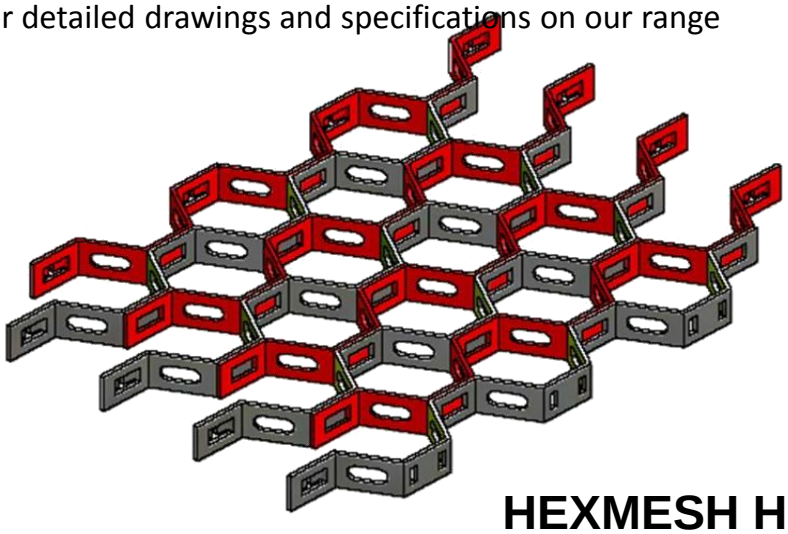
Hexmesh

Antec has been manufacturing hexagonal mesh for more than two decades, so we understand the strict performance and technical requirements that exist across a range of industries, including the major oil companies.

Whether you need standard size panels, custom-shapes or rolled products, Antec has the equipment, expertise and experience to meet your needs quickly and cost-effectively.

- Automated laser cut production facilities for speed and consistency
- Extensive selection of common shapes and sizes in stock including punch tabs
- Full in-house design and manufacturing for fast turnarounds on custom designs
- Range of stainless steel and carbon steel in stock and ready to go including alloy 304, 310, 253MA. Other materials can be supplied on request.
- Flexibility to deliver many specialty applications such as wear resistant materials
- Contact us for detailed drawings and specifications on our range

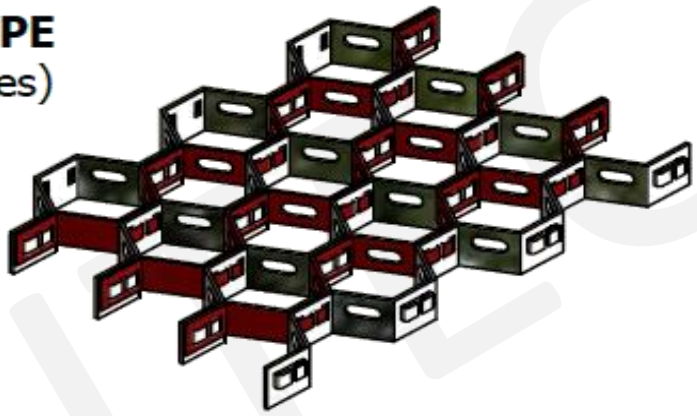


HEXMESH H TYPE
(with bonding holes)

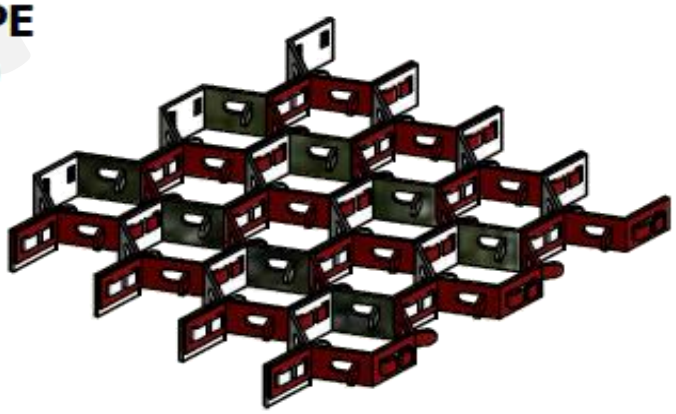
HEXMESH TYPES

H & L Types

HEXMESH H TYPE
(with bonding holes)



HEXMESH L TYPE
(with lance tabs)

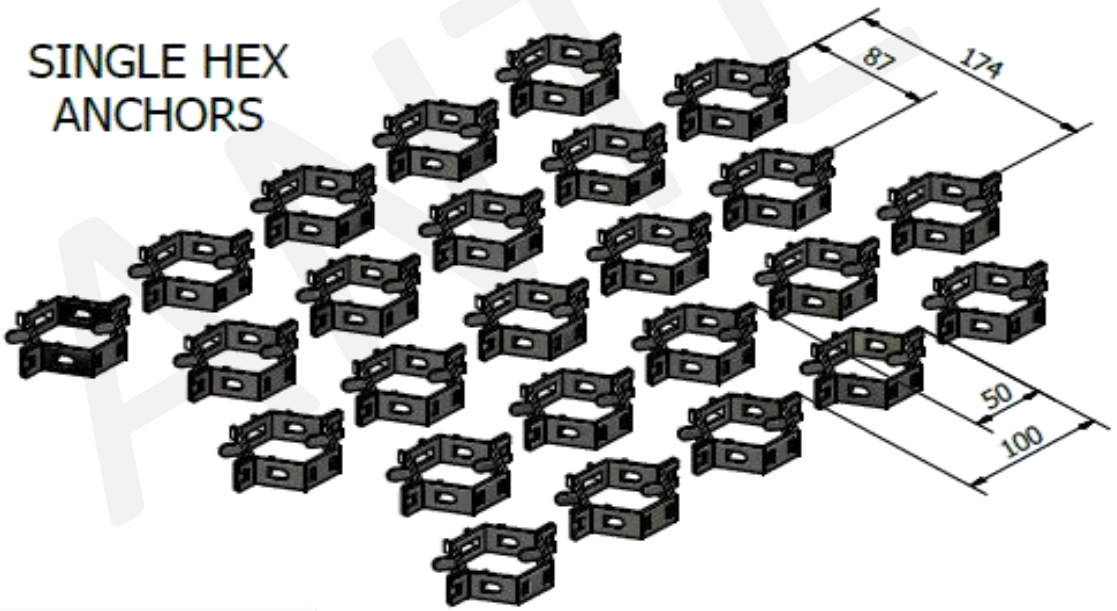


HEXMESH TYPES

Typical Layouts

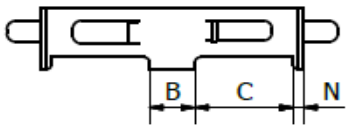
Note: Layout as shown below requires approximately 115 cells per m^2

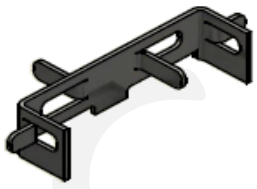
The typical layout shown is for general applications and where the refractory can be installed downhand. In severe service conditions or applications where refractory cannot be installed downhand, a closer spacing should be considered.

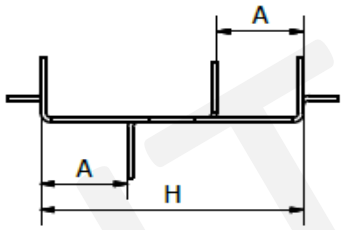


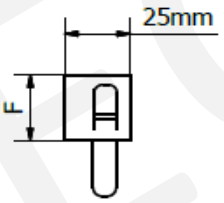
CB01
C Bar

25mm C - BAR
(STANDARD TYPE)

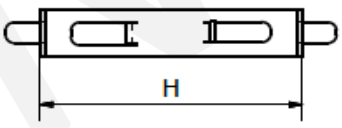


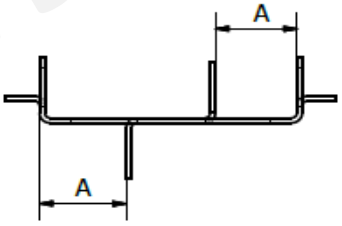


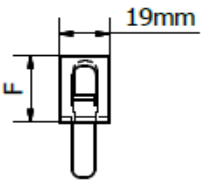




19mm C - BAR
(LOWER TYPE)

