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# LANDIS 18Ω OVERVIEW

August 2024

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Fives Landis Corp.



# LANDIS 18Ω SPECIFICATIONS

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## Landis 18Ω

Max. grinding diameter OD	380mm
Max. external grinding length	350mm (extendable to 900mm)
Grinding wheel types	CBN / Conventional
Min / Max wheel (diameter x length)	CBN – 350 (d) x 300mm (l) Conventional – 650 (d) x 150mm (l)
Centre Height (from top of linear guideway)	205mm
X / Z axis travel	205 / 580 (1000 option) mm
Max. number of spindles	1 <sup>1</sup>
Max. wheel surface speed	125m/sec
Max. workhead speed	600 <sup>2</sup> / 4500 / 300 <sup>3</sup> rpm <sup>2</sup> - with chuck / <sup>3</sup> - with orbital component

<sup>1</sup> - An additional internal grinding wheelspindle can be mounted simultaneously to main grinding wheel, subject to component dimensions and process requirements.

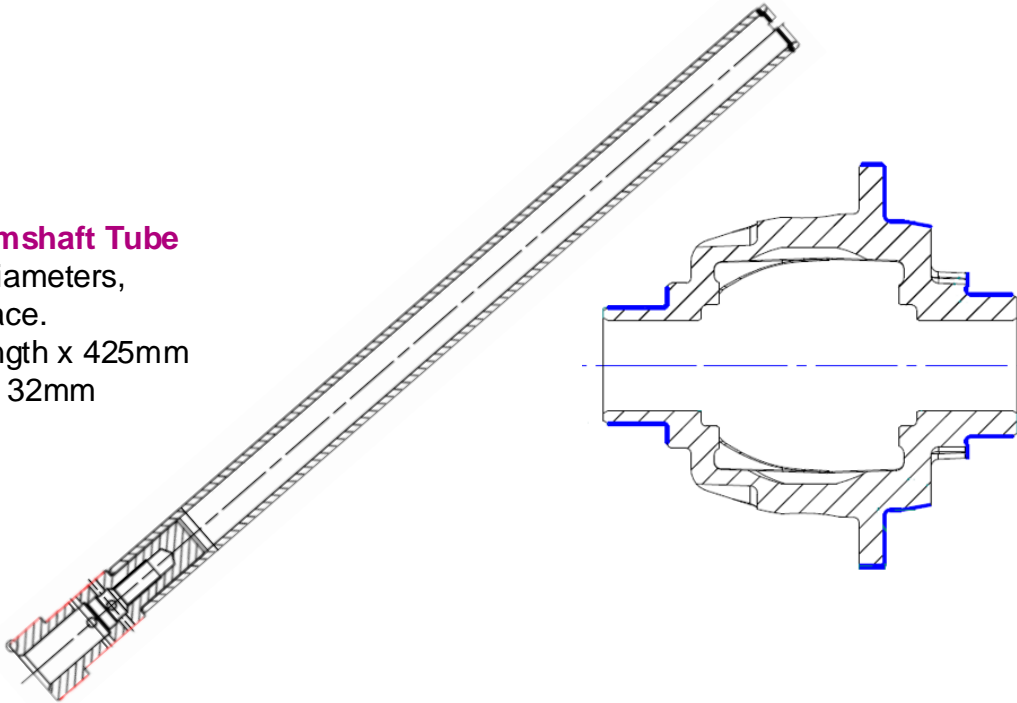


# LANDIS 18Ω – COMPONENT EXAMPLES

Typical part types – 1 of 3 (Cylindrical)

## Camshaft Tube

3 diameters,  
1 face.  
Length x 425mm  
Dia 32mm



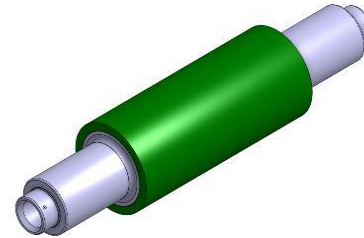
## Differential Housing

3 diameters,  
2 faces & 1 taper.  
Length x 160mm  
Dia 160mm



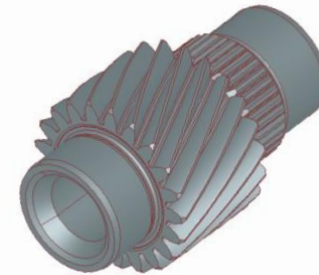
## E-rotor

“exotic” materials;  
Inconel & samarium  
cobalt – 4 diameters  
4 faces.  
Length x 200mm  
Dia 40mm



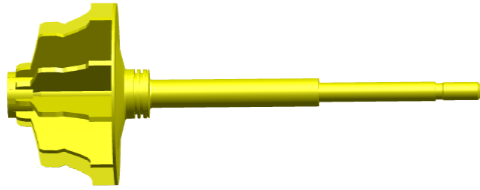
## E-drive

3 diameters,  
2 opposing faces.  
Length x 120mm  
Dia 60mm

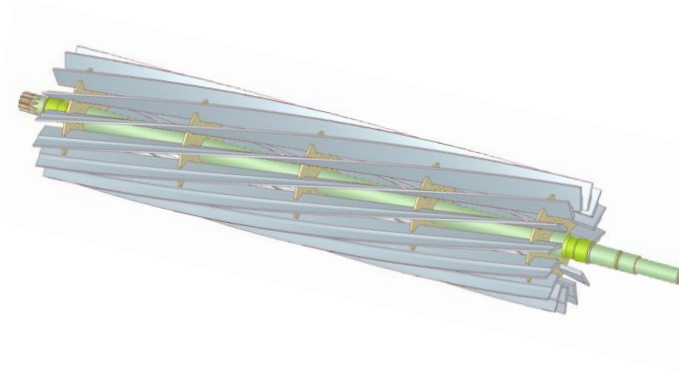


# LANDIS 18Ω – COMPONENT EXAMPLES

Typical part types – 2 of 3 (Cylindrical)



