



SHAPESMART®
NP50

SMART MACHINE SMART GRINDING

EN



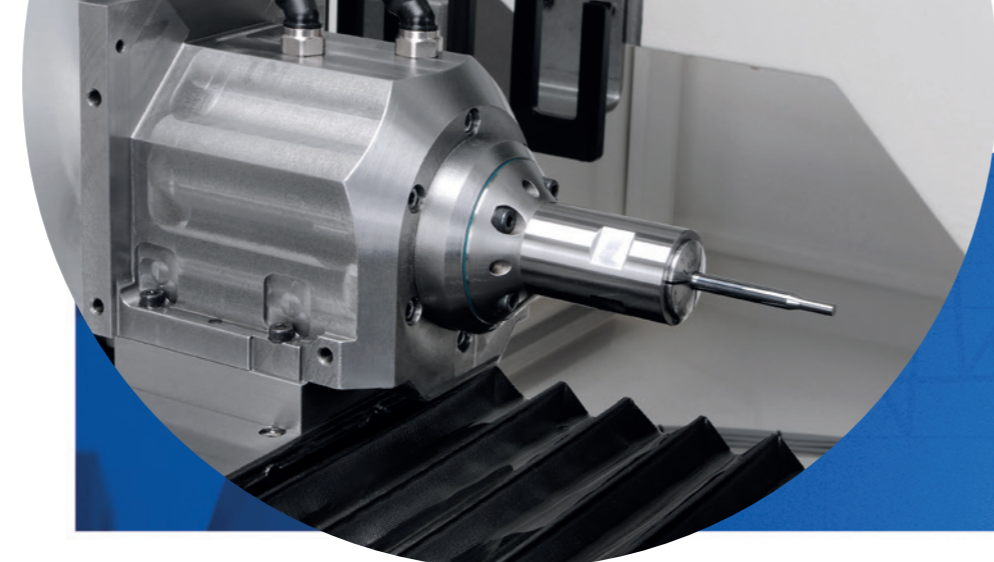
SHAPESMART® NP50

EVEN GREATER FLEXIBILITY AND POWER

Designed for both long and short batches, the ShapeSmart®NP50 is based on the method of peel grinding, a technology invented by Rollomatic. It covers a range between Ø 0.025 and 25.0 mm.

There are two grinding methods; the first one consists of peeling the part in a single pass with simultaneous engagement of a roughing and a finishing wheel. For large material removals, the second process is a series of roughing passes followed by a final roughing/finishing pass that gradually removes the remaining material and preserves the roughing wheel.

The ShapeSmart®NP50 includes, as standard, an automatic high speed pick & place tool loader with a capacity of up to 1,360 tools and offers an optional automatic compensation system, allowing tolerances of +/- 0.001 mm to be maintained during unattended production and over an extended grinding time.



The **new design workhead**, with direct drive, offers more rigidity and a more precise indexing control, especially for applications requiring flat surfaces as well as for non-round punches.

The **two synchronous spindles** make the production process very quiet and their power increased to 14 kW allows roughing operations to be carried out on both axes.



The **roughing station** has been designed to enable different wheel positions with a rotation change from 0° to 10° and 90° in just a few minutes. This innovation offers both a huge savings on set-up times and positions the machine as the most flexible on the market.

