



FORMING EXCELLENCE

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OUR SERVICE

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Our assurance of quality



Our service team



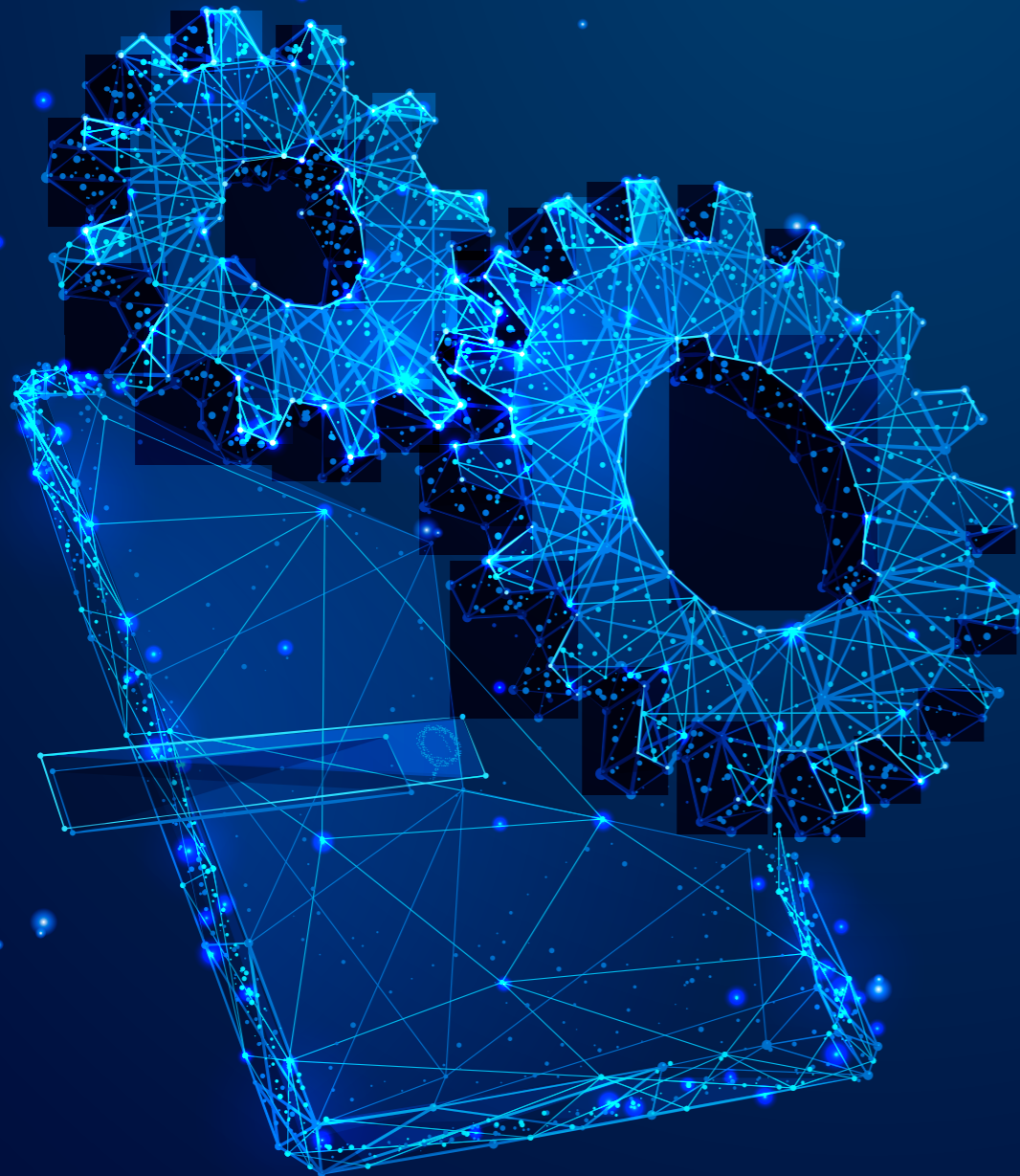
In the course of nearly fifty years of company history, WF Maschinenbau has supplied many hundreds of machines to more than fifty countries around the world. Their high quality and robustness, combined with our strict cooperation only with renowned German sub-suppliers, are the definitive reason for the durability of our machines. Our ingrained passion for mechanical engineering, combined with the top-grade service we provide, are the guarantors of customer satisfaction.

