# ATTAINING NEW HEIGHTS

### IN TECHNOLOGY & ACCURACY

The HORIZON Zenith Laser Plummet HZLP401 is used for vertical plumbing through extended heights. This is particularly useful for the Builder or Surveyor when working with heights that are inaccessible or too large to plumb with normal Optical Plummets.

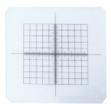
The instrument is also used for construction of vertical shafts and similar structures like massive vertical Cable Ducts or Elevator paths.

Featuring a detachable main unit, the Tribrach of the Plummet system can be centred over or under the required point and then replaced by a Theodolite or Total Station for guaranteed accuracies.

#### **Standard Accessories**



**Polarised Eye Filter** for protection against glare



Targeting Plate for measurement



**Tool Kit** for light maintenance



#### **Application examples:**

- Tower work
- High-rise work
- Elevator Shaft Construction
- Vertical Piping Construction
- Vertical Cable Ducts
- Transfer of Vertical Survey points to ground
- Ceiling work

#### **Features:**

- Highly visible laser for ease of sighting
- Useful when working with large vertical distances
- Separatable main unit and Tribrach system
- Can be used independently or with Total Stations/Theodolites

### **Optional Laser Accessories Available**



Zenith				HZLP401
	H	IZLP	401	

HORIZON Zenith Plummet HZLP401 Spec	ifications
Accuracy	1/40,000
TELESCOPE	
Effective Aperture	30mm
Magnification	25x
Minimum Focus Distance	1 m
Field of View	1° 30′
Minimum Focusing Distance	lm
Image	Inverted
LASER DIODE	
Wavelength	635nm
Laser Class	Class 2
LASER PLUMMET	
Auto Shut Off Time Interval	5min
Minimum Viewing Distance	0.5m
Plummet Accuracy	1 mm
LASER OPERATION RANGE	
Day	120m
Night	300m
LASER SPOT	
40m Range	Maximum 4mm
100m Range	Maximum 6mm
Deviation, Optical and Laser Axis	5"
Mean Square Plumbline error	≤5"
OTHERS	
Operation Temperature	-10°C ~ +40°C
Instrument Weight	2.9kg
Instrument Dimensions	130x110x244(mm)
Power Supply	3V

## ONE OF THE BEST PRISMS IN THE WORLD

### Featuring Prisms tested by an In-house **ZYGO Interferometer**

HORIZON Prisms Systems are one of the best in the World. HORIZON can professionally verify their prism accuracy on an in-house ZYGO Interferometer upon demand.

While most other Prism manufacturers claim certain accuracies. HORIZON can actually certify such claims. Strict quality control assures that only the best HORIZON Prism Systems leave our warehouse.

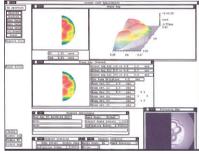
Our Prism Systems are compatible with all the major brands of instruments like Leica, Topcon, Sokkia, Nikon, Pentax and Trimble.

### Features of the **HORIZON Prism Systems:**

- HORIZON Prisms are checked and certified by In-house Interferometer
- Prism accuracy is below 5 arc seconds. Certification of the Prism Accuracy is possible upon demand
- Available in Silver, Copper coating, or plain with no coating
- Available in 64mm and 65mm, and 25.4mm/38mm for mini Prisms
- Canister for 64/65mm available in orange, yellow and black
- Canisters are drop resistant
- Alternative sizes may be available upon request
- Prism offsets are 0, 30mm generally, and -34.4mm for Leica instruments
- Prism customisation possible upon request



The ZYGO Interferometer Batch testing of Horizon Prisms



Prism accuracy print-out The results from verifying a Prism's accuracy & clarity using the ZYGO Interferometer



















ADS 0035











**ADS 16** 



**Optional ADS Soft** Carrying Case ADS SPAB01(Item interchangeable for the standard ADS Carrying Case or purchased separately)





**Standard ADS Carrying Case** ADS AX02 (Come with all reflector Systems)

# MINI PRISM SYSTEMS - PORTABLE & EASY

When you need something that is small, portable light and gets the job done, look no further than these Mini ADS Prism Sets

Being small does not make these systems fragile. These sets of silver/copper coated Mini Prism Systems are mounted in air tight housings to protect against shock, dirt and moisture.

