ITT Control Technologies provides custom seismic isolation products for unique infrastructure applications worldwide.

ITT Enidine’s engineering staff and technical sales personnel are available to assist you with all of your application needs.

- With a proven track record of operating with lean manufacturing, ITT Enidine produces higher quality custom products with greater efficiency and within shorter lead times.
- ITT Enidine manufactures all of our products in-house, giving you fast reliable service to meet your critical application needs with on-time delivery.
- Here at ITT Enidine we have a proven track record in the infrastructure market with cutting edge technologies and engineering support, we can provide a custom solution to meet any need globally.

Our website features a worldwide representative lookup to help facilitate fast, localized service at www.enidine.com. For application assistance call our help line at 1.800.852.8508.

Founded in 1920, ITT is headquartered in White Plains, NY, with employees in more than fifteen countries and sales in more than 125 countries.

The company generated 2012 revenues of approximately $2.2 billion. For more information, visit www.itt.com.
Global Presence

ITT Control Technologies provides custom seismic isolation products for unique infrastructure applications worldwide.

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for growing industrial end-markets in energy infrastructure, electronics, aerospace and transportation. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life.

Founded in 1920, ITT is headquartered in White Plains, NY, with employees in more than fifteen countries and sales in more than 125 countries. The company generated 2012 revenues of approximately $2.2 billion. For more information, visit www.itt.com.

ITT Enidine’s engineering staff and technical sales personnel are available to assist you with all of your application needs.

• With a proven track record of operating with lean manufacturing, ITT Enidine produces higher quality custom products with greater efficiency and within shorter lead times.

• ITT Enidine manufactures all of our products in-house, giving you fast reliable service to meet your critical application needs with on-time delivery.

• Here at ITT Enidine we have a proven track record in the infrastructure market with cutting edge technologies and engineering support, we can provide a custom solution to meet any need globally.

Our website features a worldwide representative lookup to help facilitate fast, localized service at www.enidine.com. For application assistance call our help line at 1.800.852.8508.

Seismic Control and Infrastructure Solutions

ITT Enidine Inc.
7 Centre Drive
Orchard Park, NY 14127
USA
Phone: 716-662-1900
Fax: 716-667-1385
Email: industrialsales@enidine.com
www.enidine.com

Our website features a worldwide representative lookup to help facilitate fast, localized service at www.enidine.com. For application assistance call our help line at 1.800.852.8508.
Short Stroke Dampers
High-Rise Buildings, Stadiums, City Centers and National Assets
- Viscous Dampers (Short Stroke) for Buildings
  - Forces up to 500 kip
  - Strokes to 8 inches
  - Diagonal or Chevron Brace mounts
  - Alpha .2 to linear
  - In line, self contained spring loaded reservoir
  - Visual or electronic fluid monitoring system

Long Stroke Dampers
Bridges, Highway and Structures
- Viscous Dampers (Long Stroke) for Bridges
  - Forces up to 2000 Kips
  - Strokes up to 60 inches
  - Alpha .2 to Linear, Lock up
  - In line, self contained spring loaded reservoir
  - Visual or electronic remote fluid monitoring system

Research, Design and Engineering
- Static Testing - Including precision electromechanical machines with programmable controllers
- Drop Testing - Up to 4,000 lbs. and 600 in/sec.
- Vibration - Electromechanical shakers with digital controllers
- Dynamic, Test - Up to 500,000 lbs. at 80 in/sec.
- 3D CAD Software, Solidworks
- Finite Element Analysis, COSMOS
- Dynamic Software, Visual Nastran
- Structural Analysis, SAP 2000

Power Plants
- VARE™ Pipe Restraint/vibration Isolator
- Nuclear, fossil generation plants
- No oil, seals, gaskets or maintenance
- Compatible with most pipe attachment hardware

Oil and Gas Offshore Platforms
- Rubber Isolation Bearings for Generators, chillers and high value assets
- High or Low Damping configurations
- Can be applied in parallel with viscous damper technology
- 6 to 21 inch diameter