We support you throughout your machine's entire life-cycle: we implement future-orientated visions in the context of our SMART FORMING Industry 4.0 offensive. And we also support ongoing production with our carefully tailored service packages and a general overhaul programme to make new from old of your gradually ageing machine.

We, globally active mechanical engineers, are the 100% professionals in our field.

SMART FORMING tools are our response to the challenges of the future. For you, our customers, we have developed a software suite that integrates your WF machine into the digital world.

Guaranteeing first-class smart forming results for you.



SMART FORMING assistant

SMART FORMING assistant assures you of essential help in the compiling of complex motion programs and, additionally, optimum preparation for production. This tool also protects your machine against the consequences of serious programming errors.



SMART FORMING viewer

SMART FORMING viewer visually displays the forming forces acting on the workpiece, thus avoiding asymmetrical loading of the rollers and possible roller overload. It supports planning and setting-up of the forming process for production of new workpieces.



SMART FORMING cam

A high-definition camera – the SMART FORMING cam – monitors all processes and the entirety of production, even in inaccessible areas. In addition, it permits WF Maschinenbau's service team remote diagnosis for the elimination of problems.



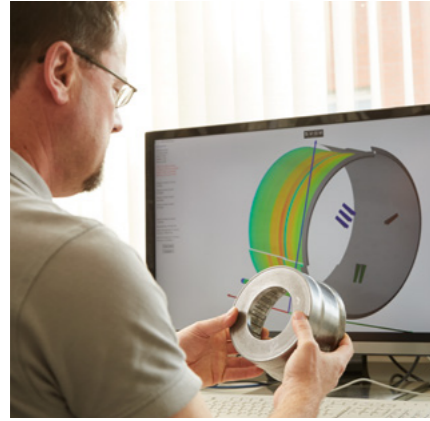
SMART FORMING inspector

Using SMART FORMING inspector for quality monitoring during ongoing production, the force patterns in the flow-forming rollers can be compared in every single element to reference values. Errors are signalised, and the machine trips if corresponding limits are exceeded.

