



DAVINCI TECHNICAL DATA GUIDE

RESILIENT SEAT GATE VALVES

BRITISH STANDARD NON-RISING STEM

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 3 (British Standard)
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

DN40-800, PN10-16



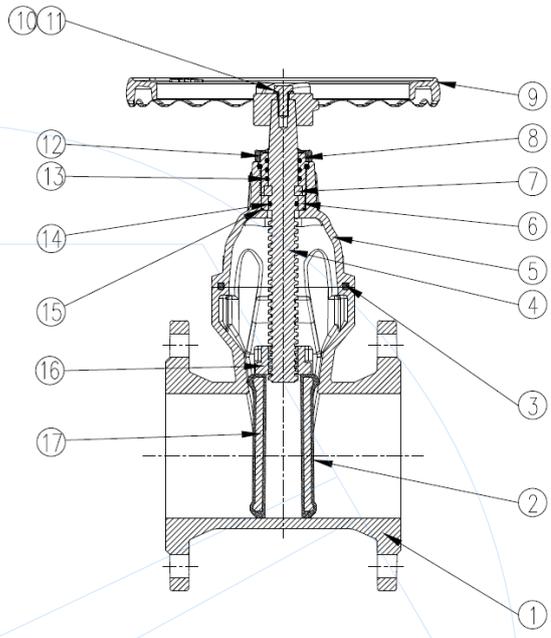
GENERAL CHARACTERISTICS

100% suitable for underground installations
 Range from DN40 up to DN800
 Full bore.
 100% Tightness in both directions.
 Minimum head loss.
 Repackable under pipeline pressure.
 By-pass available.
 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.

Nº	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	Thrust washer	CuZn39Pb1	EN 12167
7	Holding ring	CuZn39Pb1	EN 12167
8	Thrust nut	CuZn39Pb1	EN 12167
9	Handwheel	GJS500-7	DIN 1693
10	Bolts	A2-70	ASTM A959
11	Flat washwer	A2-70	ASTM A959
12	Dust cover	NBR	ISO 4633
13	Stem O-rings	NBR	ISO 4633
14	Stem O-rings	NBR	ISO 4633
15	Stem O-rings	NBR	ISO 4633
16	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."

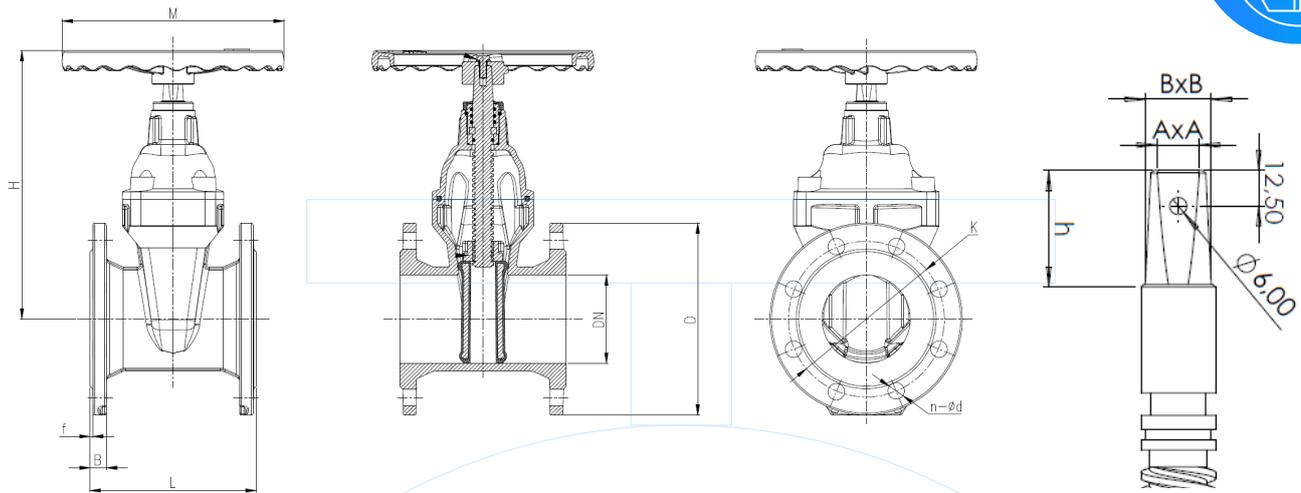
DAVINCI design recognizes this issue and introduces an innovation that prevents such wear, extending significantly the disc's service life and ensuring more reliable valve performance.



