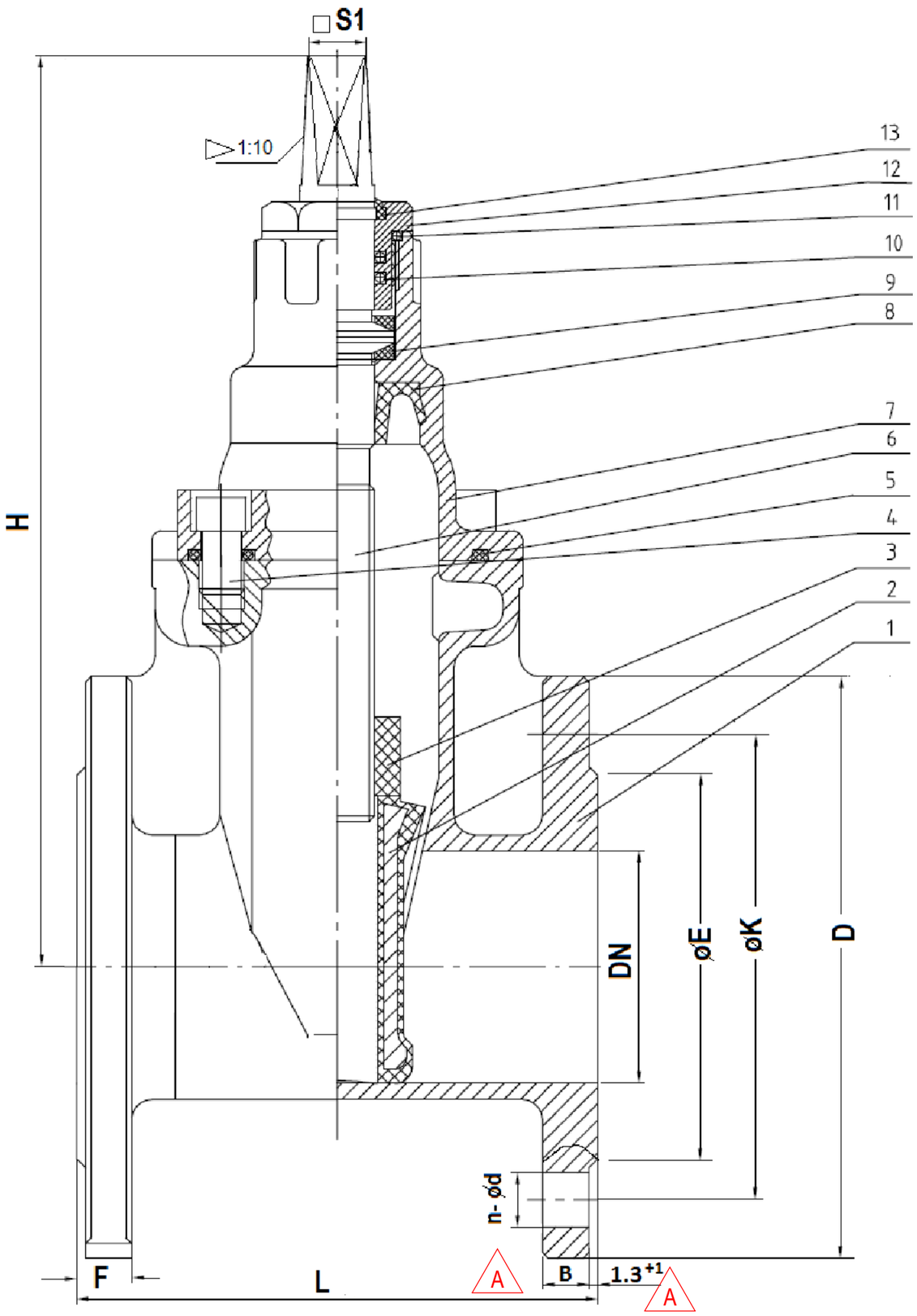
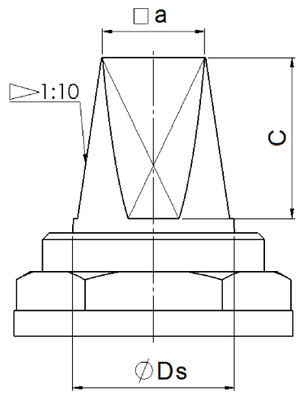
REV.	DESCRIPTION	REFERENCE	DATE	APPROVED
A	CHANGE DIMENSIONS, TOLERANCES AND TEST METHOD (SHEET 2)	ISO 7005-2 AS 2129-2000	31/07/2016	BORIS Z.



