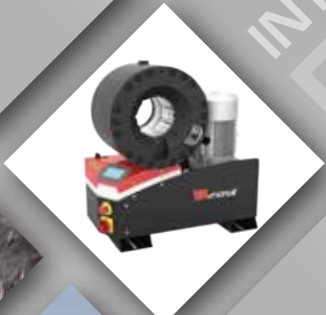


QUALITY

INTELLIGENT DESIGN
EXCELLENCE
PARTNERSHIP

INTEGRATED SOLUTIONS

HERCULES / HT SYSTEM



 **manuli**[®]
HYDRAULICS

The Hercules/HT System

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 new 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 new Hercules/HT System allows you to make every dollar count.

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Hercules/HT

InterLock Super

A range of high fatigue
the free-standing rigidity
sealing performance in 'hur

GoldenCrimp 420

Ruggedly built and easy to transpo
conditions often encountered in open-
ideal crimping solution for the Hercules/H

HSSL Heat Shrinkable Sleeves

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



**assured, long lasting performance and safety in
harshest conditions.**

*Ensure long lasting performance and conformance to the highest safety requirements
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

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

Fittings

High resistance fittings specifically designed to improve
the life of the hose and provide leak-free, ultra-reliable
performance on 'hump hose' applications.

Designed to support, operate and maintain in the harsh
environment of open pit mining, the GoldenCrimp 420 is the
ideal fitting for the HT System.



Hercules/HT

The Hercules/HT has been specifically designed for giant machines to withstand the harsh conditions found in open-pit mining environments.

Key features

- 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, complying with and 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



Ordering Information

PART REF.	HOSE SIZE			R.O.D		O.D		MAX WP		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	

CONTINUOUS SERVICE

TEMPERATURE RANGE

-50°F / 275°F

-46°C / 135°C

TUBE

High performance oil resistant synthetic rubber

REINFORCEMENT

Six high tensile steel wire spirals

COVER

Synthetic rubber with high abrasion, ozone, weather and heat resistance

APPLICABLE SPECS

ISO 18752 Grade D extension, exceeds SAE J517 R15

TYPE APPROVALS

MSHA

Fully Integrated Fitting Selection

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 - dedicated fittings designed to work seamlessly within the Hercules/HT System.

The InterLock Super fitting is a double skive solution with an extended insert for correct hose orientation and a reduction in lateral forces that can cause failure in 'hump hose' applications.

Key features:

- 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 of InterLock Super provides an anti-kink function

Ordering Information

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	XTRAFRANGE/62
M48590-20-20	MB8590-24-24	MB8590-32-32	90° XTRAFRANGE/62

Heat Shrinkable Sleeves for First Class Protection

The Hercules/HT is enhanced by new HSSL heat shrinkable sleeves.

These heat shrinkable sleeves protect the ferrule from dirt inclusion and moisture ingress under the ferrule.

They are made from polyolefin heat shrinkable material, which is self-extinguishing and provides low voltage electrical insulation.

Easy to install with simple hot air jetting, these sleeves provide the best possible protection with high abrasion resistance for the Hercules/HT.



Ordering Information

PART REF.	HOSE SIZE	INSIDE DIAMETER (D) - EXPANDED TUBE		MIN. INSIDE DIAMETER (d) - RECOVERED TUBE		WALL THICKNESS (S) - EXPANDED TUBE		MAX WALL THICKNESS (s) - RECOVERED TUBE		LINEAR WEIGHT		STD. PACK TOTAL LENGTH	
		mm	inch	mm	inch	mm	inch	mm	inch	g/m	lb/ft	m	ft
JP21B11076I099	DN 31 DN 38	76.2	3.00	38.1	1.50	0.6	0.024	2.0	0.079	310	0.21	15	49.2
JP21B11102I099	DN 51	101.6	4.00	50.8	2.00	1.0	0.039	2.5	0.098	520	0.35	15	49.2

CONTINUOUS SERVICE

TEMPERATURE RANGE

-67°F / 257°F

-55°C / 125°C

MATERIAL

X-linked polyolefin heat shrinkable thin wall tube.

Self extinguishing. Low voltage electrical insulation.

Colour: black

APPLICABLE SPECS

UL 224 VW-1 for flame resistance

GoldenCrimp 420 - The Assembly Machine of the Hercules/HT System

With a crimping force of 420 tonnes the GoldenCrimp 420 offers a hose crimping diameter of up to 3".

Key features:

- 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



For details of the complete range of Manuli Hydraulics assembly machines visit www.manuli-hydraulics.com

Ordering Information

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



www.manuli-hydraulics.com

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