# RS ROTARY VALVES SUPPLEMENTARY OPERATING & MAINTENANCE NOTES QUICK RELEASE ROTOR

## **OVERVIEW**

RS Rotary Valves may be fitted with quick release rotors when the valve is handling different materials and to avoid contamination the rotor must be cleaned between each batch.

The rotor is modified to allow it to be removed by process personnel without the need for tools and without disturbing the chain drive or the geared motor.

The rotor is retained within the none drive endplate and this is held within the valve body by thumb screws. Thus when the thumbscrews are removed and the endplate extracted from the valve body the rotor is also removed from the valve.

The drive end of the rotor is machined to fit into a hollow shaft which is supported by two sealed ball bearings and carries the main drive chain wheel. Mating driving faces are machined on both the hollow shaft and the end of the rotor shaft for positive location and driving. This prevents disturbance to the chain drive when the rotor is removed.

### **OPERATION**

### ROTOR REMOVAL

- 1) ISOLATE AND LOCK OFF THE ELECTRICAL SUPPLY TO THE GEARED MOTOR
- Remove all thumb screw retainers in the none drive side endplate.
- 3) Hold the endplate around the bearing housing and pull it out slowly of the valve body. When the rotor is halfway out of the body change the hand grip so that the rotor is supported before it is fully extracted from the body.

BE AWARE OF THE ROTOR WIEGHT AND DO NOT ALLOW IT TO DROP WHEN EXTRACTED.
ENSURE FINGERS ARE CLEAR OF THE BOTTOM ROTOR BLADES.

- When removed the rotor and endplate assembly should be placed on a work top and cleaned as required.
- Inspect the interior of the valve body and clean as required.

## ROTOR REPLACEMENT

- 1) Look inside the valve body at the drive shaft in the drive side endplate and note the position of the flat driving face within the hollow drive shaft.
- Orientate the rotor so that the flat drive face on the rotor shaft matches the position of the drive face inside the valve drive shaft (noted in 1).
- 3) Gently introduce the rotor into the valve body and push until the rotor is about half way in.
- 4) Check the drive shafts for alignment and push the endplate until the spigot slides into the body bore.
- 5) Re-fit all thumb screws into the none drive endplate and tighten them evenly.
- Ensure all relevant guards are in place and all personnel are clear of any moving machinery.
- Re-connect the power supply and test run the valve for a few minutes.
   The valve should now be ready for production.

## **MAINTENANCE**

Maintenance for valves with quick release rotors is the same as for standard valves

#### VALVE SPARES

In addition to the spares shown in the standard valve O & M Notes. following spares are also recommended:-

1off Drive Side Bearing1off Drive Side Circlip

