

LESSO



HDPE Water Pipe and Fittings





LESSO GROUP HOLDINGS LIMITED

Established in 1986, LESSO (Stock Code: 02128.HK) is a global leader in home furnishings and building materials. The Group's business portfolio spans plastic piping, building materials and home furnishings, environmental protection, new energy, supply-chain service platforms and others. It offers a wide range of products such as pipes, photovoltaics, plumbing and sanitary ware, integral kitchen materials, integral doors and windows, aluminum formwork and smart scaffolds, water purifiers, water-proofing materials and sealants, fire-fighting equipment, valves, cables, lighting, hygiene materials, items for environmental protection, agricultural facilities, and oceanic aquaculture cages. In 2023, LESSO's sales revenue reached over USD 4.38 billion.

Since implementing a strategy of globalization and expanding its global presence, LESSO has evolved into a sophisticated multinational. It boasts more than 30 advanced production bases worldwide, broadening its industrial and sales networks to cover Asia, North America, South America, Europe, Africa, and Oceania. This enables LESSO to provide quality products and services for global customers in accordance with its continuously improved strategic layout in a timely and efficient way.

LESSO has founded its R&D center with more than 1,000 scientific researchers, nationally accredited enterprise technology center, and two post-doctoral workstations to support its innovation and technical development. The Group has taken a leading role in the revision of over 120 international and Chinese industry standards. LESSO owns over 3000 patents (some of them are pending), and provides over 10,000 varieties of products, making it one of the most comprehensive manufacturers in the piping industry. Its products are utilized globally in different areas, including home decoration, civil construction, municipal water supply, drainage, energy management, power supply and telecommunications, gas supply, fire-fighting, environmental protection, agriculture, oceanic aquaculture, etc.

True to its idea of "Envisioning the Better, Building the Future", LESSO remains committed to creating a better living environment, and advocating ideal cities featuring greenness, livability, and efficiency. With concerted efforts from various sectors, LESSO will fully play its role in sustaining healthy and beautiful space so that global residents could enjoy a comfortable life.



LESSO Research Institute & Testing Center



LESSO College



Training Apartment



LESSO Headquarter



PT. LESSO TECHNOLOGY INDONESIA

PT. LESSO Technology Indonesia is one of the wholly-owned subsidiaries of LESSO Group. LESSO Group (Stock Code: 02128.HK) is a large industrial group of home furnishings and building materials. LESSO's business portfolio spans plastic piping, building materials and home furnishings, environmental protection, new energy, supply-chain service platforms and others. It offers products such as pipes, photovoltaics, plumbing and sanitary ware, integral kitchen materials, integral doors and windows, aluminum formwork and smart scaffolds, water purifiers, water-proofing materials and sealants, fire-fighting equipment, valves, cables, lighting, hygiene materials, items for environmental protection, agricultural facilities, and oceanic aquaculture cages.

LESSO Indonesia is located at Jetenglan Industrial Park, Batu Town, Demak, Central Java. With a planned investment of over 68 million US dollar, the production base covers an area of 114,400² with a total construction area of 82,000². It consists of production workshops, warehouses and supporting facilities, which was established and put into operation in 2021. The main products include PVC pipes and fittings for water supply, drainage and electricity, as well as PE and PP-R water pipes and fittings.

As one of the largest plastic piping manufacturers in Indonesia, LESSO can satisfy the demands for the growing local market and exporting to Europe and America. Our products are widely used for water supply, drainage, electricity and telecommunications, gas transmission in residential buildings and infrastructure, as well as for agriculture and marine culture.

In the future, LESSO Indonesia will strive for a more intelligent and modern operation, provide high quality products and services for customers, and constantly make contributions for local employment and economy development in Indonesia.





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Product Overview

- ◎ **Material:** PE 100
- ◎ **Pressure Rating:** 0.4MPa, 0.6MPa, 0.8MPa, 1.0MPa, 1.25MPa, 1.6MPa, 2.0MPa
- ◎ **Size:** full 20mm through 800mm availability
- ◎ **Standard:** ISO 4427-2, EN 12201-2, GB/T 13663-2, Bs6920, AS/NZS 4130, BS EN12201-2, SNI4829.2: 2015
- ◎ **Colors:**
 - Blue
 - Black with blue stripes
 - Other colors are also available upon request
- ◎ **Form Supplied:**
 - 5.8 meters straight length (all size)
 - 50 or 100 meters coil length (d_n20~d_n63)
 - Other forms are also available upon request



Advantages

- ◎ **Non-toxic:** no heavy metal additives, would not be covered with dirt or contaminated by bacterium. Sanitary. No Secondary pollution.
- ◎ **Corrosion Resistance:** unaffected by chemical matters and electron chemical matters which cause corrosion in metals.
- ◎ **High flow capacity:** smooth interior walls and low abrasion resistance result low flow resistance and high flow capacity.
- ◎ **Excellent Flexibility:** can be supplied in coil form, fewer fittings required and lower cost in installation.
- ◎ **High impact and breakage resistance.**
- ◎ **Excellent UV resistance.**
- ◎ **Differential Settlement Resistance:** low requirements for foundation treatment.
- ◎ **Easy Installation:** light weight, easy to transport and handle friendly.
- ◎ **Long Service Life:** PE water pipe can work for more than 50 years under proper use.
- ◎ **Use trenchless technology.**
- ◎ **Various Joint Availability:** socket fusion joint, butt fusion joint, electro fusion joint and transition joint.

Applications

- ◎ **Municipal water supply**
- ◎ **Commercial & Residential water supply**
- ◎ **Industrial liquids transportation**
- ◎ **Sewage treatment**



The damage percentages in the water supply lines at Kobe/Japan earthquake in 1995.

Pipe Type	Percentage of damage Piece/km
Ductile Cast Iron Pipe	0.488
Cast Iron Pipe	1.508
PVC Pipe	1.430
Steel Pipe	0.437
Asbestos Steel Pipe	1.782
PE Pipe	0

Physical Properties

Properties		Typical Value
Extension Rate at Break, %		≥350
Longitudinal Reversion, % (110℃)		≤3
Oxidation Induction Time, min (210℃)		≥20
Hydraulic Pressure Test	20℃, 100h	No Failure
	PE80 10.0MPa	
	PE100 12.0MPa	
	80℃, 165h	No Failure
	PE80 4.5MPa	
	PE100 5.4MPa	
	80℃, 1000h	No Failure
	PE80 4.0MPa	
	PE100 5.0MPa	

Characteristic	Requirements	Test parameters		Test method
		Parameter	Value	
Compound density	≥930kg/m ³	Test temperature	23℃	ISO 1183-1 or ISO 1183-2
		Number of test pieces	Shall conform to ISO 1183-1 or ISO 1183-2	
Carbon black content	(2.0 to 2.5)%(by mass)	Shall conform to ISO 6964		ISO 6964
Carbon black dispersion	Grade≤3 Rating of dispersion A1,A2,A3,or B	Preparation of test piece	Free	ISO 18553
		Number of test pieces	Shall conform to ISO 18553	
Volatile content	≤350 mg/kg	Number of test pieces	1	EN 12099
Water content	≤300 mg/kg (Equivalent to <0.03% by mass)	Number of test pieces	1	ISO 15512
Oxidation induction time (Thermal stability)	≥20 min	Test temperature	210℃	ISO 11357-6
		Number of test pieces	3	
		Test atmosphere	Oxygen	
Melt mass-flow rate (MFR) for PE80 and PE100	0.20≤MFR≤1.40 g/10 min Maximum deviation of the nominated value	Loading mass	5kg	ISO 1133-1
		Test temperature	190℃	
		Time	10 min	
		Number of test pieces	Shall conform to ISO 1133-1	

SDR 26 (PN 6)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
	50	2.0	40150
	63	2.5	52813
	75	2.9	81873
	90	3.5	117171
8010030738	110	4.2	168998
8010031423	125*	4.8	233808
	140	5.4	298005
8010030794	160	6.2	382518
	180*	6.9	480920
8010030783	200	7.7	631202
8010030087	225*	8.6	750239
8010030091	250	9.6	965492
	280*	10.7	1161816
8010030101	315	12.1	1529724
	355	13.6	1872865
8010031970	400	15.3	2446881
8010030114	450*	17.2	3004209
	500	19.1	3920113
8010032009	560*	21.4	4841216
	630	24.1	6097249
	710	27.2	7696742
	800	30.6	9829462
			12660141

SDR 17 (PN 10)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
801003479	32	2.0	31592
88010034799	40	2.4	41563
8010033201	50	3.0	64064
8010031990	63	3.8	102081
8010031422	75	4.5	143777
8010030324	90	5.4	207708
8010030225	110	6.6	281316
8010031146	125*	7.4	363243
8010031952	140	8.3	468176
8010030241	160	9.5	587640
8010030825	180*	10.7	775753
8010030249	200	11.9	917877
8010031148	225*	13.4	1183411
8010030261	250	14.8	1427403
8010031149	280*	16.6	1872358
8010031151	315	18.7	2278390
8010031153	355	21.1	3017139
8010030279	400	23.7	3677907
8010031156	450*	26.7	5004135
8010030294	500	29.7	6010017
8010031158	560*	33.2	7489487
8010030308	630	37.4	9490587
	710	42.1	12059758
8010030320	800	47.4	15559069

SDR 21 (PN 8)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
	40	2.0	40150
	50	2.4	52813
	63	3.0	81873
	75	3.6	117171
8010031920	90	4.3	168998
8010031919	110	5.3	233808
8010033031	125*	6.0	298005
8010033030	140	6.7	382518
8010033029	160	7.7	480920
	180*	8.6	631202
8010031111	200	9.6	750239
	225*	10.8	965492
	250	11.9	1161816
8010031113	280*	13.4	1529724
8010033448	315	15.0	1872865
	355	16.9	2446881
	400	19.1	3004209
	450*	21.5	3920113
8010031118	500	23.9	4841216
	560*	26.7	6097249
	630	30.0	7696742
	710	33.9	9829462
	800	38.1	12660141

SDR 13.6 (PN 12.5)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
	25	2.0	24207
	32	2.4	5265
	40	3.0	6927
8010031718	50	3.7	10677
8010031597	63	4.7	17014
8010031673	75	5.6	23963
8010011478	90	6.7	34618
8010011479	110	8.1	46886
8010032001	125*	9.2	60540
8010032035	140	10.3	78029
8010031455	160	11.8	97940
8010032002	180*	13.3	129292
8010031433	200	14.7	152980
8010031999	225*	16.6	197235
8010032013	250	18.4	237901
	280*	20.6	312060
8010032000	315	23.2	379732
8010033010	355	26.1	502856
8010032012	400	29.4	612984
8010032119	450*	33.1	834023
8010032117	500	36.8	1001670
	560*	41.2	1248248
8010032118	630	46.2	1581764
8010033143	710	52.2	2009960
	800	58.8	2593178

SDR 11 (PN 16)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
8010011477	20	2.0	8010011477
8010030746	25	2.3	8010030746
8010030477	32	3.0	8010030477
8010030484	40	3.7	8010030484
8010030491	50	4.6	8010030491
8010030500	63	5.8	8010030500
8010030765	75	6.8	8010030765
8010030506	90	8.2	8010030506
8010030428	110	10.0	8010030428
8010030433	125*	11.4	8010030433
8010032863	140	12.7	8010032863
8010030438	160	14.6	8010030438
8010030444	180*	16.4	8010030444
8010031445	200	18.2	8010031445
8010030458	225*	20.5	8010030458
8010031217	250	22.7	8010031217
8010031218	280*	25.4	8010031218
8010030473	315	28.6	8010030473
8010031444	355	32.2	8010031444
8010031443	400	36.3	8010031443
8010030488	450*	40.9	8010030488
8010030495	500	45.4	8010030495
8010031424	560*	50.8	8010031424
8010032132	630	57.2	8010032132
	710	64.5	
	800	72.6	

SDR 9(PN20)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
	20	2.3	
	25	3.0	
	32	3.6	
	40	4.5	
	50	5.6	112905
	63	7.1	180088
	75	8.4	253137
	90	10.1	365029
	110	12.3	501715
	125*	14.0	648798
	140	15.7	836031
	160	17.9	1061868
	180*	20.1	1376616
	200	22.4	1660545
	225*	25.2	2101821
	250	27.9	2586420
	280*	31.3	3334020
	315	35.2	4110972
	355	39.7	
	400	44.7	
	450*	50.3	
	500	55.8	
	560*	62.5	
	630	70.3	
	710	79.3	
	800	89.3	

SDR 7.4(PN25)

SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	Harga (Rp) (m)
	20	3.0	
	25	3.5	
	32	4.4	
	40	5.5	
	50	6.9	
	63	8.6	
	75	10.3	
	90	12.3	
	110	15.1	
	125*	17.1	
	140	19.2	
	160	21.9	
	180*	24.6	
	200	27.4	
	225*	30.8	
	250	34.2	
	280*	38.3	
	315	43.1	
	355	48.5	
	400	54.7	
	450*	61.5	



■ Features

Material: PE 100

Size: full 20mm through 110mm availability

Pressure Rating: 1.6MPa, or other nominal pressures available upon request

Standard: ISO 4427-3, EN 12201-3, BS EN 12201-3 BS 6920

Color: blue (all size)

black (all size)

other colors are also available upon request

Joint: joining pipe and socket fusion joint fittings by socket fusion joint

■ Advantages

Non-toxic: no heavy metal additives, would not be covered with dirt or contaminated by bacterium

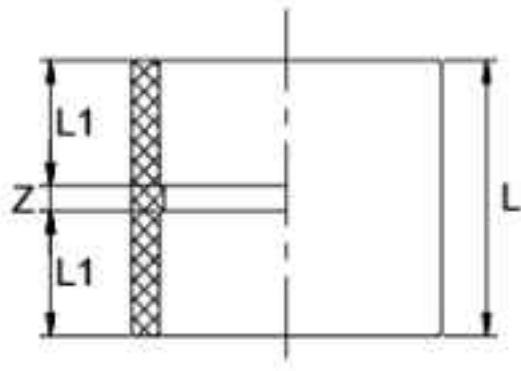
Corrosion Resistance: resist chemical matters and electron chemical corrosion

Low Installation Costs: light weight and ease of installation can reduce installation costs

High Flow Capacity: smooth interior walls result in low pressure loss and high volume

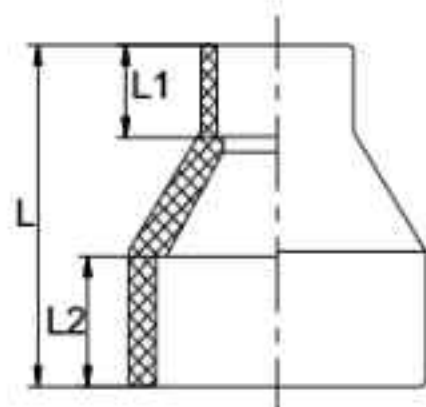
Longevity: more than 50 years under proper use

Coupling (Soc×Soc)



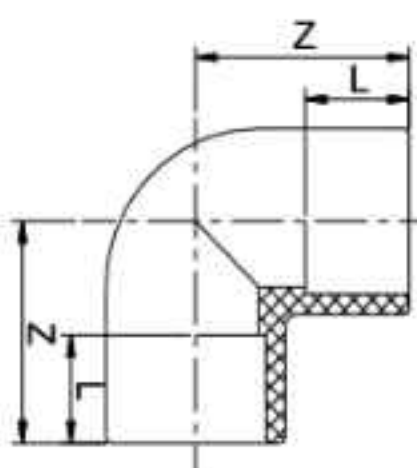
SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L	Z	PCS/CTN	Harga (Rp) (PC)
8010041336	8010041345	20	16.5	37	4	870	1929
8010041337	8010041346	25	18	40	4	560	2581
8010041338	8010041347	32	20.5	45	4	340	4302
8010041339	8010041348	40	22.5	50	5	240	6972
8010041340	8010041349	50	25.5	56	5	260	11393
8010041341	8010041350	63	30	65	5	160	20294
8010041342	8010041351	75	33	72	6	100	27207
8010041343	8010041352	90	37	78	4	50	40500
8010041335	8010041344	110	42	89	5	36	69843

Reducer (Soc×Soc)



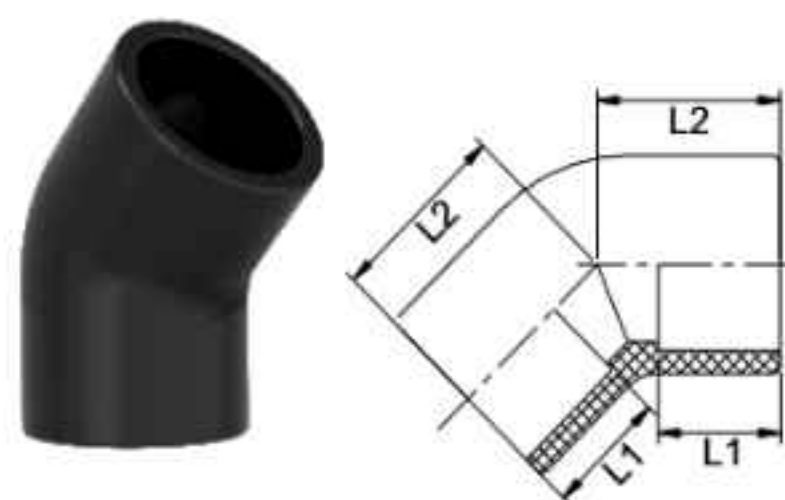
SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010041975	8010040245	25x20	16.5	18	45	600	2789
8010041560	8010040246	32x20	16.5	20.5	56	340	4361
8010040230	8010040247	32x25	18	20.5	52	300	4510
8010041976	8010040248	40x20	16.5	22.5	63	336	6794
8010040231	8010040249	40x25	18	22.5	61	240	7210
8010040232	8010040250	40x32	20.5	22.5	54	240	6943
8010042108	8010040251	50x20	16.5	25.5	67	160	10177
8010042109	8010040252	50x25	18	25.5	67	245	10088
8010040233	8010040253	50x32	20.5	25.5	67	160	10978
8010041563	8010040254	50x40	22.5	25.5	62	120	10919
8010040234	8010040255	63x25	18	29.5	82	160	19078
8010040235	8010040256	63x32	20.5	29.5	84	150	19404
8010040236	8010040257	63x40	22.5	29.5	82	150	20443
8010040237	8010040258	63x50	25.5	29.5	71	135	19345
8010040238	8010040259	75x32	20.5	33	65	135	21036
8010042743	8010040260	75x40	22.5	33	67	140	21837
8010040239	8010040261	75x50	25.5	33	75	100	23261
8010040240	8010040262	75x63	29.5	33	80	90	28097
8010041378	8010040263	90x40	22.5	37	75	90	33379
8010040241	8010040264	90x50	25.5	37	75	120	34773
8010040242	8010040265	90x63	29.5	37	100	72	43793
8010040243	8010040266	90x75	33	37	86	55	36405
8010040229	8010040244	110x63	29.5	42	112	50	68745

90° Elbow (Soc×Soc)



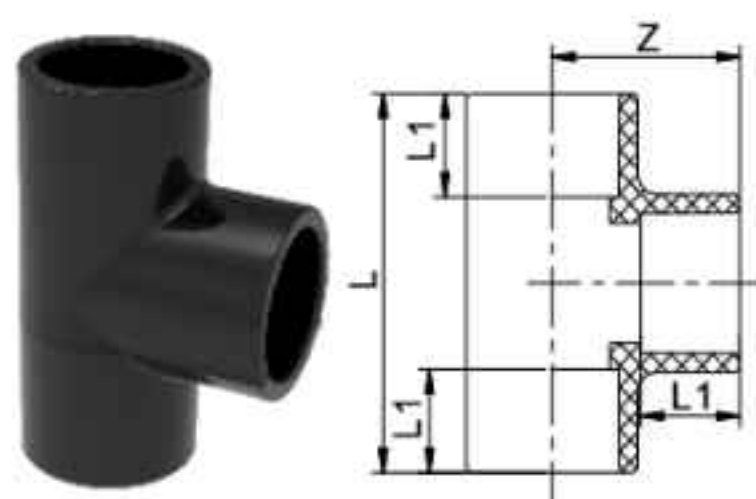
SAP Number (black)	SAP Number (blue)	Size (mm)	L	Z	PCS/CTN	Harga (Rp) (PC)
8010041979	8010040180	20	16.5	33	500	3531
8010040173	8010040181	25	18	36.5	320	4777
8010040174	8010040182	32	20.5	41.5	200	8011
8010040175	8010040183	40	22.5	48	100	12906
8010040176	8010040184	50	25.5	61	120	24418
8010040177	8010040185	63	29.5	69	60	41686
8010040178	8010040186	75	33	77.5	40	57233
8010040179	8010040187	90	37	89	25	89841
8010040172	8010041507	110	42	105.5	15	166627

45° Elbow (Soc×Soc)



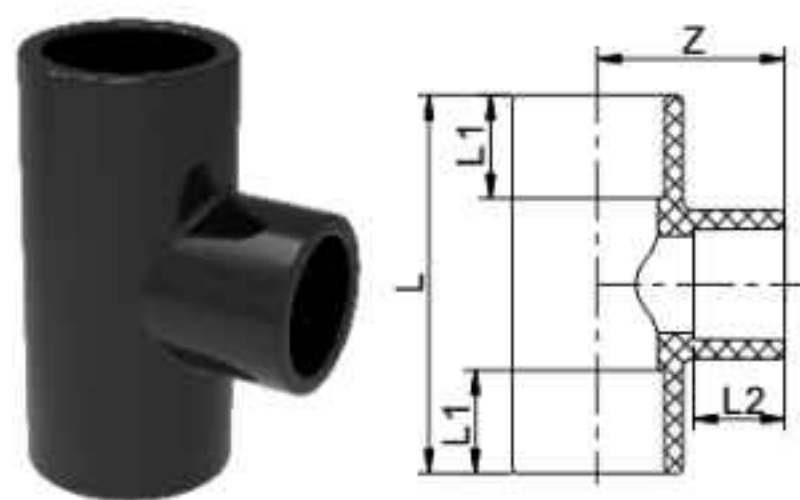
SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L2	PCS/CTN	Harga (Rp) (PC)
8010042095	8010040164	20	16.5	24	640	2611
8010042096	8010040165	25	18	27	380	3531
8010040160	8010040166	32	20.5	32	240	6498
8010042097	8010040167	40	22.5	35	300	9791
8010042098	8010040168	50	25.5	41	140	16853
8010040161	8010040169	63	29.5	48	80	30946
8010042099	8010040170	75	33	53.2	50	38452
8010040162	8010040171	90	37	59.5	30	61061
8010040159	8010040163	110	42	69	20	117701

Tee (Soc×Soc)



SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L	Z	PCS/CTN	Harga (Rp) (PC)
8010041977	8010040105	20	16.5	64	32	320	4866
8010041978	8010040106	25	18	72	36	220	6201
8010040100	8010040107	32	20.5	85	42.5	140	11423
8010041562	8010040108	40	22.5	94	47	90	17179
8010040101	8010040109	50	25.5	112	56	80	28513
8010040102	8010040110	63	29.5	140	70	50	51833
8010040103	8010040111	75	33	154	77	30	68211
8010040104	8010040112	90	37	178	89	20	112805
8010040099	8010041506	110	42	214	107	12	211725

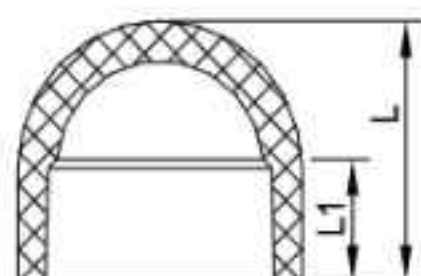
Reducing Tee (Soc×Soc)



SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L2	L	Z	PCS/CTN	Harga (Rp) (PC)
8010040192	8010040207	25x20	18	16.5	66	34	280	5489
8010040193	8010040208	32x20	20.5	16.5	72	38	180	8515
8010040194	8010040209	32x25	20.5	18	77	40	160	9583
8010040195	8010040210	40x20	22.5	16.5	78	42	116	12877
8010042101	8010040211	40x25	22.5	18	83	44	96	13233
8010041516	8010040212	40x32	22.5	20.5	90	46	96	15399
8010042102	8010040213	50x20	25.5	16.5	86	47	160	19137
8010042103	8010040214	50x25	25.5	18	91	49	150	19998
8010040196	8010040215	50x32	25.5	20.5	98	51	120	22074
8010042104	8010040216	50x40	25.5	22.5	104	53	100	24359
8010042105	8010040217	63x25	29.5	18	101	57	80	31777
8010040197	8010040218	63x32	29.5	20.5	108	59	60	34536
8010042106	8010040219	63x40	29.5	22.5	112	61	60	38601
8010040198	8010040220	63x50	29.5	25.5	122	64	60	41627
8010040199	8010040221	75x32	33	20.5	100	64	60	38007
8010043045	8010040222	75x40	33	22.5	113	63.5	54	44505
8010040200	8010040223	75x50	33	25.5	122.5	64.5	54	49964
8010040201	8010040224	75x63	33	29.5	145	75	36	61031
8010040202	8010040225	90x40	37	22.5	120	72.25	34	67677
8010040203	8010040226	90x50★	37	25.5	132.3	80	28	73166
8010040204	8010040227	90x63	37	29.5	148	84	28	87734
8010040205	8010040228	90x75	37	33	164	88	25	98148

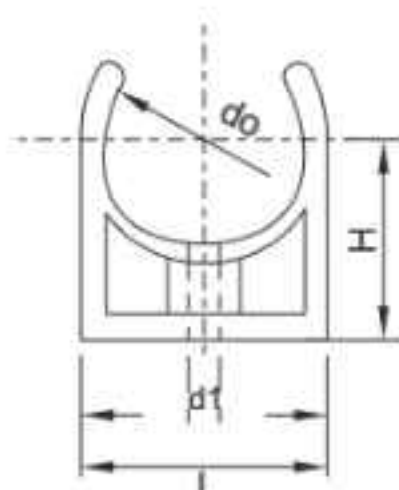
The product mold marked as "★" on this page has not been improved, please note.

