Oneiric SYSTEMS

Shock Absorber Dynamometer

Oneiric Systems' Shock Absorber Dynamometer is engineered to deliver accurate repeatable data in an easy-to-use platform. Components include: load frame; hydraulic power supply; real-time controller; and test bench software (closed loop, data acquisition and control DAQ are separate programs).

» The dynamometer range includes velocities from 750mm/s to 4,500mm/s, and forces ranging from 5,000 lbs to 25,000 lbs.

» Actuator stroke options range from 6" to 14" dynamic stroke.

Shock Absorber Dynamometer

» The cross head has computer controlled hydraulic lift actuators and a position sensor that takes the guesswork out of positioning the head for different test pieces.

» The hydraulic power unit (HPU) is sized to the application, based on maximum velocity and loads required.

» Controlled at the computer station, the HPU has hardware safety stops that can be mounted remotely for easy operator access. The data acquisition and control system operates at 2,000Hz, and acquires data at sample rates from 1Hz to 60,000Hz, depending on number of channels and optional equipment.

» All systems use Oneiric Test Bench Control software, which is a configurable test executive and data analysis application.

» The versatile Oneiric dynamometer can be designed and built to meet your requirements.

Shock Absorber Dynamometer

Product Specs

Components include: **Load Frame, Hydraulic Power Supply, Real-Time Controller** and **Test Bench Software** (closed loop control and data acquisition are independent control boards).

Hydraulic Power Supply (HPU)

» Single or 3 phase power (single phase up to 10HP); 5HP to 250HP and single reservoir, multiple motor applications are application dependent

» Cools via air, water, or process water

» Automatic control with RT controller (can be manual, if needed)

» Hardware based E-Stop switches and master control circuits

RT Controller

Standard: single rack enclosure; control all IO for HPU, service manifolds, lifts and locks; up to 4 real-time calculated channels at 2kHz; 16 analog inputs, 4 analog outputs, 16 digital (both) inputs and outputs; individual signal conditioner for each channel (conditioner cards for LVDT, thermocouples, strain gauge, ICP, 4-20mA, and voltage inputs); scriptable program offers flex control solution; waveform editor allows text input from real world applications to drive actuator

Options: 32 or 64 analog inputs; 8 or 16 analog outputs; 32 or 64 digital inputs and outputs; counter/time inputs; CAN Bus IO module (J1939 protocol, others added as required)

RT Test Bench Software *configurable

System configuration includes: controls (PID, feed forward, velocity compensation, open loop modes) — single stage, multiple stage, calculated channels, which can be used for control; matrix control provides transfer function to control actuators; control system tuning application (graphical)

» Analog inputs (separate system for DAQ and control); analog outputs (coupled to control channel or drive voltage directly without controls)

» Pump/service manifold script language offers wide interface capabilities

» Alarms and limits using digital or analog inputs, or calculated channels

Waveform editor allows text input from real world applications for actuator

» Flexible test control solution: load, run, and record single log file for each script test

Analysis

» Plot date different files on same set of axes — real-time data, peak force vs. peak velocity

