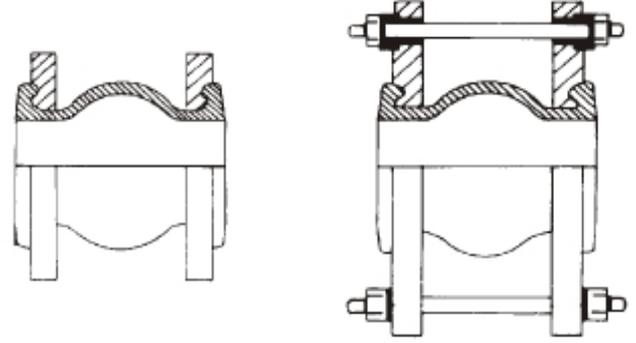


# EMFLEX<sup>®</sup>

## Chlorobutyl Rubber Flexible Connectors

EMFLEX chlorobutyl (often shortened to butyl) 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 BB Untied

Chlorobutyl rubber membrane reinforced with a nylon textile cord and fitted with untied (circular) zinc plated carbon steel flanges. Suitable for use on hot water and chilled water under 4 bar unless the pipework is secured.

### Type BB Tied

Chlorobutyl 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 hot water and chilled water under 10 bar.

| Nominal Bore | Installed Overall Length | Untied & Tied Unit | United Units Only | Untied & Tied Unit |
|--------------|--------------------------|--------------------|-------------------|--------------------|
|              |                          | Axial Compression  | Axial Elongation  | Lateral Deflection |
| mm           | mm                       | mm                 | mm                | mm                 |
| 25           | 95                       | 8                  | 4                 | 8                  |
| 32           | 95                       | 8                  | 4                 | 8                  |
| 40           | 95                       | 8                  | 4                 | 8                  |
| 50           | 105                      | 8                  | 4                 | 8                  |
| 65           | 115                      | 12                 | 6                 | 10                 |
| 80           | 130                      | 12                 | 6                 | 10                 |
| 100          | 135                      | 18                 | 10                | 12                 |
| 125          | 170                      | 18                 | 10                | 12                 |
| 150          | 180                      | 18                 | 10                | 12                 |
| 200          | 205                      | 25                 | 14                | 22                 |
| 250          | 240                      | 25                 | 14                | 22                 |

#### 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.

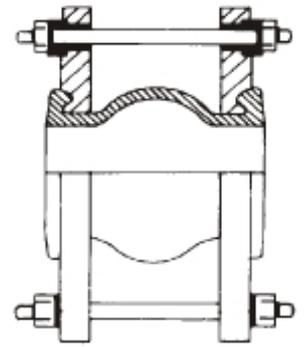
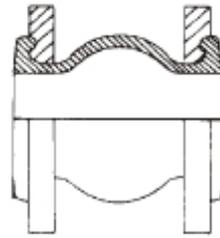
After Installation of TIED UNITS the tie-rod nuts should be checked to have 1mm clearance over the steel washers.

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

# EMFLEX<sup>®</sup>

## Rubber Flexible Connectors (130mm Long)

EMFLEX EPDM (Ethylene Propylene Diene Monomer) 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 EE Untied

EPDM rubber membrane reinforced with a nylon textile cord and fitted with untied (circular) zinc plated carbon steel flanges. Suitable for use on hot water and chilled water under 4 bar unless the pipework is secured.

### Type EE 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 hot water and chilled water under 10 bar.

| Nominal Bore | Installed Overall Length | Untied & Tied Unit | Untied Units Only | Untied & Tied Unit |
|--------------|--------------------------|--------------------|-------------------|--------------------|
|              |                          | Axial Compression  | Axial Elongation  | 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                 |

#### 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.

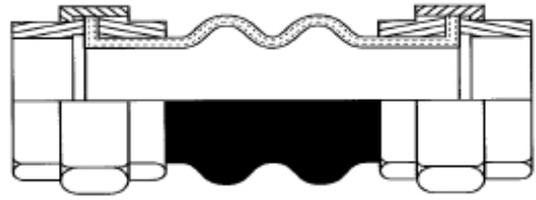
After Installation of TIED UNITS the tie-rod nuts should be checked to have 1mm clearance over the steel washers.

