

## 4 Industrijska crijeva (Industrial hoses)

### 4.1 Prehrambene tekućine (Food liquids)

#### Agrafarm



Cijev: glatka NBR guma bijele boje, prikladna za sterilizaciju parom niske temperature

Ojačanje: tekstilna mreža visoke čvrstoće

Presvlaka: hrpapava guma crvene boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -40 °C do 80 °C (max 120 °C)

Primjena: tlak vina, piva, likera, voćnih sokova, octa, pitke vode (posjeduje certifikat za protok prehrambenih tekućina)

Tube: smooth NBR white rubber, suitable for low temperature steam sterilization

Reinforcement: high-strength textile mesh

Cover: rough red rubber resistant to wear and weathering

Temperature range: -40 °C to 80 °C (120 °C max)

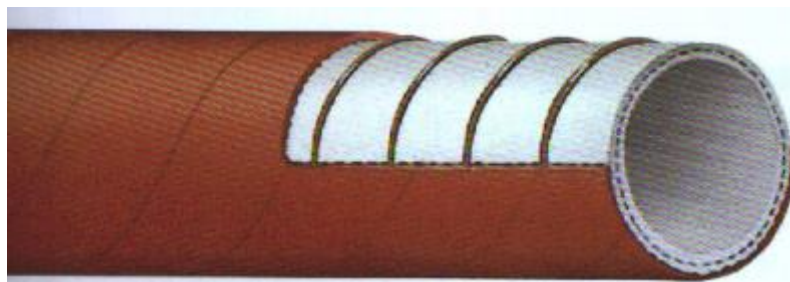
Applications: pressure of wine, beer, liqueur, fruit juices, vinegar, drinking water (has a certificate for the flow of food liquids)

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
19	32	10	30	190	0,73
25	35	10	30	250	0,66
30	41	10	30	300	0,86
32	46	10	30	320	1,2
35	48	10	30	350	1,19
38	50	10	30	380	1,37
40	52	10	30	400	1,43
45	61	10	30	450	1,86
51	69	10	30	510	2,31
60	74	10	30	600	3,2
63	82	10	30	635	2,96
70	91	10	30	700	3,72
76	93	10	30	760	3,16
80	101	10	30	800	3,58
90	108	10	30	900	3,92
100	121	10	30	1000	5,11
120	140	10	30	1200	5,72

## 4.1 Prehrambene tekućine (Food liquids)

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### Agrared



Cijev: glatka NBR guma bijele boje, prikladna za sterilizaciju parom niske temperature

Ojačanje: tekstilna mreža visoke čvrstoće i čelična spirala

Presvlaka: hrapava guma crvene boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -40 °C do 80 °C (max 120 °C)

Primjena: tlak vina, piva, likera, voćnih sokova, bezalkoholnih pića, octa, pitke vode (posjeduje certifikat za protok prehrambenih tekućina)

Tube: smooth NBR white rubber, suitable for low temperature steam sterilization

Reinforcement: high-strength textile mesh and steel spiral wire

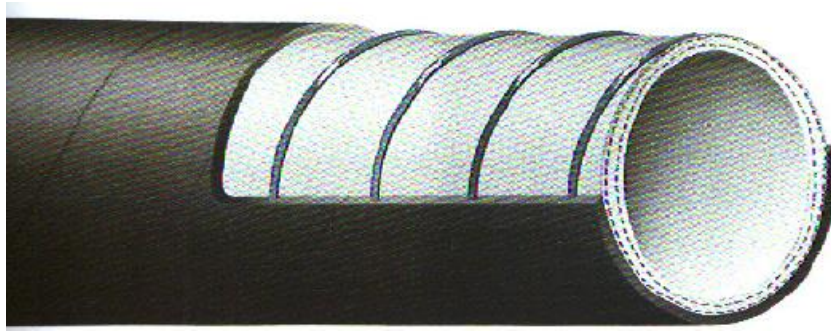
Cover: rough red rubber resistant to wear and weathering

Temperature range: -40 °C to 80 °C (120 °C max)

Applications: pressure of wine, beer, liqueur, fruit juices, vinegar, drinking water (has a certificate for the flow of food liquids)

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
25	38	10	30	200	0.92
30	44	10	30	240	1.16
32	42	8	24	256	0.83
35	49	10	30	280	1.32
38	50	10	30	304	1.00
40	52	10	30	320	1.46
45	59	10	30	360	1.63
51	65	10	30	400	2.05
60	74	10	30	480	2.55
63	76	10	30	508	1.96
70	87	10	30	560	2.99
76	88	10	30	608	2.21
80	97	10	30	640	3.37
90	107	10	30	720	3.76
100	120	10	30	800	4.93
110	129	10	30	880	5.09
120	141	10	30	960	6.15

### Agraspir



Cijev: glatka NR/SBR guma bijele boje

Ojačanje: tekstilna mreža visoke čvrstoće i čelična spirala

Presvlaka: hrapava guma crne boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -30 °C do 80 °C

Primjena: usis i tlak brašna, šećera, žitarica, stočne i druge hrane u granulatu, melase, te drugih prehrambenih proizvoda

Tube: smooth NR/SBR white rubber

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: rough black rubber resistant to wear and weathering

Temperature range: -30 °C to 80 °C

Applications: suction and pressure of flour, sugar, cereals, animal feed and other granular foods, molasses, and other food products

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
50	65	4	12	400	1.93
76	93	4	12	450	3.10
80	93	4	12	650	2.95
90	102	4	12	730	3.31
100	118	4	12	800	3.88
110	128	4	12	880	4.23
120	135	4	12	930	4.96
125	143	4	12	1000	5.41
150	168	4	12	1200	6.42
180	197	4	12	1080	6.26
200	217	4	12	1200	7.07

