

Wedge gate valves



General parameters of wedge gate valves

The wedge gate valves developed and manufactured by DKG-EAST can be used for opening and closing valves of pipe lines conveying cold and hot water, steam, acid, alkali and mining fluid, more various kinds of fluid indifferent to the material of the valve, and can also be used as open-close valves for pressure vessels. The simple and reliable construction with long life-time does not need maintenance. The risk of failure is low and renovations made depending on the type of use can raise life-time.



Deamands of clients

DKG-EAST has several decades of experience in manufacturing pipeline closing valves. Consequently, after examining special individual demands, our recommendations and offers are made according to function and clients' requirements. Our mission is to help clients with our expertise to find the best solution. The aim of DKG-EAST is to increase clients's satisfaction, as well as realise higher and higher technical standard.

Solutions

DKG-EAST designs and manufactures wedge gate valves in accordance with relevant international standards. Depending on purchasers' special requirement, forged or cast valves are made in several design variants, with standard or diverse built-in length, making the connecting surface acting on pressure rate, and considering the content and temperature of the transported medium. The finishing of the surface is made according to clients' specification including content and colour. Based on customers' demand many times executions include organizing and performing packaging and transport.

Scope

- thermal and nuclear power stations
- natural gas and thermal supply
- natural gas transmission
- crude oil and natural gas pipeline
- natural gas storage
- crude oil refinery
- offshore drilling points
- water well-spring
- sewage farms
- chemical and aluminum industries

Main references

- Petrobras, Brazil
- E.ON Földgáz Storage ZRT., Hungary
- KVV Kőolajvezetéképítő ZRT., Hungary
- Magyar Olaj- és Gázipari Nyrt. (MOL Nyrt.), Hungary
- MOL Földgázszállító ZRT., Hungary
- MVM Paksi Atomerőmű ZRT., Hungary
- OLAJTERV Fővállalkozó és Tervező ZRT., Hungary
- Petrolszerviz Kft., Hungary
- Petroszolg Kft., Hungary
- Turbo Tech Group Turbo Team Kft., Hungary
- Turbo Tech Group HP Team Kft., Hungary
- VABEKO Kft., Hungary
- Enex, Turkmenistan
- Gazkomplektimpex, Russia
- Novatek-Yurkharovneftegaz, Russia
- Novatek-Tarkosaleneftgaz, Russia
- Rostransmash Trade Ltd., Russia
- Tomskgazprom, Russia

Design Characteristics

Wedge gate valves of DKG-EAST are designed, manufactured and inspected according to the relevant international standards. The construction of the products complies with the following standards:

Generally:	API 600, DIN 3352, ISO 10434, EN 1984, PED
Basic material:	ASTM, AISI, DIN, GOSZT, MSZ EN, EN
Face to face dimension:	ANSI B 16.10, DIN 3202, EN 558
Flanges:	ANSI B 16.5, DIN 2543-48, EN 1092, ISO 7005, GOSZT 12821
Sealing surface of flanges:	ANSI B 16.5, DIN 2526, EN 1092, ISO 7005, GOSZT 12815
Buttwelded constructions:	ANSI B 16.25, DIN 2559, EN 12627
Marking:	API 600 - MSS SP 25, DIN 3352 - ISO 5209
Resistance to H ₂ S corrosion:	NACE MR 01. 75
Test pressure:	API 598, DIN 3230 T. 3, ISO 5208

The wedge gate valves of every type can be equipped with electrical and pneumatic actuators. The gate valve equipped with an actuator can be remote controlled, but if necessary, it can be operated manually, too.

The flange according to ISO 5210 is connected onto the upper part of the bonnet of the wedge gate valve, it is fixed with bolts.