- Drop/Shock Resistant
- Prisms are housed in a Water Proof Housing

### **Used for Monitoring** (Only the ADS 114)

- Structures
- Bridges
- Tunnels
- Buildings

Plus others





Accessories for ADS 102 & ADS 104 Systems



105A, 105B Mini Prism System











ADS Mini Prism Specifications	ADS 102	ADS 103	ADS 104	ADS 105A	ADS 105B	ADS 112	ADS 114
Prism Size	25.4mm	25.4mm	25.4mm	38mm	25.4mm	25.4mm	25.4mm
Coating	Silver	Silver	Silver	Silver	Silver	Copper	Copper
Prism Constant	0/30mm	0	0/30mm	0/30mm	0/30mm	0/30mm/17.5mm	-25.4mm
Mini Pole	None	3x60cm/4x25cm	None	3x60cm	3x60cm	4x30cm	None

Note: \*Available in yellow and red colour for ADS 104 / Mini Pole (4 x 25cm) is available for ADS 105A & 105B upon request

### AK SERIES PRISM SETS - SIMPLIFIED & READY ACCURACY

Accessory Information - All AK Series Prism Sets are supplied with Prism in Canister, Prism holder, Prism Cover, Target Plate and Soft Padded Carrying Case

AK Series Prism Systems	The AK 16T	All models
Prism Size	Ø65mm	Ø64mm
Prism Constant	-34.4mm	0 & 30mm
Prism/Target Height	100mm	100mm

All ADS Prism Pole Graduation are calibrated to suit AK Prism Series target height













**AK 11T** ADS 0100







**AK 12T** ADS 0120



ADS 0230

# ONE OF THE BEST 360° ALL-ROUNDERS

### The HORIZON 360° Prism System

The most versatile Prism with a 360° Omni Directional Measurement capacity. It eliminates manual positioning of the Prism which saves time and manpower. This allows the certain surveying jobs to be a one man operation.

This is also why this Prism is essential for Hydro Surveying, where 360° measurability is important.

Besides Point Surveying, this nifty Prism also does 3D Profiling and is highly compatible with Total Stations.



ADS Type L(left) & ADS Type 5/8"(centre) Sighting Pole (right) ADS 360PR(L) & ADS 360PR(5/8)

#### **HORIZON 360° Type L & Type** 5/8 Prism System

- Mounted on pole or Tribrach.
- Measurement from any direction
- Land & Hydro Survey
- Copper Coated Prisms
- Bayonet Leica or 5/8" fitting
- Range :1200 meters

ADS 360PR Series Specifications	ADS 360 Type L	ADS 360 Type 5/8
Prism Constant	-10mm	-10mm
Average Measuring Range	1200m	1200m
Mounting Adapter	Leica Bayonet Type Adapter	5/8" x 11 Adapter
Prism Accuracy	5"	5"
Dimension	143.5 x 64	157 x 64
Weight	360g	350g

#### **HORIZON 360° ADS 107**

A light weight 360° Prism System is created by mounting 8 pieces of Prism of Ø16mm 45° interval.

ADS 360PR Series Specifications	ADS 107	ADS 109
Prism Constant	8mm	4mm
Prism Centre Height	40mm	40mm
Dimensions	Ø60 x H75mm	Ø74 x H96mm
Mounting Adapter	Leica or 5/8"	Leica or 5/8"





All ADS 360° Prisms come with Standard **Soft Carry Cases** 

# NE OF THE WORLD'S BEST PRISMS

#### **Unmounted Prisms & Prism Holders**

HORIZON Prism one of the world's best because they are verified up to an accuracy of 2 arc seconds.

In this section we would like to highlight the fact that we have an experienced team which can customise any Prism size or coating to suit your exact manufacturing needs and specifications.

Besides the Prism, Horizon provides customised Prism Holders and Holders, made from aluminium and plastics to be light weight, portable and tough.

