

# Hahn Serie 60 AT

### Universal hinge for versatile application





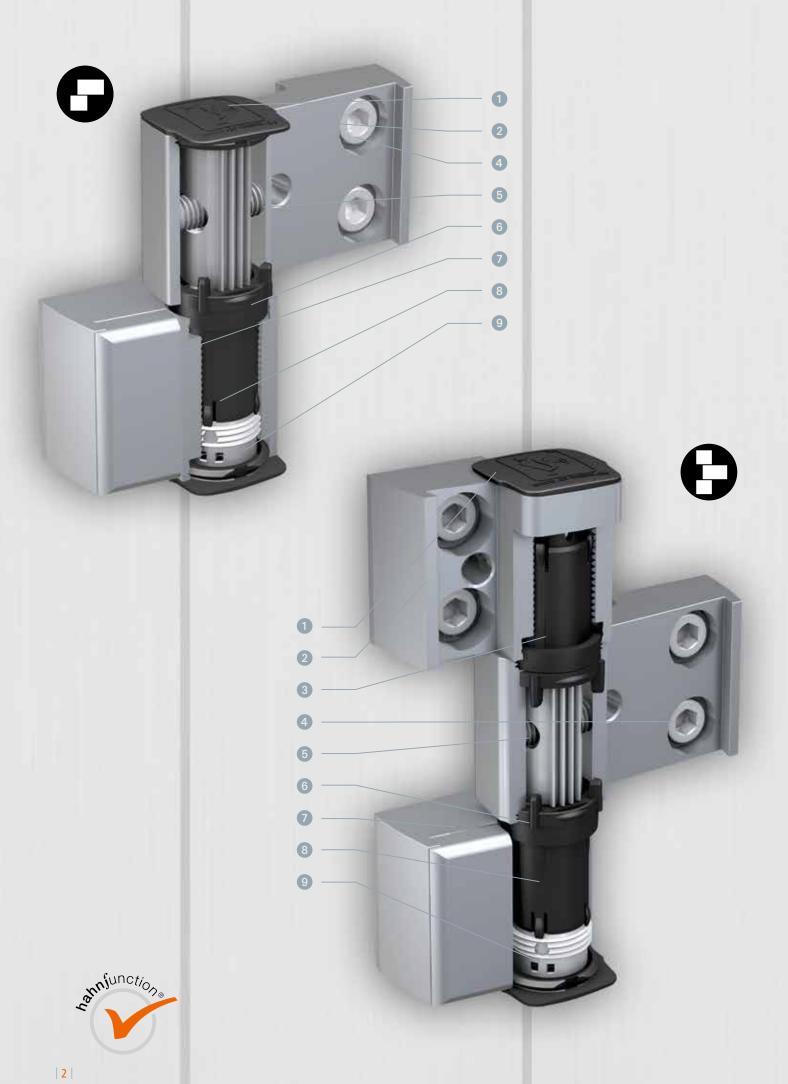


**IMPROVED TECHNOLOGY** 











- NEW! Uniform capsnow with long-term hold
- 2 Screw-on hinge of extruded aluminium – withstands significant pressure and tensile forces
- Split stainless steel pins for easier disassembly
- NEW! Choose freely between Hahn fastening elements

   suits every profile situation

#### **NEW!** Larger setting range

- Horizontal adjustment
   ± 2.5 mm on installed doors
   ensuring an optimum fit
- Both parts of the hinges are equipped with a synthetic sleeve offering
  - improved antifriction property
- NEW! Cover strip secured

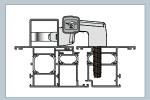
   for improved protection against break-ins

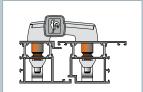
## **NEW!** Adjustable with door leaf installed

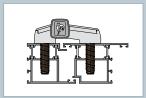
- Adjust sealing pressure
   ± 0.5 mm (necessary to remove the door leaf for some variations)
- Meight adjustment using integrated lifting and lowering spindle – continually variable + 3 mm/–2 mm and easy adjustment

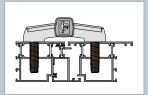
#### Other advantages

- Adjustable in six directions while door leaf is mounted
- Capable of supporting up to 220 kg (3-piece) or 140 kg (2-piece) depending on the design of the profile sections
- Available for all common aluminium and steel profile sections
- The standard version comes with high corrosion resistance
- The hinge system offers a variety of possible combinations and mounting options for inward and outward opening doors with alternating profile and corner post construction
- Can be used on left or right
- Special designs for folding doors and intrusionresistant doors
- Hinges available in anodised and RAL colours
- Bearing point maintenance-free no lubrication necessary



