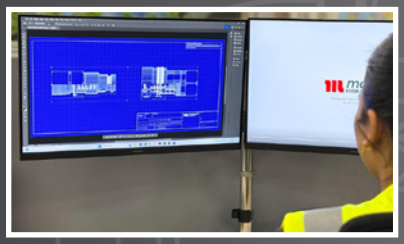
HERCULES/HT



Extreme Performance in Extreme 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**

SUPPLY ← **INTEGRATED SYSTEMS**



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. Do not 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

HELPING KEEP COST PER TONNE TO A MINIMUM

The challenges of open pit mining - huge loads, high temperatures and tough materials - place enormous demands on the hydraulic systems of the giant machines that work within these environments. To keep the cost per tonne to a minimum these machines must be capable of running almost constantly with minimum downtime for maintenance and maximum intervals between servicing.

The greatest stress placed on these hydraulic systems is within the hose assemblies, often referred to as 'hump hoses', that supply power from the main control valve to the boom. The high pressures, constant stress and high fluid temperatures can cause rapid aging in all but the most resilient of hose assemblies.

Developed specifically to cope with these challenges the Hercules/HT System from Manuli Hydraulics offers a fully integrated solution to maximise service hours and minimise downtime. With performance that matches or exceeds that of the original equipment manufacturer the Hercules/HT System allows you to make every dollar count.



LONG LASTING PERFORMANCE AND SAFETY IN THE HARSHEST CONDITIONS

To ensure long lasting performance and conformance to the highest safety requirements the Hercules/HT System for 'hump hose' applications is made up of hose, fittings, assembly equipment and accessories, all designed to work seamlessly together.

The Hercules/HT System comprises of the following:

HERCULES/HT HOSE

A robust and durable hose, able to withstand constant flexing and fluid temperatures that are consistently in the region of 135°C. Designed to meet the requirements of ISO 18752-D Ext., and with a service life exceeding 1 year (approx. 8,000 hours) on 'hump hose' applications, the Hercules/HT hose provides reliability exactly where it is most needed.

HSSL HEAT SHRINKABLE SLEEVES

Providing the best possible protection against dirt and moisture ingression under the ferrule, HSSL sleeves complete the Hercules/HT System and help ensure maximum hose assembly service life.

INTERLOCK SUPER FITTINGS

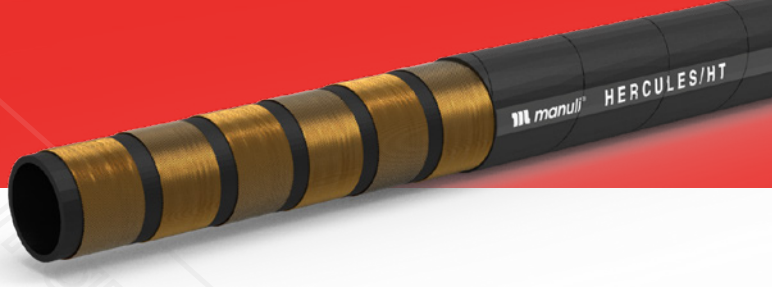
A range of high fatigue resistance fittings specifically designed to improve the free-standing rigidity of the hose and provide leak-free, ultra-reliable sealing performance in 'hump hose' applications.

GOLDENCRIMP 420

Ruggedly built and easy to transport, operate and maintain in the harsh conditions often encountered in open-pit mining, the GoldenCrimp 420 is the ideal crimping solution for the Hercules/HT System.

HERCULES/HT

LONG SERVICE LIFE & HIGH RELIABILITY



FEATURES & BENEFITS:

- HNBR based tube compound provides long term aging resistance with high temperature oil.
- Bend radius which exceeds the standard requirements by 30 - 50%.
- Extremely robust and durable, designed for a service life exceeding 1 year (approx. 8,000 hours on hump hose applications.
- Able to withstand very high fluid temperatures that are consistently in the region of 135°C.
- Isobaric hoses with a working pressure of 42 MPa, following ISO 18752 Grade D, exceeding SAE J517 R15.
- Easy mounting in any situation.
- Good flexibility through the whole temperature range.

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
H10125031*	31	-20	1,1/4”	47.7	1.88	50.9	2.00	420	6,090	1,680	24,360	400	15.75	4,175	2.81	IP+M01850-20	
H10125038*	38	-24	1.1/2”	55.2	2.17	58.7	2.31	420	6,090	1,680	24,360	450	17.72	5,195	3.49	IS+M02700-24	
H10125051*	51	-32	2”	68.9	2.71	72.4	2.85	420	6,090	1,680	24,360	500	19.69	7,265	4.88	IS+M02700-32	

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

TECHNICAL SPECIFICATIONS:

Continuous Service Temperature Range

-50.0 °F, 275 °F
-46.0 °C, 135 °C

Tube

Oil resistant synthetic rubber.

Reinforcement

Six high tensile steel wire spirals.

Cover

STRONG - TYPE “SC”Synthetic rubber with high abrasion, ozone, weather and heat resistance and an extended operational temperature range.

