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www.highstandardpipes.com



High Standard Pipe®

Manufacturers:
of PVC, HDPE Pipes
&
HDPE Welded Fittings



CERTIFICATE

TÜV NORD

Management system as per
EN ISO 9001 : 2008

In accordance with TÜV NORD CERT procedures, it is hereby certified that


HIGH STANDARD PIPE (HSP)
Shahr-e-Now, Kabul, Afghanistan

applies a management system in line with the above standard for the following scope

Manufacturer of UPVC Pipes & HDPE Pipes

Certificate Registration No. 44 100 095926
Audit Report No. 3230 100 C 09177

Valid until 2013-09-04



Certification Body is
TÜV NORD CERT GmbH

This certification was conducted in accordance with the TÜV NORD CERT auditing and certification procedures and is subject to regular surveillance audits.

TÜV NORD CERT GmbH Langemannstrasse 20 45141 Essen www.tuev-nord-cert.com



TGA-2011-09-09

Letter of Compliance



Letter of Compliance

This is to certify that Manufacturing & Testing Requirements of HDPE, PE, PPR, PPVC Pipes
HDPE, PE, PPR, PPVC, Welded & Cast Moulded Fittings as defined
in respective DIN, ASTM, ISO, PHEN & ANSI Standards were verified upon the request of:
HIGH STANDARD PIPE
Policharkhi Industrial Zone, Kabul, Afghanistan for the product of

Manufacturers of HDPE, PE, PPR, PPVC Pipes
and HDPE, PE, PPR, PPVC, Welded & Cast Moulded Fittings

Manufactured by: HIGH STANDARD PIPE

At
Afghanistan

Complies with the requirements applicable to it as per DIN 8074, 8061/62, 8077, 8078, EN ISO 4427,
4437, 12176-1, 13854-3-3, 13875-2, PHEN 12501-3, ASTM-D1348, D3350-10a, D3447, F714, F477,
F480, F679, and ANSI-U1-631-A,B

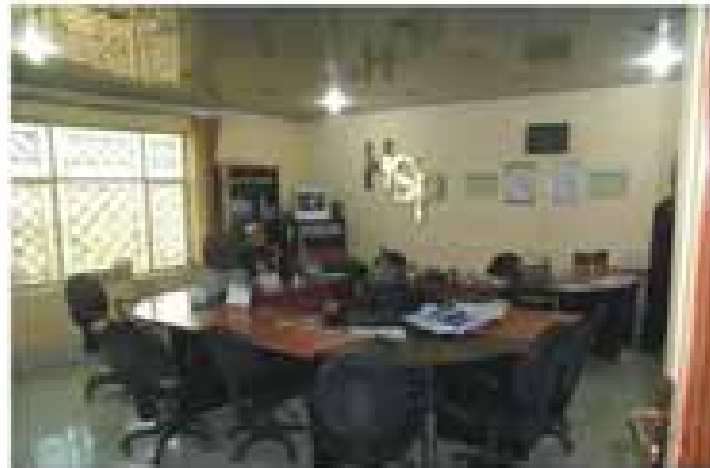
Valid for one year from the date of issue e.g. 26 June 2012.
The company is under our regular monitoring during production.


Technical Manager
Operational Manager

Ref No.: QA-10/11.22

AUTHENTICATED

QA INTERNATIONAL - UK
Head Office: Cleveland Hall, Darlington Co. Durham.
Ph. +44-1325-384272 Fax. +44-1325-480980



INTRODUCTION

High Standard Pipe (HSP) one of those establishments that produces the best quality of pipes in kind of UPVC & HDPE in Afghanistan.

We are one of the leading manufacturers of UPVC & HDPE Pipes & fittings in Afghanistan.

The Company employs the latest technologies in the extrusion and injection molding industries and provides adequate training to its staff to cope with changes. Our team of experts provides technical advices to our client to the correct application of HSP products. The Quality Management System of the company is certified to ISO 9001-2008. The company has capacity and expertise to produce pipes and fittings to meet international standards like British Standards (BS), International Organization for Standardization (ISO), (ASTM), (DIN) and individual requests.

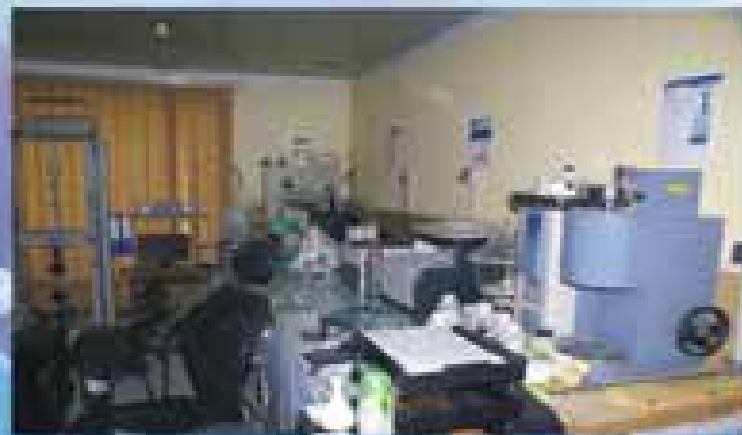
This is appreciated by our customers and also certified by international certifying agencies.