Refineries and Storage Facilities
- HERM (14 ft Deck)
- Standard Product Selection
- Standard Product Fabrication
- Electronics Isolation
- Systems Analysis and Integration
- Multi-Axis Isolation
- Minimum Sway Space

Customer Focused Approach
At ITT we will develop products, process and solutions for new applications that will generate excitement and move our partners while setting new industry standards as a premier components supplier.
- Conduct Fundamental Research to Develop Innovations
- Work with Customer to Fully Explore Application Issues and Engage all Stake Holders
- Provide Solutions, Options and Trade-offs
- Deliver on our Promises

Market Focused Solutions
- 3-COM Data Center, Santa Clara, CA
- Coronado Bridge, San Diego CA
- Sakhalin Island, Tuned Mass Damper
- Trump Tower, New York, NY
- San Francisco Opera House
- Syncrude Oil Sands Project
- Siemens Transformer Isolation

Focused Product Applications
- Power Sub-Station & Utility Base Isolation
- High-Rise Buildings
- Bridges & Highway Structures
- National Aviator, City Centers & Stadiums

We have the world’s broadest set of implementation choices for structural isolation.
Short Storke Dampers

Bridges, Highway and Structures

- Viscous Dampers (Long Stroke) Bridges
- Forces up to 2000 kips
- Strokes up to 60 inches
- Alpha .2 to Linear, Lock up
- In line, self contained spring loaded reservoir
- Visual or electronic remote fluid monitoring system

Research, Design and Engineering

- Static Testing - Including precision electromechanical machines with programmable controllers
- Drop Testing - Up to 4,000 lbs. and 600 in/sec.
- Vibration - Electromechanical shakers with digital controllers
- Dynamic Testing - Up to 500,000 lbs. at 80 in/sec.
- 3D CAD Software, Solidworks
- Finite Element Analysis, COSMOS
- Dynamic Software, Visual Nastran
- Structural Analysis, SAP 2000

Custom Solutions

Power & Utility Sub-Station

- 6 degree of freedom isolator Ring
- Stainless steel construction
- Retrofit to most transformer back-up with little or no modification
- Dynamic tested to IEEE 693

HVAC and Chiller Units

- Equipment Systems isolation stand
- Dynamic testing and analyses
- Electromechanical and Wire Rope isolation technology
- Protects equipment from vertical and horizontal seismic inputs
- No maintenance
- Chillers, HVAC, Medical Equipment

Power Plants

- WEAR™ Pipe restraint/vibration isolator
- Nuclear fossil generation plants,
- No oil, seals, gaskets or maintenance
- Compatible with most pipe attachment hardware

Oil and Gas Offshore Platforms

- Rubber Isolation Bearings
- Steel to steel contacts, cylinders and high value assets
- High or low damping configurations
- Can be applied in parallel with viscous damper technology
- 6 to 21 inch diameter

Refineries and Storage Facilities

- HERM (14 ft Deck)
- Standard Product Selection
- Standard Selection Guide
- Systems Analysis and Integration
- Multi-Axis Isolation
- Minimum Space

Customer Focused Approach

At ITT we will develop products, process and solutions for new applications that will generate excitement among our customers while setting new industry standards as a premier components supplier.

- Conduct Fundamental Research to Develop Innovations
- Work with Customers to Fully Explore Application issues and Engage all Stake Holders
- Provide Solutions, Options and Trade-offs
- Deliver on our Promises

Research and Development

ITT Enidine is active in the fundamental research community and chairs/presents at technical conferences.

