tyco Flow Control

# Design and Applications Guide for Corrugated Flexible Metal Hose.

**Flexible Piping Systems**

## Design and Applications Guide

The selection of the correct metal hose is critical to ensure optimum field performance. To accomplish this, there are a number of important applications requirements that must be known. The guide below will help identify the requirements, and design the most cost-effective, engineered product.
The word "**STAMPED**" is useful as a checklist of applications requirements to be considered.

| Consider | | Check for | Refer to |
|---|---|---|---|
| **Size/Hose & Fittings** | S | • Size of existing piping and mating fittings.<br>• Flow requirements. | • "Hose Technical Data" pages |
| **Temperature** | T | • Maximum service temperature of the application.<br>• Maximum allowable service temperature rating for hose and fitting alloys.<br>• Reduced operating pressure at elevated temperature. | • "Metal Hose Selection Factors" pages for maximum service temperature for alloys and conversion factors. |
| **Alloy/Hose & Fittings** | A | • Corrosion resistance of hose and fittings alloy for the media conveyed.<br>• Maximum service temperature and pressure for the alloy selected. | • "Corrosion Chart" pages<br>• "Metal Hose Selection Factors" pages for maximum service temperature for alloys and conversion factors. |
| **Motion and Application** | M | • Type of motion - angular, axial, offset, radial, random, vibration, amount and frequency.<br>• Hose type best suited for application and motion, including external durability requirements<br>• Cycle life requirement. | • "Corrosion Chart" pages<br>• "Metal Hose Selection Factors" pages for motion applications. |
| **Pressure** | P | • Burst, test and operating pressure.<br>• Constant, pulsating or shock pressures.<br>• Operating pressure at elevated temperature.<br>• Braid selection to maximise pressure/ minimise cost. | • "Metal Hose Selection Factors " pages for pressure definitions.<br>• "Metal Hose Selection Factors" pages for maximum service temperature and conversion factors.<br>• "Hose Technical Data" pages. |
| **End Fitting Attachment** | E | • Methods of attachment applicable to type and alloy of hose and fittings.<br>• Maximum temperature for alloys and methods of attachment. | • "Metal Hose Selection Factors" pages for maximum service temperature of alloys page.<br>• "Corrugated Metal Hose Fittings" pages. |
| **Developed Assembly Length** | D | • Minimum hose live length for type of motion.<br>• Hose assembly length with fittings (overall length). | • "Metal Hose Selection Factors" pages for assembly live length, motion and vibration.<br>• "Hose Technical Data" pages. |

***Note:*** *This engineering guide is to assist you in the selection and application of flexible metal hose for your particular requirements. The information and data contained in this Engineering Guide are the result of years of our experience and research in flexible metal hose. As such it is the best information and data available to us as of the date of printing. Progress is part of any dynamic program of research and development, such as the Company sponsors, so that all information and data continued herein are subject to change (without notice) at anytime. Should you be able to determine a specification for a particular application so that we may make a recommendation. Because we do not supervise or control the installation and use of our products, we cannot be responsible for their performance or for the improper application and usage of data.*

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A.B.N. 83 000 922 690