

TECHNICAL DATA SHEET

DS 034

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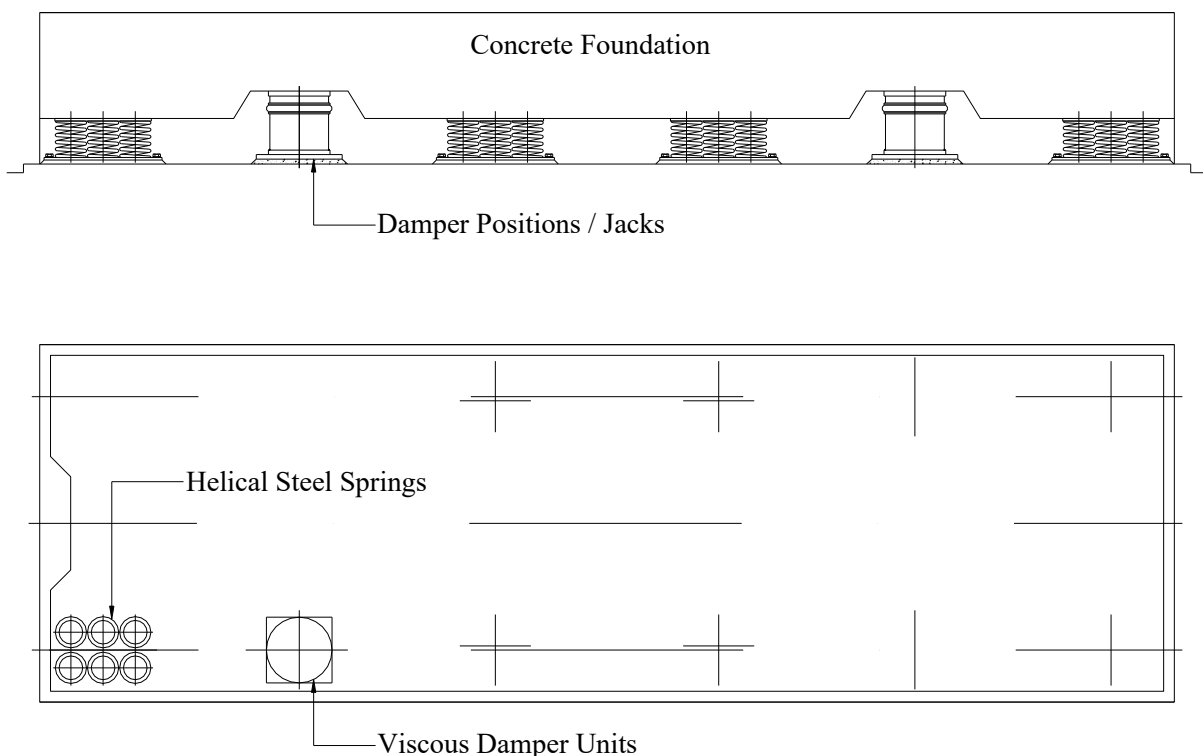
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DATE	16 May 2019
APPROVED	A.N.M

TITLE.	Installation instructions for typical isolated concrete foundation block using Open Springs and Viscous Damper Units.
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During construction of the concrete foundation it is most important that the following points are observed:

- (i) Before construction of the upper foundation it is essential that the lower foundation is covered by a layer of polythene sheet. This is to ensure a clean separation when the upper block is lifted.
- (ii) The concrete surfaces which receive the top side of the spring top plate must be level and smooth.
- (iii) The lower spring bearing surfaces are to be finished in such a way as to ensure a good bond between the concrete and the resin grout. This also applies to the seating surface for the viscous damper vessels.
- (iv) The upper bearing plates for the viscous damper pistons must be positioned accurately within the formwork and care taken that the lower face of these plates will be level after the formwork is struck.

Figure 1.



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INSTALLATION PROCEDURE

- Following construction of the concrete foundation and erection of the engine/alternator set, hydraulic jacks of suitable load carrying capacity are to be placed in the positions, typically shown in Figure 1.
- Once the concrete has cured sufficiently to allow lifting at the points specified, the foundation block is to be lifted so that there is space available for installation of the spring units between the underside of the foundation block and the top surface of the supporting concrete (Figure 2).

Figure 2.

