Section 1

Drain Pipes and Fittings

Jointing method

A. Pipe or fitting
B. Pipe or fitting
C. Synthetic rubber gasket
D. Coupling
E. Stainless steel set screws and nuts

All couplings have four set screws and nuts.

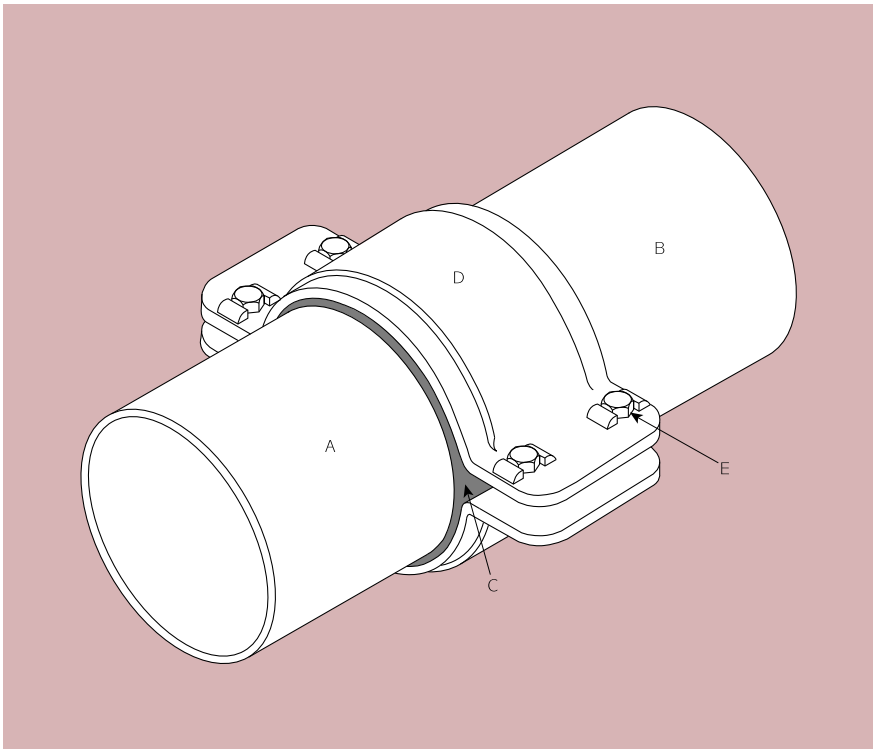
Couplings are supplied ready assembled

1. Slacken bolts to fullest extent.
2. Place synthetic rubber gasket on end of pipe or fitting A, and slide loosely assembled coupling over pipe B.
3. Fit pipe B into gasket ensuring both A and B are butting against the internal central register.
4 Slide coupling over gasket ensuring that it is centrally located and tighten bolts alternately so that the gap between coupler halves is even on both sides. When hand tight check alignment of assembly.
5 Complete tightening operation by use of a Ratchet Spanner – EF100 and Deep Socket – EF101 until a suitable resistance is achieved (min 20Nm).

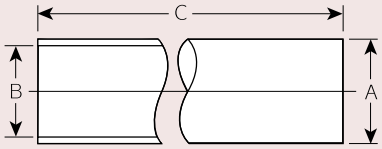
Joints may be deflected up to 5° without affecting the sealing properties.

The Timesaver couplings meet the performance requirements of BS 6087:1990 and incorporate synthetic rubber gaskets conforming to BS EN 681-1/ISO 4633 and stainless steel set screws and nuts conforming to BS 970 Part 2. A Ratchet Spanner – EF100 is the recommended tool required to tighten the stainless steel set screws which give a 'for all time seal' water and airtight installation.

Saint-Gobain PAM UK do not accept liability for any complaints on installations where components not manufactured by Saint-Gobain PAM UK are included.



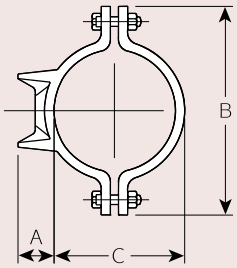
Pipes double spigot



Product code	Dia	A Max o/dia	B Min i/dia	Min section	C Metre lengths available	Nominal wt per metre kg
Pipe – TD00						
156568	100	119	99	7	3	18.7
156832	150	173	150	8	3	31.7
157042	225	256	225	10	3	60.0

Pipes are internally lined with a two part epoxy paint (ochre colour). Externally coated with black acrylic paint and stencilled every metre with blue marking.

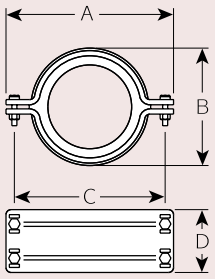
Brackets fixing

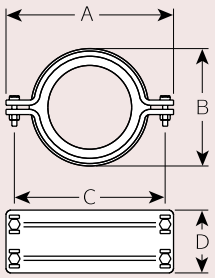


Product code	Dia	A	B	C	Nominal wt/kg
Wall fixing or hanging brackets – TD640					
191358	100	40	205	130	2.3
191359	150	40	255	175	2.8
192374	225	18	358	260	4.0

Fixing hole in bracket is plain without BSPT thread (see page 34).
225 bracket is manufactured from mild steel-coated in a red anti-rust primer.

Couplings standard and transitional





Standard
Ductile iron coupling with stainless steel nuts and set screws and synthetic rubber gasket for jointing Timesaver drain to Timesaver drain (black gasket with identity marking).

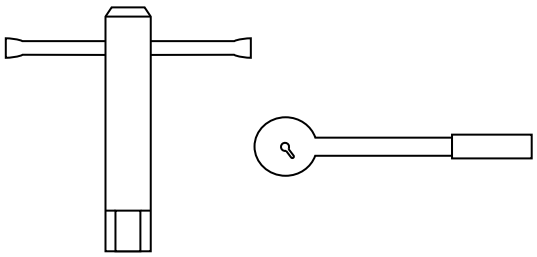
Product code	Dia	A	B	C	D	*E	Nominal wt/kg
Two-piece ductile iron coupling – TD01							
191294	100	203	140	180	75	5	2.8
191295	150	252	195	230	75	5	3.6
191296	225	345	290	320	100	5	7.8

Transitional
Ductile iron coupling with stainless steel nuts and set screws and synthetic rubber gasket for jointing Timesaver drain to Timesaver soil or Ensign soil (black gasket with identity marking). *Electrical continuity clips are available supplied separately in standard quantity bags of 25 number (see ref table page 39).*

Product code	Dia	A	B	C	D	*E	Nominal wt/kg
Two-piece ductile iron coupling – TD02							
191297	100	203	140	180	75	5	2.8
191298	150	252	195	230	75	5	3.6

Four set screws are supplied on all couplings TD01/TD02.
Electrical continuity clips are available supplied separately in standard quantity bags of 25 number (see ref table page 39).
**Minimum allowance (E) to accommodate gasket register (for guidance only).*

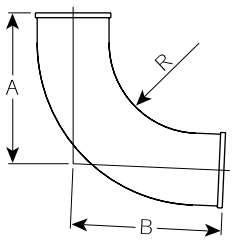
Tools



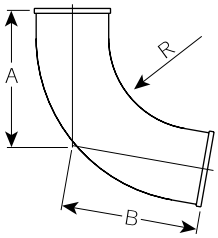
Ratchet spanner – EF100: product code 191201
A ratchet spanner is the recommended tool required to tighten the stainless steel screws, used in conjunction with a deep socket – EF101: product code 191202.

'T' box spanner – EF098: product code 191200
13mm A/F, dual purpose, for use with Timesaver and Ensign systems.

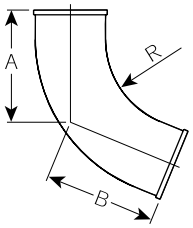
Bends medium radius



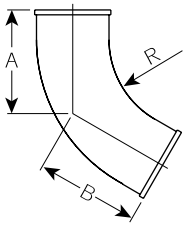
Product code	Dia	A	B	R	Nominal wt/kg
87½° Bend • Medium radius – TD06					
191219	100	250	250	150	8.8
191225	150	275	275	150	16.0
191229	225	335	335	150	41.5



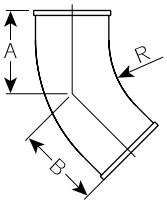
Product code	Dia	A	B	R	Nominal wt/kg
80° Bend • Medium radius – TD06					
191218	100	225	225	150	8.1



Product code	Dia	A	B	R	Nominal wt/kg
6½° Bend • Medium radius – TD06					
191217	100	190	190	150	7.0
191224	150	205	205	150	10.9

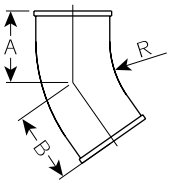


Product code	Dia	A	B	R	Nominal wt/kg
60° Bend • Medium radius – TD06					
191216	100	170	170	150	6.0

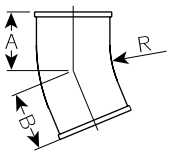


Product code	Dia	A	B	R	Nominal wt/kg
45° Bend • Medium radius – TD06					
191215	100	135	135	150	5.8
191223	150	145	145	150	11.0
191228	225	215	215	150	31.8

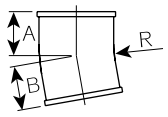
Bends medium radius



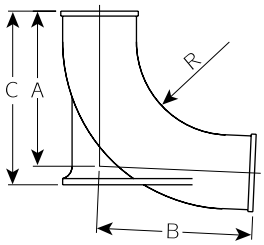
Product code	Dia	A	B	R	Nominal wt/kg
35° Bend • Medium radius – TD06					
191214	100	115	115	150	4.3
191222	150	125	125	150	9.1



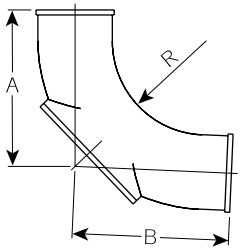
Product code	Dia	A	B	R	Nominal wt/kg
22½° Bend • Medium radius – TD06					
191213	100	95	95	150	3.6
191221	150	95	95	150	7.1
191227	225	120	120	150	18.4



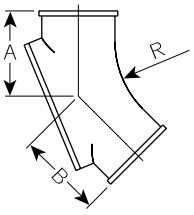
Product code	Dia	A	B	R	Nominal wt/kg
10° Bend • Medium radius – TD06					
191212	100	70	70	150	3.1
191220	150	70	70	150	4.5
191226	225	85	85	150	13.0



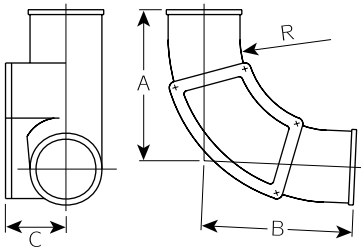
Product code	Dia	A	B	C	R	Nominal wt/kg
87½° Bend with heel rest • Medium radius – TD07						
191230	100	250	250	255	150	9.4
191231	150	275	275	310	150	19.4



Product code	Dia	A	B	R	Nominal wt/kg
87½° Bend with access rear • Medium radius – TD08					
191233	100	250	250	150	12.0
191235	150	275	275	150	21.3
191237	225	335	335	150	57.8



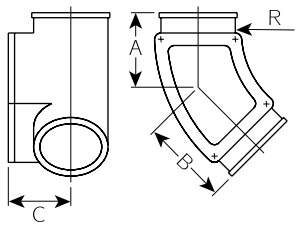
Product code	Dia	A	B	R	Nominal wt/kg
45° Bend with access rear • Medium radius – TD08					
191232	100	135	135	150	8.6
19234	150	145	145	150	25.9
† 191236	225	215	215	150	46.8



Product code	Dia	A	B	C	R	Nominal wt/kg
87½° Bend with access side • Medium radius – TD09						
191239	100	250	250	100	150	13.1
191241	150	275	275	120	150	20.5
† 191243	225	335	335	190	150	57.5

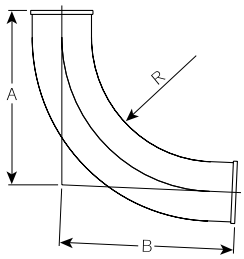
†Made to order.

