#### **External Dimensions**

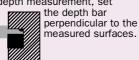
Put the workpiece as close to the reference surface as possible, and have the measuring faces firmly in contact with the workpiece without excessive force.

# Internal Dimensions

For inside measurement, put the inside jaws as deep as possible and have the measuring faces firmly in contact with the workpiece without excessive force.

### **Measuring Examples**

**Depth Measurement**For depth measurement, set



#### **Step Measurement**

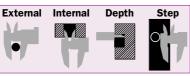
For step measurement, have the step-measuring-faces firmly in contact with the workpiece.

# OXFORD Standard Vernier Calipers



Give four types of reading - inside, outside, depth and step. Dual reading scale (metric and inch) with  $14^{\circ}$  bevelled vernier scale for reduced parallax reading error and knurled locking nut. Manufactured from hardened stainless steel for rigidity. Satin finish. Conform to **DIN 862**.





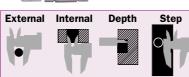
	Graduation (Reading)			Order Code OXD-330	
200/8"	.02/.001 .02/.001 '.02/.001	±0.03 ±0.03 ±0.04	143g 180g 355g	-7360K -7380K -7420K	

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#### Fine Adjustment Vernier Calipers



Give four types of reading, inside, outside, depth and step. Dual reading scale (metric and inch) with  $14^\circ$  bevelled vernier scale for reduced parallax reading error, fine adjustment assembly and knurled locking nut. Manufactured from hardened stainless steel for rigidity with satin finish. Conforms to **DIN 862**.

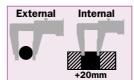


Range Graduation mm/inch (Reading)			Order Code OXD-330	
130/5" .02/.001"	±0.03	190g	-7060K	
180/7" .02/.001"	±0.03	230g	-7080K	
280/11" .02/.001"	±0.03	470g	-7120K	

### **Heavy Duty Vernier Calipers**

Give inside and outside readings. Dual reading scale (metric and inch) with  $14^\circ$  bevelled vernier scale for reduced parallax reading error, fine adjustment assembly and knurled locking nut. Internal reading edges have rounded faces for accurate bore measurement. Manufactured from hardened stainless steel.



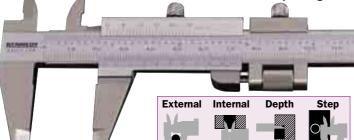


Graduation (Reading)		Order Code OXD-330	
.02/.001 .02/.001	2.25kg 2.40kg	-7180K -7240K	

# KENNEDY Fine Adjustment QUALITY INDUSTRIAL TOOLING Vernier Calipers



Incorporating Quadri feature - gives outside, inside, depth and step readings. Fine adjustment feature allows improved sensitivity of slider movement. 14° vernier face angle reduces parallax. Satin chrome finish with clear easy read graduations.



Metric & Inch Reading - Graduation: 0.02mm/0.001"

Range	Graduation	Full Scale	Weight	Order Code
mm/inch	(Reading)	Accuracy	each	KEN-330
130/5	.02/.001	±0.03	190g	-2060K
180/7	.02/.001	±0.03	230g	-2080K
280/11	.02/.001	±0.03	470g	-2120K

#### **External Dimensions**

Put the workpiece as close to the reference surface as possible, and have the measuring faces firmly in contact with the workpiece without

#### **Measuring Examples Internal Dimensions**

For inside measurement, put the inside jaws as deep as possible and have the measuring faces firmly in contact with the

workpiece without excessive force.

For depth measurement, set the depth bar perpendicular to the measured surfaces.

**Depth Measurement** 

**Step Measurement** 

NOTAHER

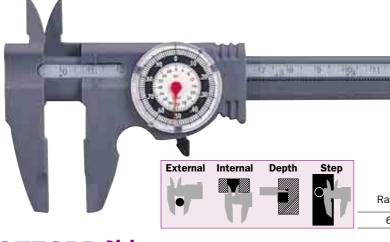
For step measurement, have the step-measuring-faces firmly in contact with the workpiece.

# **SENATOR** Dial Calipers - QUALITY TOOLING Plastic

excessive force.

Accurate four way measurement: internal, external, step and depth. Sliding jaw lock. Manufactured from high strength, lightweight polymide plastic.



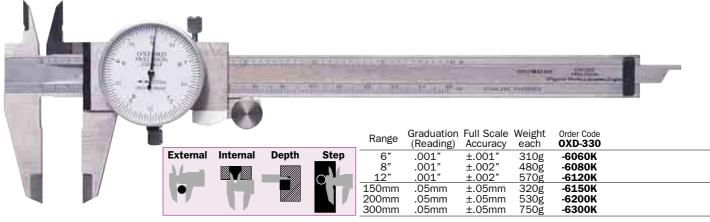


Range	Graduation	Weight Order Code each <b>SEN-330</b>
6"	0.01"/1/64"	220g <b>-6150K</b>

## OXFORD Dial Cali **Calipers**

Rack covers prevent dust from fouling teeth of racks. All measuring faces are precision ground and micro lapped for absolute inside, outside, depth and step readings. Manufactured to DIN 862.

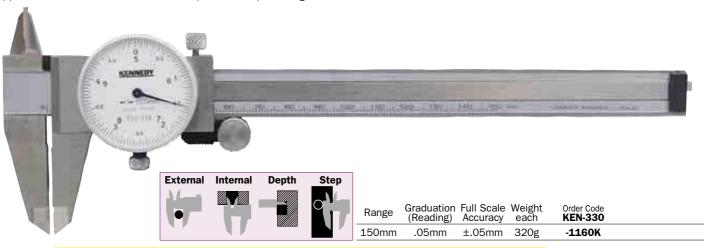




# KENNEDY Dial Calipers

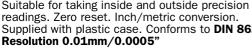
Rack covers prevent dust from fouling teeth of racks. All measuring faces are precision ground and micro lapped for absolute inside, outside, depth and step readings. Manufactured to DIN 862.





