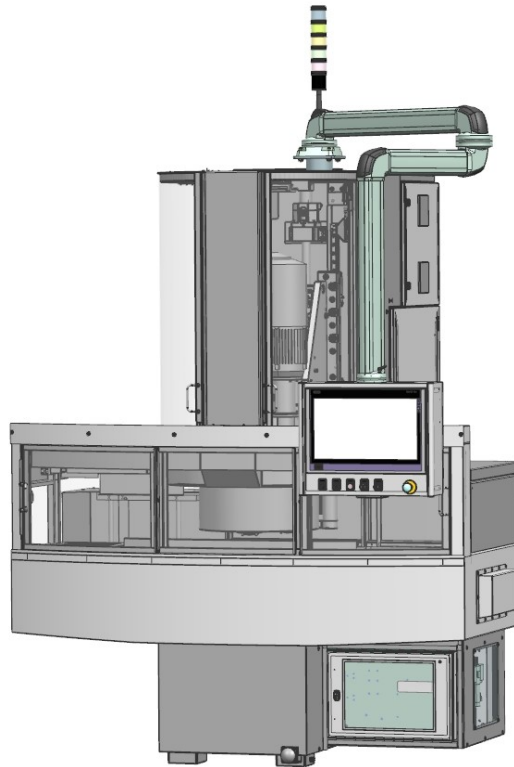


Basic machine FEM 1-3/2

Technical Description



The FLAKKOTING machine is suitable for precise and process-reliable edge preparation on cutting tools and precision components. At the same time, FLAKKOTING is used to change and improve the surface specifically. Hard coatings can also be polished and droplets removed.

The machine is designed and built in modern and rigid welded construction and in the separating chamber system, so that the machine and controlling components are protected against abrasive process materials. With just one **Plan-FLAKKO Multi**, flat and stepped or offset parts can be processed with high-performance in one or several stages.

Due to combined programmable workpiece transport movements, unit parameters and unit positioning in combination with precisely coordinated FLAKKOTING tools, the machine can be used quite universally. This means that contours, edge profiles, surfaces, offsets, interspersions and burr formations can be FLAKKOTED and surfaces finished. The solid construction and narrowest tolerances enable highly-precise edge preparations and processing. Depending on the respective requirements and processing tasks, equipment and FLAKKOTING tools for dry or wet processing can be provided.

Version from 12/05/2018, Subject to Change.
This version replaces all former descriptions.

TECHNICAL DATA**Plan-FLAKKO MULTI**

Technical data:

FLAKKO - Unit

Drive power head

Drive power of tool spindles

Spindle speed

Head speed

Number of spindles in FLAKKO

Tool dimension

Height adjustment axis

1 piece

4.0 KW

4.0 KW at 1500 RPM

50 – 2400 RPM

20 – 200 RPM

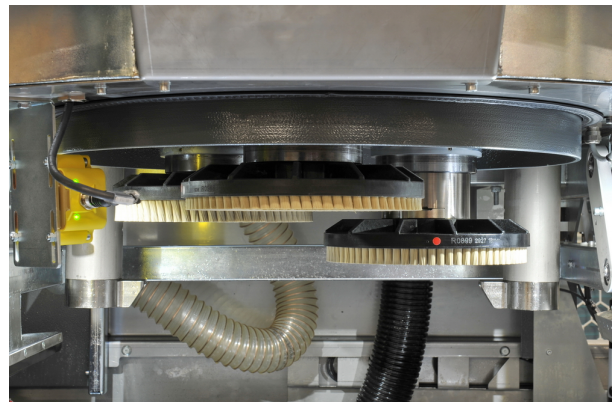
3 pieces

230 mm diameter

with servo drive

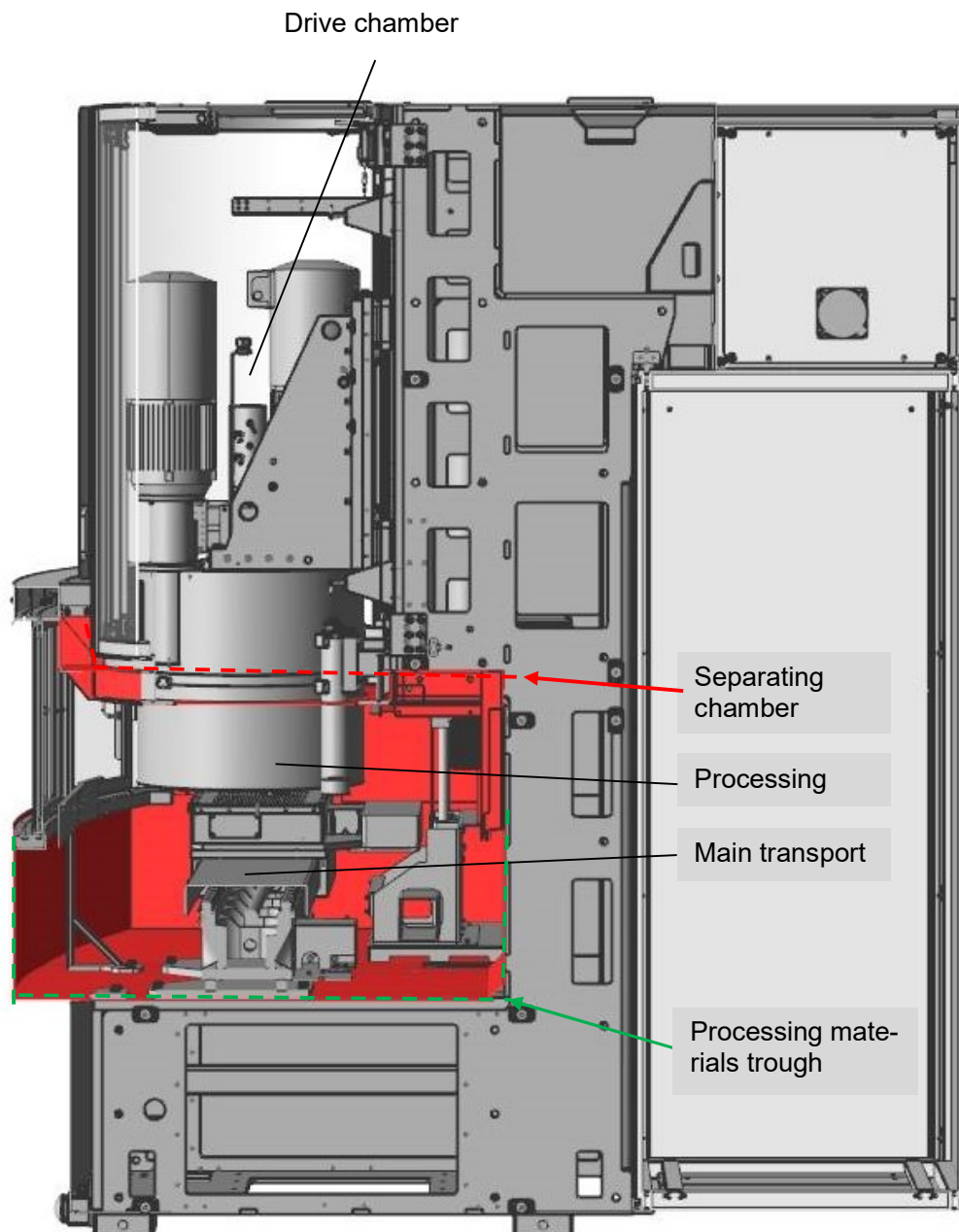


Customs revision (if applicable) three spindles individually and program controlled and the individual tools are be deployed



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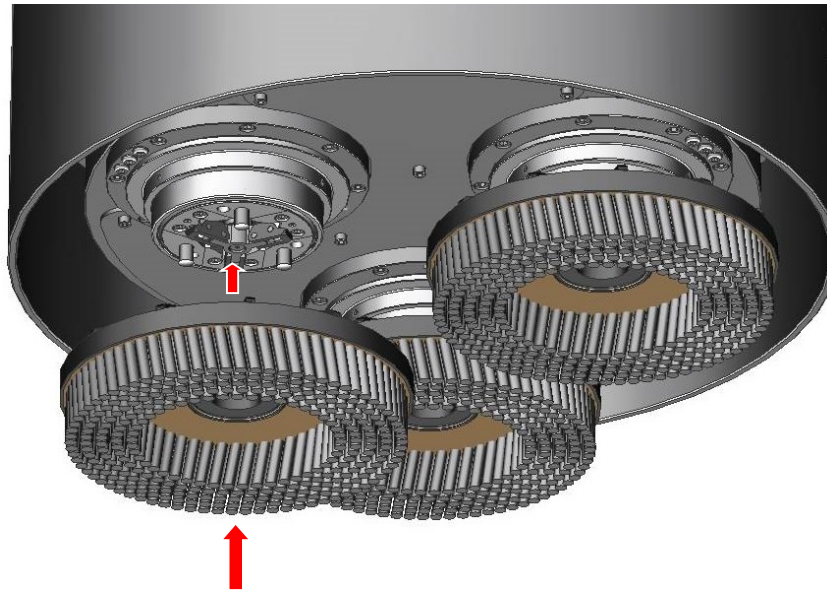
Machine design



