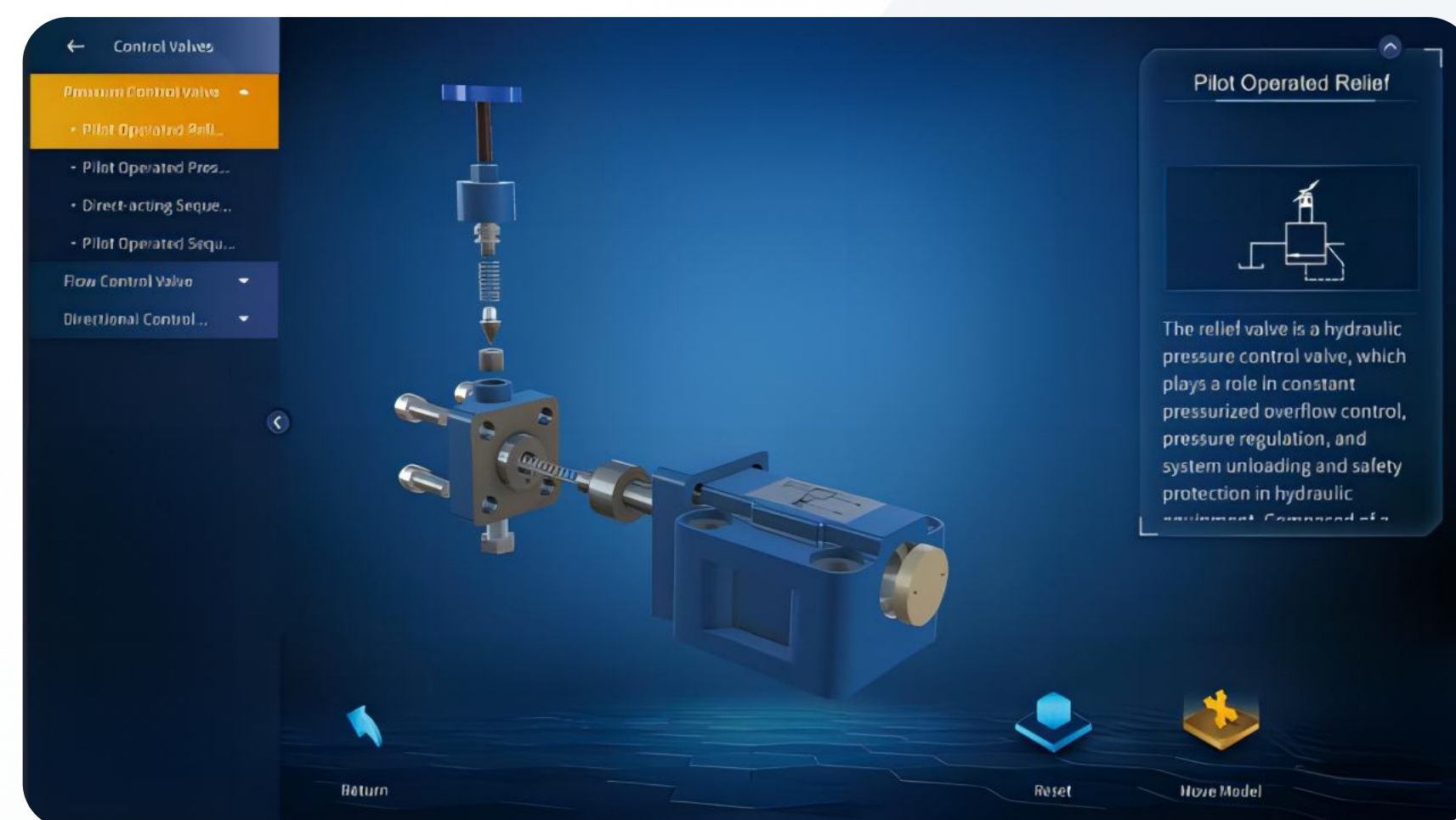


Mechanical Engineering Hydraulics VR Instruction

Designed for undergraduate and vocational education in the field of mechanical engineering and equipment manufacturing. This software integrates virtual simulated practical operations with theoretical teaching, with some component models featuring application principle animations to bridge the gap between theory and real-world application.



