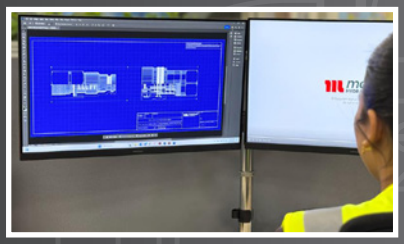
INFINITY

Extreme Durability for
OEM Applications

manuli® HYDRAULICS

"Manuli Hydraulics is focused on achieving excellence in the design, manufacture, and supply of fluid conveyance solutions, components and associated equipment for high pressure hydraulics, industrial material conveyance, refrigeration and cooling applications."



Our experienced Research & Development team take 2D drawings to 3D models to real life products.

Our world-class hoses, fittings and assembly equipment are manufactured in-house to the highest standards.

We test and validate our products to meet and exceed technical industry standards.

DESIGN → **MANUFACTURE** → **TEST** → **INTEGRATED SYSTEMS** → **SUPPLY**

We provide the complete solution: hoses, fittings, crimping parameters and assembly equipment for a fully integrated system.

We supply fluid conveyance solutions directly to our customers whenever and wherever they are.

From design to manufacture, and assembly, Manuli Hydraulics' continual commitment to this unified philosophy makes us a global leader in providing integrated solutions for fluid and material transfer connector applications including hydraulics, refrigeration & air conditioning, oil & gas, water and industrial low-pressure.

Manuli Hydraulics offer a complete range of hoses, fittings and assembly equipment which are purposely designed to work seamlessly together. This harmonized approach allows us to guarantee the quality and performance of our hose assemblies.

Every metre of hose and every single fitting is backed by industry knowledge and experience, made available to you through our dedicated team of application engineers.

From advice on component selection and configuration, our technical expertise allows us to support and work directly with our customers whenever and wherever they are based.

Disclaimer: We reserve the right to modify our products and/or related services and/or discontinue the manufacture and/or supply of any of the products and/or related services, without notice. This document supersedes all previous versions and previously issued documentation. The only official source of technical crimping parameters regarding our products is our Digital Crimp Tools. Printed copies are uncontrolled therefore, please be sure to use the latest versions of our Manuli Crimp App or Crimp Web Tool. Don't mix and match: always use Manuli original hoses and fittings. For more information, see our 'Safety Guide' by scanning the QR code.

DON'T MIX & MATCH

LONG LASTING, RELIABLE SERVICE IN SEVERE OEM APPLICATIONS

Infinity, the new OEM focused hose family from Manuli Hydraulics, has been specifically developed to suit the high performance demands of these equipment types with long-lasting, reliable service. The Infinity hose family not only meets the requirements of the above-mentioned standards, but actually surpasses them by a wide margin, meaning that equipment fitted with Infinity hoses can be run harder for longer.

DEVELOPING HIGH-PERFORMING PRODUCTS:

One of the most common hose types required by OEM's is a 2-wire braid hose which conforms to the SAE 100R16, EN 857 2SC and / or ISO 11237 2SC standards. This versatile hose type can be found in everything from excavators and wheel loaders, to telescopic booms and mining equipment, and its mission profile requirements can be just as varied. Given that these hoses service many of the most demanding and critical systems on the equipment it is a false economy to use anything but the best.

FEATURES & BENEFITS:

- **Outstanding Pressure Rating:** Handles higher pressures for reliable performance across demanding applications.
- **Wide Size Range:** Covers multiple hose configurations (DN 6 to DN 25) with easy integration.
- **Temperature Resistance:** Performs consistently in high-temperature 121°C environments.
- **Long-Service Life:** Reduces downtime through durable rubber compounds and strong fatigue resistance.
- **High Flexibility & Low Bend Radius:** Simplifies installation in tight and complex routing areas.
- **Broad Chemical Compatibility:** Suitable for use with modern environmentally safe hydraulic oils.
- **High Abrasion & Environmental Resistance:** Extends hose life in harsh operating conditions.
- **Fire-Resistant Design:** Provides added safety with MSHA approved fire extinguishing properties.
- **Skive & No-Skive Compatibility:** Offers flexible assembly options with maximum reliability when skived.

