

LESSO

CEW[®]
WaterMark

SGS

WRAS
Water Regulations Advisory Scheme



PE Water Pipe and Fittings



www.lesso.com



China LESSO Group Holdings Limited

China Lesso Group Holdings Limited (HKSE, stock name: China Lesso, stock code: 2128) is a large industrial group of home building materials in China. Group's products and services cover plumbing products, sanitary ware, holistic kitchen, PVC profile doors and windows, decorative plates, fire-fighting equipments and hygiene materials, oceanic cageculture, hardware and building material E-business platform, etc. The sales revenue had broken through RMB 15.264 billion in 2015.

With the rapid development of Lesso globalization and internationalization, China Lesso has more than 40 holding subsidiaries and more than 21 production bases distributed in 15 provinces of Mainland China, US and Canada. China Lesso has continually perfected its strategic layout and broadened its sales network and market, so as to provide products and services to our customers timely and efficiently.

China Lesso established an international R&D center, which includes a post-doctoral workstation, and China National Accredited Laboratories authorized by CNAS. Our research team has a staff of more than one thousand. At present, China Lesso owns about 3,000 patents (some of them are under processing). Our products are awarded successively of National Torch Plan projects, National Key New Product, Scientific

Achievements Promotion Projects in National Construction Industry and Government Green Procurement List; and also has been awarded many honorary titles, such as National High-Tech Enterprise, National Certified Enterprise Technology Center, China Construction Independent Innovation of Science Superior Enterprise, Intellectual Property Right Preponderant Enterprise, Demonstrational Construction Base of Plastic Piping High Tech Industrialization of Ministry of Urban and Rural Development, Guangdong Provincial Government Quality Prize, etc.

China Lesso offers a comprehensive range of products in domestic home building materials area which includes more than 10,000 specifications. The products are being widely used in the areas of home decoration, civil construction, municipal water supply, drainage, electric power communication, gas supply, fire-fighting and agriculture, oceanic cageculture, etc.

With the dramatic advance on target of global strategy, China Lesso will constantly keep the faith in "Create a relaxing life". China Lesso will present high-performance product and service to create comfortable and qualified home life for customers.



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Illustration of commercial mark included
in pipes's and fittings' publicity materials :

LESSO  **LIANSU L&S**

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Product Overview

- ◎ **Material:** PE 80 or PE 100
- ◎ **Pressure Rating:** 0.4MPa, 0.6MPa, 0.8MPa, 1.0MPa, 1.25MPa, 1.6MPa
- ◎ **Size:** full 20mm through 1600mm availability
- ◎ **Standard:** ISO 4427-2, EN 12201-2, AS/NZS 4130, BS 6920, GB/T 13663.
- ◎ **Colors:**
 - Blue: all size
 - Black with blue stripes: d_n110 or above
 - 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°C)		≤3
Oxidation Induction Time, min (200°C)		≥20
Hydraulic Pressure Test	20°C, 100h	No Failure
	PE80 9.0MPa	
	PE100 12.4MPa	
	80°C, 165h	No Failure
	PE80 4.6MPa	
	PE100 5.5MPa	
Hydraulic Pressure Test	80°C, 1000h	No Failure
	PE80 4.0MPa	
	PE100 5.0MPa	
Climate Resistance (After the pipe accumulate accept the aging energy ≥3.5GJ/m3)	80°C, 165h	No Failure
	PE80 4.6MPa	
	PE100 5.5MPa	
	Extension Rate at Break, %	≥350
	Oxidation Induction Time, min (200°C)	≥10

Technical Specifications	PE 100	Unit	Test Method
Density at 23° C	0.955	g/cm ³	ISO 1183
MFR 190° /5 kg	0.23	g/10 min	ISO 1133
Mechanical Properties			
Yield Stress	23	MPa	ISO 527
Tensile Modulus	>1000	MPa	ISO 527
Oxidation-Induction Time at 210° C	≥20	min	ISO TR 10837
Carbon Black Content	≥2	%	ISO 6964
Resistance to S.C.P (slow crack propagation = 4.6 Mpa, 80° C Notched)	>1000	h	ISO 13479
Resistance to R.C.P (Rapid Crack Propagation S4-test 110/10 mm, ° C)	>10	bar	ISO DIS 13477
Elongation at break	≥500	%	ISO 6259
Linear Thermal Expansion	1.5×10 ⁻⁴	°C ⁻¹	ASTM D696(20-60°C)
Electrical Properties			
Electric Strength	>20	kV/mm	ASTM D149
Volume Resistivity	>10 ¹⁹	ΩM	ASTM D257

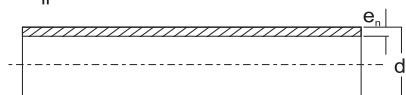
SDR 33 (PN 0.4)			SDR 21 (PN 0.6)			SDR 17 (PN 0.8)		
SAP No. (black/6M)	d _n (mm)	e _n (mm)	SAP No. (black/6M)	d _n (mm)	e _n (mm)	SAP No. (black/6M)	d _n (mm)	e _n (mm)
8010030001	160	4.9		90	4.3	8010030019	75	4.5
	180	5.5	8010030967	110	5.3	8010030020	90	5.4
8010030002	200	6.2		125	6.0	8010030014	110	6.6
	225	6.9	8010030731	160	7.7	8010030016	125	7.4
8010030954	250	7.7		180	8.6	8010030993	160	9.5
	280	8.6		200	9.6	8010031683	180	10.7
8010030005	315	9.7		225	10.8	8010031527	200	11.9
8010030007	355	10.9		250	11.9	8010031545	225	13.4
8010030008	400	12.5		280	13.4	8010031682	250	14.8
8010030959	450	13.8	8010030736	315	15.0	8010031681	280	16.6
8010030961	500	15.3		355	16.9		315	18.7
8010030962	560	17.2	8010030730	400	19.1	8010031776	355	21.1
8010030011	630	19.3		450	21.5	8010031546	400	23.7
	710	21.8	8010030983	500	23.9	8010031006	450	26.7
	800	24.5		560	26.7		500	29.7
				630	30.0		560	33.2
				710	33.9		630	37.4
				800	38.1		710	42.1
							800	47.4

SDR 13.6 (PN 1.0)			SDR 11 (PN 1.25)		
SAP No. (black/6M)	d _n (mm)	e _n (mm)	SAP No. (black/6M)	d _n (mm)	e _n (mm)
8010030798	63	4.7		25	2.3
8010030792	75	5.6	8010030799	32	3.0
8010031041	90	6.7	8010030800	40	3.7
8010031015	110	8.1	8010030039	50	4.6
8010030025	125	9.2		63	5.8
8010031018	160	11.8		75	6.8
	180	13.3		90	8.2
8010031020	200	14.7	8010030813	110	10.0
8010031022	225	16.6	8010031688	125	11.4
8010031024	250	18.4		140	12.7
	280	20.6	8010030756	160	14.6
8010031027	315	23.2		180	16.4
8010031029	355	26.1	8010031529	200	18.2
	400	29.4		225	20.5
	450	33.1		250	22.7
	500	36.8		280	25.4
	560	41.2		315	28.6
	630	46.3		355	32.2
	710	52.2	8010031460	400	36.3
	800	58.8		450	40.9
				500	45.4
				560	50.8
				630	57.2

Coil Pipe			
SDR 13.6 (PN 1.0)			
SAP No. (blue/50M)	d _n (mm)	e _n (mm)	Length (m/roll)
8010030584	63	4.7	50

SDR 11 (PN 1.25)			
SAP No. (blue/50M)	d _n (mm)	e _n (mm)	Length (m/roll)
	25	2.3	50/100
8010030597	32	3.0	50/100
8010030599	40	3.7	50/100
8010030601	50	4.6	50
8010030603	63	5.8	50

SDR: Standard Dimension
PN: Rate
d_n: Nominal Outside Diameter
 Nominal Pressure (unit: MPa)
e_n: Nominal Wall Thickness



SDR 26 (PN 0.6)		
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)
8010030738	110	4.2
8010031423	125	4.8
8010030794	160	6.2
	180	6.9
8010030783	200	7.7
8010030087	225	8.6
8010030091	250	9.6
	280	10.7
8010030101	315	12.1
	355	13.6
	400	15.3
8010030114	450	17.2
	500	19.1
	560	21.4
	630	24.1
	710	27.2
	800	30.6
	900	34.4
	1000	38.2
	1200	46.3
	1400	53.9
	1600	61.6

SDR 21 (PN 0.8)		
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)
	90	4.3
	110	5.3
	125	6.0
	140	6.7
	160	7.7
	180	8.6
8010031111	200	9.6
	225	10.8
	250	11.9
8010031113	280	13.4
	315	15.0
	355	16.9
	400	19.1
	450	21.5
8010031118	500	23.9
	560	26.7
	630	30.0
	710	33.9
	800	38.1
	900	42.9
	1000	47.7
	1200	57.2
	1400	66.8

SDR 17 (PN1.0)		
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)
8010031422	75	4.5
8010030324	90	5.4
8010030225	110	6.6
8010031146	125	7.4
8010030241	160	9.5
8010030825	180	10.7
8010030249	200	11.9
8010031148	225	13.4
8010030261	250	14.8
8010031149	280	16.6
8010031151	315	18.7
8010031153	355	21.1
8010030279	400	23.7
8010031156	450	26.7
8010030294	500	29.7
8010031158	560	33.2
8010030308	630	37.4
	710	42.1
8010030320	800	47.4
	900	53.3
	1000	59.3

SDR 13.6 (PN 1.25)		
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)
8010031597	63	4.7
8010031673	75	5.6
8010011478	90	6.7
8010011479	110	8.1
	125	9.2
8010031455	160	11.8
	180	13.3
8010031433	200	14.7
	225	16.6
	250	18.4
	280	20.6
	315	23.2
	355	26.1
	400	29.4
	450	33.1
	500	36.8
	630	46.3

SDR 11 (PN 1.6)			SDR 11 (PN 1.6)			SDR 11 (PN 1.6)				
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	SAP No. (black/50M)	d _n (mm)	e _n (mm)	Length (m/roll)	
8010011477	20	2.3	8010031443	400	36.3	8010031806	20	2.3	50/100	
8010030746	25	2.3	8010030488	450	40.9	8010030754	25	2.3	50/100	
8010030477	32	3.0	8010030495	500	45.4	8010030615	32	3.0	50/100	
8010030484	40	3.7	8010031424	560	50.8	8010031543	40	3.7	50/100	
8010030491	50	4.6		630	57.2	8010030619	50	4.6	50	
8010030500	63	5.8				8010030620	63	5.8	50	
8010030765	75	6.8								
8010030506	90	8.2	Coil Pipe							
8010030428	110	10.0	SDR 13.6 (PN 1.25)							
8010030433	125	11.4								
8010030438	160	14.6	SAP No. (blue/50M)	d_n (mm)	e_n (mm)	Length (m/roll)				
8010030444	180	16.4	8010030604	63	4.7	50				
8010031445	200	18.2								
8010030458	225	20.5								
8010031217	250	22.7								
8010031218	280	25.4								
8010030473	315	28.6								
8010031444	355	32.2								

Plastic-Steel Mesh Skeleton-Plastic (PE) Composite Pipe for Water Supply

■ Product Overview

Material: PE, steel mesh skeleton

Pressure Rating: 1.0MPa, 1.6MPa, 2.0MPa, 2.5MPa

Standard: CJ/T189

Size: full 50mm through 500mm availability

Colors: Black (all size)

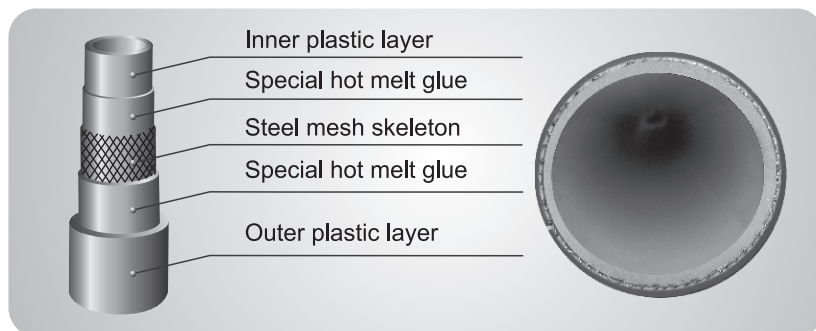
Other colors are also available upon request

