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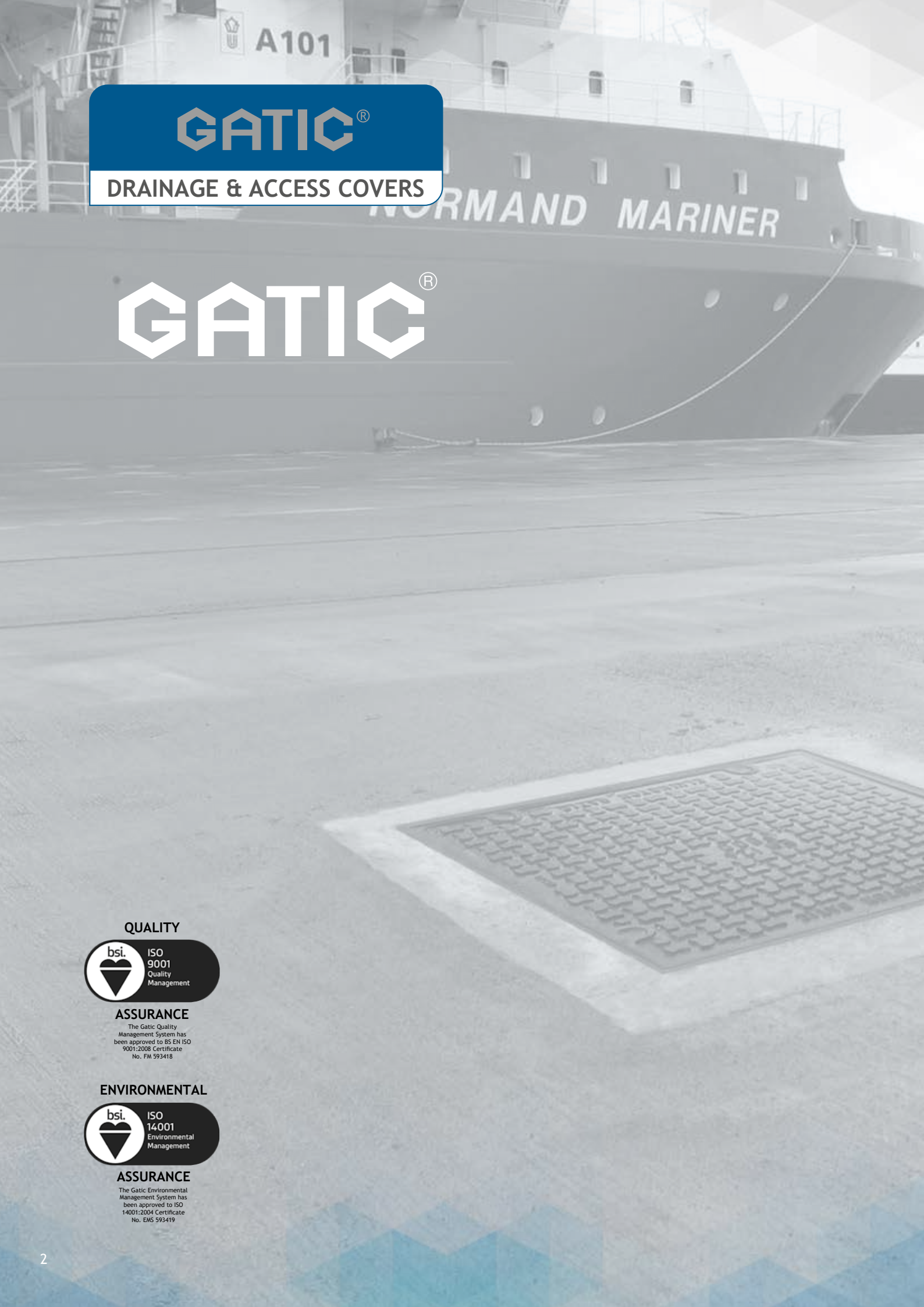
April 2019

# Access Covers

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**QUALITY**

bsi. ISO 9001 Quality Management

**ASSURANCE**

The Gatic Quality Management System has been approved to BS EN ISO 9001:2008 Certificate No. FM 593418

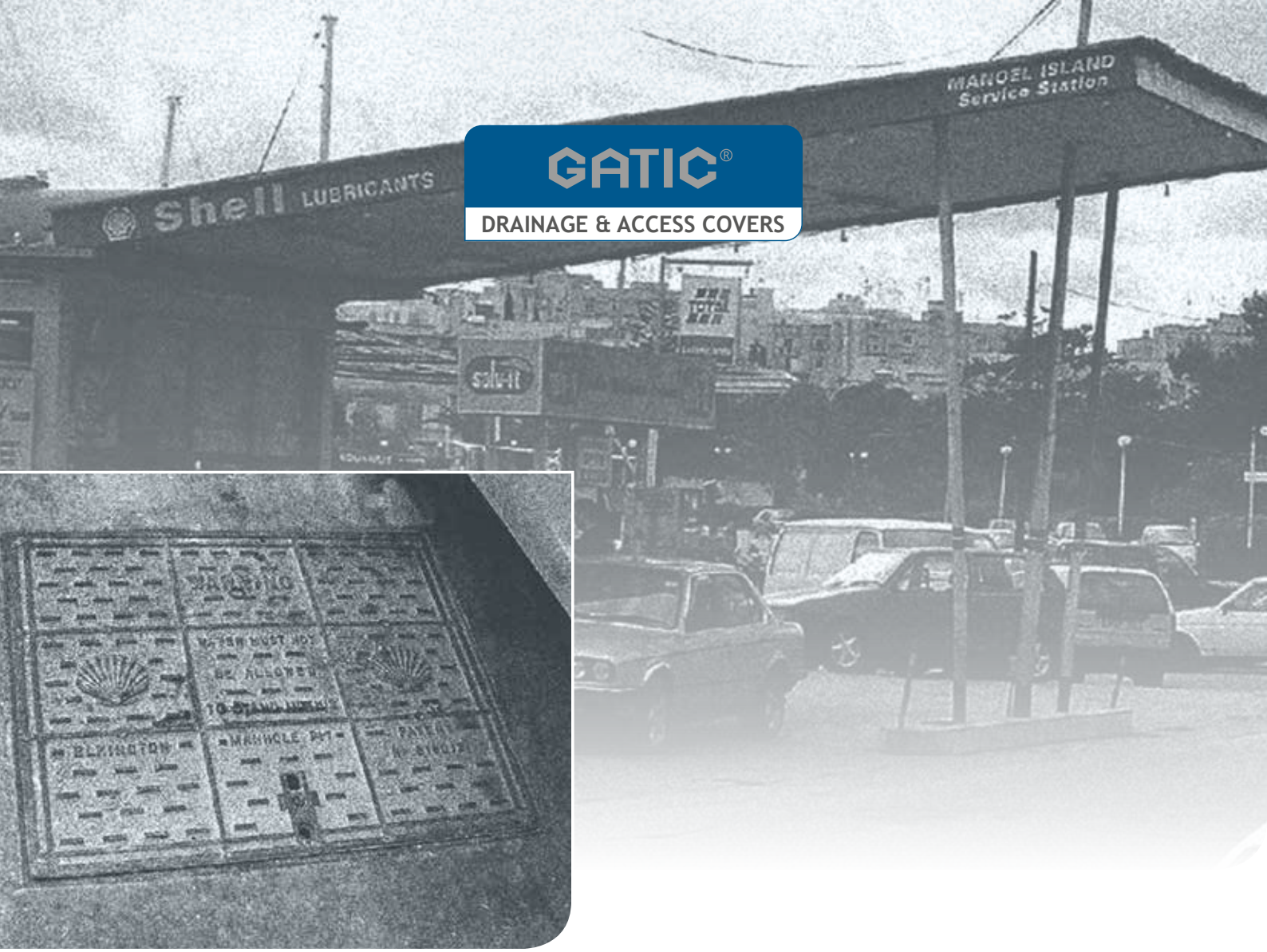
**ENVIRONMENTAL**

bsi. ISO 14001 Environmental Management

**ASSURANCE**

The Gatic Environmental Management System has been approved to ISO 14001:2004 Certificate No. EMS 593419

# Contents

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**Back in 1928, we must have got something right with our gas and air tight inspection covers.**

# A challenge in the twenties. Still challenging today.

**Because, after over 80 years of continuous development, we're still making them.**

With a history of installations dating back more than eighty years, Gatic is without doubt the fully proven International Standard for engineered access covers and drainage gratings.

Original 1928 cover still in use

When we were asked to design our first gas and air tight cover for Shell, back in the 20s, it was to a demanding specification. Our success in meeting this specification can be judged by the fact that one of the first covers supplied can still be seen in use at a Shell garage in Malta where it was originally installed.

Continuous development and refinement

Since that first success we have continued to improve and adapt our range of products to suit the ever increasing and diverse demands of travel,

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# Gatic standards and advice

## Best products. Best advice. Best results.

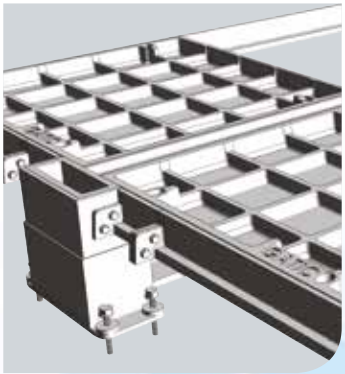
At Gatic, we know that our reputation is only as good as the performance of our products. So we do our very best to ensure that the product you buy is the right product for the job and that it is installed correctly in order to be able to do its job successfully. That is why we make a point of supplying all the help and technical support that we can.

## Manufacturing standards

It all starts with the manufacturing process. All the basic components for Gatic covers are cast to exacting specifications, developed over time.

The composition of the ductile iron is tightly controlled and the tolerances of the actual casting process are held to fine and demanding limits.

This is because our products will eventually be machined to tight specifications in order to achieve the gas, air-tight and non-rocking fit upon which our reputation is built.



Gatic covers are produced in a wide range of strength ratings to suit any real-life application. When correctly installed, they can be expected to continue to perform as intended for the lifetime of the project, with minimal servicing.

Our covers are designed to work effectively in the harshest environments.

Details of the range of load factors to match your requirements can be found on pages 10-11 of this publication. Selecting the appropriate product for your intended application means that you will achieve the service life and performance you need without over specifying, thus ensuring that you get the product you need with the most beneficial ratio of strength to cost. We can help you with this selection process and regard it as a very important part of our service.

## Professional advice on your project

Our design engineers are available to discuss the technical aspects of any project involving Gatic covers, whether large or small. The application of a little expert knowledge often means that what appear to be intractable problems can be overcome with relative ease.

You can tap into this expertise either through our website **www.gatic.com** or by calling **+44 (0)1304 203 545**. You will find most of the information you need to narrow down the choice of covers for your particular project within the pages of this publication. To see in detail how Gatic covers are constructed and fitted on site, we suggest you go to the website, where much more information is available.

## Downloads and tutorials

On the Gatic website, you will find a link to Access Cover Tutorials. Follow this link and you will be taken stage by stage through the assembly and installation process for a multispan engineered access cover, including the preparation of the site and construction of the inspection pit to accept the cover.

For more personal, in-depth instruction, you can request CPD training with one of our instructors. Should you need them, you will be able to register here to access and download technical drawings of our current range of covers for

more detailed planning purposes.

Links to the range of cover specifications by load-bearing criteria, showing typical applications and other considerations influencing the choice of cover for each particular project are also to be found.

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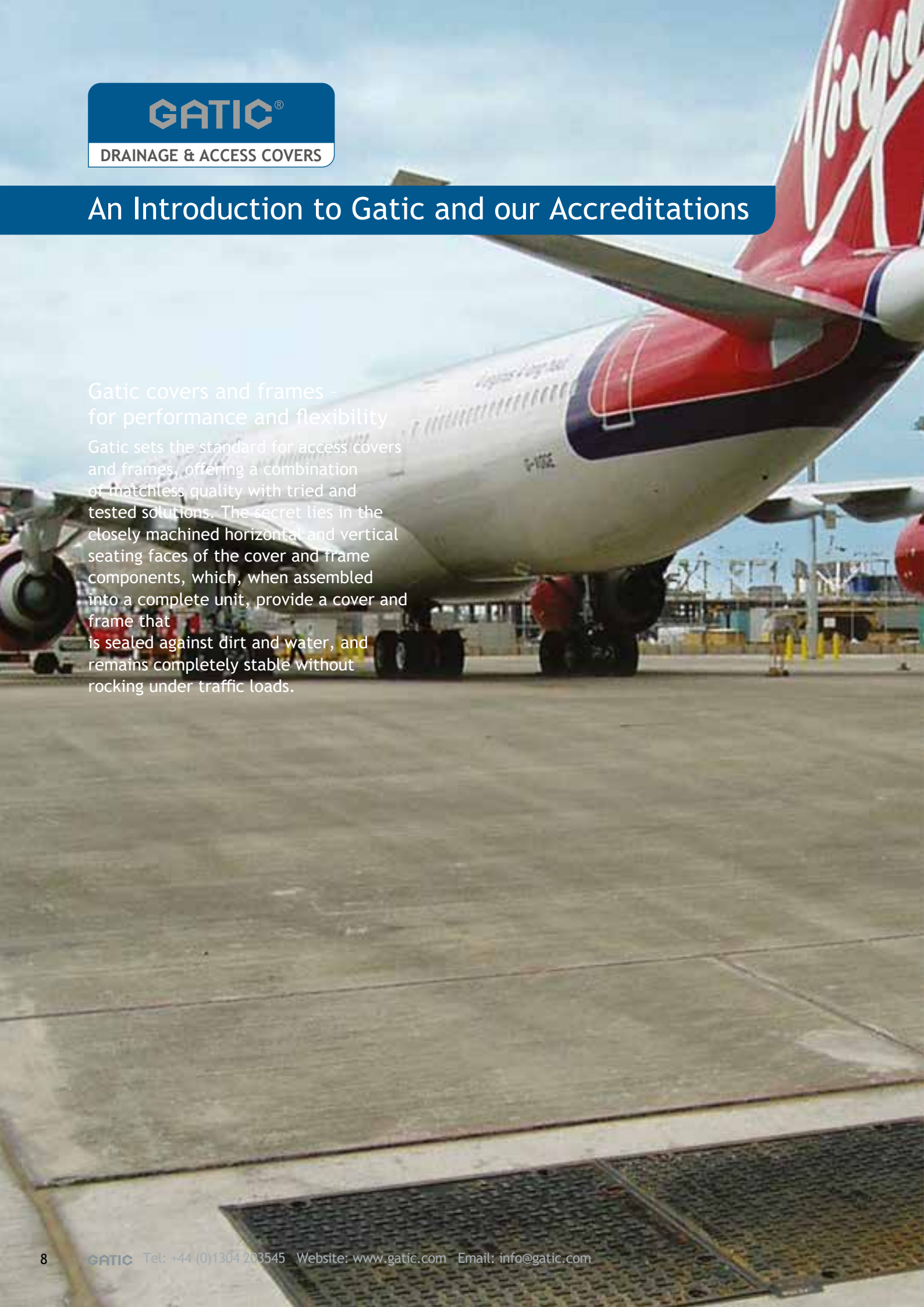
# An Introduction to Gatic and our Accreditations



## Gatic covers and frames – for performance and flexibility

Gatic sets the standard for access covers and frames, offering a combination of matchless quality with tried and tested solutions. The secret lies in the closely machined horizontal and vertical seating faces of the cover and frame components, which, when assembled into a complete unit, provide a cover and frame that
is sealed against dirt and water, and remains completely stable without rocking under traffic loads.

Gatic covers are designed both to protect and give easy access to a diverse range of underground services, examples include:

- **Manhole/Pump/Valve/Transformer Chambers**
- **Pipe and Cable service Trenches**
- **Cable Draw Pits**
- **Lighting Pits**
- **Fuel and Fire Hydrant Pits**
- **Machinery/Plant Access Chambers**
- **Combined Sewer/Overflow Chambers**

Typical applications can be found in a diverse range of projects including:

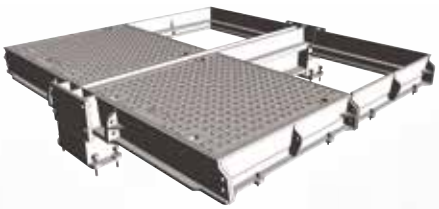
- **Airports**
- **Ports/Docks**
- **Utilities - Gas/Electricity**
- **Water - Sewerage Treatment Works/ Water Treatment Works/Pumping Stations**
- **Power Stations/Sub-Stations**
- **Commercial and Industrial Applications**
- **Highways**
- **Tunnels**

## Cover options

Gatic covers are available in a choice of designs to suit different conditions and requirements for appearance.

Recessed for concrete infill

Covers are designed with an arrangement of cross-ribs for infilling with concrete. This provides a very strong and hardwearing surface with an attractive appearance.



Solid top anti-slip surface

High performance covers that are lighter in weight than those incorporating concrete infill. Solid top covers incorporate a raised lozenge pattern on the surface.

## Quality Assurance

The Gatic Quality Management System has been approved to BS EN ISO 9001:2008

The Gatic Environmental Management System has been approved to ISO 14001:2004

QUALITY ASSURANCE

Approved to BS EN ISO 9001:2008 Certificate No. FM 593418

ENVIRONMENTAL ASSURANCE

Approved to ISO 14001:2004 Certificate No. EMS 593419

Our products are manufactured from 100 per cent ductile iron, giving high elasticity, which means Gatic covers and frames are highly resistant to physical forces and shock.

Gatic covers comprise ductile iron and structural steel components, all of which are recyclable.

## Using this brochure

Gatic covers have been created to suit the widest range of applications and to meet different loading requirements, from relatively light loads (eg, pedestrian areas and residential roads) to the most heavy (eg, airports,
dockyards, etc).

BS EN 124:1994 classifies covers according to their place of installation as shown below. Where there is any doubt, the stronger class should be selected.

| Loading description | BS EN 124 | |
|---|---|---|
| | Class | Test Load |
| Footways, pedestrian areas, etc | B125 | 125kN |
| Gully tops in kerbside channels of roads | C250 | 250kN |
| Carriageways of roads (heavy duty) | D400 | 400kN |
| Areas imposing high wheel loads | E600 | 600kN |
| Areas imposing particularly high wheel loads | F900 | 900kN |

Data from BS EN 124:1994 (Gully tops and manhole tops for vehicular and pedestrian areas. Design requirements, type testing, marking, quality control)

The covers in our brochure are organised according to the BS EN 124 classifications. Please refer to the Loading Group Selector Guide on pages 10-11.

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# Loading Group Selector Guide

E600

## Loading Group Gatic E600

20 tonne slow moving wheel load - test load 600kN

Areas imposing high wheel loads:

- Some airfield pavements
- Dockyards
- Other areas where single slow moving wheel loads up to 20 tonne may be encountered

**Pages 52 - 63**


F900

## Loading Group Gatic F900

In excess of 20 tonne slow moving wheel load - test load 900kN

Areas imposing particularly high wheel loads:

- Airfield pavements
- Taxiways
- Civil airports
- Dockyards
- Other areas where single slow moving wheel loads may exceed 20 tonne

**Pages 64 - 75**


D400

## Loading Group Gatic D400

11.5 tonne wheel load - test load 400kN

- Power stations
- Carriageways
- Hard shoulders
- Parking areas for all vehicle types

For high density traffic conditions we recommend the use of a vibration resistant locking system

**Pages 40 - 51**


The Gatic range of loading groups is organised according to BS EN 124:1994 (Gully tops and manhole tops for vehicular and pedestrian areas. Design requirements, type testing, marking, quality control).