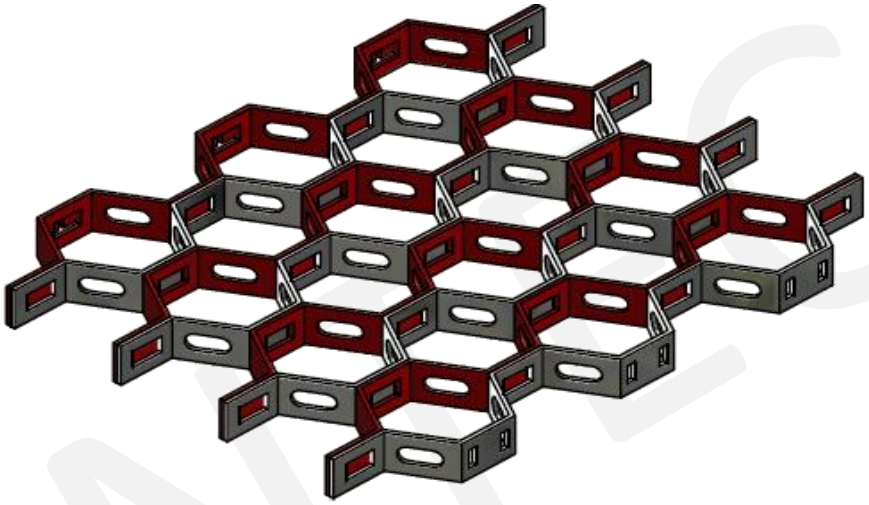


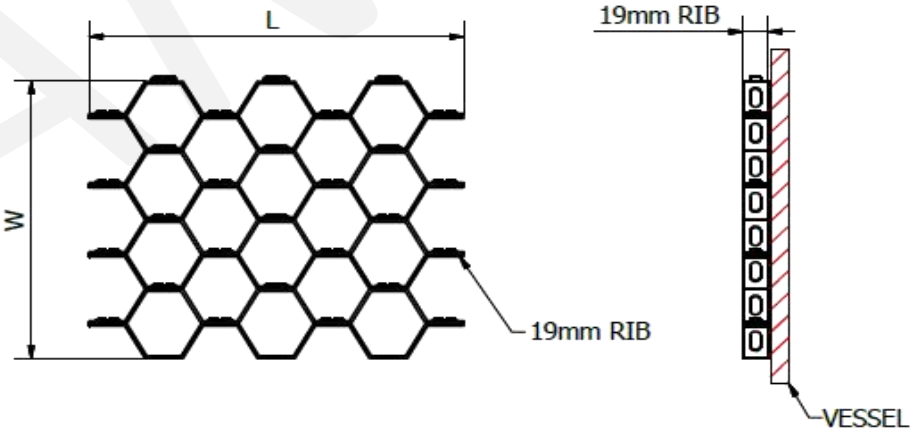




H 19

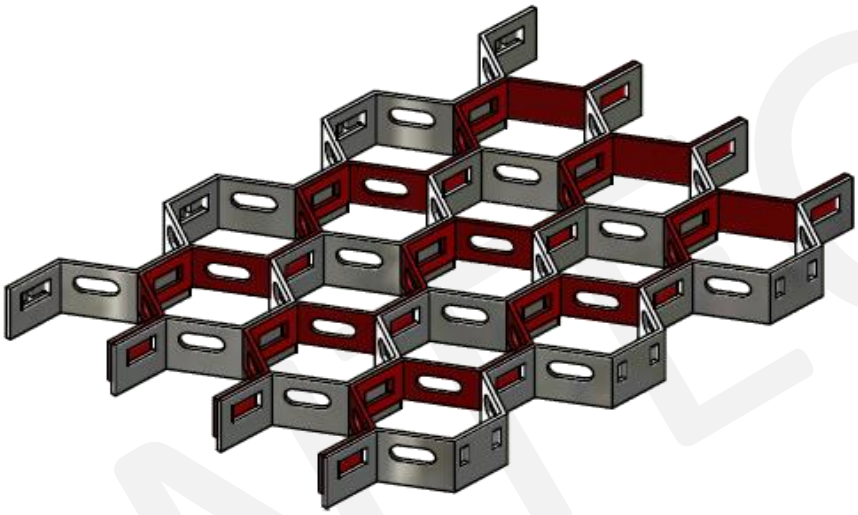
Hexmesh 19mm with bonding holes

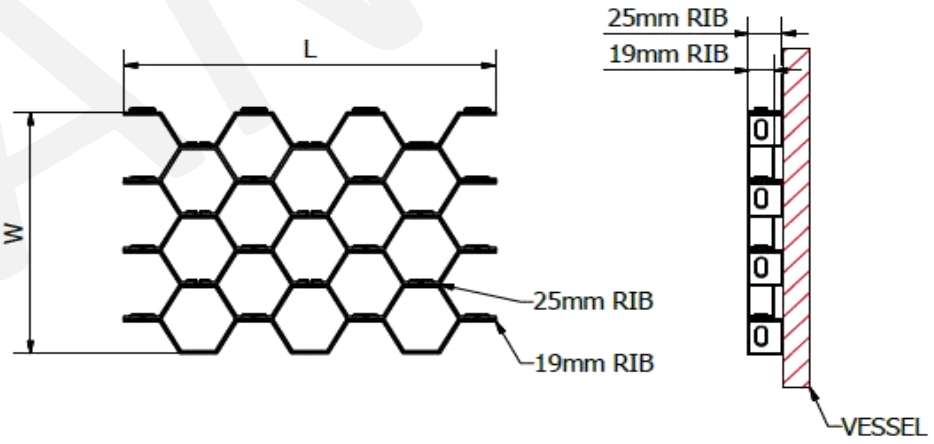




H 25

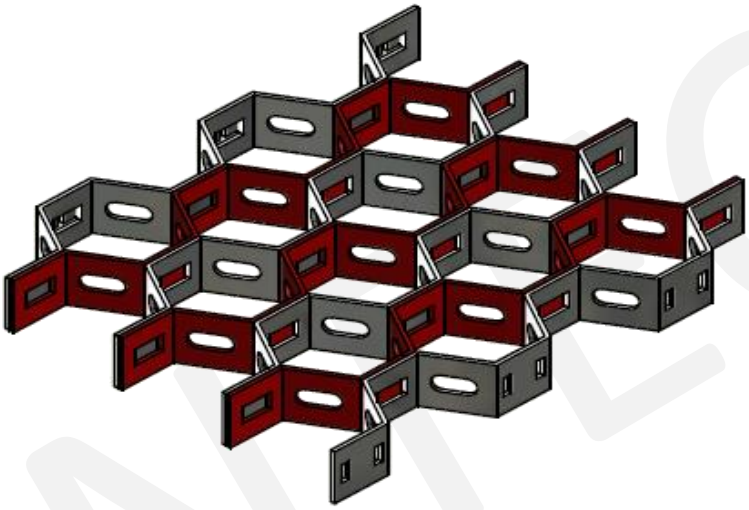
Hexmesh 25 19mm with bonding holes

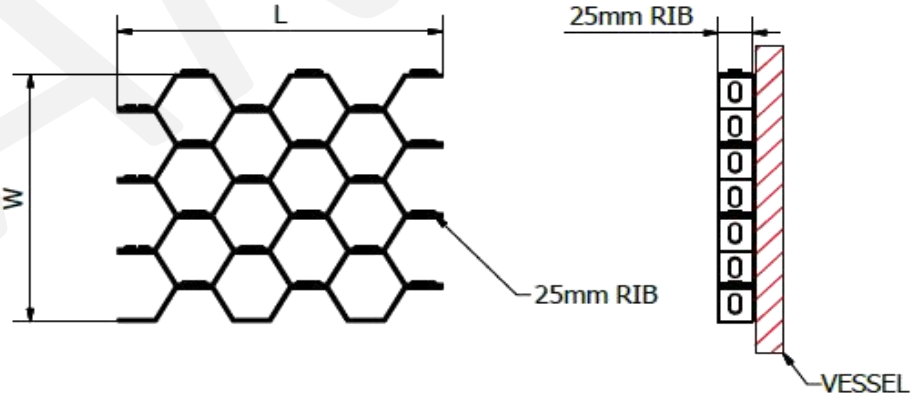




H 25

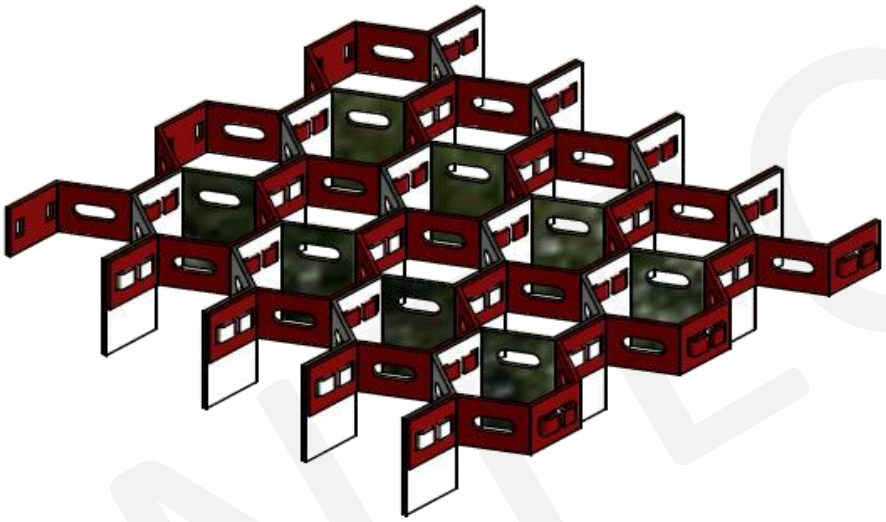
Hexmesh 25mm with bonding holes

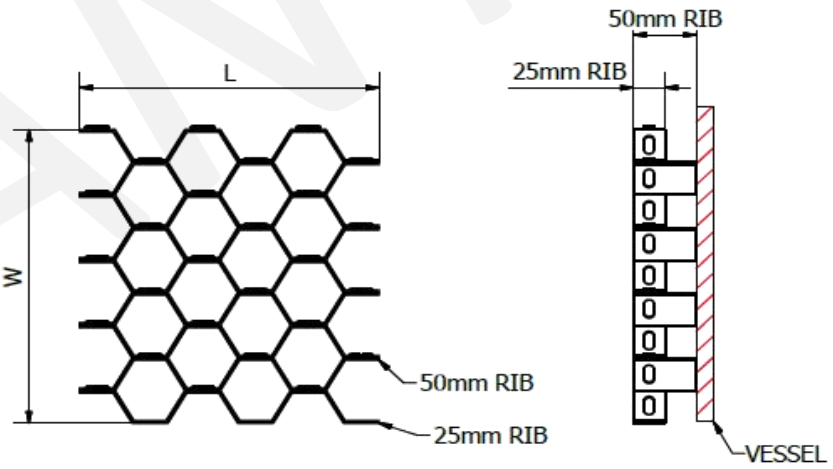




H 50

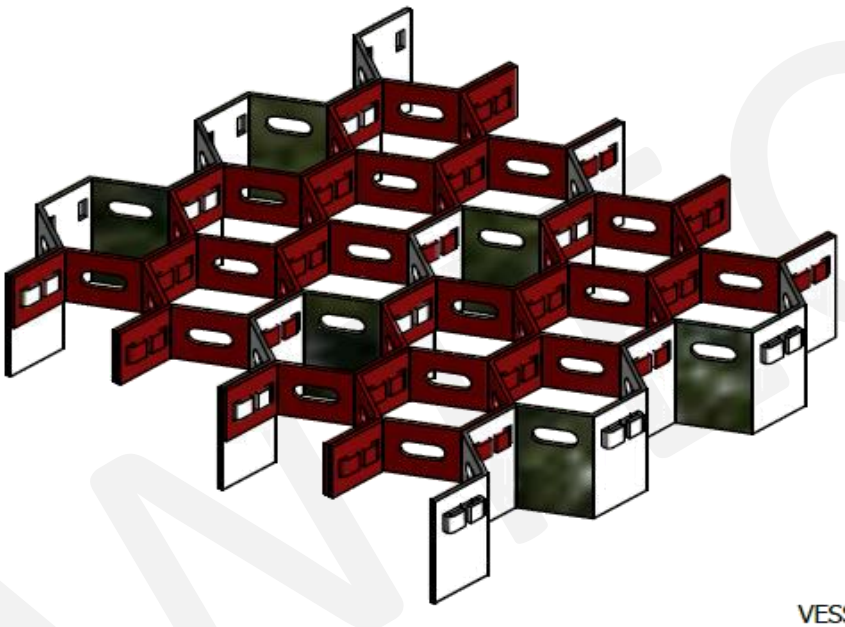
Hexmesh 50 25mm with bonding holes (1:1)

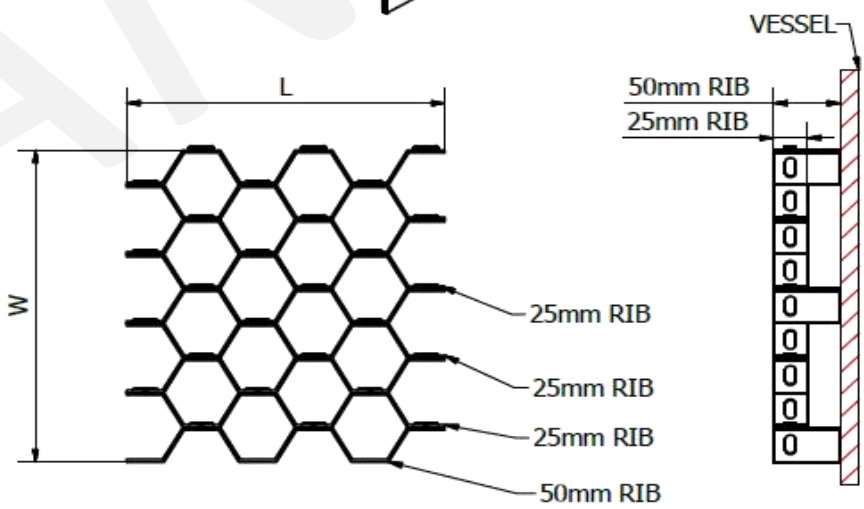




H 50

Hexmesh 50 25mm with bonding holes (1:3)

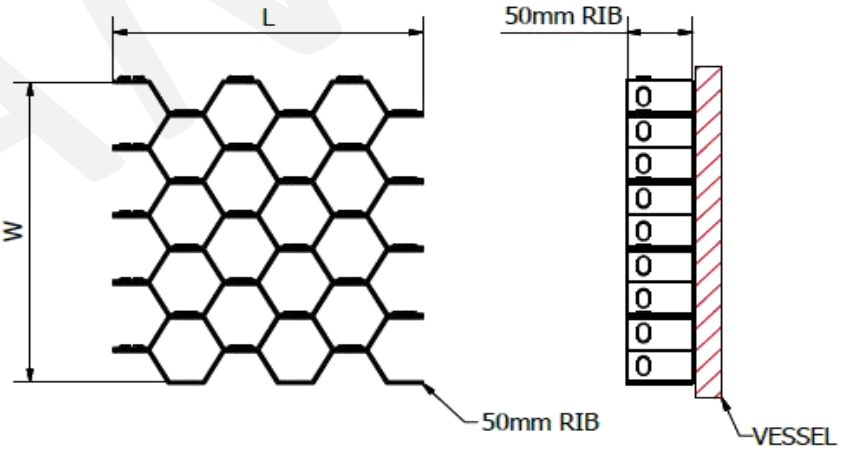




This item can be manufactured in various alloy steels

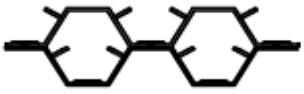
H 50

Hexmesh 50mm with bonding holes



HEXMESH TYPES

HEXMESH 19mm or 25mm

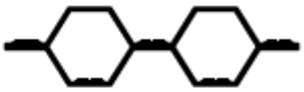


19mm or 25mm WITH
LANCE TABS
(L TYPE HEXMESH)

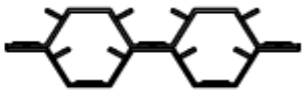
19mm or 25mm WITH
BONDING HOLES
(H TYPE HEXMESH)

HEXMESH 25-19mm

25mm-19mm
WITH BONDING HOLES
(H TYPE HEXMESH)
(1:1)

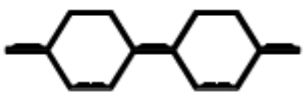


25mm-19mm
WITH LANCE TABS
(L TYPE HEXMESH)
(1:1)

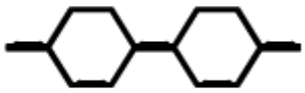


HEXMESH 50mm

50mm-25mm
WITH BONDING HOLES
(H TYPE HEXMESH)
(1:1)



50mm-25mm
WITH BONDING HOLES
(H TYPE HEXMESH)
(1:3)



50mm WITH
LANCE TABS
(H TYPE HEXMESH)

HEX 1

Hexagonal Mesh

Unless specifically requested, all hexagonal mesh supplied by Antec will be manufactured with the stronger double clenched joining system as described below. An older style, using independent rivets to join the hex together is available, but must be specifically requested. Information on this older style can be supplied separately if needed.

All comments below are based on the doubled clenched joining system type.

Hexmetal is manufactured in depths of 19mm, 25mm or 50mm. Two different styles of hexmesh are available in the above depths:

1) Lance tab (L type) - this style has lance tabs protruding from the walls of the hexagonal cell to act as anchorage for the refractory . If the refractory is being gun applied the lances may cause a shadow effect with a void forming behind the lances.

2) Bonding hole (H type) - instead of lance tabs, holes are punched through the walls of the hexmetal cell. Refractory can then flow through these holes to achieve a bond from one cell to another.

All hexmetal except 19mm is available as an offset or stepped type construction. The stepped type hexmetal has a shorter depth rib joining the full depth rib. Whilst both ribs are flush at the top surface, the shorter rib forms a gap on the back face. This gap at the back of the hexmetal allows the refractory to flow through it and hence creates a strong refractory bond between adjoining cells.

The 50mm deep hexmetal is only manufactured as stepped constructions.

HEX 2
Joining System

HEXMETAL CELL DETAIL

The most frequently supplied hexagonal mesh that Antec provides, is bonded by the unique double clenched holding system shown above. This type of bonding is widely recognised as providing a higher strength hexmetal.

A strong hex makes for a superior refractory lining.

A strong hexmetal keeps gaps between the adjoining hex rib to a minimum and also holds the panels of the hexmetal together more tightly when rolling to shape. Any small gaps (such as occur when rolling) cannot be adequately filled with refractory concrete. The non consolidated gap is then subject to ingress from the abrasive medium in the gas flow. The abrasive medium can ultimately track in behind the refractory/ hexmetal lining causing failure.

If hexagonal mesh is not tight and secure under operating conditions, the hex can "chatter" from vibration or any movement. This in turn can cause the refractory to crack or dislodge from the hexagonal cells.

When exposed to operating temperatures, the strength of the steel is significantly reduced. Therefore any additional strength incorporated into the fundamental design at ambient temperature will be of a greater benefit under the hot operating conditions.

