

# Labconcept and Labconcept Premium

## Universal Length Measuring Instrument

*The Fowler/Trimos LABCONCEPT Universal Length Measurement System combines the ultimate in accuracy, performance, range and simplicity in an easy to use, robust instrument.*

*It can calibrate all types of standards including plug gages, ring gages, thread plug gages, thread ring gages, snap gages, depth gages, dial indicators and more.*

*A large variety of accessory supports and probes allow unmatched versatility in checking both internal and external dimensions.*

*Measuring force is assured by means of an adjustable air system which can be regulated to different pressures. This system eliminates errors which could be caused by varying operator feel.*

- Large measuring range 0—20" (0—500mm) and 0—39.4" (0—1000mm)
- Developed for ISO 9000/2000 standards
- Switchable Resolution; .0001", .00001", .000001", or .001mm, .0001mm, .00001mm
- Wide range of easily interchangeable accessories
- Adjustable measuring force 0—12N
- Displacement speed of measuring carriage = 60"/sec(1.5m/sec)
- Fine adjustment range = .394"/10mm
- Operational temperature limit 10°-40°C
- Operational humidity limit 30 - 80%



**QMSOFT software (page 126) is the perfect calibration and management tool for use with the Fowler/Lab Concept!**

### Specifications

Model	54-197-777	54-197-877	54-197-300
Measuring range	0—20"(500mm)	0—40"(1000mm)	0-12"(300mm)
Accuracy	<0.3 $\mu$ m+(L(mm)/1500) $\mu$ m	<0.3 $\mu$ m+(L(mm)/1500) $\mu$ m	0.15 $\mu$ m+(L(mm)/2000) $\mu$ m
Repeatability ( $\pm 2S$ )	.000004"/.0001mm	.000004"/.0001mm	.000002"
Display	Computer added screen display: industrial computer with TFT touch screen, DDE server and Trimos WIN DHI software for display of functions and measuring results		
Resolution, switchable	.0001", .00001", .000001" or .001mm, .0001mm, .00001mm		
Weight	176 lbs (80kg)	264 lbs (120kg)	

### Order Number

### Description

54-197-777	0—20"(500mm) LABCONCEPT Length Measuring System
54-197-877	0—39.4"(1000mm) LABCONCEPT Length Measuring System
54-197-300	0-12"(300mm) LABCONCEPT Premium

**60"/1500mm and 80"/2000mm lengths available. Contact the Fowler Tech Department for pricing info.**

## Trimos Labconcept Software and Specifications



▲ Computer assisted display using Trimos Win DHI XP software

**Trimos-Win DHI XP software for all required measuring functions and connection of a gage inspection and management system**

### Functions:

- Industrial computer with TFT touch screen.
- DDE server (for Excel, Word, etc.)
- Multi-windows mode on screen.
- Graphic help for measuring functions.
- Linear type analog display or with pointer, selectable scale resolution.
- Digital display of the selected measuring force in Newton (N).
- Direct display of all length measurement values and minimum/maximum hold values.
- Selection of measuring unit mm/inch
- Selection of resolution: .0001", .00001", .000001" or .001mm, .0001mm, .00001mm.
- Measuring using two references.
- Input of 9 preset values.
- Inversion of measuring direction (+/-)
- Data transfer using a foot pedal.
- The screen is positioned on an adjustable support and fixed to the base of the instrument.



▲ Internal thread measuring display

## Trimos Labconcept Applications



▲ Checking of ring gages from dia. .473"(12mm) to 10"(250mm) using 54-197-011, 54-197-142 & 54-197-162



▲ Checking of threaded ring gages from pitch 0.7 to 6mm/48 to 4 threads per inch (max. internal dia. 7.08"/180mm) using 54-197-011, 54-197-142, 54-197-074 & 54-197-075



▲ Checking of plug gages and threaded plug gages from dia. 1.18"/30 to 250mm using 54-197-011, 54-197-142, 54-190-806 & 54-197-007



▲ Checking of dial indicators and dial comparators up to 2"/50mm range using 54-197-015



Checking of plug gages and threaded plug gages between centers up to max. dia. 1.18"/30mm, max. length 6"/150mm using 54-197-011, 54-197-806 & 54-197-007



## Trimos Labconcept Applications



▲ Checking of snap gages with range from .473 to 6"/12 to 150mm using 54-197-011, 54-197-014 & 54-197-162



▲ Checking of plugs 4" diameter (100mm), 11" length (280mm) part number 54-197-107



▲ Trimos temperature compensation package 54-197-001



▲ Trimos Heavy Duty Table 54-197-019



▲ Checking of lever (test) dial indicators using 54-197-115



▲ Checking and setting of internal micrometers using 54-196-107 & 54-196-021

# Trimos Labconcept Software and Specifications

<i>Order No.</i>	<i>Description</i>
54-197-777	0—20"(500mm) LABCONCEPT Length Measuring System
54-197-877	0—39.4"(1000mm) LABCONCEPT Length Measuring System
54-197-001	Premium temperature compensation package for Lab Concept
54-197-003	Standard temperature compensation package for Lab Concept
<b>Measuring tables and supports</b>	
54-197-011	Universal measuring table
54-197-019	Heavy duty universal measuring table
54-197-132	Holding device for indicator, fits on 54-197-011 for displacement
54-520-792	2"(50mm) digital indicator for use with 54-197-132
54-196-107	Set of vertically adjustable supports
54-196-108	Vertically adjustable support (one only)
54-196-022	Set of L-shaped supports, fits on 54-196-107
54-196-021	Set of V-shaped supports, fits on 54-196-107
<b>Accessories for setting and checking of comparative measuring instruments and indicators</b>	
54-190-805	Set of carbide Gage blocks attachments 1"(2" total)
54-196-006	Set of carbide Gage blocks attachments min. .8"
54-190-823	Dial indicator holder (for 3/8" and 8mm stems minimum)
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 fits on No. 54-190-805
54-197-114	Holding device for checking external micrometers from .48"—4"/12—100mm fits on No. 54-197-011
<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 - requires 54-190-806
54-197-107	High accuracy plug measuring fixture for plugs up to 4" diameter, 11" length
<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
54-197-142	Set of clamping attachments for height of 2.36"/60mm
54-197-143	Set of quick clamping attachments
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
54-197-075	Set of T-shaped measuring inserts with ruby balls for pitch from 56 threads per inch/0.7mm upwards - requires No. 54-197-074
54-197-913	T-shaped measuring insert with ruby balls, dia. 0.01319"/.335mm requires No. 54-197-074
54-197-076	Set of ruby ball measuring inserts for checking internal diameters from .04"/1mm upwards - requires No. 54-197-074

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