



technica
technology gmbh



DF SERIES **DEEPFLEX
DEEP HOLE
DRILLING
MACHINES**



HIGH-PRECISION DEEP HOLE DRILLING >>>

FROM Ø1.5 MM TO Ø75 MM

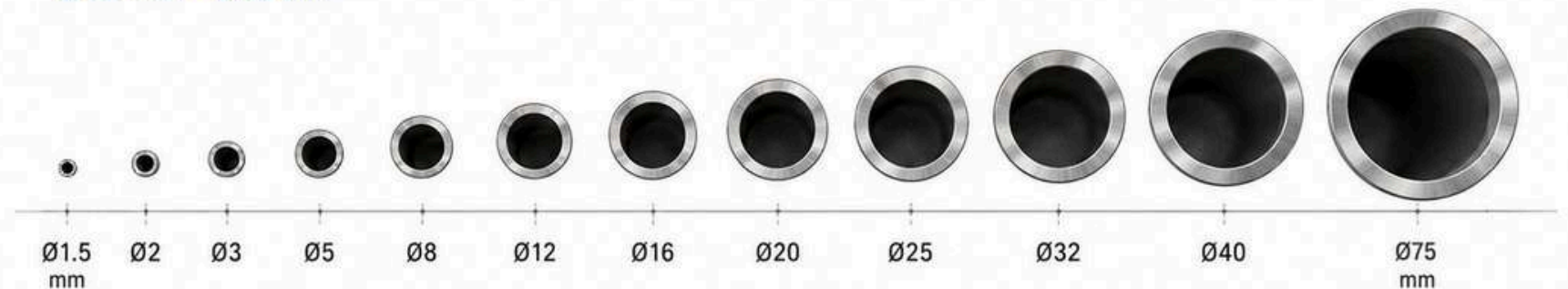
The DeepFlex deep hole drilling machines from technica technology gmbh are designed for high-precision deep hole drilling applications. The machine series covers drilling diameters from Ø1.5 mm to Ø75 mm and drilling depths from 250 mm up to 2,000 mm, providing exceptional flexibility for a wide range of industrial manufacturing requirements. Whether you require small-diameter precision drilling or large deep hole machining, DeepFlex machines deliver outstanding accuracy, reliability, and consistent production quality.



