



# WIRE ROPE SUSPENSION SYSTEM



### Major time and cost savings



It is widely accepted that labour costs are a significant outlay on most M&E projects, so any product that substantially reduces installation times merits serious consideration.



The DobyGrip wire suspension system is used to suspend static loads. In short, it's the perfect alternative to traditional methods such as threaded rod. Independent reports suggest installation times are greatly reduced, by as much as 60%.

## How Does It Work?

- Twin levers for flexible adjustment and readjustment.
- DobyGrip 2 Max (DG2M\*) maintains 100% SWL at 120° inclusive angle (pic.4 on suspension illustration page).
- Patented system owned solely by Doby Verrolec.
- Ergonomic designed zinc cast body.
- Designed in-house, complete control of all aspects.
- Available in kits with a range of Innovative end fixings.
- DobyGrip app for both Android and Apple iOS.
- Multitude of different applications.
- Full technical advice and product guidance.
- Will suspend a variety of static loads up to 500Kg.
- Perfect alternative to traditionally used Threaded Rod.
- No hot working permits required on site.

Available in 7 sizes, 1-6mm (3/64"-1/4") with safe working loads up to 500Kg. (1100lbs). All of our DobyGrips are independently tested and witnessed.

Refer to the DobyGrip website or contact the Doby Verrolec sales office for details of the full range of accessories.







### Design Specification

The strong zinc cast body minimises corrosion and both solid and stainless steel internal components ensure the strength of the DobyGrip.

With it's ability to take a suspended static load of up to 500 Kg (1100lbs) from a single unit, strength is never an issue. Greater loads will require multiple DobyGrip units. Each DobyGrip unit has been safety tested. DobyGrip sizes DG1-DG3 have a 5:1 safety factor. DobyGrips DG4-DG6 have a 3:1 safety factor. Independently tested and witnessed giving you the peace of mind where safety is

involved. Safe working loads verified by independent testing by internationally recognised organisations and test houses.

Life Cycle Tests and seismic testing (110,000 cycles at 10Hz.) were undertaken by Northumbria University (UK) and witnessed by Lloyds Register. Further information is available from the Technical Sales Office or via **www.dobygrip.com.** Alternatively, visit the main site **www.dobyverrolec.com**.

Instructions should be strictly

effective installation.

adhered to, ensuring a safe and

### Fabrication, Installation and Safety

Fabrication, installation and safety instructions are available online from **www.dobygrip.com** or **www.dobyverrolec.com**. Alternatively, contact the company Technical Sales Office, details on back.



### The Full DobyGrip Range

| A Length          |                     |  |   |   |  |   |
|-------------------|---------------------|--|---|---|--|---|
|                   | Order ref.          | Length A   | Width B   | Height C  | Weight D   | Packing                                   |
| B<br>Width        | DG1<br>DG2<br>DG2M* | 20mm ( <sup>25</sup> / <sub>32"</sub> )<br>26mm (11/ <sub>32"</sub> )<br>35mm (13/ <sub>8"</sub> ) | 16.5mm ( <sup>21</sup> / <sub>32"</sub> )<br>30mm (11/ <sub>16"</sub> )<br>26mm (11/ <sub>32"</sub> ) | 6mm ( <sup>15/</sup> 64")<br>9mm (11/ <sub>32"</sub> )<br>9mm ( <sup>11/</sup> 32") | 9gms ( <sup>0.32oz</sup> )<br>28gms ( <sup>0.99oz</sup> )<br>37gms ( <sup>1.31oz</sup> ) | 50 per pkt.<br>20 per pkt.<br>20 per pkt. |
|                   | DG3                 | 35mm (1 <sup>3/</sup> 8")  | 35mm (1 <sup>3</sup> / <sub>8"</sub> )  | 12mm ( <sup>15/</sup> 32")  | 28gms ( <sup>2.65oz</sup> )  | 10 per pkt.                               |
|                   | DG4                 | 40mm (121/ <sub>32"</sub> )  | 42mm (121/ <sub>32</sub> ")   | 13mm ( <sup>33/</sup> 64")  | 93gms (3.3oz)  | 5 per pkt.                                |
| C Height D Weight | DG5                 | 40mm (121/ <sub>32"</sub> )  | 42mm (121/ <sub>32"</sub> )   | 13mm ( <sup>33</sup> / <sub>64"</sub> )   | 93gms ( <sup>3.3oz</sup> )   | 5 per pkt.                                |
|                   | DG6**               | 50mm (1 <sup>31/32"</sup> )  | 45mm (1 <sup>98/</sup> 127")  | 15mm ( <sup>19</sup> /32")  | 141gms ( <sup>5.0</sup> oz)  | 5 per pkt.                                |