HEX 3

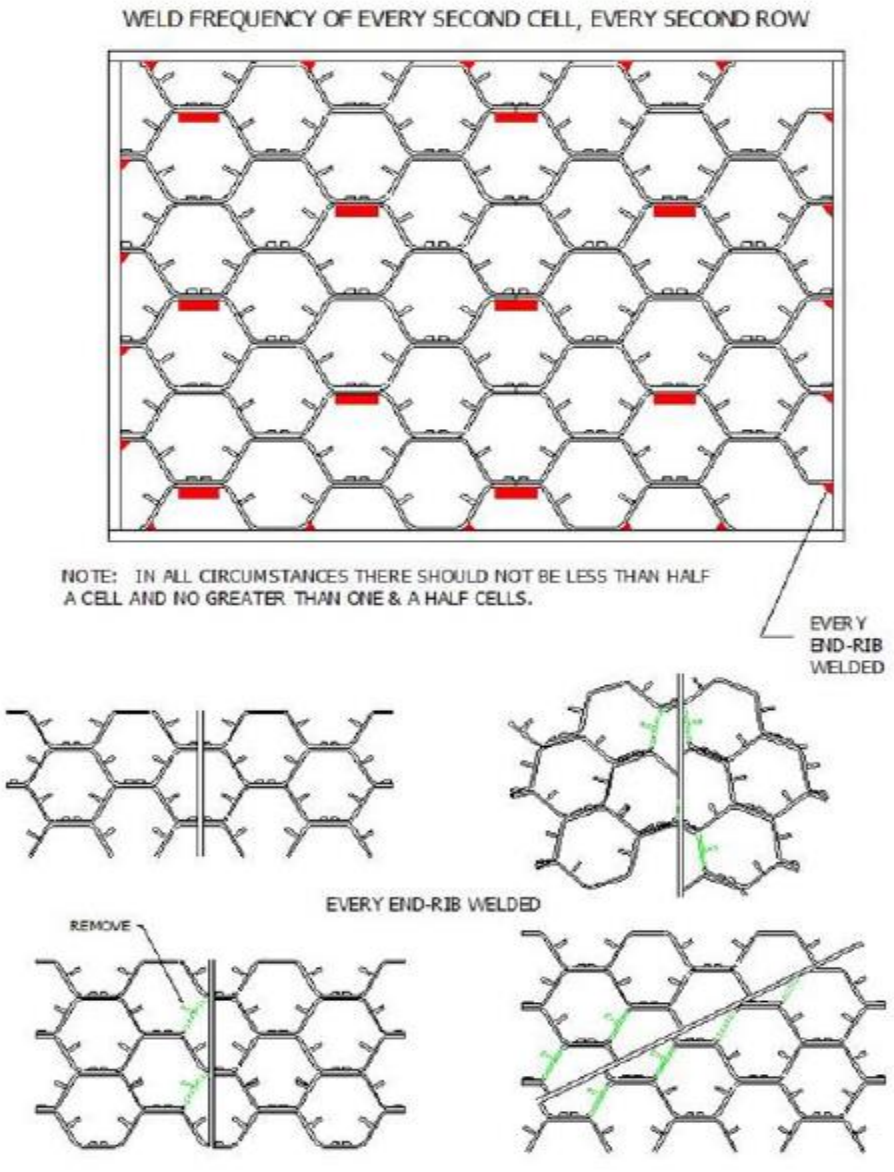
Hexagonal Mesh Types

LANCE TAB TYPE	
L19	CONSTANT 19mm RIB THICKNESS
L25	CONSTANT 25mm RIB THICKNESS
L25/19 (1:1)	25mm STEPPED HEX WITH EVERY ALTERNATE RIB 19mm
L25/19 (1:3)	25mm STEPPED HEX WITH 1 RIB x25mm THEN 3x19mm
L50/25 (1:1)	50mm STEPPED HEX WITH EVERY ALTERNATE RIB 25mm
L50/25 (1:3)	50mm STEPPED HEX WITH 1 RIB x50mm THEN 3x25mm

BONDING HOLE TYPE	
H 19	CONSTANT 19mm RIB THICKNESS
H25	CONSTANT 25mm RIB THICKNESS
H25/19 (1:1)	25mm STEPPED HEX WITH EVERY ALTERNATE RIB 19mm
H25/19 (1:3)	25mm STEPPED HEX WITH 1 RIB x25mm THEN 3x19mm
H50/25 (1:1)	50mm STEPPED HEX WITH EVERY ALTERNATE RIB 25mm
H50/25 (1:3)	50mm STEPPED HEX WITH 1 RIB x50mm THEN 3x25mm

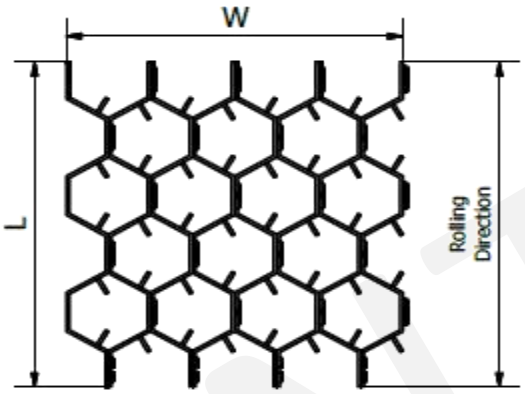
Ratios and configurations can be varied to suit customers requirements.

