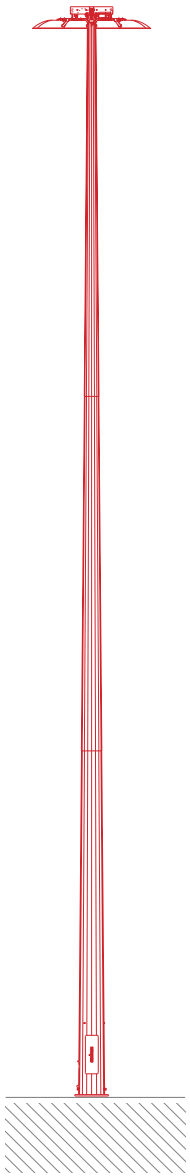
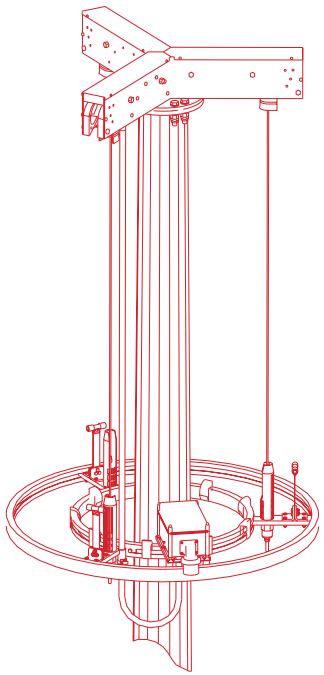


**system .** This is the leading technological product for illuminating large areas. It features a stem with a clean line topped with a compact lighting unit which can also have a roof installed on it to distinguish the design. The movement system of the mobile crown makes it possible to perform maintenance on the lights from the ground, in complete safety and avoiding having to work at a height. From lighting at traffic interchanges, to lighting for large areas or car parks, to sports lighting, this product is characterised by extreme versatility that makes it possible to support the most diverse illuminating engineering needs.

**column .** The column, based on the height of the tower, is composed of several truncated pyramid sections, with polygonal cross-section, built with press-formed steel sheet, and welded longitudinally. The various sections are assembled on site using the “slip on joint” method. The section welding process guarantees compliance with standards U N I EN ISO 15609 and CN R U NI 10011. Note that the welding process involves, unless specified otherwise by the Customer, 100% penetration of the coupling sections and at least 80% on the remaining length. A specific opening, equipped with vandal-resistant hatch, provides access to the equipment, set up inside the tower, to facilitate the floodlight mobile crown coupling/release control manoeuvre.

**sliding head .** The three-arm sliding head, built with steel sheet or aluminium alloy, is set up on the top of the column and connected to it by a flange joint. The head houses the return pulleys for the mobile crown’s suspension ropes and the floodlight power supply cables, along with devices to prevent the ropes and cables from coming out of the pulleys and from tangling. The head is also equipped with a device to couple and release the mobile crown.



**mobile crown .** The mobile crown is built with steel sheet or aluminium alloy profiles, of various sizes to support the floodlights and the relative electrical equipment required for the project. The mobile crown is connected to the suspension ropes by end tie rods locked with nut and counter-nut. It also has a floodlight power supply electrical cable securing system installed on it. The crown also has the sliding head coupling/release device fittings installed on it.

**mobile crown suspension ropes .** Three stainless steel ropes, set up in a 120° arrangement, on the arms of the sliding head, making mobile crown movement possible. The ropes are attached to the crown on one end and to a housing device (distributor) on the other, for correct tension adjustment and balance.

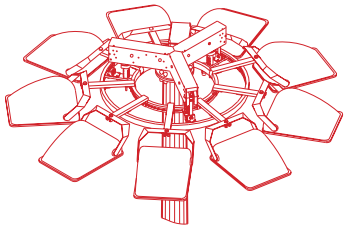
**electrical equipment .** The electrical equipment includes, in particular:
- a socket, installed inside the panel with block switch, intended to receive the floodlight power cable;
- shunt/distribution box, with protection rating IP 65, installed on the mobile crown to supply power to the floodlights. The box also features a watertight socket that makes it possible to perform the floodlight switching-on test from the ground, using an extension cable;
- the FG50K-06/J power supply electrical cable with central free-standing, non-extendable, anti-torsion kevlar reinforcement. The cable is connected to the interlocked socket located inside the hatch at the base of the tower, while the other end is connected to the shunt box set up on the mobile crown.

