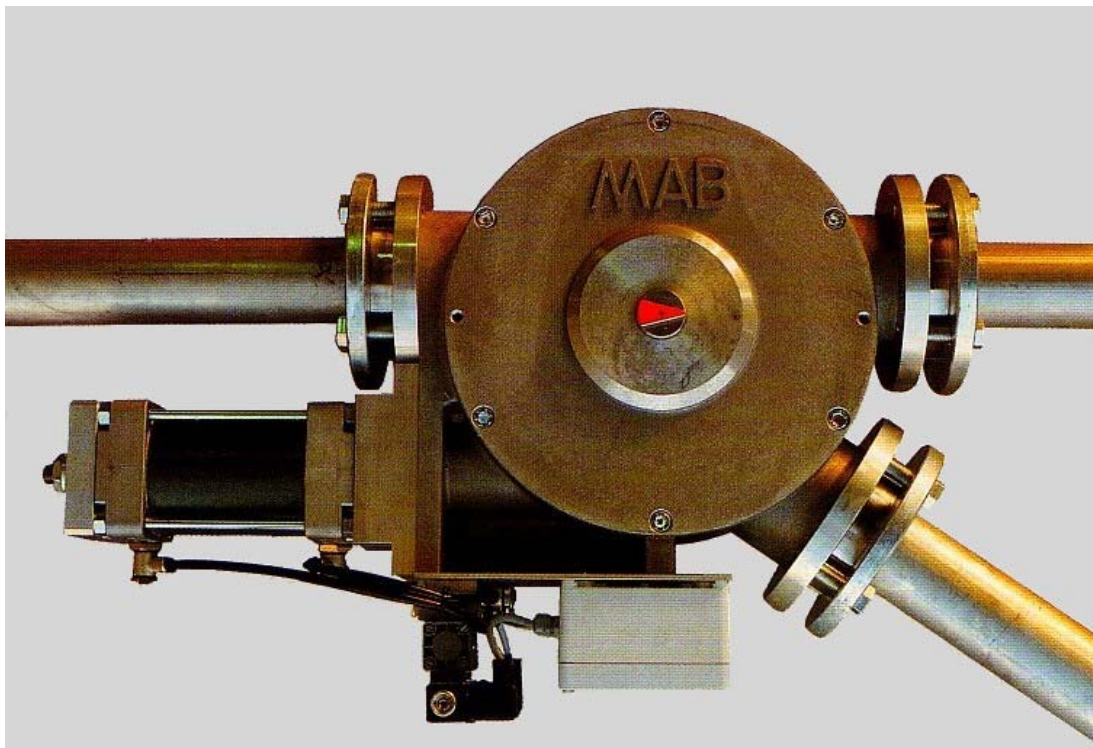


MAB DIVERTER VALVES

FOR PNEUMATIC CONVEYING APPLICATIONS

MAB



MAB diverter valves have been designed and manufactured by MAB in order to distribute powdered and granular solid materials from a single pneumatic conveying pipeline to multiple hoppers or silos.

These valves offer the following advantages:

- NO DAMAGE to the conveyed products. MAB diverter valves do not have any internal sharp edges, which could, with plastic pellets, produce unwanted powder or “streamers”, thereby decreasing the quality and value of the final product.
- EASY ACTUATION without blocking or jamming. This is due to the special design of the rotor and mating body.
- COMPLETE SEALING is achieved irrespective of flow path. As a consequence MAB diverter valves may also be used for high pressure conveying systems.
- NO DEPOSIT OF CONVEYED PRODUCT. Due to careful design there are no “dead” regions when the valve is installed in either horizontal or vertical direction.
- MINIMUM PRESSURE DROP because the cross section of the flow channel in the rotor is the same as that of the conveying pipe.
- QUICK STRIP DOWN for fast internal cleaning and easy maintenance.
- ROBUST CONSTRUCTION AND WEATHER-PROOF with limit switches and the actuation mechanism mounted inside the body.

