

# Fowler

## Horizon Premium Length Measuring & Setting Instrument

**5**  
YEAR WARRANTY



**NEW!**



The new Trimos Horizon Premium Length Measuring and Setting Instrument fulfills today's requirements of high accuracy quality control equipment. New superior engineering ensures the best measuring results by easy manipulation. The new Horizon Measuring System offers a wide range of accessories to meet numerous measuring and setting applications.

Major benefits:

- Meets all ISO 9000/2000 standards
- A dimensionally stable instrument base, well designed mechanics and the use of a high precision measuring system guarantee optimal results.
- Precision guide ways control the sliding, play-free movement of the measuring carriage using the handwheel.
- All accessories can be changed quickly and easily.
- The locking and fine adjustment device of the measuring carriage allows a quick setting and checking of comparative measuring equipment.
- Adjustable measuring force, 0—12N with digital indication of force in Newtons facilitates the checking of plain gages.
- Measuring tables and supporting devices, positioned on the instrument base, facilitate all setting and checking procedures.



The new Horizon Length Measuring and Setting Instrument is available with both Analog or Digital display systems



▲ *Horizon Premium Analog System*

Horizon Premium with Analog measuring system (Heidenhain ND281):

- The display unit is positioned on an adjustable support and fixed to the base of the instrument.
- Direct display of all length measurement values.
- Display of minimum and maximum hold values
- Direct inch/metric conversion
- Selectable resolution: .00005", .00002", .00001", .000005" or .01mm, .001mm, .0001mm.
- Input and recall of preset values.
- Measuring using two references.
- Direct RS232 output.
- Connector for data transfer using a foot pedal.

Analog system supplied with:

- Basic instrument, includes two location supports with adjustable bolt pads and location plates for instrument leveling
- Two standard anvils #54-196-321 with tungsten carbide tipped measuring surfaces
- Protective cover
- Instruction manual
- Test certificate and certificate of guarantee

Display unit and accessories

- 1 Heidenhain ND281 display unit
- 1 Location plate and adjustable support
- 1 Computer connect cable (9p)
- 1 External switch box and data transfer foot pedal
- 1 Display unit connection cable





▲ *Horizon Premium Digital System*

Digital Horizon with computer assisted screen display and Trimos software:

- Industrial computer with TFT touch screen.
- The screen is positioned on an adjustable support and fixed to the base of the instrument.
- DDE server (for Excel, Word, etc.)
- Multi-windows mode on screen.
- Linear type analog display or with pointer, selectable scale resolution.
- Digital display of the selected measuring force in N.
- Direct display of all length measurement values and minimum/maximum hold values.
- Direct inch/metric conversion.
- Selectable resolution: .001", .0001", .00001" or .01mm, .001mm, .0001mm
- Measuring using two references.
- Input of 9 preset values.
- Inversion of measuring direction sign (+/-).
- Data transfer using foot pedal.

Digital system supplied with:

- Basic instrument, includes two location supports with adjustable bolt pads and location plates for instrument leveling
- Two standard anvils #54-196-321 with tungsten carbide tipped measuring surfaces
- Interface and CD-Rom (or floppy disk) with TRIMOS Win DHI installation program, PDF help file and Acrobat Reader.
- Protective cover
- Instruction manual
- Test certificate and certificate of guarantee

Display unit and accessories

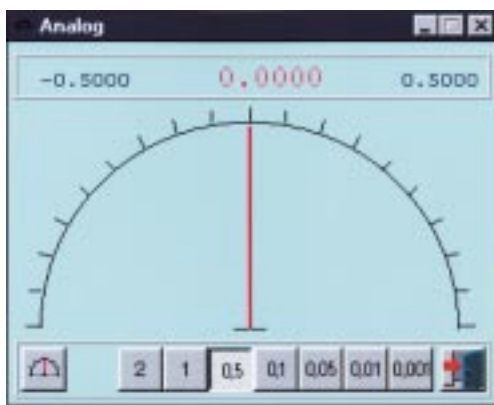
- 1 TFT touch screen and adjustable support.
- 1 Industrial computer.
- 1 Keyboard.
- 1 Foot pedal for data transfer.
- 1 Opto connection cable (used for display of measuring force)



