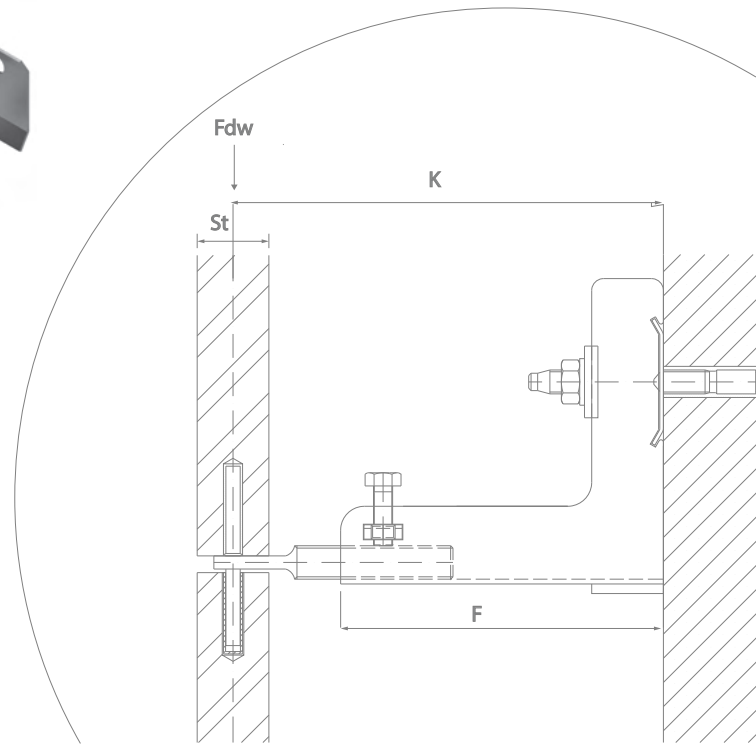


Stone Fixing Systems

Comprehensive range of stone fixing anchors for easy and quick installation of stone panels direct to load bearing substrates. HAZ stone anchors offer reliable and flexible fixing solutions for stone cladding projects.

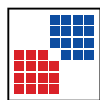
Product Brochure - HAZ-BR-SF-EN/01.25





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HAZ
Group of Companies
Establishment
www.hazgrp.com

*HAZ Metal Fixing Systems
is a member of HAZ Group of Companies*



HAZ Metal is certified with integrated management systems by TUV SUD for ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007

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Stone fixing systems

Quick & easy attachment on to load bearing substrates

Stone fixing anchors are used for the easy and fast installation of stone panels on to load bearing substrates.

There are various types of stone fixing anchors that can be used for different applications to accommodate stone weight, cavity sizes, substrate types and stone setting.

Stone fixing anchors can accommodate all types of backing structures, whether it may be concrete walls, block work & masonry walls or steel structures.

There is a wide range of standard stone anchors that can be used to satisfy project requirements.

In case a bespoke fixing system is required, HAZ Metal can design a stone anchor according to the application requirement.

Direct fixing to concrete at horizontal joints with anchor bolts



Direct fixing to concrete or masonry walls with cement mortar or resin



Direct fixing to concrete at vertical joints with anchor bolts



HZ Z Anchors



AXO Body Anchors



HA L Anchors



HDM Mortar Anchors



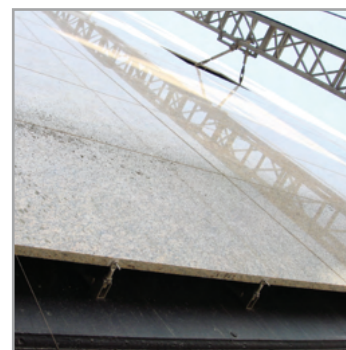
Application examples for stone anchors

Anchors are fixed to load bearing walls with anchor bolts. Fastening on to sub frame systems are made by using set screw sets or lock nuts.

Stone panels are drilled at the edges to accommodate pins for anchoring connections. Stone panels are fixed either at the horizontal or vertical joints, depending on the stone set out on the elevation.



• AXO body anchors are used to install stone panels at horizontal joints to concrete substrate



• Z anchors are used to install stone panels to concrete substrate. On the left picture horizontal joint application. On the right picture vertical joint application.

• To fasten anchors on to insulated walls, the insulation must be cut first. After fastening, the cut out insulation piece must be inserted back, and the insulation parts must be sealed in order to reduce cold bridging.



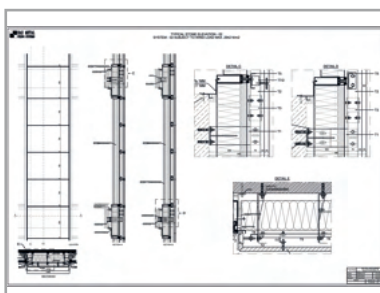
• HA L anchors are used to install stone panels to backing wall at horizontal joints. On the left picture, anchors are attached to steel channel. On the right picture, anchors are attached to concrete substrate.

Technical Design & Engineering

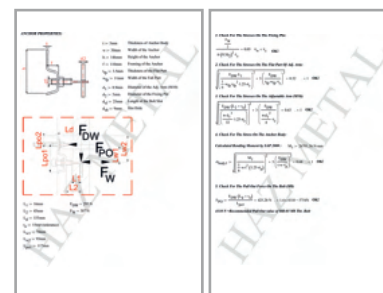
HAZ Metal provides services in the design & engineering of fixing systems and the preparation of structural calculations.

Our technical department receives the necessary technical information of the project in order to propose the most suitable, secure, easy to use and economical fixing systems in accordance with the project criteria. Custom design is also made in accordance with the architectural drawings of the project.

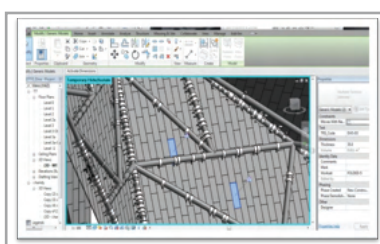
HAZ Metal can offer the design and engineering services by referring to any internationally renowned standards. The engineering department will relate to the specifications of the project and conduct its design and dimensioning according to the requested criteria.



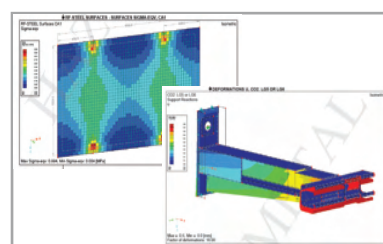
• Shop drawing with application details



• Structural analysis report



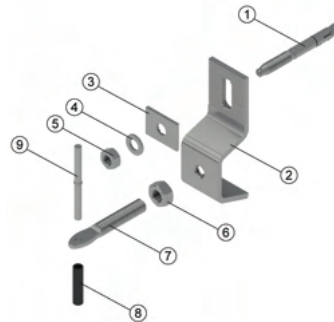
• Parametric modelling



• Finite element method stress analysis

HZ Z Anchor fixing systems

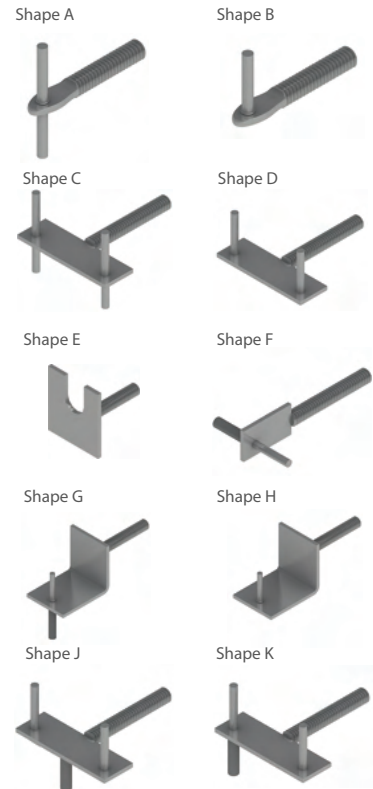
- Direct fixing on to concrete walls with anchor bolts
- Indirect fixing to sub channel systems with hex bolts or lock nuts
- Three dimensional adjustability - quick and easy fixing
- Installation at horizontal and vertical joints
- Recommended projection sizes up to 150 mm & loads up to 800 N