M A B

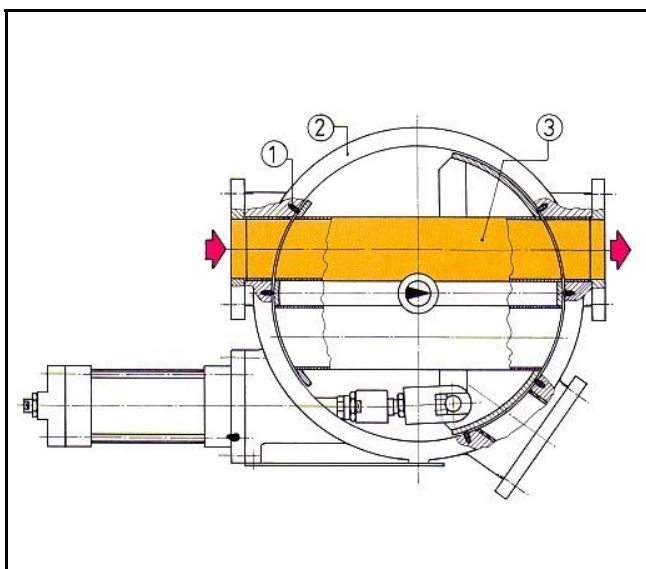
MAB SA - CH-6852 Genestrerio – Switzerland
Phone: int. +41-(0)91-641.60.50 - Fax: int. +41-(0)91-641.60.60
e-mail : info@mab-switzerland.ch - www.mab-switzerland.ch

MAB DIVERTER VALVES

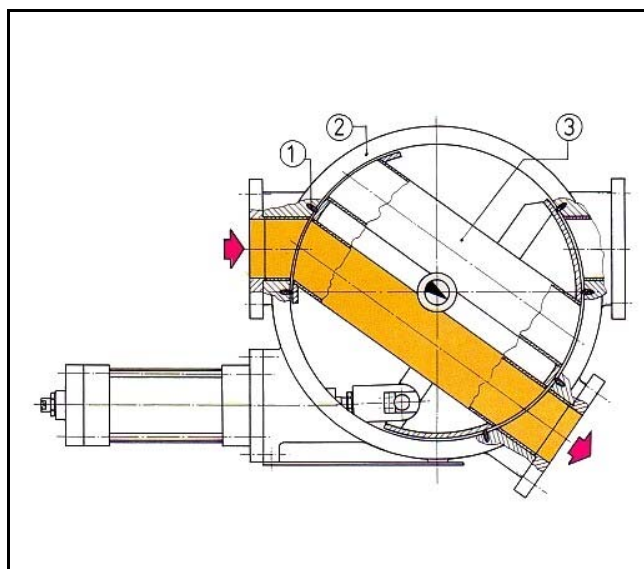
FOR PNEUMATIC CONVEYING APPLICATIONS

PRINCIPLE OF OPERATION

MAB diverter valves have been designed so that the cross-section of the internal flow channel is round and equal to the bore of the conveying pipeline. This guarantees that conveying pipelines have no internal steps along their length, which could promote particle degradation with friable products or the production of unwanted powder or streamers (angel hair) when handling soft polymer products. Also, these valves do not contain any restriction in the cross-section of the flow channel or any changes in geometry (for example round to square): With poorly designed valves either of these features can cause localized disturbances to the flow of materials, both of which can also lead to product damage.



▲ MAB Diverter valve positioned for straight flow



▲ MAB Diverter valve positioned to divert flow

MAB diverter valves basically consist in a movable plug (3) that can rotate in a fixed body (2), which is rigidly connected to the pneumatic conveying pipelines. The movable plug (3) and the body (2) are manufactured with high precision. Special gaskets (1) effect perfect sealing so that no leakage of gas or product is possible from the selected routing either internally or to the surrounding atmosphere.

