

K-TOP

Epoxy Cast Iron Drainage Systems to

**EUROPEAN STANDARD
BS EN 877**



2017

General Information

Application Areas

K-Top cast iron pipe and fittings are designed for building waste water and rainwater drainage systems, as well as connecting drainage systems. It is suitable for above and below ground applications, as well as being installed in the interior or exterior of buildings. It is also applicable for stack ventilation purposes. The K-Top range consists of hubless pipes (generally in 3m lengths), fittings of various shapes, and joined with mechanical metal couplings.

Common areas of drainage application include hotels, offices, residential apartments, shopping malls, schools and other buildings.

Standards

- HOKLAS laboratory tested to BS EN 877
- Reaction to fire rating: A2 - s1, d0
- Stainless steel couplings are in accordance to EN10088
- Elastomeric gasket are conforming to EN 681-1

Material Features

The diameter range covers DN 40 up to DN 600. Pipes and fittings are manufactured in grey cast iron, with high mechanical and impact resistant properties and are easier to cut.

Compared with other materials, cast iron is robust, fire resistant, and is noise free without adding lots of insulation.

Coatings

K-Top pipe and fittings are coated internally and externally with a red brown epoxy with a minimum thickness of 70 microns to provide exceptional corrosion and temperature resistance, and extremely smooth finishing.

Other external coatings options are available upon request.

Couplings

Couplings are equipped with premium EPDM to ensure flexible assembly and water tightness. NBR nitrile gaskets are also available for aggressive waste water containing hot oils, solvents or petrol.

Stainless steel couplings are available in different designs to meet specific pressure requirements.

The couplings are designed that when fully tightened to the pipe or fitting, it has built-in electrical continuity.

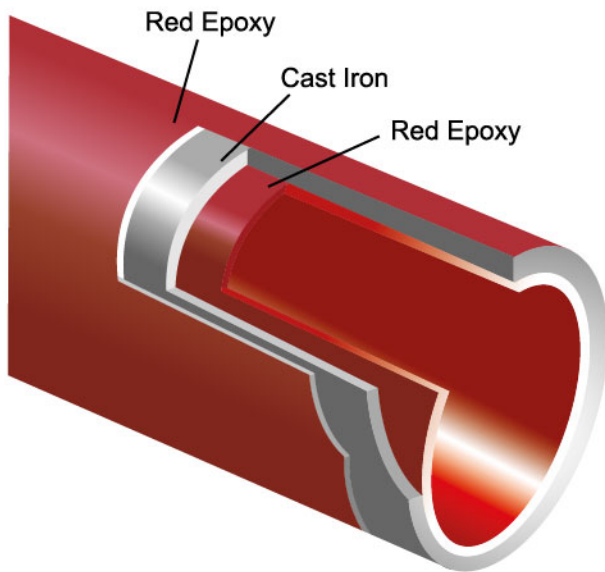
The couplings are designed for an angular deflection of 3° of up to DN 200. For DN 150 and above the angular deflection is 1°45'.

Environmental Protection

Grey cast iron is made from iron, carbon and silicon, and can be manufactured from recycled raw materials such as scrap iron. Grey cast iron is itself 100% recyclable, minimizing the impact on the environment.

Product Information

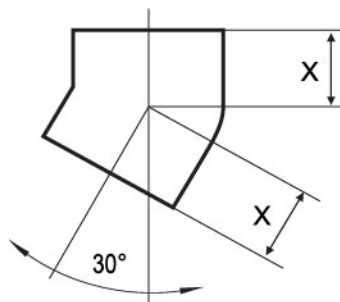
Pipes (Length = 3m)



Nominal Diameter (mm)	External Diameter DE (mm)		Wall Thickness pipes and fittings (mm)		Weight (kg)
	Nominal	Tolerance	Nominal	Min	
40	48	+2/-1	3.0	2.5	12.5
50	58	+2/-1	3.5	3.0	13.0
75	83	+2/-1	3.5	3.0	19.0
100	110	+2/-1	3.5	3.0	25.2
150	160	+2/-2	4.0	3.5	42.2
200	210	+2.5/-2.5	5.0	4.0	69.6
250	274	+2.5/-2.5	5.5	4.5	99.8
300	326	+2.5/-2.5	6.0	5.0	129.7