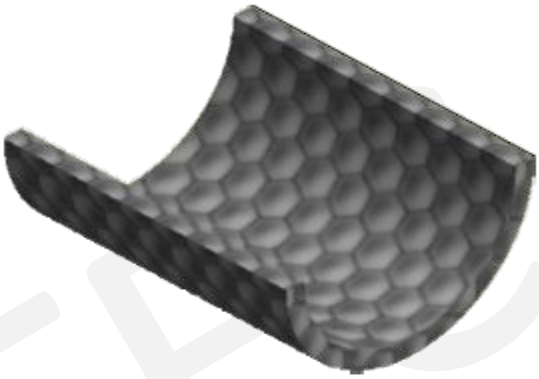
HEX4
Hexmesh Layout & Spacing

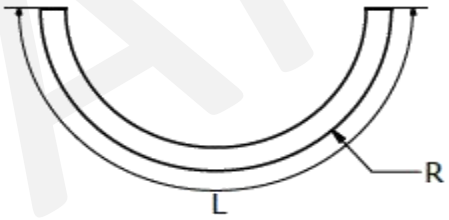


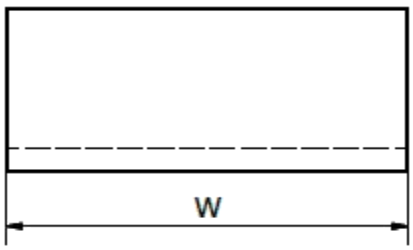
HEX 5

Rolled Hex Section

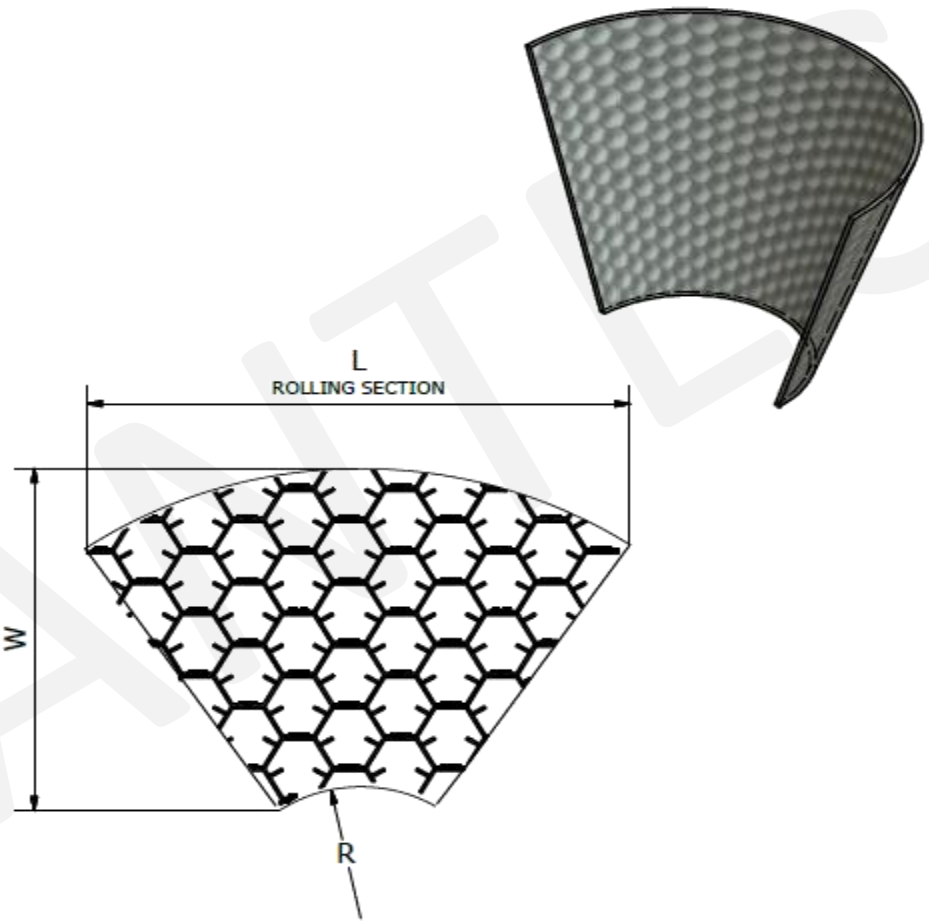




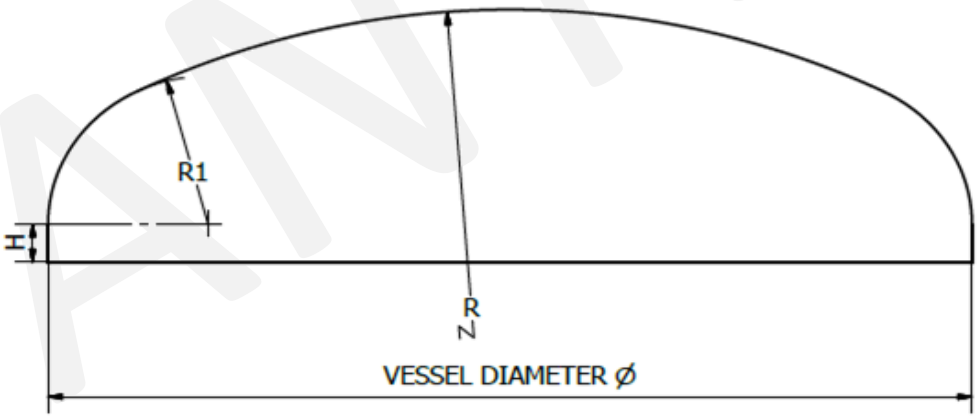




HEX 6
Rolled Cone Section

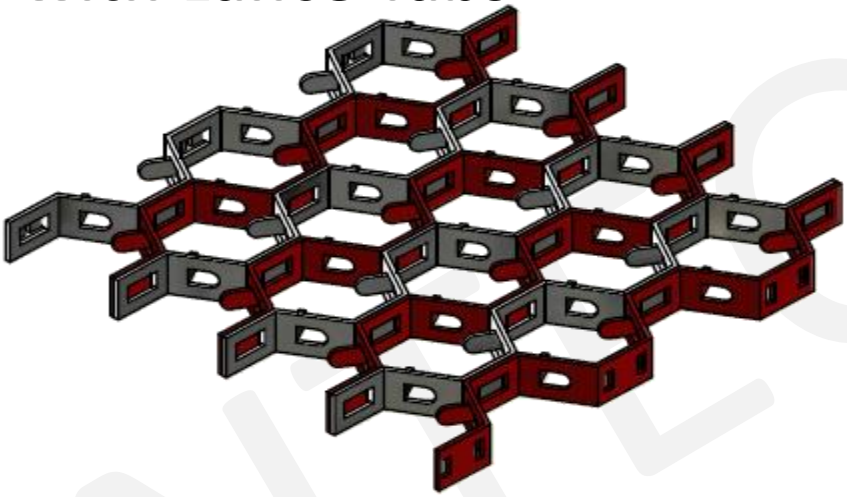


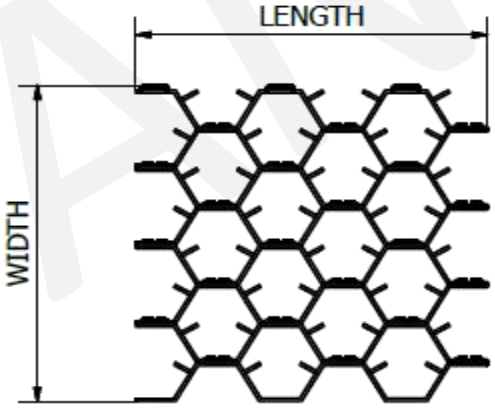
HEX 7
Rolled Dome Section

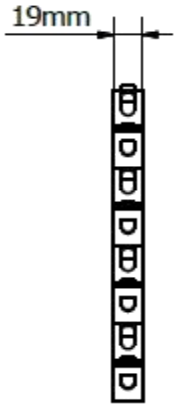


L 19 HEXMESH

19mm with Lance Tabs

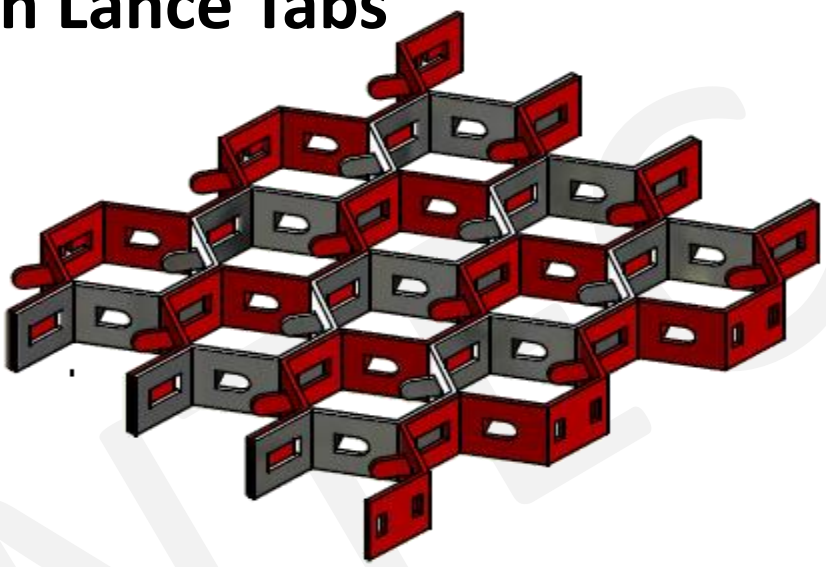


