

Magnetic Workholding

Improving process efficiency and precision accuracy

ECLIPSE MAGNETICS

Our Story So Far...

100 Years of Magnetic Innovation

We are firmly established as a leading manufacturer and supplier of magnets and magnetic equipment.

With 100 years of experience in design and manufacture of high performance magnetic systems, we supply critical magnetic equipment to some of the leading names in the most demanding industries. We are firmly established as a leading manufacturer and supplier of magnets and magnetic equipment.

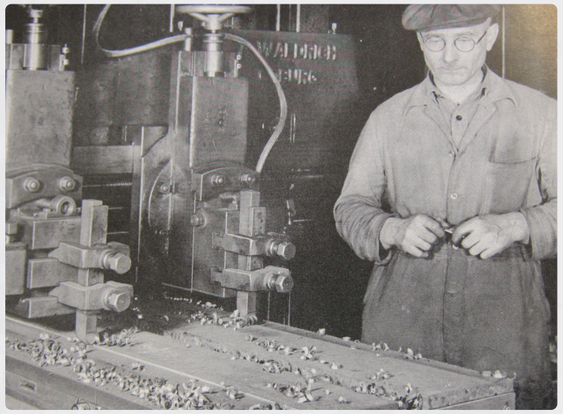
We provide magnetic solutions to all major industry sectors, delivering profit, productivity, protection, and compliance. Supplying diverse ranges of magnetic products through various channels, including international industrial catalogues, wholesalers, merchants, representatives and agents.

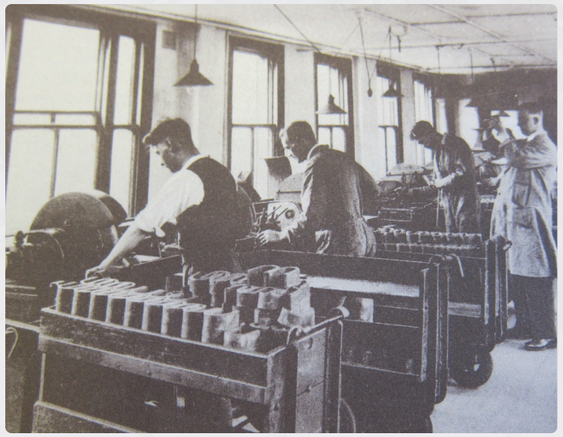
Benefiting from skilled and dedicated sales teams, each with their own specialism enables us to manage and deliver multimillion pound projects and supply contracts, often to tight deadlines.

Supplying some of the world's most prestigious brands within the Automotive, Aerospace, Manufacturing, Processing, Oil & Gas and Heating & Ventilation sectors across more than one hundred countries, all supported by our global employees and offices.

Holding various ISO accreditations, and in conjunction with benefiting from our own design engineering capabilities, we are ideally placed to offer standard and bespoke solutions into the most demanding of applications and industry sectors.

We're committed to the environment and have a road map to reach Net Zero by 2040. We value all employees and are accredited to the Living Wage Foundation.









The Eclipse Magnetics Difference

Group buying power for raw materials.



Standard or made to order products (application specific).



Flexible approach for requirements from one off to multiple quantities.



Large stock holding / warehousing capability.

Scheduling orders for call-off (JIT).



Full in-house manufacturing facilities.

Multiple in-house testing facilities from factory to warehouse.

Bespoke UK centric Technical and Engineering teams.

Experienced staff with in-depth knowledge of material compositions.



Sector-wide application and industry experience.



Our Promise

We believe that, together, we can secure a better future for our world

Our Net Zero Journey

We want to transform our business into a sustainable organisation, that works to protect our planet. That's why we are working towards achieving net zero for scope 1 and 2 emissions by 2030, and for scope 3 emissions by 2040. It's an ambitious target, but we are committed to having a net zero business by 2040. We believe that, together, we can secure a better future for our world.

