



DAVINCI TECHNICAL DATA GUIDE

# RESILIENT SEAT GATE VALVES

## NON-RISING STEM F4/F5

Ref. 121A-VI / PN 10-16



### Application

Drinking water networks  
Bulk water storage  
Process water systems  
Pump stations  
Sewage water networks  
Irrigation projects

### Approvals/Standards

Design: DIN 3352  
Manufacture according to: EN 1074-2./GB/T12232-1989  
Face to Face: EN 558-1 Series 14/15 (F4/F5)  
Mounting between flanges: PN10/16 EN 1092-2, ISO 7005-2.  
Pressure Tests acc. to EN 12266-1 Rate A. GB/T13927-1992  
Pressure Tests: Body: 1,5 x PN. Seat: 1,1 x PN  
EU directive 2014/68/EU:  
Products excluded, article 1, § 2b up to DN300. Risk Category I MoD. A from DN350 to DN600



### Certifications

CE, WRAS, ACS, EN 1074-2

### Range

DN40-1200, PN10-16



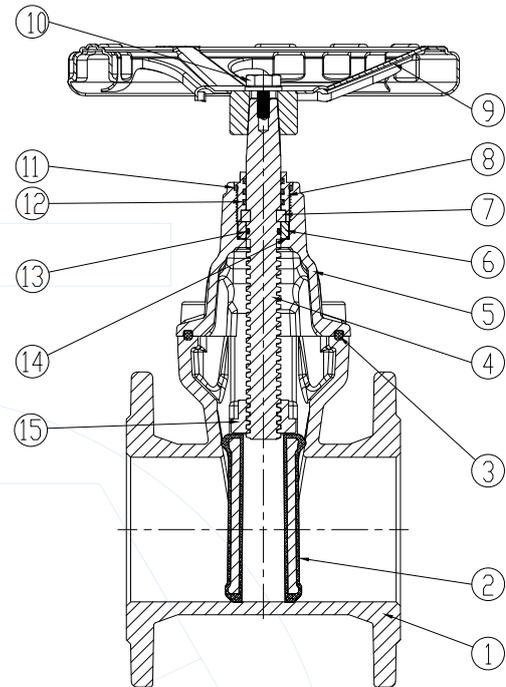
## GENERAL CHARACTERISTICS

100% suitable for underground installations  
 Range from DN40 up to DN1200  
 Full bore.  
 100% Tightness in both directions.  
 Minimum head loss.  
 Repackable under pipeline pressure.  
 Low torque values.  
 WRAS epoxy paint 250 microns:

## WORKING CONDITIONS

Pressure ratings: 1.0 Mpa, 1.6 Mpa.  
 Working temperature: -10°C + 90°C  
 Suitable media:  
 - Water  
 - Alkaline solutions.  
 - Diluted acids.  
 - Glycols.  
 - Alcohols.  
 - Inert gases.

N°	ITEM	MATERIAL	STANDARD
1	Body	GJS500-7	DIN 1693
2	Gate	GJS500-7 + EPDM	DIN 1693
3	Gasket body-bonnet	NBR	ISO 4633
4	Stem	AISI 420	ASTM A959
5	Bonnet	GJS500-7	DIN 1693
6	Washer	CuZn39Pb1	EN 12167
7	Washer	CuZn39Pb1	EN 12167
8	Nut	CuZn39Pb1	EN 12167
9	Handwheel	GJS500-7	DIN 1693
10	Bolts	CS8.8 / A2-70	ASTM A959
11	Stem O-rings	NBR	ISO 4633
12	Stem O-rings	NBR	ISO 4633
13	Stem O-rings	NBR	ISO 4633
14	Stem O-rings	NBR	ISO 4633
15	Stem nut	CuZn39Pb1	EN 12167
	RAL 5015 Painting	Epoxy 250 µm	DIN 3476-1



Components may be replaced with materials of equivalent or superior grade without prior notice, in accordance with our continuous improvement policy.



The stem is sealed with a total of six O-rings inside the bonnet.

The three O-rings placed in the upper internal part of the nut and the one located on the exterior, can be changed with pressure in the pipeline if the valve is fully open.



The liner's sealing face provides a more effective seal and reduces the torque required to close the valve.

Most factories design the gate at the same level as the sealing face. However, when the valve is closed, the increasing inlet pressure pushes the disc outward and forces it against the valve body. Over time, this constant stress damages the rubber coating on the area marked as "A."

