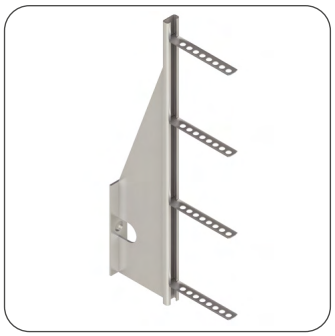
Brick Restraint Systems
Technical Catalogue
HAZ-BR-EN/05.26

HAZ METAL

Your Fixing Systems Specialist





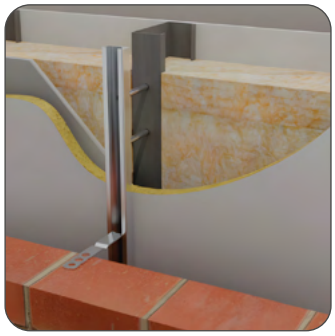


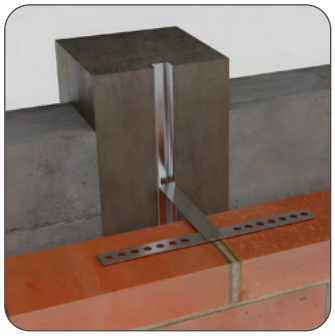


Brick Restraint Systems

Product Technical Catalogue





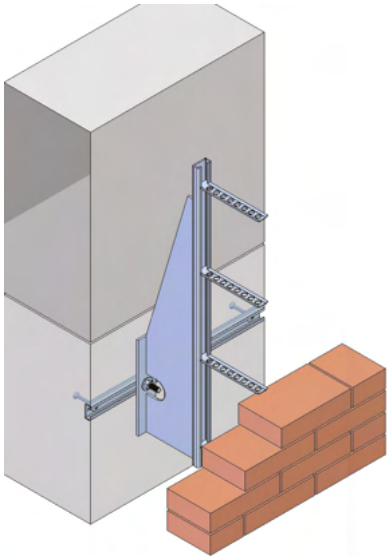




HMS-AV Special Restraint Channel - Product Details

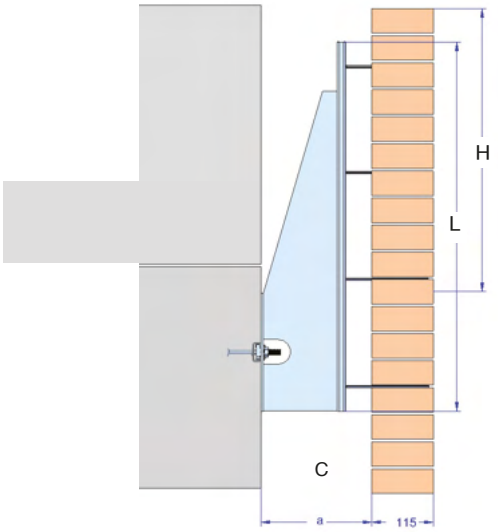
Flat reinforced concrete roof tops can deform due to the effects of weather, thermal and mechanical loading. For this reason, reinforced concrete flat roofs are supported on sliding bearings on the lower walls. Brickwork wall claddings in front of these walls will not be able to absorb the deformations caused in the structure without being damaged. Brickwork walls that extend right up to the roof must not be connected on to the roof side walls.

A special restraint channel is the solution to this problem. A 28/15 channel that is welded with plates that are designed to be fixed on the load bearing beams with two connections can be used to restrain the brick walls. HWT-M wall ties are used to restrain the brick wall and can be positioned anywhere along the length of the channels.



HMS-AV
Special Restraint Channel





Product Code	Technical Details				
	Cavity	Length	Useful Height	Wall Tie Quantity	Wall Tie Types
	C (mm)	L (mm)	H (mm)	(pcs)	
HMS-AV-600-80	80	600	440-550	3	HWT-M-28-85
HMS-AV-600-90	90				HWT-M-28-120
HMS-AV-600-145	145				HWT-M-28-180
HMS-AV-850-80	80	850	650-800	4	HWT-M-28-85
HMS-AV-850-90	90				HWT-M-28-120
HMS-AV-850-145	145				HWT-M-28-180
HMS-AV-1100-80	80	1100	900-1000	5	HWT-M-28-85
HMS-AV-1100-90	90				HWT-M-28-120
HMS-AV-1100-145	145				HWT-M-28-180

HMS-AV Special Restraint Channel

This restriant channel is fixed on the concrete wall with anchor channels or expansion bolts. The offset size of the special channel is 75 mm. There are other sizes available upon request.

Product Code Description

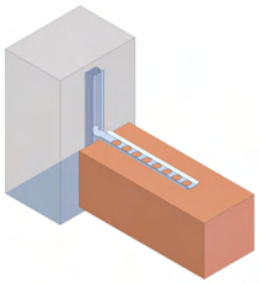
HMS-AV - 600 / 80

- HMS-AV - Type
- 600 - Useful height (mm)
- 80 - Cavity (min. mm)

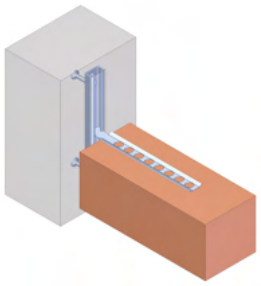
HMP Brickwork Wall Tie Channels - Product Details

Brickwork wall tie channels and suitable wall ties are used in combination for restraining outer skin brickwork walls. This system ensures the durable and reliable connection of the brickwork wall easily and efficiently. The wall ties can be positioned anywhere along the length of the channel. Fixing is done by inserting the wall ties in to the slot of the channel and then turning them 90 degrees to effectively locking the wall tie in to the channel. There are different types of channels available that can be cast in and also surface mounted.

HMPR-25/15 & 28/28 Insert

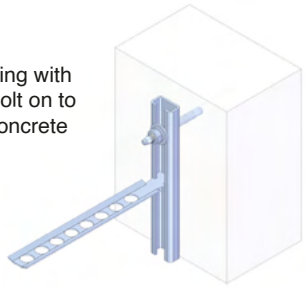


HMPR-28/15 & 38/17 Anchor Channel

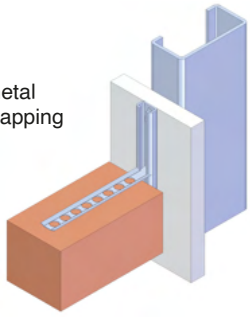


HMP-28/15 & 38/17 C Channels

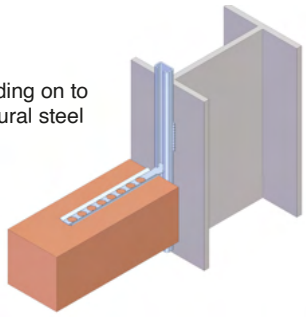
• Surface fixing with expansion bolt on to reinforced concrete walls

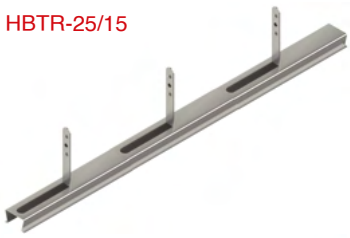


• Fixing on to metal studs with self tapping screws



• Welding on to structural steel



Product Code		Technical Details		
		Section Size (mm)	Allowable Pull Out Load At A Distance Of 250 Mm all F (kN)	Wall Tie Type
HBTR-25/15 	HBTR-25/15 Anchor Channel	25/15	1.2	HWT-M-28
	HMPR-28/15 Anchor Channel	28/15	3.0	
HMPR-28/15 & HMPR-38/17 	HMPB-28/15 Surface Channel	28/15	3.0	
	HMPR-38/17 Anchor Channel	38/17	4.5	HWT-M-38
HMPB-38/17 	HMPB-38/17 Surface Channel	38/17	4.5	

HMP Brickwork Wall Tie Channels

Wall Tie Channels are supplied in 3 and 6 metre lengths as standard. Special lengths can be cut according to project requirements. Channels are available in stainless steel and galvanized steel.