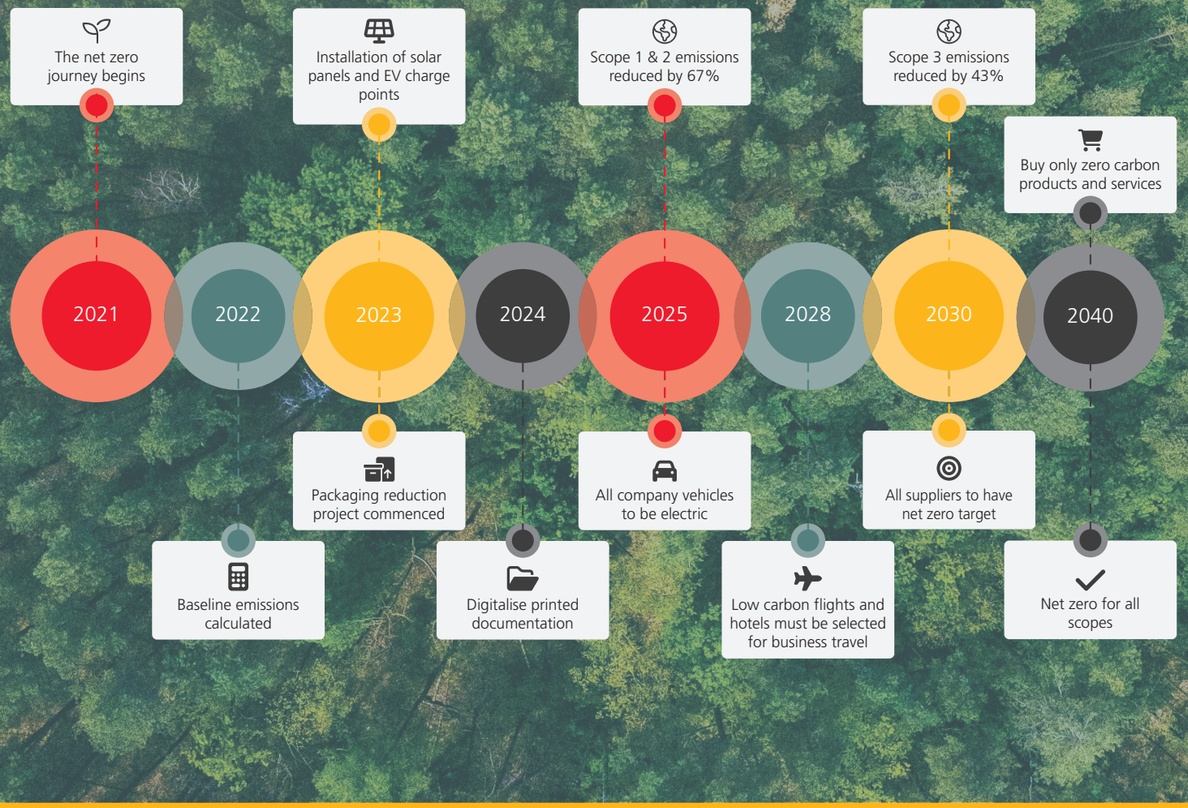
We began our net zero journey by calculating our total emissions for scopes 1, 2 and 3.

Scope 3 makes up the majority of our emissions. These are the most difficult emissions to reduce, as they are produced by our suppliers and through the usage of our products.

By understanding where our emissions come from, we can begin to take steps to reduce these, so that we can become a net zero business.

By 2040, we want to be achieve net zero status for all scopes, making Eclipse Magnetics a net zero business. This is an ambitious target, but we are confident that we can achieve it.

On our path to net zero, we are aiming to reach net zero status for scope 1 and 2 emissions by 2030, as well as reducing our scope 3 emissions by 43%. This will set us on the right path for achieving net zero status for all scopes by 2040.



Driving Competitive Edge into Precision Operations

High Performance Magnetic Workholding Systems

How a machined part is held is as important as how it is cut…..

An efficient manufacturing process requires good machine selection, premier cutting tools, good quality clean fluids and dependable workholding. The first three areas often receive substantial consideration and investment, but the workholding solution is often neglected.

With manufacturing operations using higher cutting speeds that place greater force on workholding equipment, choosing the correct workholding method is essential.

Eclipse Magnetics manufacture high performance magnetic workholding systems for a range of machining applications, from low volume single piece to high volume multi-part operations. Specifying an Eclipse system provides a range of advantages for your process:-

Vast Improvements in Production Efficiency

- **Faster set up, feed rates and metal removal** – can give 500% increase in units per hour
- **Clamping time reduced to virtually zero** – instant location, no manual clamping
- **Continuous machining of 5 faces** - no need to stop and relocate the workpiece
- Easy access for through machining, cutting and drilling
- **Improved safety** – failsafe permanent magnetic technology guarantees a secure hold

Guaranteed Precision

- **100% consistent clamping** – no operator variations
- **Eliminates vibration** – extends tool life and improves accuracy
- Ideal for multi-part and multi-directional machining



100% Accuracy: Repeatability

One of the biggest challenges for precision manufacturers is to produce a consistent quality product. Repeated accuracy requires perfect holding integrity.

Using permanent magnetic technology, Eclipse Magnetics workholding systems generate a consistent clamping force which drastically reduces the risk of part variations during

Important Considerations

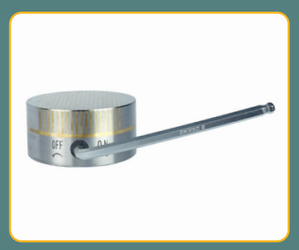
Important Key Factors to Consider

A guidence on key considarations when choosing the correct product. Please contact our sales department for more information or for any specific requirements.

