

EN 316L STAINLESS STEEL WATER PIPES & FITTINGS

About us

Ten years of extensive Research & Development in the field of plumbing pipes & fittings in order to solve the problem of leakage, ensure seepage free walls, hygienic water flow and to control increasing pollution hazards in various industries like chemical, pharmaceutical and food & beverage environment.

Sh. Pradeep Aggarwal, an Industrialist, with vast experience in the steel industry got success in the year 2004. He ushered in a new era of manufacturing /marketing and distribution of infrastructure related product Primegold S. S. Water Pipes & Fittings in the Indian market. Now, stainless steel has emerged as an alloy that is increasingly preferred for several plumbing projects.

Primegold 316L European Standard Grade, Stainless Steel Pipes & Fittings are one of the most hygienic pipes from the standpoint of water plumbing and environment as well. It is lightweight and can be used anywhere. Moreover it is strong enough to handle any pressure and offers easiest food grade approved plumbing.

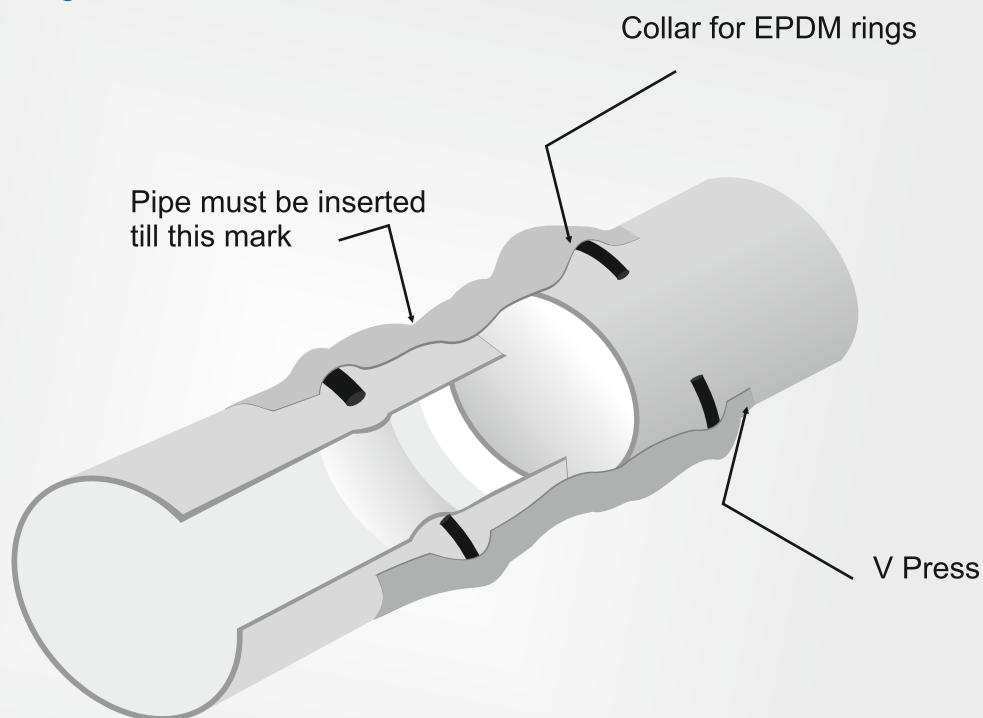
Further, Primegold Pipes & Fittings have lower friction as compared to cement lined or corroded carbon steel pipes ensuring less loss of water pressure along the pipeline. This provides an opportunity to diminish the internal diameter of the pipe and save capital cost. This is also a reason for a lower adhesion of deposits as well as lower bacteria colonization. It is also tolerant to high flow rates.



Stainless Steel Plumbing System Grade 316L European Standard

The integrated plumbing system consists of Stainless Steel Pipes & Fittings for distribution of water in various segments namely residential, commercial, industrial etc. It is available in all normal sizes used in Indian market.

