

# UP-Line Universal Premium

Flexible - Precise - Autonomous





# UP-Line HAUX Universal Premium

A wide range of modular configurations allows us to provide you with a highly flexible machine that at the same time is set up to do best what you produce the most.



HAUX Universal grinding machines offer outstanding performance and speed with high flexibility.



# UP-Line

High Precision Universal grinding machines. Autonomous production optional.



## Universal Premium

Universal high precision tool grinding

### Specifications

(\*varies depending on configuration and can be extended for special use case)

Workpiece length (auto.): max. 320 mm

Workpiece diameter (auto.): 3.00 mm - 12.7 mm

Grinding wheel diameter: max. 200 mm

Spindle power: 22 kW

Speed: 12.000 rpm

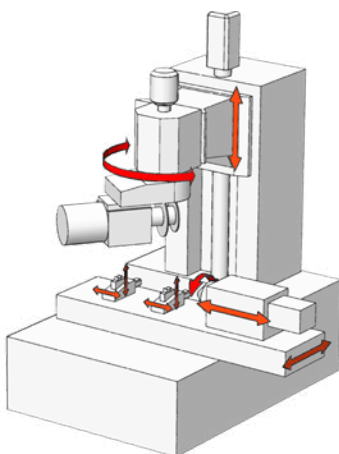
Dimensions: 4.00 x 3.00 x 2.50 m

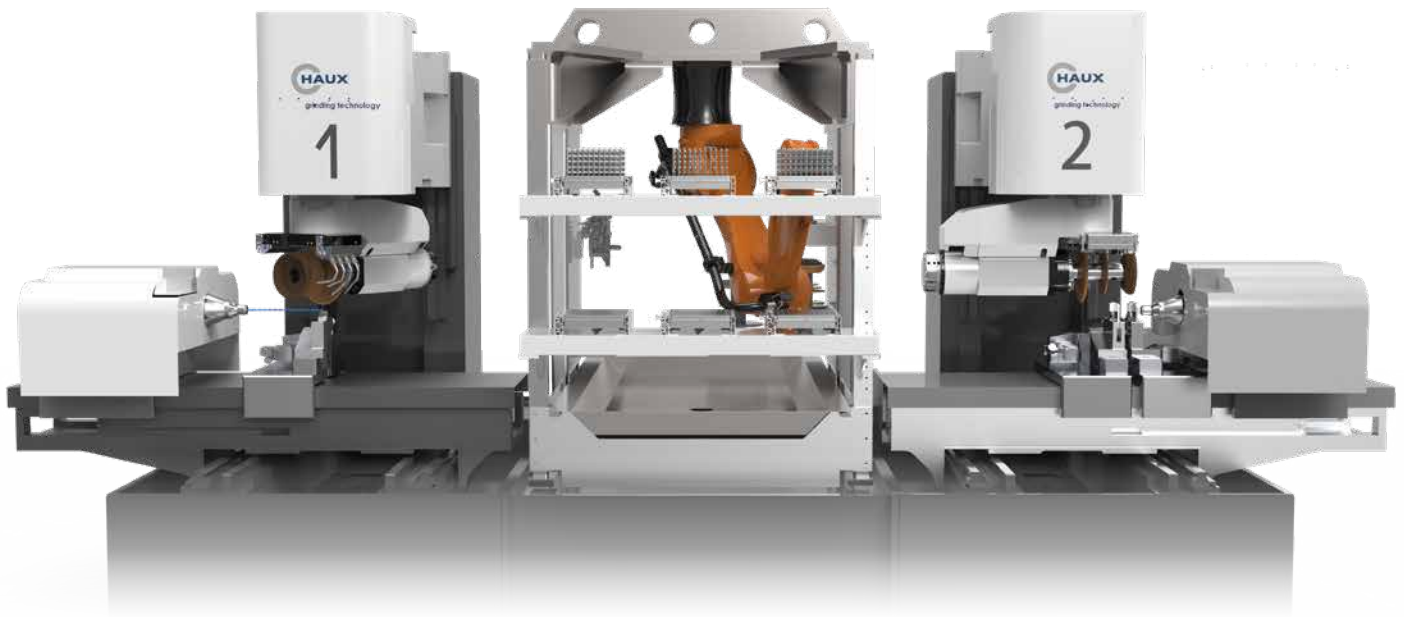
### Kinematic

#### 5 Axis + Workpiece support

(\* second workpiec support axis possible)

