Vertical and horizontal profile and measurement projectors

Optical Comparators

Just the right equipment for each measurement task – precise, reliable, fast … a real benefit for everyone.
Profile Projectors
Versatile – efficient – ergonomic
Affordable entry-level models in genuine Schneider quality.

Whether designed as a benchtop or as a floor-standing model, and whether used for individual measurement operations or more extensive comparison tasks – profile projectors by Dr. Heinrich Schneider Messtechnik provide a wealth of benefits for every user. Whatever the task, they are the epitome of efficiency!

Areas of use
State-of-the-art profile projectors developed by Dr. Heinrich Schneider Messtechnik have earned an outstanding reputation in the world of metrology, setting new standards in terms of accuracy and precision. Designed with consistently high quality, Schneider devices have continuously shown their excellence for decades, and they have proved to be reliable companions in any environment. Whether featuring a 2-axis digital display or Schneider’s M2 Measurement and Analysis Software, and whether or not integrating an edge sensor: all benchtop models are fully functional without any additional accessories being required. Thanks to their intuitive operation, users do not need to undergo tedious familiarisation processes. The combined benefits of the profile projectors thus help users maximise efficiency whilst minimising non-productive times. What better way could there be to save time and money?

Vertical profile projector PV 300
The perfect choice for reliable measurement of plastic parts, seals and gaskets, dies, profiles and other objects.

Standard features of PV 300
• 300-mm projection screen with crosshairs (graticule)
• LED transmitted light illumination

Optional features of PV 300
• Triple revolving nosepiece
• Digital angle display
• 360-mm projection screen
• Measurement stages with larger working (coverage) areas
• Quick-adjustment feature for X and Y

For more detailed information, please visit our website at www.dr-schneider.de
Vertical profile projector PV 600 in floor-standing design

The perfect choice for reliable measurement of stamped parts, profiles, dies, tools and other objects.

Available variants of PV 600

- Standard package PV 600 equipped with a 2-axis digital display
- Standard package PV 600 equipped with M2
- Standard package PV 600 equipped with M2 and an external edge sensor

Standard features of PV 600

- 600 mm screen with crosshairs (graticule)
- LED transmitted light illumination

Optional features of PV 600

- Triple revolving nosepiece
- Laterally attached measuring stage equipped with a manually operated rotation axis for tool measurement

Common features of all profile projectors

Special features and benefits

- Razor-sharp workpiece contour representation facilitates accurate measurement
- Robust design for safe and reliable everyday operation

Standard features

- Template holder (support clips)
- Protractor, rotatable through 360°, vernier 1’
- LED transmitted light illumination

Optional features

- Digital angle display for the projection screen
- Telecentric objectives (lenses) from 5- to 100-fold magnification
- Further options are available upon request

Accessories

- Black-out device
- Rotary stage
- Precision vice
- Centre point block or manual rotation axis SK40
- Concentricity gauge
- Precision jaw chuck with angle indicator
- Further accessories are available upon request

For more detailed information, please visit our website at www.dr-schneider.de
## Technical Data for Profile Projectors