Research collaboration with:

- University of California (Irvine)
- University of Buffalo (US)
- Federal University of Santa Catarina (Brazil)
- University of Liverpool (UK)
- The Boeing Corporation (US)
- Bombardier

Design and Development

- All capabilities for design and development in house
- Assemble and test quickly
- Innovation in Technology
- Engineering Experience

Market Focused Solutions

- 3-COM Data Center, Santa Clara, CA.
- Coronado Bridge, San Diego CA.
- Sakhlin Island, Tuned Mass Damper
- Trump Tower, New York, NY
- San Francisco Opera House
- Syncrude Oil Sands Project
- Siemens Transformer Isolation

Focused Product Applications

- Power Sub-Station & Utility Base Isolation
- High-rise Buildings
- Bridges & Highway Structures
- National Aviati, City Centers & Stadiums

We have the world’s broadest set of implementation choices for structural isolation.
Short Stroke Dampers
High-Rise Buildings, Stadiums, City Centers and National Assets
• Viscous Dampers (Short Stroke) Buildings
  • For use up to 500 kip
  • Strokes to 8 inches
  • Diagonal or Chevron Brace mounts
  • Alpha .2 to linear
  • In line, self contained spring loaded reservoir
  • Visual or electronic fluid monitoring system

Custom Solutions
Power & Utility Sub- Stations
• 6 degrees of freedom isolator ring
• Stainless steel construction
• Retrofit to most transformer bays with little or no modification
• Dynamic tested to IEEE 693

HVAC and Chiller Units
• Equipment systems isolation stand
• Dynamic software, Visual Nastran
• Dynamic, Elevation damping and Wire Rope isolation technology
• Protects equipment from vertical and horizontal seismic inputs
• No maintenance
• Chillers, HVAC, Medical Equipment

Power Plants
• WEARE™ Pipe restraint/vibration isolator
• Nuclear, fossil generation plants,
no oil, seal, grooves or maintenance
• Compatible with most pipe attachment hardware

Oil and Gas Offshore Platforms
• Rubber Isolation Bearings
• Engineered rubber bearings, connectors, oilers and high value assets
• High in wire damping configuration
• Can be applied in parallel with viscous damper technology
• 6 to 21 inch diameter

Refineries and Storage Facilities
• HERM (14 ft Deck)
• Standard product selection
• Turn key solution
• Electronics Isolation
• Systems Analysis and Integration
• Multi-Axis Isolation
• Minimum Sway Space

LNG & LPG Storage
• Combined Isolation Bearing
• 4 to 12 inch diameter
• Rack mounted isolators
• 400 lbs. to 100,000 lbs.
• 14 to 120 inch diameter
• Kingston, Manchester, Puerto Rico
• 25,000 pb capacity

Long Stroke Dampers
Bridges, Highway and Structures
• Viscous Dampers (Long Stroke) Bridges
• For use up to 2000 kips
• Strokes up to 60 inches
• In line, self contained spring loaded reservoir
• Visual or electronic remote fluid monitoring system

Research, Design and Engineering
• Static Testing - Including precision electromechanical machines with programmable controllers
• Drop Testing - Up to 4,000 lbs. and 400 in/sec.
• Vibration – Electromechanical shakers with digital controllers
• Dampening testing - Up to 500,000 lbs. at 80 in/sec.
  • 3D CAD Software, Solidworks
  • Finite Element Analysis, COSMOS
  • Dynamic Software, Visual Nastran
  • Structural Analysis, SAP 2000

Customer Focused Approach
At ITT we will develop products, process and solutions for new applications that will generate excitement among our customers partners while setting new industry standards as a premier components supplier.

• Conduct Fundamental Research to Develop Innovations
• Work with Customer to Fully Explore Applications/Issues and Engage all Stakeholders
• Provide Solutions, Options and Trade-offs
• Deliver on our Promises

Research and Development
ITT Enidine is active in the fundamental research community and presents at technical conferences.

