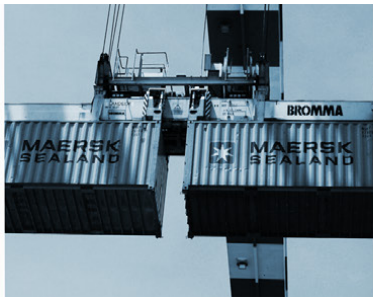


COMPANY PROFILE





SAFETY ALWAYS COMES FIRST QUALITY ENSUES – AS A RESULT



Our mission is to provide you with an optimal solution for any vibration or energy absorption problems. That's why Dellner Dampers mainly produces customised hydraulic dampers and buffers. We listen to your needs and are happy to produce either 1 or 1000 dampers/buffers, so long as your requirements are met. With buffers we can either use a more standardised product or else design a unique solution together with you that will absorb the energy in your application in the most efficient way.

cables in cable stayed bridges, seismic dampers, dampers for container spreaders or wind turbines; hydraulic buffers used in ship to shore cranes, process cranes, material handling, steel mills, military applications and energy generation.

OUR CURRENT PRODUCT RANGE

For example – bridge dampers up to 4000 kN/m/s with Fmax 70 kN and gas hydraulic buffers and seismic dampers up to 1500 kN. We are constantly expanding and updating our product range, so if you have a need for a special product not listed, please ask us anyhow!

LONG EXPERIENCE PROTECTING HUMAN LIVES

Most of our dampers and buffers are used in applications where their performance is related to safety – both for humans and structures. Without our dampers being installed on bridges they might well be subject to fatigue, and in the end jeopardise the safety of both the structure and human lives. With 50 years experience from the rail industry, we are extremely aware that safety is vital. All of our products are designed and produced in house in our workshop in Sweden and our welding is governed by the rigorous standards we must fulfil to deliver to the rail industry. In addition to the IRIS and ISO 9001:2008 standards, we are certified for welding according to EN 15085-2 Level CL1 (the railway industry standard for welding). Welding certificate EN-ISO 3834-2 must be fulfilled to get the EN 15085-2 Level CL1.

QUALITY TESTING AND CONTROL OF EVERY SINGLE UNIT

Since our dampers and buffers are often used in harsh environments, we test them thoroughly ourselves as well as together with external partners during the development process. Dellner Damper's products are guaranteed to meet your demands for a very long product lifetime – designed to withstand fatigue, corrosion, extreme temperatures and more. In addition, to ensure that every unit is flawless, we do a 100 % functional test of our dampers before delivery and each individual damper is delivered to you with a test protocol. Our products include, for example, dampers for the

[So please feel free to contact us regarding any needs relating to vibration or energy absorption. We have both the knowledge and experience – and we might well find a new and optimal solution for you.](#)

PROVIDING CUSTOMISED DAMPING PRODUCTS TO WORLD-LEADING COMPANIES FOR OVER 50 YEARS

Dellner Dampers is a well-established supplier of customised solutions for energy absorption and vibration problems. Based in Flen, Sweden, we offer a wide range of hydraulic (viscous) dampers and buffers manufactured according to our customer's individual specifications. A number of world-leading companies in a variety of industries have chosen Dellner Dampers as their supplier.

as crash test rigs, wind turbines, spreaders and stay cable dampers. Our products are used all over the world – Dellner Dampers' stay cable dampers for example, have been installed in more than 10 cable-stayed bridges, including the world's longest: the Russky Bridge in Vladivostok, Russia. Our dampers are also found in container spreaders produced by the world's leading manufacturers. All Dellner Dampers manufacturing and product development are done in-house in Sweden. Furthermore, Dellner Dampers contributes innovative damping solutions to the Dellner Group's own coupler division.

