

• CONVEYING DIVERTERS •

INTRODUCTION

Rotolok manufacture a full range of Flap, Plug and Weigh Diverters, which cover all applications in the pneumatic conveying industry to reroute powder, pellets or granules from one discharge to another.

For standard two way diversion applications, Rotolok specify the Flap Type Diverter Valve Range.

THE FLAP TYPE DIVERTER VALVE

The Flap Type Diverter consists of a robust body manufactured in two sections, split at a centre flange for ease of access to the internal sealing flap.

With the special cone transition at the inlet, the sealing area within the cone forms a complete parabola and therefore an efficient internal seal can be maintained without resorting to sealing ledges - increasing the conveying line pressure, the rubber wiper seals more effectively.

Internals are clean, with no lodgement points, and the transition from one line into two is gradual, limiting turbulence and therefore pressure drop. Similarly, by the streamline design, the valve will also feed from two lines into one - again with no lodgement areas.

Choice of materials can cater for the majority of applications and by plating the body and internal components the semi-abrasive fields can be covered.

Special demand has necessitated the manufacture of a range of 30° divert angle valves to compliment the traditional range of 22½° divert angle valves. They are obviously more compact than the 22½° range but have a slightly greater pressure drop due to the increased angle.

Further demands of industry have led to the manufacture of two types of connections:

- FLANGED
- SPIGOTTED

FLANGED

Simple and robust, bolt on flanged ends drilled to match various international standards

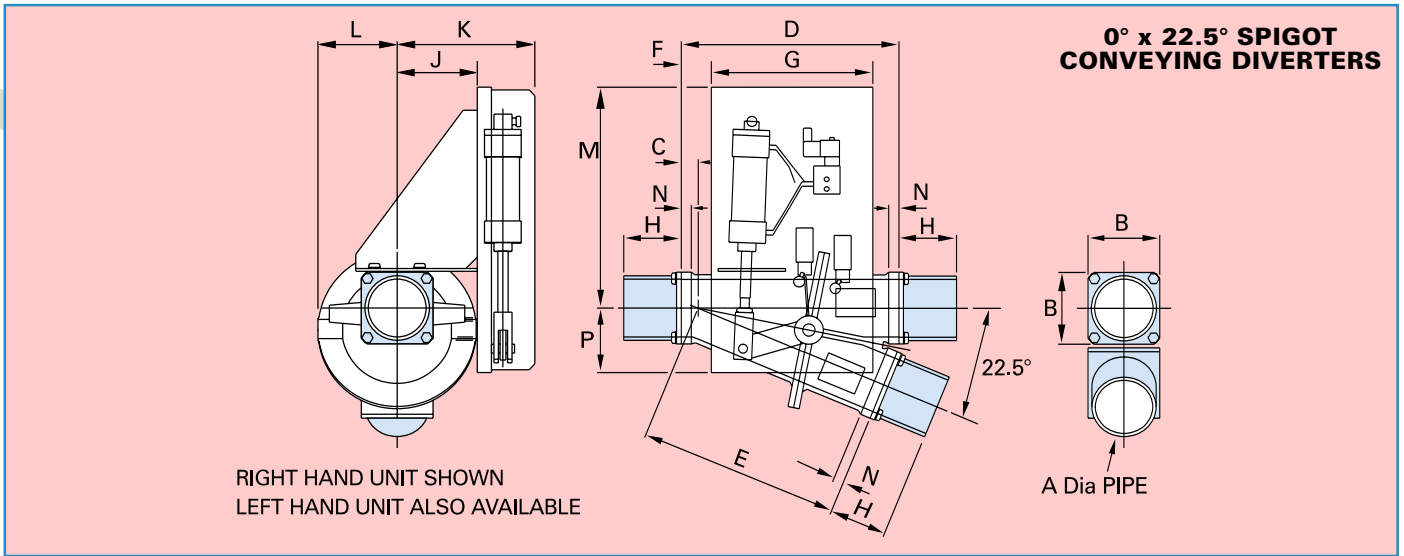


SPIGOTTED

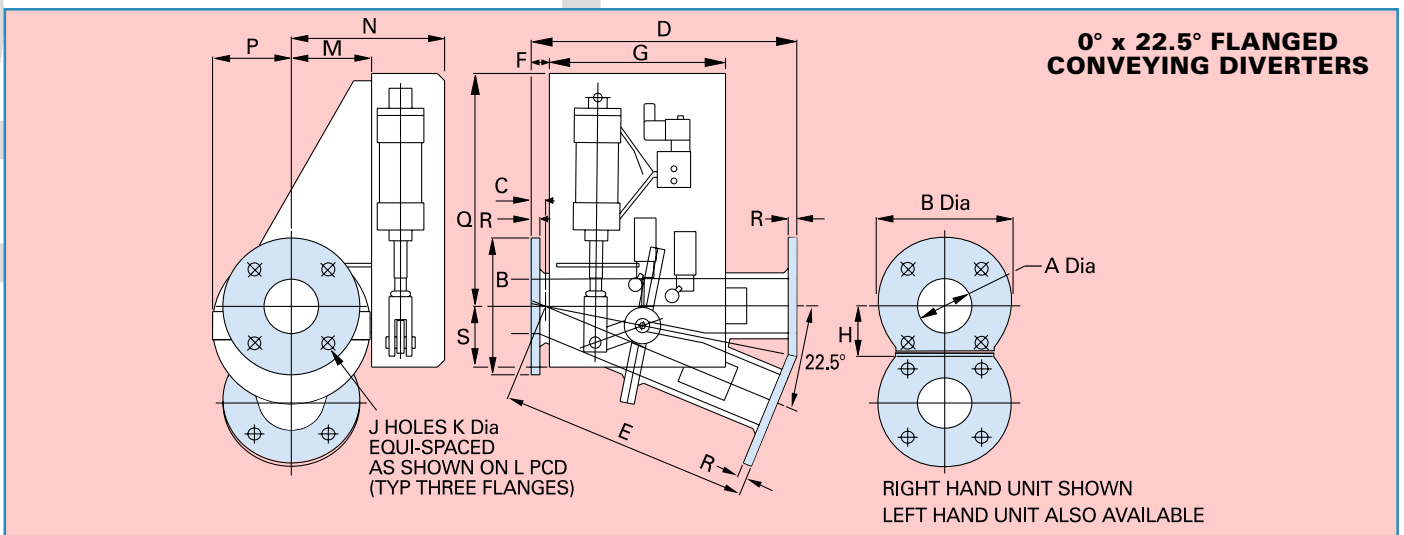
The spigotted ends are connected to pipework with "BLO-LINE" type couplings, facilitating quick access in case of blockages. It also gives flexibility in pipe length accuracies and misalignment variation. Furthermore, the Rotolok spigotted ends are not of cast fixed length, but bolted on and of variable length. This enables the end to be supplied to fit exactly to existing pipework.