Applicable Standards

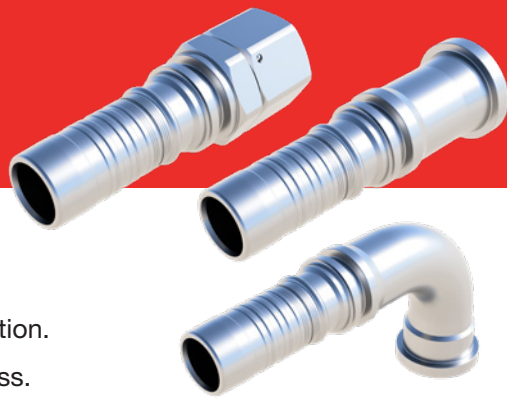
ISO 18752-D Ext., exceeds SAE J517 R15

Type Approvals

MSHA

INTERLOCK FITTINGS

FULLY INTERGRATED FITTING SELECTION



FEATURES & BENEFITS:

- High fatigue resistance with a severe impulse test qualification to one million impulse cycles (grade 'D' of ISO 18752)
- Better compression load distribution.
- Hydraulic sealing for longer life, with optional O-ring for long term sealing.
- Bulging risk elimination.
- Maximum robustness.
- Superior performance and reliability.
- Long fitting design provides an anti-kink function.

Manuli Hydraulics are the global leader in providing integrated solutions for hydraulic connector applications. As such, they offer Interlock Super for Hercules/HT DN 38 and DN 51 and Interlock Plus for DN 31.

1.1/4" *(Interlock Plus)*	**1.1/2"** *(Interlock Super)*	**2"** *(Interlock Super)*	**DESCRIPTION**
M01850-20	M02700-24	M02700-32	DOUBLE SKIVE FERRULE
M40514-20-20	MB0514-24-24	MB0514-32-32	BSP FEM. DOUBLE THRUST-WIRE
M43610-20-20	MB3610-24-24	MB3610-32-32	ISO/SAE CODE 62 FLANGE
M43640-20-20	MB3640-24-24	MB3640-32-32	45° ISO/SAE CODE 62 FLANGE
M43690-20-20	MB3690-24-24	MB3690-32-32	90° ISO/SAE CODE 62 FLANGE
M48510-20-20	MB8510-24-24	MB8510-32-32	XTRAFLANGE/62
M48590-20-20	MB8590-24-24	MB8590-32-32	90° XTRAFLANGE/62

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HEAT SHRINKABLE SLEEVES

FOR FIRST CLASS PROTECTION



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- Able to withstand very high fluid temperatures that are consistently in the region of 135°C.
- Isobaric hoses with a working pressure of 42 MPa, exceeding key norms ISO 18752 Class 420.
- (grade 'D') and SAE J517 R15.
- Easy mounting in any situation.
- Good flexibility through the whole temperature range.

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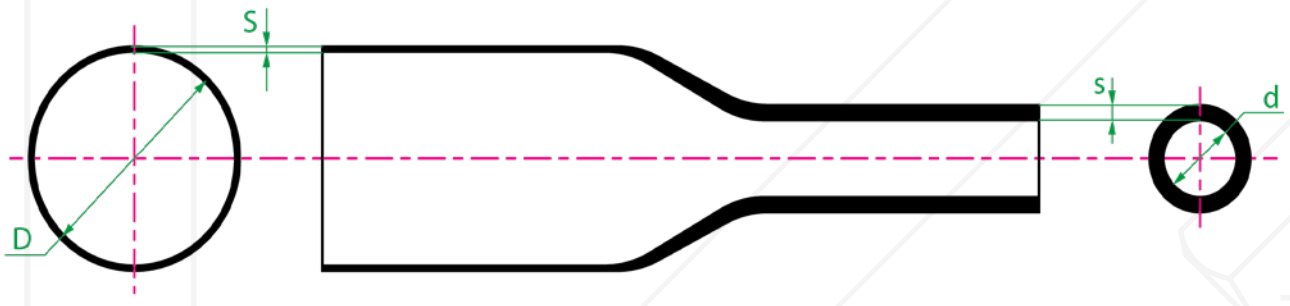
STRONG - TYPE "SC"Synthetic rubber with high abrasion, ozone, weather and heat resistance and an extended operational temperature range

Applicable Standards

ISO 18752-D Ext., exceeds SAE J517 R15

Type Approvals

MSHA; CU-TR



GOLDENCRIMP 420

ASSEMBLY MACHINE OF CHOICE FOR THE HERCULES/HT SYSTEM



FEATURES & BENEFITS:

- Robust design for transport and operation in the harsh environments encountered in mining.
- Protected cylinders for trouble-free operation in high dust environments.
- Split design architecture allows for easy handling and transportation.
- Can be used in the standard configuration, or a space saving configuration with the crimping head detached.
- Easy maintenance due to foam pads and dust collector.
- Easy die setup with ergonomically designed quick-change gun.
- Hands-free operation using footswitch.

Available with a choice of three different control panels:

- SC panel - basic Smart Control panel.
- SCE panel - electronic micrometer with the ability to save up to 25 configurations.
- SCS panel - Safe Crimp System which includes the integration of the Manuli Hydraulics fluid connectors assembling parameters.

PART REF.	VOLTAGE	DESCRIPTION
EOA3324NMGC420SC	415V, 3PH, 50 Hz	GoldenCrimp 420 SC without dies
EOA3324NMGC420SCE	415V, 3PH, 50 Hz	GoldenCrimp 420 SCE without dies
EOA3324NMGC420SCS	415V, 3PH, 50 Hz	GoldenCrimp 420 SCS without dies
ESA3220NT140401	-	Wall mounted rack for extra dies sets
ESA3220NET	-	Ergonomic table

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

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