Type assortment



ÉRT - Wedge Gate Valves designed according to API 600

	Class 150	Class 300	Class 600	Class 900	Class 1500
2"	X	X	X	X	X
3"	X	X	X	X	X
4"	X	X	X	X	X
6"	X	X	X	X	X
8"	X	X	X	X	X
10"	X	X	X	X	X
12"	X	X	X		
14"	X	X	X		
16"	X	X	X		
18"	X	X	X		
20"	X	X			X
24"	X			X	
30"	X	X			
36"	X				

ÉRT, ÉÖT - Wedge Gate Valves designed according to DIN3352

	16 bar	25 bar	40 bar	64 bar	100 bar	160 bar	250 bar
50	X	X	X	X	X	X	X
65	X	X	X	X	X	X	
80	X	X	X	X	X	X	X
100	X	X	X	X	X	X	X
125	X	X	X	X	X	X	
150	X	X	X	X	X	X	X
200	X	X	X	X	X	X	X
250	X	X	X	X	X		X
300	X	X	X	X	X	X	
350	X	X	X	X			
400	X	X	X	X			
500	X	X	X	X			

ÉRT



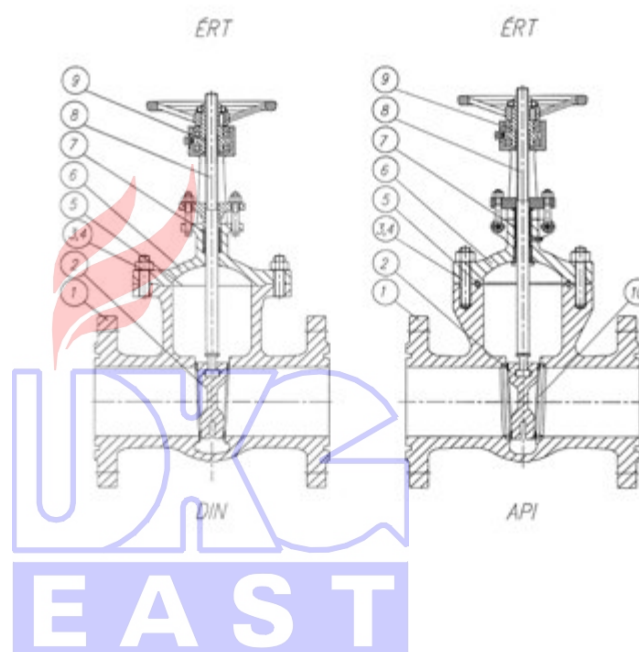
Wedge Gate Valve with flexible closing element

Basic Design	API, ISO	DIN, EN
Size range	2"-36"	50-500 mm
Pressure range	Class 150-1500	16-250 bar
Temperature range	-60 °C...+550 °C	

Main Features:

- rising stem
- bolted bonnet, outside screw and yoke
- seat ring: threaded or welded
- seat: body seat welded
- connection: flanged or welded

1	Body
2	Self-righting wedge-gate
3	Stud
4	Nut
5	Body-Bonnet sealing
6	Bonnet
7	Stuffing box sealing
8	Stem
9	Stem nut



ÉÖT



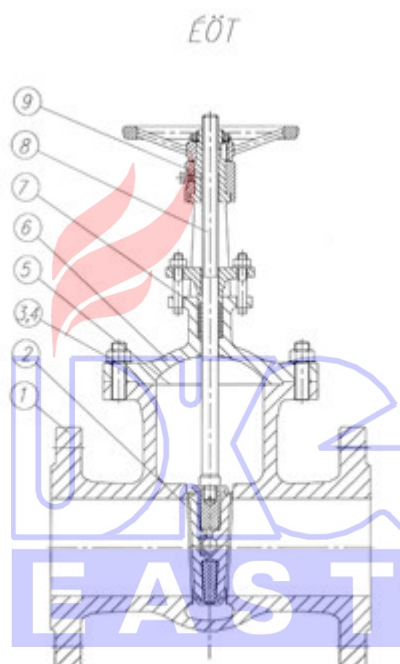
Wedge Gate Valve with self-alignment closing element

Basic Design	API, ISO	DIN, EN
Size range	--	50-500 mm
Pressure range	--	16-250 bar
Temperature range	-60 °C...+550 °C	