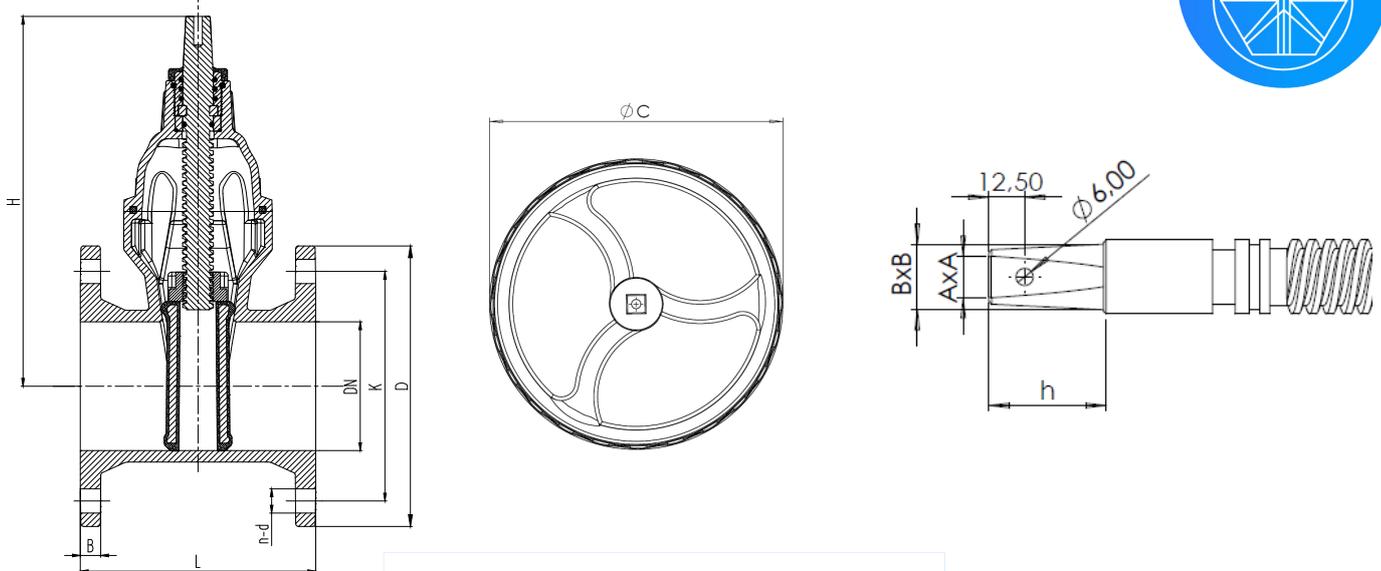
DAVINCI design recognizes this issue and introduces an innovation that prevents such wear, extending significantly the disc's service life and ensuring more reliable valve performance.



The body of the valve has guides to facilitate the movement of the gate and ensure a 100% watertight seal.



**DIMMENSIONS FOR VALVES BARE SHAFT**



DN	L		H	ØC	A	B	h	D		K		n-Ød		B		Torque (N·m)	N° Turns	Weight (kg)
	F4	F5						PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16			
40	140	240	215	180	14	17.3	32	150		110		4-19		19		40	9	8.5
50	150	250	215	180	14	17.3	32	165		125		4-19		19		50	9	9
65	170	270	250	200	17	20.7	35	185		145		4-19		19		60	10	12
80	180	280	275	200	17	20.7	35	200		160		8-19		19		60	12	14
100	190	300	320	220	19	23.2	40	220		180		8-19		19		80	12	19
125	200	325	355	250	19	23.2	40	250		210		8-19		19		100	14.5	24
150	210	350	398	280	19	23.2	40	285		240		8-23		19		120	17	30
200	230	400	495	320	24	28.7	45	340		295		8-23	12-23	20		150	18.5	48
250	250	450	590	400	27	31.7	45	405		350	355	12-23	12-28	22		200	23	73
300	270	500	670	400	27	31.7	45	460		400	410	12-23	12-28	24.5		250	27	100
350	290	550	760	500	27	34	45	520		460	470	16-23	16-28	26.5		300	30.5	160
400	310	600	855	500	27	34	45	580		515	525	16-28	16-31	28		350	34.5	223
450	330	650	930	650	32	42	70	640		565	585	20-28	20-31	30		400	28	310
500	350	700	1055	650	32	42	70	670	715	620	650	20-28	20-34	26.5	31.5	450	32.5	327
600	390	800	1265	650	32	42	70	780	840	725	770	20-31	20-37	30	36	550	34.5	632

The designs, materials and technical specifications indicated herein are subject to modification without prior notice, as part of the continuous development of our manufacturing programme, product refinement and technological advancement.