Leading Laboratories and institutions out of the country such as TUV NORD Lahore, Pakistan have confirmed our claim of quality products.

Due to our proven record of being a high quality manufacturer, the leading architects and consultants, feel very comfortable in recommending "High Standard Pipe" for their projects.

We take this opportunity to extend our whole hearted gratitude and thanking to our valuable customers for bestowing their trust and confidence on High Standard Pipe Company.



Permissible exclusions

The following sub-clauses of Product Realization (Clause 7 of ISO 9001:2008) have been excluded from the scope of HIGH STANDARD PIPE Co.

ISO subclause 7.3:2008 (E) Design & Development

This subclause is not applicable because HIGH STANDARD PIPE does process and blend the product as per customer's specifications.

Fittings

Tee T1 & Branch A 60°

Pr-EN 12201-3
as per DIN 16963

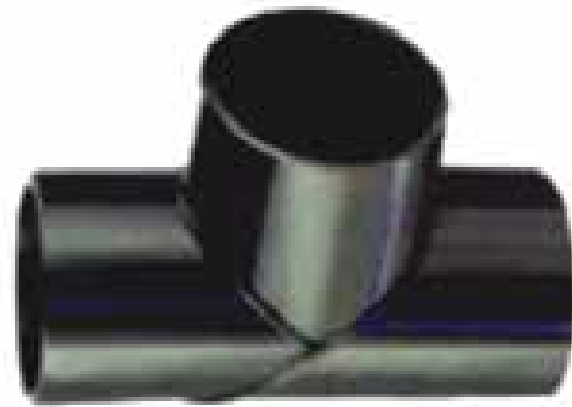
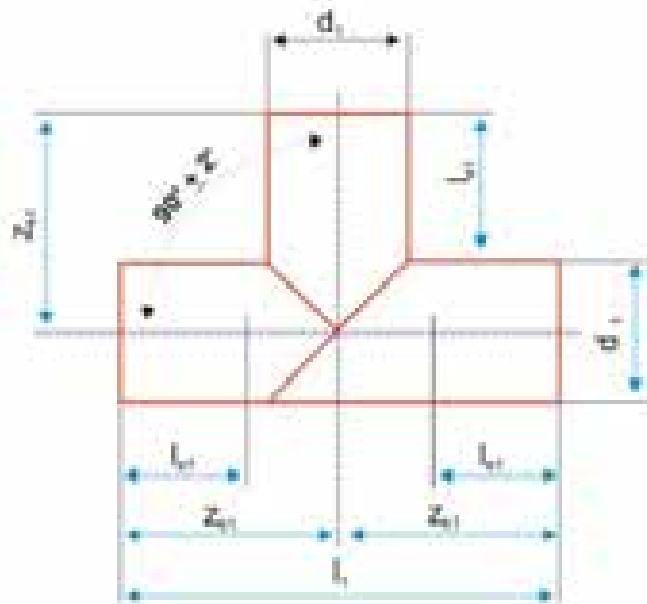
d,	l ₀ , min.	TEE		60° branch		
		l ₁ , min.	zk ₁ , min.	l ₂ , min.	zk ₂ , min.	zk ₃ , min.
110	150	410	205	500	325	175
125		430	215	545	355	190
140		440	220	581	375	206
160		460	230	642	412	230
180		480	240	700	450	250
200		500	250	759	487	272
225		530	265	830	530	300
250	250	750	375	905	580	325
280		780	390	995	630	365
315		920	460	1090	690	400
355	300	960	480	1155	730	425
400		1000	500	1250	800	450
450		1050	525	1325	850	475
500		1200	600	1400	900	500
560	350	1260	630	1480	950	530
630		1330	665	1545	1000	545
710		1410	705	1670	1080	580
800		1500	750	1810	1180	630
900		1700	850	1990	1320	670
1000	400	1800	900	2070	1360	710
1200		2000	1000	2400	1540	860

Fittings

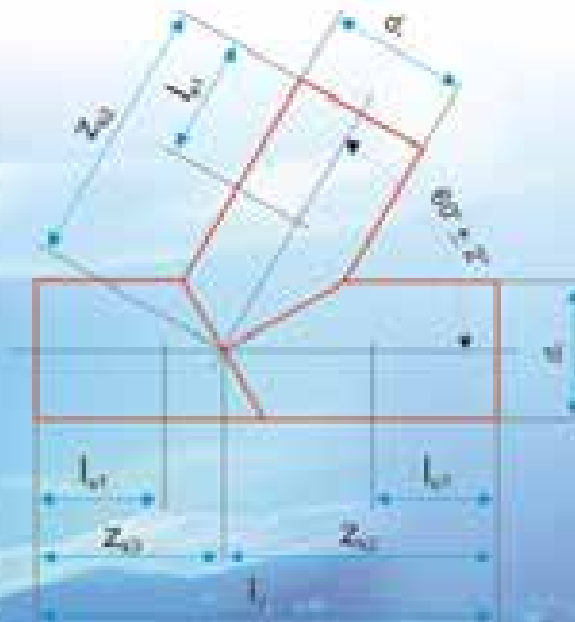
Tee T1 & Branch A 60°

Pr-EN 12201-3
as per DIN 16963

Tee T1
(produced by segment insert)



