

# MasterScanner XPL-C

## Модели XPL 200/300 C

Диапазон внешних измерений
Диапазон внутренних измерений
Диапазон сканирования
Минимальный шаг

### Погрешность измерений для стандартного исполнения

### Погрешность измерений с системой температурной компенсации

0,8 – 200/290 mm	0,8 – 200/290 mm
2,5 – 220/300 mm	2,5 – 220/300 mm
100/200 mm	100/200 mm
0,1 mm	0,1 mm

## Пределы допускаемой абсолютной

Калибр-кольцо цилиндрической или конической резьбы (внутренний диаметр - больше 10 мм, половина угла наклона боковой стороны резьбы  $\geq 27^\circ$ )

Внутренний диаметр	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
( )	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
( )	$1,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$0,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
( )	$0^\circ 6' 0''$	$0^\circ 3' 30''$
( )	$0,1^\circ$	$0,1^\circ$

### Thread plug gauges, parallel or tapered (major diameter over 1 mm, partial flank angles $\geq 27^\circ$ )

Major diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Effective pitch diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Pitch	$1,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$0,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Flankangles (right and left side)	$0^\circ 6' 0''$	$0^\circ 3' 30''$
Taper	$0,1^\circ$	$0,1^\circ$

### Plain gauges, parallel or tapered (diameter over 10 mm)

Internal diameter ring gauges	$2,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,3 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
External diameter plug gauges	$2,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,3 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Taper	$0,1^\circ$	$0,1^\circ$

### Plain gauges, parallel or tapered (diameter 1 to 10 mm)

Internal diameter ring gauges	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
External diameter plug gauges	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Taper	$0,1^\circ$	$0,1^\circ$

## Technical Data

Transducer system	HEIDENHAIN scales
Resolution	As from 0,01 $\mu\text{m}$
Temperature Compensation**	Dynamic compensation, for all scales + object, resol.: 0,01 $^\circ\text{C}$ Air
Linear bearing	bearings on granite
Actuators	Controlled CANBUS actuators
Measuring force system	Computer controlled in 2 directions
Computer	Integrated LINUX computer, Intel Core i7
Printer	Colour laser printer
Air supply	6 bar / 90 psi, oil and water free
Electric power	220V, 50Hz

\* Values valid at best conditions, such as at a temperature of  $20 \pm 0,2 \text{ }^\circ\text{C}$ , relative humidity of  $50\% \pm 5\%$ , and highest accuracy of used certified setting gauges ( $0,3 \mu\text{m} + 2 \cdot L \cdot 10^{-6}$ ; where L is the length). \*\* Optional.

IAC utilizes the highest quality measuring systems from Heidenhain



# MasterScanner XPL

## Model XPL 400/500/600

## Official Uncertainty Budget

## With temp.

Range external measurements	0,8 - 390/490/590 mm	0,8 - 390/490/590 mm
Range internal measurements	2,5 - 400/500/600 mm	2,5 - 400/500/600 mm
Max. Scan range	100/200 mm	100/200 mm
Min. Pitch	0,1 mm	0,1 mm

## Measurement uncertainty as low as\*:

### Thread ring gauges, parallel or tapered (minor diameter over 10mm, partial flank angles $\geq 27^\circ$ )

Minor diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Effective pitch diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Pitch	$1,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$0,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Flankangles (right and left side)	$0^\circ 6' 0''$	$0^\circ 3' 30''$
Taper	$0,1^\circ$	$0,1^\circ$

### Thread ring gauges, parallel or tapered (minor diameter 2,5 to 10 mm, partial flank angles $\geq 27^\circ$ )

Minor diameter	$3,5 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Effective pitch diameter	$3,5 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Pitch	$1,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$0,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Flankangles (right and left side)	$0^\circ 6' 0''$	$0^\circ 3' 30''$
Taper	$0,1^\circ$	$0,1^\circ$

### Thread plug gauges, parallel or tapered (major diameter over 1 mm, partial flank angles $\geq 27^\circ$ )

Major diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Effective pitch diameter	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Pitch	$1,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$0,9 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Flankangles (right and left side)	$0^\circ 6' 0''$	$0^\circ 3' 30''$
Taper	$0,1^\circ$	$0,1^\circ$

### Plain gauges, parallel or tapered (diameter over 10 mm)

Internal diameter ring gauges	$2,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,3 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
External diameter plug gauges	$2,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,3 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Taper	$0,1^\circ$	$0,1^\circ$

### Plain gauges, parallel or tapered (diameter 1 to 10 mm)

Internal diameter ring gauges	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
External diameter plug gauges	$3,0 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$	$1,7 \mu\text{m} + 5 \cdot 10^{-6} \cdot l$
Taper	$0,1^\circ$	$0,1^\circ$

## Technical Data

Transducer system	HEIDENHAIN scales
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