

# New Machinetype DDW ... PX

The model range of type **DDW** was extended by the next bigger version.

## Design

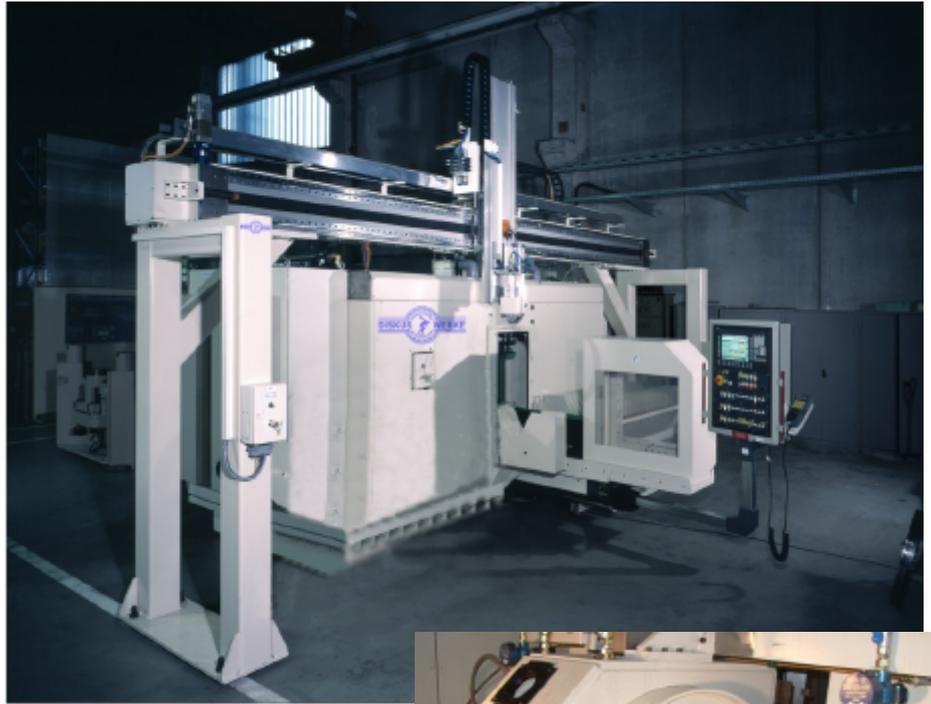
The new type of machine is designed for grinding wheel diameters 900 mm to 1100 mm. The body is a welded, fabricated one.

The guide ways are preloaded linear bearings, the in feed movement is done with preloaded ball screw and digital Servodrives with absolute coding system.

The grinding spindles have built in motors (Motorspindle) and they are liquid cooled.

The typical design with a **flat** machine base on which the feed slides are moving has the disadvantage that the grinding tools don't deflect parallel while pressure is build up during grinding, but open up at the topside. The result is that the gap between the grinding wheels has a form like a wedge and because of this the possible accuracy turns to bad results. The new model was designed to oppose this tendency. The machine base is designed as a **closed frame concept**. The grinding pressure results in a parallel deflection of the system and so the gap between the tools stays parallel all time.

The in feed movement for the slides is done with preloaded ball screws. They are mounted at vertical column between the linear bearings of the in feed slides, where the maximum load during the grinding process is developed. In this assembly all components withstand normal axial loads only and have no tendency to bend. As result of the above all components are loaded in direction of there highest stiffness according to there design.



The result is the **parallel** variation of the distance between the grinding wheels during the process.

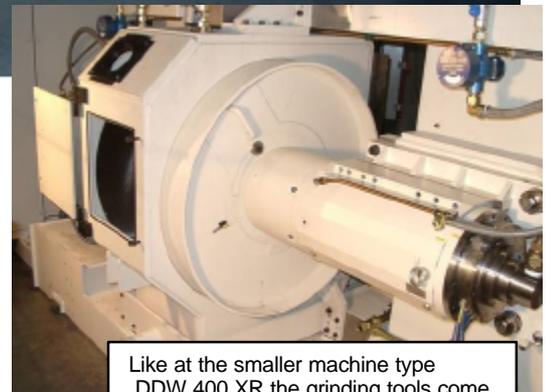
## Work flow

As well this machine has various work flow concepts. The components can be loaded onto a slide which transfers the job in between the grinding wheels. During the process this slide can oszillate (**OZ**).

The shown machine was build to grind big bearing rings. The job rotates during the process in unclamped manner between the grinding wheels.

This application is good for big parts and small batches. Instead of the oszillation slide the same machine can be equipped with a feeder disc. For smaller work pieces and large batches this machine will be used as version **DDW (R)** Being equipped with a feeder wheel to guide and transport the components.

In this case the process will be through feed or through feed plunge cut grinding.



Like at the smaller machine type DDW 400 XR the grinding tools come out of the solid grinding cell for wheel change for easy handling and good access.

Another available application are linear guiding rails between the grinding tools (**L**) used for through feed grinding of mass production parts like small bearing rings. For this application the components must be transferred with help of an outside driving system through the gap between the grinding tools.