

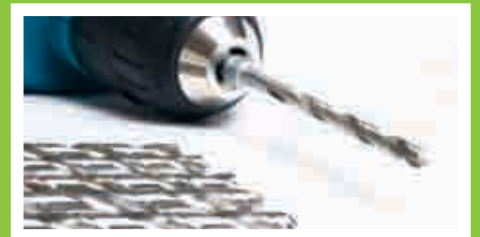


SECTION

10



ENGINEERING, PRECISION AND MEASURING



QUALITY PRODUCTS AND QUALITY SERVICE



Mitutoyo
Precision is our Profession



Mitutoyo

TUCKS
INDUSTRIAL SUPPLIERS
AND DISTRIBUTORS



SECTION 10

ENGINEERING, PRECISION AND MEASUREMENT

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10 ENGINEERING, PRECISION AND MEASUREMENT

MITUTOYO

Electronic Vernier Calipers



Easy to read LCD display for quick accurate 4-way Quadri measurement with the added feature of digimatic output to download data to a printer or computer system.

- Origin setting
- Zero setting with absolute feature
- Lock nut

Item#	Range	Resolution
01260	0-6" /0-150mm	0.00005"/0.01mm

MITUTOYO

Absolute Digimatic Calipers



Easy to read LCD display for quick accurate 4-way Quadri measurement

- Origin setting
- Zero setting with absolute feature
- Lock nut
- Certificate of inspection traceable to national standards

Item#	Range
01265	0-6"/0-150mm

VOGEL

Digital Calipers



Electronic digital calipers with data output.

- Stainless steel, hardened
- LCD - display with clear figures
- Jaws fine ground and lapped
- On/Off button
- Zero-setting at any position
- Reading switchable mm/inch

Item#	Size
01812	150mm

VOGEL

Dial Calipers



Shock proof pattern with thumb roller for fine adjustment.

- 4 way measuring system

Item#	Range
01841	150 x 0.02mm

VOGEL

Dial Vernier Calipers



Dial calipers for quick and sure reading.

- Stainless steel, hardened
- Scale satin chrome finish
- Shockproof and dustproof pattern

Item#	Size
01844	150mm/0.01mm

MITUTOYO

Vernier Calipers Fine Adjustment



Fine adjustment calipers which allows improved sensitivity of slider movement

- Clear graduations on satin chrome finish
- 14 degree measuring face angle for easy reading
- Incorporates quadri feature

Item#	Range	Graduation
01211	0-5" /0-130mm	0.001"/0.02mm
01212	0-7"/0-180mm	0.001"/0.02mm
01213	0-11"/0-280mm	0.001"/0.02mm



MITUTOYO
Vernier Calipers



The finest of vernier calipers for accurate work, with Mitutoyo's exclusive Quardri 4-way measuring feature.

- Ability to measure OD, ID, depth and steps
- Model available with a fine-adjustment carriage to fine-feed the slider

Item#	Range
01220	0-6" /0-150mm

VOGEL
Pocket Calipers



Pocket sized calipers with parallaxfree reading.

- Stainless steel hardened
- 4 way measuring system
- Scale and vernier satin chrome finish
- Jaws finely ground and lapped

Item#	Range
01830	150mm/6" x 0.05mm

VOGEL
Vernier Calipers
High Precision



Suitable for calibration purposes.

- Stainless steel hardened
- Scale and vernier satin chrome finish
- Jaws finely ground and lapped
- 4 way measuring system

Item#	Range
01824	150mm/6" x 0.05mm/1/128"

MITUTOYO
Dial Indicators



Conventional size, easy to read indicator for most general applications. Dial indicators are instruments used to accurately measure a small distance.

- Used to check the variation in tolerance during the inspection process of a machined part
- Ideal for measuring the deflection of a beam or ring under laboratory conditions

Item#	Range
01404	10 x 0.01mm
01405	10 x 0.01mm
01406	20 x 0.01mm

MITUTOYO
Dial Indicators



Small diameter model for applications where space is limited.

- Face diameter 41mm
- Hardened stainless steel spindle
- Machine ground rack gear for increased accuracy

Item#	Range
01450	5 x 0.01mm

MITUTOYO
Dial Indicators



Conventional size, easy to read indicator for most general applications.

- Mitutoyo's most popular size dial indicator
- Available In various sizes
- Accuracy is +/-0.001"

Item#	Range
01410	0.5" x 0.001"
01411	0.5" x 0.001"



MITUTOYO
External Micrometer



Lightweight water resistant digital micrometer suitable for use in areas where there is a high risk of coolant splash.