- High verified accuracy
- Customised sizes and accuracy
- Choice of plain Glass, Silver or Copper coating















Various Types of Prisms in different shapes, sizes and coatings (Customisation of Prisms available)



ADS 0102PR(MC)



ADS 65MMPR(MC)



ADS 64MMPR(MUC)R1



ADS 64MMPR(MUC)Y1



ADS PRLED(R)

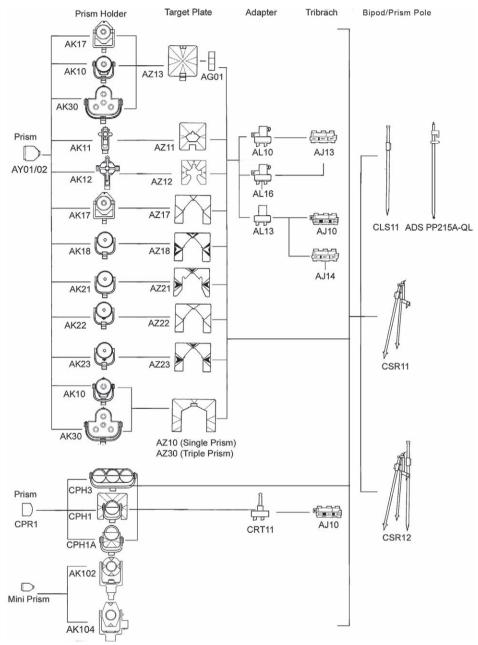
Various Types of Unmounted Prisms in different shapes and sizes

### QUALITY PRISM HOLDERS



Various Types of Prisms Holders in different shapes and sizes

# THE ADS REFLECTOR FAMILY TREE COMPATIBILITY IS OUR MIDDLE NAME



### **ADS Reflector Systems Interlinked for full compatibility**

HORIZON Reflector Systems are inter linked in a way to provide the full range of products to suit any need, no matter which part is required. A full support system for the Worlds Best Prisms. Horizon Reflector Systems are thus fully compatible with all major brands of Total Station and Electronic Distance Meters such as Leica, Topcon, Sokkia Nikon, Pentax, Trimble and Zeiss.

# TRIBRACH & ADAPTORS | FULL RANGE

### COMPATIBLE WITH ALL MAJOR PRISM SYSTEMS

HORIZON offers a complete range of regular, Laser and Optical Plummet equipped Tribrach and Tribrach Adaptors. These accessories are fully compatible with all types of Prism Systems, and interchangeable with all other Tribrachs and Adaptors.

HORIZON presents the new Premium Tribrachs, HDF21 and HDF22. These are superiorly constructed quality products, made with the quality-conscious user in mind. Built to impress, these Tribrachs will satisfy the most demanding user.



HDF 21
without Optical Plummet



AJ 10 with Optical Plummet ADS TBAJ 10



HDF 22 with Optical Plummet H2FTB HDF22



AJ 13 without Optical Plummet ADS TBAJ 13



AJ 14
with Laser Plummet
ADS TBAJ 14



AL 10 with Optical Plummet ADS TAAL 10



AL 13 without Optical Plummet ADS TAAL 13



AL 16 with Laser Plummet ADS TAAL 16



AL 14 5/8" Fixed Type ADS TAAL 14



CRT 11

without Optical Plummet
ADS SCCRT 11

### FULL RANGE & FULL ADAPTABILTY

### Various types of Adapters

HORIZON has a full range of Adapters to make our Poles and Prisms fully intergratable into whatever existing system you already have.

This takes away any worries you have of compatibility with any major brands.



- PP215 ADS AD001



**Standard 5/8"**- **PP215**ADS AD002



30mm 5/8" - PP215 ADS AD003



53mm 5/8" - PP215 ADS AD004



80mm 5/8" - PP215 ADS AD005



Adjustable Adapter
- PP250QL
ADS AD006



Fixed Adapter for Sokkia - P250QL ADS AD007



Fixed Adapter for Topcon, Pentax & Nikon - PP25OQL ADS AD008



5/8" Leica for-Leica PP250QL ADS AD009



5/8" to 5/8" Extension



Leica - ADS 360



**5/8" - ADS 360** ADS AD012



Optical Square
- PP215
ADS AD013



5/8" to 5/8" Female - Male ADS AD014



**Leica - 5/8"** ADS AD015



Cup Holder Type - PP215 ADS AD016



Clamp - LP02 SP HZLP02-SB



Pole Point
PP250 / PP460 / PP500
SP ADSPPTIP

# PRISM & RANGE ALLOY POLES

### MANUFACTURED WITH TOUGHNESS IN MIND

#### **Prism Poles**

All HORIZON poles are built to withstand daily rough usage, and we offer a full range of poles to suit all your needs.

Constructed of lightweight aluminium, and reinforced with steel at critical parts, the HORIZON prism poles are air dampened to allow smooth and safe operation. All our Prism Poles are equipped with liquid filled Bubbles, smooth working locking systems, and

laser etched clear graduation readings, with pole tips to make your job easier.