## 4.1 Prehrambene tekućine (Food liquids)

### Cristalflex

Cijev: prozirni atoksični plastificirani PVC bez ftalata

Ojačanje: tvrdi PVC žute boje otporan na gaženje

Raspon temperature: -10 °C do 60 °C

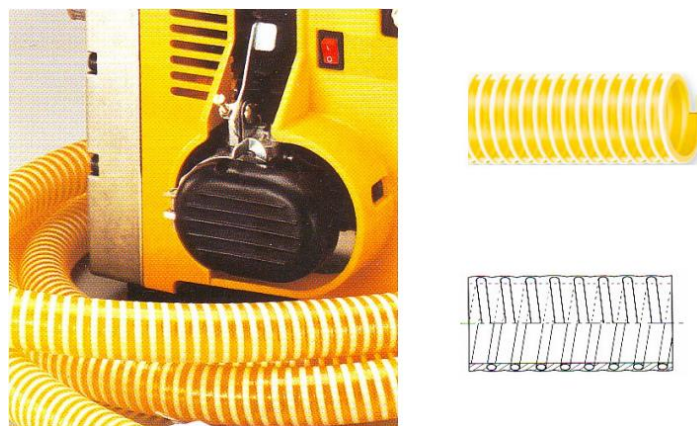
Primjena: usis i tlak pitke vode, mlijeka, vina, voćnih sokova i drugih prehrambenih tekućina

Tube: transparent atoxic plasticized phthalate-free PVC

Reinforcement: hard yellow PVC tread resistant

Temperature range: -10 °C to 60 °C

Applications: suction and pressure of drinking water, milk, wine, fruit juices and other food liquids



Diameter	Working pressure	Burst pressure	Vacuum	Bend radius	Weight
mm	bar	bar	bar	mm	kg/m
20	7	21	0.7	70	0.230
25	7	21	0.7	110	0.280
30	7	21	0.7	140	0.350
32	7	21	0.7	150	0.370
35	7	21	0.7	160	0.425
38	6	18	0.6	170	0.450
40	6	18	0.6	180	0.510
45	6	18	0.6	200	0.640
51	6	18	0.6	230	0.760
55	6	18	0.6	310	0.860
60	5	15	0.5	280	0.900
63	5	15	0.5	300	0.970
70	5	15	0.4	310	1.120
76	5	15	0.4	340	1.270
80	5	15	0.3	350	1.450
90	3	9	0.4	450	1.850
102	3	9	0.4	500	2.200
110	3	9	0.3	550	2.500
120	3	9	0.3	700	2.800
127	3	9	0.3	750	3.200
152	2	6	0.3	850	4.300
200	2	6	0.3	1000	6.500
250	1.5	4.5	0.3	1800	8.500
300	1	3	0.3	2000	11.000



## 4.1 Prehrambene tekućine (Food liquids)

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### Food 500

Cijev: PE folije velike molekularne težine ojaane poliesterskom mrežom i unutarnjom spiralom (inox)

Presvlaka: impregnirani ojačani poliester plave boje otporan na habanje i atmosferske utjecaje s vanjskom spiralom (inox)

Raspon temperature: -40 °C do 100 °C

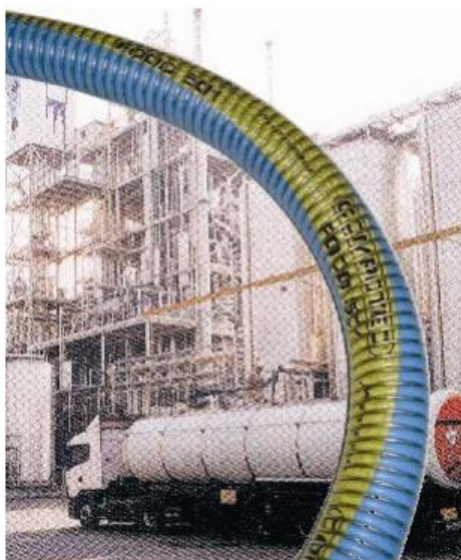
Primjena: usis i tlak svih vrsta prehrambenih tekućina (alkoholna pića, vino, pivo, mlijeko, ulje) i granulata (šećer, brašno, žitarice)

Tube: High molecular weight PE films reinforced with polyester mesh and inner spiral (stainless steel)

Cover: impregnated reinforced blue polyester resistant to wear and atmospheric influences with external spiral (stainless steel)

Temperature range: -40 °C to 100 °C

Applications: suction and pressure of all types of food liquids (alcoholic beverages, wine, beer, milk, oil) and granules (sugar, flour, cereals)



Diameter	Working pressure	Burst pressure	Bend radius	Weight	Max Length
mm	bar	bar	mm	kg/m	m
20	15	75	50	0.700	20
25	15	75	75	0.900	20
32	15	75	80	1	20
40	15	75	85	1,2	20
50	15	75	125	1,8	20
63	15	75	150	2,5	20
76	15	75	185	3	20
100	15	75	275	4,2	20



## 4.2 Crijeva otporna na abraziju (Abrasion resistant hoses)

### SHOTBLAST



- *Primjena:* Industrijsko crijevo proizvedeno za transport suhих ili mokrih abrazivnih materijala. Posebno pogodno za pjeskarenje i sačmarenje, torkret i mortove. Visoke performanse i izdržljivost
- *Sastav:* Unutarnji dio: Visokootporna na abraziju, crna NR guma.  
Ojačanje: Visokočvrsti tekstil.  
Vanjski sloj: crna, antistatička, specijalna guma otporna na abraziju i vremenske uvjete
- *Radna temperatura:* -40 °C +70 °C