Form Supplied: 6 meters or 8 meters straight length(all size)

Others forms are also available upon request

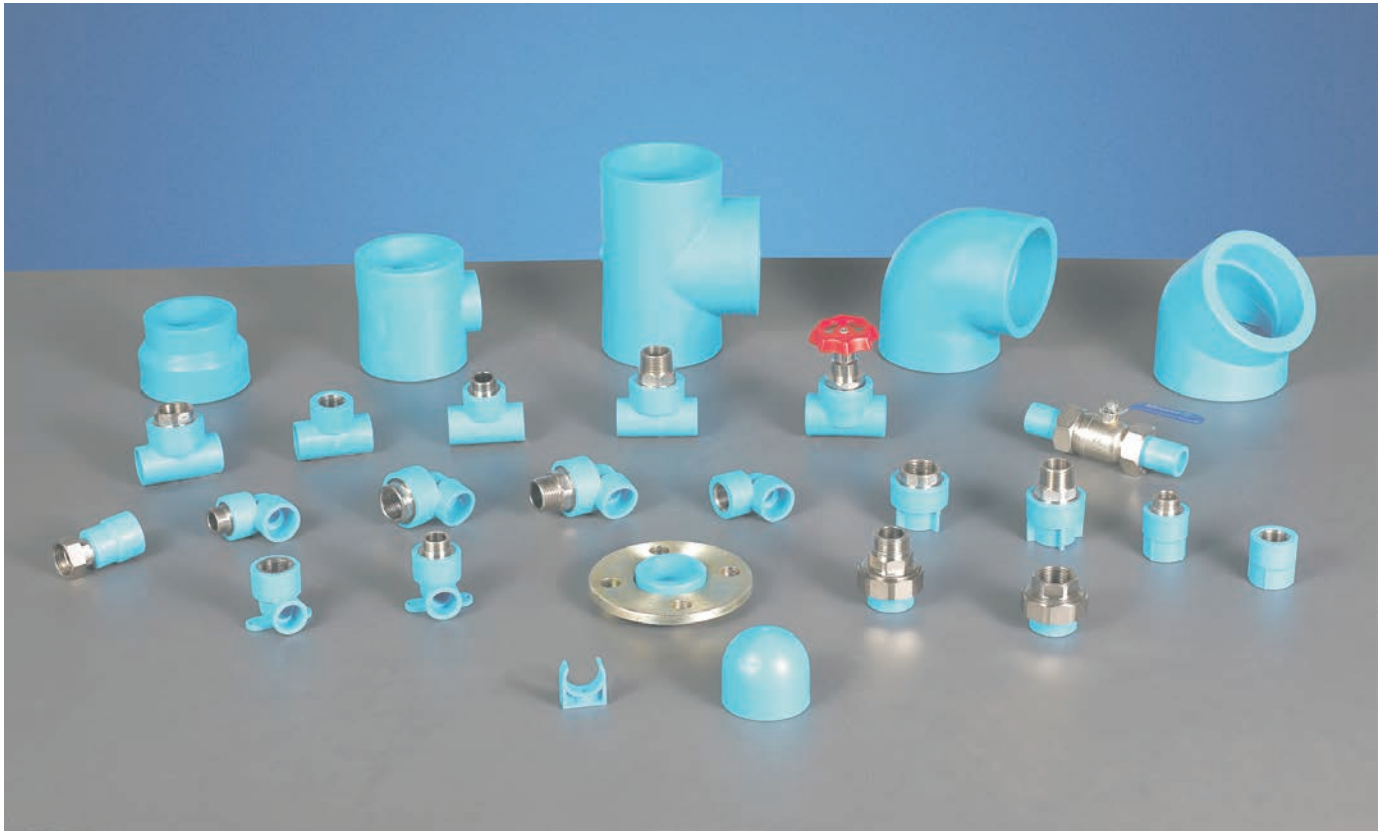
■ Advantages

- Higher strength resistance and creep resistance.
- Excellent stiffness, impact resistance. Low linear expansion coefficient.
- Smooth inner wall, won't covered with dirt. Low flow resistance, high flow capacity.
- Both the inner and outer wall are made of plastic, lead the pipe and fittings owns good corrosion resistance.
- Light weight, easy to transport.
- Use electro-fusion joint, no leakage in the joint, fast and easy installation.
- The product is composited with steel wire and plastic, overcome the fast stress crack of plastic pipe.
- Good abrasion resistance. The product can work for more than 50 years under normal use.



Plastic-Steel Mesh Skeleton-Plastic (PE) Composite Pipe for Water Supply

PN1.0			PN1.6			PN2.0		
SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	SAP No. (black/5.8M)	d _n (mm)	e _n (mm)	SAP No. (black/5.8M)	d _n (mm)	e _n (mm)
	50	4.5	8010120226	50	4.5		50	5.0
	63	4.5	8010120229	63	4.5		63	5.0
	75	5.0	8010120230	75	5.0		75	5.0
	90	5.5	8010120231	90	5.5		90	5.5
	110	5.5	8010120033	110	7.0			
	160	6.0		160	9.0			
	200	6.0	8010120042	200	9.5			
	250	10.5		250	12.0			
	315	11.5		315	13.0		50	5.5
	355	12.0		355	14.0		63	5.5
	400	12.5		400	15.0		75	5.5
	500	15.5		500	18.0		90	5.5



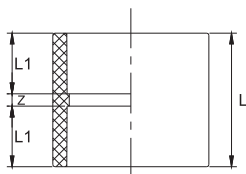
[Features]

- **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 (d_n110)
other colors are also available upon request
- **Joint:** joining pipe and socket fusion joint fittings by socket fusion joint

[Advantages]

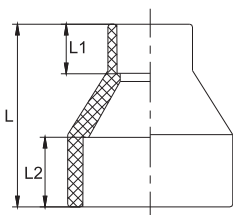
- **Non-toxic:** no heavy metal additives, would not be covered with dirt or contaminated by bacterium
- **Corrosion Resistance:** resist chemical matters and electron chemical corrosion
- **Low Installation Costs:** light weight and ease of installation can reduce installation costs
- **High Flow Capacity:** smooth interior walls result in low pressure loss and high volume
- **Longevity:** more than 50 years under proper use

Coupling (Soc × Soc)



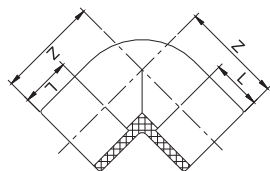
SAP No. (blue)	Size (mm)	L1	L	Z	PCS/CTN
8010041345	20	16.5	37	4	810
8010041346	25	18	40	4	600
8010041347	32	20.5	45	4	460
8010041348	40	22.5	50	5	240
8010041349	50	25.5	56	5	260
8010041350	63	30	65	5	160
8010041351	75	33	72	6	100
8010041352	90	37	78	4	50
8010041344	110	42	90	5	36

Reducer (Soc × Soc)



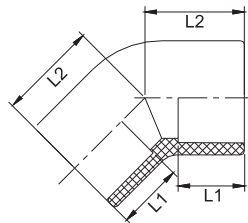
SAP No. (blue)	Size (mm)	L1	L2	L	PCS/CTN
8010040245	25x20	16.5	18	45	600
8010040246	32x20	16.5	20.5	56	320
8010040247	32x25	18	20.5	52	300
8010040248	40x20	16.5	22.5	63	320
8010040249	40x25	18	22.5	61	240
8010040250	40x32	20.5	22.5	54	240
8010040251	50x20	16.5	25.5	67	160
8010040252	50x25	18	25.5	67	160
8010040253	50x32	20.5	25.5	67	160
8010040254	50x40	22.5	25.5	62	120
8010040255	63x25	18	29.5	82	160
8010040256	63x32	20.5	29.5	84	150
8010040257	63x40	22.5	29.5	82	150
8010040258	63x50	25.5	29.5	71	135
8010040259	75x32	20.5	33	65	
8010040260	75x40	22.5	33	67	
8010040261	75x50	25.5	33	75	
8010040262	75x63	29.5	33	80	90
8010040263	90x40	22.5	37	75	
8010040264	90x50	25.5	37	75	
8010040265	90x63	29.5	37	100	72
8010040266	90x75	33	37	86	55
8010042110	110x50				
8010040244	110x63	29.5	41.5	112	50

90° Elbow (Soc × Soc)



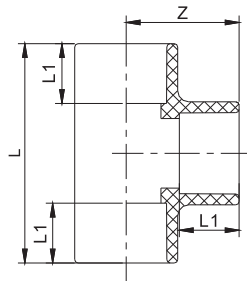
SAP No. (blue)	Size (mm)	L	Z	PCS/CTN
8010040180	20	16.5	33	500
8010040181	25	18	36.5	240
8010040182	32	20.5	43	200
8010040183	40	22.5	48	100
8010040184	50	25.5	61	120
8010040185	63	29.5	69	60
8010040186	75	33	77.5	40
8010040187	90	36	89	25
8010041507	110	42	107	15

45° Elbow (Soc×Soc)



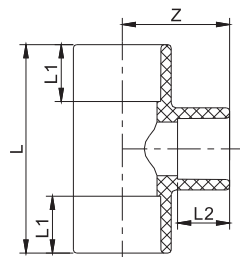
SAP No. (blue)	Size (mm)	L1	L2	PCS/CTN
8010040164	20	16.5	24	500
8010040165	25	18	27	360
8010040166	32	25	33.3	210
8010040167	40	22.5	35	140
8010040168	50	25.5	41	140
8010040169	63	29.5	48	80
8010040170	75	31	49	50
8010040171	90	37	59.5	30
8010040163	110	41.5	67.5	20

Tee (Soc×Soc×Soc)



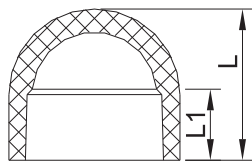
SAP No. (blue)	Size (mm)	L1	L	Z	PCS/CTN
8010040105	20	16.5	64	32	320
8010040106	25	18	72	36	260
8010040107	32	20.5	85	42.5	140
8010040108	40	22.5	94	47	90
8010040109	50	25.5	112	56	80
8010040110	63	29.5	140	70	50
8010040111	75	33	154	77	30
8010040112	90	37	178	89	20
8010041506	110	42	214	107	12

Reducing Tee (Soc×Soc×Soc)



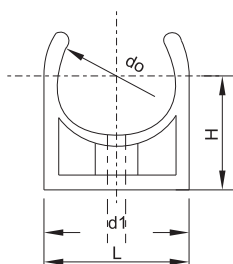
SAP No. (blue)	Size (mm)	L1	L2	L	Z	PCS/CTN
8010040207	25x20	18	16.5	66	34	280
8010040208	32x20	20.5	16.5	72	38	160
8010040209	32x25	20.5	18	77	40	120
8010040210	40x20	22.5	16.5	78	42	116
8010040211	40x25	22.5	18	83	44	96
8010040212	40x32	22.5	20.5	90	46	96
8010040213	50x20	25.5	16.5	86	47	160
8010040214	50x25	25.5	18	91	49	150
8010040215	50x32	25.5	20.5	98	51	120
8010040216	50x40	25.5	22.5	104	53	100
8010040217	63x25	29.5	18	101	57	80
8010040218	63x32	29.5	20.5	108	59	60
8010040219	63x40	29.5	22.5	112	61	60
8010040220	63x50	29.5	25.5	122	64	60
8010040221	75x32	33	20.5	100	64	
8010040222	75x40	33	22.5	113	63.5	
8010040223	75x50	33	25.5	122.5	64.5	
8010040224	75x63	33	29.5	145	75	36
8010040225	90x40	37	22.5	120	72	
8010040226	90x50	37	25.5	132.3	80	
8010040227	90x63	37	29.5	148	84	28
8010040228	90x75	37	33	164	88	25
8010042107	110x50					
8010040206	110x63					
8010041574	110x90					