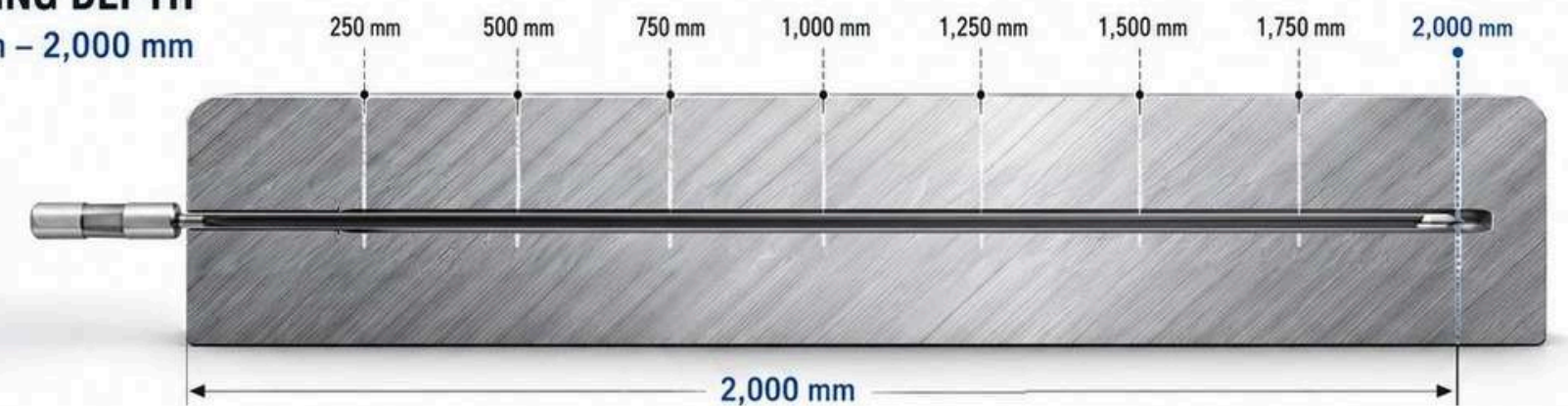
DEEPFLEX DRILLING CAPACITY

DEEP HOLE DRILLING RANGE VISUALIZATION

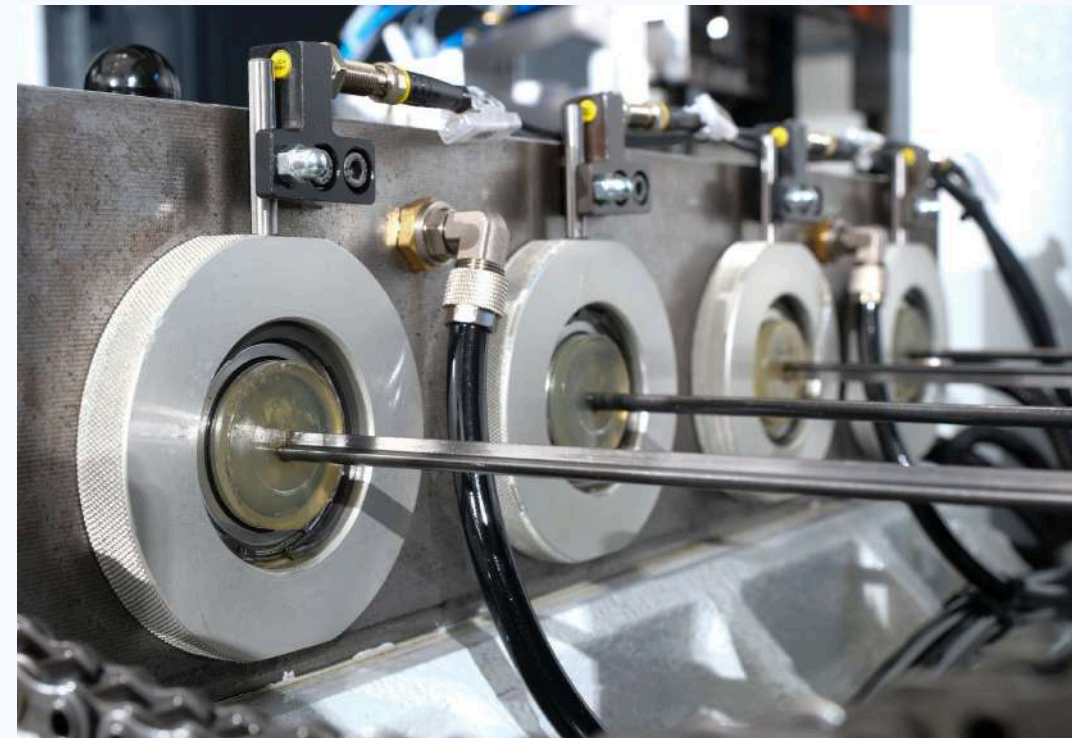
01 DRILLING DIAMETER Ø1.5 mm – Ø75 mm



02 DRILLING DEPTH 250 mm – 2,000 mm

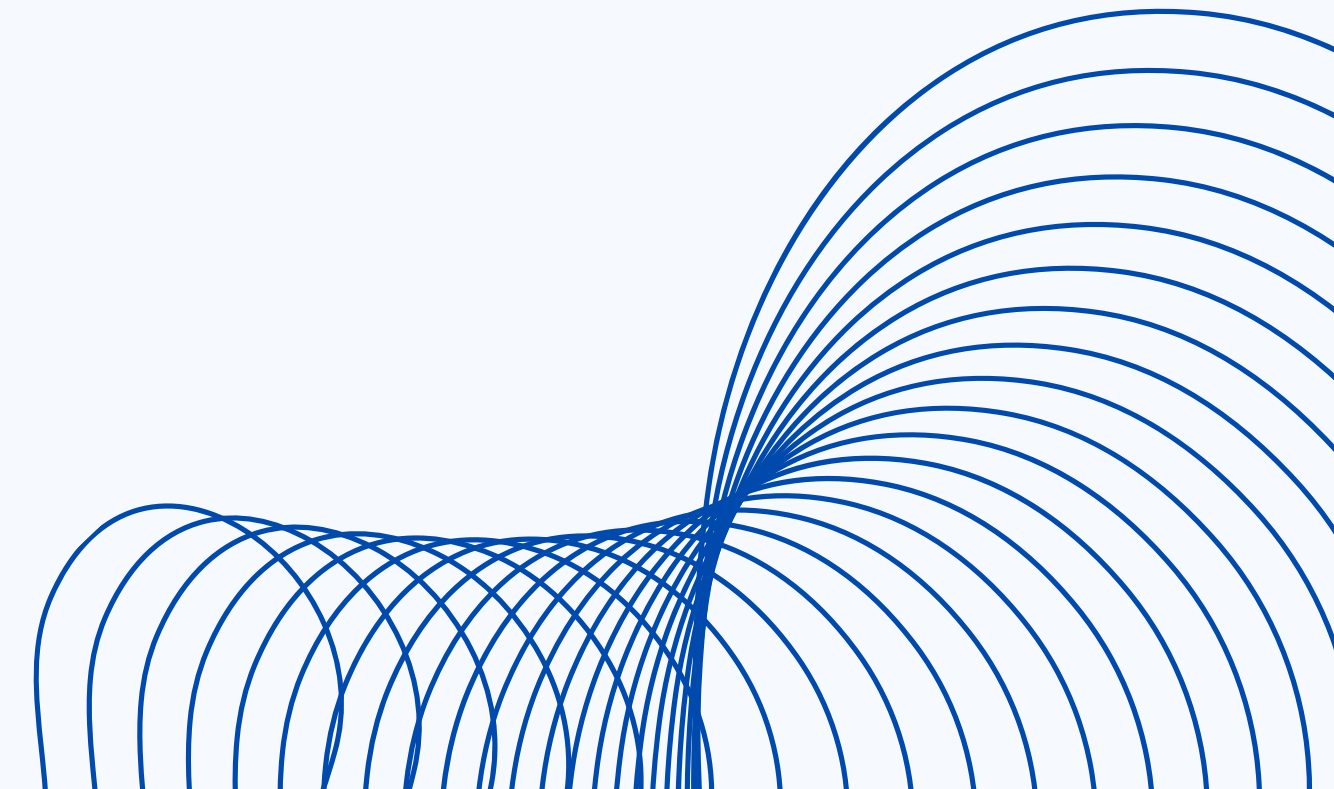


RELIABLE PERFORMANCE MEETS INTELLIGENT AUTOMATION



Developed by technica technology gmbh, the DeepFlex series combines extensive engineering experience with advanced machine technology. The result is a reliable, high-performance deep hole drilling machine designed to operate efficiently even under demanding production conditions.

