

Apollo II

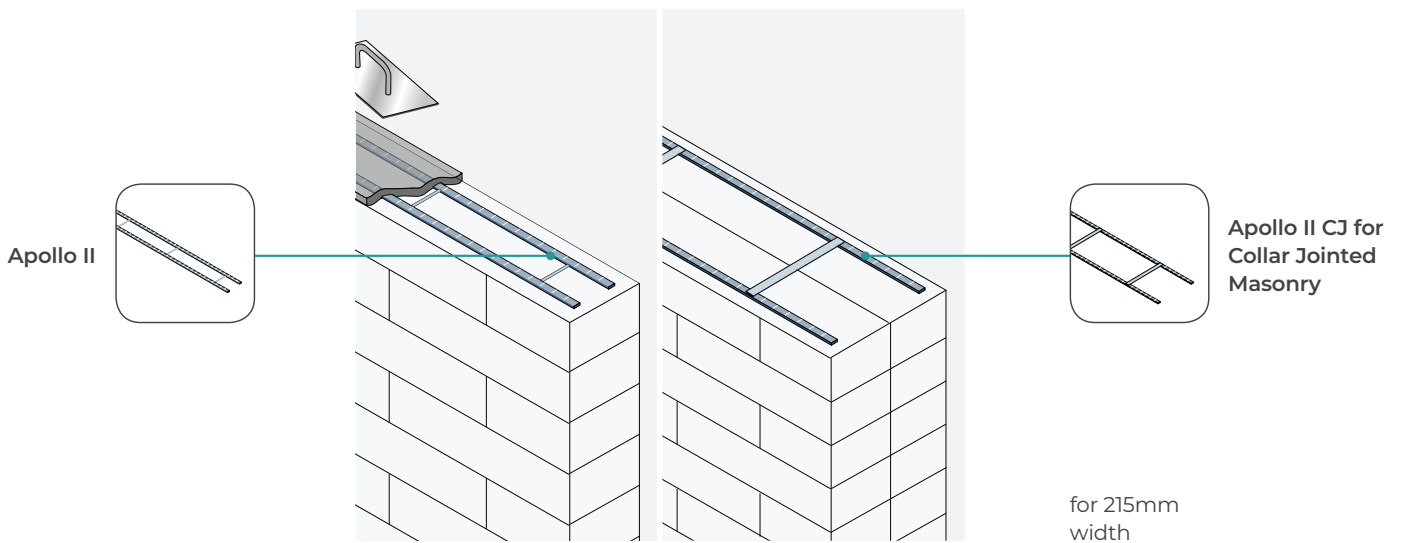
Apollo II masonry reinforcement

The use of masonry in building construction is a tried and trusted construction method used to create robust, durable and aesthetically appealing structures that last for 100's of years. Masonry – both clay bricks and concrete blocks, is a proven and versatile building material which is able to withstand very high compressive loads. However, in tension, where building loads can create deflection forces, masonry construction has span limitations and can be prone to cracking and failure if flexural strength is exceeded.

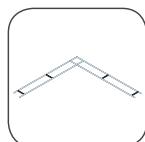
This is where reinforcing masonry can help. Apollo II is a masonry reinforcement (also termed 'bed joint' reinforcement) and is designed for use in structural masonry design applications to increase the flexural and tensile strength of masonry walls and façades in lateral and vertical load conditions. In addition, Apollo II is very useful in assisting the controlling of movement in masonry caused by shrinkage, stress and thermal expansion and contraction – so reducing the risk of cracking occurring in the masonry structure.

Advantages

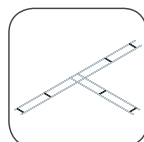
- Structural reliability
 - reduced risk of cracking
- Maximum anchorage
 - through profiled main wires
- Increased bond strength
 - up to twice normal anchorage
- Increased flexural and tensile strength
 - unique flattened profile
- Comprehensive range
 - of widths and main wire sizes
- CE marked
 - certified and tested solution



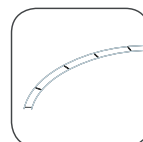
Prefabricated components available:



Corner

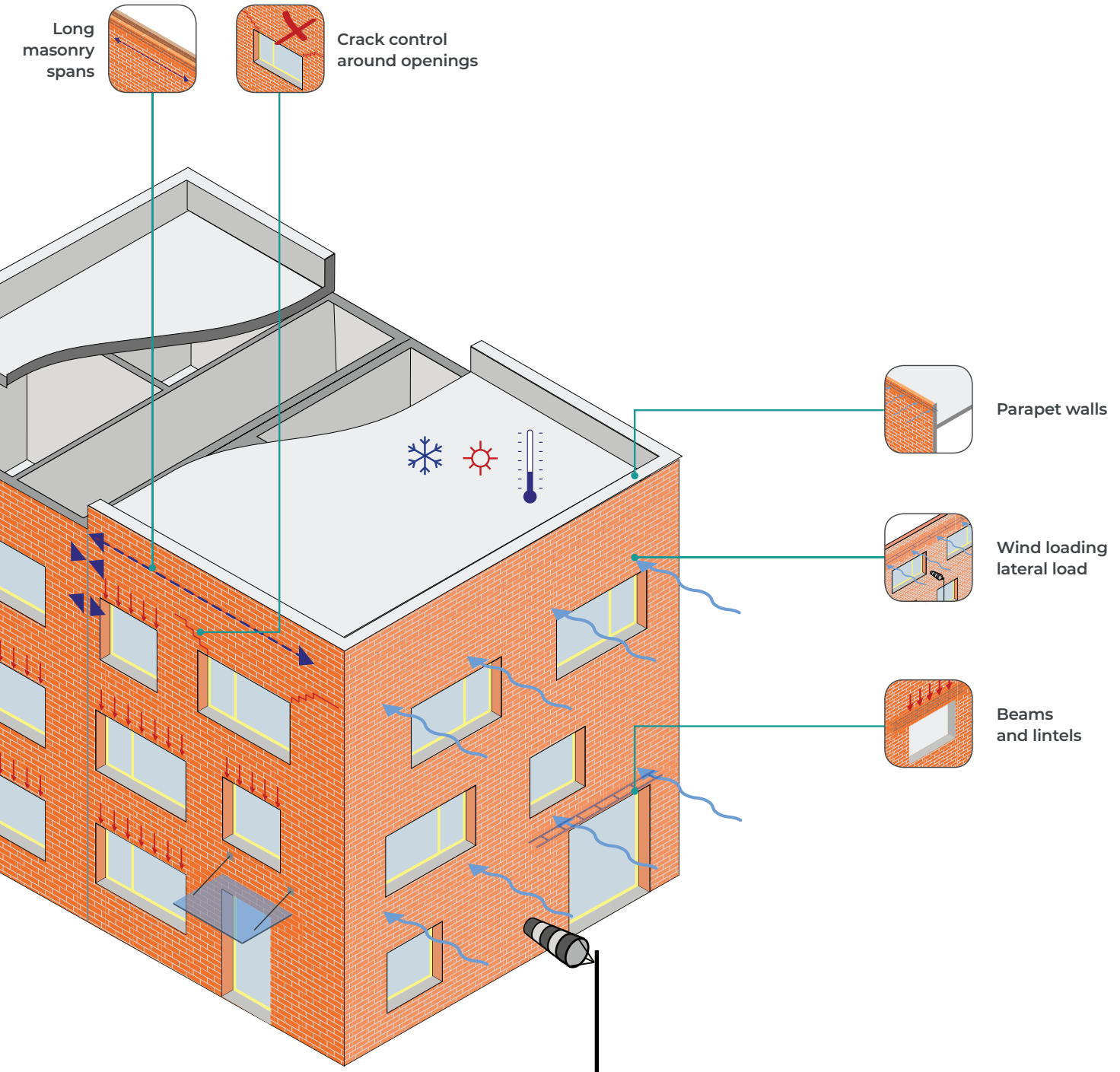


TEE



Curved

Apollo II



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acsstainless.co.uk/product/apollo-ii



ACS Stainless Steel Fixings Ltd



ACSStainlessSteelFixings

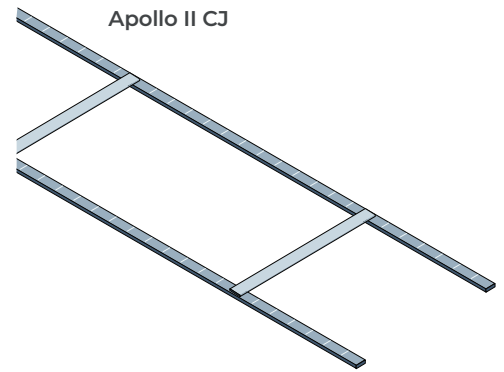
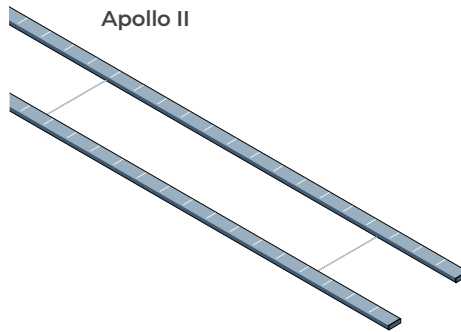
Check that you are using
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Apollo II

Apollo II materials

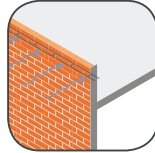
Stainless steel is suitable for use in most external applications (including MX2, MX3 & MX4 exposure classes) and offers maximum corrosion resistance and minimised future maintenance costs.