Cap (Soc)



SAP No. (blue)	Size (mm)	L1	L	PCS/CTN
8010040033	20	16.5	30	1500
8010040034	25	18	34	900
8010040035	32	20.5	43	450
8010040036	40	22.5	54	240
8010040037	50	25.5	58	140
8010040038	63	29.5	68	150
8010042069	75	33	80	
8010040039	90	37	95	
	110	42	112	

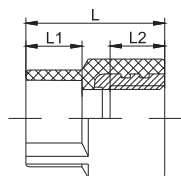
Pipe Clamp



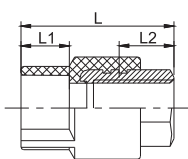
SAP No. (blue)	Size (mm)	D	L	do	d1	H	PCS/CTN
8010040013	20	20	27.5	19.8	5	22	1080
8010040014	25	25	32.5	24.6	5	25	1050
8010040015	32	32	39	31.5	5	29	960
8010041376	40	40	47.5	38.5	5	32	
8010043102	50	50	57.5	48.5	5	37	

Female Thread Adapter (Soc×Fipt with Metal Insert)

(Soc×Fipt with Metal Insert)



I

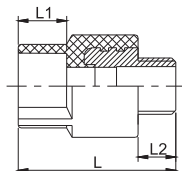


II

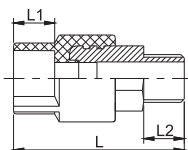
SAP No. (blue)	Size (mm×inch)	L1	L2	L	PCS/CTN
8010040086	20x1/2"	16.5	17.5	42	360
8010040087	20x3/4"	16.5	17.5	42	240
8010040088	25x1/2"	18	17.5	44.5	300
8010040089	25x3/4"	18	17.5	45	180
8010040091	32x1/2"	20.5	17.5	47	180
8010040092	32x3/4"	20.5	17.5	47	210
8010040090	32x1"	20.5	23	59	128
8010040093	40x1"	22.5	23	60	120
8010040094	40x1 1/4"	22.5	23	64	64
8010040096	50x1 1/4"	25.5	23	66	64
8010040095	50x1 1/2"	25.5	23	68.5	48
8010040097	63x2"	29.5	25	77	44
8010040098	75x2"				

Male Thread Adapter (Soc×Mipt with Metal Insert)

(Soc×Mipt with Metal Insert)



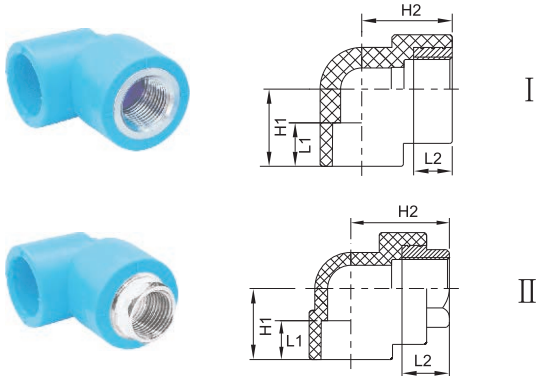
I



II

SAP No. (blue)	Size (mm×inch)	L1	L2	L	PCS/CTN
8010040146	20x1/2"	16.5	14	56	240
8010040147	20x3/4"	16.5	14	56	180
8010040148	25x1/2"	18	14	58.5	245
8010040149	25x3/4"	18	14	59	180
8010040151	32x1/2"	20.5	14	61	180
8010040152	32x3/4"	20.5	14	61	180
8010040150	32x1"	20.5	19	78	96
8010040153	40x1"	22.5	19	79	96
8010040154	40x1 1/4"	22.5	21	85	64
8010040156	50x1 1/4"	25.5	21	87	64
8010040155	50x1 1/2"	25.5	21	89.5	64
8010040157	63x2"	29.5	24	102	40
8010040158	75x2"				

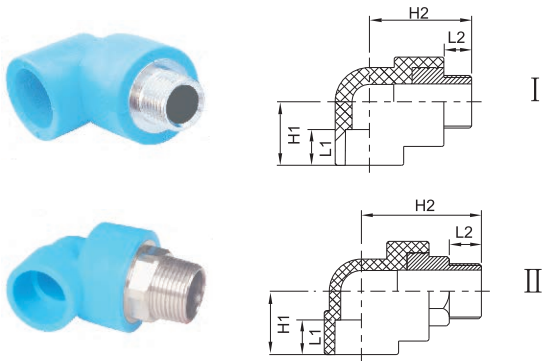
Female Thread Elbow (Soc×Fipt with Metal Insert)



SAP No. (blue)	Size (mm×inch)	L1	L2	H1	H2	PCS/CTN
8010040067	20x1/2"	16.5	17.5	30	36	240
8010040068	20x3/4"	16.5	17.5	33	36	210
8010040069	25x1/2"	18	17.5	33	38	210
8010040070	25x3/4"	18	17.5	35	38	180
8010040072	32x1/2"	20.5	17.5	35	42	180
8010040073	32x3/4"	20.5	17.5	38	42	150

8010040071	32x1"	20.5	23	40.5	53	96
8010040074	40x1 1/4"	22.5	36	51	61.2	
8010042081	50x1 1/2"	25.5	36	51	66.5	
8010041401	63x2"	29.5	40	67.5	78.5	
8010042082	75x2 1/2"	33	45	79	89.5	

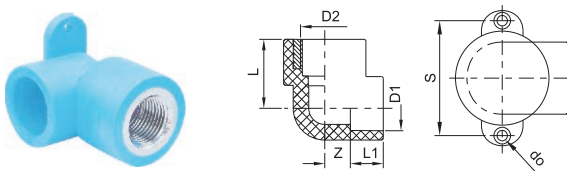
Male Thread Elbow (Soc×Mipt with Metal Insert)



SAP No. (blue)	Size (mm×inch)	L1	L2	H1	H2	PCS/CTN
8010040126	20x1/2"	16.5	14	30	50	240
8010040127	20x3/4"	16.5	14	33	50	150
8010040128	25x1/2"	18	14	33	52	210
8010040129	25x3/4"	18	14	35	52	150
8010040131	32x1/2"	20.5	14	35	56	150
8010040132	32x3/4"	20.5	14	38	56	120

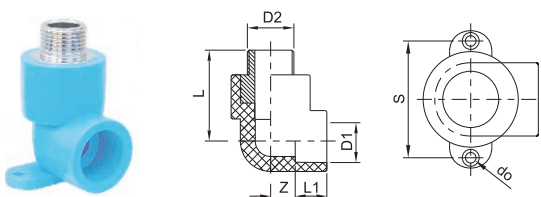
8010040130	32x1"	20.5	19	40.5	72	80
8010041402	40x1 1/4"	22.5	21	49.5	82.5	
8010042093	50x1 1/2"	25.5	21	55.5	87.5	
8010041629	63x2"	29.5	24	62.5	103	
8010041566	75x2 1/2"	33	28	74	118	

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



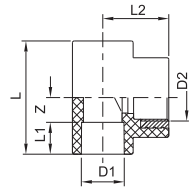
SAP No. (blue)	Size (mm×inch)	D1	D2	L	S	L1	do	PCS/CTN
8010040075	20x1/2"	20	1/2"	35	50	16	5	210
8010040076	20x3/4"	20	3/4"	35	55	16	5	180
8010040077	25x1/2"	25	1/2"	37.5	50	18	5	180
8010040078	25x3/4"	25	3/4"	37.5	55	18	5	180

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

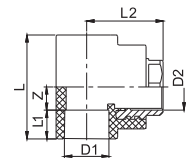


SAP No. (blue)	Size (mm×inch)	D1	D2	L	S	L1	do	PCS/CTN
8010040133	20x1/2"	20	1/2"	49	50	16	5	180
8010040134	20x3/4"	20	3/4"	49	55	16	5	150
8010040135	25x1/2"	25	1/2"	51.5	50	18	5	180
8010040136	25x3/4"	25	3/4"	51.5	55	18	5	150

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



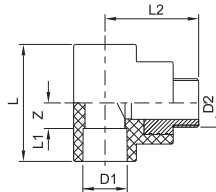
I



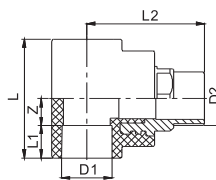
II

SAP No. (blue)	Size (mm×inch)	D1	D2	Z	L2	L1	L	PCS/CTN
8010040059	20x1/2"	20	1/2"	13.5	36	16.5	60	240
8010040060	20x3/4"	20	3/4"	16.5	36	16.5	66	210
8010040061	25x1/2"	25	1/2"	15	38	18	66	180
8010040062	25x3/4"	25	3/4"	17	38	18	70	150
8010040064	32x1/2"	32	1/2"	14.5	42	20.5	70	160
8010040065	32x3/4"	32	3/4"	17.5	42	20.5	76	144
8010040063	32x1"	32	1"	20	53	20.5	81	80
	40x1 1/4"	40	1-1/4"	28.5	61.2	22.5	102	
8010042074	50x1 1/2"	50	1-1/2"	31.5	66.5	25.5	114	
8010042075	63x2"	63	2"	36.5	78.5	29.5	132	
8010042076	75x2 1/2"	75	2-1/2"	45	89.5	33	156	

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



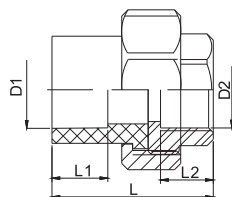
I



II

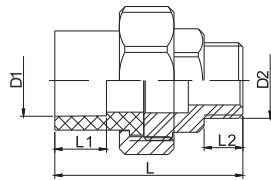
SAP No. (blue)	Size (mm×inch)	D1	D2	Z	L2	L1	L	PCS/CTN
8010040118	20x1/2"	20	1/2"	13.5	50	16.5	60	180
8010040119	20x3/4"	20	3/4"	16.5	50	16.5	66	150
8010040120	25x1/2"	25	1/2"	15	52	18	66	150
8010040121	25x3/4"	25	3/4"	17	52	18	70	120
8010040123	32x1/2"	32	1/2"	14.5	56	20.5	70	120
8010040124	32x3/4"	32	3/4"	17.5	56	20.5	76	100
8010040122	32x1"	32	1"	20	72	20.5	81	80
	40x1 1/4"	40	1-1/4"	27	82.5	22.5	99	
8010042087	50x1 1/2"	50	1-1/2"	30	87.5	25.5	111	
8010041984	63x2"	63	2"	32.25	103	29.5	123.5	
8010042088	75x2 1/2"	75	2-1/2"	41	118	33	148	

Female Thread Union (Soc×Fipt with Metal)



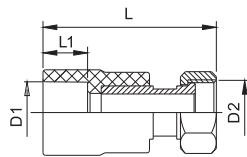
SAP No. (blue)	Size (mm×inch)	D1	D2	L1	L2	L	PCS/CTN
8010040055	20x1/2"	20	1/2"	16	16	42	180
8010040056	25x3/4"	25	3/4"	18	17	47	150
8010040057	32x1"	32	1"	20.5	18	52	90

Male Thread Union (Soc×Mipt with Metal)



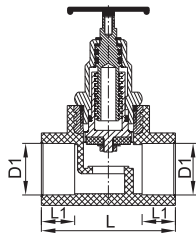
SAP No. (blue)	Size (mm×inch)	D1	D2	L1	L2	L	PCS/CTN
8010040114	20x1/2"	20	1/2"	16	14	55	150
8010040115	25x3/4"	25	3/4"	18	13.5	60	120
8010040116	32x1"	32	1"	20.5	19	71	72

Flexible Joint (Soc×Fipt with Metal)