Cap(Soc)

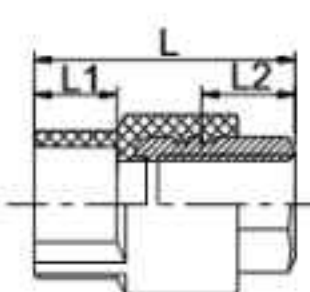
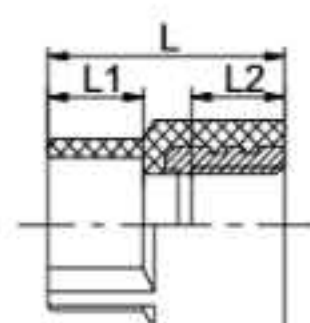


SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L	PCS/CTN	Harga (Rp) (PC)
8010040027	8010040033	20	16.5	30	1200	1365
8010040028	8010040034	25	18	34	900	2225
8010040029	8010040035	32	20.5	43	450	4243
8010040030	8010040036	40	22.5	54	240	7744
8010040031	8010040037	50	25.5	58	140	11571
8010040032	8010040038	63	29.5	68	150	21451
8010043926	8010042069	75	33	80	60	30145
8010043927	8010040039	90	37	95	80	51359
8010043433	8010045588	110	42	112	36	93639

Pipe Clamp

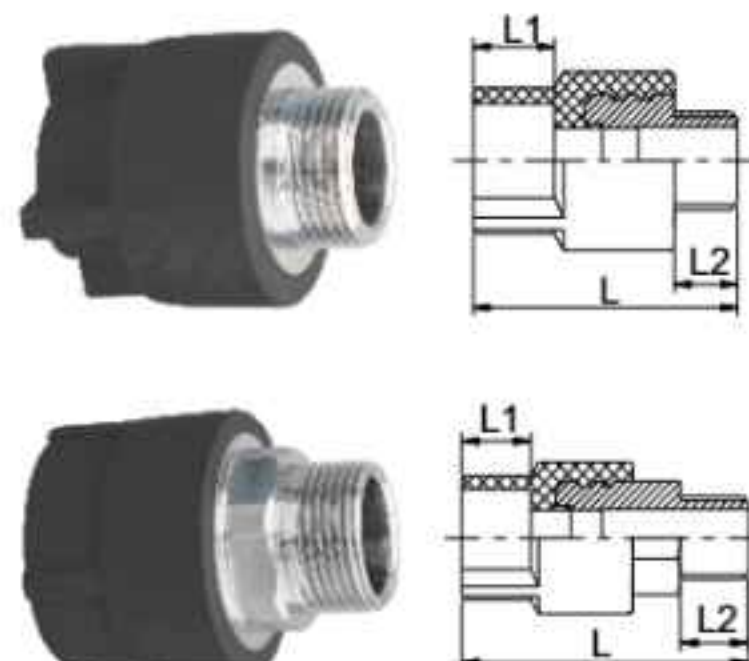


SAP Number (black)	SAP Number (blue)	Size (mm)	L	do	d1	H	PCS/CTN	Harga (Rp) (PC)
8010043287	8010040013	20	27.4	19.6	5	22	1080	1216
8010043128	8010040014	25	32	24.6	5	24.5	1050	1276
8010040012	8010040015	32	39	31.5	5	28.5	960	1691
8010043127	8010041376	40	47.5	38.5	5	32	600	2463
8010043928	8010043102	50	57.5	48.5	5	37	450	3234

Female Thread Adapter
(Soc×Fipt with Metal
Insert)

SAP Number (black)	SAP Number (blue)	Size (mm x inch)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010040079	8010040086	20x1/2"	16.5	17.5	42	360	21491
8010043046	8010040087	20x3/4"	16.5	17	42	240	29722
8010040080	8010040088	25x1/2"	18	17.5	44.5	300	21878
8010040081	8010040089	25x3/4"	18	17	45	180	29980
8010042083	8010040091	32x1/2"	20.5	17.5	47	180	25207
8010041533	8010040092	32x3/4"	20.5	17	47	210	34159
8010040082	8010040090	32x1"	20.5	22	59	96	91745
8010043047	8010040093	40x1"	22.5	22	60	72	94118
8010040083	8010040094	40x1-1/4"	22.5	24	64	72	168680
8010042731	8010040096	50x1-1/4"	25.5	24	66	48	169712
8010040084	8010040095	50x1-1/2"	25.5	23	68.5	36	210476
8010040085	8010040097	63x2"	29.5	25	77	36	311716
8010041986	8010040098	75x2"	33	25	80.5	36	322268

Male Thread Adapter (Soc×Mipt with Metal Insert)



SAP Number (black)	SAP Number (blue)	Size (mm x inch)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010040138	8010040146	20x1/2"	16.5	14	56	240	29309
8010043048	8010040147	20x3/4"	16.5	14	56	180	40712
8010042094	8010040148	25x1/2"	18	14	58.5	210	29438
8010040139	8010040149	25x3/4"	18	14	59	180	40841
8010043049	8010040151	32x1/2"	20.5	14	61	180	34004
8010042752	8010040152	32x3/4"	20.5	14	61	180	46234
8010040140	8010040150	32x1"	20.5	19	78	96	118035
8010043050	8010040153	40x1"	22.5	19	79	72	119196
8010040141	8010040154	40x1-1/4"	22.5	21	85	48	256581
8010043051	8010040156	50x1-1/4"	25.5	21	87	48	257458
8010040142	8010040155	50x1-1/2"	25.5	21	89.5	48	303124
8010040143	8010040157	63x2"	29.5	24	102	36	394972
8010041565	8010040158	75x2"	33	24	105.5	36	405653

Female Thread Elbow (Soc×Fipt with Metal Insert)



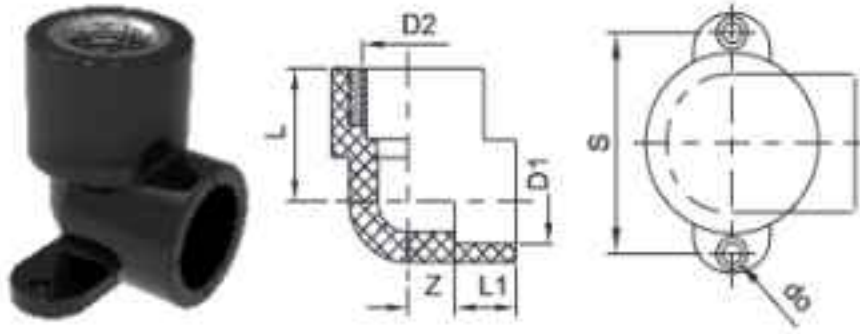
SAP Number (black)	SAP Number (blue)	Size (mm x inch)	L1	L2	H1	H2	PCS/CTN	Harga (Rp) (PC)
8010042077	8010040067	20x1/2"	16.5	17.5	30	36	240	22420
8010043052	8010040068	20x3/4"	16.5	17	33	36	210	30754
8010042078	8010040069	25x1/2"	18	17.5	33	38	210	23323
8010041549	8010040070	25x3/4"	18	16	34.4	37.4	180	31553
8010042079	8010040072	32x1/2"	20.5	17.5	35	42	180	26987
8010043053	8010040073	32x3/4"	20.5	17.5	38	42	150	36997
8010040066	8010040071	32x1"	20.5	22	40.5	53	72	93964
8010042080	8010040074	40x1-1/4"	22.5	24	51	61.2	48	172963
8010043929	8010042081	50x1-1/2"	25.5	24	57	66.5	36	215120
8010043930	8010041401	63x2"	29.5	25	67.5	78.5	18	325364
8010042730	8010042082	75x2-1/2"	33	30	79	89.5	16	556867

Male Thread Elbow (Soc×Mipt with Metal Insert)



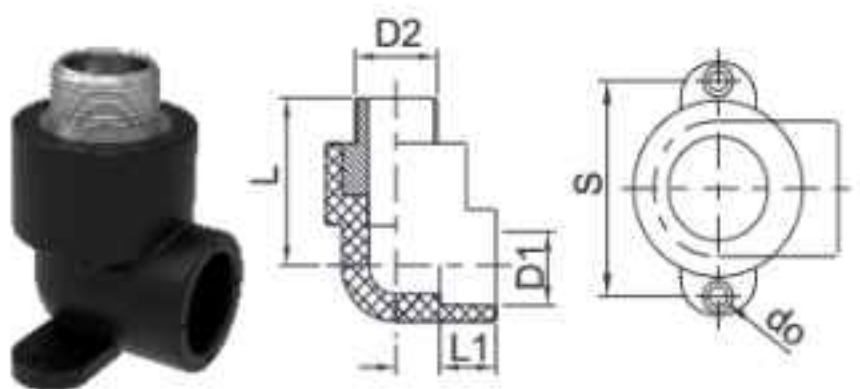
SAP Number (black)	SAP Number (blue)	Size (mm x inch)	L1	L2	H1	H2	PCS/CTN	Harga (Rp) (PC)
8010043267	8010040126	20x1/2"	16.5	14	30	50	240	30367
8010043288	8010040127	20x3/4"	16.5	14	33	50	180	41512
8010042089	8010040128	25x1/2"	18	14	33	52	210	31399
8010043268	8010040129	25x3/4"	18	14	34.4	51.4	150	42286
8010042090	8010040131	32x1/2"	20.5	14	35	56	180	35785
8010042091	8010040132	32x3/4"	20.5	14	38	56	120	48917
8010040125	8010040130	32x1"	20.5	19	40.5	72	72	119531
8010042092	8010041402	40x1-1/4"	22.5	21	49.5	82.5	48	261019
8010043931	8010042093	50x1-1/2"	25.5	21	55.5	87.5	36	307433
8010043932	8010041629	63x2"	29.5	24	62.5	103	24	406531
8010043933	8010041566	75x2-1/2"	33	28	74	118	12	659551

Female Thread Elbow with Base (Soc×Fipt with Metal Insert)



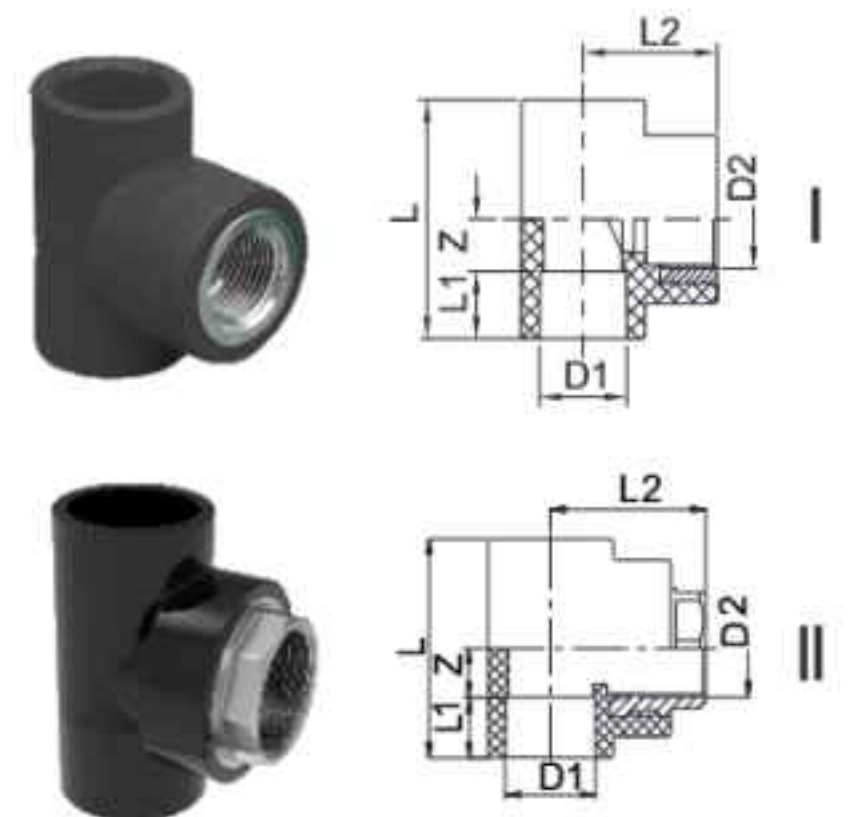
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	L	S	L1	do	PCS/CTN	Harga (Rp) (PC)
8010043913	8010040075	20x1/2"	20	1/2"	36	49.5	16.5	5	210	24794
8010043914	8010040076	20x3/4"	20	3/4"	36	53.5	16.5	5	180	33282
8010043915	8010040077	25x1/2"	25	1/2"	38	49.5	18	5	180	25568
8010043916	8010040078	25x3/4"	25	3/4"	37.4	53.5	18	5	120	34598

Male Thread Elbow with Base (Soc×Mipt with Metal Insert)



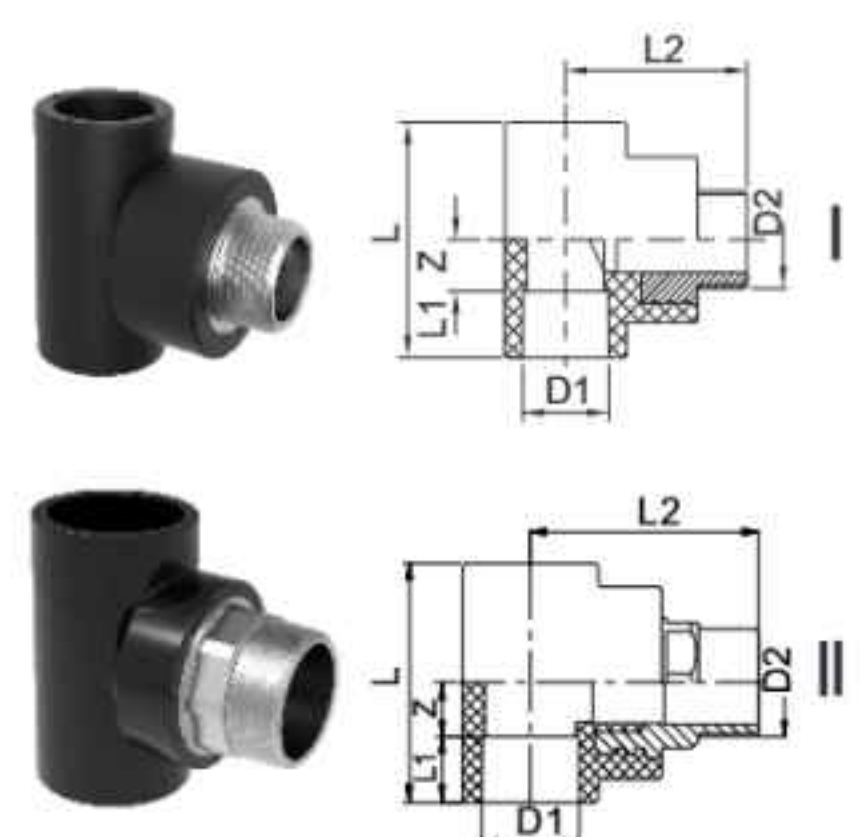
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	L	S	L1	do	PCS/CTN	Harga (Rp) (PC)
8010043917	8010040133	20x1/2"	20	1/2"	36	49.5	16.5	5	180	34056
8010043918	8010040134	20x3/4"	20	3/4"	36	53.5	16.5	5	150	46517
8010043919	8010040135	25x1/2"	25	1/2"	38	49.5	18	5	180	34959
8010043920	8010040136	25x3/4"	25	3/4"	37.4	53.5	18	5	150	46646

Female Thread Tee (Soc×Soc×Fipt with Metal Insert)



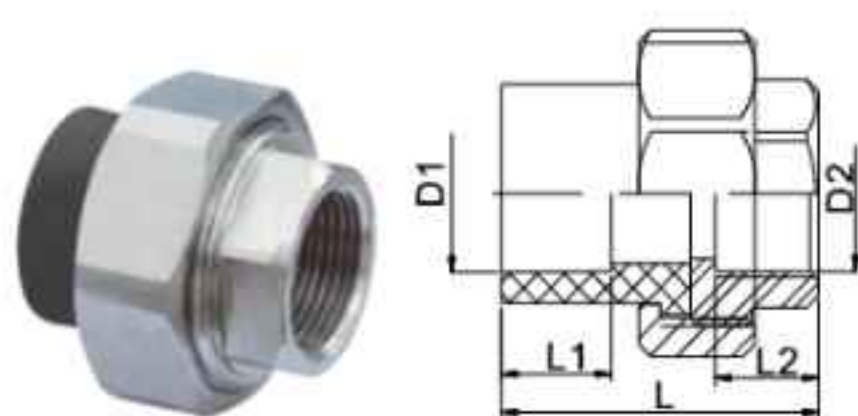
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	Z	L2	L1	L	PCS/CTN	Harga (Rp) (PC)
8010042072	8010040059	20x1/2"	20	1/2"	13.5	36	16.5	60	240	22936
8010043054	8010040060	20x3/4"	20	3/4"	16.5	36	16.5	66	210	31553
8010043055	8010040061	25x1/2"	25	1/2"	15	38	18	66	180	23607
8010042073	8010040062	25x3/4"	25	3/4"	17	38	18	70	150	31966
8010043056	8010040064	32x1/2"	32	1/2"	14.5	42	20.5	70	120	28174
8010043057	8010040065	32x3/4"	32	3/4"	17.5	42	20.5	76	120	38184
8010043058	8010040063	32x1"	32	1"	20	53	20.5	81	60	95744
8010043935	8010042074	50x1-1/2"	50	1-1/2"	31.5	66.5	25.5	114	30	221287
8010043936	8010042075	63x2"	63	2"	38	78.5	29.5	135	12	333697
8010043937	8010042076	75x2-1/2"	75	2-1/2"	46	89.5	33	158	12	563524

Male Thread Tee (Soc×Soc×Mipt with Metal Insert)



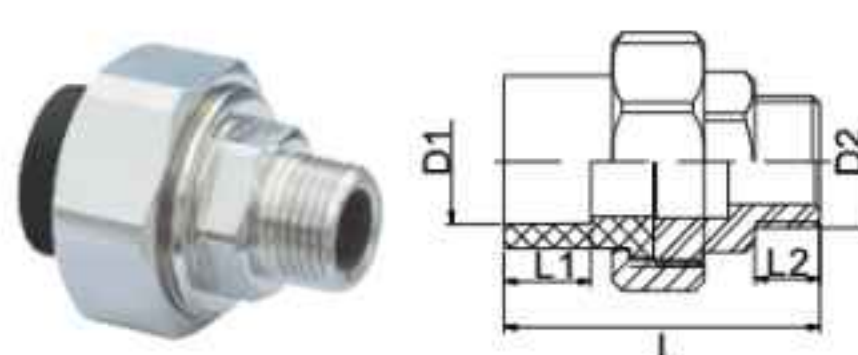
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	Z	L2	L1	L	PCS/CTN	Harga (Rp) (PC)
8010042084	8010040118	20x1/2"	20	1/2"	13.5	50	16.5	60	180	30625
8010043289	8010040119	20x3/4"	20	3/4"	16.5	50	16.5	66	150	42028
8010043269	8010040120	25x1/2"	25	1/2"	15	52	18	66	150	31270
8010042085	8010040121	25x3/4"	25	3/4"	17	52	18	70	120	42828
8010043270	8010040123	32x1/2"	32	1/2"	14.5	56	20.5	70	120	37126
8010043271	8010040124	32x3/4"	32	3/4"	17.5	56	20.5	76	90	50104
8010040117	8010040122	32x1"	32	1"	20	72	20.5	81	60	121621
8010043939	8010042087	50x1-1/2"	50	1-1/2"	30	87.5	25.5	111	24	313496
8010043940	8010041984	63x2"	63	2"	32.25	103	29.5	123.5	12	416335
8010042086	8010042088	75x2-1/2"	75	2-1/2"	41	118	33	148	12	667265

**Female Thread Union
(Soc×Fipt with Metal)**



SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010043907	8010040055	20x1/2"	20	1/2"	16	16	42	180	46621
8010043908	8010040056	25x3/4"	25	3/4"	18	17	47	150	62152
8010040054	8010040057	32x1"	32	1"	20.5	18	52	90	123014

**Male Thread Union
(Soc×Mipt with Metal)**



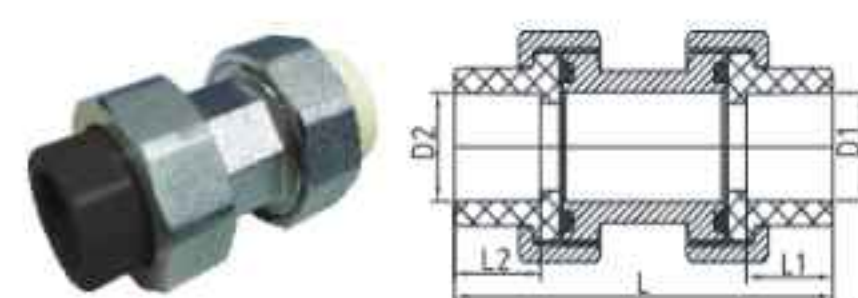
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010043905	8010040114	20x1/2"	20	1/2"	16	14	55	150	56657
8010043904	8010040115	25x3/4"	25	3/4"	18	13.5	60	120	77761
8010040113	8010040116	32x1"	32	1"	20.5	19	71	72	141203

**Flexible Joint (Soc×Fipt
with Metal)**



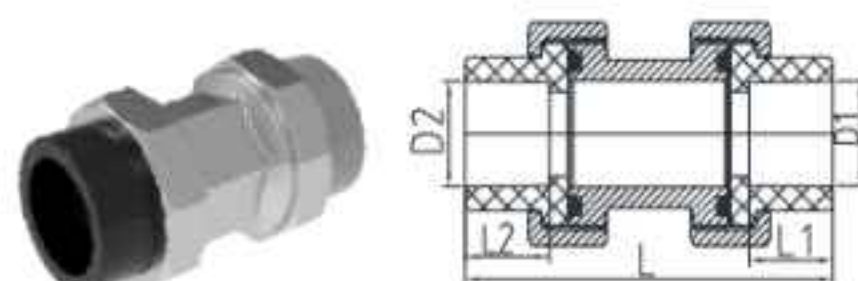
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	D1	D2	L	L1	PCS/CTN	Harga (Rp) (PC)
8010043870	8010041493	20x1/2"	20	1/2"	59	16.5	300	50594
8010043941	8010041513	20x3/4"	20	3/4"	59.5	16.5	240	42002
8010043910	8010041494	25x1/2"	25	1/2"	61	18	240	51239
8010043909	8010041495	25x3/4"	25	3/4"	62	18	240	42673
8010043911	8010041496	32x1"	32	1"	68.5	20	150	93370

**PE/PE-RT Change Union
(Soc×Soc)**



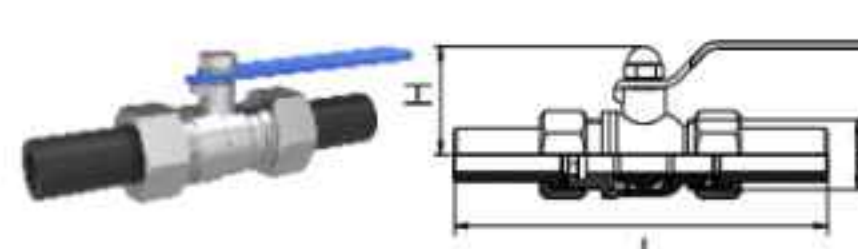
SAP Number (black)	SAP Number (blue)	Size (mm×inch)	L	L1	L2	D1	D2	PCS/CTN	Harga (Rp) (PC)
8010044326	8010041987	20	72	14.5	16.5	20	20	144	97365
8010044327	8010041988	25	77	17.8	18	25	25	120	
8010044328	8010041989	32	82	20	20	32	32	72	282355

**PPR/PE Change Union
(Soc×Soc)**

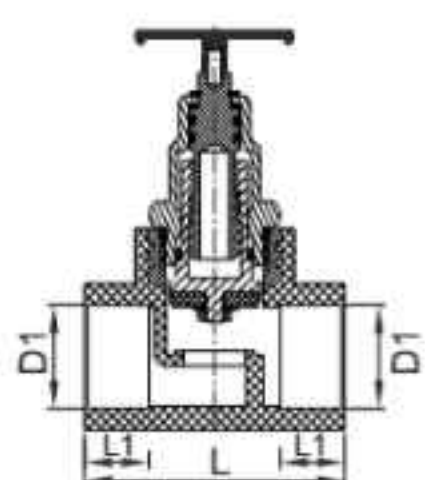


SAP Number (black)	SAP Number (gray)	Size (mm×inch)	L	L1	L2	D1	D2	PCS/CTN	Harga (Rp) (PC)
8010045474	8010043376	20	71.5	16	16.5	20	20	180	97369
	8010043377	25	77	18	18	25	25	120	139655
8010045473	8010043378	32	83.8	20	20.5	32	32	72	282613