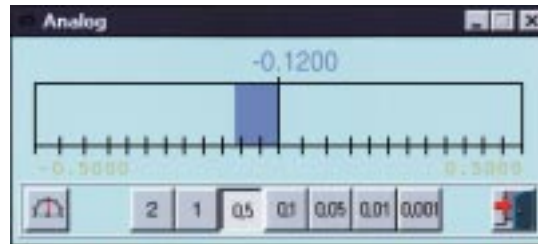




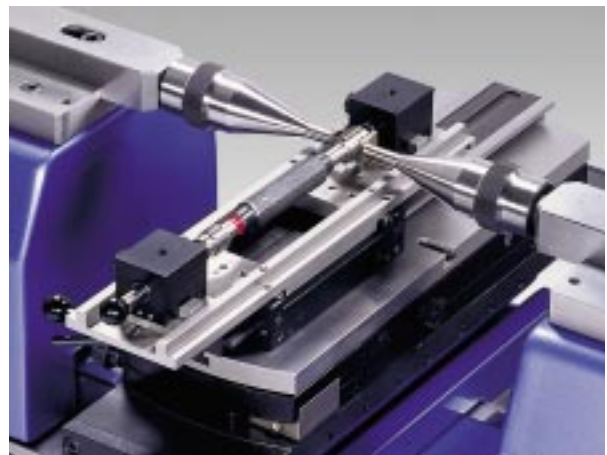
Computer assisted screen screen display using Trimos Win DHI software



Two analog displays are available  
(two windows can be opened simultaneously)

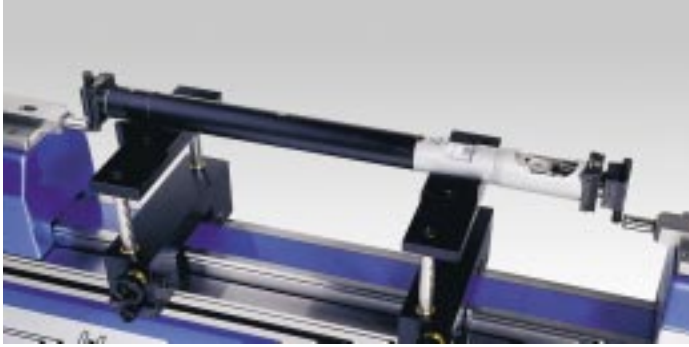


▼ *Setting of threaded plug gages from diameter 1.18" to 9.84" (30 to 250mm) using 54-196-160, 54-190-806 and 54-197-007*



▲ *Setting of threaded plug gages between centers up to maximum diameter of 1"(26mm), maximum length 6"(150mm) using 54-196-160, 54-197-106, 54-190-806 and 54-197-007*

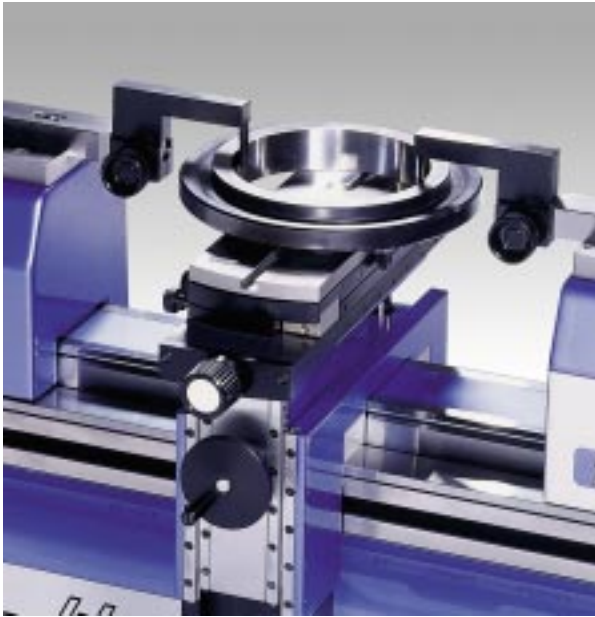




▲ Setting of 2-point bore gages using 54-196-107 and 54-196-021



▲ Setting of 2-point bore gages using 54-190-805, 54-190-829 and 54-196-040

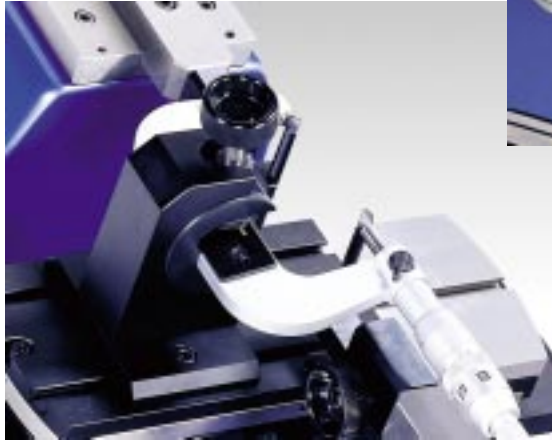


▲ Checking of ring gages from .473 to 10" (12 to 250mm) using #54-196-160, 54-197-162 and 54-197-142



▶ Checking of snap gages from .473 to 6" (12 to 150mm) using #54-196-160, 54-190-815 and 54-197-162

