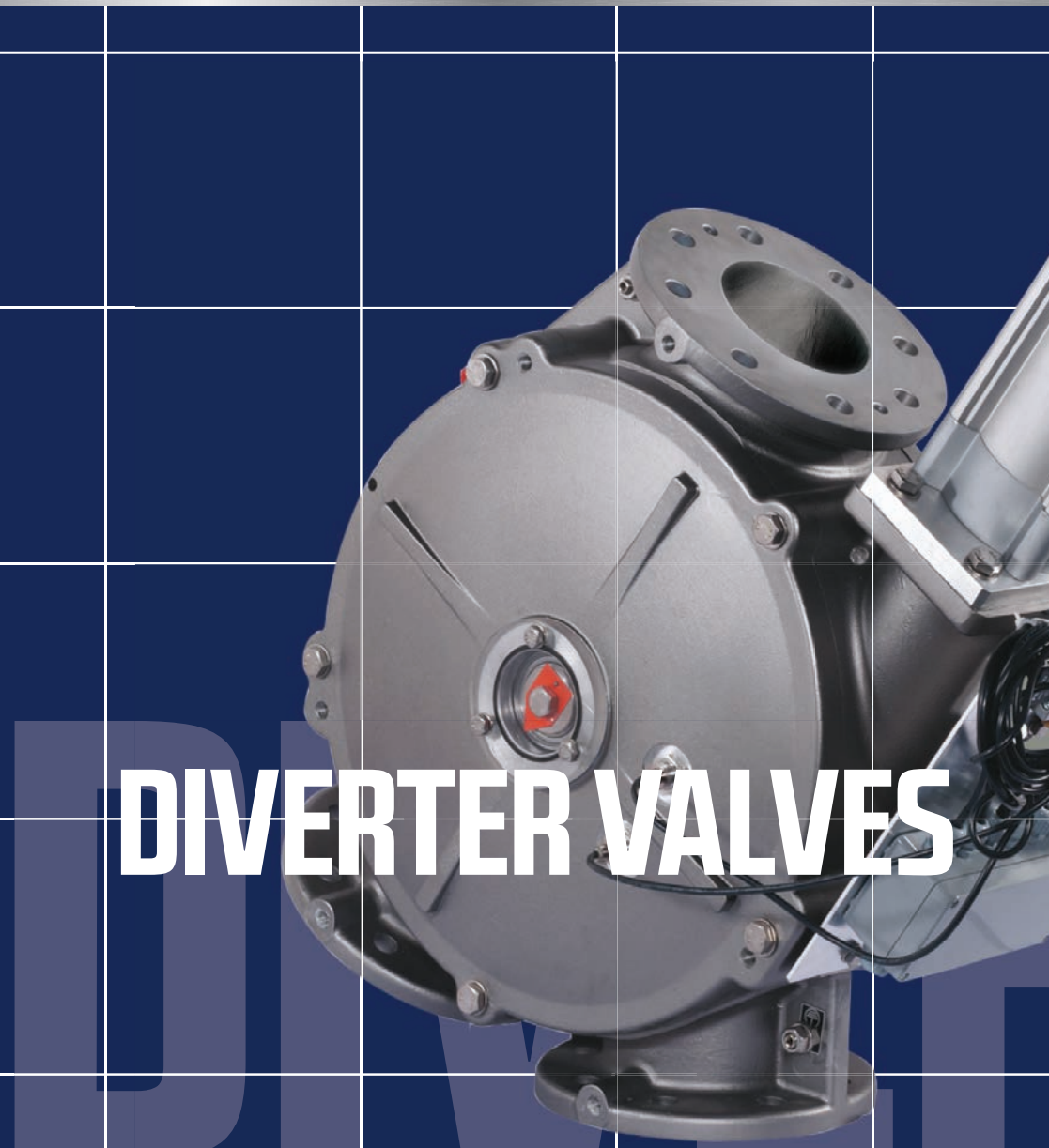
tbma



DIVERTER VALVES

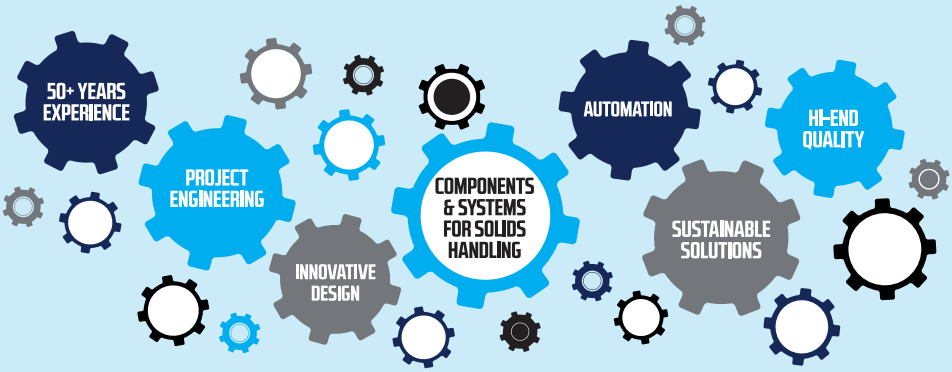
WHO WE ARE

TBMA specializes in the design and supply of components and (pneumatic) conveying systems for the processing of bulk solids goods.

Since our establishment in 1967, we have built up over 50 years of experience in the application of components and systems in the international processing industry. Together with our knowledge of bulk material technology and process engineering, we can adequately advise you on the correct implementation and application of our diverter valves. Moreover, in our own test facility we can verify the proposed technical solution for your product in advance.

Our extensive range of high-quality equipment is suitable for conveying of powders and granules in the food, dairy, animal feed, chemical and mineral industries as well as value-added logistics. From demanding, hygienic to heavy industrial applications and from high-end rotary valves to dust filter applications. We are also happy to use our expertise if you need a special application or an execution out of the ordinary.

Solutions beyond bulk handling



DIVERTER VALVES

The TBMA diverter valves are designed to handle dry materials such as powders, pellets, and granules with minimum degradation in pneumatic conveying and gravitational applications. These diverters are used in food, pet food, chemical, plastics, pharmaceutical and other process industries.

Our diverter range consists of the DTD dual channel and SDTD single channel plug diverters, BTD ball diverters, RD flap diverters and GFD gravity flap diverters.

