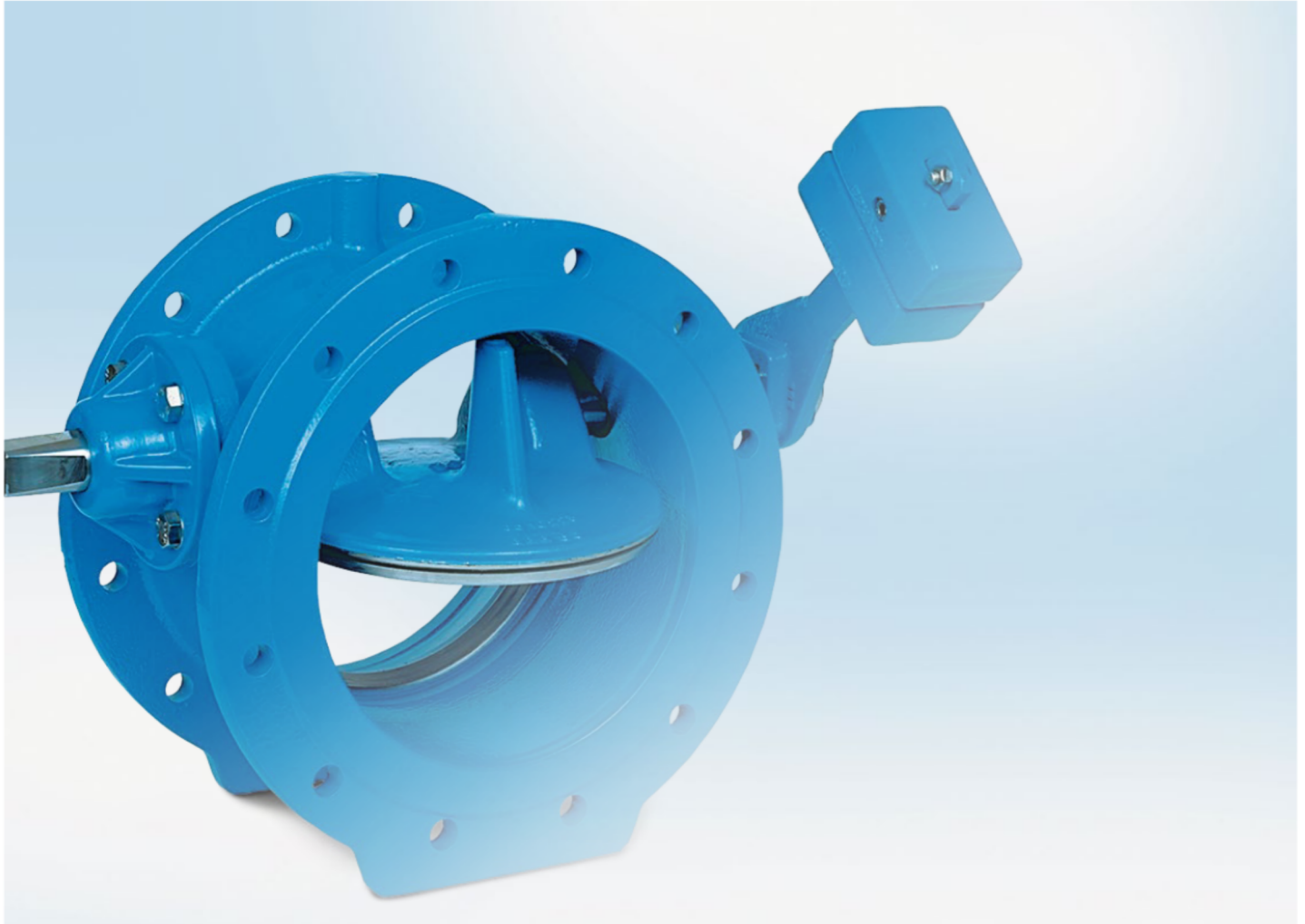


# Datasheet ERHARD ERK tilting-disc check valve

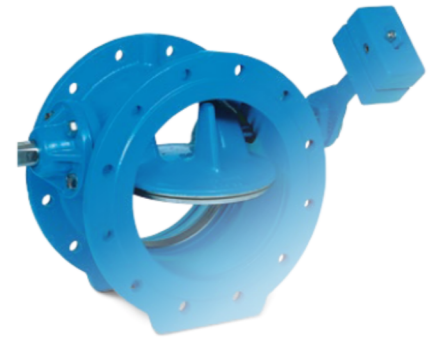


# ERHARD ERK TILTING-DISC CHECK VALVE

## The universal check valve with double eccentric valve disc

A key component of the ERHARD ERK tilting-disc check valve is the valve disc which has a freely oscillating, flow-facilitating design with double eccentricity support. The shafts are in maintenance-free, self-lubricating friction bearings, and the shaft has maintenance-free seals. A rolled up, solid body seat ring made of stainless steel, and a disc seat ring which is additionally provided with an elastic fine seal, provide perfect sealing

The ERHARD ERK check valve is designed for medium water, from DN600 also suitable for sewage and it's designed in a short face-to-face length. With nominal diameters ranging from DN 150 to DN 1000 and pressure ratings ranging from PN 10 to PN 25, as well as numerous options, the ERHARD ERK tilting-disc check valve provides a solution that can be individually adapted, even for special applications. For accident prevention in the swing area of the lever a protective cage is available. For an legal backflow, for delayed smooth closing or opening and to avoid pressure shock a damping device, weight-loaded hydraulic actuator, is available. To improve the economics of the plant, a pneumatic fill opening device is available, too.