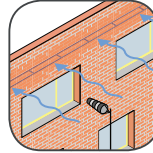
Apollo II structural applications

Wind loading

Apollo II is used to increase load capacity of façade walls and reduce the requirement for wind posts.



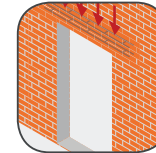
Parapets



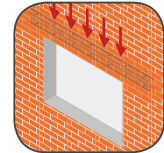
Wind loaded panels

Vertical loading

Apollo II is used to create reinforced masonry beams for lintels above openings.



Masonry lintels doors

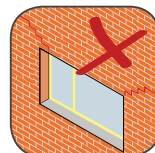


Masonry lintels windows

Apollo II movement control applications

Stress and shrinkage movement

Apollo II is used to reduce formation of cracks in masonry at vulnerable locations and due to shrinkage of materials.



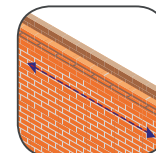
Stress cracking



Avoid stress cracking

Thermal movement

Apollo II helps to control cracking in masonry caused by thermal movement. Distances between movement joints can be increased using Apollo II.



Masonry lintels doors



Apollo II

Apollo II properties

Flattened profile with superior grip

Apollo II is manufactured from stainless steel creating unique, flattened and profiled main structural wires which help to improve bond performance compared with traditional smooth wires. The flattened profile allows for maximum coverage and anchorage within the 10 mm mortar joint, without compromising the cover within the joint.

Apollo II can provide scope for design optimisation, ultimately providing a cost-saving solution to the end-user.

Comprehensive range of widths and main wire sizes

Includes 3.0, 3.5, 4.0, 4.5 & 5.0 mm effective diameters for structural and crack-control applications.

In-line welded cross wires

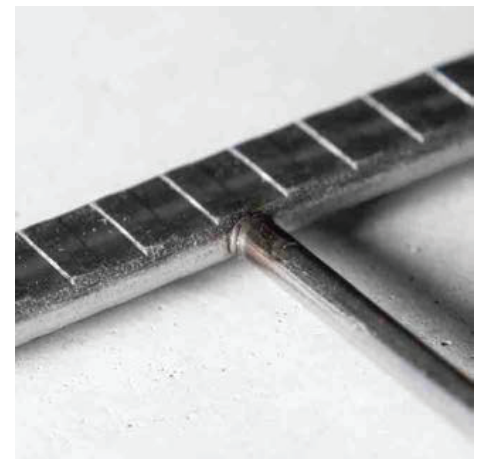
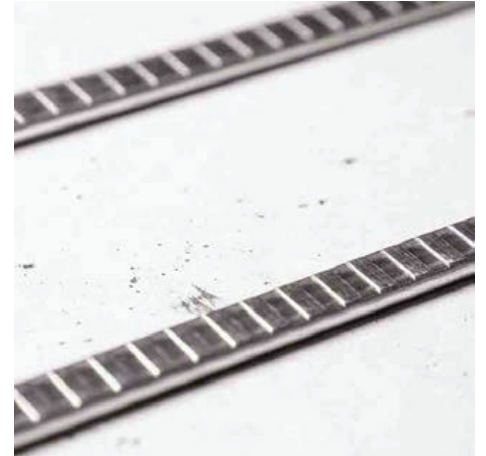
Apollo II cross wires are welded in-line to avoid steel build up problems within the mortar joint in application. The cross-wire is sized at 2.75 mm diameter to help develop maximum anchorage with the profiled main wires within the mortar and creates a very robust and durable reinforcement strip.

Certification & product quality

Apollo II meets the requirement of BS EN845-3:2013 + A1:2016 - Specification for ancillary components for masonry. Bed joint reinforcement of steel mesh work.

