

Drop-Through

Rotary Airlock Valves

Series: DT, DT-DCSR, DT-DCSR VER 2T, DT-SD, DT-SD-DCSR, DVT, DVT-DCSR, DVT-DCSR VER 2T, DVT-SD, DVT-SD-DCSR, DST, DTL, NDT REC, NDT RND



Description: Drop-Through Rotary Air Lock Valves

Type: Drop-Through

Models: DT, DT-DCSR, DT-DCSR VER 2T, DT-SD, DT-SD-DCSR
DVT, DVT-DCSR, DVT-DCSR VER 2T, DVT-SD, DVT-SD-DCSR
DST, DTL, NDT REC, NDT RND

OVERVIEW

The NES Company Inc. Drop-Through Rotary Airlock Valves ensure efficient, gravity-assisted material discharge while maintaining system pressure. Available in 6" to 18" [150 mm to 450 mm] bore sizes, they provide reliable performance for pneumatic conveying in food, chemical, pharmaceutical, plastics, and bulk material handling industries.

DESCRIPTION

NES Drop-Through Rotary Airlock Valves are designed for efficient, high-capacity pneumatic conveying, allowing gravity-assisted material flow while minimizing air leakage. With bore sizes from 6" to 18" [150 mm to 450 mm], they support up to 15 psi differential pressure and 482°F [250°C] operating conditions, making them ideal for food processing, chemical, pharmaceutical, plastics, and bulk material handling applications.



FEATURES

- Standard cast iron construction with optional 304 or 316 stainless steel for corrosion resistance.
- Drop-through design for gravity-assisted material flow with minimal air loss.
- Six to ten-vane rotors for controlled and efficient material discharge.
- Supports up to 15 psi differential pressure and 482°F [250°C] operating conditions.
- Replaceable wear components to extend service life.
- Adjustable air purge connections to minimize buildup and improve sealing.
- Available in multiple configurations, including bare valve, direct drive, or V-belt systems.

NOTES

NES Company Inc. Drop-Through Rotary Airlock Valves are engineered for efficient and reliable material handling in pneumatic conveying systems, ensuring consistent performance in demanding industrial applications.

Drop-Through

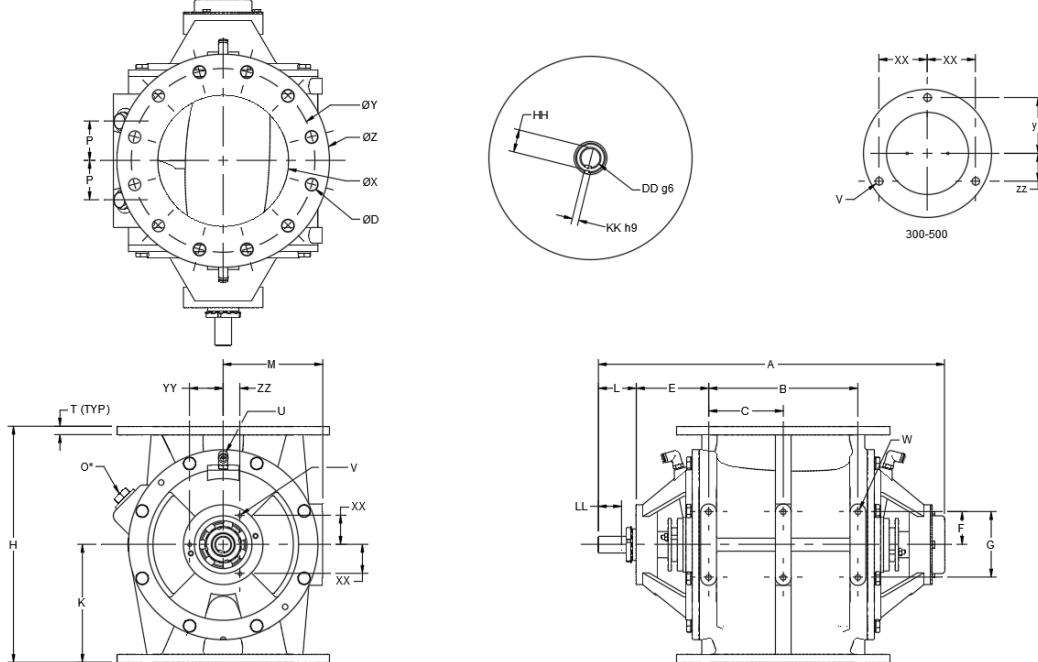
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GENERAL TECHNICAL DATA