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

# EMFLEX<sup>®</sup>

## Twin Sphere Rubber Flexible Connectors

EMFLEX twin sphere rubber flexible connectors are comprised of a twin sphere or double bubble synthetic rubber membrane reinforced with nylon. The collars are wire reinforced and the unit is complete with galvanised or stainless steel female unions. 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 TS

EPDM rubber membrane reinforced with a nylon textile cord and fitted with galvanised female unions. Suitable for steel pipework.

### Type TSN

EPDM rubber membrane reinforced with a nylon textile cord and fitted with stainless steel female unions. Suitable for use on copper pipework.

| <i>Nominal Size</i> | <i>Installed Length</i> | <i>Axial Compression</i> | <i>Axial Elongation</i> | <i>Lateral Movement</i> | <i>Angular Movement</i> |
|---------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|
| mm                  | mm                      | mm                       | mm                      | +/- mm                  | Deg                     |
| 20                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 25                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 32                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 40                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 50                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 65                  | 203                     | 22                       | 6                       | 22                      | 40                      |
| 80                  | 204                     | 22                       | 6                       | 22                      | 40                      |

#### Working Pressure:

**Maximum Working Pressure:** 6 bar

**Test Pressure:** 1.5 x Working Pressure.

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

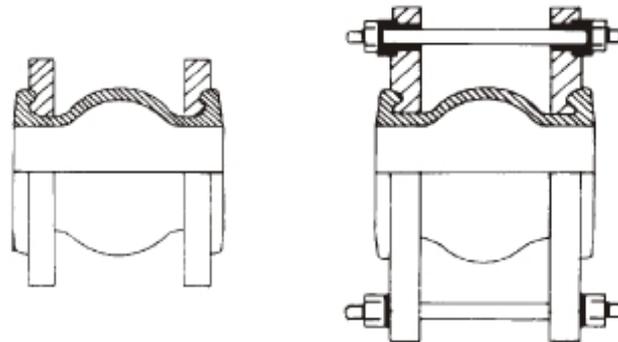
#### Design Consideration:

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.

# EMFLEX<sup>®</sup>

## EPDM Rubber Flexible Connectors DIN4809

EMFLEX EPDM (Ethylene Propylene Diene Monomer) rubber flexible connectors are comprised of a synthetic rubber membrane reinforced with a high tensile polymer textile cord. 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 RR Untied

EPDM rubber membrane reinforced with a high tensile cord and fitted with untied (circular) zinc plated carbon steel flanges. Suitable for use on hot water and chilled water under 4 bar unless the pipework is secured. They are approved to DIN4809 for use in heating plants and are fully certified to this affect.

### Type RR 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 hot water and chilled water under 10 bar. They are approved to DIN4809 for use in heating plants and are fully certified to this affect.

| Nominal Bore<br>mm | Installed Overall<br>Length<br>mm | Untied & Tied Unit<br>Axial Compression | United Units Only<br>Axial Elongation | Untied & Tied Unit<br>Lateral Deflection |
|--------------------|-----------------------------------|---|---------------------------------------|--|
|                    |                                   | mm                                      | mm                                    | mm                                       |
| 25                 | 130                               | 30                                      | 30                                    | 30                                       |
| 32                 | 130                               | 30                                      | 30                                    | 30                                       |
| 40                 | 130                               | 30                                      | 30                                    | 30                                       |
| 50                 | 130                               | 30                                      | 30                                    | 30                                       |
| 65                 | 130                               | 30                                      | 30                                    | 30                                       |
| 80                 | 130                               | 30                                      | 30                                    | 30                                       |
| 100                | 130                               | 30                                      | 30                                    | 30                                       |
| 125                | 130                               | 30                                      | 30                                    | 30                                       |
| 150                | 130                               | 30                                      | 30                                    | 30                                       |
| 200                | 130                               | 30                                      | 30                                    | 30                                       |
| 250                | 130                               | 30                                      | 30                                    | 30                                       |

**Working Pressure:** 10 bar (1000kPA)

**Test Pressure:** 1.5 x Working Pressure

**Working Temperature:** -10°C to 100°C

#### Key Features:

Complies with DIN4809 Parts 1 & 2 and is fully approved and certified to this affect.