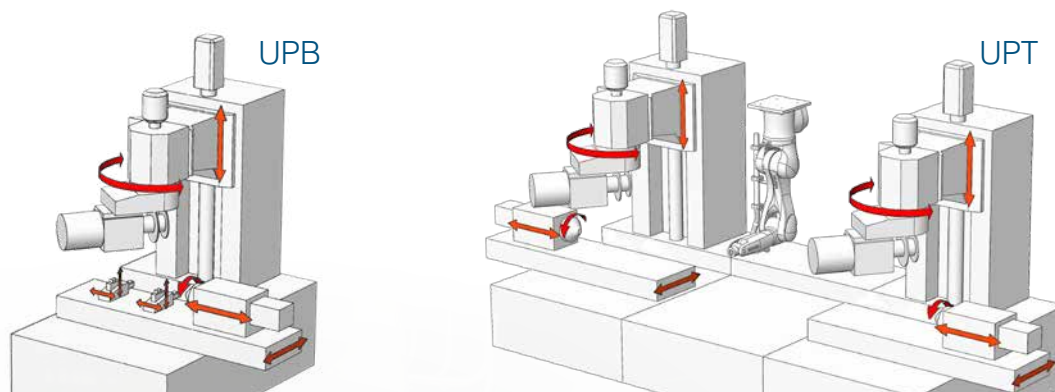
	Travel	Resolution
X - Axis:	713 mm	< 0.001 mm
Y - Axis:	289 mm	< 0.001 mm
Z - Axis:	289 mm	< 0.00 mm
C - Axis:	-122° to 122°	< 0.005°
A - Axis:	360°	< 0.005°





# Machine Configurations

Your configuration for your application



The UP-Line combines high end components in a powerful universal grinding machine that can be highly automated. With two grinding stations sharing one automation cell inside a combined machine the UPT is the top model of the line.



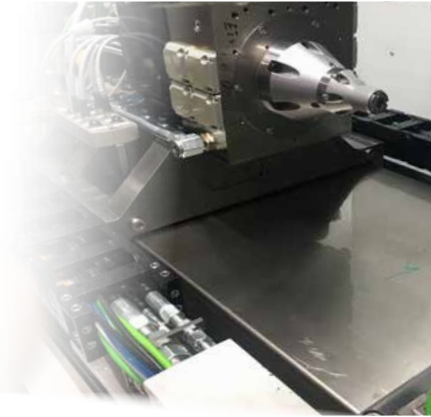
# Modules

The UP-Line uses high precision components to meet highest standards

## Workpiece carrier

Hydrostatic precision

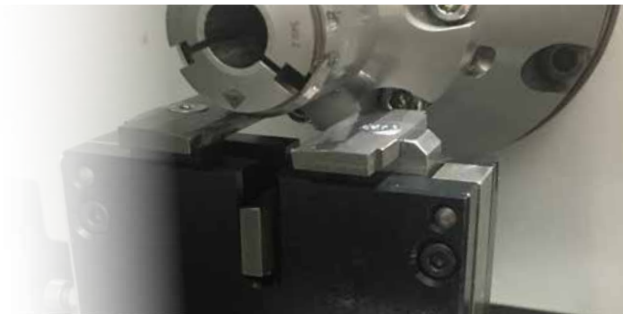
The hydrostatic workpiece carrier with 1100 rpm and 1.1 kW uses a high precision clamping system that allows automated collet changes.



## Arobotec

High precision workpiece support

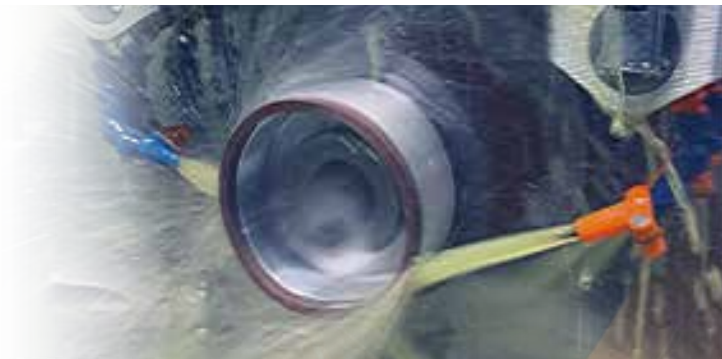
Perfect centric clamping system by Arobotec allows high precision and accuracy and offers fast and flexible setup.