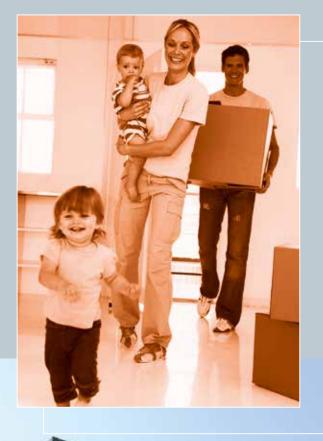














# ... more convenience for door makers

A hinge for (almost) every application:
Hahn Serie 60 AT hinges are universally usable for almost all system profiles.
They are durable and always remain stable even when subject to intensive use.
Both parts of the hinge are equipped with a low-maintenance bearing bushing.
That improves the antifriction properties for several hundred thousand cycles.
Moreover, it can be adjusted in six directions – by one person and without having to loosen the fastening screws, and now even when the door leaf is already installed.

#### **Installation instructions**

Fastening method anchor screw



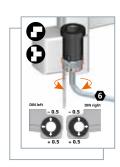
Drill 11 mm diameter holes.



### Convenient and reliable

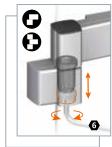
The cover strips are equipped with a tension bolt, which is fixed from behind and which prevents access to the fastening screws. To contribute to protection against break-ins, Hahn offers security sets as an accessory for doors that open outward. The hinge system offers a variety of possible combinations and mounting options for inward and outward opening doors with reversible profile and corner post construction.

#### **Adjustment instructions**

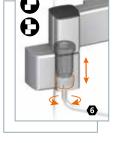


#### Adjusting the sealing pressure

Increase sealing pressure: + 0.5 mm, mark points towards the door. Decrease sealing pressure: – 0.5 mm, mark points away from the door.



Adjusting the height + 3/- 2 mm



Horizontal adjustment ± 2.5 mm

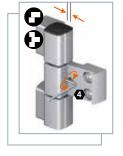




Tighten screws of the hinge body (20–25 Nm).



Slide tension bolt into cover strip. Snap-on cover strip. Snap caps in place.





# For all doors made from metal profile sections



Be it main doors, side doors or functional doors, interior, exterior or entry doors, the Hahn Serie 60 AT is a door hinge that performs as expected for the long term. Before a Hahn hinge can be rolled out, the ready-for-production hinge is subjected to testing with over 200,000 opening cycles. In doing so, the hinge must also prove itself under unfavourable conditions. It is only after these tests have been completed successfully that the hinge can be released. This guarantees that a Hahn hinge is reliable over the long term, a benefit that is much appreciated by architects, system suppliers, door makers and building owners.

### MADE IN GERMANY

### Including CE certificate

Both hinge versions of the Series 60 AT were tested by a testing laboratory with regard to a high load capacity. The 2-piece and 3-piece version have attained hinge class 14 – the currently highest rating available for single-axis door hinges. The 3-piece version with a borehole gauge of 125 mm has earned the hinge class 11 rating based on special testing criteria, whereby its high load capacity was also certified by the testing laboratory. The standard version of the Series 60 AT hinges is suited for their usability on smoke-resistant and fire safety doors within the framework of component testing.



		$\overline{\mathbb{N}}$	kg		$\checkmark$	200		<b>€</b>
	Service class	Durability	Weight of test door	Fire resistance	Security	Corrosion resistance	Intrusion protection	Hinge class
SERIE 60 AT	4	7	7	0	1	4 (5*)	1	14
SERIE 60 AT	3/4	7	4/7	0/1*	1	4 (5*)	0/1	11/14*

Suitable for installation on doors placed along emergency escape routes.

Position  $4^*$ : Suitable for use on fire protection doors for hinges of class 14,

Certified by ift Rosenheim Nr. 16-003127-PRO 1 (PB-C04-01-de-02) dated 27.09.2016.

Position 6\*: class 5 in accordance with EN 1670:2007.

Position 8\*: item M781\_ fulfils the class 11.