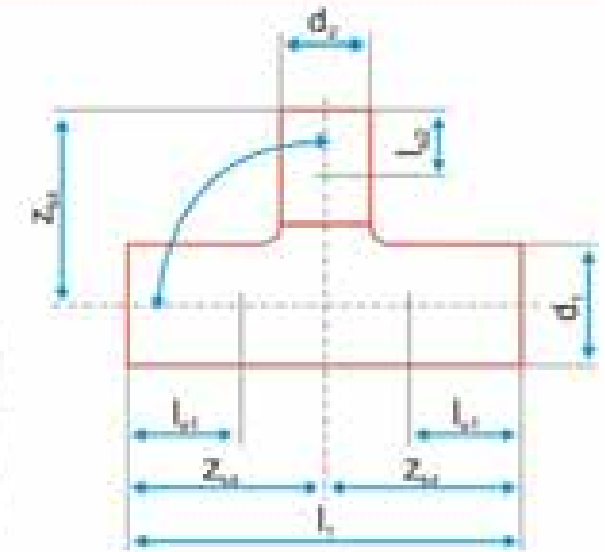
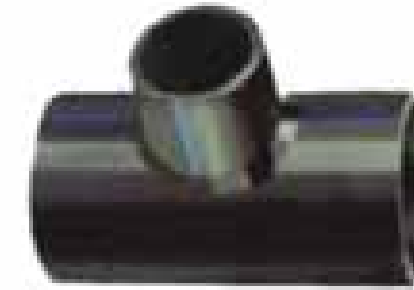
Branch A 60°
(produced by segment insert)



Fittings

Tee T5

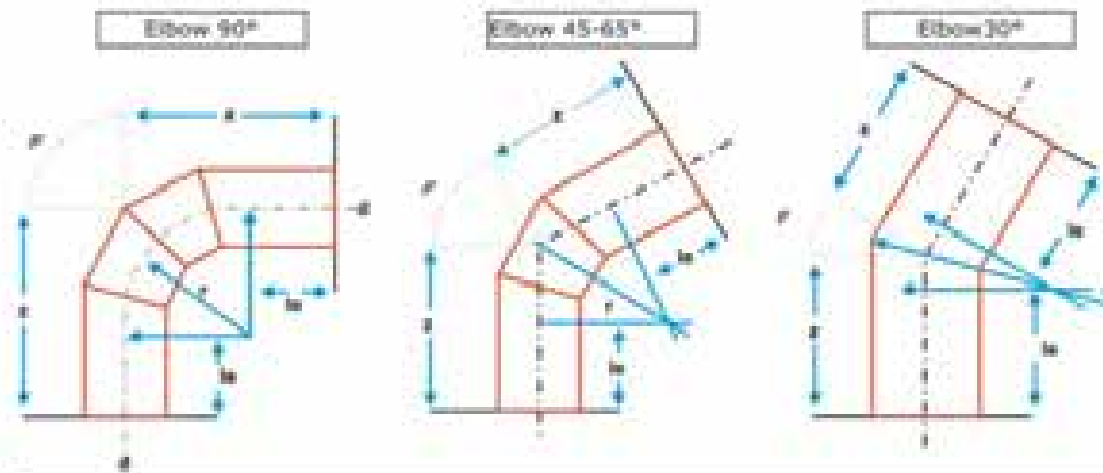
(produced by necking)
Pr-EN 12201-3
as per DIN 16963



d ₁	L ₁ min.	d ₂	L ₂ min.	L ₁ min.	Z ₁ min.	d ₁	L ₁ min.	d ₂	L ₂ min.	L ₁ min.	Z ₁ min.	d ₁	L ₁ min.	d ₂	L ₂ min.	L ₁ min.	Z ₁ min.	
160		50	150	520	260	200	250	90	150	830	415	450	300	140	150	1100	550	
		63						160						200				250
		75						180						225				280
		90						180						250				300
		110						200						315				300
180		63	150	560	280	315	315	110	150	830	415	500	300	160	150	1200	600	
		75						180						200				250
		90						180						225				280
		110						200						250				300
		125						225						315				300
200	150	63	150	600	300	400	400	110	150	830	415	560	350	160	150	1320	660	
		75						180						200				250
		90						180						225				280
		110						200						250				300
		125						225						315				300
225		75	150	650	325	450	450	125	150	830	415	630	300	160	150	1460	730	
		90						180						200				250
		110						200						225				280
		125						225						250				300
		140						250						315				300
250	250	75	150	700	350	500	500	125	150	830	415	630	300	160	150	1460	730	
		90						180						200				250
		110						200						225				280
		125						225						250				300
		140						250						315				300

