

Base box Depth, install Timing and cable Feed



Depth:

- Floor build-up sets maximum base box depth
- Base box depth is determined by what plug-top and wiring space is required
- Plug-top size decides how much plug-top space you need
- Type and size of cables decides required wiring space

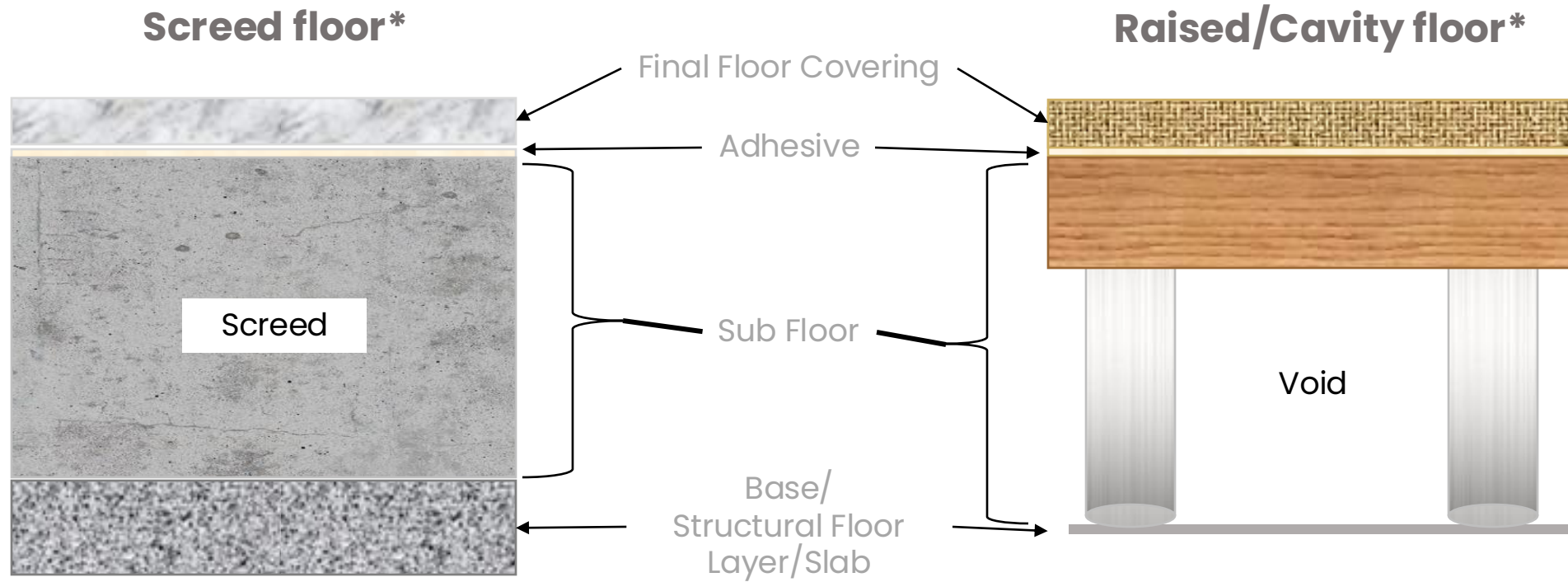
Timing:

- Will floor box be installed before or after final floor covering fitted?
 - If before, you need Standard assembly base box
 - If after, you need Retrofit
- Poured finish also requires retrofit assembly

Feed:

- How power and data services feed into the base of the floor box
- Cable/Conduit, In-screed trunking spigot or fitted into flush-floor trunking