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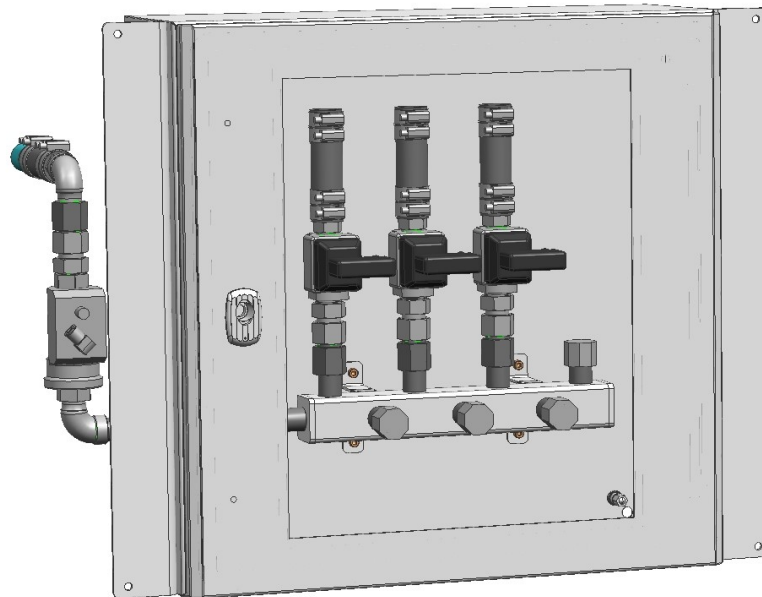
Tool clamping

Tool clamping is carried out with an automatic quick screw connection. The tool diameter is 230 mm.



The quick clamping system can be triggered via the foot switch on the bottom of the machine casing. A simple and quick way of conducting the tool change ambidextrously.

Version from 12/05/2018, Subject to Change.
This version replaces all former descriptions.

Wet processing

Consisting of valve block, spray pipes, lines, process cooling and individually controlled spray-offs. A check valve with flow monitor is installed at the machine processing material connection. The machine can be operated with emulsions or grinding oil.

Dry processing

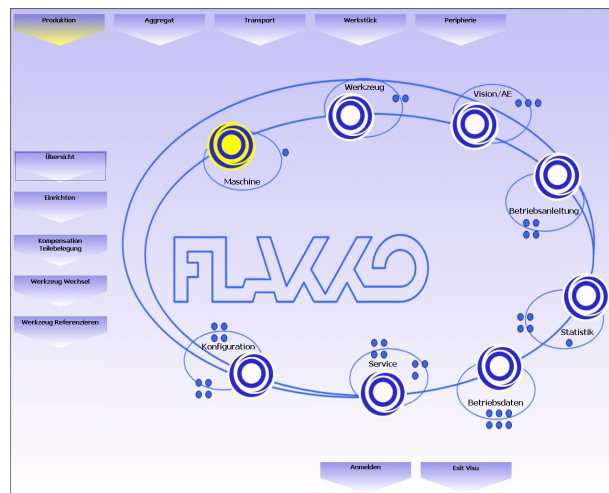
The modular machine concept and the tools also allow dry processing. An extractor with pocket filter (optional) is installed for this purpose.

Version from 12/05/2018, Subject to Change.
This version replaces all former descriptions.

Control

PLC control Siemens S7 with 15" touchscreen

- Operating modes are automatic, manual, revision
- Operator guided machine program
- Program storage with process and setting data
- Parts and performance oriented compensation control for process and quality assurance. This provides the automatic readjustment of the tool wear.
- Preparation of processing programs such as in the "Teach-in process".
- Program-supported management with visual display of the machine setting values.
- Teleservice is integrated in the control as standard.
- Language switching (optional, depending on language)



Comment to control:

The software is stored as machine program on a pluggable flash and on DVD and is supplied with the machine.

