# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS

Selecting a Pipeclamp Fitting

Pipeclamp fittings are a blackheart malleable casting and are manufactured to BS EN 1562 1997 for the strength requirements. Pipeclamp fittings are hot dip galvanised to BS EN 1461 1999. Pipeclamp fittings are supplied with stainless steel setscrews. The only tool required to tighten the setscrew is a simple allen key. When tightened to a torque of 4.1kg/m (29ft/lb), the setscrew is capable of withstanding an applied slip load of 900kg. This torque cannot be achieved using an allen key, but can be obtained when the setscrew is fully tightened using a ratchet key and a correctly set torque wrench. Pipeclamp fittings are available in 5 standard sizes as detailed in this brochure. If a Pipeclamp fitting reference number does not include a tube reference number then this fitting size is not available at the time of printing.

## SELECTING A PIPECLAMP FITTING

Selecting a Pipeclamp fitting is very simple. Using the information in the brochure, select the fitting to suit the task required, select the size of tube that is suitable then combine the two reference numbers. ie. A short inline tee using 42.4mm tube = 101-C42. Whilst the information and guidelines in this brochure are given as guidance, the ultimate responsibility for selecting the correct fitting and size for any application belongs to the customer. The customer must also ensure that any structure or construction is of sufficient strength to support the weight of the Pipeclamp fittings and tube as well as any applied load. Full technical support and assistance is available upon request.

## FINISH

The standard finish of Pipeclamp fittings and associated tubing is hot dipped galvanised

## AVAILABILITY

Pipeclamp fittings are available from authorised stockists around the Country. For details of your nearest stockist or if you are in doubt about the correct way of reading this brochure or interpreting any information within this brochure please contact OSF.

## HEALTH AND SAFETY CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1988

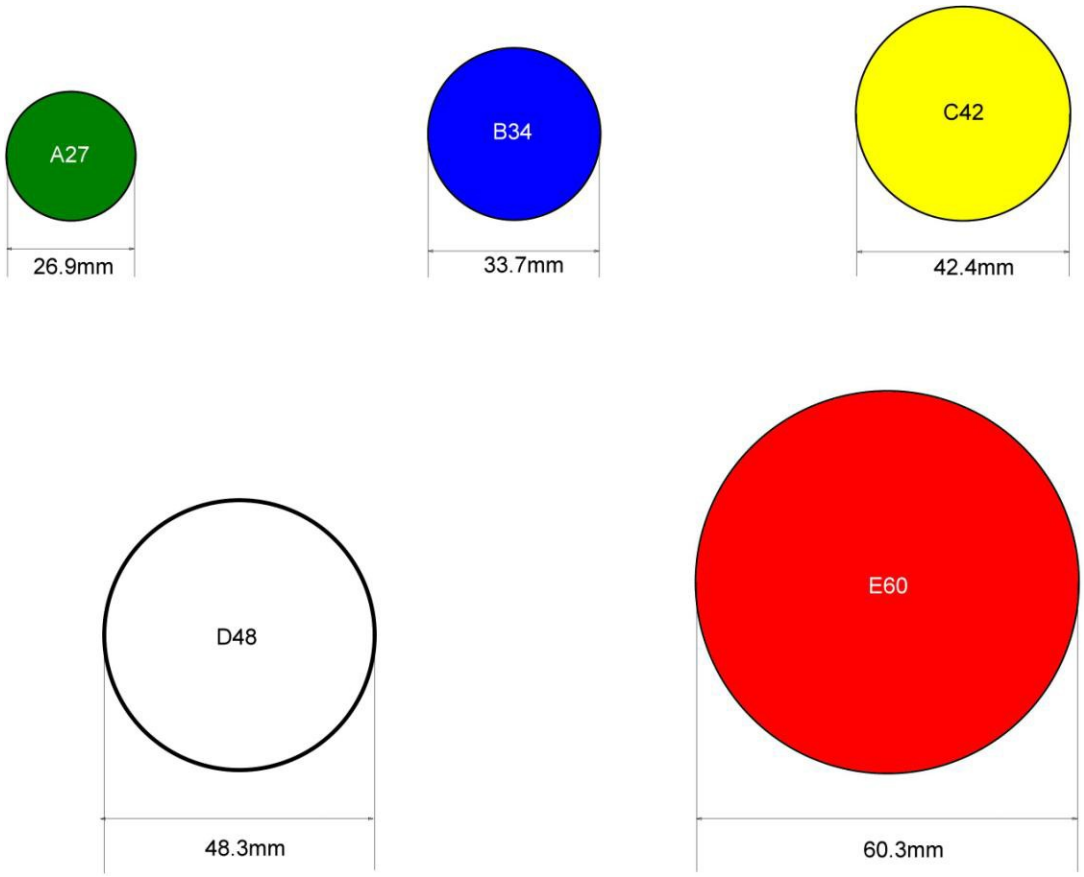
OSF have and continue to investigate the Pipeclamp fittings and associated tubing. None are considered to be hazardous within the meaning of the regulations provided that the tube is cut using pipecutters or saws and the Pipeclamp fittings are tightened with the proprietary allen or ratchet key. Any welding will have COSHH implications, especially if any surface is pre finished, i.e. galvanised, painted, powder coated etc. OSF do not recommend that Pipeclamp fittings are welded.