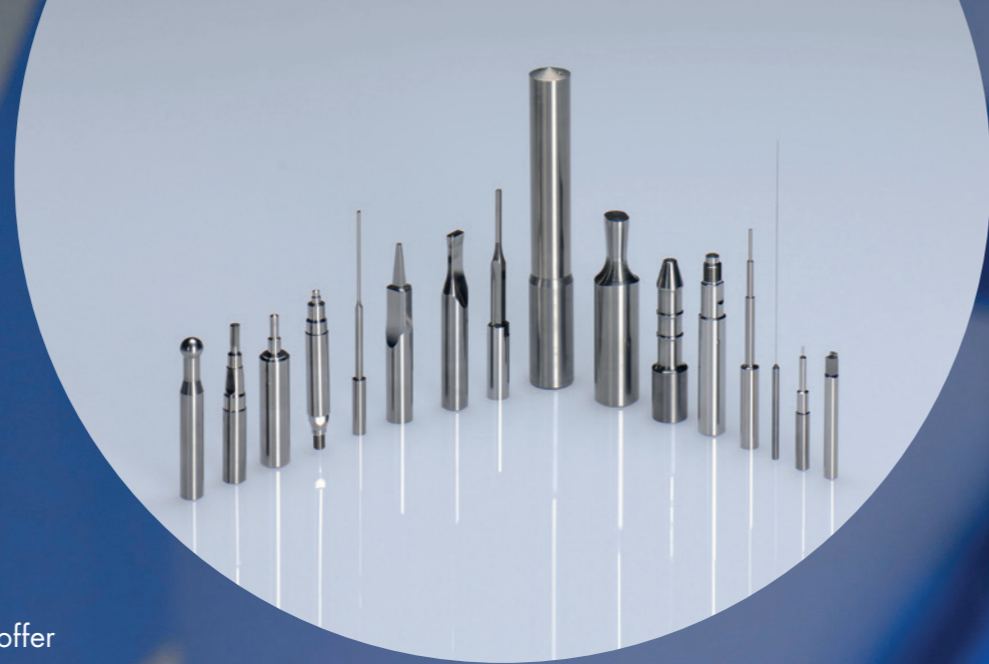


UNPARALLELED PERFORMANCE AND PRECISION

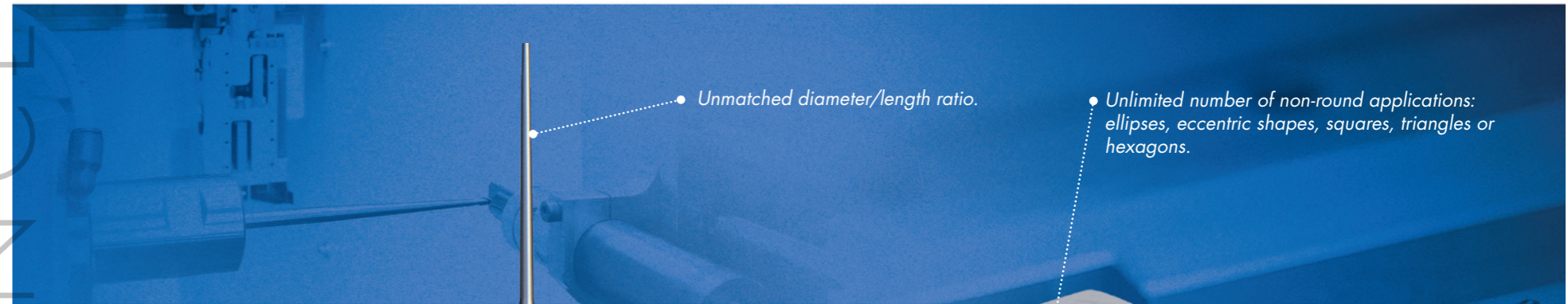
This new generation of cylindrical grinding machines has been redesigned to offer even more advantages for faster setup and tool grinding quality.

To extend the application range of this model, Rollomatic has developed a new patented method of pinch and peel grinding (US10207382): SmartPunch™.

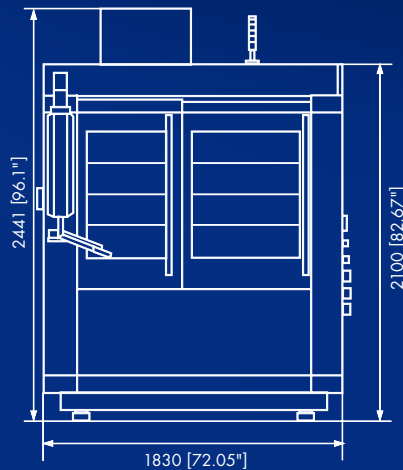
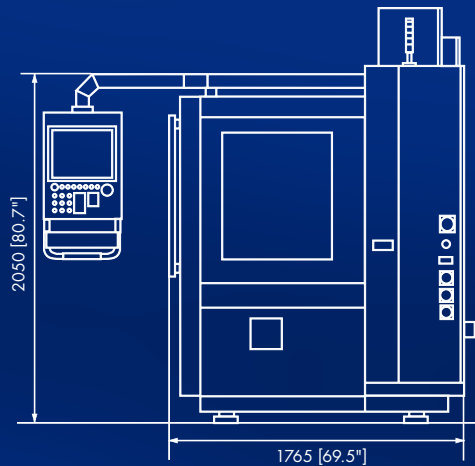
This innovative technique allows the design of an unlimited number of non-round applications such as ellipses, eccentric shapes, squares, triangles or hexagons in just a few clicks and always with the same wheel geometry.



INTELLIGENCE



SHAPESMART®NP50 TECHNICAL DATA



GRINDING RANGE

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

Grinding length max. 330 mm (13")

CONTROL

CNC axes 5 C/Y/Z/X/V Grinding station

CNC axes 3 U_l/V_l/W_l Robot station (l = Loader)

Y axis Stroke 350 mm (13.7")

Resolution 0.0001 mm (.000004")

Z axis Stroke 100 mm (3.95")

Resolution 0.0001 mm (.000004")

X axis Stroke 32 mm (1.25")

Resolution 0.00001 mm (.0000004")

V axis Stroke 32 mm (1.25")

Resolution 0.00001 mm (.0000004")

C axis Tool rotation 0 – 3000 r.p.m.

Resolution 0.0001°

Linear interpolation up to 4 axes simultaneously

+ 3 robot axes

WORKHEAD

Clamping system Schaublin W20

Clamping type Pneumatic

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

ROBOT LOAD & UNLOAD

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

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

MANUAL LOADING

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

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

GRINDING MOTOR & SPINDLE

Roughing Motor 14 kW (19 HP) Direct drive,

Internal cooling

Roughing Spindle \varnothing 118 mm (4.6"), PerfectArbor™

Cutting speed Adjustable, frequency converter

Roughing Wheel \varnothing 250 mm (10")

Finishing Motor 14 kW (19 HP) Direct drive,

Internal cooling

Finishing Spindle \varnothing 118 mm (4.6"), PerfectArbor™

Cutting speed Adjustable, frequency converter

Finishing Wheel \varnothing 150 mm (6")

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



A CLUSTER OF GENIUS
GRINDING + INTELLIGENCE + AVANT-GARDISM