In addition, the documented machine program for data backup and restore in the case of trouble is handed over to the customer on a CD-ROM. The source codes remain the property of the machine manufacturer and are not handed over to the customer (data protection / know-how protection).

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Teleservice

The machine is standard equipped with a Teleservice unit. Depending on the customer requirements and infrastructure one can choose between the following versions:

- Mobile communication LTE 4G for Europe
- Mobile communication EV/DO for USA and Canada
- LAN Router (needs adjustment at customer's network)

If the customer decides in favour of a mobile communication solution. The customer must procure the SIM card from a network provider and make this available. These costs are at the expense of the customer. It is recommended to conclude a FLAT rate.

As option, a key switch can be integrated to establish the connection.

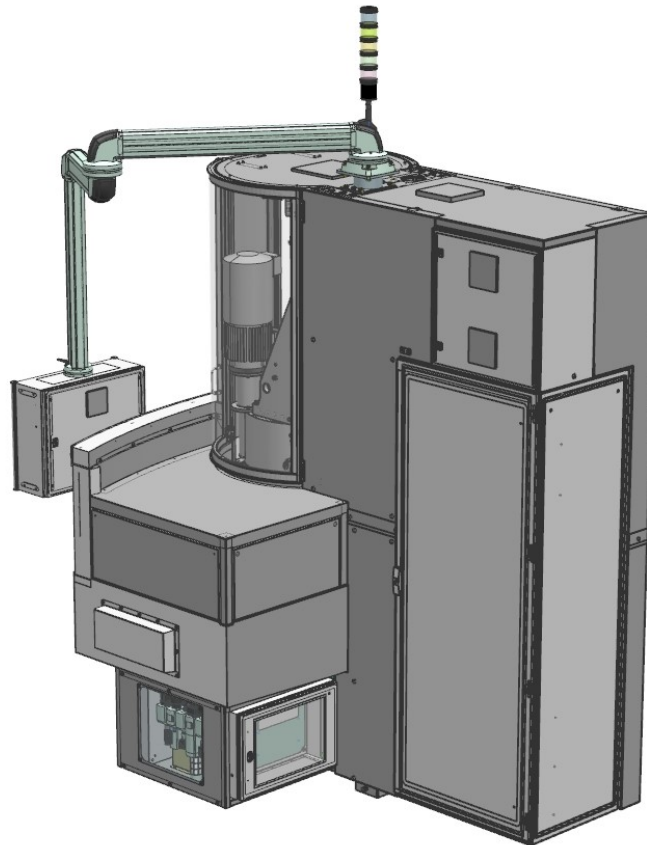
The status "Connection established" is then signalled via the signal tower light.



Version from 12/05/2018, Subject to Change.
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Control cabinet, mounted laterally on the rear of the machine

The control cabinet is equipped with an air-conditioner and is mounted on the rear side of the machine (selectively with compressor or air-water-heat exchanger). The wiring is installed protected. The cable routings into the control cabinets are fully sealed. The complete control is carried out in single conductor numbering and corresponds to the European Machine Guidelines.

**Machine paintwork**

The machine is primed in a high-quality 2-component paintwork, with a top-coat.

Machine paintwork, external view

Colour standard outside

Colour outside

Colour area inside

RAL 7035 (light grey)

according to customer specification optional

Basalt grey

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Operating Instructions / Documentation

The documentation is implemented as structured in the PROFIN standard version.



The German version and issue of the documentation is always legally binding!

The documentation is provided in the following scope:

- 1 times in paper form in 7 federal folders including the instructions for the bought-in components.
- 1 times in Machine control – Industry - PC in electronic form without instructions for the bought-in components. The documentation is directly accessible on the OP with corresponding password access.
- 1 times in electronic form on DVD without instructions for the bought-in components.

After the commissioning and handover at customer's factory, the machine software is stored on a CD in compiled form without comments and with the process programs existing at this point of time, and is handed over as documentation copy with delivery note. In addition, a backup of the PLC and visualization is filed on the IPC. After completed commissioning at customer's premises an image of the hard disk is prepared in addition.

All electronically stored documentation is in PDF - format.

Further additional documentation in paper form, as well as in other languages can be ordered for a surcharge without instructions for the bought-in components.

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