DMN
WESTINGHOUSE

PRODUCT INFORMATION SHEET

PTD

PLUG DIVERTER VALVE

FDA

FUTURE-PROOF VALUE SINCE 1950

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 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

- The standard diverter is suitable for product temperatures ranging from -25 °C to +80 °C at ambient temperatures of -5 °C to +40 °C; versions suitable for higher temperatures are available on request
- Fitted with static belly seals, the standard PTD is suitable for systems with positive pressures up to +3 barg
- Fitted with inflatable belly seals, the PTD is suitable for systems with positive pressures up to 6 barg
- Pressure shock resistant up to 10 barg*
- 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
- The PTD with static belly seals is standard supplied with solenoid valve and inductive position 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
- Versions with electrical drive and/or wear-resistant pipes available
- EC 1935/2004- and FDA-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 excluded

SPECIFICATIONS

Flange connection	Round PN 10 or ANSI 150
Maximum allowable working pressure	-0.7 to 3 barg
Optional: inflatable seal size 50-150 **inflatable seal size 200**	-0.7 to 6 barg -0.7 to 3 barg
Allowable conveying product temperature	-25˚C to 80˚C
Maximum allowable working temperature	-20˚C to 60˚C
ATEX 2014/34 EU	Marking of the mechanical equipment II 1D/2D and II -/2G

TYPE	AVAILABLE SIZES						
PTD plug diverter valve	50	65	80	100	125	150	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 10 bar
Temperature range	-20˚C to 80˚C
Working pressure	5–10 bar
Tube	Ø 10 mm

AIR CONSUMPTION

TYPE	AVAILABLE SIZES						
PTD plug diverter valve	50	65	80	100	125	150	200
At 6 bar LTR/stroke	**2.1**	**4.95**	**5.5**	**6.35**	**11.6**	**13.75**	

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 8 bar
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 8 bar
Connection	1/4”

SOLENOID COIL SPECIFICATIONS

Festo	Type MSF-...
Protection	IP 66
Socket connection	M 16 Ø 6–8 mm
Standard voltage	24 VDC 110/230 VAC 50/60 Hz
Temperature range	-5˚C to 40˚C

PRESSURE SWITCH SPECIFICATIONS

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

SENSOR SPECIFICATIONS

Pepperl & Fuchs

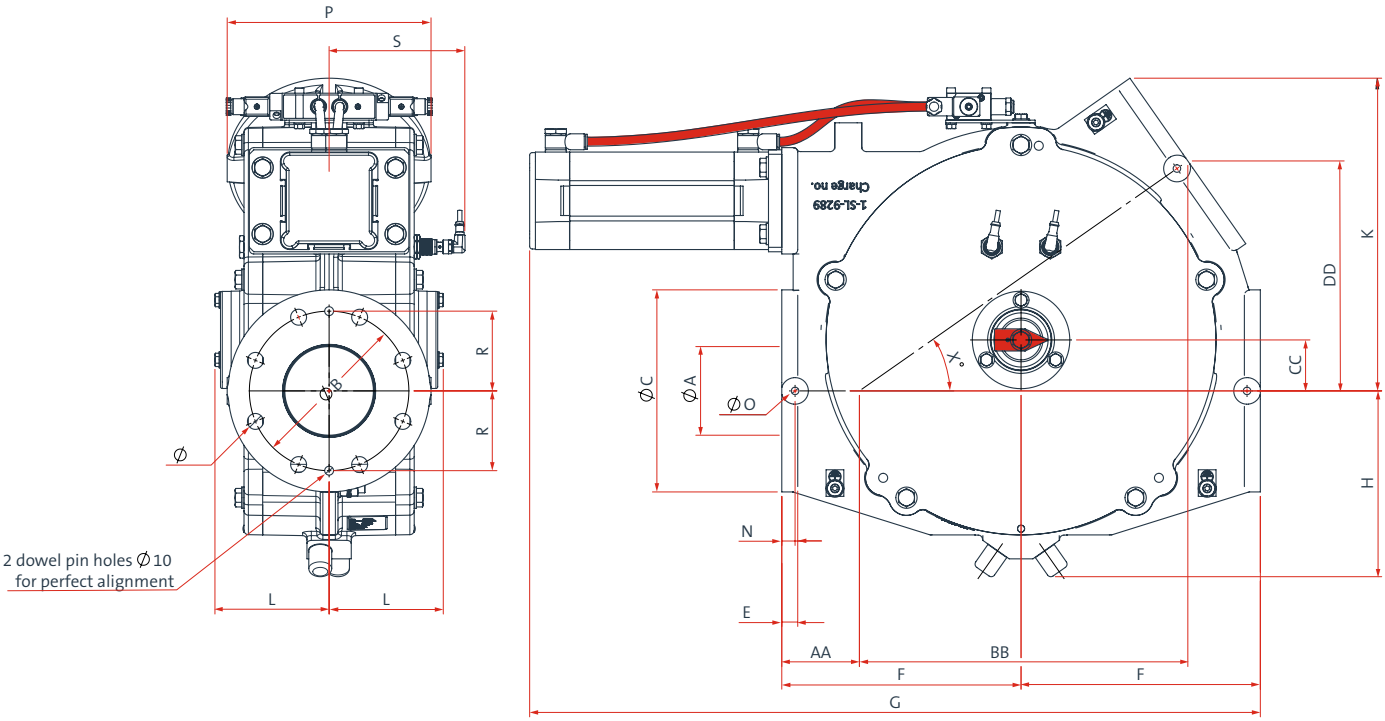
Standard	Type NBB5-18GM50-E2-V1 incl. connector M12 and 2-meter cable
	D.C. sensor (3 wire)
	Nominal voltage: 10–30 VDC
	Normally open PNP
	Ambient temperature: -25˚C to 70˚C
	Alternatives on request

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**
50	50	125	4xØ18	165	120.6	4xØ19	16	205	618	170	247	112	12.5	M10x20	170	62.5	121	33.5°	89	268	35	177
65	65	145	4xØ18	185	139.7	4xØ19	16	215	678	180	280	117	12.5	M10x20	190	72.5	131	36.7°	87	275	42.5	205
80	80	160	8xØ18	200	152.4	4xØ19	18	255	768	195	320	127	15	M10x20	205	80	138.5	36.6°	108	322	48.5	240
100	100	180	8xØ18	228	190.5	8xØ19	18	270	813	225	353	130	15	M10x20	230	90	151	35°	88	370	57.5	260
125	125	210	8xØ18	250	215.9	8xØ22.2	20	335	991	265	424	149	17.5	M12x24	255	105	163.5	35.5°	116	451	70	322
150	150	240	8xØ22	285	241.3	8xØ22.2	20	375	1061	295	485	166	20	M12x24	292	120	182	35.8°	120	511	82.5	369
200	211	295	8xØ22	343	298.4	8xØ22.2	25	500	1296	380	637	199	25	M12x20	350	147.5	211	34.8°	133	712	115	495

Technical modifications are possible, dimensions in mm.


DMN
WESTINGHOUSE
DMNWESTINGHOUSE.COM