Ø in	Ø out	Working Pressure (bar)	Working pressure (psi)	Burst pressure (bar)	Burst pressure (psi)	Weight (kg/m)	Length (m)
13	25	12	180	36	540	0.46	61
19	33	12	180	36	540	0.66	20
19	33	12	180	36	540	0.66	40
25	39	12	180	36	540	0.83	20
25	39	12	180	36	540	0.83	40
25	39	12	180	36	540	0.83	40
32	48	12	180	36	540	1.14	20
32	48	12	180	36	540	1.14	40
38	54	12	180	36	540	1.30	20
38	54	12	180	36	540	1.30	40
40	57	12	180	36	540	1.50	20
40	57	12	180	36	540	1.50	40
51	69	12	180	36	540	1.98	20
51	69	12	180	36	540	1.98	40
60	80	12	180	36	540	2.40	20
76	96	12	180	36	540	2.70	20
80	100	12	180	36	540	3.25	20
90	110	12	180	36	540	3.50	20
102	122	12	180	36	540	4.00	20

## 4.2 Crijeva otporna na abraziju (Abrasion resistant hoses)

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### Abracem



Cijev: glatka NR guma crne boje otporna na abrazivne materijale

Ojačanje: tekstilna mreža visoke čvrstoće

Presvlaka: antistatička hrapava NR guma crne boje otporna na habanje, atmosferske utjecaje i ozon

Raspon temperature: -40 °C do 90 °C

Primjena: tlak cementne prašine, šljunka, stočne hrane, zraka – koriste se za pretovar autocisterni i silosa

Tube: smooth NR black rubber resistant to abrasive materials

Reinforcement: high-strength textile mesh

Cover: antistatic rough black rubber resistant to wear, weathering and ozone

Temperature range: -40 °C to 90 °C

Applications: pressure of cement dust, gravel, fodder, air - used for transshipment of tank trucks and silos

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
50	64	10	30	500	1,57
60	74	10	30	600	1,84
63	83	10	30	630	2,89
70	84	10	30	700	2,12
75	90	10	30	750	2,28
80	93	10	30	800	2,21
90	108	10	30	900	3,6
102	120	10	30	1000	3,85
110	128	10	30	1100	4,05
120	138	10	30	1200	4,56

## 4.2 Crijeva otporna na abraziju (Abrasion resistant hoses)

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### Abraspir



Cijev: antistatička glatka NR guma crne boje otporna na abrazivne materijale

Ojačanje: tekstilna mreža visoke čvrstoće i čelična spirala

Presvlaka: antistatička hrapava NR guma crne boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -40 °C do 70 °C

Primjena: usis i tlak suhog cementa, sitnog šljunka i drugih abrazivnih materijala

Tube: antistatic smooth NR black rubber resistant to abrasive materials

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: antistatic rough black rubber resistant to wear and weathering

Temperature range: -40 °C to 70 °C

Applications: suction and pressure of dry cement, fine gravel and other abrasive materials

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
50	64	10	30	300	1,83
60	74	10	30	360	2,16
65	79	10	30	390	2,32
70	84	10	30	420	2,47
75	90	10	30	450	2,63
80	95	10	30	480	2,8
90	107	10	30	540	3,7
100	117	10	30	600	4,06
110	127	10	30	660	4,48
125	143	10	30	750	5,43
150	170	10	30	1050	7,3

## 4.2 Crijeva otporna na abraziju (Abrasion resistant hoses)

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### Abracorr hot



Cijev: antistatička (R < 1 MΩ) glatka EPDM guma crne boje otporna na abraziju

Ojačanje: tekstilna mreža visoke čvrstoće i čelična spirala

Presvlaka: hrapava vodljiva (R < 1 MΩ) valovita EPDM guma crne boje, otporna na habanje i atmosferske utjecaje

Raspon temperature: -30 °C do 100 °C

Primjena: usis i tlak vrućih prašnastih i zrnatih abrazivnih materijala - koriste se naročito u cementarama

Tube: antistatic (R <1 MΩ) smooth black abrasion resistant EPDM rubber

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: rough conductive (R <1 MΩ) corrugated EPDM black rubber, resistant to wear and weathering

Temperature range: -30 °C to 100 °C

Applications: suction and pressure of hot powder and granular abrasive materials - used especially in cement plants

Inside φ	Outside φ	Working pressure	Burst pressure	Bend radius	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>	<i>kg/m</i>
38	52	4	12	240	1,24
51	65	4	12	300	1,51
63	77	4	12	360	1,85
70	84	4	12	420	2,06
80	94	4	12	480	2,29
90	106	4	12	540	3,15
102	118	4	12	600	3,54
152	174	4	12	910	7,33

#### MULTI-WATER EPDM



Višenamjensko industrijsko crijevo ojačano čeličnom spiralom, tipa usisno–tlačno. Pogodno za prijenos različitih tekućina poput tople vode, laganih kemikalija, glikola ili industrijske otpadne vode. Može služiti i kao crijevo za zračni kompresor. Primjenjuje se u vozilima za odvoz septičkog sadržaja, HVAC chillerima i komponentama cjevovoda.

Vanjska stijenka crijeva otporna je na abraziju i zahtjevne okolišne uvjete, uključujući UV-zračenje i ozon. Crijevo je električki vodljivo, tj. otpor kroz stijenku  $R < 10^6 \Omega$ .

Unutarnji sloj	<b>EPDM</b>
Vanjski sloj	Crni EPDM
Ojačanje	Dvostruko tekstilno ojačanje, čelična spirala
Radni tlak	10 BAR
Tlak rasprskavanja	30 BAR
Temperaturni raspon	od -35°C do +120°C

Unutarnji promjer (mm)	Vanjski promjer (mm)	Vacuum (BAR)	Radius savijanja (mm)	Masa (kg/m)
19	29	1	76	0,59
25	35	1	100	0,72
32	42	1	128	0,89
38	48	1	152	1,16
51	61	1	204	1,45
63	75	0,9	252	2,00
76	88	0,9	304	2,30
90	104	0,9	356	3,01
102	116	0,9	408	3,80
127	142	0,9	608	5,01
152	166	0,9	760	6,66
203	221	0,9	812	9,88

