



HINGES  
**WVVA**



# CONTENTS

## LEGEND

<b>LEGEND / PICTOGRAMS</b>	<b>2</b>
<b>MATERIALS / FINISH</b>	<b>3</b>
<b>DOOR HINGES</b>	
<b>SURFACE HINGES</b>	
WX asymmetrical i symmetrical	6
WX angular, WX hinge adjustment	7
WX selection according to the permitted load	8
MX asymmetrical i symmetrical	11
MX hinge adjustment	12
MX selection according to the permitted load	13
WX / MX mounting sets	16
WX electro	18
<b>GROOVE HINGES</b>	
SWW	19
XWW	20
SWW / XWW selection according to the permitted load	21
RWE	22
RWE selection according to the permitted load	23
<b>ROLLER HINGES</b>	
WR	24
WR selection according to the permitted load	25
WR-1R	26
WR-1R selection according to the permitted load	27
WR-2R	29
WR-2R selection according to the permitted load	30
<b>CONCEALED HINGES</b>	
WU	31
WU selection according to the permitted load	32
WUT	33
WUT selection according to the permitted load	34
WU-1R	35
WU-1R selection according to the permitted load	36
<b>ROOF WINDOW HINGES</b>	
WP1	38
WP2	39

## PVC HINGES

AXL	40
EXL	41
AXL / EXL selection according to the permitted load	42
AXM	44
EXM	45
AXM / EXM selection according to the permitted load	46
AXS	47
AXS selection according to the permitted load	48
<b>HINGE TEMPLATES</b>	
Surface	49
Roller and concealed	50
PVC	51





3D control

INDEPENDENT & SMOOTH ADJUSTMENT IN 3 PLANES



easy & fast

EASY AND FAST ASSEMBLY



kg  
max

MAXIMUM LOAD CAPACITY OF THE HINGE



POSSIBILITY OF USING IN FIRE DOOR



CERTIFICATED PRODUCT



10 signal  
cables

10-CORE CABLE



3 signal  
cables

3-CORE CABLE



SERVICE CLASSES (1-4)



DURABILITY (3, 4, 7)



WEIGHT OF TEST DOOR (0-7)



FIRE RESISTANCE (0, 1)



SECURITY (1)








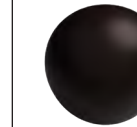
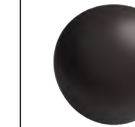
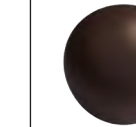
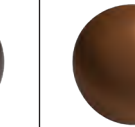
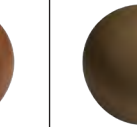




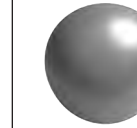
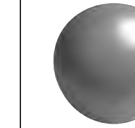
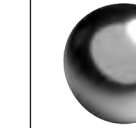


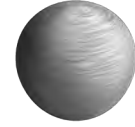
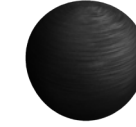
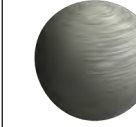
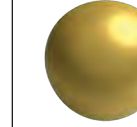
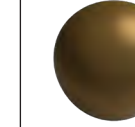
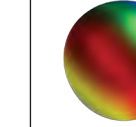
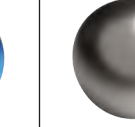
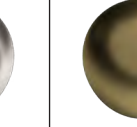





CORROSION RESISTANCE (0-4)



INTRUSION PROTECTION (0, 1)



HINGE CLASS (1 - 14)

 ALUMINIUM	 RAL 7016	 RAL 7021	 RAL 7024	 RAL 9005	 RAL 8077	 RAL 8019	 RAL 8017	 RAL 8003	 1036W	
	 RAL 9001	 RAL 9010	 RAL 9016	 RAL 7035	 RAL 9006	 SILVER	 CHROME	 CHROME MAT		
	 ANODE NATURAL	 C-0 ANODE NATURAL F-40	 C-35 ANODE BLACK F-40	 C-31 ANODE INOX F-40	 GOLD W3	 GOLD W4	 RAL	 INOX	 GOLDEN ELECTROPOLER	
 SUBLIMATION	 GOLDEN OAK	 DARK WALNUT								
	 BLACK PLASTIC	 WHITE PLASTIC								





**NOTIFIED BODY No. 1488  
INSTYTUT TECHNIKI BUDOWLANEJ  
CERTIFICATION DEPARTMENT**

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e-mail: certyfikacja@itb.pl, www.itb.pl



**CERTIFICATE OF CONSTANCY OF PERFORMANCE  
1488-CPR-0038/W**

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

**Single-axis hinges WALA**

general identification, intended use and performance of the product are described in the Annex No. Z-1488-CPR-0038/W which is an integral part of this certificate

placed on the market under the name or trade mark of:

**WALA Sp. z o.o.  
ul. Parkowa 16  
43-365 Wilkowice  
Poland**

and produced in the manufacturing plant:

**WALA Sp. z o.o.  
ul. Parkowa 16  
43-365 Wilkowice  
Poland**

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard:

**EN 1935:2002+ EN 1935:2002/AC:2003**

under system 1 for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the constancy of performance of the construction product.

This certificate was first issued on 15.12.2006 as a certificate No 1488-CPD-0038 (updated on 14.07.2009, 29.09.2009, 06.12.2010, 09.05.2011, 30.05.2012, 24.06.2013, 26.11.2015, 07.03.2016, 18.03.2019 and 21.04.2021) and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods, nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

HEAD  
of the Certification Department

Katarzyna Hatowska, M.Sc. Eng.



DEPUTY DIRECTOR  
of Instytut Techniki Budowlanej

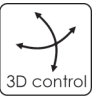
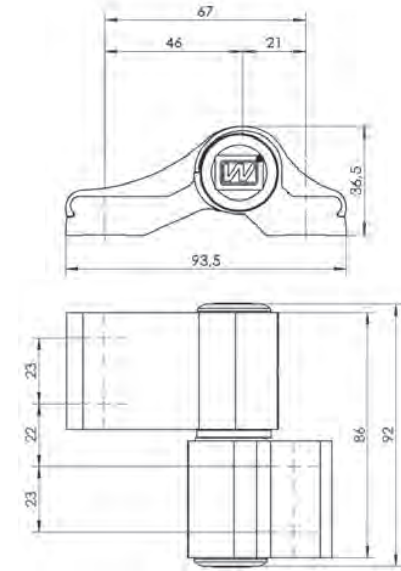
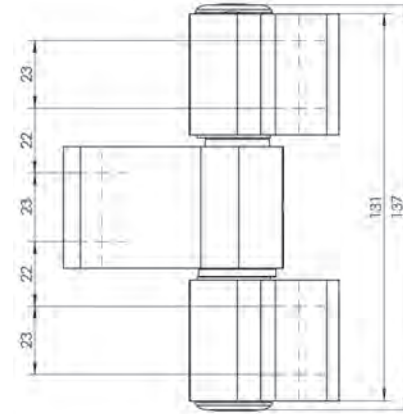
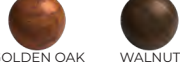
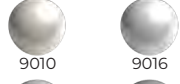
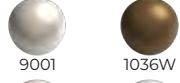
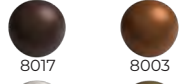
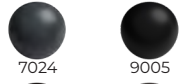
Anna Panek, M.Sc. Eng.

Warsaw, 21.04.2021

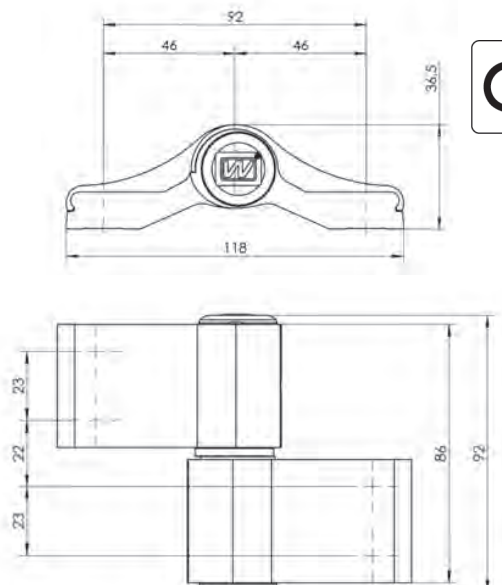
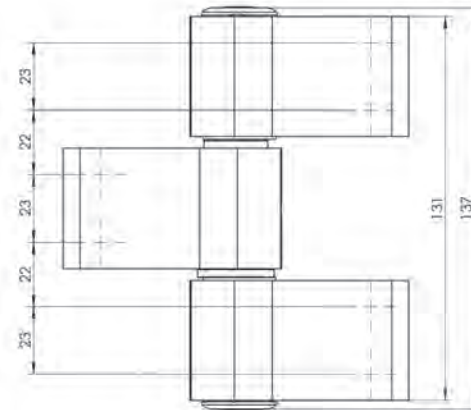




ASYMMETRICAL



SYMMETRICAL

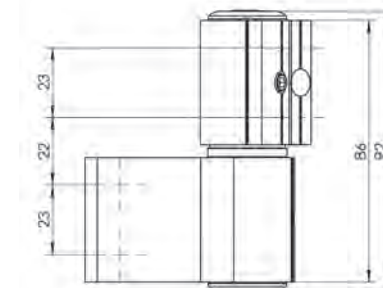
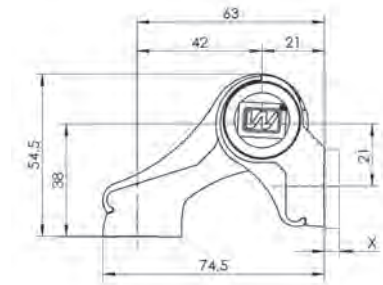
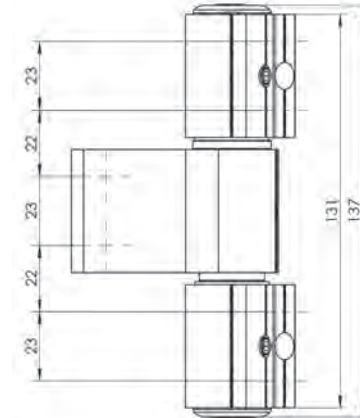




# WX

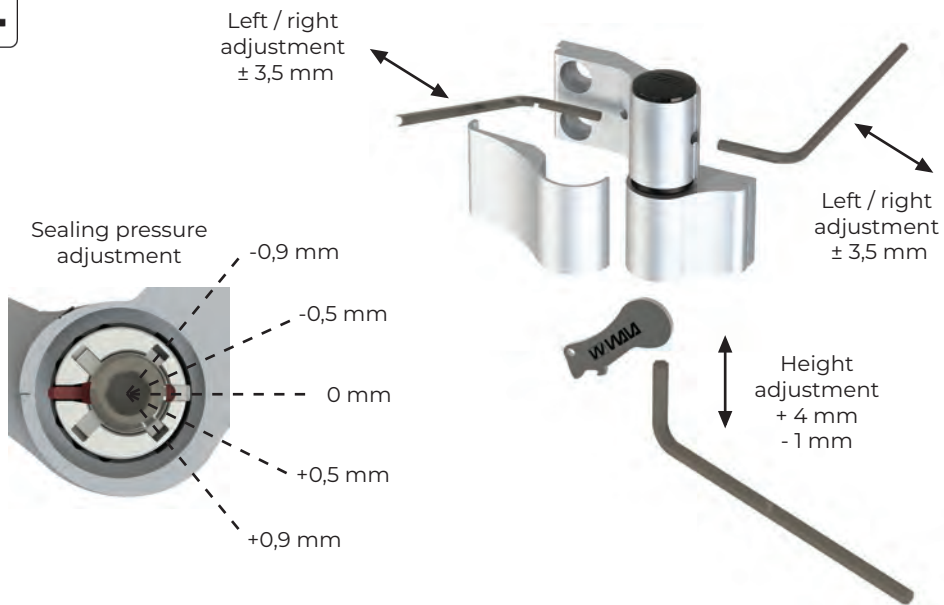
# SURFACE HINGES / HINGES

## ANGULAR

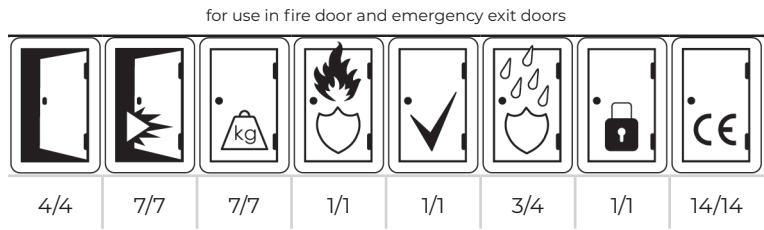


- 7016
- 7021
- 7024
- 9005
- 8077
- 8019
- 8017
- 8003
- 9001
- 1036W
- 9010
- 9016
- 7035
- 9006
- ANODE NATURAL
- INOX COATING
- RAL
- GOLDEN ELECTROPOLER
- GOLD W3
- GOLD W4
- GOLDEN OAK
- WALNUT

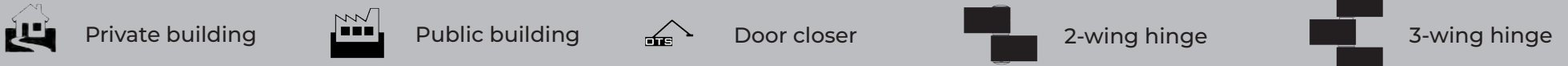
### WX HINGE ADJUSTMENT



### WX HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003



- BLACK PLASTIC
- WHITE PLASTIC



**2x**

W	S	800	900	1000	1100	1200	1300	1400
2000		122	113	105	97	90	83	77
2100		129	119	110	102	95	88	81
2200	130	130	125	116	107	99	92	85
2300			122	113	104	96	89	
2400	130	130	128	118	109	101	94	
2500			124	115	106	99		
2600			121	112	103			
2700	130	130	130	127	117	109		
2800				123	114			
2900				129	120			
3000				130	126			

**3x 2x**

W	S	800	900	1000	1100	1200	1300	1400
2000		173	160	148	137	127	117	109
2100	180	180	168	155	144	133	123	114
2200			176	163	151	140	130	120
2300	180	180	180	171	159	147	136	126
2400				167	154	143	132	
2500				175	162	150	139	
2600	180	180	180	180	170	157	146	
2700					179	165	153	
2800					174	161		
2900					180	169		
3000	180	180	180	180	174	161		
3000					180	177		

**3x**

W	S	800	900	1000	1100	1200	1300	1400
2000		216	200	185	171	159	147	136
2100	220	220	210	194	180	167	154	143
2200			204	189	175	162	150	
2300	220	220	220	214	198	184	170	157
2400				208	193	179	165	
2500				219	202	187	174	
2600	220	220	220	220	213	197	182	
2700					207	191		
2800					217	201		
2900					211			
3000	220	220	220	220	211	201		
3000					220	220		

**4x**

W	S	800	900	1000	1100	1200	1300	1400
2000	250	250	238	220	204	189	175	162
2100			249	231	214	198	183	170
2200	250	250	250	243	225	208	193	178
2300				236	218	202	187	
2400				248	229	212	197	
2500	250	250	250	250	241	223	206	
2600					234	217		
2700					246	228		
2800					239			
2900	250	250	250	250	234	217		
3000					250	250		

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>2x</b> 	2000					130	120	111	103	96	
	2100					137	126	117	108	100	
	2200	140	140	140	140	133	123	114	105		
	2300					139	129	119	111		
	2400						135	125	116		
	2500							132	122		
	2600							138	128		
	2700					140	140			134	
	2800								140	140	
	2900										
	3000										

		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> <b>2x</b> 	2000			198	184	170	157	146	135	125
	2100				193	179	165	153	142	131
	2200	200	200	200	200	187	174	161	149	138
	2300					197	182	169	156	145
	2400						191	177	164	152
	2500							186	172	159
	2600							195	181	167
	2700					200	200		190	176
	2800							200	199	185
	2900								200	194
	3000									200

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> 	2000				216	200	185	171	159	147	
	2100				227	210	194	180	167	154	
	2200	230	230	230	230	221	204	189	175	162	
	2300					214	198	184	170		
	2400					225	208	193	179		
	2500						219	203	188		
	2600							213	197		
	2700							223	207		
	2800					230	230			217	
	2900								230	228	
	3000									230	

		W	S	800	900	1000	1100	1200	1300	1400
  <b>4x</b> 	2000				259	240	222	206	191	176
	2100				272	252	233	216	200	185
	2200	280	280	280	280	265	245	227	210	194
	2300					278	257	238	221	204
	2400						270	250	232	214
	2500							263	243	225
	2600							276	255	236
	2700								268	248
	2800							280		261
	2900								280	274
	3000									280

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.





