

# Via download directly into construction

With its new standard clamping fixtures RINGSPANN offers a low-priced entry into the world of precision clamping fixture technology. Furthermore, in order to allow all engineers in fixture and equipment design to easily incorporate these flange chuck und flange mandrel models into their CAD drawings, RINGSPANN is now making all data models available for free download on its website with immediate effect. They are now just a few clicks away from being downloaded in all common formats. Visitors to this year's AMB can find out more about this new service at the RINGSPANN booth C01 in Hall 3.

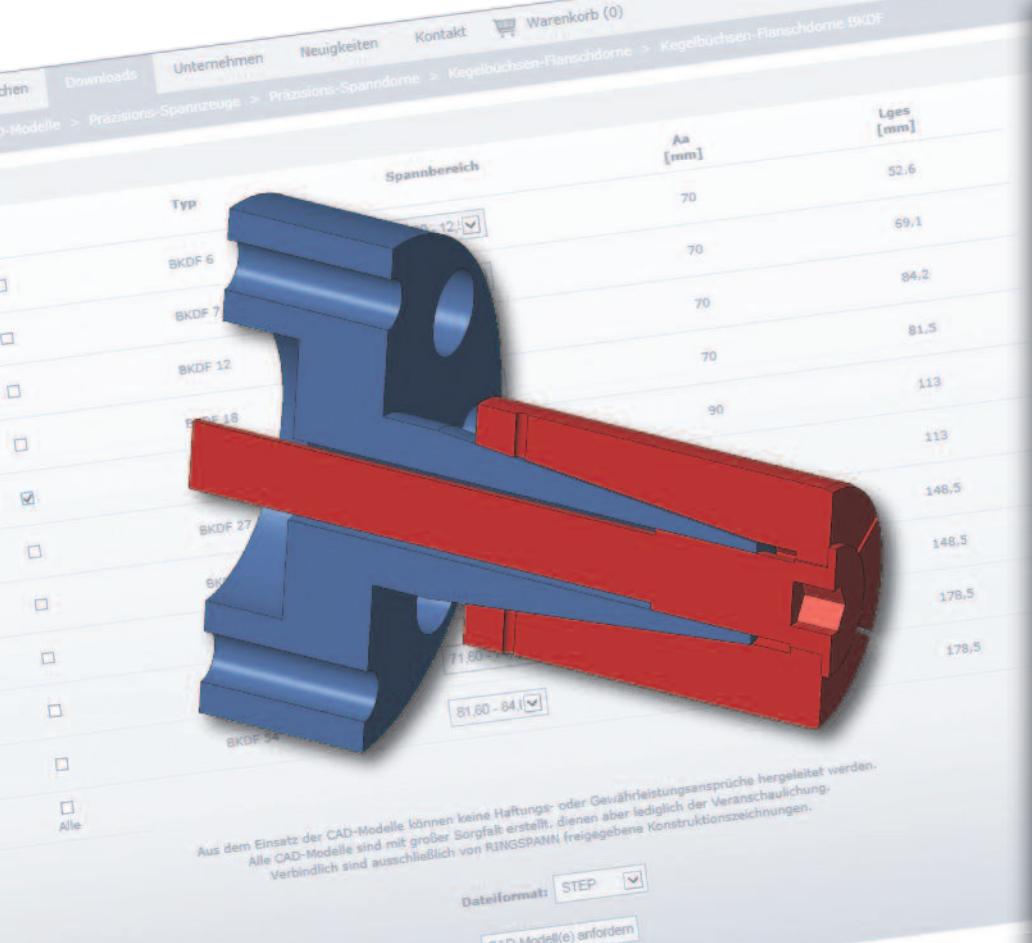
With this latest expansion of its download services, RINGSPANN is making life easier particularly for engineers of fixtures and equipment for manufacturing technology because, with immediate effect, the respective CAD models for all precision clamping fixtures of the eight standard models are now available for free download. With a minimum of effort, the engineer can now select the data model of the desired flange chuck or flange mandrel in the suitable format from the company's website, save it on their hard drive and incorporate it in their CAD drawing. And there are plenty of good reasons to do so in everyday practice: The engineer in fixture construction wants to be able to quickly incorporate a standard clamping fixture from RINGSPANN into his drawing as a complete CAD component, the equipment engineer may need to round off an already existing RINGSPANN clamping fixture with a backstop ring, an intermediate flange to the machine spindle or an adapter to the machine draw bar, and the project designer at the tool machine is able to resolve any issues on collision control. The direct link to the CAD models can be found here:

[www.ringspann.com/en/downloads/cad-models/precision-clamping-fixtures](http://www.ringspann.com/en/downloads/cad-models/precision-clamping-fixtures)

## Simple, quick and safe

The direct download of the RINGSPANN standard clamping fixture CAD models not only signifies an enormous reduction in workload and time savings for engineers; it also represents a significant contribution to quality assurance in construction. Not only is the manual reproduction of clamping fixtures in the CAD system naturally very time-intensive, it is also highly





error-prone. Now, however, the full data models are ready on demand for all established CAD programs in all common formats. The engineer can select between CATIA (V4/V5), DXF and HSF as well as IGES, PARASOLID, STEP and SAT formats. The data formats VDAFS and VRML are also provided by RINGSPANN. Once downloaded, a data model can be used both to incorporate a complete standard clamping fixture of RINGSPANN into a complete device and for the constructional further processing of individual components.

## Eight models for internal and external clamping

The new RINGSPANN range of standard clamping fixtures aims to provide users in the field of precision clamping fixture technology affordable and readily available comprehensive solutions. The focus of application hereby lies in the metal-cutting processing of workpieces with cylindrical internal and external surfaces – for example in gear manufacturing. Overall, the standard range of RINGSPANN consists of four models of precision clamping fixtures (flange chucks) and four models of precision clamping mandrels (flange mandrels). With their different construction forms - bonded disc (LAFF/ LBDF), taper collet (BKFF/ BKDF), taper sleeve (HKFF/ HKDF) and flat element (KFFF/ KFDF) - they represent different clamping principles. Thanks to their true running accuracies of  $\leq 0.010$  mm, they cover a wide range of cutting tasks and can be optimally tailored to the respective application in terms of clamping diameter, clamping length, insertion depth and expected wall thickness of the workpiece. ■

## For lathing, milling and grinding

The precision clamping fixtures of RINGSPANN are suitable for almost all turning, milling and grinding processes with heightened precision demands. Wherever metallic components with cylindrical internal or external surfaces need to be machined in automotive and gear manufacturing or the aerospace industry, these clamping fixtures are an ideal “interface” between the machine tool and the workpiece. They are commonly used for the production of gear wheels and for balancing technology. The internal or external clamping of thin-walled workpieces which, owing to their propensity for deformation, need to be clamped particularly carefully and with even force transmission, can also be employed.

## The functional fulcrum

The functional fulcrum of virtually all precision clamping fixtures by RINGSPANN is the RINGSPANN clamping disc. It is a flat-taper ring made of hardened special spring steel, which has a very high elasticity thanks to its distinctive meander slotting. Thanks to the change in the taper angle, the axial actuating force during clamping leads to a minimisation (external clamping) or maximisation (internal clamping) of the disc's diameter. If its inside diameter is supported on a mandrel, the outer diameter becomes larger; however, if the outside diameter of the clamping disc is supported, the inside diameter becomes smaller. The actuating force applied during clamping is transmitted without friction and evenly all round by this operation principle into a five to ten times larger radial force for clamping the workpiece. At the same time, the actuating force applied makes the clamping disc tilt, causing the workpiece to be pressed against a longitudinal stop during clamping and aligned.