#### SERIE 60 AT EC certificate number 1309-CPR-0256

The classification 4 7 7 0 1 5 1 14 means:

A door hinge for (4) very heavy usage, which has undergone endurance testing of (7) 200,000 cycles, for a door weighing up to (7) 160 kg, not suited for (0) fire and smoke protection, possesses a (5) corrosion resistance of 480 h and can be used on (1) anti-burglar doors.

In addition to that, testing was conducted based on 20 cycles with 320 kg and 5 cycles with 480 kg and successfully completed in accordance with EN 1935.

#### SERIE 60 AT EC certificate number 1309-CPR-0257

The classification 4 7 7 1 1 5 1 14 means:

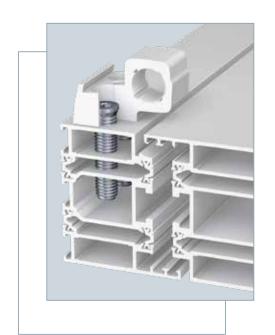
A door hinge for (4) very heavy usage, which has undergone endurance testing of (7) 200,000 cycles, for a door weighing up to (7) 160 kg, suited for (1) fire and smoke protection, possesses a (5) corrosion resistance of 480 h and can be used on (1) anti-burglar doors.

In addition to that, testing was conducted based on 20 cycles with 320 kg and 5 cycles with 480 kg and successfully completed in accordance with EN 1935. The product verifiably withstands a shear load of at least 15 kN.

### Hardly possible to be more universal



The requirements placed on hinge mounting are just as diverse as the system landscapes that hinges have to serve. For this reason, Dr. Hahn developed the Hahn screw anchor revolutionising hinge mounting in 2003. The Hahn anchor screw followed in 2007. Both fastening methods have now become permanent fixtures in the workshops of door installation firms world-wide. For the first time ever, a Hahn hinge can now utilise the entire range with the new Hahn Serie 60 AT. Of course, it depends on the door situation that the installer has to deal with. For hinges with a pivoting point of 20 mm, installers can decide on their own which mounting method they would like to order additionally for the hinge. Delivery of hinges with pivoting points other than 20 mm or 36 mm always take place completely in a box incl. fastening elements. As a result, the Hahn Serie 60 AT is able to satisfy a wide variety of situations and offers door installers maximum flexibility.





**NEW!** The Hahn Serie 60 AT is now also available for individual borehole gauges in a practical industry package of 24 hinges (2-piece) or 18 hinges (3-piece). Original Hahn fastening elements can also be ordered as needed (see page 16).



# Hahn Serie 60 AT

### Universal hinge for metal doors

## **S**YSTEM



#### System/Application

#### Material

Made of extruded aluminium

#### ■ Fastening methods

Fastening using anchor screw, screw anchor or section reinforcement plates 15 and 21 mm

#### Versions

Two pivoting points: 20 mm and 36 mm

#### ■ Load capacity

Depending on profile section design, max. 140 kg (2-piece), max. 220 kg (3-piece)

#### Adjustability

Door leaf adjustable in six directions:

- Horizontal adjustment, variable up to ± 2.5 mm
- Vertical adjustment using integrated lifting and lowering spindle, raising + 3 mm, lowering – 2 mm
- · Sealing pressure ± 0.5 mm

#### Colours

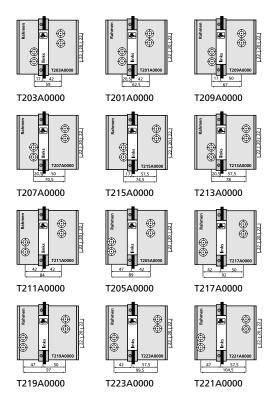
Hinges available in anodised and RAL colours

- Doors open up to > 180°
- Bearing point maintenance-free



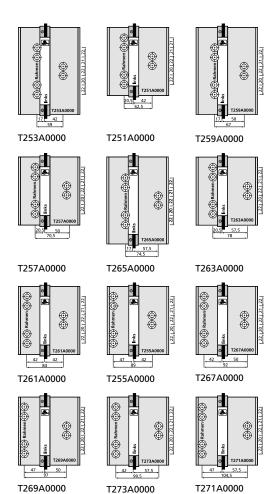
#### **Drilling jigs**





### **Drilling jigs**





#### **General suggestions for hinge placement**

The following design fundamentals are authoritative for hinge placement: size and weight of door, wall thickness of section, frame design, how the door opens, type of loading, hinge mounting. This information is essential for a precise design calculation.

