dispense volume controlled by pressure and time + Recommended for viscosities 10cP to 5000cP + Including set of syringes (20pc), syringe material: PE + requires "LabSpin cover upgrade for additional functions"
5	1	100031370	<b>REPLACEMENT BARREL FOR SYRINGE SYSTEM, 30CC, PACK OF 20</b> syringe with stopper for use with pressurized Cartridge Dispense System
6	1	100013184	<b>LABSPIN FULL AUTOMATIC DISPENSE SYSTEM 20ML</b> A full automatic dispense system capable of dispensing small quantities of material without filtration for experimental or low volume purposes + Function to be set in the recipe + Motorized piston pump made of PTFE + Dispense volume 0.1 - 20ml programmable in mini controller with touch panel + Dispense accuracy < 1% + Dispense speed programmable in 10 steps + Recommended for viscosities 1cP to 500cP + requires "LabSpin cover upgrade for additional functions" <b><u>NOTE:</u></b> <b><u>Only one resist dispense system of the two quoted can be used in a process.</u></b> <b><u>Exchange from one to the other system requires manual electrical connect/disconnect to/from each controller unit</u></b>
7	1	Qxxxxxxxxxx	<b>Cable extension with adapter for two resist dispense systems</b>
8	1	100007776	<b>LABSPIN6 EDGE BEAD REMOVAL OPTION</b> Adjustable EBR Needle for cleaning edge of wafer with solvent + function to be set in the recipe + stainless steel needle + needle adjustable in + position for cleaning edge of 2" to 6" wafer + heights + includes a full automatic dispense system + Motorized piston pump made of PTFE + Dispense volume 0.1 - 20ml programmable in mini controller with touch panel + Dispense accuracy < 1% + Dispense speed programmable in 10 steps + Recommended for viscosities 1cP to 500cP + requires "LabSpin cover upgrade for additional functions"

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POS.	QTY.	PART #	DESCRIPTION
9	1	100011740	<b>VACUUM CHUCK FOR 2" WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
10	1	100011741	<b>VACUUM CHUCK FOR 3" WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
11	1	100011742	<b>VACUUM CHUCK FOR 100 MM WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
12	1	100011748	<b>VACUUM CHUCK FOR 4" X 4" SUBSTRATES WITH CENTERING PINS</b> + material POM + SEMI standard <i>Please note:</i> if substrate weight exceeds 50g the LabSpin Active Cover Lock is mandatory for safety reasons
13	1	V108463	<b>VACUUM CHUCK WITHOUT CENTERING PINS 12</b> + material POM + Vacuum area 12 mm diameter
14	1	100090150	<b>CHUCK VACUUM AREA Ø2,5</b> + material POM + vacuum area 2,5 mm diameter

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POS.	QTY.	PART #	DESCRIPTION
<b>Basic Developer Module</b>			
15	1	100056474	<p><b>LabCluster Spin coat module basic</b>  Bench mounted system for wafer up to 150 mm round or up to 100 mm square substrates  Consisting of:  + Spinner module  + Control unit  + Bowl cover made of safety glass  + Process bowl made of polypropylene  + digital vacuum gauge  + safety features:  + vacuum monitoring  + cover open interlock  + Tool documentation on CD (only), includes "Declaration of Incorporation"  <b>Technical data:</b>  + 115/230 VAC; 60/50 Hz; 5/3 A single phase  + Speed: 50 - 99 rpm, 100 - 8,000 rpm (+/- 1 rpm) with 150 mm chuck  + Acceleration: 4,000 rpm/sec  + Spinning time: 1 s up to 999 s  + 200 recipes with 40 steps each  + Waste bottle 0.5 l  + exhaust connection  Dimensions (W x D x H):  Spinner module: 320 x 310 x 415 mm<sup>3</sup>  Controller: 160 x 120 x 67 mm<sup>3</sup></p>
16	1	100057682	<p><b>LABSPIN6 COVER UPGRADE FOR ADDITIONAL FUNCTIONS</b>  Replaces standard cover and is required for any additional function like:  + Center and edge coating  + Edge bead removal  + Developer dispense option  + Nitrogen drying</p>
17	1	100026027	<p><b>LABSPIN DEVELOPER DISPENSE OPTION</b>  for puddle development  can be connected to center dispense position in cover for additional functions  + function to be set in the recipe  + flowmeter 40 - 420ml/min  + manual pressure regulator 0.2 - 2.5bar  + 5l polyethylene pressure tank</p>