With multiple machine models available, the DeepFlex series offers the right solution for a wide variety of industries and manufacturing applications.



DEEP HOLE DRILLING SOLUTIONS FOR MULTIPLE INDUSTRIES

DeepFlex machines are successfully used in numerous industrial sectors where precision, productivity, and reliability are essential.



DEFENCE INDUSTRY

DeepFlex machines are suitable for manufacturing light- and medium-calibre barrels as well as anti-aircraft gun barrels, delivering the precision required for demanding defence applications.



AUTOMOTIVE INDUSTRY

For the automotive sector, DeepFlex machines perform high-precision drilling operations for components such as camshafts and common rails, ensuring consistent manufacturing quality.



HYDRAULIC INDUSTRY

In hydraulic manufacturing, the machines are used to produce hydraulic cylinders, valves, and connection elements with excellent dimensional accuracy.

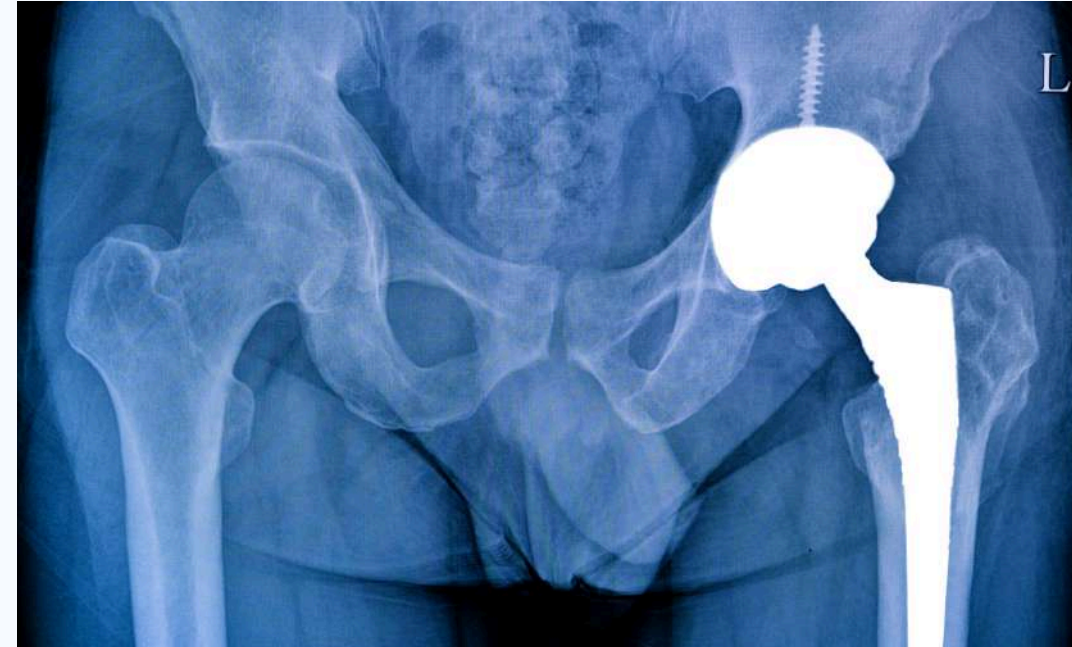
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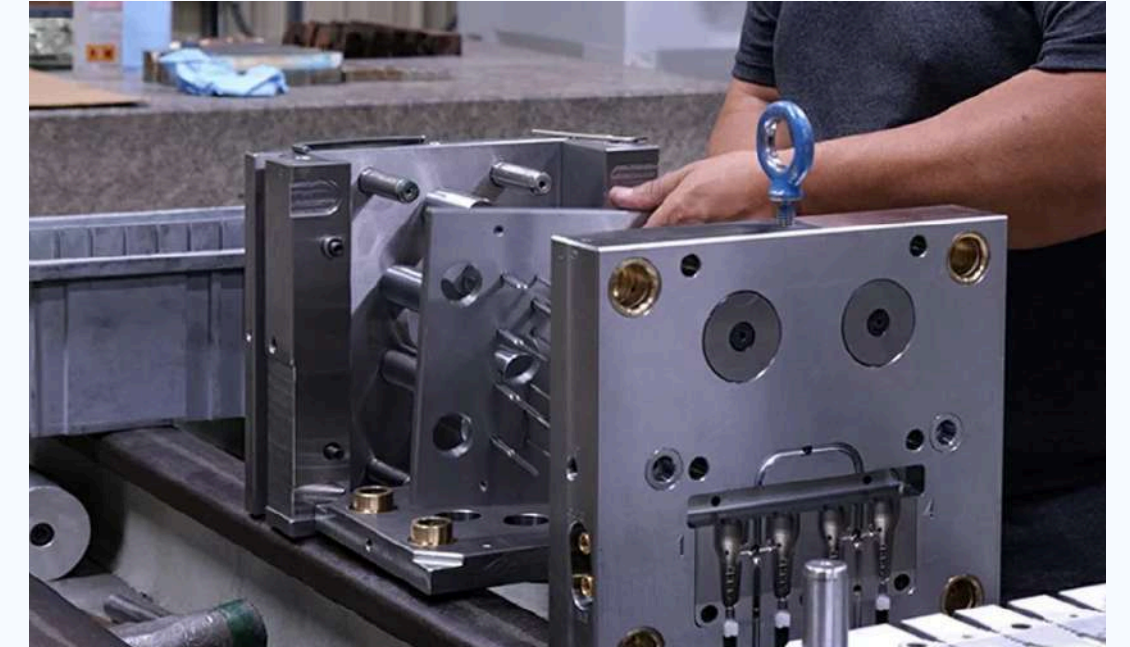
AEROSPACE INDUSTRY