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	M	A	B	h	D		K		n-Ød		B		f	Torque (N·m)	N° Turns	Weight (kg)
							PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16				
40	165	215	180	14	17.3	32	150		110		4-19	19	3	40	8	9		
50	178	215	180	14	17.3	32	165		125		4-19	19	3	50	8	9.5		
65	190	250	200	17	20.7	35	185		145		4-19	19	3	60	9	13		
80	203	275	200	17	20.7	35	200		160		8-19	19	3	60	11	15		
100	229	320	220	19	23.2	40	220		180		8-19	19	3	80	11	20		
125	254	365	254	19	23.2	40	250		210		8-19	19	3	100	14	26		
150	267	400	280	19	23.2	40	285		240		8-23	19	3	120	17	32		
200	292	495	315	24	28.7	45	340		295		8-23	12-23	20	3	150	18	50	
250	330	590	406	27	31.7	45	405	350	355	12-23	12-28	22	3	200	22	75		
300	356	670	406	27	31.7	45	460	400	410	12-23	12-28	24.5	4	250	26	104		
350	381	760	500	27	34	45	520	460	470	16-23	16-28	26.5	4	300	30	165		
400	406	850	500	27	34	45	580	515	525	16-28	16-31	28	4	350	34	229		
450	432	980	650	32	42	70	640	565	585	20-28	20-31	30	4	400	29	318		
500	457	1050	650	32	42	70	670	715	620	650	20-28	20-34	26.5	31.5	4	450	32	337
600	508	1245	650	32	42	70	780	840	725	770	20-31	20-37	30	36	5	550	34	645

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.
The torque figures don't include security margin.

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.

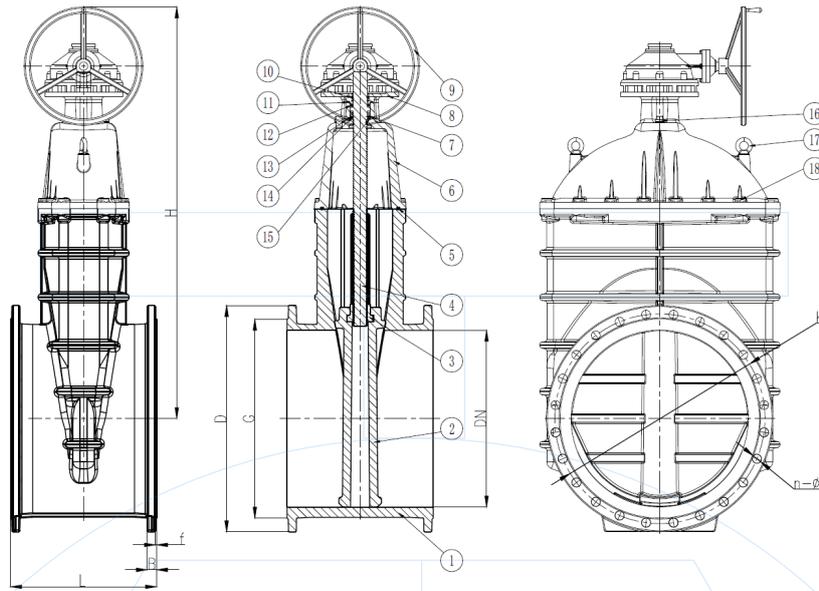
Standard version:
- Supplied with top cap.

- Optional accessories:**
- Handwheel.
 - Position indicator
 - Extension spindles.
 - Rigid
 - Telescopic





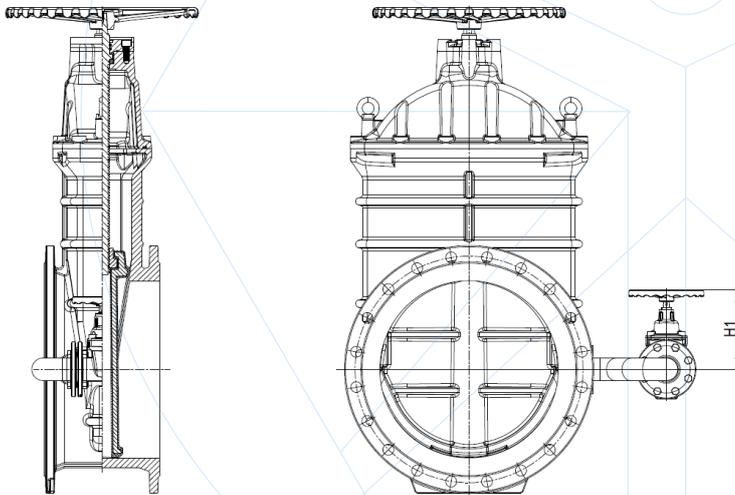
DIMMENSIONS FOR VALVES WITH ISO TOP FLANGE



DN	L	H	h	s	b	D		K		n-Ød		B		f	Torque (N·m)	Nº Turns	Weight (kg)
						PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16				
700	610	1735	45	40	6	895	910	840		24-31	24-37	32.5	39.5	5	220	203	
800	660	1880	45	40	6	1015	1025	950		24-34	24-41	35	43	5	285	234	

The torque figures include security margin.