### Loading Tables - Weights & Angles (SWL)

| DobyGrip                | Wire Diameter                               | Kg  | lb   | Angle from Verti  | ical 0 deg.     | 15 deg.      | 30 deg.   | 45 deg.      | 60 deg.      |  |  |  |
|-------------------------|---|-----|------|-------------------|-----------------|--------------|---|--------------|--------------|--|--|--|
|                         |   |     |      | % of Loading (SWI | L) 100          | 90           | 80  | 70           | 50           |  |  |  |
| DG1                     | 1mm ( <sup>3/</sup> 64") (7x7)              | 10  | 22   | DG1               | 10kg / 22lb     | 9kg / 21lb   | 8kg / 18lb  | 7kg / 15lb   | 5kg / 11lb   |  |  |  |
| DG2                     | 2mm ( <sup>5/</sup> <sub>64"</sub> ) (7x7)  | 50  | 110  | DG2               | 50kg / 110lb    | 45kg / 99lb  | 40kg / 88lb   | 35kg / 77lb  | 25kg / 55lb  |  |  |  |
| DG2M*                   | 2mm ( <sup>5/</sup> <sub>64"</sub> ) (7x7)  | 50  | 110  | DG2M*             | †† 50kg / 110lb | 50kg / 110lb | 50kg / 110lb  | 50kg / 110lb | 50kg / 110lb |  |  |  |
| DG3                     | 3mm ( <sup>1/</sup> 8") (7x7)               | 100 | 220  | DG3               | 100kg / 220lb   | 90kg / 198lb | 80kg / 176lb  | 70kg / 154lb | 50kg / 110lb |  |  |  |
| <b>DG4</b> <sup>†</sup> | 4mm ( <sup>5/</sup> 32") (7x19)             | 225 | 495  | DG4               | 225kg / 495lb   |              | Refer to sales office for current data on suspension<br>angles greater than 0 degrees from vertical.<br>DG4, DG5 & DG6 safety factor ratios are |              |              |  |  |  |
| DG5 †                   | 5mm ( <sup>3/</sup> <sub>16"</sub> ) (7x19) | 325 | 715  | DG5               | 325kg / 715lb   |              |   |              |              |  |  |  |
| DG6**                   | 6mm ( <sup>1/</sup> 4") (7x19)              | 500 | 1100 | DG6**             | 500kg / 1100lb  | calculated   | calculated at <b>3:1</b> not 5:1.   |              |              |  |  |  |
| ** ** *                 |   |     |      |                   |                 |              |   |              |              |  |  |  |

 $^{\star\star}$  Refer to sales office for Catenary applications.  $^{\dagger}$  DG4 & DG5 is the same unit with the ability to accept two wire diameters.

<sup>††</sup> Please ensure that the wire anchor into structure is capable of taking the full supported load. Contact sales office for more information.