Private building



Public building



Door closer



2-wing hinge



3-wing hinge

W	S	800	900	1000	1100	1200	1300	1400
		2000	98	91	84	78	72	67
2100	103	95	88	82	76	70	65	
2200	108	100	93	86	79	74	68	
2300	113	105	97	90	83	77	71	
2400	119	110	102	95	88	81	75	
2500	125	116	107	99	92	85	79	
2600	130	122	113	104	97	89	83	
2700		128	118	109	101	94	87	
2800	130	130	124	115	106	99	91	
2900			121	112	103	96		
3000			127	117	109	101		

W	S	800	900	1000	1100	1200	1300	1400
		2000	131	121	112	104	96	89
2100	137	127	118	109	101	93	86	
2200	144	133	123	114	106	98	91	
2300	151	140	130	120	111	103	95	
2400	159	147	136	126	117	108	100	
2500	167	154	143	132	123	113	105	
2600	175	162	150	139	129	119	110	
2700	180	180	170	158	146	135	125	116
2800			179	165	153	142	131	122
2900	180	180	174	161	149	138	128	
3000			180	169	156	145	134	

W	S	800	900	1000	1100	1200	1300	1400
		2000	169	157	145	134	124	115
2100	178	164	152	141	131	121	112	
2200	186	173	160	148	137	127	118	
2300	196	181	168	155	144	133	123	
2400	206	190	176	163	151	140	130	
2500	216	200	185	171	159	147	136	
2600	220	220	210	194	180	167	154	143
2700			204	189	175	162	150	
2800	220	220	214	198	184	170	157	
2900			208	193	179	165		
3000			219	202	187	174		

W	S	800	900	1000	1100	1200	1300	1400
		2000	219	203	188	174	161	149
2100	230	213	197	183	169	157	145	
2200	242	224	207	192	178	165	152	
2300	250	250	235	218	202	187	173	160
2400			247	229	212	196	181	168
2500	250	250	240	222	206	190	176	
2600			233	216	200	185		
2700	250	250	245	227	210	194		
2800			238	220	204			
2900	250	250	232	214				
3000			243	225				

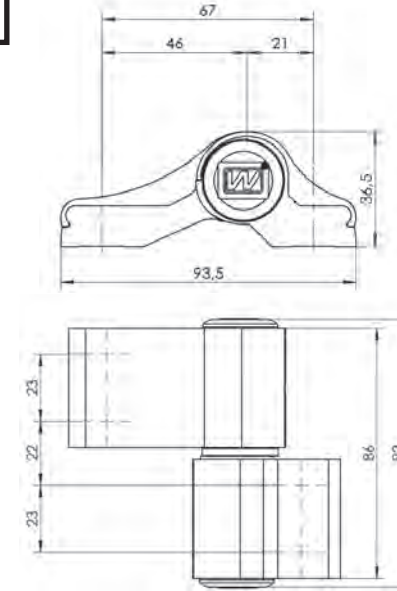
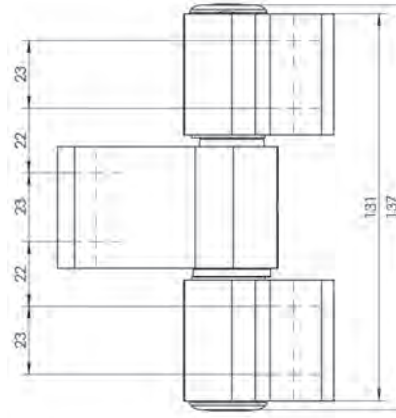
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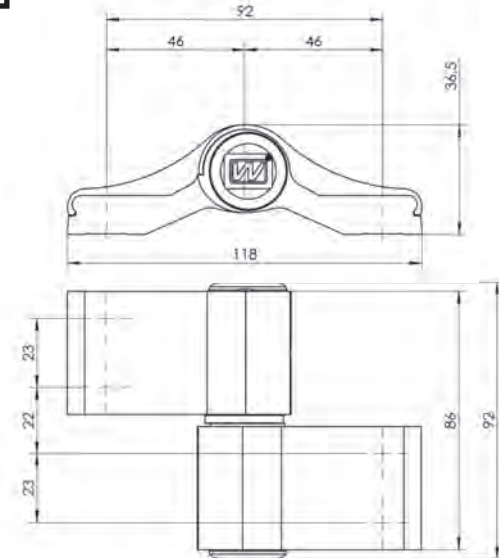
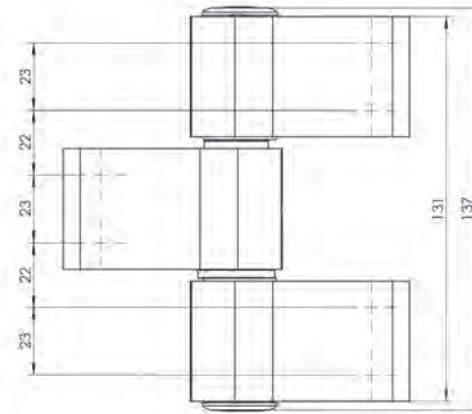
# MX







# SURFACE HINGES / HINGES

## ASYMMETRICAL



## SYMMETRICAL



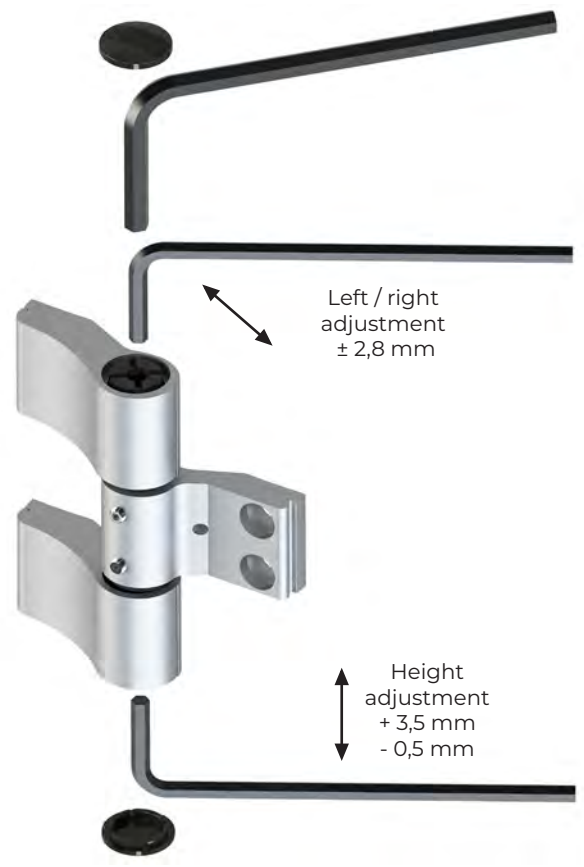
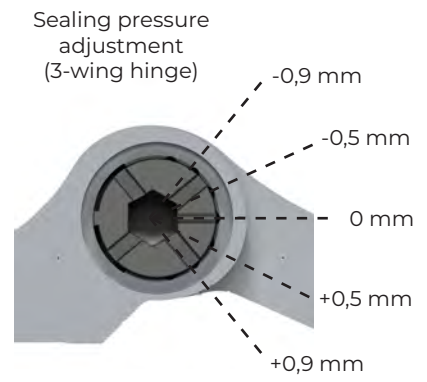
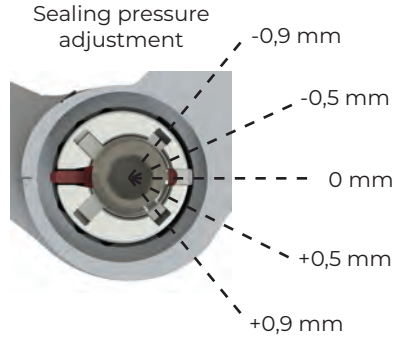
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7016
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8019
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8003
-   
9001
-   
1036W
-   
9010
-   
9016
-   
7035
-   
9006
-   
ANODE NATURAL
-   
INOX COATING
-   
GOLD W3
-   
GOLD W4
-   
RAL

-   
BLACK PLASTIC
-   
WHITE PLASTIC





MX HINGE ADJUSTMENT



MX HINGE CLASSIFICATION  
EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	3/4	1/1	14/14





# MX LOAD SELECTION

## SURFACE HINGES / HINGES



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
=   <b>2x</b> 	2000			98	90	84	78	72	66	62
	2100			103	95	88	82	76	70	65
	2200	<b>104</b>	<b>104</b>	100	93	86	79	74	68	
	2300				98	90	83	77	71	
	2400			102	94	87	81	75		
	2500					99	92	85	79	
	2600						97	90	82	
	2700						102	94	87	
	2800							98	91	
	2900							103	96	
	3000							104	101	

		W	S	800	900	1000	1100	1200	1300	1400	
=   <b>3x</b> <b>2x</b> 	2000			138	128	118	110	102	94	87	
	2100			<b>144</b>	134	124	115	106	98	91	
	2200		141		130	121	112	104	96		
	2300			<b>144</b>	<b>144</b>	137	127	118	109	101	
	2400						134	123	114	106	
	2500					140	130	120	111		
	2600						136	126	117		
	2700						143	132	122		
	2800							139	129		
	2900							<b>144</b>	135		
	3000							<b>144</b>	142		

		W	S	800	900	1000	1100	1200	1300	1400
=   <b>3x</b> 	2000			173	160	148	137	127	118	109
	2100			<b>176</b>	168	155	144	134	123	114
	2200					163	151	140	130	120
	2300				171	158	147	136	126	
	2400					166	154	143	132	
	2500					175	162	150	139	
	2600						170	158	146	
	2700							166	153	
	2800							174	161	
	2900								169	
	3000								<b>176</b>	176

		W	S	800	900	1000	1100	1200	1300	1400	
=   <b>4x</b> 	2000			<b>200</b>	190	176	163	151	140	130	
	2100					199	185	171	158	146	136
	2200			<b>200</b>	<b>200</b>	194	180	166	154	142	
	2300						189	174	162	150	
	2400					198	183	170	158		
	2500						193	178	165		
	2600							187	174		
	2700							197	182		
	2800								191		
	2900								<b>200</b>		
	3000								<b>200</b>		

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.





Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
  <b>2x</b> 	2000	112	112	112	104	96	89	82	77	
	2100				110	101	94	86	80	
	2200				112	106	98	91	84	
	2300					111	103	95	89	
	2400				112	108	100	93		
	2500					106	98			
	2600				110	102				
	2700				112	112	107			
	2800				112	112	112			
	2900					112	112			
	3000					112	112			

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> <b>2x</b> 	2000	160	160	160	158	147	136	126	117	108	100
	2100				154	143	132	122	114	105	
	2200				160	150	139	129	119	110	
	2300					158	146	135	125	116	
	2400				160	153	142	131	122		
	2500					149	138	127			
	2600				156	145	134				
	2700				160	152	141				
	2800					159	148				
	2900					160	155				
	3000				160	160					

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> 	2000	184	184	184	173	160	148	137	127	118	
	2100				182	168	155	144	134	123	
	2200				184	177	163	151	140	130	
	2300					171	158	147	136		
	2400				184	180	166	154	143		
	2500					175	162	150			
	2600				170	158					
	2700				178	166					
	2800				184	174	166				
	2900					182	166				
	3000					184	166				

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>4x</b> 	2000	224	224	224	207	192	178	165	153	141	
	2100				218	202	186	173	160	148	
	2200				224	212	196	182	168	155	
	2300					222	206	190	177	163	
	2400				224	216	200	186	171		
	2500					210	194	180			
	2600				221	204	189				
	2700				224	214	198				
	2800					224	209				
	2900					224	219				
	3000				224	224					

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



# MX LOAD SELECTION

## SURFACE HINGES / HINGES



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
  <b>2x</b> 	<b>2000</b>			78	73	67	62	58	54	50
	<b>2100</b>			82	76	70	66	61	56	52
	<b>2200</b>			86	80	74	69	63	59	54
	<b>2300</b>			90	84	78	72	66	62	57
	<b>2400</b>			95	88	82	76	70	65	60
	<b>2500</b>			100	93	86	79	74	68	63
	<b>2600</b>			<b>104</b>	98	90	82	78	71	66
	<b>2700</b>				102	94	87	81	75	70
	<b>2800</b>			<b>104</b>	<b>104</b>	99	92	85	79	73
	<b>2900</b>					97	90	82	77	
	<b>3000</b>					102	94	87	81	

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b>   <b>2x</b> 	<b>2000</b>			105	97	90	83	77	71	66	
	<b>2100</b>			110	102	94	87	81	74	69	
	<b>2200</b>			115	106	98	91	85	78	73	
	<b>2300</b>			121	112	104	96	89	82	76	
	<b>2400</b>			127	118	109	101	94	86	80	
	<b>2500</b>			134	123	114	106	98	90	84	
	<b>2600</b>			<b>144</b>	140	130	120	111	103	95	88
	<b>2700</b>				136	126	117	108	100	93	
	<b>2800</b>			<b>144</b>	<b>144</b>	143	132	122	114	105	98
	<b>2900</b>					139	129	119	110	102	
	<b>3000</b>					144	135	125	116	107	











		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> 	<b>2000</b>			135	126	116	107	66	92	86
	<b>2100</b>			142	131	122	113	105	97	90
	<b>2200</b>			149	138	128	118	110	102	94
	<b>2300</b>			157	145	134	124	115	106	98
	<b>2400</b>			165	152	141	130	121	112	104
	<b>2500</b>			173	160	148	137	127	118	109
	<b>2600</b>			<b>176</b>	168	155	144	134	123	114
	<b>2700</b>				<b>176</b>	163	151	140	130	120
	<b>2800</b>			171		158	147	136	126	
	<b>2900</b>			<b>176</b>		166	154	143	132	
	<b>3000</b>				175	162	150	139		

		W	S	800	900	1000	1100	1200	1300	1400
  <b>4x</b> 	<b>2000</b>			175	162	150	139	129	119	110
	<b>2100</b>			184	170	158	146	135	126	116
	<b>2200</b>			194	179	166	154	142	132	122
	<b>2300</b>			<b>200</b>	188	174	162	150	138	128
	<b>2400</b>				198	183	170	157	145	134
	<b>2500</b>			<b>200</b>	<b>200</b>	192	178	165	152	141
	<b>2600</b>					186	173	160	148	
	<b>2700</b>					196	182	168	155	
	<b>2800</b>			<b>200</b>	<b>200</b>	<b>200</b>	190	176	163	
	<b>2900</b>						<b>200</b>	186	171	
	<b>3000</b>			194	180					

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.





 <p>PROFILE WITHOUT THERMAL BARRIER (COLD)</p>				 <p>PROFILE WITH NARROW THERMAL BARRIER (WARM) FROM THE HINGE SIDE (AT LEAST 8mm WIDTH)</p>			
<b>WX80SU4700 (INOX)*</b>	<b>WX80104700</b>	<b>WX80SU4710 (INOX)*</b>	<b>WX80104710</b>	<b>WX80SU4900 (INOX)*</b>	<b>WX80104900</b>	<b>WX80SU4910 (INOX)*</b>	<b>WX80104910</b>
							
4 x positioning screw 2 x WN block	4 x M8x25 screw 4 x positioning sleeve 2 x WN block	6 x positioning screw 1 x WN block 1 x WN long block	6 x M8x25 screw 6 x positioning sleeve 1 x WN block 1 x WN long block	4 x positioning screw 2 x WKU block	4 x M8x25 screw 4 x positioning sleeve 2 x WKU block	6 x positioning screw 3 x WKU block	6 x M8x25 screw 6 x positioning sleeve 3 x WKU block

\* mounting available in stainless and INOX variants

MOUNTING SETS-BIG PACK				WX DISTANCE PLATE			
<b>WX50SU4700</b>	<b>WX50SD4980</b>	<b>WX50SD5100</b>	<b>WX50SD5000</b>	<b>THE PLATE MUST BE SELECTED FOR A SUITABLE MOUNTING SET</b>			
						<b>THICKNESS [A]</b>	
Positioning screw: 200pcs. WN block: 100pcs.	Quick-fastening screw 58,5mm: 200pcs.	Quick-fastening screw 71,5mm: 200pcs.	Quick-fastening screw 84,5mm: 200pcs.			2mm	
						3mm	
						5mm	
						8mm	
						10mm	





MOUNTING SETS FOR PROFILE WITH THERMAL BARRIER (WARM)

WX80104720	WX80104980	WX80105100	WX80SD4980 (INOX)*	WX80SD5100 (INOX)*	WX80SD5000	WX80SD5120	WX80SD5220	WX80DU5120 (INOX)*	WX80DU5220 (INOX)*
4 x M8x53 screw 4 x positioning sleeve 4 x adjusting sleeve (22–35mm) 2 x WN block	4 x M8x53 screw 4 x short positioning sleeve 4 x dowel sleeve TKO 48mm	4 x M8x65 screw 4 x positioning sleeve 4 x dowel sleeve TKO fire bushing 64mm	4 x quick-fastening screw 58,5mm	4 x quick-fastening screw 71,5mm	4 x long quick-fastening screw 84,5mm	2 x M8x33 screw 2 x positioning sleeve 1 x WN block 2 x quick-fastening screw 58,5mm	2 x M8x33 screw 2 x positioning sleeve 1 x WN block 2 x quick-fastening screw 71,5mm	2 x positioning screw 1 x WN block 2 x quick-fastening screw 58,5mm	2 x positioning screw 1 x WN block 2 x quick-fastening screw 71,5mm
WX80104730	WX80104990	WX80105110	WX80SD4990 (INOX)*	WX80SD5110 (INOX)*	WX80SD5001	WX80SD5130	WX80SD5230	WX80DU5130 (INOX)*	WX80DU5230 (INOX)*
6 x M8x53 screw 6 x positioning sleeve 6 x adjusting sleeve 1 x WN block 1 x long WN block	6 x M8x53 screw 6 x short positioning sleeve 6 x dowel sleeve TKO 48mm	6 x M8x65 screw 6 x positioning sleeve 6 x dowel sleeve TKO fire bushing 64mm	6 x quick-fastening screw 58,5mm	6 x long quick-fastening screw 71,5mm	6 x long quick-fastening screw 84,5mm	4 x M8x33 screw 4 x positioning sleeve 1 x long WN block 2 x quick-fastening screw 58,5mm	4 x M8x33 screw 4 x positioning sleeve 1 x long WN block 2 x quick-fastening screw 71,5mm	4 x positioning screw 1 x long WN block 2 x quick-fastening screw 58,5mm	4 x positioning screw 1 x long WN block 2 x quick-fastening screw 71,5mm

\* mounting available in stainless and INOX variants





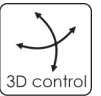
WX ELECTRO Hinge is intended to transfer ICT signals from the door frame to the door leaf. The signal can be transmitted via a 3-core cable with a cross-section of 0.5 or a 10-core cable with a cross-section of 0.14. Thanks to this, it is suitable for LAN computer networks, to supply LED lighting or handles with e-line components, replacing commonly used cable glands.

