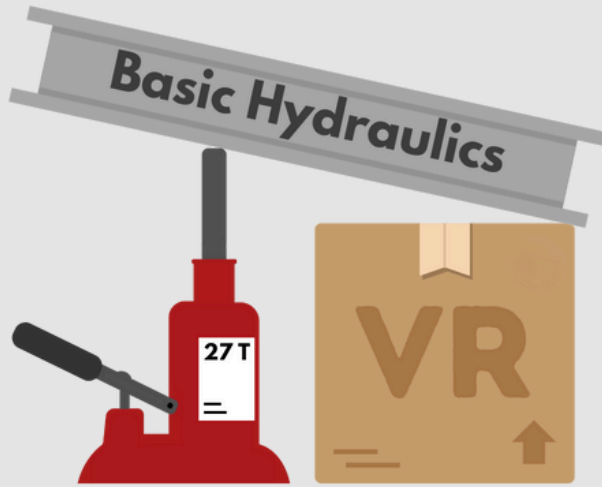




# BASIC HYDRAULICS VR



**Experience a virtual reality lesson** covering basic hydraulic principles. Peer into the inner workings of a 27 ton log splitter and discover exactly how this system functions.



### EDUCATION ORIENTED

This application follows a lesson structure built to ease students in to a strong knowledge base regarding real world hydraulics.

### BUILT FOR A CLASSROOM

Up to a dozen students can join together in this virtual space. The instructor, as the host, can control each user's permissions.

### ENGAGING TO ALL

Visualization tools, instructional models and accessibility options ensure that everyone can connect with the content.



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# HANDS-ON HYDRAULICS FROM THE COMFORT OF A CLASSROOM

## Lesson Overview

Basic Hydraulics VR exists as a pedagogical tool to introduce fluid power knowledge in a way that connects with students regardless of their background or learning style. The log splitter is broken down piece by piece and dissected to understand its functions. Each component is highlighted and the role it plays in the circuit is discussed. Chapters can be followed in or out of order depending on which topics the instructor would like to cover.

Although this program focuses on ideal hydraulic fundamentals there are also many practical applications and real world complications that are discussed in order to stretch the user's understanding of these fundamentals.



### Animated Virtual Assistance

Our virtual assistant, BR14N, floats around the scene as he works through the lesson, interacting with objects, presenting examples and regularly checking in with the instructor.



### Movement, Visibility & Interaction Options

The instructor, before and during the lesson, can individually adjust user permissions. This allows them to limit movement, what the students see as well as how they can interact with objects in the lesson.



### Fluid Flow & Pressure Visualization

Taking full advantage of VR there has been a fluid simulation included which reveals to the user where fluid is being routed, how pressure is distributed and how forces vary during the runtime of the log splitter.

## Outline

### Intro To Hydraulics

- Purpose Of Hydraulics
- Hydraulics Vocab
- Intro To Circuit Symbols

### A Simple Circuit

- Motor & Pump
- Directional Valve
- Cylinder
- Tank

### Component Breakdown

- Motor & Pump Breakdown
- Fluid Power Attributes
- Valves & Variations
- Cylinders & Other Actuators
- Tanks, Filters & Other Accessories

### Summary

- Lesson Recap
- Component Recap
- Quizzes
- "Free Play" Mode



Closed Captioning Available



Hand Tracking Or Controllers



Internet Connection Required

#### Important Information

- This application is a virtual training tool and is not a substitute for professional training.
- Users may experience discomfort during VR use; consult a physician before use if you have a history of health conditions such as seizures or motion sickness.
- Always adhere to real-world safety practices when operating machinery.