

# Tool Grinding Machine WZS 70

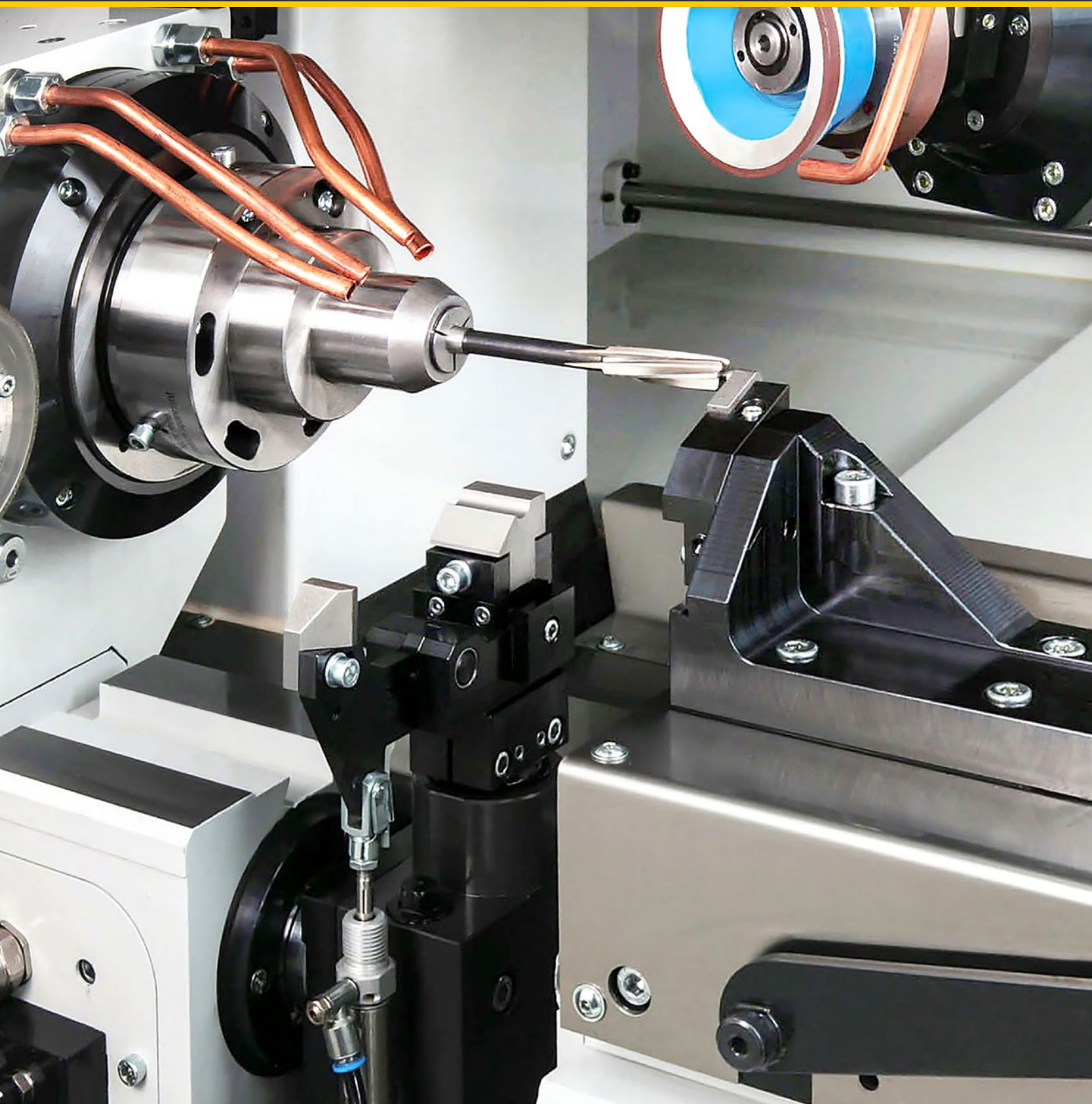
## For universal application



# WZS 70

## Advanced Technology of Tool Grinding

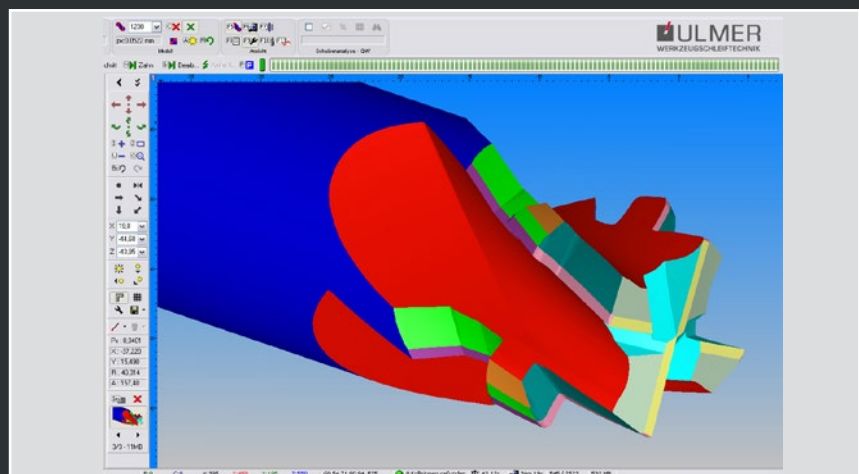
A variety of available options offer individual solutions for the production of contemporary precision tools made of carbide and HSS.



## The advantages at a glance

- Large workspace at small machine dimensions.
- Various clamping systems available for maximum flexibility and short set-up times.
- High resolution glass scales in all 5 axes (direct measuring systems).
- Direct drive systems (liquid cooled) for grinding spindle and rotating axes.
