Load Diagrams

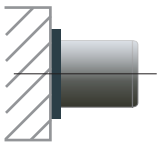
Program 0180 hydrolysis-resistant Cellular Buffers

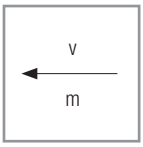
CONDUCTIX wampfler

Cellular Buffers
Program 0180

Calculation and Selection of Impact Buffers made of Diepocell® BM

• Mass against stop

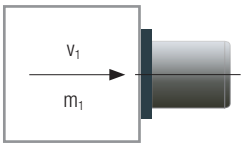


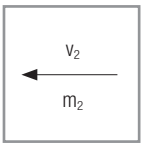


$W = \frac{1}{2} m \cdot v^2$

The calculation method
is on the next page.

• Mass against mass



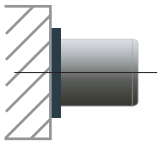


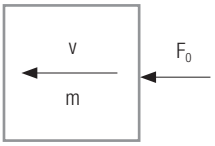
$$W = \frac{m_1 \cdot m_2 (v_1+v_2)^2}{2(m_1+m_2)}$$

if $m_1=m_2$ and $v_1=v_2$.
$W = m \cdot v^2$

• Mass with drive against stop

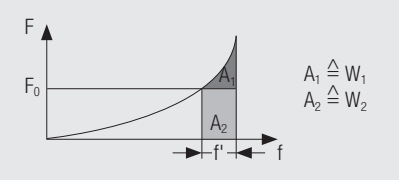
Buffer-force compression diagram



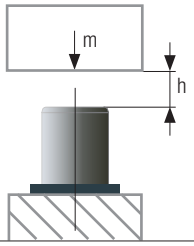


$W = \frac{1}{2} m \cdot v^2$

$W_2 = F_0 \cdot f'$



• Free fall



$W = m \cdot g \cdot h$

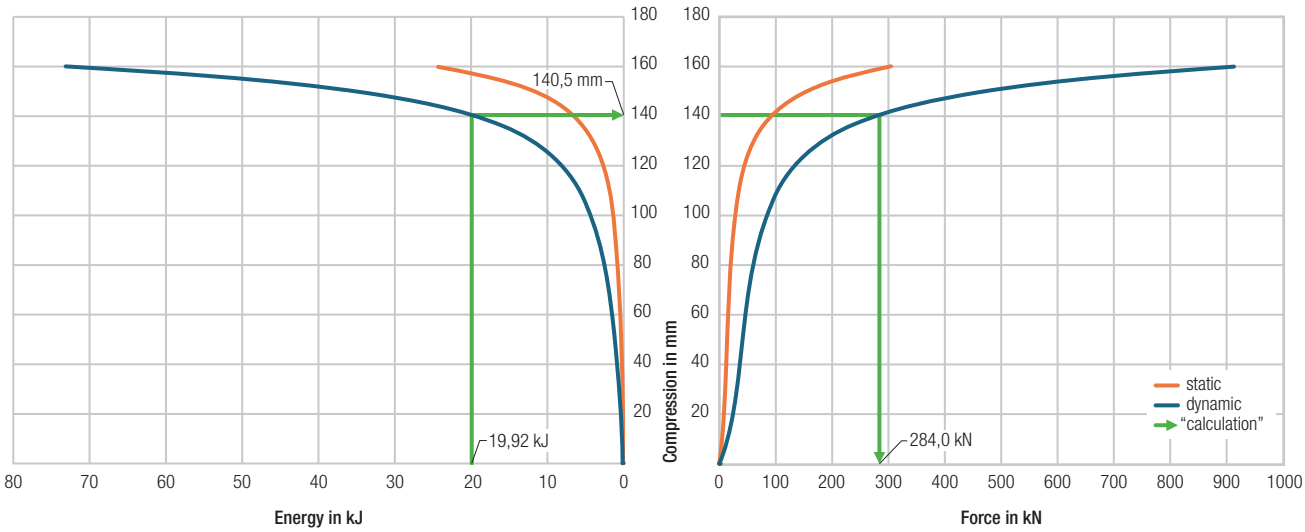
This formula is **not** applicable for lifts.

If you have any questions or require more complex calculations, our experts will be happy to assist you.

F_0:	drive force	(kN)	m_1/m_2:	mass of body 1 / body 2	(kg)
F:	final force	(kN)	v:	velocity	(m/s)
f:	buffer compression	(m)	$v_{1/2}$:	velocity of body 1 / body 2	(m/s)
f':	operating compression	(m)	W:	kinetic energy	(J)
g:	gravity acceleration	(9,81 m/s²)	W_1:	kinetic energy	(J)
h:	drop height	(m)	W_2:	work created by F_0	(J)
m:	mass	(kg)	W_{zul}:	permitted energy input	(J)

Cellular Buffers
Program 0180

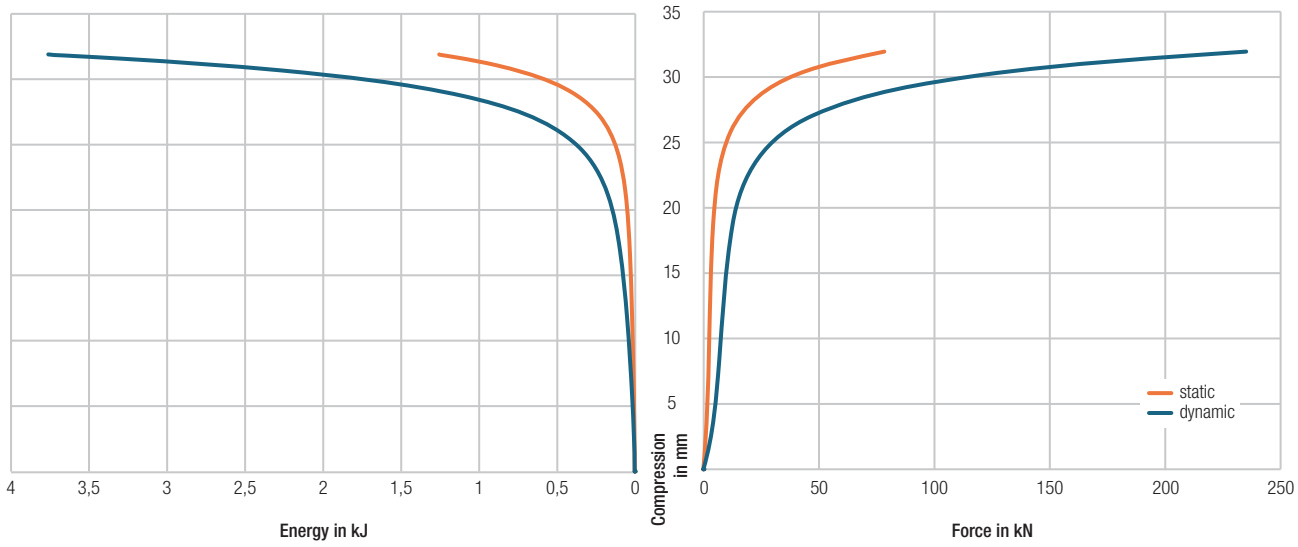
Exemplary Calculation and Selection of a Diepocell® BM Impact Buffer



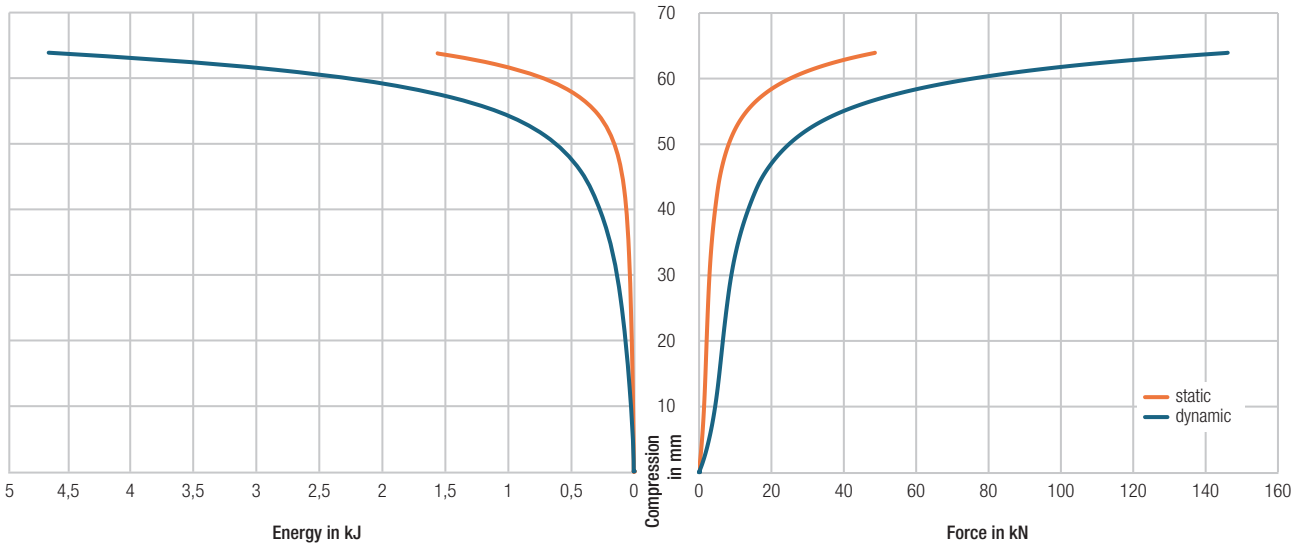
Application: mass against a stop
Formula: $W = ½m \cdot v^2$
Parameters: mass m = 2490 kg
velocity V = 4 m/s
Calculation: $W = 1/2 \times 2490\ kg \times (4{,}0\ m/s)^2$
= 19920 Nm [J]
= **19,92 kNm [kJ]**