### Range poles

Available in 2 and 3m, the HORIZON range pole is constructed with wood, and allows for easy handling with a simple twist and lock mechanism.

#### **Carbon Fibre GPS Pole**

Constructed with lightweight and tough carbon fibre wrapped round an alu-

minium core, HORIZON offers one of the lightest and strongest Carbon-Fibre poles in the market.

Weighing in at only 780g, and standing in at 2m, this pole is pound for pound one of the toughest in the market today.

Used mainly in GPS work, the HORIZON Carbon Fibre Pole comes in 2 piece detachable parts for easy transport, and a padded carrying bag.



Note: All Prism Poles come with Carrying Cases
All 2.15m & 2.5m Prism Pole come with Black/Yellow or Red/White Colour

# STABLE & ADAPTABLE TRIPODS & BIPODS

### **Various types of Stands**

Again with our Tripods and Bipods range, HORIZON offers a comprehensive range of stands all kinds surveying equipment in a variety of shapes, sizes and specifications.

Whether you are looking for lightweight aluminium for portability, wooden for stability or fibreglass for toughness, we understand what you need and can provide accordingly.

Similarly there is also a host of specifications you can choose from to suit your needs, from the Tripod height to Tripod head shape to even locking mechanism, you will find what you specifically want.















Horizon Tripods	QL/SL 165W	QL/SL 180W	QL/SL 165AS	QL/SL 180AS	QL/SL 165A32		
Material	Wood	Wood	Aluminium	Aluminium	Aluminium		
Fully Extended Length	1.65m	1.8m	1.65m	1.8m	1.65m		
Retracted Length	1.05m	1.13m	0.98m	1.06m	0.97m		
Tripod Head Size	14cm	14cm	14cm	14cm	11.4cm		
Colours	Orange / Yellow						
Tripod Head Shape	Dome or Flat head						
Locking Device	QL (quick lock) / S	QL (quick lock) / SL (screw lock)					



Horizon Tripods	QL/SL 160A32	QL/SL 165ARD	QL/SL 180FGB	QL/SL 170W		
Material	Aluminium	Aluminium	Fibreglass	Wood		
Fully Extended Length	1.60m	1.65m	1.83m	1.70m		
Retracted Length	0.95m	1.02m	1.13m	1.07m		
Thread	5/8" or M16cm					
Tripod Head Type	Flat Type					
Head Bore	58					
Weight	3.2kg 4.2kg 9.7kg 6.8kg					
Locking Device	QL (quick lock) / SL (screw lock)					

# PRECISION COLLIMATION TECHNOLOGY

### **HORIZON Collimation & Alignment Systems**

Besides providing quality instruments and accessories, HORIZON also offers precise collimator and alignment systems for vendors which are serious about the instruments they sell.

HORIZON offers a full range of Optical Collimators in single or multi-tube set ups, and a Laser Collimator for checking and adjustment of laser instruments.

Our complete range includes instrument stands and a Tribrach adjustment devices which is available on demand.

To ensure the highest precision standards, all HORIZON's Collimation and Alignment Systems undergo strict quality control before being shipped out to our customers.







# PRECISION COLLIMATION TECHNOLOGY

Collimator Specifications	Optical Collimator Model 60	Dual Tube Collimator Model 70	3 Tube Collimator Model 80		
Focal Length	F = 550mm	F = 420mm	F = 420mm		
Relative Aperture of Objective	D/f = 1/10				
Reticule for Checking Short- est Focusing Distance for Horizontal Tube	2m				
Angle between two Collimators	30° ± 15′				
Reticule Graduation	30" / Gradu- ation	20" / Gradu- ation	20" / Gradu- ation		
Reticule Graduation Range					
Horizontal	± 30′	± 20'	± 20'		
Vertical	± 30′	± 20'	± 20'		
Size of Centering Screw for securing of instruments into test position	5/8"				
Sensitivity of Levelling Bubble	20"	10"	10"		
Step Down Transformer	220V to 6V				
Voltage of light bulb for Reticule Illumination	6V	5V	5V		
Current of light bulb	0.3A				
Physical Dimension (L x W x H) cm	94 x 30.4 x 58.5	75 x 40 x 70	75 x 40 x 85		
Weight	85kg	90kg	110kg		



This device is used for the Collimation and Adjustment of Laser Instruments like Multi-line Lasers, Rotating Lasers plus others.

