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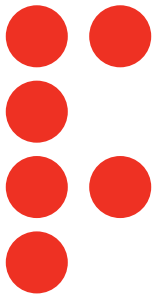
www.fastclamp.com



FastClamp®



Product Guide



FastClamp®

The safe clamping system for circular hollow sections

Access Technologies Limited was established in 1995 to manufacture access equipment for the Construction Industry, the FastClamp brand followed as a natural progression four years later and has since grown to become one of the premier ranges of slip on tubular connectors available today.

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Fourth Edition – May 2007

The information contained in this product guide is accurate to the best of our knowledge at the time of going to press. We reserve the right to modify our products in line with our policy of continued development and improvement.

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FastClamp is a range of fittings manufactured from Malleable Iron to BS EN 1562:1997 & Ductile Iron (where noted in the fittings description) to BS EN 1563:1997. FastClamp fittings are used to construct lightweight tubular steel structures and are manufactured to suit five different tube sizes.

FastClamp fittings require no welding, drilling or special tools simply a hexagon key to tighten the special setscrews that embed into the tube. FastClamp fittings will support an axial load of up to 900 kgs when tightened to a torque of 39Nm.

FINISHES AVAILABLE

FastClamp castings are Hot dip Galvanised to BS EN ISO 1461:1999 as standard. FastClamp fittings can also be supplied in a powder coated finish to RAL standard colours subject to quantity and availability from the coaters.

FASTCLAMP SELECTION

FastClamp fittings are suitable for use with steel tubes to BS EN 10255 and BS 1387 with a minimum wall thickness of 3.2mm, however please note that internal fitting types: C01, C06, C65, DDA-02 & DDA-06 are only designed for use with 3.2mm thick tube.

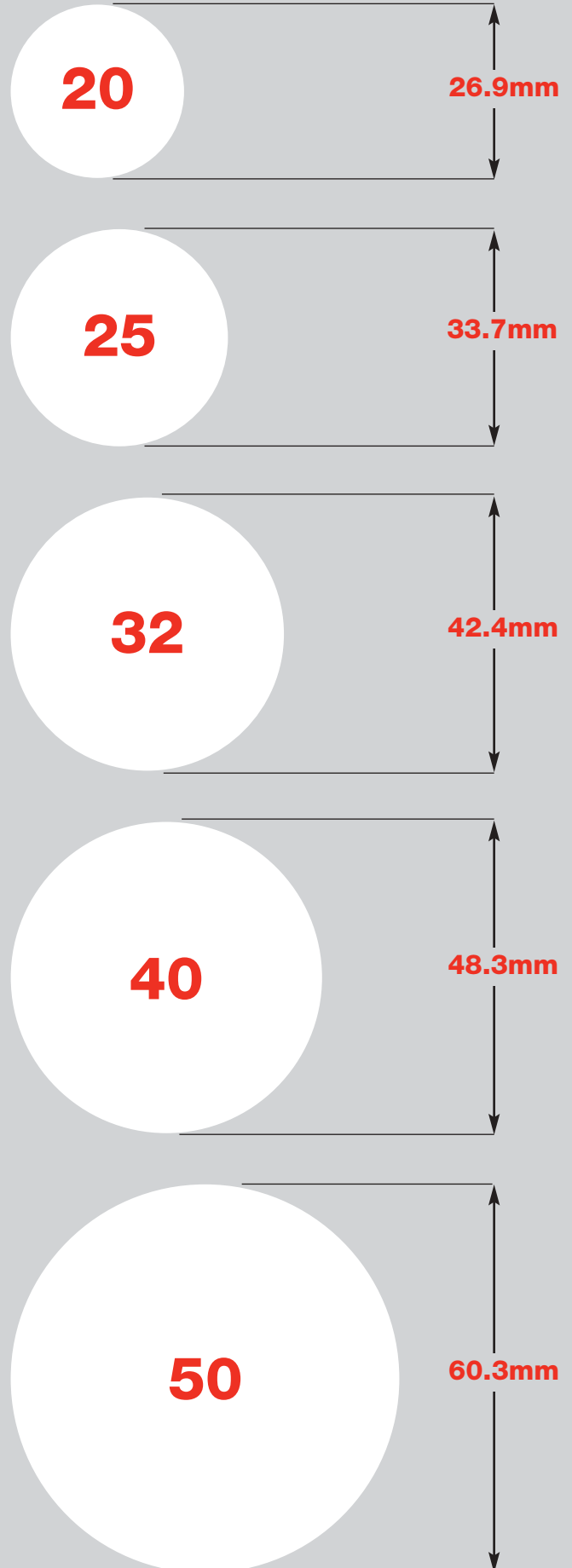
Product codes are constructed as follows:

- C** = FastClamp
- No.** = FastClamp type
- G** = Galvanised
- P** = Plastic
- S** = Stainless Steel
- No.** = Tube size

Example: **C00G20** is a FastClamp, type 00, galvanised, and suitable for 26.9mm diameter tube.

Fitting	Tube size \varnothing	Nominal bore of tube	
		Metric	Imperial
20	26.9mm	20	3/4"
25	33.7mm	25	1"
32	42.4mm	32	1 3/4"
40	48.3mm	40	1 1/2"
50	60.3mm	50	2"

Important Note: The Tube Size \varnothing should be the first consideration as this is the primary structural component for any FastClamp structure. The application guidelines on page 5 will aid this choice for handrailing and page 6 will help the design of Racking and General Structures.



FastClamp is the safe and simple solution to build many different types of lightweight tubular structures, the applications are only limited by imagination and the following are just a small selection that can be constructed.

- Handrailing
- Guardrailing
- Tyre racks
- Car ports
- Polytunnels
- Fruit cages
- Garment racks
- Greenhouses
- Barriers
- Disabled ramps
- Sheds
- Roof Edge Protection
- Frames
- Canopies
- Market stalls
- Storage racks
- Work benches
- Exhibition stands
- Cattle pens
- Cricket screens
- Security screens
- Stables
- Climbing frames
- Goalposts