## SENATOR. Economy QUALITY TOOLING Digital Calipers

Suitable for taking inside and outside precision readings. Zero reset. Inch/metric conversion. Supplied with plastic case. Conforms to DIN 862.











Extra batteries available - Order Code: EDI-904-4000K.

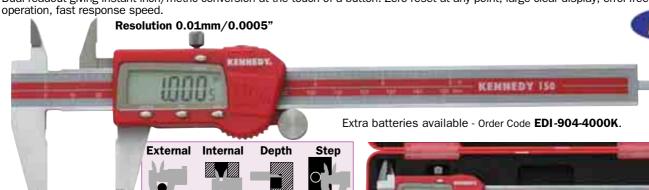
External	Internal	Depth	Step
-			

Range	Accuracy (mm)	Weight each	Order Code <b>SEN-331</b>
150mm/6"	±0.03	310g	-1330K
200mm/8"	±0.03	310g	-1360K
300mm/12"	±0.03	310g	-1400K

# KENNEDY ABSolute Digital QUALITY INDUSTRIAL TOOLING Electronic Calipers

Modern design with a knurled thumb wheel for easy use when taking internal and external depth and step measurements. Dual readout giving instant inch/metric conversion at the touch of a button. Zero reset at any point, large clear display, error-free





•				
Range	Accuracy (mm)	Weight each	Order Code KEN-331	
150mm/ 6"	±0.03		-2260K	
200mm <sup>′</sup> / 8"	±0.03		-2280K	
300mm/12"	±0.03		-2320K	



# ABSolute Calipers with SPC Output

With SPC data output (compatible with Mitutoyo SPC equipment), inch/metric conversion, on/off switch and zero set at any point. The absolute zero feature enables an (ABS) 'origin point' to be



ONICEF ZERO (AM



Order Code **KEN-331** 

-1710K

-1720K

-1730K

When this point is established, the distance from this position will always be displayed, the intelligent memory retains the 'origin point' even when powered off. Infinite response speed, large ICD feature. Resolution 0.01mm/0.0005"

Connecting Ca	bles		
For SPC data out	put compatible calipers.	Complete with da	ata hold switch.

Extra batteries available

Pin Weight

Weight

each

310g

500g

750g

Order Code KEN-331 Length Type each 40g -9010K 1<sub>m</sub> Sub-D-Jack 9 Pin 2m 60g -9020K

Accuracy

(mm)

±.02

±.02

 $\pm .02$ 



Order Code EDI-904-4000K.

Range

150mm/6

200mm/8"

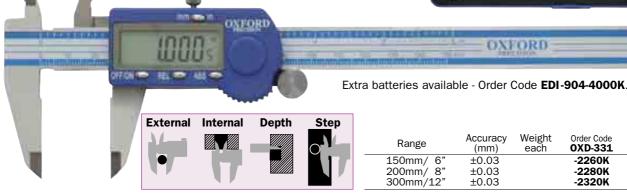
300mm/12

# OXFORD Precision ABS Digital Caliper

Precision ABSolute digital calipers have a thumb wheel for precise movement and a useful locking screw for checking repeat measurements. A measurement can be converted between inch/metric at the touch of a button.

ABSolute Measurement Function - The zero point once set is fixed until changed, even if the caliper is turned off (unless the battery is removed). Incremental mode can be achieved for repeated use of Go/No-Go measurement.





Resolution 0.01mm/0.0005"

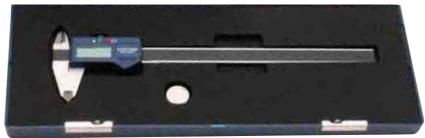
Range	Accuracy (mm)	Weight each	Order Code OXD-331
150mm/ 6"	±0.03		-2260K
200mm/ 8"	±0.03		-2280K
300mm/12"	±0.03		-2320K

OXFORD

### Standard Model with Data Output

Supplied in deluxe case with two batteries. Data cables sold separately.

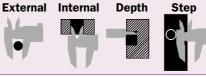
**Resolution 0.01mm/0.0005**"





Extra batteries available - Order Code EDI-904-4000K.

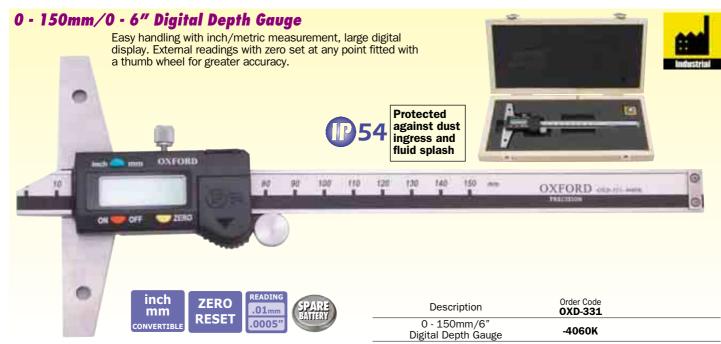
Range	Accuracy (mm)	Weight each	Order Code OXD-331	
200mm/8"	±0.03	500g	-3080K	
300mm/12"	±0.03	750g	-3120K	



#### **Data Connecting Cables**

With 4 pin jack and data hold button.

Pin Type	Length	Weight each	Order Code OXD-331
Sub-D-Jack 9 Pin	1m	40g	-9010K
Flat Plug 10 Pin	2m	60g	-9020K



## OXFORD Digital Electronic External Microme **External Micrometer**

Easy handling with a large digital display, quick response speed and zero set at any point. Metric/inch measurement. The micrometer can be connected to a PC serial port by the SPC cable provided. IP54 rating.

Range: 0 - 25mm/0 - 1".

**Resolution:** 0.001mm/0.00005".

Measuring force: 5 - 10N. Accuracy: -0.004mm.





**Protected** against dust ingress and fluid splash



Easy to use with clear digital LCD display. Large, easy-read 7.5mm LCD display. Soft-key touch for operator comfort.

