

Getinge Lancer Washer flow rates calculated in just a few clicks

Now, with the help of a calculation tool needing no expert knowledge in hydraulics, Getinge Lancer can ensure, from the design phase of its washer racks, that all the jets and injection nozzles receive adequate water supply in order to meet customer requirements.



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OUR CUSTOMER

Corporate name
Getinge Lancer

Turnover
Approximately EUR 2.5 billion in 2019

Workforce
Over 10,000 employees in more than 40 countries

Business activity
Getinge Lancer is a Swedish company established in 1904. It is an expert manufacturer of products and solutions for the healthcare and life sciences sectors. It has production sites in Brazil, France, China, Germany, Poland, Sweden, Turkey and the United States.

Glassware and other components used to manufacture biopharmaceutical products must be frequently and meticulously cleaned. The washing of these products must comply with demanding health standards and must follow a highly specific methodology. Careful consideration is given to the secure positioning of the products in the racks as well as the number and the position of the various water jets required for optimum cleaning. *“The racks are custom-made depending on the type of labware to be washed. The mechanism holding the pieces and the water supply system composed of jets and injection nozzles are designed*

to specifically meet the cGMP requirements [Current Good Manufacturing Practice] of the biopharmaceutical industry and the customer’s applications”, explained Cédric Tremolieres, CAD supervisor of the Getinge Lancer design office. The company offers an extensive range of washers/dryers with a chamber volume ranging from 80 cm³ to roughly 5 m³.

A 1D simulation tool

As a means of further tailoring the jet system of the racks to industrial needs, the design office has acquired a calculation tool allowing CAD designers to determine, from the design phase of the racks, the flows in each of their arms. This 1D simulation tool developed by Cetim’s hydraulics specialists, allows designers

to determine, in just a few clicks and without any specific hydraulics expertise, whether the capacity of the pump is sufficient to supply the required flows in all points of the racks. To do so, they simply have to specify the type of injection nozzles used, their positions, their coordinates in the rack and their cross-section areas and to state if the injection nozzles are located on straight tube sections or after the elbows. *“The development of this tool required the performance, in conjunction with Cetim, of lengthy measurement campaigns which provided input data for the calculation model. This proved to be a highly productive partnership”,* stated Cédric Tremolieres.

Cetim's asset



Thorough expertise in modelling, simulation and analysis of systems and complex components accurately predict their hydraulic behaviour over time, makes it possible to make the right choices at an early stage in the design process and thereby shorten the testing and prototyping phases.