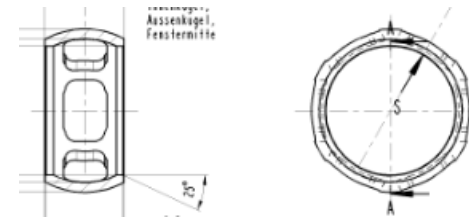
**Turbo shaft**  
“exotic” materials;  
Inconel – 5 diameters  
3 faces.  
Length x 350mm  
Dia 250mm



**Lawnmower reel**  
6 diameters,  
2 faces & tapers.  
Length x 950mm  
Dia 250mm



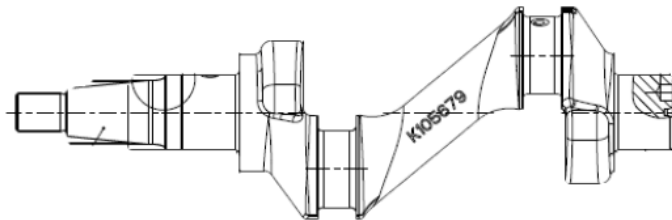
**Rotor Shaft**  
5 diameters,  
2 faces.  
Length x 350mm  
Dia 70mm



**Ball Cage**  
ID & OD diameters & faces.  
1 face.  
Length x 30mm  
Dia 65mm

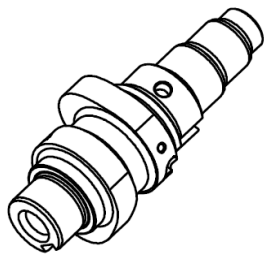
# LANDIS 18Ω – COMPONENT EXAMPLES

Typical part types – 3 of 3 (Orbital)



## Compressor crankshafts

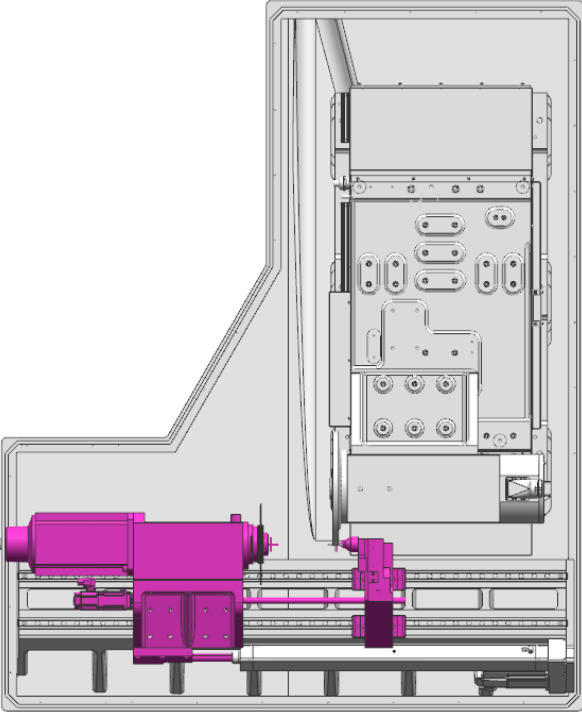
Journals & crankpins  
Length x 350mm  
Swing Dia 150mm