## Grinding spindle

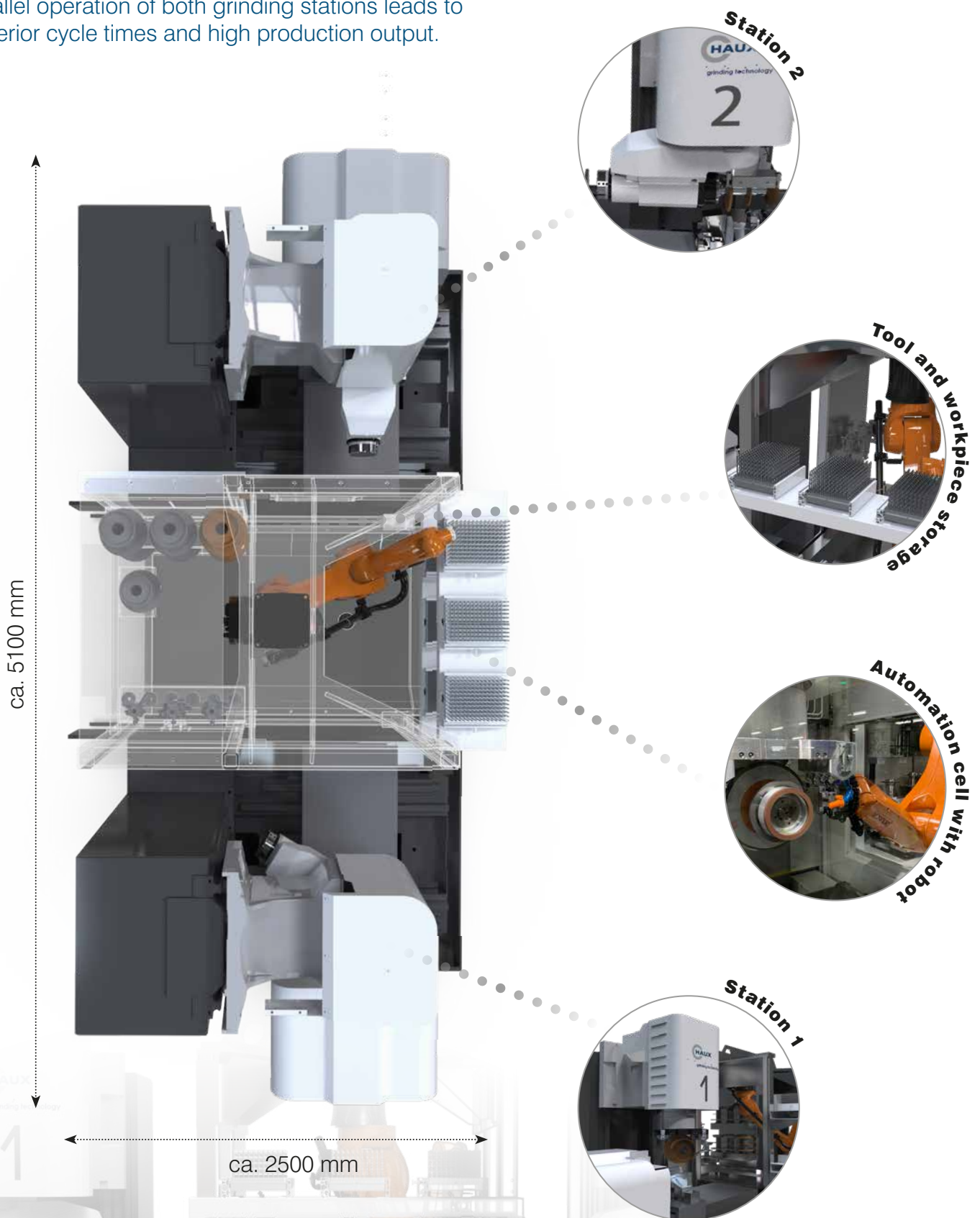
High speed - High precision

The high end german made motor spindle allows automatic grinding wheel changes and high precision grinding.