#### STEAM HP ISO 210



Vrlo jako, visokotlačno gumeno crijevo za prijenos pregrijane i zasićene pare. Proizvedeno je u skladu s normom EN ISO 6134/2A (OHM) i ojačano tekstilnim i čeličnim vlaknima. Unutarnji sloj je ekstrudirana CIIR (klorobutilna guma), s vrlo niskom propusnošću pare (manjom od parnih crijeva s EPDM unutrašnjim slojem) te povećanom otpornosti na starenje/propadanje gume. Vanjski sloj otporan je na UV-zračenje, ozon, masnoće i kiseline te je otporan na habanje. Crijevo može privremeno prenositi pregrijanu paru na temperaturi do +232 °C. Vanjska konstrukcija crijeva je mikroperforirana što sprječava pojavu „popcorninga“. Nakon uporabe nužno je osušiti crijevo kako bi se spriječilo nakupljanje kondenzata iznutra. Crijevo se također ne smije istovremeno koristiti za vodu i paru.

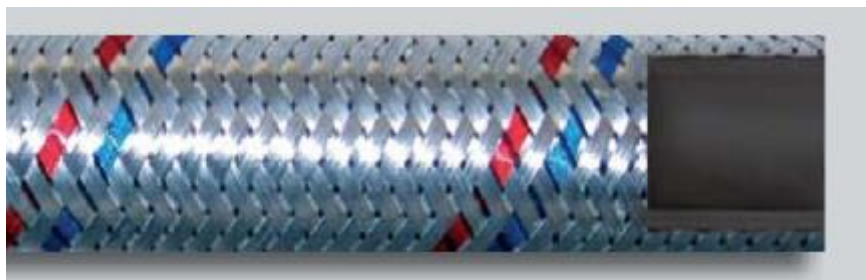
Unutarnji sloj	CIIR - ekstrudirana	
Vanjski sloj	EPDM	
Ojačanje	Čvrsto tekstilno ojačanje	Čelična spirala
Radni tlak	18 BAR	
Tlak rasprskavanja	180 BAR	
Temperaturni raspon	Od -40°C do +210°C	Do +232°C za pregrijanu paru
Vodljivost	R<10 <sup>6</sup> Ω	
Norme	EN ISO 6134 cat. A type 2	

Unutarnji promjer (mm)	Vanjski promjer (mm)	Radius savijanja (mm)
13	25	130
19	33	190
25	40	250
32	48	320
38	54	380
50	69	500

### 4.3 Topla voda i vodena para (Hot water and steam)

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AC



Materijal cijevi: netoksična glatka EPDM guma crne boje

Oplet: pocinčana čelična žica AISI 1008 (paralelne crvena i plava pruga)

Raspon temperature: max 100 °C

Primjena: tlak tople vode i nekorozivnih tekućina - koriste se naročito za pumpe i autoklave

Hose material: non-toxic smooth black EPDM rubber

Braid: galvanized steel wire AISI 1008 (parallel red and blue stripe)

Temperature range: max 100 °C

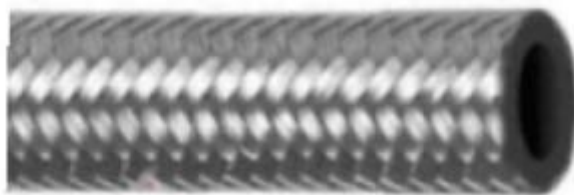
Application: pressure of hot water and corrosive liquids - used especially for pumps and autoclaves

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>
10	15	15	75	40
13	20	15	75	60
16	22	12	70	70
19	27	10	60	80
25	34	10	50	100
32	44	10	45	160
40	54	6	40	180
50	64	6	40	230
60	74	6	30	350
70	84	6	30	500

### 4.3 Topla voda i vodena para (Hot water and steam)

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LS



Materijal cijevi: netoksična glatka EPDM guma crne boje

Oplet: aluminijska žica

Raspon temperature: max 100 °C

Primjena: tlak pitke hladne i tople vode - koriste se za bojlere i vodokotlice

Hose material: non-toxic smooth black EPDM rubber

Braid: aluminium wire

Temperature range: max 90 °C

Application: drinking cold and hot water pressure - used for boilers and cisterns

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>
8	12	10	70	45
10	14	10	70	55
13	17	10	60	65

### 4.3 Topla voda i vodena para (Hot water and steam)

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#### Calorflat



Cijev: glatka SBR guma crne boje

Ojačanje: sintetska mreža

Presvlaka: hrapava NBR guma crne boje otporna na habanje, toplinu i ulje

Raspon temperature: -40 °C do 100 °C

Primjena: tlak tople vode, rashladnih tekućina i sredstava protiv zamrzavanja (glycol) - koriste se kod automobilskih hladnjaka i za ispuste

Tube: smooth SBR black rubber

Reinforcement: syntetic mesh

Cover: rough NBR black rubber resistant to wear, heat and oil

Temperature range: -40 °C to 100 °C

Applications: pressure of hot water, coolants and antifreeze (glycol) - used in car refrigerators and drains

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
10	16	3	10	60	0.21
12	18	3	10	120	0.21
13	19	3	10	130	0.21
14	20	3	10	140	0.22
15	21	3	10	150	0.23
18	24	3	10	180	0.25
20	26	3	10	200	0.27
22	28	3	10	220	0.29
25	32	3	10	250	0.39
28	36	3	10	280	0.50
30	38	3	10	300	0.53
32	40	3	10	320	0.57
35	43	3	10	350	0.61
38	47	3	10	380	0.75
40	49	3	10	400	0.79
42	51	3	10	420	0.82
45	54	3	10	450	0.87
48	57	3	10	480	0.96
51	61	3	10	500	1,1
55	65	3	10	550	1,2
60	70	3	10	600	1,25
65	75	3	10	650	1,42
70	81	3	10	700	1,75
76	87	3	10	760	1,84
80	92	3	10	800	2,03
90	102	3	10	900	2,32
100	113	3	10	1000	2,72



