

Encoder Products Division TECHNICAL NOTE – TN 46_01

Product: RGS Adhesive Backed Scales
Title: Alternative end clamping

Originator: Gary Curtis

Reviewer: Adrian Overs

Distribution: Internal
Subsidiaries
Customers

Date: 13th April 2016

GUIDANCE NOTE

To be used in conjunction with Installation guide: RGS20-S, RGS20-PC, RGS40-S, RGS40-PC scale, M-9517-2855. RGS linear encoder tape scale is available with a double-sided adhesive tape for quick and easy installation providing a 'substrate-mastered' system when using specified end clamping. This guidance note explains how, in applications where access is limited, an alternative method can be used which will give satisfactory results.

SCOPE

The products which use adhesive backing are:

- RGS20-S, RGS20-PC, RGS40-S, RGS40-PC
- RGSZ20-S, RGSN20-S, RGSZ20-P, RGSN20-P

Surface Preparation

The surface to which the scale is to be installed should be clean, dry, and free from oils or grease. To properly clean the surface a fresh lint free cloth should be used. Pre-cleaning can be with a hydrocarbon or ketone based solvent such as Heptane or Acetone. Suitable alcohol based solvents such as Isopropyl Alcohol (IPA) should be used for the final clean prior to installation. Time should be allowed for any solvents to flash off, particularly if the surface is uneven or porous. Please refer to installation guide for scale application method.

Note: All RGS scales employ a protective layer around the scale, this can be either lacquer or polyester, in both cases this protective coating needs to be removed before the scale ends can be bonded.

Encoder Products Division TECHNICAL NOTE – TN 46_01

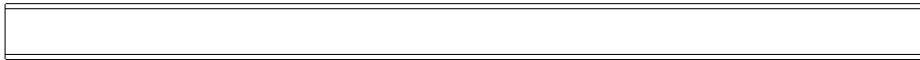
Detailed Instructions:

- Using a scalpel or similar sharp blade;
 - Remove 15mm of the adhesive backing from the scale underside
 - Remove 15mm of lacquer or polyester and gold to reveal the copper layer

RGS* Scale graduated face



RGS* Scale underside showing adhesive backing tape



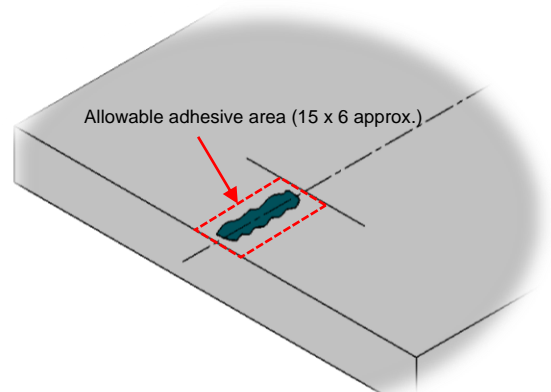
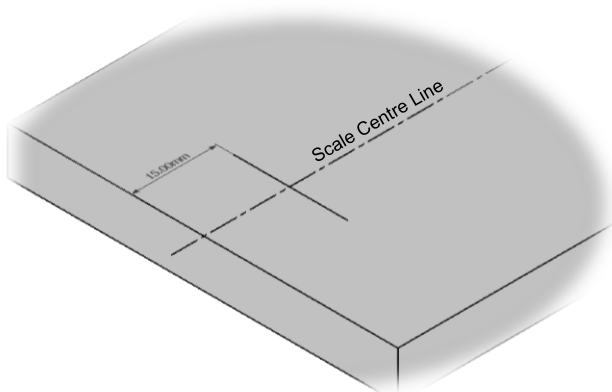
Adhesive backing tape removed 15mm from each end



Protective coating removed to reveal copper layer

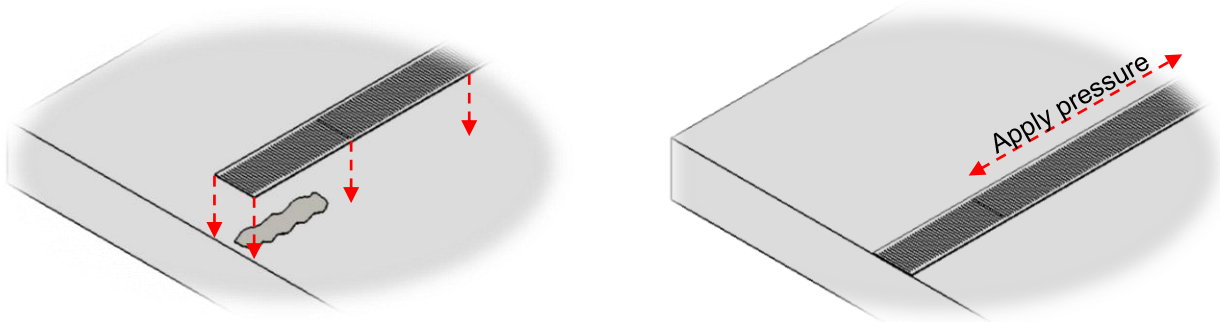


- Thoroughly mix the RGG-2 epoxy clamping adhesive, part number A-9531-0342
- Apply a thin layer of the adhesive to the fixing area on the substrate, 15mm from the scale end position

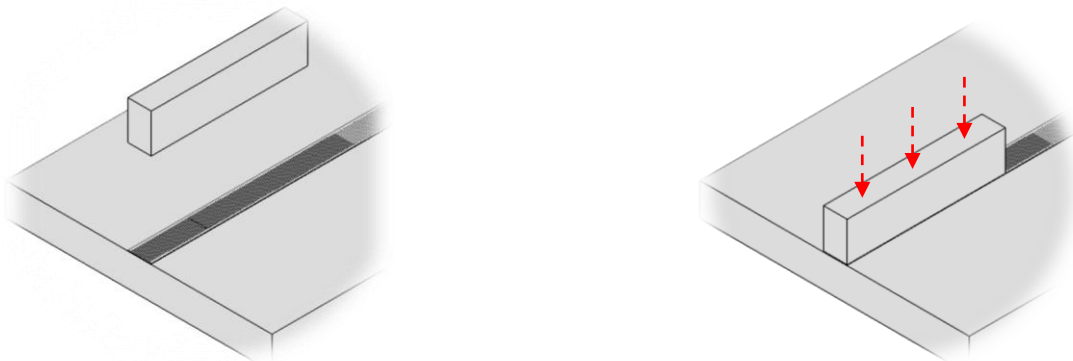


Encoder Products Division TECHNICAL NOTE – TN 46_01

- After peeling backing layer from adhesive tape, align and locate the scale. To ensure a good bond apply an even pressure of 20 – 25N by hand using a lint free cloth, moving backwards and forwards along the length of the scale at a steady speed of approximately 20mm/sec



- Using a straight edge, press onto the scale ensuring excess adhesive is cleaned from clamp area, this should maintain an even adhesive bondline of between 50 and 100µm



- Clean excess adhesive with a cotton bud, ensuring any excess adhesive is drawn away from the scale then allow a minimum 24hrs @ room temperature for the adhesive to fully cure