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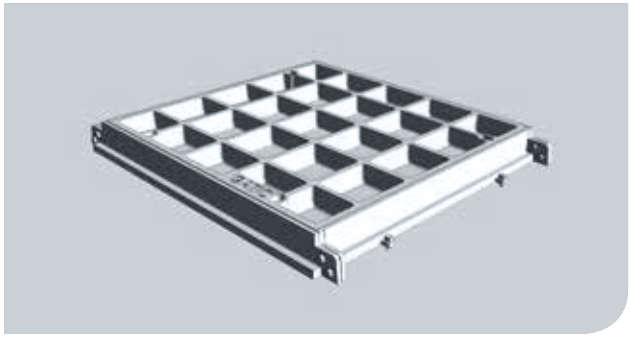
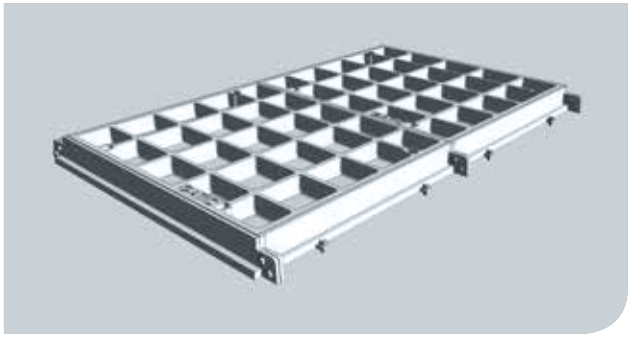
# The Gatic Range of Access Covers

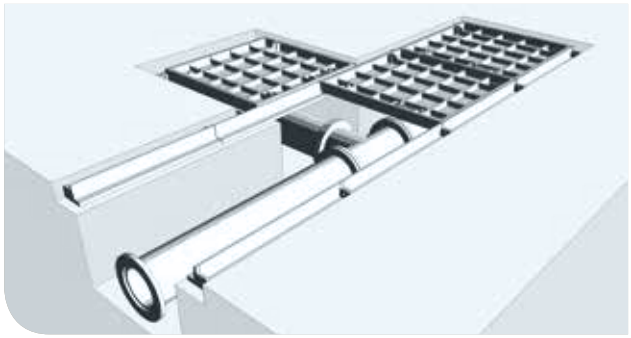
## Single Covers and Frames



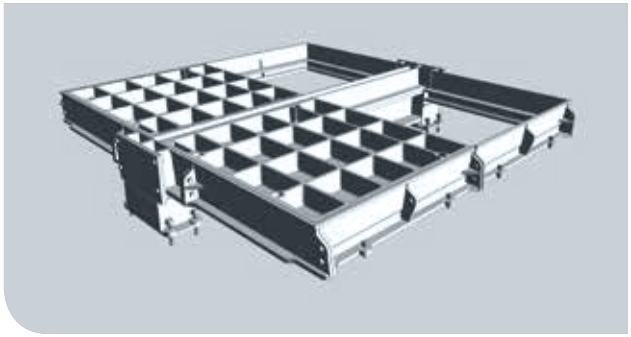
## Duct Covers and Frames




## Continuous Trench Covers and Frames



## Multispan Covers and Frames

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# Product Features and Benefits

## Cover types

Covers are recessed for concrete infill or solid top according to specifier preference.

## Concrete infill recessed covers

Recessed covers are designed for filling with concrete as specified in BS EN 124 - C45- 45 N/mm$^2$ for a test cube of 150mm, or a 40N/mm$^2$ for a test cylinder 150mm diameter x 300mm high, using a 10mm coarse aggregate.

## Anti-slip surface covers

Concrete infill covers provide a non-slip surface similar to the surrounding areas. Solid top covers incorporate a raised lozenge pattern on the surface.

## Materials

The components of Gatic covers are manufactured from the following materials:

Ductile iron components to BS EN 1563:2011

Structural steel sections (removable beams) to BS 4-1:2005

## Fine tolerances

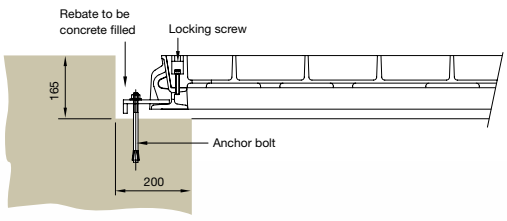
The seating faces of Gatic covers and frames are machined to ensure metal-to-metal contact within 0.25mm tolerance.

## Non-rocking

Correctly installed, Gatic covers will be non-rocking under traffic and sealed against ingress of road dirt and other detritus.

## Watertight

A film of graphite grease between the contact faces of Gatic units provides a gas and airtight seal, and a watertight joint under normal rainwater conditions.




Watertightness under pressure

## Pressure-tight

Standard single units with locking screws and holding-down bolts are available to withstand upward pressure. Consult our technical department for details.

## Easy removal/replacement

The machined underside seating face of Gatic covers allows the sliding out of covers for easy removal or replacement.

## Operator control

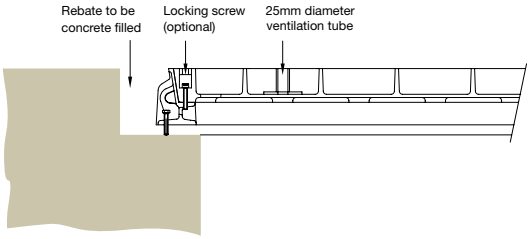
Jack screw operating keys locate positively and securely into Gatic covers and are a necessary tool if the inherent cover seal is to be broken effectively and to allow operator maximum control during operation.

## Secure and vandal resistant

Covers are designed to prevent tampering and unauthorised removal. Gatic covers cannot be removed without the correct lifting key, so unauthorised removal is virtually impossible. Locking bolts can be fitted to Gatic cover keyways as an additional security feature.

## Ventilation

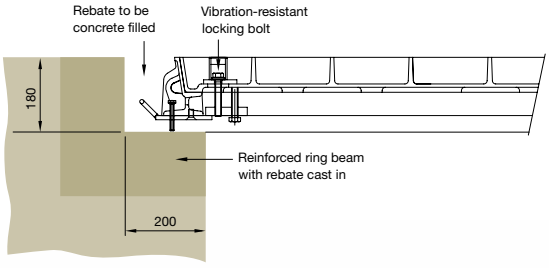
Ventilation can be provided by fitting four 25mm diameter ventilation tubes in recessed covers.




Locking/ventilated

## Vibration resistant

For covers in high density traffic conditions, we recommend the use of a factory-fitted vibration-resistant locking system. (Can be fitted to recessed covers only.)




Vibration resistant

We do not recommend the use of solid top covers in high density traffic locations.

## Closed keyways

Gatic cover keyways are closed and fitted with plastic plugs to prevent them from blocking up.

## Loadings

All Gatic covers will withstand test load and maximum permanent set criteria specified in BS EN 124: 1994 for each loading category.

## Frame bars

Gatic 140mm deep supporting frames incorporate an 'I' beam design profile to provide a robust and rigid frame
that will withstand the specified loads, without any concrete
infill or backfill.

## Rigidity

The robust and rigid design of Gatic D400, E600 and F900 frames, combined with close manufacturing tolerances, provides a monolithic structure.

## Secure support

The clear opening width between supporting frames are at least 10mm greater than the pit/chamber design to allow for minor deviations in pit construction dimensions.

## Beam wallbox

Supporting beams in Gatic Multispan units are easily removed with appropriate lifting equipment for access to the total chamber area. Beam wallboxes do not project into the
chamber opening.

## Finishes

Units are coated with a black bituminous solution that acts as a temporary protection during transit, Removable supporting steelwork is galvanised to BS EN ISO 1461:2009. See page 80 for alternative finishes.

## Installation

Consignments of Gatic units are accompanied by comprehensive installation instructions.

## Levelling bolts

All frame bars and wallboxes are fitted with bolts to assist in the levelling of the unit during installation.

## Safety grids

Hinged lift-out galvanised steel safety grids (with padlock facility if required) can be incorporated into Gatic units. See page 80.

## Environmental commitment

Responsibility towards the environment is our primary concern. Our customers often now demand products that are made from recycled and recyclable materials, supplied by companies with robust environmental policies to reduce the environmental impact of their projects for future generations.

To meet these requirements we have an integrated Quality
(BS EN ISO 9001:2008) and Environmental (BS EN ISO 14001:2004) Management System which encompasses the design, manufacture and management systems within the company and ensures our commitment to continuous environmental improvements regarding the manufacture and design of all our products in the following ways:

- Minimise environmental impact
- Commit organisational resources to energy management
- Reduce energy costs
- Give high priority to energy efficient investments
- Consider life cycle energy costs for all new projects
- Minimise $CO_2$ emissions year on year
- Use energy from sustainable resources wherever possible

To achieve these goals we have put in place the necessary systems and controls to meet demanding environmental targets and to make sure that these are maintained for the future benefit of the environment and our customers alike.

## Gatic services

Gatic offers a full support service to specifiers and contractors, including Computer Aided Design. AutoCAD compatible details of all Gatic products are available. Please consult our technical department for assistance.

In view of our commitment to product improvement, we reserve the right to alter designs without notice. Design changes will not adversely affect the performance or loading capability of our products.

**QUALITY**

bsi. ISO 9001 Quality Management

**ASSURANCE**

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**ENVIRONMENTAL**

bsi. ISO 14001 Environmental Management

**ASSURANCE**

The Gatic Environmental Management System has been approved to ISO 14001:2004 Certificate No. EMS 593419

# Loading Group D400

POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

## Introduction

This section includes Gatic covers and frames designed for Loading Group D400.

11.5 tonne wheel load, test load 400kN – Suitable for:

- Power stations
- Carriageways
- Hard shoulders
- Parking areas for all types of vehicles

## Cover types

Single covers and frames

Duct covers and frames

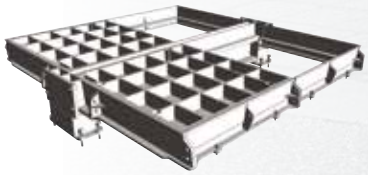
Continuous trench covers and frames

Multispan covers and frames

D400 assemblies are available with a choice of cover designs – recessed or solid top.

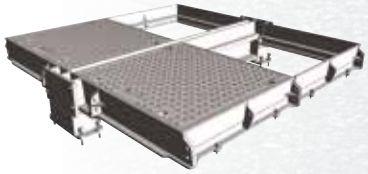
## Recessed for concrete infill

Recessed covers are available in a choice of designs designated by a 'Type' reference. D400 recessed covers are available as Type DLF, DM, DM/F and DMR. Section drawings of the different recessed cover types are shown on the following pages.



## Solid top

Solid top cover types are lighter in weight than recessed covers, and feature a figured anti-slip surface. Solid top covers are denoted by the code Type DMS depicted in section on the following pages.



To prevent movement of covers in high traffic conditions, we recommend the use of a factory fitted vibration-resistant locking system. Can be fitted to recessed covers only. See page 14.

If you are uncertain as to the adequacy of covers conforming to a particular loading, we recommend specifying covers in a higher loading group. For example, if in doubt about covers in Loading Group D400, we recommend you specify covers in Loading Group E600.


# 400

# Loading Group D400

POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

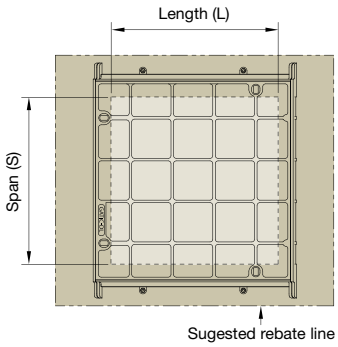
D400 Single recessed covers and frames

- Covers recessed for concrete infill
- Cover type: DLF, DMR, DM

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

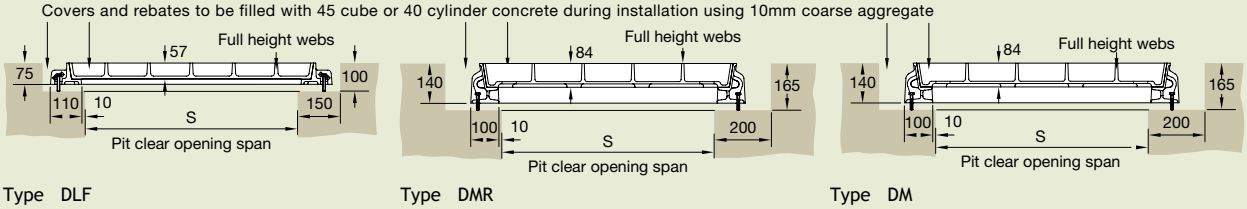
| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 750 x 300 | DLF | 900 x 540 x 75 | 1050 x 600 x 100 |
| 600 x 450 | DMR | 750 x 670 x 140 | 1000 x 850 x 165 |
| 750 x 450 | DMR | 900 x 670 x 140 | 1150 x 850 x 165 |
| 600 x 600 | DMR | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | DMR | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | DMR | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 750 x 750 | DMR | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | DMR | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | DMR | 1120 x 1120 x 140 | 1300 x 1300 x 165 |
| 600 x 1050 | DM | 820 x 1270 x 140 | 1000 x 1450 x 165 |
| 750 x 1050 | DM | 970 x 1270 x 140 | 1150 x 1450 x 165 |
| 1000 x 1050 | DM | 1220 x 1270 x 140 | 1400 x 1450 x 165 |
| 600 x 1200 | DM | 820 x 1420 x 140 | 1000 x 1600 x 165 |
| 750 x 1200 | DM | 970 x 1420 x 140 | 1150 x 1600 x 165 |




Plan of recessed single cover

## Cover types

Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate

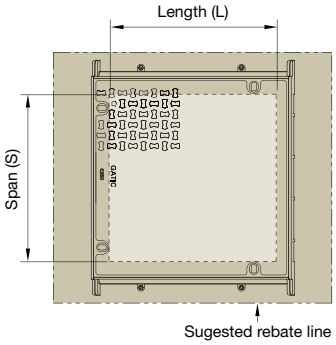


- Covers with solid top
- Cover type DMS

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

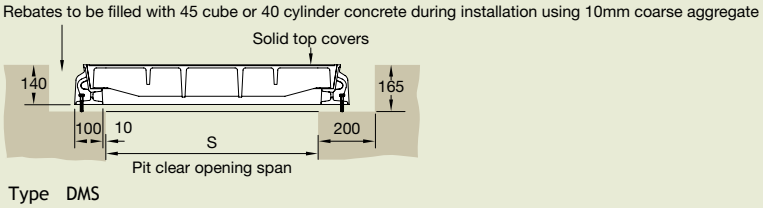
| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 600 x 600 | DMS | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | DMS | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | DMS | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 750 x 750 | DMS | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | DMS | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | DMS | 1120 x 1120 x 140 | 1300 x 1300 x 165 |
| 600 x 1200 | DMS | 820 x 1420 x 140 | 1000 x 1600 x 165 |
| 750 x 1200 | DMS | 970 x 1420 x 140 | 1150 x 1600 x 165 |
| 1000 x 1000 | DMS | 1220 x 1220 x 140 | 1400 x 1400 x 165 |




Plan of solid top single cover

For high density traffic conditions refer to page 14.

Cover types




Type DMS

# Loading Group D400

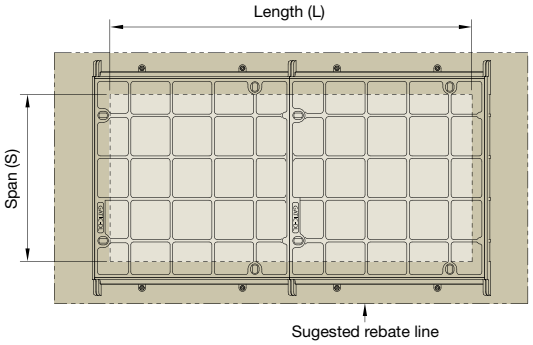
POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

- Covers recessed for concrete infill
- Cover type DLF, DMR, DM

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 300 | DLF | (L + 300) x 600 x 100 |
| 450 | DMR | (L + 400) x 850 x 165 |
| 600 | DMR | (L + 400) x 1000 x 165 |
| 750 | DMR | (L + 400) x 1150 x 165 |
| 900 | DMR | (L + 400) x 1300 x 165 |
| 1050 | DM | (L + 400) x 1450 x 165 |
| 1200 | DM | (L + 400) x 1600 x 165 |
| 1350 | DM/F | Refer to our technical department |
| 1500 | DM/F | Refer to our technical department |




Plan of recessed duct cover

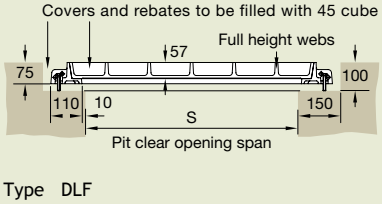
| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 300 | DLF | * | * | 2 | * | * | * | * | * | 3 | * | * | * |
| 450 | DMR | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 600 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 750 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 1050 | DM | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 1200 | DM | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 300 | DLF | * | * | * | * | 4 | * | * | * | * | * | * | 5 |
| 450 | DMR | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 600 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 750 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 1050 | DM | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 1200 | DM | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |

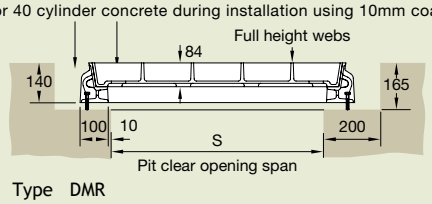
* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

## Cover types

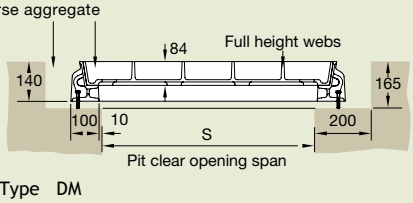
Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DLF




Type DMR

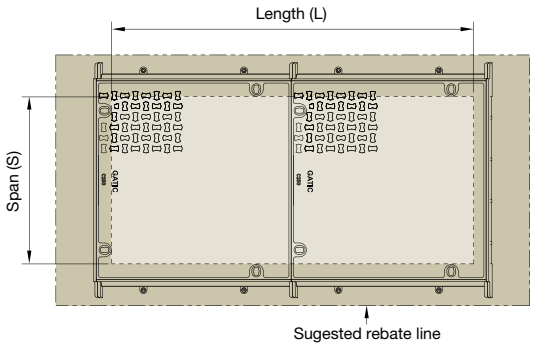



Type DM

- Covers with solid top
- Cover type DMS

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type




Plan of solid top duct cover

For high density traffic conditions refer to page 14.

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 600 | DMS | (L + 400) x 1000 x 165 |
| 750 | DMS | (L + 400) x 1150 x 165 |
| 900 | DMS | (L + 400) x 1300 x 165 |
| 1200 | DMS | (L + 400) x 1600 x 165 |

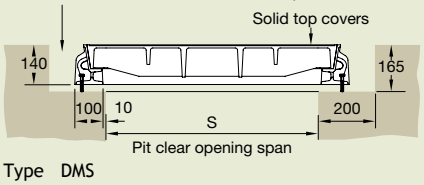
| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 600 | DMS | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 750 | DMS | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | DMS | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 1200 | DMS | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 600 | DMS | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 750 | DMS | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | DMS | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 1200 | DMS | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |

* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DMS

# Loading Group D400

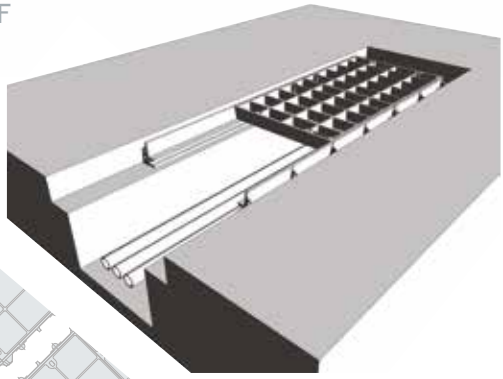
POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

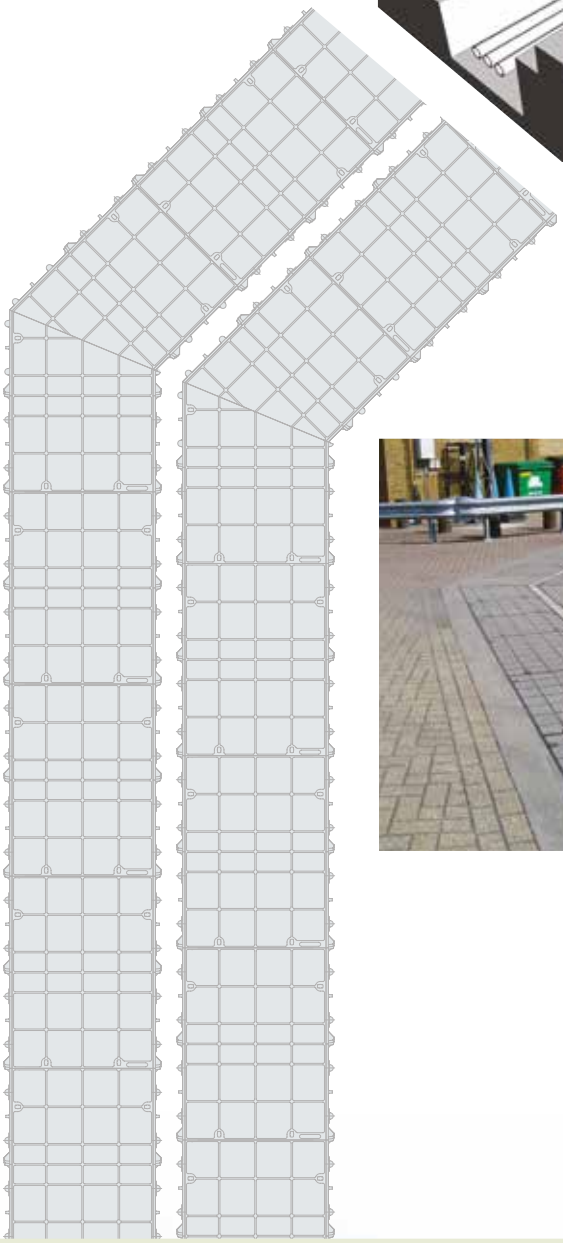
D400 Continuous recessed trench covers and frames

- Covers recessed for concrete infill
- Cover types: DLF, DM, DM/F

To specify state:

1. Loading group
2. Cover type
3. Supply layout drawing of trenches





## Continuous recessed cover

| Pit clear opening span | Cover type |
|---|---|
| 300 | DLF |
| 450 | DMR |
| 600 | DMR |
| 750 | DMR |
| 900 | DMR |
| 1050 | DM |
| 1200 | DM |
| 1350 | DM/F |
| 1500 | DM/F |

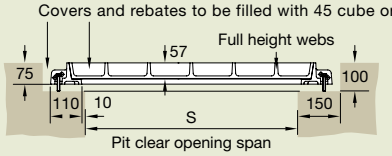
* For type DM/F refer to our technical department

Gatic covers can be formed to make continuous trenches or layouts providing total access to services below.