- Extra large LCD readout
- Lightweight design and digital display allow measurements to be taken with the micrometer held in one hand

Item#	Range	Resolution
01090	0-1"/0-25	0.0005"/0.001mm

MITUTOYO
External Micrometer



Suitable for all external measurements. Tapered frame on the anvil side for hard to reach places.

- Carbide tipped measuring faces
- Clear graduations on satin chrome finish
- Spindle lock
- Frame is fitted with heat shields

Item#	Range
01011	0-25mm x 0.001mm

MITUTOYO
External Micrometer



Suitable for all external measurements in either workshop or inspection departments.

- Enamelled frame
- Tungsten carbide tipped measuring faces
- Clear graduations on satin chrome finish
- Spindle lock

Item#	Range
01026	1-2 x 0.001"
01033	0-25 x 0.01mm
01034	0-25 x 0.001mm
01037	0-25 x 0.01mm
01038	25-50 x 0.01mm
01039	50-75 x 0.01mm
01040	75-100 x 0.01mm

VOGEL
External Micrometer



External micrometer with friction thimble for constant measuring pressure, especially for series production.

- Drum and sleeve satin chrome finish
- Chromed frame
- Tungsten carbide measuring faces, parallel lapped.
- Insulation plates
- Locking lever for quick and precise fixing
- Delivery with setting key, from up to 25mm with setting gauge

Item#	Range
01905	0-25 x 0.01mm

VOGEL
External Micrometer



High precision instrument for calibration purposes.

- Drum and sleeve satin chrome finish
- Hammer blow grey lacquered frame
- Tungsten carbide measuring face, finely lapped
- Insulation plates
- Locking lever for quick and precise fixing
- With ratchet for constant measuring pressure

Item#	Range
01915	0-25 x 0.01mm

MITUTOYO
Universal Bevel Protractor



High angle gauge for accurate angle measurements of machines, moulds and jigs.

- For use as a reference for assembling and machining
- Minimum reading 5 minutes

Item#	Range
01501	150mm/6"
01505	300mm/12"
01507	Acute angle attachment

MITUTOYO Combination Set



Combination set with 3 measuring heads attached to a stainless steel rule allowing measurements of various workpieces.

- Square head (1) used to set rule at 90° or 45° to the edge of the workpiece
- Centre head (2) used to locate centres of round workpieces
- Protractor head (3) used to set the rule to a desired angle
- Heads are hardened

Item#	Details
01550	c/w 12" Rule
01561	Square Head
01562	Centre Head
01563	Protractor Head
01564	12" Stainless Rule

MITUTOYO Telescopic Gauge Set



Used for comparative measurement of bore diameter and groove width.

- Spring loaded plunger expands within the hole whilst knurled clamp allows contacts to be locked in position then removed and measured using a micrometer or calipers

Item#	Range
01650	0-6"/0-150mm

MITUTOYO Magnetic Stand



Standard magnetic stand with cross arm.

- On/off lever to release the magnet
- Suitable for stem diameters of 4.5mm, 8mm and 3/8"
- 60kgf magnetic pull

Item#	Base
01750	50mm x 60mm x 5mm

M & W Engineers Squares



Precision ground blade and stock, blind riveted construction.

- Hardened and tempered blades
- Suitable for general workshop use

Item#	Size
02201	3"
02202	4"
02203	6"
02204	9"
02205	12"

M & W Engineers Levels



Precision ground case base with vee groove for location on cylindrical work.

- Main vial sensitivity of 1 min

Item#	Details
02211	Main & Cross Vials
02215	Main, Cross & Plumb

M & W Inside Calipers



Bow spring ensures uniform tension over working range.

- Centrally mounted adjustment screw
- Manufactured from polished tool steel

Item#	Mfg Part#	Size
02013	No.51	6"
02014	No.51	8"



M & W
Jenny Calipers
Firm Joint



Internal firm joint calipers manufactured from polished tool steel.

- Large headed nut and screw assembly provides a firm and rigid friction joint, with no play
- Size listed is the effective leg length which is measured from the joint assembly
- Firm joint caliper capacities are generally 1/3 greater than the effective leg length

Item#	Mfg Part#	Size
02031	330	6"

M & W
Jenny Calipers
Odd Leg



Odd leg with adjustable point jenny calipers, manufactured from polished tool steel

- A large headed nut and screw assembly provides a firm and rigid friction joint, with no play
- The sizes listed are the effective leg length which is measured from the joint assembly
- Leg which holds the round adjustable hardened point is offset
- Model 341 has a locating spur on the straight leg

Item#	Mfg Part#	Details
02041	336/6"	Adj Point
02051	341/5"	Adj Point & Locating Spur
02052	100612	Point for 341
02053	100456	Point Screw for 341
02054	100455	Clamp Nut for 341