Drop-Through Rotary Airlock Valve DT / Enlarged Inlet/Outlet DVT



	Swept Volume	DIN																	
Size	in m ³	øX	øY	øD	ø Z	A	B	C	E	F	G	H	K	L	M	O* (BSP)			
DT-100	0.001	100	170	4xø18	210	328	90	-	84	32.5	75	180	90	54	90	-			
DT-150	0.003	150	240	8xø23	285	484	146	-	127	50	100	280	140	60	110	¾"			
DT-175	0.006	175	270	8xø23	315	524	190	-	125	50	100	330	165	60	130	1"			
DT-200	0.011	200	295	8xø23	343	609	234	-	138	62.5	125	390	195	72	160	1¼"			
DT-250	0.019	250	350	12xø23	406	659	284	142	138	62.5	125	450	225	72	190	1¼"			
DT-300	0.034	300	400	12xø23	483	763	360	180	150	62.5	125	540	270	74	225	1½"			
DT-350	0.058	350	460	16xø23	530	833	420	210	155	62.5	125	660	330	74	270	1½"			
DT-400	0.091	400	515	16xø26	595	944	500	250	154	100	200	750	375	108	325	2"			
DT-450	0.135	450	565	20xø26	615	1052	572	286	170	150	300	855	427.5	111	380	2"			
DT-500	0.230	500	620	20xø27	670	1147	650	325	171	130	340	960	480	110	435	2"			
DVT-200	0.006	200	295	8xø23	343	524	190	-	125	50	100	330	165	60	165	1"			
DVT-250	0.011	250	350	12xø23	406	609	234	-	138	62.5	125	390	195	72	197.5	1¼"			
DVT-300	0.019	300	400	12xø23	483	659	284	142	138	62.5	125	450	225	72	222.5	1¼"			
DVT-350	0.034	350	460	16xø23	530	763	360	180	150	62.5	125	540	270	74	225	1½"			

Size	P	T	U (BSP)	V	W	XX	YY	ZZ	DD	KK	HH	LL
DT-100	-	10.5	1/8"	2XM6	4XM8	35	-	-	25	8	28	39
DT-150	40	12	¼"	3XM6	4XM10	37.1	52.5	37.1	30	8	33	36
DT-175	53	14	¼"	3XM6	4XM10	37.1	52.5	37.1	30	8	33	36
DT-200	65	14	¼"	3XM8	4XM12	55.4	64	32	32	10	35	44
DT-250	75	16	¼"	3XM8	6XM12	55.4	64	32	32	10	35	44
DT-300	95	21	3/8"	3XM10	6XM12	73.6	85	42.5	38	10	41	45
DT-350	112	26	3/8"	3XM10	6XM12	73.6	85	42.5	38	10	41	45
DT-400	125	26	3/8"	3XM10	6XM16	73.6	85	42.5	50	14	54	70
DT-450	163	26	3/8"	3XM10	6XM16	73.6	85	42	60	18	64	70
DT-500	180	28	3/8"	3XM10	6XM16	99.6	115	57.5	60	18	64	70
DVT-200	53	14	¼"	3xM6	4xM10	37.1	52.5	37.1	30	8	33	36
DVT-250	65	16	¼"	3xM8	4xM12	55.4	64	32	32	10	35	44
DVT-300	75	21	¼"	3xM8	6xM12	55.4	64	32	32	10	35	44
DVT-350	95	21	3/8"	3xM10	6xM12	73.6	85	42.5	38	10	41	45

All dimensions in mm.

*Standard pre-drilled & plug tapped holes for Cast Iron construction.

Note: We reserve the right to modify the dimensions without prior notice.


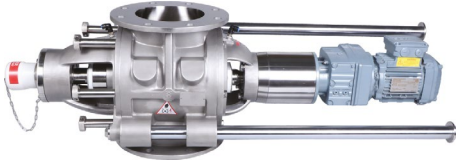
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Drop-Through Dual Cross Slide Rail DT-DCSR / Enlarged Inlet/Outlet DVT-DCSR

