BUILT-IN SPOTLIGHT SUPPORT BOX

for spotlights directly masonry and reinforced concrete

Without using the false ceiling, while the construction or renovation of a building

New patented lighting system, an exclusive of:

tekno® soluzioni

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But why have built-in spotlights?

Illuminating the rooms of your home with built-in led spotlights is a new way of seeing interior design, with original lighting effects. It's a way of getting the light where you want it, spreading warmth and beauty to all the objects it plays on.
Spotlights fitted give you the closest alternative to sunlight. By directing the lamp as you want you will get the right distribution, while each spotlight will reach out gently to every corner of the room but would not blind you in the process, a problem of traditional lighting.
Old halogen lights have practically been abandoned for the latest led spotlights, now an economic reality.
We now need to further disperse these light sources, because the light power from each light point is smaller than that of the previously used halogen lights.
It is always interesting to assess room lighting with built-in led spotlights and it is equally interesting to also install them where false ceilings are not always present or available, which have been facilitating (even if not correctly) the installation of spotlights for years.

IN HALLWAYS AND STAIRWELLS



IN BEDROOMS

IN STORES AND OFFICES


IN BATHROOMS

IN LIVINGROOMS


IN BASEMENT RECREATION ROOMS OR IN MANSARDS


SERVICE


Why use a spotlight box?

1) it is indispensable to install built-in spotlights directly in ceilings and brick or reinforced cement walls

In fact, spotlights have almost always been installed in shops or public premises where a false ceiling is normally used, but the latter is not always possible and anyway, also installing spotlights in residential buildings is highly appreciated by the end customer. There has never been a rational method to install spotlights in walls, now there is and you can truly use it in many new ways.
Our work system is still little known but the problem of spotlight installation is more widespread than thought. In any case, knowing the method gives greater use possibilities and also provides a solution to new led spotlight problems that manufacturers still don't take into consideration. In many cases, the client or the designer consulting the manufacturer's lighting catalogue, or visit a lighting exhibition, DOES NOT UNDERSTAND IT IS POSSIBLE TO INSTALL SPOTLIGHTS WITHOUT A FALSE CEILING.

Even if there are formworks in certain catalogues (but rarely technical images illustrating use), the mental connection is often not made that the spotlight inside the formwork permits assembly in a masonry ceiling; therefore the possibility is offered to the client to choose the products displayed in the catalogue, which would have been otherwise discarded. Example: the end customer consulting the catalogue could decide to install built-in spotlights in the bathroom or in a corridor since they see technical images of the formworks in the middle of unfinished walls, understanding that the spotlights he is looking at in that catalogue or in this lighting display include an installation method without use of plasterboard; and therefore a certain number of spotlights and a certain number of support boxes could be purchased.
Similarly, a planner could favour the description of a light compared to an another because the same catalogue has the installation method in reinforced cement as planned on that building site.

The problem has been around for a while. How many sector operators found themselves having to fit spotlights and not knowing how to do it?
So why aren't these topics discussed?

Why use a spotlight box?

2) it is useful to create an air zone around the spotlight to avoid it reaching temperatures that are two high and limiting the duration in led hours

The overall and common technique to install spotlights includes making a hole in the false ceiling and putting everything up there without any particular measures. However, these false ceilings are often covered in glass wool, in recent years especially in the north, due to the need to increase the efficiency of the building and "A" class to avoid wasting energy.
At the same time, the new led lights reach good power, but require correct heat disposal which often, after years of "boiling" halogens, is underestimated. In fact, if the temperatures of the leds rise too much the same led will not last 50,000 hours expected by the client and by lasting less than expected and as promised causes considerable inconvenience after coating.

It is fundamental for the manufacturer of the spotlights to clearly explain this concept and test temperature discharge while taking into consideration the possibility the spotlight could also be covered in insulating fabric, as often occurs nowadays. In fact, you need a space for temperature discharge which is usually at least 5/6 cm in volume around the light. Space that can be created by installing the spotlight with a fairly null formwork and taking the risk of it being covered in glass wool, with early damage due to heat.
Having an adequate installation method that also takes into consideration these problems, in the catalogue or instructions sheet issued by the manufacturer, also safeguards the manufacturer in the event of incorrect installation and limited hours of use.