#### Calorsteam



Cijev: glatka EPDM guma crne boje otporna na toplinu

Ojačanje: tekstilna mreža velike čvrstoće

Presvlaka: hrapava EPDM guma crne boje, izvedbe koja onemogućava stvaranje mjehurića, otporna na toplinu, starenje i atmosferske utjecaje - za prehrambenu industriju se vanjski sloj izrađuje u boji

Raspon temperature: -40 °C do 170 °C

Primjena: tlak zasićene pare - naročito se koriste za čišćenje i sterilizaciju spremnika i cjevovoda u industrijskim postrojenjima (nisu predviđene za kontinuirani 8 satni rad za što se preporučuju fleksibilne visokotlačne metalne cijevi)

Tube: smooth black heat-resistant EPDM rubber

Reinforcement: high-strength textile mesh

Cover: rough EPDM black rubber, bubble-proof, heat-resistant, aging and weather-resistant - for the food industry, the outer layer is made in color

Temperature range: -40 °C to 100 °C

Applications: saturated vapor pressure - especially used for cleaning and sterilization of tanks and pipelines in industrial plants (not intended for continuous 8-hour operation for which flexible high-pressure metal pipes are recommended)

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
13	24	7	60	130	0.40
16	26	7	60	160	0.61
19	31	7	60	190	0.59
25	37	7	60	250	0.73
28	40	7	60	280	0.79
30	45	7	60	300	1,1
32	47	7	60	320	1,16
35	50	7	60	350	1,25
38	53	7	60	380	1,34
40	54	7	60	400	1,51
45	64	7	60	450	2,03
51	68	7	60	500	2
60	82	7	60	600	3,07
63	83	7	60	630	2,89
76	95	7	60	760	3,19

### 4.3 Topla voda i vodena para (Hot water and steam)

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#### Calorflex



Cijev: glatka sintetska EPDM guma crne boje otporna na toplinu

Ojačanje: tekstilna mreža velike čvrstoće i čelična spirala

Presvlaka: spiralno "izbrazdana" sintetska guma otporna na habanje, more i atmosferske utjecaje

Raspon temperature: -40 °C do 120 °C

Primjena: usis i tlak tople vode - narocito se koristi za ispuh brodskih motora (mješavina povišene temperature ulja, nafte, morske vode)

Tube: smooth synthetic black heat-resistant EPDM rubber

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: spirally "grooved" synthetic rubber resistant to wear, sea and atmospheric influences

Temperature range: -40 °C to 120 °C

Applications: hot water suction and pressure - especially used for marine engine exhaust (mixture of elevated oil, oil, seawater temperature)

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
20	28	5	15	70	0.52
25	33	5	15	85	0.58
28	36	5	15	95	0.64
30	38	5	15	100	0.68
32	40	5	15	105	0.76
35	45	5	15	115	0.84
38	48	5	15	130	0.95
40	50	5	15	135	1.00
45	55	5	15	150	1,2
51	61	5	15	165	1,3
55	65	5	15	180	1,5
60	70	5	15	200	1,7
65	75	5	15	315	1,35
70	79	5	15	340	1,45
75	86	5	15	390	1,62
80	90	5	15	400	1,67
90	100	5	15	450	1,87
100	110	5	15	490	2,32
125	135	5	15	625	2,83



### 4.3 Topla voda i vodena para (Hot water and steam)

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#### Calormaster



Standard: BS 5342 tip 2

Cijev: glatka EPDM guma velike otpornosti na toplinu

Ojačanje: čelična mreža (2 sloja)

Presvlaka: hrapava EPDM guma crne boje otporna na toplinu, habanje i atmosferske utjecaje; njeno mikroperforiranje onemogućava stvaranje potencijalno opasnih mjehurića - po posebnom zahtjevu se vanjski sloj izrađuje u boji

Raspon temperature: -40 °C do 210 °C

Primjena: tlak zasićene pare - koristi se u kemijskim i petrokemijskim postrojenjima (nisu predviđene za kontinuirani 8 satni rad za što se preporučuju fleksibilne visokotlačne metalne cijevi)

Standard: BS 5342 type 2

Tube: smooth EPDM rubber with high heat resistance

Reinforcement: steel mesh (2 layers)

Cover: rough EPDM black rubber resistant to heat, wear and weathering; its microperforation prevents the formation of potentially dangerous bubbles - on special request, the outer layer is made in color

Temperature range: -40 °C to 210 °C

Applications: saturated vapor pressure - used in chemical and petrochemical plants (not intended for continuous 8-hour operation, for which flexible high-pressure metal pipes are recommended)

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
10	22	17	170	100	0.40
13	25	17	170	130	0.52
16	28	17	170	160	0.60
19	32	17	170	190	0.75
25	38	17	170	250	0.91
32	46	17	170	320	1,24
38	54	17	170	380	1,65
40	56	17	170	400	1,75
51	67	17	170	510	2,15
60	79	17	170	600	3,01
63	83	17	170	630	3,42
76	96	17	170	750	3,87
102	124	17	170	1000	5,1

## 4.4 Crijeva za kemikalije (Chemical products hoses)

### MULTI-CHEM EPDM



Kemijski otporno crijevo sa spiralnim ojačanjem, tip usisno-ispusno, namijenjeno za prijenos kemijski agresivnih tekućina kao što su kiseline, lužine, otapala i boje. Vanjski sloj crijeva otporan je na abraziju, habanje i utjecaje okoliša, uključujući UV zračenje i ozon.

Crijevo je potpuno vodljivo, s električnim otporom  $R < 10^6 \Omega$  kroz stijenku i  $R < 10^9 \Omega$  duž stijenke te je u skladu s normom EN 12115:2011.

