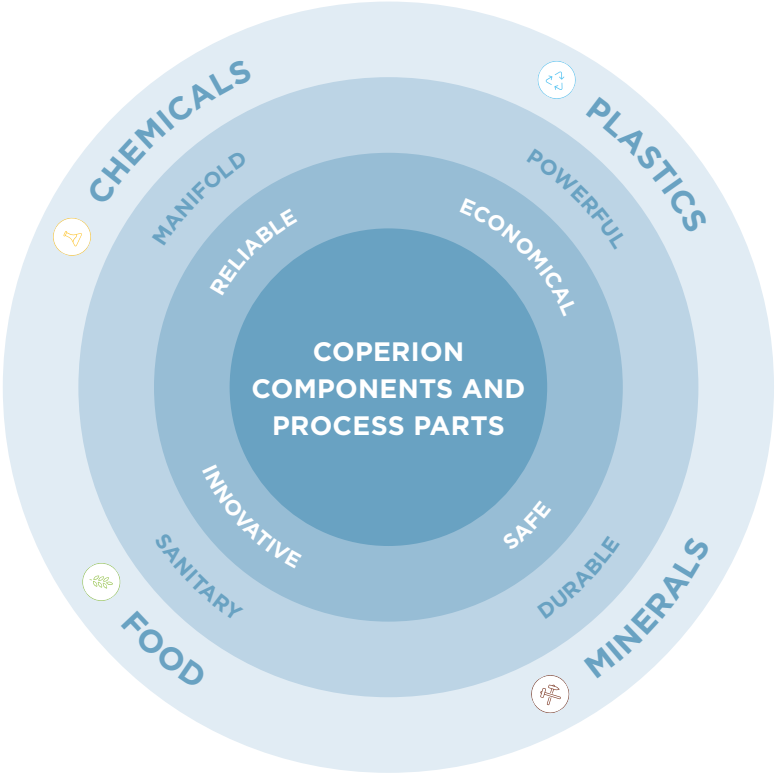
Product Line. Components.

coperion
confidence through partnership

Confidence through partnership. Making a promise into a guarantee of success.



First-class handling for first-class products. Conveying, discharging, separating, storing, mixing, feeding, or thermal treatment — we master every process step for processing and handling bulk materials.

The components we manufacture in our own facilities are highly regarded as top-quality products in the plastics, chemical, food, and mineral industries worldwide. Many years of experience and comprehensive process expertise in systems engineering are continually incorporated into the research and development of our components

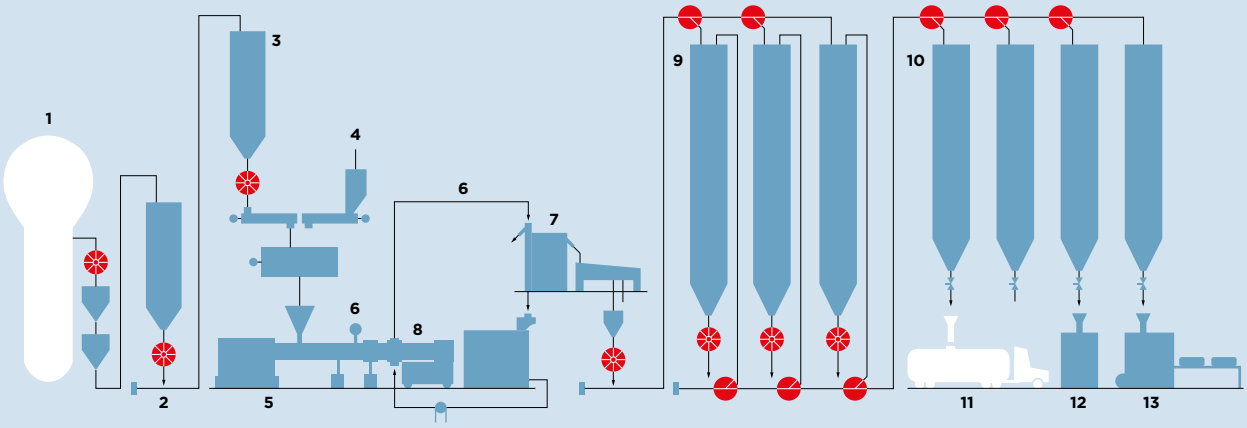
We supply certified solutions for requirements regarding sanitary and flameproof design and ATEX conformity.
Our components and key process parts set standards at high pressures and with regard to wear protection. We produce components and systems for the market; for our customers, we provide trust and confidence. That's what we mean when we say "confidence through partnership".

PLASTICS

Powerful components for all process stages. Discharging, dosing, conveying, separating, cleaning, mixing, heating, cooling, etc. Only those who know every process stage can offer you detailed solutions that decisively improve the entire process.

To maintain the quality of your products at a consistently high level, powders and pellets (e.g.,PP, PE, PET, PA, PVC) must be handled and conveyed optimally at each stage within the process chain according to their respective properties. Comprehensive, ongoing research and development enable us to offer you innovative concepts and and components from our own manufacturing facilities for your production. You therefore profit from components that are perfectly tailored to your needs and that guarantee that your products are handled as reliably, economically, and gently as possible.

COMPONENT APPLICATION USING A PLASTICS MANUFACTURING PLANT AS AN EXAMPLE



Rotary valve
Diverter valve

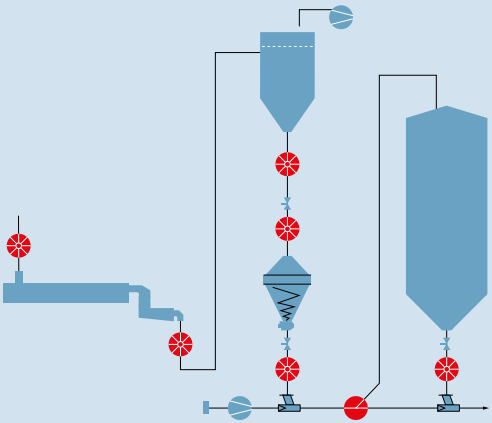
1 Reactor
2 Purging
3 Powder Silo
4 Additive Handling
5 Compounding
6 Devolatilization
7 Drying
8 Pelletizing
9 Mixing
10 Storage Silos
11 Loading
12 Big Bag
13 Bagging System

CHEMICALS

Continually optimized first-class products for a very wide range of requirements. Rotary valves, diverter valves, slide gate valves, etc. Coperion supplies a wide range of components that reliably prove their worth and functionality in many bulk materials systems worldwide.

The chemical industry in particular produces and processes many different bulk materials with various, sometimes difficult product properties. As the market and technology leader, we unite process expertise, decades of experience, and international know-how in handling numerous products (such as PTA, toner, cellulose, fertilizers, melamine). Long-term, successful partnerships with our customers are the best evidence of our solutions' success, always placing economy, reliability, and quality at the forefront.

COMPONENT APPLICATION USING A DRYING, MILLING AND MIXING PLANT AS AN EXAMPLE



Rotary valve
Diverter valve

CONVEYING PRODUCT EXAMPLES

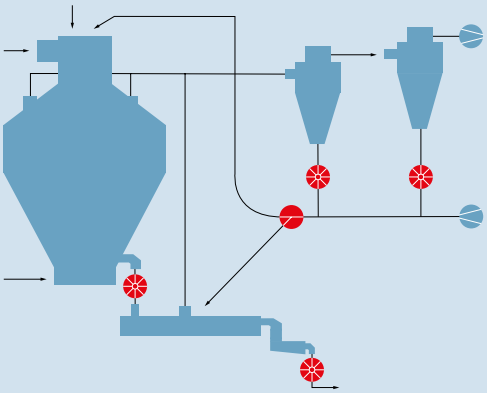
- PTA/CTA
- Adipic acid
- Catalysts
- Adhesives/sealants
- Toner/powder coating
- Methylcellulose
- Carbon black
- Rubber
- SAP, SAM
- Laundry detergent/soap
- Fertilizers
- Soda
- Urea
- Melamine
- Amino acid
- Salt/carbonate
- Sulfate/sulfite
- Silicon
- Pesticides
- Colors/coatings

FOOD

Innovative technology for optimal operational safety and sanitary production. Bulk materials components for pneumatic food conveying and discharging must meet particularly high hygiene and cleanability requirements. Coperion has developed ideal concepts for all types of applications.

With our intensive research and development of new technologies, we set standards for sanitary handling of products such as powdered milk and baby food, with process components that are easy to clean and trend-setting. During production and handling of starches, instant products, and food ingredients, our components guarantee long-term, reliable, and safe operation. Our components are also impressively gentle when discharging and conveying fragile products, such as roasted coffee beans and cereals.

COMPONENT APPLICATION USING A SPRAY DRYING PLANT AS AN EXAMPLE



Rotary valve in CIP application

Diverter valve in CIP application

CONVEYING PRODUCT EXAMPLES

Dairy Products
- Dairy powder
- Whey powder
- Lactose
- Baby food
- Casein

Starches
- Corn starch
- Potato starch
- Wheat starch
- Modified starches
- Dextrins

Basic Materials and Ingredients
- Sugar
- Flour
- Coffee beans and powder
- Corn
- Cacao beans and powder
- Salt
- Rice
- Tea
- Tobacco
- Soybeans
- Nuts
- Herbs
- Pectin
- Gelatin

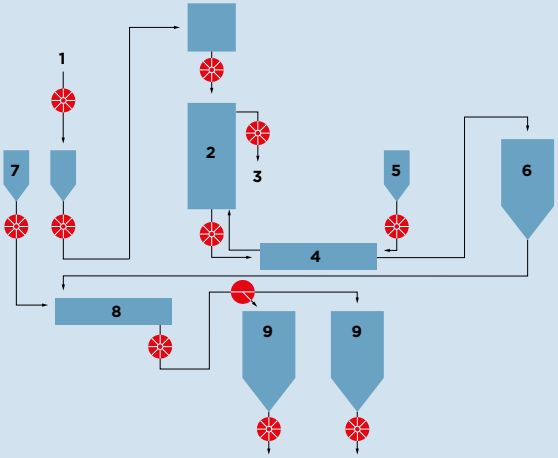
Finished Products
- Baking mixes and baking agents
- Soups
- Potato powder
- Instant products
- Breadcrumbs
- Spices and spice blends
- Cereals
- Animal feeds

MINERALS

Proven wear protection concepts for long service life. Many minerals put a considerable strain on the components in bulk materials systems as they are very abrasive. Coperion masters these challenges with innovative wear protection concepts that were developed based on results of comprehensive studies. They have proven their effectiveness in practical applications many times over.

A high degree of availability and a long service life with abrasive products such as cement, lime, sand, ash, aluminates, etc. are only possible with an effective protection concept which not only takes into account the product characteristics but operating conditions as well. Place your confidence in Coperion's sound, in-depth specialized knowledge: We have not only experience with more than 14,000 bulk materials, but also an in-house test center in which various abrasion conditions can be simulated and optimum wear protection measures defined for your applications.

COMPONENT APPLICATION USING A CEMENT PLANT AS AN EXAMPLE



1 Raw meal
2 Cyclone preheaters with bypass dust ventilation
3 Bypass dusts
4 Rotary kiln
5 fuel
6 Clinker store
7 Additives
8 Clinker grinding
9 Shipping

Rotary valve
Diverter valve

OUR WEAR-PROTECTED COMPONENTS ARE USED IN THE FOLLOWING INDUSTRIES

Cement industry
- Raw meal
- Cement
- Clinker dust
- Bypass dusts
- Solid fuels

Ore processing
- Crude ores
- Finished Products

Power Plants
- Solid fuels
- Ash

Lime Industry
- Calcium carbonate
- Dolomite
- Lime (slaked/caustic)
- Solid fuels

Construction Materials Industry
- Plasters
- Sands
- Dry mortar

Aluminum Industry
- Alumina

Timber Industry
- Swarf
- Wood powder

Ceramic Industry
- Clay/China clay products
- Refractory materials

Coperion Components

Rotary Valves

ROTARY VALVES FOR POWDERS

ROTARY VALVES FOR GRANULAR PRODUCTS

OPTIONS AND ACCESSORIES FOR ROTARY VALVES

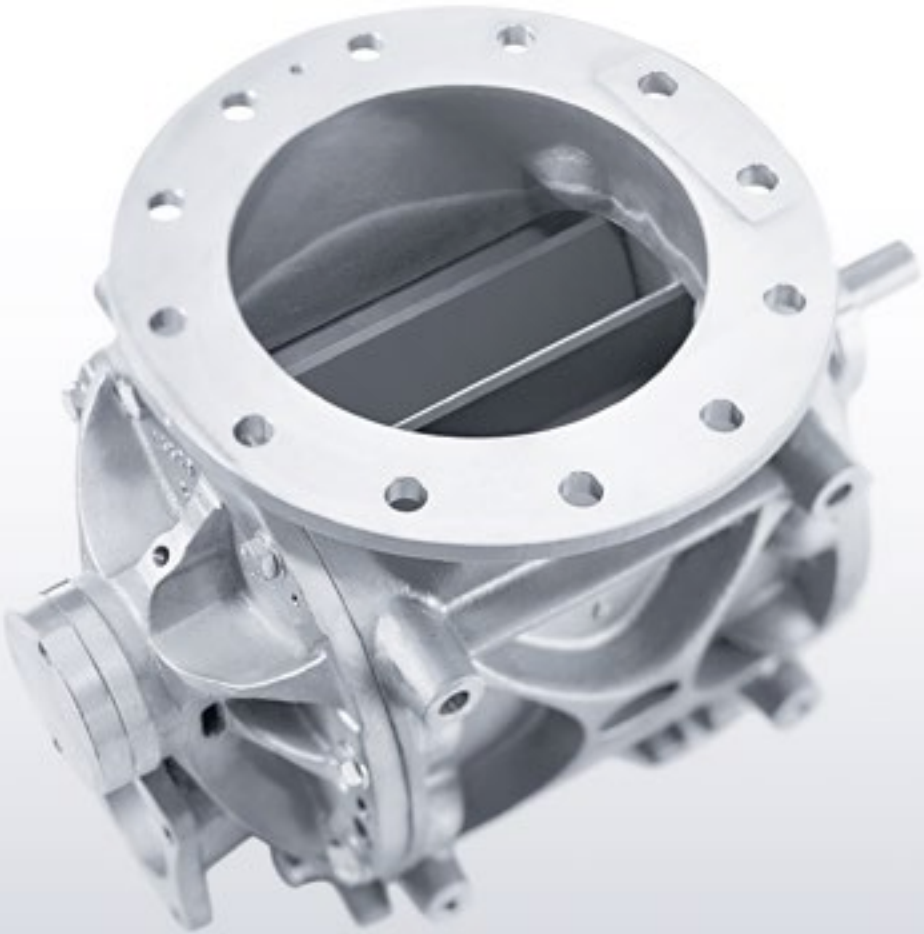
PLASTICS CHEMICALS FOOD MINERALS

Diverter Valves

Additional Components

Rotary Valves

Powders < 1 mm						Pellets 1 to 10 mm		
ZRD/ZRC	ZXD	ZFD	ZKD	ZXQ	ZAQ	ZVB	ZVD	ZVH
								
1.5 barg	1.5 barg	1.5 barg	1.5 barg	3.5 barg	3.5 barg	1.5 barg	1.5 barg	3.5 barg



Coperion valves come with the assurance of decades of experience and process expertise as well as proprietary development and manufacturing with top-quality materials.

ROTARY VALVES FOR POWDERS

Benefits: Large inlet. Unrestricted product flow. High filling efficiency.

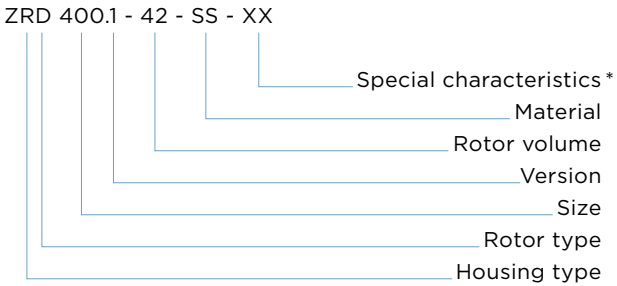
ROTARY VALVES FOR GRANULAR PRODUCTS

Benefits: Patented anti-chopping inlet geometry. Safe starting.

OPTIONS AND ACCESSORIES FOR ROTARY VALVES

Optimal rotary valve design for the individual application.

TYPE CODE FOR ROTARY VALVES



SELECTION MATRIX FOR ROTARY VALVES

Product	Average particle size d50	Application		
		Discharging	Pneumatic conveying	
		Non-pressurized	Up to 1.5 barg	Up to 3.5 barg
Powder	Up to 0.3 mm	**ZRD** ZKD	**ZXD** ZRD/ZRC ZKD ZFD[2)]	**ZXQ** ZAQ
Powder, fluff	0.3 mm to 1 mm	**ZRD** **ZKD** ZVD	**ZXD** **ZRD/ZRC** **ZKD** ZVD ZFD[2)]	**ZXQ** **ZAQ**
Granular products, uniform particles	1 mm to 6 mm	**ZVB** ZVD ZRD[1)]	**ZVB** ZVD ZRD/ZRC[1)]	**ZVH**
Irregular particles, particles with high percentage of fines	1 mm to 6 mm	**ZVD** ZRD[1)]	**ZVD** ZRD/ZRC[1)]	**ZVH**
Fibers, film scrap	1 mm to 10 mm	**ZVX** ZRX **ZKX**	**ZVX** ZRX **ZKX**	

BLUE = preferred

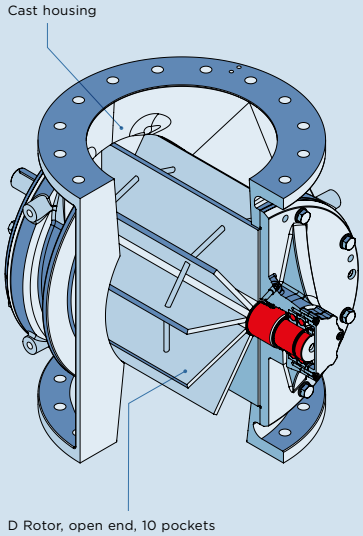
[1)] Onlyfor pre-dosedoperation. [2)] Only available inCIP design.

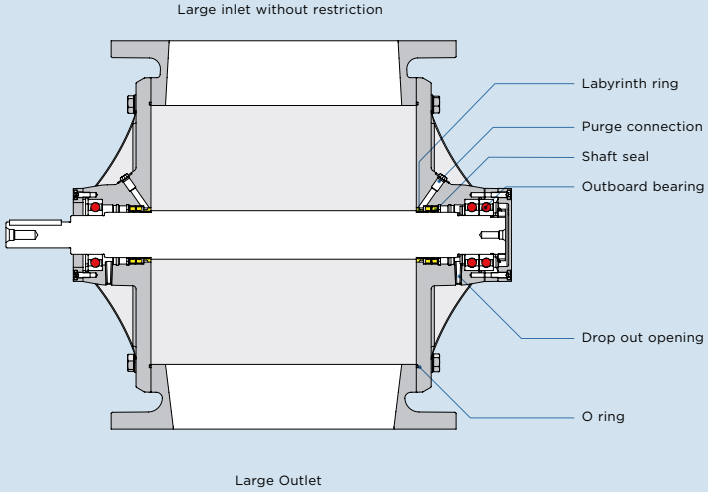
* Wear protection, page 36, Hygiene, page 34.

