



SHAPESMART®  
NP3+

SMART MACHINE SMART GRINDING



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# SHAPESMART® NP3+

## Technological evolution and unmatched performance

The ShapeSmart®NP3+ is a remarkable evolution of the previous precision cylindrical grinding models, which has made Rollomatic famous. This new model has been redesigned both ergonomically and technically to offer more features to tool manufacturers who are looking for a machine with the best value for quality, price and performance.

# SHAPEMART® NP3+

## PRECISION CYLINDRICAL GRINDING MACHINE FOR THE PREPARATION OF BLANKS

With a choice of 3 or 4 CNC axes, the ShapeSmart®NP3+ is a precision pinch and peel grinding machine for the preparation of cutting tool blanks such as endmills, drills and other stepped cylindrical tools, covering a range of diameters between 0.025 and 25.0 mm (.001" – 1.0").

This model is based on the method of peel grinding with simultaneous engagement of a roughing and a finishing wheel. This technology, invented by Rollomatic, guarantees unmatched performance in cylindrical grinding and achieves micron precision. In addition, a length ratio of up to 400x D can be achieved by this grinding concept.



CEPT  
COM



Automatic loader with a capacity of 1000 pieces

In-process tool measuring system for unattended production and diameter control under 0.002 mm

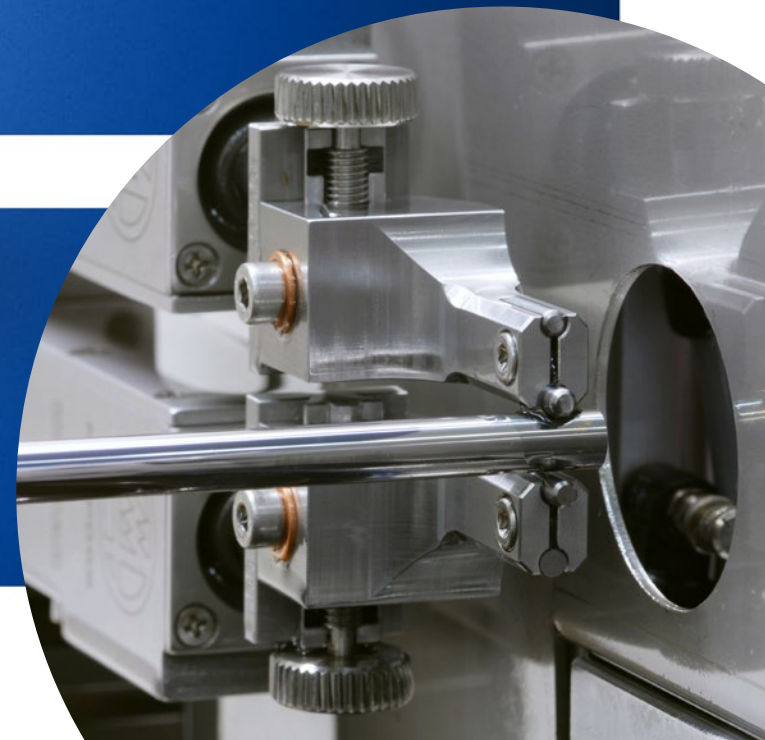
The shank guide system ensures a TIR after grinding of less than 0.002 mm

Automatic qualification of wheel positions

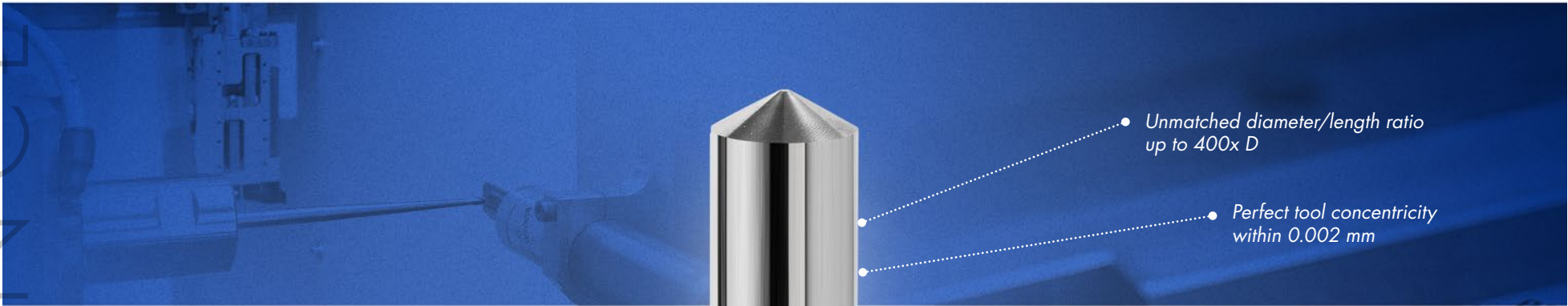
New 15" control panel with integrated PC

