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Gulf Manufacturers Co.

PP DRAINAGE SYSTEMS

GM PIPE AND FITTINGS

Gulf Manufacturers Co.

GMPIPE.COM

GM PP
DRAINAGE SYSTEM

Gulf Manufacturers Co.

PIPES
AND FITTINGS

WITH **GERMAN**
TECHNOLOGY

Gulf Manufacturers Co.

PP DRAINAGE SYSTEMS

GM PIPE AND FITTINGS

GMPIPE.COM

Gulf Manufacturers Co.

SUCCESS STORY

PP drainage system pipes and fittings
with German technology under brand name of **GM.**

- **GM** as the biggest infrastructure leader for pipes networks (sewage, drainage, water, gas....etc.), started this new business to achieve requirements of national and international markets.
Pipe's range from OD 32 till 160 mm, furthermore GM designs and produces connections and special fittings using technology of injection mould.
Knowing the product's quality is playing most important role for the positioning of company by the market and consequently.
On the development of company, GM from the beginning decided to follow a quality policy already established, which assuring that:-

- Products and services satisfy customer's expectations and all needs of more developed market by respecting all effective laws and rules.
- Quality rate at the highest possible level according to GM target.

- **GM** optimized the managing of all aspects that related to environmental impacts, as example, emissions in air, wastes limitations, recycling, reusing, transportation and disposal, the promptness in emergences managing though specific procedures.

- **GM** work instructions are certified according to ISO 14001.

Gulf Manufacturers Co.

SUCCESS STORY

GM optimized all managing of all aspects for equipment and labors in order to achieve all healthy requirements, **which leads GM to be certified for ISO 18001.**

- **GM** still stick on priority of investments and modernizing for facing up all markets challenges and get through future, counting on its relevant human potential and in force of its orientation to search for the best production technologies, working security and the environmental respect.

- **GM** team is highly motivated and experienced individuals who are dedicated for helping customers to achieve their goals.

- **GM** believed in building a long-term business relationship with our customers based on confidence and reliability.

PP DRAINAGE SYSTEM ADVANTAGES

PP DRAINAGE SYSTEM (PIPES AND FITTINGS)

HAS MUCH IMPACT STRENGTH AND CONSIDERABLE LOWER OF BRITTLE POINT SUCH THAT IT IS WELL BELOW NORMAL SERVICE TEMPERATURE (15- TO 20- C°) BESIDES OTHERS ADVANTAGES AS FOLLOWS:-

- Excellent chemical resistance which lead to increases reliably for drainage applications.
- High thermal resistance which more durable with environmental changed.
- High stress crack resistance which prevents the inching growth cracks.
- Low density which lead to less weight and easy for handling in site.
- Smooth surface which increasing the flow ducts less friction.
- Using rubber ring push system which easy connection as the lip seal already installed in socket by GM.

PP PIPE DIMENSIONS

PP pipe specified by outside diameter, GM produce the most diameter required in market with different length (300 ,150 ,100 ,75 ,50 and 600 cm), as the rubber ring must be inserted in pipe or fitting.

ALL PIPE AND FITTINGS
FABRICATED ACCORDING TO EN 1-1451

DN / Pipe Series	Pipe Series					
	S 20		S 16		S 14	
	Wall thickness (mm)					
	Min.	Max.	Min.	Max.	Min.	Max.
32	1.8	2.2	1.8	2.2	1.8	3.0
50	1.8	2.2	1.8	2.2	1.8	3.0
63	1.8	2.2	2	2.4	2.2	3.1
75	1.9	2.3	2.3	2.8	2.6	3.1
110	2.7	3.2	3.4	4	3.8	4.4
160	3.9	4.5	4.9	5.6	5.5	6.3

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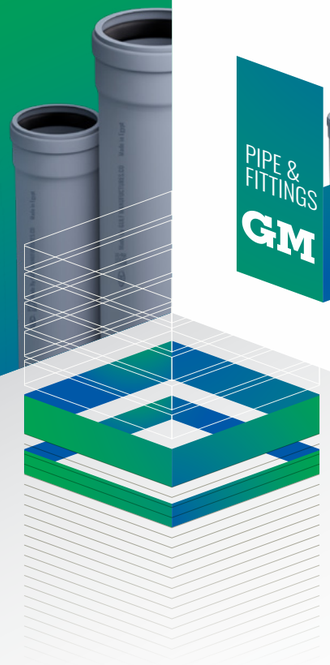
PP PIPE & FITTINGS APPLICATION



APPLICATION

- Soil and waste discharge (low and high temperature) inside buildings in this case the products must be marking by code B.
- Soil and waste discharge (low and high temperature) for both inside buildings and buried in the ground within building structure, in this case the products must be marking by code BD.
- Rainwater pipe network within the building structure.

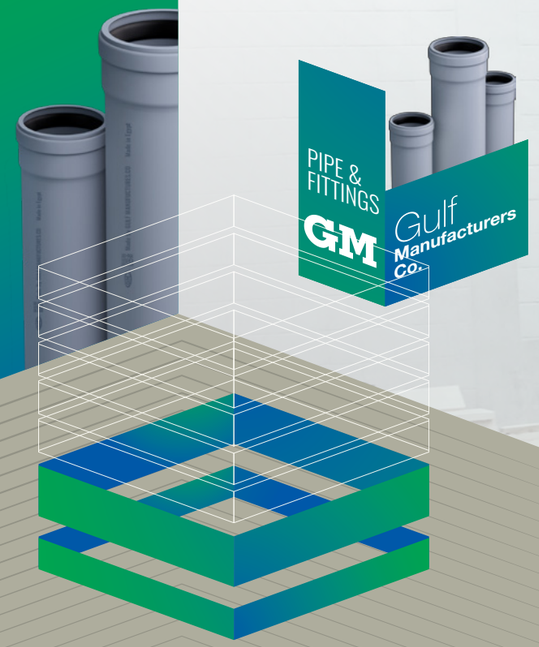
NOTE

For use buried in the ground within the building structure are intended only those components marked with BD, with dimensions equal to or greater than 75 mm and nominal ring stiffness of at least SN4.

HOW DO YOU CONNECT PP DRAINAGE PIPE?

- Inspect the socket and remove any foreign matter.
- Use a clean rag or brush to lubricate the socket with pipe lubricant.
- Clean spigot end of pipe.
- Using clean rag or brush to lubricate exposed gasket with pipe lubricant.
- Don't allow lubricant parts to touch dirt.
- Place spigot into socket and align pushing spigot into socket always push spigot ends into socket not socket into spigot.