<table>
<thead>
<tr>
<th>Model</th>
<th>PV 300</th>
<th>PV 360</th>
<th>PV 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-axis digital display</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>M2</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>M2 with external edge sensor</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Measurement range mm</td>
<td>200 x 100</td>
<td>200 x 100</td>
<td>250 x 125</td>
</tr>
<tr>
<td>Optional 300 x 200; 400 x 200; 500 x 200</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Magnification</td>
<td>10</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>Field of view (FOV) mm</td>
<td>36</td>
<td>18</td>
<td>7.2</td>
</tr>
<tr>
<td>Working distance mm</td>
<td>115</td>
<td>97</td>
<td>53</td>
</tr>
<tr>
<td>Screen diameter mm</td>
<td>300</td>
<td>360</td>
<td>600</td>
</tr>
<tr>
<td>Projection accuracy in incident light %</td>
<td>0.10</td>
<td>0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>in transmitted light %</td>
<td>0.15</td>
<td>0.15</td>
<td>0.10</td>
</tr>
<tr>
<td>Max. distortion %</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Resolution mm</td>
<td>0.0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. workpiece weight on glass plate kg</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Dimensions mm</td>
<td>W 925</td>
<td>W 925</td>
<td>W 1120</td>
</tr>
<tr>
<td>D 965</td>
<td>D 965</td>
<td>D 1350</td>
<td></td>
</tr>
<tr>
<td>H 1260</td>
<td>H 1260</td>
<td>H 1850</td>
<td></td>
</tr>
<tr>
<td>Stage size mm</td>
<td>400 x 240</td>
<td>400 x 240</td>
<td>520 x 325</td>
</tr>
<tr>
<td>Weight kg</td>
<td>130</td>
<td>130</td>
<td>450</td>
</tr>
<tr>
<td>Electric power supply</td>
<td>220-240 VAC, 50-60 Hz, 1 kW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LED Incident Light Kit

**High-performance LED incident light kit**

... designed for easy retrofitting on measurement and profile projectors

Eight well-focused high-performance LEDs ensure optimum illumination of workpiece surfaces and provide brilliant workpiece representation on the comparator’s ground-glass screen. The incident light ring can be fitted to different objectives (lenses) by means of an adapter. Depending on the type of device, multiple incident light rings can be used in one revolving nosepiece. The kit is autonomous and can be readily retrofitted to structurally identical comparators of other manufacturers.
High-end projectors for vertical and horizontal measurement – available in benchtop and floor-standing design

Designed for reliable measurement on the shop floor and in the measurement room

Areas of use of measurement projectors

State-of-the-art measurement projectors developed by Dr. Heinrich Schneider Messtechnik have earned an outstanding reputation in the world of metrology, setting new standards in terms of accuracy and precision. Designed with consistently high quality, Schneider devices have shown their excellence innumerable times over the past decades.

Since speed and precision are key on the shop floor and in the measuring room, the well-conceived rigid design of the projectors’ physical structure makes a winning team with their robust functional architecture, which is supported by the M2 measurement software (installed as a standard on a tablet PC) and by a high-precision edge sensor. All projectors have been designed to provide easy and intuitive operation to a broad range of users. Since the devices allow measurement operations to be performed in close proximity to the manufacturing area, efficiency is maximised whilst non-productive times are greatly reduced. What better way could there be to save time and money?

Horizontal measurement projector
MH 360

The perfect choice for reliable measurement of tools, turned parts, shafts, pipes/tubes and other objects.

Especially when it comes to measuring turned parts, projector MH 360 shows its particular strengths: Simply place the object to be inspected on the stage of the device vertically, and measurement can begin.

- Easy measurement of heavy workpieces weighing up to 50 kg
- 360-mm projection screen with engraved crosshairs (graticule)
- Edge sensor incorporated into the optical path
- LED transmitted light illumination

Optional equipment of MH 360

- LED incident light illumination, dimmable
- Swivelling light arm for transmitted light illumination
- M3 measurement software with multi-touch panel PC and image processing & analysis functionality (imaging probing system)
- Dual-objective (lens) changer (nosepiece)

For more detailed information, please visit our website at www.dr-schneider.de
**Vertical measurement projector MV 360**

For reliable measurement of plastic parts, seals/gaskets, dies, profiles and other objects

- Standard features of MV 360
  - Quick adjustment of the measurement stage
  - Measurement range 300 x 200 mm
  - 360-mm projection screen with crosshairs (graticule)
  - Edge sensor incorporated into the optical path
  - LED transmitted light illumination

