

# Product information

## Calibration measuring instruments Precimar ULM 600-E

### Product features

ULM-E universal length measuring comparator instruments are mounted on highly homogeneous rigid granite in a horizontal configuration

#### X-axis measuring system:

Heidenhain incremental, precision length measuring system, 100 mm long

#### Z-axis measuring system:

Renishaw incremental, precision length measuring system, 80 mm long



### Package contains

Standardsoftware 828  
WIN "Freies Messen", PC  
Auswerteeinheit (ohne  
Monitor), Magnethalter  
für Temperaturfühler,  
Messbügelpaar, Eintauchtiefe  
14 mm, 2 Parallelunterlagen  
60/20, 2 Schnellspanpratzen,  
2 Messaufsätze mit Kugelzone,  
Einstelllehre 2, USB-Stick,  
Gewichte 0,25/0,5/1,0/2,0N,  
Sechskantschlüssel,  
Schraubendreher,  
Zubehörverpackung

Item no.: 5350260

### Technical data

<b>Device dimensions</b>	1080 / 1500 / 2000 x 380 x 480 ULM 300-E: 685 x 280 x 480
<b>Measuring range for outer measurement [mm]</b>	0 to 640
<b>Measuring range for inner measurement [mm]</b>	0.5 to 485
<b>Direct measuring range [mm]</b>	100
<b>Measuring uncertainty <math>MPE_{E1}</math> (L in mm) [<math>\mu</math>m]</b>	$\leq (0.09+L/2000)$
<b>Measuring forces [N]</b>	0.2 ; 1.0 to 4.5 ; 11
<b>Repeatability [<math>\mu</math>m]</b>	$\leq 0.05$
<b>Device length [mm]</b>	1080
<b>Mass [kg]</b>	160

### Application

Calibration of:

- Plain plug gages and gage rings
- Setting gage rings
- Snap gages
- Spherical gage blocks, internal micrometers
- Gage blocks
- Thread gages
- Taper thread gages
- Gear gages
- Taper gages
- Dial indicators
- Dial comparators
- 2-point bore gages
- Outside micrometers
- 2-point inside micrometers
- Length measurement on precision table