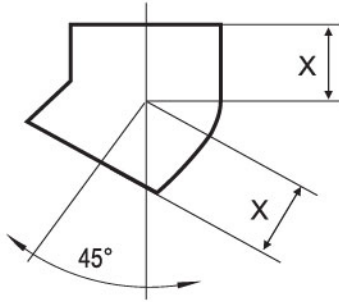
Fittings

30° Bends



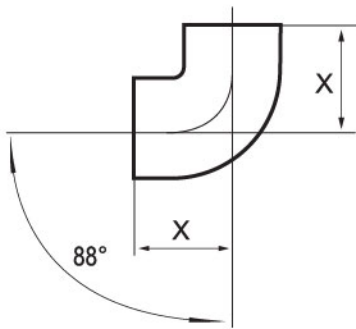
DN (mm)	X (mm)
50	45
75	50
100	60
150	80
200	95

45° Bends



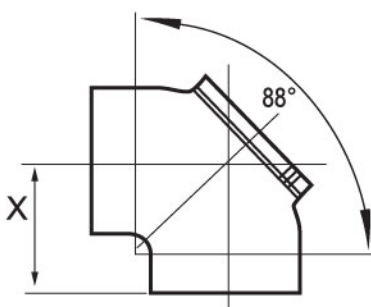
DN (mm)	X (mm)
40	50
50	50
75	60
100	85
125	80
150	115
200	110
250	130
300	155

88° Bends



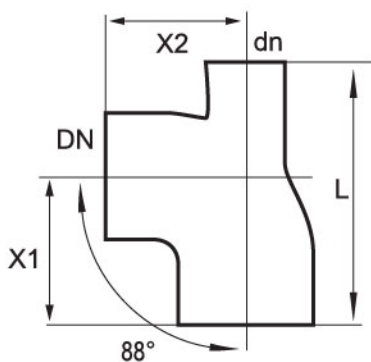
DN (mm)	X (mm)
40	70
50	75
75	95
100	110
125	125
150	145
200	180
250	220
300	260

88° Bends with Access Door



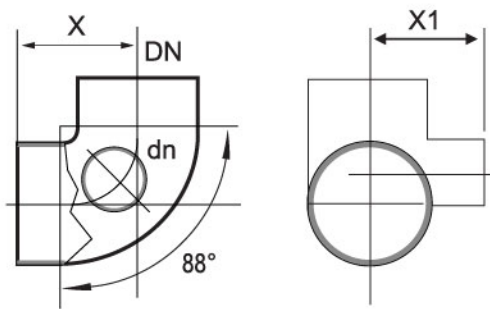
DN (mm)	X (mm)
75	95
100	117
150	150
200	175

88° Bends with Axial Ventilation



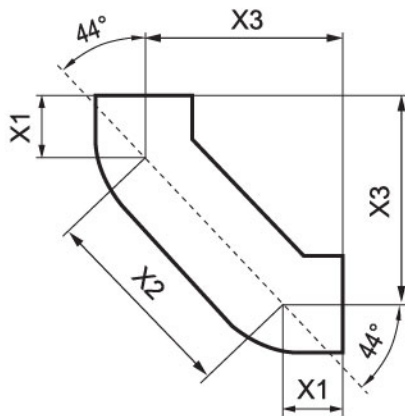
DN (mm)	dn (mm)	L (mm)	X1 (mm)	X2 (mm)
100	50	205	115	107

88° Bends with Radial Ventilation



DN (mm)	dn (mm)	X (mm)	X1 (mm)
100	50	115	95

88° Double Bends

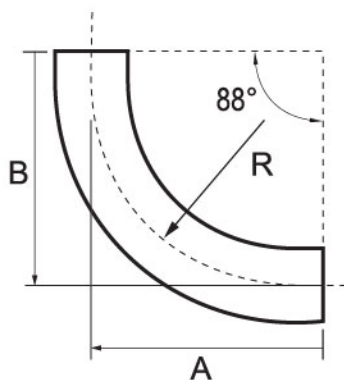


DN (mm)	X1 (mm)	X2 (mm)	X3 (mm)
50	50	100	121
75	60	120	145
100	70	140	170
125	80	160	195
150	90	180	219

