

SHIELDMASTER™

Outstanding abrasion resistance



2005



SHIELDMASTER™/1500

OUTSTANDING ABRASION RESISTANCE

HOSE SIZE																
				R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FERRULE
DN	dash	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
19	-12	19,0	3/4"	23,9	0,94	26,3	1,04	105	1520	480	6960	100	3,94	540	0,36	M00810-12
25	-16	25,4	1"	31,2	1,23	33,7	1,33	105	1520	380	5510	160	6,30	770	0,52	M00810-16
31	-20	31,8	1-1/4"	41,3	1,63	44,3	1,74	105	1520	560	8120	250	9,84	1610	1,08	M00110-20
38	-24	38,1	1-1/2"	47,7	1,88	50,7	2,00	105	1520	450	6520	300	11,81	1880	1,26	M00110-24
51	-32	50,8	2"	60,4	2,38	63,4	2,50	105	1520	420	6090	400	15,75	2420	1,62	M00110-32

KEY PERFORMANCE

Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ **FROST** Suitable for very cold environments ▪

MAIN APPLICATIONS TYPES: Low pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMP.: -49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMP.: -67°F -55°C

MAX OPERATING TEMP. (Intermittent service): 257°F 125°C

RECOMMENDED FLUIDS: Mineral oils, vegetable oils and rape seed oils, glycols and polyglycols based oils, synthetic ester based oils, oils in aqueous emulsion, water

INSERT: **MF2000 - MULTIFIT TYPE**

TUBE: **Oil resistant synthetic rubber**

REINFORCEMENT: **One high tensile steel braids (DN 19÷25). Two high tensile steel braids (DN 31÷51)**

COVER: **Composite bi-layer structure with outstanding abrasion resistance**

APPLICABLE SPECS.: **MANULI Design**

TYPE APPROVALS: **GOST-R**



SHIELDMASTER™/2000

OUTSTANDING ABRASION RESISTANCE

HOSE SIZE																
				R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FERRULE
DN	dash	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
6	-04	6,4	1/4"	10,2	0,40	12,3	0,48	140	2030	560	8120	50	1,97	185	0,12	M00110-04
10	-06	9,5	3/8"	13,6	0,54	15,8	0,62	140	2030	560	8120	60	2,36	265	0,18	M00110-06
12	-08	12,7	1/2"	17,1	0,67	19,3	0,76	140	2030	560	8120	70	2,76	345	0,23	M00110-08

KEY PERFORMANCE

Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ **FROST** Suitable for very cold environments ▪ Compact solution for difficult installation ▪

MAIN APPLICATIONS TYPES: Low pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards). Pilot lines with shield architecture

INTERNAL TEMP.: -49°F / +212°F -45°C / +100°C

MIN. EXTERNAL TEMP.: -67°F -55°C

MAX. OPERATING TEMP. (Intermittent service): 257°F 125°C

RECOMMENDED FLUIDS: Mineral oils, vegetable oils and rape seed oils, glycols and polyglycols based oils, synthetic ester based oils, oils in aqueous emulsion, water

INSERT: **MF2000 - MULTIFIT TYPE**

TUBE: **Oil resistant synthetic rubber**

REINFORCEMENT: **One high tensile steel braid**

COVER: **Composite bi-layer structure with outstanding abrasion resistance**

APPLICABLE SPECS.: **MANULI Design**

TYPE APPROVALS: **GOST-R**

MRI reserves the right to modify the data, eventual modifications can be carried out without any notice.



