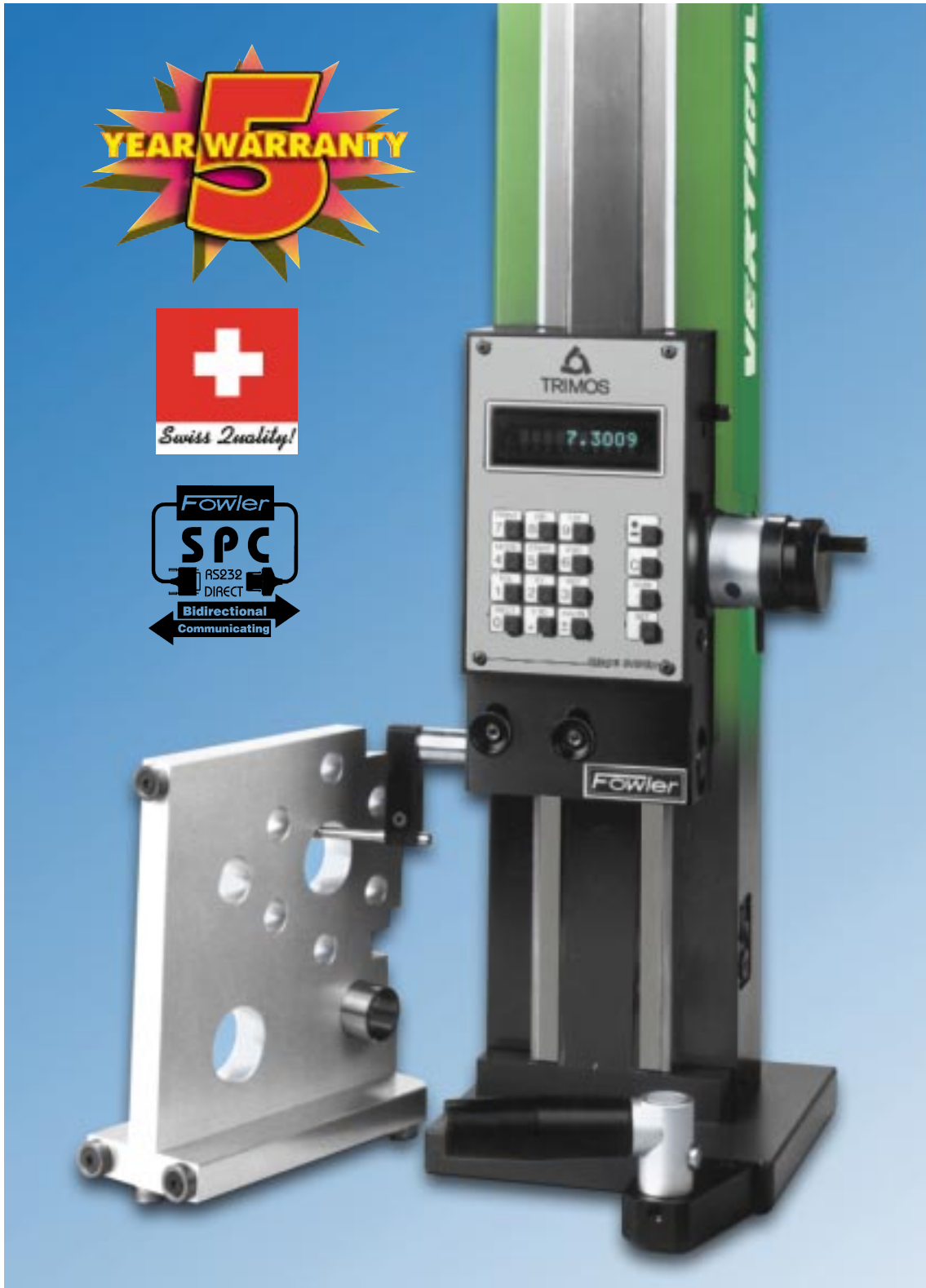




Trimos "Vertical 3" Measuring System



Fowler

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Fowler and Trimos' Vertical Measuring Systems—"Vertical 3"—brings state of the art technology to vertical gaging and obsoletes all other makes of electronic vertical measuring systems. This measuring system is now available in three ranges. The 0—12" (0—300mm) unit comes in two models. One is constructed with a granite base for use where surface plates are impractical. Other ranges include 0—23.6" (0—600mm) and 0—39.37" (0—1000mm).

The Vertical 3 is designed and manufactured in Switzerland by Trimos, the world leader in precision measuring systems. The heart of the unit is the proven Sylvac non-contact capacitive measuring system; there are no glass scales, racks or encoders to break down or wear out—just solid state perfection. Ideal for even rugged shop environments, Sylvac electronics are insensitive to magnetic or electrical interference, oil, dust, dirt, etc.

Fowler-Trimos adds a whole new dimension to Z-axis measuring... XY-axis measuring. The Vertical 3 provides two-dimensional measuring for X,Y coordinates, angles and more, making it the most advanced "Z-axis" measuring system available—and the most versatile.