• CONVEYING DIVERTERS •

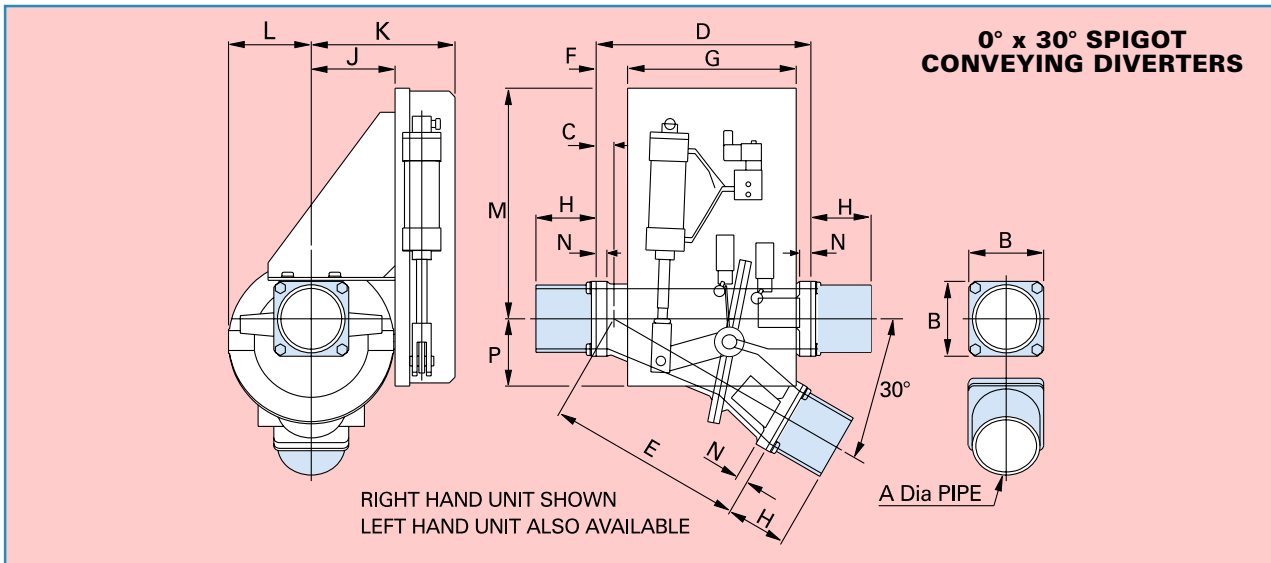


SIZE	A Pipe	B	C	D	E	F	G	H	J	K	L	M	N	P
50	2" N/B	95	20	279	259	0	250	102	92	194	90	333	19	77
63	2 1/2" N/B	102	20	299	279	5	246	102	102	204	100	329	19	81
75	3" N/B	114	20	360	340	25	246	102	112	214	110	325	19	85
100	4" N/B	127	30	385	355	53	286	102	142	244	140	391	19	114
125	5" N/B	152	30	484	454	102	286	102	162	264	160	381	19	124
150	6" N/B	197	35	568	533	120	286	102	182	284	180	379	19	126

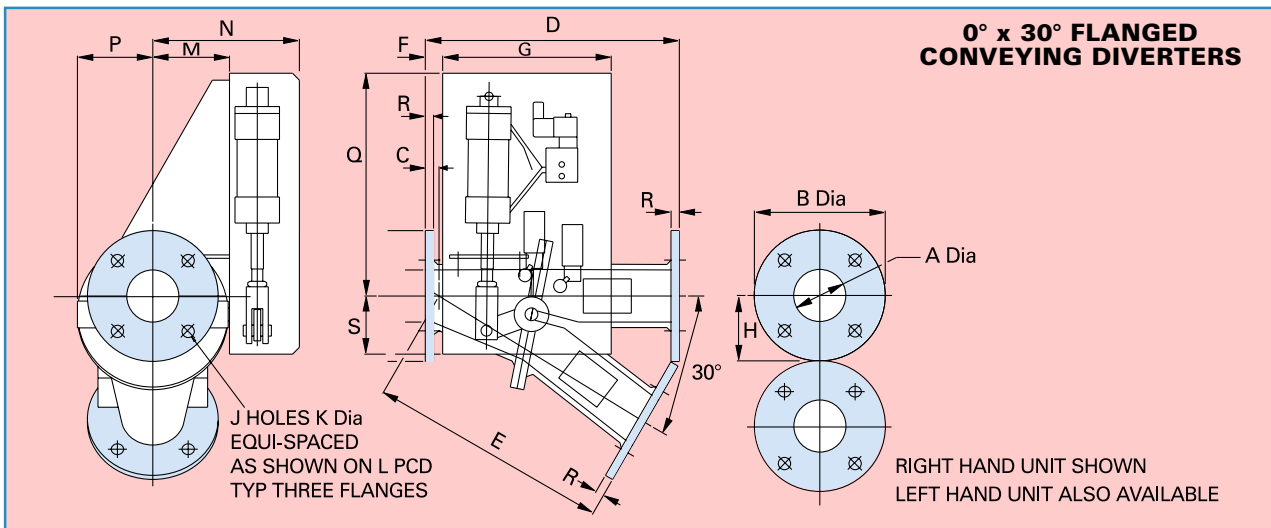


SIZE	A Dia	B Dia	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
25	25	114	4.5	240	235.5	22	189	46	4	14	82 (BSTD)	62	142	60	207	10	94
50	50	152	20	310	290	0	250	58	4	18	114 (BSTD)	92	194	90	333	10	77
63	63.5	178	20	350	330	5	246	65	4	18	127 (BSTD)	102	204	100	329	10	81
75	76	191	20	371	351	25	246	71	4	18	146 (BSTD)	112	214	110	325	12	85
100	102	229	30	444	414	53	286	82	4	18	178 (BSTD)	142	244	140	391	12	114
125	127	254	30	634	604	102	286	120	8	18	210 (BSTD)	162	264	160	381	14	124
150	160	280	35	760	725	120	286	130	8	18	235 (BSTD)	182	284	180	379	16	126
200	204	343	35	901	866	159	273	156	8	18	292 (BSTD)	222	324	223	412	16	131
250	264	406	35	1059	1024	239	316	196	8	22	356 (BSTD)	282	442	280	433	20	177
300	305	483	72	1313	1241	246	366	242	12	22	406 (BSTD)	302	462	300	533	25	203

• CONVEYING DIVERTERS •



SIZE	A Pipe	B	C	D	E	F	G	H	J	K	L	M	N	P
50	2" N/B	95	20	257	237	0	250	102	92	194	90	333	19	77
63	2 1/2" N/B	102	20	268	248	5	246	102	102	204	100	329	19	81
75	3" N/B	114	20	280	260	25	246	102	112	214	110	325	19	85
100	4" N/B	127	30	364	334	53	286	102	142	244	140	391	19	114
125	5" N/B	152	30	440	410	102	286	102	162	264	160	381	19	124
150	6" N/B	197	35	478	443	120	286	102	182	284	180	379	19	126



SIZE	A Dia	B Dia	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
50	50	152	20	332	311	0	250	76	4	18	114 (BSTD)	92	194	90	333	10	77
63	63.5	178	20	389	368	5	246	89	4	18	127 (BSTD)	102	204	100	329	10	81
75	76	191	0	370	370	25	246	96	4	18	146 (BSTD)	112	214	110	325	12	85
100	102	229	30	546	514	53	286	115	4	18	178 (BSTD)	142	244	140	391	12	114
125	127	254	30	634	600	102	286	127	8	18	210 (BSTD)	162	264	160	381	14	124
150	160	280	35	760	721	120	286	140	8	18	235 (BSTD)	182	284	180	379	16	127
200	204	343	35	721	681	159	273	172	8	18	292 (BSTD)	222	324	223	412	16	131
250	264	406	35	858	825	239	316	203	8	22	356 (BSTD)	282	442	280	433	20	177

• CONVEYING DIVERTERS •

IMPORTANT FEATURES

- Compact Design
- Small Divert Angle
- Low Pressure Drop
- Smooth Internals
- Pneumatic or Manual
- Wide Range of Materials
- Higher Pressure Gives Greater Seal
- Dust Tight to 20 p.s.i.
- Easy Access and Maintenance
- Flanged or Spigotted Ends
- Pneumatics and Switches Housed in Guards



Conveying Diverter with 30° Divert

SPECIFICATION

Bodies

Cast in aluminium, stainless steel or cast iron

Flap Valves and Spindles

Mild Steel or Stainless

Wiper Seal

Polyurethane or food quality rubber.
Temp limitation 180° C.