MAB DIVERTER VALVES

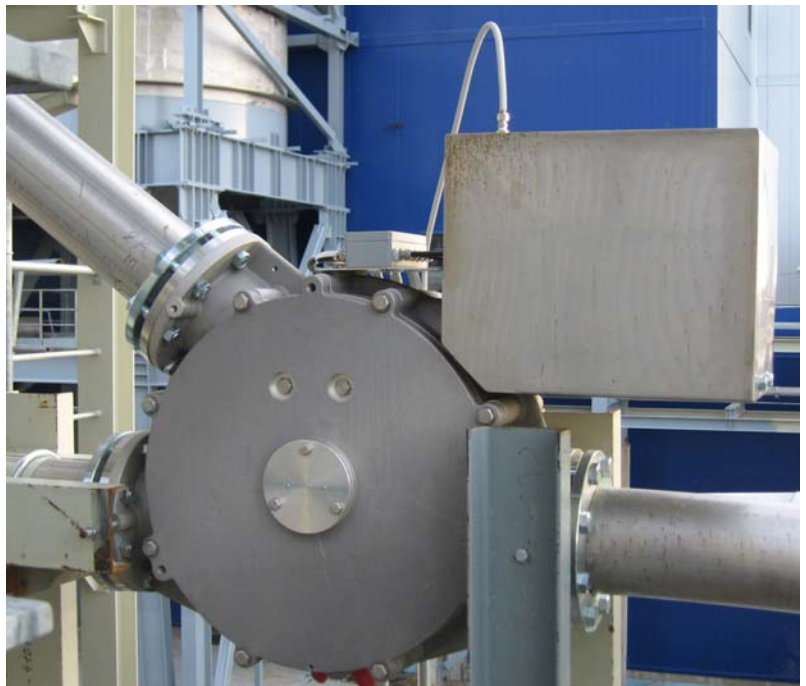
FOR PNEUMATIC CONVEYING APPLICATIONS



◀ MAB diverter valve size 150 installed in a pipeline conveying PTA powder with Nitrogen.

A double acting cylinder actuates the rotor. This actuation mechanism is completely enclosed in the body of the valve, thereby affording good weather protection. This is an important feature since diverter valves are frequently installed in unprotected locations.

Through their perfect sealing the DVR series diverter valves are recommended for use in CLOSED LOOP systems operating with NITROGEN. Also, the excellent sealing capabilities mean that these valves can be used in high pressure, dense phase conveying systems as well as low-pressure systems.



▶ MAB diverter valve, special execution, with winterization for ambient temperatures down to (-)35°C.

MAB DIVERTER VALVES

FOR PNEUMATIC CONVEYING APPLICATIONS



TECHNICAL DATA

- Standard design pressure..... 6 bar g
- Sealing pressure of one flow channel with respect to the other..... 4 bar
- Design temperature range -35 .. +170 °C
- Available sizes DN50 ... DN 250
Larger sizes are available on request
- Actuation systems.....
 - double acting air cylinder
 - manual, with hand wheel
 - electric
- Housing cast light AL-Si, having high inherent strength
- Internal components stainless steel 304 L / 316 L
- Sealing system VITON gaskets
- Pressure of actuation air..... at least 4 bar g (special applications are available with larger cylinder sizes, requiring air supply pressures of less than 4 bar g)
- Flanges according to established codes..... DIN, ANSI/ASA, UNI, JIS, etc.
- Mounting position..... horizontal or vertical
- Switch-over time about 2 seconds

STANDARD ACCESSORIES

- 2 proximity switches (at choice protection class IP 65, Ex-d, ...)
- 1 solenoid valve with 2 bobbins, voltage available 24... 240 V, 50/60 Hz, AC/DC
- 1 junction box provided for all wiring of solenoid and proximity switches
- 1 instrument air pressure reducer-filter unit (only available on demand)