Research collaboration with:
• University of California (Irvine)
• University of Buffalo (US)
• Federal University of Santa Catarina (Brazil)
• University of Liverpool (UK)
• The Boeing Corporation (US)
• Bombardier

Design and Development
• All capabilities for design and development in house
• Assembly and test quality
• Innovation in Technology
• Engineering Experience

Market Focused Solutions
3-COM Data Center, Santa Clara, CA.
Coronado Bridge, San Diego CA.
Salishan Lodge, Tied Mass Damper
National Aeronautics and Space Administration
San Francisco Opera House
Spartocil Oil Sands Project
Major Chiller Supplier in Japan
Siemens Transformer isolation

Focused Product Applications
• Power Sub- Stations & Utility Base Isolation
• High-Rise Buildings
• Bridges & Highway Structures
• National Awevin, City Centers & Stadiums

Research, Design and Engineering
• Static Testing – Including precision electromechanical machines with programmable controllers
• Drop Testing – Up to 4,000 lbs. and 600 in/sec.
• Vibration – Electromechanical shakers with digital controllers
• Dampening testing – Up to 500,000 lbs. at 80 in/sec.
• 3D CAD Software, Solidworks
• Finite Element Analysis, COSMOS
• Dynamic Software, Visual Nastran
• Structural Analysis, SAP 2000

Custom Solutions
Power & Utility Sub- Stations
• 6 degrees of freedom isolator ring
• Stainless steel construction
• Retrofit to most transformer bays with little or no modification
• Dynamic tested to IEEE 693

HVAC and Chiller Units
• Equipment systems isolation stand
• Dynamic software, Visual Nastran
• Dynamic, Elevation damping and Wire Rope isolation technology
• Protects equipment from vertical and horizontal seismic inputs
• No maintenance
• Chillers, HVAC, Medical Equipment

Power Plants
• WEARE™ Pipe restraint/vibration isolator
• Nuclear, fossil generation plants,
no oil, seal, grooves or maintenance
• Compatible with most pipe attachment hardware

Oil and Gas Offshore Platforms
• Rubber Isolation Bearings
• Engineered rubber bearings, connectors, oilers and high value assets
• High in wire damping configuration
• Can be applied in parallel with viscous damper technology
• 6 to 21 inch diameter

Refineries and Storage Facilities
• HERM (14 ft Deck)
• Standard product selection
• Turn key solution
• Electronics Isolation
• Systems Analysis and Integration
• Multi-Axis Isolation
• Minimum Sway Space

LNG & LPG Storage
• Combined Isolation Bearing
• 4 to 12 inch diameter
• Rack mounted isolators
• 400 lbs. to 100,000 lbs.
• 14 to 120 inch diameter
• Kingston, Manchester, Puerto Rico
• 25,000 pb capacity

Long Stroke Dampers
Bridges, Highway and Structures
• Viscous Dampers (Long Stroke) Bridges
• For use up to 2000 kips
• Strokes up to 60 inches
• In line, self contained spring loaded reservoir
• Visual or electronic remote fluid monitoring system

Research, Design and Engineering
• Static Testing – Including precision electromechanical machines with programmable controllers
• Drop Testing – Up to 4,000 lbs. and 600 in/sec.
• Vibration – Electromechanical shakers with digital controllers
• Dampening testing – Up to 500,000 lbs. at 80 in/sec.
• 3D CAD Software, Solidworks
• Finite Element Analysis, COSMOS
• Dynamic Software, Visual Nastran
• Structural Analysis, SAP 2000

Customer Focused Approach
At ITT we will develop products, process and solutions for new applications that will generate excitement among our customers partners while setting new industry standards as a premier components supplier.

• Conduct Fundamental Research to Develop Innovations
• Work with Customer to Fully Explore Applications/Issues and Engage all Stakeholders
• Provide Solutions, Options and Trade-offs
• Deliver on our Promises

Research and Development
ITT Enidine is active in the fundamental research community and presents at technical conferences.

