

PVC-U PIPE SYSTEMS



PRODUCT CATALOGUE 2007

CHEMCO Company

Company "Chemco" is one of the largest manufacturers of PVC-U pipes for pressure water system and the sewerage system in Russia and in the countries CIS. Manufacture of PVC-U pipes since 1981, from now on is made more than 300 000 kms of pipes!

Quality

Quality of ours PVC-U pipes meets to the world standards, our pipes have certificates of conformity and hygienic certificates of Russia and other countries. On our manufacture the perfect quality monitoring system, both the raw material, and the production technology, carried out by the accredited laboratory acts. For 26 years of manufacture our pipes from PVC had no any claim on a product quality!

Production

Our PVC-U pipes are manufactured on the advanced inventory of Austrian company KraussMaffei Kunststoff-technik GmbH - the world leader of an extrusion machine industry. Production is equipped with a computerized control system which executes full monitoring production, ensures reproducibility and stability of all technological parameters and guarantees invariably high quality of production. The CHEMCO product range comprises:

- PVC-U Sewer Systems.
- PVC-U Pressure Systems.

Chemical resistance of a material PVC-U

Chemco pipe systems are manufactured from unplasticised polyvinyl chloride polymer which is a thermoplastic material without softener and without fillers. The high strength to weight ratio, together with exceptional resistance to corrosion makes Chemco pipe systems ideal for major infrastructure applications. PVC-U is resistant against most acids and alkalis. As a result, it is also used for storage and transport of aggressive media. That is why, PVC-U is preferred in pipe constructions like:

- Drinking water main lines.
- Drinking water supply lines.
- Discharge lines.
- Irrigation lines.
- Plant construction.
- Piping systems for the industry.

PVC-U pipe systems are ideal for transporting a wide variety of chemicals and are widely used in industries where conveyance of highly corrosive liquids and gases require products with excellent corrosion resistance.

PVC pipe systems have outstanding resistance to a wide range of chemical reagents at temperatures up to 50 °C. In general PVC is suitable to convey most strong acids, alkalies and aqueous solutions (except those which are strongly oxidising), aliphatic hydrocarbons, fluorides, photographic and plating solutions, brine, mineral oils, fats and alcohols. PVC should not normally be used with aldehydes and ketones, ethers, cyclic ethers, esters and aromatic and chlorinated hydrocarbons, nitro compounds, some petrol/benzene mixtures, and similar solvents which lead to a marked swelling and softening of the material. Consideration should also be given to the effect of the fluid on the rubber ring. Rubber gaskets are generally resistant to most inorganic chemicals, including acids, alkalis including salts, together with organic acids, alcohols, ketones and aldehydes. They can be attacked by ozone, strong acids, oils, greases and many hydrocarbons however. Chemco provides extensive technical support and will be pleased to assist when doubt exists over a product's suitability.

Fields of application

The PVC-U pipe systems from Chemco are suitable for the following applications:

- Potable water distribution systems.
- Industrial process pipelines.
- Pressure sewer.
- Effluent pipelines.
- Slurry pipelines.
- Irrigation and watering systems.
- Drain and underground sewer applications.

Features and profits of use Chemco PVC-U pipe systems

- High reliability and proven service performance.
- PVC-U pipes and fittings are the preferred most reliable and safe piping material world-wide for potable water supply and distribution pipes.
- Durable and complete plastic system with extensive range of pipes and fittings.
- Corrosion resistant.
- Maintaining a smooth internal surface, preventing the build-up of deposits.
- Minimum maintenance required.
- Light weight, which makes it easy to handle and install, resulting in reduced laying costs.
- Effective rubber ring seal joint with easy push-fit system ensure a tight and durable connection.
- Reduced jointing effort and improved reliability.
- Chemco PVC-U pipe systems are resistant to a great number of chemical agents.

More information about all Chemco products can be received for our experts and on website www.chemco.nnov.ru. Chemco provides extensive technical support and will be pleased to assist when doubt exists over a product's suitability.