- Optional features of MV 360
  - Helix-type swivel option thanks to a pivot-mounted plate superposed on the measuring stage
  - LED incident light illumination, dimmable
  - Triple revolving nosepiece for fast objective (lens) change
  - M3 measurement software with multi-touch panel PC and image processing & analysis functionality (imaging probing system)
  - Digital angle display for the rotation function of the projection screen
  - Further options are available upon request

**Vertical measurement projector MV 600 in floor-standing design**

For reliable measurement of stamped parts, profiles, dies, tools and other objects

- Standard features of MV 600
  - Large-scale display of the workpiece
  - Quick adjustment of the measurement stage
  - Triple revolving nosepiece accommodating different objectives (lenses)
  - 600-mm projection screen with engraved crosshairs (graticule)
  - LED transmitted light illumination

- Optional features of MV 600
  - M3 measurement software with multi-touch panel PC and image processing & analysis functionality (imaging probing system)
  - LED incident light illumination, dimmable
  - Digital angle display for the rotation function of the projection screen
  - Laterally displaced column and SK50 manual rotation axis for measurement of tools with large diameters
  - Telecentric objectives (lenses) from 5- to 100-fold magnification
  - Further options are available upon request
Common features of all measurement projectors:

Special features and benefits
- High acutance (sharpness of contours) for reliable measurement
- Smooth and easy operation
- Consistent quality of measurement results
- No device readjustment required
- Measurement of cylindrical and cubic workpieces with consistent accuracy and precision
- Reproducible, repeatable and documentable workpiece quality and measurement results
- Generation of tabular and graphical measurement reports (protocols)

Standard features
- Template holder (support clips)
- Protractor, rotatable through 360°, vernier 1’
- LED transmitted light illumination
- 0.001 mm resolution scales
- Edge sensor incorporated into the optical path
- Device calibration to DIN EN ISO 10360-7
- M2 measurement software with tablet PC
- Calibrated and adjusted measurement stage surfaces (as a complement and extension to the linear correction function)

Accessories
- Black-out device
- Rotary stage
- Precision vice
- Centre point block or manual rotating axis SK40/50
- Concentricity gauge
- Precision jaw chuck with angle indicator
- Workstation 75
- Further accessories are available upon request

Internal edge sensor
An edge sensor built into the projector’s optical path ensures reliable measurement results regardless of the ambient lighting conditions at the projector’s place of installation.

For more detailed information, please visit our website at www.dr-schneider.de
**MV 600 designed as a special model**, equipped with a laterally displaced lifting column (feed axis) and an SK50 manual rotation axis enabling measurement of tools with large diameters. A glass stage with an SK50 tool holder is, of course, also included in the scope of supply.

### Technical Data for Measurement Projectors

<table>
<thead>
<tr>
<th>Model</th>
<th>MH 360</th>
<th>MV 360</th>
<th>MV 600</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement range</strong></td>
<td>mm</td>
<td>250 x 150</td>
<td>300 x 200</td>
</tr>
<tr>
<td><strong>Magnification</strong></td>
<td></td>
<td>10 20</td>
<td>50 100</td>
</tr>
<tr>
<td>Field of view (FOV)</td>
<td>mm</td>
<td>36 18</td>
<td>7.2 3.6</td>
</tr>
<tr>
<td>Working distance</td>
<td>mm</td>
<td>115 97</td>
<td>53 45</td>
</tr>
<tr>
<td><strong>Screen diameter</strong></td>
<td>mm</td>
<td>360</td>
<td>360</td>
</tr>
<tr>
<td><strong>Projection accuracy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in incident light</td>
<td>%</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>in transmitted light</td>
<td>%</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Max. distortion</td>
<td>%</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. workpiece weight on glass plate</td>
<td>kg</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>Length measurement error</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>optical (1D), DIN EN ISO 10360-7</td>
<td>EUₓ, MPE = (2.0 + L/80 mm) μm, EUᵧ, MPE = (2.0 + L/80 mm) μm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>optical (2D), DIN EN ISO 10360-7</td>
<td>EUₓᵧ, MPE = (2.8 + L/50 mm) μm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>mm</td>
<td>W 1000</td>
<td>W 925</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D 1170</td>
<td>D 965</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H 1115</td>
<td>H 1260</td>
</tr>
<tr>
<td>Stage size</td>
<td>mm</td>
<td>500 x 135</td>
<td>400 x 240</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>230</td>
<td>180</td>
</tr>
<tr>
<td><strong>Electric power supply</strong></td>
<td></td>
<td>220-240 VAC, 50-60 Hz, 1 kW</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Admissible ambient temperature 20°C ± 1K, temperature gradient Δth = 0.5 K/h, Δtd = 4.0 K/d, measured with a calibrated standard.
Areas of use of horizontal measurement projectors