The led can in fact last 50,000 hours, but the working temperature must not exceed approximately 70°.
For this reason, we have tested our products and thereby provided an approximation of the power limits for each of our items, all indicated in the pricelist at the bottom of this catalogue.

- excellent protection for traditional false-ceiling installations.

- easily installed by your own electrician using the special application system.

- especially in your homes, a new way to light up rooms.

Now thanks to the built-in spotlight support box and its application system the whole thing becomes a real possibility, and is available to any electrician; that is how you keep your customers satisfied!

The inventor of the spotlight support box

box TEKPFGB07
for small step marker spotlights

In order to make it easier for the isnstallers , get used to fix in the walls the ordinary rectangular boxes, we have produced a very suitable box for the fitting of the small mark step spots.

life is made of stairs...
the spotbox
grows step by step...

Now it has 4 diametres, but on demand it can be personalized for every product.

It can be easily mounted in hollows brick walls or stones.
(see models on bottom of catalogue)

True true fitting for the mark step
STEP BY STEP

Installation of the spotlights using the spotlight support box TEKPF03

These support boxes are appropriate for the following installation type:

- in false-ceilings or walls in masonry or reinforced concrete
- for round small/medium spotlighs (from 50mm to 150mm)
- for which you know at least aproximativelly the diameter
- When the coverage of the brick is made using plaster of about 1 cm thickness
- When the installation in reinforced concrete must be done at once or it is already finished
- It is possible to install them using the appropriate application system

THE SUPPORT BOX TEKPF03

Package 20pcs (h 37xl 40xp 40)

TEKPF03
LOW version
Universal spotlight support box
h 83 x l 200 x p137 mm
to use in masonry and reinforced concrete.

Package 10pcs (h 33xl 59xp 39)

TEKPF03/TA
HIGH version
with transformer holder
Spotlight support box with transformer holder
The same functions as the TEKPF03A with possibility of inserting the transformer
h 113 x l 360 x p137 mm

Package 20pcs (h 37xl 40xp 40)

TEKPF03A
High version
Universal spotlight support box
h 113 x l 200 x p137 mm
to use in masonry and reinforced concrete

unitary pack

TEKPFAP/S
application system for box fitting one centimetre away from the brick

DESCRIPTION - The universal spotlight support box type Tekno Soluzioni Art. TEKPF03, hole from 50mm to 103mm, is used as a holder for illuminating spotlights in the ceilings, walls of reinforced concrete

THE HEIGHT of these boxes and the related inside volume may be changed jointing the cover in different positions: standard and raised.

SOME IDEAS FROM OUR WORKERS






GENERAL RULES FOR INSTALLATION OF BUILT-IN SPOTLIGHTS

Mark off the electrical plant position of the spotlights.

If you choose to supply the spotlights with low-voltage, with a transformer for each group of spotlights (the most economical solution in large areas), keep to the following guidelines: find the point on the wall where the transformer box is to be installed. Install the low-voltage line to a suitable length (about 1.mmsq for each spotlight of 50 w.) do this no longer than 10mts. Connect no more than 6 spotlights of 50w to each switch. In this situation, use the TEKPF03 box. Use this box even if you decide to supply the spotlights directly with 220v using the Gu10 low energy lamp.

If you decide to install the transformer inside the spotlight support box (optimum solution in large areas where it would be difficult to install it in another way) use the TEKPF03/T box which is ideal for this type of installation.

Once the box has been installed, insert the single transformer before installing the spotlight.
If the transformer used is of 100w, it is possible to start again from the same box with a short low-voltage line in order to supply another spotlight of 50W installed nearby in a normal TEKPF box.

Remember to use the correct cover to separate the lamp space from the transformer space, making sure that the wires are only coming out of the small hole made in the cover for this use.

Choose the diameter of the next spotlight to be installed. If you do not know the diameter, do as follows: find out, according to the dimensions of the area or to the tastes of the client if the spotlight will need to be small, medium or large and according to this, use diameter 63 for small spotlights, 76 for medium spotlights and 96 for large spotlights.
The large availability of spotlights of these dimensions on the market will allow the choice to be made after the work has been finished.
According to the chosen diameter, cut the box along its already- made dotted lines using normal electrician's scissors or, even better, those scissors usually used for pruning plants.