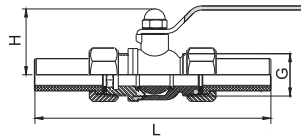
SAP No. (blue)	Size (mm×inch)	D1	D2	L	L1	PCS/CTN
8010041493	20x1/2"	20	1/2"	67	16	300
8010041513	20x3/4"	20	3/4"	68	16	240
8010041494	25x1/2"	25	1/2"	69	18	240
8010041495	25x3/4"	25	3/4"	70	18	240
8010041496	32x1"	32	1"	79	20.5	150

Stop Valve (Soc×Soc)



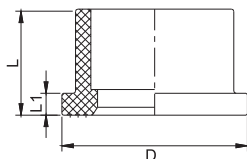
SAP No. (blue)	Size (mm)	D1	L1	L	PCS/CTN
8010040048	20	20	16	64	96
8010040049	25	25	18	74	72
8010040050	32	32	20.5	82	48
8010040051	40	40	22	85	40
8010040052	50	50	25	115	30
8010040053	63	63	29	121	20

Ball Valve (Spig×Spig)



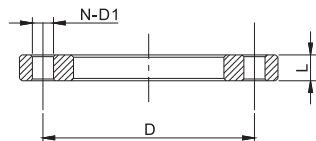
SAP No. (blue)	Size (mm)	L	G	H	PCS/CTN
8010040040	20	142	3/4"	35	96
8010040041	25	153	1"	37	72
8010040042	32	172	1-1/4"	47.5	36

Stub Flange (Soc×Flange)



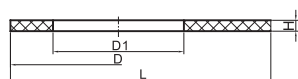
SAP No. (blue)	Size (mm)	L1	L	D	PCS/CTN
8010040009	50	10	30	84	90
8010040010	63	11	34	104	60
8010040011	75	14	38	124	

Flange (Steel Tray)



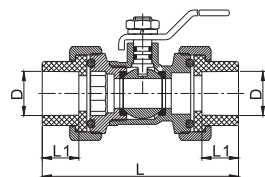
SAP No. (black)	Size (mm)	D	D1	N	L	PCS/CTN
8010041616	50 1.6MPa	110	18	4	10	
8010041617	63 1.6MPa	125	18	4	12	
	75 1.6MPa	145	18	4	15	

Rubber Gasket



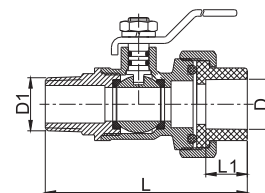
SAP No. (black)	Size (mm)	D1	D	L	H	PCS/CTN
8010040188	50	45	86	113	4	
8010040189	63	58	105	132.5	4	
8010040190	75	68	127	153.5	4	

True Union Ball Valve (Soc × Soc)



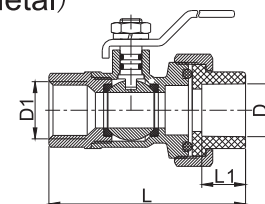
SAP No. (blue)	Size (mm)	D	L1	L	PCS/CTN
8010040040	20	20	16	85.8	
8010040041	25	25	18	93.8	
8010040042	32	32	20	103.2	

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



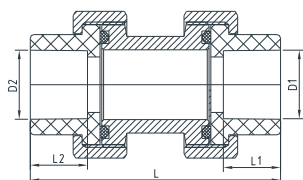
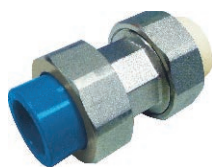
SAP No. (blue)	Size (mm)	D	D1	L1	L	PCS/CTN
8010042652	20x1/2"	20	1/2"	16	77.9	
8010042653	25x3/4"	25	3/4"	18	83.9	
8010042654	32x1"	32	1"	20	95.7	

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



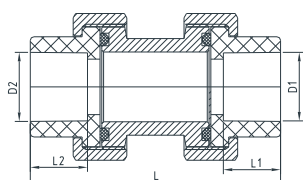
SAP No. (blue)	Size (mm)	D	D1	L1	L	PCS/CTN
8010042648	20x1/2"	20	1/2"	16	71.9	
8010070930	25x3/4"	25	3/4"	18	75.4	
8010042649	32x1"	32	1"	20	85.7	

PE/PE-RT Change Union (Soc×Soc)



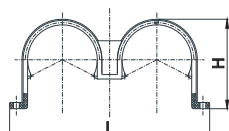
SAP No. (blue)	Size (mm×inch)	L	L1	L2	D1	D2	PCS/CTN
	20	68.2	16	16	20	20	
	25	74	18	18	25	25	
	32	82	20	20	32	32	

PPR/PE Change Union (Soc×Soc)



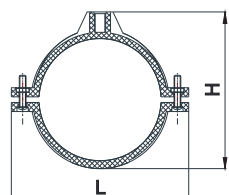
SAP No. (gray)	Size (mm×inch)	L	L1	L2	D1	D2	PCS/CTN
8010041987	20	68.2	16	16	20	20	
8010041988	25	74	18	18	25	25	
8010041989	32	82	20	20	32	32	

Double U Clamp



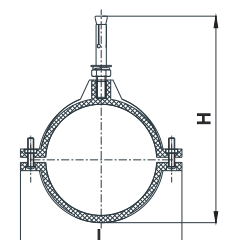
SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010042974	20	72.5	27.5	
8010042975	25	85	33.8	
8010042976	32	100.5	41	
8010042977	40	122	50	
8010042978	50	147.5	61	
8010042979	63	178	76	

Pipe Clamp I (without Screw)



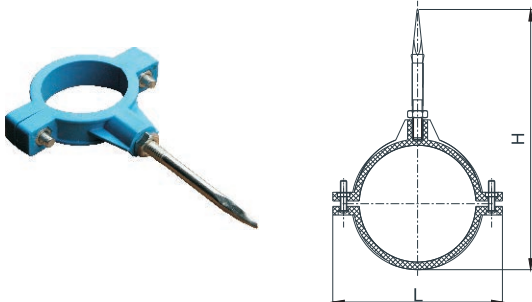
SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043001	20	49	42	
8010043004	25	54	47	
8010043007	32	64	54	
8010043010	40	72	62.5	
8010043013	50	87	73	
8010043016	63	106	87.5	
8010043019	75	118.5	101	
	90	132	115	
	110	157	138.5	
	160	207	191	

Pipe Clamp I (Screw)



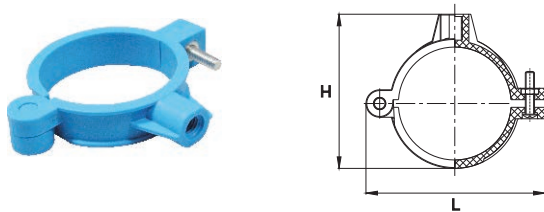
SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043002	20	49	96	
8010043005	25	54	101	
8010043008	32	64	108	
8010043011	40	72	116.5	
8010043014	50	87	127	
8010043017	63	106	140.5	
8010043020	75	118.5	154	
	90	132	178	
	110	157	200.5	
	160	207	251	

Pipe Clamp I (Tusk Screw)



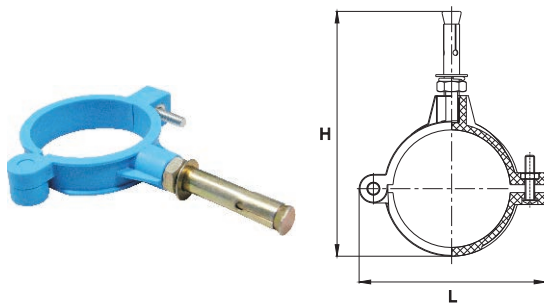
SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043003	20	49	96	
8010043006	25	54	101	
8010043009	32	64	108	
8010043012	40	72	116.5	
8010043015	50	87	137	
8010043018	63	106	150.5	
8010043021	75	118.5	164	
	90	132	218	
	110	157	240.5	
	160	207	291	

Pipe Clamp IV (without Screw)



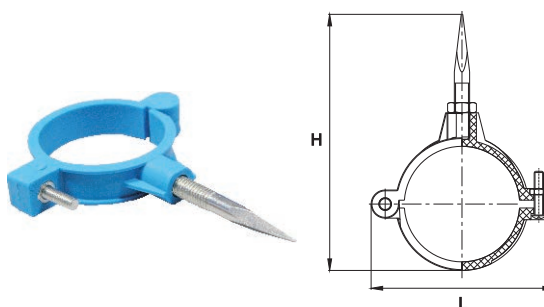
SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043038	40	72.5	62.5	
8010043041	50	88.5	73	
	63	105	87.5	
	75	117.5	101	
	90	132	115	
	110	162	138.5	

Pipe Clamp IV (Screw)



SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043040	40	72.5	111.5	
8010043043	50	88.5	127	
	63	105	140.5	
	75	117.5	154	
	90	132	178	
	110	162	200.5	

Pipe Clamp IV (Tusk Screw)



SAP No. (blue)	Size (mm)	L	H	PCS/CTN
8010043039	40	72.5	116.5	
8010043042	50	88.5	137	
	63	105	150.5	
	75	117.5	164	
	90	132	218	
	110	162	240.5	

Definitions of abbreviated configuration description follow

Soc: Socket

Fipt: Female Iron Pipe Thread

Spig: Spigot

Mipt: Male Iron Pipe Thread



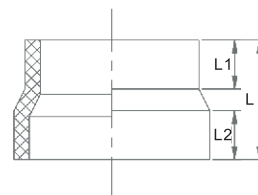
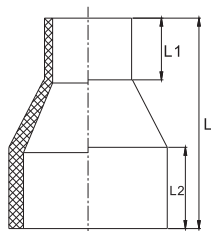
[Features]

- **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 (dn110 or above)
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

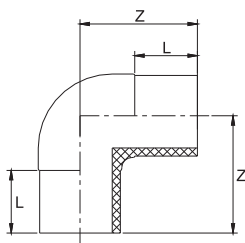
Reducer



SAP No. (blue)	SDR	Size (mm)	L1	L2	L	PCS/CTN
8010040847	11	75×63	70	75	156	60
8010040848	11	90×63	65	79	172	40
8010040849	11	90×75	70	80	164	40
8010040843	11	110×50	70	83	196	36
8010040844	11	110×63	70	80	196	36
8010041414	11	110×75	70	80	184	32
8010040845	11	110×90	70	80	169	30
8010042277	11	125×63	70	80	200	24
8010042278	11	125×90	84	98	242	24
8010042276	11	125×110	80	80	178	20
8010040846	11	160×90	80	90	242	12
8010041391	11	160×110	80	100	228	12
8010042279	11	160×125	80	80	195	12
	11	180×63	78	100	266	14
8010042280	11	180×110	100	100	239	12
8010042281	11	180×160	90	90	230	10
8010041390	11	200×110	80	100	226	6
8010041389	11	200×160	100	100	239	6
8010042282	11	200×180				6
8010042283	11	225×160	90	90	230	6
8010042284	11	225×200	90	90	206	4
8010042285	11	250×110	80	90	210	5
8010042286	11	250×160	80	90	283	3
8010042287	11	250×200	90	90	246	4
8010042288	11	250×225	90	90	206	3
8010042290	13.6	280×110				3
8010042291	13.6	280×160				4
	13.6	280×200	85	85	250	4
8010040861	13.6	315×110	90	85	225	2
8010041415	13.6	315×160	90	90	225	2
8010042292	13.6	315×200	100	100	286	2
8010040862	13.6	315×225	90	90	222	2
8010042293	13.6	315×250	90	90	240	
	13.6	315×280	85	85	201	

