

Aqua Tech



水のマイザワ

NO. 81 e





Cast Iron Sluice Gate

Outside Screw & Yoke Rising Stem
FC Sluice Gates



Maizawa Industries, Inc.

Features

-  **Simple construction makes a fluid resistance small as possible.**
-  **Wedges are provided in case of corrosion occurred on the seat considering long continuous operation, and can sustain high water-tightness.**
-  **Guide plates and numbers of wedges are provided for smooth operation and high water-tightness for off-seating operation of sluice gate.**
-  **An adjustable stopper bolt is provided to protect an over travel for closing.**



Standard Specification

1 Type

Type	Effective Size (mm)
Outside Screw & Yoke Rising Stem Square Shaped Sluice Gate	200~ 3000
Outside Screw & Yoke Rising Stem Round Shaped Sluice Gate	200~ 2000
Outside Screw & Yoke Rising Stem Square Shaped Sluice Gate for off-seating operation	200~ 2000
Outside Screw & Yoke Rising Stem Round Shaped Sluice Gate for off-seating operation	200~ 2000

2 Media

Portable Water, Industrial Water, Sewage, Irrigation Water, River Water

3 Design Head

Up to 10m

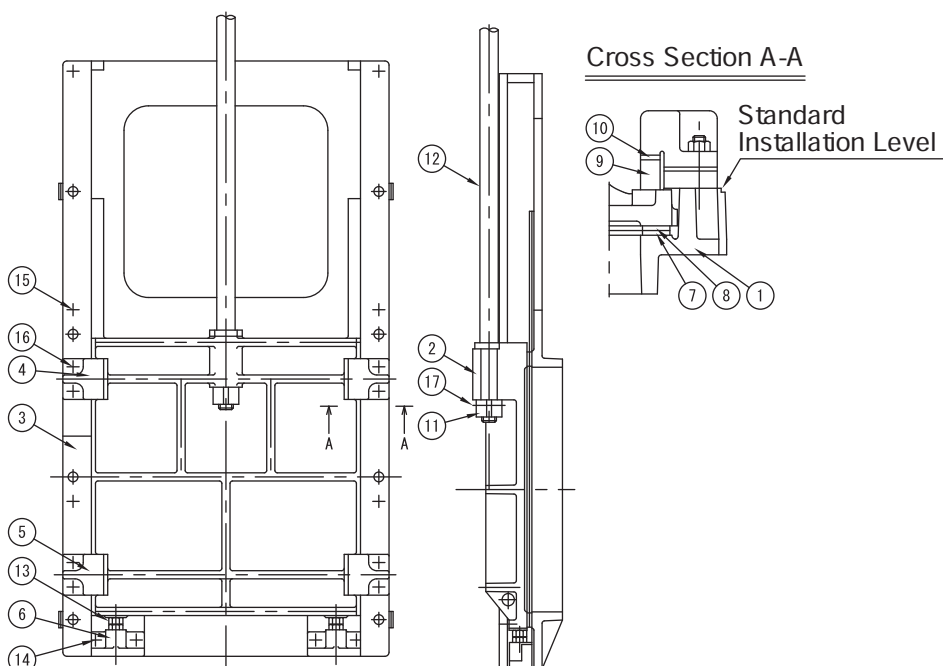
4 Headstock

Manual and Motor operator is available for standard models, however, hydraulic operator, engine operator and quick closing operator with self-closing door system are available as options.

5 Optional Pressure Seating

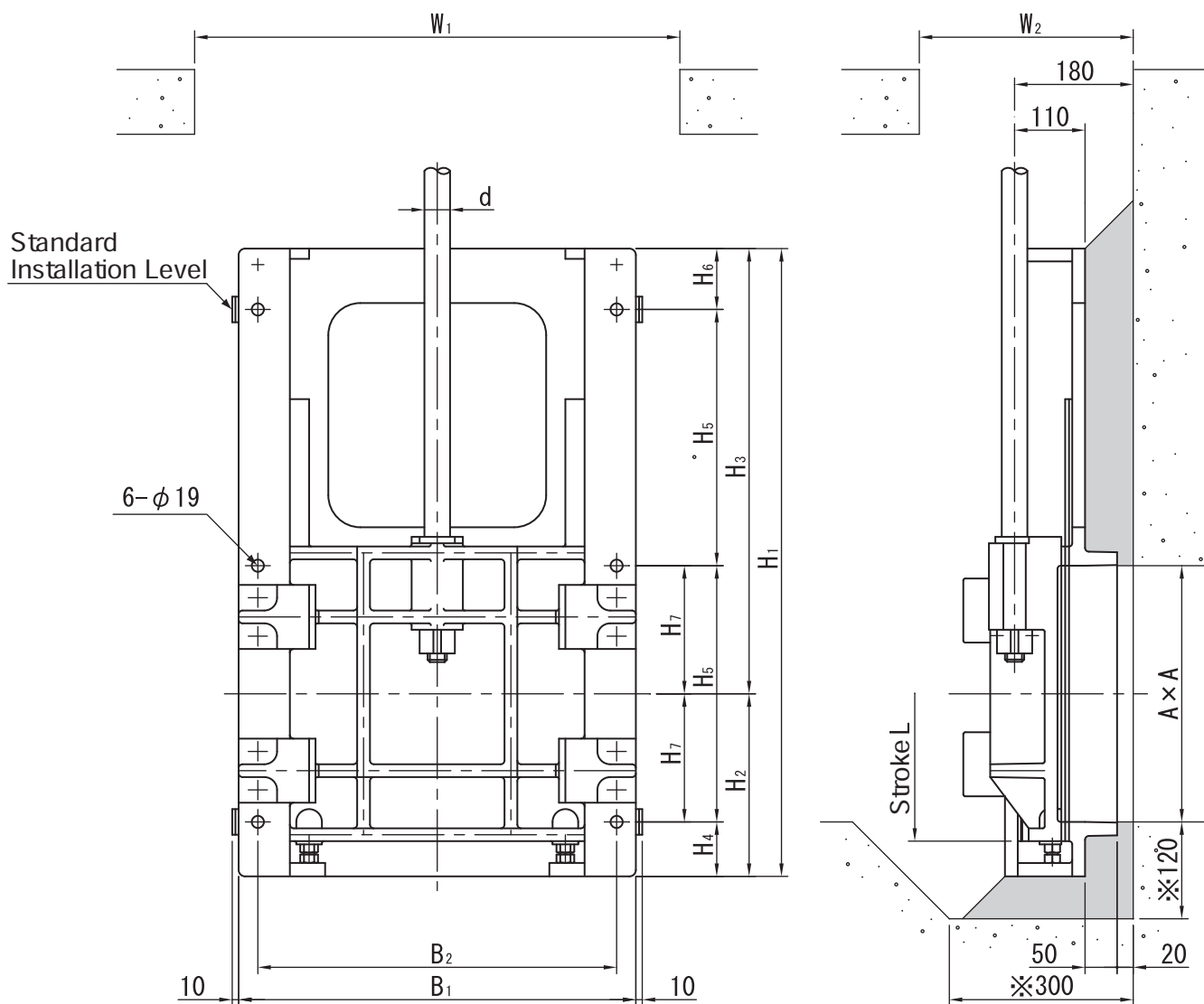
Seating options are available for on-seating /off-seating or both

Materials



No.	Part Name	Materials
1	Frame	FC200
2	Slide	FC200
3	Retainer Plate	FC200
4	Wedge Block	FC200
5	Wedge Block	FC200
6	Stopper	FC200
7	Seating Faces	SUS304
8	Seating Faces	CAC406
9	Wedge	CAC406
10	Retainer Plate	SUS304
11	Locking Device	SUS403
12	Threaded stem	SUS304
13	Hex Bolt & Nut	SUS304
14	Stud Bolt & Nut	SUS304
15	Hex Bolt	SUS304
16	Stud Bolt & Nut	SUS304
17	Hex Socket Set Screw	SUS304

Outside Screw & Yoke Rising Stem Square Sluice Gate **200×200mm**
-500×500mm



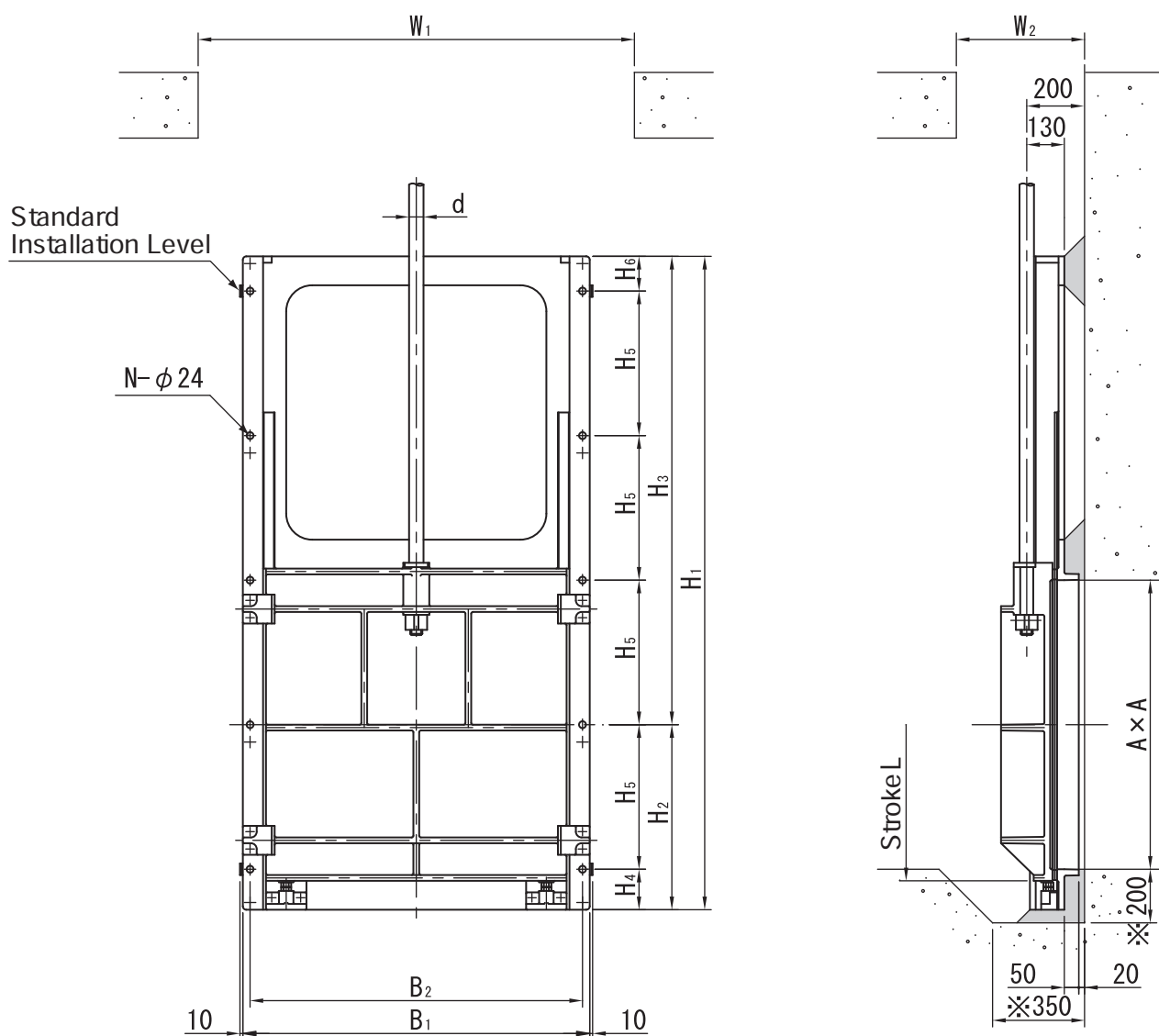
- (1) Side wedges are reduced to 1pair for size 300mm and below.
- (2) Mark ※ shows minimum dimensions required.
- (3) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Effective Size (A x A)	Symbol													
	H1	H2	H3	H4	H5	H6	H7	B1	B2	L	d	W1	W2	
200 X 200	580	185	395	85	200	95	100	390	340	230	φ 36	600	400	
250 X 250	680	215	465	90	250	90	125	440	390	280	φ 36	650	400	
300 X 300	780	235	545	85	300	95	150	490	440	330	φ 40	700	400	
350 X 350	880	260	620	85	350	95	175	540	490	380	φ 40	750	400	
400 X 400	980	285	695	85	400	95	200	590	540	430	φ 40	800	400	
450 X 450	1080	310	770	85	450	95	225	640	590	480	φ 40	850	400	
500 X 500	1180	335	845	85	500	95	250	690	640	530	φ 40	900	400	