Rotary Valve ZRD

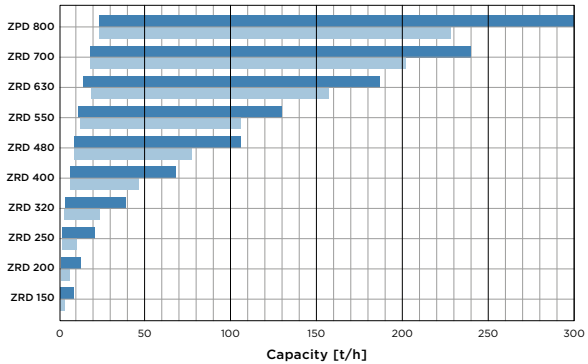
DISCHARGING AND METERING VALVE FOR POWDERS

_ Large inlet for high capacities
_ With feeding shoes also suitable for feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)
_ Can operate without leakage gas venting

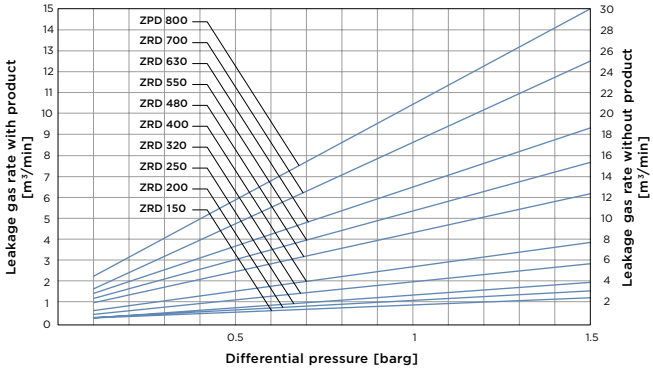




Performance diagram
Powder with bulk density 1000 kg/m³ and 0.6 mm < d50 < 1.0 mm, Δp = 0,8 barg
Powder with bulk density 1000 kg/m³ and 0.15 mm < d50 < 0.3 mm, Δp = 0,8 barg

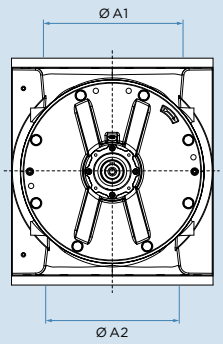


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

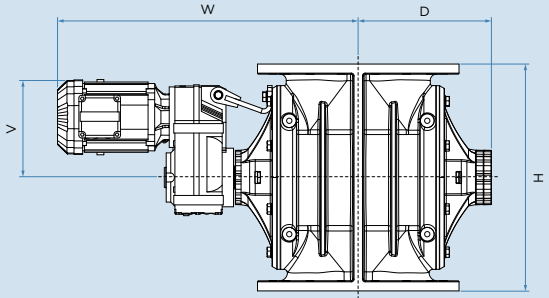


MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design (ZPD 5 barg)
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
LARGE INLET/OUTLET Without restriction of the cross section for highest capacities
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening

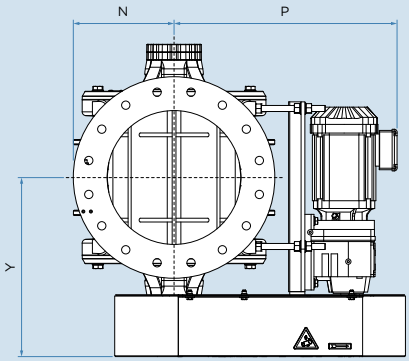
OPTIONS AND ACCESSORIES
_ Quick cleaning coupling with extraction device
_ Chamfered blades
_ Rotor with shallow pockets
_ Knife at product inlet
_ X rotor
_ DUROPROTECT® wear protection, page 36
_ Sanitary version
_ High-temperature design (T) up to 250 °C
_ Purge-free sealing gaskets



Shown without drive



Drive with parallel helical gear motor



With chain drive

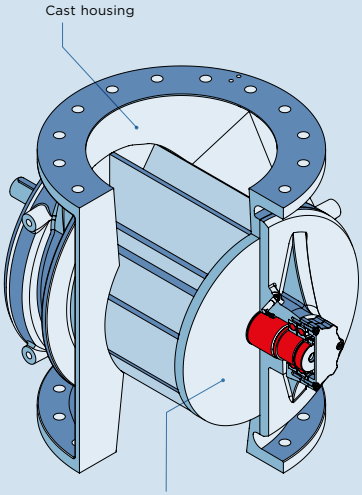
	Inlet*/Outlet*				Other dimensions							Weight*** (appr. kg)	
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	H^{+7}_{-1}	P**	Y	N	D	V**	W**	AL	SS/GG
ZRD 150	DN 150	6"	166	155	260	355	246	143	187	177	557	50	70
ZRD 200	DN 200	8"	213	207	340	409	328	171	234	202	622	75	110
ZRD 250	DN 250	10"	272	259	400	442	347	206	253	218	695	100	155
ZRD 320	DN 300	12"	322	310	500	562	417	241	305	226	759	155	245
ZRD 400	DN 350	14"	354	341	600	590	474	267	352	259	818	245	405
ZRD 480	DN 400	16"	410	400	750	686	553	299	416	300	958	405	675
ZRD 550	DN 500	20"	500	480	800	780	605	350	466	300	989	545	910
ZRD 630	DN 600	24"	600	590	900	922	637	408	504	358	1075	765	1335
ZRD 700	DN 700	28"	710	695	1000	1075	704	466	578	443	1257	1170	1965
ZPD 800****	DN 700	28"	700	680	1140	960	800	466	561	517	1260	1965	3495

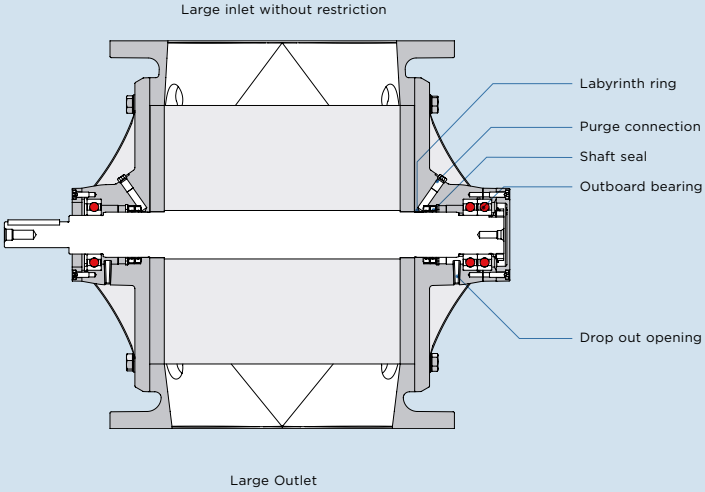
Dimensions in mm * Drilled according to DIN PN 10 or the corresponding ASME standard. ** Dimensions may vary according to design. *** With drive. **** Varying housing form.

Rotary Valve ZRC

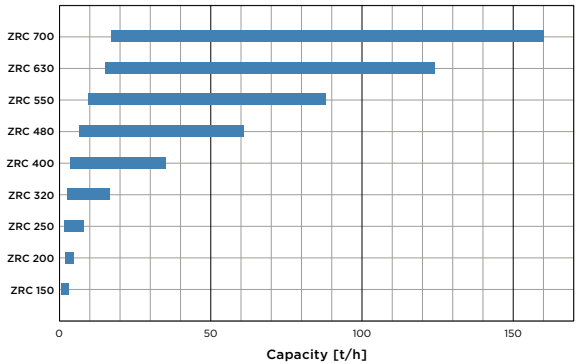
DISCHARGING AND METERING VALVE FOR POWDERS

_ Large inlet for high capacities
_ With feeding shoes also suitable for feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)
_ Can operate without leakage gas venting
_ Especially for abrasive products (cement, lime, coal, and substitute fuels)

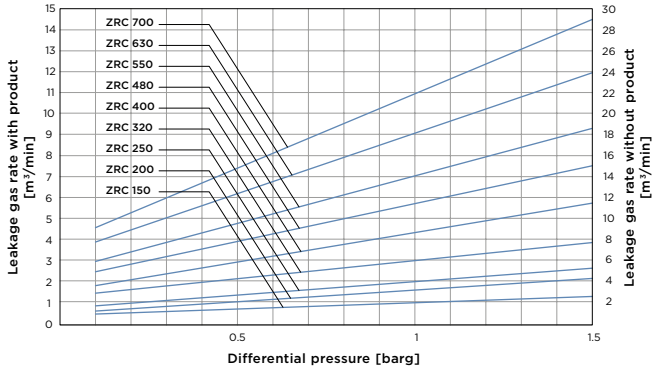




Performance diagram
Powder with bulk density 1000 kg/m³ and 0.01 mm < d50 < 1.0 mm, Δp = 0,8 barg

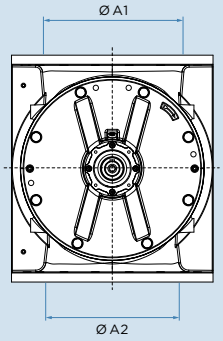


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)



MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design (ZPD 5 barg)
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
LARGE INLET/OUTLET Without restriction of the cross section for highest capacities
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening

OPTIONS AND ACCESSORIES
_ DUROPROTECT® wear protection, page 36
_ Chrome-plated housing, Tungsten carbide or ceramic
_ High-temperature design (T) up to 250 °C
_ Leakage gas venting (LS, LSA)



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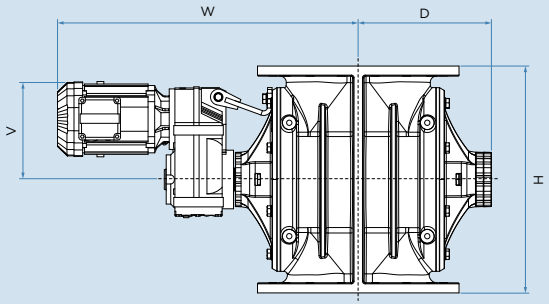
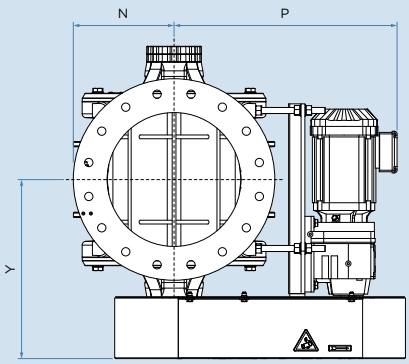


Drive with parallel helical gear motor



With chain drive

	Inlet*/Outlet*				Other dimensions							Weight*** (appr. kg)
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	H^{+7}_{-1}	P**	Y	N	D	V**	W**	SS/GG
ZRC 150	DN 150	6"	166	155	260	355	246	156	187	177	557	70
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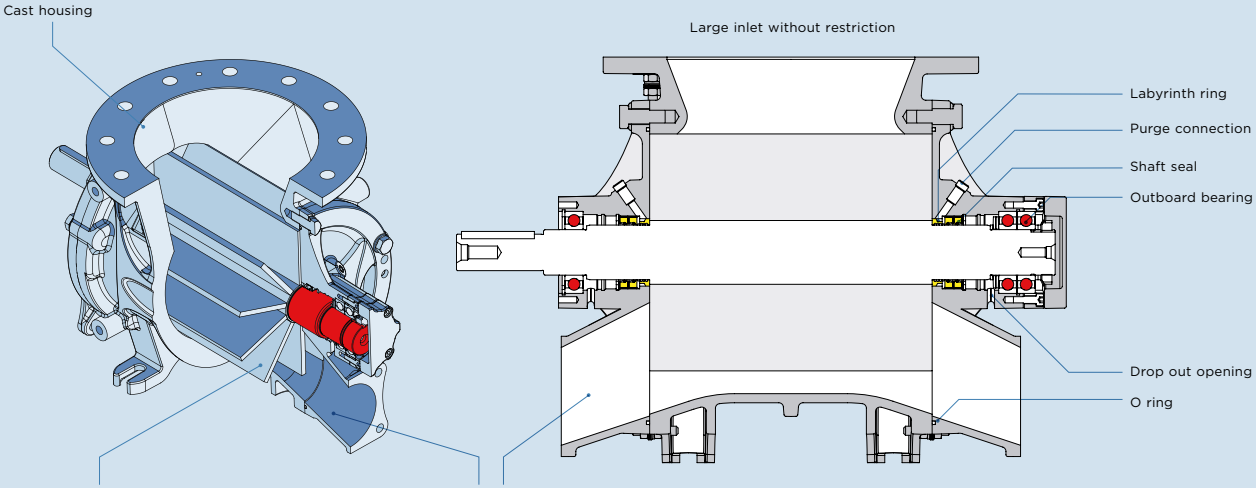
ZRC 550	DN 500	20"	500	480	800	780	605	350	466	300	989	910
ZRC 630	DN 600	24"	600	590	900	922	637	408	504	358	1075	1335
ZRC 700	DN 700	28"	710	695	1000	1075	704	466	578	443	1257	1965

Dimensions in mm * Drilled according to DIN PN 10 or the corresponding ASME standard. ** Dimensions do not apply to high temperature design; may vary according to drive.
*** With drive.

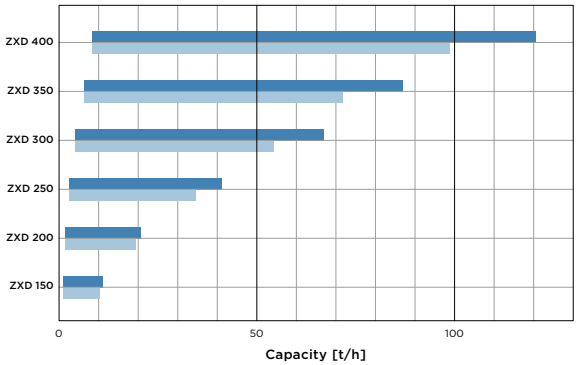
Rotary Valve ZXD

BLOW-THROUGH VALVE FOR POWDERS

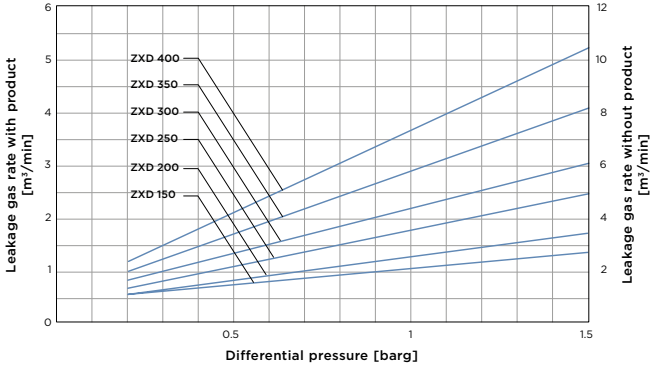
_ Large inlet for high capacities
_ For feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)
_ Operation possible without leakage gas venting



Performance diagram
Powder with bulk density 1000 kg/m³ and 0.3 mm < d50 < 0.6 mm, Δp = 0,8 barg
Powder with bulk density 1000 kg/m³ and 0.075 mm < d50 < 0.15 mm, Δp = 0,8 barg



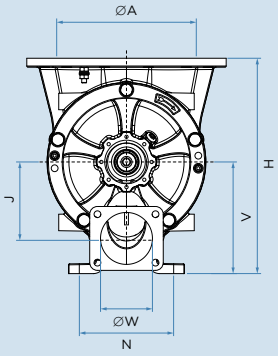
Leakage gas diagram
(New, standard clearance 60 °C, max. speed)



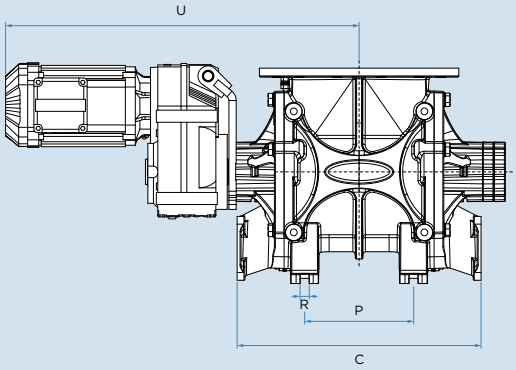
MAX. PRESSURE	1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF	10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL)	Usable in ex-zones and as protection system (Flameproof for dust ST2)
LARGE INLET	Without restriction of the cross section for highest capacities
OUTBOARD BEARINGS	Separated from product by purged seal arrangement and drop out opening
BLOW-THROUGH CHANNEL	Optimal pocket sweeping at low pressure drop

OPTIONS AND ACCESSORIES

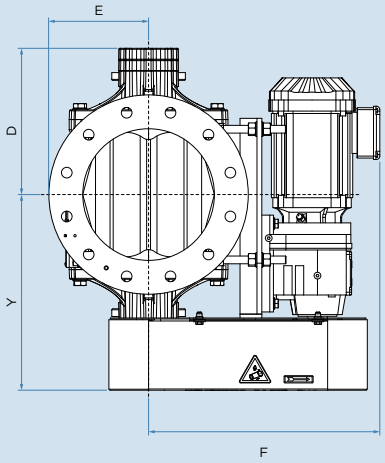
_ Quick cleaning coupling with extraction device
_ Chamfered blades
_ Knife at the product inlet
_ Scraper blades
_ DUROPROTECT® wear protection, page 36
_ Sanitary version



Shown without drive



Drive with parallel helical gear motor



With chain drive

	Inlet*			Blow-through channel		Mounting pattern			Other dimensions							Weight*** (appr. kg)	
	A (DIN)	A (ASME)	Ø A	Ø W	J^{+1}_{-1}	N	P	R	H^{+5}_{-1}	C^{+2}_{-2}	D	E	F**	Y	V^{+3}_{-1}	U**	AL	SS/GG
ZXD 150	DN 150	6"	168	69	128	112	130	14	350	366	229	142	362	271	181.0	616	70	90
ZXD 200	DN 200	8"	217	82	134	154	180	14	405	420	254	171	426	306	194.0	695	100	135
ZXD 250	DN 250	10"	272	107	158	168	225	18	445	504	302	206	478	367	230.7	756	135	195
ZXD 300	DN 300	12"	322	132	193	220	275	18	560	580	337	241	541	380	287.5	803	210	315
ZXD 350	DN 350	14"	360	160	205	240	330	23	620	660	373	267	593	437	313.0	845	305	485
ZXD 400	DN 400	16"	410	184	212	310	372	23	715	600	403	299	724	485	375.0	875	405	675

Dimensions in mm

* Drilled according to DIN PN 10 or the corresponding ASME standard.

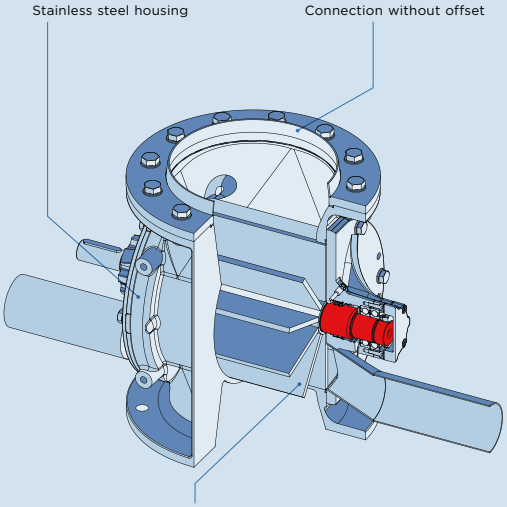
** Dimensions may vary according to drive.