	Object	Max. door size [mm]	Max. door weight [kg]	Upper door closer	Swing door drive mechanism	Closing sequence controller
	Detached house	1,250 x 2,000	120			
	Detached house	1,250 x 2,000	140			
usage	Building with multiple dwellings	1,250 x 2,000	120			
Normal usage	Building with multiple dwellings	1,250 x 2,000	140			
	Building with multiple dwellings	1,250 x 2,000	120			
	Building with multiple dwellings	1,250 x 2,000	140			
	Hospital, school,	1,250 x 2,000	120			
	Hospital, school,	1,250 x 2,000	140			
Heavy usag	Hospital, school,	1,250 x 2,000	120			
	Hospital, school,	1,250 x 2,000	140			
	Hospital, school,	1,250 x 2,000	120			
	Hospital, school,	1,250 x 2,000	140			

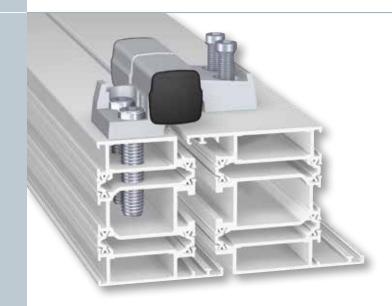
These general hinge placement suggestions take into account frame sections of normal width (approx. 45 mm) with wall thicknesses of approx. 2 mm. Since the individual door frame systems vary significantly in terms of projected widths and wall thicknesses and the mounting of hinges to the frame play a major role, we recommend that you make use of our free design calculation service, should you have any doubts. To determine the necessary placement of hinges, various information is required. Please request our questionnaire on hinge placement. Please note: All statements and calculations relate exclusively to Original Hahn hinges in conjunction with original Hahn fastening elements and take into account their specific characteristics.

Arrangement hinge placement 00 Distance from door edge 2 units 2-piece approx. 150 mm Third hinge approx. 000 150 mm below the 3 units 2-piece top hinge 00 Distance from door edge 2 units 3-piece approx. 150 mm Third hinge approx. 000 150 mm below the 3 units 3-piece top hinge Third hinge approx. 000 150 mm below the 3 units 3-piece top hinge Third hinge approx. 0000 150 mm below the top 4 units 3-piece hinge, fourth in middle Third hinge approx. 000 150 mm below the 3 units 3-piece top hinge Third hinge approx. 0000 150 mm below the top 4 units 3-piece hinge, fourth in middle Third hinge approx. 000 150 mm below the 3 units 3-piece top hinge Third hinge approx. 0000 150 mm below the top 4 units 3-piece hinge, fourth in middle Third hinge approx. 000 150 mm below the 3 units 3-piece top hinge Third hinge approx. 0000 150 mm below the top 4 units 3-piece hinge, fourth in middle

Recommended

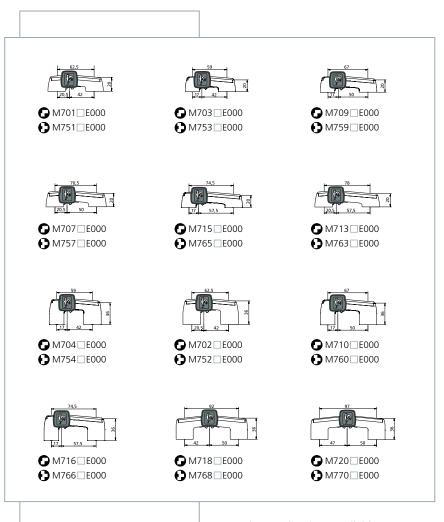


Bearing points made of maintenance-free plastic containing Teflon – do not lubricate!



