

Tempus600[®]

Reliability and maintenance cost



SARSTEDT

High reliability and easy maintenance

Many areas need to be evaluated when assessing the investment of new technology and its potential impact on daily operations. This is why we have thoroughly tested Tempus600® to ensure maximum availability, minimal maintenance and the cost of preventive maintenance is as low as possible.

MTBF
412 days

UPTIME
99,93%

MTBF

MTBF describes the average time between reported errors in the Tempus600® system during normal operation, when maintenance is carried out according to defined maintenance intervals. User errors are discarded.

UPTIME

Uptime is the percentage of time which the Tempus600® system is operational, with the proviso that power, air and networks are constantly available.

The reliability of Tempus600® is well documented and based on collected data. The values are calculated for the average Mean Time Between Failures (MTBF) and the Uptime time for Tempus600®. When it comes to achieving optimal reliability, preventive maintenance is central and is included in the calculated Uptime.

The calculations are based on data for the Tempus600® Vita, Quantit and Necto, for which a service contract has been signed with SARSTEDT ApS.

The calculations are valid from 1 January 2019.

Samples sent:	19.647.117 samples
Uptime:	99,93 %
Total Available time:	130.062 days

Tempus600® is an innovative patented invention for the transport of small clinical samples in or between hospitals and laboratories.

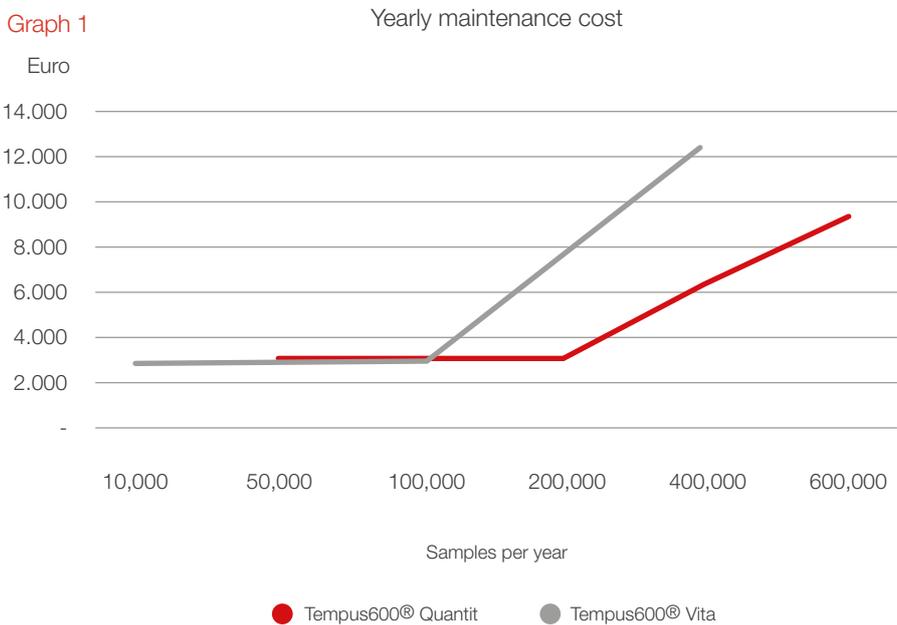
Using a transport pipe of only 25 mm in diameter, Tempus600® is easily installed in any hospital and can be directly connected to automation systems in the laboratory making Tempus600® a central element in the preanalytical process.

Tempus600® solutions are extremely reliable in operation with an uptime of 99.93% and reduce operating costs considerably. Most troubleshooting can even be done remotely by our support team.



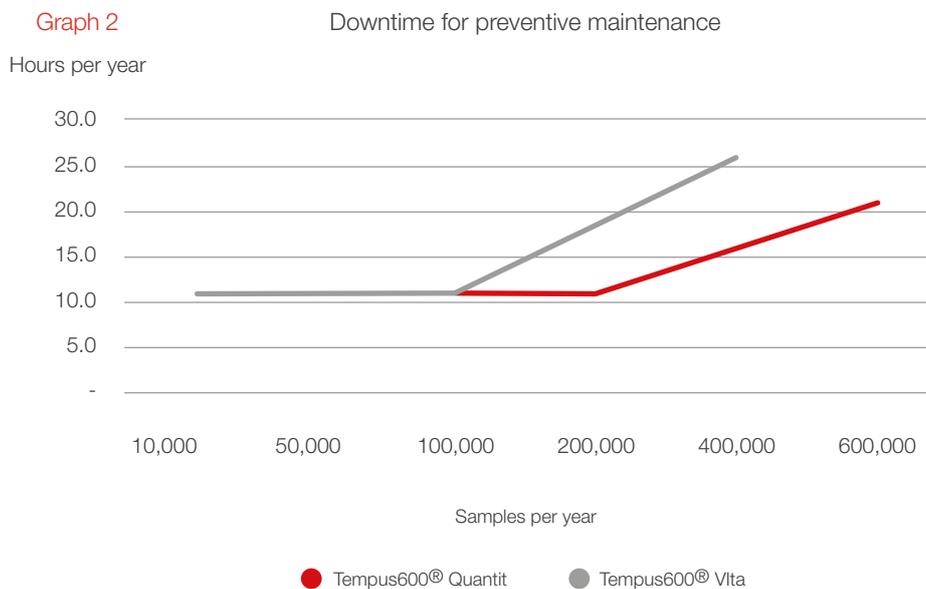
Minimal downtime

Minimal downtime is a significant contributor to ensuring a short and stable response time for laboratory results. The average yearly downtime for Tempus600® Quantit and Vita is calculated on basis of the average downtime for preventive maintenance, including cleaning costs, and also based on data using reported errors from operating Tempus600® systems in hospitals and laboratories. The total expected downtime for preventive maintenance depends on the number of samples sent per year.