Superior construction quality. Response speed: ≤0.5m/s.

Auto power off.



inch mm

**ZERO** RESET

12.7<sub>mm</sub> 0.5"

**Protected** against dust ingress and fluid splash

**0XD-331** -6010K



**TRAVEL** 

**READING** .001mm .00005"

Description **IDS Digital Indicator** 

Range

0 - 25mm/0 - 1"

## KENNEDY Digital Electronic External Micrometer

Order Code OXD-331

-5010K

Features one touch preset, lightweight design, LCD display, inch/metric conversion at the touch of a button, origin setting and error alarm, ratchet thimble type adjustment and carbide tipped measuring faces. IP65 coolant proof. Power supply: 1x SR44 battery, Order Code PAN-904-5020K supplied.

Resolution

0.001mm/0.0005"

Accuracy: ±0.001mm"/0.00005". Measuring Force: 5-10N. Supplied in fitted bench case.



Resolution: 0.001mm/0.00005"

Range	Weight each	Order Code KEN-331	
0 - 25mm/0 - 1"	270g	-3010K	

# **Digital Protractor**

This digital protractor has a range of 360° split into 4 x 90° quadrants. It is simple to calibrate and the intelligent display changes orientation at 90° and 270° to remain readable. It has a 'V' groove on the top and bottom for easy placement on acute angled or cylindrical objects. 3V lithium battery gives up to 2000 hours use. Complete with a leatherette pouch that has a belt loop.



**KEN-331** 

-4020K

# **Data Connecting Cables**

Pin Type	Length	weight each	Order Code OXD-331
Sub-D-Jack 9 Pin Flat Plug 10 Pin	1m 2m	40g 60g	-9010K -9020K

# **IDM Digital Indicator**

#### Features:

Easy to use with clear digital LCD display. Large, easy-read 7.5mm LCD display. Soft-key touch for operator comfort. Superior construction quality. Response speed:  $\leq 0.5 \text{m/s}$ . Auto power off.

#### Type IDM:

Inch/metric conversion, zero reset, data hold, min. max display, fast display, auto power off.



inch mm CONVERTIBLE

**ZERO RESET** 

**TRAVEL 12.7**mm 0.5"

**READING** .001mm .00005



**Protected** against dust ingress and fluid splash

Description **OXD-331 IDM Digital Indicator** -6020K

Range

360° (4 x 90° Quadrants)

# KENNEDY Magnetic Stand **Fitments**

All main columns are threaded M8 x 1.25mm and are interchangeable with Kennedy, Oxford, Mitutoyo etc. base units except mini-mag (M6 x 1mm) also suitable for incorporating into special fixtures or threaded pot magnets.

**Light Duty Fitment - Plain** Fitted as standard to KEN-333-2010K.

Column: 6.3 x 120mm.

Threaded: M6 x 1mm.

1/4" I/D Lug only

6.3mm Standard Clamp To Suit		Order Code KEN-333	
1/4" I/D Lug, Stem/Spigot Dia. 5/16"	90g	-2500K	

**Heavy Duty Fitment - Fine Adjusting** Fitted as standard to KEN-333-2060K and KEN-333-2050K.

-3200K



Threaded: M8 x 1.25mm.

10mm Universal Weight Order Code each KEN-333 Clamp To Suit <sup>1</sup>/<sub>4</sub>" I/D Lug, Stem/Spigot Dia. <sup>1</sup>/<sub>8</sub>", <sup>1</sup>/<sub>4</sub>", <sup>5</sup>/<sub>16</sub>" & <sup>3</sup>/<sub>8</sub>" 442g -2400K

#### **Spare Knuckle Assemblies**

For connecting columns and crossbars



Accepts	Weight	Order Code
A & B	each	KEN-333
1/4" & 5/16" O/D	50g	-3000K
10 & 10mm O/D	55g	-3010K
12 & 8mm O/D	58g	-2900K
12 & 10mm O/D	60g	-2920K

# MAGNETIC BASES & COMPARATOR STANDS

**Medium Duty Fitment - Plain** Fitted as standard to KEN-333-2080K.



6.3mm Standard Weight Order Code each **KEN-333** Clamp To Suit 1/4" I/D Lug, 420g -2460K Stem/Spigot Dia. 5/16" 1/4" I/D Lug only 21g -3200K

**Heavy Duty Fitment - Plain** Fitted as standard to KEN-333-2100K and KEN-333-2030K.



10mm Universal Weight Order Code KEN-333 Clamp To Suit each <sup>1</sup>/<sub>4</sub>" I/D Lug, Stem/Spigot Dia. <sup>1</sup>/<sub>8</sub>", <sup>1</sup>/<sub>4</sub>", <sup>5</sup>/<sub>16</sub>" & <sup>3</sup>/<sub>8</sub>" 400g -2420K

**Crossbar Assembly** 

With lug adaptor, reduced sleeve Fits over a 10mm bar.



Weight Order Code each **KEN-333** Accepts 6, 8 & 10mm Spigot 85g -3020K 1/4" I/D Lug

**Medium Duty Fitment - 3 Point** Fitted as standard to KEN-333-2110K.

3 point adjustable column: 15 x 280mm max.



Weight Order Code each **KEN-333** 3 Point Special Clamp To Suit 1/4" I/D Lug, Dovetails 312g -2480K Stem/Spigot Dia. 5/16



Weight Order Code each **KEN-333** 14mm Universal Clamp To Suit <sup>1</sup>/<sub>4</sub>" I/D Lug, Stem/Spigot Dia. <sup>1</sup>/<sub>8</sub>", <sup>1</sup>/<sub>4</sub>", <sup>5</sup>/<sub>16</sub>" & <sup>3</sup>/<sub>8</sub>" 1450g **-2440K** 

**Crossbar Assembly** 

With lug adaptor, reduced sleeve. Fits over a 12mm bar.