SPINDLE HEAD



DN - Nominal valve size		L - face-to-face dimensions		H - Max. height of wedge gate valve with non-rising spindle
		F4	F5	
mm	inch	Nominal pressure 10 or 16 Pressure grade 125 or 150		
50	2"	150	250	400
65	2.5"	170	270	425
80	3"	180	280	475
100	4"	190	300	575
125	5"	200	325	650
150	6"	210	350	700
200	8"	230	400	850
250	10"	250	450	1025
300	12"	270	500	1125

A

Size		Mutual	ISO 7005-2; EN 1092-2 PN16					AS 2129 (BS10) Table D				
mm	inch	Flange Outside Diam. ∅ D +5	Flange Thickness **Without Raising B ±2**	Facing Diam. ∅ E ±2	Diam. of Bolts Circle ∅ K ±1.5	Bolts holes diam. ∅ d +0.5	Bolts Num. n	Flange Thickness **With Raising F min.**	Facing Diam. ∅ E ±2	Diam. of Bolts Circle ∅ K ±0.75	Bolts holes diam. ∅ d +0.5	Bolts Num. n
50	2"	165	16	99	125	20	4	17	90	114	19	4
65	2.5"	185	16	118	145	20	4	17	103	127	19	4
80	3"	200	16	132	160	20	8	19	122	146	19	4
100	4"	220	16	156	180	20	8	19	154	178	19	4
125	5"	255	16	184	210	20	8	21	186	210	19	8
150	6"	285	16	211	240	24	8	21	211	235	19	8
200	8"	340	17	266	295	24	12	22	268	292	19	8
250	10"	405	19	319	355	29	12	25	328	356	23	8
300	12"	460	20.5	370	410	29	12	25	378	406	23	12

Valve Size		Spindle head dimensions (mm)		
mm	inch	Ds, min	C, min	□a ±0.25
50	2"	20	29	14.3
65	2.5"	20	29	14.3
80	3"	20	29	14.3
100	4"	24	34	17.3
125	5"	26	38	19.3
150	6"	26	38	19.3
200	8"	30	42	24.3
250	10"	30	42	24.3
300	12"	30	42	24.3

No'	Name	Materials	Remarks
1	Body	Ductile iron	BS1563 EN-GJS-500-7
2	Wedge	Ductile iron+ EPDM	BS1563 EN-GJS-500-7 BS EN681-1:1996 WA&WC
3	Spindle nut	Copper alloy	BS EN1982:1999 CC331G
4	Bolts	35#	
5	Sealing gasket	EPDM	BS EN681-1:1996 WA&WC
6	Spindle	1Cr13	
7	Bonnet	Ductile iron	BS1563 EN-GJS-500-7
8	Water seal	EPDM	BS EN681-1:1996 WA&WC
9	Spindle washer	Nylon	
10,11	O-Ring for stem	EPDM	BS EN681-1:1996 WA&WC
12	Bush	Copper alloy	
13	Anti-dust ring	EPDM	BS EN681-1:1996 WA&WC

NOTES: 1. Fort test requirements see sheet 2.
2. Dimensions are in millimeters, unless otherwise specified.
3. Dimensions are for machining, before painting.
4. For marking andcoating see sheet 2.

