

## Silicone Bellows Expansion Joints

**Vibration transmission through connections within pipeline systems must be avoided to minimize risks and damage to the system, equipment, and personnel. To ensure flawless operation of the system it is necessary to insert flexible parts to the pipeline system to reduce these vibrations.**

For pipeline systems with relatively small diameters and pressures up to 4 bar, Trelleborg offers cost-effective silicone bellows to provide the vibration isolation and flexibility necessary. Our portfolio consists of many affordable bellows for various applications. Trelleborg provides the appropriate bellows that compensate movement, expansion or misalignment in the system.

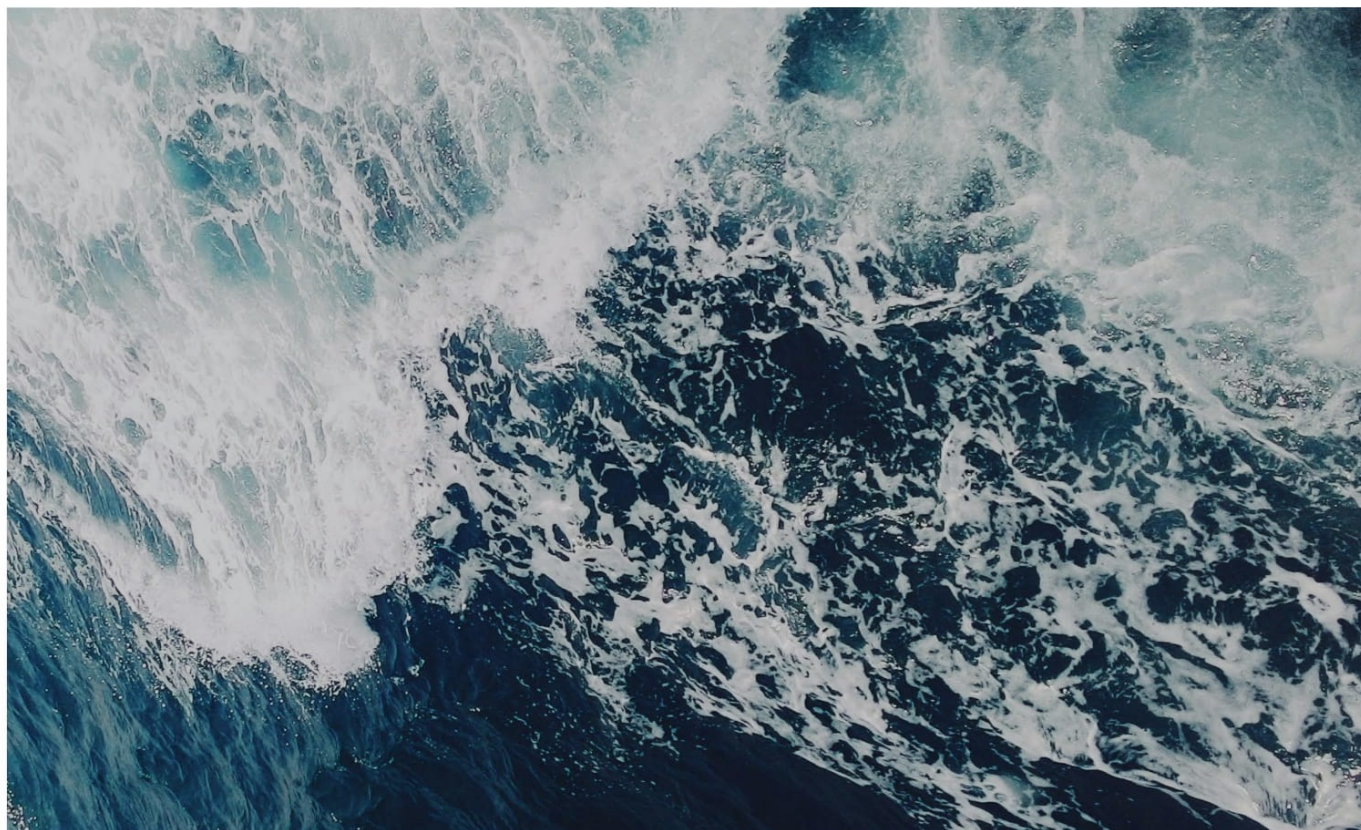
Our silicone bellows are commonly used as connectors in various applications like cooling water systems, air supply systems and pipelines for oil and solvents.