Product Code Description

HMPR - 28/15 -1500

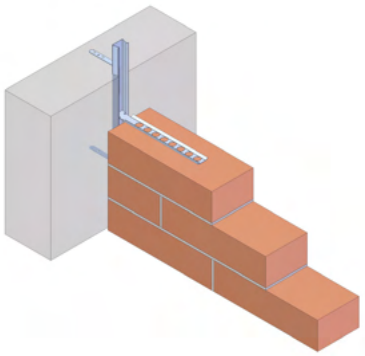
- Length
- Section
- Type

HWT-M Brickwork Wall Ties

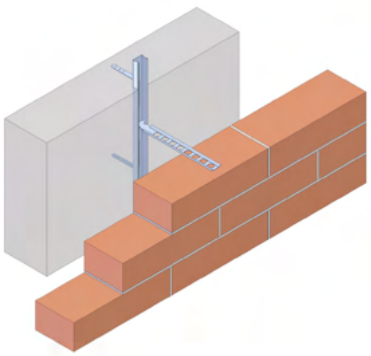
The HWT-M Brickwork wall ties are used in combination with channels for restraining brickwork walls. The wall ties are inserted any where along the channel and pressed into the bearing joint mortar of the work at recommended distances.

The type of wall ties varies according to the corresponding channel type of 28/15 or 38/17 and in the overall length of the wall tie.

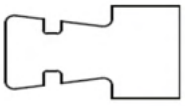
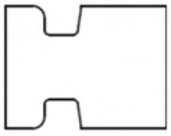
The HWT-M wall ties can be used to connect brick walls and outer shell brick facing on to reinforced concrete walls.



• Connection of brick walls to reinforced concrete walls.



• Connection of outer brick facing facades to reinforced concrete walls.

Product Code		Technical Details			
		Length	Size	Corresponding Channels	Wall Tie Head
		L (mm)	txw (mm)		
HWT-MS 	HWT-MS 28-85	85	2x26	HMPR-25/15 HMPR-28/15 HMPB-28/15	Suitable for 25/15 & 28/15 channel 
	HWT-MS 28-120	120			
	HWT-MS 28-180	180			
	HWT-MS 38-85	85	2x30	HMPR-38/15 HMPB-38/15	
	HWT-MS 38-120	120			
	HWT-MS 38-180	180			
HWT-ML 	HWT-ML 28-85	85	2x26	HMPR-25/15 HMPR-28/15 HMPB-28/15	
	HWT-ML 28-120	120			
	HWT-ML 28-180	180			
	HWT-ML 38-85	85	2x30	HMPR-38/15 HMPB-38/15	
	HWT-ML 38-120	120			
	HWT-ML 38-180	180			
HWT-MT 	HWT-MT 28-85	85	2x26	HMPR-25/15 HMPR-28/15 HMPB-28/15	Suitable for 38/17 channel 
	HWT-MT 28-120	120			
	HWT-MT 28-180	180			
	HWT-MT 38-85	85	2x30	HMPR-38/15 HMPB-38/15	
	HWT-MT 38-120	120			
	HWT-MT 38-180	180			

HWT Wall Ties

This brickwork support bracket has a single welded plate used for independent installation of each brick block. This bracket is used for closed surface elevation brick cladding.

Product Code Description

HWT-M - 28 - 85

- 85 — Length
- 28 — Channel Type
- HWT-M — Type

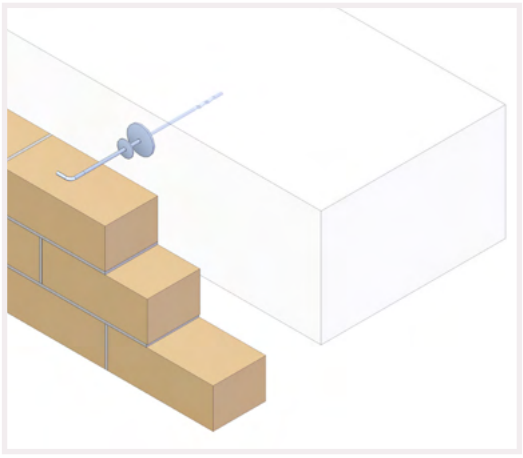
HRST Restraining Tie - Product Details

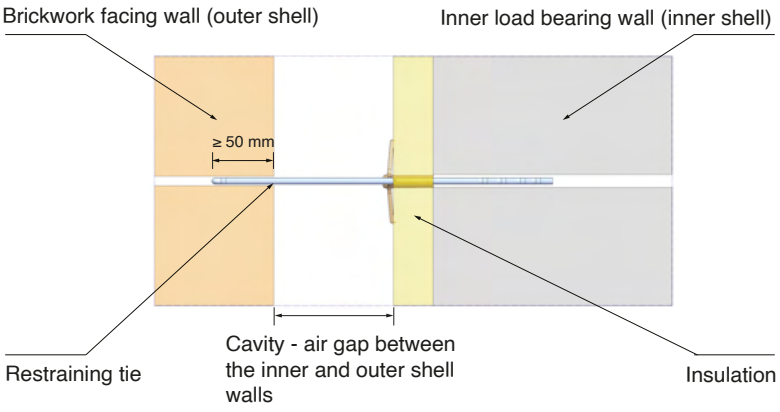
Brickwork walls are constructed of an outer shell which is thin and must be restrained against buckling. The wind loads must also be transferred on to the load bearing walls. Depending on the material used to construct the inner load bearing wall, suitable restraining ties are used in restraining the outer shell brickwork walls on to inner load bearing walls. HRST restraining ties can be securely and reliably used to restrain the brickwork walls against horizontal loads. These ties are made out of round steel and have wavy forms for embedding into mortar joints. There are two versions that are used for brickwork load bearing walls and concrete load bearing walls.