Unutarnji sloj	EPDM
Vanjski sloj	Crni EPDM
Ojačanje	Dvostruko tekstilno ojačanje, čelična spirala
Radni tlak	16 BAR
Tlak rasprskavanja	64 BAR
Temperaturni raspon	od -35°C do +100°C
Norme	EN 12115:2011

Unutarnji promjer (mm)	Vanjski promjer (mm)	Vacuum – BAR	Radius savijanja (mm)	Masa (kg/m)
19	31	0,9	125	0,69
25	37	0,9	150	0,84
32	44	0,9	175	1,03
38	51	0,9	225	1,18
50	66	0,9	275	1,73
63	79	0,9	300	2,33
76	92	0,8	350	2,76
102	120	0,8	450	3,78

### MULTI-CHEM UPE OHM SD



Usisno i ispuhno crijevo namijenjeno za prijenos agresivnih kemijskih tekućina poput sumporne kiseline, fosforne kiseline i otapala. Vanjski sloj crijeva otporan je na abraziju i zahtjevne okolišne uvjete, uključujući UV zračenje, ozon i procese starenja.

Crijevo je potpuno vodljivo; električni otpor iznosi  $R < 10^6 \Omega$ , a kroz stijenu  $R < 10^9 \Omega$ . U skladu je s normom EN 12115.

Unutarnji sloj	UPE
Vanjski sloj	Crni EPDM
Ojačanje	Duplo tekstilno ojačanje, čelična spirala
Radni tlak	16 BAR
Tlak rasprskavanja	64 BAR
Područje radne temperature	Od -35°C do +100°C (ovisno o mediju)
Norme	EN 12115:2011

Unutarnji promjer (mm)	Vanjski promjer (mm)	Vacuum – BAR	Radius savijanja (mm)	Masa (kg/m)
19	31	0,9	188	0,68
25	37	0,9	225	0,83
32	44	0,9	263	1,01
38	51	0,9	338	1,16
50	66	0,9	413	1,82
63,5	79	0,9	450	2,51
75	91	0,8	525	2,88
100	116	0,8	675	3,87

##### Chemigen – EPDM



Standard: BS 2050

Cijev: glatka ekstrudirana antistatička EPDM guma crne boje otporna na toplinu

Ojačanje: tekstilna mreža velike čvrstoće

Presvlaka: glatka ekstrudirana EPDM guma crne boje otporna na atmosferske utjecaje i ozon

Raspon temperature: -40 °C do 120 °C

Primjena: tlak kiselina, lužina i soli manje koncentracije, boja i razređivača koji ne sadrže alifatske aromatske ugljikohidrate, morske vode i tople vode, urea (AdBlue), te plinova i fluida u atmosferi koja zahtjeva antistatičnost fleksibilne cijevi

Standard: BS 2050

Tube: smooth extruded antistatic black heat-resistant EPDM rubber

Reinforcement: high-strength textile mesh

Cover: smooth extruded EPDM black rubber resistant to weathering and ozone

Temperature range: -40 °C to 120 °C

Applications: pressure of acids, alkalis and salts of lower concentration, paints and thinners that do not contain aliphatic aromatic carbohydrates, sea water and hot water, urea (AdBlue), and gases and fluids in the atmosphere that requires antistatic flexible tube

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>kg/m</i>
10	19	20	60	0.26
13	21	20	60	0.27
16	25	20	60	0.37
19	29	20	60	0.47
25	36	20	60	0.65

##### Chemcord – EPM



Cijev: glatka EPM guma crne boje otporna na ozon, kisik, toplinu, vodenu paru, kemikalije i starenje - nije otporna na mineralna ulja, aromatske rastvorenje, alifate i spojeve na bazi klora

Ojačanje: tekstilna mreža velike čvrstoće

Presvlaka: hrapava EPDM guma crne boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -35 °C do 100 °C

Primjena: tlak kemikalija na koje je otporan unutarnji sloj od EPM gume

Tube: smooth EPM black rubber resistant to ozone, oxygen, heat, water vapor, chemicals and aging - not resistant to mineral oils, aromatic solutions, aliphatics and base compounds chlorine

Reinforcement: high-strength textile mesh

Cover: rough EPDM black rubber resistant to wear and weathering

Temperature range: -35 °C to 100 °C

Applications: pressure of chemicals to which the inner layer of EPM rubber is resistant

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
19	30	10	40	190	0.55
20	29	10	40	200	0.50
25	37	10	40	250	0.75
30	42	10	40	300	0.85
32	44	10	40	320	1.00
35	48	10	40	350	1,15
38	52	10	40	380	1,3
40	54	10	40	400	1,38
45	61	10	40	450	1,49
51	66	10	40	510	1,6
60	76	10	40	600	1,98
63	80	10	40	630	2,1
76	94	10	40	760	2,95
102	122	10	40	1020	4,3

##### Chemspir – EPM



Cijev: glatka EPM guma crne boje otporna na ozon, kisik, toplinu, vodenu paru, kemikalije i starenje - nije otporna na mineralna ulja, aromatske rastvore, alifate i spojeve na bazi klora

Ojačanje: tekstilna mreža velike čvrstoće i čelična spirala

Presvlaka: hrapava EPDM guma crne boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -35 °C do 100 °C

Primjena: usis i tlak kemikalija na koje je otporan unutarnji sloj od EPM gume

Tube: smooth EPM black rubber resistant to ozone, oxygen, heat, water vapor, chemicals and aging - not resistant to mineral oils, aromatic solutions, aliphatics and base compounds chlorine

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: rough EPDM black rubber resistant to wear and weathering

Temperature range: -35 °C to 100 °C

Applications: suction and pressure of chemicals to which the inner layer of EPM rubber is resistant