Outside Screw & Yoke Rising Stem Square Sluice Gate

600×600mm
-1000×1000mm

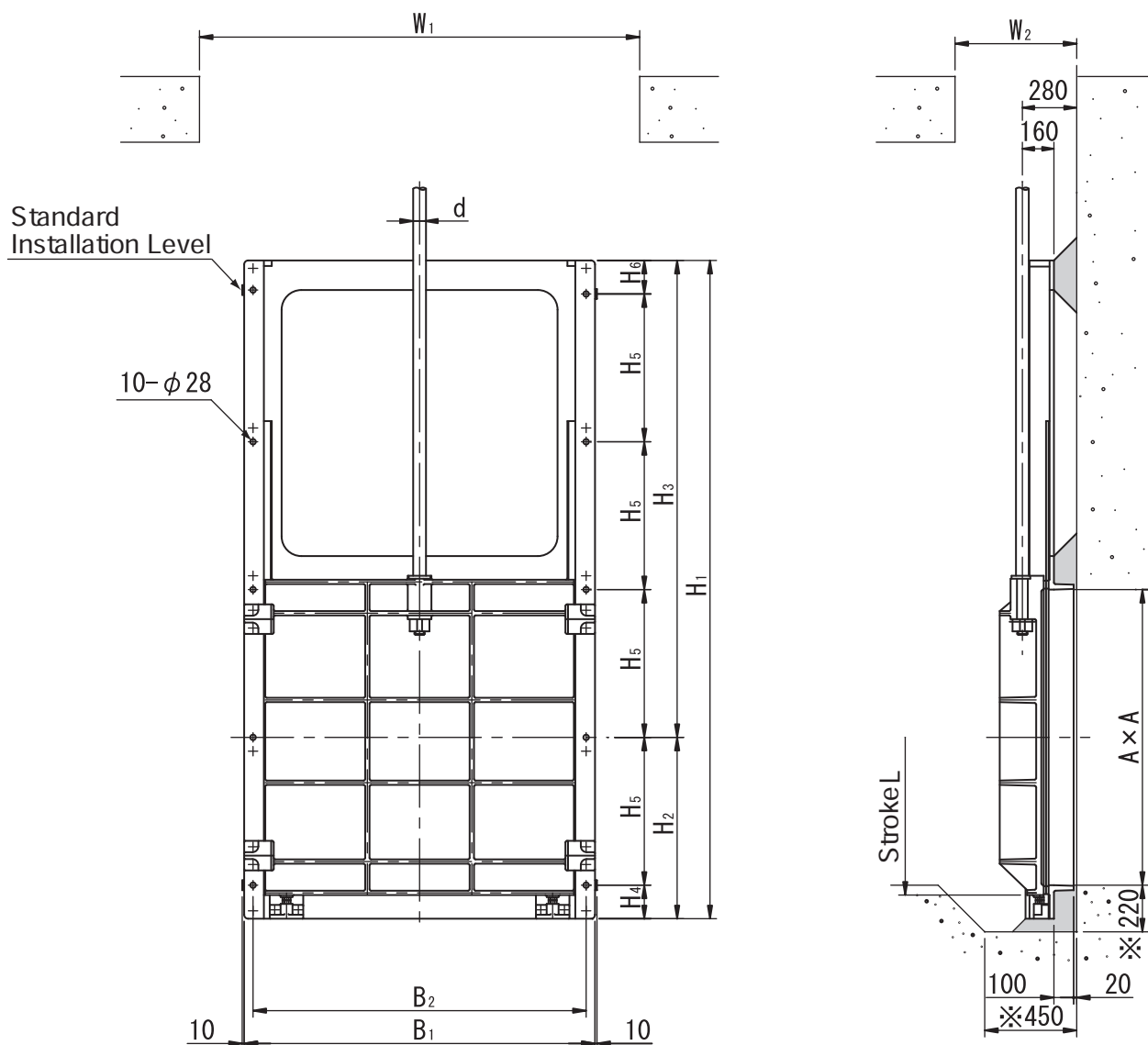


- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Effective Size (A x A)	Symbol												
	H1	H2	H3	H4	H5	H6	B1	B2	L	d	N	W1	W2
600 X 600	1460	440	1020	90	350	320	800	750	640	φ 46	8	1000	450
700 X 700	1660	490	1170	90	400	370	900	850	740	φ 46	8	1100	450
800 X 800	1860	540	1320	140	400	120	1000	950	840	φ 50	10	1200	450
900 X 900	2060	590	1470	140	450	120	1100	1050	940	φ 50	10	1300	450
1000 X 1000	2260	640	1620	140	500	120	1200	1150	1040	φ 50	10	1400	450

Outside Screw & Yoke Rising Stem Square Sluice Gate **1100×1100mm**
-1500×1500mm



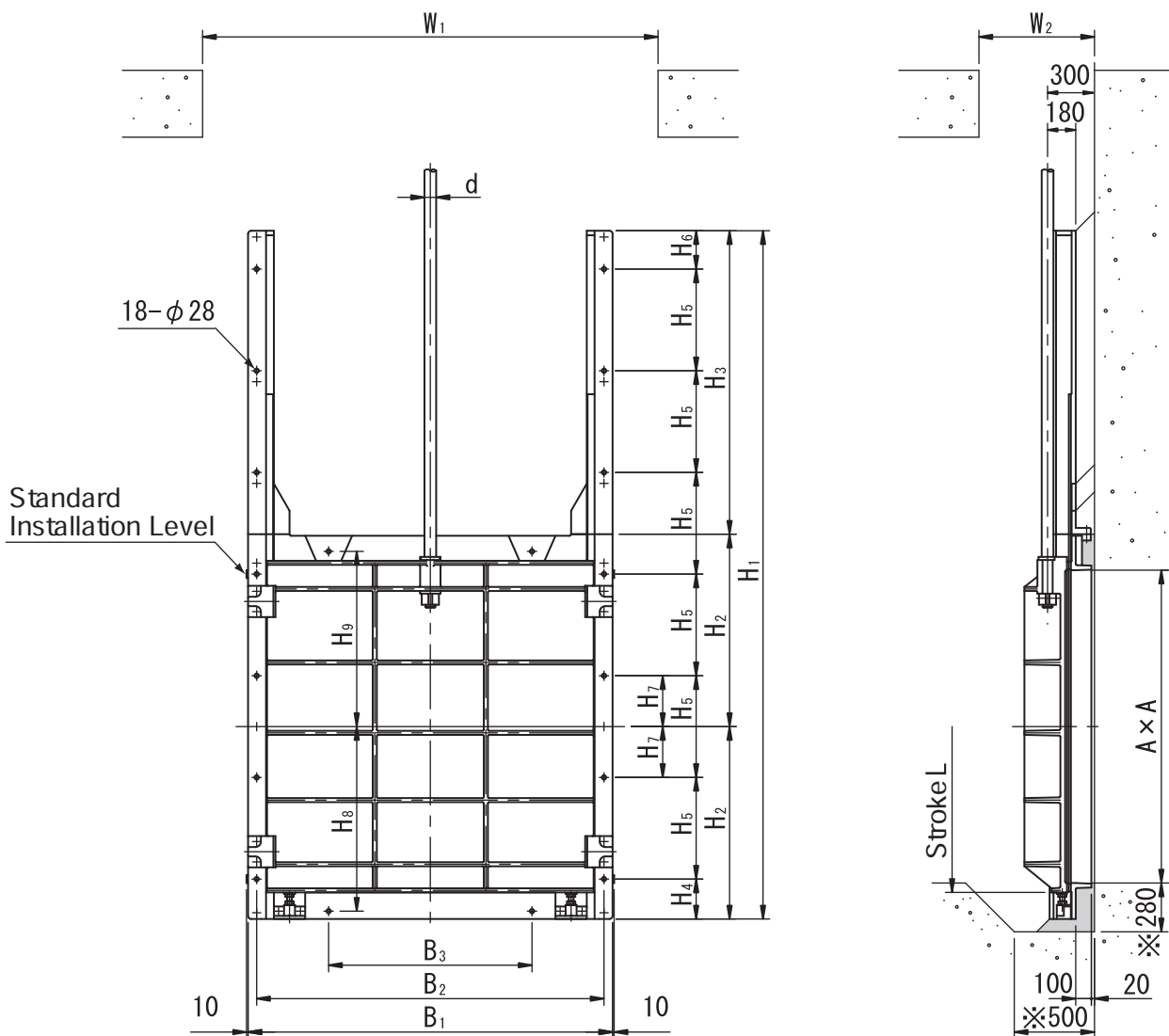
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Effective Size (A x A) \ Symbol	H1	H2	H3	H4	H5	H6	B1	B2	L	d	W1	W2
1100 X 1100	2510	720	1790	170	550	140	1380	1290	1150	φ 55	1000	450
1200 X 1200	2710	770	1940	170	600	140	1480	1390	1250	φ 55	1100	450
1300 X 1300	2920	820	2100	170	650	150	1580	1490	1350	φ 60	1200	450
1350 X 1350	3020	845	2175	195	650	225	1630	1540	1400	φ 60	1300	450
1400 X 1400	3120	870	2250	170	700	150	1680	1590	1450	φ 60	1400	450
1500 X 1500	3320	920	2400	170	750	150	1780	1690	1550	φ 65	1400	450