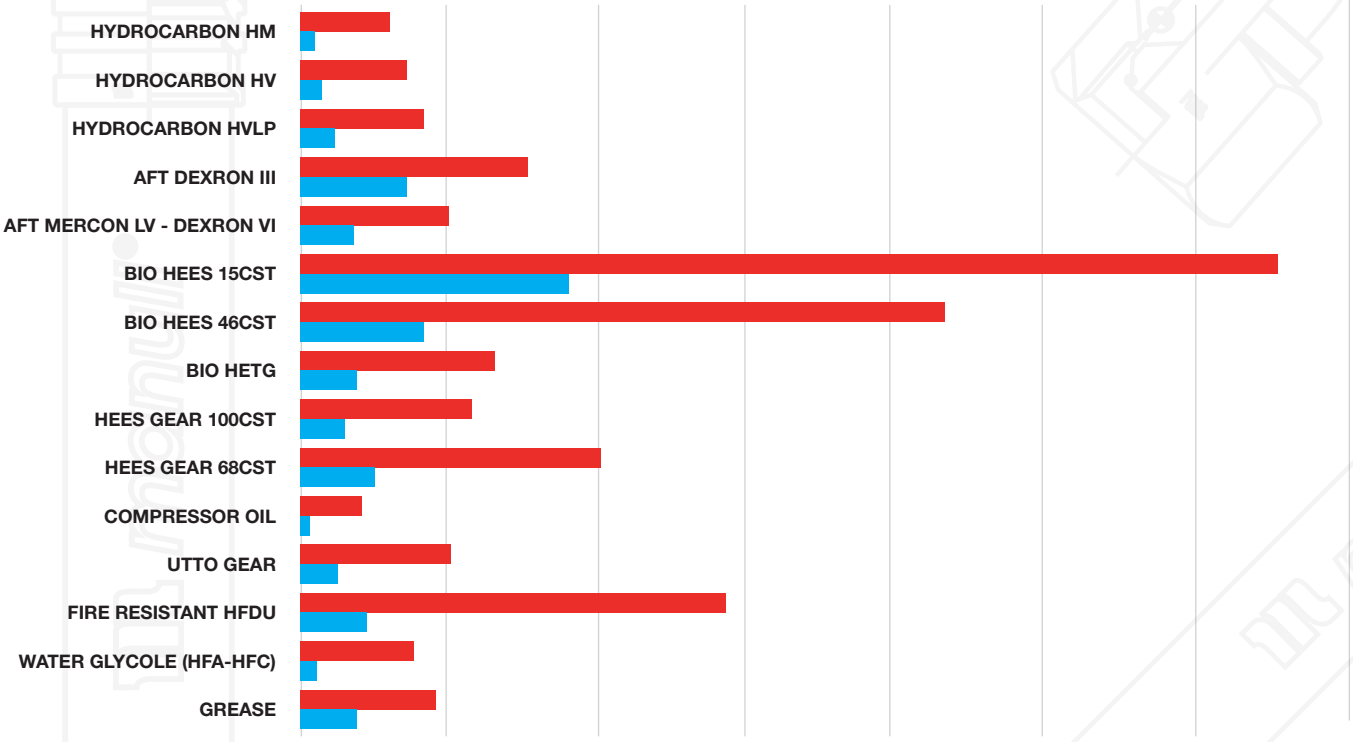
MEETING ENVIRONMENTAL TARGETS

It's no secret that hydraulic systems are widely considered to be harmful to the environment. This is largely due to the hydraulic fluids that are traditionally used, and the fact that many petroleum-based fluids are known to kill marine life and contaminate soil. In recent years, the use of environmentally safe hydraulic fluids, often based on vegetable oils rather than petroleum, has gained support from organisations, such as the Environmental Protection Agency (EPA) and similar authorities.

In order to comply with the recommendations and policies set by these agencies, OEMs have come under increased pressure to develop hydraulic systems that use environmentally safe fluids such as HETG (Hydraulic Environmental Triglyceride), HEPG (Hydraulic Environmental Polyalkylene Glycol), HEES (Hydraulic Environmental Ester Synthetic) and HEPR (Hydraulic Environmental Polyalphaolefin and Related Hydrocarbons). The major difficulty presented by this switchover comes from the compatibility of the fluids with rubber based components within the hydraulic systems, such as seals and, of course, hydraulic hoses. Unfortunately, many environmentally safe fluids can react aggressively with certain rubber compounds, making them unsuitable for use with components made from these materials.

Fluid incompatibility can cause the rubber to deteriorate, swell and eventually delaminate, leading to fluid leakage through the hose outer wall. In extreme cases, the delaminated rubber can also end up getting washed through the system contaminating the fluid and potentially damaging actuators, valves and other system components.

BEHAVIOUR VS. HYDRAULIC FLUIDS - VOLUME CHANGE %



Comparative swelling of Infinity's Nitrile Rubber tube vs. Chloroprene Rubber tube when in contact with various hydraulic fluids

CHLOROPRENE BASED INFINITY

The solution, of course, is to ensure that the components used are made from rubber compounds which are chemically compatible with the fluids.In the case of hydraulic hoses this often means selecting hoses that use a chemically compatible tube compound. Infinity, like the majority of Manuli's hoses, has a Nitrile Rubber (NBR) tube, meaning that it is equally at home being used with Environmentally Safe hydraulic fluids as it is with other, more traditional fluids, meaning that OEMs can rest assured that they can meet their environmental commitments without sacrificing the quality or longevity of their hydraulic hoses.

APPLICATION FOCUS

The Infinity hose family is designed specifically as a high-performance hose for use in original equipment. Its durability, high pressure rating, low bend radius and resistance to abrasion, aging and high temperatures make it the go-to hose for OEMs who want to ensure the reliability of their equipment.