Shaft Seal

Rubber 'O' ring

Actuation

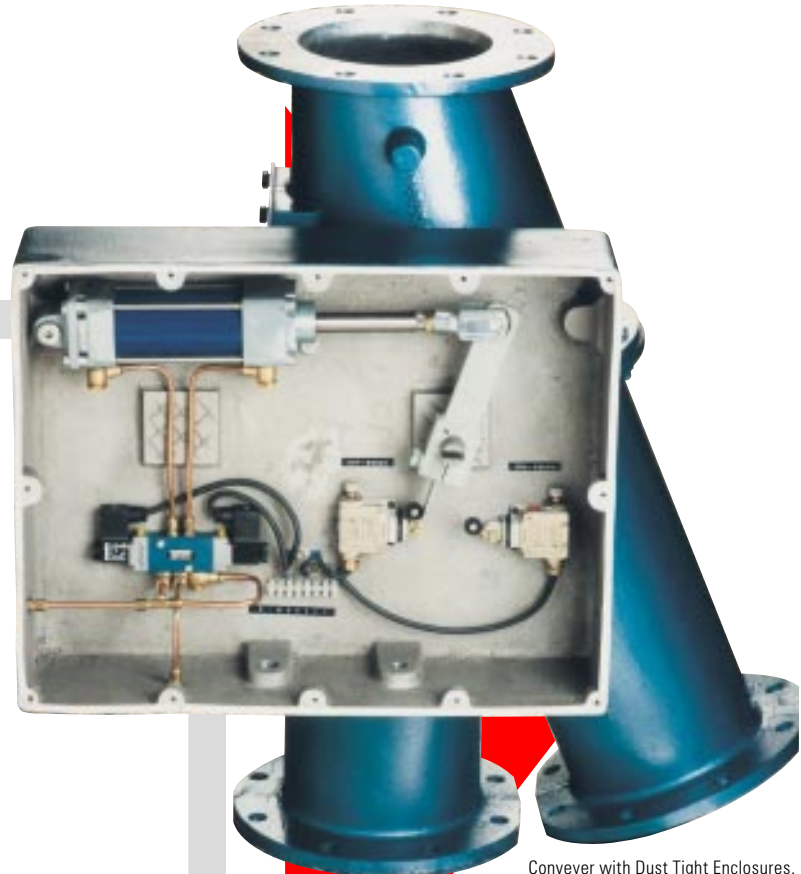
Air cylinder or manual

Pneumatic Version

Complete with five-port four-way single solenoid return valve

Limit Switches

Available to indicate open/closed conditions
Pneumatics and switches housed in guards



Conveyer with Dust Tight Enclosures.

• WEIGH VALVES •

INTRODUCTION

The weigh valve is a natural development from the Rotolok series of Pneumatic Conveying Diverter Valves. It is primarily used in small bulk handling systems whereby a product is pneumatically conveyed to a hopper or bulk bin which is process weighed.

Initially the valve is positioned as per *Fig 1* showing the product being discharged into a bin whilst the air is exhausted. On the correct weight being designated the valve changes position by means of the single cylinder to the position as per *Fig 2*.

In this case the correct weight has been established and the product is then either sent to alternative weigh stations or conveyed back to its holding hopper. The valve has the same important design feature of the well established pneumatic conveying diverters.

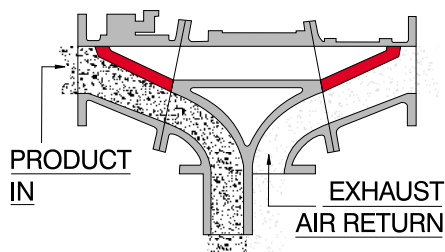


Fig 1

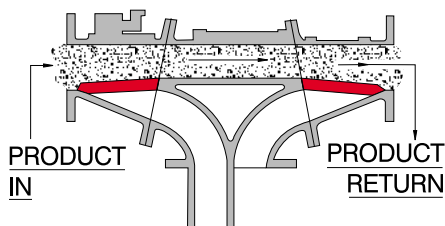


Fig 2

WEIGH VALVE

The Rotolok weigh valve consists of a robust body manufactured in three sections split at flanges giving direct access to the internal sealing flap.

By the special design cone transition the sealing areas within the cones form complete parabola and therefore an efficient internal seal can be maintained without resorting to ledges, increasing the conveying line pressure, the rubber wiper seals more effectively.

Internals are clean with no lodgement points and the transitional effects are gradual limiting turbulence and, therefore, pressure drop.

Choice of materials can cater for the majority of applications and by plating the body and internal components the semi abrasive fields can be covered.

Further demands of industry have led to the manufacture of two types of connections:

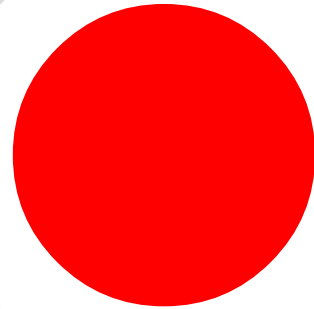
- FLANGED
- SPIGOTTED

FLANGED

Simple and robust, bolt on flanged ends drilled to match various international standards.