88° Long Double Bends

DN (mm)	X1 (mm)	X2 (mm)	X3 (mm)
75	60	301	273
100	70	312	291
150	90	334	326

Long Radius Bend



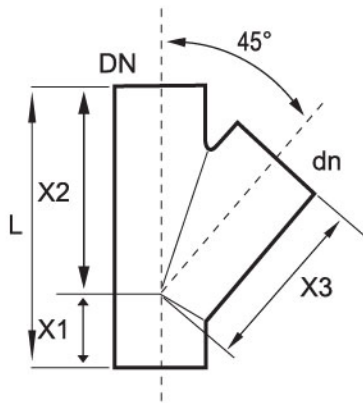
88° 150R/180R Long Radius Bends

DN	R	A	B
100	180	270	270
150	150	280	280

88° 300R/600R Long Radius Bends

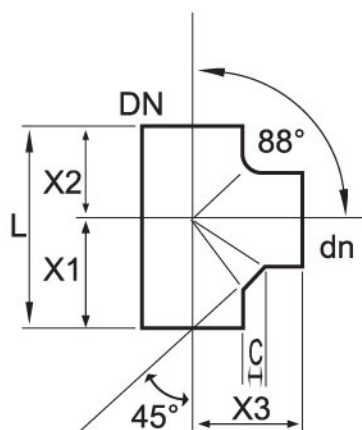
DN	R	A	B
100	300	335	335
150	300	345	345
100	600	635	635
150	600	645	645

45° Single Branches



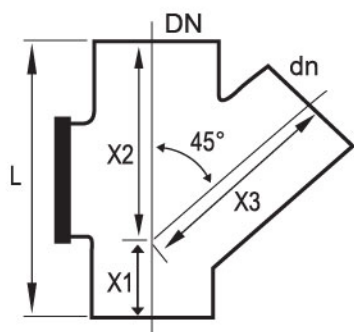
DN (mm)	dn (mm)	L (mm)	X1 (mm)	X2 (mm)	X3 (mm)
40	40	160	45	115	115
50	40	160	45	115	115
50	50	185	50	135	135
75	50	185	50	135	135
75	75	220	60	160	160
100	50	200	35	165	165
100	75	225	55	170	170
100	100	275	70	205	205
125	50	205	20	185	185
125	75	240	40	200	200
125	100	280	60	220	220
125	125	320	80	240	240
150	75	260	45	215	215
150	100	295	55	240	240
150	125	325	70	255	255
150	150	355	90	265	265
200	100	305	40	265	265
200	125	335	55	280	280
200	150	375	75	300	300
200	200	455	115	340	340
250	150	405	55	350	350
250	200	475	90	385	385
250	250	560	130	430	430
300	100	350	5	345	345
300	150	415	35	380	380
300	200	485	70	415	440
300	250	580	115	465	465
300	300	660	155	505	505

88° Single Branches



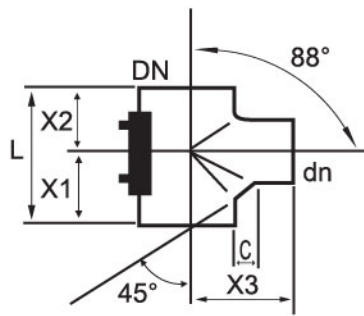
DN (mm)	dn (mm)	L (mm)	C (mm)	X1 (mm)	X2 (mm)	X3 (mm)
50	50	145	20	79	66	80
75	50	160	21	85	75	90
75	75	180	21	95	85	95
100	50	170	22	94	76	105
100	75	190	22	100	90	110
100	100	220	22	115	105	115
125	50	180	25	98	82	120
125	75	205	25	105	100	125
125	100	235	25	125	110	130
125	125	260	25	137	123	135
150	50	200	27.5	100	100	140
150	100	245	27.5	130	115	145
150	125	275	27.5	147	128	150
150	150	300	27.5	158	142	155
200	150	325	32.5	173	152	185
200	200	379	35	196	181	202
250	150	364	32	191	171	228
250	250	470	38	244	226	244
300	100	348	30	184	164	252
300	150	404	33	212	192	258
300	200	455	35	235	220	265
300	250	526	36	273	253	271
300	300	548	44	283	265	283

