Penstock & Valve Specialists

EXPRESS VALVE SERVICES LIMITED
Units 18/19 The Wallows Industrial Estate
Dudley Road, Brierley Hill
West Midlands, DY5 1HR

Tel: 01384 263872
Fax: 01384 480148
e-mail: sales@expressvalves.co.uk

INSTALLATION RECOMMENDATIONS FOR VENTILATING COLUMNS

Please read the following notes prior to commencing installation of the ventilating column(s) and if in doubt contact Express Valve Services Limited.

General Notes

For transportation purposes ventilating columns are despatched as several sub-assemblies;

- Cast Iron Base Unit
- GRP Column
- Aluminium Coronet (for use with wire cage)
- Cowl or Wire Cage
- Debris platform and box – two halves (supplied on request)

The GRP column is supplied with a protective covering to avoid damage during transit, retain the column in this condition until installation of the equipment. Store the GRP column horizontally providing adequate support to avoid distortion.

If chains or slings are to be used for handling purposes the cast iron base should be protected from damage with cloth sacking or a similar material. Never use hooks unless eyebolts are fitted.

The cast iron base must be securely fixed to a solid foundation or plinth.

Recommended Installation Procedure – Base Unit

Ensure the mounting surface for the cast iron base is reasonably flat.

Expanding Anchor Bolts

1. Present the cast iron base unit into its required position on the civil foundation or plinth using the appropriate lifting equipment.
2. Using the cast iron base unit as a template, drill all holes to the diameter and depth specified for the anchor bolts to be used.
3. The protective coating inside the base unit holes may be damaged during the drilling operation. Any damage should be made good immediately after drilling in accordance with the paint specification to prevent corrosion.
4. Move the base unit to provide safe access to the drilled anchor bolt holes. Blow/remove dust or debris from the drilled holes.
5. Place packing pieces or jacks of the required grout thickness as close as possible to the fixing. Carefully lower the base unit onto the packing pieces or jacks ensuring the flange holes are in alignment with the drilled anchor bolt holes.
6. Insert all of the anchor bolts into the holes and tighten sufficiently to ‘nip’ the packing piece or jack.
7. Check for plumb and level in all directions and adjust jacks or insert additional packing pieces to compensate for irregularities in the civil work.
8. Tighten all of the anchor bolts sufficiently to ensure movement of the base unit does not occur during grouting.

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Chemical/Resin Anchor Bolts

1. Implement steps 1 to 4 inclusive for Expanding Anchor Bolts above.
2. Follow the recommendations and instructions provided separately with the chemical/resin anchor bolts.
3. Move the base unit to provide safe access to the drilled anchor bolt holes. Blow/remove dust or debris from the drilled holes.
4. Place and support all of the anchor studs in the centre of each hole 'square' to the civil work mounting surface until the resin is fully cured. If the studs are not kept square then the base unit may become 'wedged' by the misaligned studs.
5. Place packing pieces or jacks of the required grout thickness as close as possible to the fixing. Carefully lower the base unit onto the packing pieces or jacks ensuring the flange holes are in alignment with the anchor studs.
6. Fit washers and nuts to the anchor studs. Tighten the anchor bolt sufficiently to 'nip' the packing piece or jack.
7. Check for plumb and level in all directions and adjust jacks or insert additional packing pieces to compensate for irregularities in the civil work.
8. Tighten all of the anchor bolts sufficiently to ensure movement of the base unit does not occur during grouting.

Notes: Anchor Bolts

1. The anchor bolts manufacturers installation guidelines must be followed for safe application and use of their products.
2. When 'plated' steel anchor bolts are used the exposed portion of the bolt should be applied with a protective coating to avoid corrosion.