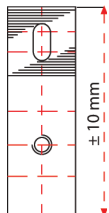
Set Elements

- 1- Through bolt
- 2- Anchor body
- 3- Serrated washer
- 4- Round washer
- 5- Hex nut for bolt
- 6- Hex nut for adj. arm
- 7- Adjustable arm
- 8- Plastic tube
- 9- Flanged pin

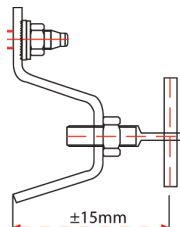
Adjustable Arm Variations



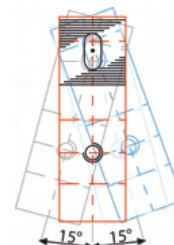
Three dimensional adjustability



1) Vertical adjustment is provided by the slotted hole. The anchor is fixed on to the bolt with the serrated washer at the desired level.

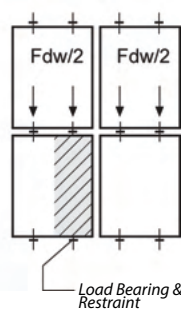
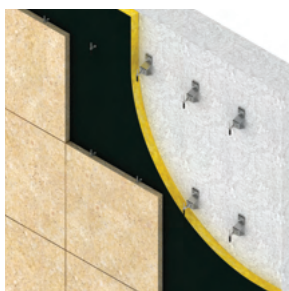


2) Adjustment of the projection size is provided by rotating the adjustable arm. The adjustable arm is locked with the hexagon nut.



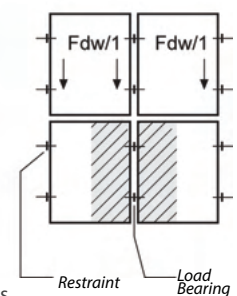
3) Adjustment of the anchor left and right is provided by sliding the body up to 15 degrees side ways.

Installation at horizontal joints



When installing at horizontal joints, each anchor bears half the load of the stone panels. Anchors act as load bearing for the stone panels above and in the same time act as a restraint for the stone panels below.

Installation at vertical joints

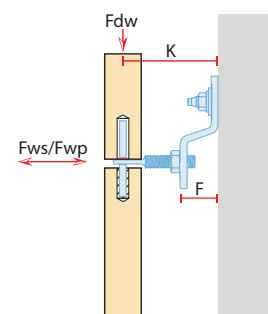


When installing at vertical joints, each anchor bears full load of the stone panels. Anchors below act as load bearing, which carries half the weight of the panel on the left and half weight of the panel on the right. The anchors above act as restraint only.

HZ01 Z Anchor



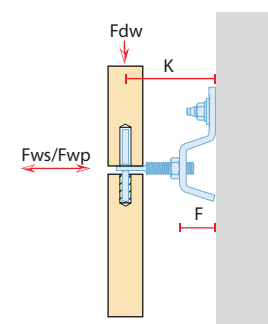
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
HZ01-452	45	200	312/219	F10	M10x60	M8
HZ01-552	55	200	312/219	F20	M10x60	M8
HZ01-752	75	200	312/219	F40	M10x60	M8
HZ01-952	95	200	312/219	F60	M10x60	M8
HZ01-554	55	400	624/437	F10	M12x70	M10
HZ01-754	75	400	624/437	F20	M12x80	M10
HZ01-954	95	400	624/437	F40	M12x80	M10
HZ01-1154	115	400	624/437	F60	M12x80	M10



HZ02 Z Anchor



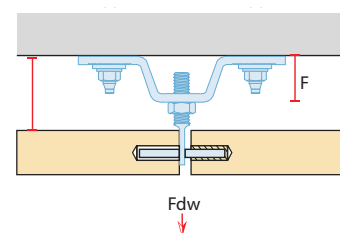
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
HZ02-452	45	200	312/219	F10	M10x50	M8
HZ02-552	55	200	312/219	F20	M10x60	M8
HZ02-752	75	200	312/219	F40	M10x60	M8
HZ02-952	95	200	312/219	F60	M10x60	M8
HZ02-554	55	400	624/437	F10	M12x70	M8
HZ02-754	75	400	624/437	F20	M12x80	M8
HZ02-954	95	400	624/437	F40	M12x80	M8
HZ02-1154	115	400	624/437	F60	M12x80	M8
HZ02-956	95	600	624/437	F20	M12x80	M10
HZ02-1156	115	600	624/437	F60	M14x90	M10
HZ02-1356	135	600	936/655	F80	M14x90	M10
HZ02-958	95	800	936/655	F40	M14x90	M10
HZ02-1158	115	800	936/655	F60	M14x90	M10
HZ02-1358	135	800	936/655	F80	M14x90	M10



HZ07 Z Anchor



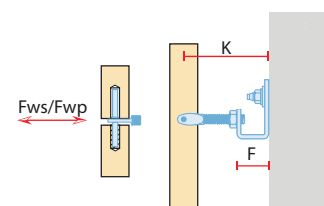
Product code	Projection K (mm)	Dead Load Fdw (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
HZ07-452	45	200	F10	M10x60	M8
HZ07-552	55	200	F20	M10x60	M8
HZ07-752	75	200	F40	M10x60	M8
HZ07-952	95	200	F60	M10x60	M8
HZ07-754	75	400	F20	M12x80	M8
HZ07-954	95	400	F40	M10x80	M8
HZ07-1154	115	400	F60	M10x80	M8



HRS Restraint Anchor



Product code	Projection K (mm)	Wind load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
HRS1-45	45	312 / 219	F10	M8x50	M8
HRS1-55	55	312 / 219	F20	M8x60	M8
HRS1-75	75	312 / 219	F40	M8x60	M8
HRS1-95	95	312 / 219	F60	M8x60	M8
HRS1-115	115	312 / 219	F60	M8x80	M8
HRS1-135	135	312 / 219	F60	M8x100	M8

