

Zweifrequenz - Laserinterferometer

ZLM 700 / 800 /900

Dual – Frequency Laser Interferometer



Komponenten und Zubehör
Components and Accessories



Optics
by
Carl Zeiss

Sämtliche Inhalte wurden sorgfältig geprüft. Dessen ungeachtet kann keine Garantie für Richtigkeit, Vollständigkeit und Aktualität der Angaben übernommen werden.

All contents have been studied carefully. Regardless of this, no guarantee for correctness completeness and actuality of information can be given.

Inhaltsverzeichnis

Index

A. Allgemeine Informationen und Systemparameter	A-1
A. General information and system parameters.....	A-1
Zweifrequenz-Laserinterferometer-Messsysteme	A-1
Dual-frequency Laser Interferometer Measurement systems.....	A-1
Leistungsparameter - ZLM 700 / ZLM 800 / ZLM 900 mit Auswerteeinheit AE (Standard)	A-5
Performance data - ZLM 700 / ZLM 800 / ZLM 900 with evaluation unit AE (standard)	A-5
B. Product overview.....	B-1
Strahlteiler - Polarisationsteiler / Intensitätsteiler.....	B-1
Beam splitters - Polarizing beam splitter / Beam splitters	B-1
Reflektoren –Spiegel / Tripelspiegel / Umlenker / Aufweitsysteme	B-2
Reflectors – Plane mirrors / Triple mirrors / Beam benders / Beam expansion systems	B-2
Wellenplatten / Blenden	B-4
Wave plates / pinholes	B-4
Faserkoppler - Ein- und Auskoppeloptiken.....	B-5
Fiber optics couplings - Input and Output.....	B-5
Kabel	B-7
Cables.....	B-7
Montageelemente – Justier- und Koppelemente.....	B-8
Mounting elements – Adjustment and coupling elements	B-8
Interferometer – Interferometer, Kompaktinterferometer , Bausätze und Lichtschlauchinterferometer.....	B-12
Interferometer – Interferometers, Compact interferometers, Assembly sets and Fiber optics interferometers	B-12
Description:	B-12
Lasermessköpfe – (Auswerteeinheiten, Anbausätze und Zubehör).....	B-17
Laser measurement heads- (evaluation units, adapters and accessories).....	B-17
Aufbewahrungsbehälter.....	B-19
Storage boxes	B-19
Zusatzeräte	B-20
Additional equipment.....	B-20

Software	B-21
Software	B-21
C. Strahlteiler – Polarisationsteiler / Intensitätsteiler	C-1
C. Beam splitters - Polarizing beam splitter / Beam splitters	C-1
Strahlteiler – Polarisationsteiler	C-1
Beam splitter – Polarizing beam splitter	C-1
Strahlteiler – Intensitätsteiler	C-2
Beam splitters – Intensity beam splitters	C-2
D. Reflektoren – Spiegel / Tripelspiegel / Umlenker / Aufweitsysteme	D-1
D. Reflectors – Plane mirrors / Triple mirrors / Beam benders / Beam expansion systems	D-1
Tripelspiegel	D-1
Triple mirrors	D-1
Planspiegel & Umlenker	D-8
Plane mirrors & Beam benders	D-8
Aufweitsysteme - Ablenker	D-14
Beam expansion systems / Beam deflectors	D-14
E. Wellenplatten & Blenden	E-1
E. Wave plates & Pinholes	E-1
Wellenplatten	E-1
Wave plates	E-1
Blenden	E-2
Pinholes	E-2
F. Faserkoppler - Ein- und Auskoppeloptiken	F-1
F. Fiber optics couplings - Input and Output	F-1
G. Kabel - Lichtwellenleiter	G-1
G. Cables – Optic fiber cables	G-1
Kurzübersicht Kabel	G-1
Short overview cables	G-1
Kabel & Lichtwellenleiter	G-3
Cables & Optic fibers	G-3

H. Montageelemente – Justier- und Koppelemente	H-1
H. Mounting elements – adjustment and coupling elements	H-1
I. Interferometers – Interferometers, Compact interferometers, Assembly sets and Fiber optics interferometers	I-1
I.1 Interferometer (Standard).....	I-1
I.2 Interferometers (standard)	I-1
I.3 Kompaktinterferometer	I-5
I.4 Compact interferometers.....	I-5
I.5 Bausätze - Interferometer	I-22
I.6 Assembly sets - Interferometers	I-22
I.7 Lichtschlauchinterferometer	I-24
I.8 Fiber optics interferometers.....	I-24
I.9 Übersicht Interferometer	I-38
I.10 Short overview - interferometers.....	I-42
J. Lasermessköpfe, Auswerteeinheiten, und Zubehör	J-1
J.1 Laser measurement heads, evaluation units, adapters and accessories	J-1
J.1.1 Lasermessköpfe	J-1
J.1.2 Laser measurement heads	J-1
J.1.3 Kompakteinheit ZLM 900 LSI	J-3
J.1.4 Compact unit ZLM 900 LSI	J-3
J.1.5 Zubehör – AUK Umweltkompensation.....	J-5
J.1.6 Accessories - AUK environmental sensor	J-5
J.1.7 Anbauelemente - Lasermessköpfe	J-7
J.1.8 Extension units - Laser measurement heads.....	J-7
J.1.9 Auswerteeinheiten und Auswertesystem	J-11
J.1.10 Evaluation units and evaluation systems	J-11
K. Aufbewahrungsbehälter.....	K-1
K.1 Storage boxes	K-1
L. Zusatzgeräte.....	0-1
L.1 Extra equipment.....	0-1
ZLM - Spezialzusatzgeräte	0-1

ZLM – special extra devices	0-1
M. Software	M-1
M. Software.....	M-1
Dynamische Software (ZLM - ESOX Module).....	M-1
Dynamic measurement software (ZLM - ESOX modules).....	M-1
Kalibriersoftware (ZLM - ESOX Module).....	M-2
Calibration software (ZLM - ESOX modules).....	M-2
Kalibriersoftware für Maschinenfehlerkompensation (ZLM - ESOX Module).....	M-4
Calibration software for machine error compensation (ZLM - ESOX modules)	M-4
Umwelt- und Materialkompensationssoftware	M-5
Environment and material compensation software.....	M-5
Auswertesoftware LT ARS / ZFM 407 - FluDi.....	M-5
Evaluation software LT ARS / ZFM 407 - FluDi	M-5
N. Übersicht (Grundaufbau und Beispiele).....	N-1
N. Overview (basic setup and examples).....	N-1
Toleranzarten	N-4
Tolerance types	N-4
Coaxiality	N-4
Round trip.....	N-4
Total round trip.....	N-4
Straightness	N-4
Roundness	N-4
Systemvarianten - Basismodule	N-5
System variants – basis modules	N-5
Hochauflösendes Interferometer mit 8-facher Strahlführung (Auflösung 0,15nm)	N-7
High resolution interferometer with 8-fold beam path (resolution 0.15nm)	N-7
Parallel - Planspiegelinterferometer 301 mit Lichtventil 302 (Strahldurchmesser 6mm).....	N-7
Parallel plane mirror interferometer 301 with Light valve 302 (beam diameter 6mm)	N-7
Parallel - Planspiegelinterferometer 301 mit Lichtventil 308 (Strahldurchmesser 3mm & 0,32nm Auflösung).....	N-8
Parallel plane mirror interferometer 301 with Light valve 308 (beam diameter 3mm & 0.32nm resolution).....	N-8

Einstrahl- Messung mit LWL – Auskopplung	N-8
Single beam measurement with fiber output coupling.....	N-8
Bausatz zur optischen Wellenlängenkompensation / Brechzahlbestimmung.....	N-9
Assembly for optical wavelength compensation / Refraction index identification	N-9
Beispiel – Positionsmessung - ZLM 700	N-10
Example – Position measurement - ZLM 700	N-10
Winkelmessung – Bestimmung des Nickwinkels – ZLM 700	N-11
Pitch angle measurement – ZLM 700	N-11
Winkelmessung – Bestimmung des Gierwinkels – ZLM 700	N-12
Yaw angle measurement – ZLM 700	N-12
Winkelmessung – Bestimmung des Rollwinkels – ZLM 700	N-13
Roll angle measurement – ZLM 700	N-13
Geradheitsabweichung – vertikaler Aufbau – ZLM 700	N-14
Straightness measurement – vertical assembly – ZLM 700	N-14
Geradheitsabweichung – horizontaler Aufbau – ZLM 700.....	N-15
Straightness measurement – horizontal assembly – ZLM 700.....	N-15
Rechtwinkligkeitsmessung – horizontaler Aufbau – ZLM 700.....	N-16
Squareness measurement – horizontal assembly – ZLM 700	N-16
Rechtwinkligkeitsmessung – vertikaler Aufbau – ZLM 700	N-17
Squareness measurement – vertical assembly– ZLM 700.....	N-17
Ebenheitsmessung – ZLM 700	N-18
Flatness measurement -ZLM 700	N-18
Diagonalmessung.....	N-23
Diagonal measurement	N-23
Vollwinkelmessung	N-24
Full angle measurement	N-24
Kompakt- Planspiegel- Interferometer 348 und Spiegel	N-25
Compact plane mirror interferometer 348 and plane mirror	N-25
Parallel- Planspiegel– Interferometer 352 mit Spiegelanordnung.....	N-25
Parallel plane mirror interferometer 352 with mirrors assembly	N-25

Parallel- Planspiegelinterferometer 356 mit Spiegelanordnung.....	N-26
Parallel plane mirror interferometer 356 with plane mirrors assembly	N-26
Parallel- Planspiegelinterferometer 358 mit Spiegel (Strahldurchmesser 3mm)	N-26
Parallel plane mirror interferometer 358 with plane mirror (beam diameter 3mm)	N-26
Kompakt Planspiegelinterferometer 360 mit Spiegel (Strahldurchmesser 3 mm)	N-27
Compact plane mirror interferometer 360 with plane mirror (beam diameter 3 mm).....	N-27
Kompakt Planspiegelinterferometer 390 mit Spiegel	N-27
Compact plane mirror interferometer 390 with plane mirror	N-27
Planspiegelinterferometer 368 mit Spiegel (Strahldurchmesser 3mm).....	N-28
Plane mirror interferometer 368 with plane mirror (beam diameter 3mm).....	N-28
Kompakt Planspiegelinterferometer 370 mit Spiegelanordnung.....	N-28
Compact plane mirror interferometer with plane mirror assembly	N-28
Drei – Achs - Kalibriersystem	N-29
Three axes calibration system	N-29
Zwei-Achs-System.....	N-29
Two axes system.....	N-29
Drei – Achs - System (Variante A in 2 Ebenen)	N-30
Three axes system (variant A in two levels)	N-30
Drei – Achs - System (Variante B in 3 Ebenen)	N-30
Three axes system (variant B in three levels).....	N-30
Kompaktinterferometer 347 für 3 - Achs – Messung (Triangulation)	N-31
Compact interferometer 347 for 3 -axes - measurement (triangulation).....	N-31
Kompaktinterferometer 347 für 3 - Achs – Messung mit Umlenkspiegel (Triangulation)	N-31
Compact interferometer 347 for 3 - axes – measurement with mirror (triangulation).....	N-31
Kompaktinterferometer 347 für 3 - Achs – Messung mit Tripelspiegel und Inklinometer	N-32
Compact interferometer 347 for 3 - axes – measurement with triple mirror and inclinometer	N-32
Kompaktinterferometer 366 für 6 - Achs – Messung mit Planspiegelinterferometer	N-33
Compact interferometer 366 for 6 - axes – measurement with plane mirror	N-33
Reflektorenschema – Einstrahlwinkelinterferometer zur 1- Achspositionsmessung	N-34
Schematic of reflectors- Single Angle Interferometer for 1 axis position measurement.....	N-34

Kompakteinheit ZLM 900 LSI mit integrierter Auswerteeinheit mit 2 x LSI Winkelinterferometer 401.....	N-34
Compact unit ZLM 900 LSI with integrated Evaluation unit with 2 x LSI Angle interferometer 401.....	N-34
Kompakteinheit ZLM 900 LSI mit integrierter Auswerteeinheit mit LSI Winkelinterferometer 407	N-35
Compact unit ZLM 900 LSI with integrated Evaluation unit with LSI Angle interferometer 407	N-35
Kompakteinheit ZLM 900 LSI mit Einstrahltaster 206 für simultane Kippwinkelmessung.....	N-36
Compact unit ZLM 900 LSI with single beam probe 206 for simulated tilt angle measurement	N-36



A. Allgemeine Informationen und Systemparameter

A. General information and system parameters

Zweifrequenz-Laserinterferometer-Messsysteme

Vielen Dank, dass Sie sich für Laserinterferometersysteme zum Messen und Kalibrieren der JENAer Meßtechnik GmbH interessieren.

Die Zweifrequenz – Laserinterferometer – Messsysteme (ZLM) bieten Ihnen eine Vielzahl von Anwendungen, die von einachsiger Distanzmessung bis zur simultanen Messung von 4 Achsen reichen.

Translatorische Messungen: X-Achse, Y-Achse, Z- Achse

Rotatorische Messungen: Rollwinkel (ϕ), Gierwinkel (ψ), Nickwinkel (θ)

Als einachsiges Messsystem ist das ZLM 700 und dessen Komponenten die beste Wahl für Ihren Anwendungsfall.

Messaufgaben in mehreren Achsen werden durch den Einsatz des ZLM 800 gelöst.

Bei extrem kleinen Aufbauten mit wenig Freiraum sollten fasergekoppelte Lasermesssysteme (ZLM 900) genutzt werden.

Sollten Sie noch keine Erfahrungen mit Laserinterferometern haben, finden Sie im Kapitel N verschiedene Aufbaubeispiele.

Gern unterstützen wir Sie mit maßgeschneiderten Lösungen für Ihre spezielle Messaufgabe.

Wenn Sie Fragen zu unseren Messsystemen haben, zögern Sie nicht und kontaktieren Sie uns!

Dual-frequency Laser Interferometer Measurement systems

Thank you that you are interested in Laser interferometer systems for measuring and calibration of JENAer Meßtechnik GmbH.



The Dual-frequency Laser Interferometer Measurement Systems (ZLM) offer a variety of applications, ranging from single-axis distance measurement to the simultaneous measurement up to 4 axes.

Translatory measurements: *x-axis, Y- axis, Z- axis*

Rotatory measurements: *roll angle (φ), yaw angle (ψ), pitch angle (θ)*

The ZLM 700 and its components is the best choice for you if you need a single-axis measurement system.

Measuring tasks in multiple axes are solved by using of the ZLM 800.

Fiber-coupled laser measurement systems (ZLM 900) should be used in application with little free space.

If you have no experience with laser interferometers, chapter N shows different configuration examples.

We are glad to support you with customized solutions for your specific measuring task.

If you have any questions about our measurement systems, do not hesitate to contact us!



Generelle Fragen, ab wann der Einsatz einer AUK (Automatischen Umweltkompensation) sinnvoll ist?

Haben sie Messbedingungen:

- wo **keine** Zustandsänderungen von Druck Temperatur und Luftfeuchte vorhanden sind
- führen sie Kurzzeitmessungen
- Messungen außerhalb des Subnanobereiches
- Messungen unter Vakuumbedingungen
- oder der haben Sie Idealbedingungen ($T = 20^\circ\text{C}$, $\text{Pa} = 101,325 \text{ kPa} = 1013$, Luftfeucht 50%).

Dann ist der Einsatz einer AUK nicht zwingend benötigt.

Andernfalls sollte der Einsatz einer AUK empfohlen werden.

Einflussfaktoren von Temperatur, Luftdruck und Luftfeuchte auf das Messergebnis:

Temperatur: ca. 10^{-6} (d.h.: $\Delta T = 1\text{K}$ →

Luftdruck: ca. 10^{-7}

Luftfeuchtigkeit: ca. 10^{-8}

General questions, at what point does it make sense to use an AUK (Automatic Environmental Compensation)?

Do you have measuring conditions

- where no state changes of pressure temperature and humidity are present
- do they perform short time measurements
- Measurements outside the subnano range
- measurements under vacuum conditions
- or you have ideal conditions ($T = 20^\circ\text{C}$, $\text{Pa} = 101,325 \text{ kPa} = 1013$, humidity 50%).

Then the use of an AUK is not absolutely necessary.



Otherwise, the use of an AUK should be recommended.

Factors of influence of temperature, air pressure and humidity on the measurement result:

Temperature: approx. 10^{-6} (i.e.: $T = 1K \rightarrow$

Air pressure: approx. 10^{-7}

Air humidity: approx. 10^{-

(Auswerteeinheit mit Standardauflösung)

*General information and system parameters**(Evaluation unit with standard resolution)***Leistungsparameter - ZLM 700 / ZLM 800 / ZLM 900 mit Auswerteeinheit AE (Standard)*****Performance data - ZLM 700 / ZLM 800 / ZLM 900 with evaluation unit AE (standard)***

Mittlere Wellenlänge He-Ne-Laser in Vakuum <i>Mean He-Ne laser wave- length in vacuum</i>	632,8 nm <i>632.8 nm</i>
Stabilität der Wellenlänge <i>Wavelength stability</i>	$2 \cdot 10^{-9}$ für 1 Stunde / $2 \cdot 10^{-8}$ für Lebensdauer <i>$2 \cdot 10^{-9}$ per 1 hour / $2 \cdot 10^{-8}$ per lifetime</i>
Strahldurchmesser <i>Beam diameter</i>	6 mm (optional 3,2 mm) <i>0.236 in (optionally 0.126 in)</i>
Maximale Leistung des austretenden Strahles <i>Max. beam output</i>	1 mW (Laserklasse 2) <i>1 mW (laser class 2)</i>
Zahl der Messachsen pro Laser <i>Number of measuring axis per laser</i>	1, optional bis 4 <i>1, optionally up to 4</i>
Messbereich Distanzmessung <i>Range of distance measurement</i>	bis 40 m, optional bis 120 m <i>to 130 ft, optionally up to 390 ft</i>
Auflösung Distanz- und Positionsmessung <i>Resolution distance and position measurement</i>	0,1 nm (Tripelreflektorinterferometer) 0,05 nm (Planspiegelinterferometer) <i>0.1 nm (cube corner interferometer), 0.05 nm (plane mirror interferometer)</i>
Genauigkeit Distanz- und Positionsmessung ($20^\circ \pm 0,5^\circ\text{C}$) mit AUK ($20^\circ \pm 0,5^\circ\text{C}$) in Vakuum <i>Accuracy distance and position measurement ($20^\circ \pm 0,5^\circ\text{C}$) with AUK ($20^\circ \pm 0,5^\circ\text{C}$) in Vacuum</i>	$\pm 0,4$ ppm ($\mu\text{/m}$) $\pm 0,08$ ppm ($\mu\text{/m}$) $\pm 0,4$ ppm ($\mu\text{/m}$) $\pm 0,08$ ppm ($\mu\text{/m}$)

(Auswerteeinheit mit Standardauflösung)

*General information and system parameters**(Evaluation unit with standard resolution)*

Messbereich Winkelmessung	$\pm 15^\circ$ bis 20 m Länge
<i>Range of angle measurement</i>	$\pm 15^\circ$ up to 65 ft length

Auflösung Winkelmessung	0,00062 μrad ($12 \cdot 10^{-5}$ arc sec)
<i>Resolution angle measurement</i>	$0.00062 \mu\text{rad}$ ($12 \cdot 10^{-5}$ arc sec)

Genauigkeit Winkelmessung	$\pm 0,1$ ppm
<i>Accuracy angle measurement</i>	± 0.1 ppm

Winkelmessung Genauigkeit (schrittweises Verfahren)	$\pm 0,05$ arcsec pro Meter des Verfahrweges bei linear bewegter Optik
<i>Accuracy angle measurement (stepwise method)</i>	± 0.05 arcsec per meter of distances traveled by linearly moving optic

Messbereich Ebenheitsmessung	bis 20 m Länge
<i>Range of flatness measurement</i>	to 65 ft length

Auflösung Ebenheitsmessung	0,00062 μrad ($12 \cdot 10^{-5}$ arc sec)
<i>Resolution of flatness measurement</i>	$0.00062 \mu\text{rad}$ ($12 \cdot 10^{-5}$ arc sec)

Genauigkeit Ebenheitsmessung	$\pm 0,2\%$ vom Messwert
	$\pm 0,05 \mu\text{rad}$ pro Meter Verschiebeweg
<i>Accuracy flatness measurement</i>	$\pm 0.2\%$ of measured value
	$\pm 0.05 \mu\text{rad}$ per meter of displacement path

Messbereich Geradheitsmessung	$\pm 5\text{mm}$ auf 2m Länge bzw. 10m Länge
<i>Range of straightness measurement</i>	30m Länge (optional) mit Winkelinterferometer
	$\pm 0.078 \text{ in}$ for 6.5 ft length or 32.5 ft length
	97.5 ft length (optionally) with angle interferometer

Auflösung Geradheitsmessung	29 nm auf 2 m
	145nm auf 10 m
<i>Resolution straightness measurement</i>	29 nm for 6.5 ft

(Auswerteeinheit mit Standardauflösung)

*General information and system parameters**(Evaluation unit with standard resolution)*

145nm for 32.5 ft

Genauigkeit Geradheitsmessung	bis 2 m	$\pm 0,5\%$	vom Messwert
	bis 10 m	$\pm 2,5\%$	vom Messwert
<i>Accuracy straightness measurement</i>	<i>to 2 m</i>	$\pm 0,5\%$	<i>of measured value</i>
	<i>to 10 m</i>	$\pm 2,5\%$	<i>of measured value</i>

Messbereich Rechtwinkeligkeitsmessung	$\pm 5\text{mm}$ auf 2m Länge bzw. 10m Länge
<i>Range of squareness measurement</i>	$\pm 0.078\text{ in}$ for 6.5 ft length or 32.5 ft length

Auflösung Rechtwinkeligkeitsmessung	bis 2 m	29 nm auf 2 m
	bis 10 m	145 nm auf 10 m
<i>Resolution squareness measurement</i>	<i>to 2 m</i>	<i>29 nm for 6.5 ft</i>
	<i>to 10 m</i>	<i>145 nm for 32.5 ft</i>

Genauigkeit Rechtwinkeligkeitsmessung	bis 2 m	$\pm 0,5\%$	vom Messwert	$\pm 0,5 \text{ arc sec} ^{***}$
	bis 10 m	$\pm 2,5\%$	vom Messwert	$\pm 0,5 \text{ arc sec} ^{***}$
<i>Accuracy squareness measurement</i>	<i>to 2 m</i>	$\pm 0,5\%$	<i>to measured value</i>	$\pm 0,5 \text{ arc sec} ^{***}$
	<i>to 10 m</i>	$\pm 2,5\%$	<i>to measured value</i>	$\pm 0,5 \text{ arc sec} ^{***}$

*** Toleranz Rechtwinkeligkeitsnormal

*** Tolerance squareness normal

Maximale Verfahrgeschwindigkeit	3 m/s, translatorisch
	320 rad/s rotatorisch
<i>Maximum movement speed</i>	<i>3m/s</i>
	<i>320 rad/s angular velocity</i>

Genauigkeit Geschwindigkeitsmessung	$\pm 0,5 \text{ ppm}$ vom Messwert
<i>Accuracy velocity measurement</i>	<i>$\pm 0,5 \text{ ppm}$ of measured value</i>

Maximale Beschleunigung	keine Begrenzung
<i>Maximum acceleration</i>	<i>no limit</i>

(Auswerteeinheit mit Standardauflösung)

*General information and system parameters**(Evaluation unit with standard resolution)*

Nichtlinearität	$\pm 1,25 \text{ nm}$ (Tripelreflektorinterferometer) $\pm 0,62 \text{ nm}$ (Planspiegelinterferometer)
<i>Non linearity</i>	$\pm 1.25 \text{ nm}$ (<i>cube corner interferometer</i>) $\pm 0.62 \text{ nm}$ (<i>plane mirror interferometer</i>)

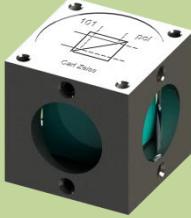
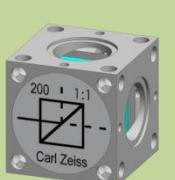
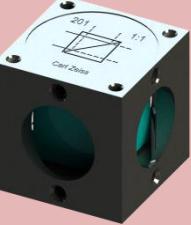
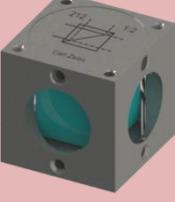
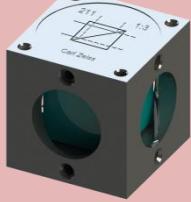
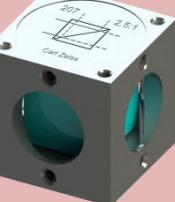
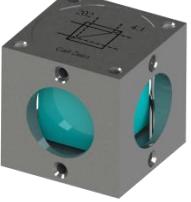
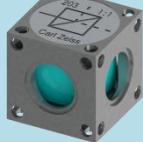
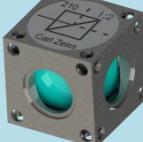
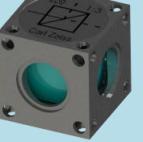
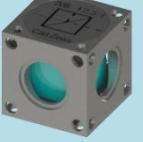
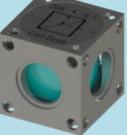
Schnittstellen	Quadratursignale 32 Bit (Echtzeit) $\Delta t \approx 20 \text{ ns}$
<i>Interfaces</i>	<i>quadrature signals</i> <i>32 Bit (real time)</i> <i>$\Delta t \approx 20 \text{ ns}$</i>

Einsatzbedingungen	Temperaturbereich: $15^\circ\text{C} \dots 30^\circ\text{C}$ Luftfeuchte: < 90% nicht kondensierend
<i>Operating conditions</i>	<i>Temperature range: $59^\circ\text{F} \dots 86^\circ\text{F}$</i> <i>Air humidity: < 90% non condensing</i>

Lagerbedingungen	Temperaturbereich: $10^\circ\text{C} \dots 40^\circ\text{C}$ Luftfeuchte < 95% nicht kondensierend
<i>Storing conditions</i>	<i>Temperature range: $50^\circ\text{F} \dots 104^\circ\text{F}$</i> <i>Air humidity < 95% non condensing</i>

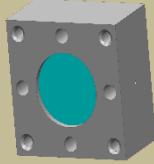
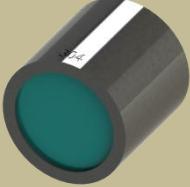
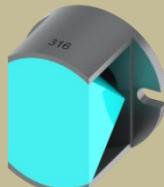
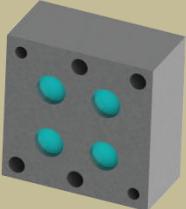
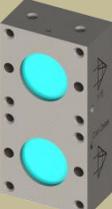
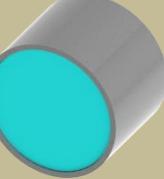
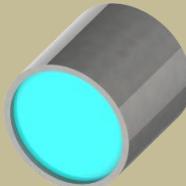
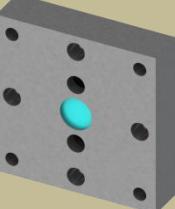
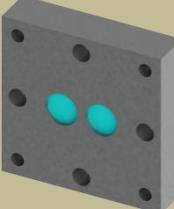
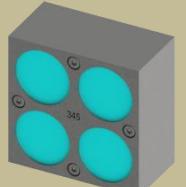
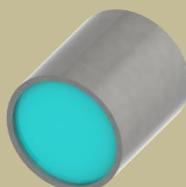
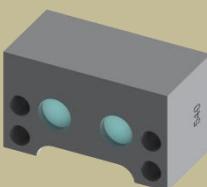
B. Produktpalette**B. Product overview****Strahlteiler - Polarisationsteiler / Intensitätsteiler**

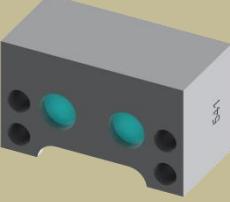
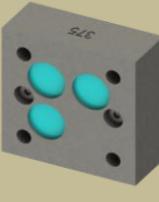
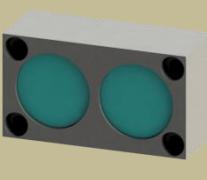
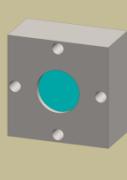
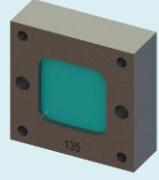
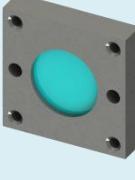
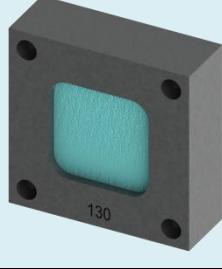
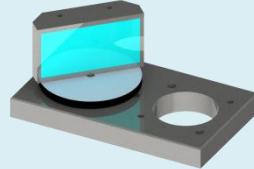
Beam splitters - Polarizing beam splitter / Beam splitters

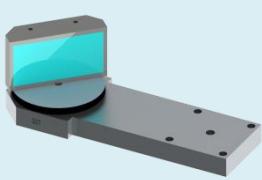
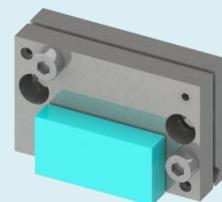
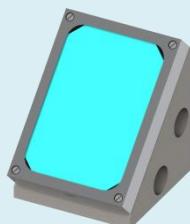
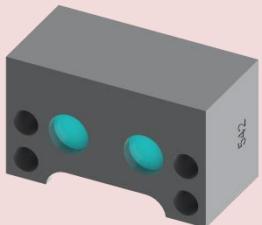
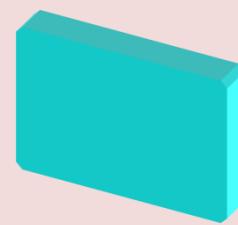
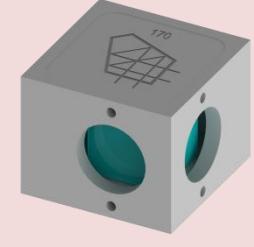
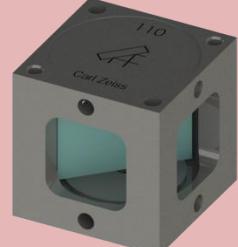
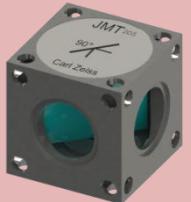
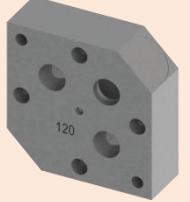
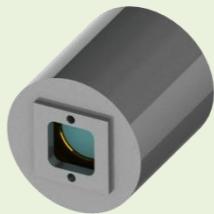
			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 4010 . 124	269302 – 4016 . 524	269302 – 4011 . 424
Seite / Page:	C-1	C-1	C-2
Name: <i>Description:</i>	Polarisationsstrahlteiler 101 <i>Polarizing beam splitter 101</i>	Polarisationsstrahlteiler 200 <i>Polarizing beam splitter 200</i>	Intensitätsteiler A 201 <i>Beam splitter A 201</i>
			
269302 – 4017 . 824	269302 – 4017 . 624	269302 – 4011 . 724	269302 – 4011 . 824
C-2	C-2	C-2	C-2
Intensitätsteiler A 212 <i>Beam splitter A 212</i>	Intensitätsteiler A 211 <i>Beam splitter A 211</i>	Intensitätsteiler A 207 <i>Beam splitter A 207</i>	Intensitätsteiler A 202 <i>Beam splitter A 202</i>
			
269302 – 4012 . 124	269302 – 4017 . 924	269302 – 4017 . 724	269302 – 4012 . 324
C-3	C-3	C-3	C-3
Intensitätsteiler B 203 <i>Beam splitter B 203</i>	Intensitätsteiler B 210 <i>Beam splitter B 210</i>	Intensitätsteiler B 209 <i>Beam splitter B 209</i>	Intensitätsteiler B 208 <i>Beam splitter B 208</i>
			
269302 – 4012 . 224			
C-3			
Intensitätsteiler B 204 <i>Beam splitter B 204</i>			

Reflektoren –Spiegel / Tripelspiegel / Umlenker / Aufweitsysteme

Reflectors – Plane mirrors / Triple mirrors / Beam benders / Beam expansion systems

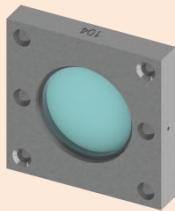
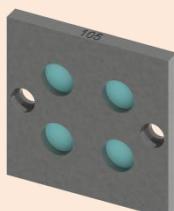
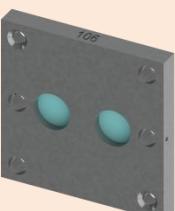
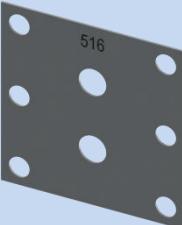
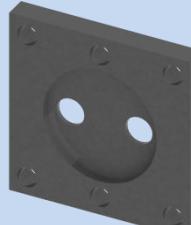
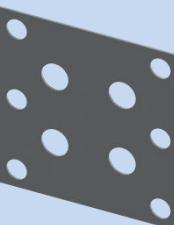
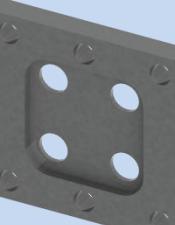
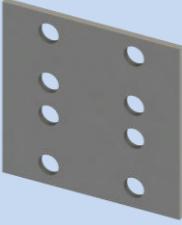
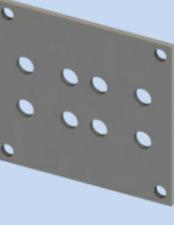
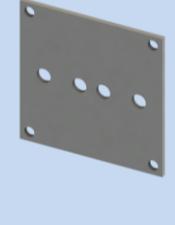
			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 4010 . 224	269302 – 4059 . 124	269302 – 4016 . 024
Seite / Page:	D-1	D-1	D-1
Name: <i>Description:</i>	Tripelreflektor 102 Cube corner reflector 102	Tripelreflektor 304 Triple reflector 304	Tripelreflektor klein 316 Triple reflector small 316
			
269302 – 4014 . 624	269302 – 4011 . 624	269302 – 4015 . 424	269302 - 4003 . 024
D-2	D-2	D-2	D-3
Doppeltripelreflektor 160 <i>Double triple reflector 160</i>	Tripelreflektor 116 Cube corner reflector 116	Doppelreflektor 115 Double reflector 115	Tripelreflektor 351 Triple reflector 351
			
269302 – 4003 . 424	269302 – 4018 . 324	269302 – 4018 . 424	269302 – 4007 . 300
D-3	D-3	D-4	D-4
Tripelreflektor 9mm <i>Triple reflector 9mm</i>	Reflektor HR - 1 354 Reflector HR - 1 354	Reflektor HR - 2 355 Reflector HR - 2 355	Tripelreflektor 9mm Triple reflector 9mm
			
269302 – 4034 . 524	269302 – 5003 . 524	269302 – 5003 . 624	269302 – 3809 . 724
D-4	D-5	D-5	D-5
3 Achs - Reflektor 345 <i>Three axis reflector 345</i>	Tripelreflektor 9mm Triple reflector 9mm	Doppelreflektor 9mm Double reflector 9mm	Referenztripelspiegel 541 Reference cube corner reflector 541

			
269302 – 3809 . 624 D-6 Referenztripelspiegel 540 Reference cube corner reflector 540	269302 – 1108 . 824 D-6 Tripelreflektor 24mm Triple reflector 24mm	269302 – 4014 . 024 D-6 Tripelreflektor 40mm Triple reflector 40mm	269302 – 4066 . 024 D-7 3 Achs - Reflektor 375 3 axis triple reflector 375
			
269302 – 5003 . 224 D-7 3 Achs - Reflektor 431 Three axes reflector 431	269302 – 5010 . 125 D-7 2 Achs - Reflektor 392 2 Axes reflector 392	269302 – 4016 . 624 D-8 Tripelreflektor 216 Cube corner reflector 216	269302 – 4018 . 824 D-8 Planspiegelreflektor 135 Plane mirror reflector 135
			
269302 – 4010 . 324 D-8 Planspiegelreflektor 103 Plane mirror reflector 103	269302 – 4016 . 124 D-9 Planspiegelreflektor klein 317 Plane mirror reflector small 317	269302 – 4013 . 824 D-9 Spiegelgruppe 321 Mirror group 321	269302 – 4022 . 124 D-9 Spiegelgruppe 130 Mirror group 130
			
269302 – 4015 . 524 D-10			
Fußplatte mit Drehspiegel 118 Base plate with turning mirror 118			

			
269302 - 4013 . 724	269302 - 4017 . 300	269302 - 4002 . 224	269302 - 4034 . 624
D-10	D-10	D-11	D-11
Drehspiegel 327 <i>Turning mirror 327</i>	Planspiegelreflektor <i>Plane mirror reflector</i>	Referenzspiegel 536 <i>Reference mirror 536</i>	90° Umlenker 346 <i>90° Beam bender 346</i>
			
269302 - 3809 . 824	269302 - 4014 . 400	269302 - 4011 . 124	269302 - 4068 . 024
D-12	D-12	D-12	D-13
Referenzplanspiegel 542 <i>Reference mirror reflector 542</i>	Planspiegel <i>Plane mirror</i>	Pentagonalprisma 111 <i>Pentaprism 111</i>	Pentagonalprisma 170 <i>Pentaprism 170</i>
			
269302 - 4011 . 024	269302 - 4012 . 424	269302 - 4008 . 424	269302 - 5100 . 224
D-13	D-13	D-14	D-14
90° Umlenker 110 <i>90° Beam bender 110</i>	90° Umlenker 205 <i>90° Beam bender 205</i>	Wendevorsatz 120 <i>Beam offset prism 120</i>	Refraktometermodul 145 <i>Refractometer modul 145</i>
			
269302 - 4005 . 924	269302 - 4006 . 024	269302 - 5905 . 026	269302 - 5906 . 025
D-14	D-15	D-16	D-17
Aufweitsystem 350 <i>Expansive system 350</i>	Reduziersystem 1/3 380 <i>Reduction system 1/3 380</i>	Drehkeilpaar 325 <i>Rotating wedge pair 325</i>	Drehkeil 315 <i>Rotating wedge pair 315</i>

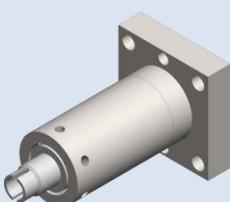
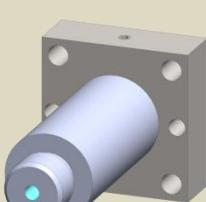
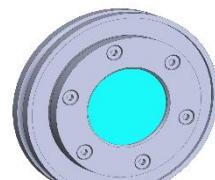
Wellenplatten / Blenden

Wave plates / pinholes

			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 4010 . 424	269302 – 4012 . 924	269302 - 5009 . 024
Seite / Page:	E-1	E-1	E-1
Name: <i>Description:</i>	$\lambda/4$ Platte 104 Quarter wave plate 104	$\lambda/4$ Platte 105 Quarter wave plate 105	$\lambda/4$ Platte 106 Quarter wave plate 106
			
269302 – 4014 . 210	269302 – 4018 . 210	269302 – 4014 . 310	269302 – 4018 . 310
E-2	E-2	E-3	E-3
Blende 516 <i>Pinhole 516</i>	Blende 517 <i>Pinhole 517</i>	Blende 519 <i>Pinhole 519</i>	Blende 520 <i>Pinhole 520</i>
			
269302 – 5011 . 310	269302 – 5011 . 210	269302 – 5011 . 410	269302 – 5011 . 510
E-4	E-4	E-5	E-5
Vorsatzblende für 345 <i>Pinhole for 345</i>	Vorsatzblende für 347/348 <i>Pinhole for 347/348</i>	Vorsatzblende für 370 <i>Pinhole for 370</i>	Vorsatzblende für 390 <i>Pinhole for 390</i>

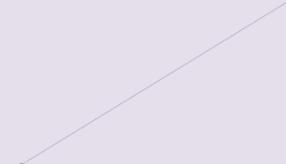
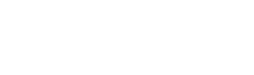
Faserkoppler - Ein- und Auskoppeloptiken*Fiber optics couplings - Input and Output*

			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 4015 . 624	269302 – 4015 . 724	269302 – 4015 . 824
Seite / Page:	F-1	F-1	F-1
Name: <i>Description:</i>	LWL Anschluss 221 Fiber optics coupling 221	LWL Anschluss 222 Fiber optics coupling 222	LWL Anschluss 223 Fiber optics coupling 223

			
269302 – 4015 . 924	269302 – 4020 . 624	269302 – 4020 .924	269302 – 4021 . 124
F-2	F-2	F-3	F-3
LWL - Anschluss für Parallelinterferometer 224 <i>Fiber optics coupling for parallel interferometer 224</i>	LWL - Anschluss 222 abgewinkelt <i>Fiber optics coupling 222 bent</i>	LWL - Anschluss 223 abgewinkelt <i>Fiber optics coupling 223 bent</i>	LWL - Anschluss für Parallelinterferometer 224 <i>Fiber optics coupling for parallel interferometer 224</i>
			
269302 – 4016 . 324	269302 – 5010 . 024	269302 – 4016 . 424	269302 – 5010 . 224
F-4	F-4	F-5	F-5
LWL Anschluss 215 <i>Fiber optics coupling 215</i>	LWL - Auskopplung 121 <i>Fiber optics coupling 121</i>	LWL - Auskopplung 218 <i>Fiber optics coupling 218</i>	Adapter LSI 440 <i>Adapter LSI 440</i>
			
269302 – 5010 . 024	000000 – 5001 . 592	000000 – 5001 . 593	
F-6	F-6	F-7	
LWL – Adapter 220 <i>LWL – Adapter 220</i>	Fenster 44 - Vakuumdurchführung <i>Window 44 - Vacuum Feedthrough</i>	Vakuum - Durchführung für 2 Faser <i>Vacuum - Feedthrough for 2x Fiber</i>	

Kabel

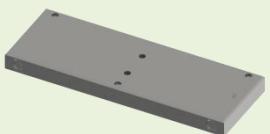
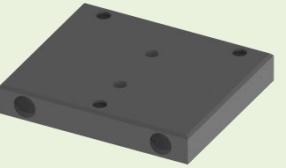
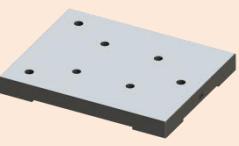
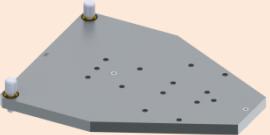
Cables

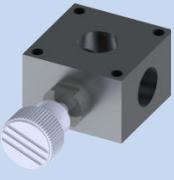
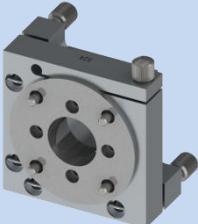
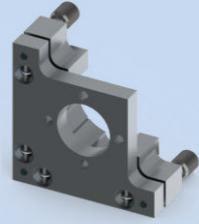
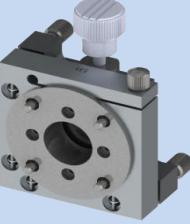
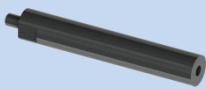
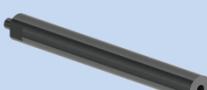
			
Artikelbestellnr.: <i>Order No.:</i>	000000 - 0146 . 250	000000 - 0228 . 205	000000 - 0228 . 289
Seite / Page:	G-3	G-3	G-3
Name: <i>Description:</i>	Geräteanschlusskabel DIN Standard <i>Power cable - DIN standard</i>	Geräteanschlusskabel GB Version <i>Power cable - British Version</i>	Geräteanschlusskabel Japan/ USA Version <i>Power cable – Japan/ USA standard</i>
			
000000 - 5001 . 394	000000 - 0212 . 678	269302 - 5040 . 424	269302 - 5040 . 524
G-3	G-4	G-4	G-4
Geräteanschlusskabel Australien/ China <i>Power cable – Australia/ China</i>	Gradienten - Lichtwellenleiter <i>Gradient index fiber cable</i>	A-Q-B Kabel (15 pol) <i>AUK connecting cable (15 pol)</i>	A-Q-B Kabel (9 pol) <i>A-Q-B cable (9 pol)</i>
			
269302 - 4040 . 224	269302 - 4040 . 824		269302 - 4080 . 824
G-5	G-5		G-6
AUK Anschlusskabel <i>AUK connecting cable</i>	Messkopfkabel , komplett <i>Measurement head cable, complete</i>		Messkopfkabel (Einbauvariante) <i>Measurement head cable (Built- in system)</i>
			
269302 - 5062 . 126	269302 - 5040 . 124	269302 - 4043 . 724	269302 - 4004 . 726
G-6	G-6	G-7	G-7
Messkopfkabel , komplett (ZLM 800) <i>Measurement head cable, (ZLM 800)</i>	Messkopfkabel <i>Measurement head cable</i>	Doppellichtwellenleiter <i>Double fiber cable</i>	Trigger Kabel 2020 <i>Trigger Cable 2020</i>

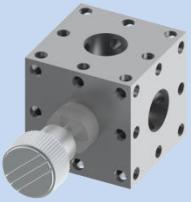
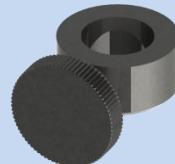
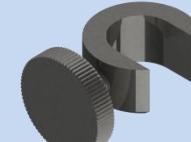
			
269302 – 5091 . 824	269302 – 5091 . 724		
G-7	G-8		
Messkopfkabel (ZLM 900) standard <i>Measurement head cable (ZLM 900) standard</i>	Messkopfkabel (ZLM 900) mit Referenz <i>Measurement head cable (ZLM 900) with reference</i>		
			
269302 – 5100 . 024	269302 – 5040 . 926	269302 – 5093 . 224	
G-9	G-9	G-10	
AqB - Kabel (Spinder & Hoyer) <i>AqB - cable (Spindler & Hoyer)</i>	Quadrantenkabel (für Referenzposition) <i>Quad cable (for reference position)</i>	Referenzsynchronkabel SMB <i>Reference synchron cable SMB</i>	

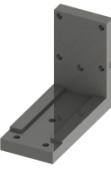
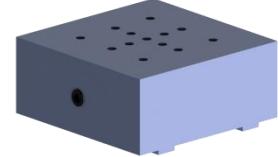
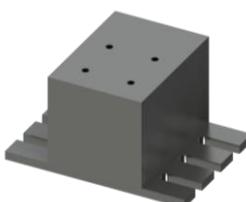
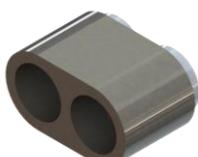
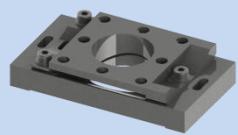
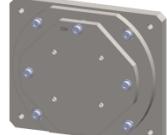
Montageelemente – Justier- und Koppelemente

Mounting elements – Adjustment and coupling elements

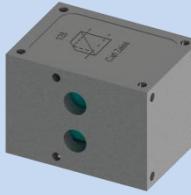
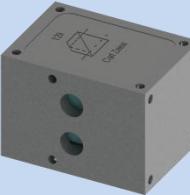
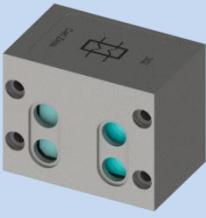
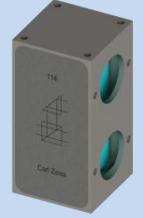
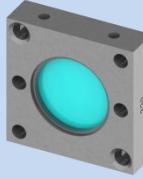
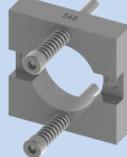
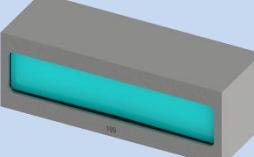
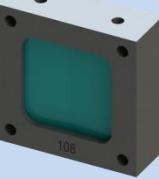
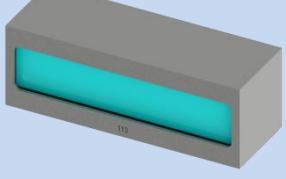
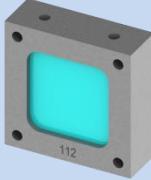
			
Artikelbestellnr.: Order No.:	269302 – 4017 . 910	269302 – 4011 . 625	269302 – 4011 . 725
Seite / Page:	H-1	H-1	H-1
Name: Description:	Koppelplatte 511 Coupling plate 511	Fußabstandsplatte 150 Base distance plate 150	Fußabstandsplatte 100 Base distance plate 100
			
269302 – 4011 . 825	269302 – 4014 . 410	269302 – 4014 . 510	269302 – 4012 . 425
H-2	H-2	H-2	H-3
Fußabstandsplatte 50 Base distance plate 50	Basisplatte 504 Mounting plate 504	Klemmhalter 510 Coupling plate 510	Justierplatte 549 Adjustable plate 549

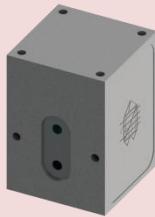
			
269302 – 4010 . 325	269302 – 4010 . 125	269302 – 4010 . 225	269302 – 4010 . 825
H-3	H-3	H-4	H-4
Klemmhalter 507 <i>Clamp mounting 507</i>	Klemmhalter 508 <i>Clamp mounting 508</i>	Klemmhalter 509 <i>Clamp mounting 509</i>	Kipphalter 523 <i>Tilttable holder 523</i>
			
269302 – 4010 . 925	269302 – 4010 . 826	269302 – 4040 . 725	269302 – 4040 . 625
H-4	H-5	H-5	H-5
Kipphalter 524 <i>Tilttable holder 524</i>	Kipphalter 525 <i>Tilttable holder 525</i>	Kipphalter 531 <i>Tilttable holder 531</i>	Kipphalter 532 <i>Tilttable holder 532</i>
			
269302 – 4004 . 625	269302 – 4010 . 525	269302 – 5011 . 610	
H-6	H-6	H-6	
Kipphalter 533 <i>Tilttable holder 533</i>	Klemmhalter 514 <i>Clamp mounting 514</i>	Abstandsblock 40 <i>Distance block 40</i>	
			
260297 – 9900 . 228	260297 – 9900 . 128	260297 – 9900 . 328	260298 – 3000 . 128
H-7	H-7	H-8	H-8
Säule 90 <i>Rod 90</i>	Säule 140 <i>Rod 140</i>	Säule 200 <i>Rod 200</i>	Magnetfuß 506 <i>Magnetic base 506</i>

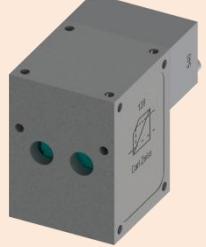
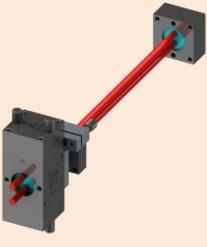
			
269302 – 4010 . 625 H-8 Klemmwürfel 503 <i>Clamping cube 503</i>	260297 – 9900 . 428 H-9 Stellring, geschlossen <i>Collar, closed</i>	260297 – 9900 . 528 H-9 Stellring, offen <i>Collar, open</i>	269302 – 4012 . 325 H-9 Saugfuß <i>Vacuum base</i>
			
269302 – 5111 . 110 H-10 Koppelplatte 509 <i>Coupling plate 509</i>	269302 – 4011 . 025 H-10 Schraube 14 <i>Screw 14</i>	269302 – 4011 . 125 H-10 Schraube 20 <i>Screw 20</i>	269302 – 4011 . 225 H-11 Schraube 29 <i>Screw 29</i>
			
269302 – 4011 . 325 H-11 Schraube 36 <i>Screw 36</i>	269302 – 4011 . 425 H-11 Schraube 45 <i>Screw 45</i>	269302 – 4005 . 624 H-12 Schraubensatz komplett <i>Set of screws, complete</i>	

			
269302 – 4010 . 425	269302 – 4018 . 110	269302 -5101 . 210	269302 - 4013 . 225
H-13	H-13	H-14	H-14
Haltewinkel 521 <i>Angle bracket 521</i>	Säulenanschluss 522 <i>Adapter plate 522</i>	Winkeladapter (für Kompakt – Planspiegelinterferometer 390) <i>Angle adapter (for Compact plane mirror interferometer 390)</i>	Winkeladapter <i>Angle adapter</i>
			
269302 – 5105 . 110	269302 – 4012 . 825	260297 - 9901 . 328	260297 - 9901 . 228
H-14	H-15	H-15	H-15
Winkeladapter für 115 <i>Angle adapter for 115</i>	Schwingungsdämpfte Säule mit Montageklemme <i>Vibration damping column with mounting clamp</i>	Verstellbare Grundplatte <i>Adjustable mounting plate</i>	Flacher Magnetfuß <i>Flat magnetic plate</i>
			
269302 – 4042 . 910	269302 – 5013 . 110	269302 – 5003 . 525	269302 – 4010 . 725
H-16	H-16	H-16	H-17
Adapterplatte 554 <i>Adapter plate 554</i>	Distanzblock für 347 und 348 <i>Distance block for 347 and 348</i>	Doppeladapter für Reflektor 9 mm (Winkelmessung) <i>Double adapter for reflector 9mm (angle measurement)</i>	45° Klemmhalter 546 <i>45° Clamp mounting 546</i>
			
269302 – 4009 . 025	269302 – 4009 . 125	269302 – 4009 . 225	269302 – 4014 . 226
H-17	H-17	H-18	H-19
Justieraufnahme 588 <i>(für optische Komponenten □ 40)</i> Adjustable mount 588 <i>(for optical components □ 40)</i>	Justieraufnahme 589 <i>(für optische Komponenten □ 28)</i> Adjustable mount 589 <i>(for optical components □ 28)</i>	Justieraufnahme 590 <i>(für optische Komponenten □ 20)</i> Adjustable mount 590 <i>(for optical components □ 20)</i>	Justieraufnahme 534 <i>Adjustable mount 534</i>

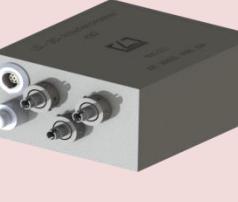
Interferometer – Interferometer, Kompaktinterferometer , Bausätze und Lichtschlauchinterferometer
Interferometer – Interferometers, Compact interferometers, Assembly sets and Fiber optics interferometers

			
Artikelbestellnr.: Order No.:	269302 – 4012 . 824	269302 – 4013 . 024	269302 – 4013 . 324
Seite / Page:	I-1	I-1	I-1
Name: Description:	Geradheitsinterferometer 128 Straightness interferometer 128	Geradheitsinterferometer 129 Straightness interferometer 129	Parallelinterferometer 301 Parallelinterferometer 301
			
269302 – 4013 . 424	269302 – 4009 . 124	269302 – 4015 . 324	269302 – 4006 . 424
I-2	I-2	I-3	I-3
Lichtventil 302 Light valve 302	Lichtventil 308 Light valve 308	Winkelinterferometer 114 Angle interferometer 114	Vibrationsvorsatzlinse 320 Vibrometer ancillary lens 320
			
269302 – 4006 . 425	269302 – 4010 . 924	269302 – 4017 . 124	269302 – 4011 . 324
I-3	I-4	I-4	I-4
Vibrometereinstellplatte 548 Vibrometer adjusting plate 548	Winkelreflektor 2 m 109 Angle reflector 2 m 109	Doppelkeil 2 m 108 Double wedge 2 m 108	Winkelreflektor 10 m 113 Angle reflector 10 m 113
			
269302 – 4017 . 224			
I-5			
Doppelkeil 10 m 112 Double wedge 10 m 112			

			
269302 – 5010 . 524	269302 – 5010 . 526	269302 – 5010 . 624	269302 – 5010 . 626
I-5	I-6	I-7	I-8
Kompaktinterferometer 347 (mit rücklaufenden Lichtstrahlen zum Lasermesskopf) <i>Compact interferometer 347 (Laser beams are inject directly into the laser head)</i>	Kompaktinterferometer 347 (mit separaten Lichtwellenleiteranschlüssen) <i>Compact interferometer 347 (with separate fiber optic connectors)</i>	3 - Achs - Kompakt - Planspiegel - Interferometer 348 <i>3 Axes Compact plane mirror interferometer 348</i>	3 - Achs - Kompakt - Planspiegel - Interferometer 348 (mit Faserkopplungen) <i>3 Axes Compact plane mirror interferometer 348 (with fiber optics couplings)</i>
			
269302 - 5093 . 124	269302 - 5093 . 424	269302 - 5093 . 024	269302 - 5093 . 324
I-9	I-10	I-11	I-12
2D - Achs - Kompakt – IF386 <i>2D Axes Compact IF386</i>	2D - Achs -Planspiegel – IF387 <i>2D Axes Plane mirror IF387</i>	3D - Achs - Kompakt – IF385 <i>3D Axes Compact IF385</i>	3D - Achs -Planspiegel – IF388 <i>3D Axes Plane mirror IF388</i>
			
269302 – 4002 . 324	269302 – 4019 . 024	269302 – 4005 . 524	
I-13	I-14	I-14	
Parallel – Planspiegel- interferometer 352 <i>Parallel plane mirror interferometer 352</i>	Parallel – Planspiegel- interferometer 356 <i>Parallel plane mirror interferometer 356</i>	Parallel-Planspiegel- Interferometer 358 <i>Parallel plane mirror interferometer 358</i>	

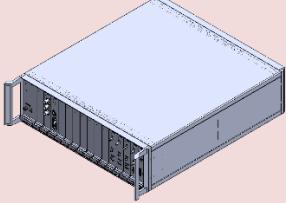
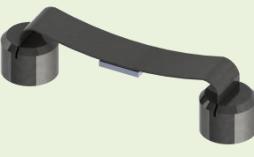
			
269302 – 4066 . 124	269302 – 4066 . 224	269302 – 4009 . 624	269302 – 4004 . 524
I-15	I-16	I-17	I-18
3-Achs-Kompakt-Planspiegel-Interferometer 360 3 Axes compact plane mirror interferometer 360	2-Achs-Kompakt-Planspiegel-Interferometer 362 2 Axes compact plane mirror interferometer 362	Planspiegelinterferometer 368 Plane mirror interferometer 368	2-Achs-Kompakt-Planspiegel-Interferometer 370 2 Axes Compact plane mirror interferometer 370
			
269302 – 5010 . 124	269302 - 4009 . 024	269302 - 4009 . 524	269302 - 4018 . 924
I-19	I-19	I-20	I-20 I-21
Kompakt – Planspiegel Interferometer 390 Compact plane mirror interferometer 390	Parallelinterferometer 608 Parallel interferometer 608	Parallelinterferometer 608 (mit LWL – Einkopplung) Parallel interferometer 608 (with fiber optics coupling)	Parallelinterferometer 608 (mit LWL - Einkopplung und variablen Strahlengang) Parallel interferometer 608 (with fiber optics coupling and variable beam control)
			
269302 - 4012 . 925	269302 – 4061 . 426	269302 – 4002 . 026	269302 – 5007 . 024
I-22	I-22	I-23	I-24
Bausatz - (Geradheitsinterferometer 128 + Referenzplanspiegel 540) Assembly set (Straightness interferometer 128 + Reference cube corner reflector 540)	Bausatz Planspiegelinterferometer Assembly set for plane mirror interferometer	Parallelinterferometer für Planspiegelreflektor mit LWL Anschluss (komplett) Parallel interferometer for Plane mirror with fiber optics coupling (complete)	LSI 4-fach-Planspiegel-Interferometer 420 (geradeaus) LSI 4-fold Plane mirror interferometer 420 (straight)

269302 – 5007 . 224 I-24 LSI 4-fach-Planspiegel-Interferometer 421 (90°, rechts) <i>LSI 4-fold Plane mirror interferometer 421 (90°, right)</i>	269302 – 5007 . 324 I-25 LSI 4-fach-Planspiegel-Interferometer 422 (90°, links) <i>LSI 4-fold Plane mirror interferometer 422 (90°, left)</i>	269302 – 5007 . 524 I-25 LSI 8-fach-Planspiegel-Interferometer 423 (geradeaus) <i>LSI 8-fold Plane mirror interferometer 423 (straight)</i>	269302 – 5007 . 724 I-26 LSI 8-fach-Planspiegel-Interferometer 424 (90°, rechts) <i>LSI 8-fold Plane mirror interferometer 424 (90°, right)</i>
269302 – 5007 . 824 I-26 LSI 8-fach-Planspiegel-Interferometer 425 (90°, links) <i>LSI 8-fold Plane mirror interferometer 424 (90°, left)</i>	269302 – 5012 . 024 I-27 LSI Einstrahlinterferometer 400 <i>LSI Single beam interferometer 400</i>	269302 – 5005 . 424 I-27 LSI Winkel-Interferometer 401 <i>LSI Angle interferometer 401</i>	269302 – 5003 . 724 I-28 LSI Winkel-Interferometer 402 (stellbar) <i>LSI Angle interferometer 402 (adjustable)</i>
269302 – 5005 . 224 I-28 LSI Winkel-Interferometer 403 mit Justiersensor <i>LSI Angle interferometer 403 sensor for adjusting</i>	269302 – 5004 . 824 I-29 LSI Winkel-Interferometer 404 mit Justiersensor, stellbar <i>LSI Angle interferometer 404 sensor for adjusting, adjustable</i>	269302 – 5005 . 324 I-29 LSI Winkel-Interferometer 405 mit Justiersensor und Libelle <i>LSI Angle interferometer 405 with sensor for adjusting and bubble level</i>	269302 – 5004 . 924 I-30 LSI Winkel-Interferometer 406 mit Justiersensor und Libelle, stellbar <i>LSI Angle interferometer 406 with sensor for adjusting and bubble level, adjustable</i>

			
269302 - 4003 . 224	269302 - 4006 . 624	269302 - 5004 . 624	269302 - 5004 . 124
I-30	I-31	I-31	I-32
LSI Winkel-Interferometer 407 mit interner Referenz und Justiersensor <i>LSI Angle interferometer 407 with internal reference and sensor for adjusting</i>	LSI Winkel-Interferometer 408 mit interner Referenz und Justiersensor, stellbar <i>LSI Angle interferometer 408 with internal reference and sensor for adjusting, adjustable</i>	LSI - Planspiegel-Interferometer 410 (mit interner Referenz) <i>LSI Plane mirror interferometer 410 (with internal reference)</i>	LSI - Winkelinterferometer 411 (mit interner Referenz) <i>LSI Angle interferometer 411 (with internal reference)</i>
			
269302 - 5004 . 424	269302 - 5004 . 224	269302 - 5004 . 524	269302 - 5004 . 024
I-32	I-33	I-33	I-34
LSI - Planspiegel-Interferometer 412 (mit interner Referenz) <i>LSI Plane mirror interferometer 412 (with internal reference)</i>	LSI - Winkel-Interferometer 414 (mit interner Referenz) <i>LSI Angle interferometer 414 (with internal reference)</i>	LSI - Planspiegel-Interferometer 415 <i>LSI Plane mirror interferometer 415</i>	LSI - Planspiegel-Interferometer 416 <i>LSI Plane mirror interferometer 416</i>
			
269302 - 5004 . 724	269302 - 5004 . 324	269302 - 4006 . 524	269302 - 5060 . 024
I-34	I-35	I-36	I-37
LSI - Planspiegel-Interferometer 417 <i>LSI Plane mirror interferometer 417</i>	LSI- Winkel- Interferometer 418 <i>LSI Angle interferometer 418</i>	LSI 3D Interferometer 430 <i>LSI 3D Interferometer 430</i>	6D - UHF Parallel Planspiegel Interferometer <i>6D - UHF Parallel Mirror Interferometer</i>

Lasermessköpfe – (Auswerteeinheiten, Anbausätze und Zubehör)

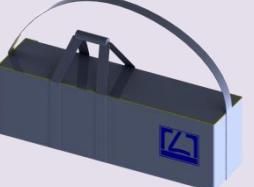
Laser measurement heads (evaluation units, adapters and accessories)

			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 5061 . 026	269302 -5062 . 026	269302 – 5063 . 026
Seite /	J-1	J-1	J-2
Name: <i>Description:</i>	Lasermesskopf ZLM 700 Laser measuring head ZLM 700	Lasermesskopf ZLM 800 Laser measuring head ZLM 800	Lasermesskopf ZLM 800 (Einbausystem) Laser measuring head ZLM 800 (built-in system)
			
269302 – 5095 . 026			
J-3			
Kompakteinheit ZLM 900 LSI <i>Compact unit ZLM 900 LSI</i>			
			
269300 – 3904 . 824	269300 – 3900 . 524	269302 - 5017 . 024	269302 – 4004 . 526
J-4	J-4	J-5	J-6
Oberflächen- Temperaturfühler 2 <i>Surface temperature sensor 2</i>	Magnethalter 2 <i>Magnetic holder 2</i>	Automatische Umweltkompensation AUK <i>AUK environmental sensor</i>	Triggerbox 2020 <i>Trigger box 2020</i>

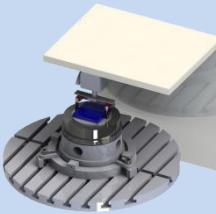
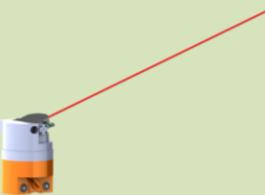
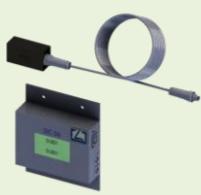
269302 - 4040 . 025	269302 – 4040 . 125	269302 – 4040 . 225	269302 – 4041 . 310
J-6	J-7	J-7	J-8
Justiertisch 528 (ohne Quertrieb) Adjustable table 528 (without cross slide)	Justieraufnahme für Laserkopf 528 Adjustable table for laser head 528	Justieraufnahme für Laserkopf 530 Adjustable mount for laser head 530	Montageplatte 529 Mounting plate 529
269302 - 5014 . 910	269302 – 4041 . 225		
J-8	J-9		
Montagetubus für Optikmodule Mounting tube for optic modules	Stativ Tripod		
269302 – 5092 . 024	269302 – 5092 . 124		
J-10	J-10		
Master Hoch Frequenz Messkarte (Master) High frequency measuring card (master)	Master Hoch Frequenz Messkarte (Slave) High frequency measuring card (slave))		
269302 – 5093 . 026	269302 – 5093 . 126		
J-11	J-11		
Grundbox mit Powermodul einachsig Basic box with power module single-axis	Grundbox mit Powermodul mehr achsig Basic box with power module multi- axis		

Aufbewahrungsbehälter

Storage boxes

			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 4003 . 626	000000 – 4003 . 726	269302 – 4010 . 126
Seite / Page:	K-1	K-1	K-2
Name: <i>Description:</i>	Transportkoffer Fluggepäck <i>Transport box- flight luggage</i>	Aufbewahrungstasche für Stativ und Justiertisch <i>Transport bag for tripod and adjustment table</i>	Aufbewahrungsbehälter für Optikmodule <i>Box for optic modules</i>
			
269302 – 4003 . 626	000000 – 5001 . 370		
K-2	K-3		
Transportbehälter – Fluggepäck (für Auswahlsetz) <i>Transport case – flight hand luggage</i>	Transportbox für ZLM 800/ PCI / 1-12 - hybrid <i>Transport box for ZLM 800/ PCI / 1-12 - hybrid</i>		

Zusatzgeräte
Additional equipment

			
Artikelbestellnr.: <i>Order No.:</i>	269302 – 6000 . 320	269302 – 6000 . 920	
Seite / Page:	L-1	L-1	
Name: <i>Description:</i>	Rotarod 880/36000 <i>Rotarod 880/36000</i>	Bausatz für Vollwinkelmessung für ZLM <i>Assembly set for full angle measurement for ZLM</i>	
			
269305 – 5500 . 024	269305 – 3500 . 026	269302 – 5100 . 326	
L-2	L-3	L-4	
ZLP 200 (selbst kalibrierendes Differentialinterferometer) <i>ZLP 200 (self calibrating differential interferometer)</i>	ZIC05-Inclinometer <i>ZIC05 - Inclinometer</i>	Einstrahltaster206 <i>Single beam probe 206</i>	

Software
 Software

	Sprachunterstützung: Deutsch	Language support: English	
Artikelbestellnr.: Order No.:	269302 - 4026 . 624	269302 - 4026 . 724	
Seite / Page:	M-1	M-1	
Name: Description:	Wegmessung Distance measurement	Wegmessung Distance measurement	
	269302 - 4026 . 824	269302 - 4026 . 924	
	M-1	M-1	
	Winkelmessung Angle measurement	Winkelmessung Angle measurement	
	269302 - 4027 . 224	269302 - 4027 . 324	
	M-2	M-2	
	Dynamische Messsoftware für Mehrachssysteme Dynamic measurement software for multi axis systems	Dynamische Messsoftware für Mehrachssysteme Dynamic measurement software for multi axis systems	

Dynamische Messsoftware
Dynamic measurement software

Artikelbestellnr.: Order No.:	269302 - 4026 . 024	269302 - 4026 . 124	
Seite / Page:	M-2	M-2	
Name: Description:	Positionsmessung Position measurement	Positionsmessung Position measurement	
	269302 - 4027 . 024	269302 - 4027 . 124	
	M-3	M-3	
	Winkel- und Geradheitsmessung Angle and straightness measurement	Winkel- und Geradheitsmessung Angle and straightness measurement	
	269302 - 4027 . 424	269302 - 4027 . 524	
	M-3	M-3	
	Ebenheitsmessung Flatness measurement	Ebenheitsmessung Flatness measurement	
	269302 - 4028 . 224	269302 - 4028 . 324	
	M-3	M-3	
	Kalibriersoftware für Mehrachssysteme Calibration software for multi axis systems	Kalibriersoftware für Mehrachssysteme Calibration software for multi axis systems	

Kalibriersoftware
Calibration software

	Sprachunterstützung: Deutsch	Language support: English	
Artikelbestellnr.: <i>Order No.:</i>	269302 - 4026 . 224	269302 - 4026 . 324	
Seite / Page:	M-4	M-4	
Name: <i>Description:</i>	System Sinumerik <i>System Sinumerik</i>	System Sinumerik <i>System Sinumerik</i>	
	269302 - 4027 . 824	269302 - 4027 . 924	
	M-4	M-4	
	System FANUC <i>System FANUC</i>	System FANUC <i>System FANUC</i>	
	269302 - 4028 . 624	269302 - 4028 . 724	
	M-4	M-4	
	System Heidenhain <i>System Heidenhain</i>	System Heidenhain <i>System Heidenhain</i>	
	269302 - 4028 . 024	269302 - 4028 . 124	
	M-5	M-5	
	System Beckhoff <i>System Beckhoff</i>	System Beckhoff <i>System Beckhoff</i>	

Kalibriesoftware für Maschinenkompenstation
Calibration software for machine error compensation

	Umwelt- und Materialkompensationssoftware <i>Material and environment compensation software</i>
Artikelbestellnr.: <i>Order No.:</i>	269302 - 4028 . 824
Seite / Page:	M-5
Name: <i>Description:</i>	ZLM Temp Kompensation <i>ZLM Temp compensation</i>

C. Strahlteiler – Polarisationsteiler / Intensitätsteiler

C. Beam splitters - Polarizing beam splitter / Beam splitters

Strahlteiler – Polarisationsteiler

Beam splitter – Polarizing beam splitter

Polarisationsteiler 101

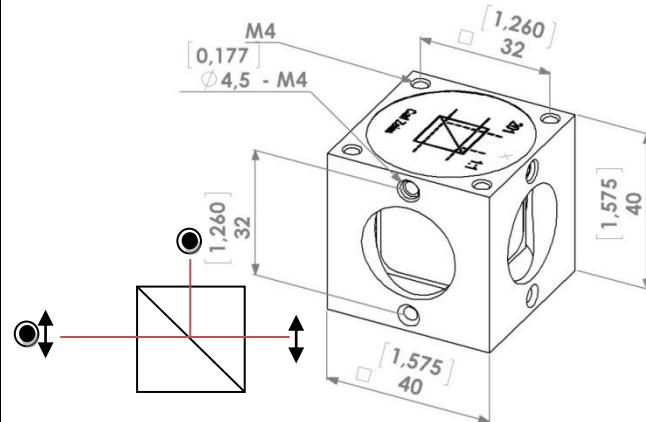
Polarizing beam splitter 101

Masse [g] /	Weight:	239
--------------------	----------------	-----

Bestell-Nr. /	Order No.:
269300 – 4010 . 124	

T in % (Transmission)	$T_P \geq 96,7\%$ $T_S \leq 0,5\%$
----------------------------------	---------------------------------------

R in % (Reflexion)	$R_P \leq 1\%$ $R_S \geq 97\%$
-------------------------------	-----------------------------------



Polarisationsteiler 200

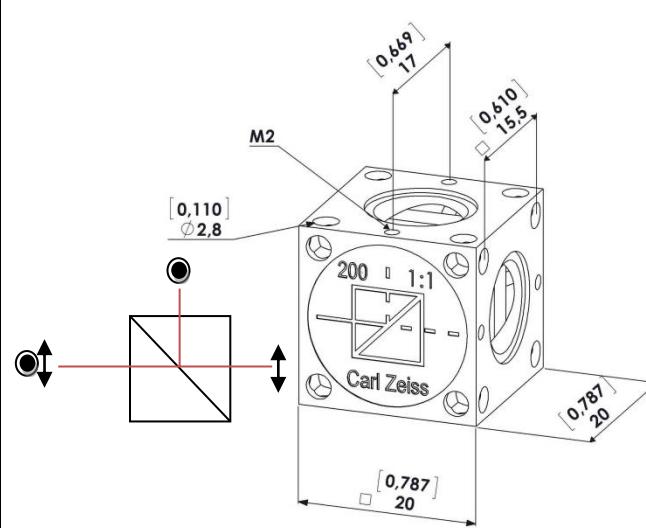
Polarizing beam splitter 200

Masse [g] /	Weight:	64
--------------------	----------------	----

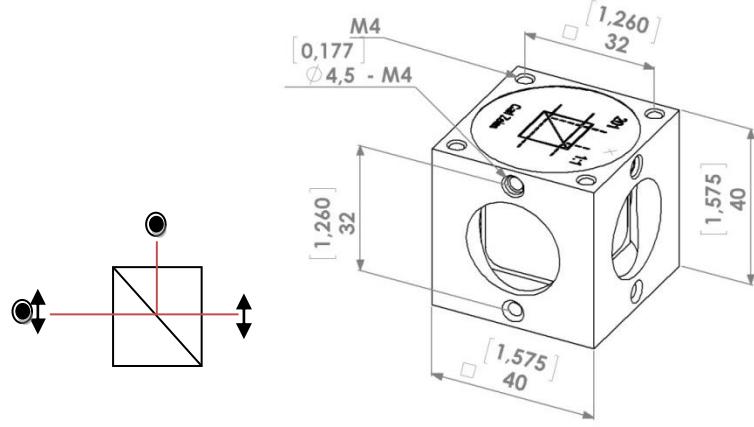
Bestell-Nr. /	Order No.:
269300 – 4016 . 524	

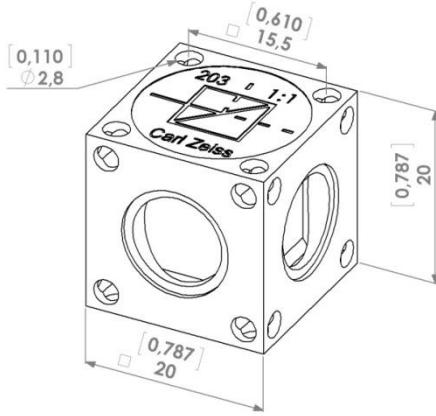
T in % (Transmission)	$T_P \geq 96,7\%$ $T_S \leq 0,5\%$
----------------------------------	---------------------------------------

R in % (Reflexion)	$R_P \leq 1\%$ $R_S \geq 97\%$
-------------------------------	-----------------------------------