Fittings Elbows

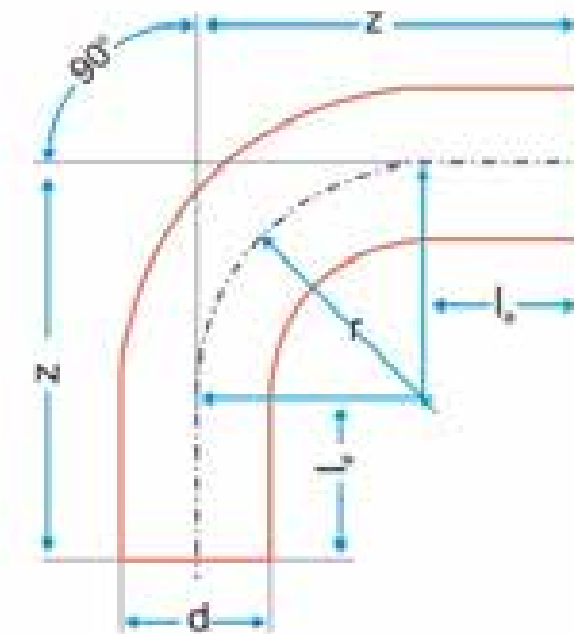
Pr-EN 12201-3
as per DIN 16963



Nominal Size d(mm)	Le min	r	30°	45	60°	90°
			Z min	Z min	Z min	Z min
110	150	165	194	218	245	315
125	150	188	200	228	258	338
140	150	210	206	237	271	360
160	150	240	214	249	288	390
180	150	270	222	262	305	420
200	150	300	230	274	323	450
225	150	338	241	290	345	488
250	250	375	350	412	466	625
280	250	420	362	424	492	670
315	300	473	428	498	576	773
355	300	533	443	520	608	833
400	300	600	461	548	646	900
450	300	675	481	580	689	975
500	350	750	551	665	783	1100
560	350	840	575	698	835	1190
630	350	945	603	741	896	1295
710	350	1065	636	792	965	1415
800	350	1200	672	847	1043	1550
900	400	1350	762	960	1179	1750
1000	400	1500	802	1022	1266	1900
1200	400	1500				2050

Fittings Pipe bend B2 90° bend

Pr-EN 12201-3
as per DIN 16963



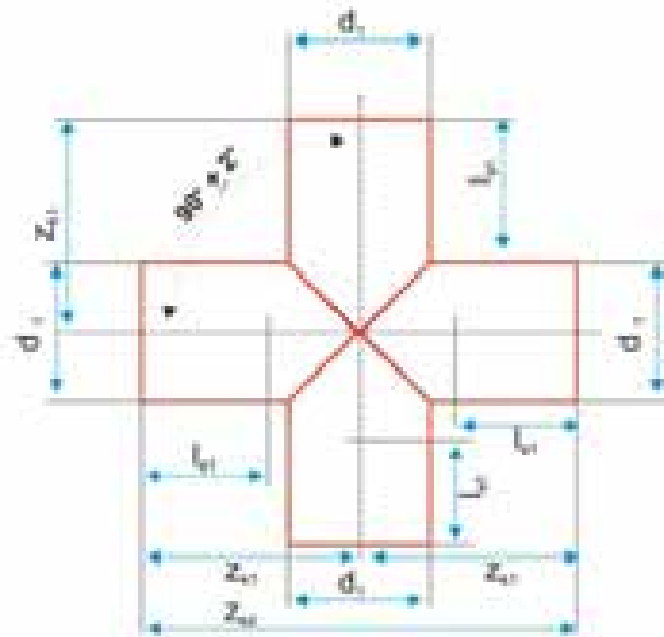
d	Le min	r ¹⁾	Z ²⁾ min
110	150	165	315
125		188	338
140		210	360
160		240	390
180		270	420
200		300	450
225		338	488
250	250	375	625
280		420	670
315		473	773
355		533	833
400		600	900
450	300	675	975

1) $r = 1.5 d$
2) $Z = r + l_e$

Fittings

Cross Tee

Pr-EN 12201-3
as per DIN 16963



D(mm)	L1 min (mm)	L2 min (mm)	L3 min (mm)	L4 min (mm)
110-200	650	650	650	650
225-280	700	700	700	700
315-400	800	800	800	800
450-560	850	850	850	850
630-710	1200	1200	1200	1200
800-1200	1200	1200	1200	1200

Fittings

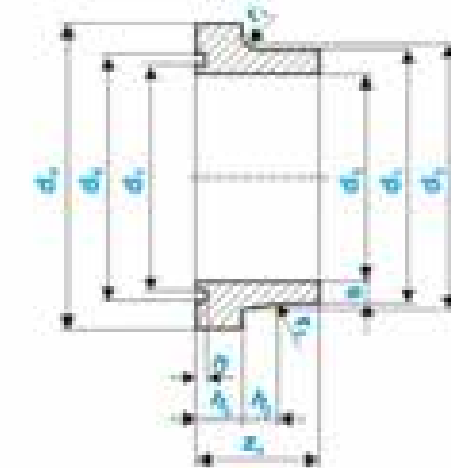
Adaptor & Flange

Pr-EN 12201-3
as per DIN 16963 - Part 4

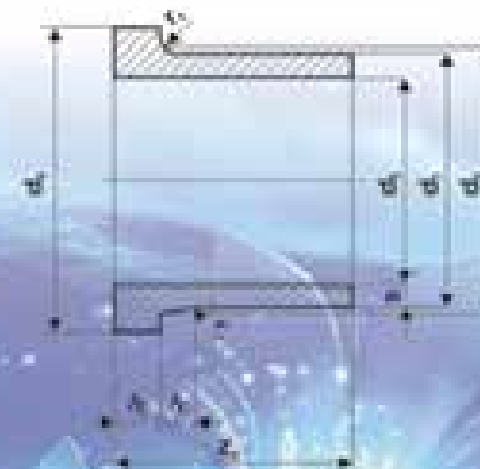
Short adaptor
(Item No. 1)



