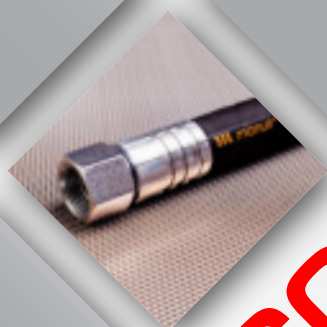


QUALITY

INTELLIGENT DESIGN
EXCELLENCE
PARTNERSHIP

INTEGRATED SOLUTIONS



GOLDENISO ISOBARIC HOSE RANGE

manuli®
HYDRAULICS

Why Manuli?

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 and refrigeration applications.

Quality and sustainable development are the driving forces of all Manuli Hydraulics' activities, with an aim to guarantee worldwide availability of technical and commercial support for its products and services.

Golden ISO™



An integrated approach

Modern hydraulics applications require robust fluid connector solutions with guaranteed long lasting performance. To that end, Manuli Hydraulics offers a complete range of hoses, fittings and assembly equipment which are designed to work seamlessly together. This harmonised approach allows us to guarantee the quality and performance of hose assemblies in a way that our competitors simply cannot match.

From design to manufacture and assembly, our commitment to this unified philosophy makes us the global leader in providing integrated solutions for hydraulic connector applications.

GoldenIso

Isobaric products for compact and efficient hydraulics

For use in:

- General hydraulics in mobile applications
- Hydraulic pressure lines with installation constraints
- Mining applications

Today's hydraulic systems are expected to meet progressively higher standards and increasingly stringent requirements, therefore technology must evolve to accommodate these demands.

New specifications are developing in order to incorporate these changing requirements. ISO 18752 is a modern isobaric approach to hose design, providing a consistent pressure rating across an entire hose family.

GoldenIso Benefits

ISO 18752

ISO 18752 is a modern isobaric approach to hose design, providing a consistent pressure rating across an entire hose family.

ISO 18752 Performance Grades and Type

Grade	Type ^a	Resistance to impulse		
		Temperature °C	Impulse pressure (% of MWP ^b)	Minimum number of cycles
A	AS	100	133%	200 000
	AC			
B	BS	100	133%	500 000
	BC			
C	CS	120	133% and 120% ^c	500 000
	CC			
D	DC	120	133%	1 000 000

