

## E 50 RT

Fully Automatic Hand Knife Sharpening Machine



# Maximized yield

Robotic technology provides perfect ground hand knives



■ Measuring hand knives



■ Sharpening hand knives

Perfectly ground hand knives enable more accurate cuts. Hand knives, ground with the E50RT robotic technology, increase the yield of meat up to 0,5 % compared to manual grinding. At 10 000 tons meat production, this means a 50 000 kilograms higher rate of yield.

Precisely ground hand knives bring down the risk of accidents and reduce absences due to inflammation in the arm and shoulder (reduced incidence of musculoskeletal disorder (MSD) by up to 80 %; source Anago Ltd).



## ■ Six-axis robot

The central organ of the sharpening machine is the Six-axis robot. It grabs the knife handle, move the knives through the different processing positions and guides them through the sharpening stages, according to its exact shape. The repeat accuracy amounts to 0.03 mm. The robot is completely sealed (IP65) and designed for operating under aggressive work environment conditions.

## ■ Individual measurement

Before the sharpening program starts, each individual knife is scanned at the measuring station. The detected knife shape is then converted into CNC data. The robot steers the knife, according to this data, through the complete sharpening process. Thus, the original knife shape is retained through every re-sharpening process.

## ■ 780 Hand knives per 8-hour shift

The E50RT has a performance of up to 780 hand knives per 8-hour shift, depending on the shape and size of the knives. The necessary personnel deployment thereby amounts to 1–2 hours.

# Best quality

Precise cuts optimize the product quality



■ Deburring hand knives



■ Polishing hand knives

The E 50RT sharpens hand knives of various shapes and sizes fully automatically.

The six-axis robot takes the knife out of the magazine – it is optically detected – next, the knife is sharpened, deburred and polished – the robot returns the knife to the magazine.

The output is up to 780 hand knives per 8 hour shift at 1–2 hours personnel deployment.



## ■ Knife magazine

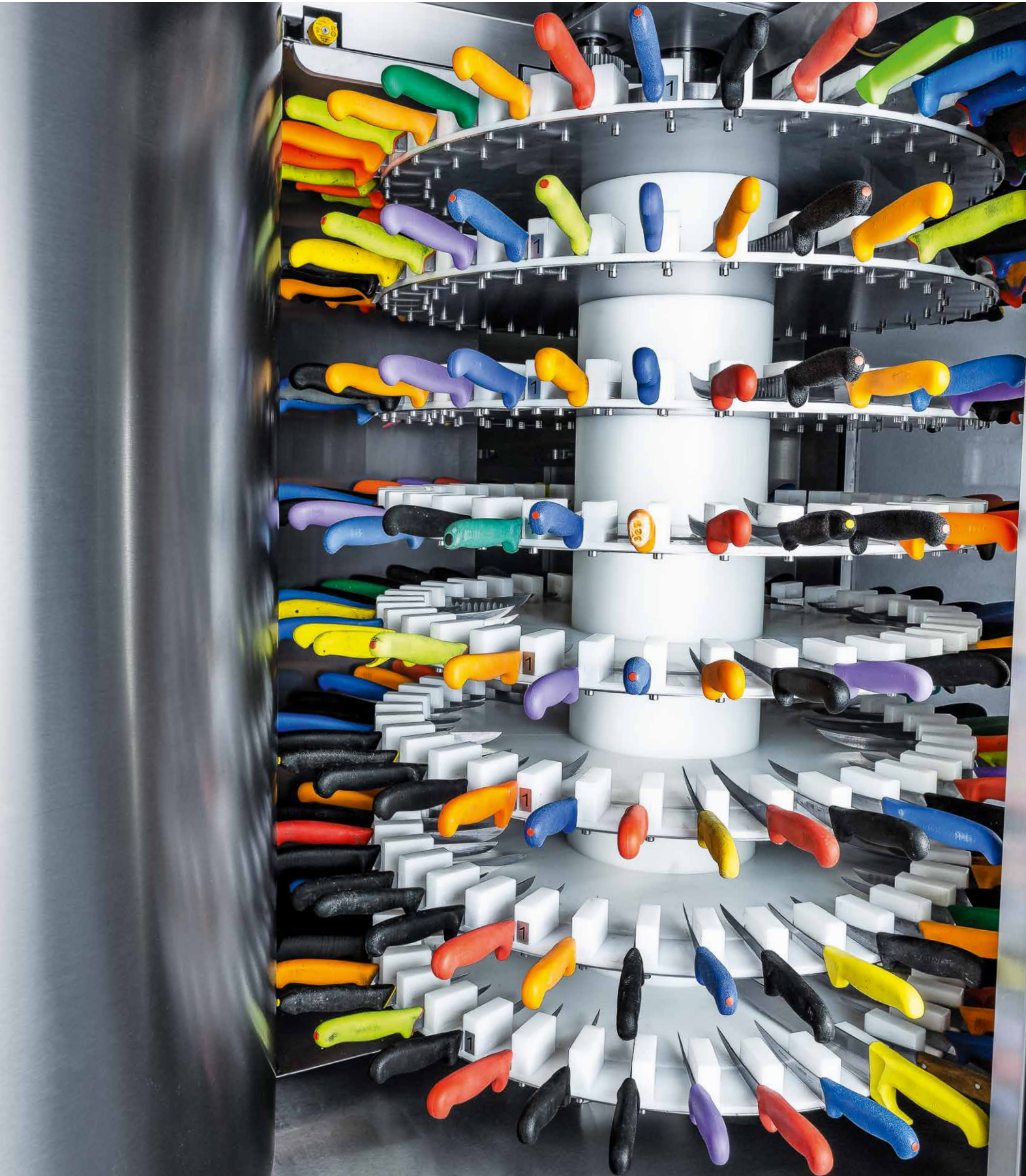
The magazine consists of two towers and has space for 576 knives. It can be loaded during the operating process. That means – no downtime because of magazine change. If the magazines are fully loaded at shift changeover, the E 50RT processes 576 knives completely manless. Since each knife is individually detected before the sharpening process begins, the magazines can be loaded with knives of various shapes and sizes.