HRST-C Restraining Tie



HRST-M Restraining Tie





Product Code		Technical Details				
		Length (mm)	Cavity (mm)	Diameter (mm)	Application Area: Internall Wall	Application Area: External Wall
	HRST-M-225-4	225	up to 100	4.0	Brickwork wa	Brickwork Wall
	HRST-M-250-4	250	up to 125	4.0		
	HRST-M-275-4	275	up to 150	4.0		
	HRST-M-300-4	300	up to 175	4.0		
	HRST-M-340-4	340	up to 215	4.0		
	HRST-C-160-4	160	up to 25	4.0	Concrete B15	Brickwork Wall
	HRST-C-180-4	180	up to 45	4.0		
	HRST-C-210-4	210	up to 75	4.0		
	HRST-C-250-4	250	up to 115	4.0		
	HRST-C-275-4	275	up to 140	4.0		
	HRST-C-300-4	300	up to 165	4.0		
	HRST-C-320-4	320	up to 185	4.0		
	HRST-C-350-4	350	up to 200	4.0		

HRST Restraining Ties

The restraining ties are used for restraining the brick facing outer shell walls against wind pressure and suction

Product Code Description

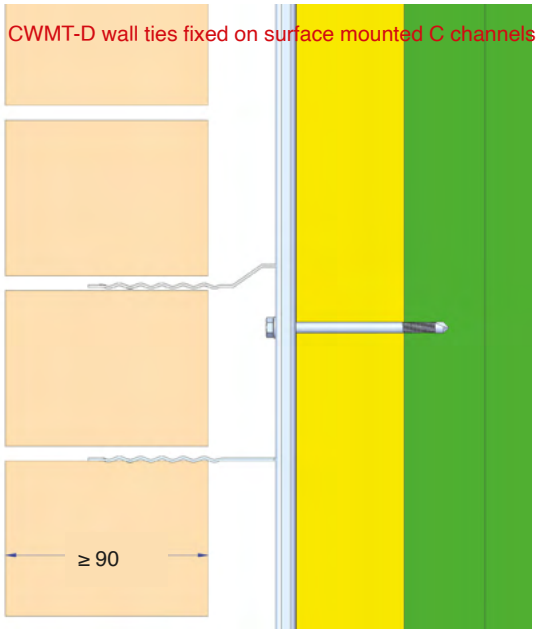
HRST-M -250 - 4

- 4 — Diameter
- 250 — Length (mm)
- HRST-M — Type

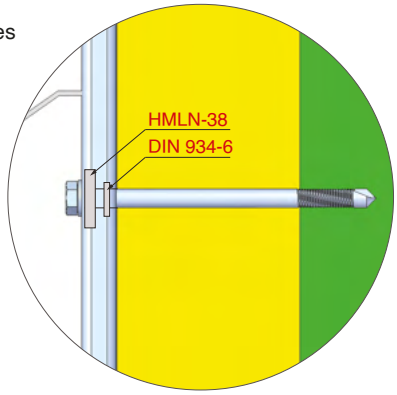
CWMT Brickwork Corrugated Wall Tie

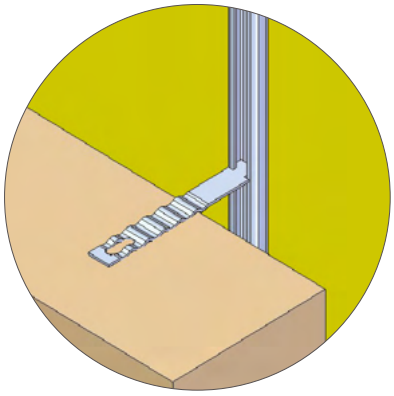
CWMT-D Brickwork Wall Tie





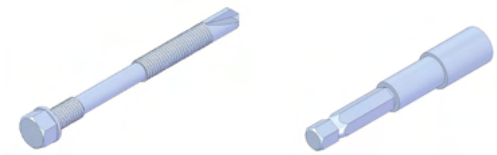
- Corrugated tir provides multiple drips to prevent moisture bridging cavity
- Provides lateral restraint for wind pressure & suction on brick work without transferring loads on to insulation
- Fixed on to 38/17 cast-in or surface fixed channels
- Positioning any where along the length of the channels
- Available in lengths between 75 and 250 mm
- Tensile loading is 0.7 kN per 600 mm screw centres



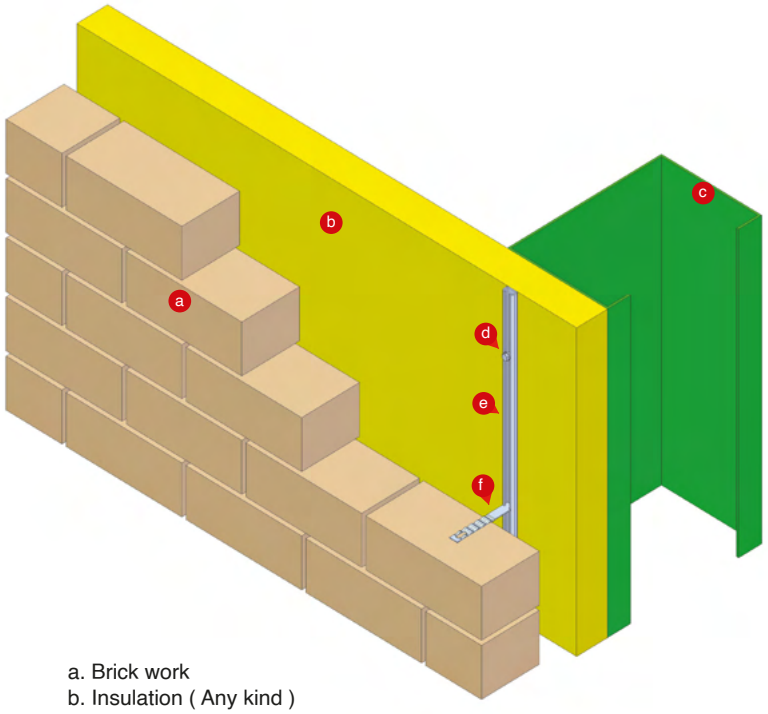


Product Code	Length
CMWT-D-75	75
CMWT-D-100	100
CMWT-D-125	125
CMWT-D-150	150
CMWT-D-200	200
CMWT-D-225	225
CMWT-D-250	250

HJT Self Tabbing Screw



- Self tapping screws with drill adaptor used for quick and easy fixing of surface channels on to metal studs



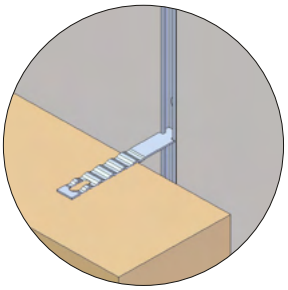
Product Code	Dimensions	Description	Insulation Thickness
For steel sections 1.5-6 mm thickness			
HJT-3-70	5.5x70	Un-washered	20-50
HJT-3-90	5.5x90		40-70
HJT-3-110	5.5x110		60-90
HJT3-130	5.5x130		80-110
For steel sections 1.5-6 mm thickness			
HJT2-120	6x120	Washered	55-105
HJT2-140	6x140		75-125
HJT2-160	6x160		95-145

a. Brick work
b. Insulation (Any kind)
c. Steel section
d. HJT Self tabbing screws
e. HMPC-38/17 Surface channel
f. CMWT-D Corrugated wall tie