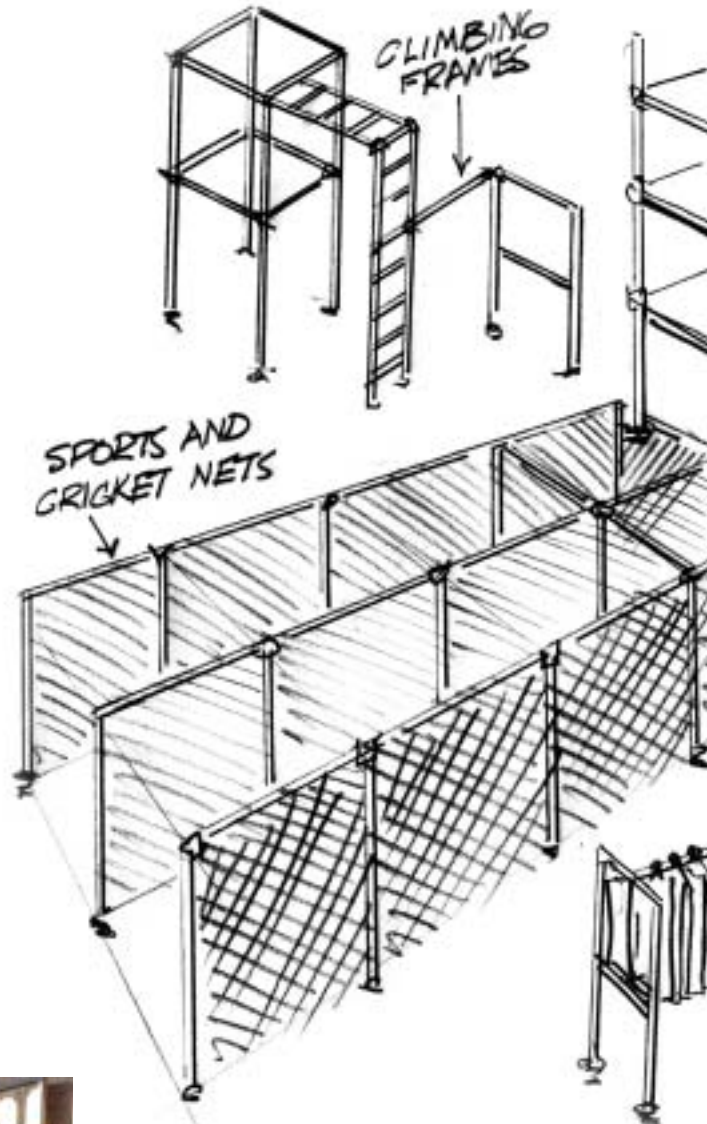
Handrails



Roof Edge Protection



Fruit Cages

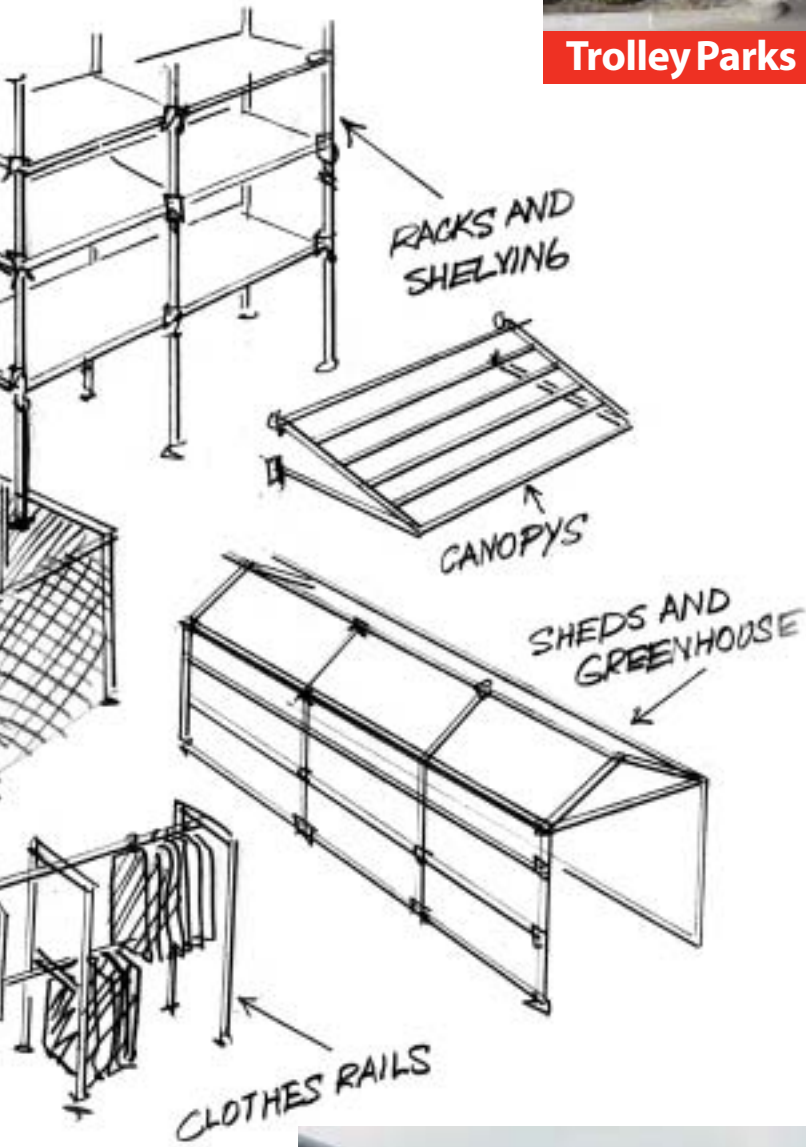


Stables





Trolley Parks



Boat Racks



Storage Racks



Guardrailing



Handrail

Handrail is the most common form of structure that is built with FastClamp fittings and requires careful consideration to meet required design loadings. Design loads are usually specified, however if unsure BS 5395 and BS 4592 are good reference documents.

The loading capacity of any handrail structure is determined principally by the diameter, thickness and frequency of its Uprights.

This table contains our recommendations to safely meet the stated design loads based on the maximum permissible bending moment of the Upright tube.

Tube Ø and Grade						
33.7 x 3.2mm Grade S275	42.4 x 3.2mm Grade S275	42.4 x 4.0mm Grade S275	48.3 x 3.2mm Grade S275	48.3 x 4.0mm Grade S275	48.3 x 5.0mm Grade S355	
Design Load						
Maximum Upright Centres (mm)						
900 mm high						
360 N/m	814	1369	1595	1828	2584	3052
740 N/m	Not Suitable	666	776	889	1257	2229
1500 N/m	Not Suitable	Not Suitable	Not Suitable	439	620	1100
1000 mm high						
360 N/m	732	1232	1435	1645	2326	2930
740 N/m	Not Suitable	599	698	800	1131	2006
1500 N/m	Not Suitable	Not Suitable	Not Suitable	Not Suitable	558	990
1100 mm high						
360 N/m	666	1120	1305	1496	2114	2778
740 N/m	Not Suitable	545	635	728	1028	1824
1500 N/m	Not Suitable	Not Suitable	Not Suitable	Not Suitable	507	900

Rails need only be 3.2mm thick and the same diameter as the Upright.

Table 3

Racking and general structures

Racking and general structures can be constructed using FastClamp fittings. Care must be taken to ensure that the tube size selected is adequate for the loads anticipated. To help with the selection of the correct tube, table 1 provides the uniformly distributed loads that can be supported between upright posts assuming that the load is supported by two tubes. These loads are calculated based on the maximum bending movement for the tube.

Table 2 provides the load capacity for single upright posts with various unsupported lengths. These loads are based on the compression strength and buckling loads of the CHS tube.

NB. When designing structures care must be taken to ensure that the load on any one grub screw does not exceed 900kg.

For further help in designing structures using FastClamp please contact our technical department.