Bends medium radius

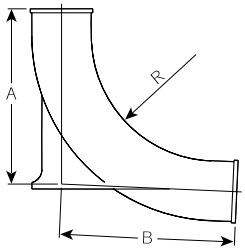


Product code	Dia	A	B	C	R	Nominal wt/kg
45° Bend with access side • Medium radius – TD09						
191238	100	135	135	100	150	10.0
191240	150	145	145	120	150	26.6
† 191242	225	215	215	190	150	46.8

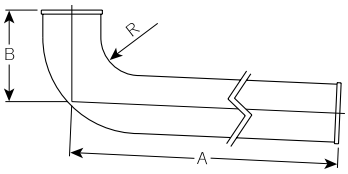
Bends long radius



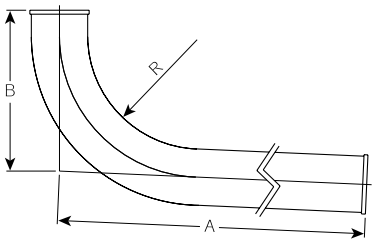
Product code	Dia	A	B	R	Nominal wt/kg
87½° Bend • Long radius – TD15					
191244	100	350	350	250	13.2
191245	150	375	375	250	25.0



Product code	Dia	A	B	R	Nominal wt/kg
87½° Bend with heel rest• Long radius – TD22					
191246	100	350	350	250	15.0
191247	150	375	375	250	28.0

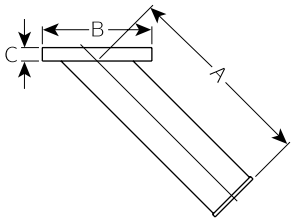


Product code	Dia	A	B	R	Nominal wt/kg
8½° Bend • Long tail – TD102					
191289	100	815	180	90	18.6



Product code	Dia	A	B	R	Nominal wt/kg
87½° Bend • Long tail – TD104					
197173	100	850	650	230	33.0
192699	150	850	650	203	54.0

Bends clearing arm

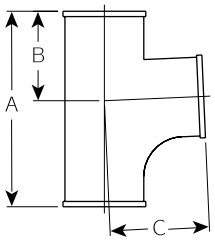


Product code	Dia	A	B	C	Nominal wt/kg
45° Bend • Clearing arm – TD425					
191292	100 x 45°	405	235	35	12.5

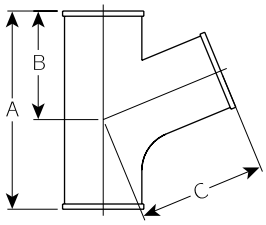
Can be used with gratings and covers – TD612/TD616 and raising pieces – TD525.

†Made to order.

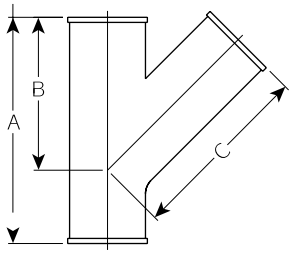
Branches



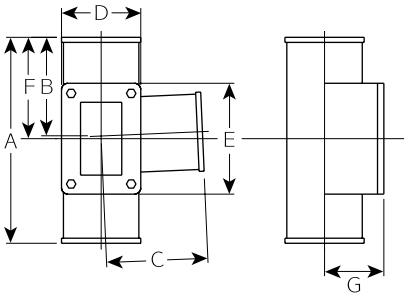
Product code	Dia	A	B	C	Nominal wt/kg
87½° Branch • Radius curve – TD37					
191250	100 x 100	295	130	150	7.8
191252	150 x 100	370	135	235	16.1
191254	150 x 150	445	170	255	19.1
191256	225 x 100	390	155	275	40.0
191258	225 x 150	460	185	295	46.3
191260	225 x 225	590	225	365	58.5



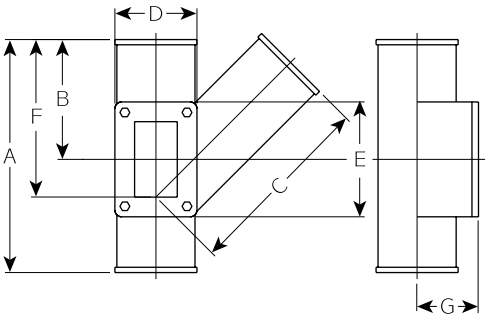
Product code	Dia	A	B	C	Nominal wt/kg
67½° Branch • Radius curve – TD37					
191249	100 x 100	305	165	195	8.8



Product code	Dia	A	B	C	Nominal wt/kg
45° Branch – TD37					
191248	100 x 100	355	245	290	11.3
191251	150 x 100	365	280	325	15.4
191253	150 x 150	435	315	355	24.4
191255	225 x 100	390	340	395	42.0
191257	225 x 150	460	375	410	45.8
191259	225 x 225	590	445	510	64.4



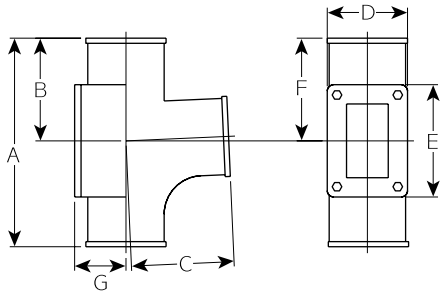
Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
87½° Branch with access side RH • Radius curve – TD51									
191262	100 x 100	325	160	160	205	215	160	105	14.2
191264	150 x 100	370	140	235	175	175	140	135	20.9
† 191267	225 x 150	590	225	295	260	260	250	190	67.3
† 191269	225 x 225	590	225	365	260	260	250	190	79.5



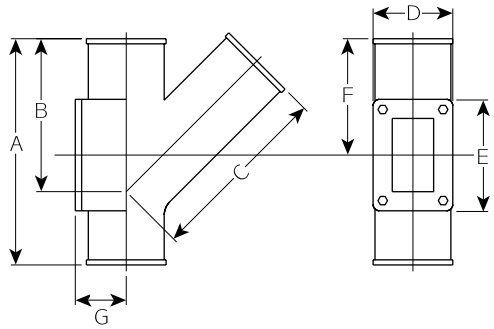
Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
45° Branch with access side RH – TD51									
191261	100 x 100	355	245	290	125	175	245	105	14.2
191263	150 x 100	420	300	325	175	175	200	135	21.9
† 191265	225 x 100	590	445	330	260	260	350	190	62.8
† 191266	225 x 150	590	445	355	260	260	350	190	66.8
† 191268	225 x 225	590	445	510	260	260	350	190	85.4

†Made to order.

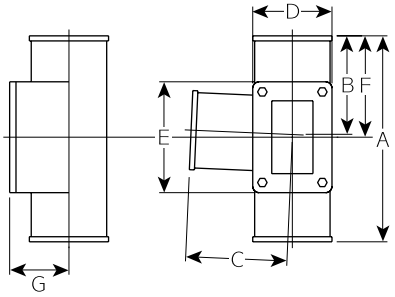
Branches



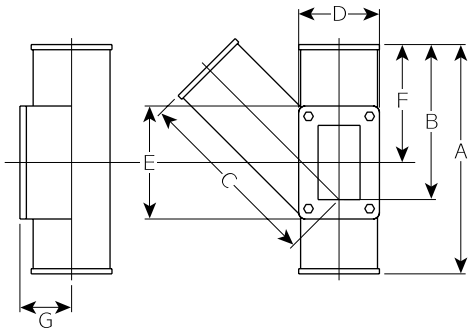
Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
87½° Branch with access rear • Radius curve – TD52									
191271	100 x 100	325	160	160	205	215	160	80	13.4
191273	150 x 100	370	140	235	175	175	140	110	22.9
† 191275	225 x 100	590	225	275	260	260	250	190	60.0
† 191276	225 x 150	590	225	295	260	260	250	190	62.4
† 191278	225 x 225	590	225	365	260	260	250	190	79.5



Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
45° Branch with access rear – TD52									
191270	100 x 100	355	240	290	205	215	185	80	16.1
191272	150 x 100	420	300	325	175	175	200	110	22.9
† 191274	225 x 100	590	445	330	260	260	350	190	63.0
† 191277	225 x 225	590	445	510	260	260	350	190	84.4

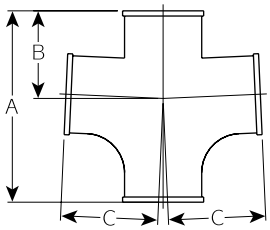


Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
8½° Branch with access side LH • Radius curve – TD53									
191280	100 x 100	325	160	160	205	215	160	105	14.2
191282	150 x 100	370	140	235	175	175	140	135	21.2
† 191284	225 x 100	590	225	275	260	260	250	190	61.0
† 191286	225 x 150	590	225	295	260	260	250	190	67.3
† 191288	225 x 225	590	225	365	260	260	250	190	79.5



Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
45° Branch with access side LH – TD53									
191279	100 x 100	355	245	290	125	175	245	105	14.2
191281	150 x 100	365	280	325	175	175	200	135	21.9
† 191283	225 x 100	590	445	330	260	260	350	190	62.8
† 191285	225 x 150	590	445	355	260	260	350	190	66.8
† 191287	225 x 225	590	445	510	260	260	350	190	85.4

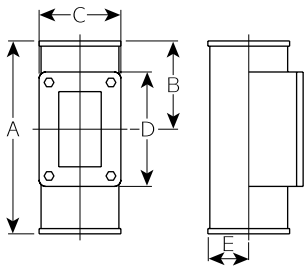
Branches double



Product code	Dia	A	B	C	Nominal wt/kg
87½° Double branch • Plain – TD447					
191293	100 x 100	325	160	160	11.6

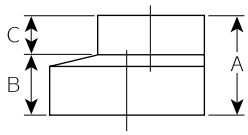
†Made to order.