### **Precision Engineering & Reliability**

### The DobyGrip 2 Max



# Specifically designed to exceed the 60 degree inclusive angle



# How is it different?

DobyGrip 2 Max (DG2M\*) is designed to exceed the 60 degree inclusive angle. Drastically reducing the space required above the duct on installations, allowing the duct to be installed closer to the suspension point and reduces the length of wire rope required whilst still retaining it's **100%** load capacity.

| Comparative Loading Table for 2mm                      |        |         |         |         |         |         |         |          |          |
|--|--------|---------|---------|---------|---------|---------|---------|----------|----------|
| Inclusive Angle  | 0 deg. | 15 deg. | 30 deg. | 45 deg. | 60 deg. | 75 deg. | 90 deg. | 105 deg. | 120 deg. |
| <b>Conventional Wire Suspension</b> % of Loading (SWL) | 100%   | 90%     | 80%     | 70%     | 50%     | Χ       | Χ       | X        | X        |
| <b>DobyGrip Max</b><br>% of Loading (SWL)              | 100%   | 100%    | 100%    | 100%    | 100%    | 100%    | 100%    | 100%     | 100%     |
| SWL (kg)   | 50     | 50      | 50      | 50      | 50      | 50      | 50      | 50       | 50       |
| SWL (lbs)  | 110    | 110     | 110     | 110     | 110     | 110     | 110     | 110      | 110      |

### Please note: \*DG2M must be used for HVAC applications.



# DobyGrip App for Wire Suspension

Developed for use with the DobyGrip system you are able to search for products, compare them against other DobyGrip products and then able to calculate the required DobyGrips when estimating for jobs on site.



## DobyGrip in action







Doby Verrolec the UK's largest manufacturer of Ductwork Jointing Systems and Ductwork Components for over 50 years, with an extensive range of HVAC accessories. Suspension Systems for the Construction Sector including Channel Profiles and the patented DobyGrip Wire Suspension System. Special rollformed profiles for OEM's including profiles and accessories for the Commercial Door & Security sector. In-house design and engineering facilities give the Company flexibility whilst maintaining its and its customer intellectual property. Doby Verrolec supply directly to the leading contractors worldwide and are supported where appropriate by the premier Distributors in the relevant sectors.



Over 50 years experience in rollforming and presswork, with over 95% of products manufactured in house. Capable of working with galvanised and stainless steel and Aluminium. Currently working in steel thicknesses between 0.4mm and 6mm. Supported by in house design and engineering functions. A mult-skilled workforce provides maximum flexibility to cope with changing customer requirements. The Company ensures its products are tested to the appropriate standards worldwide including BESA, ISO and Lloyds in the UK, Apave in France, TÜV in Germany and SMACNA and UL in the USA. The Company also ensures it's processes and systems also comply and conform to Quality and Environmental standards of ISO 9001 and ISO 14001.



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The information contained herein is subject to change without prior notice due to continuing research and development. Doby Cleats Ltd trading as Doby Verrolec Registered in England Number 952089

# Installation Instructions

### **Plain Cable**

Pass one cable end through the DobyGrip in the direction of the arrow on the casing. Now pass the cable over or through the suspension point. Note: Always ensure that the suspension point is suitable and capable of supporting the load being suspended. Pass the cable back through the remaining entry into the DobyGrip unit 1 in the direction of the arrow on the casing then pull the cable (**B**) tight. Always ensure a minimum of **75mm** excess cable (**A**) protrudes through the unit. Pass the end of cable (**B**) through a second DobyGrip unit in the direction of the arrow on the casing of the arrow on the casing.

Pull the cable (**B**) through the unit and pass through the suspension point of the item being suspended ensuring that the contact point between the cable and the item being supported will not damage the cable. Pass the tail of the cable back through the remaining entry into the DobyGrip in the direction of the arrow on the casing leaving a minimum of **75mm** protruding from the DobyGrip. **3** 

Pull the required length of cable through the unit to position the item being suspended at the desired height. The height can easily be adjusted by lifting the load from the DobyGrip, pushing back the adjusting slide \*lever and repositioning at the desired level.