Weight Order Code each **KEN-333** Accepts 6, 8 & 10mm Spigot 85g -3040K 1/4" I/D Lug

# KENNEDY Permanent Quality INDUSTRIAL TOOLING Mag Stand

Mini-Mag Stand With one magnetic face. Light duty with standard clamp, 30mm diameter keeper.

#### Mounts:

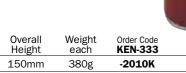
1/4" I/D lug, stem/spigot diameter: 5/16".

Column height x diameter: 120mm x 6.3mm.

Magnetic pull:

14.75kg.

**Base dimensions:** 30 x 35mm.



### Lever Switchable **Universal 2 Mag Stand**



Overall Height	Weight each	Order Code KEN-333
230mm	1.2kg	-2030K

## Lever Switchable Fine Adj. 2 Mag Stand

With two magnetic faces and large vee. Heavy duty with universal clamp and fine adjustment

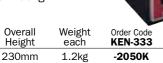
#### Mounts: 1/4" I/D lug,

stem/spigot diameter: 1/8" . 1/4". **Base dimensions:** 

60 x 50 x 55mm. Column height x diameter: 175 x 12mm.

Crossbar length x diameter: 165 x 10mm.

Magnetic pull: 50kg.



# OXFORD Mini-Mag Stand

One magnetic face. Standard clamp. 30mm diameter base.

#### Mounts:

1/4" I/D lug, stem/spigot diameter: 5/16" and dovetail clamp.

**Base dimensions:** 

30 x 35mm.

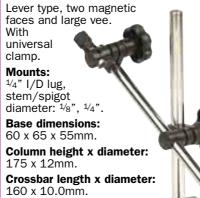
Column height x diameter: 150 x 6.3mm.

Crossbar length x diameter: 120 x 6.3mm.

Magnetic pull: 14kg.



# **Universal 2 Mag Stand**



Magnetic pull: 50kg.

Overall Height	Weight each	Order Code OXD-333
230mm	1 20kg	-7030K

# Fine Adjustment 2 Mag Stand

Lever type two magnetic faces and large vee. Universal clamp.

Mounts: 1/4" I/D lug, stem/spigot diameter: 1/8 1/4". Base

dimensions: 60 x 50 x 55mm.

Column height x diameter: 175 x 12mm.

Crossbar length x diameter:

160 x 10.0mm.

Magnetic pull: 50kg.



Overall Weight Height each -7050K 230mm 1.20kg

### **Universal 4 Mag Stand**

With four magnetic faces, one at 45°. Universal clamp.

 $^{1/4}$ " I/D lug, stem/spigot diameter:  $^{1/8}$ ",  $^{5/16}$ " and  $^{3/8}$ ".



60 x 50 x 55mm. Column height x diameter: 175 x 12mm. Crossbar x diameter: 160 x 10.0mm. Magnetic pull: 30kg.

Overall	Weight	Order Code
Height	each	OXD-333
230mm	1.20kg	-7100K

### Compact 4 Mag Stand

With four magnetic faces, one at 45°. Standard clamp.

#### Mounts:

1/4" I/D lug,

stem/spigot diameter: 5/16".



Overall Weight Height each **OXD-333** -7080K 280mm

# **KENNEDY**

## Lever Switchable Elbow Joint 2 Mag Stand

With two magnetic faces and large vee. Medium duty special clamp with fine adjustment.

#### Mounts:

1/4" I/D lug, dovetail stem/spigot diameter: 5/16".



Weight

each

1.2kg

Order Code

**KEN-333** 

-2110K

Elbow

Joint

2 Mag



#### Overall Weight Height each **KEN-333** 380mm 3.00kg -2070K

### **MAGNETIC BASES & COMPARATOR STANDS** Fine Adjusting 4 Mag Stand

#### With four magnetic faces, one at 45°. Heavy duty with universal clamp and fine adjustment. Mounts: 1/4" I/D lug, stem/spigot diameter: <sup>1/</sup>8", <sup>1/</sup>4". **Base dimensions:** 64 x 64 x 76mm. Column height x diameter: 175 x 12mm. Crossbar length x diameter: 165 x 10.0mm. Magnetic pull: 80kg.

Overall Height	Weight each	Order Code KEN-333	
280mm	1.90kg	-2060K	

# **Universal 4 Mag Stand**



**Base dimensions:** 48 x 40 x 50mm.

Column height x diameter: 175 x 12mm.

Crossbar length x diameter: 165 x 10.0mm.

Magnetic pull: 30kg.

		-
Overall Height	Weight each	Order Code KEN-333
227mm	0.90kg	-2100K

# Compact 4 Mag Stand



#### Overall Weight Order Code Height each **KEN-333** 2273 0.89kg -2080K

### Lever Type Base - 50kg

Fitted as standard to KEN-333-2030K.

-2050K and -2110K two magnetic

bottom and back face. Large vee for curved surfaces. Threaded: M8 x 1.25mm.

Base dimensions: 60 x 50 x 55mm.

Magnetic pull: 50kg.



Magnetic Pull	Weight each	Order Code <b>KEN-333</b>	
50kg	850g	-2240K	

### Push Button Base - 30kg

Fitted as standard to KEN-333-2080K and -2100K. Four magnetic faces, bottom, sides and 45° angle face for curved surfaces.

Threaded: M8 x 1.25mm. Magnetic pull: 30kg.



Magnetic Pull	Weight each	Order Code KEN-333	
30kg	850g	-2220K	

### Push Button Base - 80kg

Fitted as standard to KEN-333-2060K and -2070K. Four magnetic faces, bottom, sides and 45° angle face for curved surfaces.

Threaded: M8 x 1.25mm. Magnetic pull: 80kg.



Magnetic	Weight	Order Code
Pull	each	KEN-333
80kg	850g	-2200K

### **GROUP 335** MICROMETERS - BORE

# OXFORD 3 Point Bore Micrometer Sets

Designed to self-centre, for accurate measuring of bores. Satin finish, fitted with knurled ratchet stop.