45° Single Branches with Access Door



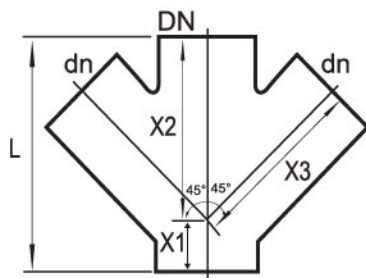
DN (mm)	dn (mm)	L (mm)	X1 (mm)	X2 (mm)	X3 (mm)
75	75	228	65	163	163
100	50	205	105	100	105
100	75	258	60	198	195
100	100	278	78	200	200
150	100	298	55	243	243
150	150	358	90	268	268

88° Single Branches with Access Door



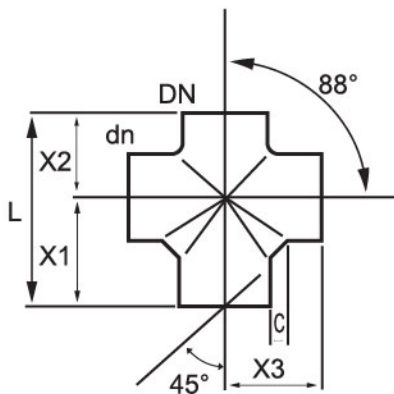
DN (mm)	dn (mm)	L (mm)	C (mm)	X1 (mm)	X2 (mm)	X3 (mm)
75	75	220	22	135	85	130
100	100	275	22	175	100	153
150	100	279	27.5	149	130	145
150	150	350	27.5	215	135	190

45° Double Branches



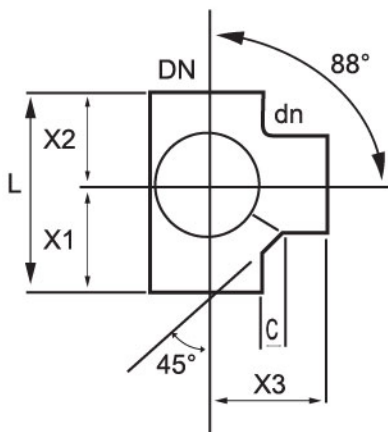
DN (mm)	dn (mm)	L (mm)	X1 (mm)	X2 (mm)	X3 (mm)
100	100	260	70	190	190
150	150	360	80	280	280

88° Double Branches



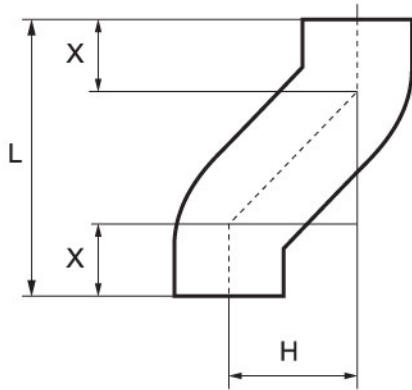
DN (mm)	dn (mm)	L (mm)	C (mm)	X1 (mm)	X2 (mm)	X3 (mm)
100	50	180	22	100	80	105
100	75	205	22	110	95	120
100	100	230	22	120	110	120
150	100	245	27.5	130	115	145

88° Corner Branches



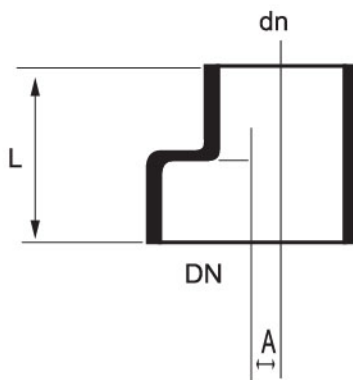
DN (mm)	dn (mm)	L (mm)	C (mm)	X1 (mm)	X2 (mm)	X3 (mm)
75	75	180	21	95	85	95
100	75	190	22	100	90	110
100	100	220	22	115	105	120
125	75	235	25	125	110	140
150	100	245	27.5	130	115	145

Offset Pipes



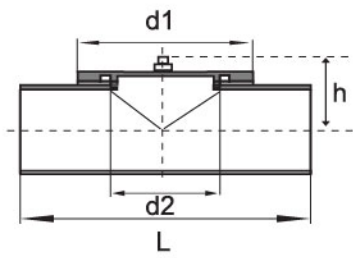
DN (mm)	L (mm)	X (mm)	H (mm)
100	205	70	65
100	270	70	130
100	340	70	200

