THE CLARK-DRAIN D400 HIGH MAX SERIES

STRENGTH COMES FROM WITHIN

AS THE INTENSITY OF TRAFFIC ON THE ROADS INCREASES AND WEATHER CONDITIONS BECOME MORE CHANGEABLE, SPECIFYING AND INSTALLING HIGH QUALITY, DURABLE DRAINAGE PRODUCTS HAS NEVER BEEN MORE IMPORTANT WITH WHOLE LIFE COSTS AND HEALTH AND SAFETY A CENTRAL CONCERN FOR WATER AUTHORITIES, LOCAL COUNCILS AND THE HIGHWAYS AND ENVIRONMENTAL AGENCIES.

For organisations operating buried networks that require access, High Max offers a solution which can prolong surface wear and the skid resistant life of the product.

CLARK-DRAIN
THE DRAINAGE COMPANY

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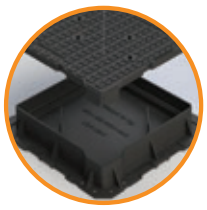
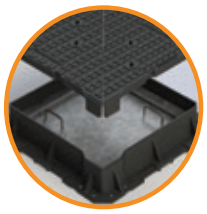
THE CLARK-DRAIN
D400 HIGH MAX SERIES

High Max provides a comprehensive range of product accessories to **enhance, protect and increase safety**. One frame can accommodate all five options, either factory fitted, or retrofitted to an existing High Max installation, avoiding the costly purchase of separate or replacement products.

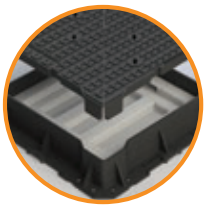
SEALING PLATES, LOW LEAK AND SAFETY GRIDS



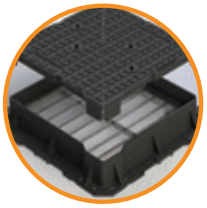
1. Drop in ductile iron low leak plate
Ingress of surface water into a sewer system can add to the problem of surging during periods of increased flows in the drainage system. The High Max low leak plate provides an additional seal to slow down/prevent the ingress of surface water in gully chamber systems.



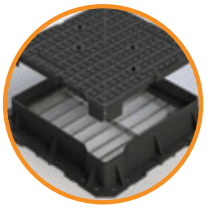
2. Bolt-down steel sealing plate
During heavy rains and subsequent flood conditions, water surges can cause traditional manhole covers to be forced out of the ground, either becoming a hazard or simply leaving a hole in the road - having serious consequences for pedestrian and road users. High Max features a bolt-in sealing plate for added security for areas where flooding may be an issue. High Max sealing plates are specially designed to overcome problems of back pressure experienced in sewer shafts up to 0.5 bar (equivalent to pressure of five metres head of water). Mild-steel galvanised sealing plates are fixed inside the access frame and secured using screws enabling water to dissipate safely through the drain system, while ensuring that the cover doesn't become a hazard for pedestrians or motorists.



3. GRP sealing plate
Light in terms of manual handling, drop in Glass Reinforced Plastic (GRP) sealing plates act as a protective barrier against the egress of odours and the corrosive properties of sewer gases particularly in countries with hot climates.



4. Safety Grids
A specially designed galvanised stainless steel safety grid rests on the frame lip to prevent accidental man-entry into the chamber during access or maintenance.



5. Security grills (Prisons)
Fabricated medium to heavy duty high security steel hinged and locking grills and frames can be used in highly sensitive prison areas as a second level security barrier against unauthorised entry into and out of access chambers. They are designed and manufactured for all categories of HM Prison contracts with design variations to suit category A, B and C security levels.

Exceeds the BS EN 124 D400 loading requirement

The Cover and frame is capable of withstanding a 44 tonne test load. Made from high grade ductile iron for optimum strength and durability, High Max meets the needs of HA 104/09 (High risk areas).

Silent in use

Non rock three point suspension with male and female support foot engagement directs the loading stresses for best-case frame and bedding interaction to minimise surface noise when trafficked..