### ADVANTAGES

- Suitable for relatively high temperatures
- Various variations available (dimensions, medium)
- Versions with reinforcement rings available
- Special versions for use with saltwater, oils, chemicals, and solvents
- Easy installation with PARI clamps
- Stock item

### APPLICATION EXAMPLES

- Cooling water systems
- (Clean) air supply systems
- Turbo air charge systems
- Pipeline systems for chemicals



## TWINFIT FLUOR BLUE & CLAMPING BANDS

### APPLICATION

Twinfit Fluor Blue silicone bellows provide an extremely flexible connection for cooling water systems, clean air supply, and turbo air charge systems. This type is oil resistant and suitable for applications with very high temperatures.

- Temperature range from  $-60^{\circ}\text{C}$  up to  $+250^{\circ}\text{C}$
- Maximum working pressure 4 bar at  $120^{\circ}\text{C}$

### CONSTRUCTION

The Twinfit silicone bellows are constructed with:

- High-quality Black Fluor silicone rubber inner tube
- Heavy-duty DuPont Nomex cord reinforcement
- Blue silicone rubber cover
- Three stainless steel reinforcement rings on the outside
- Special beads on each end for positioning the clamping bands

### CLAMPING BANDS

We recommend using our heavy-duty clamping bands. The clamping bands are either made of zinc-plated carbon steel or full stainless steel.

### MOVEMENTS

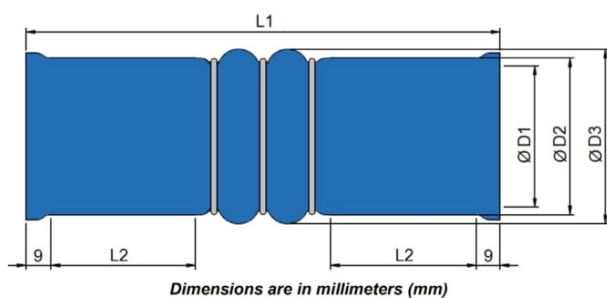
Compression and elongation 13 mm. Lateral 3 mm.

### GENERAL

A minimum distance of 50 or 69 mm, depending on bellow size, between the pipe ends is needed for secure operation. On a TwinFit Fluor Blue clamping bands should be used.



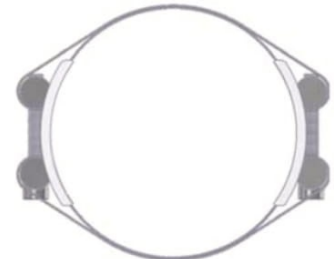
### TECHNICAL DRAWING



I-1 part



II-2 parts



## TWINFIT FLUOR BLUE & CLAMPING BANDS

### PRODUCT DATA: TWINFIT FLUOR BLUE

| PART NO.    | INSIDE DIAMETER<br>D1 [MM] | OUTSIDE DIAMETER<br>D2 [MM] | BELLOWS DIAMETER<br>D3 [MM] | NEUTRAL LENGTH<br>L1 [MM] | CUFF LENGTH<br>L2[MM] |
|-------------|----------------------------|-----------------------------|-----------------------------|---------------------------|-----------------------|
| 300 062 034 | 34                         | 39                          | 42                          | 178                       | 55                    |
| 300 062 038 | 38                         | 44                          | 47                          | 178                       | 55                    |
| 300 062 042 | 42                         | 48                          | 55                          | 178                       | 55                    |
| 300 062 048 | 48                         | 53                          | 60                          | 178                       | 55                    |
| 300 062 054 | 54                         | 59                          | 66                          | 178                       | 55                    |
| 300 062 060 | 60                         | 65                          | 69                          | 185                       | 60                    |
| 300 062 076 | 76                         | 80                          | 90                          | 188                       | 60                    |
| 300 062 080 | 80                         | 85                          | 90                          | 214                       | 65                    |
| 300 062 089 | 89                         | 94                          | 106                         | 214                       | 65                    |
| 300 062 108 | 108                        | 112                         | 124                         | 217                       | 65                    |
| 300 062 114 | 114                        | 118                         | 124                         | 217                       | 65                    |
| 300 062 133 | 133                        | 138                         | 144                         | 217                       | 65                    |
| 300 062 139 | 139                        | 144                         | 154                         | 217                       | 65                    |