V Press Fittings





Application of PRIMEGOLD STAINLESS STEEL PLUMBING SYSTEM

DRINKING WATER :

Primegold latest technology introduce Stainless Steel plumbing system is a safe and beneficial system in all application for drinking water.

HEATING/COOLING:

Primegold press fittings are ideal to use in hot/cold water system, easy to install with guarantee of a perfect seal. For higher working temperature, Brown colour o-ring that resist temperature close to 200°C is available.

COMPRESSED AIR:

Primegold press fittings are ideal for compress air system with a maximum operating pressure of 6 bars.

FIRE PROTECTION:

Primegold press fittings can bear pressure upto pn16 because it is confirm to the uni 11179 standard for class1.

TOLERATE HIGH PRESSURE OF LIQUIDS AND GASSES :

Stainless Steel Pipe is made-up of high strength material which can take the pressure upto 16 bars.

ENVIRONMENTAL BENEFIT:

Supply of water through stainless steel is quality wise better for drinking because stainless steel is corrosion free and will not cause contamination.

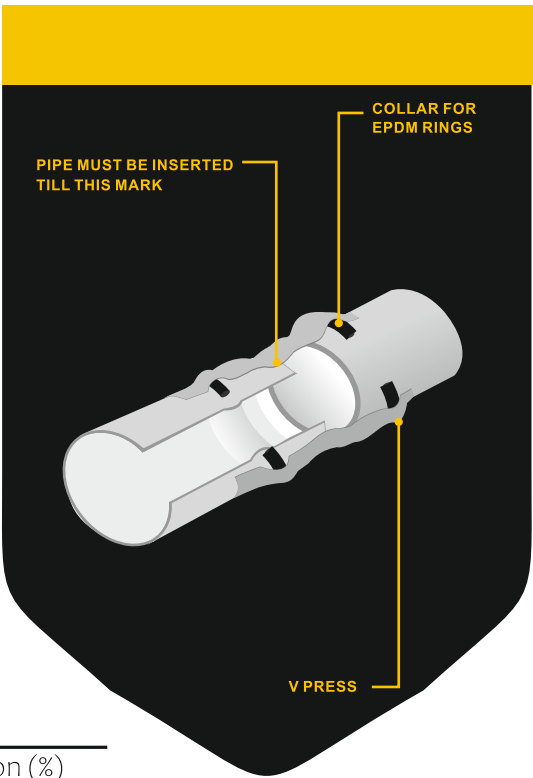
Properties of STAINLESS STEEL

Non Portable Water

Primegold 316L European Standard can be used other than portable water such as chemical/ drainage system.

Naval Construction

It can also be used in naval construction, where installation and firmness is necessary, for example in the internal tracts of ships to convey refrigerated water, water for sanitary uses or firefighting system.



Mechanical Properties

	Tensile Strength (kg/mm²)	Elongation (%)
Carbon Steel	35.5(<=30)	46.4 (<=30)
Unplasticised PVC	5.3	53
Heat Resistance Unplasticised PVC	5.3	100
Stainless Steel	73.6(<53)	47.5 (<=35)

Physical Properties

	Specific Gravity	Av. Coefcient of Thermal Expansion10 ⁻⁶ /k 0-100°C	Conductivity (cal/cm-sec°C) 0-100°C	Specific Heat (cal/g°C) 0-100°C	Electric Resistivity (μ-cm) Room Temp.	Young's Modulus	Magnetism
Carbon Steel	7.86	11.6	0.142	.115	14.2	21,000	Yes
	1.43	70	0.12×10	0.035	<=10×10 ¹⁴	-	No
Heat Resistance Unplasticised	1.56	70	0.11×10	.25	<=10×10 ¹⁴	-	No
Stainless Steel	7.93	17.3	0.039	0.12	72	19,700	No

Expansion of Pipes of Different Materials

12	Pe (Plastic)
8	Pvc (Plastic)
2.98	Zink
2.83	Lead
2.4	Aluminum
1.7	90/10 Copper-Nickel
1.65	Copper
1.65	Stainless Steel
1.1	Carbon Steel
0.9	Cast Iron