Choose the height of the box according to the depth of the spotlight to be installed, the box and the average dimensions (the most common). It is however possible to obtain a 3cm higher box by simply moving the cover higher. This will allow installation of spotlights up to 120mm in depth.

If, however, the spotlight
to be installed is a small one, or the installation conditions require a container of a lower height, it is possible to cut the box along the indicated line and, putting the box in a lower position, will allow you to obtain a box which will be lower by 3cm compared to the traditional model, with a minimum height
of only 8 cm.

You will find in out web site films of this type of installation, clicking on play on the page www.teknosoluzioni.it/tecnico.html

INSTALLATION OF THE SPOTLIGHTS IN MASONRY CEILINGS OR WALLS

The new spotlight support box solves a long-standing problem for electrical installation operators, who frequently had been asked by their customers to install the spotlights without having a false ceiling installed.At best the job was expensive and difficult, at worst impossible because of the existence of construction norms regulating the minimum height of a ceiling.
The most difficult obstacles were:

- difficulty in getting hold of parts with the right diameter and grips for the spotlight arm springs (which in any case did not come up to CEE standards)
- difficulty for the operators to install them correctly, given the absence of the usual plaster on the ceilings, so that the final result was nearly always not quite right, leading installers to avoid using spotlights as much as possible.

The built-in spotlight support box completely solves these problems, and, with the help of the special application tool, opens the door to a new working system: ***the installation of the built-in spotlight support boxes in a home as a viable alternative or addition to traditional systems.***

- Use the universal spotlight support box.
- While marking off the electrical plant, position the spotlights in the centre of the brick.

- The builder will make the holes in the brick as precisely as possible so as not to complicate later plastering work.

- Choose the most appropriate spotlight diameter and cut the box along the marked fracture lines.

- Completely remove the box support which is not necessary in this type of installation.

- Possibly, though not necessarily, open a few of the ventilation holes on the box cover, to favour heat dispersion through the cavities in the mounting surface.

- Insert the box in the applicator and turn the pin to block it

- Position the tripod on the box and tighten the knob

- Using a common extensible pole for paint-rollers, or a builder's sprung perch or, even better, three provisional plugs in the slots, hold the assembly against the unplastered ceiling and keep it steady.

- The special configuration of the application system enables you to achieve a fast and precise positioning of the box at exactly 1 cm. from the brick, leaving enough space for the subsequent plastering.
- The use of more than one application system at the same time is reccomended.

- Fix the box using polyurethane foam or quick-dry cement mortar, allow to dry before removing the application system, which can be re-used hundreds of times.

- Use polyurethane foam in small quantities. And it is advisable to apply it using the correct gun.

- The builder, who has previously made the hole in the brick, will then fill-in around the box before adding the final plaster.

INSTALLATION OF THE SPOTLIGHTS IN REINFORCED CONCRETE CEILINGS OR WALLS

During the phase of building design the spotlights can be positioned in reinforced concrete, before it is finalised. For example, the spotlights can be installed in stairwells between floors, or wherever the ceiling or floor is made specially to house the spotlights.

In this case as well, use the spotlight support box appropriately cut to the diameter of the hole and the support feet..

Nail the support box to the armour form in the place where the spotlight to be installed must be positioned.

Also fasten the box to the reinforcing rods and position the tubes for the electrical supply cables.

Before the drop, make sure any parts which should be protected from concrete penetration, such as tube-box connections, are sealed.

Wherever it is necessary for this type of installation, seal the crack between the box and the cover with silicone.

On removal of the form, the position of the spotlight hole can be identified by observing the two nails originally hammered in

You will find in out web site films of this type of installation, clicking on play on the page www.teknosoluzioni.it/tecnico.html

And.....did you know that Old-type tubes, which sometimes replaced the installation of spotlights, are dangerously inflammable and indeed do not now respond to the existing safety standards.

SPOTLIGHT SUPPORT BOX TEKPF05 E TEKPF06

For medium spotlights, Low energy spotlights, metallic halogen and even hi-fi speakers • Per faretti a led sino a 25 watt

TEKPF05 until 15 cm. diameter
until led lamps 15 watt

the two models have the same functional characteristics, the only difference is their size

TEKPF06 until 24 cm. diameter
until led lamps 25 watt

The new **TEKPF05 and TEKPF06** support boxes are the ideal solution when it is to be prepared the future installation of a built-in spotlight in any kind of building: for small, medium and large dimensions, before even knowing the necessary diameter.

