

# Section 2

## Pipes and Fittings – below ground

### Ensign cast iron drainage 1st choice for schools

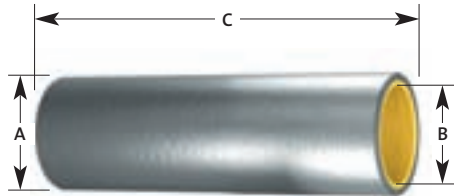
Ensign offers the strength, safety and durability for areas where young people work and play:

- non-combustible – will not drip as molten, burning globules (unlike HDPE), contributing to spread of fire and threat of injury to pupils, staff and firefighters alike, or emit toxic smoke like UPVC (the biggest killer in any fire)
- secure – strong enough to withstand the knocks in exposed areas (such as soil stacks on external walls) in playgrounds etc.
- requires minimal up-keep – helps keep maintenance costs to an absolute minimum
- silent in operation – the quietest system on the market, ensuring a noise-free environment for learning without adding lots of insulation
- durable – systems last in excess of 50 years, reducing any further drain on financial resources
- 100% recyclable – reducing landfill problems for future generations



# Pipes double spigot

Pipe – ED000

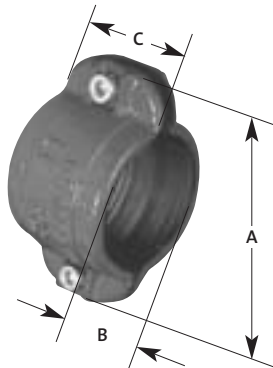


Product Code	CAD Ref	Dia	A Max O/dia	B Min I/dia	Min Section	C Metre Lengths Available	Nom. Wt kg
03309	0043	100	112	97.5	3	3	25.5
03310	0063	150	162	146.25	3.5	3	43.0
04077	0083	200	212	195	4	3	69.3
04423	0093	250	276.5	243.75	4.5	3	99.8
04424	00123	300	328.5	292.50	5	3	129.7
09319	00163	400	431	390	5	3	177.7
09341	00203	500	534	487.5	5.2	3	244.9
09342	00243	600	637	585	5.8	3	321.9

Pipes coated internally with a two part epoxy and externally with a zinc rich base coat, then the standard grey protective coating. (See page 82).

## Couplings

Two-piece ductile iron coupling – ED001



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04078	024	100	170	137	58	0.8
04079	026	150*	217	183	80	1.7
04080	028	200*	278	243	82	3.5
04425	029	250*	343	308	82	4.4
04426	0212	300*	395	360	82	5.4

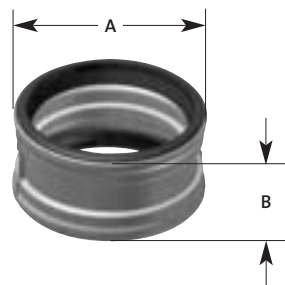
For 400, 500, 600 diameter couplings see EC002HP High Performance Stainless Steel Couplings page 10.

\*150-300mm incorporates four socket bolts.

Patent No. 2 305 481.

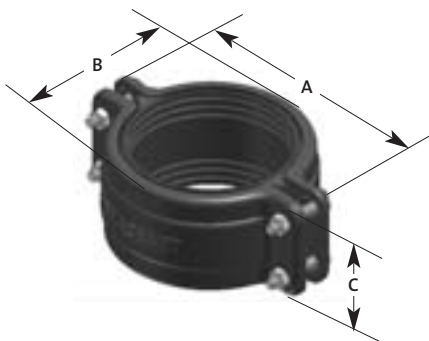
Nitrile gaskets will be considered on request, on a quotational basis.

Push-fit socket – ED004



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
09165	044	100	140	90	1.2
09166	046	150	195	95	2.2

Ductile iron transitional coupling – TD02  
Transitional coupling Ensign to  
Timesaver – BS 437



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
02466	02D4	100	75	140	203	2.8
02467	02D6	150	75	195	252	3.6

Timesaver drain coupling assembly. Black coated, incorporating four set screws and nuts, and transitional elastomer seal. For jointing Ensign system to Timesaver drain BS 437.