PIPES AND FITTINGS

DIMENSION

Size	OD (in mm)	Pipe Thickness (in mm)	Fitting Thickness (in mm)
1/2"	15.00	1.00	1.50
3/4"	22.00	1.20	1.50
1"	28.00	1.20	1.50
1 1/4"	35.00	1.50	1.50
1 1/2"	42.00	1.50	1.50
2"	54.00	1.50	1.50
2 1/2"	76.10	2.00	2.00
3"	88.90	2.00	2.00

* Pipe as per EN Standard



EPDM detail for Water Plumbing *

Material	Percentage	Function
EPDM Rubber	32.00%	
Filling (Calcium Carbonate)	16.00%	Stabilize, avoid D-shaper of rubber
Reinforce (N330, N550)	31.20%	Provide crack resistance
Softener (Paraffine Oil No.-300)	15.20%	Avoiding penetration due to moisture
Accelerator	01.12%	Provide high physical property
Vulcanizer	00.64%	Provide weather resistance and ageing resistance
Other	03.84%	To give shape
Total	100.00%	



Other EPDM Detail*

Material	Colour	Temp.	Function	Usage
Fluoronrubber	Brown	-30°C -170°C	16	Steam high temperature hot water
HNBR	Yellow	-40°C -150°C	16	Gas Fuel Oil

Crimping Tool

Height	: 203mm
Length	: 395 mm
Width	: 81 mm
Weight	: 3 kg
Compression Range	: 54mm



* Prior Information required for special purpose EPDM

*Suitable for Drinking water as per IS 10500
Maximum Chloride level upto 1000 ppm

Comparison Of Various PLUMBING MATERIALS

Parameter	GI	PPR	CPVC	COMPOSITE	COPPER	S.S	Why SS is better
Corrosion Resistance	1	5	5	5	4	5	Stainless Steel grades EN 316L have better corrosion resistance. Even copper has Green corrosion of Copper Sulphate which is poisonous.
Hygiene	1	3	3	4	4	5	"Food Grade, Recommended for Drinking water, Food & Pharma equipment"
Maintenance Free Life	1	3	2	1	3	5	Minimum replacement costs
Enhances Building Life	1	3	3	1	4	5	Negligible leakage, hence least damage to building
Strength of Pipes	4	2	1	1	3	5	Stainless Steel is the strongest among competing materials
Ease of Installation	2	2	3	3	2	5	Fast installation with low skill worker
Earthquake Proof	3	2	2	5	3	5	Withstands the vibrations and shocks due to its ductile nature
Cleanability	1	2	2	2	4	5	Lowest deposit buildup due to smooth surface
Food Grade	1	2	2	2	4	5	Meets all food grade standards
High Temperature Application	3	1	1	1	4	5	Retains strength at high temperature
Low Temperature Application	3	1	1	1	3	5	Is not brittle at low temperature, unlike Plastic or G.I
Fire Resistant	4	1	1	1	3	5	Withstands High Temperature
Experience of Usage	5	1	1	1	5	5	Worldwide usage experience of 30-40 years
Outside Painting Required	1	5	5	5	5	5	No need of Painting
Deposition of Algae	2	1	1	2	3	5	Smooth surface prevents algae buildup
Blockage Problem	1	2	2	2	4	5	No deposit buildup hence no blockage
Damage due to Drilling	4	1	1	1	4	5	Strongest material doesn't get damaged due to drilling
High Flow Rate of Water	2	3	3	2	3	5	Smooth and Wear resistant at High Flow rate
Low Roughness (less scaling)	1	3	3	2	4	5	Smooth surface prevents deposition
Usage in Public Building	1	1	1	1	2	5	Strong material not easily gets damaged
Wear Resistant	1	1	1	1	1	5	Not effected by sand or high flow rate
Joint Assurance System	3	1	1	1	2	5	"No welding or Solution joining. Permanent Mechanical joint checked for each joint by gauge"
Saves Pumping Energy	1	3	3	2	4	5	Smooth surface need less electricity
Water Quality affect	1	5	5	5	4	5	No change in water quality during storage
Pressure Rating	3	2	1	1	3	5	Highest design pressure rating of 25 bar
Joint Strength	2	1	1	1	2	5	Press fit joint has fool proof and high strength joint
Application Range	3	2	2	2	4	5	Used for Air, Water & many Gases
Less conduiting (Jhiri) Requirement	2	1	1	3	3	5	As pipe dia is less
High Wall Strength	3	1	1	3	3	5	Less Brick cutting for piping retains its strength
Saving in Labour Cost	1	4	5	5	1	5	Fast installation with low skill worker
Saving in Installation Time	1	3	3	5	1	5	Fast to install (approx 1/3rd time of G.I Piping)
Application in High Rise Building	3	2	2	2	4	5	Not affected by Vibration and Wind Speeds
Reduces Space requirement Shafts	2	1	1	2	3	5	Since lower dia is possible, saving in Shaft sizes possible
Life Cycle Cost	1	3	3	1	4	5	Lowest life cycle cost
Equivalent ID (NB sizes shown)	1/2"	1"	1"	1"	1/2"	1/2"	Plastics are commonly denoted by OD sizes
Low Diameter possible (eg. OD)	3/4"	1"	1"	1"	1/2"	1/2"	High flow rates, less deposits, allow for use of low diameter
Cost Index (G.I = 100%),incl. Labour	100	90	80	110	200	140	Slightly more than G.I and others
Total 5* Ratings	1	3	4	6	2	34	Highest rating in most parameters