Main Features:

- Rising Stem
- Bolted Bonnet, Outside Screw and Yoke
- Seat Ring: welded (stainless, stellite)
- Connection: flanged or welded

1	Body
2	Wedge-gate
3	Stud
4	Nut
5	Body-bonnet sealing
6	Bonnet
7	Stuffing box sealing
8	Stem
9	Stem nut
10	Seat ring

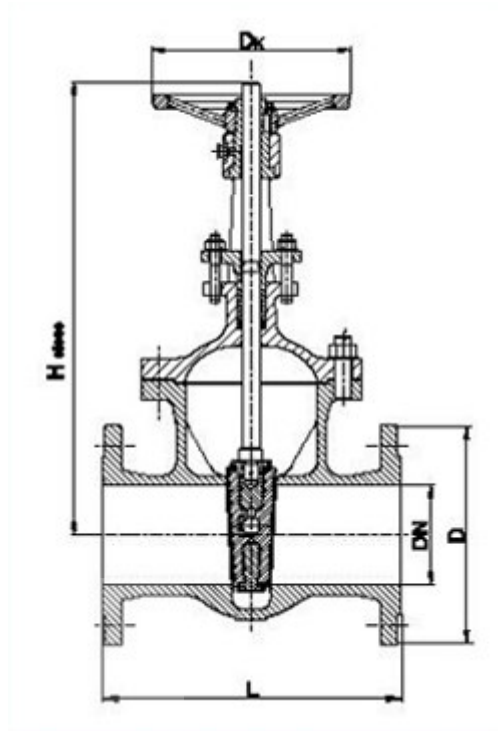
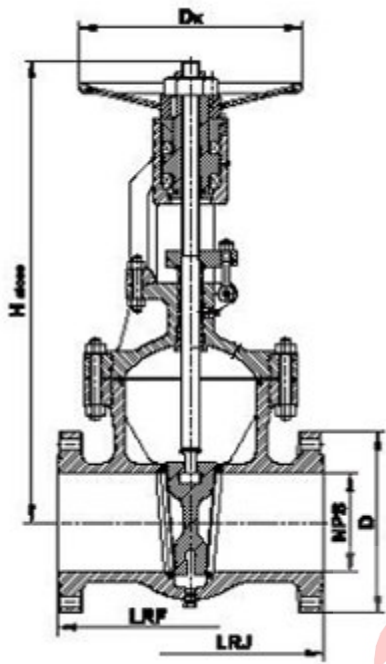


Dimension Table



API

DIN



API


Dimensions for Gate Valves designed according to ÉRT API 600
Class 150

NPS	LRF	LWN	LRJ	H _{close}	D	DK	kg
2"	177,8	215,9	190,5	370	152,4	220	30
3"	203,2	282,6	215,9	460	190,5	220	47
4"	228,6	304,8	241,3	565	228,6	270	69
6"	266,7	403,2	279,4	680	279,4	320	126
8"	292,1	419,1	304,8	877	342,9	370	173
10"	330,2	457,2	342,9	1075	406,4	470	240
12"	355,6	501,6	368,3	1215	482,6	470	385
14"	381	571,5	393,7	1310	533,4	520	600
16"	406,4	609,6	419,1	1485	596,9	520*	830
18"	432	660	444,7	1630	635	640*	895
20"	457	711	469,7	1780	698,5	640*	965
24"	508	812,8	520,7	1942	813	640*	1030
30"	610	914	622,7	2595	887,5	640*	1550
36"	711	1016	723,7	3450	1057,1	640*	3020

Class 300

NPS	LRF=LWN	LRJ	H _{close}	D	DK	kg
2"	215,9	231,7	370	165,1	220	37
3"	282,6	298,4	460	209,5	220	58
4"	304,8	320,6	545	254	320	90
6"	403,2	419,1	720	317,5	370	180
8"	419,1	434,9	883	381	470	280
10"	457,2	473	1075	444,5	470	435
12"	501,7	517,5	1247	520,7	520	630
14"	762	777,8	1360	584,2	580	870
16"	838,2	854	1472	647,7	640*	1020
18"	914,4	930,3	1805	711,2	640*	1140
20"	990,6	1009,7	1920	774,7	640*	1540
30"	1397	1422,4	2610	990,6	640*	4200