*** With drive.

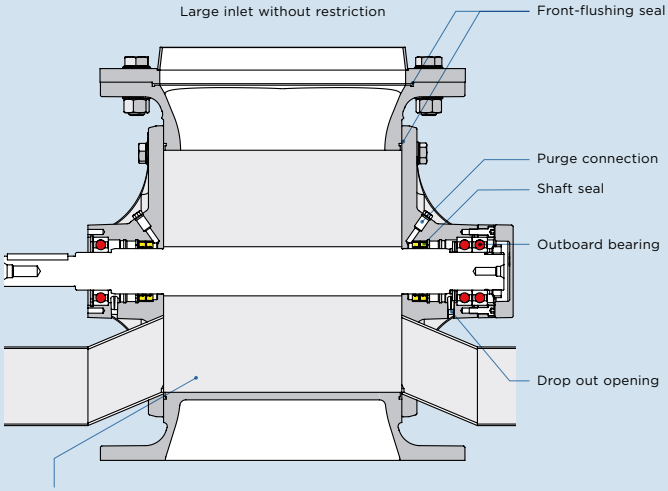
Rotary Valve ZFD

BLOW-THROUGH VALVE IN CIP VERSION

_ For automatic wet cleaning without opening the valve (CIP)
_ Stainless steel design, engineered to EHEDG guidelines
_ Smooth transitions and polished surfaces Ra 0.8 µm to minimize product deposits
_ Front-flushing seals at inlet/outlet and between side cover and housing (patented gap-free design, FDA-compliant)

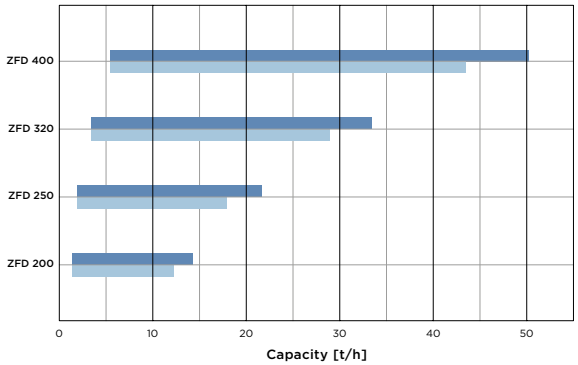


D Rotor, open end, 10 pockets, chamfered blades

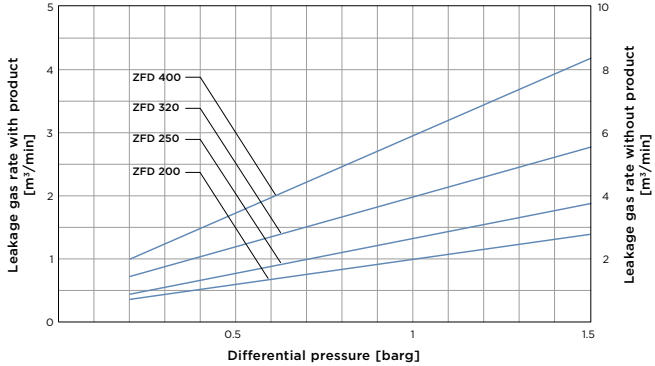


Blow-through channel without groove

Performance diagram
Powder with bulk density 1000 kg/m³ and 0.3 mm < d50 < 0.6 mm, Δp = 0,8 barg
Powder with bulk density 1000 kg/m³ and 0.075 mm < d50 < 0.15 mm, Δp = 0,8 barg

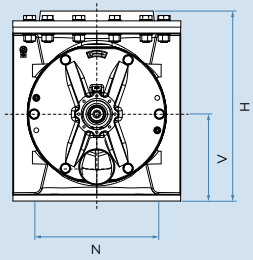


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

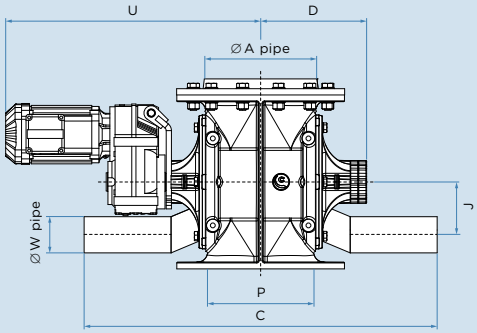


MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
LARGE INLET/OUTLET Greatest possible connection cross section for highest capacities
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening purged seal arrangement

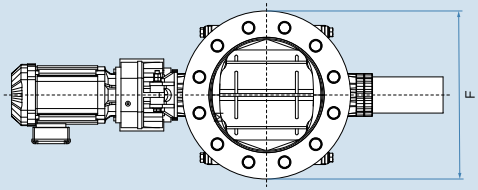
OPTIONS AND ACCESSORIES
_ Quick cleaning coupling with extraction device
_ Conveying line adaptors in acc. with DIN 11864



Front view



Side view



top view

	Inlet*			Blow-through channel		Mounting pattern			Other dimensions						Weight*** (appr. kg)
	A (DIN)	A (ASME)	Ø A pipe	Ø W pipe	J	N	P	Quantity x Ø	H^{+5}_{-1}	C	D	F	U**	V^{+3}_{-1}	
ZFD 200	DN 200	8"	219.1	70 x 2.0	118.0	272.5	112.9	4 x Ø 22	386	937	234	341	622.0	170	125
ZFD 250	DN 250	10"	273.0	85 x 2.0	126.5	247.5	247.5	4 x Ø 22	446	964	253	412	695.0	200	175
ZFD 320	DN 300	12"	323.9	100 x 2.0	152.0	243.8	348.1	4 x Ø 22	546	1015	305	483	758.5	250	265
ZFD 400	DN 350	14"	355.6	125 x 2.0	171.0	263.9	376.8	4 x Ø 22	653	1320	352	533	818.0	300	445

Dimensions in mm

* Drilled according to DIN PN 10 or the corresponding ASME standard.

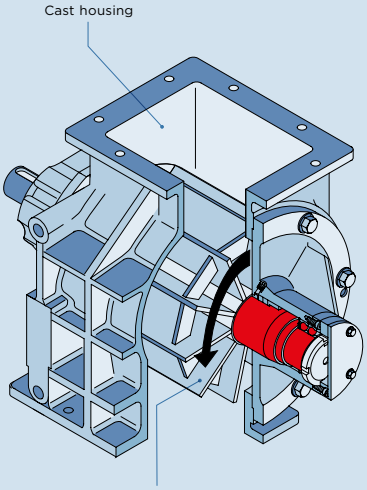
** Dimensions may vary according to drive.

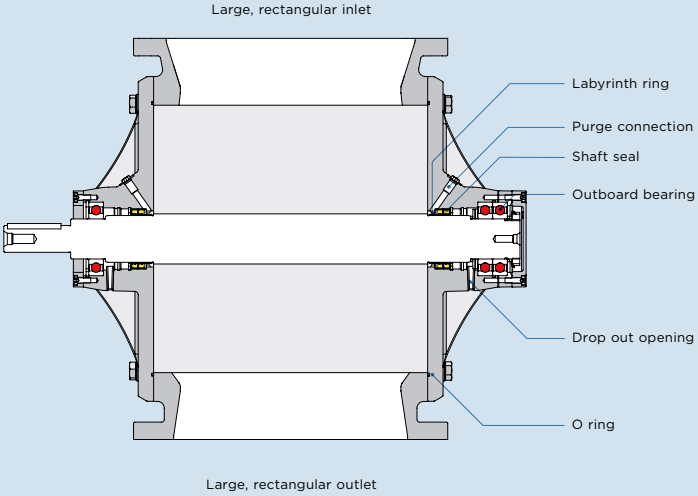
*** With drive.

Rotary Valve ZKD

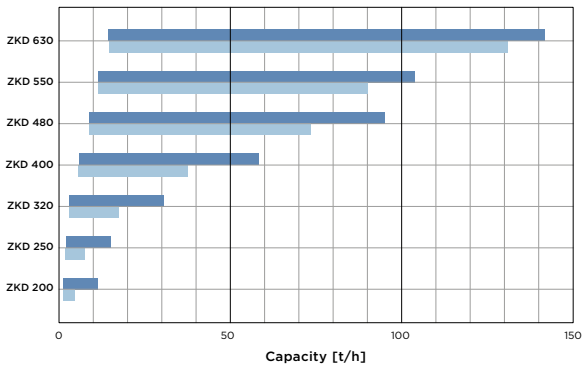
DISCHARGING AND METERING VALVES FOR POWDERS

_ Solid housing with rectangular flange connections
_ With feeding shoe also suitable for feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)

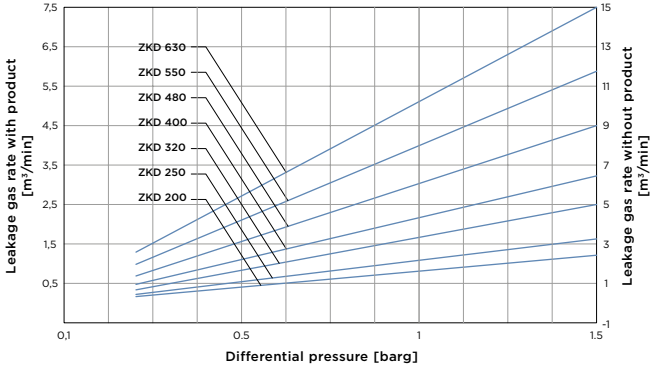




Performance diagram
Powder with bulk density 1000 kg/m³ and 0.6 mm < d50 < 1.0 mm, Δp = 0,8 barg
Powder with bulk density 1000 kg/m³ and 0.15 mm < d50 < 0.3 mm, Δp = 0,8 barg

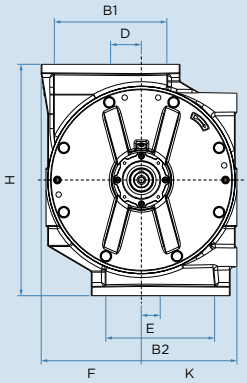


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

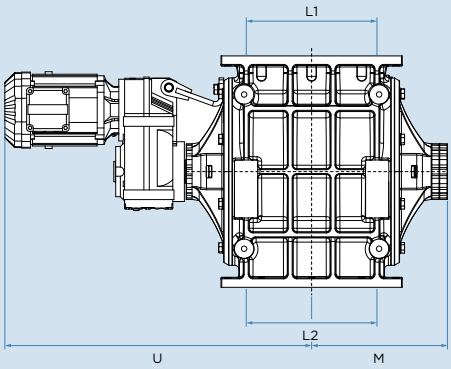


MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
INLET/OUTLET Rectangular housing design shape corresponds to rotor shape
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening

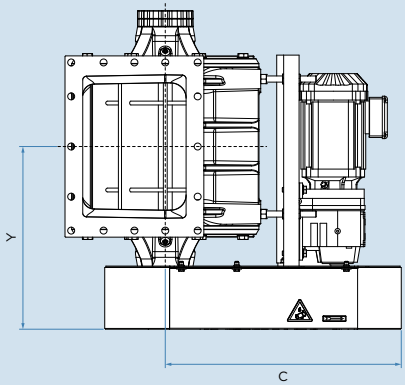
OPTIONS AND ACCESSORIES
_ Quick cleaning coupling with extraction device
_ Chamfered blades
_ Rotor with shallow pockets
_ Knife at the product inlet
_ Scraper blades
_ X rotor → ZKX or C rotor → ZKC
_ DUROPROTECT® wear protection, page 36
_ High-temperature design (T) up to 250 °C



Shown without drive



Drive with parallel helical gear motor



With chain drive

	Inlet/Outlet		Offset (axes)		Other dimensions							Weight** (appr. kg)	
	L1 x B1	L2 x B2	D	E	H_{-1}^{+5}	C*	Y*	K	F	M*	U**	AL	SS/GG
ZKD 200	186 x 150	186 x 150	25	/	340	485	350	140	147	233	510	80	120
ZKD 250	220 x 178	220 x 170	54	20	400	485	385	165	189	252	560	105	170
ZKD 320	280 x 208	280 x 200	72	40	475	530	450	205	222	300	685	160	265
ZKD 400	370 x 268	350 x 260	80	50	600	585	490	247.5	260	354	760	245	425
ZKD 480	460 x 300	450 x 300	60	20	700	730	570	300	270	415	940	415	700
ZKD 550	500 x 320	490 x 320	100	30	800	900	630	330	330	470	1000	565	965
ZKD 630	600 x 400	590 x 400	45	/	900	1000	670	405	325	508	1110	790	1415

Dimensions in mm

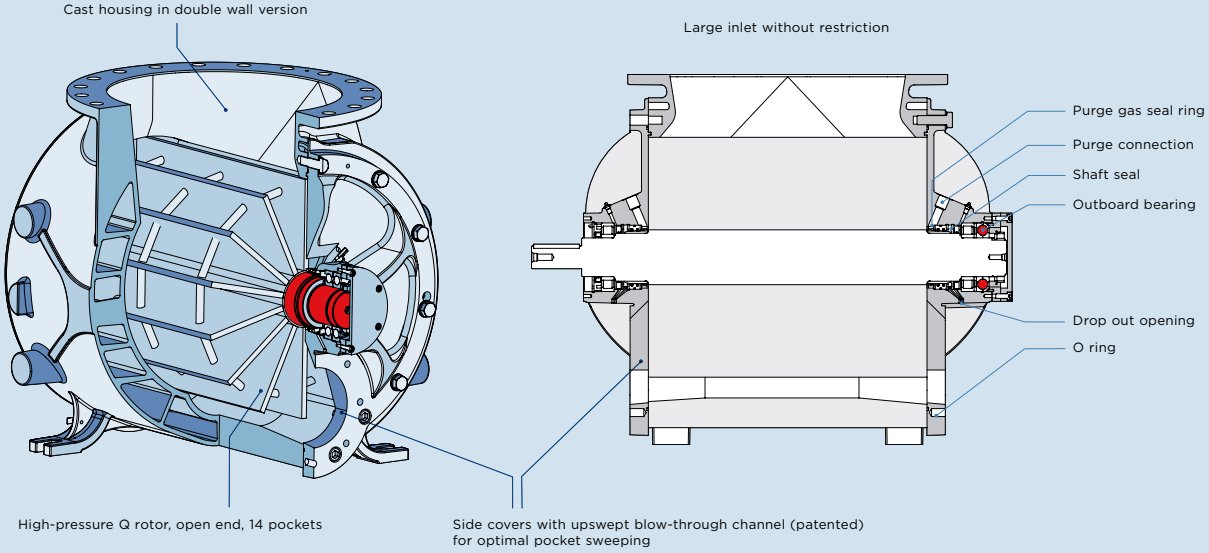
* Dimensions do not apply to high temperature design; may vary according to drive.

** With drive.

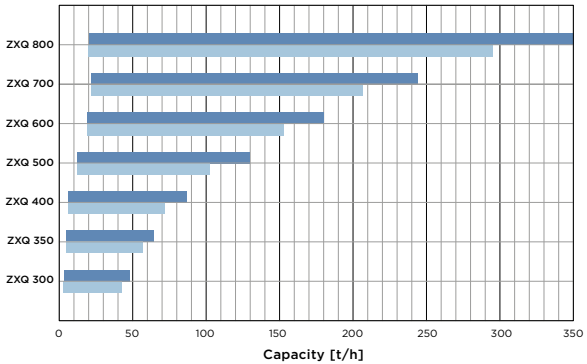
Rotary Valve ZXQ

HIGH-PRESSURE BLOW-THROUGH VALVE FOR POWDERS

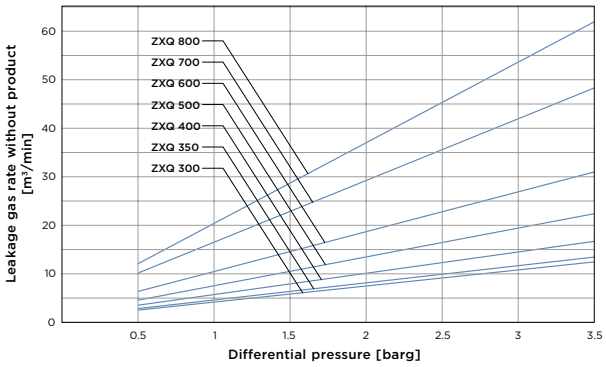
_ Highest product capacities due to low leakage gas rates
_ Specially developed for feeding bulk materials into pneumatic conveying systems at up to 3.5 barg (51 psi)



Performance diagram
Powder with bulk density 1000 kg/m³ and 0.3 mm < d50 < 0.6 mm, Δp = 2 barg
Powder with bulk density 1000 kg/m³ and 0.075 mm < d50 < 0.15 mm, Δp = 2 barg

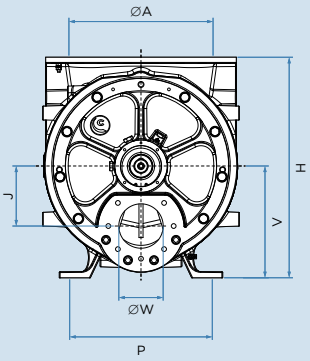


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

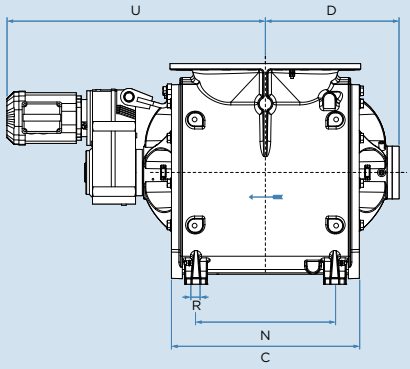


MAX. PRESSURE RANGE 3.5 barg (51 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi) due to heavy duty design
LOW MAINTENANCE Open-end high-pressure rotor with 14 pockets for low leakage gas rates
LARGE INLET Without restriction of the cross section for highest capacities
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening
BLOW-THROUGH CHANNEL Optimal pocket sweeping at low pressure drop

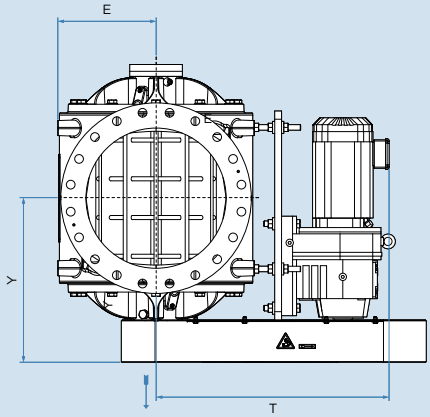
OPTIONS AND ACCESSORIES
_ Chamfered blades
_ Heated housing
_ DUROPROTECT® wear protection, page 36



Shown without drive



Drive with parallel helical gear motor



With chain drive

Conveying direction

	Inlet*			Blow-through channel		Mounting pattern			Other dimensions								Weight*** (appr. kg)	
	A (DIN)	A (ASME)	Ø A	Ø W	J^{*1}_{-1}	N	P	R	H^{*7}_{-1}	C^{*1}_{-1}	D	E	Y	V^{*4}_{-1}	T**	U**	AL	SS
ZXQ 300	DN 300	12"	318	100	173	220	275	18	560	584	341	217	409	280	554	714	240	335
ZXQ 350	DN 350	14"	360	125	205	240	330	23	620	584	383	240	425	313	600	847	310	560
ZXQ 400	DN 400	16"	410	150	198	310	372	23	715	600	416	287	487	375	656	877	410	675
ZXQ 500	DN 500	20"	515	175	230	500	510	28	810	690	488	380	604	410	1020	985	765	1035
ZXQ 600	DN 600	24"	610	200	280	654	540	30	955	810	557	455	669	470	1120	1146	1140	1780
ZXQ 700	DN 700	28"	710	250	319	730	670	33	1200	960	709	528	872	580	1300	1355	1890	3030
ZXQ 800	DN 800	32"	815	265	383	840	820	36	1400	1180	808	525	970	700	1330	1622	2775	/

Dimensions in mm

* Drilled according to DIN PN 10 or the corresponding ASME standard.

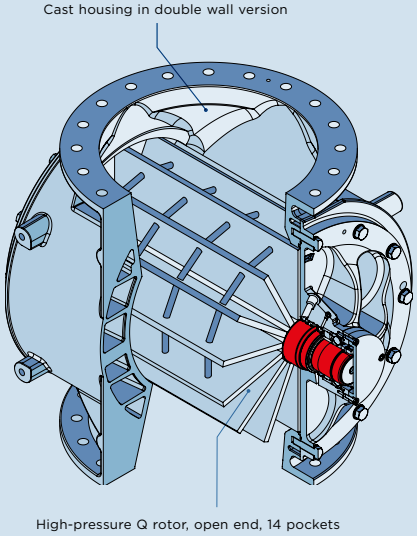
** Dimensions may vary according to drive.