### Operating instructions

BA55E000\_ERHARD\_ERK\_  
tilting\_disc\_150-600

ERHARD\_ERK\_tilting\_disc\_  
SOE\_150-600

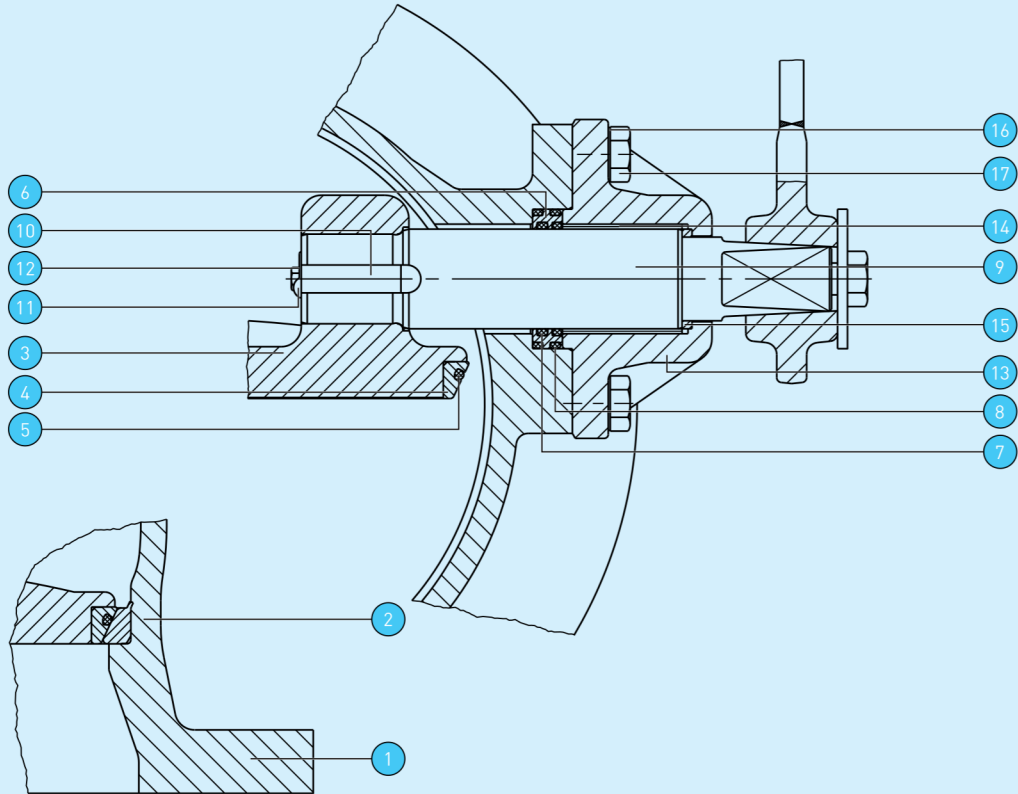
# SHORT BODY EN 558-1, BASIC LINE 14

## Shipment

Nominal sizes	DN 150 - DN 1400
Pressure ratings	PN 10 - PN 40
Working temperatures	- 20 °C to + 60 °C for water
Anschlüsse	- with flanges to EN - with flanges to international standards
Materials Body and valve disc	- Cast iron with spheroidal graphite GGG - Cast iron with lamellar graphit GG
Seals	Elastomer Perbunan, EPDM oder Viton
Protection against corrosion	- EKB fusion bonded epoxy - Coating according to customers' request



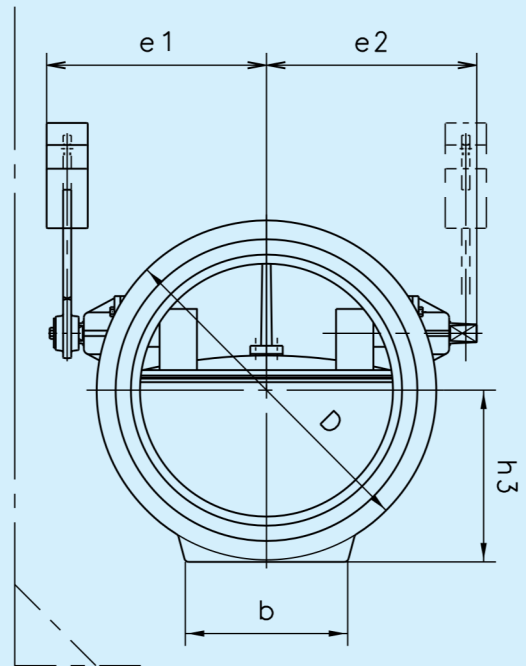
