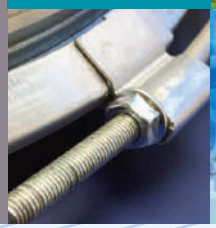
VerroLoc
Assembly/Installation Instructions

Precision
Engineering
& Reliability



Doby Verrolec

VerroLoc Circular Jointing System

Assembly Instructions

Each joint comprises of 2 flange rings and 1 closure ring and are supplied together for easier transportation. To start the assembly, slacken the nut on the closure ring to release it from the two flange rings. (Fig.1)

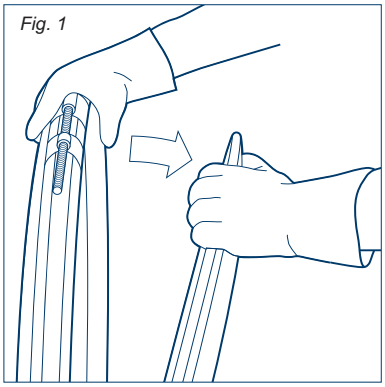
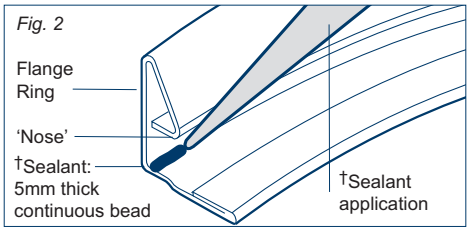


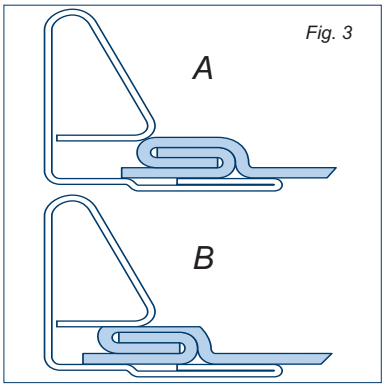
Fig. 1

The VerroLoc circular joint is supplied with no †sealant as standard, but can be applied post manufacture by the installer to the joint prior to fitting to the duct if required. Create a 5mm thick continuous bead around the ring as shown below in Fig.2. Use DVS01 non-toxic permanently non-setting flange †sealant, available in 205 Litre Drums or use only fully tested to DW144 High Velocity permanently flexible Duct Sealant.

Please note: When rings are ordered with the optional integral †sealant at the time of rolling, it is not necessary to be manually sealed.



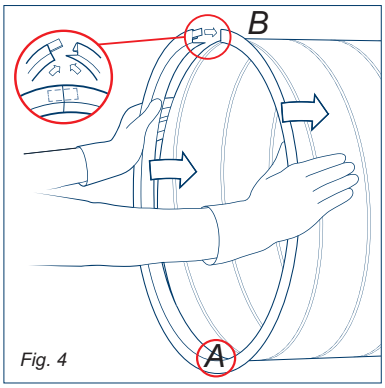
On all ducts where the spirally wound seam is too high to be enclosed by the flange (A) on Fig. 3. The seam must be ground down to accommodate the flange allowing it to sit properly (B, Fig.3). Please note, care must be taken when grinding back to ensure the seam integrity is maintained.



† Integral sealant - DVS01 non-toxic permanently non-setting flange sealant can be injected at time of manufacture.

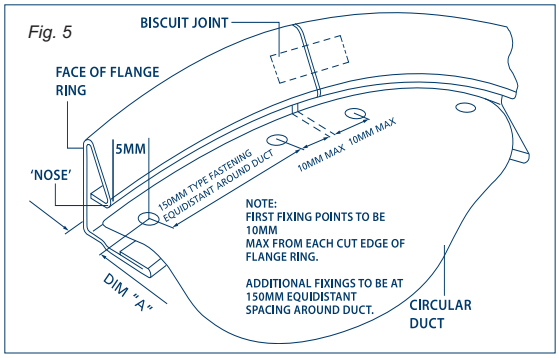
When selecting a starting point to fit the complete ring assembly and to ensure a good seal, where possible position the break point of the first flange ring a minimum of 100mm from the cut seam of the spirally wound ductwork.

