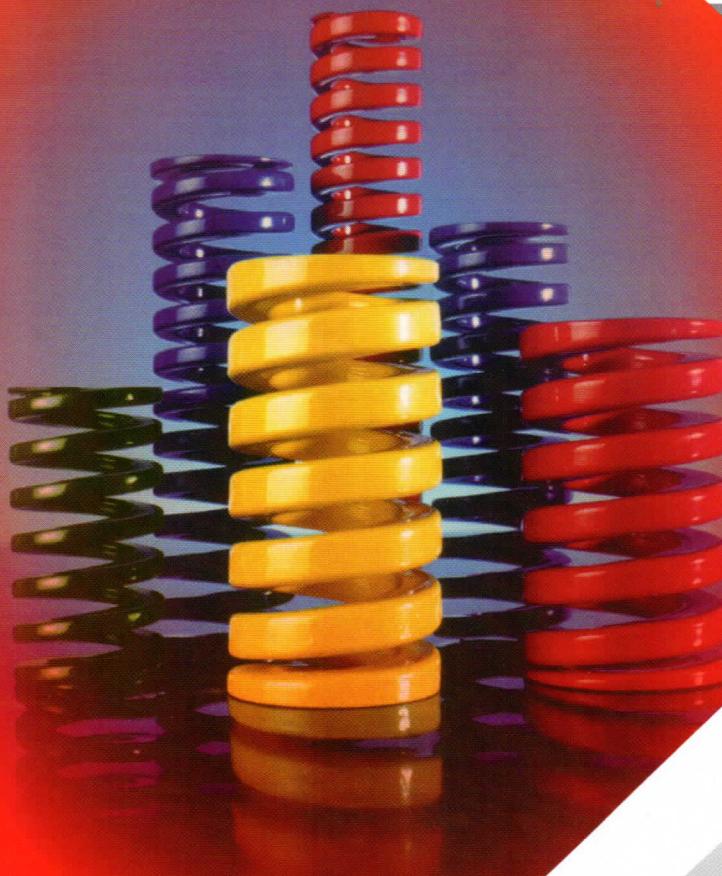




DANLY



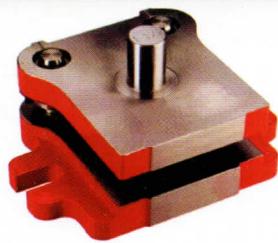
**DANLY - PRECISION & STANDARD PARTS SUPPLIES FOR TOOL CONSTRUCTION,
MOULD MAKING AND OTHER MECHANICAL APPLICATION**

- ✓ DIE SETS & SPECIAL MACHINING
- ✓ GUIDING ELEMENTS & ACCESSORIES
- ✓ MECHANICAL SPRINGS
- ✓ GAS SPRINGS
- ✓ BENDERS
- ✓ PUNCHES & DIES
- ✓ CAM UNITS
- ✓ CONVEYORS, PRESS FEEDS & IN-DIE TAPPING
- ✓ DANFLEX



DIE SETS & SPECIAL MACHINING

1. SHAPED DIE SETS
2. SR SERIES DIE SETS
3. NT SERIES DIE SETS
4. COMPACT NITROGEN DIE SYSTEMS
5. CUSTOM DIE SETS & PLATE



We can quickly deliver rectangular standard die sets in different sizes from C1 to C9 in acc. with ISO standard, as well as the standard die sets of the CC, DC and RC series. All die sets can be equipped with steel, sintered bronze or SinterLube® bushings, as well as pillars for injection or removable pillar tie bars for the guide bushing. Rectangular die sets (as shown above) and shaped die sets series, R,RR,RL,RM,DL,DS,CPC,RPC,FPR & CPR are shipped with short lead-times.

All rectangular sets can be fitted with:

- Steel, Sintered Bronze or SinterLube® bushings
- 'S' type pillars & 'B' type bushings
- Solid or ball bush guiding

Custom made die sets Series A1 to A4 and A1BB to A4BB

- Guide elements in solid or ball bush types
- Plates made from Fe 430A (C45 on request)
- 7000 series aircraft aluminium available on request
- Extra machining or processing according to customer requirement.

GUIDING ELEMENTS & ACCESSORIES

DANLY manufactures pins and bushings with a surface hardness of 60 to 64 HRC and a surface roughness of 0.2 µm. In accordance with your individual requirements, you can adapt the length of the guiding elements to meet your needs, because all pins, bushings and retainers of DANLY's lubricated guide bushings and DANLY's ball bearing guides are interchangeable within the same nominal diameter.