PRIMEGOLD

S.S. WATER PIPES & FITTINGS

The Smart Choice for Plumbing:
PRIME GOLD
STAINLESS STEEL WATER
PIPES & FITTINGS

Its lightweight design allows Primegold pipes & Fittings to be used in any location and easily handle 16 bar pressure. Stainless steel is food-grade material making them the ideal choice for all plumbing projects where hygiene is of the utmost importance. Upgrade to Primegold water pipes & fittings today and experience the ultimate in plumbing performance and sanitation.



Stainless Steel ADVANTAGES AT A GLANCE



CORROSION RESISTANT

Primegold Stainless Steel Water Pipes & Fittings are corrosion resistant steel. Corrosion is phenomenon as per oxide film theory whereby a thin, stable oxide film with passive coating is formed on the surface of a metal which protects from corrosion, while other plumbing systems like GI system are faster corroding with heavy re-installation costs and minimum service life on the other hand Stainless Steel continues to serve for several years.



EXCEPTIONAL STRENGTH AND DURABILITY

Stainless Steel plumbing system are in harmony with nature, conserve energy, and easy in maintenance. As per the *CBRI report Primegold Stainless Steel Pipes & Fittings has more than 100 years life with minimum maintenance.



EASY TO INSTALLATION

Due to hydraulic or electro-mechanical pressing tools, installation of Stainless Pipe & Fittings are easy. No welding or threading of the pipe is require for installation.



REDUCE DEPOSITS AND BACTERIA

Using Primegold S. S. Water Pipes & Fittings ensures water quality of portable water which gets compromised by using non food grade plumbing system.



LIGHTWEIGHT AND VERSATILE

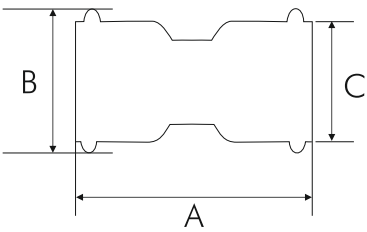
With the help of press fitting tools, pipes are joined by pressing instead of threaded joints. So, thickness of the wall is reduced. Stainless Steel Pipe is made up of high strength material, therefore is able to hold up more stress than G.I. In addition to this, the corrosion resistance of stainless steel significantly increases the life of the system.