Horizontal tubes load capacity

Uniformly distributed load in Kg using two horizontal tubes

Tube Ø and Grade						
Span (metres)	33.7 x 3.2mm Grade S275	42.4 x 3.2mm Grade S275	42.4 x 4.0mm Grade S275	48.3 x 3.2mm Grade S275	48.3 x 4.0mm Grade S275	48.3 x 5.0mm Grade S355
0.5	1257	2108	2490	2818	3347	4910
0.6	1047	1757	2075	2349	2789	4092
0.7	898	1506	1778	2013	2391	3507
0.8	785	1317	1556	1761	2092	3069
0.9	698	1171	1383	1566	1859	2728
1.0	628	1054	1245	1409	1673	2455
1.1	571	958	1132	1281	1521	2232
1.2	524	878	1037	1174	1394	2046
1.3	483	811	958	1084	1287	1888
1.4	449	753	889	1007	1195	1754
1.5	419	703	830	939	1116	1637
1.6	393	659	778	881	1046	1534
1.7	370	620	732	829	984	1444
1.8	349	586	692	783	930	1364
1.9	331	555	655	742	881	1292
2.0	314	527	622	705	837	1228
2.1		502	593	671	797	1169
2.2		479	566	641	761	1116
2.3		458	541	613	728	1067
2.4		439	519	587	697	1023
2.5		422	498	564	669	982
2.6			479	542	644	944
2.7			461	522	620	909
2.8			445	503	598	877
2.9			429	486	577	847
3.0			415	470	558	818

Table 1

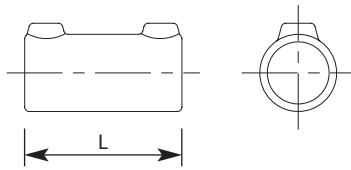
Vertical strut load capacity

Vertical load in Kg per strut

Tube Ø and Grade						
Strut length (metres)	33.7 x 3.2mm Grade S275	42.4 x 3.2mm Grade S275	42.4 x 4.0mm Grade S275	48.3 x 3.2mm Grade S275	48.3 x 4.0mm Grade S275	48.3 x 5.0mm Grade S355
0.3	2876	3803	4657	4437	5410	9244
0.4	2688	3669	4493	4314	5296	8967
0.5	2438	3482	4263	4190	5107	8551
0.6	2084	3240	3935	3975	4842	7996
0.7	1729	2892	3509	3697	4502	7118
0.8	1417	2571	3083	3389	4086	6148
0.9	1167	2223	2623	3050	3632	5223
1.0	959	1901	2263	2650	3178	4484
1.1	813	1634	1935	2342	2800	3790
1.2	688	1419	1672	2034	2421	3236
1.3	583	1232	1443	1787	2119	2773
1.4	521	1071	1246	1571	1854	2450
1.5	458	937	1115	1387	1665	2172
1.6	396	830	984	1232	1475	1895
1.7	354	750	853	1109	1324	1664
1.8	313	670	787	986	1173	1525
1.9	292	589	689	894	1059	1387
2.0	229	536	623	801	984	1387

Table 2

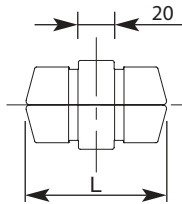
C00 Sleeve Joint



Type	Tube Size	L	Kg
C00G20	26.9	76	0.23
C00G25	33.7	97	0.41
C00G32	42.4	126	0.72
C00G40	48.3	132	0.87
C00G50	60.3	120	0.36

The Sleeve Joint is designed to provide an in line joint between two tubes of the same diameter

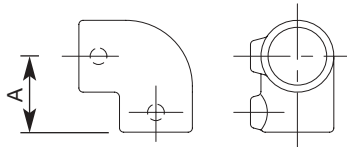
C01 Expanding Connector



Type	Tube Size	L	Kg
C01G25	33.7	76	0.24
C01G32	42.4	76	0.36
C01G40	48.3	76	0.47

The expanding Connector is designed to provide an in line joint between the tubes of the same diameter, and a wall thickness of 3.2mm. It fits flush with the tube surface and can be located inside other fittings. It must not be used as a load-bearing joint, in these applications use a FastClamp type C00.

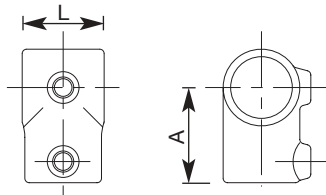
C02 90° Elbow



Type	Tube Size	A	Kg
C02G20	26.9	40	0.27
C02G25	33.7	48	0.38
C02G32	42.4	63	0.67
C02G40	48.3	66	0.80
C02G50	60.3	86	1.69

The 90° Elbow is designed to provide a joint between two tubes at right angles to each other. Often used for railing ends and corners.

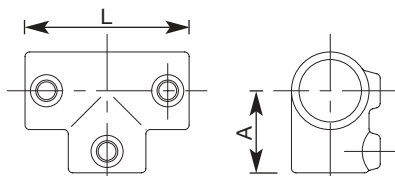
C03 Short Tee



Type	Tube Size	A	L	Kg
C03G20	26.9	40	36	0.22
C03G25	33.7	48	48	0.29
C03G32	42.4	63	57	0.49
C03G40	48.3	68	63	0.61
C03G50	60.3	86	75	1.01

The Short Tee is designed to provide a butt joint between two tubes at right angles to each other. Often used for railing ends and tops. If tubes need to be joined inside the fitting then a C04G type should be used.

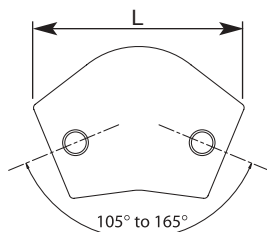
C04 Long Tee



Type	Tube Size	A	L	Kg
C04G20	26.9	40	80	0.37
C04G25	33.7	48	97	0.52
C04G32	42.4	63	126	0.85
C04G40	48.3	66	132	1.06
C04G50	60.3	86	172	2.00

The Long Tee is designed to provide a butt joint between two tubes at right angles to each other. Often used for railing ends and tops. It allows the through tube to be joined inside the fitting. An alternative is the C03G type fitting.

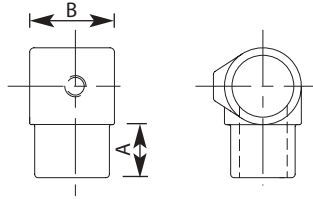
C05 Variable Elbow



Type	Tube Size	L	Kg
C05G25	33.7	100	0.44
C05G32	42.4	121	0.63
C05G40	48.3	140	0.87

The Variable Elbow is designed to make joints at an angle of between 105° and 165°.

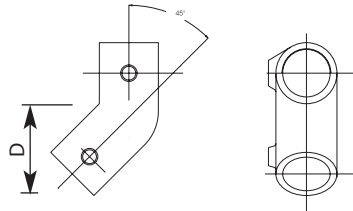
C06 Internal T Joint



Type	Tube Size	A	B	Kg
C06G25	33.7	25	45	0.34
C06G32	42.4	35	54	0.50
C06G40	48.3	35	60	0.62

The Internal T Joint is designed to provide an angled joint between a tube and a FastClamp fitting when used in conjunction with C02G and C03G type fittings. Often used for railing tops and midrails to accommodate a slope as offset railing.