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>	<i>kg/m</i>
25	37	10	40	150	0,85
30	42	10	40	236	1,05
32	46	10	40	256	1,25
35	49	10	40	265	1,38
38	52	10	40	280	1,5
40	54	10	40	290	1,7
51	65	10	40	330	2,3
60	74	10	40	480	2,66
63	78	10	40	500	2,96
70	84	10	40	540	3,4
76	92	10	40	570	4
80	96	10	40	640	5,3
102	118	10	40	600	6,4
127	147	10	40	780	8,2
152	172	10	40	1050	12,5
203	228	10	40	1580	17,8

##### Chemspir – UPE



Cijev: glatki polietilen velike molekularne težine (UPE) crne boje otporan na gotovo sve kemijske proizvode i aromatske rastvore - otporniji je na temperaturu od umreženog polietilena

Ojačanje: tekstilna mreža velike čvrstoće i čelična spirala

Presvlaka: hrapava EPDM guma crne ili zelene boje otporna na habanje i atmosferske utjecaje

Raspon temperature: -40 °C do 100 °C

Primjena: usis i tlak kemikalija, na koje je otporan unutarnji sloj od UPE gume, prehrambenih tekućina, pitke vode

Tube: black high molecular weight (UPE) smooth polyethylene resistant to almost all chemical products and aromatic solutions - more resistant to temperature than cross-linked polyethylene

Reinforcement: high-strength textile mesh and steel spiral wire

Cover: rough EPDM black or green rubber resistant to wear and weathering

Temperature range: -40 °C to 100 °C

Applications: suction and pressure of chemicals, to which the inner layer of UPE rubber, food liquids, drinking water is resistant

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
19	30	16	64	130	0.75
25	37	16	64	150	0.98
30	42	10	40	240	1,1
32	46	16	64	256	1,4
35	48	10	40	280	1,5
38	52	16	64	304	1,6
40	54	10	40	350	1,4
51	65	16	64	450	2,1
60	75	10	40	520	2,6
63	78	16	64	550	2,8
76	94	16	64	600	3,9
80	96	10	40	630	4,5
102	122	16	64	800	5,5

#### 4.4 Crijeva za kemikalije (Chemical products hoses)

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##### Chemcord – FPM



Cijev: glatki viton (FPM) crne boje otporan na visoke temperature ulja i kemikalija - nije otporna na ketone

Ojačanje: tekstilna mreža velike čvrstoće i bakreni oplet

Presvlaka: hrapavi neopren (CR) crne boje otporan na atmosferske utjecaje, povišene temperature i ulja

Raspon temperature: -15 °C do 120 °C

Primjena: tlak kemikalija na koje je otporan unutarnji sloj od FPM gume

Tube: black smooth viton (FPM) resistant to high temperatures of oils and chemicals - not resistant to ketones

Reinforcement: high-strength textile mesh and copper braid

Cover: rough neoprene (CR) black color resistant to weathering, elevated temperatures and oils

Temperature range: -15 °C to 120 °C

Applications: pressure of chemicals to which the inner layer of FPM rubber is resistant

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
mm	mm	bar	bar	mm	kg/m
19	29	10	40	125	0,55
25	35	10	40	160	0,69
30	42	10	40	190	1
32	46	10	40	200	1,2
38	54	10	40	240	1,6
40	56	10	40	240	1,66
50	68	10	40	300	2,3
60	78	10	40	360	2,7
63	81	10	40	360	2,8
75	93	10	40	450	3,1
80	98	10	40	480	3,3
100	120	10	40	600	4,6

## 4.5 Nafta i naftni derivati, hidraulično ulje (Petroleum and petroleum products)

### BR



Materijal cijevi: glatka NBR guma crne boje

Oplet: pocinčana čelična žica AISI 1008 (paralelne crvena i plava pruga)

Raspon temperature: -10 °C do 70 °C

Primjena: tlak nafte, hidrauličnog ulja, rashladnih emulzija

Hose material: non-toxic smooth black EPDM rubber

Braid: galvanized steel wire AISI 1008 (parallel red and blue stripe)

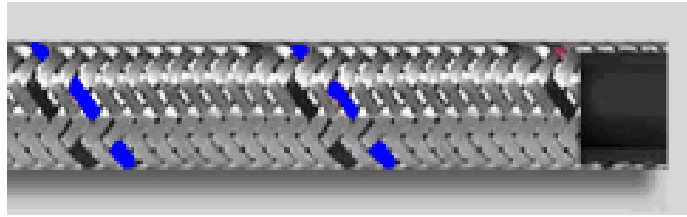
Temperature range: -10 °C to 70 °C

Application: oil pressure, hydraulic oil, cooling emulsions

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>
5	10	15	75	30
6	11	15	75	30
8	13	15	75	40
10	15	15	75	45
13	19	15	60	50
16	22	10	60	70
19	25	10	50	80
25	33	10	45	100

## 4.5 Nafta i naftni derivati, hidraulično ulje (Petroleum and petroleum products)

TA



Materijal cijevi: glatka NBR guma crne boje otporna na ozon

Oplet: pocinčana čelična žica AISI 1008 (paralelne crna i plava pruga)

Raspon temperature: -40 °C do 100 °C (komprimirani zrak)

-40 °C do 80 °C (nafta)

-40 °C do 120 °C (hidraulično ulje)

Primjena: tlak komprimiranog zraka, nafte, hidrauličnog ulja

Hose material: non-toxic smooth black EPDM ozone resistant rubber

Braid: galvanized steel wire AISI 1008 (parallel black and blue stripe)

Temperature range: -40 °C to 100 °C (compressed air)

-40 °C to 80 °C (petroleum)

-40 °C to 120 °C (hydraulic oil)

Application: pressure of compressed air, oil, hydraulic oil

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>
5	10	15	30	30
6	11	15	30	30
8	13	15	40	40
10	15	15	45	45
13	19	15	50	50
16	22	10	70	70
19	24	10	80	80
25	32	10	100	100



## 4.5 Nafta i naftni derivati, hidraulično ulje (Petroleum and petroleum products)

**BS**



Cijev: glatka NBR guma crne boje otporna na naftu, naftne derivate i hidraulično ulje