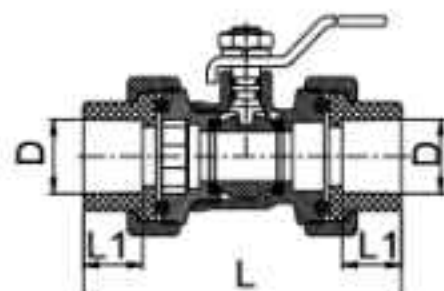
Ball Valve (Spig×Spig)



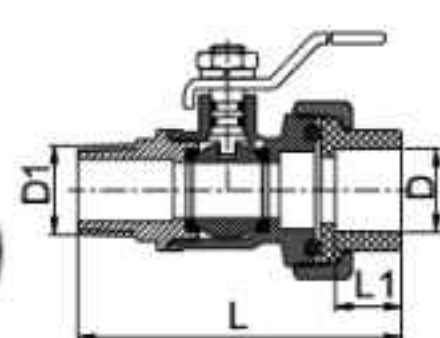
SAP Number (black)	SAP Number (blue)	Size (mm)	L	G	H	PCS/CTN	Harga (Rp) (PC)
8010043328	8010040040	20	142	3/4"	33	96	170925
8010043906	8010040041	25	156.5	1"	35	72	264295
8010042070	8010040042	32	169	1-1/4"	42.2	36	505061

Stop Valve (Soc×Soc)


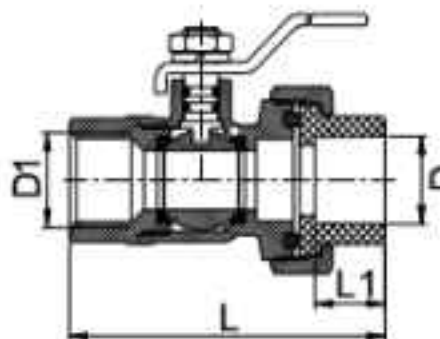
SAP Number (black)	SAP Number (blue)	Size (mm)	D1	L1	L	PCS/CTN	Harga (Rp) (PC)
8010040043	8010040048	20	20	16.5	65	72	78277
8010040044	8010040049	25	25	18	74	60	104645
8010040045	8010040050	32	32	20.5	83	36	193629
8010042071	8010040051	40	40	22.5	89.5	36	195564
8010040046	8010040052	50	50	25.5	117	30	324925
8010040047	8010040053	63	63	29.5	124	20	465045
8010046381	8010046382	75	75	33	129	9	687054
8010043574	8010044820	90	90	37	160	5	1094720
8010043573	8010044890	110	110	42	194		

True Union Ball Valve (Soc×Soc)


SAP Number (black)	SAP Number (blue)	Size (mm)	D	L1	L	PCS/CTN	Harga (Rp) (PC)
8010043058	8010041519	20	20	16	85.8	96	158231
8010043059	8010041520	25	25	18	93.8	72	212282
8010042643	8010042644	32	32	20	103.2	36	431995

Male Thread Union Ball Valve (Soc×Mipt with Metal)


SAP Number (black)	SAP Number (blue)	Size (mm)	D	D1	L1	L	PCS/CTN	Harga (Rp) (PC)
8010043942	8010042652	20x1/2"	20	1/2"	16	77.9	96	135398
8010043943	8010042653	25x3/4"	25	3/4"	18	83.9	72	192184
8010043944	8010042654	32x1"	32	1"	20	95.7	24	381556

Female Thread Union Ball Valve (Soc×Fipt with Metal)


SAP Number (black)	SAP Number (blue)	Size (mm)	D	D1	L1	L	PCS/CTN	Harga (Rp) (PC)
8010043945	8010042648	20x1/2"	20	1/2"	16	71.9	120	132070
8010043607	8010070930	25x3/4"	25	3/4"	18	75.4	72	181632
8010043608	8010042649	32x1"	32	1"	20	85.7	36	363109

PE Single Male Manifold


SAP Number (black)	SAP Number (black)	Size (mm)	SDR	Brand Pipe	PCS/CTN	Harga (Rp) (PC)
8010043349	8010043349	50x1/2"	11	3		146363
8010043350	8010043350	50x1/2"	11	4		192391
8010043351	8010043351	50x1/2"	11	5		243449
8010043437	8010043437	50x1/2"	11	6		289166
8010043415	8010043415	50x1/2"	11	8		386845

Double U Clamp



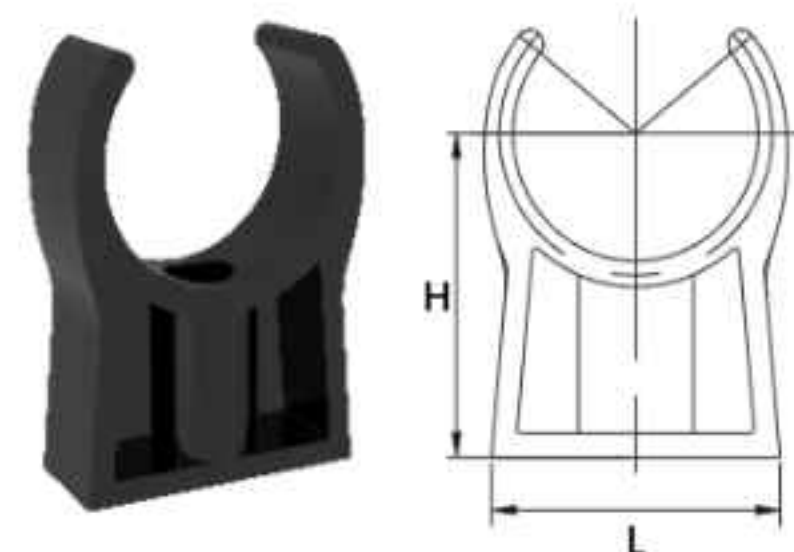
SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
8010043948	8010042974	20	72.5	27.5		801
8010043949	8010042975	25	85	33.8		1276
8010043950	8010042976	32	100.5	41		1543
8010043951	8010042977	40	122	50		2255
8010043952	8010042978	50	147.5	61		2700
8010043953	8010042979	63	178	76		4183

U Clamp



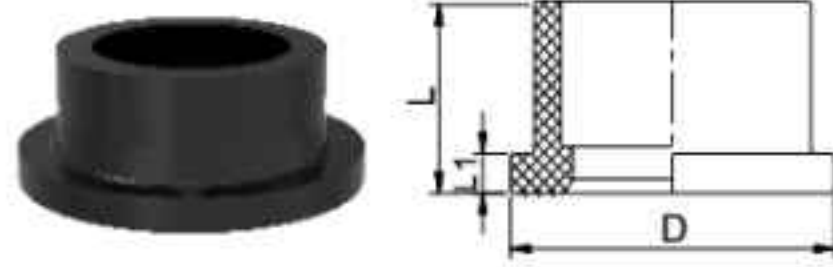
SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
	8010043595	20	44	27.5		1216
	8010043596	25	50.5	33.8		1276
	8010043597	32	57	41		1691
	8010043598	40	68	50		2463
	8010043781	50	78	61		3234

Clamp (Moderate-style)



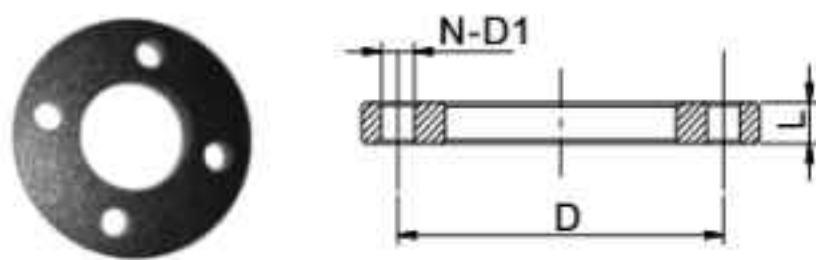
SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
8010045475	8010043599	20	24.5	30		1365
8010045476	8010043600	25	30.5	35		1869
8010045477	8010043749	32	37	40		2196
8010045478	8010043750	40	46	45		2937

Stub Flange (Soc×Flange)



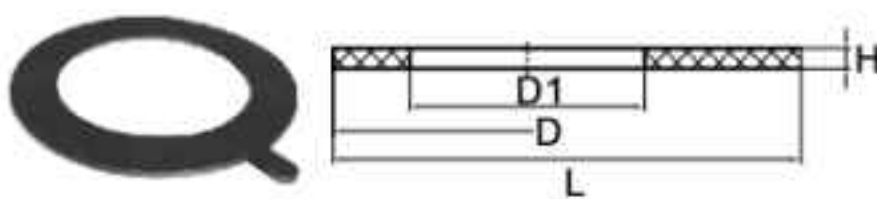
SAP Number (black)	SAP Number (blue)	Size (mm)	L1	L	D	PCS/CTN	Harga (Rp) (PC)
8010040006	8010040009	50	10	30	84	90	11186
8010040007	8010040010	63	11	34	104	60	20621
8010040008	8010040011	75	14	38	124	50	30323

Flange(Steel Tray)



SAP Number (black)	SAP Number (black)	Size (mm)	D	D1	N	L	PCS/CTN	Harga (Rp) (PC)
8010041616	8010041616	50 1.6MPa	110	18	4	10		217909
8010041617	8010041617	63 1.6MPa	125	18	4	12		293722
8010043144	8010043144	75 1.6MPa	145	18	4	15		439301

Rubber Gasket



SAP Number (black)	SAP Number (black)	Size (mm)	D1	D	L	H	PCS/CTN	Harga (Rp) (PC)
8010040188	8010040188	50	45	86	113	4		6765
8010040189	8010040189	63	58	105	132.5	4		10444
8010040190	8010040190	75	68	127	153.5	4		13530

Pipe Clamp I
(without Screw)

SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
8010043954	8010043001	20	49	42	720	2374
8010043955	8010043004	25	54	47	720	2451
8010043956	8010043007	32	64	54	270	2761
8010043957	8010043010	40	72	62.5	240	3122
8010043958	8010043013	50	87	73	280	4954
8010043959	8010043016	63	106	87.5	180	6656
8010043960	8010043019	75	118.5	101	130	7018

Pipe Clamp I (Screw)



SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
8010043872	8010043002	20	49	96	480	5444
8010043961	8010043005	25	54	101	450	5521
8010043871	8010043008	32	64	108	360	5831
8010043962	8010043011	40	72	116.5	240	6192
8010043963	8010043014	50	87	127	200	11971
8010043964	8010043017	63	106	140.5	130	13674
8010043965	8010043020	75	118.5	154	100	14474

Pipe Clamp I
(Tusk Screw)

SAP Number (black)	SAP Number (blue)	Size (mm)	L	H	PCS/CTN	Harga (Rp) (PC)
8010043966	8010043003	20	49	96	480	5366
8010043967	8010043006	25	54	101	450	5444
8010043968	8010043009	32	64	108	360	5753
8010043969	8010043012	40	72	116.5	300	6115
8010043970	8010043015	50	87	137	220	10475
8010043971	8010043018	63	106	150.5	130	12178
8010043972	8010043021	75	118.5	164	100	12977



■ Features

Material: PE 100

Size: full 75mm through 800mm availability

Pressure Rating: 1.0MPa, 1.25MPa, 1.6MPa or other nominal pressures available upon request

Standard: ISO 4427-3, EN 12201-3, BS EN 12201-3 AS/NZS 4129 BS 6920

Color: blue (all size)

black (all size)

other colors are also available upon request

Joint: joining pipe and butt joint fittings by butt fusion joint

■ Advantages

Non-toxic: no heavy metal additives, would not be covered with dirt or contaminated by bacterium

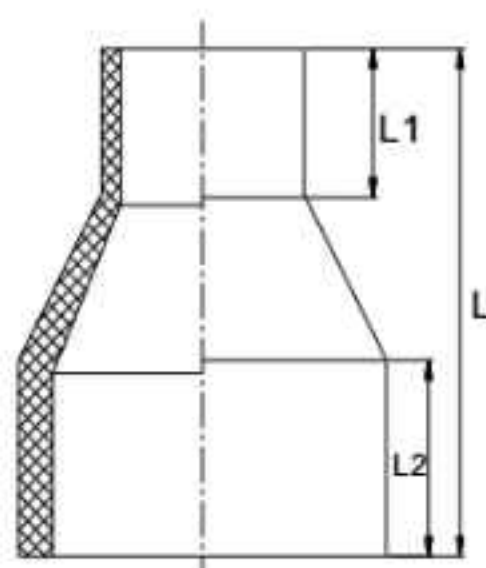
Corrosion Resistance: resist chemical matters and electron chemical corrosion

Low Installation Costs: light weight and ease of installation can reduce installation costs

High Flow Capacity: smooth interior walls result in low pressure loss and high volume

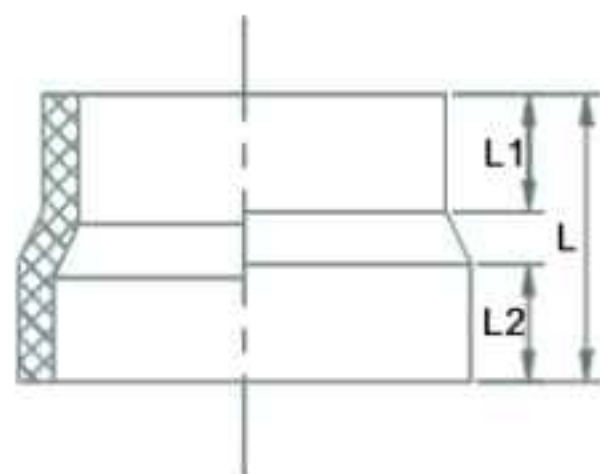
Longevity: more than 50 years under proper use

Reducer



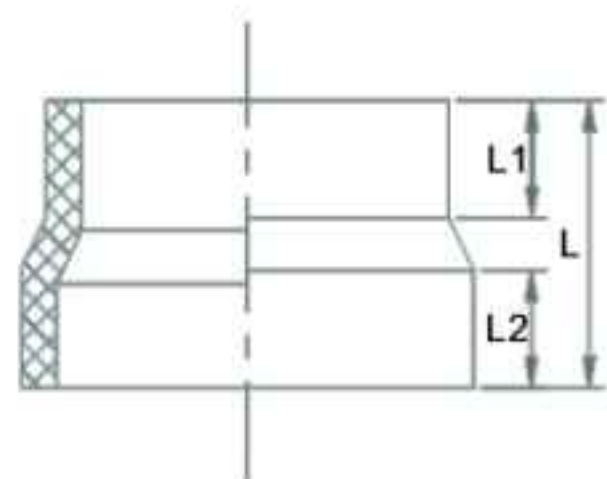
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010040840	8010040847	11	75×63	70	72.5	156	60	107257
8010040841	8010040848	11	90×63	65	82	170	40	133782
8010040842	8010040849	11	90×75	70	82.6	167	40	128174
8010040816	8010040843	11	110×50	65	79.6	200	36	162681
8010040817	8010040844	11	110×63	65	89	195	36	175973
8010040818	8010041414	11	110×75	70	84.7	185	32	176002
8010040819	8010040845	11	110×90	76	83.6	172	30	187425
8010040821	8010042277	11	125×63	65	88.6	202	24	200183
8010040822	8010042278	11	125×90	76	83.3	193	24	200569
8010040820	8010042276	11	125×110	84	91	195	20	234363
8010040825	8010040846	11	160×90	80	102.2	238	12	347198
8010040823	8010041391	11	160×110	84	102.8	230	12	365564
8010040824	8010042279	11	160×125	88	103.6	222	12	348741
8010040828		11	180×63	67	85.3	205	14	312751
8010040826	8010042280	11	180×110	76	84.1	213	12	373456
8010040827	8010042281	11	180×160	75	84.1	182	10	428405
8010040829	8010041390	11	200×110	84	116.1	270	6	569189
8010040830	8010041389	11	200×160	100	100.3	237	6	599898
8010040831	8010042282	11	200×180	87	100.8	205	6	588475
8010040832	8010042283	11	225×160	86	97.4	231	6	755161
8010040833	8010042284	11	225×200	89	96	205	4	782012
8010040834	8010042285	11	250×110	82	91.3	217	5	749791
8010040835	8010042286	11	250×160	100	105	290	3	1054027
8010040836	8010042287	11	250×200	101	104.5	254	3	981899
8010040837	8010042288	11	250×225	91	96.5	208	3	933923
8010043391		11	315×160	98	155	300	2	1987682
8010044633		11	315×180	105	155.5	297	2	1761656
8010040838		11	315×200	112	156	304	2	2222609
8010044613		11	315×225	120	157.6	310	2	2240233
8010044839		11	315×250	130	161.3	322	2	2434008
8010044822		11	400×225	120	159	344	1	3056959
8010040852	8010042290	13.6	280×110	77	90.4	295	3	918672
8010040853	8010042291	13.6	280×160	79	90.3	257	4	939085
8010040854		13.6	280×200	94	90.1	253	4	1003766
8010040855	8010040861	13.6	315×110	81	87.8	231	3	1015100
8010040856	8010041415	13.6	315×160	86	91.4	250	2	1123692
8010040857	8010042292	13.6	315×200	106	103.23	296	2	1497445
8010040851	8010040862	13.6	315×225	90	94.3	223	2	1199380
8010040858	8010042293	13.6	315×250	81	98.9	234	2	1441309
8010040859	8010043633	13.6	315×280	83	92	200	/	1226617

Reducer



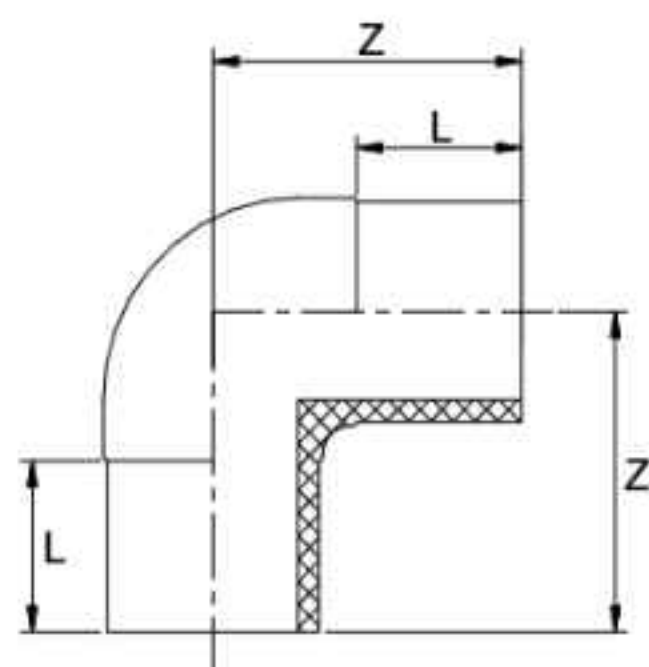
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010042311	8010044819	17	75×63	70	72.5	156	60	105150
8010042313	8010043309	17	90×63	70	82	170	40	131735
8010042314		17	90×75	70	82.6	167	40	127759
8010042295	8010044306	17	110×50	65	79.6	200	36	156420
8010042296	8010043310	17	110×63	65	89	195	36	169890
8010040863	8010044612	17	110×75	70	84.7	185	32	171938
8010040864	8010043311	17	110×90	76	83.6	172	30	183361
8010044502		17	125×63	65	88.6	202	24	190185
8010040865	8010043496	17	125×90	76	83.3	193	24	192499
8010042297	8010044873	17	125×110	84	91	195	20	219202
8010040868	8010043497	17	160×90	80	102.2	238	12	334055
8010040866	8010043481	17	160×110	84	102.8	230	12	349394
8010040867		17	160×125	88	103.6	222	12	332571
8010042983		17	180×63	67	85.3	205	14	310526
8010042298		17	180×110	76	84.1	213	12	360312
8010040869	8010043202	17	180×160	75	84.1	182	10	420305
8010040870	8010043860	17	200×110	84	116.1	270	6	536849
8010040871	8010043862	17	200×160	100	100.3	237	6	565510
8010042299		17	200×180	87	100.8	205	6	530856
8010040872	8010043742	17	225×160	86	97.4	231	6	701428
8010042301	8010043792	17	225×200	89	96	205	4	736884
8010040873	8010043794	17	250×110	82	91.3	217	5	674577
8010040874	8010044378	17	250×160	100	105	290	3	975016
8010040875		17	250×200	100	104.5	254	3	928196
8010040876	8010043728	17	250×225	91	96.5	208	3	873752
8010042302	8010043793	17	280×110	77	90.4	295	3	902561
8010040877	8010043729	17	280×160	79	90.3	257	4	917604
8010042303	8010043791	17	280×200	94	90.1	253	4	982285
8010040878	8010043081	17	315×110	81	87.8	231	3	941370
8010040879	8010043077	17	315×160	86	91.4	250	2	1093607
8010044709		17	315×180	105	155.5	197		1668819
8010040880	8010043078	17	315×200	106	103.23	296	2	1452317
8010040881	8010044367	17	315×225	90	94.3	223	2	1180065
8010040882	8010044368	17	315×250	81	98.9	234	2	1410156
8010040883		17	315×280	83	92	200	/	1168583
8010040884	8010044379	17	355×200	84	93.9	286	/	1685968
8010040885	8010044373	17	355×250	77	92.5	243	/	1647783
8010040886	8010042315	17	355×315	85	103.3	217	/	1478634
8010040887	8010043861	17	400×200	76	97	267	/	1836662
8010044812		17	400×225	120	182.4	344		2917273
8010040888	8010043730	17	400×250	74	100.7	240	/	1867430
8010043182	8010043731	17	400×280	75	97.3	231		1996583
8010040889	8010044380	17	400×315	85	78.3	220	/	1617905
8010040891		17	450×200	73	79.6	262	/	2462224
8010040892	8010044381	17	450×250	77	84.5	246	/	2476792
8010040893	8010042317	17	450×315	37	52.	126	/	1908730
8010040896		17	500×315	110	108.2	275	/	4382615
8010040897		17	500×355	113	109.7	277	/	4376592

Reducer



SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (PC)
8010040898	8010042319	17	500×400	110	113	278	/	4635077
8010042307		17	500×450	118	118.6	279	/	5117274
8010040899		17	560×400	105	102.6	250	/	4687860
8010041971		17	560×450	105	104.9	250	/	4833451
8010042308		17	560×500	105	108.8	250	/	5069802
8010042309		17	★ 630×315	100	100	290	/	
8010040900		17	★ 630×400	100	100	290	/	
8010040901	8010042320	17	★ 630×500	100	100	290	/	
8010042321		26	500×315	110	108.2	275	/	3604519
8010043925		26	500×355	113	109.7	277	/	3502929
8010040905		26	500×400	110	115.4	273	/	3972368
8010042322		26	500×450	118	118.6	279	/	4134425
8010042323		26	560×315	97.5	101.3	250	/	3882468
8010040906		26	560×400	105	102.6	250	/	4107693
8010042324		26	560×450	105	104.9	250	/	4355675
8010043145		26	560×500	144	108.8	250	/	4512392

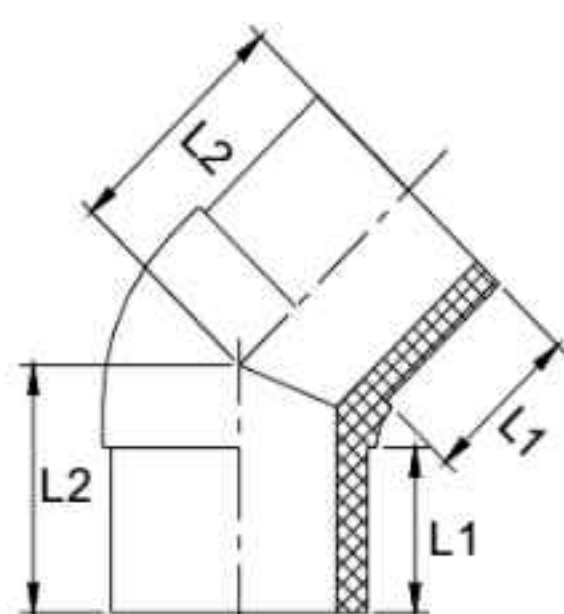
90° Elbow



SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	Z	L	PCS/CTN	Harga (Rp) (PC)
8010043577		11	63	122	65	46	
8010040751	8010040756	11	75	132	75	30	152148
8010040752	8010040757	11	90	150	85	20	214099
8010040743	8010040753	11	110	163	87	12	312989
8010040744	8010042253	11	125	170.5	87	8	394374
8010040745	8010040754	11	160	200	100	5	687157
8010040746		11	180	210	95	4	843607
8010040747	8010040755	11	200	225	100	3	1135679
8010040748		11	225	265	120	/	2075417
8010040749	8010042254	11	250	292	130	/	2897365
8010040750	8010043502	11	280	316	138	/	3924421
8010041624	8010044556	11	315	355	150	/	6115669
8010045528		11	355	517.5	110	/	6462719
8010042257	8010043193	17	75	132	75	30	146688
8010040766	8010043192	17	90	150	85	20	200747
8010040759	8010043229	17	110	163	87	12	302367
8010042256	8010043486	17	125	170.5	87	8	375355
8010040760	8010043249	17	160	200	100	5	659534
8010040761		17	180	210	95	4	758662
8010040762	8010044311	17	200	225	100	3	1101321
8010040763	8010043441	17	225	265	120	/	1761716
8010040764	8010042258	17	250	292	130	/	2553549
8010040765	8010043297	17	280	316	138	/	3241121
8010041623	8010044557	17	315	355	150	/	5251887
8010043551		17	355	330	110	/	5616145

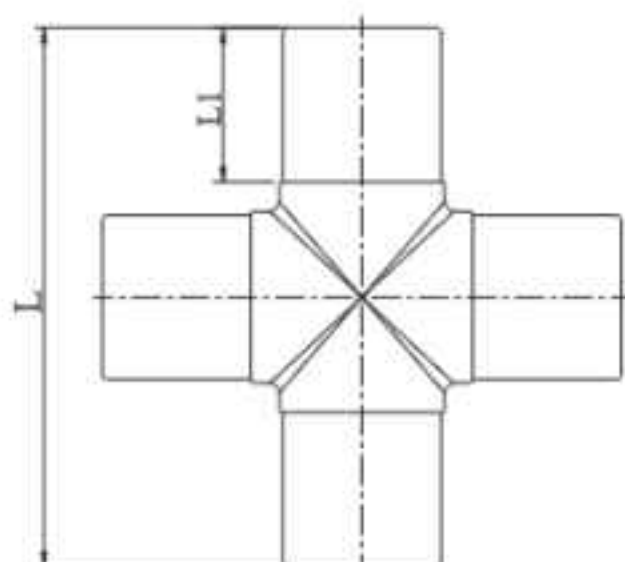
The product mold marked as "★" on this page has not been improved, please note.