Due to its extreme mission profile, Infinity is suitable for use in some of the most varied and demanding applications including:

- Forestry harvester heads and undercarriages
- Aerial platforms and telescopic booms
- Small-medium excavators
- Wheel loaders
- Drilling machines
- Road construction equipment
- Mining roof bolting machines

IMPROVE CONNECTION ROBUSTNESS WITH TUBE-FORMED FITTINGS

As the world's leading supplier of integrated hydraulic connector solutions, Manuli Hydraulics is committed to ensuring that every hose assembly performs to the highest possible standard. We do this by providing dedicated, proven fitting solutions for every single hose in our portfolio.

We further support our OEM partners by offering a new and improved solution for 90° slip-on nut elbow fittings. Available in BSP, ORFS and JIC configurations, these fittings are manufactured from a single piece of high-grade steel tube which has been cold-formed rather than from steel bar which has been machined and welded. Similar to the Manuli KR fittings range, they also come with a forged nut rather than a machined nut, further improving the robustness of the connection.

Advantages of this type of fitting are:

- **Crack-Resistant Design:** Reduces the risk of failure and extends fitting life.
- **High Burst Pressure (> 2,000 bar):** Provides reliable performance under extreme pressure conditions.
- **Captured Slip On Nut:** Simplifies assembly and improves connection security without extra components.
- **Lead Free Construction:** Supports environmentally responsible operations.
- **Reduced Tube Ovality (< 5%):** Maintains consistent flow and improves overall pressure efficiency.

COMPLETE OEM ASSEMBLY SHOP SUPPORT

Manuli Hydraulics' dedication to providing integrated solutions also extends to our wide range of hose assembly equipment. Each and every Manuli Hydraulics assembly machine is designed to work flawlessly with our hose and fittings product range.

For our OEM assembly partners, we offer a wide range of high-volume production machines, designed to make your assembly processes as efficient, reliable and repeatable as possible.

Our machines range from industrial standard decoilers and cutting machines, to some of the most advanced flushing and testing equipment currently available on the market, as well as everything in between.

One specific highlight of our OEM standard crimping machines is our proprietary Safe Crimp System (SCS) software which ensures that every single crimping operation is carried out to the same high standard as the last. This system also automatically sets and adjusts the crimping parameters to match the very latest available crimping data, making sure that you never fall behind.

INFINITY

LONG SERVICE LIFE & HIGH RELIABILITY

FEATURES & BENEFITS:

- The high-performance solution for toughest OEM specifications.
- Performance far exceeds EN 857-2SC.
- Extended service life and resistance to fatigue.
- High temperature and environmental resistance.
- Enhanced flex impulse resistance with M00120 skive ferrule.
- Wide chemical compatibility with hydraulic fluids.
- High ozone and weather resistance.
- Vacuum resistance with SAE 100 R4 performance.

APPLICATIONS & FLUIDS:

Hydraulics: High pressure lines with installation constraints in severe OEM applications

Mineral oils, vegetable oils and synthetic ester based oils (up to 100°C/212°F), glycols and polyglycols, mineral oils in aqueous emulsion, water

PART REF.	HOSE SIZE			R.O.D		O.D		MAX. W.P		BURST		MIN. BEND		WEIGHT		FITTINGS	
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	Std 1	Std 2
H01164006*	6	– 4	1/4"	11.3	0.44	13.1	0.51	450	6,520	1,800	26,107	45.0	1.77	284	0.19	MF + M00120-04	OPF-04
H01164008*	8	– 5	5/16"	12.9	0.5	14.7	0.57	400	5,800	1,600	23,206	55.0	2.16	319	0.21	MF + M00120-05	OPF-05
H01164010*	10	– 6	3/8"	15.5	0.61	17.1	0.67	400	5,800	1,600	23,206	65.0	2.55	440	0.3	MF + M00120-06	OPF-06
H01164012*	12	– 8	1/2"	18.6	0.73	20.6	0.81	360	5,220	1,440	20,885	80.0	3.14	573	0.39	MF + M00120-08	OPF-08
H01164016*	16	– 10	5/8"	22.9	0.9	24.7	0.97	320	4,640	1,280	18,565	90.0	3.54	736	0.49	MF + M00120-10	OPK-10
H01164019*	19	– 12	3/4"	27.4	1.07	29.3	1.15	320	4,640	1,280	18,565	120.0	4.72	1,046	0.7	MF + M00120-12	OPK-12
H01164025*	25	– 16	1"	33.9	1.33	36.1	1.42	225	3,263	900	13,053	160.0	6.29	1,372	0.92	MF + M00130-16	OPK-16

Refer to the latest Manuli Digital Crimp Tools for crimping parameters.

TECHNICAL SPECIFICATIONS:

Continuous Service Temperature Range

-40.0 °F, 250 °F
-40.0 °C, 121 °C

Tube

Oil resistant synthetic rubber.

Reinforcement

Two high tensile steel braids.

Cover

STRONG – TYPE "SC"
Synthetic rubber with high abrasion, ozone, weather and heat resistance and an extended operational temperature range

Applicable Standards

Exceed EN 857 2SC, SAE 100R16, ISO 11237-2SC

Type Approvals

MSHA; CU-TR; FRAS; B

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