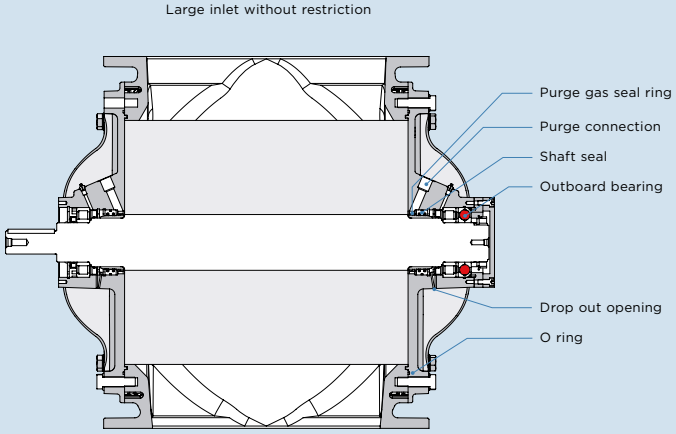
*** With drive.

Rotary Valve ZAQ

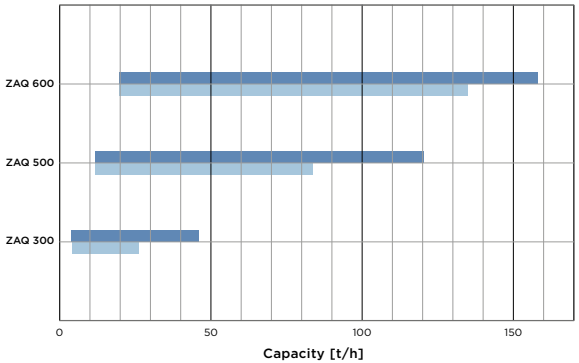
DISCHARGING VALVE FOR FOR POWDERS

_ Highest product capacities due to low leakage gas rates
_ Specially developed for feeding bulk materials into pneumatic conveying systems at up to 3.5 barg (51 psi)

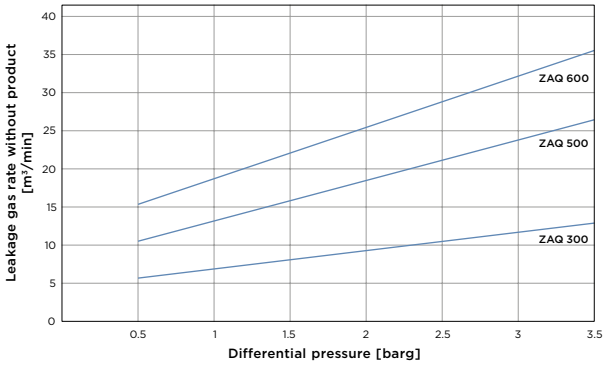




Performance diagram
Powder with bulk density 1000 kg/m³ and 0.3 mm < d50 < 0.6 mm, Δp = 2 barg
Powder with bulk density 1000 kg/m³ and 0.075 mm < d50 < 0.15 mm, Δp = 2 barg

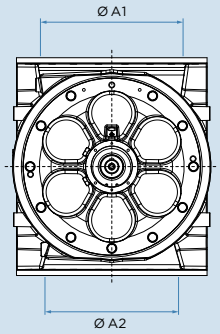


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

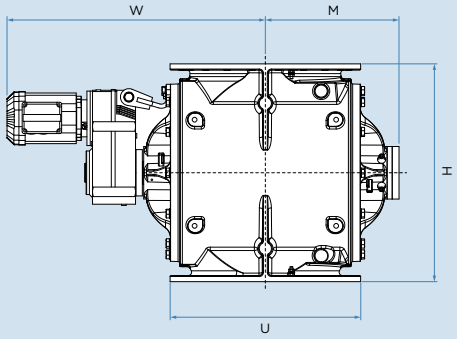


MAX. PRESSURE 3.5 barg (51 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
LOW MAINTENANCE Open-end high-pressure rotor with 14 pockets for low leakage gas rates
LARGE INLET Without restriction of the cross section for highest capacities
OUTBOARD BEARINGS Separated from product by purged seal arrangement and drop out opening

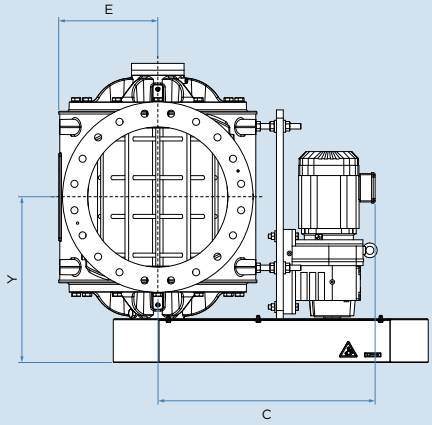
OPTIONS AND ACCESSORIES
_ Chamfered blades
_ Usable in ex-zones (ATEX)
_ Heated housing



Shown without drive



Drive with parallel helical gear motor



With chain drive

	Inlet*/Outlet*				Other dimensions							Weight*** (appr. kg)	
	A (DIN)	A (ASME)	Ø A1	Ø A2	H	W**	C**	Y	M	E	U	AL	SS
ZAQ 300	DN 300	12"	316	290	560	985.5	564	408.5	341	227	483	205	335
ZAQ 500	DN 500	20"	610	490	800	947.0	802	608.0	548	362	700	660	1135
ZAQ 600	DN 600	24"	620	590	970	1146.0	994	668.0	585	442	812	990	1730

Dimensions in mm

* Drilled according to DIN PN 10 or the corresponding ASME standard.

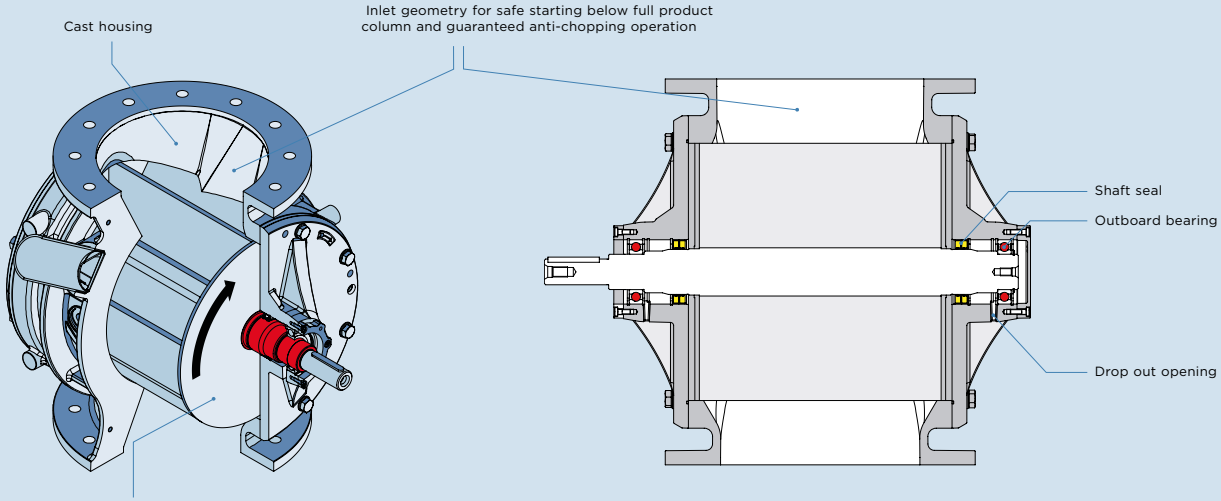
** Dimensions may vary according to drive.

*** With drive.

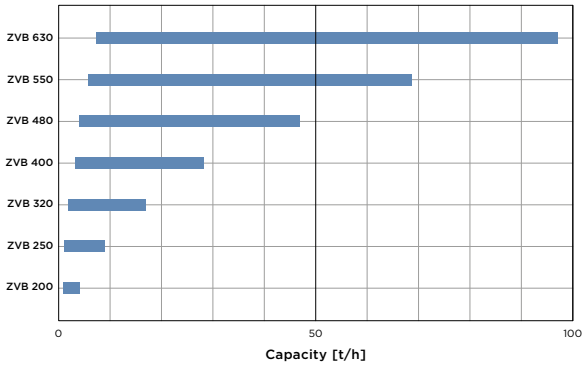
Rotary Valve ZVB

DISCHARGING VALVE FOR GRANULAR PRODUCTS

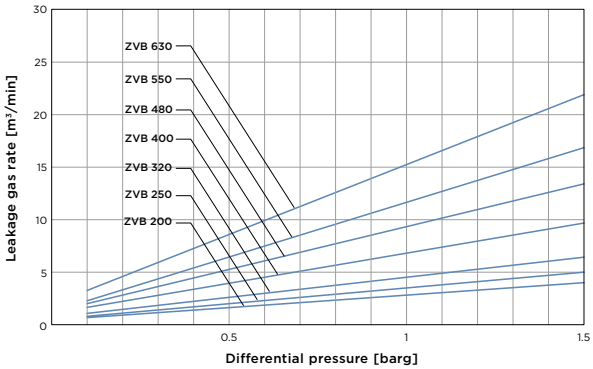
_ Ideal coordination of rotor volume and inlet cross section creates maximum capacity
_ With special inlet geometry for gentle product handling
_ With feeding shoe also suitable for feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)



Performance diagram
PE/PP pellets with bulk density 520 kg/m³ and 3.0 mm particle size, Δp = 0.8 barg

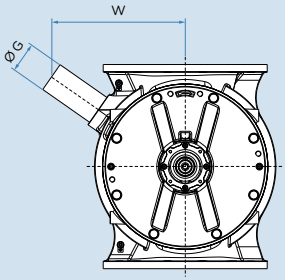


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

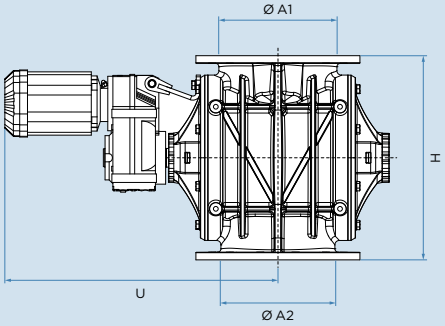


MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL) Usable in ex-zones
PELLET INLET Special inlet geometry for gentle operation at full product column
CAPACITY High throughputs by venting internal gas leakage prior to filling rotor pockets

OPTIONS AND ACCESSORIES
_ Rotor with shallow pockets
_ ZGB version (pellet deflection)
_ DUROPROTECT® wear protection, page 36
_ High-temperature design (T) up to 250 °C

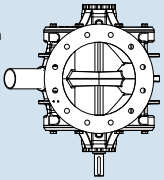


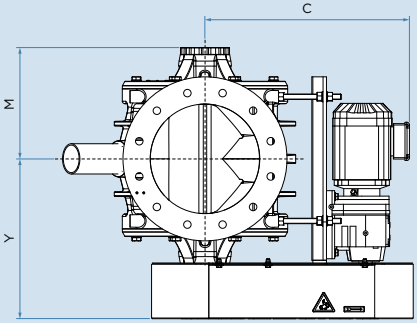
Shown without drive



Drive with parallel helical gear motor

ZGB design





With chain drive

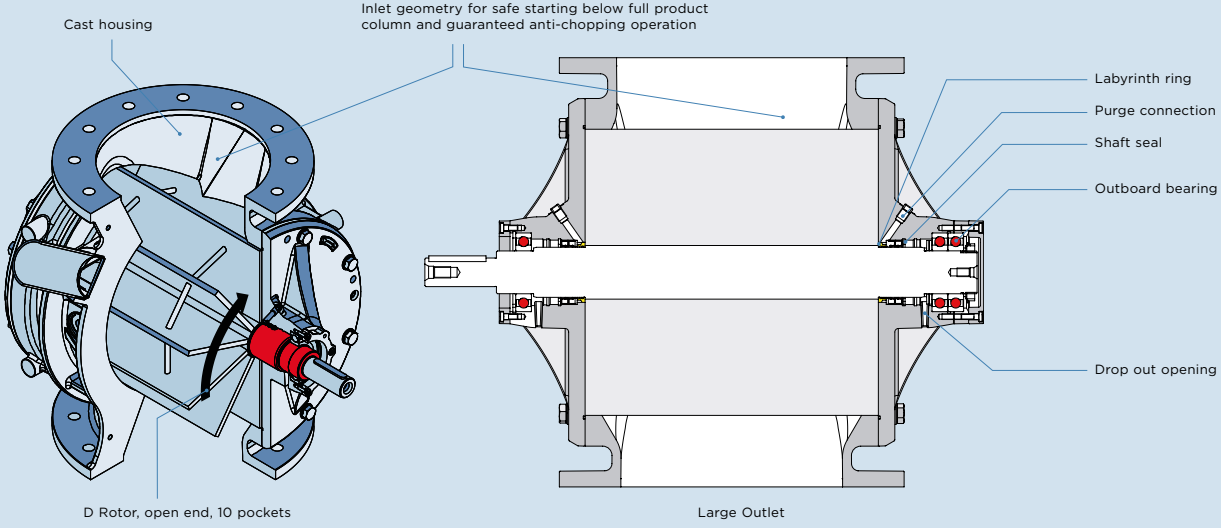
	Inlet*/Outlet*				Other dimensions							Weight*** (appr. kg)	
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	H_{-1}^{+5}	C**	Y**	W	M**	U**	Ø G	AL	SS
ZVB 200	DN 150	6"	166	155	360	409	328	226	234	622	48.3	80	105
ZVB 250	DN 200	8"	213	207	450	442	347	278	253	695	60.3	105	145
ZVB 320	DN 250	10"	272	259	500	562	417	320	305	759	76.1	160	225
ZVB 400	DN 300	12"	322	310	600	590	474	393	352	818	88.9	255	365
ZVB 480	DN 350	14"	360	337	750	686	553	464	416	958	88.9	410	595
ZVB 550	DN 400	16"	410	387	850	780	605	537	466	988	114.3	565	780
ZVB 630	DN 500	20"	511	487	970	922	637	589	505	1075	114.3	780	1220

Dimensions in mm * Drilled according to DIN PN 10 or the corresponding ASME standard. ** Dimensions do not apply to high temperature design; may vary according to drive.
*** With drive.

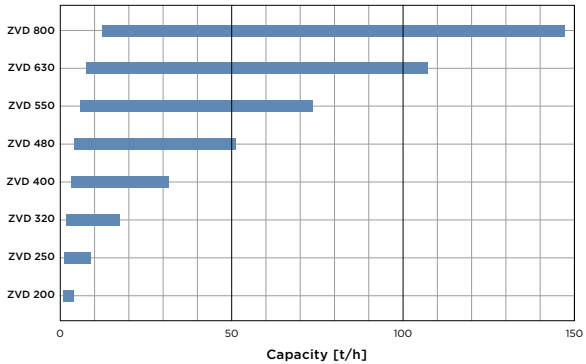
Rotary Valve ZVD

DISCHARGING VALVE FOR FINE- TO COARSE-GRAINED PRODUCTS

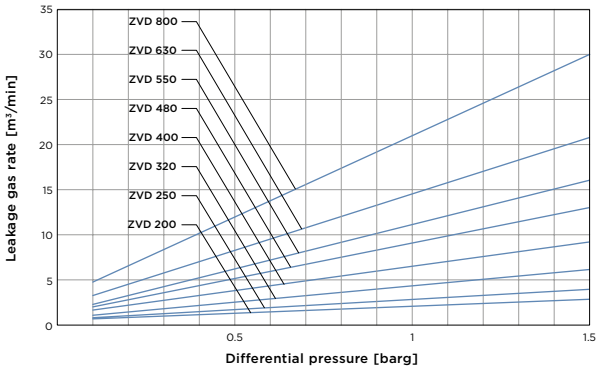
_ Ideal ratio of rotor volume to inlet cross section creates maximum capacity
_ With special inlet geometry for gentle product handling
_ With feeding shoe also suitable for feeding bulk materials into pneumatic conveying systems at up to 1.5 barg (21 psi)



Performance diagram
PE/PP pellets with bulk density 520 kg/m³ and 3.0 mm particle size, Δp = 0.8 barg

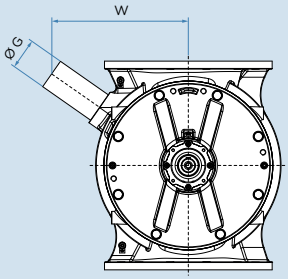


Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

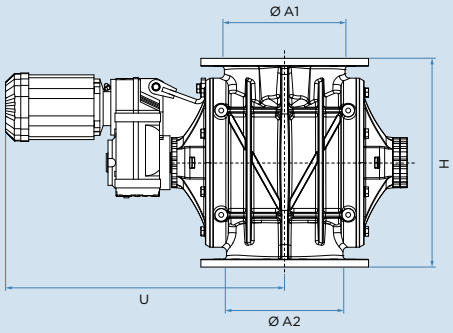


MAX. PRESSURE 1.5 barg (21 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL) Usable in ex-zones and as protection system (Flameproof for dust ST2)
PELLET INLET Special inlet geometry for gentle operation at full product column
CAPACITY High throughputs by venting internal gas leakage prior to filling rotor pockets

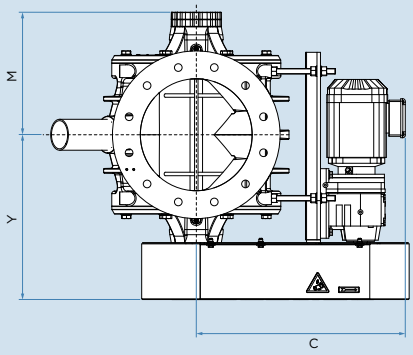
OPTIONS AND ACCESSORIES
_ Quick cleaning coupling with extraction device
_ Rotor with shallow pockets
_ Scraper blades
_ X rotor → ZVX or C rotor → ZVC
_ DUROPROTECT® wear protection, page 36
_ High-temperature design (T) up to 250 °C



Shown without drive



Drive with parallel helical gear motor



With chain drive

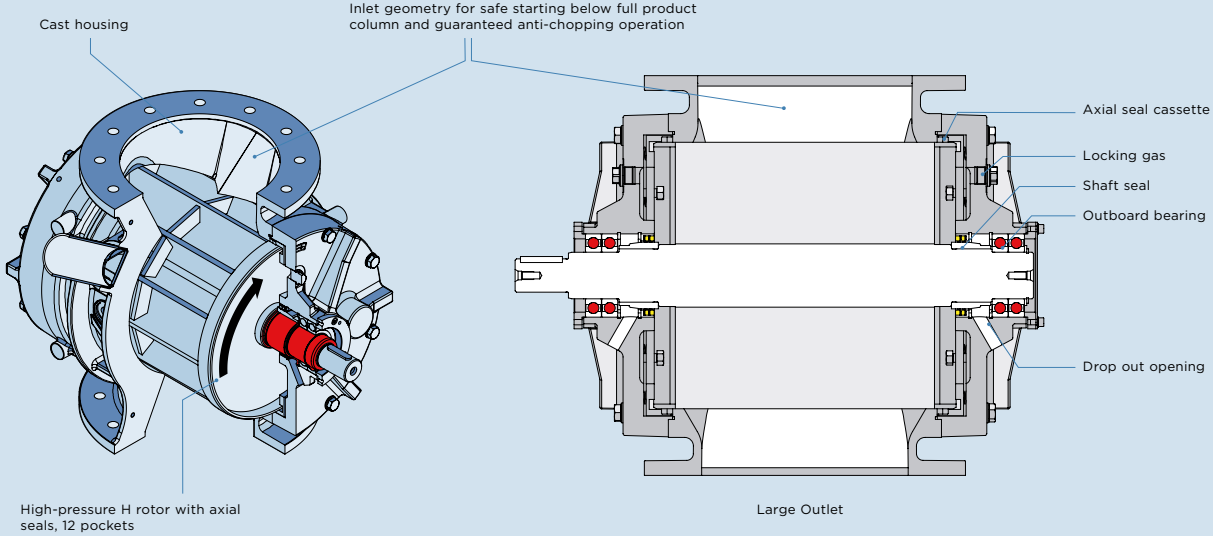
	Inlet*/Outlet*				Other dimensions							Weight*** (appr. kg)	
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	H^{+7}_{-1}	C**	Y**	W	M**	U**	Ø G	AL	SS
ZVD 200	DN 150	6"	166	155	360	409	328	226	234	622.0	48.3	80	120
ZVD 250	DN 200	8"	213	207	450	442	347	278	253	695.0	60.3	105	165
ZVD 320	DN 250	10"	272	259	500	562	417	320	305	758.5	76.1	160	250
ZVD 400	DN 300	12"	322	310	600	590	474	393	352	818.0	88.9	255	420
ZVD 480	DN 350	14"	360	337	750	686	553	464	416	958.0	88.9	410	680
ZVD 550	DN 400	16"	410	387	850	780	605	537	466	988.0	114.3	565	950
ZVD 630	DN 500	20"	511	487	970	922	637	589	505	1075.0	114.3	780	1220
ZVD 800	DN 700	28"	700	680	1140	1095	750	754	608	1307.0	168.3	1865	3455

Dimensions in mm * Drilled according to DIN PN 10 or the corresponding ASME standard. ** Dimensions do not apply to high temperature design; may vary according to drive.
*** With drive.