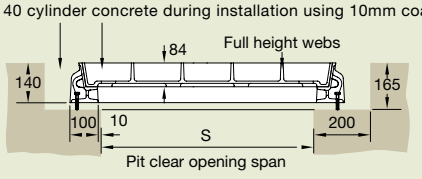
Construction drawings are required so that Gatic cover layout drawings can be prepared.

## Cover types

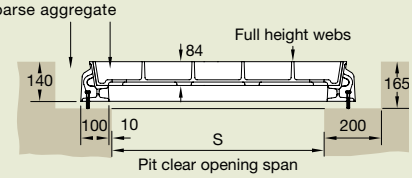
Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DLF




Type DM

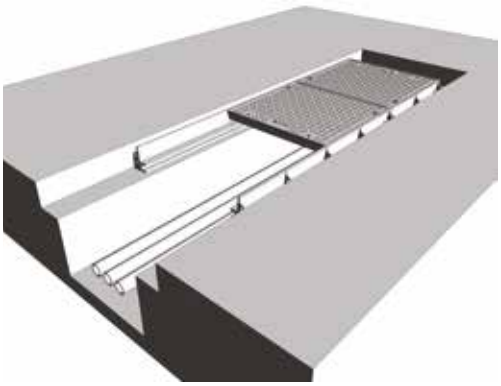



Type DMR

- Covers with solid top
- Cover types: DMS

To specify state:

1. Loading group
2. Cover type
3. Supply layout drawing of trenches

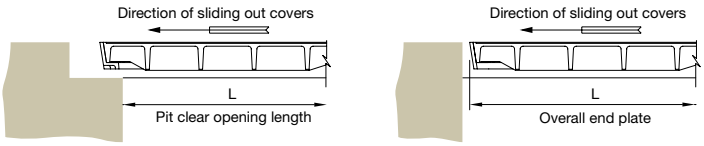


## Continuous solid top cover

| Pit clear opening span | Cover type |
|---|---|
| 600 | DMS |
| 750 | DMS |
| 900 | DMS |
| 1200 | DMS |

For high density traffic conditions refer to page 14.

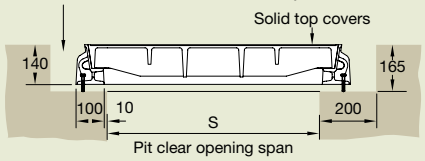
Standard solid top covers are supplied in straight runs. Junctions and splays can be achieved by the inclusion of localised recessed covers. Refer to our technical department for more information.




End terminations

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DMS

# Loading Group D400

POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

D400

Multispan covers and frames

## Specification

Below is sample specification information and notes for Multispan recessed covers and frames.

For more details on features and benefits of Gatic covers, see pages 14 to 15.

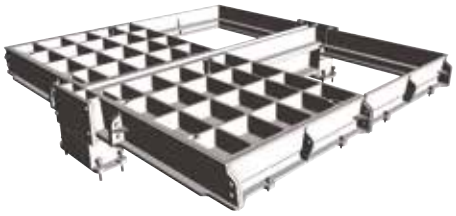
### Loading group Gatic D400

11.5 tonne wheel load – test load 400 kN.

### Materials

Ductile iron components to BS EN 1563:2011.

Structural steel removable beams to BS 4-1:2005.



Type DMR recessed

### Finishes

Units coated with black bituminous solution for protection during transit.

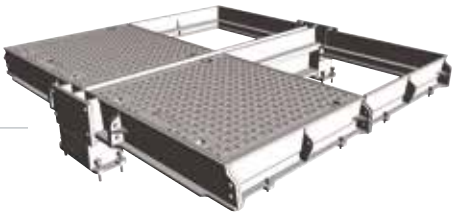
Removable supporting steelwork galvanised to BS EN ISO 1461:2009.

### Infill and surround concrete by customer

Concrete strength, using 10mm coarse aggregate, to be:
45N/mm² for a test cube of 150mm or
40N/mm² for a test cylinder of 150mm diameter x 300mm high.

### Installation

In accordance with instructions supplied by Gatic.



Type DMS solid top

To specify use size and description format as follows:

### Gatic Multispan Recessed covers and frames

Cover type DMR recessed

Multiple access covers recessed for concrete infill with removable beams.

.... in no. .... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type DMR Ductile Iron Recessed Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group D400 – 11.5 Tonnes Wheel Load (pneumatic tyre).

### Gatic Multispan Solid Top covers and frames

Cover type DMS solid top

Multiple solid top access covers with removable beams.

.... in no. .... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type DMS Ductile Iron Solid Top Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group D400 – 11.5 Tonnes Wheel Load (pneumatic tyre).

Standard pit clear opening sizes are shown on Page 49.

Beam sizes and other dimensions are shown on Pages 50 and 51.

For high density traffic conditions refer to page 14.

## Product Selection

Refer to the table to identify which cover and beam configuration you require against pit clear opening length (L) and pit clear opening span (S). All dimensions are in millimetres.

Pit clear opening length (L) mm

| Pit clear opening span (S) mm | | 2 parts | | | | | 3 parts | | | | | | | 4 parts | | | | | | | | Beam centres mm | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2750 | 2900 | 2700 | 2850 | 3000 | 3150 | 3300 | 3450 | 3600 | 3750 | 3900 | A | B | C | D | E |
| 2 parts 1 beam | 1380 | | | | | | | | | | | | | | | | | | | | | | 690 | 690 | | | |
| | 1530 | | | | | | | | | | | | | | | | | | | | | | 840 | 690 | | | |
| | 1680 | | | | | | | | | | | | | | | | | | | | | | 840 | 840 | | | |
| | 1830 | | | | | | | | | | | | | | | | | | | | | | 990 | 840 | | | |
| | 1980 | | | | | | | | | | | | | | | | | | | | | | 990 | 990 | | | |
| | | 4 part (2x2) recessed multispan cover with 1 removable support beam | | | | | 6 part (3x2) recessed multispan cover with 1 removable support beam | | | | | | | 8 part (4x2) recessed multispan cover with 1 removable support beam | | | | | | | | | | | | | |
| 3 parts 2 beams | 2160 | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 690 | | |
| | 2310 | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 690 | | |
| | 2460 | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 840 | | |
| | 2610 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 840 | | |
| | 2760 | | | | | | | | | | | | | | | | | | | | | | 840 | 1080 | 840 | | |
| | 2910 | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 990 | | |
| | 3060 | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 990 | | |
| | | 6 part (2x3) recessed multispan cover with 2 removable support beams | | | | | 9 part (3x3) recessed multispan cover with 2 removable support beams | | | | | | | 12 part (4x3) recessed multispan cover with 2 removable support beams | | | | | | | | | | | | | |
| 4 parts 3 beams | 2940 | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 690 | |
| | 3090 | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 690 | |
| | 3240 | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 840 | |
| | 3390 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 690 | |
| | 3540 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 840 | |
| | 3690 | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 840 | |
| | 3840 | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 990 | |
| | 3990 | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 840 | |
| | 4140 | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 990 | |
| | | 8 part (2x4) recessed multispan cover with 3 removable support beams | | | | | 12 part (3x4) recessed multispan cover with 3 removable support beams | | | | | | | 16 part (4x4) recessed multispan cover with 3 removable support beams | | | | | | | | | | | | | |
| 5 parts 4 beams | 3720 | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 780 | 690 |
| | 3870 | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 930 | 780 | 690 |
| | 4020 | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 780 | 840 |
| | 4170 | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 930 | 930 | 690 |
| | 4320 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 780 | 930 | 840 |
| | 4470 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 930 | 840 |
| | 4620 | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 1080 | 930 | 840 |
| | 4770 | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 930 | 990 |
| | 4920 | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 1080 | 930 | 990 |
| | 5070 | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 930 | 1080 | 990 |
| | 5220 | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 1080 | 990 |
| | | 10 part (2x5) recessed multispan cover with 4 removable support beams | | | | | 15 part (3x5) recessed multispan cover with 4 removable support beams | | | | | | | 20 part (4x5) recessed multispan cover with 4 removable support beams | | | | | | | | | | | | | |

Note: For other pit clear opening sizes please refer to our technical department

# Loading Group D400

POWER STATIONS, CARRIAGEWAYS, HARD SHOULDERS, AND PARKING AREAS FOR ALL TYPES OF VEHICLE

D400 Multispan covers and frames

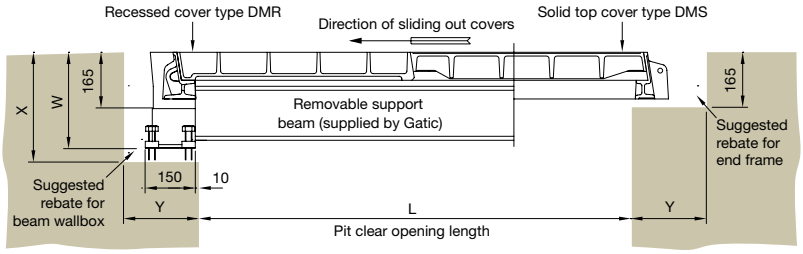
Type DMR recessed

Type DMS solid top

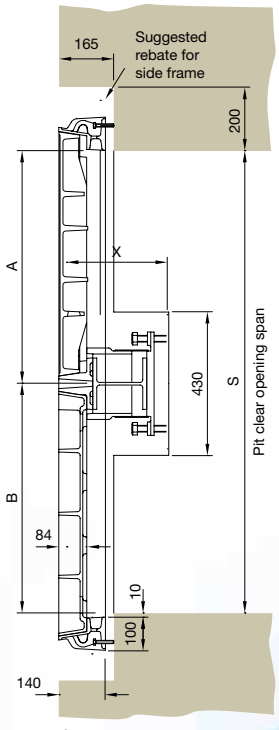
- Covers recessed for concrete infill or solid top
- Cover types: DMR (recessed) DMS (solid top)

The details below show plan and sections of a typical recessed/solid top unit.

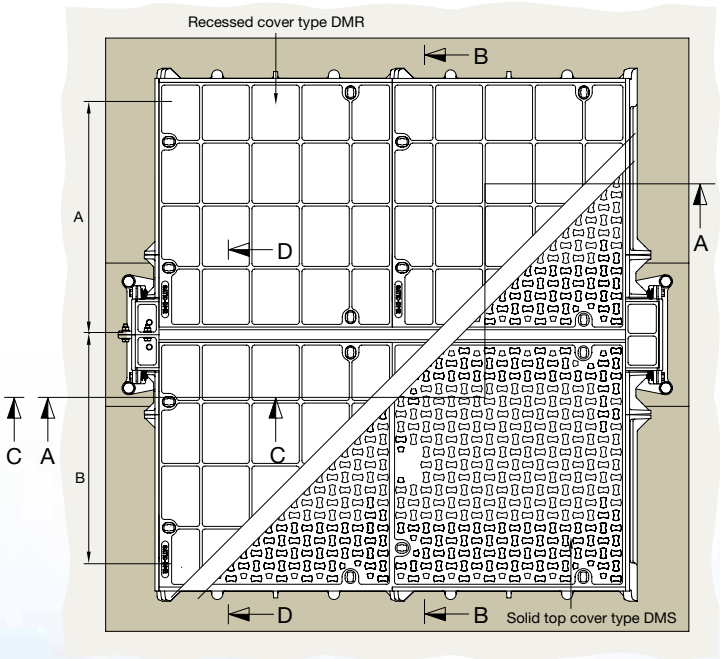
For selection and specification guidance, refer to pages 48, 49 and 51.



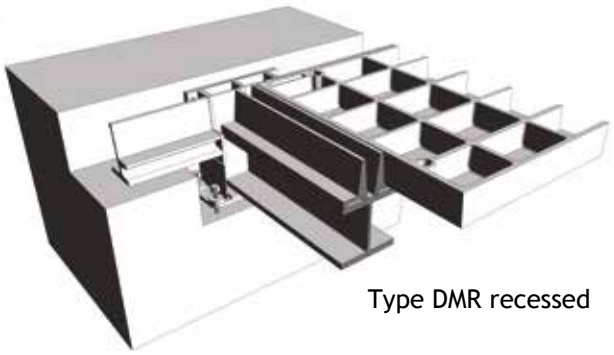

Section A - A



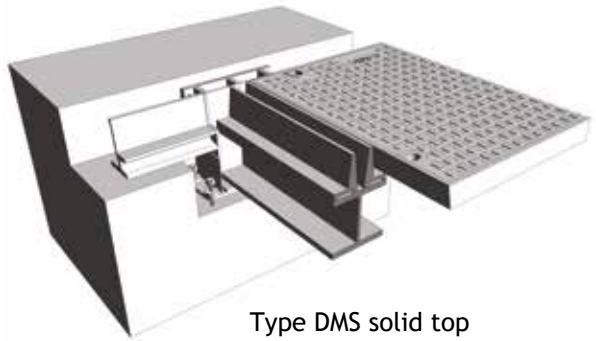

Section B - B




Plan showing recessed and solid top cover options



Type DMR recessed



Type DMS solid top

## Beam Size

The required beam size for Multispan covers is dependent on the pit clear opening length and the loading group.

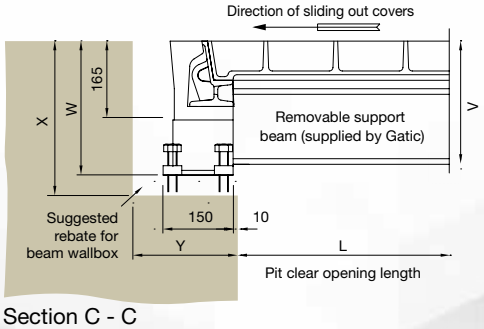
The table shows maximum beam length against beam size. The removable support beams are supplied by Gatic.

The table also indicates dimensions of the beam wallbox and rebate to suit different beam sizes. See also the accompanying section details.

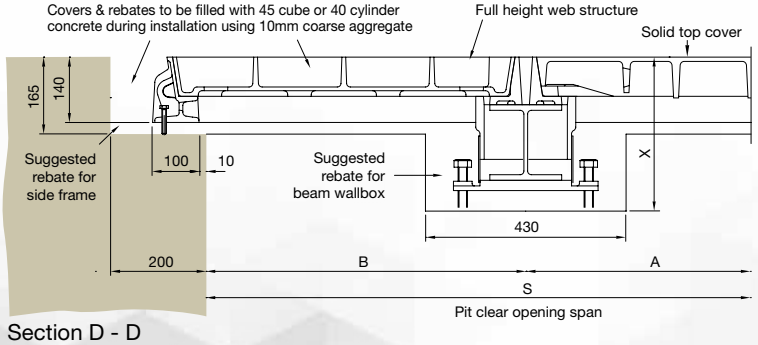
### Support beam size chart

| Removable support beam size | Max pit clear opening length (L) | Beam wallbox dimensions | | | |
|---|---|---|---|---|---|
| | | V | W | X | Y |
| 152 x 152 x 37kg/m UC | 1300 | 265 | 290 | 330 | 230 |
| 203 x 152 x 52kg/m RSJ | 1750 | 306 | 330 | 370 | 230 |
| 305 x 165 x 54kg/m UB | 2300 | 414 | 440 | 480 | 230 |
| 356 x 171 x 67kg/m UB | 2850 | 467 | 490 | 535 | 300 |
| 457 x 152 x 82kg/m UB | 3450 | 568 | 595 | 635 | 300 |
| 533 x 210 x 122kg/m UB | 3900 | 648 | 670 | 715 | 300 |

Note: Removable support beams are supplied by Gatic




Section C - C




Section D - D

# Loading Group E600

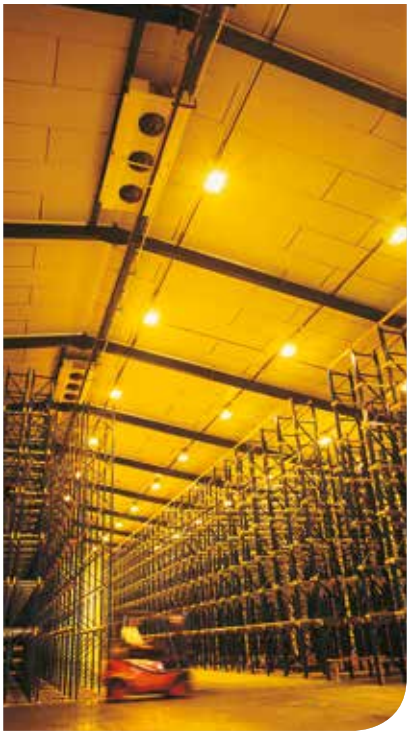
AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

## Introduction

This section includes Gatic covers and frames designed for Loading Group E600.

20 tonne wheel load,
test load 600kN – Suitable for:

- Some airfield pavements dockyards
- Dockyards
- Other areas where single slow moving wheel loads up to 20 tonne may be encountered



## Cover types

Single covers and frames

Duct covers and frames

Continuous trench covers and frames

Multispan covers and frames

E600 assemblies are available with a choice of cover designs – recessed or solid top.

## Recessed for concrete infill

Recessed covers are available in a choice of designs designated by a 'Type' reference. E600 recessed covers are available as Type DLF, DM and DMR. Section drawings of the different recessed cover types are shown on the following pages.

## Solid top

Solid top cover types are lighter in weight than recessed covers, and feature a figured anti-slip surface. Solid top covers are denoted by the code Type DMS and STF depicted in section on the following pages.

To prevent movement of covers in high traffic conditions, we recommend the use of a factory fitted vibration-resistant locking system. Can be fitted to recessed covers only. See page 14.

If you are uncertain as to the adequacy of covers conforming to a particular loading, we recommend specifying covers in a higher loading group. For example, if in doubt about covers in Loading Group E600, we recommend you specify covers in Loading Group F900.