- Linear axes with direct drive for highly dynamic requirements optionally available.
- Easy access to service-related areas for simple and quick maintenance.
- Innovative solutions for customer specific applications.
- CNC control NUM Flexium+ with powerful NUM DriveX and integrated security architecture NUM Safe.

**NUMROTO<sup>plus</sup>**<sup>®</sup>  
Programming system  
with 3D graphics





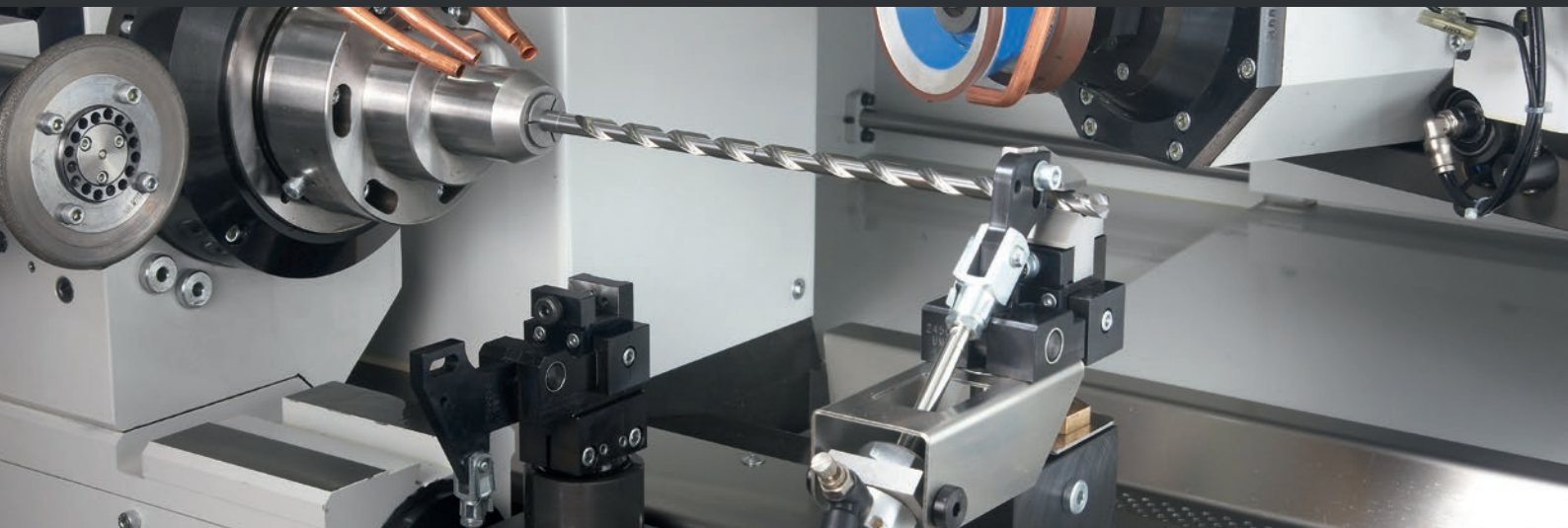
# WZS 70

## Application & Equipment

This machine covers a wide range of possible applications. It enables the production of complex tool geometries and variable batch sizes.