Pressure pipe systems

The lightweight pressure pipes and fittings are available in diameters from 90 mm - 500 mm and in pressure classes ranging from PN 6 to PN 12. The PVC-U pressure pipes are available in socketed and plain ended lengths. They can be jointed in various ways. The PVC-U pressure pipes and fittings from Chemco are suitable for the following applications:

- potable water distribution systems
- industrial process pipelines
- pressure sewer
- effluent pipelines
- slurry pipelines
- irrigation and watering systems

Sewer pipe systems

The Chemco U-PVC sewer pipes and fittings are suitable for drain and underground sewer applications. This easy push-fit rubber ring jointing system is durable, corrosion free and light weight. The diameter varies from 110-500 mm in class SN 4. Chemco PVC sewer is a complete and reliable system, offering a wide variety of solutions. The pipes are available in socketed pipes and on request in plain-ended pipes. An extensive range of fittings and gullies is available to complete the system.

Pipe Jointing



1. Lubricate the sealing ring and fix it in a socket pipe. A ring to interpose an acute bead to a periphery edge of a socket pipe into a groove of a socket pipe and uniformly to unroll on a round.



2. Lubricate the plain end and a socket pipe.



3. Note the depth of entry mark. Align the spigot and socket. Using a crowbar with a piece of wood across the mouth of the opposing socket push the spigot home, leaving the depth of entry mark just visible.

Pipe Cutting & Chamfering



The plain end of pipes is supplied by a factory chamfer for unweighting of call in a socket pipe. If tube sections of non-standard length the pipe can be truncated a saw are required. Clearly mark the cutting position on the pipe, ensuring the cut will be square to the axis of the pipe. Use a wood saw to cut the pipe in an even and gradual cut. Remove all swarf and burs from the cut end and chamfer the pipe with a fine to medium file, providing a chamfer of minimum 15° for half of the pipe wall thickness.

Anchorage of tees, end caps and valves



Fittings exposed to shearing forces caused by internal water pressure, e.g. bands, tees, end caps, reducers and valves must be anchored.

PVC Pipe Jointing with other pipe systems



Pipeline systems of PVC are easily integrated with pipes from other materials (cast iron, steel, PE, PP, concrete, etc.). Company Chemco presents a wide spectrum purpose specialized transition fittings. On arising questions our experts will offer the necessary technical decision.

Repair of PVC of pipelines



Repair of PVC pipelines is carried out by replacement of the damaged lot with use of a tube section and two sleeve fittings.

Dimensions and units

Dimensions are indicated in mm and are specified as nominal or standard sizes.

Dn – Nominal Outside Diameter

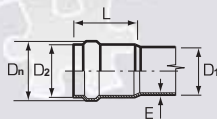
E - Pipe wall thickness

PN - Nominal pressure

SDR - Standard Dimension Ratio

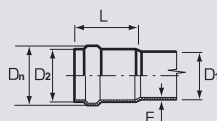
$SDR = Dn/E$

PRESSURE PIPES



PRESSURE PIPES PVC-U 100 WITH SOCKETS

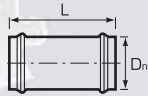
<i>Dn, MM</i>	D1	D2	E	L
SDR 33 PN 6				
90	84,4	110,7	2,8	110,5
110	103,2	132,5	3,4	116,0
160	150,2	186,0	4,9	134,5
225	211,2	254,5	6,9	154,0
315	295,6	351,3	9,7	184,0
400	375,4	443,1	12,3	220,0
500	469,4	549,6	15,3	255,0
SDR 21 PN 8				
90	81,4	110,7	4,3	110,5
110	99,4	132,5	5,3	116,0
160	144,6	186,0	7,7	134,5
225	203,4	254,5	10,8	154,0
315	285,0	351,3	15,0	184,0
400	361,8	443,1	19,1	220,0
500	452,2	549,6	23,9	255,0



