

Spécialistes en mécanique de procédés et du contrôle de l'environnement industriel
Mechanical Process and Industrial Environmental Control Specialists

Standard Rotary Valve



The prime function of a rotary valve is to regulate the flow from one chamber to another while maintaining a good airlock condition. The valve is mainly used for dry powder, granular products, shredded trims, etc.

In the dust filtration field, good airlocks are essential on cyclone and bag filter application in order for the manufacturer's quoted high dust collection efficiencies to be maintained. Airlocks are also important in the pneumatic conveying industry, where product is regulated into a high pressure conveying line while minimising air leakage.

With Dynaquip, there are no double standards, all our standard valves are precision machines for close tolerances and minimal eccentricities for pressure differentials up to 20psi and temperatures up to 400°F.

We have made special models to handle temperatures up to 1200°F and pressures up to 350psi.

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.

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.

Packing gland type seals.

Maximising valve speed to 25 rpm - prolonging life, ensuring good throughput.

Precision machining of component.

Specifications

Bodies

Cast Iron, Stainless Steel or Aluminium precision bored.

End Covers

Cast Iron, Stainless Steel or Aluminium spigot located in body for concentricity.

Rotor

Fabricated Mild or Stainless Steel.

Bearings

Sealed-for-life-ball type rigged outboard or high temperature above 400°F.

Shaft Seal

Gland type with PTFE packing.

Drive

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

Montréal • Québec • Toronto • Boston

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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 and feeding methods all affect the valve throughput.

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 over 35 = 400 cu. ft/hr.

From the chart, two valves economically cover this:

1. **250 Valve at 26 rpm.**
2. **300 Valve at 12 rpm.**

With flour being sluggish and the 250 unit on its uppermost speed, the selection is limited to the 300 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 provision that the potential valve discharge rate exceeds the collecting rate.

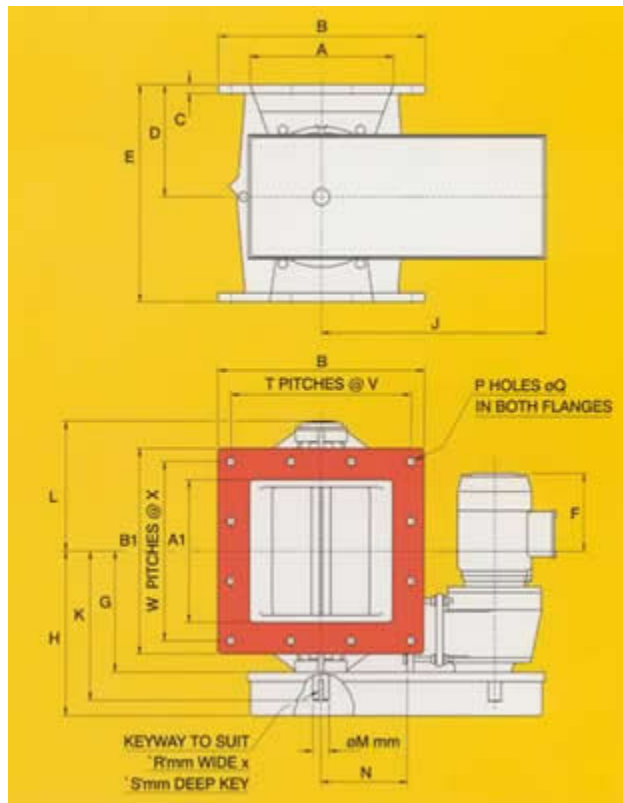
Capacity Chart in Cubic Feet/Hr													
915	1158	5792	9266	11583	13900	16216	18533	20849	23166	25483	27799	30116	100%
	1158	5792	8803	10425	12232	13946	15568	16888	18069	18857	19737	20479	Practical
750	681	3405	5448	6809	8171	9533	10895	12257	13619	14981	16343	17704	100%
	681	3405	5176	6128	7190	8198	9152	9928	10623	11086	11604	12039	Practical
600	356	1780	2848	3560	4272	4984	5696	6408	7120	7832	8544	9255	100%
	356	1780	2706	3204	3759	4286	4785	5190	5554	5796	6066	6293	Practical
500	205	1024	1639	2048	2458	2868	3277	3687	4097	4506	4916	5326	100%
	205	1024	1557	1843	2163	2466	2753	2986	3196	3334	3490	3622	Practical
450	149	743	1189	1487	1784	2082	2379	2676	2974	3271	3568	3866	100%
	149	743	1130	1338	1570	1791	1998	2168	2320	2421	2533	2629	Practical
400	104	519	830	1037	1245	1452	1660	1867	2075	2282	2490	2697	100%
	104	519	789	933	1096	1249	1394	1412	1618	1689	1768	1834	Practical
350	65.2	326	521	652	782	912	1043	1173	1303	1434	1567	1694	100%
	65.2	326	495	587	688	784	876	950	1016	1061	1110	1152	Practical
300	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
250	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
200	12.7	63	101	127	152	177	203	228	253	279	304	329	100%
	12.7	63	96	114	134	152	171	185	197	206	216	224	Practical
150	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
125	2.8	14	23	28	34	39	45	51	56	62	68	73	100%
	2.8	14	22	25	30	34	38	41	44	46	48	50	Practical
85	0.96	4.8	7.7	9.6	11.5	13.4	15.4	17.3	19.2	21.1	23	25	100%
	0.96	4.8	7.3	8.6	10.1	11.5	12.9	14	15	15.6	16.3	17	Practical
50	0.228	1.1	1.8	2.3	2.7	3.2	3.6	4.1	4.6	5.0	5.5	5.9	100%
	0.228	1.1	1.7	2.1	2.4	2.7	3	3.3	3.6	3.7	3.9	4	Practical
	1	5	8	10	12	14	16	18	20	22	24	26	
Rotor Speed RPM													