Ojačanje: samougasivi impregnirani vulkanizirani tekstil crne boje

Presvlaka: glatka guma crne boje otporna na ozon

Raspon temperature: 100 °C

Primjena: tlak benzina, nafte i hidrauličnog ulja

Tube: smooth black NBR rubber resistant to oil, petroleum products and hydraulic oil

Reinforcement: self-extinguishing impregnated vulcanized black textiles

Cover: smooth black ozone resistant rubber

Temperature range: 100 °C

Applications: gasoline, oil and hydraulic oil pressure

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>mm</i>	<i>kg/m</i>
3	7	10	30	25	0.04
4	8	10	30	35	0.05
5	10	10	30	40	0.08
6	11	10	30	50	0.10
8	13	10	30	65	0.11
10	17	10	30	80	0.19

## 4.5 Nafta i naftni derivati, hidraulično ulje (Petroleum and petroleum products)

### **Petrocar**



Standard: EN 1360 Tip 1

Cijev: glatka NBR guma crne boje otporna naftu i naftne derivate

Ojačanje: tekstilna mreža velike čvrstoće i bakreni oplet

Presvlaka: glatka NBR guma crne boje otporna na petrokemijske proizvode, habanje, atmosferske utjecaje i starenje

Raspon temperature: -30 °C do 55 °C

Primjena: tlak nafte, običnog benzina, super benzina i ekološkog benzina - koristi se na benzinskim postajama

Standard: EN 1360 Type 1

Tube: smooth NBR black rubber resistant to oil and petroleum products

Reinforcement: textile mesh and copper braid

Cover: smooth black NBR rubber resistant to petrochemicals, wear, weathering and aging

Temperature range: -30 °C to 55 °C

Applications: pressure of oil, ordinary gasoline, super gasoline and ecological gasoline - used at gas stations

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>kg/m</i>
13	21,5	16	48	0.260
16	26	16	48	0.350
19	29	16	48	0.400
25	36.5	16	48	0.570

### MULTI 20 D



Visoko izdržljivo, višenamjensko ispušno/odvodno crijevo pogodno za prijenos komprimiranog zraka (uključujući nauljeni zrak), industrijske vode i mulja.

Koristi se, primjerice, kao visokotlačno crijevo s prihvaticima tipa „claw“ (spojnice) kao što su ATLAS COPCO, za pneumatske čekiće te kao komponenta u cjevovodima.

Vanjski sloj otporan je na UV zračenje, ozon, oštre okolišne uvjete, abraziju i blage kemikalije. Zahvaljujući mješavini sintetičke gume u unutrašnjosti, crijevo je otporno na habanje i onečišćenje uljem.

Unutarnji sloj	SBR
Vanjski sloj	EPDM
Ojačanje	Dvostruko tekstilno ojačanje
Radni tlak	20 BAR
Tlak rasprskavanja	60 BAR
Temperaturni raspon	Od -30 °C do +80 °C

Unutarnji promjer (mm)	Vanjski promjer (mm)
19	30
25	37
32	44
38	52
51	66
63	79
76	92
102	118

## 4.6 Zrak i plin (Air and gas hoses)

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### GC



Materijal cijevi: glatka termoplastična guma (NO 8 i 13), NBR guma (NO 10)  
odnosno CR guma (NO 19 i NO 25)

Oplet: aluminijska žica sa 2 paralelne žute pruge (NO 8 i 13), odnosno čelčna pocinčana žica  
sa 2 paralelne žute pruge (NO 10, 19 i 25)

Standardi: UNI CIG 7140 IMQ (NO 8 i 13)  
DIN 22103/94 (NO 19)  
ASTM C542 (NO 25)

Primjena: tlak inertnih plinova (propana, butana, metana, gradskog plina)

Hose material: smooth thermoplastic rubber (NO 8 and 13), NBR rubber (NO 10) and CR  
rubber (NO 19 and NO 25)

Braid: aluminum wire with 2 parallel yellow stripes (NO 8 and 13), or galvanized steel wire  
with 2 parallel yellow stripes (NO 10, 19 and 25)

Standards: -40 ° C to 100 ° C (compressed air)  
-40 ° C to 80 ° C (petroleum)  
-40 ° C to 120 ° C (hydraulic oil)

Application: pressure of inert gases (propane, butane, methane, city gas)

NO	Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Bend radius
-	mm	mm	bar	bar	mm
NO 8	8	15	15	80	45
NO 10	10	16	12	60	60
NO 13	13	21	12	60	60
NO 19	19	30	10	30	80
NO 25	25	36	20	60	150

## 4.6 Zrak i plin (Air and gas hoses)

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### Aersuper



Cijev: glatka sintetska guma bijele boje prehrambene kvalitete otporna na zauljeni zrak

Ojačanje: tekstilna mreža

Presvlaka: hrapava sintetska guma plave boje otporna na atmosferske utjecaje i starenje

Raspon temperature: -40 ° C do 160 ° C °C

Primjena: tlak komprimiranog vrućeg zraka – montira se na kompresore kamiona cisterni za transport proizvoda poput cementa, granulata, žita

Tube: smooth synthetic rubber of food quality resistant to oily air

Reinforcement: textile net

Cover: rough synthetic rubber resistant to weathering and aging

Temperature range: -40 ° C to 160 ° C

Applications: compressed hot air pressure - mounted on tank truck compressors for transport of products such as cement, granules, grain

Inside $\phi$	Outside $\phi$	Working pressure	Burst pressure	Weight
<i>mm</i>	<i>mm</i>	<i>bar</i>	<i>bar</i>	<i>kg/m</i>
38	49	10	30	1,05
42	53	10	30	1,15
51	62	10	30	1,37
60	72	10	30	1,74
63	75	10	30	1,75
70	84	10	30	2,37
76	90	10	30	2,56
90	104	10	30	2,99
102	116	10	30	3,36