- ✓ GUIDING ELEMENTS
- ✓ GUIDING ELEMENTS IMPERIAL (INCH) COMPONENTS
- ✓ ACCESSORIES
- ✓ BALL BEARING GUIDE UNITS
- ✓ SINTERLUBE SELF LUBRICATED GUIDE BUSHINGS

DANLY GUIDE BUSHES

- In steel, sintered bronze and SinterLube® design
- Sintered bronze and SinterLube® material, is applied in an environmentally-friendly, powder-metallurgical process
- Steel and sintered bronze bushes with lubrication grooves and are fitted with oil nipples
- SinterLube® bushes only require initial lubrication.

PUNCHES & DIES

The extensive DANLY range includes punches and matrixes according to DIN and ISO with different diameters, lengths and head shape combinations.

The extensive DANLY range, includes punches and matrixes according to DIN and ISO standards, with various combinations of diameters, lengths and head types. These products are available in A2 (HWS), M2 (HSS) and ASP (sintered steel) and where possible, can be supplied with various coatings such as: TiN (Titanium nitride), TiCN (Titanium Carbonitride) and CrN (Chromium Nitride).

All DANLY punches, matrixes and guide bushings are vacuum heat treated in computerised vacuum furnaces. The components are then quenched in nitrogen within the furnace. The result is a very fine grain structure which provides high wear resistance, high shock resistance and dimensional consistency day after day, year after year.

ADVANTAGES

- High Wear resistance
- Higher resistance against material fatigue
- Reduction of tension and good stability for a long life
- Improved punching resistance



MECHANICAL SPRINGS

SUPERSPRINGS – THE ORIGINAL HELICAL COMPRESSION SPRINGS

DANLY high performance die springs, stand for Long service life, Consistent dimensional accuracy, Accurate spring rates, Highly economical.

Excellent stock availability More than 400 SuperSprings® are available in four colour-coded load classifications. Uniform lengths and diameters provide full interchangeability between load ratings. Spring diameters are guaranteed to fit in the hole and over the rod diameters listed in the dimensional data. Lengths, diameters, rates and colours conform to ISO 10243.

MECHANICAL SPRINGS

Our own requirements of helical compression springs are very high, which is why we have constructed one of the most sophisticated production plants for helical compression springs. Danly has over 400 different types of helical compression springs in stock in four different stress categories in acc. with ISO 10243.



GAS SPRINGS

GAS SPRINGS | NITROGEN GAS SPRINGS

The DESIGN2-TITE® program by DANLY exceeds the scope of ISO 11901-1 and VDI 3003. These high-quality nitrogen gas springs have special quality characteristics like the patented maintenance-free SinterLube® guide bushing or the one-piece piston rod.

We now offer an extended and expanded range of gas springs to meet all of our customers' gas spring requirements. There are now 9 separate series of standard pre-engineered gas springs available for quick delivery.

Our expanded range includes both SinterLube® self lubricating and conventional design gas springs, all built with the finest materials and assembled with exacting precision to provide reliability and long life.

The designs available range from 12 daN up to 20000 daN. Our nitrogen gas springs can be filled according to customer requirements, thus providing solutions for specific applications.

In addition to our complete line of standard gas springs, we offer what no other gas spring manufacturer offers: a re-engineer custom gas spring manufacturing service with incomparably quick delivery.

With our "design a spring program", we can special manufacture gas springs to provide an exact cross to most other gas spring models or to your application specifications.

See page 3 of our "Nitrogen Gas Springs" catalogue for details and worksheet.

NITROGEN DIE SYSTEMS

Compact die systems provide an almost constant force along the entire stroke path. The required force can be easily set by adjusting the gas pressure.

DANLY nitrogen suspension systems offer a number of additional characteristics

- Forces between 3.3 and 200 kN per suspension cylinder
- Fast setting of the nitrogen filling pressure and thus the piston force with fill and control fitting
- Prevention of off-centre strain through assembly of the individual suspension cylinders
- Gas pressure 110 bar, final pressure at max. piston stroke 120 bar
- Prevention of contamination through hermetically sealed system
- Reduction of sealing wear through integrated lubrication system
- Lubrication oil can be refilled without deinstalling the suspension cylinder



CONVEYORS, PRESS FEEDS & IN-DIE TAPPING

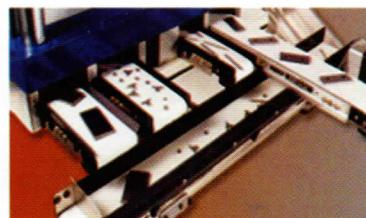
The fed material is powerfully gripped at all times throughout the press cycle, thus avoiding slippage or misfeeds. Repeatability of 0.03mm (0.001") is true of all feeds in the range, with each unit built with virtually all of the pneumatics and pipework embedded within the product. The standard range of feeds is augmented by: heavy duty, rollband and open throat units.