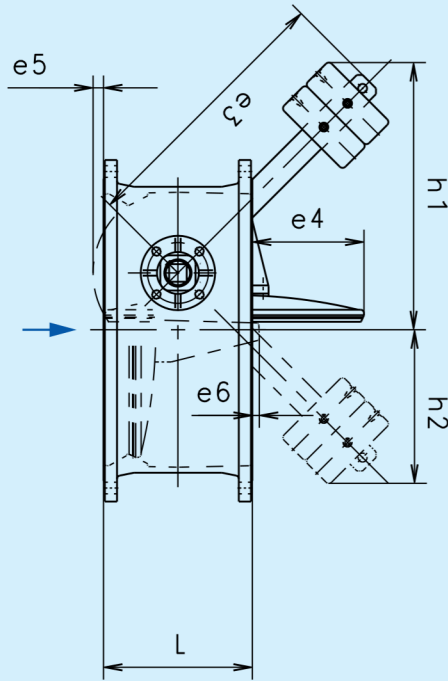
# TILTING-DISC CHECK VALVE – SINGLE COMPONENTS



Standard design with weight-loaded lever

Pos.	Description	Materials	Coating
1	Body	ductile cast iron	EKB
2	Seat ring	stainless steel	
3	Valve disc <sup>11</sup>	ductile cast iron	EKB
4	Disc facing ring	stainless steel	
5	O-ring	elastomer (NBR)	
6	Spacer	stainless steel	
7	O-ring	stainless steel	
8	O-ring	elastomer (NBR)	
9	Shaft	stainless steel	
10	Key	stainless steel	
11	Locking plate	stainless steel	
12	Hexagon bolt	stainless steel	
13	Flanged bearing	ductile cast iron	EKB
14	Bush	steel-sn-PTFE	
15	Fitting ring	brass	
16	Washer	stainless steel	
17	Hexagon bolt	stainless steel	
18	Lever	steel	EKB

