



**Dvoslojne korugovane
PP cevi i fitting**

**Double layer corrugated
PP pipes and fittings**

Proizvodnja i namena

UVOD. Peštan za svoje korugovane cevi nabavlja materijale od vrhunskih sertifikovanih svetskih proizvođača. To su pre svega sirovine koje zadovoljavaju visoka svojstva otpornosti na udar koje poseduje polipropilen PP-B kopolimer.

IZBOR. Vrlo je važno da se izvrši pravilan izbor cevi prema vrsti fluida i uslovima eksploatacije, u skladu sa karakteristikama materijala od kog su izrađene.

Production and purposes

INTRODUCTION. Peštan Company supplies for its corrugated pipes only certified materials from top manufacturers. These raw materials are satisfying properties of high impact resistance that have polypropylene copolymer PP-B.

CHOICE. It is very important to make the correct choice of pipe by the type of fluid and by conditions of exploitation, in accordance with the characteristics of the material from which they are made of.

KARAKTERISTIKA CHARACTERISTICS	VREDNOST VALUE	EN EN
Gustina Density	900kg/m ³	EN 1183
MFR MFR	0,3gr/10 min(230/2,16)	EN1133
Modul elastičnosti Modulus of elasticity	1500/2000MPa	EN527
Zatezna čvrstoća na granici razvlačenja Tensile strength at yield point	32 MPa	EN527
Udarna žilavost po Šarpiju sa zarezom Impact toughness by Sharp with a comma	+23 °C 70kJ/m ² -23 °C 7 kJ/m ²	EN179/1eA EN179/1eA





MATERIJAL. Karakteristike materijala, odnosno temperaturne primene date su u sledećoj tablici:

MATERIJAL MATERIAL	MIN. MIN.	MAX. MAX.	KRATKOTRAJNA SHORT-TERM
PP // PP	-20 °C	60°C	95°C
PE-HD // PE-HD	-40°C	40°C	70°C
PVC-U // KG-U	0°C	40°C	60°C

Primena materijala prema temperaturi // Application of materials according to temperature

PROIZVODNJA. Cevi se proizvode u skladu sa SRPS-EN13476 I EN1440

- Razvrstane su prema unutrašnjem svetlom prešniku DN/ID
- Očekivani životni vek je 100 godina
- Odlične hidrauličke karakteristike
- Odlična hemijska postojanost
- Visoka temperaturna postojanost na 60 °C, kratkotrajno do 90 °C.
- Visoka otpornost na abraziju
- Cevi su male težine
- Jednostavna manipulacija i ugradnja
- Dobre mehaničke karakteristike
- Dobra otpornost na udar i pri niskim temperaturama
- Dobra fleksibilnost cevi
- Cevi se mogu u potpunosti reciklirati.
- Ne sadrže teške metale ni ostale sporne materije
- Koeficijent trenja je $-K_b=0,25\text{mm}$

*Pored klasa SN4 i SN8, cevi se po zahtevu kupca mogu proizvesti i u klasama SN12 i SN16

MATERIAL. Material properties and temperature application are given in the following table:

PRODUCTION. Pipes are manufactured in accordance with SRPS-EN13476 and EN1440

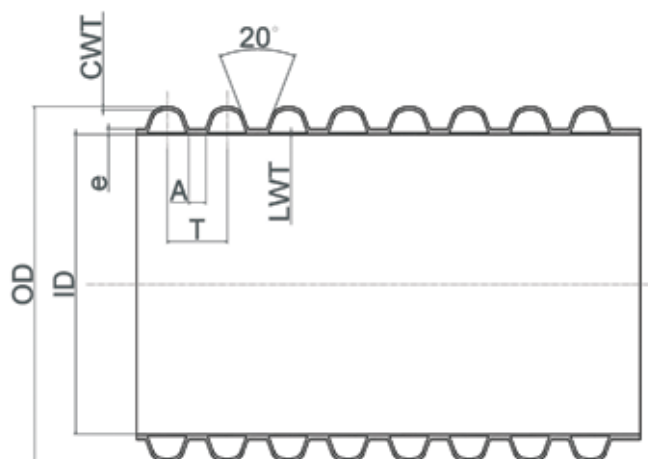
- Classified according to the inner light diameter DN/ID
- Life expectancy is 100 years
- Excellent hydraulic properties
- Excellent chemical stability
- High temperature stability at 60 °C, short term up to 90 °C
- High resistance to abrasion
- Pipes are lightweight
- Easy handling and installation
- Good mechanical properties
- Good impact resistance at low temperatures
- Good pipe flexibility
- Pipes can be completely recycled
- Pipes do not contain heavy metals or other disputed matter
- Friction coefficient is $-K_b = 0.25 \text{ mm}$