- 7016
- 7021
- 7024
- 9005
- 8077
- 8019
- 8017
- 8003
- 9001
- 1036W
- 9010
- 9016
- 7035
- 9006
- ANODE NATURAL
- INOX COATING
- RAL
- GOLDEN ELECTROPOLER
- GOLD W3
- GOLD W4
- GOLDEN OAK
- WALNUT

ASYMMETRICAL



SYMMETRICAL



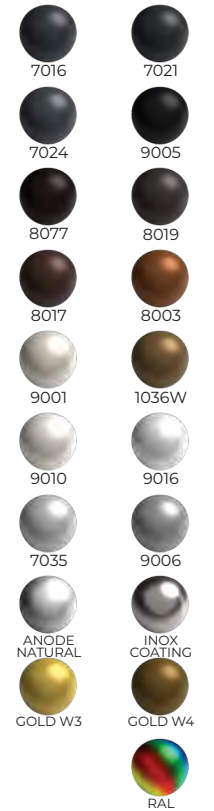
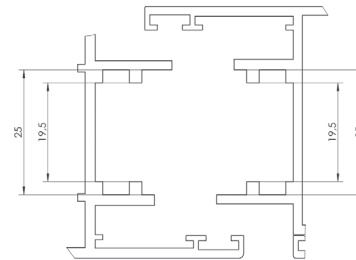
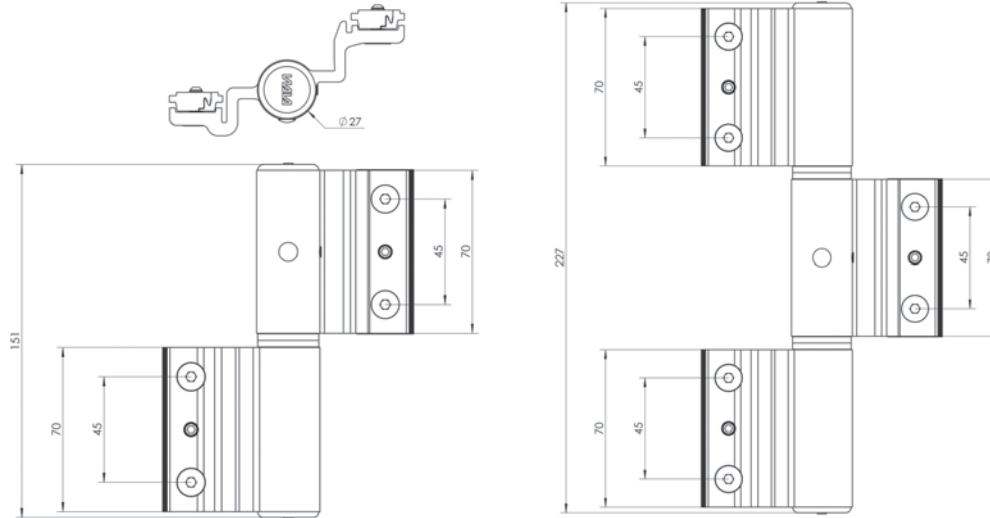
PROFILE WITHOUT THERMAL BARRIER (COLD)		MOUNTING SETS FOR PROFILE WITH THERMAL BARRIER (WARM)	
<b>WX80104710E</b>	<b>WX80SU4710E</b>	<b>WX80SD4990E (INOX)</b>	<b>WX80104990E</b>
5 x M8x25 screw 5 x positioning sleeve 1 x WN block electro 1 x long WN block	5 x positioning screw 1 x WN block electro 1 x long WN block	5 x quick- fastening screw 58,5mm	5 x M8x53 screw 5 x positioning sleeve 5 x dowel sleeve TKO

**WX ELECTRO HINGE CLASSIFICATION**  
EN 1935:2002 + EN 1935:2002/AC:2003

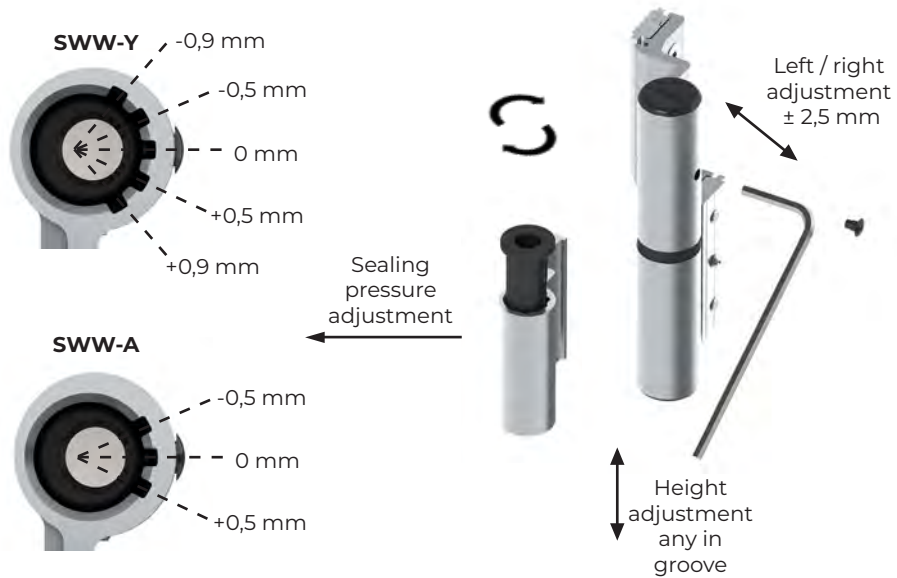
for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	3/4	1/1	14/14





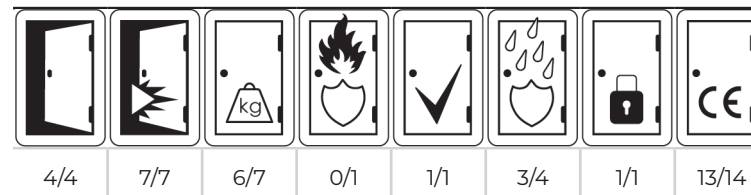
## SWW HINGE ADJUSTMENT



	SYMBOL	FIRMA	SYSTEM
SWW Hinge is suitable for grooves 25/19,5 to the following profiles	Y	YAWAL	PBI 50N
	Y	BLYWEERT	APOLLO COLD
	A	ALUPROF	MB-59S, MB-45S

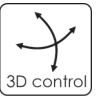
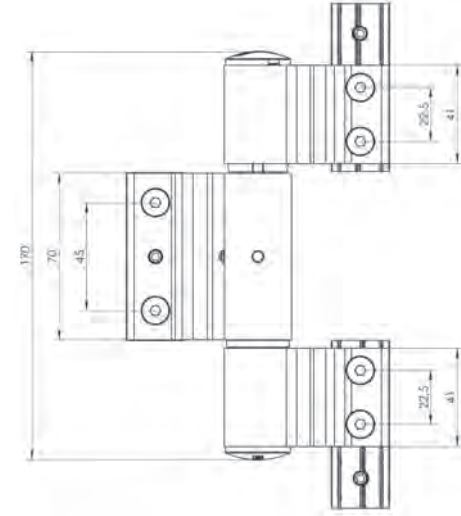
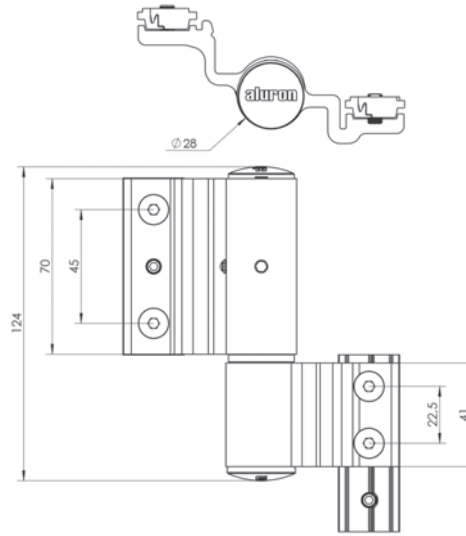
### SWW HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

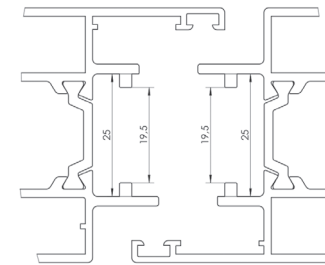
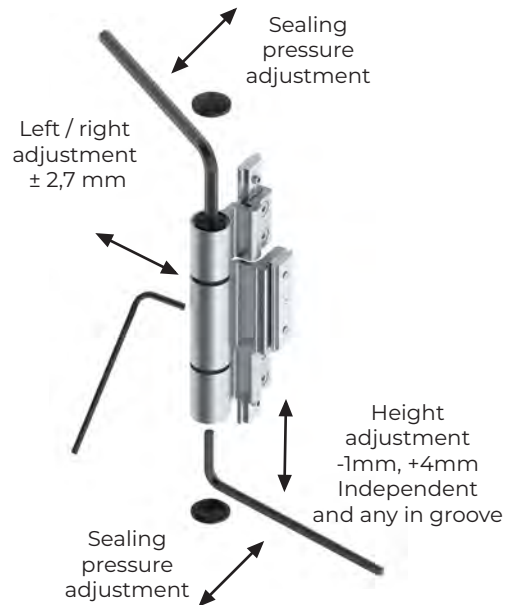
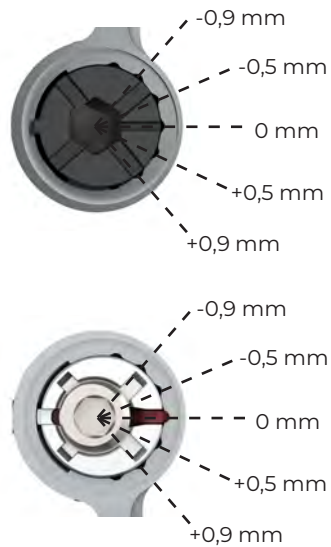




- 7016
  - 7024
  - 8077
  - 8017
  - 9001
  - 9010
  - 7035
  - ANODE NATURAL
  - GOLD W3
  - RAL
- 7021
  - 9005
  - 8019
  - 8003
  - 1036W
  - 9016
  - 9006
  - INOX COATING
  - GOLD W4



**XWW HINGE ADJUSTMENT**



XWW Hinge is suitable for grooves 25/19,5 to Aluron systems: ACS 50 or AS 52

**XWW HINGE CLASSIFICATION**  
EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

4/4	7/7	6/7	0/1	1/1	3/4	1/1	13/14





# SWW / XWW

## LOAD SELECTION

# GROOVE HINGES / HINGES



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200
		2000		58	54	50	46	43
		2100	60	60	57	53	49	45
		2200			55	51	47	
		2300	60	58	54	50		
		2400		56	52			
		2500		59	55			

		W	S	800	900	1000	1100	1200
		2000		76	70	65	60	56
		2100	80	74	68	63	59	
		2200	84	77	72	66	61	
		2300	85	81	75	70	65	
		2400		79	73	68		
		2500	83	77	71			

		W	S	800	900	1000	1100	1200
		2000		99	92	85	79	73
		2100	104	96	89	83	77	
		2200	105	105	101	94	87	80
		2300			98	91	84	
		2400	103	96	89			
		2500	105	100	93			

		W	S	800	900	1000	1100	1200
		2000		117	108	100	93	86
		2100	120	120	113	105	97	90
		2200			119	110	102	95
		2300	120	116	107	99		
		2400		113	104			
		2500		118	109			

		W	S	800	900	1000	1100	1200
		2000		64	59	55	51	47
		2100	67	62	58	53	50	
		2200	71	65	61	56	52	
		2300	74	69	64	59	55	
		2400	75	72	67	62	57	
		2500		75	70	65	60	

		W	S	800	900	1000	1100	1200
		2000		87	81	75	69	64
		2100	92	85	79	73	68	
		2200	95	95	89	83	77	71
		2300			94	87	80	74
		2400	91	84	78			
		2500	95	89	82			

		W	S	800	900	1000	1100	1200
		2000		105	97	90	83	77
		2100	110	110	102	95	88	81
		2200			107	99	92	85
		2300	110	104	96	89		
		2400		109	101	94		
		2500		110	106	98		

		W	S	800	900	1000	1100	1200
		2000		128	119	110	102	94
		2100	130	130	125	116	107	99
		2200			121	112	104	
		2300	130	127	118	109		
		2400		124	115			
		2500		130	120			

		W	S	800	900	1000	1100	1200
		2000		70	65	60	56	51
		2100	73	68	63	58	54	
		2200	77	71	66	61	57	
		2300	81	75	69	64	60	
		2400	85	79	73	68	63	
		2500	89	83	77	71	66	

		W	S	800	900	1000	1100	1200
		2000		93	86	80	74	69
		2100	98	91	84	78	72	
		2200	103	95	88	82	76	
		2300	108	100	93	86	79	
		2400	113	105	97	90	83	
		2500	115	110	102	95	88	

		W	S	800	900	1000	1100	1200
		2000		117	108	100	93	86
		2100	122	113	105	97	90	
		2200	129	119	110	102	95	
		2300	135	125	116	107	99	
		2400		131	122	113	104	
		2500	135	128	118	109		

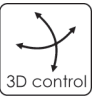
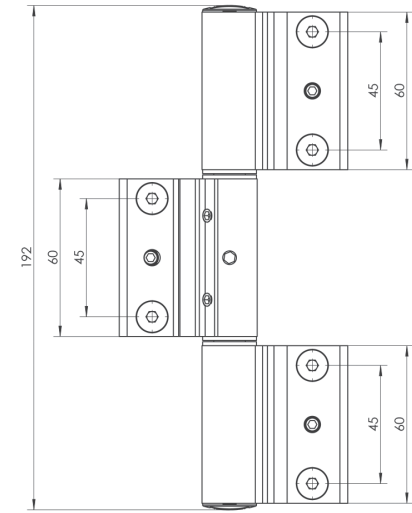
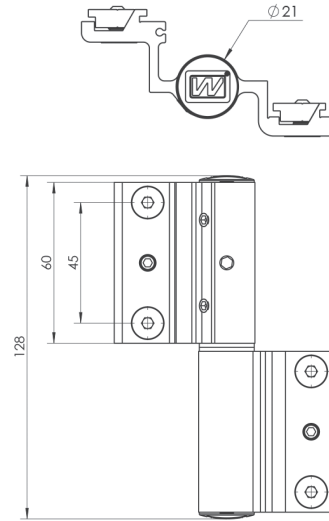
		W	S	800	900	1000	1100	1200
		2000		134	124	115	106	99
		2100	141	130	121	112	104	
		2200	148	137	127	117	109	
		2300	150	150	144	133	123	114
		2400			140	129	120	
		2500	147	136	126			

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



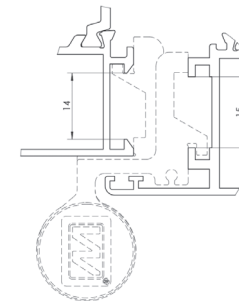
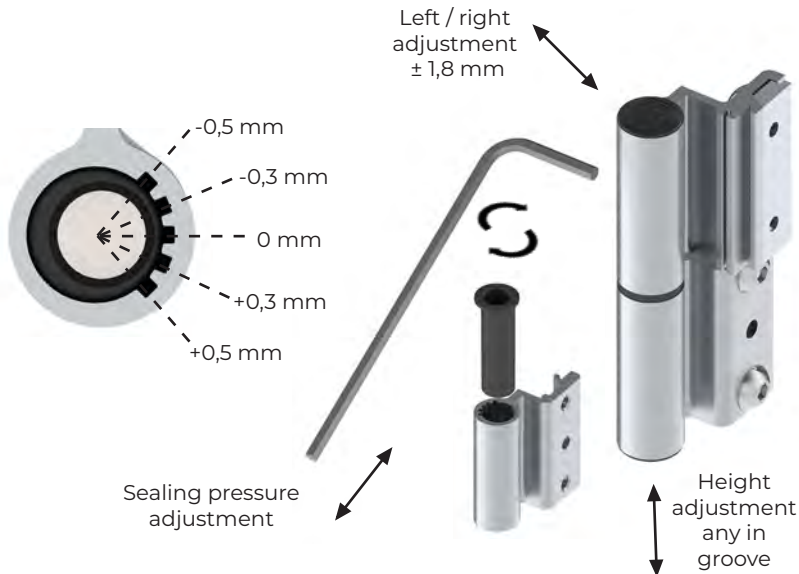


- 7016
- 7021
- 7024
- 9005
- 8077
- 8019
- 8017
- 8003
- 9001
- 1036W
- 9010
- 9016
- 7035
- 9006
- ANODE NATURAL
- INOX COATING
- GOLD W3
- GOLD W4
- RAL

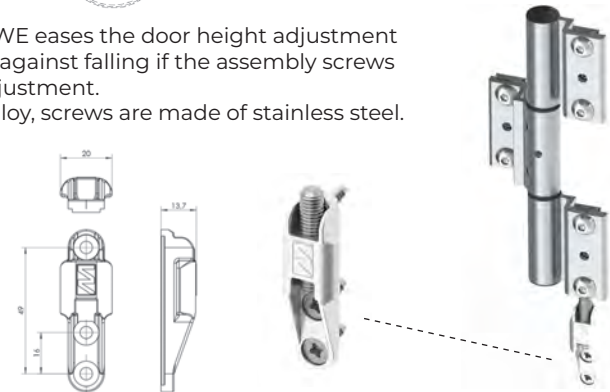


RWE Hinge is suitable for aluminium euro groove systems with the door frame of the width 14mm and the door leaf of the width 15mm

**RWE HINGE ADJUSTMENT**



Height regulator RWE eases the door height adjustment and protects doors against falling if the assembly screws are loosened for adjustment. Made of cast zinc alloy, screws are made of stainless steel.