SPECIFICATIONS

DIVERTER VALVES	DTD	SDTD	RD	GFD	BTD
Flange sizes (DN)	50-200	150-300	50-300	150-300	65-250
Application	diverting or converging	diverting only	diverting or converging	diverting only	diverting or converging
Differential pressure	2 bar* 6 bar**	1,5 bar* 6 bar**	1 bar	gravity applications	6 bar
Standard design temperature	80 °C	80 °C	70 °C	70 °C	150 °C
ATEX 2014/34/EU	yes	yes	yes	yes	yes

* static seal ** inflatable seal

DTD PLUG DIVERTER

The DTD is made of aluminium LM25 grade through a high quality die casting process. All product contact surfaces are lined with 316 stainless steel tubes. The standard seals are FDA approved silicone, which ensures a complete sealing between the body and the plug.

The standard execution diverter with static seals can be used in pressure conveying systems where the pressure is less than 2 bar. When equipped with inflatable seals (optional), the DTD is suitable for systems up to 6 bar. The DTD is supplied as a complete unit with pneumatic actuator and associated components, such as a solenoid valve, solenoid coils, junction box and position sensors.

APPLICATONS

FEATURES

- Dual channel plug
- Food grade silicone seals
- All product contact surfaces in stainless steel 316
- Aluminium body, plug and end covers
- No external moving parts
- Pressure up to 2 bar with static seals
- Position indicators
- Air cylinder operated
- Easy maintenance
- Minimum product degradation
- Conforming to ATEX 2014/34/EU (optional)

APPLICATIONS

- Suitable for powders, granules and pellets
- For diverting or converging of product flow in conveying line applications