Premier Chucks



Universal Chucks



Find out more about our products click here to visit our website

Product Selector

A guide on how to use our standard products. Please speak to our sales department for more information.

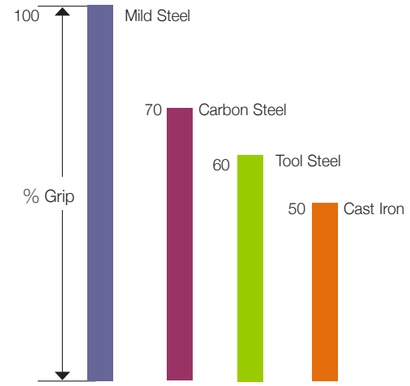
Product Type	Page	Applications		Material Thickness (mm)					
		Turning	Grinding	1	2	5	10	15	20 and above
Premier Range Rectangular Chuck	8		✔			✔	✔	✔	✔
Unviersal Rectangular Chucks	13		✔		✔	✔	✔	✔	✔
Premier Radial Pole Circular Chucks	11	✔	✔				✔	✔	✔
Premier Range Circular Chucks	10	✔	✔			✔	✔	✔	✔
Universal Circular Chucks	12	✔	✔		✔	✔	✔	✔	✔

Note: Table is an approximate guide for specific applications please contact us.

Material Type

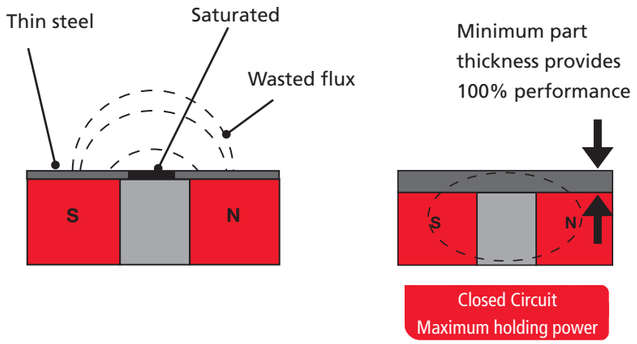
The scale below highlights the effect that material type has on clamping forces.

Workpiece Material



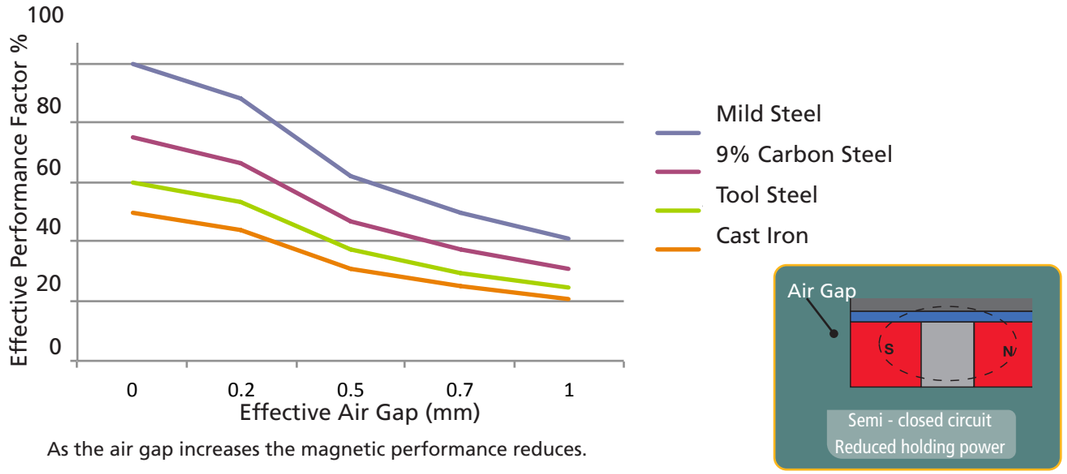
Material Thickness

To achieve maximum clamping force minimum materials should be observed.



Air Gaps

An air gap between the magnet and the load will also affect lifter performance.
The chart below shows the general effect on different materials.



As the air gap increases the magnetic performance reduces.

Eclipse Magnetics Work Smart with Magnets

Premier Range Chuck Rectangular

Eclipse Magnetics invented the world's first permanent magnetic chuck in 1934 and we continue to set the benchmark for quality workholding with the Premier Range. Guaranteed to retain their magnetism, the premier chucks are manufactured from high performance materials providing optimum holding power and efficient use of the workholding area.

Robust chrome plated side and end stops
For location on product and for fencing in the smaller parts.



Extended base plate
For fixing the chuck to the machine bed with the clamps supplied. (Tee nuts not included).