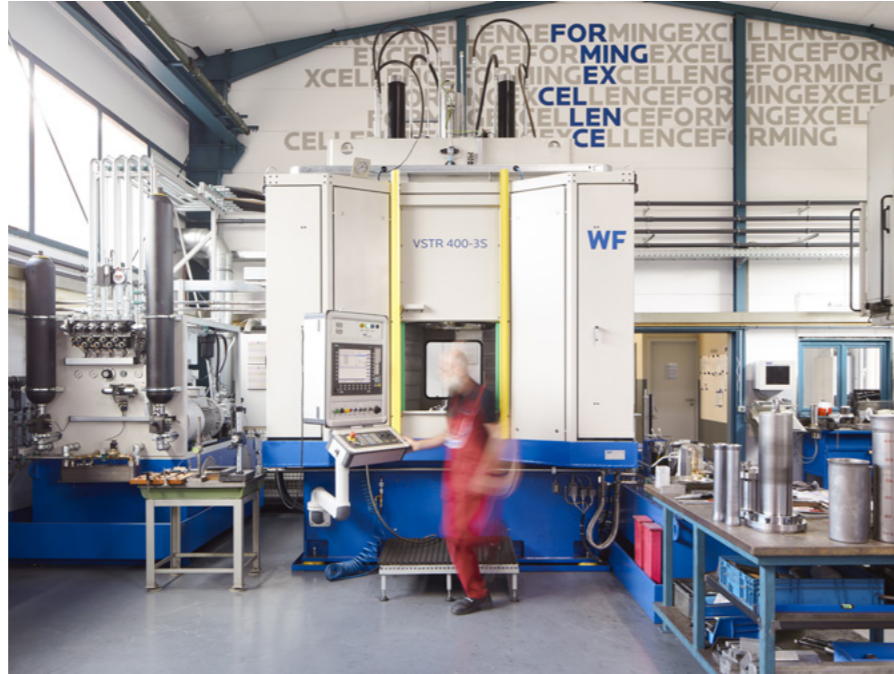


SMART FORMING diagnostics

SMART FORMING diagnostics is a tool that monitors all production and machine data, compiles evaluations and supplies information on trends, limits and error messages in real time, from and to any place in the world.



For us, development and practical implementation go hand-in-hand



Machine set-up

Our service team is at your side whenever you aim to produce a new workpiece: from the initial idea, via mould design and configuration, up to and including practical setting-up of your machine, and from the details of the necessary tool, up to and including CNC programming.

Product development, feasibility studies and fundamental testing

Our know-how, paired with your specific visions and ideas: we work hand-in-hand with you on new projects. Our R&D and service specialists contribute their knowledge, while we check producibility on our four test machines and evaluate the results in our own dedicated test laboratory. An all inclusive development programme unique in our industry.

Short production runs

Do you need a short production run, but investment in a new machine would not be economically rational? We produce the batches you need precisely to your specifications -quickly, reliably and with the WF quality you expect.

WF Future Zone

Together, we shape the future in our WF Future Zone. As highly skilled professionals in our field, we are working continuously on our own WF innovations. For several new developments, we are looking for project partners prepared to tread new paths with us. Talk in confidence with us about current and planned developments and the benefits of cooperation. We would be pleased to discuss exclusive joint developments with you. In the past, projects like this have frequently resulted in jointly held patents.



“Constant velocity joint” – combined R&D project in cooperation with thyssenkrupp Steel Europe

Roboter: © Thomas Söllner, Fotolia

To assure trouble-free production for you we have developed exactly the right automation solutions. A high-performance **feed/discharge system** tailored precisely to your machine assures maximum possible productivity.

To meet producers' needs, we also supply **industrial robots**, camera-assisted **gripper and manipulator systems** and all your **handling and conveying equipment** needs. Our in-house developed automation solutions assure trouble-free operation, being perfectly matched to your specific machine type. It also goes without saying that we can also supply all well-known brands of industrial robot. And our scope of supply in every case includes the appropriate **safety equipment**.



Robot featuring special grippers and manipulators and project-specific conveying equipment – all supplied by WF Maschinenbau





Maintenance

Regular on-site servicing on the basis of our preventative **on-site maintenance agreements** guarantee high machine availability, dependable productivity and assured process reliability. Fixed package prices ensure planning certainty. At the agreed maintenance intervals, our technicians service your machine on the basis of its production since the last service.

Remote and SMART glasses maintenance permit maintenance via on-line link and/or augmented-reality goggles from any location. Our service technician can then identify operating issues or adjustment errors and check the machine's condition. The machine operator is then enabled, after receiving specific recommendations for action, to perform more basic servicing and maintenance tasks himself.

Spares packages are available for the first 4,000 and 8,000 hours of operation – if necessary, you can replace wear parts yourself on the spot. This makes our customers independent of delivery times and spares availability. We naturally also supply individual spares when needed, provided they are available.

Retrofitting and uprating

We can overhaul your machine. All bearings, guides, seals, cylinders and cladding will then be replaced with new parts. The entire electrical and hydraulic systems are then rebuilt and new pumps and motors fitted. Complete with a new **manufacturer's guarantee**, of course.

Customers' needs change and vary depending on the machine itself and the industry, the end product and the existing production line. We are pleased to retrofit your machine to enable you to use your WF machine optimally even under modified boundary conditions. Let us take a joint check with you to determine whether an additional pressure level in the tailstock, a control-system update or an automatic oil pre-heating system will optimise your processes. Together we will analyse your ideas and modify your machine to match your vision.

Delivery: after twenty years in service ...