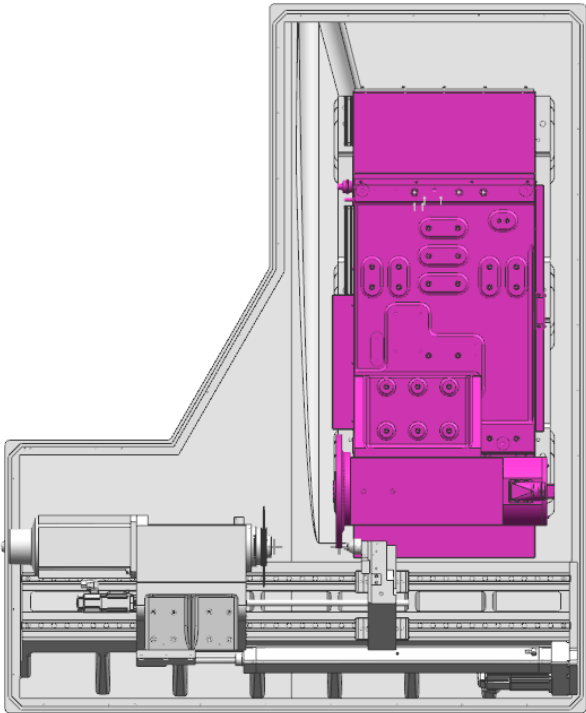
## Motorbike camshafts

Lobes & OD  
Length x 250mm  
Swing Dia 60mm

# LANDIS 18Ω – MACHINE AXIS

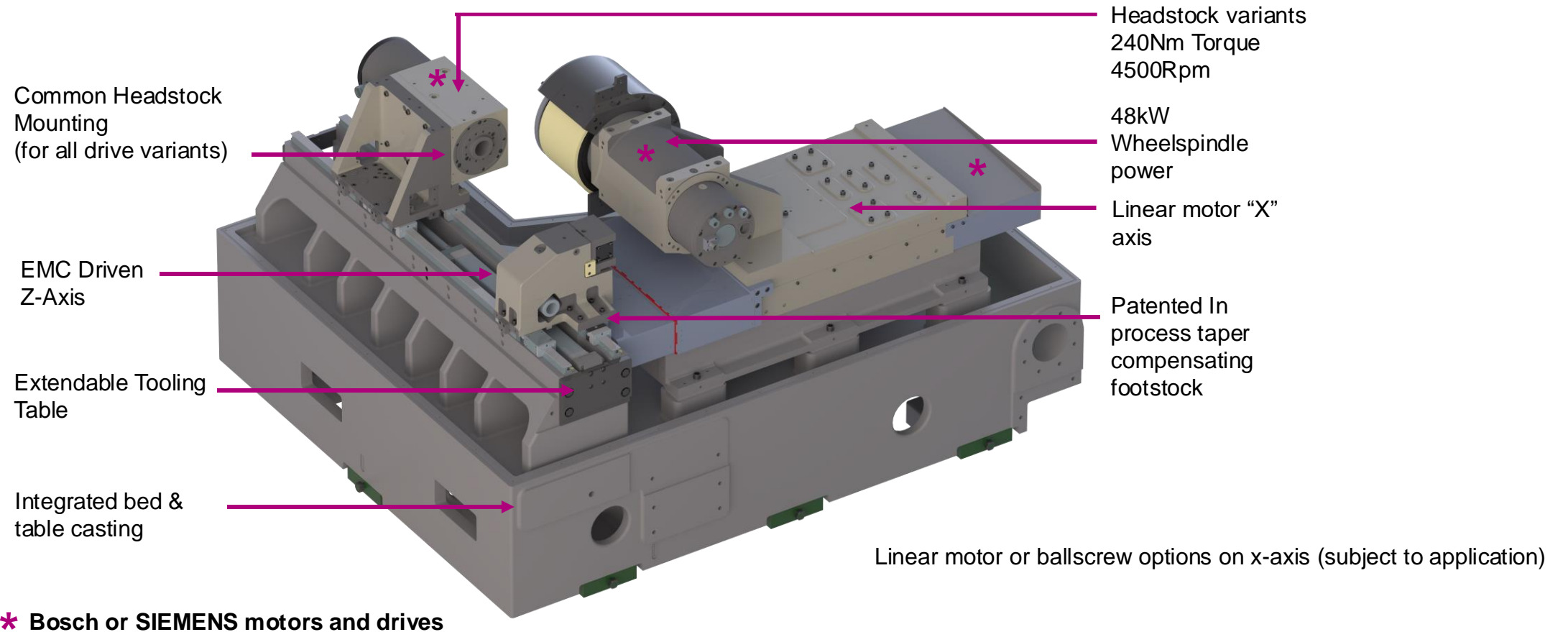


pseudo Z-Axis

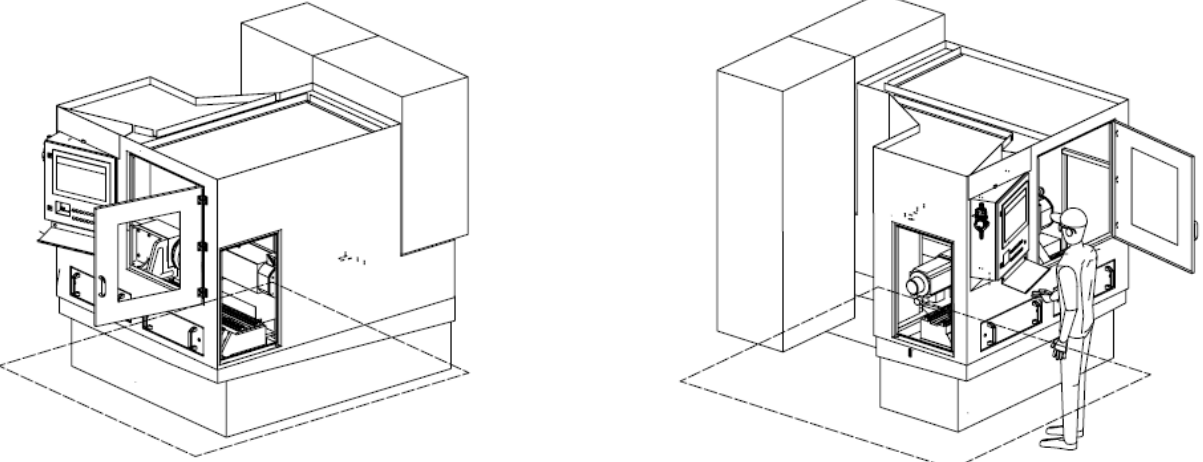
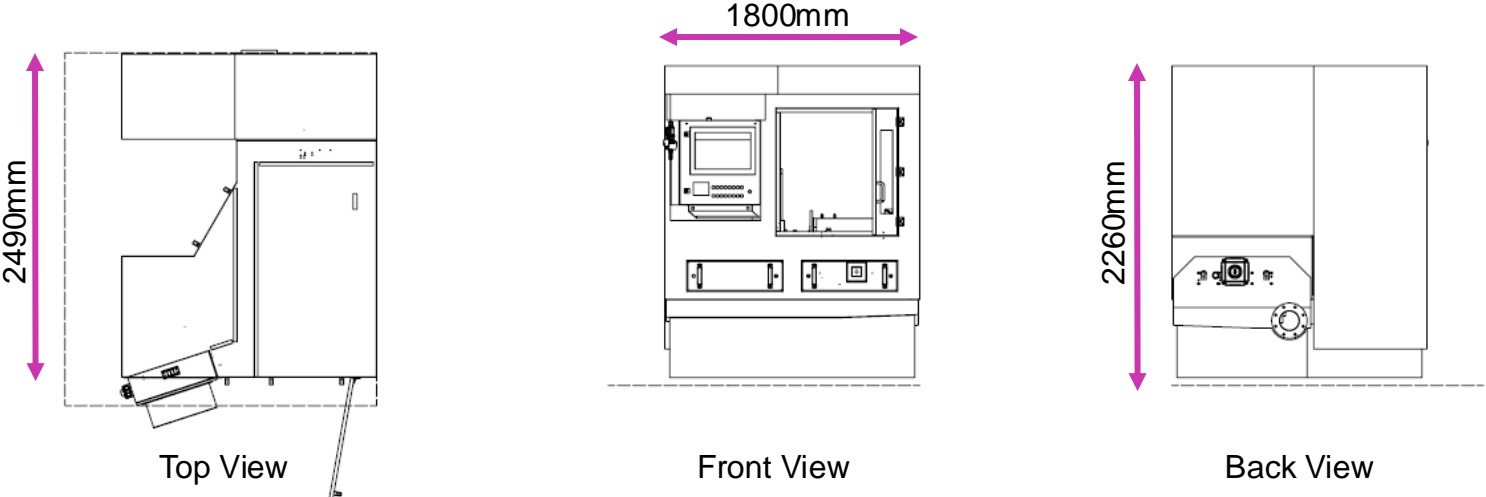