# 009

# Loading Group E600

AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

E600

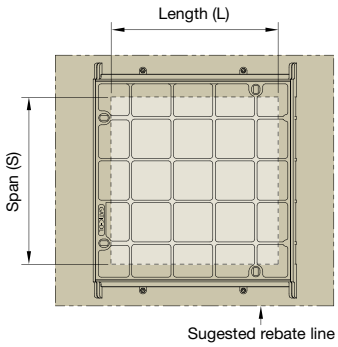
Single recessed covers and frames

- Covers recessed for concrete infill
- Cover type: DLF, DMR, DM

To specify state:

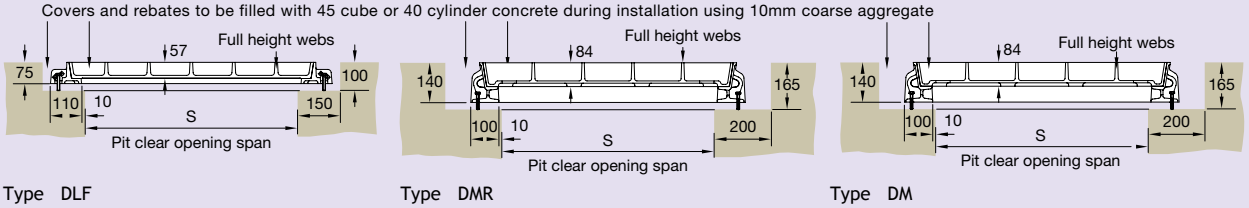
1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 750 x 300 | DLF | 900 x 540 x 75 | 1050 x 600 x 100 |
| 600 x 450 | DMR | 750 x 670 x 140 | 1000 x 850 x 165 |
| 750 x 450 | DMR | 900 x 670 x 140 | 1150 x 850 x 165 |
| 600 x 600 | DMR | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | DMR | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | DMR | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 750 x 750 | DMR | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | DMR | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | DMR | 1120 x 1120 x 140 | 1300 x 1300 x 165 |
| 600 x 1050 | DM | 820 x 1270 x 140 | 1000 x 1450 x 165 |
| 750 x 1050 | DM | 970 x 1270 x 140 | 1150 x 1450 x 165 |
| 1000 x 1050 | DM | 1220 x 1270 x 140 | 1400 x 1450 x 165 |
| 600 x 1200 | DM | 820 x 1420 x 140 | 1000 x 1600 x 165 |
| 750 x 1200 | DM | 970 x 1420 x 140 | 1150 x 1600 x 165 |




Plan of recessed single cover

## Cover types

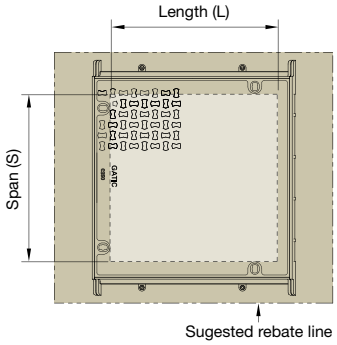


- Covers with solid top
- Cover type STF, DMS

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

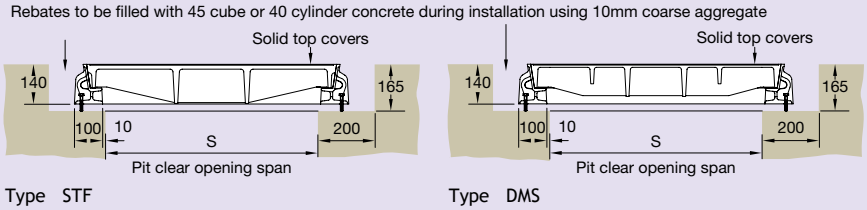
| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 600 x 600 | STF | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | STF | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | STF | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 700 x 700 | STF | 850 x 920 x 140 | 1100 x 1100 x 165 |
| 750 x 750 | STF | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | STF | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | STF | 1120 x 1120 x 140 | 1300 x 1300 x 165 |
| 1000 x 1000 | DMS | 1220 x 1220 x 140 | 1400 x 1400 x 165 |




Plan of solid top single cover

For high density traffic conditions refer to page 14.

Cover types



# Loading Group E600

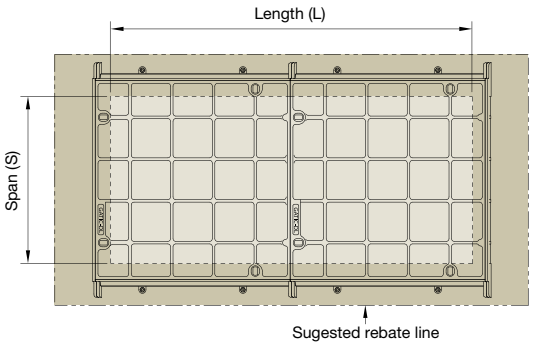
AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

- Covers recessed for concrete infill
- Cover type DLF, DMR, DM

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 300 | DLF | (L + 300) x 600 x 100 |
| 450 | DMR | (L + 400) x 850 x 165 |
| 600 | DMR | (L + 400) x 1000 x 165 |
| 750 | DMR | (L + 400) x 1150 x 165 |
| 900 | DMR | (L + 400) x 1300 x 165 |
| 1050 | DM | (L + 400) x 1450 x 165 |
| 1200 | DM | (L + 400) x 1600 x 165 |
| 1350 | DM/F | Refer to our technical department |
| 1500 | DM/F | Refer to our technical department |



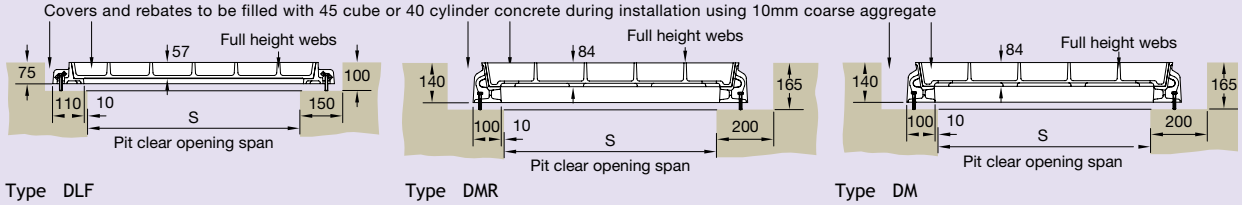

Plan of recessed duct cover

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 300 | DLF | * | * | 2 | * | * | * | * | * | 3 | * | * | * |
| 450 | DMR | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 600 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 750 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 1050 | DM | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 1200 | DM | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 300 | DLF | * | * | * | * | 4 | * | * | * | * | * | * | 5 |
| 450 | DMR | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 600 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 750 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 1050 | DM | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 1200 | DM | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |

* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

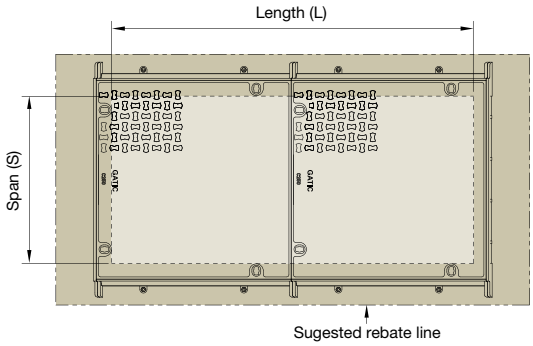
## Cover types




- Covers with solid top
- Cover type STF

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type




Plan of solid top duct cover

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 600 | STF | (L + 400) x 1000 x 165 |
| 700 | STF | (L + 400) x 1100 x 165 |
| 750 | STF | (L + 400) x 1150 x 165 |
| 900 | STF | (L + 400) x 1300 x 165 |

For high density traffic conditions refer to page 14.

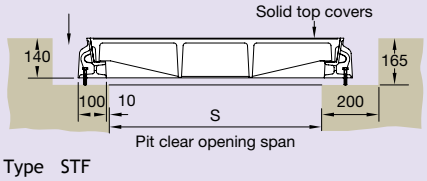
| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1500 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 600 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 700 | STF | * | * | 2 | * | * | * | * | * | 3 | * | * | * | * |
| 750 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3100 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 600 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 700 | STF | * | * | * | 4 | * | * | * | * | * | * | 5 | * | * |
| 750 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |

* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type STF

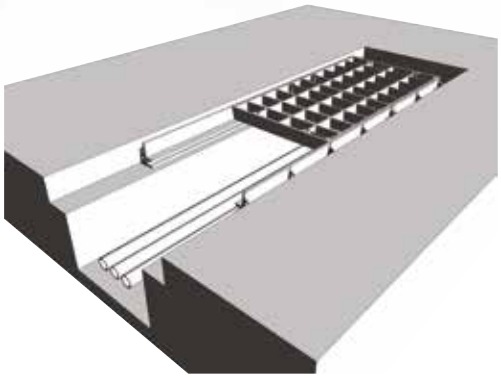
# Loading Group E600

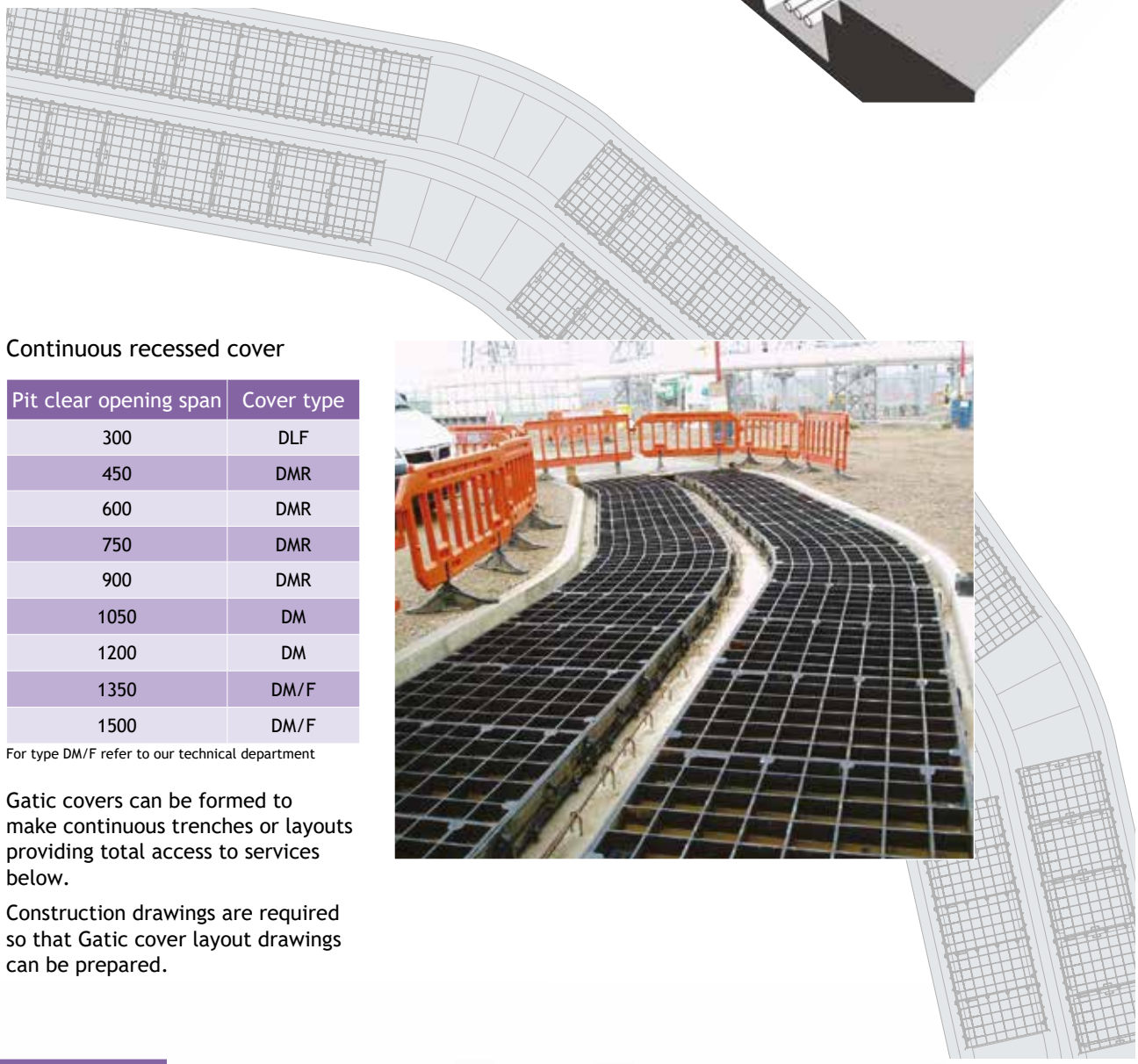
AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

- Covers recessed for concrete infill
- Cover types: DLF, DM, DMR, DM/F

To specify state:

1. Loading group
2. Cover type
3. Supply layout drawing of trenches





## Continuous recessed cover

| Pit clear opening span | Cover type |
|---|---|
| 300 | DLF |
| 450 | DMR |
| 600 | DMR |
| 750 | DMR |
| 900 | DMR |
| 1050 | DM |
| 1200 | DM |
| 1350 | DM/F |
| 1500 | DM/F |

For type DM/F refer to our technical department

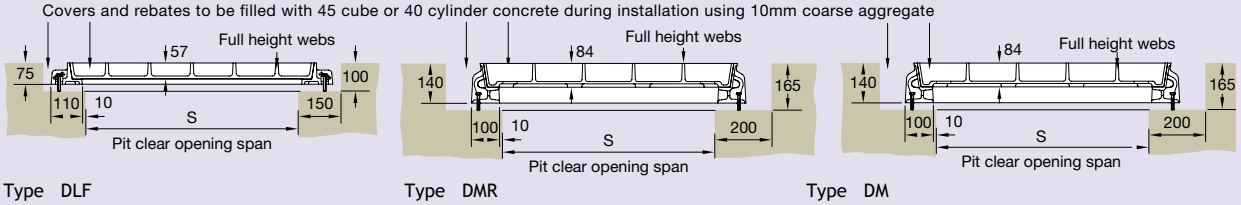


Gatic covers can be formed to make continuous trenches or layouts providing total access to services below.

Construction drawings are required so that Gatic cover layout drawings can be prepared.

## Cover types

Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate

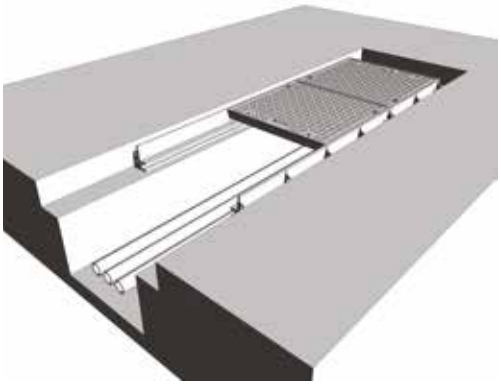



Type DLF Type DMR Type DM

- Covers with solid top
- Cover types: STF

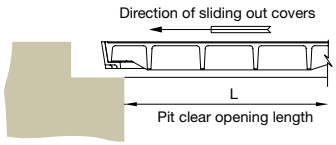
To specify state:

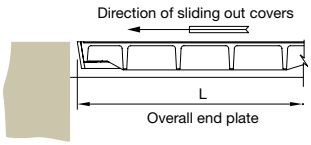
1. Loading group
2. Cover type
3. Supply layout drawing of trenches



Continuous solid top cover

| Pit clear opening span | Cover type |
|---|---|
| 600 | STF |
| 700 | STF |
| 750 | STF |
| 900 | STF |



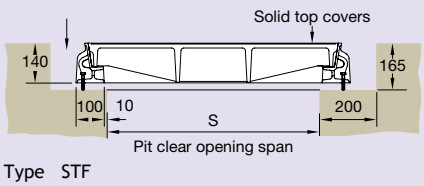

End terminations

Standard Solid top covers are supplied in straight runs. Junctions and splays can be achieved by the inclusion of localised recessed covers. Refer to our technical department for more information.

For high density traffic conditions refer to page 14.

Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type STF

# Loading Group E600

AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

## Specification

Below is sample specification information and notes for Multispan recessed covers and frames.

For more details on features and benefits of Gatic covers, see pages 14 to 15.

### Loading group Gatic E600

20 tonne wheel load – test load 600 kN.

### Materials

Ductile iron components to BS EN 1563:2011.

Structural steel removable beams to BS 4-1:2005.

### Finishes

Units coated with black bituminous solution for protection during transit.

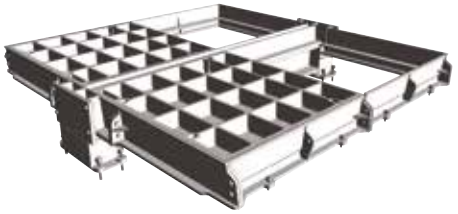
Removable supporting steelwork galvanised to BS EN ISO 1461:2009.

### Infill and surround concrete by customer

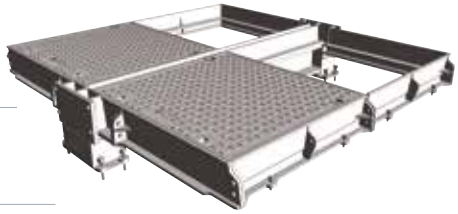
Concrete strength, using 10mm coarse aggregate, to be:
45N/mm² for a test cube of 150mm or
40N/mm² for a test cylinder of 150mm diameter x 300mm high.

### Installation

In accordance with instructions supplied by Gatic.



Type DMR recessed



Type STF solid top

To specify use size and description format as follows:

### Gatic Multispan Recessed covers and frames

Cover type DMR recessed

Multiple access covers recessed for concrete infill with removable beams.

.... in no. ..... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type DMR Ductile Iron Recessed Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group E600 – 20 Tonnes Wheel Load (pneumatic tyre).

### Gatic Multispan Solid Top covers and frames

Cover type STF solid top

Multiple solid top access covers with removable beams.

.... in no. ..... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type STF Ductile Iron Solid Top Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group E600 – 20 Tonnes Wheel Load (pneumatic tyre).

Standard pit clear opening sizes are shown on Page 61.

Beam sizes and other dimensions are shown on Pages 62 and 63.

For high density traffic conditions refer to page 14.

## Product Selection

Refer to the table to identify which cover and beam configuration you require against pit clear opening length (L) and pit clear opening span (S). All dimensions are in millimetres.

Note: All dimensions shown in red are made up using 700 x 700 solid top covers only.

Pit clear opening length (L) mm

| Pit clear opening span (S) mm | | 2 parts | | | | | | 3 parts | | | | | | | 4 parts | | | | | | | | Beam centres mm | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1500 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2300 | 2450 | 2600 | 2750 | 2900 | 2700 | 2850 | 3000 | 3100 | 3150 | 3300 | 3450 | 3600 | 3750 | 3900 | A | B | C | D | E |
| 2 parts 1 beam | 1380 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 690 | | | |
| | 1530 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 690 | | | |
| | 1580 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 790 | | | |
| | 1680 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 840 | | | |
| | 1830 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 840 | | | |
| | 1980 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 990 | | | |
| | | 4 part (2x2) recessed multispan cover with 1 removable support beam | | | | | | 6 part (3x2) recessed multispan cover with 1 removable support beam | | | | | | | | 8 part (4x2) recessed multispan cover with 1 removable support beam | | | | | | | | | | | | | |
| 3 parts 2 beams | 2160 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 690 | | |
| | 2310 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 690 | | |
| | 2460 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 840 | | |
| | 2460 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 790 | | |
| | 2610 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 840 | | |
| | 2760 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 1080 | 840 | | |
| | 2910 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 990 | | |
| | 3060 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 990 | | |
| | | 6 part (2x3) recessed multispan cover with 2 removable support beams | | | | | | 9 part (3x3) recessed multispan cover with 2 removable support beams | | | | | | | | 12 part (4x3) recessed multispan cover with 2 removable support beams | | | | | | | | | | | | | |
| 4 parts 3 beams | 2940 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 690 | |
| | 3090 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 690 | |
| | 3240 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 840 | |
| | 3340 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 880 | 790 | |
| | 3390 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 690 | |
| | 3540 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 840 | |
| | 3690 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 840 | |
| | 3840 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 990 | |
| | 3990 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 840 | |
| | 4140 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 990 | |
| | | 8 part (2x4) recessed multispan cover with 3 removable support beams | | | | | | 12 part (3x4) recessed multispan cover with 3 removable support beams | | | | | | | | 16 part (4x4) recessed multispan cover with 3 removable support beams | | | | | | | | | | | | | |
| 5 parts 4 beams | 3720 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 780 | 690 |
| | 3870 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 930 | 780 | 690 |
| | 4020 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 780 | 840 |
| | 4170 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 930 | 930 | 690 |
| | 4220 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 880 | 880 | 790 |
| | 4320 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 780 | 930 | 840 |
| | 4470 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 930 | 840 |
| | 4620 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 1080 | 930 | 840 |
| | 4770 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 930 | 990 |
| | 4920 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 1080 | 930 | 990 |
| | 5070 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 930 | 1080 | 990 |
| | 5220 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 1080 | 990 |
| | | 10 part (2x5) recessed multispan cover with 4 removable support beams | | | | | | 15 part (3x5) recessed multispan cover with 4 removable support beams | | | | | | | | 20 part (4x5) recessed multispan cover with 4 removable support beams | | | | | | | | | | | | | |

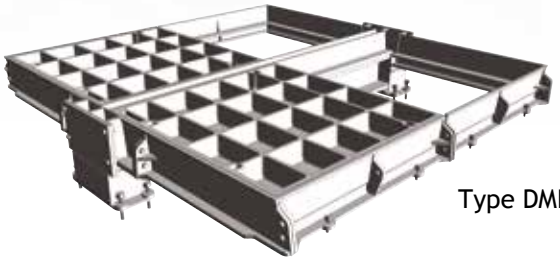
Note: For other pit clear opening sizes please refer to our technical department

# Loading Group E600

AREAS OF HIGH WHEEL LOADS, SOME AIRCRAFT HARDSTANDINGS, DOCKYARDS AND OTHER AREAS WHERE HEAVY DUTY PLANT AND VEHICLES MAY BE USED

E600

Recessed duct covers and frames



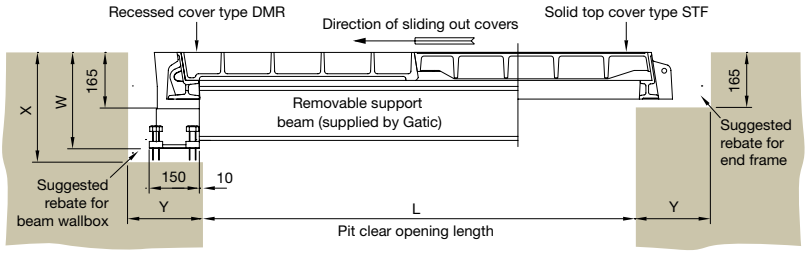
Type DMR recessed

Type STF solid top

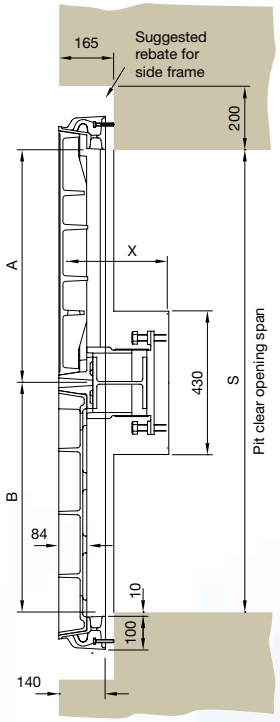
- Covers recessed for concrete infill or solid top
- Cover types: DMR (recessed) STF (solid top)

The details below show plan and sections of a typical recessed/solid top unit.