NEW! Now with Hahn anchor screw for especially fast processing

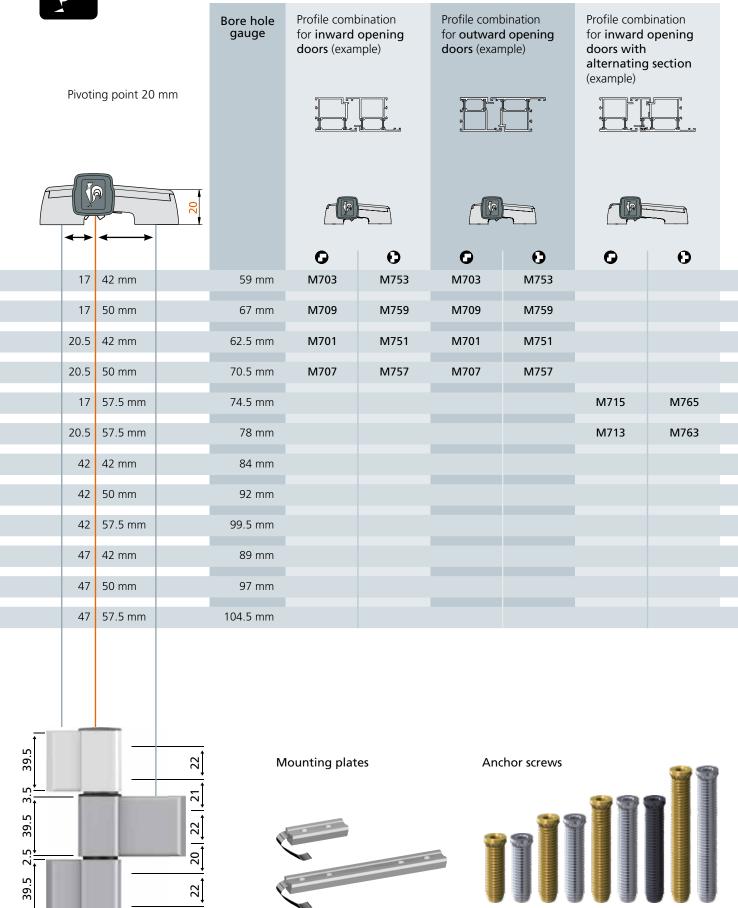
#### **Versions** for installation with all Hahn fastening elements



Many other applications available on request



### Separate order of hinge and fastening elements



For item numbers of fastening elements, see page 16





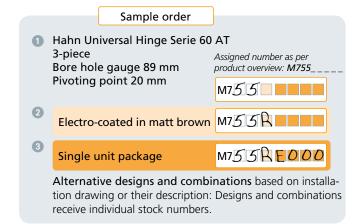
Profile comb	nination			Col		r le	21/			Dr	acking ur	vi+	Vour et	ock	number	Drilli	ng jigs
for outward doors with ing section	d opening alternat-		O ava	ther ailab cate	co le. sep	lou Ple	rs ase		ation	ГС	icking ur	iit.	Tour St	.OCK	number		
		unfinished, for anodisation	EV1 anodised	unfinished, for coating	Electro-coated in matt brown	RAL 9010 coated	RAL 8077 coated	9016 coated	other colour as per specification	Single unit	Industry	Industry	gnation	ımber	nit		T251A0000
0	0	0 = unfini	1 = EV1 a	П	II	II	= RAL	6 = RAL9	9 = other	package PU = 1	package PU = 24	package	Basic designation	Colour number	Packing unit	Item r	A0000
		0	1	2	R	4	5	6	9	E000			M7			2 0 3	2 5 3
		0	1	2	R	4	5	6	9	E000			M7			209	259
		0	1	2	R	4	5	6	9	E000	V000	V001	M7			201	251
		0	1	2	R	4	5	6	9	E000			M7			207	257
		0	1	2	R	4	5	6	9	E000			M7			215	265
		0	1	2	R	4	5	6	9	E000			M7			213	263
M711	M761	0	1	2	R	4	5	6	9	E000			M7			211	261
*)	M767	0	1	2	R	4	5	6	9	E000			M7			217	267
*)	M773	0	1	2	R	4	5	6	9	E000			M7			223	273
M705	M755	0	1	2	R	4	5	6	9	E000			M7			205	255
*)	M769	0	1	2	R	4	5	6	9	E000			M7			219	269
*)	M771	0	1	2	R	4	5	6	9	E000			M7			221	271

