Rotary screen printing

Introduced soon after ‘Flat’ screen printing in the early 1950’s. Taking advantage of improvement in inks the process allows a similar look to flat table printing whilst offering the advantages of ‘continuous printing’ manufacturing costs.

**Rotary Screen Printing is a relatively recent development of flat bed screen printing. It can print a continuous web of moving paper, upwards of 3000 metres long, as opposed to the limiting length (normally 30 metres) of flat screen printed wallpaper.**

The screen would have a width of up to 68cm and be between 64 and 100cm in circumference, thus allowing relatively large pattern repeats.

A typical rotary screen print machine would have an in-line configuration with upwards of seven or eight print stations available, each printing one colour. The cylindrical printing screen itself is a very fine ‘honey combed’ type mesh.

The screen is produced by photochemical means, in that a photopolymer coating is applied to the surface of the screen before photographic exposure causes it to harden on the mesh. Therefore to create the design it is just a question of ‘masking off’ the mesh with a stencil in the desired shape. The areas of the mesh that have been hardened will not allow ink through. Therefore as the ink is squeezed, under pressure from the inside of the cylindrical mesh, by way of a
rubber squeegee, it exits through the open mesh that was masked during the photo-exposure. The inks used in this process are quite opaque, and rich colours are achievable. It is important that the ink is fully dry before the paper reaches the next print station, thus ensuring no show through or smudging of the inks from the colour underneath. This is done by hot air dryers between each print station.

Whilst rotary screen may principally be similar to flat bed screen, it does have the benefit of being cheaper, due chiefly to it being a continuous print process.