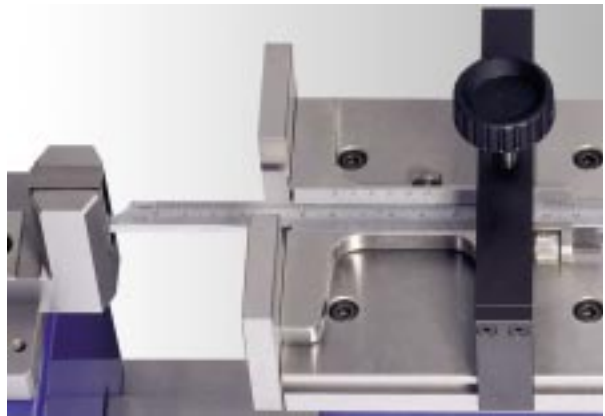




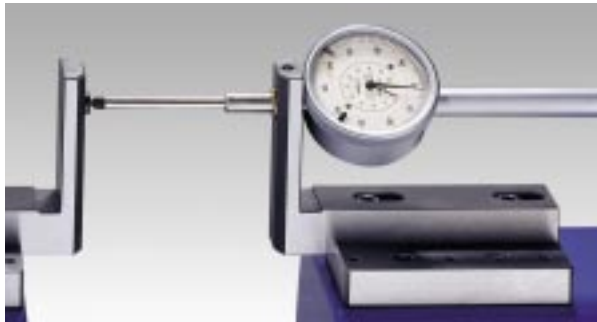
▲ Checking and setting of external micrometers from .4725 to 4" (12 to 100mm) using 54-197-114, 54-196-160 & 54-197-162



▲ Checking and setting of external micrometers from 3" to 120" (75 to 3050mm) using 54-190-805 & 54-190-825



▲ Checking of depth calipers using 54-190-805 & 54-190-827



▲ Checking of 8mm dial indicators above range of 50mm using holder 54-190-824  
Checking of 3/8" dial indicators up to 2" range using 54-190-823

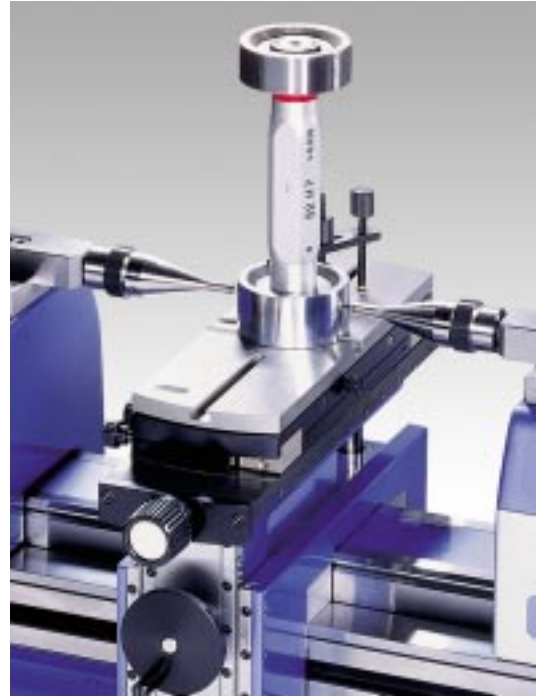
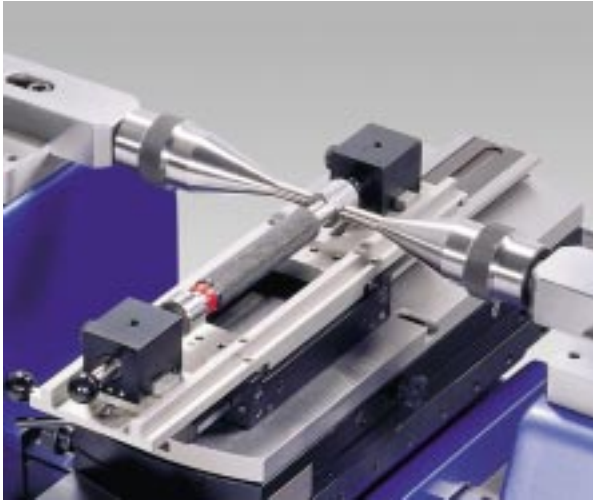