X-Axis

# LANDIS 18Ω – KEY FEATURES

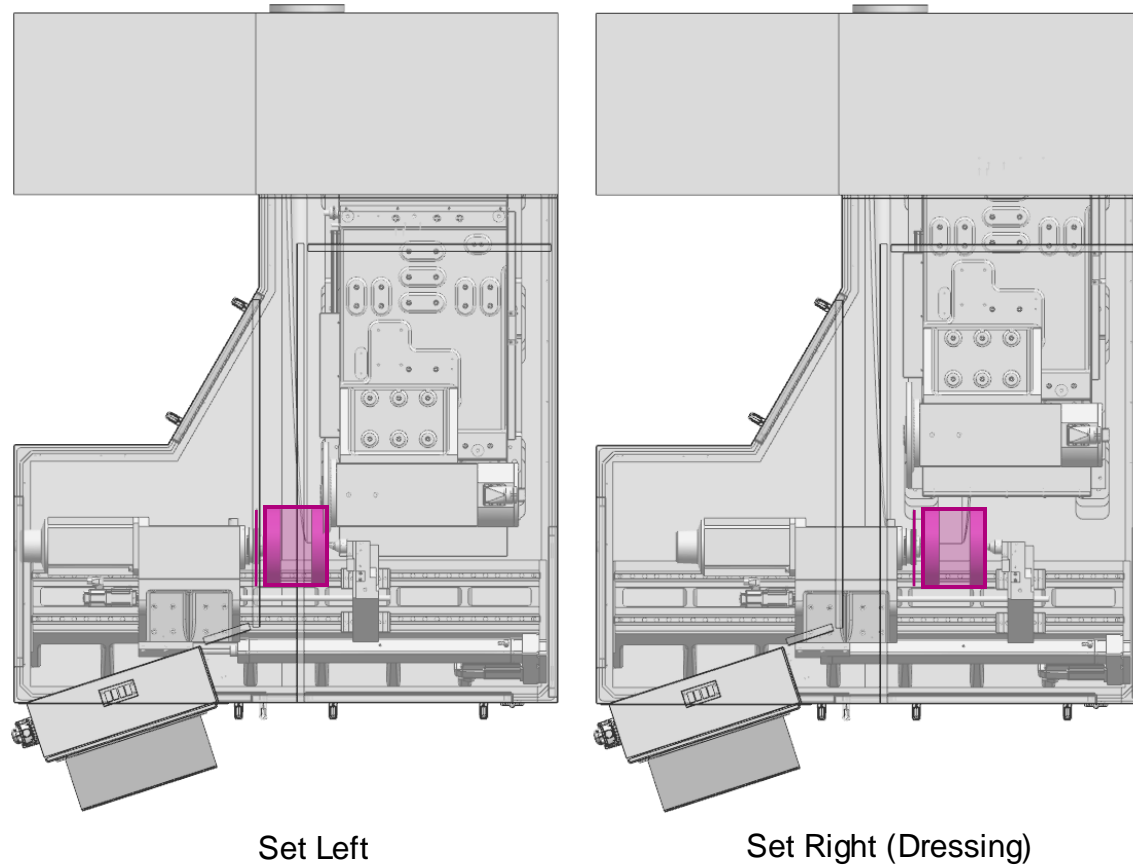


# LANDIS 18Ω – BASE MACHINE SIZE





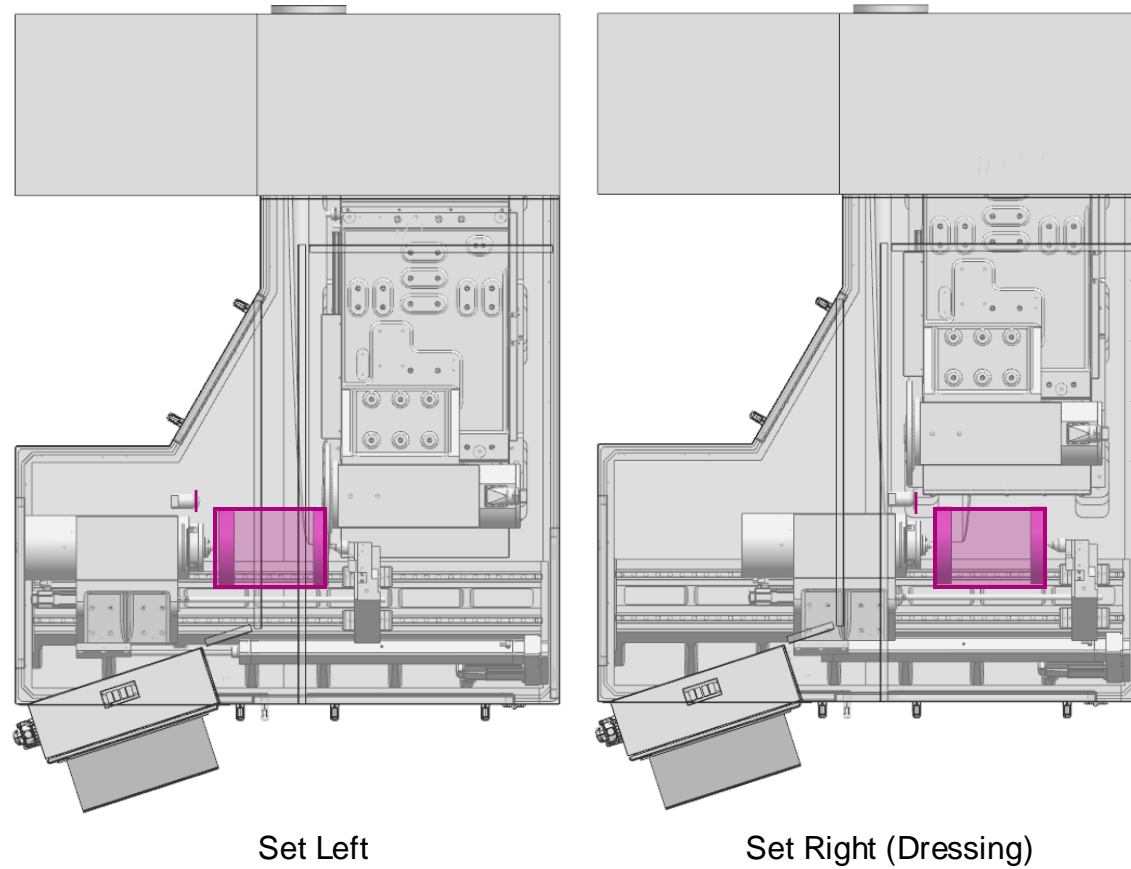
# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 1