**OPERATING OPTIONS AND OPTIONAL ACCESSORIES**

Our engineering team provides customized solutions tailored to each customer's specific project requirements. Our manufacturing plan includes the following operation options for manual gate valves.

**Standard version:**

- Supplied with top cap.

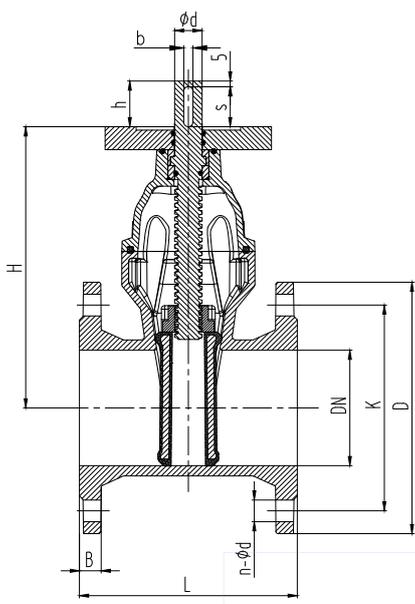
**Optional accessories:**

- Handwheel.
- Position indicator
- Extension spindles.
  - Rigid
  - Telescopic





**DIMMENSIONS FOR VALVES WITH ISO TOP FLANGE**



DN	L		H	Ød	h	s	b	D		K		n-Ød		B		Torque (N-m)	Nº Turns	Weight (kg)
	F4	F5						PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16			
40	140	240	160	18	45	40	6	150		110		4-19		19	40	8	8.5	
50	150	250	160	18	45	40	6	165		125		4-19		19	40	8	9	
65	170	270	190	20	45	40	6	185		145		4-19		19	50	9	12	
80	180	280	215	20	45	40	6	200		160		8-19		19	60	11	14	
100	190	300	250	20	45	40	6	220		180		8-19		19	80	11	19	
125	200	325	295	20	45	40	6	250		210		8-19		19	100	14	24	
150	210	350	330	20	45	40	6	285		240		8-23		19	120	17	30	
200	230	400	430	30	65	56	8	340		295		8-23	12-23	20	150	18	48	
250	250	450	515	30	65	56	8	405		350	355	12-23	12-28	22	200	22	73	
300	270	500	590	30	65	56	8	460		400	410	12-23	12-28	24.5	250	26	100	
350	290	550	700	30	65	56	8	520		460	470	16-23	16-28	26.5	300	30	160	
400	310	600	785	40	80	70	12	580		515	525	16-28	16-31	28	350	34	223	
450	330	650	875	40	80	70	12	640		565	585	20-28	20-31	30	400	29	310	
500	350	700	950	40	80	70	12	670	715	620	650	20-28	20-34	26.5	31.5	450	32	327
600	390	800	1225	50	100	90	14	780	840	725	770	20-31	20-37	30	36	550	34	632
700	430	900	1335	50	100	90	14	895	910	840	840	24-31	24-37	32.5	39.5	700	40	910
800	470	1000	1480	50	100	90	14	1015	1025	950	950	24-34	24-41	35	43	900	45	1160
900	510	1100	1800	60	110	100	18	1115	1125	1050	1050	28-34	28-41	46.5	46.5	1300	57	1750
1000	550	1200	1950	65	110	100	18	1230	1255	1160	1170	28-37	28-43	50	50	1500	62.5	2170
1200	630	--	2240	65	110	100	18	1455	1485	1380	1390	32-40	32-49	55	57	1750	75	2260

