



PRODUCT INFORMATION SHEET

BTD

BALL DIVERTER VALVE



BACKGROUND

Established in 1950, DMN-WESTINGHOUSE has been a worldwide, trusted supplier of rotary valves and diverter valves for decades, serving a large range of dry bulk solids processing industries. True to our promise to provide future-proof value, our experts continue monitoring the performance of our products in practice, including in the context of customer feedback and emerging new technologies and practices.

Our staff have developed a complete range of premium diverter valves for the transport of any type of dry bulk solid in powder, granule, or pellet form. We offer plug, tube, flap, and ball diverter valves – all with the DMN-WESTINGHOUSE quality mark.

These durable diverters can be further customised to your specifications and are easy to integrate with your current rotary valves. Tell us more about your setup and applications, and we will offer you the perfect diverter valve.

MEET THE **BTD** BALL DIVERTER VALVE

The Ball-Type Diverter valve (BTD) is designed to handle abrasive products in pneumatic conveying systems. It can be installed in high-pressure and high-temperature settings, such as thermoelectric power stations, incinerators, foundries, and cement, glass, ceramic, limestone, gypsum, and chemical plants.

It is suitable for both diverting and converging applications. In diverting mode, the product forms its own wear surface, while in converging mode, the diverter's impact area is reinforced for durability. The BTD is constructed from robust ductile cast iron, to ensure efficiency and a long service life in demanding environments.



THE **BTD** BALL DIVERTER VALVE AT A GLANCE

- Suitable for product temperature from 14°F to 176°F; options for higher temperatures are available on request
- Pressure range: -7.25 to +87 PSI
- Especially designed for transport of abrasive dry bulk solids
- Suitable for systems with high pressures and temperatures
- Two removable side covers allow for seal replacement in-place
- Body made from ductile cast iron
- Smart design that ensures that the seal becomes tighter with the increase of positive pressure
- Seals replaceable with the valve in place
- Replaceable wear bushings on the outlet
- Grease-lubricated shaft seals
- ATEX 2014/34/EU certification available

PROPERTIES

- Hard-wearing diverter made from premium material, designed to withstand the constant attack of abrasive dry bulk solids
- Built for excellent performance under high pressure and high temperatures
- In-place seal replacement

BENEFITS

With a smart design executed in premium, extremely robust materials, **the BTD offers great value and performance** under extreme circumstances. The possibility of in-place seal replacement makes servicing easy and quick, ensuring **lower costs** due to minimal downtime.

APPLICATIONS

DMN-WESTINGHOUSE produces all existing types of diverter valves, for a broad range of industries. Get in touch and share the details of your process and installation, so that we can recommend the perfect valve for you.

SPECIFICATIONS

Flange connection	Round PN 10 or ANSI 150
Maximum allowable working pressure	-7.25 to 87 PSI
Allowable conveying product temperature	-13°F to +176°F
Maximum allowable working temperature	-4°F to +140°F
ATEX 2014/34 EU	Marking of the mechanical equipment II 1D/2D and II -/2G

TYPE	AVAILABLE SIZES						
BTD ball diverter valve	65	80	100	125	150	200	250

MATERIAL SPECIFICATIONS

Cast housing/end covers	Ductile spheroidal cast iron GS 500/7	UNI EN 1563-UNI 4544 ASTM A536
Seal	Polyurethane	
Optional	Silicone (+302°F)	

DRIVE SPECIFICATIONS

Airtorque	Type DR double acting pneumatic actuator
Medium	Air filtration lubricated or not up to 145 PSI
Temperature range	-40°F to +176°F
Working pressure	72–116 PSI
Tube	Ø 0.39"

AIR CONSUMPTION

TYPE	AVAILABLE SIZES						
BTD ball diverter valve	65	80	100	125	150	200	250
At 6 bar LTR/cycle opening-closure	12.3	12.3	21.5	36.3	36.3	50	88

SOLENOID VALVE SPECIFICATIONS

Solenoid valve	5/2 NAMUR bistable version with manual control
Festo	Type VSNC-F-B52-G14-FN
Medium	Air filtration lubricated or not up to 116 PSI
Connection	1/4"

SOLENOID COIL SPECIFICATIONS

Festo	Type VACN-N...
Protection	IP 65
Socket connection	M 16 Ø 0.24"–0.31"
Standard voltage	24 VDC 110/230 VAC 50/60 Hz
Temperature range	-4°F to +140°F