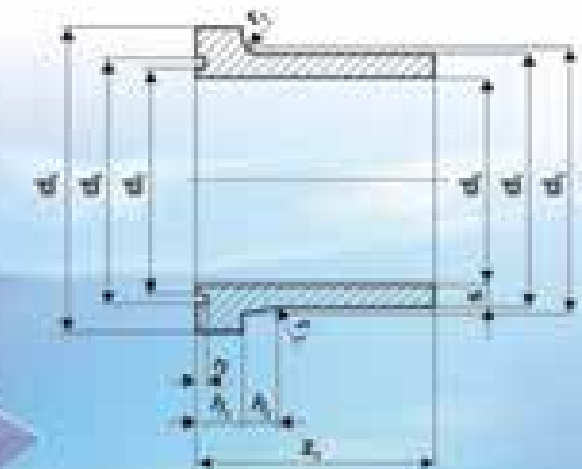
Short adaptor
(Item No. 23)



Long adaptor
(Item No. 3)



Long adaptor
(Item No. 24)



Example of a series 3 PE-HE adaptor (Item No. 3) designed for a pipe outside diameter of 200mm

Adaptor DIN 16963-3-200-3-PE-HD

Fittings

Adaptor & Flange

Pr-EN 12201-3

as per DIN 16963 - Part 4 **Table 1. Adaptors (Item 1, 3, 23 & 24)**

Nominal flange size DN	Pipe diameter d ₁										K ¹⁾	Bolts		t ₁
	15	20	25	32	40	50	63	75	90	100		Number	Thread size	
15	15	15	15	15	15	15	15	15	15	15	65	4	M12	3
20	20	20	20	20	20	20	20	20	20	20	75	4	M12	3
25	25	25	25	25	25	25	25	25	25	25	85	4	M16	3
32	32	32	32	32	32	32	32	32	32	32	100	4	M16	3
40	40	40	40	40	40	40	40	40	40	40	110	4	M16	3
50	50	50	50	50	50	50	50	50	50	50	125	4	M16	3
63	63	63	63	63	63	63	63	63	63	63	145	4	M16	3
75	75	75	75	75	75	75	75	75	75	75	160	8	M16	3
90	90	90	90	90	90	90	90	90	90	90	180	8	M16	3
100	100	100	100	100	100	100	100	100	100	100	180	8	M20	3
125	125	125	125	125	125	125	125	125	125	125	210	8	M16	3
150	150	150	150	150	150	150	150	150	150	150	240	8	M20	3
180	180	180	180	180	180	180	180	180	180	180	288	12	M20	3
200	200	200	200	200	200	200	200	200	200	200	300	12	M20	3
250	250	250	250	250	250	250	250	250	250	250	338	16	M20	4
280	280	280	280	280	280	280	280	280	280	280	376	16	M24	4
300	300	300	300	300	300	300	300	300	300	300	430	16	M24	4
350	350	350	350	350	350	350	350	350	350	350	517	20	M24	6
400	400	400	400	400	400	400	400	400	400	400	620	20	M24	4
500	500	500	500	500	500	500	500	500	500	500	725	20	M27	7
600	600	600	600	600	600	600	600	600	600	600	725	24	M27	4
700	700	700	700	700	700	700	700	700	700	700	840	24	M27	5
800	800	800	800	800	800	800	800	800	800	800	950	24	M30	5
900	900	900	900	900	900	900	900	900	900	900	1050	28	M30	5
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1160	28	M33	5
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1380	32	M36	6

Fittings

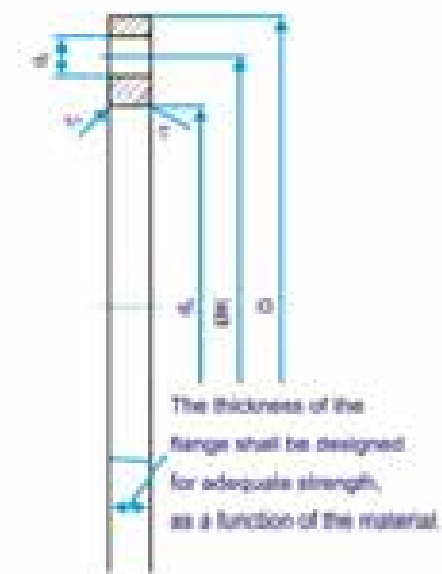
Adaptor & Flange

Pr-EN 12201-3

as per DIN 16963 - Part 4

Table 2. Flanges (Item No. 2)

Flange (Item No. 2)



Designation of a glass fibre reinforced plastics * flange (Item No. 2) for a pipe outside diameter of 75mm and rated for PN 10:
Flange DIN 16963-2-75-10 GFK

