



# GRAIN TECH LTD

PROCESSING, HANDLING & STORAGE SYSTEMS

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## Rotary Valve Series



# BFCP Series – Blow Through Rotary Airlock Valve

This series is of extremely heavy-duty construction and have been designed to operate under arduous conditions with virtually any product.

These rotary valves have design features as follows:

- A vee-neck design inlet/outlet to reduce product shearing loads.
- A large capacity rotor with substantial shaft to withstand high differential pressures across the valve and greater torque loadings.
- Facilities for mounting a rigid gear motor drive assembly with chain tension adjustment feature.
- Externally mounted seated-for-life rotor outrigger bearings and substantial gland type packing end plate seals with optional lantern ring air purge.
- Chain drive fitted with safety guarding.



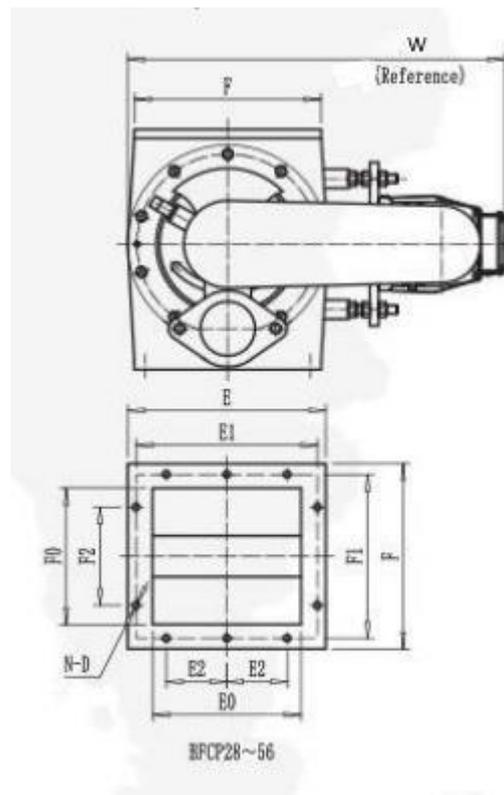
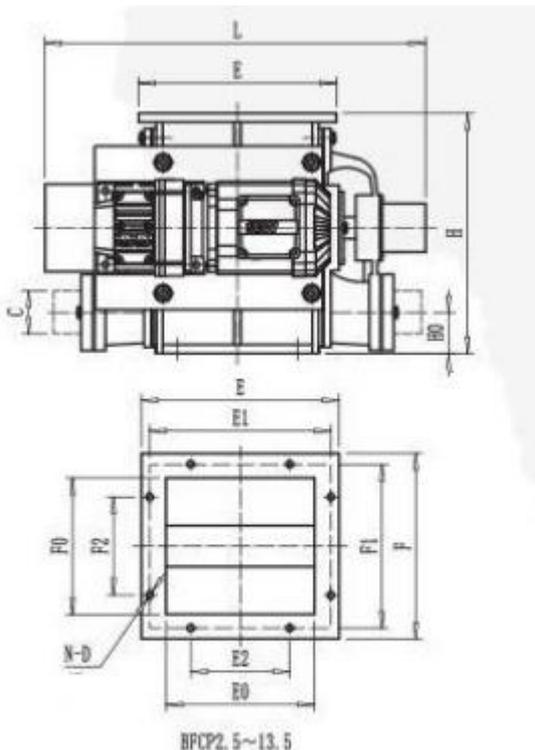
Inlet and outlet flanges are drilled to standard pattern.

Fabricated from cast iron body with steel rotor assembly machined for close tolerance operation and fitted with machined cast iron end plates or optional 304 or 316 stainless steel fabrication.

Supplied with inlet/outlet air flange fittings and finished in an enamel paint topcoat over a prepared and primed surface for cast iron models.

## Optional Equipment:

- Replacement rotor tips – steel, brass, bronze, nylon, PFTE, polyurethane and rubber.
- Special motors – flame proof, etc.
- Metering baffles.
- Body or top venting for pneumatic conveying systems.
- Variable speed drive.



The BFCP series rotary valves are widely used to meet the specific needs of modern bulk handling applications and are constructed to ensure high sealing and feeding efficiency with maximum durability.

(Note: There are 80, 100, 120 and 140 models which are not listed in this chart)

Model	L	W	H	H0	E	E0	E1	E2	F	F0	F1	F2	C	N	D
BFCP2.5	475	490	280	40	210	130	180	80	210	130	180	100	ø45	8	ø10
BFCP5.5	600	580	340	50	280	200	250	150	250	170	220	120	ø65	8	ø12
BFCP8.5	655	640	400	70	330	250	300	180	330	250	300	180	ø70	8	ø12
BFCP13.5	680	685	440	70	360	270	330	200	340	240	300	180	ø100	8	ø14
BFCP28	820	790	580	125	450	350	415	150	350	250	315	180	ø110	10	ø14
BFCP56	890	850	670	131	510	410	475	180	410	310	375	200	ø125	10	ø14

## TGFY Series – Flow Through Rotary Airlock Valve

The TGFY series is a standard model range including five capacity sizes, and are well proven in operation metering a wide range of dry solids, granular, pelleted, and powdered type materials from the outlets of silos, hoppers, cyclones, dust filters, mixers, weighers, etc, etc.