Floor build-up helps set the maximum potential base box depth

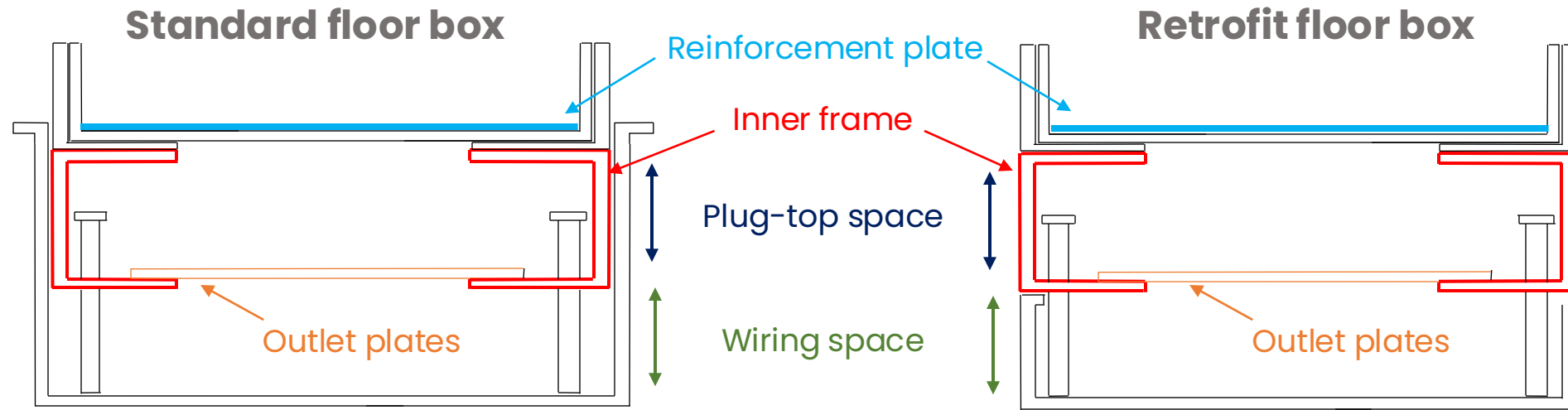


Depth of sub floor determines possible size of base box

Choose base box depth that gives you the plug-top space and wiring space you need

**representative of typical floor build-ups only*

Depth of base box determined by what plug-top and wiring space is required



Inner frame has many important functions:

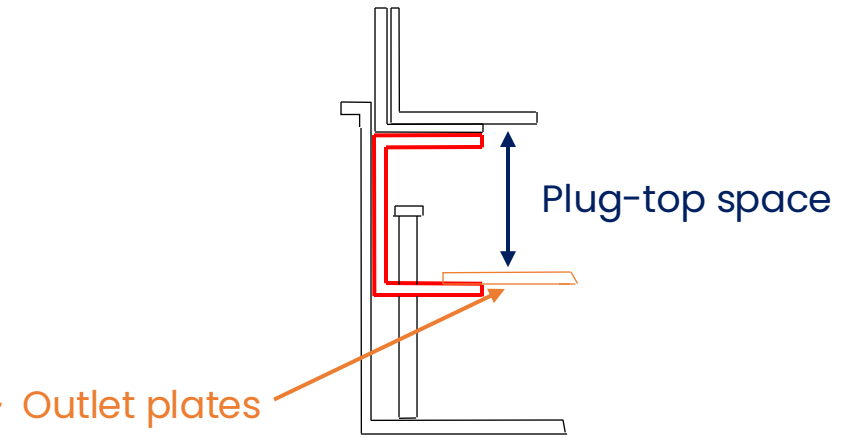
- Height-adjustable inner frame enables on-site levelling and a perfect flush floor finish
- Fix outlet plates to the inner frame
- Inner frame supports the lid and makes it load-bearing

Outlet plates have power plugs and data/AV points mounted in them in different configurations

Plug top space determines the space available for power plug tops and data points

Wiring space determines what wiring can be accommodated below the outlet plates based on their cable flex and bend radius

Plug-top space required is determined by power plug-top size and type



Sub-floor space helps determine how deep your base box can be

Base box depth decides how much plug-top space you have

Recommendation: choose the deepest base box you can fit in the floor space as plug-tops are becoming larger and larger, i.e. with transformers

Power plug-tops differ in size and shape (*plug-top space required mm*)

These plug-tops fit in Cableduct floor boxes
(*depending on base box size*)



Standard UK plug
20mm – 28mm



AC-DC Adapter/Transformer plug
35mm – 50mm



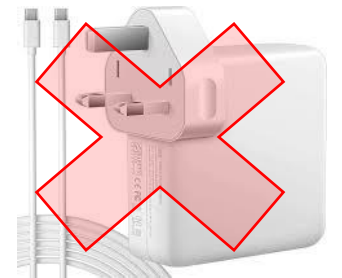
Adapter/Transformer plug 50mm – 68mm

Additional considerations:

- International plug-top sizes and plastic cable flex can vary – some feed directly up instead of out to the side
- Size and type of cable to/from the plug-top requires different space within the plug-top space



This plug-top type is too large for standard Cableduct floor boxes



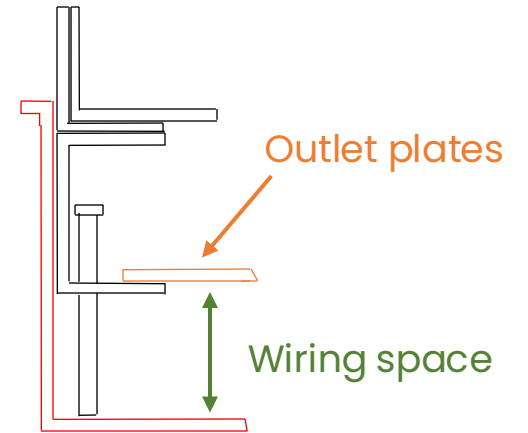
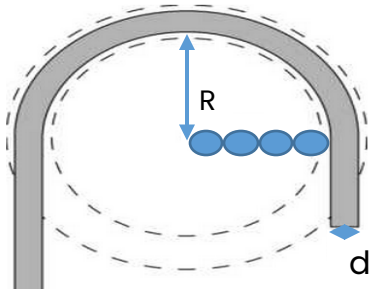
Laptop charger 90mm – 100mm

Type of cabling fed into floor box determines wiring space required below outlet plate

Cables of different type and size require a certain bend radius and wiring space for the cables to safely plug in and exit the floor box without damage (*bend radius is defined as the minimum radius a cable can be bent without damaging it or degrading its performance*).

Thinner cables (CAT5 & CAT5e) tend to have a smaller bend radius and suit most base box depths.

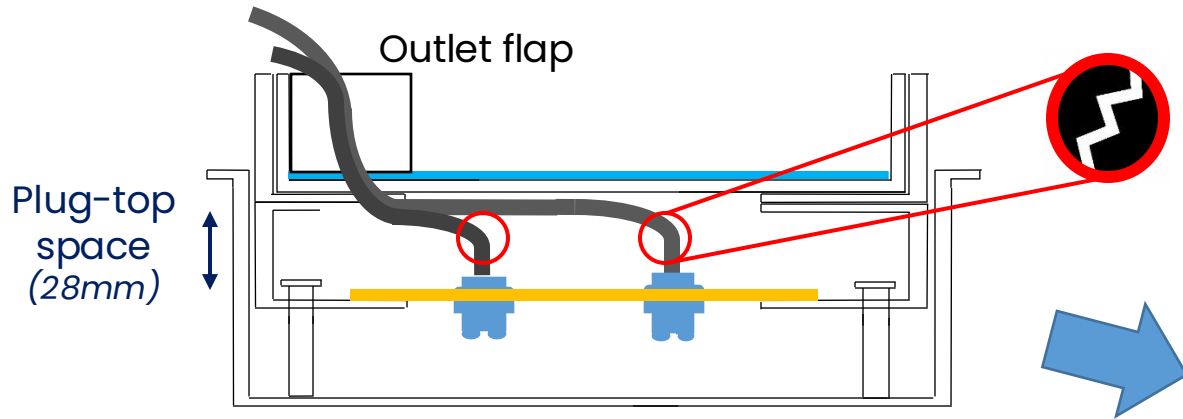
Thicker cables (CAT6 & CAT6A) have a larger bend radius and sometimes struggle to fit into shallow floor boxes (CAT7 cables can have an overall diameter of 10mm).