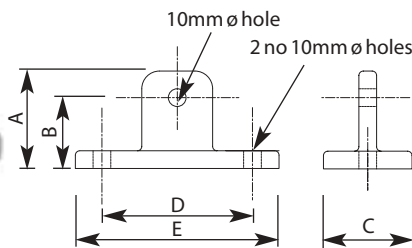
C07 45° Tee



Type	Tube Size	D	Kg
C07G25	33.7	45	0.49
C07G32	42.4	54	0.69
C07G40	48.3	60	0.91

The 45° is used as a bracing and strut component for strengthening structures.

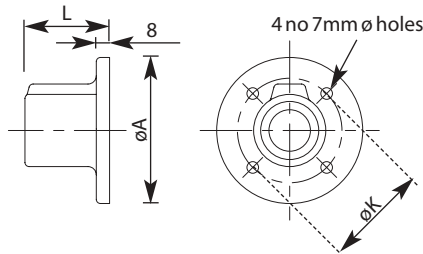
C10 Swivel Base



Type	Tube Size	A	B	C	D	E	Kg
C10G	N/A	55	40	50	85	115	0.56

The Swivel Base is designed to provide a base fixing. It is usually used in conjunction with a C36G type fitting to make a C46G type base swivel combination. This fitting does not provide sufficient rigidity to be used as a railing base without other means of support.

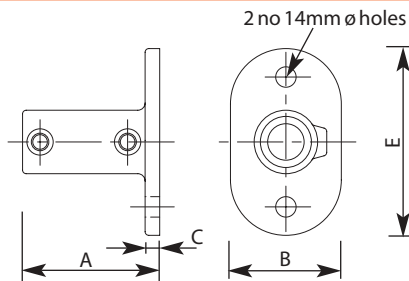
C11 Base Flange



Type	Tube Size	A	K	L	Kg
C11G20	26.9	83	57	42	0.43
C11G25	33.7	88	63	48	0.50
C11G32	42.4	102	76	54	0.72
C11G40	48.3	114	89	60	0.97
C11G50	60.3	127	95	64	1.13

The Base Flange is designed to provide a positional wall or base fixing. It is not recommended to use this type as a railing base.

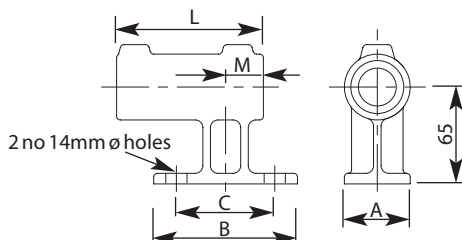
C12 Railing Base Flange - DUCTILE



Type	Tube Size	A	B	C	D	E	Kg
C12G25	33.7	90	76	9	89	128	1.01
C12G32	42.4	90	80	10	102	140	1.41
C12G40	48.3	90	89	10	114	152	1.61

The Railing Base is designed to provide a base for railings and other structures. It is recommended that this fitting be used in accordance with FastClamp maximum post centre dimensions, see table 3 on page 06.

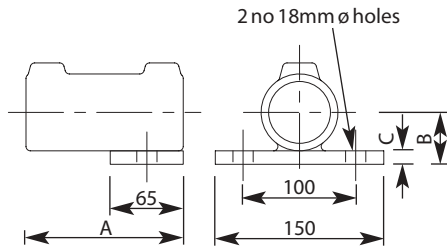
C13 Railing Vertical Side Support



Type	Tube Size	A	B	C	M	L	Kg
C13G25	33.7	48	95	65	25	105	0.94
C13G32	42.4	54	105	75	30	115	1.23
C13G40	48.3	60	120	90	40	125	1.51

The Railing Vertical Side Support is designed to provide a base for railings and other structures that need a side mounted fixing. It is recommended that this fitting be used in accordance with FastClamp maximum post centre dimensions, see table 3 on page 06.

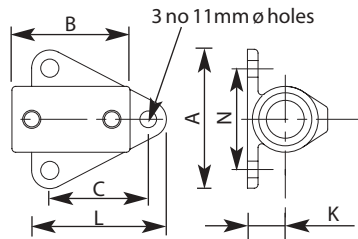
C14 Railing Horizontal Side Support - DUCTILE



Type	Tube Size	A	B	C	Kg
C14G25	33.7	90	30	12	0.92
C14G32	42.4	90	35	12	1.41
C14G40	48.3	90	41	15	1.53

The Railing Horizontal Side Support is designed to provide a base for railings and other structures that need a side mounted fixing. It is recommended that this fitting be used in accordance with FastClamp maximum post centre dimensions, see table 3 on page 06.

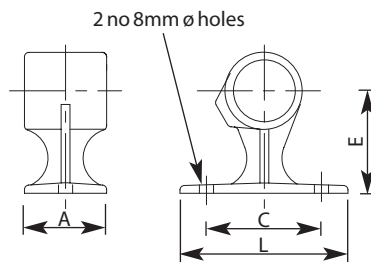
C15 Side Palm Fixing



Type	Tube Size	A	B	C	K	L	N	Kg
C15G25	33.7	93	78	66	26	90	69	0.68
C15G32	42.4	102	92	75	31	99	78	0.94
C15G40	48.3	108	98	81	34	105	84	1.12

The Side Support is designed to provide a base for railings and other structures that need a side mounted fixing. It is recommended that this fitting be used in accordance with FastClamp maximum post centre dimensions, see table 3 on page 06.

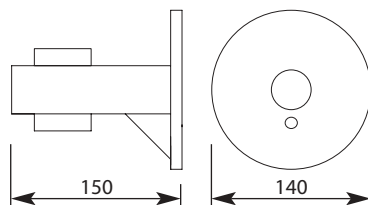
C16 Handrail Bracket



Type	Tube Size	A	C	E	L	Kg
C16G20	26.9	44	57	55	78	0.36
C16G25	33.7	45	65	58	95	0.52
C16G32	42.4	48	85	62	115	0.67
C16G40	48.3	50	85	68	115	0.77

The Handrail Bracket is designed to secure handrail tube to a wall. It can also be used on top of walls as a fixing for a low rail.

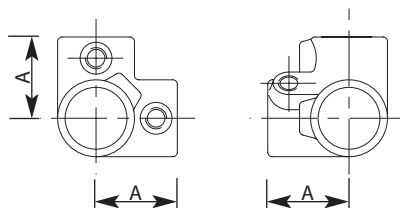
C17 Ground Support



Type	Tube Size	Kg
C17G25	33.7	1.67
C17G32	42.4	1.73
C17G40	48.3	2.10

The Ground Socket is designed to provide a base that can be cast into the ground to support a post. The post is removable. It is recommended that this fitting be used in accordance with FastClamp maximum post centre dimensions, see table 3 on page 06.

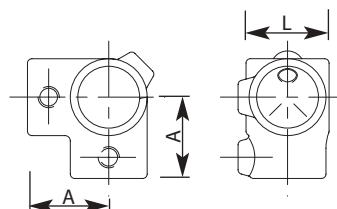
C20 3 Way 90° Elbow



Type	Tube Size	A	Kg
C20G20	26.9	40	0.51
C20G25	33.7	48	0.52
C20G32	42.4	63	0.90
C20G40	48.3	66	1.02
C20G50	60.3	85	

The 3 way 90° Elbow is designed to provide a neat corner for the upper rail of guardrail or frames.