▲ Checking of calipers using 54-196-006





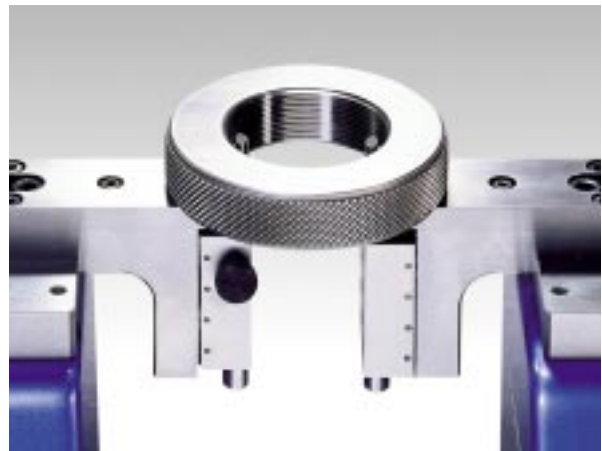
▼ *Setting of plug gages between centers up to maximum diameter of 1.18"(30mm), maximum length 6"(150mm) using 54-196-160, 54-190-806 and 54-197-106*



▼ *Checking of threaded ring gages from pitch 48 to 4 threads per inch/0.7 to 6mm (maximum internal diameter of 7.08"/180mm) using 54-196-160, 54-197-142, 54-197-075 and 54-197-074 or 54-197-070 & 073*

▲ *Setting of plug gages from diameter of 1.18" to 10"(30 to 250mm) using 54-196-160, 54-197-142 and 54-190-806*

*Checking of ring gages from diameter of .04 to 4"(1 to 100mm) using 54-196-160, 54-197-142, 54-197-070 and 54-190-076 and 54-197-074 or 54-197-070 & 073*



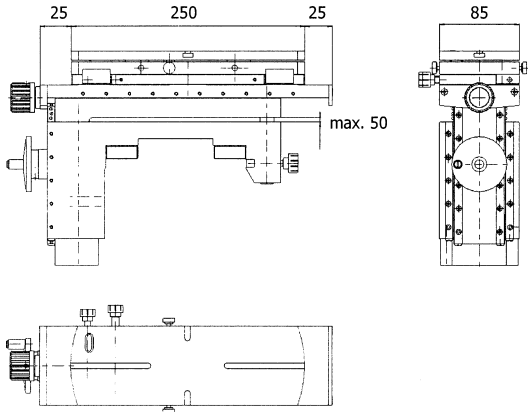
▲ *Checking of threaded ring gages (low cost method) from minimum internal diameter of .70"(18mm), pitch from 0.25 to 5mm (4-80) thread per inch using 54-190-818, 54-190-804 and 54-190-826*



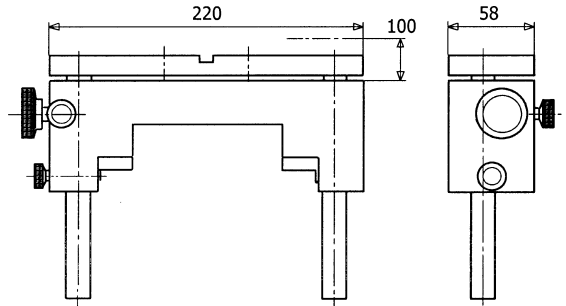


# Horizon Premium Accessories

## MEASURING TABLES AND ADJUSTABLE SUPPORTS



54-196-160



54-196-107 (pair)  
54-196-108 (one only)