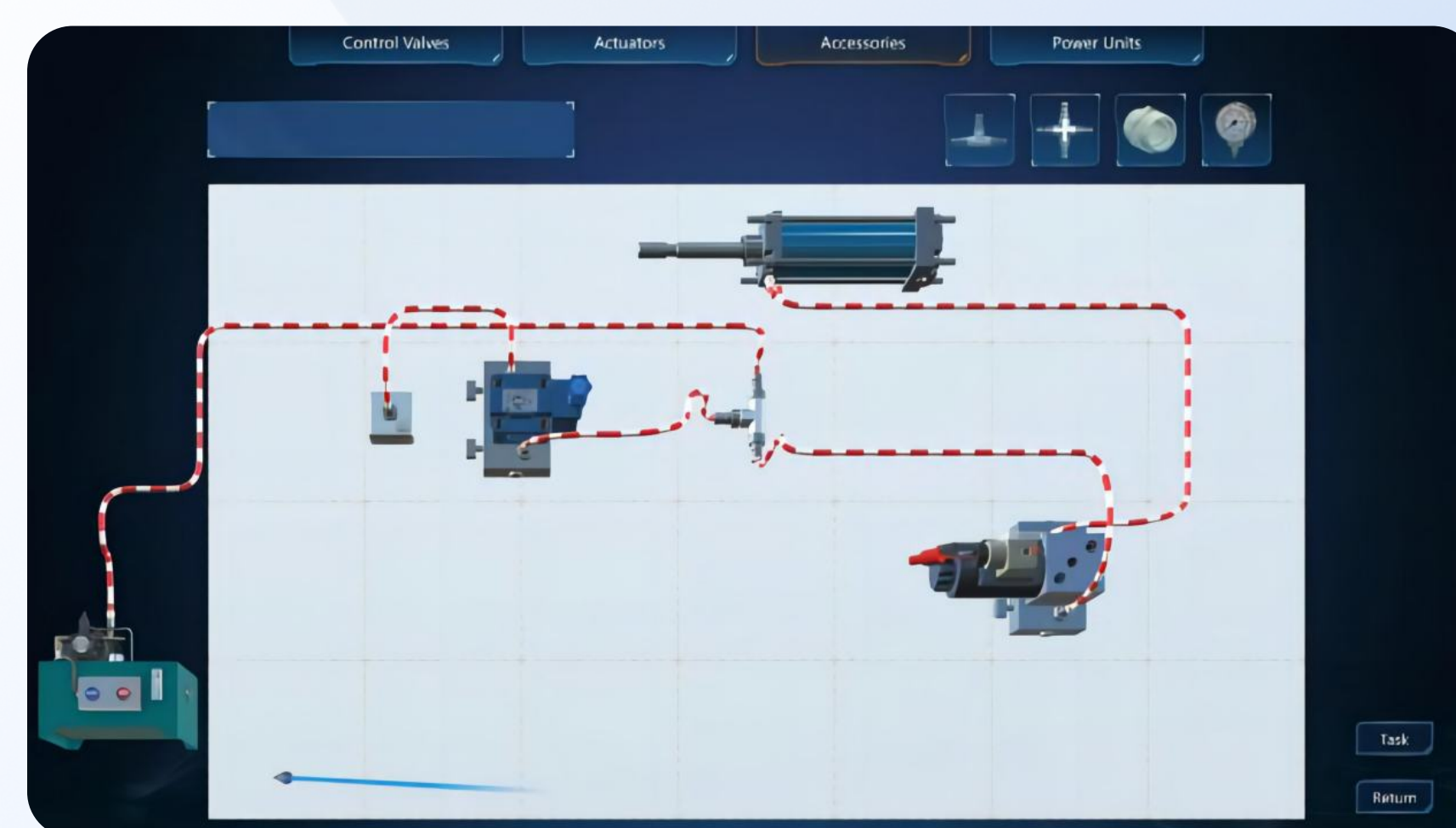
It demonstrates the process of converting pressure energy into mechanical energy through the use of a single-acting hydraulic cylinder, employing 3D animation effects.



It clearly displays the internal structure of a pilot-operated relief valve, which consists of a pilot valve and a main valve.



It creates a virtual scene to demonstrate the process of how the directional valve utilizes the relative movement between the valve core and the valve body to change the direction of the liquid flow.



It offers hydraulic circuit building tasks to assist students in gaining a better understanding of the symbols and functions of each component.

Highlights

- Providing a collection of **330** interactive high-quality 3D models and features, along with **16 pre-built circuit construction tasks**;
- Covering over **90%** of essential teaching points in hydraulic and pneumatic control technology;
- Compatibility with various teaching devices, including Desktop, All-In-One Virtual Holographic Interactive Desktop;
- Circuit building model settings to facilitate personalized exploration and reinforce theoretical knowledge.
- Integration of theory and practice, providing realistic application scenarios;
- Through **1:1 accurate models** and a three-dimensional reconstruction of the real professional practical environment as outlined in the curriculum, it enhances the efficiency and applicability of practical learning.

Functionalities

Modules	Component	Features
3D models	Power units	Comprising gear pumps, vane pumps, and piston pumps.
	Actuators	Including hydraulic motors and cylinders
	Control Valves	Comprising pressure valves, flow valves, and directional control valves, and the building of a directional control circuit, a speed control circuit, and a pressure control circuit
	Accessories	Comprising tubes, fuel tanks, filters, accumulators, sand cooler sand cooling switches.