Schneider measurement projectors with horizontal optical path are equipped with a highly rigid mechanical stage (XY cross stage). Stage loads of up to 200 kg are measured with the same accuracy and precision as lighter workpieces. Useful clamping fixtures, such as dead and live centre supports (whether manual, motorised or CNC-controlled) can be easily mounted on the stage.

Standard features

- 600-mm – 1000-mm screen with crosshairs (graticule), depending on the model
- Template holder (support clips)
- Protractor rotatable through 360°, vernier 1°
- Triple revolving nosepiece accommodating different objectives (lenses)
- Measurement range: from 350 x 300 mm to 750 x 300 mm, depending on the model
- Stage size: from 750 x 200 mm to 1200 x 200 mm, depending on the model
- Stage with a swivel range of +/- 20°, vernier 10°, for table models R350 and R450
- X, Y and Z axis supported by a needle roller bearing
- Scales with a resolution of 0.1 µm
- Motorisation of all three axes and control via joystick
- Transmitted light and incident light illumination system
- Focusable incident light illumination
- M2 measurement software featuring an edge sensor integrated in the optical path
Optional features

- Integration of a high-resolution CCD camera in the optical path for documented and fast measurement
- M3 measurement software with geometrical functions — a smartly intuitive starter package guiding the user into the field of image processing & analysis (please see the M3 brochure for more details)
- Measurement and analysis software SAPHIR for complex measuring tasks (please see the SAPHIR brochure for more details)
- CNC control for automated workpiece measurement
- Expandable up to 5 axes, thus enabling control of a rotary stage and a swivel unit
- SPC interface for measurement data analysis
- 2D digitising of unknown workpiece contours
- CAD data comparison thanks to a 2D BestFit algorithm
- User management feature enabling multiple operators to perform measurements quickly and easily
- Further options are available upon request.

Highlights

- 2D optical measuring device calibrated in accordance with DIN EN ISO 10360-7
- Ideal for use in harsh industry environments
- Conveniently accessible measurement stage
- Large projection screen for easy user orientation during measurement
- Possibility of fully automated (CNC-controlled) measurement programme execution

The whole is more than the sum of its parts ... … and the quality supplied by Schneider Messtechnik is the best proof of this truth: The optical system, the mirrors as well as the projection screens used by Schneider are, without exception, made of high-quality materials ensuring excellent optical properties. In addition, all components are meticulously installed in an extremely rigid frame. It is the functionally integrated whole which makes the difference and which ensures absolutely accurate measurement results over the projector’s entire life cycle. High performance — high reliability — high technology! Dr. Heinrich Schneider Messtechnik will never compromise when it comes to quality and has long made a name for itself as a competent and innovative partner in the field of precision metrology.
Areas of use of vertical measurement projectors

Schneider measuring projectors with vertical optical path are equipped with a highly rigid mechanical stage (XY cross stage). Thanks to a special glass plate, workpieces weighing up to 20 kg can be directly positioned on the glass plate. Useful clamping fixtures, such as dead and live centre supports (whether manual, motorised or CNC-controlled) can be conveniently mounted on the stage.