INDUSTRIAL DAMPING TECHNOLOGY WITH ROOTS IN THE RAIL INDUSTRY

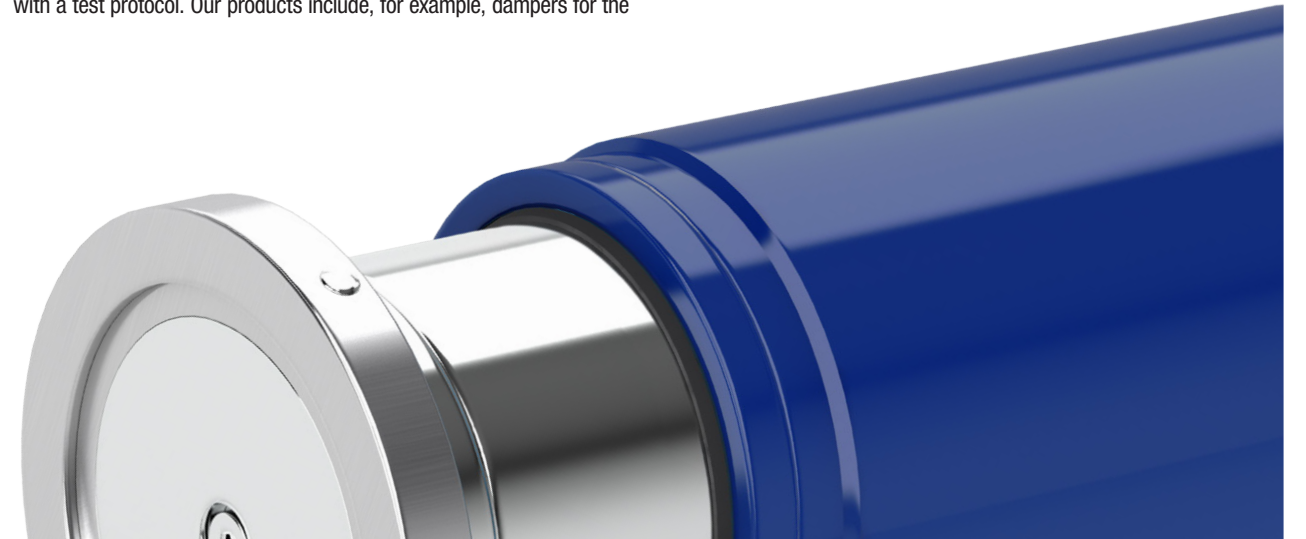
In the 1960's Dellner Dampers functioned as an ASEA production unit and our whole company was then dedicated to producing dampers for ASEA trains. In the 1990's we diversified and started supplying damping products for bridges, container spreaders, ship to shore cranes, wind turbines, defence and a variety of other applications. Between 1993 and 2003 we traded under the name of Precima. In 2003 we were bought by the Dellner Group and established our present name.

QUALITY CERTIFICATIONS

Our success over the past 50 years is largely due to our uncompromising focus on precision and quality. Preservation of our entrepreneurial spirit has also allowed us to maintain a high level of ingenuity, customer focus and production flexibility. Dellner Dampers is certified according to ISO 9001:2008 and IRIS (International Railway Industry Standard) – a globally recognized standard unique to the railway sector for the evaluation of management systems. At present Dellner Dampers is working according to the ISO 14001 environment management system and is due to be certified in the near future.

SHOCK ABSORBERS AND DAMPING TECHNOLOGY FOR VARIOUS INDUSTRIES WORLD-WIDE

Today Dellner Dampers' products are dampers and buffers for the rail industry as well as engineering services for industrial applications such



PEOPLE DO BUSINESS

Dellner Dampers is, and has always been, an innovative driven company. Customer satisfaction is our top priority. We accomplish this by meeting with you, carefully listening to your needs, researching when necessary and then discussing and presenting various solutions. We always base our designs on your requirements combined with our long experience, skilled staff and modern tools such as computer aided simulations and drawings. Since top quality products are our niche, all Dellner Damper products are built by hand.

PARTNERSHIP FOR SUCCESSFUL LONG-TERM SOLUTIONS

At Dellner Damper, our goal is to be much more than merely your supplier; we want to earn your trust as a close partner, collaborate and together build mutual success. We naturally base our business on long-term relationships, especially since our products are often designed to be in use for many decades.

CONTINUOUS IMPROVEMENT

At Dellner Dampers we are always actively working to improve our services through shortening delivery times and offering cost efficient products and services including stock keeping and maintenance. Since we work with world-leading companies from a variety of industries we

are used to challenging demands – regarding both our products and services. We believe that our skilled personnel are very good at fulfilling these demands and a large number of our customers give us excellent references and choose to stay with us for decades.

CUSTOM MADE TOOLS AND THE KNOWLEDGE TO USE THEM

We always design shock absorbers and industrial damping technology based on your needs. Sometimes a meeting with someone from your company and a quick drawing can be enough to get started. At other times, however, the problems are more complex.

Then we may do:

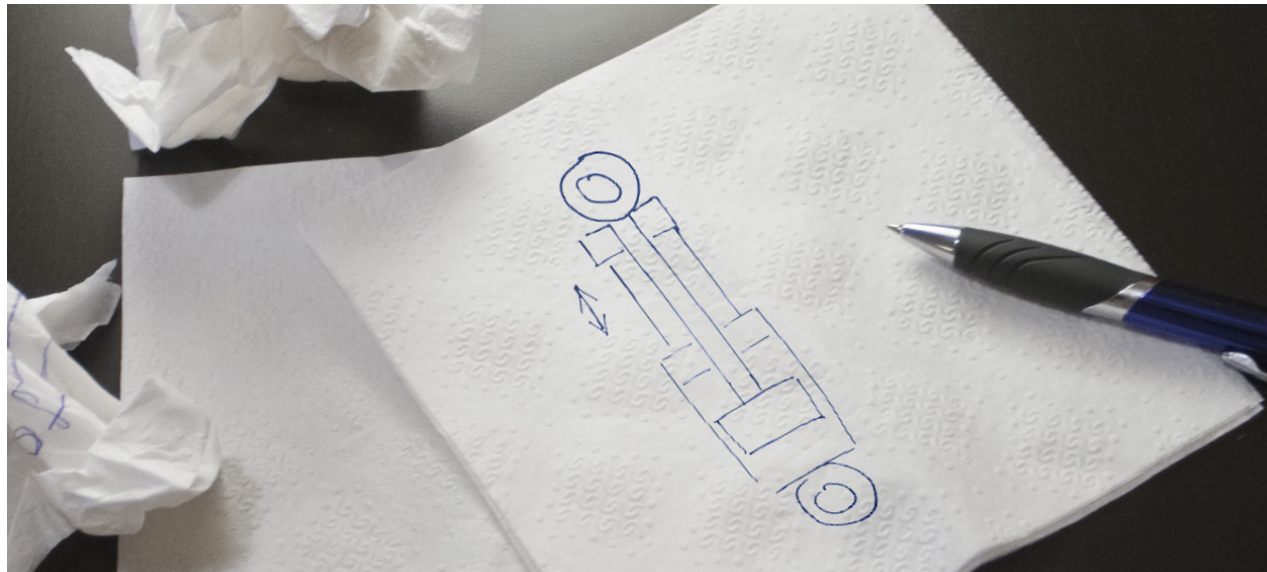
- Energy absorption simulations (multi-body impacts)
- Cable dynamics simulations.
- FEM calculations (Finite Element Method) and FEA (Finite Element Analysis)
- A LS-DYNA model and model validation

ENHANCING YOUR SAFETY BECAUSE PEOPLE ARE PEOPLE

Users of various products sometimes make mistakes. So it is good to know that our products can lessen risk and minimize damages if and when problems occur. One clear example of this is Dellner Damper buffers being installed on a Ship To Shore Crane on both the trolley and the gantry legs. Absorbing the energy from an impact in this way protects the operator and the crane when an involuntary impact occurs.

HOW CAN NEW DAMPERS AND BUFFERS INCREASE YOUR PROFITS?

Many of our customers have boosted their productivity by using dampers and/or buffers from Dellner Dampers; often by increasing the speed of various applications and then letting our dampers absorb the vibration or energy of any impacts. For more information and a good example of this, please ask us about the use of dampers in container spreaders.



OVER 95 % EXPORT FROM SWEDEN TO THE WORLD

Dellner Dampers is an internationally oriented company, founded and based in the town of Flen, 100 km south east of Stockholm. We export more than 95 % of what we produce in our workshop and our market is global. We are eager to help out anywhere in the world where we can solve problems and bring success to our customers.



OUR SOLUTIONS CAN BE USED IN:

- Bridges – cable dampers & seismic dampers
 - Container spreaders
 - Cranes – STS, RMG, process cranes
 - Crash test rigs for automotive
 - Defence – moving targets
 - Energy generation – wind turbines & wave energy
 - Material handling – steel & paper mills, warehouses
 - Mining equipment, special vehicles and equipment
 - Rocket launch pads
- (fill in your need/application and contact us today, see www.dellnerdampers.se)

BRIDGES WHERE DELLNER DAMPERS SUPPLIED – CABLE DAMPERS:

- Russky Island Bridge, Russia (the world record bridge opened in 2012, the longest main span of 1104 m for a cable stayed bridge)
- Öresund Bridge, Sweden/Denmark
- Pitt River Bridge, Canada
- Storabelt Bridge, Denmark
- Rion-Antirion Bridge, Greece
- Phu My Bridge, Vietnam
- Busan-Geoja Bridge 1, South Korea
- 2:nd Geo Geum Bridge, South Korea
- Golden Horn Bridge, Russia
- Sae Poong Bridge, South Korea
- Wroclaw Bridge, Poland
- Port Mann, Canada
- Anzac Bridge, Australia

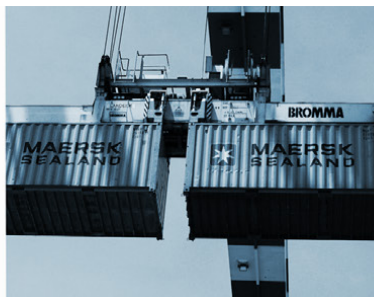
This list is just an example of bridges where we supplied cable dampers, and we are continuously taking part in new bridge projects.

WELCOME TO ASK FOR REFERENCES!

Currently our dampers are operating daily in ports worldwide. Our customers spreaders and our viscous damper for stay cables have been installed in a numerous of bridges around the world.

For more information and references, please call us at: +46 157 45 43 40 or send an e-mail to info@dellnerdampers.se.
For more information, please visit www.dellnerdampers.se





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