# RWE LOAD SELECTION

## GROOVE HINGES / HINGES



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200
	2000			50	45	40	35	30
	2100			55	50	45	40	35
	2200	60	60	55	50	45	40	
	2300			55	50	45		
	2400			55	50			
	2500			60	55			

		W	S	800	900	1000	1100	1200
	2000			72	65	59	52	46
	2100			78	72	65	59	52
	2200	85	85	78	72	65	59	
	2300			78	72	65		
	2400			78	72			
	2500			85	78			

		W	S	800	900	1000	1100	1200
	2000			89	82	74	66	58
	2100			97	89	82	74	66
	2200	105	105	97	89	82	74	
	2300			97	89	82		
	2400			97	89			
	2500			105	97			

		W	S	800	900	1000	1100	1200
	2000			106	97	88	78	69
	2100			116	106	97	88	78
	2200	125	125	116	106	97	88	
	2300			116	106	97		
	2400			116	106			
	2500			125	116			

		W	S	800	900	1000	1100	1200
	2000			60	55	50	45	40
	2100			65	60	55	50	45
	2200	70	70	65	60	55	50	
	2300			65	60	55		
	2400			65	60			
	2500			70	65			

		W	S	800	900	1000	1100	1200
	2000			82	75	69	62	56
	2100			88	82	75	69	62
	2200	95	95	88	82	75	69	
	2300			88	82	75		
	2400			88	82			
	2500			95	88			

		W	S	800	900	1000	1100	1200
	2000			99	92	84	76	68
	2100			107	99	92	84	76
	2200	115	115	107	99	92	84	
	2300			107	99	92		
	2400			107	99			
	2500			115	107			

		W	S	800	900	1000	1100	1200
	2000			116	107	98	88	79
	2100			126	116	107	98	88
	2200	135	135	126	116	107	98	
	2300			126	116	107		
	2400			126	116			
	2500			135	126			

		W	S	800	900	1000	1100	1200
	2000			70	65	60	55	50
	2100			75	70	65	60	55
	2200	80	80	75	70	65	60	
	2300			75	70	65		
	2400			75	70			
	2500			80	75			

		W	S	800	900	1000	1100	1200
	2000			92	85	79	72	66
	2100			98	92	85	79	72
	2200	105	105	98	92	85	79	
	2300			98	92	85		
	2400			98	92			
	2500			105	98			

		W	S	800	900	1000	1100	1200
	2000			109	102	94	86	78
	2100			117	109	102	94	86
	2200	125	125	117	109	102	94	
	2300			117	109	102		
	2400			117	109			
	2500			125	117			

		W	S	800	900	1000	1100	1200
	2000			131	122	113	103	94
	2100			141	131	122	113	103
	2200	150	150	141	131	122	113	
	2300			141	131	122		
	2400			141	131			
	2500			150	141			

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.

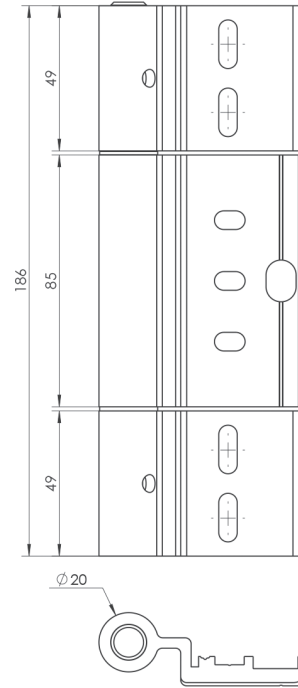




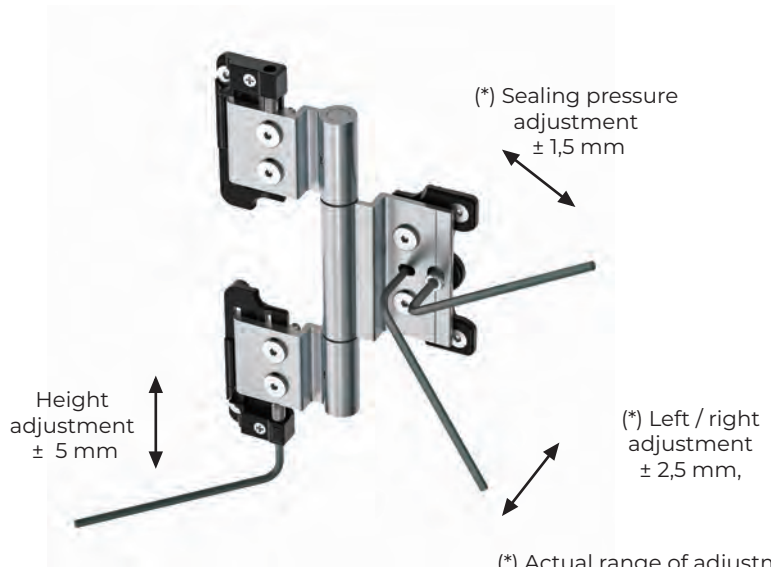
- 7016
- 7024
- 8077
- 8017
- 9001
- 9010
- 7035
- ANODE NATURAL
- RAL
- GOLDEN OAK
- 7021
- 9005
- 8019
- 8003
- 1036W
- 9016
- 9006
- INOX COATING
- WALNUT



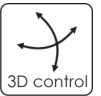
The Hinge is also available with the covers made of 304 stainless steel.  
External dimension of the cover: Ø22mm



**WR HINGE ADJUSTMENT**



(\*) Actual range of adjustment may be smaller depending on the aluminum system and its limitation



Full adjustment range of the gap (left/right ) in negative direction for most aluminium systems can be achieved by milling the door profile and covering it with the mask.

**WR HINGE CLASSIFICATION**  
EN 1935:2002 + EN 1935:2002/AC:2003

for use in fire door and emergency exit doors

4/4	7/7	7/7	1/1	1/1	4/4	1/1	14/14





# WR LOAD SELECTION

## ROLLER HINGES / HINGES






Private building









Door closer








Public building

	W	S	700	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> 	2000						110	105	95	90	
	2100						115	110	105	95	
	2200						120	115	110	100	
	2300								115	110	
	2400								115	110	
	2500									115	
	2600										120
	2700										
	2800										
	2900										
3000											

	W	S	700	800	900	1000	1100	1200	1300	1400	
   <b>3x</b> <b>4x</b> 	2000						140	135	125	120	
	2100						145	140	135	125	
	2200						150	145	140	130	
	2300								145	140	
	2400								145	140	
	2500									145	
	2600										150
	2700										
	2800										
	2900										
3000											

	W	S	700	800	900	1000	1100	1200	1300	1400	
 <b>2x</b> 	2000						111	107	103	99	
	2100						116	111	107	103	
	2200						120	116	111	107	
	2300								116	111	
	2400								116	111	
	2500									116	
	2600										120
	2700										
	2800										
	2900										
3000											

	W	S	700	800	900	1000	1100	1200	1300	1400	
  <b>2x</b> 	2000						91	87	83	79	
	2100						96	91	87	83	
	2200						100	96	91	87	
	2300								96	91	
	2400								96	91	
	2500									96	
	2600										100
	do										
	3000										

	W	S	700	800	900	1000	1100	1200	1300	1400	
 <b>4x</b> 	2000						170	165	155	150	
	2100						175	170	165	155	
	2200						180	175	170	160	
	2300								175	170	
	2400									170	
	2500									175	
	2600										180
	do										
	3000										

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulk the door.

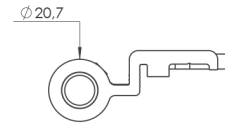
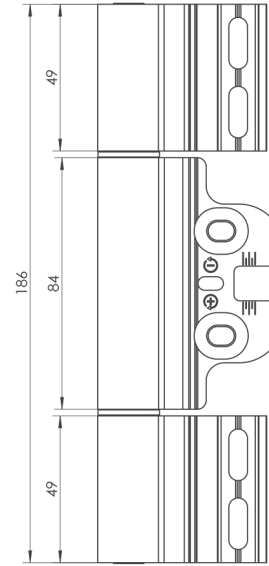




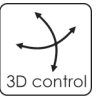
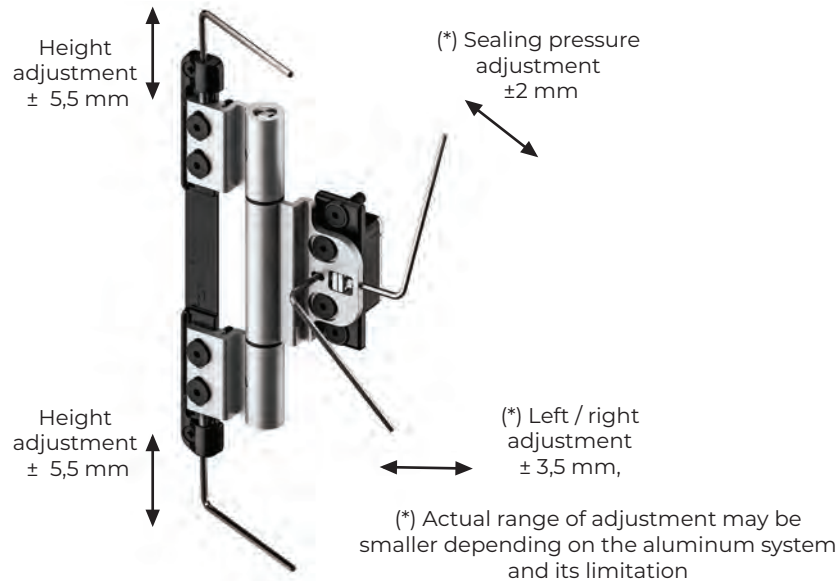
- 7016
- 7024
- 8077
- 8017
- 9001
- 9010
- 7035
- ANODE NATURAL
- RAL
- GOLDEN OAK
- 7021
- 9005
- 8019
- 8003
- 1036W
- 9016
- 9006
- INOX COATING
- WALNUT



The Hinge is also available with the covers made of 304 stainless steel.  
External dimension of the cover:  $\varnothing 22,5\text{mm}$



**WR-1R HINGE ADJUSTMENT**



Full adjustment range of the gap (left/right ) in negative direction for most aluminium systems can be achieved by milling the door profile and covering it with the mask.

**WR-1R HINGE CLASSIFICATION**  
EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	4/4	1/1	14/14





# WR-1R

## LOAD SELECTION (COUNTER-PLATES)



Private building



Door closer



Public building

W S	700	800	900	1000	1100	1200	1300	1400
2000					101	97	93	89
2100					106	101	97	93
2200					110	106	101	97
2300						110	106	101
2400					110		110	106
2500						110		110
2600					110		110	
2700						110		110
2800					110		110	
2900						110		110
3000					110		110	

W S	700	800	900	1000	1100	1200	1300	1400
2000					90	85	75	70
2100					95	90	85	75
2200					100	95	90	80
2300						100	95	90
2400					100		100	95
2500						100		100
2600					100		100	
2700						100		100
2800					100		100	
2900						100		100
3000					100		100	

W S	700	800	900	1000	1100	1200	1300	1400
2000					71	67	63	59
2100					76	71	67	63
2200					80	76	71	67
2300						80	76	71
2400					80		80	76
2500						80		80
2600					80		80	
do						80		80
3000					80		80	

W S	700	800	900	1000	1100	1200	1300	1400
2000					120	115	105	100
2100					125	120	115	105
2200					130	125	120	110
2300						130	125	120
2400					130		130	125
2500						130		130
2600					130		130	
2700						130		130
2800					130		130	
2900						130		130
3000					130		130	

W S	700	800	900	1000	1100	1200	1300	1400
2000					150	145	135	130
2100					155	150	145	135
2200					160	155	150	140
2300						160	155	150
2400					160		160	155
2500						160		160
2600					160		160	
do						160		160
3000					160		160	




If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.









  
 Private building




  
 Door closer



  
 Public building

	W S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> 	2000	<b>80</b>	<b>80</b>	<b>80</b>	70	65	55	50
	2100				75	70	65	55
	2200				<b>80</b>	75	70	60
	2300					<b>80</b>	75	70
	2400				<b>80</b>		75	70
	2500					<b>80</b>	75	70
	2600				<b>80</b>		<b>80</b>	<b>80</b>
	2700					<b>80</b>		
	2800				<b>80</b>		<b>80</b>	<b>80</b>
	2900					<b>80</b>		
3000	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>				

	W S	800	900	1000	1100	1200	1300	1400
   <b>3x</b> <b>4x</b> 	2000	<b>100</b>	<b>100</b>	<b>100</b>	90	85	75	70
	2100				95	90	85	75
	2200				<b>100</b>	95	90	80
	2300					<b>100</b>	95	90
	2400				<b>100</b>		95	90
	2500					<b>100</b>	95	90
	2600				<b>100</b>		<b>100</b>	<b>100</b>
	2700					<b>100</b>		
	2800				<b>100</b>		<b>100</b>	<b>100</b>
	2900					<b>100</b>		
3000	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>				

	W S	800	900	1000	1100	1200	1300	1400
 <b>2x</b> 	2000	<b>90</b>	<b>90</b>	<b>90</b>	81	77	73	69
	2100				86	81	77	73
	2200				<b>90</b>	86	81	77
	2300					<b>90</b>	86	81
	2400				<b>90</b>		86	81
	2500					<b>90</b>	<b>90</b>	<b>90</b>
	2600				<b>90</b>			
	2700					<b>90</b>	<b>90</b>	<b>90</b>
	2800				<b>90</b>			
	2900					<b>90</b>	<b>90</b>	<b>90</b>
3000	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>				

	W S	800	900	1000	1100	1200	1300	1400
  <b>2x</b> 	2000	<b>70</b>	<b>70</b>	<b>70</b>	61	57	53	49
	2100				66	61	57	53
	2200				<b>70</b>	66	61	57
	2300					<b>70</b>	66	61
	2400				<b>70</b>		66	61
	2500					<b>70</b>	<b>70</b>	<b>70</b>
	2600				<b>70</b>			
	do					<b>70</b>	<b>70</b>	<b>70</b>
	3000				<b>70</b>			

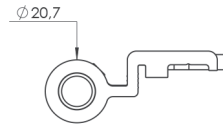
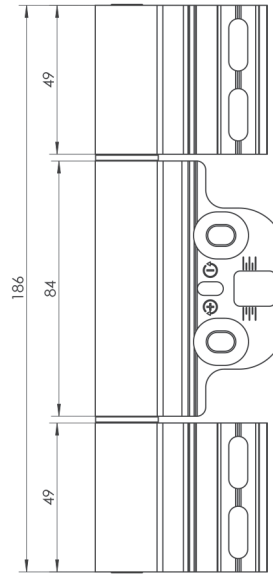
	W S	800	900	1000	1100	1200	1300	1400
 <b>4x</b> 	2000	<b>130</b>	<b>130</b>	<b>130</b>	120	115	105	100
	2100				125	120	115	105
	2200				<b>130</b>	125	120	110
	2300					<b>130</b>	125	120
	2400				<b>130</b>		125	120
	2500					<b>130</b>	<b>130</b>	<b>130</b>
	2600				<b>130</b>			
	do					<b>130</b>	<b>130</b>	<b>130</b>
	3000				<b>130</b>			

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.