PP PIPE & FITTINGS
QUALITY CONTROL

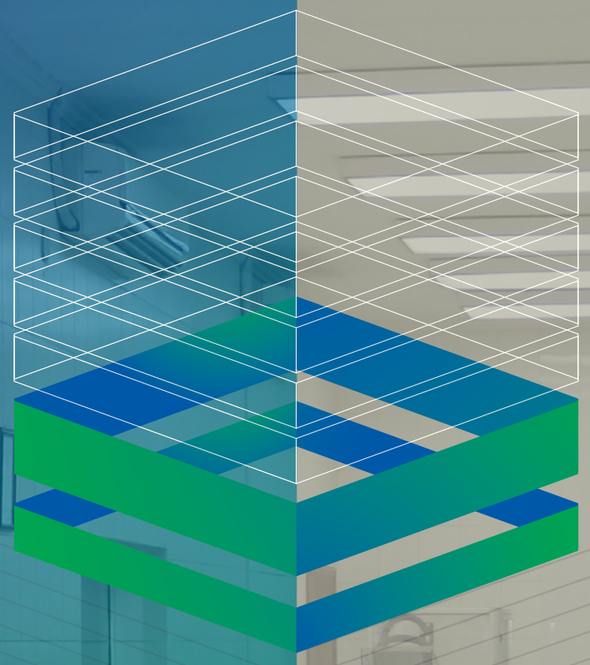


All Pipes Produced According To En, DIN & ISO Standards Which Is Obey To The Inspection And Tests As Follows:

- Melt mass flow.
- Thermal stability (OIT).
- Appearance.
- Colour.
- Marking.
- Geometrical characteristics.
- Impact resistance.
- Longitudinal reversion.
- Resistance to internal pressure.
- Ring stiffness.

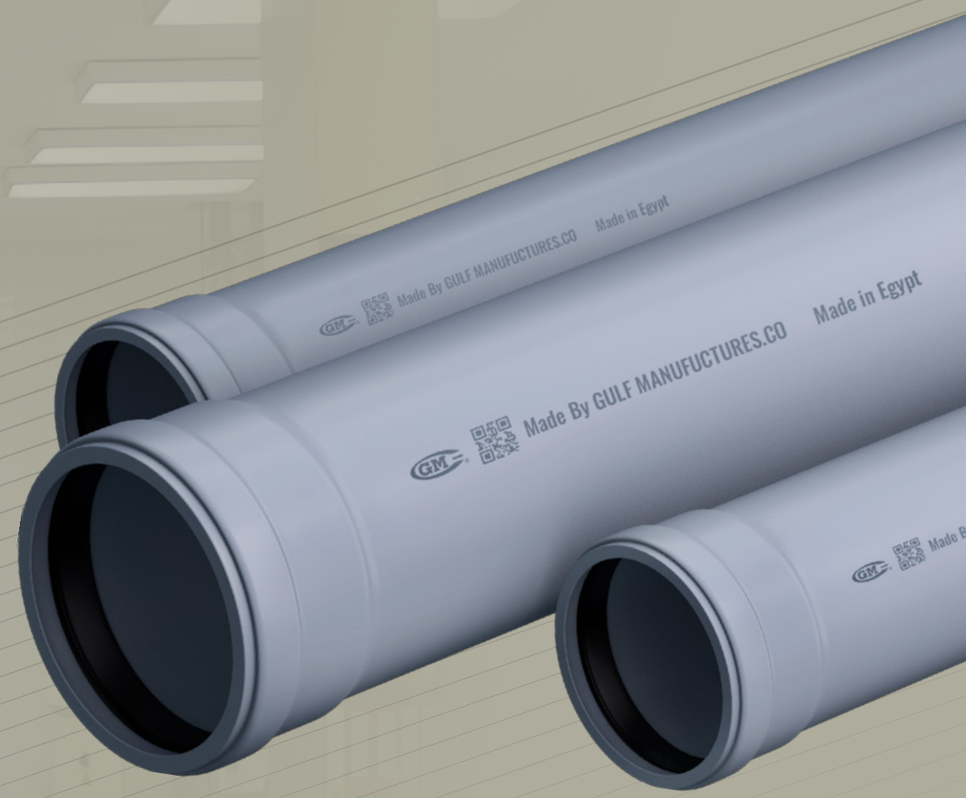
STORAGE & HANDLING

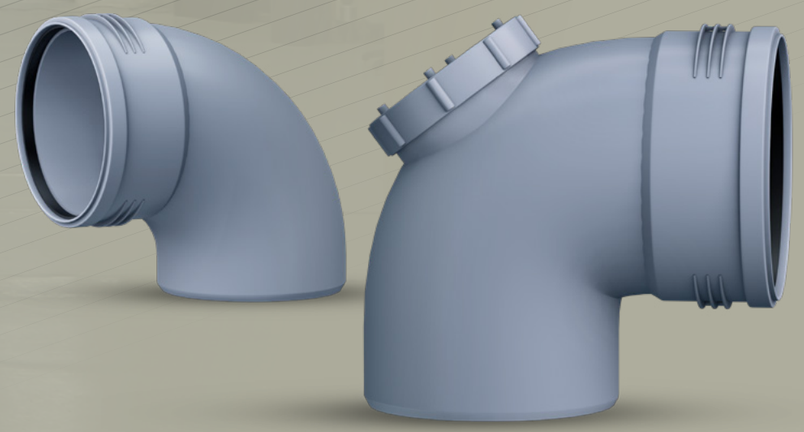
- Storage area must be away from sunrays.
- Storage area must be away from any sharp edges and stones.
- Storage area must be away from any heat source.
- Pipe must be stored in bundles as picture.
- You must follow osha safety requirements.



CHEMICAL
RESISTANCE TABLES

Gulf Manufacturers Co.





Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Acetone	100	+	P	
Alums of all types, aq.	F	+	+	
Aluminium salts, aq.	F	+	+	+
Ammonia, gaseous	100	+	+	
Ammonia, aq	conc	+	+	
	10	+	+	
Ammonium acetate, aq.	F	+	+	+
Ammonium carbonate, aq	F	+	+	+
Ammonium chloride, aq.	F	+	+	+
Ammonium nitrate, aq	F	+	+	+
Ammonium phosphate, aq	F	+	+	+
Ammonium sulphate, aq.	F	+	+	+
Amyl alcohol, pure		+	+	
Aniline	100	+	*	
Barium salts	F	+	+	+
Benzaldehvde	100	+		
Benzaldehyne, aq	sat	+		
	(0.3)	+		
Benzoic acid	100	+	+	
Benzoic acid, aq	sat	+	+	+
Benzene	100	-	N	
Boric acid	100	+	+	
Boric acid, aq.	sat	+	+	
	(4.9)			
Bromine, liquid	100	N		
Bromine vapours	high	N	N	
Bromine vapours	low	P	N	
Bromine water	sat	N	N	
Butane, liquid	100	+		
Butane, gaseous	100	+	+	
n-Butyl alcohol (n-Butanol)	100	+	+	+
Calcium chloride, aq.	sat	+	+	
Calcium nitrate, aq.	sat	+	+	
Chlorine, liquid	100	N		
Chlorine, gaseous, damp	10	P	N	N
Chlorine, gaseous, dry	100	N	N	N
Chloroform	-	N		
Chlorobenzene	100			
Ether, see diethly ether				
fermentaon amyl alcohol				
Formic acid	98	+	P	
	90	+		
	50	+	+	
	10	+	+	+
Petrol, see fuels				
Succinic acid, aq.	sat	+	+	