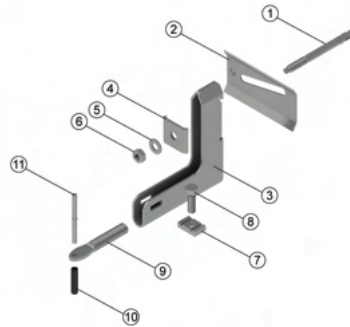
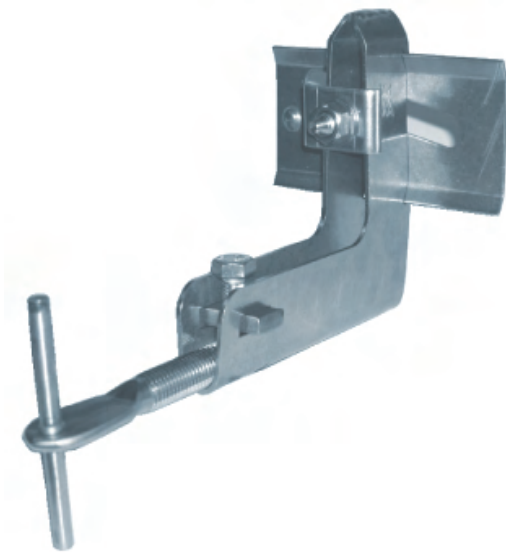
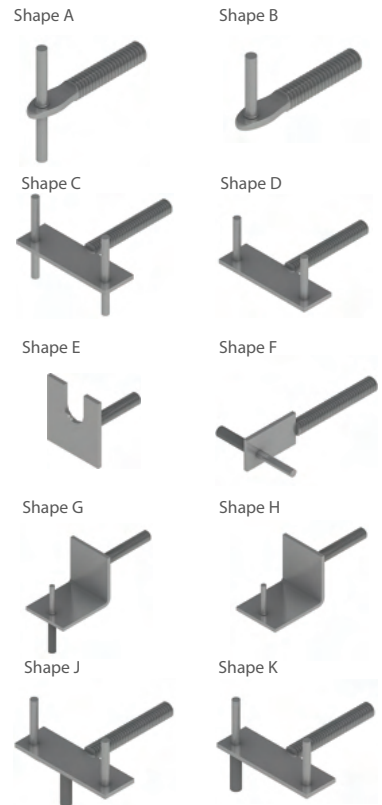


- Material: Stainless Steel 1.4301 (A2) & 1.4401 (A4)
- Table above is prepared according to Eurocode standards
- Loads stated are working resistance loads
- Other sizes are available for production upon request
- Bolts are provided separately
- Structural calculation reports are available upon order
- More information available in stone fixing systems technical catalogue

AXO Body Anchor fixing systems

- Direct fixing in to concrete walls with anchor bolts
- Indirect fixing on to sub channel systems with hex bolts or lock nuts
- Three dimensional adjustability - quick and easy fixing
- Installation at horizontal and vertical joints
- Optimum static performance for higher loads and larger projection sizes
- Recommended projection sizes up to 280 mm and loads up to 1300 N

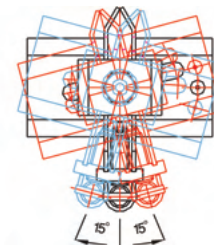
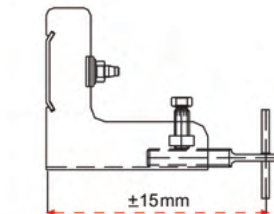
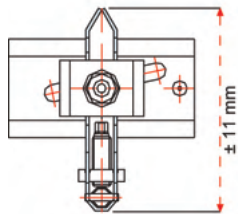
Adjustable Arm Variations



Set Elements

- 1- Through bolt
- 2- Wedge washer
- 3- Anchor body
- 4- Lock washer
- 5- Round washer for through bolt
- 6- Hex nut for through bolt
- 7- Locking plate
- 8- Hex bolt
- 9- Adjustable arm
- 10- Plastic tube
- 11- Flanged pin

Three dimensional adjustability

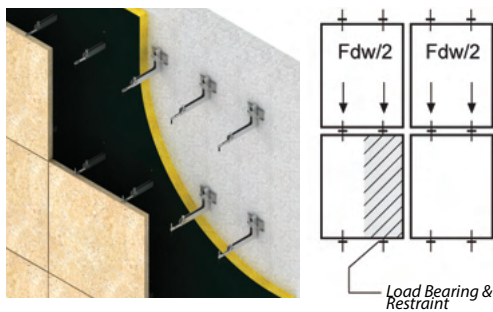


1) Vertical adjustment is provided through the body space. The anchor is fixed onto the bolt through the wedge washer and the lock washer at the desired level.

2) Adjusting the projection size by simply moving the adjustable arm without rotating. The adjustable arm is safely fixed to the anchor body with the lock nut and hex bolt.

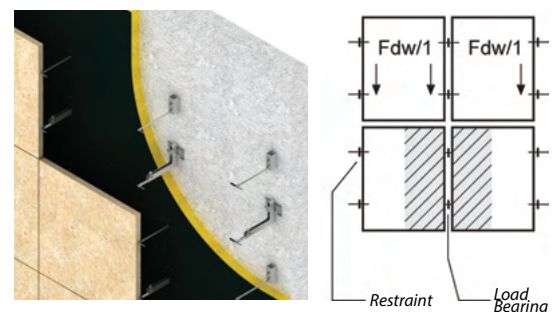
3) Adjusting the anchor left and right is provided by sliding the body up to 15 degrees left or right.

Installation at horizontal joints



When installing at horizontal joints, each anchor bears half the load of the stone panels. Anchors act as load bearing for the stone panels above and in the same time act as a restraint for the stone panels below.

Installation at vertical joints

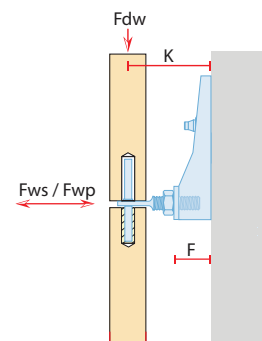


When installing at vertical joints, each anchor bears full load of the stone panels. Anchors below act as load bearing, which carries half the weight of the panel on the left and half the weight of the panel on the right. The anchors above act as restraint only.

AXO1 Body Anchor



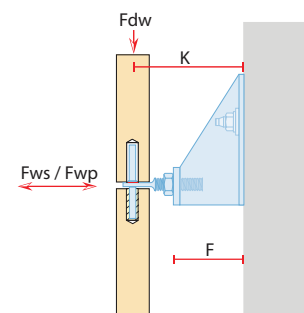
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
AXO1-705	60	500	780 / 546	F 20	M12x80	M8
AXO1-1105	85	500	780 / 546	F 60	M12x80	M8
AXO1-7013	120	400	2028 / 1419	F 20	M16x80	M10
AXO1-11013	160	600	2028 / 1419	F 60	M16x80	M10



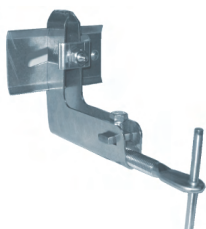
AXO2 Body Anchor



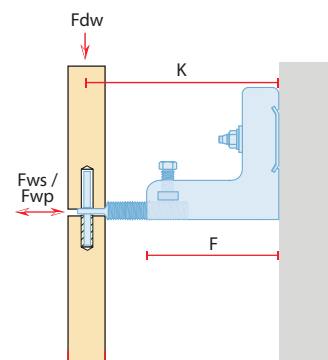
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
AXO2-1505	150	500	780 / 546	F 20	M12x80	M8
AXO1-15013	150	1300	780 / 546	F 60	M16x80	M10



