DUREL POLYMER SPRING SYSTEMS – EXTREMELY RESILIENT

The DUREL brand name stands for excellence in high-performance polymer spring systems. We manufacture proven and reliable springs that are used in engineering, industrial applications and rail cars worldwide. DUREL springs are used in applications where masses need to be moved, dynamic forces need to be reliably dampened and ease of use is critical. Apart from proven and reliable standard springs, DUREL offers application-specific solutions – in a fast, flexible and cost-efficient manner.

DURABLE. RELIABLE. SAFE.

DUREL®

YOUR POLYMER SPRING EXPERTS

DUREL – DURABLE SPRINGS FOR INDUSTRIAL APPLICATIONS

THE NEXT GENERATION OF POLYMER SPRINGS

Customers all around the world rely on our high-performance polymer springs due to their reliable operation, even under difficult conditions. Our customers appreciate the freedom from maintenance, the unsurpassed energy absorption and the damping rate of more than 50 percent as well as the excellent temperature-stability that enables the use of our springs at temperatures between –76°F and 122°F (–60°C and +50°C).

To achieve these properties, DUREL polymer springs are manufactured from a particular type of thermoplastic polyester elastomer (TPEE) using a special process. Compared to springs made from rubber, polyurethane or other polymer materials, DUREL polymer springs far exceed the characteristics of those springs in terms of high energy absorption, excellent energy dissipation and durability, while being light-weight and compact. DUREL polymer springs offer unparalleled design freedom and, consequently, cost-efficient solutions.

AREAS OF APPLICATION

- Agricultural engineering and machinery
- Construction machinery
- Metal processing
- Mining machinery
- Processing machinery for natural stone
- Machinery for civil engineering and building materials
- Robotics and automation
- Wood processing machinery
- Engineering and construction of large industrial plants
- Shipbuilding and offshore supply industry

Our springs are suitable for a wide range of industrial applications, such as:

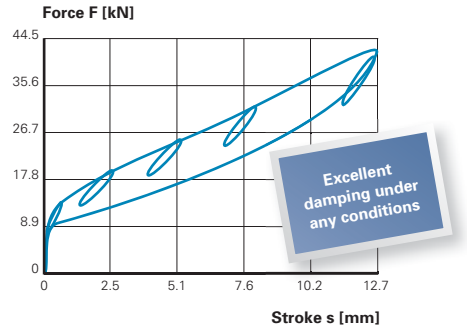
- Damping of compression moulding and die-cutting machines in automated production
- Structural damping of buildings
- Damping of loading bays
- Vehicles for pit and open-cast mining

and many more. Please feel free to contact us regarding your individual requirements.

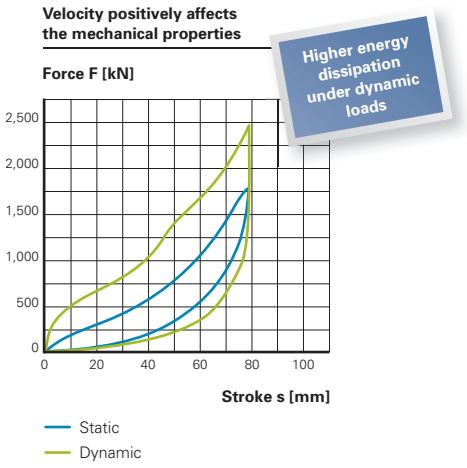
YOUR ADVANTAGES AT A GLANCE

- Even in the quasistatic load range, the damping percentage of our springs exceeds 50%
- Unrivaled energy absorption despite reduced weight and compact volume
- Exceed the performance of traditional metal, rubber and/or hydraulic-based springs in terms of life span, reliability and durability
- Outstanding dimensional stability and consistent spring quality for many years to come
- Excellent performance under dynamic load and sudden load changes.
- Progressive spring curve
- Maintenance-free over the entire lifetime and thus affordable
- Reduced machine downtimes
- Excellent creep resistance and flexural fatigue endurance
- No stick-slip effect or noise emissions
- Excellent resistance to chemicals, grease, oils and solvents prevents material degradation and the loss of material properties
- Broad operating temperature range from –76°F to 122°F (–60°C to +50°C); the relatively constant stiffness ensures a consistent performance under any climate conditions
- Fully recyclable
- Application-specific, cost-efficient design
- Small quantities available
- Short delivery times, uncompromising on-time delivery
- Quality made in Germany

Vibration damping:
Vibration build-up is prevented, even during small movements



Velocity positively affects the mechanical properties



AN EXCERPT FROM OUR COMPREHENSIVE PRODUCT PORTFOLIO

Spring Component	Maximum Force	Static Energy Absorption	Stroke	Free Height	Inner Diameter Unloaded	Outer Diameter at Full Stroke
	[kN]	[J]	[mm]	[mm]	[mm]	[mm]
DI126915	20	55	6.3	21.3	24.5	55.0
DI126100	54	100	30.0	92.0	-	94.0
DI126914	75	300	10.7	31.0	42.9	87.0
DG2 Pad	160	400	3.0	32.0	25.0	90.0
DI12	170	230	2.0	17.7	36.0	80.0
DI126800	210	800	24.0	80.0	40.0	145.0
DG2 Pad 3	300	900	5.0	32.0	25.0	90.0
DK30 Pad 3	660	6,000	27.5	93.0	74.0	210.0
DR20 Pad	700	3,600	22.0	76.5	51.0	165.0
DH20 Pad	750	3,700	17.5	67.5	52.0	165.0
DP30 Pad	840	4,000	17.5	58.0	33.0	165.0
DZ15DF Pad	1,000	1,500	12.6	41.5	26.0	127.0
DH30 Pad	1,000	4,300	21.4	61.0	55.0	189.0
DK30 Pad 2	1,000	7,500	28.0	93.0	74.0	210.0
DZ20 Pad	1,000	10,000	27.5	100.0	64.0	240.0

- All values are approximate and depend on a particular application.
- Spring components from the same type group can be combined to expand the energy capacity.
- Combination of different pads available upon request.
- Special sizes available upon request.

- Product specifications valid at the time of printing.
- The contents of this brochure and technical data are subject to change.
- The data shown in the relevant property charts apply.

Application-related design is our specialty. DUREL offers a unique range of polymer spring and dampening elements for significantly smaller design spaces. Compared to traditional dampening solutions, they provide an energy capacity that is up to 15% higher when integrated into existing installations.

We would be happy to provide a consultation to help you find the right solution that is tailored to your needs.

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