# Layout

Parallel operation of both grinding stations leads to superior cycle times and high production output.



ca. 5100 mm

ca. 2500 mm

Station 2

Tool and workpiece storage

Automation cell with robot

Station 1

**HAUX**

# Software

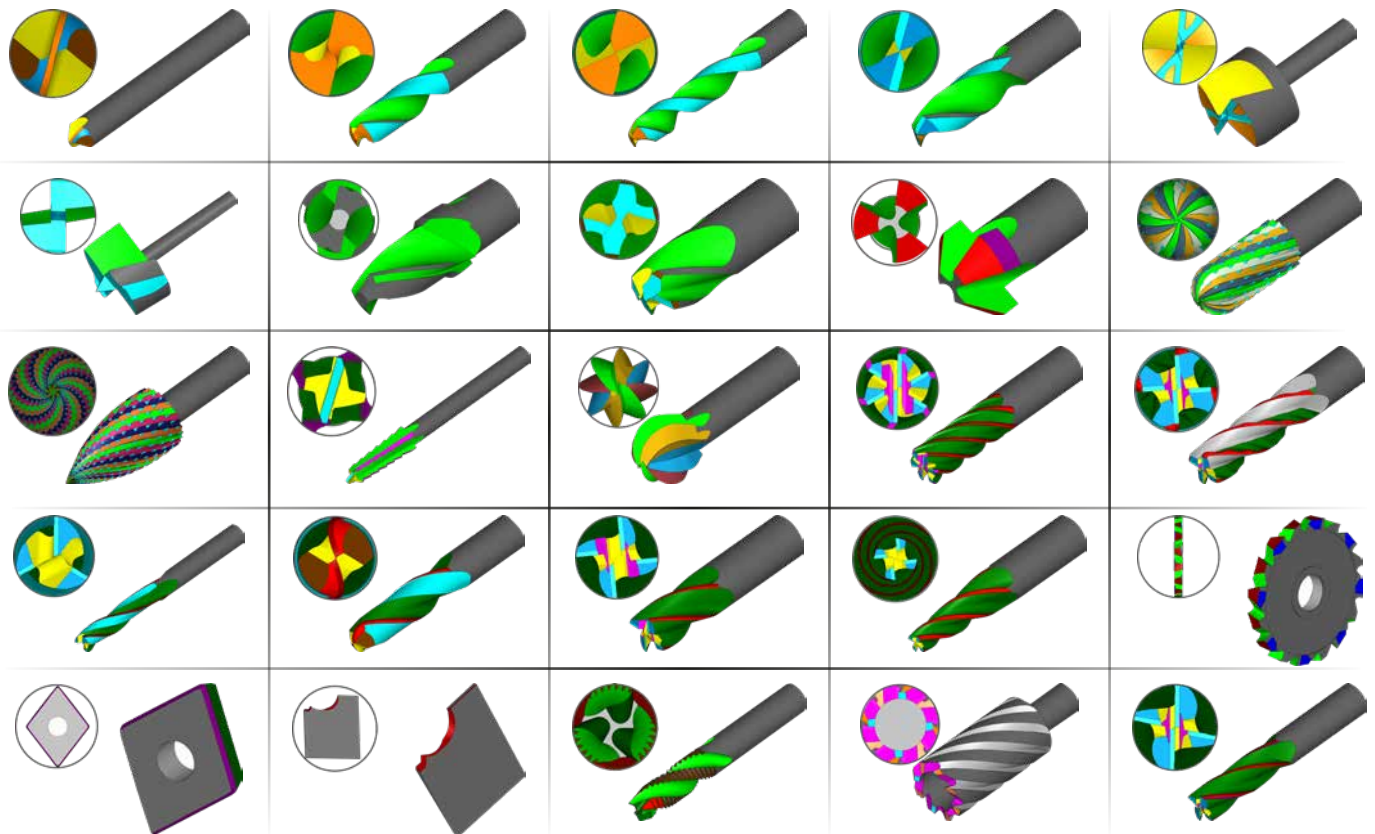
Modular - Expandable - Integrated

Our modular software runs on single machines as well as multi station machines or machines integrated in manufacturing cells. It allows integration into your company's network. Part, order, tooling or measurement data is easily exchanged. Autonomous operation of our machines is optional.