<sup>11</sup> DN 150: austenitic CrNi steel



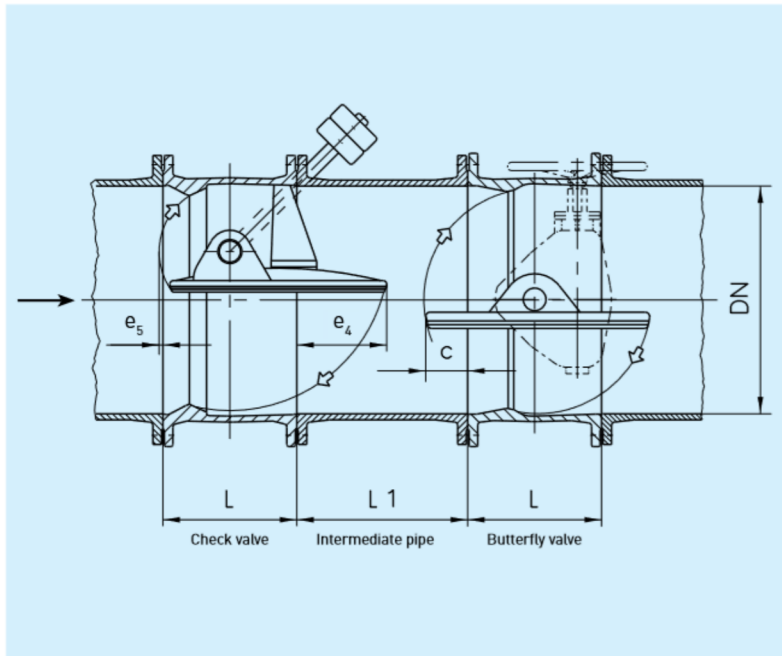
For DN 700 and larger, the valve disc protrudes – during its travel – from the body on the inlet side.

Protective guard to be mounted by user

Nominal size DN	Face-to-face dim. in mm	Flange-Ø D		Space requirement in mm								Feet dimensions in mm				Weight approx. kg		Volume m <sup>3</sup>
				e1	e2	e3	e4	e5	e6	h1	h2	b	h3	h3	PN10	PN16		
		PN10	PN16															
150	210	-	285	230	210	230	-	-	-	210	150	150	-	145	-	45	0,03	
200	230	340	340	270	245	250	20	-	-	240	155	160	175	175	55	65	0,05	
250	250	400	400	300	280	250	45	-	-	250	145	180	205	205	80	90	0,08	
300	270	455	455	350	325	300	70	-	-	300	180	200	230	230	105	115	0,12	
350	290	505	520	375	350	350	95	-	-	350	200	225	260	270	140	160	0,18	
400	310	565	580	400	375	400	118	-	-	390	230	250	290	295	170	195	0,23	
450	330	615	640	450	410	450	142	-	-	450	260	250	315	325	210	240	0,32	
500	350	670	715	480	445	500	165	-	-	500	290	300	340	360	270	330	0,41	
600	390	780	840	560	515	600	215	-	-	600	350	330	395	425	380	430	0,71	
700	430	895	910	640	600	700	263	10	-	680	400	400	455	460	520	570	0,99	
800	470	1015	1025	690	655	800	315	15	5	800	460	450	515	520	720	765	1,42	
900	510	1115	1125	750	725	900	364	30	20	890	510	550	562	570	950	1020	1,95	
1000	550	1230	1255	820	780	1000	410	40	30	990	570	60	630	635	1200	1290	2,58	
1100	590	1340	1355	895	860	1000	455	55	45	1030	570	650	680	690	1380	1500	2,88	
1200	630	1455	1485	975	935	1000	515	62	35	990	490	700	730	750	1880	2020	3,43	
1400	710	1675	1685	1070	1070	1000	615	80	80	1070	480	800	845	850	2970	3120	4,55	

# SUGGESTION FOR INSTALLATION OF CHECK VALVE AND BUTTERFLY VALVE

**Attention!** Installation must be effected in such a way that the weight-loaded lever of the check valve is on the left seen in flow direction and that the gearbox of the butterfly valve is on the right, seen in flow direction. Thus, there will be no collision between weight-loaded lever and gearbox.