Comparison of Dairy CSR Version 1 and Version 2TE Rotary Valve	
<p>Version 1</p> 	<p>Version 2TE</p> 
Old design. Followed by many European manufacturers.	Newly developed design for high level hygienic standards (patent pending)
Designed for dairy standards with diagonal cross slides for easy cleaning purpose	Designed for dairy standards with diagonal cross slides for easy cleaning purpose
Special tools required for clearance setting	No special tools or techniques required for clearance setting
Rotor cannot be rotated for cleaning	Rotor can be rotated for cleaning. It makes cleaning process easier for operators.
Straight bore and straight rotor concept (Usual problem in Version 1 is that the rotor tends to touch the body bore while opening and closing of the valve, causing score marks on the body bore. Presence of scoring marks on the body bore voids the USDA/EHEDG/ ALL dairy standards validation)	Tapered rotor and tapered body concept (At no point of time the rotor and body will come into contact while opening and closing of the valve. Specially designed for dairy valves with CSR to avoid scoring marks on the bore)
Difficult to engage the Rotor shaft with Dummy shaft	Easy to engage the Rotor shaft with the Dummy shaft.
Chances for product deposition between dummy shaft and rotor shaft is more. Also, it is not a hygienic practice in dairy industries.	Designed to keep the dummy shaft area always clean. Product entry into dummy shaft is not possible.
High product deposition on dummy shaft area will cease the rotor from rotating. Sudden failure of rotary valve causes heavy loss to production and also involves more cost to fix the issue.	No such failure is possible in Version 2TE.

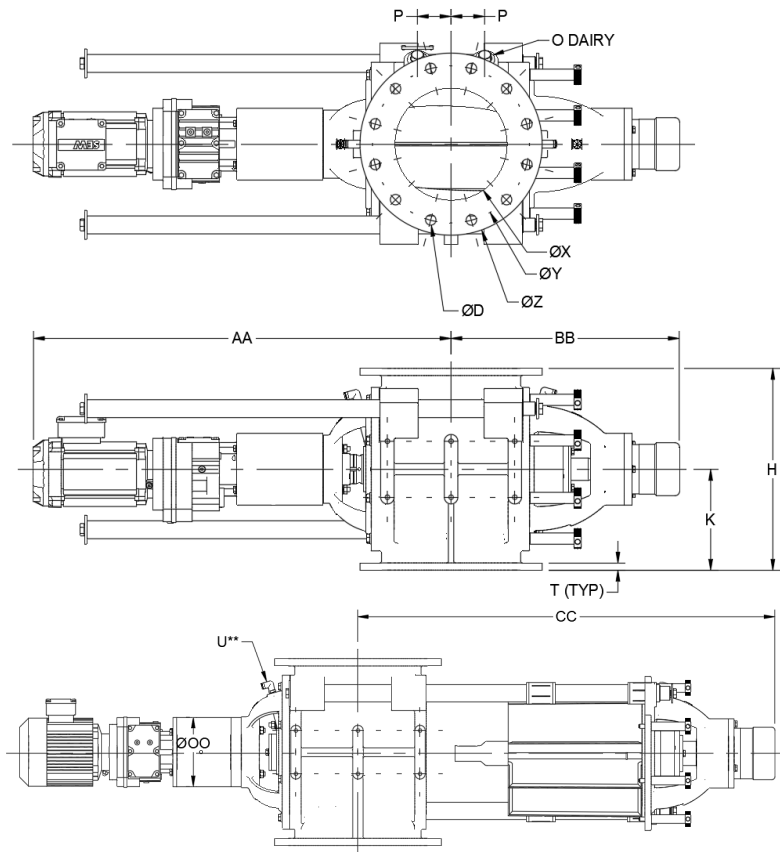
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Drop-Through Dual Cross Slide Rail, rev.2 DT-DCSR VER 2T / Enlarged Inlet/Outlet DVT-DCSR VER 2T



	Swept Volume	DIN														
Size	m ³	øX	øY	øD	øZ	H	K	P	T	U** (BSP)	O Dairy (UNEF)	AA	BB	CC	øOO	Type SEW
DT-150	0.003	150	240	8xø23	285	80	140	40	12	1/4" (ø10)	1 1/8"	815	320	760	120	RF37
DT-175	0.006	175	270	8xø23	315	330	165	53	14	1/4" (ø10)	1 1/8"	860	370	880	120	RF37
DT-200	0.011	200	295	8xø23	343	390	196	65	14	1/4" (ø10)	1 1/8"	1015	420	1130	160	RF47
DT-250	0.019	250	350	12xø23	406	450	225	75	16	1/4" (ø10)	1 1/8"	1035	510	1190	160	RF47
DT-300	0.034	300	400	12xø23	483	540	270	95	21	3/8" (ø10)	1 1/8"	1060	620	1430	200	RF57
DT-350	0.058	350	460	16xø23	530	660	330	112	26	3/8" (ø10)	1 1/8"	1215	730	1670	200	RF67

**Air purge connection

All dimensions are in mm.