Strahlteiler – Intensitätsteiler
Beam splitters– Intensity beam splitters

Intensitätsteiler A <i>Beam splitter A</i>				
für Doppelstrahl <i>for double beam</i>				
Masse [g] / Weight : 239				
Teilungsverhältnis: <i>Splitting ratio:</i>	Artikel Nr.: <i>Article No.:</i>	R in % (Reflexion <i>Reflection)</i>	T in % (Transmission <i>Transmission)</i>	Bestell-Nr. : <i>Order No.:</i>
mit dielektrischer - polarisationsneutraler Beschichtung <i>with dielectric polarization – neutral coating</i>				
A 1 : 1	201	$R_{ } \leq 50 \pm 1\%$ / $R_{\perp} \geq 50 \pm 1\%$	$T_{ } \geq 50 \pm 1\%$ / $T_{\perp} \leq 50 \pm 1\%$	269302 – 4011 . 424
A 1 : 2	212	$R_{ } \leq 33 \pm 2\%$ / $R_{\perp} \geq 33 \pm 2\%$	$T_{ } \geq 67 \pm 2\%$ / $T_{\perp} \leq 67 \pm 2\%$	269302 – 4017 . 824
A 1 : 3	211	$R_{ } \leq 25 \pm 4\%$ / $R_{\perp} \geq 25 \pm 4\%$	$T_{ } \geq 75 \pm 2\%$ / $T_{\perp} \leq 75 \pm 2\%$	269302 – 4017 . 624
mit Metallbeschichtung <i>with metal coating</i>				
A 2,5 : 1	207	$R_{ } \leq 68 \pm 4\%$ / $R_{\perp} \geq 68 \pm 4\%$	$T_{ } \geq 22 \pm 4\%$ / $T_{\perp} \leq 22 \pm 4\%$	269302 – 4011 . 724
A 4 : 1	202	$R_{ } \leq 76 \pm 4\%$ / $R_{\perp} \geq 76 \pm 4\%$	$T_{ } \geq 14 \pm 4\%$ / $T_{\perp} \leq 14 \pm 4\%$	269302 – 4011 . 824

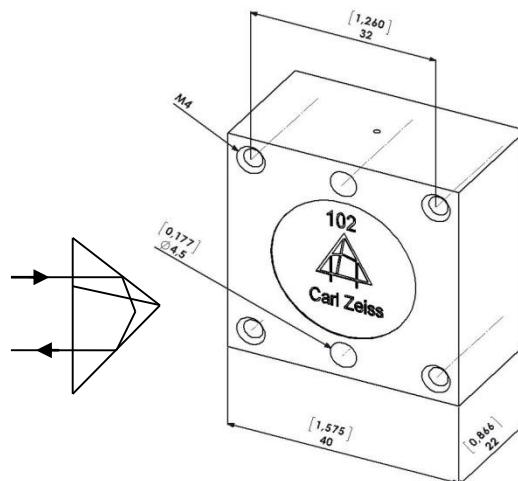
Intensitätsteiler B <i>Beam splitter B</i>				
für Einzelstrahl <i>for single beam</i>				
Masse [g] / Weight : 23				
mit dielektrischer - polarisationsneutraler Beschichtung <i>with dielectric polarization - neutral coating</i>				
Teilungsverhältnis: <i>Splitting ratio:</i>	Artikel Nr.: <i>Article No.:</i>	R in % (Reflexion Reflection)	T in % (Transmission Transmission)	Bestell-Nr. : <i>Order No.:</i>
B 1 : 1	203	$R_{ } \leq 50 \pm 1\% /$ $R_s \geq 50 \pm 1\%$	$T_{ } \geq 50 \pm 1\% /$ $T_{\perp} \leq 50 \pm 1\%$	269302 – 4012 . 124
B 1 : 2	210	$R_{ } \leq 33 \pm 3\% /$ $R_s \geq 33 \pm 3\%$	$T_{ P} \geq 67 \pm 3\% /$ $T_{\perp} \leq 67 \pm 3\%$	269302 – 4017 . 924
B 1 : 3	209	$R_{ } \leq 25 \pm 2\% /$ $R_s \geq 25 \pm 2\%$	$T_{ P} \geq 75 \pm 2\% /$ $T_{\perp} \leq 75 \pm 2\%$	269302 – 4017 . 724
mit Metallbeschichtung <i>with metal coating</i>				
B 2,5 : 1	208	$R_{ } \leq 68 \pm 4\% /$ $R_s \geq 68 \pm 4\%$	$T_{ } \geq 22 \pm 4\% /$ $T_{\perp} \leq 22 \pm 2\%$	269302 – 4012 . 324
B 4 : 1	204	$R_{ } \leq 76 \pm 4\% /$ $R_s \geq 76 \pm 4\%$	$T_{ } \geq 14 \pm 4\% /$ $T_{\perp} \leq 14 \pm 4\%$	269302 – 4012 . 224

D. Reflektoren –Spiegel / Tripelspiegel / Umlenker / Aufweitsysteme
D. Reflectors – Plane mirrors / Triple mirrors / Beam benders / Beam expansion systems

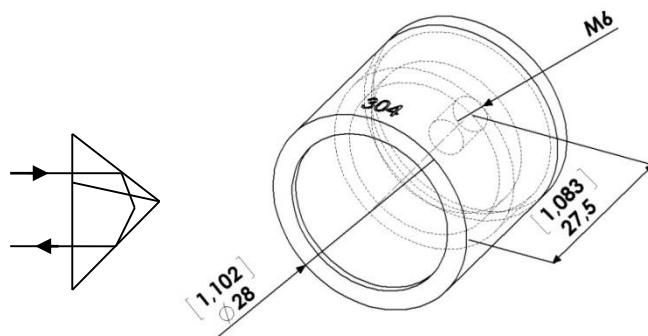
Tripelspiegel

Triple mirrors

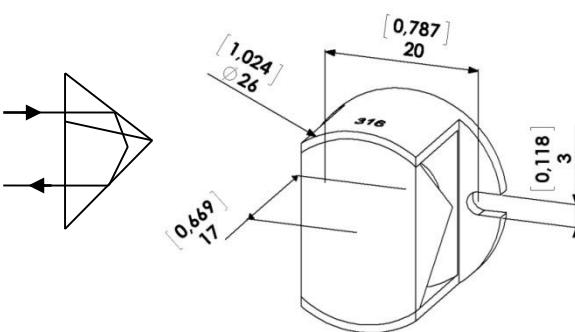
Tripelreflektor 102 <i>Cube corner reflector 102</i>	
Reflexionsleistung: <i>Reflected Efficiency:</i>	R≥92%
Masse [g] / Weight :	198
Bestell-Nr. / Order No.: 269302 – 4010 . 224	



Tripelreflektor 304 <i>Triple reflector 304</i>	
Reflexionsleistung: <i>Reflected Efficiency:</i>	R≥92%
Masse [g] / Weight :	70,8
Bestell-Nr. / Order No.: 269302 – 4059 . 124	



Tripelreflektor klein 316 <i>Triple reflector small 316</i>	
Reflexionsleistung: <i>Reflected Efficiency:</i>	R≥92%
Masse [g] / Weight :	11,8
Bestell-Nr. / Order No.: 269302 – 4016 . 024	

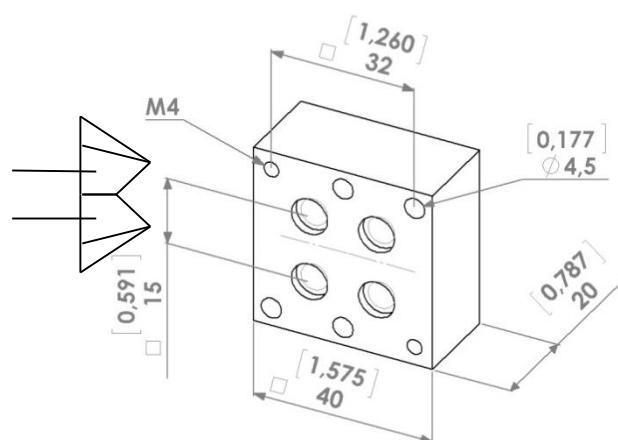


Doppelreflektor 160*Double triple reflector 160*

Reflexionsleistung:
Reflected Efficiency: R≥92%

Masse [g] / Weight : 152,3

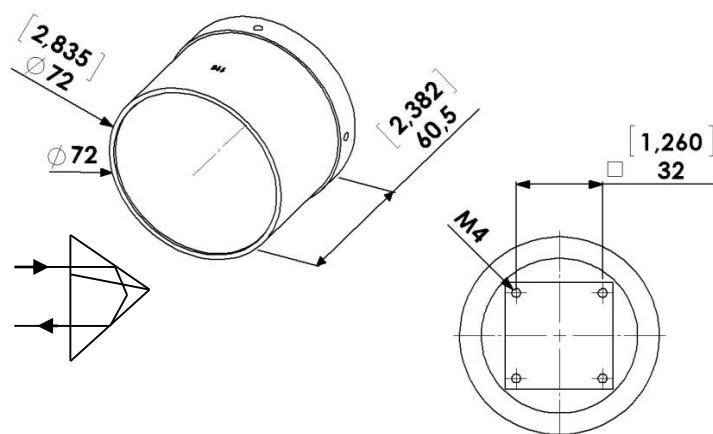
Bestell-Nr. / Order No.:
269302 – 4014 . 624

**Tripelreflektor 116***Cube corner reflector 116*

Reflexionsleistung:
Reflected Efficiency: R≥92%

Masse [g] / Weight : 797

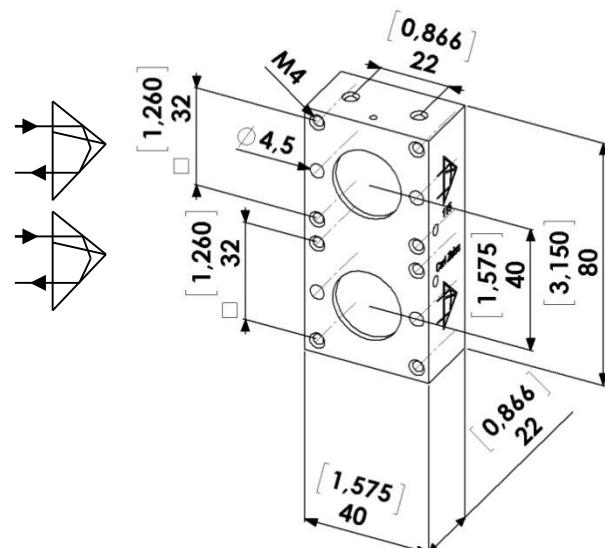
Bestell-Nr. / Order No.:
269302 – 4011 . 624

**Doppelreflektor 115***Double reflector 115*

Reflexionsleistung:
Reflected Efficiency: R≥92%

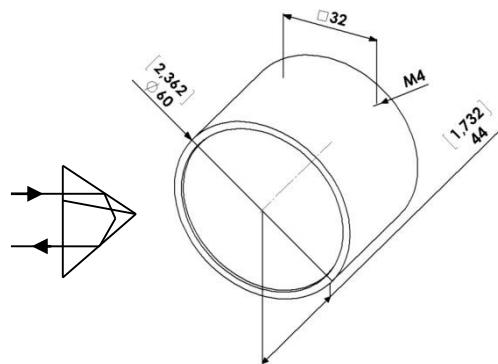
Masse [g] / Weight : 389

Bestell-Nr. / Order No.:
269302 – 4015 . 424

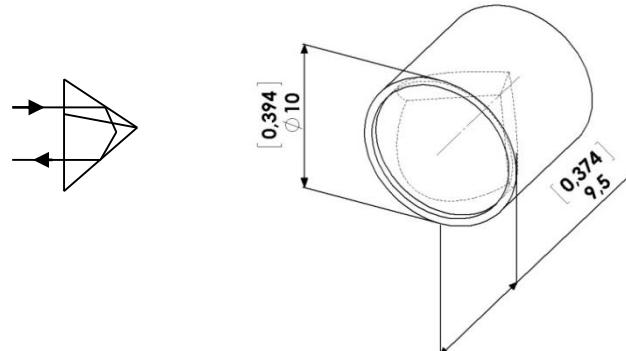


Tripelreflektor 351*Triple reflector 351***Reflexionsleistung:***Reflected Efficiency:* R≥92%**Masse [g] / Weight :** 420**Bestell-Nr. / Order No.:**

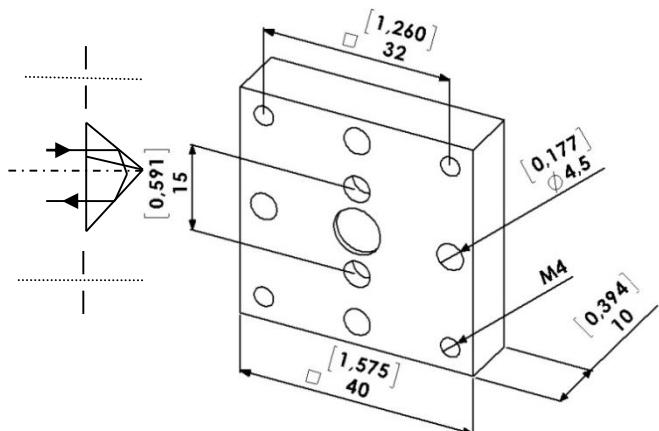
269302 – 4003 . 024

**Tripelreflektor 9 mm***Triple reflector 9mm***Reflexionsleistung:***Reflected Efficiency:* R≥92%**Masse [g] / Weight :** 2,7**Bestell-Nr. / Order No.:**

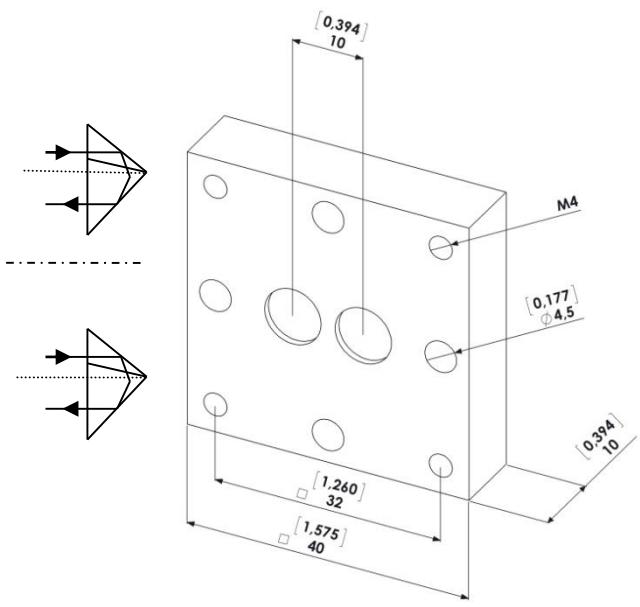
269302 – 4003 . 424

**Reflektor HR – 1 354***Reflector HR – 1 354***Reflexionsleistung:***Reflected Efficiency:* R≥92%**Masse [g] / Weight :** 91,4**Bestell-Nr. / Order No.:**

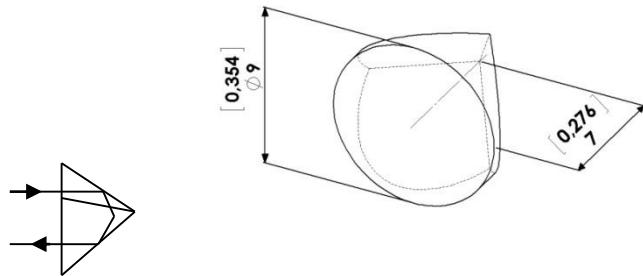
269302 – 4018 . 324

für 3mm Strahldurchmesser
for 3mm beam diameter

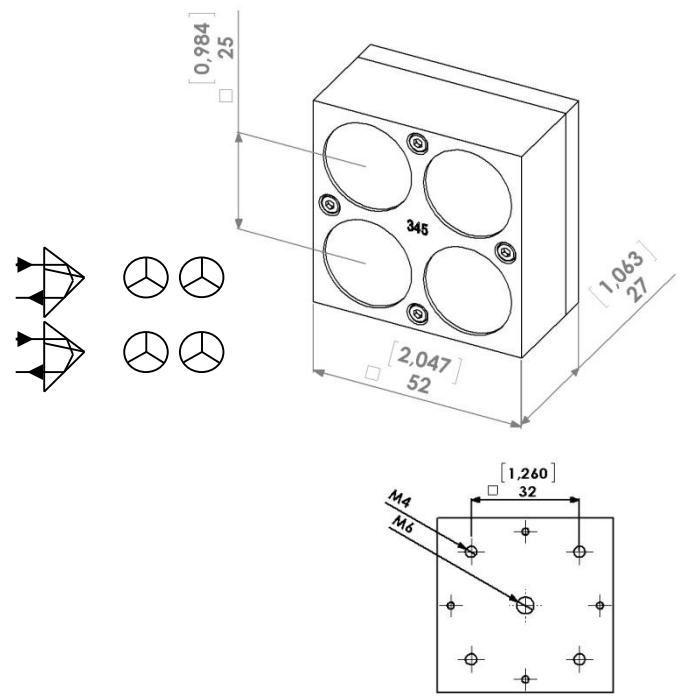
Reflektor HR – 2 355	
<i>Reflector HR – 2 355</i>	
Reflexionsleistung:	<i>Reflected Efficiency:</i>
	R≥92%
Masse [g] /	Weight :
	94,3
Bestell-Nr. /	Order No.:
269302 – 4018 . 424	
für 3mm Strahldurchmesser	
<i>for 3mm beam diameter</i>	

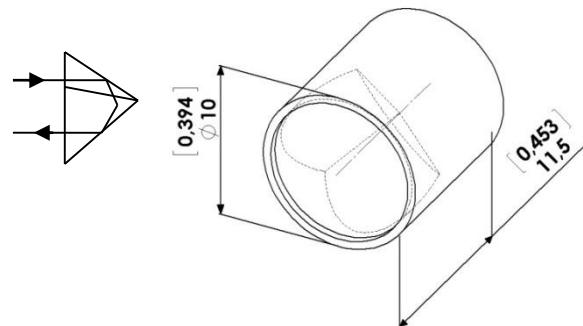
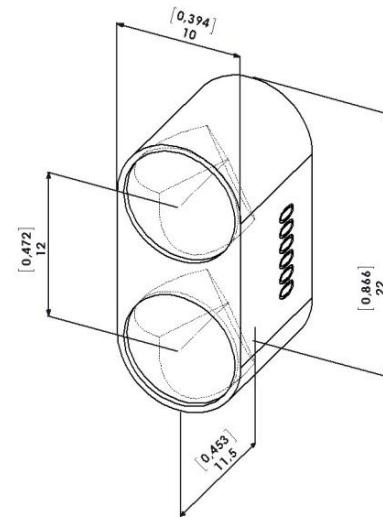
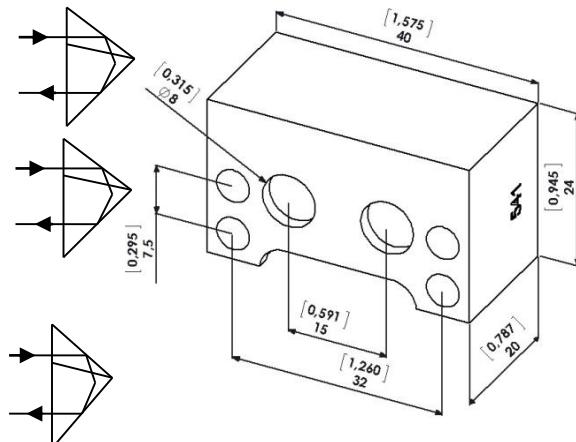


Tripelreflektor 9 mm (ohne Gehäuse)	
<i>Triple reflector 9mm (without socket)</i>	
Reflexionsleistung:	R≥92%
<i>Reflected Efficiency:</i>	
Masse [g] / Weight :	0,6
Bestell-Nr. / Order No.:	
269302 – 4007 . 300	



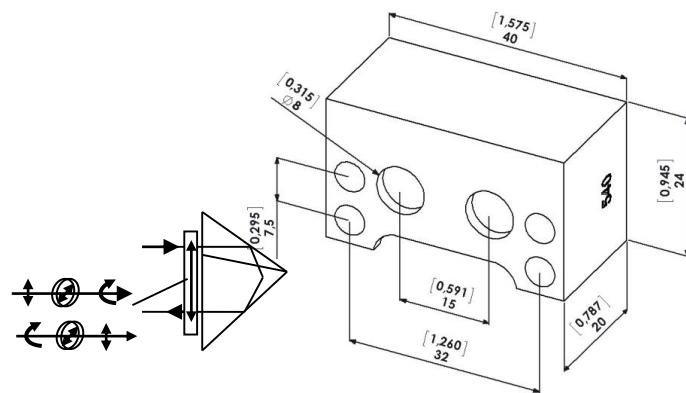
3 Achs – Reflektor 345	
<i>Three axes reflector 345</i>	
Reflexionsleistung: <i>Reflected Efficiency:</i>	R≥92%
Masse [g] / <i>Weight :</i>	331,9
Bestell-Nr. / <i>Order No.:</i>	
269302 – 4034 . 524	



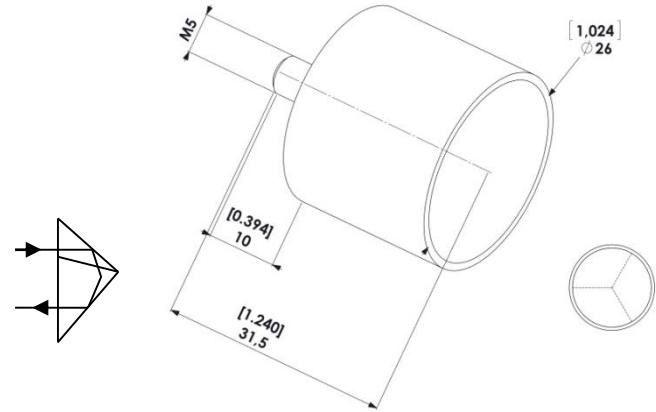
Tripelreflektor 9 mm (mit Haftmagnet)*Triple reflector 9mm (with magnetic clamp)***Reflexionsleistung:***Reflected Efficiency: R≥92%***Masse [g] / Weight :** 3,7**Bestell-Nr. / Order No.:****269302 – 5003 . 524****Doppelreflektor 9 mm (mit Haftmagnet)***Double reflector 9 mm (with magnetic clamp)***Reflexionsleistung:***Reflected Efficiency: R≥92%***Masse [g] / Weight :** 11**Bestell-Nr. / Order No.:****269302 – 5003 . 624****Referenztripelspiegel 541***Reference cube corner reflector 541***Reflexionsleistung:***Reflected Efficiency: R≥92%***Masse [g] / Weight :** 28,9**Bestell-Nr. / Order No.:****269302 – 3809 . 724**

Referenztripelspiegel 540*Reference cube corner reflector 540***Reflexionsleistung:**Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 31,3**Bestell-Nr. / Order No.:**

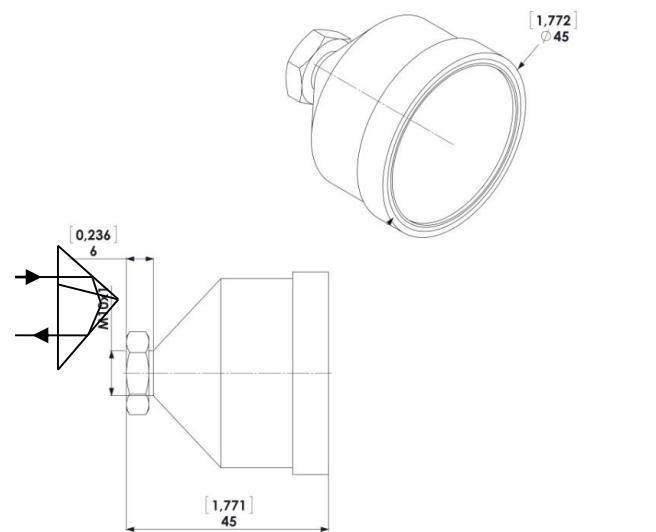
269302 – 3809 . 624

**Tripelreflektor 24 mm***Triple reflector 24mm***Reflexionsleistung:**Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 35**Bestell-Nr. / Order No.:**

269302 – 1108 . 824

**Tripelreflektor 40 mm***Triple reflector 40mm***Reflexionsleistung:**Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 70**Bestell-Nr. / Order No.:**

269302 – 4014 . 024

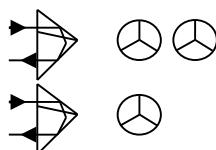
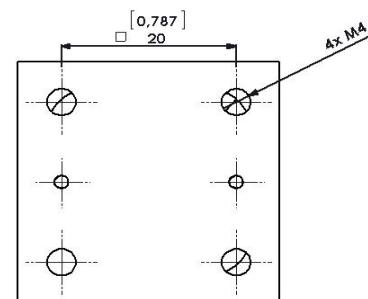
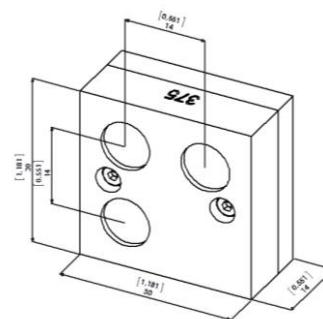


3 Achs - Reflektor 375

Three axes reflector 375

Reflexionsleistung:Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 67,6**Bestell-Nr. / Order No.:**

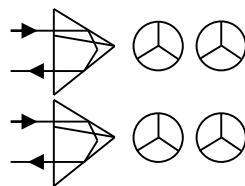
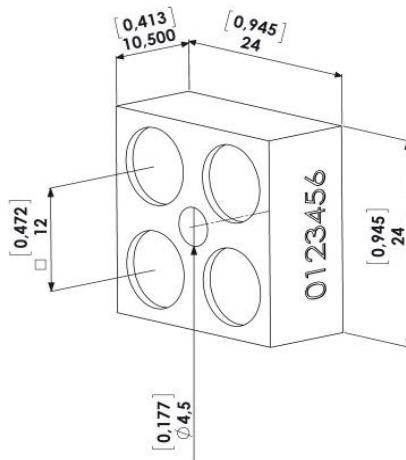
269302 – 4066 . 024

**3 Achs - Reflektor 431**

Three axes reflector 431

Reflexionsleistung:Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 34**Bestell-Nr. / Order No.:**

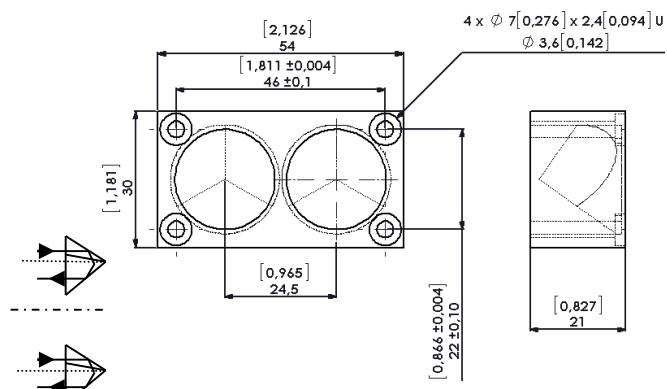
269302 – 5003. 224

**2 Achs - Reflektor 392**

2 Axes reflector 392

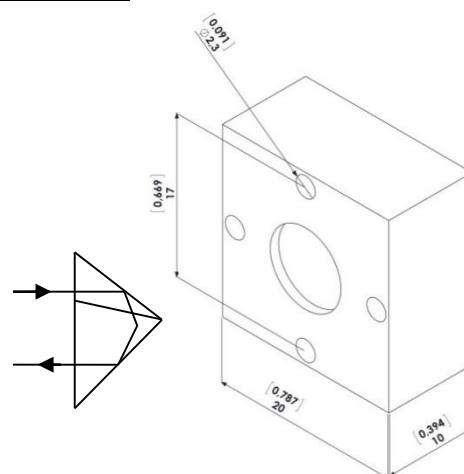
Reflexionsleistung:Reflected Efficiency: $R \geq 92\%$ **Masse [g] / Weight :** 34**Bestell-Nr. / Order No.:**

269302 – 5010. 125

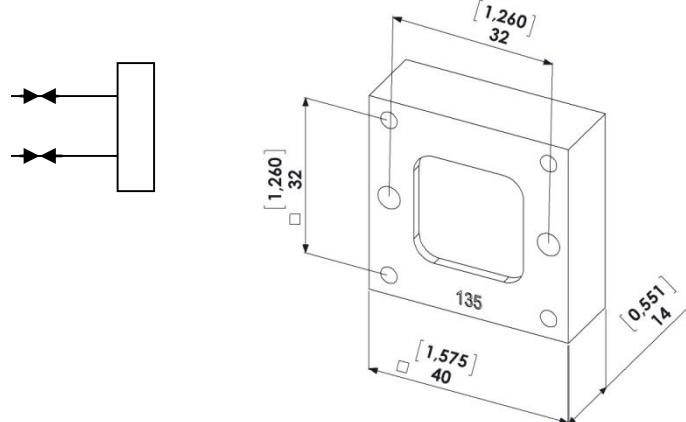


Tripelreflektor 216*Cube corner reflector 216***Reflexionsleistung:***Reflected Efficiency:* R≥92%**Masse [g] / Weight :** 102**Bestell-Nr. / Order No.:**

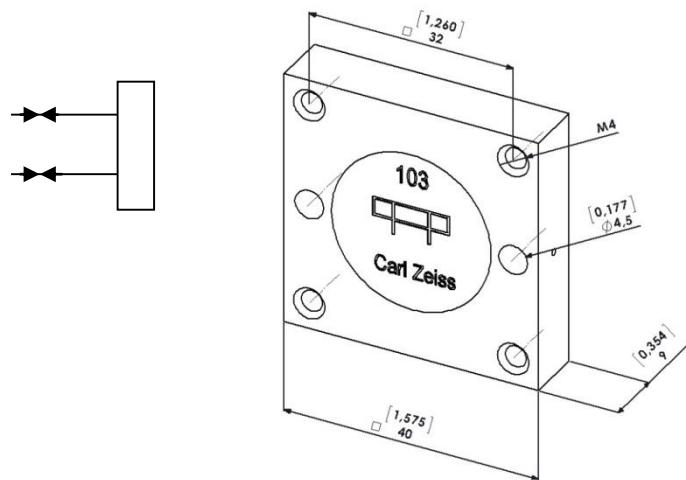
269302 – 4016 . 624

**Planspiegel & Umlenker***Plane mirrors & Beam benders***Planspiegelreflektor 135***Plane mirror reflector 135***Reflexionsleistung:***Reflected Efficiency:* R≥99%**Masse [g] / Weight :** 103**Bestell-Nr. / Order No.:**

269302 – 4018 . 824

**Planspiegelreflektor 103***Plane mirror reflector 103***Reflexionsleistung:***Reflected Efficiency:* R≥99%**Masse [g] / Weight :** 86**Bestell-Nr. / Order No.:**

269302 – 4010 . 324



Planspiegelspiegel klein 317

Plane mirror reflector small 317

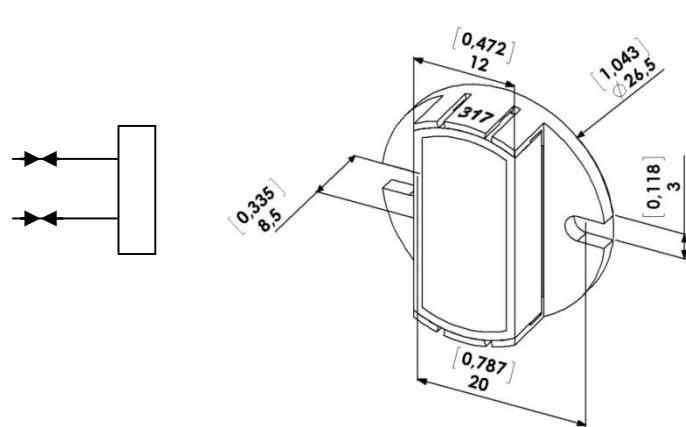
Reflexionsleistung:

Reflected Efficiency: $R \geq 99\%$

Masse [g] / Weight : 7,6

Bestell-Nr. / Order No.:

269302 – 4016 . 124



Spiegelgruppe 321

Mirror group 321

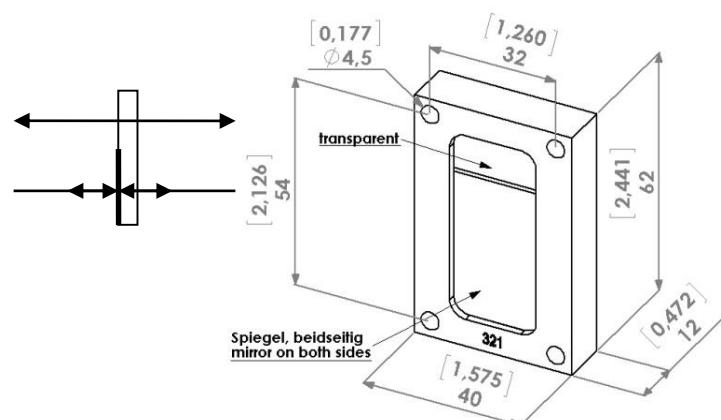
Reflexionsleistung:

Reflected Efficiency: $R \geq 99\%$

Masse [g] / Weight : 128,4

Bestell-Nr. / Order No.:

269302 – 4013 . 824



Spiegelgruppe 130

Mirror group 130

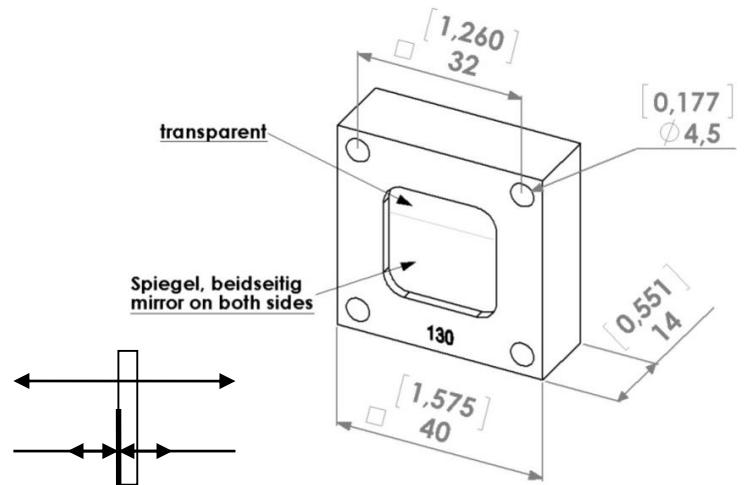
Reflexionsleistung:

Reflected Efficiency: $R \geq 99\%$

Masse [g] / Weight : 101,9

Bestell-Nr. / Order No.:

269302 – 4022 . 124

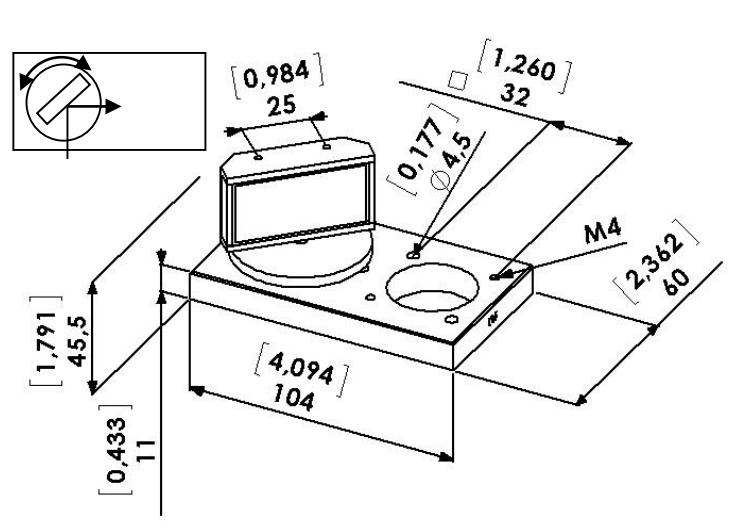


Fußplatte mit Drehspiegel 118

Base plate with turning mirror 118

Reflexionsleistung:Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** 643**Bestell-Nr. / Order No.:**

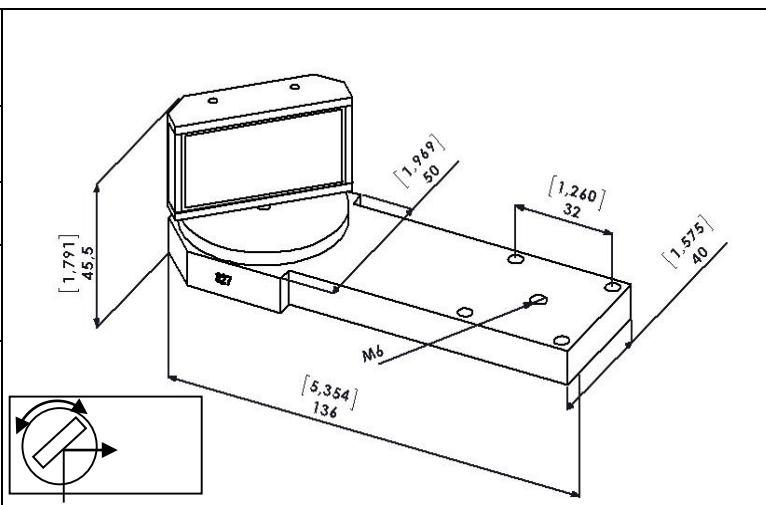
269302 – 4015 . 524

**Drehspiegel 327**

Turning mirror 327

Reflexionsleistung:Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** 358,2**Bestell-Nr. / Order No.:**

269302 – 4013 . 724

**Planspiegelreflektor**

Plane mirror reflector

Reflexionsleistung:Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** -**Bestell-Nr. / Order No.:**

269302 – 4017 . 300 – (Länge [mm])

269302 – 4017 . 300 – (length [mm])

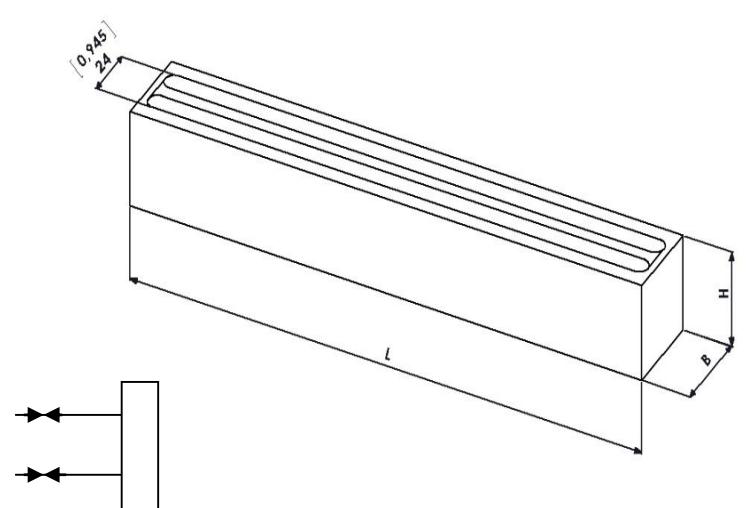
Alle optischen Gläser

all optical glasses

z.B.: /e.g.: Cerodur

Länge „L“ bis ca. 800 mm möglich

Length „L“ up to 800 mm possible

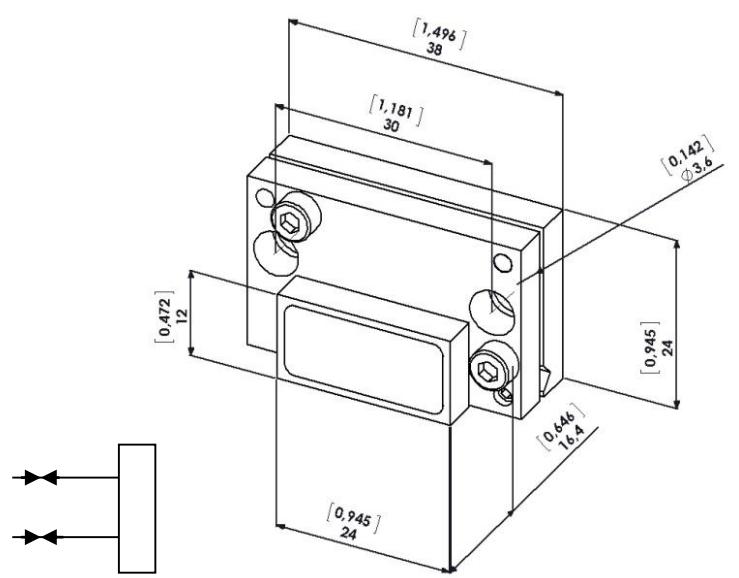


Referenzspiegel 536

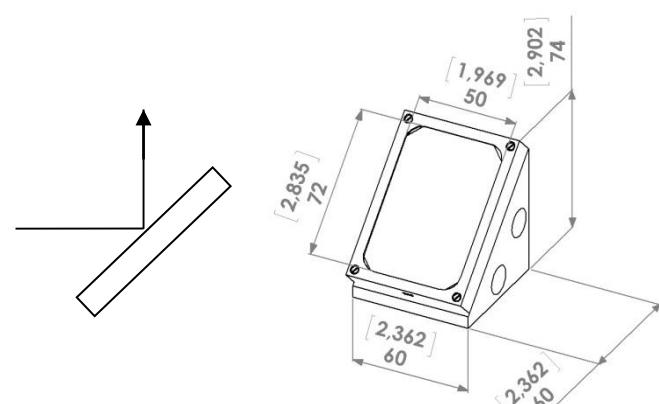
(justierbar mit Halterung)

*Reference mirror 536**(adjustable, with holder)***Reflexionsleistung:***Reflected Efficiency: R≥99%***Masse [g] / Weight :** 70,7**Bestell-Nr. / Order No.:**

269302 – 4002 . 224

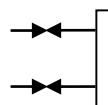
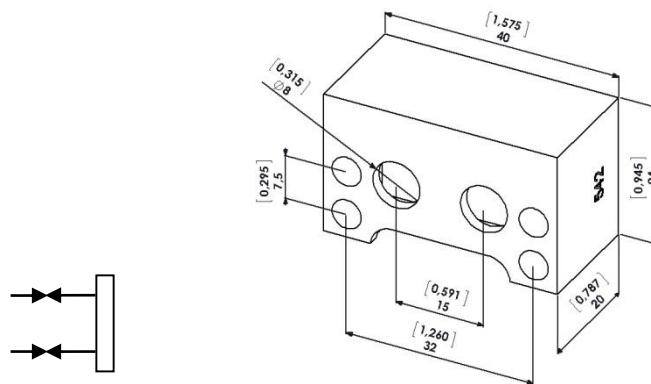
**90° Umlenker 346***90 ° Beam bender 346***Reflexionsleistung:***Reflected Efficiency: R≥99%***Masse [g] / Weight :** 1004,6**Bestell-Nr. / Order No.:**

269302 – 4034 . 624

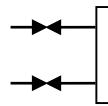
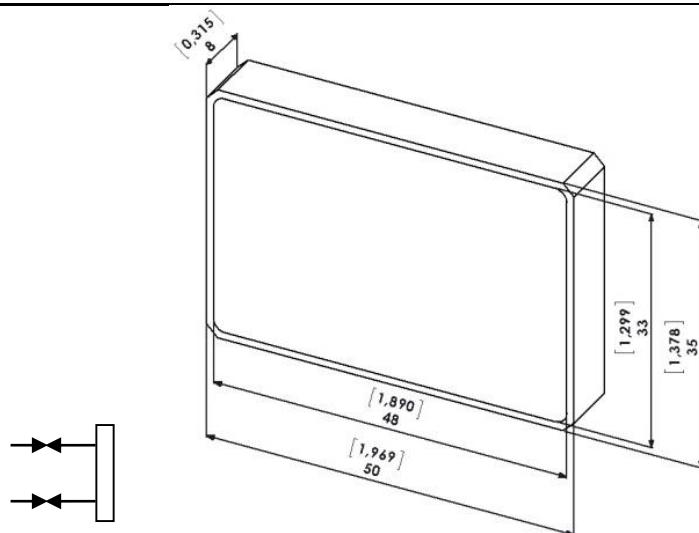


Referenzspiegel 542*Reference mirror reflector 542***Reflexionsleistung:**Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** 24,7**Bestell-Nr. / Order No.:**

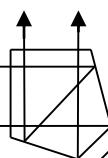
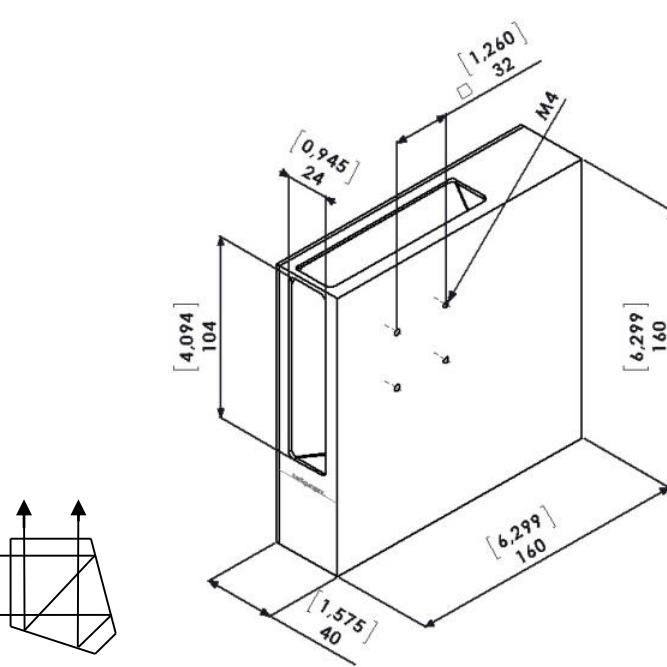
269302 – 3809 . 824

**Planspiegel***Plane mirror***Reflexionsleistung:**Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** 35,1**Bestell-Nr. / Order No.:**

269302 – 4014 . 400

**Pentagonalprisma 111***Pentaprism 111***Reflexionsleistung:**Reflected Efficiency: $R \geq 98\%$ **Ablenkung reflektierter Strahl:**Reflected beam deviation
Ar \leq 1 "**Masse [g] / Weight :** 2560**Bestell-Nr. / Order No.:**

269302 – 4011 . 124

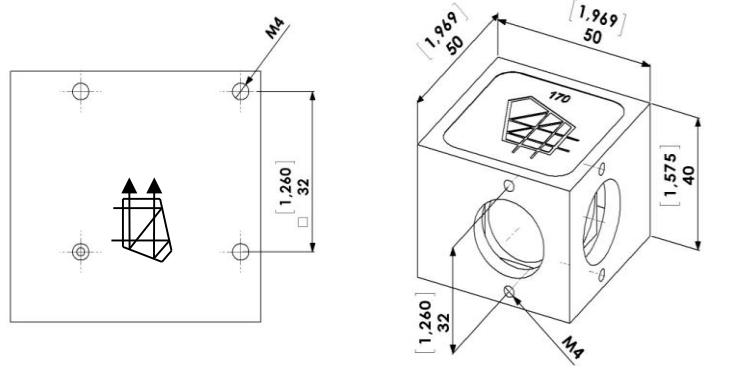


Pentagonalprisma 170*Pentaprism 170***Reflexionsleistung:**

Reflected Efficiency: R≥98%

Masse [g] / Weight : 412**Bestell-Nr. / Order No.:**

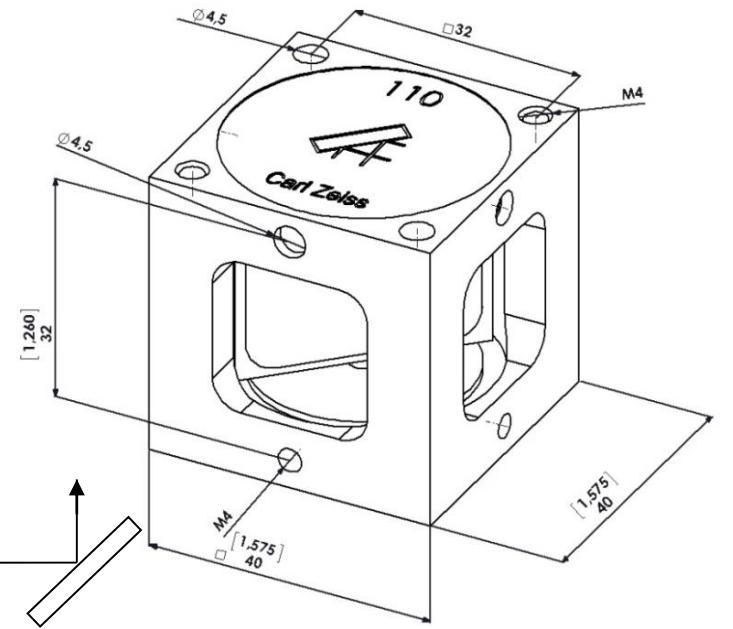
269302 – 4068 . 024

**90° Umlenker 110***90 ° Beam bender 110***Reflexionsleistung:**

Reflected Efficiency: R≥99%

Masse [g] / Weight : 222**Bestell-Nr. / Order No.:**

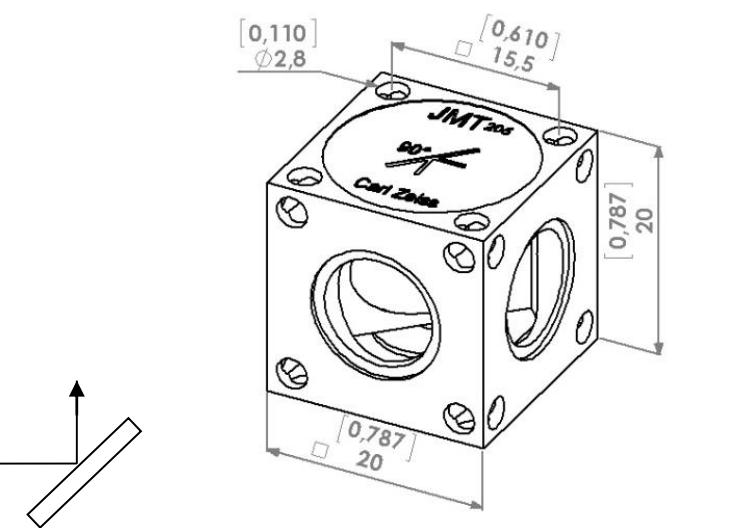
269302 – 4011 . 024

**90° Umlenker 205***90 ° Beam bender 205***Reflexionsleistung:**

Reflected Efficiency: R≥99%

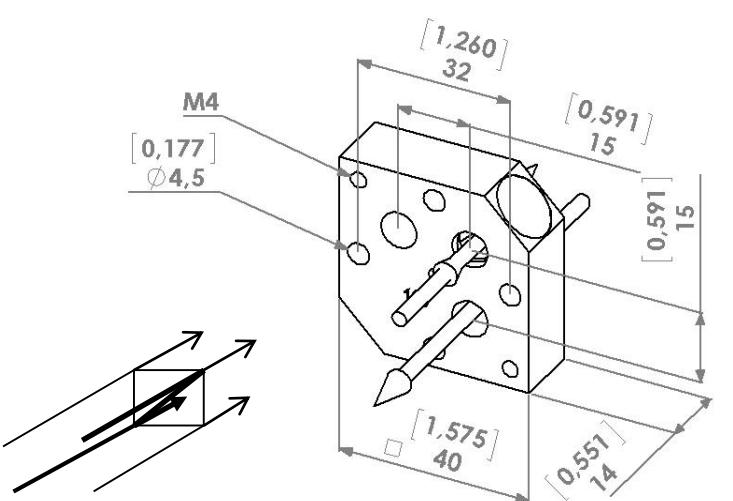
Masse [g] / Weight : 21,3**Bestell-Nr. / Order No.:**

269302 – 4012 . 424

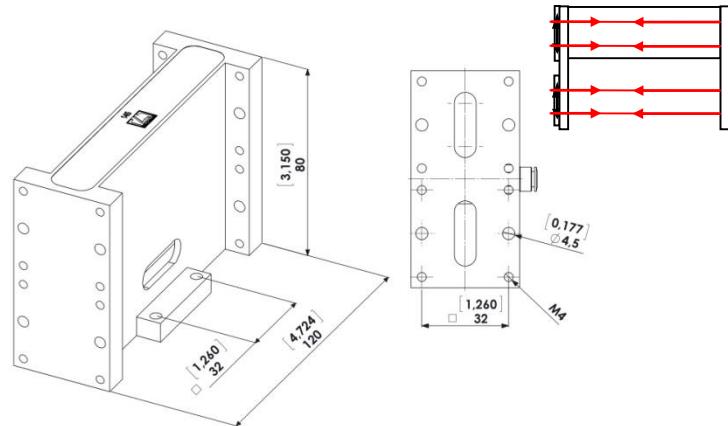


Wendevorsatz 120*Beam offset prism 120***Reflexionsleistung:**Reflected Efficiency: $R \geq 98\%$ **Masse [g] / Weight :** 121**Bestell-Nr. / Order No.:**

269302 – 4008 . 424

**Refraktometermodul 145***Refractometer module 145***Reflexionsleistung:**Reflected Efficiency: $R \geq 99\%$ **Masse [g] / Weight :** 904**Bestell-Nr. / Order No.:**

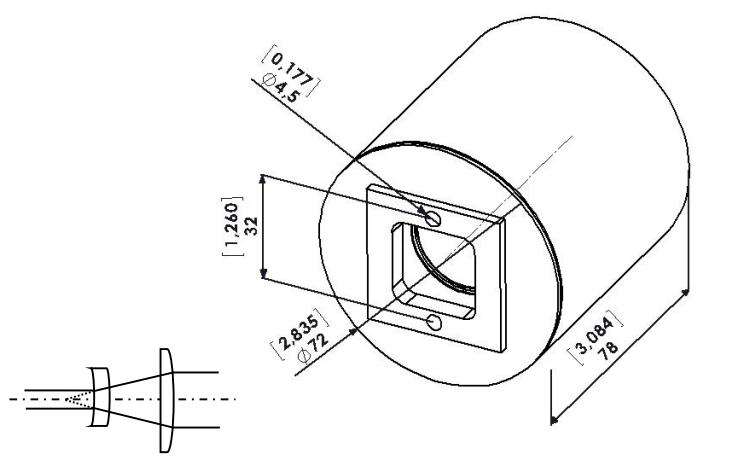
269302 – 5100 . 224

**Aufweitsysteme - Ablenker***Beam expansion systems / Beam deflectors***Aufweitsystem 350***Expansive system 350***Aufweitungsverhältnis (633nm):**

Expansion rate (633nm): 3 : 1

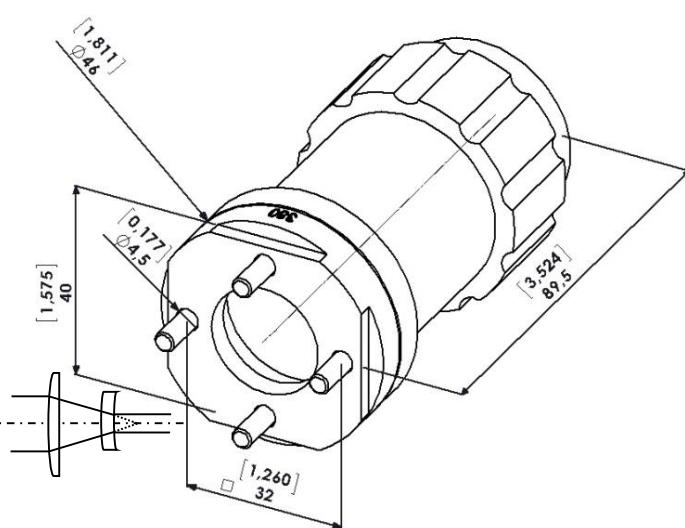
Masse [g] / Weight : 818,6**Bestell-Nr. / Order No.:**

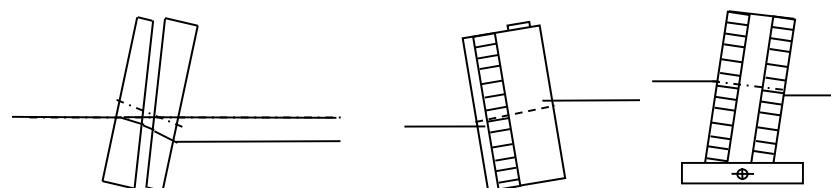
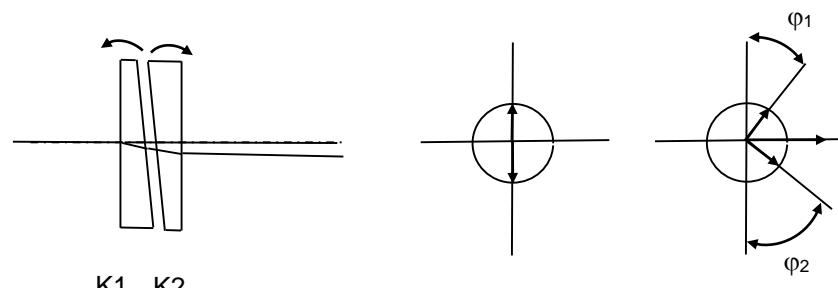
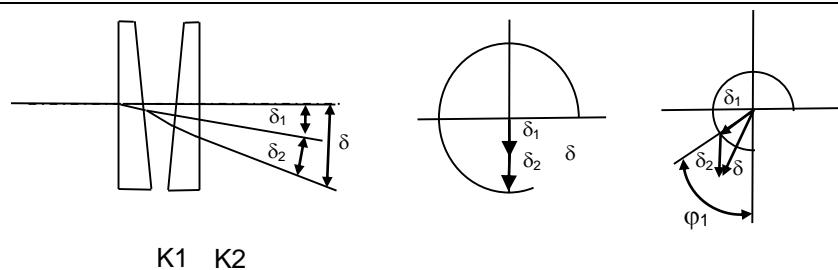
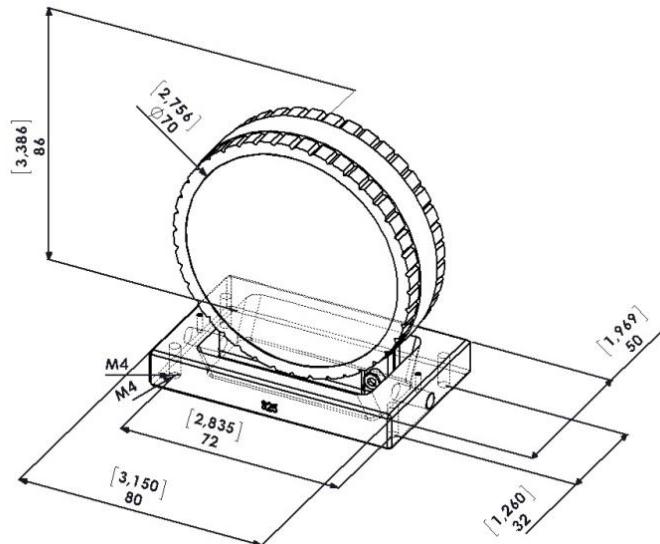
269302 – 4005 . 924

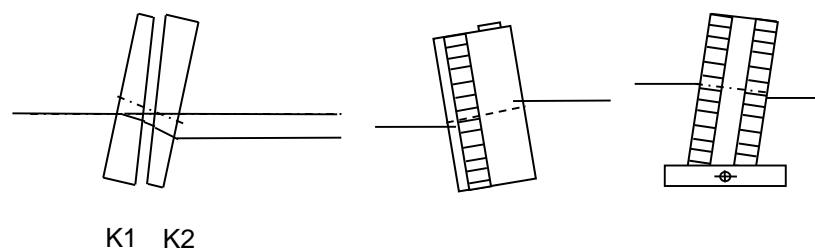
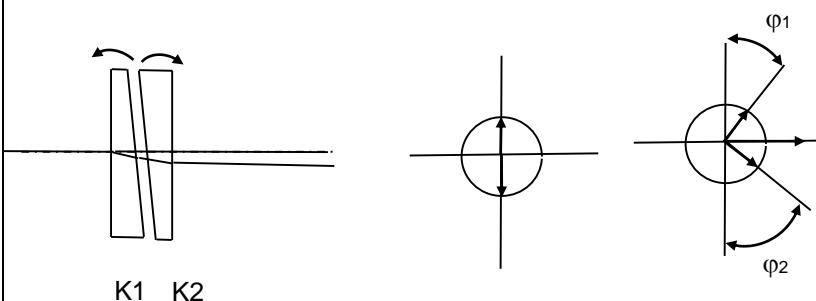
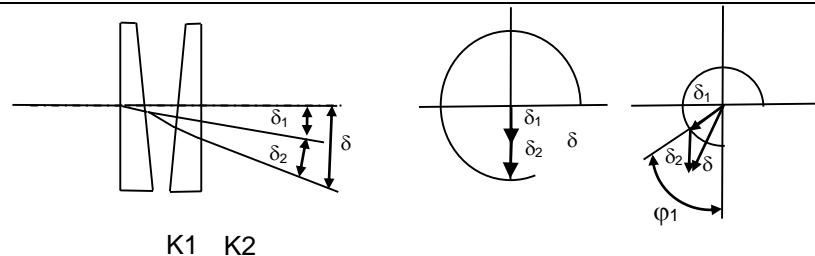
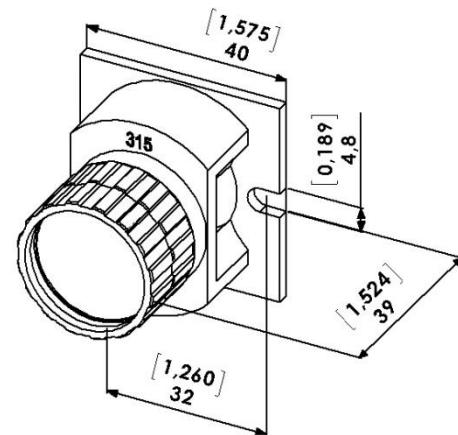


Reduziersystem 1/3 380*Reduction system 1/3 380***Aufweitungsverhältnis (633nm):***Expansion rate (633nm): 1 : 3***Masse [g] / Weight :** 268,6**Bestell-Nr. / Order No.:**

269302 – 4006 . 024



Drehkeilpaar 325*Rotating wedge pair 325***Masse [g]: Weight :** 200**Bestell-Nr. / Order No.:**
269302 – 5905 . 026

Drehkeil 315*Rotating wedge pair 315***Masse [g]: Weight :** 54,1**Bestell-Nr. / Order No.:**
269302 – 5906 . 025

E. Wellenplatten & Blenden*E. Wave plates & Pinholes***Wellenplatten***Wave plates***Lambda/4 - Platte 104***Quarter wave plate 104*

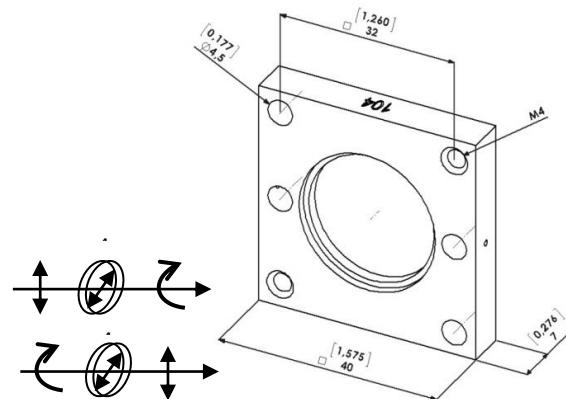
Apertur: Aperture:	$\varnothing 22\text{mm}$
------------------------------	---------------------------

Masse [g] / Weight :	60
-----------------------------	----

Bestell-Nr. / Order No.:
269300 – 4010 . 424

Polarisationsrichtung 45° gedreht zur optischen Achse

Polarisation direction 45 ° rotated to the optical axis

**Lambda/4 - Platte 105***Quarter wave plate 105*

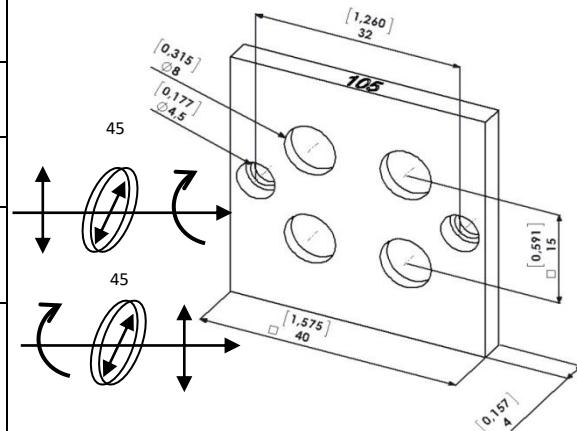
Apertur: Aperture:	$\varnothing 8\text{mm}$
------------------------------	--------------------------

Masse [g] / Weight :	36
-----------------------------	----

Bestell-Nr. / Order No.:
269300 – 4012 . 924

Polarisationsrichtung 45° gedreht zur optischen Achse

Polarisation direction 45 ° rotated to the optical axis

**Lambda/4 - Platte 106***Quarter wave plate 106*

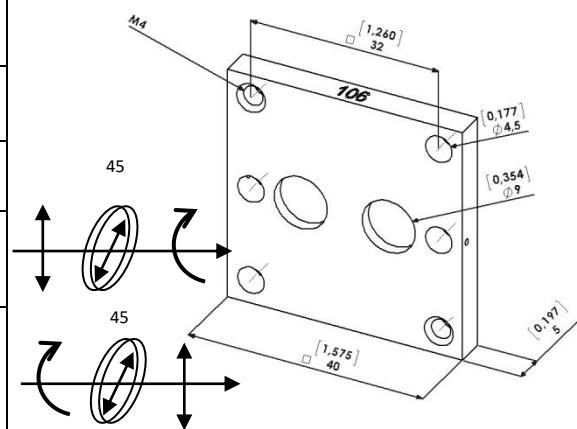
Apertur: Aperture:	$\varnothing 9\text{mm}$
------------------------------	--------------------------

Masse [g] / Weight :	49
-----------------------------	----

Bestell-Nr. / Order No.:
269300 – 5009 . 024

Polarisationsrichtung 45° gedreht zur optischen Achse

Polarisation direction 45 ° rotated to the optical axis

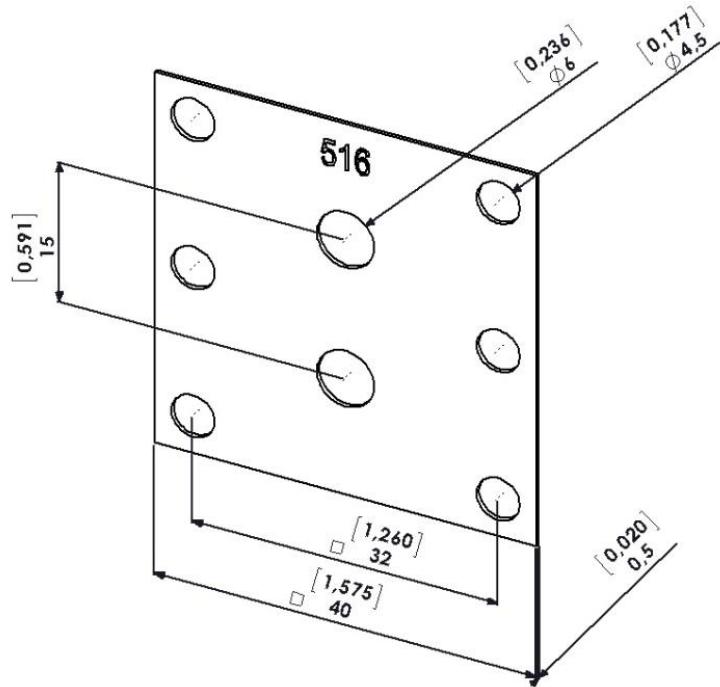


Blenden

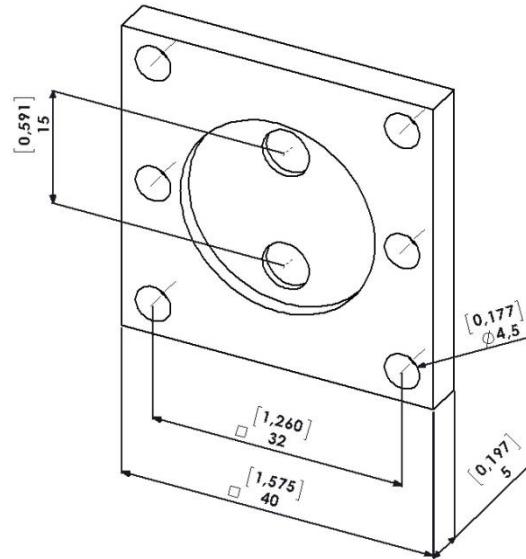
Pinholes

Blende 516

Pinhole 516

Apertur: Aperture: Ø6mm**Masse [g] / Weight :** 2**Bestell-Nr. / Order No.:**
269300 – 4014 . 210**Blende 517**

Pinhole 517

Apertur: Aperture: Ø6mm**Masse [g] / Weight :** 42,9**Bestell-Nr. / Order No.:**
269300 – 4018 . 210

Blende 519

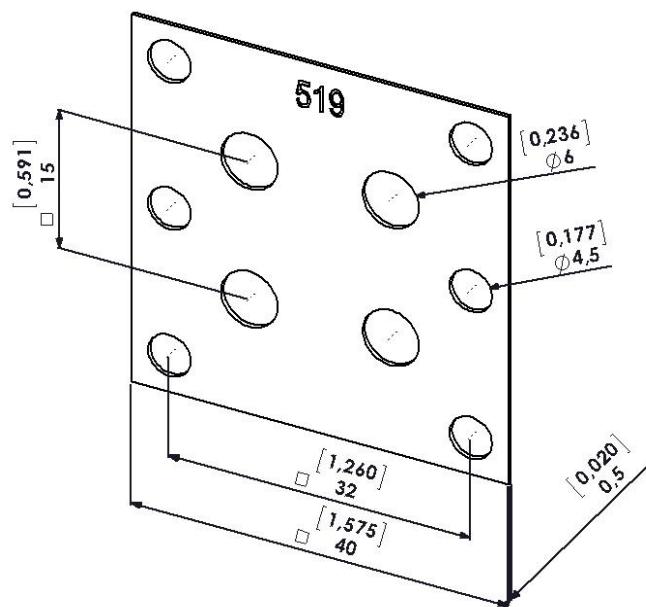
Pinhole 519

Apertur:

Aperture: Ø6mm

Masse [g] / Weight : 1,9**Bestell-Nr. / Order No.:**

269300 – 4014 . 310

**Blende 520**

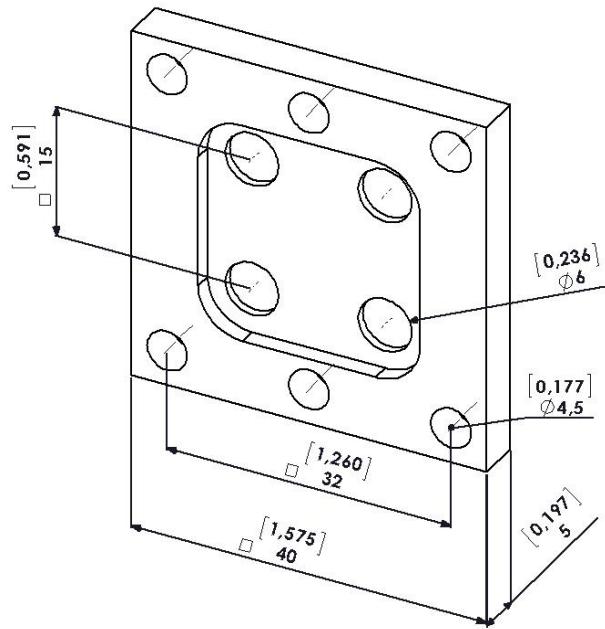
Pinhole 520

Apertur:

Aperture: Ø6mm

Masse [g] / Weight : 39**Bestell-Nr. / Order No.:**

269300 – 4018 . 310

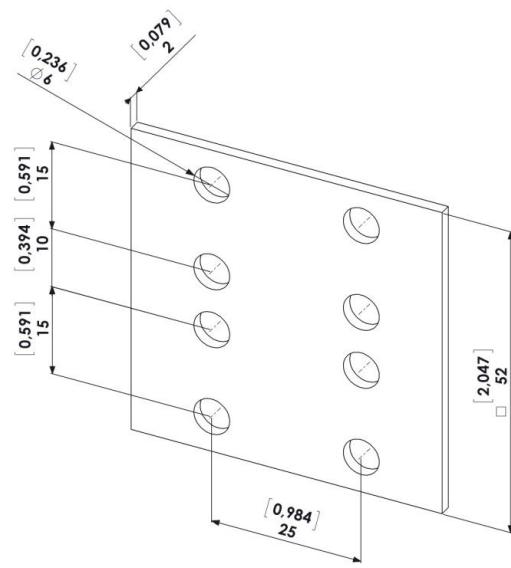


Vorsatzblende für 345*Pinhole for 345*

Apertur: Aperture: $\varnothing 6\text{mm}$

Masse [g] / Weight : 5,1

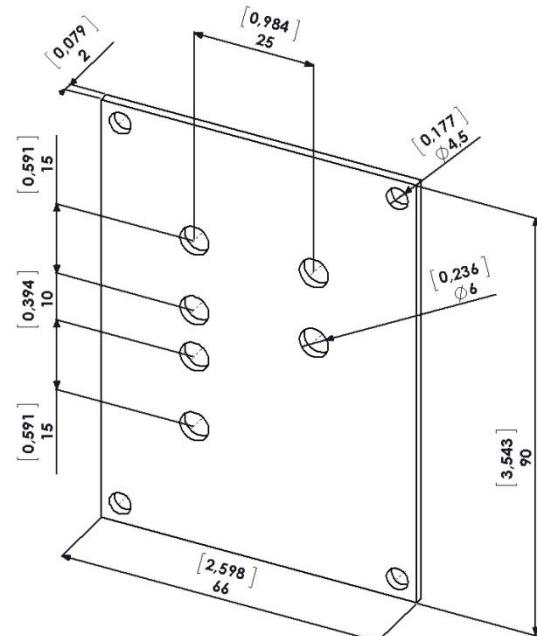
Bestell-Nr. / Order No.:
269300 – 5011 . 310

**Vorsatzblende für 347/ 348***Pinhole for 347/ 348*

Apertur: Aperture: $\varnothing 6\text{mm}$

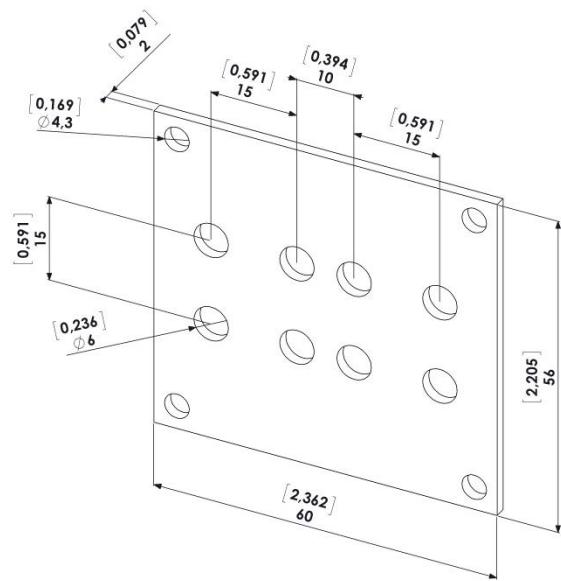
Masse [g] / Weight : 12

Bestell-Nr. / Order No.:
269300 – 5011 . 210

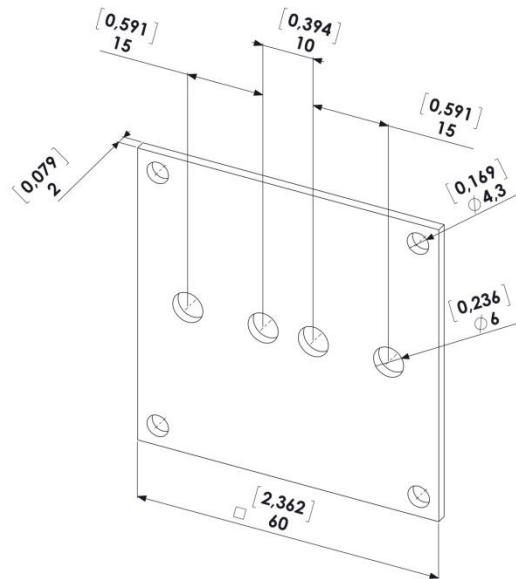


Vorsatzblende für 370

Pinhole for 370

Apertur: Aperture: Ø6mm**Masse [g] / Weight :** 6**Bestell-Nr. / Order No.:**
269300 – 5011 . 410**Vorsatzblende für 390**