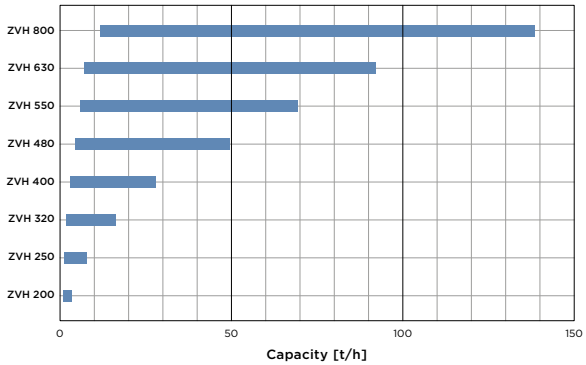
Rotary Valve ZVH

HIGH-PRESSURE DISCHARGING VALVE FOR PELLETS

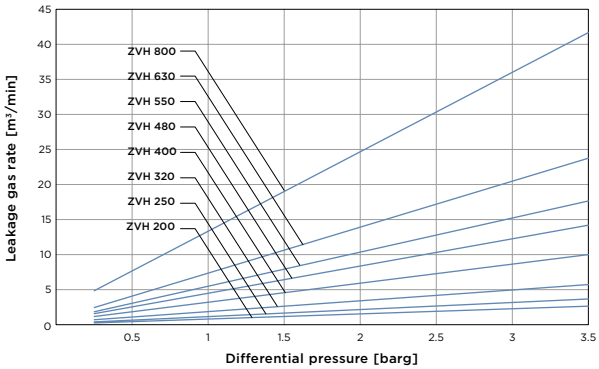
_ Ideal ratio of rotor volume to inlet cross section creates maximum capacity
_ With special inlet geometry for gentle product handling
_ With feeding shoe also suitable for feeding bulk materials into pneumatic conveying systems at up to 3.5 barg (51 psi)



Performance diagram
PE/PP pellets with bulk density 520 kg/m³ and 3.0 mm particle size, Δp = 2.0 barg



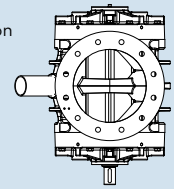
Leakage gas diagram
(New, standard clearance 60 °C, max. speed)

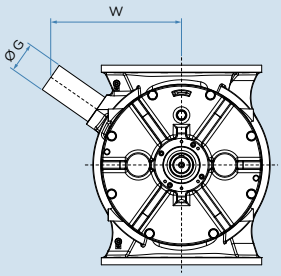


MAX. PRESSURE 3.5 barg (51 psi) system and differential pressure
PRESSURE SURGE PROOF 10 barg (145 psi), due to heavy duty design
ATEX (OPTIONAL) Usable in ex-zones
PELLET INLET Special inlet geometry for gentle operation at full product column
LOW LEAKAGE CAPACITY High-pressure rotor with 12 pockets and axial seals
High throughputs by venting internal gas leakage prior to filling rotor pockets

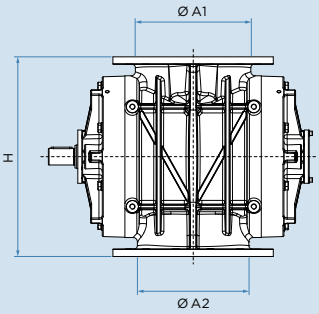
OPTIONS AND ACCESSORIES
_ Quick cleaning coupling with extraction device
_ Rotor with shallow pockets
_ ZGH version (pellet deflection)
_ DUROPROTECT® wear protection, page 36
_ High-temperature design (T) up to 250 °C

ZGH version

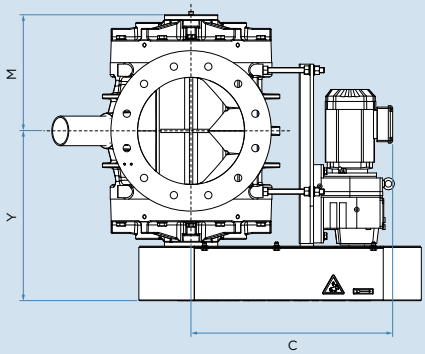




Shown without drive



Shown without drive



With chain drive

	Inlet*/Outlet*				Other dimensions						Weight*** (appr. kg)	
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	H^{+7}_{-1}	C**	Y**	W	M*	Ø G	AL	SS
ZVH 200	DN 150	6"	166	155	360	402	367	202	245	48.3	105	135
ZVH 250	DN 200	8"	213	207	450	467	418	278	272	60.3	160	205
ZVH 320	DN 250	10"	272	259	500	535	462	320	315	76.1	240	305
ZVH 400	DN 300	12"	322	310	600	592	510	393	359	88.9	335	440
ZVH 480	DN 350	14"	360	337	750	686	569	464	418	88.9	485	665
ZVH 550	DN 400	16"	410	387	850	780	588	537	436	114.3	680	930
ZVH 630	DN 500	20"	511	487	970	922	618	589	466	114.3	1010	1375
ZVH 800	DN 700	28"	700	680	1140	1095	771	754	616	168.3	1995	3495

Dimensions in mm * Drilled according to DIN PN 10 or the corresponding ASME standard. ** Dimensions do not apply to high temperature design; may vary according to drive.
*** With drive.

Valves | Options

Coperion has individual solutions for every application. Whether feeding into a process or a conveying line, discharging from a silo or big bag — Coperion rotary valves are attuned to the process and bulk material at hand.

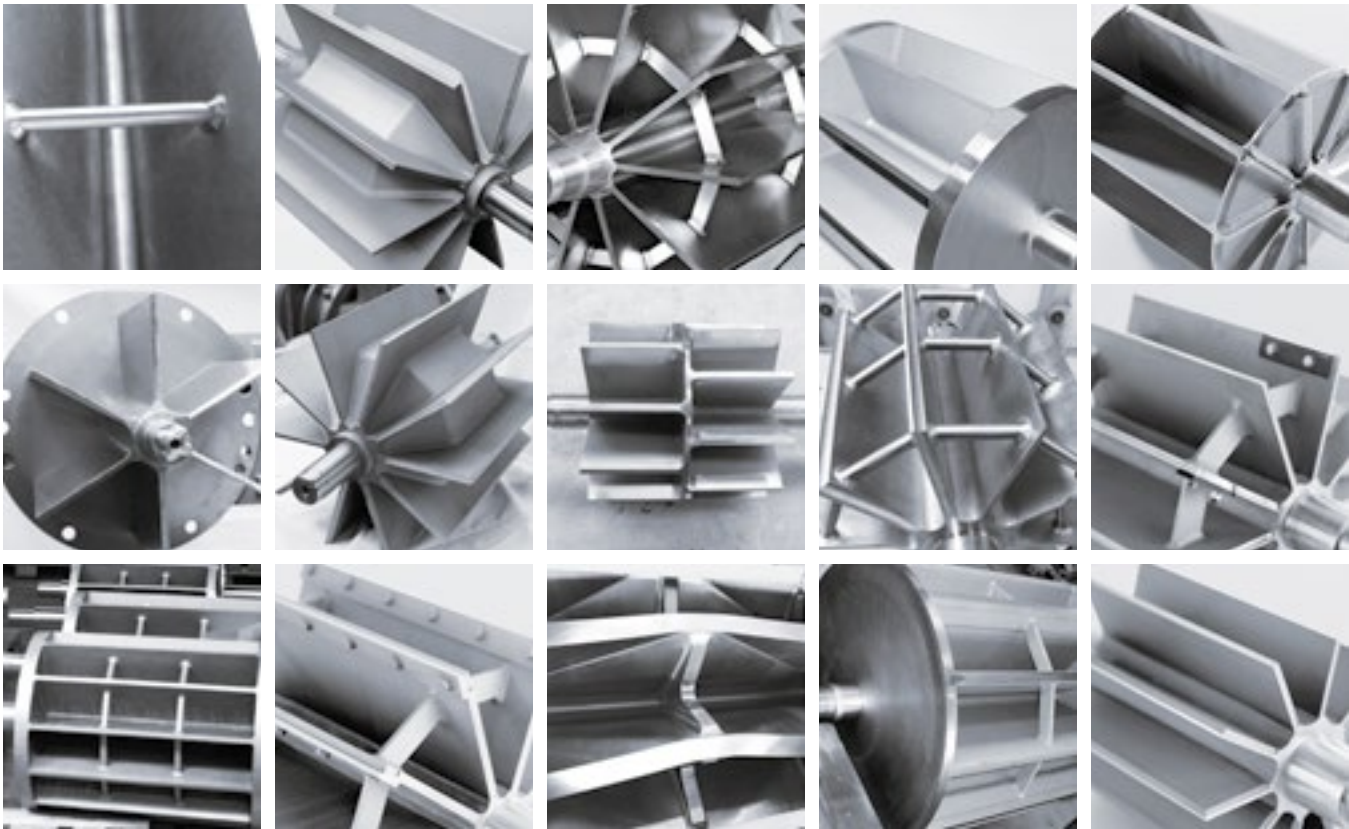
YOUR BULK MATERIAL

FREE FLOWING | ABRASIVE – STRIPPING | STICKY – CAKING – TACKY – ADHESIVE – SMEARING | FIBROUS | SHOOTING – FLUIDIZING | FRAGILE – BRITTLE | DEPOSIT-FORMING | COHESIVE – STICKY | DULL | DIFFUSES WELL | SQUEAKY | HARD | AGGLOMERATING | BRIDGING | WET

The ideal combination of a Coperion rotary valve housing and rotor guarantees economical and optimal conveying for any bulk material.

OUR SOLUTIONS

X ROTOR | 6-POCKET ROTOR | REINFORCED ROTOR | ROTOR WITH SHALLOW POCKETS | OFFSET ROTOR | KNIFE AT ROTOR | CHAMFER | SURFACES WITH PEARL EFFECT | WEAR PROTECTION | OPEN ROTOR | CLOSED ROTOR | POLISHED – HYGIENIC | KNIFE AT HOUSING | SMART GLIDE FINISH



Rotary Valves | Sanitary Design

ROTARY VALVE DESIGNS AND ACCESSORIES

_ With smooth-surfaced contours
_ For the strictest sanitary and cleanability requirements
_ Designs modified for product and cleaning method

	Standard	Hygienic	Hygienic CIP
			
Material	GG, CC, SS	SS	SS
Version	_ Surface interior standard (i.e., cast surface, weld seams) _ Flange inlet/outlet standard _ Shaft seal NBR, optional EPDM, PTFE _ Rotor standard _ Optional: Quick cleaning versions	_ Surface interior polished Ra ≤ 0.8 µm _ Flange inlet/outlet standard (not centered) _ Shaft seal FDA-compliant EPDM _ Rotor sanitary, recess on sides and perimeter, rounded chamber base _ Optional: Quick cleaning versions	_ Surface interior polished Ra ≤ 0.8 µm _ Flange inlet/outlet with front-flush, centered CIP seal, including counter-flange _ Side cover with front-flush, gap-free, centered CIP seal _ Shaft seal, CIP type, FDA-compliant _ Rotor sanitary, recess on sides and perimeter, rounded chamber base _ Optional: Quick cleaning versions

EXTRACTION DEVICE
FULL ACCESS SYSTEM, SINGLE-SIDED (FXS-1)

_ Single-sided swing-out system (in combination with Quick Cleaning version)
_ Easy rotor installation and removal without a lifting mechanism
_ Rotor can easily be moved to the side
_ Free access for cleaning and inspection

EXTRACTION DEVICE
FULL ACCESS SYSTEM, DOUBLE-SIDED (FXS-2)

_ Double-sided swing-out system (in combination with FXS-1 and Quick Cleaning version)
_ Additional swinging mechanism for the cover on the actuator side
_ Rotor and drive can easily be moved to the side without a lifting mechanism
_ Best possible access for cleaning and inspection

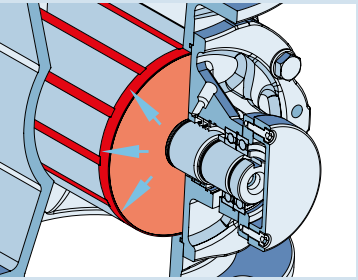
ROTORCHECK® CONTACT MONITORING

_ Intelligent electronics for continuous monitoring of undesired contact between rotor and housing
_ Prevents product contamination from metal abrasion
_ Protects against serious damage to the rotary valve
_ Version available for use in explosive atmospheres (ATEX)

Rotary Valves | Wear Protection

ROTARY VALVE VERSIONS

_ Design incorporates wear protection
_ Wear-resistant materials – specific to your application
_ For use especially in pneumatic conveying



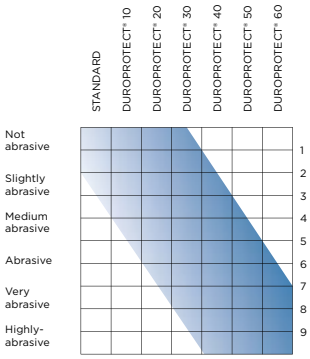
WEAR PROTECTION BY DESIGN

_ Closed rotor with massive end plates
_ Narrow gaps due to axially fitted rotor
_ Seal purging protects sealing rings and tub from wear

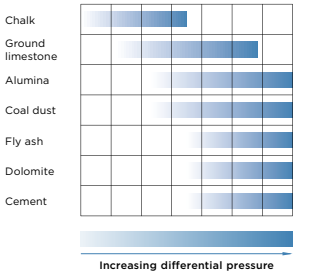
DUROPROTECT® PROTECTION CONCEPT

_ Selection concept developed on basis of long-term studies at the Coperion Test Center and in the field
_ Adapted to Mohs' hardness of bulk material relative to typical bulk materials' wear characteristics
_ Optimized for product properties (particularly abrasiveness) and operating conditions (particularly pressure difference)

SELECTION ACCORDING TO MOHS HARDNESS



SELECTION ACCORDING TO PRODUCT

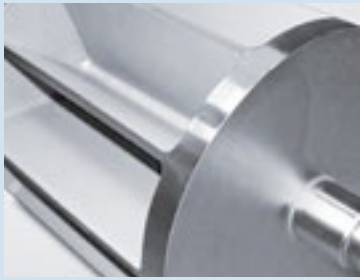


WEAR RESISTANCE CONCEPT AVAILABLE IN 5 LEVELS FOR ROTARY VALVES FOR POWDERS

DUROPROTECT®	DP 10	DP 20	DP 30	DP 40	DP 50	DP 60
Housing	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCARB®	DUROCERA®
Side covers	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCHROM®	DUROCARB®	DUROCARB® DUROCERA®
Rotor	D-rotor Steel	C-rotor Steel	C-rotor DUROCHROM®	C-rotor DUROCARB®	C-rotor DUROCARB®	C-rotor DUROCARB®
Abrasiveness / Pressure difference	Low					High

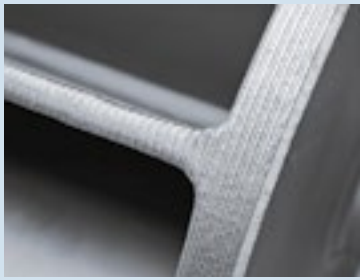
DUROCHROM®
HOUSING + ROTOR

_ Housing coated with hard chrome, coating thickness up to 400 µm
_ Rotor end plates and circumference coated with hard chrome
_ High wear resistance ensures long-term low leakage



DUROCARB®
ROTOR

_ Tungsten carbide welded on tip ends of rotor and end blades. Front end of end plates coated with hard chrome.
_ Tungsten carbide matrix is optimized to suit particle size of the bulk material (photo alongside shows tungsten carbide welding before machining)



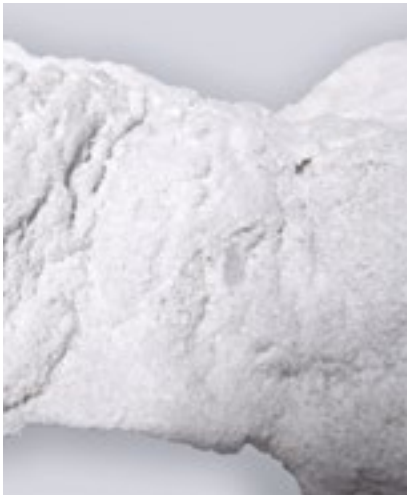
DUROCERA®
HOUSING

_ Monolithic or seamless, fitted solid ceramic lining on the housing for highest housing wear protection technically possible
_ Maximum wear resistance ensures long-term low leakage gas rates

Rotary Valves | Specialty Valves

SPECIAL ROTARY VALVE VERSION WITH VERY HIGH CUTTING FORCE AND TORQUE

_ For cutting and shredding agglomerates and clumps
_ Particularly in recycling applications or as chopping valves in reactor discharging
_ For safe and interruption-free operation






Specialty valves are predominantly used in manufacturing polyolefins (gas phase and slurry process) following reactor discharge. They can however also be used in plastics recycling, for example, or in conveyors for handling solid recovered fuel, to cut wires or the like.

VALVES ACCORDING TO APPLICATION WITH DIVERSE HIGH TORQUES (LEVELS)

	Discharge Valves		Blow-Through Valves
Housing			
Definition	ZRD max. 1.5 barg (21 psi)	ZAQ max. 3.5 barg (51 psi)	ZXQ max. 3.5 barg (51 psi)
Level 1	400, 480, 550, 630, 700, 800	500, 600	400, 500, 600, 700
Level 2	550, 630, 700, 800	500, 600	–
Level 3	550, 630, 700, 800	500, 600	–

	Level 1	Level 2	Level 3
Rotor			
Torque and Cutting Force	The cutting force of specialty valves is many times that of standard.		

