



ZEISS O-DETECT

Specifications

Version: 2021-05



Seeing beyond

System description

Type according to ISO 10360-1:2000	O-DETECT 3/2/2: Column CMM
Operating mode	motorized / CNC
Sensor mounts	Fixed installation
Sensors	ZEISS INVENTA D1 (optical)
Software	ZEISS ZAPHIRE

Dynamic

3/2/2				
Travel speed	Motorized	in mm/s	Axes	0 to 100
	CNC	in mm/s	X, Y, Z-axes	300/300/100
		in mm/s	Vektor	435
Acceleration		in mm/s ²	X, Y, Z-axes	500/500/500
		in mm/s ²	Vektor	866

Sensors and accuracy

The functionality of the device and its specifications are only achievable when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

ZEISS INVENTA D1 ¹⁾



Optical 2D camera sensor with image processing functionality and autofocus, CMOS monochrome camera with GigE Vision interface, 5 MP, 2/3 "chip, high-resolution telecentric optical system with continuous digital zoom, Working distance 65 mm, 1.0x magnification, sensor resolution 3.45 µm, FoV (field of view): 8.8 mm x 6.6 mm, 5 MP overview camera for navigation. Illumination: coaxial bright field incident light (blue), transmitted light, integrated interface for additional lighting systems

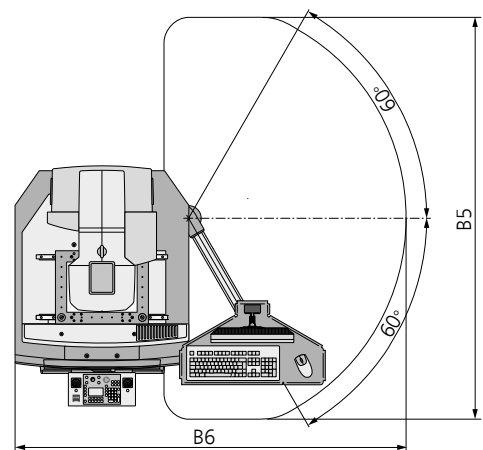
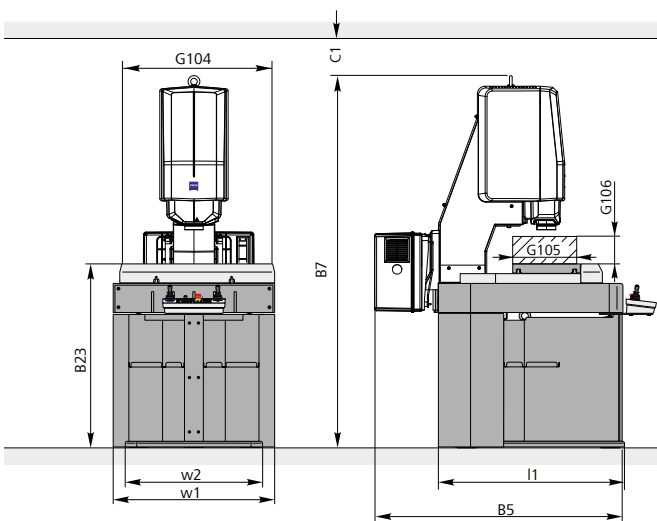
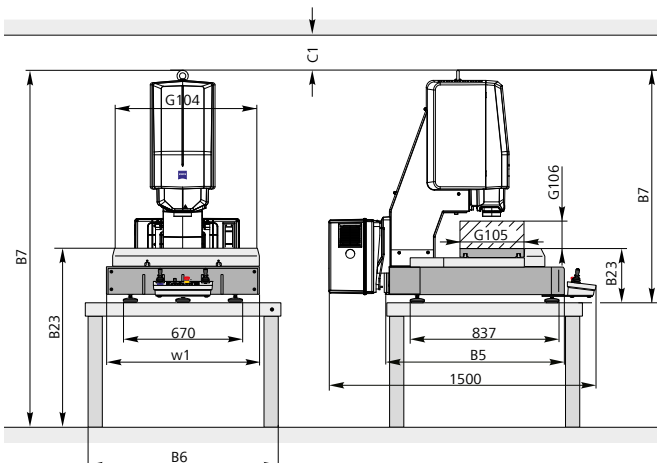
3/2/2				
Length measurement error MPE complies with ISO 10360-7:2011	EU XY (1D)	in µm	20 °C ± 2 °C	1,6 + L/200
	EU XY (2D)	in µm	20 °C ± 2 °C	1,9 + L/150
	EU XYZ (3D)	in µm	20 °C ± 2 °C	2,4 + L/150
Repeatability range (of EU) MPL complies with ISO 10360-7:2011	RU	in µm	20 °C ± 2 °C	1,2
Repeatability range (of EUZ L=0 mm) MPL complies with ISO 10360-7:2011	RUZ	in µm	20 °C ± 2 °C	1,9
Probing error MPE complies with ISO 10360-7:2011	PF2D ²⁾	in µm	20 °C ± 2 °C	1,9
Probing error of the image processing system MPE complies with ISO 10360-7:2011	PFV2D	in µm	20 °C ± 2 °C	1,2