**materials .** The use of the following materials is required for the various structural elements of the tower;
- column: steel S355 JR [Fe 510 B) UNI EN 10025;
base flange: steel S355 JR (Fe 510 B) UNI EN 10025;
- metalwork: steel S235 JR (Fe 360 B) UNI EN 10025;

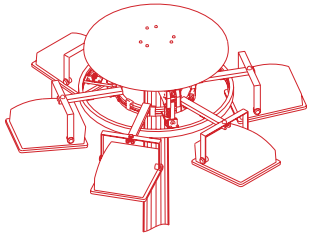
**surface protection .** All of the steel components are protected against surface corrosion with hot galvanising through dipping in molten zinc, in compliance with standard UNI EN 1461.

**active and passive safety .** The “floodlight-bearing tower with mobile crown” system features the following safety devices:
- mechanical device that couples the mobile crown to the sliding head comprised of 3 coupling elements that take the weight off the suspension ropes during normal operation;
- centring and anti-rotation device of the mobile crown comprised of 3 elements that, during normal tower operation, prevent any horizontal movement;
- safety chain that, inside the column, connects the distributor to the base of the tower thereby stopping the mobile crown from detaching from the sliding head during normal operation, in case of exceptional events.

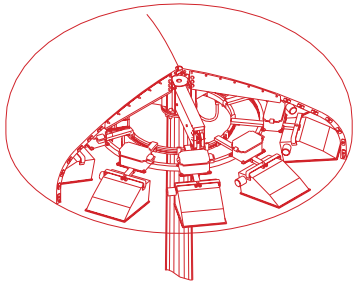
**installation method .** The tower is normally anchored to the relative foundation with tie rods embedded in the plinth, and base flange welded to the lower section. For special applications the tower can be embedded directly in the foundation plinth.



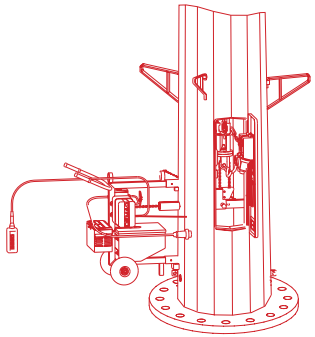
**top standard .** This product featuring great versatility represents the solution to the most diverse illuminating engineering needs. The flexibility and modularity of the components and movement systems guarantee optimal results in every application.

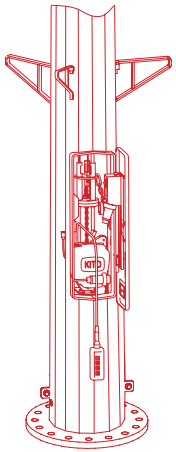


**top canopy .** At the top of the floodlight tower, protecting the sliding head and installed on a galvanised steel canopy which can be painted on request. The Top Canopy model represents an aesthetically-pleasing solution, providing the head of the floodlight tower with the appearance of simple compactness.



**top cover .** At the top of the floodlight tower, protecting the head and crown assembly, and with a hand-stratified gelcoat-protected PRFV canopy installed on it in “Light Grey” RAL 7032 with UV ray protection.





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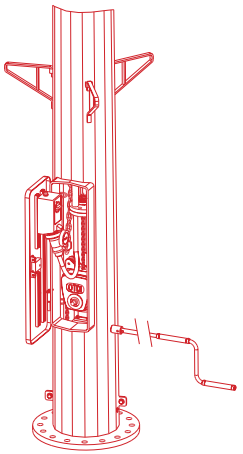
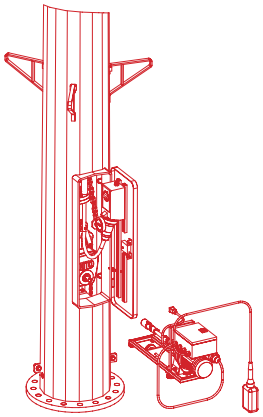
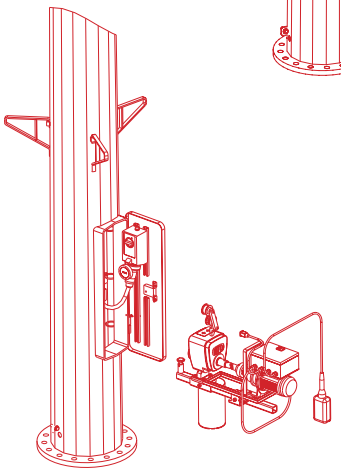


