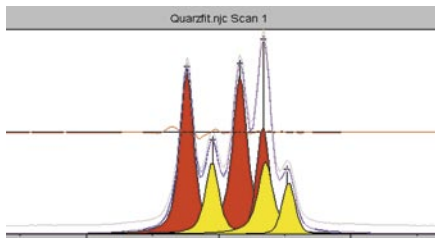


Diffractometer System XRD 3003 TT

Base is the two circle goniometer **MZ VI E** in **symmetrical or asymmetrical Theta / Theta configuration**.

Optical encoders are mounted directly on mechanically independent Omega- and Theta-drive.



The goniometer can carry heavy loads and its concept offers sufficient room for many attachments or user's own experimental setup-ideas.

The free central bore of 135mm diameter makes installation of accessories like e.g. a high / low temperature chamber very easy.

The standard system comes with the high stabilized X-ray equipment ID 3003, a scintillation counter with setting via PC compact channel board and Rayflex software.

Attachments are not included in basic system configuration.



System specification

Safety cabinet

type-approved fully protected machine
(§4 sec. 3 RöV, approval certificate no. SH 87/02 Rö)

Goniometer

Max. load	axial central: 5250 N
Min. controllable step size	0.0005°
Reproducibility	±0.0003°
Max. angle range	Ω (tube side) = 0° - Θ (detector side) = 165° Ω (tube side) = 165° - Θ (detector side) = 0°
Radius of measurement circle	170 mm – 300 mm, continuously variable

X-ray equipment ID 3003

Output	2 - 60 kV, 2 - 80 mA, max. 3.5 kW, ±0.01% at ±10% mains voltage fluctuation
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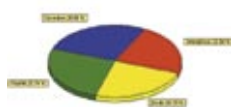
Diffraction System XRD 3003 TT



TSA-3 Attachment



GID - Grazing Incidence Device



AUTOQUAN Software



Parabolic Multilayer



Reflectivity Attachment

Applications Required options

Constant irradiation of sample surface	Automatic divergence slit
Dynamical range of intensity	Rayflex-controlled attenuator
Parallel beam	Parabolic multilayer + long soller (0.15°)
High speed 1	Chopper mode
High speed 2	Position sensitive detector PSD
Peak/ background, K_{β} -suppression	Curved graphite monochromator, secondary beam side
Peak/ background, $K_{\alpha 2}$ suppression	Focussing monochromator Ge or SiO ₂ , primary beam side
Sample holder 1	Rotating sample holder with controller
Sample holder 2	Motorized x-y-z positioning sample holder
Sample changer	12-fold sample changer with controller
Qualitative phase analysis	Rayflex Search / Match PDF data base
Quantitative phase analysis	Autoquan
Structure Analysis 1	Rayflex-Index/Refine
Structure Analysis 2	Rietveld refinement program BGMN
Stress measurement in Omega mode	Rayflex Stress
Stress in CHI mode and texture measurement	TSA-3 with controller, Collimator (optional: Fox), Rayflex-Stress, Rayflex-Texture
High/low temperature measurements	Temperature chamber, Parallel beam setup recommended
Thin film analysis / grazing incidence / reflectivity measurements	GID attachment (flat monochromator) Reflectivity attachment, Rayflex Reflectivity (if required: parabolic multilayer or Ge channel cut crystal)
Investigation of different colloid systems	Small angle attachment



Secondary Monochromator



with Curved Graphite Crystal



Motorized x-y-z-Table



Collimator Mount



Rayflex-Controlled Attenuator