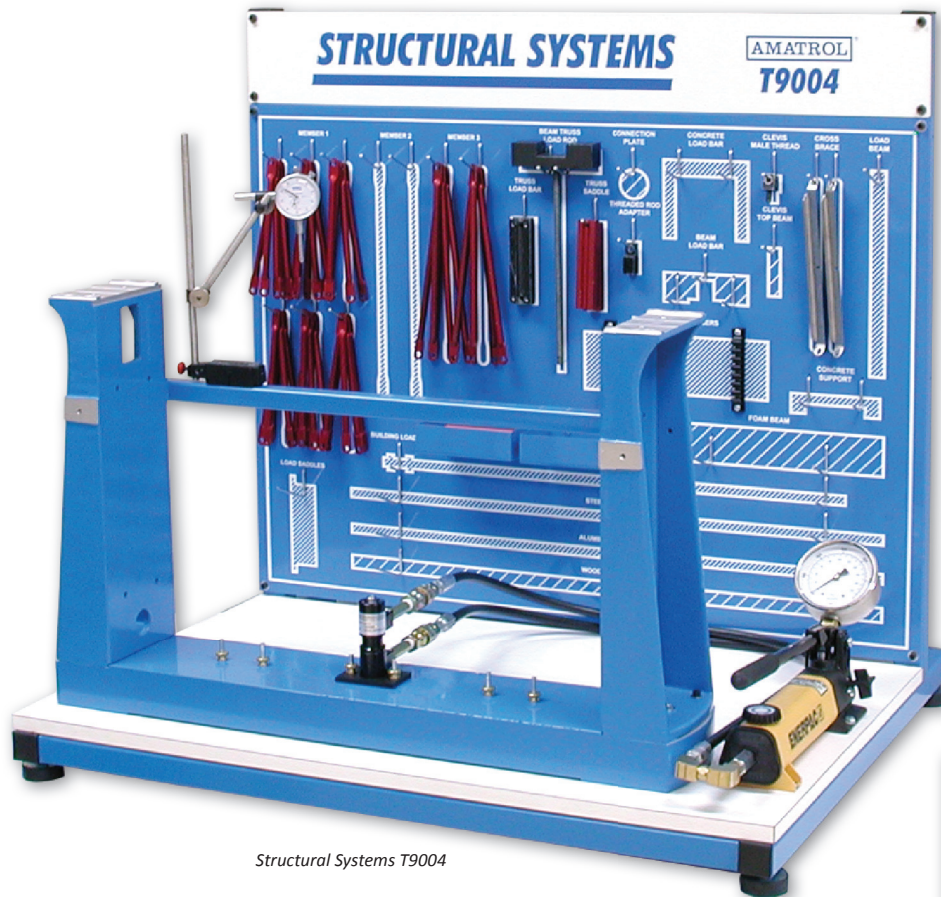


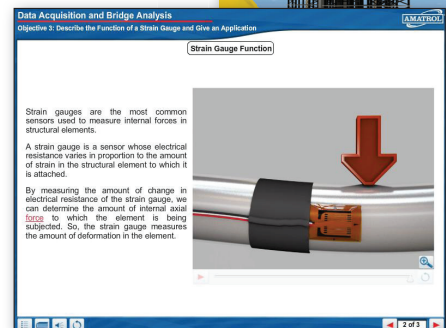
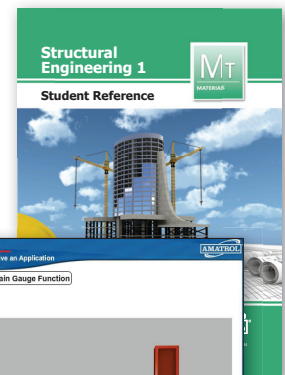
Structural Engineering 1 Learning System

96-SE1



Structural Systems T9004

Student Reference Guide



Interactive Multimedia Curriculum

Learning Topics:

- Civil Engineering Careers
- Types of Structures
- Structural Elements
- Structural Stability
- Force Vectors
- Free-Body Diagrams
- Bridge Materials & Construction
- Bridge Design
- Truss Bridges

Amatrol's Structural Engineering 1 Learning System, 96-SE1, introduces learners to the field of civil engineering. Civil engineers are responsible for creating structures such as skyscrapers, bridges, tunnels, dams, mass transit systems, water treatment facilities, and many more structures that we use every day for living, transportation, and industry. Learners will learn the fundamentals of structural analysis as well as bridge design and construction.