M & W
Jenny Calipers
Firm Joint



External firm joint calipers, manufactured from polished tool steel

- Large headed nut and screw assembly provides a firm and rigid friction joint, with no play
- The sizes listed are the effective leg length which is measured from the joint assembly

Item#	Mfg Part#	Size
02035	331	6"

M & W
Outside Calipers



Bow spring ensures uniform tension over working range

- Centrally mounted adjustment screw offers finer setting

Item#	Mfg Part#	Size
02023	No.52	6"
02024	No.52	8"

M & W
Spring Dividers



Manufactured from polished tool steel

- Points are hardened to over 550Hv
- Bow spring ensures uniform tension over working range
- Centrally mounted adjustment screw
- The nominal size is the distance between the centre of the roller and the working ends of the legs

Item#	Mfg Part#	Size
02002	No.50/4	4"
02003	No.50/6	6"
02004	No.50/8	8"
02005	No.50/10	10"
02006	No.50/12	12"

M & W
Depth Gauge with Protractor



Full range rule adjustment.

- Readings can be fixed by means of a locknut
- Rules graduated on both sides
- Protractor plate is graduated 0° - 180° - 0° degrees
- Scale resolution 1/2 degree

Item#	Mfg Part#	Size
02183	No.44	6" x 64ths & mm
02185	No.44M	150 x 1mm & 64ths



M & W
Drill Gauge



Made from high grade tool steel, with a brushed finish.

- Marked with nominal size of each hole

Item#	Mfg Part#	Size
02157	No.1067M	0.5-13mm

M & W
Feeler Gauge



A feeler gauge is a simple tool used to measure gap-widths. Mostly used in engineering to measuring the clearance between two parts. They consist of a number of small lengths of steel of different thicknesses with measurements marked on each piece.

- All blades are hardened, tempered and polished

Item#	Mfg Part#	Size	Blade No.	Thickness
02101	No.391M	75mm	10	5-80 x 0.01mm
02103	No.388M	100mm	13	3-50 x 0.01mm
02107	No.390M	100mm	20	5-100 x 0.01mm
02113	No.124	6"	10	1.1/2-25 x 0.001"
02117	No.12	3"	26	2-25 Inclusive

M & W
Radius Gauge



Used to measure the radius of an object. Radius gauges require a bright light behind the object to be measured. The gauge is placed against the edge to be checked and any light leakage between the blade and edge indicates a mismatch that requires correction.

- 16 blades

Item#	Mfg Part#	Size
02143	No.204A	1/32"-17/64" x 1/64"
02145	No.204MA	5.5mm-13mm x .5mm

M & W
Safe & Sure Gauge



An economical range of feeler gauges for general workshop use.

- Nominal thickness marked on each blade.
- All blades are hardened, tempered and polished

Item#	Mfg Part#	Size	Blade No.	Thickness
02119	No.912M	75mm	10	5-80 x 0.01mm
02121	No.911M	100mm	10	5-80 x 0.01mm
02125	No.912	3"	10	1.1/2-25 x 0.001"
02127	No.911	4"	10	1.1/2-25 x 0.001"

M & W
Screw Cutting Gauge



Traditional engineer's screw cutting gauge.

- 60° USA / 55° Whitworth
- Suitable for most standard metric and imperial thread forms
- Accurately milled angles for precise evaluation of thread form

Item#	Mfg Part#
02161	No.200

M & W
Screw Pitch Gauge



Used as a reference tool in determining the pitch of a thread that is on a screw or in a tapped hole.

- Accurately milled steel blades marked with nominal size on each blade

Item#	Type#	Mfg Part#	Blade No.
02131	Metric	No.801	30
02134	Whit/Metric	No.804	50
02135	Unified	No.806	30
02137	Whit	No.800	28



M & W
Wire Gauge



Two part space saving design, with corner pivot.

- Marked with nominal size of each slot
- Made from high grade tool steel, with a brushed finish

Item#	Type	Mfg Part#	Size
02151	Imperial	No.1052	1-36 Gauge
02153	Metric	No.1053M	0.2-10mm 40 Slots

M & W
Engineers Scribers



Scribers are hand tools used in the metal trades to mark lines on workpieces, prior to machining. The process of using the scriber is referred to as marking out and may require the addition of other hand tools and equipment.

- Pearl chrome finish
- Robust design

Item#	Mfg Part#	Details
02291	E222	Double Ended
02292	E220	Pocket

ECLIPSE
Trammel Heads



Trammel heads beams for mounting on a beam of suitable thickness, to provide an efficient and convenient means of laying out the distance between two points and scribing arcs and circles.

