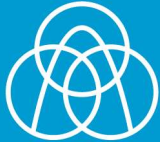


Industrial Solutions

# polab® APM

The automatic sample preparation module for XRF and XRD – compact, flexible and upgradable.



thyssenkrupp



# polab® APM – Sample Preparation for XRF and XRD

Grinding unit and tablet press integrated into one compact housing.

Compact, flexibly configurable and upgrade-capable. polab® APM integrates into a single machine all the components needed for preparing samples of mineral materials.



## polab® APM basis unit

The basis unit for sample preparation consists of the following components:

- Sample loader for blind sample and main sample
- Grinding aid dosing unit
- Grinding unit (patented)
- Tablet press
- Optional: volumetric or gravimetric dosing device

The polab® APM basis unit can be upgraded into polab® APM plus by simply changing certain components.

## Benefits of polab® APM

- Patented grinding unit for efficient and gentle grinding
- Optimised sample preparation for the different requirements of XRF and XRD
- Excellent reproducibility
- High sample throughput rate and less routine work to be carried out by the laboratory personnel
- Predefined and user-specific sample preparation routines
- Operator panel for simple and intuitive operation
- Sequential control by PLC
- Grinding and pressing functions can be selected in a combined process or as single processes

## Technical data

Weight:	443 kg (APM), 500 kg (APMplus)
Dimensions (W x H x D):	600 x 1230 x 735 mm (APM) 600 x 1230 x 900 mm (APMplus)
Power consumption:	2,0 kVA
Power supply:	1-phase
Compressed-air supply:	7-9 bar
Compressed-air consumption per sample:	160 dm <sup>3</sup>

## Sample material

Properties:	mineral materials
Grain size:	0-7 mm
Residues on 1 mm screen (D 50 = 1 mm):	< 50 %
Moisture content:	< 1 %

## Control system and control panel

Siemens  
Optional: Rockwell

Sample holders: steel rings	Standard	Optional
Outside diameter:	51,5 mm	40,0 mm
Inner diameter:	35,0 mm	35,0 mm
Height:	8,6 mm	14,0 mm

## Tablet press

Pressing power: 47 ... 93 kN  
Pressure holding time: adjustable

## Grinding unit: vibratory disc mill

Grinding bowl and grinding elements: tungsten carbide  
Effective volume: 30 cm<sup>3</sup>

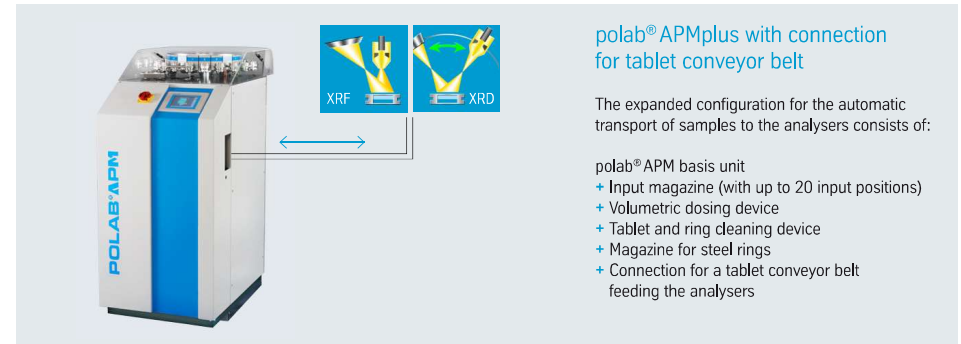
# polab® APMplus Upgrading stages



## polab® APMplus with output magazine

The expanded configuration for the automatic processing of sample series consists of:

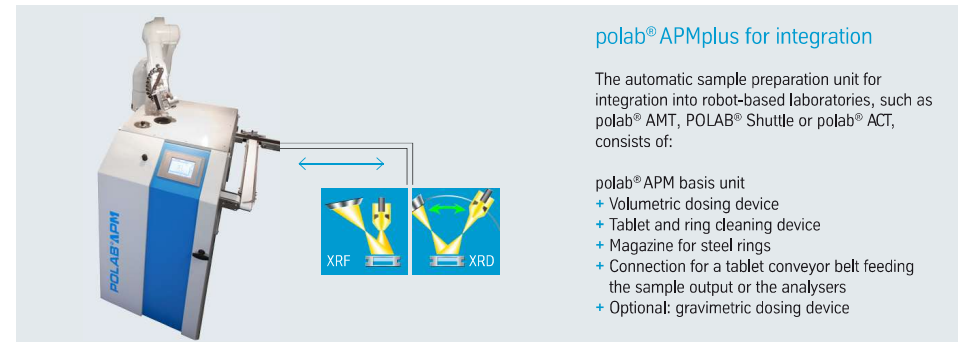
- polab® APM basis unit
- + Input magazine (with up to 20 input positions)
  - + Volumetric dosing device
  - + Tablet and ring cleaning device
  - + Magazine for steel rings
  - + Output chute
  - + Optional: output magazine



## polab® APMplus with connection for tablet conveyor belt

The expanded configuration for the automatic transport of samples to the analysers consists of:

- polab® APM basis unit
- + Input magazine (with up to 20 input positions)
  - + Volumetric dosing device
  - + Tablet and ring cleaning device
  - + Magazine for steel rings
  - + Connection for a tablet conveyor belt feeding the analysers



## polab® APMplus for integration

The automatic sample preparation unit for integration into robot-based laboratories, such as polab® AMT, POLAB® Shuttle or polab® ACT, consists of:

- polab® APM basis unit
- + Volumetric dosing device
  - + Tablet and ring cleaning device
  - + Magazine for steel rings
  - + Connection for a tablet conveyor belt feeding the sample output or the analysers
  - + Optional: gravimetric dosing device

**Curious to find out more?  
Contact us:**

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