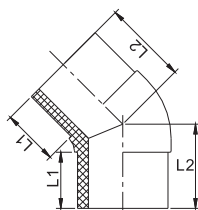
SAP No. (blue)	SDR	Size (mm)	L1	L2	L	PCS/CTN
	17	355×200	80	80	287	
	17	355×250	77	77	242	
8010042315	17	355×315	90	90	220	
	17	400×200	70	70	260	
	17	400×250	80	80	248	
	17	400×315	80	85	215	
8010042316	17	400×355				
	17	450×200	70	70	254	
	17	450×250	85	85	248	
8010042317	17	450×315	90	100	270	
8010042318	17	450×400				
	26	500×315	85	100	250	
	17	500×315	85	100	250	
	26	500×355	85	100	250	
	17	500×355	85	100	250	
	26	500×400	85	100	250	
8010042319	17	500×400	85	100	250	
	26	500×450				
	17	500×450	85	100	250	
	26	560×315				
	26	560×400				
	17	560×400	90	95	250	
	26	560×450				
	17	560×450				
	17	560×500	100	95	250	
	17	630×315	100	100	290	
	17	630×400	100	100	290	
8010042320	17	630×500	100	100	290	

90° Elbow



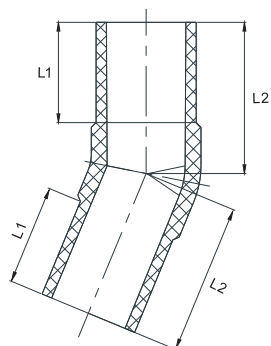
SAP No. (blue)	SDR	Size (mm)	Z	L	PCS/CTN
8010040756	11	75	132	75	30
8010040757	11	90	150	85	20
8010040753	11	110	163	87	12
8010042253	11	125	170.5	87	8
8010040754	11	160	200	100	5
	11	180	210	95	4
8010040755	11	200	225	100	3
	17	225	265	120	
	11	225	265	120	
8010042258	17	250	292	130	
8010042254	11	250	292	130	
8010043297	17	280	316	138	
	11	280	316	138	

45° Elbow



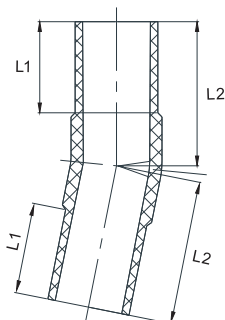
SAP No. (blue)	SDR	Size (mm)	L1	L2	PCS/CTN
8010040734	11	75	80	124	30
8010040735	11	90	85	136	18
8010041385	11	110	87	145	12
8010042245	11	125	87	150	10
8010042985	17	160	100	175	
8010043300	11	160	100	175	
8010043196	17	180	105	183	
	11	180	105	183	
	17	200	110	193	
8010043168	11	200	110	193	
8010042251	17	225	122	215	
8010042246	11	225	122	215	
8010042252	17	250	130	232	
8010042247	11	250	130	232	
8010043298	17	280	140	250	
	11	280	140	250	

22.5° Elbow



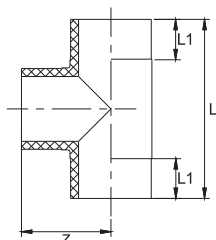
SAP No. (blue)	SDR	Size (mm)	L1	L2	PCS/CTN
	11	50	55	87	
	11	63	63	95	

11. 25° Elbow



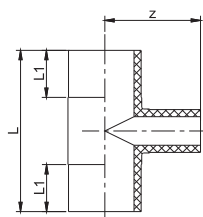
SAP No. (blue)	SDR	Size (mm)	L1	L2	PCS/CTN
	11	50	55	87	
	11	63	63	95	

Tee



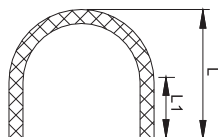
SAP No. (blue)	SDR	Size (mm)	L1	L	Z	PCS/CTN
8010040714	11	75	75	264	132	18
8010040715	11	90	85	300	150	14
8010040710	11	110	87	326	163	8
8010040711	11	125	87	341	170.5	6
8010040712	11	160	100	400	210	3
	11	180	95	420	420	3
8010040713	11	200	100	450	225	2
	17	225	120	530	265	
8010042242	11	225	120	530	265	
	11	250	130	600	300	
8010042244	17	250	130	600	300	
	11	280	138	632	316	
	17	280	138	632	316	
8010043080	17	315	150	710	355	
	11	315				
	17	355	110	660	330	
	26	355	110	672	336	
	17	400	110	724	357.5	

Reducing Tee



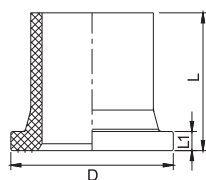
SAP No. (blue)	SDR	Size (mm)	L1	L	Z	PCS/CTN
8010040802	11	110×63	85	300	160	10
8010040803	11	110×75	85	300	160	10
8010040804	11	110×90	85	300	160	9
8010040806	11	160×63	90	330	188	6
8010042266	11	160×75	90	330	188	5
8010040807	11	160×90	90	330	188	5
8010040805	11	160×110	90	330	188	5
8010042267	11	200×90	112	420	220	
8010041387	17	200×110	100	410	226	
8010041386	11	200×110	100	410	226	
8010041973	17	200×160	100	410	226	
8010041628	11	200×160	100	410	226	
	11	250×63	130	500	250	
	17	250×110	130	510	270	
	11	250×110	130	510	270	
	17	250×160	130	510	270	
	11	250×160	130	510	270	

Cap



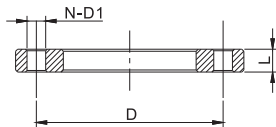
SAP No. (blue)	SDR	Size(mm)	L1	L	PCS/CTN
8010042237	11	63	50.5	82	
8010040683	11	75	75	113	100
8010042239	17	90			
8010040684	11	90	75	120	60
8010042230	11	110	74	130	40
8010042231	11	125	80	143.5	24
8010042232	11	160	98	179	15
	11	180	88	180	12
8010042233	11	200	98	199	8
8010042234	11	225	90	204	5
8010041583	11	250	97	224	4
	13.6	280	78	220	4
8010042235	11	315	74	140	
	17	355	74	120	
8010042236	11	400	74	160	

Stub Flange



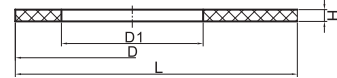
SAP No. (blue)	SDR	Size(mm)	L1	L	D	PCS/CTN
	11	50	10	86	90	
8010043062	11	63	14	100	97	
8010040588	11	75	16	125	122	48
8010040589	11	90	17	140	138	24
8010040584	11	110	18	160	158	18
8010040585	11	125	18	160	163	16
8010040586	11	160	28	180	212	6
8010042203	11	180	30	184	212	6
8010040587	11	200	32	200	268	4
8010042204	11	225				
8010042205	11	250	35	150	320	4
8010042206	11	280	38	152	324	3
8010040663	11	315	35	150	370	
	13.6	355	35	120	444	
8010042226	17	400	33	140	482	
	17	450				
	26	500	46	130	600	
	17	500	46	130	600	
	26	560	50	130	657	
	17	560	50	130	657	
	26	630	50	150	704	
	17	630	50	150	704	

Flange (Steel Tray)



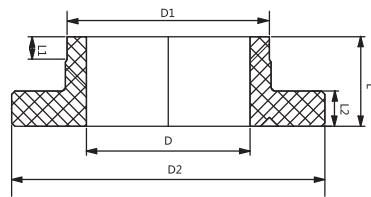
SAP No. (black)	SAP No. (blue)	Size(mm)	D	D1	N	L	PCS/CTN
SDR26 (0.6MPa)							
		1000	1120	30	28	26	
		1400	1560	36	36	27	
		1600	1760	36	40	29	
SDR21 (0.8MPa)							
8010042197		315					
8010040519		1200					
SDR17 (1.0MPa)							
8010040520	8010042676	75					
8080020300	8010042677	90					
8010040521	8010040534	110					
8010040522	8010042198	180					
8010040523	8010040535	200	295	22	8	24	
8010040524	8010042198	225	295	22	8	24	
8010040525	8010040536	250	350	22	12	26	
8010040526		280	350	22	12	26	
8010040527		315	400	22	12	28	
8010040528	8010040537	355	460	22	16	30	
8010040529	8010041582	400	515	26	16	32	
8010040530	8010040538	450	565	26	20	32	
8010040531		500	620	26	20	32	
8010040532		560	725	30	20	36	
8010040533	8010040539	630	725	30	20	36	
		710	840	30	24	36	
	8010040539	800	950	33	24	36	
8010042663		900	1050	33	28	33	
		1000	1160	36	28	38	
		1200	1380	39	32	44	
SDR13.6 (1.25MPa)							
8010040540		110					
8010040541		160					
8010042199		450					
SDR11 (1.6MPa)							
8010040554		50	110	18	4	10	
8010043028	8010043071	63	125	18	4	18	
8010040557	8010040566	75	145	18	4	18	48
8010040559	8010040567	90	160	18	8	20	36
8010040542	8010040560	110	180	18	8	22	32
8010040543		125	180	18	8	22	32
8010040544	8010040561	160	240	22	8	24	15
8010040545	8010040562	180	240	22	8	24	15
8010040546	8010040563	200	295	22	12	26	8
8010040547		225	295	22	12	26	
8010040548	8010040564	250	355	26	12	29	4
8010040549		280	355	26	12	29	
8010040550	8010040565	315	410	26	12	32	3
8010040551		355	470	25	16	34	
8010040552	8010043260	400	525	30	16	32	
8010040553	8010043261	450	585	30	20	40	
8010040555	8010043262	500	650	34	20	48	
8010041712		560					
8010040556	8010041534	630	770	36	20	54	
8010040558	8010041535	800	950	39	24	42	
8010042746		1200					

Rubber Gasket



SAP Number	Size(mm)	D1	D	L	H	PCS/CTN
8010040783	75					
8010040785	90					
8010040767	110					
8010040768	125	102	162	188	3.5	
8010042692	140					
8010040769	160					
8010040770	180	148	212	238.5	3.5	
8010040771	200					
8010040772	225	184	273	299.5	3.5	
8010040773	250					
8010040774	280	229	320	348.5	3.5	
8010040775	315					
8010040776	355					
8010040777	400					
8010040778	450					
8010040779	500					
8010040780	560	516	690	716	5	
8010040781	630					
8010040782	710	630	810	837	5	
8010040784	800	738	915	942.5	5	
	900	770	1005	1085.5	6	
	1000	860	1110	1185	6	
8010042261	1200	1045	1328	1419	6	
	1400	1280	1510	1595	6	
	1600	1465	1710	1795	6	

Long-turn Flange (One Piece)



SAP Number	Size(mm)	L1	L2	L	D1	D2	D	PCS/CTN
8010043164	125	20	26.5	80	125	102	215	



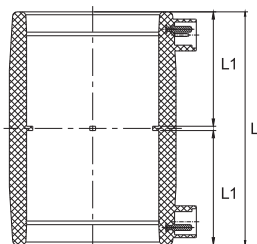
[Features]

- **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]

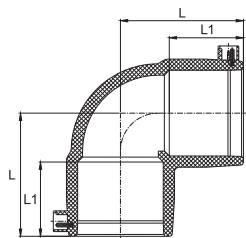
- **Non-toxic:** no heavy metal additives, would not be covered with dirt or contaminated by bacterium
- **Corrosion Resistance:** resist chemical matters and electron chemical corrosion
- **Low Installation Costs:** light weight and ease of installation can reduce installation costs
- **High Flow Capacity:** smooth interior walls result in low pressure loss and high volume
- **Longevity:** more than 50 years under proper use

E/F Coupling



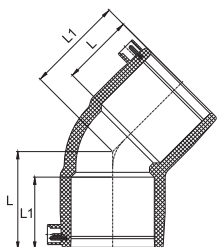
SAP No. (black)	Size(mm)	L	L1	PCS/CTN
8010040318	20	84	41	350
8010040321	25	84	41	320
8010040325	32	90	44	240
8010040327	40	100	49	180
8010040330	50	113	55	120
8010040332	63	129	63	80
8010040333	75	143	70	48
8010040334	90	161	79	32
8010040314	110	167	82	18
8010040315	125	177	87	12
8010040316	160	199	98	6
8010040317	180	213	105	4
8010040319	200	227	112	4
8010040320	225	243	120	2
8010040322	250	261	129	2
8010040323	280	273	135	2
8010040324	315	304	150	1
8010040326	355	332	164	1
8010040328	400	362	179	1
8010040329	450	394	194.5	
8010040331	500	425	210	
8010042123	630			

