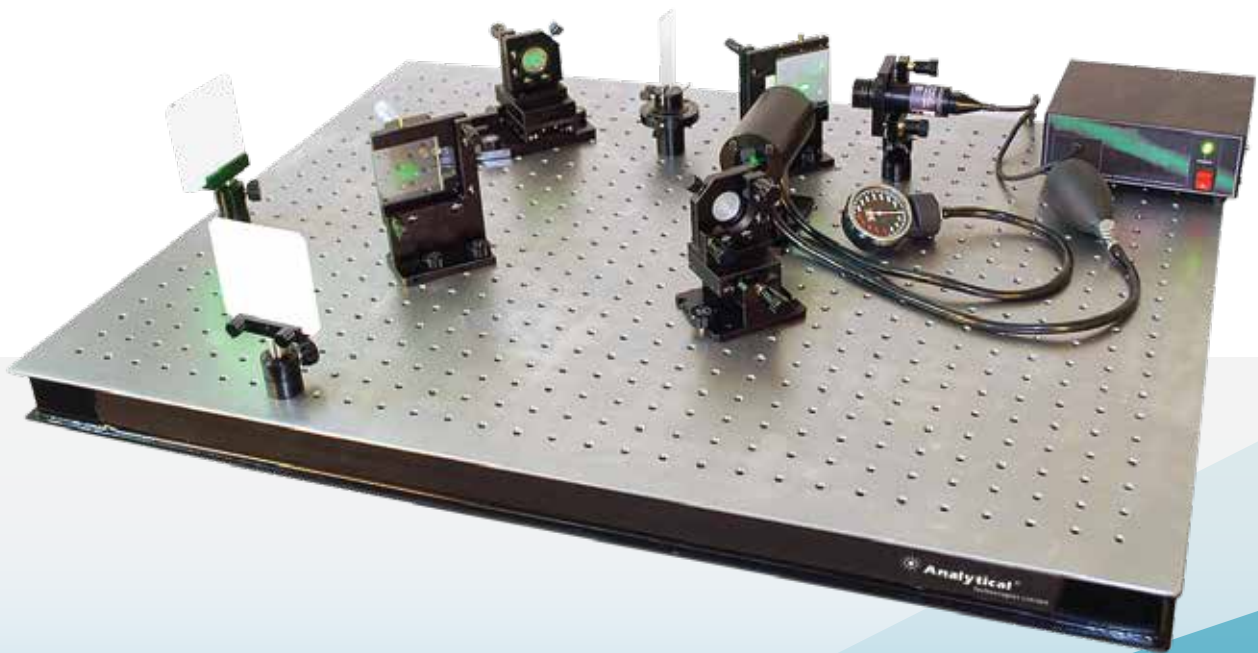


# MACH ZEHNDER INTERFEROMETER

## MZ-3012



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

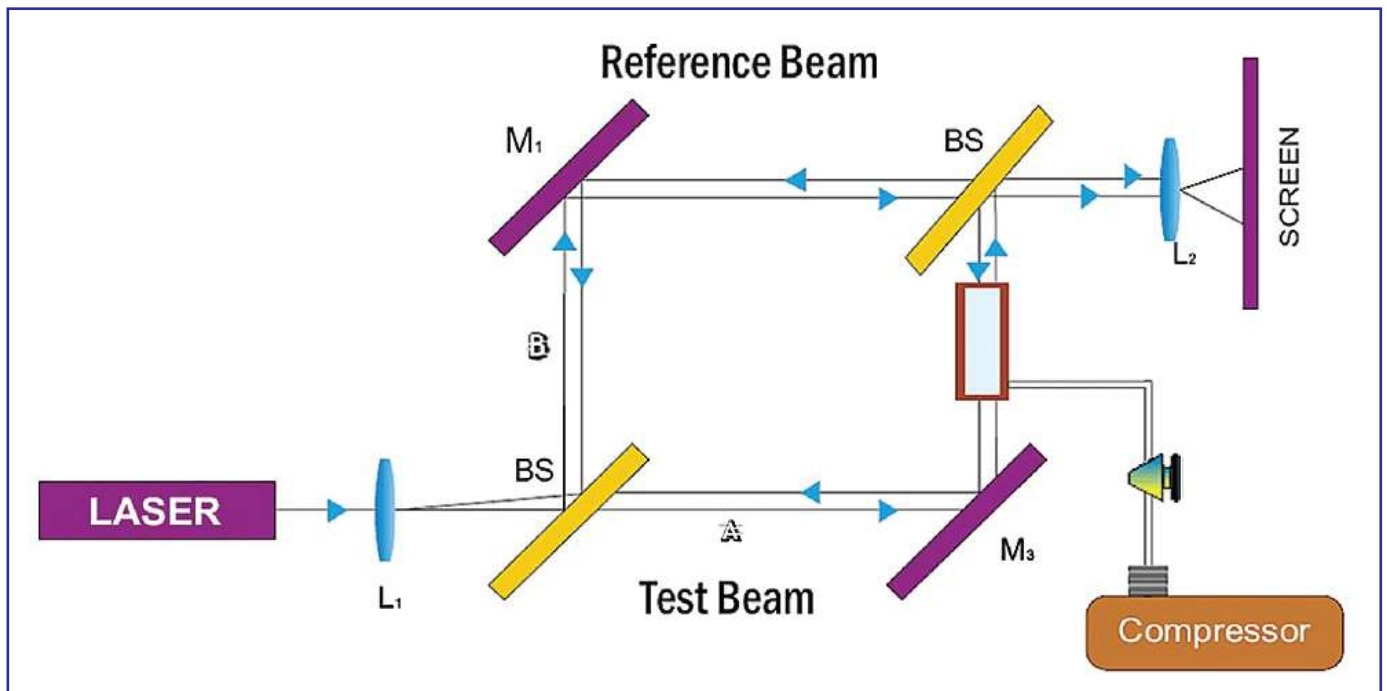
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## ►► Principle and Working :