*The pipes are manufactured as class SN4 and SN8, pipes according to customer's request can be produced in class SN12 and SN16



NAČIN SPAJANJA. Spajanje pod uglom fittingom, spajanje više cevododa sa T računom kao i spajanje preko naknadnog sedlastog priključka SAG (saddle after grip).

CONNECTING METHODS. Connecting with angle fitting, connecting many pipelines with T branches and connecting over the saddle after grip (SAG).



ŠIFRA CODE	DN	OD	ID	e	CWT	LWT	T	A	Kg/m
10702000	Ø140	SN4 Ø160	139.8	1.2	0.5~0.9	0.9	17.44	3.5	0.8-1.1
10702020		SN8 Ø160	139	1.6	0.9~1.2	1.1	17.44	3.5	1.1-1.4
10702001	Ø200	SN4 Ø227	199	1.7	0.9~1.2	1.2	22.43	4.5	1.8-2.0
10702021		SN8 Ø227	198	2.2	1.2~1.6	1.4	22.43	4.5	2.1-2.5
10702002	Ø250	SN4 Ø283	249	2.2	1.2~1.4	1.5	26.17	5.1	2.8-3.1
10702022		SN8 Ø283	248	2.7	1.6~2.0	1.6	26.17	5.1	3.6-3.85
10702003	Ø300	SN4 Ø340	298.2	2.6	1.3~1.5	1.7	31.4	5.5	3.8-4.2
10702023		SN8 Ø340	297	3.2	1.7~2.2	1.8	31.4	5.5	4.5-5.2
10702004	Ø400	SN4 Ø453	397.8	3.2	1.4~1.7	2.2	39.25	7.9	5.8-6.6
10702024		SN8 Ø453	396	4.1	2.2~2.6	2.5	39.25	7.9	8.1-8.9
10702005	Ø500	SN4 Ø567	497.6	4.2	1.8~2.2	3.0	52.78	9.4	9.8-10.7
10702025		SN8 Ø567	495	5.5	2.4~3.1	3.3	52.78	9.4	12.6-13.5
10702006	Ø600	SN4 Ø680	597	5.2	2.6~3.0	3.5	65.97	13.2	15.0-16.5
10702026		SN8 Ø680	594	6.7	3.4~3.8	3.8	65.97	13.2	18.7-19.3
10702007	Ø800	SN4 Ø906	796	6.5	2.8~3.2	4.5	89.97	19.3	24.0-25.8
10702027		SN8 Ø906	792	8.5	4.3~5.1	4.7	89.87	19.3	31.6-33.4



Naknadni sedlasti priključak (SAG)

NAMENA. Naknadni sedlasti priključak je nov, moderan proizvod, odličnih performansi.

Namenjen je za naknadno priključivanje na postojeći cevovod sa priključkom za glatke i korugovane cevi. Upotrebom ovog sistema u kombinaciji sa ogromnom ponudom Peštan fittinga izrada novih linija kućne, ulične i kišne kanalizacije, kao i priključivanje na postojeće linije postaje pravo zadovoljstvo.

Radi se o najnovijem proizvodu iz palete preduzeća Peštan čija je namena naknadno priključivanje na postojeći cevovod sa priključkom za glatke i korugovane cevi. Spoj je siguran i vodonepropustan. Izrađuje se od ABS-a u tehnologiji injekcionog brizganja.

Saddle after grip (SAG)

PURPOSE. Saddle after grip is new, modern product, with great performance.