45° Elbow



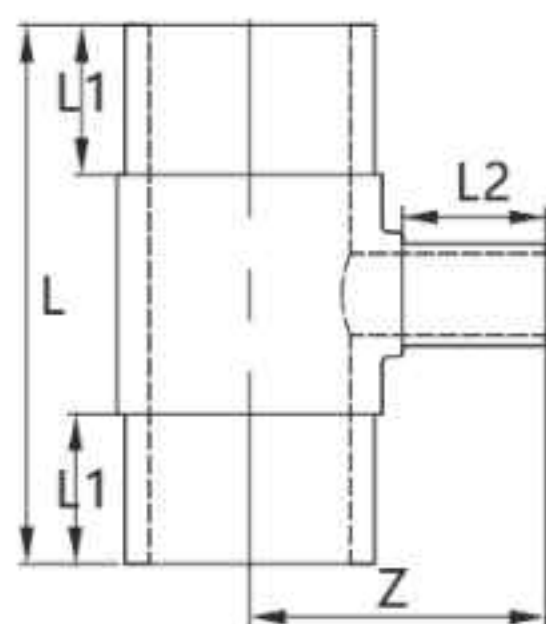
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L2	PCS/CTN	Harga (Rp) (PC)
8010040732	8010040734	11	75	80	124	30	151258
8010040733	8010040735	11	90	85	136	18	202705
8010040725	8010041385	11	110	87	145	10	296759
8010040726	8010042245	11	125	87	150	4	366484
8010040727	8010043300	11	160	100	175	3	665913
8010040728		11	180	105	183	3	864109
8010040729	8010043168	11	200	110	193	/	1059189
8010040730	8010042246	11	225	122	215	/	1600578
8010040731	8010042247	11	250	130	232	/	2366123
8010041412	8010043501	11	280	140	250	/	3092860
8010044463		11	315	150	270	/	4714711
8010042687	8010044818	17	75	80	124	30	146184
8010041541	8010043230	17	90	85	136	18	198670
8010040736	8010043231	17	110	87	145	12	286137
8010042250	8010043485	17	125	87	150	10	335152
8010040737	8010042985	17	160	100	175	4	614644
8010040738	8010043196	17	180	105	183	3	664845
8010040739	8010043785	17	200	110	193	3	948342
8010040740	8010042251	17	225	122	215	/	1503883
8010040741	8010042252	17	250	130	232	/	2033582
8010040742	8010043298	17	280	140	250	/	2716852
8010043594	8010045533	17	315	150	270		3998122

Cross



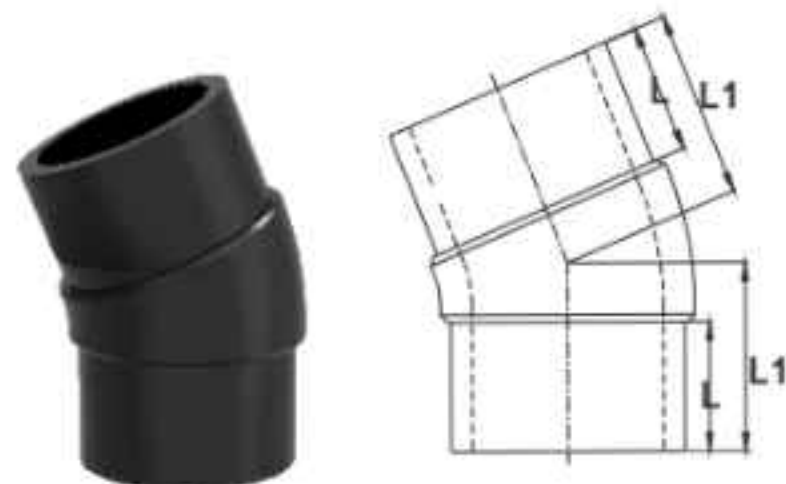
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L	D	PCS/CTN	Harga (Rp) (PC)
8010043326	8010043901	11	63	63	220	67	20	191728
8010043327	8010044483	11	75	70	254	79	13	242285
8010043438		11	90	79	288	95	7	347614
8010044510		11	110	82	339	110	4	586279
8010044511		11	125	87	363	125		751689
8010044006		11	160	98	426	160	2	1372000
8010044605		11	200	112	510	200	1	2357341
8010044790		11	225	120	558	558		3538682
8010044498		17	63	63	220	67	20	185170
8010044499		17	75	70	254	79	13	232880
8010044500		17	90	79	288	95	7	335686
8010044501		17	160	98	426	160	2	564739
8010044711		17	110	82	339	110	4	719349
8010044712		17	125	87	363	125		1290704
8010044713		17	200	112	510	200	1	2357341
8010044791		17	225	120	558	225		3430178

Reducing Tee



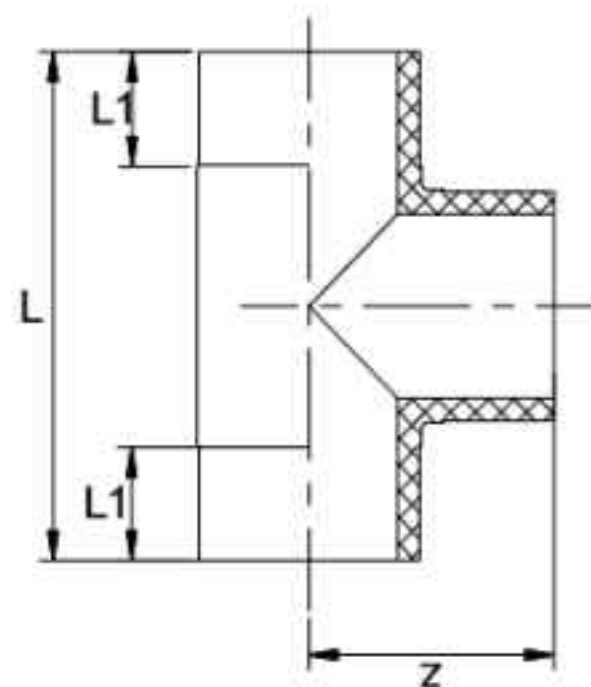
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L2	L	Z	PCS/CTN	Harga (Rp) (PC)
8010040789	8010040802	11	110×63	87	85	302	160.75	10	362063
8010040790	8010040803	11	110×75	87	84.5	302	161.25	10	370400
8010040791	8010040804	11	110×90	87	87	302	162.25	9	389893
8010040794	8010040806	11	160×63	92.5	92	333	190	6	696236
8010040795	8010042266	11	160×75	92.5	91.5	333	188.5	5	733561
8010040796	8010040807	11	160×90	92.5	91.5	333	188.5	5	752135
8010040793	8010040805	11	160×110	92.5	90.5	333	186	5	761777
8010042265	8010042267	11	200×90	114	80	424	226	2	1240265
8010040797	8010041628	11	200×110	100	84	373	205	2	1229109
8010040798	8010041628	11	200×160	100	100	426	230	2	1590193
8010042984	8010043563	11	250×63	130	65	500	350	/	2332448
8010045559	8010046376	11	250×75	130	75	410	226	/	2527973
8010040799	8010043562	11	250×110	130	84	460	248	/	2971925
8010040800	8010043563	11	250×160	130	100	510	270	/	3118228
8010042747		11	250×200	130	112	528	271	/	3182701
8010044442		11	315×110	150	82	492	281.5	/	4483315
8010044443	8010045503	11	315×160	150	98	545	298.5	/	4631576
8010044907		11	315×180	150	105	568	308.5	/	5129646
8010044444	8010045534	11	315×200	150	112	592	315.5	/	5386321
8010044487		11	400×315		150	775	390	/	11234278
8010040809	8010043250	17	110×63	87	85	302	160.75	10	346101
8010040810	8010044611	17	110×75	87	84.5	302	161.25	10	356752
8010042269	8010043251	17	110×90	87	87	302	162.25	9	370400
8010042271	8010043252	17	160×63	92.5	92	333	190	6	679562
8010040811		17	160×75	92.5	91.5	333	188.5	5	716679
8010042272	8010043253	17	160×90	92.5	91.5	333	188.5	5	732730
8010042270	8010043254	17	160×110	92.5	90.5	333	186	5	739554
8010043037		17	200×90	112	80	424	226	2	1177157
8010040812	8010041387	17	200×110	114	84	373	205	2	1124730
8010040813	8010041973	17	200×160	100	100	426	230	2	1219022
8010040814	8010043787	17	250×110	130	84	460	248	/	2535747
8010040815	8010043494	17	250×160	130	100	510	270	/	2709998
8010044398	8010045502	17	315×110	150	82	492	281.5	/	4360837
8010044397	8010045538	17	315×160	150	98	542	298.5	/	4411336
8010044565	8010045548	17	315×200	150	112	590	315.5	/	5203673

22.5° Elbow



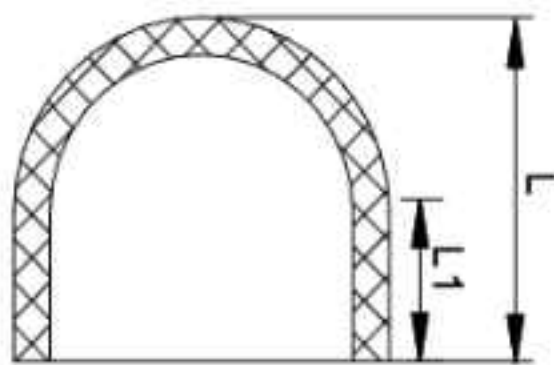
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	Z	L	PCS/CTN	Harga (Rp) (PC)
8010044637		11	225	175	120		1397694
8010044710		17	225	175	120		1307438

Tee



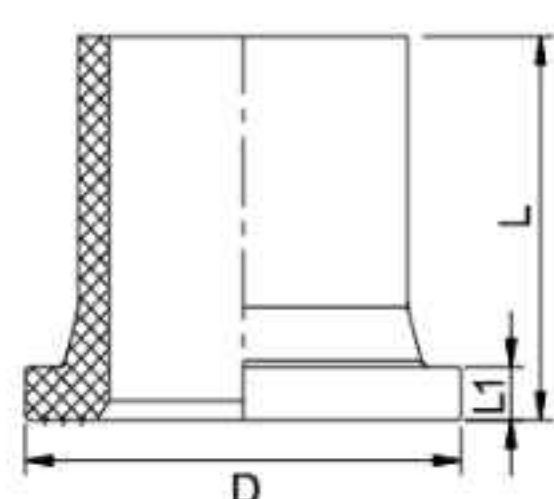
SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L	Z	PCS/CTN	Harga (Rp) (PC)
8010042241	8010044340	11	63	65	224	112	22	158645
8010040708	8010040714	11	75	75	264	132	18	207304
8010040709	8010040715	11	90	85	300	150	14	303287
8010040699	8010040710	11	110	90	325	163.5	8	446415
8010040700	8010040711	11	125	87	341	170.5	6	550349
8010040701	8010040712	11	160	100	400	210	3	964542
8010040702	8010044347	11	180	105	430	215	3	1151018
8010040703	8010040713	11	200	103	456	228	2	1645884
8010040704	8010042242	11	225	120	530	265	/	2889561
8010040705	8010044409	11	250	130	600	300	/	4035417
8010040706	8010044310	11	280	138	632	316	/	5217173
8010040707		11	315	150	710	355	/	8253571
8010044497	8010044431	17	63	65	224	112	22	152622
8010043768	8010044705	17	75	75	264	132	18	201430
8010041540	8010043305	17	90	85	300	150	14	284565
8010040717	8010043255	17	110	90	325	163.5	8	428613
8010042243		17	125	87	341	170.5	6	514448
8010040718	8010043256	17	160	100	400	210	3	930155
8010041620	8010043201	17	180	105	430	215	3	1116630
8010040719		17	200	103	456	228	2	1595030
8010040720	8010043439	17	225	120	530	265	/	2481302
8010040721	8010042244	17	250	130	600	300	/	3476760
8010040722	8010043440	17	280	138	632	316	/	4486608
8010040723	8010043080	17	315	150	710	355	/	6897741
8010040724	8010044372	17	355	103.5	660	330	/	7236691
8010041383	8010043726	17	400	102	715	357.5	/	9656903
8010043922		26	355	103.5	660	330	/	6265473

Cap



SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L	PCS/CTN	Harga (Rp) (PC)
8010042229	8010042237	11	63	50.5	82	150	58420
8010040681	8010040683	11	75	81.2	111	100	72276
8010040682	8010040684	11	90	79.7	117	60	95715
8010040672	8010042230	11	110	83.43	127	40	128115
8010040673	8010042231	11	125	92.93	145	24	164698
8010040674	8010042232	11	160	111	175	15	316045
8010040675		11	180	105	177	12	350640
8010040676	8010042233	11	200	113.1	195	8	489110
8010040677	8010042234	11	225	11.4	207	5	660603
8010040678	8010041583	11	250	118.2	224	4	855267
8010040679	8010042235	11	315	88.6	140	/	1168790
8010040680	8010042236	11	400	82	150	/	1975399
8010044466		11	450	85	200	/	4621310
8010040690		13.6	280	115.8	223	4	923805
8010044503	8010043302	17	63	50.5	82	150	56373
8010042238		17	75	81.2	111	100	69754
8010041409	8010042239	17	90	79.7	117	60	92986
8010041542	8010043257	17	110	83.43	127	40	126098
8010044504	8010043817	17	125	92.93	145	24	153275
8010040691	8010043258	17	160	111	175	15	299845
8010042982	8010043198	17	180	105	177	12	333461
8010040692	8010044305	17	200	113.1	195	8	474957
8010040693	8010043782	17	225	111.4	207	5	639121
8010041543	8010044382	17	250	118.2	224	4	835092
8130070124	8010043303	17	280	115.8	223	4	900000
8010040694	8010043197	17	315	88.6	140	/	1113485
8010040695	8010044383	17	355	70.2	120	/	1124315
8010040696	8010043461	17	400	82	150	/	1965430
8010044698		17	450	149.7	195	/	2925788
8010044689		17	500	149.7	200	/	3697238
8010044690		17	560	152.8	220	/	4674983
8010044691		17	630	160	220	/	6680883
8010044972		17	710	164.7	250	/	9887528
8010045489		17	800	164	250	/	13156716

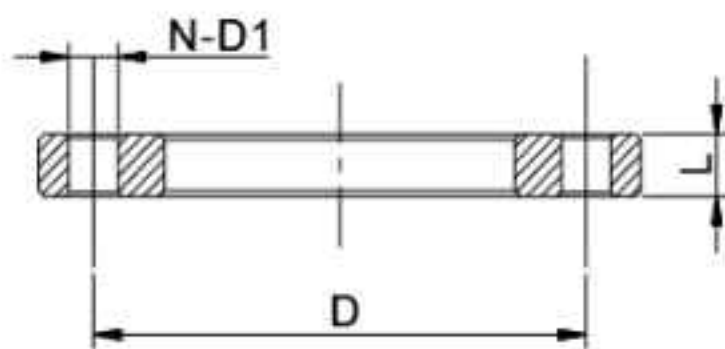
Stub Flange



SAP Number (black)	SAP Number (blue)	SDR	Size (mm)	L1	L	D	PCS/CTN	Harga (Rp) (PC)
8010040580	8010043586	11	50	10	86	90	120	100937
8010040581	8010043062	11	63	11	98	102	80	111856
8010040582	8010040588	11	75	16	120	122	48	171819
8010040583	8010040589	11	90	17	135	138	24	207868
8010040571	8010040584	11	110	18	140	158	18	288630
8010040572	8010040585	11	125	18	150	158	16	325599
8010040573	8010040586	11	160	25	175	212	6	606395
8010040574	8010042203	11	180	30	180	212	6	663362
8010040575	8010040587	11	200	32	190	268	4	1050793
8010040576	8010042204	11	225	25	195	268	4	1077407
8010040577	8010042205	11	250	34	150	320	4	1324439
8010040578	8010042206	11	280	35	145	320	3	1315954
8010040664	8010040663	11	315	33	145	370	2	3523520
8010040665		11	355	31	120	432		4301646
8010040666	8010042666	11	400	33	140	482	1	5554491
8010042967		11	450	50	120	545	/	6375401
8010040667		11	500	46	170	585		10575100
8010041626		11	560	50	195	685		14122178
8010040662	8010043706	13.6	355	31	120	432	2	3806394
8010044505	8010043259	17	50	10	86	90	120	96843
8010042213	8010042775	17	63	11	98	102	80	105477
8010040603	8010042748	17	75	16	120	122	48	163066
8010041552	8010043238	17	90	17	135	138	24	197276
8010040595	8010043500	17	110	18	140	158	18	272697
8010042208	8010043204	17	125	18	150	158	16	301714
8010040597		17	160	25	175	212	6	577942
8010042209	8010043194	17	180	30	180	212	6	595121
8010040598	8010043499	17	200	32	190	268	4	969556
8010040599	8010042214	17	225	25	195	268	4	962524
8010040600	8010043304	17	250	34	150	320	4	1260738
8010040601	8010043079	17	280	35	145	320	3	1237447
8010040653	8010043526	17	315	33	145	370	2	2802806
8010040654	8010043239	17	355	31	120	432	2	3812981
8010040655	8010043240	17	400	33	140	482	1	4503164
8010040656	8010043241	17	450	50	120	545	/	5560455
8010040657	8010043707	17	500	46	170	585	/	7386465
8010040658	8010043525	17	560	50	195	685	/	10682832
8010040659		17	★ 630	50	160	685	/	12218017
8010040660		17	★ 710				/	
8010040661		17	800				/	
8010040649		26	500	46	170	585	/	6291524
8010040605	8010043029	26	560	50	195	685	/	8950193
8010040606		26	630	50	160	685	/	9138360

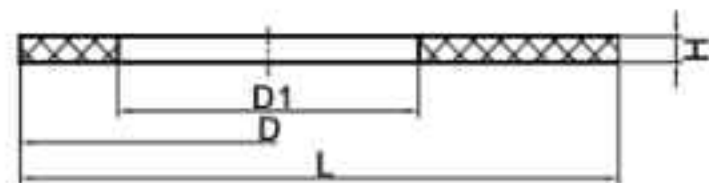
The product mold marked as "★" on this page has not been improved, please note.

Flange (Steel Tray)



SAP Number (black)	SAP Number (blue)	Mpa	Size (mm)	D	D1	N	L	Thread Size	PCS/ CTN	Harga (Rp) (PC)
8010043365	8010042676	1.0	75	145	18	4	18	M16		
8010043364	8010042677	1.0	90	160	18	8	20	M16		
8010043107	8010043515	1.0	110	180	18	8	20	M16		721007
		1.0	125	180	18	8	20	M16		
8010043022	8010043203	1.0	160	240	22	8	22	M20		
8080020300		1.0	180	240	22	8	24	M20		
8010040521	8010040534	1.0	200	295	22	8	24	M20	1	1501217
8010040522	8010042198	1.0	225	295	22	8	24	M20	1	1762027
8010040523	8010040535	1.0	250	350	22	12	26	M20	1	1742222
8010040524	8010045317	1.0	280	350	22	12	26	M20	1	1744952
8010040525	8010040536	1.0	315	400	22	12	28	M20	1	2307377
8010040526	8010040537	1.0	355	460	22	16	30	M20	1	3363421
8010040527	8010041582	1.0	400	515	26	16	32	M24	1	3873804
8010040528	8010040538	1.0	450	565	26	20	32	M24	1	4184419
8010040529	8010044352	1.0	500	620	26	20	32	M24	1	5110954
8010040530	8010044758	1.0	560	725	30	20	36	M27	1	9274160
8010040531		1.0	630	778	30	20	34	M27		6633645
8010040532		1.0	710	895	30	24	35	M27		
8010040533	8010040539	1.0	800	1015	33	24	36	M30		
8010040557	8010040566	1.6	75	145	18	4	18	M16	5	598198
8010040559	8010040567	1.6	90	160	18	8	20	M16	3	670146
8010040542	8010040560	1.6	110	180	18	8	22	M16	3	713085
8010040543	8010043518	1.6	125	180	18	8	22	M16	3	
8010040544	8010040561	1.6	160	240	22	8	24	M20	1	1304777
8010040545	8010040562	1.6	180	240	22	8	24	M20	1	1055599
8010040546	8010040563	1.6	200	295	22	12	26	M20	1	1821614
8010040547	8010043517	1.6	225	295	22	12	26	M20	1	1477358
8010040548	8010040564	1.6	250	355	26	12	29	M24	1	2135439
8010040549	8010043503	1.6	280	355	26	12	29	M24	1	2593900
8010040550	8010040565	1.6	315	410	26	12	32	M24	1	2803281
8010040551	8010043516	1.6	355	470	26	16	35	M24	1	4665697
8010040552	8010043260	1.6	400	525	30	16	32	M27	1	5197858
8010040553	8010043261	1.6	450	585	30	20	37	M27	1	7202660
8010040555	8010043262	1.6	500	650	33	20	44	M30	1	11670873
8010041712	8010043704	1.6	560	770	36	20	55	M33	1	19974882
8010040556	8010041534	1.6	630	770	36	20	55	M33	1	14616569
8010044588		1.6	710	840	36	24	63	M33	1	
8010040558	8010041535	1.6	800	950	39	24	42	M36	1	

Rubber Gasket



SAP Number	Size (mm)	D1	D	L	H	PCS/CTN	Harga (Rp) (PC)
8010040783	75				3.5		13233
8010040785	90				3.5		17060
8010040767	110				3.5		17802
8010040768	125				3.5		16467
8010040769	160				3.5		29433
8010040770	180				3.5		25071
8010040771	200				3.5		44446
8010040772	225				3.5		39728
8010040773	250				3.5		63405
8010040774	280				3.5		54444
8010040775	315				4		85331
8010040776	355				4.5		138292
8010040777	400				5		191282
8010040778	450				5		198641
8010040779	500				5		200540
8010040780	560				5		323700
8010040781	630				5		257180
8010040782	710				5		404610
8010040784	800				5		441401



■ Features

Material: PE 100

Size: full 20mm through 400mm availability

Pressure Rating: 1.6MPa or other nominal pressures available upon request

Standard: ISO 4427-3, EN 12201-3, BS EN 12201-3 AS/NZS 4129 BS 6920

Color: blue, black or other colors available upon request

Joint: joining pipe and electro fusion fittings by electro fusion joint

■ Advantages

Non-toxic: no heavy metal additives, would not be covered with dirt or contaminated by bacterium

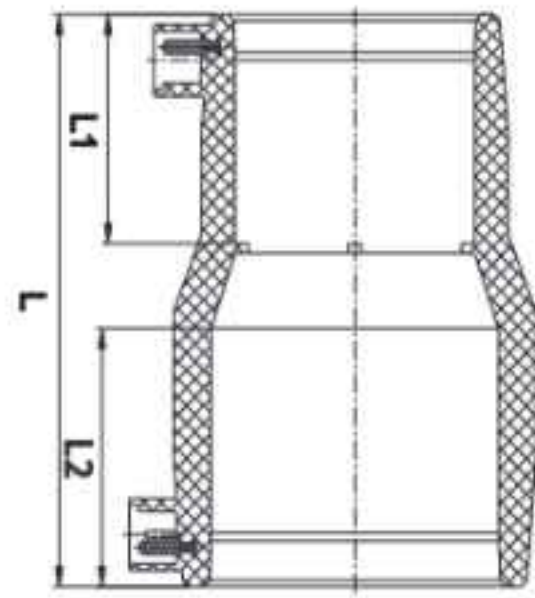
Corrosion Resistance: resist chemical matters and electron chemical corrosion

Low Installation Costs: light weight and ease of installation can reduce installation costs

High Flow Capacity: smooth interior walls result in low pressure loss and high volume