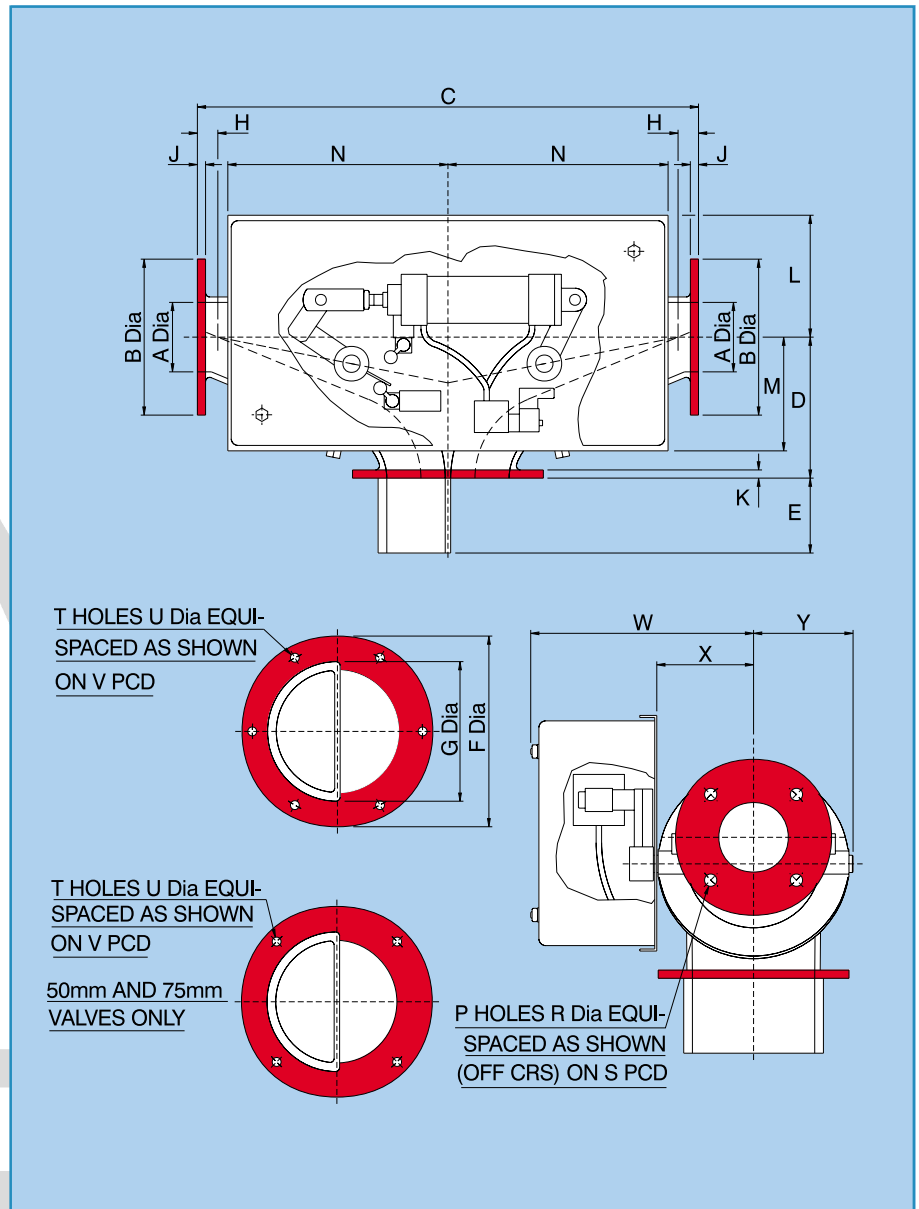
SPIGOTTED

The spigotted ends are connected to pipework with "BLO-LINE" type couplings, facilitating quick access in case of blockages. It also gives flexibility in pipe length accuracies and misalignment variation. Furthermore, the Rotolok spigotted ends are not of cast fixed length, but bolted on and of variable length. This enables the end to be supplied to fit exactly to existing pipework.



• WEIGH VALVES •

FLANGED STANDARD WEIGH VALVES



PLANNING-IN DETAIL FOR GENERAL GUIDANCE ONLY

Drillings are Rotolok standards. Variations can be made.

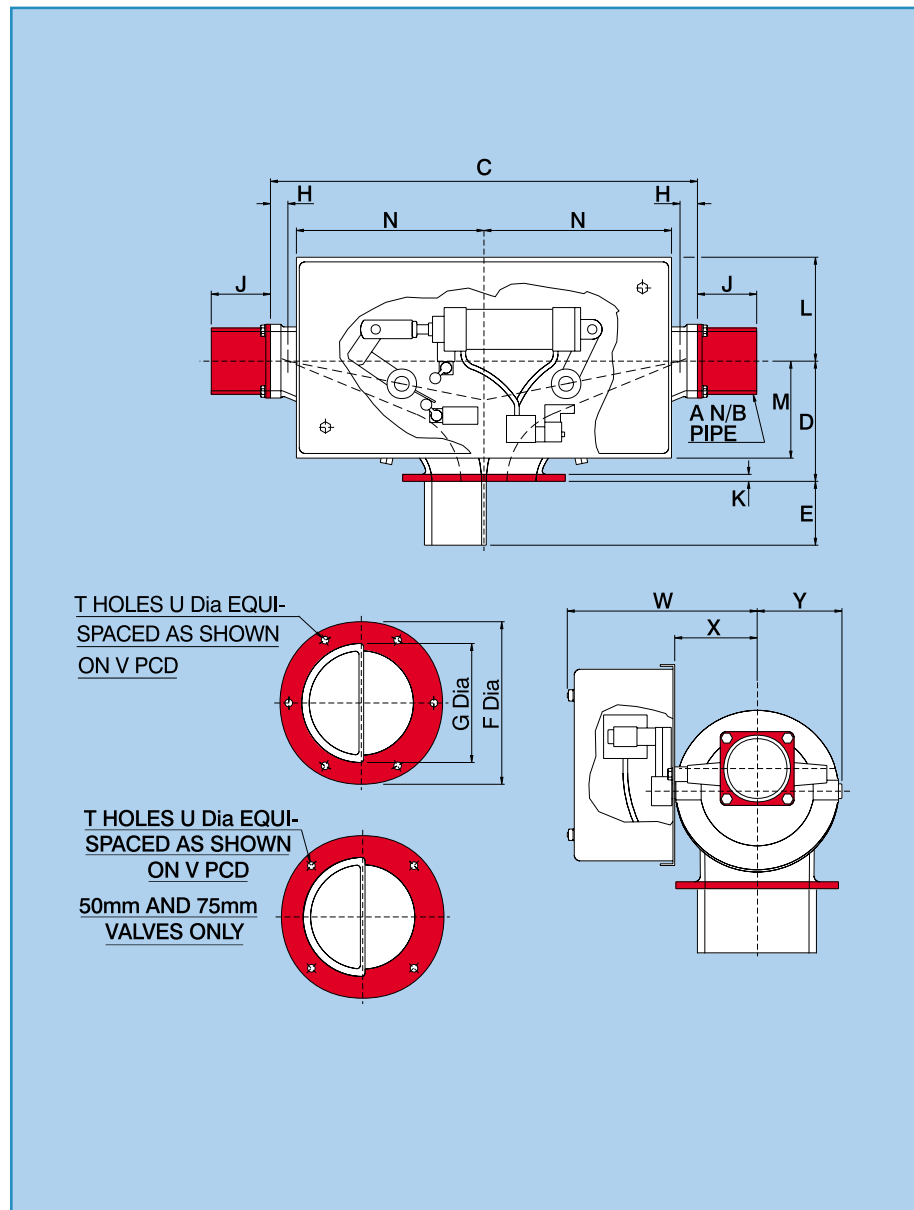
SIZE	øA	øB	C	D	E	øF	øG	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
50	50	152	428	142	90	180	110	20	10	10	245	128	196	4	18	114	4	13	145	193	91	90
75	76	191	550	172	100	220	160	20	12	12	276	155	250	4	18	146	6	13	190	214	112	110
100	100	229	735	207	110	280	215	30	12	12	179	167	323	4	18	178	6	13	250	337	142	146
125	127	254	876	251	120	320	237	30	14	10	170	177	323	8	18	210	8	13	290	357	162	160
150	160	280	964	290	150	360	290	35	16	16	214	193	423	8	18	235	8	18	324	372	182	180
200	204	343	1,263	380	140	430	376	35	16	16	199	208	423	8	18	292	12	18	394	412	222	223

Dimensions in millimetres unless stated

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

• WEIGH VALVES •

SPIGOTTED STANDARD WEIGH VALVES



PLANNING-IN DETAIL FOR GENERAL GUIDANCE ONLY

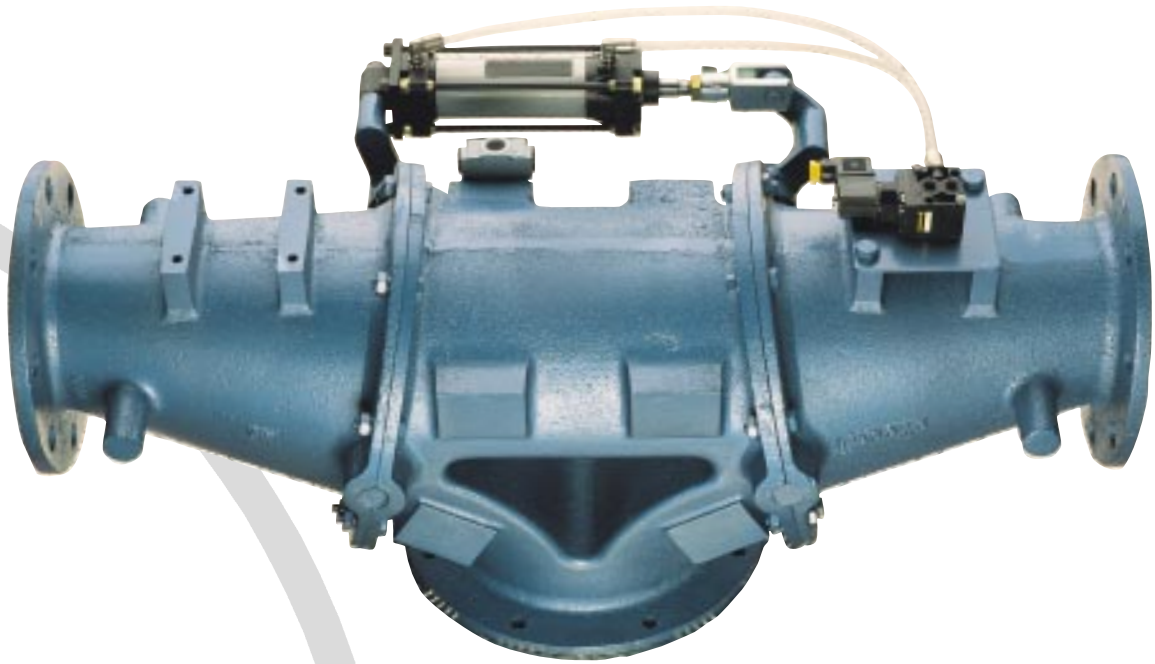
Drillings are Rotolok standards. Variations can be made.

