OFFSET ROTARY VALVES
## INTRODUCTION

The main function of a Rotary valve is to regulate the flow of materials 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 hard type: plastic; polyethylene; nylon etc., does not shear easily and consequently, without considerable care the standard drop-through type of valve can seize and also experience considerable shock loadings.

To minimise these problems the Offset Rotary Valve ensures lower pocket fillage as its design means that the rotor is still being filled in an upward cycle with the pellets falling away at a 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 fillage 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
- Options available for specialisation

## SPECIFICATION

### BODIES
Cast Iron, Stainless Steel or Aluminum precision bored

### END COVERS
Cast Iron, Stainless Steel or Aluminum spigot located in body for concentricity

### ROTOR
Fabricated Mild or Stainless Steel

### BEARINGS
Generally sealed-for-life-ball type rigged outboard or high temperature above 480°F

### SHAFT SEAL
Gland type with PTFE packing

### DRIVE
TEFC geared motor unit side wall mounted to valve body and complete with taper lock sprockets chain drive all in an enclosed guard

## OPTIONS

We have several additional options available including:
- Body Vents
- Air Purge Glands
- Quick Release Rotors
- Direct Coupled Drives
- Hard Chrome Internals
- Electro-less Nickel Plating
- Shear Plate Deflectors
- Speed Switches
- Dropout Boxes
- V.S. Drives
- Flameproof Motors
- Vent Boxes etc.

Dimensions are approximate and subject to change without notice Planning in detail for general guidance only (To cover safety aspects ask for our safety leaflets) Drillings are Rotolok standards. Variations can be made.
OFFSET SQUARE VALVES

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OFFSET SQUARE VALVES

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>A1</th>
<th>B</th>
<th>B1</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<td>7 ¼”</td>
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<td>½”</td>
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<td>16”</td>
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All dimensions are in inches.

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Planning-in detail for general guidance only.

(To cover safety aspects ask for our safety leaflets)
OFFSET CIRCULAR VALVES

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VALVE SELECTION

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

The theoretical efficiency is seldom achieved in practice as density, product characteristics, pressure differentials, feeding methods etc. all affect valve throughput.

On these considerations the practical figures are assessed and are more acceptable for correct valve selection.

e.g. Select a valve to process 7 1/2 tonnes/hour of flour at 34lb/cu.ft.

Volume required = 7.5 x 2200/34 = 485 cu.ft/hr.

From the chart the 12” unit running at 14 RPM covers this requirement.

Certain products when fluidised can exceed the conservative ratings. Similarly, light products - 10lb/cu.ft the opposite effect can occur.

### CAPACITY CHART IN CUBIC FEET/HR

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<th>VALVE SIZE</th>
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#### NOTES:

**THROUGHPUT**

Certain products when fluidised can greatly exceed the conservative rating and on application, e.g. cement, 100% pocket fillage has been known to occur. Similarly light products, up to 10lb/cu.ft, the opposite can occur.

**TEMPERATURE**

On an application above ambient (70°F) it is important to specify operating temperatures so rotor compensation for expansion can be machined as necessary.

**CONVERSIONS**

Multiply cubic feet/hr by 0.0283 to obtain cubic metre/hour.

Theoretical capacity 100% pocket fillage efficiency.

Conservative estimates throughput.
OTHER ROTOLOK PRODUCTS

As well as the Offset Rotary Valves, Rotolok manufacture and supply a range of other products in Cast Iron for use in conveying systems.

These include, but are not limited to: Slide Gates with Pneumatic, Motorised or Manual operation; Rotary Valve; Dust Collector Valve; Roundhead Valve; Blowing Seals and various Diverter Valves.

For more information, please visit our website or contact our sales team.