Outside Screw & Yoke Rising Stem Square Sluice Gate

1600×1600mm
i ii -2000×2000mm



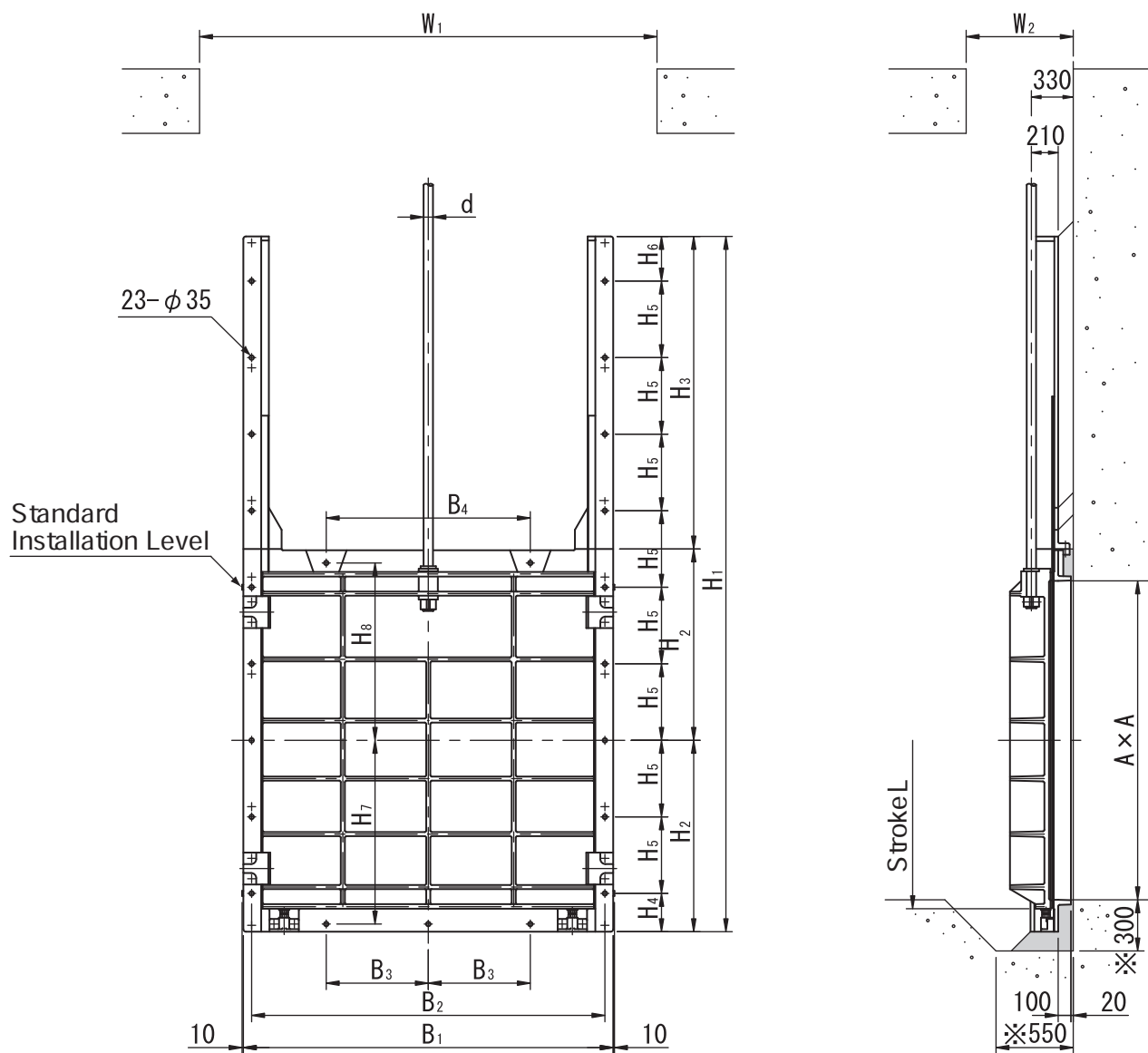
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Symbol Effective Size (A x A)	Unit:mm															
	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	B3	L	d	W1	W2
1600 X 1600	3600	1030	1540	205	550	95	275	980	920	1930	1820	1000	1660	φ 65	2150	600
1650 X 1650	3700	1055	1590	230	550	170	275	1000	950	1980	1870	1100	1710	φ 65	2200	600
1700 X 1700	3800	1080	1640	255	550	245	275	1030	970	2030	190	1100	1760	φ 70	2250	600
1800 X 1800	4000	1130	1740	230	600	170	300	1080	1020	2130	2020	1200	1860	φ 70	2350	600
1900 X 1900	4200	1180	1840	280	600	320	300	1130	1070	2230	2120	1200	1960	φ 75	2450	600
2000 X 2000	4400	1230	1940	255	600	245	325	1180	1120	2330	2220	1300	2060	φ 75	2550	600

Outside Screw & Yoke Rising Stem Square Sluice Gate

2100×2100mm
i ii -2500×2500mm



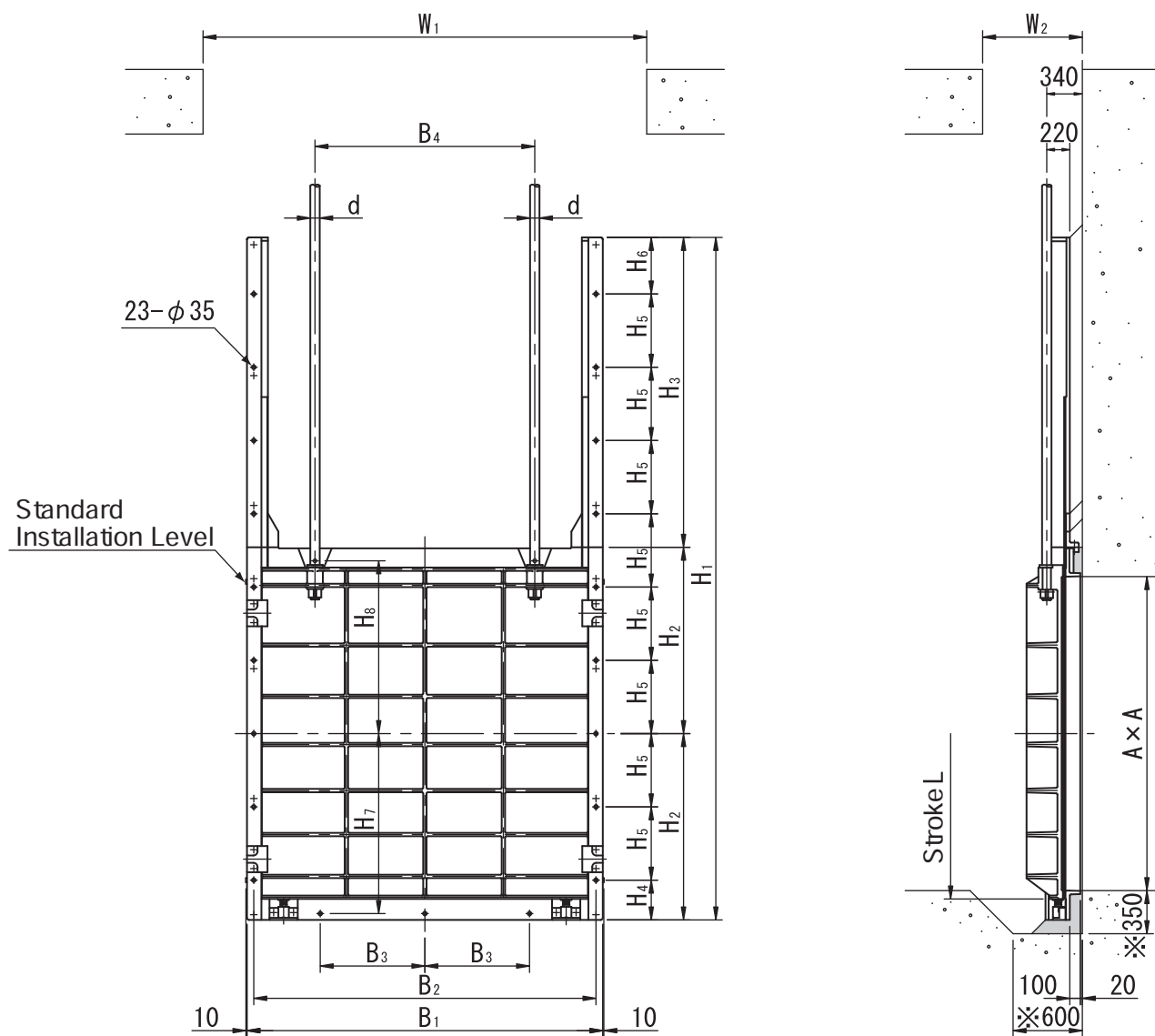
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Symbol Effective Size (A x A)	Unit:mm															
	H1	H2	H3	H4	H5	H6	H7	H8	B1	B2	B3	B4	L	d	W1	W2
2100 X 2100	4650	1300	2050	300	500	350	1240	1190	2500	2370	700	1400	2170	φ 80	2700	700
2200 X 2200	4850	1350	2150	250	550	200	1290	1240	2600	2470	700	1400	2270	φ 80	2800	700
2300 X 2300	5050	1400	2250	300	550	350	1340	1290	2700	2570	750	1500	2370	φ 85	2900	700
2400 X 2400	5250	1450	2350	250	600	200	1390	1340	2800	2670	800	1600	2470	φ 85	3000	700
2500 X 2500	5450	1500	2450	300	600	350	1440	1390	2900	2770	800	1600	2570	φ 90	3100	700

Outside Screw & Yoke Rising Stem Square Sluice Gate

2600×2600mm
i ii -3000×3000mm



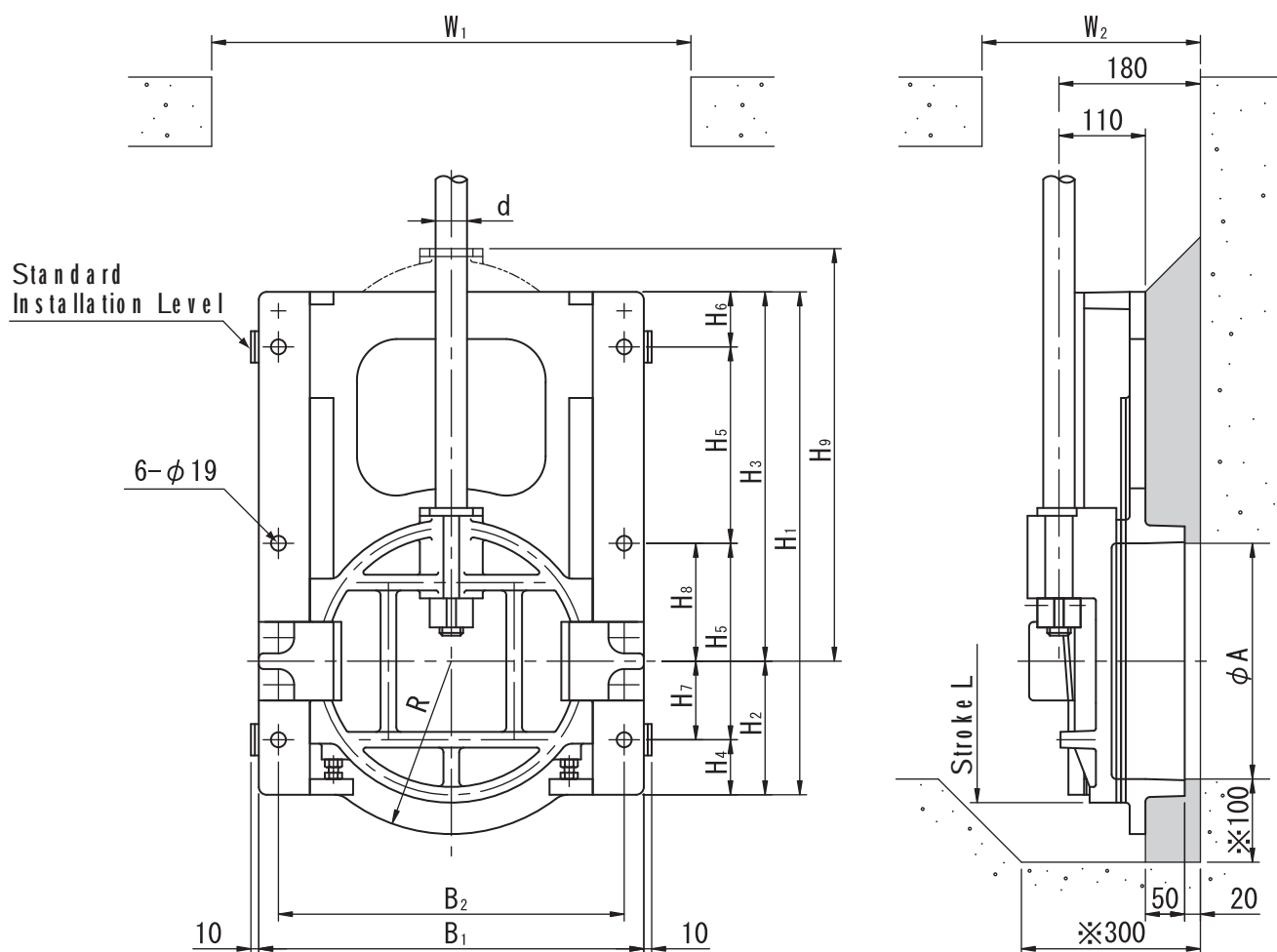
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Effective Size (A x A)	Symbol	H1	H2	H3	H4	H5	H6	H7	H8	B1	B2	B3	B4	L	d	W1	W2
2600 X 2600		5710	1580	2550	380	600	530	1520	1450	3000	2870	900	1800	2680	φ 80	3200	800
2700 X 2700		5910	1630	2650	330	650	380	1570	1500	3100	2970	950	1900	2780	φ 85	3300	800
2800 X 2800		6110	1680	2750	380	650	530	1620	1550	3200	3070	1000	2000	2880	φ 85	3400	800
2900 X 2900		6320	1730	2860	330	700	390	1670	1600	3300	3170	1000	2000	2980	φ 90	3500	800
3000 X 3000		6520	1780	2960	380	700	540	1720	1650	3400	3270	1050	2100	3080	φ 90	3600	800