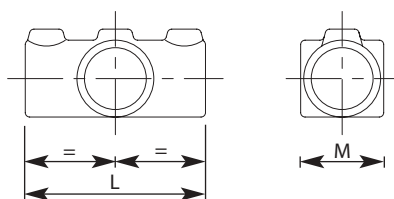
C21 Corner C/W Thru Tube



Type	Tube Size	A	L	Kg
C21G20	26.9	40	36	0.29
C21G25	33.7	48	48	0.43
C21G32	42.4	63	57	0.72
C21G40	48.3	66	63	0.85
C21G50	60.3	86	75	1.55

The Corner Complete with through tube is designed to provide a 90° corner for the intermediate rail of guardrail or frames.

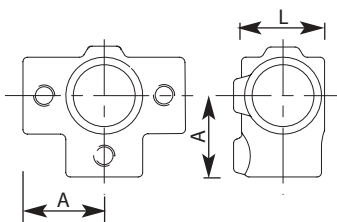
C22 Two Socket Cross



Type	Tube Size	L	M	Kg
C22G20	26.9	80	36	0.32
C22G25	33.7	97	48	0.42
C22G32	42.4	126	57	0.71
C22G40	48.3	132	63	0.87
C22G50	60.3	172	75	1.46

The Two Socket Cross fitting provides the midrail joint for handrail and other structures. It is recommended that the handrail post is continuous through the fitting.

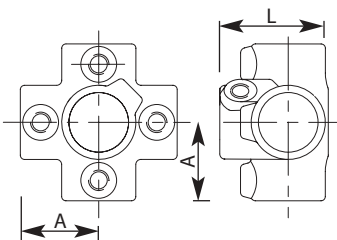
C23 Side Outlet Tee



Type	Tube Size	A	L	Kg
C23G20	26.9	40	44	0.38
C23G25	33.7	48	48	0.55
C23G32	42.4	63	57	0.86
C23G40	48.3	66	63	1.00
C23G50	60.3	86	85	2.00

The Side Outlet Tee fitting provides a three way midrail joint for handrail and other structures. It is recommended that the handrail post is continuous through the fitting.

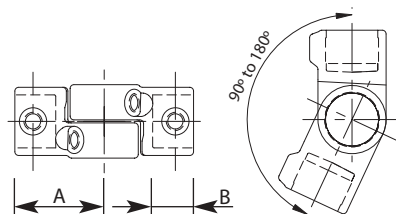
C24 4Way Cross + Central Tube



Type	Tube Size	A	L	Kg
C24G20	26.9	41	59	0.51
C24G25	33.7	48	65	0.72
C24G32	42.4	63	80	1.17
C24G40	48.3	66	85	1.33
C24G50	60.3	86	67	2.30

The 4 Way Cross fitting provides a four way midrail joint for handrail and other structures. It is recommended that the handrail post is continuous through the fitting. This fitting may also be used for the top rail with the centre post capped with a C65 Plastic Stop End.

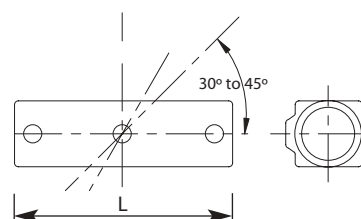
C25 Short Tee Swivel



Type	Tube Size	A	B	Kg
C25G25	33.7	59	30	0.30
C25G32	42.4	74	40	0.45
C25G40	48.3	82	45	0.60

The Short Tee Swivel fittings are normally used in pairs to allow corner joints of any angle between 90° and 180°. The fitting can also be used on staircases with a C02 and C03 fitting to accommodate landings used in conjunction with a short piece of tube and a C65 Plastic Stop End. When ordering please specify the number of fittings required, not the number of pairs.

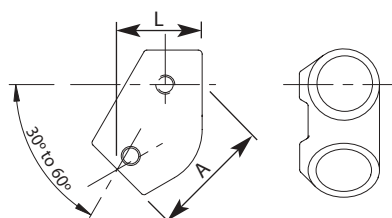
C28 Adjustable 2 Socket Cross 30° to 45°



Type	Tube Size	L	Kg
C28G25	33.7	146	0.69
C28G32	42.4	178	1.03
C28G40	48.3	218	1.36

The Adjustable 2 Socket Cross fitting will accommodate any rake angle from 30° to 45°. This fitting can be used as an alternative to the C27 where the rake angle varies or is not known precisely.

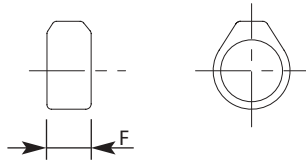
C29 Adjustable Short Tee



Type	Tube Size	A	L	Kg
C29G25	33.7	75	54	0.46
C29G32	42.4	95	63	0.71
C29G40	48.3	105	68	0.87

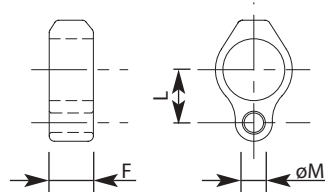
The Adjustable Short Tee fitting will accommodate any rake angle from 30° to 60°. This fitting is commonly used for the top rail of handrail to accommodate the rake angle on slopes. It can also be used for any Tee Joint that needs to mate at an angle of between 30° and 60° for light weight structures.

C30	Collar	Type	Tube Size	F	Kg
		C30G20	26.9	22	0.13
		C30G25	33.7	25	0.13
		C30G32	42.4	27	0.17
		C30G40	48.3	27	0.19



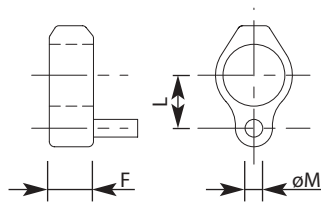
The Collar fitting can be used to support the C03 fitting when the latter is used as a hinge. It can also be used to increase the load capacity of another fitting when used together. This fitting can be used as a stop for a sliding tube.

C31	Gate Eye	Type	Tube Size	F	L	M	Kg
		C31G20	26.9	25	30	12	0.20
		C31G25	33.7	25	30	11	0.20
		C31G32	42.4	27	34	11	0.25
		C31G40	48.3	27	37	11	0.27



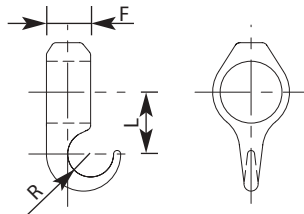
This fitting is designed as a gate eye for light weight gates. If a heavy gate is being used we recommend that C03 and C30 type fittings are used to support the gate.

C32	Gate Hinge	Type	Tube Size	F	L	M	Kg
		C32G20	26.9	25	30	11	0.20
		C32G25	33.7	25	30	10	0.22
		C32G32	42.4	27	34	10	0.27
		C32G40	48.3	27	37	10	0.29



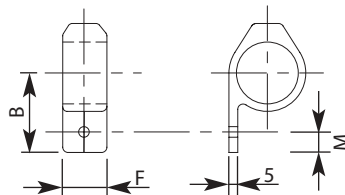
This fitting is designed as a gate hinge for light weight gates. If a heavy gate is being used we recommend that C03 and C30 type fittings are used to support the gate.

