

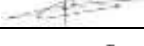

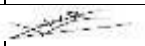


Modular retention bund with fire-suppressing system



Records of revision

Rev.	Date	Observations	Written by	Signature	Approved by	Visa
0	09/12/2019	General reset	PGO		MZE	
1	12/05/2020	Adding Grounding section	PGO		CBO	
2	09/11/2020	Flange fixing modification	PGO		CBO	
3	22/02/2022	PFK modification + junction cover + bund fixing	MLE		VVR	



User instructions booklet : BAFX Range

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I - SAFETY INSTRUCTIONS

- Wear a safety helmet, gloves (Kevlar or leather) and safety shoes at all times when installing the equipment.
- The products might have hydrocarbons on them, so adequate personal protective equipment must be worn (impermeable gloves, overalls, safety glasses, safety helmet, safety boots) during maintenance work.
- Do not carry loads heavier than 55 kg (for men) or 25 kg (for women). For loads between 55 kg and 105 kg, ask for the help of a co-worker or use lifting equipment. (Art. R4541-9 of the French Labor Code).
- Wear insulating personal protective equipment when earthing the equipment and make sure to shunt the earthing loops.
- Take care not to catch your fingers when removing and fitting the baffles (wear leather gloves).
- Use suitable and in good order lifting equipment when handling the bunds.
- For BAFX® fitted with lifting rings, they must be installed at the locations indicated in the plan, hand tight abutting each side.
- Use proper lifting straps, in good order and long enough to allow obtuse angles greater than 45 °.
- The operations of handling and lifting must be performed when the bund is empty (without transformer and without grating).
- Remain at a safe distance from the lifting equipment during bund handling operations.
- When installing accessories (valves, siphons, FILTRELEC ECODESIGN® cartridges, etc.) always bend your knees to avoid back strain.

II - SYSTEM CONTENT

- Retention bund with fire-suppressing system BAFX® (Fig. a)
- Filtration Kit(s) FILTRELEC ECODESIGN® (Fig. b) (option)
- Prefiltration System(s) PFK (Fig. c) (option)
- Drain valve(s) (option)
- Grating (option)
- NoVib vibration dampers (plates or springs) (Fig. d) (option)
- Teflon insulating plates (option)



Fig. a



Fig. b

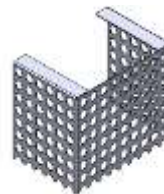


Fig. c

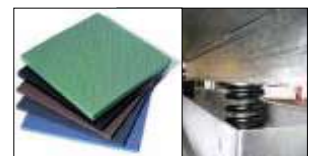


Fig. d

Before assembling the BAF make sure you have all the parts needed.

In case of parts missing, please contact AKHELEC IMMEDIATELY either by telephone (+34 (0) 932 72 39 00) or by e-mail (akhelec@akhelec.com) to report the missing or damaged parts.

Without any reservation expressed, the delivery is considered to be complete both in quantities and condition of the parts. The party receiving the goods will be responsible in case of non-signature for the goods without clear cause.

III - INSTALLATION OF THE MATERIEL AND ACCESSORIES

Note: The following operations must only be carried out by qualified personnel. This service can be carried out by the GMT site teams or under our supervision.

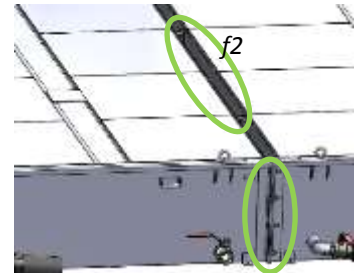
III.1. BAFX® Installation

1. Unload the bunds one by one using suitable lifting equipment and the lifting rings. Lay them on a flat surface free of obstacles (*Fig. e*).
2. Place the bunds in their final position and make sure to align them properly (*Fig. e*).
3. Fix the bunds to one another with the supplied fixation plates and screws as describe in the following paragraphs and place a bolt assembly in the upper opening of each plate between bunds if necessary (*fig. f2*)
4. Once the bunds are installed and assembled, remove the baffles.
5. Clean the inside of the bunds (leaves, branches, dust...)
6. Install the internal flange connections (See paragraph III.2).
7. Replace the baffles.
8. Install the grating on top (*Fig. h*).
9. Install the deflectors (option, See paragraph III.4).
10. Install the earthing connections (See paragraph III.6).
11. If necessary, you can fix the bund to the ground using the brackets. (Studs not supplied). This makes possible to straighten and flatten the bund on the ground with any deformations due to galvanization or imperfections in the concrete slab. (*fig.h*).
12. Install the filtration system **FILTRELEC ECODESIGN®** (option, see chapter III.7) (*Fig. g*).