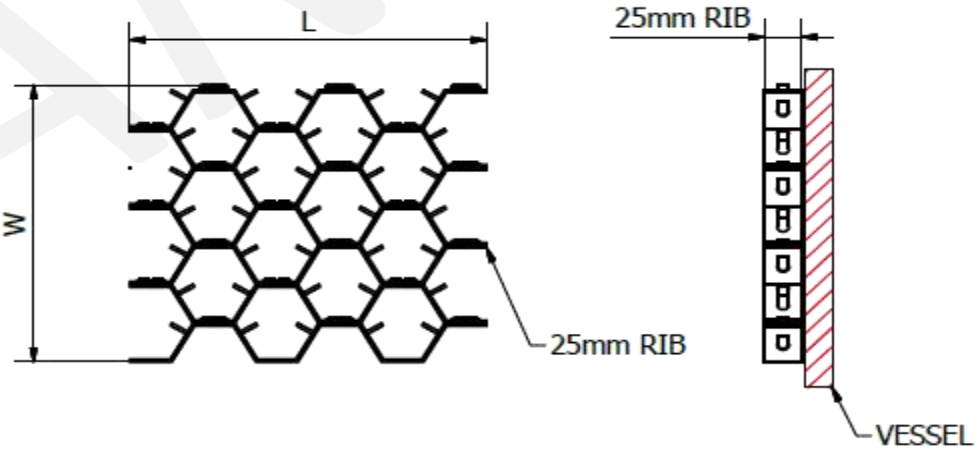




L 25 HEXMESH

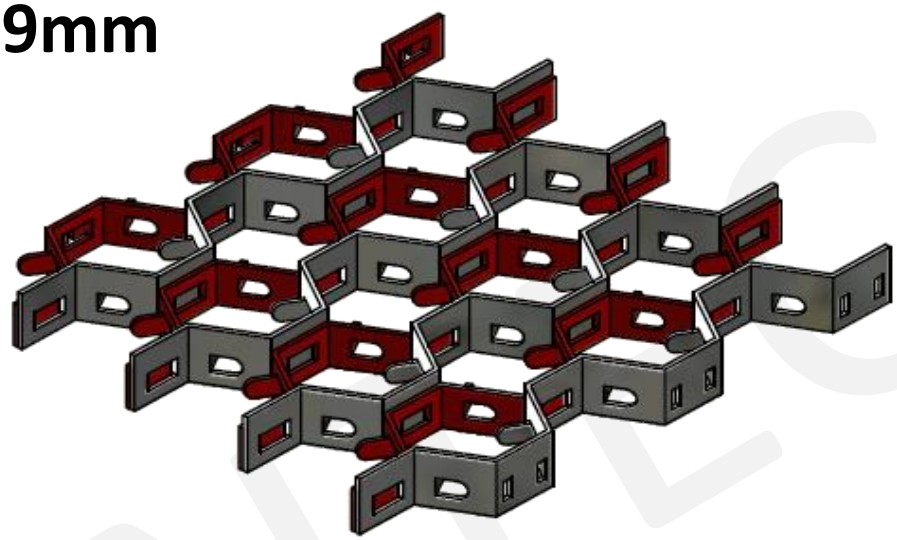
25mm with Lance Tabs

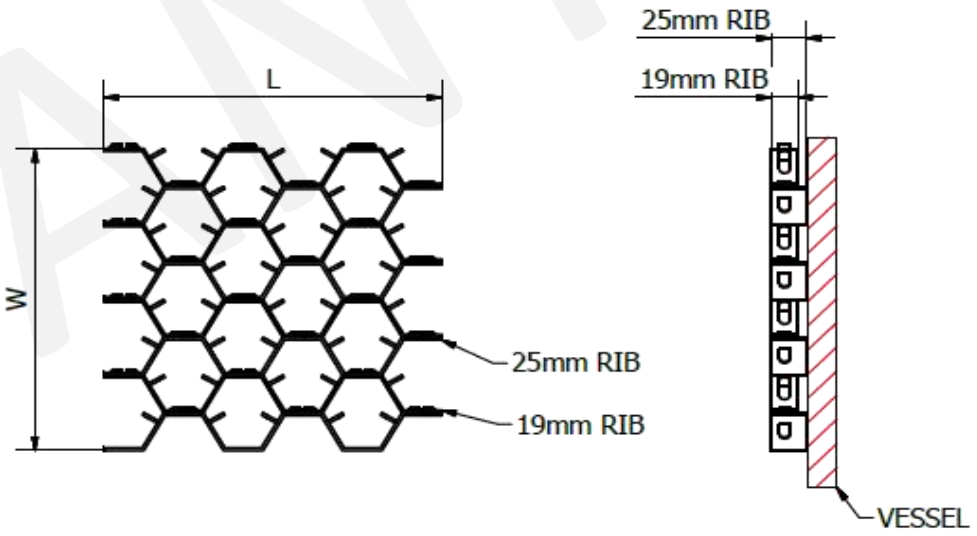




L 25-19 STEP HEXMESH

25 – 19mm

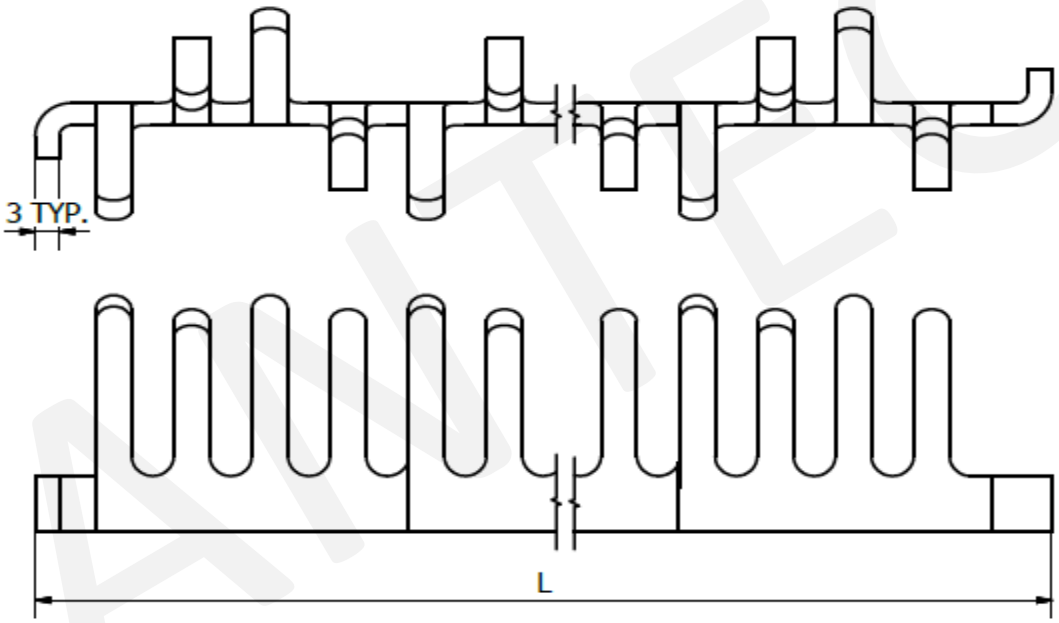


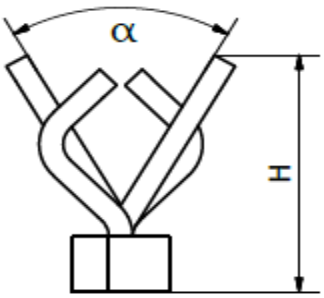


DAS 1

Das Strip

Patent Design

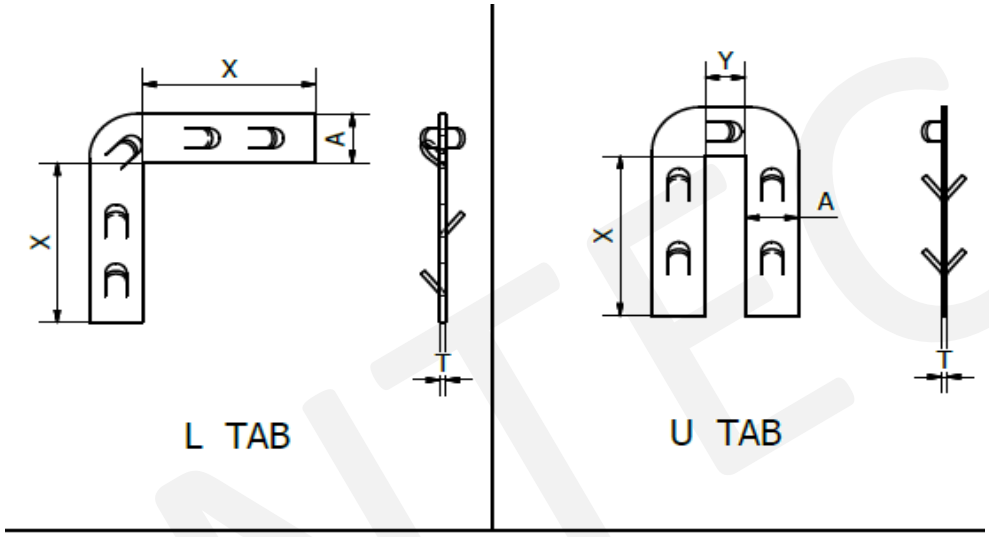


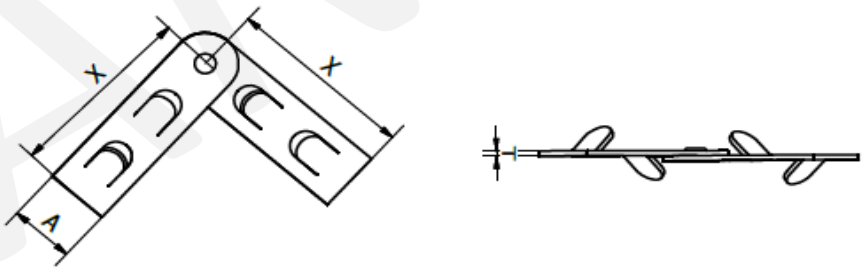


All items can be manufactured in various alloy steels
Tolerances:
+/- 3mm on Dimensional
+/- 3° on Angular Dimensions
Unless otherwise noted