Pipes access



Product code	Dia	A	B	C	D	E	Nominal wt/kg
Rect door – TD56							
191344	100	270	135	125	175	95	9.7
191345	150	270	135	175	175	125	15.4
191346	225	590	250	260	260	190	62.6

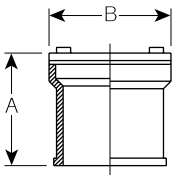
Pipes taper



Product code	Dia	A	B	C	Nominal wt/kg
Pipes • Diminishing – TD41					
191333	150 x 100	100	47	43	3.5
191334	225 x 100	210	160	50	13.6
191335	225 x 150	210	160	50	13.4
191336	*225 x 200	100	60	40	6.2
NEW 192431	†225 x 250	152	82	70	9.8

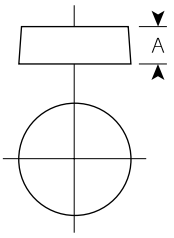
*Connects 225 Timesaver drain to 200 Ensign soil/drain.
†Connects 225 Timesaver drain to 250 Ensign soil/drain.

Socket ferrules



Product code	Dia	A	B	Nominal wt/kg
Socket ferrule with cast iron cap – TD36				
191330	100	120	130	3.8

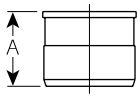
Blank ends



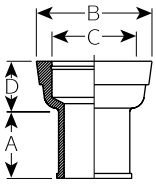
Product code	Dia	A	Nominal wt/kg
Blank ends – TD34			
191326	100	40	1.3
191327	150	40	2.6
191328	225	75	10.7

If you require blank ends drilled to accommodate 50mm waste – use GT71 (see page 49) with TD02 stepped coupling.

Pipes transitional



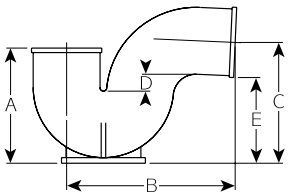
Product code	Dia	A	Nominal wt/kg
Adaptor from Timesaver drain to supersleve – TD118			
191350	100	100	2.2
191351	150	125	5.1



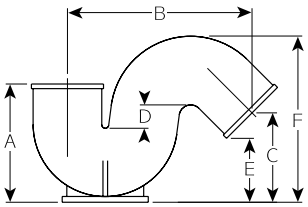
Product code	Dia	A	B	C	D	Nominal wt/kg
Socket for cast iron to suit BS 437 – TD47						
191341	100	100	185	135	75	8.0
191342	150	80	240	190	90	11.8
† 191343	225	120	355	275	115	31.3

Note: Transitional pipe for WC (see soil page 43).

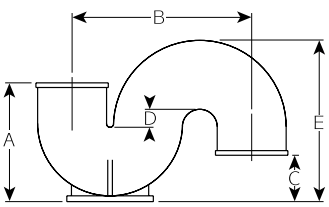
Gully traps



Product code	Dia	A	B	C	D	E	Nominal wt/kg
87½° Gully trap – TD60							
191399	100	205	300	215	50	165	12.4
191400	150	295	400	295	50	220	24.4



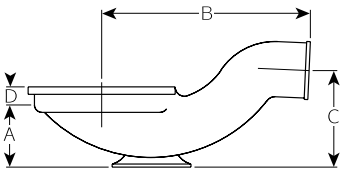
Product code	Dia	A	B	C	D	E	F	Nominal wt/kg
45° Gully trap – TD60								
191398	100	205	320	155	50	120	275	13.2



Product code	Dia	A	B	C	D	E	Nominal wt/kg
Vertical gully trap – TD60							
191397	100	205	310	80	50	275	13.2

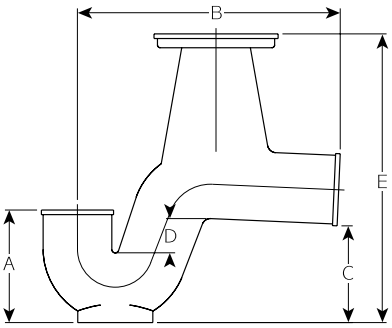
†*Made to order.*

Gully traps

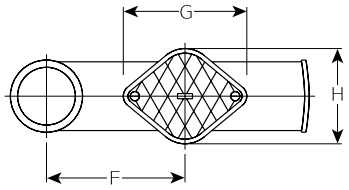


Product code	Dia	A	B	C	D	Nominal wt/kg
87½° Gully trap with 225mm inlet – TD64						
191401	100	130	450	220	43	24.0

Can be used with raising pieces – TD678 and TD108/TD111.

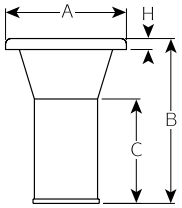


Product code	Dia	A	B	C	D
87½° Gully trap with surface access – TD107					
191402	100	195	455	230	75



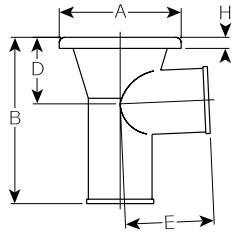
	Dia	E	F	G	H	Nominal wt/kg
87½° Gully trap with surface access – TD107						
	100	500	240	215	165	23.3

Gully inlets bellmouth



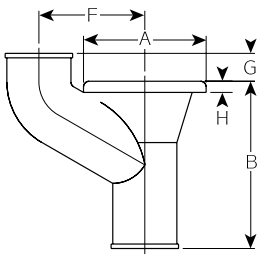
Product code	Dia	A	B	C	H	Nominal wt/kg
Gully inlet • Plain – TD500						
191301	100	220	300	190	17	8.6

Can be used with gratings and covers – TD612/TD616 and raising pieces – TD525.



Product code	Dia	Branch	A	B	D	E	H	Nominal wt/kg
Gully inlet with single branch – TD105								
191299	100	100	220	300	120	160	17	11.8

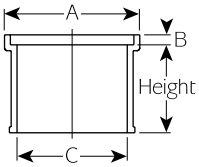
Can be used with gratings and covers – TD612/TD616 and raising pieces – TD525.



Product code	Dia	Branch	A	B	F	G	H	Nominal wt/kg
Gully inlet with vertical branch – TD106								
191300	100	100	220	300	190	50	17	13.7

Can be used with gratings and covers – TD612/TD616 and raising pieces – TD525.

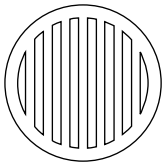
Raising pieces



Product code	Height	A	B	C	Nominal wt/kg
Raising piece – TD525					
191303	150	220	17	190	9.1
191305	305	220	17	190	11.3

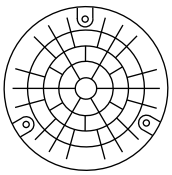
To suit Bellmouth – TD500/TD105/TD106.
Can be used with gratings and covers – TD612/TD616.
Raising pieces require caulking into above listed components.
See p35 for details on caulking compound.

Gratings and covers



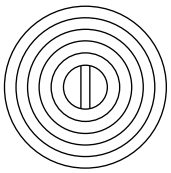
Product code	Dia	Nominal wt/kg
Grating plain – TD612		
191385	200	1.8

Maximum load 2.0 tonnes.



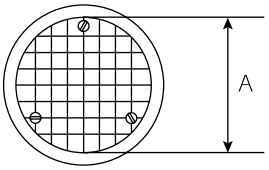
Product code	Dia	Nominal wt/kg
Solid cover – TD613S		
191386	200	2.0

Maximum load 2.0 tonnes.



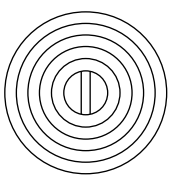
Product code	Dia	Nominal wt/kg
Grating hinged and locking – TD614		
191387	200	1.8

Maximum load 2.0 tonnes.



Product code	Dia	A	Nominal wt/kg
Sealed plate and frame – TD615			
191388	200	180	2.7

Maximum load 2.0 tonnes. Sealed with rubber seal three screws.

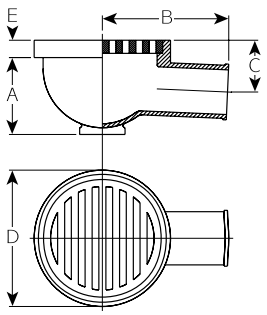


Product code	Dia	Nominal wt/kg
Grease sealed cover and frame – TD616		
191389	200	2.2

Maximum load 2.0 tonnes. Three screws to fix.

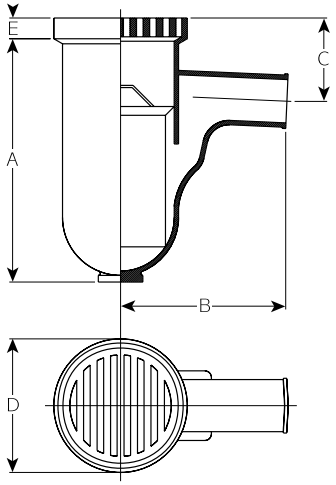
TD612/TD616 can be used in conjunction with raising pieces – TD525.
Bellmouths – TD500/TD105/TD106 and clearing arm bends – TD425.
Gratings – TD614/TD615/TD616 require caulking into above listed components. See p35 for details on caulking compound.

Gully traps



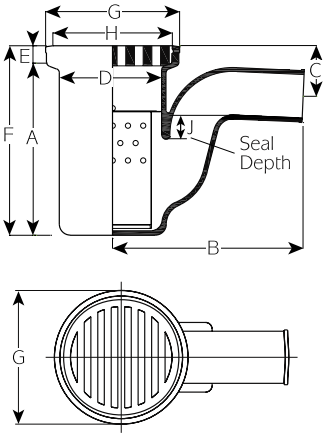
Product code	Dia	A	B	C	D	E	Nominal wt/kg
87½° Trapless gully trap • 230 diameter inlet – TD467							
191403	100	225	280	130	305	43	17.7

Can be used with raising pieces – TD678 and TD108/TD111.
Can be fitted with covers and gratings – TD650/TD653 and TD661/TD662.



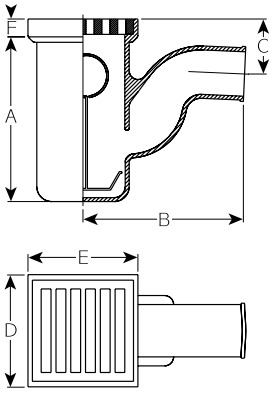
Product code	Dia	A	B	C	D	E	Nominal wt/kg
87½° Deans gully trap • 230 diameter inlet – TD550							
191407	100	560	380	190	305	43	55.4

Can be used with raising pieces – TD678 and TD108/TD111.
Can be fitted with covers and gratings – TD650/TD653 and TD661/TD662.
Can be supplied with Galvanised Sediment Pan: product code 191181.
If used with Galvanised Sediment Pan this fitting can only be fitted with TD650 or TD651 gratings.