AXO4 Body Anchor



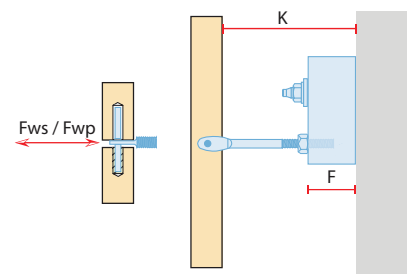
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Body size (mm)	Adj. arm (mm)	Bolt size (mm)
AXO4-1805	180	500	780 / 546	F 135	M12x100	M8x120
AXO4-2005	200	500	780 / 546	F 155	M12x100	M8x120
AXO4-2205	220	500	780 / 546	F 175	M12x100	M8x120
AXO4-2405	240	500	780 / 546	F 195	M12x100	M8x120
AXO4-2605	260	500	780 / 546	F 215	M12x100	M8x120
AXO4-1809	180	900	1430 / 1000	F 135	M12x100	M10x130
AXO4-2009	200	900	1430 / 1000	F 155	M14x100	M10x130
AXO4-2209	220	900	1430 / 1000	F 175	M14x100	M10x130
AXO4-2409	240	900	1430 / 1000	F 195	M14x100	M10x130
AXO4-2609	260	900	1430 / 1000	F 215	M14x100	M10x130
AXO4-18013	180	1.300	2028 / 1419	F 135	M16x100	M10x130
AXO4-20013	200	1.300	2028 / 1419	F 155	M16x100	M10x130
AXO4-22013	220	1.300	2028 / 1419	F 175	M16x100	M10x130
AXO4-24013	240	1.300	2028 / 1419	F 195	M16x100	M10x130
AXO4-26013	260	1.300	2028 / 1419	F 215	M16x100	M10x130



HRS3 Restraint Anchor



Product code	Projection K (mm)	Dead load Fwp/Fws (N)	Form size F (mm)	Adj. arm (mm)	Bolt size (mm)
HRS1-60	60	2028 / 1419	F 25	M8x50	M8x80
HRS1-80	80	2028 / 1419	F 25	M8x70	M8x80
HRS1-100	100	2028 / 1419	F 32	M8x80	M8x80
HRS1-120	120	2028 / 1419	F 32	M8x120	M8x80
HRS1-140	140	2028 / 1419	F 32	M8x120	M8x80
HRS1-160	160	2028 / 1419	F 32	M8x140	M8x80
HRS1-180	180	2028 / 1419	F 40	M8x150	M8x80
HRS1-200	200	2028 / 1419	F 40	M8x170	M8x80
HRS1-220	220	2028 / 1419	F 40	M8x190	M8x80
HRS1-240	240	2028 / 1419	F 50	M8x200	M8x80
HRS1-260	260	2028 / 1419	F 50	M8x220	M8x80



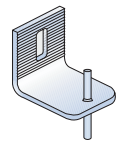
- Material: Stainless Steel 1.4301 (A2) & 1.4401 (A4).
- Table above is prepared according to Eurocode standards.
- Loads stated are working resistance loads.
- Other sizes are available for production upon request.
- Bolts are provided separately.
- Structural calculation reports are available upon order
- More information available in stone fixing systems technical catalogue

HA L Anchor fixing systems

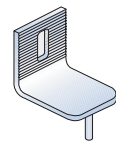
- Direct fixing into concrete walls with expansion bolts
- Indirect fixing onto sub channel system with hex bolts
- Economical & easy fixing
- Installation at horizontal joints only
- Adjustability provided through adjustable plates and slotted pin holes

Variations

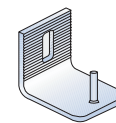
Shape A



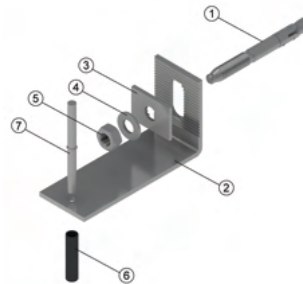
Shape C



Shape B



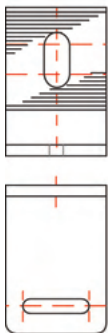
Shape D



Set Elements

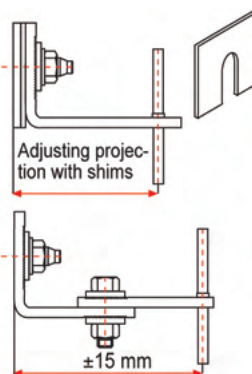
- 1- Through bolt
- 2- Anchor body
- 3- Serrated washer
- 4- Round washer for through bolt
- 5- Hex nut for through bolt
- 6- Plastic tube
- 7- Flanged pin

Adjustability



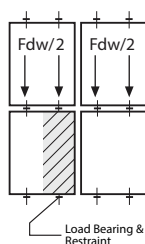
1. Vertical adjustment is made through the slot hole. The anchor is fixed on to the bolt with the serrated washer and nut.

2. A slot pin hole can be provided to enable lateral adjustment of the pin.



3. Greater projection sizes can be achieved by using shims. Shims are placed at the back of the anchor.

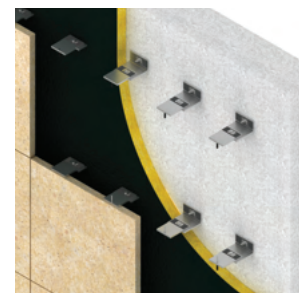
4. An adjustment plate is available in HA04 & HA05 type L anchors where adjustment of the projection size can be made.



• Anchors act as load bearing and restraint, carrying the slabs above and restraining the slabs below.



• When using HA01 & HA03 type anchors, adjustability for projection size can be done by inserting shims between the anchor and the wall.

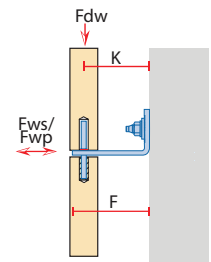


• When using HA04 type anchors, adjustability of the projection size is enabled with the adjustable plate, which is fixed to the body with hex bolts.

HA01 L Anchor



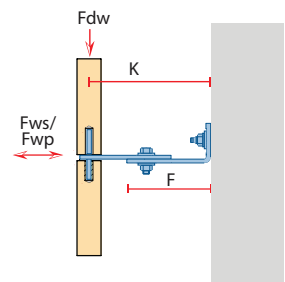
Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	F. pin size (mm)	Bolt size (mm)
HA01-302	30	200	312 / 219	F 36	Ø 5	M8
HA01-352	35	200	312 / 219	F 41	Ø 5	M8
HA01-402	40	200	312 / 219	F 46	Ø 5	M8
HA01-452	45	200	312 / 219	F 51	Ø 5	M8
HA01-502	50	200	312 / 219	F 56	Ø 5	M8
HA01-552	55	200	312 / 219	F 61	Ø 5	M8
HA01-304	30	400	624 / 437	F 36	Ø 5	M8
HA01-354	35	400	624 / 437	F 41	Ø 5	M8
HA01-404	40	400	624 / 437	F 46	Ø 5	M8
HA01-454	45	400	624 / 437	F 51	Ø 5	M8
HA01-504	50	400	624 / 437	F 56	Ø 5	M8
HA01-554	55	400	624 / 437	F 61	Ø 5	M8