#### OXD-335-2490K - Contents:

Micrometers: 6 - 8mm, 8 - 10mm, 10 - 12mm.

Calibration rings: 8 and 10mm.

Slotted screwdrivers, 2 x spanners, extension bar.



#### OXD-335-2500K - Contents:

Micrometers: 11 - 14mm, 14 - 17mm, 17 - 20mm. Slotted screwdrivers, 2 x spanners, extension bar for measuring

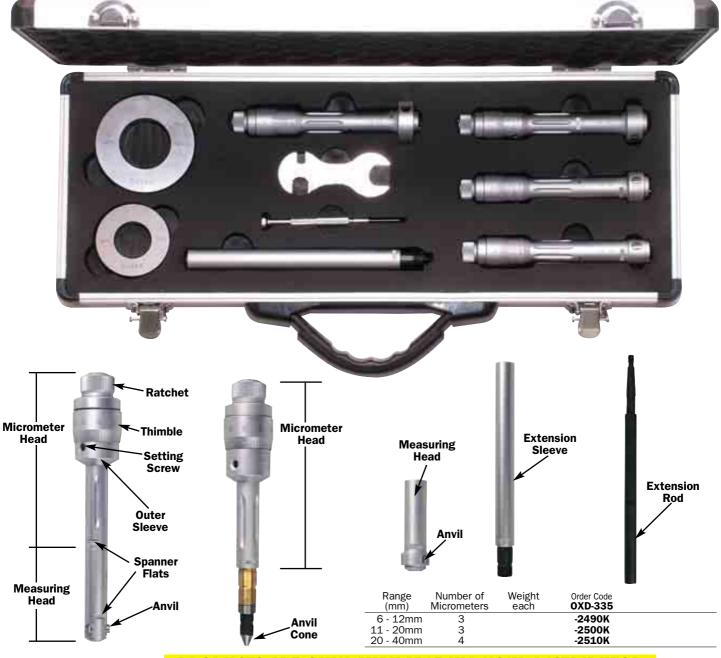
170mm deep. Calibration rings: 14 and 17mm.



#### OXD-335-2510K - Contents:

Micrometers: 20 - 25mm, 25 - 30mm, 30 - 35mm, 35 - 40mm.

Slotted screwdrivers, 2 x spanners, extension bar for measuring 220mm deep. Calibration rings: 25 and 35mm.



# OXFORD Enamelled Frame External Missons

With enamelled frame and tungsten carbide tipped anvils. High quality fitted metal case with adjusting spanner. Sizes 25 - 50mm/1 - 2" and over supplied with setting standard. Manufactured to **BS 870**.

All supplied in a impact resistant fitted plastic case.







Supplied in case.

1=m	Inch				
	Range	Graduation	Weight each	Order Code OXD-335	
	0 - 1"	0.001"	230g	-6010K	
	1 - 2"	0.001"	300g	-6020K	
1993	2 - 3"	0.001"	400g	-6030K	
	3 - 4"	0.001"	530g	-6040K	
The second second	4 - 5"	0.001"	770g	-6050K	
	5 - 6"	0.001"	800g	-6060K	

20

15

# Micrometer Setting Standards

For setting external micrometers, calipers etc. to zero, providing accurate repeatability of measurements. Flat, lapped measuring ends with fitted heat insulation block. Manufactured to BS 870.

	n)				p.	
Size	Weight each	Order Code OXD-335	Size	Weight each	Order Code OXD-335	
25mm	10g	-7010K	1"	10g	-7110K	
50mm	10g	-7020K	2"	10g	-7120K	
75mm	20g	-7030K	3"	20g	-7130K	
100mm	30g	-7040K	4"	30g	-7140K	
_125mm	40g	-7050K	5"	40g	-7150K	



#### Metric

Range	Graduation	Weight each	Order Code OXD-335	
0 - 25mm	0.01mm	230g	-5010K	
25 - 50mm	0.01mm	300g	-5020K	
50 - 75mm	0.01mm	400g	-5030K	
75 - 100mm	0.01mm	530g	-5040K	
100 - 125mm	0.01mm	770g	-5050K	
125 - 150mm	0.01mm	800g	-5060K	
150 - 175mm	0.01mm		-5070K	
175 - 200mm	0.01mm		-5080K	
200 - 225mm	0.01mm		-5090K	
225 - 250mm	0.01mm		-5100K	
250 - 275mm	0.01mm		-5110K	
275 - 300mm	0.01mm		-5120K	

# KENNEDY Enamelled Frame QUALITY INDUSTRIAL TOOLING External Micrometers

Enamelled frame and tungsten carbide tipped anvils. Manufactured to BS 870.





#### Accuracy: Flatness: 0.6mm.

Parallelism:  $(2 + L/100)\mu m$  (fraction rounded down).

Instrumental error:  $\pm(1 + L/75)\mu m$ (fraction rounded up).

L = maximum measuring length.

#### Metric

Range	Graduation	Weight each	Order Code KEN-335	
0 - 25mm	0.01mm	230g	-0010K	
25 - 50mm	0.01mm	300g	-0020K	
50 - 75mm	0.01mm	400g	-0030K	
75 - 100mm	0.01mm	530g	-0040K	
100 - 125mm	0.01mm	770g	-0050K	
125 - 150mm	0.01mm	800g	-0060K	

Supplied in case.

# OXFORD Precision Tool Set

Multi purpose precision set supplied in plastic fitted bench case.

#### **Contents:**

0 - 25mm and 25 - 50mm external micrometer, 25mm setting standard, two micrometer setting spanners, 125mm/5" vernier caliper, 150mm/6" rule with pocket clip, 300mm/12" engineers rule, 100mm engineers square, pocket scriber with clip.



Description Weight each Order Cod OXD-33

10 Piece Precision Set 150g -9000K

#### **External Micrometer Sets**

With enamelled frame and tungsten carbide tipped anvils and fine adjustment ratchet. Supplied in plastic fitted bench case.