Interferometer is built by assembling the building blocks on a breadboard as per desired optical layout. Optics and laser head are held using kinematic mounts with two axis fine adjustment facility. Precision alignments for obtaining the interference fringes are done using kinematic mounts.

One of the simplest experiments using the interferometer is measurement of index of refraction of air with an airtight test cell placed in one of the optical arms of the interferometer. No other factor such as convective airflow, should be present, that can generate optical path differences. The flexibility in fringe localization is one of the important advantages of the mach zehnder interferometer over other interferometers. Although many Mach-Zehnder interferometers use a rectangular arrangement, parallelogram arrangements are also possible. Vibration isolated supports for optical table is optional.



## ►► Features

- Kinematic mounts are used for fine movement of optical components
- Diode laser is used as light source
- All materials used in this setup are of laboratory grade with corrosion resistance
- The optics used in this device are of research quality

## ►► Scope of Supply

### Optical Breadboard with Support



Dimensions	800mm x 600mm
Material	Stainless
SteelQuantity	1 no.

### Kinematic Laser Mount

Material	Black anodized Aluminum alloy
Adjustments	Using 80 tpi lead screws
Adjustment Range	+/-4 degrees
Quantity	1 no.



### Beamsplitter Mount

Degrees of freedom	2 degrees
Material	Black anodized Aluminium alloy
Quantity	1 no.



### Mirror Mount with Translation

Degrees of freedom	3 degrees
Fine adjustments	Using 80 tpi lead screws
Material	Black anodized Aluminium alloy
Quantity	1 no.



### Mirror Mount with Precision Translation Supply

Degrees of freedom	3 degrees
Material	Black anodized Aluminium alloy
Least count of the micrometer	0.01 mm
Quantity	1 no.



### Rotation Stage

Resolution	2° / division
Material	Black anodized Aluminium alloy
Quantity	1 no.



### Screen with Mount

Dimension	75mm x 75mm
Quantity	1 no.



### Pressure Cell

Length	10 cm
Pressure Range	0 - 300 mm Hg
Quantity	1 no.



### Mirror with Cell

Diameter	25 mm
Thickness	6 mm
Material	Borofloat
Coating	Aluminium
Quantity	2 nos.



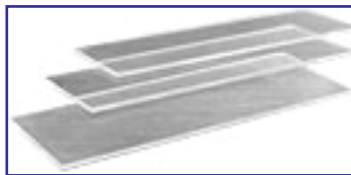
### Beamsplitter

Dimension	50 mm x 50 mm
Thickness	4 mm
R/T ratio	50 / 50
Material	N-BK7
Coating	Aluminium
Quantity	2 nos.



### Glass Slide

Dimension	75 mm x 25 mm
Thickness	1 mm
Material	Float
Quantity	5 nos.



### Diode Laser with Power supply (Red)

Wave length	650 nm
Optical power	5 mW
Quantity	1 nos.



### Diode Laser with Power supply (Green)

Wave length	532 nm
Optical power	5 mW
Quantity	1 nos.



## ►► Regulatory compliances



## ►► Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



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