1) Laser class 1: EN (IEC) 60825-1:2002

2) Edge detection in the center of the image

ZEISS O-DETECT 3/2/2	Dimensions in mm						
	Measuring range			Overall machine dimensions			Working range (Max. workpiece size)
	X axis	Y axis	Z axis	Width	Length	Height	
	G104	G105	G106	B6	B5	B7	B17
Basic model	300	200	200	865 ¹⁾	1000 ²⁾	1305	∞
With standard base	300	200	200	865 ¹⁾	1000 ²⁾	1980	∞
With shopfloor base	300	200	200	approx. 1935	1960 ²⁾	2015	∞

	Dimensions in mm			Table height	Assembly clearance	Weight in kg	
	Footprint		Length			Max. workpiece	Measuring machine
	Width	Length					
	w1	w2 ³⁾	l1	B23	c1		
Basic model	865	765	1000	305	≥ 200	20	325
With standard base	865	740	1021	980	≥ 200	20	440
With shopfloor base	732	-	920	1015	≥ 200	20	490



Note: the given dimensions and weights are approximate values. Subject to change. Actual appearance of specific sizes may vary from illustration. Dimensioning based on DIN 4000-167:2009.

- 1) plus 2 x 500 mm assembly clearance.
- 2) plus 240 mm for control panel storage and 500 mm assembly clearance.
- 3) With disassembly of the cover parts during installation.

Requirements for operational readiness

Relative humidity	40 % - 70% (without condensation)
Environmental temperature	17 °C - 35 °C
Electrical power rating	3/2/2 1/N/PE 100 - 240V~(+10%); 50-60 Hz; power consumption max. 600 VA; Typical power consumption (thermal load): 130 W; Amount of heat generated max. 2160 kJ/h





Environmental requirements

	3/2/2
Permissible humidity (without condensation)	40 % - 70 %
Environmental temperature	20 °C ± 2 °C
Temperature fluctuations	per day 2,0 K/d per hour 1,0 K/h spatial 1,0 K/m
Floor vibrations	ZEISS O-DETECT is equipped with an integrated vibration damping system and is therefore highly resistant to vibrations.

Technical features

	3/2/2
Length measurement system	Optical scales; reflected light system, photoelectric, resolution 0.08 µm
Controller	Type based on ZEISS C99m Protection type IP53
Data technology	Delivered with a fully equipped workstation.
Accessories (optional)	Part clamping set, pallet frame, workpiece temperature sensor, standard base, ShopFloor base, blue/white ringlight

Approvals

Regulations	ZEISS O-DETECT complies with EC machinery directive 2006/42/EC, the EMC directive 2014/30/EU and the RoHS directive 2011/65/EU.    
Disposal	ZEISS products and packaging returned to us are disposed of in accordance with applicable legal provisions.

Certifications/accreditations

Quality management system	ISO 9001:2015; VDA 6, Parts 4, 3. Issue 2017
Environmental management system	ISO 14001:2015
Occupational health & safety management systems	BS OHSAS 18001:2007
Accredited	ISO / IEC 17025:2005

Carl Zeiss
Industrielle Messtechnik GmbH
GmbH73446 Oberkochen
Germany

Vertrieb: +49 7364 20-6336
Service: +49 7364 20-6337
Fax: +49 7364 20-3870
E-mail: info.metrology.de@zeiss.com
Internet: www.zeiss.de/imt