Nominal flange size DN	Pipe outside diameter d ₁	D ₂ ²⁾	D ₃ ²⁾	K ¹⁾	Bolts		t ₁	
					Number	Thread size		
15	20	98	14	28	65	4	M12	3
20	25	105	14	34	75	4	M12	3
25	32	115	18	42	85	4	M16	3
32	40	140	18	51	100	4	M16	3
40	50	150	18	62	110	4	M16	3
50	63	165	22	78	125	4	M16	3
63	75	185	22	92	145	4	M16	3
75	90	200	22	108	160	8	M16	3
90	100	220	22	128	180	8	M16	3
100	125	220	22	135	180	8	M16	3
125	140	250	22	158	210	8	M16	3
150	160	285	22	178	240	8	M20	3
180	180	285	22	188	240	8	M20	3
200	200	340	22	235	295	8	M20	3
250	250	395	22	288	350	12	M20	3
280	280	395	22	294	350	12	M20	3
300	315	445	26	338	400	16	M20	4
350	355	505	26	376	460	16	M24	4
400	400	565	26	430	515	16	M24	4
500	450	670	26	517	620	20	M24	6
600	500	670	26	533	620	20	M24	4
800	580	780	30	618	725	20	M27	7
900	630	780	30	645	725	24	M27	4
700	710	895	30	740	840	24	M27	5
800	805	1015	33	843	950	24	M30	5
900	900	1115	33	947	1050	28	M30	5
1000	1000	1230	36	1050	1160	28	M33	5
1200	1200	1455	39	1280	1380	32	M36	6

1) See table 1 for flange materials and for material approval to be used in the designation.
2) From d1 = 63mm, identical with the values given in DIN 2673 except d1 = 450mm and 550mm, d2 values are identical with those given in DIN 2642.
3) See DIN 2501 Part 1 for flange connecting dimensions.

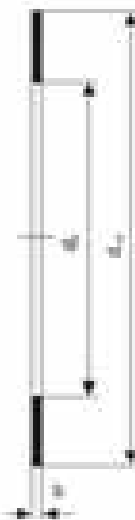
Fittings

Adaptor & Flange

Pr-EN 12201-3
as per DIN 16963 - Part 4

Table 3. Gasket (Item No. 7)

Gasket (Item No. 7)*



Designation of a pipe series 3 gasket (Item No. 7) designed for a pipe outside diameter of 250mm:

Gasket DIN 16963 - 7 - 250 - 3

Pipe outside diameter d_1	D_2	D_2 Pipe Series				b
		2	3	4	5	
20	45	-	-	-	16	2
25	58	-	-	21	20	
32	68	-	-	28	26	
40	78	-	36	35	33	2
50	88	-	46	44	41	
63	102	59	58	56	51	
75	122	70	69	66	61	2
90	138	84	83	80	74	
110	158	103	101	97	90	
125	158	117	115	111	102	3
140	188	131	129	124	114	
160	212	150	148	142	131	
180	212	169	166	160	147	3
200	268	188	185	177	164	
225	268	211	208	199	184	
250	320	234	231	222	204	3
280	320	263	258	248	229	
315	370	295	291	279	258	
355	430	333	328	315	290	3
400	482	375	369	355	327	
450	585	422	415	399	368	
500	585	469	461	443	409	3
560	685	525	517	497	456	
630	685	591	581	559	513	
710	800	666	655	630	-	3
800	905	750	738	709	-	
900	1005	844	831	798	-	
1000	1110	938	923	885	-	3
1200	1330	1126	1108	-	-	

* If other suitable cross-sectional dimensions shall be permitted.

Fittings

Adaptor & Flange

Pr-EN 12201-3
as per DIN 16963 - Part 4

Table 4. Orings (Item No. 8)



Pipe outside Diameter, d_1	d_1		d_2		Identical with (standard designation of Oring)
		Limit Deviations		Limit Deviations	
20					DIN8063 16 20
25	23.4	± 0.4	3.5	± 0.1	DIN8063 13 25
32					DIN8063 16 32
40	43.8	± 0.5			DIN8063 16 40
50	53.3	± 0.5	5.3	± 0.13	DIN8063 16 50
63	69.2	± 0.7			DIN8063 16 63
75	81.9		5.3	± 0.13	DIN8063 16 75
90	101	± 0.7	5.3	± 0.13	DIN8063 16 90
110	120		7	± 0.15	DIN8063 16 110
125	120	± 0.7			DIN8063 16 110
140	151.8	± 1.2	7	± 0.15	DIN8063 16 140
160	177.2	± 1.2			DIN8063 16 160
180	164.4				DIN8063 16 180
200	196.2	± 1.2	7	± 0.15	DIN8063 16 200
225	202.5				DIN8063 16 225

3. Materials:

Table 5. Materials

Name of component	Item No.	Permitted material						PE-HD
		GG	St	Al	PPGF	PVC	GFK	
Short adaptor	1							X
Short adaptor	23							X
Long adaptor	3							X
Long adaptor	24							X
Flange	2	X	X	X	X	X	X	
Gasket	7							
O-ring	8							

Materials subject to agreement.