- Supplied as a pair

Item#	Mfg Part#	Beam Size
02501	No.33	3/4 - 1.1/2"

M & W
Vee Blocks



Standard vee blocks without clamps, supplied in matched and numbered pairs.

- Manufactured from close grained cast iron
- 62mm Vee capacity

Item#	Mfg Part#
02251	No.211

ECLIPSE
Toolmakers Clamps



Eclipse toolmakers clamps are designed for holding work together while drilling, tapping and machining.

- Made from case hardened steel for extra strength.
- Ends are rounded to permit clamping under shoulders or in recesses

Item#	Mfg Part#	Capacity	Jaw Size
02261	No. 410	25mm	50mm
02263	No. 411	38mm	75mm
02265	No. 412	63mm	100mm
02267	No. 413	89mm	125mm

ECLIPSE
Magnets



The minor magnet is cast from alnico material with ground finished magnetic poles. Button magnets are cylindrical magnet with both poles in the same plane with fixing holes.

- Cast from alnico material
- Can be used in temperatures up to 550°C

Item#	Type	Mfg Part#	Size
02601	Minor	E801	7.9W 22L 11.1H
02615	Button	E824	31.8D 25.4H



HAZET
Drift Pin Set



Drift pin set in a plastic display stand. Used as an aid in aligning bolt or rivet holes prior to inserting a fastener. A drift pin is constructed as a tapered rod, with the hammer acting on the large end of the taper. The tapered end of a drift pin is placed into the semi-aligned bolt holes of two separate components and then driven into the hole.

- 115 - 200mm long

Item#	Mfg Part#	Size	Set
23560	751/6	2 - 8mm	6 Pce

PROTO
Proto Drift Punch



A drift punch is used as an aid in aligning bolt or rivet holes prior to inserting a fastener.

- Overall length 10"

Item#	Mfg Part#	Body	Point
43151	96	1/4"	3/32"
43153	96	5/16"	1/8"
43155	96	3/8"	3/16"

ECLIPSE
Centre Punch Set



A set of 4 centre punch tools with a sharp point.

- Used in metalworking to mark centers or center lines on pieces to be drilled
- Sizes 1/8" - 1/4"

Item#	Mfg Part#	Set
02315	351W	4 Pce

ECLIPSE
Automatic Centre Punch



Sturdily constructed with all wearing parts being of specially hardened and tempered steel.

- One handed operation - no hammer required

Item#	Mfg Part#	Size
02301	65-171R	120mm

ECLIPSE
Centre Punch



A center punch forms a small dimple in which the tip of the drill will fit.

- When drilling larger holes and the web of the drill is wider than the indentation produced by a center punch, the drilling of a pilot hole is usually needed.

Item#	Mfg Part#	Size
02310	351A	1/8" x 4"
02312	351B	5/32" x 4"
02313	351C	3/16" x 4"
02314	351D	1/4" x 4"

PRIORY
Centre Punch



Round head centre punch for marking a small dimple in which the tip of a drill will fit.

Item#	Size
43323	1/8"
43324	5/32"



STARRETT
Long Series Pin Punch Set



Set 5 long series pin punches in a plastic case.

Set contains one of each :-

- 248A - 1/8"
- 248B - 3/16"
- 248C - 1/4"
- 248D - 5/16"
- 248E - 3/8"

Item#	Size	Set
43321	1/8" - 3/8"	5 Pce

PRIORY
Priory Pin Punch Set



A set of 9 pin punches used for the purposes of layout. A pin punch is used as a driving tool to drive pins.

- Pin punches are typically characterized by a hexagonal body, with a long, flat ended cylindrical section
- Sizes: 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/16" and 3/8"

Item#	Mfg Part#	Size	Set
43328	135-S9	1/16" - 3/8"	9 Pce

STARRETT
Long Series Pin Punch



Long range 200mm drive pin punch for driving deep set pins.

Item#	Mfg Part#	Size
43322	248B	3/16" x 8"

ECLIPSE
Parallel Pin Punch



A pin punch is used as a driving tool, typically, as the name implies, to drive pins that are used to affix a fixture to a rotating shaft. Pin punches are typically characterized by a hexagonal body, with a long, flat ended cylindrical section.

Item#	Mfg Part#	Size
02322	161A	3/32" x 4"
02323	161B	1/8" x 4"
02324	161C	3/16" x 4"
02325	161D	1/4" x 4"
02326	161E	5/16" x 6"

MAUN
Wad Punch Set



This metric wad punch kit comprises a single wad punch handle onto which screw a series of nine interchangeable punches. The handles are blackened and punches heat treated and chemically blacked. The handle should be struck with a hammer or mallet onto a wooden block. The spring loaded plunger in the handle enables holes to be accurately centred and serves to eject the slug.