HA03 L Anchor



Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	F. pin size (mm)	Bolt size (mm)
HA04-606	60	600	936 / 655	F 50	Ø 6	M12
HA04-806	80	600	936 / 655	F 60	Ø 6	M12
HA04-1006	100	600	936 / 655	F 70	Ø 6	M12
HA04-1206	120	600	936 / 655	F 90	Ø 6	M12
HA04-1406	140	600	936 / 655	F 110	Ø 6	M12
HA04-1606	160	600	936 / 655	F 130	Ø 6	M12
HA04-1806	180	600	936 / 655	F 150	Ø 6	M12
HA04-608	60	800	1235 / 865	F 50	Ø 6	M12
HA04-808	80	800	1235 / 865	F 60	Ø 6	M12
HA04-1008	100	800	1235 / 865	F 70	Ø 6	M12
HA04-1208	120	800	1235 / 865	F 90	Ø 6	M12
HA04-1408	140	800	1235 / 865	F 110	Ø 6	M12
HA04-1608	160	800	1235 / 865	F 130	Ø 6	M12
HA04-1808	180	800	1235 / 865	F 150	Ø 6	M12



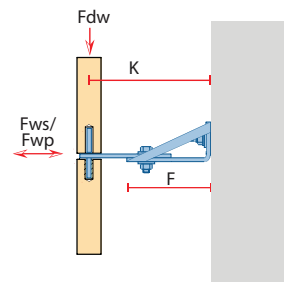
HA04 L Anchor



HA04-K L Anchor



Product code	Projection K (mm)	Dead load Fdw (N)	Wind load Fwp/Fws (N)	Form size F (mm)	F. pin size (mm)	Bolt size (mm)
HA05-2006	200	600	936 / 655	F 170	Ø 6	M12
HA05-2206	220	600	936 / 655	F 190	Ø 6	M12
HA05-2406	240	600	936 / 655	F 210	Ø 6	M12
HA05-2606	260	600	936 / 655	F 230	Ø 6	M12
HA05-2806	280	600	936 / 655	F 250	Ø 6	M12
HA05-2008	200	800	1235 / 865	F 170	Ø 6	M12
HA05-2208	220	800	1235 / 865	F 190	Ø 6	M12
HA05-2408	240	800	1235 / 865	F 210	Ø 6	M12
HA05-2608	260	800	1235 / 865	F 230	Ø 6	M12
HA05-2808	280	800	1235 / 865	F 250	Ø 6	M12



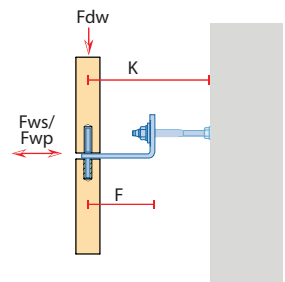
HA05 L Anchor



HAZ21 Restraint Anchor



Product code	Projection K (mm)	Wind load Fwp/Fws (N)	Form size F (mm)	F. pin size (mm)	Bolt size (mm)
HAZ21-S50C45	65	655	F 40	Ø 6	M6
HAZ21-S50C80	85	655	F 75	Ø 6	M6
HAZ21-S50C110	130	655	F 75	Ø 6	M6
HAZ21-S50C140	95	655	F 85	Ø 6	M6
HAZ21-S50C166	135	655	F 85	Ø 6	M6
HAZ21-S50C200	155	655	F 125	Ø 6	M6

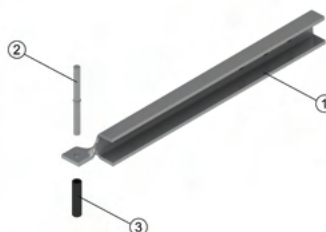
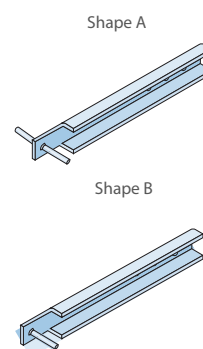


- Material: Stainless Steel 1.4301 (A2) & 1.4401 (A4)
- Table above is prepared according to Eurocode standards
- Loads stated are working resistance loads
- Other sizes are available for production upon request
- Bolts are provided separately
- Structural calculation reports are available upon order
- More information available in stone fixing systems technical catalogue

HDM Mortar Anchor fixing systems

- Direct fixing to concrete and masonry walls with mortar
- Economical & easy fixing
- Installation at vertical and horizontal joints
- Special design for installing heavy loads at large projection sizes

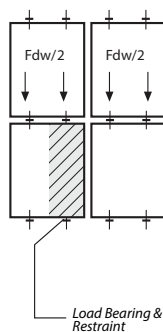
Variations



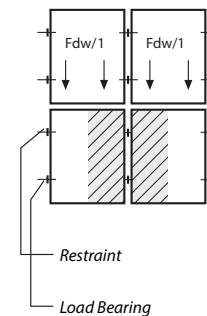
Set Elements

- 1- Anchor Body
- 2- Flanged pin
- 3- Plastic tube

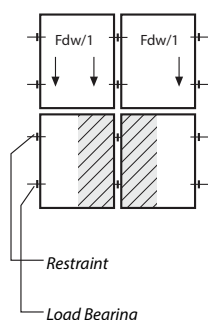
Installation at horizontal joints with BUG anchors



Installation at vertical joints with BTN & HG anchors



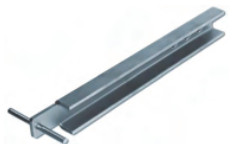
Installation at vertical joints with BUN & HG anchors



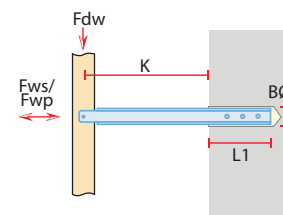
• In horizontal joint installation, slabs are pinned on the bottom and upper edges of the stone panels. Anchors act as load bearing, carrying half the weight of the slabs above. Anchors also act as restraint, restraining the slabs below and restraining against wind suction and pressure.

• In vertical joint installation, slabs are pinned at the left and right edges of stone panels. Anchors on the bottom are load bearing anchors, carrying the whole weight of the slab. Each anchor bears half the weight of the slab on the left and half the weight of the slab on the right. Anchors on the top are restraint anchors, restraining the slabs against wind suction and pressure.