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Other Configurations

Drop-Through Simply Demountable DT-SD / Enlarged Inlet/Outlet DVT-SD

- *Refer to the technical drawings and documentation to view.

Drop-Through Simply Demountable with Dairy Cross Slide Rail DT-SD-DCSR / Enlarged Inlet/Outlet DVT-SD-DCSR

- *Refer to the technical drawings and documentation to view.

Drop-Through Simply Demountable with Dairy Cross Slide Rail, rev. 2 DT-SD-DCSR VER 2T / Enlarged Inlet/Outlet DVT-SD-DCSR VER 2T

- *Refer to the technical drawings and documentation to view.

Drop-Through NUCON Bolt-in Replacement with Round Inlet/Outlet NDT-RND / Square Inlet/Outlet NDT-REC

- *Refer to the technical drawings and documentation to view.

Application table

Applications
Dairy
Food
Chemical
Plastics
Pet Food
Pharmaceuticals
Other Bulk Material Handling Applications

Drop-Through

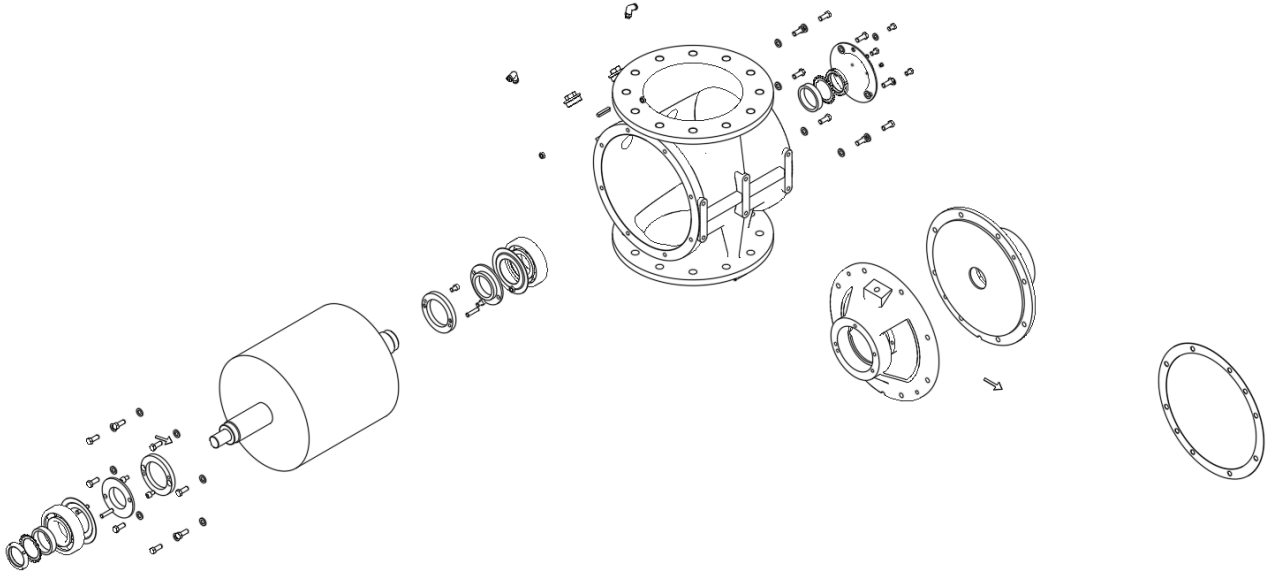
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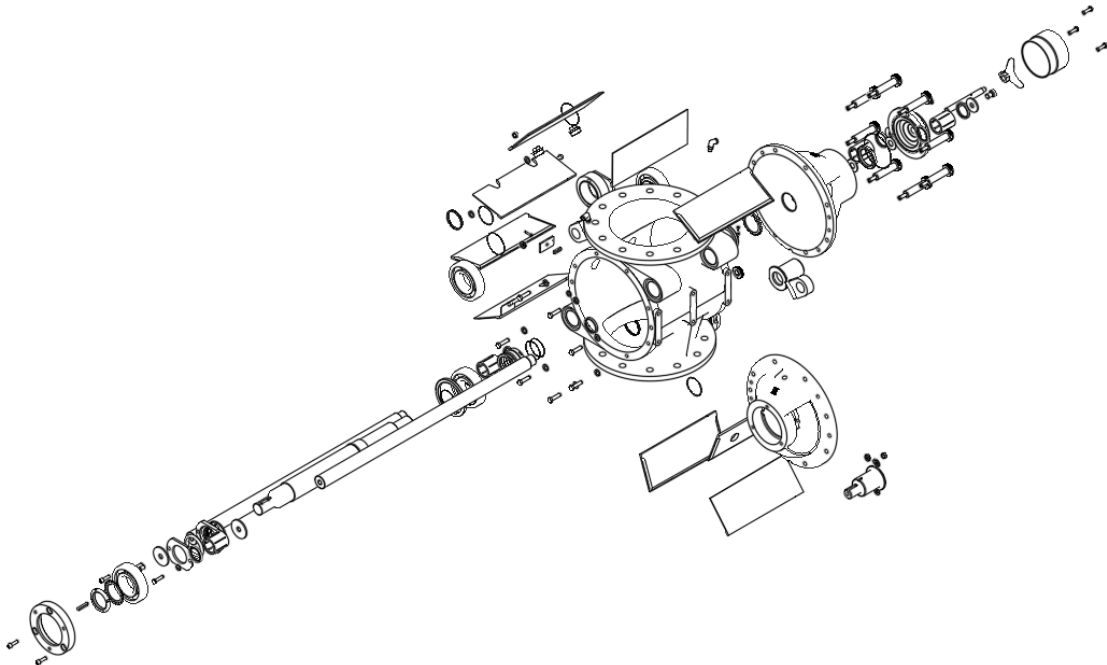