SIZE	øA	C	D	E	øF	øG	H	J	K	L	M	N	T	U	V	W	X	Y
50	2"	428	142	90	180	110	20	102	10	245	128	196	4	13	145	193	91	90
75	3"	550	172	100	220	160	20	102	12	276	155	250	6	13	190	214	112	110
100	4"	735	207	110	280	215	30	102	12	179	167	323	6	13	250	337	142	146
125	5"	876	251	120	320	237	30	102	10	170	177	323	8	13	290	357	162	160
150	6"	964	290	150	360	290	35	102	16	214	193	423	8	18	324	372	182	180
200	8"	1,263	380	140	430	376	35	102	16	199	208	423	12	18	394	412	222	223

Dimensions in millimetres unless stated

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

• WEIGH VALVES •



SPECIFICATION

Bodies

Cast Iron, Cast Aluminium or Stainless Steel.

Flap Plates and Spindles

Mild or Stainless Steel.

Wiper Seal

Polyurethane or food quality rubber.

Shaft Seal

Rubber 'o' rings.

Actuation

Air cylinder complete with five-port four-way single solenoid spring.

Limit Switches

Positioned and actuated to indicate valve condition.

IMPORTANT FEATURES

- Compact design.
- Small divert angle.
- Low pressure drop - minimal transition effect.
- Smooth internals - no lodgement points.
- Wide selection of materials.
- High sealing efficiencies - with line pressure increasing effectiveness.
- Dust tight enclosures to 20 p.s.i.
- Simple access and maintenance.
- One cylinder direct action operation.

Giving a virtually leakproof, non-contaminating unit ideally suitable for the food and chemical industries.

• PLUG DIVERTERS •

INTRODUCTION

Plug type diverter valves are used in the pneumatic conveying industry to re-route powder, pellets or granules from one discharge point to another.

The Rotolok Plug Diverter can be used where Flap Valves are unsuitable due to high pressures or abrasive duties.

Plug Valves are ideal for use in high vacuum conveying systems or where severe leakage or cross contamination cannot be tolerated.

FLANGED

Simple and robust, bolt on flanged ends drilled to match various international standards.



PLUG DIVERTER

The valve consists of a rugged cast body which houses a cast plug between a pair of end covers. The material handled passes from one line through a tunnel within the plug to either of the two outlet lines. The material stream is diverted to the selected outlet by rotating the plug through 150°. Rotation is alternately clockwise and counter-clockwise and is achieved by means of a double acting torque actuator.

To prevent cross contamination of product air to the chamber or dormant leg, sealing is achieved by means of a PTFE spring loaded gland arrangement accessible adjustable and replaceable externally.

The plug and body are precision machines using the latest CNC technology to ensure reliability and sealing efficiency. The valve has no dead-leg, smooth internals ensure no lodgement points, minimising turbulence and therefore ensuring line efficiency is kept to a maximum.

Pipe connections can be supplied as either plain pipe ends or flanged as required.

- FLANGED
- SPIGOTTED

SPIGOTTED

The spigotted ends are connected to pipework with "BLO-LINE" type couplings, facilitating quick access in case of blockages. It also gives flexibility in pipe length accuracies and misalignment variation. Furthermore, the Rotolok spigotted ends are not of cast fixed length, but bolted on and of variable length. This enables the end to be supplied to fit exactly to existing pipework.



• PLUG DIVERTERS •

IMPORTANT FEATURES

- Suitable for all types of Conveying Systems and most materials.
- Compact design.
- Small divert angle - 30°.
- Smooth internals - no lodgement points.
- Minimal air leakage and cross contamination.
- Pneumatic and / or manual versions.
- Rugged design for impact pressure up to 10 Bar (145p.s.i.).
- Simple access and maintenance.
- Aluminium, Cast Iron or Stainless Steel construction

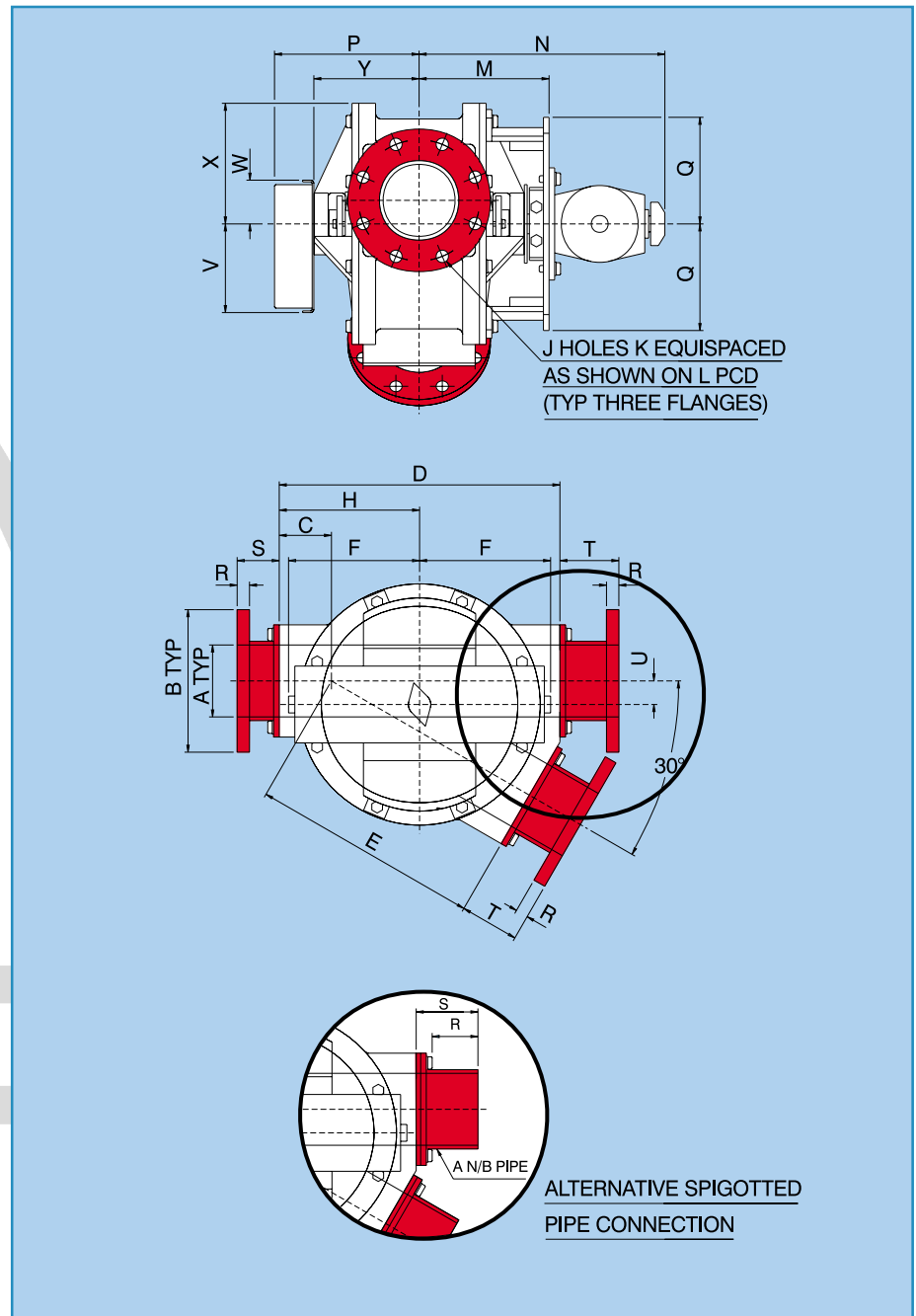
Giving a virtually leakproof, non-contaminating unit ideally suitable for the food and chemical industries.