PNEUMATIC TOGGLE PRESSES

DANLY Pneumatic Toggle Presses have been designed to ensure accuracy and reliability, with the minimum of maintenance costs. They are suitable for both short and long production runs and are compact enough to be installed on assembly lines. This allows them to be used for a variety of assembly operations, in addition to conventional presswork such as blanking, piercing, forming etc.

CONVEYOR SYSTEMS

DANLY UK are agents for DORNER MANUFACTURING CORP conveyor systems. Initially, DANLY supplied conveyors to the pressings industry for use under press tooling. However, DANLY now supply to a variety of other industries including pharmaceutical and packaging.



CAM UNITS

The DANLY Hydrocam unit is used wherever the greatest application flexibility is required with low effort®. Hydrocam® units deflects shifshift movements in all directions with forces from 20 kN to 310 kN in the die.

HYDROCAM®

The DANLY Hydrocam unit is used wherever the greatest application flexibility is required with low effort®. Hydrocam® units deflects shifshift movements in all directions with forces from 20 kN to 310 kN in the die. The required masters and slaves can be installed in the optimum positions for the construction of the die.



CAM DRIVE

The Camdrive® product line by DANLY provides compact and high-quality mechanical sideshifts. Equipped with graphite plug bushings, the Camdrive® meets the standards of the automotive industry. All units are equipped with a mechanical die return and a SuperSprings® die spring.

Further features of Camdrive® are

- Cutting forces from 10 kN to 180 kN
- angular attachment up to 30°
- with forced retraction, die carrier or form Punches & dies

Camdrive® is economic, versatile and space-saving. It also offers the following benefits:

- Fast delivery even for equipment with options
- Exchangeable – metric dimensions and tolerances
- Hardened components with a long service life
- No lubricating required
- Ideal for low-maintenance dies

READY BENDER

Our Ready Bender® and Rotary Bender® optimally assist modern bending technology with a rotating forming motion. The benders are a highly efficient way to produce a large number of different bending shapes.

DANLY Ready Benders® transfer the vertical movement of any press into a precise, rotary forming motion. This allows the bender to easily over-bend past 90° to counter material springback, a distinct mechanical advantage Ready Benders® give tool designers and metal stampers, a way to produce tooling that holds consistent part angle tolerances, especially when higher volume production is required.

Almost any length bend in practically any thickness of material, can be made using either in stock benders or by specifying your special requirements.

The bender is a highly efficient method of producing a wide range of different forms in metal. We make special benders, quoted by application. Use the worksheet on the back of the catalogue and send drawing for a quotation.

Reduce your die costs and improve part quality:

- Hold +/- 1/2° angle tolerance, no "coining" required.
- Overbend up to 120° in one press stroke.
- Benders are more tolerant of material thickness variations.
- Hold consistent leg heights, eliminate cams and re-strokes.
- Hole locations near bends are usually not distorted.
- Form pre-painted and decorative metal without tool marks.
- Ideal for forming high strength steel and aluminium.
- Form narrow channels and short leg bends.
- Reduce operations and eliminate die stations.
- Decrease forming tonnage by 50% to 80%

DANFLEX

DANLY polyurethane springs are available with:

- Matching outer diameters to our SuperSprings
- 3 Shore hardnesses, 80, 90 and 95
- Round bar in solid and hollow forms
- Plate and cushions also available

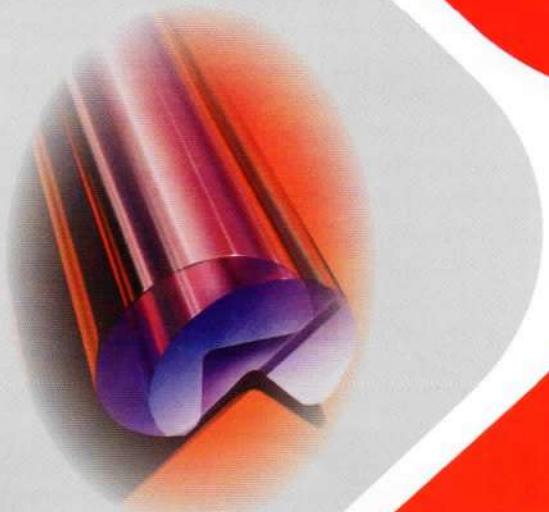


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