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS

DEBURR AND BREAK SHARP EDGES | SURFACE FINISH: N8 | PRODUCTION PROCESS: ----------

COMPUTER GENERATED DWG. - DO NOT SCALE | FIRST ANGLE PROJECTION

	NAME	DATE	MATERIAL:
DRAWN	BORIS Z.	01/08/2016	
CHK'D	BORIS Z.	01/08/2016	
APPV'D			WEIGHT:

TITLE: Gate valves DN50 - DN300

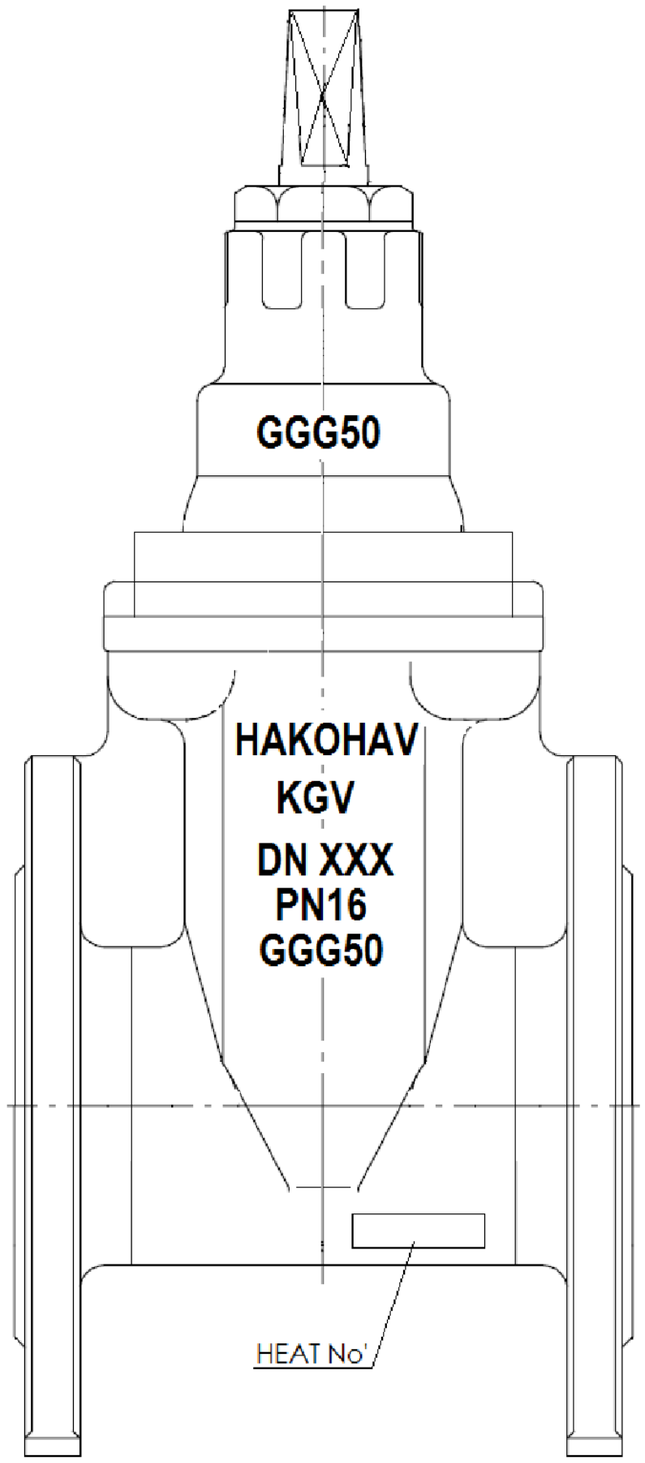
DWG. NO./REV: Rev. A

CAT. NO./REV:

SHEET 1 OF 2

SCALE A3

Dwg: G:\DEVELOPMENT\GATE VALVES [RED STAR-KGV]\2''-12'' GATE VALVES_RevA; Model: *Model Rev:



TESTS AND TEST REQUIREMENTS.

1. Hydraulic pressure resistance.

Open the valve to the end of the wedge travel and rotate the spindle three turns in the closing direction. Connect the valve inlet to a source of water pressure and seal the outlet with a blind flange.

Fill the test system with water and ensure that no air remains in the system. Gradually increase the pressure in the inlet to 1.6 times the nominal pressure.