Outside Screw & Yoke Rising Stem Round Sluice Gate

φ200mm - φ500mm



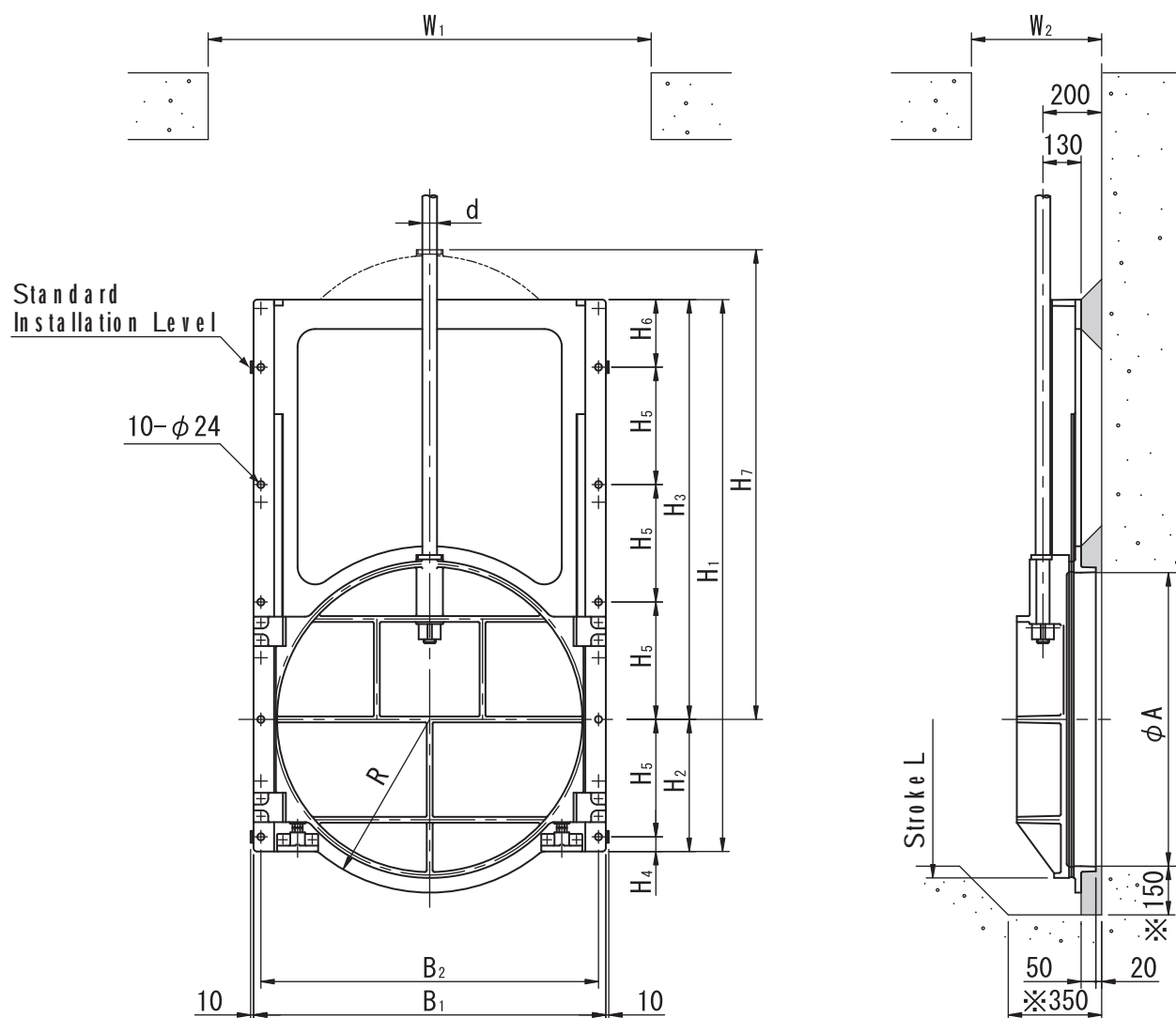
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Symbol	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	L	R	d	W1	W2
Effective Size (φA)																
200	480	145	335	65	190	35	80	110	375	390	340	230	170	φ 36	600	400
250	560	155	405	65	200	95	90	110	450	440	390	280	190	φ 36	650	400
300	640	170	470	70	250	70	100	150	525	490	440	330	220	φ 40	700	400
350	720	180	540	60	250	160	120	130	600	540	490	380	240	φ 40	750	400
400	800	195	605	65	300	135	130	170	675	590	540	430	270	φ 40	800	400
450	890	215	675	65	350	125	150	200	750	640	590	480	290	φ 40	850	400
500	970	230	740	80	400	90	150	250	825	690	640	530	320	φ 40	900	400

Outside Screw & Yoke Rising Stem Round Sluice Gate

φ600mm - φ1000mm



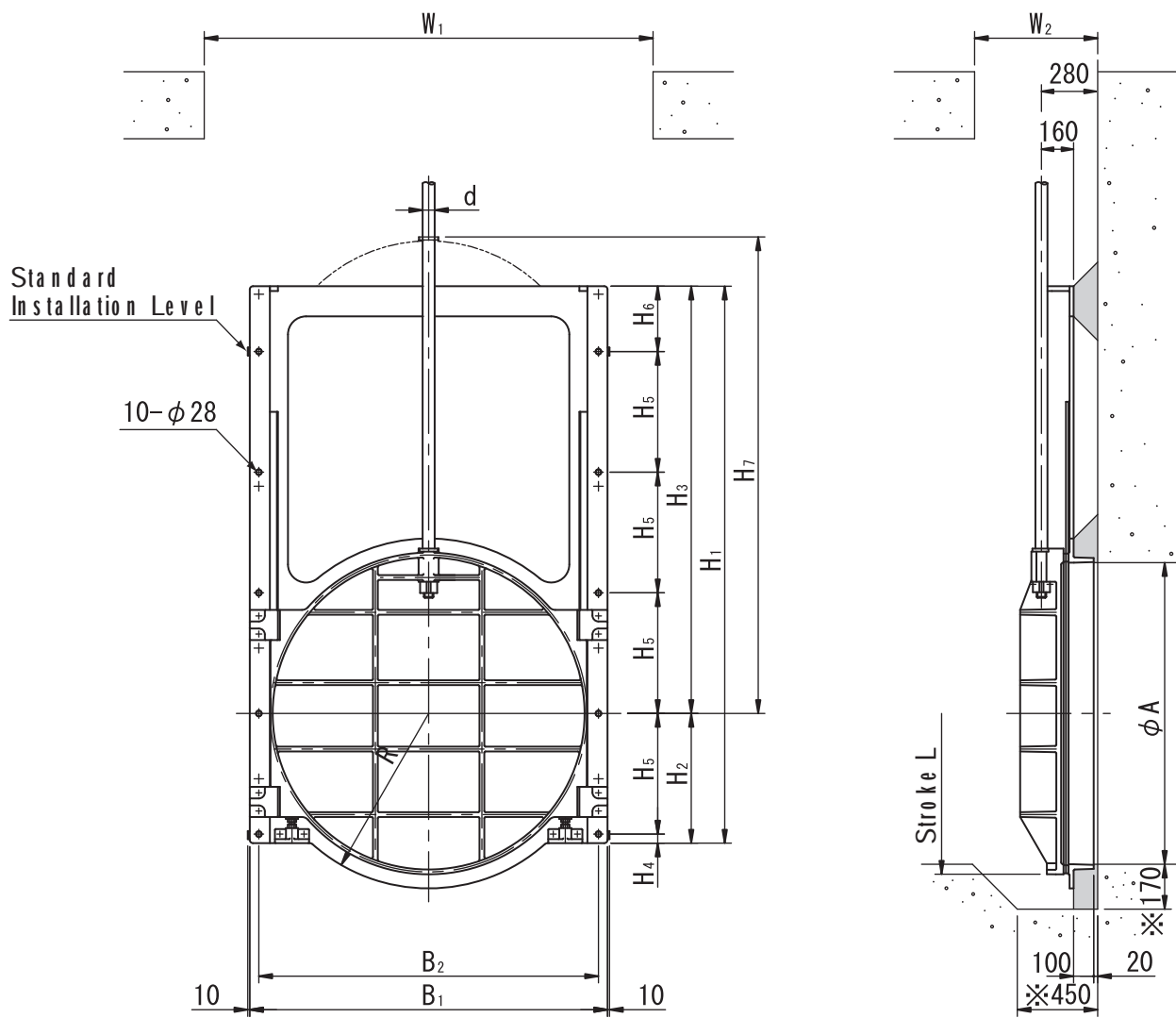
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Effective Size (φA) \ Symbol	H1	H2	H3	H4	H5	H6	H7	B1	B2	L	R	d	W1	W2
600	1240	350	890	100	250	140	1000	800	750	640	390	φ46	1000	450
700	1400	375	1025	75	300	125	1150	900	850	740	440	φ46	1100	450
800	1560	400	1160	50	350	110	1300	1000	950	840	490	φ50	1200	450
900	1710	415	1295	65	350	245	1450	1100	1050	940	540	φ50	1300	450
1000	1880	450	1430	50	400	230	1600	1200	1150	1040	590	φ50	1400	450