## Details

- ⚡ Wheel = CBN Ø350X17mm
- ⚡ Workdriver = Centre Friction
- ⚡ Component = Ø280X200mm
- ⚡ Dresser = Headstock Centreline Dressing

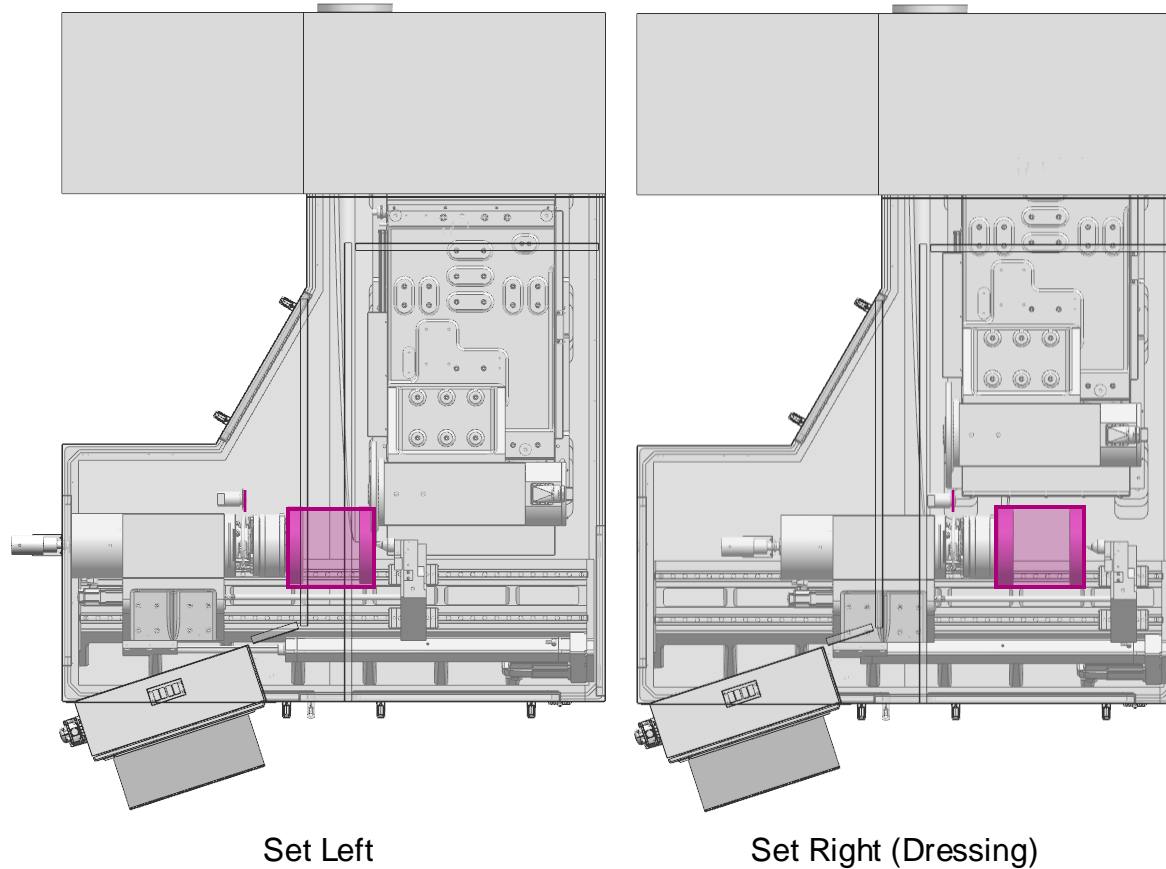
# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 2



## Details

- ⚡ Wheel = CBN Ø350X17mm
- ⚡ Workdriver = Centre Friction
- ⚡ Component = Ø280X360mm
- ⚡ Dresser = Headstock Mounted Dressing