Cellular Buffers
Program 0180

Buffer size 80 x 40 – Energy Absorption / Final Force

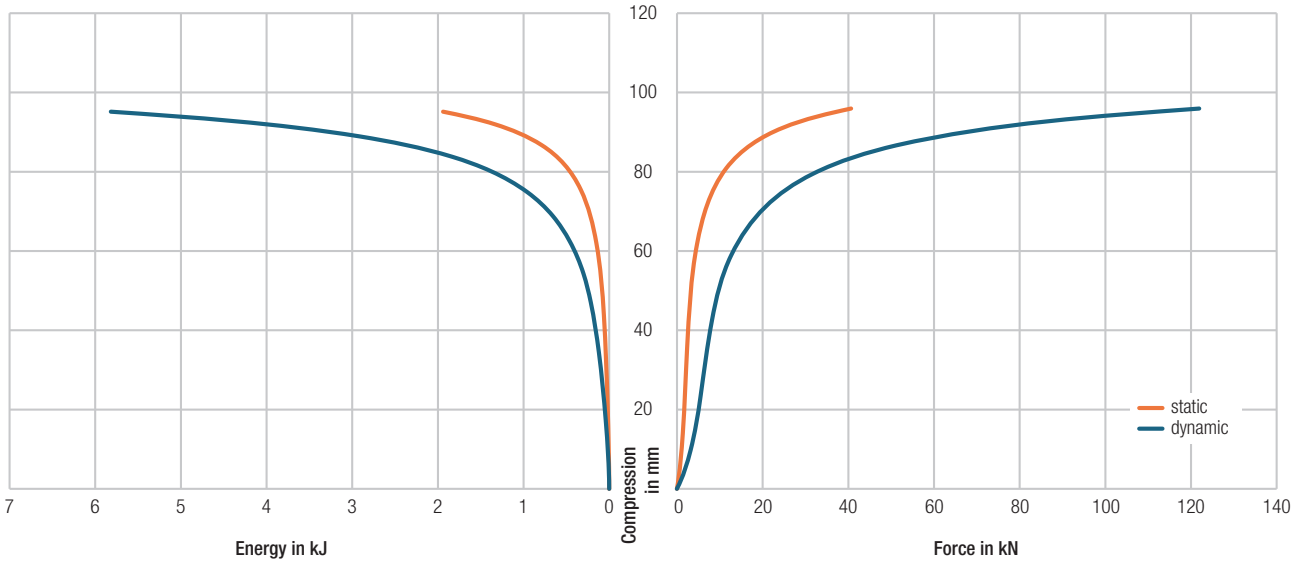


Buffer size 80 x 80 – Energy Absorption / Final Force

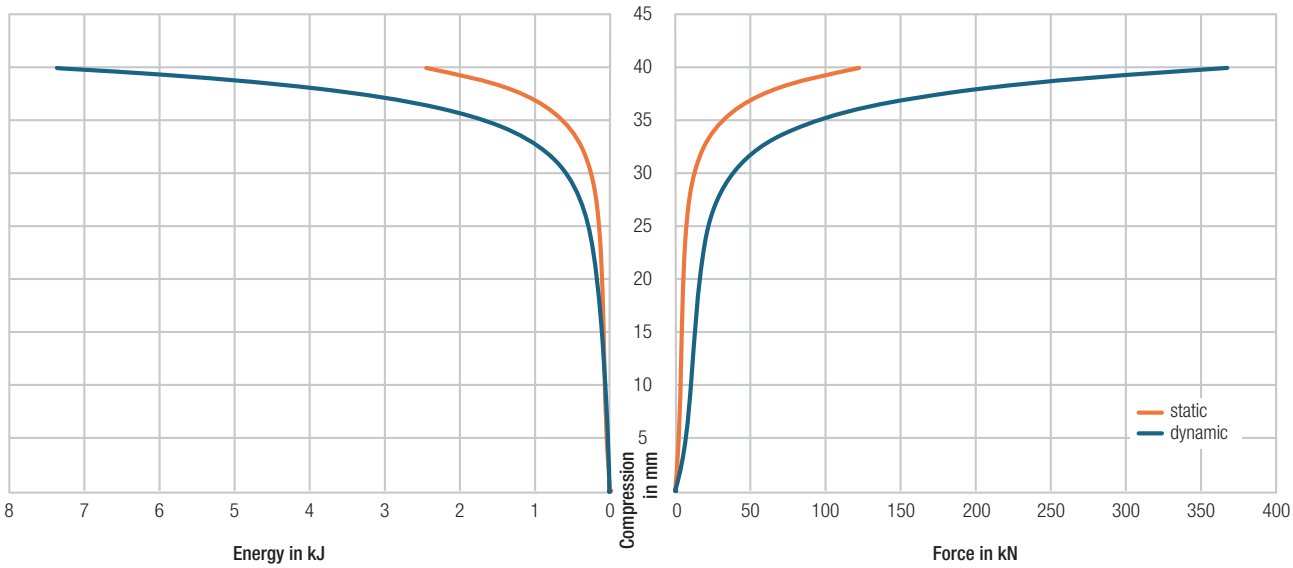


Cellular Buffers
Program 0180

Buffer size 80 x 120 – Energy Absorption / Final Force

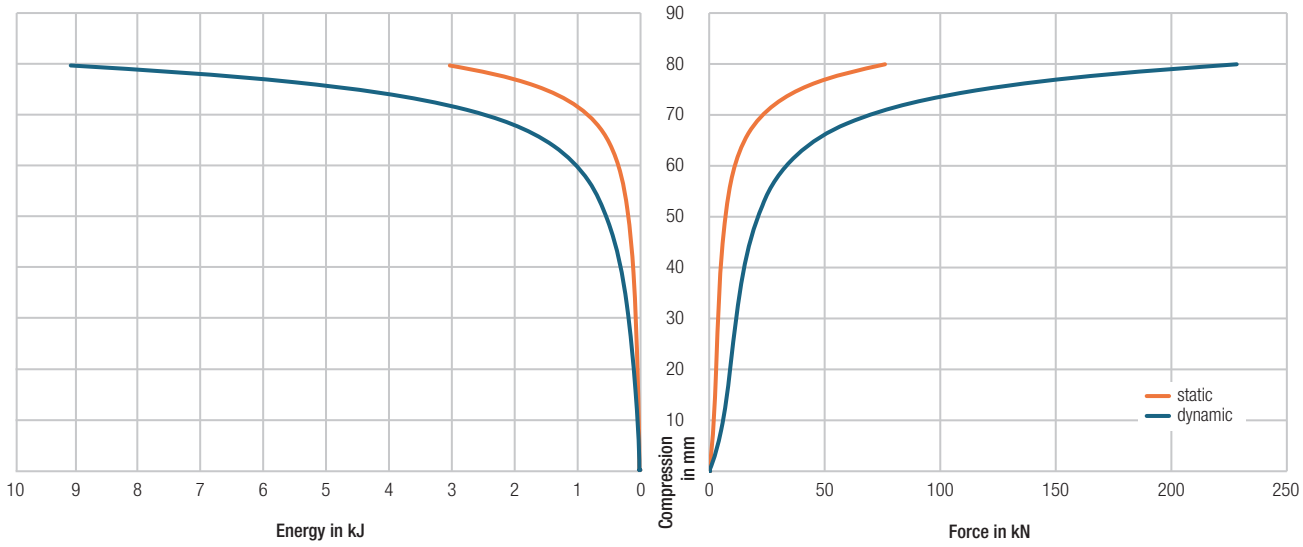


Buffer size 100 x 50 – Energy Absorption / Final Force

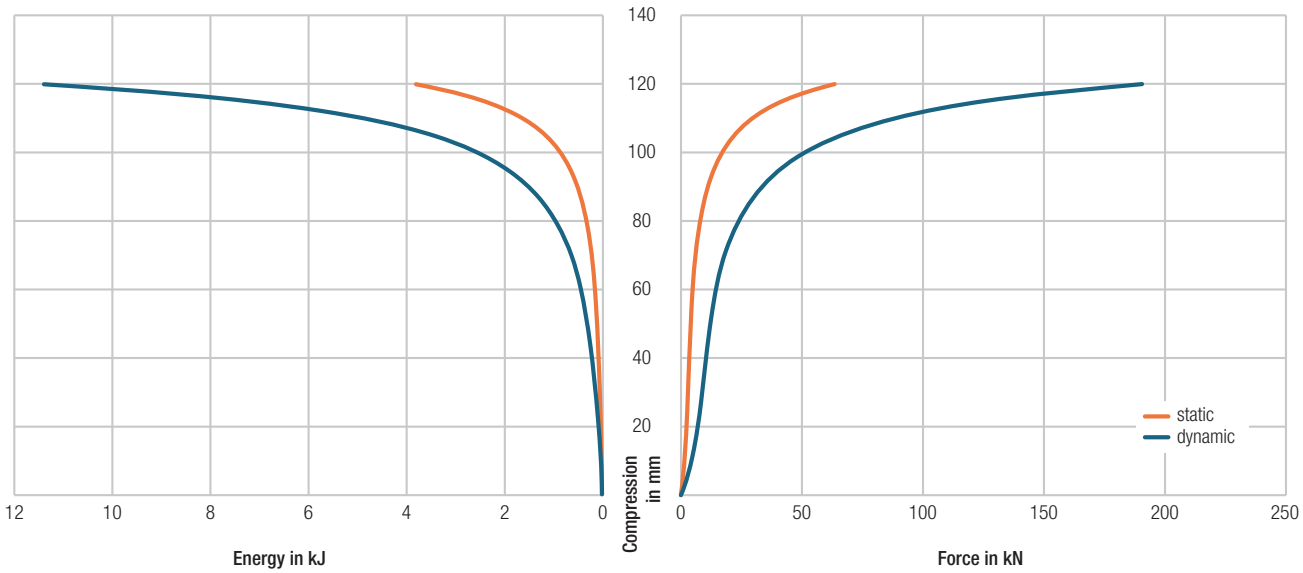


Cellular Buffers
Program 0180

Buffer size 100 x 100 – Energy Absorption / Final Force

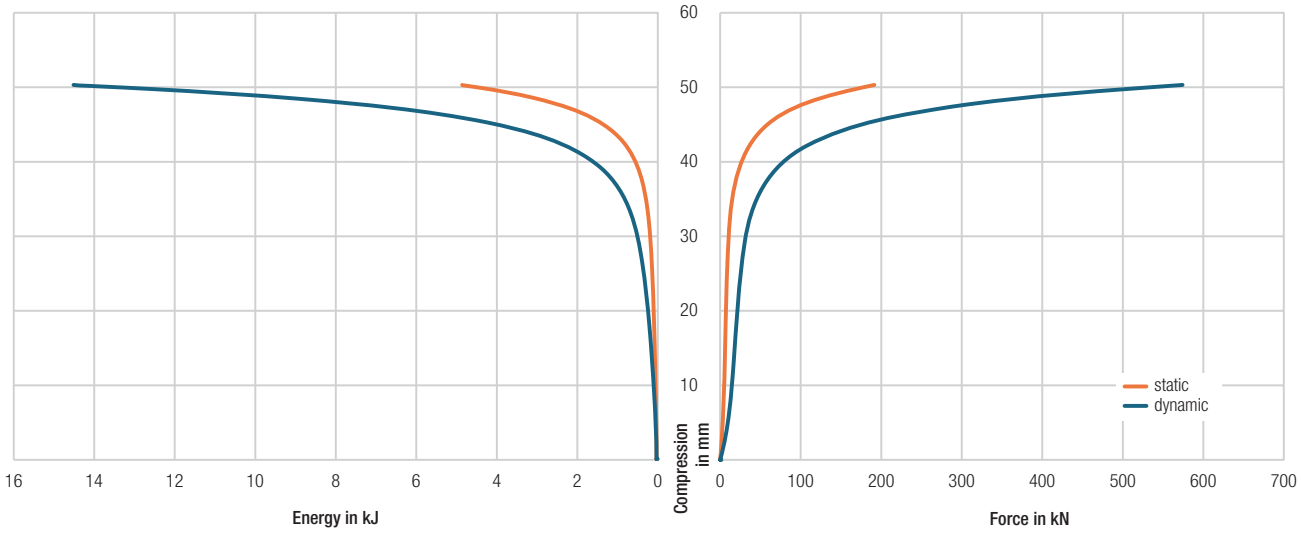


Buffer size 100 x 150 – Energy Absorption / Final Force