Chemical Resistance				
Pharmaceuticals and cosmetics	Conc.%	°20c	°60c	°100c
Ace c acid (glacial)	100	+	P	N
"Ace c acid, aq. (ct. also	F	+	+	
vinegar)"	50	+	+	
Ace c anhydride	100	+		
Chiorine water	100	N	N	
Hydrogen chloride, gaseous	sat	P	N	
(ct. also hydrochloric acid)	high	+	+	
Chloroethane2	100	N		
"Chromium salts (bivalent and	F	+	+	+
trivalent), aq."	low	+	+	
Chlorosulphonic acid				
Chromium troxide, aq.	sat	+	+	
(chromic acid)	sat	+	N	
Cyclohexane	20	+	P	
Cyclohexanol	100	+		
Cyclohexanone	100	+	+	
Decahydronaphthalene	100	+	N	
Diethyl ether	100	P-	N	N
Dibutyl phthalate, see	100	P		
plas cizers				
Dimethylformamide	100	+		
-4, 1Dioxan	100	+	P	N
Iron salts, aq.	sat	+	+	+
Ethyl acetate (ace c ester)	100	P	P	
Butyl acetate	100	+	P	
Ethanol, not denatured	100	+		
Ethanol, aq., not denatured	96	+	+	
	50	+	+	
	10	+	+	
Ethyl benzene	100	P	N	
Formaldehyde, aq.	40	+	+	
Dichloroethane	100	P	P-	
Glycerol	100	+	+	
Glycerol, aq.	high	+	+	
	low	+	+	
Glycol	100	+	+	+
Glycol, aq.	high	+	+	
	low	+	+	+
-2Ethyl hexanol	100	+		
Hydrotiuoric acid	40	+	+	
	30	+	+	
	10	+	+	

Keys :

P = practically resistant
+ = resistant
N = not resistant
No: (F) = any concentration
low = low concentratio

stand. = standard
customary conc. = concentrated solution
serv = service concentration
Disc. = discoloured

sat.= cold saturated
b.p. = boiling point
aq. = aqueous solution

Chemical Resistance				
Pharmaceuticals and cosmetics	Conc.%	°20c	°60c	°100c
Aspirin		+		
Camphor		+		
Hair shampoo		+	+	
Menthol		+		
Nail polish1		+	P	
Nail polish remover 1		+	P	
Perfume 2		+		
Soap, bar	sat.	+	+	
Soap solution	10	+	+	
		+	+	
Quinine		+		
Vaseline		+	P	+
Tincture of iodine, DAB 6	disc +			
[DAB=German Pharmacopoeia]				
Toothpaste		+	P	

Pharmaceuticals and cosmetics	Conc.%	°20c	°60c	°100c
Foodstutis and Luxury Items				
Apple purée		+	+	
Apple juice		+	+	P+
Beer		+		
Butter		+	+	
Buttermitk		+		
Bitter almond tiavouring		+		
Coca-Cola®		+		
Egg (raw and cooked)		+	+	P+
Fish, pickled		+	+	P+
Fruit juices		+	+	
Orange juice		+	+	
Orange peel		+		
Orange peel		+		
Gravy		+	+	P+
Peanut oil		+	P+	P-
Vinegar	satnd.	+	+	
Pineappte juice		+	+	
Vinegar essence 3	satnd.	+	+	
[DAB=German Pharmacopoeia]				
Foodstutis and Luxury Items				
Apple purée		+	+	
Apple juice		+	+	P+
Beer		+		
Butter		+	+	
Buttermitk		+		
Bitter almond tiavouring		+		
Coca-Cola®		+		
Egg (raw and cooked)		+	+	P+
Fish, pickled		+	+	P+
Fruit juices		+	+	
Orange juice		+	+	
Orange peel		+		
Orange peel		+		
Gravy		+	+	P+
Peanut oil		+	P+	P-
Vinegar	satnd.	+	+	
Pineappte juice		+	+	
Vinegar essence 3	satnd.	+	+	
[DAB=German Pharmacopoeia]				

Chemical Resistance				
Pharmaceuticals and cosmetics	Conc.%	°20c	°60c	°100c
Foodstutis and Luxury Items				
Apple purée		+	+	
Apple juice		+	+	P+
Beer		+		
Butter		+	+	
Buttermitk		+		
Bitter almond tiavouring		+		
Coca-Cola®		+		
Egg (raw and cooked)		+	+	
Fish, pickled		+	+	
Fruit juices		+	+	
Orange juice		+	+	
Orange peel		+		
Orange peel		+		
Gravy		+	+	P+
Peanut oil		+	+	P-
Vinegar	satnd.	+	+	
Pineappte juice		+	+	
Vinegar essence 3	satnd.	+	+	
[DAB=German Pharmacopoeia]				

Chemical Resistance				
Pharmaceuticals and cosmetics	Conc.%	°20c	°60c	°100c
Foodstutis and Luxury Items				
Apple purée		+	+	
Apple juice		+	+	P+
Beer		+		
Butter		+	+	
Buttermitk		+		
Bitter almond tiavouring		+		
Coca-Cola®		+		
Egg (raw and cooked)		+		
Orange peel		+		
Orange peel		+		
Gravy		+	+	P+
Peanut oil		+	P+	P-
Vinegar	satnd.	+	+	
Pineappte juice		+	+	
Vinegar essence 3	satnd.	+	+	
Lard		+	+	P
Mustard		+		
Soda water		+		
Soya bean oil		+	P	
Starch, starch soluon, aq.	F	+	+	
Tea, ready to drink		+	+	*
Tea leaves		+	+	
Tomato ketchup		+	+	
Tomato juice		+	+	
Vanilla		+	+	
Wine, mulled wine		+	+	
Whisky	40	+		
Sausage		+	+	
Lemon flavouring		+		
Lemon peel		+		
Lemon peel oil		+		
Lemon juice		+	+	
Salt, dry		+	+	+
Salted herrings		+	+	+
Sale water		+	+	+
"Sauerkraut (pickled cabbage) ready to	disc +			
serve"	F	+	+	*
Sugar dry		+	+	+
Sugar soluons	F	+	+	*
Sugar-beet syrup		+	+	*

Chemicals	Conc.%	°20c	°60c	°100c
Brandy		+	+	
Cinnamon (powder)		+		
Cinnamon (scks)		+		
Cooking oil, vegetable		+	P	
Citric acid, see Chemicals		+	+	
Cooking oil, animal		+	P	
Cream, whipped cream		+		

Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Citric acid, aq.	sat.	+	+	+
Carbon tetrachloride	100	P	N	
Silver salts, aq.	sat.	+	+	
Stearic acid	100	+		
Tetrachloroethane	100	P-	N	
Tetrachloroethylene	100	P	N	
(perchloroethylene)				
Tetrahydrofuran	100	P	N	
Tetrahydronaphtalene	100	P	N	
Thiophene	100	P	N	
Toluene	100	P	N	
Trichlorethylene	100	P	P	
Water	Water	+	+	+
Hydrogen Perioxide, aq.	90			
	30	+	P	
	10	+	+	
	3	+	+	+
Tartaric acids, aq.	sat.	+	+	
Xylene	100	P	N	
Zinc salts, aq.	sat.	+	+	+
Tin (W) chloride	sat.	+	+	

Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Detergents, synthec2	serv.	+	+	+
Tar		+	P	
Fuels:				
Precipitaon naphtha per DIN 51635		+	P	
Petrol, regular		*	N	
Oil of turpenne		0	N	
White spirit		+	P	
Ink1		+	+	
Transformer oil		+	P	
Petrol, super		P	N	
Diesel oil1		+	P	
Detergents U	High	+	+	
Water glass		+	+	
Hydrogen peroxide, see chemicals				
Plascizers :				
Dionyl phthalate		+		
Dioctyl adipate		+		
Dioctyl phthalate		+		
Tricresyl phosphate		+		
Trioctyl phosphate		+		
Two-stroke engine oil		P	P	
Plascizers :				
Dibutyl phthalate		+	P	
Dibutyl sebacate		+		
Dihexyl phthalate		+		
Dionyl adipate		+		

Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Alum		+	+	
Asphalt		+	P	
Batery acid	sat.	+	+	
Borax, aq.	sat.	+	+	
Brake fluid		+	+	
Bleaching lye/liquor		P	P	
(%12 effectve chlorine)				
Chlorinated lime		+	+	
(arqueous suspension)				
Chromium baths, techn		+	+	
Chromic-sulphuric acid mixture		N	N	
Diesel oil, see fuels				+
Dixan lye	sat.	+	+	
Floor polish/wax		+	P	
Petrol, see fuels				

Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Anfreeze (car		+	+	
Aqua regia		+	N	
Dishwasher fluid		+	+	+
Heang fuel oils1		+	P	
Bone oil		+	P+	
Cresol soluon		+		
Lanolin		+	P	
Linseed oil		+	+	
Pine-needle oil		+	P+	
Fixing salt (ct. also sodium	10			
thiosulphate)		+	+	
Formalin		+	+	
LITEX		+	+	
Lysol		+	P	
Mineral oils (free from aromacs)		+	P	N
Furniture polish		+	P	N
Engine oils (car)		+	P	N
(cf. also two-stroke engine oils				
and oil in accordance with ASTM)				
Moth balls		+		
Oleum	F	N	N	
"Oil NO.3 in accordance with ASTM D				
59-380"	100	+	P	N
Paraffin	100	+	+	N
Liquid paraffin	100	+	P	N
Pecn	sat.	+	+	
Petroleum ether	100	+	P	
Photographic developer1	satnd.	+	P	
Kerosene	100	+	P	
	serv,	+	+	
Scots fir oil		+	P+	
Sagrotan		+	P	
So soap		+	+	
Typewriter oil		+	P+	
Shoe polish		+	P	
Seawater		+	+	+
Silicone oil		+	P+	
Soda, see sodium carbonate				

Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Cresol	sat.	+	+	+
Cresol, aq.	100	+	P	
	sat.	+	P	
Copper salts, aq.	(0.25)			
Heptane	100	+	P	
Hexane	100	+	P	
Isooctane	100	+	P	
-2Propanol	100	+	+	
Caustic potash solution	50	+	+	
	25	+	+	
	10	+	+	
Magnesium salts, aq.	sat.	+	+	+
Methyl ethyl ketone	sat.	+	+	+
Methyl alcohol (methanol)	100	+	P	
Methyl alcohol, aq.	100	+	+	
Potassium carbonate, aq. (potash)	sat.	+	+	
Potassium chlorate, aq.	sat.	+	+	
	10	+	+	
Potassium chloride, aq.	(7.3)			
Potassium dichromate, aq.	sat.	+	+	+
	sat.	+	+	+
Potassium iodide, aq.	12			
Potassium nitrate, aq.	sat.	+	+	
Potassium permanganate, aq.	sat.	+	+	
	sat.	+	+	
Potassium persulphate, aq.	(6.4)			
	sat.	+		
Potassium sulphate, aq.	(0.5)			
Dichloromethane	50	+	+	
Lactic acid, aq.	100	P		
	90	+	+	
	50	+	+	
	10	+	+	
Mineral oils, see Technical				
Requisites and Drugs				
Naphthalene	100	+		
Sodium bicarbonate, aq. (natron)	sat.	+	+	
Sodium bisulphite, aq.	sat.	+	+	
Sodium carbonate, aq. (soda)	sat.	+	+	+
	10	+	+	
Sodium chlorate, aq.	25	+	+	+
Sodium chloride, aq. (common salt)	sat.	+	+	
Sodium chlorite, aq.	5	+		
Sodium hydroxide (caustic soda)	100	+	+	
Sodium hypochloride, aq.	5	+	+	
Sodium nitrate, aq.	sat.	+	+	
Urea, aq.	sat.	+	+	