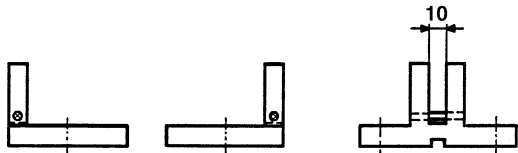
## SUPPORTING/CLAMPING DEVICES FOR MEASURING TABLES AND SUPPORTS



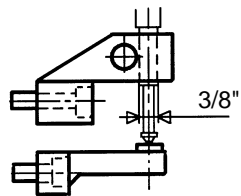
54-190-802 for use w/54-196-107



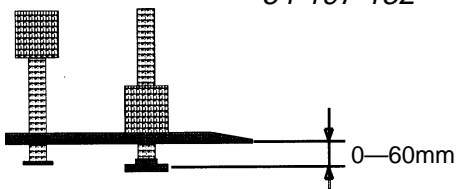
54-196-022 for use w/54-196-107



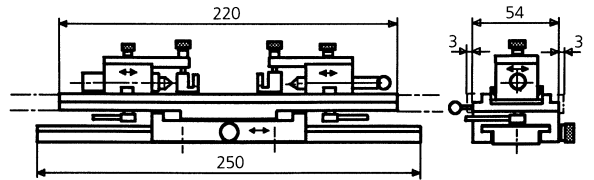
54-197-121 for use w/54-196-107



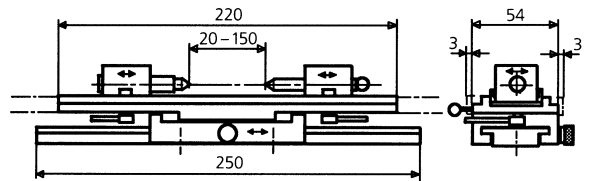
54-197-132



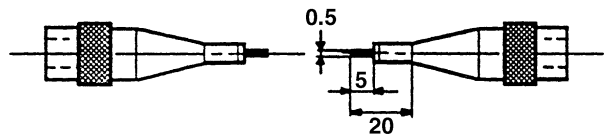
54-197-142



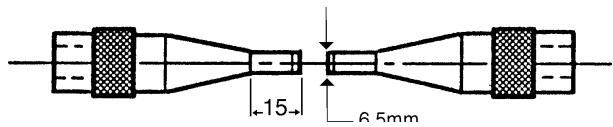
54-197-106



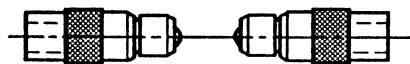
## ACCESSORIES FOR EXTERNAL MEASUREMENTS



54-190-865



54-190-806 - Ø6.5mm  
54-197-806 - Ø8mm



54-190-807

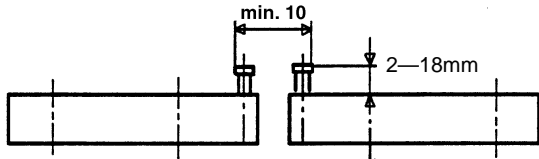




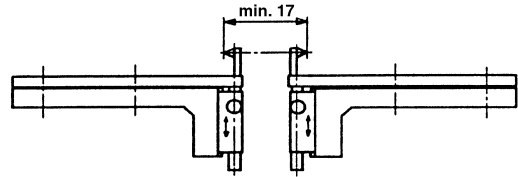