<sup>\*)</sup> We recommend using a 3-piece variation

#### Screw anchor

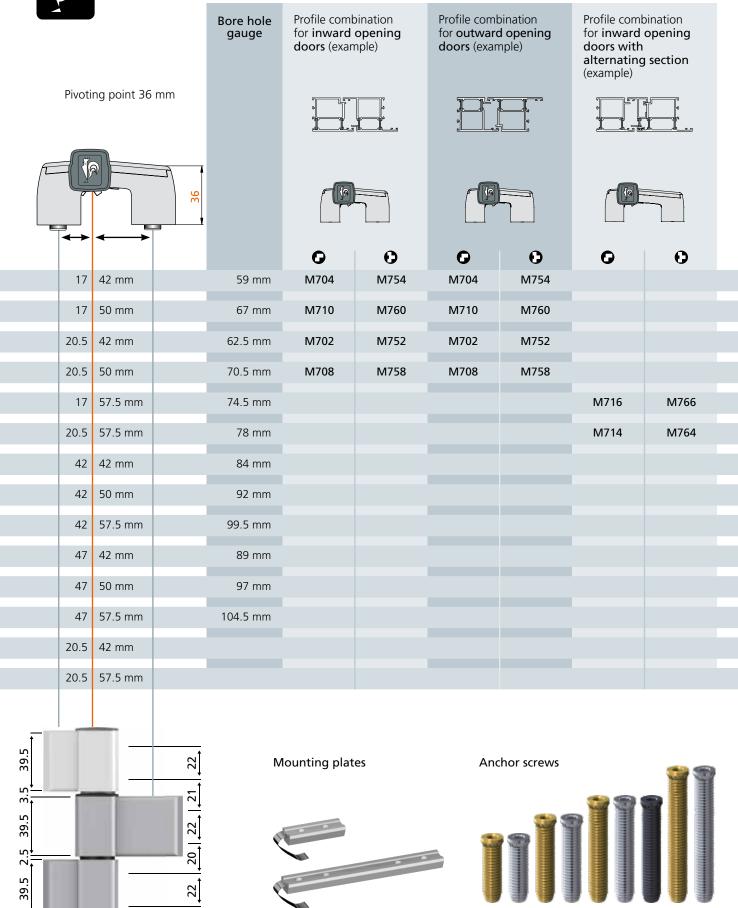


For item numbers of fastening elements, see page 16





### Separate order of hinge and fastening elements



For item numbers of fastening elements, see page 16





Profile co	utward	Profile combin		Colour key Other colours	Pa	acking un	it	Yours	tock	number	Drillin	ıg jigs
opening doors with alternating section (example) for corner post construction (example)		nstruc-	available. Please indicate separately							<b>•</b>	•	
				unfinished, for anodisation EV1 anodised unfinished, for coating Electro-coated in matt brown RAL 9010 coated RAL 8077 coated RAL 9016 coated other colour as per specification	Single	la la casa	la data	Basic designation	mber	it		T201A0000
				unfinis EV1 ar unfinis Electro RAL 90 RAL 90 other o	unit package PU = 1	Industry package PU = 24		sic desig	Colour number	Packing unit	Item n	umber A0000
0	0	O	•	0 - 2 4 7 9 9	00	0	0	Bas	Ö	Рас	O	•
				0 1 2 R 4 5 6 9	E000			M7			2 0 3	2 5 3
				0 1 2 R 4 5 6 9	E000			M7			209	259
				0 1 2 R 4 5 6 9	E000			M7			201	251
				0 1 2 R 4 5 6 9	E000			M7			207	257
				0 1 2 R 4 5 6 9	E000			M7			215	265
				0 1 2 R 4 5 6 9	E000			M7			213	263
M712	M762			0 1 2 R 4 5 6 9	E000			M7			211	261
M718	M768			0 1 2 R 4 5 6 9	E000			M7			217	267
M724	M774			0 1 2 R 4 5 6 9	E000			M7			223	273
M706	M756			0 1 2 R 4 5 6 9	E000			M7			205	255
M720	M770			0 1 2 R 4 5 6 9	E000			M7			219	269
**)	M772			0 1 2 R 4 5 6 9	E000			M7			221	271
		M749*)	M799*)	0 1 2 R 4 5 6 9				M7		Please cont article num combinatio	ber of corn	
		M748*)	M798*)	0 1 2 R 4 5 6 9				M7		Combinatio	113.	

- \*) When ordering corner post constructions, please indicate the profile section system and profile combination.
- \*\*) Item number on request

#### Screw anchor



For item numbers of fastening elements, see page 16

#### Sample order 1 Hahn Universal Hinge Serie 60 AT 2-piece Assigned number as per product overview: M702\_ Bore hole gauge 62.5 mm Pivoting point 36 mm м7*0*2 **RAL 9010** м702 4 🔲 coated 3 м702 4 **V000** Industry package PU = 24 Alternative designs and combinations based on installation drawing or their description: Designs and combinations receive individual stock numbers.



