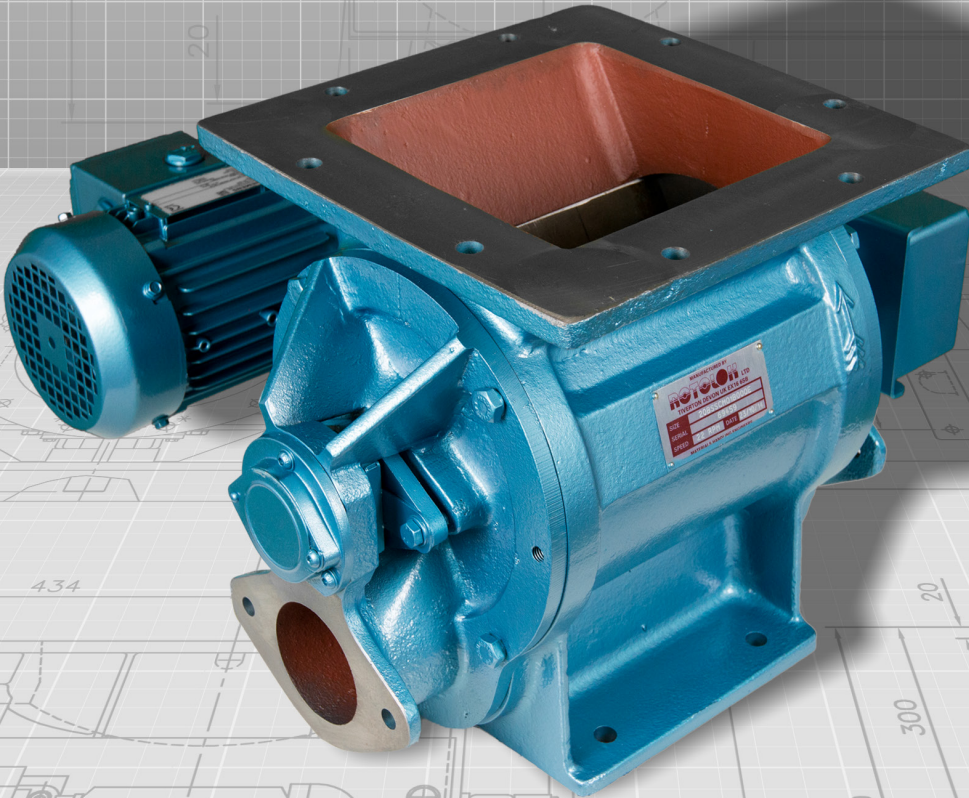


ROTOLOK

everything under control...



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BLOWING SEAL VALVES

INTRODUCTION

Blowing Seals were 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 products 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 pockets 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 Blowing 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 minimising headroom
- Minimum clearance at rotor tips and sides with body
- Robust body adequately stiffened to prevent distortion
- Heavy shaft diameters minimising deflection
- Outboard bearings for non-contamination - options for high temperature
- Packing gland type seals with air purging option
- Precision machining of components
- Abrasive duty types

SPECIFICATION

BODY

Cast Iron or Stainless Steel 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 752°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.
Option: flameproof, variable speed etc.