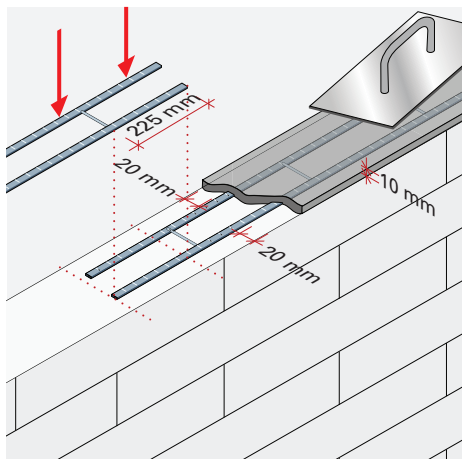
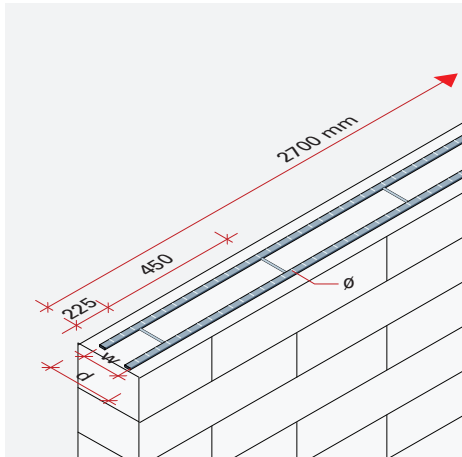
CE Mark in accordance with clause 4:2:2 of the standard.

Declaration of Performance (DOP) documents available on request.



Apollo II

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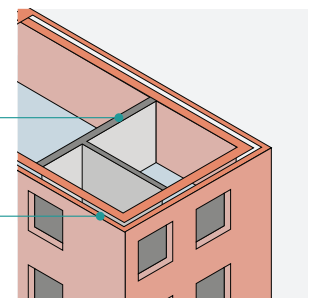
Item Code Exposure class ¹ MX2, MX3, (MX4)	Product width* w (mm)	Wall thickness d (mm)	Main Wire Nom ø (mm)
ATS30W060	60	102 brick or 100 block	3.0
ATS35W060	60	102 brick or 100 block	3.5
ATS40W060	60	102 brick or 100 block	4.0
ATS45W060	60	102 brick or 100 block	4.5
ATS50W060	60	102 brick or 100 block	5.0
ATS30W100	100	140 block	3.0
ATS35W100	100	140 block	3.5
ATS40W100	100	140 block	4.0
ATS45W100	100	140 block	4.5
ATS50W100	100	140 block	5.0
ATS30W150	150	190 or 200 block	3.0
ATS35W150	150	190 or 200 block	3.5
ATS40W150	150	190 or 200 block	4.0
ATS45W150	150	190 or 200 block	4.5
ATS50W150	150	190 or 200 block	5.0
ATS30W175	175	215 block	3.0
ATS35W175	175	215 block	3.5
ATS40W175	175	215 block	4.0
ATS45W175	175	215 block	4.5
ATS50W175	175	215 block	5.0

Units are strips – 2.70 m long with 20 strips in each pack = 54 m per pack / Minimum overlap is 225 mm
*Non standard product widths can be made to order

1) BS EN1996-2 Annex A . A1 - Classification of micro conditions of exposure of completed masonry

- Class MX1 Masonry in a dry environment
- Class MX2 Masonry exposed to moisture or wetting
- Class MX3 Masonry exposed to moisture or wetting plus freeze thaw cycling
- Class MX4* Masonry exposed to saturated salt air, sea water or de-icing salts

For MX4 conditions consult with ACS for advice



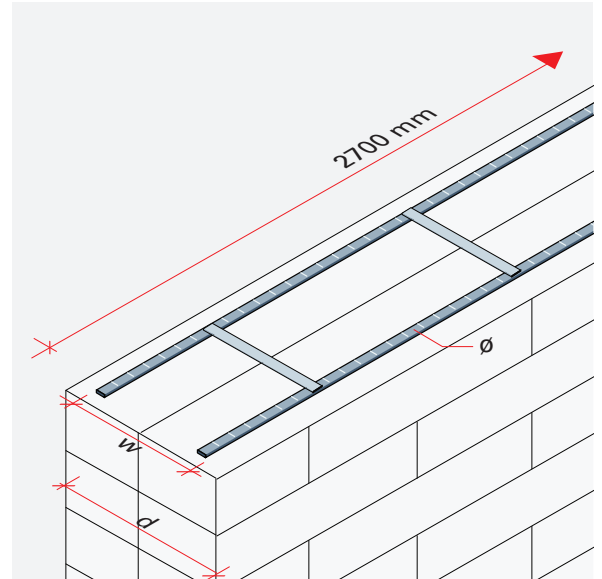
Apollo II

Apollo II CJ Collar jointed masonry wall construction

Apollo II CJ combines Apollo II masonry reinforcement with a welded 20 mm x 3 mm cross tie to allow the construction of two leaves of masonry tied together. This alleviates the safety problems associated with the repeat lifting and placing of heavy 215 mm solid blocks.