Both TEKPF05 and TEKPF06 can be installed in reinforced concrete on the prior phase of the construction.
Appropriate for all round spotlights from 2cm to 21cm diameter and also for squared spotlights from 2cm to 14cm. So it is appropriate for 90% of the spotlights on the market. The support box is a sturdy container, where a compensation grill can be applied, round or square, when the building is done.
The grill is composed by several concentric rings, which can be removed by cutting them using the electrician's scissors.
This way there is possible to change the diameter or the side by 0,7mm for each cut ring, still standing into the here above mentioned dimensions. The support boxes dispose of a large interior volume, which allows an excellent hit dissipation, even after an extended use of the installed spotlight. Moreover it is possible to intervene in time, in order to change the spotlight with an other type or another dimension without trespassing the diameter of the used grill, related to the 05 or 06 model.

The support box TEKPF06 can be equipped of a central support leg, which makes it resilient and thus can be trampled during the most intense phase of the construction.

This is how it works for REINFORCED CONCRETE and in MASONRY

secure the box nailing it to the housing reinforcement, to the point where the spotlight will be installed

ensure the box to the reinforcing bars, even tying it; pass the cables through the little holes especially made at each side of the boxes.

If it is well done the using of fixing nails can be avoid.

open the entrance hole of the alimentation corrugated tube(do not forget) and insert it in order to remain still

pour the concrete and after that, disarming, we would find the 150mm hole, on the new realised ceiling.

later, or when necessary, it could be possible to apply the compensation grids deciding the size of the holes and the sizes of the spotlights to be installed, cutting the grid to the necessary sizes

A subsequent shaving with glue tiles or glue for normal plasterboard will allow hiding the remaining grill, leaving space for the perfect hole required.
Caution: Do not use lime plaster and cement directly on the grill, make always and firstly the shaving as a support

suitable for diameters below, round or squared, it is possible to insert the following universal grills that can be cut at the right diameter or at the right size of the spotlight.

universal accessory for round spotlights
TEKPF GRILL05 R
diameters less than 150 mm
TEKPF GRILL06 R
diameters less than 210 mm

universal accessory for square spotlights
TEKPF GRILL05 Q

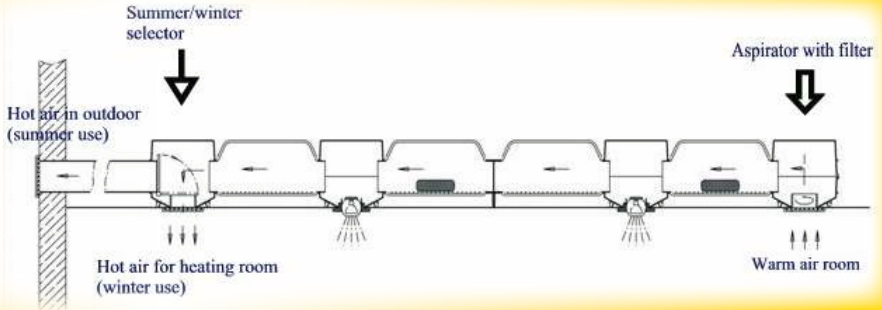
Dissipation and recovery of heat in spotlights with modular lighting system

As already said for box models Tekpf05 and Tekpf06, the version may be supplied with transformer housing. Such housing is set up to be further extended with multiple units so as to obtain a complete horizontal modular lighting system, equally spaced, thus making the lighting system setup operations much easier simply by means of the necessary TEKPFT items (to be put at a distance of 33 cm from one onother).

TEKPFT
universal accessory

HEAT RECOVERY

The sequence of TEKPFT elements, beyond defining the equidistance, also originates a conduit suitable for the accommodation of transformers, but also very useful for the dissipation of the heat produced by lighting.
In fact with the tube well done leads to the possibility of ventilating the modular lighting system with the ***RECOVERY of the HEAT*** dissipated by the lamps to heat the room.
For the first time, a system has been designed to perform at the same time two things that will extend the life of the lighting components, that is, reduce the risk of overheating and fire and **RECOVER THE HEAT EMITTED BY THE LAMPS** in the room, thus becoming an important source of recovery and energy saving.
Placing an aspirator at one of the two ends, we will get an air flow coming from the room that will cross the lighting system suitably made with the aid of the TEKPFT sequence, cooling lamps, spotlights and any transformers and coming out of the other end, returning the heat gathered into the USAGE ROOM.
The placement of the ventilating unit (with inlet filter) and of the treated air outlet grid takes place into the two boxes TEKPF06 or TEKPF05 located at the ends, which will thus be used not as spotlight supports but as component holders for the ventilation system with heat recovery.