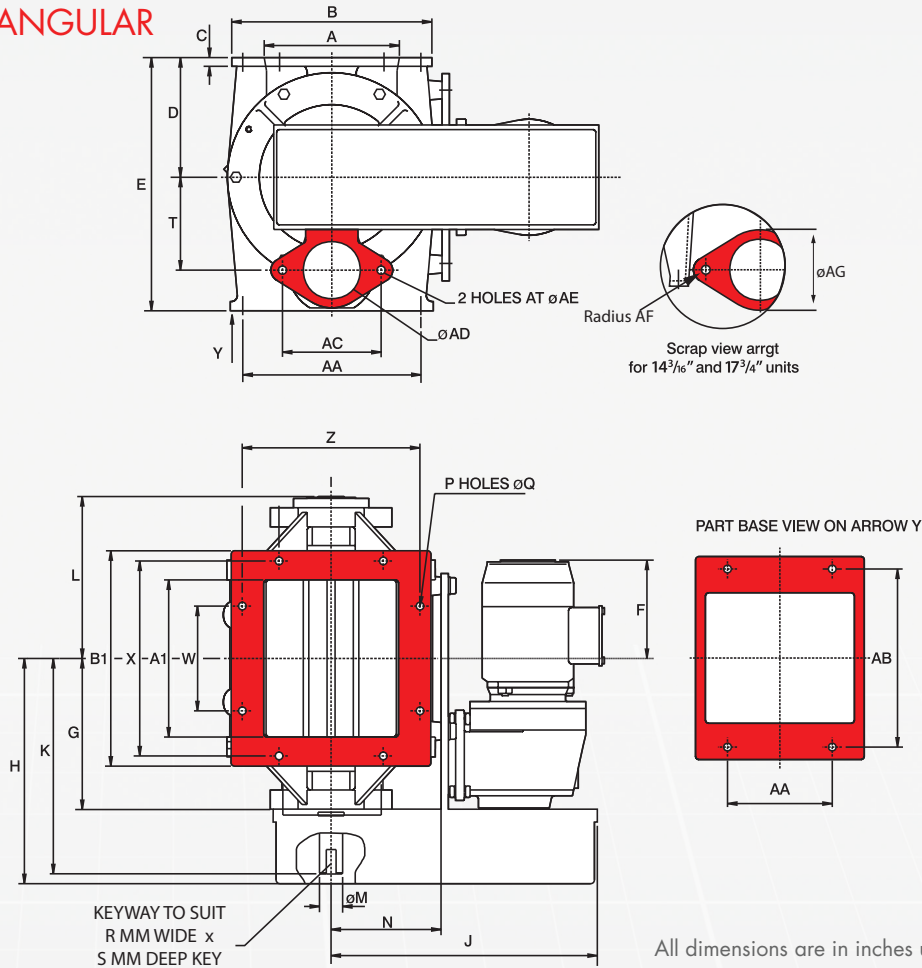
OPTIONAL FEATURES

The Rotolok Blowing Seals have several optional extras that can be applied depending on the valves application. (Details to be given on application) These include:

- Hard Chrome Internals
- Electroless Nickel Plating
- Shear Plate Deflectors
- Direct Coupled Drives
- Flameproof Motors
- Air Purge Glands
- Speed Switches
- Body Vents
- Vent Boxes
- V.S. Drives



SQUARE/RECTANGULAR INLET



SIZE	A	A1	B	B1	C	D	E	F	G	H	J	K	L	M	N	P
5"	5"	5"	8"	8 ^{1/8} "	1/2"	4 3/8"	9 1/2"	11 1/2"	6 1/4"	9 1/2"	12 5/8"	8 5/8"	7 1/8"	28mm	3 3/4"	8
8"	8"	8"	11 13/16"	11 13/16"	1/2"	6 1/4"	13 3/8"	11"	7 7/8"	11 1/8"	13 3/4"	10 1/4"	8 5/8"	28mm	5"	8
9"	7"	7 7/8"	11"	11"	5/8"	7 1/8"	13 3/8"	12"	8 7/8"	12 7/8"	17 1/8"	11 1/4"	9 5/8"	40mm	6 1/2"	8
11"	8 7/8"	10 5/8"	13 5/8"	14 9/16"	5/8"	8 1/8"	17 1/8"	11 5/8"	10 3/16"	14 1/4"	18 1/8"	12 5/8"	11"	40mm	7 1/2"	8
14"	10"	13 3/4"	13 3/4"	17 3/4"	9/16"	9 1/2"	18 3/8"	9"	12 3/8"	16 3/4"	22 3/8"	15 1/4"	13 1/8"	50mm	9"	10
18"	12 1/4"	15 3/4"	16 1/8"	20 1/8"	9/16"	11 3/8"	19 5/8"	7 1/2"	13 3/4"	18 1/8"	24 5/8"	16 5/8"	14 1/2"	50mm	10 5/8"	10