LOW MAINTENANCE

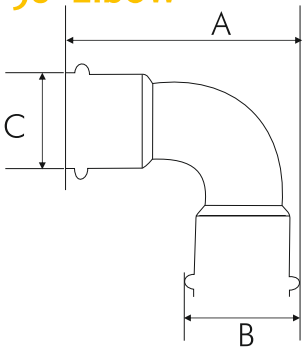
Once Primegold Stainless Steel Pipes & Fittings are installed in the building, users will be free of heavy maintenance because it is designed for a minimum 100 years of service with minimum maintenance.

Socket



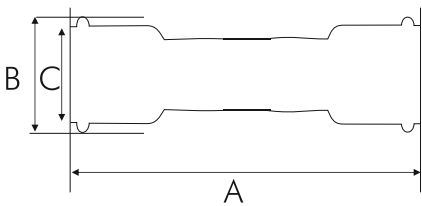
	A	B	C
1/2"	53.50	23.00	18.50
3/4"	57.40	31.40	25.70
1"	58.50	37.40	31.60
1 1/4"	67.50	44.60	38.80
1 1/2"	78.30	53.40	45.70
2"	92.40	65.50	58.00

A 90° Elbow



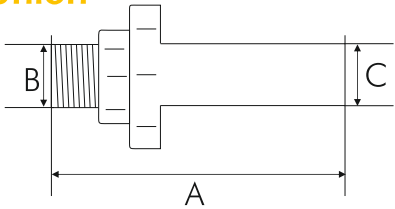
	A	B	C
1/2"	55.00	23.00	18.50
3/4"	77.00	31.40	25.70
1"	92.00	37.40	31.60
1 1/4"	109.00	44.60	38.80
1 1/2"	142.00	53.40	45.70
2"	175.00	65.50	58.00

Slip Socket



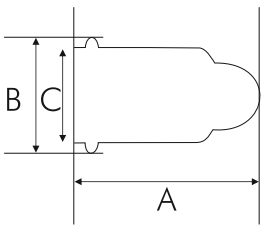
	A	B	C
1/2"	79.50	23.00	18.50
3/4"	87.50	31.40	25.70
1"	100.00	37.40	31.60
1 1/2"	119.00	44.60	38.80

Union



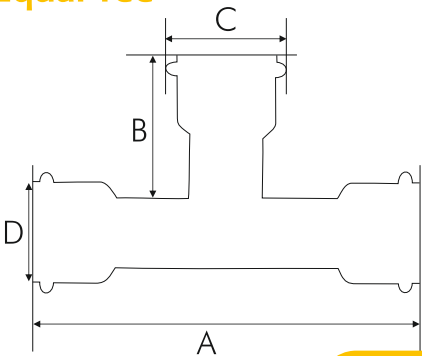
	A	B	C
1/2"	120.50	21.00	15.00
3/4"	143.00	26.00	22.00
1"	150.00	33.00	28.00
1 1/4"	159.00	41.00	35.00
1 1/2"	163.00	47.00	42.00
2"	168.00	59.50	54.00

Cap



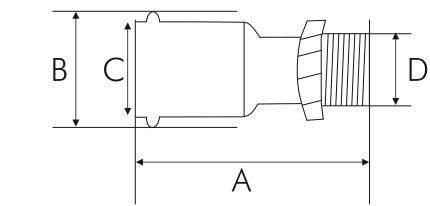
	A	B	C
1/2"	49.00	23.00	18.50
3/4"	38.00	31.40	25.70
1"	40.00	37.40	31.60
1 1/4"	44.60	44.60	38.80
1 1/2"	54.00	53.40	45.70
2"	62.00	65.50	58.00