RANGE

A choice of construction materials include Aluminium, Cast Iron and Stainless Steel in any combination, allowing the majority of applications to be catered for. Standard range size 75mm to 250mm diameter but we will extend this range should the need arise.

PLANNING-IN DETAIL FOR GENERAL GUIDANCE ONLY

FLANGED AND SPIGOTTED PLUG DIVERTER VALVES



Drillings are Rotolok standards. Variations can be made.

SIZE	COMMON													FLANGED BS TABLE D							SPIGOTTED				
	C	D	E	F	H	M	N	P	Q	U	V	W	X	Y	øA	øB	J	øK	L	R	S	T	A pipe	R	S
75	82	390	308	235	195	210	417	236	130	30.5	158	78	150	165	78	184	4	18	146	10	80	80	3" N/B	85	108
100	85	440	355	235	220	219	426	246	158	36	158	78	180	175	102	216	4	18	178	10	70	105	4" N/B	81	110
125	93	500	407	235	250	232	438	258	190	42	158	78	215	188	128	254	8	18	210	13	75	105	5" N/B	81	110
150	94	542	448	235	271	262	470	288	203	47.5	158	78	230	218	154	279	8	18	235	13	76	97	6" N/B	81	110
200	117	670	553	235	335	292	500	315	253	58.5	158	78	280	245	203	337	8	18	292	13	80	130	8" N/B	79	110
250	141	800	659	235	400	320	527	571	300	69.5	300	300	330	320	254	406	8	22	356	16	91	141	10" N/B	79	110

Dimensions in millimetres unless stated
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

• FABRICATED DIVERTER VALVES •

INTRODUCTION

Gravity Feed Diverter Valves are used in the bulk handling field to re-route powders, pellets or granular materials from one discharge point to another.

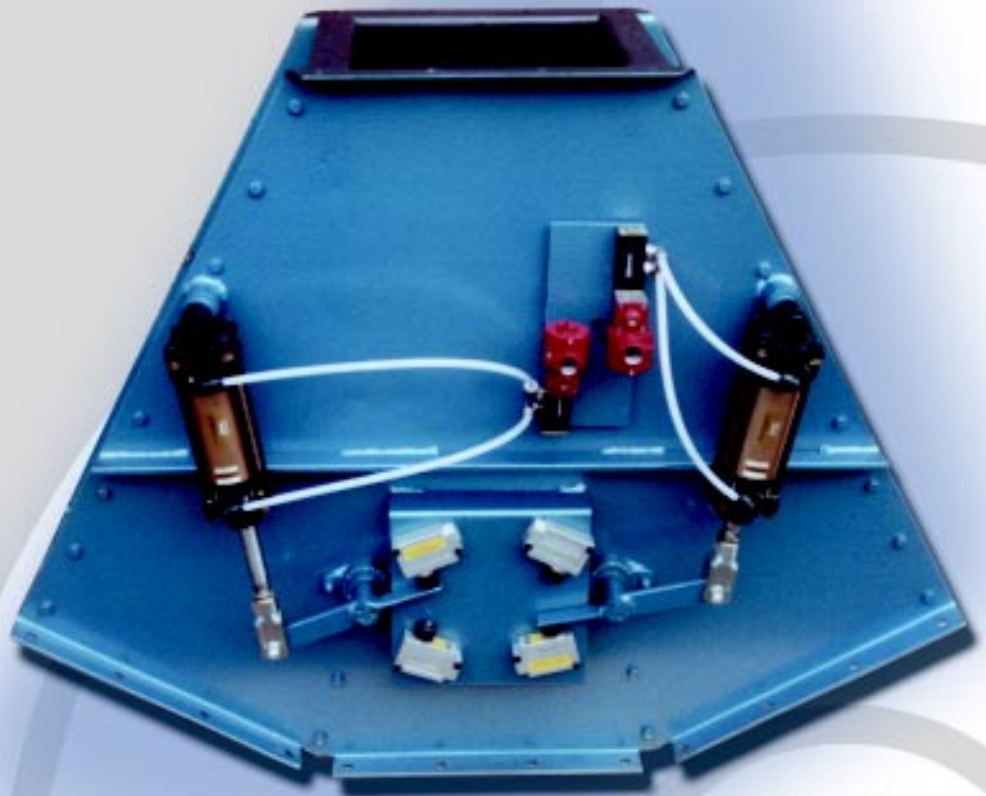
Being of fabricated design Rotolok can accommodate many variations and options relating to divert angles, inlet sizes and form (square, rectangular and round etc).

Generally fabricated from 3mm plate. The internal flap is manufactured with two plates sandwiching a polyurethane wiper seal, to ensure there is adequate sealing to the non-operational leg. The whole assembly is mounted on the main spindle which is supported externally by two sealed for life 2-bolt flanged ball bearings.

The pneumatically operated unit is actuated by an air cylinder complete with solenoid valve and internal piping. Limit switches are also fitted as standard equipment and positioned to indicate open / closed conditions.

The manual version is operated by a smooth action handle.

All pneumatic or electrical switches are fully enclosed for safety reasons.



Fabricated Pneumatic Gravity Diverter Valve



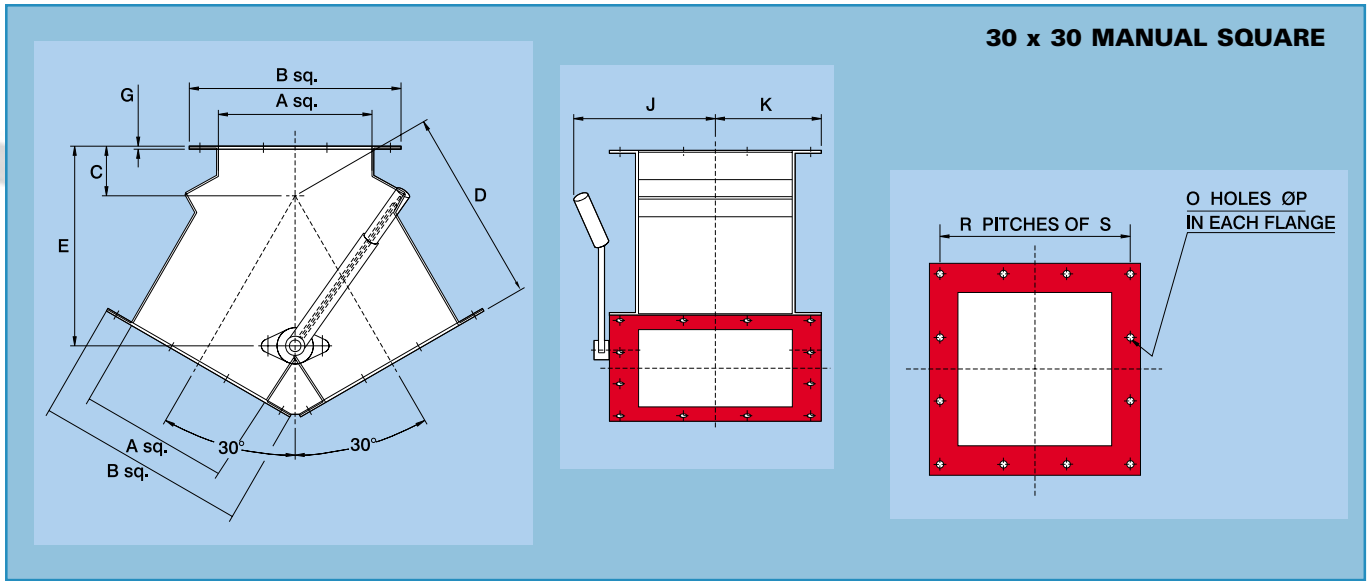
Simple, versatile Diverter Valves for a wide range of applications

IMPORTANT FEATURES

- Divert angle ensures good flow conditions.
- Compact rugged design.
- Smooth internals with negligible lodgement areas.
- Pneumatic or manual versions.
- Wide selection of materials.
- Good sealing effect.
- Simple access and minimal maintenance.