Black gasket with identity markings.

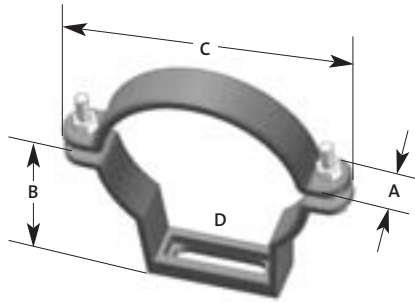
Nitrile gaskets will be considered on request, on a quotational basis.

Electrical continuity available supplied extra (see page 49).

To connect Ensign drain to Timesaver 416, use standard Timesaver coupling GT01 (black coated).

# Brackets

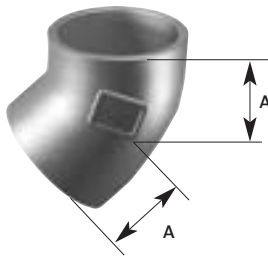
## Ductile iron bracket – ED048



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04154	<b>484</b>	100	27	90	166	0.6
04155	<b>486</b>	150	30	115	214	0.8
04156	<b>488</b>	200	35	150	266	1.6

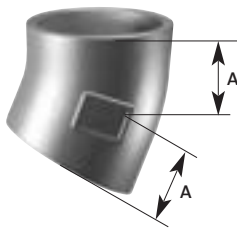
*Elongated slot at fixing point (D) to ease fixing.*

## 45° bend • Short radius – ED002



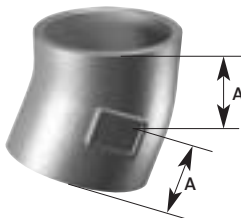
Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04081	<b>0240045</b>	100	70	1.6
04082	<b>0260045</b>	150	90	3.0
04083	<b>0280045</b>	200	110	7.0
04427	<b>02945</b>	250	130	10.9
04428	<b>021245</b>	300	155	18.7
09318	<b>021645</b>	400	247	35.0
09343	<b>022045</b>	500	318	53.0
09344	<b>022445</b>	600	350	92.0

## 30° bend • Short radius – ED002



Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04084	<b>0240030</b>	100	60	1.7
04085	<b>0260030</b>	150	80	3.2

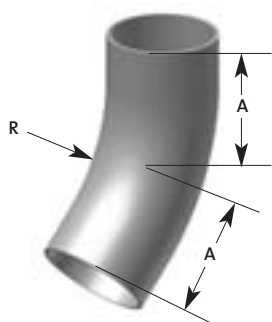
## 15° bend • Short radius – ED002



Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04086	<b>0240015</b>	100	50	1.3
04087	<b>0260015</b>	150	65	2.7

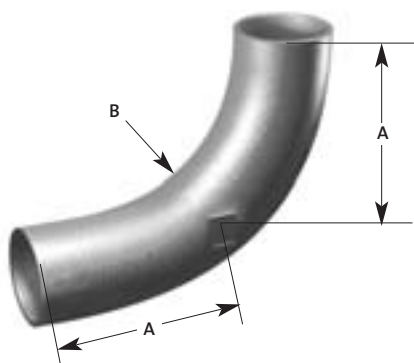
# Bends medium long radius door back

## 45° bend • Medium radius – ED02M



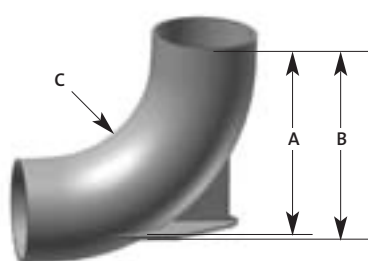
Product Code	CAD Ref	Dia	A	R	Nominal Wt/kg
04088	<b>2M40045</b>	100	135	150	3.5
04089	<b>2M60045</b>	150	145	150	6.2