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POS.	QTY.	PART #	DESCRIPTION
18	1	100026028	<b>LABSPIN DI-WATER RINSE OPTION</b> for puddle development can be connected to center dispense position in cover for additional functions + function to be set in the recipe + flowmeter 40 - 420ml/min + manual pressure regulator 0,2 - 2,5bar + 5l polyethylene pressure tank
19	1	100024919	<b>DRAIN CONNECTOR</b> for connecting a tube to the drain instead of the waste bottle includes connector and 2m tube recommended especially for developer processes Please note: customer needs to supply tank or canister
20	1	100026026	<b>LABSPIN NITROGEN PURGE OPTION</b> for Drying wafer + with digital flowmeter 2 - 100 l/min + function to be set in the recipe
21	1	100011740	<b>VACUUM CHUCK FOR 2" WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
22	1	100011741	<b>VACUUM CHUCK FOR 3" WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
23	1	100011742	<b>VACUUM CHUCK FOR 100 MM WAFER WITH CENTERING PINS</b> + material POM + SEMI standard
24	1	100011748	<b>VACUUM CHUCK FOR 4" X 4" SUBSTRATES WITH CENTERING PINS</b> + material POM + SEMI standard <i>Please note:</i> if substrate weight exceeds 50g the LabSpin Active Cover Lock is mandatory for safety reasons
25	1	V108463	<b>VACUUM CHUCK WITHOUT CENTERING PINS 12</b> + material POM + Vacuum area 12 mm diameter
26	1	100090150	<b>CHUCK VACUUM AREA Ø2,5</b> + material POM + vacuum area 2,5 mm diameter

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POS.	QTY.	PART #	DESCRIPTION
<b>Hot Plate Modules</b>			
27	2	100018730P	<b>Hot Plate Module</b> Bench mounted hot plate for wafers from Ø 2" up to 200 mm or substrates up to 6" x 6" + 3 lifting pins for substrate handling + Temperature range: 60 - 250 °C Uniformity: +/-0.5 °C up to 120 °C, +/-1 % for 120 °C and above + including controller with touch panel (1 m cable between plate and controller) + max # recipes: 200 + max # steps/recipe: 40 + programmable temperature ramps: 0-10 °C/min (heating) + step time: 0 - 999 s in 1 s steps
28	2	100018734P	<b>OPTION: HP8 PROXIMITY</b> + For bake without contact between substrate and hot plate chuck + Wafer only in contact with lifting pins during bake process + Proximity 0.00 mm - 10.00 mm
29	2	100011719P	<b>OPTION: HP8 NITROGEN PURGE</b> + With flowmeter, tubing and recipe controlled activation
30	1	100087866	<b>SUSS LABCLUSTER BACK POSITION HEIGHT EXTENSION</b> + Mandatory for back locations for better module access + For Cooling Plate and Hot Plate in back position

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POS.	QTY.	PART #	DESCRIPTION
<b>Documentation &amp; Installation</b>			
31	1	100062410P	<b>MANUAL (LANGUAGE: INDIVIDUAL)</b> Tool operation manual in English, including: + tool operation manual + SUSS MMC TC software manual + schematic diagramms (electric, pneumatics, fluidics) + spare parts (categorized) + preventive maintenance manual Delivered media: + 1 x CD-ROM + 1 x cleanroom paper
32	3	V790102P	<b>DAY/S OF INSTALLATION</b> + Installation of machine at customer site + Instruction in basic machine usage + Including accommodation, excluding travel
33	14	V790003P	<b>HOURLY OF TRAVELLING TO AND FROM INSTALLATION SITE</b>
34	1	V790004P	<b>FLIGHT TO INSTALLATION SITE</b>