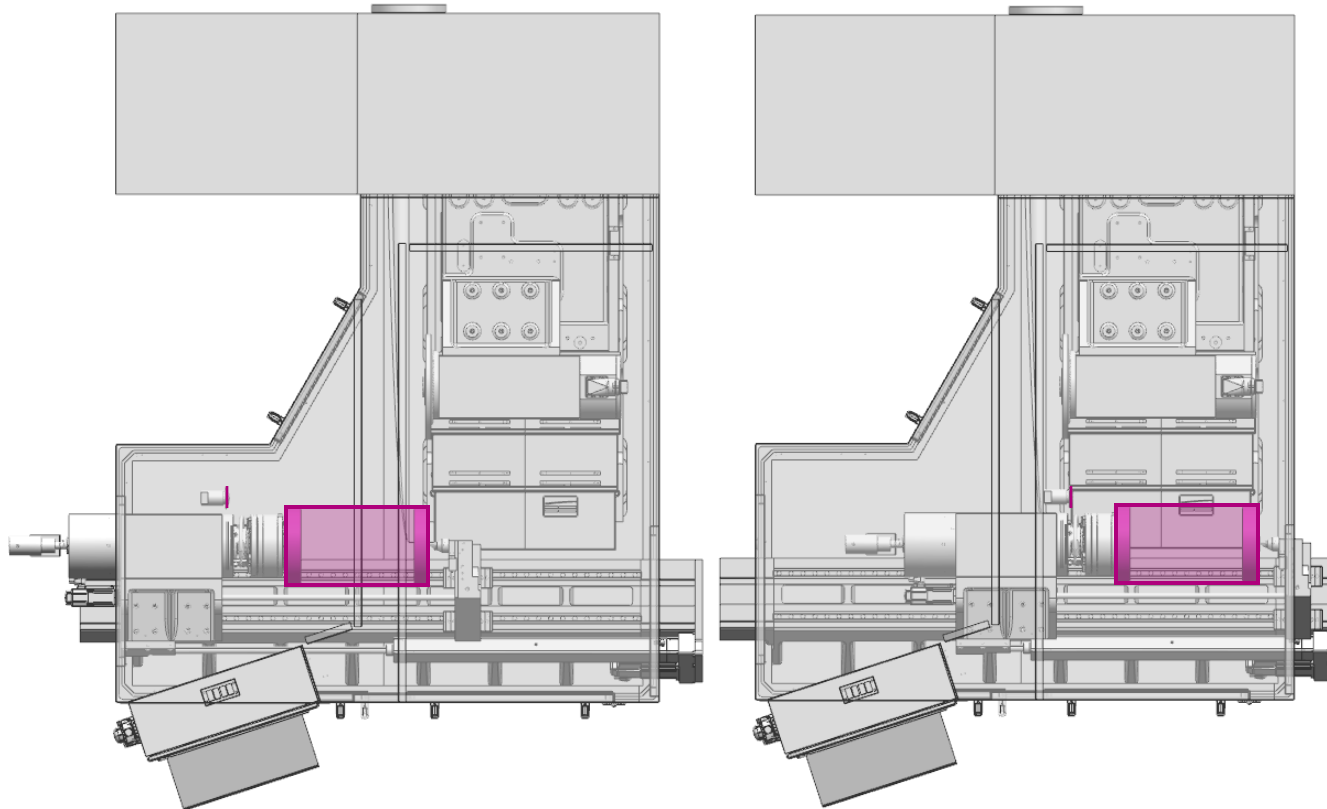
# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 3



## Details

- ⚡ Wheel = CBN Ø350X17mm
- ⚡ Workdriver = Chuck/Collet
- ⚡ Component = Ø280X290mm
- ⚡ Dresser = Headstock Mounted Dressing

# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 4



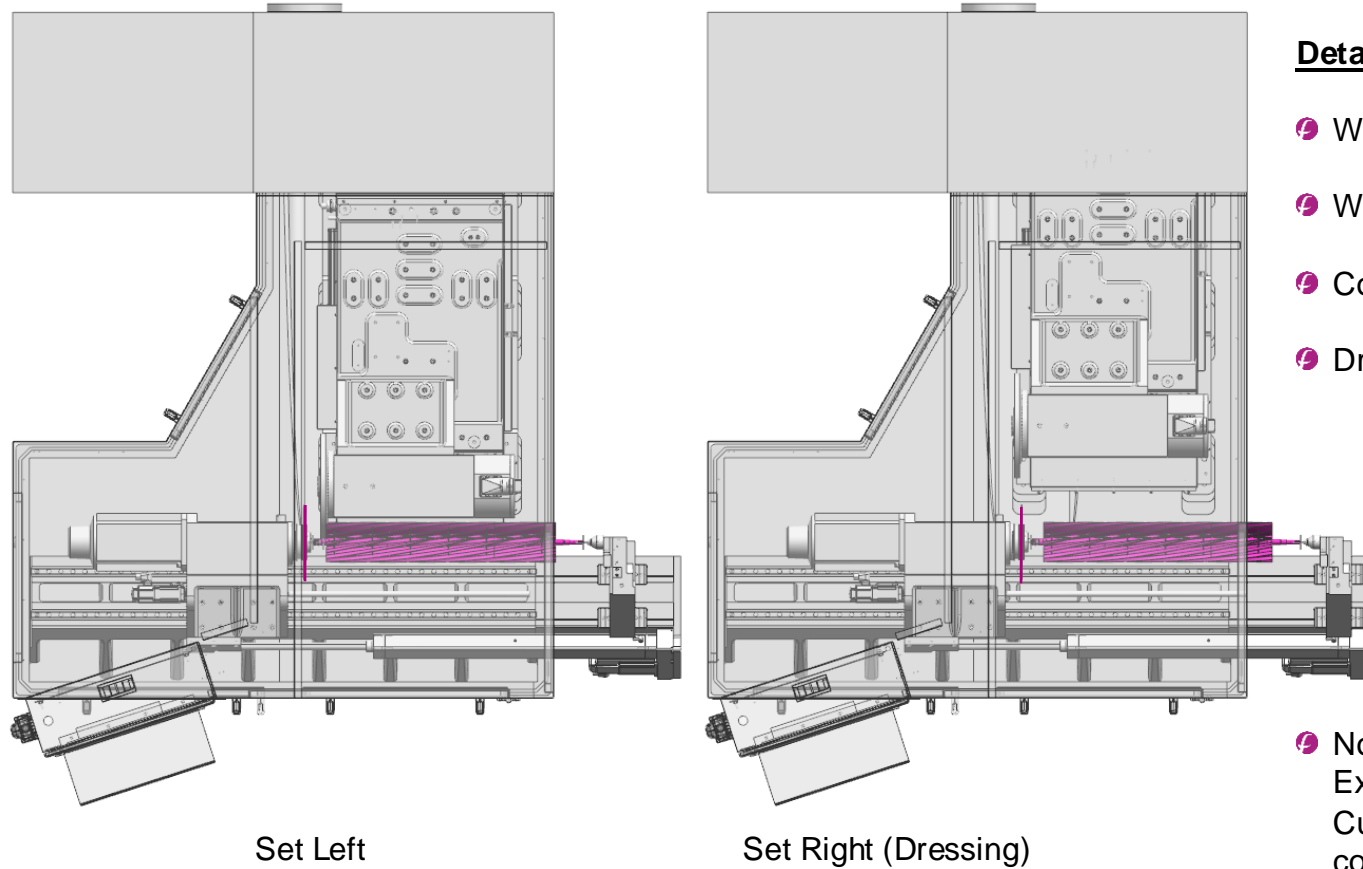
Set Left

Set Right (Dressing)

## Details

- ⚡ Wheel = CBN Ø350X17mm
- ⚡ Workdriver = Chuck/Collet
- ⚡ Component = Ø280X475mm
- ⚡ Dresser = Headstock Mounted Dressing
- ⚡ Note = 180mm LH/RH Table Extension

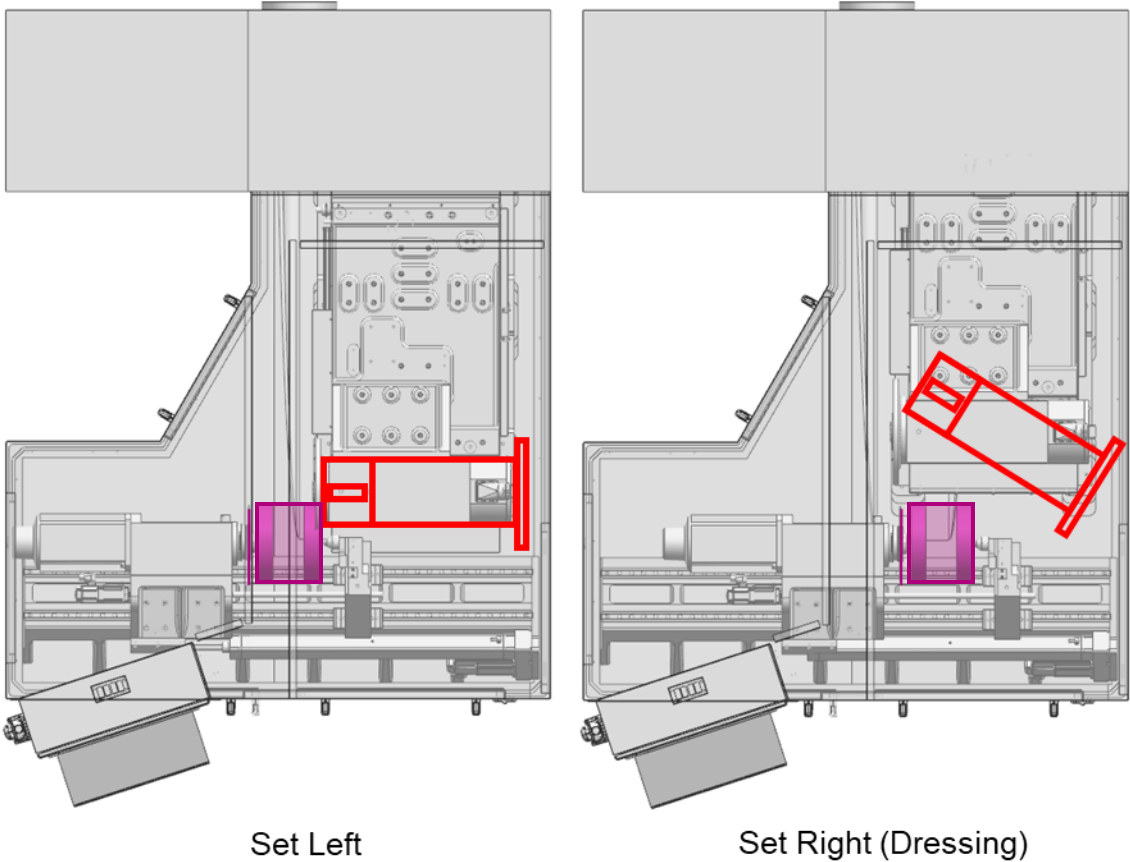
# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 5



## Details

- Wheel = CBN Ø350X17mm
  - Workdriver = Fixture
  - Component = Ø135X900mm
  - Dresser = Headstock Centreline Dressing
- Note = 420mm RH Table Extension. End Dia Grinding. Customer to manually flip component