Exploded View

Drop Through Standard



Drop Through with Cross Slide Rails, ver. 2



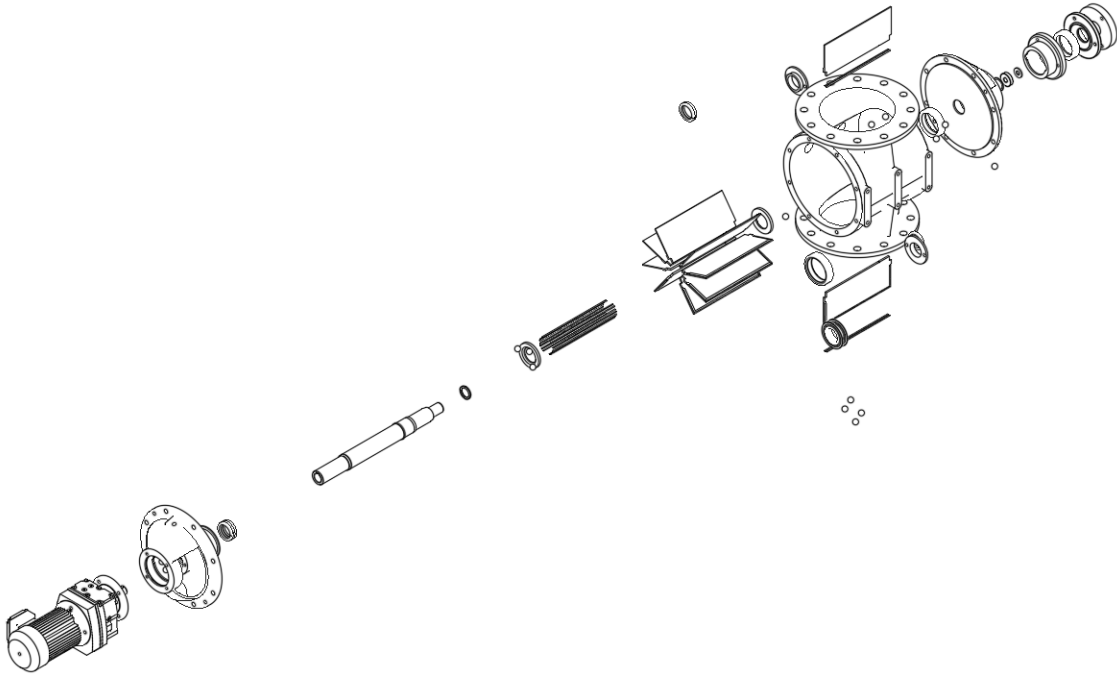
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Drop Through, Sanitary Standard Version



Drop Through, Sanitary with Cross Slide Rails, ver. 2