BUN Mortar Anchor



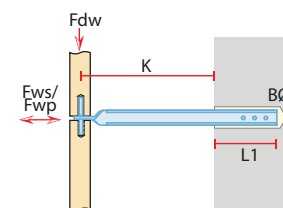
Product code	Projection K (mm)	Dead load F _{dw} (N)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size (mm)	Bore Dia. B Ø (mm)
BUN-622	220	600	393	80	Ø 5	34
BUN-624	240	600	393	80	Ø 5	38
BUN-816	160	800	524	80	Ø 5	32
BUN-818	180	800	524	80	Ø 5	32
BUN-820	200	800	524	80	Ø 5	32
BUN-822	220	800	524	80	Ø 5	36
BUN-824	240	800	524	80	Ø 5	36



BUG Mortar Anchor



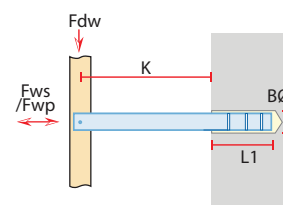
Product code	Projection K (mm)	Dead load F _{dw} (N)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size (mm)	Bore Dia. B Ø (mm)
BUG-616	160	600	571	80	Ø 5	32
BUG-618	180	600	571	80	Ø 5	32
BUG-620	200	600	571	80	Ø 5	34
BUG-622	220	600	571	80	Ø 5	34
BUG-624	240	600	571	80	Ø 5	36



BTN Mortar Anchor



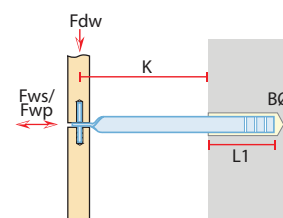
Product code	Projection K (mm)	Dead load F _{dw} (N)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size (mm)	Bore Dia. B Ø (mm)
BTN-416	160	400	260	80	Ø 5	36
BTN-418	180	400	260	80	Ø 5	38
BTN-420	200	400	260	80	Ø 5	40
BTN-422	220	400	260	80	Ø 5	36
BTN-424	240	400	260	80	Ø 5	36
BTN-616	160	600	393	80	Ø 5	39
BTN-618	180	600	393	80	Ø 5	41
BTN-620	200	600	393	80	Ø 5	42



BTG Mortar Anchor



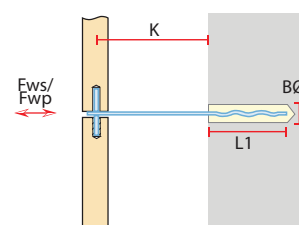
Product code	Projection K (mm)	Dead load F _{dw} (N)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size (mm)	Bore Dia. B Ø (mm)
BTG-316	160	300	393	80	Ø 5	30
BTG-318	180	300	393	80	Ø 5	32
BTG-320	200	300	393	80	Ø 5	32
BTG-322	220	300	393	80	Ø 5	34
BTG-324	240	300	393	80	Ø 5	34
BTG-516	160	500	655	80	Ø 5	34
BTG-518	180	500	655	80	Ø 5	36
BTG-520	200	500	655	80	Ø 5	38



HN Mortar Anchor Restraint anchor



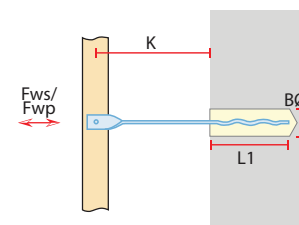
Product code	Projection K (mm)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size (mm)	Bore Dia. B Ø (mm)
HN & BTG-1016	160	500	80	Ø 5	21
HN & BTG-1018	180	500	80	Ø 5	21
HN & BTG-1020	200	500	80	Ø 5	21
HN & BTG-1022	220	500	80	Ø 5	24
HN & BTG-1024	240	500	80	Ø 5	26



BTG Mortar Anchor Restraint anchor



- Material: Stainless Steel 1.4301 (A2) & 1.4401 (A4)
- Table above is prepared according to Eurocode standards
- Loads stated are working resistance loads
- Other sizes are available for production upon request
- Structural calculation reports are available upon order
- More information available in stone fixing systems technical catalogue



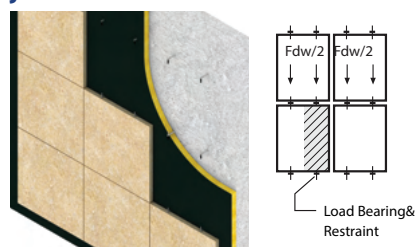
HSD Mortar Anchor fixing systems

- Direct fixing to concrete and masonry walls with mortar
- Economical & easy fixing
- Installation at vertical and horizontal joints

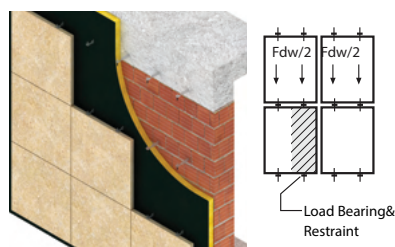
HSD01 Mortar Anchor HSD02 Mortar Anchor W. Plate HSD03 Mortar Anchor Twisted Head HSD04 Mortar Anchor W. Plate & Twisted HRD01 Mortar Anchor



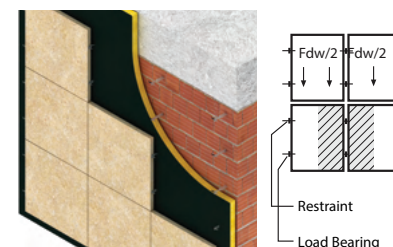
Installation at Horizontal joints with HRD01 Anchor



Installation at Horizontal joints with HSD04

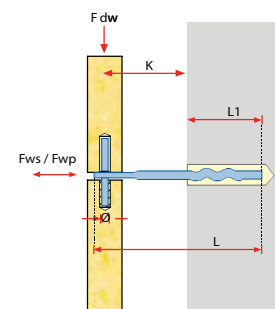


Installation at Vertical joints with HSD02&03



HRD01 Mortar Anchor

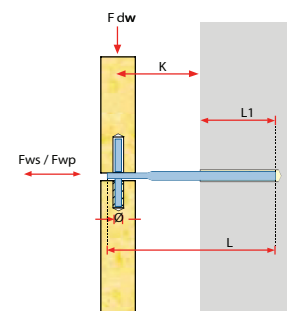
Product code	Projection K (mm)	Dead load F _{dw} (kN)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size Ø (mm)	Bore Dia. B Ø (mm)
HRD01-352	35	200	220	90	Ø 4	14
HRD01-452	45	200	220	90	Ø 4	14
HRD01-552	55	200	220	90	Ø 4	16
HRD01-652	65	200	220	90	Ø 4	16
HRD01-752	75	200	220	90	Ø 4	16
HRD01-354	35	400	430	90	Ø 5	18
HRD01-454	45	400	430	90	Ø 5	18
HRD01-554	55	400	430	90	Ø 5	18
HRD01-654	65	400	430	90	Ø 5	18
HRD01-754	75	400	430	90	Ø 5	18



- Available in stainless steel 1.4301-304 (A2) & 1.4401-316 (A4)
- Load bearing & restraint.
- Other sizes are available for production upon request
- Loads up to 400 N
- Stone thickness's 20-50 mm.
- Fastened into concrete ≥C20/25 and Masonry M12/II with mortar

HRD02-S Mortar Anchor

Product code	Projection K (mm)	Dead load F _{dw} (kN)	Wind load F _{wp} /F _{ws} (N)	Embed L ₁ (mm)	F. pin size Ø (mm)	Bore Dia. B Ø (mm)
HRD01-352	35	200	220	90	Ø 4	14
HRD01-452	45	200	220	90	Ø 4	14
HRD01-552	55	200	220	90	Ø 4	16
HRD01-652	65	200	220	90	Ø 4	16
HRD01-752	75	200	220	90	Ø 4	16
HRD01-354	35	400	430	90	Ø 5	18
HRD01-454	45	400	430	90	Ø 5	18
HRD01-554	55	400	430	90	Ø 5	18
HRD01-654	65	400	430	90	Ø 5	18
HRD01-754	75	400	430	90	Ø 5	18

