Selection criteria for manhole covers

PLACES OF INSTALLATION

Standard EN 124 divides products into minimum level groups and classes according to their intended place of installation :

- **Group 6 : (class F 900) :** Areas imposing particularly high wheel loads, such as aircraft pavements, etc..
- **Group 5 : (class E 600 mini) :** Areas imposing high wheel loads, such as docks, port areas, aircraft pavements, airports, factory yards, etc..
- **Group 4 : (class D 400 mini) :** Carriageways of roads - including pedestrian streets, hard shoulders and parking areas for all types of road vehicles.
- **Group 3 : (class C 250 mini) :** For gully tops installed in the area of kerbside channels of roads which, when measured from the kerb edge, extend to a maximum of 0.50 m into the carriageway and a maximum of 0.20 m into the footway.
- **Group 2 : (class B 125 mini) :** Footways, pedestrian areas and comparable areas, car parks and car parking decks.

Some manhole covers are capable of passing a test load which exceeds that specified for their class. Others are fitted with a reinforced frame in order to ensure stability in especially severe traffic conditions, while remaining in compliance with the installation conditions considered in the standard.

TRAFFIC STRESSES

In addition to the group and class concepts specified in EN 124, it is recommended that specific traffic and operating stresses should also be taken into account in order to select the most suitable product.

The following three parameters :
- number of vehicles,
- speed,
- type of vehicles - *cars or heavy vehicles* using the carriageway,

are combined and contribute to the definition of the concept of the type of traffic.

TYPE OF TRAFFIC	NUMBER OF VEHICLES	SPEED	TYPE OF VEHICLES
Intense	High	Speed authorized on large urban roads	Regular use by heavy vehicles
Normal	Irregular	Stabilized urban speed	- Essentially light vehicles - Transit of heavy vehicles
Low	Low	Limited speed	Occasional truck traffic (deliveries, etc.)

SAINT-GOBAIN CANALISATION designs its manhole covers in accordance with traffic stresses in terms of : stability, safety and silence. The type of technical solutions implemented depends on the intended use of the casting.

TYPE OF TRAFFIC	SECURING OF COVER / GRATING IN FRAME	STABILITY / BEARING	INSERTION DEPTH (I)	FRAME DEPTH (F)
Intense	Weight of cover	Elastomer ring	I ≥ 80 mm	F = 100 mm
Normal	- Locking - Metal seating	PE ring	Locking or I ≥ 50 mm	F = 100 mm or F = 75 mm with anchoring means

OPERATING STRESSES

Efficient management of sewer systems requires more frequent inspections and checks. The handling of municipal castings designed without due care can lead to damage in the lumbar region of the back and spine. All SAINT-GOBAIN CANALISATION manhole covers are designed to facilitate opening and closing operations with a minimum of force and to provide service teams with more ergonomic working conditions.

INSPECTIONS	OPENING ASSISTANCE SYSTEM	USER SAFETY	OPENING ERGONOMICS
Frequent	Hinge	90° locking Opening to 130°	1 single movement Standing position
Periodic	- Hinged mechanism - Pins	Device ensuring holding of tool and guidance of cover	Handling in two steps
Occasional	None	Cover positioning marker	Bending of back and pulling / lifting effort

RANGE

SAINT-GOBAIN CANALISATION offers a very wide range of carriageway manhole covers in accordance with all the requirements of standards and satisfying the specific criteria of each place of installation.