HAUX uses its own software on NC- and PLC-level and cooperates with MTS Switzerland for special use cases. HAUX own profiling software offers great value and specialized optimization for intended applications.

Remote access is offered by default and a new RED-box offers secure high volume data exchange and machine monitoring.

## Applications



## HAUX HMI

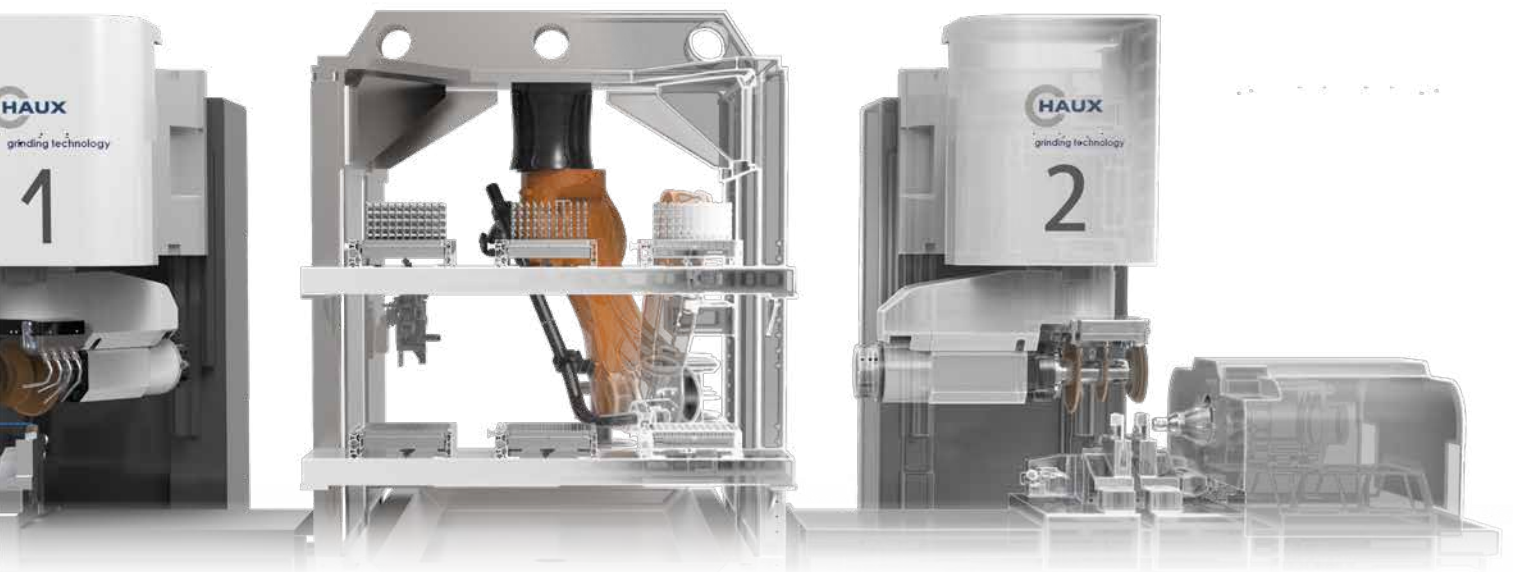
Individual UI - Preview / Simulation



HAUX HMI with parametric tool definition includes live preview of each parameter's effect and on screen explanations.

Current process values are displayed during operation.