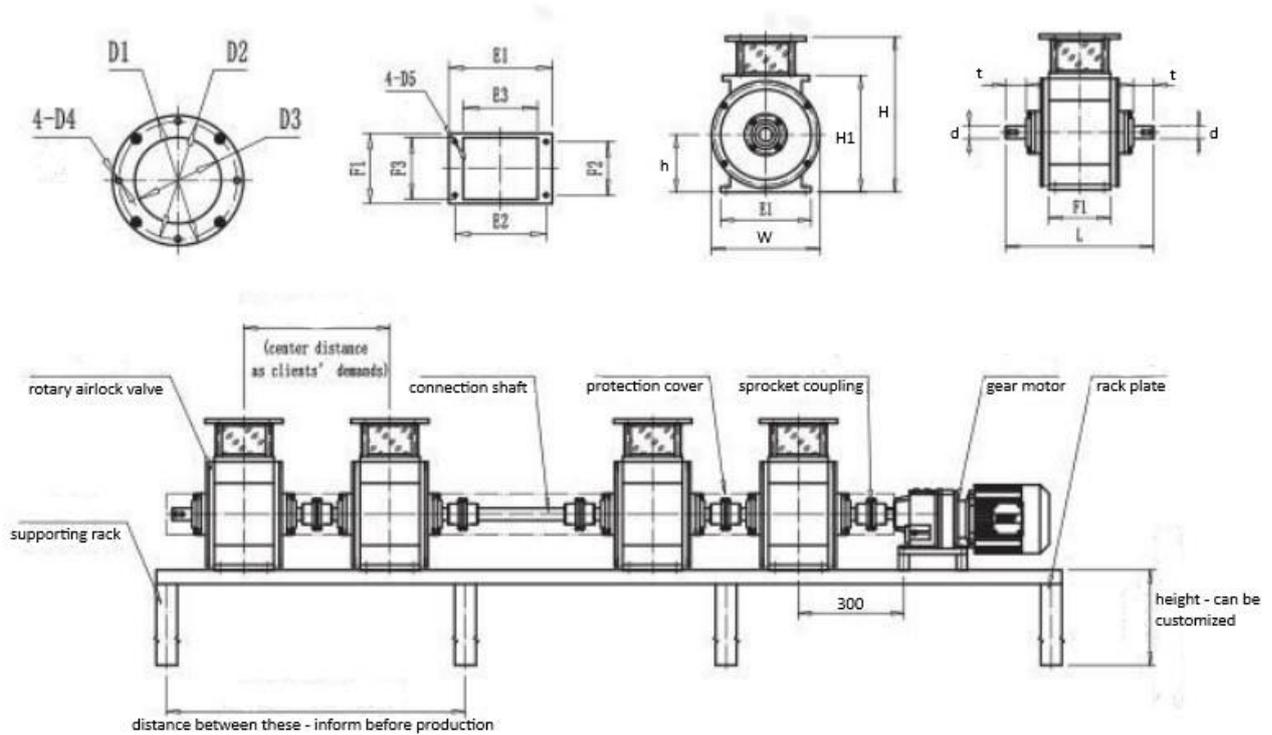
These rotary valves have design features as follows:

- Cast iron body and end plates machined to close tolerance.
- Steel rotor vane fitted to heavy duty machined steel shaft.
- End plate gland type seals.
- Round inlet fitted with removable acrylic sight glass.
- Square drilled outlet.
- Direct inline drive cyclo drive gear unit.
- Optional shaft extension for multi driven line shaft installation.
- Finish in enamel paint topcoat over a primed prepared metal surface.



These rotary valves may be fitted with a discharge line loader for installation within negative pneumatic conveying applications.





Model	Inlet & Outlet Dimensions			Installation Dimensions					Outer Dimensions									
	D3	E3	F3	D2	E2	F2	D4	D5	L	W	H	h	H1	D1	E1	F1	d	t
TGFY5	Ø147	180	150	Ø200	220	130	Ø8.5	Ø11	410	300	435	160	325	Ø222	250	170	Ø35	50
TGFY7	Ø159	182	160	Ø220	230	140	Ø8.5	Ø11	420	310	435	160	325	Ø250	260	180	Ø35	50
TGFY9	Ø184	182	210	Ø240	230	190	Ø8.5	Ø11	470	310	435	160	325	Ø270	260	230	Ø35	50
TGFY12	Ø208	240	218	Ø260	290	200	Ø11	Ø11	520	370	530	190	380	Ø290	320	238	Ø40	50
TGFY16	Ø250	240	260	Ø300	290	240	Ø11	Ø11	570	370	530	190	380	Ø330	320	280	Ø40	50