Pinhole for 390

Apertur: Aperture: Ø6mm**Masse [g] / Weight :** 7**Bestell-Nr. / Order No.:**
269300 – 5011 . 510

F. Faserkoppler - Ein- und Auskoppeloptiken
F. Fiber optics couplings - Input and Output

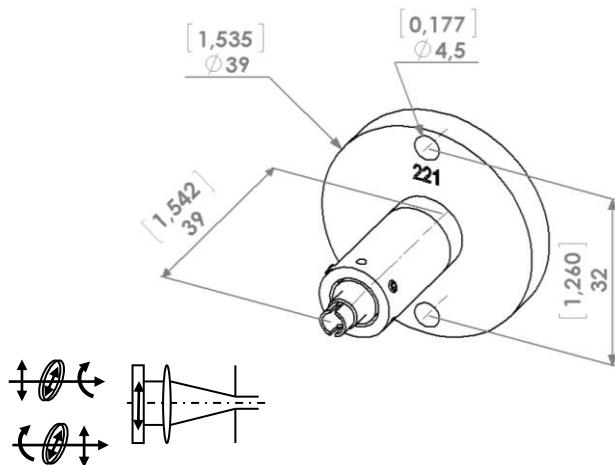
LWL Anschluss 221

Fiber optics coupling 221

Masse [g]:/ Weight: 73

Bestell-Nr. / Order No.:
269302 – 4015 . 624

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66
Connector:
DIN LSA connector (8°-polish) D-4108.66



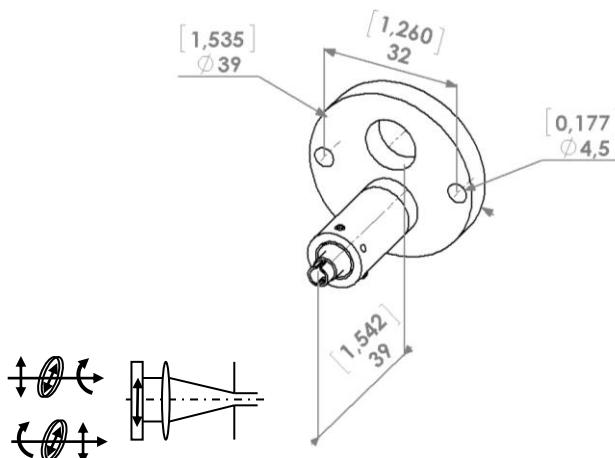
LWL Anschluss 222

Fiber optics coupling 222

Masse [g]:/ Weight: 67

Bestell-Nr. / Order No.:
269302 – 4015 . 724

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66
Connector:
DIN LSA connector (8°-polish) D-4108.66



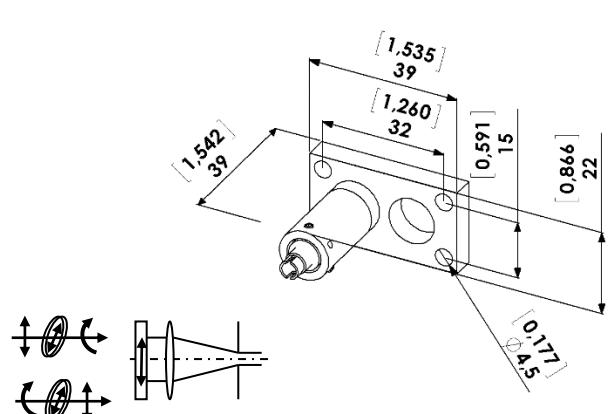
LWL Anschluss 223

Fiber optics coupling 223

Masse [g]:/ Weight: 50

Bestell-Nr. / Order No.:
269302 – 4015 . 824

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66
Connector:
DIN LSA connector (8°-polish) D-4108.66



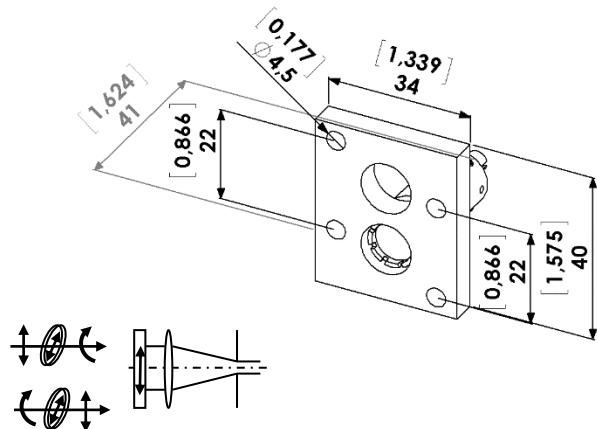
**LWL - Anschluss für
 Parallelinterferometer 224**
*Fiber optics coupling for Parallel
 interferometer 224*

Masse [g]:/ Weight: 73

Bestell-Nr. / Order No.:
 269302 – 4015 . 924

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66

*Connector:
 DIN LSA connector (8°-polish) D-4108.66*



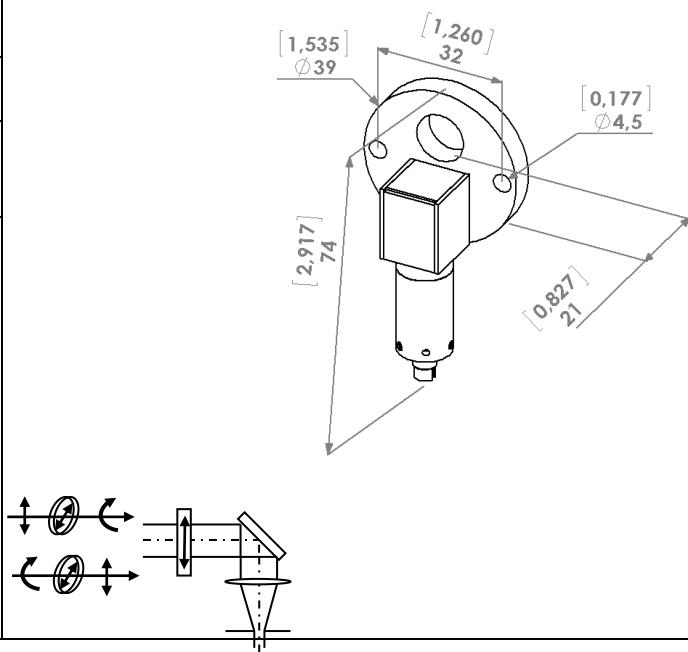
LWL - Anschluss 222 abgewinkelt
Fiber optics coupling 222 bent

Masse [g]:/ Weight: 74,4

Bestell-Nr. / Order No.:
 269302 – 4020 . 624

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66

*Connector:
 DIN LSA connector (8°-polish) D-4108.66*

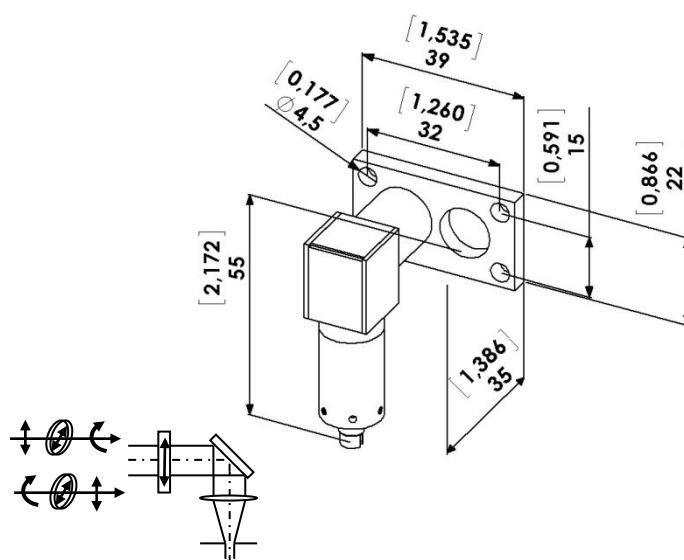


LWL - Anschluss 223 abgewinkelt
Fiber optics coupling 223 bent

Masse [g]:/ Weight: 75,3

Bestell-Nr. / Order No.:
 269302 – 4020 . 924

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66
Connector:
DIN LSA connector (8°-polish) D-4108.66

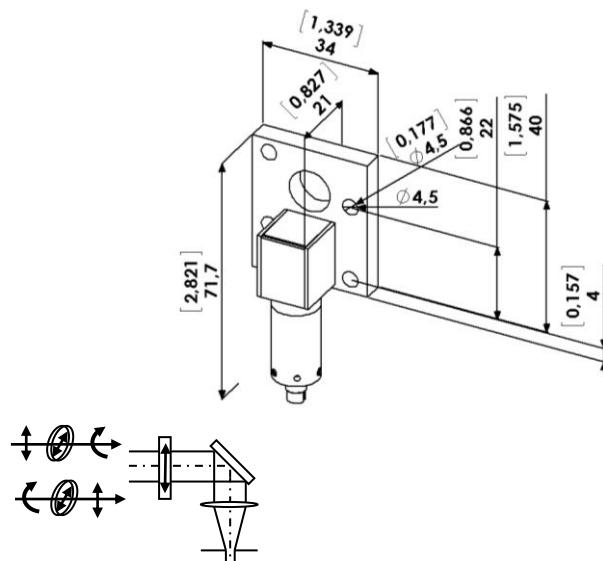


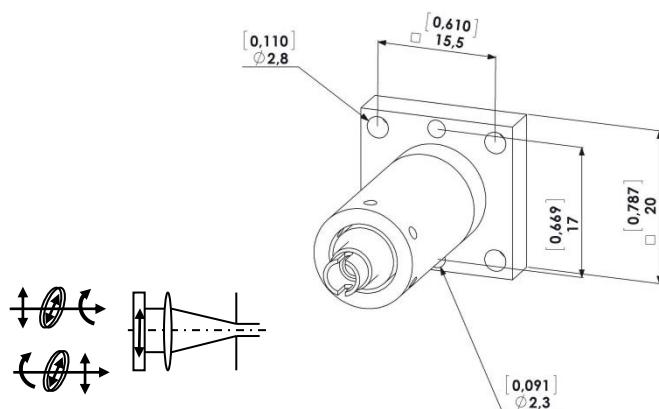
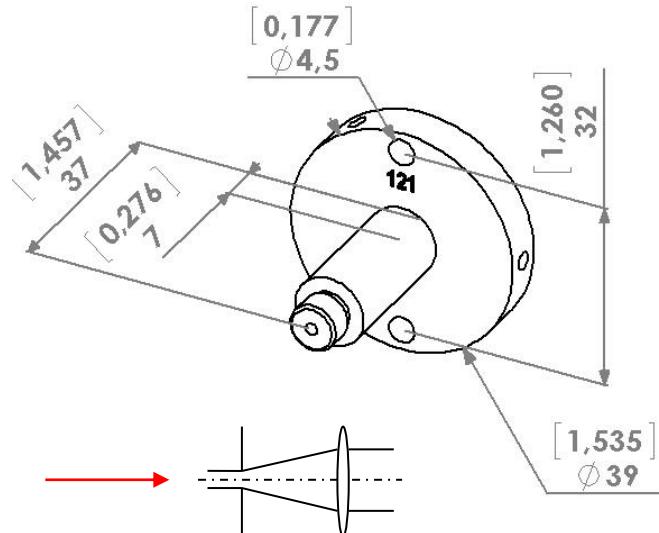
LWL - Anschluss für Parallelinterferometer 224 abgewinkelt
Fiber optics coupling for Parallel interferometer 224 bent

Masse [g]:/ Weight: 92,2

Bestell-Nr. / Order No.:
 269302 – 4021 . 124

Steckersystem:
DIN LSA Stecker (8° Schliff) D-4108.66
Connector:
DIN LSA connector (8°-polish) D-4108.66



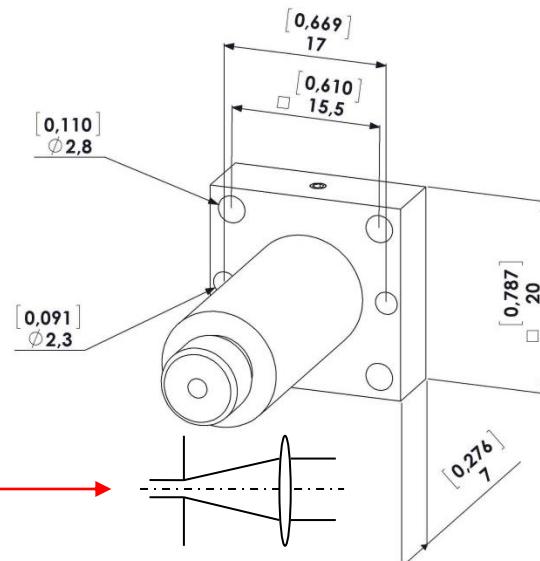
LWL Anschluss 215*Fiber optics coupling 215***Masse [g]:/ Weight:** 34**Bestell-Nr. / Order No.:**
269302 – 4016 . 324**Steckersystem:****DIN LSA Stecker (8° Schliff) D-4108.66****Connector:***DIN LSA connector (8°-polish) D-4108.66***LWL - Auskopplung 121***Fiber optics coupling 121***Masse [g]:/ Weight:** 58**Bestell-Nr. / Order No.:**
269302 – 5010 . 024**Steckersystem (Versorgung)****FC-APC Stecker (8° Schliff)****Connector (supply):***FC-APC connection (8°-polish)*

LWL - Auskopplung 218*Fiber optics coupling 218***Masse [g]:/ Weight:** 42**Bestell-Nr. / Order No.:**
269302 – 4016 . 424**Steckersystem (Versorgung)**

FC-APC Stecker (8° Schliff)

Connector (supply):

FC-APC connection (8°-polish)

**Adapter LSI 440***Adapter LSI 440***Masse [g]:/ Weight:** 293,2**Bestell-Nr. / Order No.:**
269302 – 5010 . 224**Steckersystem:**

DIN LSA Stecker (8° Schliff)

D-4108.66

Connector:

DIN LSA connector (8°-polish)

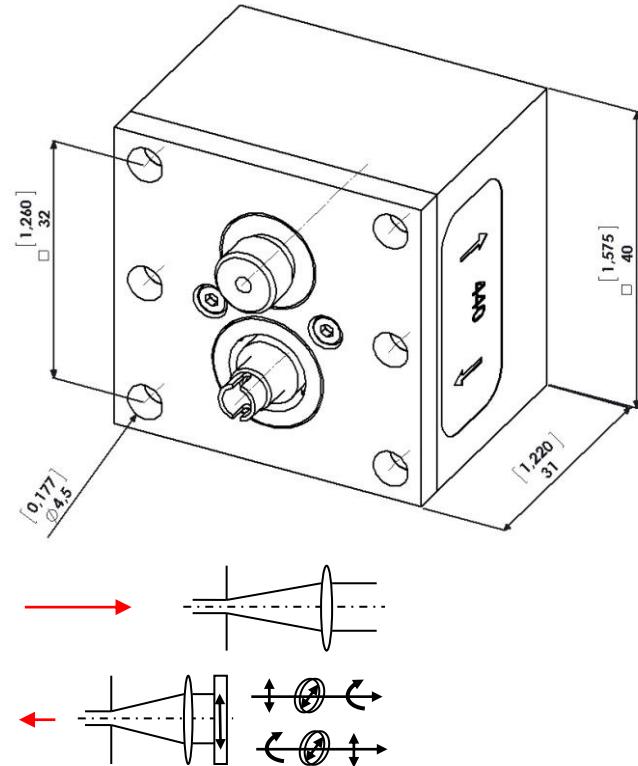
D-4108.66

Steckersystem (Versorgung)

FC-APC Stecker (8° Schliff)

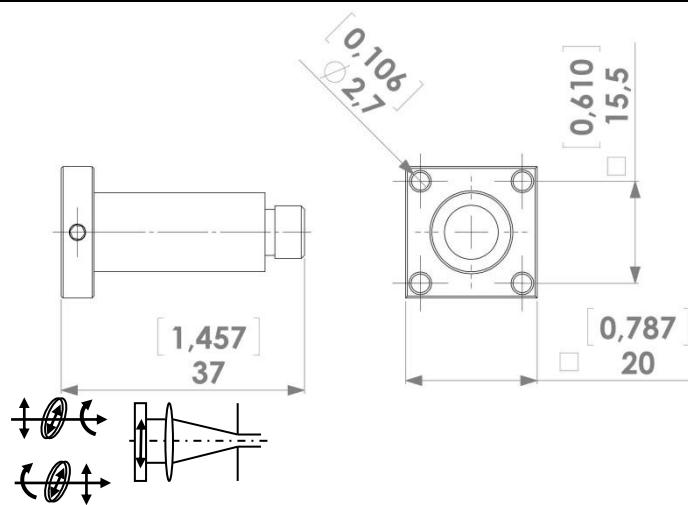
Connector (supply):

FC-APC connection (8°-polish)

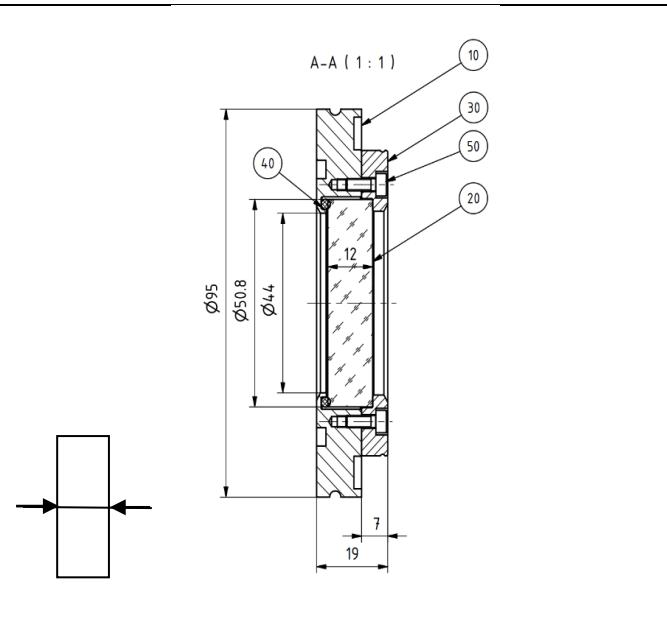


LWL Adapter 220*LWL Adapter 220***Masse [g]:/ Weight:** 95**Bestell-Nr. / Order No.:**

269302 - 5093 . 524

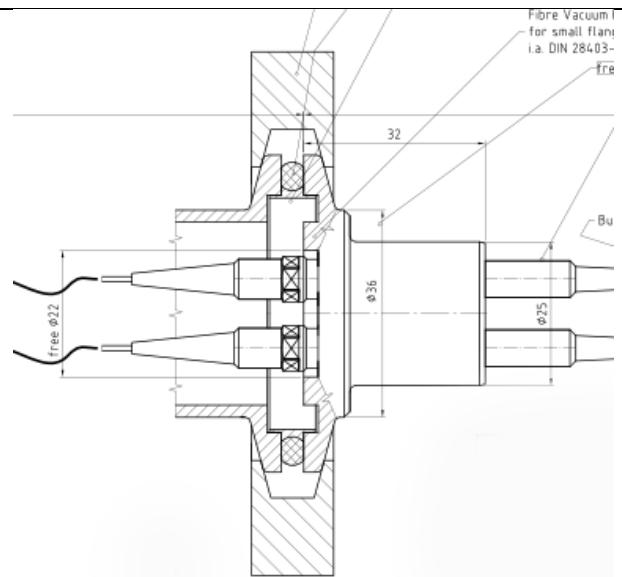
Steckersystem:**DIN LSA Stecker (8° Schliff) D-4108.66***Connector:**DIN LSA connector (8°-polish) D-4108.66***Fenster 44 - Vakuumdurchführung***Window 44 - Vacuum Feedthrough***Masse [g]:/ Weight:** -**Bestell-Nr. / Order No.:**

000000 - 5001 . 592



Vakuum - Durchführung für 2 Faser
Vacuum - Feedthrough for 2x Fiber

Masse [g]:/ Weight: -

Bestell-Nr. / Order No.:
0000000 - 5001 . 593**Steckersystem:**
VIS/NIR-50-NA022-DIN-APC/DIN-
APC-20/50
Kabellänge 0,7 mConnector:
VIS/NIR-50-NA022-DIN-APC/DIN-
APC-20/50
Cable length 0.7 m

7. Kabel - Lichtwellenleiter

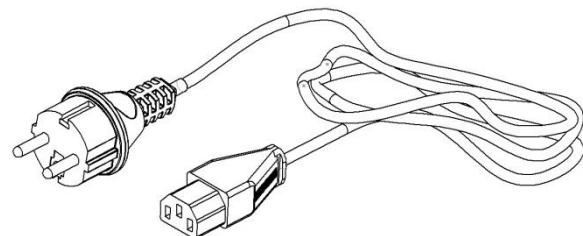
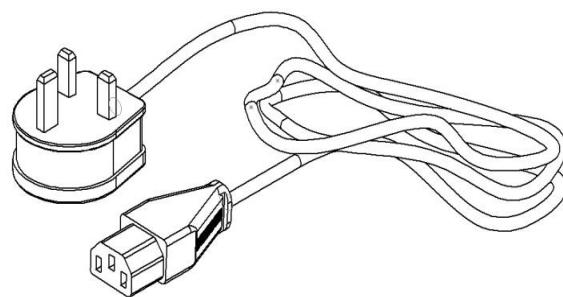
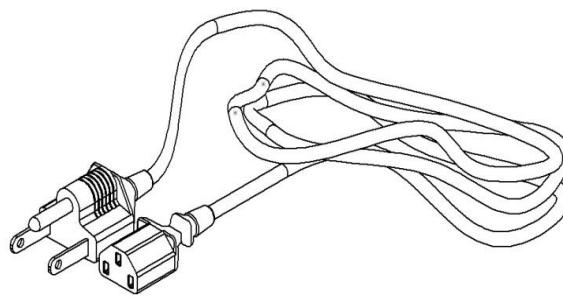
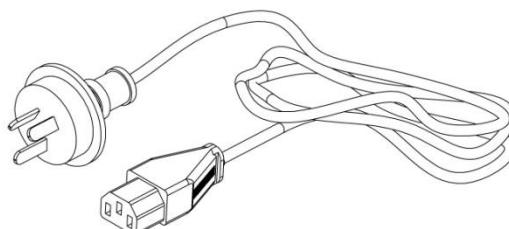
7. Cables – Optic fiber cables

Kurzübersicht Kabel

Short overview cables

	Bestell-Nr. / Order No.:	Stecker / socket	ZLM700	ZLM800	ZLM900 LSI
Trigger Kabel 2020 <i>Trigger cable 2020</i> <i>Länge / length: 5m</i>	269302-4004.726	X2	x	x	x
A-Q-B Kabel (15 pol) <i>A-Q-B cable (15pol)</i> <i>Länge / length: 5m</i>	269302-5040.424	X2	x	x	x
A-Q-B Kabel (9 pol) <i>A-Q-B cable (9 pol)</i> <i>Länge / length: 5m</i>	269302-5040.524	X2	x	x	x
A-Q-B Kabel (Spindler & Hoyer) <i>A-Q-B cable (Spindler & Hoyer)</i> <i>Länge / length: 5m</i>	269302-5100.024	X2	x	x	x
AUK Kabel <i>AUK cable</i> <i>Länge / length: 5m</i>	269302-4040.224	X3	x	x	x
Messkopfkabel <i>Measurement head cable, complete</i> <i>Länge / length: 5m</i>	269302-4040.824	X4	x	x	-
Messkopfkabel <i>Measurement head cable</i> <i>Länge / length: 5m</i>	269302-5040.124	X4	x	x	-
Messkopfkabel <i>Measurement head cable, complete</i> <i>(Fiber cables are integrated)</i> <i>Länge / length: 20m</i>	269302-5040.824	X4	x	x	-
Messkopfkabel (Einbauvariante) <i>Measurement head cable (built- in system)</i> <i>Länge / length: 5m</i>	269302-4080.824	X4	x	x	-
Messkopfkabel (ZLM 800) <i>Measurement head cable (ZLM 800)</i> <i>Länge / length: 5m</i>	269302-5062.126	X4	x	x	-
Messkopfkabel (ZLM 900) standard <i>Measurement head cable (ZLM 900)</i> <i>standard</i>	269302-5091.824	X4			
Messkopfkabel (ZLM 900) mit Referenz <i>Measurement head cable (ZLM 900) with</i> <i>reference</i>	269302-5091.724	X4			

	Bestell-Nr. / <i>Order No.:</i>	Stecker <i>/ socket</i>	ZLM700	ZLM800	ZLM900 LSI
Quadrantenkabel (für Referenzposition) <i>Quad cable (for reference position)</i> <i>Länge / length: 5m</i>	296302-5040.926	X4	X	X	X
Referenzsynchronkabel SMB <i>Reference synchron cable SMB</i> <i>Länge / length: 95m,,</i>	269302-5093.224				

Kabel & Lichtwellenleiter
Cables & Optic fibers**Geräteanschlusskabel DIN Standard***Power cable - DIN standard***Masse [g] / Weight :** -**Bestell-Nr. / Order No.:****000000 – 0146 . 250****Geräteanschlusskabel GB Version***Power cable – British version***Masse [g] / Weight :** -**Bestell-Nr. / Order No.:****000000 – 0228 . 205****Geräteanschlusskabel Japan /USA Version***Power cable – Japan / USA version***Masse [g] / Weight :** -**Bestell-Nr. / Order No.:****000000 – 0228 . 289****Geräteanschlusskabel Australien/ China***Power cable – Australia / China version***Masse [g] / Weight :** -**Bestell-Nr. / Order No.:****000000 – 5001 . 394**

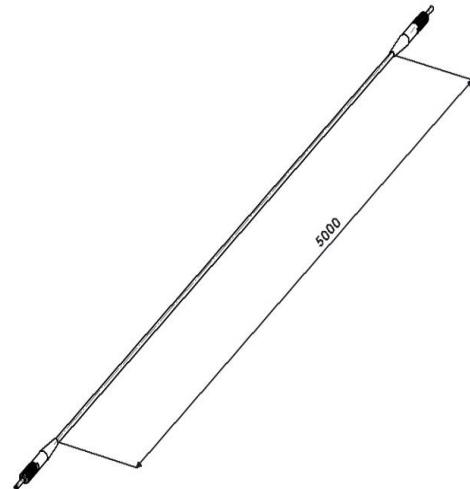
Gradienten - Lichtwellenleiter*Gradient index fiber cable*

Länge : 3 m (Standard) /
Length: nach Kundenanforderungen
 according to customer
 requirements

Masse [g] / Weight : -

Bestell-Nr. / Order No.:
000000 – 0212 . 678

Steckersystem:
Connector:
 pe Patchkabel 2xD-4108.66/K - 50/125/900/3000-5m

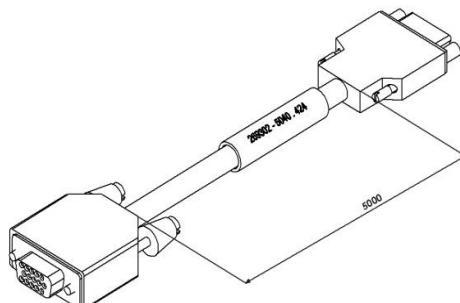
**A-Q-B Kabel (15 pol)***A-Q-B connecting cable (15 pol)*

Länge : 5 m (Standard) /
Length: nach Kundenanforderungen
 according to customer
 requirements

Masse [g] / Weight : 323

Bestell-Nr. / Order No.:
269302 – 5040 . 424

Steckersystem:
Connector:
 MDSM - 25 SC - Z11 - VS 1-
 D - SUB - Buchse 15 pol HIGH DENSITY

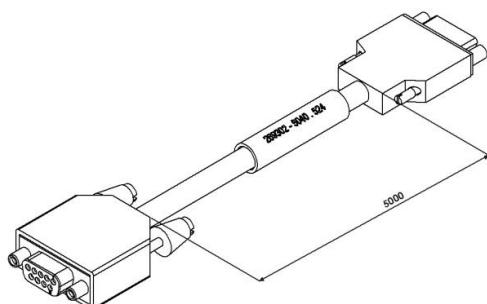
**A-Q-B Kabel (9 pol)***A-Q-B connecting cable(9pol)*

Länge : 5 m (Standard) /
Length: nach Kundenanforderungen
 according to customer
 requirements

Masse [g] / Weight : 323

Bestell-Nr. / Order No.:
269302 – 5040 . 524

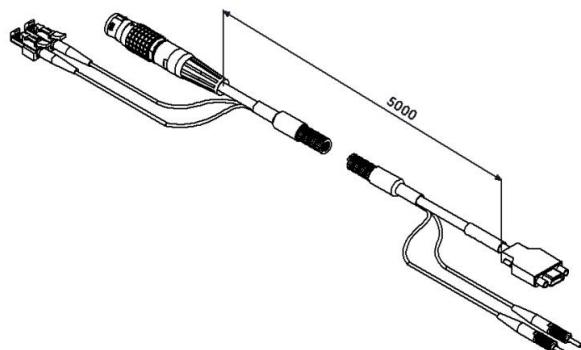
Steckersystem:
Connector:
 MDSM - 25 SC - Z11 - VS 1-
 D - SUB - Buchse 9 pol



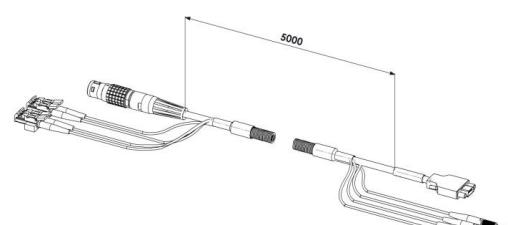
Messkopfkabel , komplett

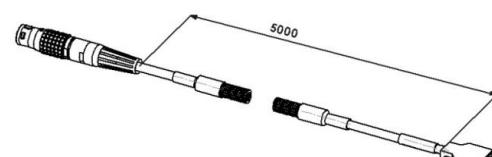
Measurement head cable, complete (Fiber cables
are integrated)

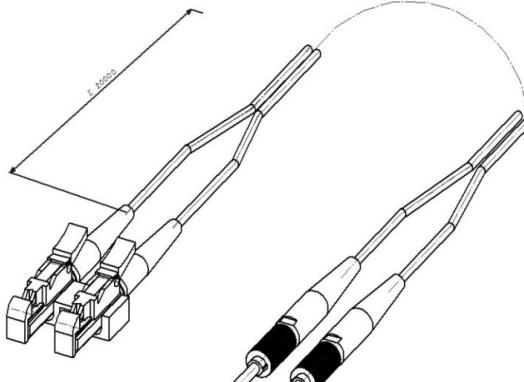
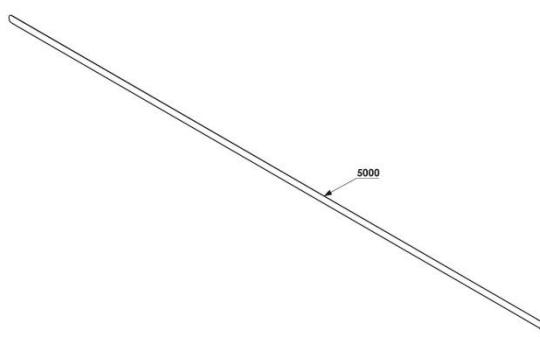
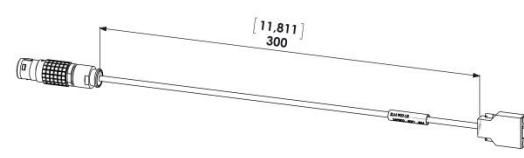
Länge : <i>Length:</i>	3 m (Standard)/ oder Kundenanforderung or customer requirements
Masse [g] / <i>Weight :</i>	-
Bestell-Nr. / <i>Order No.:</i>	269302 – 4040 . 824
Steckersystem: <i>Connector:</i>	FGG.3B.312.CLA D62ZN MDSM-15SC-Z11-VS1



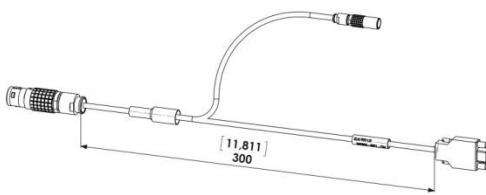
Messkopfkabel (Einbauvariante) <i>Measurement head cable, (built-in system)</i>		
Länge : <i>Length:</i>	3 m (Standard)/ oder Kundenanforderung or customer requirements	
Masse [g] / Weight :	-	
Bestell-Nr. / Order No.:	269302 – 4080 . 824	
Steckersystem: <i>Connector:</i>	FGG.3B.312.CLA D62ZN MDSM-15SC-Z11-VS1	

Messkopfkabel, komplett (ZLM 800) <i>Measurement head cable, complete (ZLM 800)</i>		
Länge : <i>Length:</i>	3 m oder Kundenanforderung or customer requirements	
Masse [g] / Weight :	-	
Bestell-Nr. / Order No.:	269302 – 5062 . 126	
Steckersystem: <i>Connector:</i>	FGG.3B.312.CLA D62ZN MDSM-15SC-Z11-VS1	

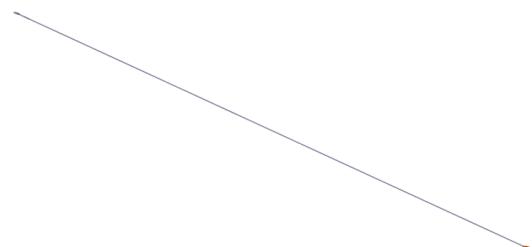
Messkopfkabel <i>Measurement head cable</i>		
Länge : <i>Length:</i>	3 m (Standard)/ oder Kundenanforderung or customer requirements	
Masse [g] / Weight :	-	
Bestell-Nr. / Order No.:	269302 – 5040 . 124	
Steckersystem: <i>Connector:</i>	FGG.3B.312.CLA D62ZN MDSM-15SC-Z11-VS1	

Doppellichtwellenleiter <i>Double fiber cable</i>		
Länge x [m]: <i>Length x [m]:</i>	3 m (standard)/ oder Kundenanforderung or customer requirements	
Masse [g] / Weight :	-	
Bestell-Nr. / Order No.: 269302 – 4043 . 724 /x		
Steckersystem: <i>Connector:</i> E-2148.6 SM 8° Compact Zirkonia/Neusilber-Einsatz (Pilzferule) 8° D -4106.66 SM 0° Zirkonia/neusilber-Einsatz (Pilz)Stirnfläche konvex Simplex- Kabel 1x50/125/900/1600-20,0m		
Trigger Kabel 2020 Trigger cable 2020		
Länge : <i>Length:</i>	5 m	
Masse [g] / Weight :	180	
Bestell-Nr. / Order No.: 269302 – 4004 . 726		
Steckersystem: <i>Connector:</i> BNC FGG.0B.302.CLA		
Messkopfkabel (ZLM 900) Standard <i>Measurement head cable (ZLM 900) standard</i>		
Länge : <i>Length:</i>	300 mm	
Masse [g] / Weight :	230	
Bestell-Nr. / Order No.: 269302 – 5091 . 824		
Steckersystem: <i>Connector:</i> MDSM - 25 SC - Z11 - VS 1 FGG.3B.316.CLAD92Z		

Messkopfkabel (ZLM 900) mit Referenz <i>Measurement head cable (ZLM 900) with reference</i>	
Länge : <i>Length:</i>	300 mm
Mass [g] / <i>Weight :</i>	230
Bestell-Nr. / Order No.: 269302 – 5091 . 824	
Steckersystem: <i>Connector:</i> MDSM - 25 SC - Z11 - VS 1 FGG.3B.316.CLAD92Z	



A-Q-B-Kabel (Spindler & Hoyer) <i>A-Q-B cable (Spindler & Hoyer)</i>	
Länge : <i>Length:</i>	5 m (Standard)/ oder Kundenanforderung or customer requirements
Masse [g] / Weight :	323
Bestell-Nr. / Order No.:	269302 – 5100 . 024
Steckersystem: <i>Connector:</i>	
MDSM - 25 SC - Z11 - VS 1- D - SUB - Buchse 15 pol	



Quadrantenkabel (für Referenzposition) <i>Quad cable (for reference position)</i>	
Länge : <i>Length:</i>	5 m (Standard)/ oder Kundenanforderung or customer requirements
Masse [g] / Weight :	268
Bestell-Nr. / Order No.:	269302 – 5040 . 924
Steckersystem: <i>Connector:</i>	
MDSM - 25 SC - Z11 - VS 1- 1 FGG.OG.307 .CLA.D56	



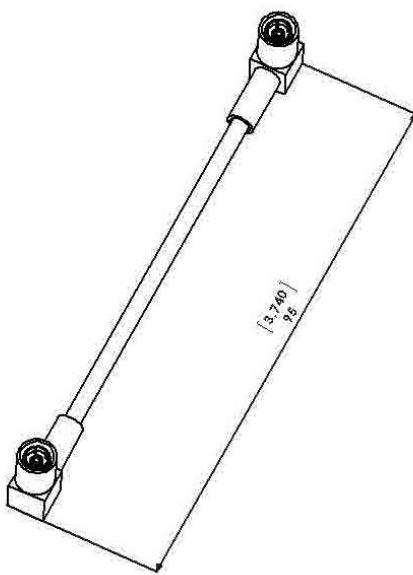
Referenzsynchronkabel SMB*Reference synchron cable SMB***Länge :** 95mm*Length:***Masse [g] / Weight :** 8**Bestell-Nr. / Order No.:**

269302 – 5093.. 224

Steckersystem:*Connector:*

SMB abgewinkelt

SMB rectangular



H. Montageelemente – Justier- und Koppelemente

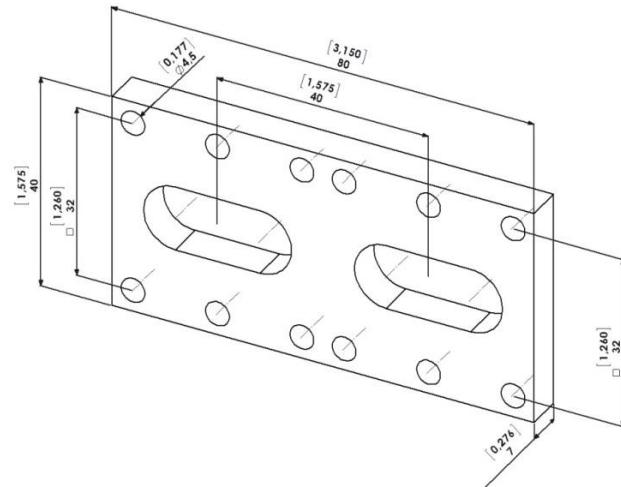
H. Mounting elements – adjustment and coupling elements

Koppelplatte 511

Coupling plate 511

Masse [g] / Weight : 131

Bestell-Nr. / Order No.:
269302 – 4017 . 910



Fußabstandsplatte 150

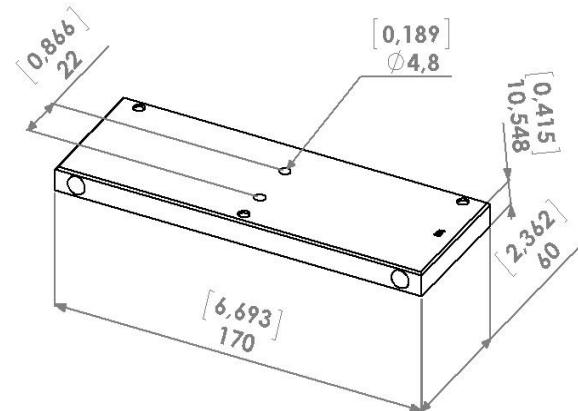
Base distance plate 150

Masse [g] / Weight : 827

Bestell-Nr. / Order No.:
269302 – 4011 . 625

Fußabstandsplatte für Doppelreflektor 115

Base distance plates for double triple reflector 115

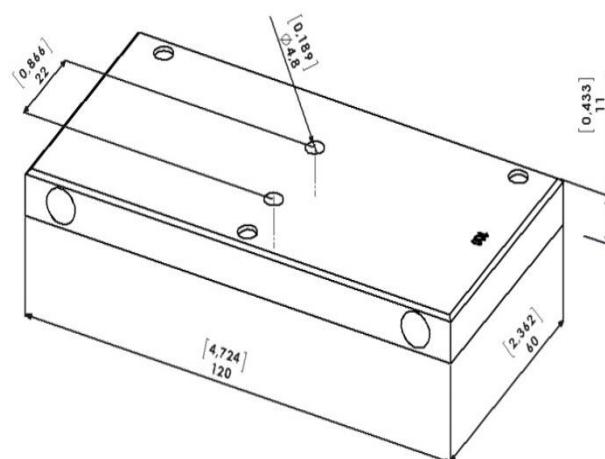


Fußabstandsplatte 100

Base distance plate 100

Masse [g] / Weight : 582

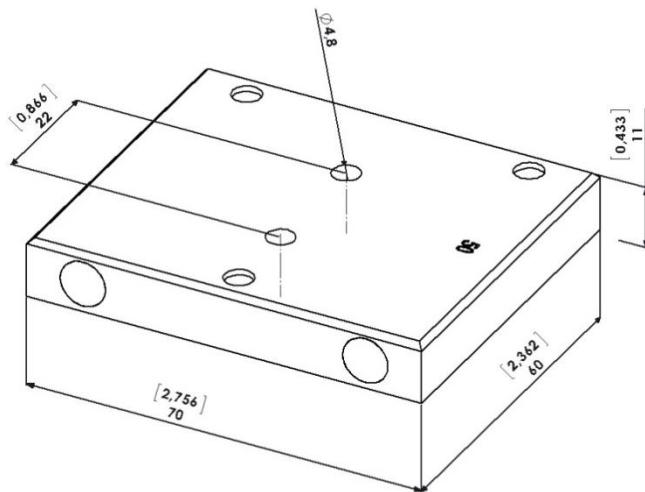
Bestell-Nr. / Order No.:
269302 – 4011 . 725



Fußabstandsplatte 50
Base distance plate 50

Masse [g] / Weight : 336

Bestell-Nr. / Order No.:
269302 – 4011 . 825

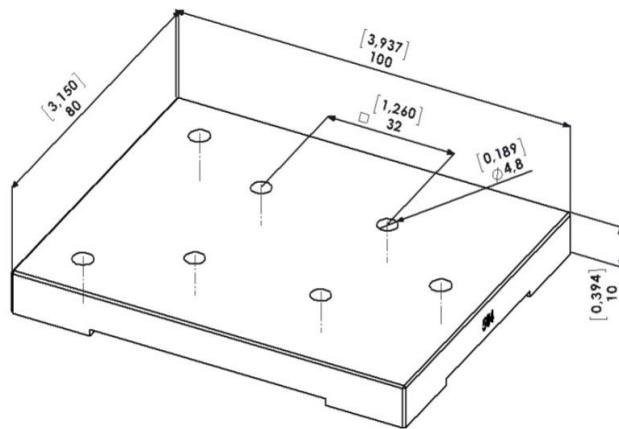


Basisplatte 504

Mounting plate 504

Masse [g] / Weight : 536,4

Bestell-Nr. / Order No.:
269302 – 4014 . 410

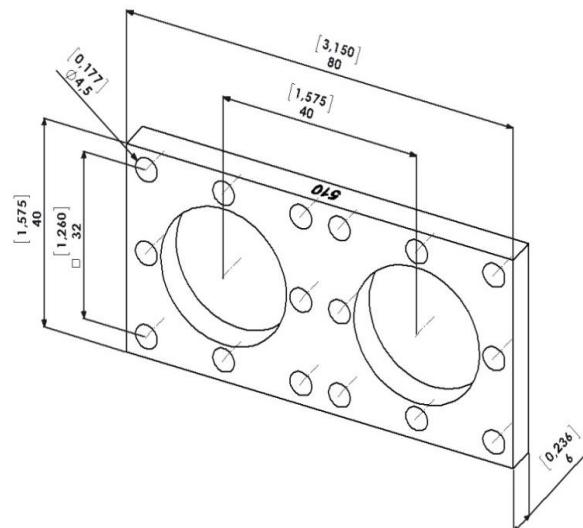


Koppelplatte 510

Coupling plate 510

Masse [g] / Weight : 88,2

Bestell-Nr. / Order No.:
269302 – 4014 . 510

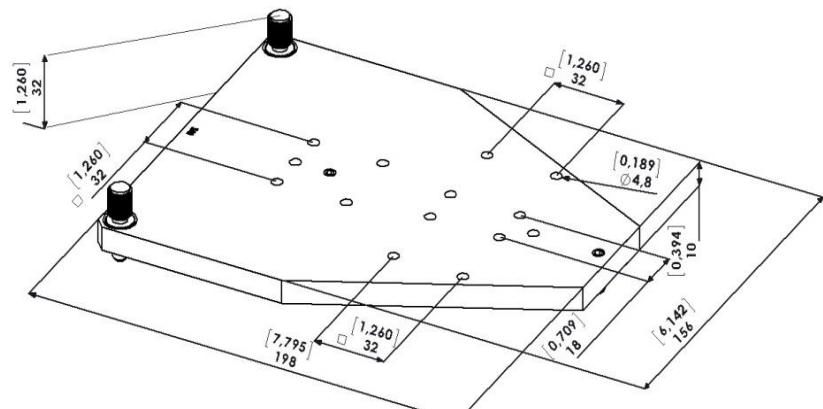


Justierplatte 549*Adjustable plate 549*

Masse [g] / Weight :	671
-----------------------------	-----

Bestell-Nr. / Order No.:	
---------------------------------	--

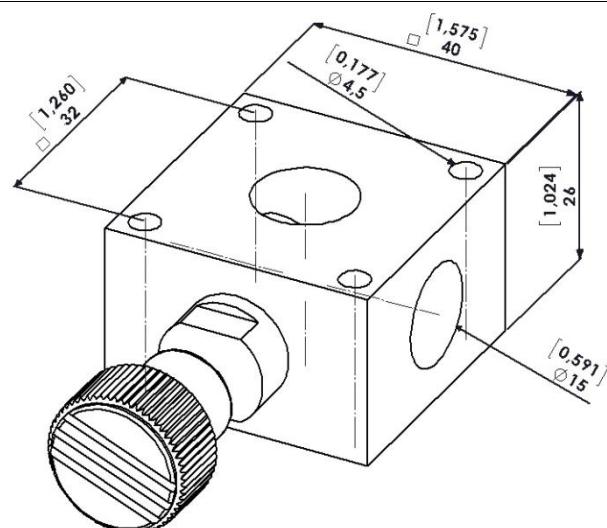
269302 – 4012 . 425

**Klemmhalter 507***Clamp mounting 507*

Masse [g] / Weight :	100,4
-----------------------------	-------

Bestell-Nr. / Order No.:	
---------------------------------	--

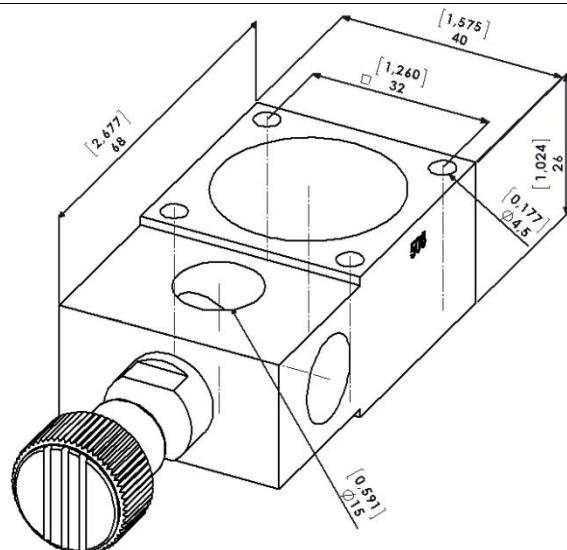
269302 – 4010 . 325

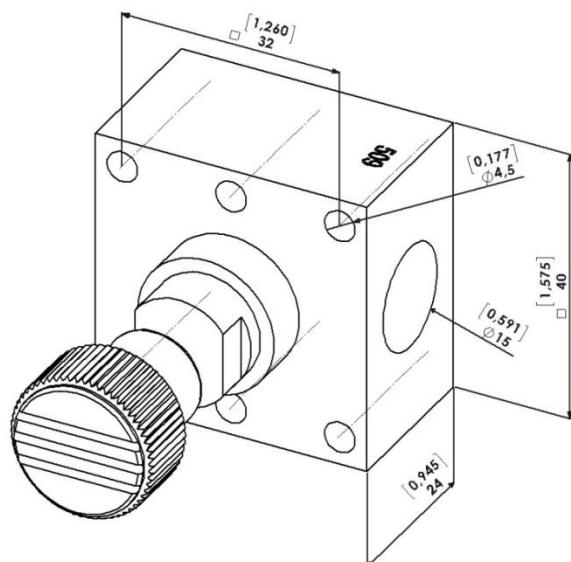
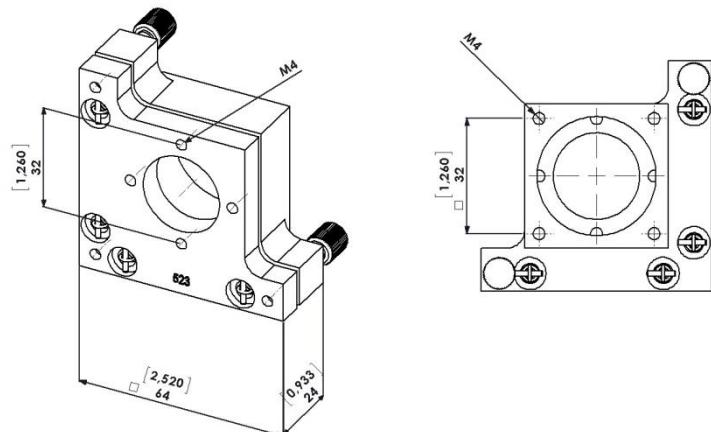
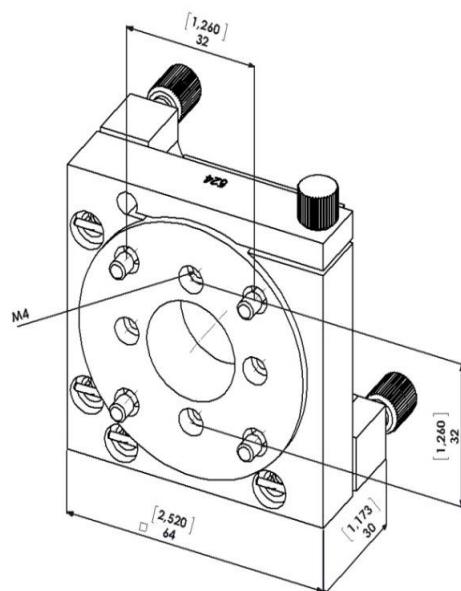
**Klemmhalter 508***Clamp mounting 508*

Masse [g] / Weight :	115,7
-----------------------------	-------

Bestell-Nr. / Order No.:	
---------------------------------	--

269302 – 4010 . 125

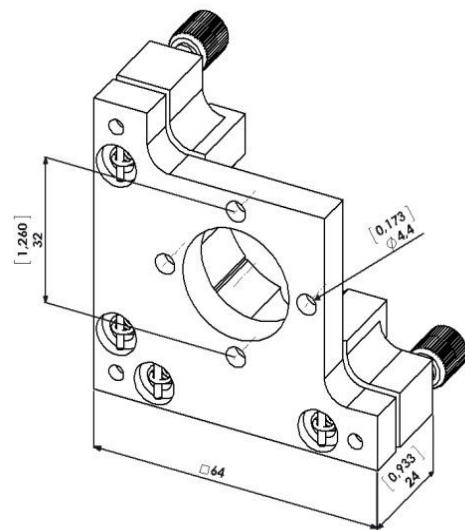


Klemmhalter 509*Clamp mounting 509***Masse [g] / Weight :** 102,5**Bestell-Nr. / Order No.:**
269302 – 4010 . 225**Kipphalter 523***Tilttable holder 523***Anzahl Freiheitsgrade:**
No. of degrees of freedom: 2**Masse [g] / Weight :** 153,6**Bestell-Nr. / Order No.:**
269302 – 4010 . 825**Kipphalter 524***Tilttable holder 524***Anzahl Freiheitsgrade:**
No. of degrees of freedom: 3**Masse [g] / Weight :** 338,8**Bestell-Nr. / Order No.:**
269302 – 4010 . 925

Kipphalter 525
Tiltable holder 525

Anzahl Freiheitsgrade: <i>No. of degrees of freedom:</i>	2
Masse [g] / Weight :	136,5

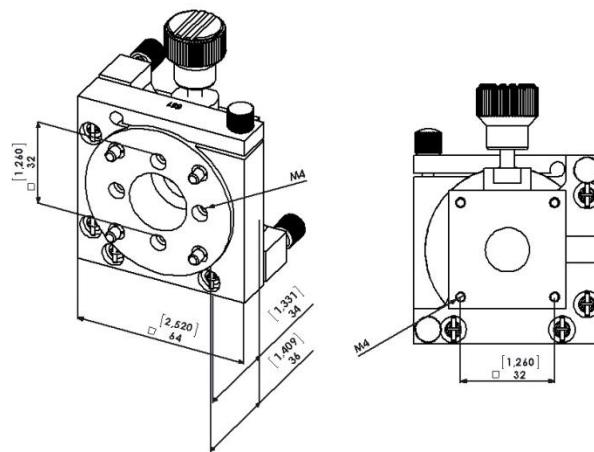
Bestell-Nr. / Order No.:
269302 – 4010 . 826



Kipphalter 531
Tiltable holder 531

Anzahl Freiheitsgrade: <i>No. of degrees of freedom:</i>	3
Masse [g] / Weight :	432,5

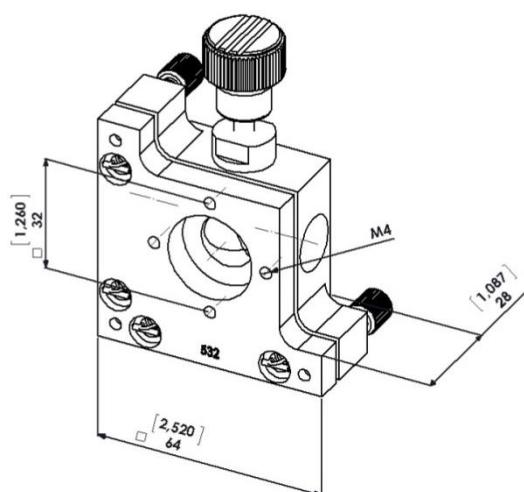
Bestell-Nr. / Order No.:
269302 – 4040 . 725



Kipphalter 532
Tiltable holder 532

Anzahl Freiheitsgrade: <i>No. of degrees of freedom:</i>	2
Masse [g] / Weight :	191

Bestell-Nr. / Order No.:
269302 – 4040 . 625



Kipphalter 533*Tiltable holder 533***Anzahl Freiheitsgrade:**

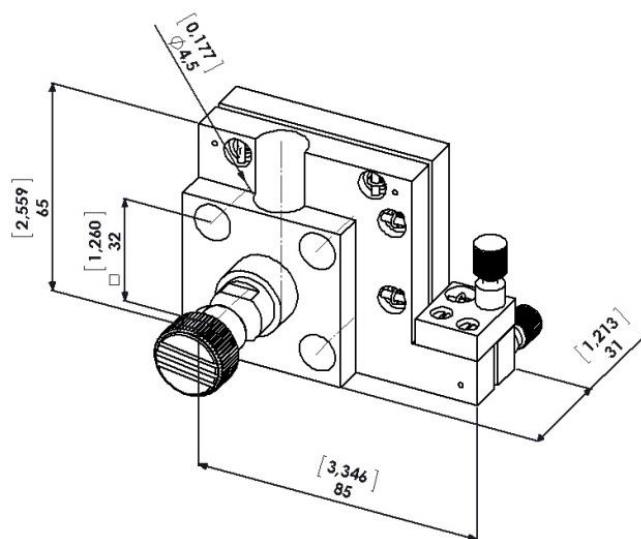
No. of degrees of freedom: 2

Masse [g] / Weight :

219,3

Bestell-Nr. / Order No.:

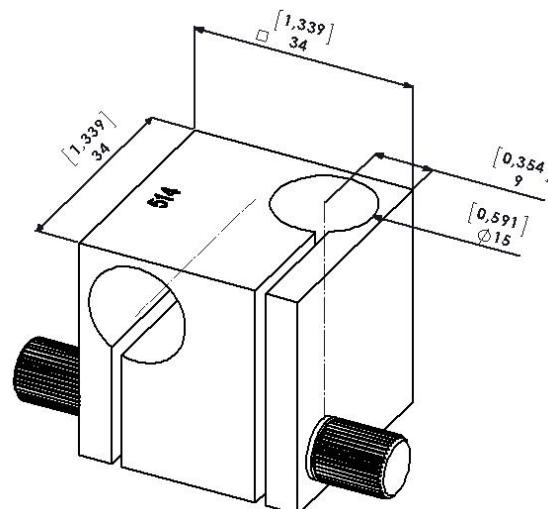
269302 – 4004 . 625

**Klemmhalter 514***Clamp mounting 514***Masse [g] / Weight :**

79,8

Bestell-Nr. / Order No.:

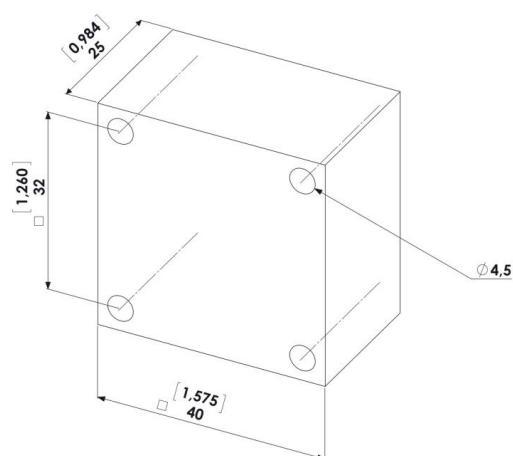
269302 – 4010 . 525

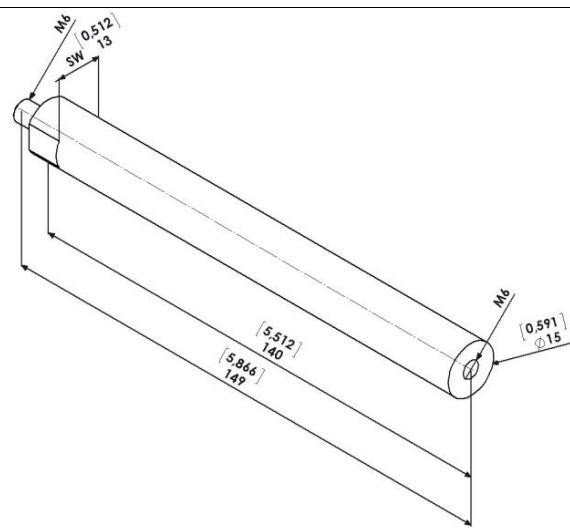
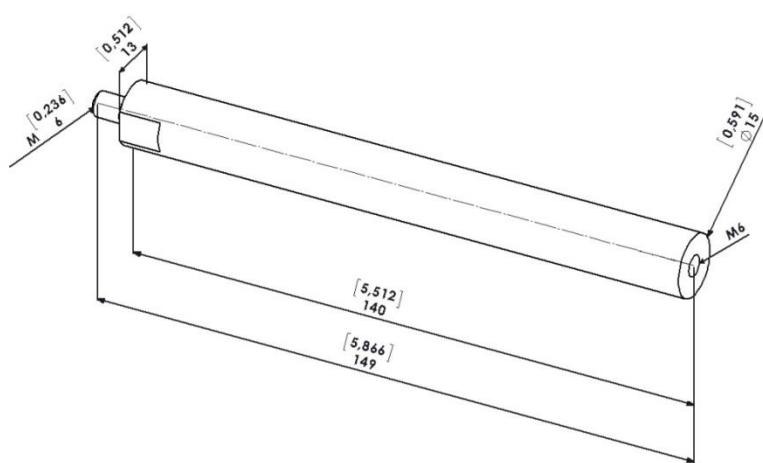
**Abstandsblock 40***Distance block 40***Masse [g] / Weight :**

299

Bestell-Nr. / Order No.:

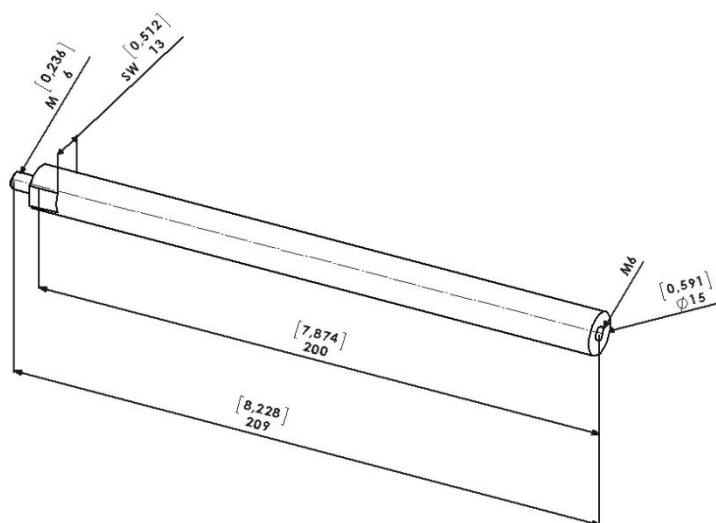
269302 – 5011 . 610



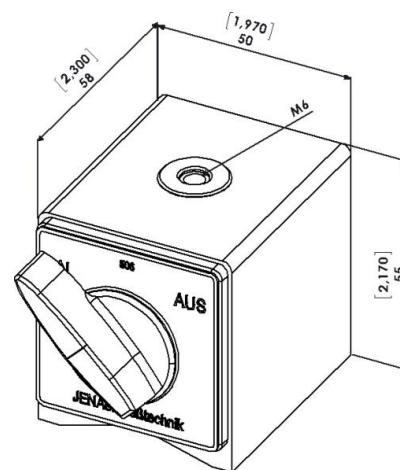
Säule 90
Rod 90**Masse [g] / Weight :** 122,8**Bestell-Nr. / Order No.:**
260297 – 9900 . 228**Säule 140**
Rod 140**Masse [g] / Weight :** 191,7**Bestell-Nr. / Order No.:**
260297 – 9900 . 128

Säule 200

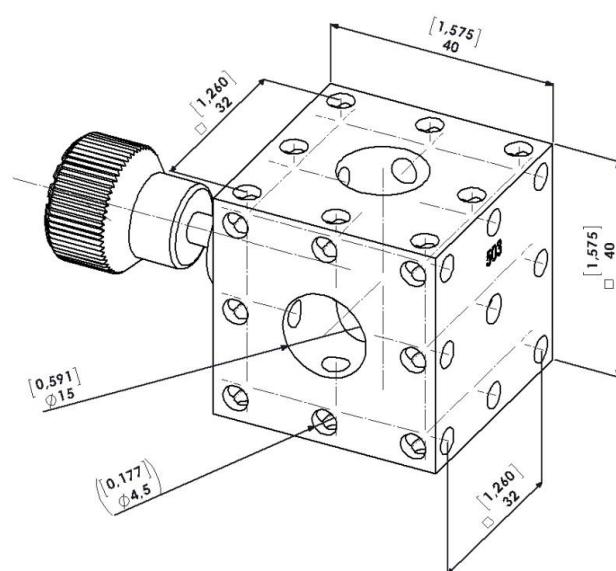
Rod 200

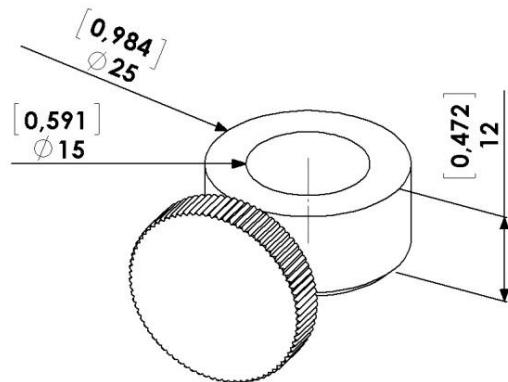
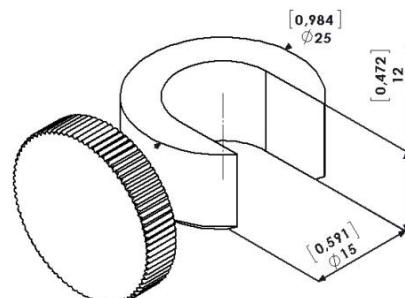
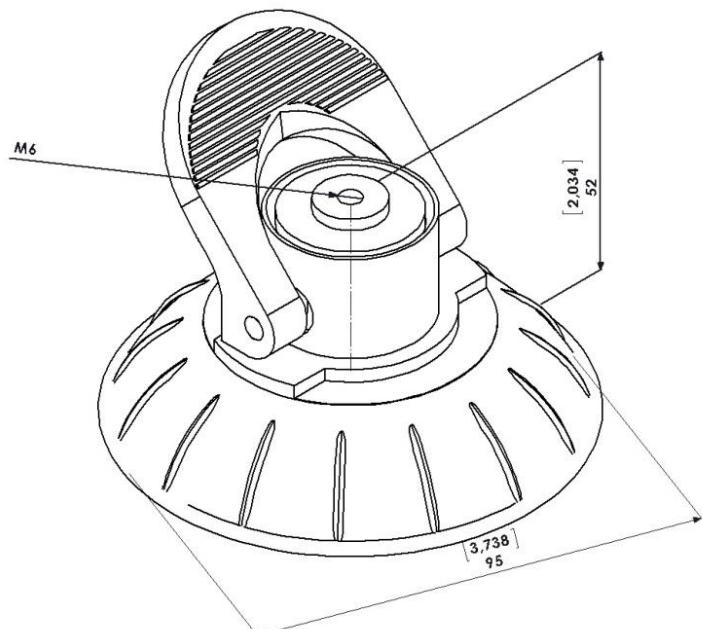
Masse [g] / Weight : 274,4**Bestell-Nr. / Order No.:**
260297 – 9900 . 328**Magnetfuß 506**

Magnetic base 506

Masse [g] / Weight : 1.200**Bestell-Nr. / Order No.:**
260298 – 3000 . 128**Klemmwürfel 503**

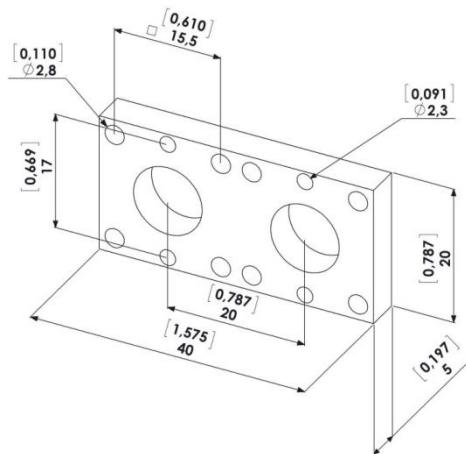
Clamping cube 503

Masse [g] / Weight : 140**Bestell-Nr. / Order No.:**
269302 – 4010 . 625

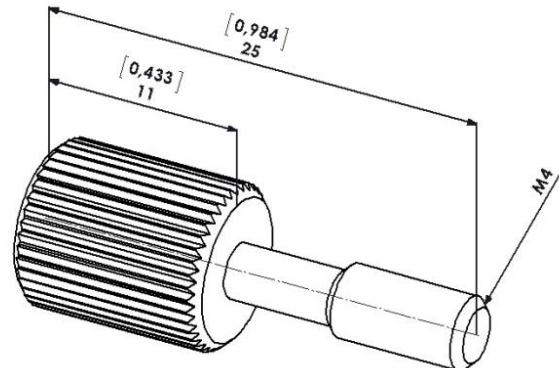
Stellring, geschlossen
Collar, closed**Masse [g] / Weight :** 47**Bestell-Nr. / Order No.:**
260297 – 9900 . 428**Stellring, offen**
Collar, open**Masse [g] / Weight :** 38,9**Bestell-Nr. / Order No.:**
260297 – 9900 . 528**Saugfuß**
Vacuum base**Masse [g] / Weight :** 271**Bestell-Nr. / Order No.:**
269302 – 4012 . 325

Koppelplatte 509*Coupling plate 509***Masse [g] / Weight :** 24**Bestell-Nr. / Order No.:**

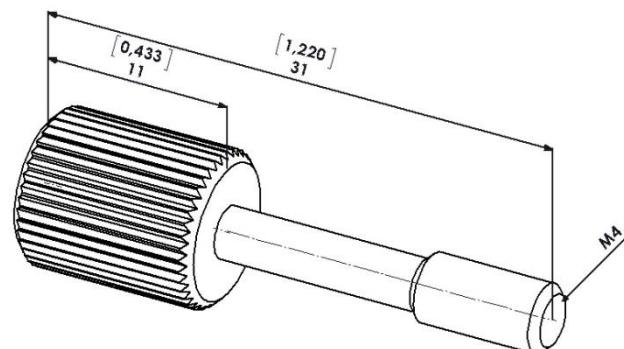
269302 – 5111 . 110

**Schraube 14***Screw 14***Masse [g] / Weight :** 6,2**Bestell-Nr. / Order No.:**

269302 – 4011 . 025

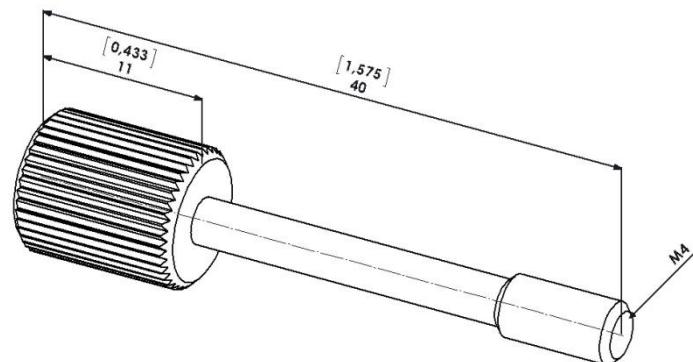
**Schraube 20***Screw 20***Masse [g] / Weight :** 6,5**Bestell-Nr. / Order No.:**

269302 – 4011 . 125

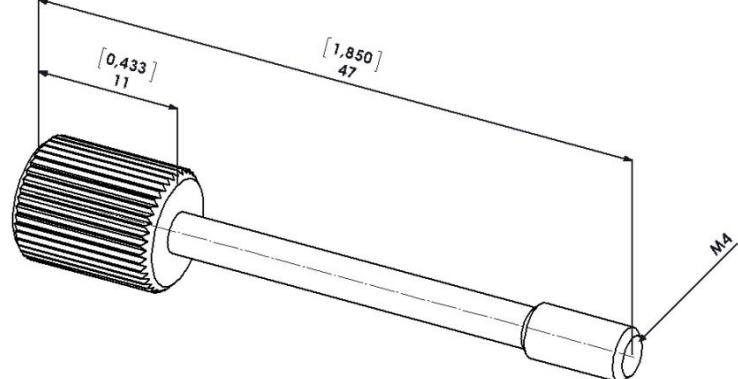


Schraube 29

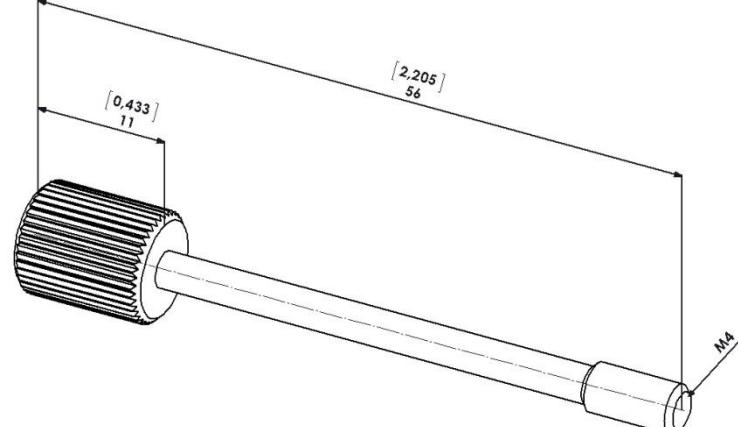
Screw 29

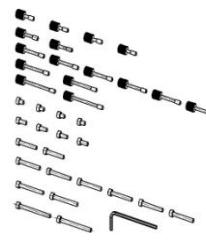
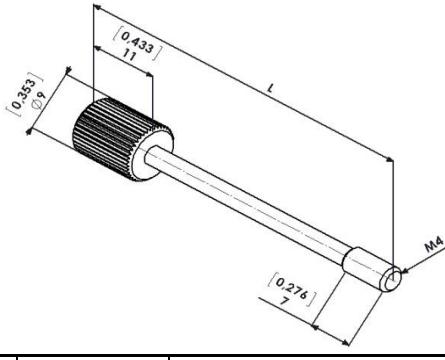
Masse [g] / Weight : 7**Bestell-Nr. / Order No.:**
269302 – 4011 . 225**Schraube 36**

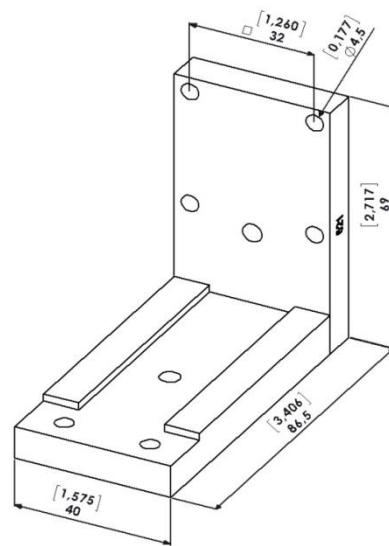
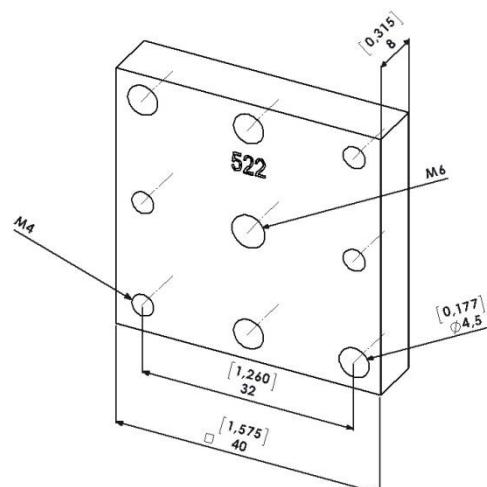
Screw 36

Masse [g] / Weight : 7,4**Bestell-Nr. / Order No.:**
269302 – 4011 . 325**Schraube 45**

Screw 45

Masse [g] / Weight : 7,9**Bestell-Nr. / Order No.:**
269302 – 4011 . 425

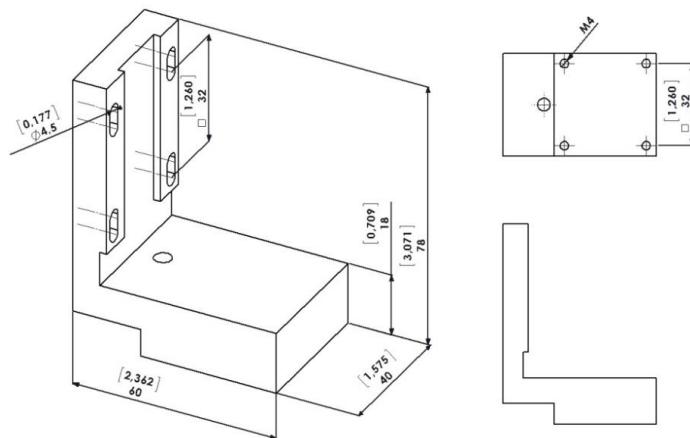
Schraubensatz komplett <i>Set of screws, complete</i>																									
Masse[g]: / Weight [g]:	124																								
Bestell-Nr. / Order No.: 269302 – 4005 . 624																									
 																									