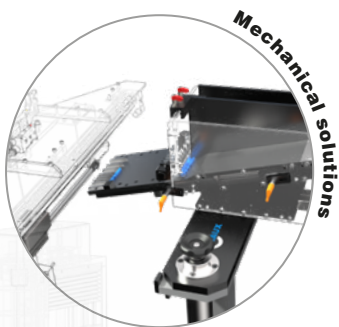




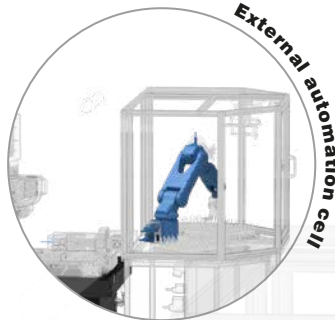
# HAUX

## Automation

Elevate performance to the next level



*Mechanical solutions*



*External automation cell*



*Integrated automation cell*



*Special solutions*



*Robot out*



*Portal loader*



*Portal connecting machines*



*Robot in machine*



HAUX offers the right automation solution for every situation.

The partnership with KIENER Maschinenbau GmbH brought together decades of know-how and experience in automation, engineering and tool grinding,



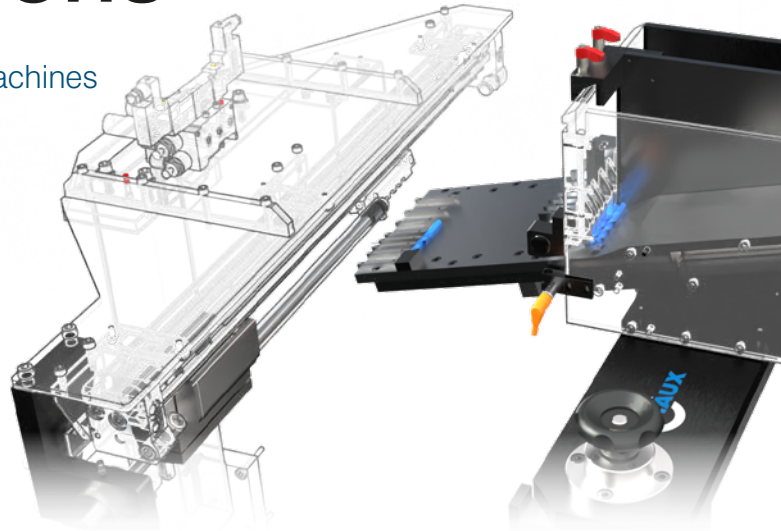
# Automation Options

Examples of automation solutions used in HAUX machines

## Mechanical Solutions

High quality engineering

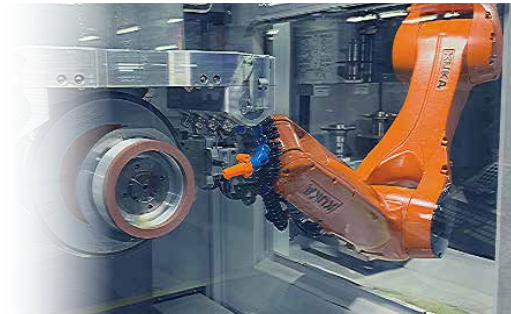
HAUX Maschinenbau offers decades of know-how and innovations of the pioneers of high speed grinding. High speed workpiece loading and unloading using magazines and indexing mechanisms offers top speeds in many use cases.



## Robotics

Flexible and universal

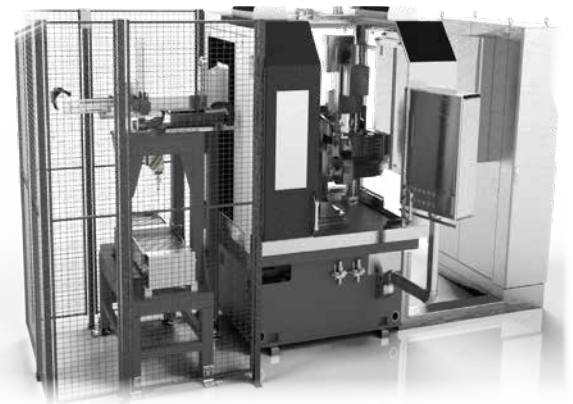
Industrial robots offer a great balance of cost and flexibility and can even be used to automate grinding wheel changes. Lots of custom grippers, storage, indexing- and orienting solutions let us customize the scope of the robotic automation of your machine when needed.



