Procedure of production of Filter Unit

① Take out a Filter Unit from a packing (measure) and set it in a production frame.

Please confirm that there is no projection, no holes, no scratches etc, inside the production frame.

They may break the net.

When setting the Filter Unit, it is recommended to draw the Filter Unit out of the frame as much as possible so that you can keep the net tight.

At the same time, when you fill the materials into the net, please pay attention to the net not to be caught at the corner of the frame.

Please try to ease the tension of the net at first and second filling.

② Stuff prescribed quantity fillings.

In case size of filling is too big, it may break the net.

Stuffing too much quantity may cause the break of the net.

③ As indicated at the below figure, assemble the net to the upper center and pull out hanging rope from 6 places.

Hanging points are indicated by 7 red tapes and 6 linen strings on a hanging rope. They are indicated above photo, 5 red marks and 1 yellow mark. You will find 2 red taped places in yellow mark. It is a joint part of the rope, so it is regarded as one place. Please take off all linen strings. It is easy to take off by pulling both ends (indicated with blue circle in the photo) at the same time.
**Procedure of production of Filter Unit**

4. As it is shown at the below figure, tie the hanging ring with ropes.
   * 6 ropes are united.

![Diagram of hanging ring and ropes]

5. As soon as the net becomes tight by temporary hanging, please put hook of the crane a little bit down, then bind the mouth of Filter Unit.

Do not lift crane’s temporary hang for binding, more than required.

It may break the net.

Put the ring on crane’s hook and lift it until ropes get together.

Then, drag the binding rope whose diameter is 6mm.

![Diagram of binding process]

6. Down crane’s hook slightly from hung up position and loosen the tension of Filter Unit.
   And then, tie it up firmly at little below the original position of binding rope.

If the tension of the net by temporary hang is strong or tie position is higher place than original binding rope position, there is a risk of loosing the knot after production frame is lifted.

![Diagram of final tensioning]

Bind till the last.
Procedure of production of Filter Unit

⑦ Lift up the production frame and leave Filter Unit.

Raise the frame slowly.

※N.B
Please do not lift Filter Unit from the production frame.
When you lift Filter Unit, friction resistance against frame will be added to its weight.
Ropes and nets will catch extra loading that there is a risk of break.

⑧ Move left the Filter Unit to temporary stock yard by hanging ring with a hook.

Do not drag it when moving.
(It will break.)

⑨ After temporal stock, put numbering cloth to Filter Unit with binding wire in order to confirm quantity.

The order of moving from temporary stock, it is recommended to take out from the new ones.
There is a risk of break by pile up if order is disregarded.
Instruction of the Filter Unit production

It is advised to pay attention to following points when production the Filter Unit (including filling of material).

A) Filling materials

- If a size of filling is bigger than prescribed (indicated on the catalogue), the net may break.
- In case filling's size is bigger than prescribed, the void percentage becomes higher that the weight may not reach aimed value.
- In case crushed concrete is filled, weight may not reach the target although designed volume is filled because gravity of concrete is smaller than natural stone.
- In case fillings are stuffed more than the dimension of the Frame, Filter Unit may break and size of finished product may change.
- The quantity of stuffed quantity should be stated by volume. Please keep in mind that although you stuff prescribed volume, there is a possibility of not reaching targeted weight due to different gravity or size of stuffed material as described above.

B) The production frame

- Please prepare production frame which has smooth inner surface. In case it has protuberance by welding, projection or hole, there is a risk of break.
- In case there is any projection which catches Filter Unit at outside the frame, it may break the net or make filling work inefficient. You are requested to make effort not to be caught at the corner of the frame.
- Please make stated volume production frame by inner size.
- The circumference of production frame should be smaller than that of Filter Unit.

C) The check points for filling work

- When setting the Filter Unit to the Frame, make sure to set stitched part of Filter Unit to the line of opposing corner of the Frame. So that you can set the Filter Unit in good balance.
- When setting the Filter Unit to the Frame, draw the mouth of Filter Unit along the outside wall of the frame, and keep bottom center of Filter Unit 10cm from the ground. If the net is loose at the bottom of the frame, closing of the mouth will be difficult. It may also cause the break of net because the loose bottom net will be stroked by stuffed material when lifted.
- After the filling, leveling of filling is not necessary if stated volume is visually confirmed. Binding of mouth will be easier and probability of break of net will be lower not to have fillings at the top corner of the production frame.
- Temporary hang to bind the mouth will be enough if the hanging rope gathers. It is not necessary to lift Filter Unit until nets are pulled with full tension. It may break if you lift unnecessarily.
- We recommend you to work as slow as possible until workers are used to the work.

We hope this instruction is helpful and the Filter Unit production goes smoothly.
**Re: Stone stuffing of Filter Unit**

× Bad example

① Production frame
Wrong size—Setting of net is difficult.
There are projections—Net was hooked.

○ Good example

① Production frame
Correct size—Setting of net is easy.
There is no projections—Net will not be hooked.

② Stuffing stones
Unsuitable size: Diameter more than 200mm.

Suitable size: 50~150mm

③ Setting of a net
If production frame is too big, net can't be opened.
Unnecessary load to a net.

There is leeway of net if size of frame is correct.
There is no load to a net.

④ Produced Filter Unit.
A lot of vacancy with uneven surface.
Flexibility and stability are very bad.

Net will be damaged if production method is wrong.

④ Production of Filter Unit.
No vacancy with smooth surface.
Flexibility and stability are very good.