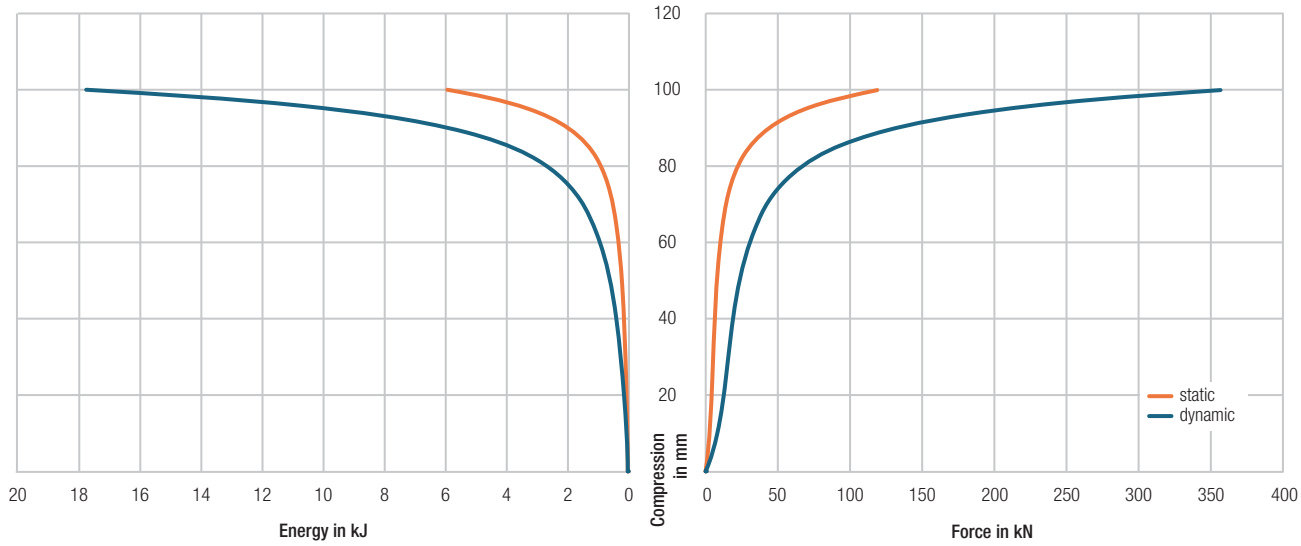


Cellular Buffers
Program 0180

Buffer size 125 x 63 – Energy Absorption / Final Force

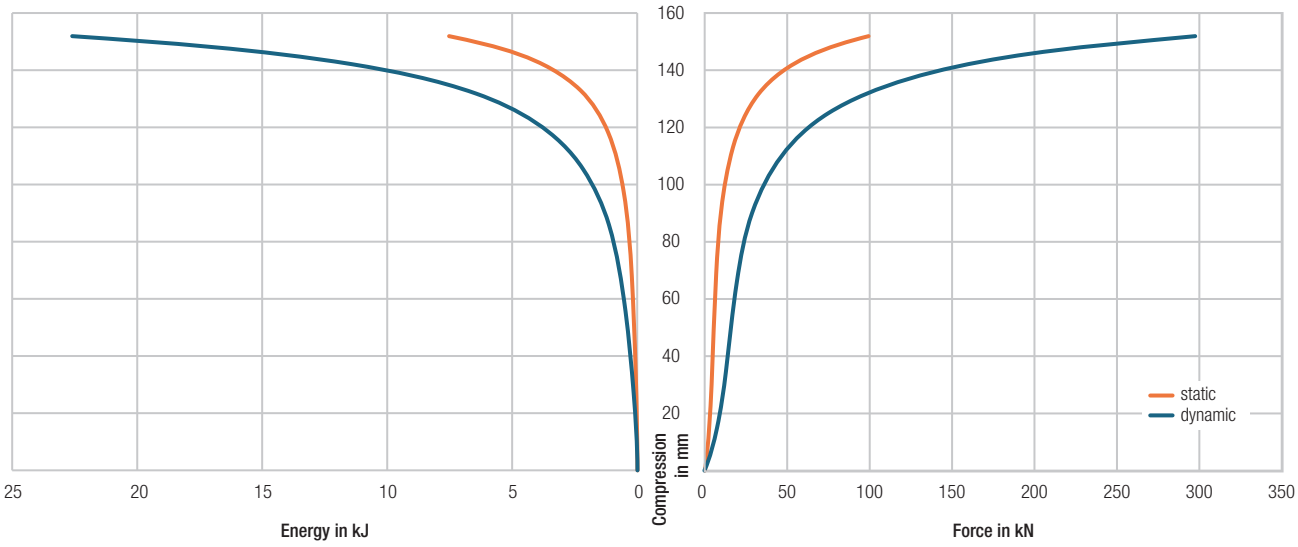


Buffer size 125 x 125 – Energy Absorption / Final Force

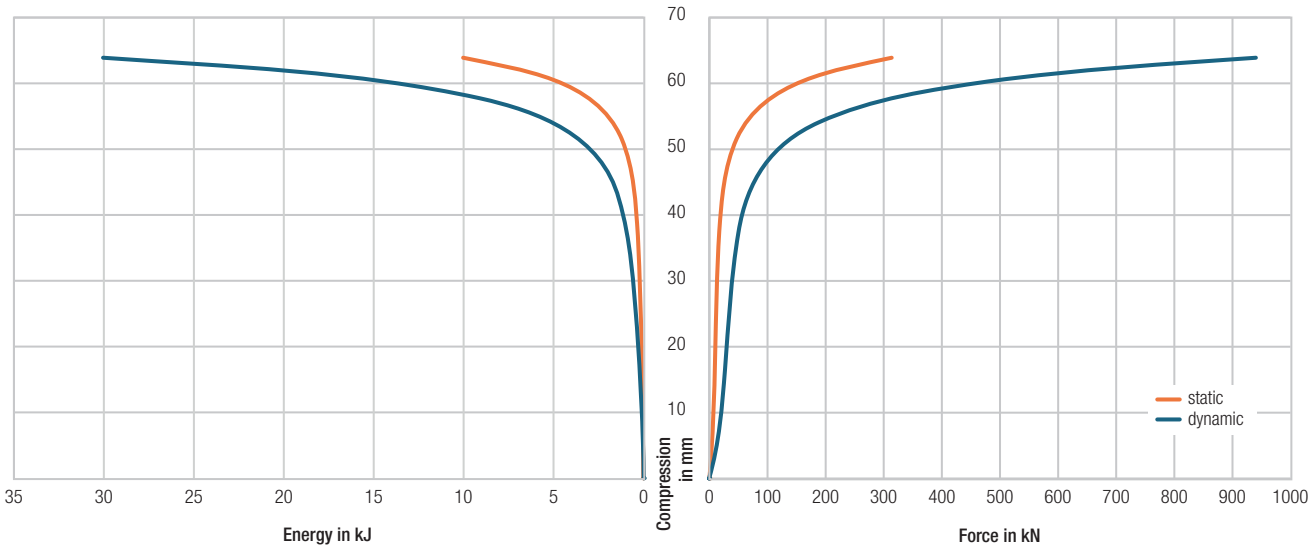


Cellular Buffers
Program 0180

Buffer size 125 x 190 – Energy Absorption / Final Force



Buffer size 160 x 80 – Energy Absorption / Final Force



Cellular Buffers
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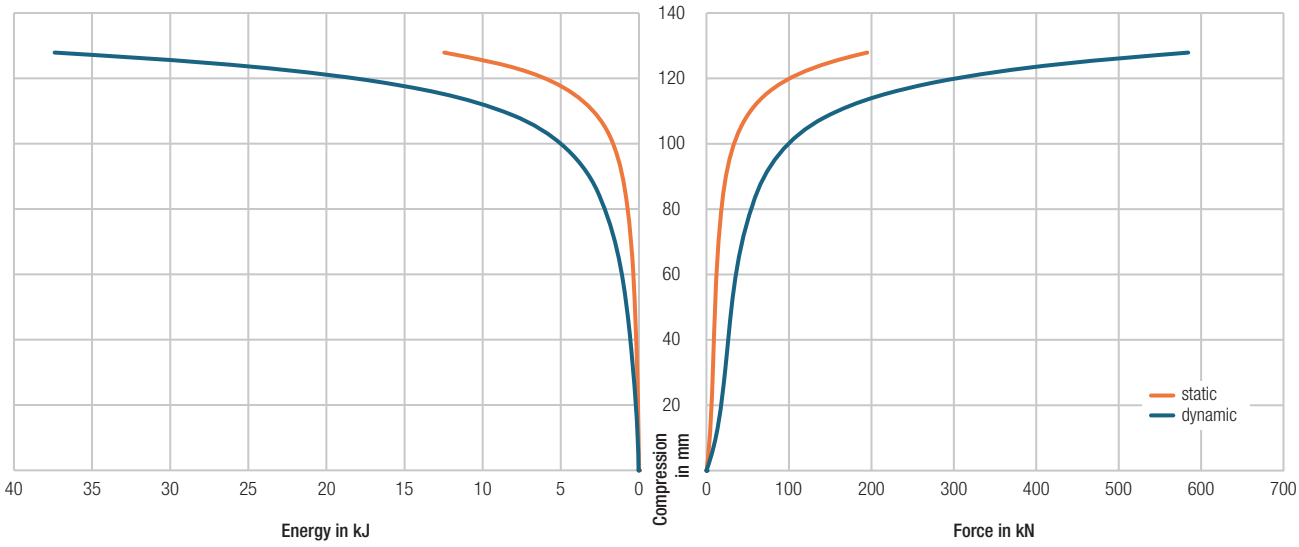
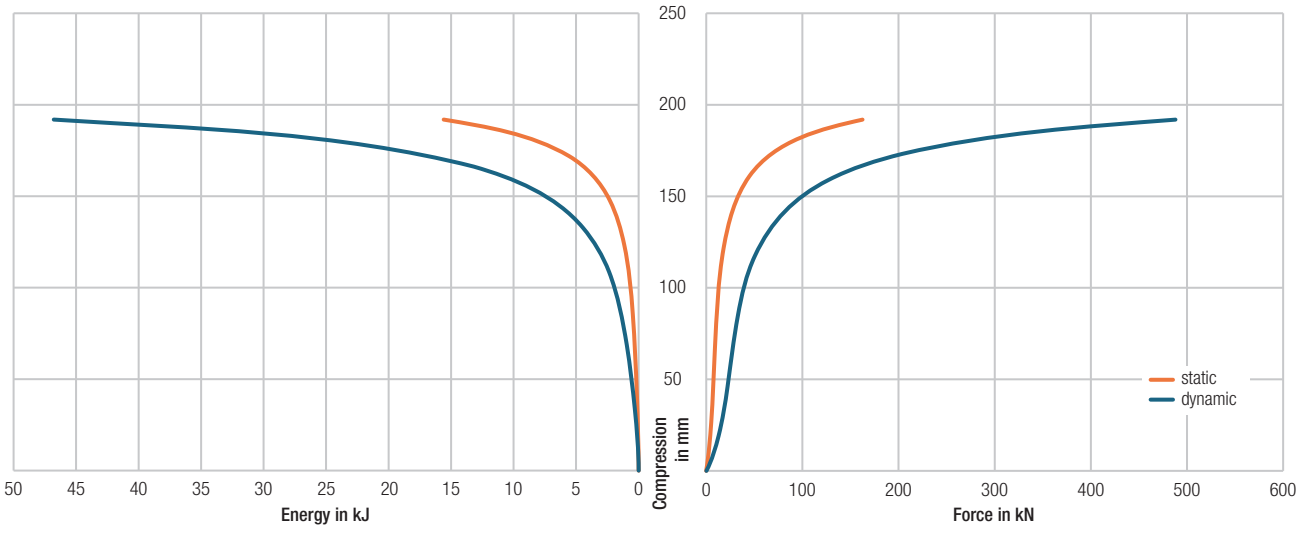
Buffer size 160 x 160 – Energy Absorption / Final Force