ST 750 V CNC:
Thanks to the many configuration options both in terms of measuring path and screen diameter, this state-of-the-art instrument meets all modern metrology requirements and opens up a world of application possibilities that multiply even further if an entirely customised model is chosen.
**Standard features**

- 600-mm – 1000-mm screen with crosshairs (graticule), depending on the model
- Template holder (support clips)
- Protractor rotatable through 360°, vernier 1°
- Triple revolving nosepiece accommodating different objectives (lenses)
- Measurement range: from 300 x 200 mm to 500 x 200 mm, depending on the model
- Stage size: from 600 x 440 mm to 800 x 440 mm, depending on the model
- X, Y and Z axis supported by a needle roller bearing
- Scales with a resolution of 0.1 µm
- Motorisation of all three axes and control via joystick
- High-performance LED transmitted light and LED incident light illumination system
- Focusable incident light illumination
- M2 measurement software featuring an edge sensor installed in the optical path

**Optional features**

- Integration of a high-resolution CCD camera in the optical path for documented and fast measurement
- M3 measurement software with geometrical functions – a smartly intuitive starter package guiding the user into the field of image processing & analysis (please see the separate brochure for more details)
- Measurement and analysis software SAPHIR for complex measurement tasks (please see the SAPHIR brochure for more details)
- CNC control for automated workpiece measurement
- Expandable up to 5 axes, thus enabling control of a rotary stage and a swivel unit
- SPC interface for measurement data analysis
- 2D digitising of unknown workpiece contours
- CAD data comparison thanks to a 2D BestFit algorithm
- User management feature enabling multiple operators to perform measurements quickly and easily
- Further options are available upon request

**Highlights**

- 2D optical measuring device calibrated in accordance with DIN EN ISO 10360-7
- Ideal for use in harsh industry environments
- Conveniently accessible workpiece holder [measurement stage]
- Large projection screen for easy user orientation during measurement
- Possibility of fully automated (CNC-controlled) measurement programme execution

The optical system, the mirrors as well as the projection screens used by Schneider are made of high-quality material. They are installed in a rigid frame, which ensures excellent optical properties and thus unparalleled measurement accuracy.

This commitment to quality has established Schneider Messtechnik as a reliable and innovative partner in the field of high-precision measurement so that clients can expect absolutely accurate measurement results over the projector’s entire life cycle.
Special solutions

Turn your measuring projector into a 3- to 6-axis CNC measuring machine! Thanks to measurement and analysis software SAPHIR, the device is capable of performing a variety of additional functions, such as fully automated execution of measurement programmes and automated data acquisition. The obtained data is then professionally processed, prepared and presented in the form of tabular and graphical measurement reports as well as in initial sample inspection reports.

The new generation of measurement projectors combines the most advanced digital technology with the most proven functional features into an innovative high-performance package. A CCD camera integrated in the projector’s optical path brings numerous advantages in handling and use:

- Clear and large-size display of the images projected on the ground-glass screen as well as measurement data acquisition with unprecedented precision in the camera’s field of view
- High density of measurement points ensures reliable measurement results
- Both the camera and the ground-glass screen of the projector display live images
- Fast and easy comparison of the images captured by the camera and of the images displayed on the ground-glass screen with the required values in order to detect possible deviations
- Reliable measurement of small radii and transition zones
- Measurements in incident light can be integrated into programme execution

No deterioration of measurement quality by direct sunlight or unfavourable lighting conditions. A sensor or a CCD camera installed in the projector’s optical path will always determine the accurate edge values of workpieces independently of ambient light effects.

By moving the swivelling unit or the rotary table, the user can measure the contours of helical teeth and threaded elements. T-slots and stop edges facilitate fast and accurate mounting of clamping fixtures.

The rotary/swivel unit transforms the measuring projector into a 5-axis CNC measuring machine.