Maintain the pressure for two minutes.

During the test, ensure that no external force is applied in the direction of the flange axes.

No cracks shall appear in the valve and no signs of leakage or sweating shall be observed.

2. Operating torque

2.1. Seal one end of the valve (the outlet), however leave a water passage that permits a flow in the range of 500 liters per hour to 1000 liters per hour at nominal pressure.

Apply pressure at the other end of the valve (the inlet) and gradually increase it to the nominal pressure. Gradually close the valve until it is sealed by applying a torque on the valve spindle in the closing direction and record the maximum moment required for closing.

Open the valve by applying a torque to the spindle end in the opening direction and record the maximum torque required for it.

The torque required for operating the valve during the test shall not exceed the moment given in Table 1 below, according to the nominal valve diameter.

2.2 For valves where there is no arrow indicating the flow direction, repeat the test by changing between the inlet and outlet.

3. Sealing

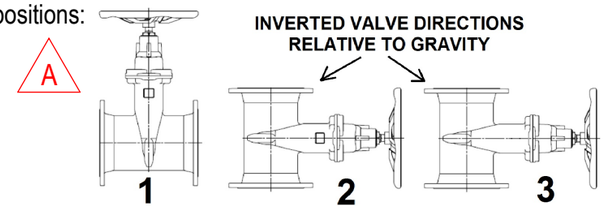
Connect the valve inlet to a source of water and completely close the water passage by applying the torque given in Table 1, to the spindle.

Keep the valve outlet open to the atmosphere. Gradually apply a hydraulic pressure equal to the nominal pressure to the valve inlet, ensuring that no air remains in the system.

Maintain this pressure for two minutes. Visually examine if the following requirements are met.

A. No signs of leakage shall be observed through the valve housing, through the cover and gaskets or through the outlet open to the atmosphere.

B. All hydraulic tests to be done in each of these 3 positions:



C. On valves with no arrow indicating the flow direction, repeat the test by inverting flow direction in each of these 3 positions.

(So, totally, on the valves with no arrow, the test to be repeated 6 times, with arrow - 3 times)

4. Mechanical strength of valve.

Apply a torque equal to three times the value given in Table 1 to the valve spindle, according to the nominal measurement of the valve. Where the valve is equipped with a manual operating wheel, apply the torque to the wheel perimeter.

Apply the torque, given in Table 1, once in the opening direction and once in the closing direction.

No signs of deformation, crack or other defects in the valve or its parts shall be exhibited.

5. Marking shall contain the following details:
   - -Name (HAKOHAV, KGV)
   - -Nominal size
   - -Nominal pressure
   - -Material (on the Body and on the Cover)
6. Heat Number:
   Letters: HEIGHT- 10mm (MIN.); 3mm EMBOSSED.
7. Coating / Painting:
   Gate valve shall be Polyester electrostatic powder coated (RAL 5010 HB), or powed "RILSAN 7443T blue MAC "(Nylon11) for drinking water.
   Thickness:
   250 microns minimum at inside surfaces;
   200 microns minimum at outside surfaces.

Table 1 - Torque required for operating the valve

Nominal size of gate valve, DN (mm)	50	80	100	125	150	200	250	300
Allowed maximum operating torque (Nm)	27	37.5	63	63	63	170	225	225

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS				TITLE:
DEBURR AND BREAK SHARP EDGES	SURFACE FINISH: N8	PRODUCTION PROCESS: ----------		Gate valves DN50 - DN300
COMPUTER GENERATED DWG. - DO NOT SCALE		FIRST ANGLE PROJECTION		
CONTENTS PROPERTY OF HAKOHAV LTD. UNAUTHORIZED USE IS FORBIDDEN				
	NAME	DATE	MATERIAL:	DWG. NO./REV: Rev. A / SHEET 2 OF 2
DRAWN	BORIS Z.	01/08/2016		
CHK'D	BORIS Z.	01/08/2016		SCALE
APPV'D			WEIGHT:	CAT. NO./REV: / A3