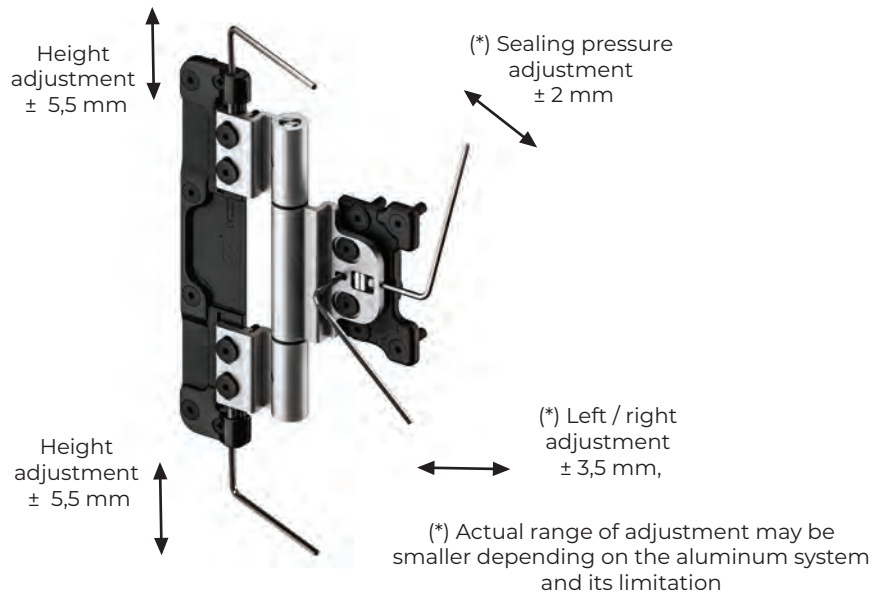




The Hinge is also available with the covers made of 304 stainless steel. External dimension of the cover:  $\varnothing 22,5\text{mm}$



## WR-2R HINGE ADJUSTMENT

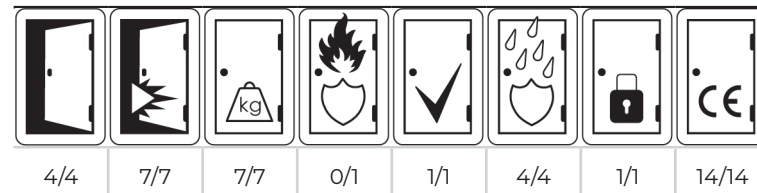


Full adjustment range of the gap (left/right ) in negative direction for most aluminium systems can be achieved by milling the door profile and covering it with the mask.



## WR-2R HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors











  
 Private building



  
 Door closer


  
 Public building

W S	700	800	900	1000	1100	1200	1300	1400
	<b>120</b>				110	105	95	90
2100					115	110	105	95
					2200	115	110	100
<b>3x</b>					2300	115	110	110
2400					115	110	110	
2500					115	110	110	
2600					120	120	120	115
2700					120	120	120	120
2800					120	120	120	120
2900					120	120	120	120
3000	120	120	120	120				

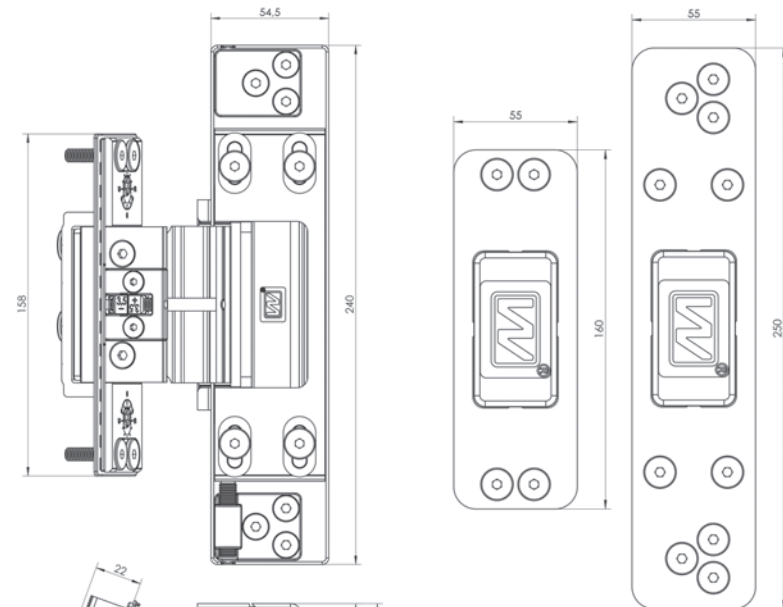
W S	700	800	900	1000	1100	1200	1300	1400	
	<b>150</b>				140	135	125	120	
					2100	145	140	135	125
					2200	145	140	130	
<b>3x</b> <b>4x</b>					2300	145	140	140	
2400					145	140	140		
2500					145	140	140		
2600					150	150	150	145	
2700					150	150	150	150	
2800					150	150	150	150	
2900					150	150	150	150	
3000	150	150	150	150					

W S	700	800	900	1000	1100	1200	1300	1400	
	<b>120</b>				111	107	103	99	
<b>2x</b>					2100	116	111	107	103
2200					116	111	107		
2300					116	111	107		
2400					116	111	107		
2500					120	120	120	116	
2600					120	120	120	120	
2700					120	120	120	120	
2800					120	120	120	120	
2900					120	120	120	120	
3000	120	120	120	120					

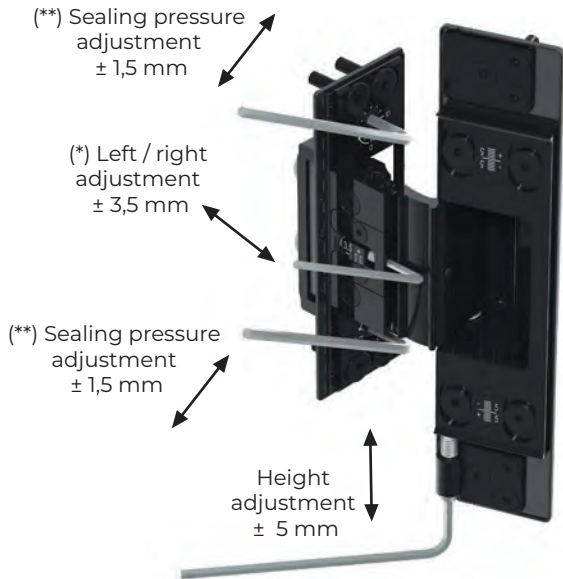
W S	700	800	900	1000	1100	1200	1300	1400	
	<b>100</b>				91	87	83	79	
					2100	96	91	87	83
<b>2x</b>					2200	96	91	87	
2300					96	91	87		
2400					96	91	87		
2500					100	100	100	96	
2600					100	100	100	100	
do					100	100	100	100	
3000					100	100	100	100	

W S	700	800	900	1000	1100	1200	1300	1400	
	<b>180</b>				170	165	155	150	
<b>4x</b>					2100	175	170	165	155
2200					175	170	160		
2300					175	170	160		
2400					175	170	160		
2500					180	180	180	170	
2600					180	180	180	175	
do					180	180	180	180	
3000					180	180	180	180	

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.

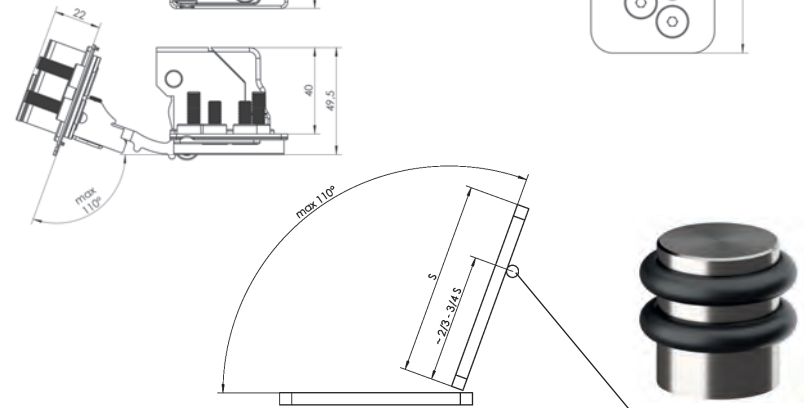


## WU HINGE ADJUSTMENT



(\*) – adjustment in the negative direction can be very limited depending on aluminium system

(\*\*) – actual range can differ due to the gap value at the seal, depending on aluminium system



## WU HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	4/4	1/1	14/14














  
 Private building




  
 Door closer



  
 Public building

W S	700	800	900	1000	1100	1200	1300	1400
	<b>150</b>	<b>150</b>	<b>150</b>	140	130	120	110	100
				140	130	120	110	100
<b>3x</b>				140	130	120	110	100
				140	130	120	110	100
2000				140	130	120	110	100
2100				140	130	120	110	100
2200				140	130	120	110	100
2300				140	130	120	110	100
2400				140	130	120	110	100
2500				140	130	120	110	100
2600	140	130	120	110	100			
2700	140	130	120	110	100			
2800	140	130	120	110	100			
2900	140	130	120	110	100			
3000	140	130	120	110	100			

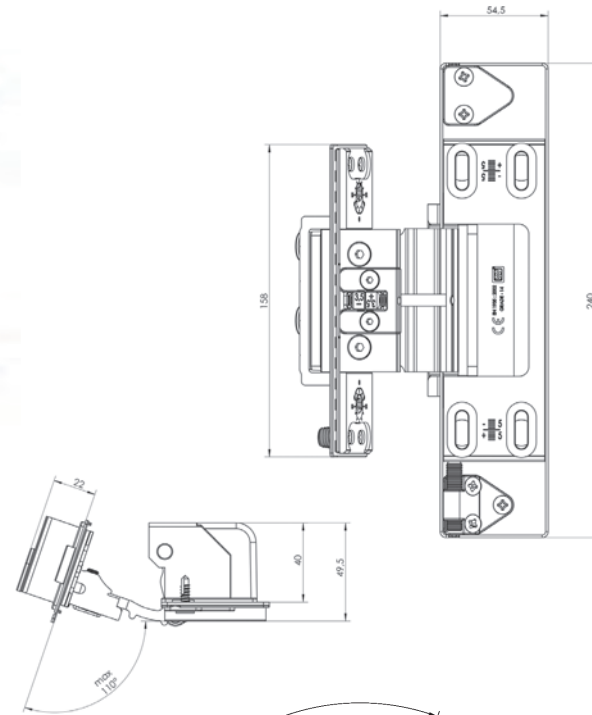
W S	700	800	900	1000	1100	1200	1300	1400
	<b>180</b>	<b>180</b>	<b>180</b>	170	160	150	140	130
				170	160	150	140	130
				170	160	150	140	130
<b>3x</b>				170	160	150	140	130
				170	160	150	140	130
<b>4x</b>				170	160	150	140	130
2000				170	160	150	140	130
2100				170	160	150	140	130
2200				170	160	150	140	130
2300				170	160	150	140	130
2400	170	160	150	140	130			
2500	170	160	150	140	130			
2600	170	160	150	140	130			
2700	170	160	150	140	130			
2800	170	160	150	140	130			
2900	170	160	150	140	130			
3000	170	160	150	140	130			

W S	700	800	900	1000	1100	1200	1300	1400
	<b>150</b>	<b>150</b>	<b>150</b>	140	130	120	110	100
<b>2x</b>				140	130	120	110	100
				140	130	120	110	100
2000				140	130	120	110	100
2100				140	130	120	110	100
2200				140	130	120	110	100
2300				140	130	120	110	100
2400				140	130	120	110	100
2500				140	130	120	110	100
2600				140	130	120	110	100
2700	140	130	120	110	100			
2800	140	130	120	110	100			
2900	140	130	120	110	100			
3000	140	130	120	110	100			

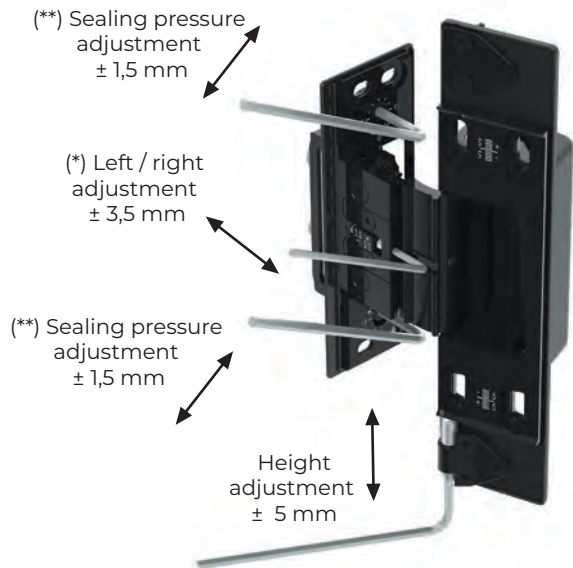
W S	700	800	900	1000	1100	1200	1300	1400
	<b>130</b>	<b>130</b>	<b>130</b>	120	110	100	90	80
				120	110	100	90	80
<b>2x</b>				120	110	100	90	80
				120	110	100	90	80
2000				120	110	100	90	80
2100				120	110	100	90	80
2200				120	110	100	90	80
2300				120	110	100	90	80
2400				120	110	100	90	80
2500				120	110	100	90	80
2600	120	110	100	90	80			
do	120	110	100	90	80			
3000	120	110	100	90	80			

W S	700	800	900	1000	1100	1200	1300	1400
	<b>210</b>	<b>210</b>	<b>210</b>	200	190	180	170	160
<b>4x</b>				200	190	180	170	160
				200	190	180	170	160
2000				200	190	180	170	160
2100				200	190	180	170	160
2200				200	190	180	170	160
2300				200	190	180	170	160
2400				200	190	180	170	160
2500				200	190	180	170	160
2600				200	190	180	170	160
do	200	190	180	170	160			
3000	200	190	180	170	160			

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.

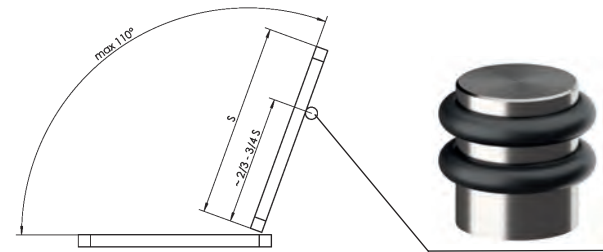


## WUT HINGE ADJUSTMENT



(\*) – adjustment in the negative direction can be very limited depending on aluminium system

(\*\*) – actual range can differ due to the gap value at the seal, depending on aluminium system



## WUT HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	4/4	1/1	14/14





  
 Private building

  
 Door closer

  
 Public building

W S	700	800	900	1000	1100	1200	1300	1400	
<b>2000</b>	<b>150</b>			140	130	120	110	100	
<b>2100</b>				140	130	120	110		
<b>2200</b>				<b>150</b>	140	130	120		
<b>2300</b>					140	130	120		
<b>2400</b>				<b>150</b>	140	130			
<b>2500</b>					140				
<b>2600</b>				<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>2700</b>									
<b>2800</b>				<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>2900</b>									
<b>3000</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>			

W S	700	800	900	1000	1100	1200	1300	1400		
<b>2000</b>	<b>180</b>				170	160	150	130		
<b>2100</b>					170	160	150	140		
<b>2200</b>					<b>180</b>	170	160	150		
<b>2300</b>						170	160			
<b>2400</b>					<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	170	
<b>2500</b>									170	
<b>2600</b>					<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>2700</b>										
<b>2800</b>					<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>2900</b>										
<b>3000</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>				

W S	700	800	900	1000	1100	1200	1300	1400	
<b>2000</b>	<b>120</b>			110	100	100	90	80	
<b>2100</b>				110	100	100	100		
<b>2200</b>				<b>120</b>	110	100	100		
<b>2300</b>					110	100	100		
<b>2400</b>				<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	110	100
<b>2500</b>								110	
<b>2600</b>				<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>
<b>2700</b>									
<b>2800</b>				<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>
<b>2900</b>									
<b>3000</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>			

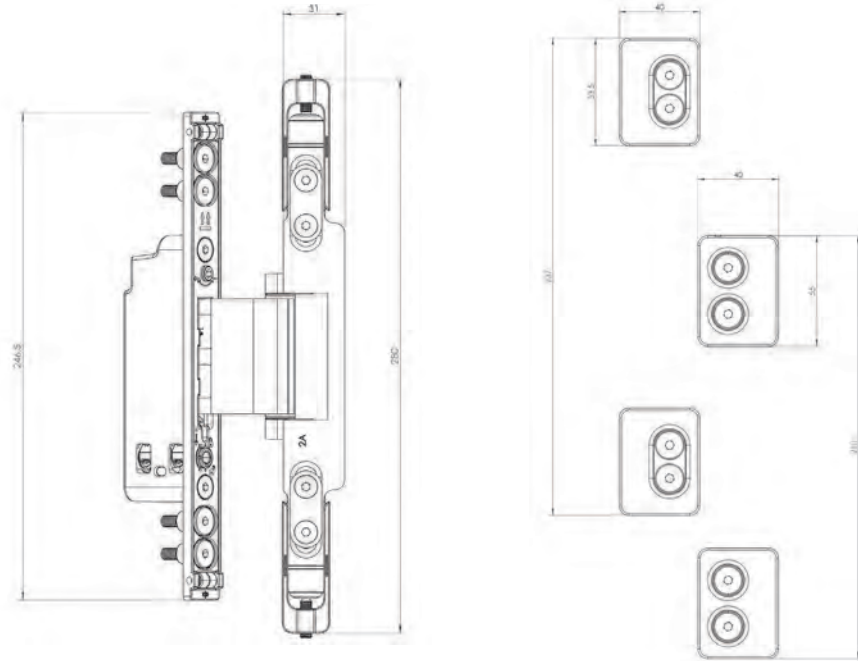
W S	700	800	900	1000	1100	1200	1300	1400			
<b>2000</b>	<b>100</b>			90	80	80	70	60			
<b>2100</b>				100	90	80	80	80			
<b>2200</b>				100	100	90	80	80			
<b>2300</b>				<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	90	80	80
<b>2400</b>									90	80	
<b>2500</b>				<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	
<b>2600</b>											
<b>do</b>				<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	
<b>3000</b>											

W S	700	800	900	1000	1100	1200	1300	1400		
<b>2000</b>	<b>170</b>			160	150	140	130	120		
<b>2100</b>				170	160	150	140	130		
<b>2200</b>				170	170	160	150	140		
<b>2300</b>				<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	170	160
<b>2400</b>									170	
<b>2500</b>				<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>2600</b>										
<b>do</b>				<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>3000</b>										

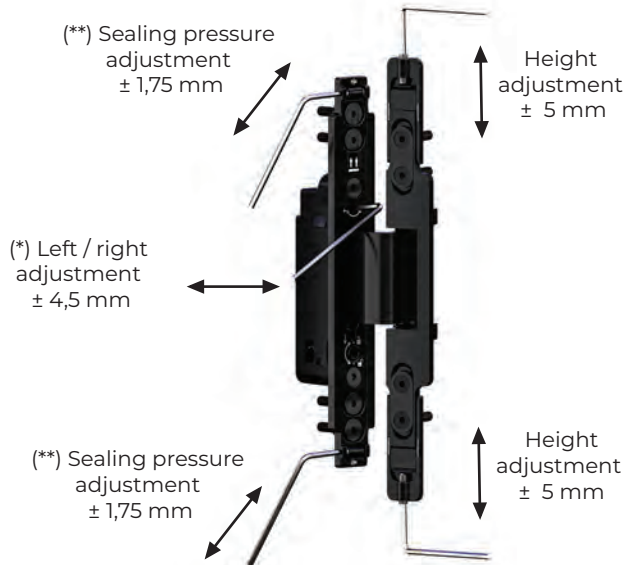
If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulk the door.