## TZYG Series – Rotary Airlock Valve

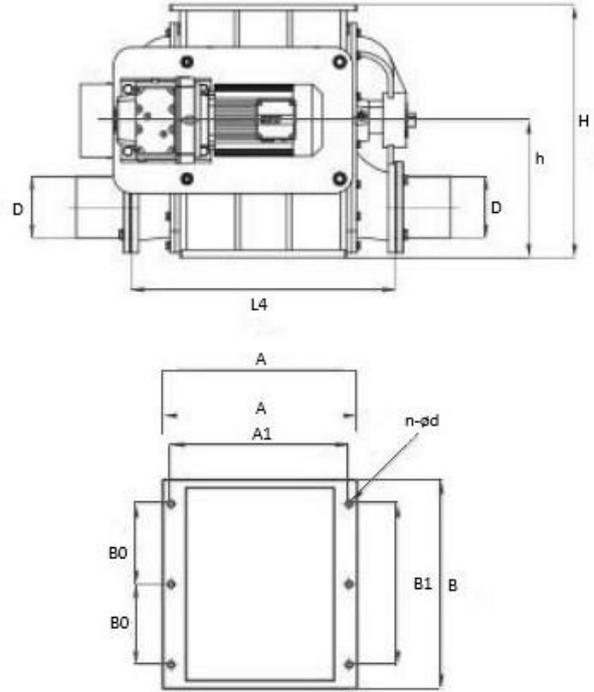
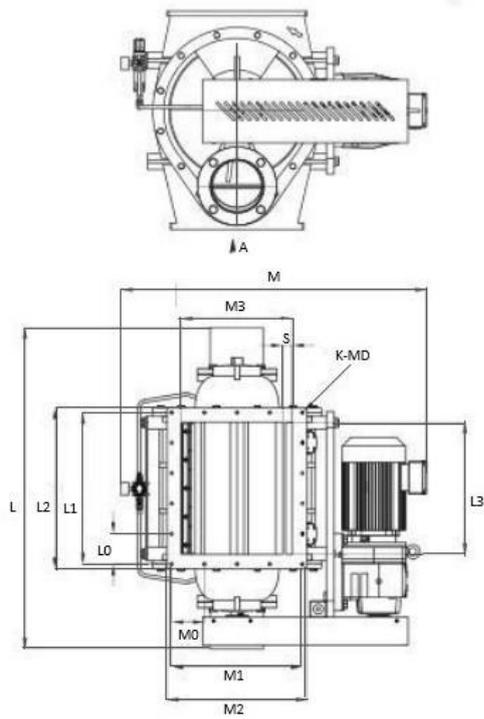
Heavy duty design for incorporation within dilute density pneumatic conveying systems and is ideal for multiple collection rotary valve pickup applications.

Suited to handling a wide range of dry solids, granular, pelleted, and powdered type materials.

In this blow through airlock design, the conveying air inlet and material discharge outlet combine in the bottom of the housing assembly with the pressurized conveying air flow transferring through the vane discharging cavity to maintain a clean material transfer.

The design includes a nodular cast iron housing with cast iron end plates having a carbon steel vane rotor and heavy-duty shaft assembly with all components machined for close tolerance fitting making this unit suitable for high pressure conveying applications. Also available fabricated from 304 or 316 stainless steel.





Model		L	L0	L1	L2	L3	L4	M	M0	M1	M2	M3
13/15	2.5L	610	90	162	182	140	384	535	110	130	150	130
22/22	5.5L	735	110	232	252	300	436	670	140	210	230	178
28/30	13.5L	844	105	315	340	276	544	740	92	216	310	236
36/38	28L	928	82	410	640	354	628	852	825	330	360	271
65/45	56L	1118	96	480	510	420	718	960	102.5	410	440	349
52/42	80L	925	117.5	430	500	390	732	1101	128	384	414	332
52/52	100L	1025	114	570	600	490	832	1101	128	384	414	332
52/13-200	140L	1260	130	780	810	700	1042	1145	128	384	414	332
52/13-300	140L	1260	130	780	810	700	1042	1145	128	384	414	332

Model	S	K-MD	H	h	H1	D	A	A1	B	B0	B1	n-ød
13/15	f	8-M12	355	200	1225	Ø52	190	162	152	f	100	4-Ø14
22/22	f	8-M12	425	250	156.5	Ø70	220	190	222	f	110	4-Ø14
28/30	f	12-M12	490	285	180	Ø108	300	270	302	f	210	4-Ø14
36/38	30	18-M12	580	328	207	Ø140	360	330	386	f	250	4-Ø14
65/45	30	18-M12	690	375	238	Ø168	840	770	908	350	780	6-Ø16
52/42	25	16-Ø16	745	405	257.5	f	460	625	635	95	380	10-Ø16
52/52	28	16-Ø14	745	405	257.5	f	460	625	535	110	440	10-Ø16
52/13-200	30	18-Ø14	710	430	257.5	f	460	625	745	110	660	14-Ø14
52/13-300	30	18-Ø14	860	510	280	f	524	694	745	110	660	14-Ø14