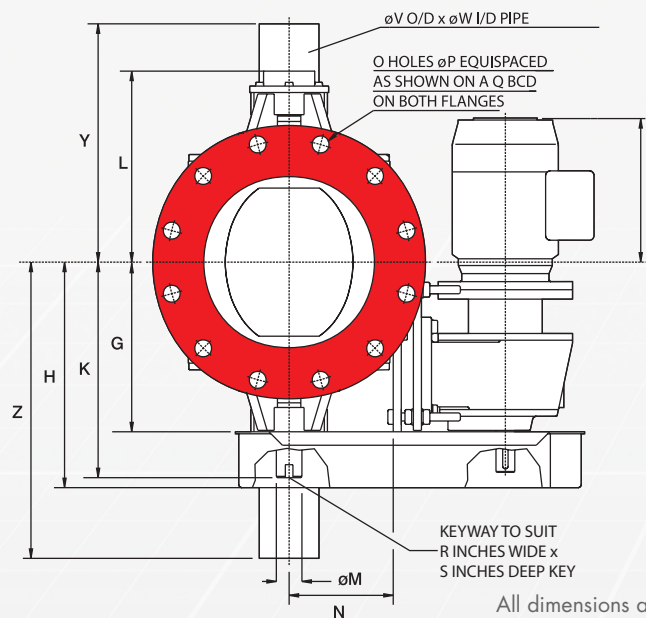
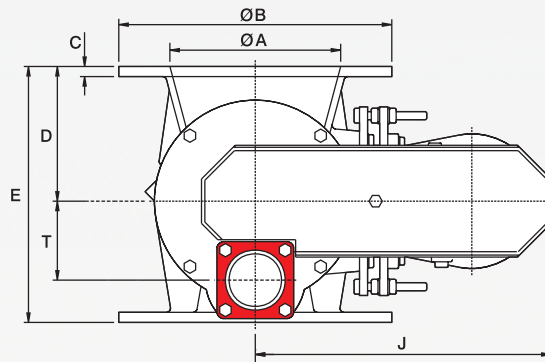
SIZE	Q	R	S	T	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	HP
5"	3/8"	8mm	7mm	3 1/8"	3 9/16"	6 11/16"	3 9/16"	6 11/16"	3 9/16"	5"	3 3/4"	2"	7/16"	3/4"	3 1/16"	1/2
8"	1/2"	8mm	7mm	4"	5 1/8"	10 5/8"	5 1/8"	10 5/8"	5 1/8"	7 1/2"	5 1/8"	3"	7/16"	3/4"	4 5/16"	1/2
9"	*	12mm	8mm	4 3/8"	5 1/8"	9 7/8"	3 15/16"	9 7/8"	5 1/8"	8 7/8"	4 5/16"	2 9/16"	9/16"	3/4"	3 15/16"	1
11"	1/2"	12mm	8mm	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"	3/4"	5 1/8"	1
14"	9/16"	14mm	9mm	7 7/8"	11 13/16"	16 9/16"	7 1/16"	12 5/8"	12 5/8"	2@5 29/32"	7 1/8"	4 5/16"	9/16"	7/8"	5 11/16"	1 1/2
18"	9/16"	14mm	9mm	9"	12 5/8"	18 7/8"	8 11/16"	14 19/16"	15"	2@5 5/16"	7 7/8"	4 15/16"	9/16"	7/8"	6 1/16"	1 1/2

*Side holes \varnothing 1/2", end holes tapped M10

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.



CIRCULAR INLET



All dimensions are in inches unless otherwise stated

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

SIZE	N	O	P	Q	R	S	T	V	W	Y	Z	HP
6"	5 5/8"	8	7/8"	9 1/2"	1/4"	1/4"	3 5/16"	2 3/8"	2"	11 5/8"	14 1/2"	1/2
8"	5 5/8"	8	7/8"	11 3/4"	1/4"	1/4"	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"	3/8"	3/8"	4 5/8"	3 1/2"	3 1/16"	13 15/16"	17 5/16"	1
12"	7 11/16"	12	1"	17"	3/8"	3/8"	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"	5/8"	1/2"	7"	5 9/16"	5"	17 1/2"	22 3/8"	1 1/2

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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 practise 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 tons/hour of flour at 34lb/cu.ft.
Volume required = $7.5 \times 2200/34 = 485$ cu.ft/hr.