Product Number	Length mm	Height mm	Width mm	Pole Pitch	Weight kg
AX47/P	203	42	127	17.6	8.2
AX510/P	276	53	129	35	16
AXS612/P	322	63	151	32	22
AXS618/P	451	63	151	32	36
AXM824/P	601	63	201	35	56

Premier Range Chuck Rectangular

WORKHOLDING

Additional top plates
These chucks offer additional top plates.
These plates can be mounted on the top of the original and can be fully machined to provide location or nesting of parts. These are generally used as fixtures where they are changed for different components.

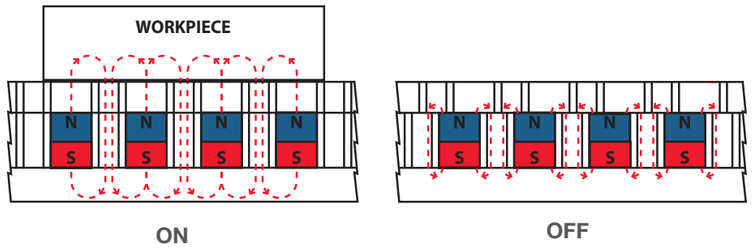
Key features include:-
- Additional top plates available to suit specific work-pieces
- Can be partially magnetised to allow ease of positioning in set up
- 3 year product guarantee and lifetime magnetism guarantee

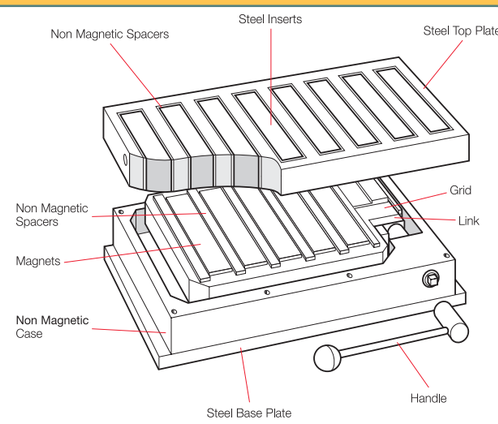
Thick all metal top plate
- This is a one piece section with steel inserts.
- Inserts are fixed with white metal.
- Provides high accuracy and ample life for multiple regrinds.
- Allows the top plate to be machined and drilled for location on large production runs.*

* Please consult manufacturer for positioning.

Removable ergonomic operating handle
Handle can be removed once required power is achieved.

How it Works
The chuck is switched on and off by moving the central magnet pack **A**. When it is in pitch with the top plate **B** magnetism is directed into the workpiece, when it is out of pitch with the top plate magnetism is directed away from the workpiece.





Premier Range Chuck
Circular



Premier Range chucks provide precision performance and durability

Features

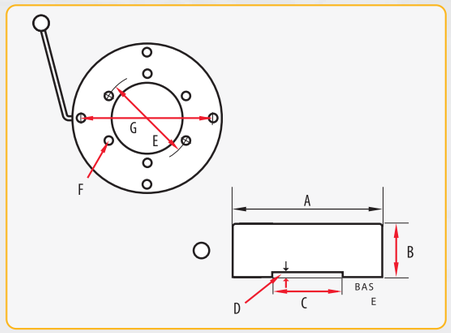
- Premier range grinding chucks provide precision performance
- For fast, accurate, secure holding of ferrous components
- Thick all metal top plate - high accuracy and long lifespan
- High corrosion resistance - resists damage from coolants
- Concentric guide rings - provide positional guide

Our high performance **Premier Circular Chucks** include the high quality parallel pole version.

Ideal for holding workpieces on lathes and cylindrical or rotary grinding machines, this range is designed for holding thin ring-shaped components that can be subject to radial distortion.

Grooved rings in the top plate assist in visual positioning to aid quick changeover

- Simple on-off switching - removable operating handle
- Variable hold - allows adjustment of position before full hold is engaged
- Failsafe permanent magnetic technology



Product Number	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Weight kg
AX475C/P	121	45	50.8	6.5	76.2	M6	101.6	4.23
AX651C/P	167	60	76.22	6.5	101.6	M10	139.7	9.66
AX91C/P	229	60	85.8	6.5	114.3	M10	190.5	20
AX12C/P	305	72	152.4	4.75	184.15	M12	254	45.5