# Contents: -5500K

0 - 25mm, 25 - 50mm, 50 - 75mm and 75 - 100mm external micrometers, 25mm, 50mm and 75mm micrometer setting standards, two micrometer setting spanners.

#### -6600K

0 - 1", 1 - 2", 2 - 3" and 3 - 4" external micrometers, 1", 2" and 3" micrometer setting standards, two micrometer setting spanners.



 Range
 Graduation
 Weight each
 Order Code OXD-335

 0 - 100mm 0 - 4"
 0.01mm - 5500K - 6600K

# OXFORD Apprentice Engineer's Tool Set **Tool Set**

#### **Contents**

150mm (6") engineer's rule, 0 - 25 and 25 - 50mm micrometers, 25mm setting standard, 10x magnification eye loupe, 150 (6") digital caliper, 0.5 - 1.0mm 20 blade feeler gauge, 51 metric 60° screw pitch gauge, pocket scriber. Technical data handbook.



### Multi Anvil Micrometer Set

Description

An external micrometer with seven pairs of interchangeable anvils. For measuring grooves, threads, bearings, tube and sheet.

#### **Anvils Included:**

12mm disc, 5.5mm blade, 60° cone and blade, 6.5mm radius, 6.5 and 2mm flat.



Weight each Order Code OXD-335 Range Graduation 0 - 25mm 0.01mm -3250K

# 335 MICROMETERS - EXTERNAL

# OXFORD Interchangeable Anvil Micrometer

Carbide tipped spindle faces. Hardened and ground anvils. Supplied in metal case with adjusting spanner. Four anvils and three setting standards.

Accuracy:  $\pm (4+L/75)$ mm.

Measuring faces flatness: ± 0.6mm.

Parallelism: (2+L/100)mm.





Range	Graduation	Weight each	Order Code OXD-335	
0 - 100mm	0.01mm	850g	-3000K	
0 - 150mm	0.01mm	990g	-3020K	

### **Interchangeable Anvil Micrometers**



# OXFORD Mechanical Digital Micrometer — 0 - 25mm

Direct reading external micrometer for quick and easy reading. With enamelled frame and tungsten carbide precision ground micro finish measuring faces. Measuring range 0 - 25mm. Graduation 0.01mm, 0.5mm screw pitch with lock.





#### 30° Anvil Micrometers

Used for measuring within small grooves or recesses and for quick comparisons of thread accuracy in screw cutting operations. With knurled thimble, ratchet stop and thumb lock. Enamelled frame with satin chromed finish barrel and sleeve.



#### **Wire Micrometer**

Specially designed for measuring wire diameters 0 - 10mm. The front of the body is flat to help support the wire when measuring. With knurled thimble, ratchet stop and vernier scale barrel, all over satin chrome finish.

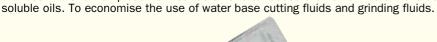


Capacity	Graduation	Weight each	Order Code OXD-335	
0 - 10mm	0.002mm	150g	-2000K	

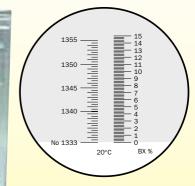
# 336/338 REFRACTOMETERS/STEEL GAUGE BLOCKS

### OXFORD Portable Optical Refractometer Refractometer

For determining the concentration of oil in water emulsions and transparent solutions, such as machine shop coolant. Maintaining the correct mixture in coolant systems is vital to ensure optimum performance from cutting tools. To protect the machine and workpiece from corrosion and to reduce the risk of health hazards arising from incorrect concentrations of water







**Lens for Portable** Refractometer

**Calibrated Refractive Scale** 

#### **Specifications:**

Range ND: 1.333 - 1.356. Bx: 0 - 15%.

Eyepiece magnification: 11x. Telescopic lens magnification: 4x.

Accuracy: ±0.0003 ±0.2% Lattic value: 0.0005 0.2%

Supplied in high quality fitted metal case complete with

calibration screwdriver and operator manual.

#### Refractometer

Dimensions	Weight each	Order Code OXD-336	
38 x 38 x 185mm	30g	-1010K	

#### Spares

Description	Weight each	Order Code OXD-398	
Lens for Portable Refractometer	10g	-3630K	

# KENNEDY Steel Gauge QUALITY INDUSTRIAL TOOLING Block Sets

Supplied in high quality wooden bench cases, complete with certificate of calibration. Available in two grades. Manufactured to **BS EN ISO 3650.** 

#### **Grade 2: For Workshop Use**

Grau	e 2: For worksii	up use			
No. o Piece	f Range s (inclusive)	ncrements Weight each		Order Code KEN-338	
		36	Piece Inc	ch care	
(2) (9) (9) (9) (4) (3)	.05"10" .10011009" .101109" .110190" .25" 1, 2 & 4"	.05" .0001" .001" .010" .10"	2.4kg	-3360K	
		81	Piece Inc	eh	
(9) (49) (19) (4)	.10011009" .101149" .0595" 1-4"	.0001" .001" .05" 1"	4.0kg	-3810K	
		47 P	iece Met	ric	
(1) (9) (9) (24) (4)	1.005mm 1.01-1.09mm 1.1-1.9mm 1-24mm 25-100mm	.01mm .1mm 1mm 25mm	2.1kg	-4470K	
		88 P	iece Met	ric	
(1) (9) (49) (20)	1.0005mm 1.001 -1.009mm 1.01-1.49mm .5-10mm	.001mm .01mm .5mm	2.8kg	-4880K	

(20) (9)	.5-10mm 20-100mm	.5mm 10mm	2.org	-400UN	
Grad	e 1: For Inspec				
No. o		Increments	Weight each	Order Code KEN-339	
		81	Piece Inc	ch	
(9)	.10011009"	.0001"			
(49)		.001"	4.0kg	-4810K	
(19)	.0595"	.05"	T.ONG	402010	
(4)	1-4"	1"			
		47 P	iece Me	tric	
(1)	1.005mm				
(9)	1.01-1.09mm	.01mm			
(9)	1.1-1.9mm	.10mm	2.4kg	-5470K	
(24)	1-24mm	1mm			
(4)	25-100mm	25mm			
		88 P	iece Me	tric	
(1)	1.0005	004			
(9)	1.001-1.009mm		0.01	=	
(49)	1.01-1.49mm	.01mm	2.8kg	-5880K	
(20)	.5-10mm	.5mm			
(9)	20-100mm	10mm			





iiii

**Precision & Laboratory** 

# LEVELS & SQUARES/SCREW GAUGES 341/360

both the inside and

outside of the stock

and blade,

to ensure

accuracy.