### PRODUCT DATA: CLAMPING BANDS

| FOR BELLOW<br>PART NO. | CLAMP TYPE | CLAMP<br>ST.37 ZINC-PLATED<br>PART NO. | CLAMP<br>STAINLESS STEEL AISI 304<br>PART NO. | REQUIRED<br>QUANTITY |
|------------------------|------------|----------------------------------------|-----------------------------------------------|----------------------|
| 300 062 034            | I-1 part   | 300 070 040                            | 300 071 040                                   | 4                    |
| 300 062 038            | I-1 part   | 300 070 045                            | 300 071 045                                   | 4                    |
| 300 062 042            | I-1 part   | 300 070 050                            | 300 071 050                                   | 4                    |
| 300 062 048            | I-1 part   | 300 070 055                            | 300 071 055                                   | 4                    |
| 300 062 054            | I-1 part   | 300 070 060                            | 300 071 060                                   | 4                    |
| 300 062060             | I-1 part   | 300 070 065                            | 300 071 065                                   | 4                    |
| 300 062 076            | I-1 part   | 300 070 080                            | 300 071 085                                   | 4                    |
| 300 062 080            | I-1 part   | 300 070 085                            | 300 071 085                                   | 4                    |
| 300 062 089            | II-2 parts | 300 080 095                            | 300 081 095                                   | 4                    |
| 300 062 108            | II-2 parts | 300 080 115                            | 300 081 115                                   | 4                    |
| 300 062 114            | II-2 parts | 300 080 125                            | 300 081 120                                   | 4                    |
| 300 062 133            | II-2 parts | 300 080 140                            | 300 081 140                                   | 4                    |
| 300 062 139            | II-2 parts | 300 080 150                            | 300 081 150                                   | 4                    |

## TYPE A-BLUE & CLAMPING BANDS

### APPLICATION

Trelleborg Type A-Blue silicone bellows provide an extremely flexible connection for general purposes. These all-round silicone bellows are typically used in cooling water systems and pipe systems for clean air. The Type A-Blue silicone bellow is suitable for applications with very high temperatures.

- Temperature range from  $-60^{\circ}\text{C}$  up to  $+180^{\circ}\text{C}$ .
- Maximum working pressure 4 bar at  $20^{\circ}\text{C}$ .

### CONSTRUCTION

Type A-Blue silicone bellows are constructed with:

- Red silicone rubber inner tube
- Polyester reinforcements
- Blue silicone outer cover

### GENERAL

Due to its construction, the required distance between the two pipe ends connected by the bellows may vary from 5 to 15 mm for secure operation. On a Type A-Blue silicone bellow, the use of heavy-duty clamping bands is recommended.



### PRODUCT DATA: TYPE A BLUE

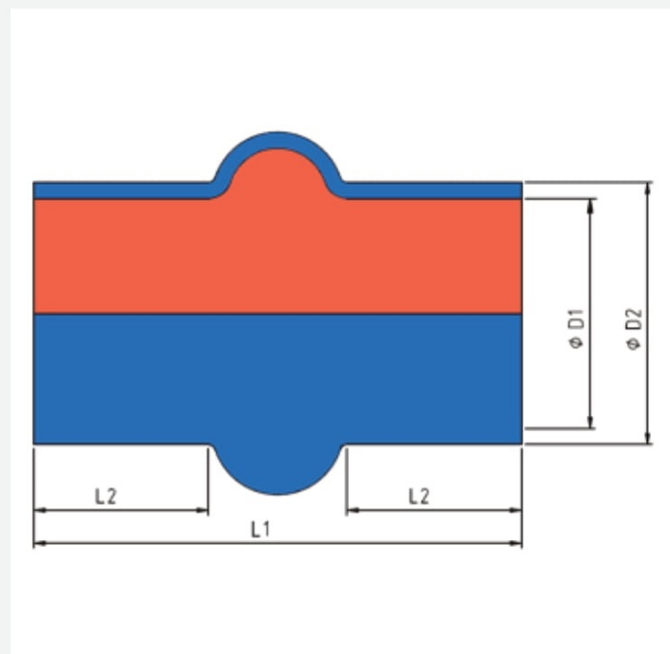
| PART NO.    | INSIDE DIAMETER<br>D1<br>[MM] | OUTSIDE DIAMETER<br>D2<br>[MM] | NEUTRAL LENGTH<br>L1<br>[MM] | CUFF LENGTH<br>L2<br>[MM] |
|-------------|-------------------------------|--------------------------------|------------------------------|---------------------------|
| 300 060 034 | 34                            | 45                             | 130                          | 47                        |
| 300 060 038 | 38                            | 49                             | 130                          | 47                        |
| 300 060 042 | 42                            | 53                             | 130                          | 47                        |
| 300 060 048 | 48                            | 59                             | 130                          | 47                        |
| 300 060 054 | 54                            | 64                             | 130                          | 47                        |
| 300 060 057 | 57                            | 69                             | 130                          | 47                        |
| 300 060 060 | 60                            | 71                             | 130                          | 47                        |
| 300 060 064 | 64                            | 75                             | 130                          | 47                        |
| 300 060 070 | 70                            | 81                             | 170                          | 62                        |
| 300 060 076 | 76                            | 87                             | 170                          | 62                        |
| 300 060 080 | 80                            | 91                             | 170                          | 62                        |
| 300 060 085 | 85                            | 97                             | 170                          | 62                        |
| 300 060 089 | 89                            | 101                            | 170                          | 62                        |
| 300 060 108 | 108                           | 120                            | 170                          | 62                        |
| 300 060 114 | 114                           | 126                            | 170                          | 62                        |
| 300 060 133 | 133                           | 145                            | 170                          | 62                        |
| 300 060 139 | 139                           | 152                            | 170                          | 62                        |