\* Adjustment must be made using the main wire inward lever (**1**) on diagram to the right, **not** the lever where the wire is exiting the unit, prior to being cut. Once all heights are fixed excess cable can be cut back, always ensure a minimum of **75mm** excess cable protrudes through the unit.

### Safe Working Loading diagram (SWL)

The diagram below illustrates the typical loading configuration for the DobyGrip range when the suspension wire is away from vertical. If, as the diagram states, that the duct/pipe is required to be closer to the DobyGrip unit for height restrictions or services etc, then the Safe Working Load (SWL) table overleaf will show the permitted angles and the reduction in the suspended loads. For more information on DobyGrip suspension heights then please refer to the sales office for recommendations.











WARNING Load ratings (SWL) are based on vertically suspended wire rope. If any part of the wire rope is NOT vertical refer to the safe working load table (SWL) or contact your

local sales office for further

information.





# Installation Instructions



### Cable with loop only

Having selected the most suitable DobyGrip unit (refer to Brochure for technical details) and cable size for the load being suspended; pass the tail of the cable over or through the suspension point. Note: Always ensure that the suspension point is suitable and capable of supporting the load being suspended. Pass the tail of the cable through the loop formed in the cable and pull tight, ensuring that the contact point between the cable and the supporting structure will not damage the cable. 4

Pass tail of the cable through the DobyGrip in the direction of the arrow on the casing. 5

### Point to remember...

If using the DobyGrip in conjunction with our wire on a reel, make sure the wire has been cut to length correctly using approved wire cutters to guarantee the shape to the wire end and therefore ease of use through the DobyGrip unit.

Pass the tail of the cable back through the suspension point or accessory to be supported, ensuring that the contact point between the cable and the item being supported will not damage the cable. Pull the cable through the unit ensuring that once all heights are fixed any excess cable be cut back and always ensure a minimum of 75mm excess cable protruding through the unit. 6

Movement: Do not in any instance use the DobyGrip system to suspend moving services or objects that are subject to sudden or repeated dynamic movement. DobyGrips and accessories are designed for static only installations that are either, HVAC, mechanical, signage or electrical in nature. Refer to customer services for suitability of any other application or installation method.

### Safe Working Load (SWL) table

Load ratings for all of the DobyGrip range are based solely on the suspension being vertical. Therefore the more the wire rope is moved away from vertical then extra sideways loads are applied, reducing the holding capacity of the single DobyGrip. The effect this has in turn on the suspension unit is shown in the table and diagram overleaf.

The diagrams shown in this document are for guidance purposes only, when working with steel wire care must always be taken to avoid accidents and suitable protective clothing should be worn.







| Safe Working Load (SWL) angles from vertical |               |              |              |              |              |  |  |  |  |
|--|---------------|--------------|--------------|--------------|--------------|--|--|--|--|
| DobyGrip                                     | <b>0</b> °    | <b>15</b> º  | <b>30</b> º  | <b>45</b> °  | 60⁰(Max)     |  |  |  |  |
| Size 1 (SWL 10kg / 22lb)                     | 10kg (22lb)   | 9kg (21lb)   | 8kg (18lb)   | 7kg (15lb)   | 5kg (11lb)   |  |  |  |  |
| Size 2 (SWL 50kg / 110lb)                    | 50kg (110lb)  | 48kg (105lb) | 43kg (95lb)  | 35kg (77lb)  | 25kg (55lb)  |  |  |  |  |
| Size 3 (SWL 100kg / 220lb)                   | 100kg (220lb) | 96kg (211lb) | 86kg (189lb) | 70kg (154lb) | 50kg (110lb) |  |  |  |  |
| % of Loading                                 | 100           | 90           | 80           | 70           | 50           |  |  |  |  |

Wire to and from the DobyGrip shall not exceed an inclusive angle of 60° in any instance. The information contained in the SWL table here and diagram overleaf applies to both types of installation shown.

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Installation

Instructions

















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