Outside Screw & Yoke Rising Stem Round Sluice Gate

$\phi 1100\text{mm} - \phi 1500\text{mm}$



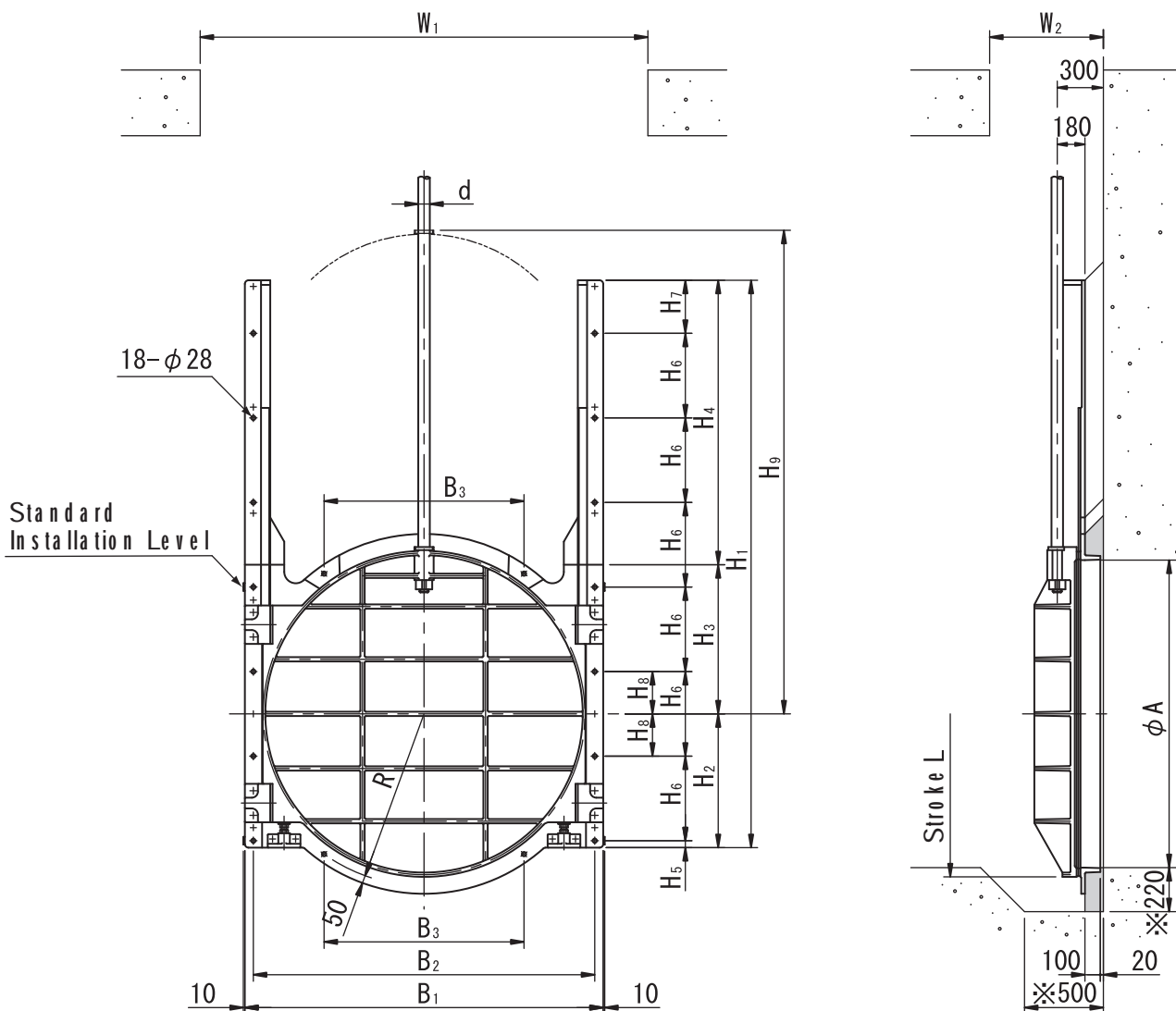
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Effective Size (ϕA)	Symbol	H1	H2	H3	H4	H5	H6	H7	B1	B2	L	R	d	W1	W2
	1100		2080	505	1575	55	450	225	1770	1380	1290	1150	670	$\phi 55$	1600
1200		2260	540	1720	40	500	220	1920	1480	1390	1250	720	$\phi 55$	1700	550
1350		2510	595	1915	45	550	265	2145	1630	1540	1400	790	$\phi 60$	1850	550
1500		2770	645	2125	45	600	325	2370	1780	1690	1550	870	$\phi 65$	2000	550

Outside Screw & Yoke Rising Stem Round Sluice Gate

$\phi 1650\text{mm} - \phi 2000\text{mm}$

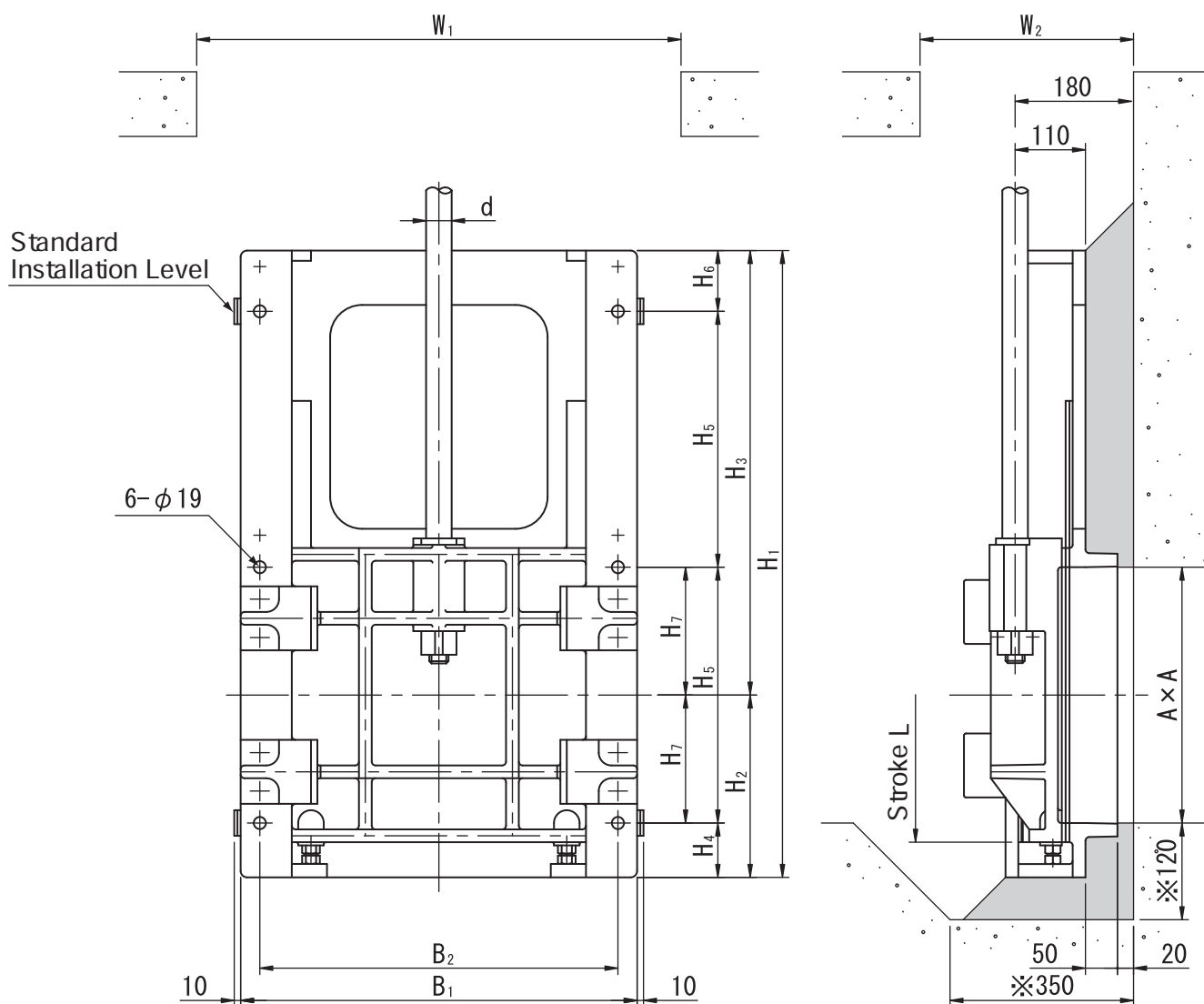


- (1) Mark \times shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: m m

Symbol Effective Size (ϕA)	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	B3	L	R	d	W1	W2
1650	3090	750	850	1490	75	450	315	225	2615	1980	1870	1100	110	950	$\phi 65$	2200	600
1800	3340	800	900	1640	50	500	290	250	2845	2130	2020	1200	1860	1020	$\phi 70$	2350	600
2000	3690	870	970	1850	45	550	345	275	3145	2330	2220	1300	2060	1120	$\phi 75$	2550	600

Outside Screw & Yoke Rising Stem Square Sluice Gate for off-seating operation 200×200mm
-400×400mm

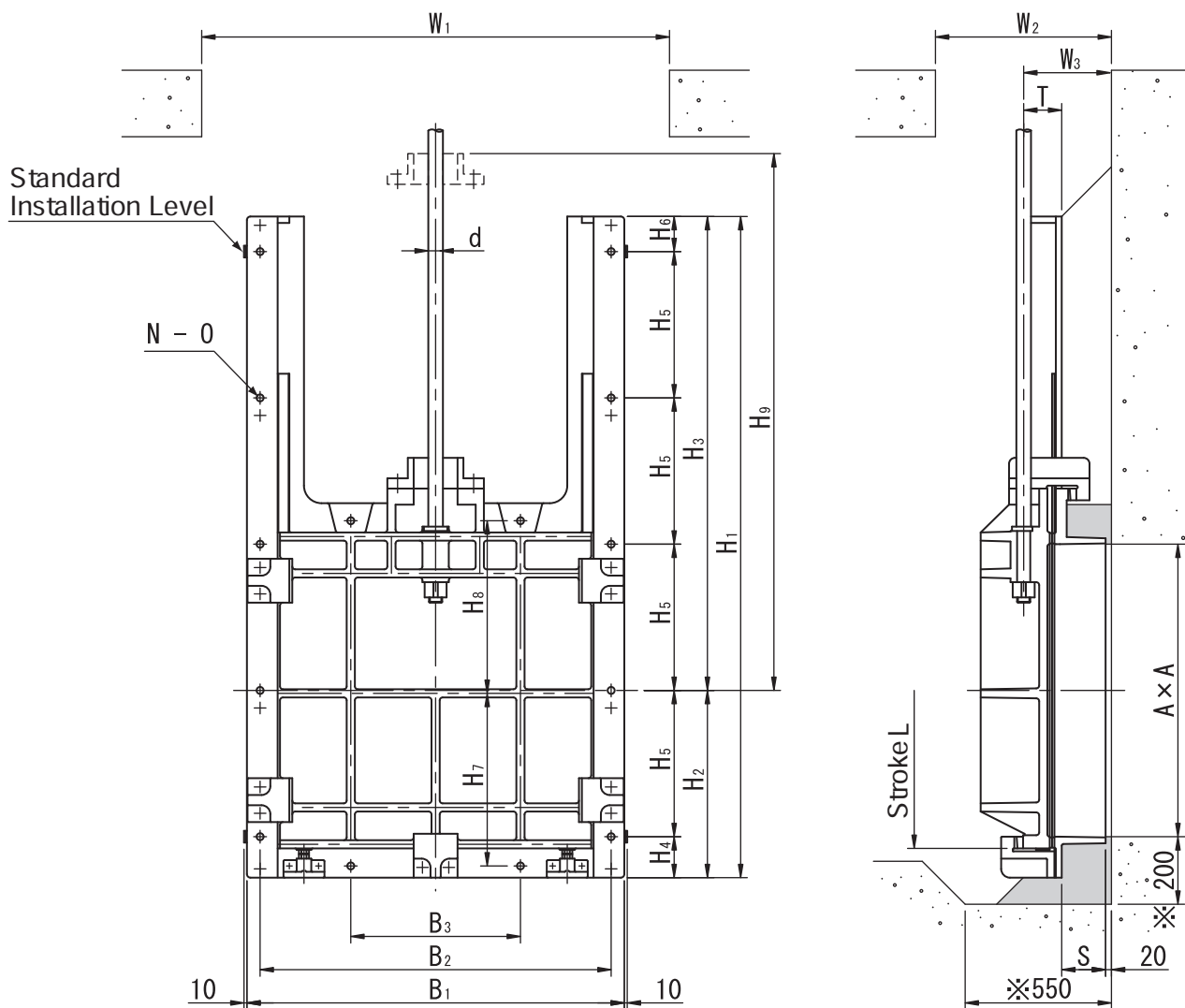


- (1) Side wedges are reduced to 1 pair for size 300mm and below.
- (2) Mark ※ shows minimum dimensions required.
- (3) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Effective Size (A x A) \ Symbol	H1	H2	H3	H4	H5	H6	H7	B1	B2	L	d	W1	W2
200 X 200	580	185	395	85	200	95	100	420	360	230	φ 36	650	450
250 X 250	680	215	470	85	250	90	125	470	410	280	φ 36	700	450
300 X 300	780	235	545	85	300	95	150	520	460	330	φ 40	750	450
350 X 350	880	260	620	85	350	95	175	570	510	380	φ 40	800	450
400 X 400	980	285	695	85	400	95	200	620	560	430	φ 40	850	450

Outside Screw & Yoke Rising Stem Square Sluice Gate for off-seating operation ii **450×450 m**
-1000×1000m m