A flow switch may be located into the outlet grid to direct the warm air outside the building through the special piping, for SUMMER USE.
This allows avoiding the further loading of the conditioning system with the heat dissipated by the lighting components, thus giving an important recovery source with energy saving.

This brand new and unique system is an exclusive and patented by Tekno soluzioni srl.

Important Note. When realizing out this modular system, embedded in a sequence the TEKPFT article, remember:

Do not install the door closing tray of the transformer holder

Open the bottoms of the pre fractured background of the TEKPFT

For have not a closed tunnel

Installations with depth increase with TEKPFRING accessories, also customized, for reinforced cement on view

allows the box to be raised while keeping reinforcing bars close to one another even with an increase in the depth of the box for spotlights more than 13 cm deep.

In some cases, the structural designer needs the reinforcing bars in reinforced concrete to be not too far apart. Therefore it is necessary to lift the box from the support surface, in such a way that the box is at the center of the slab and below and above can run the structural reinforcing bars which should be covered by at least 2 cm of concrete.

For this type of installation, choose a TEKPFRING accessory that can hold the grill and adapt the hole.

Or rather a RING accessory that already adapts the hole to the spotlight to be installed, if the final diameter is already known.

We can make any type of accessory Tekpfring to adapt our boxes any kind of spotlight in diameter, depht, shape or size.

With this accessory the spotlight support box will be raised 5 cm from the surface of the concrete form (recommended height to allow for the concrete to cover the reinforcing bars sufficiently) furthermore it increases the depth of the box.

The reinforcing bars can therefore be placed close together and the efficiency of the finished structure will not be adversely affected.

Therefore wait for concrete laying and we find the hole already finished if we used TEKPFRING

or

after dismantling insert the compensation grid

A subsequent shaving with glues tiles or glue for normal plasteboard will allow hiding the remaining grill , leaving space for the perfect hole required.
Caution: Do not use lime plaster and cement directly on the grill, make always and firstly the shaving as a support.

Installation Flush ceiling spotlights in reinforced cement or walls

also with the possibility of increasing the depth of the box, for lights deeper than 13 cm.

With spotlights, you are advised to check you have made the right choice for the formwork and relevant accessories to use, since any additional modifications to the reinforced cement will be difficult, if not impossible.
Check the model of the box to use with abundance (tekpf05 or tekpf06) , to then carry out convenient and vented light installation. The box fastened in the reinforced cement in fact must last as long as the building, much more than the light to be installed, and thereby enable flexibility also for any future choices.

The assembly ring nut (or frame) must pass from the hole in the box, if necessary you can reduce the perforated support surface prepared by the manufacturer until it passes from the hole, so that at least a small part of the sheet metal remains to enable its fastening.

Firstly, check the size of the transformer which should fit in the prepared box, to choose the right compartment tunnel (TEKPFT-SHORT or TEKPFT), to insert and hold it.
Now we can identify the light box support product to use for our lights to install. (in the case represented TEKPF06TSHORT). If the light to install is smaller than the hole on the box tekpf05 or tekpf06 , respectively 150 or 210 mm. , choose the grill with the necessary geometric shape (R for round hole lights, S for square hole lights)

Position the assembly ring nut (frame) over the grill of the light to install, so you can mark its cutting point to contain the ring nut as precisely as possible.
Then cut the grill with a normal electrician's scissors.

Fit the assembly ring nut in the just cut grill to check the good outcome of the work. The space created between the ring hut and the grill must be the least possible and then subsequently shaved.

Tighten the grill using normal, self-threading plasterboard screws to the perforated sheet metal passing the screws through its opening. As we have already said, the perforated sheet can be made smaller to fit it into the grill in the light support box. (the excess sheet metal would in fact obstruct this operation)

Carry out an overall test to ensure everything is working correctly.