The main feature of the hinge is easy and quick assembly of the door sash with the frame.



## WU-1R HINGE ADJUSTMENT



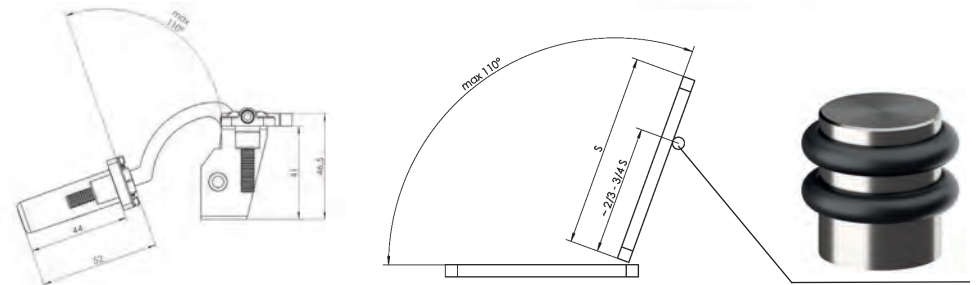
(\*\*) Sealing pressure adjustment  $\pm 1,75$  mm

Height adjustment  $\pm 5$  mm

(\*) Left / right adjustment  $\pm 4,5$  mm

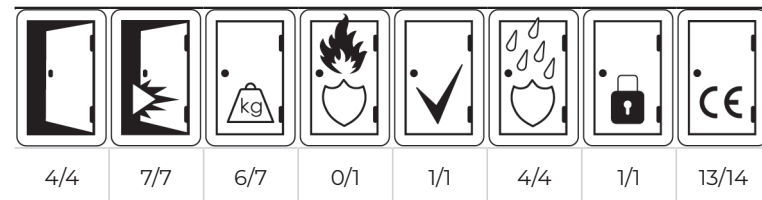
(\*) – adjustment in the negative direction can be very limited depending on aluminium system

(\*\*) – actual range can differ due to the gap value at the seal, depending on aluminium system



## WU-1R HINGE CLASSIFICATION EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors









  
 Private building


  
 Door closer


  
 Public building

W S	700	800	900	1000	1100	1200	1300	1400	
	2000	100			90	85	75	70	
	2100				95	90	85	75	
	2200				100	95	90	80	
	2300					100	95	90	
	2400				100		95	90	
	2500						100	95	95
	2600				100	100		100	100
	2700								
	2800								
	2900								
3000									

W S	700	800	900	1000	1100	1200	1300	1400	
 	2000	130			120	115	105	100	
	2100				125	120	115	105	
	2200				130	125	120	110	
	2300					130	125	120	
	2400				130		125	120	
	2500						130	125	125
	2600				130	130		130	130
	2700								
	2800								
	2900								
3000									

W S	700	800	900	1000	1100	1200	1300	1400	
	2000	110			101	97	93	89	
	2100				106	101	97	93	
	2200				110	106	101	97	
	2300					110	106	101	
	2400				110		106	101	
	2500						110	106	106
	2600				110	110		110	110
	2700								
	2800								
	2900								
3000									

W S	700	800	900	1000	1100	1200	1300	1400	
	2000	80			71	67	63	59	
	2100				76	71	67	63	
	2200				80	76	71	67	
	2300					80	76	71	
	2400				80		76	71	
	2500						80	76	76
	2600				80	80		80	80
	do								
	3000								

W S	700	800	900	1000	1100	1200	1300	1400	
	2000	160			150	145	135	130	
	2100				155	150	145	135	
	2200				160	155	150	140	
	2300					160	155	150	
	2400				160		160	160	160
	2500								
	2600								
	do								
	3000								

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



# WU-1R

## LOAD SELECTION (ALTERNATIVE MB45)

CONCEALED / HINGES



Private building



Door closer



Public building

W S	800	900	1000	1100	1200	1300	1400		
	2000	<b>70</b>			61	57	53	49	
2100	66				61	57	53		
2200	<b>70</b>				66		61	57	
2300					<b>70</b>		66	61	
2400	66						61		
2500	<b>70</b>				<b>70</b>	<b>70</b>	<b>70</b>	<b>70</b>	<b>70</b>
2600									
2700									
2800									
2900									
3000									

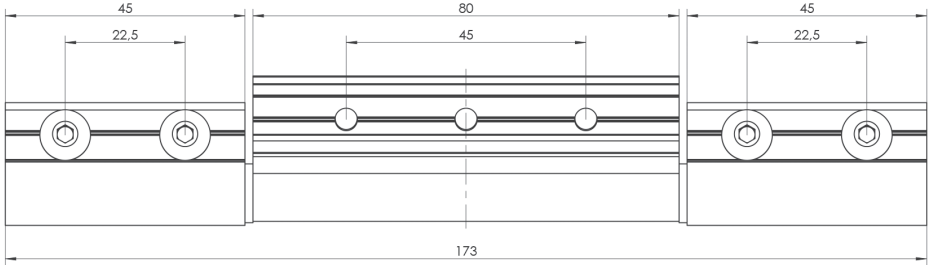
W S	800	900	1000	1100	1200	1300	1400		
	2000	<b>90</b>			81	77	73	69	
2100	86				81	77	73		
2200	<b>90</b>				86		81	77	
2300					<b>90</b>		86	81	
2400	86						81		
2500	<b>90</b>				<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>
2600									
2700									
2800									
2900									
3000									

W S	800	900	1000	1100	1200	1300	1400		
	2000	<b>80</b>			70	65	55	50	
2100	75				70	65	55		
2200	<b>80</b>				75		70	60	
2300					<b>80</b>		75	70	
2400	75						70		
2500	<b>80</b>				<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
2600									
2700									
2800									
2900									
3000									

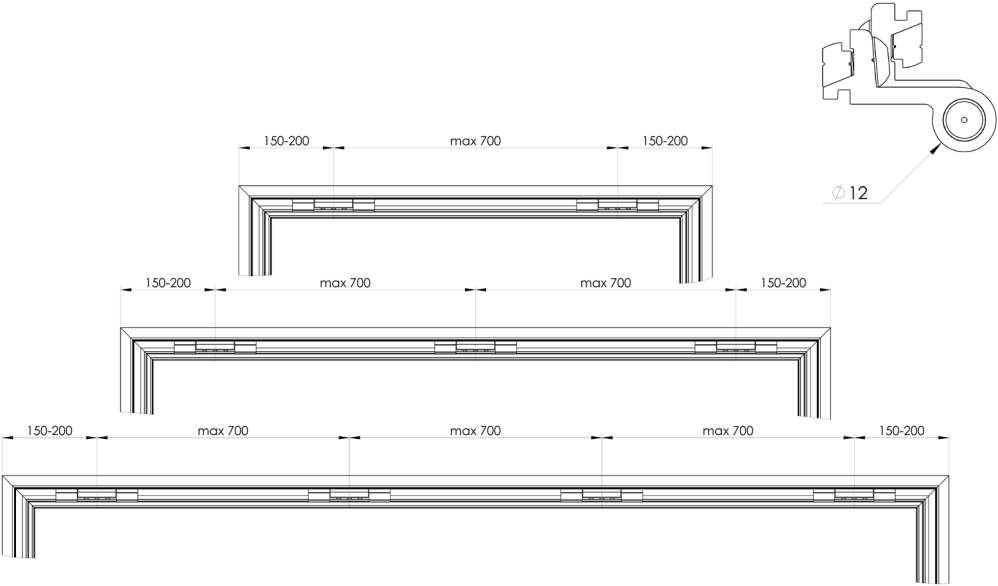
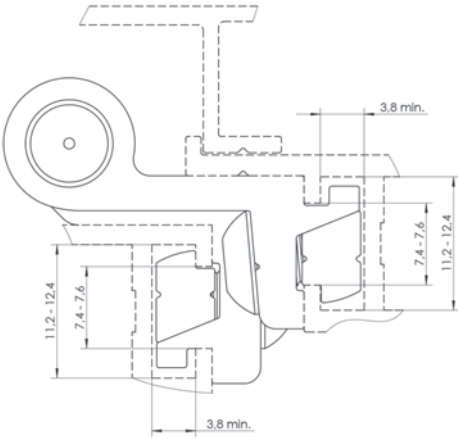
W S	800	900	1000	1100	1200	1300	1400		
	2000	<b>110</b>			100	95	85	80	
2100	105				100	95	85		
2200	<b>110</b>				105		100	90	
2300					<b>110</b>		105	100	
2400	105						100		
2500	<b>110</b>				<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>
2600									
2700									
2800									
2900									
3000									

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.





WPI Roof Window Hinge should match to the following groove ranges:



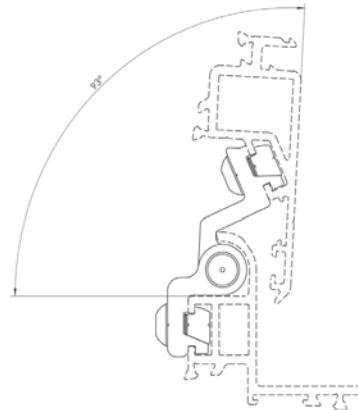
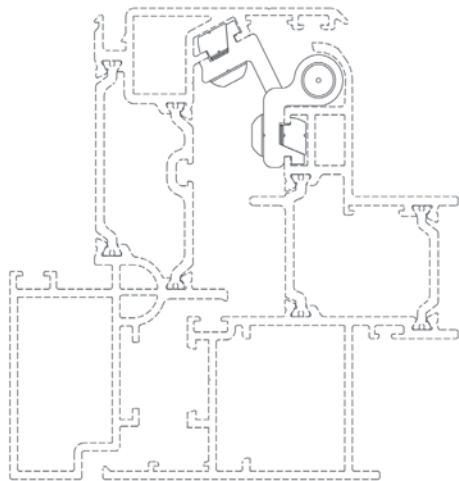
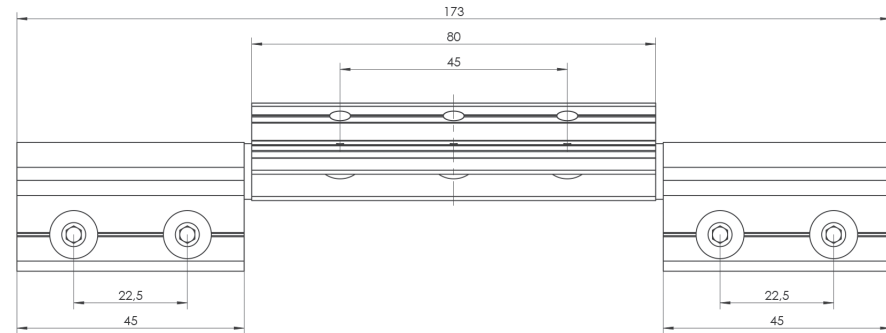
QTY. OF HINGES	MAX LOAD (with snow)
2	140 KG
3	210 KG
4	260 KG



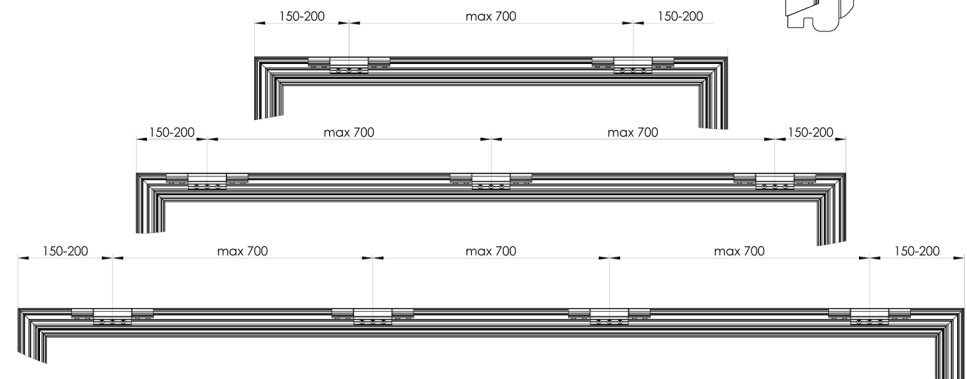
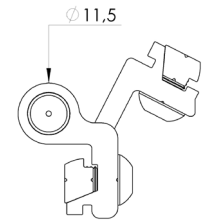


# WP2 ROOF WINDOW HINGE

# ROOF WINDOW HINGES / HINGES



MAXIMUM OPENING ANGLE



QTY. OF HINGES	MAX LOAD (with snow)
2	160 KG
3	240 KG
4	300 KG



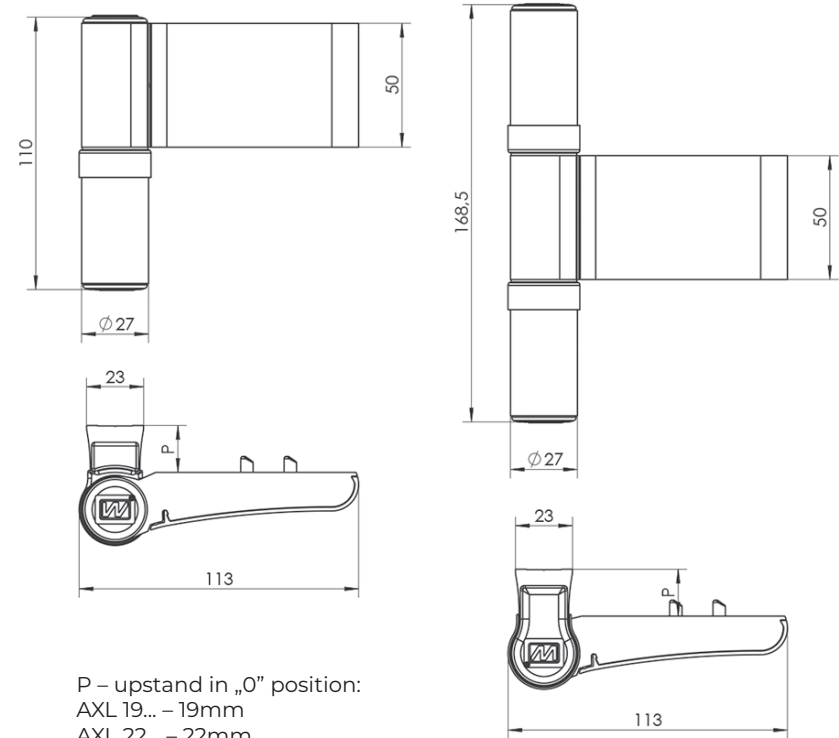
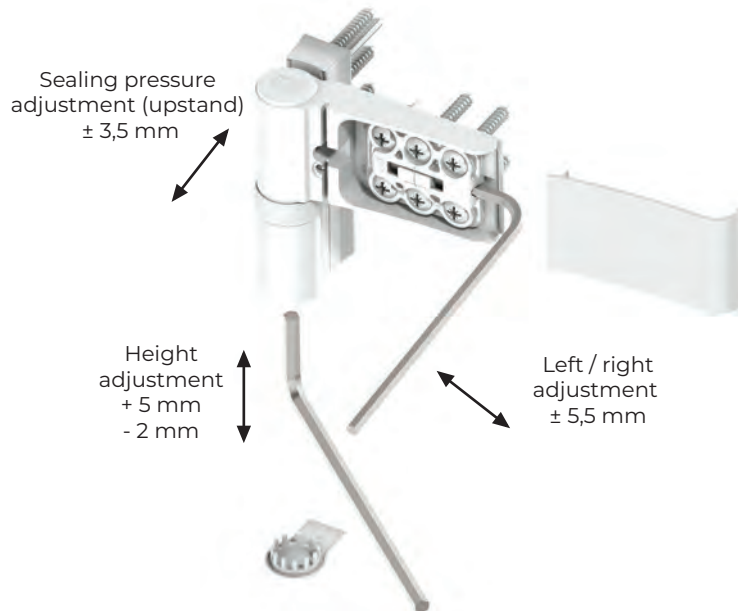