## 88° Bend • Medium & long radius – ED02L



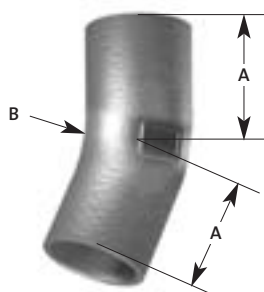
Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04090	<b>2L40088</b>	100	269	180	4.3
04091	<b>2L60088</b>	150	274	150	10.1

## 88° bend • Medium & long radius with heel rest – ED007



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
09059	<b>0740088</b>	100	269	277	180	5.5
09060	<b>0760088</b>	150	274	282	150	11.4

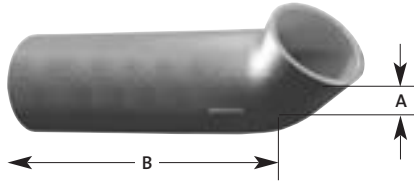
## 22° bend • Long radius – ED02L



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04092	<b>2L40022</b>	100	90	180	1.7

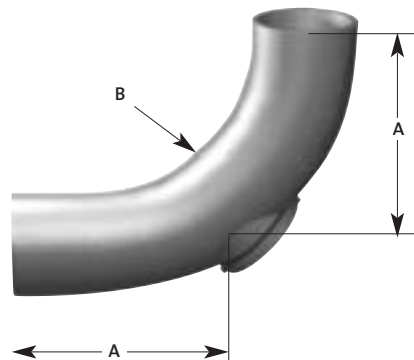
# Bends medium long radius door back

**45° bend • Long tail – ED055**



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04094	5540045	100	70	250	4.0

**88° bend • Long radius door back – ED05L**

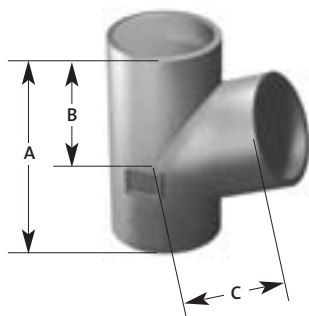


Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04093	5L40088	100	269	180	5.5

**88° bend • MR radius door back – ED05M**

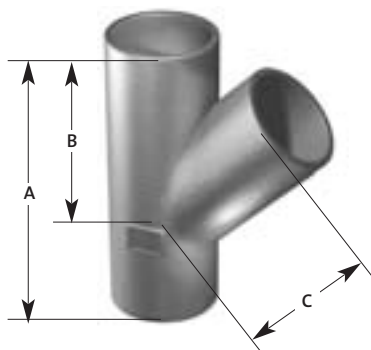
Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
09227	5M60088	150	274	150	11.4

**69° branch • Equal and unequal – ED006**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04097	0644069	100 x 100	215	130	130	2.7
04191	0664070	150 x 100	235	150	155	5.1

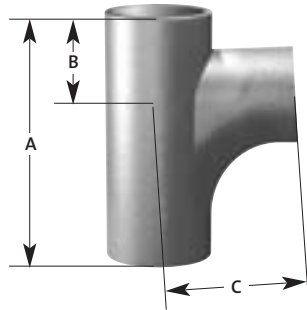
**45° branch • Equal and unequal – ED006**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04098	0644045	100 x 100	275	205	205	3.8
04099	0664045	150 x 100	295	240	240	6.1
04100	0666045	150 x 150	355	265	265	9.0
04101	0684045	200 x 100	300	260	260	10.3
04102	0686045	200 x 150	375	300	300	13.2
04103	0688045	200 x 200	455	340	340	17.3
04429	0699045	250 x 250	560	430	430	32.2
04430	6121245	300 x 300	660	505	505	54.8
09345	6161245	400 x 300	660	555	565	55.3
09322	6161645	400 x 400	835	645	645	82.5
09346	6202045	500 x 500	1020	790	790	175.0
09347	6242445	600 x 600	1180	920	920	215.0