DeepFlex machines are suitable for manufacturing critical aerospace components, including aircraft engines, propellers, wings, and other structural aircraft parts where precision machining is essential.



MEDICAL INDUSTRY

In medical manufacturing, DeepFlex machines are designed for the production of implants, instruments, and other equipment where maximum precision is required.

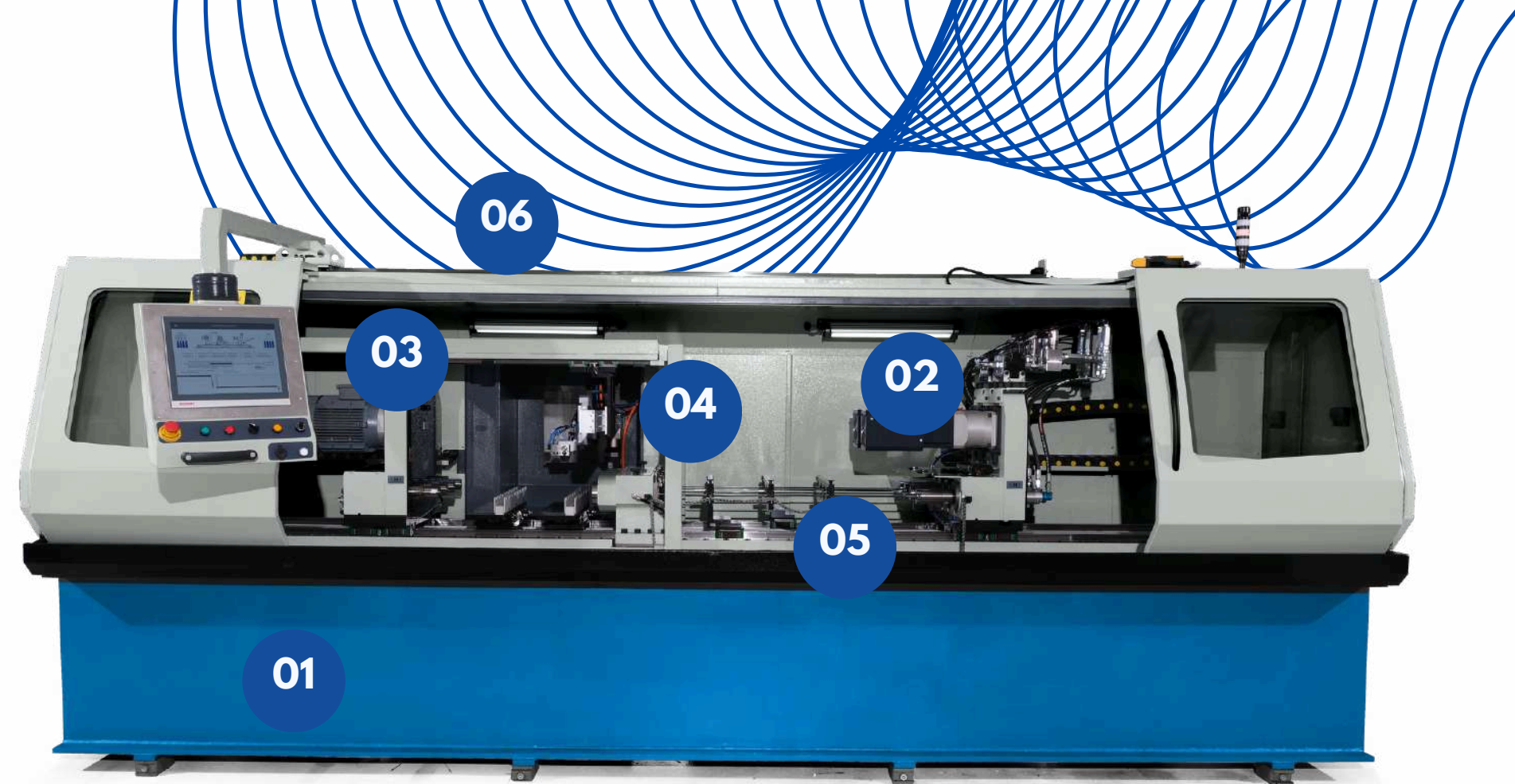


MOLD MANUFACTURING

The machines are also used in the mold industry for producing plastic injection molds and mold accessories, supporting high-quality tool manufacturing.