Check the height of the light if it is compatible with the standard depth of the box (13 cm) , if the light is deeper or you want to give it more depth, CHOOSE to use the TEKPFRING ..06/..50..Grill accessory chosen as follows:
The RING accessory allows lifting the box and keeping the reinforcing bars close together; also increasing the depth of the box, for lights over 13 cm deep.

In some cases, the structural designer needs the reinforcing bars in reinforced concrete to be not too far apart. Therefore it is necessary to lift the box from the support surface, in such a way that the box is at the center of the slab and below and above can run the structural reinforcing bars which should be covered by at least 2 cm of concrete.
For this type of installation, choose a TEKPFRING accessory that can hold the grill

With this accessory the spotlight support box will be raised 5 cm from the surface of the concrete form (recommended height to allow for the concrete to cover the reinforcing bars sufficiently)

The reinforcing bars can therefore be placed close together and the efficiency of the finished structure will not be adversely affected.

pour the concrete
and after that, disarming, we would find the hole, on the new realised ceiling. If necessary, it could be possible to apply the compensation grids deciding the size of the holes and the sizes of the spotlights to be installed, cutting the grid to the necessary sizes

A subsequent shaving with glues tiles or glue for normal plasteboard will allow hiding the remaining grill, leaving space for the perfect hole required.

Caution: Do not use lime plaster and cement directly on the grill, make always and firstly the shaving as a support.

and lastly install the spotlight on the frame covered in the grill shaving.

The spotlight will therefore be installed exactly as it is installed in the plasterboard.

Box application in PLASTERBOARD (TEKPF05 and TEKPF06) as protection from glass wool that would suffocate the spotlight

The main features of these spotlights that makes them unique compared to any products on the market IS THE POSSIBILITY OF BEING INSTALLED EVEN AFTER THE FALSE CEILING HAS ALREADY BEEN COMPLETED.

In fact, besides the convenience when a spotlight must be installed in the masonry where a built in box is required, it is known that the installation of a spotlight in the false ceiling is perfect if all the equipment, including power supply, is contained in a protection box; the dust and the choking of the fiberglass (where applicable) cause overheating of the lighting and of the bulb, causing aging and limited life.

The background art envisaged the use of boxes that would not fit through the hole, that is, that could be manually installed only during the false ceiling construction.
In the practice, often at the building site the exact position of installation of the spotlights is not known, and the diameters thereof are uncertain, too.
Also, the operator that makes the plasterboard very often works not aided by an electrician, with consequent difficulties in an operation that when performed before the false ceiling is closed, requires the continuous collaboration of the two professionals,
and this is why our proposal provides even

THE UNIVERSAL DIAMETERS

reducing the prior choice to only two products (TEKPF05 and TEKPF06)

It is possible to make the support box universal for all diameters below 15cm(if the TEKPF05 is installed) and 21cm (if TEKPF06 is installed), using the appropriate compensation grill (such as described on the past pages)

The grill can be shaved from the normal putty and hide the plasterboard as a sequence of several concentric diameters, including square

At any moment, without knowing the required diameter in advance, the electrician can cut the grid and obtain a perfectly sized hole for the spotlight to be installed.
That system is universal in absolute and it is suitable as a solution of the predisposition of the spotlight in the plasterboard, FOR ALL TYPES OF SPOTLIGHTS ON THE MARKET: ***because the universal grill may be shaved and therefore may be hidden in the false ceiling.***

N.B. TEKPF06 is also available for 220 – 230 – 240mm on request.
(However, for these versions the grills of compensation can not be applied)

Method for applying for boxes TEKPF05 and TEKPF06 IN PLASTERBOARD

Make the hole after having installed the false ceiling

Assemble the transformer box

Insert the box into the hole and put it aside

Open the lighting box into two halves

Insert the two halves one at a time, putting them aside

Assemble the two halves into the hole

Assemble also the transformer holder

Place the box close to the hole and check the transformer closing door

Fasten the box using standard screws for plasterboard at the marks on the box edge

Insert the power supply previously connected

Install the spotlight which will then be nicely seated

protected from dust and above all, from the insulating fiberglass, when applicable.

INSTALLATION OF BUILT-IN SPOTLIGHTS on existing cavities with TEKPFrawplate...