- 7016
  - 7024
  - 8077
  - 8017
  - 9001
  - 9010
  - 7035
  - ANODE NATURAL
  - RAL
  - GOLD W3
  - GOLDEN OAK
- 7021
  - 9005
  - 8019
  - 8003
  - 1036W
  - 9016
  - 9006
  - INOX COATING
  - GOLDEN ELECTROPOLER
  - GOLD W4
  - WALNUT

- BLACK PLASTIC
- WHITE PLASTIC



**AXL HINGE ADJUSTMENT**

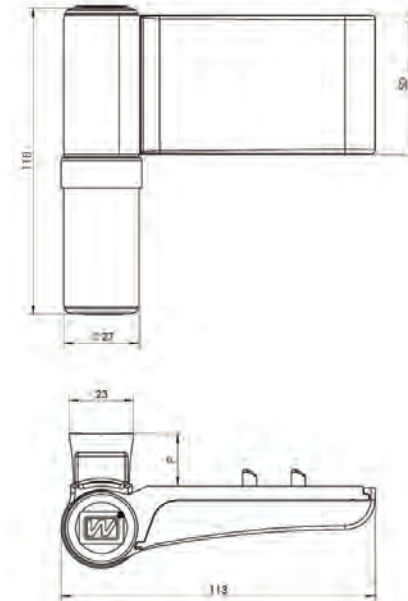


**AXL HINGE CLASSIFICATION**  
 EN 1935:2002 + EN 1935:2002/AC:2003

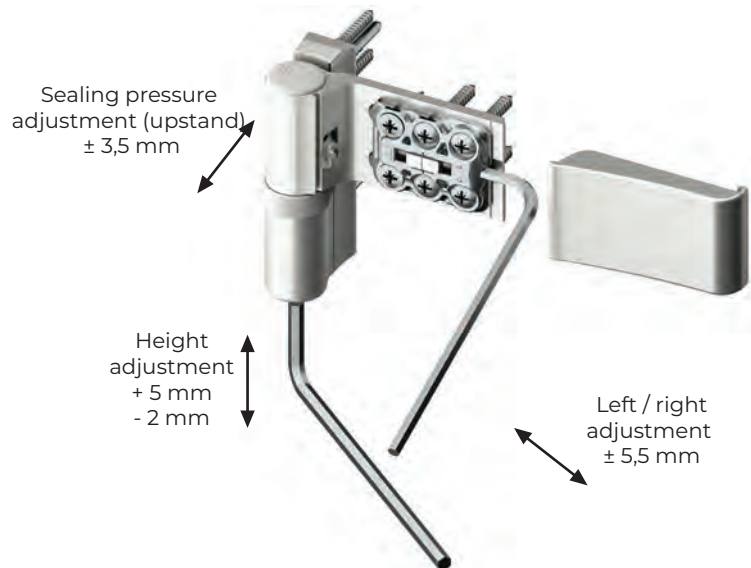
for use in emergency exit doors

4/4	7/7	7/7	0/1	1/1	4/4	1/1	14/14

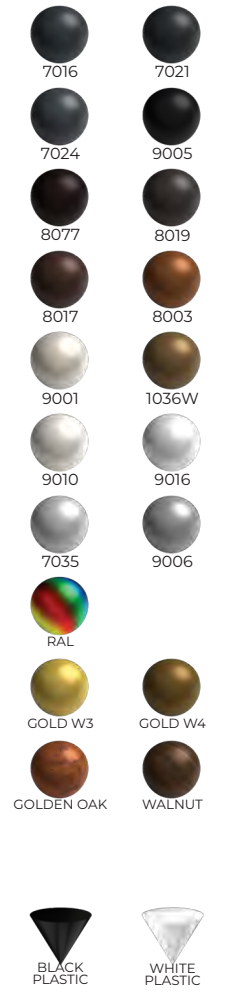




## EXL HINGE ADJUSTMENT



P – upstand in „0“ position:  
EXL 19... – 19mm  
EXL 22... – 22mm  
EXL 24... – 24mm





Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
 <b>3x</b> 	2000	180	180	170	155	145	140	130	125	
	2100				165	150	145	135	130	
	2200				175	160	150	140	135	
	2300			180	180	170	160	150	140	
	2400						175	165	155	145
	2500			180	180	170	160	150		
	2600							175	165	155
	2700			180	180	175	165	165		
	2800							170		
	2900			180	180	175	165	170		
3000	175	180								

		W	S	800	900	1000	1100	1200	1300	1400	
 <b>3x</b> 	2000	210	210	195	180	170	155	140	130		
	2100				200	190	175	160	150	135	
	2200			210	210	200	185	170	155	140	
	2300						195	180	165	150	
	2400			210	210	205	190	175	160		
	2500						200	185	170		
	2600			210	210	195	180	165	150		
	2700							205	190		
	2800			210	210	200	185	170			
	2900							195	180		
3000	210	210	200	185	170						
3000					195	180					

		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> <b>4x</b> 	2000	140	140	130	115	105	110	100	95	
	2100				125	110	115	105	100	
	2200				140	135	120	120	110	105
	2300			150	150	140	130	120	110	
	2400						145	135	125	115
	2500			150	150	140	130	120		
	2600						145	135	125	
	2700			150	150	145	135	125		
	2800						140			
	2900			150	150	145	135	125		
3000	140	150								

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> <b>4x</b> 	2000	170	170	155	140	130	125	110	100		
	2100				160	150	135	130	120	105	
	2200				170	160	145	140	125	110	
	2300			180	180	165	150	135	120		
	2400						175	160	145	130	
	2500			180	180	170	155	140			
	2600						165	150			
	2700			180	180	175	160	145			
	2800						165	150			
	2900			180	180	170	155	140			
3000	165	150									

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



Private building



Public building



Door closer



2-wing hinge



3-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> 	2000	150	150	150	140	125	115	110	100	95
	2100				145	135	120	115	105	100
	2200				145	130	120	110	105	
	2300			150	150	150	140	130	120	110
	2400						145	135	125	115
	2500			150	150	150	150	140	130	120
	2600							145	135	125
	2700			150	150	150	150	145	135	125
	2800							140		
	2900							145		
	3000			150						

		W	S	800	900	1000	1100	1200	1300	1400	
  <b>3x</b> 	2000	180	180	180	165	150	140	125	110	100	
	2100				170	160	145	130	120	105	
	2200				170	155	140	125	110		
	2300			180	180	180	180	165	150	135	120
	2400							175	160	145	130
	2500			180	180	180	180	170	155	140	
	2600							165	150		
	2700			180	180	180	180	175	160	145	
	2800							170			
	2900							175			
	3000			180							

		W	S	800	900	1000	1100	1200	1300	1400	
   <b>3x</b> <b>4x</b> 	2000	130	130	130	120	105	95	90	80	75	
	2100				125	115	100	95	85	80	
	2200				130	125	110	100	90	85	
	2300			130	130	130	130	120	110	100	90
	2400							125	115	105	95
	2500			130	130	130	130	120	110	100	
	2600							125	115	105	
	2700			130	130	130	130	125	115	105	
	2800							120			
	2900							125			
	3000			130							

		W	S	800	900	1000	1100	1200	1300	1400	
   <b>3x</b> <b>4x</b> 	2000	160	160	160	145	130	120	105	90	80	
	2100				150	140	125	110	100	85	
	2200				160	150	135	120	105	90	
	2300			160	160	160	160	145	130	115	100
	2400							155	140	125	110
	2500			160	160	160	160	150	135	120	
	2600							145	130		
	2700			160	160	160	160	155	140	125	
	2800							150			
	2900							155			
	3000			160							

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.

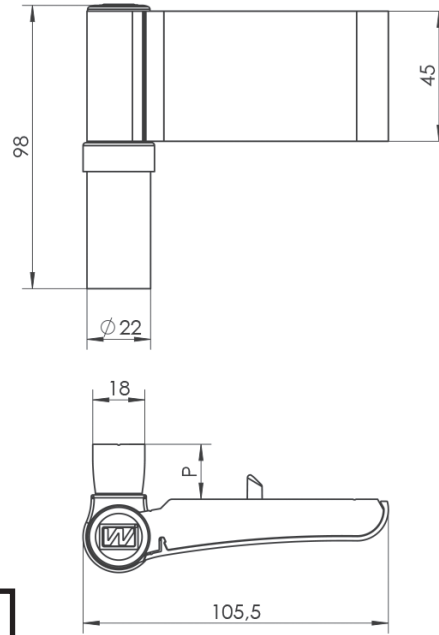
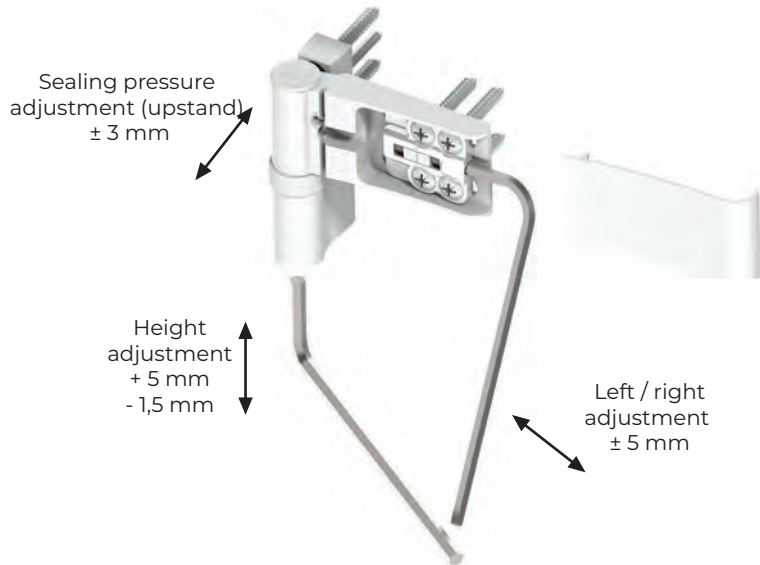




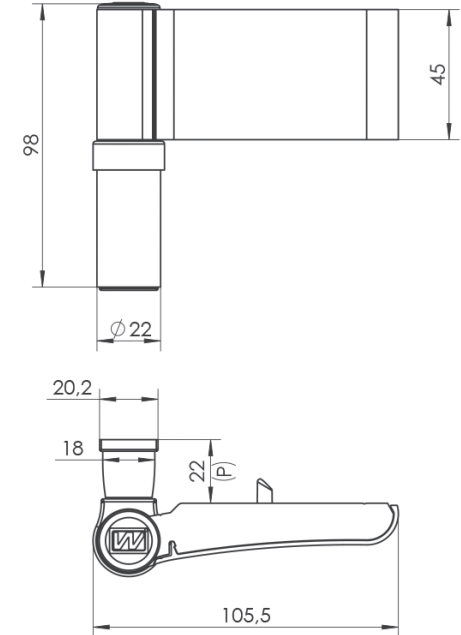
- 7016
- 7021
- 7024
- 9005
- 8077
- 8019
- 8017
- 8003
- 9001
- 1036W
- 9010
- 9016
- 7035
- 9006
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- RAL
- GOLDEN ELECTROPOLER
- GOLD W3
- GOLD W4
- GOLDEN OAK
- WALNUT



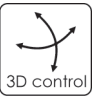
**AXM HINGE ADJUSTMENT**



P – upstand in „0“ position:  
 AXM 17... – 17mm (14 - 20mm)  
 AXM 19... – 19mm (16 - 22mm)  
 AXM 21... – 21mm (18 - 24mm)

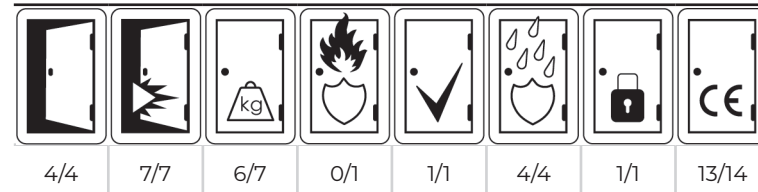


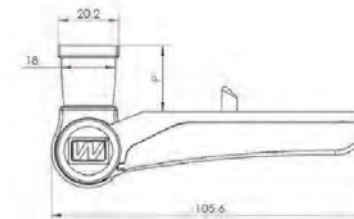
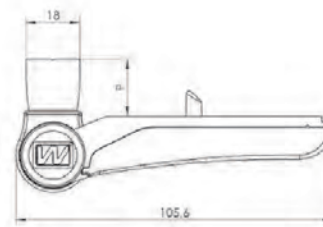
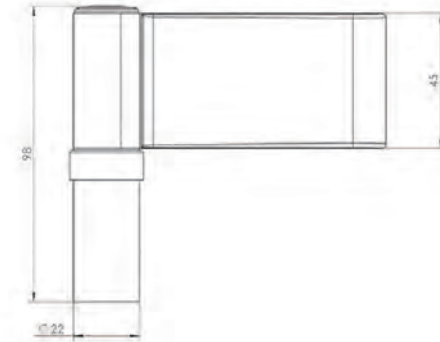
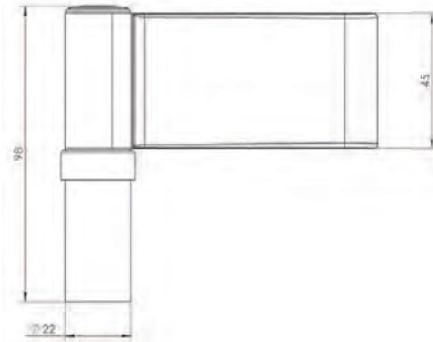
Due to the application the 3mm distance plate, the upstand 20mm, 22mm and 24mm can be achieved.



**AXM HINGE CLASSIFICATION**  
 EN 1935:2002 + EN 1935:2002/AC:2003

for use in emergency exit doors

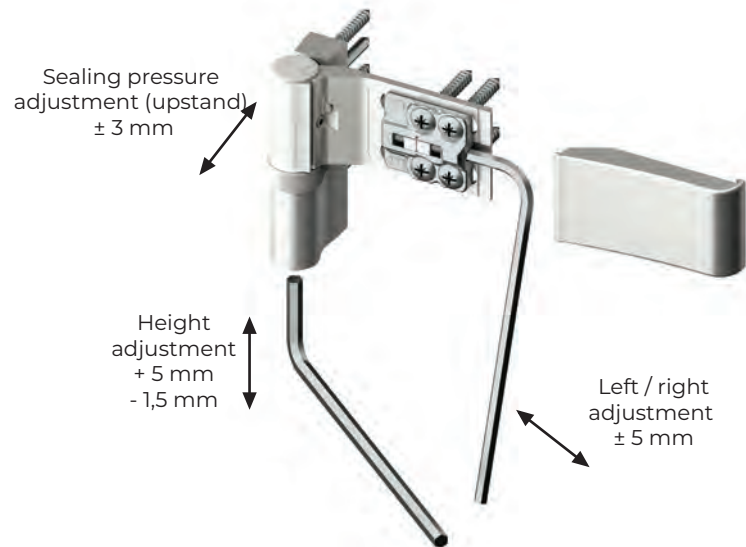




## EXM HINGE ADJUSTMENT

P – upstand in „0“ position:  
 EXM 17... – 17mm (14 - 20mm)  
 EXM 19... – 19mm (16 - 22mm)  
 EXM 21... – 21mm (18 - 24mm)

Due to the application the 3mm distance plate, the upstand 20mm, 22mm and 24mm can be achieved.