## BFCZ Series – Drop Through Rotary Airlock Valve

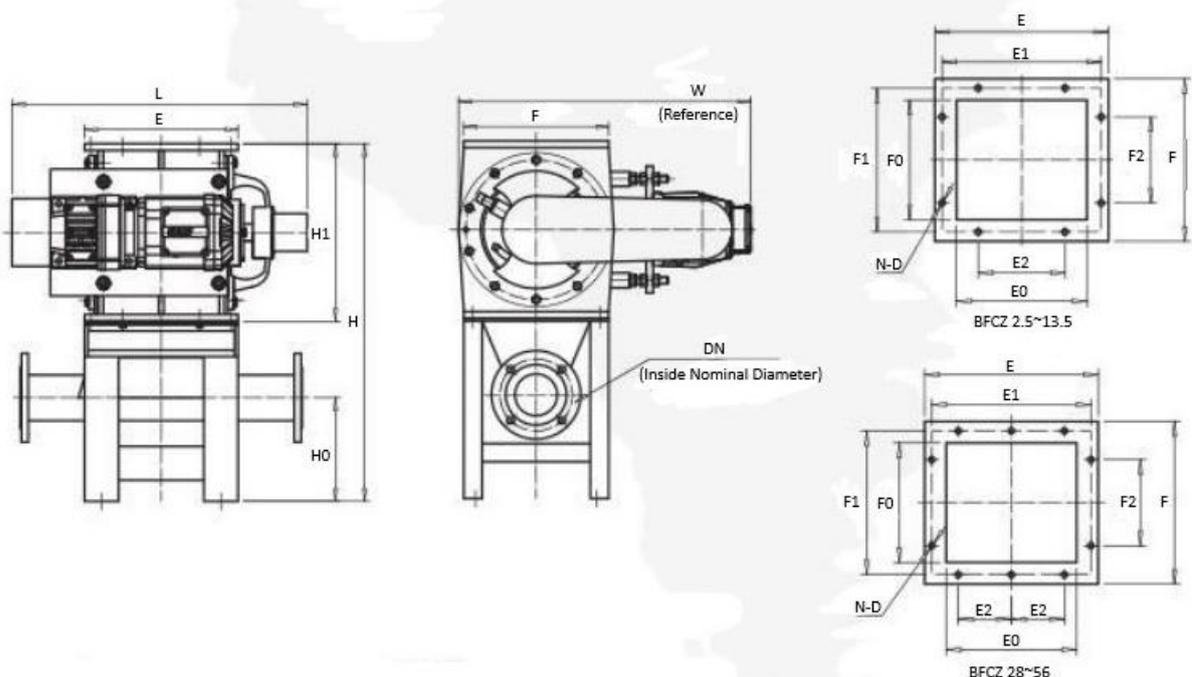
This airlock valve combines a high-pressure airlock valve together with separate venturi discharge air/material transfer assembly.

This airlock valve arrangement is commonly used within applications handling highly corrosive and granular type materials as the conveying air/material is kept away from the rotary valve rotor vanes. The aerodynamic design of the venturi improves the material conveying transfer efficiency and component working life.

The design is very suitable for multi transfer arrangements where a number of rotary valves are connected in series within a common pneumatic conveying line.

These rotary valves have design features as follows:

- A special vee-neck inlet/outlet design to reduce product shearing loads.
- A large capacity rotor with heavy duty shaft to withstand high differential pressures across the valve and greater torque loadings.
- Drive is via an adjustable chain and sprocket transmission from a cyclo drive gear motor unit.
- Externally mounted seated-for-life bearings and substantial gland type packing seals with optional lantern ring air purge.
- Available in cast iron housing and end plate assembly with steel rotor or optional 304 or 316 stainless steel fabrication.



(Note: There are 80, 100, 120 and 140 models which are not listed in this chart)

Model	L	W	H	H0	H1	E	E0	E1	E2	E3	F	F0	F1	F2	F3	N	D	DN
BFCZ2.5	455	490	570	150	280	210	130	180	80	210	210	130	180	100	152	8	Ø10	50
BFCZ5.5	580	580	690	205	340	280	200	250	150	250	250	170	220	120	220	8	Ø12	65
BFCZ8.5	635	640	810	245	400	330	250	300	180	330	330	250	300	180	270	8	Ø12	100
BFCZ13.5	660	685	850	245	420	360	270	330	200	340	340	240	300	180	296	8	Ø14	100
BFCZ28	800	790	1050	320	520	450	350	415	150	350	350	250	315	180	376	10	Ø14	125
BFCZ56	870	850	1180	320	650	510	410	475	180	410	410	310	375	200	446	10	Ø14	150

## RV-D.FC Series – Mechanically Operated Vane Sweep Cleaning Type

This series incorporates an internal vane pocket sweep cleaning paddle blade arrangement driven in concert with the valve vane rotation suited for handling sticky and low fluidity type materials.

The design of the rotor allows for optimum filling efficiency relative to standard valve rotor pocket design to ensure high-capacity throughputs.

These rotary valves have design features as follows:

- Integrated rotary valve and sweep pocket cleaning paddle blade arrangement.
- Inline drive from shaft coupled cyclo drive gear unit.
- Chain driven secondary shaft.
- Heavy duty rotary valve body assembly with machined components.
- Drive safety guard.
- Carbon steel fabricated unit support frame for rotary valve and venturi discharge assembly.
- Available in either 304 or 316 stainless steel for rotary valve body and rotor assemblies.