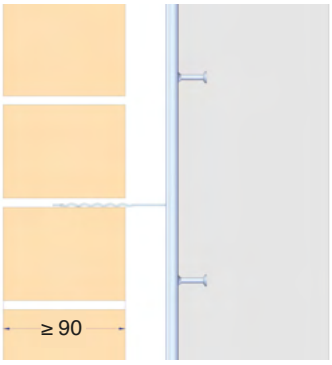
CWMT Brickwork Corrugated Wall Tie

CWMT-C Brickwork Wall Tie



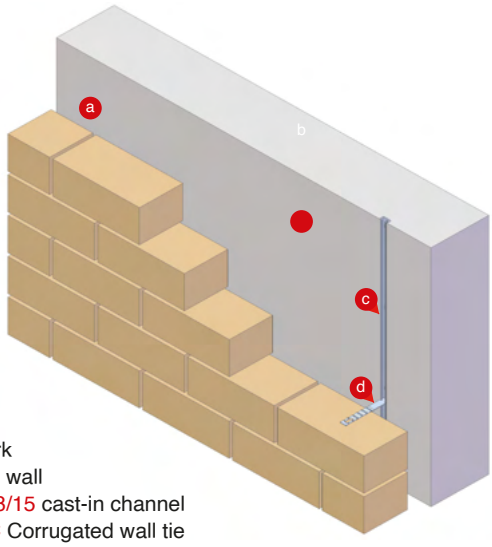


CWMT-D wall ties fixed on cast in channels



- Fixed on to 38/17 cast-in or surface fixed channels
- Positioning any where along the length of the channels
- Available in lengths between 75 and 250 mm
- Tensile loading is 1.0 kN

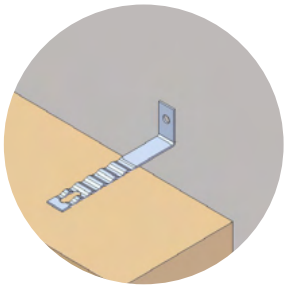
Product Code	Length
CMWT-C-75	75
CMWT-C-100	100
CMWT-C-125	125
CMWT-C-150	150
CMWT-C-200	200
CMWT-C-225	225
CMWT-C-250	250



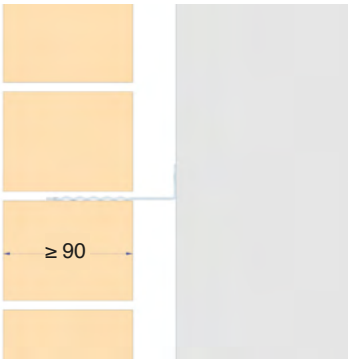
a. Brick work
b. Concrete wall
c. HMPR-28/15 cast-in channel
d. CMWT-C Corrugated wall tie

CWMT-B Brickwork Wall Tie



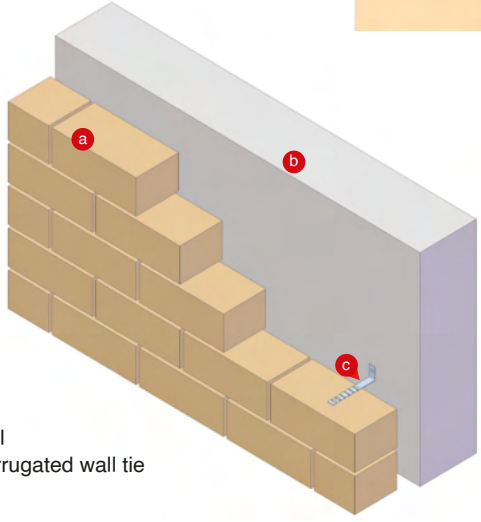


CWMT-B wall ties fixed on cast in channels



- Fixed on to concrete and brickwork walls with facade plugs
- Can be riveted or welded on to structural steel as well
- Available in lengths between 75 and 250 mm
- Tensile loading is 1.0 kN

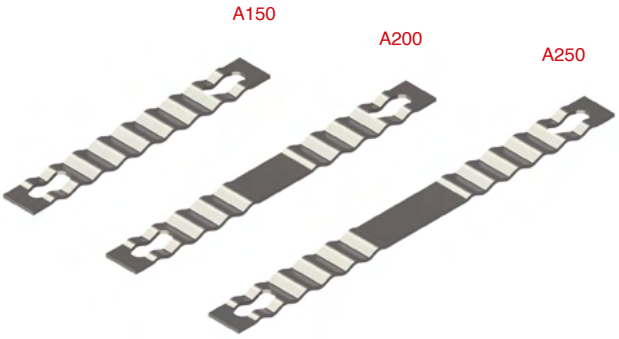
Product Code	Length
CMWT-B-75	75
CMWT-B-100	100
CMWT-B-125	125
CMWT-B-150	150
CMWT-B-200	200
CMWT-B-225	225
CMWT-B-250	250

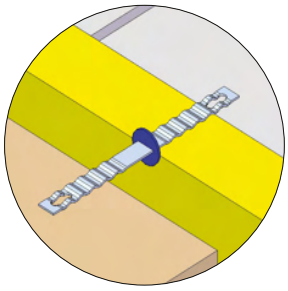


a. Brick work
b. Concrete wall
c. CMWT-B Corrugated wall tie

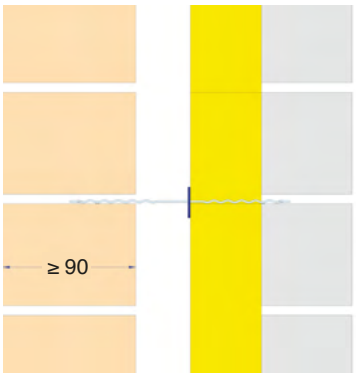
CWMT Brickwork Corrugated Cavity Wall Ties

CWMT-A Brickwork Wall Tie



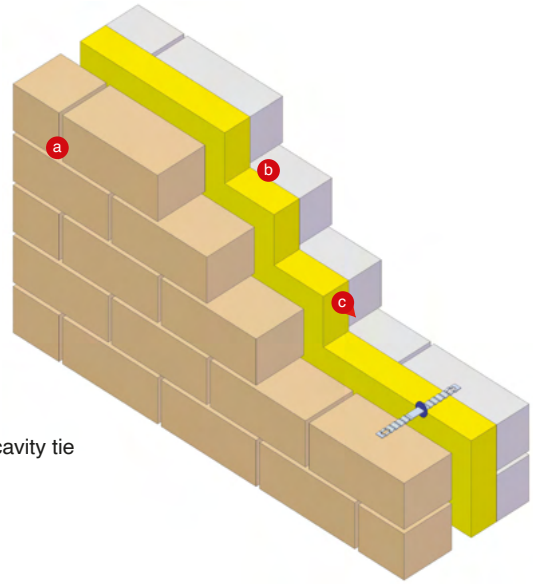


CWMT-A wall ties connected between inner and outer shell walls



- Fixed on to both inner and outer shell walls with mortar
- Quick and easy to install
- Available in 150 , 200 and 250 mm
- Can be supplied in stainless steel and galvanized steel