Improved software features:

- On-screen indication of Reference #2; and choice of 15 or 80 column printer output.
- X/Y mode alignment using offset values and rotation.
- X/Y mode rotational squareness error **checking and correction**. This makes the Vertical 3 the only gage of its kind to measure the part as it is rotated to correct for rotational errors. This is accomplished with optional #54-190-585 squareness probe.

Vertical 3 provides part programming A breakthrough in vertical measuring systems, the "PROG" mode allows programming of a measuring sequence (with or without input of tolerance limits) for batch

The VIII's capabilities may fit your application well enough, so that you might not have to buy that CMM!



▲ Model #54-190-350 with granite base.

quantities. After the simple programming is completed, the "AUTO" mode carries out the programmed measuring sequence and X,Y coordinate measuring procedure.

Other features include:

- A power supply that is completely self-contained due to a built-in rechargeable battery (approx. operational time of one battery charge is 30 hours).
- A built-in air pump (battery-operated).
- Clearly defined display (DOT matrix).
- Direct RS232-C data output—ideal for SPC.
- Dialog mode operation.
- Acceptance of measured values by an acoustic signal.

Functions include:

- Surface to surface measurements.
- Surface to centerline measurements.
- Centerline dimensions of bores and shafts.
- Internal and external diameters.
- Evaluation of X,Y coordinates, radius, angles and P.C.D.
- Measurement of squareness.
- Part programming including tolerance limits.



Basic Functions:

- Surface to surface .
- Surface to centerline.
- Centerline dimensions of bores and shafts.
- Internal and external diameters, etc.



- Zero setting of digital display at any position.
- Storing reference values.
- Confirmation of dialog mode.



- Starts selection of reference values.
- Reset key.



- Storage of probe constant.
- Checking of a stored value.



- Selection of flat surface measurement to diameter and centerline mode.

Other Functions enable:

- The printout of all accepted values.
- The programming of a measuring sequence with or without input of tolerances for batch quantities.



- NORM PRINT consecutive printout of all measurements.
- AUTO PRINT printout of group of measurements with or without tolerance indications.



- DIRECT ON maximum or minimum value, static measurements.
- DIRECT OFF performing all measurements (dynamic).



- Clears a last measurement.



- NORM normal measurement acceptance.
- PROG programming of a measuring sequence.
- AUTO application of a programmed measuring sequence.
- Carry out the X,Y coordinate measuring procedure.



- Activates the function selected by the MODE key.



- Terminates the selected and applicated MODE function.

- Evaluation of X,Y coordinate values, P.C.D., radius, angle.
- Measuring of squareness using a Sylvac probe (direct display).
- Measuring with 2 references.
- Minimum, maximum values.



- Input of nominal sizes and tolerances to the value measured during the programming mode.



- Activates the coordinate measuring procedure.



- Measuring with two references.



- Squareness measurements using a Sylvac probe.



- Selector for resolution: .01mm-.001mm/.001"-.0001"



- mm/inch selector key (true inch/metric conversion).



▲The new style Sylvac electronic display unit—clearly presented—allowing measurements to be taken in the vertical axis and printed without the assistance of a computer.

Printer

Use Fowler's Printer #54-190-575 for hardcopy data output, including histograms and statistical data. Indicates if reading is above or below tolerance limits.





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VERTICAL 3 STANDARD ACCESSORIES

<p>#54-190-551</p>	<p>#54-190-555</p>	
<p>#54-190-553</p>	<p>#54-190-556</p>	<p>#54-190-557</p>
<p>#54-190-552</p>	<p>#54-190-554</p>	

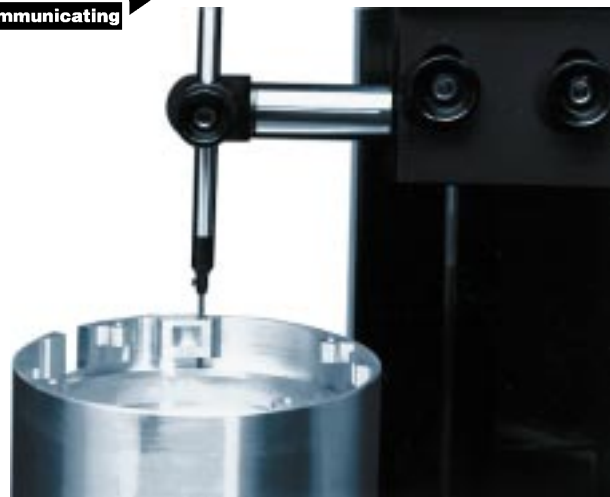
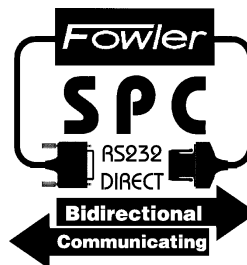
VERTICAL 3 OPTIONAL ACCESSORIES

<p>#54-190-566 H= 230mm #54-190-558 H=130mm</p>	<p>#54-190-563 2.2mmø #54-190-564 4.5mmø #54-190-565 9.7mmø</p>		
<p>#54-190-550</p>	<p>#54-190-559</p>		
<p>#54-190-797</p>	<p>#54-190-562</p>	<p>#54-190-585</p>	<p>#54-190-795</p>