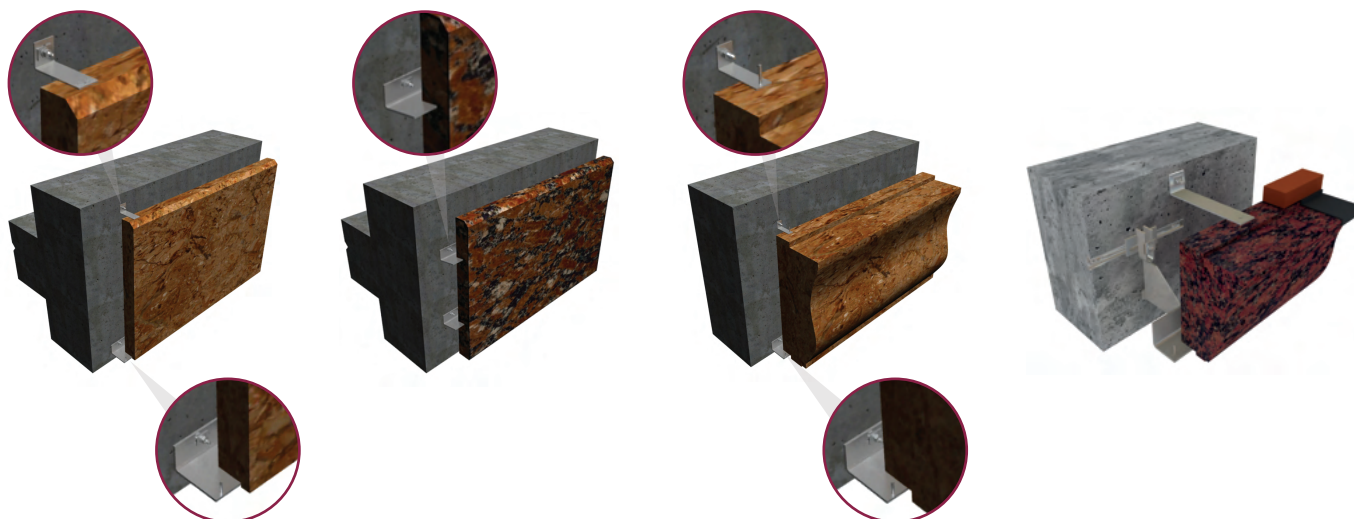


- Available in stainless steel 1.4301-304 (A2) & 1.4401-316 (A4)
- Load bearing & restraint
- Other sizes are available for production upon request
- Fastened into concrete ≥C20/25 and Masonry M12/II with chemical adhesive

Heavy duty corbel fixing systems - Overview

Fixing systems designed for installing high-load natural stone wall cladding are available in various types and size ranges. The specific system recommendation is tailored to the technical requirements of each project. These fixing systems are ideal for supporting high-load ashlar, coping and cornice stones. Load-bearing and restraint anchors are used to securely attach the high load slabs to different wall backings, utilizing a range of attachment methods such as connections with anchor bolts or to cast in channels.

Application Examples

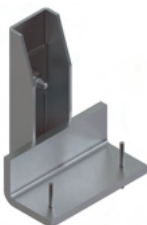


Load Bearing Anchors

FIX



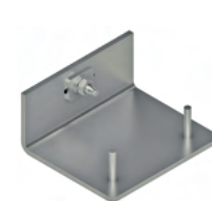
HMCS-SB/P



HMCS-DB



HAMF



Restraint Anchors

HA-RST



HA-RST/K



HA-RST/K B

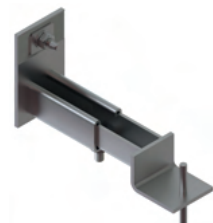


HAZ21



Periscope Anchors

HPC1



HPC2



HPC3

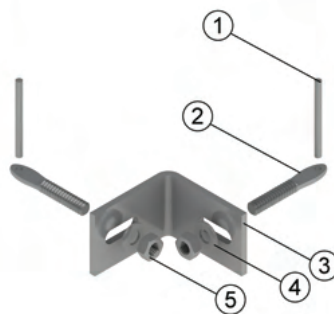


HPC4



HCA Corner anchor fixing systems

- For fixing small slabs on to supported facade slabs.
- Used for reveal, column, soffit and sill slabs.
- Slabs can be assembled in the work shop for faster installation on site.
- Special drilling is required on the slabs, details of which are shown at the bottom of the page.



Set Elements

- 1 - Straight pin
- 2 - Adjustable arm
- 3 - Anchor body
- 4 - Washer
- 5 - Hex nut

HCA01



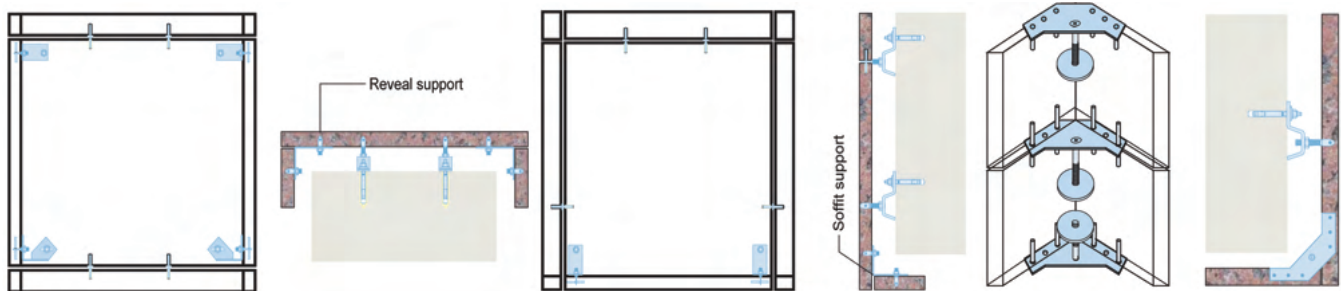
HCA02



HCA03

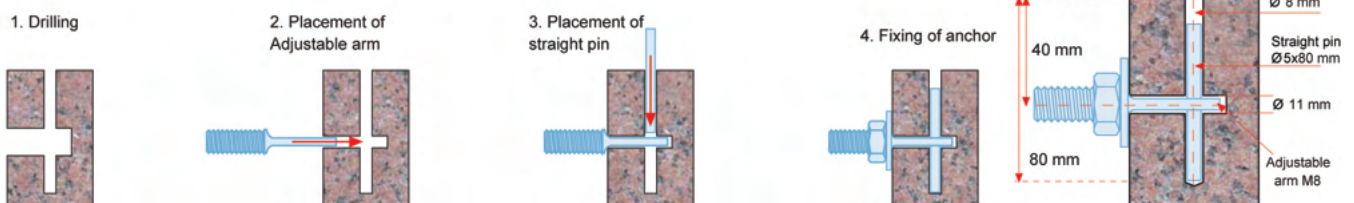


Application examples



Special Drilling for HCA01 & HCA02 Corner Anchors

Special drilling is done to the slabs at the upper face and at the back. The drilling must be done precisely as shown on the illustration. The adjustable arm inserted from the back of the stone meets the pin which is inserted from the edge surface of the stone.

