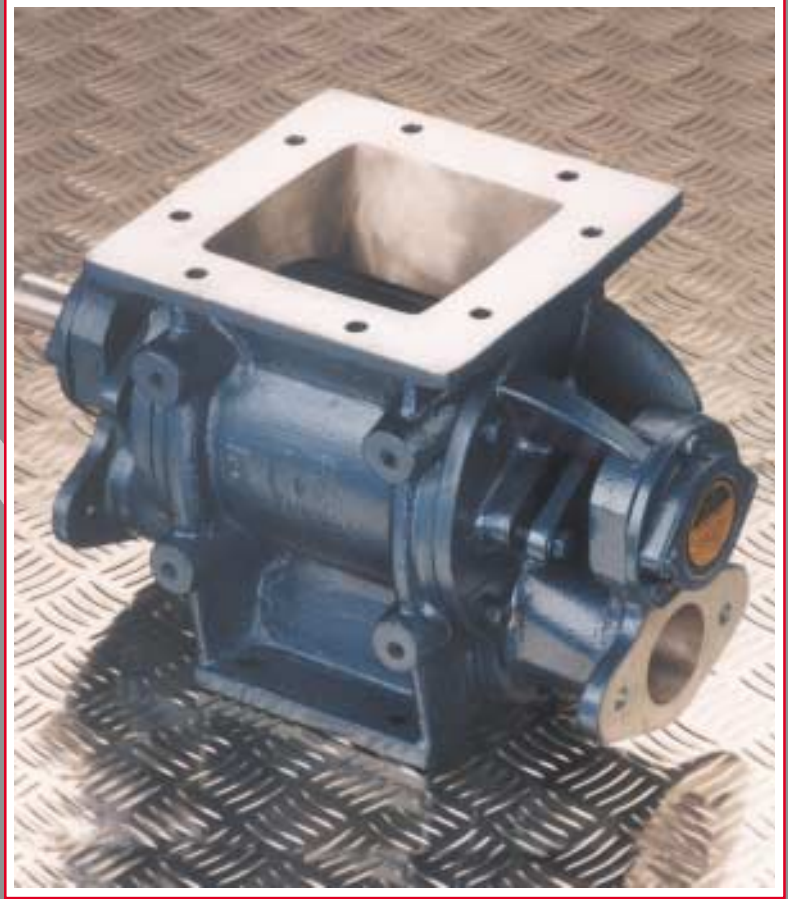


# BLOWING SEALS



**ROTOLUX**  
*everything under control...*

# • BLOWING SEALS •

## INTRODUCTION

Blowing Seals have been introduced to meet the specific needs of the pneumatic conveying industry and are a natural extension to the Rotary Airlock, both being used to regulate the flow of dry powder, dust or granular product while maintaining an airlock.

However, the Blowing Seal has distinct advantages for the specialist as it introduces high pressure conveying air through the valve body and rotor pocket ensuring -

**HIGH EFFICIENCY THROUGHPUT WITH LOW EFFECTIVE PRESSURE DROP.**

This is achieved by the fact that more blades are in contact for longer periods with the valve body, resulting in less air leakage - and by blowing through the rotor each rotor pocket is efficiently emptied.

The Rotolok range of seals are robustly constructed with an emphasis on close tolerances and minimal eccentricities, making the units suitable for the majority of pneumatic conveying applications.

## STANDARD FEATURES

- Maximum number of blades in contact with body at one time without affecting throughput.
- Streamlined entry and discharge of conveying air through valve.
- Good throat opening at valve entry allowing high pocket filling efficiency.
- Compact design minimizing headroom.
- Minimum clearance at rotor tips and sides with body.
- Robust body adequately stiffened to prevent distortion.
- Heavy shaft diameters minimizing deflection.
- Outboard bearings for non-contamination - option for high temperature.
- Packing gland type seals with air purging option.
- Precision machining of components.
- Abrasive duty types.

**All add up to Rotolok standards.**



### Round Blowing Seal

#### SPECIFICATION

##### Bodies

Cast Iron, Stainless Steel or Aluminum precision machined.

##### End Covers

Cast Iron or Stainless Steel spigot located in body.