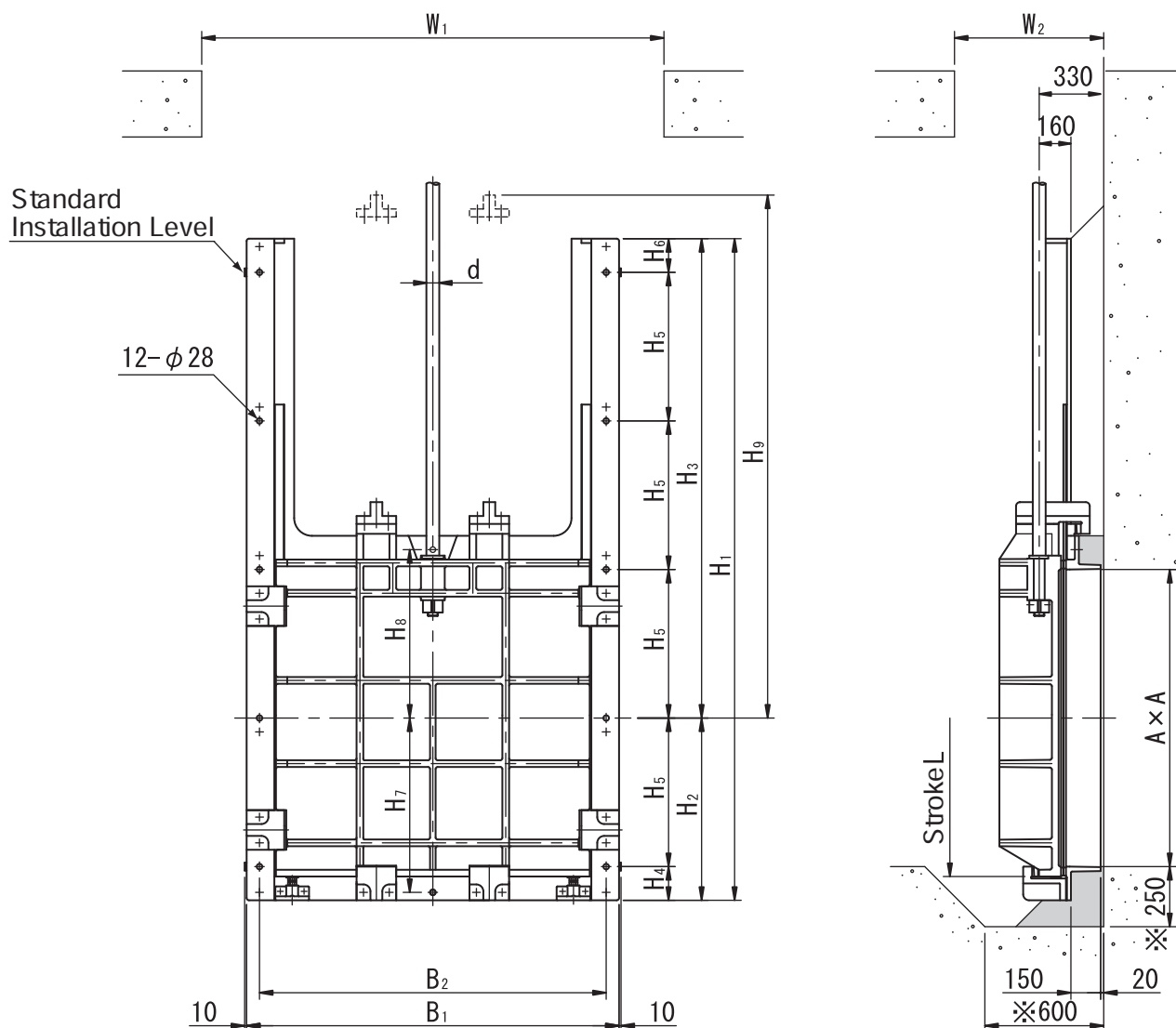
- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Symbol Effective Size (A x A)	Symbol																				
	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	B3	L	d	N	O	S	T	W1	W2	W3
450 X 450	1080	310	770	85	450 (225)	95	-	-	905	670	610	-	480	φ 40	6	φ 19	100	110	900	450	230
500 X 500	1180	335	845	85	500 (250)	95	-	-	980	720	660	-	530	φ 40	6	φ 19	100	110	950	450	230
600 X 600	1460	440	1020	90	350	320	-	-	1235	890	800	-	640	φ 46	8	φ 24	150	130	1100	600	300
700 X 700	1660	490	1170	90	400	370	-	-	1385	990	900	-	740	φ 46	8	φ 24	150	130	1200	600	300
800 X 800	1860	540	1320	140	400	120	500	480	1535	1090	1000	460	840	φ 50	10	φ 24	150	130	1300	600	300
900 X 900	2060	590	1470	140	450	120	550	530	1685	1190	1100	520	940	φ 50	10	φ 24	150	130	1400	600	300
1000 X 1000	2260	640	1620	140	500	120	600	580	1835	1290	1200	580	1040	φ 50	10	φ 24	150	130	1500	600	300

() shows the pitch of equally spaced bolt holes.

Outside Screw & Yoke Rising Stem Square Sluice Gate for off-seating operation **1100×1100mm**
-1500×1500mm

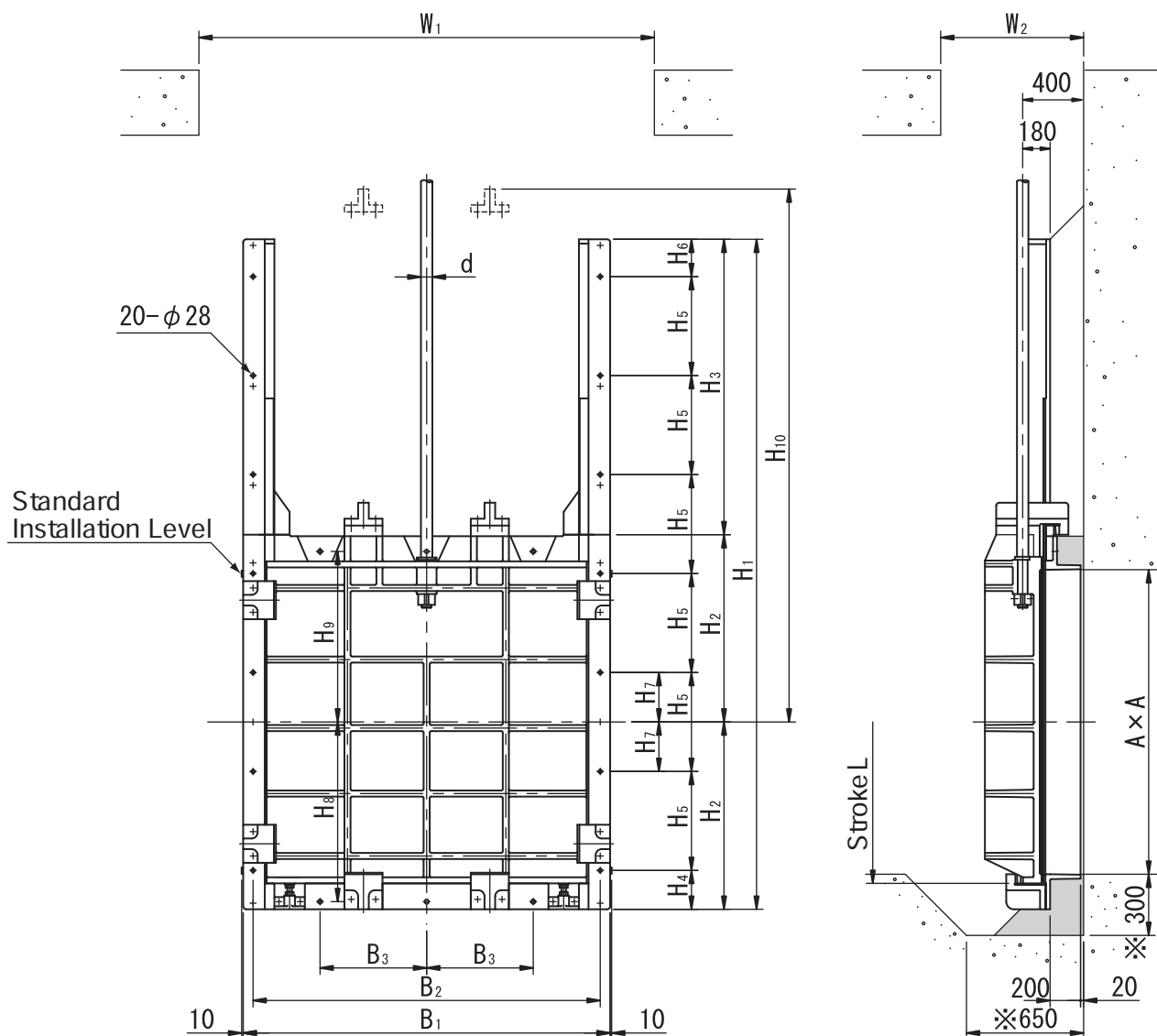


- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Effective Size (A x A)	Symbol	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	L	d	W1	W2
	1100 X 1100		2510	720	1790	170	550	140	680	650	2040	1480	1350	1150	φ 55	1700
1200 X 1200		2710	770	1940	170	600	140	730	700	2190	1580	1450	1250	φ 55	1800	700
1300 X 1300		2920	820	2100	170	650	150	780	750	2340	1680	1550	1350	φ 60	1900	700
1350 X 1350		3020	845	2175	195	650	225	805	775	2415	1730	1600	1400	φ 60	1950	700
1400 X 1400		3120	870	2250	170	700	150	830	800	2490	1780	1650	1450	φ 60	2000	700
1500 X 1500		3320	920	2400	170	750	150	880	850	2640	1880	1750	1550	φ 65	2100	700

Outside Screw & Yoke Rising Stem Square Sluice Gate for off-seating operation **1600×1600mm**
-2000×2000mm