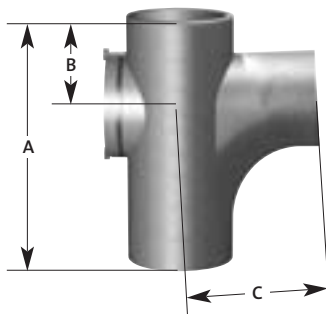
# Branches

**88° Single branch • Radius curve – ED06R**



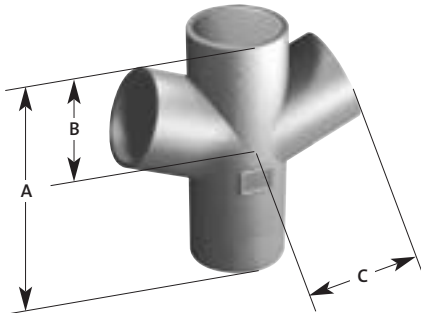
Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04104	<b>6R44088</b>	100 x 100	270	102	150	3.5
04105	<b>6R64088</b>	150 x 100	300	117	202	7.6
04106	<b>6R66088</b>	150 x 150	400	140	260	12.5
04107	<b>6R86088</b>	200 x 150	428	157	283	13.0

**88° Branch with access • Radius curve – ED07R**



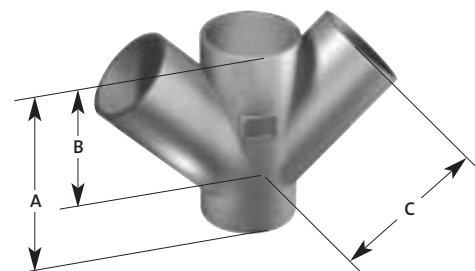
Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04109	<b>7R44088</b>	100 x 100	270	102	150	4.3
04110	<b>7R64088</b>	150 x 100	300	117	202	10.4
04111	<b>7R66088</b>	150 x 150	400	140	260	13.9

**69° Double branch – ED010**



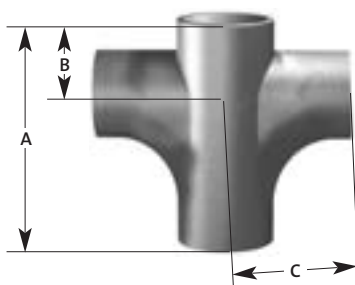
Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04112	<b>1044470</b>	100 x 100	215	130	130	3.4

**45° Double branch – ED010**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04114	<b>1044445</b>	100 x 100	260	190	190	4.0
04115	<b>1064445</b>	150 x 100	280	225	225	8.4
04116	<b>1066645</b>	150 x 150	355	265	265	12.6
04117	<b>1088845</b>	200 x 200	455	340	340	24.0

**88° Double branch • Radius curve – ED10R**

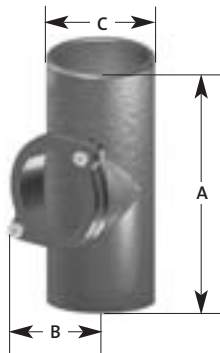


Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04118	<b>OR44488</b>	100 x 100	270	102	150	4.2
04119	<b>OR64488</b>	150 x 100	300	115	200	10.9



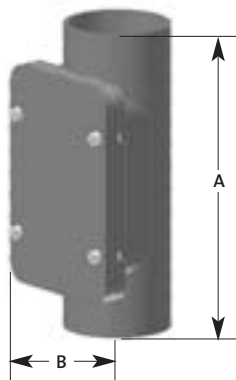
## Pipes access

**Round door – ED014**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04121	<b>144</b>	100	250	80	116	3.1
04122	<b>146</b>	150	280	110	170	6.2

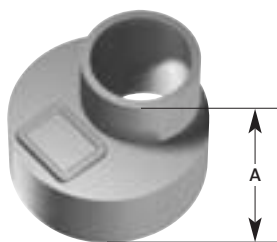
**Rect door – ED015**



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04123	<b>154</b>	100	320	80	6.7
04124	<b>156</b>	150	395	105	12.2
04125	<b>158</b>	200	475	140	20.2
04431	<b>159</b>	250	540	160	38.5
04432	<b>1512</b>	300	610	190	50.0

## Pipes tapered

**Pipes • Tapered – ED028**

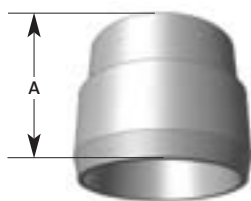


To connect 250 and 200 Ensign to 225 Timesaver Drain, use TD41 (consult Timesaver catalogue or contact technical department 01952 262529).

Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04126	<b>2864</b>	150 x 100	105	1.9
04127	<b>2884</b>	200 x 100	115	3.5
04128	<b>2886</b>	200 x 150	125	3.3
04437	<b>2894</b>	250 x 100	122	5.5
04434	<b>2896</b>	250 x 150	135	6.3
04440	<b>2898</b>	250 x 200	145	6.5
04438	<b>28126</b>	300 x 150	150	9.9
044398	<b>28128</b>	300 x 200	160	10.1
04433	<b>28129</b>	300 x 250	170	12.2
09197	<b>281612</b>	400 x 300	200	20.0

# Pipes and connectors transitional

**Transitional connector – ED076**

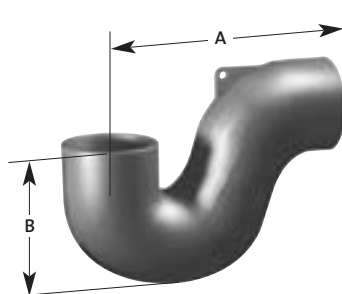


Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04130	<b>764</b>	100	100	1.8
04131	<b>766</b>	150	125	4.2

*Adaptor from Ensign to Supersleve.*

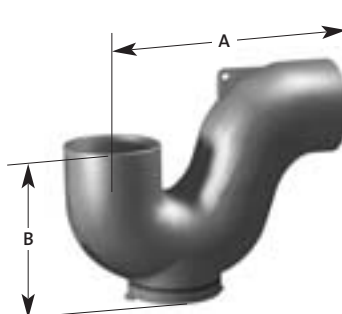
## Traps

**Traps • Plain – ED034**



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04132	<b>344</b>	100	255	160	4.5

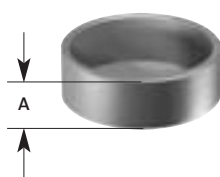
**Traps • Plain with access bottom – ED037**



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04133	<b>374</b>	100	255	175	5.2
04134	<b>376</b>	150	350	240	12.1

## Blank ends

**Blank ends • Plain – ED070**

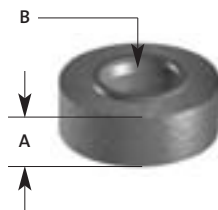


Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04135	<b>704</b>	100	40	0.8
04136	<b>706</b>	150	50	2.0
04137	<b>708</b>	200	60	3.2
04435	<b>709</b>	250	70	5.7
04436	<b>7012</b>	300	90	10.3



# Blank ends

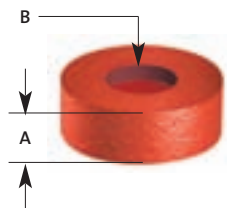
## Blank ends • Push-fit connection – ED071



Product Code	CAD Ref	Dia	A	Nominal Wt/kg
04138	<b>7142</b>	100	40	1.0
04139	<b>7162</b>	150	50	2.0

*B = rubber grommet which accommodates 50mm waste UPVC or copper.*

## Blank ends • Drilled and taped – EF071T

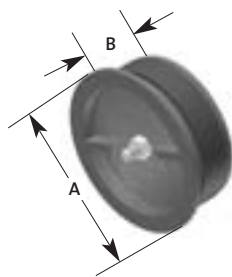


Product Code	CAD Ref	Dia	A	Nominal Wt/kg
03213T	<b>7142T</b>	100	40	1.0

*To connect to UPVC/copper waste use 50mm/2" BSPT male iron adaptor.*

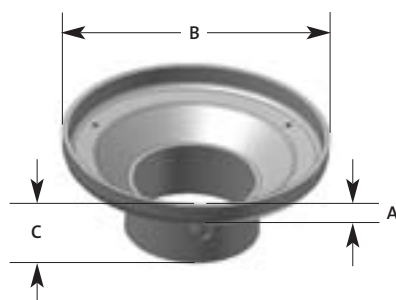
*B = D/T 50mm BSPT.*

## Expansion plug – ED074



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
03221	<b>744</b>	100	110	42	0.7
03223	<b>746</b>	150	156	42	1.5