DF SERIES

DEEP HOLE DRILLING MACHINES



01 MACHINE BODY

03 WORKPIECE
CLAMPING
GROUP

05 DRILL AND WORKPIECE
FIXTURE

02 DRILLING UNITS

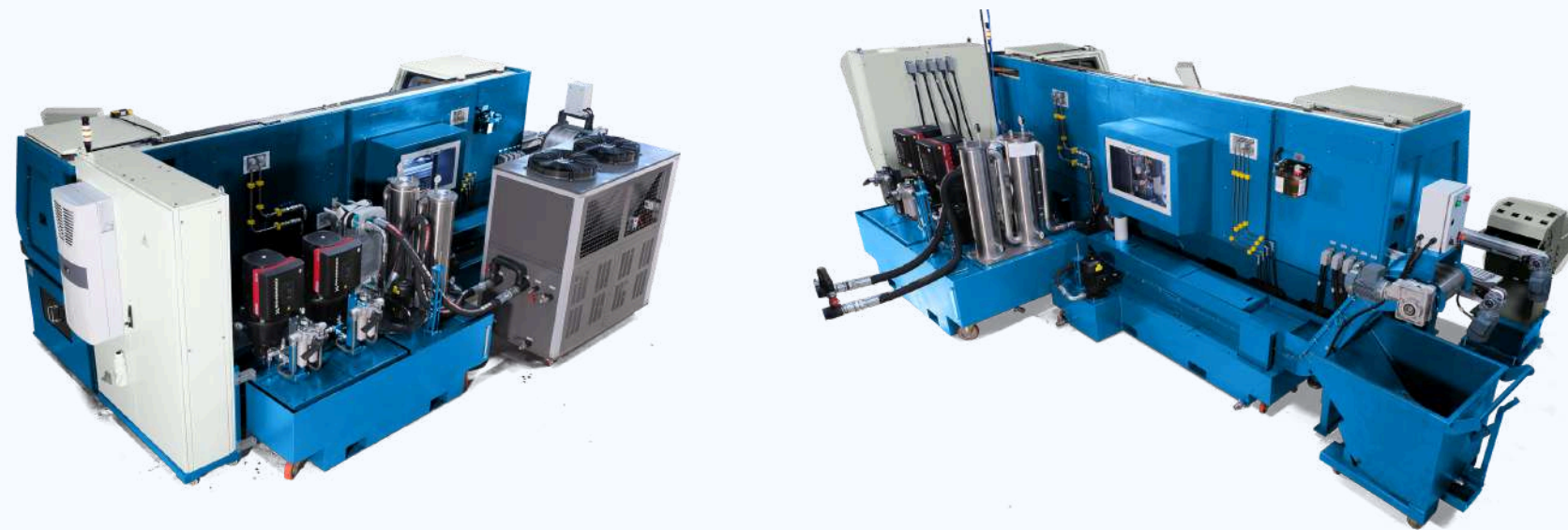
04 CHIP BOX

06 COOLING UNIT

RIGID MACHINE BASE

The stress-relieved, rigid machine base is precisely machined to ensure maximum stability, vibration absorption, and a long lifetime.

COOLING UNIT



The specially designed oil tank completely separates clean and dirty fluid. Featuring a double-bag filter system (20-25 microns), a high-pressure filter (10 microns), and a high-capacity chiller with a heat exchanger, it maintains peak oil quality and cleanliness.

Water-cooled heat exchanger to ready for chiller cooling system.

For sound isolation, high-pressure pumps enclosed within a cabin provide quiet and comfortable operation, creating a more comfortable working environment.



DRILLING UNITS

HIGH STABILITY, MINIMUM VIBRATION

The meticulously designed cast iron body provides maximum rigidity and vibration absorption. Combining precision machining, high-grade components, and quality craftsmanship keeps spindle nose run-out under 5 microns. Standard AT-series spindle nose connections offer flexible tool holding options, while the cartridge spindle design simplifies maintenance.



A high-pressure rotary distributor ensures uniform oil flow and pressure to every unit. To maximize service life, an integrated air seal protects the spindle from contaminants. Finally, an automated pneumatic system removes leftover oil from inside the workpiece after drilling.