## RV-D.PI Series – Airjet Purge Cleaning Design Rotary Valve

This rotary valve design incorporates a high-pressure pulsating air turbulence feature for cleaning the returning valve vane pockets for use when handling sticky and easily agglomerated materials. Residual product remaining within the vane pocket is subject to a controlled and regulated airjet blast directed into the individual pocket as this travels on the return side of the rotary valve body. The pulse jet of air is controlled for pressure and blast frequency to suit the operating conditions.

These rotary valves have design features as follows:

- Cast iron body and end plate assemblies machined for close tolerance.
- Machined and polished rotor complete with heavy duty shaft.
- Sealed end plate bearings.
- Chain and sprocket transmission with adjustable tension from a cyclo drive gear unit complete with safety guarding.
- Drilled flange inlet and outlet.
- Vee-neck design inlet/outlet.
- Enamel paint finish over a prepared and primed surface.

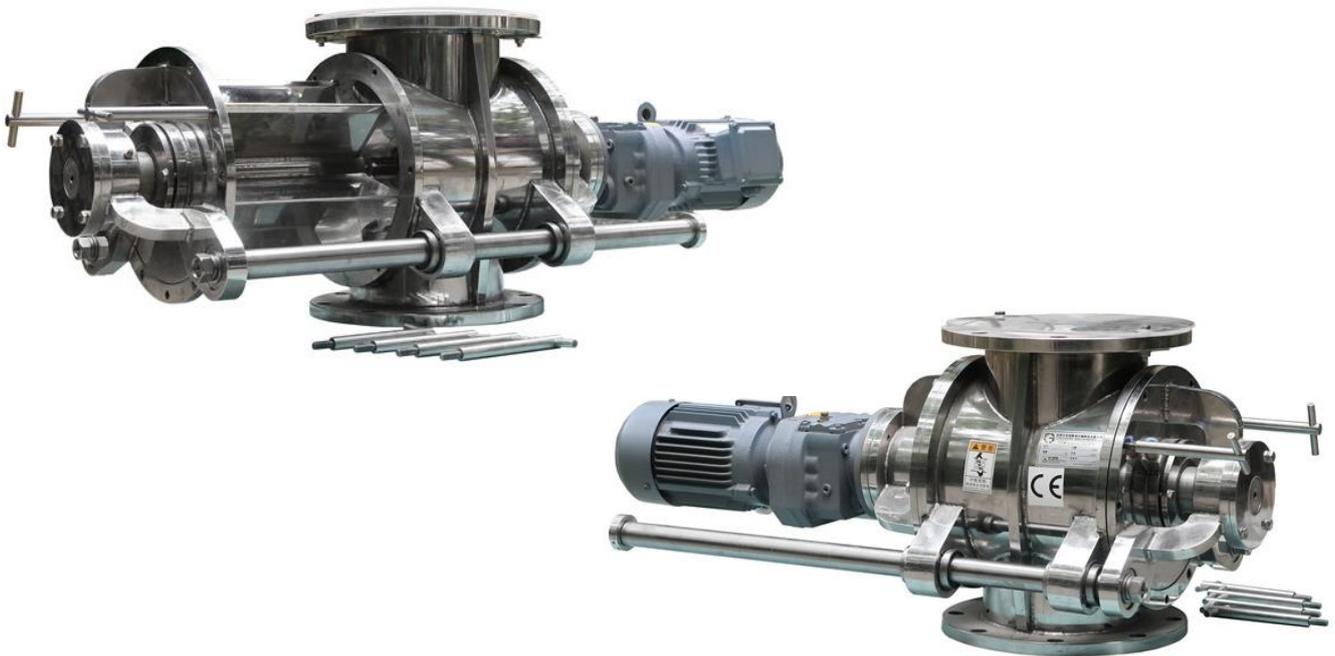


## RV-D.QC Series – Easy Cleaning Rotary Valve

Suited for incorporation within applications calling for frequent total hygiene clean down and non-contamination requirement in food, pharmaceutical and chemical related industries.

These rotary valves have design features as follows:

- Round inlet/outlet flange with vee-neck entry.
- Cast iron body and end plate assemblies machined for close tolerance finish.
- Welded and polished rotor with rounded pocket profile.
- Inbuilt slide out valve vane assembly operating on heavy duty slide shafts within cast and bushed outriggers.
- Inline shaft mounted gear drive unit.
- Secure rotor assembly position locking arrangement.
- Available in either 304 or 316 stainless steel with polished finish.



## RV-D\B.M Series – Micro Feeding Rotary Valve

This series rotary valve is designed for low feeding delivery rates where strict sanitation standards and requirements are called for.

These rotary valves have design features as follows:

- Forged body housing and flanged end plates.
- Machined and polished rotor including heavy duty shaft.
- Heavy duty shaft seals and end plate bearings.
- High resistance against explosion incidence.
- Heavy duty inlet/outlet drilled flanges.
- All contact surface areas fully polished.
- Available in either 304 or 316 stainless steel.
- Includes shaft mounted gear drive unit.
- May be fitted with optional features: - controlled flow rate, anti-choking.