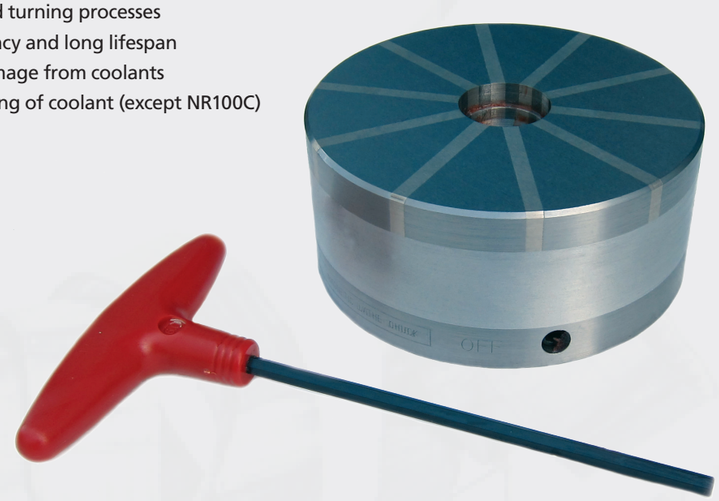
Premier Range Chuck
Radial Pole

WORKHOLDING

Features

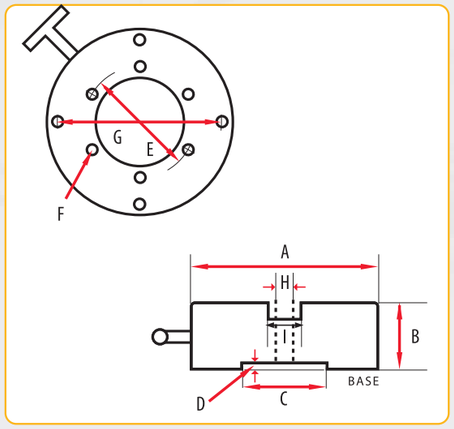
- Quick, precise set up for grinding and turning processes
- Thick all metal top plate - high accuracy and long lifespan
- High corrosion resistance - resists damage from coolants
- Through bore - allows through flushing of coolant (except NR100C)
- Can be rotated at up to 3000 rpm

Fast, safe set up on precision grinding applications



Ideal for a wide range of precision grinding and medium / heavy turning applications, the radial pole is the best option for ring type applications such as inspection and precision grinding.

The radial pole is a great option for heavy turning on ring type components. The design concentrates the entire magnetism from the chuck to the point in contact with the workpiece, ensuring excellent hold.



- Simple on-off switching - removable operating handle
- Variable hold - allows adjustment of position before full hold is engaged
- Failsafe permanent magnetic technology

Radial Pole is Radially Balanced

While the switching principle is the same on all of the premier range the radial pole version uses a round magnet pack that rotates to switch.

This ensures that the chucks stay in balance when rotating and can be spun up to a maximum of 3000rpm.

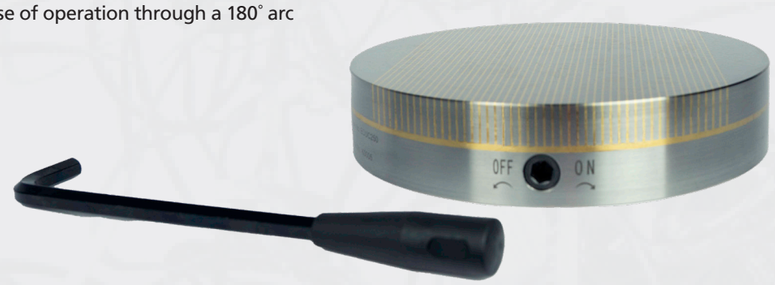
Product Number	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	No. Of Poles	Weight kg
NR100C	100	48	50.8	6.5	N/A	M6	76	N/A	N/A	6	3.08
NR150C	150	69	76.2	4	N/A	M10	102	32	36	10	8.79
NR225C	225	71	85.8	5	114.3	M10	190.5	50	54	14	18.5
NR300C	300	71	152.4	54.75	184.15	M12	354	62	66	18	40

Universal Range Chucks Circular

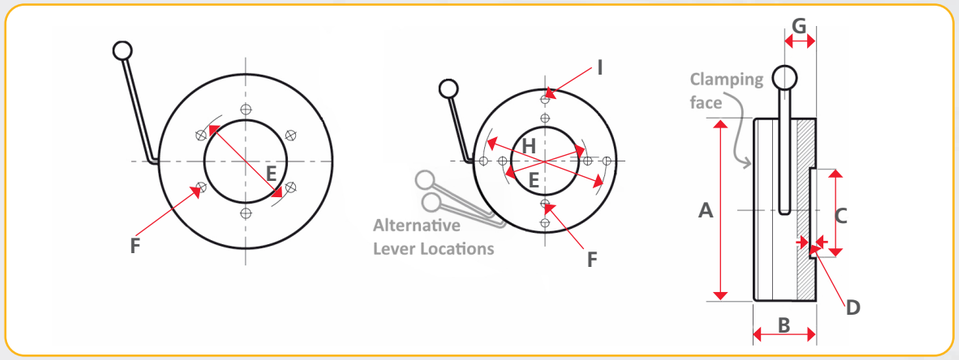
Features

- Universal pole pattern Pole Pitch of 1mm Brass & 3mm Steel
- Top plate concentrates magnetic energy on to the chuck face
- The chuck top plate can be partially magnetised to aid the correct positioning of the workpiece
- Brass and steel top plates
- Universal pole pattern to allow for a wider range of thicknesses of material to be clamped
- On thinnest materials, the achievable clamping force is reduced
- Up to 80N/cm² maximum holding force (depending on material and part - subject to application)
- Removable hexagon key handles ensure ease of operation through a 180˚ arc
- Threaded fixing locations on rear side
- Supplied with removable handle