##### Rotor

Fabricated Mild or Stainless Steel fixed bladed open type.

##### Bearings

Ball type sealed-for-life - alternative high temperature to 475° F.

##### Shaft Seal

PTFE packing gland.

##### Drive

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

#### OPTIONS

- Tungsten Carbide Internals etc.
- Electroless Nickel Plating
- Shear Plates Deflectors
- Direct Coupled Drives
- Flameproof Motors
- Air Purge Glands
- Speed Switches
- Body Vents
- Vent Boxes
- V.S. Drives

# • BLOWING SEALS •

## RETANGULAR BLOWING SEAL

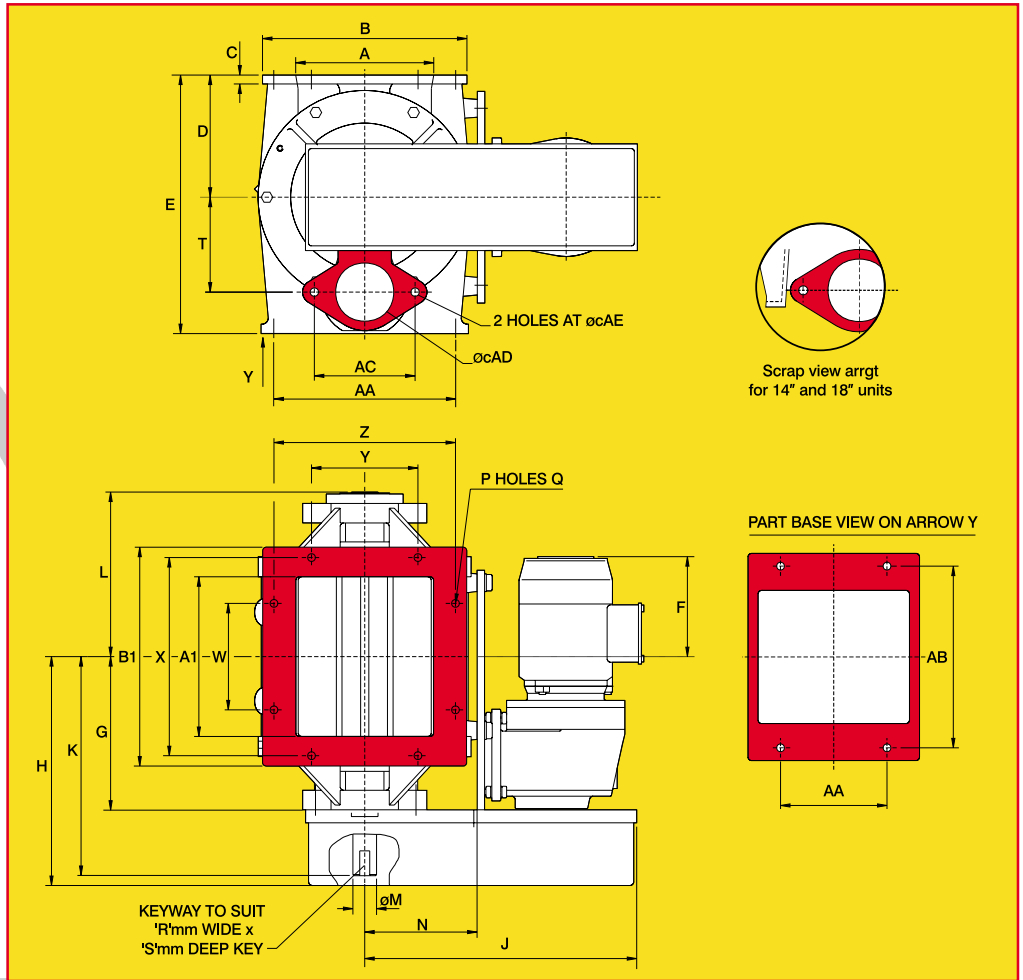


PLANNING-IN DETAIL  
FOR GENERAL GUIDANCE ONLY

(TO COVER SAFETY ASPECTS  
ASK FOR OUR SAFETY LEAFLETS)

Drillings are Rotolok standards.  
Variations can be made.

All dimensions in inches unless  
stated otherwise.