Class 600

NPS	LRF=LWN	LRJ	H _{close}	D	DK	Kg
2"	292,1	295,3	453	165,1	220	45
3"	355,6	358,8	461	209,5	320	70
4"	431,8	435	580	273	360	128
6"	558,8	562	855	355,6	470	260
8"	660,4	663,6	940	419,1	590	470
10"	787,4	790,6	1085	508	680	620
12"	838,2	841,4	1287	558,8	680	880
14"	889	892,2	1500	603,2	490*	1150
16"	990,6	993,8	1673	685,8	520*	1560
18"	1092,2	1095,4	1880	742,9	640*	1900

Class 900

NPS	LRF=LWN	LRJ	H _{close}	D	DK	Kg
2"	368,3	371,5	578	215,9	320	110
3"	381	384,2	578	241,3	320	130
4"	457,2	460,4	724	292,1	470	175
6"	609,6	612,8	914	381	500	360
8"	736,6	739,8	1100	469,9	590	610
10"	838,2	841,4	1305	546,1	680	990
24"	1549,4	1568,5	2287	1041	800*	6800

Class 1500

NPS	LRF=LWN	LRJ	H _{close}	D	DK	Kg
2"	368,3	371,5	578	215,9	320	110
3"	469,9	473,1	713	266,7	420	190
4"	546,1	549,3	762	311,1	420	290
6"	704,8	711,2	1080	393,7	640	560
8"	831,8	841,4	1370	482,6	800	1100
10"	990,6	1000,1	1417	584,2	900	2000
20"	1663,7	1685,9	2115	984,2	1000*	10000

* Gear operated design



DIN


ÉRT, ÉÖT DIN Wedge Gate Valve as per construction requirements of DIN standard
16 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	250	350	437	165	220	30
65	270	390	488	185	220	37
80	280	450	565	200	220	47
100	300	550	700	220	270	69
125	325	660	820	250	370	85
150	350	720	915	285	370	126
200	400	880	1100	340	370	173
250	450	1010	1295	405	470	240
300	500	1170	1510	460	520	385
350	550	1300	1710	520	640	600
400	600	1953	1953	580	490*	830
500	700	2460	2460	715	490*	1800

25 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	250	350	437	165	220	31
65	270	390	488	185	220	39
80	280	450	565	200	220	50
100	300	550	700	235	270	74
125	325	660	820	270	370	105
150	350	720	915	300	370	140
200	400	880	1100	360	370	186
250	450	1010	1295	425	470	260
300	500	1170	1510	485	520	395
350	550	1300	1710	555	640	610
400	600	1953	1953	620	490*	900
500	700	2460	2460	730	490*	1900

40 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	250	350	437	165	220	32
65	290	390	488	185	220	42
80	310	450	565	200	220	50
100	350	550	700	235	320	78
125	400	660	820	270	370	115
150	450	720	915	300	370	150
200	550	880	1110	375	470	246
250	650	1020	1305	450	520	378
300	750	1170	1510	515	640	620
350	850	1255	1620	580	640	925
400	950	1953	1953	660	490*	1200
500	1150	2460	2460	755	490*	1600

64 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	250	350	437	180	220	37
65	290	390	488	205	270	48
80	310	450	565	215	270	58
100	350	550	700	250	370	90
125	400	660	820	295	470	105
150	450	720	915	345	470	180
200	550	880	1110	415	520	280
250	650	1030	1315	470	640	435
300	750	1210	1550	530	720	630
350	850	1310	1675	600	720	760
400	950	1953	1953	670	490*	1020
500	1150	2460	2460	800	490*	2100