<table border="1"> <thead> <tr> <th>Nummer Number</th> <th>Länge [mm]: Length [inch]</th> <th>Anzahl: Quantity:</th> <th>Einzelbestellnummer: Order no.:</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>25 0.984</td> <td>4</td> <td>269302 – 4011 . 025</td> </tr> <tr> <td>20</td> <td>31 1.220</td> <td>2</td> <td>269302 – 4011 . 125</td> </tr> <tr> <td>29</td> <td>40 1.575</td> <td>6</td> <td>269302 – 4011 . 225</td> </tr> <tr> <td>36</td> <td>47 1.850</td> <td>2</td> <td>269302 – 4011 . 325</td> </tr> <tr> <td>45</td> <td>56 2.205</td> <td>2</td> <td>269302 – 4011 . 425</td> </tr> </tbody> </table>		Nummer Number	Länge [mm]: Length [inch]	Anzahl: Quantity:	Einzelbestellnummer: Order no.:	14	25 0.984	4	269302 – 4011 . 025	20	31 1.220	2	269302 – 4011 . 125	29	40 1.575	6	269302 – 4011 . 225	36	47 1.850	2	269302 – 4011 . 325	45	56 2.205	2	269302 – 4011 . 425
Nummer Number	Länge [mm]: Length [inch]	Anzahl: Quantity:	Einzelbestellnummer: Order no.:																						
14	25 0.984	4	269302 – 4011 . 025																						
20	31 1.220	2	269302 – 4011 . 125																						
29	40 1.575	6	269302 – 4011 . 225																						
36	47 1.850	2	269302 – 4011 . 325																						
45	56 2.205	2	269302 – 4011 . 425																						
Zylinderschrauben M4 (DIN 912) <i>Socket head screws M4 (DIN 912)</i> <table border="1"> <thead> <tr> <th>Länge [mm]: Length [inch]:</th> <th>Anzahl: Quantity:</th> </tr> </thead> <tbody> <tr> <td>6 0.236</td> <td>4</td> </tr> <tr> <td>10 0.394</td> <td>4</td> </tr> <tr> <td>25 0.984</td> <td>2</td> </tr> <tr> <td>30 1.181</td> <td>6</td> </tr> <tr> <td>35 1.378</td> <td>2</td> </tr> <tr> <td>45 1.811</td> <td>2</td> </tr> </tbody> </table> <p>1 x Sechskant-Schraubendreher DIN-911 - ISO-2936 <i>1 x Allen key, DIN-911 - ISO-2936</i></p>		Länge [mm]: Length [inch]:	Anzahl: Quantity:	6 0.236	4	10 0.394	4	25 0.984	2	30 1.181	6	35 1.378	2	45 1.811	2										
Länge [mm]: Length [inch]:	Anzahl: Quantity:																								
6 0.236	4																								
10 0.394	4																								
25 0.984	2																								
30 1.181	6																								
35 1.378	2																								
45 1.811	2																								

Haltewinkel 521*Angle bracket 521***Masse [g] / Weight :** 414,4**Bestell-Nr. / Order No.:**
269302 – 4010 . 425**Säulenanschluss 522***Adapter plate 522***Masse [g] / Weight :** 92,5**Bestell-Nr. / Order No.:**
269302 – 4018 . 110

**Winkeladapter (für Kompakt –
Planspiegelinterferometer 390)**
*Angle adapter (for Compact plane
mirror interferometer 390)*

Masse [g] / Weight : 435,8

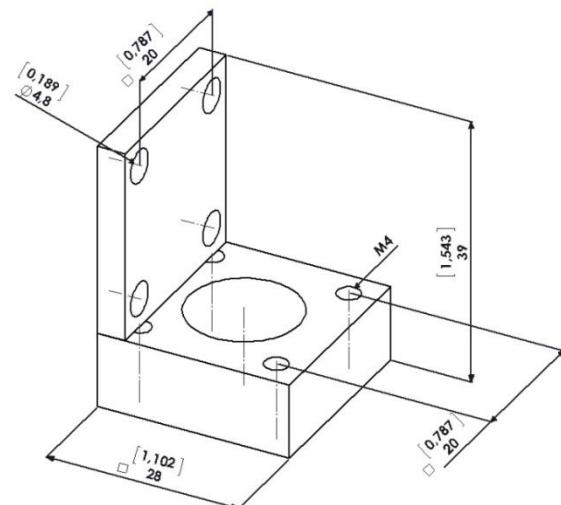
Bestell-Nr. / Order No.:
269302 – 5101 . 210



Winkeladapter
Angle adapter

Masse [g] / Weight : 69,4

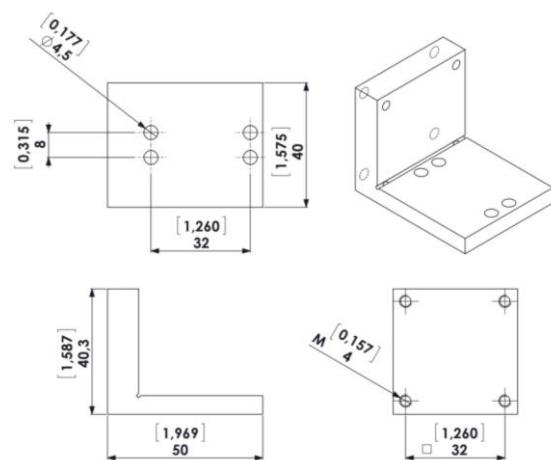
Bestell-Nr. / Order No.:
269302 – 4013 . 225



Winkeladapter für 115
Angle adapter for 115

Masse [g] / Weight : 25,5

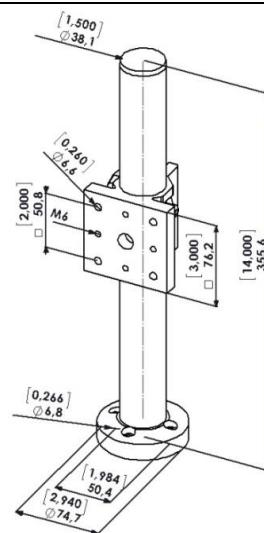
Bestell-Nr. / Order No.:
269302 – 5105 . 110



Schwingungsgedämpfte Säule mit Montageklemme
Vibration damping column with mounting clamp

Masse [g] / Weight : 737

Bestell-Nr. / Order No.:
269302 – 4012 . 825

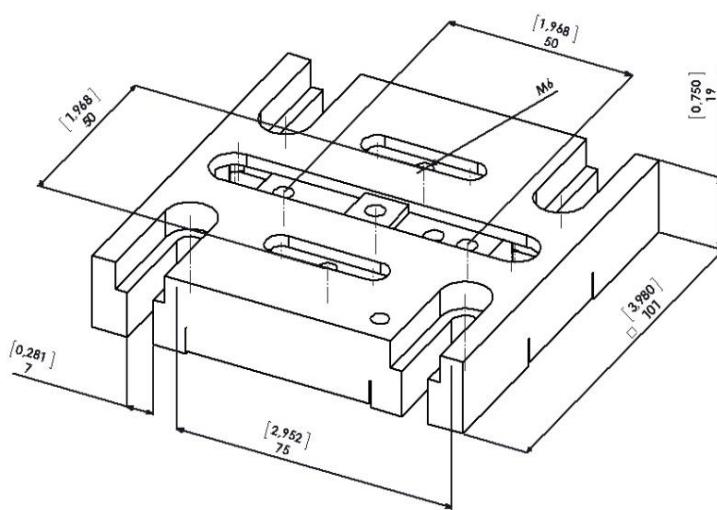


Verstellbare Grundplatte
Adjustable mounting plate

Anzahl Freiheitsgrade:
No. of degrees of freedom 1

Masse [g] / Weight : -

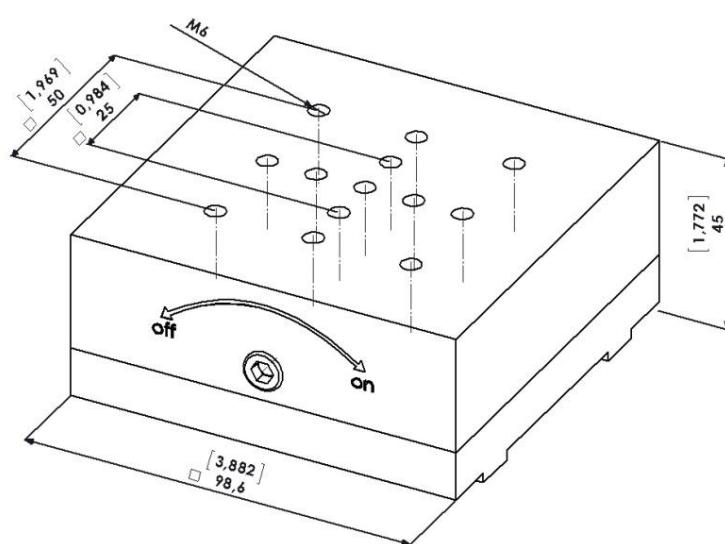
Bestell-Nr. / Order No.:
260297 – 9901 . 328

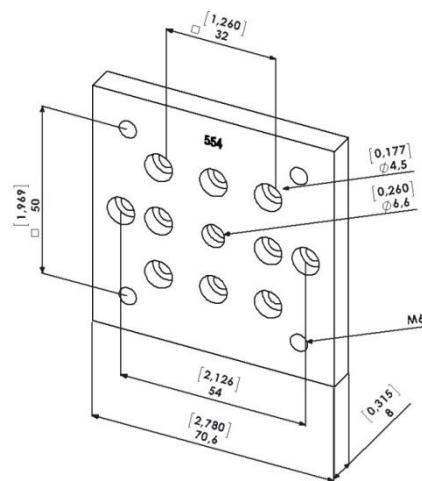
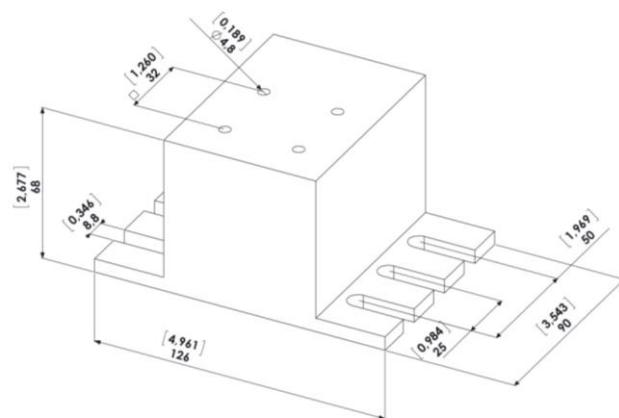
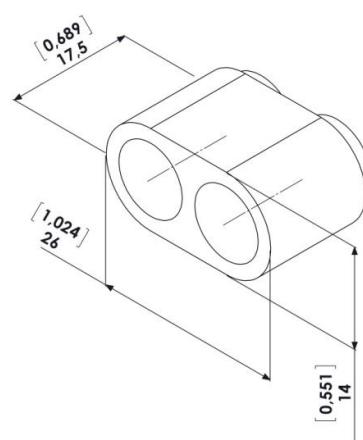


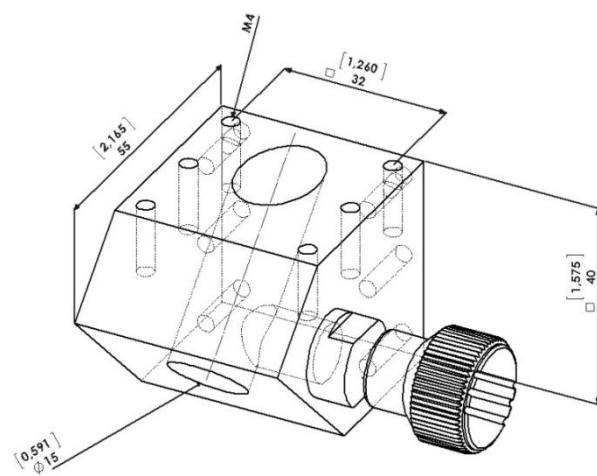
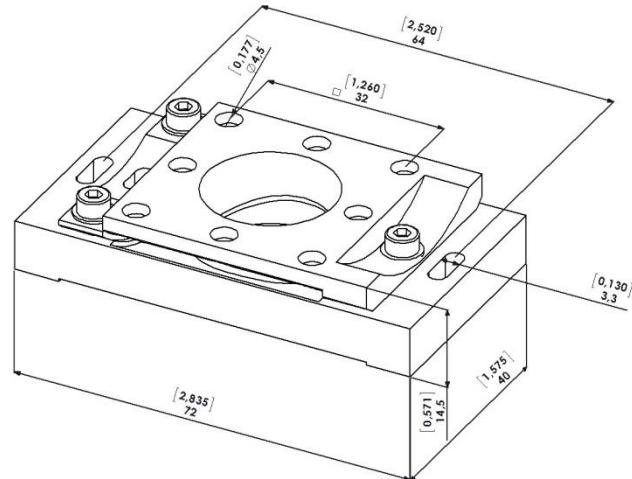
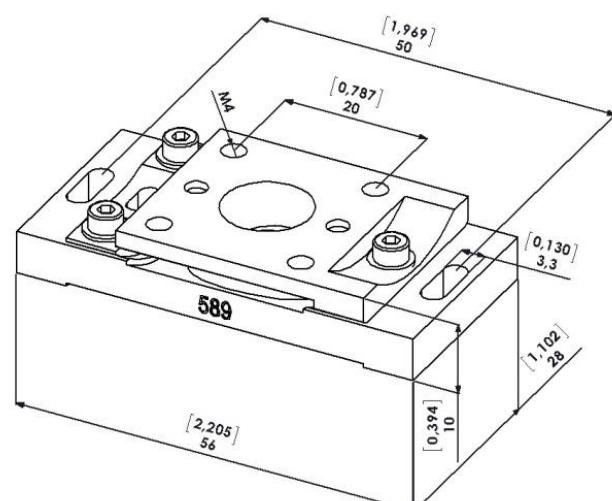
Flacher Magnetfuß
Flat magnetic plate

Masse [g] / Weight : -

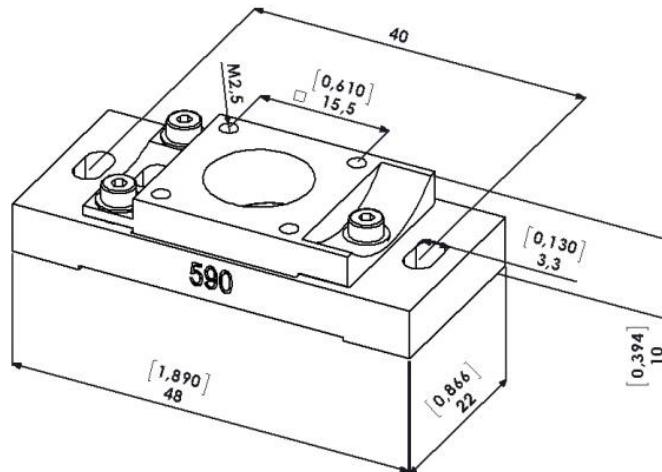
Bestell-Nr. / Order No.:
260297 – 9901 . 228



Adapterplatte 554*Adapter plate 554***Masse [g] / Weight :** 279,6**Bestell-Nr. / Order No.:**
269302 – 4042 . 910**Distanzblock für 347 und 348***Distance block for 347 and 348***Masse [g] / Weight :** 1124**Bestell-Nr. / Order No.:**
269302 – 5013 . 110**Doppeladapter für Reflektor 9 mm
(Winkelmessung)***348 Double adapter for reflector 9mm
(angle measurement)***Masse [g] / Weight :** 26,2**Bestell-Nr. / Order No.:**
269302 – 5003 . 525

45° Klemmhalter 546*45° Clamp mounting 546***Masse [g] / Weight :** 197,6**Bestell-Nr. / Order No.:**
269302 – 4010 . 725**Justieraufnahme 588****(für optische Komponenten □ 40)***Adjustable mount 588**(for optical components □ 40)***Anzahl Freiheitsgrade:**
No. of degrees of freedom: 2**Masse [g] / Weight :** 188,7**Bestell-Nr. / Order No.:**
269302 – 4009 . 025**Justieraufnahme 589****(für optische Komponenten □ 28)***Adjustable mount 589**(for optical components □ 28)***Anzahl Freiheitsgrade:**
No. of degrees of freedom: 2**Masse [g] / Weight :** 70,1**Bestell-Nr. / Order No.:**
269302 – 4009 . 125

Justieraufnahme 590 (für optische Komponenten □ 20) <i>Adjustable mount 590</i> (for optical components □ 20)	
Anzahl Freiheitsgrade: No. of degrees of freedom:	2
Masse [g] / Weight :	49,8
Bestell-Nr. / Order No.: 269302 – 4009 . 225	



Justieraufnahme 534

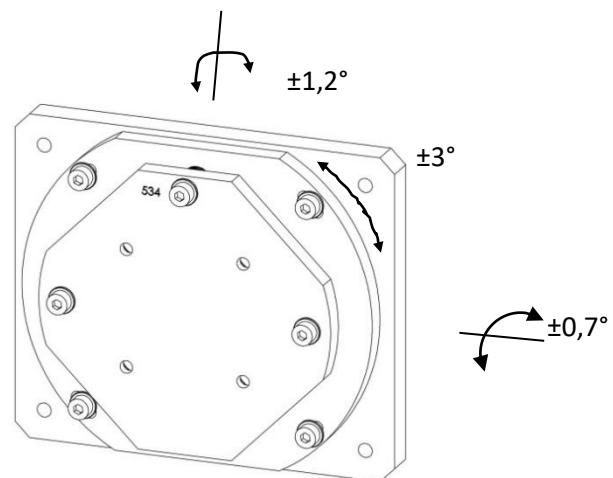
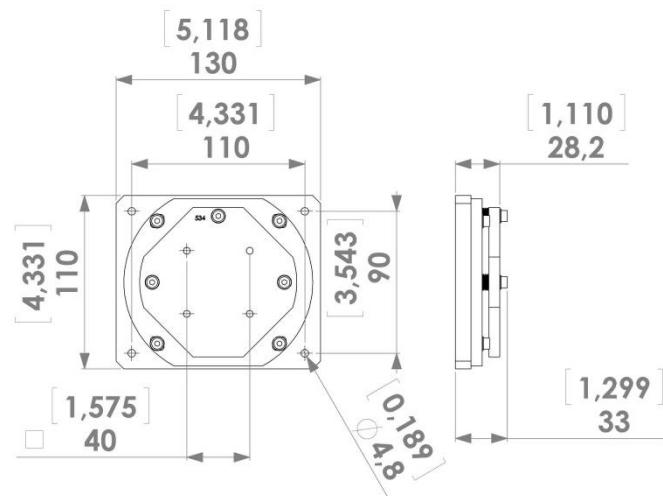
Adjustable mount 534

Anzahl Freiheitsgrade:

No. of degrees of freedom: 3

Masse [g] / Weight : 2030**Bestell-Nr. / Order No.:**

269302 – 4014 . 226

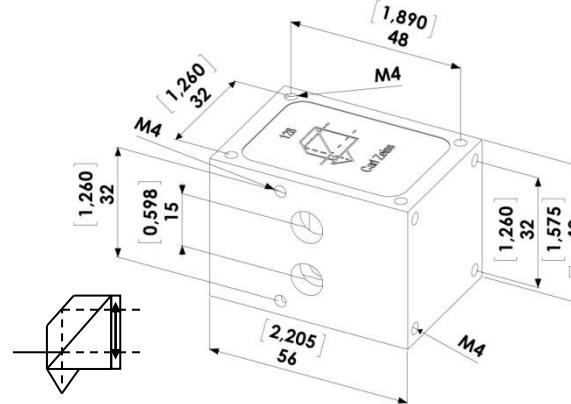


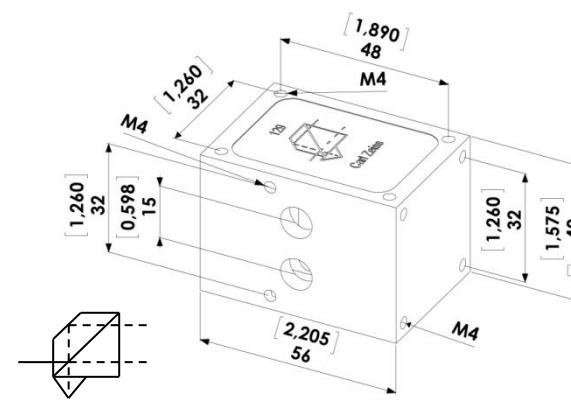
**I. Interferometers – Interferometers, Compact interferometers, Assembly sets and Fiber optics
 interferometers**

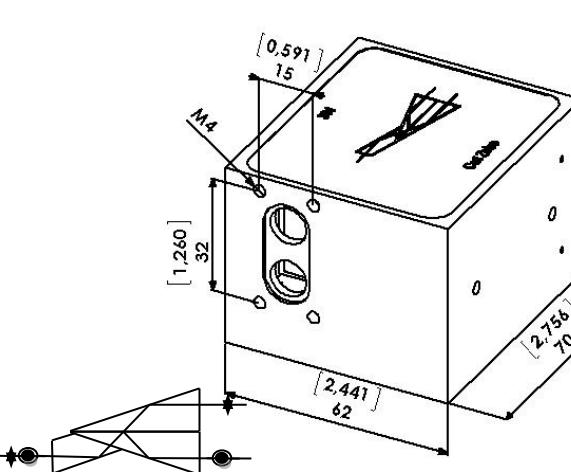
Interferometer (Standard)

Interferometers (standard)

I. Interferometer – Interferometer, Kompaktinterferometer. Bausätze und Lichtschlauchinterferometer

Geradheitsinterferometer 128 <i>Straightness Interferometer 128</i>	
Max. Strahldurchmesser: 6 <i>Max. beam diameter [mm]:</i>	
Masse [g] / Weight : 383,8	
Bestell-Nr. / Order No.: 269302 – 4012 . 824	

Geradheitsinterferometer 129 <i>Straightness Interferometer 129</i>	
Max. Strahldurchmesser: 6 <i>Max. beam diameter [mm]:</i>	
Masse [g] / Weight : 378,5	
Bestell-Nr. / Order No.: 269302 – 4013 . 024	

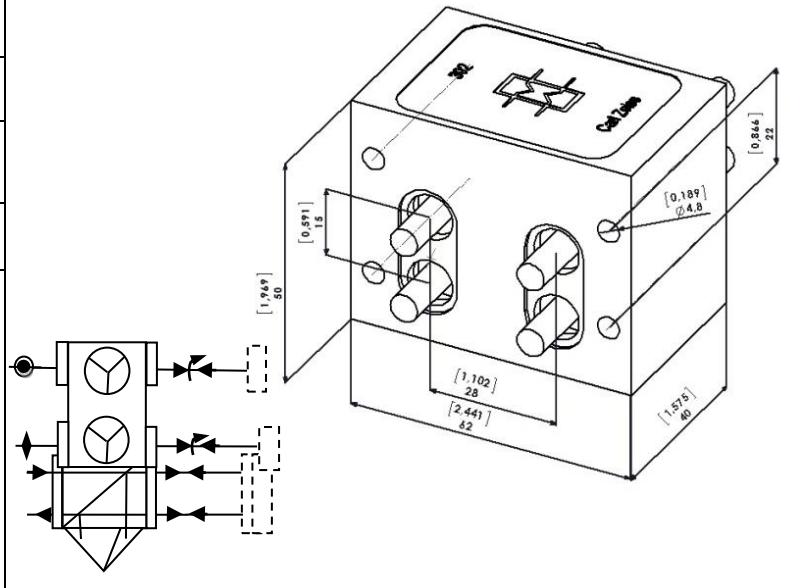
Parallelinterferometer 301 <i>Parallel interferometer 301</i>	
unmagnetisierbar / hochvakuumverträglich / <i>non-magnetisable</i> <i>fit for high vacuum</i>	
Masse [g] / Weight : 971,3	
Bestell-Nr. / Order No.: 269302 – 4013 . 324	
Max. Strahldurchmesser: 6 mm *(A) <i>Max. beam diameter [mm]:</i> 3 mm ** (B)	
Erweiterungsmodul: <i>Extension modules:</i>	
Lichtventil 302 (A) <i>Light valve 302</i>	Lichtventil 308 (B) <i>Light valve 308</i>

Lichtventil 302

Light valve 302

Masse [g] / Weight : 505,2**Bestell-Nr. / Order No.:**
269302 – 4013 . 424**Max. Strahldurchmesser:** 6
Max. beam diameter [mm]:

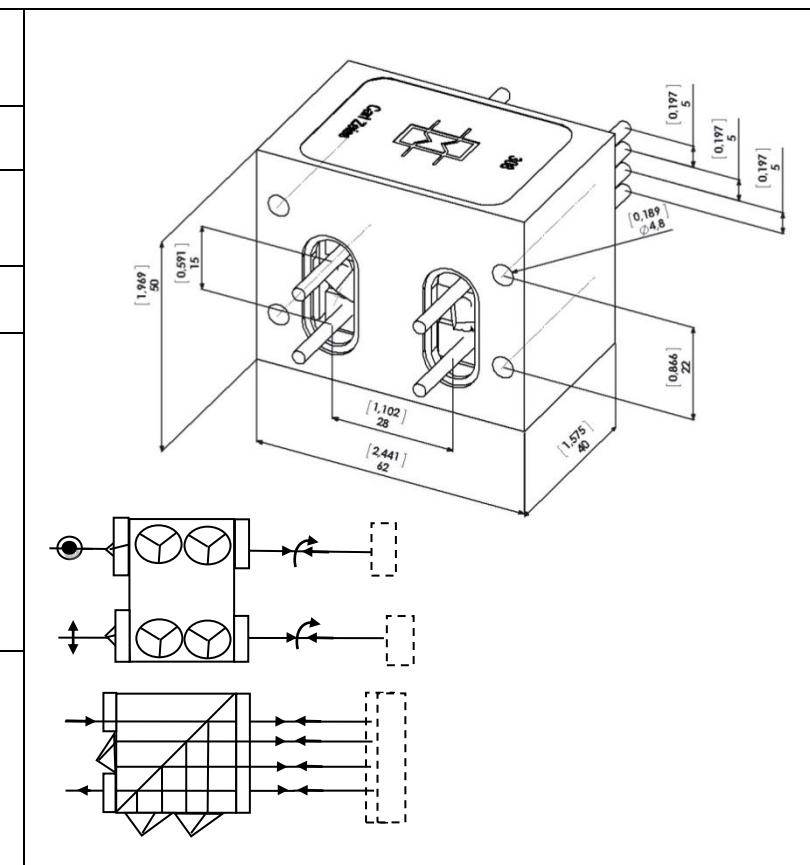
Nur in Verbindung mit Parallel-interferometer 301
 (269302 - 4013 . 324) als
 Planspiegelinterferometer einsetzbar.
Only applicable in combination with parallel
interferometer 301
 (269302 - 4013 . 324) as a *Plane mirror*
interferometer

**Lichtventil 308**

Light valve 38

Masse [g] / Weight : 494,1**Bestell-Nr. / Order No.:**
269302 – 4009 . 124**Max. Strahldurchmesser:** 3
Max. beam diameter [mm]:

Nur in Verbindung mit Parallel-interferometer 301
 (269302 - 4013 . 324) als
 Planspiegelinterferometer einsetzbar
Only applicable in combination with parallel
interferometer 301
 (269302 - 4013 . 324) as a *Plane mirror*
interferometer



Doppelte Auflösung als Lichtventil 302

(269302 – 4013 . 424)

double resolution as Light valve 302
 (269302 – 4013 . 424)

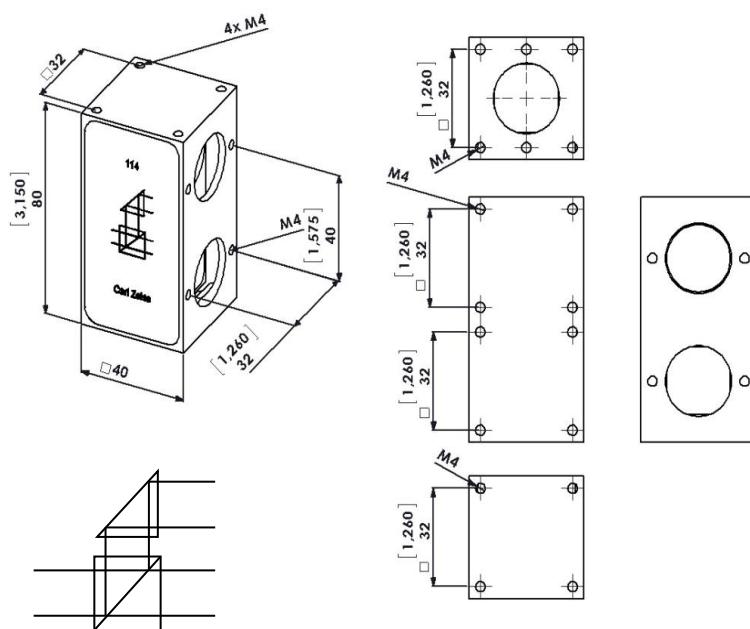
Winkelinterferometer 114

Angle interferometer 114

Max. Strahldurchmesser: Max. beam diameter [mm]:	6
--	---

Masse [g] / Weight :	406
-----------------------------	-----

Bestell-Nr. / Order No.:	
269302 – 4015 . 324	



Vibrationsvorsatzlinse 320

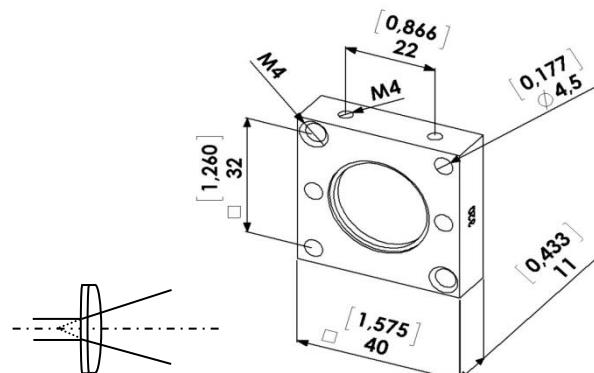
Vibrometer ancillary lens 320

Brennweite [mm]: Focal distance:	200
--	-----

Masse [g] / Weight :	92,6
-----------------------------	------

Bestell-Nr. / Order No.:	
269302 – 4006 . 424	

Max. Strahldurchmesser: Max. beam diameter [mm]:	18
--	----

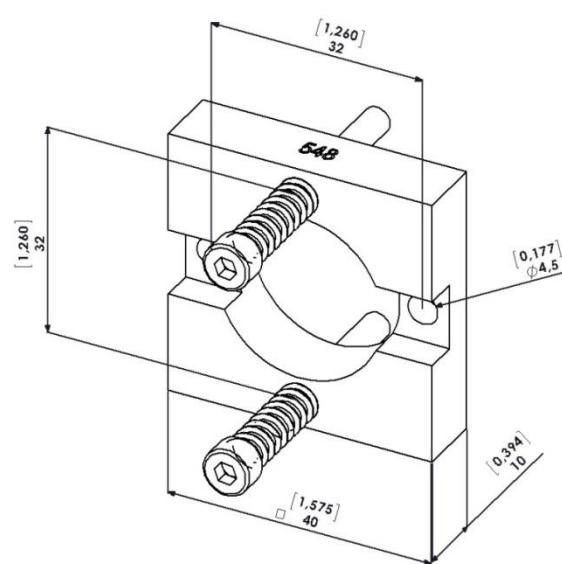


Vibrometereinstellplatte 548

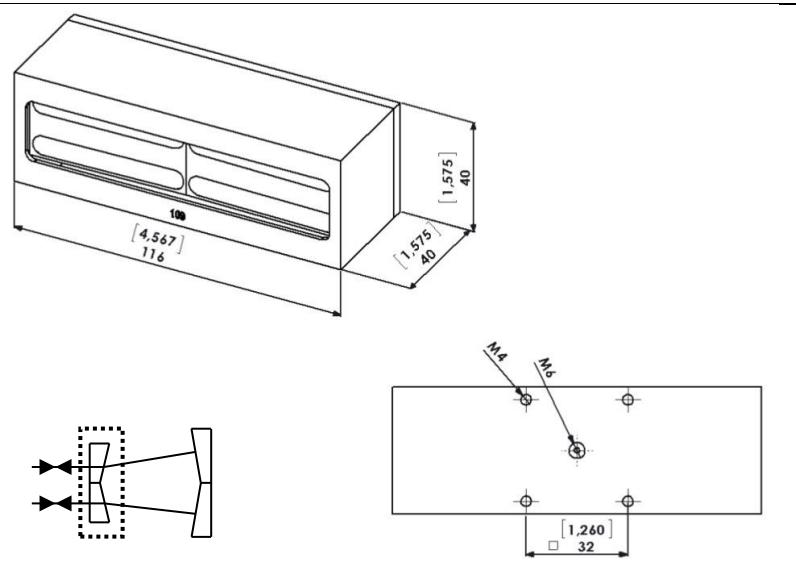
Vibrometer adjusting plate 548

Masse [g] / Weight :	80,4
-----------------------------	------

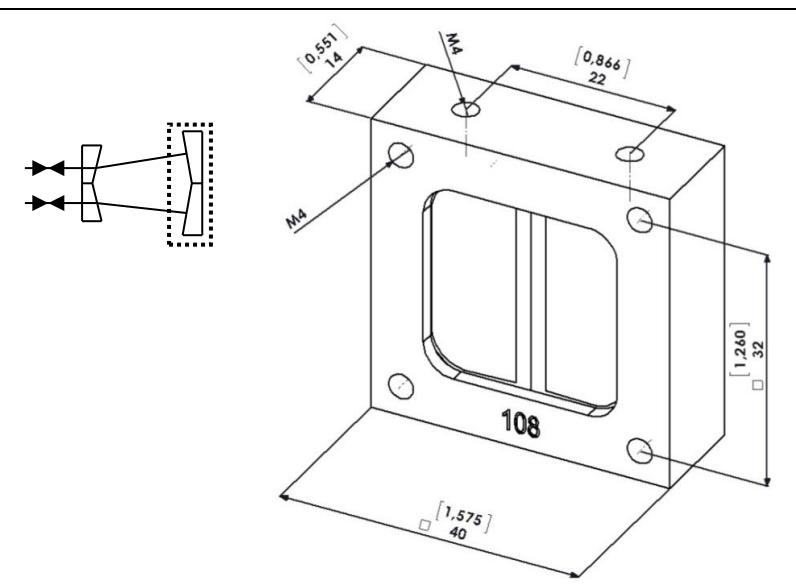
Bestell-Nr. / Order No.:	
269302 – 4006 . 425	



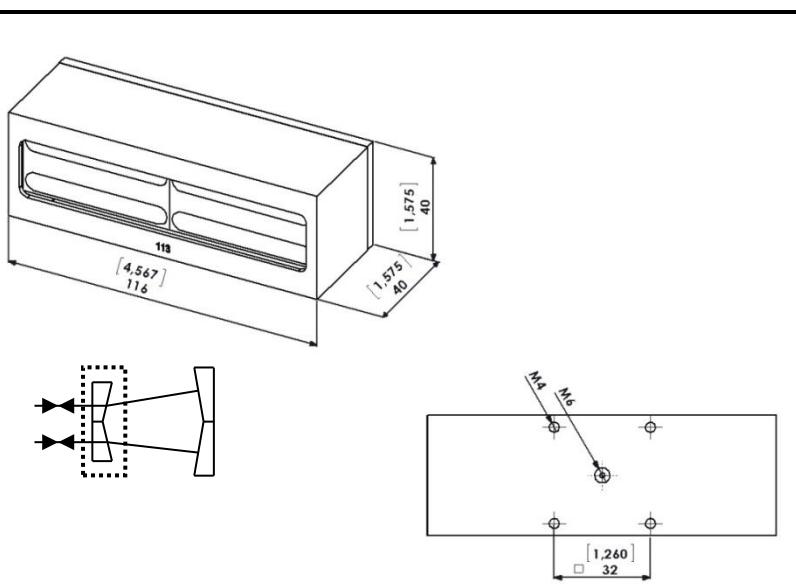
Winkelreflektor 2m 109 Angle reflector 2m 109	
Max. Strahldurchmesser: Max. beam diameter [mm]:	6
Masse [g] / Weight :	681
Bestell-Nr. / Order No.:	
269302 – 4010 . 924	
<p>Nur in Verbindung mit Doppelkeil 2m 108 nutzbar. <i>Only useable with</i> <i>Double wedge 2m 108.</i></p>	



Doppelkeil 2m 108 Double wedge 2m 108	
Max. Strahldurchmesser: Max. beam diameter [mm]:	6
Masse [g] / Weight :	104
Bestell-Nr. / Order No.:	
269302 – 4017 . 124	
<p>Nur in Verbindung mit Winkelreflektor 2m 109 nutzbar <i>Only useable with</i> <i>Angle reflector 2m 109</i></p>	



Winkelreflektor 10m 113 Angle reflector 10m 113	
Max. Strahldurchmesser: Max. beam diameter [mm]:	6
Masse [g] / Weight :	684
Bestell-Nr. / Order No.:	
269302 – 4011 . 324	
<p>Nur in Verbindung mit Doppelkeil 10m 112 nutzbar <i>Only useable with</i> <i>Double wedge 10m 112</i></p>	



Doppelkeil 10m 112*Double wedge 10m 112***Max. Strahldurchmesser:**

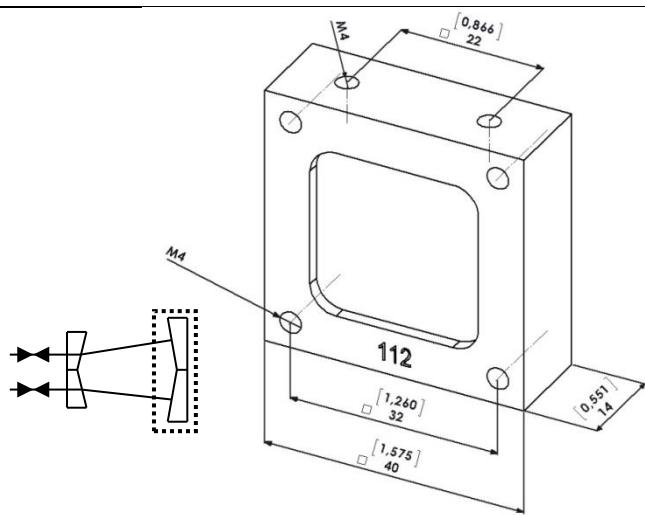
6

*Max. beam diameter [mm]:***Masse [g] / Weight :**

104

Bestell-Nr. / Order No.:**269302 – 4017 . 224**

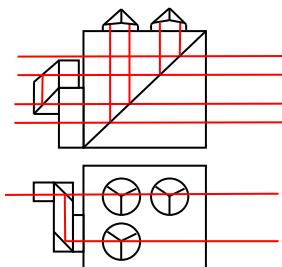
Nur in Verbindung mit
 Winkelreflektor 10m 113 nutzbar
Only useable with
Angle reflector 10m 113

**Kompaktinterferometer***Compact interferometers***3 - Achs - Kompaktinterferometer 347 (für Tripelspiegel)***3 - Axes compact interferometer 347 (for triple reflectors)***Messart: Position, Gier- & Nickwinkel***Measurement type: Position, Yaw & Pitch angle***Max. Strahldurchmesser:**

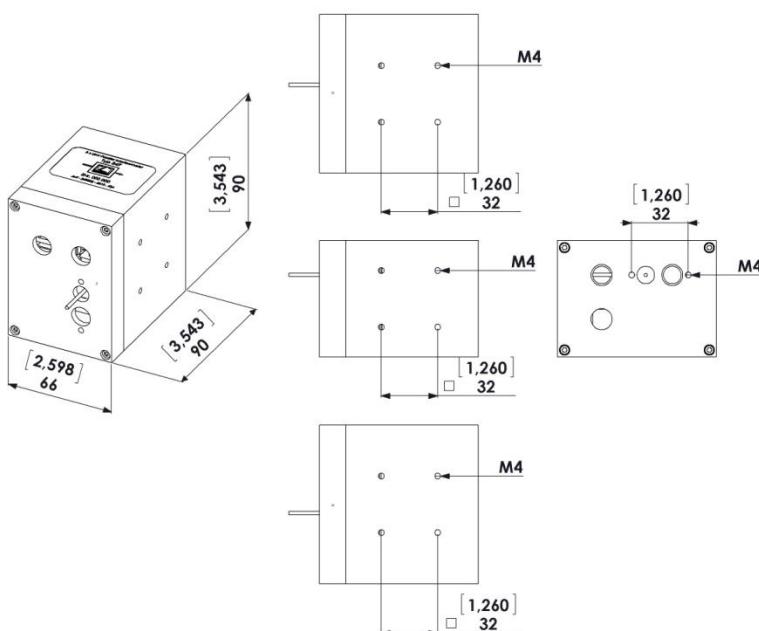
6

*Max. beam diameter [mm]:***Masse [g] / Weight :**

1529

Bestell-Nr. / Order No.:**269302 - 5010 . 524**

für Retroreflektoren
for triple reflectors



3 - Achs - Kompaktinterferometer 347 (für Tripelspiegel)
 3 Axes compact interferometer 347 (for triple reflectors)

Messart: Position, Gier- & Nickwinkel

Measurement type: Position, Yaw & Pitch angle

Max. Strahldurchmesser:

Max. beam diameter [mm]:

6

Masse [g] / Weight :

1665

Bestell-Nr. / Order No.:

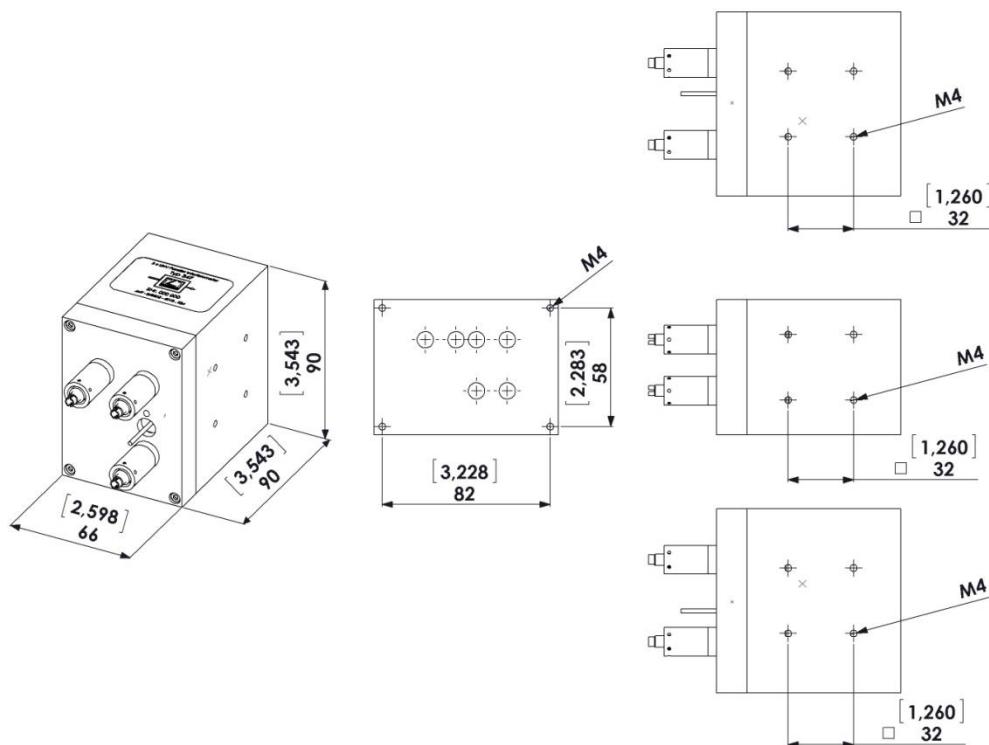
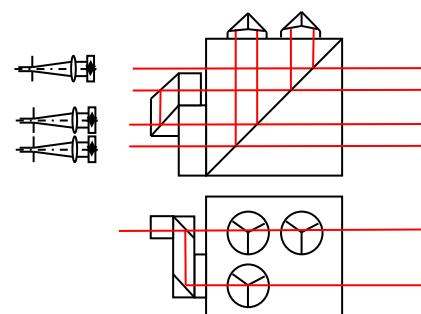
269302 - 5010 . 526

mit drei Anschlüssen für Lichtwellenleiter

with three couplings for fiber optics cables

für Retroreflektoren

for triple reflectors



3 - Achs - Kompakt - Planspiegelinterferometer 348

3 Axes compact plane mirror interferometer 348

Messart: Position, Gier- & Nickwinkel

Measurement type: Position, Yaw & Pitch angle

Max. Strahldurchmesser:

Max. beam diameter [mm]:

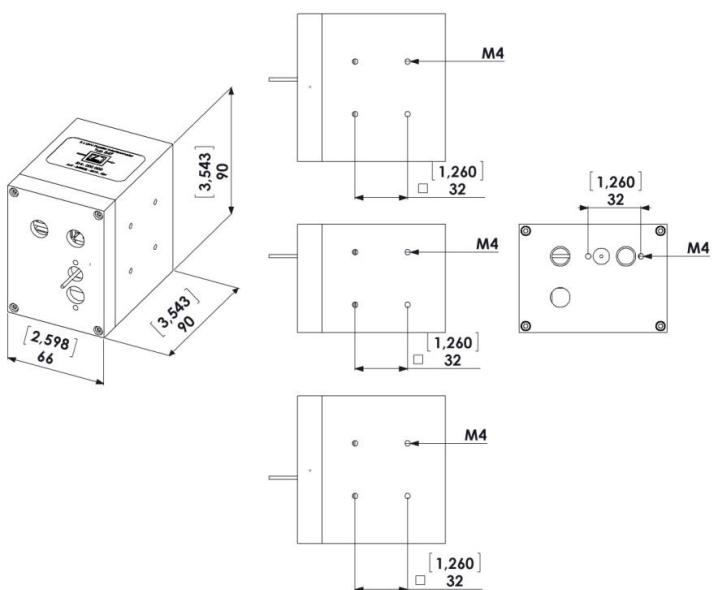
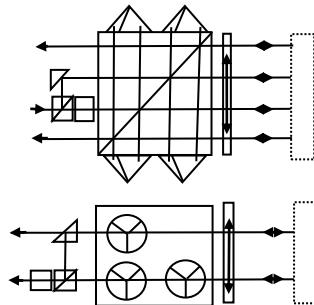
6

Masse [g] / Weight :

1596

Bestell-Nr. / Order No.:

269302 - 5010 . 624



3 - Achs - Kompakt - Planspiegel - Interferometer 348 (mit Faserauskopplung)

3 Axes compact plane mirror interferometer 348 (with fiber coupling)

Messart: Position, Gier- & Nickwinkel

Measurement type: Position, Yaw & Pitch angle

Max. Strahldurchmesser:

Max. beam diameter [mm]:

6

Masse [g] / Weight :

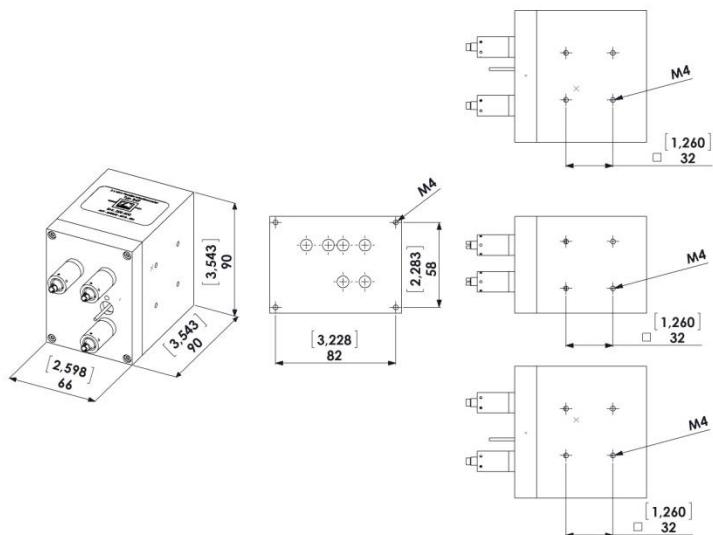
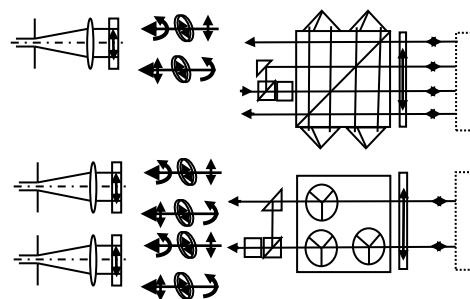
1696

Bestell-Nr. / Order No.:

269302 - 5010 . 626

mit drei Anschlüssen für Lichtwellenleiter

with three couplings for fiber optics cables



2D - Achs - Kompakt – IF386

2D Axes Compact IF386

Messart: Position, Nickwinkel

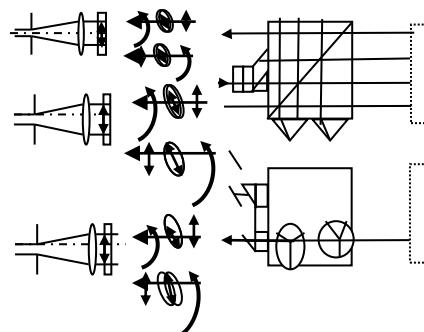
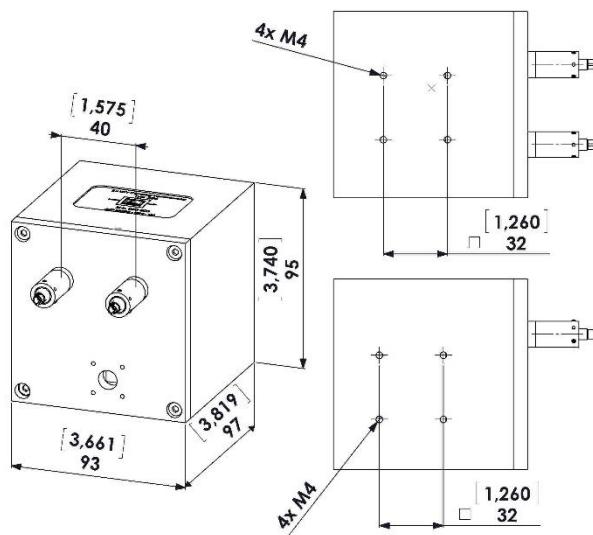
Measurement type: Position, Yaw angle

Max. Strahldurchmesser: 6

Max. beam diameter [mm]:

Masse [g] / Weight : 3541**Bestell-Nr. / Order No.:****269302 - 5093 . 124****Mit zwei Anschlüssen für Lichtwellenleiter**

with two couplings for fiber optics cables



2D - Planspiegel – IF387

2D Plane mirror IF387

Messart: Position, Nickwinkel

Measurement type: Position, Yaw angle

Max. Strahldurchmesser: 6

Max. beam diameter [mm]:

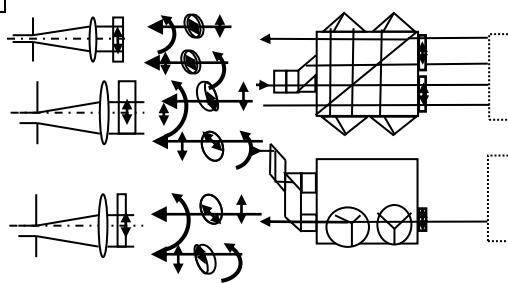
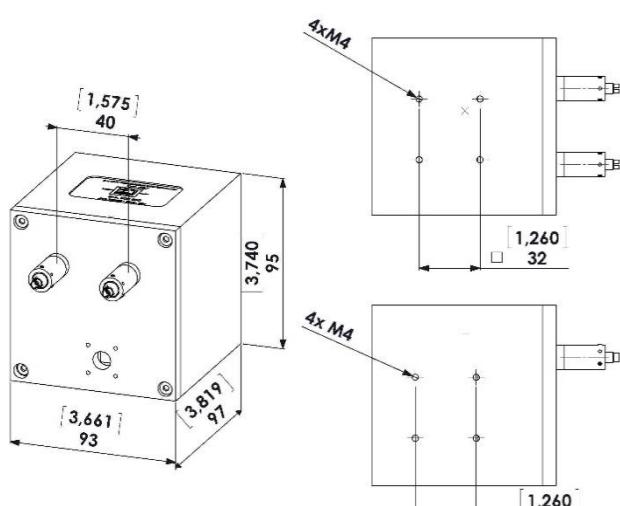
Masse [g] / Weight : 3544

Bestell-Nr. / Order No.:

269302 - 5093 . 424

Mit zwei Anschlüssen für Lichtwellenleiter

with two couplings for fiber optics cables



3D - Kompakt – IF385

3D compact IF385

Messart: Position, Nick- & Gierwinkel

Measurement type: Position, pitch- & yaw angle

Max. Strahldurchmesser:

Max. beam diameter [mm]:

6

Masse [g] / Weight :

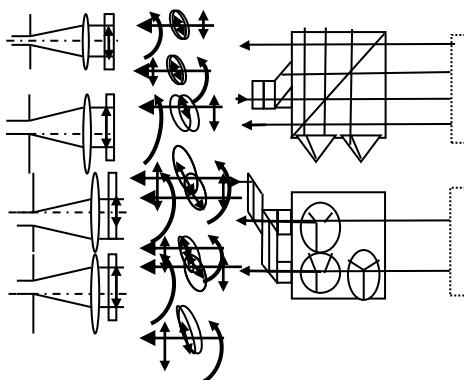
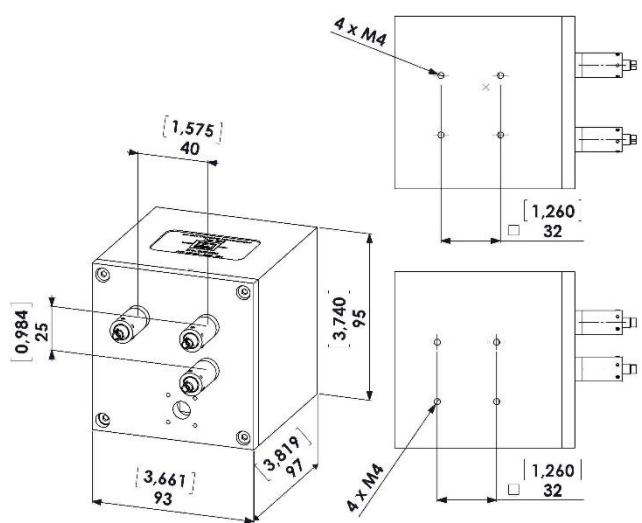
3573

Bestell-Nr. / Order No.:

269302 - 5093 . 024

Mit drei Anschlüssen für Lichtwellenleiter

with three couplings for fiber optics cables



3D - Planspiegel – IF388

3D Pane mirror IF388

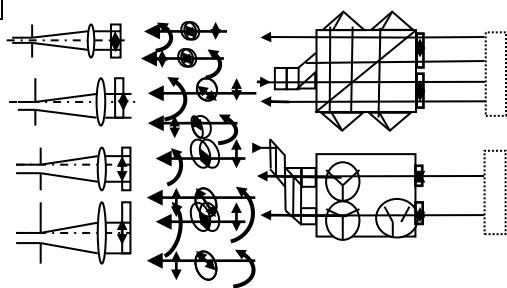
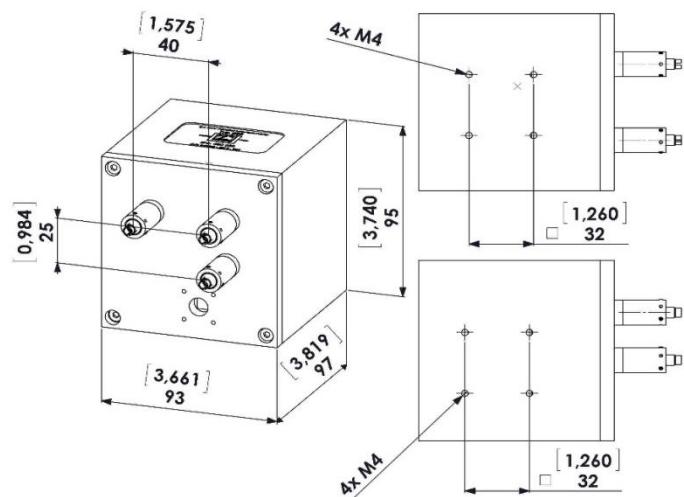
Messart: Position, Nick- & Gierwinkel**Measurement type:** Position, pitch- & yaw angle**Max. Strahldurchmesser:**

Max. beam diameter [mm]:

6

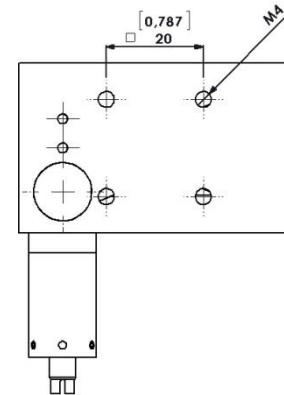
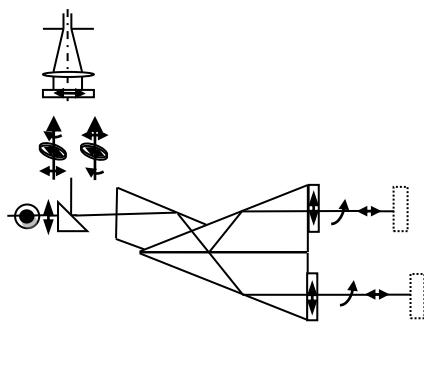
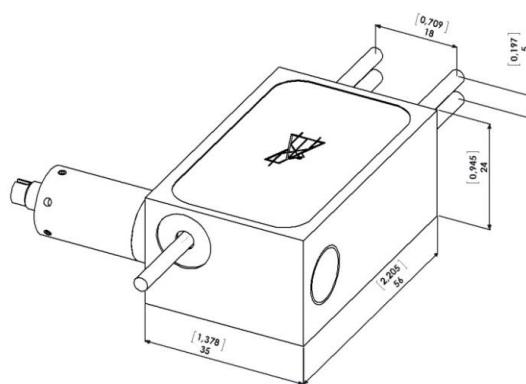
Masse [g] / Weight : 3577**Bestell-Nr. / Order No.:****269302 - 5093 . 324****Mit drei Anschlüssen für Lichtwellenleiter**

with three couplings for fiber optics cables



Parallel - Planspiegelinterferometer 352
Parallel plane mirror interferometer 352
Messart: Position, Gier- oder

Measurement type: Nickwinkel
Position, Yaw or Pitch angle
Masse [g] / Weight : 228,6

Bestell-Nr. / Order No.:
269302 - 4002 . 324
für 3 mm Strahldurchmesser;
mit Anschluss für Lichtwellenleiter
for 3mm beam diameter;
with one coupling for fiber optic cables


Parallel Planspiegelinterferometer 356

Parallel plane mirror interferometer 356

Messart: Position & Gierwinkel

Measurement type: Position & Yaw angle

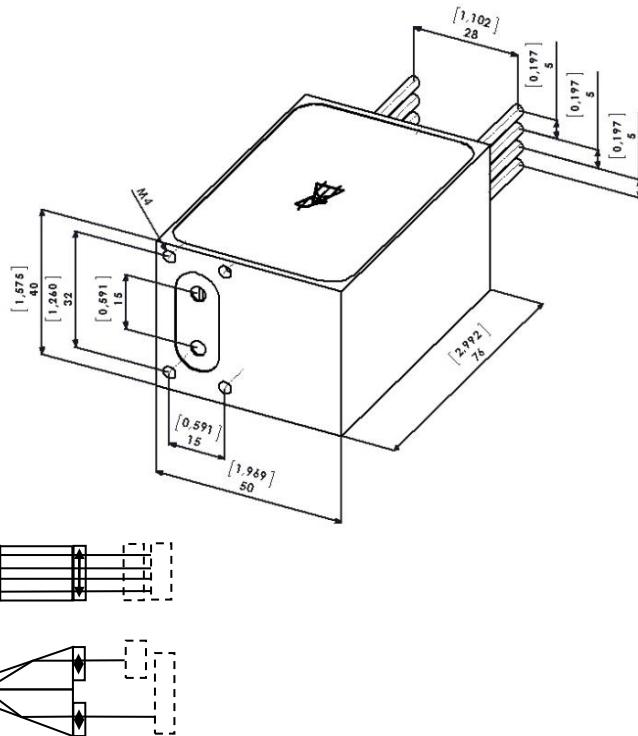
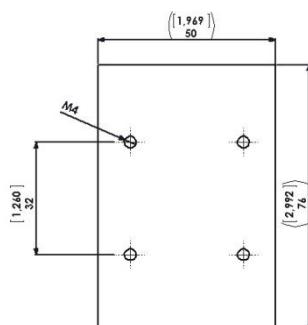
Max. Strahldurchmesser:

Max. beam diameter [mm]:

Masse [g] / Weight :

Bestell-Nr. / Order No.:

269302 - 4019 . 024



Parallel-Planspiegelinterferometer 358

Parallel plane mirror interferometer 358

Messart: Position & Gierwinkel

Measurement type: Position & Yaw angle

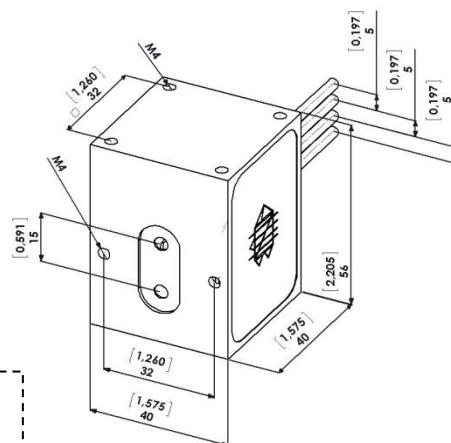
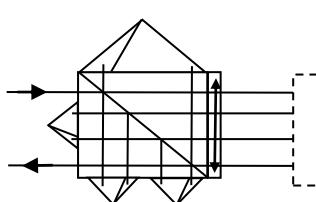
Max. Strahldurchmesser:

Max. beam diameter [mm]:

Masse [g] / Weight :

Bestell-Nr. / Order No.:

269302 - 4005 . 524



3 - Achs-Kompakt-Planspiegelinterferometer 360

3 - Axes compact plane mirror interferometer 360

Messart: Position, Nick- und Gierwinkel

Measurement type: Position, Yaw- and Pitch angle

Masse [g] / Weight : 800

Bestell-Nr. / Order No.:

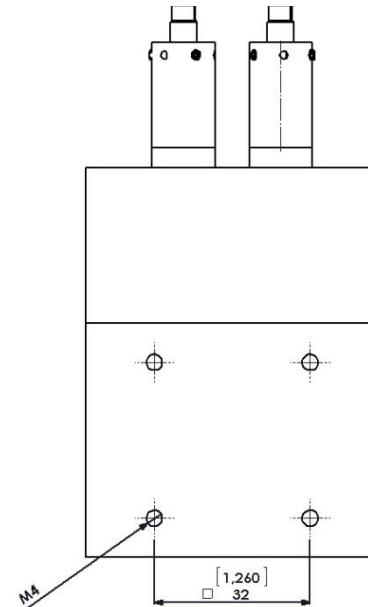
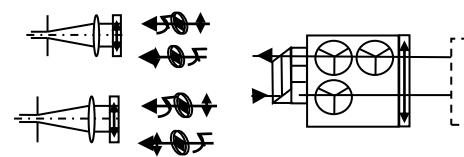
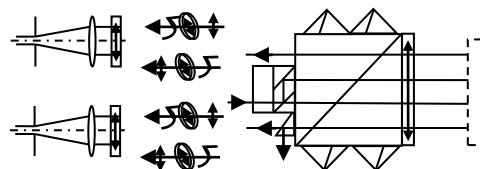
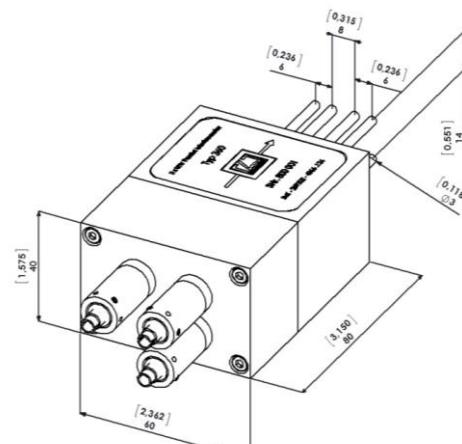
269302 - 4066 . 124

mit drei Anschlüssen für Lichtwellenleiter

(für 3 mm Strahldurchmesser)

with three couplings for fiber optic cables

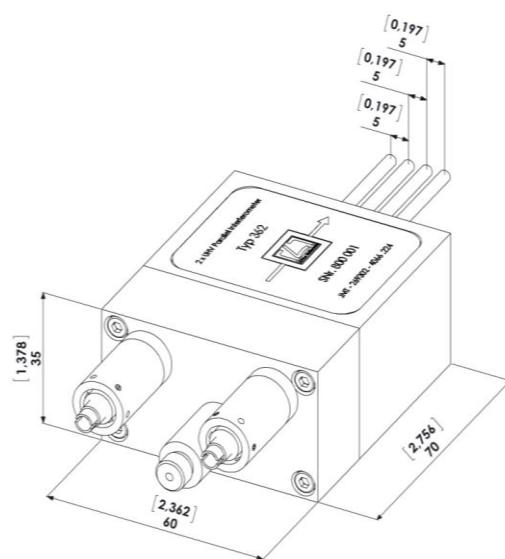
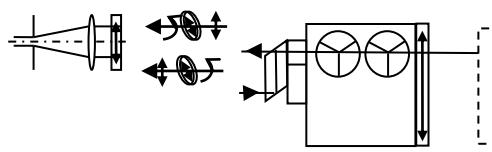
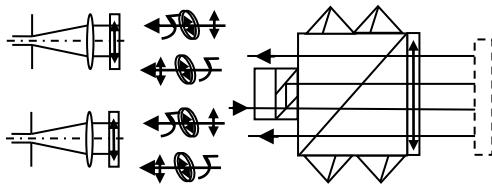
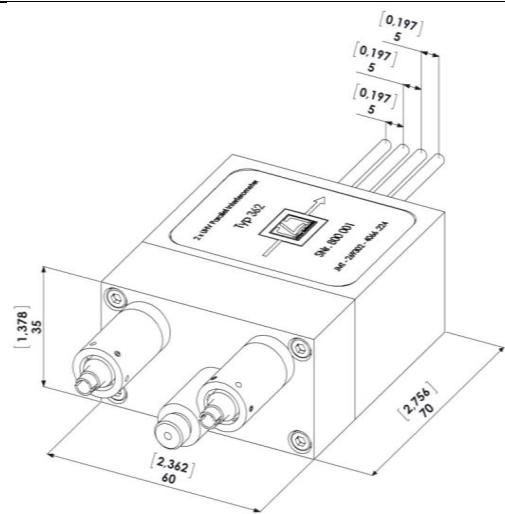
(for 3mm beam diameter)



© 2023

2 - Achs- Kompakt- Planspiegelinterferometer 362
2 - Axes compact plane mirror interferometer 362
Messart: Position & Gierwinkel

Measurement type: Position & Yaw angle
Masse [g] / Weight : 580

Bestell-Nr. / Order No.:
269302 - 4066 . 224
mit zwei Anschlüssen für Lichtwellenleiter
(für 3 mm Strahldurchmesser)
with two couplings for fiber optic cables
(for 3mm beam diameter)


Planspiegelinterferometer 368

Plane mirror interferometer 368

Messart: Position

Measurement type: Position

Max. Strahldurchmesser:

Max. beam diameter [mm]:

3

Masse [g] / Weight :

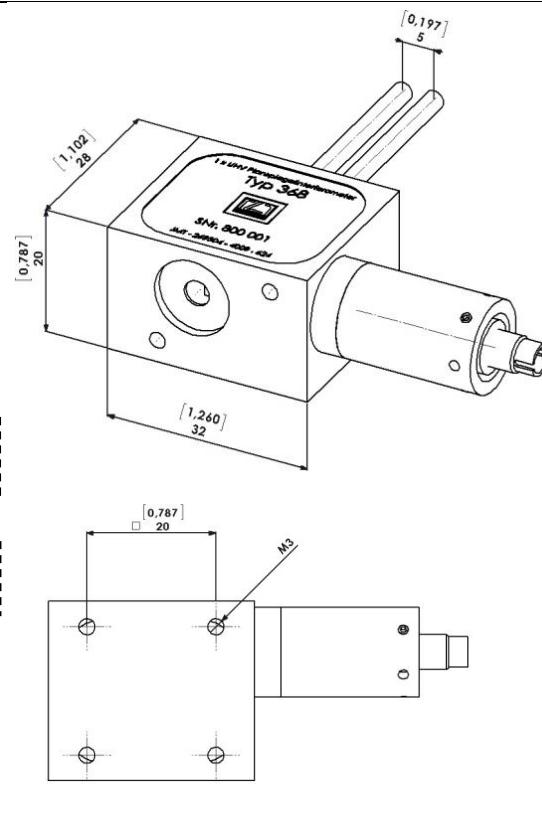
101,6

Bestell-Nr. / Order No.:

269302 - 4009 . 624

mit Anschluss für Lichtwellenleiter

with coupling for fiber optic cable



2- Achs- Kompakt- Planspiegelinterferometer 370
2 Axes compact plane mirror interferometer 370
Messart: Position & Gierwinkel

Measurement type: Position & Yaw angle
Max. Strahldurchmesser:
Max. beam diameter [mm]:

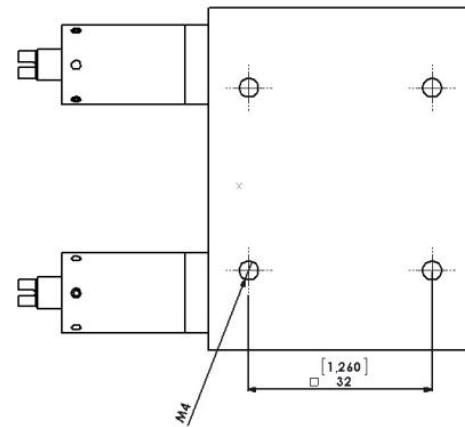
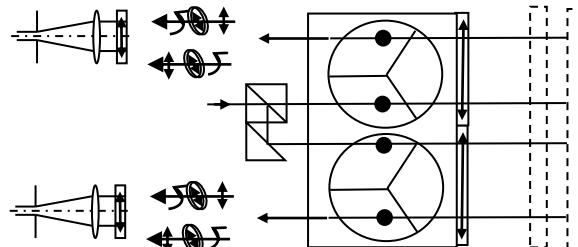
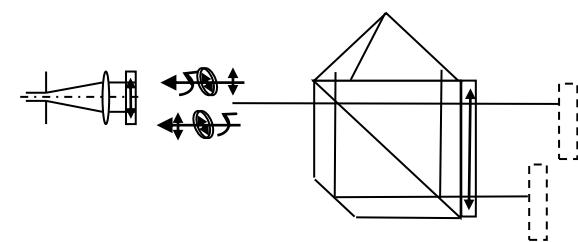
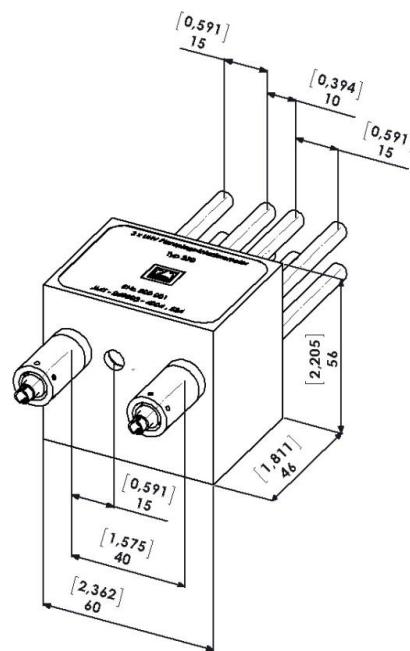
6

Masse [g] / Weight :

693,1

Bestell-Nr. / Order No.:

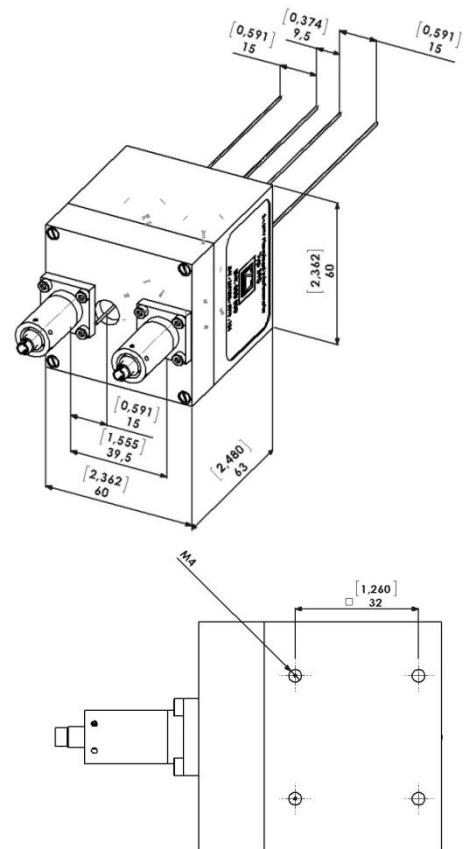
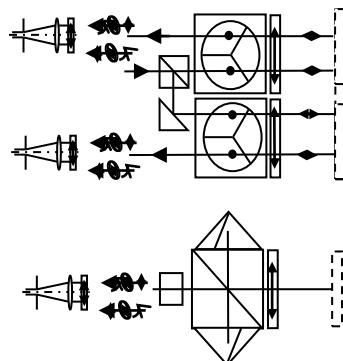
269302 - 4004 . 524

mit Anschluss für Lichtwellenleiter
with coupling for fiber optic cables


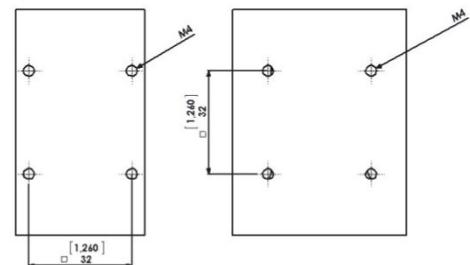
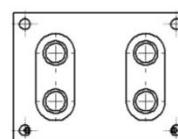
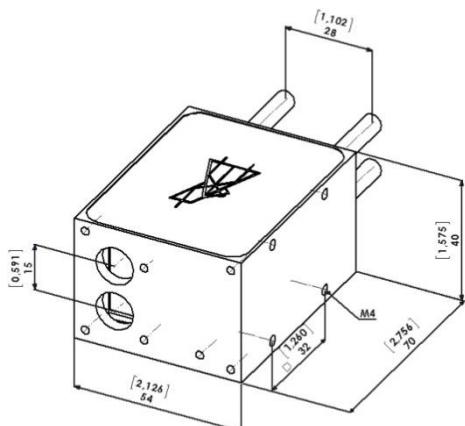
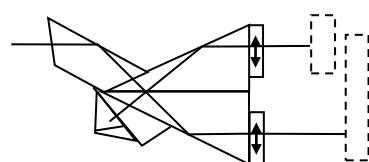
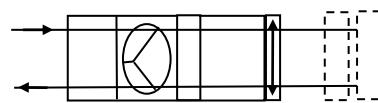
Kompakt – Planspiegelinterferometer 390	
<i>Compact plane mirror interferometer 390</i>	
Messart: <i>Measurement type:</i>	Position & Gierwinkel <i>Position & Yaw angle</i>
Max. Strahldurchmesser: <i>Max. beam diameter [mm]:</i>	6
Masse [g] / Weight :	713,3
Bestell-Nr. / Order No.:	
269302 - 5010 . 124	

mit Anschluss für Lichtwellenleiter

with coupling for fiber optic cables



Parallelinterferometer 608	
<i>Parallel interferometer 608</i>	
Messart:	Position, Gierwinkel
Measurement type:	<i>Position, Yaw angle</i>
Max. Strahldurchmesser:	6
<i>Max. beam diameter [mm]:</i>	
Masse [g] /	Weight : 580,5
Bestell-Nr. /	Order No.:
269302 - 4009 . 024	



Parallelinterferometer 608

Parallel interferometer 608

Messart: Position, Gierwinkel

Measurement type: Position, Yaw angle

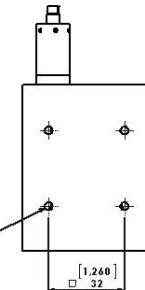
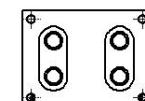
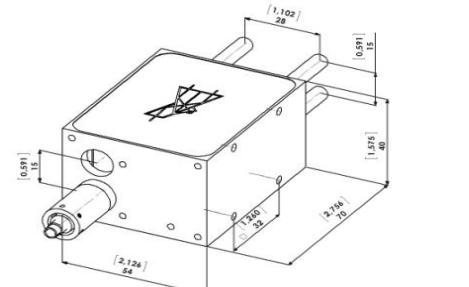
Max. Strahldurchmesser:

Max. beam diameter [mm]:

Masse [g] / Weight :

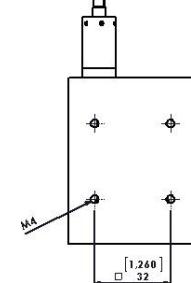
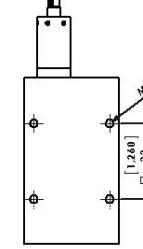
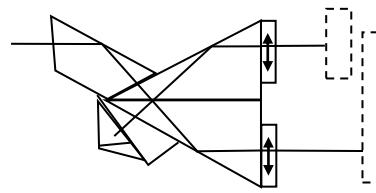
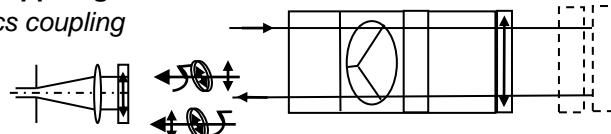
Bestell-Nr. / Order No.:

269302 - 4009 . 524



mit LWL-Einkopplung

with fiber optics coupling



Parallelinterferometer 608

(mit LWL-Einkopplung und variablen Strahlengang)

Parallel interferometer 608

(with fiber optics coupling and variable beam control)

Messart: Position, Gierwinkel

Measurement type: Position, Yaw angle

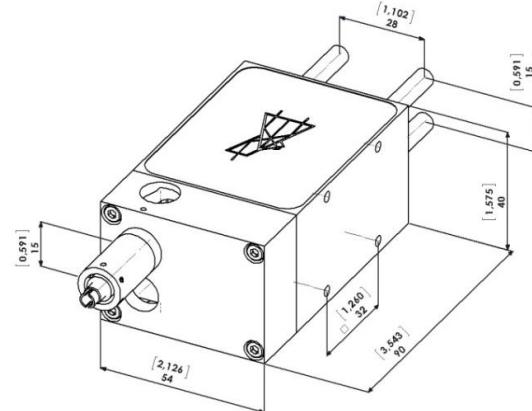
Max. Strahldurchmesser:

Max. beam diameter [mm]:

Masse [g] / Weight :

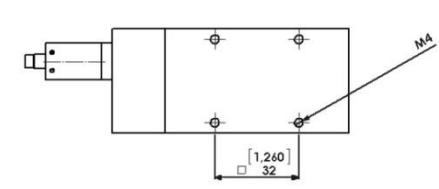
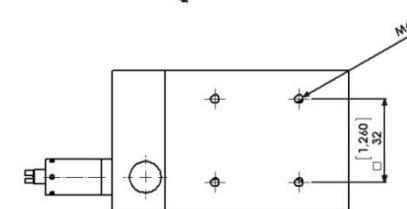
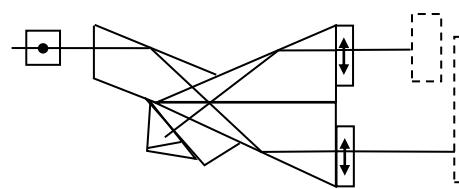
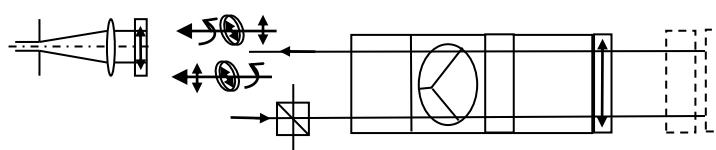
Bestell-Nr. / Order No.:

269302 - 4018 . 924 Vn / x : y



mit LWL – Einkopplung

with fiber optics coupling



Dieses Interferometer ist für Mehrachssysteme konzipiert.