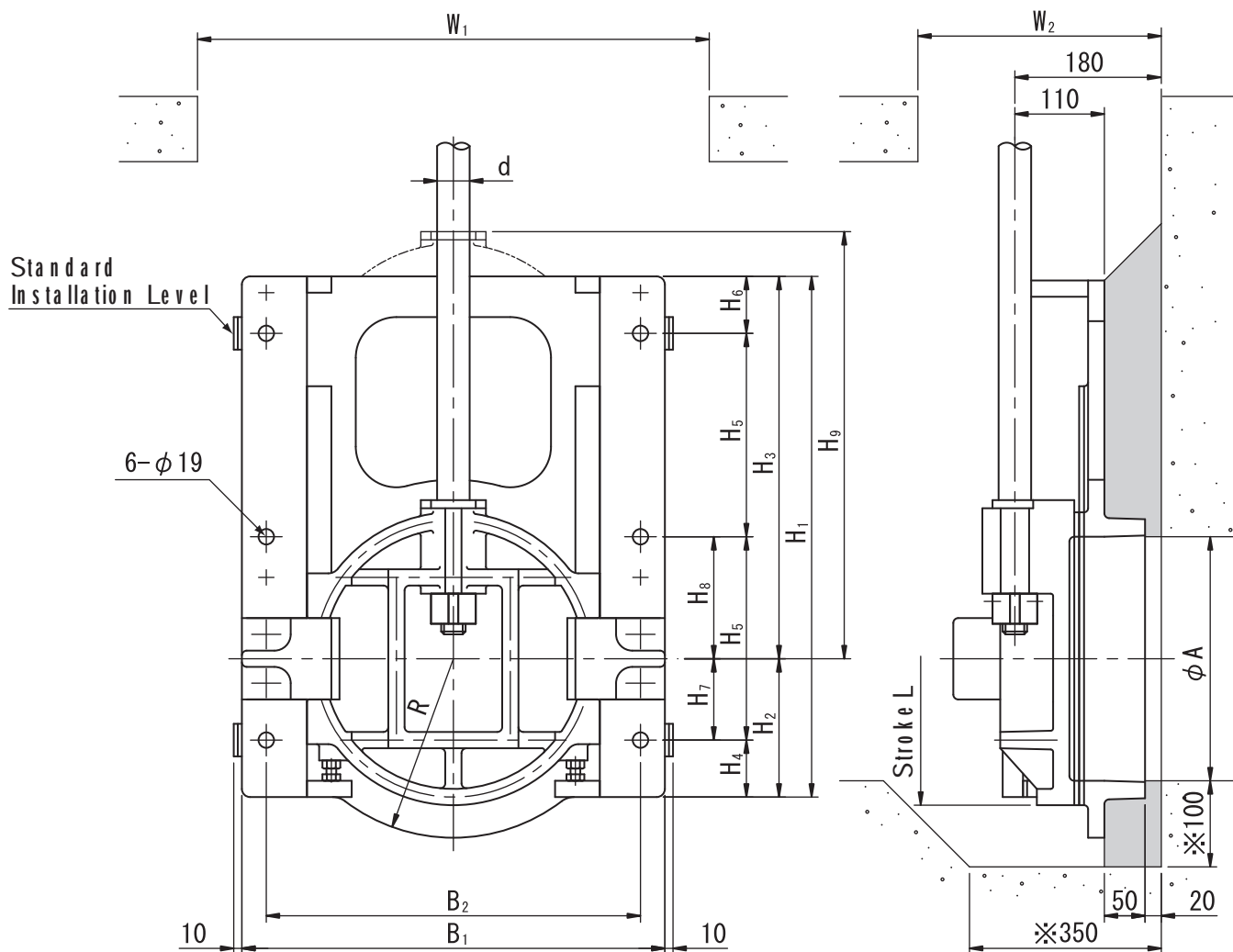


- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit:mm

Symbol Effective Size (A x A)	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	B1	B2	B3	L	d	W1	W2
1600 X 1600	3600	1030	1540	205	550	95	275	980	920	2900	2010	1880	560	1660	φ 65	2200	800
1650 X 1650	3700	1055	1590	230	550	170	275	1000	950	2975	2060	1930	580	1710	φ 65	2250	800
1700 X 1700	3800	1080	1640	255	550	245	275	1030	970	3050	2110	1980	595	1760	φ 70	2300	800
1800 X 1800	4000	1130	1740	230	600	170	300	1080	1020	3200	2220	2080	630	1860	φ 70	2400	800
1900 X 1900	4200	1180	1840	280	600	320	300	1130	1070	3350	2310	2180	665	1960	φ 75	2500	800
2000 X 2000	4400	1230	1940	255	600	245	325	1180	1120	3500	2410	2280	700	2060	φ 75	2600	800

Outside Screw & Yoke Rising Stem Round Sluice Gate for off-seating operation $\phi 200\text{mm} - \phi 400\text{mm}$

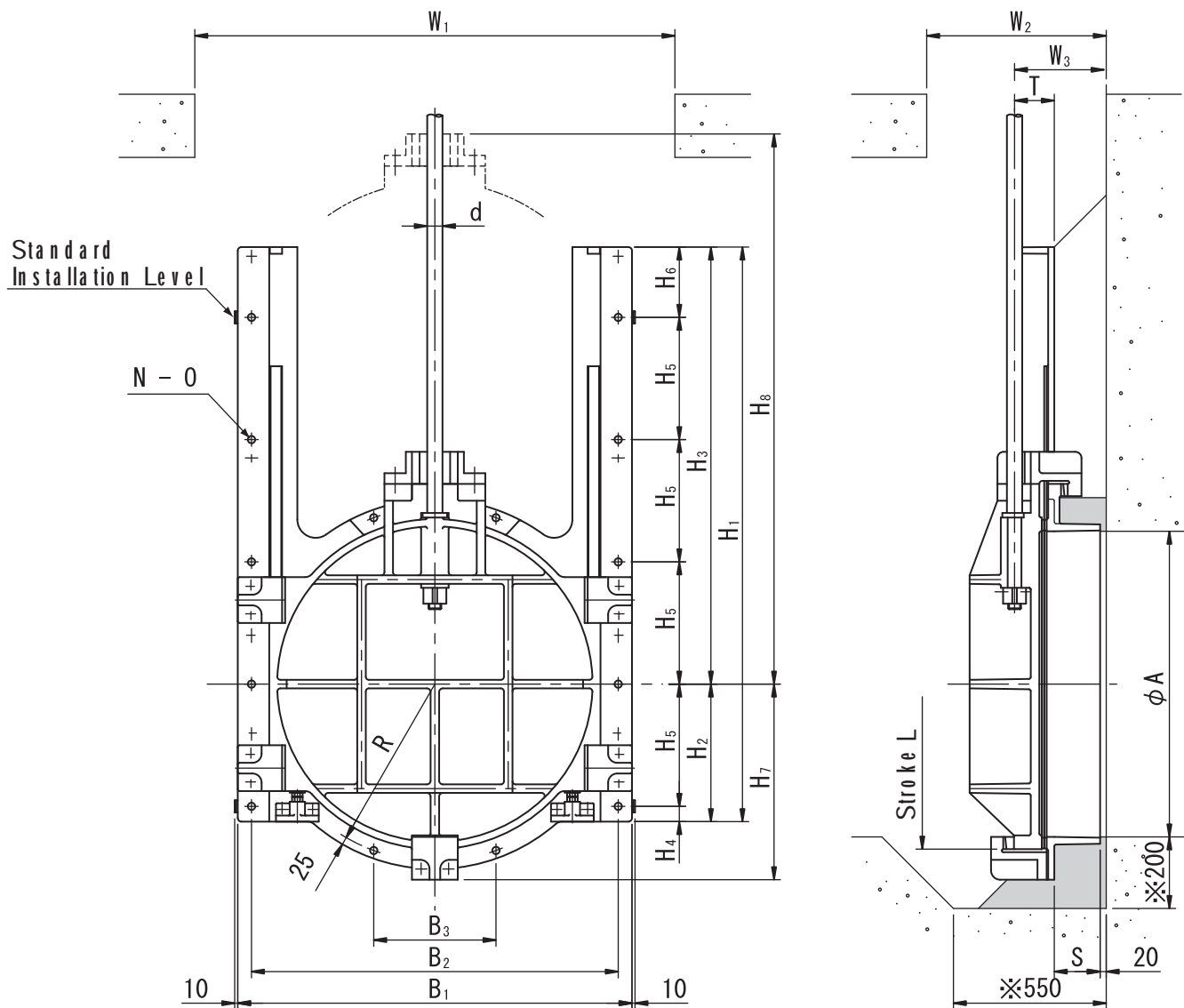


- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Symbol Effective Size (ϕA)	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	L	R	d	W1	W2
200	480	145	335	65	190	35	80	110	375	420	360	230	170	$\phi 36$	650	400
250	560	155	405	65	200	95	90	110	450	470	410	280	190	$\phi 36$	700	400
300	640	170	470	70	250	70	100	150	525	520	460	330	220	$\phi 40$	750	400
350	720	180	540	60	250	160	120	130	600	570	510	380	240	$\phi 40$	800	400
400	800	195	605	65	300	135	130	170	675	620	560	430	270	$\phi 40$	850	400

Outside Screw & Yoke Rising Stem Round Sluice Gate for off-seating operation $\phi 450\text{mm} - \phi 1000\text{mm}$



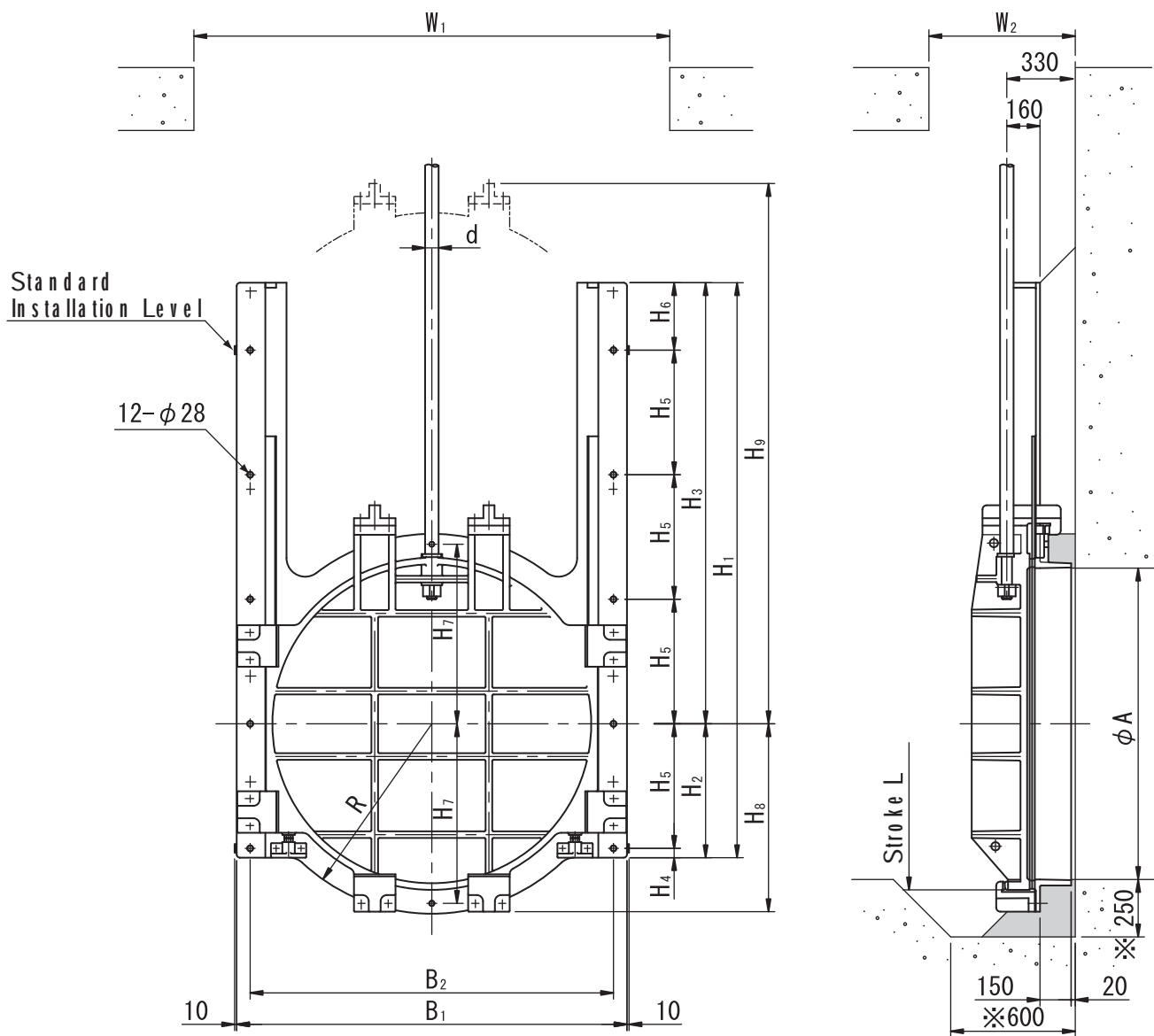
- (1) Side wedges are reduced to 1 pair for size 450mm and 500mm .
- (2) Mark ※ shows minimum dimensions required .
- (3) W1, W2 show minimum opening dimensions for hanging gate down .