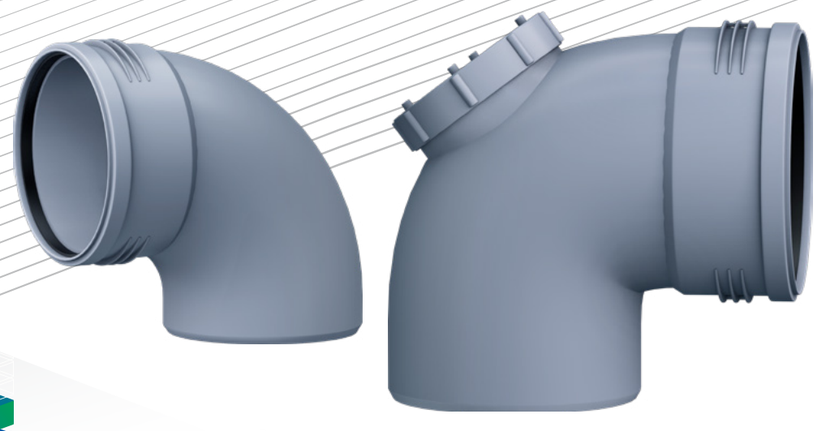
Chemical Resistance				
Chemicals	Conc.%	°20c	°60c	°100c
Carbon disulphide2	96	+	+	
Caustic soda solution	50	+	+	
	25	+	+	
	10	+	+	
Sodium nitrate, aq.	sat.	+		
Sodium perborate, aq.	sat.	+	+	
	(1.4)	+	+	
Sodium phosphate, aq.	sat.	+	+	
Sodium sulphate, aq. (Glauber's salt)	sat.	+	+	
Sodium sulphite, aq.1	sat.	+	+	
Sodium sulphite, aq.	sat.	+	+	
Sodium thiosulphate, aq. (fixing sait)	sat.	+	+	
Nickel saits	sat.	+	+	
Nitrobenzone	100	P+	P-	
Oleic acid	100	+	+	
Octane, see isooctane				
Oxalic acid, aq.	sat.	+	+	+
Ozone (< 0.5 ppm)		P+	P-	
Perchloroethylene, see				
tetrachloroethylene				
Phenol	sat.	+	+	
(aqueous phase)	(approx. 9)			
	sat.			
Pyridine	100	+	+	
Mercury	100	+	+	
Mercury salts, aq.	sat.	+	+	
Nitric acid	50	P	N	
	25	+	+	
	10	+	+	
Hydrochlorid acid	Conc.	+	+	*
	10	+	+	
	100	P		
Sulphur	low	+	P	
Sulphur dioxide	100	+	+	
Sulphuric acid	50	+	+	
	25	+	+	
	10	+	+	+
Hydrogen sulphide1	low	+	+	
(phenolic phase)	(approx 70).			
	100	+		
Phosphorus pentoxide	sat.	+	P	
Phosphoric acid	(approx. 85)			
	50	+	+	
Phosphoric acid	10	+	+	+
	50	+		
Propane, liquid	100	+	+	
Propane, gaseous	100	+	P	

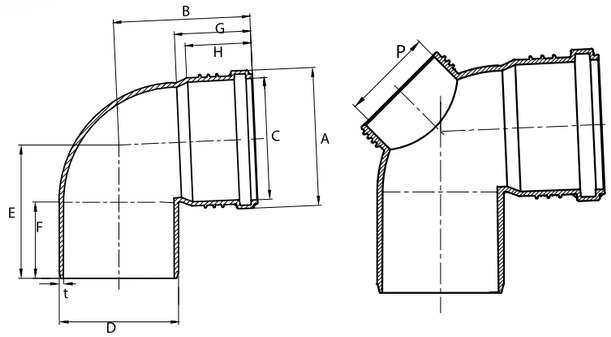
Keys :

P = practically resistant
+ = resistant
N = not resistant
No: (F) = any concentration
low = low concentratio

stand. = standard
customary conc. = concentrated solution
serv = service concentration
Disc. = discoloured

sat.= cold saturated
b.p. = boiling point
aq. = aqueous solution



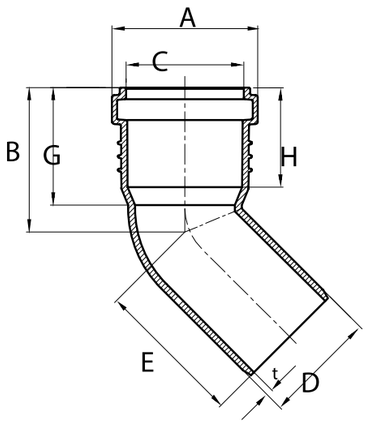


ELBOW 87.5°

with and without Inspection Door

DN	A	B	C	D	E	F	G	H	t	P
32	42	59	34	32.1	60	44.6	36.5	31	1.8	-
50	64.4	77.5	52	50.15	79	55	77.5	51.9	2.8	-
63	77	89	65	63.15	89	98.7	56.7	48.8	2.5	-
75	90.2	96	77.3	75.2	96	60	57.8	50	2.8	57.5
110	127.4	126	112.3	110.2	123	70.25	70.4	60.7	3.8	96
160	184	168	162.5	160.2	160	83.3	87.4	72.5	5.5	126

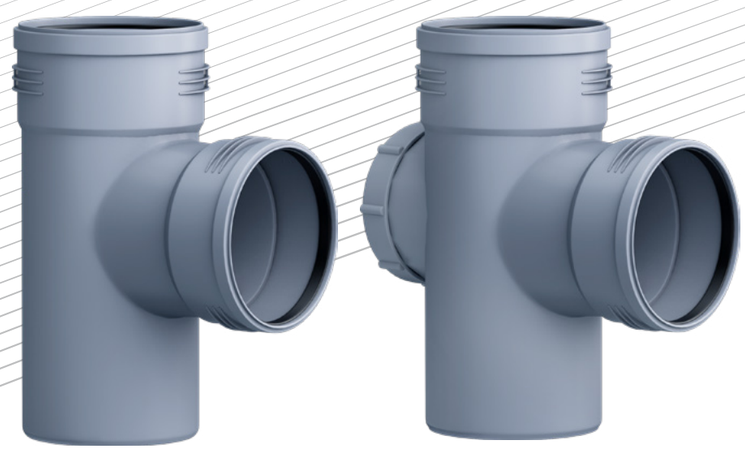
Dimensions in (mm)

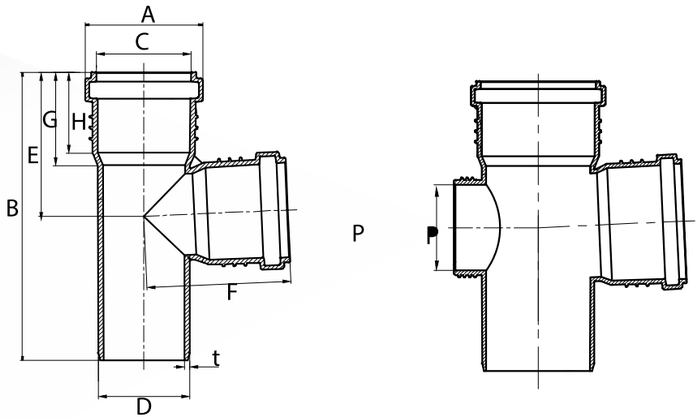


ELBOW 45°

DN	A	B	C	D	E	G	H	t
32	42	49.5	34	32.1	51	42	36.2	1.8
50	64.4	63.8	52	50.2	65.4	51.9	44.6	2.8
63	77	71	65	63.15	70	56.7	48.8	2.5
75	90.2	-	70.3	75.2	75.6	57.8	50	2.8
110	127.4	96.1	112.3	110.2	93.1	70.4	60.7	3.8
160	184	124	162.5	160.2	116.5	87.4	73.6	5.5

Dimensions in (mm)