## Gully inlet – ED060



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04143	<b>604</b>	100	20	215	87	2.4

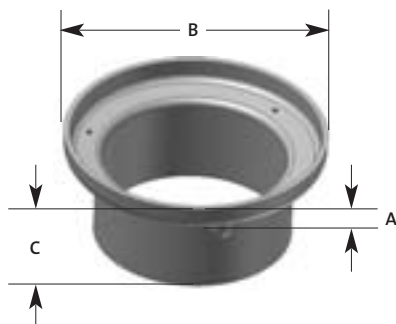
*Can be supplied fitted with solid cover order ED066 (Product Code 04192).*



Solid cover

# Gully inlet Bellmouth

**Bellmouth – ED060**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04144	606	150	20	215	95	2.9

*Can be supplied fitted with solid cover order ED066 (Product Code 04193).*



Solid cover

**Grating plain – ED065**

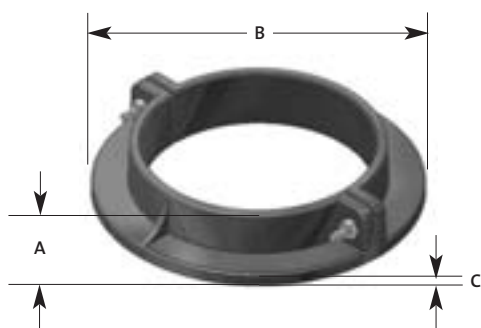


Product Code	CAD Ref	Dia	Nominal Wt/kg
04146	65	200	1.8

*Loose grating for ED060. Maximum load 2.0 tonnes.*

# Puddle flanges

**Flange – ED078**



Product Code	CAD Ref	Dia	A	B	C	Nominal Wt/kg
04147	784	100	50	220	12	4.6
04148	786	150	65	275	12	6.6
09161*	7810	250	70	405	12	57.9
09162*	7812	300	75	460	12	71.2

*\*Black only.*

*This collar is in two halves which can be bolted around the pipe even when pipe is in position. Can also be used as a firestop.*

*Due to manufacturing tolerances it is recommended that the puddle flange is bedded on Denso tape or similar.*

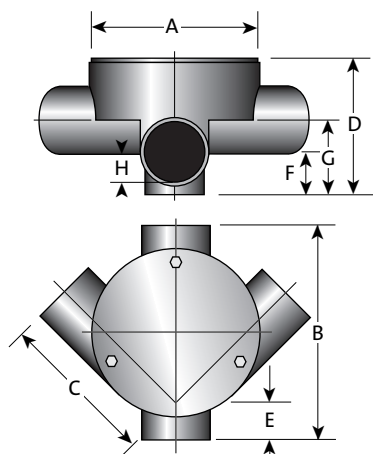
**Multi-clamp • Puddle flange – ED078**



Product Code	CAD Ref	Dia	A	B	Nominal Wt/kg
04149	788	200	370	35	6.3

# Inspection chambers

## Inspection chamber – ED012

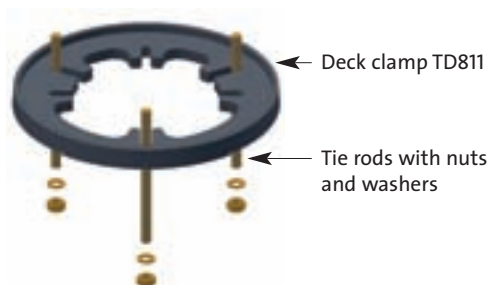


Product Code	CAD Ref	Dia	A	B	C	D	E	F	G	H	Nom. Wt/kg
04151	12444	100 x 100	275	373	265	224	73	70	122	50	15.9
04152	12644	150 x 100	274	393	265	243	83	95	147	75	17.2
04153	12666	150 x 150	274	393	254	295	118	95	175	75	19.4

Supplied with 250mm diameter removable cover for ease of maintenance.