Made to **British** 

**Standard** 

BS 939.

OXFORD Engineer's Sauares

from hardened steel that has been precisely ground to produce parallel edges so that the square has an exact right angle on

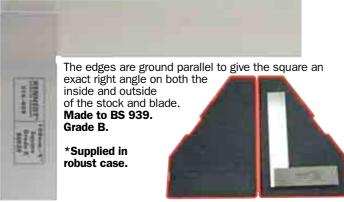
**Squares** 

Engineer's steel squares that are precision manufactured

## KENNEDY Engineer's <sup>©</sup> Squares

Manufactured from hardened and tempered steel.





Order Code <b>KEN-518</b>	Weight each	Size (mm)
-4030K	140g	75 ( 3")*
-4040K	270g	100 ( 4")*
-4060K	320g	150 ( 6")*
-4090K	1400g	225 ( 9")
-4120K	2000g	300 (12")

### Adjustable Steel Squares

Made from hardened steel ,precision ground, with three blades, one plain, parallel blade for use as an engineer's square, 30° and 45° bevel edged blade for checking angles, anda narrow blade graduated metric and inch.



Measured	Weight	Order Code
Length	each	KEN-518
100mm/4"	340g	-4150K
150mm/6"	410g	-4160K

# 200mm Precision Prism Level

Two plastic knobs insulate the level from the hand's heat. Reading: 0.0005" per foot (10 seconds) (0.05mm/m). V-grooved base allows levelling cylindrical surfaces. Two graduated vials allow for transverse and horizontal settings. Packed in strong, wooden, fitted case.

Order Code

OXD-340 -0030K

-0040K

-0060K -0090K

-0120K

Dimensions:

Level: 200 x 50 x 40mm. Case: 235 x 80 x 50mm.

Size

(mm)

75 (3") 100 (4"

50 (6

300 (12"



Dimensions (W x D x Hmm)	Base	Weight each	Order Code OXD-340	
200 x 50 x 40	200mm	1.9kg	-5000K	

# KENNEDY Screw Plug Quality INDUSTRIAL TOOLING Gauges

**Double Ended Go & No Go** 





Thread	Weight	Order Code
Size	each	KEN-360
	Metric Coarse	— Class 6H Tolerance
M2.0 x 0.40	4g	-0810K
M2.5 x 0.45	4g	-0830K
M3.0 x 0.50	4g	-0840K
M4.0 x 0.70	10g	-0860K
M5.0 x 0.80	12g	-0880K
M6.0 x 1.00	14g	-0890K
M7.0 x 1.00	26g	-0900K
M8.0 x 1.25	28g	-0910K
M9.0 x 1.25	28g	-0920K
M10.0 x 1.50	52g	-0930K
M12.0 x 1.75	70g	-0950K
M14.0 x 2.00	108g	-0960K
M16.0 x 2.00	128g	-0970K
M18.0 x 2.50	132g	-0980K
M20.0 x 2.50	148g	-0990K
M24.0 x 3.00	272g	-1010K
M30.0 x 3.50	484g	-1030K
M36.0 x 4.00	622g	-1050K

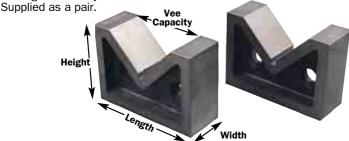




Size   each   KEN-361	
140 0 0 50	
M3.0 x 0.50 8g <b>-0100K</b>	
M4.0 x 0.70 14g <b>-0120K</b>	
M5.0 x 0.80 16g <b>-0140K</b>	
M6.0 x 1.00 50g <b>-0150K</b>	
M8.0 x 1.25 58g <b>-0170K</b>	
M10.0 x 1.50 66g <b>-0190K</b>	
M12.0 x 1.75 96g <b>-0210K</b>	
M16.0 x 2.00 176g <b>-0230K</b>	
M20.0 x 2.50 206g <b>-0250K</b>	
M24.0 x 3.00 244g <b>-0270K</b>	

### OXFORD Vee PRECISION Block Blocks

Matched and numbered pairs of closed grained iron castings accurately machined. Precision 90° vee blocks.



Vee Capacity	Weight/ Pair	Order Code OXD-370	
45	1.7kg	-2110K	
56	2.9kg	-2120K	
62	4.8kg	-2130K	
78	6.5kg	-2140K	
113	11.2kg	-2150K	
125	19.0kg	-2160K	
	45 56 62 78 113	Capacity     Pair       45     1.7kg       56     2.9kg       62     4.8kg       78     6.5kg       113     11.2kg	Capacity         Pair         OXD-370           45         1.7kg         -2110K           56         2.9kg         -2120K           62         4.8kg         -2130K           78         6.5kg         -2140K           113         11.2kg         -2150K

## Workshop Grade Hollow Ground Vee Blocks & Clamp

Designed for checking precision machine parts. Hardened and precision ground steel supplied in matched pairs, each with V-grooves central and parallel to the sides and base ensuring perfect alignment. Complete set with two

V-blocks (one pair) and two clamps.

Supplied with malleable iron clamps with steel screws.