# TWL Series – Light Duty Rotary Feeder

This series of rotary feeder is used within applications requiring regulated material delivery to follow in equipment or processes such as mills, screeners, belt conveyors, online mixers, elevators, etc.

The lightweight design keeps the installed load down and the compact structure with flanged inlet/outlet provides for simple installation, operation and maintenance.

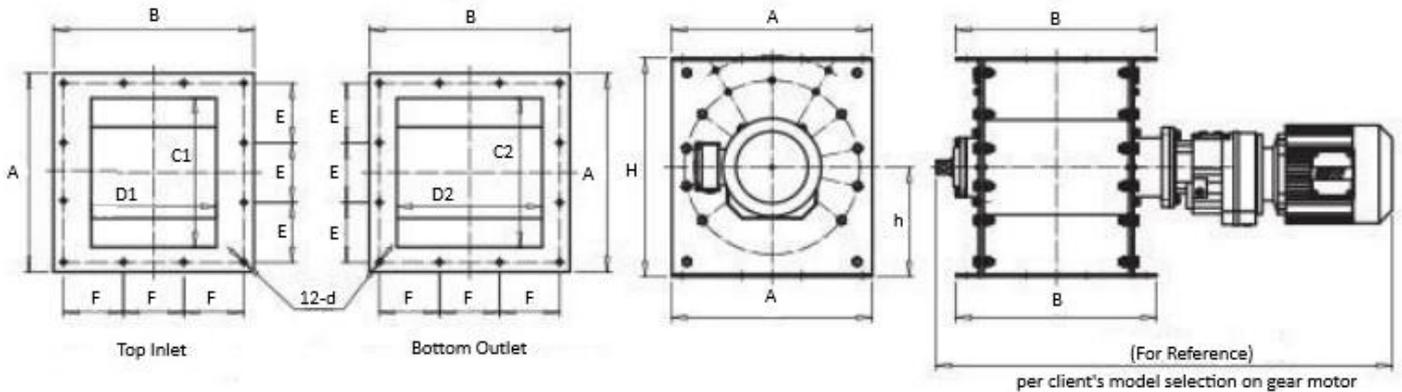
These feeder valves are ideally controlled via variable speed drives for installation for process supply regulation.

The end plates are fitted with packed gland seals and have flange mounted bearing sets.

Drive is via a shaft mounted gear motor drive.

Finished in enamel paint over a prepared and primed metal surface.

All component items are fabricated from carbon steel with a 304 stainless steel version also being available.



Model	Inlet & Outlet Dimension				Outer Dimension					Installation Dimension		
	C1	D1	C2	D2	L	A	B	H	h	E	F	d
TWL5	280	170	280	210	810	380	320	380	190	113	93	Ø12
TWL7	280	170	280	210	830	380	320	380	190	113	93	Ø12
TWL9	280	230	280	270	890	380	380	380	190	113	113	Ø12
TWL12	300	250	300	290	910	400	400	440	220	120	120	Ø12
TWL16	300	310	300	350	970	400	460	440	220	120	140	Ø12
TWL20	350	300	350	340	960	450	450	450	225	136	136	Ø14
TWL25	350	330	350	370	1052.5	450	480	500	250	136	146	Ø14

# TXL – Standard Drop Through Rotary Valve

Widely used within most process applications where silo/bin/hopper discharge filter collector discharge, metering materials to following mills, screeners, dryers, conveyors, and similar applications is called for.

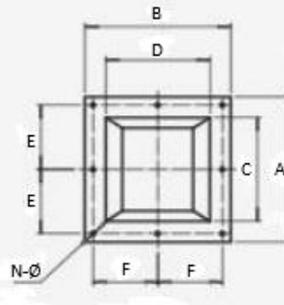
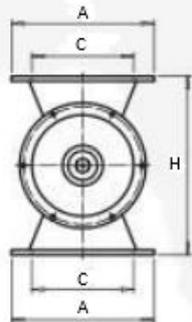
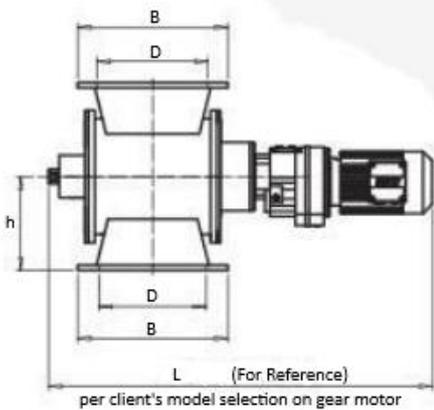
Suited for ordinary pressure use in food processing, grain/seed handling, chemical, metallurgical, mining, fertiliser, and related industries.

Fabrication is from cast iron housing and end plate assemblies machined to close tolerance with carbon steel open end rotor fitted up to a heavy-duty shaft vane running in dual roller bearing assemblies complete with end plate seals.