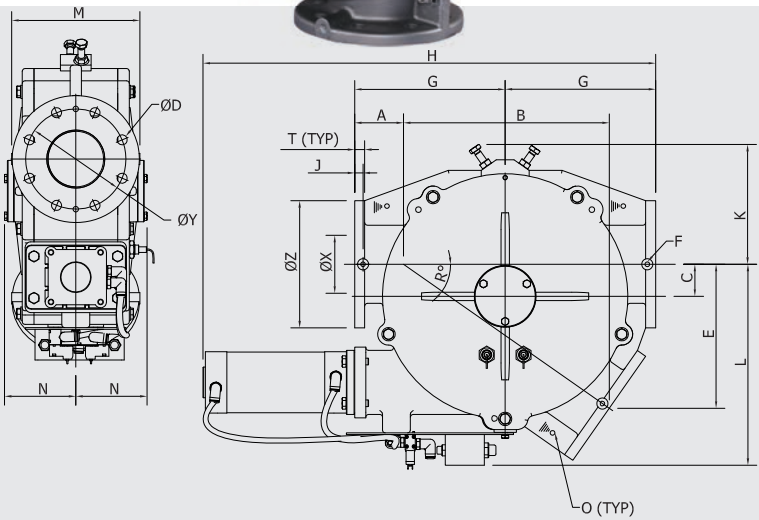
DESIGN

- Sizes (7) from 50 to 200 mm
- DIN / ANSI / JIS drilling patterns
- Operating temperature 80 °C (max)

OPTIONS

- Thicker stainless steel liner
- Wear resistant pipe liners
- High temperature version
- Dynamic (inflatable) seals up to 6 bar g
- Polyurethane seals (static seal version only)

DTD with dual channel plug



		DIN			ANSI																	
Type DTD	ØX	ØY	ØD	ØZ	ØY	ØD	A	B	C	E	F	G	H	J	K	L	M	N	O	T	R°
50	50	125	4xØ18	165	120.6	4xØ19	90	270	35	175	M10x20	205	620	12.5	170	270	170	110	M10	16	33.5
65	65	145	4xØ18	185	139.7	4xØ19	85	275	42.5	205	M10x20	215	680	12.5	180	290	190	115	M10	16	36.7
80	80	160	8xØ18	200	152.4	8xØ19	110	320	48.5	240	M10x20	255	770	15	195	325	205	125	M10	18	36.6
100	100	180	8xØ18	228	190.5	8xØ19	90	370	57.5	260	M10x20	270	815	15	225	360	230	130	M10	18	35
125	125	210	8xØ18	250	215.9	8xØ22,2	115	450	70	320	M12x20	335	990	17.5	265	430	255	150	M12	20	35.5
150	150	240	8xØ22	285	241.3	8xØ22,2	120	510	82.5	370	M12x20	375	1060	20	295	480	290	165	M12	20	35.8
200	200	295	8xØ22	343	298.4	8xØ22,2	135	710	115	495	M12x20	500	1295	25	380	620	350	200	M12	25	34.8

All dimensions are in mm. Technical modifications are possible.

SDTD PLUG DIVERTER

The SDTD is made of aluminium LM25 grade through a high quality die casting process. All product contact surfaces are lined with 316 stainless steel tubes. The standard seals are FDA approved silicone, which ensures a complete sealing between the body and the plug.

The standard execution diverter with static seals can be used in pressure conveying systems where the pressure is less than 1,5 bar. When equipped with inflatable seals (optional), the SDTD is suitable for systems up to 6 bar.
The SDTD is supplied as a complete unit with pneumatic actuator and associated components, such as a solenoid valve, solenoid coils, junction box and position sensors.

APPLICATONS

FEATURES

- Single channel plug
- Food grade silicone seals
- All product contact surfaces in stainless steel 316
- Aluminium body, plug and end covers
- No external moving parts
- Pressure up to 1,5 bar with static seals
- Position indicators
- Pneumatic actuator operated
- Easy maintenance
- Minimum product degradation
- Conforming to ATEX 2014/34/EU (optional)

APPLICATIONS

- Suitable for powders, granules, kibbles and pellets
- For diverting of product flow in conveying line applications

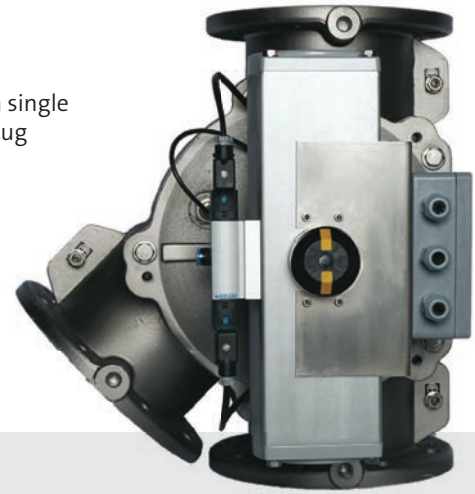
DESIGN

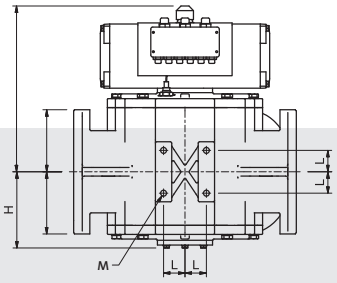
- Sizes (4) from 150 to 300 mm
- DIN / ANSI / JIS drilling patterns
- Operating temperature 80 °C (max)