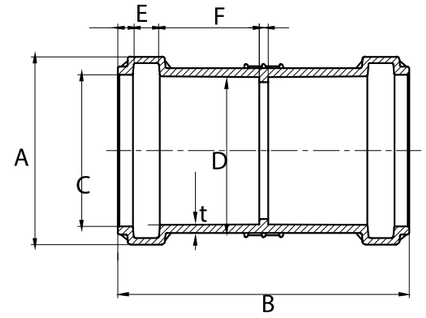


EQUAL BRANCH 87.5°

with and without Inspection Door

DN	A	B	C	D	E	F	G	H	t	P
32	42	120	34	32.1	60	60	42	36.5	1.8	-
50	64.4	158	52+0.15	50.15	79	79	51.9	44.6	2.8	-
63	77	180	65	63.15	92	92	56.7	48.8	2.5	-
75	90.2	194	77.3	75.2	98	98	57.8	50.6	2.8	57.5
110	127.4	252.5	112.3	110.2	129.5	129.5	70.4	60.7	3.8	96
160	184	334	162.5	160.2	173.5	173.5	87.4	73.6	5.5	126

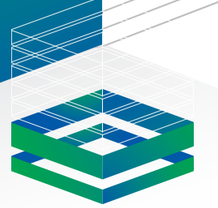
Dimensions in (mm)

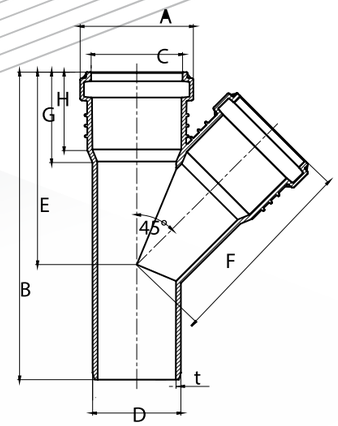


DOUBLE SOCKET SLEEVE

DN	A	B	C	D	E	F	t
32	42	90	34	32.6	6.5	33	1.8
50	64.4	100	52	50.6	8.5	34.5	2.8
63	77	105	65	63.6	8.5	37.2	2.5
75	90.2	110	77.3	75.6	8.5	39	2.8
110	127.4	125	112.3	110.6	10	44	3.8
160	184	155	162.5	160.6	12.5	52.5	5.5

Dimensions in (mm)

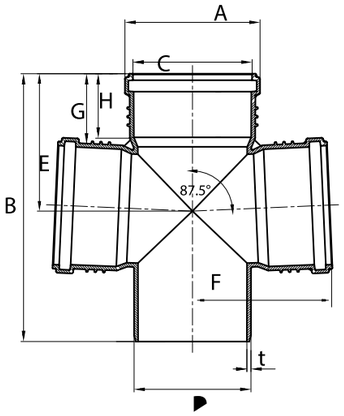




EQUAL BRANCH 45°

DN	A	B	C	D	E	F	G	H	t
32	42	130	34	32.1	79	79	42	36.5	1.8
50	66.4	175	52	50.15	109.5	109.5	51.9	44.6	2.8
63	77	200	65	63.15	130	130	56.7	40	2.5
75	90.2	220	77.3	75.2	144.4	144.4	57.8	50.6	2.8
110	127.4	292	112.3	110.2	199	199	70.4	60.7	3.8
160	184	394	162.9	160.2	277	277	87.4	73.6	5.5

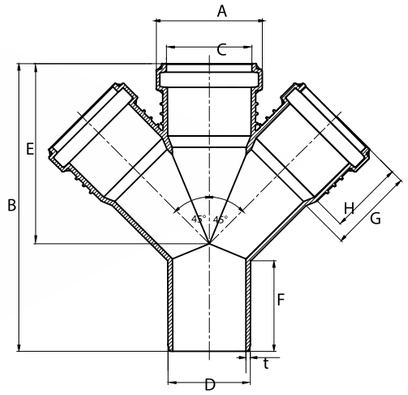
Dimensions in (mm)



EQUAL CROSS 87.5°

DN	A	B	C	D	E	F	G	H	t
50	-	-	-	-	-	-	-	-	-
75	90.2	194	77.3	75.2	98	98	57.8	50.8	2.8
110	127.4	252.5	112.3	110.2	129.5	129.5	70.4	60.7	3.8
160	-	-	-	-	-	-	-	-	-

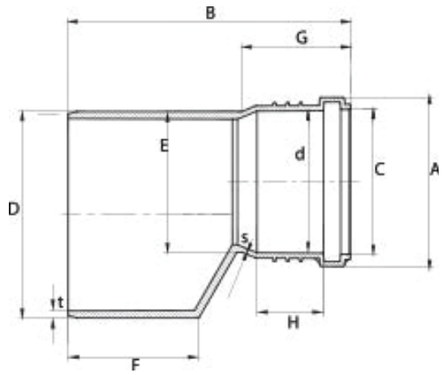
Dimensions in (mm)



EQUAL DOUBLE BRANCH 45°

DN	A	B	C	D	E	F	G	H	t
50	64.4	175	52	50.15	109.5	55.12	51.9	44.6	2.8
75	90.20	220	77.3	75.2	144.2	60	57.8	50.6	2.8
110	127.4	292	119.9	110.2	199	70.2	70.4	60.7	3.8
160	184	394	162.5	160.2	277	83.8	87.3	73.6	5.5

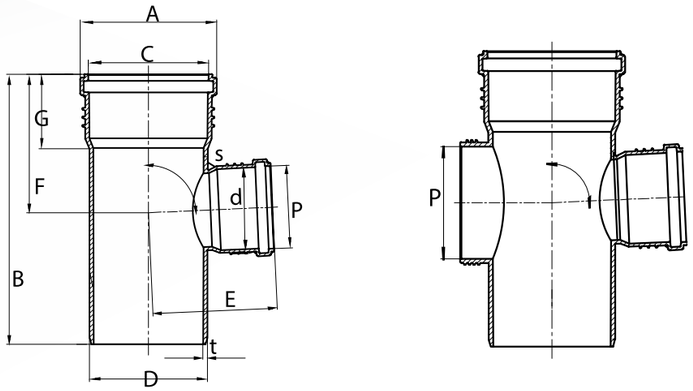
Dimensions in (mm)



ECCENTRIC REDUCER

DN1 - DN2	A	B	C	D	E	F	G	H	t	d	s
63/32	42	118	34	63.15	31	56	42	25.2	2.5	32.6	1.8
63/50	64	116	52	63.15	31	56	51.9	30	2.5	50.6	2.8
75/50	64.4	128	52	75.5	46.8	60	51.9	44.6	2.8	50.6	2.8
75/63	77	125	65	75.5	46.8	60	56.7	35	2.8	63.6	2.8
110/50	64.4	152	52	110.2	50.2	70	51.9	44.6	3.8	50.6	2.8
110/63	77	152	65	110.2	50.2	70	56.7	35	3.8	63.6	2.5
110/75	90.2	151	77.3	110.2	75.2	70	57.8	50	3.8	75.6	2.8
160/110	127.4	185	112.3	160.2	110.2	83.77	70.4	43.5	5.5	111	3.8