Graph 1 shows the frequency, time and cost of the annual maintenance of the Tempus600® Vita and Quantit. The graph shows that the number of samples sent per year with the Tempus600® Vita and Quantit affect the annual maintenance cost.

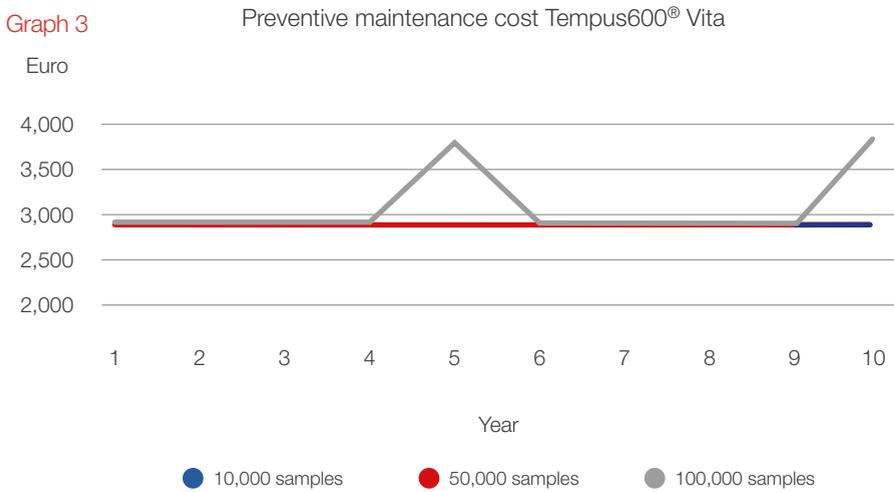
From a maintenance point of view, when sending more than 100,000 samples a year, the hospital or laboratory must assess whether the Tempus600® Quantit or Vita is best suited for the purpose.



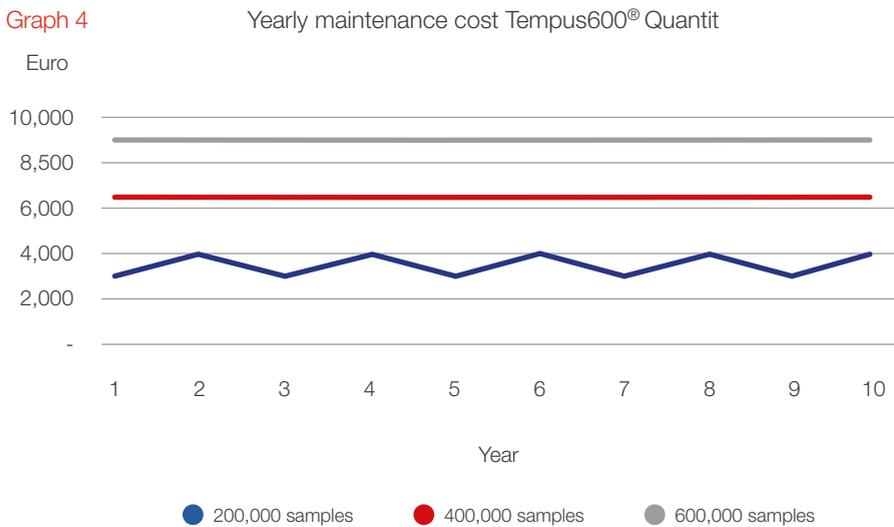
Graph 2 shows the expected downtime per year for Tempus600® Vita and Quantit in connection with the preventive maintenance / service in relation to the number of samples sent per year.

Predictable preventive maintenance costs

The cost of preventive maintenance on Tempus600® systems is related to the number of samples sent per year. The annual cost of preventive maintenance, including cleaning costs, on Tempus600® systems can be predicted and calculated as it does not increase over time.



Graph 3 shows the frequency, time and cost of the annual maintenance of the Tempus600® Vita.



Graph 4 shows the frequency, time and cost of the annual maintenance of the Tempus600® Quantit.

Case study

Bispebjerg Hospital in Denmark has one of the largest fully automated laboratories in Europe. The laboratory facility ensures higher quality for the hospital, with faster response times for analyses of the 1 million blood samples that the hospital's clinical biochemistry department currently needs to be able to process every year. As an important element in optimising response time, the hospital has installed Tempus600® systems for the transport of small clinical samples.

Naturally, reliability and uptime are of outmost importance for maintaining a smooth flow and steady production of blood samples. From a maintenance point of view, it is optimal that the systems require minimal maintenance, and the cost of the ongoing maintenance is as low as possible.

Bispebjerg Hospital	MTBF	UPTIME
7 Tempus600® Vita	249 days	99,97%
1 Tempus600® Quantit	90 days	99,94%
3 Tempus600® Necto	143 days	99,8%

The calculations are based on data for the Tempus600® Vita, Quantit and Necto, installed at Bispebjerg Hospital, Denmark. Service contracts have been signed with SARSTEDT ApS for all the systems. The data are valid from 1 January 2019.

Samples sent: **3.446.802 samples**
Uptime: **99,92%**

Available time:

Tempus600® Vita	14.437 days
Tempus600® Quantit	1.075 days
Tempus600® Necto	9.582 days



Cool facts

Countries

26

Hospitals

206

Installations

562

TEMPUS600[®]

One-touch for better treatment



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Through Tempus600[®], we help hospitals to commence patient treatment earlier and discharge ambulatory patients more efficiently. Through predictable and faster transportation of small clinical samples, we help to significantly reduce the total turnaround time. The overall outcomes of the Tempus600[®] system are considerable savings in time and resources.