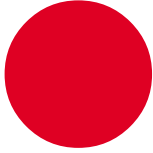
	SIZE	A	A1	B	B1	C	D	E	F	G	H	J	K	L	M	N
VALVE SIZE	5	5	5	8 1/8	8 1/8	1/2	4 3/8	9 1/2	8 7/8	6 1/4	10	16	8 5/8	7 1/8	1 1/8	3 3/4
	8	8	8	11 13/16	11 13/16	1/2	6 1/4	13 3/8	7 1/8	7 7/8	11 1/2	16	10 1/4	8 5/8	1 1/8	5
	9	7	8	11	11	5/8	7 1/8	13 3/8	9 3/16	8 7/8	12 1/2	17 1/8	11 1/4	9 5/8	1 1/2	6 1/2
	11	8 7/8	10 5/8	13 9/16	13 5/8	5/8	8 1/8	17 1/8	7 7/8	10 1/8	13 7/8	18 1/8	12 5/8	11	1 1/2	7 1/2
	14	10	13 3/4	17 3/4	13 3/4	9/16	9 1/2	20 1/2	5 7/8	12 3/8	16 3/8	23 7/16	15 1/4	13 1/8	2	9
	18	12 1/4	15 3/4	20 1/8	16 1/8	9/16	11 3/8	19 5/8	4 1/4	13 3/4	18 7/8	24 5/8	16 5/8	14 1/2	2	10 5/8

	SIZE	P	Q	R	S	T	W	X	Y	Z	AA	AB	AC	AD	AE	H.P.
VALVE SIZE	5	8	3/8	1/4	1/4	3 1/8	3 9/16	6 11/16	3 9/16	6 11/16	3 9/16	5	3 3/4	2	7/16	1/2
	8	8	1/2	1/4	1/4	4	5 1/8	10 5/8	5 1/8	10 5/8	5 1/8	7 1/2	5 1/8	3	7/16	1/2
	9	8	*	3/8	3/8	4 3/8	5 1/8	9 7/8	3 15/16	9 7/8	5 1/8	8 7/8	4 3/8	2 9/16	9/16	1
	11	8	1/2	3/8	3/8	6 1/4	7 1/16	13 3/16	7 1/16	12 1/16	7 1/16	12 1/8	6 11/16	3 7/8	9/16	1
	14	10	9/16	1/2	1/2	8 7/8	11 13/16	16 9/16	7 1/16	12 5/8	11 13/16	12 5/8	7 1/8	4 5/16	9/16	1 1/2
	18	10	9/16	1/2	1/2	9	12 5/8	18 7/8	8 11/16	15	15	12 5/8	15	7 7/8	4 5/16	9/16