Product Code	Length
CMWT-A-150	150
CMWT-A-200	200
CMWT-A-250	250



a. Brick work
b. Concrete wall
c. CMWT-A Corrugated cavity tie

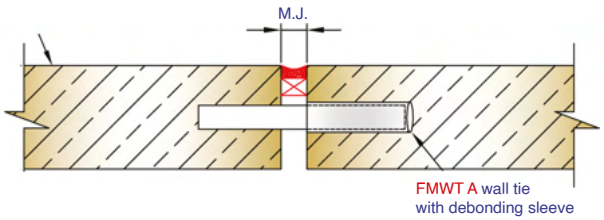
FMWT Brickwork Wall Ties For Expansion Joints

- Wall ties supplied with debonding sleeves
- Used on expansion joints where the debonding sleeves allow movement
- Available to fit the range of the CWMT wall ties

FMWT A Wall Tie



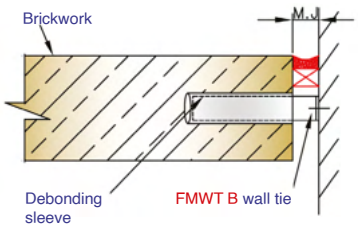
Brickwork Product Code	Length
FMWT-A-225	225



FMWT B Wall Tie



Product Code	Length
FMWT-B-125	125

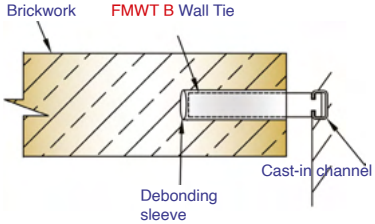


FMWT C Wall Tie



M.J.

Product Code	Length
FMWT-C-28-125	125
FMWT-C-38-125	125



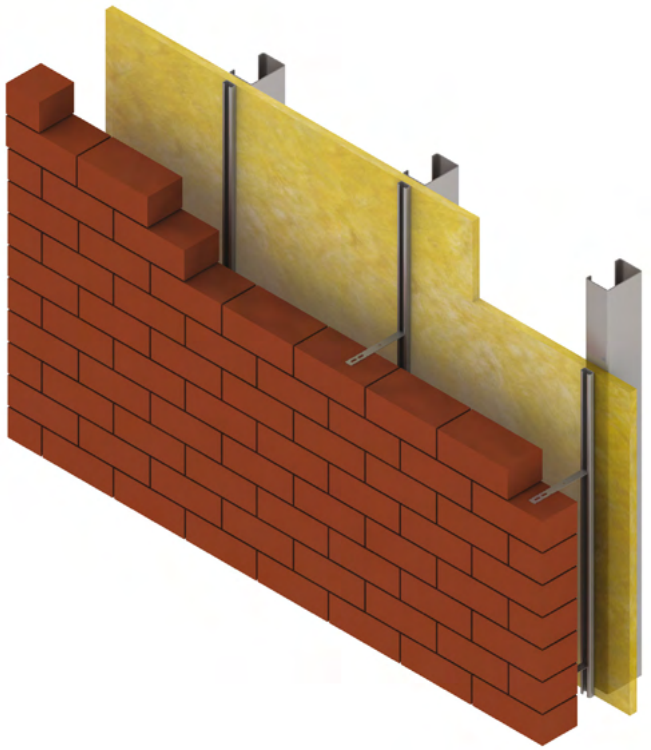
HMP-25/14 Brick Restraining System

Brickwork restraint channels type HMP-25/14 and the corresponding channel ties type HWT-D-25 are used to tie back the outer leaf brick cladding wall on to a building substrate. The substrate can be either concrete or steel stud.

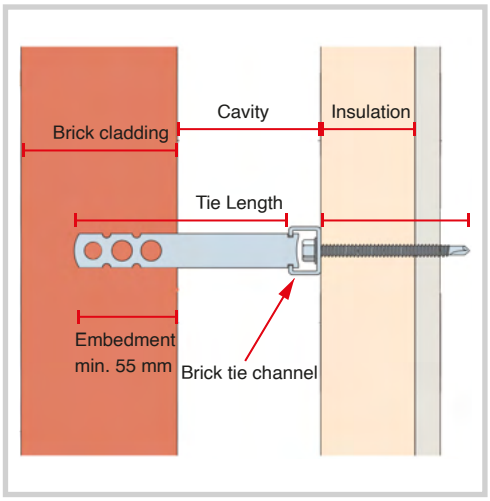
The attachment of the HMP-25/14 brick tie channel is done with a suitable screw that drills through any type of insulation up to 220 mm thickness. The channels have pre-drilled holes with spacing of 100 mm. Self drilling screws to drill and tab into light cauge steel studs or concrete screws that drills to concrete are used for easy and fast attachments of the brick tie channel.

HWT-D-25 channel ties are available to suit cavities up to 265 mm. The channel ties fit on to the channel by rotating 90 degrees and easily positioned in any location along the lenght of the channel.

Compression sleeves are supplied in instances where the restraint system has to be stiffened against high compression loads. The components can be supplied are stainless steel grade AISI 304 and AISI 316.



HMP-25/14 & HWT-D-25 Installation plan





System Components:

- HMP-25/14 Channel in 2700 mm and 3000 mm as standard lengths.
- Threaded fixing screws available for light gauge steel and concrete. Screws can drill through insulation up to 220 mm thick.
- HWT-D-25 channel ties in different length to accommodate up to 259 mm open cavity.
- Compression sleeves supplied to correspond with the insulation thickness for enabling stability of the restraint system under compression load.
- All components are stainless steel grade AISI 304 - 1.4301& AISI 316 - 1.4401

Wall Tie Types as per reference to PD 6697 and BS EN 1991-1-4

Required wall tie type	Application	Building height (m)	Geographical Location
Type 1	Heavy duty tie, suitable for most building types	Any height	Suitable for most sites. However, for relatively small or unusually shaped buildings in vulnerable areas, tie provision should be calculated
Type 2	General purpose tie, suitable for residential and small commercial buildings	15	Suitable for flat sites where basic wind speed is up to 31m/s and altitude is not more than 150m above sea level
Type 3	Basic wall ties, suitable for residential and small commercial buildings	15	Suitable for flat sites in towns/cities where basic wind speed does not exceed 27m/s and altitude is not more than 150m above sea level
Type 4	Light duty tie, suitable for box-form domestic dwellings	10	Suitable for flat sites in towns/cities where basic wind speed does not exceed 27m/s and altitude is not more than 150m above sea level

Notes: Refer to PD 6697: 2010 and BS EN 1991-1-4: 2005 for complete information.