For more detailed information, please visit our website at www.dr-schneider.de
ST 1000 VS CNC:
A special version of model ST 1000, designed as a 5-axis CNC measuring centre.
### Technical Data for Measurement Projectors

<table>
<thead>
<tr>
<th>Model</th>
<th>ST 600 H</th>
<th>ST 750 H</th>
<th>ST 1000 H</th>
<th>ST 600 V</th>
<th>ST 750 V</th>
<th>ST 1000 V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement range</strong></td>
<td>X·Y mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>horizontal optical path</td>
<td>350 x 300 / 450 x 300 / 650 x 300 / 750 x 300</td>
<td>300 x 200 / 400 x 200 / 400 x 300 / 500 x 200</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>vertical optical path</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Magnification</strong></td>
<td>5</td>
<td>10</td>
<td>20</td>
<td>25</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Field of view (FOV) / Working distance</td>
<td>mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST 600 H und ST 600 V</td>
<td>120 / 220</td>
<td>60 / 136</td>
<td>30 / 144</td>
<td>24 / 118</td>
<td>12 / 100</td>
<td>6 / 48</td>
</tr>
<tr>
<td>ST 750 H und ST 750 V</td>
<td>150 / 315</td>
<td>75 / 164</td>
<td>37.5 / 109</td>
<td>30 / 92</td>
<td>15 / 60</td>
<td>7.5 / 47</td>
</tr>
<tr>
<td>ST 1000 H und ST 1000 V</td>
<td>200 / 445</td>
<td>100 / 240</td>
<td>50 / 240</td>
<td>40 / 240</td>
<td>20 / 140</td>
<td>10 / 120</td>
</tr>
<tr>
<td><strong>Ground-glass screen diameter</strong></td>
<td>mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>depending on the model 600 / 750 / 1000 (further dimensions upon request)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Projection accuracy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in transmitted light</td>
<td>%</td>
<td>0.10</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in incident light</td>
<td>%</td>
<td>0.10</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max. distortion</strong></td>
<td>%</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max. workpiece weight</strong></td>
<td>kg</td>
<td>200</td>
<td>200</td>
<td>(on glass plate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length measurement error</td>
<td>Measuring length L in mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>optical (1D), DIN EN ISO 10360-7</td>
<td>( E_{UX}, MPE = (2.0 + L/80 \text{ mm}) \mu m )</td>
<td>( E_{UY}, MPE = (2.0 + L/80 \text{ mm}) \mu m )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>optical (2D), DIN EN ISO 10360-7</td>
<td>( E_{UXY}, MPE = (2.8 + L/50 \text{ mm}) \mu m )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>kg</td>
<td>1200 - 1700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Other magnifications upon request  
2) Field of view (FOV) for the ground-glass screen  
3) Admissible ambient temperature 20°C ± 1K, temperature gradient \( \Delta t = 0.5 \text{ K/\( h \)}, \Delta t = 4.0 \text{ K/\( d \)} \), measured with a calibrated standard \( \beta = \text{Magnification factor} = 10 \Delta \) Objective (lens) 10x

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**M2 measurement software with internal edge detector**

Measurement software M2 sets new standards for the convenient and accurate measurement of geometrical dimensions by means of profile or measurement projectors (optical comparators). For more detailed information, please request our free brochure "Measurement Software M2".

**Measurement software M3 with image processing feature**

This valuable tool enables precise measurement of geometrical elements by means of an intuitive multi-touch application. Among its main strengths are the clear and well-structured user interface as well as its innovative image processing functions that ensure fast and reproducible measurement point acquisition. For more detailed information, please request our free brochure "Measurement Software M3".

**Measurement and analysis software SAPHIR**

Since “Schneider” is the German word for “tailor”, you can rightly conclude that SAPHIR is a truly “tailor-made” measuring software that leaves nothing to be desired: from “A” as in “axis alignment” to “Z” as in “zero-point administration” – SAPHIR is a valuable resource with invaluable features. For further information about this technological gem, please request our free brochure entitled “SAPHIR – 3D Measurement and Analysis Software”.

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