Collimator Specifications	Laser Collimator	Collimator 550			
Focal Length	F = 550mm				
Relative Aperture of Objective	D/f = 1/10				
Reticule for Checking Shortest Focu- sing Distance for Horizontal Tube	∞	-			
Reticule Graduation	-	20" / Graduation			
Sensitivity of Levelling Bubble	8"	-			
Step Down Transformer	220V to 6V	220V to 6V			
Voltage of light bulb for Reticule Illumination	6V				
Current of Light Bulb	0.3A				
Physical Dimension (L x W x H) cm	68 x 20 x 24	70 x 17 x 12			
Weight	14kg	7.5kg			

### **Features of Instrument Stand**

- Weight : >100kg
- Adjustable height
- Screw type base mounting
- Standard 5/8" thread connection to instrument
- Illuminated Crosshairs



Collimator for adjustments & calibration of Laser instruments
HZ WSLC01



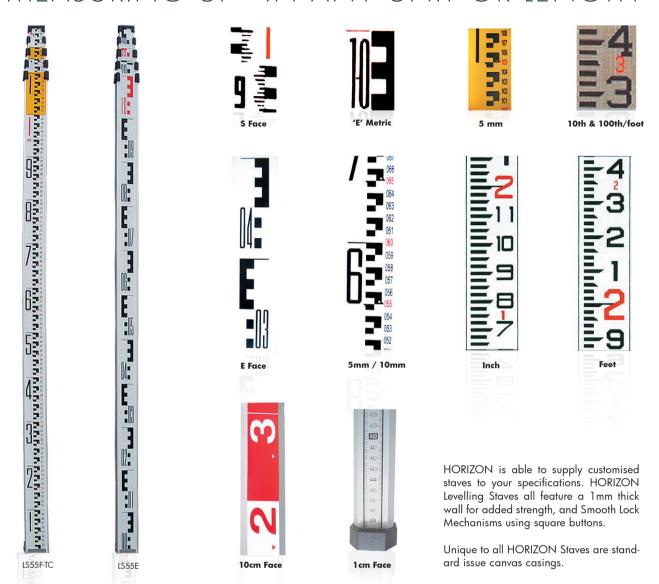


Tribrach Optical Plummet Alignment Tool HZ WSTB01



Instrument Stand with adjustable height and Illuminated Crosshair HZ WSBW1

### MEASURING UP - IN ANY UNIT OR LENGTH



Staff Model Number	LS 33E	LS 335	LS 33EF	LS 33F-TC	LS 44E	LS 445	LS 44EF	LS 44F-TC
Order No.	HZ LS33E	HZ LS335	HZ LS33E F	HZ LS33F TC	HZ LS44 E	HZ LS44 5	HZ LS44E F	HZ LS44F- TC
Section	3	3	3	3	4	4	4	4
Graduation Front	E	5mm	E	5mm	Е	5mm	E	5mm
Graduation Back	-	1cm	10th & 100th / Foot	10cm	-	1cm	10th & 100th / Foot	10cm
Weight	1.0kg	1.0kg	1.0kg	1.0kg	1.5kg	1.5kg	1.5kg	1.5kg

Staff Model Number	LS 55E	LS 555	LS 55EF	LS 55F-TC
Order No.	HZ LS55 E	HZ LS55 5	HZ LS55E F	HZ LS55F- TC
Section	5	5	5	5
Graduation Front	Е	5mm	E	5mm
Graduation Back	-	1cm	10th & 100th / Foot	10cm
Weight	1.7kg	1.7kg	1.7kg	1.7kg

## CIRCULAR & PLATE LEVEL CUSTOMISATION



HZ 2000 Series SP OLT2000CL



HZ 4024 SP HZOLS024CL



HZ 4032 SP HZOLS032CL



NA700 LC SPOL641990



NA800 IC SP434239



AJ10/AJ13 SP ADSTBAJCL

-	1000	100		TOWNSHIELD
Sept.	4	101	100	
SEA.		133	110	





AL 10 Tribach Adapter HTS 300 / FT 1000 Series SP ADSTAALPL SP FTHTSPI01

### Various types of Replacement Bubbles

To expand our product range to suit all users, Horizon offers a wide range of replacement Bubbles to customise your surveying equipment.