Flipper station able to grind double ended tools (up to 200 mm)

3D touch probe for neck and conical clearance between the cutting portion and the shank

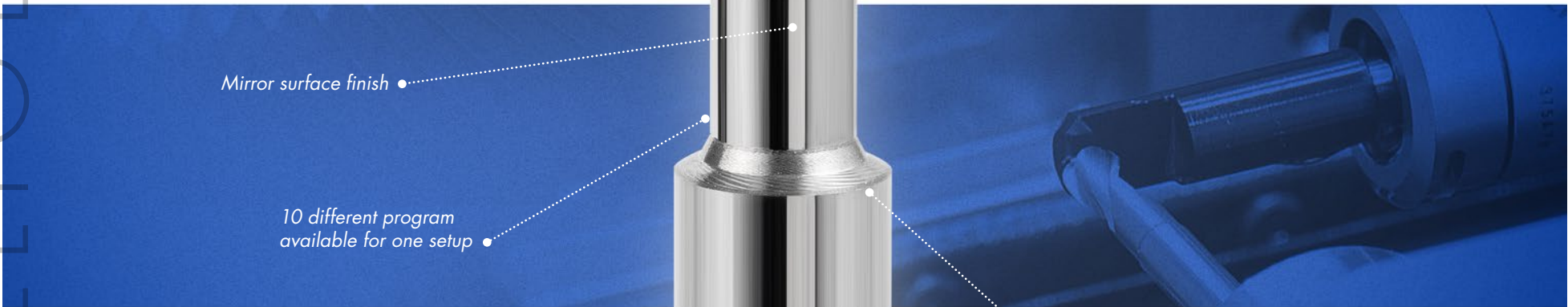


INTELLIGENT  
PRECISION



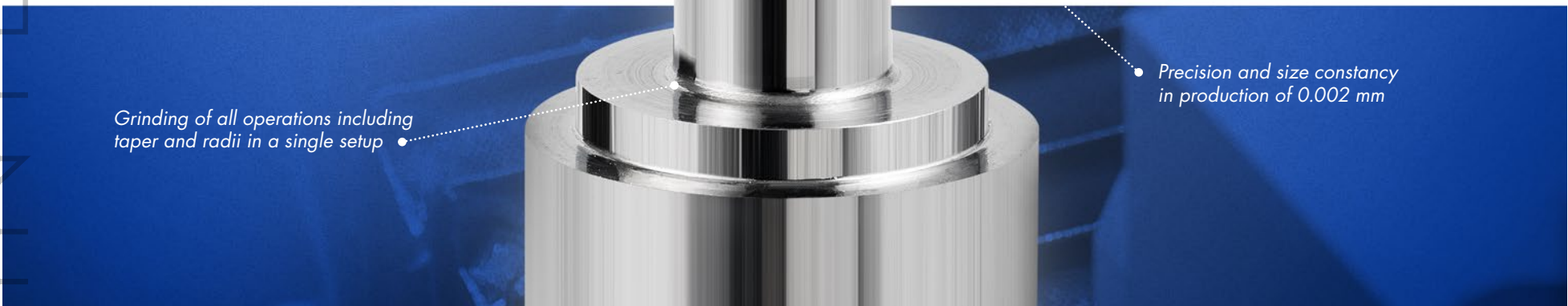
• Unmatched diameter/length ratio up to 400x D