Reducers



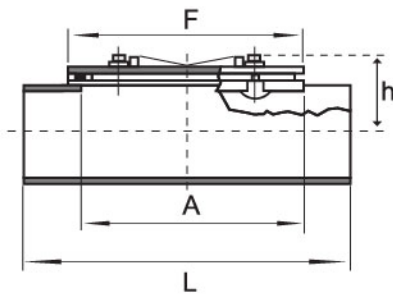
DN (mm)	dn (mm)	L (mm)	A (mm)
50	40	65	5
75	50	80	13
100	50	80	25
100	75	90	14
150	50	95	51
150	75	100	39
150	100	105	25
200	100	115	50
200	150	125	25
250	100	127	83
250	150	140	57
250	200	145	32
300	150	150	83
300	200	160	58
300	250	170	26

Short Pipes with Circular Access Door



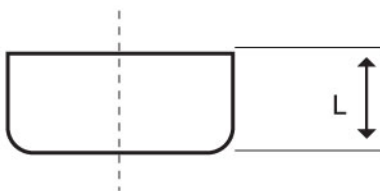
DN (mm)	L (mm)	h (mm)	d1 (mm)	d2 (mm)
50	190	65	105	53
75	220	75	134	78
100	260	85	159	104

Short Pipes with Rectangular Access Door



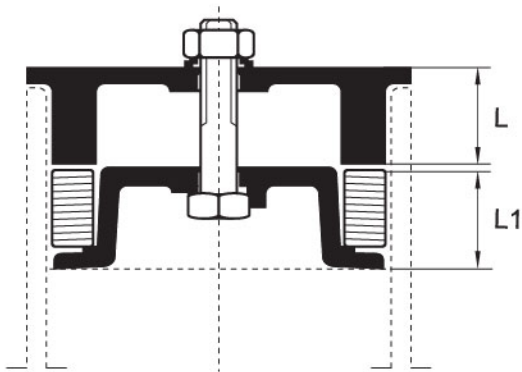
DN (mm)	L (mm)	A (mm)	F (mm)	h (mm)
100	340	200	230	85
150	395	250	280	115
200	465	300	330	140
250	570	350	426	170
300	640	400	476	195

Caps



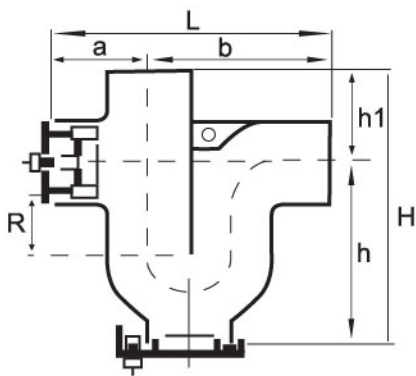
DN (mm)	L (mm)
50	30
75	35
100	40
150	50
200	60
250	70
300	80

Expansion Plug



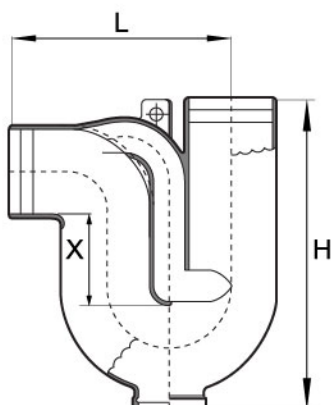
DN (mm)	L (mm)	L1 (mm)
50	20	20
75	28	27
100	28	27
150	28	27
200	29	30

Traps



DN (mm)	L (mm)	H (mm)	R (mm)	h (mm)	h1 (mm)	b (mm)	a (mm)
50	190	250	60	182	68	122	68
75	265	293	60	200	93	172	93
100	325	392	100	282	110	215	110
150	470	493	100	348	145	325	145
200	600	600	100	420	180	400	200




Anti-siphon Traps



DN (mm)	L (mm)	H (mm)	X (mm)
50	155.6	251	75.7
75	201	293	85
100	269	372	110
150	450	670	230