SHIELDMASTER™/4000

OUTSTANDING ABRASION RESISTANCE

HOSE SIZE				R.O.D.		O.D.		bar		BURST PRESSURE		MIN.BEND RADIUS		KG		FERRULE
				mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
DN 6	dash -4	mm 6,4	inch 1/4"	mm 11,6	inch 0,46	mm 13,6	inch 0,54	bar 276	psi 4000	bar 1110	psi 16090	mm 50	inch 1,97	g/m 260	lb/ft 0,17	M00110-04
DN 8	dash -5	mm 7,9	inch 5/16"	mm 12,9	inch 0,51	mm 14,9	inch 0,59	bar 276	psi 4000	bar 1110	psi 16090	mm 57	inch 2,24	g/m 285	lb/ft 0,19	M00110-05
DN 10	dash -6	mm 9,5	inch 3/8"	mm 15,4	inch 0,61	mm 17,4	inch 0,69	bar 276	psi 4000	bar 1110	psi 16090	mm 63	inch 2,48	g/m 390	lb/ft 0,26	M00110-06
DN 12	dash -8	mm 12,7	inch 1/2"	mm 18,5	inch 0,73	mm 20,7	inch 0,81	bar 276	psi 4000	bar 1110	psi 16090	mm 80	inch 3,15	g/m 535	lb/ft 0,36	M00110-08
DN 16	dash -10	mm 15,9	inch 5/8"	mm 22,7	inch 0,89	mm 25,1	inch 0,99	bar 276	psi 4000	bar 1110	psi 16090	mm 90	inch 3,54	g/m 620	lb/ft 0,42	M00110-10
DN 19	dash -12	mm 19,0	inch 3/4"	mm 27,1	inch 1,07	mm 29,7	inch 1,17	bar 276	psi 4000	bar 1110	psi 16090	mm 120	inch 4,72	g/m 1100	lb/ft 0,74	M00110-12
DN 25	dash -16	mm 25,4	inch 1"	mm 35,1	inch 1,38	mm 38,1	inch 1,50	bar 276	psi 4000	bar 1110	psi 16090	mm 267	inch 10,51	g/m 1935	lb/ft 1,30	M00920-16
DN 31	dash -20	mm 31,8	inch 1-1/4"	mm 43,8	inch 1,72	mm 47,0	inch 1,85	bar 276	psi 4000	bar 1110	psi 16090	mm 400	inch 15,75	g/m 2585	lb/ft 1,73	M00920-20
DN 38	dash -24	mm 38,1	inch 1-1/2"	mm 50,0	inch 1,97	mm 53,5	inch 2,11	bar 276	psi 4000	bar 1110	psi 16090	mm 500	inch 19,69	g/m 3155	lb/ft 2,11	M00910-24
DN 51	dash -32	mm 50,8	inch 2"	mm 63,5	inch 2,50	mm 68,0	inch 2,68	bar 276	psi 4000	bar 1110	psi 16090	mm 700	inch 27,56	g/m 4560	lb/ft 3,06	M01400-32

KEY PERFORMANCE

Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ **FROST** Suitable for very cold environments ▪

MAIN APPLICATIONS TYPES: High pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMP.: -49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMP.: -67°F -55°C

MAX OPERATING TEMP. (Intermittent service): 257°F 125°C

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

INSERT: MF2000 - MULTIFIT TYPE (DN 6÷38)

MF2000 - INTERLOCK TYPE (DN 51)

TUBE: Oil resistant synthetic rubber

REINFORCEMENT: Two high tensile steel braids (DN 6÷19).

Four high tensile steel spirals (DN 25÷51)

COVER: Composite bi-layer structure with outstanding abrasion resistance

APPLICABLE SPECS.: MANULI Design

TYPE APPROVALS: GOST-R



SHIELDMASTER™/5000

OUTSTANDING ABRASION RESISTANCE

HOSE SIZE				R.O.D.		O.D.		bar		BURST PRESSURE		MIN.BEND RADIUS		KG		FERRULE
				mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
DN 6	dash -4	mm 6,4	inch 1/4"	mm 11,6	inch 0,46	mm 13,6	inch 0,54	bar 345	psi 5000	bar 1380	psi 20010	mm 50	inch 1,97	g/m 260	lb/ft 0,17	M00110-04
DN 8	dash -5	mm 7,9	inch 5/16"	mm 12,9	inch 0,51	mm 15,1	inch 0,59	bar 345	psi 5000	bar 1380	psi 20010	mm 55	inch 2,17	g/m 330	lb/ft 0,22	M00110-05
DN 10	dash -6	mm 9,5	inch 3/8"	mm 15,0	inch 0,59	mm 17,2	inch 0,68	bar 345	psi 5000	bar 1380	psi 20010	mm 65	inch 2,56	g/m 405	lb/ft 0,27	M00110-06
DN 12	dash -8	mm 12,7	inch 1/2"	mm 19,8	inch 0,78	mm 22,2	inch 0,87	bar 345	psi 5000	bar 1380	psi 20010	mm 120	inch 4,72	g/m 655	lb/ft 0,44	M00910-08
DN 16	dash -10	mm 15,9	inch 5/8"	mm 24,4	inch 0,96	mm 27,2	inch 1,07	bar 345	psi 5000	bar 1380	psi 20010	mm 200	inch 7,87	g/m 990	lb/ft 0,66	M00910-10
DN 19	dash -12	mm 19,0	inch 3/4"	mm 28,2	inch 1,11	mm 31,2	inch 1,23	bar 345	psi 5000	bar 1380	psi 20010	mm 230	inch 9,06	g/m 1385	lb/ft 0,93	M01300-12
DN 25	dash -16	mm 25,4	inch 1"	mm 35,1	inch 1,38	mm 38,1	inch 1,50	bar 345	psi 5000	bar 1380	psi 20010	mm 267	inch 10,51	g/m 1935	lb/ft 1,30	M01300-16