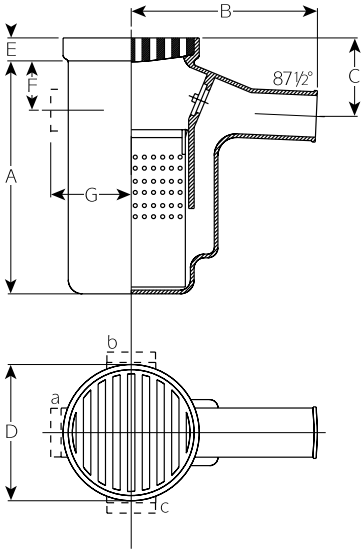
Product code	Dia	A	B	C	D	E	F	G	H	J	Nominal wt/kg
87½° Gully trap • 230 diameter inlet – TD551											
191408	100	395	437	117	225	40	435	308	274	56	30.8

Can be used with raising pieces – TD678 and TD108/TD111.
Can be fitted with covers and gratings – TD650/TD653 and TD661/TD662.
Can be supplied with Galvanised Sediment Pan: product code 191182.
If used with Galvanised Sediment Pan this fitting can only be fitted with TD650 or TD651 gratings.



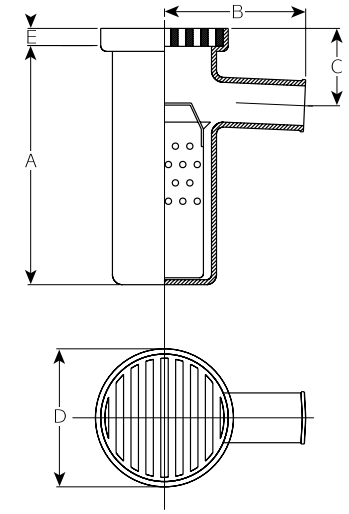
Product code	Dia	A	B	C	D	E	F	Nominal wt/kg
87½° Gully Trap • 230 x 230 inlet – TD553								
191381	100	380	370	125	255	250	35	26.8

Can be supplied with Galvanised Sediment Pan: product code 191183.
Can be supplied with Grating: product code 191380.
Maximum load 2.0 tonnes.



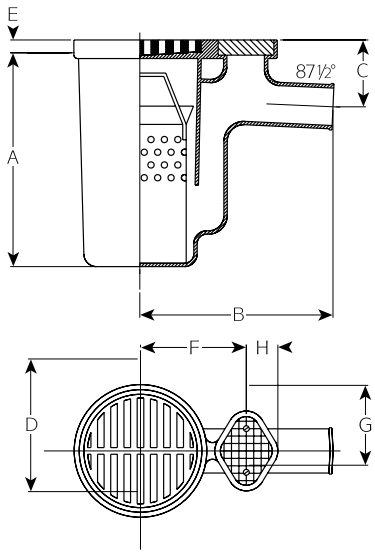
Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
87½° Garage gully trap • 305 diameter inlet – TD554									
191410	100	478	363	168	380	67	101	210	58.4

Can be supplied with raising pieces – TD559.
Can be supplied with Galvanised Sediment Pan: product code 191184.
Can be supplied with grating: product code 191382.
Maximum load 7.5 tonnes.
100 Inlets can be cast on in positions a, b, or c to order.
Product code 02712 191411 inlet at a
02715 191414 inlet at b
02716 191415 inlet at c
02713 191412 inlet at a and b
02714 191413 inlet at a and c
191416 Inlets a, b and c.



Product code	Dia	A	B	C	D	E	Nominal wt/kg
87½° Trapless gully trap • 230 diameter inlet – TD556							
191409	100	570	335	185	300	45	45.4

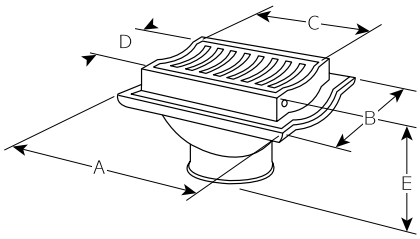
Can be used with raising pieces – TD678 and TD108/TD111.
Can be fitted with covers and gratings – TD650/TD653 and TD661/TD662.
Can be supplied with Galvanised Sediment Pan: product code 191181.
If used with Galvanised Sediment Pan this fitting can only be fitted with TD650 or TD651 gratings.



Product code	Dia	A	B	C	D	E	F	G	H	Nominal wt/kg
87½° Garage gully trap • 330 diameter inlet – TD558										
191418	100	560	520	180	405	50	285	215	85	75.5

Can be supplied with Galvanised Sediment Pan: product code 191185.
Can be supplied with Grating: product code 191383.
Maximum load 7.5 tonnes.

Yard gully

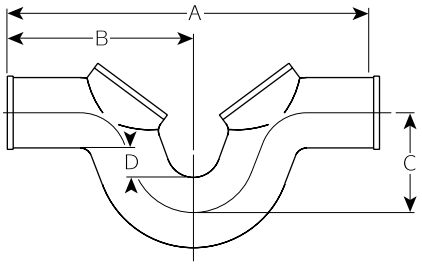


Heavy roadway hinged grating and frame.
Grating dished 25mm deep for channel or flat.

Product code	Outlet dia	A	B	C	D	E	Nominal wt/kg
Gully trap with luting flange – TD561							
191357	225	445	375	335	265	205	44.0

For use with traps – TD550/TD551 and TD556.
Raising pieces – TD678 and TD108/TD111 and tapered inlet gullies – TD684 and TD120/TD123.
Grating maximum load 7.5 tonnes.
Requires caulking into fittings.
See p35 for details on caulking compound.

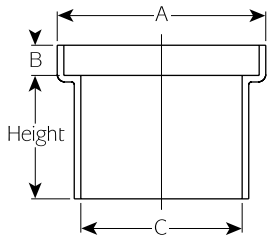
Running traps



Product code	Dia	A	B	C	D	Nominal wt/kg
Running trap with double access – TD475						
191404	100	413	206	150	50	14.2
191405	150	775	370	215	50	55.4
191406	225	1200	600	325	100	144.0

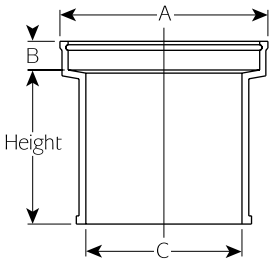
225 diameter comes supplied with foot.
100 and 150 diameter have round accesses.
225 diameter has rectangular accesses.

Raising pieces



Product code	Height	A	B	C	Nominal wt/kg
Raising piece – TD559					
191354	75	380	50	305	12.7
191356	150	380	50	305	20.4
191355	300	380	50	305	37.0

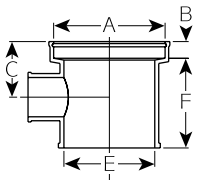
For use with gully trap – TD554.
Requires caulking into gully trap.
See p35 for details on caulking compound.



Product code	Height	A	B	C	Nominal wt/kg
Raising pieces • 225 inside diameter • Plain – TD678					
191363	75	305	43	225	9.5
191365	115	305	43	225	11.6
191364	150	305	43	225	13.5
191366	225	305	43	225	17.0
191367	300	305	43	225	21.5

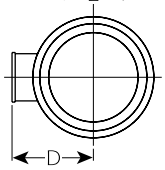
Raising pieces

TD108/111



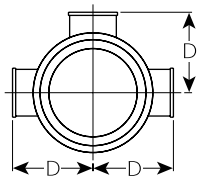
Product code	A	B	C	D	E	F	Nominal wt/kg
Raising piece with 100 inlet branch – TD108							
191347	305	43	140	205	225	225	19.0

TD108



Product code	A	B	C	D	E	F	Nominal wt/kg
Raising piece with 100 inlet branches – TD111							
191348	305	43	140	205	225	225	23.1

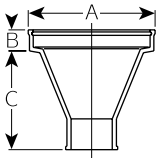
TD111



Raising pieces – TD678 and TD108/TD111 can be used in conjunction with gully traps – TD64/TD467/TD550/TD551/TD556 and tapered gully inlets – TD684 and TD120/123.
Can also be used with grating and covers – TD650/TD653 and TD661/TD662.
Raising pieces require caulking into Gully Traps.
See p35 for details on caulking compound.

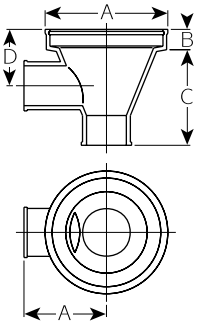
Tapered gully inlets

TD684



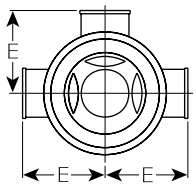
Product code	Outlet dia	A	B	C	Nominal wt/kg
Tapered gully inlet • 225 inside diameter • Plain – TD684					
191368	100	305	43	245	12.9
191369	150	305	43	225	12.3

TD120



Product code	Outlet dia	A	B	C	D	E	Nominal wt/kg
Tapered gully inlet with 100 inlet branch – TD120							
191352	100	305	43	245	140	205	14.2

TD123

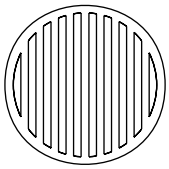


Product code	Outlet dia	A	B	C	D	E	Nominal wt/kg
Tapered gully inlet with 100 inlet branches – TD123							
191353	100	305	43	245	140	205	20.3

Tapered gully inlets – TD684 and TD120/TD123 can be used in conjunction with raising pieces – TD678 and TD108/TD111 and can be used with gratings and covers – TD650/TD653 or TD661/TD662.

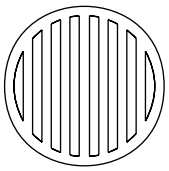
Gratings and covers

For gully traps, raising pieces and tapered gully inlets 265 diameter to suit TD678 and TD108/TD111 raising pieces, TD684 and TD120/TD123 tapered gully inlets, and gully traps TD467/TD550/TD551/TD556.



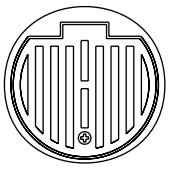
Product code	Dia	Nominal wt/kg
Light grating – TD650		
191390	265	3.6

Maximum load 2.0 tonnes.



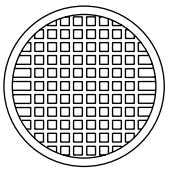
Product code	Dia	Nominal wt/kg
BS heavy grating – TD651		
191391	265	8.0

Maximum load 7.5 tonnes.



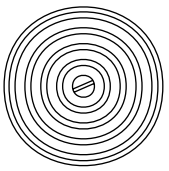
Product code	Dia	Nominal wt/kg
Hinged and locking grating and frame – TD653		
191360	265	5.3

Maximum load 2.0 tonnes.



