

PRODUCT INFORMATION SHEET

PTD **PLUG 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, ball, and flap diverter valves – all with the DMN-WESTINGHOUSE quality mark.

These durable diverters can easily be integrated with our rotary valves and our proprietary Smart Flow Control. Tell us more about your setup and applications, and we will offer you the perfect diverter valve.

MEET THE **PTD** PLUG DIVERTER VALVE

The PTD plug diverter valve is especially designed to route powders and pellets in pneumatic conveying systems with minimum degradation. Precision machining, proper sealing, and an obstruction-free internal geometry guarantee a smooth passage of your product.

The user-friendly, foolproof design enables quick on-site internal examination, servicing, and – when necessary – replacement of seals. The PTD design features no moving parts on the outside and complies with all current guidelines regarding safety in the workplace.



THE **PTD** PLUG DIVERTER VALVE AT A GLANCE

- Aluminium housing and end covers, installed with a dual-pipe plug (two-channel design)
- All product contact surfaces are stainless steel AISI 316/DIN 1.4404
- No moving parts on the outside
- Three FDA and EC 1935/2004-compliant silicone belly seals guarantee the sealing between housing and plug
- Pressure-tight body, ensuring no leakage to atmosphere
- Fitted with static belly seals, the standard PTD is suitable for systems with positive pressures up to 43.5 PSI
- Fitted with inflatable belly seals, the PTD is suitable for systems with positive pressures up to 87 PSI
- Pressure shock resistant up to 10 barg*
- The PTD with static belly seals is standard supplied with solenoid valve and inductive position sensors. sensors; a terminal box can be selected optionally
- The PTD with inflatable belly seals is supplied with a complete electro-pneumatic control system, including solenoids, terminal box and inductive position sensors
- The standard diverter is suitable for product temperatures ranging from -13°F to +176°F at ambient temperatures of +23°F to +104°F. Versions suitable for higher temperatures are available on request
- Versions with electrical drive and/or wear-resistant pipes available

- EC 1935/2004 compliant
- ATEX 2014/34/EU certification available

PROPERTIES

- Glue-free belly seals ensure a fast seal replacement process
- Easy, two-sided access – service the diverter from the most convenient side
- Plug position indicator on both sides
- Minimal service required
- The compact form and user-friendly design ensure great ease of operation

BENEFITS

Glue-free seal replacement, faster checks, minimal servicing needs, and maximum user-friendliness each lead to greater efficiency. Your operators perform their tasks quicker, leading to minimal downtime.

Your benefit? The PTD sets a new standard in servicing efficiency, ensuring **more uptime and reduced expenses**.

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.

*Size 200 (8") excluded

SPECIFICATIONS

Flange connection	Round PN 10 or ANSI 150
Maximum allowable working pressure	10.15 PSI to 43.5 PSI
Optional: inflatable seal size 50-200	10.15 PSI 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						
PTD plug diverter valve	2" (50)	2.5" (65)	3" (80)	4" (100)	5" (125)	6" (150)	8" (200)

MATERIAL SPECIFICATIONS

Cast housing/end covers/plug	Aluminium EN AC 42100 (EN AC-Al Si7Mg0.3)	
Piping	Stainless steel AISI 316L	DIN 1.4404
Static and inflatable belly seal	Silicone	FDA approved – EC 1935/2004 compliant

DRIVE SPECIFICATIONS

Double acting cylinder	According to ISO 15552
Medium	Air filtration lubricated or not up to 145 PSI
Temperature range	-4°F to +176°F
Working pressure	72.5 PSI to 114 PSI
Tube	Ø 0.39"



AIR CONSUMPTION

TYPE	AVAILABLE SIZES						
PTD plug diverter valve	2" (50)	2.5" (65)	3" (80)	4" (100)	5" (125)	6" (150)	8" (200)
At 87 PSI Ft ³ /stroke	0.074	0.175	0.19	0.22	0.41	0.485	1

SOLENOID VALVE SPECIFICATIONS

Cylinder	5/2 bistable version with manual control
Festo	Type JMFH-5-1/4-EX
Medium	Air filtration lubricated or not up to 116 PSI
Connection	1/4"

Inflatable seal	3/2 monostable version with manual control
Festo	Type MFH-3-1/4-EX
Medium	Air filtration lubricated or not up to 116 PSI
Connection	1/4"

SOLENOID COIL SPECIFICATIONS

Festo	Type MSF-...
Protection	IP 66
Socket connection	M 16 Ø 0.23" to 0.31"
Standard voltage	24 VDC 110/230 VAC 50/60 Hz
Temperature range	+23°F to +104°F

PRESSURE SWITCH SPECIFICATIONS

Festo	Type PEV-1/4-B
Protection	IP 65
Voltage	Max. 125 VDC/250 VAC



SENSOR SPECIFICATIONS

Pepperl & Fuchs

Standard

Type NBB5-18GM50-E2-V1 incl. connector M12 and 6.5 ft cable

D.C. sensor (3 wire)

