



Manuli Hydraulics unveils new cutting-edge solutions for the hydraulics sector at Bauma China 2010

Manuli Hydraulics, leading company in the field of hydraulic connectors owned by the Manuli Rubber Industries group, unveiled a new range of cutting-edge solutions designed for the Hydraulics sector.



It happened at the Bauma China 2010, International trade fair for all sectors of the construction-machinery industry, held in Shanghai from November 23rd to 26th.

All the innovations shown off at Manuli Hydraulics' stand (hall E6 – stand 502) were developed by the Aldo Occari Innovation Centre in Italy, which oversees the R&D centers of the group in China, Poland, India and other development centers worldwide.

Here follows a detailed description of Manuli Hydraulics' new solutions:

- **Eco-Tube Plus**

The proprietary rubber tube has now an innovative NBR-base compound formulation in all of its wire spiral hose ranges.

Compared to the former Eco-Tube, the new Eco-Tube Plus compound affords the following improvements and advantages:

- higher elastic modulus for higher resistance at fitting tail end;
- significantly higher tensile strength and elongation at break for improved mechanical strength, stability at tighter bend radii;
- better tear resistance over a wider range of test temperatures up to 120°C;
- higher stability (more gradual changes) on long term oil ageing in mineral base (hydraulic, engine and transmission type) oils;
- significantly reduced swelling and 3 times better stability even with the most aggressive synthetic Biological oils.

- **GoldenIso/45**

It's a unique high pressure isobaric hose line where the pressure rating has been tuned over the classic 6000 psi and set at 450 bar, in order to offer the necessary margin for absorbing any kind of pressure peak and surge that normally occurs in hydraulic systems.

This appropriate design can increase the service life of the product and has been proven by impulse tests up to 2 million cycles, justifying the definition of "long life" given to the hose. The hose line is released with new integrated flanged fittings, **X-traflange/45**, having an equivalent and more robust design in order to assure the mechanical resistance in any working condition.



- **Diamondspir**

The traditional high pressure (up to 8000 psi) and large bore (up to 3") hose line, has been recently upgraded with two important features: an extension to size ¾" and a redesign of 2 ½" size, aimed to offer a more compact, light and flexible hose in this important area. The hose family is offered with the innovative **X-traflange/56**, having a unique patented 3D bending design of flange and counter flange for an outstanding mechanical resistance at these extreme pressures.

- **Interlock Plus**

The complete wire spiral hose range has been recently enhanced with the introduction of Interlock Plus, the new high performance fitting style offering high reliability and easy assembly, in order to allow the more demanding OEM applications and easy replacement in after market.

- **"Sharc"**

The new Super High Abrasion Resistant Cover – "Sharc" is made by a proprietary compound that extends the application limits of rubber. Its abrasion resistance is at least 50 times better than international specification requirements and 5 times better than most related solutions currently available on rubber, still keeping very high ozone and weathering resistance. In addition, the new cover has flame resistance and antistatic properties for application in mining environments.

- **MQS-DHI Qsafe line**

For the more demanding OEM applications, Manuli released a radical innovation in this field: the MQS-DHI Qsafe line. DHI stands for "Direct to Hose Integration" and it is an innovative solution to integrate quick couplings and hose inserts for highly compact, short, light, inexpensive and leak free connections.



- **Flush-Fit insert family**

Specifically designed for the compactness of long wall mining connection, the Flush-Fit insert family is the Ideal solution for easy operation and fast maintenance in high pressure mining machinery. Flush-Fit is a new staple-lock fitting system having a snag free profile for an easier handling in critical installations, still offering a 350 bar pressure rating up to 2" size. All inserts within this product line are compatible with the Manuli **Rockmaster** hose range for all mining applications and the **MIP** (Mercia International Products) Staple-lock adaptors range.

- **Refrimaster Plus line**

Comfort of operators is more and more appreciated as an added value feature in hydraulic machines, including air conditioning of cabins that is progressively increasing its market share. Manuli Hydraulics offers a dedicated product range, where the new Refrimaster Plus line (up to the new Dn 22) has a very low permeation level and is universally compatible with any Freon and lubricant used in the field of mobile refrigeration. The hose line is integrated with the well-known **Frigoclic** fittings for field attachability, now improved with the innovative **SP-ring gasket**; the same insert can be mounted with a crimped ferrule for OEM applications.



Not only products

Following the acquisition of the company Techmaflex in 2005, Manuli Hydraulics is today the only hydraulic connectors' manufacturer that is fully integrated with an assembly machines manufacturer: that allows a joint development of products and machines able to improve the overall performance of the system.

In line with a continuous development of the red machines range, the new bench top crimping machine, **MB 350**, offers unique features: a high crimping force (350 tons) combined with a large head opening (up to 4" hose) that makes this product ideal for crimping large bore and heavily reinforced hoses. The machine keeps the innovative ergonomic design adopted in these models, which is greatly appreciated by operators in this sector.



Environmental and safety consciousness

A lot international regulations are increasing their requirements for health and environmental protection that is a requirement to be improved with the overall development of the sector. Manuli Hydraulics has a long a successful history in this field, having implemented safe and green solutions when they have become industrially available.

A large range of halogen free hoses has been recently announced; many lead free fittings are available in the range, including the new Interlock Plus family; an effective Cr+6 free zinc plating technology has been applied in recent years. In addition, the Iso 14001 and Iso 18001 certifications have been achieved by all the manufacturing plants in the Manuli Hydraulic Group.

Manuli Rubber Industries (MRI), established in 1935, is a multinational corporation with two distinct global organizations:

- Manuli Hydraulics, focused on achieving excellence in the design, manufacture and sale of machines and fluid conveying rubber/metal components for high pressure hydraulics and Oil & Marine applications.
- Fluiconnecto by Manuli, focused on achieving excellence in providing end-users from all sectors with top quality hydraulic components and technical services.

MRI is committed to deliver sustainable value to its stakeholders, through excellence in innovation, quality and service.

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