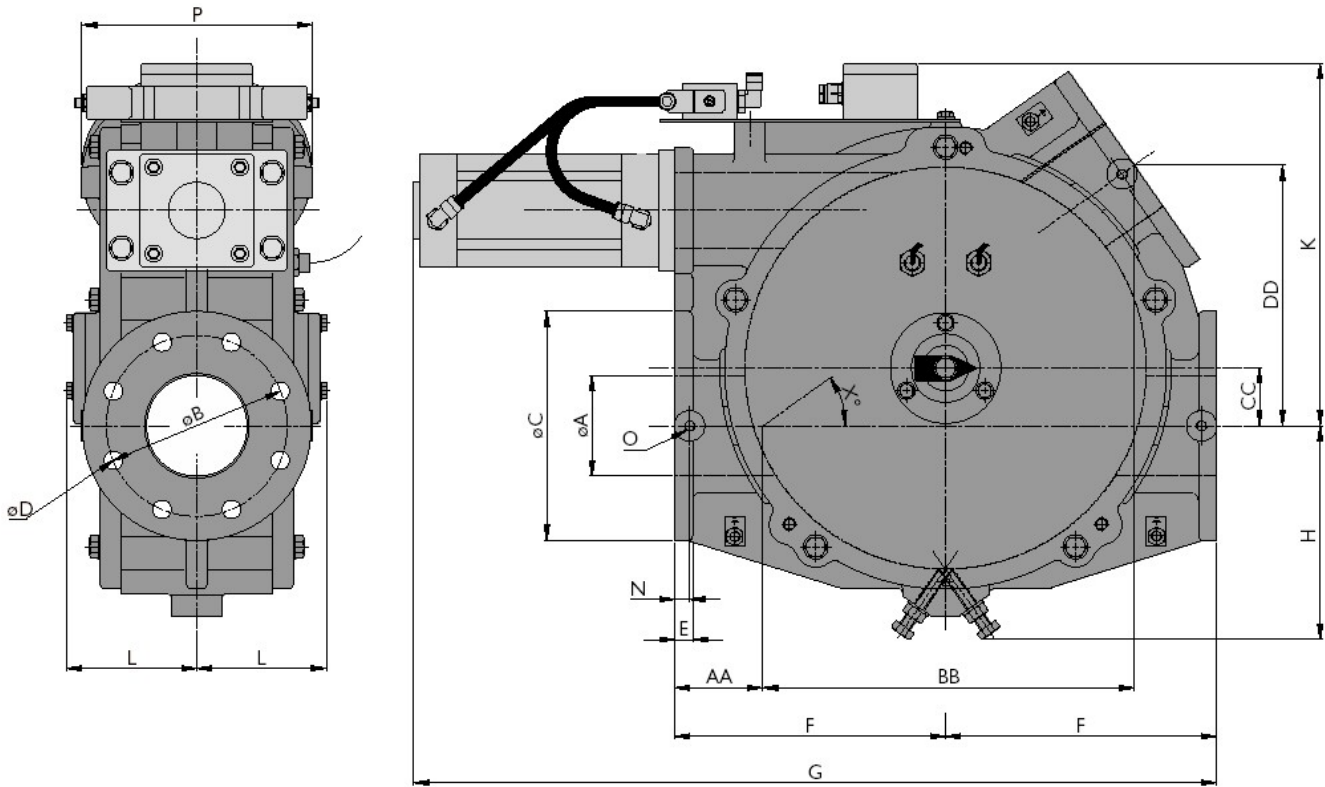
▶ Inductive limit switches.

MAB DIVERTER VALVES

FOR PNEUMATIC CONVEYING APPLICATIONS



DIMENSIONS for sizes 50... 200



The table below shows the main dimensions of MAB diverter valves.

Size	DIN				ANSI				E	F	G	H	K	L	N	O	P	X°	AA	BB	CC	DD
	ØA	ØB	D	ØC	ØB	D																
50	50	125	4xØ18	165	120,6	4xØ19	16	205	618	170	268	112	12,5	M10x20	170	33,5	89	268	35,0	177		
65	65	145	4xØ18	185	139,7	4xØ19	16	215	678	180	291	117	12,5	M10x20	190	36,7	87	275	42,5	205		
80	80	160	8xØ18	200	152,4	4xØ19	18	255	768	195	327	127	15	M10x20	205	36,6	108	322	48,5	240		
100	100	180	8xØ18	228	190,5	8xØ19	18	270	813	225	361	130	15	M10x20	230	35,0	88	370	57,5	260		
125	125	210	8xØ18	250	215,9	8xØ22,2	20	335	991	265	433	149	17,5	M12x24	255	35,5	116	451	70,0	322		
150	150	240	8xØ22	285	241,3	8xØ22,2	20	375	1061	295	480	166	20	M12x24	292	35,8	120	511	82,5	369		
200	211	295	8xØ22	343	298,4	8xØ22,2	25	500	1296	380	618	199	25	M12x20	350	34,8	133	712	115,0	495		

SPECIAL APPLICATIONS / EXECUTIONS

MAB designs and supplies diverter valves for special applications, in order to solve the wide variety of problems presented by pneumatic conveying systems operating at special conditions and/or with difficult products. Such applications include:

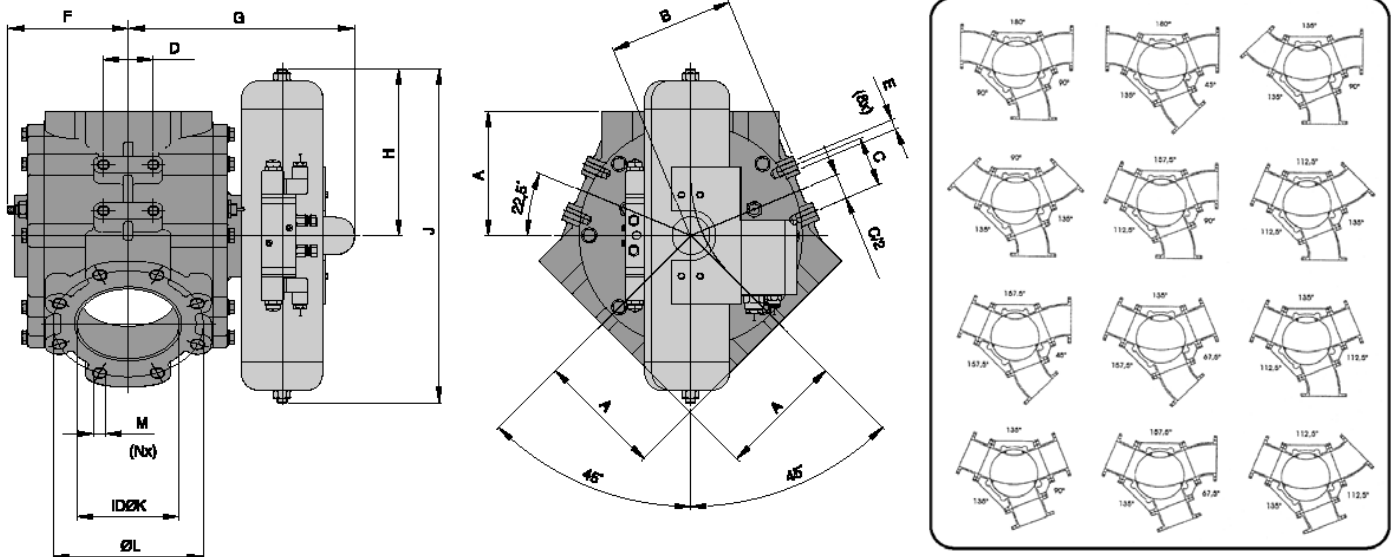
- Abrasive products
- High temperature systems
- Flame-proof installations
- Choice of inflatable seals for all sizes
- Winterization

MAB DIVERTER VALVES

FOR PNEUMATIC CONVEYING APPLICATIONS



DIMENSIONS for sizes 150... 400



The table below shows the main dimensions of MAB diverter valves.

Size	A	B	C	D	E	F	G	H	J	ØK	DIN 2501, PN 10			ANSI 150 LBS			WEIGHT (KG)
											ØL	M	N	ØL	M	N	
150	200	200	80	80	M16	192	365	270	540	162,3	240	M20	8	241,3	M20	8	120
175	235	245	80	80	M16	225	400	315	630	187,7	270	M20	8	-	-	-	175
200	235	245	80	80	M16	225	400	315	630	213,1	295	M20	8	298,5	M20	8	185
250	285	290	100	100	M16	255	460	380	760	267,0	350	M20	12	362,0	M24	12	260
300	325	330	100	100	M16	296	500	380	760	317,9	400	M20	12	431,8	M24	12	320
350	380	380	100	100	M16	325	610	430	860	349,6	460	M20	16	476,3	M27	12	350
400	440	440	100	100	M16	355	640	430	860	400,4	515	M24	16	539,8	M27	16	380

Technical modifications are possible, dimensions in mm

- ▶ Universal application
- ▶ For diverging and converging
- ▶ Sizes from DN 150 up to DN 400 (6" to 16")
- ▶ Pressure up to 3,5 bar g
- ▶ Maximum product temperature 120 °C
- ▶ Static or dynamic sealing
- ▶ No moving parts on the outside