To apply the ring, push one of the flange rings onto the end of the duct. Starting at the opposite point away from the break point shown as (A) on Fig.4. Ease both sides of the flange ring into place working towards the break point (B). Hold both sides of the ring and snap the joint into place. Pay particular attention if there is a *biscuit joint and engage the biscuit in place before snapping the joint closed. *N.B. biscuit joints are currently fitted to all 30 series rings.



The flange rings are manufactured to high tolerances and are designed to be fitted without the need for cutting. On occasions however it may be necessary to cut back the flange ring to give an optimum fit.

Once the flange ring is in the correct position the ring must be secured to the duct. The fastening fixing point dimension "A" below in Fig. 5 is measured from the edge of the flange ring 'Nose' and out 5mm. This measurement can be used with all ring sizes.



To complete the fitting of the flange ring insert a bead of DVS01 non-toxic permanently non-setting flange †sealant (or use only fully tested to DW144 High Velocity permanently flexible Duct Sealant), applied down the seam where the break in the flange ring occurs Fig.6. This can be undertaken at the time of fitting the flange ring or to avoid being damaged in transit could be applied just prior to installation. Process is then repeated on the opposite end of the duct with the second flange ring.

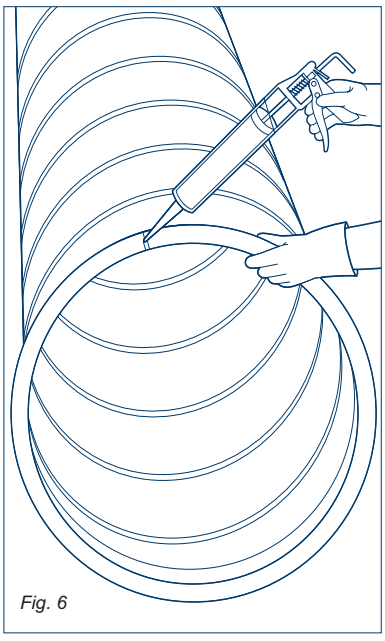


Fig. 6

Safety Warning

During installation, the ductwork must be suitably and independently supported. The VerroLoc flange joint is **NOT** self-supporting. Ducts should be independently suspended when mating. We do not recommend joining two pieces of ductwork on the ground with the VerroLoc ring and lifting them into place as this too will cause undue stress on the joint. There may not also be sufficient integral strength to suspend the joint at that point using wire rope.

Please also note: DW144 Second Edition 2013, table 17 refers to "maximum spacing" centres of 3000mm. Note 1 clearly states, "maximum spacing relate solely to duct weight considerations. Closer spacing may be required by reason of the limitations of the buildings structure or to achieve the necessary duct rigidity". This is not a recommended method of hanging ductwork.

Please make sure you are wearing PPE equipment when handling any exposed metal edges as these can sometimes be sharp.

Assembly Instructions

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If not applied at the time of assembly, apply a bead of DW144 Approved HV flexible duct sealant along the full length of the internal break of the flange profile. This process to be undertaken on each pair of mating flanges. (Fig.6)

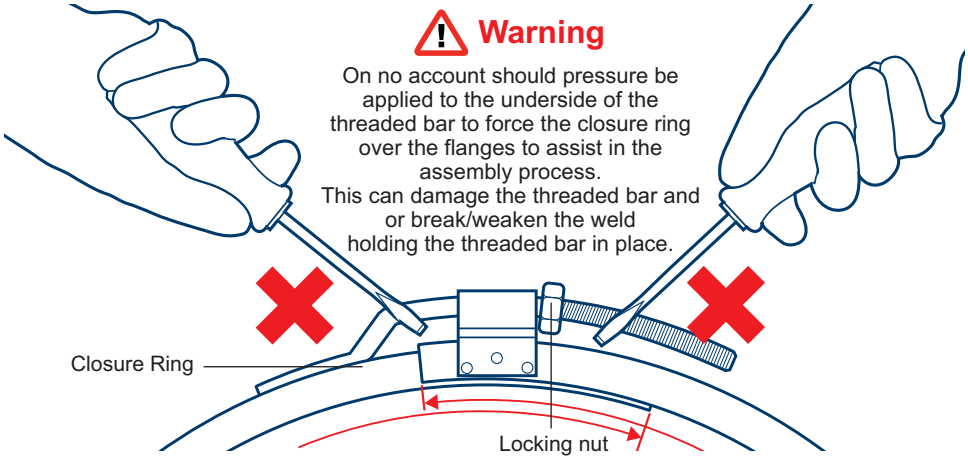
Thread closure fixing

When using Closure ring with thread Fixing - Place closure ring over end of duct, line up mating ducts, ensure that the break in each flange ring is not in line.