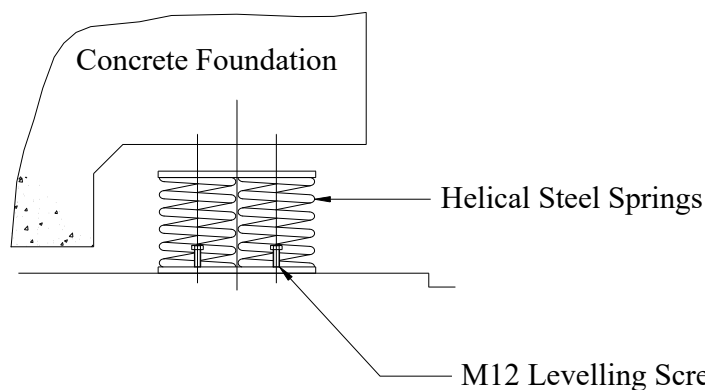
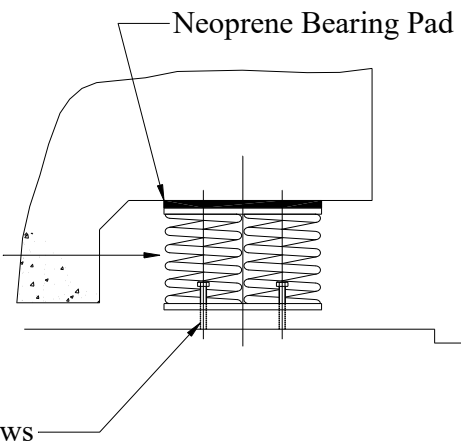


Figure 3.



- The spring isolator units should then be assembled and positioned as shown on our drawings or recommendations by means of the 4 x M12 leveling screws. They should be lifted until the top bearing pad (Neoprene) is just in contact with the underside of the foundation block (Figure 3).

NB: It is essential that at no time should load be applied to the spring unit leveling screws or the lower plate - they are not designed for this purpose.

- When all the units have been set in this way, suitable 'dams' should be constructed and resin grout (chock-fast orange or equivalent) poured between the underside of the lower spring support plate and the top of the supporting concrete. The gap to be filled with resin grout should be approximately 40mm (Figure 4)
- After the resin grout has cured, the load may be transferred to the spring units which should deflect by specified amount under the combined weight of foundation and set.

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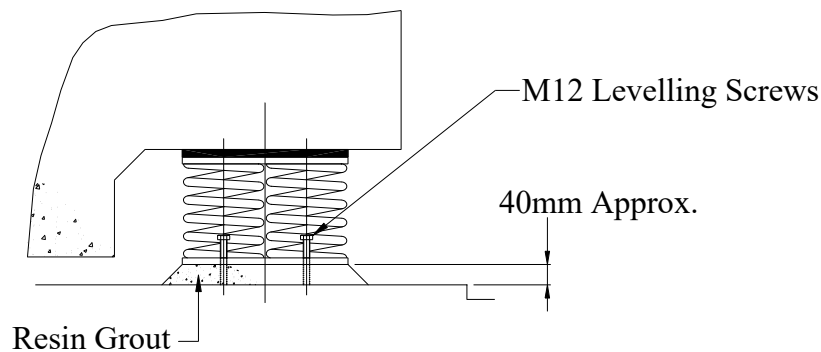
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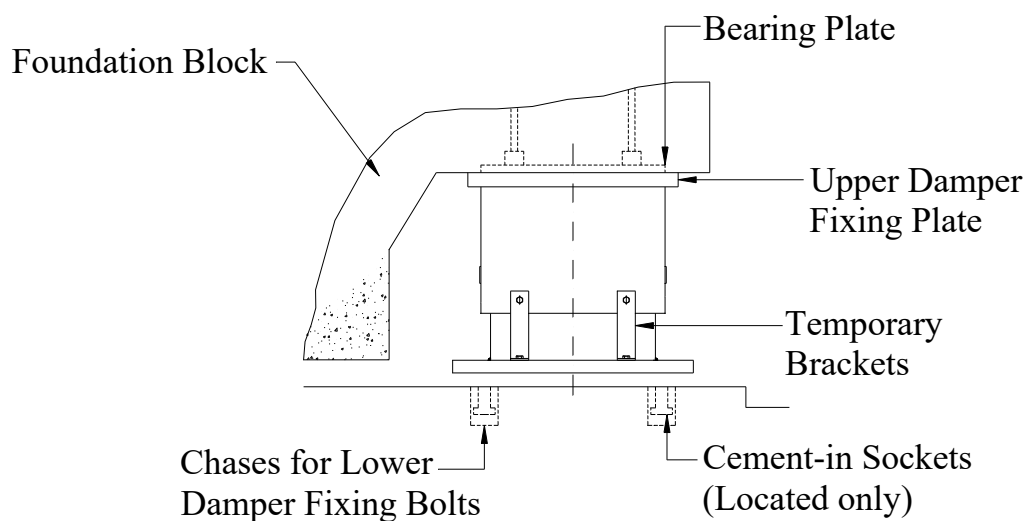
Installation instructions for typical isolated concrete foundation block using Open Springs and Viscous Damper Units.