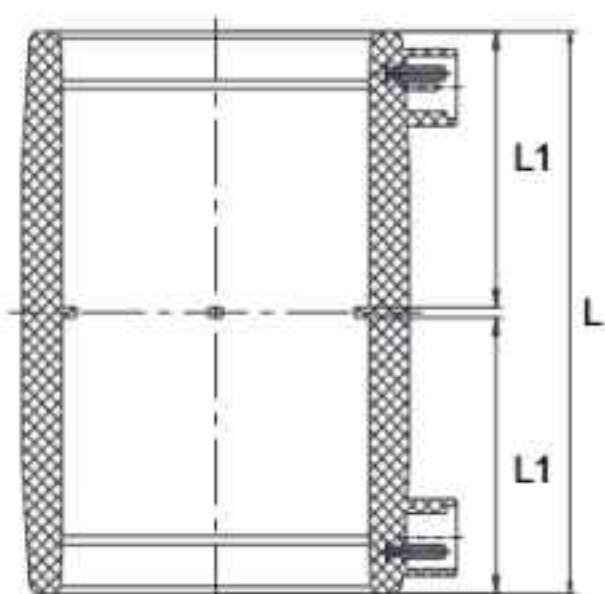
Longevity: more than 50 years under proper use

E/F Reducer



SAP Number (black)	Size (mm)	L	L1	L2	PCS/CTN	Harga (Rp) (PC)
8010040493	32×25	89	41	44	250	67915
8010040496	40×32	105	44	49	150	58598
8010040497	50×32	115	44	55	126	70674
8010040498	50×40	115	49	55	100	85094
8010040499	63×32	130	44	63	72	97496
8010040500	63×40	130	49	63	72	100285
8010040501	63×50	130	55	63	70	126098
8010040502	75×63	145	63	70	48	105091
8010040503	90×63	175	63	79	28	135177
8010040504	90×75	175	70	79	28	148409
8010040474	110×50	160	55	82	24	257951
8010040475	110×63	180	63	82	20	194813
8010040476	110×75	180	70	82	24	207364
8010040477	110×90	180	79	82	20	214751
8010040478	125×90	195	79	87	14	259227
8010040481	160×90	224	79	98	6	436060
8010040479	160×110	224	82	98	6	495904
8010040485	★ 200×63	250	63	112	5	
8010040482	200×110	250	82	112	4	863071
8010040483	200×160	250	98	112	4	954840
	★ 225×110	255	82	120		
	★ 225×160	260	98	120		
8010040487	250×110	280	82	129	3	1224362
8010040488	250×160	280	98	129	2	1294739
8010040489	250×200	280	112	129	2	1412470
8010040490	315×160	320	98	150		2220710
8010040491	315×200	320	112	150	1	2450060
8010040492	315×250	320	129	150	1	2347075
8010040494	400×200	370	112	179		4344667
8010040495	400×315	370	150	179		4510552

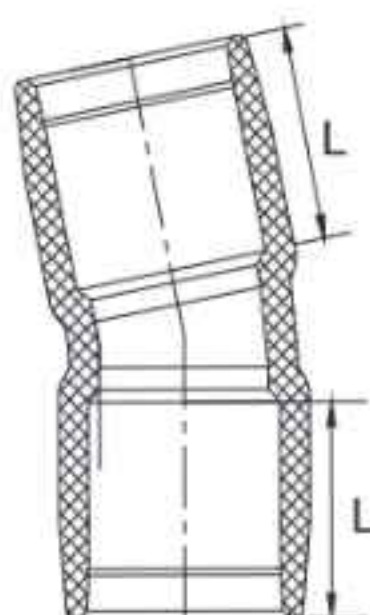
E/F Coupling



SAP Number (black)	Size (mm)	L	L1	PCS/CTN	Harga (Rp) (PC)
8010040318	20	84	41	350	39105
8010040321	25	84	41	320	39876
8010040325	32	90	44	240	48451
8010040327	40	100	49	180	72721
8010046179	• 50	113	55	82	101056
8010045492	• 63	129	63	54	104082
8010045493	• 75	143	70	48	112034
8010044891	• 90	161	79	32	160515
8010044821	• 110	167	82	18	216383
8010040315	125	177	87	12	279284
8010044468	• 160	199	98	6	536086
8010040317	180	213	105	4	711605
8010044825	• 200	227	112	4	867729
8010040320	225	243	120	2	1121674
8010045560	• 250	261	129	2	1565508
8010046415	• 280	273	135	2	1793106
8010045561	• 315	304	150	1	2791532
8010040326	355	332	164	1	3535507
8010040328	400	362	179	1	4188158
8010040329	450	394	194.5	1	7938416
8010040331	500	429	212	1	6679192
8010042122	560	476	234	1	11334711
8010042123	630	546	270	1	17521440

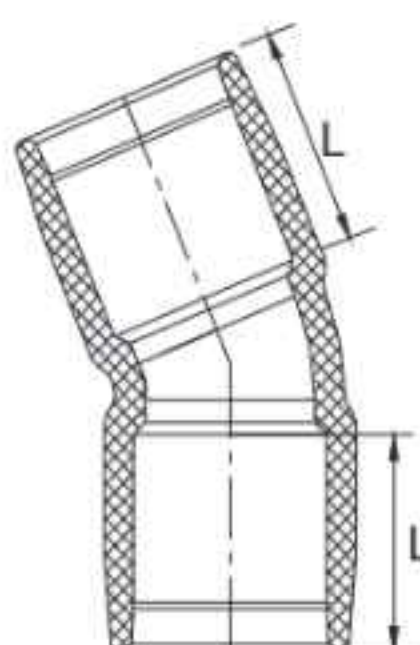
• The New Type Product

E/F 11.25° Elbow



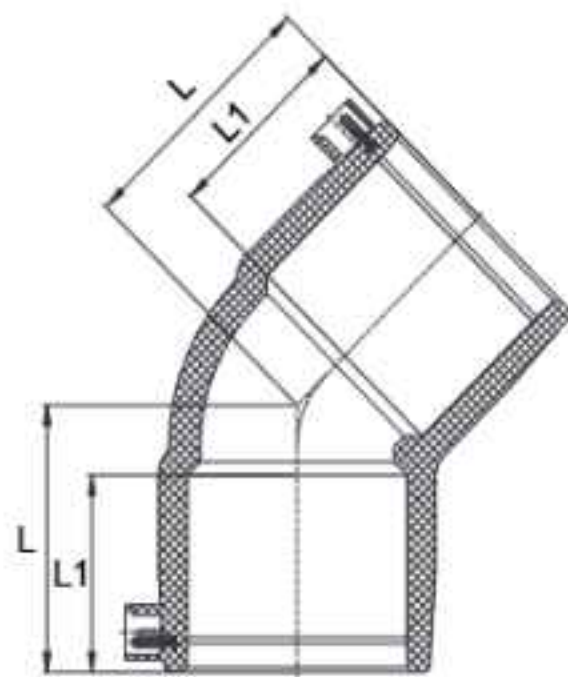
SAP Number (black)	Size (mm)	L	PCS/CTN	Harga (Rp) (PC)
8010044792	50	55	46	103667
8010044726	63	63	24	106397
8010044728	75	70	30	147134
8010044694	90	79	23	197365
8010046041	110	82		
8010046045	125	87		

E/F 22.5° Elbow



SAP Number (black)	Size (mm)	L	PCS/CTN	Harga (Rp) (PC)
8010044793	50	55	42	104349
8010044727	63	63	22	109927
8010044729	75	70	30	151554
8010044794	90	79	8	205079
8010046043	110	82	11	
8010046046	125	87		

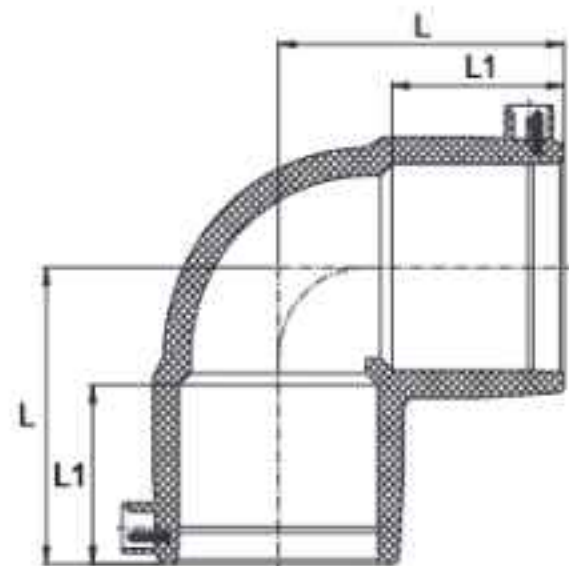
E/F 45° Elbow



• The New Type Product

SAP Number (black)	Size (mm)	L	L1	PCS/CTN	Harga (Rp) (PC)
8010040362	32	56	44	180	52783
8010040363	40	64	49	120	78032
8010040365	50	73	55	80	109393
8010040366	63	85	63	45	119125
8010040367	75	95	70	36	151169
8010040368	90	107	79	20	197454
8010040355	110	116	82	12	304118
8010040356	125	127	87	8	379034
8010045597	• 160	150	98	4	723147
8010040358	180	157	105	3	1001214
8010046195	• 200	170	112	2	1287975
8010044959	225	182	120		1628764
8010040360	250	202	129	1	2223945
8010040361	315	238	150		3792449
8010040364	400	280	179		7135101

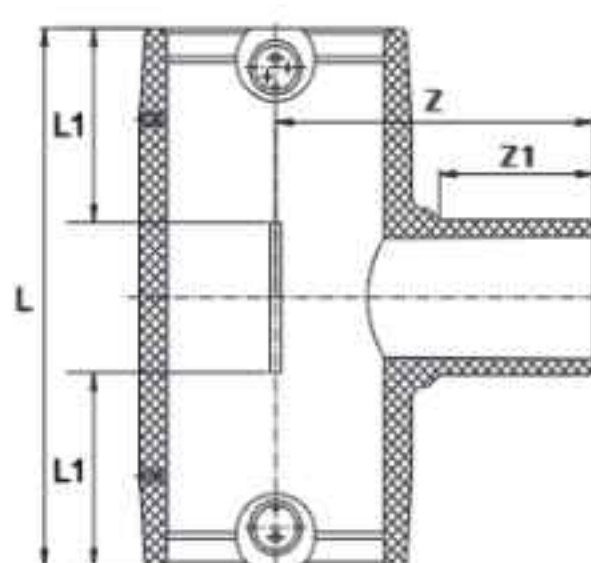
E/F 90° Elbow



• The New Type Product

SAP Number (black)	Size (mm)	L	L1	PCS/CTN	Harga (Rp) (PC)
8010040379	20	54	41	360	40262
8010040381	25	56.2	41	240	41301
8010040384	32	65	44	160	53436
8010040385	40	74	49	100	79130
8010046404	• 50	86	55	60	115624
8010045967	• 63	100	63	40	109453
8010045960	• 75	114	70	24	156954
8010046416	• 90	131	79	16	220567
8010045236	• 110	145	82	9	302367
8010040376	125	159	87	6	424845
8010044954	• 160	192	98	4	724393
8010046054	• 180	206	105	2	1177840
8010045836	• 200	225	112	2	1512043
8010044643	225	245	120		1979612
8010045837	• 250	265	129	1	2505186
8010040383	315	320	150		4553841
8010040386	400	395	179		8942746

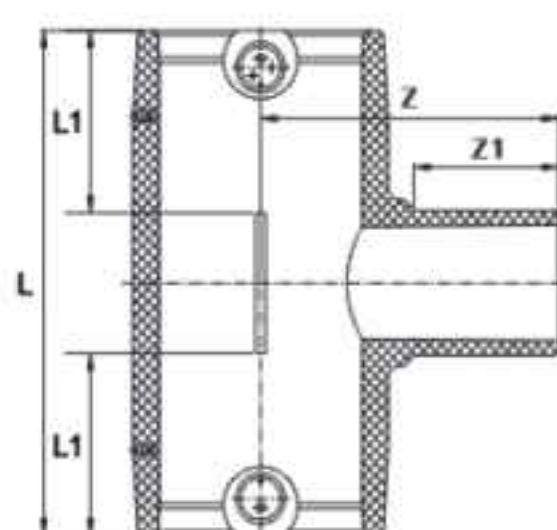
E/ F Reducing Tee



• The New Type Product

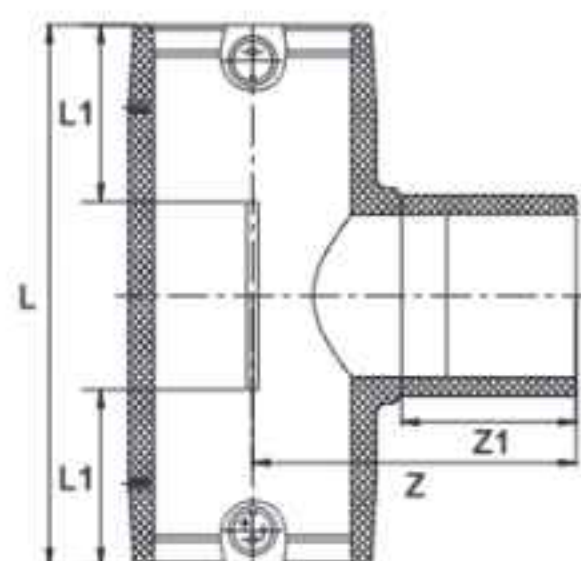
SAP Number (black)	Size (mm)	L	L1	Z1	Z	PCS/CTN	Harga (Rp) (PC)
8010040434	32×20	107	44	43	70	130	52575
8010040435	32×25	111.5	44	43	70	130	53643
8010040441	40×20	118.5	49	43	76	90	78329
8010040442	40×25	123	49	43	76	90	78536
8010040443	40×32	129	49	46	79	90	81949
8010040444	50×20	130.5	55	42	79.5	70	108889
8010040445	50×25	135.8	55	43	81	65	109868
8010040446	50×32	142.2	55	46	84	60	113517
8010040447	50×40	149	55	51	89	60	118888
8010040448	63×20	153	63	43	90	40	91087
8010040449	63×25	158	63	43	90	40	96457
8010040450	63×32	165.5	63	46	96	40	97466
8010040451	63×40	172.5	63	51	101	40	104142
8010040452	63×50	180.5	63	57	107	36	108622
8010040453	75×40	186.3	70	51	109	24	144137
8010040454	75×50	194.2	70	57	115	24	152118
8010040455	75×63	204	70	65	123	20	162888
8010040456	90×40	197	79	51	120	16	191490
8010040457	90×50	209.5	79	57	126	16	204426
8010040458	90×63	219	79	65	134	15	222555
8010040459	90×75	230	79	72	141	14	236500
8010040403	110×50	218	82	57	140	10	310556
8010040404	110×63	226	82	65	148	10	317558
8010040405	110×75	238	82	72	155	9	348652
8010040406	110×90	250	82	81	164	9	373753
8010040408	125×63	239	87	65	160	6	394997
8010040409	125×75	249.6	87	72	167	6	397370
8010040410	125×90	261.6	87	81	175	6	443181
8010040407	125×110	278.6	87	84	178	6	493649
8010046405	● 160×50	249	98	57	174	4	666655
8010046180	● 160×63	259	98	65	182	4	695376
8010046193	● 160×75	270	98	72	189	4	741750
8010046192	● 160×90	282	98	81	198	4	772132
8010045439	● 160×110	298	98	84	201	4	855149
8010043150	180×160	352	105	100	230	2	1305035
8010046182	● 200×50	308	112	70	216	2	1275691
8010046194	● 200×63	308	112	70	216	2	1291772
8010040420	200×75	308	112	81	227	2	1333014
8010046181	● 200×90	308	112	81	227	2	1349540
8010045550	● 200×110	365	112	100	245	2	1444514
8010045551	● 200×160	365	112	100	245	2	1723827
8010044239	225X110	360	120	84	242	1	1657544
8010042154	225x160	400	120	100	260	1	1924841
8010040425	250X50	330	129	80	252	1	1887309
8010040426	250X63	330	129	80	252	1	1896358
8010040427	250X75	330	129	80	254	1	1897960
8010040428	250X90	358	129	90	265	1	2086810

E/ F Reducing Tee



SAP Number (black)	Size (mm)	L	L1	Z1	Z	PCS/CTN	Harga (Rp) (PC)
8010040422	250X110		129	90	265	1	2323013
8010040423	250X160	430	129	110	291	1	2578323
8010040424	250X200	430	129	120	291	1	2692731
8010040433	315X90	440	150	100	325	/	3838022
8010040429	315X110	440	150	100	325	/	3845084
8010040430	315X160	440	150	105	325	/	3999308
8010040431	315X200	514	150	120	346	/	4574224
8010040432	315X250	514	150	134	346	/	4718034
8010042157	400X90	453	179	82	355	/	6117806
8010040436	400X110	453	179	82	355	/	6132285
8010040437	400X160	526	179	110	390	/	7190881
8010040438	400X200	526	179	112	390	/	7357092
8010040439	400X250	619	179	134	415	/	8983186
8010040440	400X315	619	179	163	425	/	9584300

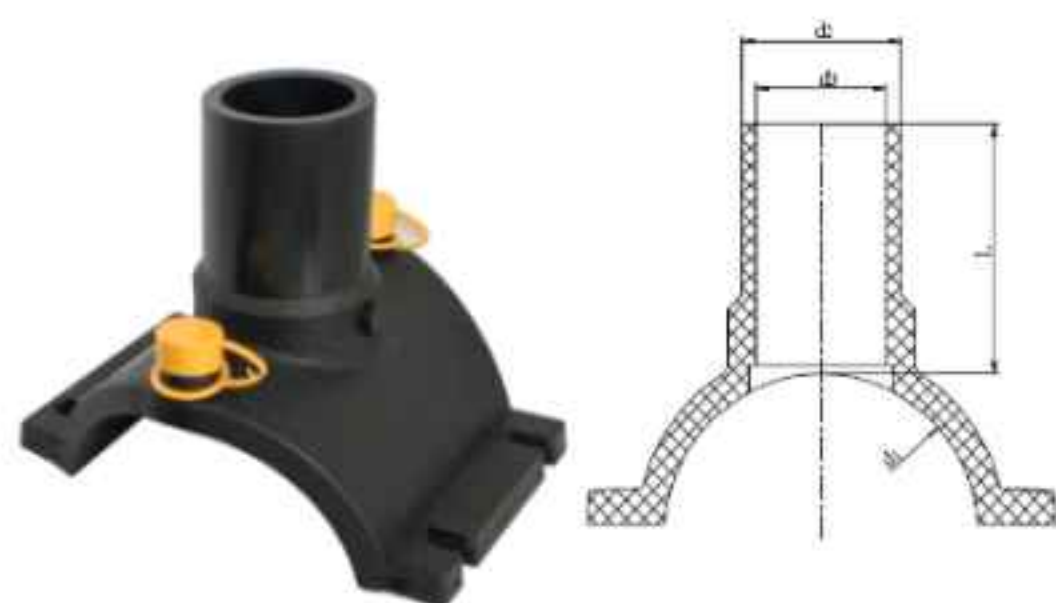
E/F Tee



• The New Type Product

SAP Number (black)	Size (mm)	L	L1	Z1	Z	PCS/CTN	Harga (Rp) (PC)
8010040289	20	98	41	42	60.5	300	46226
8010040291	25	102	41	42	63	180	48392
8010040294	32	118	44	46	73	120	60883
8010040295	40	136	49	51	84	70	90850
8010040297	50	157	55	57	95	48	128560
8010040298	63	190	63	65	115	30	137580
8010040299	75	215	70	72	130	20	191520
8010040300	90	242	79	81	150	12	263084
8010045587	● 110	266	82	86	167	7	430660
8010040286	125	290	87	89	181	5	559725
8010045437	● 160	338	98	105	222	3	1055036
8010040288	180	368	105	107	237	2	1424813
8010045586	● 200	398	112	115	255	1	1947836
8010044640	225	460	120	129	290		2464657
8010040292	250	472	129	135	301	1	3069569
8010040293	315	567	150	150	360	/	5639733
8010040296	400	690	179	179	440	/	11495879

E/F Straight Saddle



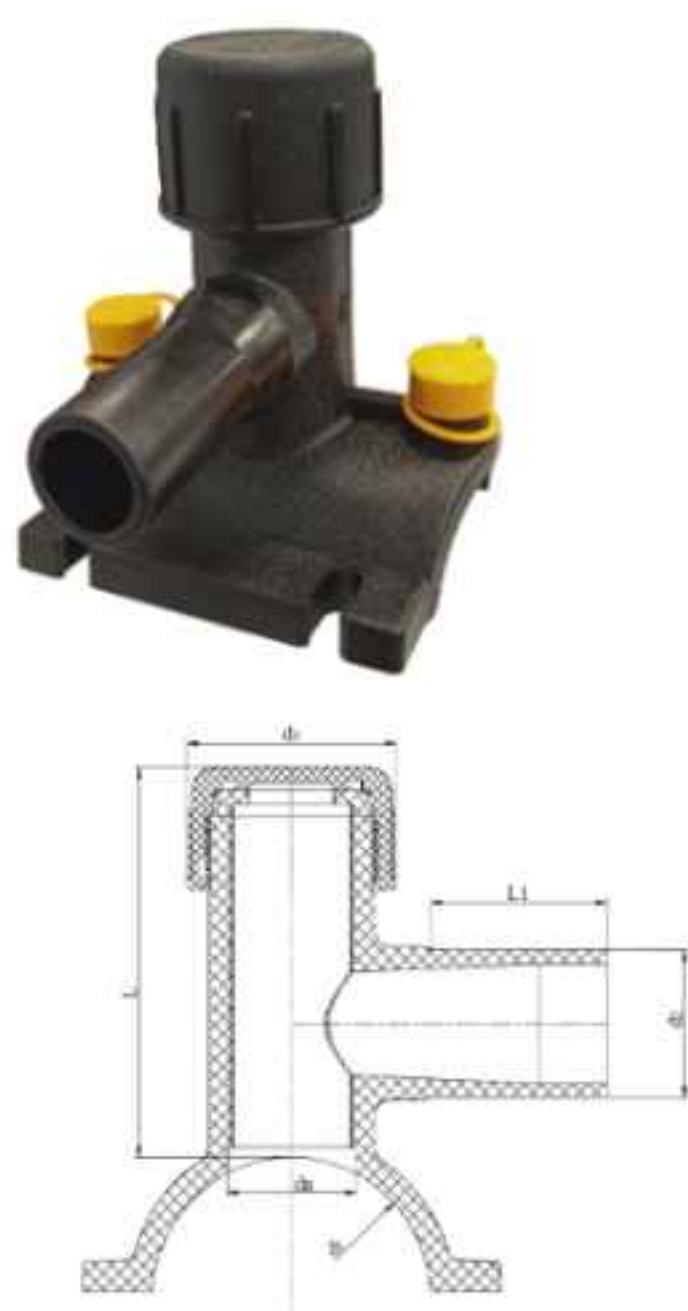
SAP Number (black)	Size (mm)	d1	d2	d3	L	PCS/CTN	Harga (Rp) (PC)
8010042696	75×63	75	51	63	95		303583
8010042697	90×63	90	51	63	95	12	312039
8010042698	110×63	110	51	63	95	10	322661
8010042699	125×63	125	51	63	95		343193
8010042700	160×63	160	51	63	95		380518
8010042701	180×63	180	51	63	95		465344
8010042702	200×63	200	51	63	95	12	509197

E/F Stop Saddle

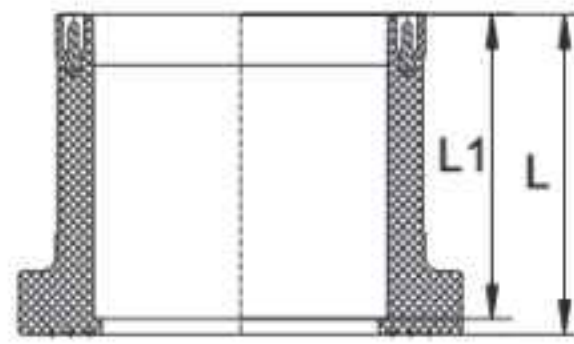


SAP Number (black)	Size (mm)	PCS/CTN	Harga (Rp) (PC)
8010041359	90	36	720061
8010041353	110	30	775218
8010041354	125	30	1097286
8010041355	160	30	941518
8010041356	200	20	1076902
8010041357	250		2172823
8010041358	315		3249340

E/F Tapping Saddle

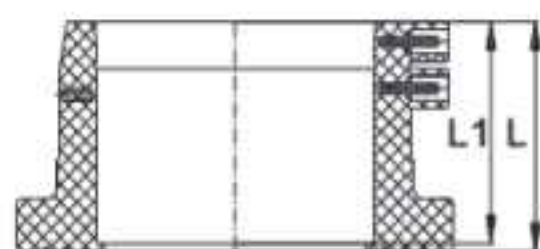


SAP Number (black)	Size (mm)	da	d1	d2	d3	L1	L	PCS/CTN	Harga (Rp) (PC)
8010042710	63×25	33	63	25	66	50	113		460716
8010042711	63×32	33	63	32	66	50	113		462882
8010042712	75×32	33	75	32	66	50	113		487864
8010042713	90×32	33	90	32	66	50	113		526732
8010042714	90×63	57	90	63	93	79	170	12	712673
8010042715	110×32	33	110	32	66	50	113		573343
8010042716	110×40	57	110	40	93	59	170		724215
8010042717	110×63	57	110	63	93	79	170	10	810169
8010042718	125×32	33	125	32	66	50	113		637816
8010042719	125×63	57	125	63	93	79	170		829128
8010042720	160×32	33	160	32	66	50	113		726114
8010042721	160×63	57	160	36	93	79	170	5	920660
8010042722	180×32	33	180	32	66	50	113		750888
8010042723	180×63	57	180	63	93	79	170		973621
8010042724	200×32	33	200	32	66	50	113		842391
8010042725	200×63	57	200	63	93	79	170		1064827