## TYPE A-BLUE & CLAMPING BANDS

### PRODUCT DATA: CLAMPING BANDS

| FOR BELLOW<br>PART NO. | CLAMP TYPE | CLAMP<br>ST.37 ZINC-PLATED<br>PART NO. | CLAMP STAINLESS STEEL<br>AISI 304<br>PART NO. | REQUIRED QUANTITY |
|------------------------|------------|----------------------------------------|-----------------------------------------------|-------------------|
| 300 060 034            | I-1 part   | 300 070 045                            | 300 071 045                                   | 2                 |
| 300 060 038            | I-1 part   | 300 070 050                            | 300 071 050                                   | 2                 |
| 300 060 042            | I-1 part   | 300 070 055                            | 300 071 055                                   | 2                 |
| 300 060 048            | I-1 part   | 300 070 060                            | 300 071 060                                   | 2                 |
| 300 060 054            | I-1 part   | 300 070 065                            | 300 071 065                                   | 4                 |
| 300 060 057            | I-1 part   | 300 070 070                            | 300 071 070                                   | 4                 |
| 300 060 060            | I-1 part   | 300 070 075                            | 300 071 075                                   | 4                 |
| 300 060 064            | I-1 part   | 300 070 080                            | 300 071 080                                   | 4                 |
| 300 060 070            | I-1 part   | 300 070 085                            | 300 071 085                                   | 4                 |
| 300 060 076            | I-1 part   | 300 070 090                            | 300 071 090                                   | 4                 |
| 300 060 080            | II-2 parts | 300 080 095                            | 300 081 095                                   | 4                 |
| 300 060 085            | II-2 parts | 300 080 100                            | 300 081 100                                   | 4                 |
| 300 060 089            | II-2 parts | 300 080 105                            | 300 081 105                                   | 4                 |
| 300 060 108            | II-2 parts | 300 080 125                            | 300 081 125                                   | 4                 |
| 300 060 114            | II-2 parts | 300 080 130                            | 300 081 130                                   | 4                 |
| 300 060 133            | II-2 parts | 300 080 150                            | 300 081 150                                   | 4                 |
| 300 060 139            | II-2 parts | 300 080 160                            | 300 081 160                                   | 4                 |

### TECHNICAL DRAWING



## TYPE A-GREEN & CLAMPING BANDS

### TYPE A-GREEN & CLAMPING BANDS

Trelleborg Type A-Green silicone bellows provide an extremely flexible connection for applications with fluids like saltwater, oils, chemicals, and solvents. Additionally, this specific type of bellows is also suitable for drinking water systems and applications with very high temperatures.

- Temperature range from  $-60^{\circ}\text{C}$  up to  $+180^{\circ}\text{C}$ .
- Maximum working pressure 4 bar at  $20^{\circ}\text{C}$ .

### CONSTRUCTION

Type A-Green silicone bellows are constructed with:

- Special blue fluor-silicone inner tube
- Polyester reinforcements
- Green silicone outer cover

### GENERAL

Due to its construction, the required distance between the two pipe ends connected by the bellows may vary from 5 to 15 mm for secure operation. On a Type A-Green silicone bellow, the use of heavy-duty clamping bands is recommended.

### MOVEMENTS

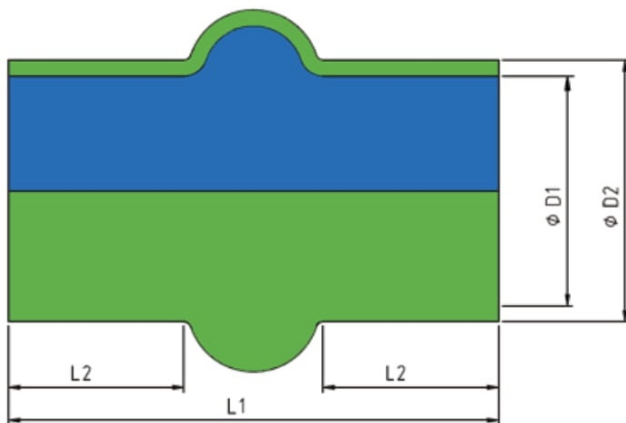
Compression and elongation 3 mm. Lateral 2 mm.