It is intended for subsequent connection to an existing pipeline for smooth as well as corrugated pipes. Using this system, combined with a great range of Peštan fittings, production of new lines of home, street and drain sewer, as well as connecting to existing lines becomes satisfaction.

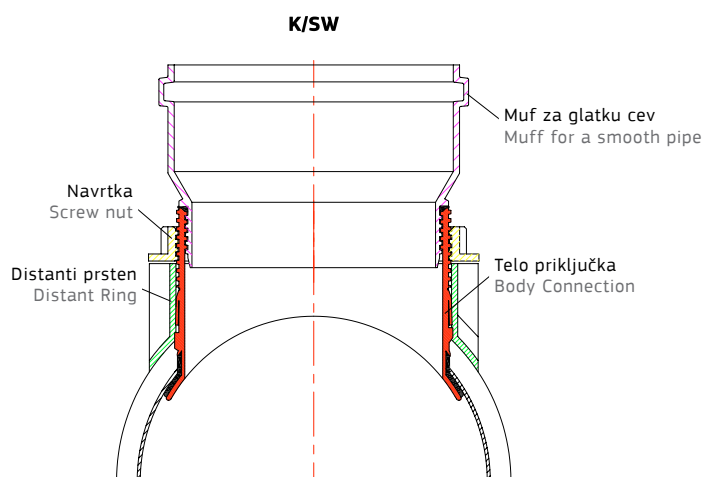
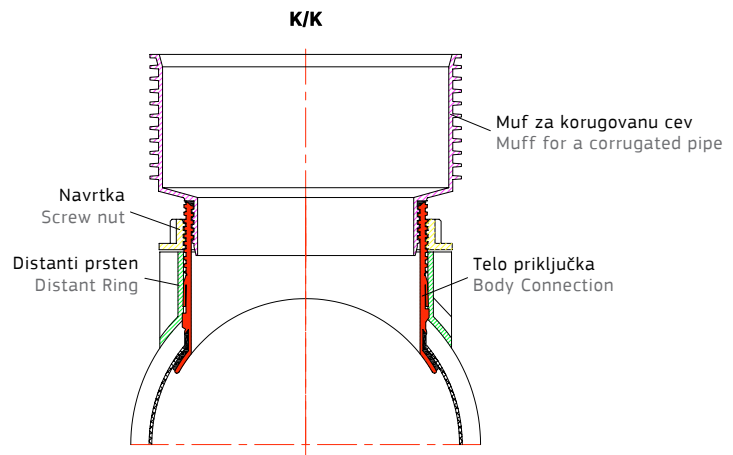
Peštan latest product main purpose is to be subsequently attached to an existing pipeline with a connection to smooth and corrugated pipes. The connection is safe and waterproof. It is made of ABS by injection molding technology.



VELIČINE. Veličine koje nudimo date su u sledećoj tabeli:

SIZES. Sizes are given in the following table:

K/K ŠIFRA K/K CODE	K/SW ŠIFRA K/SW CODE	
10799200	10799100	250/200
10799201	10799101	300/200
10799202	10799102	400/200
10799203	10799103	500/200
10799204	10799104	600/200





Lukovi 30°, 45°, 60°, 90°

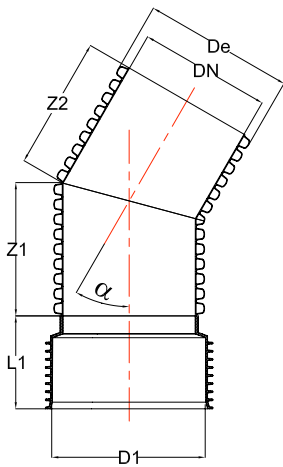
NAMENA. Lukovi su prateći fitting čija je namena spajanje cevi pod određenim uglom u zavisnosti od zahteva (30°,45°,60°,90°). Izrađuje se u tehnologiji zavarivanja segmenata cevi i poluspojnice koja ima funkciju integrisanog mufa.

Bends 30°, 45°, 60°, 90°

PURPOSE. Bends are side fittings which main purpose is connecting pipes at certain angle in accordance with requirements (30°,45°,60°,90°).It is made in the technology of welding pipe segments and semi joints which has the function of integrated socket.