*Required back pressure to absolute tightness: 0,3 - 0,4 bar*

*We recommend a minimum distance between pump and the check valve of 3x DN.*

Nominal size DN	L mm	L1 mm	e4 mm	e5 mm	c mm
150	210	-	-	-	-
200	230	150	20	-	-
250	250	150	45	-	-
300	270	150	70	-	2
350	290	200	95	-	25
400	310	225	118	-	40
450	330	250	142	-	55
500	350	300	165	-	65
600	390	400	215	-	95
700	430	500	263	10	120
800	470	600	315	15	150
900	510	650	364	30	180
1000	550	750	410	40	210
1100	590	800	455	55	225
1200	630	900	515	62	270
1400	710	1100	615	80	320

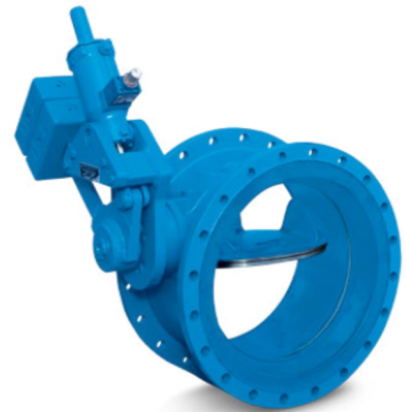
# FUNCTIONAL AND CONTROL DIAGRAM OF A HYDRAULIC DAMPING DEVICE

ERHARD hydraulic damping devices are double-acting, i.e., damping is effective in opening direction and in closing direction. Appropriate kinematics and shape of the damping cylinder brings about the damping zones shown in the below diagram. The hydraulic damping device is of very compact design and well approved in terms of ease of maintenance, adjustability, and functionality thanks to its being installed externally.

If the standard types are equipped with hydraulic damping cylinder, due to shaft dimensioning and material, the admissible back pressure is limited as follows:

DN	Max. admiss. back press. in bar
150	12,5
200	14,5
250	7,1
300	8,5
350	5,4
400	3,6
450	4,5
500	3,3
600	3,2
700	3,1
800	2,9
900	2,9
1000	2,9

Types for higher back pressure upon request.



# LEVER ARRANGEMENT

## For horizontal pipes

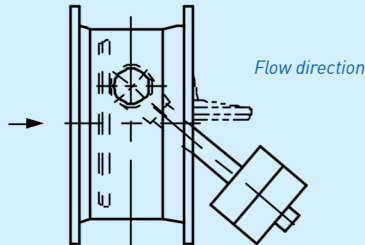


Fig. 1  
Counterweight with damping device  
on the left, seen in flow direction

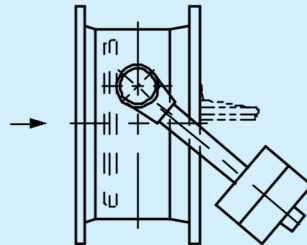


Fig. 2  
Counterweight with damping device  
on the right, seen in flow direction

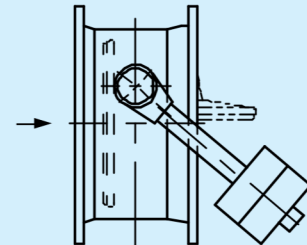


Fig. 3  
Counterweight with damping device  
on both sides

## For vertical pipes, upward flow

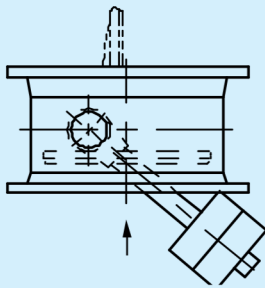


Fig. 4  
Counterweight with damping device  
on the left, seen in flow direction

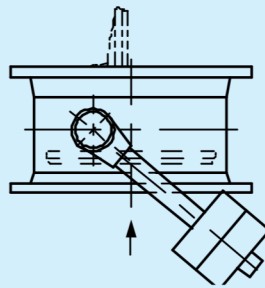


Fig. 5  
Counterweight with damping device  
on the right, seen in flow direction