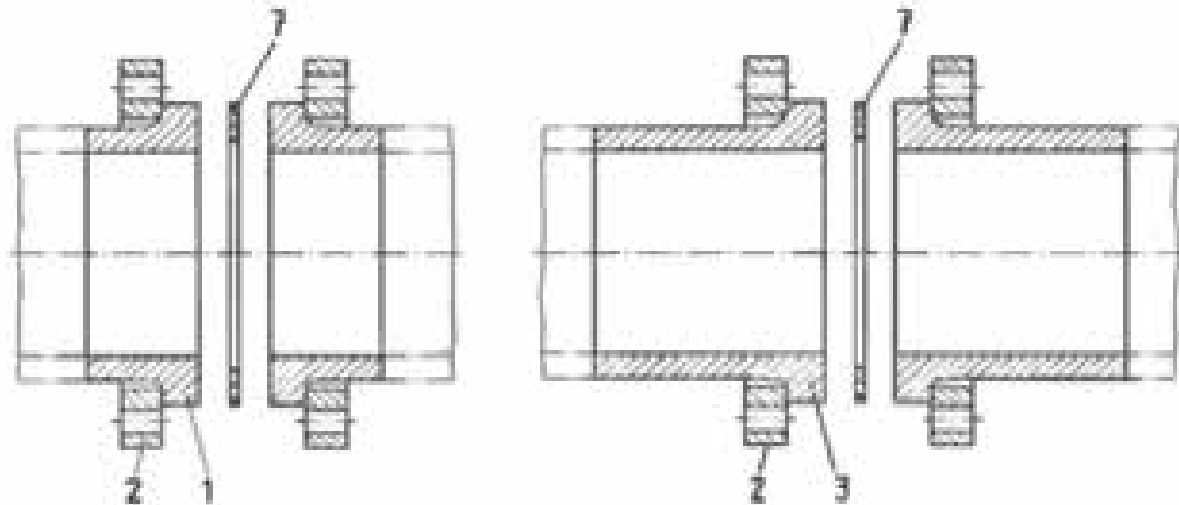
The materials suitable for the components listed are marked X.
 GG = cast iron (gray cast iron) as specified in DIN 1691
 St = St 37.2 or St 37-2 as specified in DIN 17100, at the manufacturer's discretion.
 Al = light alloy
 PPGF = Glass fiber reinforced polypropylene
 PVC = PVC-U as specified in DIN 8063 Part 5
 GFK = glass fiber reinforced plastic
 PE-HD = high-density polyethylene as specified in DIN 16963 Part 5 (cf. Explanatory notes)
 For Item Nos. 7 and 8, the material shall be agreed as a function of the type, concentration and service temperature of the medium conveyed.

4. Assemblies

Adaptors, Flange and sealing elements as specified in clause 2 may be used to make the flanged joints shown below.

Type F1 flanged joint (for sizes from DN15 to DN1200)

Type F6 flanged joint (for sizes from DN15 to DN200)

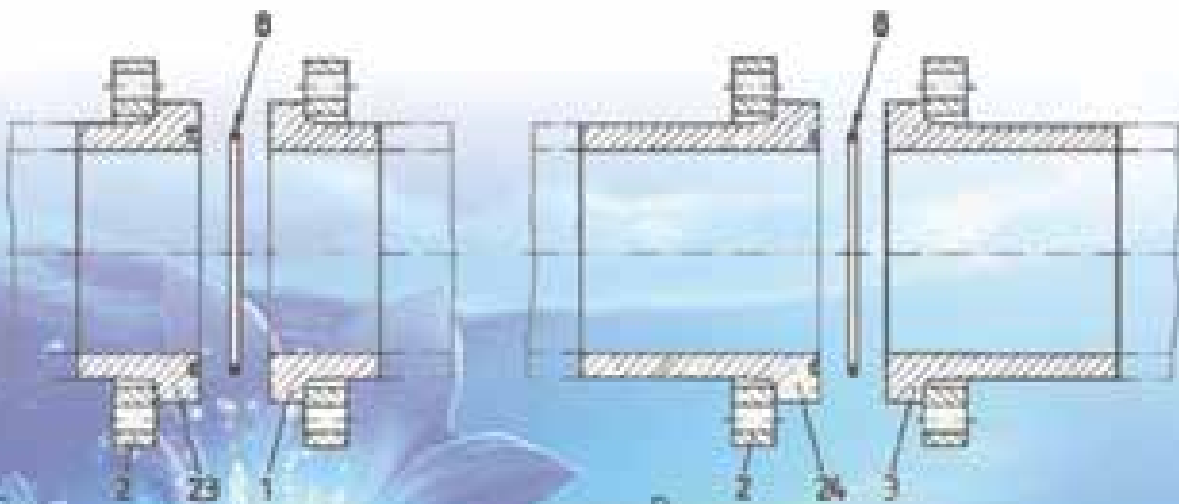


Item No.	Name of Component
1	Short adaptor
2	Flange
3	Gasket

Item No.	Name of Component
2	Flange
3	Long Adaptor
7	Gasket

Type F2 flanged joint (for sizes from DN15 to DN1200)

Type F7 flanged joint (for sizes from DN15 to DN200)



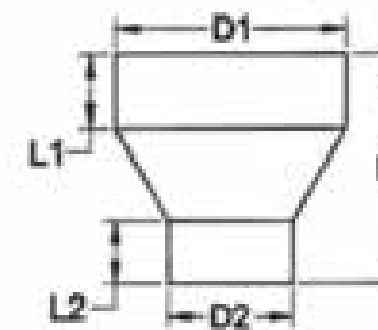
Item No.	Name of Component
1	Short Adaptor
2	Flange
3	O-ring
2a	Short Adaptor

Item No.	Name of Component
2	Flange
3	Long Adaptor
3a	O-ring
2a	Long Adaptor

Fittings
Reducer

Pr-EN 12201-3
as per DIN 16963

Concentric reducers transit fluid between two different pipe sizes. A reducer might have a single standard diameter change or a multiple diameter change. P.E.S produces single or multiple stage reducers from size 25 to 1600 mm in different SDRs. The following table is modified for PE100 and SDR11 (PN16 bar) reducers.