- |  |            |  |         |
|--|------------|--|---------|
|  | 7016       |  | 7021    |
|  | 7024       |  | 9005    |
|  | 8077       |  | 8019    |
|  | 8017       |  | 8003    |
|  | 9001       |  | 1036W   |
|  | 9010       |  | 9016    |
|  | 7035       |  | 9006    |
|  | RAL        |  |         |
|  | GOLD W3    |  | GOLD W4 |
|  | GOLDEN OAK |  | WALNUT  |

- |  |               |  |               |
|--|---------------|--|---------------|
|  | BLACK PLASTIC |  | WHITE PLASTIC |
|--|---------------|--|---------------|





Private building



Public building



Door closer



2-wing hinge

		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> 	2000	135	135	125	110	100	95	85	80	
	2100			130	120	105	100	90	85	
	2200			130	115	105	95	90		
	2300			125	115	105	95			
	2400			120	110	100				
	2500			125	115	105				
	2600			120	110					
	2700			130	120					
	2800			125						
	2900			130						
	3000			135						

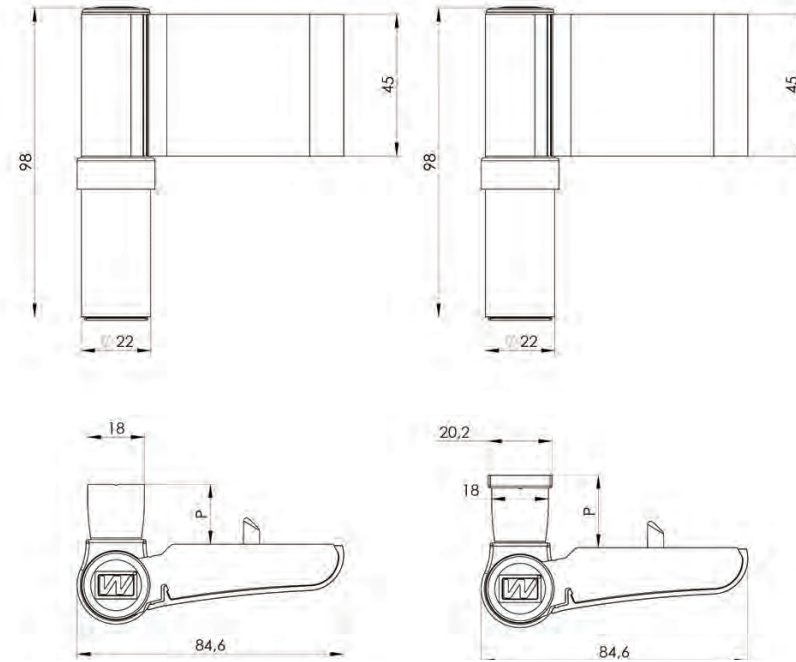
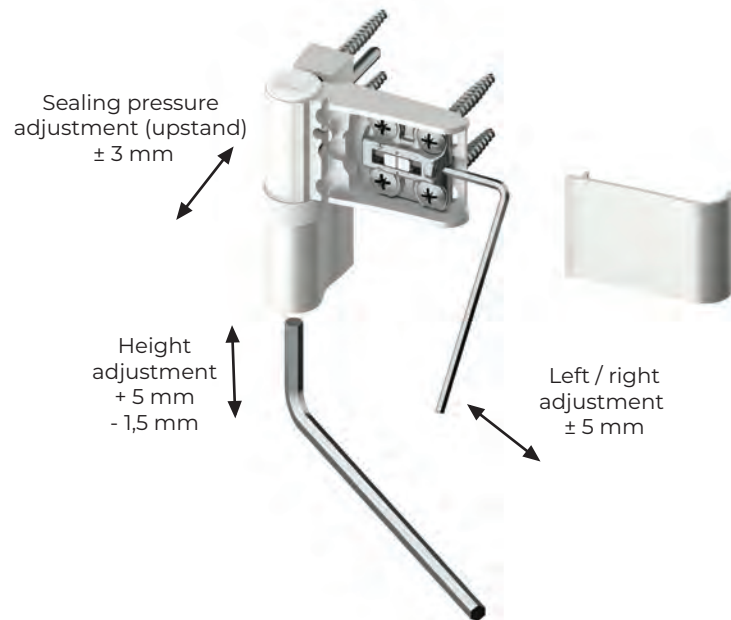
		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> 	2000	110	110	100	85	75	70	60	55	
	2100			105	95	80	75	65	60	
	2200			105	90	80	70	65		
	2300			100	90	80	70			
	2400			105	100	85	75			
	2500			105	90	80				
	2600			95	85					
	2700			105	95					
	2800			100						
	2900			105						
	3000			110						

		W	S	800	900	1000	1100	1200	1300	1400
  <b>3x</b> <b>4x</b> 	2000	110	110	90	75	65	70	60	55	
	2100			95	85	70	75	65	60	
	2200			100	95	80	80	70	65	
	2300			100	90	80	70			
	2400			105	100	85	75			
	2500			105	90	80				
	2600			95	85					
	2700			105	95					
	2800			100						
	2900			105						
	3000			110						

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



## AXS HINGE ADJUSTMENT



P – upstand in „0“ position:  
 AXS 17... – 17mm (14 - 20mm)  
 AXS 19... – 19mm (16 - 22mm)  
 AXS 21... – 21mm (18 - 24mm)

Due to the application the 3mm distance plate, the upstand 20mm, 22mm and 24mm can be achieved.

- |               |                     |
|---------------|---------------------|
|               |                     |
| 7016          | 7021                |
|               |                     |
| 7024          | 9005                |
|               |                     |
| 8077          | 8019                |
|               |                     |
| 8017          | 8003                |
|               |                     |
| 9001          | 1036W               |
|               |                     |
| 9010          | 9016                |
|               |                     |
| 7035          | 9006                |
|               |                     |
| ANODE NATURAL | INOX COATING        |
|               |                     |
| RAL           | GOLDEN ELECTROPOLER |
|               |                     |
| GOLD W3       | GOLD W4             |
|               |                     |
| GOLDEN OAK    | WALNUT              |

- |               |               |
|---------------|---------------|
|               |               |
| BLACK PLASTIC | WHITE PLASTIC |





Private building



Public building



Door closer



2-wing hinge

W	S	800	900	1000	1100	1200
		2000	100	90	80	70
2100	110	100	90	80	70	
2200	120	110	100	90	80	
2300	130	120	110	100	90	
2400	130	120				
2500	120	110	110	100	90	
2600						
2700						
2800						
2900						
3000						

W	S	800	900	1000	1100	1200
		2000	135	125	110	100
2100	135	130	120	105	100	
2200	135	135	130	115	105	
2300	135	135	135	125	115	
2400	135	135				
2500	125	125	125	125	110	
2600						
2700						
2800						
2900						
3000						

W	S	800	900	1000	1100	1200
		2000	100	90	80	70
2100	110	100	90	80	70	
2200	120	110	100	90	80	
2300	130	120	110	100	90	
2400	130	120				
2500	120	110	110	100	90	
2600						
2700						
2800						
2900						
3000						

If the distance between hinges in the middle of a door exceeds 1500mm, we suggest using additional hinge which caulks the door.



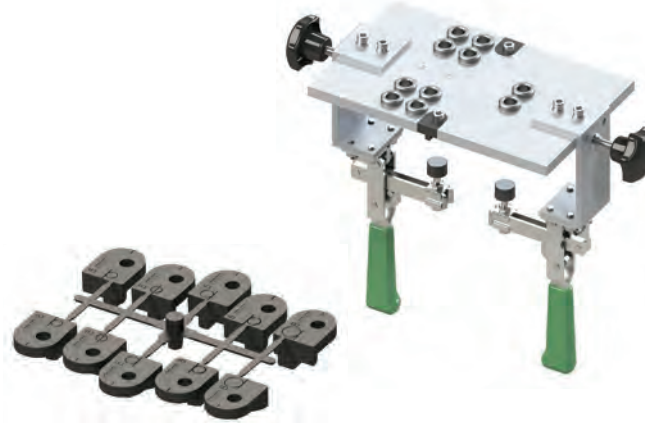
# SURFACE HINGES

## PATTERNS FOR DRILLING / HINGES

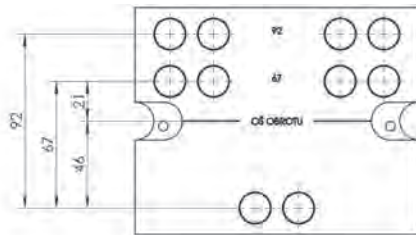
S1



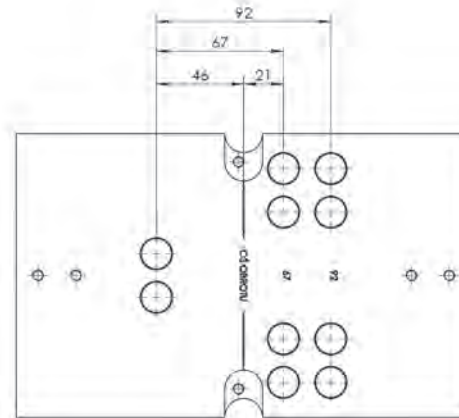
S2



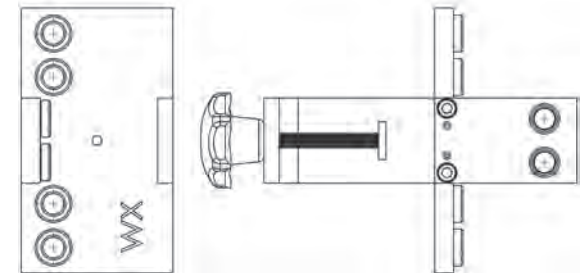
S3



S1 Pattern for WX and MX Surface Hinge,  
dimension 67/92



S2 Pattern for WX and MX Surface Hinge,  
dimension 67/92



S3 Pattern for WX Angular Hinge





	LEAF PROFILE	LEAF PROFILE	FRAME PROFILE	FRAME PROFILE
WR				
WR-1R				
WR-2R				
WU				
WUT				
WU-1R				



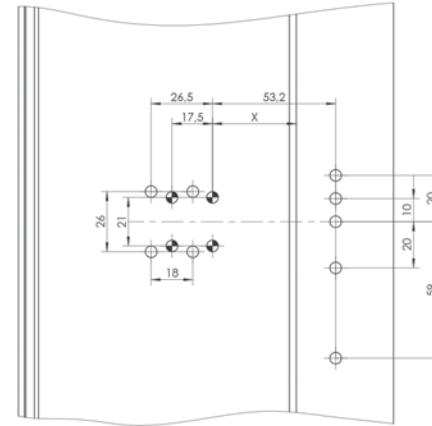
AXL / EXL



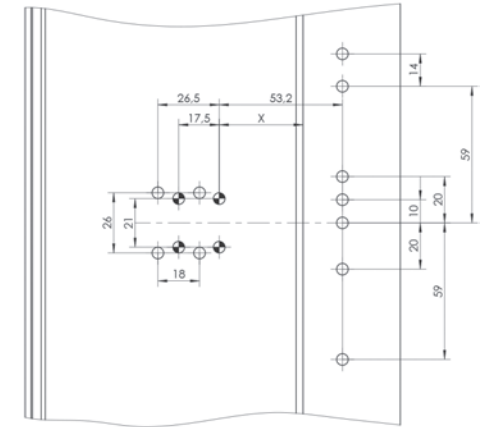
AXL / EXL



TOOLING IN PROFILE  
AXL / EXL 2-wing hinge



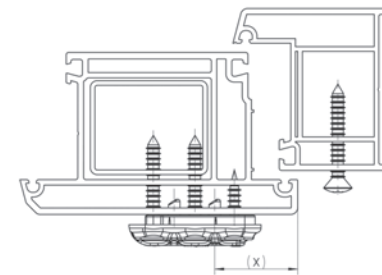
TOOLING IN PROFILE  
AXL / EXL 3-wing hinge



DISTANCE THICKNESS A	VALUE X
2 mm	40 mm
4 mm	38 mm
6 mm	36 mm
8 mm	34 mm



DISTANCE THICKNESS A	VALUE X
4 mm	36 mm
5 mm	35 mm
6 mm	34 mm
7 mm	33 mm
8 mm	32 mm





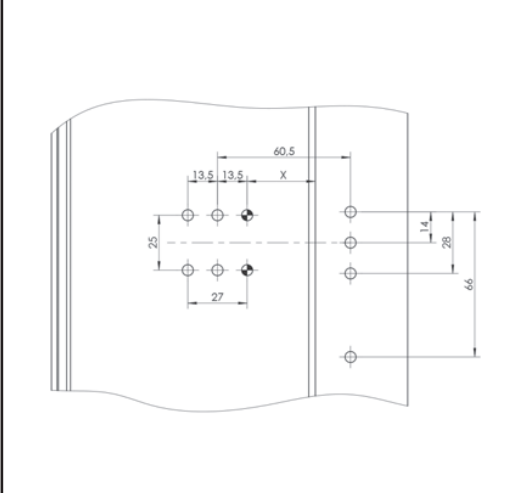
AXM / EXM



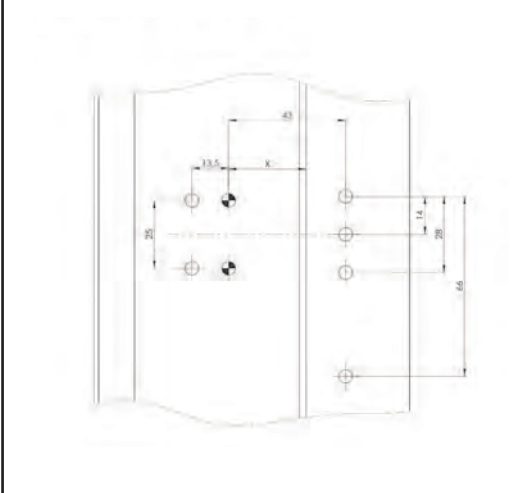
AXS




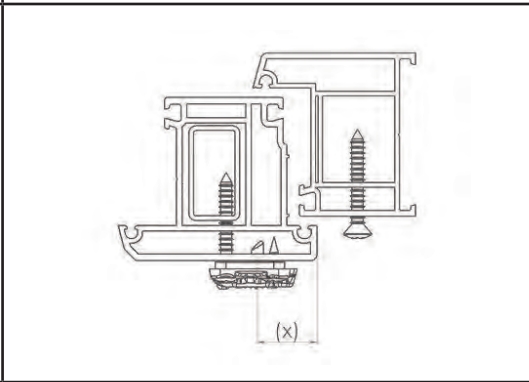
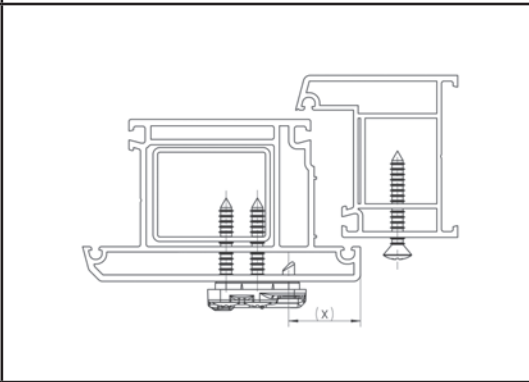
TOOLING IN PROFILE AXM / EXM



TOOLING IN PROFILE AXS



DISTANCE THICKNESS A	VALUE X
2 mm	34 mm
4 mm	32 mm
6 mm	30 mm
8 mm	28 mm

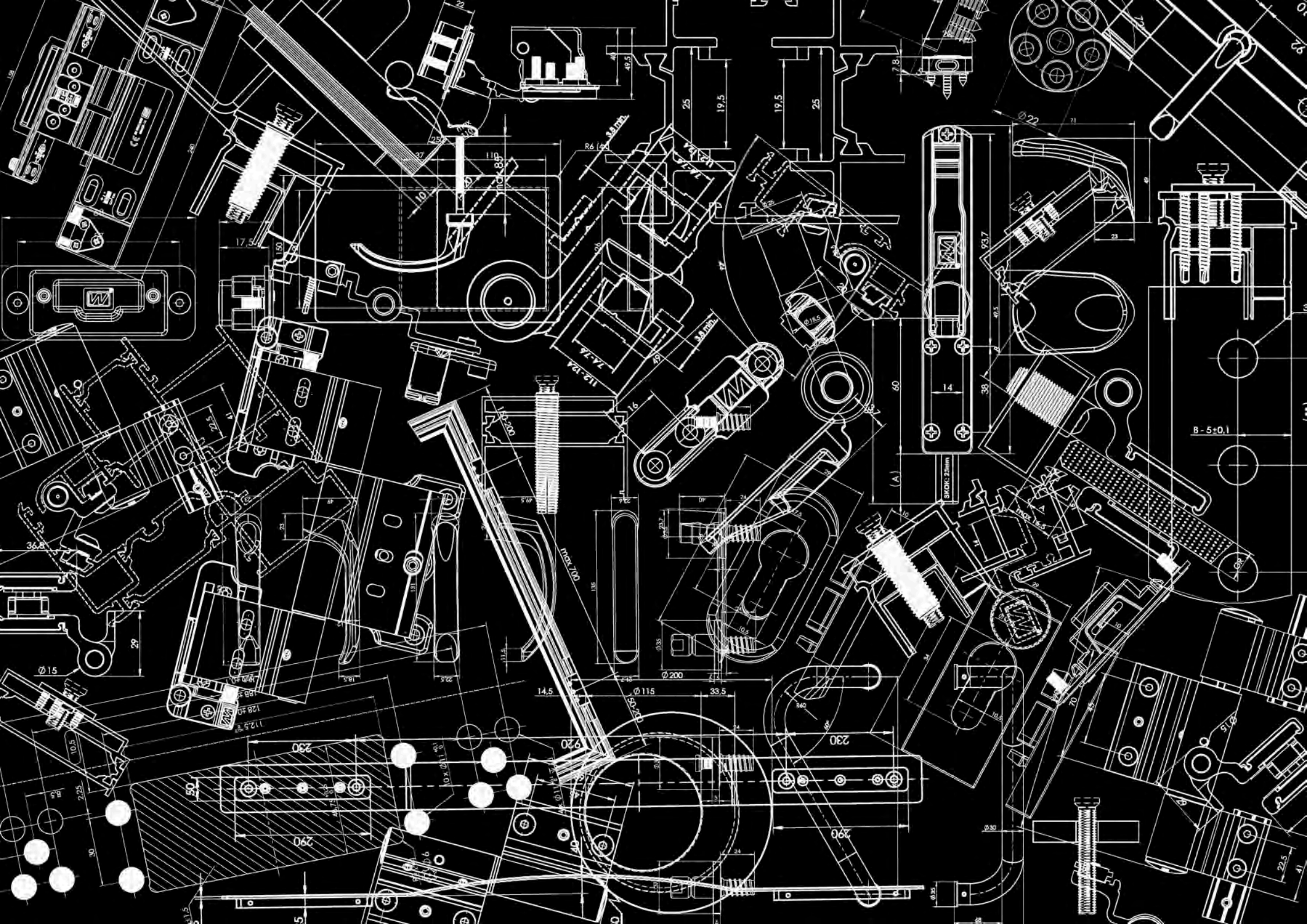


TRIPLE TEMPLATE



AXL TRIPLE TEMPLATE







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