Verified burst pressure of 30 bar gauge minimum after 10 years service. An increased safety point.

Fully traceable and has the date of manufacture, DIN approval registration number, pressure and temperature rating, nominal diameter, manufacture, type and identifiable colour coding permanently moulded into the membrane.

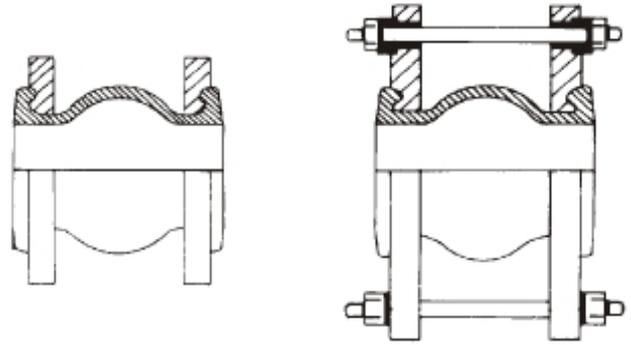
Laboratory tested for noise and vibration reduction capabilities. Tied units are fitted with noise absorbing top hat washers.



# EMFLEX<sup>®</sup>

## Butyl/EPDM Rubber Flexible Connectors to DVGW

EMFLEX Butyl/EPDM compounded rubber flexible connectors are Comprised of a synthetic rubber membrane reinforced with a nylon textile cord. The collars are wire reinforced and the unit is complete with carbon steel flanges. They are capable of 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 and water supply installations.



### Type R Untied or Tied

Butyl/EPDM rubber membrane reinforced with a nylon textile cord and fitted with 'untied' or 'tied' carbon steel flanges. Suitable for use with hot water, chilled water and drinking water. They are approved by DVGW for use with drinking water and are fully certified to this best.



| Nominal Bore | Installed Overall Length | Untied & Tied Unit | United Units Only | Untied & Tied Unit |
|--------------|--------------------------|--------------------|-------------------|--------------------|
|              |                          | Axial Compression  | Axial Elongation  | Lateral Deflection |
| mm           | mm                       | mm                 | mm                | mm                 |
| 25           | 130                      | 30                 | 30                | 30                 |
| 32           | 130                      | 30                 | 30                | 30                 |
| 40           | 130                      | 30                 | 30                | 30                 |
| 50           | 130                      | 30                 | 30                | 30                 |
| 65           | 130                      | 30                 | 30                | 30                 |
| 80           | 130                      | 30                 | 30                | 30                 |
| 100          | 130                      | 30                 | 30                | 30                 |
| 125          | 130                      | 30                 | 30                | 30                 |
| 150          | 130                      | 30                 | 30                | 30                 |
| 200          | 130                      | 30                 | 30                | 30                 |
| 250          | 130                      | 30                 | 30                | 30                 |

**Working Pressure:** 10 Bar (1000KPA)

**Test Pressure:** 1.5 x Working Pressure.

**Working Temperature:** up to 90°C

#### Key Features:

- Complies with DVGW use with drinking water and is fully approved and certified to this effect.
- Fully traceable and has the date of manufacture, pressure and temperature rating, nominal diameter, manufacturer, type identifiable colour permanently moulded into the membrane.
- Noise and vibration reduction capabilities. Tied units are fitted with noise absorbing top hat washers up to 300mm nominal size are supplied with metal hemispherical 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 tier-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.