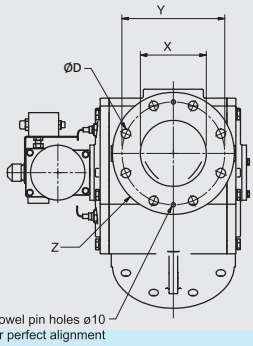
OPTIONS

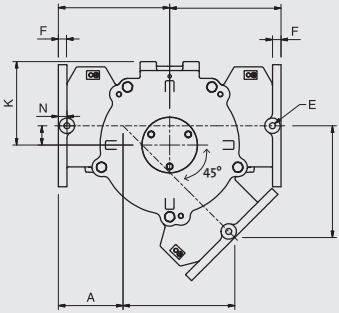
- Thicker stainless steel liner
- Wear resistant pipe liners
- High temperature version
- Dynamic (inflatable) seals up to 6 bar g

SDTD with single channel plug









		DIN			ANSI															
Type SDTD	**ØX**	**ØY**	**ØD**	**ØZ**	**ØY**	**ØD**	**A**	**B**	**C**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**
150	150	240	8xØ22	285	241.3	8xØ22,2	151	261	45	M16x24	20	260	180	390	195	50	M16x24	20	145
200	200	295	8xØ22	343	343	8xØ22,2	155	315	60	M16x24	25	300	205	445	240	50	M16x24	25	175
250	250	350	12xØ22	406	406	12xØ25,4	156	384	80	M16x24	25	350	235	500	300	70	M16x24	25	205
300	300	Drawing and dimensions are available on request																		

All dimensions are in mm. Technical modifications are possible.

RD TWO-WAY FLAP DIVERTER

The RD two-way flap diverter valves are suitable for transporting (mildly) abrasive, smooth-running powders or granules. These diverters are specially designed for diverting from 1 to 2 transport lines or vice versa with minimal pressure loss and good sealing properties.

Type RD diverters are suitable for simple two-way routing in pneumatic transport systems with an operating pressure up to 1 bar. Control can be done either manually, with a pneumatic cylinder assembly or with a pneumatic actuator assembly. The diverter valves are equipped with limit switches for indicating the open/closed position.

FEATURES

- Compact design
- Small divert angle -22,5°
- Low pressure loss due to smooth line transition
- Operating pressure up to 1 bar
- Dust tight up to 1 bar
- Easy disassembly and maintenance
- In cast iron, stainless steel and aluminium
- Manual or electro-pneumatic control in closed box
- ATEX 2014/34/EU certified (optional)

APPLICATIONS

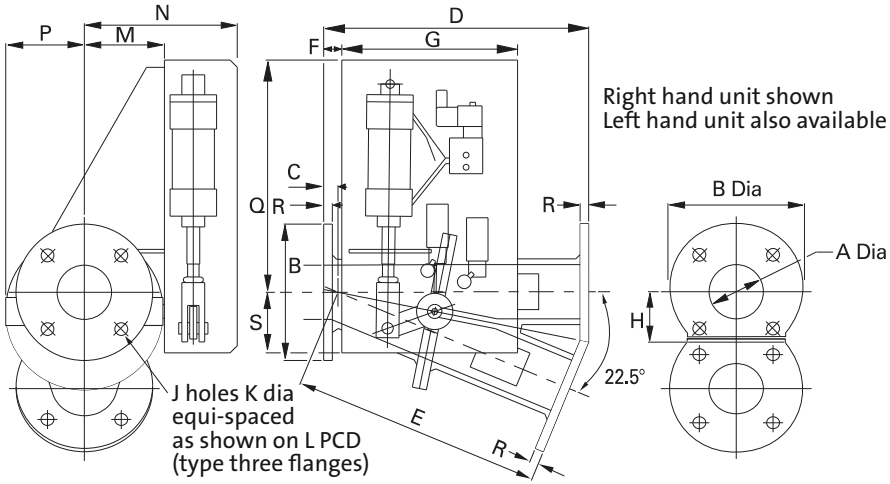
- Suitable for powders, granules and pellets
- For diverting or converging of product flow in conveying line applications

