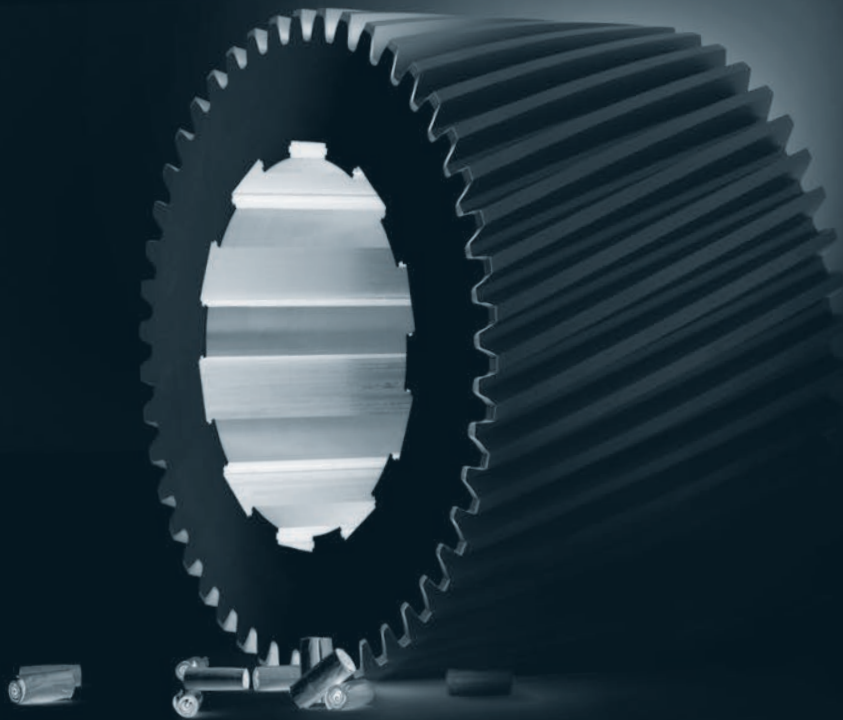




# *Electromechanical Keyseating and Profiling Machines*



*Innovation, Quality, and Operating Efficiency*



# Keyseating

Keyseating is a cutting manufacturing process. Grooves for wedges and feather keys are applied into bores of workpieces. Also internal profiles and contours can be cut. The cutting tool is a single edged cutter. It has the width of the required groove or the shape of the required profile. Every groove or profile is made in a multitude of vertical cutting strokes.

Because of the low expenses for the cutting tools, keyseating is suitable for single-item production and batch production.

The FRÖMAG keyseating and profiling machines Series E 32-3/ 50-3/70-3 are designed for high dynamic machining processes due to their improved robustness. They are available in three control configuration levels, to satisfy all customer needs. LPC with 5,6", PPC with 10" and APC with 15" touch screen monitor.

Both the stroke and the infeed motion are guided via high-precision ball splines and linear guidings. This leads to a high smoothness and stiffness in the machine movements.

The position detection is carried out by into the servo motors integrated absolute encoders for both axis. They replace the commonly used, susceptible linear position sensors.

The coupling between the motors and the ball screws is made via toothed belts. The operation of the FRÖMAG keyseating and profiling machines is realized by an easy to understand graphical user interface. The texts in this interface are available in every national language.

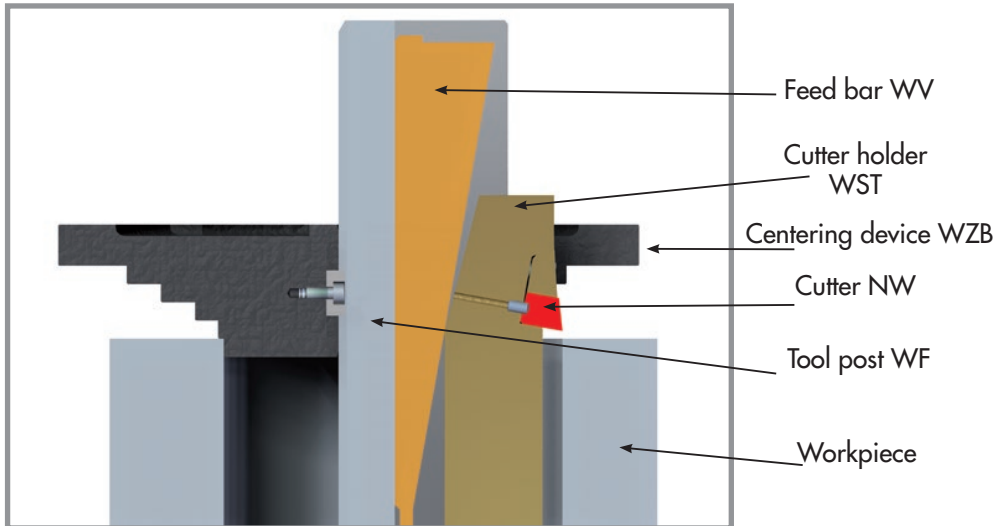
Compared to hydraulically driven machines FRÖMAG keyseating and profiling machines show the following significant advantages:

- Very high dynamic behaviour of the stroke and infeed axis, leading to fast movements and precision reversals
- Rigid, heavy-duty backlash and maintenance free precision roller guided in all axis
- High machining precision
- The FRÖMAG Rapida E 32-3/ 50-3/ 70-3 series is placed on ground level in stroke length 425mm and optionally for 600mm
- Low space requirement due to compact design without additional hydraulic unit
- No hydraulic oil and costs for maintenance, servicing, oil change, storage and disposal
- No thermal pollution of the environment by the hydraulic unit
- Simple mechanical design
- Low noise emission
- Energy saving
- Position detection in the drive motors
- Easy maintenance and service

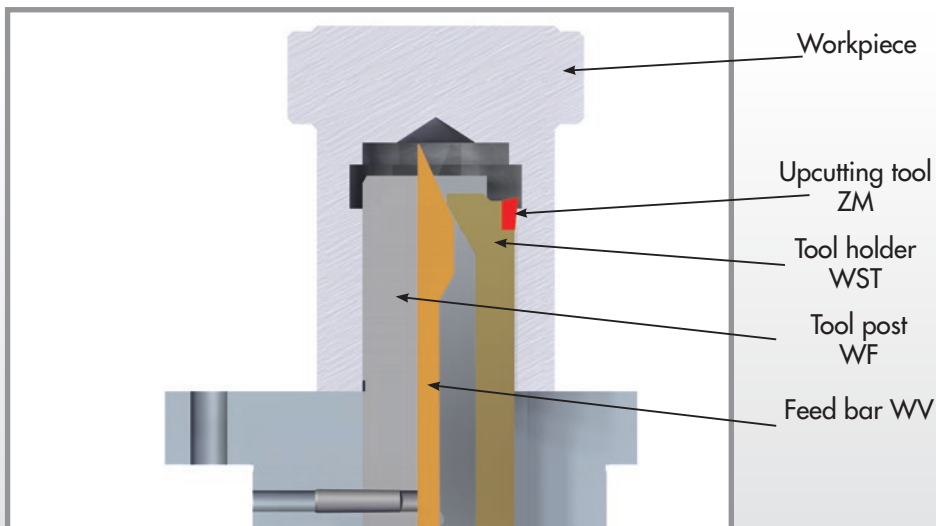
The innovative FRÖMAG electromechanical keyseating and profiling machines work with the highest quality and excellent efficiency.

# The technical principles:

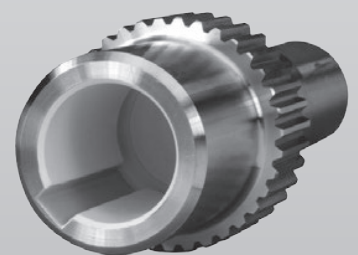
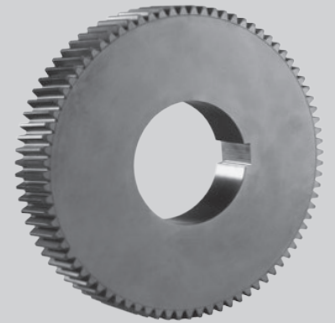
## The technical principle keyseating