HMP-25/14 Restriant System Performance Details

Insulation thickness (mm)	Vertical Tie Spacing (mm)	Spacing of the Fixings (mm)	Wind Load Capacity (kN/m2)
Max. 220	300	400	3.31
Max. 220	375	400	2.65
Max. 220	450	400	2.21
Max. 220	675	400	1.58

Notes: Centres shown achieve equivalent tie type performances to PD 6697 6.2.2.5

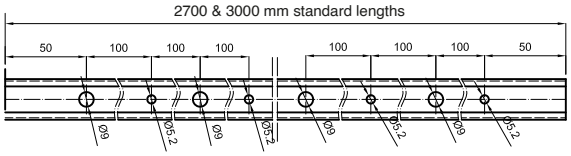
HMP-25/14 Brick Restraining System

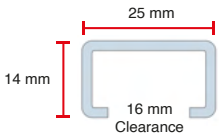
HMP-25/14 Brick Tie Channel



HMP-25/14 Brick Tie Channel Product Details		
Product Code	Channel Length (mm)	Drilled hole spacing (mm)
HMP-25/14-2700	2700	100
HMP-25/14-3000	3000	100

• Stainless steel AISI 304





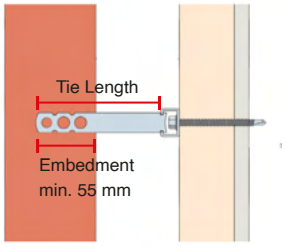
• Channels are available in 2700mm & 3000 mm lengths as standard.
• Pre-drilled holes are at 100 mm spacings with a 5.2 mm diameter hole and a 9 mm diameter holes.
• Different holes diameters to accommodate different types of fixings.

HWT-D-25 Channel Tie



HWT-D-25 Channel Ties Product details		
Product Code	Tie Length (mm)	Cavity (mm)
HWT-D-25-100	100	40-60
HWT-D-25-125	125	60-90
HWT-D-25-150	150	90-110
HWT-D-25-175	175	110-140
HWT-D-25-200	200	140-170
HWT-D-25-225	225	165-190
HWT-D-25-250	250	190-215
HWT-D-25-275	275	215-240
HWT-D-25-300	300	240-265

• Stainless steel AISI 304



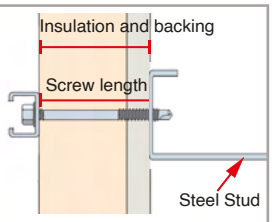
• Ties available in various lengths to accommodate the wall cavity.
• Ties lock in to channel after rotating the toes 90 degrees.
• Min embedment in to mortar should be 55 mm.

JT2 D6 Self drilling screw



JT2-5.5/6.3 Self Drilling Screws			
Product Code	Screw Length (mm)	Overlay (mm)	Insulation & backing thickness (mm)
JT2 D6 5.5/6.3-62	62	30	25-45
JT2 D6 5.5/6.3-82	82		35-60
JT2 D6 5.5/6.3-102	102		45-80
JT2 D6 5.5/6.3-122	122		60-95
JT2 D6 5.5/6.3-135	135		65-110
JT2 D6 5.5/6.3-152	152		80-125
JT2 D6 5.5/6.3-192	192		130-175
JT2 D6 5.5/6.3-262	262		175-220

• Stainless steel AISI 304



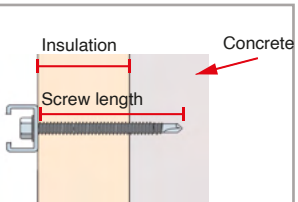
• Tabbing screws enable installation on to SFS through insulation
• Supplied in various lengths to fullfill the cavity requirement

FBS 6.3 x 60 Concrete screw



FBS R 6.3 x 60 Concrete Screws			
Product Code	Screw Length (mm)	Pilot hole (mm)	Insulation & backing thickness (mm)
FBS R 6.3 x 60	60	5x30	25-45
FBS R 6.3 x 80	80		35-60
FBS R 6.3 x 100	100		45-80
FBS R 6.3 x 120	120		60-95
FBS R 6.3 x 140	140		65-110
FBS R 6.3 x 180	180		100-140
FBS R 6.3 x 220	220		120-160
FBS R 6.3 x 260	262		175-220

• Hardened steel with corrosion resistant coating

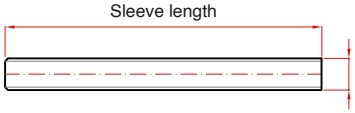


• Tabbing screws enable installation on to SFS through insulation
• Supplied in various lengths to fullfill the cavity requirement
• 5 mm diameter pilot hole required.

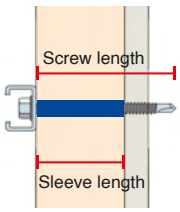
HM-CPS Compression Sleeve



• Corresponds to the insulation thickness
• Supplied in various lengths to accommodate the insulation thickness
• compressive strength and stability of the channel tie system are both achieved by preventing the channel deflecting



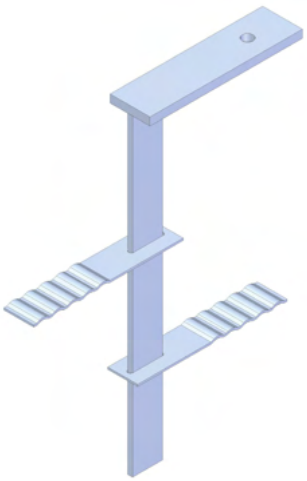
Outer dia. 10 mm
Inner dia. 8 mm

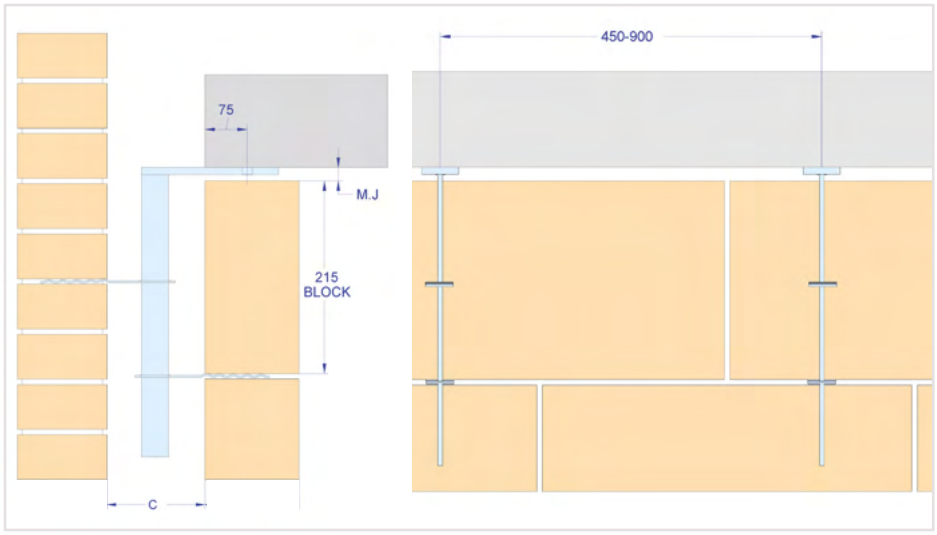


HMHR Brickwork Head Restraints

HMHR Brickwork head restraints are specifically designed parts for restraining brickwork below horizontal soft joints by attaching the brickwork to the structure without restricting differential movement. These items are available in stainless steel AISI 304 and AISI 316.