## Portal & Production Line Integration

For seamless production

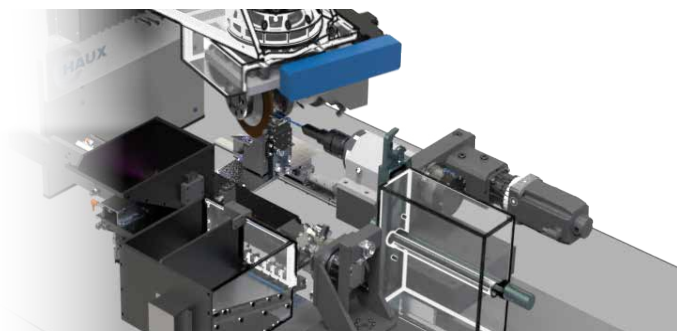
Portals can offer better speeds versus robots for applicable use cases and still remain a lot of the same flexibility.

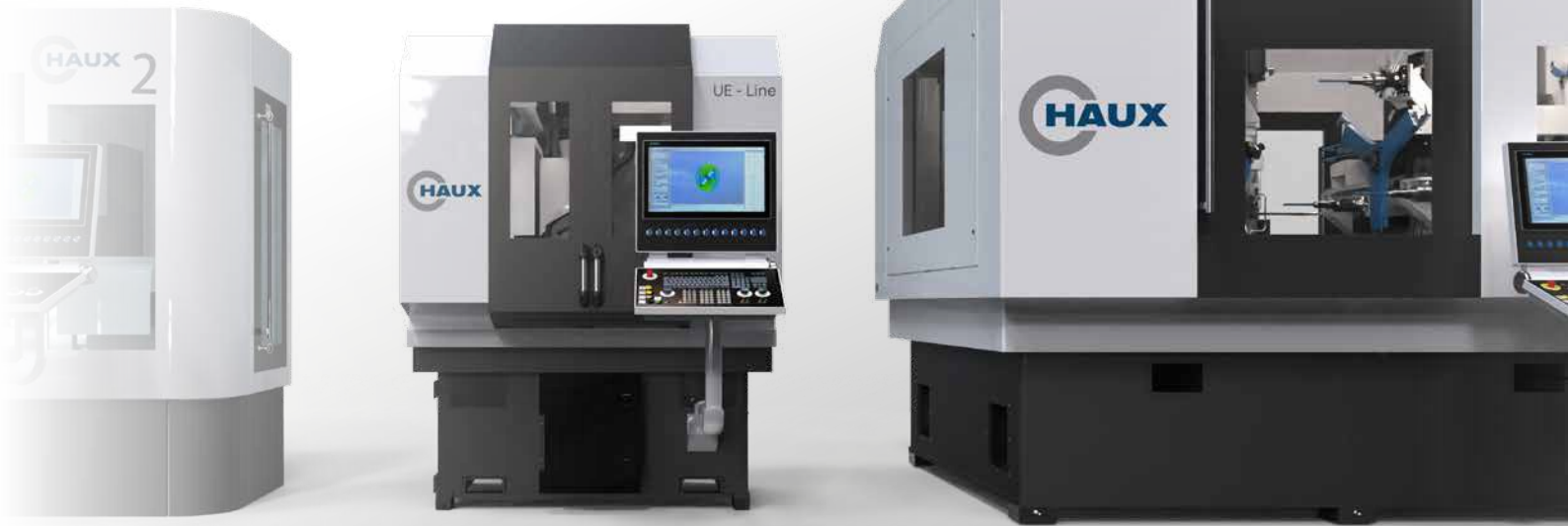


## Special Solutions

For high speed and special customer needs

HAUX has a lot of experience in special applications and individual engineering projects. For special use cases we work closely with our customer to develop the optimal machine for the specific use case.





# HAUX

MOVING  
INNOVATION

For more information visit [haux-grinding.com](http://haux-grinding.com) or contact us for an individual consultation.

# UE Line

## Universal Eco - Modular Universal grinding

The UE-Line is our allround talent - flexible and expandable. The 5-Axis grinding kinematic of the base model offers you full flexibility and the extra strong structure of all components allows high speed and feed rates. Many different configurations are possible to specialize for specific production requirements using HAUX Modules.