» Frequency domain functions are standard

» Calculated channels from control system included in channel list

» Additional calculated channels and formulas can be saved

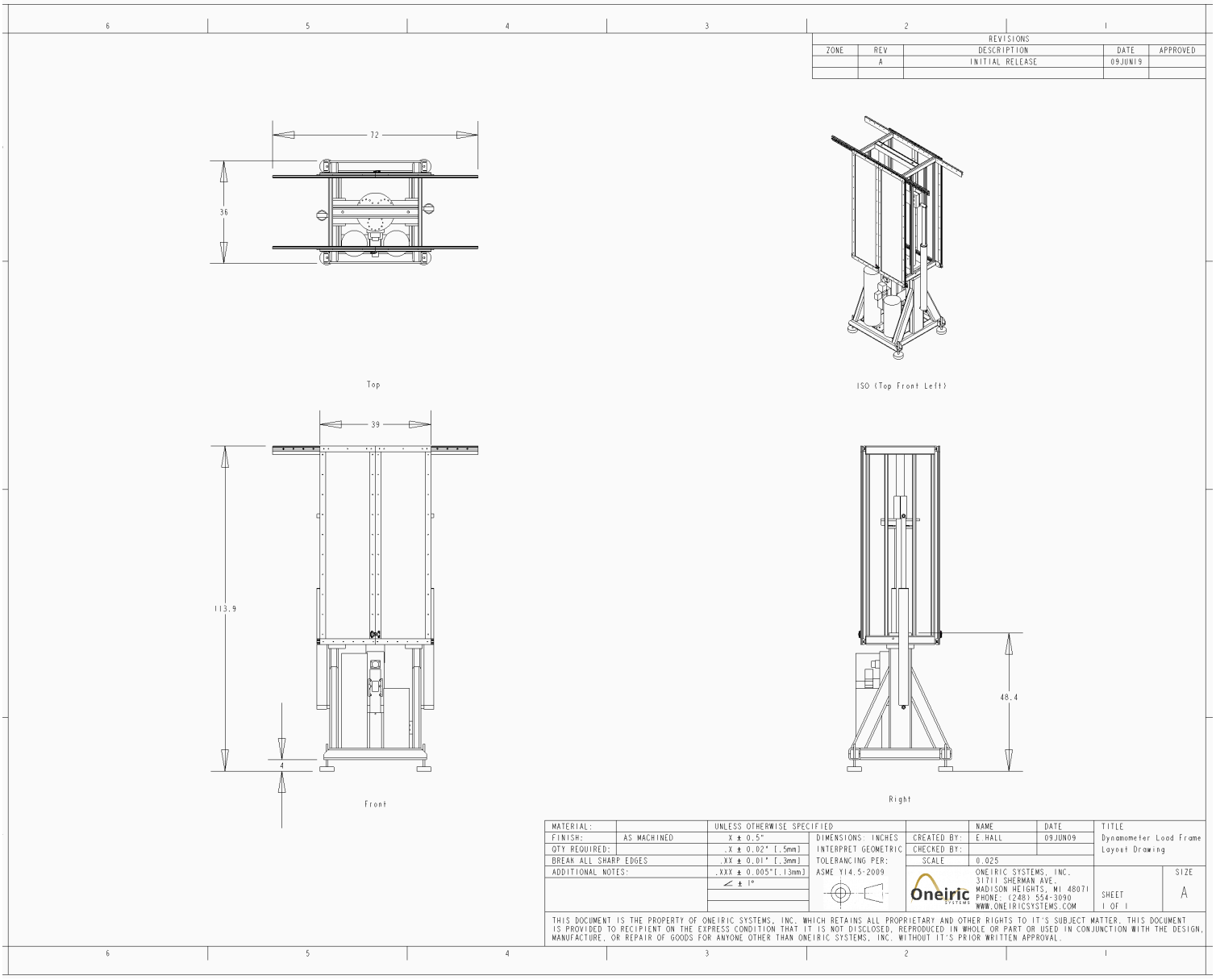
» Analysis can be performed on groups of shocks to compare control forces or verify quality

Tabular output can be exported to a text file

Load Frame

Standard Features: cross head position control; cage view proximity switches; 5.5kip actuator (1.5m/s, 6” stroke); single reaction load cell; flow cutoff

Options: hydraulic cross head lock; 11, 15 or 25kip actuator (10”, 12” or 14” stroke respectively), 3 load cell reaction measurement; 6 DoF load reaction for all reaction components; high velocity (2.5-4.0m/s); side load control; shock mounting fixtures; chain fall for heavy test components



Oneiric Systems, Inc.® (OSI) is a Michigan based company incorporated in 1992. OSI designs, develops, services, and manufactures custom test and automation equipment for automotive and industrial applications.

Call for a Quote 248-554-3090