E/F 90° Elbow



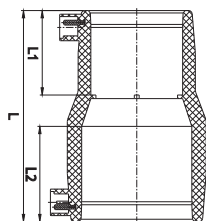
SAP No. (black)	Size(mm)	L	L1	PCS/CTN
8010040379	20	54	41	
8010040381	25	56.2	41	240
8010040384	32	65	44	160
8010040385	40	74	49	100
8010040387	50	86	55	60
8010040388	63	100	63	40
8010040389	75	114	70	24
8010040390	90	131	79	16
8010040375	110	145	82	9
8010040376	125	159	87	6
8010040377	160	190	96	4
8010040378	180	206	105	2
8010040380	200	225	112	2
8010040382	250	265	129	1
8010040383	315	320	150	
8010040386	400	395	179	

E/F 45° Elbow



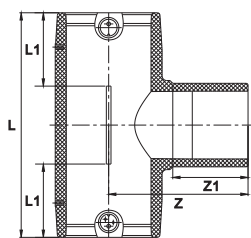
SAP No. (black)	Size(mm)	L	L1	PCS/CTN
8010040362	32	56	44	180
8010040363	40	64	49	120
8010040365	50	73	55	80
8010040366	63	85	63	50
8010040367	75	95	70	48
8010040368	90	107	79	20
8010040355	110	116	82	12
8010040356	125	127	87	8
8010040357	160	150	98	4
8010040358	180	157	105	3
8010040359	200	170	112	2
8010040360	250	202	129	1
8010040361	315	238	150	
8010040364	400	280	179	

E/F Reducer



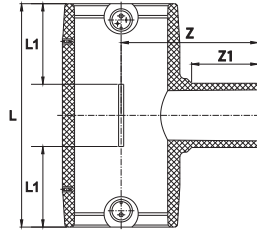
SAP No. (black)	Size(mm)	L	L1	L2	PCS/CTN
8010040493	32×25				
8010040496	40×32	105	44	49	150
8010040497	50×32	115	44	55	126
8010040498	50×40	115	49	55	100
8010040499	63×32	130	44	63	72
8010040500	63×40	130	49	63	72
8010040501	63×50	130	55	63	70
8010040502	75×63	145	63	70	48
8010040503	90×63	175	63	79	28
8010040504	90×75	175	70	79	28
8010040474	110×50	160	55	82	33
8010040475	110×63	180	63	82	20
8010040476	110×75	180	70	82	24
8010040477	110×90	180	79	82	24
8010040478	125×90	195	79	85	14
8010040481	160×90	224	79	98	6
8010040479	160×110	224	82	98	6
8010040485	200×63	250	63	112	5
8010040486	200×90	250	79	112	
8010040482	200×110	250	82	112	4
8010040483	200×160	250	98	112	4
8010040487	250×110	280	82	129	3
8010040488	250×160	280	98	129	2
8010040489	250×200	280	112	129	2
8010040490	315×160	320	98	150	
8010040491	315×200	320	112	150	1
8010040492	315×250	320	129	150	1
8010040494	400×200	370	112	179	
8010040495	400×315	370	129	179	

E/F Tee



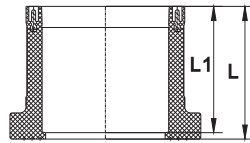
SAP No. (black)	Size(mm)	L	L1	Z1	Z	PCS/CTN
8010040289	20	98	41	41	60.5	180
8010040291	25	102	41	41	63	
8010040294	32	118	44	46	73	120
8010040295	40	136	49	51	84	70
8010040297	50	157	55	57	95	48
8010040298	63	190	63	65	115	30
8010040299	75	215	70	72	130	20
8010040300	90	242	79	81	150	12
8010040285	110	266	82	84	167	7
8010040286	125	290	87	89	181	5
8010040287	160	338	98	105	222	3
8010040288	180	368	105	107	237	2
8010040290	200	398	112	115	255	2
8010040292	250	472	129	134	301	1
8010040293	315	567	150	150	360	
8010040296	400	690	179	178	440	

E/ F Reducing Tee



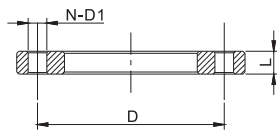
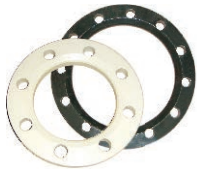
SAP No. (black)	Size(mm)	L	L1	Z1	Z	PCS/CTN
8010040434	32×20	107	44	43	70	130
8010040435	32×25	111.5	44	43	70	130
8010040441	40×20	118.5	49	43	76	90
8010040442	40×25	123	49	43	76	90
8010040443	40×32	129	49	46	79	90
8010040444	50×20	130.5	55	42	79.5	70
8010040445	50×25	135.8	55	43	81	65
8010040446	50×32	142.2	55	46	84	60
8010040447	50×40	149	55	51	89	60
8010040448	63×20	153	63	43	90	40
8010040449	63×25	158	63	43	90	40
8010040450	63×32	165.5	63	46	96	40
8010040451	63×40	172.5	63	51	101	40
8010040452	63×50	180.5	63	57	107	36
8010040453	75×40	186.3	70	51	109	
8010040454	75×50	194.2	70	57	115	
8010040455	75×63	204	70	65	123	
8010040456	90×40	197	79	51	120	16
8010040457	90×50	209.5	79	57	126	16
8010040458	90×63	219	79	65	134	15
8010040459	90×75	230	79	72	141	14
8010040403	110×50	218	82	57	140	10
8010040404	110×63	226	82	65	148	10
8010040405	110×75	238	82	72	155	9
8010040406	110×90	250	82	81	164	9
8010040408	125×63	239	87	65	160	6
8010040409	125×75	249.6	87	72	167	6
8010040410	125×90	261.6	87	81	175	6
8010040407	125×110	278.6	87	84	178	6
8010040412	160×50	249	98	57	174	4
8010040413	160×63	259	98	65	182	4
8010040414	160×75	270	98	72	189	3
8010040415	160×90	282	98	81	198	3
8010040411	160×110	298	98	84	201	3
8010043150	180×160	352	105	100	230	
8010040418	200×50	308	112	70	216	2
8010040419	200×63	308	112	70	216	2
8010040420	200×75	308	112	81	227	
8010040421	200×90	308	112	81	227	
8010040416	200×110	365	112	100	245	2
8010040417	200×160	365	112	100	245	2
8010040425	250×50	330	129	80	252	
8010040426	250×63	330	129	80	252	
8010040427	250×75	330	129	80	254	
8010040428	250×90	358	129	90	265	
8010040422	250×110	358	129	90	265	1
8010040423	250×160	430	129	110	291	1
8010040424	250×200	430	129	120	291	1
8010040433	315×90	440	150	100	325	
8010040429	315×110	440	150	100	325	
8010040430	315×160	440	150	105	325	
8010040431	315×200	514	150	120	346	
8010040432	315×250	514	150	134	346	
8010040436	400×110	453	179	82	355	
8010040437	400×160	526	179	110	390	
8010040438	400×200	526	179	112	390	
8010040439	400×250	619	179	134	415	
8010040440	400×315	619	179	163	425	

E/F Stub Flange



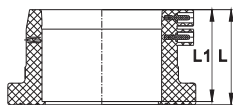
SAP No. (black)	Size(mm)	L	L1	PCS/CTN
8010040277	110	129	126	20
8010040278	160	129	124	7
8010040279	200	139	135	6
8010040280	250	143	138	3
8010040281	315	159	150	1
8010040282	400	185	175	
8010040283	500	220	210	
8010043074	630	288	255	

E/F Flange (Steel Tray)



SAP No. (black)	Size(mm)	N	D1	D	L	PCS/CTN
8010040267	110	8	18	180	22	3
8010040268	160	8	22	240	24	1
8010040269	200	12	22	295	26	1
8010040270	250	12	26	355	29	1
8010040271	315	12	26	410	32	1
8010040273	400	16	30	525	36	1
8010040274	500	20	33	650	44	
8010043076	630	20	36	770	54	

E/F Stub Flange (short)



SAP No. (black)	Size(mm)	L	L1	PCS/CTN
8010043075	110	88	85	

E/F Straight Saddle



SAP No. (black)	Size (mm)	PCS/CTN
8010042697	90x63	
8010042698	110x63	30
8010042699	125x63	
8010042700	160x63	30
8010042702	200x63	
8010042703	200x90	12
8010042705	250x90	12
8010042708	315x110	4
8010042709	315x160	3

E/F Tapping Saddle



SAP No. (black)	Size (mm)	PCS/CTN
8010042711	63x32	
8010042714	90x63	
8010042716	110x40	
8010042717	110x63	
8010042721	160x63	
8010042726	200x90	
8010042727	250x90	
8010042720	160x32	12

E/F Stop Saddle



SAP No. (black)	Size (mm)	PCS/CTN
8010041359	90	
8010041353	110	
8010041354	125	
8010041355	160	
8010041356	200	
8010041357	250	
8010041358	315	8



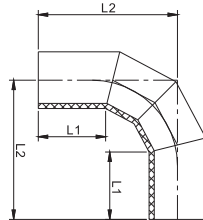
[Features]

- **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

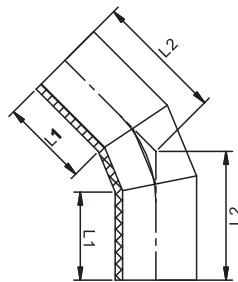
Fabricated 90° Elbow



SAP No. (black)		Size (mm)	L1	L2	PCS/CTN
1.0 MPa	1.6MPa				
8010041048	8010041062	315	374	773	
8010041049	8010041063	355	374	833	
8010041050	8010041064	400	374	900	
8010041051	8010041065	450	410	975	
8010041052	8010041066	500	405	1100	
8010041053	8010041067	560			
8010041054	8010043112	630	526	1295	
8010041055		710			
8010042450		800			

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

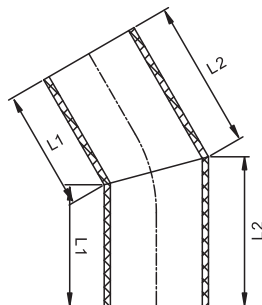
Fabricated 45° Elbow



SAP No. (black)		Size (mm)	L1	L2	PCS/CTN
1.0 MPa	1.6MPa				
8010041013	8010041030	280	340	498	
8010041014	8010041031	315	340	520	
8010041015	8010041032	355	363	548	
8010041016	8010041033	400	363	580	
8010041017	8010041034	450	400	950	
8010041018	8010041035	500			
8010041019	8010042432	560	500	1180	
8010041020	8010041985	630			
8010041021		710			
8010041022		800			

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

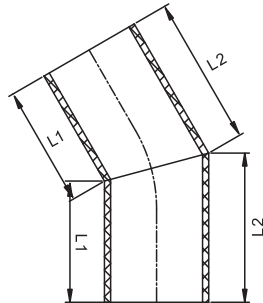
Fabricated 30° Elbow



SAP No. (black)		Size (mm)	L1	L2	PCS/CTN
1.0 MPa	1.6MPa				
8010042749	8010043296	280	325	400	
	8010042659	630			
		1200	680	1002	

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

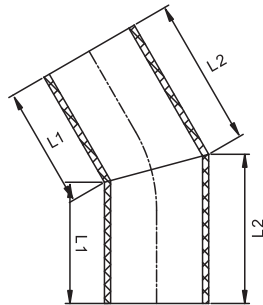
Fabricated 11.25° Elbow



SAP No. (black)		Size (mm)	L1	L2	PCS/CTN
1.0 MPa	1.6MPa				
8010041614	8010041432	125			
	8010041427	180			
8010042661		200			
8010042660	8010043221	250			
	8010041429	315			
	8010043153	630	540	602	