Fig. e



Fig. f



f1

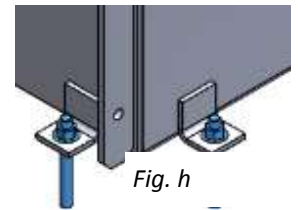


Fig. h

Fig. g



Fig. i



III.2. BAFX with internal flanges

Subassembly details (Fig k)

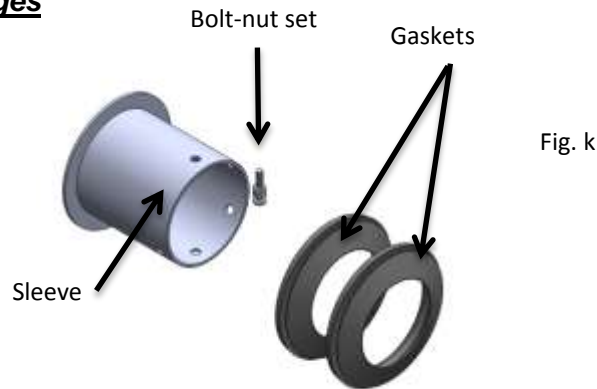


Fig. k

1. Count the joints the same way (Fig. l).
2. Slide the sleeve through the two gaskets taking care of respecting the right position and direction (Fig. m).