PT 1

Punch Tabs

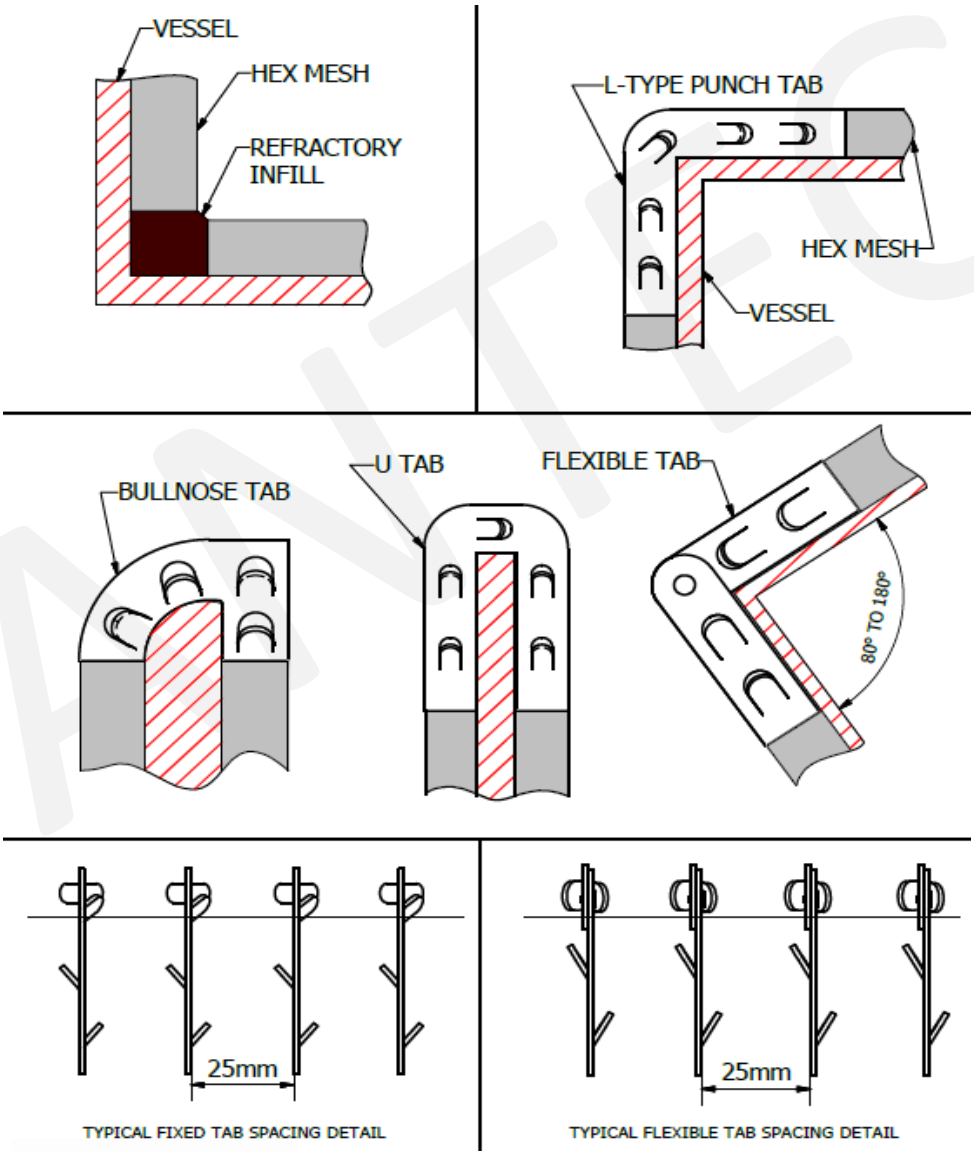




STRAIGHT FLEX TAB

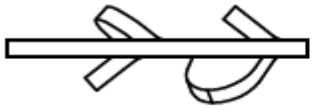
PT 2

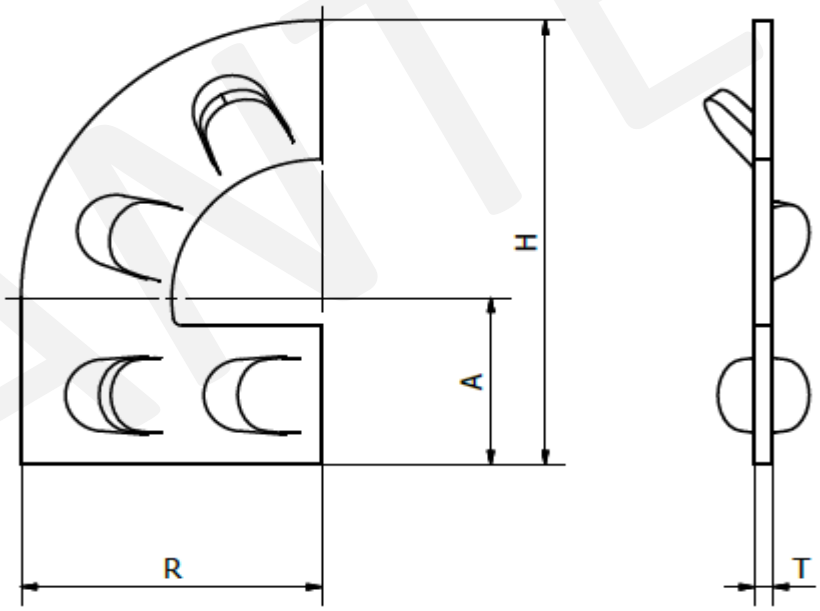
Typical Hexmetal Corner Details



PT 3

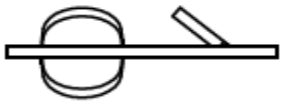
Radius Corner Tab

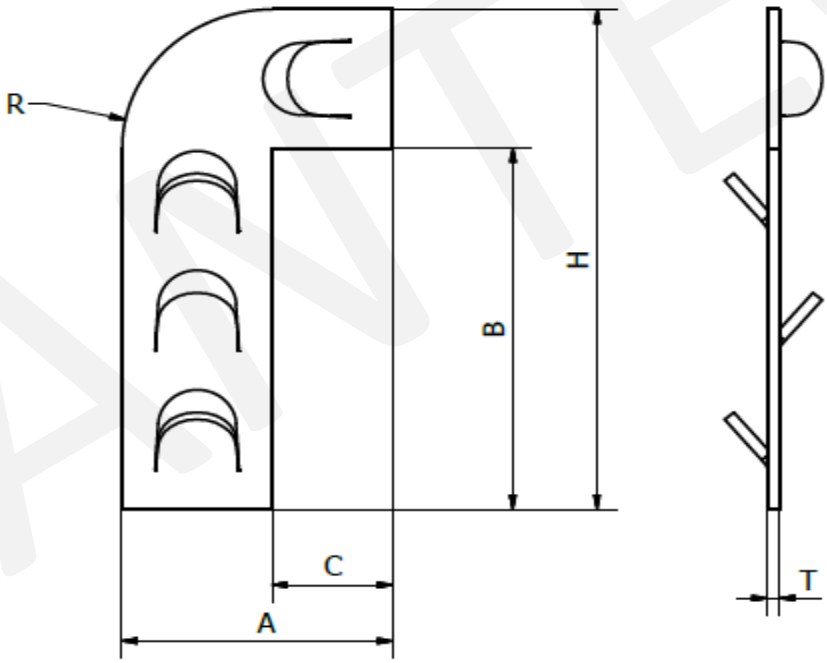




PT 4

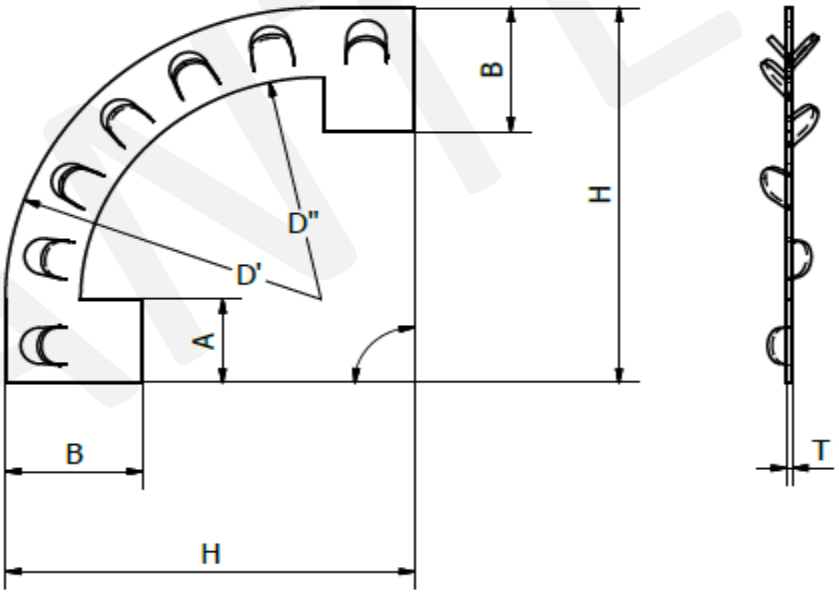
Corner Tab





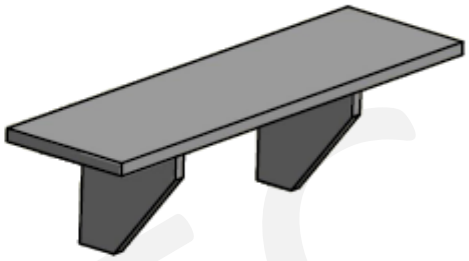
PT 5

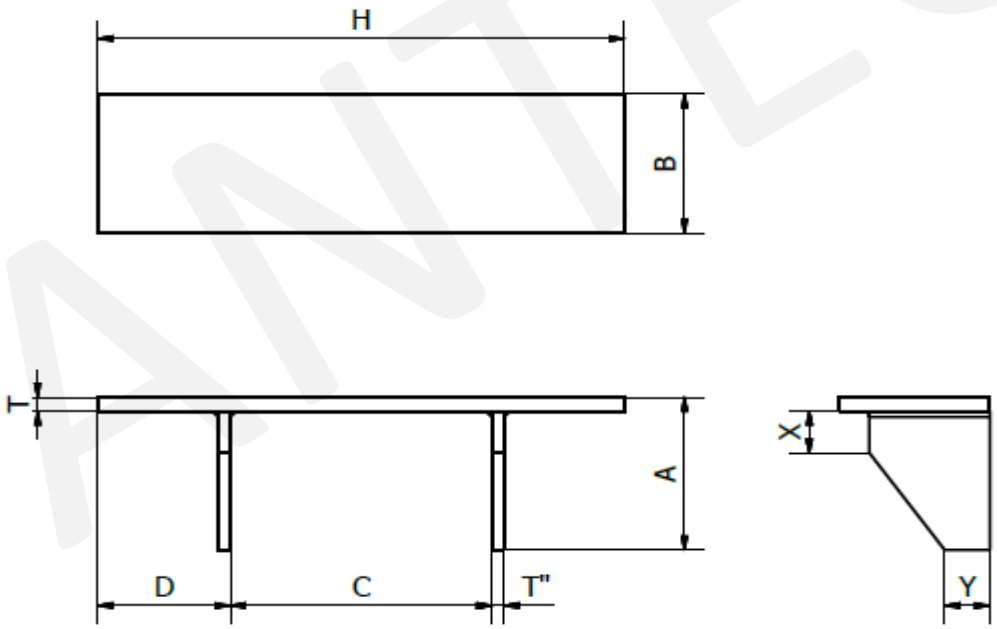
Raised Corner Tab



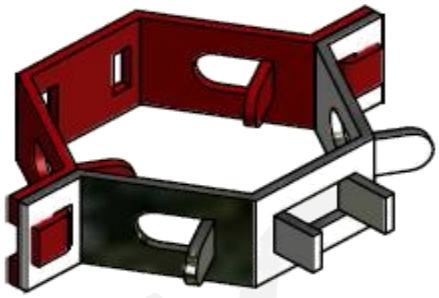
SB 1

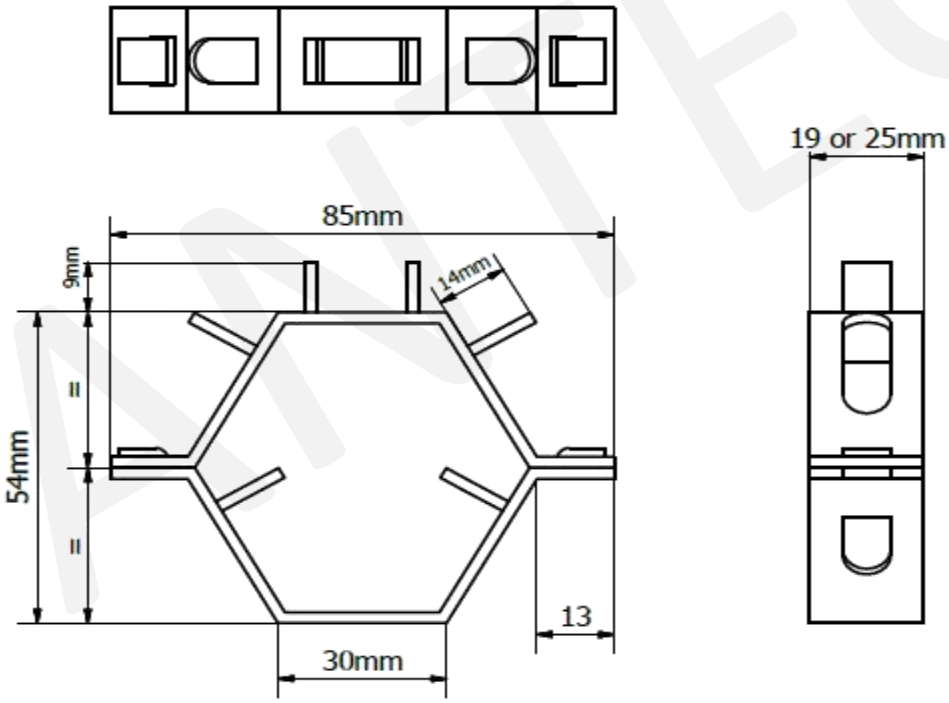
Shelf Bracket (Long)





SH 1
Single Hex Anchor



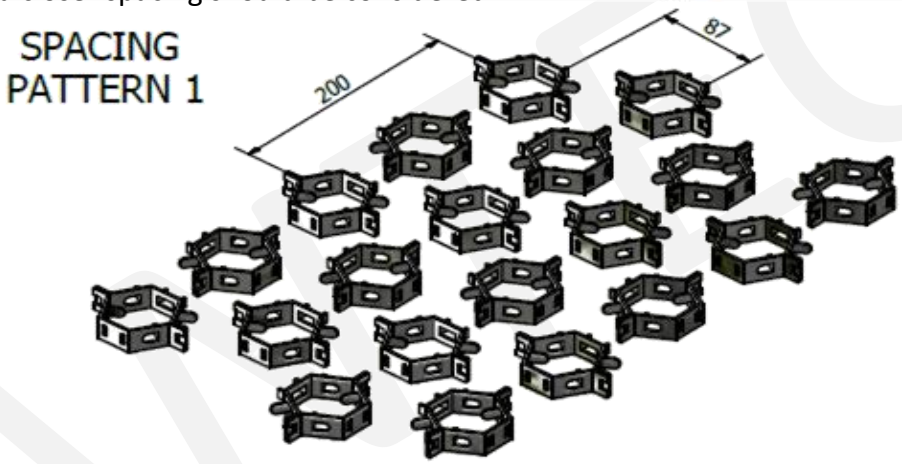


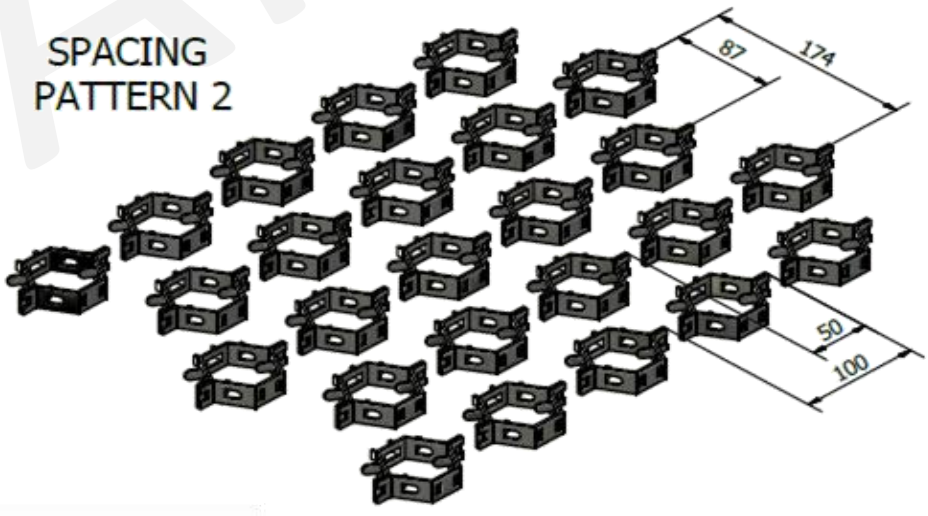
SH 2A

Single Hex Spacing Details

Note: Layout as shown below requires approximately 115 cells per m^2