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

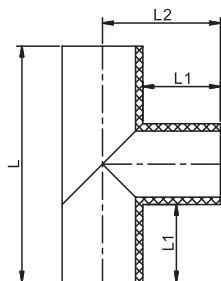
Fabricated 22.5° Elbow



SAP No. (black)		Size (mm)	L1	L2	PCS/CTN
1.0 MPa	1.6MPa				
8010043213	8010041570	90			
8010041611	8010043173	110			
8010041612	8010040986	125			
8010040981	8010042995	160			
	8010040987	180			
8010040982	8010043154	200			
8010043295	8010041430	280			
8010040983	8010040988	315			
	8010040989	450			
8010040984	8010043152	630			
8010040985		800			
		1200	680	919	

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

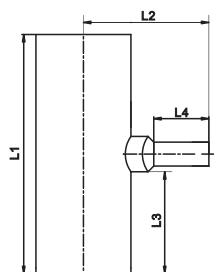
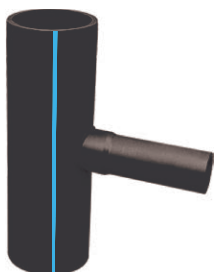
Fabricated Tee



SAP No. (black/1.6MPa)	Size (mm)	L1	L2	L	PCS/CTN
8010040926	315	300	460	920	
8010040927	355	300	480	960	
8010040928	400	300	500	1000	
8010040929	450	305	530	1060	
8010040930	500	350	600	1200	
8010040931	560				
8010043113	630	350	665	1330	

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

Fabricated Reducing Tee

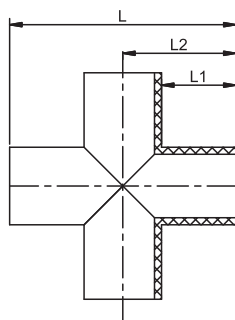


SAP No. (black/1.6MPa)	Size (mm)	L1	L2	L3	L4	PCS/CTN
8010041243	200×63	600	275	235	145	
8010041244	200×75	600	285	223	155	
8010041245	200×90	600	290	213	155	
8010041251	225×63	600	288	235	145	
8010041252	225×75	600	298	223	155	
8010041253	225×90	600	303	213	155	
8010041246	225×110	600	308	203	160	
8010041260	250×63	630	300	250	145	
8010041261	250×75	630	310	238	155	
8010041262	250×90	630	315	228	155	
8010041254	250×110	630	320	218	160	
8010041255	250×125	630	325	203	160	
8010041266	280×63	670	315	270	145	
8010042609	280×75	670	335	258	155	
8010041267	280×90	670	340	248	155	
8010041263	280×110	670	345	238	160	
	280×125	670	335	223	160	
8010041276	315×63	670	343	270	145	
8010041277	315×75	670	353	258	155	
8010041278	315×90	670	358	248	155	
8010041268	315×110	670	363	238	160	

SAP No. (black/1.6MPa)	Size (mm)	L1	L2	L3	L4	PCS/CTN
8010041269	315×125	670	368	223	160	
8010041270	315×160	670	363	203	160	
8010042754	355×63	670	358	270	145	
	355×75	670	373	258	155	
8010041282	355×90	670	378	248	155	
8010041279	355×110	670	393	238	160	
8010041437	355×125	670	393	223	160	
8010041280	355×160	670	382	203	160	
8010041287	400×63	720	380	295	145	
8010041288	400×75	720	395	283	155	
8010041289	400×90	720	400	273	155	
8010041283	400×110	720	415	263	160	
8010041284	400×125	720	425	248	160	
8010041285	400×160	720	405	228	160	
8010041292	450×63	720	400	295	145	
8010041293	450×75	720	410	283	155	
8010041294	450×90	720	425	273	155	
8010041393	450×110	720	430	263	160	
8010041290	450×125	720	440	248	160	
8010041291	450×160	720	430	228	160	
	500×63	760	430	315	145	
	500×75	760	440	303	155	
8010041296	500×90	760	455	293	155	
8010041295	500×110	760	460	283	160	
8010042612	500×125	760	470	268	160	
8010043099	500×160	760	460	248	160	
	560×110	760	485	283	160	
8010042616	560×160	760	490	248	160	
	630×63	760	500	315	145	
	630×75	760	510	303	155	
	630×90	760	530	393	155	
	630×110	760	535	283	160	
	630×125	760	540	268	160	
8010042662	630×160	760	530	248	160	

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

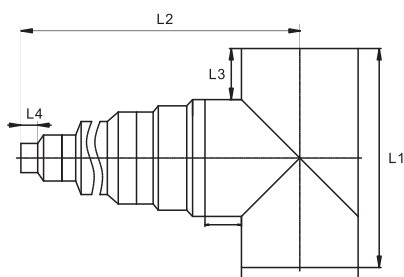
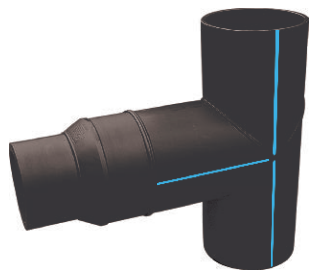
Fabricated Cross



SAP No. (black/1.6MPa)	Size (mm)	L1	L2	L	PCS/CTN
8010040957	110	150	205	410	
8010041517	125	150	215	430	
8010040958	160	150	230	460	
8010040960	200				
8010040961	225	150	250	500	
8010040962	250	150	265	530	
8010040963	280	250	350	750	
8010040964	315				
8010040965	355	300	460	920	
8010040966	400	300	480	960	
8010040967	450	300	500	1000	
8010040968	500				
	560				
	630				

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.






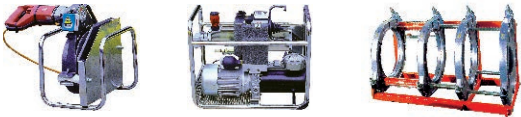

Fabricated Reducing Tee Assembly



SAP No. (black/1.6MPa)	Size (mm)	L1	L2	L3	L4	PCS/CTN
	200×50	600	315	235	30	2
8010041315	200×110	440	500	120	78	2
8010041316	200×125	440	650	120	70	3
8010041397	200×160	440	450	120	100	2
8010041317	225×125	530	705	152.5	80	3
8010041318	225×160	530	485	152.5	90	2
8010041319	225×200	530	400	152.5	90	2
	250×50	630	340	250	30	2
	250×160	600	570	165	90	2
	250×200	600	500	165	100	2
	250×225	600	450	165	90	2
	280×160	632	588	176	100	2
8010041439	280×200	632	550	176	90	2
	315×50	670	383	270	30	3
8010041322	315×180	920	800	302.5	80	3
8010041561	315×200	920	638	302.5	100	2
8010041990	315×225	920	575	302.5	90	2
	315×250	920	590	302.5	88	2
	315×280	920	550	302.5	85	2

SAP No. (black/1.0MPa)	Size (mm)	L1	L2	L3	L4	PCS/CTN
	355×50	670	398	270	30	2
	355×180	960	1050	302.5	80	4
	355×200	960	850	302.5	100	3
	355×225	960	800	302.5	90	3
	355×250	960	820	302.5	88	3
	355×280	960	785	302.5	85	3
	355×315	960	590	302.5	90	2
	400×50	720	420	295	30	3
8010041395	400×200	1000	850	300	100	3
8010041438	400×225	1000	820	300	90	3
8010041436	400×250	1000	841	300	88	3
	400×280	1000	800	300	85	3
8010041394	400×315	1000	610	300	77	2
	400×355	1000	600	300	30	2
	450×180	1060	1300	305	80	4
	450×200	1060	1173	305	100	3
	450×225	1060	1100	305	90	3
8010043133	450×250	1060	1126	305	88	3
	450×280	1060	1085	305	77	3
8010041310	450×315	1060	895	305	30	2
8010041441	450×355	1060	895	305	90	2
	450×400	1060	895	305	130	2
	500×180	1200	1390	350	80	5
8010043026	500×200	1200	1196	350	100	4
	500×225	1200	1194	350	90	4
	500×250	1200	1150	350	88	4
	500×280	1200	1110	350	85	4
8010043066	500×315	1200	920	350	85	3
	500×355	1200		350		3
	500×400	1200	710	350	110	2
	500×450	1200		350		2
	560×225	1260	1421	350	90	4
	560×280	1260	1400	350	80	4
	560×315	1260	1200	350	85	3
	630×180	1330	1800	350	80	6
8010043027	630×200	1330	1610	350	100	5
	630×225	1330	1546	350	90	5
8010042626	630×250	1330	1564	350	88	5
	630×280	1330	1300	350	85	5
	630×315	1330	1285	350	85	4
	630×355	1330		350		4
8010043103	630×400	1330	1080	350	120	3
	630×450	1330	1335	350	80	3
	630×500	1330	1055	350	60	2

Nominal Pressure is available in 0.6MPa, 1.0MPa and 1.6MPa.

Pipe Cutter 	SAP Number	Model	Application Range
	8010041504	TU 140	50~140
	8010041505	T3	100~160
		T4	180~315
Blade Scraper 	SAP Number	Model	Application Range
	8010041502	Small Scraper	1.5"
	8010041503	Big Scraper	2.0"
Rotation Scraper 	SAP Number	Model	Application Range
	8010042738	RTC160	50~160
		RTC315	75~315
Socket Fusion Welding Machine 	SAP Number	Model	Application Range
	8010041418	1000w	20~63
	8010041419	1600w	75~110
	8010041420	2500w	160
Melting Socket 	SAP Number	Model	Application Range
	8010040972		20
	8010040973		25
	8010040974		32
	8010040975		40
	8010040976		50
	8010040977		63
	8010040978		75
	8010040979		90
	8010040970		110
	8010040971		160
Butt Fusion Welding Machine 	SAP Number	Model	Application Range
	8010041410	160	63~160
	8010041411	250	90~250
	8010041382	250	110~250
	8010041553	315	160~315
		450	280~450
		630	400~630
		800	630~800
	1200	900~1200	
Electro Fusion Welding Machine 	SAP Number	Model	Application Range
	8010041972	DRJ-CA-9C	
	8010042745	DRJ-CA-15C	

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

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.



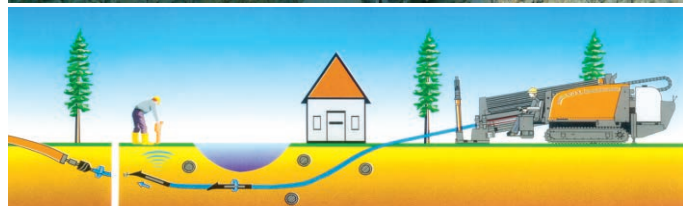
3.3b For reducing workload of joint, PE pipe in large diameter can be joint on the ground (outside the groove) before devoted into the groove.