	AVERAGE DATA CABLE THICKNESS					
	CAT 5E	CAT 6	CAT 6A			
	UTP	UTP	UTP	UTP	UTP with Isolation Wrap	Shielded
Average OD	5mm	6mm	8.4mm	8mm	7mm	7.5mm
Minimum Bend Radius	20mm*	24mm*	33.6mm*	32mm*	28mm*	30mm*

- *Minimum bend radius during operation
- OD (Outside Diameter)

Angled data plates/modules used when plug-top and wiring space is constrained



Angled Data Modules

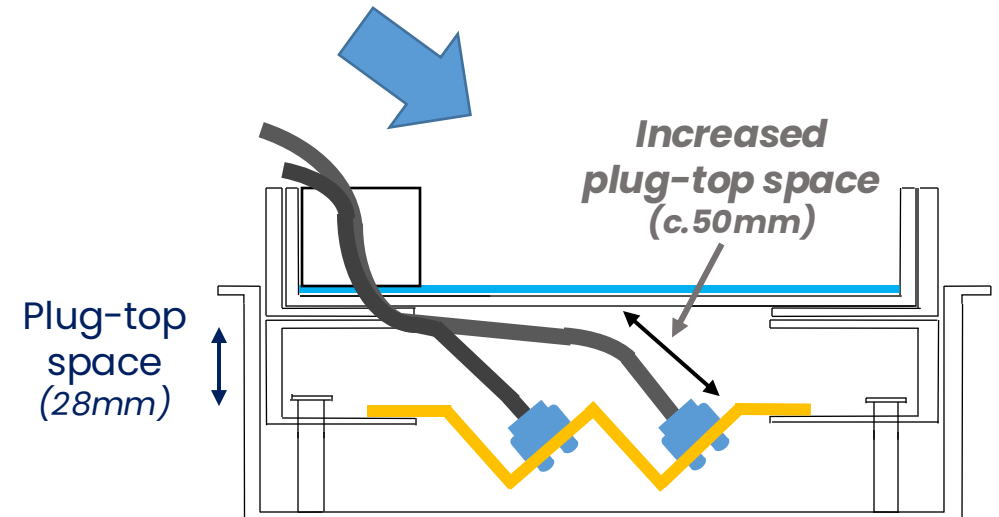


Angled Data Plates



If plug-top space is limited and the project requires data cables with a bend radius greater than 30mm:

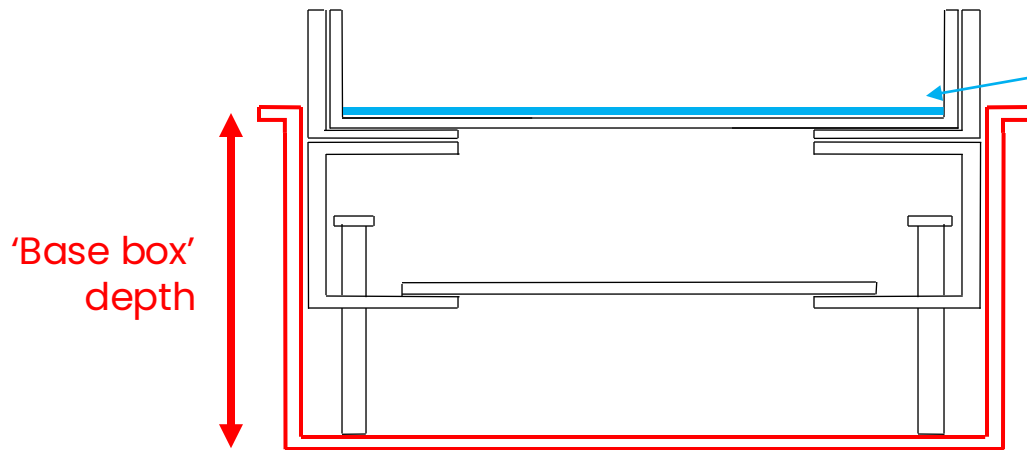
- If space permits, we recommend a minimum 85mm base box for CAT 6 and CAT 6A to allow for the installation of angled data modules/plates
- This increases plug-top space from 30mm to approximately 50mm and reduces and softens the bend radius.