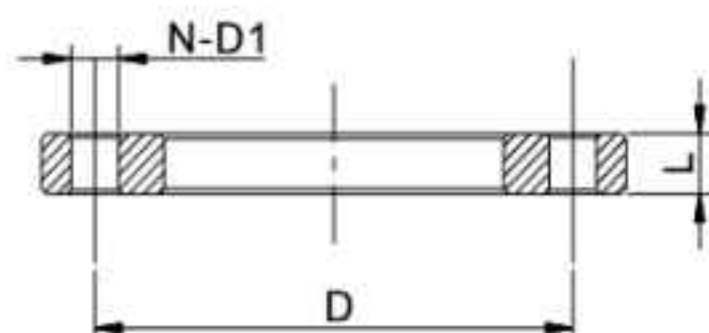
E/F Stub Flange


• The New Type Product

SAP Number (black)	Size (mm)	L	L1	PCS/CTN	Harga (Rp) (PC)
8010043684	50	62	55	120	
8010043692	63	66	63	72	
8010043685	75	73	70	48	
8010042116	90	81	79	24	
8010040278	● 160	128	125	9	
8010040279	● 200	138	134	6	
8010040280	250	142	138	3	
8010040281	315	159	150	2	
8010040282	400	185	175	/	
8010040283	500	220	210	/	
8010043074	630	283	255	/	

E/F Stub Flange (short)


SAP Number (black)	Size (mm)	L	L1	PCS/CTN	Harga (Rp) (PC)
8010043075	110	88	85	20	186357

E/F Flange (Steel Tray)


SAP Number (black)	Size (mm)	N	D1	D	L	PCS/CTN	Harga (Rp) (PC)
8010043104	50	4	18	75	10		224276
8010043105	63	4	18	82.5	12		271896
8010043106	75	4	18	92.5	15		367404
8010042113	90	8	19	100	15		431788
8010040267	110	8	18	180	22	3	701604
8010040268	160	8	22	240	24	1	1170335
8010040269	200	12	22	295	26	1	1619051
8010040270	250	12	26	355	29	1	2088264
8010040271	315	12	26	410	32	1	2480916
8010040273	400	16	30	525	36	1	4221418
8010040274	500	20	33	650	44		8891120
8010043076	630	20	36	770	54		12965108



■ Features

Material: PE 100

Size: full 110mm through 800mm availability

Pressure Rating: 0.6MPa, 1.0MPa, 1.6MPa or other nominal pressures available upon request

Standard: ISO 4427-3 EN 12201-3 BS EN 12201-3 BS 6920

Color: blue, black with blue stripes or other colors available upon request

Angles: various angles available upon request

Joint: joining pipe and fabricated fittings by butt fusion joint

■ Advantages

Non-toxic: no heavy metal additives, would not be covered with dirt or contaminated by bacterium

Corrosion Resistance: resist chemical matters and electron chemical corrosion

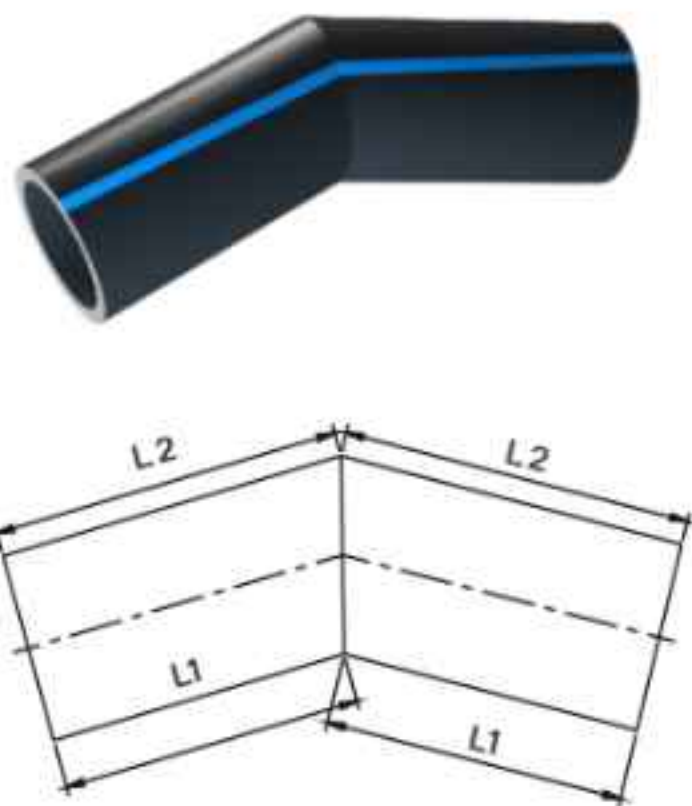
Low Installation Costs: light weight and ease of installation can reduce installation costs

High Flow Capacity: smooth interior walls result in low pressure loss and high volume

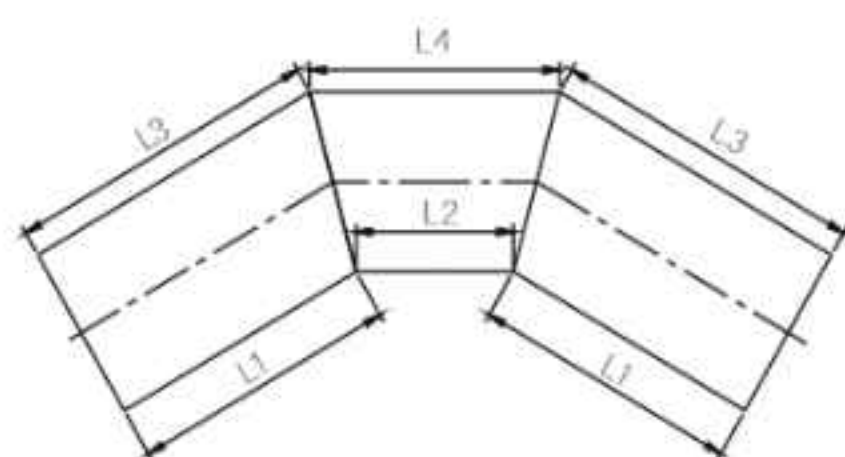
Longevity: more than 50 years under proper use

Fabricated
22.5° Elbow

SAP Number(black)		Size(mm)	L1	L2	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
1.0MPa	1.25MPa					
8010045318	8010045336	90	160	177.9	276554	300320
8010045319	8010045337	110	160	181.9	342778	379924
8010045320	8010045338	125	170	194.9	423480	471071
8010045321	8010045339	160	170	201.8	582214	663273
8010045322	8010045340	180	180	215.8	713831	820850
8010045323	8010045341	200	180	219.8	869094	1011510
8010045324	8010045342	225	180	224.8	1146805	1344852
8010045325	8010045343	250	300	349.5	1465312	1732431
8010045326	8010045344	280	300	355.7	2420271	2806396
8010045327	8010045345	315	350	412.7	3399381	4031827
8010045328	8010045346	355	350	420.6	4691183	5583686
8010045329	8010045347	400	380	459.6	6247256	7463934
8010045330	8010045348	450	380	469.5	8320150	9894322
8010045331	8010045349	500	400	499.5	10944462	12965790
8010045332	8010045350	560	460	571.4	15997055	19271169
8010045333	8010045351	630	540	665.3	22837029	28059542
8010045334	8010045352	710	565	706.2	29476581	36156960
8010045335	8010045353	800	590	749.1	39412234	45734643

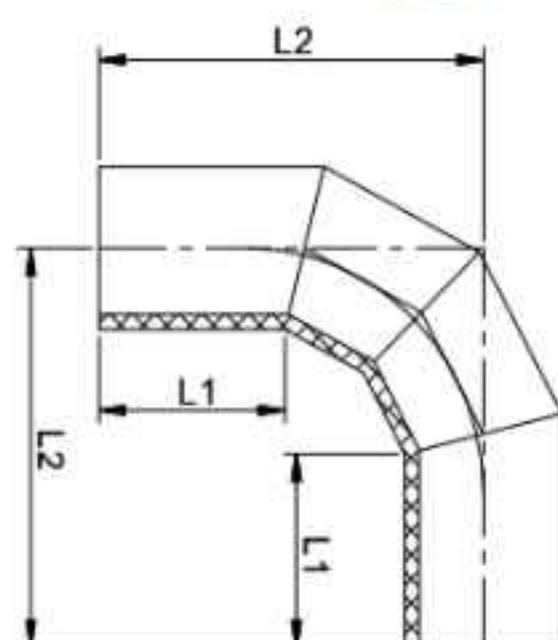
Fabricated
30° Elbow

SAP Number(black)		Size(mm)	L1	L2	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
1.0MPa	1.25MPa					
8010045354	8010045372	90	160	184.1	278275	302397
8010045355	8010045373	110	180	209.5	362745	404224
8010045356	8010045374	125	180	213.5	439353	490178
8010045357	8010045375	160	170	212.9	609867	696563
8010045358	8010045376	180	180	228.2	727568	837436
8010045359	8010045377	200	180	233.6	868293	1017948
8010045360	8010045378	225	195	255.3	1225994	1441725
8010045361	8010045379	250	315	382	1999105	2381225
8010045362	8010045380	280	325	400.1	2893270	3364637
8010045363	8010045381	315	350	434.4	3751267	4457532
8010045364	8010045382	355	350	445.1	5206937	6206845
8010045365	8010045383	400	408	515.2	6711680	8025824
8010045366	8010045384	450	405	525.6	9150169	10899215
8010045367	8010045385	500	420	554	12711844	15099004
8010045368	8010045386	560	500	650.1	17269869	20834838
8010045369	8010045387	630	520	688.8	22846612	28071558
8010045370	8010045388	710	540.3	730.5	29473140	36152658
8010045371	8010045389	800	570	784.4	44494764	51679384

Fabricated
60° Elbow

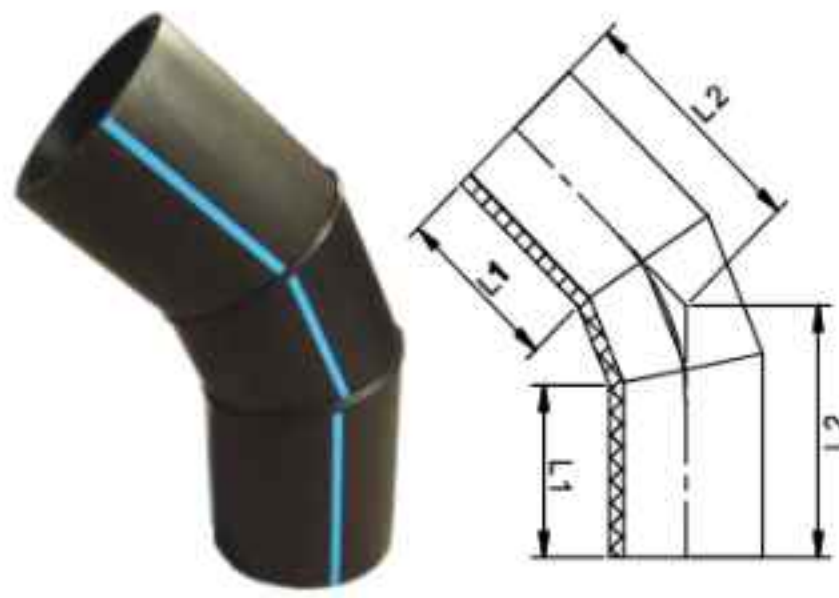
SAP Number(black)			L1	L2	L3	L4	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
1.0MPa	1.25MPa	Size(mm)						
8010045390	8010045408	90	200.0	100.0	224.1	148.2	497299	533704
8010045391	8010045409	110	200.0	100.0	229.5	158.9	600105	657873
8010045392	8010045410	125	200.0	100.0	233.5	167.0	707244	774120
8010045393	8010045411	160	200.0	100.0	242.9	185.7	923271	1036581
8010045394	8010045412	180	200.0	100.0	248.2	196.5	1072007	1215521
8010045395	8010045413	200	200.0	100.0	253.2	207.2	1278836	1478901
8010045396	8010045414	225	200.0	100.0	260.3	220.6	1578266	1824052
8010045397	8010045415	250	305.0	115.0	372.0	249.0	2400362	2826097
8010045398	8010045416	280	307.5	115.0	382.5	265.1	3026132	3478808
8010045399	8010045417	315	390.0	170.0	474.4	338.8	4562949	5383325
8010045400	8010045418	355	390.0	180.0	485.1	367.7	5765949	6828729
8010045401	8010045419	400	400.0	200.0	507.2	414.4	7347123	8741405
8010045402	8010045420	450	400.0	200.0	520.6	441.2	10356373	12231161
8010045403	8010045421	500	460.0	220.0	597.0	487.9	14823043	17377482
8010045404	8010045422	560	475.0	250.0	625.1	550.1	19231975	22952356
8010045405	8010045423	630	490.0	280.0	658.8	617.6	25845834	31408365
8010045406	8010045424	710	500.0	300.0	690.2	680.5	33512858	40761269
8010045407	8010045425	800	510.0	320.0	724.4	748.7	45151153	52092242

Fabricated 90° Elbow



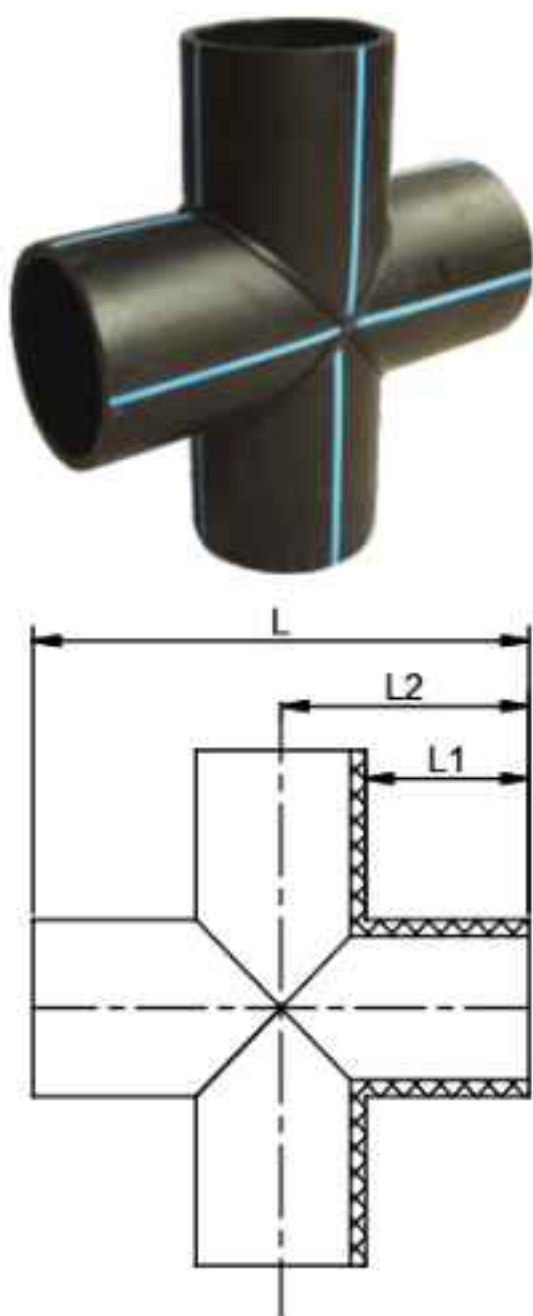
SAP Number (black)		Size (mm)	L1	L2	PCS/CTN	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
1.0MPa	1.25MPa						
-----	8010045010	355	345	835.7			10702325
8010045003	8010045011	400	375	909.7		11929803	14240295
8010045004	8010045012	450	405	985.2		17001800	20141984
8010045005	8010045013	500	405	1086.2		23426957	27559336
8010045006	8010045014	560	480	1197.1		33106587	39656536
8010045007	8010045015	630	525	1304.5		44714619	54571052
8010045008	8010045016	710	540	1414.1		58061816	70962362
8010045009	8010045017	800	565	1552.4		79502070	91953590

Fabricated 45° Elbow



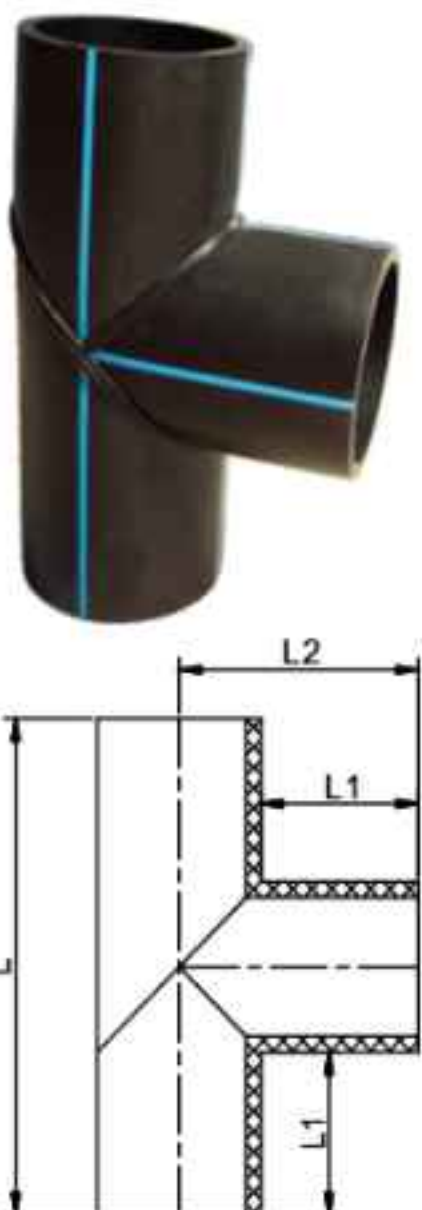
SAP Number (black)		Size (mm)	L1	L2	PCS/CTN	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
1.0MPa	1.25MPa						
8010044987	8010044995	355	525	525.9		6523662	7752207
8010044988	8010044996	400	550	550.7		8406905	10031635
8010044989	8010044997	450	581	581.4		11716713	13886213
8010044990	8010044998	500	622	622.2		15761179	18516157
8010044991	8010044999	560	697	697.8		22619607	27119389
8010044992	8010045000	630	770	770.8		29994441	36603760
8010044993	8010045001	710	848	848.3		38647400	47159694
8010044994	8010045002	800	927	927.9		51912798	60000959

Fabricated Cross

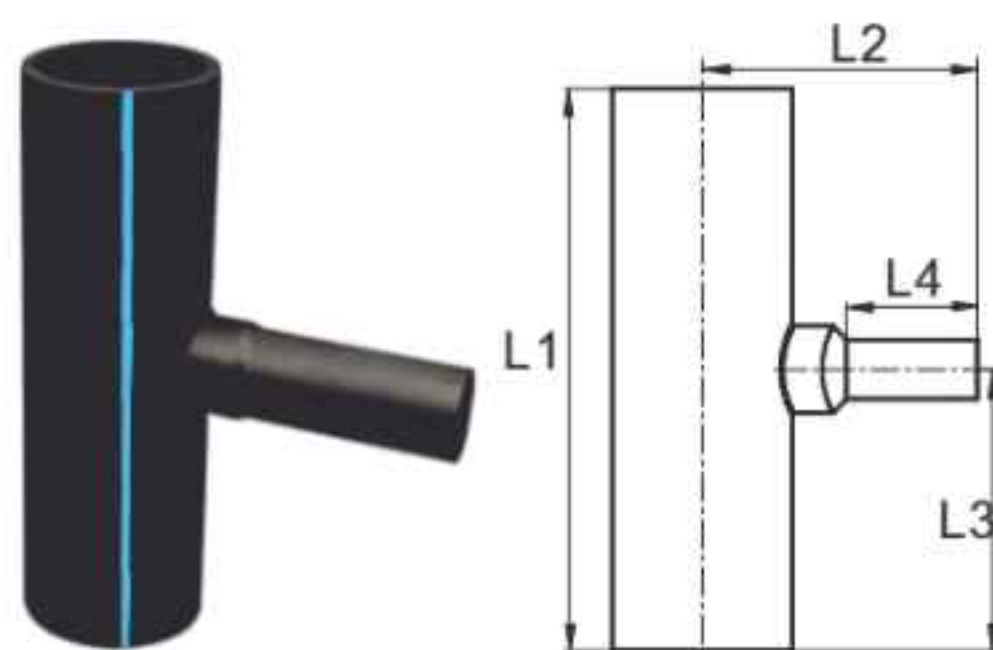


SAP Number (black)		Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
0.6MPa	0.8MPa							
8010045026	8010045035	250	250	375	750		4721981	5554046
8010045027	8010045036	280	250	390	780		6115551	7027072
8010045028	8010045037	315	300	457.5	915		8754490	10256296
8010045029	8010045038	355	300	477.5	955		12099218	14241541
8010045030	8010045039	400	300	500	1000		15628079	18459458
8010045031	8010045040	450	300	525	1050		21139727	24939593
8010045032	8010045041	500	350	600	1200		30090632	35214166
8010045033	8010045042	560	350	630	1260		39481543	47214464
8010045034	8010045043	630	350	665	1330		52574617	63959085

Fabricated Tee



SAP Number (black)		Size (mm)	L1	L2	L	PCS/CTN	Harga (Rp) (1.0MPa)	Harga (Rp) (1.25MPa)
0.6MPa	0.8MPa							
8010045018	8010045022	450	300	500	1000		16701154	19854778
8010045019	8010045023	500	300	525	1050		23854205	28085948
8010045020	8010045024	560	350	600	1200		31949932	38390725
8010045021	8010045025	630	350	665	1330		43215126	52839303

Fabricated
Reducing Tee

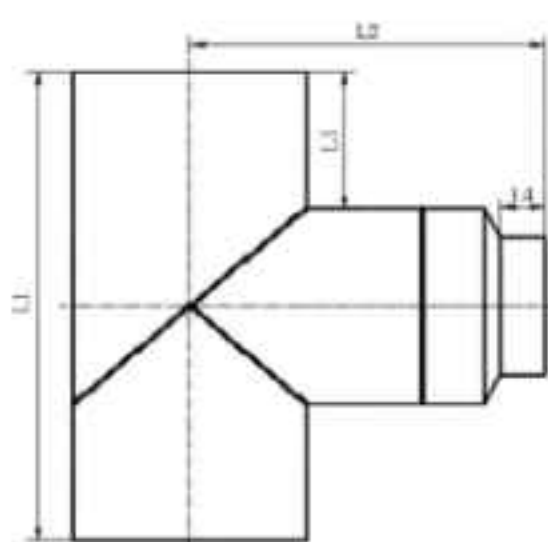
Note:

≤ dn630 specifications with 0.6、0.8MPa; When pressure levels of the main pipe and branch pipe are different, please indicate when placing order and customize the product.