### Additional axis with steady rest and clamp down device

Stabilization of long workpieces due to following support during grinding.



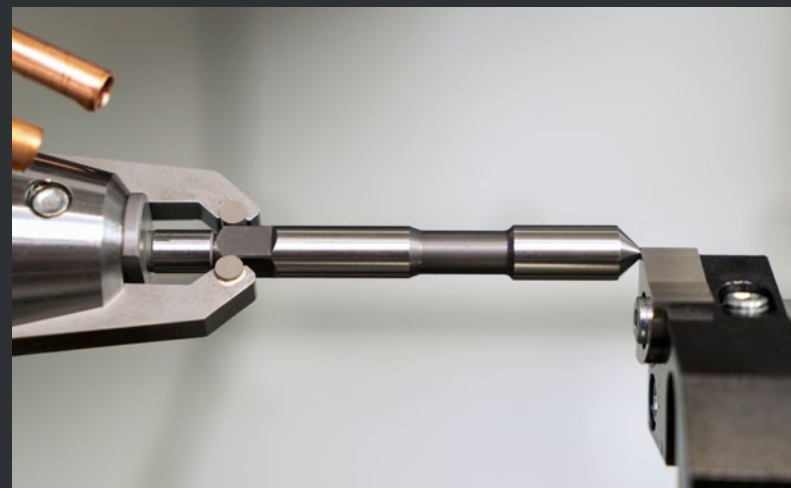
### Second Probe

Progress integrated measuring of grinding wheels in the machine.