### CLAMPING BANDS

To ensure the operation and safety of this type of bellow, the use of our heavy-duty clamping bands is strongly recommended. These clamping bands are available in zinc-plated carbon steel or full stainless steel.

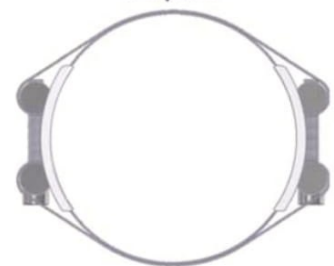
### TECHNICAL DRAWING



I-1 part



II-2 parts



## TYPE A-GREEN & CLAMPING BANDS

### PRODUCT DATA: TYPE A-GREEN

| PART NO.    | INSIDE DIAMETER<br>D1<br>[MM] | OUTSIDE DIAMETER<br>D2<br>[MM] | NEUTRAL LENGTH<br>L1<br>[MM] | CUFF-LENGTH<br>L2<br>[MM] |
|-------------|-------------------------------|--------------------------------|------------------------------|---------------------------|
| 300 050 030 | 30                            | 43                             | 130                          | 45                        |
| 300 050 034 | 34                            | 46                             | 130                          | 45                        |
| 300 050 038 | 38                            | 51                             | 130                          | 45                        |
| 300 050 042 | 42                            | 55                             | 130                          | 52                        |
| 300 050 044 | 44                            | 57                             | 130                          | 52                        |
| 300 050 048 | 48                            | 61                             | 130                          | 60                        |
| 300 050 054 | 54                            | 67                             | 165                          | 60                        |
| 300 050 057 | 57                            | 70                             | 165                          | 60                        |
| 300 050 060 | 60                            | 73                             | 165                          | 60                        |
| 300 050 076 | 76                            | 89                             | 200                          | 75                        |
| 300 050 089 | 89                            | 102                            | 200                          | 75                        |
| 300 050 108 | 108                           | 121                            | 200                          | 75                        |
| 300 050 114 | 114                           | 131                            | 200                          | 75                        |
| 300 050 133 | 133                           | 149                            | 200                          | 75                        |
| 300 050 139 | 139                           | 163                            | 200                          | 75                        |

### PRODUCT DATA: CLAMPING BANDS

| FOR BELLOW<br>PART NO. | CLAMP TYPE | STEEL CLAMP<br>ST.37 ZINC-PLATED<br>PART NO. | CLAMP STAINLESS STEEL<br>AISI 304<br>PART NO. | REQUIRED QUANTITY |
|------------------------|------------|----------------------------------------------|-----------------------------------------------|-------------------|
| 300 050 030            | I-1 part   | 300 070 043                                  | 300 071 045                                   | 2                 |
| 300 050 034            | I-1 part   | 300 070 050                                  | 300 071 050                                   | 2                 |
| 300 050 038            | I-1 part   | 300 070 050                                  | 300 071 050                                   | 2                 |
| 300 050 042            | I-1 part   | 300 070 055                                  | 300 071 055                                   | 2                 |
| 300 050 044            | I-1 part   | 300 070 060                                  | 300 071 060                                   | 2                 |
| 300 050 048            | I-1 part   | 300 070 060                                  | 300 071 060                                   | 2                 |
| 300 050 054            | I-1 part   | 300 070 070                                  | 300 071 070                                   | 4                 |
| 300 050 057            | I-1 part   | 300 070 075                                  | 300 071 070                                   | 4                 |
| 300 050 060            | I-1 part   | 300 070 075                                  | 300 071 075                                   | 4                 |
| 300 050 076            | I-1 part   | 300 070 090                                  | 300 071 090                                   | 4                 |
| 300 050 089            | II-2 parts | 300 080 105                                  | 300 081 105                                   | 4                 |
| 300 050 108            | II-2 parts | 300 080 130                                  | 300 081 120                                   | 4                 |
| 300 050 114            | II-2 parts | 300 080 130                                  | 300 081 130                                   | 4                 |
| 300 050 133            | II-2 parts | 300 080 155                                  | 300 081 150                                   | 4                 |
| 300 050 139            | II-2 parts | 300 080 170                                  | 300 081 170                                   | 4                 |