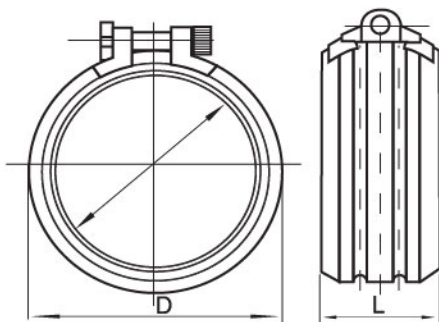
Couplings and Grip Collars

Consideration for various jointing methods is the aggressiveness of the media (selection of the correct gasket – standard EPDM, special version NBR), the aggressiveness of the environment (selection of the correct metal), as well as the expected pressure charge and supporting brackets.

	Photo	Nominal Size (mm)	Pressure	Metal Collar Material	Bolt and Nuts Material	Gasket	Axial Restraint up to (bar)	Built in Electrical Continuity
1. Single Screw Type		40-200	Standard (5 Bars)	316 Stainless Steel	304 (A2) Stainless Steel	EPDM	0.5	Yes
2. Multi Screw Type		250-300	Standard (3 Bars)	316 Stainless Steel	304 (A2) Stainless Steel	EPDM	0.5	Yes
3. Grip Collar		50-300	High (Up to 10 Bars)	Chromium-plated Steel	Heat Treated Carbon Steel	N/A	10 (DN 50-125) 5 (DN 150-200) 3 (DN 250-300)	Yes

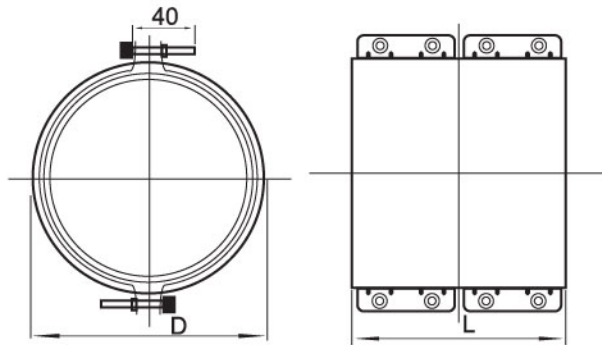
NB: Couplings and nuts and bolts are available in both 304 and 316 grade stainless steel. NBR gaskets are available upon request.

Couplings (Single Screw Type)



DN (mm)	D (mm)	L (mm)
40	69	42
50	69	42
75	94	45
100	121	45
150	173	54
200	226	67

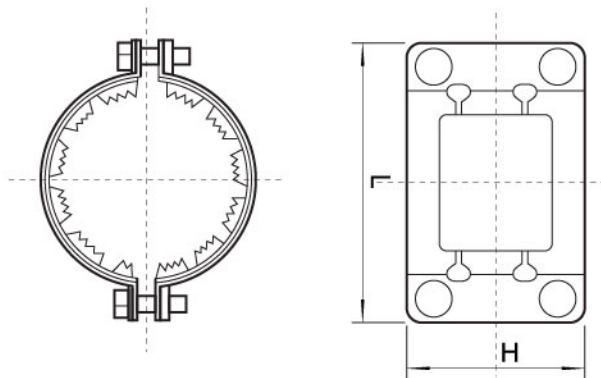
Couplings (Multi Screw Type)



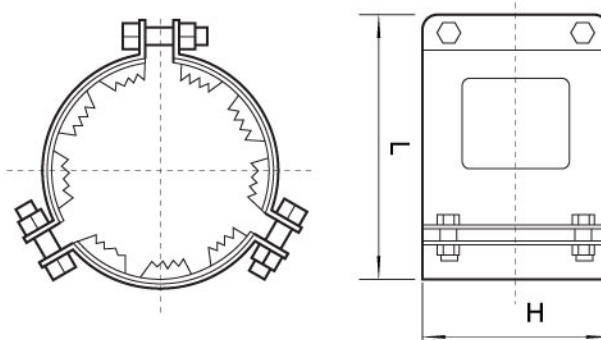
DN (mm)	D (mm)	L (mm)
250	290	140
300	342	140

Grip Collar

The K-Top grip collar is an extra device and combined with coupling in the junction to withstand an unexpected pressure loading in drainage system.