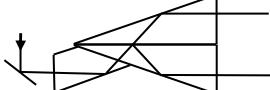
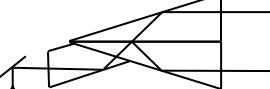
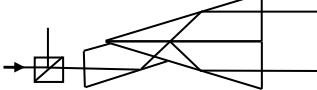
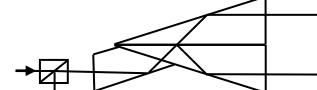
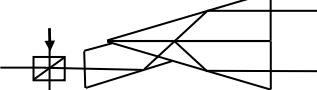
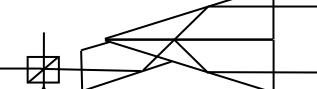
Es bietet verschiedene Möglichkeiten der Laserstrahlführung

Als Intensitätsteiler V3 ... V6 können Strahlungsverhältnisse 1:1, 2:1, 3:1, 1:2 und 1:3 verwendet werden.

This interferometer is designed for multi- axes systems.

It offers several possibilities of laser beam control.

Here are to use beam splitter V3... V6 with the division ratios of 1:1, 2:1, 3:1, 1:2 und 1:3

V1	90° Umlenker links 90° beam bender left	
V2	90° Umlenker rechts 90° beam bender right	
V3	Intensitätsteiler - geradeaus -links Beam splitter – straight on - left	
V4	Intensitätsteiler - geradeaus -rechts Beam splitter – straight on - right	
V5	Intensitätsteiler - links -rechts Beam splitter – left - right	
V6	Intensitätsteiler - rechts -links Beam splitter – left - left	

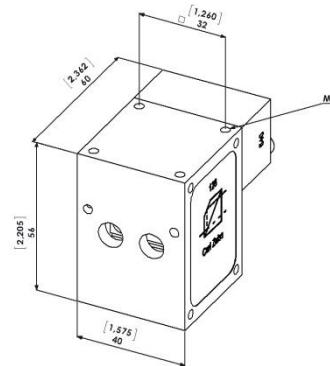
Beispiel für Bestellangaben: 269302 – 4018 . 924 V3 / 1:1

Example of order information: 269302 – 4018 . 924 V3 / 1:1

Bausätze - Interferometer

Assembly sets - Interferometers

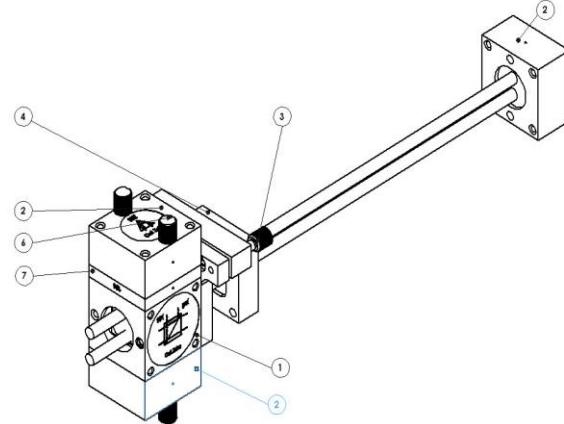
Bausatz - (Geradheitsinterferometer 128 + Referenzplanspiegel 540) <i>Assembly set (Straightness Interferometer 128 + Reference cube corner reflector 540)</i>	
Max. Strahldurchmesser: <i>Max. beam diameter [mm]:</i>	6
Masse [g] / Weight :	414.9
Bestell-Nr. / Order No.: 269302 - 4012 . 925	



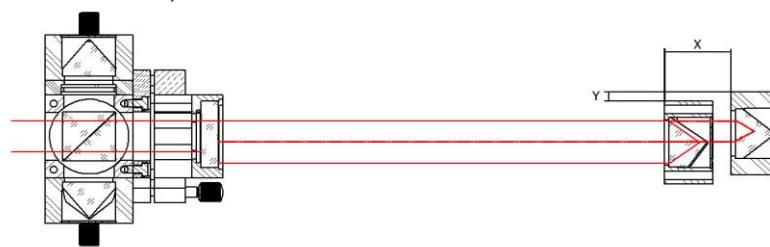
POS-NR.	BENENNUNG Order no.	BESCHREIBUNG	Description	MENGE Quantity
1	269302 - 4012 . 824	Geradheitsinterferometer 128	Straightness interferometer 128	1
2	269302 - 3809 . 624	Referenztripelspiegel 540	Cube corner reflector 540	1
3	000000 - 0004 . 496	ISO 1207 - M4 x 25 --- 25N	screw ISO 1207 - M4 x 25 --- 25N	2

Bausatz Planspiegelinterferometer
Assembly set for Plane mirror interferometer

Max. Strahldurchmesser: <i>Max. beam diameter [mm]:</i>	6
Masse [g] / Weight :	1123,5
Bestell-Nr. / Order No.: 269302 – 4061 . 426	



X → 40 m
 Y → 4,5 mm (Tripelreflektor 102)
 (Cube corner reflector 102)
 Y → 15 mm (Tripelreflektor 351)
 (Cube corner reflector 351)



POS-NR.	BENENNUNG Order no.	BESCHREIBUNG	Description	MENGE Quantity
1	269302 - 4010 . 124	Polarisationsteiler 101	Polarizing beam splitter 101	1
2	269302 - 4010 . 224	Tripelreflektor 102	Cube corner reflector 102	3
3	269302 - 4010 . 826	Kipphalter 525	Tiltable holder 525	1
4	269302 - 4022 . 124	Spiegelgruppe 130	Mirror group 130	1
5	000000 - 5001 . 118	ISO 1207 - M4 x 8 --- 8N	Screw ISO 1207 - M4 x 8 --- 8N	4
6	269302 - 4011 . 225	Rändelschraube 29	Screw 29	4
7	269302 - 4010 . 424	Lambda / 4 - Platte 104	Quarter wave plate 104	1

**Parallelinterferometer für Planspiegelreflektor mit
 LWL Anschluss (komplett)**

*Parallel Interferometer for Plane mirror reflector with
 fiber optics (complete)*

Max. Strahldurchmesser:

Max. beam diameter [mm]:

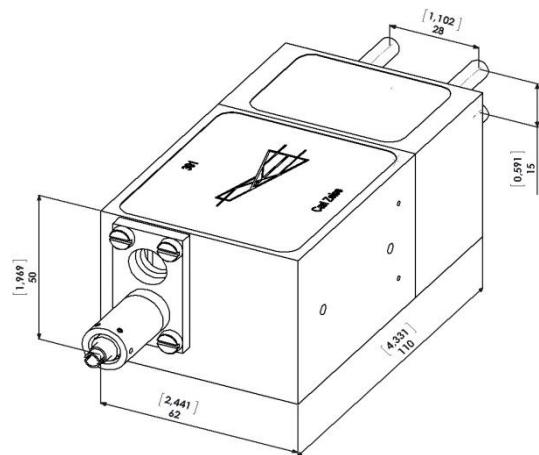
6

Masse [g] / Weight :

1547

Bestell-Nr. / Order No.:

269302 - 4002 . 026



POS.-NR.	BENENNUNG Order No.:	BESCHREIBUNG	Description	MENGE Quantity
1	269302 - 4013 . 324	Parallelinterferometer 301	Parallel Interferometer 301	1
2	269302 - 4013 . 424	Lichtventil 302	Light valve 302	1
3	000000 - 5001 . 117	ISO 1207 - M4 x 40 --- 40N	Screw ISO 1207 - M4 x 40	4
4	000000 - 5001 . 118	ISO 1207 - M4 x 8 --- 8N	Screw ISO 1207 - M4 x 8	4
5	269302 - 4015 . 824	LWL - Anschluss 223	Fiber optics coupling 223	1

Lichtschlauchinterferometer
Fiber optics interferometers

LSI 4-fach-Planspiegel-

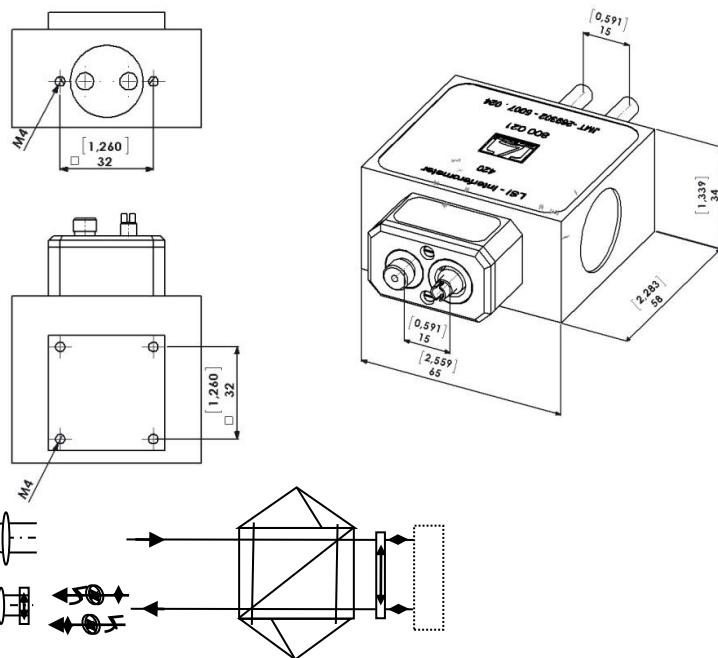
Interferometer 420 (geradeaus)

*LSI 4-fold Plane mirror interferometer
 420 (straight)*

Masse [g] / Weight : 162,6

Bestell-Nr. / Order No.:

269302 – 5007 . 024



LSI 4-fach-Planspiegel-

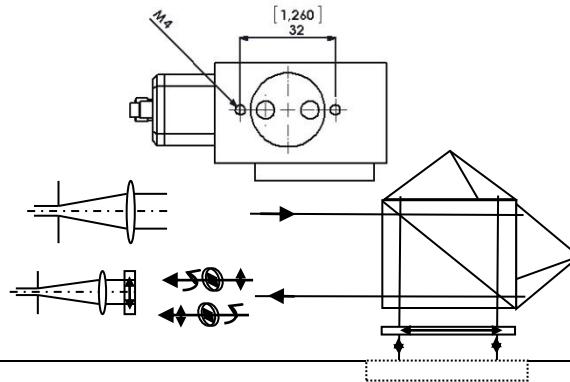
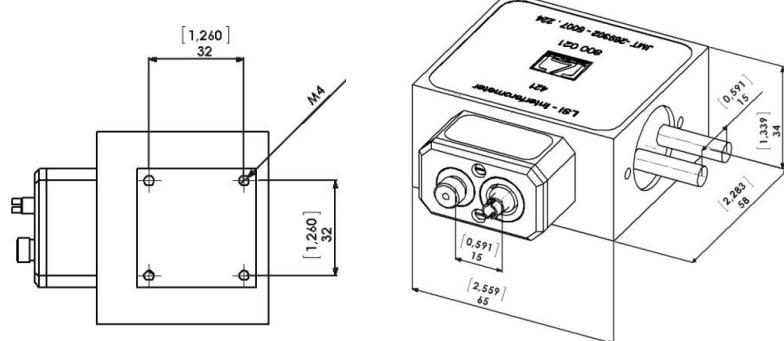
Interferometer 421 (90°,rechts)

*LSI 4-fold Plane mirror interferometer
 421 (90°,right)*

Masse [g] / Weight : 163,6

Bestell-Nr. / Order No.:

269302 – 5007 . 224

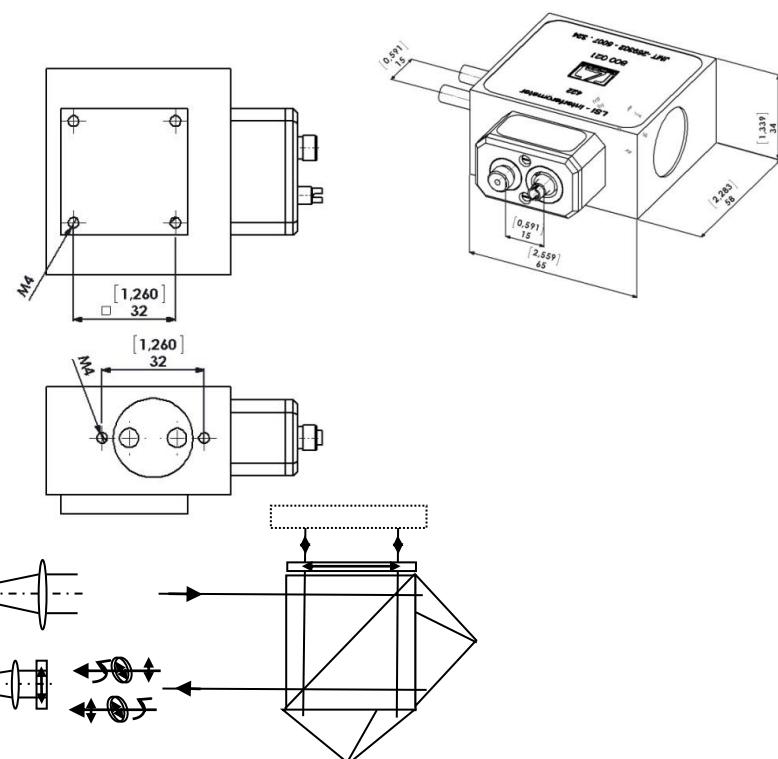


LSI 4-fach-Planspiegel-**Interferometer 422 (90°, links)**

*LSI 4-fold Plane mirror interferometer
 422 (90°, left)*

Masse [g] / Weight : 163,6

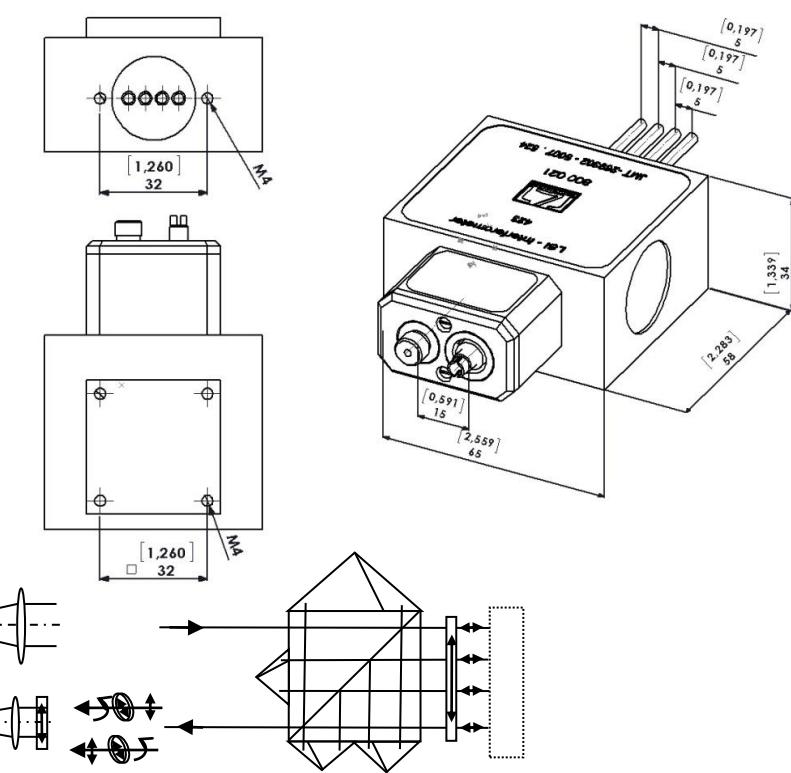
Bestell-Nr. / Order No.:
269302 – 5007 . 324

**LSI 8-fach-Planspiegel-****Interferometer 423 (geradeaus)**

*LSI 8-fold Plane mirror interferometer
 423 (straight)*

Masse [g] / Weight : 160,7

Bestell-Nr. / Order No.:
269302 – 5007 . 524



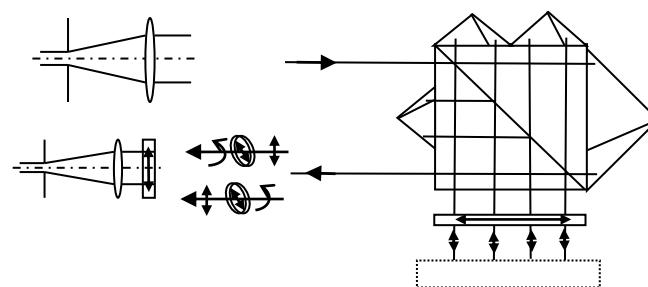
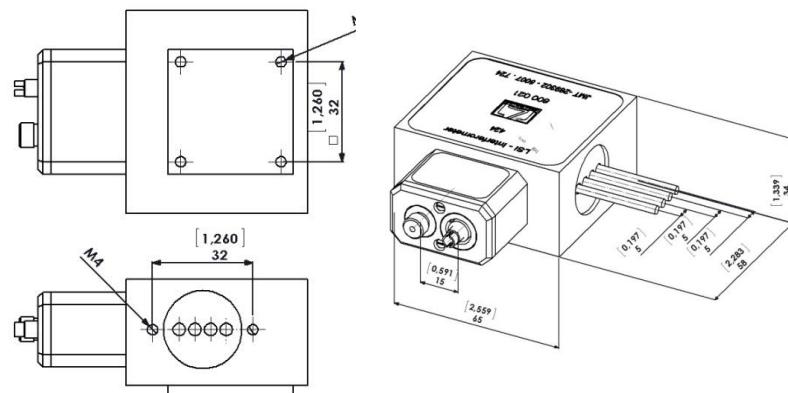
LSI 8-fach-Planspiegel-**Interferometer 424 (90°, rechts)**

*LSI 8-fold Plane mirror interferometer
 424 (90°, right)*

Masse [g] / Weight : 161,3

Bestell-Nr. / Order No.:

269302 – 5007 . 724

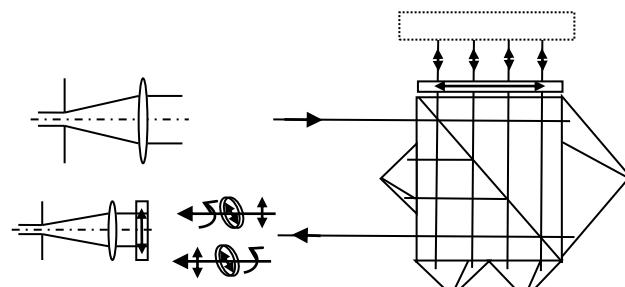
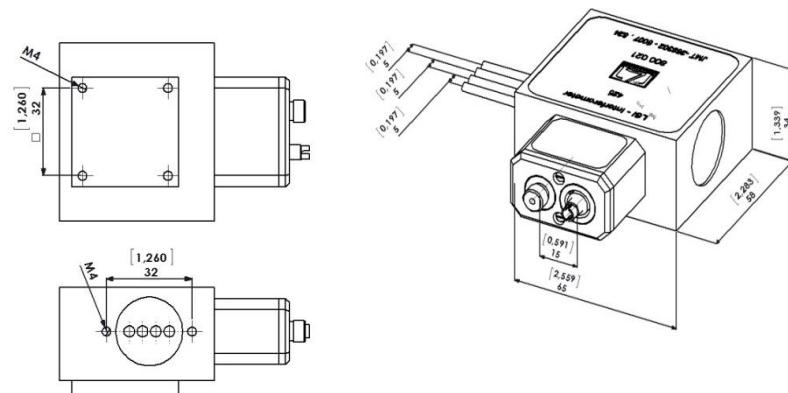
**LSI 8-fach-Planspiegel-****Interferometer 425 (90°, links)**

*LSI 8-fold Plane mirror interferometer
 425 (90°, left)*

Masse [g] / Weight : 161,3

Bestell-Nr. / Order No.:

269302 – 5007 . 824



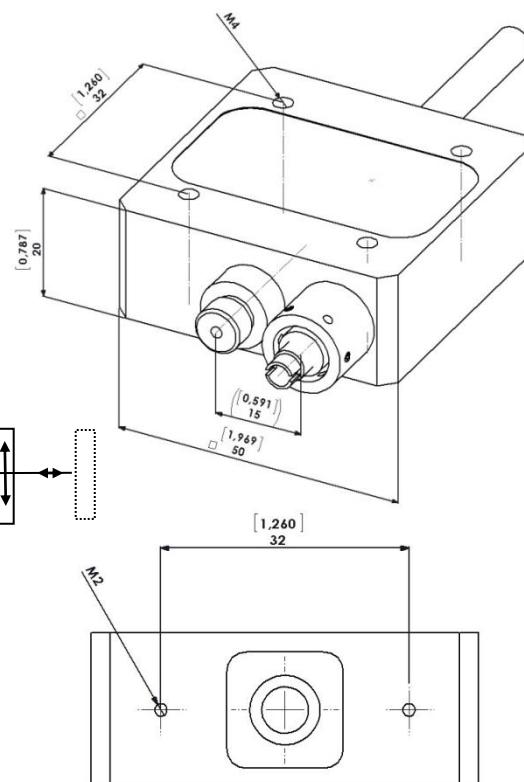
LSI Einstrahlinterferometer 400

LSI Single beam interferometer 400

Masse [g] / Weight : 264

Bestell-Nr. / Order No.:

269302 - 5012 . 024



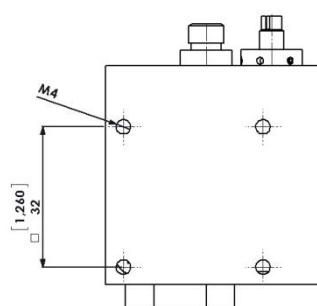
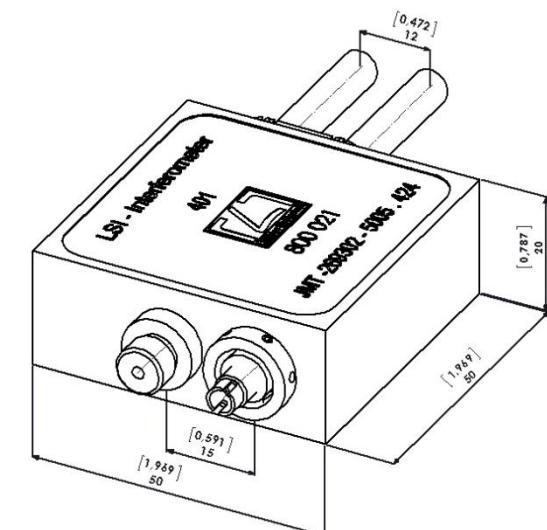
LSI Winkel-Interferometer 401

LSI Angle interferometer 401

Masse [g] / Weight : 72,9

Bestell-Nr. / Order No.:

269302 - 5005 . 424

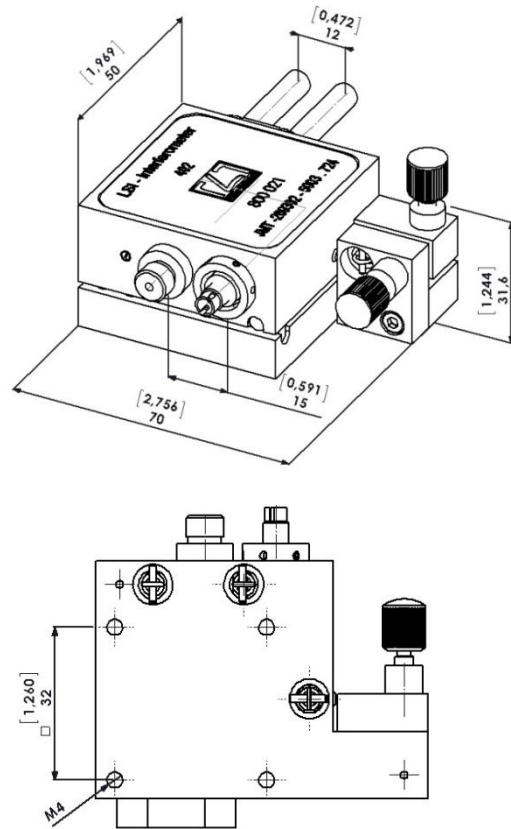
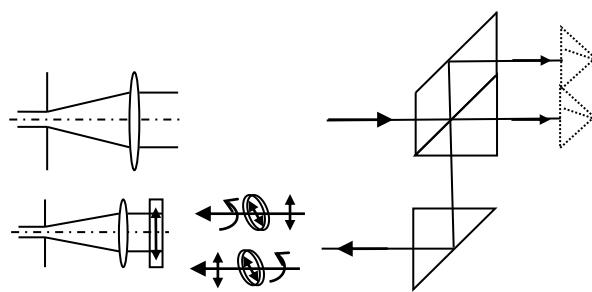


LSI Winkel-Interferometer 402 (stellbar)*LSI Angle interferometer 402 (adjustable)*

Masse [g] /	Weight :	176,7
--------------------	-----------------	-------

Bestell-Nr. / Order No.:

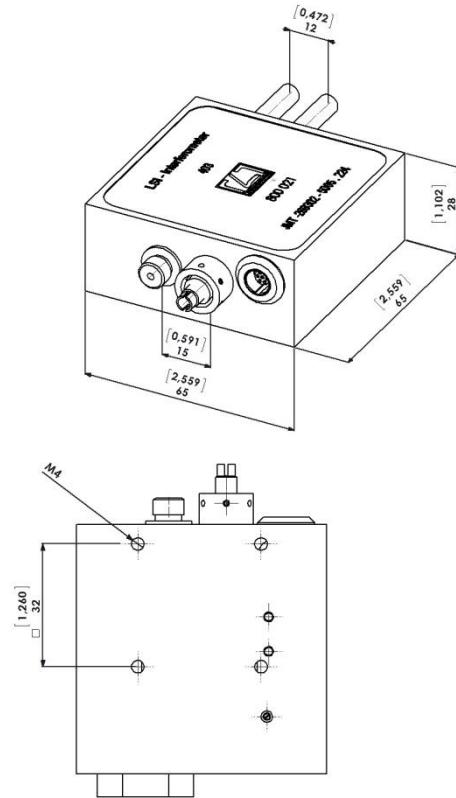
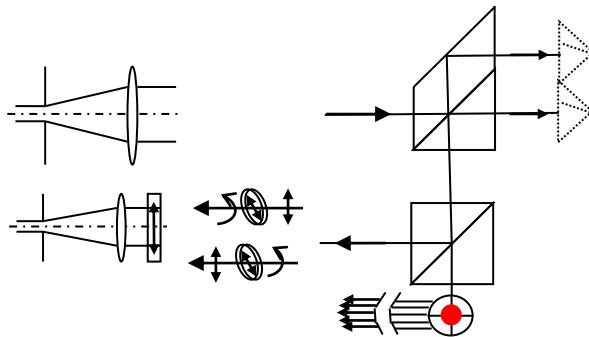
269302 - 5003 . 724

**LSI Winkel-Interferometer 403 mit Justiersensor***LSI Angle interferometer 403 sensor for adjusting*

Masse [g] /	Weight :	123
--------------------	-----------------	-----

Bestell-Nr. / Order No.:

269302 - 5005 . 224



LSI Winkel-Interferometer 404 mit

Justiersensor, stellbar

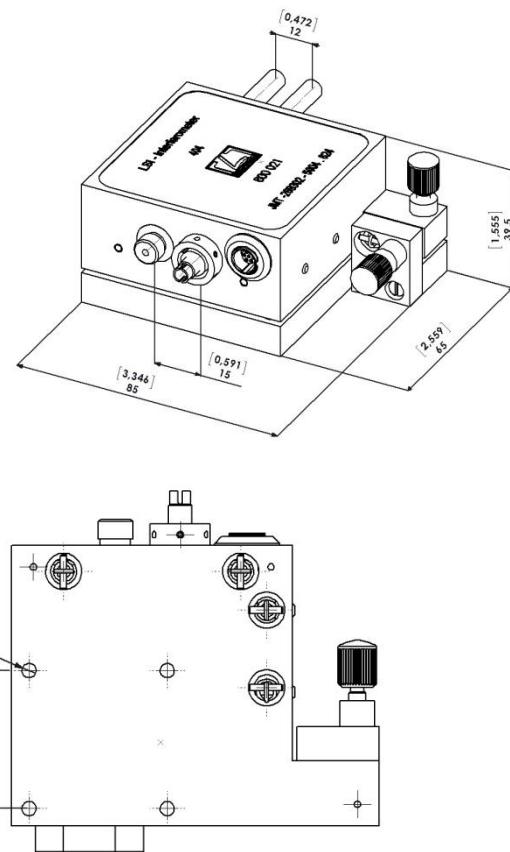
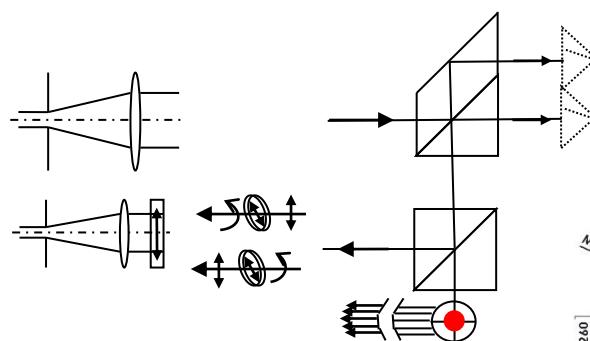
*LSI Angle interferometer 404 sensor for
 adjusting, adjustable*

Masse [g] / Weight :

202

Bestell-Nr. / Order No.:

269302 - 5004 . 824



LSI Winkel-Interferometer 405 mit

Justiersensor und Libelle

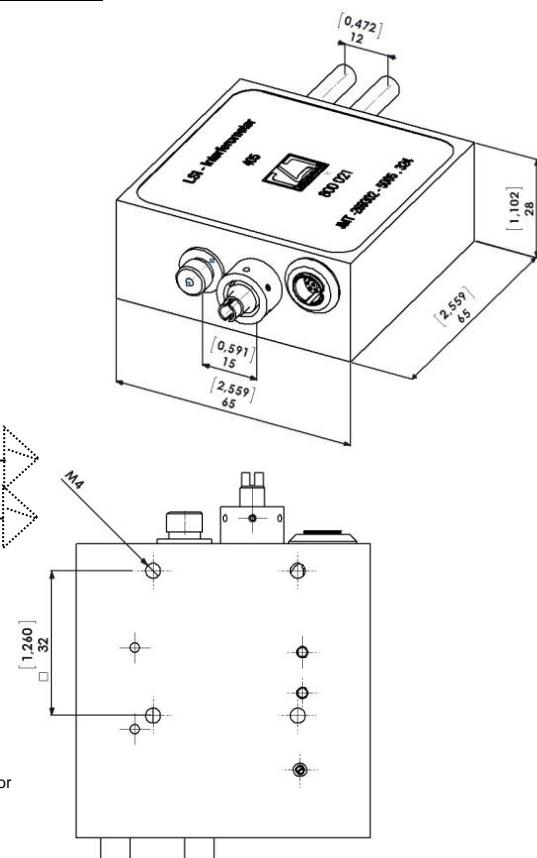
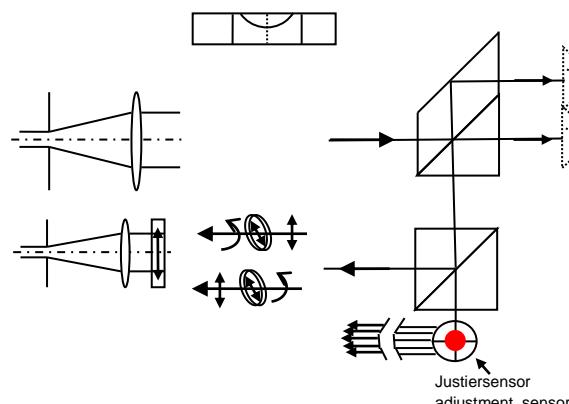
*LSI Angle interferometer 405 with sensor for
 adjusting and bubble level*

Masse [g] / Weight :

140,6

Bestell-Nr. / Order No.:

269302 - 5005 . 324

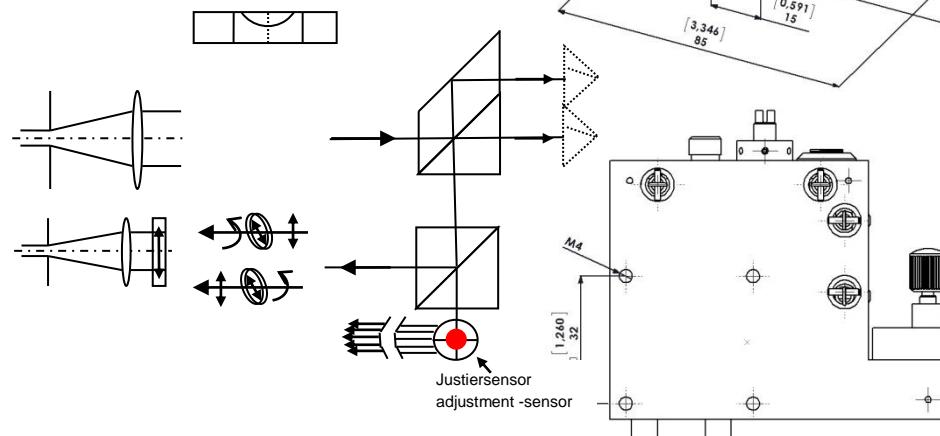


**LSI Winkel-Interferometer 406 mit
Justiersensor und Libelle, stellbar**

*LSI Angle interferometer 406 with sensor for
adjusting and bubble level, adjustable*

Masse [g] /	Weight :	302,4
--------------------	-----------------	-------

Bestell-Nr. /	Order No.:
269302 - 5004 . 924	

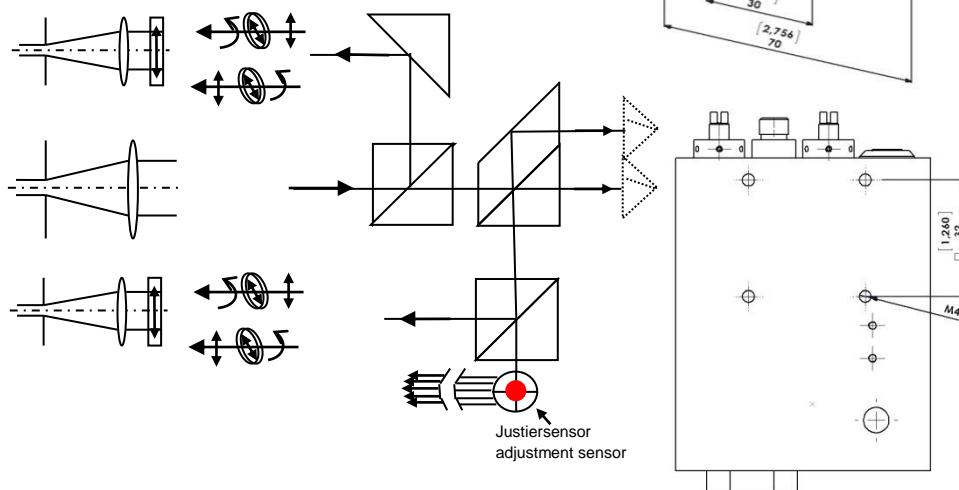


**LSI Winkel-Interferometer 407 mit interner
Referenz und Justiersensor**

*LSI Angle interferometer 407 with internal
reference and sensor for adjusting*

Masse [g] /	Weight :	295,9
--------------------	-----------------	-------

Bestell-Nr. /	Order No.:
269302 - 4003 . 224	

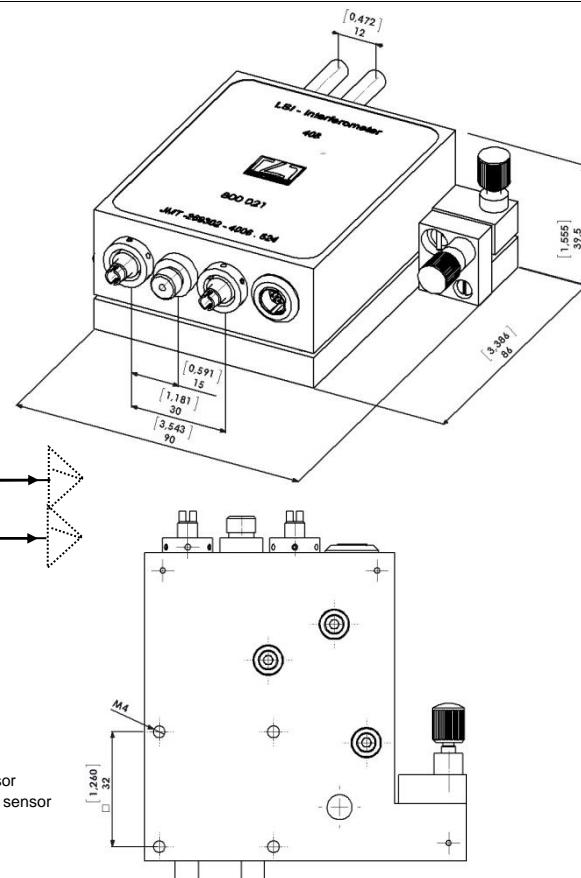
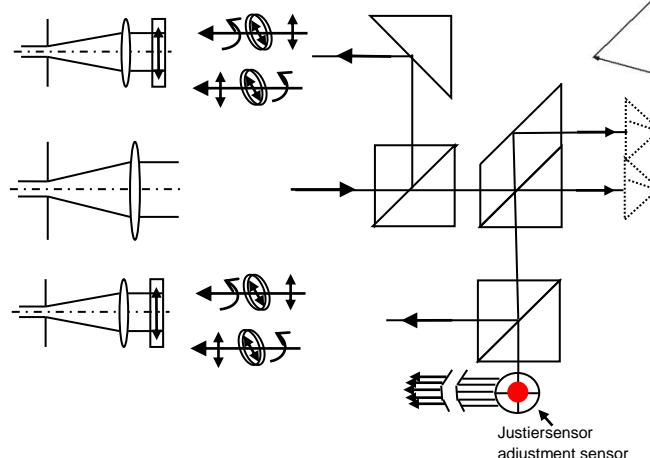


LSI Winkel-Interferometer 408 mit interner Referenz und Justiersensor, stellbar
LSI Angle interferometer 408 with internal reference and sensor for adjusting, adjustable

Masse [g] / Weight : 497,1

Bestell-Nr. / Order No.:

269302 - 4006 . 624



LSI – Planspiegelinterferometer 410

(mit interner Referenz)

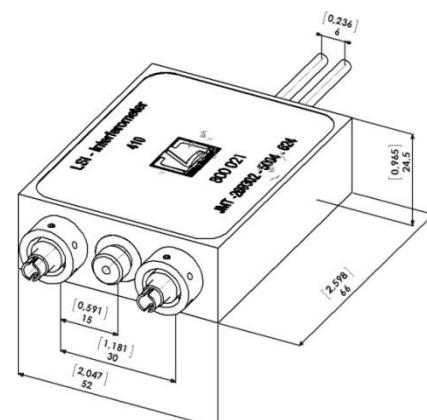
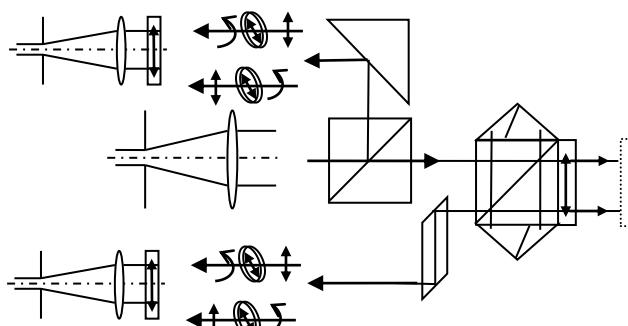
LSI plane mirror interferometer 410

(with internal reference)

Masse [g] / Weight : 107,8

Bestell-Nr. / Order No.:

269302 - 5004 . 624



LSI – Winkel-Interferometer 411

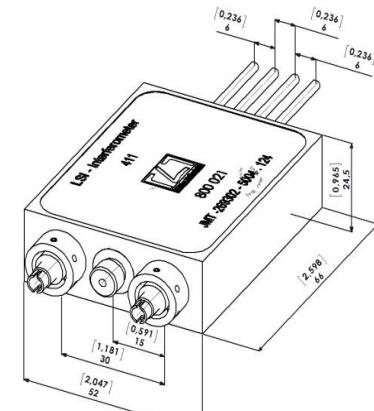
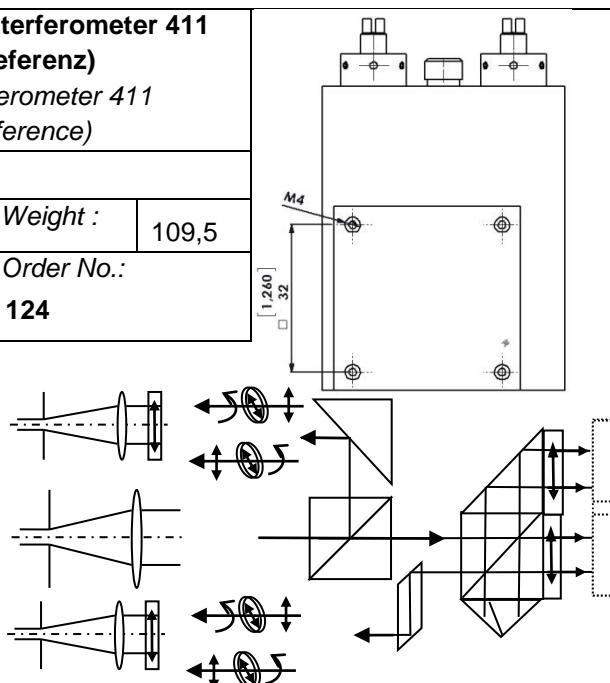
(mit interner Referenz)

*LSI Angle interferometer 411
 (with internal reference)*

Masse [g] / Weight : 109,5

Bestell-Nr. / Order No.:

269302 - 5004 . 124



LSI - Planspiegelinterferometer

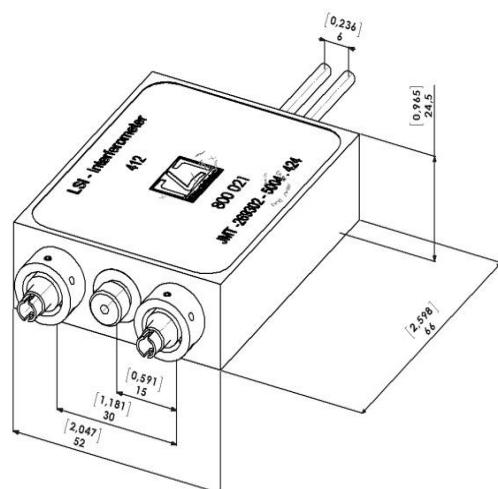
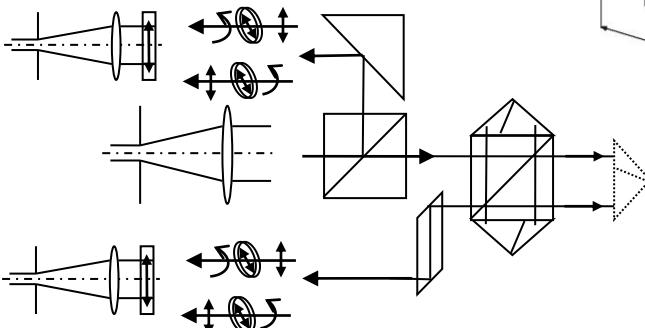
412 (mit interner Referenz)

*LSI Plane mirror interferometer
 412 (with internal reference)*

Masse [g] / Weight : 107,2

Bestell-Nr. / Order No.:

269302 - 5004 . 424



LSI – Winkel-Interferometer 414

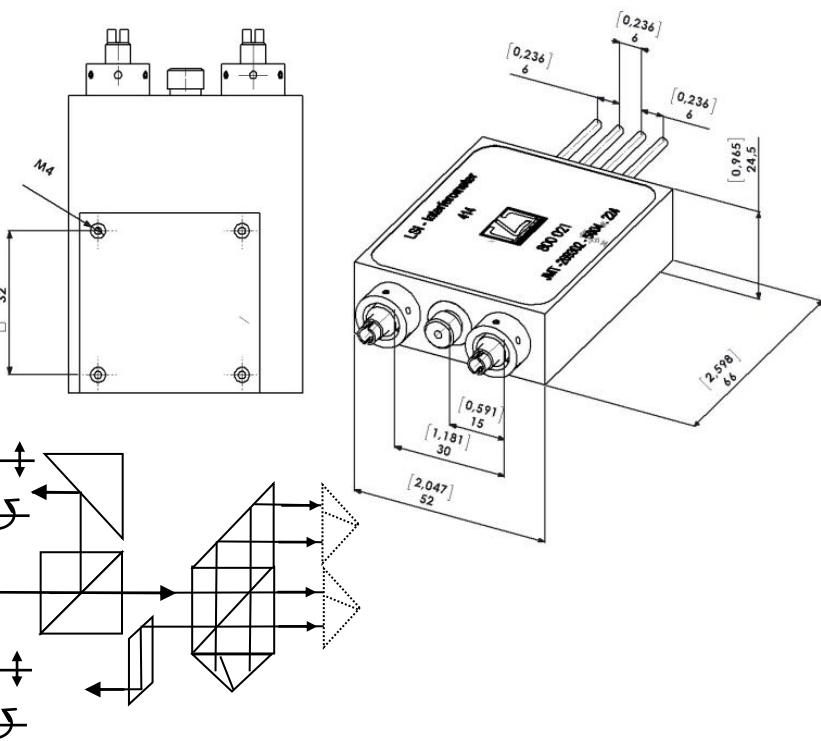
(mit interner Referenz)

LSI Angle interferometer 414 (with internal reference)

Masse [g] / Weight : 108,3

Bestell-Nr. / Order No.:

269302 - 5004 . 224



LSI - Planspiegelinterferometer

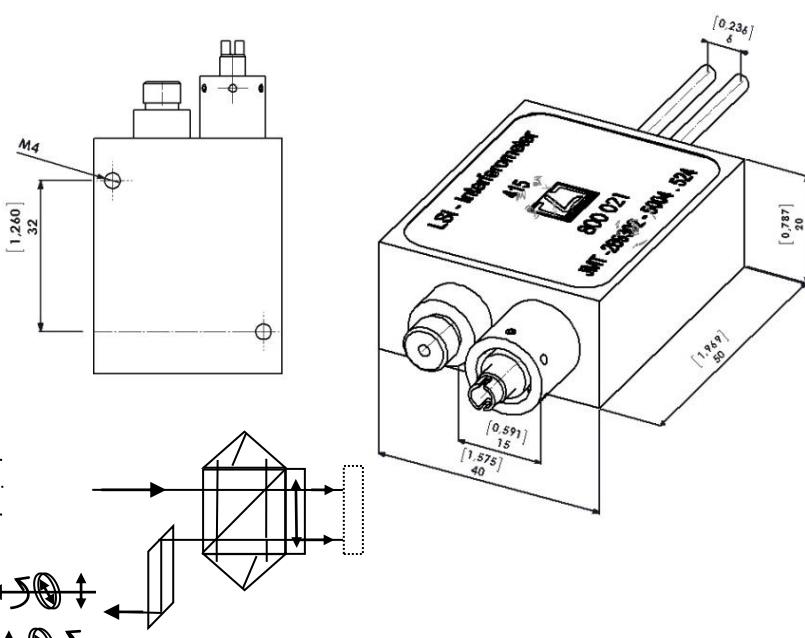
415

LSI Plane mirror interferometer 415

Masse [g] / Weight : 58,2

Bestell-Nr. / Order No.:

269302 - 5004 . 524

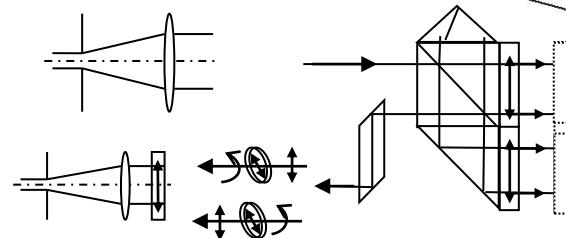
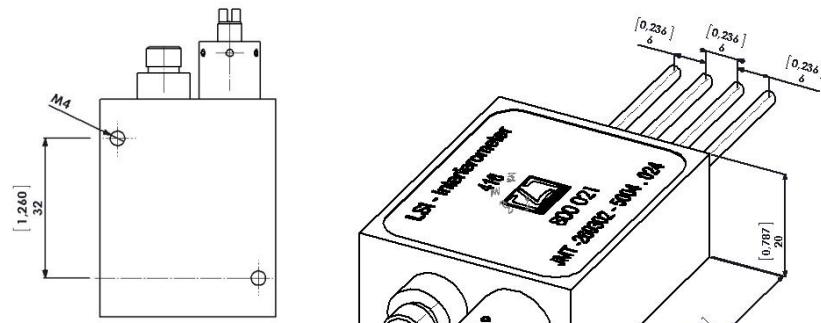


LSI –**Planspiegelinterferometer 416**

*LSI Plane mirror interferometer
 416*

Masse [g] / Weight : 59,9

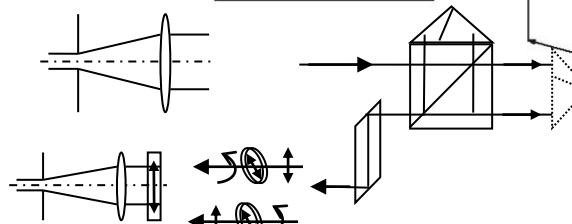
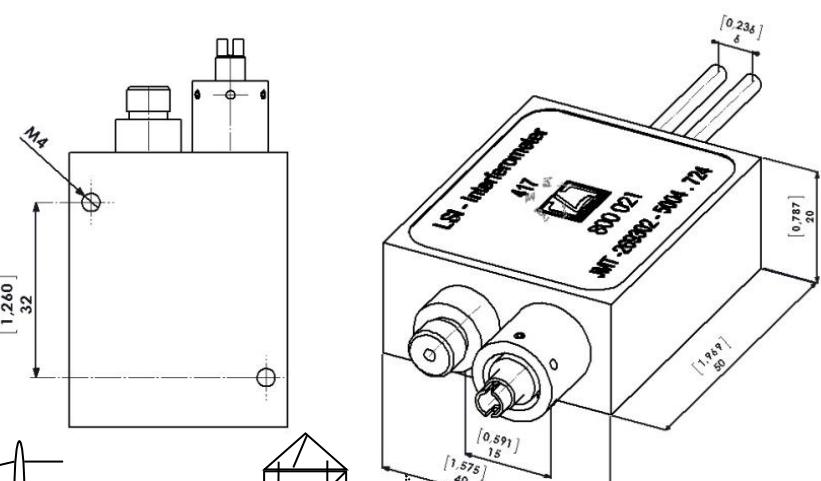
Bestell-Nr. / Order No.:
269302 - 5004 . 024

**LSI –****Planspiegelinterferometer 417**

*LSI Plane mirror
 interferometer 417*

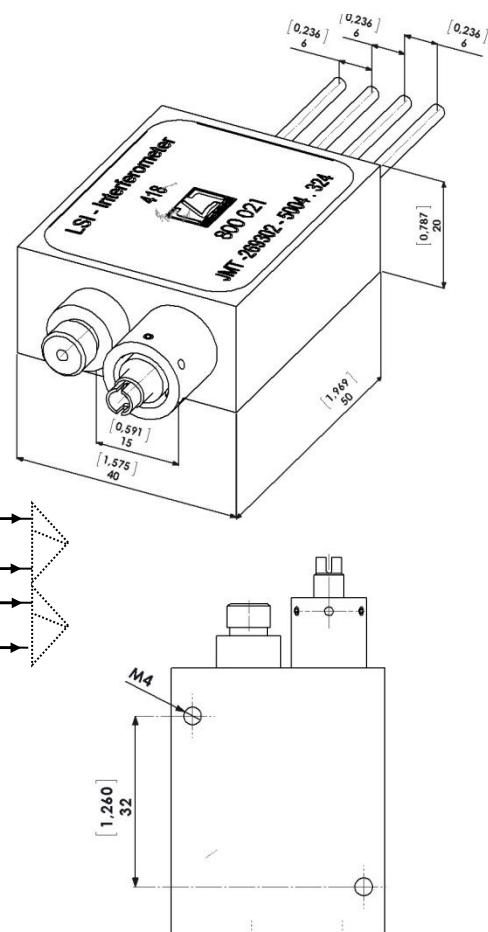
Masse [g] / Weight : 56,6

Bestell-Nr. / Order No.:
269302 - 5004 . 724



LSI- Winkel-Interferometer 418
*LSI Angle interferometer 418***Masse [g] / Weight :** 58,6**Bestell-Nr. / Order No.:**

269302 - 5004 . 324



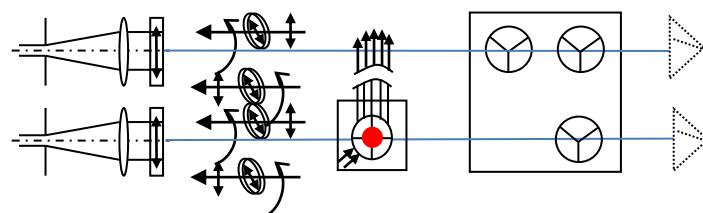
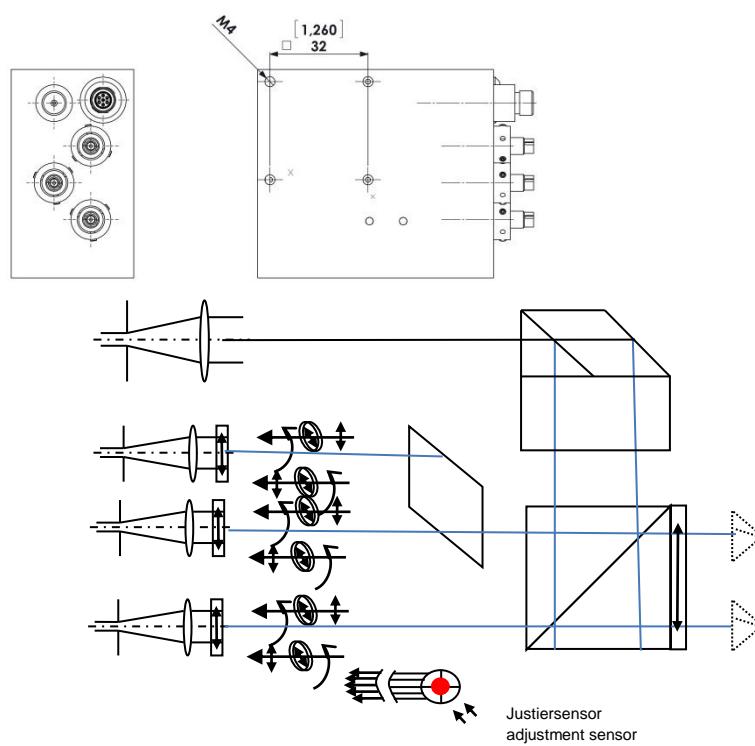
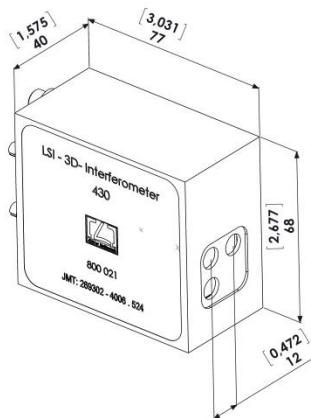
LSI-3D-Interferometer 430

LSI 3D Interferometer 430

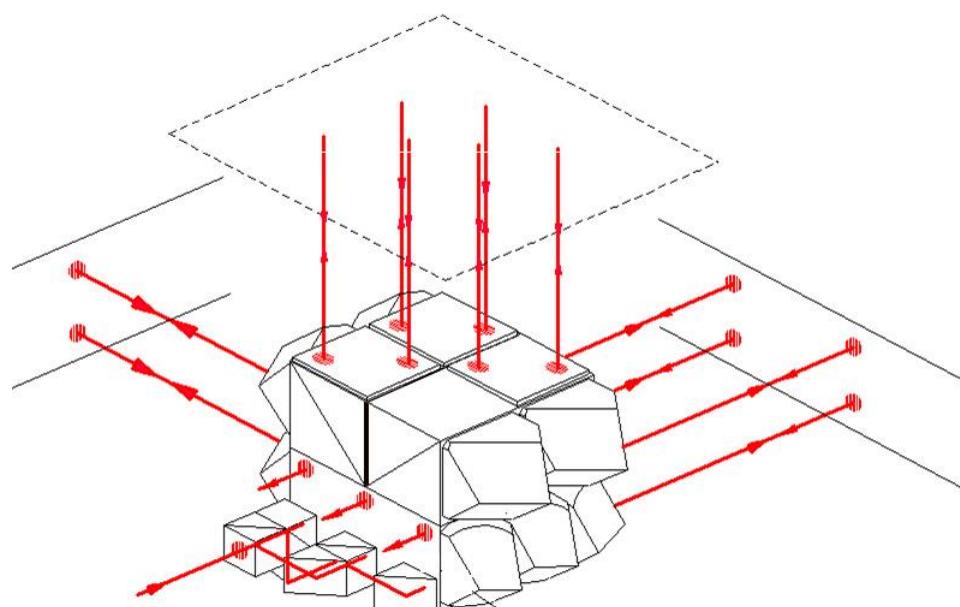
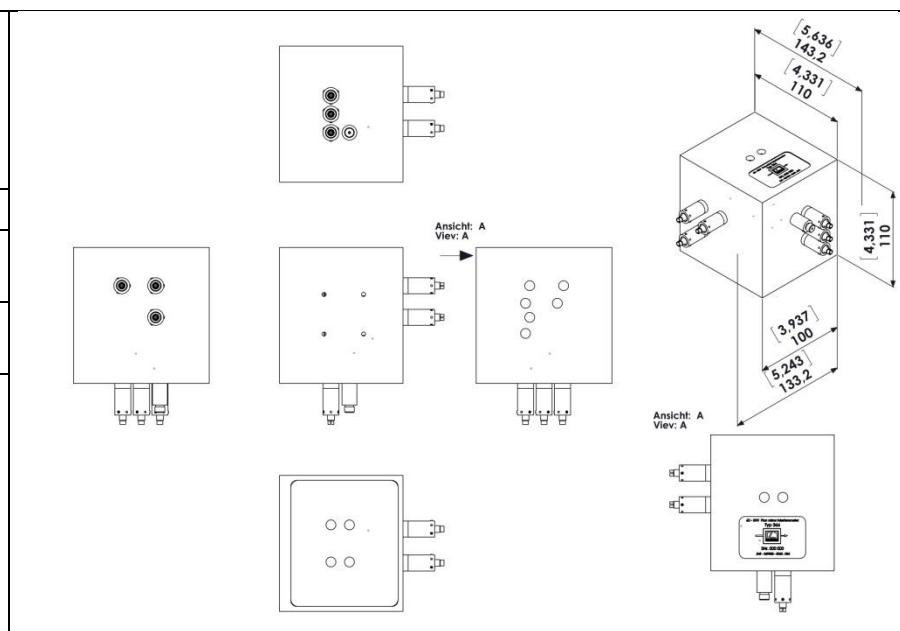
Masse [g] / Weight : 924

Bestell-Nr. / Order No.:

269302 - 4006 . 524



6D - UHF Parallel Planspiegel Interferometer		
366		
6D - UHF Parallel Mirror		
Interferometer 366		
Masse [g] /		
	Weight	3350
Bestell-Nr. /		
Order No.: 269302 - 5060 . 024		



Übersicht Interferometer

Bestellnummer:	Bezeichnung	Kurzbezeichnung	Massen [g]:	Kompaktinterferometer	Lichtschlauchinterferometer	Messachse(n) mit Faserankopplung	max Strahl durchmesser [mm]	Befestigungsabstand [mm]	Anzahl der Messachsen	Planspiegelmessung	Tripelspiegelmessung	Messung Nick- oder Gierwinkel	Messung Nick- und Gierwinkel	Position	Parallelität
269302 - 4017 . 124	Doppelkeil 2m 108	108	103,73	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4010 . 924	Winkelreflektor 2m 109	109	680,99	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4017 . 224	Doppelkeil 10m 112	112	104,18	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4011 . 324	Winkelreflektor 10m 113	113	684,1	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4015 . 324	Winkelinterferometer 114	114	406,0	-	-	6	32	1	x	x	x	-	x	-	-
269302 - 4012 . 824	Geradheitsinterferometer 128	128	383,8	-	-	6	32	1	x	x	x	-	x	-	-
269302 - 4013 . 024	Geradheitsinterferometer 129	129	379,5	-	-	6	32	1	-	x	x	-	x	-	-
269302 - 4013 . 324	Parallelinterferometer 301	301	971,3	-	-	6 / 3	32	1	x	-	x	-	x	x	x
269302 - 4013 . 424	Lichtventil 302	302	505,2	-	-	6	32	-	x	-	x	-	x	x	x
269302 - 4009 . 124	Lichtventil 308	308	494,1	-	-	3	32	-	x	-	x	-	x	x	x
269302 - 4006 . 424	Vibrationsvorsatzlinse 320	320	92,4	-	-	18	32	-	-	-	-	-	-	-	-
269302 - 5010 . 524	Kompaktinterferometer 347	347	1529,0	x	-	6	32	3	-	x	x	x	x	x	
269302 - 5010 . 526	Kompaktinterferometer 347 - Faserkopplung	347	1665,0	x	-	x	6	32	3	-	x	x	x	x	

Bestellnummer:	Bezeichnung	Kurzbezeichnung	Massen [g]:	Kompaktinterferometer	Lichtschlauchinterferometer	Messachse(n) mit Faserankopplung	max Strahldurchmesser [mm]	Befestigungsabstand [mm]	Anzahl der Messachsen	Planspiegelmessung	Tripletspiegelmessung	Messung Nick- oder Gierwinkel	Messung Nick- und Gierwinkel	Position	Parallelität
269302 - 5010 . 624	3-Achs-Kompakt-Planspiegelinterferometer 348	348	1596	x	-	x	6	32	3	x	-	x	x	x	
269302 - 5010 . 626	3-Achs-Kompakt-Planspiegelinterferometer 348 - Faserkopplung	348	1696	x	-	-	6	32	3	x	-	x	x	x	
269302 - 4002 . 324	Parallel-Planspiegelinterferometer 352	352	228,6	x		x	6	20	1	x	-	x	-	x	x
269302 - 5093 . 124	2D Achs Kompakt IF 386	386	3541	X	-	x	6	32	2		X	X	-	x	
269302 - 5093 . 424	2D Planspiegel IF 387	387	3544	X	-	X	6	32	2	X		X	-	x	
269302 - 5093 . 024	3D Achs Kompakt IF 385	385	3573	X	-	X	6	32	3		x	X	X	x	
269302 - 5093 . 324	3D Planspiegel IF 388	388	3577	x	-	X	6	32	3	x		x	X	x	
269302 - 4019 . 024	Parallel-Planspiegelinterferometer 356	356	477,2	x	-	x	3	32	1	X	-	x	-	x	x
269302 - 4005 . 524	Parallel-Planspiegelinterferometer 358	358	310,1	x	-	-	3	32	1	x	-	-	-	x	-
269302 - 4066 . 124	3-Achs-Kompakt-Planspiegelinterferometer 360	360	604	x	-	x	3	32	3	x	-	x	x	x	-
269302 - 4066 . 224	2-Achs-Kompakt-Planspiegelinterferometer 362	362	580	x	-	x	3	32	2	x	-	x	-	x	x
269302 - 5060 . 024	6D - UHF Parallel Planspiegel Interferometer 366	366	3350	x	x	x	-	32	6	x	-	x	x	x	x
269302 - 4009 . 624	Planspiegelinterferometer 368	368	101,6	x	-	x	3	20	1	x	-	-	-	x	-
269302 - 4004 . 524	2-Achs-Kompakt-Planspiegelinterferometer 370	370	693,1	x	-	x	6	32	2	x	-	x	-	x	-
269302 - 5010 . 124	Kompakt-Planspiegelinterferometer 390	390	713,3	x	-	x	6	32	2	x	-	x	-	x	-
269302 - 5012 . 024	LSI - Einstrahlinterferometer 400	400	264.01	x	x	x	-	32	1	x	x	-	-	x	-
269302 - 5005 . 424	LSI - Winkelinterferometer 401	401	72,9	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5003 . 724	LSI - Winkelinterferometer 402, stellbar	402	176,7	x	x	x	-	32	1	-	x	x	-	x	-

Bestellnummer:	Bezeichnung	Kurzbezeichnung	Massen [g]:	Kompaktinterferometer	Lichtschlauchinterferometer	Messachse(n) mit Faserankopplung	max Strahldurchmesser [mm]	Befestigungsabstand [mm]	Anzahl der Messachsen	Planspiegelmessung	Tripelspiegelmessung	Messung Nick- oder Gierwinkel	Position	Parallelität
269302 - 5005 . 224	LSI - Winkelinterferometer 403, mit Justiersensor	403	123,0	x x x	-	-	32	1	-	x x	-	x	-	
269302 - 5004 . 824	LSI - Winkelinterferometer 404, mit Justiersensor, stellbar	404	202,0	x x x	-	32	1	-	x x	-	x	-		
269302 - 5005 . 324	LSI - Winkelinterferometer 405, mit Justiersensor und Libelle	405	140,6	x x x	-	32	1	-	x x	-	x	-		
269302 - 5004 . 924	LSI - Winkelinterferometer 406, mit Justiersensor und Libelle, stellbar	406	302,4	x x x	-	32	1	-	x x	-	x	-		
269302 - 4003 . 224	LSI Winkelinterferometer 407 mit interner Referenz und Justiersensor	407	295,9	x x x	-	32	1+R	-	x x	-	x	-		
269302 - 4006 . 624	LSI Winkel-Interferometer 408 mit interner Referenz und Justiersensor, stellbar	408	497,1	x x x	-	32	1+R	-	x x	-	x	-		
269302 - 5004 . 624	LSI- Planspiegelinterferometer 410 (mit interner Referenz)	410	107,8	x x x	-	32	1+R	x	-	x	-	x		
269302 - 5004 . 124	LSI- Winkelinterferometer 411 (mit interner Referenz)	411	109,5	x x x	-	32	1+R	x	-	x	-	x		
269302 - 5004 . 424	LSI- Planspiegelinterferometer 412 (mit interner Referenz)	412	107,2	x x x	-	32	1+R	-	x x	-	x	-		
269302 - 5004 . 224	LSI- Winkelinterferometer 414 (mit interner Referenz)	414	108,3	x x x	-	32	1+R	-	x x	-	x	-		
269302 - 5004 . 524	LSI-Planspiegelinterferometer 415	415	58,2	x x x	-	32	1	x	-	x	-	x		
269302 - 5004 . 024	LSI-Planspiegelinterferometer 416	416	59,9	x x x	-	32	1	x	-	x	-	x		
269302 - 5004 . 724	LSI-Planspiegelinterferometer 417	417	56,6	x x x	-	32	1	-	x x	-	x	-		
269302 - 5004 . 324	LSI-Winkelinterferometer 418	418	58,6	x x x	-	32	1	-	x	-	-	x		
269302 - 5007 . 024	LSI 4-fach-Planspiegelinterferometer 420 (geradeaus)	420	162,6	x x x	-	32	1	x	-	-	-	x	-	
269302 - 5007 . 224	LSI 4-fach-Planspiegelinterferometer 421 (90°, rechts)	421	163,6	x x x	-	32	1	x	-	-	-	x	-	
269302 - 5007 . 324	LSI 4-fach-Planspiegelinterferometer 422 (90°, links)	422	163,6	x x x	-	32	1	x	-	-	-	x	-	
269302 - 5007 . 524	LSI 8-fach-Planspiegelinterferometer 423 (geradeaus)	423	160,7	x x x	-	32	1	x	-	-	-	x	-	
269302 - 5007 . 724	LSI 8-fach-Planspiegelinterferometer 424 (90°, rechts)	424	161,2	x x x	-	32	1	x	-	-	-	x	-	

Bestellnummer:	Bezeichnung	Kurzbezeichnung	Masse [g]:	Kompaktinterferometer	Lichtschlauchinterferometer Messachse(n) mit Faserankopplung	max Strahl durchmesser [mm]	Anzahl der Messachsen	Planspiegelmessung	Tripelspiegelmessung	Messung Nick- oder Gierwinkel	Messung Nick- und Gierwinkel	Position	Parallelität
269302 - 5007 . 824	LSI 8-fach-Planspiegelinterferometer 425 (90°, links)	425	161,2	x x x	-	32	1	x - -	-	-	x -		
269302 - 4006 . 526	LSI- 3D Interferometer 430	430	924	x x		32	3+R	- x x	x	x	x x		
269302 - 4012 . 925	Bausatz (Geradheitsinterferometer 128 + Referenzspiegel 128 + Referenzspiegel) - 545	545	414,9	- - -	-	32	1	x x -	-	-	x -		
269302 - 4006 . 425	Vibrometereinstellplatte 548	548	80,4	- - -	-	32	-	- - -	-	-	- -		
269302 - 4009 . 024	Parallelinterferometer 608	608	580,4	x - -	-	6	32	1 x -	x	-	x x		
269302 - 4009 . 524	Parallelinterferometer 608 mit LWL - Einkopplung	608	605,9	x -	x 6	32	1 x -	x	-	x	-	x x	
269302 - 4018 . 924	Parallelinterferometer 608 mit LWL - Einkopplung und variablen Strahlengang	608	764,5	x -	x 6	32	1 x -	x	-	x	-	x x	
269302 - 4061 . 426	Bausatz Planspiegelinterferometer		1183,26	- - -	- 6	32	1 - x	-	-	-	x -		
269302 - 4002 . 026	Parallelinterferometer für Planspiegelreflektor mit LWL Anschluss (komplett)		1547,0	- - x	6 32	1 x -	- x	-	-	x -	x x		
269302 - 5060 . 024	6D - UHF Parallel Planspiegel Interferometer 366	366	3350	x x x	-	32	6 x -	x	-	x x x			

Short overview - *interferometers*

<i>Order No.:</i>	<i>Description :</i>	<i>Short No.:</i>	<i>Weight[g]:</i>	<i>Compact interferometer</i>	<i>Fiber optics interferometer</i>	<i>Measuring axis with fiber coupling</i>	<i>max. beam diameter [mm]</i>	<i>Fixation distance [mm]</i>	<i>No. of measurement axis</i>	<i>Plane mirror measurement</i>	<i>Triple reflector measurement</i>	<i>Measurement pitch or yaw angle</i>	<i>Measurement pitch and yaw angle</i>	<i>Position</i>	<i>Parallelism</i>
269302 - 4017 . 124	Double wedge 2m 108	108	103.73	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4010 . 924	Angle reflector 2m 109	109	680.99	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4017 . 224	Double wedge 10m 112	112	104.18	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4011 . 324	Angle reflector 10m 113	113	684.1	-	-	6	32	1	-	-	x	-	x	-	-
269302 - 4015 . 324	Angle interferometer 114	114	406.0	-	-	6	32	1	x	x	x	-	x	-	-
269302 - 4012 . 824	Straightness interferometer 128	128	383.8	-	-	6	32	1	x	x	x	-	x	-	-
269302 - 4013 . 024	Straightness interferometer 129	129	379.5	-	-	6	32	1	-	x	x	-	x	-	-
269302 - 4013 . 324	Parallel interferometer 301	301	971.3	-	-	6 / 3	32	1	x	-	x	-	x	-	x
269302 - 4013 . 424	Light valve 302	302	505.2	-	-	6	32	-	x	-	x	-	x	-	x
269302 - 4009 . 124	Light valve 308	308	494.1	-	-	3	32	-	x	-	x	-	x	-	x
269302 - 4006 . 424	Vibrometer ancillary lens 320	320	92.4	-	-	18	32	-	-	-	-	-	-	-	-
269302 - 5010 . 524	Compact interferometer 347	347	1529.0	x	-	6	32	3	-	x	x	x	x	x	x
269302 - 5010 . 526	Compact interferometer 347 – fiber coupling	344	1665.0	x	-	x	6	32	3	-	x	x	x	x	x