Shuttering and Grouting

1. Shutter up around the internal opening and external flange of the base unit.
2. Check again for plumb and level in all directions. If correct mix and pour a fluid grout in proportions of 50 Kg of Ordinary Portland Cement, 50 Kg of silver sand and one small tub (0.227 Kg) of Conbex or equivalent non-shrink additive between the base unit flange and civil work.
3. Leave the installation undisturbed for the duration of the grout curing cycle as recommended by the Conbex or equivalent additive manufacturer. When the grout is fully cured, check that the anchor bolts are still tight in sequence (i.e. when one bolt has been checked follow on with bolt diagonally or diametrically opposite).
4. If all anchor bolts are tight then remove the accessible shuttering and generally clean-up and remove any excess grout or debris from around the base unit.
5. Exposed portions of plated steel anchor bolts should be painted on completion of the installation.
6. Do not cut off protruding threads on chemical anchor studs when fitted.

Installation Procedure –GRP Column

Install the column in calm weather to facilitate the installation.

1. Remove the protective covering on the GRP tube.
2. **Coronet and Wire Cage Assembly** – The coronet is provided with a recess for fitting onto the GRP tube complete with a series of socket head screws, and one recess for fixing and locating the wire cage.
3. Insert the extended wire 'legs' through the hole in the coronet (non-socket screw recess) and fully seat in the recess. Deform the wire 'legs' to secure.

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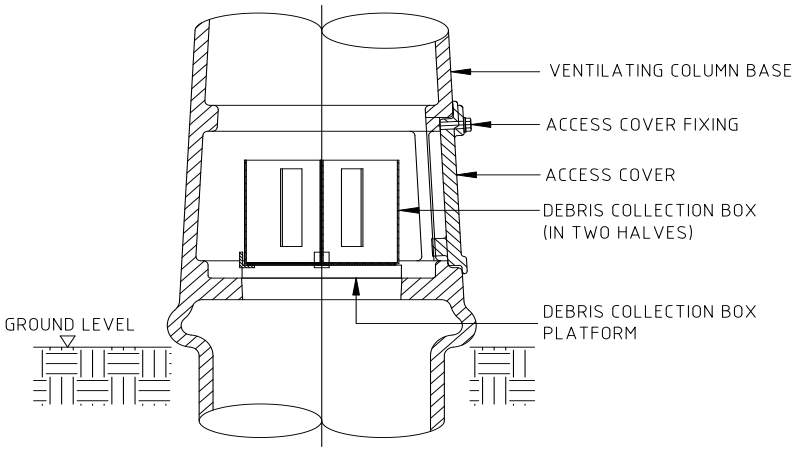
4. **Cowl assembly** – The cowl is provided with a series of socket head screws for direct assembly onto the GRP tube.
5. Slide the coronet/cowl assembly onto the end of the GRP tube and secure with the screws provided.
6. The equipment/method used for installation of the column will depend on the size of ventilating column tube and length. Additional support may be required during installation for long columns.
7. Raise and slide the column into the base unit until it seats on the internal taper. The end of the column should be approximately 500mm above the ground level datum. NOTE: Ensure the tube does not obscure the ventilation mesh in the cowl.
8. The base unit is provided with a recess to accept non-shrink grout/resin for a seal between base unit and column.
9. Insert three or four packing pieces equally spaced between the base unit recess and the GRP column. Check the column for plumb adjusting the packing pieces as necessary.
10. Re-check the column for plumb.
11. Pour non-shrink grout or resin into the base unit recess and allow to fully cure.

Debris Box Assembly

The debris platform and box is supplied as separate item to avoid loss and/or damage and requires assembly on completion of the installation.

1. Remove the access cover and retain the fastener for re-assembly of the access cover.
2. Place the debris platform inside the access port, ensure the platform is horizontal and fully seated.
3. Place one half of the debris box on the platform in a position to facilitate fitting of the other half of the debris box.
4. Ensure both halves of the debris box are correctly seated.
5. Replace the access cover and fastener.
6. Ensure the cover is securely fixed.



SECTION THRO' ACCESS HATCH ON C/L