The typical layout shown is for general applications and where the refractory can be installed downhand. In severe service conditions or applications where refractory cannot be installed downhand, a closer spacing should be considered.



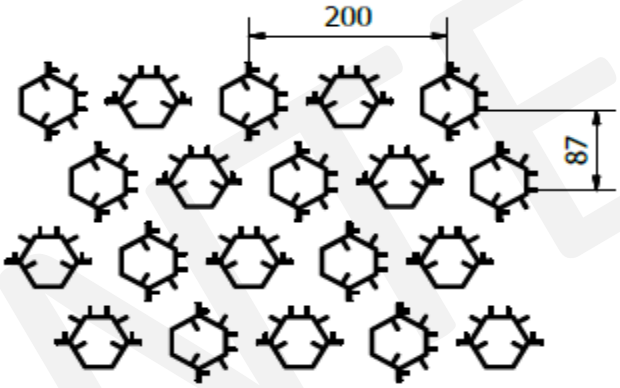


SH 2

Single Hex Spacing Details

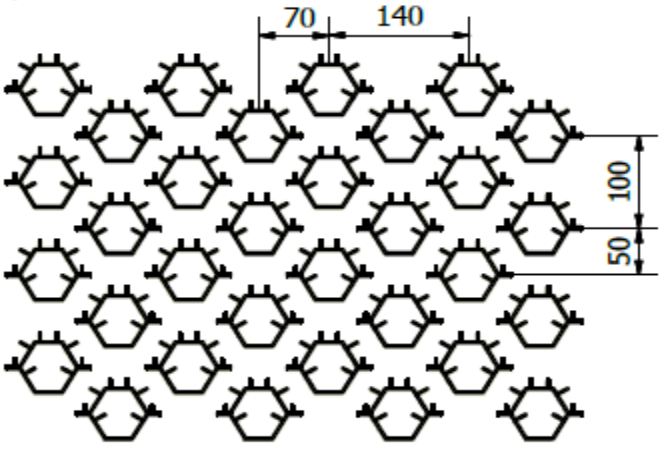
SPACING PATTERN 1:

TYPICAL SPACING USED FOR GENERAL APPLICATIONS AND WHEN REFRACTORY IS INSTALLED IN DOWNHAND CONDITIONS.
THIS PATTERN REQUIRES APPROXIMATELY 115 SINGLE HEX PER SQUARE METRE.



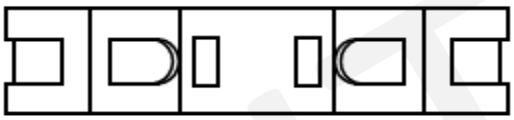
SPACING PATTERN 2:

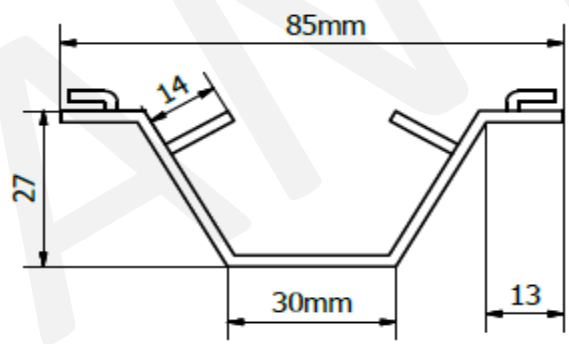
ALTERNATIVE SPACING USED FOR MORE SEVERE CONDITIONS OR WHERE ADDITIONAL RETENTION IS PREFERRED DURING REFRACTORY INSTALLATION (SUCH AS NON DOWNHAND APPLICATION)
THIS PATTERN REQUIRES APPROXIMATELY 145 SINGLE HEX PER SQUARE METRE.

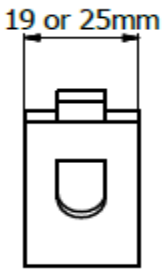


SH 3

Half Hex Anchor







SH 3

Half Single Hex Anchor