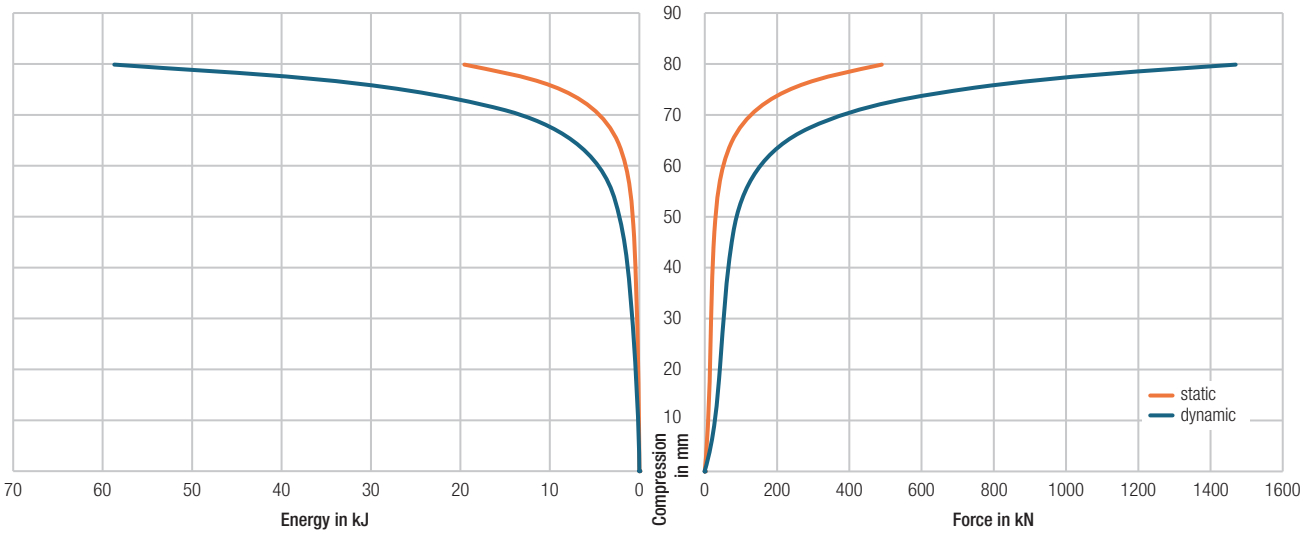


Buffer size 160 x 240 – Energy Absorption / Final Force

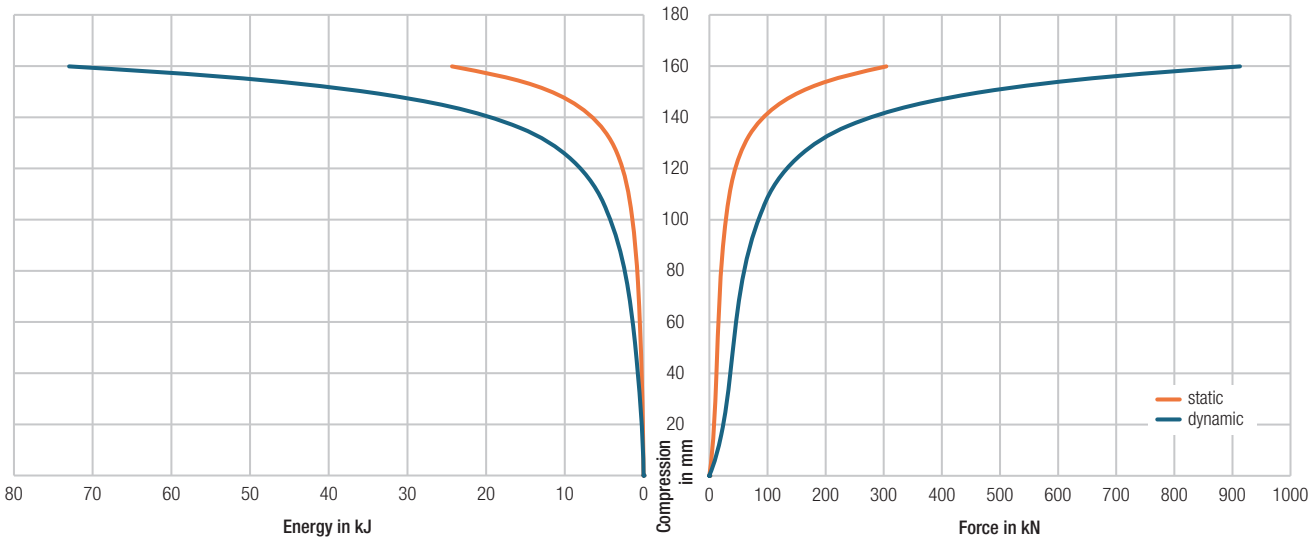


Cellular Buffers
Program 0180

Buffer size 200 x 100 – Energy Absorption / Final Force

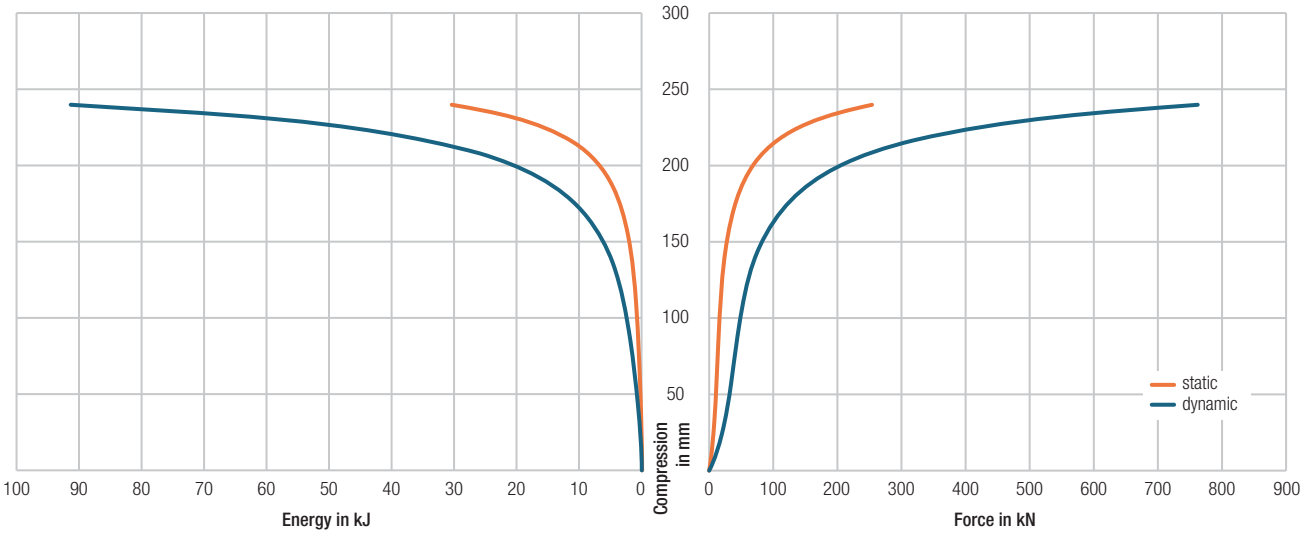


Buffer size 200 x 200 – Energy Absorption / Final Force

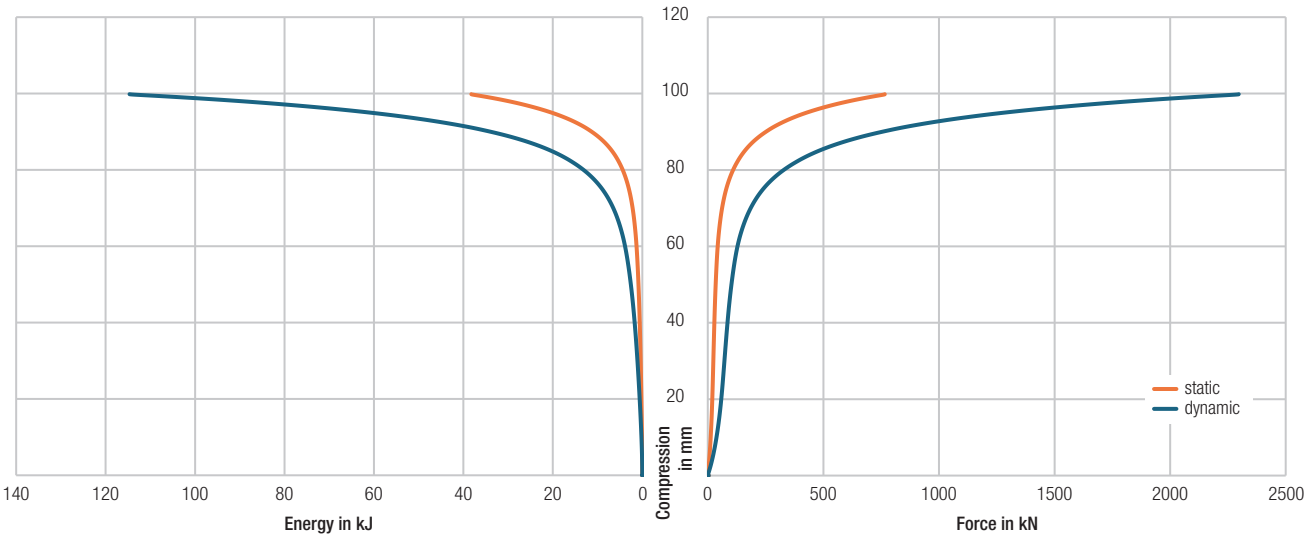


Cellular Buffers
Program 0180

Buffer size 200 x 300 – Energy Absorption / Final Force

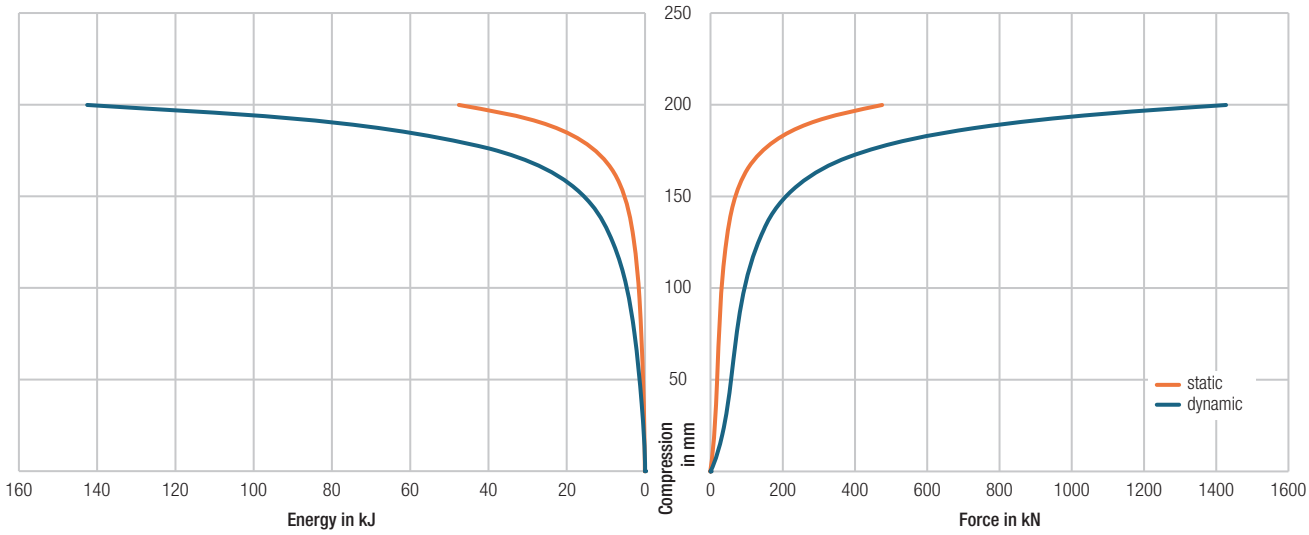


Buffer size 250 x 125 – Energy Absorption / Final Force

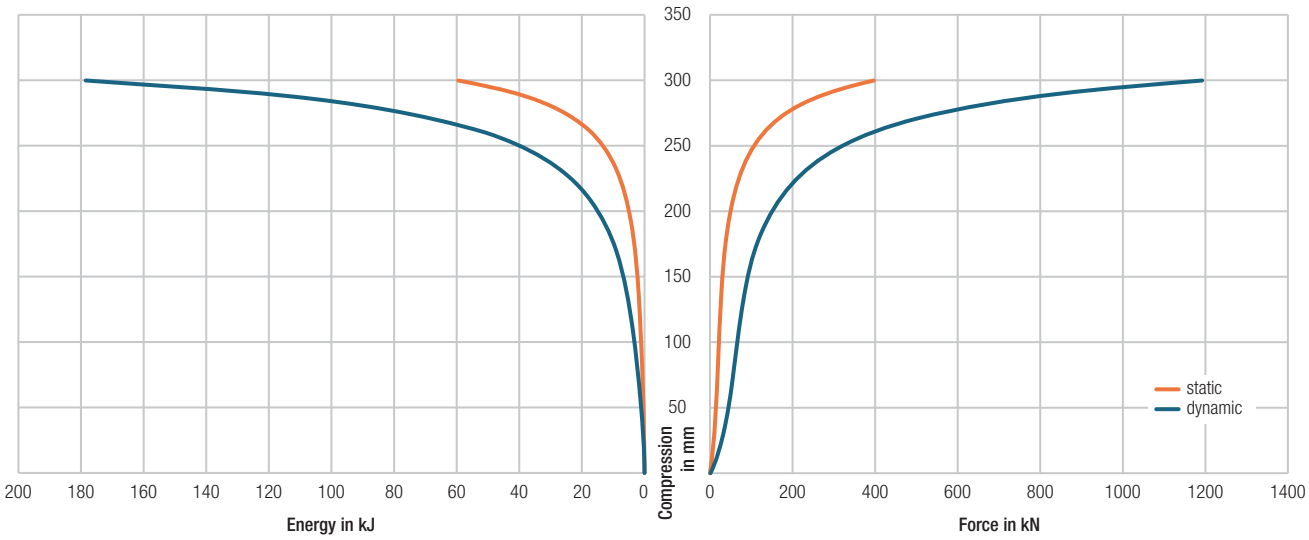


Cellular Buffers
Program 0180

Buffer size 250 x 250 – Energy Absorption / Final Force

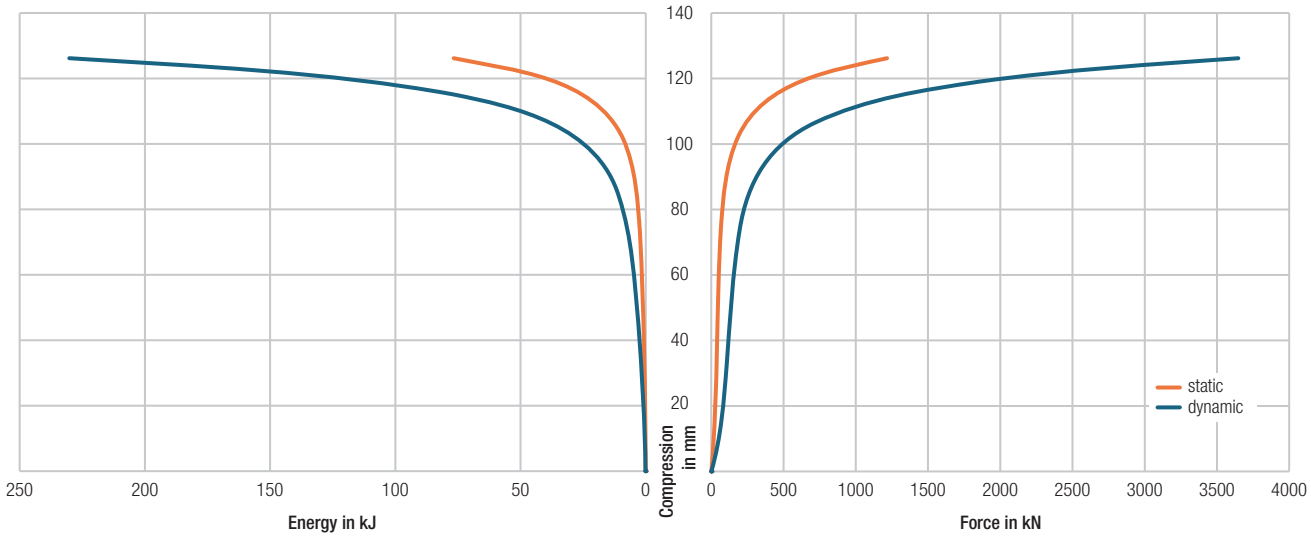


Buffer size 250 x 375 – Energy Absorption / Final Force

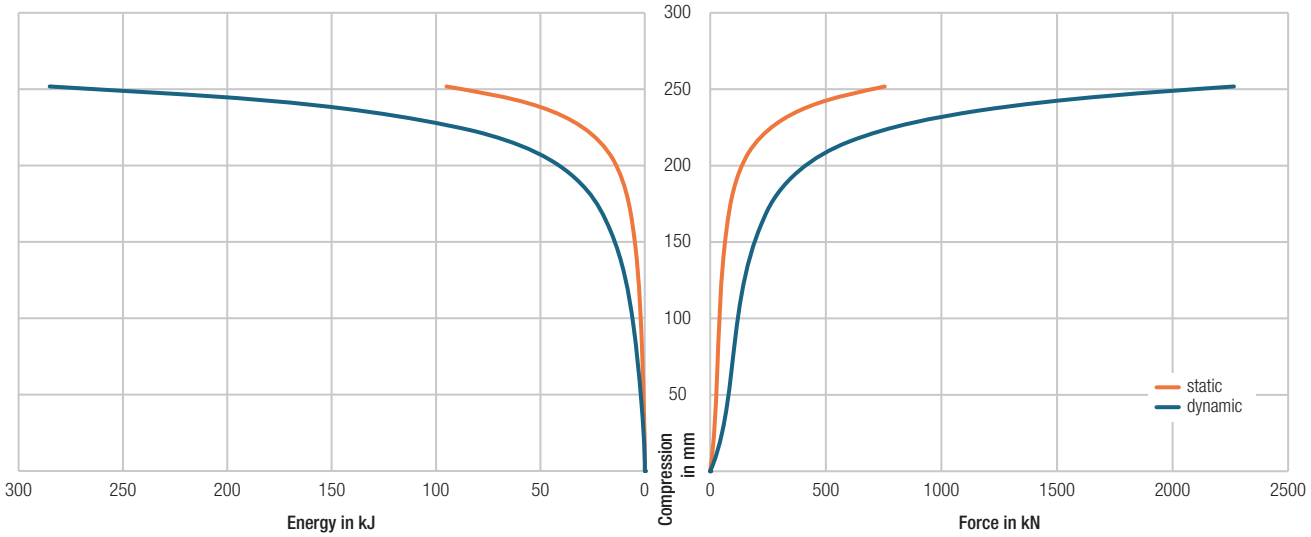


Cellular Buffers
Program 0180

Buffer size 315 x 158 – Energy Absorption / Final Force

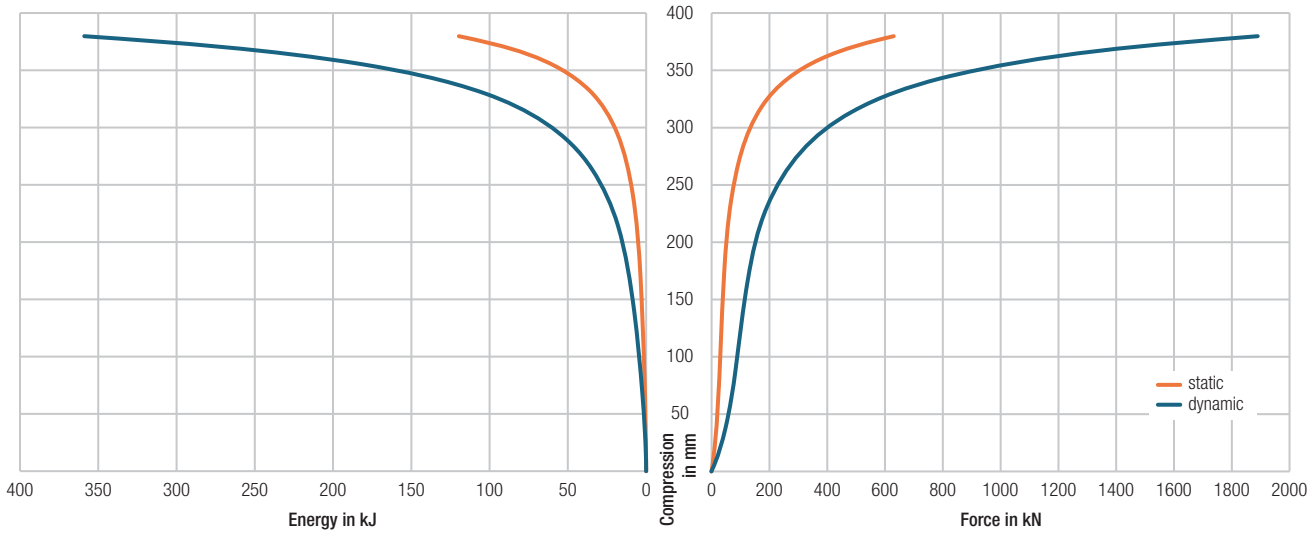