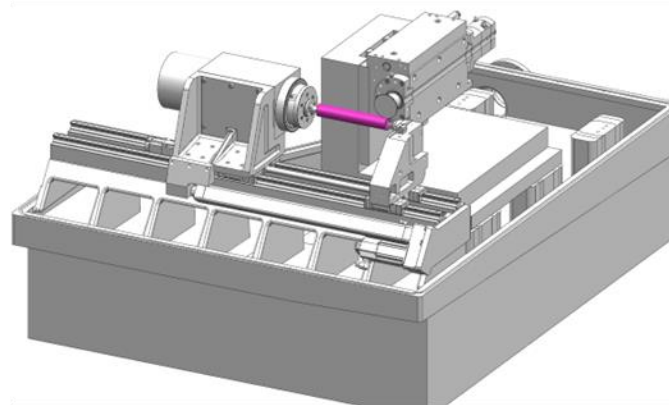
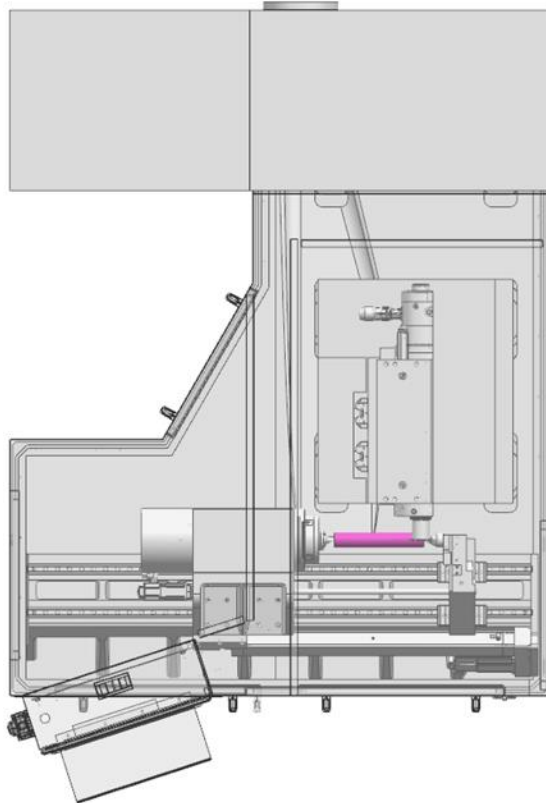
# LANDIS 18Ω ALTERNATIVE WHEELSPINDLE CONFIGURATION



### Details

- Wheel = CBN Ø350, RH mounted
- Wheel = CBN Ø350, RH mounted, max 32.5 degree angle

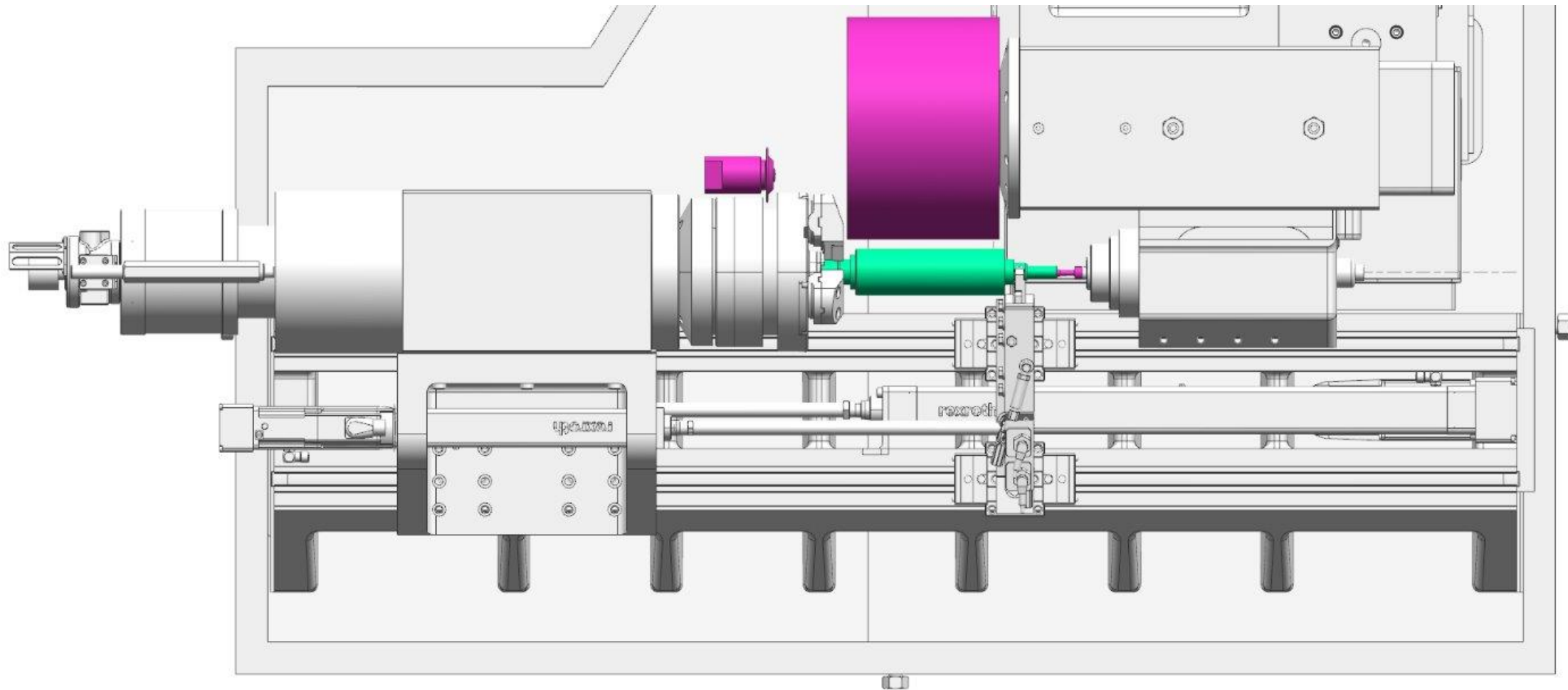
# LANDIS 18Ω – TYPICAL FUNCTIONAL AXIS POSITIONS: 6



## Details

- ⚙ Wheel = CBN Ø98X4mm Plated
- ⚙ Workdriver = Fixture
- ⚙ Component = Ø50X300mm
- ⚙ Note = Vertical Wheelfeed.  
Grinding slot parallel to shaft.

# LANDIS 18Ω – ID & OD GRINDING CONFIGURATIONS







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Industry can do it