WORKPIECE CLAMPING GROUP

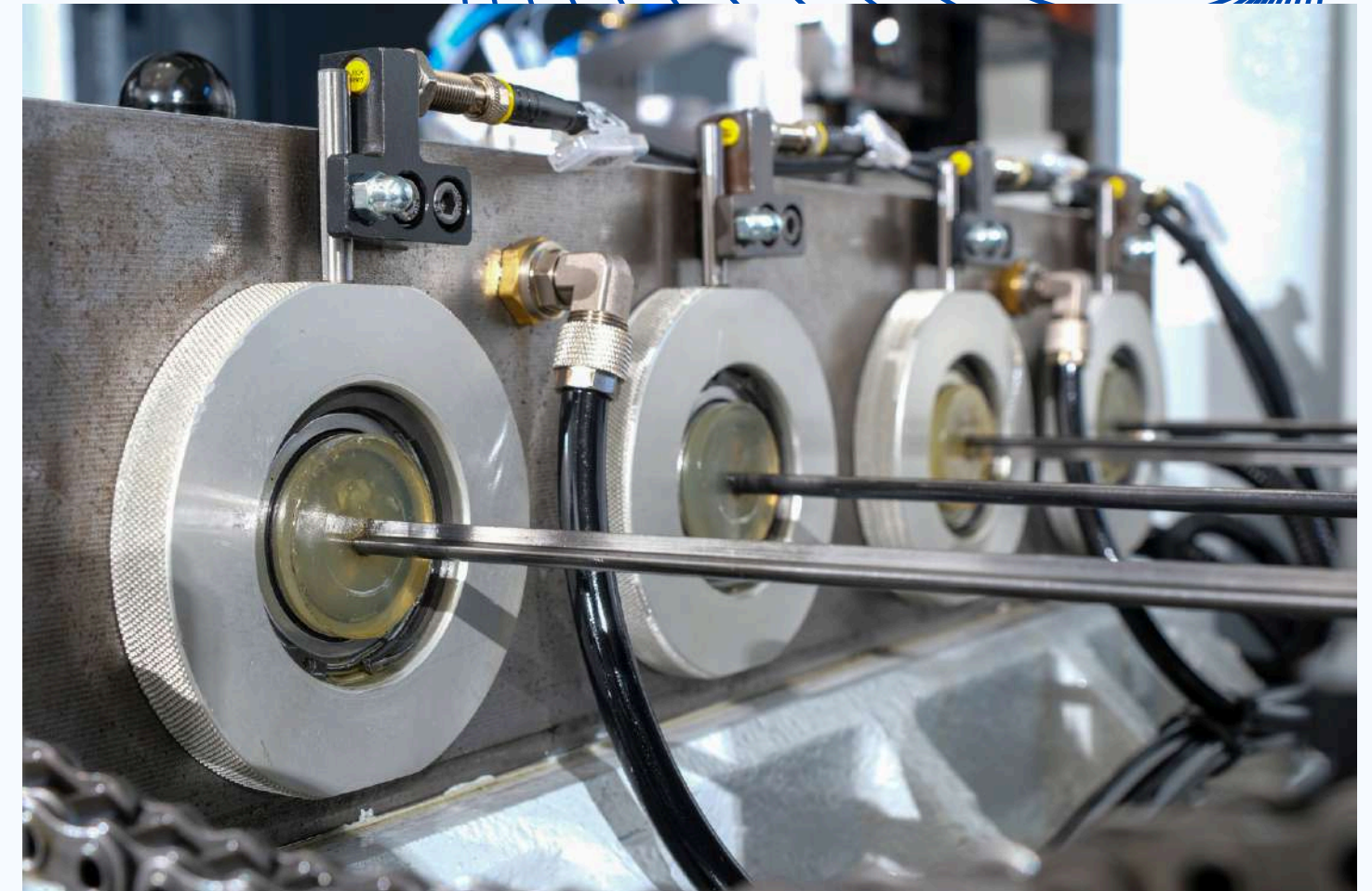


Precisely machined clamping cones secure the workpieces to deliver high accuracy and performance during machining. Integrated Poka-Yoke switches guarantee correct part clamping, while an independent clamping system provides ± 2 mm length compensation to handle precise workpieces reliably.



CHIP BOX

Enhanced chip evacuation is achieved with a specially designed chip box and integrated scraper attachment, ensuring maximum efficiency with oil entry points that prevent chip buildup.



DRILL TOOL BEDDING



Fast-connecting V-beds save time during type changes and enhance operational efficiency. Bushings (drill bushes) and drill beds ensure maximum concentricity, guaranteeing precise processing of workpieces.

