



**EMFLEX<sup>®</sup>**

## **WRAS Approved Rubber Flexible Connectors**

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# WRAS Approved Rubber Flexible Connectors

EMFLEX EPDM (Ethylene Propylene Diene Monomer) WRAS approved rubber flexible connectors are comprised of a synthetic rubber membrane reinforced with nylon. The collars are wire reinforced and the unit is complete with carbon steel flanges. They are capable of absorbing movement in several directions; axial compression, axial elongation and lateral deflection. A small amount of angular movement may also be allowed. They are normally installed in the pipework to isolate various items of plant which produce noise and vibration. These flexible connectors effectively dampen the transmission of sound and vibration from plant items in building services installations.



## TYPE WRAS Untied

EPDM rubber membrane reinforced with a nylon textile cord and fitted with untied (circular) zinc plated carbon steel flanges. Suitable for use on potable services under 4 bar working pressure.

## TYPE WRAS Tied

EPDM rubber membrane reinforced with a nylon textile cord and fitted with tied (oval) zinc plated carbon steel flanges complete with isolating tie bars. Suitable for use on potable services under 10 bar working pressure.

| Nominal Bore | Installed Overall Length | Untied & Tied Unit Axial Compression | Untied Units Only Axial Elongation | Untied & Tied Unit Lateral Deflection |
|--------------|--------------------------|--------------------------------------|------------------------------------|---------------------------------------|
| mm           | mm                       | mm                                   | mm                                 | mm                                    |
| 25           | 130                      | 12                                   | 9                                  | 12                                    |
| 32           | 130                      | 12                                   | 9                                  | 12                                    |
| 40           | 130                      | 12                                   | 9                                  | 12                                    |
| 50           | 130                      | 12                                   | 9                                  | 12                                    |
| 65           | 130                      | 12                                   | 9                                  | 12                                    |
| 80           | 130                      | 12                                   | 9                                  | 12                                    |
| 100          | 130                      | 14                                   | 9                                  | 12                                    |
| 125          | 130                      | 14                                   | 9                                  | 12                                    |
| 150          | 130                      | 14                                   | 9                                  | 12                                    |
| 200          | 130                      | 14                                   | 9                                  | 12                                    |
| 250          | 130                      | 14                                   | 9                                  | 12                                    |
| 300          | 200                      | 14                                   | 9                                  | 12                                    |
| 350          | 200                      | 14                                   | 9                                  | 12                                    |

### Working Pressure:

4 bar (400kPA) for untied units, unless pipe is secured.  
10 bar (1000kPA) for tied units with top hat washers.  
16 bar (1600kPA) PLEASE CONTACT OUR OFFICES.

**Test Pressure:** 1.5 x Working Pressure

**Working Temperature:** -10°C to 90°C

### Key Features:

- Fully traceable and has the date of manufacture, nominal diameter, manufacturer, and type permanently moulded into the membrane.
- Noise and vibration reduction capabilities.
- All Tied units are fitted with noise absorbing top hat washers.

### Design Consideration:

Rubber flexible connectors are subjected to the same internal pressure force as metal expansion joints and that the same force is equal to the internal pressure multiplied by the maximum internal area. This force causes the connector to lengthen and tied units are recommended where the working pressure exceeds 4 bar, unless the pipework is secured to restrict movement.

Tie rods are fitted through oval flanges and to isolate the tie-rods from the special neoprene top hat washers are used to prevent any metal to metal contact whatsoever, effectively preventing noise transmission.

After Installation of TIED UNITS the tie-rod nuts should be checked to have 1mm clearance over the steel washers.

When using with items of plant mounted on vibration isolators, such as springs or inertia bases, then TIED units must be installed.