Stress-Lite™ Corrugated Metal Hose

One of the primary objectives in manufacturing corrugated metal hose is forming corrugations on a steel tube while adding the least amount of residual stress. Through innovative design and in-house, custom-built production equipment, Hose Master has accomplished this with Stress-Lite™ processes (Hydroforming and Crimpforming).

Most other forming methods are rough, adding excessive residual stress which only shortens the service life of the product. In addition, many of them also twist the tube while forming, creating damaging torsional stress leading to premature fatigue and failure. Our proprietary gentle forming technologies do not add these excessive stresses.

Stress-Lite™ processes synchronize non-torsional radial forming with simultaneous bi-directional axial tube feed.

These processes produce hose with:

- Minimal Work Hardening
- Uniform Wall Thickness
- No Residual Torsional Stress (RTS)


Example of RTS

Resulting in the superior performance of Stress-Lite™ hose:

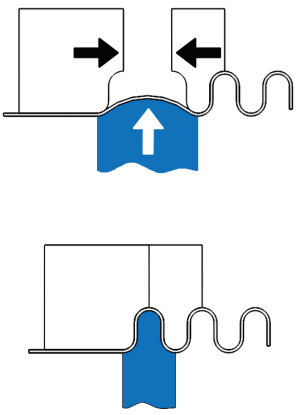
- Greater Flexibility
- Higher Cycle Life

Hydroforming expands the tube from the inside. Crimpforming compresses the tube from the outside, and is used on more ridged tube having a larger t/d (tube thickness to diameter) ratio.

Conceptually, Crimpforming is the “Inverse” of Hydroforming

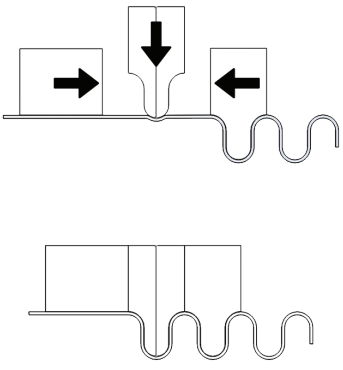
Hydroforming Process:

Hydroforming method grabs a section of tube, expands it without torsion using high pressure water, while simultaneously feeding the tube in axially from both directions.



Crimpforming Process:

Crimpforming method grabs a section of tube, compresses it without torsion using a “shutter-crimp”, while simultaneously feeding the tube in axially from both directions.



Our engineers at Hose Master have developed Stress-Lite™ processes which represent the state-of-the-art technology in hose manufacturing. This, in conjunction with an optimized hose profile, yields the best corrugated metal hose in the industry.

HOSE MASTER
1233 East 222nd Street • Cleveland, Ohio 44117
(800) 221-2319 • Fax: (216) 481-7557 • www.hosemaster.com
Cleveland • Houston • Atlanta • Reno

ISO 9001
Registered Quality System

NAHAD Metal Hose Listed Manufacturer