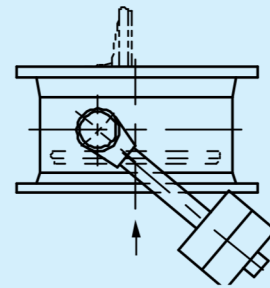


Fig. 6  
Counterweight with damping device  
on both sides

## For vertical pipes, downward flow

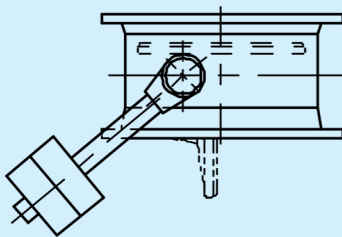


Fig. 7  
Counterweight with damping device  
on the left, seen in flow direction

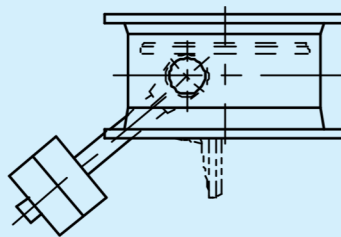


Fig. 8  
Counterweight with damping device  
on the right, seen in flow direction

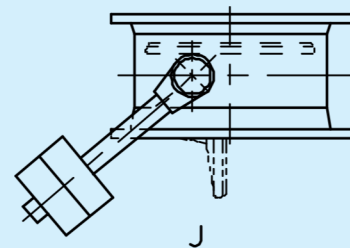
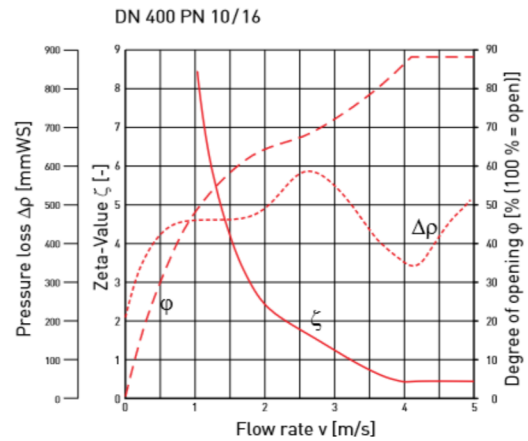
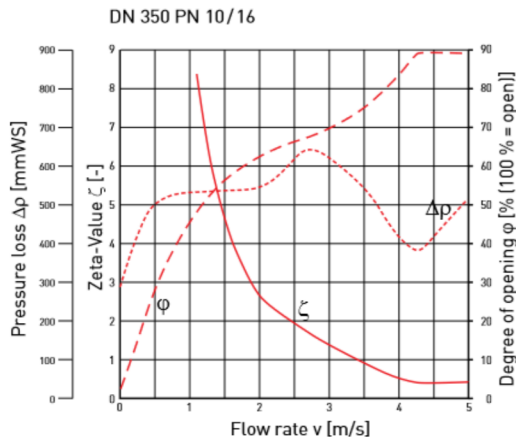
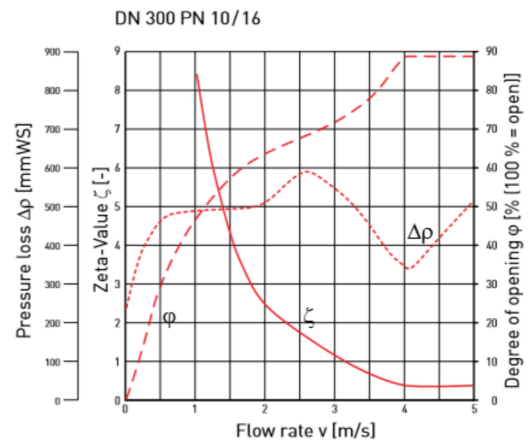
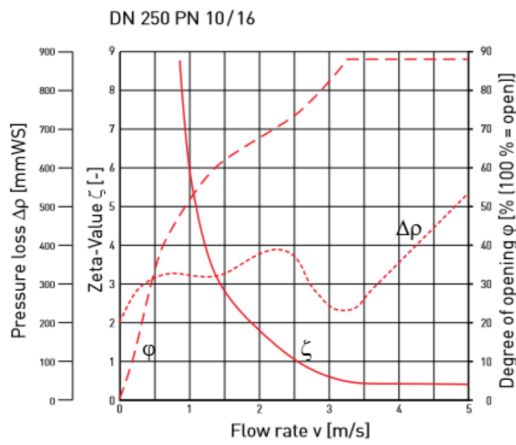
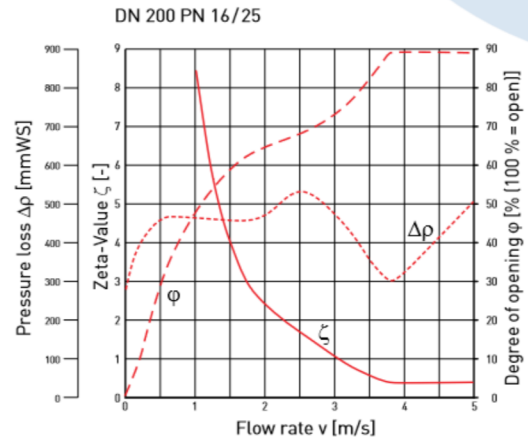
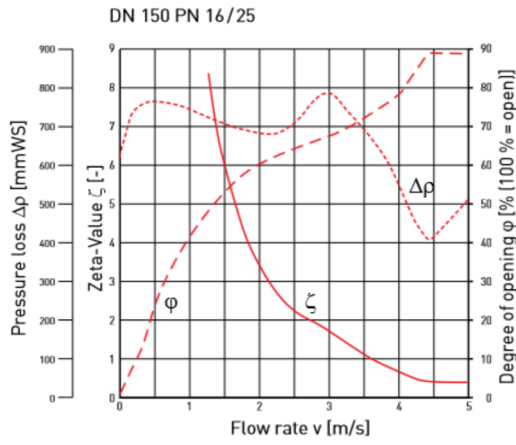