# Horizon Premium Applications

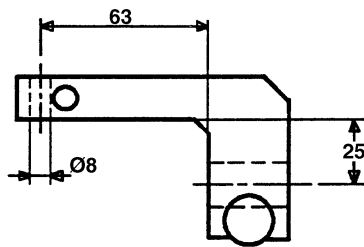
## ACCESSORIES FOR INTERNAL MEASUREMENTS



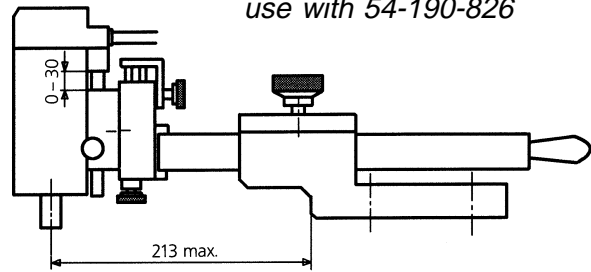
54-190-809



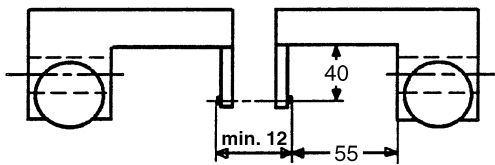
54-190-818  
use with 54-190-826



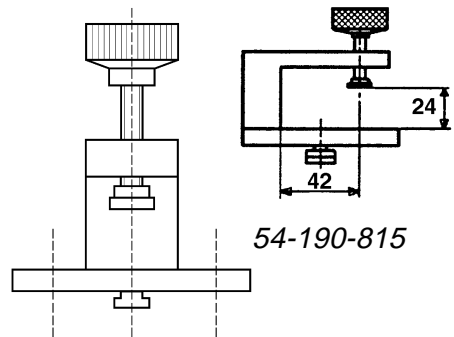
54-197-016



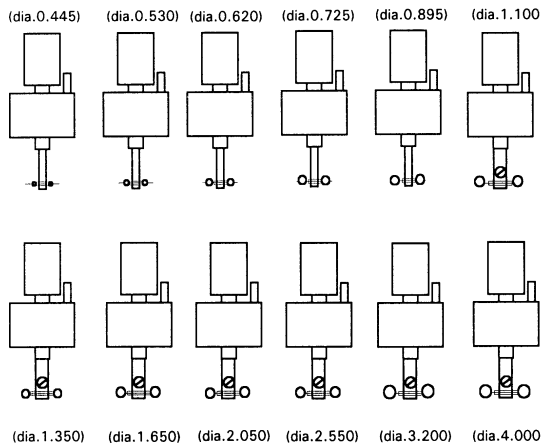
54-197-070 and  
54-197-074



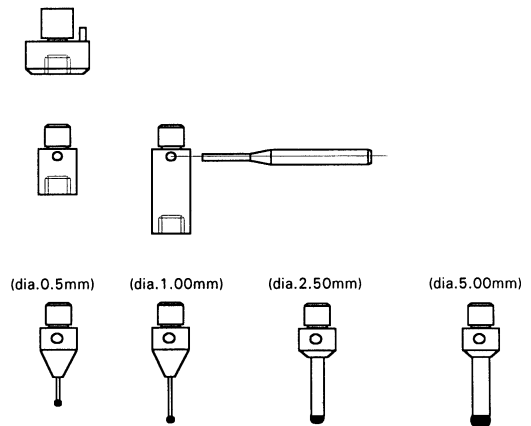
54-197-162



54-190-815



54-197-075



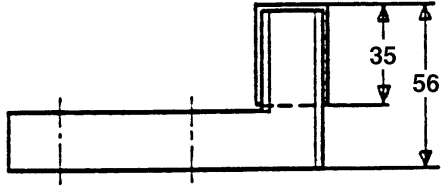
54-197-076



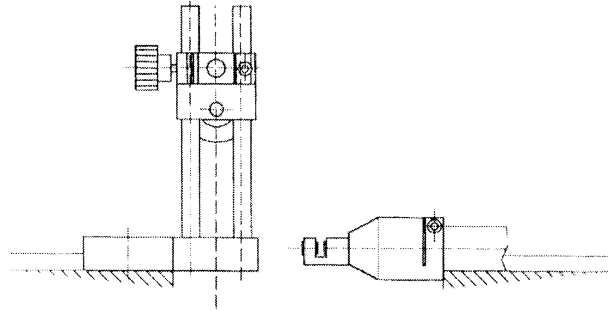


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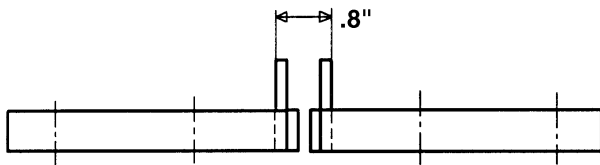
## ACCESSORIES FOR SETTING AND CHECKING



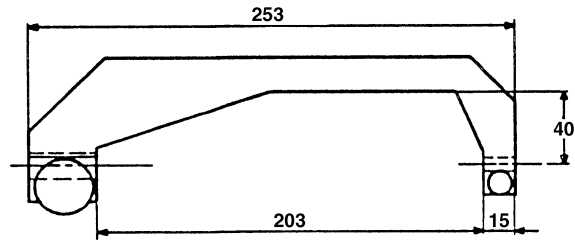
54-190-828 (25mm)  
54-190-805 (1")