Rotary Valves | Accessories

ROTARY VALVE ACCESSORIES

_ For optimizing our rotary valves to your application

LEAKAGE GAS COLLECTOR

_ Compact attachment for effective venting of leakage gas for rotary valves for powders
_ Allows high capacities
_ Ensures product flow with long gravity pipes or reduced inlet cross sections

LEAKAGE GAS SEPARATOR

_ Conical hopper for effective separation of product from the leakage gas stream during pre-dosed rotary valve operation
_ Depressurization of upstream feeding system
_ Enables leakage gas discharge directly into a central dedusting system
_ Also available with a filter attachment

GAS PURGE SYSTEM

_ Gas-purged labyrinth ring to protect the shaft seal in powder applications
_ Completely assembled with piping
_ Recommended with pressure difference and for sanitary applications
_ Can be used with pressure and flow rate monitoring

Purge-free sealing gaskets

_ For non-abrasive conveying products, reduced effort

SPEED MONITOR

_ Simple function control
_ 10 impulses per rotation for safe function and speed monitoring
_ Selection of various cylindrical sensors for normal and ex-zone environments

DIRECT DRIVE*

_ Compact, easy-to-assemble drive in plug-in version
_ No overdrive or clutch, making it easy to maintain and sanitary
_ Smooth, quiet operation

CHAIN DRIVE*

_ Side-mounted drive with chain overdrive
_ Later change of gear ratio possible by exchanging the chain sprocket
_ Suitable for high product temperatures

* All drives are available for operation on the frequency converter and in a version for use in ex-zones (ATEX).

Rotary Valves | Accessories

ROTARY VALVE ACCESSORIES

_ For optimizing our rotary valves to your application

HEATED HOUSING

_ Heated by steam or circulated thermo-oil inside the housing up to 220 °C max
_ For heating the rotary valve at product temperatures higher than 120 °C
_ Minimizes leakage gas
_ Large-scale heat transfer for short pre-heating times

FEEDING STATIONS
RCG AND FFZ

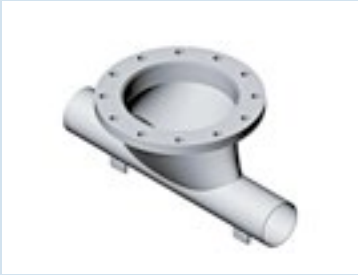
_ Dense-phase conveying station RCG or dilute-phase conveying station FFZ
_ Complete conveying stations consisting of rotary valve, feeding shoe and support frame, assembled and ready to install (options such as butterfly valve)
_ Easy integration into conveying machines

ROTARY VALVE INSTALLED UNDER SILO

_ Coperion rotary valve design enables assembly without separate air leakage venting on a case-by-case basis
_ Compact construction underneath bin or silo
_ Sanitary installation
_ Reduces investment costs for powder applications

FEEDING SHOE FOR DILUTE-PHASE CONVEYING

_ Guarantees optimal feed of powders and pellets into the conveying pipe
_ Optimized design for low pressure drop
_ Various connecting nominal diameters available for each size, optional connecting flange at conveying pipe
_ Optional chrome plating or ceramic lining

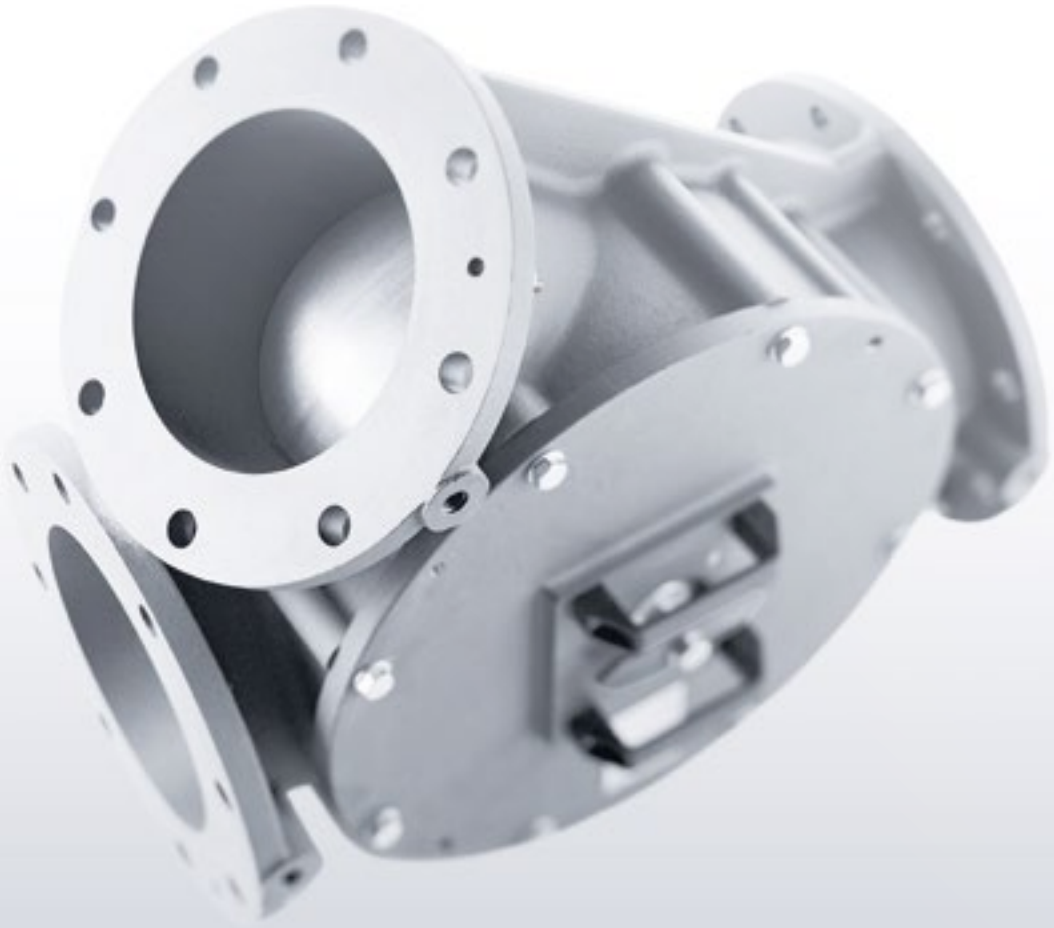


FEEDING SHOE FOR SLOW-MOTION CONVEYING

_ Ensures optimal feed of pellets into the conveying pipe, even at low conveying gas velocities
_ Supports formation of plugs for stable conveying
_ Pressure range up to 3.5 barg (51 psi)

Diverter Valves

Granular products and powders					Granular products	
WZK	WYK	WRK	WHK	WGV	WEK	WET
						
5 barg	5 barg	4 barg	3 barg	1 barg	6 barg	6 barg



Coperion diverter valves come with the assurance of decades of experience and process expertise as well as proprietary development and manufacturing with top-quality materials.

K DESIGN
Asymmetric design with 35° to 45° angle suitable for distributing and collecting in conveying lines and gravity pipes.

T DESIGN
Rectangular design with 90° angle for silo filling.

V DESIGN
Symmetric design with 50° angle for gravity lines.

TYPE CODE FOR DIVERTER VALVES

SELECTION MATRIX FOR DIVERTER VALVES

Product	Average particle size d50	Application		
		Gravity pipe	Pneumatic conveying	
			Distributing valve	Collecting valve
Powder, fluff	Up to 1 mm	WGV WRK* WYK WZK WHK	WZK WRK* WYK** WHK	WZK WYK** WHK
Granular products, uniform particles	1 mm to 10 mm	WGV WEK WHK WYK	WEK/WET WZK WHK WYK	WEK WZK WHK WYK
Irregular particles, particles with high percentage of fines	1 mm to 10 mm	WGV WHK	WZK WHK	WZK WHK

BLUE = preferred

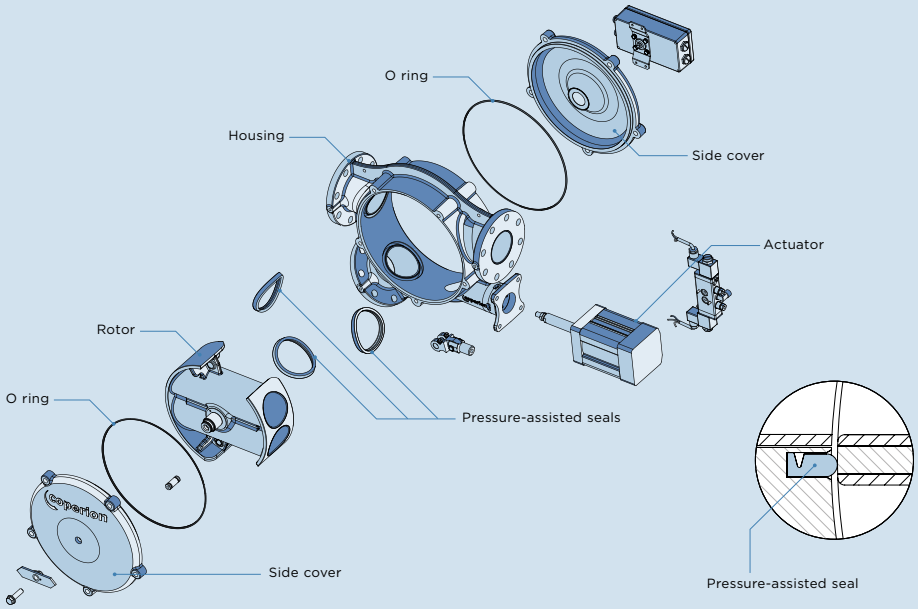
* For abrasive minerals.

** Sanitary applications.

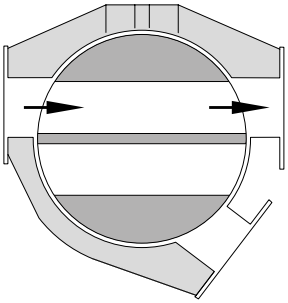
Two-Way Diverter Valve WZK

DUAL CHANNEL DIVERTER VALVE FOR GRANULAR PRODUCTS AND POWDERS

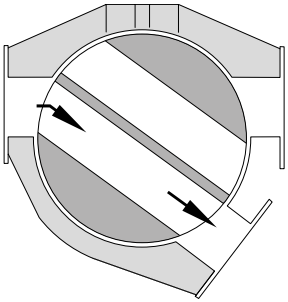
_ Cylindrical design with pressure-assisted seals
_ For installation in conveying lines or gravity pipes up to 5 barg (73 psi)
_ The Coperion original, most commonly installed worldwide



Straight through

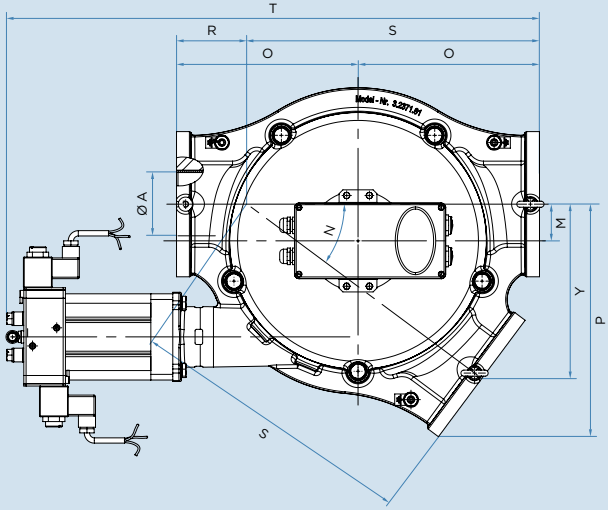


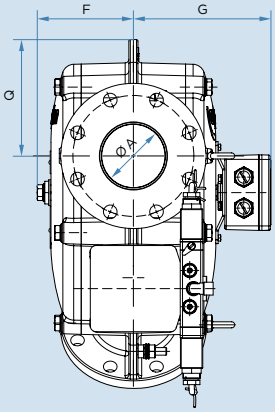
Diverted



MAX. PRESSURE 5 barg (73 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Pressure-assisted seals in the housing
MATERIAL Cast aluminum with stainless steel pipe insert (CR) or with reduced diameter (CD)

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Wear protection
_ Seal materials according to application
_ Signal box on right or left side
_ Quick cleaning design





Shown with signal box on right-hand side

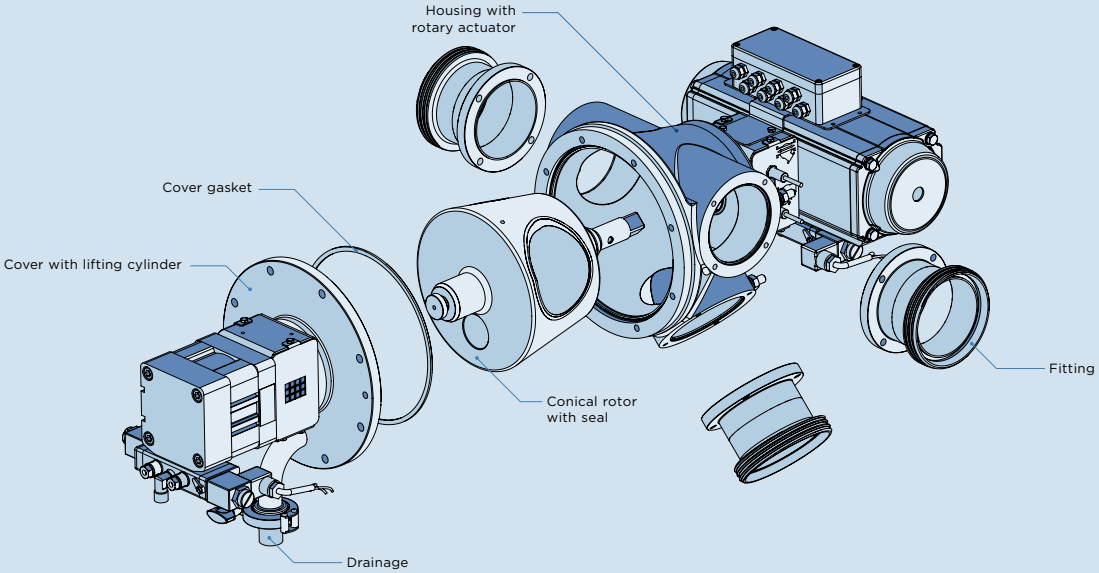
	Inlet*/Outlet*				Other dimensions											Weight (appr. kg)
	A (DIN)	A (ASME)	Ø A (CR)	Ø A (CD)	F	G	M	N	O	P	Q	R	S	T	Y	AL
WZK 50	DN 50	2"	55.1	50.3	103	163	35	33.5°	185	232	127,5	69	301	604	166	26
WZK 65	DN 65	2,5"	70.9	68.1	116	176	42.5	36.7°	215	276	135	87	343	662	205	34
WZK 80	DN 80	3"	83.7	80.9	122	182	48.5	36.6°	240	308	154	93	387	705	231	40
WZK 100	DN 100	4"	109.1	101.7	141	201	60.8	35.4°	270	360	199	80	461	782	267	62
WZK 125	DN 125	5"	133.7	125.5	160	220	74	35.5°	320	424	235	89	551	906	320	92
WZK 150	DN 150	6"	162.3	154	180	240	88.5	36°	360	485	268	88	632	989	372	124
WZK 175	DN 175	7"	187.7	181.7	231	291	102	36°	425	576	334	108	742	1172	436	203
WZK 200	DN 200	8"	213.1	207.1	242	302	117	35°	500	640	393	129	871	1326	500	282
WZK 250	DN 250	10"	267.0	261	283	387	144	35.5°	600	776	457	152	1048	1534	609	430

Dimensions in mm * Drilled according to DIN PN 10 or ASME 16.5 class 150.

Two-Way Diverter Valve WYK

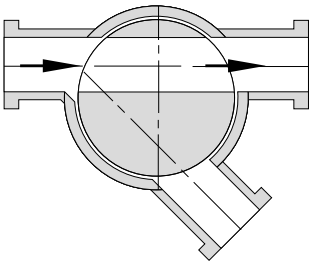
STAINLESS STEEL DIVERTER VALVE FOR GRANULAR PRODUCTS AND POWDERS

_ Single-channel conical-form diverter valve for easier dismantling
_ In sanitary and wet-cleanable CIP version
_ For installation in conveying lines and gravity pipes up to 5 barg

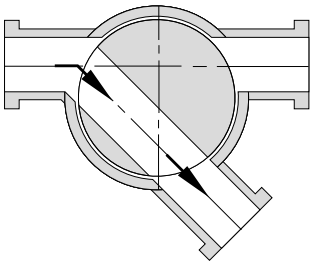


WYK-CIP:

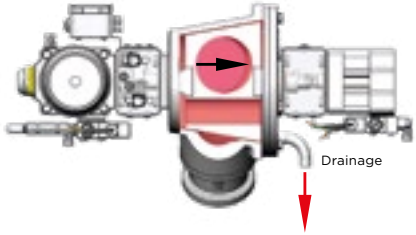
Pneumatic conveying, straight through



Pneumatic conveying, diverted 45°



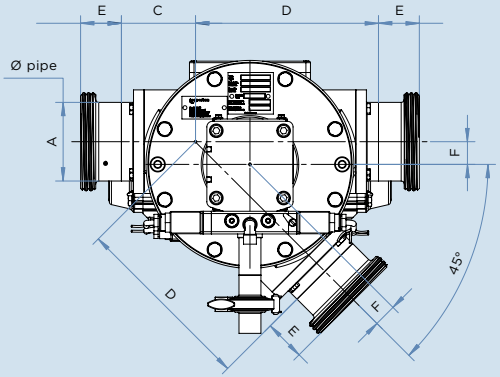
CIP cleaning*, rotor extracted



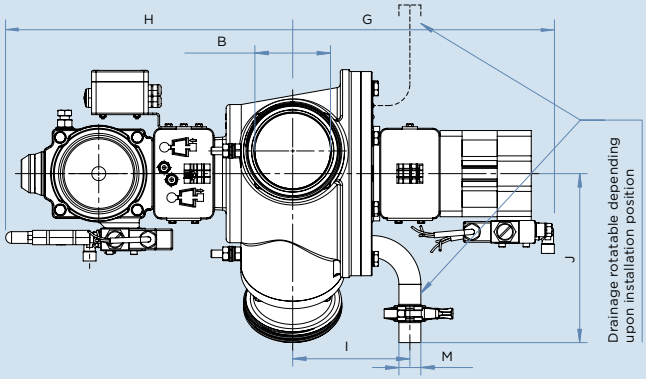
* CIP cleaning: During automatic cleaning, the rotor is extracted from the housing using the extraction cylinder, and completely flushed and purified by the cleaning medium.