#### Anchor screw

Varia	tion		Item number	PU for*
Ì	37.5 mm 19.5 mm	Steel Effective length	VP02A0012 VP03A0012 VP02B0012 VP03C0012	1 1 24 18
	48 mm 30 mm	Steel Effective length	VP02A0014 VP03A0014 VP02B0014 VP03C0014	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
300	58 mm 40 mm	Steel Effective length	VP02A0016 VP03A0016 VP02B0016 VP03C0016	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Section of the leading of	74 mm 56 mm	Steel Effective length	VP02A0019 VP03A0019 VP02B0019 VP03C0019	0 1 0 1 0 24 0 18
	58 mm 40 mm	For steel profiles Effective length	VP02A0018 VP03A0018 VP02B0018 VP03C0018	1 1 1 C 24 18

Variat	ion		Item number	PU for*
	37.5 mm 19.5 mm	Stainless steel Effective length	VP02A0013 VP03A0013 VP02B0013 VP03C0013	1 1 1 C 24 18
	48 mm 30 mm	Stainless steel Effective length	VP02A0015 VP03A0015 VP02B0015 VP03C0015	1 1 1 C 24 18
	58 mm 40 mm	Stainless steel Effective length	VP02A0017 VP03A0017 VP02B0017 VP03C0017	1 1 1 C 24 18
	74 mm 56 mm	Stainless steel Effective length	VP02A0020 VP03A0020 VP02B0020 VP03C0020	<b>Q</b> 1 1 <b>Q</b> 24 <b>Q</b> 18

#### Screw anchor

36 mm 27 mm	Steel Effective length	VP02A0003 VP03A0003 VP02B0003 VP03C0003	1 1 24 18
41 mm 32 mm	Steel Effective length	VP02A0005 VP03A0005 VP02B0005 VP03C0005	1 1 24 18
51 mm 42 mm	Steel Effective length	VP02A0007 VP03A0007 VP02B0007 VP03C0007	1 1 24 18
55 mm 46 mm	Steel Effective length	VP02A0010 VP03A0010 VP02B0010 VP03C0010	1 1 24 18
51 mm 42 mm	For steel profiles Effective length	VP02A0009 VP03A0009 VP02B0009 VP03C0009	<b>Q</b> 1
	27 mm 41 mm 32 mm 51 mm 42 mm 55 mm 46 mm	27 mm Effective length  41 mm Steel 32 mm Effective length  51 mm Steel 42 mm Effective length  55 mm Steel 46 mm Effective length  51 mm For steel profiles	36 mm         Steel Effective length         VP03A0003 VP02B0003 VP02B0003 VP03C0003 VP03C0003           41 mm         Steel VP02A0005 VP02A0005 VP02B0005 VP02B0005 VP03C0005 VP03C0005 VP03C0005 VP03C0007 VP02B0007 VP02B0007 VP02B0007 VP02B0007 VP03C0007 VP02B0007 VP03C0007 VP03C0010 VP02B0010 VP03C0010 VP03C0010 VP03C0010 VP03C0010 VP03C0010 VP03C0010 VP03C0010 VP03C0009 VP03A0009 VP02B0009 VP02B0009 VP02B0009

1970			VP02A0004	<b>G</b> 1
1	36 mm	Stainless steel	VP03A0004	1 0 1 0 24 0 18
3	27 mm	Effective length	VP02B0004	<b>G</b> 24
			VP03C0004	18
700			VP02A0006	<b>G</b> 1
	41 mm	Stainless steel	VP03A0006	1 1 24
1	32 mm	Effective length	VP02B0006	<b>G</b> 24
-			VP03C0006	18
7		Stainless steel Effective length	VP02A0008	<b>G</b> 1
	51 mm 42 mm		VP03A0008	<b>()</b> 1
			VP02B0008	<b>Q</b> 1 <b>Q</b> 1 <b>Q</b> 24
			VP03C0008	18
7	55 mm 46 mm	Stainless steel Effective length	VP02A0011	<b>G</b> 1
			VP03A0011	1 1 24
			VP02B0011	<b>1</b> 24
			VP03C0011	18