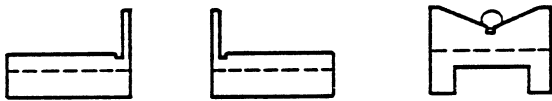
54-197-115



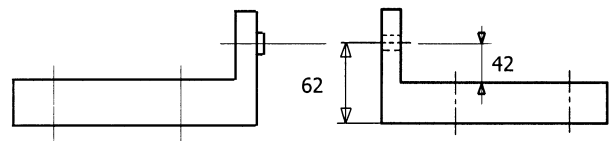
54-196-006



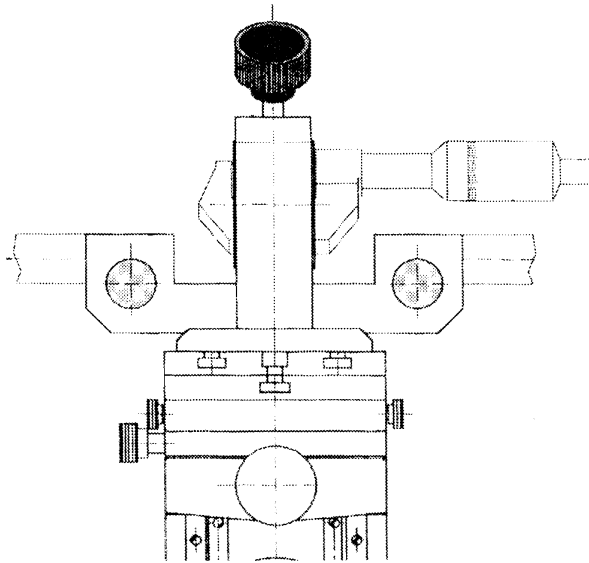
54-197-015



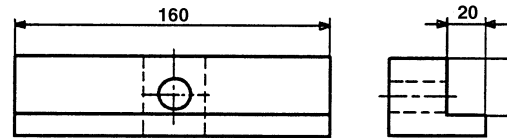
54-190-825



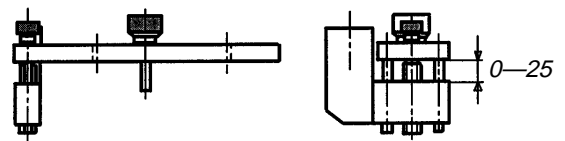
54-190-823



54-197-114



54-190-820



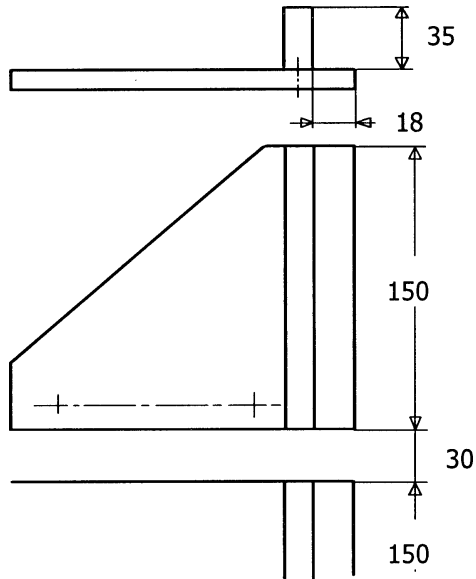
54-196-040



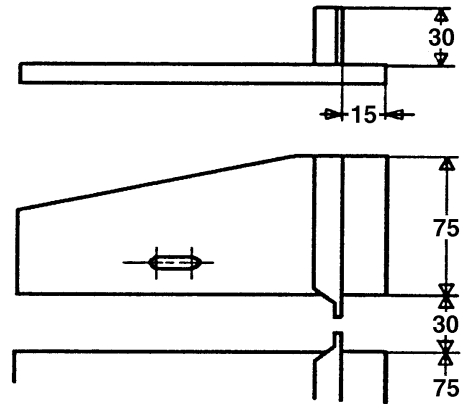


Horizon Premium Applications

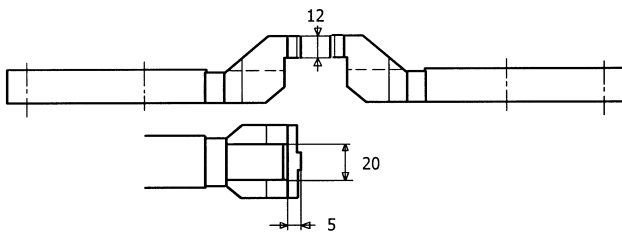
ACCESSORIES FOR SETTING AND CHECKING cont.



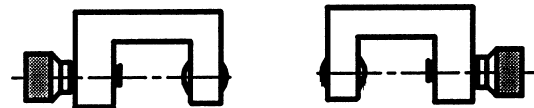
54-190-817



54-190-829

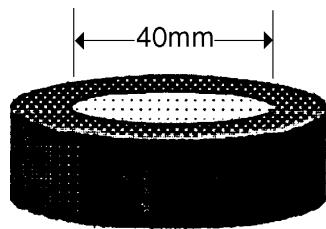


54-196-008

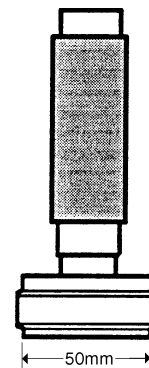


54-190-810 (.4")  
54-190-830 (10mm)

MISCELLANEOUS



54-197-040



54-197-050







## Horizon Premium Length Measuring & Setting Instrument

### System Specifications (all models)

Resolution (analog)	.00005", .00002", .00001", .000005" (.01, .001, .0001mm)
Resolution (digital)	.001", .0001", .00001" (.01, .001, .0001mm)
Repetability ( $\pm 2s$ )	.000008"/.0002mm
Measuring Force	0—43 ounces/12N (adjustable) - Constant measuring force of the floating probe movement with digital indication
Displacement speed	60"/sec. - 1.5 m/sec.
Fine adjustment range	.394"/10mm

Operational temperature limit	10½—40½°C
Operational humidity limit	30—80%

### Accuracy

Analog	
54-196-050	.00010" (.0025mm)
54-196-110	.00013" (.0033mm)
54-196-260	.00018" (.0045mm)
54-196-280	.00021" (.0053mm)
54-196-320	.00027" (.0068mm)



*Swiss Quality!*

Digital	
54-196-750	.00007" (.0018mm)
54-196-800	.00010" (.0025mm)
54-196-815	.00013" (.0033mm)
54-196-820	.00017" (.0042mm)
54-196-850	.00020" (.0051mm)



Order No.	Description	Weight
ANALOG		
54-196-050	0—21.5" (550mm) Horizon Premium	176 lbs (80 kg.)
54-196-110	0—41" (1050mm) Horizon Premium	264 lbs (120 kg.)
54-196-260	0—61" (1550mm) Horizon Premium	352 lbs (160 kg.)
54-196-280	0—80.5" (2050mm) Horizon Premium	440 lbs (200 kg.)
54-196-320	0—120" (3050mm) Horizon Premium	616 lbs (279 kg.)
DIGITAL		
54-196-750	0—21.5" (550mm) Horizon Premium	176 lbs (80 kg.)
54-196-800	0—41" (1050mm) Horizon Premium	264 lbs (120 kg.)
54-196-815	0—61" (1550mm) Horizon Premium	352 lbs (160 kg.)
54-196-820	0—80.5" (2050mm) Horizon Premium	440 lbs (200 kg.)
54-196-850	0—120" (3050mm) Horizon Premium	616 lbs (279 kg.)