Product code	Dia	Nominal wt/kg
Sealing plate and frame fitted with two screws – TD661		
191361	265	5.0

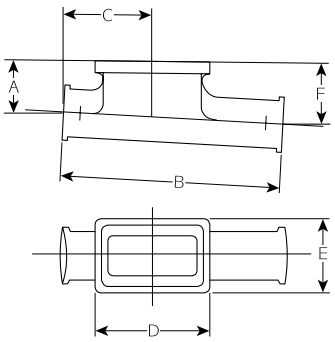
Maximum load 7.5 tonnes.



Product code	Dia	Nominal wt/kg
Grease seal cover and frame fitted with two screws – TD662		
191362	265	3.6

Maximum load 2.0 tonnes.
Requires caulking into above listed gully traps, raising pieces and tapered gully inlets. See p35 for details on caulking compound.

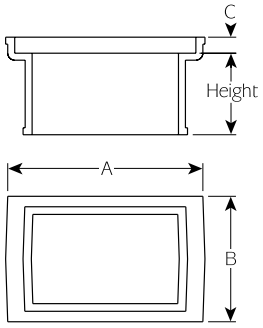
Rainwater shoes



Product code	Dia	A	B	C	D	E	F	Nominal wt/kg
Rainwater shoe with horizontal inlet – TD114								
191349	100	125	530	215	280	180	147	15.5

Can be used with gratings and covers – TD790 to TD795.
Can be used with raising pieces – TD793.

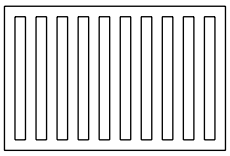
Raising pieces



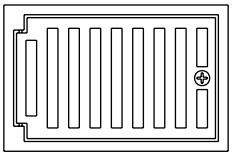
Product code	Height	A	B	C	Nominal wt/kg
Raising piece – TD793					
191378	305	280	180	25	15.4

For use with TD114.
Can be used with gratings and covers – TD790 to TD795.
Raising pieces require caulking into rainwater shoes.
See p35 for details on caulking compound.

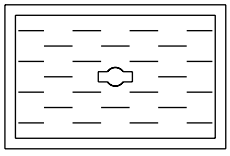
Gratings and covers



Product code	Dimensions	Nominal wt/kg
Grating – TD790		
191374	240 x 140	2.4

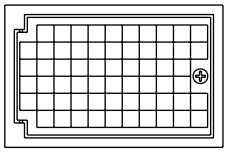


Product code	Dimensions	Nominal wt/kg
Hinged and locking grating and frame – TD791		
191375	240 x 140	3.2



Product code	Dimensions	Nominal wt/kg
Grease seal cover and frame – TD792		
191376	240 x 140	2.4

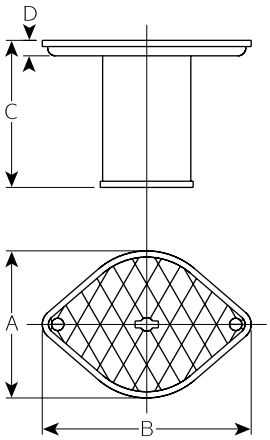
Fitted with two screws if required.



Product code	Dimensions	Nominal wt/kg
Hinged and locking cover and frame – TD795		
191379	240 x 140	3.2

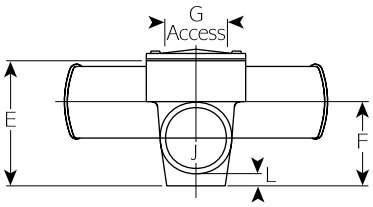
The above gratings and covers are for use with rainwater (drain) shoes – TD114 and raising pieces – TD793. Gratings – TD791/TD795 require caulking into above listed components.
See p35 for details on caulking compound.

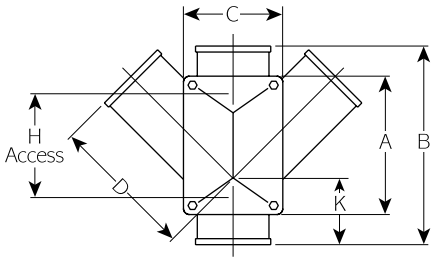
Airtight inspection eye covers



Product code	Dia	A	B	C	D	Nominal wt/kg
Airtight inspection eye covers – TD724						
191394	100	215	270	190	35	10.0
191395	150	260	320	180	30	16.2

Chambers

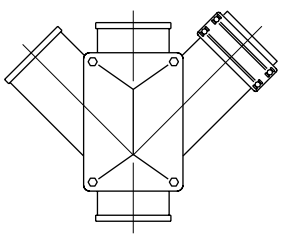




	Product code	Dia	A	B	C	D	E	F	G	H	J	K	L	Nominal wt/kg
	Chamber • Double branch – TD14													
	191306	100 x 100	230	330	165	240	210	140	100	170	65	110	20	19.6
	191307	150 x 100	210	300	215	285	250	170	150	150	90	55	25	24.7
	191308	150 x 150	285	380	215	330	300	200	150	225	95	105	25	38.6
†	191309	225 x 100	500	910	280	400	370	220	226	450	110	320	62	100.0
†	191310	225 x 150	500	910	280	450	370	220	226	450	85	320	62	110.0
†	191311	225 x 225	500	910	280	565	370	220	226	450	45	320	62	174.0

L and J are dimensions to invert.

†*Made to order.*



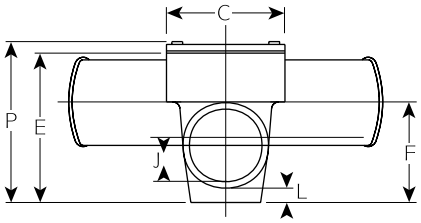
Single branch arm:
if only one branch arm is required, blank off unused arm using TD34 Blank End with TD01 coupling.

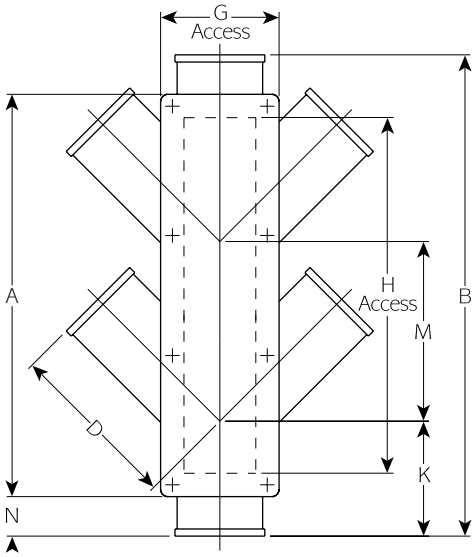
Chambers

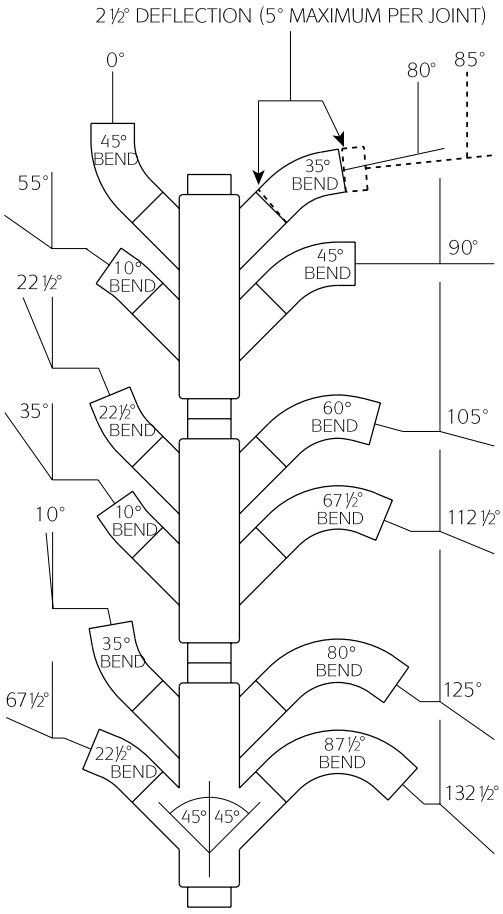
	Product code	Dia	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Nominal wt/kg
Chamber – TD17																	
	191312	100 x 100	560	670	140	250	210	140	100	520	65	160	20	250	55	240	40.2
	191313	150 x 100	560	670	190	285	245	165	150	520	90	160	25	250	55	280	55.9
	191314	150 x 150	700	810	190	330	300	195	150	660	95	135	25	360	55	335	87.2
†	191315	225 x 100	500	920	280	400	370	220	226	450	110	210	62	250	235	410	210.0
†	191316	225 x 150	1050	1460	280	450	370	220	226	1000	85	320	62	550	235	410	220.0
†	191317	225 x 225	1050	1460	280	565	370	220	226	1000	45	320	62	550	235	410	240.0

L and J are dimensions to invert.

†*Made to order.*







Inspection chambers

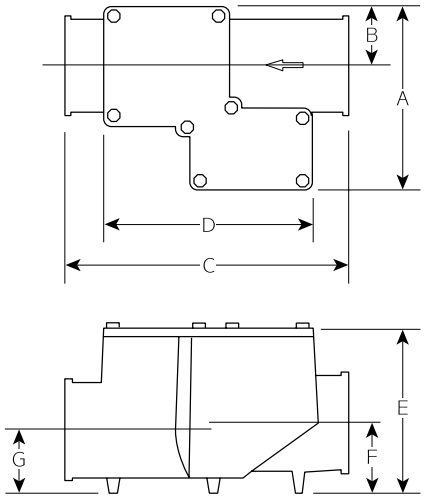
Inspection chamber branch arm entries are all at 45° to conform with BS 437 and Codes of Practice BS EN 12056 Parts 2 and 3.

Where other angles of entry are necessary these can be achieved by the use of standard bends as shown. The Timesaver joint having at 5° deflection capability enables other angles to be achieved e.g. 10° gap from 80° to 90° deflect each joint of 35° bend according to angle required. An 85° angle is illustrated.

The diagram assumes that the branch drains have a fall of 1 in 40 or less. Falls steeper than this will alter the bend apparent angle in plan.

†*Made to order.*

Eureka anti-flooding trunk valves



Jones 'Eureka' anti-flooding trunk valves and interceptors for disconnecting chambers and tidal outfalls.

These valves consist of a cast iron body, stainless steel flap faced with rubber seal, separate cast iron valve seating, polystyrene float fixed to a brass pivot rod, and a bolted cover with rubber seal.

The valve and float are fixed to the same brass spindle in adjoining chambers separated by baffles which allow water to enter but excludes solids. Under normal circumstances the valve hangs clear of the flowing sewage, but when the flood water rises the float rises with it and closes the valve.