All add up to Rotolok standards.

FABRICATED DIVERTER VALVES

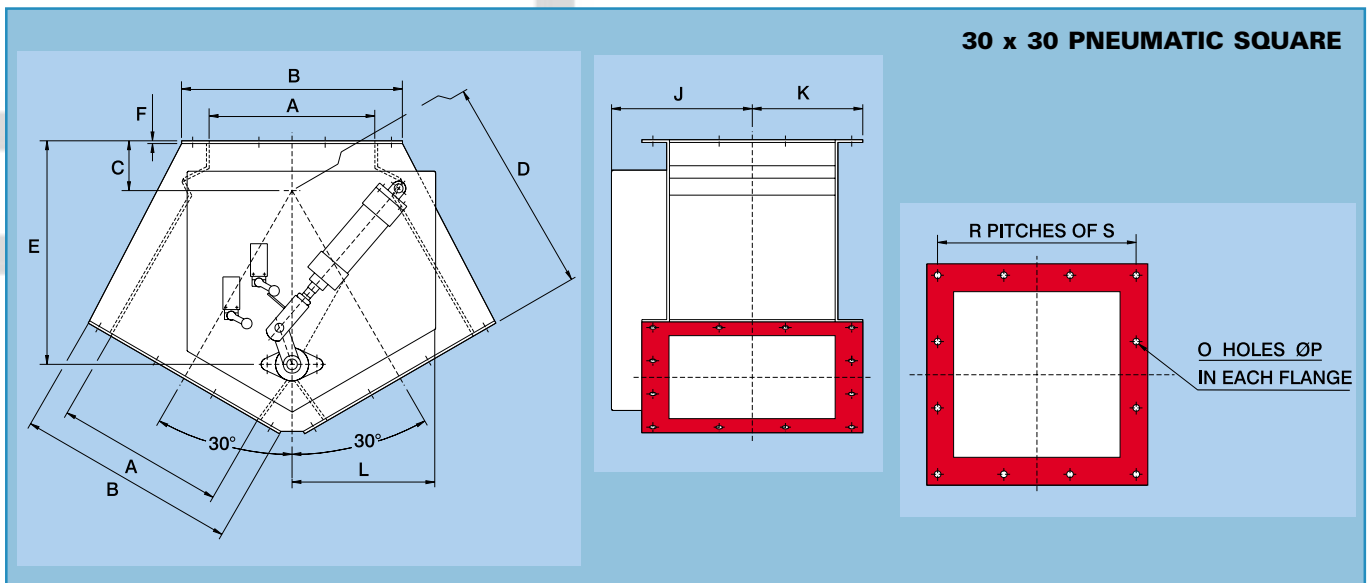


Drillings are Rotolok standards. Variations can be made.

SIZE	A	B	C	D	E	G	J	K	O	P	R	S
VALVE SIZE 150	152	250	70	256	243	3	185	125	8	12	2	110
200	203	300	75	288	285	3	210	150	12	12	3	90
250	254	350	82	321	330	5	235	175	12	12	3	105
350	350	450	89	432	430	5	290	225	12	12	3	140

Dimensions in millimetres unless stated

Dimensions subject to change without notice



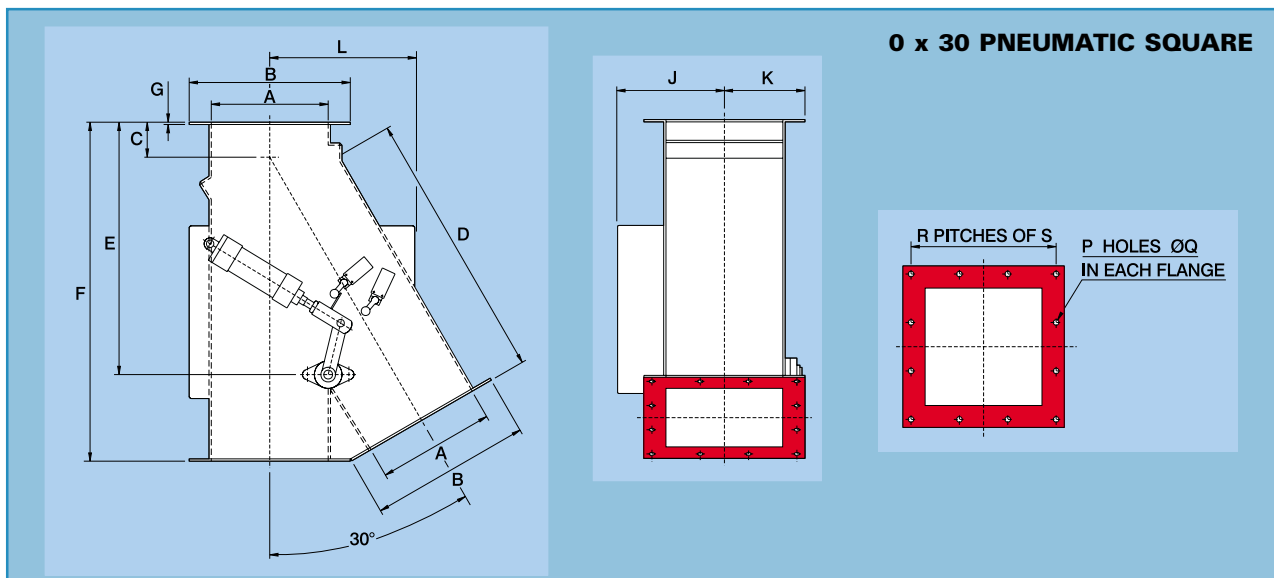
Drillings are Rotolok standards. Variations can be made.

SIZE	A	B	C	D	E	G	J	K	L	O	P	R	S
VALVE SIZE 150	152	250	70	256	243	3	188	125	355	8	12	2	110
200	203	300	75	288	285	3	214	150	315	12	12	3	90
250	254	350	82	321	330	5	241	175	270	12	12	3	105
300	300	400	90	392	404	5	264	200	260	12	12	3	120
350	350	450	89	432	430	5	310	225	300	12	12	3	140
400	400	500	130	500	526	5	335	250	345	16	12	4	115
500	500	600	130	565	605	5	410	305	435	16	12	4	140

Dimensions in millimetres unless stated

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• FABRICATED DIVERTER VALVES •