Pole Spacing: 3.0mm steel - 1.0mm brass
Effectively clamps all workpiece thicknesses down to 3mm



Universal Range chucks provide high performance at a competitive price



Product Number	A mm	B mm	C mm	D mm	E mm	#1	F	G mm	#2	H	I	Weight kg
ECUC100	100	48	N/A	N/A	70	2	M6	N/A	N/A	N/A	N/A	3
ECUC125	125	48	80	3	95	4	M6	N/A	N/A	N/A	N/A	5
ECUC160	160	48	100	3	120	4	M6	N/A	N/A	N/A	N/A	9
ECUC200	200	52	120	4	160	4	M8	N/A	N/A	N/A	N/A	13
ECUC250	250	52	160	4	180	4	M8	N/A	N/A	N/A	N/A	20

Key			
A	Outside diameter	G	Handle distance
B	Height	H	Outer PCD(2)
C	Recess diameter	#1	Number of holes in PCD1
D	Recess depth	I	Diameter of holes (in PCD2)
E	Inner PCD(1)	#2	Number of holes in PCD2
F	Diameter of holes (in PCD1)		

Universal Range Chucks Rectangular

WORKHOLDING

Features

- Universal pole pattern Pole Pitch of 1mm Brass & 3mm Steel
- Top plate concentrates magnetic energy on to the chuck face
- The chuck top plate can be partially magnetised to aid the correct positioning of the workpiece
- Universal pole pattern to allow for a wider range of thicknesses of material to be clamped
- On thinnest materials, the achievable clamping force is reduced
- Up to 80N/cm² maximum holding force (depending on material and part - subject to application)
- Fixing location slot at each of the two narrower ends
- Supplied with removable handle

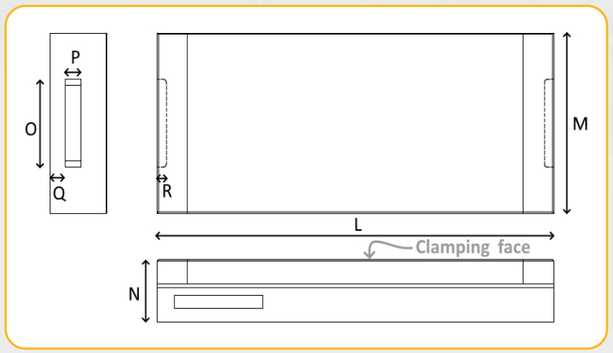
Pole Spacing: 3.0mm steel - 1.0mm brass
Effectively clamps all workpiece thicknesses down to 3mm



Universal permanent magnetic chucks, ideal for precision grinding, turning and inspection

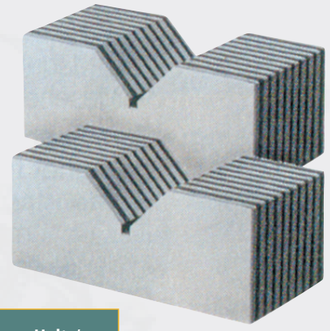
The universal pattern pole pitch (1mm brass, 3mm steel) provides secure clamping for small or thin items as well as thicker or larger pieces. The range offers a highly efficient alternative to manual clamps and mechanical fixtures.

Powered by high-strength Neodymium magnets, the Universal chuck generates up to 80 N/cm² clamping force (subject to application). It also features an all-metal top plate which concentrates magnetic energy into the chuck face. Accurate positioning is made simple by a facility to partially magnetise the top plate to enable fine adjustments to the position of the workpiece.



Product Number	Length L mm	Width M mm	Height N mm	Slot Width O mm	Slot Height P mm	Distance to Slot Q mm	Slot Depth R mm	Weight kg
ERUC1018	180	100	48	48	12	13	8	7
ERUC1325	250	128	48	62	12	13	8	12
ERUC1530	300	150	48	73	12	13	8	17
ERUC1545	450	150	52	73	14	13	8	27
ERUC2060	600	200	52	98	14	13	8	49

