

BS EN 124 – Standard Classification

- Access covers and gully grates installed in the UK should meet the requirements of the European Standard BS EN 124.
- This applies to all situations, on and off-load and to all materials.
- Products designed to BS EN 124 are grouped and classified depending on their place of installation.
- It is the responsibility of the engineer to ensure that the correct product is specified.
- The appropriate class of manhole top or gully top to be used depends upon the place of installation.
- The selection of the appropriate class is the responsibility of the designer.
- Where there is any doubt the stronger class should be selected.
- This standard divides access covers and gully grates into a number of classes by static test load. It also categorises the various places where they may be installed from Group 1, the least demanding environment, through to Group 6, the most demanding environment. It provides guidance on the minimum class to be used against each installation group.



- **Group 1 – minimum Class A15** – Access covers and gratings capable of withstanding a 15kN test load. For use in areas where only pedestrians have access.



- **Group 2 – minimum Class B125** – Access covers and gratings capable of withstanding a 125kN test load. For use in car parks and pedestrian areas where only occasional vehicular access is likely.



- **Group 3 – minimum Class C250** – Access covers and gratings capable of withstanding a 250kN test load. For use in car parks, forecourts, industrial sites and areas with slow moving traffic also in highway locations up to 500mm from the kerb and up to 200mm into the verge, excluding motorways.



- **Group 4 – minimum Class D400** – Access covers and gratings capable of withstanding a 400kN test load. For use in areas where cars and lorries have access, including carriageways, hard shoulders and pedestrian areas.

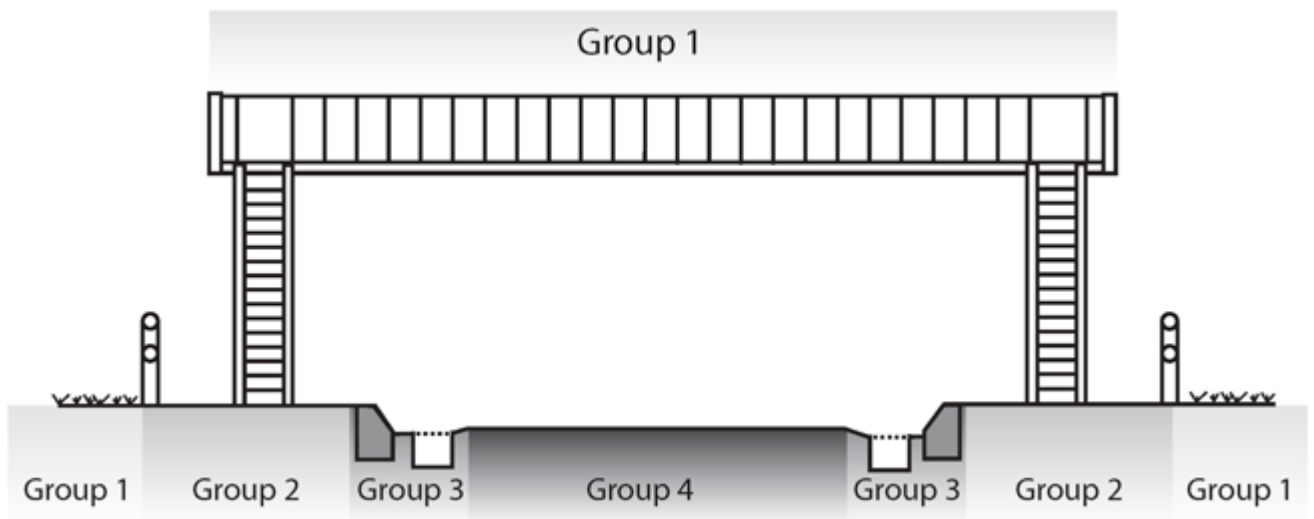


- **Group 5 – minimum Class E600** – Access covers and gratings capable of withstanding a 600kN test load. For use in areas where high wheel loads are imposed such as loading areas, docks or aircraft pavements.



- **Group 6 – minimum Class F900** – Access covers and gratings capable of withstanding a 900kN test load. For use in areas where particularly high wheel loads are imposed such as aircraft pavements.
- All TD covers and gully g rates comply with BS EN 124:2015, However it is accepted within the industry that the standard (due to both its lack of measure for dynamic loading and its enforcement) has its limitations and can be considered inadequate in ensuring that the in situ product is fit for purpose. (Those areas are covered in more detail in our specification guide.

- In order to counter this TD (often uniquely within the sector) have introduced a package of measures:
 - D400 and above one standard range for all intensity of traffic including HIGH INTENSITY
 - Corner Testing of product as standard (most failures occur in the corners as various importers concentrate solely on passing centre pad load test required by standard and reduce weight and strength in all other surface areas).
 - Full transparency and suite of batch results available for download online (and hard copies sent on every distributor delivery).
 - UK testing of all batches.
- Free UK testing and drop in for witnessing random testing of TD product and incumbent supplier testing (again FREE).



BS EN 124 – Product Specification

The BS EN 124 standard provides a general guide to product stability and sets out test load parameters for the various classes of products in terms of static load tests.

It **does not** provide specific information on dynamic loads imposed by the wide variety of traffic conditions found on modern road systems. It therefore has its limitations with regard making a truly informed specification decision in terms of the installed product being fit for purpose.

The selection of product in the majority of cases is straightforward. However increasingly road conditions make selecting a fit for purpose product more acute. In all instances Thomas Dudley offer free to user specification / technical service (contact details below).

In addition to this (in line with TD commitment to transparency and continuous improvement) to simply the task for D400 loadings and above we **offer 1 version of the product that is suitable for any / all intensity of traffic at that load. (These have a myriad of names within the sector but essentially are standard product is HIGH INTENSITY). We do not offer low or medium intensity ranges.**

With this the specifier and installer will have confidence that their chosen product will be fit for purpose in all intensities of traffic at that loading.

Below we have highlighted those instances whereby higher intensity product is more often than not required:

1. Dual carriageways

Higher speeds of traffic naturally increases the dynamic impact loading on castings. So to can heavy braking zones towards traffic lights and roundabouts.

2. Traffic lights

Acceleration, deceleration and turning all increase the stress on ironwork

3. Roundabouts

Turning vehicles increase movement and torque between cover/grate and frame and ultimate increase the stress.

4. Changes of Load Scenarios

Areas such as conversion to bus routes, one way, traffic calming, road maintenance, temporary use of central reservation / hard shoulders can apply directional (and clipping point), volume, and acceleration and deceleration stresses that original specification was not envisaged.