Clamp the two flange rings together using the appropriate vice clamps, ensuring that the vice clamps also go over the closure ring; more than one pair of clamps may be required dependant on the duct size. Fit the closure ring around the two mating flange rings, ensuring both ends overlap (as diagram below) before finally tightening the locking nut to pull both faces of flange rings together, remove vice clamps.

Using a rubber mallet, tap around the outer edge of the closure ring to ensure flange rings are correctly aligned;

To prevent over tightening of the closure ring during assembly a Torque spanner must be used to tighten up the nut on the threaded bar. Apply only maximum recommended pressures of 12NM on the 15mm and 20mm Flange Rings and 20NM on the 30mm Flange Rings. (Fig. 7&8)



Ensure that the Closure Ring ends overlap each other before tightening the locking nut

Clasp closure fixing

When using the Clasp Closure ring - Place closure ring over end of duct. Line up mating ducts, ensuring that the break in each flange ring is not in line. (Fig. 9)

Clamp the two flange rings together using the appropriate vice clamps ensuring that the vice clamps also go over the closure ring, more than one pair of clamps may be required dependant on the duct size. Fit the closure ring around the two mating flange rings, pull over the closing arm to pull the two sections together, remove the vice clamps.

Using a rubber mallet tap around the outer edge of the closure ring to ensure flange rings are correctly aligned, engage safety arm, insert safety wedge to prevent accidental opening. (Fig.10)

Gasket

Whilst the complete joints were not tested with Gasket between the faces of the flange rings gasket can be applied to the face of one flange prior to assembly. It is recommended to use DVL DS570 gasket. Supplied in green for ease of identification. DS570 is a cross linked medium density PVC closed cell foam combined with a high grab adhesive.

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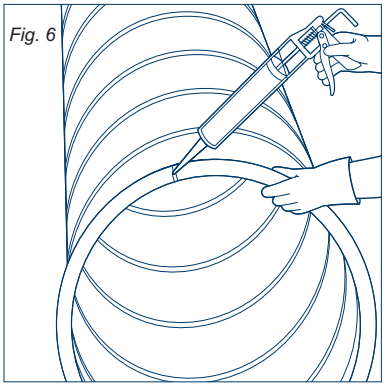
Fig. 6