\* 8 Holes 3/8 UNC

# • BLOWING SEALS •

## ROUND BLOWING SEAL

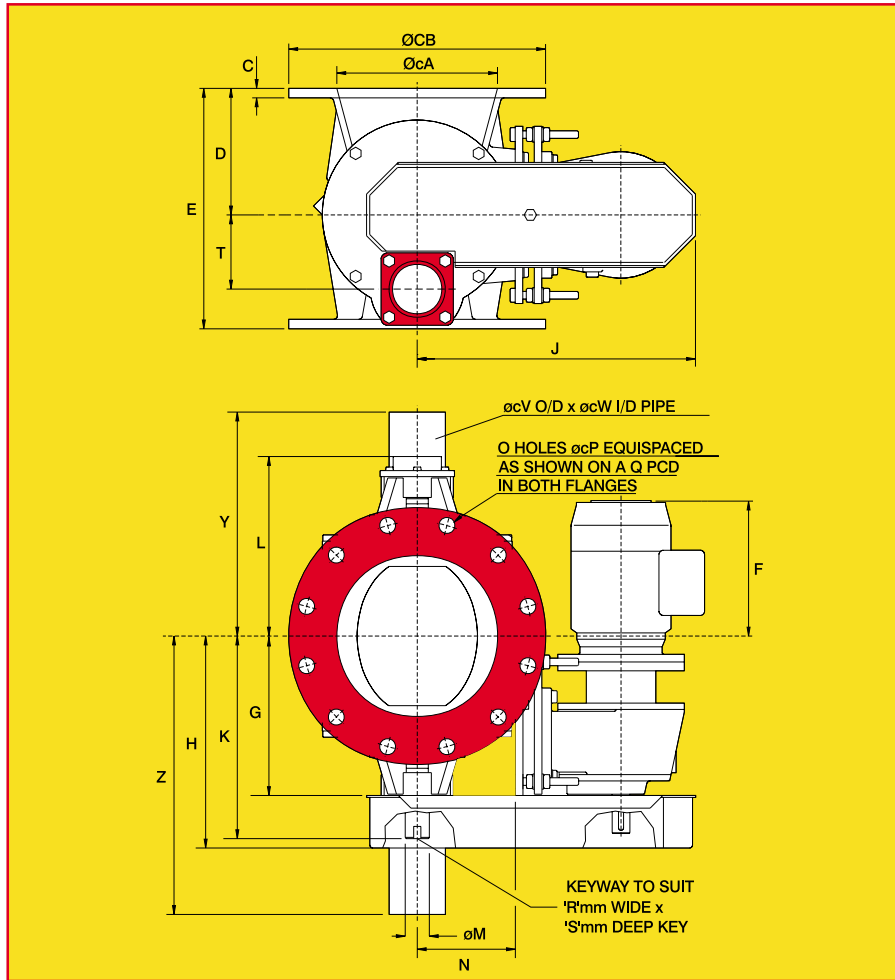


PLANNING-IN DETAIL  
FOR GENERAL GUIDANCE ONLY

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Drillings are Rotolok standards.  
Variations can be made.

All dimensions in inches unless  
stated otherwise.



	SIZE	A	B	C	D	E	F	G	H	J	K	L	M mm
VALVE SIZE	6	6	11 1/4	1/2	5 1/2	10 5/8	8 7/8	7 5/8	10 3/4	16	10 1/4	8 3/4	30
	8	8	13 1/2	1/2	6 5/16	12 1/4	7 7/8	8 5/8	11 7/8	16	11 1/4	9 7/8	30
	10	10	16	9/16	7 7/8	15	9	10	13 1/2	17 3/8	12 5/8	11 1/4	35
	12	12	19	3/4	9 7/16	18 1/4	7 7/8	11	14 7/8	19	13 3/4	12 3/8	35
	16	16	23 1/2	3/4	11 13/16	22 3/4	4	13 3/4	19	22 1/2	18	15 3/4	60

	SIZE	N	O	P	Q	R mm	S mm	T	V	W	Y	Z	H.P.
VALVE SIZE	6	5 5/8	8	7/8	9 1/2	8	7	3 3/8	2 3/8	2	11 5/8	14 1/2	1/2
	8	5 5/8	8	7/8	11 3/4	8	7	3 5/8	2 7/8	2 1/2	12 5/8	15 1/2	1/2
	10	6 1/8	12	1	14 1/4	10	8	4 5/8	3 1/2	3	13 15/16	17 3/8	1
	12	7 3/4	12	1	17	10	8	5 5/8	4	3 1/2	15 1/8	18 3/8	1
	16	9 1/4	16	1 1/8	21 1/4	18	11	7	5 1/2	5	17 11/16	22 3/8	1 1/2

# • BLOWING SEALS •

## 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%.

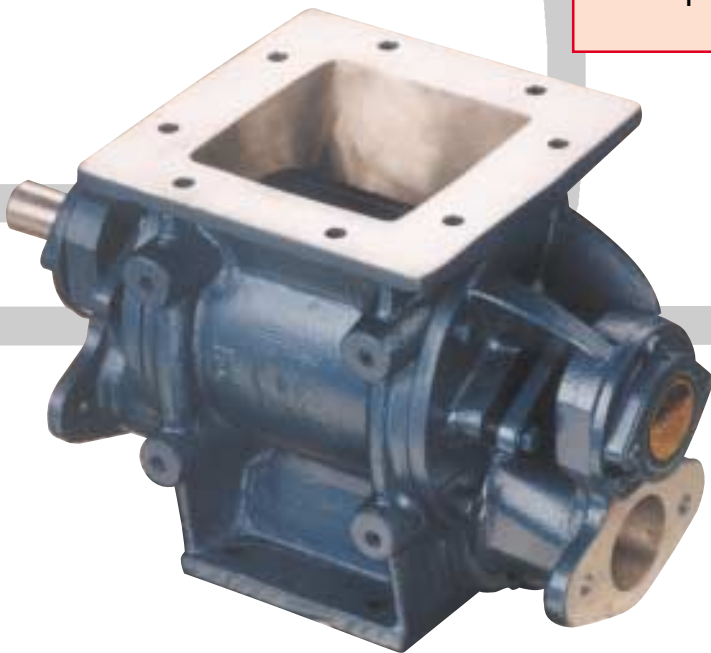
In practice this is seldom achieved as density, product characteristics, pressure differential, feeding methods, all affect the valve throughput efficiency.