- Range 5mm-32mm
- High grade alloy steel construction
- Self-centering holder
- Interchangeable punches

Item#	Mfg Part#	Size	Set
38121	1000-05	5 - 32mm	9 Pce

PRIORY
No. 96 Wad Punch



Used to cut perfectly round holes in soft material such as leather, plastic, rubber and card etc.

- Manufactured from a single drop forging, the cutting edge is hardened and ground for a long life
- The waste hole behind the cutting edge is slightly larger to ensure the waste passes through unobstructed

Item#	Size
43001	1/4"
43005	1/2"
43007	5/8"
43009	3/4"
43013	1"
43018	1.1/4"
43022	1.1/2"
43030	2"



PRIORY
Saddlers/Belt Punch



Used to cut perfectly round holes in soft material such as leather, plastic, rubber and card etc.

- Manufactured from quality tool steel, the cutting edges are hardened and ground to ensure a long life
- Ref no. 97

Item#	Size
43041	1/8"
43042	3/16"
43043	1/4"
43044	5/16"
43045	3/8"
43046	1/2"
43047	5/8"
43048	3/4"
43049	1"

PRIORY
Letter and Number Punch Set



Come in a variety of sizes from 3mm up to 10mm. They are most common in the reverse image, this allows the end result to be immediately readable.

- Used to emboss the impression of a letter or figure into a work-piece

Item#	Size
A-Z Letter Punches	
43101	1/8" / 3mm
43102	3/16" / 4.7mm
43103	1/4" / 6mm
43104	5/16" / 8mm
43105	3/8" / 10mm
0-9 Figure/ Number Punches	
43111	1/8" / 3mm
43112	3/16" / 4.7mm
43113	1/4" / 6mm
43114	5/16" / 8mm
43115	3/8" / 10mm

ECLIPSE
Pin Vices

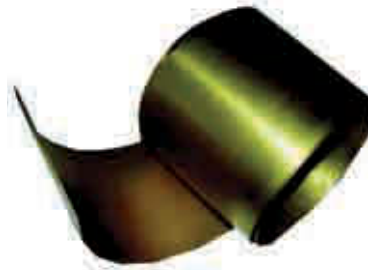


For holding small taps, drills, reamers etc.

- Each pin vice can take a drill bit up to a certain size

Item#	Mfg Part#	Chuck
02522	No. 122	0.75 - 1.5mm
02523	No. 123	1.4 - 3.1mm
02524	No. 124	3.1 - 5mm

SHIMFOIL
Brass Shim



Brass shim is available in various thickness making it great for making parts for model vehicles, miniatures, accessories and more.

- Assorted pack contains: 0.001"; 0.0015"; 0.002"; 0.003"; 0.004"; 0.005"; 0.006"; 0.007"; 0.008"; 0.010"; 0.012" and 0.015"

Item#	Size
88622	0.002" x 6" x 100"
88623	0.003" x 6" x 100"
88627	0.007" x 6" x 100"
88628	0.008" x 6" x 100"
88629	0.009" x 6" x 100"
Assorted Brass Shim Pkt 12	
88660	0.001" - 0.015"

SHIMFOIL
Assorted Steel Shim



This material takes hard or soft solder readily, has excellent forming qualities and may be lightly drawn, blanked or stamped.

- Assorted pack contains: 0.001"; 0.0015"; 0.002"; 0.003"; 0.004"; 0.005"; 0.006"; 0.007"; 0.008"; 0.010"; 0.012" and 0.015"

Item#	Size
88665	0.001" - 0.015"



ZEUS *Zeus Chart*



Reference charts and tables for the drawing office, toolroom or workshop.

- Containing data on standard drill sizes and decimal equivalents tapping drills and clearances for metric and imperial threads
- Also long tables for sine, cosine, tangent and cotangent

Item#	Type
02990	Book

STUARTS *Engineers Blue*



Micrometer engineers marking blue gives a clear perfect mark on any metal, in any light.

- Being a lubricant cannot damage bearings or other working parts

Item#	Type
88950	Tin
88953	Tube

TUCKS *French Chalk*



French chalk is a type of talc used by tailors for marking cloth, used by cleaners for removing grease from cloth and as a dry lubricant in it's powdered form.

- Soft, finely powdered magnesium silicate ($MgH_2(SiO_3)_4$),
- Dusted between the leaves of a book prior to gilding the edges so as to prevent the leaves from sticking during the gilding process
- To remove grease stains from paper

Item#	Stick No.
88930	48