

Stainless Steel Corrugated Flexible Hose Assemblies

AEROFLEX hose assemblies are engineered to perfection in flexibility, strength and reliability. Aeroflex industries can provide a corrugated stainless steel hose assembly that will meet your most demanding technical specification. We can supply the hose complete with any type of end connections in various types of materials. The end connections are tig welded to hose.



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Modes of Movements

Annular

A hose profile that is designed so each convolution is a separate circle or ring.

Braid

Woven wire cover placed over hose which prevents elongation of the hose and permits higher working pressure.

Static Installations

Where the flexible hose is used to connect misaligned pipes and remain in static position.

Occasional Flexing

Where the hose is required to flex occasionally, such as manually operated equipment.

Constant Flexing

When the hose is required to flex continuously, usually in moving machinery.

Vibration

High frequency, low amplitude movement e.g. On a compressor.

Working Temperature

Temperature to which hose will be subjected during operation.

Static Bend

Minimum center bend radius to which flexible metal hose may be bent for installation.

Safety Factor

Difference between working pressure and rated burst pressure.

| TABLE - 1 TECHNICAL DATA | | | | | | | | |
|--------------------------|---------------------|---------|---|-------------------------------------|---|-------------------------------------|------------------------------------|-------------------------------------|
| NOMINAL BORE | MINIMUM BEND RADIUS | | WITHOUT BRAID | | SINGLE BRAID | | DOUBLE BRAID | |
| | STATIC | FLEXING | MAX. working pressure kg/cm ² | TEST pressure kg/cm ² | MAX. working Pressure kg/cm ² | TEST pressure kg/cm ² | MAX. working kg/cm ² | TEST pressure kg/cm ² |
| N.B. | mm | mm | | | | | | |
| 6 | 25 | 100 | 4 | 6 | 100 | 150 | 160 | 240 |
| 10 | 40 | 150 | 4 | 6 | 90 | 135 | 144 | 216 |
| 12 | 50 | 200 | 3 | 4.5 | 80 | 120 | 128 | 192 |
| 16 | 50 | 200 | 3 | 4.5 | 70 | 105 | 112 | 168 |
| 20 | 70 | 200 | 2 | 3 | 64 | 96 | 102 | 153 |
| 25 | 90 | 200 | 2 | 3 | 50 | 75 | 80 | 120 |
| 32 | 110 | 250 | 1.5 | 2.3 | 40 | 60 | 64 | 96 |
| 40 | 130 | 250 | 1.5 | 2.3 | 30 | 45 | 48 | 72 |
| 50 | 175 | 350 | 1.0 | 1.5 | 28 | 42 | 44 | 66 |
| 65 | 200 | 410 | 1.0 | 1.5 | 24 | 36 | 38 | 57 |
| 80 | 205 | 450 | 1.0 | 1.5 | 18 | 27 | 28 | 42 |
| 100 | 230 | 560 | 0.8 | 1.2 | 16 | 24 | 26 | 39 |
| 125 | 280 | 660 | 0.6 | 0.9 | 12 | 18 | 20 | 30 |
| 150 | 320 | 815 | 0.6 | 0.9 | 10 | 15 | 16 | 24 |
| 200 | 435 | 1015 | 0.5 | 0.75 | 8 | 12 | 12 | 18 |

Stainless Steel Hose Table-1 Technical Data

Temperature Correction Factor

When hoses are required to work at higher temperatures, the working pressure given in Table 1 should be multiplied by the correction factor. This will determine the pressure rating of the hoses for higher temperatures.

Example :

A 50 NB hose is required for a temperature of 200°C and working pressure of 19 kg./cm. The specified pressure for 50 NB single wire braid hose as per table is 28 kg/cm. The correction factor at 20°C is 0.69. Hence the working pressure permissible is $28 \times 0.69 = 19.32$ kg/cm. This is higher than the required pressure i.e. 19.2 kg/cm. Hence single braided hose is recommended.

| TABLE II | | | | | | | | | | | | | | | | | | | | |
|--------------|------|------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Temp (°C) | -200 | -150 | -100 | -50 | 0 | 20 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 |
| Corr. Factor | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.92 | 0.83 | 0.75 | 0.69 | 0.65 | 0.61 | 0.58 | 0.56 | 0.54 | 0.53 | 0.52 | 0.34 | 0.19 | 0.19 |

Temperature Chart Table II