## The technical principle slotting with guided tool



## Workpiece samples



## Advantages of eletromechanical keyseating and profiling machines:

- Energy efficient work, since the driving power is accessed only when needed
- Higher efficiency than hydraulic machines
- Very stable running characteristics
- High precision stroke and infeed
- Low noise emission
- No risk of leakage in the hydraulic system, no filter change
- Maintenance-free, temperature-independent operation
- No heating of the system by hydraulic flow losses
- Teleservice via mobile and fixed network (option)



Rapida E 32-3-425-LPC



Rapida E 32-3-425-PPC

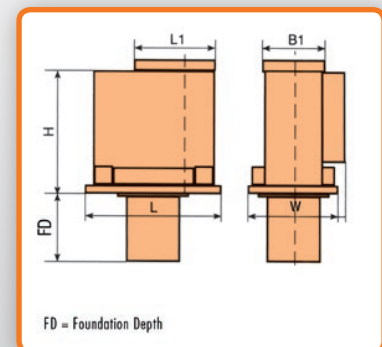


Rapida E 32-3-425-APC

## Features and dimensions Rapida E 32-3/50-3/70-3

- Subject to change without notice -

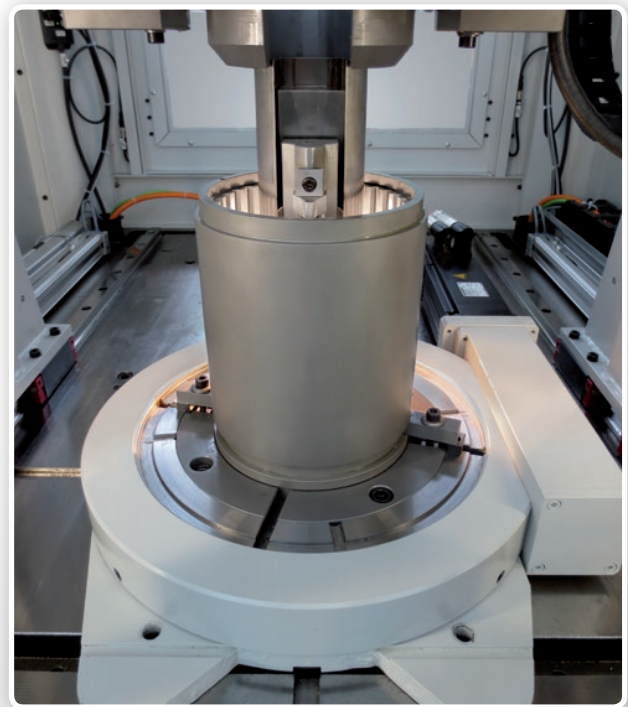
	E 32-3	E 50-3	E 70-3
Keyway width (mm)	2 – 32	2 – 50	2 – 70
Keyway length (mm)	425/600	425/600	425/600
Bore size (acc. to DIN)	10 – 130	10 – 230	10 – 500
Cutting- and Return Speed (m/min)	0 – 15 0 – 30	0 – 15 0 – 30	0 – 15 0 – 30
Infeed rate/stroke (mm)	0,01 – 1,5	0,01 – 1,5	0,01 – 1,5
Loading Capacity kN	300	350	350
Machine Dimensions (mm)	H L W FD*	1290 1100 930 250	1310 1100 930 250
Machine Table Size L1 x B1 (mm)	640 x 600	640 x 600	780 x 600
Connected Load (KW)	5,5	7,5	11



FD = Foundation Depth

\*FD for machines with stroke > 425 mm

## *Clamping bridge*



E 70-3-600-APC incl. clamping bridge and automatic indexing table for fully automatic processing of workpieces with internal gearing



## FRÖMAG is your reliable partner for:

- Electromechanical Keyseating and Profiling Machines
- Electromechanical Slotting Machines
- Electromechanical Broaching Machines
- Special Purpose Machines
- Subcontracting

## *Innovation, Quality, and Operating Efficiency*

There are more than 5,000 FRÖMAG machines worldwide highly valued due to their precision and reliability.

They offer cost saving solutions for the jobs defined by our customers especially in the fields of:

**drive systems (motors, gears and gear boxes, couplings)**  
**pumps-, fittings-, actuators manufacturing systems**  
**materials handling and wind energy**  
**automotive and components**  
**special purpose machines...**

FRÖMAG is certified according to DIN EN ISO 9001

Please contact us,  
we will find a perfect solution for your requirements.



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