**OPERATING OPTIONS: GEARBOX or ELECTRIC ACTUATOR**



Horizontal gearbox 1 phase



Horizontal gearbox 2 phases



Vertical gearbox 2 phases



Vertical gearbox 1 phase



Electric actuator



## GEARBOX CONNECTION DETAILS

DN	Gearbox REduction	Input torque gearbox	Nº turns to close gearbox	Gearbox connection	Type
40	2.35:1	22,1	21	F10-EMD05	BA-00D
50	2.35:1	22,1	21	F10-EMD05	
65	2.35:1	27,7	24	F10-EMD05	
80	2.35:1	33,2	28	F10-EMD05	
100	2.35:1	44,3	28	F10-EMD05	
125	2.35:1	55,3	34	F10-EMD10	
150	2.35:1	66,4	40	F10-EMD10	
200	2.35:1	83,0	43	F10-EMD10	
250	3:1	86,7	69	F10-EMD10	
300	3:1	108,3	81	F10-EMD15	
350	3:1	130,0	92	F10-EMD15	BA-0D
400	3.6:1	126,4	124	F10-EMD15	
450	3.6:1	144,4	101	F10-EMD15	
500	3.6:1	202,2	117	F14-EMD20	BA-1D
600	4.5:1	158,9	155	F14-EMD20	
700	4:1	150,0	176	F14-EMD20	BA-0D
800	4:1	150,0	200	F14-EMD30	
900	5:1	375,0	285	F14-EMD20	
1000	5:1	500,0	313	F14-EMD20	
1200	5:1	500,0	375	F14-EMD20	





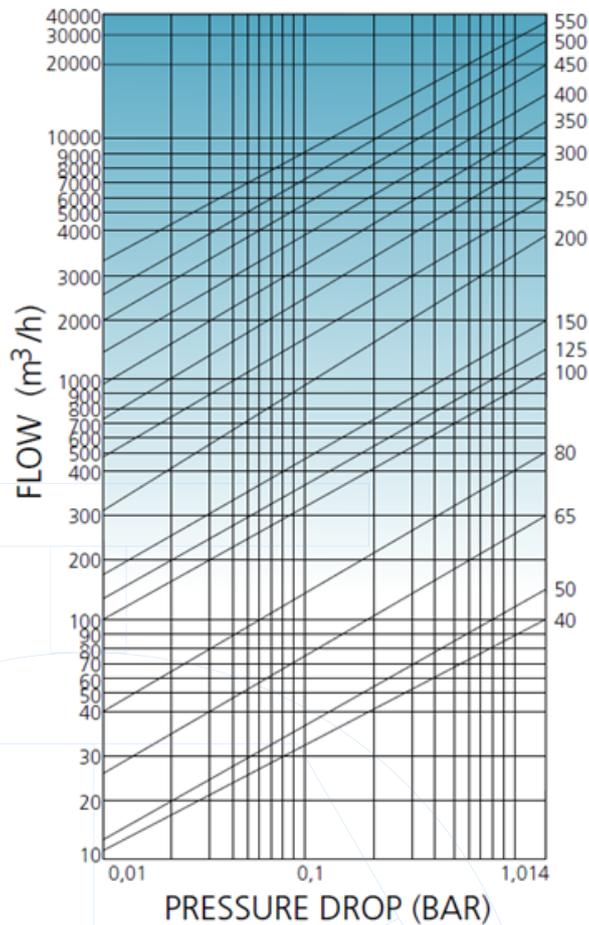
## FLOW CHARACTERISTIC CHART

The Flow Characteristic Chart illustrates the relationship between flow rate and pressure drop across the gate valve under different operating conditions. By reading the diagonal curves, end customer can quickly determine how much pressure loss will occur at a given flow rate for various valve sizes.

DAVINCI VALVES full-bore design allows very low flow resistance and minimal pressure drop when the valve is fully open, ensuring efficient performance in water distribution and industrial piping systems.



## FLOW CHARACTERISTIC CHARTS



## CERTIFICATES AND CERTIFICATIONS

Standard version

- 2 years warranty Certification
- 3.1. Technical Standard Test report supplied
- Possibility of additional Testing proofs, under request
- Certification for components and for whole product per request.

Formi QAT\_10-MS5, version 02, effective since October 07th, 2022

**VERIFICATION**

No. 3N240126.DV0513  
Test Report / Technical Construction File no. B-524012082

Verification's Holder: DAVINCI VALVES  
18 Dongyu Street, Square One 11th Floor 1101, Jinjiang District, Chengdu, Sichuan, China

Verification ECMA Mark:

Product: GATE VALVE DUCTILE IRON  
Model(s): 200  
DN50-DN1200 PN10-PN16

Verification to: Standard: EN 1074-1:2000, EN 1074-2:2000+A1:2004  
related to CE Directive(s): 2014/68/EU (Pressure Equipment)

This document has been issued in accordance with the European Commission's note of 14 September 2022 ref. Ares (2022) 43428/4 concerning voluntary certifications with non-notified procedure and for products intended for third countries outside the EU market.