	Model	Order Number	Sensitivity of Bubble
Circular Level	HZ 2000 Series	SP OLT2000CL	8'/2mm
	HZ 4024	SP HZOLS024CL	8'/2mm
	HZ 4032	SP HZOLS032CL	8'/2mm
	AJ10 / AJ13	SP ADSTBAJCL	8'/2mm
	NA 700 Series	LC SPOL641990	10'/2mm
	NA 800 Series	LC SP434239	10'/2mm
Plate Level	AL 10 Tribrach Adapter	SP ADSTAALPL	30'/2mm
	HTS 300 / ET 1000 Series	SP ETHTSPLO1	30'/2mm

### HIGH QUALITY & WIDE RANGE OF COMPASSES

With a wide range of quality Compasses, Horizon something to offer to every industry that needs one. From a simple Pocket Compass to Optical Compasses to even those for Forestry Survey.

Our range of Compasses will serve a wide range of applications.



HZ MCDC45-3



DC45-3 Compass DQY-M Mecca Seeking **Pocket Compass** HZ PCIQYM



**DQL-3 Pocket Compass** HZ PCHQL3



HZ PCHQL2A



DQL-2A Pocket Compass DQL-1 Forestry Compass HZ OCHDQL1



HZ PCHDQY1



DQY1 Pocket Compass DQL-8 Pocket Compass



DC45-1 Compass H7 MCDC45-1



DC45-2 Compass H7 MCDC45-2



**DSL-1 Forestry Compass** HZ ODLHDSL1



**DQL-6 Optical Compass** HZ OCHQL6

### MEASURING WH

#### **Classique Professional**

- Measures up to 10km by 10cm units
- Metric or Imperial
- Pistol Grip Zero Reset
- Trigger Brake
- Kick Down Side Stand
- Sealed Roller Bearings
- Wrist Strap
- In Line Weight Distribution for Balance
- Folds in Half
- Optional Carry Case
- Full One Year Guarantee

### Measuring wheel 500 deluxe

500mm Circumference wheel for accuracy as well as for convenience and compact storage. Folds easily to one third of it's length and snaps back to full length.

- Wheel Circumference:500mm
- Wheel Diameter: 160mm
- Maximum Distance: 999.9m
- Reading: Meters, Decimeters
- Weight 1.1kg

#### MW 500 Bantam

Net Weight: 0.77 kg

Other specifications same as MW Mini 500



500 deluxe HZ MWRS02

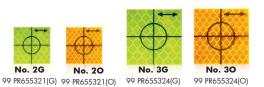
### SWISS MADE RETRO TARGETS

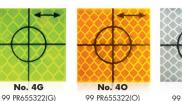
### **HORIZON**

### **Retro-Targets**

These are premium quality Reflective Targets made in Switzerland. A very convenient and handy type of Prisms, our Retro-Targets work with all major brand instruments well.

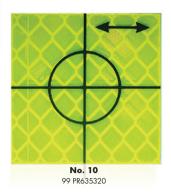
HORIZON Retro-Targets are available in a variety of sizes and colours.











Retro Target Specifications	No. 2G/No. 2O	No. 3G/No. 3O	No. 4/No. 4G/No. 4O	No.4.4	No. 6	No.10
Size	20 x 20 mm	30 x 30 mm	40 x 40mm	44 x 44mm	60 x 60mm	100 x 100mm
Measuring Range	80m	100m	150m	155m	200m	300m

### CARRYING CASES & BAGS

HORIZON Bags and Carrying Cases are made of High Fibre Count Nylon and durable Hard Plastics to safe keep the instruments and equipment inside.

However given the long lasting nature of HORIZON products and the rugged environment these carrying cases are subjected to, wear and tear or accidents may occur to warrant replacements. These are readily available to ensure that HORIZON equipment continually receives the best protection.

HORIZON Bags and Carrying Cases are usually in bright colours to ensure that the equipment can be easily located should it be misplaced.