Buffer size 315 x 315 – Energy Absorption / Final Force

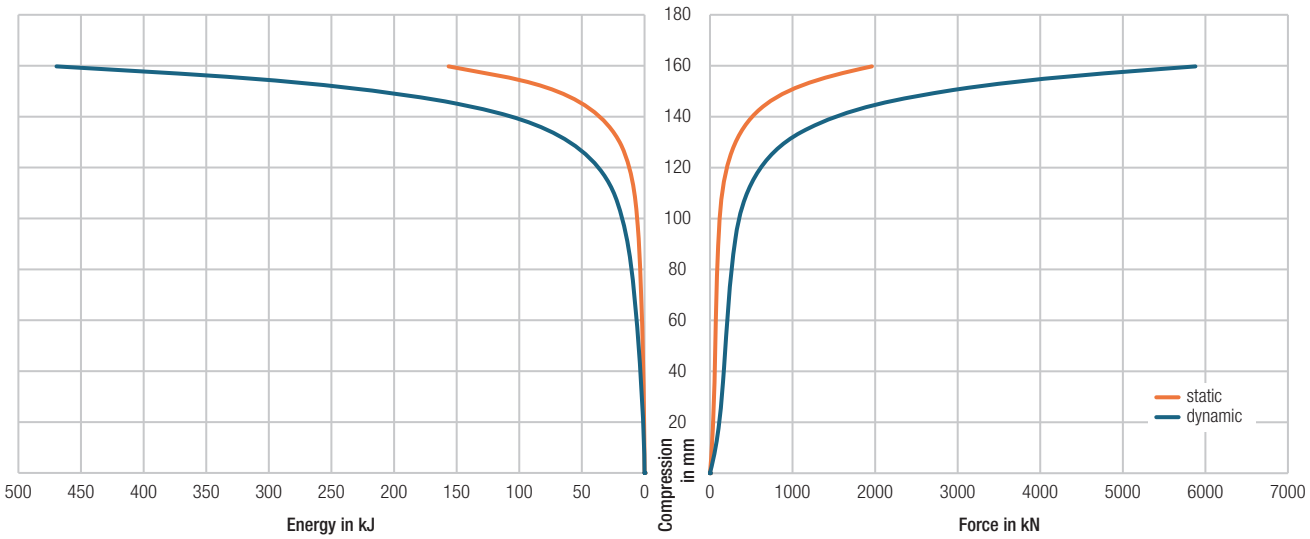


Cellular Buffers
Program 0180

Buffer size 315 x 475 – Energy Absorption / Final Force

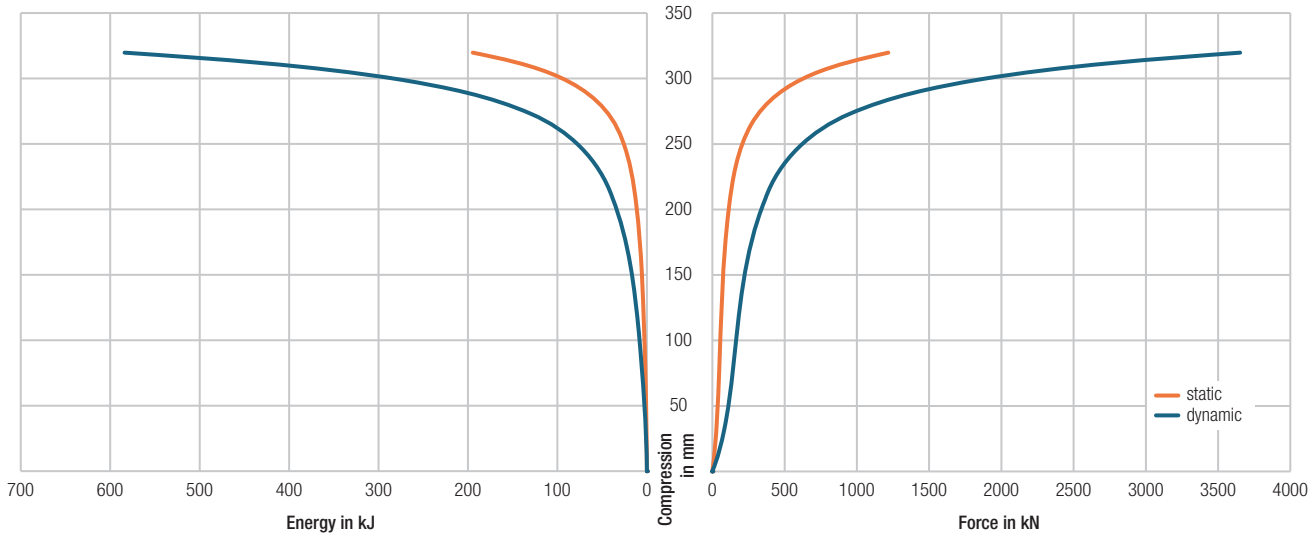


Buffer size 400 x 200 – Energy Absorption / Final Force

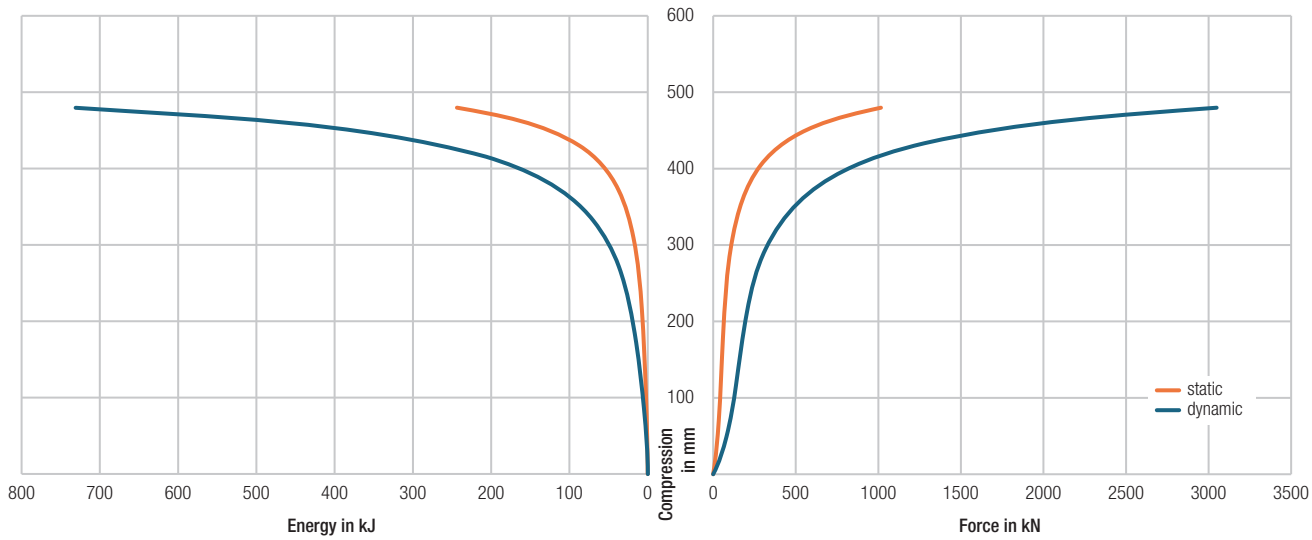


Cellular Buffers
Program 0180

Buffer size 400 x 400 – Energy Absorption / Final Force

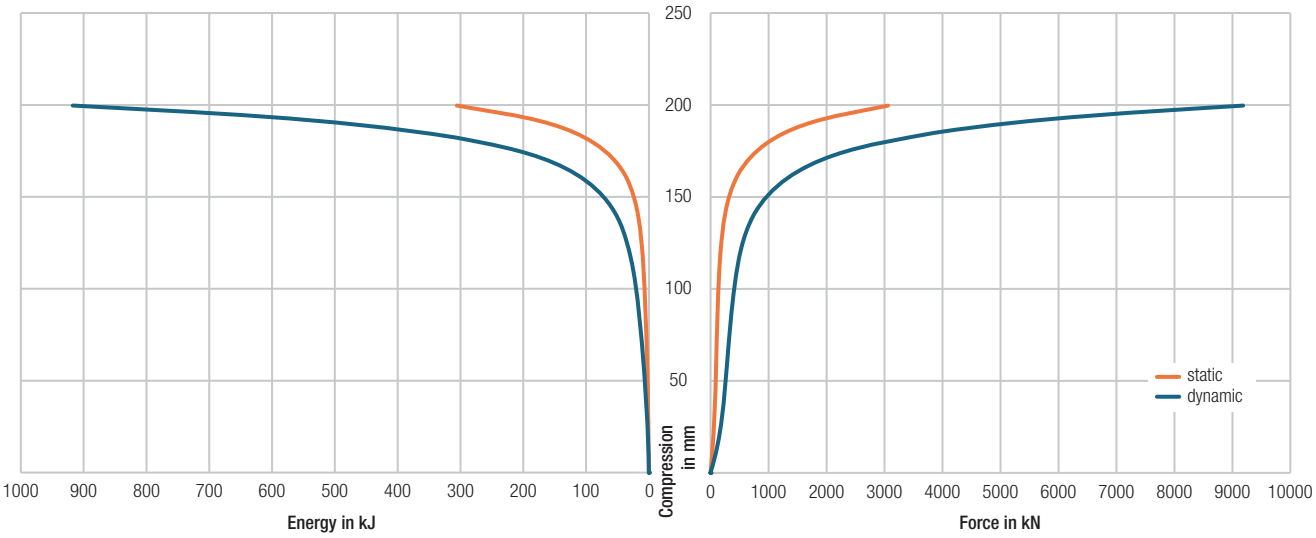


Buffer size 400 x 600 – Energy Absorption / Final Force

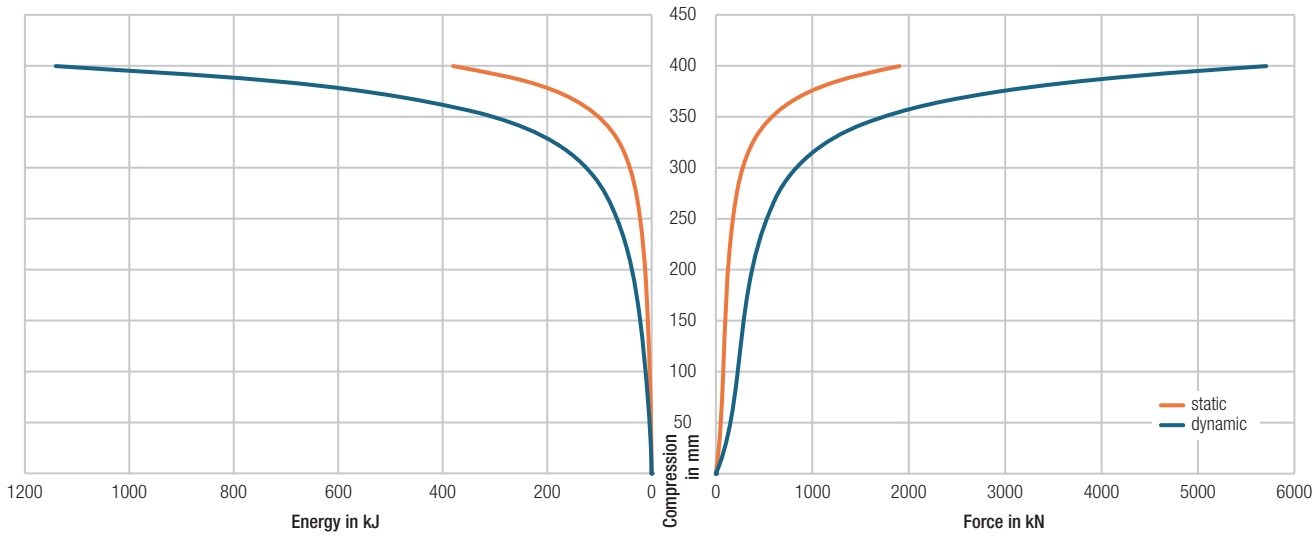


Cellular Buffers
Program 0180

Buffer size 500 x 250 – Energy Absorption / Final Force

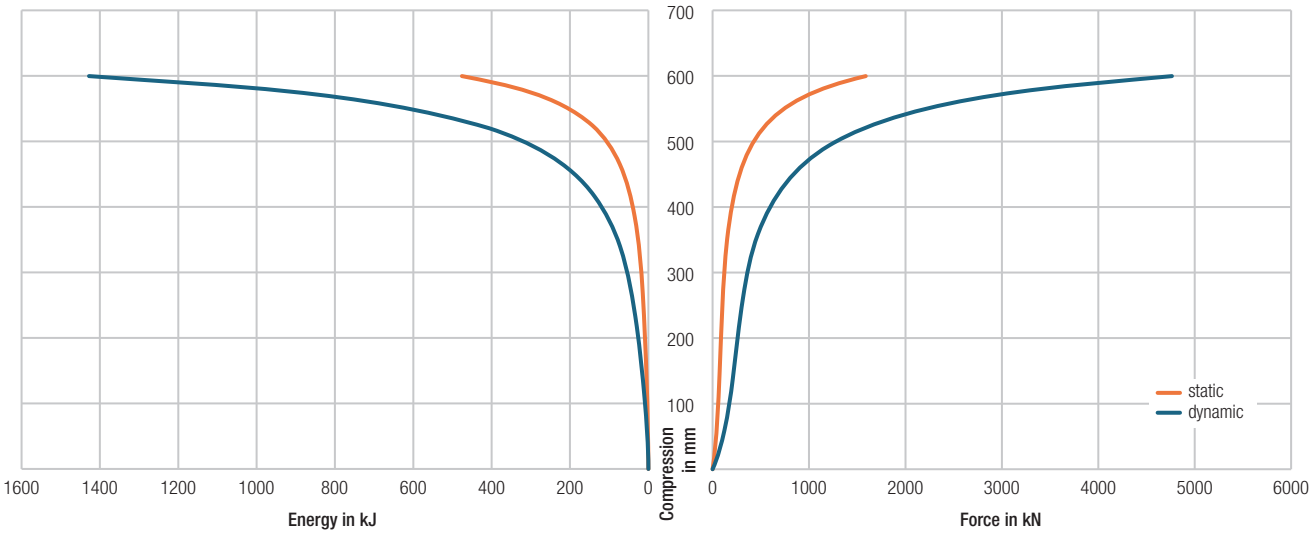


Buffer size 500 x 500 – Energy Absorption / Final Force

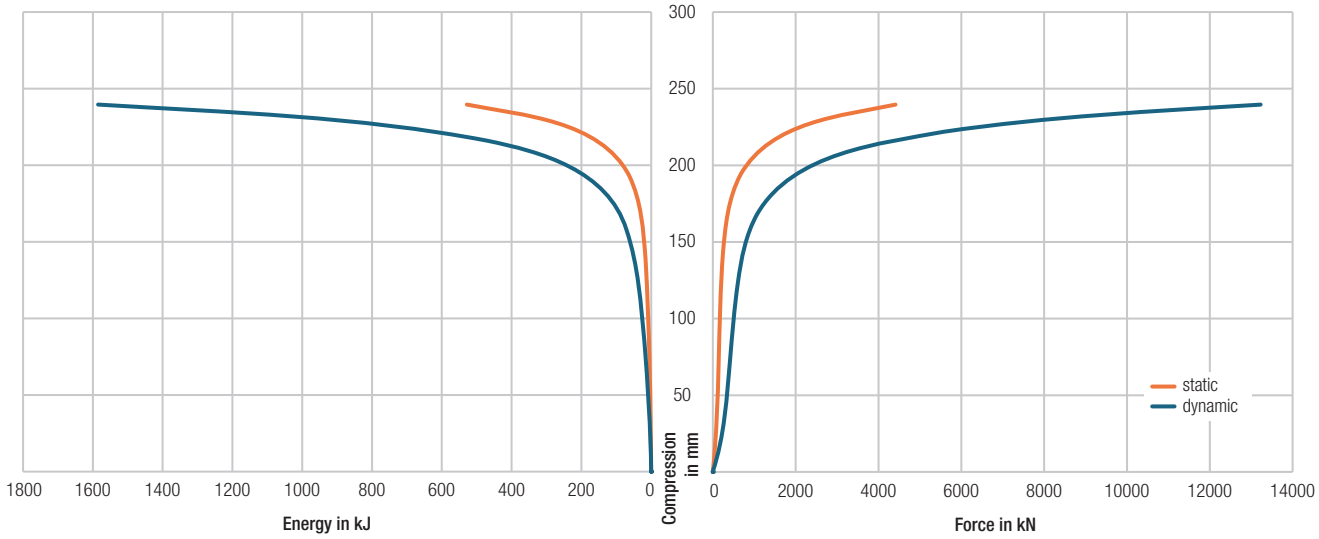


Cellular Buffers
Program 0180

Buffer size 500 x 750 – Energy Absorption / Final Force

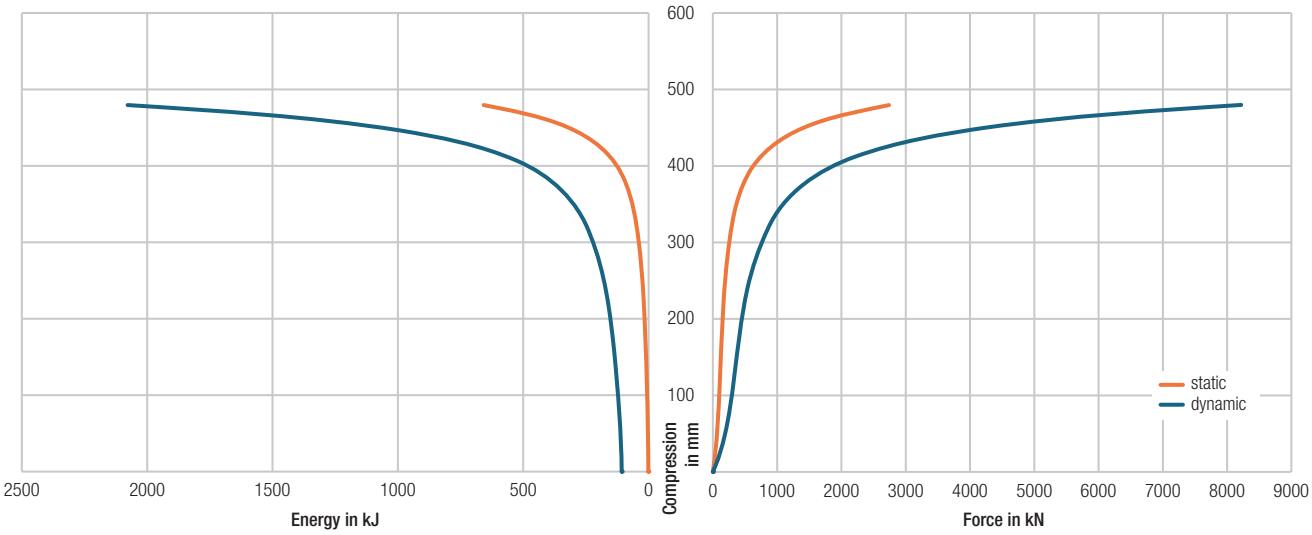


Buffer size 600 x 300 – Energy Absorption / Final Force

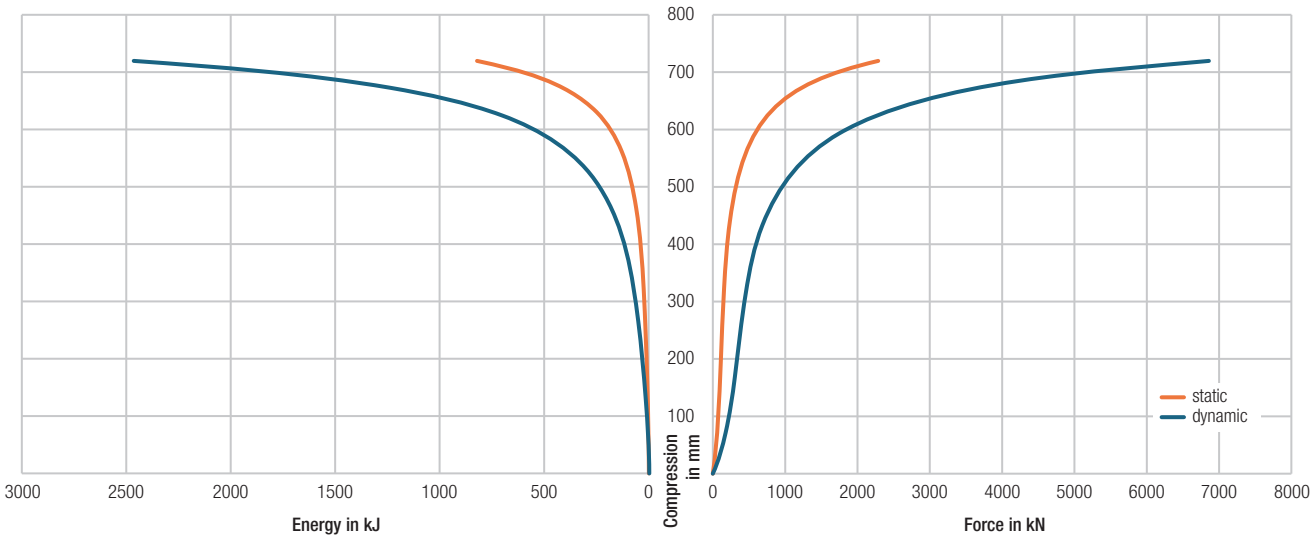