The manufacturer has voluntarily decided to submit its documents concerning the above-mentioned product for verification. Ente Certificazione Macchine confirms that the documentation made available and immediately released to it, or containing sensitive data, meets the essential requirements of the above-mentioned directives. The verification activity carried out exclusively concerned the technical documentation and no verification was carried out on the product. This document cannot replace the CE Declaration of Conformity. The above conformity mark can be affixed to the technical documentation in accordance with the ECMA regulation on its issue and use, published on the website [www.ecma.eu](http://www.ecma.eu)

Issuance date: 24 January 2024  
Expiry date: 25 January 2029

Approver: Ente Certificazione Macchine  
Legal Representative:

Ente Certificazione Macchine Srl  
Via Cor' Belio, 243 - Loc. Castello di Serravalle - 40053 Valsamoggia (BO) - ITALY  
☎ +39 051 4703441 - ✉ +39 051 4703156 - i@entecertificazionemacchine.it - www.entecertificazionemacchine.it

**WRAS**  
APPROVED PRODUCT

This certifies that

**DAVINCI VALVES**

has had the undermentioned product(s) examined, tested and certified as being of an appropriate quality and standard as required in the Water Supply (Water Fittings) Regulations and Scottish Water Byelaws, subject to scheme requirements being met when installed.

Model Numbers

**200 RANGE OF GATE VALVES: DN50-400**

The certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current status of an approval must be obtained from the WRAS Approvals Directory ([www.wras.co.uk/](http://www.wras.co.uk/) directory)

The product so mentioned will be valid until the end of:

April 2028  
Certificate no.: 2304364

Ian Hughes,  
WRAS Approvals Manager

NARODOWY INSTYTUT ZDROWIA PUBLICZNEGO PZH  
- Państwowy Instytut Badawczy  
National Institute of Public Health NIH - National Research Institute

**ATEST HIGIENICZNY** B.BK.60110.1558.2025  
ORIGINAL

**NATIONAL INSTITUTE OF PUBLIC HEALTH NIH - NATIONAL RESEARCH INSTITUTE**

Wyrob / produkt: Zawory klinowe seria 200A, Zawory zerotne seria 400A i 420A, kompensatory seria 300A

Zawierający / containing: żelazo szlachetne z powłoką epoksydową, stal nierdzewna, EPDM

Przeznaczony do / destined: montażu w instalacjach służących do przesyłania wody przeznaczonych do spożycia przez ludzi

Wymieniony wyrob / produkt odpowiada wymaganiom higienicznym przy spełnieniu następujących warunków / the above-mentioned product is acceptable according to hygienic criteria with the following conditions: konieczność uniknięcia do przepływu wody przeznaczonych do spożycia przez ludzi przed oddaniem do użytku należy zapobiegać woda w ilości zapewniającej jej całkowitą wymianę

Atest Higieniczny nie dotyczy oceny parametrów technicznych, właściwości użytkowych i estetycznych wyrobów. / The hygienic certificate does not cover the assessment of the technical parameters, functional properties, or appearance potential of the product.

Wytwórca / producer: DAVINCI VALVES  
18 Dongyu Street, Square One 11th Floor 1101, Jinjiang District, Chengdu, Sichuan Province, China

Atest może być zmieniony lub unieważniony po przekształceniu słownych dowodów przez mikroorganizmy. Ministerstwo zdrowia wyda zgodę po 2028.09.30 lub w przypadku zmian w recepturze albo w technologii wytworzenia wyrobu. / The certificate may be corrected or cancelled after appropriate modification. The certificate loses its validity after 2028.09.30 or in the case of changes in composition or in technology of production.

Data wydania atestu higienicznego: 30 września 2025  
The date of issue of the certificate: 30th September 2025

Kontakt w sprawie niniejszego atestu higienicznego? / To contact regarding the hygienic certificate:  
Zakład Badań i Rozwoju Technologicznego PZH (ZiBRT) Department of Environmental Health and Safety (EHS) NIH, NIH  
00-791 Warszawa, ul. Chłodnia 24 / 00-791 Warsaw, Chłodnia 24, Poland  
e-mail: [wnm@nibib.pzh.gov.pl](mailto:wnm@nibib.pzh.gov.pl) / tel: +48 22 251-5154, +48 22 251-5149

CE

WRAS

PZH



CONTACT US

# DAVINCI GATE VALVES ORDER REQUEST

Ref. 121A-VI / PN 10-16



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