The Structural Engineering 1 Learning System includes the T9004 Structural Testing Systems consisting of a workstation, bridge component sets, a test fixture set, indicator package, bridge designer software, supplemental CD, and interactive multimedia student curriculum. These components are used to teach topics such as civil engineering careers, structural stability, force vectors, and bridge design.



Technical Data

Complete technical specifications available upon request.

Test Fixture

Welded tube steel frame
36" H x 38" W x 30" D

Hydraulic Assembly

Tank kit
Hydraulic cylinder
Pressure gauge, 4" 3000 psi
Max pressure: 2300 psi

Bridge Component Set 1

Threaded beams (10)
7" beams (26)
9.9" beams (6)
Cross braces (8)

Bridge Component Set 2A

7" beams (4)
9.9" beams (4)

Test Fixture Set 1

Threaded rod adapter
Clevis pin (3)
Cotter hairpin (3)
Clevis, male thread
Allen wrench
Truss saddle (2)
Truss load bar
Beam truss load rod assembly

Indicator Package

Strap, nylon hook and loop
Magnetic base
Precision dial indicator
Clamp, indicator swivels (2)
Stainless steel rods (3)
Socket head cap screw

Bridge Designer Software

Supplemental CD

Bridge DVD

Multimedia Curriculum (MB784)

Instructor's Guide (CB784)

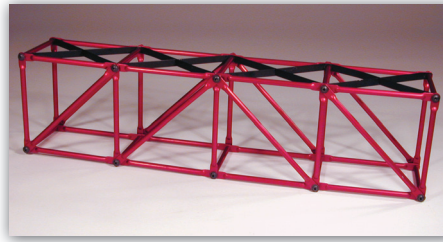
Installation Guide (DB784)

Student Reference Guide (HB784)

Additional Requirements

See <http://www.amatrol.com/support/computer-requirements>

Build and Evaluate Different Bridge Designs!

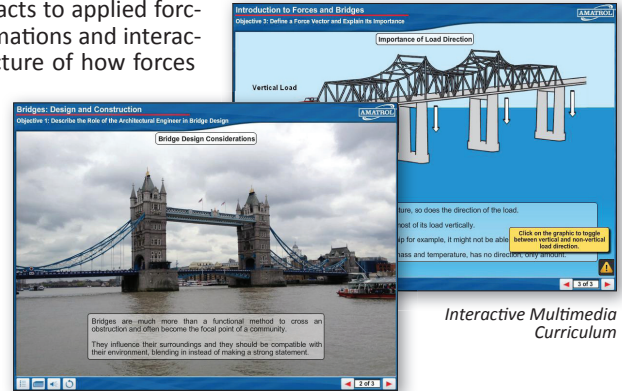


Howe Truss Bridge

The 96-SE1 features modular building elements that can be connected to form multiple types of bridges including the Warren, Pratt, and Howe truss bridges as well as a four-story building structure. The T9004 test unit features a heavy-duty frame and a powerful hydraulic loading system to test these structures under realistic conditions. The flexible mounting system enables each structure to be easily mounted for testing.

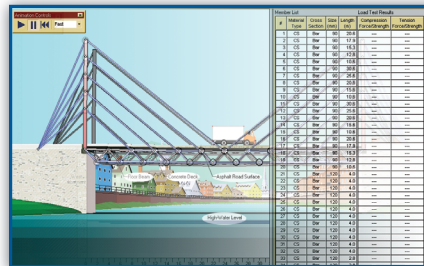
Interactive Multimedia Makes Understanding Force Vectors Much Easier

Understanding how a structure reacts to applied forces is vital. Through the use of animations and interactions, learners will gain a clear picture of how forces are distributed throughout a structure. For example, early in the learning process, learners will progress through a multimedia interaction where they will be asked to apply a load to a simple square structure to see how unstable it is. Then, they will apply a load to the same structure, once a cross-member has been added, to show the structure's increased stability.



Interactive Multimedia Curriculum

Structural Design Software Challenges Students



Bridge Design Software

Learners will use bridge design software to explore the characteristics of other bridge designs beyond those available for construction using the T9004. The software offers many learner-configured design parameters including structural member length, cross-section size, material, and bridge type. It then simulates a vehicle driving across their bridge showing how the bridge reacts to the vehicles weight across the span.

Student Reference Guide

A sample copy of the Structural Engineering 1 Student Reference Guide is included with the system for your evaluation. Sourced from the system's multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