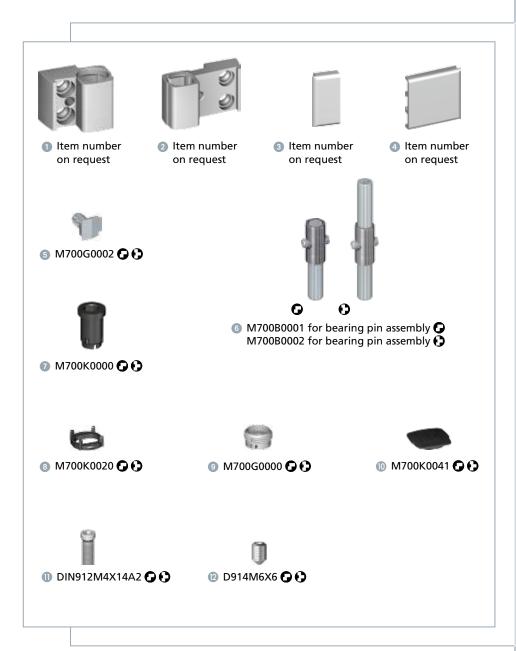
#### Mounting plate

	VP02A0000	
--	-----------	--

		VP02A0001	<b>G</b> 1	
627	21 mm	VP03A0001	<b>O</b> 1	
44	21 111111	VP02B0001	: <b>G</b> 24	
		VP03C0001	18	

<sup>\*</sup> PU for = Packing unit for indicated number of hinges







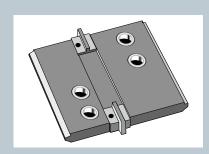


- 1 Frame hinge blade
- 2 Door hinge blade
- 3 Cover strip for frame hinge blade
- 4 Cover strip for door hinge blade
- Tension bolt
- 6 Bearing pin

- Bearing bushing
- 8 Upthrust washer
- ① Lifting and lowering spindle
- **(1)** Сар
- O Screw M4x14
- Set-screw M6x6

#### **Accessories**





#### **Drilling jig** consisting of:

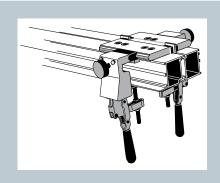
- 1 drill plate
- 3 pairs of spacers for shadow groove (4, 5 and 6 mm)
- 2 grooved pins Ø 5 mm for self-installation

#### Spacers



4 mm, 5 mm or 6 mm

Item numbers see page 10

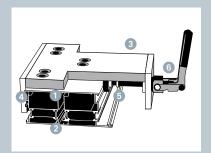


Add-on set for setting up a quick-clamping drilling jig consisting of:

- 2 clamping units
- 2 large spacers with 4 screws M6 x 75
- 1 small spacer with 2 screws M6 x 60
- 4 screws M6 x 40 (for installation without spacers)

The add-on set is mounted on the existing drilling jig.

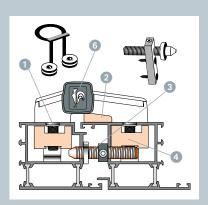
The quick-clamping drilling jig is suited for projected widths up to approx. 90 mm (frame) or approx. 110 mm (leaf).



#### Quick-clamping drilling jig

- 1 Omission of spacers on the hinge side
- 2 No longer necessary to twist sections
- 3 Less clamping tools no complicated fastening of drilling jig with screw clamps
- 4 Section-fitted mounting
- 5 Plastic pressure disk to prevent damage to section
- 6 Pretension adjustable to section tolerances

Please contact us if you would like to order a quick-clamping drilling jig.



#### Special accessories for intrusion protection

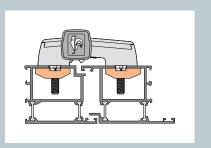
(Special design for intrusion-resistant doors)

- Set of balls for securing the hexagon sockets of fastening screws for doors that open outwards
- 2 Plate to support the hinge blade on the section
- 3 Collared safety mandrel to prevent the door from being forced open
- 4 Section-based mounting plates
- Snap-off screw
- 6 Saw-resistant bearing pin

For item numbers see overleaf



Wide mounting plates for thin-walled steel sections



Special rust-proof version

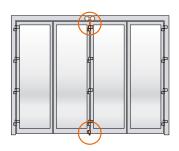
Mounting plate





Folding door hinges

Hinge for roller unit, suitable for folding door hinges M12 and M16





#### Hahn Serie 60 AT

#### **Item numbers Accessories**



In the standard delivery condition, Hahn Serie 60 AT is always delivered without fastening elements. Hahn hinge and Hahn fastening elements are ideally geared to each other. Please note that due to this, product warranty for the proper functionality of the products is subject to the use of both original products. Dr. Hahn does not assume liability if third-party products are used.

Please note: Hahn Serie 60 AT is offered with pivoting points up to 36 mm. If through any further processing higher pivoting points are achieved the producer's liability becomes void.