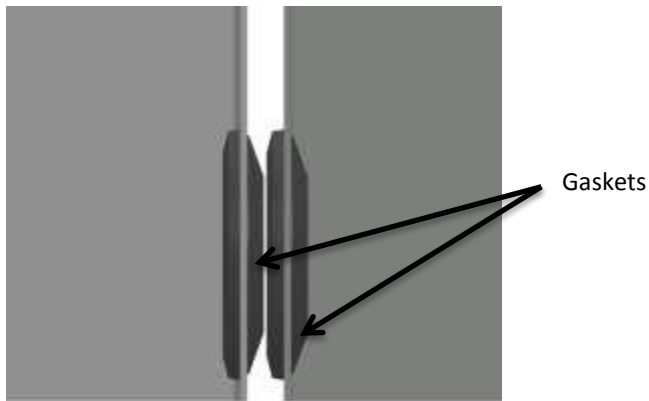


Fig. l

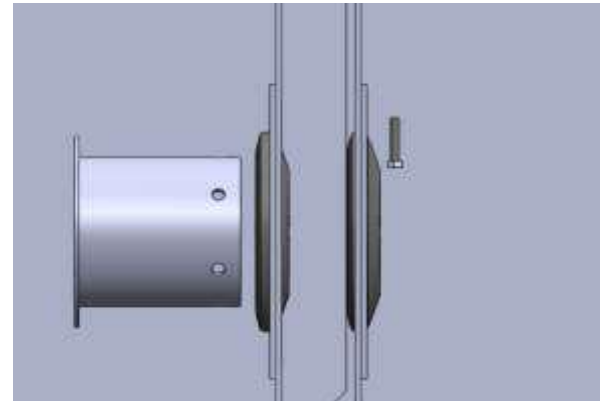


Fig. m

3. Lock the sleeve with the bolt-nut set (Fig. n and o).

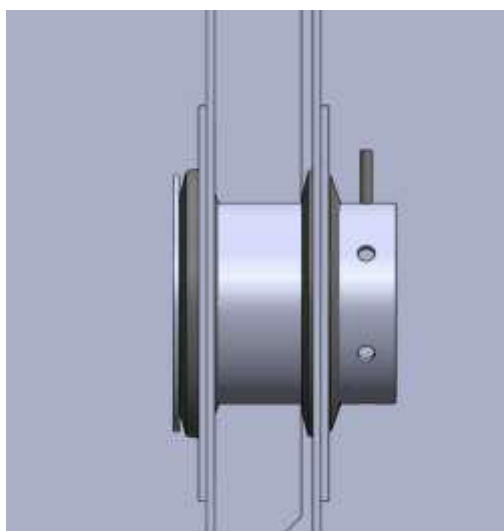


Fig. n

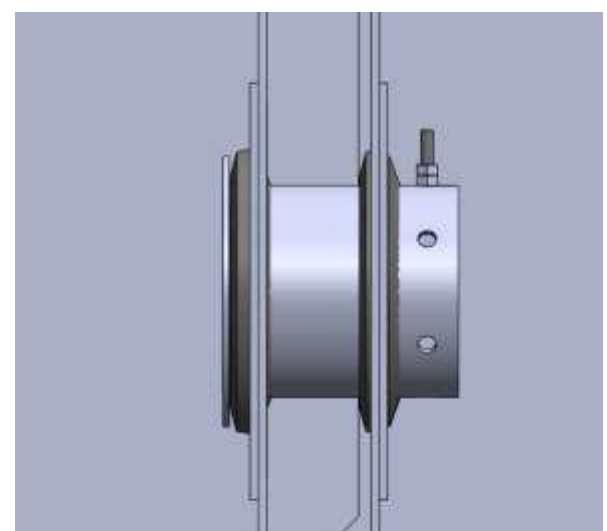


Fig. o

III.3. BAFX® with removable deflectors

1. Cover the gap between 2 bunds by placing the deflectors (Fig. p) astride these 2 bunds.

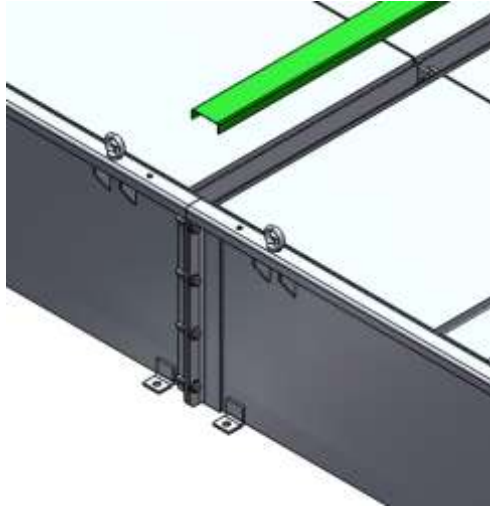
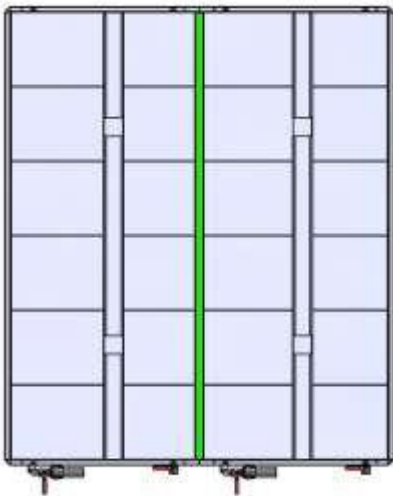


Fig. p

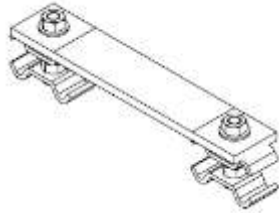


Realization example

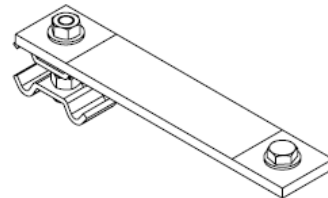
III.4. Electrical earthing connections

Every single bund and grating must be connected to the ground, using braids or cables. Cross-sectional areas of braids and cables are defined by the customer / user.

In case it is required, we can supply grounding elements for the equipment. There are of 3 different types as described below:

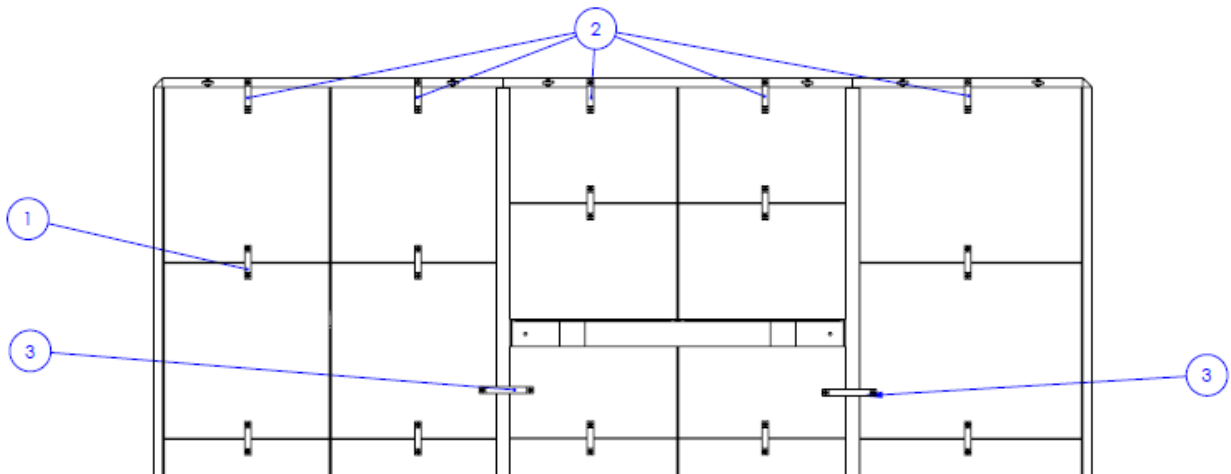


Grounding set T1
Between grating
(exists in longer version Grounding set T3)