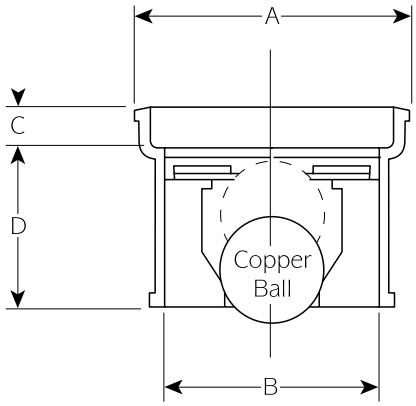
When flood water subsides the float falls, the valve is raised and the rush of pent up water cleans the valve.

Product code	Dia	A	B	C	D	E	F	G	Nominal wt/kg
Anti-flooding trunk valve 'Eureka' – TD750									
191420	150	330	105	490	365	285	115	105	50.0

100, 225, 300mm diameter are currently available in traditional socket and spigot specification (see page 30).
225 and 300mm diameter are made to order.

Note: 1" BSP float vent is supplied plugged. Plug should be removed and a vent pipe carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance. These valves are sold at customers' risk only without guarantee. They are checked before despatch and no liability can be accepted after installation. It is recommended that these valves are serviced before the start of each wet season or a least twice a year.

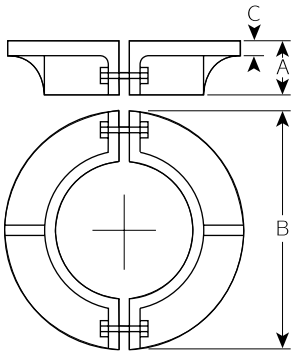
Ball valve anti-flooding



Product code	A	B	C	D	Nominal wt/kg
Anti-flooding ball valve – TD756					
191421	305	225	43	180	21.8

Can be used with grating – TD650.
Can be used in conjunction with TD64/TD467/TD550/TD551/TD678 and TD684.
Not recommended for use in foul drain systems.
This valve is sold at customers' risk only without guarantee.
They are checked before despatch and no liability can be accepted after installation.
It is recommended that these valves are serviced before the start of each wet season or a least twice a year.

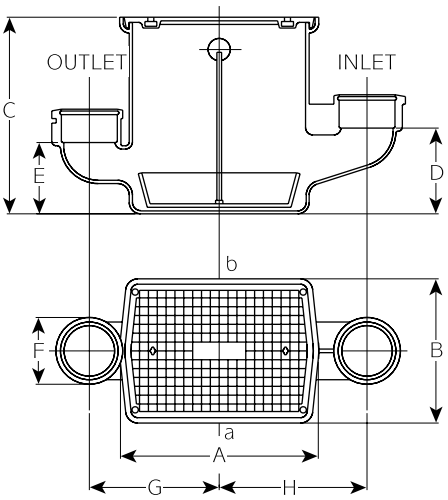
Flanges loose puddle



Product code	Dia	A	B	C	Nominal wt/kg
Flange – TD777					
191371	100	50	220	13	3.9
191372	150	65	275	13	5.6
191373	225	65	360	13	8.6

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 material.

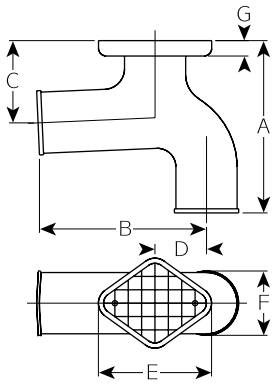
Grease traps



For use inside and outside building.
Inside dimensions for TD706: 455 x 305 x 545.

Product code	Dia	A	B	C	D	E	F	G	H	Nominal wt/kg
Grease trap – TD706 with grease seal cover										
191419	100	545	400	545	250	210	185	360	410	113.1

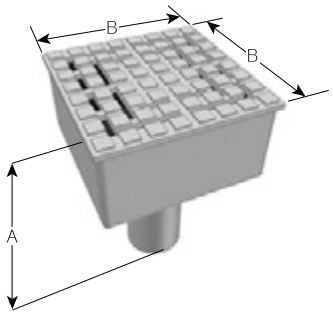
Single seal cover: product code 191393
Can be used with Galvanised Sediment Pan: product code 191187.
Can be used with Bellmouth – TD105 and TD106 on Inlet.
Can used with TD708 on outlet.
Can be tapped 1½" BSPT for vent at a or b to order.
It is recommended that if an appliance, which has its own water seal is connected directly to the grease trap, the waste pipe should be vented and this should be positioned as close to the grease trap as possible.



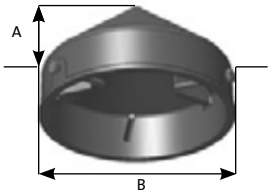
Product code	Dia	A	B	C	D	E	F	G	Nominal. wt/kg
Grease trap outlet for TD706 grease trap – TD708									
191370	100	330	330	155	100	220	175	30	17.1

SOCKET AND SPIGOT DRAIN FITTINGS TO BS 437

Inlets fresh air

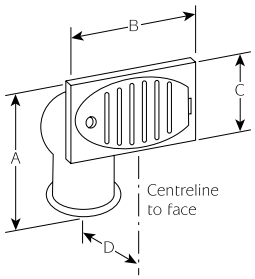


Product code	Dia	A	B	Nominal wt/kg
'CREGEEN' with hinged cover – 585				
191590	100	343	305	22.2



Product code	Dia	A	B	Nominal wt/kg
Ventilating head with three GM screws – 589				
191591	100	178	292	8.8

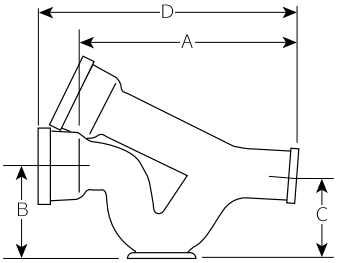
To fit 100 drain pipe socket or 150 drain pipe spigot.



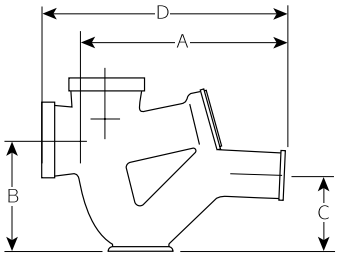
Product code	Dia	A	B	C	D	Nominal wt/kg
Fresh air inlet – 591						
191592	100	315	255	175	115	10.0

Without flap valve.
With locking grill.

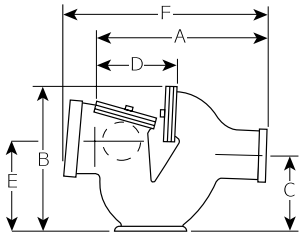
Traps



Product code	Dia	A	B	C	D	Nominal wt/kg
Intercepting trap – 477						
191602	100	530	230	220	582	34.0
191603	150	660	300	290	740	66.0



Product code	Dia	A	B	C	D	Nominal wt/kg
Intercepting trap – 479						
191605	100	580	290	220	660	47.0



Product code	Dia	A	B	C	D	E	F	Nominal wt/kg
Intercepting trap – 481								
191607	100	530	240	230	240	235	660	44.0
191610	150	610	485	290	290	320	700	68.0

100 and 150mm dia with 100 dia FAI.
Can be supplied with fresh air inlet LH or RH.
100 LH 191608 100 RH 191609 150 LH 191611 150 RH 191612.
Position of inlet left/right decided when viewing against the direction of the flow. If in doubt – contact Technical Dept. 01952 262529

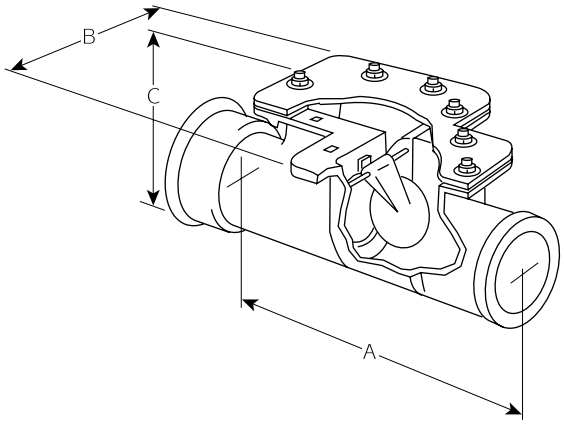
Eureka anti-flooding trunk valves

Jones 'Eureka' anti-flooding trunk valves and interceptors for disconnecting chambers and tidal outfalls.

These valves consist of a cast iron body, stainless steel flap faced with rubber seal, separate cast iron valve seating, polystyrene float fixed to a brass pivot rod, and a bolted cover with rubber seal.

The valve and float are fixed to the same brass spindle in adjoining chambers separated by baffles which allow water to enter but excludes solids. Under normal circumstances the valve hangs clear of the flowing sewage, but when the flood water rises the float rises with it and closes the valve.

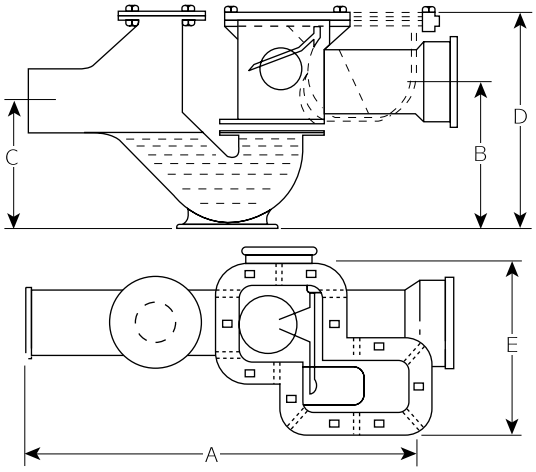
When flood water subsides the float falls, the valve is raised and the rush of pent up water cleans the valve.



Note: 1" BSP float vent is supplied plugged. Plug should be removed and a vent pipe carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance. These valves are sold at customers' risk only without guarantee. They are checked before despatch and no liability can be accepted after installation. It is recommended that these valves are serviced before the start of each wet season or a least twice a year.

Product code	Dia	A	B	C	Nominal wt/kg
Anti-flooding trunk valve 'Eureka' – 750					
191593	100	597	356	241	51.0
†191594	225	889	610	406	120.0
†191870	300	1035	748	540	350.0

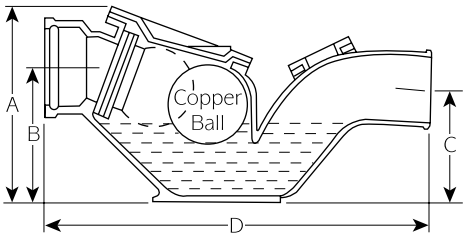
150mm diameter (see page 27).



Product code	Dia	A	B	C	D	E	Nominal wt/kg
Anti-flooding trunk valve 'Eureka' – 752							
†191595	100	845	299	267	396	343	105.0
†191596	150	978	355	305	546	406	145.0
†191597	225	1372	559	432	800	584	–

Note: 1" BSP float vent is supplied plugged. Plug should be removed and a vent pipe carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance. These valves are sold at customers' risk only without guarantee. They are checked before despatch and no liability can be accepted after installation. It is recommended that these valves are serviced before the start of each wet season or a least twice a year.