# UP Line

## Universal Premium - High End Universal grinding

The HAUX UP-Line offers full autonomy and ultra high precision. Its high precision servo axis lead to a perfect surface finish and the the high end base body eliminates vibrations. The top model the UPT combines two stations with an automation cell inbetween. Collet changes, tool changes and even grinding wheel packet changes can be done fully automatic.



# MM Line

## High Performance Multi Station

The MM-Line combines two main grinding stations on one base body and offers excellent cycle times using a high end tool changing system that can move the tool between stations and load as well as unload in one single fast movement.

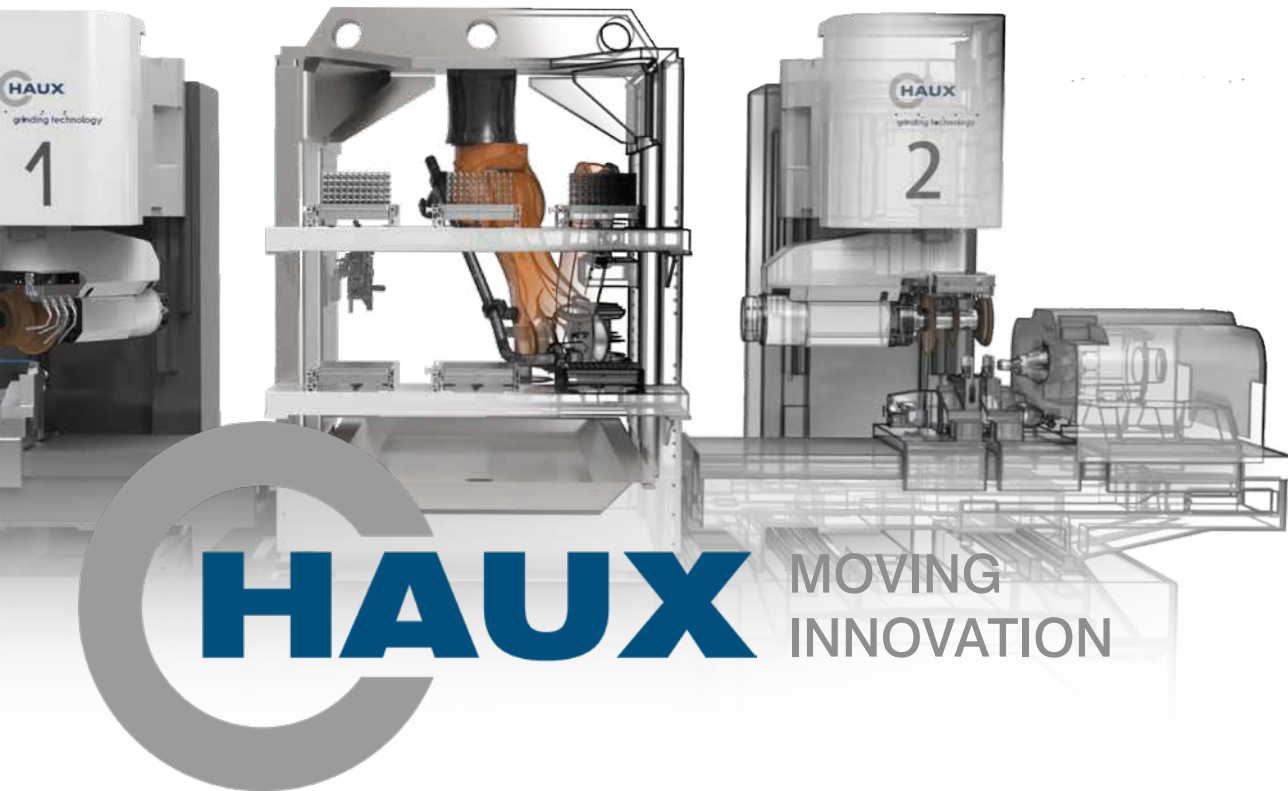


# Special

## High Performance Multi Station

HAUX has a lot of experience in special applications and individual engineering projects. For special use cases we work closely with our customer to develop the optimal machine for the specific use case.





HAUX Maschinenbau offers decades of know-how and innovations of the pioneers of high speed grinding.

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For more Information visit  
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