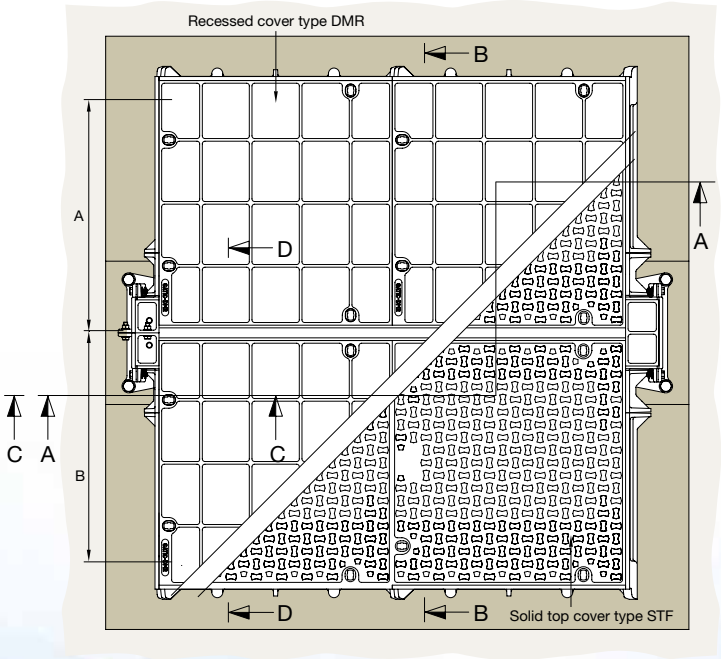
For selection and specification guidance, refer to pages 60, 61 and 63.



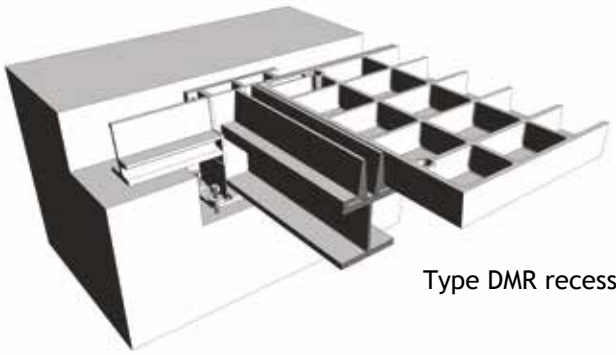

Section A - A



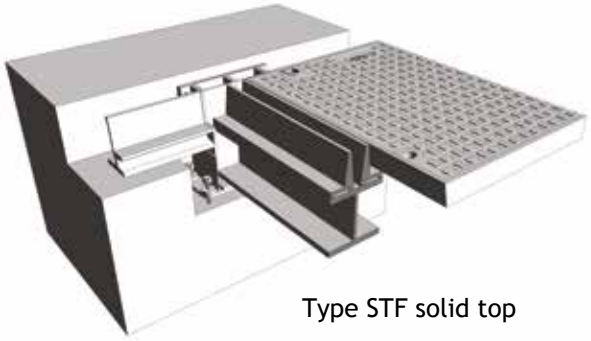

Section B - B




Plan showing recessed and solid top cover options



Type DMR recessed



Type STF solid top

## Beam Size

The required beam size for Multispan covers is dependent on the pit clear opening length and the loading group.

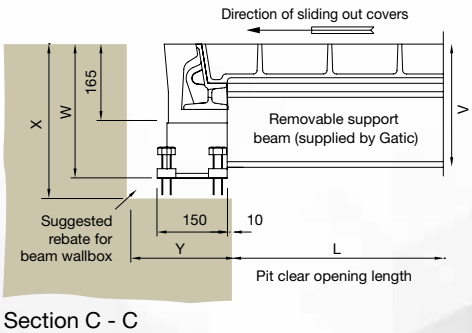
The table shows maximum beam length against beam size. The removable support beams are supplied by Gatic.

The table also indicates dimensions of the beam wallbox and rebate to suit different beam sizes. See also the accompanying section details.

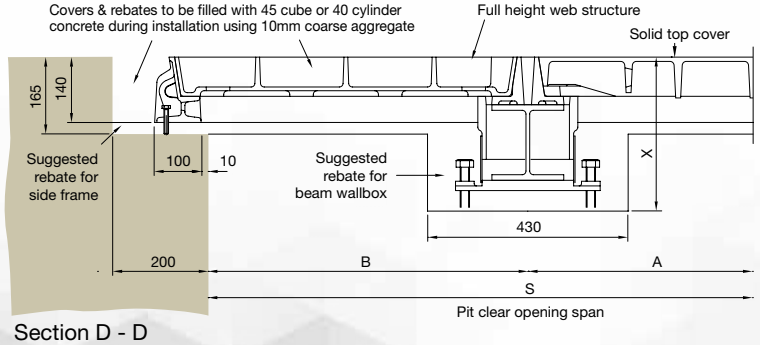
### Support beam size chart

| Removable support beam size | Max pit clear opening length (L) | Beam wallbox dimensions | | | |
|---|---|---|---|---|---|
| | | V | W | X | Y |
| 203 x 152 x 52kg/m RSJ | 1300 | 306 | 330 | 370 | 230 |
| 305 x 165 x 54kg/m UB | 1900 | 414 | 440 | 480 | 230 |
| 356 x 171 x 67kg/m UB | 2300 | 467 | 490 | 535 | 300 |
| 457 x 152 x 82kg/m UB | 2900 | 568 | 595 | 635 | 300 |
| 533 x 210 x 122kg/m UB | 3900 | 648 | 670 | 715 | 300 |

Note: Removable support beams are supplied by Gatic




Section C - C




Section D - D

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

## Introduction

This section includes Gatic covers and frames designed for Loading Group F900.

In excess of 20 tonne slow moving wheel load, test load 900kN - Suitable for:

- Aircraft hardstandings and taxiways at civil airports
- Container ports and dockyards where individual wheel loadings exceed 20 tonnes

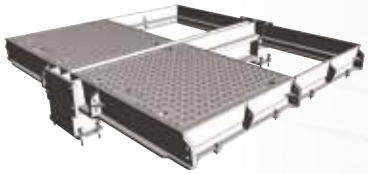
F900 assemblies are available with a choice of cover designs - recessed or solid top.

## Recessed for concrete infill

Recessed covers are available in a choice of designs designated by a 'Type' reference. F900 recessed covers are available as Type DLF, DM ,DMR and DM/F. Section drawings of the different recessed cover types are shown on the following pages.

## Solid top

Solid top cover types are lighter in weight than recessed covers, and feature a figured anti-slip surface. Solid top covers are denoted by the code Type STF depicted in section on the following pages.



## Cover types

Single covers and frames

Duct covers and frames

Continuous trench covers and frames

Multispan covers and frames

To prevent movement of covers in high traffic conditions, we recommend the use of a factory fitted vibration-resistant locking system. Can be fitted to recessed covers only. See page 14.


# 2006

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

F900

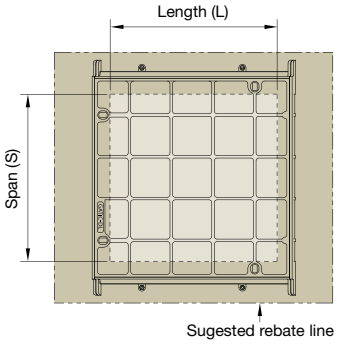
Single recessed covers and frames


- Covers recessed for concrete infill
- Cover type: DLF, DMR, DM

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

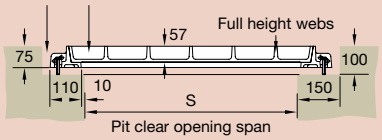
| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 750 x 300 | DLF | 900 x 540 x 75 | 1050 x 600 x 100 |
| 600 x 450 | DMR | 750 x 670 x 140 | 1000 x 850 x 165 |
| 750 x 450 | DMR | 900 x 670 x 140 | 1150 x 850 x 165 |
| 600 x 600 | DMR | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | DMR | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | DMR | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 750 x 750 | DMR | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | DMR | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | DMR | 1120 x 1100 x 140 | 1300 x 1300 x 165 |
| 600 x 1050 | DM | 820 x 1270 x 140 | 1000 x 1450 x 165 |
| 750 x 1050 | DM | 970 x 1270 x 140 | 1150 x 1450 x 165 |
| 1000 x 1050 | DM | 1220 x 1270 x 140 | 1400 x 1450 x 165 |
| 600 x 1200 | DM | 820 x 1420 x 140 | 1000 x 1600 x 165 |
| 750 x 1200 | DM | 970 x 1420 x 140 | 1150 x 1600 x 165 |



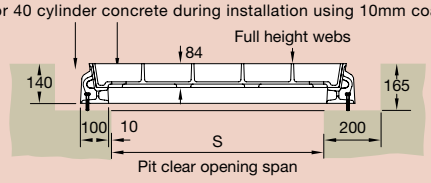

Plan of recessed single cover

## Cover types

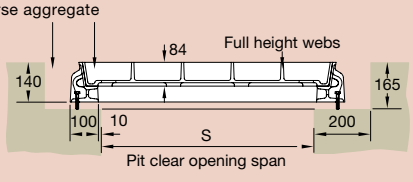
Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DLF




Type DMR



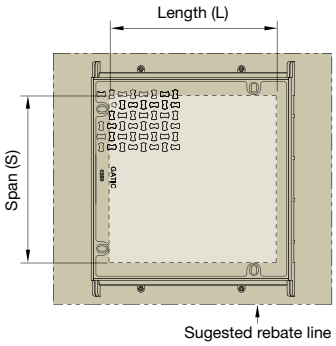

Type DM

- Covers with solid top
- Cover type STF

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

| Pit clear opening sizes L x S | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 600 x 600 | STF | 750 x 820 x 140 | 1000 x 1000 x 165 |
| 750 x 600 | STF | 900 x 820 x 140 | 1150 x 1000 x 165 |
| 900 x 600 | STF | 1050 x 820 x 140 | 1300 x 1000 x 165 |
| 700 x 700 | STF | 850 x 920 x 140 | 1100 x 1100 x 165 |
| 750 x 750 | STF | 900 x 970 x 140 | 1150 x 1150 x 165 |
| 900 x 750 | STF | 1050 x 970 x 140 | 1300 x 1150 x 165 |
| 900 x 900 | STF | 1120 x 1120 x 140 | 1300 x 1300 x 165 |

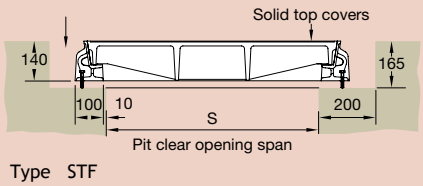



Plan of solid top single cover

For high density traffic conditions refer to page 14.

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type STF

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

F900

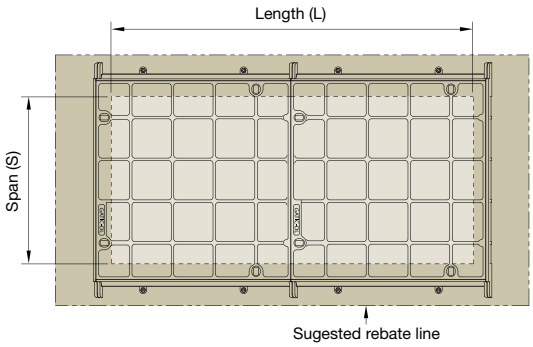
Recessed duct covers and frames

- Covers recessed for concrete infill
- Cover type DLF, DMR, DM/F

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 300 | DLF | (L + 300) x 600 x 100 |
| 450 | DMR | (L + 400) x 850 x 165 |
| 600 | DMR | (L + 400) x 1000 x 165 |
| 750 | DMR | (L + 400) x 1150 x 165 |
| 900 | DMR | (L + 400) x 1300 x 165 |
| 1050 | DM/F | (L + 400) x 1450 x 165 |
| 1200 | DM/F | (L + 400) x 1600 x 165 |
| 1350 | Refer to our technical department | |
| 1500 | Refer to our technical department | |




Plan of recessed duct cover

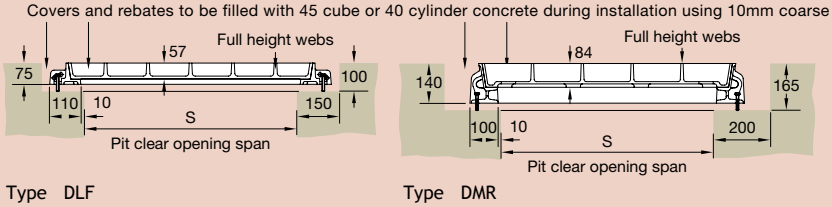
| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 300 | DLF | * | * | 2 | * | * | * | * | * | 3 | * | * | * |
| 450 | DMR | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 600 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 750 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | DMR | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 1050 | DM/F | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |
| 1200 | DM/F | 2 | 2 | 2 | * | * | 3 | 3 | 3 | 3 | * | 4 | * |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 300 | DLF | * | * | * | * | 4 | * | * | * | * | * | * | 5 |
| 450 | DMR | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 600 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 750 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | DMR | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 1050 | DM/F | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |
| 1200 | DM/F | 4 | * | 4 | 4 | 4 | 5 | 5 | 5 | 5 | * | 5 | 5 |

* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

## Cover types

Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate

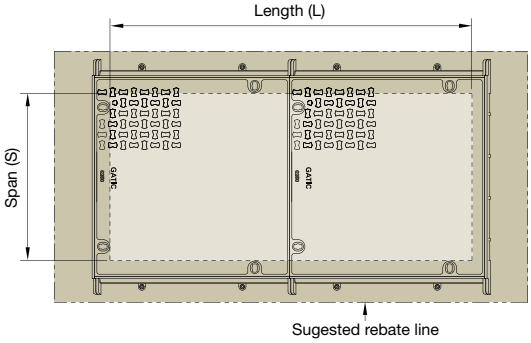



Type DLF  Type DMR

- Covers with solid top
- Cover type STF

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type




Plan of solid top duct cover

| Pit clear opening sizes | Cover type | Suggested rebate size length x width x depth |
|---|---|---|
| 600 | STF | (L + 400) x 1000 x 165 |
| 700 | STF | (L + 400) x 1100 x 165 |
| 750 | STF | (L + 400) x 1150 x 165 |
| 900 | STF | (L + 400) x 1300 x 165 |

For high density traffic conditions refer to page 14.

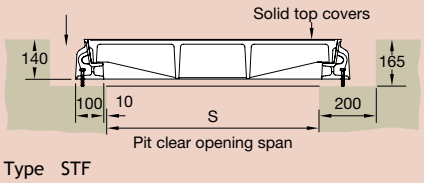
| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1500 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2450 | 2600 | 2700 | 2750 |
| 600 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 700 | STF | * | * | 2 | * | * | * | * | * | 3 | * | * | * | * |
| 750 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 900 | STF | 2 | 2 | * | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |

| Pit clear opening span (S) | Cover type | Standard pit clear opening length (L) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2850 | 2900 | 3000 | 3100 | 3150 | 3300 | 3400 | 3550 | 3700 | 3850 | 3900 | 4000 | 4150 |
| 600 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 700 | STF | * | * | * | 4 | * | * | * | * | * | * | 5 | * | * |
| 750 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| 900 | STF | 4 | 3 | 4 | * | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |

* Indicates standard sizes not available  The number shown indicates the quantity of cover parts  Other standard sizes may be available, refer to our technical department

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type STF

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

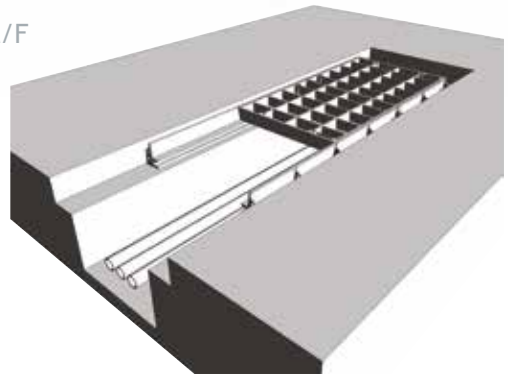
F900

Continuous recessed trench covers and frames

- Covers recessed for concrete infill
- Cover types: DLF, DMR, DM/F

To specify state:

1. Loading group
2. Cover type
3. Supply layout drawing of trenches



## Continuous recessed cover

| Pit clear opening span | Cover type |
|---|---|
| 300 | DLF |
| 450 | DMR |
| 600 | DMR |
| 750 | DMR |
| 900 | DMR |
| 1050 | DM/F |
| 1200 | DM/F |
| 1350 | DM/F |
| 1500 | DM/F |

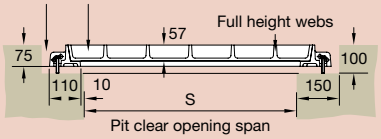
For Type DM/F 1050,1200,1350 and 1500 spans refer to our technical department

Gatic covers can be formed to make continuous trenches or layouts providing total access to services below.

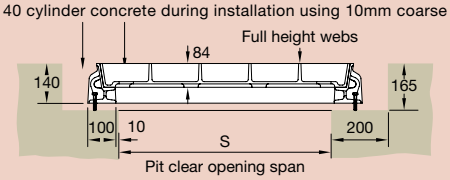
Construction drawings are required so that Gatic cover layout drawings can be prepared.

## Cover types

Covers and rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DLF

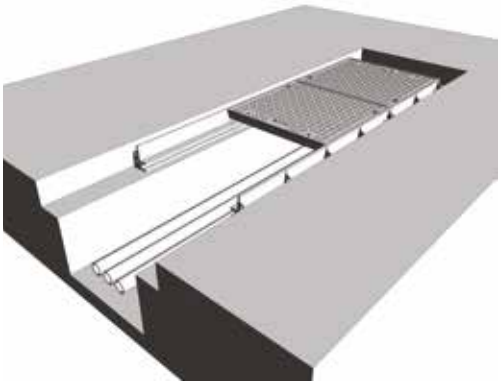


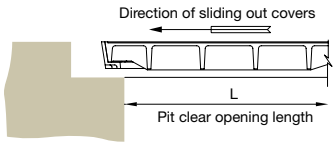

Type DMR

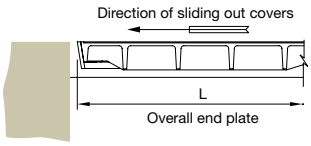
- Covers with solid top
- Cover types: STF

To specify state:

1. Loading group
2. Cover type
3. Supply layout drawing of trenches






End terminations

## Continuous solid top cover

| Pit clear opening span | Cover type |
|---|---|
| 600 | STF |
| 700 | STF |
| 750 | STF |
| 900 | STF |

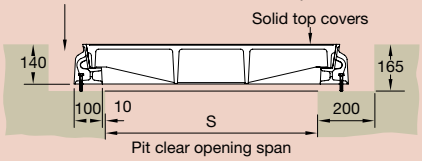
Note: Solid top covers can only be supplied in continuous straight runs

Standard Solid top covers are supplied in straight runs. Junctions and splays can be achieved by the inclusion of localised recessed covers. Refer to our technical department for more information.

For high density traffic conditions refer to page 14.

## Cover types

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type STF

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

F900

Multispan covers and frames

## Specification

Below is sample specification information and notes for Multispan recessed covers and frames.

For more details on features and benefits of Gatic covers, see pages 14 to 15.