PRESSURE PIPES PVC-U 125 WITH SOCKETS

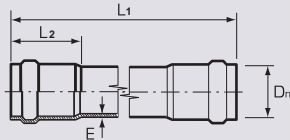
<i>Dn, MM</i>	D1	D2	E	L
SDR 41 PN 6				
160	104,6	132,5	2,7	116,0
225	152,0	186,0	4,0	134,5
315	214,0	254,5	5,5	154,0
400	299,6	351,3	7,7	184,0
500	380,4	443,1	9,8	220,0
500	475,4	549,6	12,3	255,0
SDR 33 PN 8				
110	103,2	132,5	3,4	116,0
160	150,2	186,0	4,9	134,5
225	211,2	254,5	6,9	154,0
315	295,6	351,3	9,7	184,0
400	375,4	443,1	12,3	220,0
500	469,4	549,6	15,3	255,0
SDR 26 PN 10				
110	101,6	132,5	4,2	116,0
160	147,6	186,0	6,2	134,5
225	207,8	254,5	8,6	154,0
315	290,8	351,3	12,1	184,0
400	369,4	443,1	15,3	220,0
500	461,8	549,6	19,1	255,0
SDR 21 PN 12,5				
110	99,4	132,5	5,3	116,0
160	144,6	186,0	7,7	134,5
225	203,4	254,5	10,8	154,0
315	285,0	351,3	15,0	184,0
400	361,8	443,1	19,1	220,0
500	452,2	549,6	23,9	255,0

COUPLING PN 10



Repair coupling

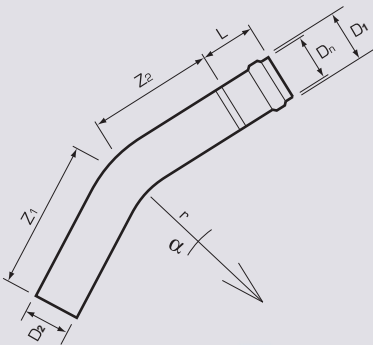
D_n, MM	L
90	300
110	325
160	375
225	460
315	535
400	605
500	360



Double socket coupling

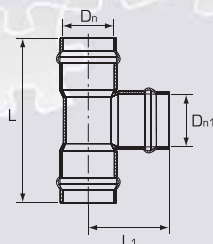
D_n, MM	E	L_2	L_1
110	4,2	133	1000
160	6,2	145	1000
225	8,6	162	1000
315	12,1	201	1000
400	15,3	212	1000
500	14,6	213	1000

BEND PN 10



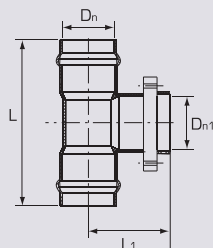
D_n, MM	α	r	D_2	D_1	L	Z_1	Z_2
90	11	250	80,0	118	125	296	154
90	22	250	80,0	118	125	323	179
90	30	250	80,0	118	125	356	197
90	45	250	80,0	118	125	377	234
90	60	250	80,0	118	125	453	274
90	90	250	80,0	118	125	527	380
110	11	300	97,8	142	135	341	209
110	22	300	97,8	142	135	363	238
110	30	300	97,8	142	135	393	260
110	45	300	97,8	142	135	409	304
110	60	300	97,8	142	135	479	353
110	90	300	97,8	142	135	599	480
160	11	700	142,6	201	158	448	282
160	22	700	142,6	201	158	482	351
160	30	700	142,6	201	158	536	403
160	45	700	142,6	201	158	605	505
160	60	700	142,6	201	158	736	619
160	90	700	142,6	201	158	1015	915
225	11	900	200,8	277	183	524	377
225	22	900	200,8	277	183	589	465
225	30	900	200,8	277	183	730	531
225	45	900	200,8	277	183	826	663
225	60	900	200,8	277	183	937	810
225	90	900	200,8	277	183	1296	1190
315	11	1300	281,6	384	209	941	450
315	22	1300	281,6	384	209	1119	578
315	30	1300	281,6	384	209	1293	673
315	45	1300	281,6	384	209	1382	863
315	60	1300	281,6	384	209	1804	1076
315	90	1300	281,6	384	209	2123	1625
400	11	2000	357,4	488	234	1369	523
400	22	2000	357,4	488	234	1531	719
400	30	2000	357,4	488	234	1699	866
400	45	2000	357,4	488	234	1968	1158
400	60	2000	357,4	488	234	2270	1485
400	90	2000	357,4	488	234	2518	2330
500	11	2500	467,4	610	308	1691	581
500	22	2500	467,4	610	308	1956	826
500	30	2500	467,4	610	308	1891	1010
500	45	2500	467,4	610	308	2102	1376