Specifications:	#54-190-300 & 350	#54-190-777	#54-190-788
Measuring range	0-12" (0-300mm)	0-23.6" (0-600mm)	0-39.37" (0-1000mm)
Application range	0-15.75" (0-400mm)*	0-27.5" (0-700mm)*	0-43.31" (0-1100mm)*
Resolution	.0001 or .001" (.001 or .01mm)	.0001 or .001" (.001 or .01mm)	.0001 or .001" (.001 or .01mm)
Repeatability	.0001" (.001mm)	.0001" (.001mm)	.0001" (.001mm)
Accuracy over full range	$3 + \frac{(Lmm)\mu m}{300}$	$3 + \frac{(Lmm)\mu m}{300}$	$3 + \frac{(Lmm)\mu m}{300}$
Max. displacement velocity of the measuring carriage	40"/second (1m/sec) travel	40"/second (1m/sec) travel	40"/second (1m/sec) travel
Measuring pressure	.7N (adjustable .4-3N)	1.2N (adjustable .7-3N)	1.2N (adjustable .7-3N)
Squareness over full range	lateral .0002" (.005mm) (meas. direction)	lateral .0004" (10 μ m) (meas. direction)	lateral .0005" (12 μ m) (meas. direction)
Operating temp.	+10° to +40°C	+10° to +40°C	+10° to +40°C
Overall height (with granite base)	26" (660mm) 27.56" (700mm)	36" (915mm)	53.15" (1350mm)
Weight (with granite base)	40 lbs. (18kg) 100 lbs. (45kg)	63 lbs. (28.3kg)	76 lbs. (34kg)
Data output:	RS232-C (Direct)	RS232-C (Direct)	RS232-C (Direct)

*Varies according to probe used



▲ Depth measurement.

Video

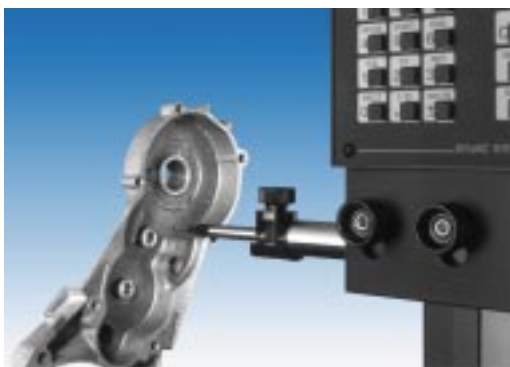
Also available is Video #54-190-779. This is a fifteen minute, comprehensive demonstration/training tape on the applications of the Trimos Vertical 3 Measuring System.



Standard Equipment...Vertical 3s include rechargeable battery & charging unit (cable lgth. 98.4"/2.5m), dust cover, test & guarantee certificate, instructions & accessories shown below with an asterisk.



Order No.	Description
54-190-300	0—12" (0—300mm) Trimos Vertical 3.
54-190-350	0—12" (0—300mm) Trimos Vertical 3 with granite base 20.86" x 13.78" x 2.56".
54-190-777	0—23.6" (0—600mm) Trimos Vertical 3.
54-190-788	0—39.37" (0—1000mm) Trimos Vertical 3.
Accessories:	
54-190-550	T-shaped probe 15.75"(400mm) length.
54-190-551	*Offset probe holder with .315" (8mm) diameter ball insert.
54-190-552	*Swivel probe holder with .315" (8mm) diameter ball insert.
54-190-553	*Set of cones with holder.
54-190-554	*Measuring insert with interchangeable pin.
54-190-555	*Measuring insert for dial indicator measuring points w/4-48 and insert w/M1.6.
54-190-556	*Measuring insert with carbide parallel faces.
54-190-557	*Ball measuring insert.
54-190-558	Deep L-shaped probe 5.12"(130mm).
54-190-559	Long L-shaped probe 13.78"(350mm).
54-190-560	*Setting gage (inch).
54-190-561	Ball probe 2mm
54-190-562	Setting gage (metric).
54-190-563	Barrel-shaped probe. Diameter 2.2mm.
54-190-564	Barrel-shaped probe. Diameter 4.5mm.
54-190-565	Barrel-shaped probe. Diameter 9.7mm.
54-190-566	Deep L-shaped probe 230mm.
54-190-575	Printer with cable for Vertical 3.
54-190-576	Replacement cable: Printer to Vertical 3
54-190-577	Cable & software for Vert. 3. Includes cable w/DB9F, DB9M/DB25F adaptor and 3-1/2" TV filer software
54-190-585	Sylvac probe with holder for measuring squareness.
54-190-713	Replacement electronic pack.
54-190-779	Video demo of #54-190-777. VHS.
54-190-795	Riser block with air inlets; 12"(300mm) capacity; for 54-190-777 only.
54-190-798	Spare battery set and socket.
54-903-215*	Replacement paper for #54-190-575.



▲ Alignment & measuring in 2 coordinates.



▲ Measurement using swivel probe.