Dimensions in (mm)

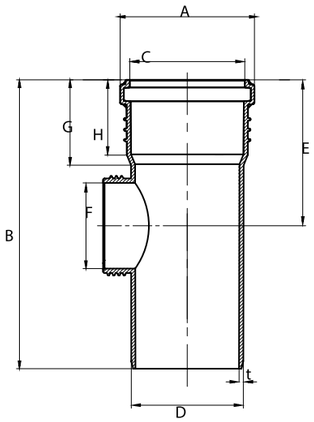


REDUCER BRANCH 87.5°

with and without Inspection Door

DN1-DN2	A	B	C	D	E	F	G	H	T	D	S	P
110/50	127.4	252.5	112.3	110.2	109.5	129.5	70.4	60.7	3.8	52	2.8	96
110/63	127.4	252.25	112.3	110.3	115	129.5	70.4	60.7	3.8	63.6	3.8	96
110/75	127.4	252.5	112.3	110.2	116	129.5	70.4	60.7	3.8	75.6	2.8	96
160/110	184	334	162.5	160.2	154.5	173.5	86.5	73.6	6.5	110.6	3.8	126

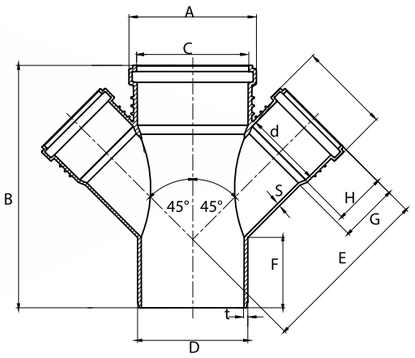
Dimensions in (mm)



INSPECTION SOCKET

DN	A	B	C	D	E	F	G	H	t
50	-	-	-	-	-	-	-	-	-
75	90.2	194	77.3	75.2	98	57.5	57.5	50.6	2.8
110	127.4	252.5	112.3	110.2	129.5	96	70.4	60.7	3.8
160	184	334	162.5	160.2	173.5	126	87.4	73.6	5.5

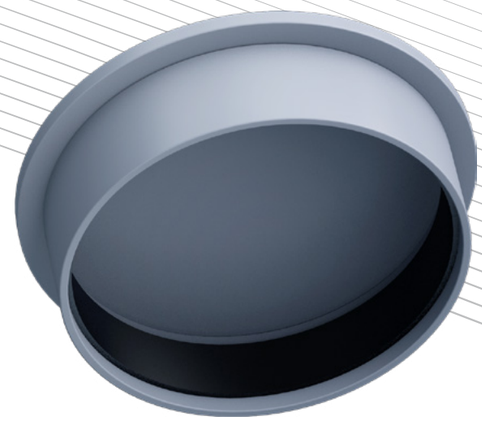
Dimensions in (mm)

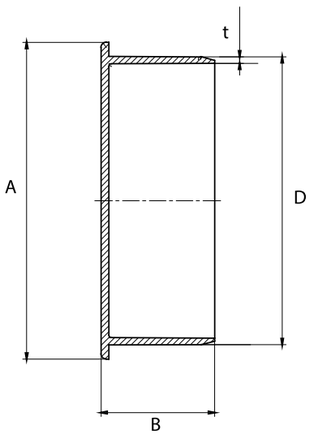


REDUCER DOUBLE BRANCH 45°

DN	A	B	C	D	E	F	G	H	t	d	S
110/50	127.4	206	112.3	110.2	152	70.6	57.8	50.6	3.8	50.6	2.8
110/75	127.4	242.5	112.3	110.2	171.9	70.4	57.8	50.6	3.8	75.6	2.8
110	-	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-	-

Dimensions in (mm)

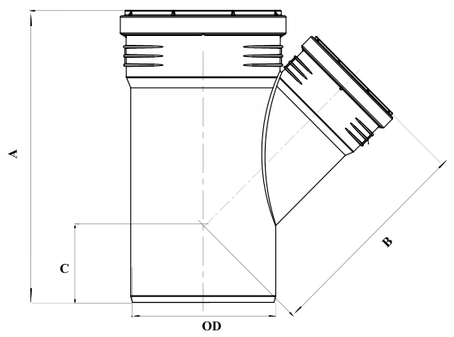




PLUG

DN	A	B	D	t
32	37.5	27	32	1.6
50	59	33.2	50	2.2
63	70	36	63	2.5
75	84	36	75	2.2
110	121	43	110	2.5
160	174	53	160	3.0

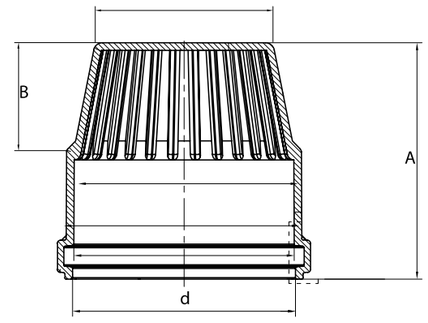
Dimensions in (mm)



REDUCED TEE 45°

OD1 / OD2	D1	D2	A	B	C
110/50	110.2	50.5	242	169	68
110/63	110.2	63.6	225	164	70
110/75	110.2	75.6	242	171	68
160/110	160.2	110.6	320	236	82

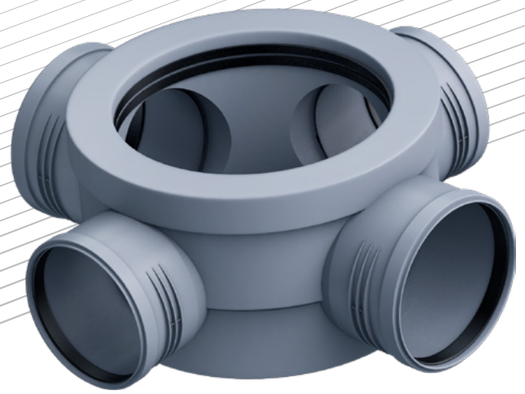
Dimensions in (mm)



AREATOR

DN	A	B	D	t
63	80	60	65	2.5
75	90	38	77.3	2.8
110	119	54	112.3	2.2

Dimensions in (mm)

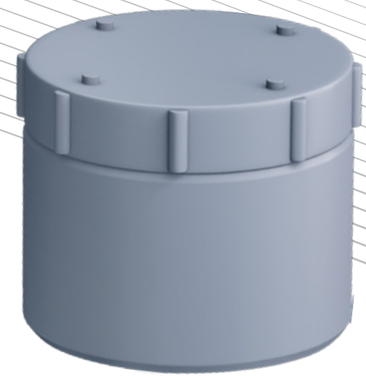


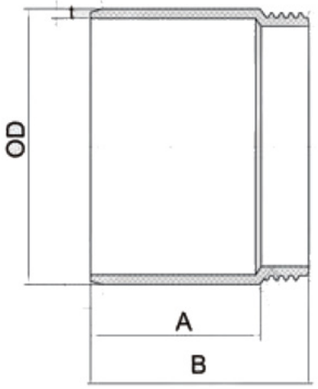
FLOORTRAP

FLOOR TRAP DIMENSIONS	A	B	C
110x75x50x50	110	114	120
110x75x63x63x63	120.7	108.7	100

Dimensions in (mm)

Gulf Manufacturers Co.