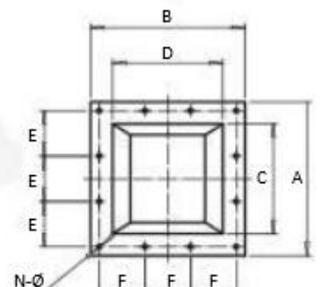
The inlet/outlet as a vee-profile for easier material handling flows.

Drive is via a shaft mounted gear drive unit complete with cyclo drive or SEW type gear box.

Finish is in enamel paint over a primed and prepared metal surface.



TXL5-16



TXL20-25

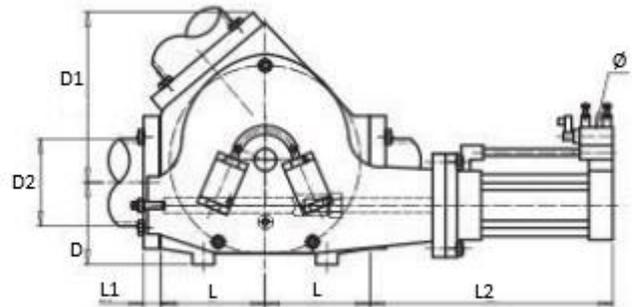
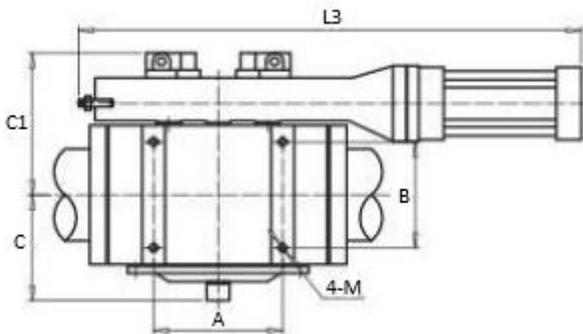
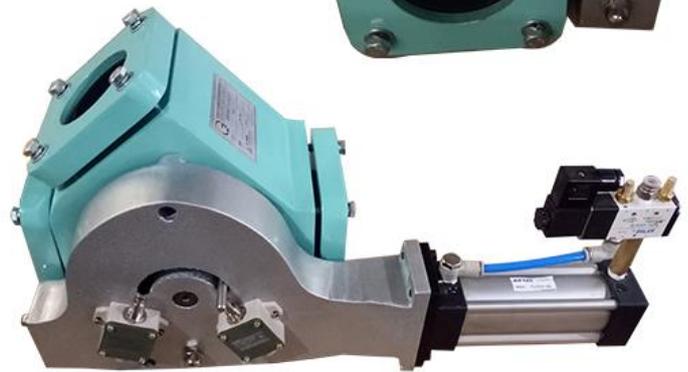
Model	Inlet & Outlet Dimension		Outer & Installation Dimension							
	C	D	H	h	L	A	B	E	F	N-Ø
TXL5	200	200	400	200	890	300	300	130	130	8-Ø12
TXL7	220	220	440	220	910	320	320	140	140	8-Ø12
TXL9	240	240	440	220	1020	340	340	150	150	8-Ø12
TXL12	260	260	440	220	1040	360	360	160	160	8-Ø14
TXL16	300	300	460	230	1080	400	400	180	180	8-Ø14
TXL20	350	300	520	260	1045	450	400	136	120	14-Ø14
TXL25	350	350	520	260	1105	450	450	136	136	14-Ø14

## THFX Series – Plug Diverter Valve

Two-way plug diverter valve mainly used within pneumatic conveying installations for multi-direction flow. Available in a range of sizes/capacities.

These diverter valves have design features as follows:

- 304 or 316 stainless steel fabrication.
- Heavy duty design housing and plug assembly with close tolerance fitment.
- Flange connection for conveying pipework assembly.
- Pneumatic air cylinder actuation with control valve and read switch position indicator.
- Optional pneumatic electro drive or manual actuation.