LUK 30° // BEND 30°

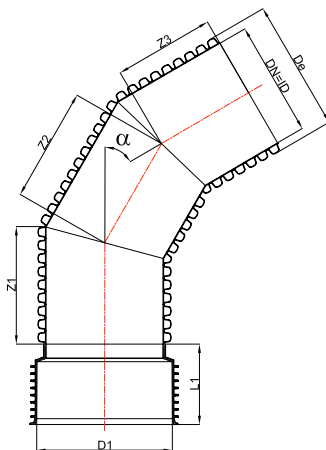


ŠIFRA CODE	DN	De	D1	α	L1	Z1	Z2
10799250	140	160	162	30°	95	180	165
10799251	200	227	230	30°	140	200	180
10799252	250	283	286	30°	170	235	210
10799253	300	340	346	30°	180	280	250
10799254	400	453	458	30°	230	355	315
10799255	500	567	575	30°	255	475	425
10799256	600	680	686	30°	300	595	525

LUK 45° // BEND 45°

ŠIFRA CODE	DN	De	D1	α	L1	Z1	Z2
10799260	140	160	162	45°	95	210	210
10799261	200	227	230	45°	140	225	225
10799262	250	283	286	45°	170	260	260
10799263	300	340	346	45°	180	315	315
10799264	400	453	458	45°	230	395	395
10799265	500	567	575	45°	255	530	530
10799266	600	680	686	45°	300	660	660

LUK 60° // BEND 60°



ŠIFRA CODE	DN	De	D1	α	L1	Z1	Z2	Z3
10799270	140	160	162	60°	95	165	210	165
10799271	200	227	230	60°	140	180	225	180
10799272	250	283	286	60°	170	210	235	210
10799273	300	340	346	60°	180	250	285	250
10799274	400	453	458	60°	230	315	350	315
10799275	500	567	575	60°	255	420	475	420
10799276	600	680	686	60°	300	525	595	525

LUK 90° // BEND 90°

ŠIFRA CODE	DN	De	D1	α	L1	Z1	Z2	Z3
10799280	140	160	162	90°	95	165	210	165
10799281	200	227	230	90°	140	180	225	180
10799282	250	283	286	90°	170	210	260	210
10799283	300	340	346	90°	180	250	315	250
10799284	400	453	458	90°	230	315	390	315
10799285	500	567	575	90°	255	425	530	425
10799286	600	680	686	90°	300	525	660	525

Sve mere su date u milimetrima (mm) // Measurements are given in millimeters (mm)



T KOMAD. Ovaj fitting dobijen je zavarivanjem segmenata cevi pod uglom od 90° sa odgovarajućim nastavkom u formi poluspojnice. Dostupan za cevi prečnika od Ø140-Ø600.

EKSCENTRIČNI REDUCIR. Fiting čija je namena spajanje cevi različitog prečnika. Izrađuje se u tehnologiji injekcionog brizganja polipropilena. Dostupan je u veličinama datim u tabeli.

PRELAZ SA KORUGOVANE NA GLATKU CEV . Namena ovog proizvoda je prelazak sa korugovane na glatku cev. Izrađuje se u tehnologiji injekcionog brizganja polipropilena ili zavarivanja. Dostupan je u veličinama koje su date u tabeli.

ČEP. Proizvod je u funkciji zatvaranja cevi i fitinga pri postavljanju cevi kao i pri raznim vrstama ispitivanja kao i za neke druge namene. Izrađuje se u tehnologiji injekcionog brizganja i zavarivanja polipropilena .

DUPLA SPOJNICA. Fiting namenjen za linijsko spajanje cevi istog prečnika. Proizvod je dobijen injekcionim brizganjem polipropilena.

TEE. This fitting was obtained by welding pipe segments at an angle of 90° with the appropriate extension in the form of semi joint. Available for pipe diameters Ø140-Ø600.

EXCENTRIC REDUCER. Fitting which main purpose is connecting pipes of different diameters. It is made of polypropylene injection molding technology. This fitting is available in sizes listed in the table.