Chuck Blocks



Features

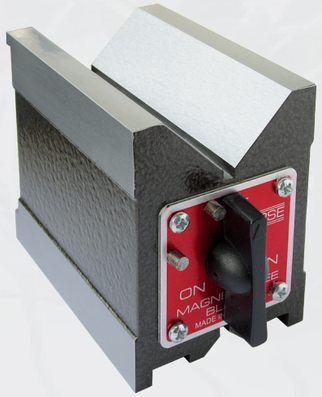
- Extends the flux path of a magnetic chuck
- To transfer magnetism from the top plate of the chuck through to the workpiece
- Improved holding performance for cylindrical and irregular shaped workpieces
- Provides a side support for taller workpieces
- Provides a finer pole contact surface for thinner workpieces
- Supplied in a matching pair

Product Number	Length mm	Height mm	Width mm	Pole Direction kg	Weight kg	Units/ Packs
950	60	30	75	Longitudinal*	2.4	2

*Along width

Magnetic V Blocks

Features



- Securely hold workpieces for grinding, marking or spark erosion
- Easy to engage and release the workpiece
- Instant, accurate clamping
- Can be used on its base, top bottom or end
- Matching pairs (MP) versions ground at same time to have matching squareness and parralism

Ideal for holding cylindrical and other complex workpieces for marking, spark erosion, grinding and measurement. The 'v' and the base are both magnetic. Both are energised / de-energised at the same time by the toggle switch. Securing the base to any flat ferrous surface and securing the workpiece to the holding area.

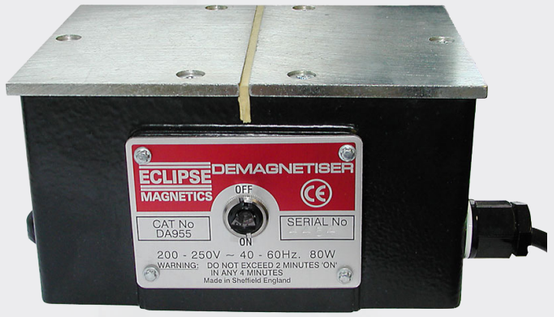
Please note: The actual performance is always application specific. The below values were derived from testing on very thick mild steel flat plate. The pull force achieved in an application may be lower as it is affected by things such as the size, shape and thickness of the material, the material type being used, and the temperature of the application.

Product Number	Width mm	Length mm	Height mm	Max diameter of workpiece		Weight kg	Max pull force bottom face kg	Max pull force top face kg	Max pull force back face kg
				Top 'V' mm	Bottom 'V' mm				
25 Micron Accuracy - flatness / parallelism (top and bottom faces)									
E934	70	101.6	95	65	22	3.96	180	150	110
E934MP (sold in pairs)	70	101.6	95	65	22	7.42	180	150	110
E935	70	80	95	65	22	3.38	140	120	90
E935MP (sold in pairs)	70	80	95	65	22	6.76	140	120	90

Workholding Accessories

Table-top Demagnetiser

Features



- Demagnetiser for removing residual magnetism
- Removes magnetism which may remain after workholding
- Simple operation- part is simply drawn across the top plate
- 3 power supply options available
- CE approved
- Max usage: 2 minutes in any 4 minute period

Lightweight unit for the removal of residual magnetism following grinding. Some materials retain magnetism following long periods of magnetic clamping. The more alloys in the material the more magnetism will be retained.

Product Number	Voltage v	Width mm	Height mm	Depth mm	Weight kg	Plug Type
DA955/UK	240	150	117	87	3.83	UK (Type G)
DA955/EUR	220	150	117	87	3.83	EU (Type C)
DB956/EUR	110	150	117	87	3.83	EU (Type C)

> I've used these circular chucks all of my life and they are exactly what we need; they do what they say on the tin. They're very versatile, they minimise error, and they enable me to grind the parts so that they are flat and accurate.
> The chucks are easy to use and definitely the most effective method of holding for us. It's the easiest and most convenient way of keeping machined components in place; without them we would need special tooling. The dog rings can be positioned and skimmed on the machine, allowing all sides to be machined and meeting tolerance requirements of within 10 microns.
>
> Mark Rampton, CNC Grinder
> Xtrac

Workholding Accessories
Magnetic Bases

Magnetic Bases with Toggle Switch

Features

- Ideal for fitting mounting arms to secure measuring or inspection equipment
- Toggle switched magnetic bases
- For easy on/off attraction to any ferrous surface to provide rigid support
- Magnetic on 3 sides
- Can clamp onto curved and flat surfaces
- A range of fitments also available



These magnetic stands or magnetic bases are great option for mounting screw fit components such as gauging arms, measurement equipment, photography equipment, jigs, fixings and lighting. They can be positioned instantly on ferrous surfaces and the toggle switch can be used for fine position adjustment. Available to suit M6, M8 and

Product Number	Length mm	Width mm	Height mm	Screw Thread mm	Hold kg	Weight kg
E905WF/50	40	40	40	M6	50	0.405
E905WF	65	50	55	M8	80	0.960
E905WF/100	75	50	55	M8	100	1.200
E905WF/130	117	50	55	M10	130	1.900