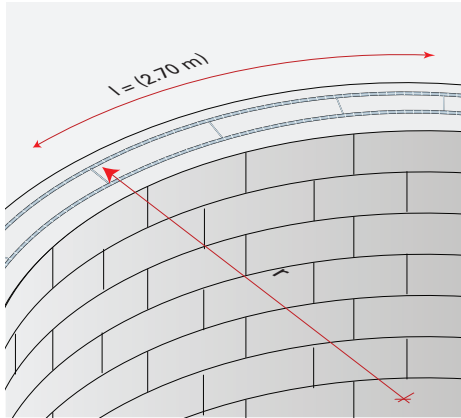
Using Apollo II CJ it is possible to construct two leaves of 100 mm brick or block side by side, eliminating the heavy block situation and creating a so called 'Collar-Joint' built wall.

The Apollo II welded ties anchor across the two leaves, structurally tying them together, and the main reinforcing wires act to reinforce the wall against structural forces and/or to assist with movement control of the built wall panel.



Item Code Exposure class ¹ MX2, MX3, (MX4)	Product width* w (mm)	Wall thickness d (mm)	Main Wire Nom Ø (mm)
ATSCJ30	175	215	3.0
ATSCJ35	175	215	3.5
ATSCJ40	175	215	4.0
ATSCJ45	175	215	4.5
ATSCJ50	175	215	5.0

Apollo II

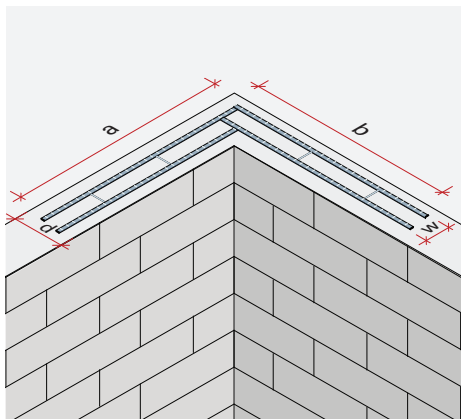


Apollo II Custom-Made

Custom-Made Apollo II

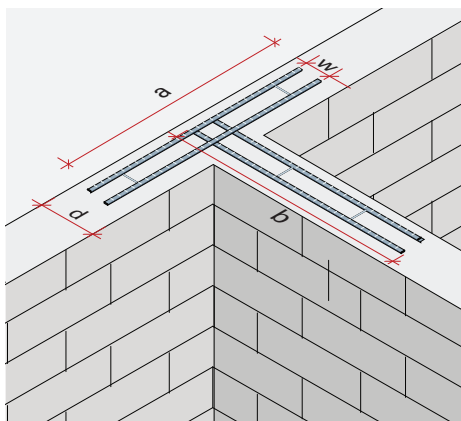
Apollo II can be custom-made in a variety of widths and shapes to assist with special details. The use of engineered units enables continuity of the full reinforcement to construct the detail or feature, so maintaining structural integrity of the masonry and providing crack control. From a site perspective, welded factory-made units reduce the need to fabricate on site and improve efficiency and build quality in conjunction with standard Apollo II reinforcement strips.

Within reason any shape can be fabricated. Corners and junctions, as well as radiused forms, are commonly called for.



Apollo II Corner

Apollo II Corner Item Code	Main Wire Nom Ø (mm)	Product width* w (mm)	Corner dimensions (a/b) (mm)	Wall thickness d (mm)
ATSC30W060	3.0	60	900 x 900	100
ATSC40W060	4.0	60	900 x 900	100
ATSC50W060	5.0	60	900 x 900	100
ATSC30W100	3.0	100	900 x 900	140
ATSC40W100	4.0	100	900 x 900	140
ATSC50W100	5.0	100	900 x 900	140



Apollo II TEE

Apollo II TEE Item Code	Main Wire Nom Ø (mm)	Product width* w (mm)	TEE dimensions (a/b) (mm)	Wall thickness d (mm)
ATST30W060	3.0	60	900 x 900	100
ATST40W060	4.0	60	900 x 900	100
ATST50W060	5.0	60	900 x 900	100
ATST30W100	3.0	100	900 x 900	140
ATST40W100	4.0	100	900 x 900	140
ATST50W100	5.0	100	900 x 900	140