

# YOKES **Y1** **Y7** **YM5** **Y6** **Y8**



## MAGNETIC PARTICLE INSPECTION EQUIPMENT

Magnetic Yokes are used for the detection of surface cracking in any ferro-magnetic material. Our Yokes handle the most demanding magnetic particle inspection jobs with ease; they are widely used in the testing of welds, automotive components, steel and grey iron castings, and for in-plant inspection and repair.

There are five Yokes to choose from depending upon your specific NDT application needs: AC, AC/DC, battery operated and permanent magnet. All models deliver outstanding performance and are some of the most durable and powerful yokes on the market today.



The **Y1** is a lightweight electromagnetic Yoke, ergonomically constructed for ease of use.



The **Y6** is a lightweight encapsulated AC yoke designed for reliable, one-person detection of surface indications. Its articulated legs make it ideal for inspecting components of different geometries.



The **Y7** Yoke offers either a constant AC field to reveal surface defects or a pulsed DC field for revealing both surface and near-surface defects. Designed for one-person portable inspection, its articulated legs contour to any part shape to assure good contact.



The **Y8** Yoke, with its battery pack and battery charger combines lightweight construction and leg adjustability, making it one of the most versatile pieces of MPI equipment available.



The **YM5** permanent magnet Yoke is a portable and convenient means of magnetising components for crack detection.

## YOKES: Y1, Y6, Y7, Y8, YM5

	Y1	Y6				Y7		Y8	YM5
Part number	001Y025	001Y022	001Y004	001Y013	001Y020	001Y019	001Y018	001Y024	001Y005
AC voltage	230 V	50 V	110 V	115 V	230 V	115 V	230 V	230 V	-
Frequency	50/60 Hz	50 Hz	50 Hz	60 Hz	50 Hz	50 Hz	50/60 Hz	50/60 Hz	-
DC voltage	-	-	12 V	-	12 V	Pulsed	Pulsed	6 V	-
Current draw: AC	2.6 A	15 A	3.5 A	3.5 A	2.3 A	5 A	2 A	1.5 A	-
Current draw: DC	-	-	8.5 A	8.5 A	2.5 A	-	-	-	-
Weight	2.1 Kg	3.4 Kg	3.4 Kg	3.4 Kg	3.4 Kg	4.1 Kg	4.1 Kg	3.8 Kg	3 Kg

### Y1



#### Product Features

- Ergonomic design
- Soft grip for comfort
- Impact and chemical resistant shell
- 3m cable
- Leg capacity: 0 - 250 mm

All our Y1 Yokes carry the CE mark and conform to the appropriate European Union directives.

### Y6



#### Product Features

- Demagnetising capability
- Lightweight and easy to use single-handed
- Articulated legs with 25 x 25 mm pole area
- Poles adjustable from 25 - 250 mm
- Exceeds specific lift weight recommendations: can lift up to 10.5 Kg AC, 32 Kg DC (depending on model)

All our Y6 Yokes carry the CE mark and conform to the appropriate European Union directives.

Method of current control and effect on wave form	Sinusoidal AC mains or DC battery
Duty cycle at maximum output	23 % (ratio of current 'ON' to 'Total' time)
Maximum current 'ON' time	30 seconds
Recommended pole spacing	$S_{min}$ 35 mm, $S_{max}$ 140 mm
Cross-sectional dimensions of the pole	25 x 25 mm
Pole spacing: AC tangential field strength in kA/m at the central point between the poles on a 500 x 250 x 10 mm steel plate.	35 mm: 12 kA/m
	140 mm: 2 kA/m
	250 mm: 1.4 kA/m
Specified electrical protection	IP 64

## YOKES: Y1, Y6, Y7, Y8, YM5

### Y7



#### Product Features

- AC (constant level) and DC (pulsed) magnetic fields
- Articulated, double-jointed legs
- Solid state controls for maximum safety and reliability
- Demagnetising capability
- Pull force of ca 27 Kg (Flux density 1 Tesla at 100 mm pole spacing)
- Pole capacity: 0 - 300 mm

All our Y7 Yokes carry the CE mark and conform to the appropriate European Union directives.

### Y8



#### Product Features

- 100% portable; ideal for field inspections
- Battery pack with convenient shoulder strap
- Articulated legs with 25 x 25 mm pole area
- Poles adjustable from 25 - 250 mm
- Solid state controls for maximum safety and reliability
- Exceeds specific lift weight requirements: can lift up to 32 Kg.

All our Y8 Yokes carry the CE mark and conform to the appropriate European Union directives.

#### Weights

Weights	
Yoke	3.8 Kg
Battery	2.2 Kg
Batter charger	1.3 Kg

### YM5



#### Product Features

- No electrical supply needed
- Hinged arms and rotating pole pieces allow a wide variety of profiles to be magnetised.
- Easy removal of the pole pieces from the component.
- Lifting power: > 18 Kg lift (Gauss pull test)
- Can be re-magnetised to return it to its original lifting capacity.
- Supplied with a keeper bar which has false indications so you can easily check the magnetisation strength.

Magnet elements	Magloy 1
Field strength	7000 gauss with poles together 400 gauss in centre of a 50 mm air gap

# YOKES: Y1, Y6, Y7, Y8, YM5

## Accessories



**Y6 Yoke Light Source and Leg Assembly**

Part number: 002L115

Activated by the magnetic field, this setup switches on automatically during testing - ideal for inspection in darker corners.



**YM5 re-magnetiser**

Part numbers:  
007E100B (with battery)  
007E100 (without battery)

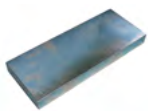
Used to remagnetise the YM5 Yoke, returning it to its lifting capacity of 18 Kg. It works by discharging batteries through coils placed around the legs.



**Magnetic Indicator Strips**

Part numbers:  
008M004 (Type I for general use)  
008M005 (Type II for aerospace work)

Used to provide a guide to the strength of the magnetic field at the precise point of their location. Complies with EN-ISO 9934-1:2001, RPS700.



**Certified Test Weights**

Part numbers:  
026T018B: AC test weight (4.5 Kg)  
026T018A: DC test weight (18 Kg)



**Polysray**

Part number:  
004G004

An inexpensive spray unit for the application of magnetic ink.



**Powder Dispenser**

Part number:  
008D003

A powder 'puffer' for the application of dry magnetic powder.

## Magnaflux Yoke Kits

The Magnaflux Yokes Y6, Y7 and YM5 are also available in kit format. The kit includes the following, all contained in an attractive carrying case:

- a Yoke of your choice (Y6, Y7 or YM5 - please specify when ordering)
- Magnavis 7HF black magnetic ink - aerosol
- Magnavis WCP-2 white contrast paint
- a wire brush and cloth

Part number: 005K001