mm	mm	mm	mm	mm
25	25	115	52	52
32	20	120	54	52
32	25	120	54	52
40	20	130	57	52
40	25	130	57	52
40	32	130	57	53
50	20	150	63	52
50	25	140	63	52
50	32	140	63	53
50	40	140	63	57
63	32	150	65	53
63	40	150	65	57
63	50	150	65	63
75	40	170	72	57
75	50	170	72	63
75	63	170	72	65
90	50	190	81	63
90	63	190	81	65
90	75	190	81	70
110	63	205	86	65
110	75	205	86	70
110	90	205	86	81
125	63	214	87	63
125	75	210	92	72
125	90	212	92	81
125	110	212	92	86
140	75	230	110	70
140	90	230	110	79
140	110	230	110	88
140	125	235	110	90
160	90	244	120	79
160	110	244	102	86
160	125	245	102	92
160	140	260	120	110
180	90	245	105	79
180	110	270	105	82
180	125	255	102	92
180	140	270	120	110

D1 (mm)	D2 (mm)	L (mm)	L1 (mm)	L2 (mm)
250	150	323	140	112
250	200	325	140	120
250	250	340	140	130
315	150	340	160	134
315	200	355	150	120
315	250	355	150	130
315	300	365	150	139
355	200	390	165	130
355	250	390	165	139
355	300	390	165	150
400	200	415	180	139
400	250	415	180	150
400	300	420	180	165
450	250	435	195	139
450	300	435	195	150
450	350	435	195	164
450	400	435	195	179
500	250	455	210	150
500	300	455	210	164
500	350	455	210	179
500	400	455	210	195
560	350	455	230	164
560	400	465	230	179
560	450	465	230	195
630	350	502	250	179
630	400	502	250	195
630	450	506	250	212
630	500	506	250	230
710	400			
710	450			
710	500			
800	400			
800	450			
800	500			
900	450			
900	500			
900	550			

Fittings Reducer

Pr-EN 12201-3
as per DIN 16963

180	160	255	107	102
200	140	275	120	110
200	160	265	117	102
200	180	265	117	107
225	140	295	130	110
225	160	279	122	102
225	180	280	122	107
225	200	280	122	117
250	160	300	130	100
250	180	295	130	105
250	200	315	130	112
250	225	332	130	120
D1	D2	L	L1	L2
(mm)	(mm)	(mm)	(mm)	(mm)

1000	630			
1000	710			
1000	800			
1200	710			
1200	800			
1200	900			
1400	900			
1400	1000			
1400	1200			
1600	1000			
1600	1200			
1600	1400			
D1	D2	L	L1	L2
(mm)	(mm)	(mm)	(mm)	(mm)

High Density Polyethylene Pipe Fittings (HDPE Pipe Fittings)

We are engaged in offering HDPE fittings that are manufactured as per the requirement in butt weld type fabrication & jointing. We are also engaged in undertaking work for jointing, butt welding, fusion welding of several HDPE pipes & fittings. Our wide range of Fittings is made from 100% virgin material as to achieve excellent performance. These are available in several specifications with different standards.

Salient features are as follows:

- High impact and breakage resistance.
- Very high resistance to direct sunlight (UV resistance for long time .this is supplied by ultraviolet light resistance agent mixed to the PE raw material.
- There is no need to take protection precautions at the time of installation like cathodic protection.
- Availability of connection at a place out of the trench.
- Advantage of being not affected from earth movements like landslide, earthquakes, etc.
- PE pipes require less fittings for connection because they are elastic and in many place they do not require connection where the other types do. Because PE pipes are bendable with a radius of 20 times of its out diameter. The other pipe type does not have this advantage.
- Advantage of mobilization of the PE pipe production facilities. This enable very big saving in transport costs for projects where large diameter pipes are required.
- Advantage of higher durability & advantage of easy installation and transport without material loss.
- PE pipes do not require concrete block at the place like bending and tee separations.
- PE pipes do not require welding characteristics.
- Very good adoption to earth movements.
- Many different pressure resistance option, PE pipe can be produced resistant to 12 different pressure class from 2.5 bar up to 12 bar.
- High resistance to chemical not affected from corrosion, decaying and abrasion.
- Advantage of perfect leak proof no cracks no break and no deformation.
- Advantage of safe application in irregular surface like sea, river, lake passages at place where there can be no sockets etc.
- Availability of more than one connection method (butt welding, Electro fusion welding, push fit sockets etc.)
- Advantage of having perfectly smooth internal surface because of this advantage of PE pipes in comparison to the other pipe types. This brings considerable saving in the overall cost of the line and the services costs.
- PE pipes have the advantage of very long service life under severe conditions.
- PE pipes are light in weight, which enable the installation with high speed at places.
- PE pipes are elastic, which is a big advantage during the earthquake or any other earth movements. This characteristics

Offering HDPE pipe fittings.

SDR	SDR 41 – SDR 6
Grade	PE 80 and HDPE100
Range	Dia 90mm to 450mm
Fabricated	Band 11.25° – 90°, Tee, Cross and Y
Standard	Pr-EN 12201-3, DIN 16 963
Application	Various types of fittings used to join