Research collaboration with:
• University of California (Irvine)
• University of Buffalo (US)
• Federal University of Santa Catarina (Brazil)
• University of Liverpool (UK)
• The Boeing Corporation (US)
• Bombardier

Design and Development
• All capabilities for design and development in house
• Assembly and test quality
• Innovation in Technology
• Engineering Experience

Market Focused Solutions
3-COM Data Center, Santa Clara, CA.
Coronado Bridge, San Diego CA.
Salishan Lodge, Tied Mass Damper
National Aeronautics and Space Administration
San Francisco Opera House
Spartocil Oil Sands Project
Major Chiller Supplier in Japan
Siemens Transformer isolation

Focused Product Applications
• Power Sub- Stations & Utility Base Isolation
• High-Rise Buildings
• Bridges & Highway Structures
• National Awevin, City Centers & Stadiums

Research, Design and Engineering
• Static Testing – Including precision electromechanical machines with programmable controllers
• Drop Testing – Up to 4,000 lbs. and 600 in/sec.
• Vibration – Electromechanical shakers with digital controllers
• Dampening testing – Up to 500,000 lbs. at 80 in/sec.
• 3D CAD Software, Solidworks
• Finite Element Analysis, COSMOS
• Dynamic Software, Visual Nastran
• Structural Analysis, SAP 2000

Custom Solutions
Power & Utility Sub- Stations
• 6 degrees of freedom isolator ring
• Stainless steel construction
• Retrofit to most transformer bays with little or no modification
• Dynamic tested to IEEE 693

HVAC and Chiller Units
• Equipment systems isolation stand
• Dynamic software, Visual Nastran
• Dynamic, Elevation damping and Wire Rope isolation technology
• Protects equipment from vertical and horizontal seismic inputs
• No maintenance
• Chillers, HVAC, Medical Equipment

Power Plants
• WEARE™ Pipe restraint/vibration isolator
• Nuclear, fossil generation plants,
no oil, seal, grooves or maintenance
• Compatible with most pipe attachment hardware

Oil and Gas Offshore Platforms
• Rubber Isolation Bearings
• Engineered rubber bearings, connectors, oilers and high value assets
• High in wire damping configuration
• Can be applied in parallel with viscous damper technology
• 6 to 21 inch diameter

Refineries and Storage Facilities
• HERM (14 ft Deck)
• Standard product selection
• Turn key solution
• Electronics Isolation
• Systems Analysis and Integration
• Multi-Axis Isolation
• Minimum Sway Space

LNG & LPG Storage
• Combined Isolation Bearing
• 4 to 12 inch diameter
• Rack mounted isolators
• 400 lbs. to 100,000 lbs.
• 14 to 120 inch diameter
• Kingston, Manchester, Puerto Rico
• 25,000 pb capacity

We have the world’s broadest set of implementation choices for structural isolation.
Global Presence

ITT Control Technologies provides custom seismic isolation products for unique infrastructure applications worldwide.

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for growing industrial end-markets in energy infrastructure, electronics, aerospace and transportation. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life.

Founded in 1920, ITT is headquartered in White Plains, NY, with employees in more than fifteen countries and sales in more than 125 countries. The company generated 2012 revenues of approximately $2.2 billion. For more information, visit www.itt.com.

ITT Enidine Inc.
7 Centre Drive
Orchard Park, NY 14127
USA
Phone: 716-662-1900
Fax: 716-667-1385
Email: industrialsales@enidine.com
www.enidine.com

Seismic Control and Infrastructure Solutions

ITT Enidine’s engineering staff and technical sales personnel are available to assist you with all of your application needs.

• With a proven track record of operating with lean manufacturing, ITT Enidine produces higher quality custom products with greater efficiency and within shorter lead times.

• ITT Enidine manufacture’s all of our products in-house, giving you fast reliable service to meet your critical application needs with on-time delivery.

• Here at ITT Enidine we have a proven track record in the infrastructure market with cutting edge technologies and engineering support, we can provide a custom solution to meet any need globally.

Our website features a worldwide representative lookup to help facilitate fast, localized service at www.enidine.com. For application assistance call our help line at 1.800.852.8508.

Founded in 1920, ITT is headquartered in White Plains, NY, with employees in more than fifteen countries and sales in more than 125 countries.

The company generated 2012 revenues of approximately $2.2 billion. For more information, visit www.itt.com.