<i>Order No.:</i>	<i>Description:</i>	<i>Short No.:</i>	<i>Weight[g]:</i>	<i>Compact interferometer</i>	<i>Fiber optics interferometer</i>	<i>Measuring axis with fiber coupling</i>	<i>max. beam diameter [mm]</i>	<i>Fixation distance [mm]</i>	<i>No. of measurement axis</i>	<i>Plane mirror measurement</i>	<i>Triple reflector measurement</i>	<i>Measurement pitch or yaw angle</i>	<i>Measurement pitch and yaw angle</i>	<i>Position</i>	<i>Parallelism</i>
269302 - 5010 . 624	3 Axes Compact plane mirror interferometer 348	348	1596	x	-	x	6	32	3	x	-	x	x	x	
269302 - 5010 . 626	3 Axes Compact plane mirror interferometer 348 – fiber coupling	348	1696	x	-	-	6	32	3	x	-	x	x	x	
269302 - 5093 . 124	2D Compact IF 386	386	3541	X	-	x	6	32	2		X	X	-	x	
269302 - 5093 . 424	2D Plane mirror IF 387	387	3544	X	-	X	6	32	2	X		X	-	x	
269302 - 5093 . 024	3D Compact IF 385	385	3573	X	-	X	6	32	3		x	X	X	x	
269302 - 5093 . 324	3D Plane mirror IF 388	388	3577	x	-	X	6	32	3	x		x	X	x	
269302 - 4002 . 324	Parallel plane mirror interferometer 352	352	228.6	x		x	6	20	1	x	-	x	-	x	x
269302 - 4019 . 024	Parallel plane mirror interferometer 356	356	477.2	x	-	x	3	32	1	x	-	x	-	x	x
269302 - 4005 . 524	Parallel plane mirror interferometer 358	358	310.1	x	-	-	3	32	1	x	-	-	-	x	-
269302 - 4066 . 124	3 Axes Compact plane mirror interferometer 360	360	604	x	-	x	3	32	3	x	-	x	x	x	-
269302 - 4066 . 224	2 Axes Compact plane mirror interferometer 362	362	580	x	-	x	3	32	2	x	-	x	-	x	x
269302 - 5060 . 024	6D - UHF Parallel Mirror Interferometer 366	366	3350	x	x	x	-	32	6	x	-	x	X	X	X
269302 - 4009 . 624	Plane mirror interferometer 368	368	101.6	x	-	x	3	20	1	x	-	-	-	x	-
269302 - 4004 . 524	2 Axes Compact plane mirror interferometer 370	370	693.1	x	-	x	6	32	2	x	-	x	-	x	-
269302 - 5010 . 124	Compact plane mirror interferometer 390	390	713.3	x	-	x	6	32	2	x	-	x	-	x	-
269302 - 5012 . 024	LSI Single beam interferometer 400	400	264.01	x	x	x	-	32	1	x	x	-	-	x	-
269302 - 5005 . 424	LSI Angle interferometer 401	401	72.9	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5003 . 724	LSI Angle interferometer 402. adjustable	402	176.7	x	x	x	-	32	1	-	x	x	-	x	-

<i>Order No.:</i>	<i>Description</i>	<i>Short No.:</i>	<i>Weight[g]:</i>	<i>Compact interferometer</i>	<i>Fiber optics interferometer</i>	<i>Measuring axis with fiber coupling</i>	<i>max. beam diameter [mm]</i>	<i>Fixation distance [mm]</i>	<i>No. of measurement axis</i>	<i>Plane mirror measurement</i>	<i>Triple reflector measurement</i>	<i>Measurement pitch or yaw angle</i>	<i>Measurement pitch and yaw angle</i>	<i>Position</i>	<i>Parallelism</i>
269302 - 5005 . 224	LSI Angle interferometer 403 sensor for adjusting	403	123.0	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5004 . 824	LSI Angle interferometer 404 sensor for adjusting. adjustable	404	202.0	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5005 . 324	LSI Angle interferometer 405 with sensor for adjusting and bubble level	405	140.6	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5004 . 924	LSI Angle interferometer 406 with sensor for adjusting and bubble level. adjustable	406	302.4	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 4003 . 224	LSI Angler interferometer 407 with internal reference and sensor for adjusting	407	295.9	x	x	x	-	32	1+R	-	x	x	-	x	-
269302 - 4006 . 624	LSI Angle interferometer 408 with internal reference and sensor for adjusting. adjustable	408	497.1	x	x	x	-	32	1+R	-	x	x	-	x	-
269302 - 5004 . 624	LSI plane-mirror-interferometer 410 (with internal reference)	410	107.8	x	x	x	-	32	1+R	x	-	x	-	x	-
269302 - 5004 . 124	LSI Angle interferometer 411 (with internal reference)	411	109.5	x	x	x	-	32	1+R	x	-	x	-	x	-
269302 - 5004 . 424	LSI Plane-mirror-interferometer 412 (with internal reference)	412	107.2	x	x	x	-	32	1+R	-	x	x	-	x	-
269302 - 5004 . 224	LSI Angle interferometer 414 (with internal reference)	414	108.3	x	x	x	-	32	1+R	-	x	x	-	x	-
269302 - 5004 . 524	LSI Plane mirror interferometer 415	415	58.2	x	x	x	-	32	1	x	-	x	-	x	-
269302 - 5004 . 024	LSI Plane mirror interferometer 416	416	59.9	x	x	x	-	32	1	x	-	x	-	x	-
269302 - 5004 . 724	LSI Plane mirror interferometer 417	417	56.6	x	x	x	-	32	1	-	x	x	-	x	-
269302 - 5004 . 324	LSI Angle interferometer 418	418	58.6	x	x	x	-	32	1	-	x	-	-	x	-
269302 - 5007 . 024	LSI 4-fold plane mirror interferometer 420 (straight)	420	162.6	x	x	x	-	32	1	x	-	-	-	x	-
269302 - 5007 . 224	LSI 4-fold plane mirror interferometer 421 (90°.right)	421	163.6	x	x	x	-	32	1	x	-	-	-	x	-
269302 - 5007 . 324	LSI 4-fold plane mirror interferometer 422 (90°.left)	422	163.6	x	x	x	-	32	1	x	-	-	-	x	-
269302 - 5007 . 524	LSI 8-fold plane mirror interferometer 423 (straight)	423	160.7	x	x	x	-	32	1	x	-	-	-	x	-

<i>Order No.:</i>	<i>Description</i>	<i>Short No.:</i>	<i>Weight[g]:</i>	<i>Compact interferometer</i>	<i>Fiber optics interferometer</i>	<i>Measuring axis with fiber coupling</i>	<i>max. beam diameter [mm]</i>	<i>Fixation distance [mm]</i>	<i>No. of measurement axes</i>	<i>Plane mirror measurement</i>	<i>Triple reflector measurement</i>	<i>Measurement pitch or yaw angle</i>	<i>Measurement pitch and yaw angle</i>	<i>Position</i>	<i>Parallelism</i>
269302 - 5007 . 724	LSI 8-fold plane mirror interferometer 424 (90°.right)	424	161.2	x	x	x	-	32	1	x	-	-	-	x	-
269302 - 5007 . 824	LSI 8-fold plane mirror interferometer 425 (90°.left)	425	161.2	x	x	x	-	32	1	x	-	-	-	x	-
269302 - 4006 . 526	LSI- 3D Interferometer 430	430	924	x	x			32	3+R	-	x	x	x	x	
269302 - 4012 . 925	Assembly set (Straightness Interferometer 128 + Reference cube corner reflector 540)	545	414.9	-	-	-	-	32	1	x	x	-	-	x	-
269302 - 4006 . 425	Vibrometer adjusting plate 548	548	80.4	-	-	-	-	32	-	-	-	-	-	-	-
269302 - 4009 . 024	Parallel interferometer 608	608	580.4	x	-	-	6	32	1	x	-	x	-	x	x
269302 - 4009 . 524	Parallel interferometer 608 with fiber optics coupling	608	605.9	x	-	x	6	32	1	x	-	x	-	x	x
269302 - 4018 . 924	Parallel interferometer 608 with fiber optics coupling and variable beam control	608	764.5	x	-	x	6	32	1	x	-	x	-	x	x
269302 - 4061 . 426	Assembly set for plane mirror interferometer		1183.26	-	-	-	6	32	1	-	x	-	-	x	-
269302 - 4002 . 026	Parallel interferometer for plane mirror reflector with wire coupling (complete)		1547.0	-	-	x	6	32	1	x	-	x	-	x	x
269302 - 5060 . 024	6D - UHF Parallel Mirror Interferometer 366	366	3350	x		x	x	-	32	6	x	-	x	x	x

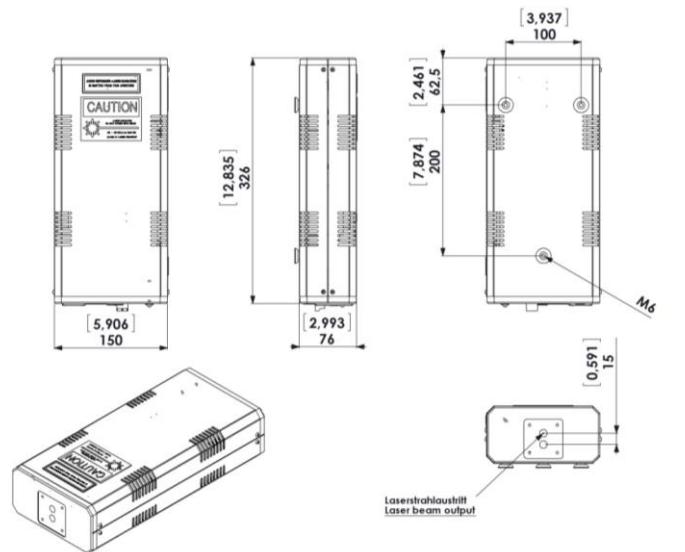
J. Lasermessköpfe, Auswerteeinheiten, und Zubehör

J. Laser measurement heads, evaluation units, adapters and accessories

Lasermessköpfe

Laser measurement heads

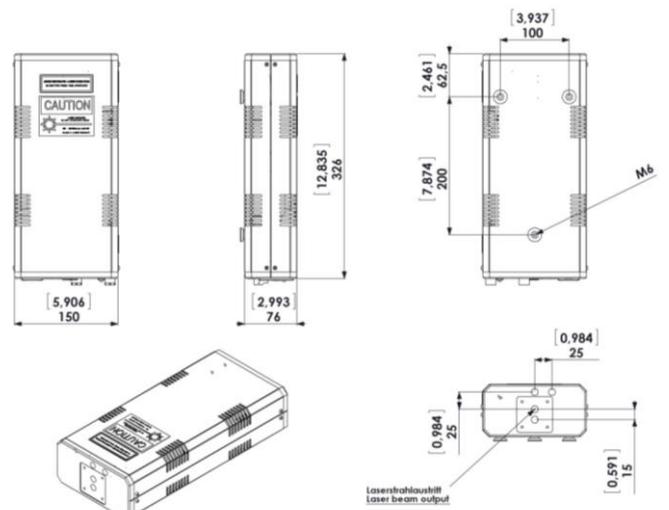
Lasermesskopf ZLM 700 <i>Laser measuring head ZLM 700</i>	
Zahl der Messachsen pro Laser: <i>No. of measuring axes per laser:</i>	1
Masse [g] / Weight :	3961
Bestell-Nr. / Order No.: 269302 – 5061 . 026 / Ø	
Strahldurchmesser: <i>Beam diameter:</i>	<ul style="list-style-type: none"> • 6 mm (0.236 ") • 3,2 mm (0.126")
Netz: <i>Power supply:</i>	<ul style="list-style-type: none"> • 95 ... 265V • 43 - 63 Hz



Beispiel für Bestellangaben: 269302 – 5061 . 026 / 6 mm

Example of order information: 269302 – 5061 . 026 / 6 mm

Lasermesskopf ZLM 800 <i>Laser measuring head ZLM 800</i>	
Zahl der Messachsen pro Laser: <i>No. of measuring axes per laser:</i>	3
Masse [g] / Weight :	4156
Bestell-Nr. / Order No.: 269302 – 5062 . 026 / Ø	
Strahldurchmesser: <i>Beam diameter:</i>	<ul style="list-style-type: none"> • 6 mm (0.236 ") • 3,2 mm (0.126")
Netz: <i>Power supply:</i>	<ul style="list-style-type: none"> • 95 ... 265V • 43 - 63 Hz



Beispiel für Bestellangaben: 269302 – 5062 . 026 / 6mm

Example of order information: 269302 – 5062 . 026 / 6 mm

Lasermesskopf ZLM 800 (Einbausystem)
*Laser measuring head ZLM 800
(built-in system)*

Zahl der Messachsen pro Laser:

No. of measuring axes per laser:
Masse [g] / Weight :

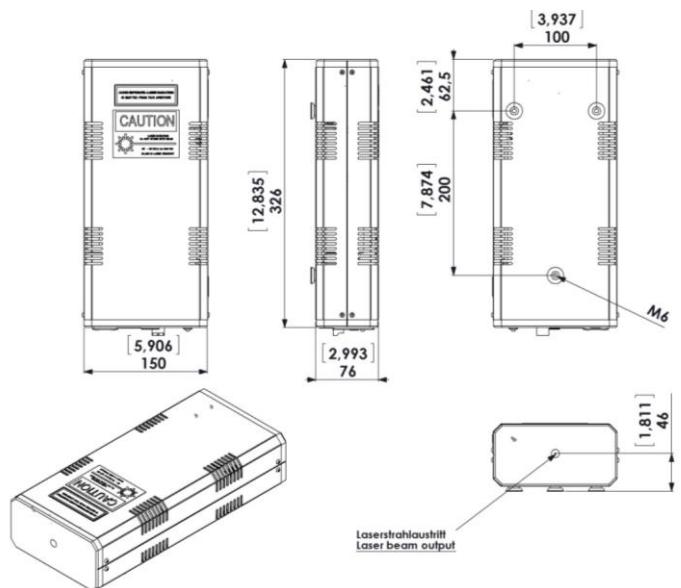
4023

Bestell-Nr. / Order No.:

269302 – 5063 . 026 / Ø

Strahldurchmesser: • 6 mm (0.236 ")
Beam diameter: • 3,2 mm (0.126")

Netz: • 95 ... 265V
Power supply: • 43 - 63 Hz

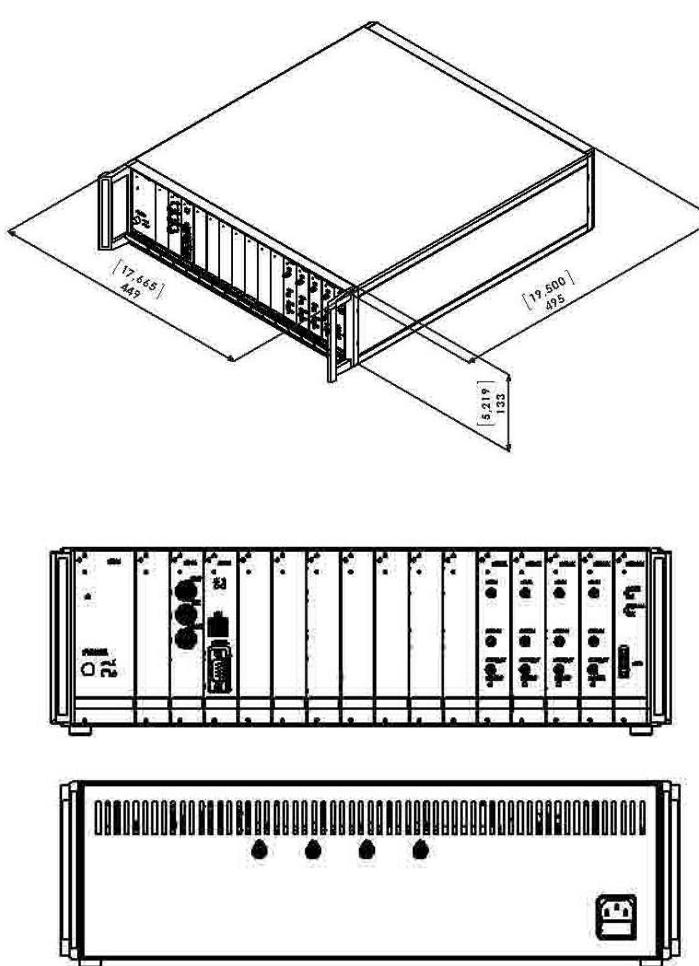


Beispiel für Bestellangaben: 269302 – 5063 . 026 / 6mm

Example of order information: 269302 – 5063 . 026 / 6 mm

Komپакteinheit ZLM 900 LSI*Compact unit ZLM 900 LSI*

Komپاكteinheit ZLM 900 LSI <i>Compact unit ZLM 900 LSI</i>	
Zahl der Messachsen pro Laser: <i>No. of measuring axes per laser:</i>	1-4
Masse [g] / Weight :	
Bestell-Nr. / Order No.: 269302 – 5095 . 026	
Lichtleitfaserausgang: <i>Fiber optics output:</i>	FC APC Stecker FC APC connector
Netz: <i>Power supply:</i>	<ul style="list-style-type: none">• 100 ... 240V (50/ 60 Hz)

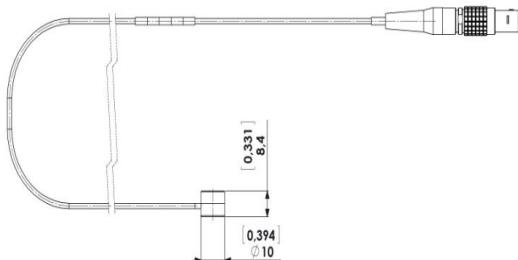


Zubehör – AUK Umweltkompensation
Accessories - AUK environmental sensor

Oberflächen - Temperaturfühler 2

Surface temperature sensor 2

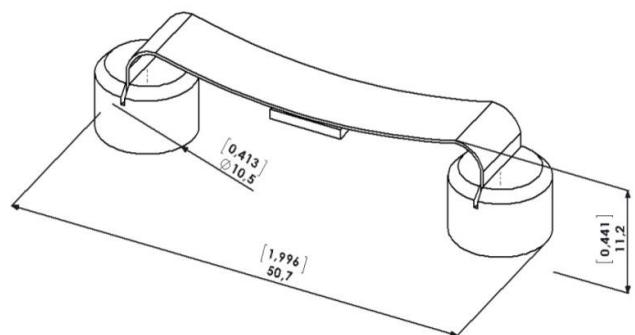
Einsatztemperaturbereich [°C]: <i>Temperature range [F]:</i>	0 – 60°C 32 -140°F
Masse [g] / Weight :	24
Bestell-Nr. / Order No.:	269300 – 3904 . 824
Kabellänge [m]: <i>Cable length:</i>	5
Messunsicherheit: <i>Measurement accuracy:</i>	50 mK

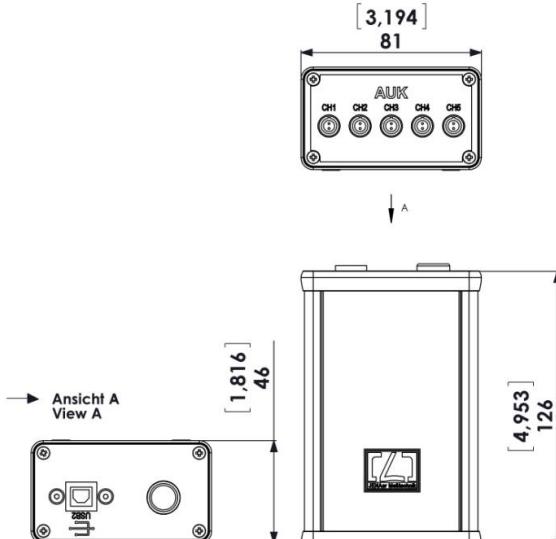


Magnethalter 2

Magnetic holder 2

Masse [g] / Weight :	9,5
Bestell-Nr. / Order No.:	269300 – 3900 . 524



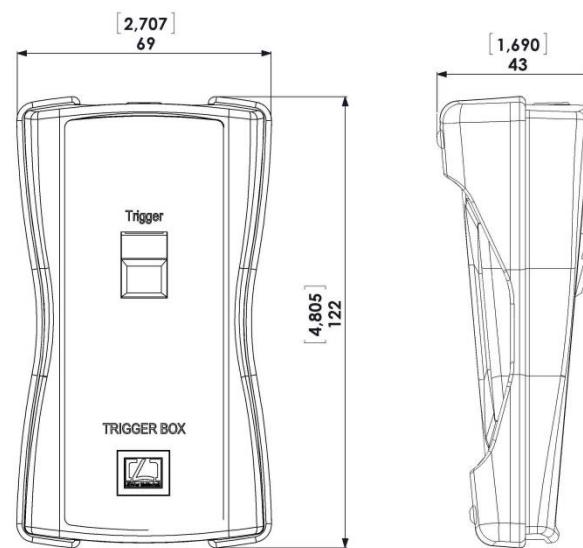
Automatische Umweltkompensation AUK <i>AUK environmental sensor</i>			
Masse [g] / Weight : 279			
Bestell-Nr. / Order No.: 269302 - 5017 . 024			
Zur Kompensation von Temperatur, Luftdruck und Luftfeuchte <i>for compensation of temperature, pressure and humidity</i>			
Lufttemperatur Messbereich: <i>Air temperature range:</i>	10°C ... 45 °C		
Messgenauigkeit: <i>Air temperature accuracy:</i>	< 0,1 K		
Max. Anzahl Temperatursensoren <i>Max. no. temperature sensor</i>	5		
Luftdruck Messbereich: <i>Air pressure range:</i>	500 – 1100 hPa		
Luftdruck Messgenauigkeit: <i>Air pressure accuracy:</i>	< 1,5 hPa		
Rel. Luftfeuchte Messbereich: <i>Rel. Air humidity range:</i>	0 ... 100%		
Rel. Luftfeuchte Messgenauigkeit: <i>Rel. Air humidity accuracy:</i>	1,5%		
Oberflächentemperatur - Messbereich: <i>Surface temperature range:</i>	0°C ... 40°C 32°F ... 104°F		
Oberflächentemperatur Messgenauigkeit: <i>Surface temperature accuracy:</i>	5mK		

Trigger Box 2020

Trigger box 2020

Masse [g] / Weight : 88

Bestell-Nr. / Order No.:
269302 – 4004 . 526



Anbauelemente - Lasermessköpfe

Extension units - Laser measurement heads

Justiertisch 528 (ohne Quertrieb)

Adjustable table 528 (without cross slide)

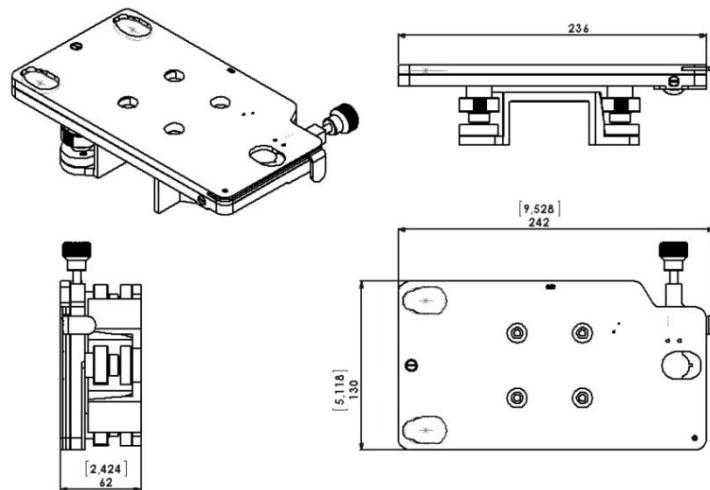
Anzahl Freiheitsgrade: 4

Degrees of freedom:

Masse [g] / Weight : 1131,5

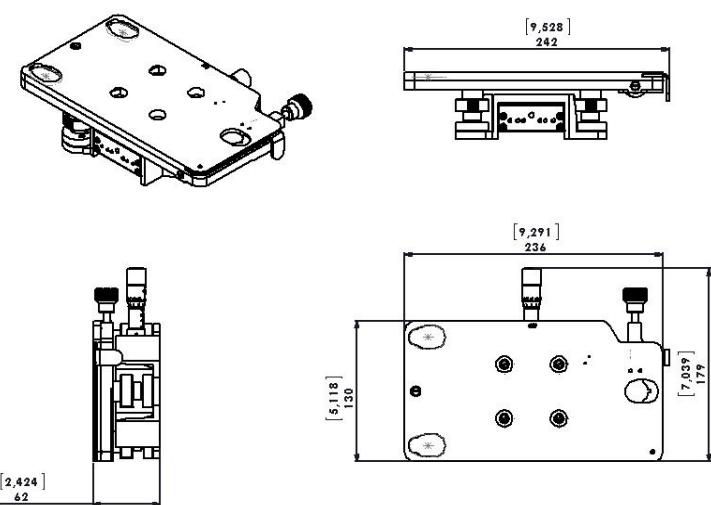
Bestell-Nr. / Order No.:

269302 - 4040 . 025



Justieraufnahme für Laserkopf 528
Adjustable mount for laser head 528

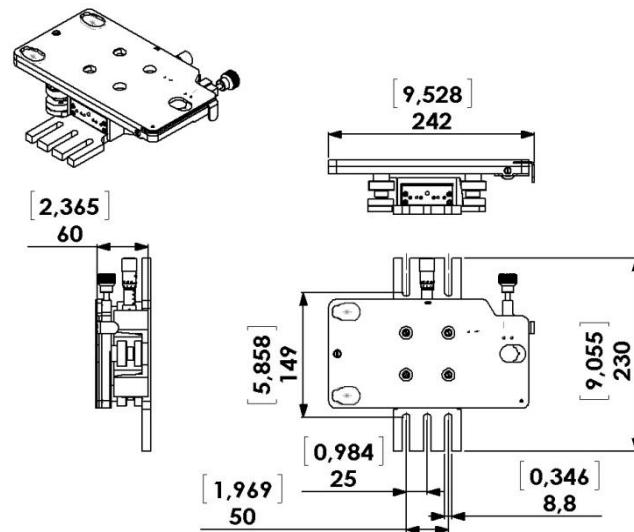
Anzahl Freiheitsgrade:	5
<i>Degrees of freedom:</i>	
Masse [g] / Weight :	1431,5
Bestell-Nr. / Order No.:	269302 - 4040 . 125

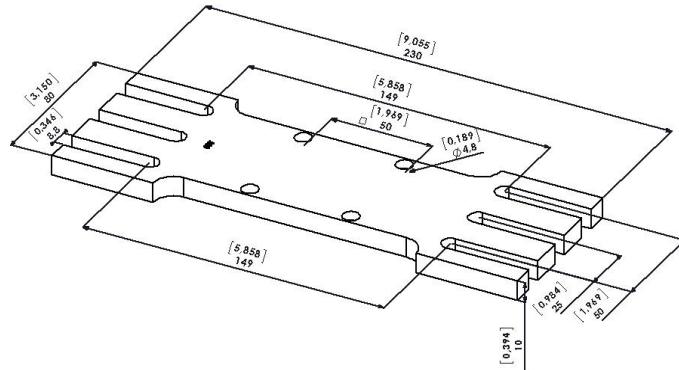
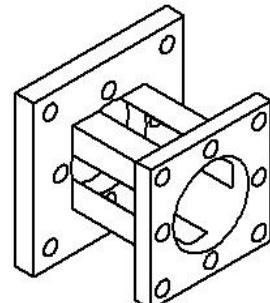
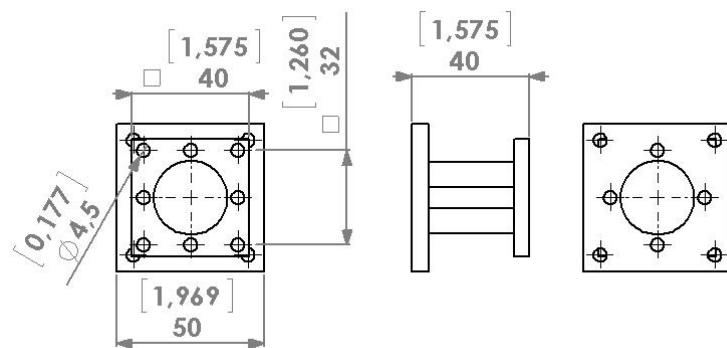


Justieraufnahme für Laserkopf 530

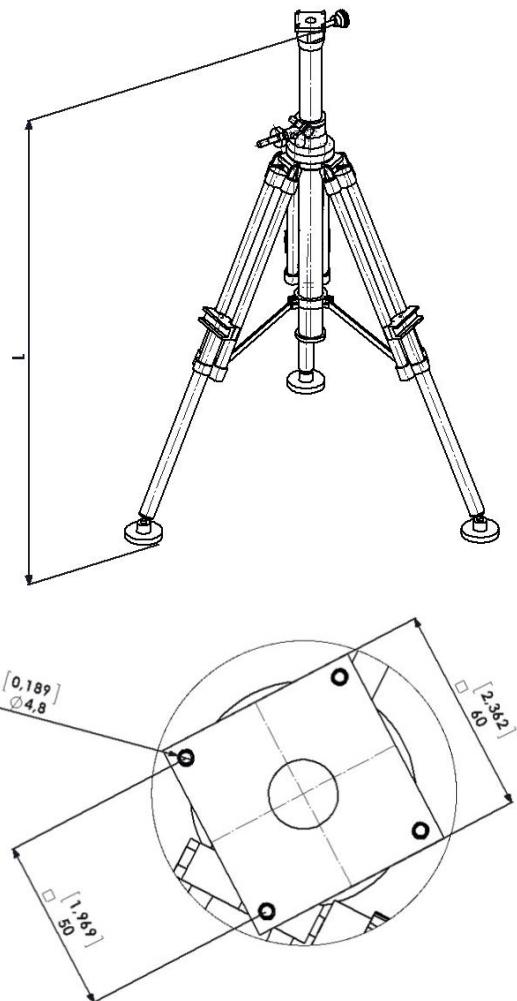
Adjustable mount for laser head 530

Anzahl Freiheitsgrade:	5
<i>Degrees of freedom:</i>	
Masse [g] / Weight :	1794
Bestell-Nr. / Order No.:	269302 - 4040 . 225



Montageplatte 529*Mounting plate 529***Masse [g] / Weight :** 362,6**Bestell-Nr. / Order No.:****269302 - 4041 . 310****Montagetubus für Optikmodule***Mounting tube for optic modules***Masse [g] / Weight :** 19,32**Bestell-Nr. / Order No.:****269302 - 5014 . 910**

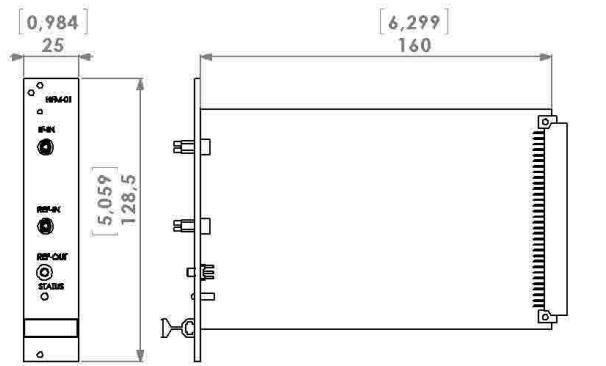
Stativ <i>Tripod</i>
Masse [g] / Weight : 3827
Bestell-Nr. / Order No.:
269302 - 4041 . 225
Aufbauhöhe (min): 665mm Aufbauhöhe (max): 1325mm <i>Assembly height (min):</i> 26.18" <i>Assembly height (max):</i> 55.16"



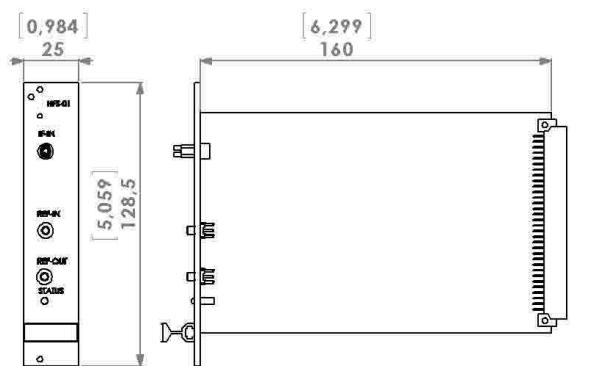
Auswerteeinheiten und Auswertesystem

Evaluation units and evaluation systems

Hoch Frequenz Messkarte (Master) <i>High frequency measuring card (master)</i>	
Masse [g] / Weight :	310
Bestell-Nr. / Order No.:	269302 - 5092 . 024
- Erweiterte Spezifikationen: <i>Ext. specifications:</i>	Signalaufbereitung <i>Signal processing</i>
Schnittstellen: <i>Interfaces:</i>	



Hoch Frequenz Messkarte (Slave) <i>High frequency measuring card (slave)</i>	
Masse [g] / Weight :	310
Bestell-Nr. / Order No.:	269302 - 5092 . 124
- Erweiterte Spezifikationen: <i>Ext. specifications:</i>	Signalaufbereitung <i>Signal processing</i>
Schnittstellen: <i>Interfaces:</i>	



Grundbox mit Powermodul (RE10+ET10/ET21 +IFM-01+IFS-01) – einachsig

Basic box with power module (RE10+ET10/ET21 +IFM-01+IFS-01) - multi-axis

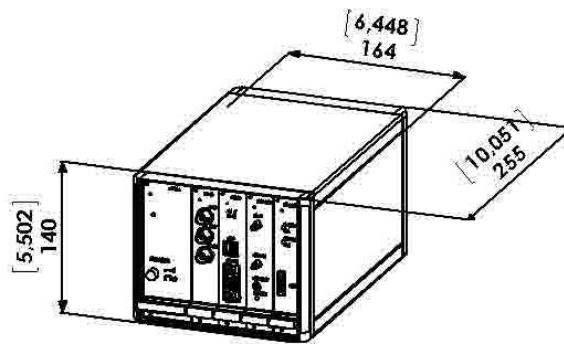
Anzahl der Auswerteeinheiten: 1...4

No. of Evaluation units:

Masse [g] / Weight: 4000

Bestell-Nr. / Order No.:

269302 – 5093 . 026

**Grundbox mit Powermodul (RE10+ET10/ET21 +IFM-01+IFS-01) – mehrachsig**

Basic box with power module (RE10+ET10/ET21 +IFM-01+IFS-01) - single-axis

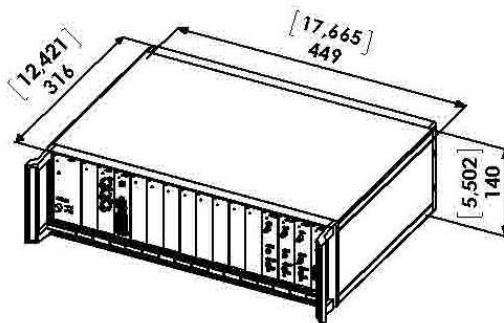
Anzahl der Auswerteeinheiten: 1...4

No. of Evaluation units:

Masse [g] / Weight: 5000

Bestell-Nr. / Order No.:

269302 – 5093 . 126



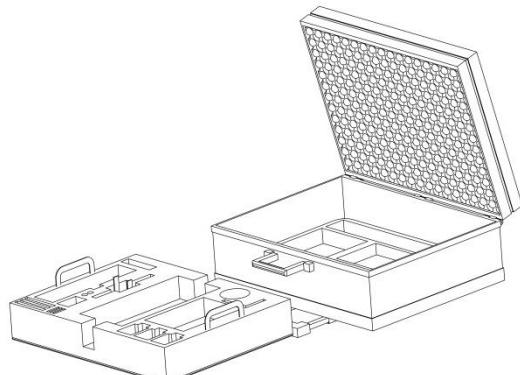
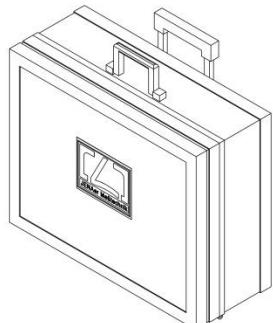
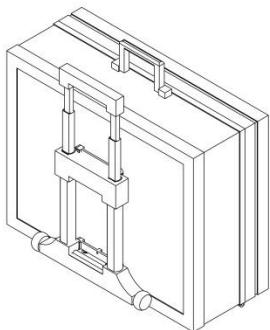
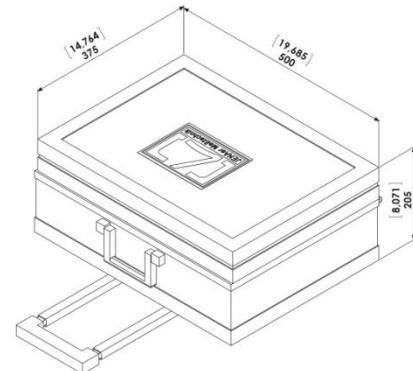
K. Aufbewahrungsbehälter*K. Storage boxes***Transportbehälter - Fluggepäck (mit abnehmbaren Rollensystem)***Transport box - flight luggage (with removable rollers system)*

Abmessung [mm]:	500 x 375 x 205
<i>Dimension [inch]:</i>	19.685 x 14.764 x 8.071

Masse [g] / Weight :	-
-----------------------------	---

Bestell-Nr. / Order No.:

269302 - 4003 . 626

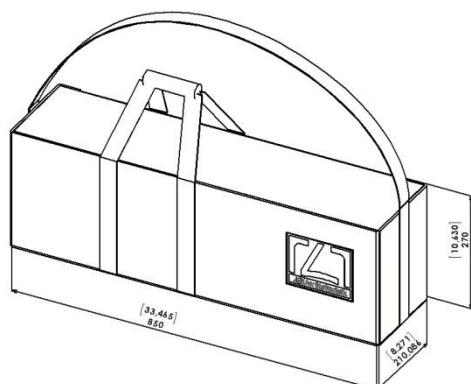
**Aufbewahrungstasche für Stativ und Justiertisch***Transport bag for tripod and adjustment table*

Abmessung [mm]:	1100 x 250 x 210
<i>Dimension [inch]:</i>	43.309 x 9.843 x 8.268

Masse [g] / Weight :	1286
-----------------------------	------

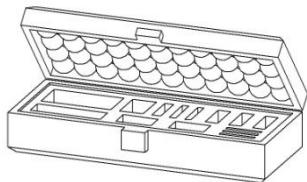
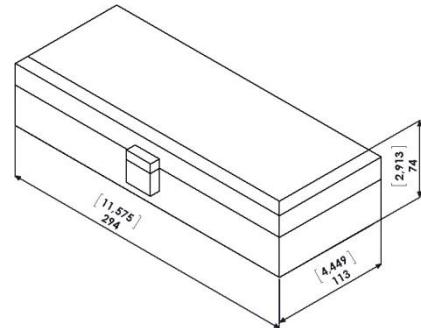
Bestell-Nr. / Order No.:

000000 - 4003 . 726

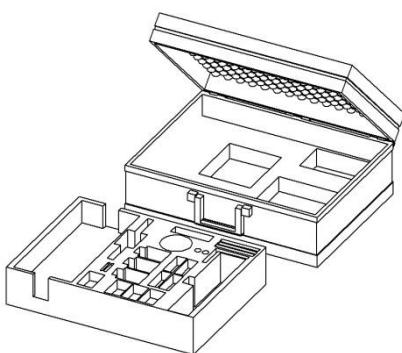
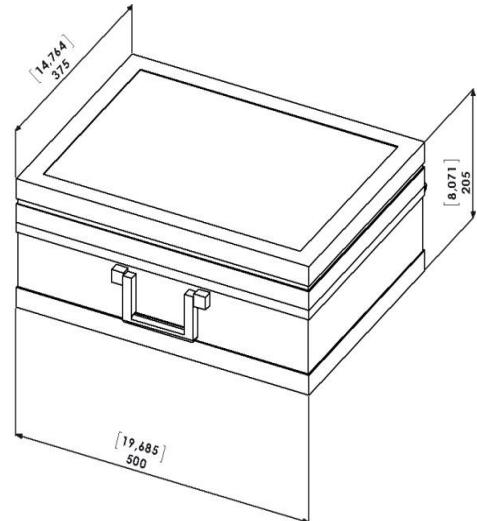


Aufbewahrungsbehälter für Optikmodule*Box for optic modules***Abmessung [mm]:** 285 x 103 x 66
Dimension [inch]: 11.221 x 4.055 x 2.598**Masse [g] / Weight :****Bestell-Nr. / Order No.:**

269302 - 4010 . 126

**Transportbehälter – Fluggepäck (für Auswahlsetz)***Transport case – flight hand luggage***Abmessung [mm]:** 485 x 357 x 157
Dimension [inch]: 19.094 x 14.055 x 6.181**Masse [g] / Weight :****Bestell-Nr. / Order No.:**

269302 - 4003 . 626



Transportbox für ZLM 800/ PCI / 1-12 - hybrid*Transport box for ZLM 800/ PCI / 1-12 - hybrid***Abmessung [mm]:***Dimension [inch]:*

766 x 616 x 761

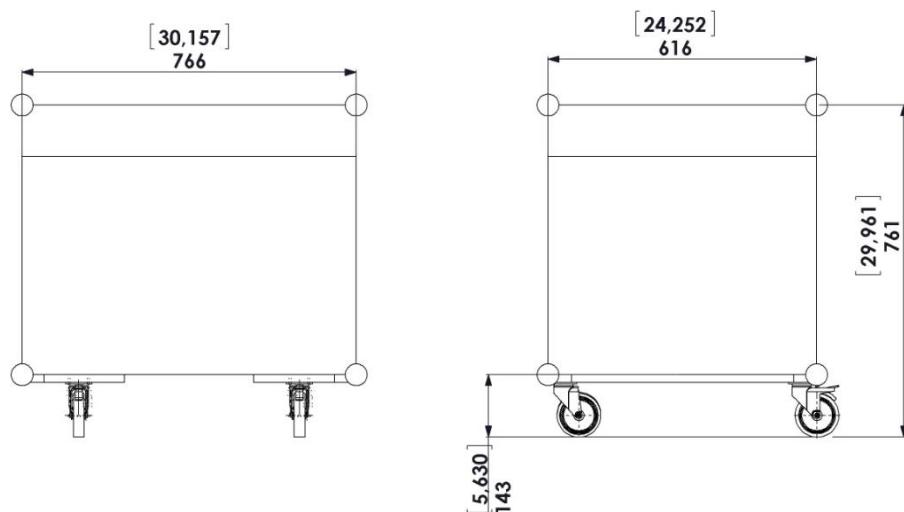
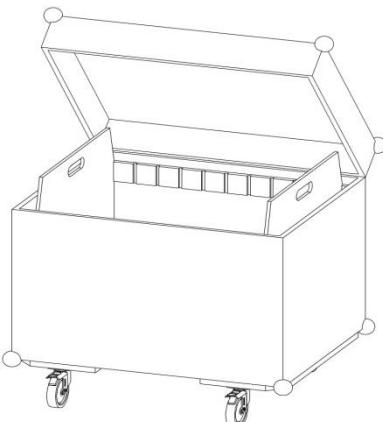
30.157 x 24.252 x 29.961

Masse [kg] / Weight :

ca. 32

Bestell-Nr. / Order No.:

000000 – 5001 . 370



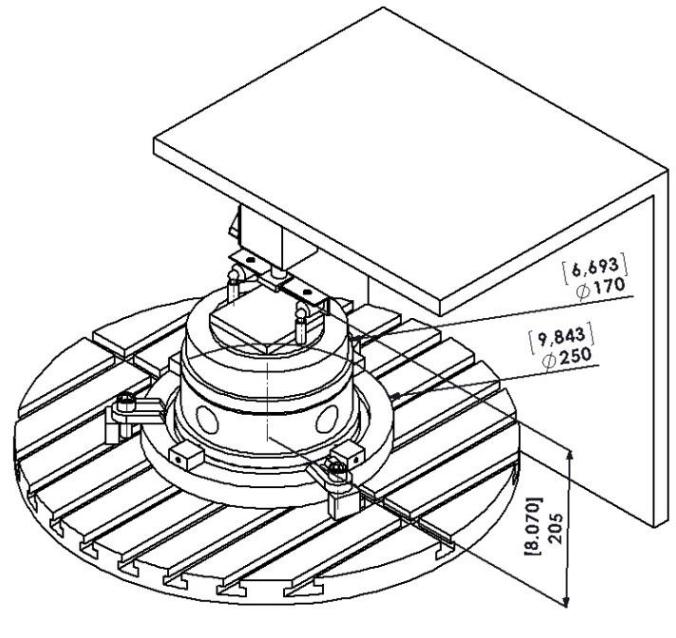
L. Zusatzgeräte

L. Extra equipment

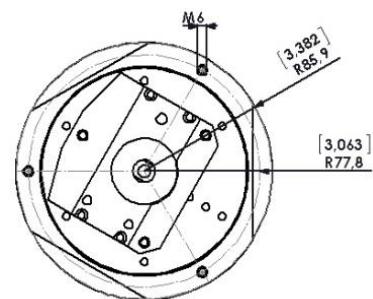
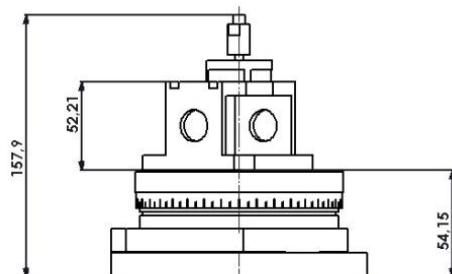
ZLM - Spezialzusatzeräte

ZLM – special extra devices

Rotarod 880/36000 <i>Rotarod 880/36000</i>	
Abmessung [mm]: <i>Dimension [inch]:</i>	$\varnothing 250 \times 205$ $\varnothing 9.843 \times 8.070$
Masse [g] / Weight :	13000
Bestell-Nr. / Order No.: 269302 – 6000 . 320	

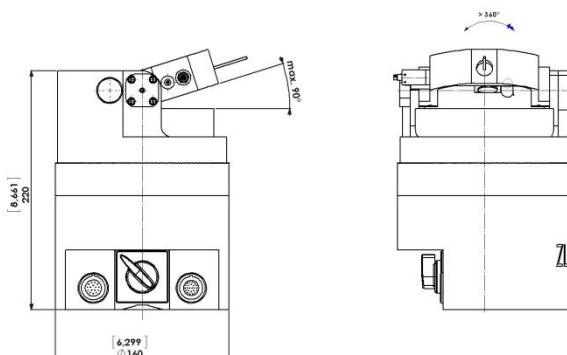


Bausatz für Vollwinkelmessung <i>Assembly set for full angle measurement</i>	
Abmessung [mm]: <i>Dimension [inch]:</i>	$\varnothing 171,8 \times 157,9$ $\varnothing 6.76 \times 6.21$
Masse [g] / Weight :	
Bestell-Nr. / Order No.: 269302 – 6000 . 200	



ZLP 200 (selbstkalibrierendes Differentialinterferometer)*ZLP 200 (self calibrating differential interferometer)*

Abmessung [mm]: <i>Dimension [inch]:</i>	$\varnothing 160 \times 220$ $\varnothing 6.299 \times 8.661$
Masse [g] / Weight :	
Bestell-Nr. / Order No.:	269305 – 5500 . 024
Erweiterte Spezifikationen: <i>Ext. specifications:</i>	Echtzeitsystem <i>Real-time system</i>
Winkelschrittauflösung (Azimut): <i>Angular step resolution (Azimuth):</i>	1,2"
Winkelschrittauflösung (Elevation): <i>Angular step resolution (elevation):</i>	12"
Rotationsmessabstand: <i>Rotation measurement distance:</i>	3 m
Messgenauigkeit: <i>Accuracy :</i>	100 nm



ZIC 05 Inclinometer*ZIC 05 Inclinometer*

Abmessung [mm]:	$\varnothing 160 \times 220$ $\varnothing 6.299 \times 8.661$
<i>Dimension [inch]:</i>	

Masse [g] / Weight :	
-----------------------------	--

Bestell-Nr. / Order No.:	269305 – 3500 . 026
---------------------------------	----------------------------

Erweiterte Spezifikationen:

<i>Ext. specifications:</i>	
-----------------------------	--

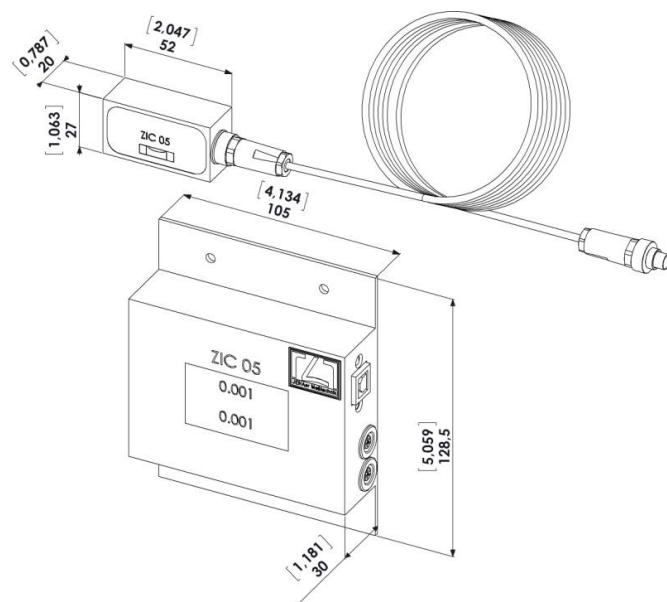
Messrate:	3 Hz
<i>Measurement rate:</i>	

Messbereich:	$\pm 10^\circ$	$\pm 3^\circ$	$\pm 1^\circ$
<i>Measurement range:</i>			

Messauflösung:	0,0003° 0.0003°	0,0001° 0.0001°	0,00005° 0.00005°
<i>Resolution:</i>			

Messgenauigkeit:	0,003° 0.003°	0,001° 0.001°	0,0005° 0.0005°
<i>Accuracy:</i>			

Lieferumfang: <i>Delivery items:</i>	Artikelnummer: Order No.	BESCHREIBUNG Name	MENGE Quantity
	269305 - 3500 . 024	ZIC 05 Sensor für 345 ZIC 05 sensor for 345	1
	269305 - 3501 . 024	ZIC 05 Verbindungskabel ZIC 05 connecting cable	1
	269305 - 3500 . 025	ZIC 05 Auswerteeinheit ZIC 05 Evaluation unit	1



Einstrahltaster 206*Single beam probe 206***Abmessung [mm]:**20 x 20 x 83,5
Dimension [inch]:

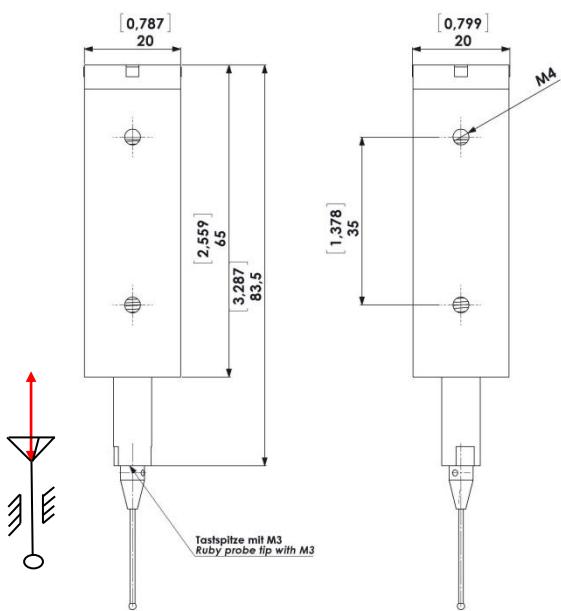
0.799 x 0.799 x 3.287

Masse [g] / Weight :

160

Bestell-Nr. / Order No.:

269302 – 5100 . 324



M. Software
M. Software

Dynamische Software (ZLM - ESOX Module)
Dynamic measurement software (ZLM - ESOX modules)

Wegmessung <i>Distance measuring</i>			
Bestell-Nr.: 269302 – 4026 . 624		<i>Order No.:</i> 269302- 4026 . 724	
Dynamische Messsoftware für Einachssysteme		<i>Dynamic measurement software for one axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
- Weg / Zeit	- Geschwindigkeit	- Distance / time	
- Beschleunigung	- Fourieranalyse	- Velocity	
- Leertaste		- Acceleration	
		- Fourier analysis	
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	- Timer - extern - Leertaste	<i>Trigger:</i>	- timer - external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Winkelmessung <i>Angle measurement</i>			
Bestell-Nr.: 269302 – 4026 . 824		<i>Order No.:</i> 269302- 4026 . 924	
Dynamische Messsoftware für Einachssysteme		<i>Dynamic measurement software for one axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
- Winkel / Zeit	- Winkelgeschwindigkeit	- Angle / time	
- Winkelbeschleunigung	- Fourieranalyse	- Angular velocity	
- Leertaste		- Angular acceleration	
		- Fourier analysis	
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	- Timer - extern - Leertaste	<i>Trigger:</i>	- timer - external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Dynamische Messsoftware für Mehrachssystemmessung <i>Dynamic measurement for multi axis systems</i>			
Bestell-Nr.: 269302 – 4027 . 224		Order No.: 269302- 4027 . 324	
Dynam. Messsoftware für Multiachssysteme		<i>Dynamic measurement software for multi axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
<ul style="list-style-type: none"> - Weg / Zeit - Geschwindigkeit - Beschleunigung - Winkel / Zeit - Winkelgeschwindigkeit - Winkelbeschleunigung - Geradheit - Gier- und Nickwinkel - Fourieranalyse - Statistik 		<ul style="list-style-type: none"> - Distance / time - Velocity - Acceleration - Angle / time - Angular velocity - Angular acceleration - Straightness - Yaw- and pitch angle - Fourier analysis - Statistic 	
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	<ul style="list-style-type: none"> - Timer - extern - Leertaste 	<i>Trigger:</i>	<ul style="list-style-type: none"> - timer - external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Kalibriersoftware (ZLM - ESOX Module)
Calibration software (ZLM - ESOX modules)

Positionsmessung <i>Position measurement</i>			
Bestell-Nr.: 269302 – 4027 . 024		Order No.: 269302- 4027 . 124	
Dynamische Messsoftware für Einachssysteme		<i>Dynamic measurement software for one axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
Verfahrensrichtlinien: <ul style="list-style-type: none"> - ISO 230 - VDI 3441 - VDI 2617 - NMTBA (Linear, Pendelschritt, Quasipilger u. Unidirektonal)		Procedure direction: <ul style="list-style-type: none"> - ISO 230 - VDI 3441 - VDI 2617 - NMTBA (linear, pendular step, quasi-pilger & unidirectional)	
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	<ul style="list-style-type: none"> - Timer - extern - Leertaste 	<i>Trigger:</i>	<ul style="list-style-type: none"> - timer - external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Winkel- und Geradheitsmessung <i>Angle and straightness measurement</i>			
Bestell-Nr.: 269302 – 4026 . 024		Order No.: 269302- 4026 . 124	
Dynamische Messsoftware für Einachssysteme		<i>Dynamic measurement software for one axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
- Winkel	- Geradheit	- Angle	- Straightness
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	- extern - Leertaste	<i>Trigger:</i>	- external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Ebenheitsmessung <i>Flatness measurement</i>			
Bestell-Nr.: 269302 – 4027 . 424		Order No.: 269302- 4027 . 524	
Dynamische Messsoftware für Einachssysteme		<i>Dynamic measurement software for one axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
Verfahrensrichtlinien: - Cross Jack - Union Jack		Procedure direction: - Cross Jack - Union jack	
Datenexport:	ASCII	<i>Data export:</i>	ASCII
Startauslösung:	- extern - Leertaste	<i>Trigger:</i>	- external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Kalibriersoftware für Mehrachssysteme <i>Calibration software for multi axis systems</i>			
Bestell-Nr. : 269302 – 4028 . 224		Order No.: 269302- 4028 . 324	
Dynamische Messsoftware für Mehrachssysteme		<i>Dynamic measurement software for multi axis systems</i>	
Sprachunterstützung: Deutsch		<i>Language support: English</i>	
- Weg - Winkel - Geradheit - Gier und Nickwinkel (Linear, Pendelschritt, Quasipilger u. Unidirektonal)		- Distance - Angle - Straightness - Yaw and pitch angle (linear, pendular step, quasi-pilger & unidirectional)	
Datenexport:	ASC II	<i>Data export:</i>	ASCII
Startauslösung:	- extern - Leertaste	<i>Trigger:</i>	- external - space
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>			

Kalibriersoftware für Maschinenfehlerkompensation (ZLM - ESOX Module)
Calibration software for machine error compensation (ZLM - ESOX modules)

System Sinumerik <i>System Sinumerik</i>	
Bestell-Nr.: 269302 – 4026 . 224	<i>Order No.:</i> 269302- 4026 . 324
Sprachunterstützung: Deutsch	<i>Language support: English</i>
Steuerungen	<i>Controller:</i>
<ul style="list-style-type: none"> - Siemens 800 series - Siemens 840D 	
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

System FANUC <i>System FANUC</i>	
Bestell-Nr.: 269302 – 4027 . 824	<i>Order No.:</i> 269302- 4027 . 924
Sprachunterstützung: Deutsch	<i>Language support: English</i>
Steuerungen	<i>Controller:</i>
<ul style="list-style-type: none"> - Fanuc 0, 00 - Fanuc 10, 11, 12, 100, 110, 120 - Fanuc 15 -Fanuc 16, 18, 21, 160, 180, 210 - Fanuc 30, 31, 32, 300, 310, 320 	
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

System Heidenhain <i>System Heidenhain</i>	
Bestell-Nr.: 269302 – 4028 . 624	<i>Order No.:</i> 269302- 4028 . 724
Sprachunterstützung: Deutsch	<i>Language support: English</i>
Steuerungen:	<i>Controller:</i>
<ul style="list-style-type: none"> - Heidenhain TNC 426, 430, iTNC 530 - Heidenhain ND 221B, 231B, 281B - Heidenhain ND 720, 760 	
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

System Beckhoff <i>System Beckhoff</i>	
Bestell-Nr.: 269302 – 4028 . 024	<i>Order No.:</i> 269302- 4028 . 124
Sprachunterstützung: Deutsch	<i>Language support: English</i>
Steuerungen:	<i>Controller:</i> - Beckhoff TwinCAT CNC
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

Umwelt- und Materialkompensationssoftware
Environment and material compensation software

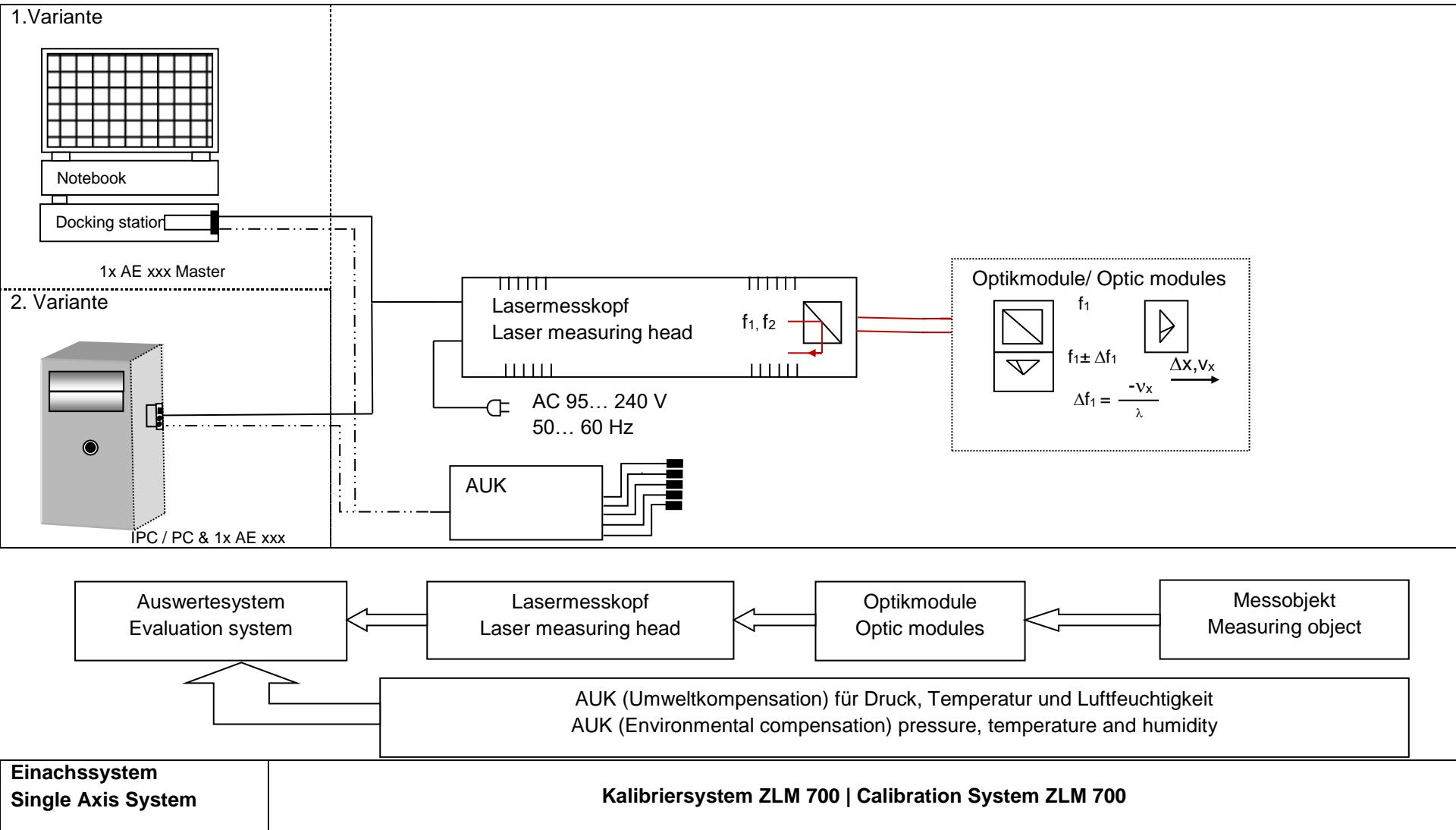
ZLM Temp Kompensation <i>ZLM Temp compensation</i>	
Bestell-Nr.: 269302 – 4028 . 824	<i>Order No.:</i> 269302- 4028 . 924
Sprachunterstützung: Deutsch	<i>Language support: English</i>
Benötigte Zusatzeinheiten: Required units:	<i>AUK</i> TEMP 14
Maximale Anzahl Temperatursensoren (für Umweltkompensation ZLM) : <i>Max. number of temperature sensors (environment compensation of ZLM):</i>	5 16* * ... TEMP14
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

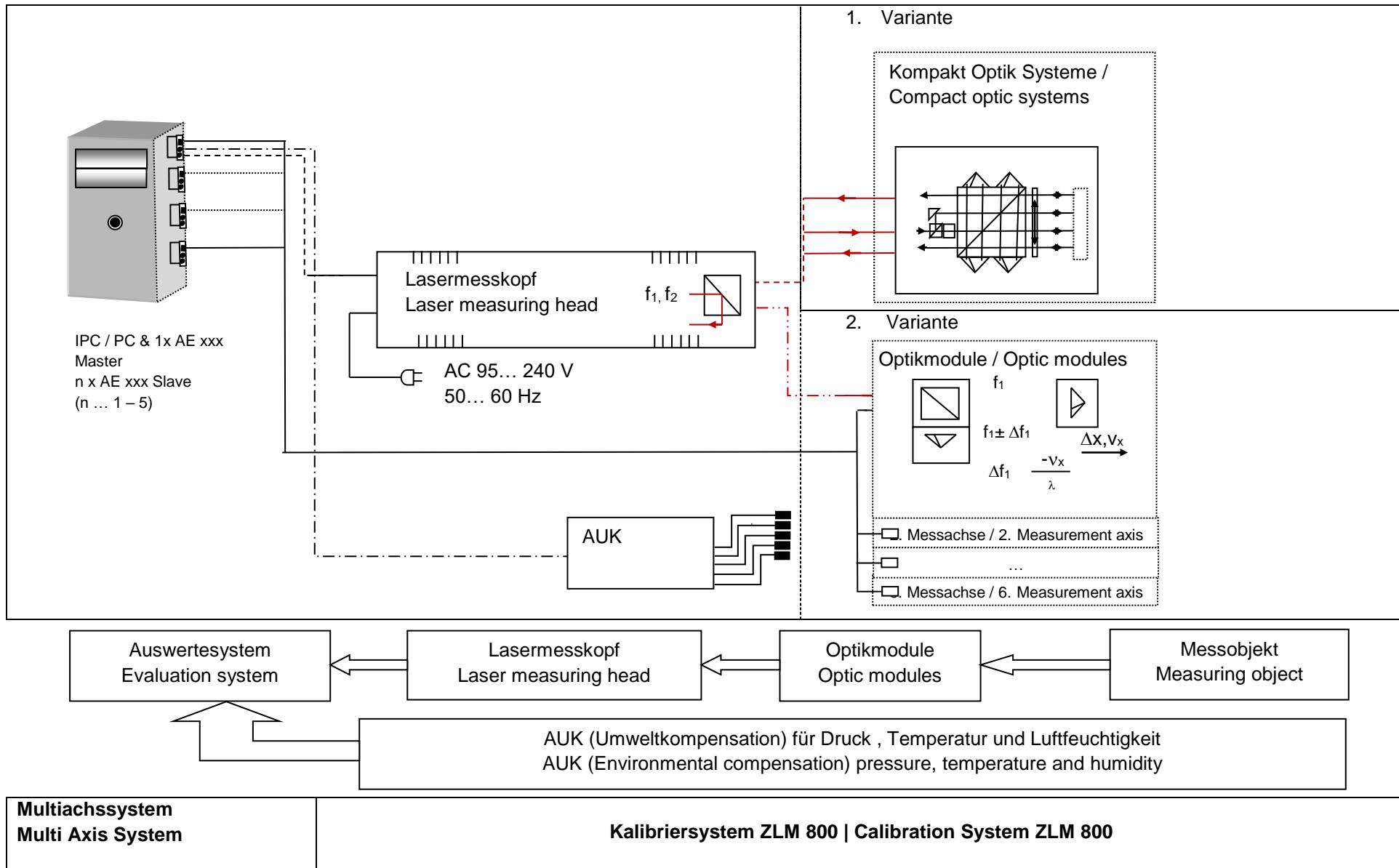
Auswertesoftware LT ARS / ZFM 407 - FluDi
Evaluation software LT ARS / ZFM 407 - FluDi

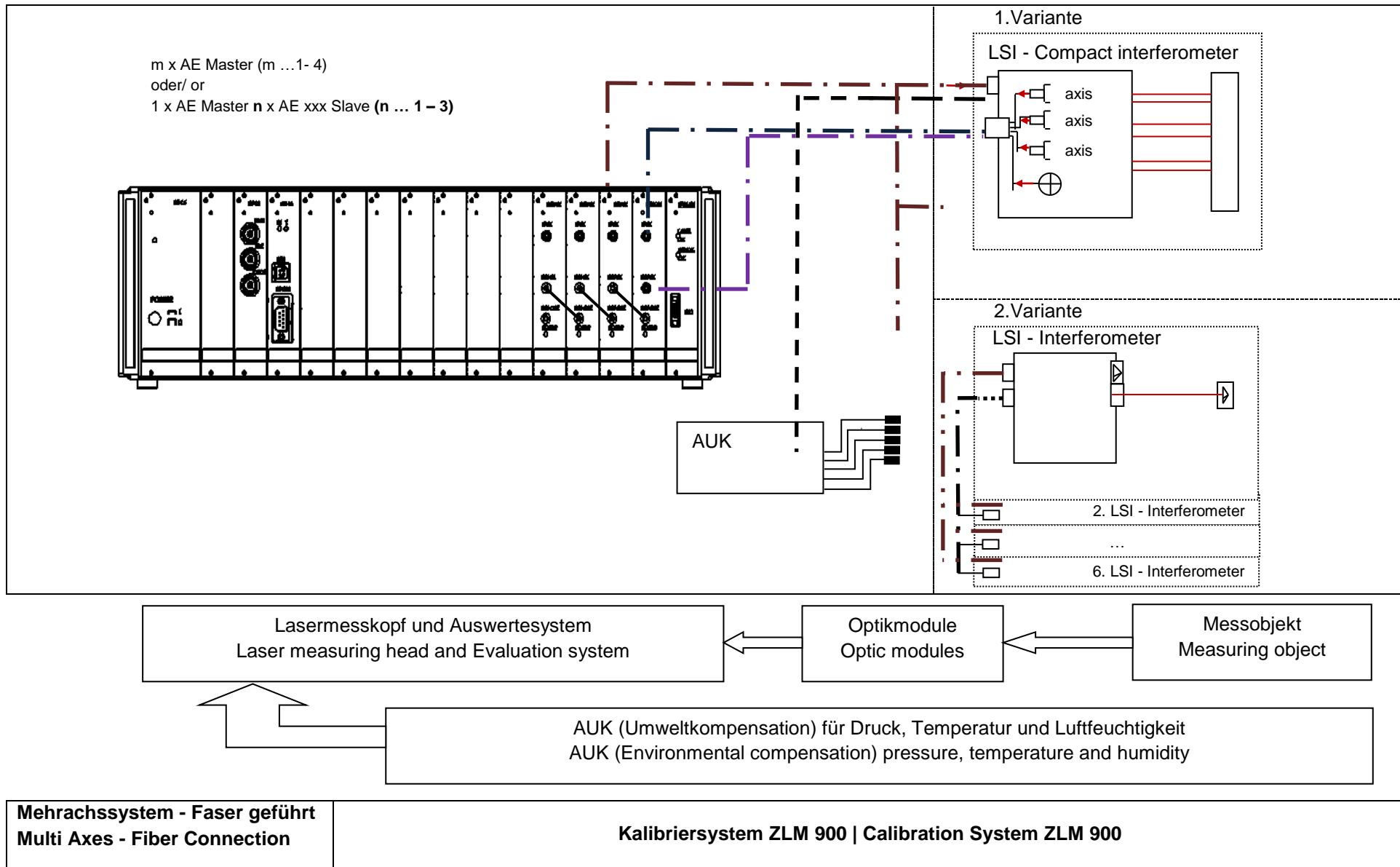
Dynamic ARS <i>Dynamic ARS</i>	
Bestell-Nr.: <i>Order No.:</i>	269302- 4028 . 924
für Windows 7, 8, 10 (32bit, 64bit) <i>for Windows 7, 8, 10 (32bit, 64bit)</i>	

N. Übersicht (Grundaufbau und Beispiele)

N. Overview (basic setup and examples)







Toleranzarten

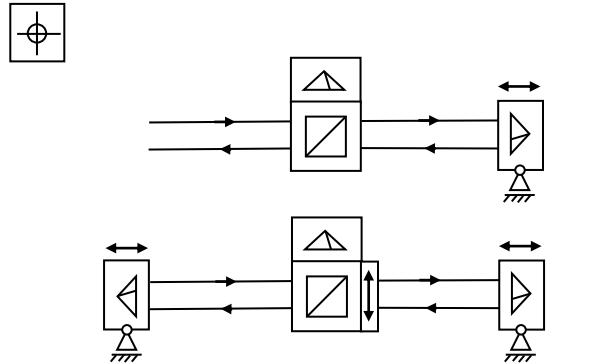
Tolerance types

Art Type	Gruppe Group	Geometrische Eigenschaft <i>Geometric property</i>	Symbol
Lagetoleranzen <i>Position tolerances</i>	Richtungstoleranzen <i>Directional tolerances</i>	Parallelität <i>Parallelism</i>	//
		Rechtwinkligkeit <i>Rectangularity</i>	L
		Winkligkeit <i>Angularity</i>	V
	Ortstoleranzen <i>Location tolerances</i>	Position	○+
		Koaxialität <i>Coaxiality</i> Konzentrizität <i>Concentricity</i>	○○
		Symmetrie <i>Symmetry</i>	--
Formtoleranzen <i>Shape tolerances</i>	Laufftoleranzen <i>Running tolerances</i>	Rundlauf <i>Round trip</i>	→
		Gesamtrundlauf <i>Total round trip</i>	→→
	Flachform- toleranzen <i>Flat forming tolerances</i>	Geradheit <i>Straightness</i>	—
		Ebenheit <i>Flatness</i>	□
	Rundlauftolera- zen <i>Concentricity tolerances</i>	Rundheit <i>Roundness</i>	○
		Zylindrizität <i>Roundness</i>	○
Profiltoleranzen <i>Profile tolerances</i>		Profiltoleranz der Linie <i>Profile tolerance of the line</i>	D
		Profiltoleranz der Ebene <i>Profile tolerance of the plane</i>	D

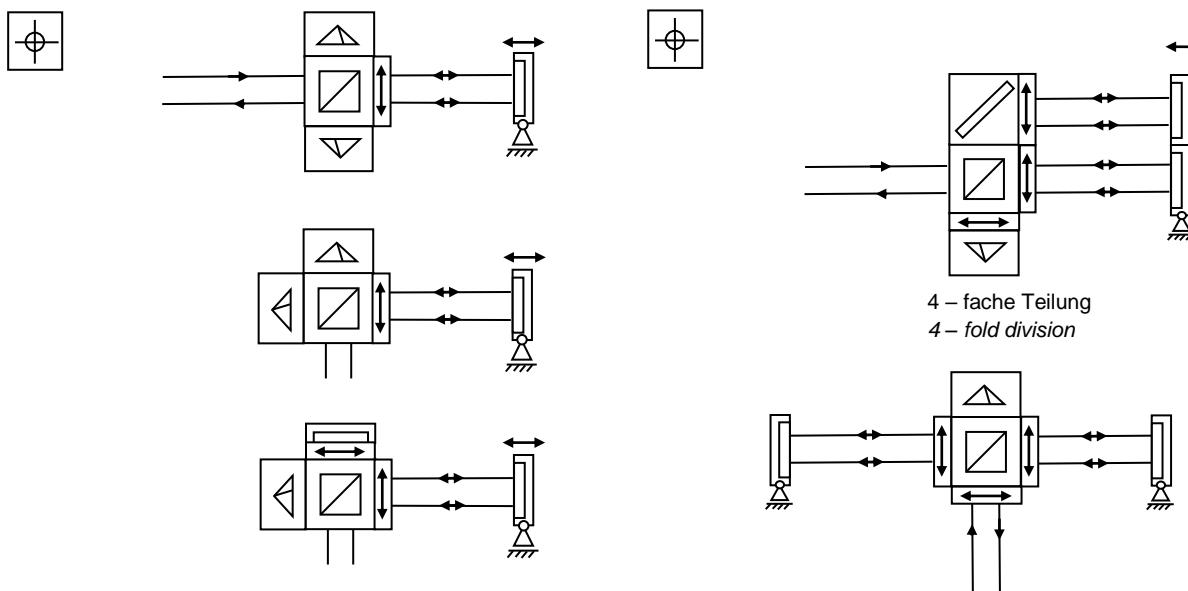
Systemvarianten - Basismodule
System variants – basis modules

	Tripelreflektor Cube corner reflector
	Polarisationsstrahlteiler Polarizing beam splitter
	Planspiegel Plane mirror
	$\lambda/4$ Platte Quarter wave plate
	90° Umlenker 90° Beam bender

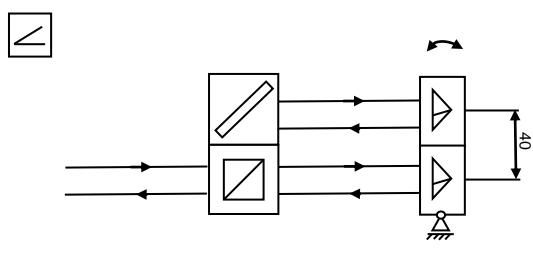
Streckenmessung mit Tripelreflektor
Distance measurement with Cube corner reflector



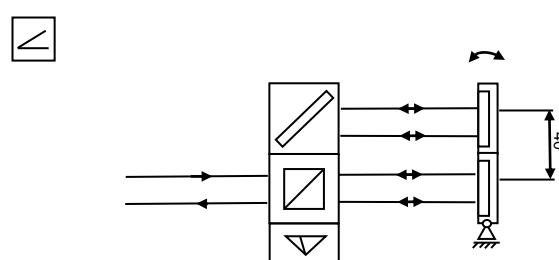
Streckenmessung mit Planspiegelreflektor
Distance measurement with Plane mirror reflector