Exceeds HA104/09 (High Risk Area) specification

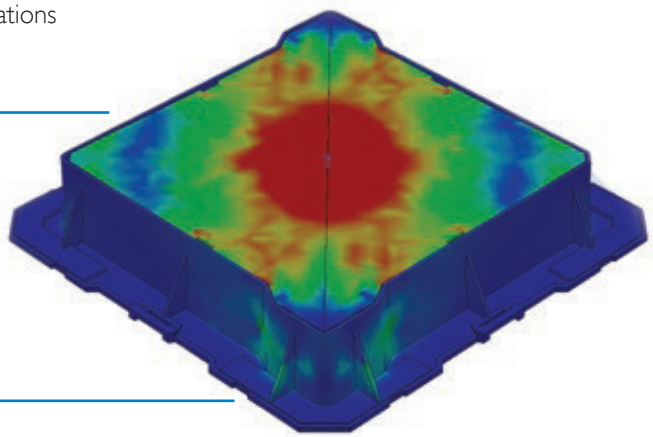
Tread pattern area has 25% more density than the minimum specified in EN 124 and 66% greater tread height, helping to prolong surface wear and the skid resistant life of the product.

Perfectly positioned seating

'Inboard' cover supports reduce the risk of cover collapse under extreme loads.

STRENGTH COMES FROM WITHIN

Our team of design experts analyse the results of Finite Element Analysis (FEA) and 3D modelling to provide an understanding of the dispersion of dynamic loads from traffic on the cover and frame structure. High Max is purposely designed so that under heavy, dynamic loads stresses are distributed as evenly as possible on the bedding, minimising the impact on chamber top installations and reducing the risk of early failure.