Dimensions Length x Width x Height	Weight/ Pair	Order Code OXD-370	
31.5 x 40 x 31.5mm	1.7kg	-2310K	

# **Workshop Vee Blocks & Clamp**

Designed for checking precision machine parts. Hardened and precision ground steel supplied in matched pairs, each with V-grooves central and parallel to the sides and base ensuring perfect alignment. Complete set with two V-blocks (one pair) and two clamps.



Dimensions Length x Width x Height	Weight/ Pair	Order Code OXD-370	
50 x 37 x 37mm	1.0kg	-2300K	

# **Adjustable Swivel Angle** Surface Plates

With radial locking hardened and ground pins and plain slotted top, are made from close grained cast iron with a Grade 2 ground finish.

#### 3 - 4 Day Delivery



### **Angle Plates**

#### **Open End**

Type

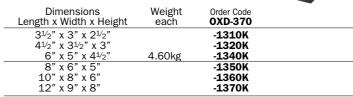
SA1P

SA2P

SA4P

Open end angle plates are versatile accessories which can be used to clamp and hold work in a vertical position for planing, milling, or drilling. Work can be clamped and rotated through several planes for measurement or machining without repositioning. The slots allow work to be easily fastened to the plate, and the plate to a fixture base or machine bed. Manufactured from close grained

cast iron. BS: 5535 Grade B.



#### Webbed End

Webbed slotted angle plates can be used for rapid mounting fixtures for machine set-up, layout, or inspection. They are heavily ribbed for strength and rigidity. Sides and ends are machine finished. Manufactured from close grained cast iron.

BS: 5535 Grade B.



Dimensions Length x Width x Height	Weight each	Order Code OXD-370	
3½" x 3" x 2½"	1.4kg	-1100K	
4½" x 3½" x 3"	1.5kg	-1110K	
6" x 5" x 4 <sup>1/</sup> 2"	6.1kg	-1120K	
8" x 6" x 5"	10.4kg	-1140K	
10" x 8" x 6"	15.6kg	-1160K	
12" x 9" x 8"	26.5kg	-1170K	

#### Plain Surface Plates

Surface plates are used when a precision surface is key. These plates are manufactured from high quality, close grained cast iron and are stress relieved against distortion by heat treatment. Rigidity and long lasting accuracy are ensured by adequate top and side thickness and ribbed construction. The surfaces are free from pin

holes, planed and hand scraped. Manufactured to BS 817.

Product Number Description Dimensions Weight Order Code OXD-371 Length x Width each SP4 300 x 200mm -2000K 11kg SP6 Grade 1 300 x 300mm 18kg -2020K -2040K -2200K SP11 450 x 300mm 300 x 200mm 39kg Grade 2 450 x 300mm 39kg -2240K

Covers and handles are available separately (to order only), details on request. Hardened and ground steel parallels for workshop use. Supplied in pairs for packing or levelling components prior to machining in tool rooms or machine shops.



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#### **Supplied in Pairs**



Dimensions	Weight/	Order Code	
Length x Width x Height	Pair	0XD-372	
8 x 15 x 100mm		-4080K	
10 x 4 x 160mm		-3700K	
10 x 20 x 100mm		-4100K	
12 x 20 x 100mm		-4120K	
14 x 4 x 150mm		-3800K	
14 x 4 x 160mm		-3710K	
16 x 4 x 150mm		-3810K -4160K	
16 x 25 x 150mm		-4160K -3720K	
18 x 4 x 140mm 18 x 4 x 150mm		-3720K -3820K	
20 x 4 x 150mm		-3820K -3830K	
20 x 4 x 15011111 20 x 30 x 200mm		-3630K -4200L	
22 x 4 x 140mm		-3730K	
22 x 4 x 14011111 22 x 4 x 150mm		-3730K -3840K	
24 x 4 x 150mm		-3850K	
25 x 40 x 250mm		-4250K	
26 x 4 x 140mm		-3740K	
26 x 4 x 150mm		-3860K	
28 x 4 x 150mm		-3870K	
30 x 4 x 140mm		-3750K	
30 x 4 x 150mm		-3880K	
32 x 4 x 150mm		-3890K	
34 x 4 x 140mm		-3760K	
35 x 4 x 150mm		-3900K	
38 x 4 x 140mm		-3770K	
40 x 4 x 150mm		-3910K	
42 x 4 x 140mm		-3780K	
45 x 4 x 150mm		-3920K	
50 x 4 x 150mm		-3930K	

# 18 Piece Set Contents: nine pairs of the following sizes: 10 x 4 x 160mm, 14 x 4 x 160mm, 18 x 4 x 140mm, 22 x 4 x 140mm, 26 x 4 x 140mm, 30 x 4 x 140mm, 34 x 4 x 140mm, 38 x 4 x 140mm, 42 x 4 x 140mm. Supplied in wooden storage box. Weight each Order Code OXD-372 Description 18 Piece Set -3620K 2.8kg

#### 16 Piece Set

**Contents:** eight pairs of the following sizes:

5 x 16 x 100mm, 6 x 18 x 100mm, 8 x 24 x 100mm, 10 x 30 x 100mm, 12 x 36 x 150mm, 14 x 48 x 150mm, 18 x 60 x 150mm, 22 x 62 x 150mm. And support blocks.



Description	Weight each	Order Code OXD-372	
16 Piece Set	12.7kg	-3600K	

### 28 Piece Set

#### **Contents:**

Contents: fourteen pairs of the following sizes:

14 x 4 x 150mm,	16 x 4 x 150mm,	18 x 4 x 150mm,
20 x 4 x 150mm,	22 x 4 x 150mm,	24 x 4 x 150mm,
26 x 4 x 150mm,	28 x 4 x 150mm,	30 x 4 x 150mm,
32 x 4 x 150mm,	35 x 4 x 150mm,	40 x 4 x 150mm,
45 x 4 x 150mm,		50 x 4 x 150mm.

Supplied in wooden storage box.







Description	Weight each	Order Code OXD-372
28 Piece Set	11.5kg	-3640K