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

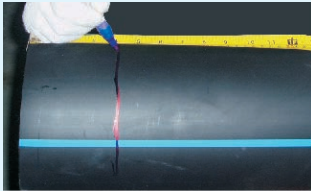
Wall Thickness (mm)	Preheating Curling Height (mm) (Preheating Temperature is 210 ± 10°C)	Preheating Time(s) (Temperature is 210 ± 10°C)	Allowed Maximum Transit Time(s)	Cooling Time for the Weld Seam under Pressure-reserving State (min)
2.0 - 3.9	0.5	30 - 40	4	4 - 5
4.3 - 6.9	0.5	40 - 70	5	6 - 10
7.0 - 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



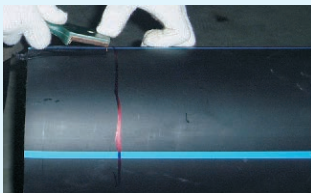
(3) Electro Fusion Joint

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**



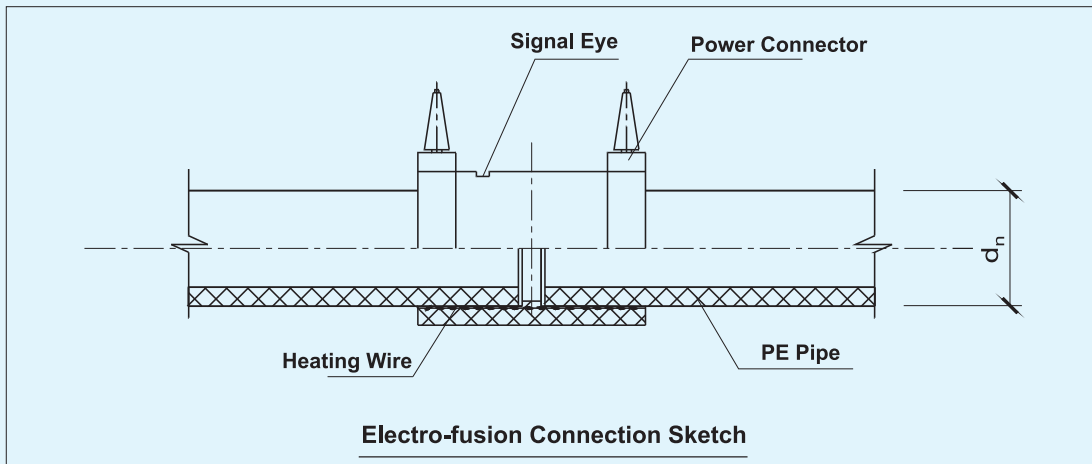
④ **Apply electric current**

- 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

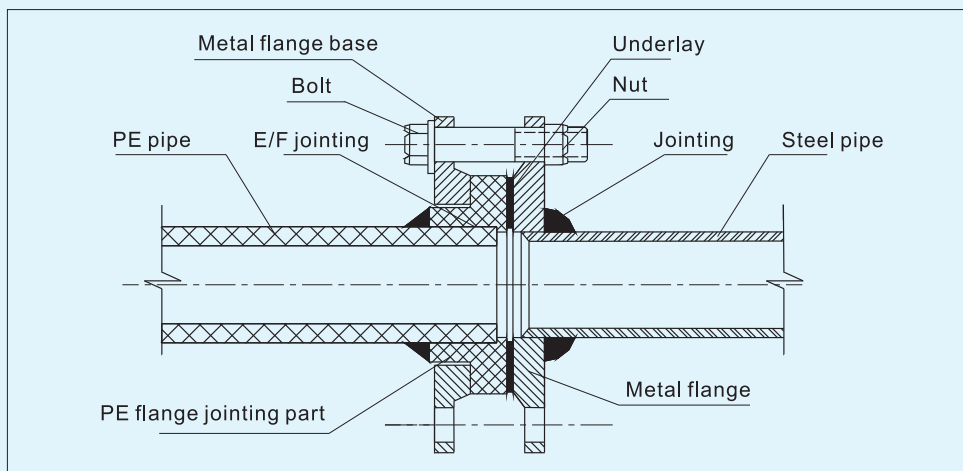
① Preparation

- 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.

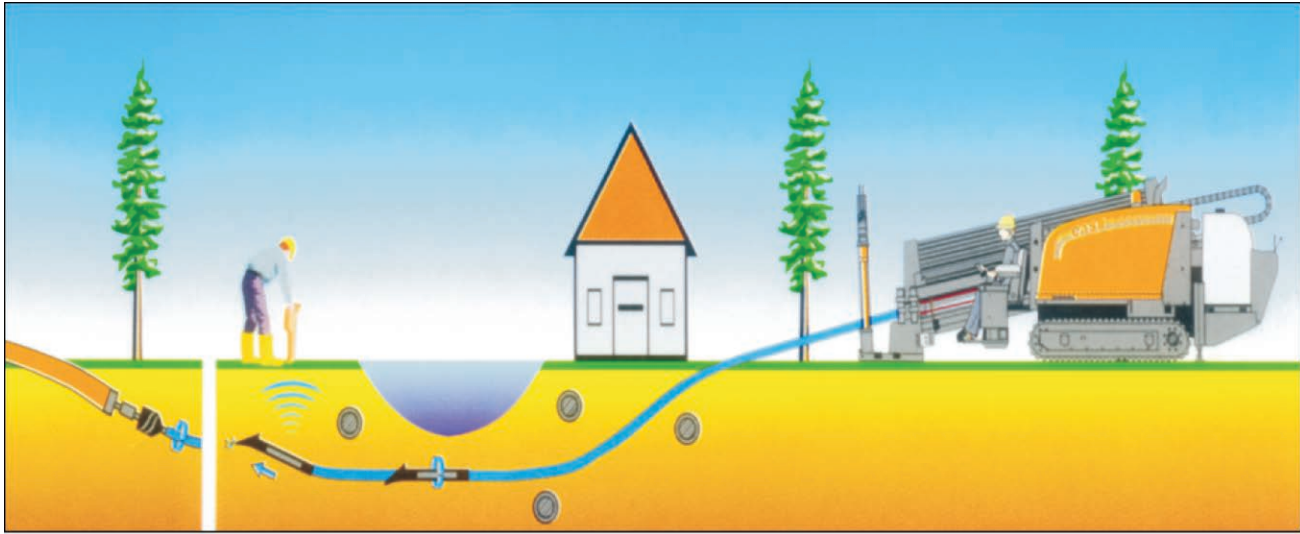


Trenchless Technology

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.



BV certification for PE water pipe and fittings comply with ISO 4427-2, ISO 4427-3, EN 12201-2, EN 12201-3, BS EN 12201-2, BS EN 12201-3.



WaterMark licence for PE water pipe comply with AS/NZS 4130, WaterMark licence for PE water pipe fittings comply with AS/NZS 4129.



CERTIFICATE OF CONFORMITY

SAI Global hereby grants:
Guangdong Liansu Technology Industrial Co., Ltd
 Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan, Guangdong China

WaterMark Certificate of Conformity – Level 1
 Evaluated to:
 AS/NZS 4130:2009 - Polyethylene (PE) pipes for pressure applications

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 Issued : 11 March 2013
 Expires : 10 March 2018

Originally Certified : 11 March 2013
 Current Certification : 11 March 2013

Paul Butcher
 Global Head – Assurance Services

Samir Chouk
 Head of Policy, Risk and Certification

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 Issued : 5 March 2015
 Expires : 8 July 2017

Originally Certified : 9 July 2007
 Current Certification : 5 March 2015

Paul Butcher
 Global Head – Assurance Services

Samir Chouk
 Head of Policy, Risk and Certification

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PE water pipe and fittings comply with BS 6920.



Our Ref: GH/M110323 & NJ/M120106
 Test Report: MAT/LAB 485D & MAT/LAB109E

4th April 2012

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

WATER REGULATIONS ADVISORY SCHEME (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 BS 6920-1:2000 '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

Liansu PE Pipe, Black Coloured, extruded polyethylene pipe. For use with water up to 60°C.

APPROVAL NUMBER: 1110503
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO LTD

The Scheme reserves the right to review approval. This approval is valid between October 2011 and October 2016.

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.wras.co.uk/directory

Yours faithfully

Jason Furnival

Jason Furnival
 Approvals & Enquiries Manager
 Water Regulations Advisory Scheme

Water Regulations Advisory Scheme Ltd.
 30 Fern Close, Potters-Fan Industrial Estate,
 Oldbath, Gwent NP23 3JX, UK.
 Tel: 01495 248434. Fax: 01495 236289.
 E-mail: info@wras.co.uk. Website: www.wras.co.uk



Our Ref: GH/M110323 & NJ/M120106
 Test Report: MAT/LAB 485D & MAT/LAB109E

4th April 2012

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

WATER REGULATIONS ADVISORY SCHEME (WRAS)
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

Liansu PE Fittings, Black coloured, injection moulded polyethylene fittings. For use with water up to 60°C.

APPROVAL NUMBER: 1110505
APPROVAL HOLDER: GUANGDONG LIANSU TECHNOLOGY INDUSTRIAL CO LTD

The Scheme reserves the right to review approval. This approval is valid between October 2011 and October 2016.

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Yours faithfully

Jason Furnival

Jason Furnival
 Approvals & Enquiries Manager
 Water Regulations Advisory Scheme

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 Oldbath, Gwent NP23 3JX, UK.
 Tel: 01495 248434. Fax: 01495 236289.
 E-mail: info@wras.co.uk. Website: www.wras.co.uk

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

شهادة - 증명서 - 證明書 - Certifi

Verification of Compliance

No. EC.1282.0B140121.GL.T0351

Certificate's Holder: Guangdong Liansu Technology Industrial Co., Ltd.
Liansu Industrial Estate, Longjiang Town, Shunde Zone, Foshan City, Guangdong Province, China

Product: PPR Pipes and Fittings, PE Pipes and Fittings, UPVC Pipes and Fittings, CPVC Pipes and Fittings

Model(s):	PPR PIPES AND FITTINGS	DN10-160mm
	PE PIPES AND FITTINGS	DN16-1600mm
	UPVC PIPES AND FITTINGS	DN12-1000mm
	CPVC PIPES AND FITTINGS	DN12-160mm

Directives: R 305/2011 Regulation for the Marketing of Construction Products

Standards: EN ISO 15874-1:2013, EN ISO 15874-2:2013, EN ISO 15874-3:2013, EN 12201-1:2011, EN 12201-2:2011, EN 12201-3:2011, EN ISO 1452-1:2009, EN ISO 1452-2:2009, EN ISO 1452-3:2010, EN ISO 15877-1:2009+A1:2010, EN ISO 15877-2:2009+A1:2010, EN ISO 15877-3:2009+A1:2010

Remark: This Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Technical Construction File (TCF) is existent for the above listed product(s). The TCF satisfactorily covers the essential requirements of the above listed Directive(s). Other relevant Directives have to be observed in case they are applicable. This Document is only valid for the equipment and configuration described and in conjunction with the TCF detailed above. Whereas the Manufacturer is responsible of the certification of the product(s) and not exempted to perform all the necessary activities before placing the product(s) on the market. The Manufacturer is also responsible of the internal production control to ensure the product(s) are in compliance with the essential requirements of the above mentioned Directive(s). This certificate can be checked for validity at www.entecerma.org

Date of issue JANUARY 2014 Expiry date JANUARY 2019

Certification Chief Manager




Certification Deputy Manager



Ente Certificazione Macchine Srl
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PE water pipe and fittings' ROHS test reports issued by SGS.

Test Report



Inspection Order No.: IN-GZ-5602-140029
Page No.: 1 of 36
Date of issue: Jul.17, 2014

INSPECTION REPORT
(non-negotiable)

- Description and Quantity of Commodity as per: PE Water Pipes & PE Pipe fittings: 52252PCS

- Name & Address of Buyer: To be advised

- Name & Address of Seller: GUANGDONG LIANSU TECHNOLOGY IND. CO., LTD
Shunde, Foshan, Guangdong, China

- Inspection Date & Place: Jul.10, 2014 in Longjiang Town, Foshan City, P.R. China

- LIC No.: To be advised

- PI No.: To be advised

- Nature of Inspection:	Item	Result
	Witness dimension check	Subject to client's evaluation
	Document review	Acceptable

- Inspector: Vissboll Huang

This is to report that we, SGS-CSTC Guangzhou Branch at the request of GUANGDONG LIANSU TECHNOLOGY IND. CO., LTD conducted the following inspection:

Inspection Findings:

Inspection during Production:

- Dimension Check:**
 - Reference documents:
 - International standard ISO 4227-3:2007 provided by LIANSU
 - Dimensions were checked by workers of LIANSU under SGS inspector's witness. Pipes and pipe fittings were tested at warehouse one by one. Found dimensions were accord with the tolerance in [ISO 4227-3: 2007 (E)] except for 63# Flange sleeve. Details found as below:

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LESSO

CHINA LESSO GROUP HOLDINGS LIMITED

(Hong Kong Listed Stock Code: 2128)

www.lesso.com

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