Equal Tee



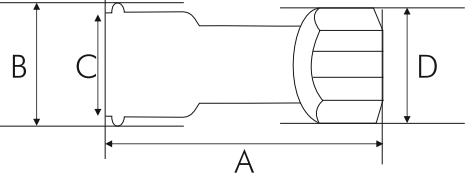
	A	B	C	D
1/2"	82.60	37.50	23.00	18.50
3/4"	88.20	41.00	31.40	25.70
1"	100.00	40.80	37.40	31.60
1 1/4"	117.60	43.80	44.60	38.80
1 1/2"	139.80	50.70	53.40	45.70
2"	184.00	54.00	65.50	58.00

Male Adaptor



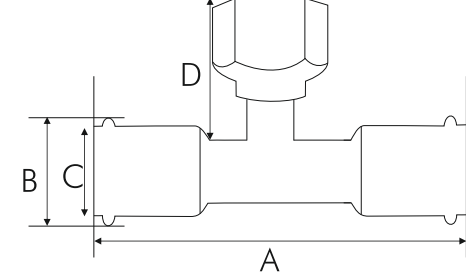
	A	B	C	D
1/2"	53.00	23.00	18.50	21.00
3/4"	55.50	31.40	25.70	26.00
1"	61.20	37.40	31.60	33.00
1 1/4"	80.00	44.60	38.80	41.50
1 1/2"	80.00	53.40	45.70	47.00
2"	94.50	65.50	58.00	59.50

Female Adaptor



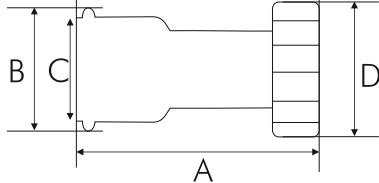
	A	B	C	D
1/2"	48.80	23.00	18.50	27.60
3/4"	67.30	31.40	25.70	34.20
1"	58.00	37.40	31.60	41.20
1 1/4"	75.60	44.60	38.80	57.60
1 1/2"	77.50	53.40	45.70	68.60
2"	102.00	65.50	58.00	80.50

Branch Tee Female Outlet



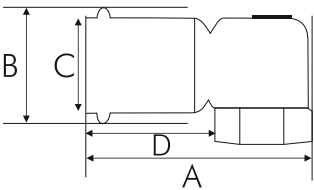
	A	B	C	D
1/2"	82.20	23.00	18.50	24.00
3/4"	88.20	31.40	25.70	33.20
1"	99.80	37.40	31.60	32.80

Valve Connector



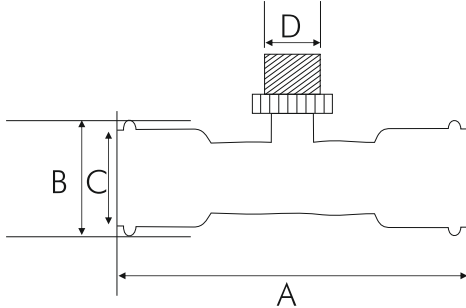
	A	B	C	D
1/2"	57.40	23.00	18.50	28.20
3/4"	53.50	31.40	25.70	34.50
1"	59.00	37.40	31.60	41.00
1 1/4"	67.70	44.60	38.80	51.00
2 1/2"	64.70	31.40	25.70	28.00

90° Female Elbow Short

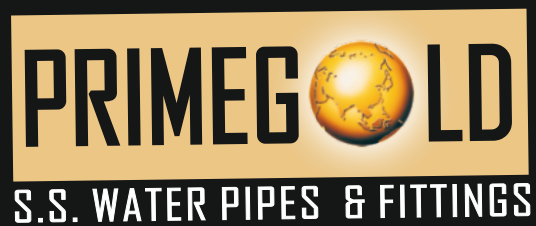


	A	B	C	D
1/2"	63.70	23.00	18.50	34.00
3/4"	63.00	31.40	25.70	35.00
1"	83.00	37.40	31.60	40.00

Branch Tee Male Outlet



	A	B	C	D
1/2"	81.50	23.00	18.50	26.00
3/4"	90.20	31.40	25.70	34.00
1"	99.80	37.40	31.60	35.00
2 1/2"	88.00	31.40	25.70	31.00



Get In Touch

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