Ball valve anti-flooding



Product code	Dia	A	B	C	D	Nominal wt/kg
Anti-flooding ball valve – 755						
† 191598	100	350	240	185	660	53.5
† 191599	150	460	315	260	820	98.9
† 191600	225	616	438	383	1219	–

Not recommended for use in foul drain systems.
These valves are sold at customers' risk only without guarantee.
They are checked before despatch and no liability can be accepted after installation.
It is recommended that these valves are serviced before the start of each wet season or a least twice a year.
These valves should be set horizontally with the aid of a spirit level.

† *Made to order.*

BIM Library

Saint-Gobain PAM UK launched the first phase of its fully integrated parametric BIM library in 2014. The Timesaver ranges will be added by end of 2015.

The Saint-Gobain PAM BIM library has been produced on the guidelines and frameworks defined by the UK standards documents, including BS1192:2007, PAS1192-2, and BS8541-1 & BS8541-2:2011

The BIM library of components has been designed up to LOD Specification level 350. Compatibility:

- From 2012 Autodesk REVIT (.rvt)

Access to the BIM library will be available through the Saint-Gobain website **www.saint-gobain-pam.co.uk** or contact the PAM BIM technical consultant on 01952 262561.

Design recommendations

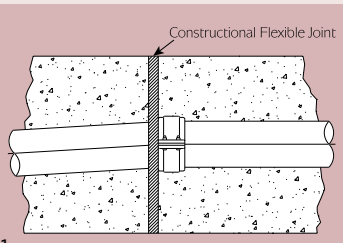


Fig. 1

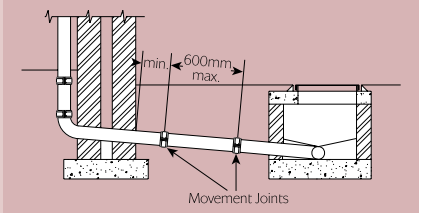
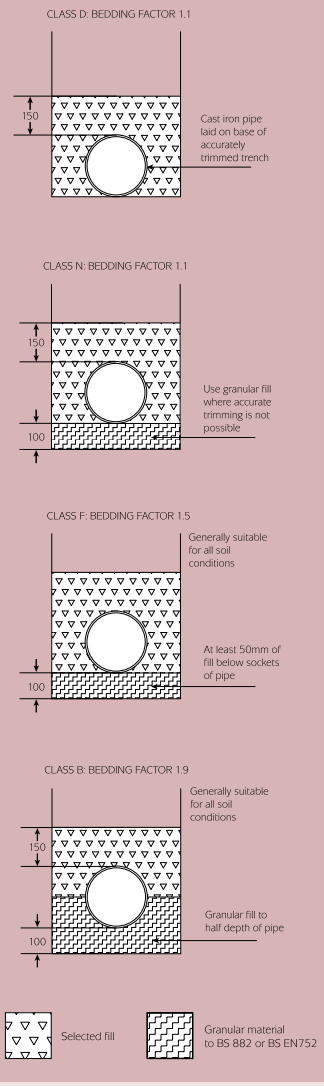


Fig. 2

Backfilling for rigid pipes



Trench preparation

Timesaver drain may be laid directly into a naturally trimmed trench allowing 50mm clearance at each joint between coupling and trench bottom. The trench bottom should be flat to give continuous support to the pipework.

If the subsoil can't be accurately trimmed with a spade, the trench should be excavated to a depth of 100mm below the pipe invert and a granular bed laid. This also should allow 50mm clearance at each joint between the coupling and the granular bed. Where Timesaver drain is to be set in concrete, the trench should be prepared as described above to allow a minimum of 100mm of concrete under the pipe.

The pipe should be supported on a compressible material (e.g. expanded polystyrene), either side of each joint. The concrete should have a suitable flexible joint at intervals not greater than 5m in order to reduce the natural rigidity of the concrete. This should be made of a compressible material (e.g. expanded polystyrene), which should be placed next to a pipe joint, and conform to the full cross section of the concrete (see Fig. 1).

Haunching and surround should not be carried out until the pipework has been tested and inspected.

Differential movement

Timesaver couplings allow up to 5° deflection at each joint.

Pipelines leaving buildings, manholes or other structures which are likely to be subject to settlement, should have a minimum of two joints a maximum of 600mm apart, thereby allowing a short length of pipe to act as a 'rocker pipe'. The joint nearest the structure should be as close to it as possible and in areas where large settlement is expected, more than one 'rocker pipe' may be required (see Fig. 2).

Minimum depth of pipework

Timesaver drain can be installed with a minimum cover of 75mm under building without further protection. Where Timesaver drain is installed under roads and yards, subject to normal usage, protection need only be considered if the cover is less than 300mm. However, in areas that are subject to special loadings or abuse, extra protection should be considered.

Minimum bedding – limits of cover

The choice of bedding and backfilling depends on the depth at which the pipes are to be laid and the size and strength of the pipes. Rigid pipes like cast iron are more robust than flexible plastics pipes and backfilling can therefore be simpler. The Building Regulations specify the limits of cover for rigid pipes as follows:

Limits of cover for standard strength rigid pipes in any width of trench (as per BS EN 752)

Pipe size	Bedding class	Fields and gardens		Light traffic roads		Heavy traffic roads	
		Min metres	Max metres	Min metres	Max metres	Min metres	Max metres
100	D or N	0.4	4.2	0.7	4.1	0.7	3.7
	F	0.3	5.8	0.5	5.8	0.5	5.5
	B	0.3	7.4	0.4	7.4	0.4	7.2
150	D or N	0.6	2.7	1.1	2.5	–	–
	F	0.6	3.9	0.7	3.8	0.7	3.3
	B	0.6	5.0	0.6	5.0	0.6	4.6

Backfill sequence

Trenches should be backfilled in stages, and at least 150mm of earth free from stones larger than 40mm, lumps of clay over 100mm and vegetable matter should cover the pipe before tamping down. Further 300mm thick layers of selected fill should be tamped down until the trench is full.

Falls

Pipework gradients should be chosen to obtain a self-cleaning action under normal discharge conditions. For flows of less than 1 litre/sec a gradient of 1 in 40 for 100mm pipe and 1 in 60 for 150mm pipe, are usually sufficient and for practical purposes, the gradients should not be less than 1 in 80 for 100mm pipe and 1 in 150 for 150mm pipe.

Design recommendations

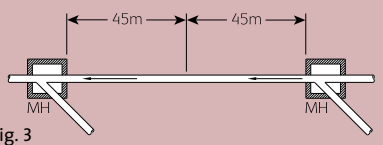


Fig. 3

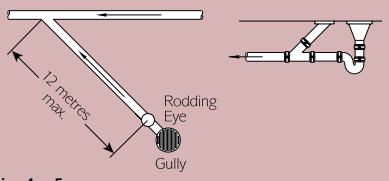


Fig. 4 + 5

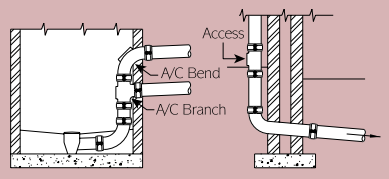


Fig. 6 + 7

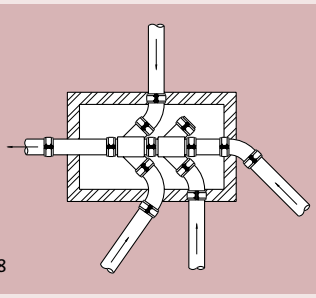


Fig. 8

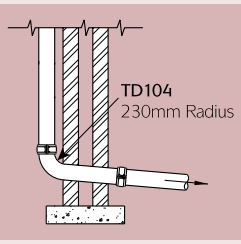


Fig. 9

Access

Access is required on all pipelines to facilitate the rodding and clearing of debris and can be provided by manholes, chambers, access fitting or rodding eye – the latter allowing downstream access only.

Generally, no part of a drain should be further from a manhole than 45m and the distance between manholes should not exceed 90m (see Fig. 3).

Where a drain connects with another drain without the provision of an inspection chamber or manhole, access should be provided on the branch drain within 12m of the junction (see Fig. 4 and Fig. 5).

It is recommended that access to the pipework is installed each time the drain changes direction either horizontally or vertically by the inclusion of an access fitting (see Fig. 6 and Fig. 7).

Inspection chambers

Inspection chamber branch arm entries are all at 45° to conform with BS 437 and BS EN 12056 Parts 2 and 3.

Where other angles of entry are necessary these can be achieved by the use of standard bends as shown above. The Timesaver joint having at 5° deflection capability enables other angles to be achieved, e.g. 10° gap from 80° to 90° deflect each joint of 35° bend according to angle required. An 85° angle is illustrated (see Fig. 10).

The diagram assumes that the branch drains have a fall of 1 in 40 or less. Falls steeper than this will alter the bend apparent angle in plan.

Use of bends

Bends in drains should be kept to a minimum. Wherever possible bends should be at or near to manholes or in a position which will allow ease of rodding (see Fig. 8).

At the base of soil and rainwater stacks, it is recommended that long or large radius bends be used (see Fig. 9).

Use of branches

Branches or junctions on drains should be, where possible, at access points, such as manholes, to facilitate rodding.

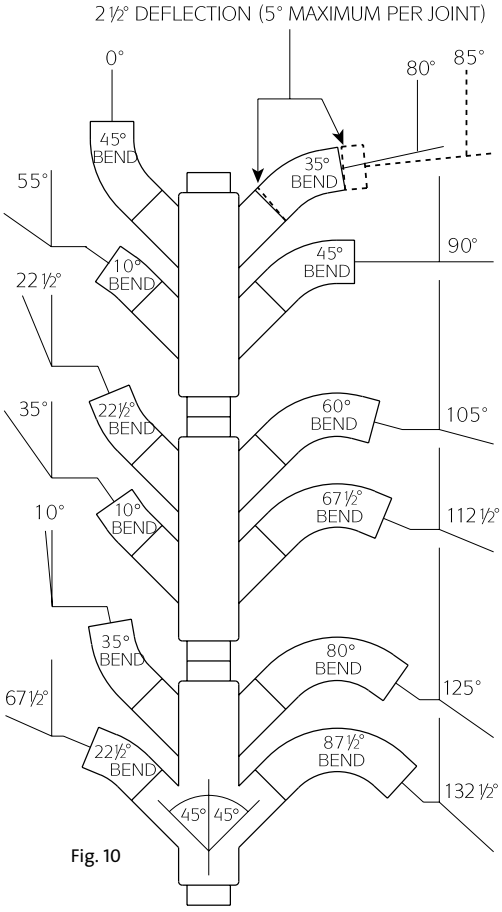


Fig. 10

Design recommendations

TD777

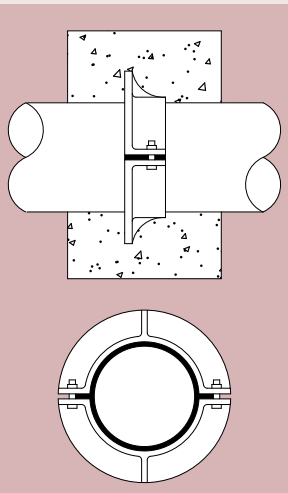


Fig. 11

Gullies, floor drains and traps

A drainage gully is a fitting that enables wastewater to enter the drainage system without allowing smells or sewer gases to escape. A variety of designs have been developed to suit different situations, for example – back inlet gully, which is used to connect rainwater pipes and waste pipes from ground floor sinks.