HMHR-C Cavity Head Restrain

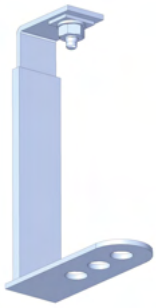


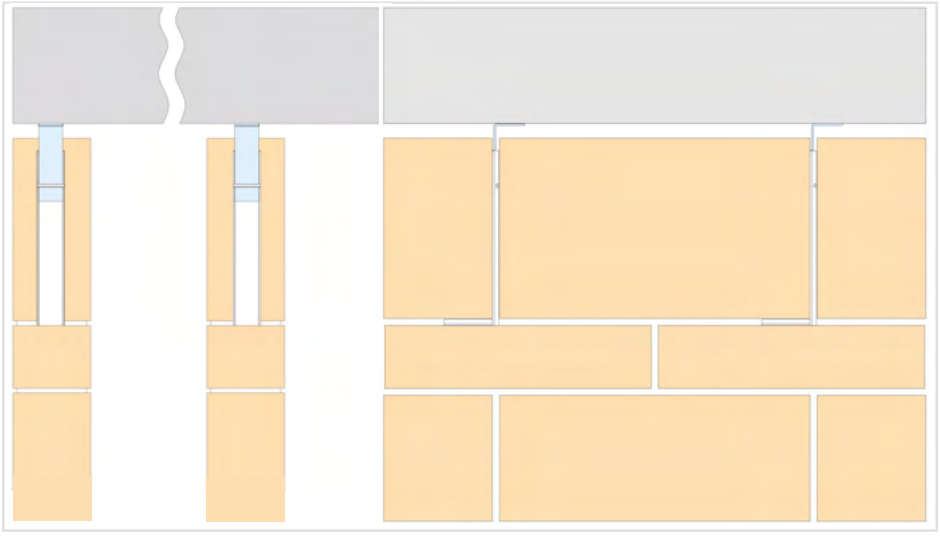


- Corrugated ties prevent dripping and reduces moisture bridging cavity
- Provide lateral restraint for inner and outer wall brick facing
- Service load is 1 kN
- Available in stainless steel and galvanized steel
- Movement joint maximum 25 mm
- Other sizes are available to order

Product Code	Cavity
HMHR-C-75	75
HMHR-C-125	125
HMHR-C-175	175
HMHR-C-225	225

HMHR-H Hidden Head Restraint



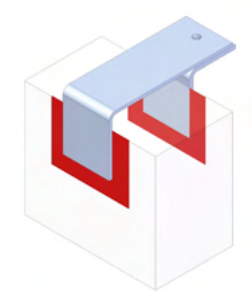


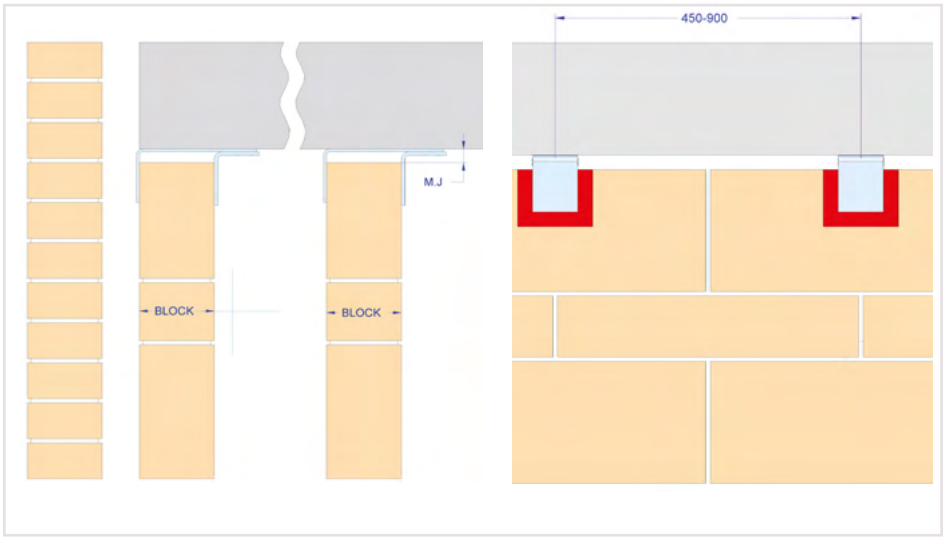
- Hidden head restraint used for areas where aesthetics are a consideration
- Provides vertical tolerance and differential movement with a debonding sleeve
- Vertical joint must be mortar filled
- Available in stainless steel and galvanized steel
- Movement joint maximum 25 mm
- Other sizes are available to order

Product Code	Cavity
HMHR-H-75	75
HMHR-H-125	125
HMHR-H-175	175
HMHR-H-225	225

HMHR Brickwork Head Restraints

HMHR-E Exposed Head Restraint

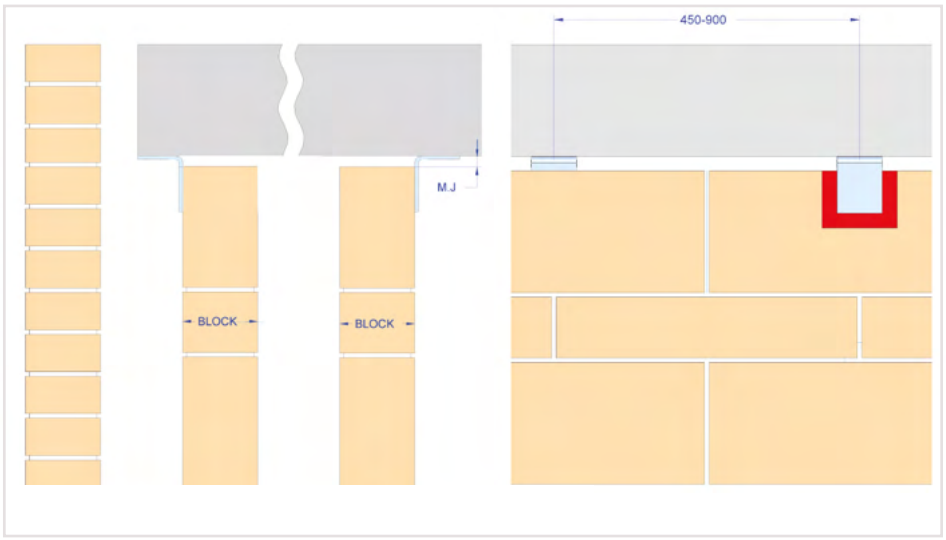




- Exposed head restraint for inner wall
- Provides vertical tolerance and differential movement with a debonding sleeve
- Vertical joint must be mortar filled