Nominal voltage: 10–30 VDC

Normally open PNP

Ambient temperature: -13°F to +158°F

Alternatives on request

TERMINAL BOX SPECIFICATIONS

ROSE

Material

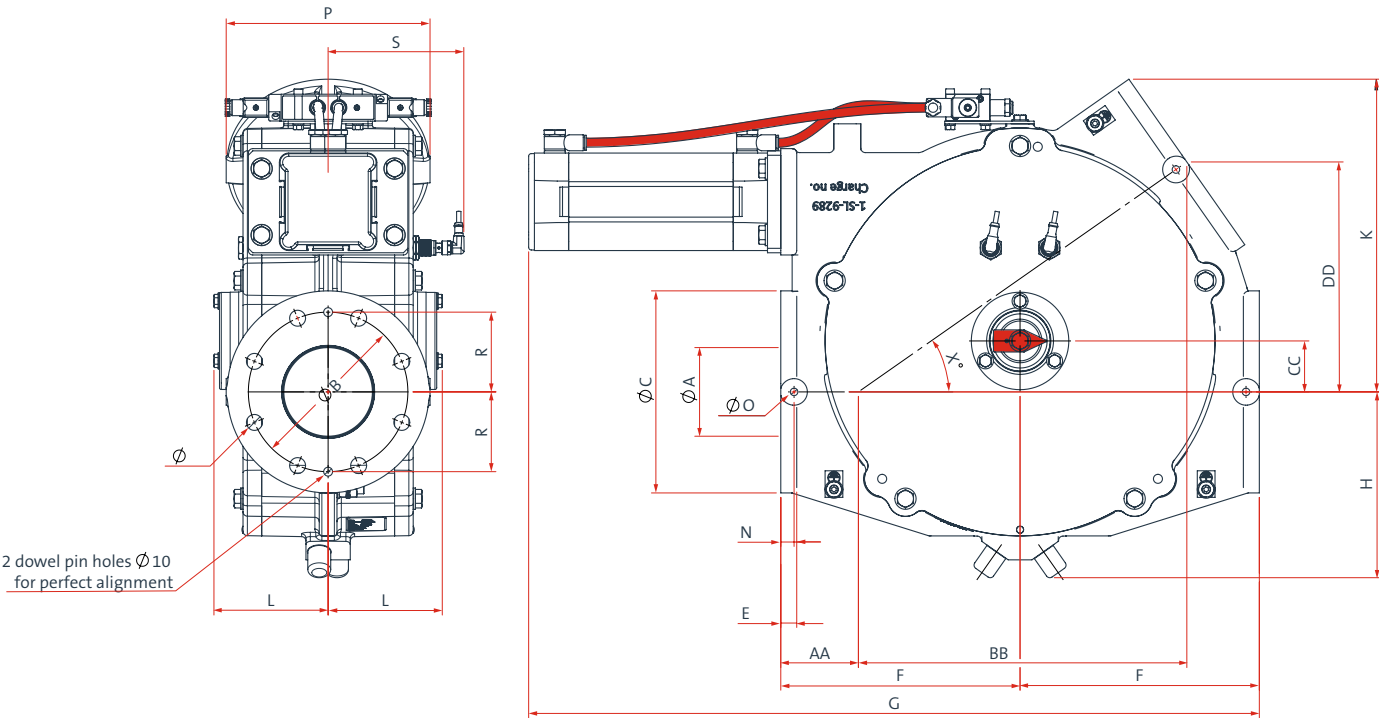
Polyester

Protection

IP 66



MEASUREMENTS



TYPE	DIN				ANSI																	
PTD	ØA	ØB	D	ØC	ØB	D	E	F	G	H	K	L	N	O	P	R	S	X	AA	BB	CC	DD
2" (50)	1.97	4.92	4xØ0.71	6.50	4.75	4xØ0.75	0.63	8.07	24.33	6.69	9.72	4.41	0.49	M10x20	6.69	2.46	4.76	33.5	3.50	10.55	1.38	6.97
2.5" (65)	2.56	5.71	4xØ0.71	7.28	5.50	4xØ0.75	0.63	8.46	26.69	7.09	11.02	4.61	0.49	M10x20	7.48	2.85	5.16	36.7	3.43	10.83	1.67	8.07
3" (80)	3.15	6.30	8xØ0.71	7.87	6.00	4xØ0.75	0.71	10.04	30.24	7.68	12.60	5.00	0.59	M10x20	8.07	3.15	5.45	36.6	4.25	12.68	1.91	9.45
4" (100)	3.94	7.09	8xØ0.71	8.98	7.50	8xØ0.75	0.71	10.63	32.01	8.83	13.90	5.12	0.59	M10x20	9.06	3.54	5.94	35	3.46	14.57	2.26	10.24
5" (125)	4.92	8.27	8xØ0.71	9.84	8.50	8xØ0.87	0.79	13.19	39.02	10.43	16.69	5.87	0.69	M12x24	10.04	4.13	6.44	35.5	4.57	17.76	2.76	12.68
6" (150)	5.91	9.45	8xØ0.87	11.22	9.50	8xØ0.87	0.79	14.76	41.77	11.61	19.09	6.54	0.79	M12x24	11.50	4.72	7.17	35.8	4.72	20.12	3.25	14.53
8" (200)	8.31	11.61	8xØ0.87	13.50	11.75	8xØ0.87	0.98	19.69	51.02	14.96	25.08	7.83	0.98	M12x20	13.78	5.81	8.31	34.8	5.24	28.03	4.53	19.49

Technical modifications are possible, dimensions in inches.



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