SAP Number (black)		Size (mm)	L1	L2	L3	L4	PCS/CTN	Harga (Rp)	
0.6MPa	0.8MPa							(0.6MPa)	(0.8MPa)
8010045044	8010045094	200×63	600	305	300	145		1329839	1526878
8010045045	8010045095	200×75	600	325	300	145		1412262	1609301
8010045046	8010045096	225×63	600	315	300	145		1615621	1869863
8010045047	8010045097	225×75	600	337.5	300	155		1698044	1952286
8010045048	8010045098	225×90	600	347.5	300	160		1793047	2047289
8010045049	8010045099	225×110	600	357.5	300	155		1887813	2142055
8010045050	8010045100	250×75	630	350	315	155		2035095	2359833
8010045051	8010045101	250×90	630	360	315	155		2130128	2454836
8010045052	8010045102	250×125	630	385	315	160		2430804	2755512
8010045053	8010045103	280×63	670	345	335	145		2539960	2902438
8010045054	8010045104	280×75	670	365	335	155		2622383	2984861
8010045055	8010045105	280×90	670	375	335	155		2711245	3073723
8010045056	8010045106	280×110	670	385	335	160		2806040	3168519
8010045057	8010045107	280×125	670	400	335	160		3011624	3374102
8010045058	8010045108	315×63	670	362.5	335	145		3067848	3592740
8010045059	8010045109	315×75	670	382.5	335	155		3150272	3675164
8010045060	8010045110	315×90	670	392.5	335	155		3239163	3764025
8010045061	8010045111	315×125	670	417.5	335	160		3539512	4064404
8010045062	8010045112	355×63	670	382.5	335	145		3959788	4664183
8010045063	8010045113	355×75	670	402.5	335	155		4042211	4746607
8010045064	8010045114	355×90	670	412.5	335	155		4123418	4827813
8010045065	8010045115	355×110	670	422.5	335	160		4218214	4922609
8010045066	8010045116	355×125	670	437.5	335	160		4431452	5135847
8010045067	8010045117	355×160	670	447.5	335	160		4677416	5381841
8010045068	8010045118	400×63	720	405	360	145		5153115	6111338
8010045069	8010045119	400×75	720	425	360	155		5235539	6193761
8010045070	8010045120	400×90	720	435	360	155		5316745	6274968
8010045071	8010045121	400×110	720	445	360	160		5411541	6369763
8010045072	8010045122	400×125	720	460	360	160		5617124	6575347
8010045073	8010045123	400×160	720	470	360	160		5870744	6828966
8010045074	8010045124	450×63	720	430	360	145		6432545	7653020
8010045075	8010045125	450×75	720	450	360	155		6514968	7735444
8010045076	8010045126	450×90	720	460	360	155		6597095	7817570
8010045077	8010045127	450×110	720	470	360	160		6691890	7912366
8010045078	8010045128	450×125	720	485	360	160		6905129	8125604
8010045079	8010045129	450×160	720	495	360	160		7165661	8386136
8010045080	8010045130	500×63	760	455	380	145		8158271	9711970
8010045081	8010045131	500×75	760	475	380	155		8240724	9794393
8010045082	8010045132	500×90	760	485	380	155		8339851	9893551
8010045083	8010045133	500×110	760	495	380	160		8434647	9988316
8010045084	8010045134	500×125	760	510	380	160		8647885	10201584
8010045085	8010045135	500×160	760	520	380	160		8883732	10437431

SAP Number (black)		Size (mm)	L1	L2	L3	L4	PCS/CTN	Harga (Rp)	
0.6MPa	0.8MPa							(0.6MPa)	(0.8MPa)
8010045086	8010045136	560×110	760	525	380	160		10714460	12946208
8010045087	8010045137	560×160	760	550	380	160		11196064	13427811
8010045088	8010045138	630×63	760	520	380	145		13170394	16318292
8010045089	8010045139	630×75	760	540	380	155		13277177	16425104
8010045090	8010045140	630×90	760	550	380	155		13349512	16497440
8010045091	8010045141	630×110	760	560	380	160		13444278	16592206
8010045092	8010045142	630×125	760	575	380	160		13689738	16837666
8010045093	8010045143	630×160	760	585	380	160		13925882	17073809

Fabricated Reducing Tee Assembly



Note:

≤ dn315 specifications with 0.6, 0.8, 1.0, 1.6MPa
(200×50, 250×50, 315×50 only with 0.6, 0.8MPa);
dn355, 400 specifications with 0.6, 0.8, 1.0MPa
(355×50, 400×50 only with 0.6, 0.8MPa);

≥ dn450 specifications with 0.6, 0.8MPa;

When pressure levels of the main pipe and branch pipe are different, please indicate when placing order and customize the product.

SAP Number (black)				Size (mm)	L1	L2	L3	L4	Harga (Rp)			
0.6MPa	0.8MPa	1.0MPa	1.6MPa						(0.6MPa)	(0.8MPa)	(1.0MPa)	(1.6MPa)
8010045144	8010045201	—	—	200×50	600	346.5	300	25	1381317	1578355		
8010045149		8010041138	8010041316	200×125	426	435	213	90	2004179	2328917		
8010045150		8010041145	8010041317	225×125	530	675	265	75	3120869	3645761		
8010045151	8010042488	8010041146	8010041318	225×160	530	485	265	80	4012808	4717204		
8010045152	8010042489	8010041147	8010041319	225×200	530	460	265	85	5206136	6164358		
8010045145	8010045202	—	—	250×50	630	359.6	315	25	1661105		1661105	1958190
8010045153	8010042494	8010041309	8010043352	250×200	600	526	300	84.8	3482516		3482516	3813455
8010045154	8010042495	8010041156	8010041258	250×225	600	495	300	90	3049720		3049720	3405345
8010045155	8010042498	8010041163	8010044860	280×160	632	800	316	80	3092385		3092385	3448010
8010045156	8010042499	8010041536	8010044857	280×200	632	791	316	84.8	4154334			4640981
8010045146	8010045203	—	—	315×50	670	385.3	335	25	4152020		4152020	4638667
8010045157	8010042504	8010042625	8010041990	315×225	710	570	355	90	5034435		5018354	9016060
8010045158	8010042505	8010041174	8010041274	315×250	710	585	355	88	5124810		5108729	8883524
8010045159	8010042506	8010041175	8010041275	315×280	710	585	355	88	7517696		7517696	9545699
8010045147	8010045204	—	—	355×50	670	405.3	355	25	7735503		7735503	9712029
8010045160		8010043403	—	355×180	660	795	330	80	7589556		7589556	10320027
8010045161	8010042509	8010041183	—	355×200	660	602	330	75	8908061		8908061	37472083
8010045162		8010043405	—	355×225	660	750.2	330	90	8240071		8240071	
8010045163	8010042510	8010041185	—	355×250	660	560	330	77	9225797		9225797	
8010045164		8010041601	—	355×280	660	729.2	330	85	8210193		8210193	
8010045165	8010042511	8010043426	—	355×315	660	535.2	330	85	9302554		9302554	
8010045148	8010045205	—	—	400×50	720	427.2	360	25	8053743		8053743	
8010045166	8010042514	8010041395	—	400×200	715	612.5	357.5	70	10409630		10409630	
8010045167	8010042515	8010041438	—	400×225	715	781.5	357.5	90	11717988		11717988	
8010045168	8010042516	8010041436	—	400×250	715	579.6	357.5	75	10435829		10435829	
8010045169		8010041194	—	400×280	715	562.3	357.5	77	10544392		10544392	
8010045170	8010042518	8010041556	—	400×355	715	—	357.5	—	16095263		11997065	

Fabricated Reducing Tee Assembly

SAP Number (black)		Size (mm)	L1	L2	L3	L4	Harga (Rp) (0.6MPa)	Harga (Rp) (0.8MPa)	Harga (Rp) (1.0MPa)	Harga (Rp) (1.6MPa)
0.6MPa	0.8MPa									
8010045171	8010045206	450×180	1050	864	525	90	21561782	24687458		
8010045172	8010045207	450×200	1050	669	525	65	19893794	23019470		
8010045173	8010045208	450×225	1050	750.6	525	90	20888748	24014394		
8010045174	8010045209	450×250	1050	631.5	525	77	20585669	23911854		
8010045175	8010045210	450×280	1050	—	525	—	20518526	23644201		
8010045176	8010045211	450×315	1050	544	525	37	19251617	22377262		
8010045177	8010045212	450×355	1050	685	525	97	20010605	23136251		
8010045178	8010045213	450×400	1050	685	525	97	26273289	29398965		
8010045179	8010045214	500×180	1200	1236	600	90	30652463	34898032		
8010045180	8010045215	500×200	1200	1041	600	95	29936644	34182214		
8010045181	8010045216	500×225	1200	1044	600	100	29621816	33867385		
8010045182	8010045217	500×250	1200	1004	600	88	29839327	34084866		
8010045183	8010045218	500×280	1200	960	600	85	29711627	33957196		
8010045184	8010045219	500×315	1200	765	600	95	28380779	32626348		
8010045185	8010045220	500×355	1200	765	600	95	28371433	32616973		
8010045186	8010045221	500×400	1200	765	600	95	28575266	32820806		
8010045187	8010045222	500×450	120	765	600	130	28970203	33215743		
8010045188	8010045223	560×225	1260	1280	630	100	42336657	48762259		
8010045189	8010045224	560×280	1260	1195	630	85	42416054	48841656		
8010045190	8010045225	560×315	1260	1000	630	95	41106509	47532111		
8010045191	8010045226	630×180	1330	1605	665	90	67015955	76563227		
8010045192	8010045227	630×200	1330	1410	665	115	66333872	75881114		
8010045193	8010045228	630×225	1330	1410	665	100	66019043	75566286		
8010045194	8010045229	630×250	1330	1364	665	88	66237148	75784419		
8010045195	8010045230	630×280	1330	1325	665	85	66098559	75645831		
8010045196	8010045231	630×315	1330	1130	665	95	64734303	74281575		
8010045197	8010045232	630×355	1330	1130	665	95	64724957	74272199		
8010045198	8010045233	630×400	1330	1130	665	95	64936444	74483716		
8010045199	8010045234	630×450	1330	1130	665	130	65331382	74878654		
8010045200	8010045235	630×500	130	865	665	100	61005051	70552293		

Pipe Cutter



SAP Number	Model	Application Range	Harga (Rp)
8010041504	TU 140	50~140	2892825
8010041505	T3	100~160	3182108
813005267	T4	180~315	21214050

Blade Scraper



SAP Number	Model	Application Range	Harga (Rp)
8010041502	Small Scraper	1.5"	212141
8010041503	Big Scraper	2.0"	212141

Socket Fusion Welding Machine



SAP Number	Model	Application Range	Harga (Rp)
8010041418	1000w	20~63	1562126
8010041419	1600w	75~110	2632471
8010041420	2500w	160	4811732

Melting Socket



SAP Number	Model	Application Range	Harga (Rp) (PC)
8010040972		20	149253
8010040973		25	165824
8010040974		32	199004
8010040975		40	248755
8010040976		50	281935
8010040977		63	331686
8010040978		75	630192
8010040979		90	812587
8010040970		110	995020
8010040971		160	2620232

Butt Fusion Welding Machine



SAP Number	Model	Application Range	Harga (Rp)
8130070492	160	63~160	76177725
8010041411	250	90~250	
8010041382	250	110~250	85820475
8130052485	315	160~315	105105975
8130052486	450	280~450	181283700
8010044757	630	400~630	276746925
	800	630~800	
	1200	900~1200	

Electro Fusion Welding Machine



SAP Number	Model	Application Range	Harga (Rp)
8010041972	DRJ-CA-9C		93534675
8010042745	DRJ-CA-15C		161998200

It can save the data and the data can be printed when connecting to the computer.

Welding machine



SAP Number	Model	Application Range	Harga (Rp)
8010041418	1000W	dn20-63	1562126
8010041419	1600W	dn75-110	2632471
8010041420	2500W	dn160	4811732

3.1 Corrosion resistance.

3.2 No leaks in the fusion weld joint. PE pipe are mainly used fusion weld joint to ensure the identity of the material, structure of the fittings and the pipe.

3.3 The great technical and economic value of the flexibility of PE piping system. Mainly as below:

3.3a PE pipe can be coiled due to it's excellent flexibility, can be supplied with long length, avoiding the mass usage of joint and fittings, reducing the workload of joint. By considering the practicality, our company can supplied coiled PE pipe if the diameter not more than 63mm.



3.3b For reducing workload of joint, PE pipe in large diameter can be joint on the ground (outside the groove) before devoted into the groove.



3.3c Directional drilling technique can be used in the joint of the PE pipe in some places due to it's flexibility, lightweight and excellent scratch resistance. Suitable place includes the road, base of the railroad, river, etc.



3.3d Submerge the long pipe when laying the PE pipe in the river or lake. Connect the pipe on the fixed location before the pipes are submerged with heavy articles.



3.3e Repair the old urban water supply pipe by PE pipe as the lined pipe.



3.4 Effective resist the underground movement and the point load. PE pipe has excellent flexibility and strong differential settlement resistance, the extension rate at break has exceeds 350%.

3.5 Excellent resistance to fast crack propagation.

3.6 Long service life. The PE pipe can be used for more than 50 years under proper use.

3.7 Environment-friendly. PE pipe can be recycled. It won't produce harmful matter to the environment even burn it out.

(1) Socket Fusion Joint Step: (Use Socket Fusion Welding Machine)**① Check and measure**

- Check the pipe and fittings to see whether they are damaged, and make the incision smooth.
- Measure the depth of socket, mark on the pipe surface.

**② Chamfer**

- Chamfer the nozzle, the angle should be 30°, the length of surface groove should not exceed 2.0mm.

**③ Clean and dry**

- Clean and dry the pipe's spigot and the fittings' socket.

**④ Heat**

- Push the end of the pipe and fittings, without turning, upto the welding depth into the welding machine, heat up the end of the pipe and fittings.

**⑤ Join and cool**

- Pull out the pipe and fittings from the welding machine when the scheduled heating is over, insert the pipe's spigot into the fittings' socket evenly and swiftly.
- Not continue the next step until the scheduled cooling is over.

Recommended technical parameter for Socket Fusion Joint

(Thermal temperature is 260°C±°C)

Outer Diameter (mm)	Heating Time(s)	Maximum Transit Time (s)	Minimum Cooling Time (s)
20	5	4	2
25	7	4	2
32	8	6	4
40	12	6	4
50	18	6	4
63	24	8	6

(2) Butt Fusion Joint Step: (Use Butt Fusion Welding Machine)**① Prepare**

- Prepare the necessary tools.

**② Clamp and clean**

- Clamp down the pipe on the jig, clean up the joint parts, mill the joint sides, and then adjust the joint parts to make the misplacement less than 10% of the wall thickness.

**③ Heat**

- Put the heating panel.

**④ Join**

- Remove the heating panel after finishing heating, join the two heating parts swiftly, increase pressure up to the fusion-joint pressure and keep until it cools down.

**⑤ Complete**

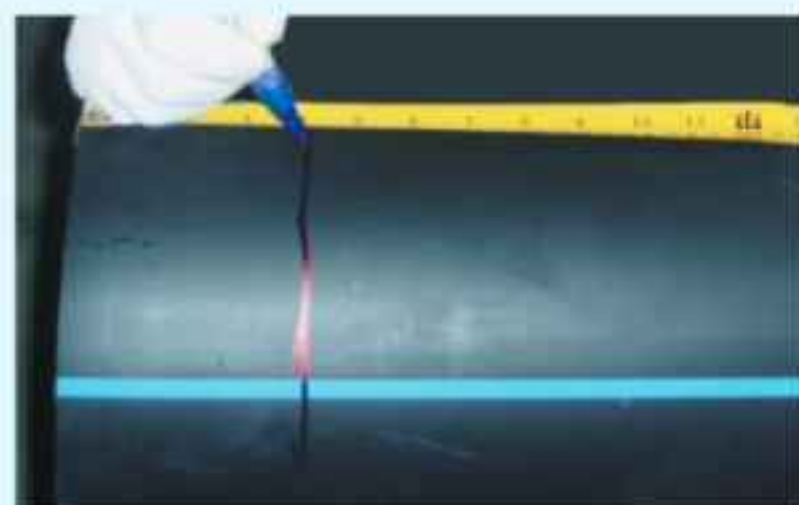
- Butt Fusion Joint is completed.

Recommended welding parameter, which should be followed by the welders

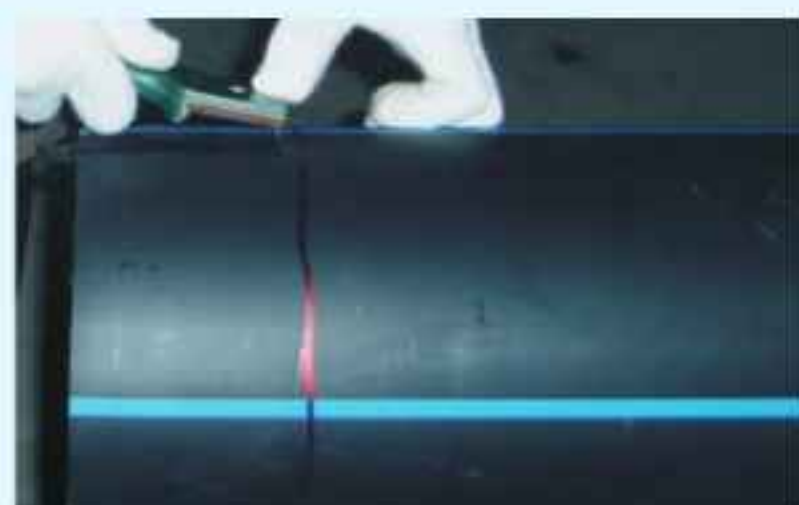
Wall Thickness (mm)	Preheating Curling Height (mm) (Preheating Temperature is $210\pm 10^{\circ}\text{C}$)	Preheating Time(s) (Temperature is $210\pm 10^{\circ}\text{C}$)	Allowed Maximum Transit Time(s)	Cooling Time for the Weld Seam under Pressure-reserving State (min)
2.0 - 3.9	0.5	30 - 40	4	4 - 5
4.3 - 6.9	0.5	40 - 70	5	6 - 10
7.0 - 11.4	1.0	70 - 120	6	10 - 16
12.2 - 18.2	1.0	120 - 170	8	17 - 24
20.1 - 25.5	1.5	210 - 250	10	25 - 32
28.3 - 32.2	1.5	280 - 320	12	33 - 40

Application of Butt Fusion Joint at Sites



(3) Electro Fusion Joint Step: (Use Electro Fusion Welding Machine)**① Clean and mark**

- Clean up the connection part, mark the inserting depth.

**② Scrape**

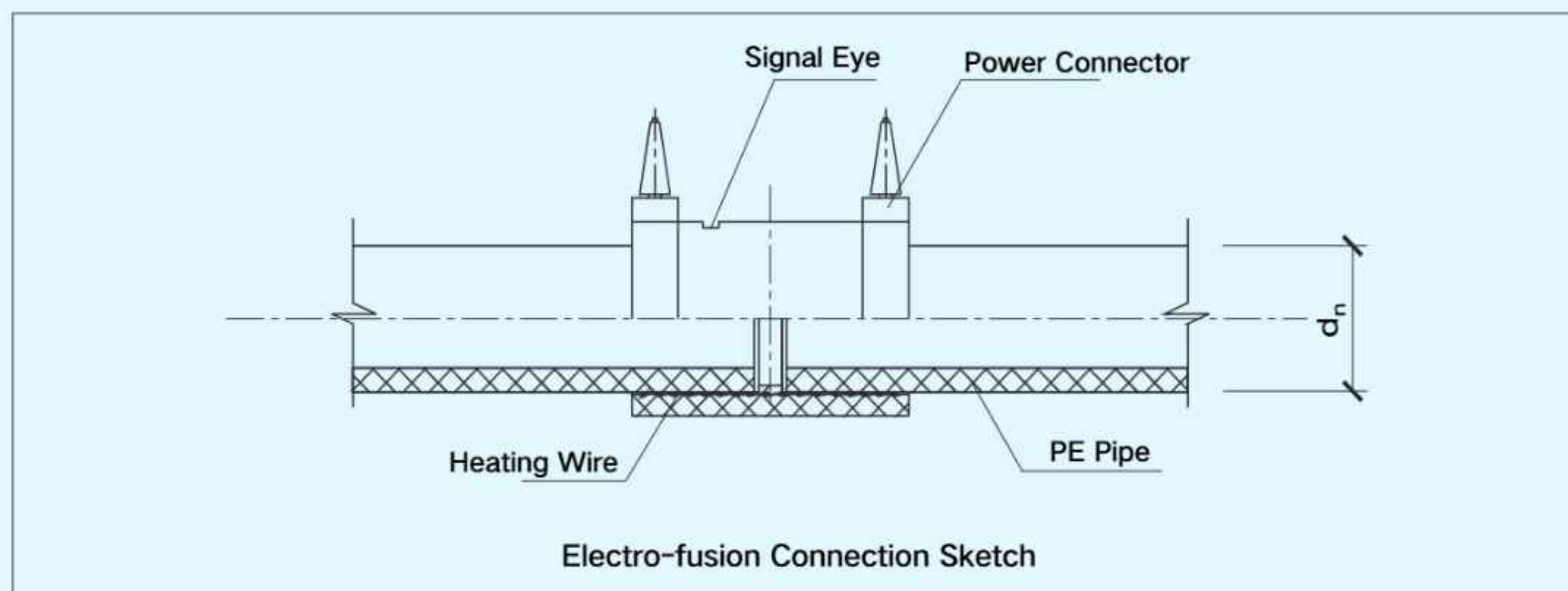
- Scrape and polish the joint surface.

**③ Align and restrain the fittings to the pipes****④ Apply electric current**

- Apply the electric current to the fittings; the joining parts will be heated and melted, turn off the current when there is melt flowing in the observation hole.

**⑤ Cool**

- Cool without movement or pressure.



Note: While connecting, the heating voltage and time should comply with manufacture's technical stipulations of Electro Fusion Welding Machine.

(4) Transition Joint

Join the PE pipe and the iron pipe by Flange Joint

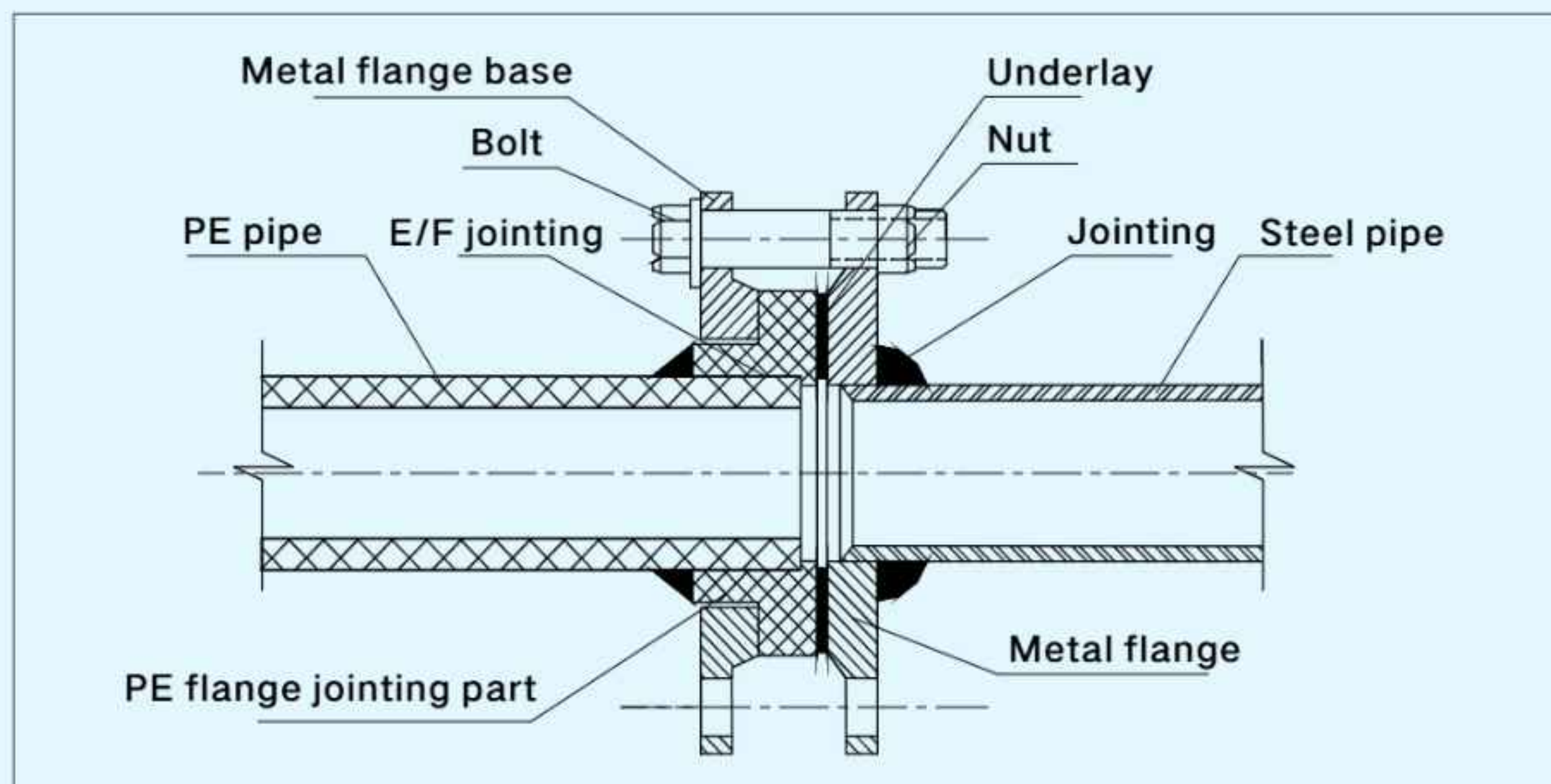
① Preparation

■ Prepare the necessary tools and accessories. ■ Check and clean the accessories.

② Put the pipe in the flange tray.

③ Use socket fusion joint or butt fusion joint on the pipe and the flange stub.

④ Put the rubber ring between the two flange stubs, and then tighten the bolts.