On these considerations the estimated figures are assessed and are more acceptable for selecting the correct valve. e.g. Select a valve to handle 7½ tons/hour of flour at 34 lb/cu. ft. Volume required =  $7.5 \times 2000 \div 34 = 441$  cu. ft/hr.

From the chart, two valves economically cover this:

1. 9" Valve at 26 rpm.
2. 11" Valve at 12 rpm.

With flour being sluggish and the 9" unit on its uppermost speed, the selection is limited to the 11" unit.



Capacity Chart in Cubic Feet/Hr													
Valve Size	Rotor Speed RPM												
	1	5	8	10	12	14	16	18	20	22	24	26	
20"	120	600	960	1200	1440	1680	1920	2160	2400	2640	2880	3120	100%
	120	600	920	1128	1320	1510	1670	1790	1944	2085	2216	2340	Practical
16"	104	519	830	1037	1245	1452	1660	1867	2075	2282	2490	2697	100%
	104	519	789	933	1096	1249	1394	1512	1618	1689	1768	1834	Practical
14"	66	330	528	660	792	924	1056	1188	1320	1452	1584	1716	100%
	66	330	507	620	725	830	915	986	1068	1147	1218	1287	Practical
12"	45.4	227	363	454	545	636	727	818	908	999	1090	1181	100%
	45.4	227	354	409	480	547	611	663	708	739	774	803	Practical
11"	32.5	162	260	325	390	455	520	585	650	715	780	845	100%
	32.5	162	249	305	355	405	450	485	526	564	600	634	Practical
10"	25.6	128	205	256	307	359	410	461	512	564	615	666	100%
	25.6	128	195	230	270	309	344	373	399	417	437	453	Practical
9"	17	85	136	170	204	238	272	306	340	374	408	442	100%
	17	85	130	160	184	212	235	254	275	296	314	331	Practical
8"	12.3	62	98	123	148	172	197	221	246	271	295	320	100%
	12.3	62	94	116	135	150	171	183	199	214	227	240	Practical
6"	5.0	25	40	50	60	71	81	91	101	111	121	131	100%
	5.0	25	38	45	53	61	68	74	79	82	86	89	Practical
5"	2.7	13.5	25.5	27	32.5	38	43	49	54	59	65	70	100%
	2.7	13.5	20.5	24	29	32.5	37	40	42	44	46	48	Practical

## 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 15lb/cu. ft. the opposite effect can happen.

### Temperature

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

### Conversions

Divide cubic metres/hr by 0.0283 to obtain cubic feet/hr.

Theoretical capacity 100% pocket fillage efficiency.

Conservative estimated throughput.

## • OTHER ROTOLOK PRODUCTS •

- Rotary Airlocks
- Conveying Diverters
- Double Dumps
- Fabricated Slides
- Slim Slides
- Rotoslides
- Rotoflex Valves
- Slimflex Valves
- Butterfly Dampers
- Weigh Valves
- Plug Diverters
- Screw Conveyors
- Gravity Diverters
- Rotospeed Switch
- Level Lok
- Pipe Couplings
- Ni Hard Bends
- Special Designs



Rotolok Valves Inc  
Industrial Ventures II, 2711 Gray Fox Road  
Monroe, North Carolina, 28110  
Tel: (704) 282-4444 Fax: (704) 282-4242  
e-mail: [sales@rotolok.com](mailto:sales@rotolok.com)  
website: [www.rotolok.com](http://www.rotolok.com)