Magnetic Bases with Push Button Switch

Features

- Push button activated magnetic base for mounting components
- Push button switched magnetic bases to hold Eclipse Magnetics fitments for inspecting workpieces.
- Can be located on any ferrous surface to provide rigid support
- Magnetic on 4 sides
- Can clamp onto curved and flat surfaces
- A range of fitments also available



Product Number	Length mm	Width mm	Height mm	Screw Thread mm	Weight kg	Hold kg
E900WF	48	40	52	M8	0.5	30
E901WF	64	64	76	M8	1.70	80

Workholding Accessories
Fitments Arms

WORKHOLDING

Fitment Arm Sets for Magnetic Bases

Features

- Wide range of options for mounting components such measuring instruments and lighting
- Feature robust flexible arms with secure tightening/positioning
- Available with fine adjustment crossbar for precision measurement
- Complete with screw thread base for attaching to magnetic bases or direct to machine
- Flexible/snake arm version available

Our **Fitment Arms** or gauging arms are suitable for use with magnetic bases. Available in compact, flexible, single pillar or heavy duty options each can be used for a variety of mounting applications such as dial or digital indicators, lighting or optical instruments. Available with M6, M8 or M10 threads they provide firm support with fine positional adjustment.

Light Duty Fitment

Product Number	Pillar Height mm	Pillar Diameter mm	Crossbar Length mm	Crossbar Diameter mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP72CP	185	12.5	150	6.3	M8	0.358	8.0



Light Duty Fitment with a Base

Product Number	Base Part Number	Fitment	Hold kg
E903CP	E900WF	RP72CP	30

Heavy Duty with Fine Adjustment Fitment



Product Number	Pillar Height mm	Pillar Diameter mm	Crossbar Length mm	Crossbar Diameter mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP991BL	175	12	165	10	M8	0.444	4.5/8.0 (with sleeve)

Heavy Duty with Fine Adjustment Fitment with a Base

Product Number	Base Part Number	Fitment	Hold kg
E901	E901WF	RP991BL	80
E906	E905WF	RP991BL	80



Dial not included

Workholding Accessories
Fitments Arms

Heavy Duty Fitment



Product Number	Pillar Height mm	Pillar Diameter mm	Crossbar Length mm	Crossbar Diameter mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP995BL	175	12	165	10	M8	0.445	4.5/8.0 (with sleeve)

Heavy Duty Fitment with a Base



Product Number	Base Part Number	Fitment	Hold kg
E908M	E900WF	RP995BL	30
E905	E905WF	RP995BL	80

One Pillar With a Base Fitment



Product Number	Base Part Number	Hold kg
E909	834	14

Flexible Snake Arm Fine Adjustment



Product Number	Maximum Extension mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP907S	355	M8	0.332	8.0/Dovetail

Flexible Snake Arm Fine Adjustment with a Base

Product Number	Base Part Number	Fitment	Hold kg
E907M	E905WF	RP907S	80

Workholding Accessories
Fitments Arms

Mechanical Fitment Stand (Small)



Product Number	Maximum Extension mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP999S	162	M6	0.175	6.0/8.0/Dovetail (with sleeve)

Mechanical Fitment Stand (Small) with a Base

Product Number	Base Part Number	Fitment	Hold kg
E910S	E905WF/50	RP999S	50

Mechanical Fitment Stand



Product Number	Maximum Extension mm	Screw Thread mm	Weight mm	Diameter of Clamp Hole mm
RP999	295	M8	0.272	8.0/Dovetail

Mechanical Fitment Stand with a Base

Product Number	Base Part Number	Fitment	Hold kg
E910	E905WF	RP999	80

Mechanical Fitment Stand (Extra Large)



Product Number	Maximum Extension mm	Screw Thread mm	Weight kg	Diameter of Clamp Hole mm
RP999L	650	M10	2.939	6.0/8.0/ Dovetail (with sleeve)

Mechanical Fitment Stand (Extra Large) with a Base

Product Number	Base Part Number	Fitment	Hold kg
E910L	E905WF/130	RP999L	130

Our Products

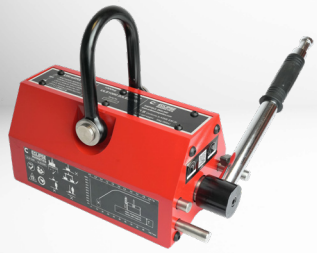
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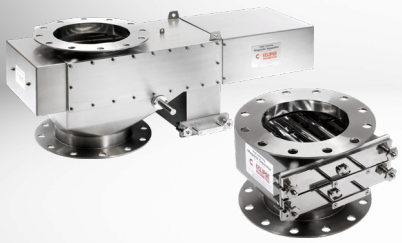
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While every effort has been made to ensure the accuracy of the information in this publication please note that specifications may change without notice.