TEE PN 10



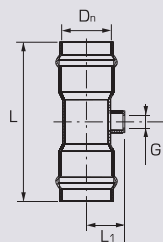
Tee with Socket

<i>Dn, MM</i>	<i>Dn1</i>	<i>L</i>	<i>L1</i>
90	90	330	165
110	90	352	175
110	110	368	184
160	90	496	200
160	110	414	210
160	160	462	231
225	110	450	250
225	160	580	270
225	225	580	290



Tee with Flange

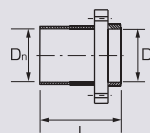
<i>Dn, MM</i>	<i>Dn1</i>	<i>L</i>	<i>L1</i>
90/90	80	335	160
110/110	100	372	180
160/160	150	455	230
160/110	100	452	210
160/90	80	385	200
110/90	80	347	170
225/225	200	580	282
225/160	150	530	272



Tee with Threaded Insert

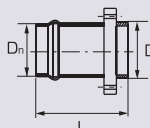
<i>Dn, MM</i>	<i>G</i>	<i>L</i>	<i>L1</i>
90	1 1/2"	295	70
110	2"	340	85
160	2"	375	107

SOCKET PN 10



Flange Socket M

<i>Dn, MM</i>	<i>D</i>	<i>L</i>
90	80	142
110	100	153
160	150	176
225	200	218
315	300	252



Flange Socket M

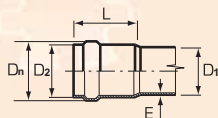
<i>Dn, MM</i>	<i>D</i>	<i>L</i>
90	80	128
110	100	135
160	150	154
225	200	335
315	300	380



Reducing Socket

<i>Dn, MM</i>	<i>D</i>	<i>L</i>
110	90	270
160	110	314
225	160	490

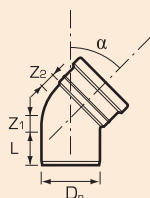
SEWAGE PIPES



SEWAGE PIPES PVC-U WITH SOCKETS CLASS SN 4

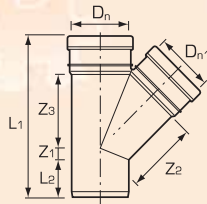
<i>Dn</i> , MM	D1	D2	E	L
110	103,6	132,5	3,2	116,0
160	152,0	186,0	4,0	134,5
200	190,2	228,9	4,9	146,5
250	237,6	281,9	6,2	162,2
315	299,6	351,3	7,7	192,2
400	380,4	443,1	9,8	220,0
500	475,4	549,6	12,3	255,0