KEY PERFORMANCE

Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ **FROST** Suitable for very cold environments ▪

MAIN APPLICATIONS TYPES: Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMP.: -49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMP.: -67°F -55°C

MAX OPERATING TEMP. (Intermittent service): 257°F 125°C

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

INSERT: MF2000 - MULTIFIT TYPE (DN 6÷16)

MF2000 - INTERLOCK TYPE (DN 19÷25)

TUBE: Oil resistant synthetic rubber

REINFORCEMENT: Two high tensile steel braids (DN 6÷12).

Four high tensile steel spirals (DN 16÷25)

COVER: Composite bi-layer structure with outstanding abrasion resistance

APPLICABLE SPECS.: MANULI Design

TYPE APPROVALS: GOST-R



SHIELDMASTER™/6000

OUTSTANDING ABRASION RESISTANCE

HOSE SIZE				R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN.BEND RADIUS		WEIGHT		FERRULE
				mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
6	- 4	6,4	1/4"	11,3	0,44	13,5	0,53	420	6090	1680	24360	45	1,77	280	0,19	M00110-04
10	- 6	9,5	3/8"	17,6	0,69	20,6	0,81	420	6090	1680	24360	110	4,33	720	0,48	M00910-06
12	- 8	12,7	1/2"	20,3	0,80	23,5	0,93	420	6090	1680	24360	120	4,72	845	0,57	M00910-08
16	- 10	15,9	5/8"	23,7	0,93	27,0	1,06	420	6090	1680	24360	140	5,51	1000	0,67	M00910-10
19	- 12	19,0	3/4"	28,2	1,11	32,0	1,26	420	6090	1680	24360	170	6,69	1475	0,99	M01300-12
25	- 16	25,4	1"	35,1	1,38	38,1	1,50	420	6090	1680	24360	220	8,66	2045	1,37	M01300-16
31	- 20	31,8	1-1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	267	10,51	3680	2,47	M01300-20
38	- 24	38,1	1-1/2"	54,6	2,15	57,8	2,28	420	6090	1680	24360	315	12,40	4765	3,13	M01300-24
51	- 32	50,8	2"	68,4	2,69	72,0	2,83	420	6090	1680	24360	600	23,62	6745	4,52	*

* CONTACT MANULI RUBBER INDUSTRIES / CONSULTE A MANULI RUBBER INDUSTRIES

KEY PERFORMANCE

Outstanding abrasion and ozone resistance ■ Standard overall dimensions ■ Easy assembly and mounting operations (no protection sleeves required) ■ Isobaric pressure rating ■ **FROST** Suitable for very cold environments ■

MAIN APPLICATIONS TYPES: Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMPERATURE:

-49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMPERATURE:

-67°F -55°C

MAX OPERATING TEMPERATURE

(Intermittent service): 257°F 125°C

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

INSERT: **MF2000 - MULTIFIT TYPE (DN 6÷16)**

MF2000 - INTERLOCK TYPE (DN 19÷38)

TUBE: **Oil resistant synthetic rubber**

REINFORCEMENT: **Two high tensile steel braids (DN 6).**

Four high tensile steel spirals (DN 10÷25).

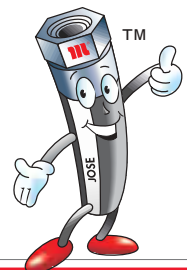
Six high tensile steel spirals (DN 31÷51)

COVER: **Composite bi-layer structure with outstanding abrasion resistance**

APPLICABLE SPECS.: **MANULI Design**

TYPE APPROVALS: **GOST-R**

MRI reserves the right to modify the data, eventual modifications can be carried out without any notice.