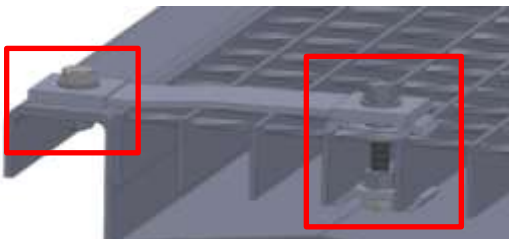


Grounding set T2
Between bund/hatch and grating

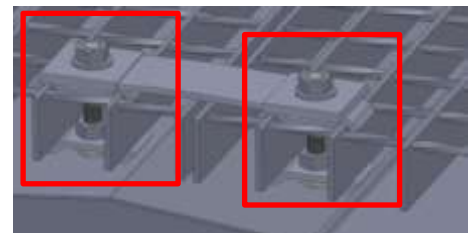
All sets must be assembled as per the supplied drawing. The bund is designed to receive those elements (drilling holes on bund edges regarding T2 elements). Regarding T1 and T3 sets, there is no specific assembly points, grounding connection will be ensured as soon as every single grating panel is linked to two adjacent panels at least.



Fixing is made as per following pictures, untightening and then tightening back the M8 nuts and metallic staples on each side of the bund edge and/or grating panel, thanks to a 13mm wrench



Parts to be disassembled and then tightened back after having placed nuts and metallic staples on each side of the bund edge/ grating.



III.5. Installation of the FILTRELEC® filtration system (option)

To guarantee an efficient filtration of rain water, the BAFX is composed by two complementary FILTRELEC® systems developed by AKHELEC company :

- 1 prefiltration internal system PFK
- 1 external filtration system FILTRELEC®

See the FILTRELEC® user guide

III.6. Installation of the NoVib vibration dampers (plates or springs) (option)

See the NoVib user guide.

III.7. Watertightness test

Our production and welding process ensures watertightness of the bund, junctions and welding. However, in case it is required, a specific watertightness test can be performed at the end of the installation process.

The bund must be filled up to the siphon level (before) then a visual check is done to ensure there is no leakage around the bund after a reasonable time. This specific test is not included within the assembly service neither the assembly assistance we propose, therefore the customer who want to perform it will have to provide the infrastructure and resource needed to do it.

IV - SERVICE AND MAINTENANCE

IV.1. Frequency and interest

Regular maintenance must be carried out on the equipment to ensure it is neither damaged nor soiled (cleaning the baffles, carrying out a general inspection and ensuring effective rainwater runoff...). Inspections must be performed at least once a year. We can propose to carry out these regular checks. Please contact AKHELEC.

IV.2. How to access inside the BAFX®

To clean the bund (in case of buried bund for example), it is necessary to remove the fire-protection cover to access inside the bund. To do so, you have to:

1. On one extremity of the bund, remove the gratings to access the fire-protection cover
2. Move the baffles to align one of them with the bund free space allowing you to remove them.
3. Remove the first baffle.
4. Remove enough baffles to enable an access inside for your intervention (for installing a pump for example).
5. After your intervention, put back the baffles one by one in the same position, so that the next one will lay on the previous one.





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IV.3. Service and maintenance of the FILTRELEC ECODESIGN® filtration system & PFK (option)

See FILTRELEC ECODESIGN® user guide.

V - PRECAUTIONS AND RESTRICTIONS IN USE

- Only use the BAF X® with the transformer for which it was sold.
- Do not use the BAFX® for retaining fluids that were not considered at the time of purchase.
- Install the BAFX® on a flat and clean surface.
- Do not lift bund + transformer by the transformer itself, even if equipped with rolling system.
- Maintenance must be done with the bund empty from water.
- Do not step on the baffles. They are designed for drainage and extinguishing burning oil – not to withstand loads. Metal grating must be installed to allow the operator to move around the transformer.
- Do not cover when in use. Make sure that the surface of the BAFX® is totally unobstructed to allow oil to flow freely through the baffles.
- Do not grind (using disk grinders, etc.) or saw metal parts near the BAF unless it is properly protected. Iron dust on the bunds would oxidize and cause rusting.
- During handling of the BAFX®, avoid hard hits to the bund, which could damage the coating potentially causing corrosion.
- Pending installation, the bund must be stored in a sheltered storage area (or covered with a tarp).
- It is forbidden to climb or lean on FILTRELEC ECODESIGN® products. The dimensioning of these products is based on their ability to filter and drain the fluid and not on the resistance to a load or a shock.
- Some BAFX are designed for the transformer to be installed with a crane. In this case, it is strictly forbidden to slide the transformer onto the bund.

VI - IN CASE OF AN INCIDENT

In case of an incident, the equipment must be replaced or cleaned as follows:

1. Have the bund drained and cleaned by a specialised firm.
2. Make sure to remove all traces of oil from the bund.
3. Reinstall all the equipment.

For bunds equipped with the optional FILTRELEC ECODESIGN® filtration system, see the FILTRELEC ECODESIGN® user guide.