INTRODUCTION

The main function of a Rotary Valve is to regulate the flow of material from one chamber to another while maintaining a good airlock condition. The material or product being handled is usually dry free flowing powder, dust or granules.

The granule type of product, especially if it is a plastic type, polyethylene or nylon etc., does not shear easily and consequently, without considerable care the standard drop-through type of valve leads to valve seizure and also considerable shock loadings.

To minimize these problems the Offset Rotary Valve ensures lower pocket fillage as its design means that the rotor is still being filled in the upward cycle with the pellets falling away at the shear point. Similarly, the pelican beak distributes the product across the full width of the rotor.

IMPORTANT FEATURES

- Maximum number of blades in contact with body at one time without affecting throughput.
- Good throat opening at valve entry allowing high pocket filling efficiency.
- Robust body adequately stiffened to prevent distortion.
- Heavy shaft diameters minimising deflection.
- Outboard bearings for non-contamination.
- Packing gland type seals.
- Maximising valve speed to 25 rpm - prolonging life, ensuring good throughput.
- Precision machining of components.

All add up to Rotolok standards.

SPECIFICATION

<table>
<thead>
<tr>
<th>Bodies</th>
<th>Cast Iron, Stainless Steel or Aluminum precision bored.</th>
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<tbody>
<tr>
<td>End Covers</td>
<td>Cast Iron, Stainless Steel or Aluminum spigot located in body for concentricity.</td>
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<tr>
<td>Rotor</td>
<td>Fabricated Mild or Stainless Steel.</td>
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<td>Bearings</td>
<td>Generally sealed-for-life-ball type rigged outboard or high temperature type above 475° F.</td>
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<tr>
<td>Shaft Seal</td>
<td>Gland type with PTFE packing.</td>
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<tr>
<td>Drive</td>
<td>TEFC geared motor unit side wall mounted to valve body and complete with taper lock sprockets chain drive all in an enclosed guard.</td>
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OFFSET ROTARY VALVES

RECTANGULAR OFFSET ROTARY VALVES

NOTE: Flange detail for sizes 16, 18 and 20 as shown. For sizes 8, 10 and 12 only drillings shaded grey apply.

PLANNING-IN DETAIL FOR GENERAL GUIDANCE ONLY

(TO COVER SAFETY ASPECTS ASK FOR OUR SAFETY LEAFLETS)

Drillings are Rotolok standards. Variations can be made.

RECTANGULAR OFFSET ROTARY VALVES

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All dimensions in inches. Dimensions subject to change without notice.
**OFFSET ROTARY VALVES**

**ROUND OFFSET ROTARY VALVES**

O HOLES øP EQUISPACED AS SHOWN ON A Ø PCOLB (150lb ASA) IN BOTH FLANGES

**PLANNING-IN DETAIL FOR GENERAL GUIDANCE ONLY**

(TO COVER SAFETY ASPECTS ASK FOR OUR SAFETY LEAFLETS)

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**ROUND ROTARY VALVES**

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VALVE SELECTION

The chart below gives theoretical and estimated throughputs on the basis of rotor speed.

The theoretical figure is determined by the swept volume of the valve and is calculated on a pocket fillage of 100%.

In practice this is seldom achieved as density, product characteristics, pressure differential, feeding methods, all affect the valve throughput efficiency.

On these considerations the estimated figures are assessed and are more acceptable for selecting the correct valve. e.g. Select a valve to handle 7 tons/hour of flour at 35 lb/cu. ft. Volume required = 7.0 x 2000 ÷ 35 = 400 cu. ft/hr.

From the chart, two valves economically cover this:
1. 10" Valve at 26 rpm.
2. 12" Valve at 12 rpm.

With flour being sluggish and the 10" unit on its uppermost speed, the selection is limited to the 12" unit.

Factors other than throughput can sometimes determine valve selection. This is particularly true on cyclone and filter applications where the valve inlet size to prevent bridging can become the governing factor, always with the proviso that the potential valve discharge rate exceeds the collecting rate.

OPTIONS

- Body Vents
- Air Purge Glands
- Quick Release Rotors
- Direct Coupled Drives
- Hard Chrome Internals
- Electroless Nickel Plating
- Shear Plate Deflectors
- Speed Switches
- Dropout Boxes
- V.S. Drives
- Flameproof Motors
- Vent Boxes etc.
SPECIAL ROTARY VALVES

Rotolok manufactures other valve sizes with rectangular and other non-standard inlets. We have also made specials to handle temperatures of 2200°F and pressures of 350 p.s.i. If you are looking for something special please ask for our ODDBALL Brochure.