TRANSITION FROM CORRUGATED TO SMOOTH PIPE. The purpose of this product is transition from smooth to corrugated pipe. It is made of polypropylene injection molding technology or welding. It is available in sizes that are given in the table.

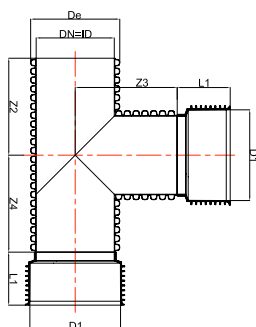
END CAP. This product has a function of closing the pipes and fittings while installing pipes and different types of testing as well as for any other purpose. It is made in the technology of injection molding and welding polypropylene.

DOUBLE MUFF. Fitting designed for linear connection of pipe with same diameter. The product is obtained by polypropylene injection molding.



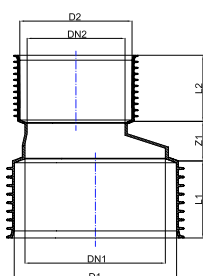
T KOMAD, DUPLA SPOJNICA, EKSCENTRIČNI REDUCIR, PRELAZ SA KORUGOVANE NA GLATKU CEV, ČEP ≪ DVOSLOJNE KORUGOVANE PP CEVI I FITING
 TEE, DOUBLE MUFF, EXCENTRIC REDUCER, TRANSITION FROM CORRUGATED TO SMOOTH PIPE, END CAP ≪ DOUBLE LAYER CORRUGATED PP PIPES & FITTINGS

T KOMAD // TEE



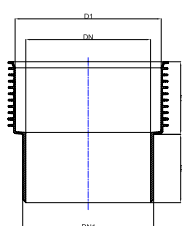
ŠIFRA CODE	DN	De	D1	L1	Z2	Z3	Z4
10799350	140	160	162	91	220	215	220
10799351	200	227	230	140	245	245	245
10799352	250	283	286	168	285	300	285
10799353	300	340	344	182	345	360	345
10799354	400	453	458	235	430	460	430
10799355	500	567	574	299	580	600	580
10799356	600	680	686	310	725	735	725

EKSCENTRIČNI REDUCIR // EXCENTRIC REDUCER



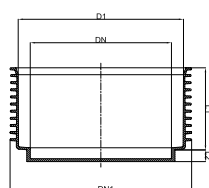
ŠIFRA CODE	DN1	DN2	D1	D2	Z1	L1	L2
10799300	200	140	230	160	58	115	91
40000760	250	200	286	230	129	145	110
40000763	300	250	344	286	136	153	137
40000812	400	300	458	344	146	200	150
40000764	500	400	574	458	159	262	200
40000814	600	500	686	574	171	270	262

PRELAZ SA KORUGOVANE NA GLATKU CEV // TRANSITION FROM CORRUGATED TO SMOOTH PIPE



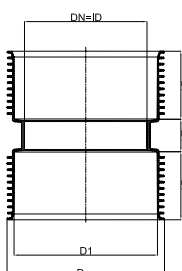
ŠIFRA CODE	DN	DN1	D1	L1	L2
10799500	140	160	162	90	90
40000771	200	200	230	115	120
40000772	250	250	286	145	143
40000773	300	315	346	153	155
40000774	400	400	459	235	200

ČEP // END CAP



ŠIFRA CODE	DN	DN1	D1	L1	L2
10799400	140	176	162	90	25,5
10799401	200	200	230	115	30
10799402	250	250	286	145	31
10799403	300	300	346	153	32
10799404	400	400	459	235	35
10799405	500	574	624	262	37
10799406	600	686	748	270	40

DUPLA SPOJNICA // DOUBLE MUFF



ŠIFRA CODE	DN	De	D1	L1	Z1
10799000	140	176	162	90	51
10799001	200	252	230	115	60
10799002	250	312	286	145	62
10799003	300	375	346	153	64
10799004	400	498	459	200	70
10799005	500	624	575	262	74
10799006	600	748	690	270	80
40000792	800	960	919	325	90



Reviziona šaha

NAMENA. Sa konusnim završetkom se sastoji iz 3 elementa: baze, tela i konusa. Baza i konus izrađeni su od polipropilena ili polietilena tehnologijom roto liva. Telo šaha je Peštan PP korugovana cev DN/ID800.