Order No.	Description
<b>Measuring tables and supports</b>	
54-196-160	Universal measuring table
54-197-132	Holding device for indicator, fits on 54-196-160 table for displacement
54-196-107	Set of vertically adjustable supports
54-196-108	Adjustable support (one only)
54-196-022	Set of L-shaped supports to fit #54-196-107
54-196-021	Set of V-shaped supports to fit #54-196-107
54-197-106	Floating measuring table with location centers and V-shaped supports requires 54-196-107 or 108
<b>Accessories for setting and checking of comparative measuring instruments and indicators</b>	
54-190-805	Set of carbide gage block attachments 1" (2" total)
54-196-006	Set of carbide gage block attachments for checking calipers
54-190-823	Dial indicator holder (for 3/8" and 8mm stems)
54-197-015	Dial indicator holder for max range of 2"/50mm (for 3/8" and 8mm stems)
54-197-115	Adjustable holding device for lever dial indicator
54-190-825	Set of V-shaped blocks for checking external micrometers over 2.36"/60mm requires 54-190-805
54-197-114	Holding device for external micrometers from .48"—4"/12—100mm requires 54-196-160
<b>Accessories for setting and checking of comparative measuring instruments and indicators</b>	
54-190-820	Holding device for setting of 2 point bore gages (fits on standard probes)
54-190-817	Set of supporting plates for setting of 2 point bore gages total length of 13"/330mm
54-190-829	Set of supporting plates for setting of 2 point bore gages total length of 7.08"/180mm
54-196-040	Adjustable support for setting of the reversal point requires 54-190-817 or 54-190-829
54-190-807	Set of anvils with Tungsten carbide balls for flat measuring surfaces
<b>Accessories for external measurements</b>	
54-190-806	Set of anvils with tungsten carbide tipped measuring surface - diameter 0.256"/6.50mm
54-197-806	Set of anvils with tungsten carbide tipped measuring surface - diameter 0.315"/8mm
54-190-865	Set of knife shaped anvils with tungsten carbide measuring surfaces
54-190-807	Set of anvils with tungsten carbide balls for flat measuring surfaces
54-197-007	Set of wires on holders for checking pitch diameters of external threads, pitch of 72-5 threads per inch/0.25-5mm



## Horizon Premium Length Measuring & Setting Instrument



Order No.	Description
<b>Accessories for internal measurements</b>	
54-197-162	Set of L-shaped probes (minimum internal measurement: .475"/12mm) for height of 1.57"/40mm
54-190-815	Clamping device for snap gages from .475" to 6" (12 to 150mm)
54-197-142	Set of clamping attachments for height of 2.36"/60mm - use with 54-196-160
54-190-818	Set of measuring devices for checking of pitch diameters of internal threads (minimum internal diameter of .475"/12mm) requires #54-190-826
54-190-826	Set of cones, 60½, for pitch of 64-5 threads per inch/ 0.4 to 5mm use ring #54-190-804
54-190-804	Setting ring, 60½ for use with 54-190-826
54-197-070	Measuring device for checking of internal diameters from .04"/1mm upwards and pitch diameters of internal threads from M4/32UNC-NC upwards for analog system - requires 54-197-073
54-197-073	Analog display for measuring device for #54-197-070
54-197-074	Measuring device for checking of internal diameters from .04"/1mm upwards and pitch diameters of internal threads from M4/32UNC-NC upwards for digital system
54-197-075	Set of T-shaped measuring inserts with ruby balls for pitch from 56 threads per inch/0.7mm upwards for use with 54-197-070 & 074
54-197-913	T-shaped measuring insert with ruby balls, dia. 0.01319"/.335mm for use with 54-197-070 & 074
54-197-076	Set of ruby ball measuring inserts for checking internal diameters from .04"/1mm upwards for use with 54-197-070 & 074
<b>Reference gages</b>	
54-197-050	Master plug gage, dia 1.9685"/50mm includes calibration certificate
54-197-040	Master ring gage, dia. 1.5748"/40mm includes calibration certificate