100 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	250	350	437	195	220	42
65	290	390	488	220	320	58
80	310	450	565	230	320	68
100	350	550	700	265	470	100
125	400	675	835	315	470	170
150	450	720	915	355	470	210
200	550	880	1110	430	520	340
250	650	1030	1315	505	640	600
300	750	1220	1560	585	720	900

160 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	300	350	437	195	270	43
65	360	390	488	220	370	63
80	390	450	565	230	370	72
100	450	550	700	265	470	115
125	525	550	700	315	470	170
150	600	720	915	355	470	220
200	750	880	1110	430	640	405
300	1050	1250	1590	585	640	1320

250 bar

DN	L	H _{close}	H _{open}	D	DK	Kg
50	350	578	654	200	300	80
80	470	713	806	255	420	100
100	550	762	879	300	420	140
150	750	1080	1248	390	640	300
200	950	1370	1606	485	800	520
250	1150	1417	1687	585	640*	1200

* with gear-box

Identification system



The identification number of wedge gate valves includes characters and numbers, as following:

Character	1	2	3	4	5	6	7	8
Meaning	Nominal diameter	Nominal pressure	Type of valve	Symbol of temperature	Symbol of connection	Counterflange set	Symbol of welding on	Other parts
Sample 1	DN200	PN25	ÉRT	71	A	X	SS	M-E
Sample 2	NPS2"	Class150	ÉRT	4	C	-	ST	M-L

Sample of notation:

DIN 3352 norm gate valves: **DN200 PN25 ÉRT-71-A-X-SS-M-E**

API 600 norm gate valves: **NPS2" Class150 ÉRT-4-C-ST-M-L**

1st character

The first character of identification code refers to the nominal diameter of valves.

2nd character

The second character of identification code refers to the nominal pressure of valves.

3rd character

The third character of identification code refers to the design of closing element and way of moving gate.

- Types of closing elements
 - flexible closing mechanism
 - self-alignment closing mechanism
- Closing element moves with a rising stem

The reviewed closing elements and operating types are noted as following:

Type of closing mechanism	Type of stem moving
	rising stem gate valve
	Code
	ÉRT
	ÉÖT

4th character

The fourth character of identification code refers to the serviceable temperature range of valves.

Character	Serviceable temperature range (°C)
1	-29 — +80
2	-29 — +150
3	-29 — +300
4	-29 — +450
49	-29 — +550
89	-101 — +550
61	-46 — +80
62	-46 — +150
63	-46 — +300
71	-60 — +80
72	-60 — +150
73	-60 — +300

5th character

The fifth character of identification code refers to the mode of connection of valves.

ÉÖT

Character	Meaning
A	Flanged end with the same flanges on both sides of the body.
C	Welded end. End is made of the casting body.
CVC	Venturi design welded end. End is made of the pipe welded to the casting body.
B	Threaded end.

The performance of connections are according to relevant standards.

6th character

The sixth character of identification code refers to having counterflange.

Character	Notation	Meaning
X	written	Delivering valve is with complete counterflange (contains: seal and screws).
-	non-written	Delivering valve is without counterflange (does not contain neither seal nor screws).

7th character

The seventh character of identification code refers to the overlaying on seat surfaces.

Character	Description	
SS	Corrosion resistance overlay(ER410), for non-aggressive agent, steam.	max.450 C°
ST	Stellited (ERCoCr-A), for aggressive-,abrasive agent, acids, bases, steam.	max.550 C°
SST	Overlaying seat ring is noted ST ,overlaying wedge is noted SS .	max.450 C°

8th character

The eighth character of identification code refers to the other accessories.

Character	Meaning
G	Gear operated design
M	Electromechanical operated design (with electro-motor added)
MSZ	Electromechanical operated design (without electro-motor added)
P	Pneumatic operated design
H	Hydraulic operated design
MV	By-pass design
L	Extendable design (The rate of extending is determined by the customer)
E	Buryable design (The deep of burying is determined by the customer)
K	Cardan-shaft operated design



Gallery