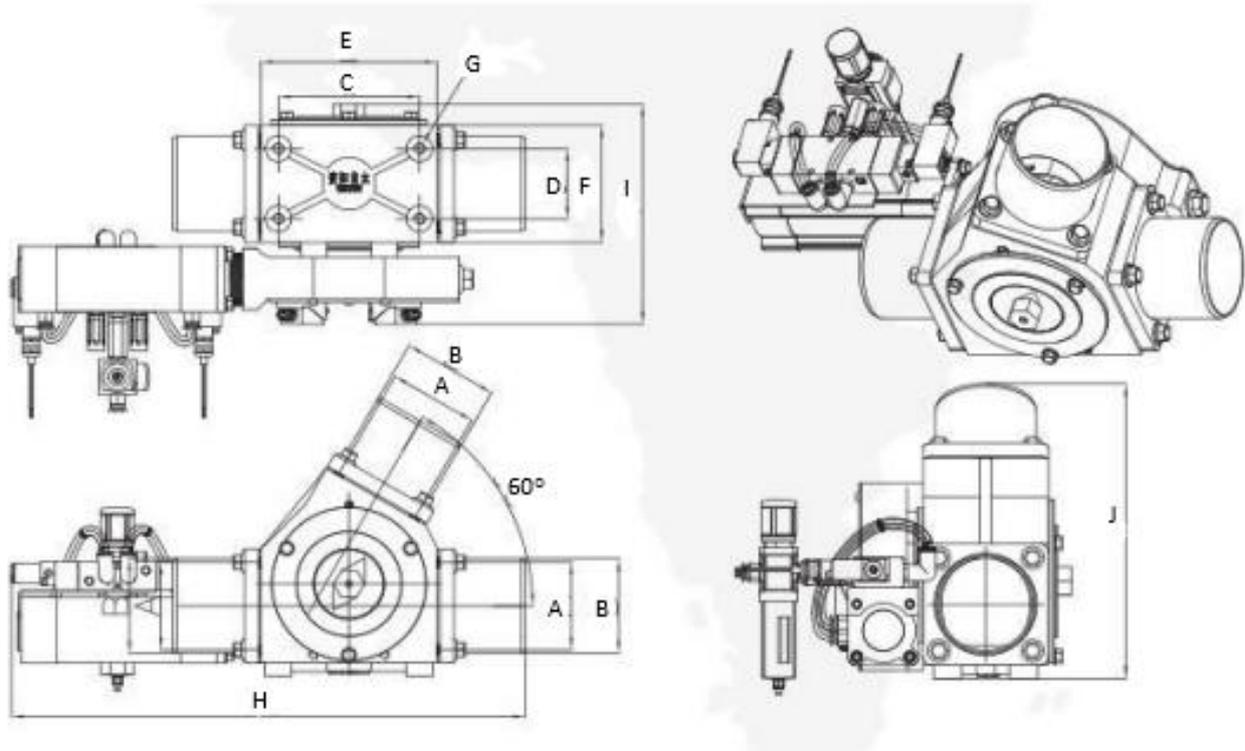


Model	Outer & Installation Dimension												
	A	B	C	C1	D	D1	D2	L	L1	L2	L3	M	Ø
THFX65x2	100	80	85	155	80	158	73	95	20	330	575	M8	8
THFX80x2	115	100	98	165	90	176	89	105	20	320	575	M10	8
THFX100x2	140	120	105	175	95	198	114	120	20	315	590	M10	10
THFX120x2	170	140	125	195	100	230	130	140	20	345	695	M12	10
THFX150x2	210	160	140	215	125	265	159	160	22	355	715	M12	12
THFX180x2	240	180	155	230	135	295	180	175	22	365	715	M12	12
THFX200x2	280	220	175	260	155	335	219	200	25	425	875	M12	16
THFX220x2	310	240	185	275	170	365	245	220	25	420	885	N12	16
THFX250x2	350	270	200	285	185	405	275	245	25	435	960	M12	16

## TXFLF Series – Plug Diverter Valve

Heavy duty series two-way diverter valve manufactured from QT600-3 nodular cast iron for abrasion resistant feature. Fitted with valve plug precision assembled bearings and cast-iron flange assemblies.

Incorporates pneumatic air cylinder actuation with control valve and read switch indicator as standard with optional electro drive or manual operation also being available.



Model	A	B	C	D	E	F	G	H Reference Value	I Reference Value	J Reference Value
TXFLF6x2	60	67	160	80	200	134	4xM12↓25	592	249	316.5
TXFLF8x2	80	87	160	80	200	134	4xM12↓25	592	249	321.5
TXFLF10x2	100	108	160	80	200	134	4xM12↓25	582	249	317
TXFLF12x2	120	127	180	100	240	155	4xM12↓25	632	277	359
TXFLF15x2	150	159	220	120	290	190	4xM16↓35	719	327.5	413.5
TXFLF18x2	180	194	250	150	325	230	4xM16↓35	796.5	379	463
TXFLF20x2	200	219	280	165	360	260	4xM16↓35	861	411	507

## THFX-G Series – Plug Diverter Valve

This series of diverter valve is manufactured with cast 304 or 316 body housing and stainless-steel plug assembly complete with pipe clamp fittings and rotary actuator diverter control incorporating position indicator.

May also be supplied with electric drive or manual operation.



Model	A	B	C	C1	D	L	4-M	H	H
THFX-G80x2	80	98	102	246.5	ø89	240	4-M10	269.5	90
THFX-G100x2	100	114	112	256.5	ø108	280	4-M10	325.5	110
THFX-G120x2	115	144	132	326.5	ø133	320	4-M12	392.5	130
THFX-G150x2	150	168	145	340.5	ø159	360	4-M12	449.5	160
THFX-G180x2	155	183	163	355.5	ø194	420	4-M12	505	180
THFX-G200x2	200	199	177	394	ø219	480	4-M12	571	210
THFX-G220x2	210	241	204	419	ø245	520	4-M16	658	230
THFX-G250x2	210	278	243	453	ø273	540	4-M16	686.5	250

## Two-way Gravity Diverter Valve

Incorporated within bulk material conveying and process handling systems for changing the flow direction.

These diverter valves have design features as follows:

- Heavy duty design with fabricated assembly including drilled flanges and sure seal diverter blade arrangement.
- Air cylinder actuation complete with read switch position indicator.
- Available in carbon steel and stainless-steel versions.



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