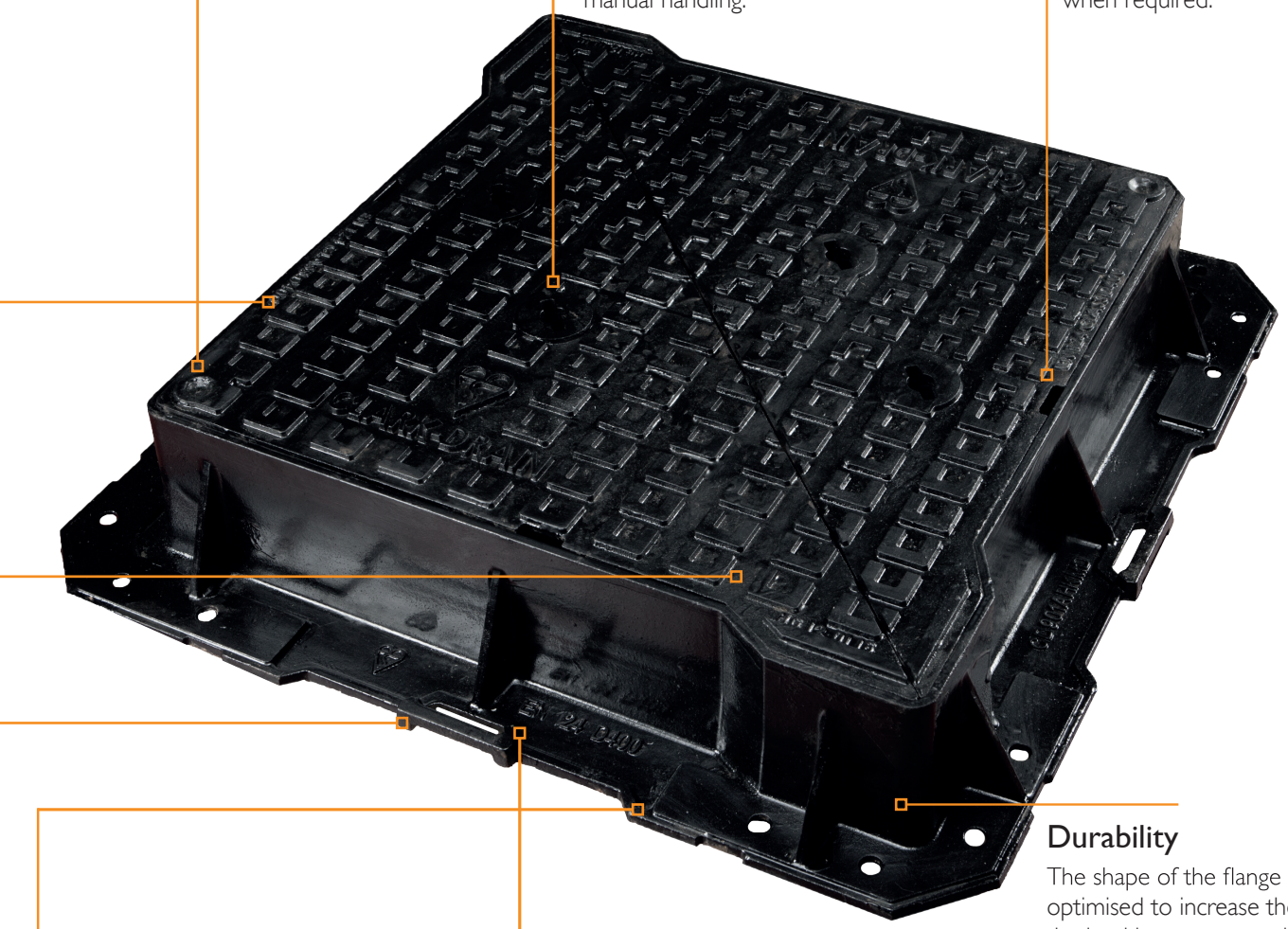


Road traffic in weight and volume has increased significantly in recent years, whilst the structural wear with each vehicle that passes increases significantly with increasing loads. Reason enough, we believe to design a tread pattern with 25% more density than the minimum specified in EN 124 and 66% more tread height, to prolong surface wear and the skid resistant life of the High Max product.

Security
Recessed locators provide bolt locking option.

Easy utility access
Non slip safety key holes compatible with long handle lifting keys and other mechanical lifting devices supports safe manual handling.

Ease of use
Prising access locators enables covers to be levered from frame when required.



Durability
The shape of the flange has been optimised to increase the area where the load is concentrated, whilst the flared frame helps to transfer dynamic loads around the corners to minimise the stresses on the bedding. The solid flange meets the minimum 75mm width conforming to BS 7903.