Heavy-duty series pre-loaded rail and carriage



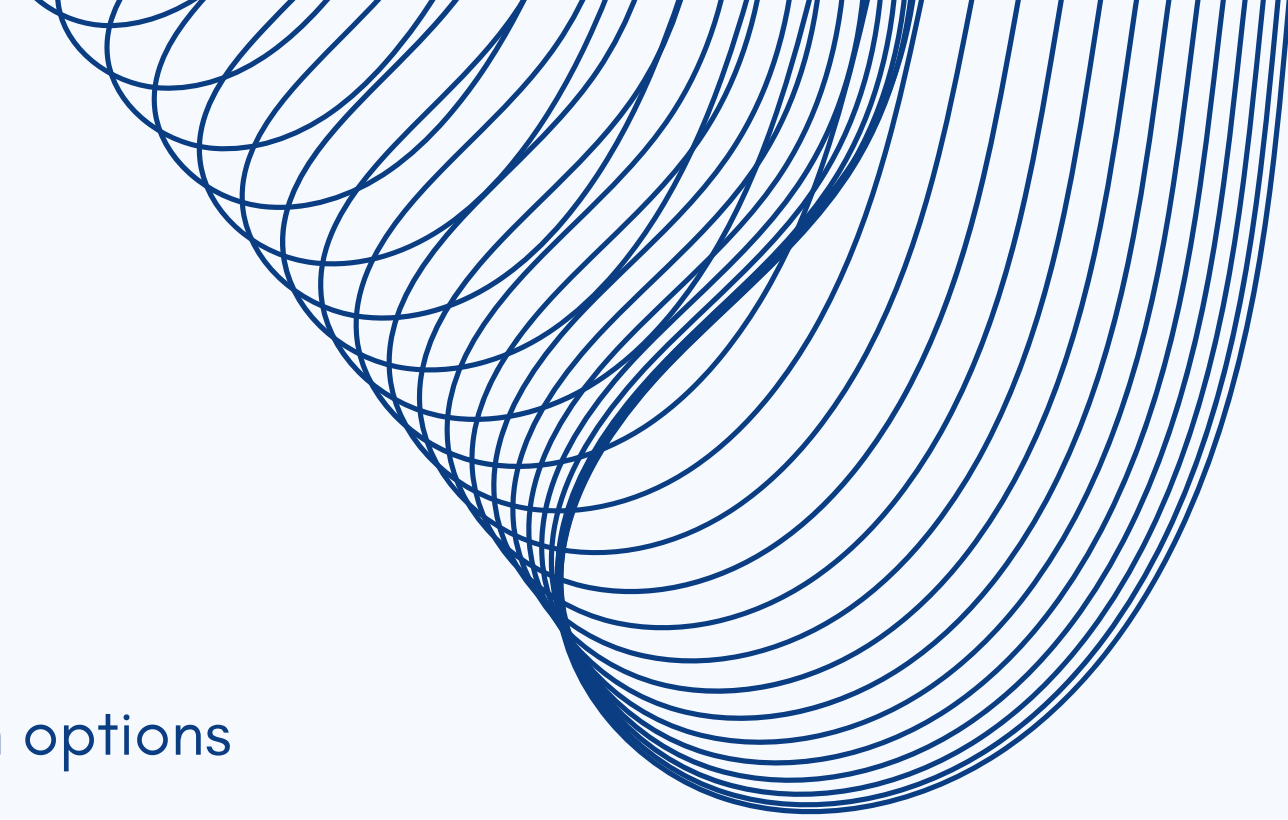
CONTROL PANEL



- User-friendly, easy-to-use, movable control panel
- (17" PC Panel)
- Programmable speed/feed values
- Programmable pressure and flow rate settings
- Programmable drilling and clamping unit positions

OPTIONAL FEATURES

- Pneumatic or hydraulic chuck
- Scraper belt conveyor
- Magnetic chip conveyor
- Deep-bed paper filter
- Water cooled chiller
- Double precision pressure filter
- Filter change without stopping
- Beckhoff/Siemens/Fanuc control system options

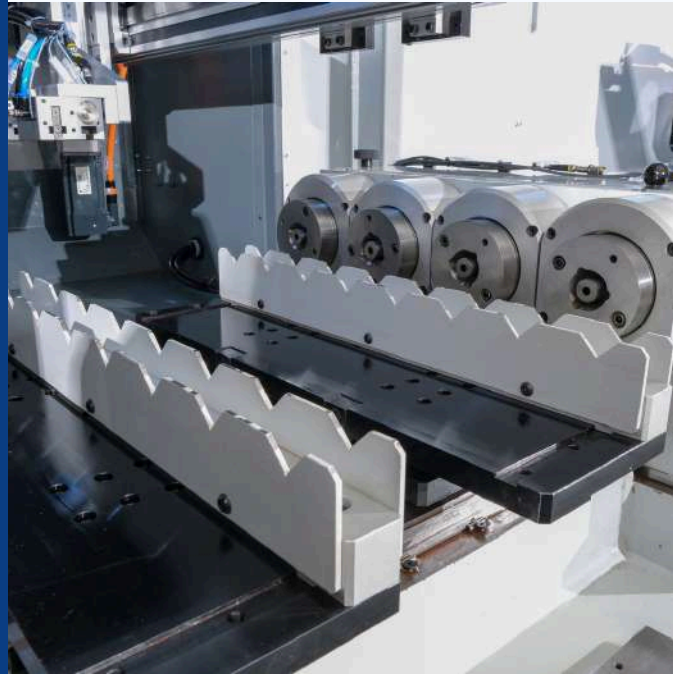


AUTOMATION ADD-ONS

- Automated parts feeding using Cartesian robots
- Workpiece loading/unloading conveyors
- Step feeder part loading
- Robotic arm part loading and unloading

FEATURE	DF SERIES				
	DF - 08	DF - 13	DF - 20	DF - 45	DF - 75
CAPACITY					
Min. Drilling Diameter (mm)	ø1.5	ø4	ø7	ø18	ø37
Max. Drilling Diameter (mm)	ø8	ø13	ø20	ø45	ø75
Max. Hole Depth (mm)	250	500 / 1000 / 1500	500 / 1000 / 1500	1000* / 2000	1000* / 2000
DRILLING UNIT					
Number of Spindles	1 / 2 / 4			1 / 2	
Process Type	Gundrill / Insert Type Gundrill			Insert Type Gundrill	
Spindle Speed (rpm)	10000	6000	3000	300 / 1500	250 / 1000
Spindle Power (kW) / (For each work spindle)	1.5	4.8	5	15	30
Power Transmission	High-Strength Timing Belt				
Spindle Holder	DIN55026				
WORKPIECE AND ROTATION EQUIPMENT					
Workpiece Speed (rpm)	0-2000	0-500	0-150		
Workpiece Clamping (Optional)	Hydraulic or Spring With Cone		Hydraulic or Pneumatic Chuck		
Power Transmission	High-Strength Timing Belt				
Workpiece Loading	Manual (Including Autoloading Infrastructure)				
Rapid Traverse (mm / min)	5000			3000	
COOLING UNIT					
Max. Pressure (Bar)	200	120	90	40	25
Tank Capacity (L)	500	1500	1500	2000	4500
Filtration	Chip Basket / Double Bag Filtration / Single High Pressure Filter				
Flow and Pressure Control	Automatically Adjustable Pressure and Monitored Flow Rate Via Panel				
CONTROL PANEL					
Control Program (Optional)	Beckhoff/Siemens/Fanuc				
Certification	CE/UL				

AUTOMATED FEEDING SOLUTIONS



V-BED STRUCTURE

Double drilling capacity with an integrated body and a two-axis special pneumatic V-bed structure. Seamless production with automatic loading.