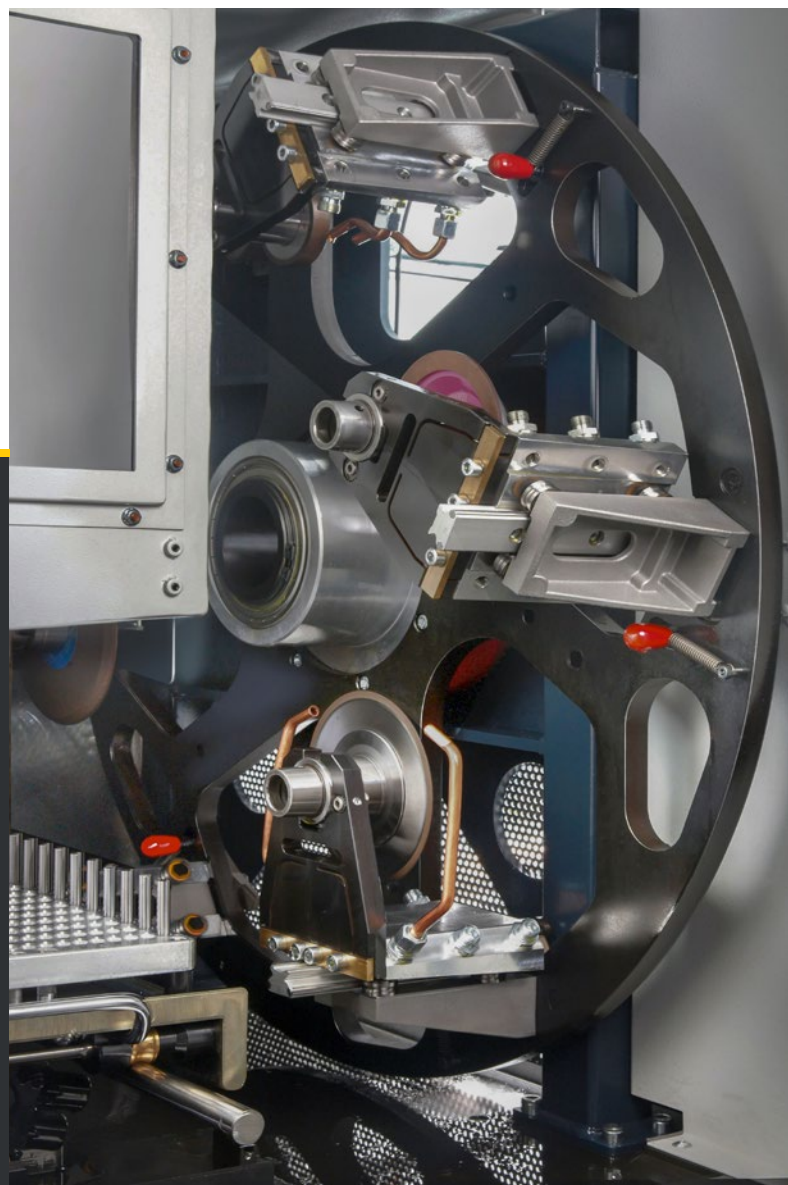
### Tail stock

Different versions allow the clamping between centers.



### Automatically wheel changer

- Quick changeover of grinding unit.
- Wheel pack and coolant manifold in one unit ensure effective coolant supply.
- Choice of
  - Sixfold for diameter max. → 203 mm
  - Eightfold for diameter max. → 153 mm



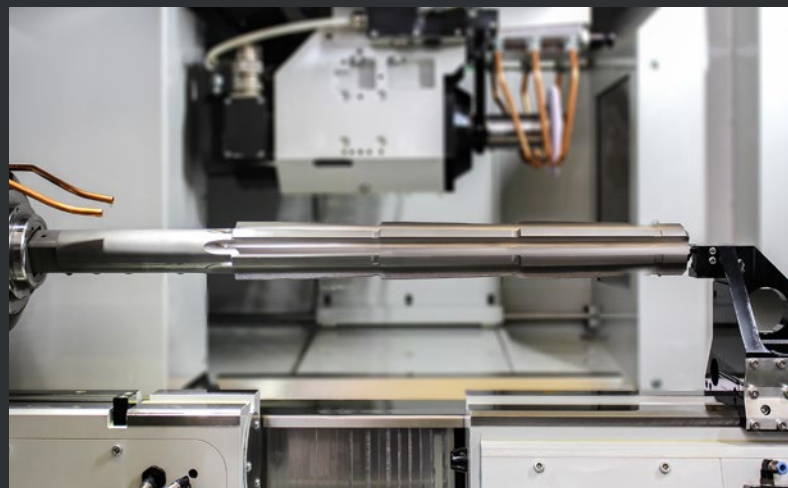
### Workpiece clamping

Different clamping systems are available.



### Tailstock attachment for heavy workpieces

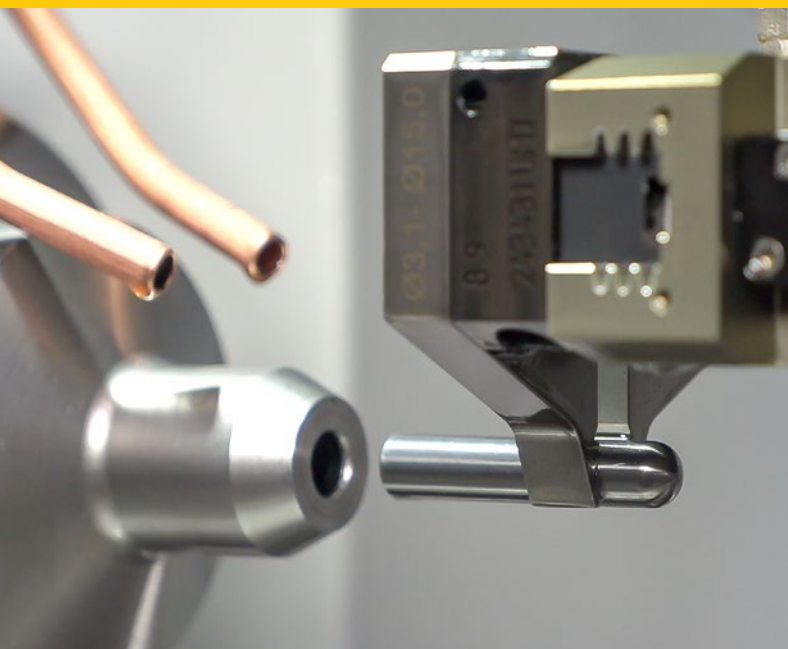
Optional C-axis with max. 100 Nm torque to handle workpieces >15 kg.





# WZS 70

## Workpiece Automation



### Pick-up Automation

Easy set-up and reliable changing of the workpieces even in hydraulic expansion chuck.