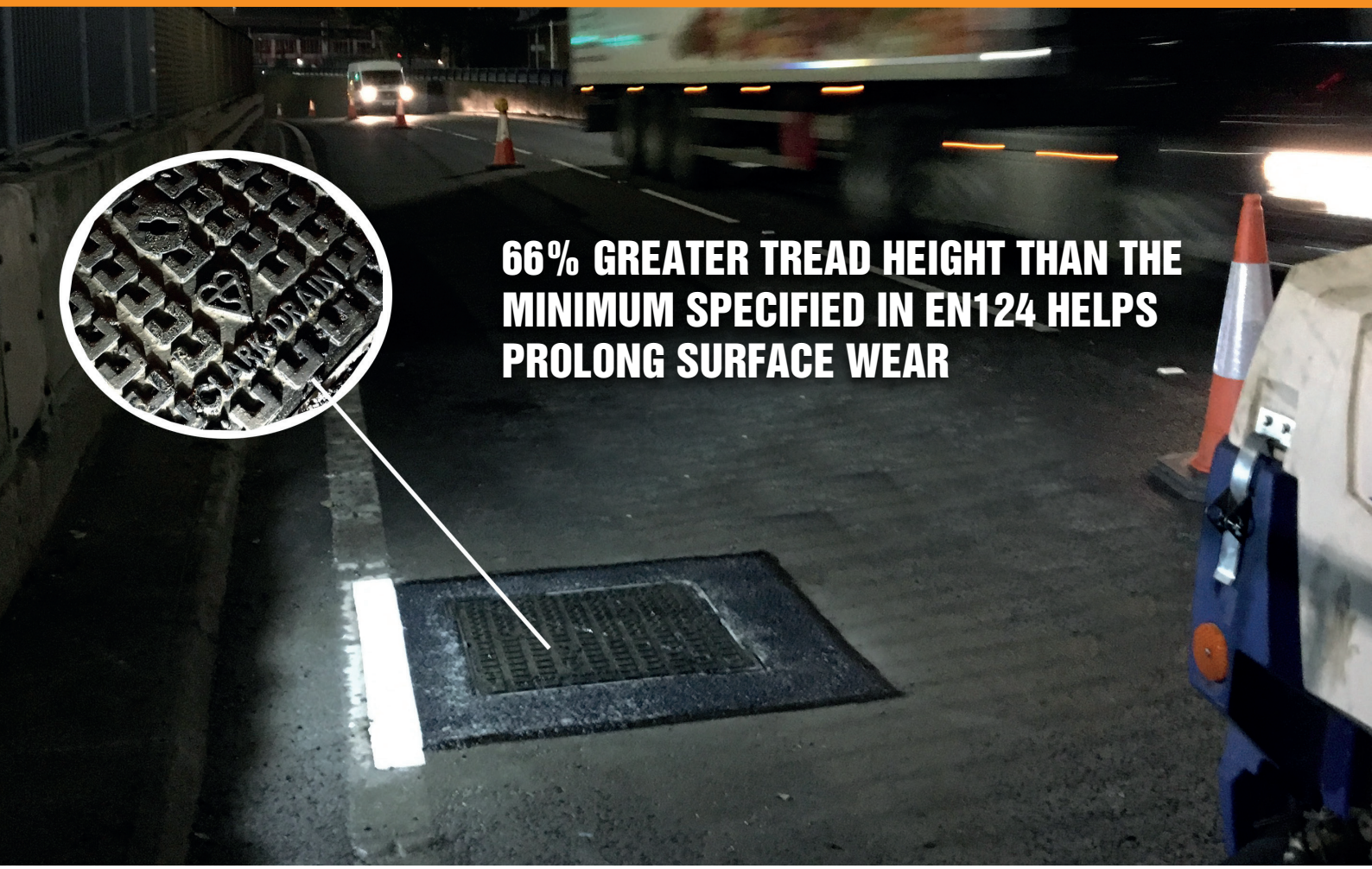
Flexible design*
For existing, older installations that need replacement covers the 600x600mm clear opening High Max products incorporate a frame design to accommodate imperial 24"x24" pit sizes.

Effective installation
Vented grouting pockets on flange improves bond to mortar and lateral stability of manhole cover in service.

Product code	Clear opening (mm)	Loading class	Overall size (mm)	Frame depth	Overall weight (kg)
CD 901H KMD	600x600*	D400	847x847	100	104
CD 901AH KMD	600x600*	D400	851x851	150	115
CD 902H KMD	675x675	D400	915x915	100	125
CD 902AH KMD	675x675	D400	925x925	150	137

Options: Sealing plate • GRP sealing plate • Low leak • Safety grill • Security grill

* Will accommodate imperial 24"x24" pit size



COMMITMENT TO QUALITY

HIGH MAX IS MANUFACTURED UNDER A CERTIFIED ISO 9001:2008 QUALITY MANAGEMENT SYSTEM. FURTHER ASSURANCE OF QUALITY IS GAINED FROM THE RELEVANT EUROPEAN AND BRITISH PERFORMANCE SPECIFICATION UNDER THE PRESTIGIOUS BRITISH STANDARD KITEMARK AND COMPLIANCE WITH RELEVANT INDUSTRY SPECIFIC REGULATIONS. THE FOLLOWING STANDARDS ARE ACCREDITED TO CLARK-DRAIN:

bsi. ISO 9001 Quality Management
FM 86830

UVDB Verify empowered by Achilles Verified

ISO 9001:2008
All Clark-Drain products are designed, developed and manufactured under the international quality standard, BS EN ISO9001:2008. Our whole team is committed to the principles of Total Quality Management.

BS EN 124
Our ductile iron manhole covers are covered by the BS EN 124 European standard. High Max covers and frames conform to a D400 loading class.

UVDB Verify
Clark-Drain has achieved Category A status with the UVDB Verify scheme against key criteria such as Health and Safety, Environmental controls & procedures and quality

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