C33	Hook	Type	Tube Size	F	L	R	Kg
		C33G20	26.9	25	32	10	0.17
		C33G25	33.7	25	36	13	0.18
		C33G32	42.4	27	40	13	0.22
		C33G40	48.3	27	43	13	0.25



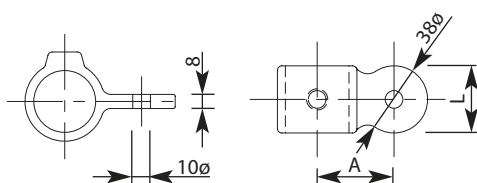
The fitting is designed to provide an attachment for chain.

C34	Fixing Pad	Type	Tube Size	B	F	M	Hole	Kg
		C34G25	33.7	45	25	12.5	6	0.18
		C34G32	42.4	54	27	13.5	6	0.23
		C34G40	48.3	60	27	13.5	6	0.25



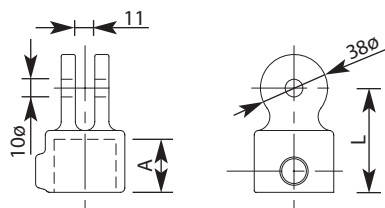
The fitting is designed to provide an attachment for flat sheets or board. It may also be used as a gate stop. An alternative fitting for the attachment of boards is the C35 type.

C35	Male Swivel	Type	Tube Size	A	L	Kg
		C35G20	26.9	38	32	0.24
		C35G25	33.7	43.5	38	0.27
		C35G32	42.4	48	48	0.36
		C35G40	48.3	51	48	0.41
		C35G50	60.3	60	48	0.54



The Male Swivel is designed as part of the swivel combination group of fittings. It can be used on its own for use with a shackle and chain or with the C36 female swivel to mount rails at any angle for slopes. It can also be used for attaching flat sheets or boards to a structure. It is also available assembled with the C36 fittings as a C45 single Swivel Combination.

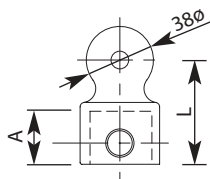
C36F Female Swivel



Type	Tube Size	A	L	Kg
C36G20F	26.9	36	58	0.25
C36G25F	33.7	30	60	0.36
C36G32F	42.4	40	70	0.48
C36G40F	48.3	45	75	0.58
C36G50F	60.3	58	95	0.95

The Female Swivel is designed as part of the swivel combination group of fittings. It can be used with the C10, C35, C37, C38 or C39 male swivel fittings.

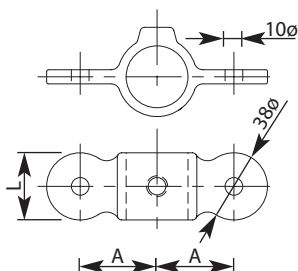
C36M Male Swivel



Type	Tube Size	A	L	Kg
C36G20M	26.9	36	58	0.25
C36G25M	33.7	30	60	0.36
C36G32M	42.4	40	70	0.48
C36G40M	48.3	45	75	0.58
C36G50M	60.3	58	95	0.95

The Male Swivel is designed as part of the swivel combination group of fittings. It can be used with C36F fittings.

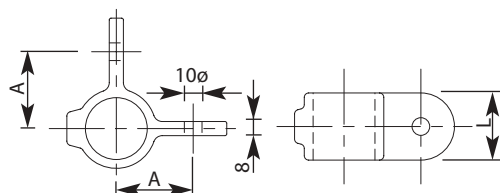
C37 Double Male Swivel



Type	Tube Size	A	L	Kg
C37G20	26.9	38	32	0.33
C37G25	33.7	43.5	38	0.34
C37G32	42.4	48	48	0.43
C37G40	48.3	51	48	0.48
C37G50	60.3	56	50	0.71

The Double Male Swivel is designed as part of the swivel combination group of fittings. It can be used with two C36 female swivel fittings. The double swivel combination is also available assembled as a type C47 fitting.

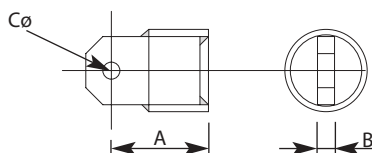
C38 90° Corner Male Swivel



Type	Tube Size	A	L	Kg
C38G20	26.9	38	39	0.36
C38G25	33.7	43.5	38	0.36
C38G32	42.4	48	48	0.48
C38G40	48.3	51	48	0.49

The 90° Corner Male swivel is designed as part of the swivel combination group of fittings. It can be used with two C36 female swivel fittings, to make a corner combination fitting which is also available assembled as a type C48 type fitting.

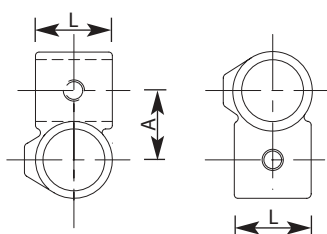
C39 Socket Male Swivel



Type	Tube Size	A	B	C	Kg
C39G20	26.9	45	10	11	0.13
C39G25	33.7	45	10	11	0.16
C39G32	42.4	55	10	11	0.24
C39G40	48.3	55	10	11	0.28
C39G50	60.3	55	10	11	0.35

The Socket Male Swivel is designed as part of the swivel combination group of fittings. It can be used with a C36 Female Swivel and a C41 Clamp on Tee fitting to make a swivel combination fitting that will provide an angled strut for an existing structure without dismantling.

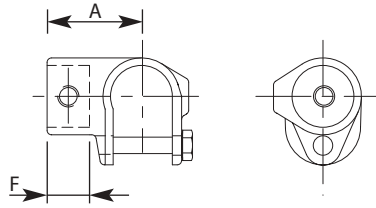
C40 90° Crossover



Type	Tube Size	A	L	Kg
C40G20	26.9	35	36	0.35
C40G25	33.7	40	45	0.43
C40G32	42.4	49	54	0.61
C40G40	48.3	55	60	0.73
C40G50	60.3	64	61	1.00

The 90° Crossover is to allow two rails at 90° to each other to be joined. It is often used for the midrail joint on handrailing where continuous lengths of tube are used. Please note that tube joints should use the C00 or C01 type fitting and must not be joined in the C40 type fitting.

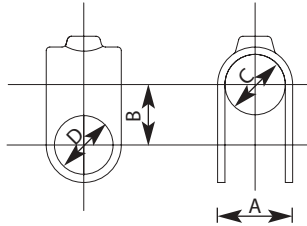
C41 Clamp on Tee



Type	Tube Size	A	F	Kg
C41G20	26.9	50		0.28
C41G25	33.7	48	25	0.35
C41G32	42.4	63	35	0.54
C41G40	48.3	68	35	0.61
C41G50	60.3	90		0.92

The Clamp on Tee is designed to allow a new tube to be joined to an existing structure.

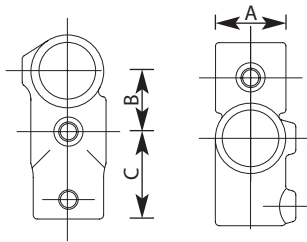
C42 Clamp on Crossover



Type	Tube Size	A	B	C	D	Kg
C42G20	26.9	37	27	27	27	0.30
C42G25	33.7	44	34	34	34	0.35
C42G32	42.4	53	43	43	43	0.54
C42G40	48.3	58	49	49	49	0.61
C42G50	60.3	70	61	61	61	1.00

The Clamp on Crossover is designed to allow a new tube to be joined to an existing structure.

