

# PK Machinebouw Installs New Dilution Plating Machine for SGS Spijkenisse

The new dilution plating machine developed for SGS for processing microbiological analyses is truly a working horse. It was commissioned in April 2008 and its footprint is a mere 1.5 x 4 metres.

This new asset is no bigger than a lab table. With a storage capacity of 560 empty Petri dishes, 8 medium pumps and 10 sorter and stacking units the machine can run at top speed for two hours without pause with only one operator present. What's more, analysts can restock the storage without interrupting the process. The operator follows the on-screen instructions for processing the sample, scanning the test tube barcode, pipetting and dosing. Next, he tips the knee pedal in motion. While the selected medium flows into the Petri dish, he adds the sample with the pipettor, disposes the pipette tip and sticks on a fresh one, all in one continuous motion. In this way, one person can reach up to 350 Petri dishes per hour. Faultless, efficient, and flexible as well. The dilution plating machine designed by PK Machinebouw allows an operator to process special samples just as effortless as routine samples.

## Upgrading

During the last 15 years, SGS and PK Machinebouw BV have worked together in the field of automation. The new dilution plating machine is an upgrade of the first model, which was completed in '93/'93. SGS-lab manager Ed van Meurs: "Both the first and the new dilution plating machine is tailor-made to your demands and preferences in consultation with PK Machinebouw. Our 'Kitty I' functioned all those years without problems." Mr Meurs cringes at the thought of not having Kitty: "This machine saves us 3.5 FTEs. One operator performs the work of almost 5 persons, but the visual control is still there. That's because someone watches over the system. It is also very important for our microbiological analyses that we can approach each sample separately. If something unusual occurs, the operator can switch to semi automatic or fully automatic."



Peter Krul, PK Machinebouw BV manager on the development. "The upgrading took nine months. The design was made with a 3D design package and the software was written in cooperation with a partner. The dilution plating machine consists of modules connected on the spot. This means two days of connecting, performing test runs the next day, and then it simply works. Our dilution plating machine is easy to operate. At SGS, it wasn't Kitty, but the analysts who needed to get used to it."

Want to know more about PK Machinebouw BV?  
Visit: [www.pkmachinebouw.nl](http://www.pkmachinebouw.nl)  
Watch Kitty performing at:  
[www.pkmachinebouw.nl/nieuws\\_uitplaat.htm](http://www.pkmachinebouw.nl/nieuws_uitplaat.htm)

'One operator does the work of almost five persons'

# PK Machinebouw:

power in automising microbiology labs

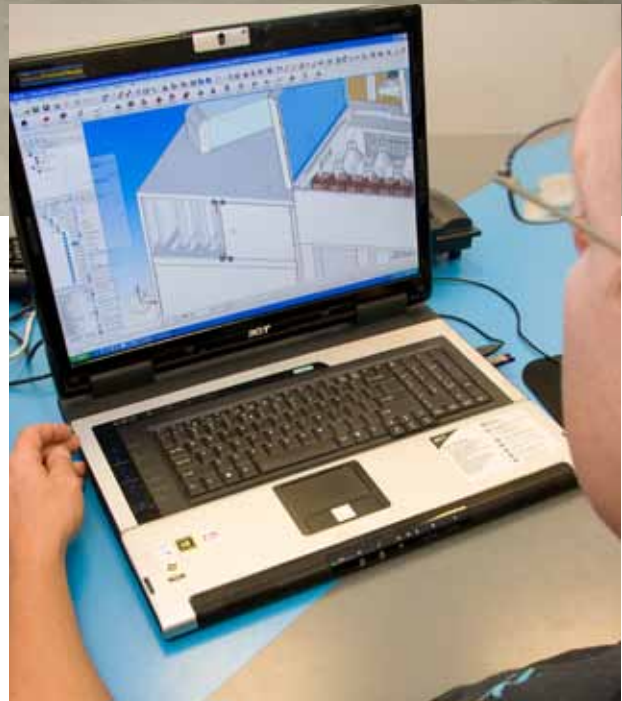
## PK Machinebouw's dilution plating machines:

TURNKEY • FLEXIBLE • CUSTOM MADE • MODULAR • ROBUST  
SCREEN OPERATED • MONKEY PROOF • SMALLEST FOOTPRINT  
SHORT PAYBACK TIME • ALSO SUITED FOR SMALLER LABORATORIES



PK MACHINEBOUW B.V.





Being a precision technical company, PK Machinebouw BV realises all automation solutions on their own premises. We do this in close consultation with the customer. We translate your automation demands to a three-dimensional model. Together we agree on a definitive design. Based on HiCad Next drawings, our engineers produce the various parts using modern equipment, and provide assembly and powering. Both for control and software we cooperate with a regular partner. So you always have a single contact for all your preferences regarding automatic processing of Petri dishes with growth media.

PK Machinebouw BV offers robust solutions with a high degree of automation and lots of flexibility. Our

dilution plating machine has a modular composition according to a tested concept. It is ready for production after two days of installation only. Complete operation regarding Petri dishes is LIMS controlled. This ensures maximum output and faultless processing. The user-friendly software and operation plus training-on-the-job allows quick adaptation of operators with our dilution plating machine. Thanks to a stainless steel exterior the dilution plating machine can be easily cleaned, and Petri dishes are protected from escaping the machine. All machine parts remain easily accessible for resupply, cleaning or inspection via doors and/or

valves. Furthermore, our machine is super compact. With an area of only 6 square metres our dilution plating machine fits in any laboratory. In addition, distance troubleshooting ensures continuity.

#### Specifications:

- 1.5 x 4 metres and 1.4 metres high (monitor top)
- Mechanical speed 7.5 sec per tact
- Up to 480 Petri dishes per hour
- Heated dosing arm
- Storage unit with processing area
- Shaking conveyor
- Cooling conveyor
- Sorting and stacking unit
- 560 empty Petri dishes in storage
- Pumps for 8 media types
- Ten sorter/stacking units for bacterial count, Enteros, Staphylococcus aureus, Lactobacillales, fungi and yeasts, or specific microorganisms, among others

#### Particulars:

- 1 operator
- Coupling to the Laboratory Information Management System
- Petri dish coding with unique barcode
- Sorter unit both sorting media and storing special samples separately