Proizvod je urađen u skladu sa EN 13476-1, EN 13476-3, EN13598-2.

UGRADNJA. Iskopavanje rova za polaganje revizione šaha treba da zadovolji uslove da rov bude najmanje 30cm širi od prečnika šaha kao i minimalno 15cm viši od ukupne visine. Površina na koju se postavlja šaha mora biti ravna i bez izbočina. Zbijenost materijala posteljice mora biti najmanje 95% Proctorove gustine. Nakon spajanja šaha i cevovoda pomoću integrisanog naglavka pristupa se zatrpavanju. Zatrpavanje otvora oko šaha treba izvesti sipkim materijalom postepeno u slojevima po 30cm. Slojeve materijala treba nabijati ručno ili pomoću laganih alata kako bi se izbegla deformacija sa spoljne strane šaha. Step en zbijenosti tla na zelenim površinama trebalobi da iznosi 95% Proctorove gustine a na saobraćajnicama od 98%-100%. Završni sloj materijala mora odgovarati okolnom tlu. »

Inspection manhole

PURPOSE. With cone end is composed of 3 elements: base, body and cone. Base and cone are made of polypropylene or polyethylene by rotation casting technology. The body of the manhole Peštan is PP corrugated pipe DN/ID800.

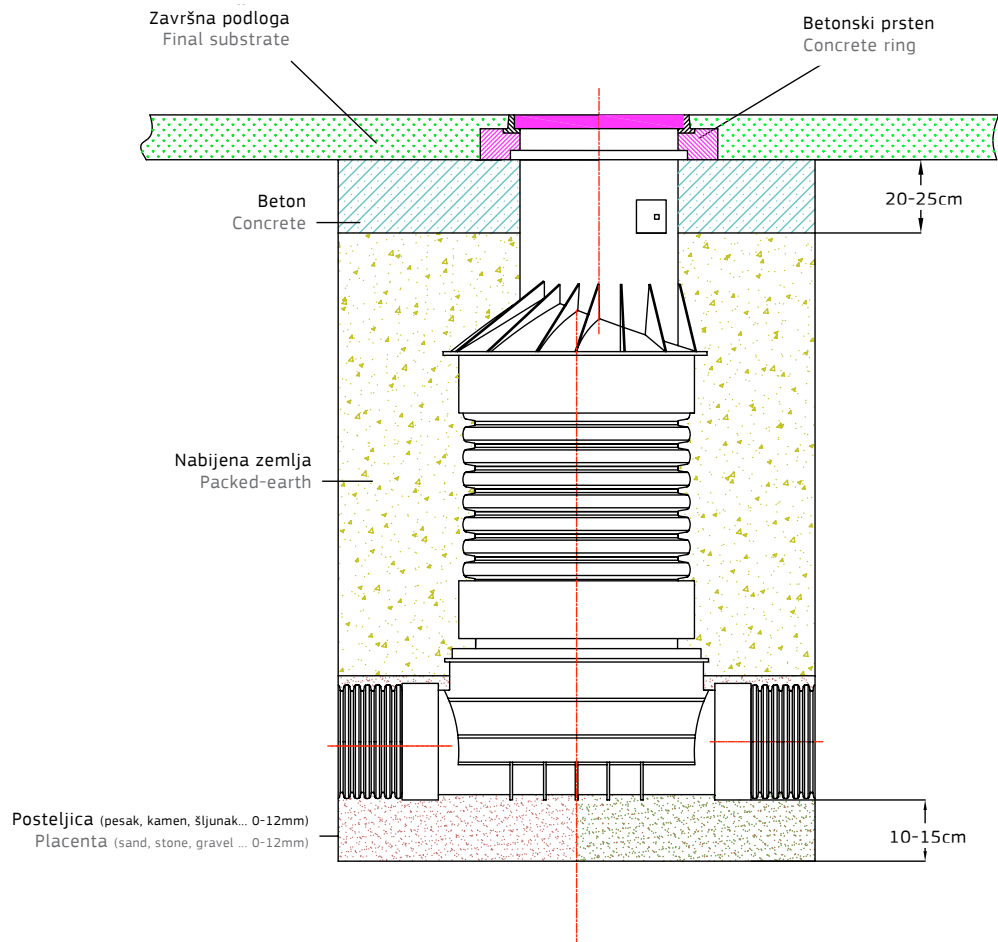
The product is made in accordance with EN 13476-1, EN 13476-3, EN13598-2.