Product Code	Cavity
HMHR-E-75	75
HMHR-E-125	125
HMHR-E-175	175
HMHR-E-225	225

HMHR-S Exposed Head Restraint



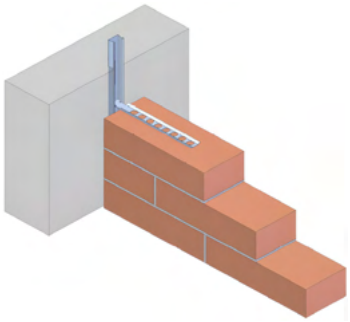
- Exposed head restraint for inner wall
- Provides vertical tolerance and differential movement with a debonding sleeve
- Vertical joint must be mortar filled

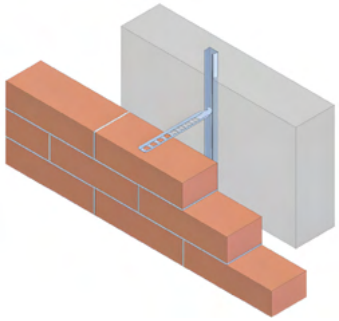
Product Code	Cavity
HMHR-E-75	75
HMHR-E-125	125
HMHR-E-175	175
HMHR-E-225	225

HMP-E-28/28 Cast in Insert & Dovetail Ties

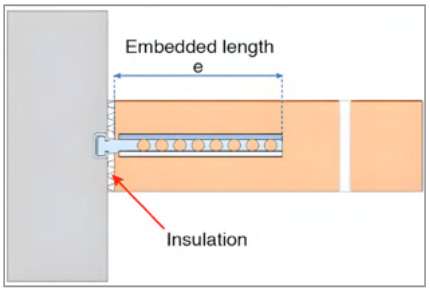
Cast in insert type HMP-28/28 and the corresponding dove tail tie type HWT-28 are used for restraint of brick units and cast stone to various backing structures.

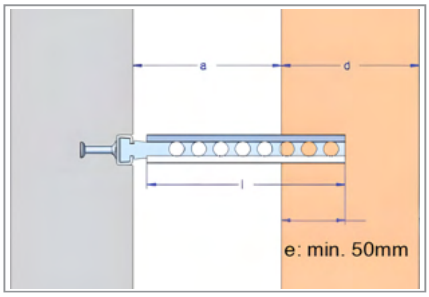
The shape of the channel forms the means to afix into the concrete and provides the required resistance for the moderate loadings required for the restraint connections.



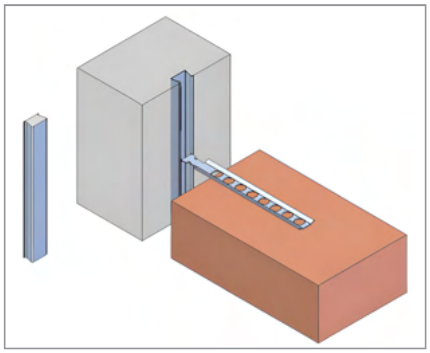


HMP-28/28 Insert & HWT-E-28 Tie Installation plan





• Wall ties can be used for masonry wall connections fixed to load bearing walls. Embedding length (e) is achieved with the length of the wall tie.



• The shape of the channel enables

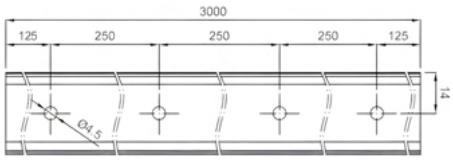
HMP-28/18 Brick Tie Channel

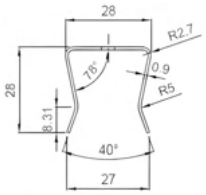


HMP-28/28 Brick Tie Channel Product Details

Product Code	Channel Length (mm)	Drilled Hole Spacing (mm)
HMP-28/28-3000	3000	250
HMP-28/28-150	150	100
HMP-28/28-100	100	50

• Stainless steel AISI 304 & AISI 316





• Channels are available in 100mm, 150mm & 300mm lengths as standard.
• Pre-drilled holes are at 250mm spacings with a 4.5mm diameter hole and 9mm diameter holes.

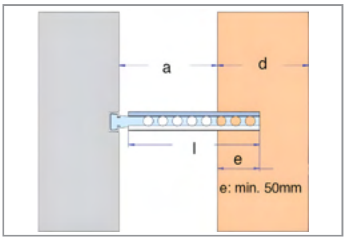
HWT-D-25 Channel Tie



HWT-E-28 Channel Tie Product Details

Product Code	Tie Length (mm)	Cavity a (mm)
HWT-E-28-75	75	15-35
HWT-E-28-100	100	40-60
HWT-E-28-125	125	60-90
HWT-E-28-150	150	90-110
HWT-E-28-200	200	160-210

• Stainless steel AISI 304 & AISI 316



• Ties lock in to channel after rotating the toes 90 degrees.
• Minimum embedment in to mortar should be 55mm.



Since its beginning in 1993, HAZ Metal has proved its reliability by successfully completing challenging projects. HAZ Metal has established a reputation for being a reliable supplier of structural components for facade construction.

Prestigious and large scale projects around the world have been supplied with high quality fixing systems designed and manufactured by HAZ Metal.

Always at the forefront of fixing technology, HAZ METAL has established a wide product portfolio to complement its fixing systems targeted for the specialist external wall cladding market. Designing and engineering high integrity and quality products for facade applications made HAZ a worldwide known brand in the construction industry.

HAZ METAL combines the very latest international technology with its own research and development team to establish a technical excellence within the industry. HAZ METAL readily embraces the responsibility of a major producer and shares its expertise with problem solving solutions.

HAZ METAL

HAZ Metal is certified with integrated management systems by TUV SUD for ISO 9001 & OHSAS 18001

HAZ
Group of Companies
Establishment
www.hazgrp.com

HAZ Metal A.S.
is a member of HAZ Group of Companies

HAZ METAL SANAYİ VE TİCARET A.Ş.
Şehit Er Çıracı Caddesi No. 10
Akçay Sanayi Bölgesi 31200 İskenderun
Hatay, TÜRKİYE
Tel : +90 (0) 326 626 20 50
Fax : +90 (0) 326 626 20 45
www.hazmetal.com
info@hazmetal.com

HAZ METAL UK LTD
154 Great North Road Hatfield
Herts. AL9 5JN England
Tel: +44 (0) 1707 - 260 180
www.hazmetal.co.uk
info@hazmetal.co.uk

HAZ PAZARLAMA İÇ & DIŞ TİC. A.Ş.
İçerenköy Mh. Çayır Cd. Özce Center
No:3 K:12 34752 Ataşehir
İstanbul, TÜRKİYE
Tel: +90 (0) 216 410 72 06
info@hazgrp.com

HAZ METAL DEUTSCHLAND GmbH
Alfred-Zippe-Straße 1
97877 Wertheim, GERMANY
Tel: +49 (0) 9342 9359
www.hazmetal.eu
info@hazmetal.de