### Loading group Gatic F900

In excess of 20 tonne wheel load – test load 900 kN.

### Materials

Ductile iron components to BS EN 1563:2011.

Structural steel removable beams to BS 4-1:2005.

Type DMR recessed

### Finishes

Units coated with black bituminous solution for protection during transit.

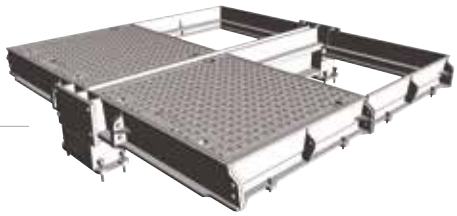
Removable supporting steelwork galvanised to BS EN ISO 1461:2009.

### Infill and surround concrete by customer

Concrete strength, using 10mm coarse aggregate, to be:
45N/mm² for a test cube of 150mm or
40N/mm² for a test cylinder of 150mm diameter x 300mm high.

### Installation

In accordance with instructions supplied by Gatic.



Type STF solid top

To specify use size and description format as follows:

### Gatic Multispan Recessed covers and frames

Cover type DMR recessed

Multiple access covers recessed for concrete infill with removable beams.

.... in no. .... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type DMR Ductile Iron Recessed Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group F900 – In excess of 20 Tonnes Wheel Load (pneumatic tyre).

### Gatic Multispan Solid Top covers and frames

Cover type STF solid top

Multiple solid top access covers with removable beams.

.... in no. .... (length) x .... (span) mm pit clear opening multi span cover and frame.
Gatic Type STF Ductile Iron Solid Top Cover in .... parts complete with
.... in no. .... x .... mm galvanised removable support beam spanning the .... (length) mm way.

Suitable for Loading Group F900 – In excess of 20 Tonnes Wheel Load (pneumatic tyre).

Standard pit clear opening sizes are shown on Page 73.

Beam sizes and other dimensions are shown on Pages 74 and 75.

For high density traffic conditions refer to page 14.

## Product Selection

Refer to the table to identify which cover and beam configuration you require against pit clear opening length (L) and pit clear opening span (S). All dimensions are in millimetres.

Note: All dimensions shown in red are made up using 700 x 700 solid top covers.

Pit clear opening length (L) mm

| Pit clear opening span (S) mm | | 2 parts | | | | | | 3 parts | | | | | | | 4 parts | | | | | | | | Beam centres mm | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1300 | 1450 | 1500 | 1600 | 1750 | 1900 | 2000 | 2150 | 2300 | 2300 | 2450 | 2600 | 2750 | 2900 | 2700 | 2850 | 3000 | 3100 | 3150 | 3300 | 3450 | 3600 | 3750 | 3900 | A | B | C | D | E |
| 2 parts 1 beam | 1380 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 690 | | | |
| | 1530 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 690 | | | |
| | 1580 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 790 | | | |
| | 1680 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 840 | | | |
| | 1830 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 840 | | | |
| | 1980 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 990 | | | |
| | | 4 part (2x2) recessed multispan cover with 1 removable support beam | | | | | | 6 part (3x2) recessed multispan cover with 1 removable support beam | | | | | | | | 8 part (4x2) recessed multispan cover with 1 removable support beam | | | | | | | | | | | | | |
| 3 parts 2 beams | 2160 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 690 | | |
| | 2310 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 690 | | |
| | 2460 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 840 | | |
| | 2460 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 790 | | |
| | 2610 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 840 | | |
| | 2760 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 1080 | 840 | | |
| | 2910 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 990 | | |
| | 3060 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 990 | | |
| | | 6 part (2x3) recessed multispan cover with 2 removable support beams | | | | | | 9 part (3x3) recessed multispan cover with 2 removable support beams | | | | | | | | 12 part (4x3) recessed multispan cover with 2 removable support beams | | | | | | | | | | | | | |
| 4 parts 3 beams | 2940 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 690 | |
| | 3090 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 690 | |
| | 3240 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 840 | |
| | 3340 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 880 | 790 | |
| | 3390 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 690 | |
| | 3540 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 840 | |
| | 3690 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 840 | |
| | 3840 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 990 | |
| | 3990 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 840 | |
| | 4140 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 990 | |
| | | 8 part (2x4) recessed multispan cover with 3 removable support beams | | | | | | 12 part (3x4) recessed multispan cover with 3 removable support beams | | | | | | | | 16 part (4x4) recessed multispan cover with 3 removable support beams | | | | | | | | | | | | | |
| 5 parts 4 beams | 3720 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 780 | 780 | 690 |
| | 3870 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 780 | 930 | 780 | 690 |
| | 4020 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 780 | 780 | 780 | 840 |
| | 4170 | | | | | | | | | | | | | | | | | | | | | | | | | 690 | 930 | 930 | 930 | 690 |
| | 4220 | | | | | | | | | | | | | | | | | | | | | | | | | 790 | 880 | 880 | 880 | 790 |
| | 4320 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 780 | 930 | 840 |
| | 4470 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 930 | 930 | 840 |
| | 4620 | | | | | | | | | | | | | | | | | | | | | | | | | 840 | 930 | 1080 | 930 | 840 |
| | 4770 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 930 | 930 | 990 |
| | 4920 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 930 | 1080 | 930 | 990 |
| | 5070 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 930 | 1080 | 990 |
| | 5220 | | | | | | | | | | | | | | | | | | | | | | | | | 990 | 1080 | 1080 | 1080 | 990 |
| | | 10 part (2x5) recessed multispan cover with 4 removable support beams | | | | | | 15 part (3x5) recessed multispan cover with 4 removable support beams | | | | | | | | 20 part (4x5) recessed multispan cover with 4 removable support beams | | | | | | | | | | | | | |

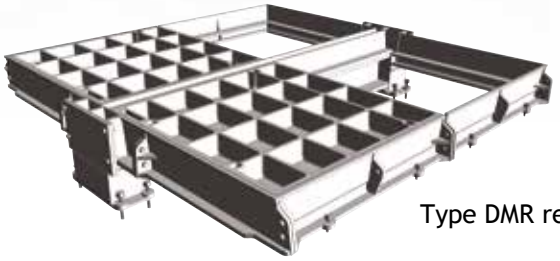
Note: For other pit clear opening sizes please refer to our technical department

# Loading Group F900

AREAS OF EXCEPTIONALLY HIGH WHEEL LOADS, AIRCRAFT HARDSTANDINGS, TAXIWAYS AT CIVIL AIRPORTS CONTAINER PORTS AND DOCKYARDS WHERE INDIVIDUAL WHEEL LOADINGS EXCEED 20 TONNES

F900

Multispan covers and frames

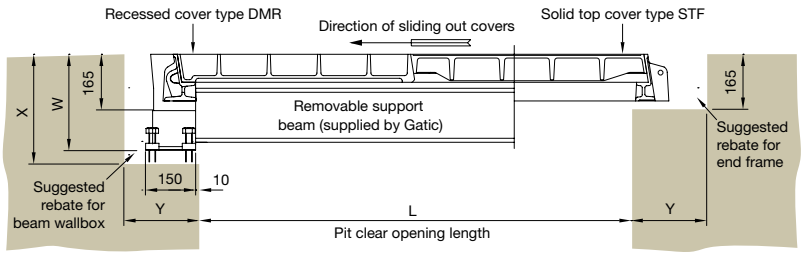
Type DMR recessed

Type STF solid top

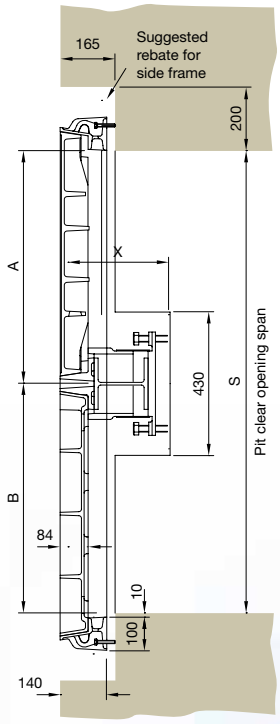
- Covers recessed for concrete infill or solid top
- Cover types: DMR (recessed) STF (solid top)

The details below show plan and sections of a typical recessed/solid top unit.

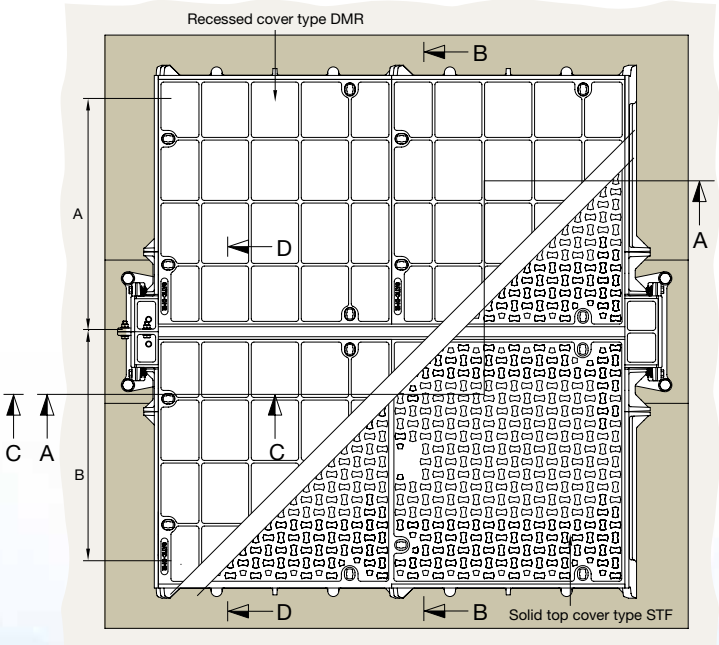
For selection and specification guidance, refer to pages 72, 73 and 75.




Section A - A

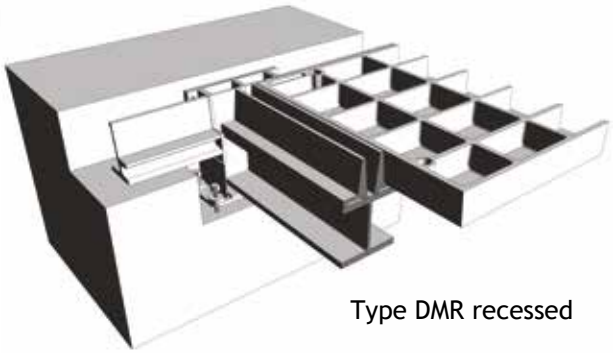



Section B - B

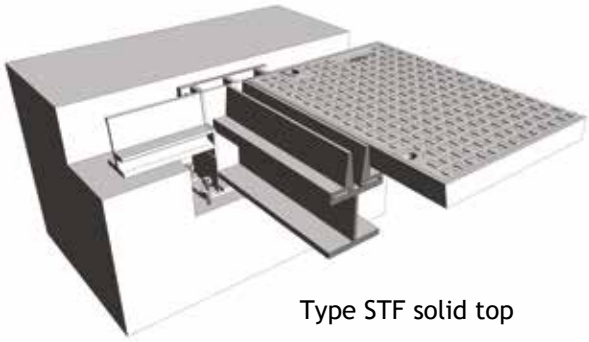



Plan showing recessed and solid top cover options


GATIC Tel: +44 (0)1304 203545 Website: www.gatic.com Email: info@gatic.com



Type DMR recessed



Type STF solid top

## Beam Size

The required beam size for Multispan covers is dependent on the pit clear opening length and the loading group.

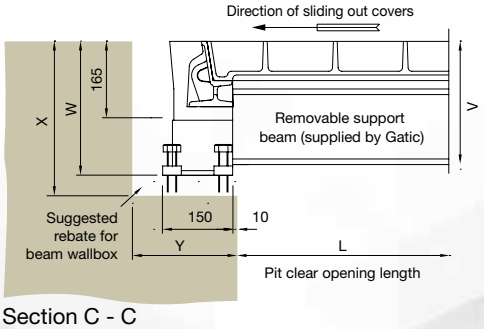
The table shows maximum beam length against beam size. The removable support beams are supplied by Gatic.

The table also indicates dimensions of the beam wallbox and rebate to suit different beam sizes. See also the accompanying section details.

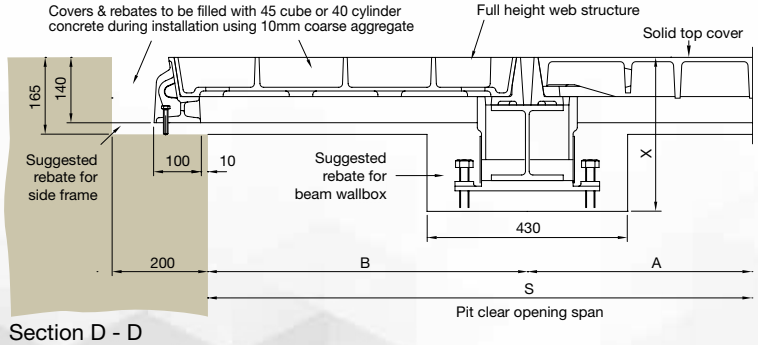
### Support beam size chart

| Removable support beam size | Max pit clear opening length (L) | Beam wallbox dimensions | | | |
|---|---|---|---|---|---|
| | | V | W | X | Y |
| 356 x 171 x 67kg/m UB | 1750 | 467 | 490 | 535 | 300 |
| 457 x 152 x 82kg/m UB | 2300 | 568 | 595 | 635 | 300 |
| 533 x 210 x 122kg/m UB | 3300 | 648 | 670 | 715 | 300 |
| 610 x 229 x 140kg/m UB | 3900 | 720 | 745 | 790 | 300 |

Note: Removable support beams are supplied by Gatic




Section C - C




Section D - D

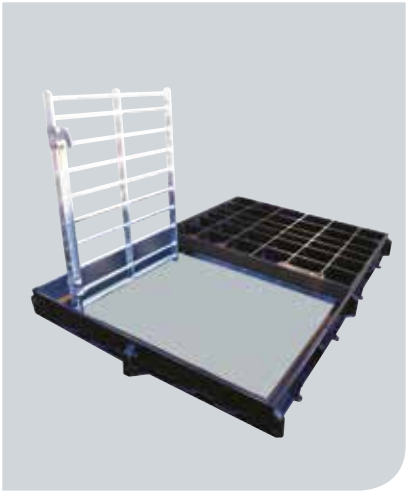
# THE GATIC RANGE OF ACCESS COVER AND GRATINGS

## Introduction

Gatic has developed a specialised range of products suitable for loading groups up to F900.

This section covers:

- Solid top assist lift covers
- Recessed assist lift covers
- Hinged hydrant covers
- Circular covers
- Hinged safety grids
- Galvanised covers and gratings
- Gratings and frames
- Plug covers and cut outs



Hinged safety grids Page 80

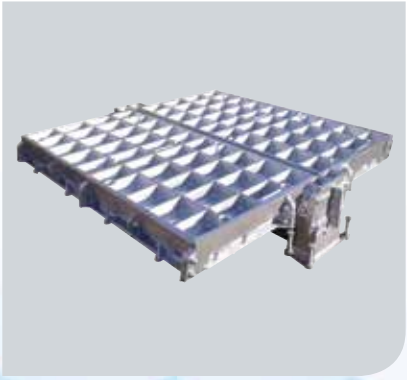
Circular covers Page 81

Gratings and frames Page 82-83

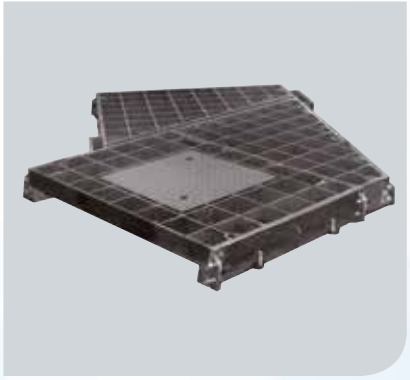
Assist lift covers Page 78

Hydrant covers Page 81

Assist lift covers Page 79



Galvanised covers and gratings Page 80



Plug Covers and Cut Outs Page 84

# Loading Group up to F900

F900

GATIC range of access covers

## AssistLift covers

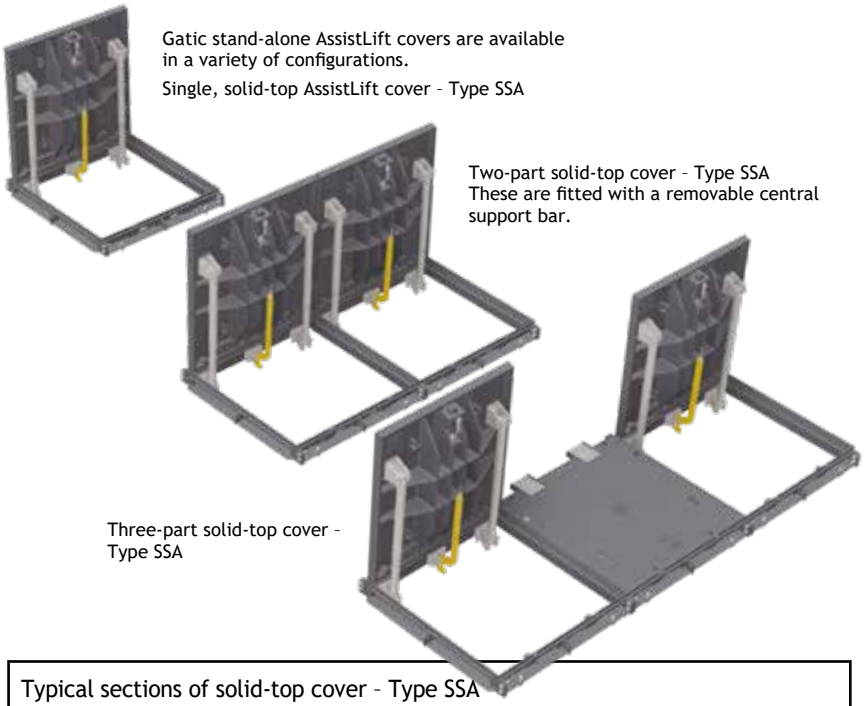
Gatic Type SSA side hinged covers are all assist lift to give complete access to the chamber below.

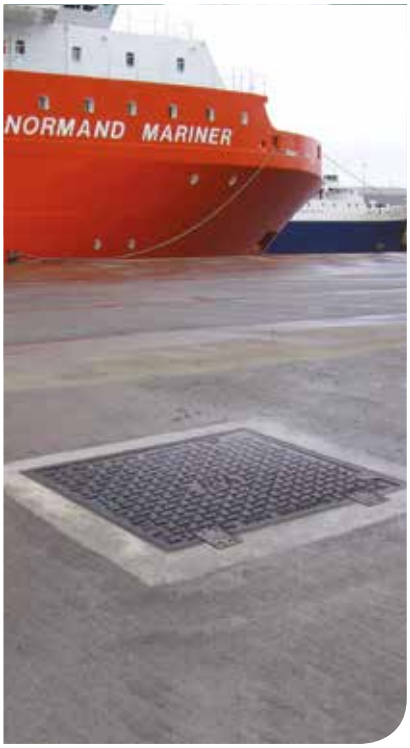
Gatic stand-alone AssistLift covers are available in a variety of configurations.

Single, solid-top AssistLift cover - Type SSA

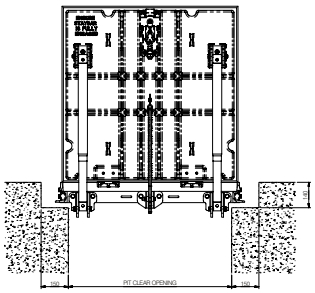
Two-part solid-top cover - Type SSA
These are fitted with a removable central support bar.

Three-part solid-top cover - Type SSA

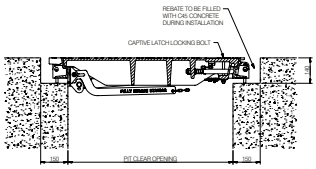





Typical sections of solid-top cover - Type SSA



Cover open - front view




Cover closed - side view

Gatic with side hinged AssistLift covers

These can be supplied in standard units as per the sizes shown on the chart below.