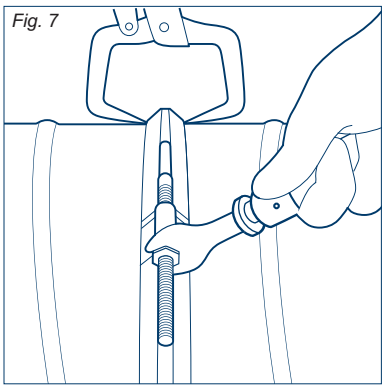
Fig. 7

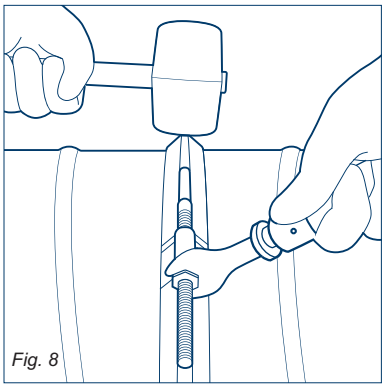
Fig. 8

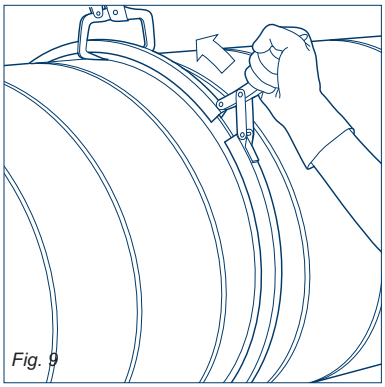
Fig. 9

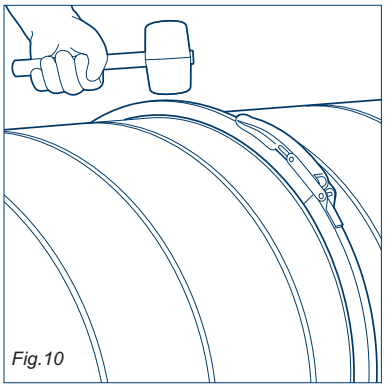
Fig.10

Installation Instructions

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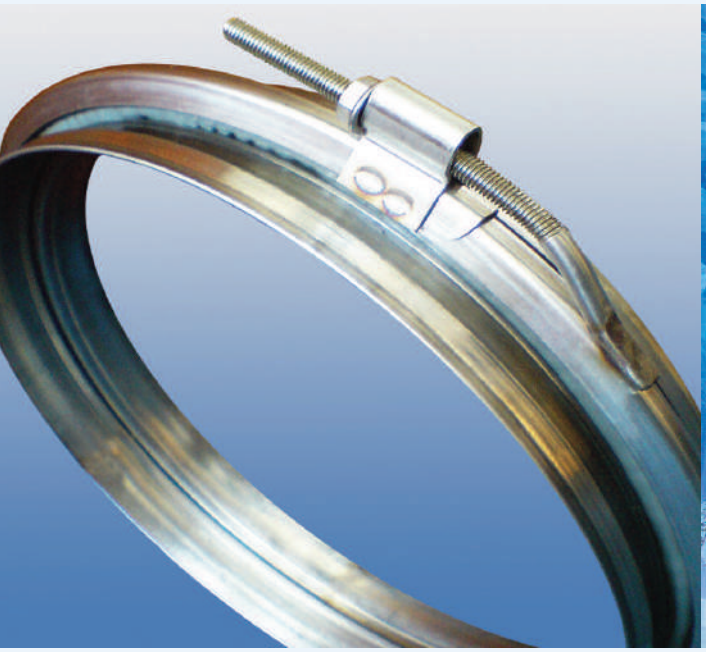

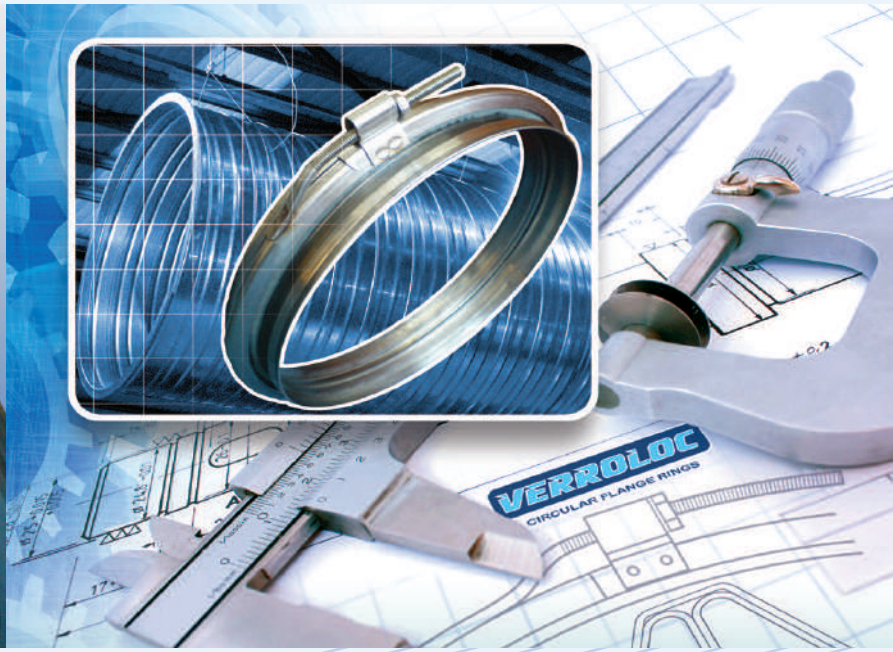

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