INSTALLATION. Digging trenches for laying manhole should meet the requirements by size of a trench at least of 30cm wider than the diameter of manhole, and least 15cm higher than the total height of manhole. Surface for manhole must be smooth and without protrusions. Material density must be at least 95% of Proctor density. After connecting manhole and pipeline with an integrated fitting you can start backfilling. Backfilling around the manhole opening should be done gradually with loose material in layers by 30cm. Layers of material has to huddle by hand or using a lightweight tool to prevent deformation of the outside of the manhole. Level of soil compaction on the green surfaces has to be 95% of Proctor density, and on the roads of 98% -100%. Backfill soil material must match the surrounding soil. »



Statička i dinamička opterećenja ne prenose se direktno na tlo šahte već preko završne armirano-betonske ploče na zasip oko šahte. Potrebno je paziti da je betonski poklopac postavljen centrično u odnosu na izlaz iz šahte.

Static and dynamic loads are not transferred directly to the ground through the manhole, but the final reinforced-concrete plate on the embankment around the manhole. It is necessary to take care that the concrete cover of manhole had to be placed centric in relation to the exit from the manhole.





Nagib Baze // Base slope

DN/ID	100	150	200	250	300	350	400	500	600	800
%	l/s	l/s	l/s	l/s	l/s	l/s	l/s	l/s	l/s	l/s
1	1,98	5,88	12,68	23	37	56	80	144	232	495
2	2,87	8,50	18,27	33	53	80	114	206	332	707
3	3,56	10,51	22,57	41	66	99	141	253	409	870
4	4,14	12,22	26,21	47	77	115	163	294	474	1007
5	4,66	13,27	29,42	53	86	129	183	329	531	1128
6	5,13	15,08	32,32	58	94	141	201	361	583	1237
7	5,56	16,34	34,99	63	102	153	217	391	630	1338
8	5,96	17,50	37,48	68	109	164	233	418	674	1432
9	6,34	18,60	39,82	72	116	174	274	444	716	1517
10	6,69	19,64	42,03	76	122	184	261	468	755	1603
15	8,25	24,18	51,72	93	150	226	320	575	927	1967
20	9,57	28,02	59,89	108	174	261	371	665	1072	2275
25	10,73	31,40	67,10	121	195	292	415	745	1200	2545
30	11,78	34,46	73,61	132	214	321	455	817	1316	2790
35	12,75	37,27	79,61	143	231	347	492	883	1422	3015
40	13,65	39,89	85,18	153	247	371	526	944	1521	3225
45	14,49	42,35	90,42	163	263	394	558	1002	1614	3431
50	15,29	44,68	95,30	172	277	415	589	1056	1702	3608
55	16,05	46,89	100,09	180	291	435	618	1108	1786	3785
60	16,78	49,01	104,60	188	304	455	646	1158	1865	3954
65	17,48	51,04	108,92	196	316	474	672	1206	1942	4117
70	18,15	52,99	113,08	203	328	492	698	1251	2016	4273
75	18,80	54,87	117,09	211	340	509	722	1338	2087	4423
80	19,42	56,69	120,97	218	351	526	746	1380	2156	4569
85	20,03	58,64	124,73	224	362	542	769	1380	2222	4710
90	20,62	60,17	128,38	231	373	558	792	1420	2287	4848
95	21,19	61,84	131,93	237	383	574	814	1459	2350	4981
100	21,75	63,47	135,39	243	393	589	835	1497	2412	5111

Protok L/S // Flow L/S



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