Timing of floor box installation

decides if standard or retrofit assembly

Standard floor box

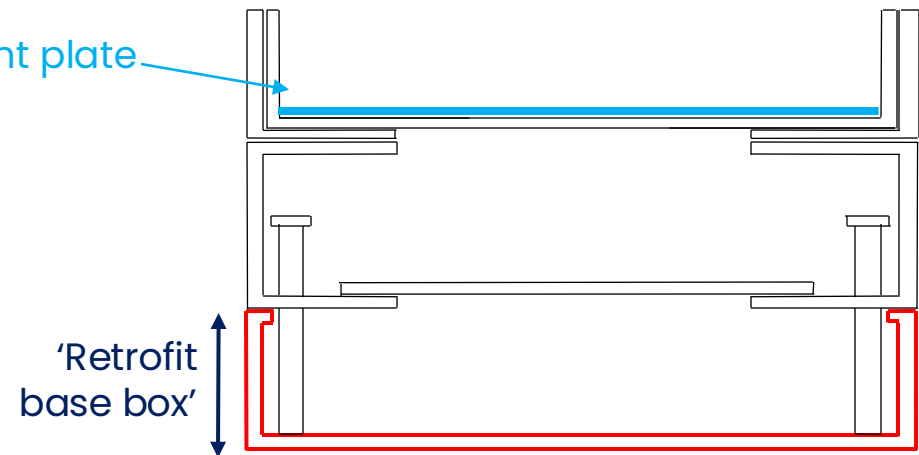


Reinforcement plate

'Base box' depth

Typically hidden in sub-floor

Retrofit floor box



'Retrofit base box'

If final floor covering has not been installed yet

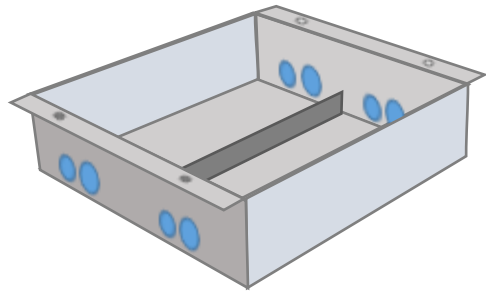
- Install standard assembly base box

If final floor covering has already been installed or if a poured finish (polished screed/concrete or poured Terrazzo)

- Install 'retrofit' base box
- This has no fixing flange on the base box, so fixing and securing the base needs to be considered

Feed type – How power and data services feed into the floor box

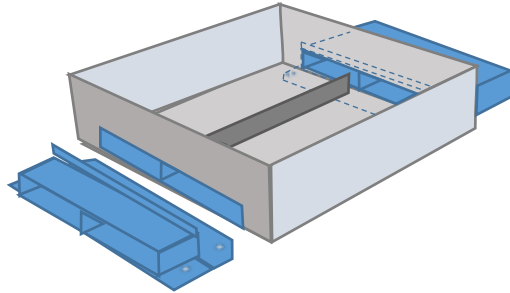
Cable/Conduit Entry



Most typical feed type

- Base boxes have standard 20 & 25mm round knockouts

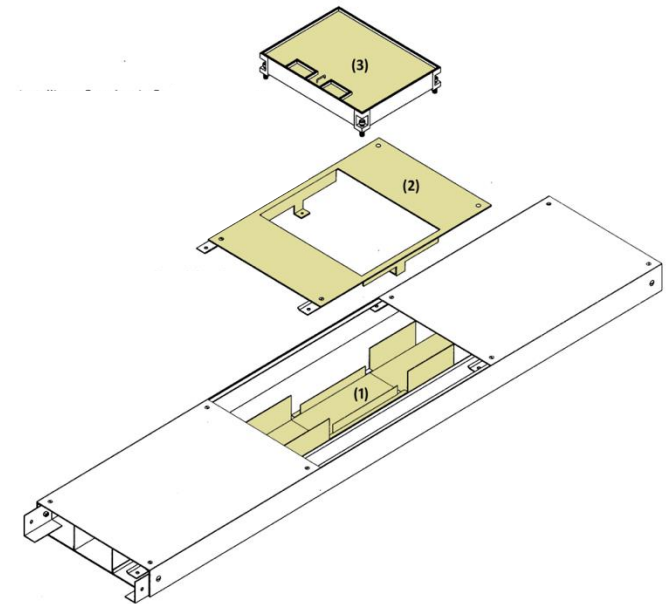
In-screed trunking spigot



Generally part of an integrated trunking and floor box solution

- includes underfloor/flush floor trunking spigots that allow you to connect the trunking feed directly into the base box

Flush-floor trunking (500 and 2000 floor boxes only)



Floor box fits direct into trunking

- Trunking to be >55mm deep