Sometimes to prepare spotlights, without a preventive study in advance, you may find cubic cavities in the reinforced cement made by builders, by inserting a polystyrene profile before setting the reinforced cement.

To enable subsequent easy installation of lights in any diameter and shape, also in these cases we have studied the metal plates to host our compensation grills for the 05 and 06 series, making it easier to install the lights.

The same plates are fastened over the reinforced cement hole, then the work sequence stays the same as that indicated on the previous page regarding the cut and shaving of the universal grill. Remember: when you shave the grill with tile glue, the metal plate should be “dirtied” to then encourage plaster grip.

Coverage of a hole prepared bigger than the light to install with the TEKPFplate

If you have to assemble boxes tekpf05 or tekpf06 in the reinforced cement on view, or plastering will not be carried out

we have steel compensation grids that enable coverage of the grill tekpf05 or tekpf06 and interfacing with the light to install.

The latter will appear bigger since the edge is extended by the size of the “still plate” made to measure with the hole customised to the diameter of the light.

TEKPF04T

the security box for the transformer and/or the electrical connection

Dimensions:
h 152 x l 52 x p 52 mm

(also sold in bulk quantity)

THE SAFETY OF THE ELECTRICAL CONNECTION within the ceilings

Very often, in the ceilings, the electrical connection is made approximately and with a big risk in terms of safety and fire prevention.
The rules of electrical installation provide that the electrical connection should always carried out in a box that has the isolation requirements, protection against dust, inspection only by the use of a tools. When it comes to installing downlights, the hole of the spotlight is often smaller and it is not possible to pass a conventional junction box that could secure the connection as it should. Therefore, at the moment it is all connected with the clamps and everything is being put up there on the false ceiling, without worrying about the dangers of the junction which is free to touch metal struts, or to merge, causing short circuits or fires, also seeing the non-small electricity that can circulate in the cables of the spotlights.
Tekno Soluzioni has developed and patented the FIRST BOX that protects the connection in the ceiling, which blocks the corrugated tubes at the entrance and exit of it, forming a perfect junction, AND THAT ALSO GOES THROUGH A SMALL HOLE IN THE CEILING.

Here's how it works:

- The box is composed of two halves that once closed to each other it can be opened only by using a screwdriver.

- Previously open the prepared holes for the entry of corrugated so as to provide the bypass box as needed.

- Identify inside the hole made in the false ceiling where the spotlight and the corrugated tubes arranged in advance, which may also have already been strung the wires, will be subsequently installed

- Fit the corrugated tubes, of 20, within the already done holes. A special flap will lock them, exercising on them an anti-tear function.

- Make the connection in the usual manner with the clamps.

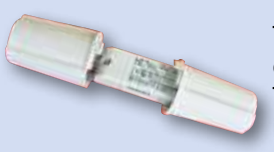
- Close the snap box, remembering that once closed it can be opened only by using a screwdriver.

- Put everything into the ceiling, even under the glass wool insulation, where now THE CONNECTION WILL BE PROTECTED AND REALIZZED BY THE BOOK..

- At this point it is possible to use another box TEKPF04T mounted in sequence to accommodate a transformer for halogen or LED lamps, or nothing else if the line is already suitable to feed the spotlight.

- It is possible to make complete and safe the installation of the spotlight by installing a box TEKPF04 .. of the appropriate diameter, which is also already predisposed for the entrance of the corrugated tube of 20. (See the following pages of the catalog for the use of the product line TEKPF04)

- We will now mount the spotlight in full security and functionality.



TEKPF04T ALLOCATION SMALL TRANSFORMER IF NOT ALREADY DOUBLE INSULATION

The transformer holder is available also for the installation in false-ceilings. This one is a part of the TEKPF04/T box which passes through the spotlight hole, starting from 50mm diameter. The transformer holder must be inserted through the hole having the transformer inside. It is possible at any moment to reverse the process for any kind of future maintenance of the transformer and related connections.

installation in plasterboard, wooden false ceilings and any other material (spotlight support box TEKPF04)

For SMALL or MEDIUM SIZED SPOTLIGHTS (21 to 105 mm).