Figure 4.



6. If the spring deflections are not uniform along the length of the foundation and the foundation is not level, then this can be corrected should it be considered necessary by re-lifting the foundation and set clear of the spring units and the insertion of suitably graduated steel shims.
7. Following removal of the hydraulic jacks, the damper units can be installed. The “cement in sockets” should be located and loosely secured in the chases provided. The damper units should be installed with temporary brackets in place. (These ensure equal clearances between piston and vessel over their full length), in the positions shown on our layout drawings, prepared for each application. The upper damper fixing plate can now be fixed to the bearing plates set in the underside of the foundation block (Figure 5).

Figure 5.



The lower fixing bolts should then be greased and positioned to pick up and screw into the “cement in sockets”, leaving a 3mm clearance between the top of socket and underside of the damper vessel seating plate (Figure 6)

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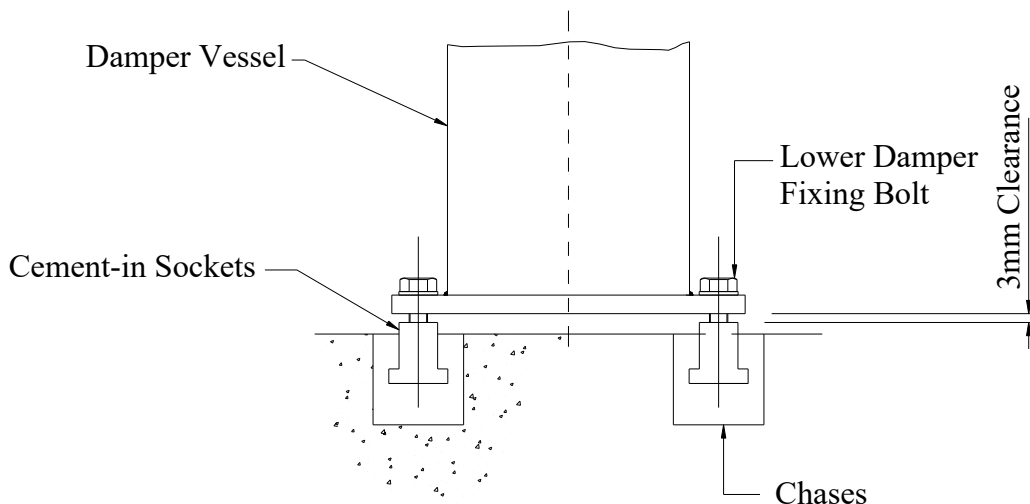
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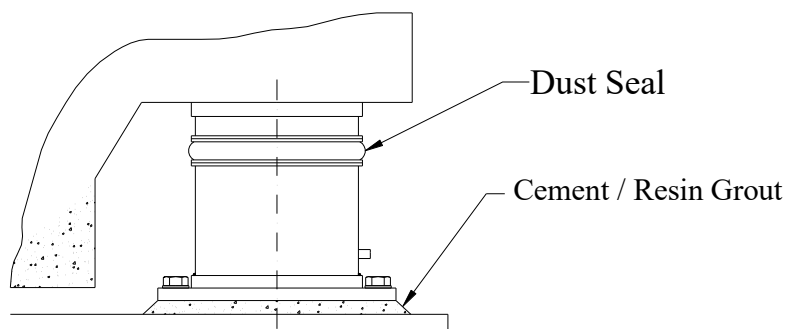
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Figure 6



Resin grouting can then be completed using suitable "Dams". When the resin grout has cured the bolts can be tightened and the temporary brackets removed from damper vessel (Figure 7).

Figure 7



- The silicon damping fluid should then be poured into the damper vessel - it is suggested that an open sheet metal trough be used for this purpose.

The damping fluid level must be set in accordance with our drawings or recommendations.

- The dust seals can then be clipped/secured to damper vessel to complete the seal.

Please contact our Applications Department at the address below if you have any problems relating to installation or selection.



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