

HESSAPP

75 YEARS



IN THE ANNIVERSARY YEAR THE BUSINESS BACK ON TRACK

HESSAPP celebrates its 75th anniversary this year.

The global crisis in machine tool industry, caused by the switch from internal combustion engines to electric motors and the corona pandemic, also left its mark on HESSAPP. Following successful restructuring and a return to the core business, HESSAPP, which is part of the FFG Group, is now embracing the economic upswing again.

Even amid global crisis, a production cell for railroad wheels was delivered. The customer decided in favor of HESSAPP, due to the highest quality required for the finishing of workpieces. This HESSAPP cell produces wheels for high-speed trains, among other things.

This specially engineered and customized cell consists of two HESSAPP vertical lathes of the type VDM 1400-12. This equipment is an additional supplement to the very successful VDM series.

Furthermore, a production line was successfully set up and commissioned at an automotive customer in France, and put into operation. The highly productive production line is designed for brake discs with workpiece diameters ranging from 240 to 350 mm. The line consists of three HESSAPP vertical lathes of the types DVT 500 and DVH 400.

In the last few months, further orders for vertical lathes of various types had been realized in Germany and abroad.

HESSAPP is a specialist for vertical turning machines and has been developing customer solutions for 75 years.

The company looks back on its very eventful and successful years. The entrepreneur and design engineer Erich Arnst founded the Hessische Apparatebau GmbH in Wiesbaden, Germany and gave the company the abbreviated name HESSAPP. Since the building complex in Wiesbaden was not particularly suitable for lathe production, the company moved to Taunusstein-Hahn in 1947.

With increasing turnover, the Aarstraße 1a facility became too small. At the beginning of 1955, the construction of own halls and an administration building began on the company's own premises. In the following decades, the company was further expanded. Since 2013, HESSAPP has become a part of FFG (Fair Friend Group), an international conglomerate with focus on machining excellence.

The adaptation to changing market requirements helped the company to gain technological reputation and made it a leader in its field with innovations and customer-oriented solutions, especially in the field of complex workpieces. Building only high-quality precision machine tools became the principle.

The HESSAPP product range includes self-loading vertical lathes with „pickup“ motor spindle and motorized spindle, and vertical lathes with traditional stationary spindle arrangement.

Based on the different series, HESSAPP supplies complete solutions for fully automated machining of turned parts, for medium to large batch sizes.

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PRODUCTION LINE FOR TURNING AND DRILLING MACHINING OF BRAKE DISCS

(in four setups for a customer in France)

The production line shown here is designed for the manufacture of passenger car brake discs with a blank diameter of 350 mm.

- ▶ The line consists of three HESSAPP vertical lathes of the types DVH 400, DVT 500 and DVH 400.
- ▶ The basic machines are designed in HYDROPOL® for this customer.
- ▶ The DVH 400 machines have been equipped with an additional (through-cycle) loading/unloading position to arrange them in line.
- ▶ The OP10 turning operation is performed on the first DVH. On the following DVT, OP20 and OP30 machining is performed. This machine is equipped with 2 additional NC lift-off slides for the synchronous machining of 2 plane surfaces.
- ▶ The second DVH 400 (OP40) is equipped with a multiple drilling head for the drilling of the brake discs.
- ▶ Between the machines and at the end of the line, turning stations have been integrated (usually not necessary with other solutions). These enable the workpieces to be fed to the individual machines in the specified machining position.
- ▶ Depending on the customer's requirements, we are able to carry out brake disc production flexibly in 3 or 4 setups. The integration of finishing processes such as turn-milling and grinding has already been realized several times.

As a specialist for vertical lathes HESSAPP has been developing customer-specific solutions.

Solutions for the machining of brake discs have been successfully installed worldwide and produce high quality and cost effective.

Further technical details you can get to know via our sales engineers.

Please contact us – we will be happy to help. By phone or during a visit at a distance!

You will find your responsible contact person at: www.ffg-ea.com/en/contact/

FULLY AUTOMATIC MANUFACTURING CELL FOR TURNING, DRILLING AND MILLING OF RAILROAD WHEELS

(in two setups for a customer in China)

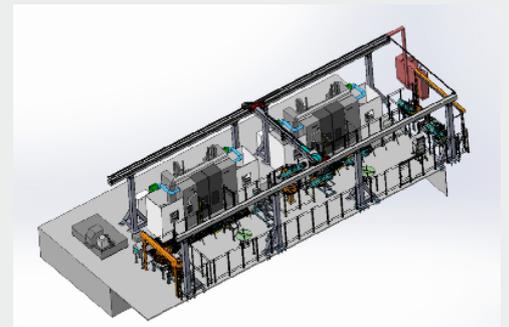
This particular customer chose the HESSAPP solution, because the wheels are used for high-speed trains and therefore the finishing of the finishing of the workpieces requires a very high quality. The cell consists of two HESSAPP vertical lathes of the type VDM 1400-12. This machine type is an addition to the VDM series, which is very successfully represented on the market.

- ▶ The system is loaded via a surface gantry from Güdel.
- ▶ Each of the two VDM 1400-12 machines is equipped with two compound slides. A B-axis is mounted on one of the compound slides to produce the oil push-off hole. The other is equipped with a fixed carrier for turning.
- ▶ The machines are each equipped with two 24-cavity tool magazines for holding the modular tools required for the machining of the railroad wheels.
- ▶ The cell is designed so that two wheel types can be produced at the same time or one wheel type per machine can be produced in batches. In addition, each machine can be operated individually. The entire cell is equipped with the necessary safety equipment for raw and finished part supply. The railroad wheels can be fed to each workpiece supply zone without interrupting the gantry in automatic mode.
- ▶ Both operations of the wheels are processed in one machine (reversing clamping). The unmachined parts are taken from the staging pile and stack and deposited on the blank deposit in front of the machines, which is barcode reading station in front of the machines.
- ▶ After the first operation is completed, the wheel is unloaded from the gantry and turned 180°. As soon as one of the two machines has completed the second operation, the gantry removes the part and places it on the table in front of the machine to optimize the loading time. The gantry then picks up a blank again from the barcode reading station in front of the machine and loads the machine again.
- ▶ A chip shredder is located under each machine to shred and transport away the flowing chips produced during machining. Via a coolant unit, the filtered coolant is supplied to the cutting process with sufficient quantity and pressure.
- ▶ For checking the workpiece quality, a manual measuring station is located between the machines.

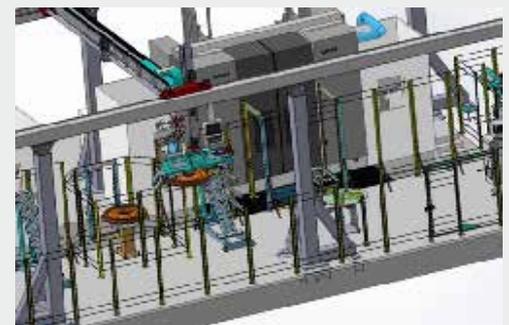
As a specialist for vertical lathes HESSAPP has been developing customer-specific solutions for 75 years.

Production cells for the machining of railroad wheels are used by customers worldwide and have proven themselves in continuous with the highest process reliability.

Technical data	VDM 1400-12
Turning/swing diameter	1 400 mm
Maximum speed	504 min ⁻¹
Drive power at 60% ED	93 kW
Torque at 60% ED	32 000 Nm



Layout of the manufacturing cell



VDM 1400-12 and manual measuring station