

# Analyze the factors of dynamic system displacement in front loading washing machines

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**Abstract** — The washing machines are characterized by the loading capacity, cabinet depth and spin speed. On the other hand, energy efficiency, water consumption and noise levels are main characteristics that influence customer decisions to buy washing machines.

Washing machines most critical part is the dynamic system. Controlling the dynamic system displacement in the cabinet is a big challenge of washing machines.

The scope of this study is to analyze the factors of dynamic system displacement in front loading washing machines. We are using 6-Sigma methodology to define and compare the main factors of displacement in order to assure the stability of machines. (*Abstract*)

**Keywords**— Optimization, 6-Sigma methodology, washing machines, displacement of dynamic system (key words)