Nominal Size	L (mm)	H (mm)
50	127.5	72
75	151	72
100	180	82
125	207	99
150	230	99



Nominal Size	L (mm)	H (mm)
200	240	111
250	315	135
300	366	135

	Assembling parts: Segments & Screws	
	DN Ø50-150	DN Ø200-300
Segments	2 x 180°	3 x 100°
Hexagon Screws	4pcs M8/M10	6pcs M10/M12
Hexagon Nuts	NIL	6pcs M10/M12

Grip Collar (Material specifications)

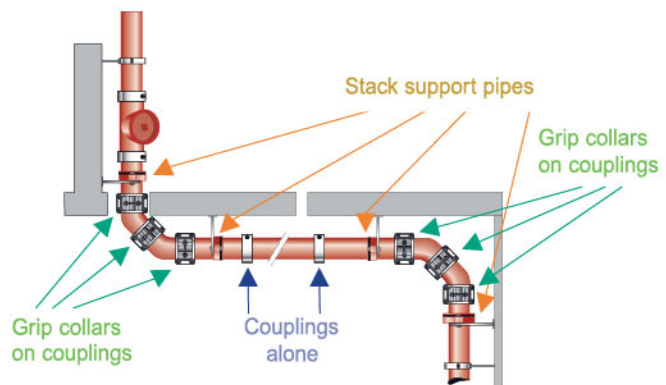
Frame: Chromium-plated Steel
Grips: Chromium-plated Steel
Screws and Nuts: Stainless Steel 304/316

Note: Hot-dipped galvanized coating is available upon request.

Conditions for installation (coupling secured with grip collar)

When drainage pipework maybe exposed to an internal pressure loading higher than 0.5 bars,

1. Pipes laid under the groundwater table
2. Wastewater pipes or rainwater pipes running through several storeys without outlets
3. Pipework operating under pressure for wastewater pumped installations
4. Trust forces at the change of direction have to be addressed to avoid disconnection or slippage of the pipeline systems
5. In general, the couplings withstand hydrostatic pressure 5 Bars from DN 40 to DN 200 3 Bars for the same couplings for DN 250 and DN 300



TOUCH UP PAINT

A reddish brown touch up paint is designed for recoating the end of cut epoxy cast iron pipe, or for touching up epoxy cast iron pipe or fittings scratch. It is conveniently equipped with a brush applicators cap.



K-Top Pipework Bracketing Recommendations

It is the vital element for the pipework stability with a proper bracketing system and the pipe loadings will be balanced evenly. The general rules are the brackets shall be regularly and uniformly spaced. The maximum distance between two brackets shall not exceed 2000 mm and the maximum distance on either side of a coupling shall be 650 mm accordingly.

Horizontal

Brackets must be securely installed at changes of direction and whenever a fitting is connected. Suspended pipelines shall be secured with supports every 10 m to prevent disconnection.

Vertical

The major aim of pipe brackets on vertical pipelines is to prevent the stacks from falling over with their own loading and the general rules still applied with 2 m maximum spacing. However, attention to be drawn at the ground floor level installation that additional brackets or reinforced pipe supports may be needed.

Installation Instructions

Couplings

Step 1

Align and complete the stainless steel coupling with the elastomeric gasket.



Step 3

Push the next pipe or fitting into the coupling making sure that the cut pipes are square.



Step 2

Push the coupling onto the end of the pipe or fitting up to the gasket's central register.



Step 4

Tighten the screw(s) and nut(s) set.



Grip Collars

Step 1

Uniformly position the two half parts of the grip collar and encircle the pipe in parallel.



Step 3

Tighten the screws so that the two plates are put in parallel with the same spacing.



Step 2

Insert the screws to fix the parts of the grip collar together.



Step 4

The assembly is finished when the external edges of the plates are in contact on both sides.



Job References

Hong Kong Disneyland



Prince Hotel, Hong Kong



Louis XIII Macau



Tseung Kwan O Sports Centre, Hong Kong



Macau Studio City Macau



KEMBLA (HK) LIMITED
金特霸(香港)有限公司

Member of Metal Manufactures Group

5/F Henan Building,
90 Jaffe Road,
Wanchai, Hong Kong
Tel : +852 2528 0999
Fax: +852 2528 3113
Email: info@kembla.com.hk
Website: www.kembla.com.hk