Cellular Buffers
Program 0180

Buffer size 600 x 600 – Energy Absorption / Final Force

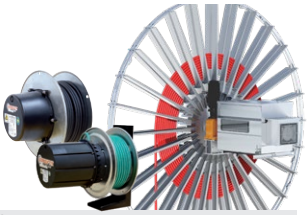


Buffer size 600 x 900 – Energy Absorption / Final Force



Your Applications – our Solutions

The solutions we deliver for your applications are based on your specific requirements. In many cases, a combination of several different Conductix-Wampfler systems can prove advantageous. You can count on Conductix-Wampfler for hands-on engineering support together with the optimum solution to safely meet your needs.

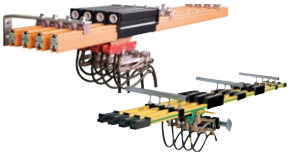


Cable and Hose Reels

Motor driven and spring driven reels by Conductix-Wampfler provide energy, data and media over a variety of distances, in all directions, fast and safe.

Festoon Systems

Conductix-Wampfler cable trolleys can be used in virtually every industrial application. They are reliable, robust and available in an enormous variety of dimensions and designs.



Conductor Rails

Available as enclosed or multiple unipole systems, Conductix-Wampfler conductor rails reliably move people and material.

Inductive Power Transfer

The no-contact system for transferring energy. For all tasks that depend on high speeds and absolute resistance to wear.

Non-insulated Conductor Rails

Robust, non-insulated aluminum conductor rails with stainless steel cap provide the ideal basis for power supply of people movers and transit networks.

Radio Remote Controls

Safety remote control solutions customized to meet our customer needs with modern ergonomic design.

Reels, Retractors and Balancers

Available for hoses and cables, as classical reels or high-precision positioning aids for tools, we offer a complete range of reels and spring balancers.

Jib Booms

Complete with tool transporters, reels or an entire media supply system – safety and flexibility are key to the completion of difficult tasks.

Slip Ring Assemblies

Whenever things are really “moving in circles”, the proven slip ring assemblies by Conductix-Wampfler ensure the flawless transfer of energy and data. Here, everything revolves around flexibility and reliability!

Mobile Control Systems

Mobile control solutions for your plant – wether straightforward or intricate. Control and communication systems from LJU have been tried and tested in the automotive industry for decades.

ProfiDAT®

This data transfer system is a compact slotted waveguide that can also be used as grounding rail (PE) at the same time.

Charging Solutions

Whether inductive or conductive, this bundle of products offers always the perfect solution for all industrial charging tasks including the matching battery with integrated battery management system.

www.conductix.com

Conductix-Wampfler
has just one critical mission:
To provide you with energy and data transmission systems that will keep your operations up and running 24/7/365.

To contact your nearest sales office, please refer to:
www.conductix.contact

KAT0180-0003-US