SHIELDMASTER™/2SC MINE



OUTSTANDING ABRASION RESISTANCE
MSHA APPROVED

HOSE SIZE				R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN.BEND RADIUS		WEIGHT		FERRULE
				mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
6	-12	19,0	3/4"	25,6	1,01	27,8	1,09	245	3550	980	14210	120	4,72	815	0,55	M00110-12
10	-16	25,4	1"	33,0	1,30	35,2	1,39	210	3040	840	12180	150	5,91	1195	0,80	M00110-16
12	-20	31,8	1-1/4"	41,1	1,62	43,5	1,71	140	2030	560	8120	250	9,84	1610	1,08	M00110-20

KEY PERFORMANCE

MSHA approved composite cover for mining applications ▪ Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Indelible branding with embossed technology ▪

MAIN APPLICATIONS TYPES: Medium pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

CONTINUOUS SERVICE: -40°F / +212°F -40°C / +100°C

MAX OPERATING TEMP. (Intermittent service): 257°F 125°C

RECOMMENDED FLUIDS: Mineral oils, vegetable and rape seed oils, glycols and polyglycols based oils, synthetic ester based oils, oils in aqueous emulsion, water

INSERT: MF2000 - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Composite bi-layer structure with outstanding abrasion resistance. MSHA approval
APPLICABLE SPECS.: MANULI Design

SHIELDMASTER™/5000 MINE



OUTSTANDING ABRASION RESISTANCE
MSHA APPROVED

HOSE SIZE				R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN.BEND RADIUS		WEIGHT		FERRULE
				mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
6	-4	6.4	1/4"	11.6	0.46	13,6	0,54	345	5000	1380	20010	50	1,97	260	0,17	M00110-04
8	-5	7.9	5/16"	12.9	0.51	15,1	0,59	345	5000	1380	20010	55	2,17	330	0,22	M00110-05
10	-6	9.5	3/8"	15.0	0.59	17,2	0,68	345	5000	1380	20010	65	2,56	405	0,27	M00110-06
12	-8	12.7	1/2"	19.8	0.78	22,2	0,87	345	5000	1380	20010	120	4,72	655	0,45	M00910-08
16	-10	15.9	5/8"	24.4	0.96	27,2	1,07	345	5000	1380	20010	200	7,87	1015	0,68	M00910-10
19	-12	19.0	3/4"	28.2	1.11	31,2	1,23	345	5000	1380	20010	230	9,06	1420	0,95	M01300-12
25	-16	25.4	1"	35.1	1.38	38,1	1,50	345	5000	1380	20010	267	10,51	1980	1,33	M01300-16
31	-20	31.8	1-1/4"	42.2	1.66	45,2	1,78	345	5000	1380	20010	350	13,78	2500	1,68	M01400-20

KEY PERFORMANCE

MSHA approved composite cover for mining applications ▪ Outstanding abrasion and ozone resistance ▪ Standard overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Indelible branding with embossed technology ▪

MAIN APPLICATIONS TYPES: Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

CONTINUOUS SERVICE: -40°F / +212°F -40°C / +100°C

MAX OPERATING TEMP.

(Intermittent service): 257°F 125°C

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

INSERT: MF2000 - MULTIFIT TYPE (DN 6÷16)
MF2000 - INTERLOCK TYPE (DN 19÷31)
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids (DN 6÷12).
Four high tensile steel spirals (DN 16÷31)
COVER: Composite bi-layer structure with outstanding abrasion resistance. MSHA approval
APPLICABLE SPECS.: MANULI Design
TYPE APPROVALS: GOST-R

KEY PERFORMANCE

SHIELDMASTER has a high resistance to a harsh working environment, from extreme cold (-55°C) temperatures, to heavy duty mining applications (MSHA approved). SHIELDMASTER is flexible due to compact structure and with a reduced bend radius. Due to its external composite shield, the SHIELDMASTER has an outstanding resistance to Abrasion, Ozone and Weather, therefore no protection sleeves is required.

SHIELDMASTER MINE

- Compact high performance 2 wire braids hose line for critical installations.
- Wide mineral and biological oil compatibility.
- Flame retardant cover.
- MSHA Approval (IC 126/10).
- Heavy Duty environment resistance
- EMBOSSED branding layline.

MF2000™ and **MF3000™** coupling range, for long lasting and reliable hose assemblies.

Staple-lock solution available.

SHIELDMASTER FROST

- Cold Flexibility: INTERNAL TEMPERATURE RATING -45°C/+100°C
MIN. EXTERNAL TEMPERATURE -55°C
- Outstanding abrasion and ozone resistance.
- Isobaric pressure rating.
- Suitable for VERY COLD ENVIRONMENTS.
- Ideal for **HIGH PRESSURE LINES** working in extreme abrasion conditions.
- Frost / Snow Anti-Stick Effect.
- MYLAR Branding layline.

MF2000™ and **MF3000™** coupling range, for long lasting and reliable hose assemblies.



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