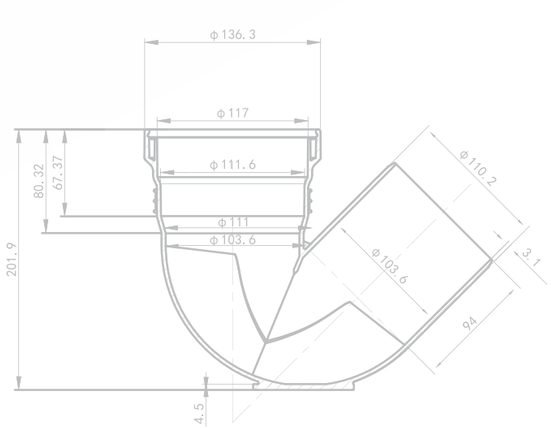


CLEANING PLUG

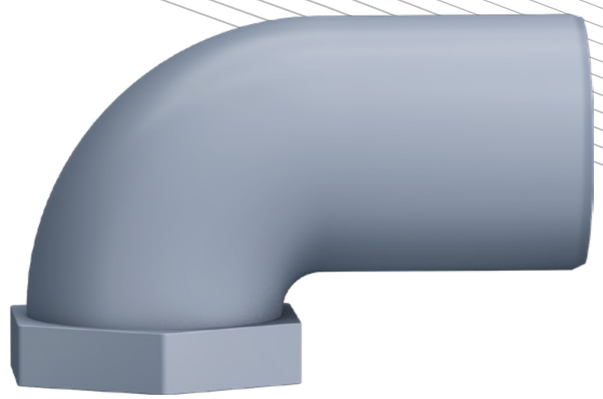
OD	A	B	C	t
110	90	70	96	3.8
160	113	84	126	5.5

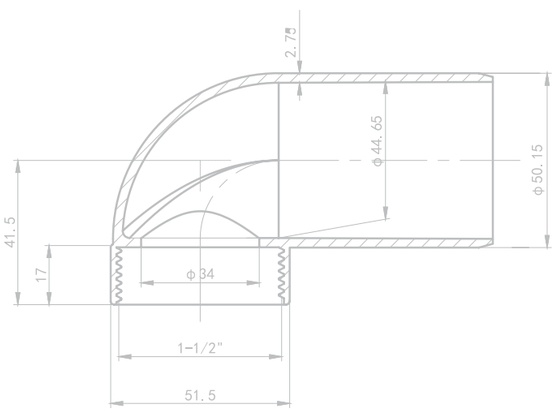
Dimensions in (mm)

GM Gulf Manufacturers Co.



P TRAP





FEMALE THREAD ELBOW 50/1.5”

Gulf Manufacturers Co.

CERTIFICATE

Certificate EG17/0042

The management system of

Gulf Manufacturers Company

5th industrial zone, 6th of October City, Egypt.

has been assessed and certified as meeting the requirements of

ISO 45001:2018

For the following activities

Manufacturing of pipes and fittings of PVC, PE & PP- R.

This certificate is valid from [redacted]

and remains valid subject to satisfactory surveillance audits.

Issue 4. Certified since [redacted]

Authorised by
Jonathan Hall
Global Head - Certification

SGS United Kingdom Ltd
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
t +44 (0)151 350-6666 - www.sgs.com

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Housing & Building National Research Center
Vice Chairman Office
for Research and Studies Affairs

المركز القومي لبحوث الإسكان والبناء
مكتب نائب رئيس مجلس الإدارة
لشئون البحوث والدراسات

المركز القومي لبحوث الاسكان والبناء
إدارة السكرتارية والمحضرات
تاريخ الورود: ٢٠١٩/٩/٥
رقم الصادر: ٥٨١

السادة / الشركة الخليجية للتصنيع GM

تحية طيبة وبعد...

نتشرف بأن نرفق لسيادتكم نتائج الاختبارات (الفيزيائية – الميكانيكية – الاشعة فوق البنفسجية (UV) طبقا للمواصفات القياسية العالمية EN1451 وذلك بناء على خطابكم الوارد الينا برقم (٥٠٢) بتاريخ [redacted] على عدد (١) عينات مواسير بولي بروبلين لأغراض الصرف الصحي الضغط (٥٠مم ، ٧٥مم ، ١١٠مم ، ١٦٠مم) من انتاج الشركة الخليجية للتصنيع GM – والتي تم توريدها بمعرفتكم.

هذا وقد سددت الرسوم المقررة بموجب من القسيمة رقم [redacted]

وتفضلوا بقبول فائق الاحترام ...

نائب رئيس مجلس الإدارة
لشئون البحوث و الدراسات
والقائم على تسيير الاعمال
بمعهد الهندسة الصحية والبيئية
أستاذ دكتور/
خالد محمد [redacted]

مرفقات :
نتائج الاختبارات

تحريرا في : ٢٠١٩/٩/٢

مصطفى

87 El-Tahrir St., Dokki, Giza 11511
P.O.Box : 1770 Cairo, EGYPT
Phone: (+202) 7617067, 7617106 Fax : 3367179
E_mail : hbrc@hbrc.edu.eg www.hbrc.edu.eg

٨٧ شارع التحرير الدقي - جيزة
ص.ب : ١٧٧٠ القاهرة

Certificate EG16/3837

The management system of

Gulf Manufacturers Company

5th industrial zone, 6th of October City, Egypt

has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Manufacturing of pipes and fittings of PVC, PE & PP- R

This certificate is valid [redacted]

and remains valid subject to satisfactory surveillance audits.

Issue 4. Certified [redacted]

Authorised by
Jonathan Hall
Global Head - Certification

SGS United Kingdom Ltd
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
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Certificate EG18/3838

The management system of

Gulf Manufacturers Company

5th industrial zone, 6th of October City, Egypt

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

Manufacturing of pipes and fittings of PVC, PE & PP- R.

This certificate is valid [redacted]

and remains valid subject to satisfactory surveillance audits.

Issue 4. Certified [redacted]

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PP DRAINAGE SYSTEM PIPES AND FITTINGS

WITH GERMAN TECHNOLOGY UNDER BRAND NAME OF

Gulf Manufacturers Co.

NOTES