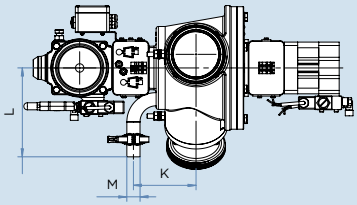
MAX. PRESSURE 5 barg (73 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Elastomer seal as well as tight clearances between rotor and housing
MATERIAL Stainless steel
SURFACE Product wetted parts Ra = 0,8 µm

OPTIONS AND ACCESSORIES
_ Sanitary construction for fully automatic and residue-free CIP cleaning (Cleaning In Place) with no dismantling or manual cleaning
_ Can be used in ex-zones with proper accessories
_ Option: "Standard" version without CIP function

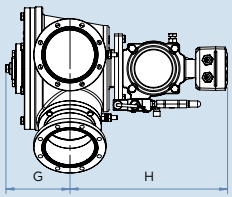


Shown with DIN 11864 threaded fittings
Option: additional pipe couplings upon request, E.g., DIN 11851, tri-clamp DIN 32676 or SMS 1145





Option: Drainage on the housing adapted to installation position



Option: COP version

	Inlet/Outlet			Other dimensions					CIP version							Standard version		Weight (appr. kg)	
	A (DIN)	A (ASME)	Ø Rohr	B	C	D	E	F	G	H	I	J	K	L	Ø M	G	H	Standard	CIP
WYK 65	DN 65 – DIN 11864-1	2 1/2"	70 x 2	66	47	143	85	20	324	354	124	176	103	157	19 x 1.5 (DN 15)	130	329	35	44
WYK 80	DN 80 – DIN 11864-1	3"	85 x 2	81	55	175	94	25	329	361	134	196	116	174	23 x 1.5 (DN 20)	138	333	48	54
WYK 100	DN 100 – DIN 11864-1	4"	104 x 2	100	68	212	94	30	346	380	155	223	138	196	29 x 1.5 (DN 25)	146	377	73	77
WYK 125	DN 125 – DIN 11864-2	5"	129 x 2	125	76	245	88	35	361	391	170	291	154	226	35 x 1.5 (DN 32)	162	400	99	100
WYK 150	DN 150 – DIN 11864-2	6"	154 x 2	150	88	282	95	40	376	407	190	279	174	244	1 x 1.5 (DN 32)	177	415	128	128

Dimensions in mm

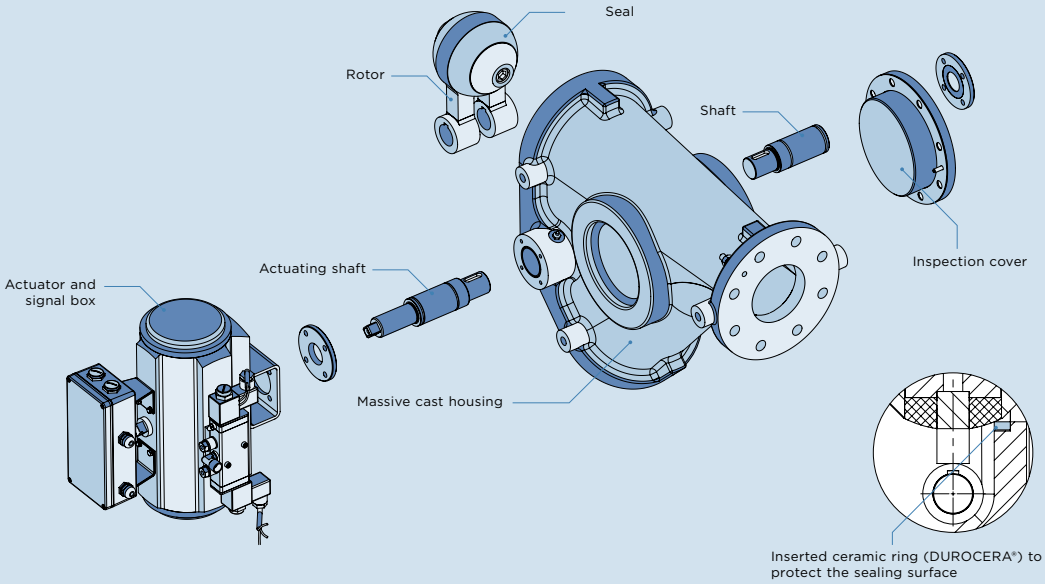
Other sanitary flanges are possible.

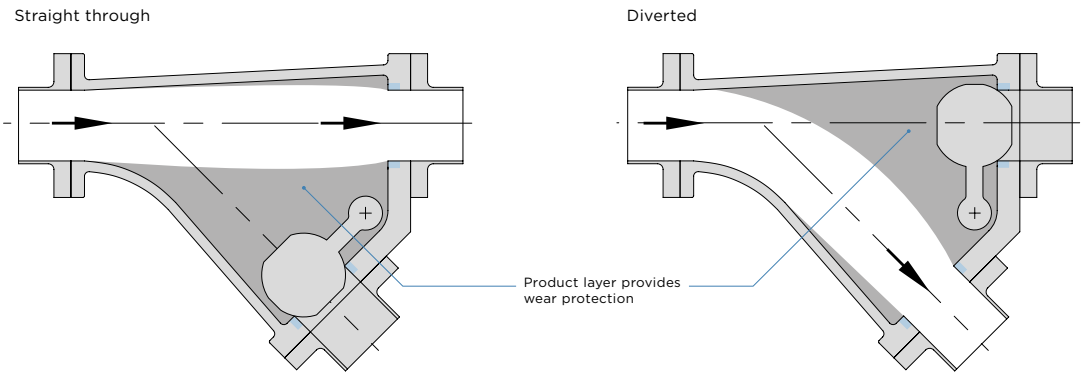
Two-Way Diverter Valve WRK

MASSIVE CAST-IRON DIVERTER VALVE FOR GRANULAR PRODUCTS AND POWDERS

_ Wear-protected diverter valve for abrasive products

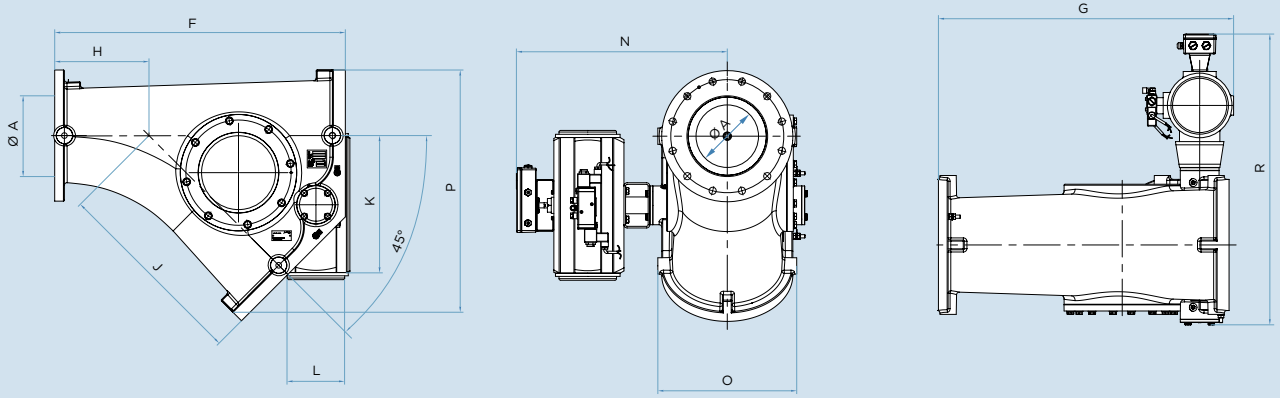
_ For compact installation in conveying lines or gravity pipes up to 4 barg





MAX. PRESSURE 4 barg (58 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Rotor with elastomer seal
MATERIAL Cast iron with ceramic wear protection ring installed

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Second inspection cover
_ Switchable in the product (case-by-case assessment)
_ Actuator on the right-hand side



Shown with actuator on left-hand side

	Inlet*/Outlet*			Other dimensions										Weight (appr. kg)
	A (DIN)	A (ASME)	Ø A	F	G	H	J	K	L	N	O	P	R	GG
WRK 100	DN 100	4"	100	520	515	132	388	274	114	443	270	470	607	120
WRK 125	DN 125	5"	125	600	605	147	453	320	133	493	290	537	670	150
WRK 150	DN 150	6"	150	700	708	202	498	352	146	523	320	595	719	180
WRK 200	DN 200	8"	200	770	762	242	528	373	155	588	370	666	810	230
WRK 250	DN 250	10"	250	900	949	292	608	430	178	694	430	777	942	330

Dimensions in mm Other sizes upon request.

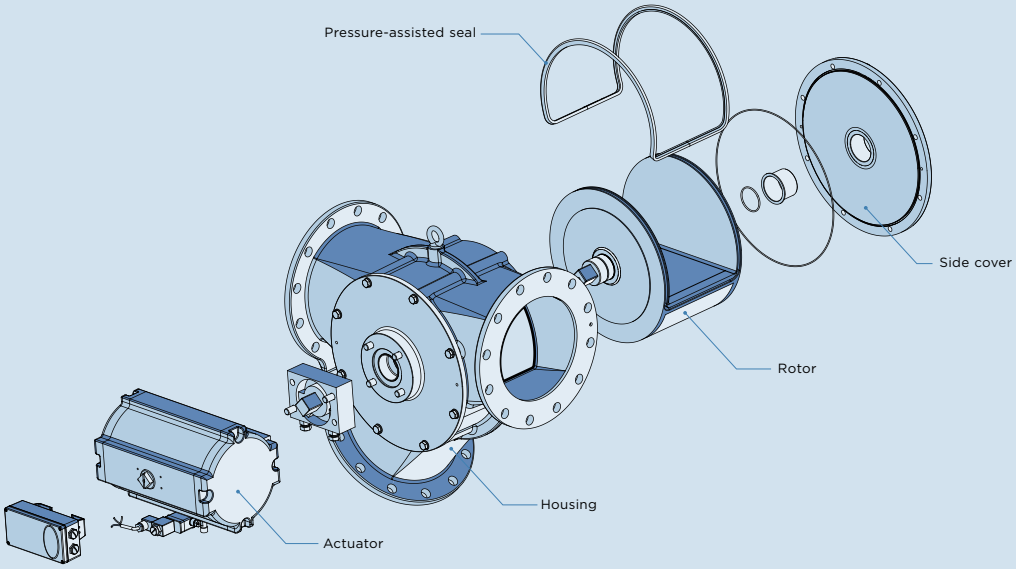
* Drilled according to DIN PN 10 with metric thread or ASME 16.5 class 150 with thread in inches.

Two-Way Diverter Valve WHK

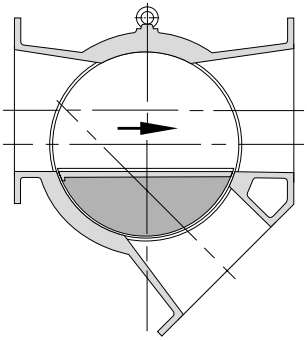
COMPACT SINGLE CHANNEL DIVERTER VALVE FOR GRANULAR PRODUCTS AND POWDERS

_ With sealed rotor and 45° outlet

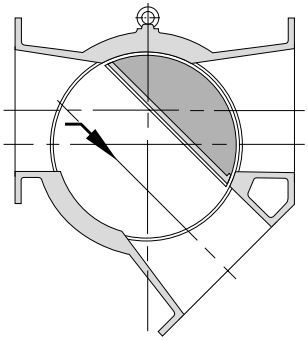
_ For compact installation in conveying lines or gravity pipes up to 3 barg



Straight through

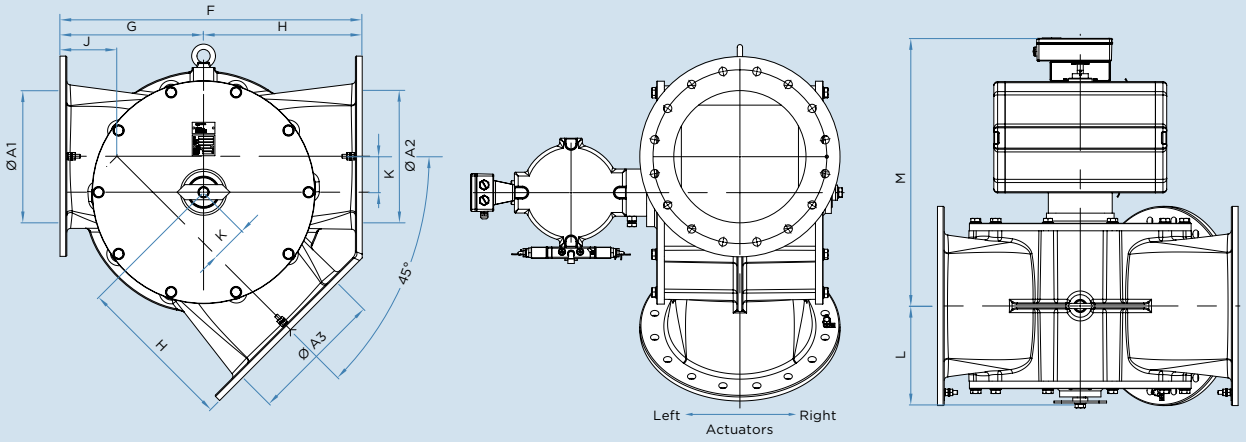


Diverted



MAX. PRESSURE 3 barg (43 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Endless wrap-around seal
MATERIAL Stainless steel

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Actuator on the left or right side
_ Quick cleaning design
_ Wash water design for draining water out of silos, for example



	Inlet*/Outlet*					Other dimensions							Weight (appr. kg)	
	A1/A2/A3 (DIN)	A1/A2/A3 (ASME)	Ø A1	Ø A2	Ø A3	F	G	H	J	K	L	M	AC	SS
WHK 150	DN 150	6"	162	162	162	460	220	240	109	46	152	453	–	100
WHK 200	DN 200	8"	212	212	212	530	250	280	112	57	180	529	91	165
WHK 250	DN 250	10"	265	265	265	680	340	340	161	74	216	630	162	220
WHK 300	DN 300	12"	316	316	316	750	355	395	150	85	250	657	205	348
WHK 350	DN 350	14"	350	355	355	800	380	420	151	95	271	713	–	450
WHK 400	DN 400	16"	406	406	406	900	420	480	153	110	300	781	–	700

Dimensions in mm

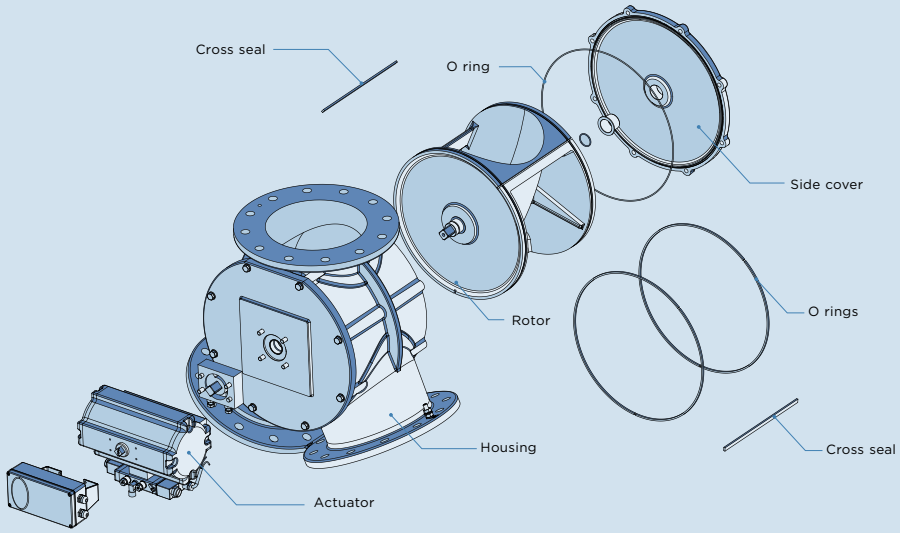
* Drilled according to DIN PN 10 or ASME 16.5 class 150.

Two-Way Diverter Valve WGV

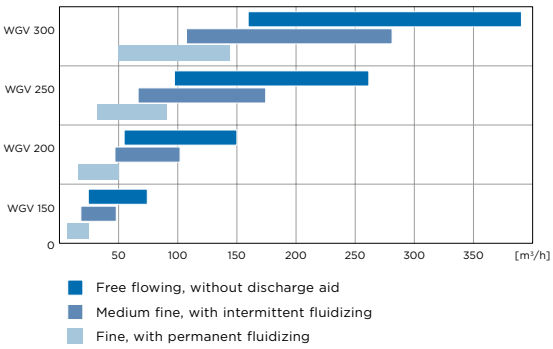
SINGLE CHANNEL DIVERTER VALVE FOR GRANULAR PRODUCTS AND POWDERS

_ Symmetrical housing

_ For gravity pipes at up to 1 barg system pressure



Flow capacity without counter current

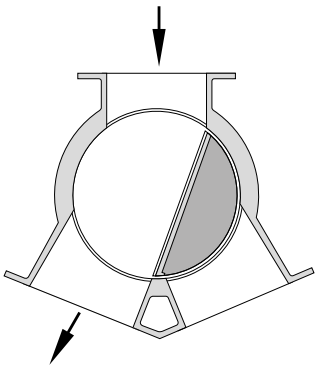


Free flowing, without discharge aid

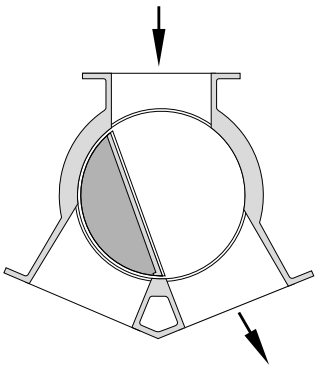
Medium fine, with intermittent fluidizing

Fine, with permanent fluidizing

Diverted left

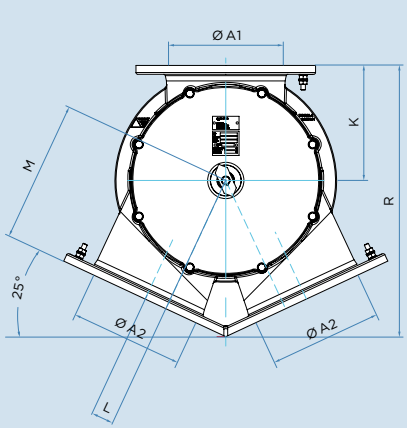


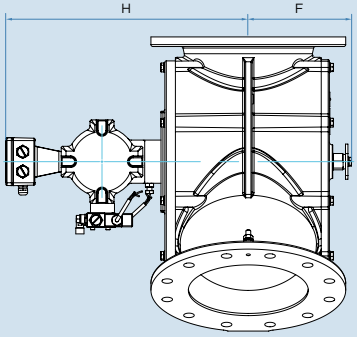
Diverted right

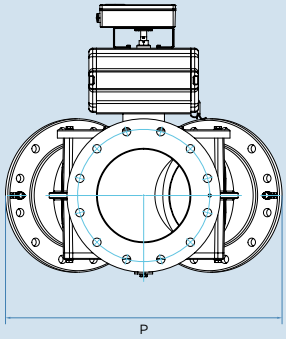


MAX. PRESSURE 1 barg (15 psi) system pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Cross seal between the outlets
MATERIAL Cast aluminum, hard-coated

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Quick cleaning design







	Inlet*/Outlet*				Other dimensions							Weight (appr. kg)
	A1/A2 (DIN)	A1/A2 (ASME)	Ø A1	Ø A2	F	H	K	L	M	P	R	AC
WGV 150	DN 150	6"	150	150	170	434	185	52	200	522	405	45
WGV 200	DN 200	8"	200	200	200	478	220	52	260	622	506	64
WGV 250	DN 250	10"	250	250	215	506	260	52	320	733	613	94
WGV 300	DN 300	12"	315	300	250	592	335	65	400	859	764	142

Dimensions in mm

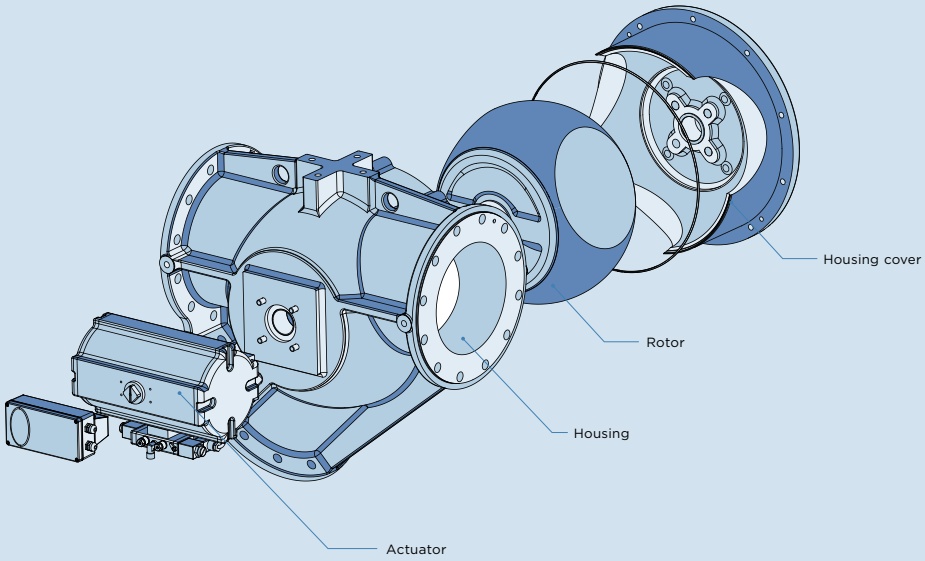
* Drilled according to DIN PN 10 or ASME 16.5 class 150.