From the chart the 11" unit running at 18 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														
VALVE SIZE		Rotor Speed RPM												
		1	5	8	10	12	14	16	18	20	22	24	26	
18"		149	743	1189	1487	1784	2082	2379	2676	2974	3271	3568	3866	100%
	Practical	149	743	1130	1338	1570	1791	1998	2168	2320	2421	2533	2629	
16"		104	519	830	1037	1245	1452	1660	1867	2075	2282	2490	2697	100%
	Practical	104	519	789	933	1096	1249	1394	1512	1618	1689	1768	1834	
14"		65.2	326	521	652	782	912	1043	1173	1303	1434	1564	1694	100%
	Practical	65.2	326	495	587	688	784	876	950	1016	1061	1110	1152	
12"		45.4	227	363	454	545	636	727	818	908	999	1090	1181	100%
	Practical	45.4	227	364	409	480	547	611	663	708	739	774	803	
11"		32.5	162	260	325	390	455	520	585	650	715	780	845	100%
	Practical	32.5	162	249	305	355	405	450	485	526	564	600	634	
10"		25.6	128	205	256	307	359	410	461	512	564	615	666	100%
	Practical	25.6	128	195	230	270	309	344	373	399	417	437	453	
9"		17	85	136	170	204	238	272	306	340	374	408	442	100%
	Practical	17	85	130	160	184	212	235	254	275	295	313	331	
8"		12.7	63	101	127	152	177	203	228	253	279	304	329	100%
	Practical	12.7	63	96	114	134	152	171	185	197	206	216	224	
6"		5.0	25	40	50	60	71	81	91	101	111	121	131	100%
	Practical	5.0	25	38	45	53	61	68	74	79	82	86	89	
5"		2.8	14	23	28	34	39	45	51	56	62	68	73	100%
	Practical	2.8	14	22	25	30	34	38	41	44	46	48	50	
		1	5	8	10	12	14	16	18	20	22	24	26	

NOTES:

THROUGHPUT

Certain products when fluidised can greatly exceed the conservative rating and on some applications, 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 incorporated as necessary.

CONVERSIONS

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

Theoretical capacity = 100% pocket fillage efficiency.

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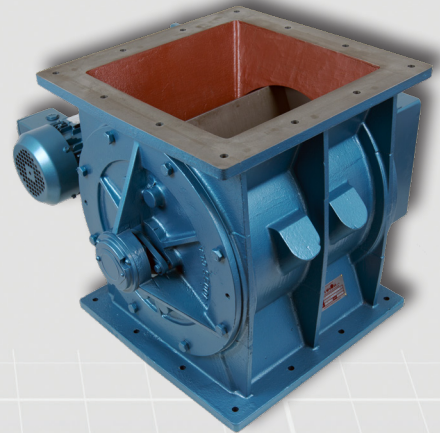
OTHER ROTOLOK PRODUCTS

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

These include, but are not limited to: Blo-line pipe coupling; Slide Gates with Pneumatic, Motorised or Manual operation; Rotary Valve; Dust Collector Valve; Roundhead Valve; Offset Rotary Valves and various Diverter Valves.

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

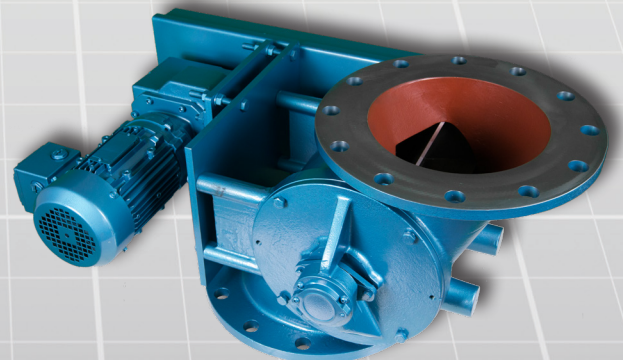
A Standard Rotary Valve that can be made to suit most applications with a variety of construction materials and rotors



A Cast Iron conveying diverter valve. Available with flanged or spigotted connections to fit existing conveying systems



Offset Rotary Valves are designed to feeder a product similar to a Standard Rotary Valve but with reduced shearing and damage to the product passing through



A Standard Plug Diverter Valve. The valve has a rugged cast iron body and is suitable for abrasive or high pressure applications