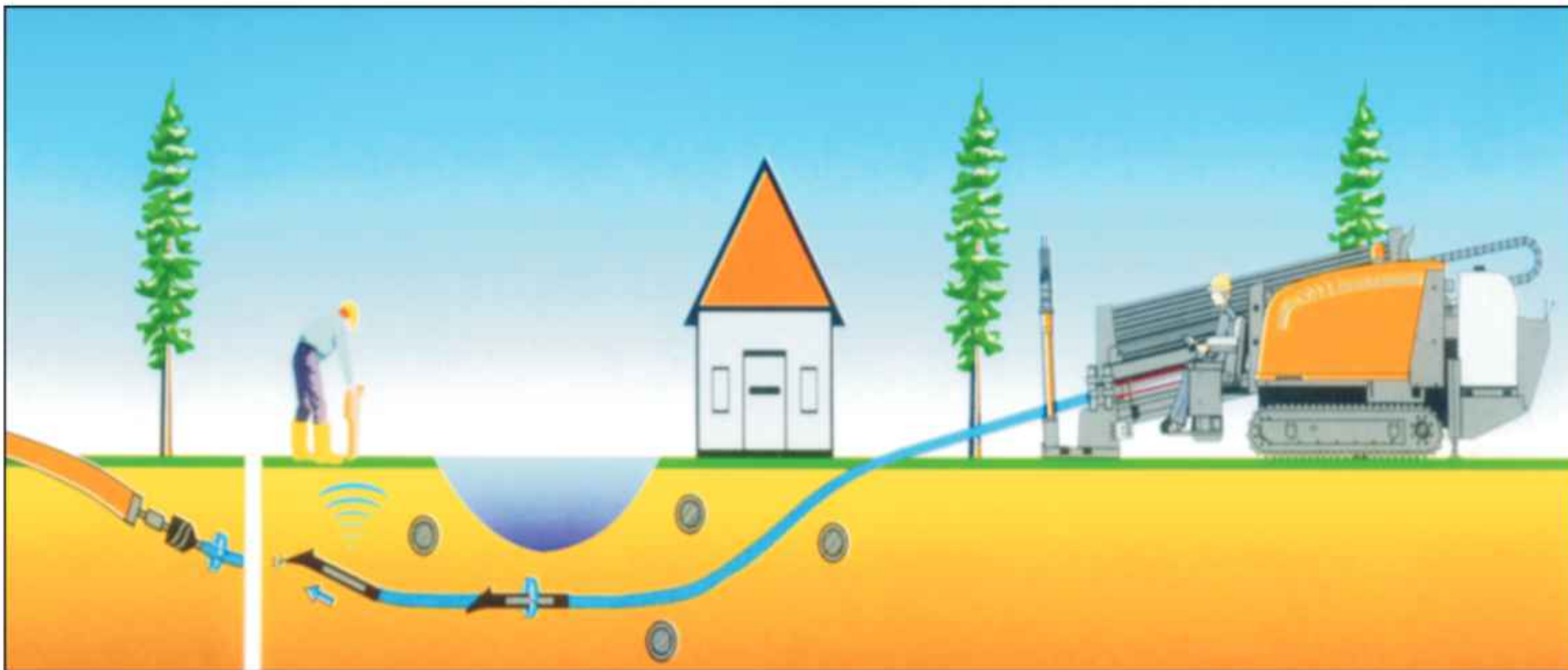


Trenchless Technology

The technology of detecting, laying, repairing and changing various kinds of pipe by no excavation or less excavation.

Horizontal Directional Drilling Technology

The installation technology of directional drilling, chambering and pulling the pipe from different depth and different stratum by using the directional drilling equipments and location apparatus.



PE Pipe and Fittings_BS EN 12201-2;2011,BS EN 12201-3;2011

PE Pipe and Fittings_ISO 4427-2;2007,ISO 4427-3;2007


BUREAU VERITAS

FACTORY APPROVAL CERTIFICATE

Certificate No.: FA-IPC/SR/IPCA-22/006-01

Name of the factory: Guangdong Liansu Technology Industrial Co., Ltd.
Address of the factory: Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong, P. R. China

Type(s) of product manufactured: PE PIPES & FITTINGS FOR WATER SUPPLY
Applying standards: ISO 4427-2: 2007(Pipe), ISO 4427-3:2007(Fitting)
After examination of the following documents:

- Quality System Certificate n° (ISO9001-2015): 0070021Q53207R7L
(Valid from 2021-07-30 to 2024-07-29)
- Factory Audit Report n° FR-IPC/SR/IPCA-22/006-01

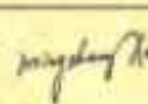
The undersigned, Inspector of Bureau Veritas, certifies that the above factory meets the applicable requirements of BV procedure GM-VPC for the production of the following types of pipes & fittings listed in Annex I to Certificate.

This certificate is valid from **Oct. 01st, 2022**
For a period of three years, ending **Sep. 30th, 2025**

This approval is only valid provided that every semi-annual audit (in annex) is done and found satisfactory by Bureau Veritas, and when no significant changes are made to the audited facility, its production rate and its quality system. These conditions will be assessed during semi-annual audits.

This approval is an integral and indissociable part of the voluntary certification process of pipes & fittings by Bureau Veritas as defined in BV procedure GM-VPC.

Made at: Shanghai
On: Oct. 01st, 2022

Name & signature: 
Mingsheng Xu
BV China INS Department Product Manager

Bureau Veritas Greater China, Industry and Facility Division
Address: 3/F, No. 1298, Wei Ma Road, Huangpu District, Shanghai, 200011, P. R. China
Tel: +86 21 2319 0001, 2319 0002, 2319 0003 Fax: +86 21 68861421


BUREAU VERITAS

ANNEX I TO CERTIFICATE No. FA-IPC/SR/IPCA-22/006-01

- Name of the factory: Guangdong Liansu Technology Industrial Co., Ltd.
- Address of the factory: Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong, P. R. China
- Type of Product Manufactured: PE PIPES & FITTINGS FOR WATER SUPPLY
- Applying standards : ISO 4427-2: 2007(Pipe), ISO 4427-3:2007(Fitting)

Specification:

Pipes : ISO 4427-2: 2007
DN 20-2000, PN4-PN25, PE100 & PE80
Fittings: ISO 4427-3:2007, PE100 & PE80
Socket fusion fittings (DN 20-125)
Electro fusion fittings (DN 20-630)
Butt fusion fittings (DN 20-630)
Fabricated Fittings (DN 90-900)

- Satisfactory audit of the above mentioned factory and issuance of the references report as per the Factory Approval Certificate.

This certificate is valid for 3 years (until Sep. 30th, 2025), providing that the semi-annual surveillance visits made by the society are satisfactory. After that period it shall be renewed in accordance with the Bureau Veritas Rules.

1 st Year Period:		2 nd Year Period:		3 rd Year Period:	
01/10/2022-31/03/2023	01/04/2023-30/09/2023	01/10/2023-31/03/2024	01/04/2024-30/09/2024	01/10/2024-31/03/2025	01/04/2025-30/09/2025
Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:

Name & signature: 
Mingsheng Xu
BV China INS Department Product Manager

Bureau Veritas Greater China, Industry and Facility Division
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BUREAU VERITAS

FACTORY APPROVAL CERTIFICATE

Certificate No.: FA-IPC/SR/IPCA-22/006-02

Name of the factory: Guangdong Liansu Technology Industrial Co., Ltd.
Address of the factory: Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong, P. R. China

Type(s) of product manufactured: PE PIPES & FITTINGS FOR WATER SUPPLY AND DRAINAGE / SEWERAGE UNDER PRESSURE
Applying standards: BS EN 12201-2: 2011(Pipe), BS EN 12201-3:2011(Fittings)
After examination of the following documents:

- Quality System Certificate n° (ISO9001-2015): 0070021Q53207R7L
(Valid from 2021-07-30 to 2024-07-29)
- Factory Audit Report n° FR-IPC/SR/IPCA-22/006-02

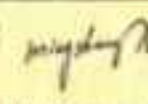
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For a period of three years, ending **Sep. 30th, 2025**

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This approval is an integral and indissociable part of the voluntary certification process of pipes & fittings by Bureau Veritas as defined in BV procedure GM-VPC.

Made at: Shanghai
On: Oct. 01st, 2022

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- Name of the factory: Guangdong Liansu Technology Industrial Co., Ltd.
- Address of the factory: Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong, P. R. China
- Type of Product : PE PIPES & FITTINGS FOR WATER SUPPLY AND DRAINAGE / SEWERAGE UNDER PRESSURE
- Applying standards : BS EN 12201-2: 2011(Pipe), BS EN 12201-3:2011(Fittings)

Specification:

Pipes : BS EN 12201-2: 2011
DN 20-2000, PN4-25, PE100
Fittings: BS EN 12201-3:2011, PE100 & PE80
Socket fusion fittings (DN 20-DN 125)
Electro fusion fittings (DN 20-DN 630)
Butt fusion fittings (DN 20-DN 630)
Fabricated Fittings (DN 90-DN 900)

- Satisfactory audit of the above mentioned factory and issuance of the references report as per the Factory Approval Certificate.

This certificate is valid for 3 years (until Sep. 30th, 2025), providing that the semi-annual surveillance visits made by the society are satisfactory. After that period it shall be renewed in accordance with the Bureau Veritas Rules.

1 st Year Period:		2 nd Year Period:		3 rd Year Period:	
01/10/2022-31/03/2023	01/04/2023-30/09/2023	01/10/2023-31/03/2024	01/04/2024-30/09/2024	01/10/2024-31/03/2025	01/04/2025-30/09/2025
Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:	Sign & Stamp:

Name & signature: 
Mingsheng Xu
BV China INS Department Product Manager

Bureau Veritas Greater China, Industry and Facility Division
Address: 3/F, No. 1298, Wei Ma Road, Huangpu District, Shanghai, 200011, P. R. China
Tel: +86 21 2319 0001, 2319 0002, 2319 0003 Fax: +86 21 68861421

WRAS PE Water Pipe(Black)(60°C)

Approval Number 2104518
Test Report: MA7191/7.3

20th April 2021

Guangdong Liansu Technology Industrial Co. Ltd.
Liansu Industrial Estate,
Langjiang Town,
Shunde Zone,
Foshan City,
Guangdong,
China

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EQ

WRAS APPROVED MATERIAL

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYETHYLENE- COMPONENTS. **5240**

'LSPE-BK001'. Black coloured, extruded polyethylene pipe. For use with water up to 60°C.

APPROVAL NUMBER: 2104518
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO. LTD.

The Scheme reserves the right to review approval.
Approval 2104518 is valid between April 2021 and April 2026

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully



Ian Hughes
WRAS Approvals Manager

The Water Regulations Advisory Scheme Ltd. Registered in England No. 08662000 Registered office: 40 Lowick Close Haze Grove Stockport SK7 3ED
WRAS App (2019) v1.0 Tel: +44(0)203 207 8020 Fax: +44(0)1482 248 540 Email: info@wras.co.uk website: www.wras.co.uk Page 1 of 2

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that: 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that NO changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

The Water Regulations Advisory Scheme Ltd. Registered in England No. 08662000 Registered office: 40 Lowick Close Haze Grove Stockport SK7 3ED
WRAS App (2019) v1.0 Tel: +44(0)203 207 8020 Fax: +44(0)1482 248 540 Email: info@wras.co.uk website: www.wras.co.uk Page 2 of 2

WRAS PE Water Pipe Fittings(Black)(60°C)

Approval Number 2111500
Test Report: MA7191/7.4

20th April 2021

Guangdong Liansu Technology Industrial Co. Ltd.
Liansu Industrial Estate,
Langjiang Town,
Shunde Zone,
Foshan City,
Guangdong,
China

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EQ

WRAS APPROVED MATERIAL

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
CONSECUTIVE MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYETHYLENE- COMPONENTS. **5240**

'LSPE-BK001'. Black coloured, injection moulded polyethylene fitting. For use with water up to 60°C.

APPROVAL NUMBER: 2111500
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO. LTD.

This is a re-approval of 1610546 which is valid between October 2016 and October 2021.

The Scheme reserves the right to review approval.
Approval 2111500 is valid between November 2021 and November 2026

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully



Ian Hughes
WRAS Approvals Manager

The Water Regulations Advisory Scheme Ltd. Registered in England No. 08662000 Registered office: 40 Lowick Close Haze Grove Stockport SK7 3ED
WRAS App (2019) v1.0 Tel: +44(0)203 207 8020 Fax: +44(0)1482 248 540 Email: info@wras.co.uk website: www.wras.co.uk Page 1 of 2

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

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This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

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Use of the WRAS Approved Material Logo

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that NO changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

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The Water Regulations Advisory Scheme Ltd. Registered in England No. 08662000 Registered office: 40 Lowick Close Haze Grove Stockport SK7 3ED
WRAS App (2019) v1.0 Tel: +44(0)203 207 8020 Fax: +44(0)1482 248 540 Email: info@wras.co.uk website: www.wras.co.uk Page 2 of 2

WRAS PE Water Pipe(Deep Blue)(60°C)

Approval Number 2110500
Test Report: MA7191/7/1

WRAS
APPROVED MATERIAL

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP23 4EG

20th April 2021

Guangdong Liansu Technology Industrial Co. Ltd.
Liansu Industrial Estate,
Longjiang Town,
Shunde Zone,
Foshan City,
Guangdong,
China

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
CONSECUTIVE MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6820-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYETHYLENE- COMPONENTS. **5240**

LSPE-BE002 PE Pipe (Deep Blue). Blue coloured, extruded polyethylene pipe. For use with water up to 60°C.

APPROVAL NUMBER: 2110500
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO. LTD.

This is a re-approval of 1609522 which is valid between September 2016 and September 2021.

The Scheme reserves the right to review approval.
Approval 2110500 is valid between October 2021 and October 2026

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully



Ian Hughes
WRAS Approvals Manager

The Water Regulations Advisory Scheme Ltd. Registered in England No. 08603035 Registered office: 6D Llewellyn Close Haver Grove, Basingstoke, Hampshire RG24 0PQ
WRAS Approvals Unit 13
Tel: +44(0)1293 307 9030 Fax: +44(0)1293 308 540 Email: info@wras.co.uk or web@wras.co.uk Page 1 of 2

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

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WRAS Approvals Unit 13
Tel: +44(0)1293 307 9030 Fax: +44(0)1293 308 540 Email: info@wras.co.uk or web@wras.co.uk Page 2 of 2

WRAS PE Water Pipe Fittings(Deep Blue)(60°C)

Approval Number 2110501
Test Report: MA7191/1/2

WRAS
APPROVED MATERIAL

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP23 4EG

20th April 2021

Guangdong Liansu Technology Industrial Co. Ltd.
Liansu Industrial Estate,
Longjiang Town,
Shunde Zone,
Foshan City,
Guangdong,
China

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
CONSECUTIVE MATERIAL APPROVAL**

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The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYETHYLENE- COMPONENTS. **5240**

LSPE-BE002 PE Fitting (Deep Blue). Blue coloured, injection-moulded polyethylene fitting. For use with water up to 60°C.

APPROVAL NUMBER: 2110501
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO. LTD.

This is a re-approval of 1609523 which is valid between September 2016 and September 2021.

The Scheme reserves the right to review approval.
Approval 2110501 is valid between October 2021 and October 2026

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, 'Materials which have passed full tests of effect on water quality'.

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully



Ian Hughes
WRAS Approvals Manager

The Water Regulations Advisory Scheme Ltd. Registered in England No. 08603035 Registered office: 6D Llewellyn Close Haver Grove, Basingstoke, Hampshire RG24 0PQ
WRAS Approvals Unit 13
Tel: +44(0)1293 307 9030 Fax: +44(0)1293 308 540 Email: info@wras.co.uk or web@wras.co.uk Page 1 of 2

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

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WRAS Approvals Unit 13
Tel: +44(0)1293 307 9030 Fax: +44(0)1293 308 540 Email: info@wras.co.uk or web@wras.co.uk Page 2 of 2

GOST licence for PE water pipe

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС CN.HB63.H01922
Срок действия с 26.04.2022 по 25.04.2025
№ 0495629

ОРГАН ПО СЕРТИФИКАЦИИ Общество с ограниченной ответственностью "НИЦ ТЕСТ". Место нахождения: 108801, город Москва, п. Коммунарка, ул. Потاپовская Рош, д. 12 к. 2, этажом под/4 офис 14, Телефон: +79034451952, Адрес электронной почты: olenkarost@yandex.ru, Аттестат аккредитации регистрационный № RA.RU.11HB63, Дата регистрации аттестата аккредитации: 15.01.2020 года

ПРОДУКЦИЯ Фитинги для бытового водоснабжения. См. Приложение (Бланк № 0095029, № 0095030, № 0095031) Серийный выпуск

код ОК 229000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ
Нормативной документации изготовителя

код ТН ВЭД 391721

ИЗГОТОВИТЕЛЬ GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO., LTD
Место нахождения: Lesso industrial estate, Longjiang town, Shunde District, Foshan City, Guangdong Province, China, 528318

СЕРТИФИКАТ ВЫДАН GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO., LTD
Место нахождения: Lesso industrial estate, Longjiang town, Shunde District, Foshan City, Guangdong Province, China, 528318

НА ОСНОВАНИИ Протокол испытаний № 32311.ИЛ01.С2566 от 25.04.2022 года. Испытательной лабораторией Общество с ограниченной ответственностью «АРТАЛИКС». Свидетельство об уполномочивании № АРТАЛИКС.32311.ИЛ01. Дата регистрации свидетельства: 05.10.2020 года

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Схема сертификации: 3

Руководитель органа: С. О. Коваленко
Эксперт: Р. Н. Прокофьев

Сертификат не применяется при обязательной сертификации

GOST licence for PE water pipe fittings

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС CN.HB63.H01924
Срок действия с 26.04.2022 по 25.04.2025
№ 0495626

ОРГАН ПО СЕРТИФИКАЦИИ Общество с ограниченной ответственностью "НИЦ ТЕСТ". Место нахождения: 108801, город Москва, п. Коммунарка, ул. Потاپовская Рош, д. 12 к. 2, этажом под/4 офис 14, Телефон: +79034451952, Адрес электронной почты: olenkarost@yandex.ru, Аттестат аккредитации регистрационный № RA.RU.11HB63, Дата регистрации аттестата аккредитации: 15.01.2020 года

ПРОДУКЦИЯ Фитинги для бытового водоснабжения. См. Приложение (Бланк № 0094982, № 0094983, № 0094984, № 0094985, № 0094986, № 0094987, № 0094988, № 0094989, № 0095000, № 0095001, № 0095002, № 0095003, № 0095004, № 0095005, № 0095006, № 0095007, № 0095008, № 0095009, № 0095010, № 0095011, № 0095012, № 0095013, № 0095014, № 0095015, № 0095016, № 0095017, № 0095018, № 0095019, № 0095020, № 0095021, № 0095022, № 0095023, № 0095024, № 0095025, № 0095026) Серийный выпуск

код ОК 229000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ
Нормативной документации изготовителя

код ТН ВЭД 391740000

ИЗГОТОВИТЕЛЬ GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO., LTD
Место нахождения: Lesso industrial estate, Longjiang town, Shunde District, Foshan City, Guangdong Province, China, 528318

СЕРТИФИКАТ ВЫДАН GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO., LTD
Место нахождения: Lesso industrial estate, Longjiang town, Shunde District, Foshan City, Guangdong Province, China, 528318

НА ОСНОВАНИИ Протокол испытаний № 32311.ИЛ01.С2570 от 25.04.2022 года. Испытательной лабораторией Общество с ограниченной ответственностью «АРТАЛИКС». Свидетельство об уполномочивании № АРТАЛИКС.32311.ИЛ01. Дата регистрации свидетельства: 05.10.2020 года

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Схема сертификации: 3

Руководитель органа: С. О. Коваленко
Эксперт: Р. Н. Прокофьев

Сертификат не применяется при обязательной сертификации

CE certification for PE water pipe and fittings comply with EN 12201.

ICR Verification of Conformity

№: ICR Polska/VC/HM220522

Name and address of Applicant Guangdong Liansu Technology Industrial Co., Ltd
Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong Province, China

Name and address of manufacturer Guangdong Liansu Technology Industrial Co., Ltd
Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong Province, China

Product name PE PIPE AND FITTINGS

Product types DN20-1600

Product trademark N/A

This document confirms that the product sample meets the requirements of the following standards:
ISO 4427-2:2019
ISO 4427-3:2019
EN 12201:2011

The assessment process has been carried out in accordance with individual rules and conditions agreed with the applicant. Evaluation has been carried out in accordance with:

Test reports 7822042101

Tests conducted by Kind Product Technical Service Co., Ltd

Issue date 19.05.2022

Expiration date 18.05.2027

Remarks
This verification of conformity refers to the above mentioned product and its conformity in regard to above mentioned standard(s) was proven on test sample.
The Verification of conformity was issued on voluntary basis and does not imply meeting all essential requirements, assessment of the whole production or any other notified bodies conformity assessment procedure appropriate for the product.

CE marking remarks:
mark is not restricted by the following verification of conformity
mark given here as reference, can be only use by the manufacturer after applying all essential requirements from relevant directive

Document status can be checked: <https://icrpolska.com/>

ICR Polska Co. Ltd
www.icrpolska.com
icrpolska@icrp.com

Director: Rafal Kalinowski
Warsaw, 19.05.2022

QR code:

SNI cert 2944 for PE water pipe

Lampiran Appendix

Page 1 of 1

Product Name:
Polyethylene (PE) Pipes And Fittings

Brands:
LESSO

Types/Models:
PE 100: Serial PN 6; PN 8; PN 10; PN 12,5; PN 16
(DN: (25-1600) mm
=====

Location and date of issued:
Jakarta, May 27, 2024

Signed by

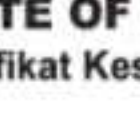
LILIK PANDAYANINGRUM
Head

This appendix is valid only if displayed together with Certificate number 101/S/Pro/8/V/2024 dated May 27, 2024 First issued

Jl. Cikini IV No.15, Jakarta Pusat 10330, Indonesia
<https://bspj.jakarta.kemperin.go.id/>

LA 10770

SNI CERT for PE water pipe fittings



CERTIFICATE OF CONFORMITY
Sertifikat Kesesuaian

Standard: SNI 4629.2:2015 – Sistem Perpipaan Plastik – Pipa Polietilena (PE) dan Fitting untuk sistem penyediaan air minum Bagian 2: Pipa
ISO 9001:2015 – Sistem manajemen mutu – Persyaratan

Client: **PT. Lesso Technology Indonesia**
Kawasan Industri JIPS blok D, Jl. Semarang – Demak KM 14.7 Demak, Jawa Tengah

Certificate Registration No.: 622210251

Certificate Scheme Type: s

Company Name and Address: PT. Lesso Technology Indonesia
Kawasan Industri JIPS blok D, Jl. Semarang – Demak KM 14.7 Demak, Jawa Tengah

Auan Perjanjian Sertifikasi: 790522021
Reference to the certification agreement

Company's representative: Mr. Luo Yi Biao
Manufacture site: PT. Lesso Technology Indonesia
Kawasan Industri JIPS blok D, Jl. Semarang – Demak KM 14.7 Demak, Jawa Tengah

Importer name and address: N/A

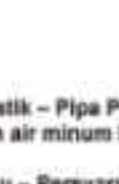
NIB/ API Number: 9120107702875
Scope: Plastic Piping – Polyethylene Pipe / Perpipaan Plastik – Pipa Polietilena

Type: Attached / Terlampir

Brand: LESSO

Validity: Certificate valid from May 13, 2024 until May 12, 2028.
Sertifikat berlaku dari 13 Mei 2024 sampai dengan 12 Mei 2028

The factory/manufacturer site is subject to annual surveillance audit with the due date for all future audits is February 12.
Pabrik/pusat produksi tempat pembuatan audit surveilans setiap tahun dengan batas waktu audit berikutnya adalah 12 Februari


 Head of Certification Body/Kepala Lembaga Sertifikasi



PT IAPMO Group Indonesia
Jl. Kapas Timur Blok F/3 No. 11AA, Ujung Cikarang, Delta Sition II, Bekasi 17795, Jawa Barat – Indonesia, www.iapmogroupindonesia.id

This certificate is valid based upon the Effective Date and Expiration Date shown on this certificate. Any change in material, manufacturing process, testing or design without having first obtained the approval of PT IAPMO Group Indonesia, or any evidence of non-compliance with applicable standards or of deficient workmanship, may be deemed sufficient cause for revocation.

Sertifikat ini berlaku berdasarkan Tanggal Efektif yang tertera di atas. Setiap perubahan dalam bahan, proses manufaktur, metode uji, atau desain tanpa persetujuan dari PT IAPMO Group Indonesia, atau bukti ketidakpatuhan terhadap standar yang berlaku atau pelanggaran yang nyata terhadap standar yang ditetapkan dapat dianggap sebagai bukti yang cukup untuk pembatalan sertifikat ini. Semua pelanggaran dan pelanggaran yang efektif akan dapat dianggap sebagai alasan untuk pembatalan sertifikat.

SNI CERT for PE water pipe fittings



K1 IAPMO GROUP INDONESIA

CERTIFICATE OF CONFORMITY

Sertifikat Kesesuaian

Appendix 1 of 1
Lampiran 1 dari 1

No. 612210251

No.	Type / Model <i>Type / Model</i>	Product Description <i>Deskripsi Produk</i>
1.	PN 8 DN: 110, 125, 160, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	PE 100 high density polyethylene / Pipa Poliethilena
2.	PN 8 DN: 90, 110, 125, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	
3.	PN 10 DN: 63, 75, 90, 110, 125, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	
4.	PN 12.5 DN: 25, 32, 40, 50, 63, 75, 90, 110, 125, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	
5.	PN 16 DN: 20, 25, 32, 40, 50, 63, 75, 90, 110, 125, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630	

PT IAPMO Group Indonesia
 Jl. Kapak Timur Blok F21 No. 11A, Upper Cikarang, Delta Cityzone II, Bekasi 17710, Jawa Barat - Indonesia. www.iapmoindonesia.co.id

LESSO

PT. LESSO TECHNOLOGY INDONESIA

Add: Kawasan Industri JIPS Blok D, Jl. Semarang-Demak Km 14.7, Batu,
Karangtengah, Kabupaten Demak Jawa Tengah 59561, Indonesia

Tel: 08112588883

E-mail: ind.consumer@lesso.com

Web: <https://lessoindonesia.co.id/>

Facebook: LESSO Indonesia

lessoindonesia.co.id

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