Unit: mm

Symbol Effective Size (ϕA)	H1	H2	H3	H4	H5	H6	H7	H8	B1	B2	B3	L	R	d	N	S	T	W1	W2	W3
450	890	215	675	65	350 (150,200)	125	340	885	670	610	-	480	-	$\phi 40$	6	100	110	900	400	230
500	970	230	740	80	400 (150,250)	90	365	965	720	660	-	530	-	$\phi 40$	6	100	110	950	400	230
600	1240	350	890	100	250	140	440	1185	890	800	-	640	-	$\phi 46$	10	150	130	1100	600	300
700	1400	375	1025	75	300	125	490	1335	990	900	-	740	-	$\phi 46$	10	150	130	1200	600	300
800	1560	400	1160	50	350	110	540	1500	1090	1000	400	840	480	$\phi 50$	14	150	130	1300	600	300
900	1710	415	1295	65	350	245	590	1650	1190	1100	400	940	530	$\phi 50$	14	150	130	1400	600	300
1000	1880	450	1430	50	400	230	640	1800	1290	1200	400	1040	580	$\phi 50$	14	150	130	1500	600	300

() shows the pitch of equally spaced bolt holes .

Outside Screw & Yoke Rising Stem Round Sluice Gate for off-seating operation $\phi 1100\text{mm} - \phi 1500\text{mm}$

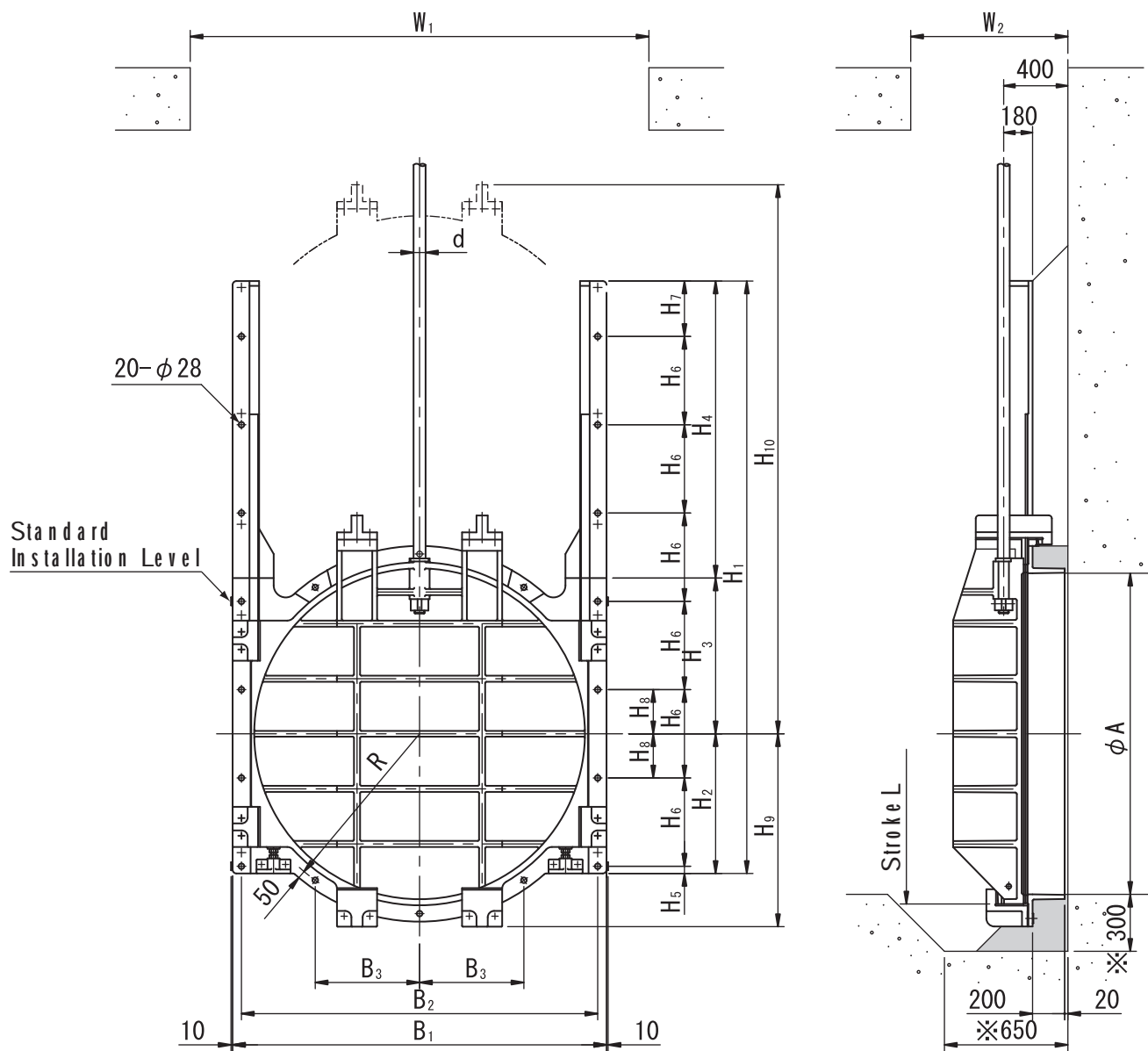


- (1) Mark ※ shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

Unit: mm

Symbol	H1	H2	H3	H4	H5	H6	H7	H8	H9	B1	B2	L	R	d	W1	W2
Effective Size (ϕA)																
1100	2080	505	1575	55	450	225	665	710	2020	1480	1350	1150	715	$\phi 55$	1700	700
1200	2260	540	1720	40	500	210	715	760	2170	1580	1450	1250	765	$\phi 55$	1800	700
1350	2510	595	1915	45	550	265	790	830	2390	1730	1600	1400	840	$\phi 60$	1950	700
1500	2770	645	2125	45	600	325	865	900	2610	1880	1750	1550	915	$\phi 65$	2100	700

Outside Screw & Yoke Rising Stem Round Sluice Gate for off-seating operation $\phi 1650\text{mm} - \phi 2000\text{mm}$



- (1) Mark * shows minimum dimensions required.
- (2) W1, W2 show minimum opening dimensions for hanging gate down.

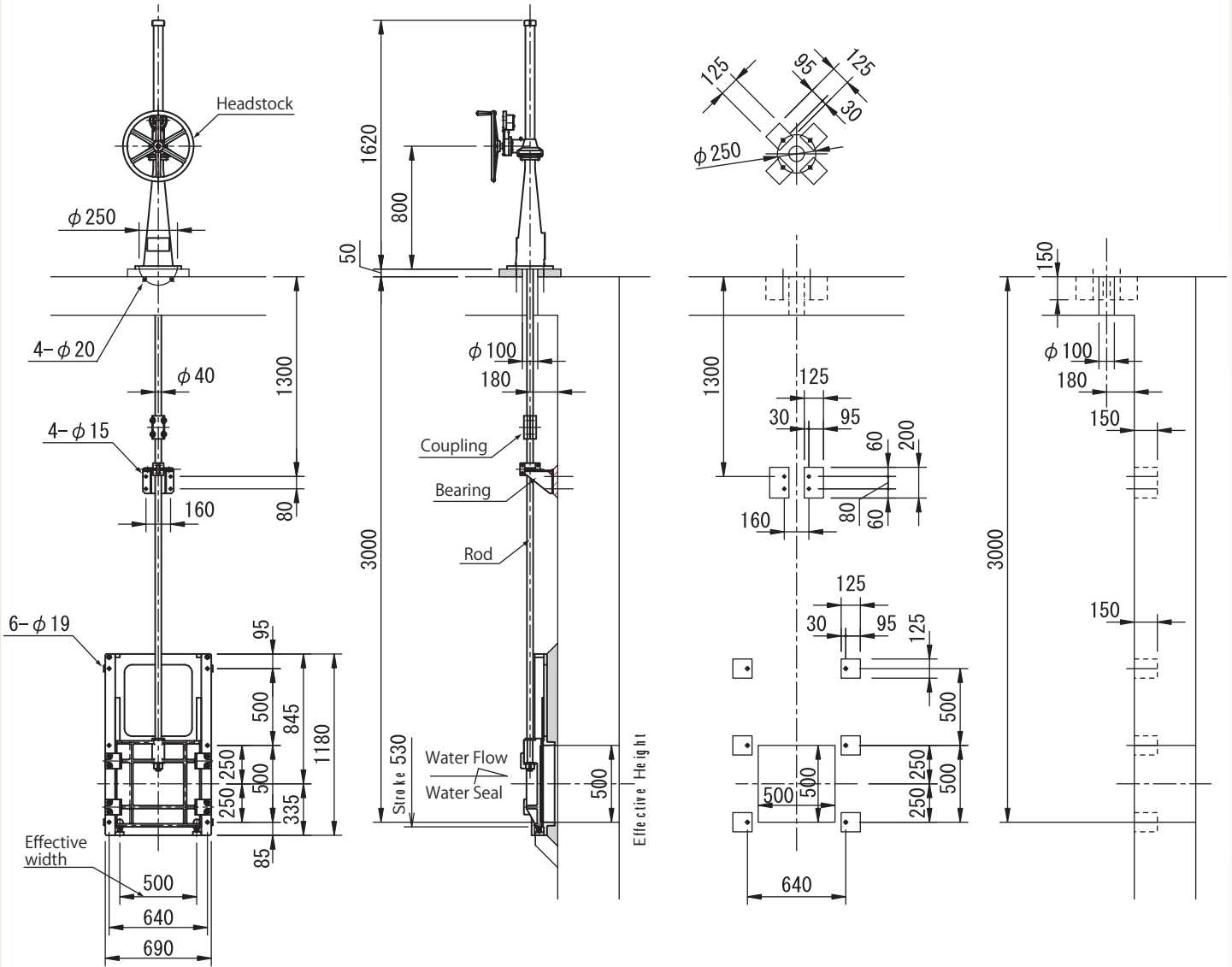
Unit: m

Effective Size (ϕA)	Symbol	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	B1	B2	B3	L	R	d	W1	W2
1650		3090	750	850	1490	75	450	315	225	1050	2910	2060	1930	550	1710	950	$\phi 65$	2250	800
1800		3340	800	900	1640	50	500	290	250	1120	3130	2210	2080	600	1860	1020	$\phi 70$	2400	800
2000		3690	870	970	1850	45	550	345	275	1220	3430	2410	2280	650	2060	1120	$\phi 75$	2600	800

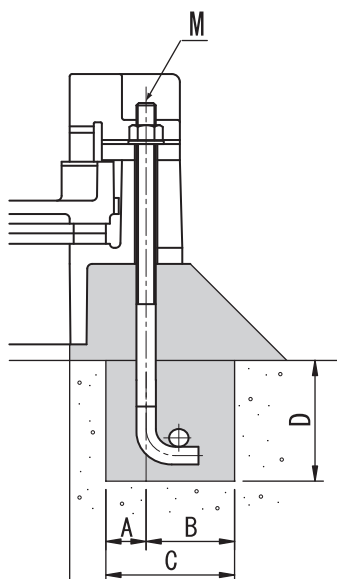
Example of Installation Outside Screw & Yoke Raising System 500x500mm Square Sluice Gate

1. Installation Drawing

2. Foundation Drawing



3. Dimensions of Anchor Bolts



M	A	B	C	D	E
M 12	$\phi 15$	30	95	□125	150
M 16	$\phi 19$	30	95	□125	150
M 20	$\phi 24$	50	110	□160	150
M 24	$\phi 28$	50	110	□160	150
M 30	$\phi 35$	50	150	□200	150

P repair following information for R F Q

- 1 . T ype / M odel**
- 2 . E ffective opening size**
- 3 . Q uantity**
- 4 . M edia**
- 5 . D esign D epth (M aximum D epth)**
- 6 . O perating D epth (F or open / close)**
- 7 . O n S eating / O ff S eating / B oth**
- 8 . T ype of operator (M anual / E lectrical)**
- 9 . O pening direction**
- 10 . R equest for M aterial**
- 11 . Installation S ize
(F rom the center of effective diameter to the slab
surface for headstock installation)**
- 12 . A ccessories**
- 13 . C oating color**
- 14 . R equest for installation and supervising**
- 15 . D ate of delivery**

Any information in this document is subject to change without notice.



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