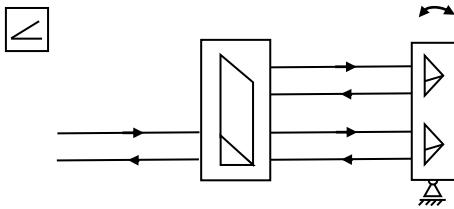
Winkelmessung mit Tripelreflektoren
Angle measurement with Cube corner reflectors



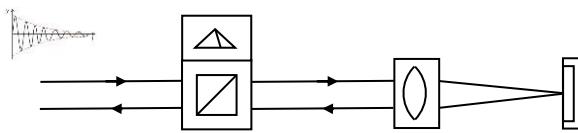
Winkelmessung mit Planspiegelreflektoren
Angle measurement with Plane mirror reflectors



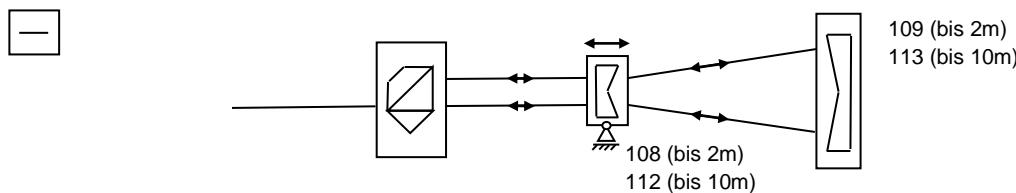
Winkelmessung mit Doppelreflektor *Angle measurement with Double cube corner reflectors*



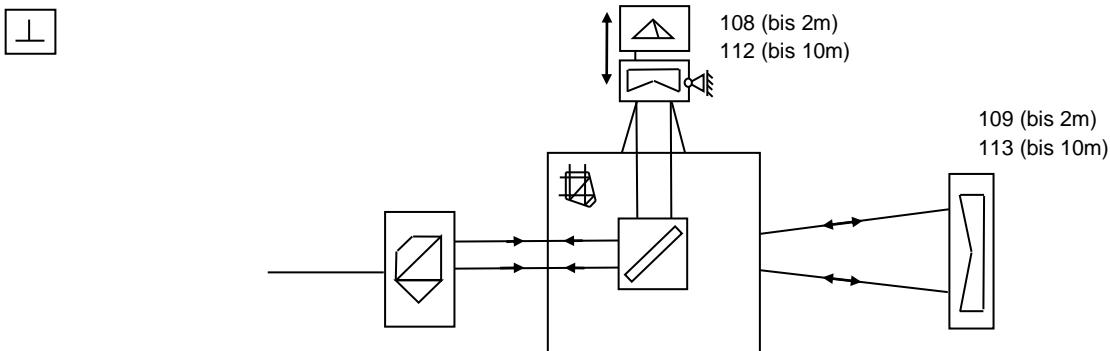
Schwingungsmessung (2,5nm Auflösung)
Vibration measurement (2.5nm resolution)



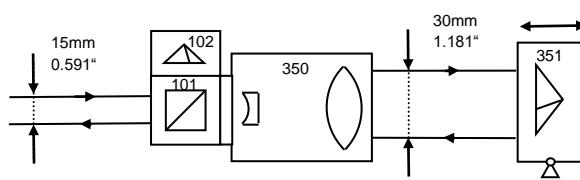
Geradheitsmessung
Straightness measurement



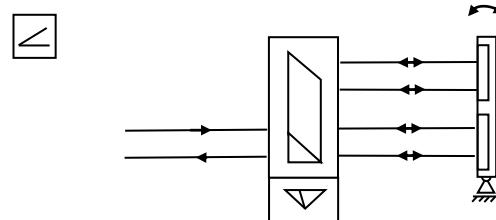
Rechtwinkeligkeitsmessung *Squareness measurement*



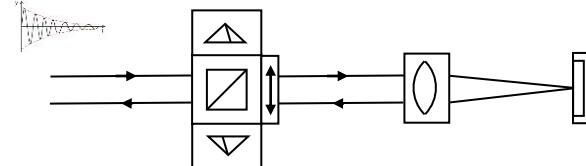
Vergrößerung des Strahldurchmessers und
-abstandes für Streckenmessung bis 120m
Widening the beam diameter and beam distance
for distance measurements up to 390 ft



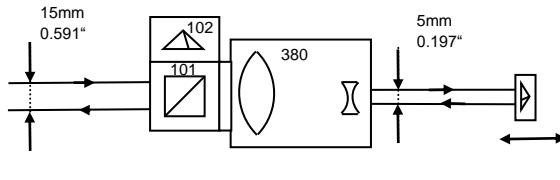
Winkelmessung mit Planspiegelreflektor

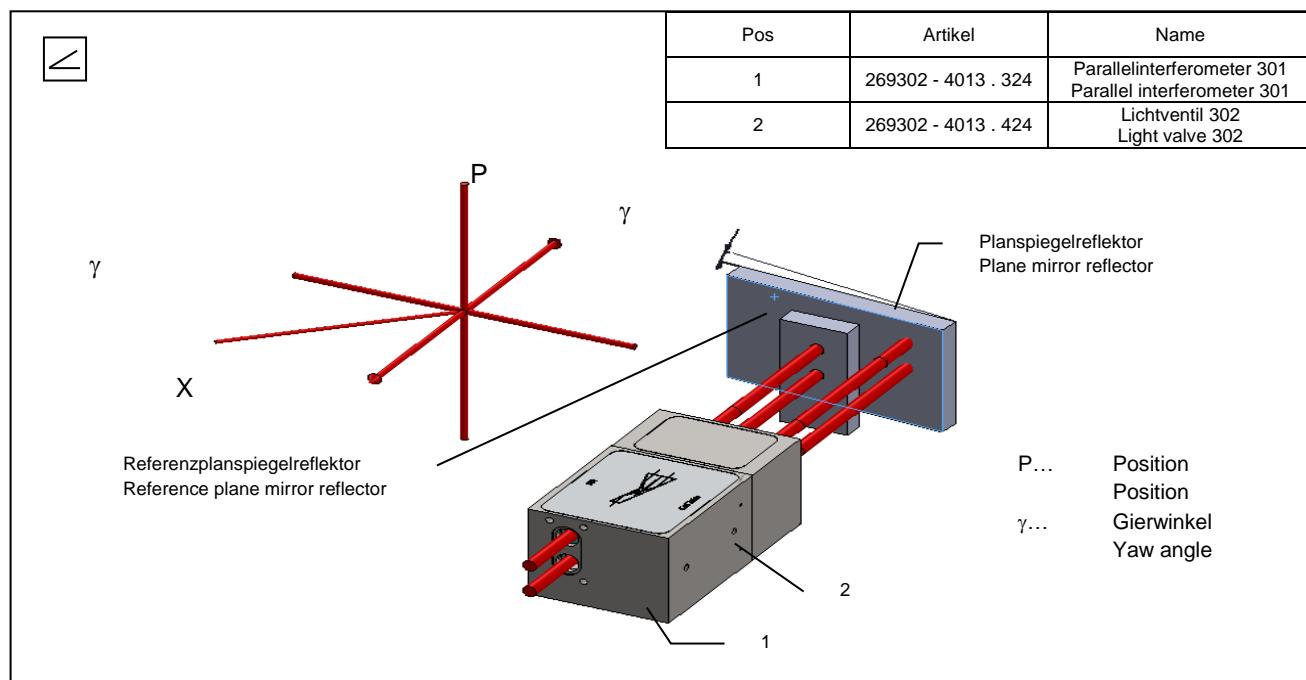
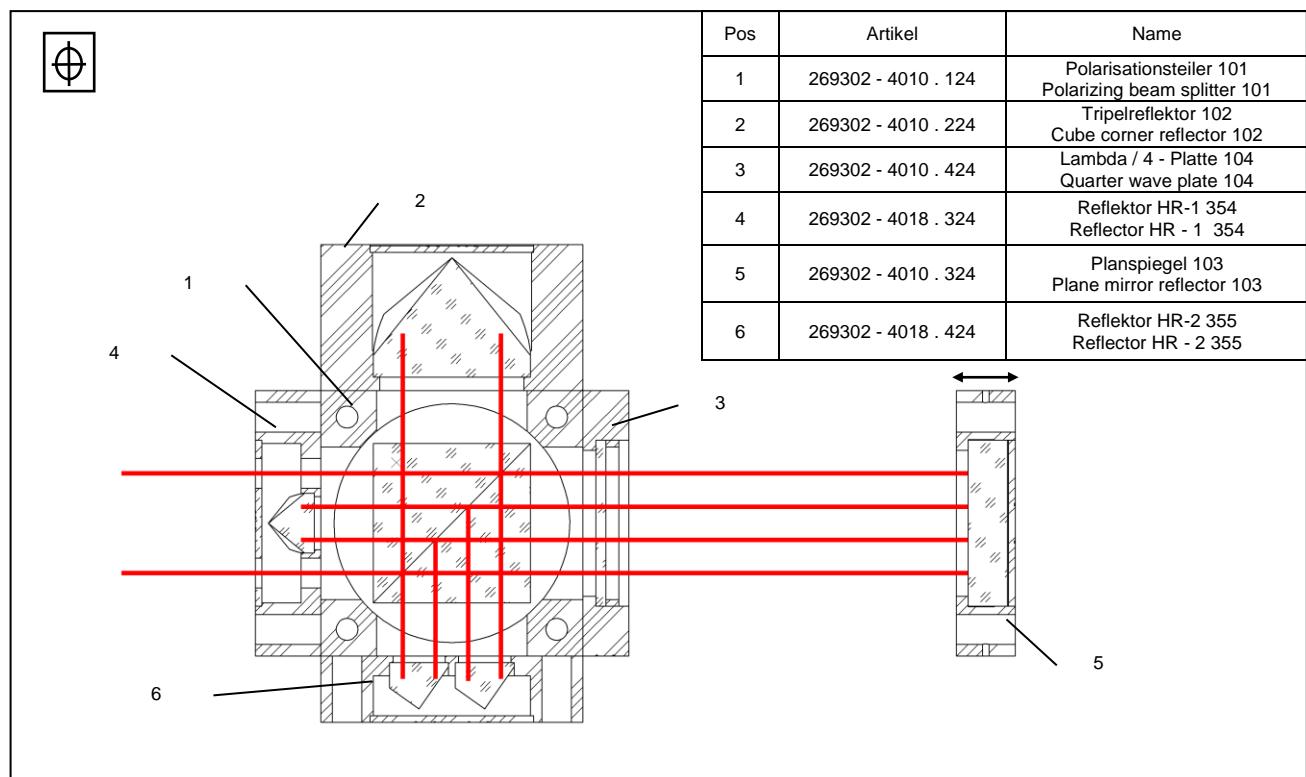


Schwingungsmessung (1,25nm Auflösung)
Vibration measurement (1.25nm resolution)



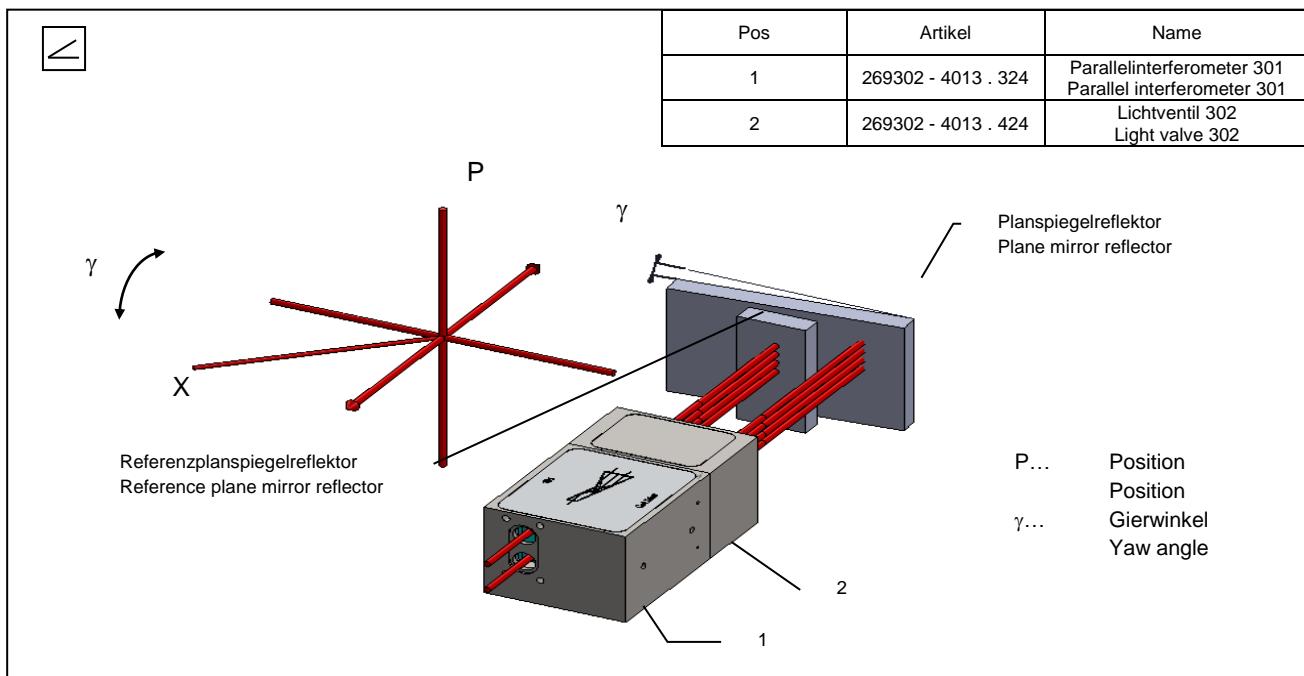
Reduzierung des Strahlabstandes für geringe
Reflexionsfläche (Streckenmessung bis 12m)
*Reducing the beam spacing for the smallest reflection
surface (distance measurement up to 39ft)*



Hochauflösendes Interferometer mit 8-facher Strahlführung (Auflösung 0,15nm)
High resolution interferometer with 8-fold beam path (resolution 0.15nm)


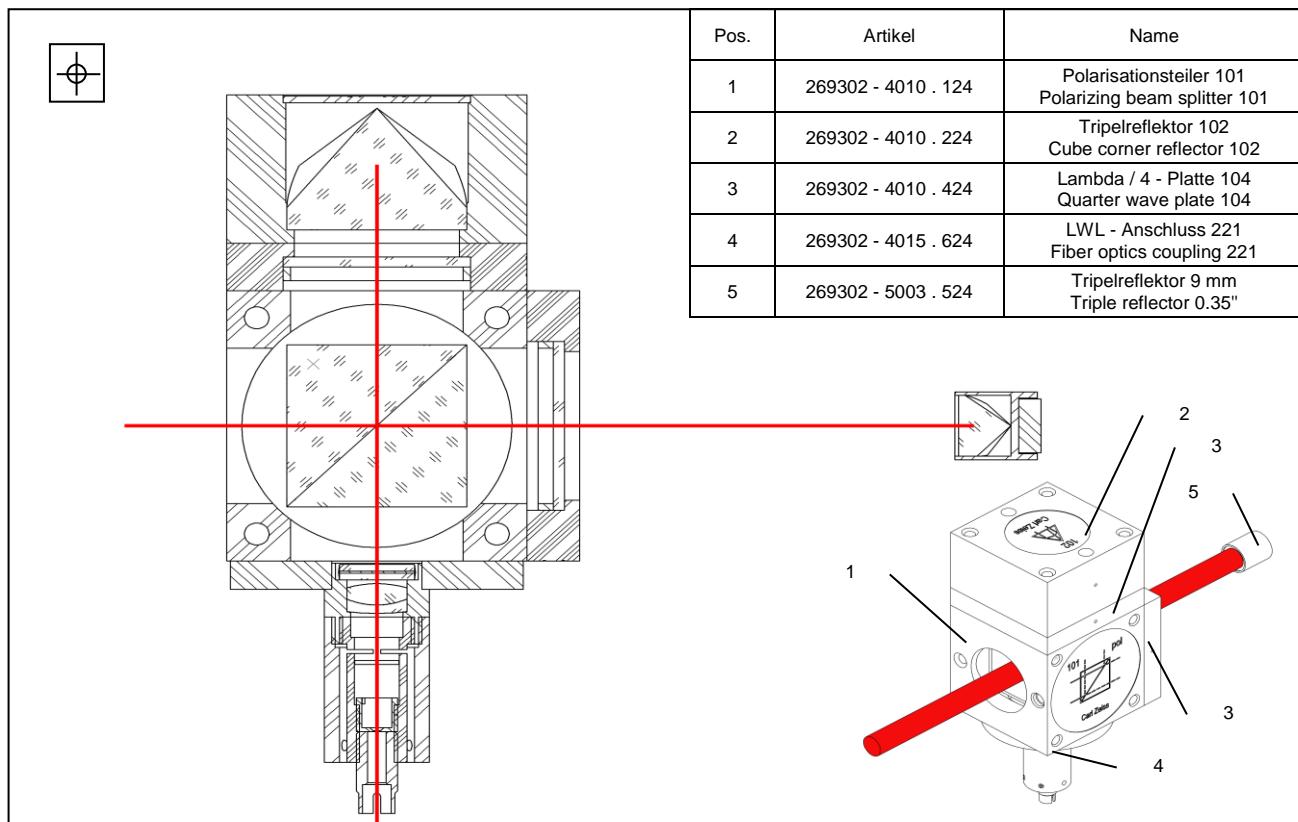
Parallel - Planspiegelinterferometer 301 mit Lichtventil 308 (Strahldurchmesser 3mm & 0,32nm Auflösung)

Parallel plane mirror interferometer 301 with Light valve 308 (beam diameter 3mm & 0.32nm resolution)



Einstrahl- Messung mit LWL – Auskopplung

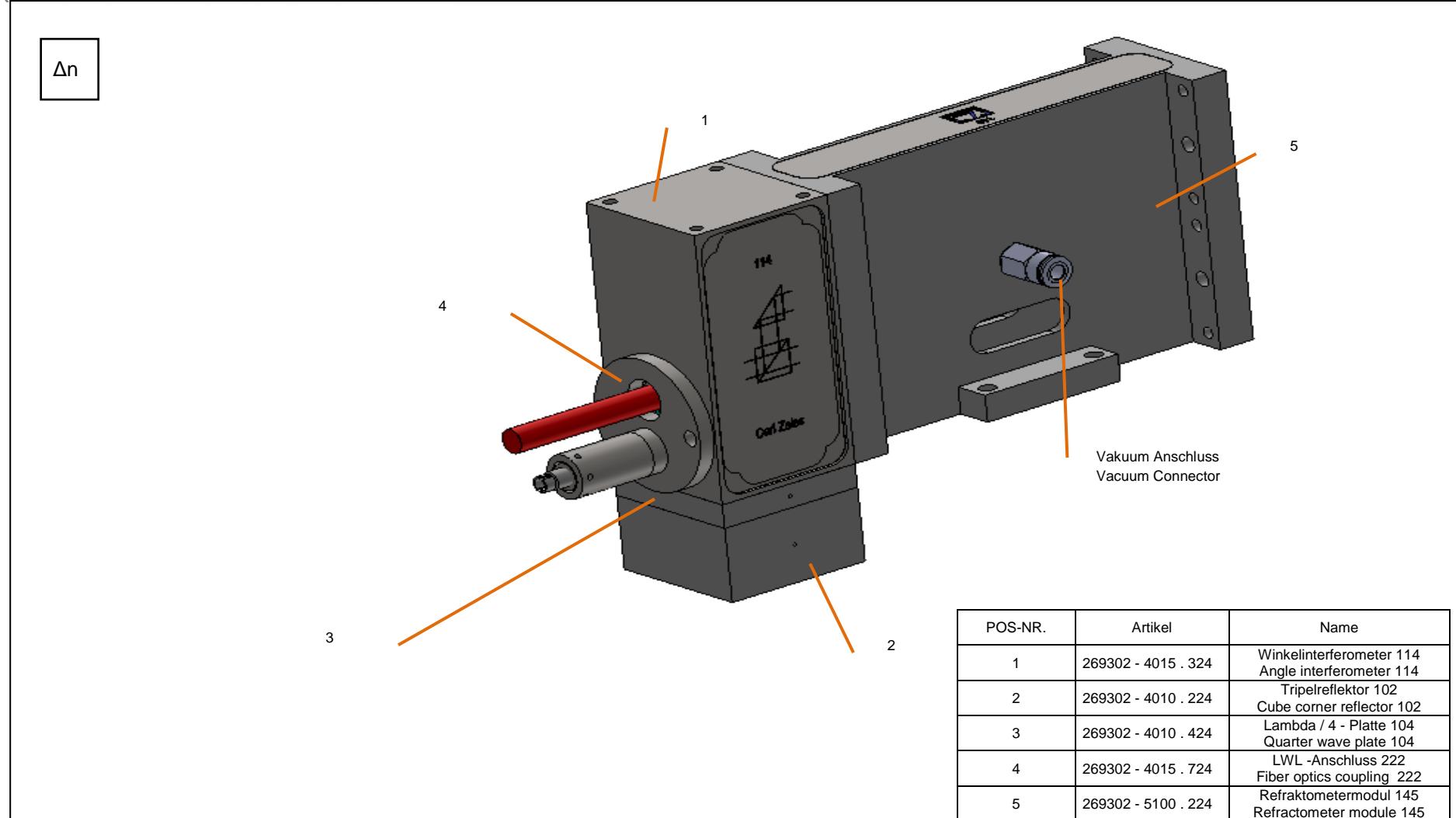
Single beam measurement with fiber output coupling

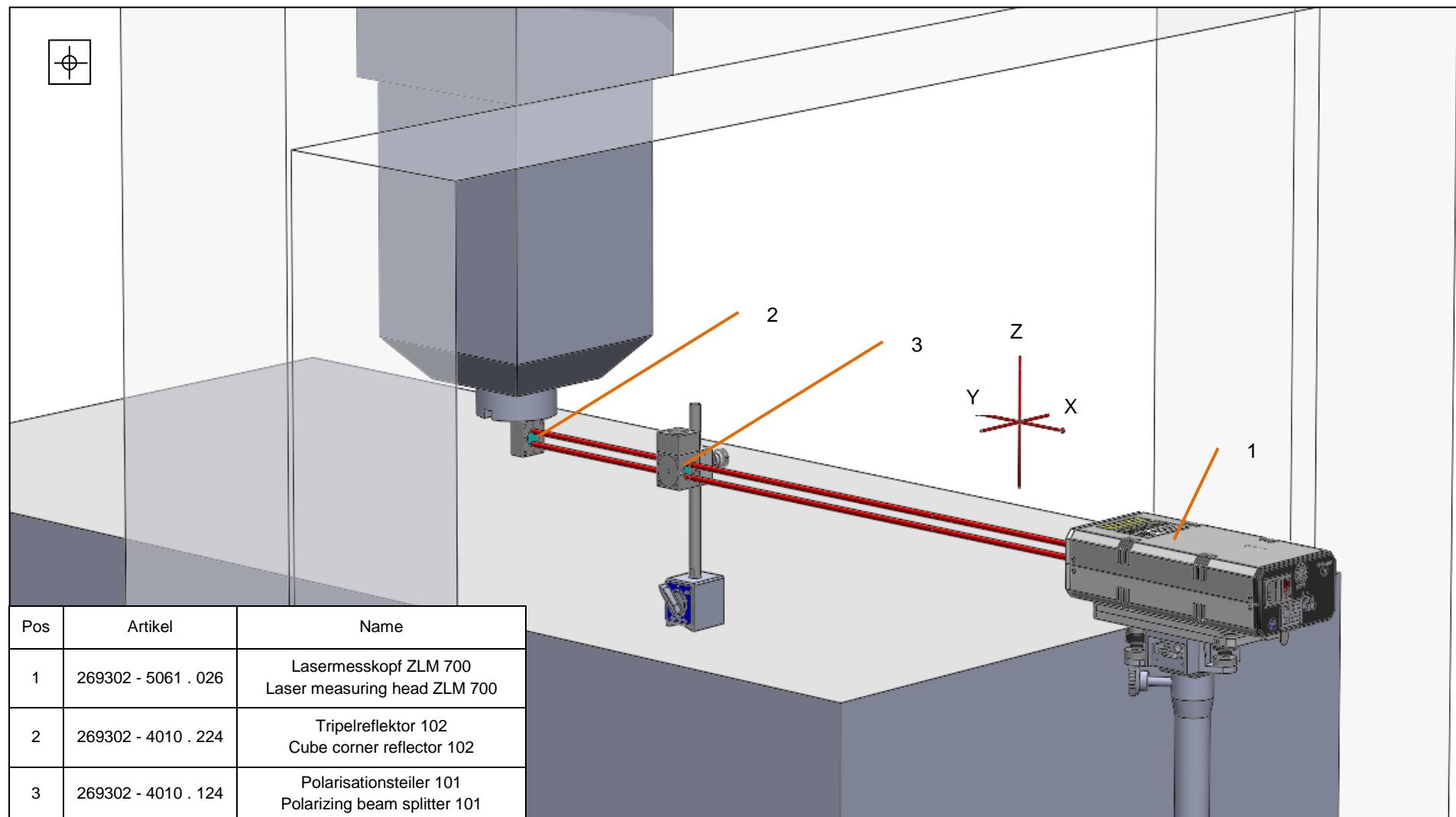


Bausatz zur optischen Wellenlängenkompensation / Brechzahlbestimmung

Assembly for optical wavelength compensation / Refraction index identification

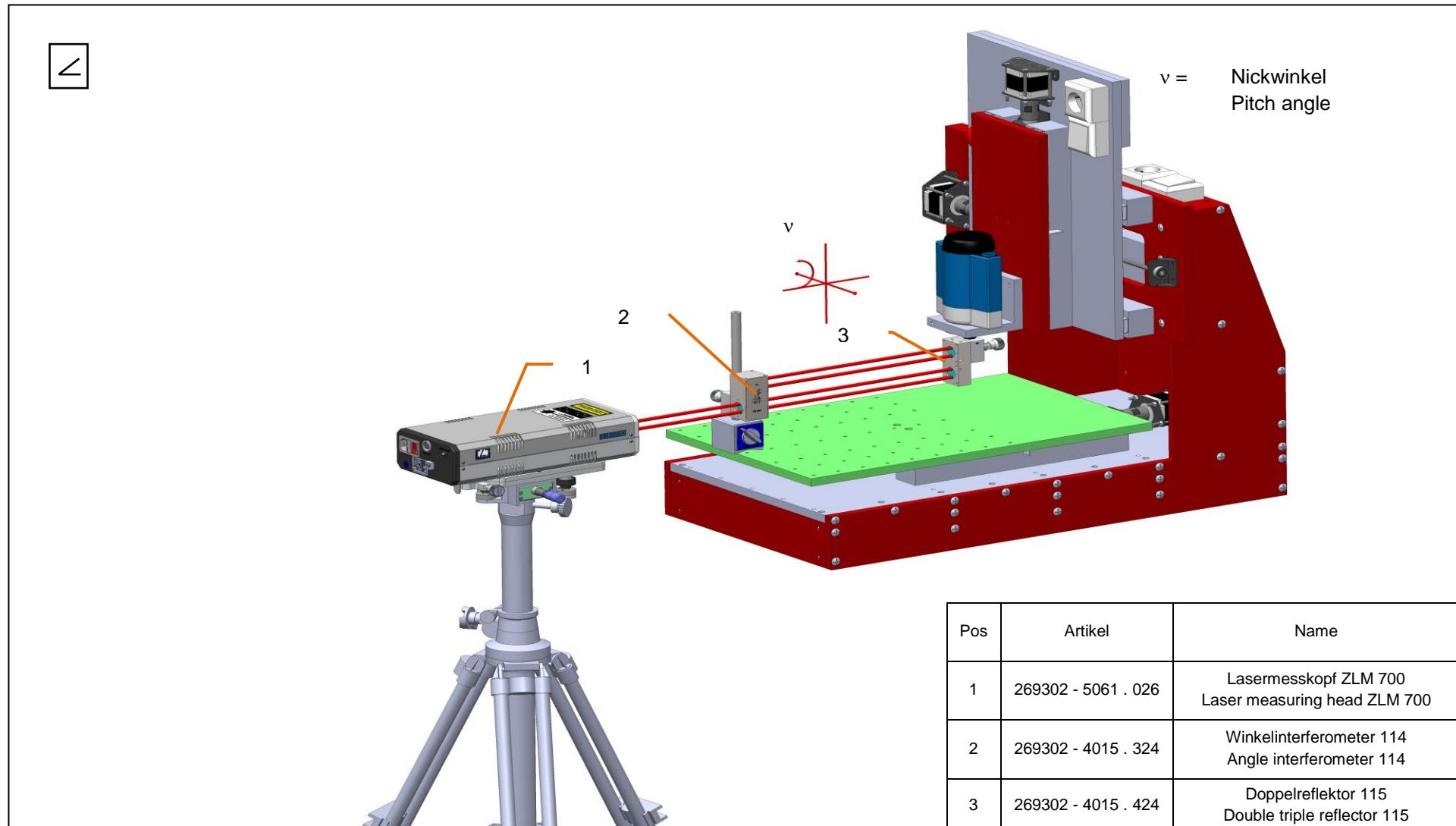
Klicken oder tippen Sie hier um Text einzugeben



Beispiel – Positionsmessung - ZLM 700
Example – Position measurement - ZLM 700

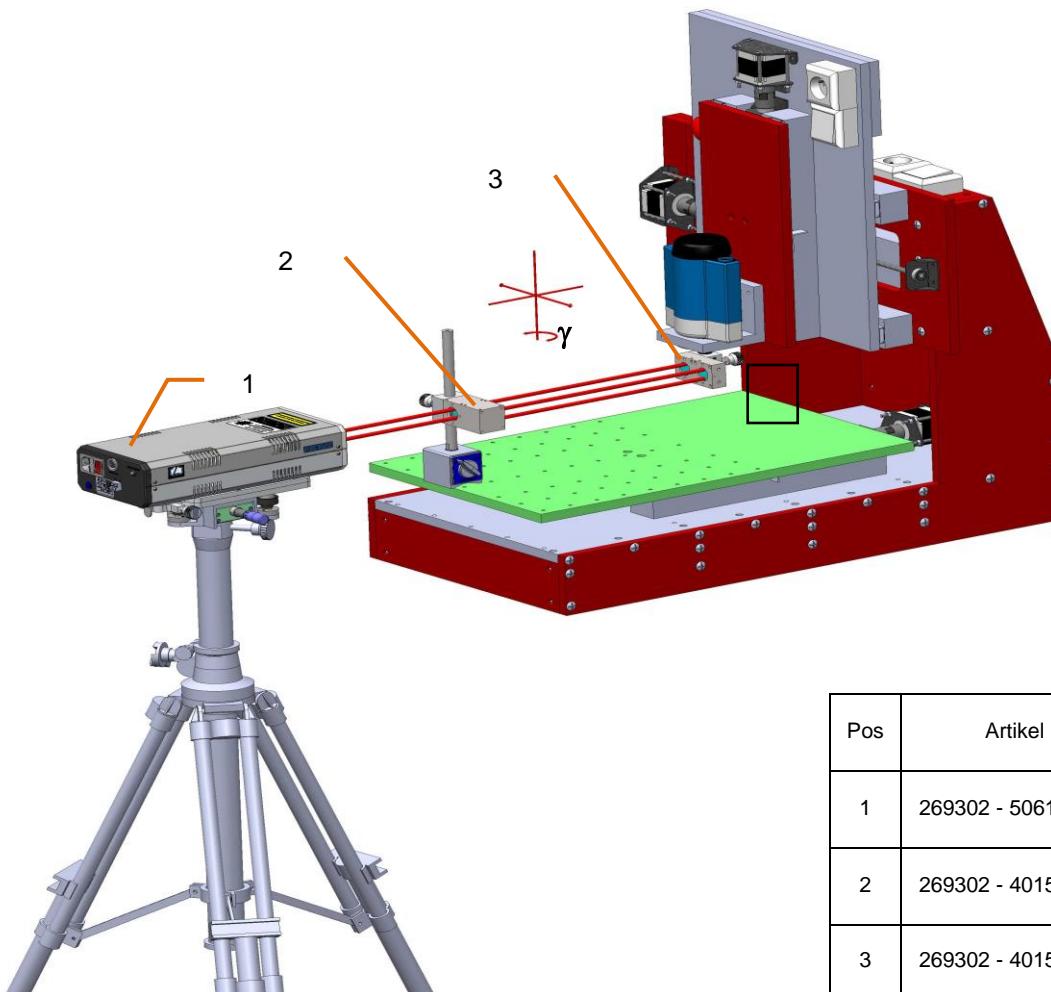
Winkelmessung – Bestimmung des Nickwinkels – ZLM 700

Pitch angle measurement – ZLM 700



Winkelmessung – Bestimmung des Gierwinkels – ZLM 700

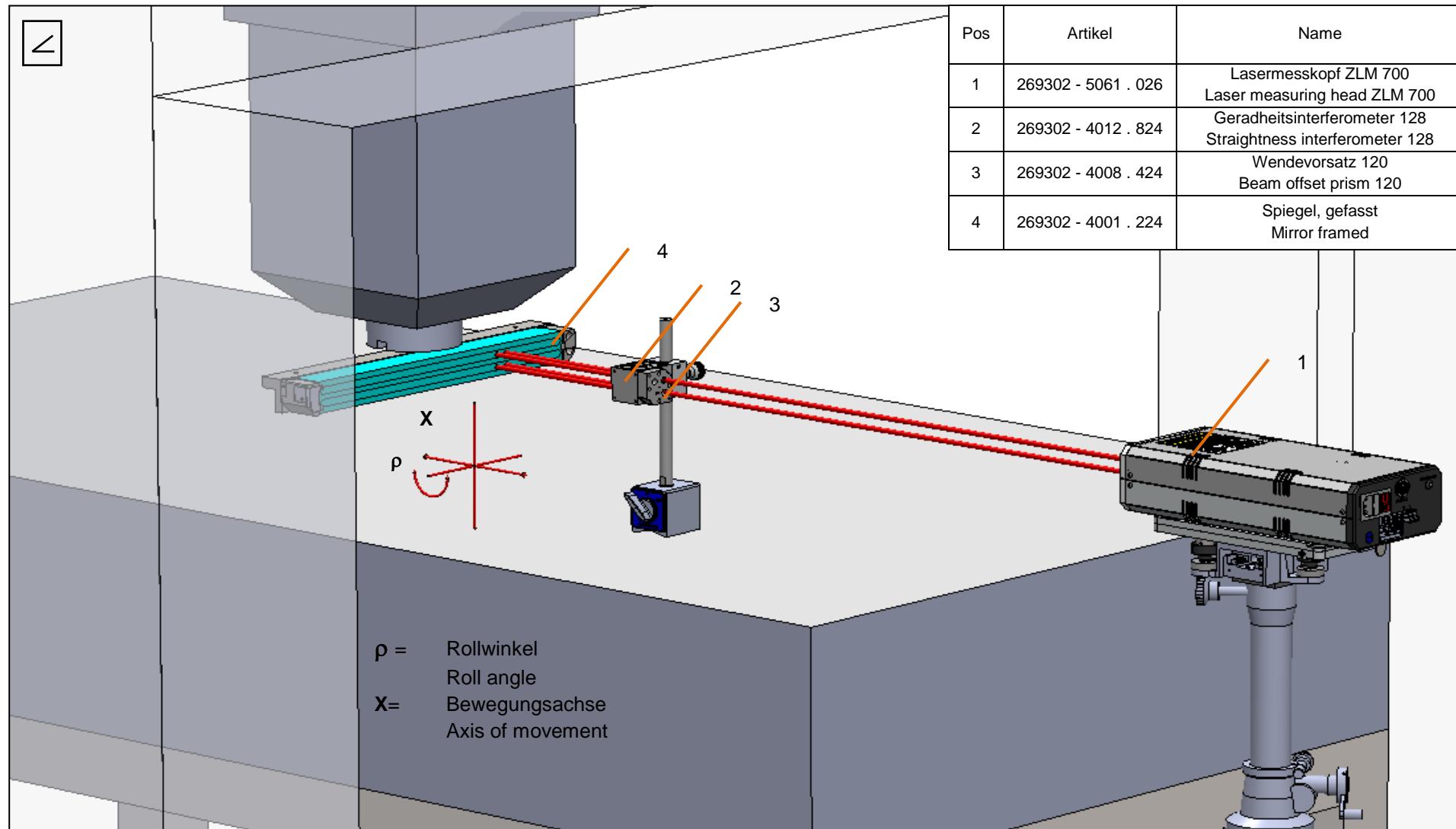
Yaw angle measurement – ZLM 700

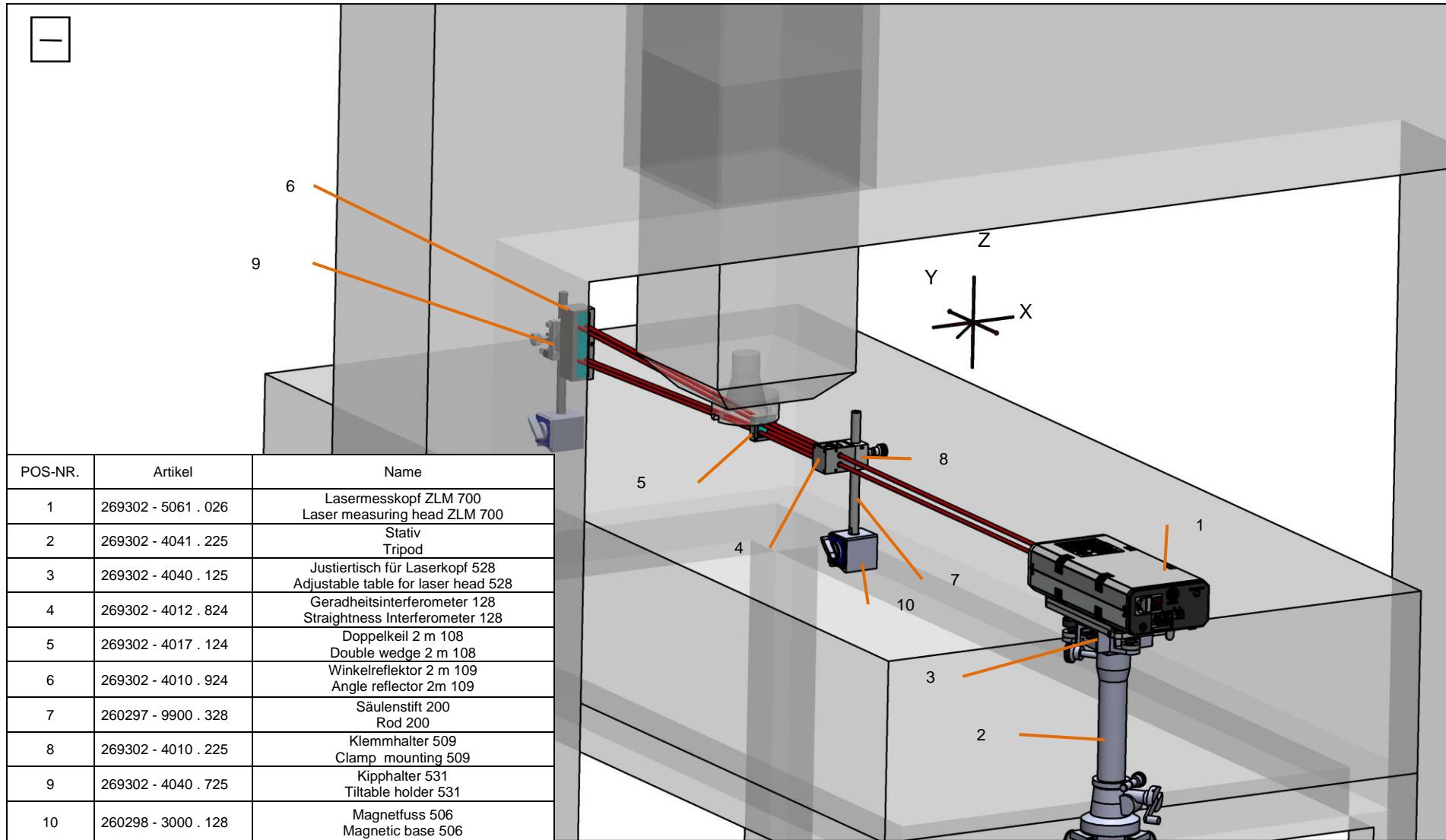
 γ = Gierwinkel
Yaw angle

Pos	Artikel	Name
1	269302 - 5061 . 026	Lasermesskopf ZLM 700 Laser measuring head ZLM 700
2	269302 - 4015 . 324	Winkelinterferometer 114 Angle interferometer 114
3	269302 - 4015 . 424	Doppelreflektor 115 Double triple reflector 115

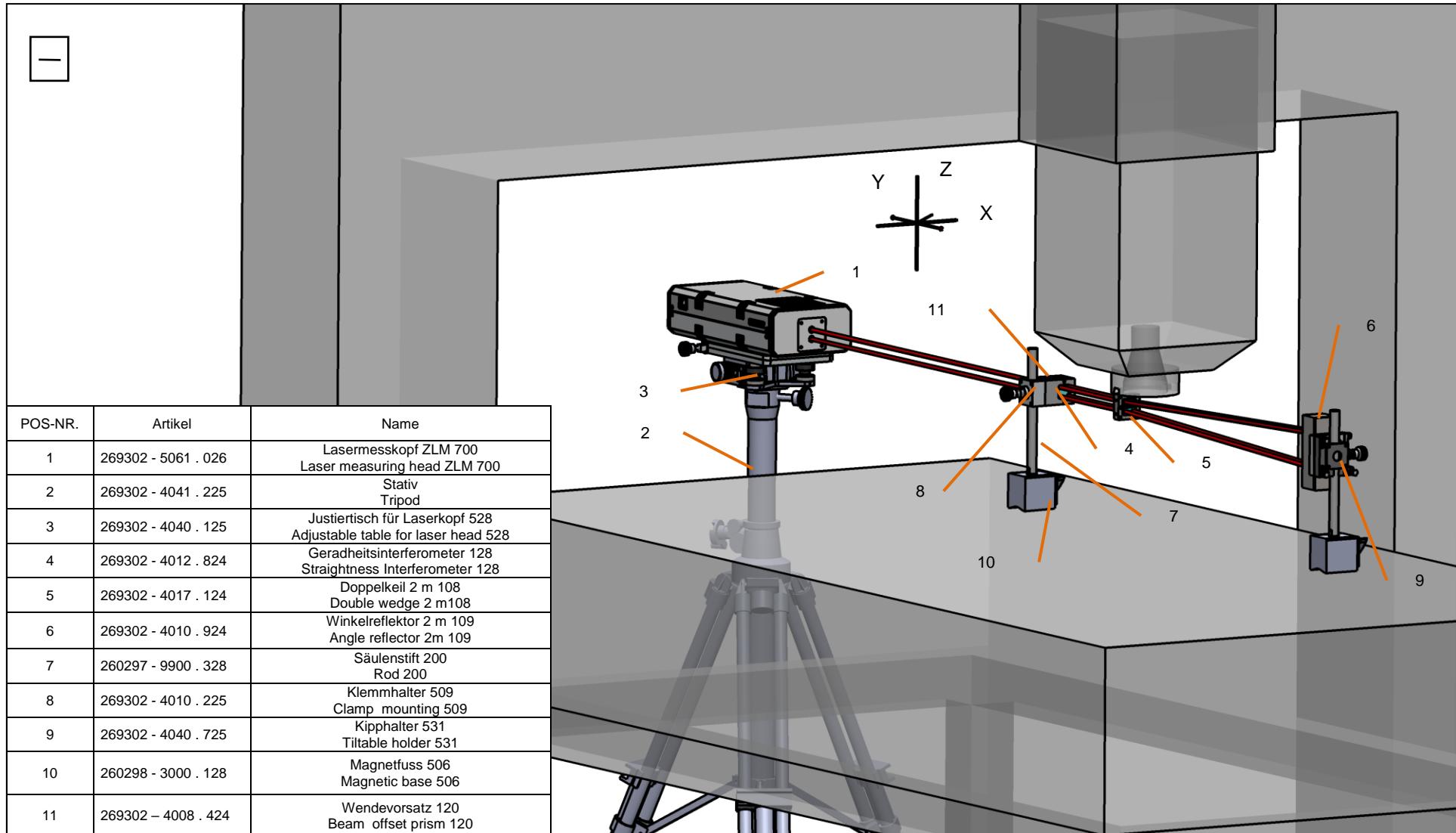
Winkelmessung – Bestimmung des Rollwinkels – ZLM 700

Roll angle measurement – ZLM 700



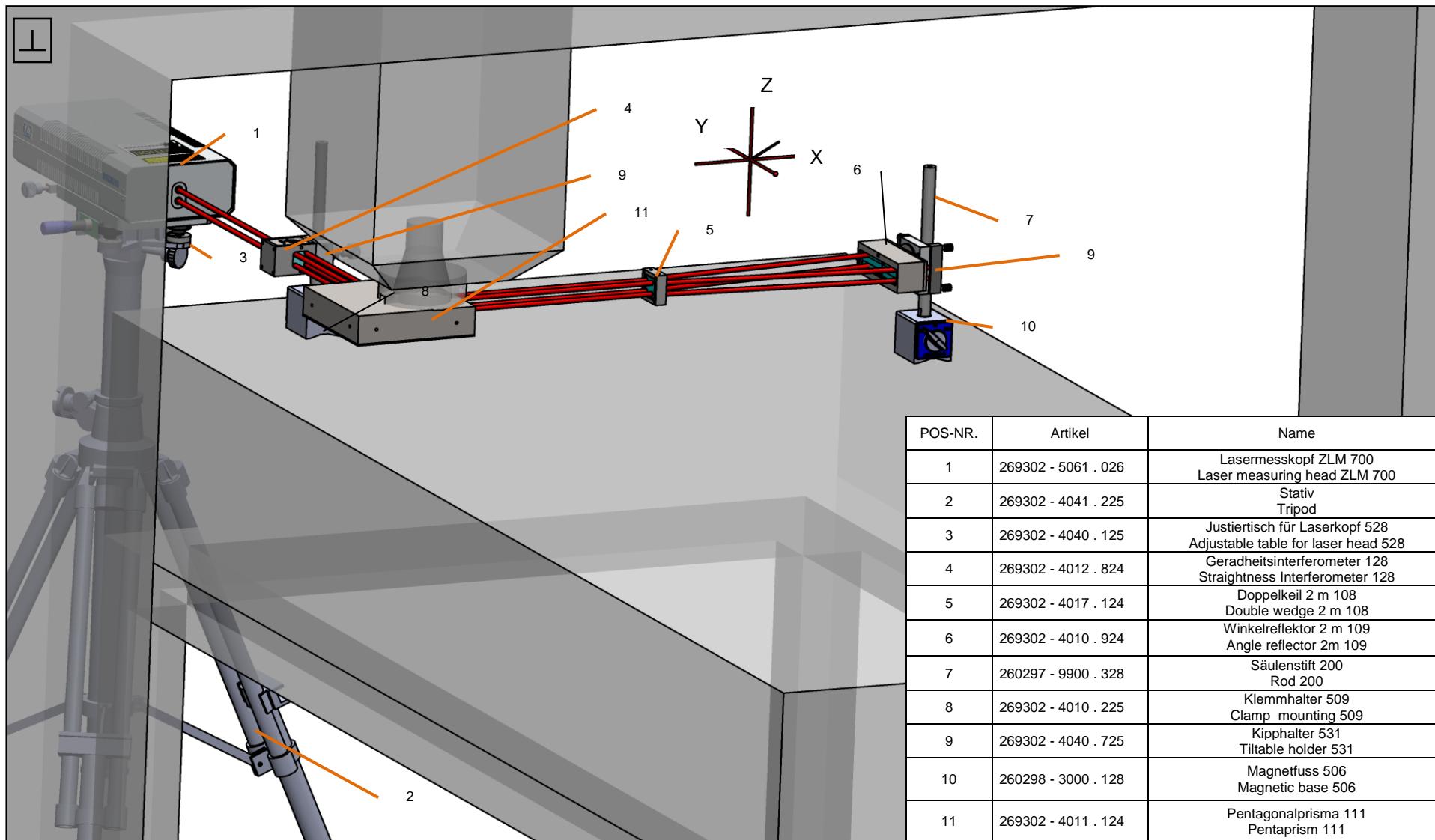
Geradheitsabweichung – vertikaler Aufbau – ZLM 700
Straightness measurement – vertical assembly – ZLM 700

Geradheitsabweichung – horizontaler Aufbau – ZLM 700
 Straightness measurement – horizontal assembly – ZLM 700



Rechtwinkligkeitsmessung – horizontaler Aufbau – ZLM 700

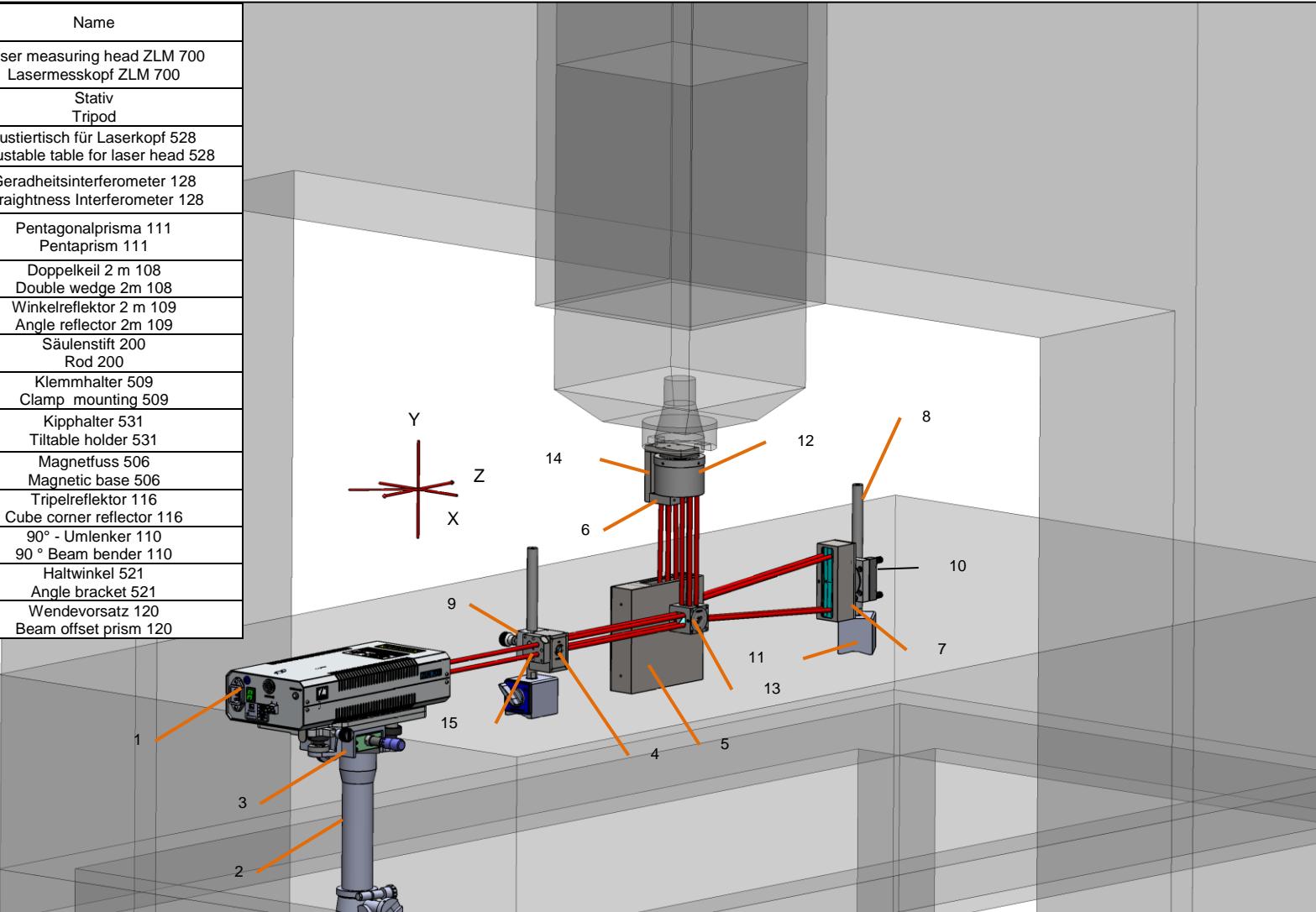
Squareness measurement – horizontal assembly – ZLM 700



Rechtwinkligkeitsmessung – vertikaler Aufbau – ZLM 700

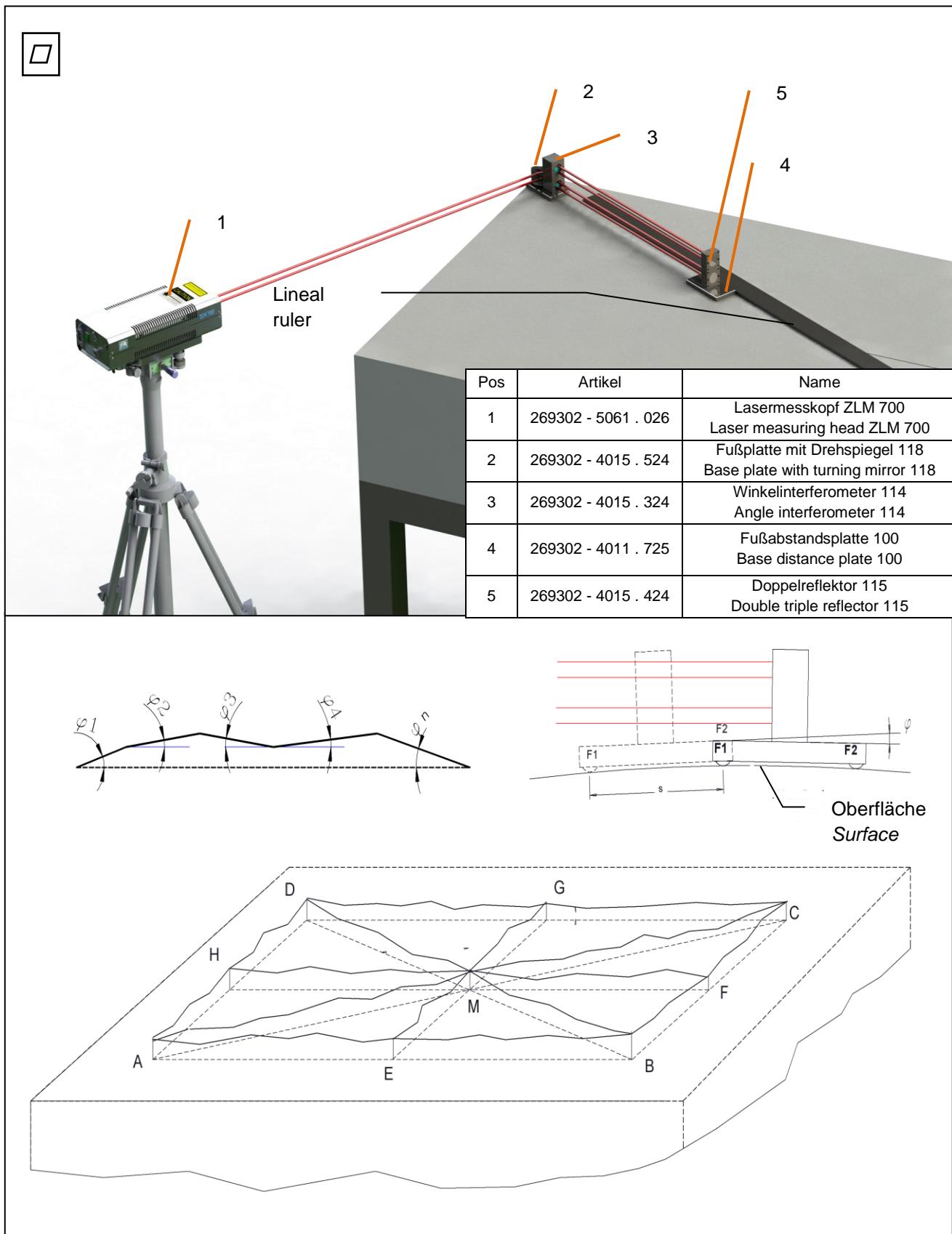
Squareness measurement – vertical assembly – ZLM 700

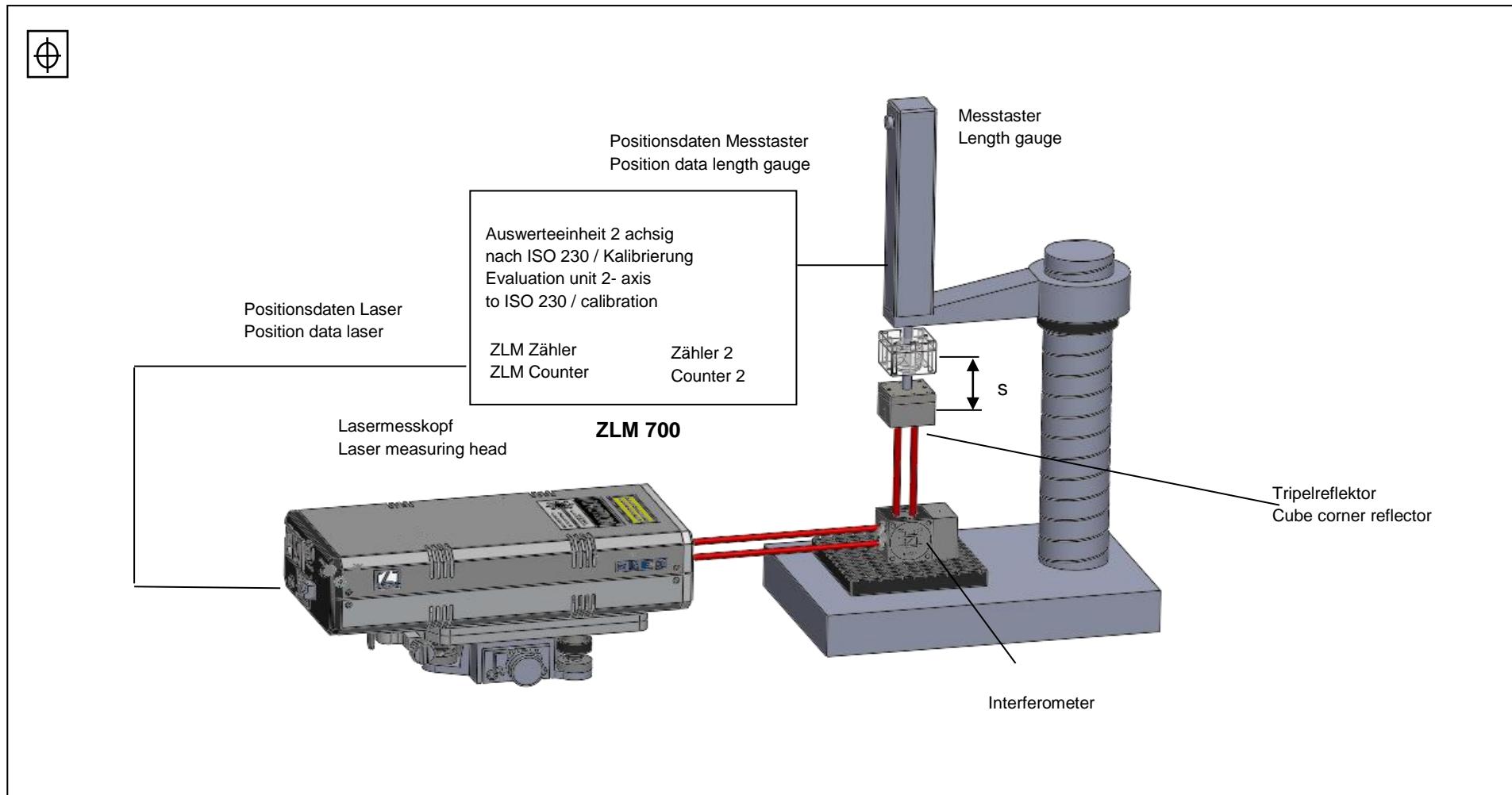
POS-NR.	Artikel	Name
1	269302 - 5061 . 026	Laser measuring head ZLM 700 Lasermesskopf ZLM 700
2	269302 - 4041 . 225	Stativ Tripod
3	269302 - 4040 . 125	Justiertisch für Laserkopf 528 Adjustable table for laser head 528
4	269302 - 4012 . 824	Geradheitsinterferometer 128 Straightness Interferometer 128
5	269302 - 4011 . 124	Pentagonalprisma 111 Pentaprism 111
6	269302 - 4017 . 124	Doppelkeil 2 m 108 Double wedge 2m 108
7	269302 - 4010 . 924	Winkelreflektor 2 m 109 Angle reflector 2m 109
8	260297 - 9900 . 328	Säulenstift 200 Rod 200
9	269302 - 4010 . 225	Klemmhalter 509 Clamp mounting 509
10	269302 - 4040 . 725	Kipphalter 531 Tilttable holder 531
11	260298 - 3000 . 128	Magnetfuss 506 Magnetic base 506
12	269302 - 4011 . 624	Tripelreflektor 116 Cube corner reflector 116
13	269302 - 4011 . 024	90° - Umlenker 110 90 ° Beam bender 110
14	269302 - 4010 . 425	Haltwinkel 521 Angle bracket 521
15	269302 - 4008 . 424	Wendevorsatz 120 Beam offset prism 120



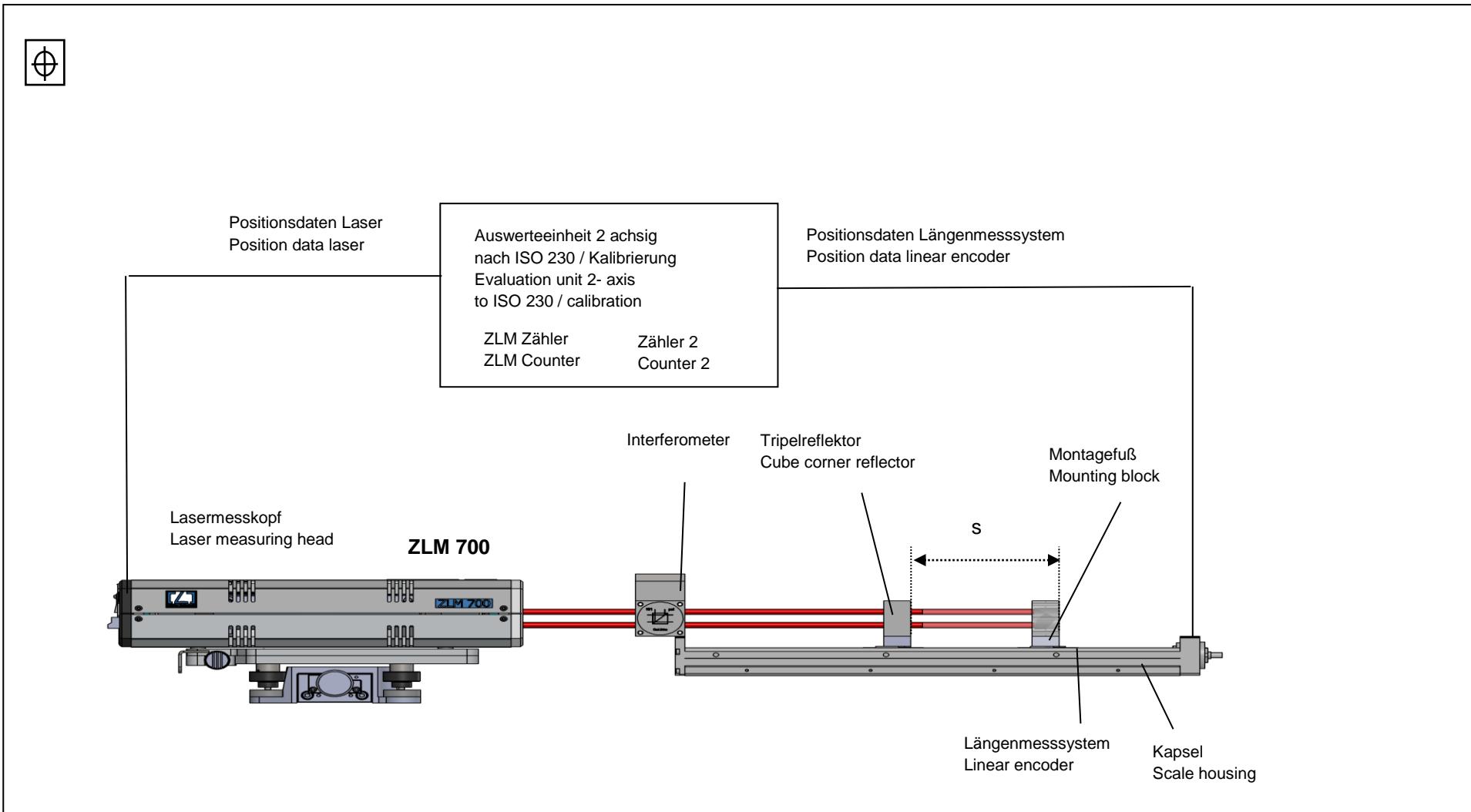
Ebenheitsmessung – ZLM 700

Flatness measurement -ZLM 700



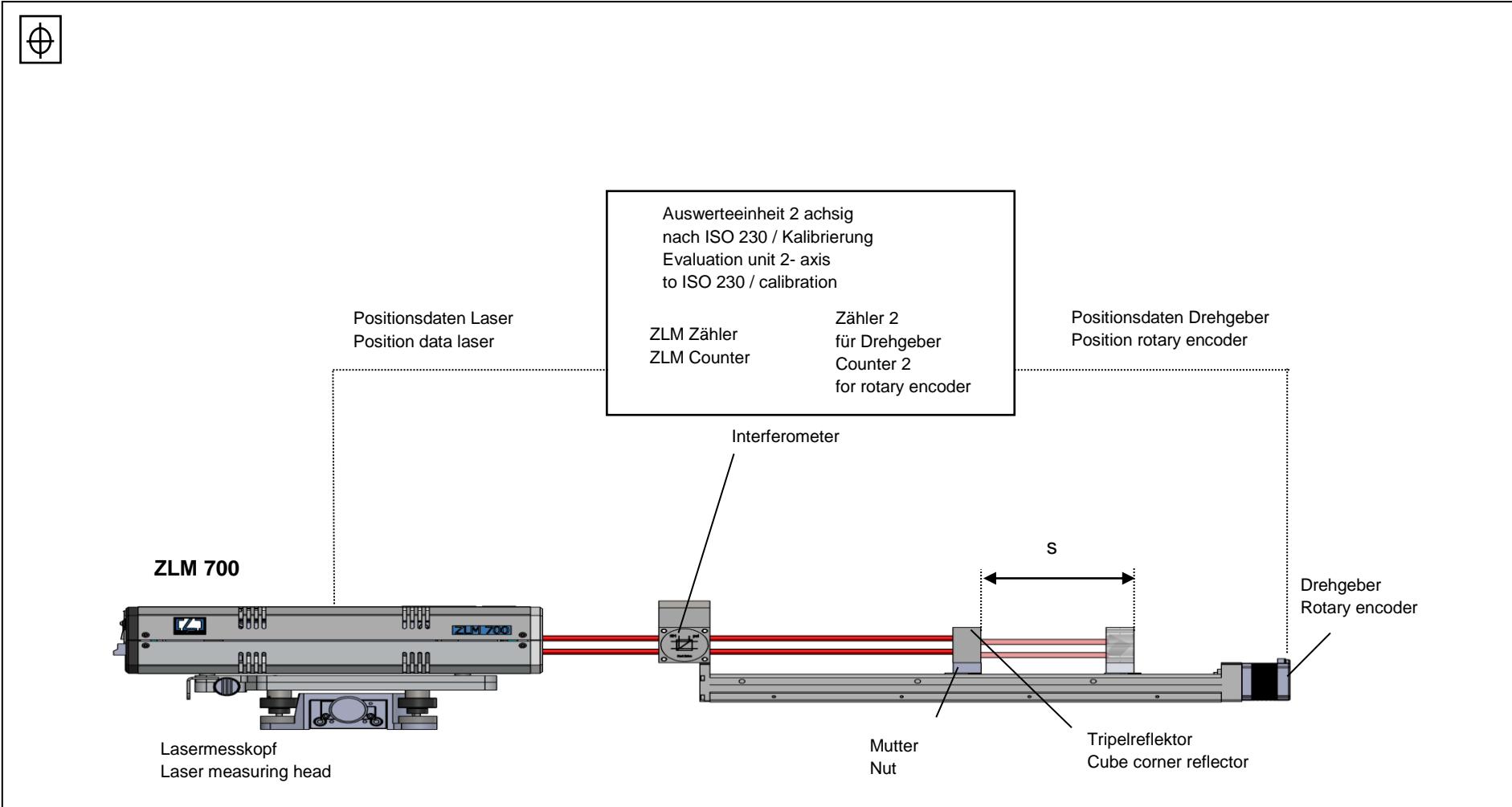


Synchrone dynamische Kalibrierung mit dem ZLM 700 1-achsig und einer Erweiterungsauswerteeinheit
Synchronous dynamic calibration of length with ZLM 700 1-axis and one extension evaluation unit



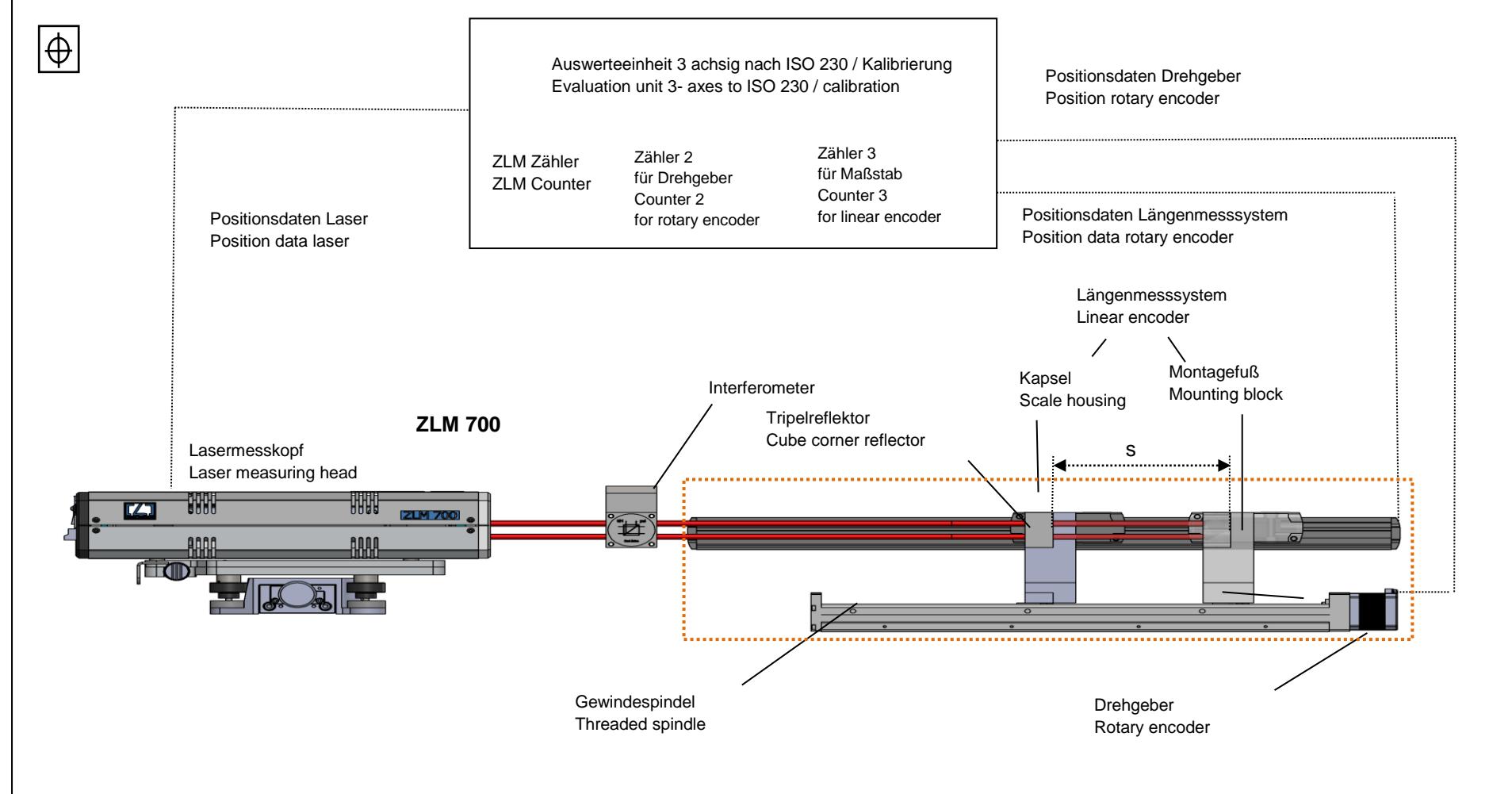
Synchrone dynamische Kalibrierung eines Längenmesssystems mit dem ZLM 700 1-achsig und einer Erweiterungsauswerteeinheit
Synchronous dynamic calibration of linear encoder with ZLM 700 1-axis and one extension evaluation unit

Klicken oder tippen Sie hier, um Text einzugeben.



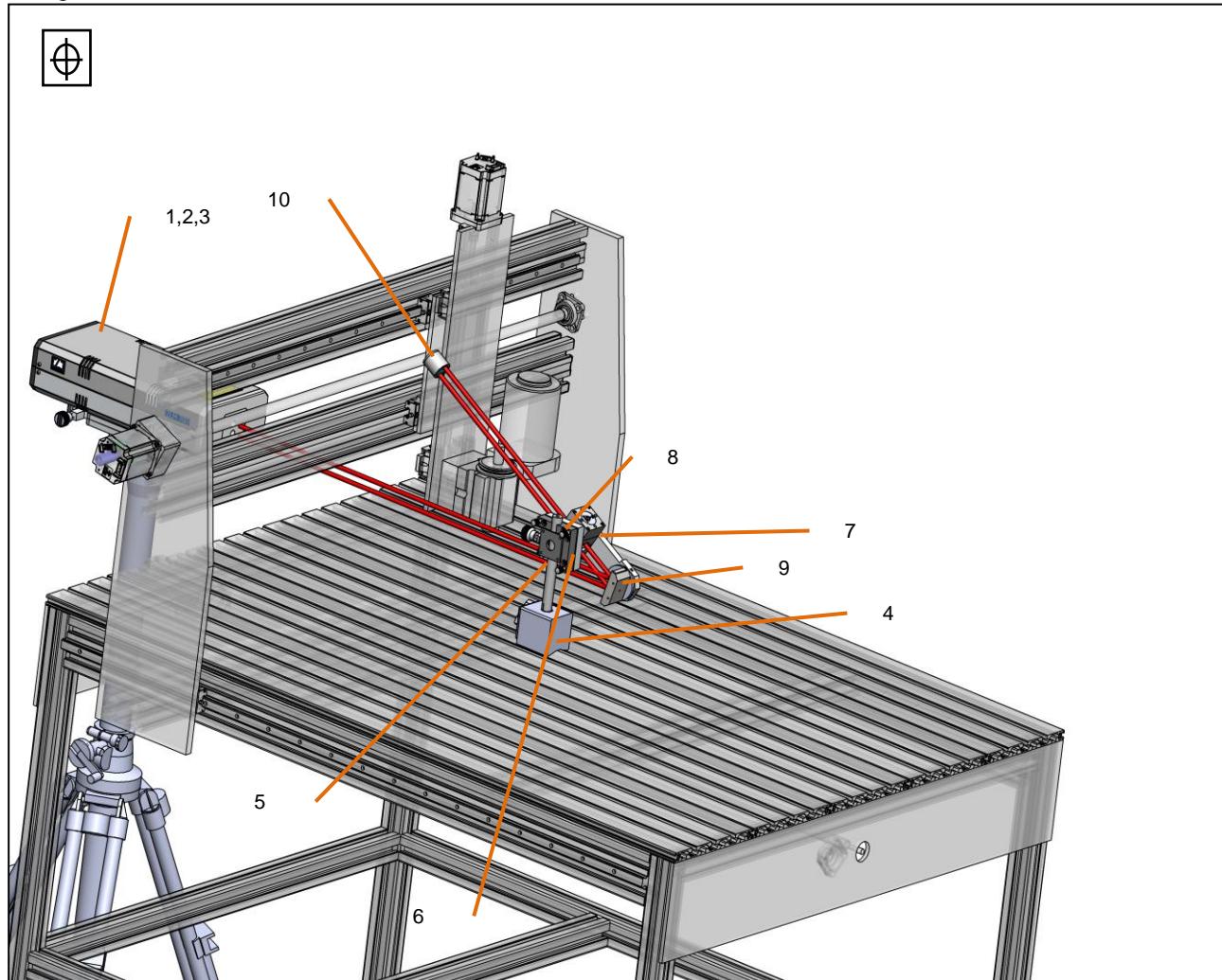
Synchrone dynamische Kalibrierung eines Drehgebers zur Spindelsteigung mit dem ZLM 700 Komparator Zähler und einer Erweiterungsauswerteeinheit
Synchronous dynamic calibration of rotary encoder for screw pitch with ZLM 700 – comparator counter and one extension evaluation unit

Klicken oder tippen Sie hier, um Text einzugeben.



