

Drillbench

Dynamic drilling simulation software



Drillbench™ dynamic drilling simulation software is a software simulation tool focusing on well control. Replicating the conditions during a drilling operation or well control incident, will enable the user to optimize procedures and reduce risk to achieve efficient drilling operations with a minimum of non-productive time.

Drillbench software consists of three modules that cover the entire well control scope.

- **Drillbench Dynamic Hydraulics** enables the user to simulate planned operations and verify that the planned scope can be performed without exceeding the available pressure window.
- **Drillbench Dynamic Well Control** focuses on how a potential well control incident best can be handled to minimize risk and loss of time.
- **Drillbench Blowout Control** focuses on tertiary well control. It will enable the user to evaluate worst case discharge rates and validate that the blowing well can be killed and controlled efficiently.

Drillbench software is based on dynamic simulations and advanced multiphase modelling to replicate the wellbore responses during a drilling and well control operation.

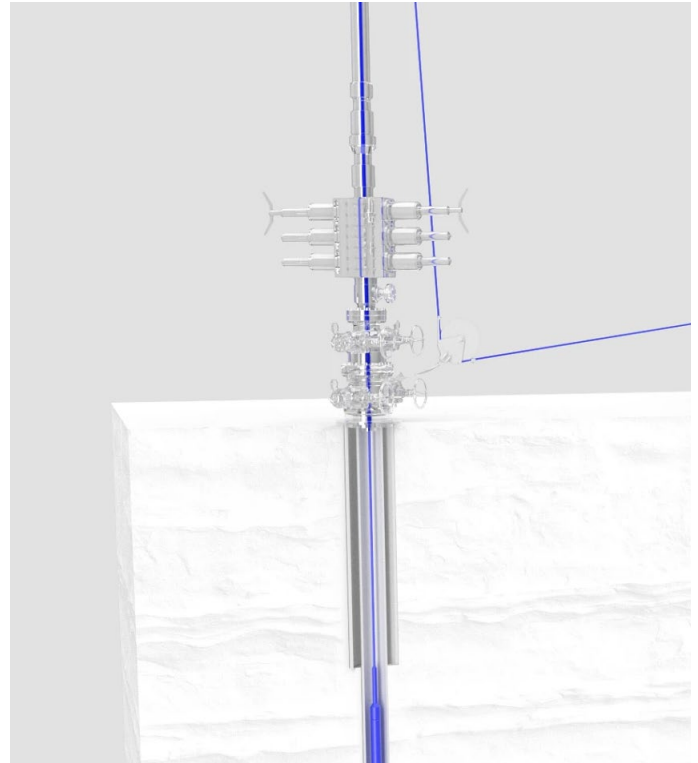
Drillbench software has traditionally been a standalone on-prem software solution, but from the 2022 release, it is now also available as a cloud solution being part of the Delfi™ digital platform. On Delfi, Drillbench software will run on a virtual machine. This will enable the use of standard laptops—as computing power is offered through the cloud solution.

For those customers subscribing to Well Engineering on Delfi an efficient workflow is available where Drillbench software can load project data directly from the DrillPlan coherent well construction solution, to minimize manual input and avoid human errors.

All Drillbench software applications share a similar user interface. The differences are minor and are only based on different operational scenarios. Extensive and flexible graphics makes it easy for the user to evaluate and optimize operations. It is also easy to perform sensitivity runs and compare different options in the results handling with Drillbench software.

Applications:

- Primary Well Control: hydraulic and temperature simulations to validate that all planned operations can be performed (Drillbench Dynamic Hydraulics).
- Secondary Well Control: evaluate kick tolerance and the best procedures for handling a kick incident (Drillbench Dynamic Well Control).
- Tertiary Well Control: evaluate worst case discharge and the requirements for a dynamic kill operation in a blowing well (Drillbench Blowout Control).



Benefits:

- Minimize well control risk with realistic dynamic multiphase models.
- Optimize procedures to drill safe and efficient wells.
- Understand the impact of operational changes on wellbore conditions.
- Include dynamic well behavior to replicate real wells.

Features:

- On prem desktop solution
- Cloud solution (Delfi digital platform)
- Dynamic modelling
- Dynamic temperature
- Multiphase modelling with all phase transitions

More details on each application in Drillbench software on application product sheets.