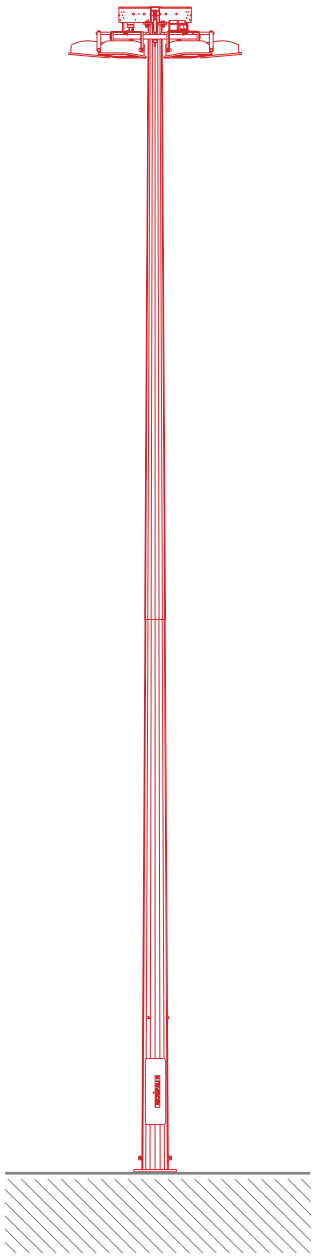




**semi integrated manual .** In this configuration, inside the hatch, therefore in an easily-reachable, there is a gear unit with chain-driven movement, with direct pull. The calibrated and marked chain, of the required length, is housed in a container located under the hoist. A crank system, when coupled, provides the necessary motion for the descent and ascent operations of the mobile crown. In this configuration, inside the hatch, therefore in an easily-reachable, there is a gear unit with chain-driven movement, with direct pull. The calibrated and marked chain, of the required length, is housed in a container located under the hoist. Movement is carried out by a removable movement system, comprised of: a supporting frame with a system that fastens it to the tower, an electric motor with 400 V 50 Hz three-phase power supply, a coupling system to the gear unit and lastly a button panel to run operations at a safe distance. This solution features an “end stop device”, comprised of an electrically-operated induction sensor which automatically controls the coupling and releasing manoeuvres of the mobile crown.

**semi integrated electrical .** In this configuration, inside the hatch, therefore in an easily-reachable, there is a gear unit with chain-driven movement, with direct pull. The calibrated and marked chain, of the required length, is housed in a container located under the hoist. A crank system, when coupled, provides the necessary motion for the descent and ascent operations of the mobile crown.

**portable removable .** In this configuration, the movement system is completely removable. The portable system is comprised of a rigid frame with the following installed on it: gear unit, electric motor with 400 V 50 Hz three-phase power supply, a button panel to run operations from a safe distance and lastly a container with the lifting chain, calibrated and marked and of the required length. This solution features an “end stop device”, comprised of an electrically-operated induction sensor which automatically controls the coupling and releasing manoeuvres of the mobile crown.



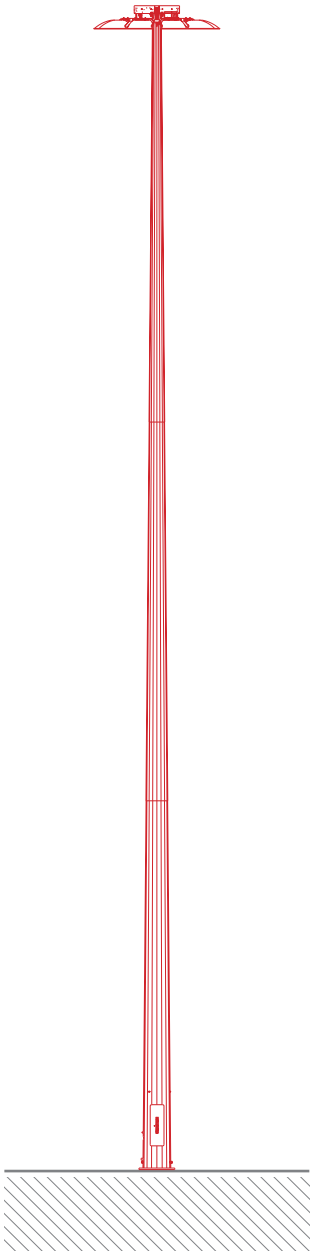
movement
M: semi integrated manual
S: semi integrated electric
P: portable electric
I: integrated
C: wheeled

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MS 15 | 15000 | 4 | 4 | 180x347 | 480 | 16 M24/800 | 700 | 13 | M S P | 2000x1200 |
| MS 18 | 18000 | 4 | 4 | 180x382 | 480 | 16 M24/800 | 820 | 17 | M S P | 2100x1200 |
| MS 20 | 20000 | 4 | 4 | 180x405 | 480 | 16 M24/800 | 900 | 19 | M S P | 2200x1200 |

payload chart >

maximum surface exposed to wind ($m^2$) in function to the zone and the exposure's category