WORKPIECE FEEDING UNIT

Continuous workpiece feeding on the loading conveyor ensures uninterrupted production, moving parts directly into the processing area right after loading.



LOADING AND UNLOADING CONVEYOR

An advanced part-handling system designed for automated machines. Space-saving conveyors built directly into the machine move workpieces efficiently to support high-volume mass production.



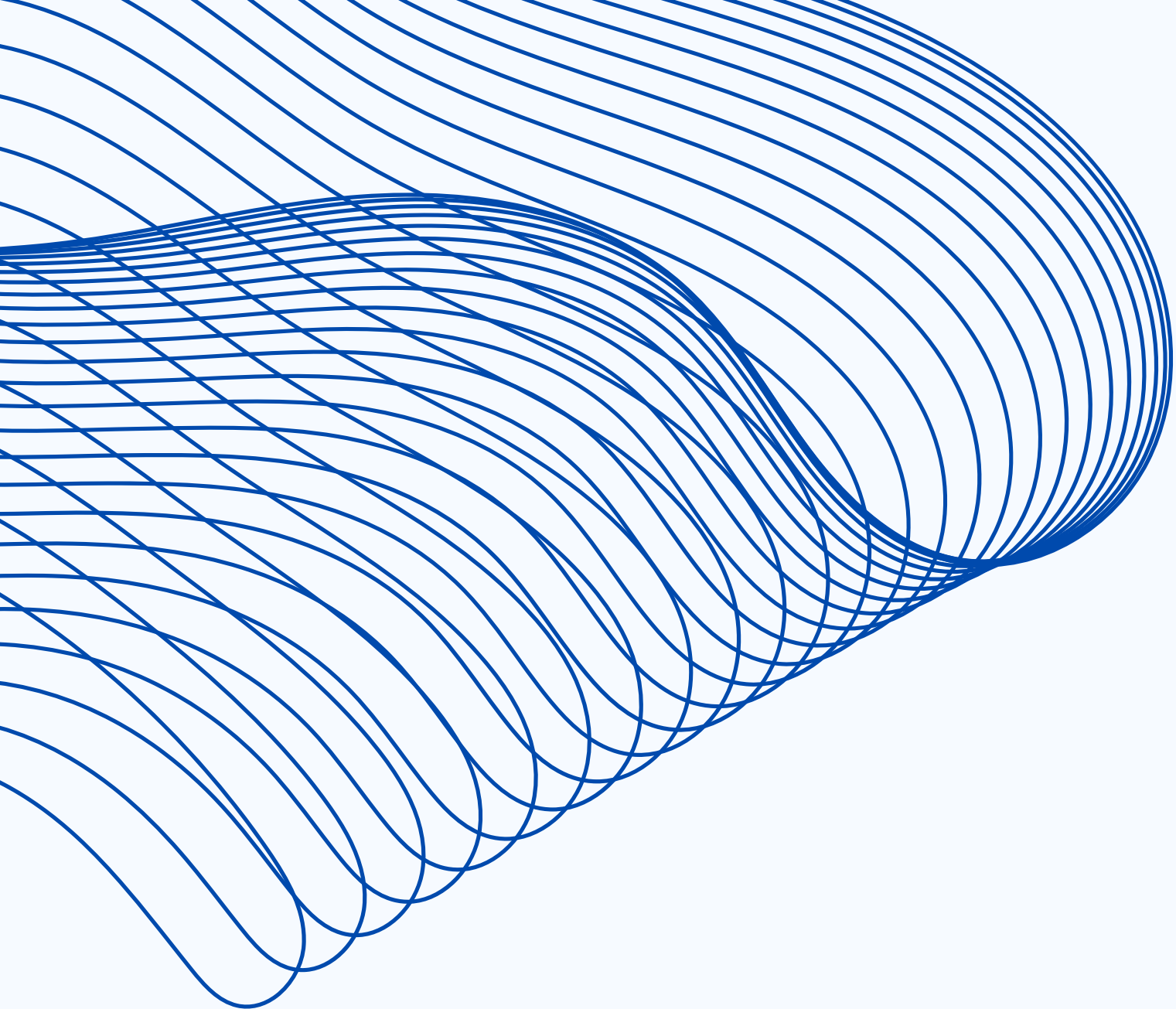
AUTOMATIC FEEDING ROBOT

Automatic loading/unloading using a customised feeding system.

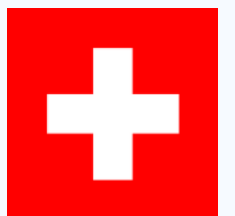


ROBOTIC ARM FEEDING

Machines designed and built with an infrastructure capable of working with a 6-axis robot, with the ability to transition to a fully automatic system through optional add-ons.



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