Fig. 9  
Counterweight with damping device  
on both sides

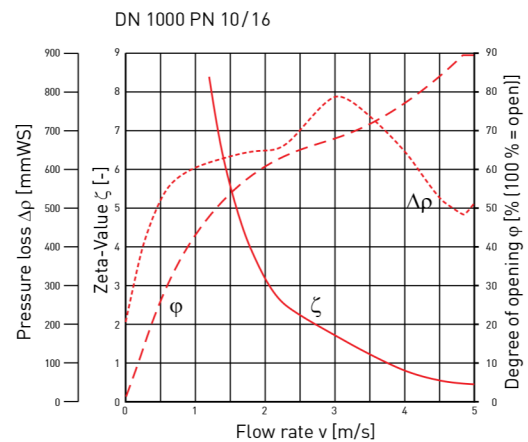
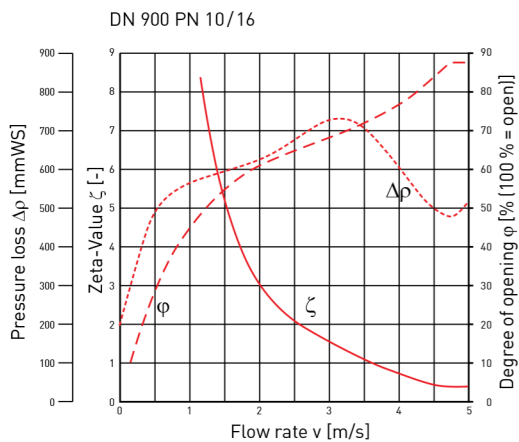
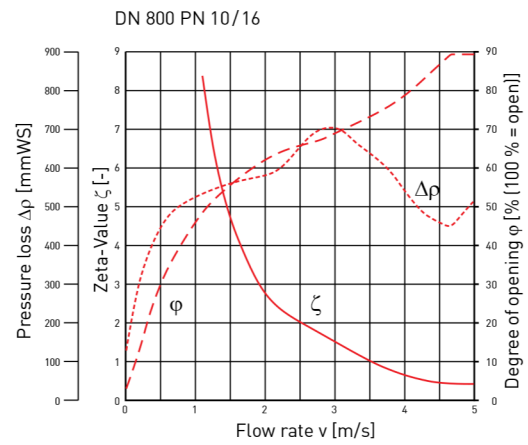
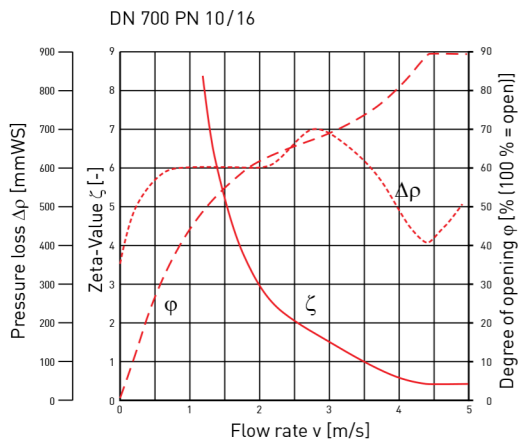
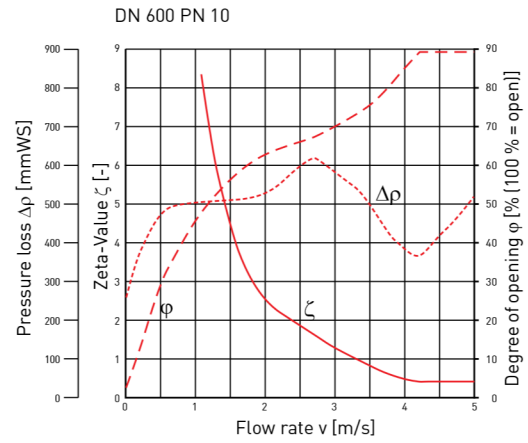
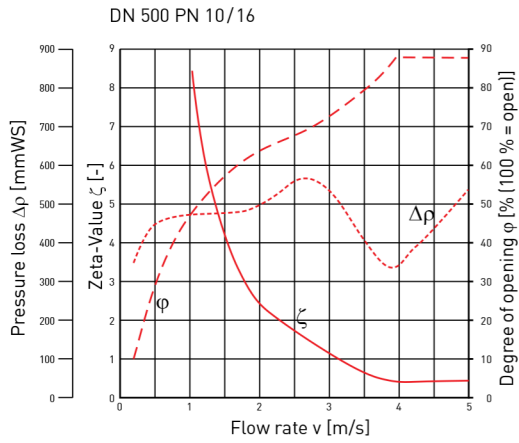
When placing the order, please specify the fig. No. of the lever arrangement.



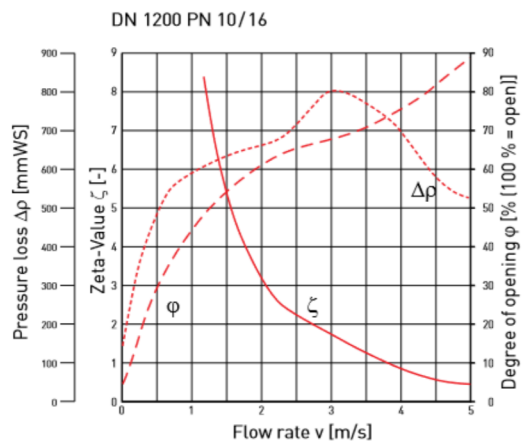
# ZETA-VALUES



# ZETA-VALUES



# ZETA-VALUES





[www.talis-group.com](http://www.talis-group.com)

TALIS is the undisputed Number One for water transport and water flow control. TALIS has the best solutions available in the fields of water and energy management as well as for industrial and communal applications. We have numerous products for comprehensive solutions for the whole water cycle – from hydrants, butterfly valves and knife gate valves through to needle valves. Our experience, innovative technology, global expertise and individual consultation processes form the basis for developing long-term solutions for the efficient treatment of the vitally important resource “water”.



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