BY-PASS



DN	H1	BYPASS VALVE
350	215	DN50-F4
400	215	DN50-F4
450	215	DN50-F4
500	275	DN80-F4
600	275	DN80-F4
700	275	DN80-F4
800	275	DN80-F4



OPERATING OPTIONS: GEARBOX or ELECTRIC ACTUATOR



Horizontal gearbox 1 phase



Horizontal gearbox 2 phases



Vertical gearbox 2 phases



Vertical gearbox 1 phase



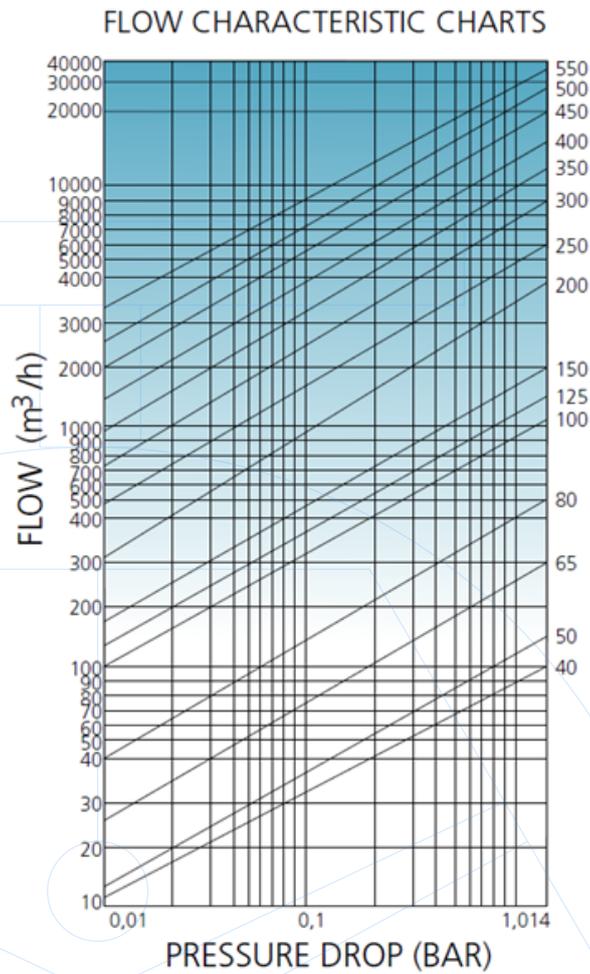
Electric actuator



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.



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.

Form QAT_10405, version 02, effective since October 07th, 2022

VERIFICATION

No. 3N240126.DV0513
Test Report / Technical Construction File no. 8.524012082

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

Verification ECHM 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) 4342894 concerning voluntary certifications with non-filled 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 3rd or certifying sensitive data, meet 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 EC Declaration of Conformity. The above conformity mark can be affixed to the technical documentation in accordance with the EC regulation on its issue and use, published on the website www.ec.europa.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 - i3@entecertmacchine.it - www.entecertmacchine.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/ 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 NIZH - National Research Institute

ATEST HIGIENICZNY B.BK.60110.1558.2025
ORIGINAL

NATIONAL INSTITUTE OF PUBLIC HEALTH NIZH - NATIONAL RESEARCH INSTITUTE

Wyrob / produkt: Zasuwy klinowe seria 200A, Zasuwy zerobne 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 przepływu wody przeznaczonych do spożycia przez ludzi

Wymiary wyrobów produktu odpowiadają wymaganom higienicznym przy spełnieniu następujących warunków / The above-mentioned product is acceptable according to hygienic criteria with the following conditions: konieczność składowania do przepływu wody przeznaczonych do spożycia przez ludzi przed oddaniem do użytku należy przekazać wody w ilości zapewniającej jej całkowitą wymianę

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

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

Ależni 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 NIZH (ZiB) / Department of Environmental Health and Safety NIZH - NIZ
00-791 Warszawa, ul. Chłodnia 24 / 00-791 Warsaw, Chłodnia 24, Poland
e-mail: warner@nizh.gov.pl / tel: +48 22 271-5154, +48 22 271-5149

CE

WRAS

PZH



CONTACT US

DAVINCI VALVES ORDER REQUEST

Ref. 121A-VI / PN 10-16



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For professionals who look for more.