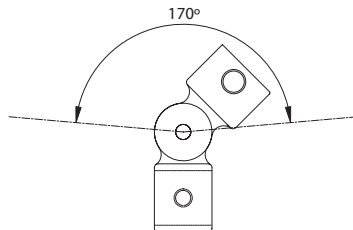
C43 Combination Socket



Type	Tube Size	A	B	C	Kg
C43G20	26.9	31	35	40	0.38
C43G25	33.7	42	40	48	0.49
C43G32	42.4	54	49	60	0.71
C43G40	48.3	60	54	68	0.93

The Combination Socket is designed for racking and similar systems to allow a crossover to be combined with a cross tie.

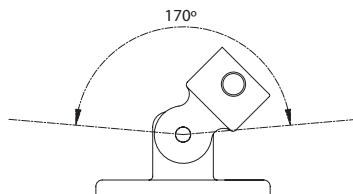
C45 Single Swivel Combination



Type	Tube Size	Kg
C45G20	26.9	0.49
C45G25	33.7	0.45
C45G32	42.4	0.94
C45G40	48.3	1.09
C45G50	60.3	1.49

The Single Swivel combination is designed to provide an angled tee between two tubes. It can be used to construct sloping handrail and for providing bracing struts to structures.

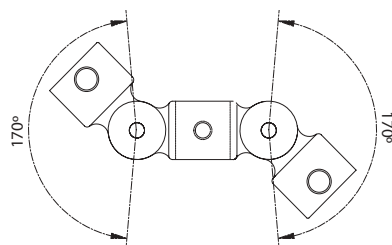
C46 Base Swivel Combination



Type	Tube Size	Kg
C46G20	26.9	0.85
C46G25	33.7	0.97
C46G32	42.4	1.09
C46G40	48.3	1.19
C46G50	60.3	1.51

The Base Swivel Combination is designed to provide an angled wall or floor mounting. This fitting should not be used as a railing base without suitable support.

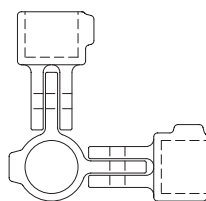
C47 Double Swivel Combination



Type	Tube Size	Kg
C47G20	26.9	0.13
C47G25	33.7	1.26
C47G32	42.4	1.59
C47G40	48.3	1.84
C47G50	60.3	2.71

The Double Swivel Combination is designed to provide an in line angled joint as a post, this is suitable for the mid rail of sloping handrail or to provide bracing to a structure.

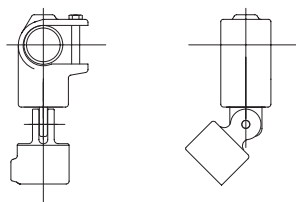
C48 90° Corner Swivel Combination



Type	Tube Size	Kg
C48G20	26.9	0.93
C48G25	33.7	1.28
C48G32	42.4	1.64
C48G40	48.3	1.85

The 90° Corner Swivel Combination is designed to provide an angled joint at a post, this is suitable for the mid rail of sloping handrail or to provide bracing to a structure.

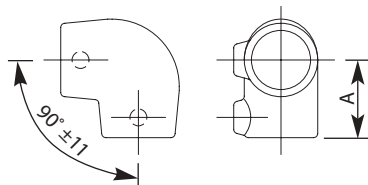
C49 Clamp on Swivel Combination



Type	Tube Size	Kg
C49G20	26.9	0.63
C49G25	33.7	0.92
C49G32	42.4	1.31
C49G40	48.3	1.52
C49G50	60.3	2.27

The Clamp on Swivel Combination is designed to provide an angled tee between two tubes, one of which is part of an existing structure. It can be used for providing bracing struts to structures.

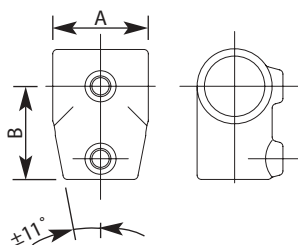
C50 Slope Elbow ±11°



Type	Tube Size	A	Kg
C50G40	48.3	68	0.94

The Slope Elbow is designed to provide an elbow for use on ramps. The variable angle allows the fitting to accommodate slopes up to 11°.

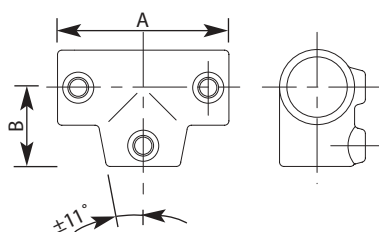
C51 Slope Short Tee ±11°



Type	Tube Size	A	B	Kg
C51G40	48.3	68	64	0.75

The Slope Short Tee is designed to provide a T joint between two tubes for use on ramps. The variable angle allows the fitting to accommodate slopes up to 11°.

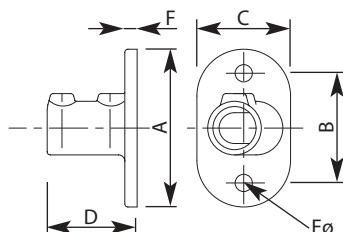
C52 Slope Long Tee ±11°



Type	Tube Size	A	B	Kg
C52G40	48.3	144	76	1.33

The Slope Long Tee is designed to provide a T joint between two tubes for use on ramps. The variable angle allows the fitting to accommodate slopes up to 11°.

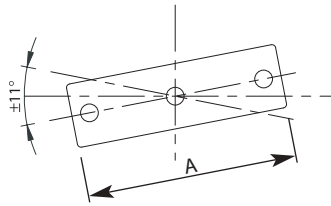
C53 Slope Base ±11°



Type	Tube Size	A	B	C	D	E	F	Kg
C53G40	48.3	152	112	92	88	14	10	1.43

The Slope Base is designed to provide a base for use on ramps. The variable angle allows the fitting to accommodate slopes up to 11°.

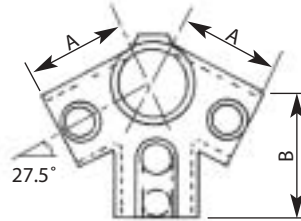
C54 Slope 2 Socket Cross $\pm 11^\circ$



Type	Tube Size	A	Kg
C54G40	48.3	144	0.98

The Slope 2 Socket Cross is designed to provide a joint for the midrail for use on ramps. The variable angle allows the fitting to accommodate slopes up to 11° .

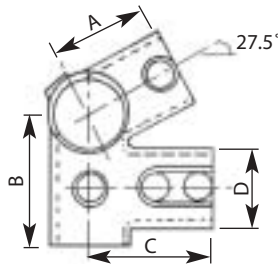
C55 $27\frac{1}{2}^\circ$ Ridge Fitting



Type	Tube Size	A	B	Kg
C55G40	48.3	67	89	0.96

A four way socket fitting used to construct the ridge of a roof structure.