Ventilation of drains

It is important to allow a passage of air through the drainage system to enable any foul gases to escape. This is achieved by providing air inlets at the low point and vent pipes that terminate at high level, and also at the head of the drain. Convection currents cause a slow flow of air through the system. Also, if the air pressure in the drain was reduced, say by the pipes flowing full, the trap seals of gullies and WC's would be lost and the sewer gases would be able to enter the building.

Puddle flanges

Where pipes pass through external walls, a puddle flange may be required to prevent water from entering where the pipe is below the natural ground water table, or methane gas from entering the building from made-up ground. Loose, two-piece flanges should be bedded onto 'Denso' tape and tightened into position (see Fig. 11).

Support recommended for suspended drainage

It is important that all suspended horizontal pipework is adequately supported by brackets and fixings of sufficient strength to support the pipes and their maximum contents.

The distance between pipe supports should not exceed 3m (BS EN 12056-2 Code of Practice for Sanitary Pipework'). However, as shown in Fig. 12, it is recommended that suspended BS 437 pipes should have two bracket supports per 3m length.

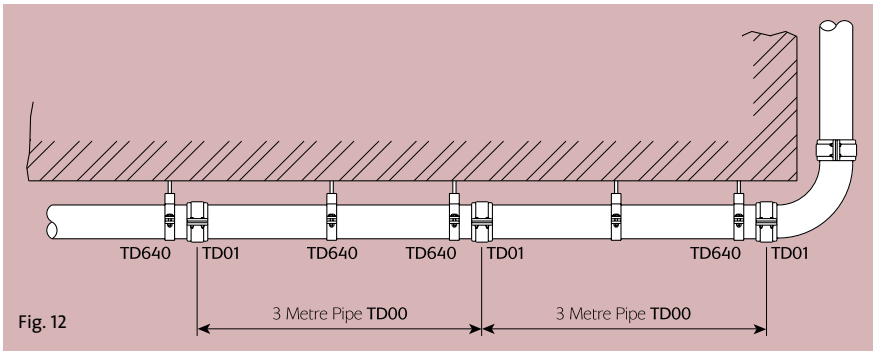
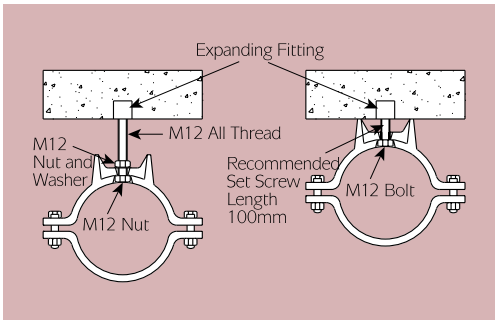


Fig. 12



Connection to other systems

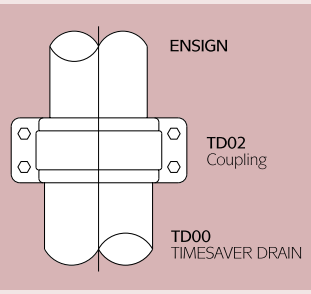


Fig. 13

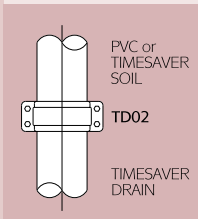


Fig. 14

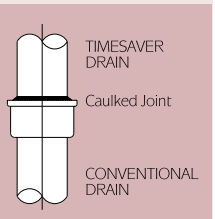


Fig. 15

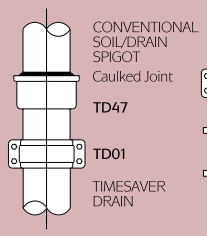


Fig. 16

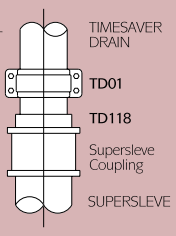


Fig. 17

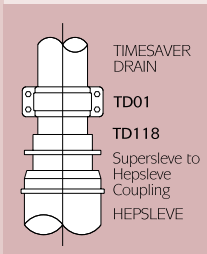


Fig. 18

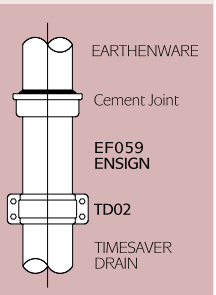


Fig. 19

A. Timesaver drain dimensions

Most materials can be connected to Timesaver drain by using a TD01 coupling if their dimensions conform to the following table:

Timesaver drain nominal dia	Min o/dia	Max o/dia
100	116	119
150	170	173
225	250	256

or by using a TD02 coupling if their dimensions conform to the following table:

	Other material	
Timesaver drain nominal dia	**Min o/dia**	**Max o/dia**
100	110	114
150	161	165

B. Ensign

Couple directly to Ensign using a TD02 transitional coupling (see Fig. 13). Four bolt, two piece coupling to BS 6087.

C. Timesaver soil

Timesaver soil can be connected directly to Timesaver drain using a TD02 coupling (see Fig. 14).

D. Conventional drain/soil

To connect Timesaver drain/soil into a conventional drain socket use a traditional caulked joint (see Fig. 15).

If connecting to a conventional drain/soil spigot use a TD47 with a caulked joint and a TD01 at the spigot of the TD47 (see Fig. 16).

E. Hepworth clayware

100 and 150 Supersleve can be connected to Timesaver drain by using a TD118 adaptor and a TD01 coupling (see Fig. 17).

100 and 150 Hepsleve can be connected to Timesaver Drain by using a TD118 adaptor and a TD01 coupling in conjunction with a Supersleve to Hepsleve transitional coupling manufactured by Hepworth (see Fig. 18).

F. Earthenware

Timesaver drain can be connected to an earthenware socket using a traditional cement joint.

If connecting to an earthenware spigot use a EF059 and a TD02 coupling with a traditional cement joint at the socket of the EF059 (see Fig. 19).

Advice on cold caulking

For products which require to be caulked ie socketed BS437 fittings or raising pieces we recommend the following:

Resin product code: W251A

Hardener product code: W252

Supplied by:
John Winter & Co. Ltd
Foundry & Dental Supplies
P.O. Box 21
Washer Lane Works
Halifax
HX2 7DP

Tel: 01422 364 213 Fax: 01422 330 493

Quality control procedures and tests

All pipes, fittings and couplings are subjected to tests in accordance with the requirements of the relevant British Standard prior to despatch from works.

Pipes and fittings

A. Hydrostatic test
Pipes and fittings, after coating, conform to the hydrostatic pressure requirements of BS 437:

Pipes	345kPa	(3.45 Bars)
Fittings	170kPa	(1.70 Bars)

The test pressure is applied internally and maintained for not less than 15 seconds and up to a maximum of one minute.

B. Crushing test
Pipes and, where applicable, fittings conform to the BS 437 requirements of being capable of withstanding a test load of 150kN per metre run.

Couplings

A. Deflection test procedure
Fully engage pipe ends into joint assembly. Align them axially with one pipe restrained from movement and the other pipe completely free to move. Separate the pipes axially by 5mm on either side of central register.

Angularly deflect one pipe with respect to the other, to an angle of 3° with the fulcrum on the centre line of the pipes within the joint. Apply and maintain a hydrostatic pressure of 1 bar for period of five minutes without leakage.

B. Drain testing
It is normal practice to carry out two soundness tests on drainage systems. The first, before back filling the trench, followed by a second test after back filling which may be required to be witnessed by the local building control officer.

Methods of testing – two methods of soundness testing are possible: a water test or an air test.

Water test – to carry out a water test the length of drain to be tested is blocked off at its lower end by means of a drain stopper. Another stopper is fitted at the top of the run of drain with an up-stand pipe of 1.5m height attached. The drain is then filled with water and the joints can then be inspected for leaks. It is recommended that the total head of water should not exceed 4m so it may be necessary to test the drain in sections.

Air test – the air test is quicker to carry out and more searching than the water test, and should be used in preference. To carry out the test, drain stoppers are filled to any open ends, and gullies have their traps filled with water. A length of hose is then passed through a trap and air is gently blown into the drain until a pressure of 100mm is indicated on a manometer. Provided a pressure of a least 75mm remains after 5 minutes of the test, the drain can be considered sound. Where traps or gullies are connected the drain should withstand a pressure of 50mm water gauge and this should not fall by more than 12.5mm in a 5-minute period.

C. Straight draw test procedure
Fully engage the pipes in the joint assembly, as Fig. 20. Align them axially. Separate the pipes axially by 5mm on either side of the central register. Prevent further longitudinal movement. Apply and maintain a hydrostatic pressure of 1 bar for a period of five minutes without leakage.

D. Shear loading test procedure
Fully engage the pipes in the joint assembly and align them axially on supporting structure, as Fig. 21. Separate the pipes axially by 5mm on either side of central register. Prevent further longitudinal movement. Apply a shear load of 0.025kN x nominal pipe diameter in mm, inclusive of the mass of the pipe and contents, uniformly over a length of 300mm adjacent to the coupling, as Fig. 21.

Apply and maintain a hydrostatic pressure of 1 bar for a period of five minutes without leakage.

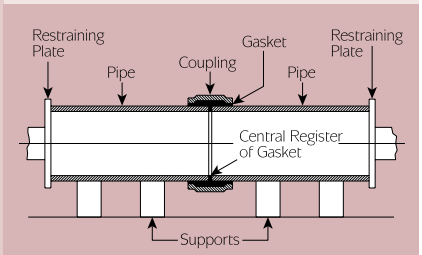


Fig. 20

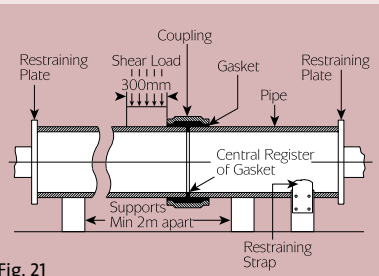


Fig. 21

It is recommended that these technical notes should be read in conjunction with the following British Standards:

1. BS EN 12056-2: Code of Practice for Sanitary Pipework (inside the building).
2. BS EN 12056-3: Code of Practice for Drainage of Roofs and Paved Areas (inside the building).
3. BS EN 752: Drains and Sewers Outside Buildings.
4. BS 8301: Code of Practice for Building Drainage (now obsolete).