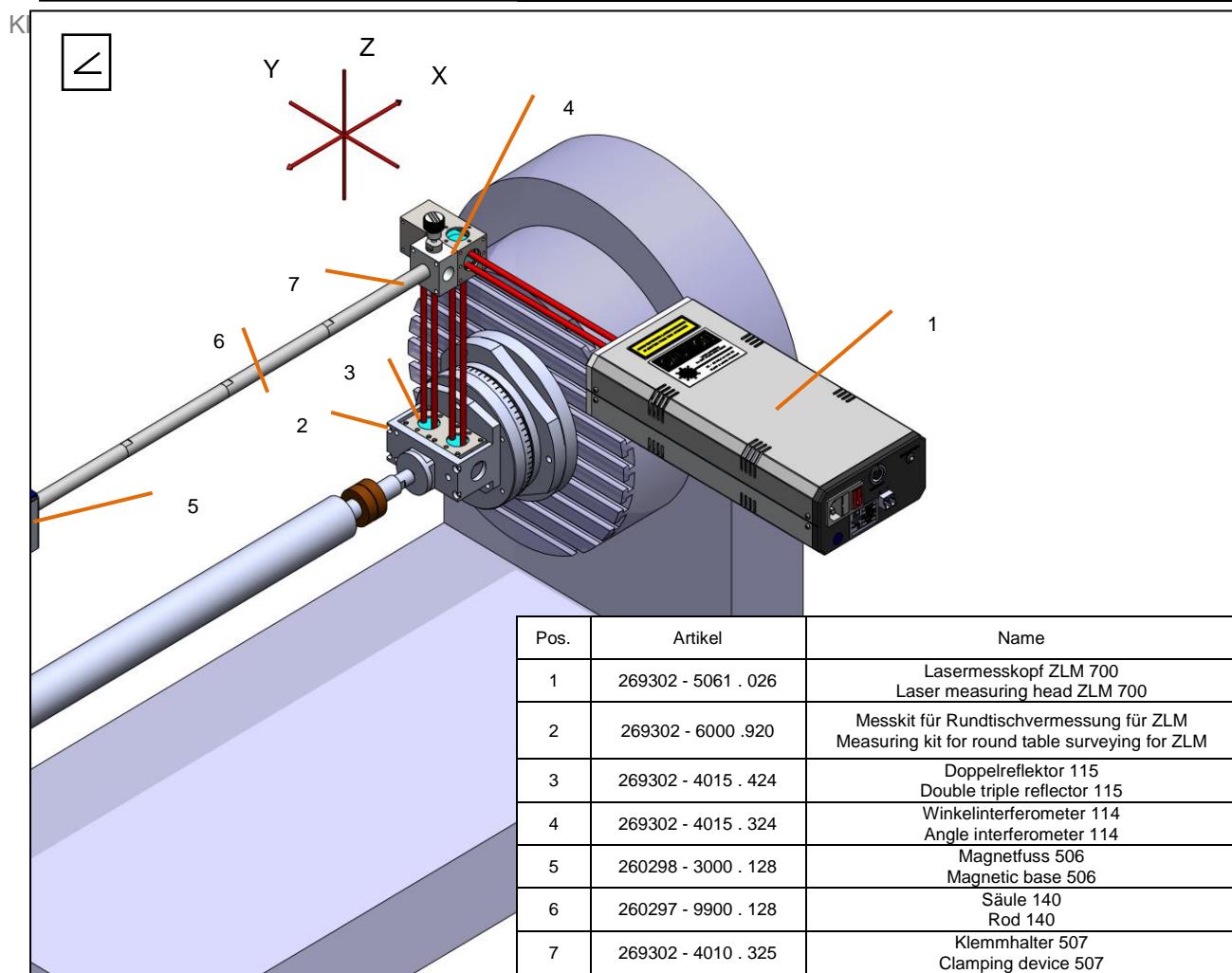
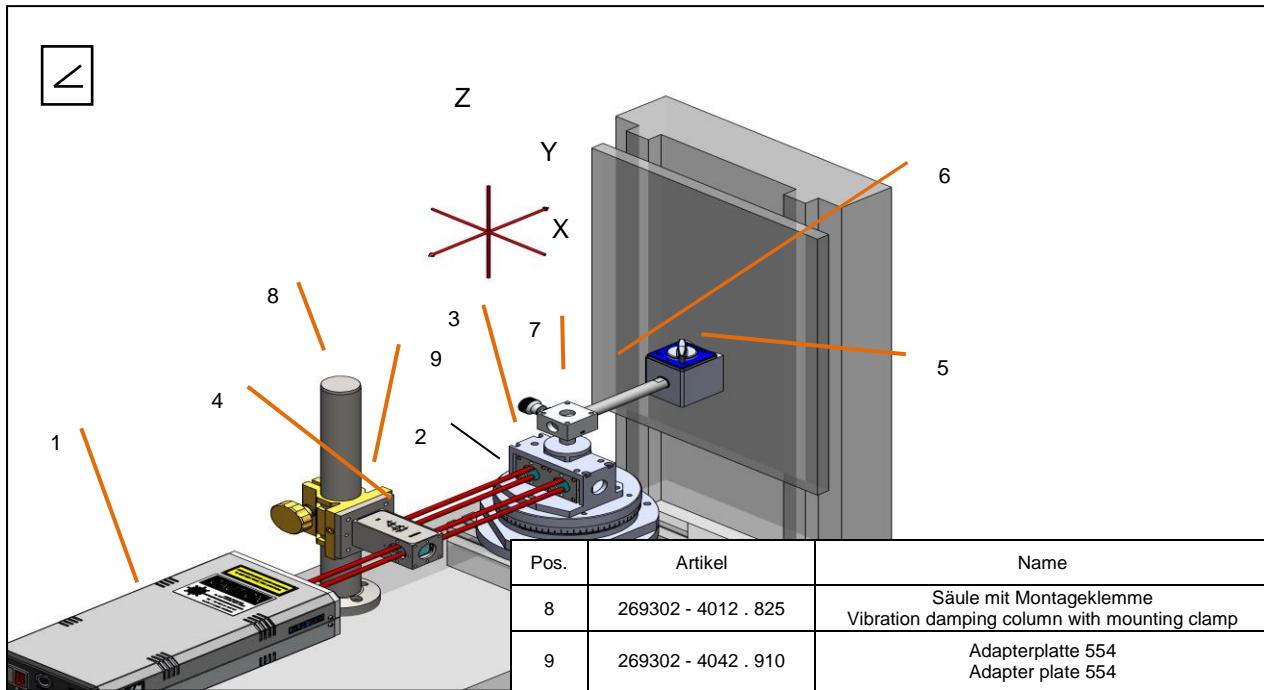
Synchrone dynamische Kalibrierung eines Längenmesssystems sowie Drehgebers zur Spindelsteigung mit dem ZLM 700 und 2 x Erweiterungsauswerteeinheiten
Synchronous dynamic calibration of linear encoder and linear encoder with ZLM 700 and 2x extension evaluation units

Diagonalmessung
Diagonal measurement

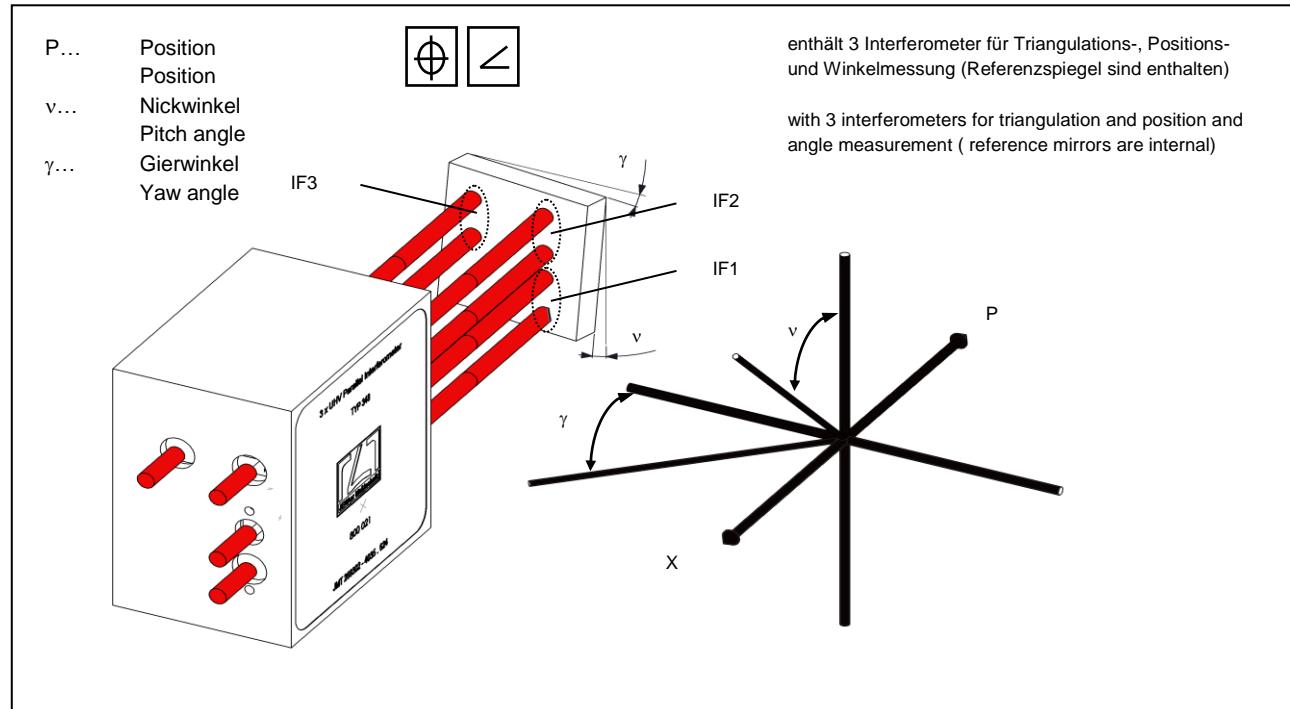


POS.	Artikel	Name
1	269302 - 4041 . 225	Stativ Tripod
2	269302 - 4040 . 125	Justiertisch Adjustable table 528
3	269302 - 5061 . 026	Lasermesskopf ZLM 700 Laser measuring head ZLM 700
4	260298 - 3000 . 128	Magnetfuß 506 Magnetic base 506
5	260297 - 9900 . 128	Säulenstift 140 Rod 140
6	269302 - 4040 . 725	Kipphalter 531 Tilttable holder 531
7	269302 - 4010 . 124	Polarisationsteiler 101 Polarizing beam splitter 101
8	269302 - 4010 . 224	Triplexreflektor 102 Cube corner reflector 102
9	269302 - 4013 . 724	Drehspiegel 327 Turning mirror 327
10	269302 - 4059 . 124	Triplexreflektor 304 Triple reflector 304

Vollwinkelmessung
Full angle measurement

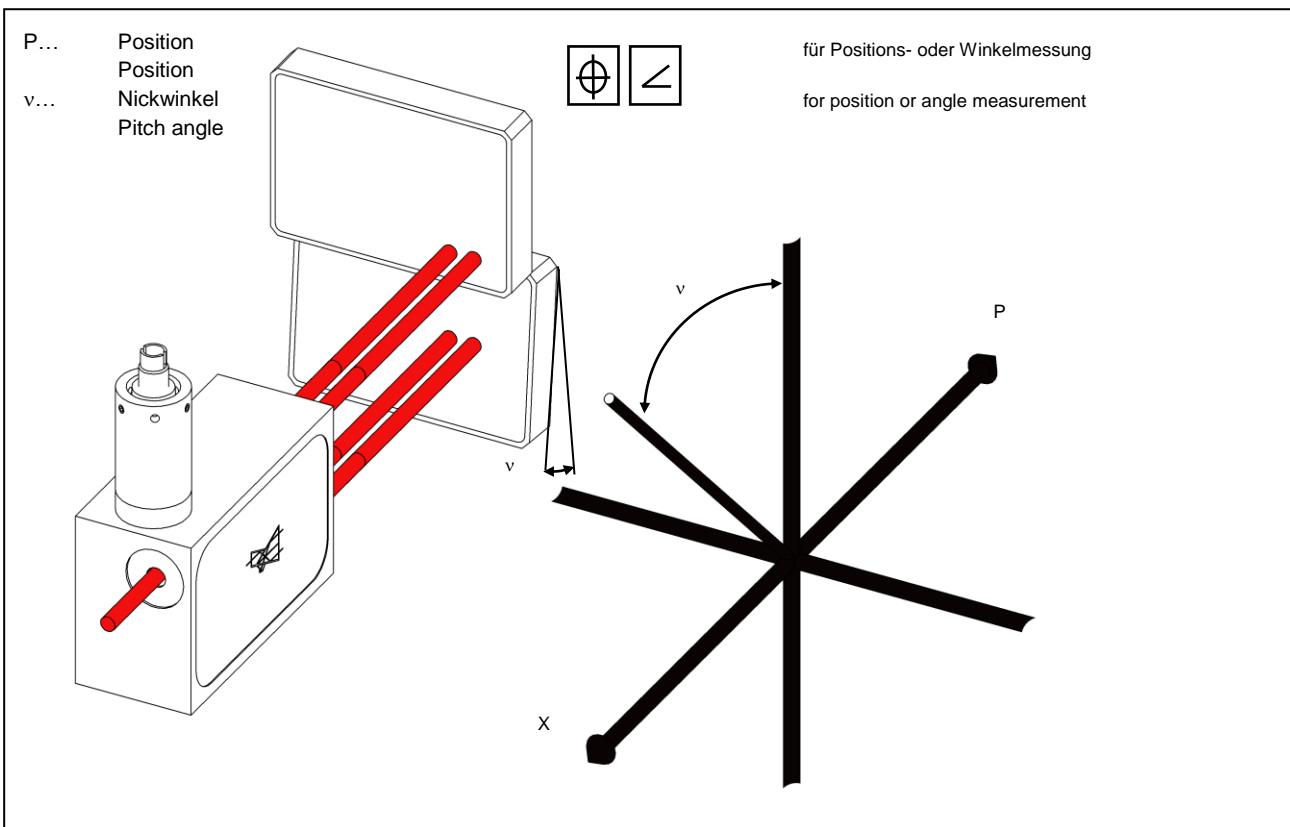


Kompakt- Planspiegel- Interferometer 348 und Spiegel
Compact plane mirror interferometer 348 and plane mirror



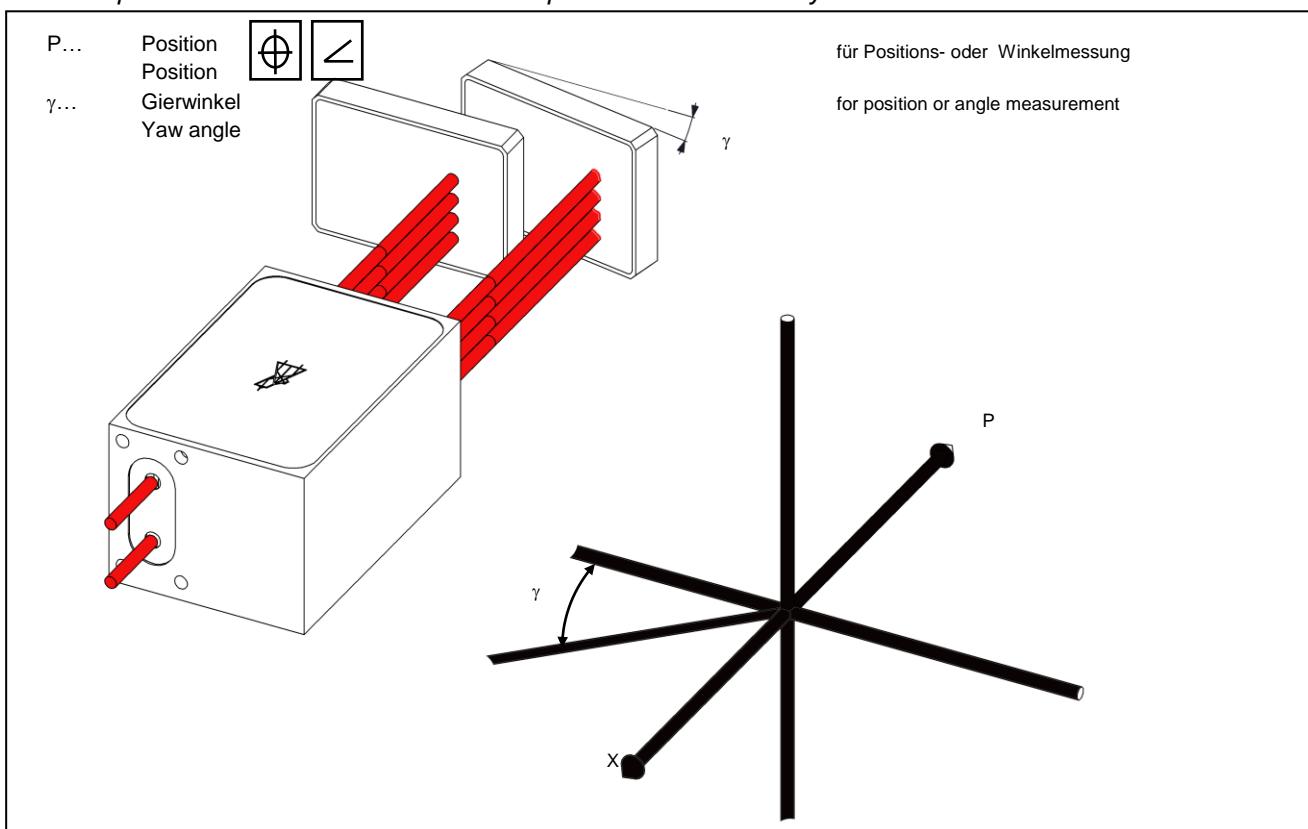
Parallel- Planspiegel- Interferometer 352 mit Spiegelanordnung

Parallel plane mirror interferometer 352 with mirrors assembly



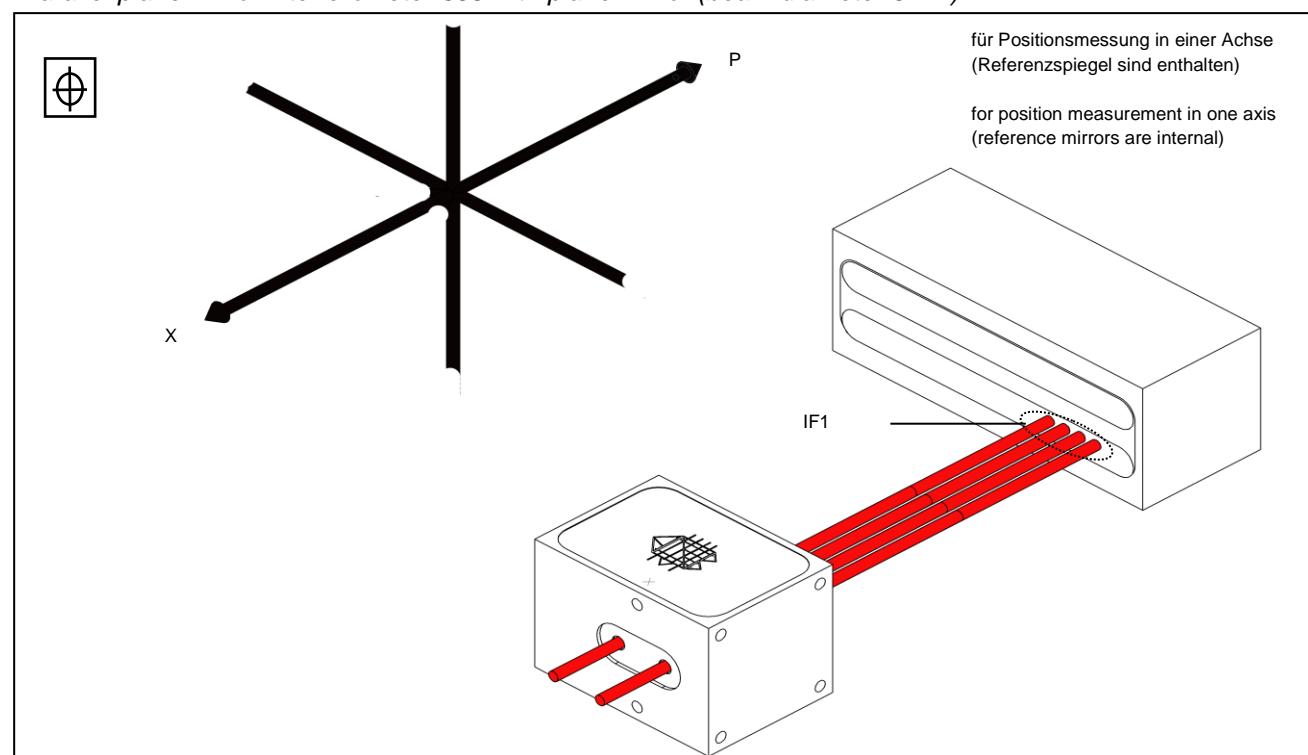
Parallel- Planspiegelinterferometer 356 mit Spiegelanordnung

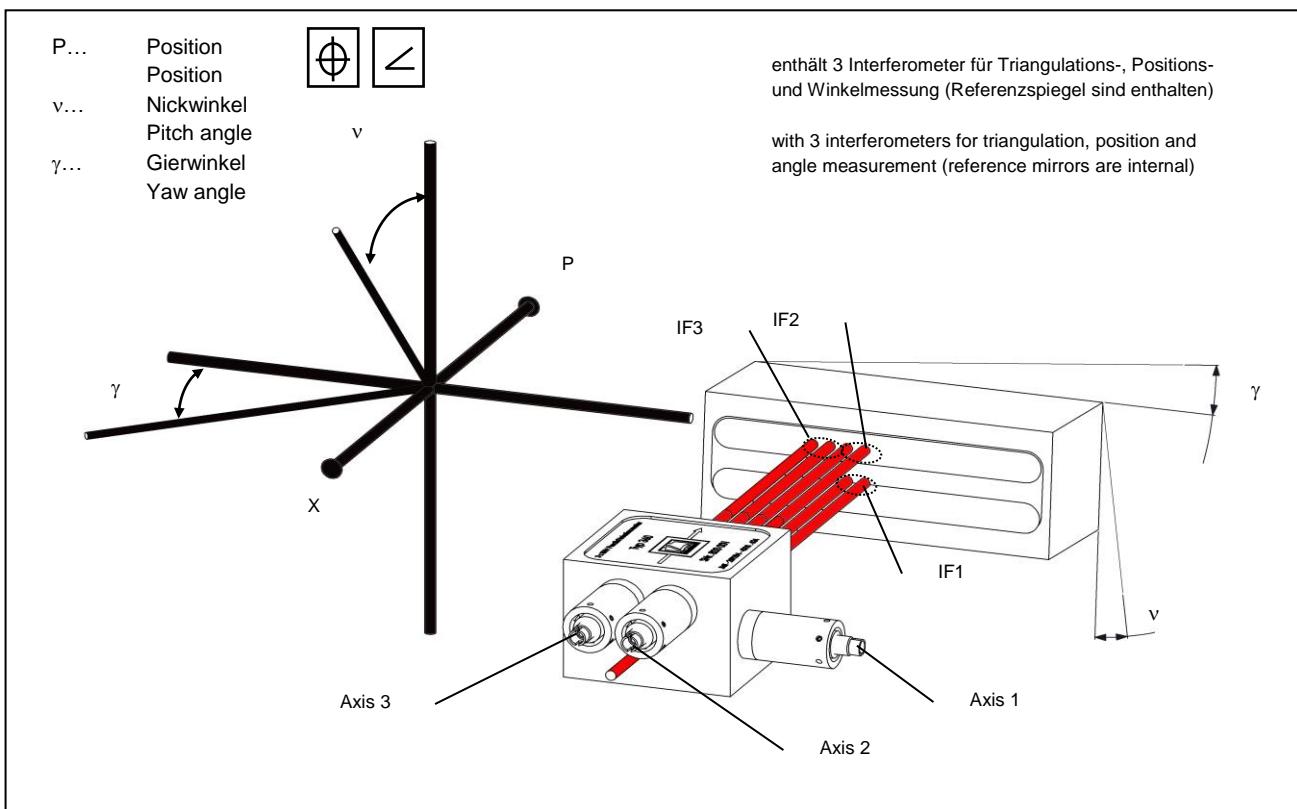
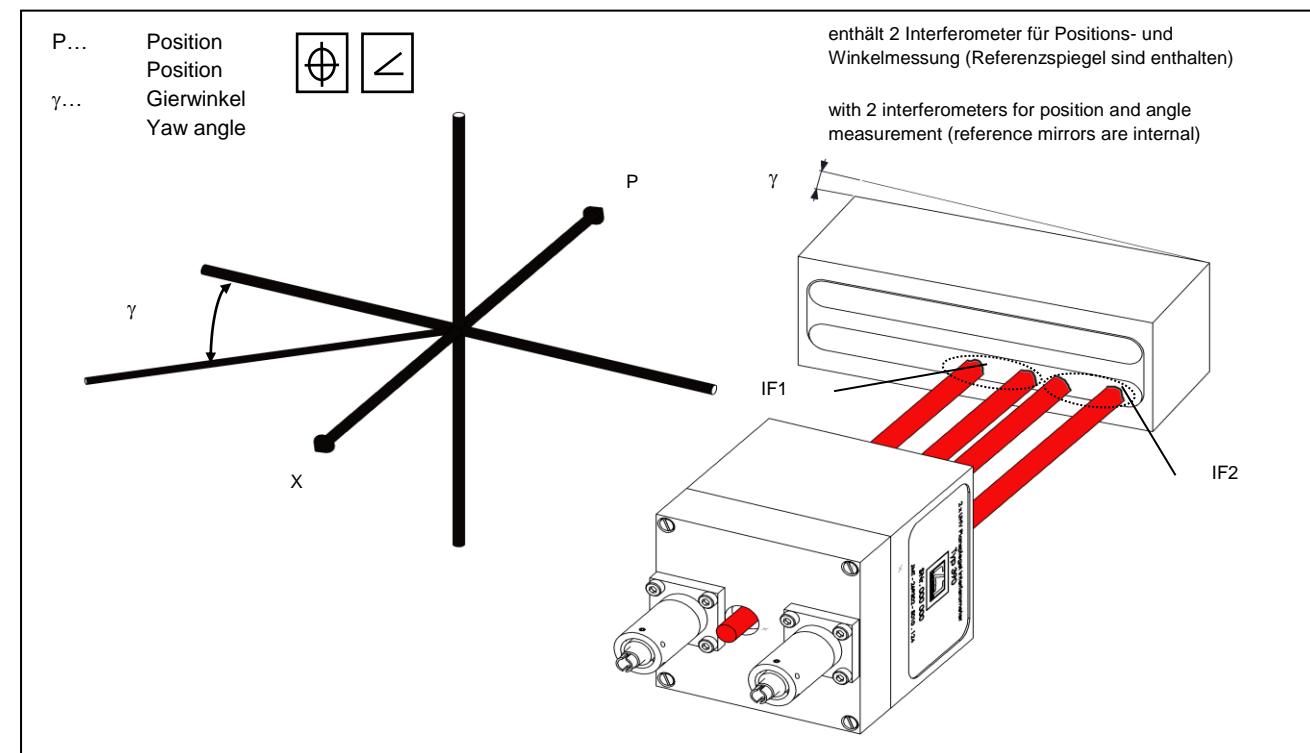
Parallel plane mirror interferometer 356 with plane mirrors assembly

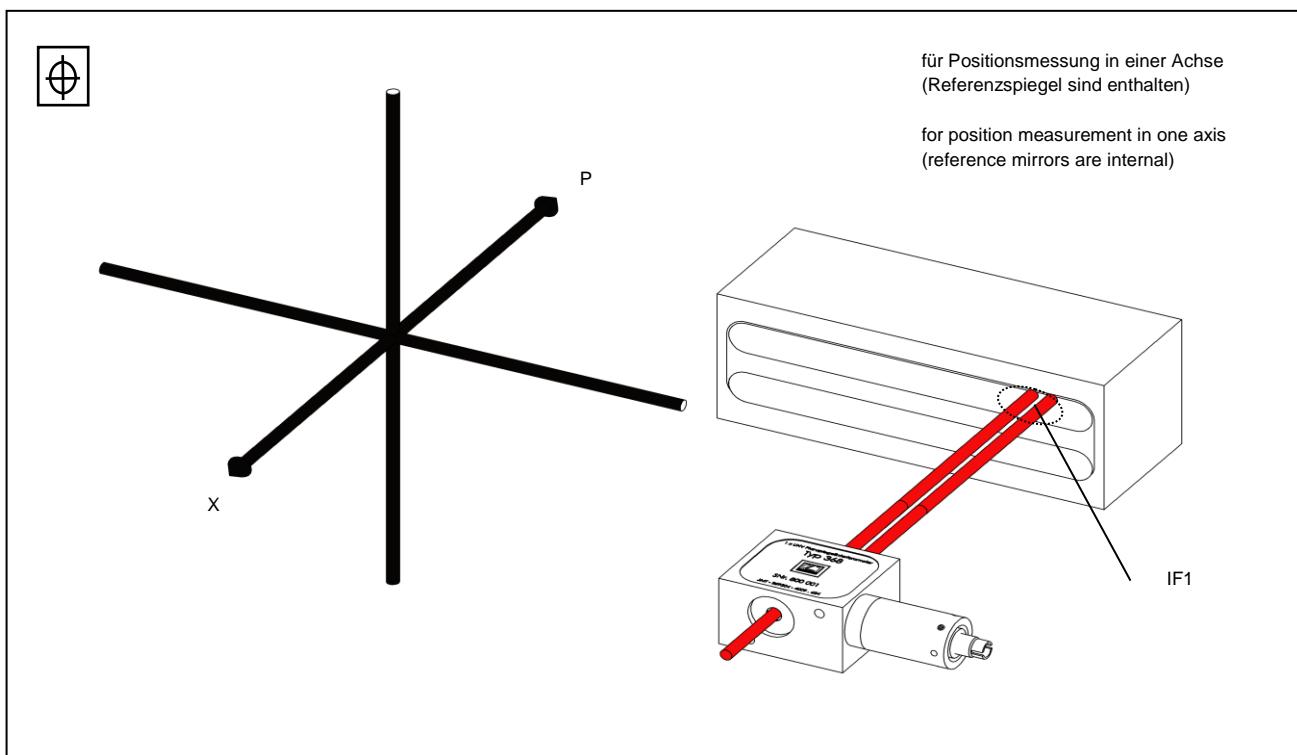
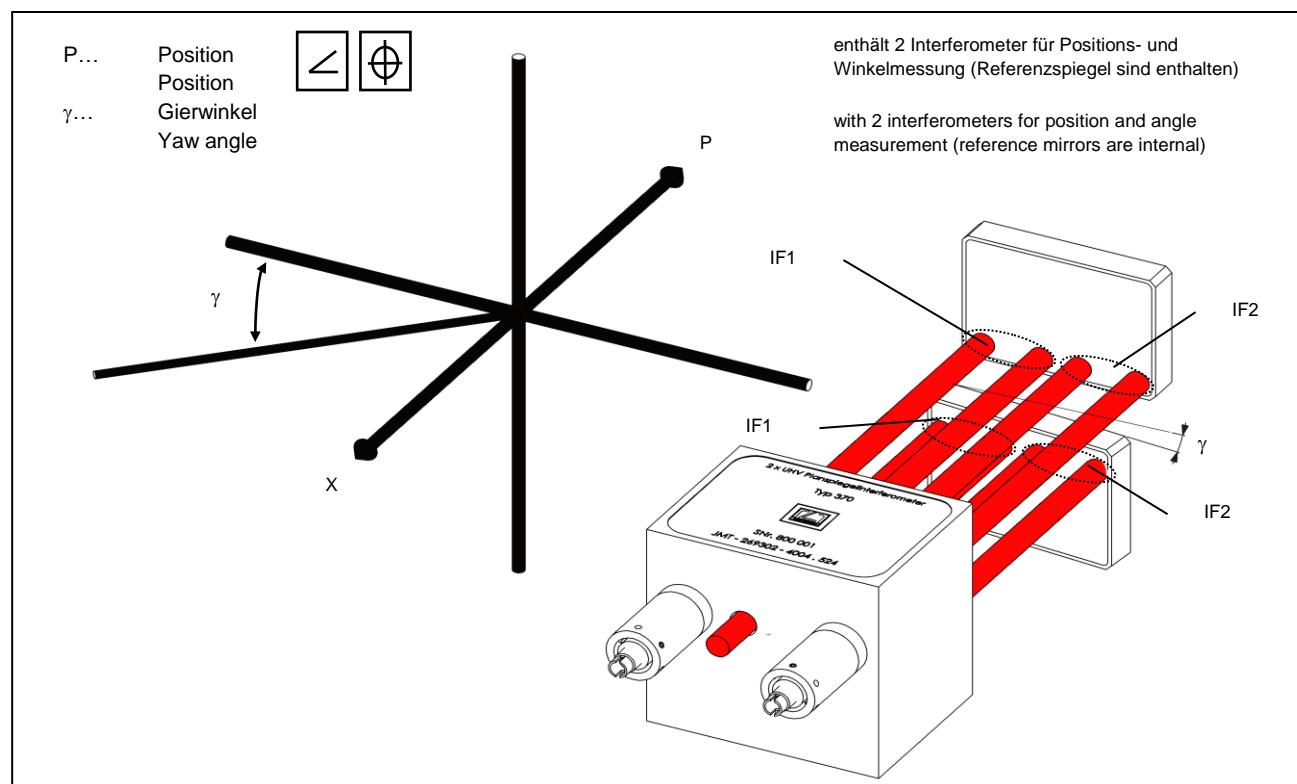


Parallel- Planspiegelinterferometer 358 mit Spiegel (Strahldurchmesser 3mm)

Parallel plane mirror interferometer 358 with plane mirror (beam diameter 3mm)

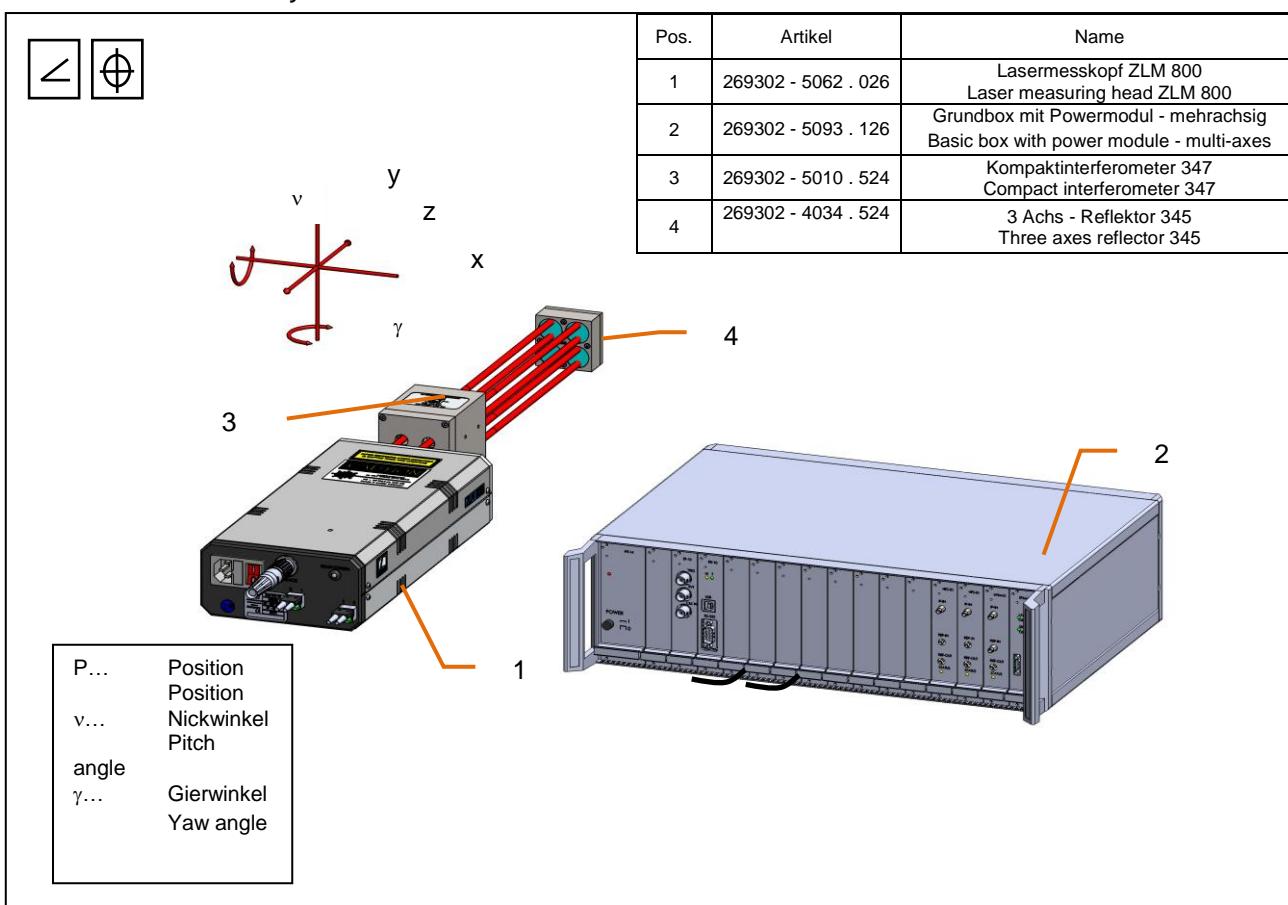


Kompakt Planspiegelinterferometer 360 mit Spiegel (Strahldurchmesser 3 mm)
Compact plane mirror interferometer 360 with plane mirror (beam diameter 3 mm)

Kompakt Planspiegelinterferometer 390 mit Spiegel
Compact plane mirror interferometer 390 with plane mirror


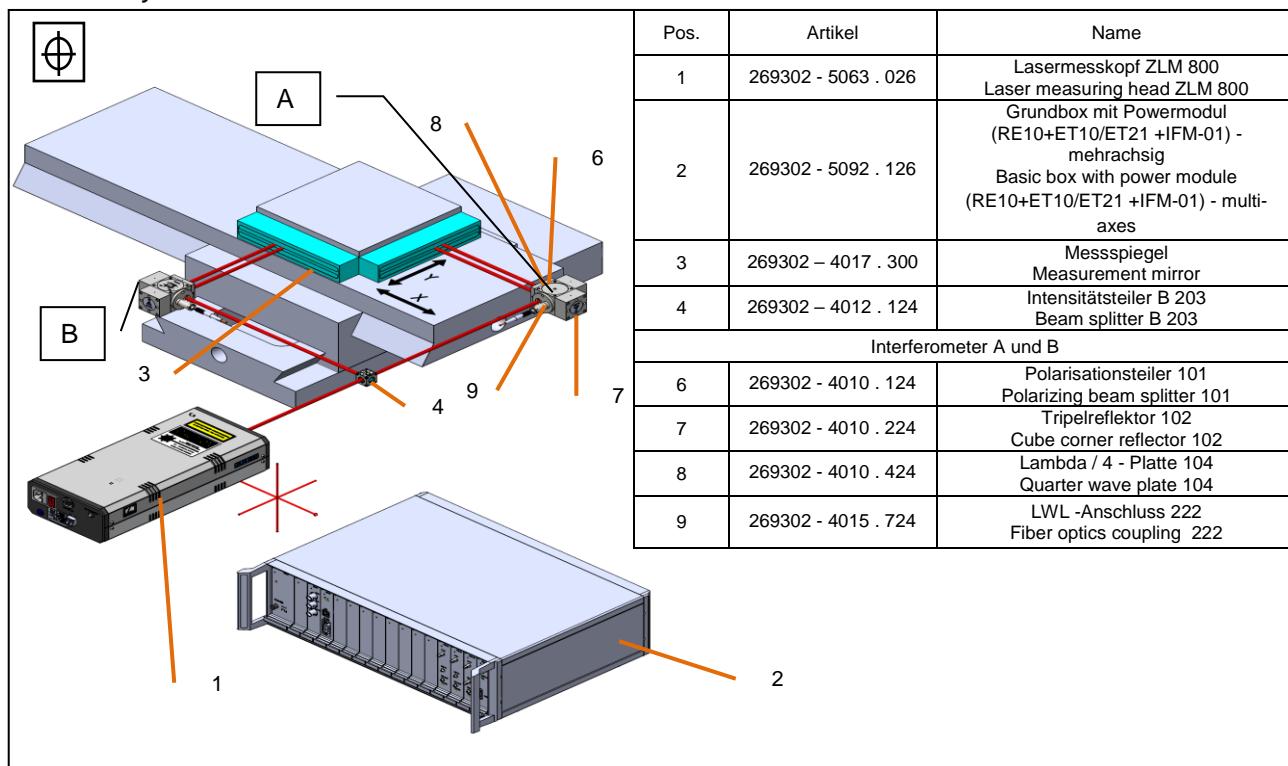
Planspiegelinterferometer 368 mit Spiegel (Strahldurchmesser 3mm)
Plane mirror interferometer 368 with plane mirror (beam diameter 3mm)

Kompakt Planspiegelinterferometer 370 mit Spiegelanordnung
Compact plane mirror interferometer with plane mirror assembly


Drei – Achs - Kalibriersystem

Three axes calibration system

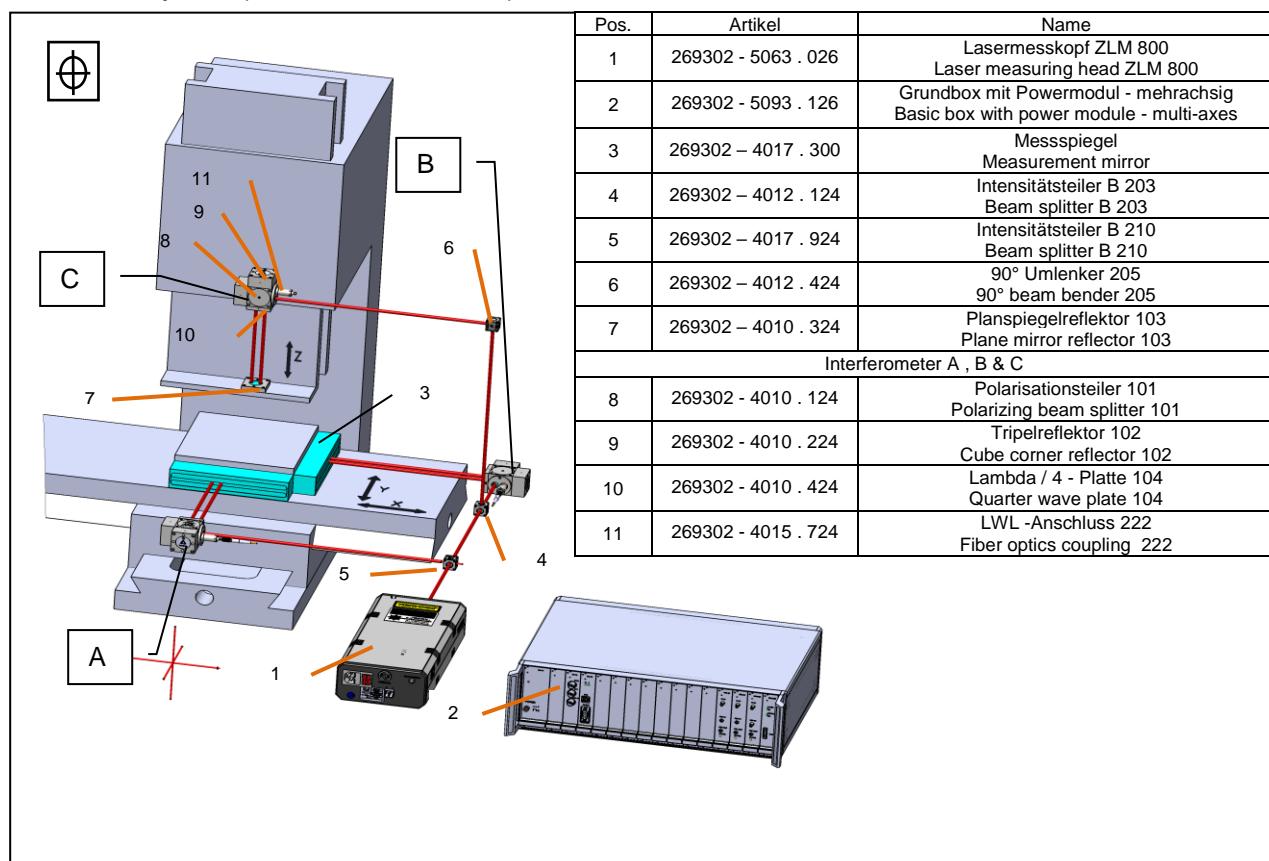
**Zwei-Achs-System**

Two axes system

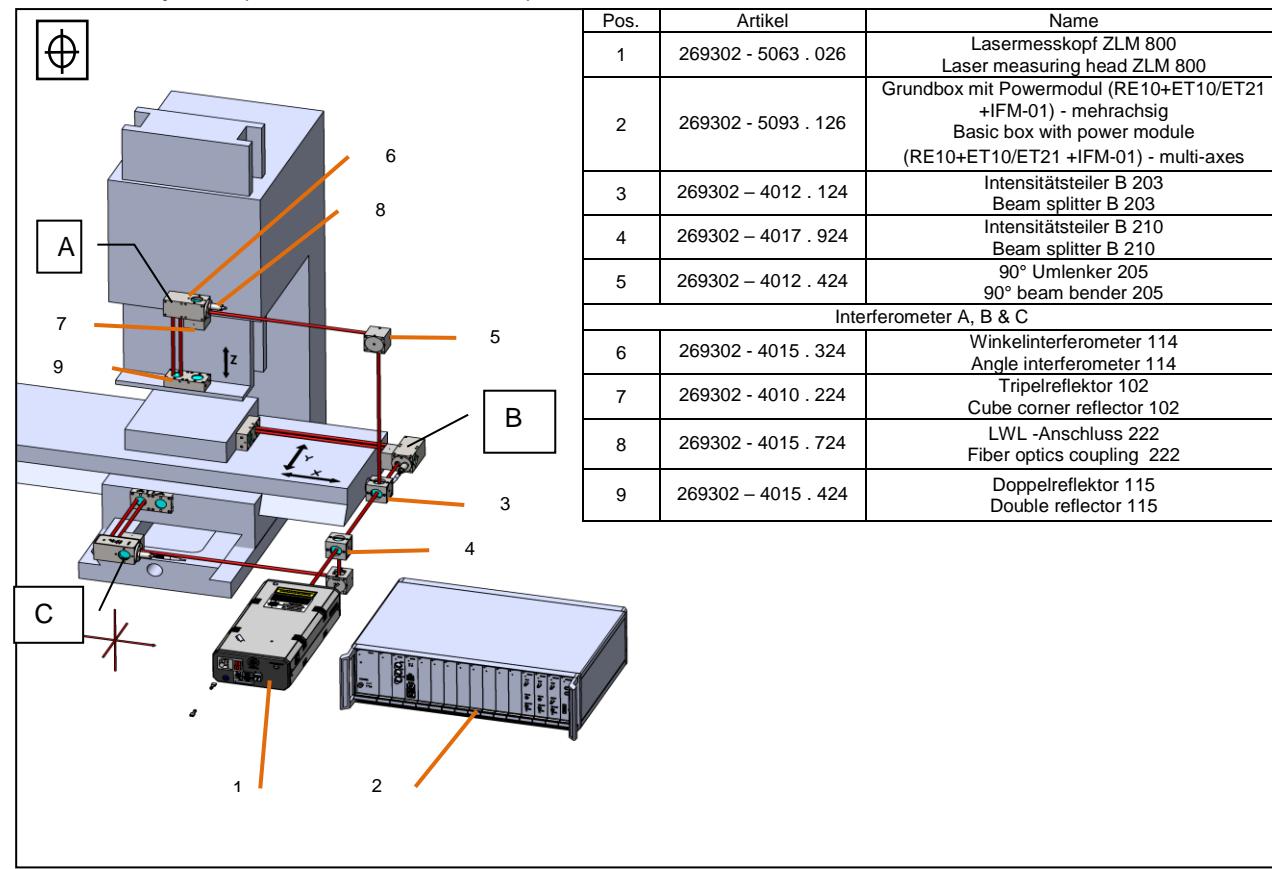


Drei – Achs - System (Variante A in 2 Ebenen)

Three axes system (variant A in two levels)

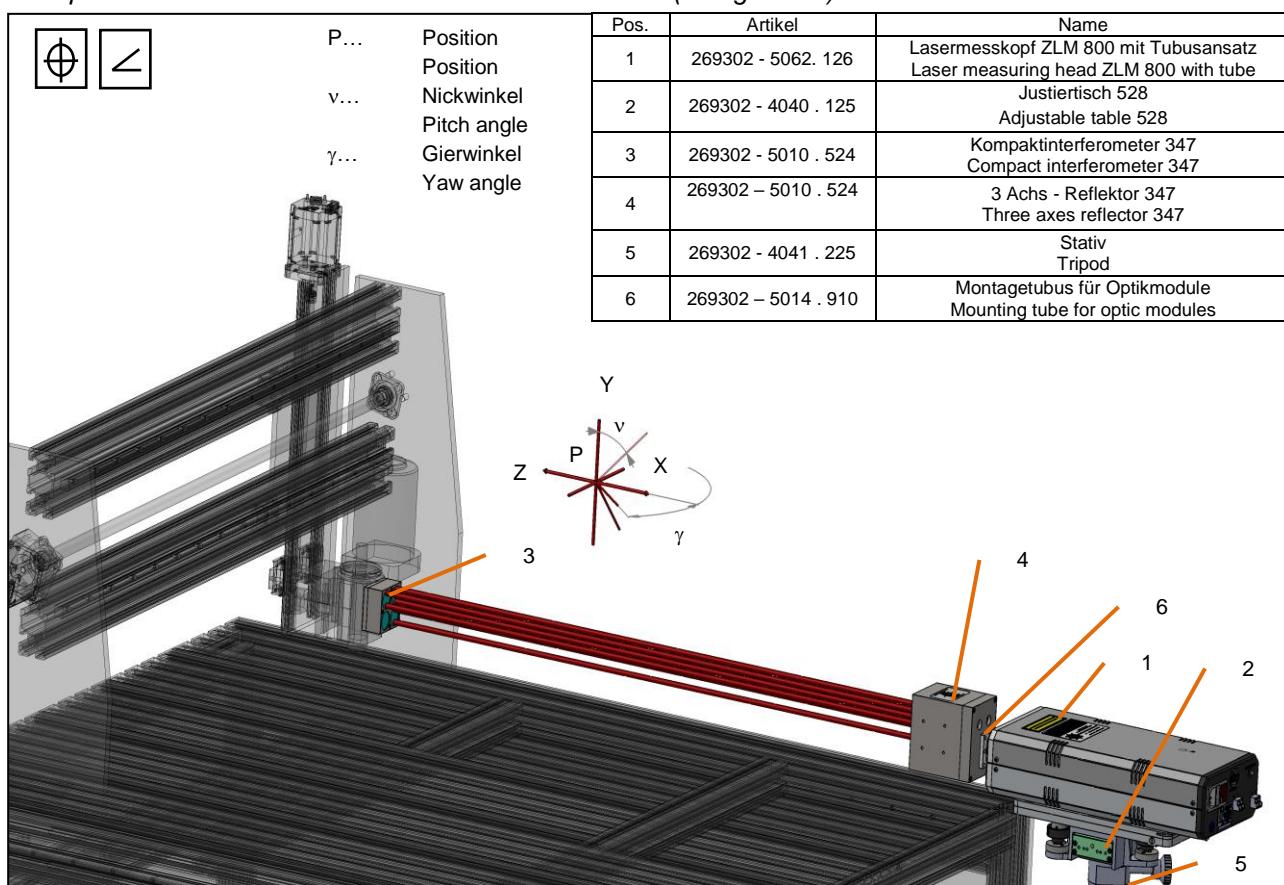
**Drei – Achs - System (Variante B in 3 Ebenen)**

Three axes system (variant B in three levels)

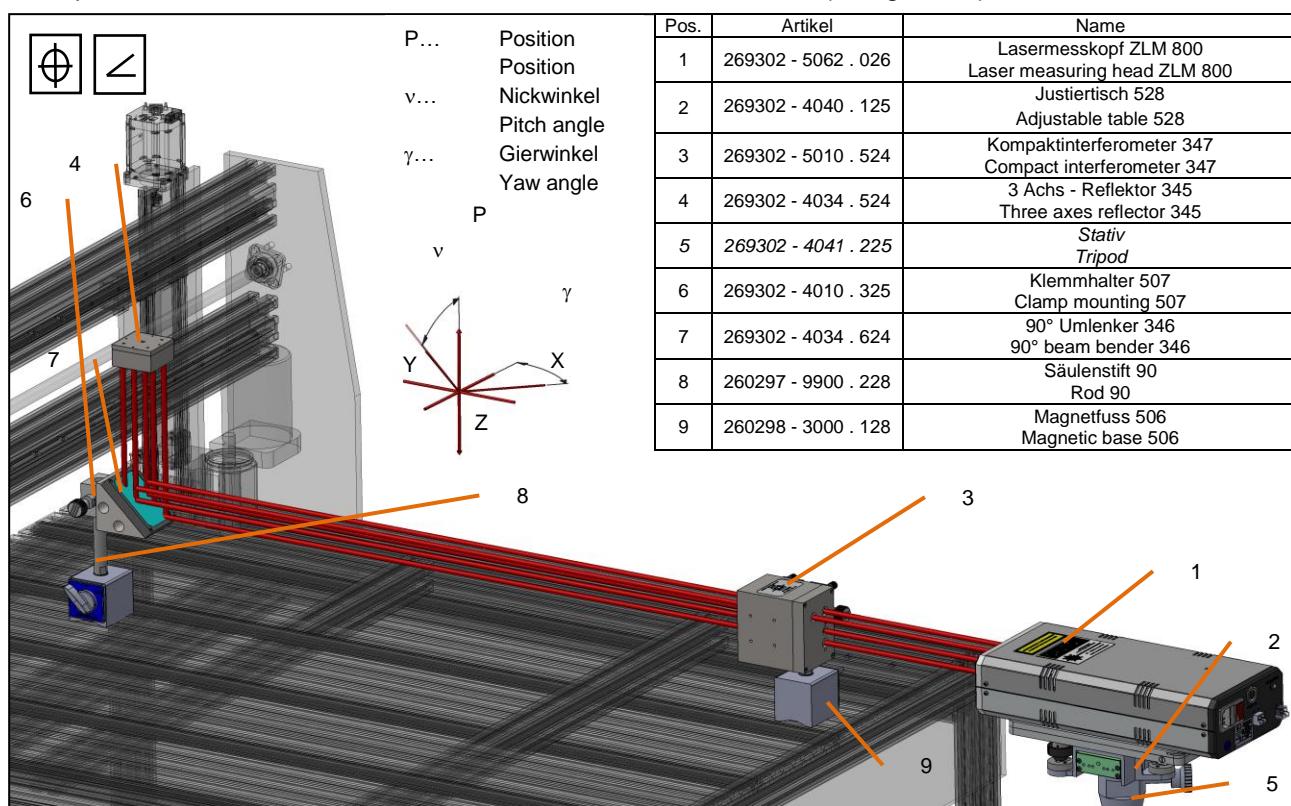


Kompaktinterferometer 347 für 3 - Achs – Messung (Triangulation)

Compact interferometer 347 for 3 - axes - measurement (triangulation)

**Kompaktinterferometer 347 für 3 - Achs – Messung mit Umlenkspiegel (Triangulation)**

Compact interferometer 347 for 3 - axes – measurement with mirror (triangulation)



Kompaktinterferometer 347 für 3 - Achs – Messung mit Tripelspiegel und Inclinometer

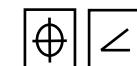
Compact interferometer 347 for 3 - axes – measurement with triple mirror and inclinometer

Messung für:

- Position, Nick & Gierwinkel (mit Interferometer 347)
- Roll Winkel mit ZIC 05 (differentielle Methode)

Measurement for:

- Position, pitch & yaw angle (with interferometer 347)
- Roll angle with ZIC 05 (differential method)



Inclinometer ZIC 05 - (2)

8

Inclinometer ZIC 05 - (1)

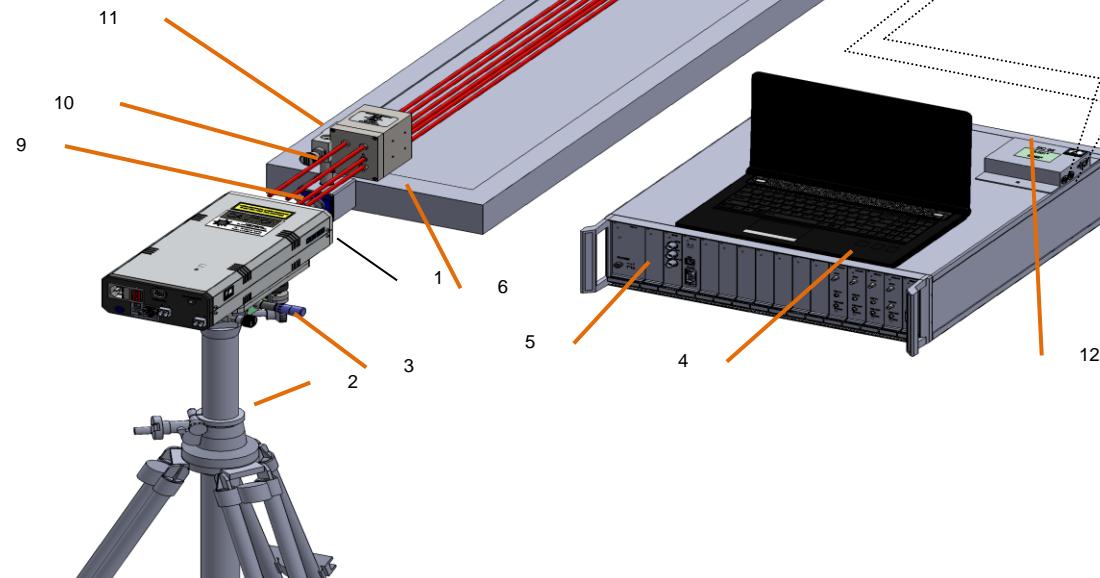
8

Roll angle (differential method)

measured value (inclinometer ZIC05 (2))
- measured value (inclinometer ZIC 05(1))
= absolute measured roll angle

Position

- Y Nickwinkel / pitch angle
F Gierwinkel / yaw angle
Q Rollwinkel/ roll angle



Pos	Artikel	Name
1	269302 - 5062 . 026	Lasermesskopf ZLM 800 Laser measuring head ZLM 800
2	269302 - 4041 . 225	Stativ Tripod
3	269302 - 4040 . 125	Justiertisch für Laserkopf 528 Adjustable table for laser head 528
4	-	Notebook
5	269302 - 5093 . 126	Grundbox mit Powermodul - mehrachsig Basic box with power module - multi-axes
6	269302 - 5010 . 524	Kompaktinterferometer 347 Compact Interferometer 347
7	269302 - 4034 . 524	3 Achs - Reflektor 345 Three axis reflector 345
8	269305 - 3500 . 024	ZIC 05 - Sensoreinheit 345 ZIC 05 sensor for 345
9	260298 - 3000 . 128	Magnetfuß 506 Magnetic base 506
10	260297 - 9900 . 228	Säule 90 Rod 90
11	269302 - 4010 . 125	Klemmhalter 508 Clamp mounting 508
12	269305 - 3500 . 025	ZIC 05 Auswerteeinheit ZIC 05 evaluation unit

Kompaktinterferometer 366 für 6 - Achs – Messung mit Planspiegelinterferometer*Compact interferometer 366 for 6 - axes – measurement with plane mirror*

Messung für:

- simultane Messung von Position, Nick.- Gier.- und Rollwinkel (mit Interferometer 366)

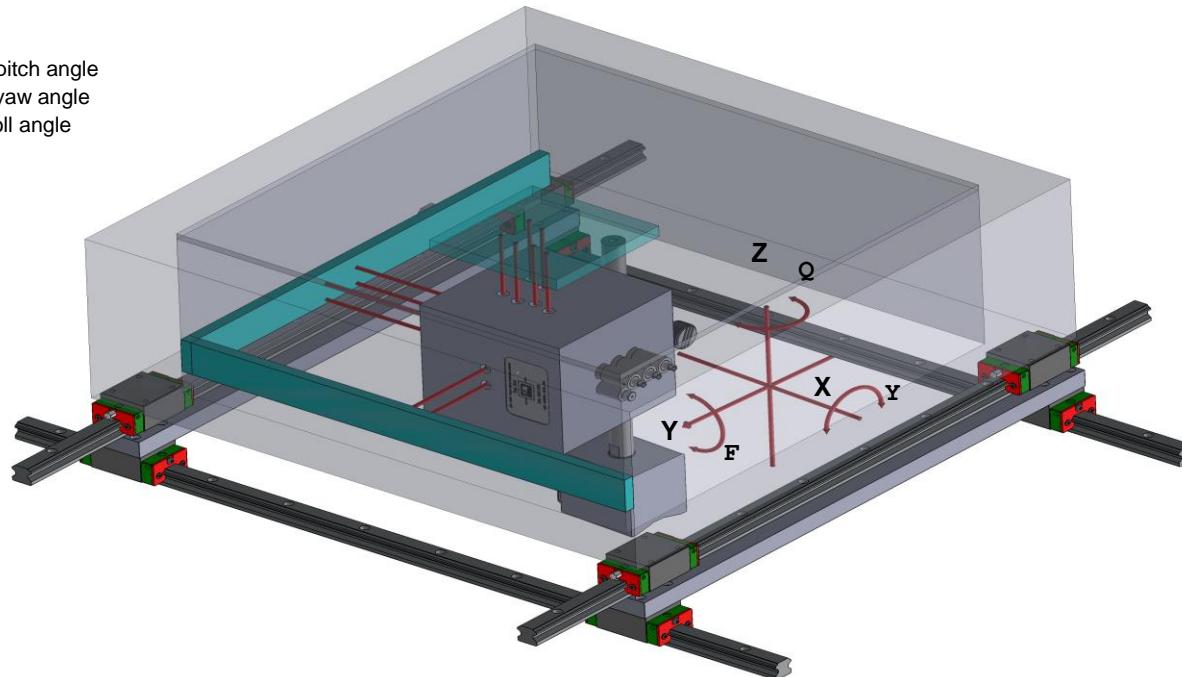
Measurement for:

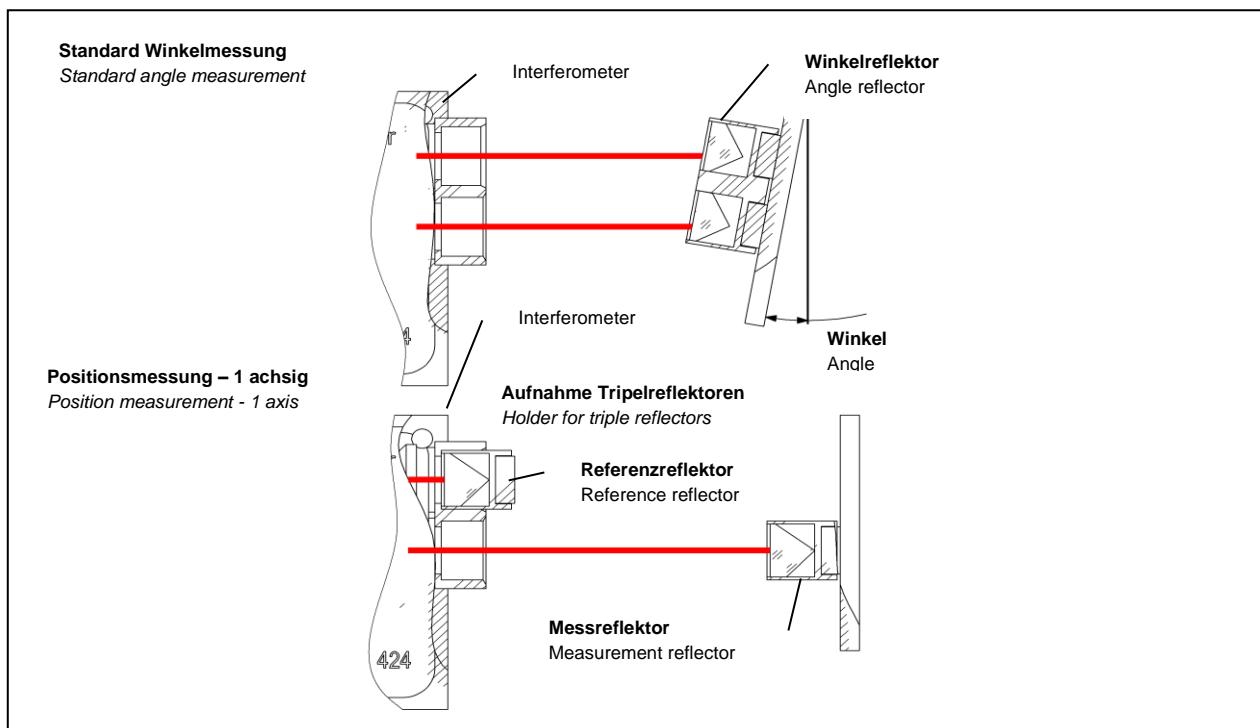
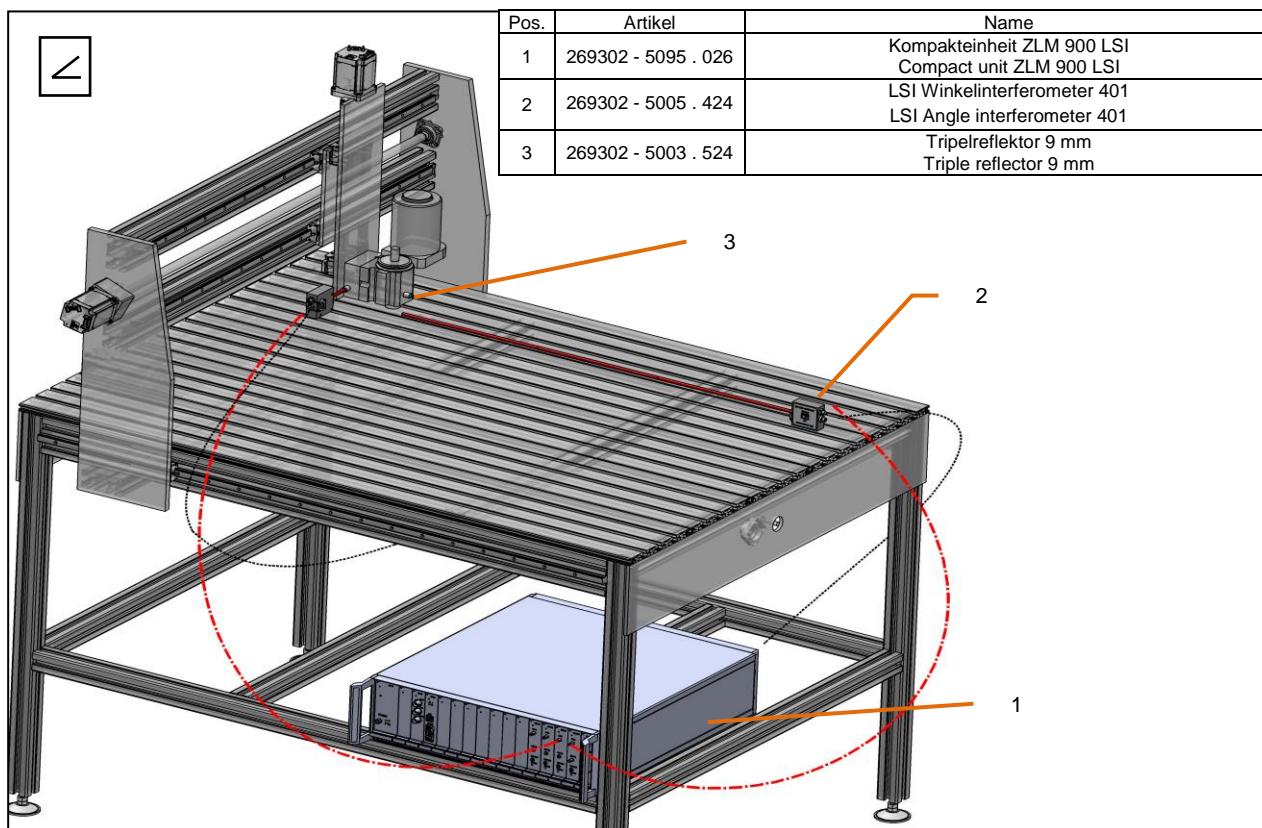
- simultaneous measurement of position, pitch, yaw & roll angle (with interferometer 366)



Position

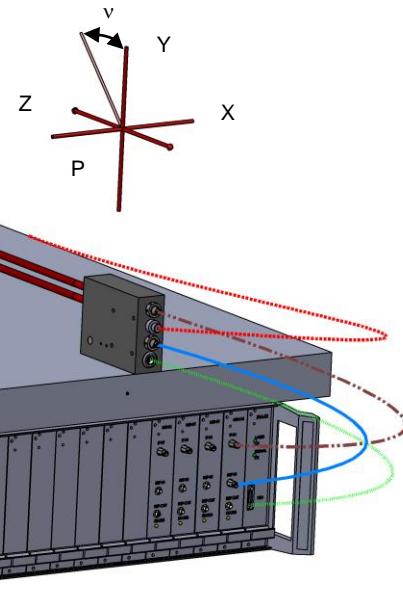
- Y Nickwinkel / pitch angle
- F Gierwinkel / yaw angle
- Q Rollwinkel/ roll angle



Reflektorenschema – Einstrahlwinkelinterferometer zur 1- Achspositionsmeßung
Schematic of reflectors- Single Angle Interferometer for 1 axis position measurement

Kompakteinheit ZLM 900 LSI mit integrierter Auswerteeinheit mit 2 x LSI Winkelinterferometer 401
Compact unit ZLM 900 LSI with integrated Evaluation unit with 2 x LSI Angle interferometer 401


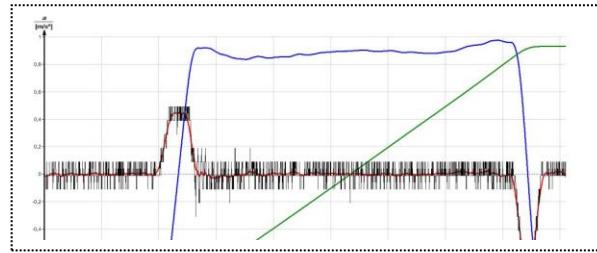
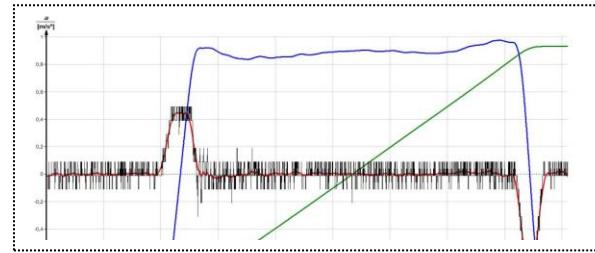
Kompakteinheit ZLM 900 LSI mit integrierter Auswerteeinheit mit LSI Winkelinterferometer 407
Compact unit ZLM 900 LSI with integrated Evaluation unit with LSI Angle interferometer 407

Pos.	Artikel	Name
1	269302 - 5095 . 026	Kompakteinheit ZLM 900 LSI Compact unit ZLM 900 LSI
2	269302 - 4003 . 224	LSI Winkelinterferometer 407 LSI Angle interferometer 407
3	269302 - 5003 . 624	Doppelreflektor 9mm Double reflector 9mm

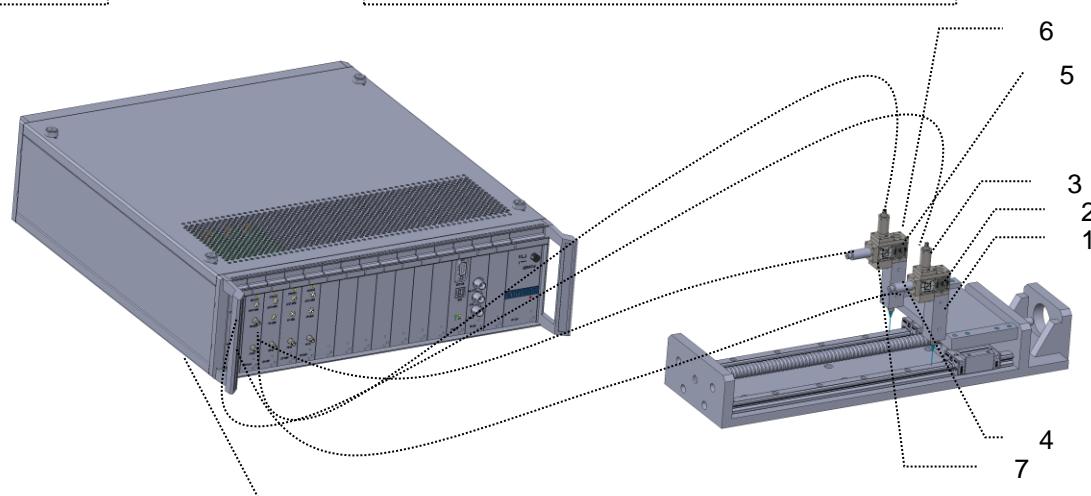


P... Position
Position
Nickwinkel
Pitch angle

Kompakteinheit ZLM 900 LSI mit Einstrahltester 206 für simultane Kippwinkelmessung
Compact unit ZLM 900 LSI with single beam probe 206 for simulated tilt angle measurement

**P₁****P₂**

POS.	Artikel	Name
1	269302 - 5100 . 324	Einstrahltester 206 Single beam probe 206
2	269302 - 4012 . 424	90° Umlenker 205 für Einzelstrahl 90° Beam bender 205
3	269302 - 4016 . 324	LWL Anschluss 215 Fiber optics coupling 215
4	269302 - 4016 . 424	LWL Auskoppelung 218 Fiber optics coupling 218
5	269302 - 4016 . 524	Polarisationsteiler 200 Polarizing beam splitter 200
6	269302 - 5111 . 110	Klemmhalter 509 Coupling plate 509
7	269302 - 4016 . 624	Tripelreflektor 216 Cube corner reflector 102
8	269302 - 5095 . 026	Kompakteinheit ZLM 900 LSI Compact unit ZLM 900 LSI



P_{1,2...} Position
Position



JENAer Meßtechnik GmbH
Carl-Zeiss-Promenade 10

D – 07745 Jena /
Germany

Tel.: +49 3641 / 21 53 26
+49 3641 / 21 53 27
Fax: +49 3641 / 21 53 28
Mobil: +49 171 5 22 66 54
e-mail: info@jenaer-mt.de
homepage: <http://www.jenaer-mt.de>