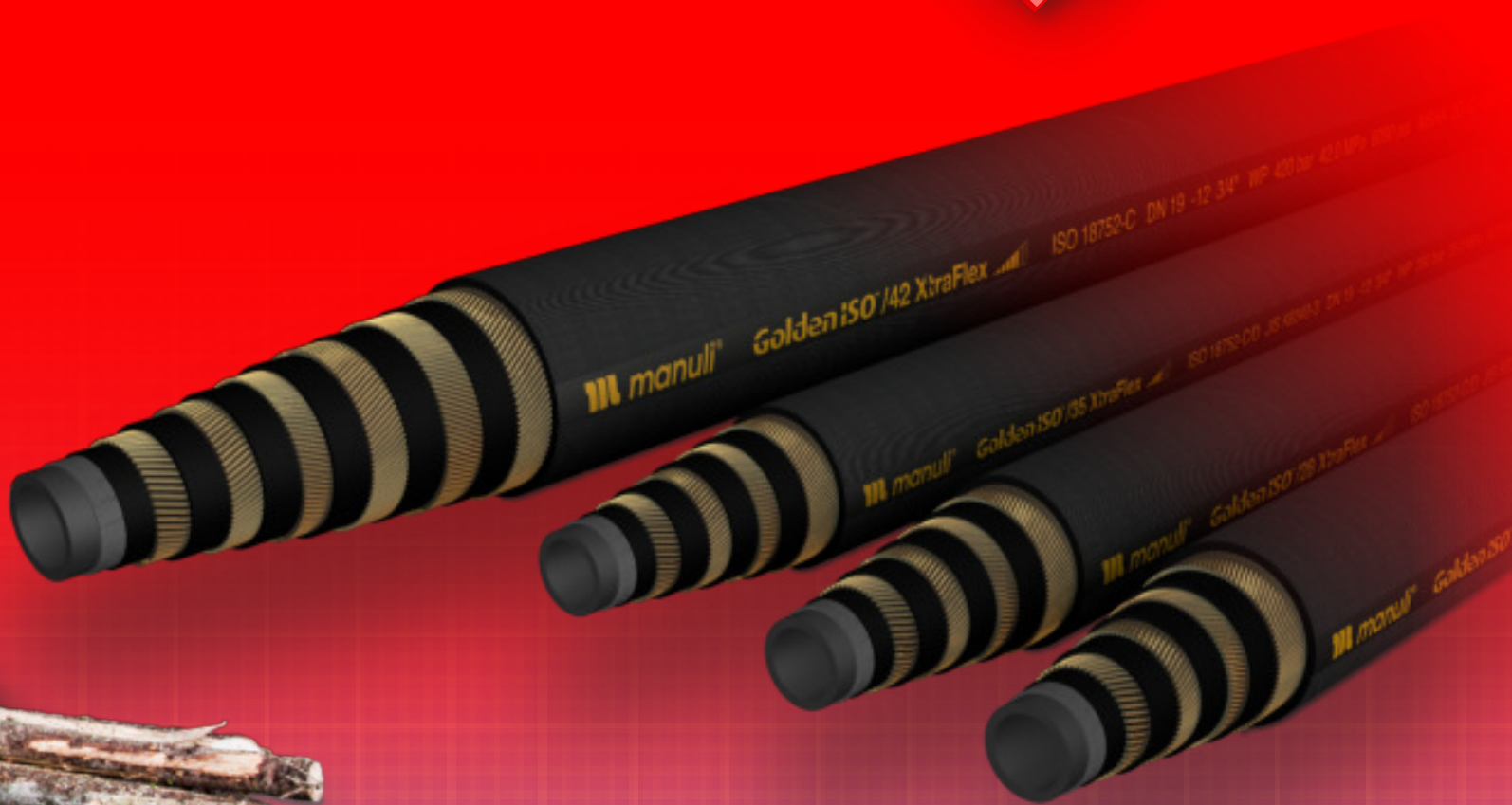
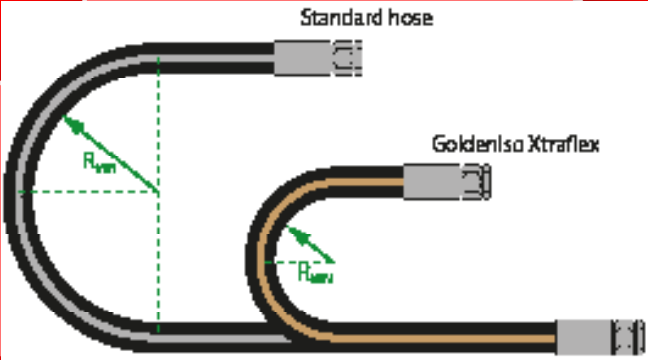
^a Standard or compact, e.g. CS is grade C and standard type. Standard types have larger outside diameters and larger bend radii and compact types have smaller outside diameters and smaller bend radii

^b Maximum working pressure

^c 120% of the MWP shall be used for classes 350, 420 and 560 instead of 133%

GOLDENISO ANTIWEAR (21, 28 MPa)

GOLDENISO XTRAFLEX (21, 28, 35, 42 MPa)





GOLDENISO HOSE RANGE

HOSE	HOSE STRUCTURE	NORM	KEY PERFORMANCE
GOLDENISO/28 ANTIWEAR	Wire braided	ISO 18752-A, ISO 11237-R19, SAE J517-100R19	Extreme abrasion resistance
GOLDENISO/21 XTRAFLEX	Wire spiralled	ISO 18752-C/D, IIS K6349	Extreme flexibility
GOLDENISO/35 XTRAFLEX	Wire spiralled	ISO 18752-C/D, IIS K6349	Extreme flexibility
GOLDENISO/45 LONGLIFE	Wire spiralled	ISO 18752-D ext., ISO 11237-R15, SAE J517-100R15	High fatigue resistance



HOSES BY WORKING PRESSURE

HOSE SIZE	WORKING PRESSURE (bar)										
DN	5	6	8	10	12	16	19	25	31	38	51
dash	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32
GOLDENISO/28 ANTIWEAR		280	280	280	280	280	280				
GOLDENISO/45 LONGLIFE		460				460	460	460	450	450	

HOSES BY APPROVALS

HOSE	HYDRAULICS, MARINE EQUIPMENT TYPE APPROVALS					MINING SAFETY TYPE APPROVALS			GOVERNMENT, SAFETY AND SPECIAL TYPE APPROVALS
	DNV-GL	DNV-GL (MED)	ABS	BV	LLOYD'S REGISTER	MSHA	FRAS	MA	CU-TR
GOLDENISO/28 ANTIWEAR	*	*				*	*		*
GOLDENISO/21 XTRAFLEX		*	*	*	*	*			*
GOLDENISO/35 XTRAFLEX	*	*	*	*	*	*	*	*	*
GOLDENISO/38 LONGLIFE						*			*
GOLDENISO/45 LONGLIFE						*			*



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