

Magnetic DRO Mounting instructions



Each machine is supplied a Generic type mounting hardware to fit "Optional" Optimum Digital Readout Reader heads (D692) and Magnetic Scales (D694) to connect to a 3 Axis Display (D690)
Some drilling and tapping new holes will be needed.

NB: the fitting of the "X" Axis Scale and Reader head is on the front of the table and the existing graduated scale and Zero pointer bracket are both removed to fit it. "Y" and "Z" scales fit in milled slots on the left hand side of machine.

Scale fitted pictures on this instruction sheet show different brackets on a different machine, but set up is similar

Supplied with each machine

1 off each "X, Y, & Z" Axis Reader head mounting brackets.

Needed

9 off M3 x 16mm Screws (fastening reader heads onto brackets)

2 off M6 x 20 Screws (Fix "X" bracket to machine)

4 off M4 x 16mm Socket Head cap Screws (fix "Y" & "Z" brackets to machine)

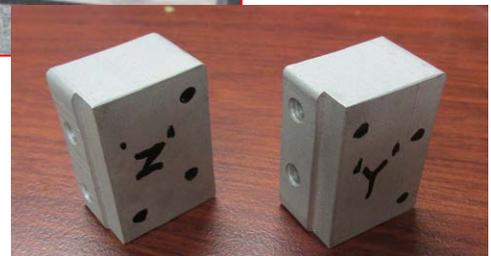


"X" bracket is drilled and taped to suit Reader head, but "Y" and "Z" brackets need 3 holes drilled and taped M3, to suit position of reader head on assembly due to machine head/slide differences.

To determine "Y" and "Z" brackets, see picture on the right, noting positioning of drilled and counter bored holes are at different ends of blocks.

(Black marks on picture, show approximate positioning of M3 taped holes needed to hold reader head. Marks are not on blocks supplied with machine!)

Picture on the right shows the "Z" block as supplied, mounted to MH28V for reference.



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Firstly roughly mark the position the reader head and wiper of each Axis will be located. Checking to ensure there is enough travel in the slide movements and that the magnetic scale when fitted are always under them at both ends of full axis movement. You may need to loosely fit the alloy bar for the "Y" scale to the machine to check this axis. The "X" scale reader head/wiper goes in the position were the location marker was for the graduated scale.

Fitting of magnetic Scale and protector strip.

Clean the groove it will be sitting in. Mark and cut to length with sharp tin snips or similar, the brown magnetic strip and the stainless steel cover strip. Carefully peel back the paper cover off the self-adhesive back of the Brown Magnetic strip and place it in position in the groove, smoothing it out by running your finger along it hard to push it down.

Carefully peel back the paper cover off the self-adhesive back of the silver stainless steel and place this on top of the magnetic strip smoothing it out by running your finger along it hard to push it down.

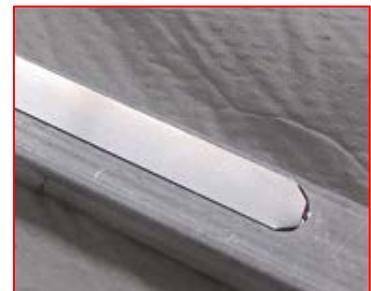
Accurately mark out and center punch as needed, were the "Y" & "Z" reader head bracket attachment screws will be and drill and tap holes M4 x 10 deep.

Holes for the "X" axis need to be M6 and may be OK or need tapping depending on the model of mill purchased.

The rear of the "Z" bracket may need machining off to allow mill head to swivel depending on model of mill it is fitted to.

Reader heads/wipers are held on each bracket with 3 off M3 screws, with nuts and washers used on the "Y" Axis.

A "Wiper Plate" also needs to be fitted to the top of each Reader head as shown below. Tolerance of the gap between reader head and magnetic scale is 0.3mm to 1.0mm. This allows for any variance due to depth of groove scale is fitted in etc. Put a 0.5mm washer between the head and scale, tighten the 3 screws and remove washer.



To protect the cable into the head a saddle supplied must be fitted as shown or similar position to all heads. ("Y" Axis Shown)

Position DRO Display were needed on the machine and fit cables to the rear of it.

Secure all excess cable to the rear of the machine allowing enough cable so machine can be wound to all Axis extremities without pulling on any cable,



Plug in and test all Axis