DESIGN

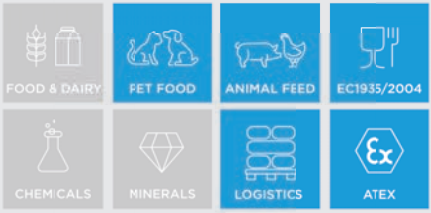
- Sizes (9) from 50 to 300 mm
- DIN / ANSI / JIS drilling patterns
- Operating temperature 70 °C (max)

OPTIONS

- Flanged or spigotted connections



APPLICATONS

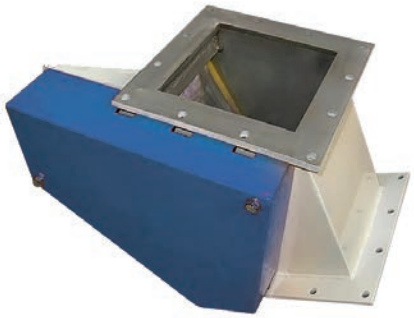


Type RD	ØA	ØB	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
50	50	152	20	310	290	0	250	58	4	18	114	92	194	90	328	10	82
65	63.5	178	20	350	330	5	246	65	4	18	127	102	204	100	329	10	81
80	76	191	20	371	351	25	246	71	4	18	146	112	214	110	325	12	85
100	102	229	30	444	414	53	286	82	4	18	178	142	244	140	391	12	114
125	127	254	30	634	604	102	286	120	8	18	210	162	264	160	381	14	124
150	160	280	35	759	724	120	286	130	8	18	235	182	284	180	379	16	126
200	204	343	35	902	867	148	276	157	8	18	292	222	324	223	411	16	131
250	264	406	35	1058	1023	239	316	196	8	22	356	282	442	285	433	20	177
300	305	483	72	1313	1241	246	366	242	12	22	406	302	462	300	532	25	203

All dimensions are in mm. Technical modifications are possible.

GFD GRAVITY DIVERTER

GFD free-fall gravity diverters are designed to divert powders and granules from one transport line to two or three others using gravity. The favourable change angle of 30° or 45° contributes to a fluent product flow and the smooth internal finish prevents product build-up.



APPLICATONS

FEATURES

- Compact and robust construction made of mild steel
- Smooth line transition
- Easy disassembly and maintenance
- In mild or stainless steel
- Sealing flap made from polyurethane
- Manual or electro-pneumatic control in closed box with limit switches
- ATEX 2014/34/EU certified (optional)

APPLICATIONS

- Suitable for powders, granules and pellets
- For diverting of product flow in gravity applications only

DESIGN

- Flanges in- and outlet round, square or rectangular
- Outlet 2- or 3-way routing
- Change angle 30° or 45°

OPTIONS

	Change angle		Direction			Flanges		
Outlets	30°	45°	left	right	symmetrical	round	square	rectangular
2	x	x				x	x	x
3	x	x	na	na		x	x	x

BTD BALL DIVERTER

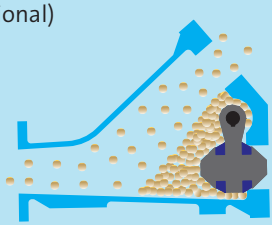
The BTD can be used for both diverting and converging. When used for diverting, the wear surface is provided for by the product itself (most common application). For converging, the diverter has been notably strengthened at the internal product impact area.

The positive pressure pushes the ball and seal firmly into its seating. The rugged construction ensures that the higher the positive pressure, the tighter the seal. Due to the easy maintenance design of the diverter, the seals can be replaced by removing the two side covers with the valve in place.

APPLICATONS

FEATURES

- Body made from ductile cast iron
- Removable wear bushes on outlet
- Grease lubricated shaft seals
- Seals replaceable without dismounting the valve from the conveying line
- Pressure up to 6 bar
- Pneumatic actuator operated
- Easy maintenance
- Minimum product degradation
- Conforming to ATEX 2014/34/EU (optional)



APPLICATIONS

- Designed to handle (extremely) abrasive products
- Suitable for powders and pellets
- For diverting of converging in heavy applications
- Suitable for systems with high pressures and temperatures

DESIGN

- Sizes from 65 up to 250 mm
- DIN / ANSI drilling patterns
- Operating temperature 150 °C (max)

OPTIONS

- High temperature version

COMPONENTS

SYSTEMS

PROJECTS

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