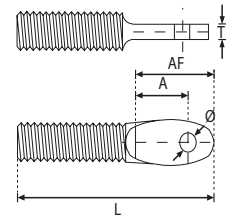


Accessories

HAA Adjustable Arm



Product Code	Metric Size M (mm)	Length L (mm)	Flat length Size AF (mm)	Flattening Thickness T (mm)	Pin Diameter Ø (mm)	Stone Thickness St (mm)	Distance Between Edge & Hole A (mm)
HAA-8/50	8	50	A+6	3	4	20	12-13
HAA-8/60	8	60	A+6	3	4	25	14-16
HAA-8/70	8	70	A+6	3	4	30	16-17
HAA-10/50	10	50	A+8	3.5	5	40	22-24
HAA-10/60	10	60	A+8	3.5	5	50	26-29
HAA-10/70	10	70	A+8	3.5	5		
HAA-10/80	10	80	A+8	3.5	5		
HAA-12/50	12	50	A+8	4.5	5		
HAA-12/60	12	60	A+8	4.5	5		
HAA-12/70	12	70	A+8	4.5	5		
HAA-12/80	12	80	A+8	4.5	5		
HAA-14/50	14	50	A+8	5.5	6		
HAA-14/60	14	60	A+8	5.5	6		
HAA-14/70	14	70	A+8	5.5	6		
HAA-14/80	14	80	A+8	5.5	6		
HAA-16/50	16	50	A+8	6	6		
HAA-16/60	16	60	A+8	6	6		
HAA-16/70	16	70	A+8	6	6		
HAA-16/80	16	80	A+8	6	6		



Type B : With Welded Pin Type C : With Welded Plate Type D : With Welded Plate & Pins Type E : With Welded Shim



HFP Flanged Pin



Product Code	Diameter Ø (mm)	Length L (mm)	Flange Diameter FØ (mm)
HFP-4/50	4	50	5
HFP-5/60	5	60	6
HFP-5/70	5	70	6
HFP-6/70	6	70	7

HSW Serrated Washer



Product Code	Thickness T (mm)	Height H (mm)	Width W (mm)	Length L (mm)
HSW-22307	2.5	22	30	Ø7
HSW-22309	2.5	22	30	Ø9
HSW-263411	3	26	34	Ø11
HSW-263413	3	26	34	Ø13

HTP Traced Pin



Product Code	Diameter Ø (mm)	Length L (mm)	Trace Height TH (mm)
HTP-5/70	5	70	5.2
HTP-6/75	6	75	6.2

HPW Plain Washer



Product Code	Thickness T (mm)	Height H (mm)	Width W (mm)	Length L (mm)
HPW-22307	2.5	22	30	Ø7
HPW-22309	2.5	22	30	Ø9
HPW-263411	3	26	34	Ø11
HPW-263413	3	26	34	Ø13

HSP Straight Pin



Product Code	Diameter Ø (mm)	Length L (mm)
HSP-4/60	4	60
HSP-5/60	5	60
HSP-5/70	5	70
HSP-6/70	6	70

HMLN Lock Nut



Product Code	Thickness T (mm)	Height H (mm)	Width W (mm)	Metric Hole M (mm)
HMLN-6	6	20	34	M6
HMLN-8	8	20	34	M8
HMLN-10	9	20	34	M10
HMLN-12	10	20	34	M12

HUP U Shaped Pin



Product Code	Diameter Ø (mm)	Height L (mm)	Width W (mm)
HUP-4/50	4	20	50
HUP-5/50	5	25	50
HUP-6/50	6	30	50

HSM Shim Plate



Product Code	Thickness T (mm)	Height H (mm)	Width W (mm)	Slot Hole Ø x SL
HSM-4030-7	2	40	30	7x20
HSM-4030-9	2	40	30	9x25
HSM-4050-11	3	40	50	11x25
HSM-4050-13	4	40	50	13x30

HCP Capped Pin



Product Code	Diameter Ø (mm)	Cap Diameter ØC (mm)	Length L (mm)
HCP-4/35	4	6	35
HCP-5/40	5	7	40
HCP-6/45	6	8	45

HPT Plastic Tube



Product Code	Inner Diameter In. Ø (mm)	Outer Diameter Ou. Ø (mm)	Length L (mm)
HPT-4	4.5	6	30
HPT-5	5.5	7	40
HPT-6	6.5	8	40

- Material : Stainless Steel 1.4301-304 (A2) & 1.4401-316 (A4). Material for Plastic Tube: Polyacetal.
- Other sizes are available for production upon request.

Stone Fixing Anchor Systems Summary

HAZ Metal product range offers all the possible stone fixing methods that are available in the industry. It is the company's objective to offer the most suitable and economic solutions for stone fixings.

HAZ Design department designs and propose bespoke system solutions for the requirement of each project.

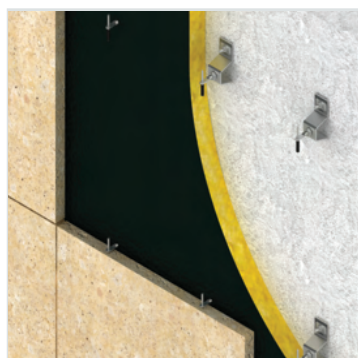
Further Systems details are also available as concept drawings which include sections, plan and elevation details which illustrate fixing details of the HAZ system.

A comprehensive Stone Fixing Systems Technical Product Catalog is available to download from our web site.



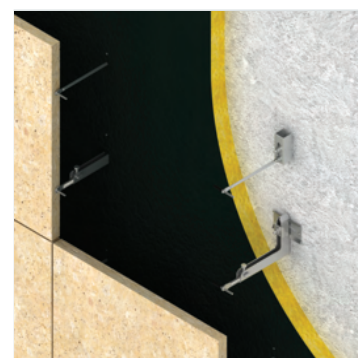
Stone Fixing Systems Technical catalogue is downloadable at www.hazmetal.com

HZ Z Anchors



- Fixing to substrate with anchor bolts
- Projection sizes up to 150 mm
- Recommended for loads up to 800N
- Installation at horizontal or vertical joints
- Three dimensional adjustability

AXO Body Anchors



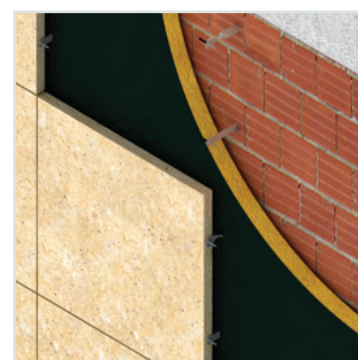
- Fixing to substrate with anchor bolts
- Projection sizes up to 280 mm
- Recommended for loads up to 1300 N
- Installation at horizontal or vertical joints
- Optimum static performance
- Three dimensional adjustability

HA L Anchors



- Fixing to substrate with anchor bolts
- Can be used for stone thickness's higher than 50 mm
- Various types to enable adjustability
- Installation at horizontal joints only

HDM Mortar Anchors



- Fixing to substrate with mortar
- Projection sizes up to 240 mm
- Recommended for loads up to 1200 N
- Installation at horizontal or vertical joints
- Three dimensional adjustability



Demir Bank, Istanbul



Adnoc HQ, Abu Dhabi



Chelsea Barracks, London



Eschborn Plaza, Frankfurt



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