| | | 1 - 2 | | | | 3 | | | | 4 - 5 - 6 - 7 | | | | 8 | | | | zone cat. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV | |
| MS 15 | 360° | - | 1,35 | 1,50 | 1,75 | - | 1,00 | 1,20 | 1,35 | - | - | 1,00 | 1,20 | | | | | |
| | 180° | - | 1,10 | 1,25 | 1,45 | - | 0,85 | 1,00 | 1,10 | - | - | 0,85 | 1,00 | | | | | |
| MS18 | 360° | - | 1,25 | 1,40 | 1,60 | - | 0,90 | 1,10 | 1,25 | - | - | 0,90 | 1,10 | | | | | |
| | 180° | - | 1,05 | 1,15 | 1,35 | - | 0,80 | 0,90 | 1,05 | - | - | 0,75 | 0,90 | | | | | |
| MS20 | 360° | - | 1,15 | 1,30 | 1,50 | - | 0,85 | 1,00 | 1,15 | - | - | 0,85 | 1,00 | - | - | 0,85 | 0,95 | |
| | 180° | - | 1,00 | 1,10 | 1,25 | - | 0,70 | 0,85 | 0,95 | - | - | 0,75 | 0,85 | - | - | 0,70 | 0,80 | |



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M: semi integrated manual
S: semi integrated electric
P: portable electric
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| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CM 20-1 | 20000 | 4 | 4 | 200x440 | 590 | 16 M24/800 | 970 | 21 | - C | - | - | 2300x1200 |
| CM 20-2 | 20000 | 4 | 4 | 200x520 | 590 | 16 M24/800 | 1060 | 24 | I C | 2600x500 | 1600x800 | - |
| CM 20-3 | 20000 | 4 | 4 | 220x520 | 670 | 16 M24/800 | 1200 | 27 | I C | 2800x500 | 1800x800 | - |
| CM 25-1 | 25000 | 4 | 4 | 200x580 | 740 | 16 M30/1000 | 1500 | 32 | I C | 2700x500 | 1700x1000 | - |
| CM 25-2 | 25000 | 4 | 4 | 200x650 | 740 | 16 M30/1000 | 1600 | 35 | I C | 3000x500 | 1800x1000 | - |
| CM 25-3 | 25000 | 4 | 4 | 220x720 | 810 | 16 M30/1000 | 1700 | 38 | I C | 3100x500 | 2000x1000 | - |
| CM 25-4 | 25000 | 4 | 5 | 240x720 | 840 | 20 M30/1000 | 2000 | 39 | I C | 2900x500 | 2100x1000 | - |
| CM 30-1 | 30000 | 4 | 4 | 200x700 | 810 | 16 M30/1000 | 1950 | 46 | I C | 3100x500 | 1900x1000 | - |
| CM 30-2 | 30000 | 4 | 5 | 230x710 | 810 | 16 M30/1000 | 2150 | 47 | I C | 3300x500 | 2100x1000 | - |
| CM 30-3 | 30000 | 4 | 5 | 240x740 | 840 | 20 M30/1000 | 2430 | 49 | I C | 3500x500 | 2300x1000 | - |
| CM 30-4 | 30000 | 4 | 5 | 240x820 | 940 | 20 M30/1000 | 2700 | 54 | I C | 3300x500 | 2500x1000 | - |
| CM 35-1 | 35000 | 4 | 5 | 240x745 | 850 | 16 M30/1000 | 2700 | 57 | I C | 3500x500 | 2300x1000 | - |
| CM 35-2 | 35000 | 4 | 5 | 240x840 | 940 | 20 M30/1000 | 3070 | 63 | I C | 3500x500 | 2500x1000 | - |
| CM 35-3 | 35000 | 4 | 5 | 240x910 | 1000 | 24 M30/1000 | 3300 | 67 | I C | 3700x500 | 2700x1000 | - |


height outside ground (mm)


underground (mm)


lenght topper (mm)


shelf arm (mm)


evolution arm (mm)


curve ray (mm)


diameter (mm)


tip diameter (mm)
base diameter (mm)


lenght (mm)


n° spotlight


thickness (mm)


thickness blunt on tip (mm)


thickness blunt in base (mm)


maximum pull applicable on top (mm)


dimensions maximum of flag for velocity
of wind to 100km/h; side for height (mxm)


dimensions slot
cable entry slot (mmxmm)


quota of location for slot clips
to pole base (mm)


quota of location cable entry slot
to pole base (mm)


quota of location for grounding system
to base pole (mm)


number hook, diameter and lenght


interaxle spacing for hook


dimensions to the plinth monobloc
side x heights (mm)


dimensions of the holein to the plinth of groundwork
for insert of the pole diameter x height (mm)


dimensions of the foundation of a plinth a recess
side x heights (mm)


dimensions of the little pillar of a plinth a recess
side x heights (mm)


total weight(kg)


weight minimal and maximum for the siystem
of movement manual with cable (kg)


weight minimal and maximum for the siystem
of movement manual with manual winch (kg)


movement:
M: semi integrated manual
S: semi integrated electric
P: portable electric
I: integrated
C: wheeled


surface for paint (m2)

calculation adapt to the norm  EN40
certification CE

calculation adapt to the D.M. 17/01/2018


number of arms


ray of incline