Longer lengths are available

Number of cover parts are shown in the boxes under the standard pit clear opening

| Pit clear opening Span (S) | Solid Top Cover type | Standard Pit clear opening lengths (L) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 750 | 1580 | 2410 | 3240 | 4070 | 4900 | 5730 |
| 760 | SSA | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Pit clear opening Span (S) | Solid Top Cover type | Standard Pit clear opening lengths (L) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 900 | 1880 | 2860 | 3840 | 4820 | 5800 | 6780 |
| 910 | SSA | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

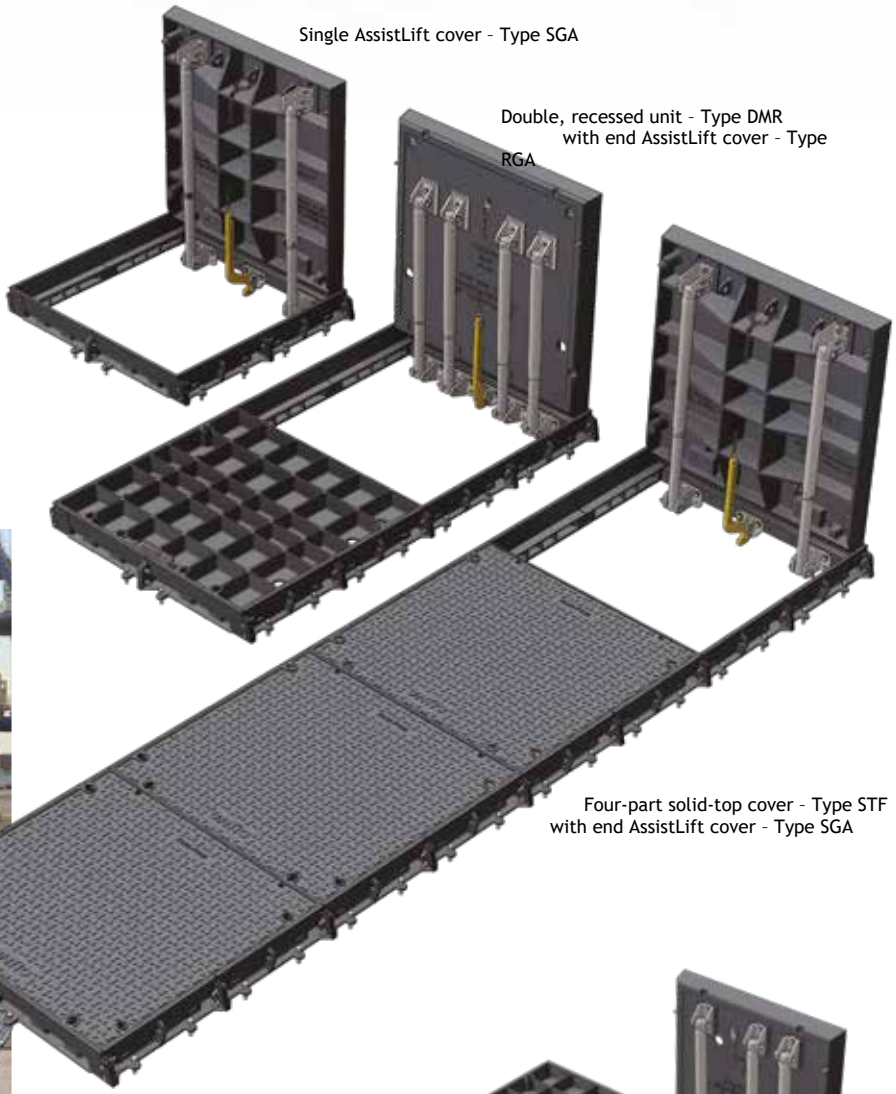
## AssistLift covers

Gatic Type RGA and SGA end hinged covers give complete access to the chamber opening when used as a single cover. When integrated as part of a duct or multispan arrangement, they provide either one person access to a chamber above a ladder or access to equipment that would need to be inspected/operated on a regular basis.

For full details of AssistLift products refer to our new brochure: Gatic AssistLift, Makes light work of heavy covers, or visit **www.gatic.com**.


Single AssistLift cover - Type SGA

Double, recessed unit - Type DMR with end AssistLift cover - Type RGA



Four-part solid-top cover - Type STF with end AssistLift cover - Type SGA

Recessed AssistLift cover - Type RGA

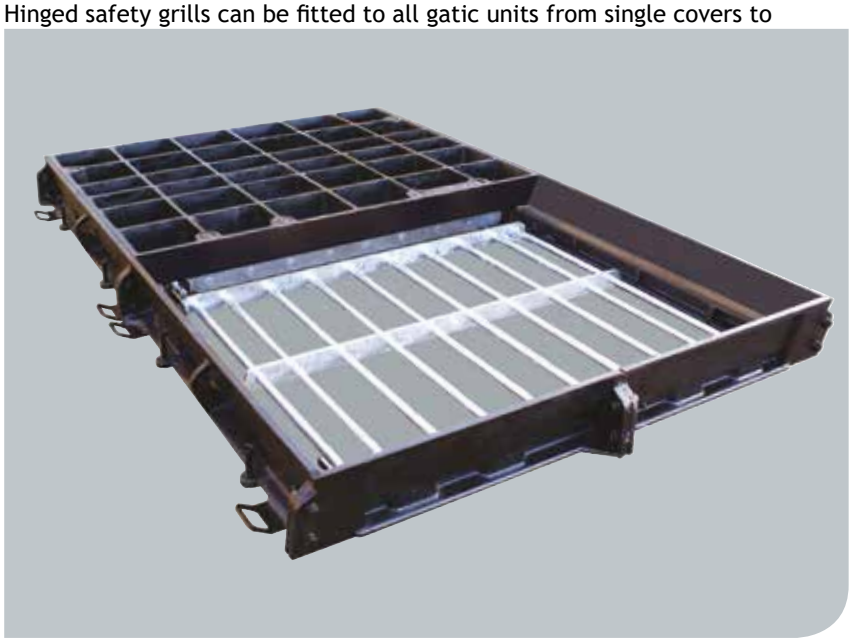
Solid top AssistLift cover - Type SGA

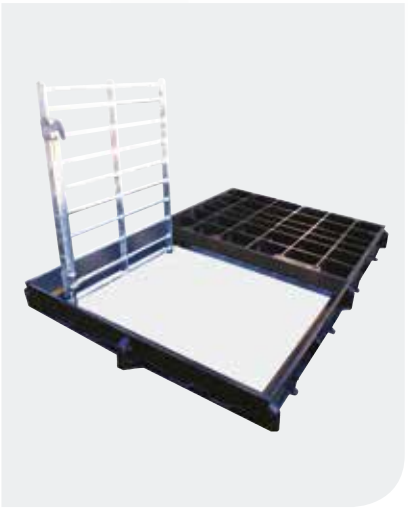
# Loading Group up to F900

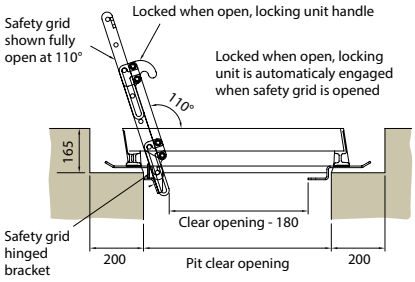
## Hinged safety grids

Gatic covers can be supplied with mild steel galvanised safety grids when required. Once the cover is removed, the safety grid can be hinged to the vertical position where it will lock safely in place. Safety grids can be locked in a closed position
by using customer-supplied padlocks.

Hinged safety grills can be fitted to all gatic units from single covers to

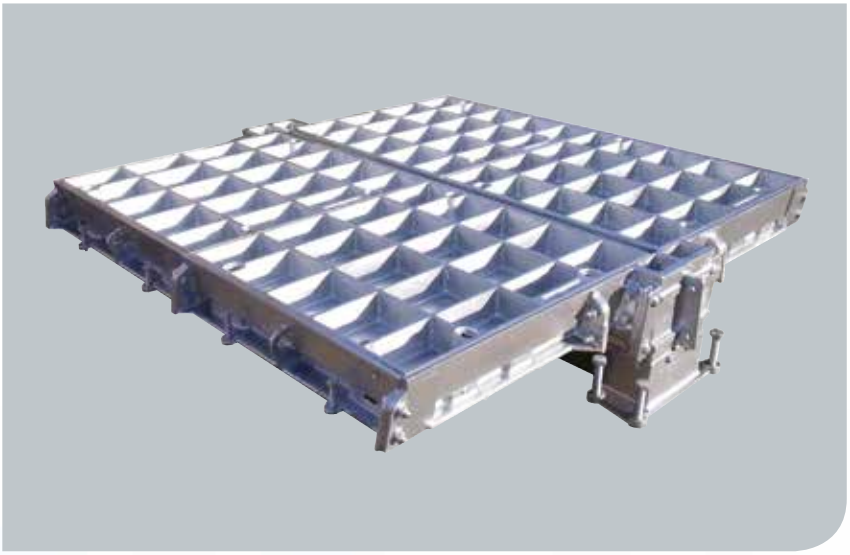







## Alternative finish galvanised covers and gratings

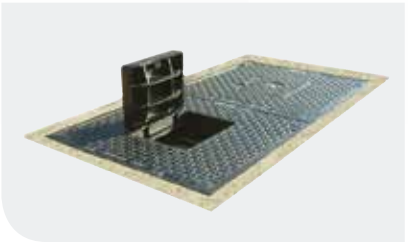
Gatic covers and gratings are supplied painted with black bituminous paint
as standard. This acts as temporary protection during transit. Where additional protection is required, Gatic ductile iron covers can be supplied galvanised to BS EN ISO 1461:2009. Refer to Gatic technical department for more information.



## Hinged hydrant covers

Hydrant lids can be supplied as single covers or set into a larger cover. This provides localised access without removing the larger cover.

Hydrants fitted within larger covers are 400 x 300 clear opening, centrally positioned.



Double hydrant covers

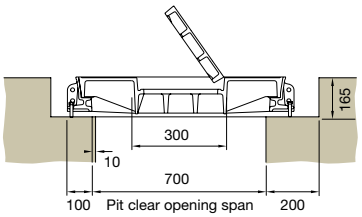
To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type

Single and double covers fitted with 400 x 300 hinged hydrant

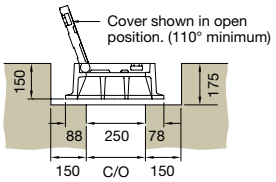
| Pit clear opening sizes | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 700 x 700 | MHS/H | 850 x 920 x 140 | 1100 x 1100 x 165 |
| 900 x 900 | MHS/H | 1120 x 1120 x 140 | 1300 x 1300 x 165 |
| 1500 x 700 | MHS/H | 1720 x 920 x 140 | 1900 x 1100 x 165 |
| 1900 x 900 | MHS/H | 2120 x 1120 x 140 | 2300 x 1300 x 165 |

Single and double units - including a 400 x 300 hinged hydrant cover centrally positioned in each cover




Hydrant covers

| Pit clear opening sizes | Cover type | Overall frame size length x width x depth | Suggested rebate size length x width x depth |
|---|---|---|---|
| 225 x 225 | FH | 391 x 391 x 150 | 525 x 525 x 175 |
| 450 x 250 | FH | 616 x 416 x 150 | 750 x 550 x 175 |
| 500 x 250 | FH | 666 x 416 x 150 | 800 x 550 x 175 |

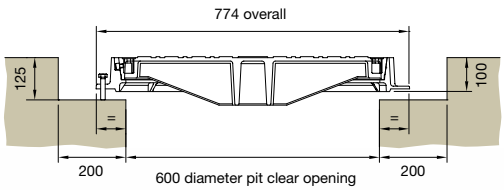



## Solid top circular covers

Suitable for up to F900 loading.

To specify state:

1. Loading group
2. Pit clear opening size length (L) x span (S)
3. Cover type




| Pit clear opening sizes | Cover type | Overall frame size | Suggested rebate size length x width x depth |
|---|---|---|---|
| 600mm diameter | GC | 775 diameter | 1000 diameter |
| 750mm diameter | GC | 925 diameter | 1150 diameter |
| 900mm diameter | GC | 1075 diameter | 1300 diameter |

Note: D400 covers available upon request.

# Loading Group up to F900

F900

GATIC range of drainage gratings

## Single gratings and frames

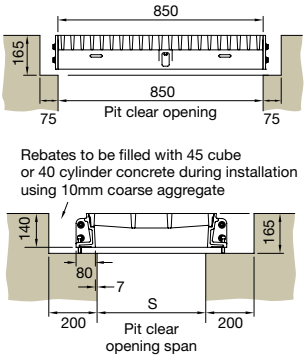
Drainage gratings are supplied where surface water drainage is required.

To specify state:

1. Loading group
2. Pit clear opening size
   length (L) x span (S)
3. Grating type

## Single gratings

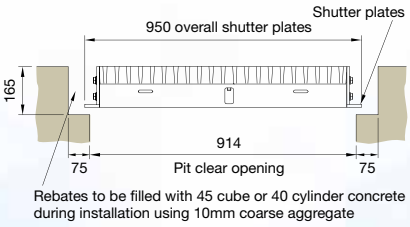
| Pit clear opening sizes | Grating type | Overall frame size length x width x depth | Suggested rebate size length x width x depth | Waterway per unit |
|---|---|---|---|---|
| 850 x 300 | DRG/140 | 870 x 480 x 140 | 1000 x 700 x 165 | 1256cm² |
| 850 x 450 | DRG/140 | 870 x 630 x 140 | 1000 x 850 x 165 | 2215cm² |
| 600 x 600 | DRG/100 | 620 x 780 x 100 | 750 x 800 x 125 | 1991cm² |
| 850 x 600 | DMG | 870 x 780 x 140 | 1000 x 1000 x 165 | 2768cm² |
| 700 x 750 | DMG | 720 x 970 x 140 | 850 x 1150 x 165 | 2290cm² |

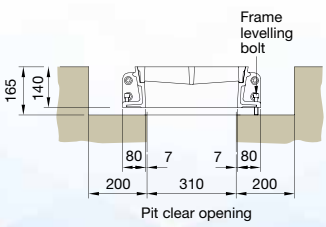



Type DRG/140

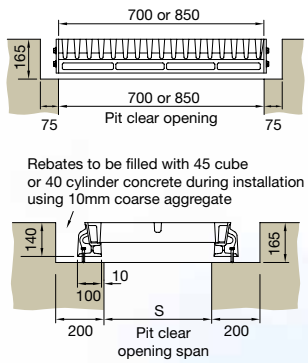
## Single gratings with shutter plates

| Pit clear opening sizes | Grating type | Overall frame size length x width x depth | Suggested rebate size length x width x depth | Waterway pre unit |
|---|---|---|---|---|
| 914 x 310 | DRG/140/S | 950 x 480 x 140 | 1065 x 700 x 165 | 1256cm² |
| 914 x 457 | DRG/140/S | 950 x 630 x 140 | 1056 x 850 x 165 | 2215cm² |
| 914 x 610 | DMG/S | 950 x 780 x 140 | 1065 x 1000 x 165 | 2768cm² |




Type DRG/140/S - DMG/S similar




Type DMG


## Trench gratings and frames

Gatic gratings and frames can be manufactured in continuous runs.

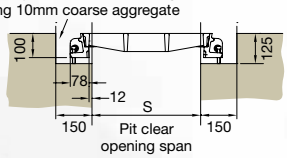
A layout drawing with enquiries will enable our technical department to design an appropriate layout of gratings.

## Trench gratings

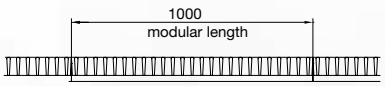
| Pit clear opening sizes | Grating type | Overall frame size length x width x depth | Suggested rebate size length x width x depth | Waterway per metre |
|---|---|---|---|---|
| 300 | DRG/100 | 1000 x 480 x 100 | L x 600 x 125 | 1813cm² |
| 450 | DRG/100 | 1000 x 630 x 100 | L x 750 x 125 | 2629cm² |
| 600 | DRG/100 | 1000 x 780 x 100 | L x 900 x 125 | 3445cm² |
| 750 | DRG/100 | 1000 x 930 x 100 | L x 1050 x 125 | 4329cm² |
| 810 | DRG/100 | 1000 x 990 x 100 | L x 1150 x 125 | 4466cm² |

Note: Gratings for C250/D400/E600 loadings available on request.

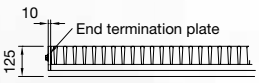

Rebates to be filled with 45 cube or 40 cylinder concrete during installation using 10mm coarse aggregate




Type DRG/100




Section through drainage trench




Section through end termination

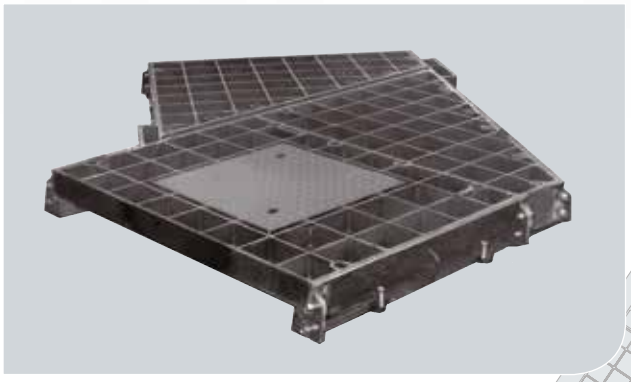
# Covers and Frames Installation

## Plug covers

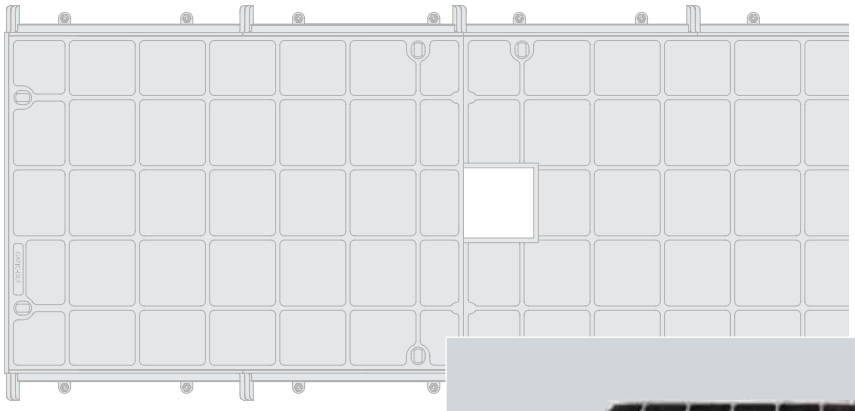
Loading groups up to C250

Small insert plug covers can be fitted to a wide range of cover sizes. Maximum 300 x 300 plug clear opening.

Refer to Gatic technical department for more information.







## Holes and cut-outs

Holes and cut-outs can be provided in covers to allow for the positioning of valves, pipes and cables. These can be square or circular, loading suitable for C250.

Upstands can be fitted to prevent the ingress of water around pipes and valves.

## Single cover and frames

1 Prepare the rebate in accordance with dimensions given in the relevant tables within this publication and/or accompanying drawings.

2 Remove cover from frame and place frame squarely over pit ensuring it does not overhang any edges.

3 Screw down on the frame leveling bolts until the desired height is achieved.

4 Place formwork around inside of pit so that the timber is approximately 10mm above the bottom of the frame. This will prevent spalling of the frame.

Do not pour concrete at this stage.

5 Clean off cover and frame sealing faces and replace cover into frame.

6 Adjust the frame level so that the cover is not rocking. Tap down the corners of the covers with a balk of timber to make sure it is seated fully.

7 If covers are of the recessed design you will need to cover the 4 holes in the cover base with a small metal or slate plate.

8 Insert the plastic keyhole plugs and mask off with tape.

9 Pour concrete in the covers, if of the recessed type, and around the frames making sure that you thoroughly tamp and vibrate as you go.

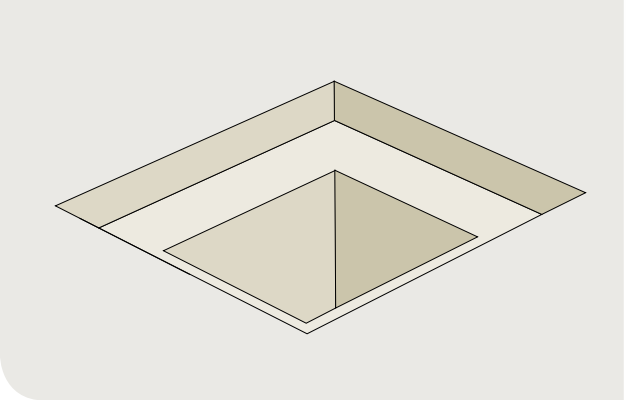
10 Allow concrete to cure overnight.

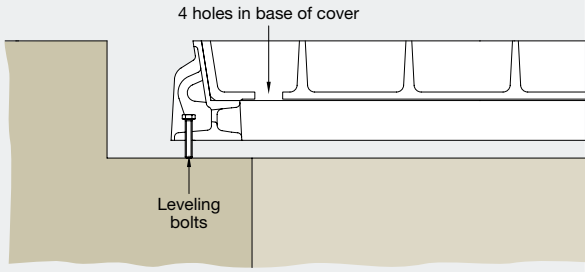
11 Remove cover and strike shuttering.