These boxes are used to apply a new culture of safety and durability, BECAUSE NOWADAYS THE SPOTLIGHTS ARE INSTALLED IN THE FALSE CEILINGS WITHOUT RULES and in a rough and insecure way, often giving rise to the following kind of unexpected things, often overlooked by manufacturers and installers:

- The connecting cables and the connecting terminals are often free to rely on metal parts of the false ceilings, NOT CONNECTED TO EARTH and so with a strong predisposition for short-circuits, indirect contact and DAMAGES BECAUSE OF THE JOULE EFFECT; that is why the use of the 220v GU10, lamps further worsens the jeopardy of the people using it.

- That way the bulbs are not protected and they are filled with dust and they overheat HAVING A DURATION OF USE LESS THAN NORMAL.

- The springs compress the spotlights in the plasterboard to the point that if you have to remove a spotlight for maintenance IT MAY EASILY RUIN THE PLATERBOARD'S EDGE NEAR THE HOLE OF THE SPOTLIGHT, leaving then blemishes traces very difficult to fix.

More often, the ceilings are covered with INSULATION MATERIAL for thermal insulation, that is why the spotlights ARE CHOKING without having the necessary volume of air around them for the heat dissipation. This is causing blemishing dark halos around the spotlights, poor durability of the bulbs and the spotlight becoming opaque because of the overheating. When the hot spotlight is in contact with wood the impropriety and the danger are even more obvious.

The use of a support box, in the insulating material, specially designed to contain the spotlights and resistant to high temperatures, which interposes between the spotlight and the protecting structures surrounding the electrical connection it CONSTITUTES A SERIOUS STEP FORWARD FOR THE SAFETY AND FOR ALL THE RULES TO A GOOD INSTALLATION. May be applied also through the spotlight hole, EVEN AFTER THE FALSE CEILING HAS BEEN CLOSED.

Making the hole in the false ceiling

In this phase it is possible to insert the transformer holder

These boxes feature the possibility of inserting the cylindrical body into the cut-to-size hole

in order to then be secured to the false ceiling, jointing two hollow bodies used to seat the spotlight retaining springs

The result is a perfectly assembled box fitted for the inlet of the corrugated power supply tubes

The box will thus protect the spotlight and the hole edge into the false ceiling, which would otherwise be easily subject to abrasions

It is ideal in order not to make a contact between the spotlight and the wood

INSTALLATION IN EXISTING CEILINGS ALREADY PLASTERED

The BOXES TEKPF04 are also suitable for renovations, i.e. in masonry ceilings when already plastered and you have to make the smallest hole possible to avoid damaging the existing ceiling.

In this case, however you need to open holes above the box to enable heat dissipation in the cavity of the slab.
If this is not possible, you must comply with the power limitations described on the pricelist, or use TEKPF03A or TEKPF05

INSTALLATION OF SPOTLIGHTS ON THE GROUND AND IN WALLS

THE SUPPORT BOXES TEKPF04 ARE ALSO PARTICULARLY INDICATED TO BE INSTALLED IN THE WALL OR IN THE FLOOR

Their small size, but also the lowest solicitation to the heat that in these situations is better dissipated upwards, it can be used in strict adherence with the body of the illuminating lamp.

This brand new system , unique of this kind it is exclusively and patented by Tekno Soluzioni SRL

SPECIFICATIONS *common to all products*

MATERIAL COMMONLY USED:

- Polypropylene, 30% glass charged
  Class "HB" (glow wire 650°C), white colour,
  operating temperature up to 120°c

AVAILABLE ON REQUEST:

- Polypropylene, 30% glass charged
  Class "HB" (glow wire 850°C), white colour,
- Nylon, 30% glass charged
  Class "VO" (glow wire 960°C), white colour,
  operating temperature up to 130°c

On demand, boxes can be treated with REI application if they are to be installed in places where a peculiar fire resistance is required.

THE ORIGINS OF SPOTLIGHT SUPPORT BOXES

Spotlight support boxes were invented by an electrical system installer who, through the experience of his work, became aware of the practical lack that existed in the installation of built in spotlights.
The study and design of the smallest details with the practical on site experience led to the manufacture of these products, covered by several international patents and nowadays used by millions people all over the world.

Do you want to join them?

OUR SALES NETWORK

The spotlight support box is distributed all over the world through a network of agents and retailers. Contact us and we will tell you the easiest way to find our products.

WE ARE LOOKING FOR COLLABORATORS
In many foreign countries. Ask us for information if you are interested in working with us.

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