C56 $27\frac{1}{2}^\circ$ Eaves Fitting



Type	Tube Size	A	B	C	D	Kg
C56G40	48.3	67	89	83	51	1.19

A four way socket fitting used to construct the eaves of a roof structure.

C60 Spare Screws



Type	Tube Size	Size	Key Size	Kg
C60S25	26.9 & 33.7	1/4" BSP	6mm	
C60S32/40	42.4, 48.3 & 60.3	3/8" BSP	6mm	

Spare Screws come in two sizes, 1/4" BSP for the 20 and 25nb range and 3/8" BSP for the 32, 40 and 50nb ranges. All screws are stainless steel for increased corrosion resistance BS970 GR420.

C61 Allen Keys



Type	Tube Size	Key Size	Kg
C61G25	26.9 & 33.7	6mm	
C61G32/40	42.4, 48.3 & 60.3	8mm	

Allen keys are available in two sizes, the first is suitable for the 20 and 25nb fitting and the other for the 32, 40 and 50nb fittings.

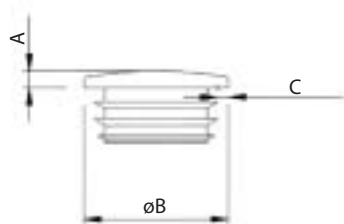
C62 Ratchet Keys



Type	Tube Size	Key Size	Kg
C62R	All	6 & 8mm	

The ratchet driver and dual keys are also available to speed assembly. The ratchet driver will also allow tightening to the correct torque.

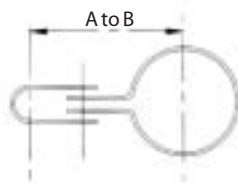
C65 Plastic End Cap



Type	Tube Size	A	B	C	Kg
C65G20	26.9	3.2	27	3.2	0.01
C65G25	33.7	3.2	34	3.2	0.01
C65G32	42.4	3.2	42	3.2	0.01
C65G40	48.3	3.2	48	3.2	0.01
C65G50	60.3	3.2	60	3.2	0.01

Plastic End Caps are available for finishing plain end tubes. Available in grey plastic they will fit medium and heavy gauge tube.

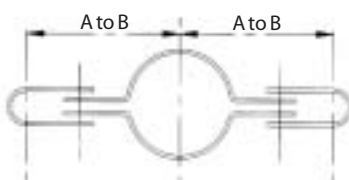
C66 Single Mesh Clip



Type	Tube Size	A	B	Kg
C66G20	26.9	48	58	0.05
C66G25	33.7	54	67	0.05
C66G32	42.4	60	72	0.07
C66G40	48.3	65	75	0.08
C66G50	60.3	66	76	0.15

The Single Mesh Clip is designed to provide a fixing for standard mesh panels. It is recommended that the clips be spaced at a maximum of 450mm apart.

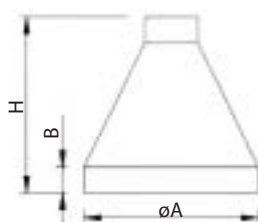
C67 Double Mesh Clip



Type	Tube Size	A	B	Kg
C67G20	26.9	48	58	0.11
C67G25	33.7	54	67	0.12
C67G32	42.4	60	72	0.12
C67G40	48.3	65	75	0.12
C67G50	60.3	66	76	0.25

The Double Mesh Clip is designed to provide a fixing for standard mesh panels. It is recommended that the clips be spaced at a maximum of 450mm apart.

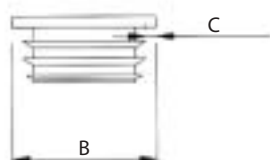
C68 Weather Cowl



Type	Tube Size	H	A	B	Kg
C68G25	33.7	135	145	25	0.25
C68G32	42.4	160	155	25	0.29
C68G40	48.3	170	165	25	0.33

The Weather Cowl is designed to cover the Railing base and provide a weather proof seal when used with a suitable flexible sealant.

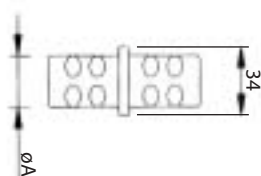
C69 Square Plastic End Cap



Type	Tube Size	B	C	Kg
C69P40x40	40x40 SHS	40	3.2	0.01
C69P50x50	60x60 SHS	50	3.2	0.01
C69P70x70	70x70 SHS	70	3.2	0.02

The Plastic End Caps are available for finishing plain end square tubes. Available in grey plastic they will fit medium and heavy tube gauges.

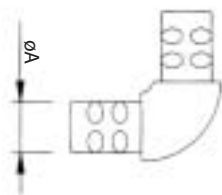
C70 Crimp Straight



Type	Tube Size	A	Kg
C70G25	33.7	26.0	0.27

Straight Crimp Joints provide a permanent in-line connection for 33.7mm diameter x 3.2mm thick tube, a Crimping tool is necessary and these are available for hire or purchase.

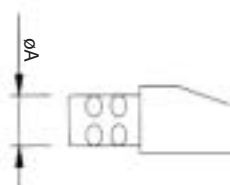
C71 Crimp Elbow



Type	Tube Size	A	Kg
C71G25	33.7	26.0	0.47

Crimp Elbow's provide a permanent 90° connection for 33.7mm diameter x 3.2mm thick tube, a Crimping tool is necessary and these are available for hire or purchase.

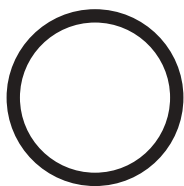
C72 Crimp Variable Elbow



Type	Tube Size	A	Kg
C72G25	33.7	26.0	0.95

Crimp Variable Elbow's provide a permanent variable angled connection for 33.7mm diameter x 3.2mm thick tube, a Crimping tool is necessary and these are available for hire or purchase.

T25/32/40 Tube



Type	Tube Size	Kg
T25MG	33.7	2.41
T32MG	42.4	3.09
T40MG	48.3	3.56

33.7mm, 42.4mm or 48.3mm diameter x 3.2mm thick tube is available from stock in 6500mm random lengths.

MESH Mesh Infil Panels



50mm x 50mm x 10 guage mesh panels complete with 8mm dia frames manufactured to customers requirements.

Handrailing for the disabled

DDA is short for the Disability Discrimination Act, this Act of Parliament makes it unlawful to discriminate against disabled persons in connection with employment, the provision of goods, facilities and services or the disposal or management of premises; to make provision about the employment of disabled persons; and to establish a National Disability Council.

The DDA range has been designed to meet these requirements by providing a non-discriminatory handrail solution that complies with Part 'M' of the Building Regulations 2004 and is a smooth continuous handrail of 42.4mm diameter. DDA fittings are supplied Hot dip Galvanised as standard but can be supplied in a powder coated finish to RAL standard colours subject to quantity and availability from the coaters, in cold temperatures a powder coated finish will give the impression of being warmer to the touch.

The DDA Range



Designed to satisfy the requirements of Part 'M' of the Buildings Regulations 2004.

DDA-01 Upright Connector



DDA-02 Handrail Upright



DDA-03 Wall Bracket



DDA-04 Intermediate Bracket



DDA-05 End Return



DDA-06 90° Bend