• Perfect tool concentricity within 0.002 mm



• Mirror surface finish

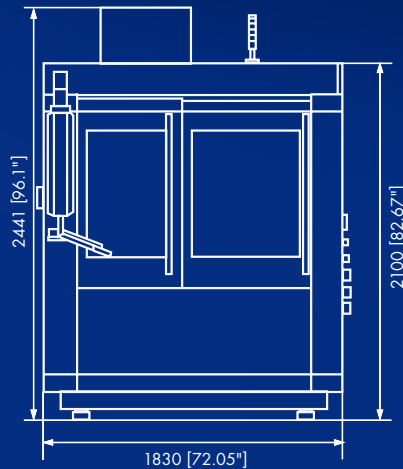
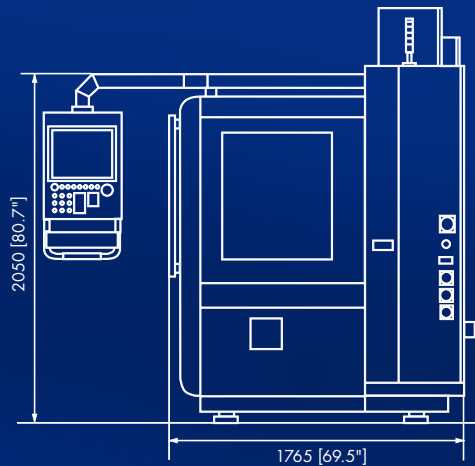
• 10 different program available for one setup



• Grinding of all operations including taper and radii in a single setup

• Precision and size constancy in production of 0.002 mm

## SHAPESMART®NP3+ TECHNICAL DATA (MM)



### GRINDING RANGE

Grinding  $\varnothing$  0.025 – 25.0 mm (.001"– 1")

Grinding length 330 mm (13")

### CONTROL

FANUC 32iB

CNC axes 3 Y/Z/X Grinding station

Y axis Stroke 350 mm (13.8")

Encoder type Rotary, on AC motor

Resolution 0.0001 mm (.000004")

Z axis Stroke 100 mm (3.95")

Encoder type Rotary, on AC motor

Resolution 0.0001 mm (.000004")

X axis Stroke 29 mm (1.14")

Encoder type Absolute linear scale

Resolution 0.00005 mm (.000002")

### MANUAL LOADING

Shank  $\varnothing$  1.0 – 25.0 mm (.04"– 1")

Overall length 20 – 350 mm (.787" – 13.8")

### WORKHEAD

Motor 0.70 kW (1 HP)

Rotation 300 – 3000 r.p.m. adjustable,  
converter

Clamping system Schaublin W20

Clamping type Pneumatic

Clamping range  $\varnothing$  1.0 – 25.0 mm (.04"– 1")

### GRINDING MOTOR & SPINDLE

Roughing Motor 8.5 kW (11 HP), Belt drive,  
Internal cooling

Roughing Spindle  $\varnothing$  100 mm (4"), PerfectArbor™

Rotation speed max. 7600 r.p.m. adjustable

Roughing Wheel  $\varnothing$  250 mm (10")

Configuration 90° or 10°

### ROBOT LOAD & UNLOAD (OPTION)

CNC axes 3 U<sub>L</sub>/V<sub>L</sub>/W<sub>L</sub> Robot station

(L = Loader)

Shank  $\varnothing$  1.0 – 20.0 mm (.04"– .78")

Overall length 30 – 300 mm (1.2" – 12")

### FINISHING STATION (OPTION)

V axis Stroke 29 mm (1.14")

Encoder type Absolute linear scale

Resolution 0.00005 mm (.000002")

Finishing Motor 1.4 kW (2 HP)

Direct drive, Internal cooling

Finishing Spindle  $\varnothing$  100 mm (4"), PerfectArbor™

Finishing Wheel  $\varnothing$  150 mm (6")

Rotation speed max. 10000 r.p.m. adjustable

### DIMENSIONS

L x W x H 1830 x 1765 x 2441 mm  
(72" x 70" x 96")

Net weight Approx. 3000 Kg (6614 lbs.)

Total Power Maximum 15 kW,  
3 x 400V/25A

\* Specifications are subject to change without notice