### Loading Device

with up to three pallets.  
Capacity (example):  
Shank diameter 10 mm → 300 pieces.

### Workpiece Pallets

The pallets are outside the workspace for access to quality inspection at any time.





### Robot Automation

Loading device with up to four pallets.  
High capacity and fast changeover  
times provide efficient processing  
of large batch sizes.

Capacity (example):  
Shank diameter 10 mm → 450 pieces



# WZS 70

## Technical Details

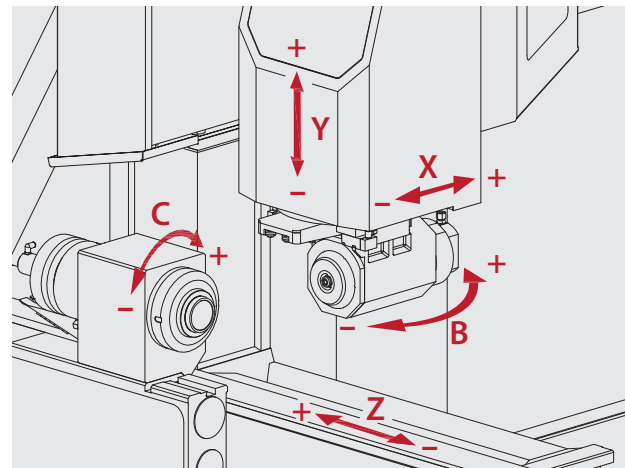
### Technical Data WZS 70

Travels of axes	X-axis	740 mm
	Y-axis	250 mm
	Z-axis	740 mm
	B-axis	390° (-180° / +210°)
	C-axis	n x 360°
Resolution	X, Y, Z-axis	0.0001 mm
	B, C-axis	0.0001°
Axis drives	X, Y, Z-axis	2.4 kN
	B-axis	315 Nm
	Rapid travel speeds X / Y / Z	30 / 30 / 30 m/min
Grinding spindle	Motorized spindle	Ø 150 x 300 mm
	Power S7	15 kW / 200 Hz
	Peak power S2	24 kW
	Speed infinitely	1,000 to 9,000 min <sup>-1</sup> / 300 Hz
	Torque const. S7	24 Nm up to 6,000 min <sup>-1</sup>
	Grinding wheel Ø max.	203 mm
	Internal taper	HSK 50E (2 sides)
Workpiece spindle	Internal taper	ISO-50
	Speed standard (optional)	30 (1,200) min <sup>-1</sup>
	Torque max. (optional)	60 Nm (100 Nm)
Machine	Total connected load	15 kVA
	Supply voltage / Frequency	400 V / 50 Hz
	Machine (basic) W x L x H	2,120 x 2,680 x 2,420 mm
	with add. robot W x L x H	3,130 x 2,680 x 2,420 mm
	Weight	approx. 6 t

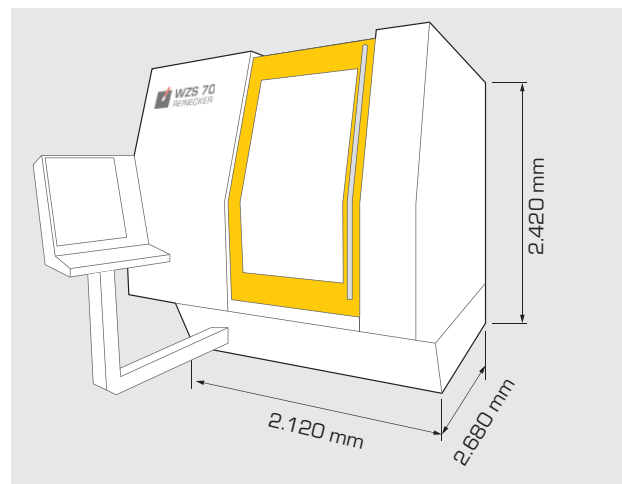
### Workpiece dimensions (measuring from taper zero line ISO 50)

Manual loading	Ø max.	270 mm
	Length max.	570 mm
	Weight max.	20 kg
Workpiece automation (robot)	Ø max.	32 mm
	Length max.	450 mm
	Weight max.	2.5 kg
Workpiece automation (Pick up)	Ø max.	25 mm
	Length max.	200 mm
	Weight max.	1.5 kg

### Kinematic



### Dimensions [in mm]



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