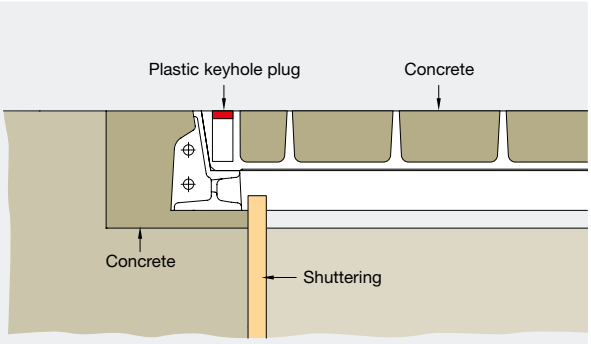
12 Clean faces of covers and frame and apply a thin film
of graphite grease to the seating faces.

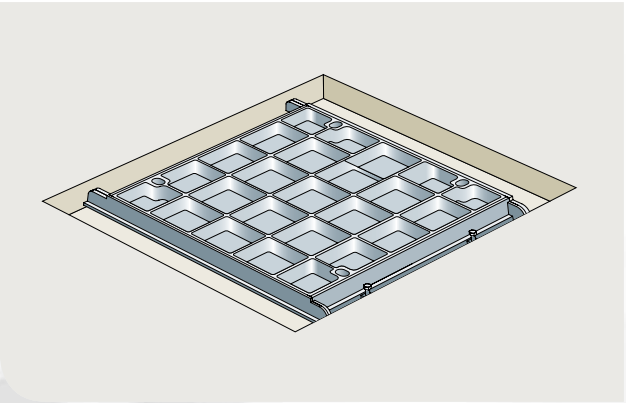
13 Replace cover into the frame and tap down with a balk of timber.

14 Allow the concrete to fully mature before any load is applied.





# Covers and Frames Installation

## Ducts and trenches

1 Prepare the rebate in accordance with dimensions given in the relevant tables within this publication and/or accompanying drawings. They are also numbered in sequence.

2 Covers and frames are supplied pre-matched and banded together.

Do not remove banding at this stage.

3 Commence at one end of the pit, or if there is a junction then commence at this point. Identify the relevant covers and frames at this location.

4 Place first assembled section squarely over the pit ensuring it is in alignment with the centre of the pit.

5 Identify the next assembly. This is done by locating the next number in the sequence, offering up to the first portion and loosely bolting the frame together. Numbers are painted on the ends of the covers to correspond with the drawings supplied.

6 Adjust the height of the frames to the required level by using the leveling bolts in the frame.

7 Repeat along the length of the trench making sure the covers are following a straight line.

8 Visually check that your covers are in the correct frames and order by looking for the random grinding nicks around each cover perimeter on the top surface.

9 In sections, remove covers from frames and place formwork around inside of pit so that the timber is approximately 10mm above the bottom of the frame. This will prevent spalling of the frame.

Do not pour concrete at this stage.

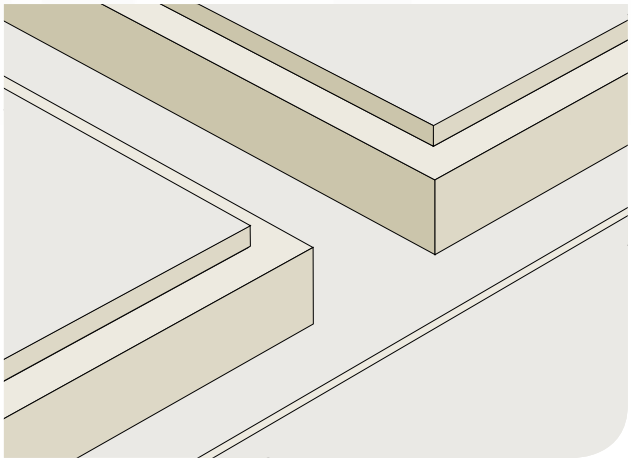
10 Clean off covers and frame seating faces and replace cover into the frame.

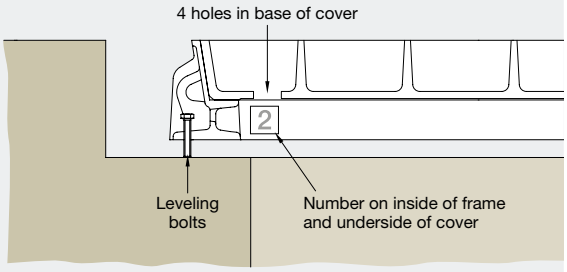
11 Check that the grinding nicks still correspond.

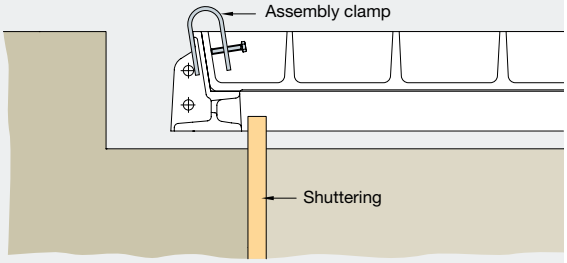
12 Adjust the frame level so that the cover is not rocking.
Tap down the corners of the covers with a balk of timber to make sure it is seated fully.

13 Using the assembly clamps provided, clamp the covers to the frames and across cover to cover joints. This will ensure that the covers are seated proprely.

14 Moving round the frame, with the covers in place, tighten the frame bolts making sure you do not damage the lead packers or over-tighten the bolt.





15 If covers are of the recessed design, you will need to cover the small holes in the cover base with a small metal or slate plate.

## Ducts and trenches

(continued)

16 Insert the plastic keyhole plugs and mask off with tape.

17 Pour concrete around the frames to a depth of about 25mm up the back of the frame and tamp or vibrate as you go.

18 Allow to cure overnight then remove the assembly clamps.

19 Pour concrete into the recessed covers, and around the frames, making sure that you thoroughly tamp and vibrate as you go.

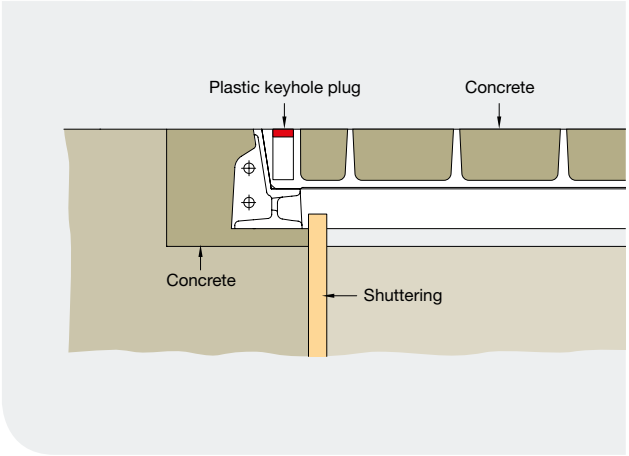
20 Allow concrete to cure overnight.

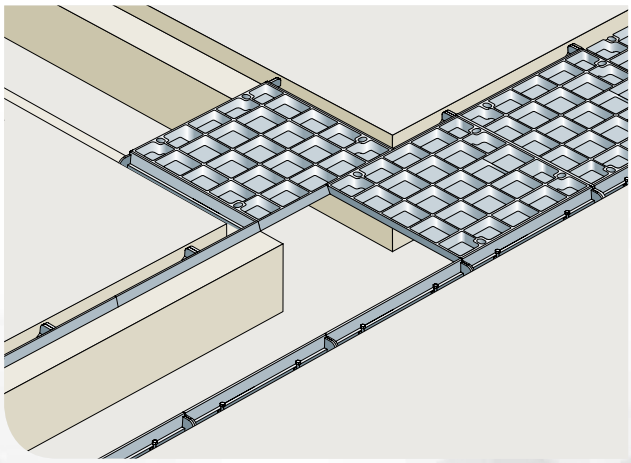
21 Remove cover and strike shuttering.

22 Clean faces of covers and frame and apply a thin film of graphite grease to the seating faces.

23 Replace cover into the frame and tap down with a balk of timber. Once again make sure that the grinding nicks match up.

24 Allow the concrete to fully mature before any load is applied.



# Covers and Frames Installation

## Multispan covers and frames

Form the frame and wallbox rebates around the pit strictly in accordance with Gatic's drawing. It is important to follow the stated dimensions otherwise the multispan cover will not fit.

The frame is delivered in sections together with beam assemblies and covers. Ensure that the end frames match with the side frame components.

The end frames can be identified as those sections with the beam end wallbox forming part of their construction. Frame sections and beam assemblies are numbered to help locate the cover positions.

Identification numbers are shown on the cover layout drawing supplied. Numbers can be found painted on the ends of covers, beams and outside faces of frames. Number tags are also fixed to the underside of the cover and also to the frame and beams.

The lowest numbers in each row of covers indicate that this is the front end of the unit.

1 Position the front end frames in the wallbox pockets and loosely join the sections together in the middle and at the corners.

2 Locate the side frame assemblies. These are handed so that they only fit on the correct side of the cover, and offer up to the back end frames.

Remember that there are a number of small frame pieces that make up a straight frame.

3 Check that lead spacers at the frame joints have not been damaged otherwise the frame will no longer mate with the cover. Again loosely bolt the frames together.

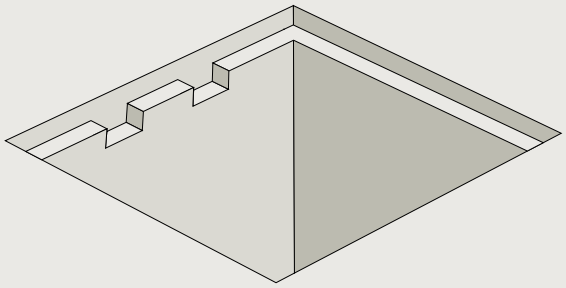
4 Using the large 'Tommy Bar' gradually screw down on the levelling bolts on the bottom of the wallboxes until the top of the frame is approximately level with the finished floor level.

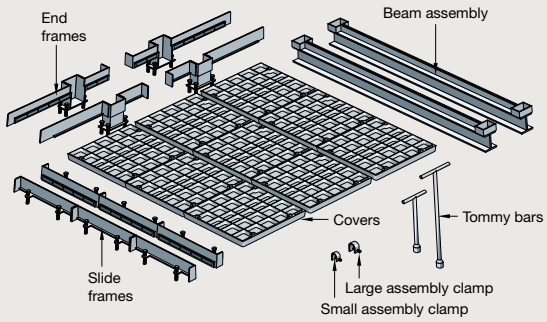
5 Now using the small 'Tommy Bar' adjust the side frames up to approximate finished level.

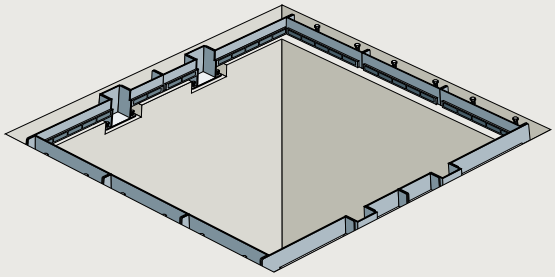
6 Locate the correct beam assembly, look for the numbers painted on the beam and corresponding tags on the frame, and lower into the wallboxes.

7 Tap down on the filler block, using a rubber mallet, and then, using the small assembly clamp, clip the end of the beam into the wallbox. (If the filler block is not flush then the beam is not seated correctly in the wallbox and you will need to adjust it accordingly).

8 Dimensionally check the frame is roughly square and not overhanging the edge of the pit.





## Multispan covers and frames (continued)

Do not pour concrete at this stage.

9 Clear any debris from the seating faces of the covers and frames and, starting with the middle row, lay the three covers down between the two beams.

10 With the three covers in position, adjust the wallbox levelling bolts to attain the required height, and also to make sure that the covers are seated correctly and
not rocking.

11 Position one of the outer rows and this time adjust the levelling bolts until the covers do not rock.

12 Repeat for the other end row.

The covers are now sound enough to walk on to check that they are not rocking.

13 Walk across the covers and tap the corners with a balk of timber to ensure that they are firmly down.

14 Using the assembly clamps provided, you can now pull the covers tightly together and into the frames to ensure the unit is correctly seated.

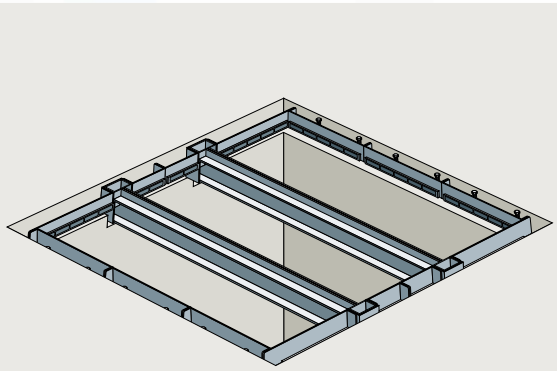
15 Visually check the top edges of the covers and frames making sure that random grinding marks align with each other.

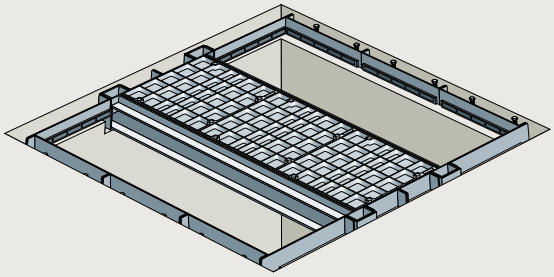
16 Now go round the frame and tighten all loose connected frame joints, but do not over-tighten. They only need to be nipped up.

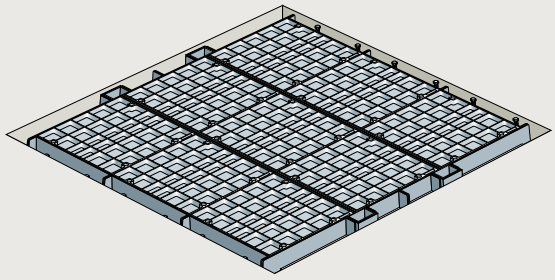
17 Remove the covers and carefully stack at the side of the pit.

18 Place timber shuttering around the inside perimeter of the pit and brace as appropriate. The shuttering should sit approximately 10mm higher than the bottom of
the frame.

19 Replace the covers, taking care that they are in the correct location, check that there is still no rock, and then clamp the covers in place as before.







# Covers and Frames Installation

## Multispan covers and frames

(continued)

20 Place small thin pieces of cut steel over the holes in the cover base plates, insert keyhole plugs and place masking tape over them.

The cover is now ready to receive concrete.

21 Leave the assembly clamps in place and part fill the rebate around the frame, going approximately 25mm up the back of the frame and thoroughly tamping or vibrating to ensure that it flows under the frame. Leave for 24 hours to set.

22 Remove clamps and proceed to infill around the rest of the frame and inside the covers,thoroughly tamping as you go.

23 Float off the surface to the desired texture.

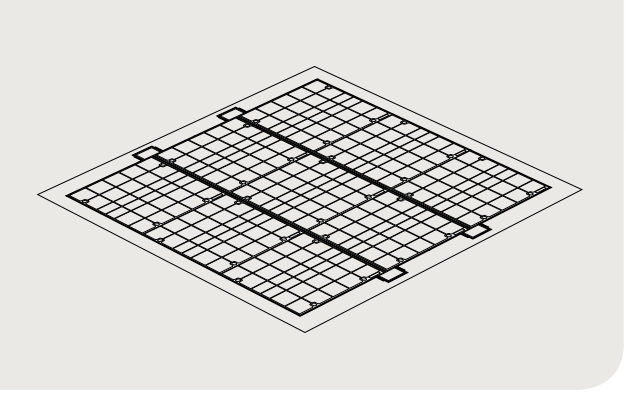
24 Remove covers from the frames and strike the shuttering, checking that the concrete has fully flowed under the frame.

25 Clean off covers and beams.

26 Lightly grease the blocks on the end of the beams and place in position.

27 Lightly grease faces and covers and replace in frames, checking that the grinding marks align.

28 Allow the concrete to fully mature before any load is applied.



## Gatic tutorial


A Full tutorial on how to install Gatic Covers is shown on our website www.gatic.com

## Lifting keys

Manual jack screw key operation.

Method of removing Gatic covers using manual lifting keys.

1 Clear all obstructions from key holes.

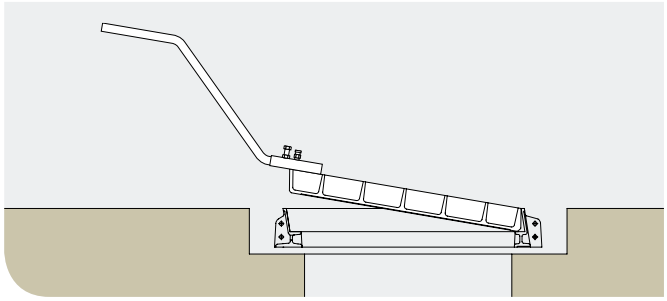
2 Slacken off jack screw before placing key in position.

3 Insert tee bolt in the key hole, turn clockwise through 90º and tighten lock nut.

4 Jack screw can now be tightened to act on the frame and break seal.

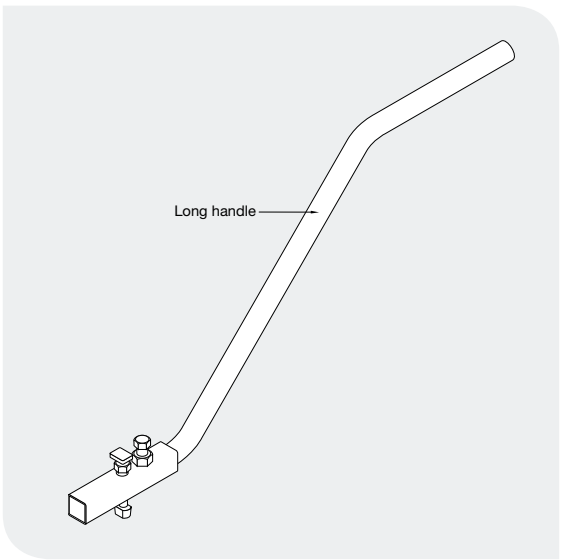
5 Lift front and slide out cover.

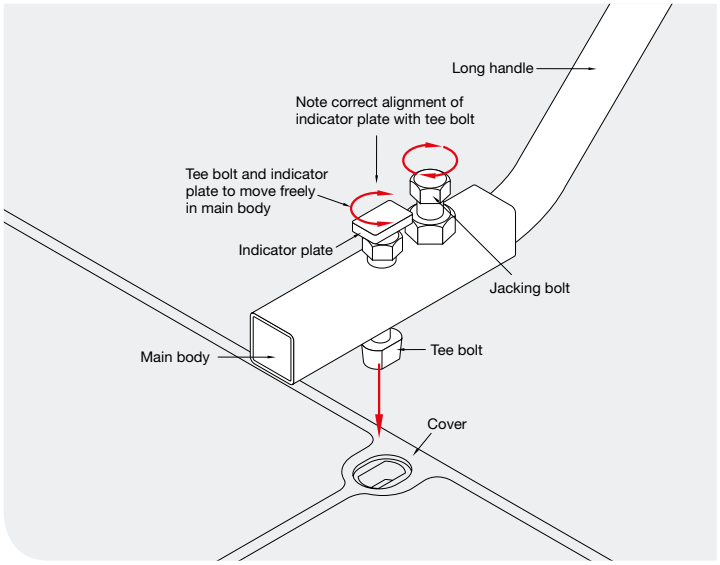
6 Slacken off jack screw before replacing cover.

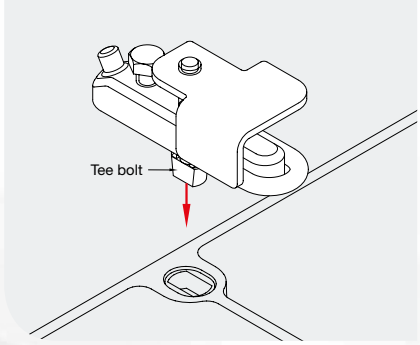


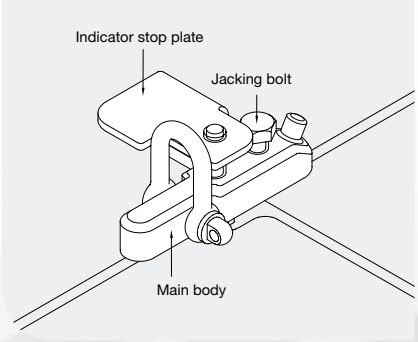
Long handled lifting keys (pair)

Not for use with mechanical or crane lifting.




Mechanical lifting keys

Mechanical lifting keys are designed and tested for use with crane and other mechanical devices.

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