No.	Suitable Model	Order Number
1	Prism Pole 2.5m	ADS PP250A-CC
	Prism Pole 5m	ADS PP500A-CC
2	Prism Pole 2.15m	ADS PP215A-CC
3	Prism Pole 2m	ADS PP200A-CC
4	Levelling Staff	HZ LSCC
5	ADS 360° Prism	ADS SP360PR
6	ADS Prism Set	ADS SPAB01
7	AKXXT Prism System*	ADS SPA B05
8	ADS Prism Set*	ADS AX02
9	ADS 102 Mini Prism	ADS SP102PR
	ADS 103 Mini Prism	ADS SP103PR
	ADS 104 Mini Prism	ADS SP104PR
	ADS 105 Mini Prism	ADS SP105PR
	ADS 112 Mini Prism	ADS SP112PR
10	Mini Pole for ADS 103 (3 x 60cm)	ADS SP103PP
	Mini Pole for ADS 105 (3 x 60cm)	ADS SP105PP
	Mini Pole for ADS 103 (4 x 25cm)	ADS SP103PP-SKK
	Mini Pole for ADS 105 ( 4 x 25cm)	ADS SP105PP-SKK
	Mini Pole for ADS 112	ADS SP112PP



## MORE ACCESSORIES TO CHOOSE FROM

#### Other Accessories

HORIZON offers a wide selection of small survey accessories, like a complete Rod Level selection, Crack Monitors, Optical Squares and several other products which are not listed.

HORIZON has a constantly expanding product range so if you are looking for something related to Surveying that is not mentioned in this catalogue, chances are that we do offer

All your surveying answers, are just a simple phone call or email away!















HZ SLSL9 HZ SLSL10

#### **Laser Accessories**

HORIZON carries a wide range of Laser accessories to complement our laser emitting products.

The Universal Telescopic 2 section 2m Laser Staff with a Sliding Bracket conveniently holds most types of Laser Detectors This system provides fast,

easy and accurate determination of height differences.

The etched-in markings and surface protection coating ensures the clear and long lasting Graduation. All laser staff are supplied with quick lock sliding bracket and a nylon case







Telescopic Viewer with Pouch HZ HLABFT4



**Cross Target Plate for Interior Craftsman and Designers** HZ HLACZM27



SL6

**Adapter for Telescopic Viewer** (For Generation 5 instruments) LC HLA731716









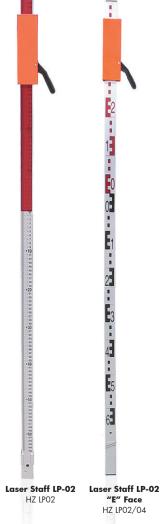




C6 Size

HZ HLACZM26 HZ HLATPC6

Laser Sensor HLD10 Specifications	
Detective Range	50mm (2.01in)
Detective Precision	High Precision: ±1mm ( ± 0.04in) Normal Precision: ±2mm ( ±0.08in)
Detective Beam Indication	Two LCDs (Front & Rear), Buzzer
Power Source	DC9V Alkaline Battery
Time for Power Auto Cut Off	20min Approx.
Operations Temperature Range	-20° ~ +50°C ('-4°F ~ 122°F)
Dimensions	150(L) x 97(W) x 24(H) mm
Weight	0.2kg (0.44 lbs) - including battery



# HITTING THE NAIL ON THE MARK

### **Standard Nails**

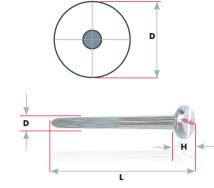
Often during surveying, Nails are required to Mark certain spots. HORIZON has range of nails for this very purpose.











Survey Nails Specification	No. 01	No. 1	No. 2	No. 4	No. 5	No. 7
Size D x H x L (mm)	6 x 3.7 x 29	9.2 x 4.5 x 44	15 x 7.3 x 50.7	20.2 x 6.5 x 104.7	20.4 x 7x129.9	20.5 x 7.1 x 202.3



#### **Premium Nails**

HORIZON now offers a choice of Premium Nails made in Japan. This range of nails are made for more strenuous use such as Markings in concrete and other hard surfaces.

HORIZONs' new Carburized nails are verified in laboratory statistics.

In various tensile, bend and strength test, these nails have been proven to perform up to 24%-31% better than other nails, in an mean average taken over a few test.

Call us to enquire on the sizes available.

Carburizing Nail Comparison (Average taken over a sample of 3 nails.)	Normal Nail	Carburizing Nail	Percentage Improvement
Tensile Strength	65kgf/mm²	65kgf/mm²	24%
Bend Test (bend with 40mm Nail to be cracked)	537kgf	705kgf	31%
Strength Test	2969kgf	3857kgf	30%

### SURVEY MARKERS

Survey Marker Specification	No. 2	No. 3	No. 4
Size D x d	Ø 26.5 x 5.1 mm	Ø 46 x 9.4 mm	Ø 53.8 x 8.7 mm







ADS SM#3