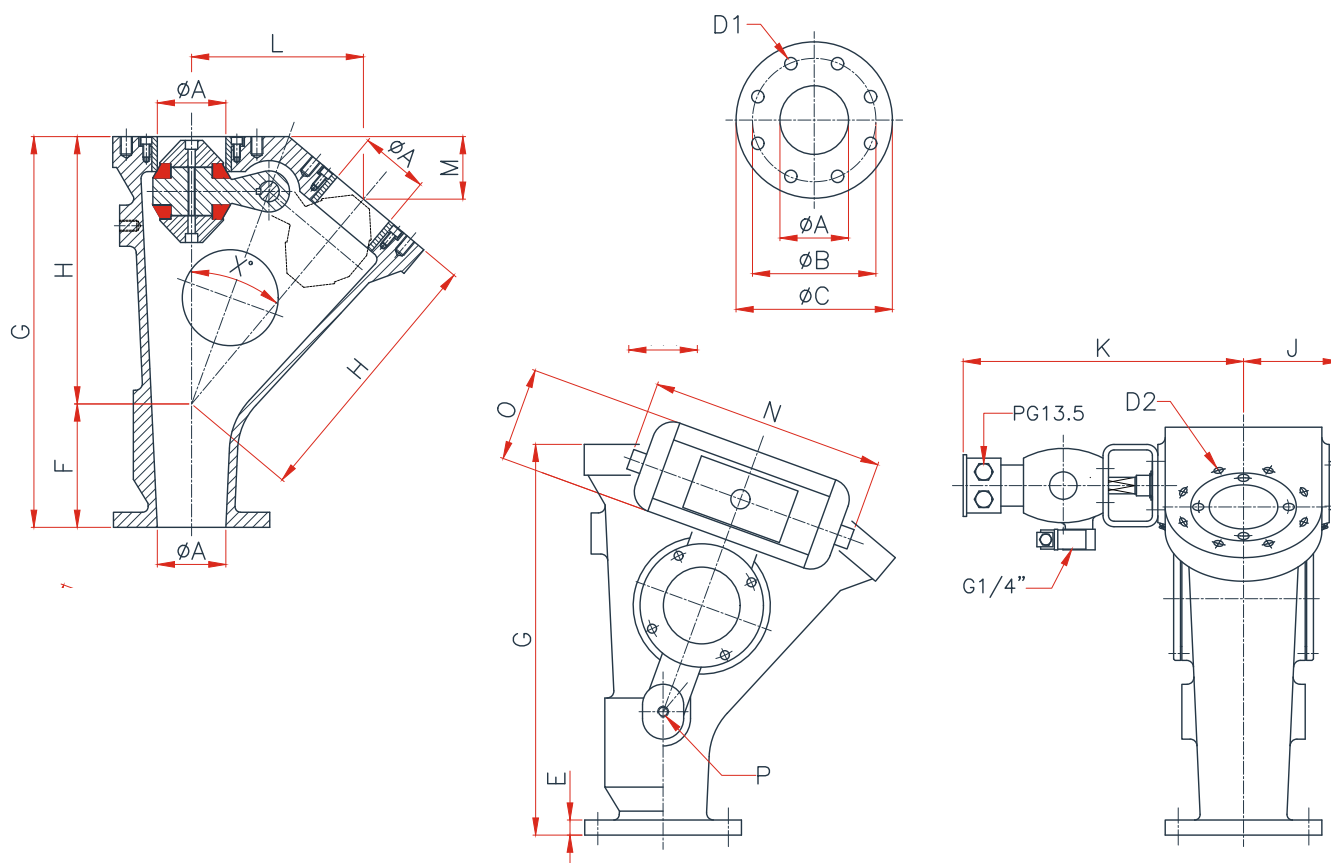
SWITCH/TERMINAL BOX SPECIFICATIONS

Rotech	Type ACR3ASTAZ10 Micro switches
Protection	IP 65
Standard voltage	4 A, 230 VAC
Temperature range	-13°F to +185°F
Cable gland	M20x1.5 Clamp. range 0.31" to 0.51"

OPTIONAL SWITCH/TERMINAL BOX SPECIFICATIONS

Rotech	Type APFN412EASEAZ10
Inductive proximity switch	Pepperl & Fuchs. Type NBN4-12GM50-E2
Protection	IP 65
Standard voltage	10 VDC to 30 VDC 3-wire PNP NO - 0-200 mA
Temperature range	-13°F to +158°F
Cable gland	M20x1.5 Clamp. range 0.31" to 0.51"

MEASUREMENTS



TYPE	PN 10				ANSI 150 LBS				
BTD	ØA	ØB	ØD1	ØC	ØB	ØD1	ØD2	E	F
65	65	145	4xØ18	185	139.7	4xØ19	4x M16x25	18	95
80	80	160	8xØ18	200	152.4	4xØ19	*x M16x25	20	140
100	100	180	8xØ18	228.6	190.5	8xØ19	8x M16x25	22	180
125	125	210	8xØ18	255	215.9	8xØ22,2	8x M16x25	24	225
150	150	240	8xØ22	285	241.3	8xØ22,2	8x M16x25	24	240
200	200	295	8xØ22	340	298.4	8xØ22,2	8x M16x25	25	160
250	250	350	12xØ22	407	361.9	12xØ25,4	12x M20x35	30	170

Flange connection: Pn 10 or
Ansi 150 lbs * 8 holes for Pn
10, 4 holes for AnSi 150 lbs

TYPE	BTD	G	H	J	K	L	M	N	O	P	X°	WEIGHT
65	65	550	455	130	395	228	61	310	105	M16x20	30°	68 kg
80	80	500	360	135	400	232	84	310	105	M16x20	40°	77 kg
100	100	570	390	145	425	250	91	380	120	M16x25	40°	100 kg
125	125	700	475	165	470	305	111	450	140	M20x25	40°	155 kg
150	150	780	540	175	480	347	126	450	140	M20x20	40°	208 kg
200	200	810	650	200	515	418	152	520	150	M20x25	40°	300 kg
250	250	850	680	260	630	437	159	640	170	M20x30	40°	450 kg

Technical modifications are possible, dimensions in



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