# Floor drains adjustable

## TD810 Floor drain body with adjustable clamp plate



Adjustable height for use with waterproof membrane

### Body options

Product Code	CAD Ref	Part No.	No. Bore	Nominal Wt/kg
03666	810	TD810	100	8.2

### TD813 floor drain body with adjustable clamp plate D/T for deck clamp (TD811)

Product Code	CAD Ref	Part No.	No. Bore	Nominal Wt/kg
03671	813	TD813	100	8.2

### TD811 cast iron deck clamp complete with nuts, washers and bolts. Used with TD813

Product Code	CAD Ref	Part No.	No. Bore	Nominal Wt/kg
03667	811	TD811	–	1.8

### Coating

Floor drains are coated in a black water based primer.

### Connections to Ensign above and below ground pipework

Connection achieved from the extension piece TD812, and transitional coupling TD02. (See pages 11 and 45).

# Floor drains adjustable

**TD826 nickel bronze grating and frame**



**Gratings for use with TD810, TD813, TD822 and TD824**

Product Code	CAD Ref	Size	Nominal Wt/kg
00683	826	150 x 150	2.2

**TD827 nickel bronze circular grating and frame**



Product Code	CAD Ref	Dia	Nominal Wt/kg
00684	827	162	2.0

**TD828 nickel bronze square inspection cover (sealed)**



Product Code	CAD Ref	Size	Nominal Wt/kg
00686	828	150 x 150	2.5

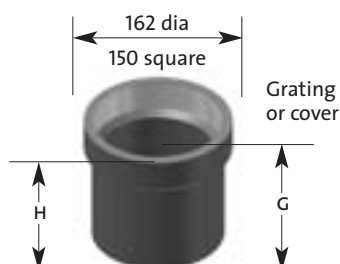
**TD829 nickel bronze circular inspection cover (sealed)**



Product Code	CAD Ref	Dia	Nominal Wt/kg
00685	829	162	2.3

# Floor drains adjustable

**TD824 cast iron body threaded for use with grating TD826 – TD829**



**Alternative for use with non-membrane floors**

Product Code	CAD Ref	Dia	G min	G max	H	Nominal Wt/kg
03677	824	100	150	175	120	2.9

**TD812 screwed outlet extension pieces**



Product Code	CAD Ref	Dia	Nominal Wt/kg
03670	812	100	4.2

**TD118 adaptor from Timesaver drain to Supersleve**



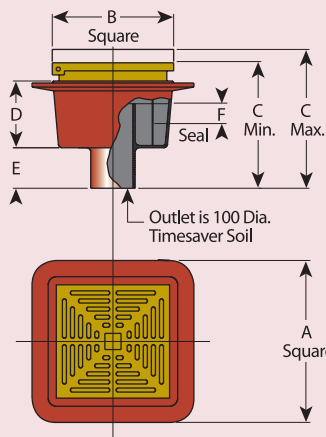
Product Code	CAD Ref	Dia	A	Nominal Wt/kg
02579	118	100	170	2.3

**TD822 cast iron screw inlet extension piece for use with grating TD826 – TD829**



Product Code	CAD Ref	Dia	Nominal Wt/kg
03675	822	100	2.9

# Floor drains technical



Adjustable height for use with non-membrane floors

**TD950 square trapped floor drain**  
This trapped floor drain has been found useful in brewery installations.

Product Code	CAD Ref	Dia	A	B	C min	C max	D	E	F	kg
02683	950	100	400	300	310	335	160	100	50	19.7

Outlet is 100 Timesaver Soil.  
To connect to Ensign use standard GT01 coupling.