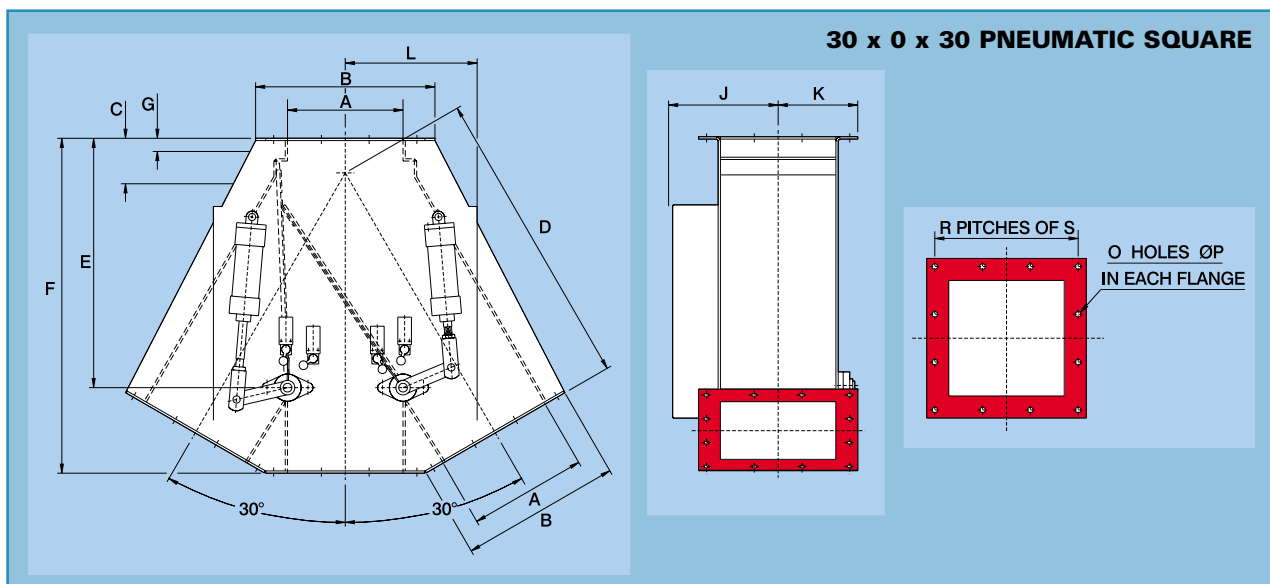


Drillings are Rotolok standards. Variations can be made.

SIZE	A	B	C	D	E	F	G	J	K	L	Ø	P	R	S
150	152	250	70	476	346	546	3	188	125	340	8	12	2	110
200	203	300	76	565	458	641	5	216	150	330	12	12	3	90
250	254	350	76	660	548	736	5	241	175	310	12	12	3	105
300	300	400	76	826	656	902	5	280	200	370	12	12	3	120
350	350	450	108	868	772	976	5	305	225	280	12	12	3	140

Dimensions in millimetres unless stated

Dimensions subject to change without notice



Drillings are Rotolok standards. Variations can be made.

SIZE	A	B	C	D	E	F	G	J	K	L	Ø	P	R	S
150	152	250	70	476	346	546	5	216	125	355	8	12	2	110
200	203	300	76	565	458	641	5	216	150	250	12	12	3	90
250	254	350	76	660	548	736	5	241	175	290	12	12	3	105
300	300	400	76	826	656	902	5	280	200	465	12	12	3	120

Dimensions in millimetres unless stated

Dimensions subject to change without notice

• FABRICATED DIVERTER VALVES •

SPECIFICATION

Bodies

Fabricated in Mild or Stainless Steel.

Flap Plates and Spindle

Mild or Stainless Steel.

Wiper Seal

Polyurethane or food quality rubber.

Actuation

Air cylinder or manual.

Pneumatic Version

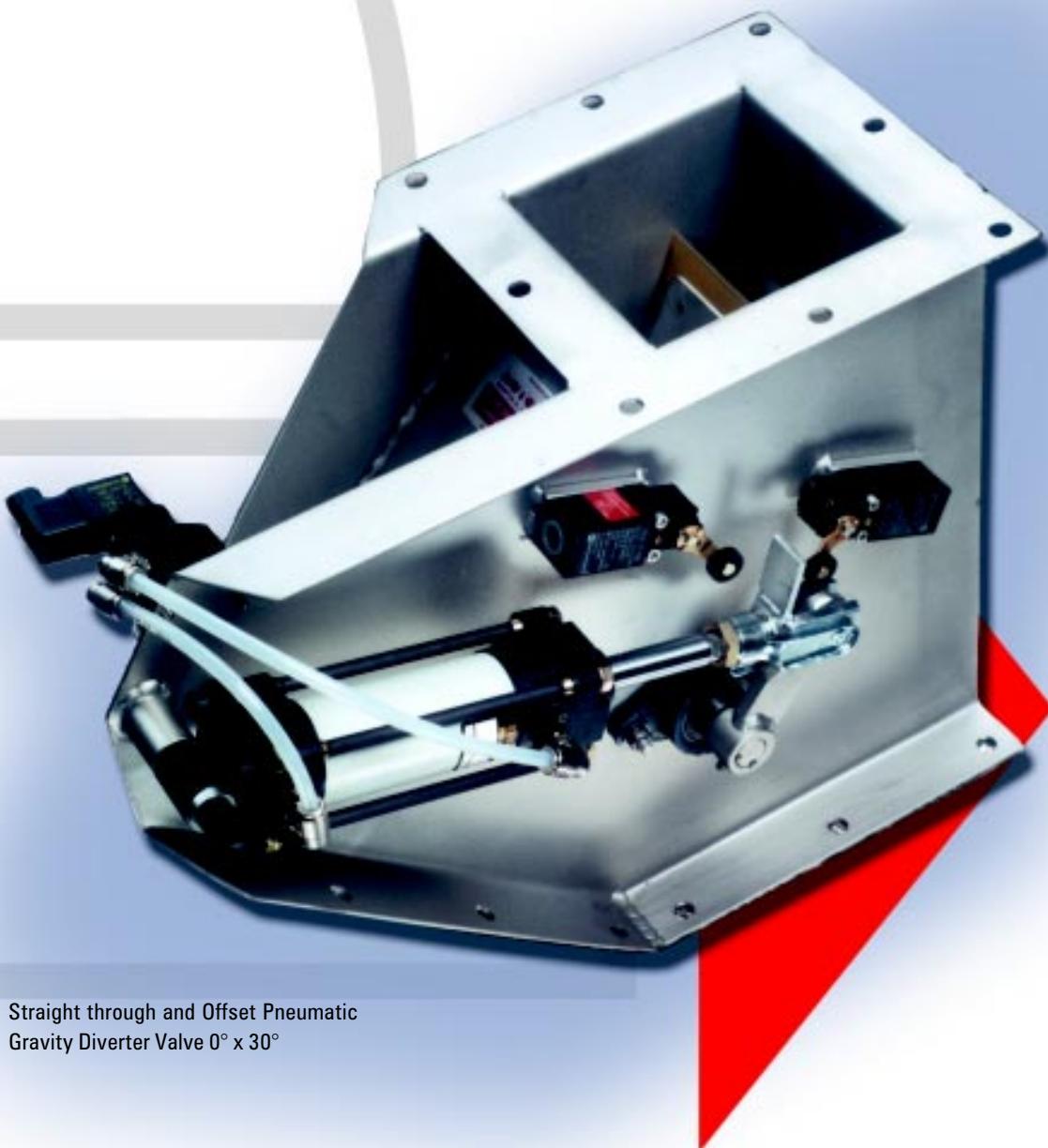
Complete with five port, four-way single solenoid spring return valve.

Limit Switches

Positioned to indicate open/closed conditions.

RANGE

Manufactured in four basic sizes based on a 30° divert angle. As the units are fabricated, versions can be tailor made to suit specific duties and needs. Divert angles can be changed to suit the application and the product being handled and options on inlet and outlet formats and flanges can be varied. With full flexibility around our standard design, Rotolok also manufactures a cast range for heavier duty application. Rotolok produces what you need to suit your application.



Straight through and Offset Pneumatic
Gravity Diverter Valve 0° x 30°