## ■ Sharpness testing device (optional)

After the knife has been polished, the E 50RT tests its sharpness fully automatically. The knife penetrates a test medium in the process. The measured sharpness is shown on the display. If the sharpness falls below the minimal value set, the knife is displayed as 'not sharp'. If the set sharpness is also not achieved with the next knife, the grinding machine shuts down. The reason for the shut-down is displayed.

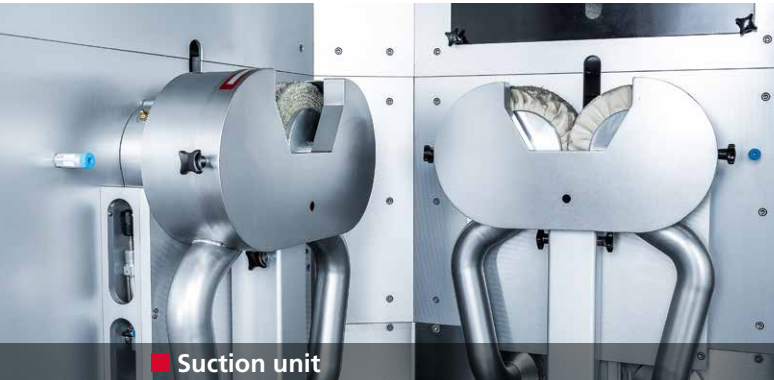
## E 50 RT

Fully Automatic Hand Knife Sharpening Machine



# Health-supporting technology

Completely encapsulated machine with suction unit and water cooling



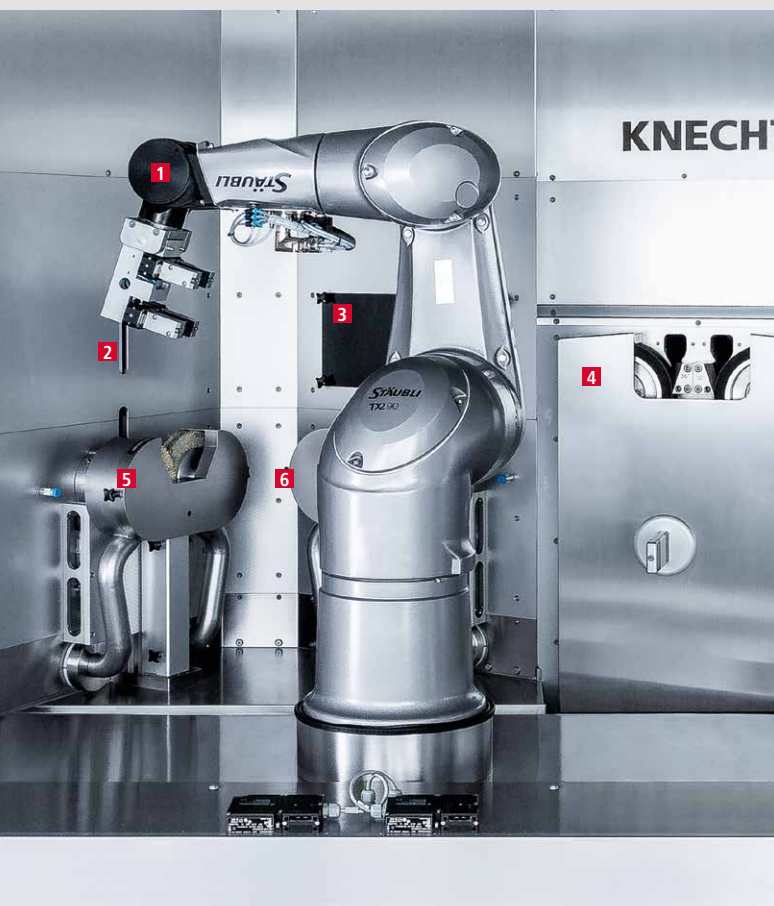
Suction unit



Coolant monitoring

The serial suction unit and the water cooling considerably reduce all emissions arising from sharpening and polishing. This protects the operator's respiratory system.

The machine room remains nearly clean. This increases the operational safety of the mechanical components. The filtered out grinding and polishing abrasion collects in a tray. There, it can be easily disposed of in an environmentally-friendly way.



- 1 Six-axis robot
- 2 Sharpness testing device (optional)
- 3 Laser measuring device
- 4 Wet-grinding belts
- 5 Deburring wheels
- 6 Polishing wheels

## E 50 RT

### Technical specifications and space requirements\*

■ Depth	2872 mm
■ Width	2686 mm
■ Height	2043 mm
■ Weight	approx. 2300 kg
■ Depth*	6500 mm
■ Width*	5500 mm
■ Height*	2100 mm
■ Electrical supply	8 kW 3x 400 V 50Hz
■ Back-up fuse	25 A
■ Compressed air supply	6.5 bar
■ Compressed air consumption	< 50 l per minute
■ Emission sound pressure level according EN ISO 11201	approx. 72 dB (A)
■ Internet connection	RJ45
■ Knife magazine	576 knives
■ Performance	approx. 780 knives per 8-hour shift

The machine meets the EC safety and health requirements and is provided with the CE-symbol.  
As at 2022.06 | Subject to technical modifications.

