

PK DEMO DAYS: SAVE 75% FTEs ON PETRI DISH HANDLING

# Turbo dilution plating

Ready for a dilution plating machine with the highest efficiency, smallest footprint, simplest operation that simply does what it is supposed to do? Then come to PK Machinebouw's info days in Roelofarendsveen on February 16 and 17. Experience just how much FTEs you can save on Petri dish handling and how you can improve traditional dilution plating methods. Also suitable for labs short on space.

On 16 and 17 February you can have a seat behind the latest dilution plating machine by PK Machinebouw in Roelofarendsveen. A great chance to see for yourself. Experience the new model, to be commissioned at SGS in Lisbon this spring. More compact than its predecessor, which

has been performing at SGS Netherlands to their satisfaction for three years now. Here, in the Dutch town of Spijkensisse, SGS conducts its complete microbiology programme on a tiny 1.5 x 4 metre footprint, using only 1.5 FTEs. Its efficiency allows this new custom-made PK dilution

plating machine to quickly make good on its investment.

## User Friendly

Experience shows that laboratory assistants are quick to adapt to the PK dilution plating machine. A single person can operate the entire machine completing all needed procedures on one spot. Usually this would take up to four persons. The software regulates all activities. The operator follows the on-screen instructions and knows what to do. All data are directly stored in the LIMS. PK Machinebouw engineers will install the upgraded dilution plating machine for SGS Lisbon's microbiological lab in the tenth week of 2011. After installation, a short course for laboratory assistants suffices. Thanks to the user-friendly interface, assistants are ready to operate the dilution plating machine after only a few hours. On the second day they will know the ins and outs of the software. Work on the machine will be close to feel like a routine operation. In theory, the maximum machine speed is set on 480 dishes per hour.

## Big Bang

The PK dilution plating machine has a compact, robust, flexible and hygienic design. Furthermore, it is user friendly, reliable and efficient. It can be installed and operated anywhere. This includes old premises. No need to break walls! That's a big advantage. Many labs are short on space. They hardly accommodate traditional plate handling lines with lots of moving parts and conveyor belts stretch-

## Specs

- A single laboratory assistant for all plate handling. 0.5 FTEs suffices for support, i.e. filling and taking out the plates, and keeping agar at proper levels.
- High throughput. 8 dishes per minute, or 480 per hour.
- Most compact model on the market. Daily full-time performance on little over 5 square metres.
- Cooling and heating of eight media. Can be increased or reduced at will.
- Fully stainless steel. Most hygienic and easy to clean.
- Fast calibration. Via touch screen during start-up.
- Maintenance contract. Minimal maintenance requirements, works around the clock.
- Custom-made tools and modules. 'Little frying pan' for special samples within an automatised process; spreading machine (LIMS-guided, no labels, no spatulas, no pipette tips) up to 1,080 dishes per hour; automated colony counter (LIMS-guided) with a 480 Petri dish capacity, and removable cartridges for destacking and stacking.



Gripping device designed for SGS Portugal, lifts cover in order to print 2D code high up the side.



The 'little frying pan' for conducting special analyses among routine ones.

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equipped with an industrial printer. It always works and is maintenance free. The dishes are directly printed on. This annually saves the lab € 1,300 worth of labels, and assistants don't waste time replacing labels. Upon request of SGS in Portugal, the codes provided by the LIMS are directly printed on the plate sides. This ensures a unique coupling between sample and dish, even when the cover falls off. The dishes are given a 2D code for automatic scanning and one that assistants can read. The 2D code contains all information needed for the LIMS protocol. It can be scanned in three directions, allowing readout even in case of damage. The scanner can read both traditional, linear codes and 2D codes. As a result, any dish is recognised, regardless of coding type. PK came up with a smart solution for coding the print high up the dish side. When a dish is released, a special gripping device slightly lifts the cover, allowing the code to be placed close to the dish edge.

### Continuity

The latest model is an example of technical perfection. The stacking unity with minimal engine use is an innovative feat. Servo-guidance ensures continuous variable speed. Evidence for reliability forms the first generation of PK dilution plating machines, which worked for 13 years in the former SGS lab in Roelofarendsveen. The robustness of the PK dilution plating machine allows servicing twice a year. The continuity is guaranteed, due to the moving parts' relative infrequent motion and choice of engines and air cylinders. In all PK dilution plating machines remote trouble shooting is possible. If the lab ICT department agrees, PK offers remote assistance. PK is able to update the software by uploading or downloading.

Above: This is how the PK dilution plating machine is currently operating in Spijkenisse.  
 Left: All pipette operations in Spijkenisse are fully LIMS-guided.  
 Right: Snaking design with cooling conveyor belt saves lots of space in SGS Spijkenisse.

ing metres on end. The new PK dilution plating machine for SGS Lisbon fits perfectly into the existing lab hall. Even better, it can simply be transported in a passenger lift to the fourth floor for installation. After commissioning, the lab can do without 3 FTEs. For this lab, the

pipetting to be done.

### Custom Made

As every lab is unique, PK creates its dilution plating machines custom-made. Based on the modular standard concept, PK can provide custom-made solutions on demand, such as routing, reagent supply and stacking docks. Optional extensions are a spreading machine and automatic colony counter. The stand alone, menu-operated touch screen offers flexibility. The machine software can be applied universally and is available in multiple languages. This allows international labs to conveniently switch from Dutch to French, English or Portuguese, for example.

### Printing Reliability

The new dilution plating machine is

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arrival of this machine is truly a big bang. The lab instantly switches from fully manual to maximum automation. A single operator will be responsible for all the

Curious? Please register via the site ([www.pkmachinebouw.nl](http://www.pkmachinebouw.nl)) and fulfill the registration form on the website or send an E-mail to: [pkm@PKMachinebouw.nl](mailto:pkm@PKMachinebouw.nl). Live demo after registration and coding demonstration on request. For more information on the features of 'Kitty' at SGS, please refer to the article on [www.pkmachinebouw.nl](http://www.pkmachinebouw.nl)