Two-Way Diverter Valve WEK

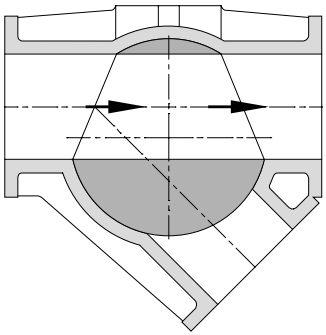
SINGLE CHANNEL DIVERTER VALVE FOR GRANULAR PRODUCTS

_ Compact, spherical design with 45° outlet

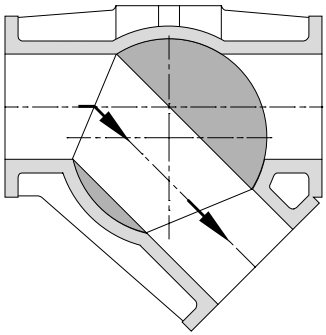
_ For compact installation in conveying lines or gravity pipes up to 6 barg



Straight through

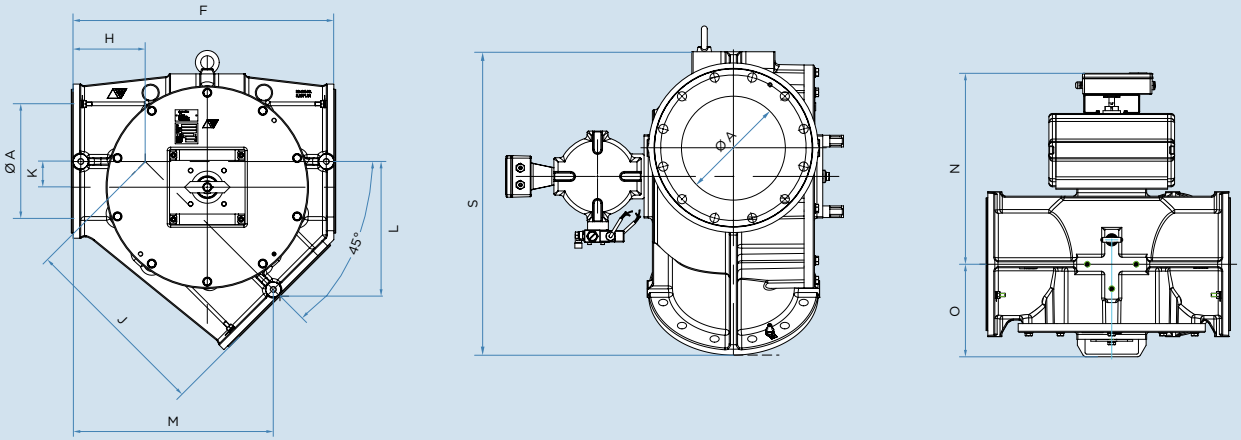


Diverted



MAX. PRESSURE 6 barg (87 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Tight clearance from outlet to outlet
MATERIAL Cast aluminum, product-contacting parts hard coated
Option: Stainless steel

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Cross seal between the outlets
_ Product-contacting parts made of stainless steel
_ Quick cleaning design
_ Switchable in the product (case-by-case assessment)
_ Actuator on the right-hand side



Shown with actuator on left-hand side

	Inlet*/Outlet*			Other dimensions									Weight (appr. kg)
	A (DIN)	A (ASME)	Ø A	F	H	J	K	L	M	N	O	S	AC
WEK 108	DN 100	4"	108	390	103	287	40	203	306	378	144	410	39
WEK 134	DN 125	5"	134	430	116	314	43	222	338	390	156	450	47
WEK 150/162	DN 150	6"	150/162	500	144	356	48	252	396	429	180	501	65
WEK 187	DN 175	7"	187	600	170	430	58	304	474	460	211	614	112
WEK 200/213	DN 200	8"	200/213	600	170	430	58	304	474	460	211	614	103
WEK 250/265	DN 250	10"	250/265	700	196	504	68	356	552	548	265	730	164
WEK 300/316	DN 300	12"	300/316	800	205	595	85	421	626	622	290	853	239
WEK 350	DN 350	14"	350	900	221	680	95	480	701	642	310	972	308
WEK 400	DN 400	16"	400	1050	284	766	100	542	826	827	318	1080	465

Dimensions in mm

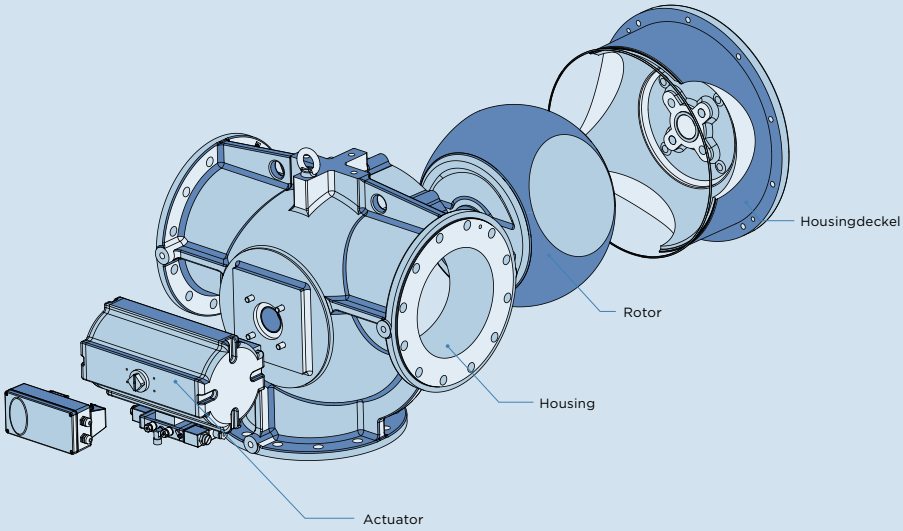
* Drilled according to DIN PN 10 or ASME 16.5 class 150.

Two-Way Diverter Valve WET

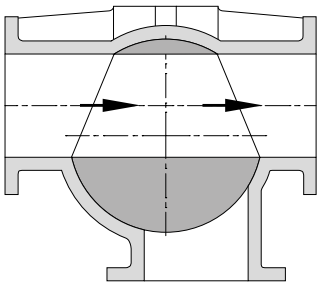
SINGLE CHANNEL DIVERTER VALVE FOR GRANULAR PRODUCTS

_ Spherical design with 90° outlet

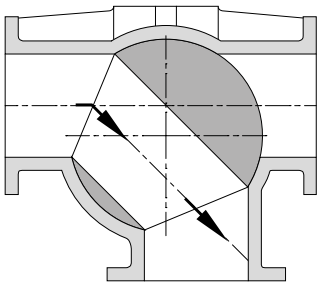
_ Developed for silo feeding conveying lines up to 6 barg



Straight through

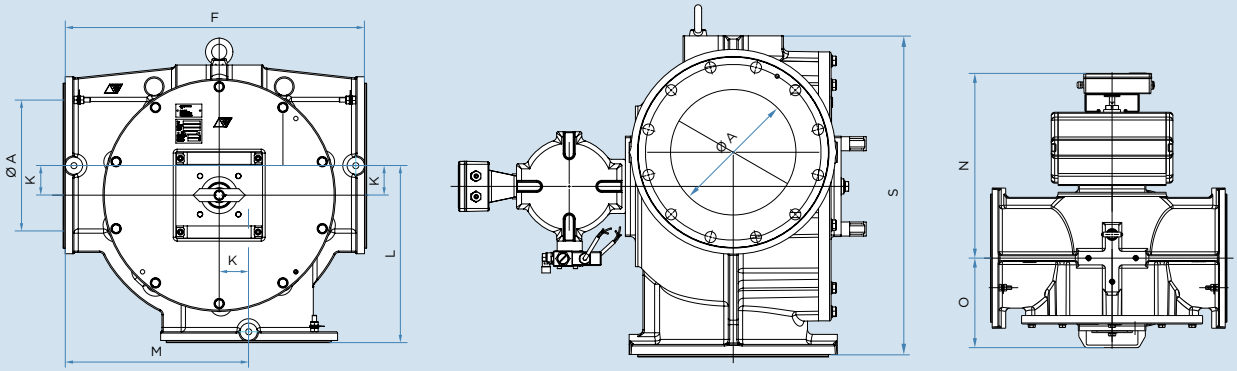


Diverted



MAX. PRESSURE 6 barg (87 psi) system and differential pressure
OPERATION TEMPERATURE –20 °C to 100 °C
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request)
SEAL CONFIGURATION Tight clearance from outlet to outlet
MATERIAL Cast aluminum, product-contacting parts hard coated
Option: Stainless steel

OPTIONS AND ACCESSORIES
_ Can be used in ex-zones with proper accessories
_ Cross seal between the outlets
_ Product-contacting parts made of stainless steel
_ Quick cleaning design
_ Switchable in the product (case-by-case assessment)
_ Actuator on the right-hand side



Shown with actuator on left-hand side

	Inlet*/Outlet*			Other dimensions							Weight (appr. kg)
	A (DIN)	A (ASME)	Ø A	F	K	L	M	N	O	S	AC
WET 150/162	DN 150	6"	150/162	500	48	288	308	405	180	440	70
WET 187	DN 175	7"	187	600	58	348	368	428	211	540	110
WET 200/213	DN 200	8"	200/213	600	58	348	368	428	211	540	110
WET 250/265	DN 250	10"	250/265	700	68	408	428	548	265	640	170
WET 300/316	DN 300	12"	300/316	800	85	475	495	590	290	740	250
WET 350	DN 350	14"	350	900	95	545	545	610	310	850	350

Dimensions in mm

* Drilled according to DIN PN 10 or ASME 16.5 class 150.

Additional Components

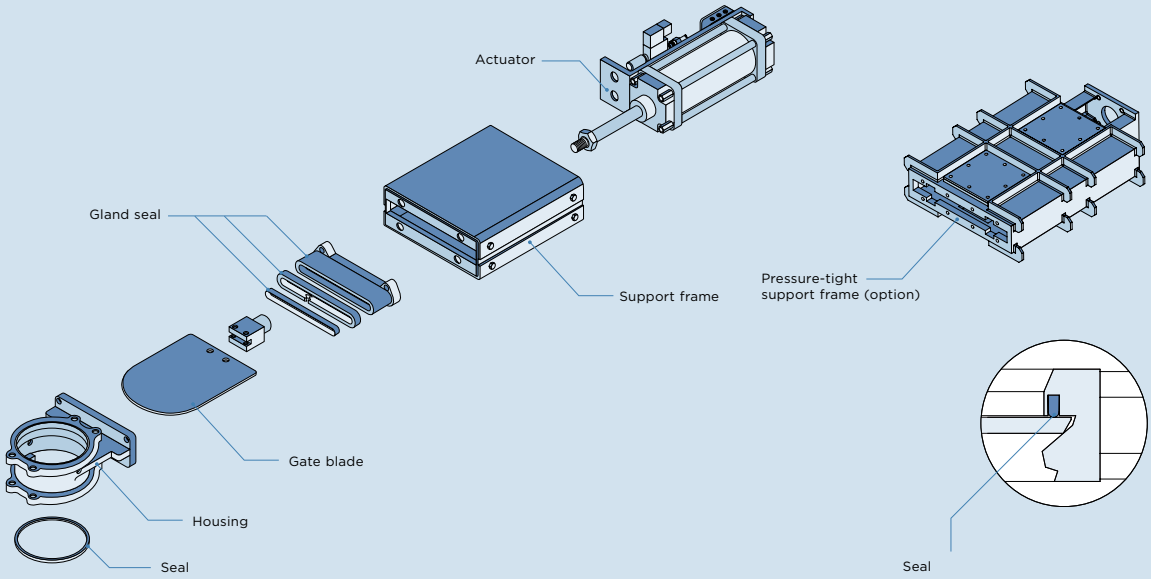
Granular products and powders				
Universal Gate Valve	Sampler	Air Volume Control Unit	Deflection Bend	Hammer
				

Coperion components come with the assurance of decades of experience. process expertise as well as proprietary development and manufacturing with top-quality materials. We master every process step in detail and we specialize in uniting them for optimal process flows. With each Coperion component, you benefit from our experience in plant engineering.

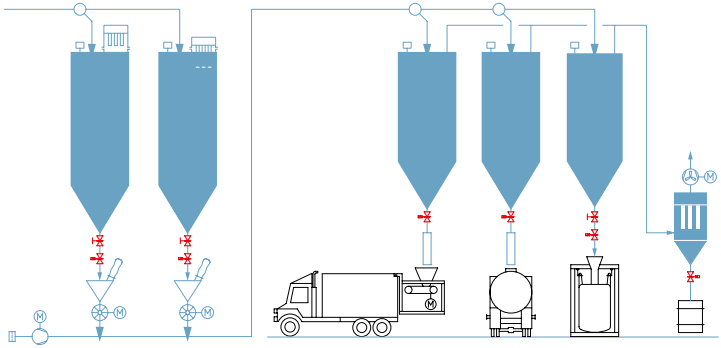
Universal Gate Valve FUS/FUH

WAFER VALVES FOR POWDERS AND GRANULAR PRODUCTS

_ Made of stainless steel with large free cross section and sealed gate blade
_ For installation in gravity pipes up to 1.5 barg (FUS) or 3.5 barg (FUH)
_ Low construction height



Application examples



MAX. PRESSURE RANGE 1.5 barg (11 psi) FUS; 3.5 barg (51 psi) FUH system and differential pressure

OPERATION TEMPERATURE –20 °C to 100 °C

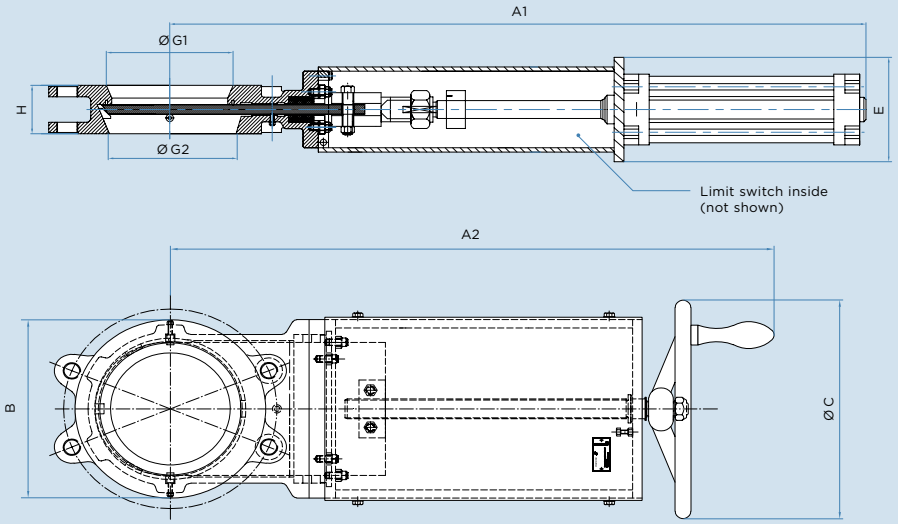
APPLICATION Suitable for fluid group 2 in accordance with PED (fluid group 1 upon request); for all bulk materials with d10 > 10 µm and d90 < 6 mm

SEAL CONFIGURATION Seal in the drop through opening, gland sealed to the outside

MATERIAL Stainless steel

OPTIONS AND ACCESSORIES

_ Manual or pneumatic version
_ Installation position up to 30° on the horizontal
_ Pressure-tight support frame (FUH: 5 barg)

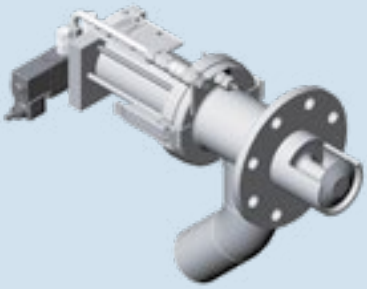


	Flange*				Other dimensions			Manual actuator		Weight (appr. kg)		Pneumatic actuator	Weight (appr. kg)	
	G (DIN)	G (ASME)	Ø G1	Ø G2	B max.	E max.	H	A2	Ø C	FUS	FUH	A1	FUS	FUH
FUS/FUH 100	DN 100	4"	108	110	203	153	51	558	203	18	28	724	26	28
FUS/FUH 150	DN 150	6"	162	162	265	165	57	645	265	27	40	877	36	43
FUS/FUH 200	DN 200	8"	212	212	301	193	70	731	265	40	46	1052	49	55
FUS/FUH 250	DN 250	10"	265	267	362	193	70	841	265	56	66	1272	66	76
FUS/FUH 300	DN 300	12"	316	318	412	255	76	948	340	70	85	1423	82	105
FUS/FUH 350	DN 350	14"	355	355	412	249	76	1052	340	94	109	1571	107	130
FUS/FUH 400	DN 400	16"	406	406	516	296	89	1274	340	138	153	1740	150	185
FUS/FUH 500	DN 500	20"	508	508	640	331	114	1513	340	226	245	2140	235	410
FUS/FUH 600	DN 600	24"	607	591	792	419	138	1720	340	730	545	2481	530	600
FUH 700	DN 700	28"	710	695	951	522	154	2085	500	/	600	2881	/	1000

Dimensions in mm

* Drilled according to DIN PN 10 or the corresponding ASME standard.

Sampler PN 80

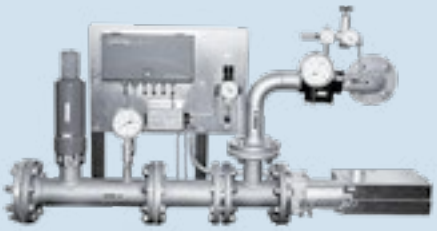


FOR TAKING SAMPLES FROM HOPPERS AND GRAVITY PIPES

_ Max. operating pressure ± 0,2 bar (2.9 psi) system and differential pressure (except for Version S2)
_ Operation temperature –20 °C to 80 °C
_ Double pistons with 0.2 | volume activated by pneumatic actuator
_ Installation position up to 30° on the horizontal
_ Cast aluminum or stainless steel housing, stainless steel pistons
_ Versions for granular products and powders
_ Food version (quick cleaning, with S2 pistons only)*
_ Can be used in ex-zones with proper accessories*
_ Control unit for cycle times*

*Optional.

Air Volume Control Unit LMR-X



CONTINUOUSLY ADJUSTABLE AIR VOLUME FOR LENGTH- AND THROUGHPUT-VARIABLE PNEUMATIC CONVEYING

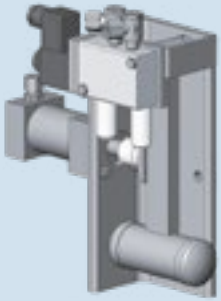
_ Laval nozzle with variable effective cross section due to adjustable conical needle
_ Shut off function included
_ Activation by linear I/P positioner with 4 - 20 mA
_ Compressor or net version available
_ Options: Contact manometer, pressure transmitter, safety valve, version for use in ex-zones (ATEX)

Deflection Bend Gamma-Bend® NT

GENTLE SEGMENT DEFFLECTION FOR DILUTE-PHASE PELLET CONVEYING

_ Directed 2-point deflection of pellets toward the exit
_ Product deflection prevents angel hair formation and reduces dust accumulation to a minimum
_ Lowest pressure drop of any special deflector
_ Operation pressure up to 4.5 bar in any size
_ Maintenance-free — no post-processing needed as with surface-treating standard deflection

Pneumatic Hammer PK 125



ELECTRO-PNEUMATICALLY ACTUATED DISCHARGE AID FOR WEIGHING HOPPERS, SILOS, ETC.

_ Robust, low-maintenance design
_ Easy to retrofit
_ Can be combined with additional hammers
_ Electrical control implemented as a separate unit or incorporated into the overall control concept

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