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SQUARE INLET

Square Rotary Valves																								
Size	A	A1	B	B1	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	V	W	X	H.P.
125	127	127	225	225	12	98.5	197	195	159	232	406	220	195	28	143	8	14	8	7					0.5
150	152	152	250	250	12	140	280	180	174	247	406	234	195	28	143	12	12	8	7	3	70	3	70	0.5
200	203	203	300	300	15	165	330	155	199	272	406	259	217	28	143	12	12	8	7	3	90	3	90	0.5
250	254	254	370	370	15	203	388	200	229	322	478	290	249	35	155	12	18	10	8	3	108	3	108	1
300	305	305	440	440	19	240	465	170	260	353	478	320	279	35	195	12	18	10	8	3	128	3	128	1
350	356	356	470	470	19	257	514	160	270	363	512	329	289	35	220	12	12	10	8	3	140	3	140	1
400	406	406	550	550	20	300	580	115	332	425	626	403	352	50	235	12	18	14	9	3	165	3	165	1.5
450	457	457	610	610	20	322	630	85	357	450	626	428	377	50	285	12	18	1	9	3	187	3	187	2
500	508	508	650	650	20	340	670	120	382	475	700	453	402	50	289	16	18	14	9	4	148	4	148	2
600	410	410	750	750	20	380	750	115	432	525	700	503	452	50	335	16	18	14	9	4	173	4	173	3
750	750	750	1000	1000	25	500	1000	60	503	643	910	605	522	70	450	24	18	20	12	6	149	6	149	3
915	915	915	1165	1165	25	600	1200	-25	605	748	1000	707	625	70	540	24	22	20	12	6	175	6	175	5

All Dimensions in mm

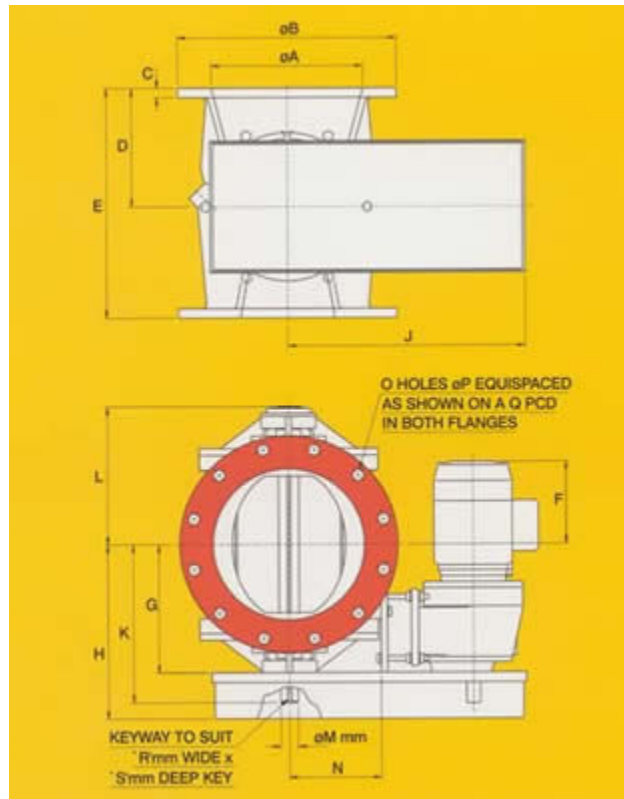


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CIRCULAR INLET

Round Rotary Valves																			
Size	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	H.P.
50	51	152	10	60	120	*	74												
85	85	190	10	80	160	*	117												
125	127	240	12	108	214	200	159	232	406	219	178	28	143	8	18	200	8	7	0.5
150	154	285	12	140	270	180	174	247	406	234	194	28	143	8	22	241	8	7	0.5
200	203	320	13	160	310	155	199	272	406	259	219	28	143	8	18	280	8	7	0.5
250	254	370	15	200	380	200	229	322	478	289	248	35	155	8	18	320	10	8	1
300	305	440	19	240	465	170	260	353	478	320	279	35	195	12	22	395	10	8	1
350	356	533	19	270	520	160	270	363	512	332	289	35	220	12	22	445	10	8	1
400	206	540	20	300	580	110	332	425	626	403	352	50	235	12	22	495	14	9	1.5
450	457	635	20	320	625	80	357	450	626	419	377	50	285	16	32	578	14	9	2
500	508	700	20	340	670	115	382	475	700	453	402	50	289	20	32	635	14	9	2
600	610	813	20	385	760	115	432	525	700	503	452	50	335	20	35	749	14	9	3
750	762	984	25	500	1000	45	503	646	910	605	522	70	450	28	35	914	20	12	3
All Dimensions in mm																			



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