BEND



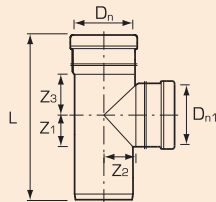
<i>Dn</i> , MM	<i>α</i> , град	L	Z1	Z2
110	15°	61	9	15
110	22°	61	12	18
110	30°	61	16	22
110	45°	61	25	29
110	67°	61	60	66
110	88,5°	61	60	66
160	15°	87	23	19
160	30°	87	34	29
160	45°	78	33	42
160	67°	80	58	64
160	88,5°	75	84	89
200	15°	100	13	24
200	30°	101	30	30
200	45°	100	46	55
200	67°	100	72	80
200	88,5°	100	105	114
250	15°	121	19	30
250	30°	121	37	49
250	45°	121	57	69
250	88,5°	121	132	143
315	15°	142	23	38
315	30°	142	47	61
315	45°	142	72	86
315	88,5°	142	166	180
400	15°	170	29	48
400	30°	170	59	78
400	45°	170	91	110
400	88,5°	170	211	229
500	15°	320	37	59
500	30°	320	74	97
500	45°	320	114	137
500	88,5°	320	263	286

TEE



Tee 45°

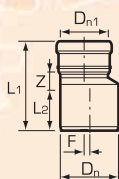
<i>Dn/Dn1, MM</i>	<i>Z1</i>	<i>Z2</i>	<i>Z3</i>	<i>L1</i>	<i>L2</i>
110/110	41	140	85	241	61
160/110	0	168	158	303	74
160/160	36	193	193	381	74
200/110	58	195	239	484	100
200/160	19	220	214	407	90
200/200	46	241	241	470	99
250/110	-36	290	310	510	60
250/160	-3	260	250	550	160
250/200	24	350	310	640	166
250/250	57	340	340	680	143
315/110	-67	310	320	600	120
315/160	-33	340	340	680	180
315/200	-5	380	380	700	160
315/250	28	380	380	800	232
315/315	72	440	440	840	168
400/110	-105	340	360	700	150
400/160	-70	400	380	770	200
400/200	-43	410	400	820	230
400/250	-10	480	450	850	210
400/315	34	540	500	960	236
400/400	91	550	500	1030	249
500/160	-115	422	371	820	-
500/200	-88	470	510	870	-
500/250	-55	550	532	900	-
500/315	-11	560	583	1030	-
500/400	47	578	548	1060	-
500/500	114	652	683	1100	-



Tee 87°30'

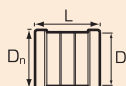
<i>Dn/Dn1, MM</i>	<i>Z1</i>	<i>Z2</i>	<i>Z3</i>	<i>L</i>
110/110	60	61	61	236
160/110	60	168	159	342
160/160	83	131	88	352
200/110	61	100	67	-
200/160	86	108	91	394
200/200	105	111	111	435
250/110	65	129	71	-
250/160	89	132	65	-
250/200	108	134	115	-
250/250	132	138	138	-
315/110	68	160	75	-
315/160	93	162	100	-
315/200	112	165	119	-
315/250	135	169	142	-
315/315	166	173	173	-
400/110	73	201	81	-
400/160	97	203	105	-
400/200	116	205	125	-
400/250	139	209	148	-
400/315	170	214	179	-
400/400	211	219	219	-
500/160	90	220	283	770
500/200	118	253	131	800
500/250	144	257	155	870
500/315	175	333	300	880
500/400	216	267	226	950
500/500	262	274	274	1000

REDUCTION



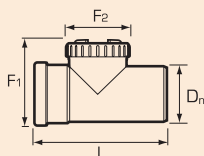
Dn/Dn1, MM	F	L1	L2	Z
160/110	25	172	78	37
200/160	20	227	120	38
250/200	25	298	134	50
315/250	32	334	144	65
400/315	42	374	155	85
500/400	50	740	400	130

COUPLING



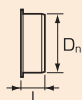
Dn, MM	D	L_M
110	127	123
160	182	169
200	226	230
250	291	250
315	361	293
400	457	324
500	559	362

CLEANING FITTING



Dn, MM	L	F1	F2
110	262	150	131
160	400	185	200x100
200	524	240	330x220
250	722	300	183
315	745	370	183
400	792	-	-

STOPPER



Dn, MM	L
110	63
160	69
200	65
250	115
315	135
400	155
500	350

NON-RETURN VALVE



Dn, MM	L (length)	H (height)	A (width)
110	227	266	188
160	367	333	243

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