

10 Tips to Validate your Design Performance

As it is observed by Simulation Experts, Design Engineers are facing biggest and complicated challenges while developing design modules. Such as frequent design changes, reuse of same model and problems/errors are found too late, etc. which results in higher designing time and high cost in design stage and the most important High time to launch a product in market.

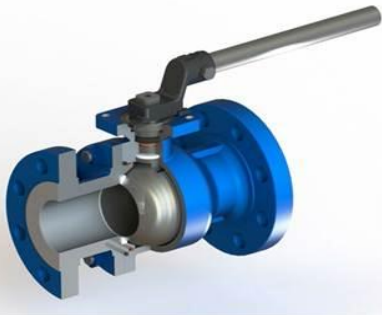
TO COPE UP WITH ABOVE CHALLENGES, THE FOLLOWING ARE THE STEPS TO GET A DEEPER VIEW OF YOUR DESIGN PERFORMANCE:

1. Verify your design with powerful linear static analysis
2. Evaluate your product performance throughout its operational cycle with motion analysis
3. Study the effects of cyclic loading on product life
4. Test your design with extensive structural analysis
5. Understand the effects of temperature on your design
6. Analyse assembly motion for process and task workflow with event-based simulation
7. Simulate frequency or buckling in your designs & Analyse your design in the nonlinear world
8. Perform dynamic analyses of parts and assemblies
9. Simulate composite materials
10. Tackle your complex problems with Cyclic Symmetry and 2D planar simplification tools

How **SIDDHARTH ENGINEERS** has increased Quality & Performance of their Ball Valves

SIDDHARTH ENGINEERS

Specialize in designing and manufacturing a wide range of customized high performance ball valves for main Indian Manufacturers




Challenge: Accelerate the development of ball valves and turnkey projects—involving valves, pumps, piping, instrumentation, programmable logic controllers, and other automation hardware—while simultaneously improving quality.

Solution: Implement **SOLIDWORKS Simulation** Professional structural analysis, **SOLIDWORKS Flow Simulation** computational fluid dynamics (CFD) analysis, and **SOLIDWORKS Composer** technical communication software solutions.

Benefits:

- Cut design cycles by **20%**
- Shortened time-to-market by **12%**
- Reduced prototyping costs by **30%**
- Improved product quality and performance



“The ability to model our assembly designs in 3D using SOLIDWORKS, and then evaluate the assembly to identify critical areas that need improvement prior to testing and manufacturing the finished product has dramatically improved both the speed and quality of our development processes. SOLIDWORKS enables us to bring higher quality products to market faster, which has improved our competitiveness.”

— Pradeep Parab, Partner