... Returned: ready for the next twenty years



In five compact modules, machine operators learn the necessary know-how about the machine and the processes used.

“General operation” module

Basic introduction to the operation and handling of the machine

Result: Operation of the machine using pre-programmed sequences

“Machine operation” module

Necessary user knowledge concerning setting-up of the machine, tool changing, programming and safe handling and use of equipment; basic principles of robot programming if required

Result: Independent modification of program sequences and setting-up of the machine

“Machine maintenance” module

Know-how concerning the mechanical, hydraulic, electrical and electronic systems and functions of the machine, fault diagnosis, troubleshooting

Result: Independent maintenance and troubleshooting

“Programming and forming processes” module

Detailed knowledge concerning programming, forming processes and the technologies used

Result: Independent programming and optimisation of planned processes

“Follow-up” module

Individual practical training for advanced users, following a generous familiarisation phase

Result: Optimisation of operation by individual customers

The “General operation” module is a free-of-charge service and you are welcome to take advantage of it during works acceptance at WF Maschinenbau or during commissioning at your premises.



16-page brochure:
Our training provisions

complete with a detachable certificate

This brochure supports your participants every day during training. It provides useful headings, remarks, and space for the learner's own notes.



WF helpdesk

We provide fast and effective assistance via the WF service portal. The digital lifecycle record for each individual machine enables our technicians to systematically solve any problems and provides our customers with access to the latest innovations, automation solutions and add-ons for each individual machine.

Personal contact

You have direct contact with WF Maschinenbau at any time. Your personal contact will establish with WF's experts your needs and any problems quickly and without unnecessary complications.

Remote support

We determine the cause of any problem(s) quickly and simply direct from Sendenhorst (Germany) by performing remote diagnosis using the control system and a remote link. The data of your machine and its processes are evaluated very rapidly, assuring fast help for you. This also minimises your costs, since productivity is scarcely impaired and on-site deployments can be avoided in many cases.

SMART glasses support

If diagnosis of the problem is not possible via a remote link, we use augmented-reality goggles. Your machine operators enable our service technicians to take a look onto and into the machine. Problems can therefore be identified and solutions quickly found.

On-site support

Teams of experts for the mechanical, hydraulic and electronic elements of the machines are located at three locations around the world if more serious problems necessitate on-site visits. We coordinate these deployments from Germany, China and North America, thus permitting rapid and highly competent assistance for you.



		★ Basic	★★ Advanced	★★★ Excellence
Troubleshooting	WF helpdesk: Service portal linked with digital lifecycle record for trouble-free service processes	●	●	●
	Personal contact		●	●
	Remote support: For identification of cause(s) of problems with the machine via on-line link		●	●
	SMART glasses support: Determination of causes of problem(s) using augmented-reality goggles			●
	On-site support: For identification of cause(s) of problems on the actual machine			●
On-line and off-line training events	General operation: General instruction in the operation of the machine during pre-commissioning at WF	●	●	●
	Machine operation: User knowledge on setting machine up, tool changing, programming and safe handling and use of operating equipment		●	●
	Machine maintenance: Know-how on machine mechanics and hydraulics, fault diagnosis and troubleshooting		●	●
	Programming and forming process: Detail knowledge on programming and technologies			●
	Follow-up: Individual practical training for advanced practitioners, around four months after commissioning, for optimisation of operation			●
Maintenance	Spares package 4000: Recommended spare parts for the first 4,000 hours of operation		●	
	Spares package 8000: Recommended spare parts for the first 8,000 hours of operation			●
	Remote maintenance: Remote inspection for ascertainment of machine condition, including recommendations for action		●	●
	SMART glasses maintenance: Inspection using AR goggles and remote access for ascertainment of machine condition, including recommendations for action			●
	On-site maintenance agreement: Entire on-site maintenance of the machine at specified maintenance intervals			●

With our service packages, we ensure long and reliable operation of your machine. The "Basic" package is included in the purchase price of your machine. Please contact us for customised packages or to book individual services!

FORMING EXCELLENCE

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