Coloured tube is for aesthetic purposes only - standard tube finish is galvanised

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS

Pipeclamp Tube Size Guide



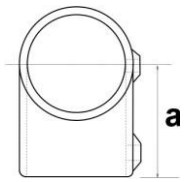

## TUBE SIZES AVAILABLE TO SUIT PIPECLAMP FITTINGS

| Pipeclamp Size | Tube Dia (mm) O/D | Nominal Bore (mm) | Nominal Bore (in.) |
|---|---|---|---|
| **A27** | 26.9 | **20** | 3/4 |
| **B34** | 33.7 | **25** | 1 |
| **C42** | 42.4 | **32** | 1 1/4 |
| **D48** | 48.3 | **40** | 1 1/2 |
| **E60** | 60.3 | **50** | 2 |

**NOTE: -**

The Nominal bore is a discretionary dimension only. The wall thickness can vary depending on the gauge of tube used which will alter the bore dimension

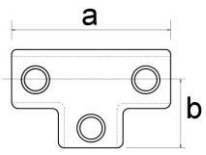
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**101**

This Pipeclamp fitting is a 90° short tee connection between 2 tubes. Typical use is on straight and level guardrail to connect the vertical post to the top rail or end/mid rail. This Pipeclamp fitting cannot be used to join tubes in the top of the short tee, to join tubes use the 104 Pipeclamp fitting.

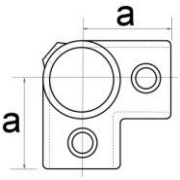
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 101-A27 | 26.9 | 41 | | | | | | | 0.20 |
| 101-B34 | 33.7 | 48 | | | | | | | 0.33 |
| 101-C42 | 42.4 | 62 | | | | | | | 0.49 |
| 101-B34/C42 | 33.7/ 42.4 | 58 | | | | | | | 0.40 |
| 101-D48 | 48.3 | 69 | | | | | | | 0.58 |
| 101-E60 | 60.3 | 86 | | | | | | | 0.89 |




**104**

This Pipeclamp fitting is a 90° long tee connection between 2 tubes. Typical use is on straight and level guardrail to connect the vertical post to the top rail. This Pipeclamp fitting can be used to join tubes in the top of the long tee. This fitting is used in conjunction with the Pipeclamp fitting 119 when building 2 or 3 rail guardrail systems.

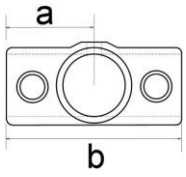
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 104-A27 | 26.9 | 82 | 41 | | | | | | 0.37 |
| 104-B34 | 33.7 | 93 | 46 | | | | | | 0.53 |
| 104-C42 | 42.4 | 120 | 60 | | | | | | 0.83 |
| 104-D48 | 48.3 | 136 | 68 | | | | | | 0.99 |
| 104-E60 | 60.3 | 169 | 85 | | | | | | 1.62 |




**116**

This Pipeclamp fitting is a 90° corner joint with the vertical passing through the Pipeclamp fitting. Typical use is on straight and level guardrail for connecting the mid/lower rail to the vertical at a 90° corner. This Pipeclamp fitting can also be used in a similar way on other rectangular structures. This fitting is normally used in conjunction with Pipeclamp fitting 128 when building a 2 or 3 rail guardrail system.

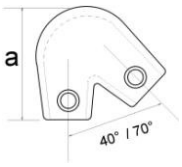
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 116-A27 | 26.9 | 40 | | | | | | | 0.27 |
| 116-B34 | 33.7 | 48 | | | | | | | 0.48 |
| 116-C42 | 42.4 | 60 | | | | | | | 0.62 |
| 116-D48 | 48.3 | 68 | | | | | | | 0.76 |
| 116-E60 | 60.3 | 87 | | | | | | | 1.29 |




**119**

This Pipeclamp fitting is a 90° joint between a vertical and 2 horizontal rails. Typical use is on straight and level guardrail for connecting the mid/lower rail to the vertical. The vertical must remain continuous with the cross rails being cut. This fitting is normally used in conjunction with Pipeclamp fitting 104 when building a 2 or 3 rail guardrail system.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 119-A27 | 26.9 | 40 | 80 | | | | | | 0.29 |
| 119-B34 | 33.7 | 46 | 92 | | | | | | 0.39 |
| 119-C42 | 42.4 | 60 | 120 | | | | | | 0.63 |
| 119-D48 | 48.3 | 67 | 134 | | | | | | 0.77 |
| 119-E60 | 60.3 | 84 | 168 | | | | | | 1.25 |

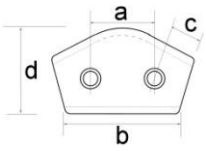



**123**

This Pipeclamp fitting is a variable elbow between 40° and 70°. This Pipeclamp fitting is used to connect the vertical to the top rail at the top of the slope or on a staircase.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 123-D48 | 48.3 | 134 | | | | | | | 1.20 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**124**

This Pipeclamp fitting is a variable elbow connector (110° and 180°). This Pipeclamp fitting is used to connect two rails to avoid the need to bend the tube and it can also be used at the bottom of a slope or stair guardrail to join the top rail to the vertical.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 124-B34 | 33.7 | 48 | 60 | 14 | 64 | | | | 0.40 |
| 124-C42 | 42.4 | 61 | 71 | 15 | 78 | | | | 0.66 |
| 124-D48 | 48.3 | 54 | 62 | 16 | 82 | | | | 0.65 |

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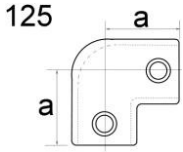


**125**

This Pipeclamp fitting is a 90° elbow connection between 2 tubes. Typical use is on straight and level guardrail to connect the vertical post to the top rail. This fitting is normally used in conjunction with Pipeclamp fitting 101 when building a two rail guardrail system. This Pipeclamp fitting can also be used to create a 90° tube bend.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 125-A27 | 26.9 | 41 | | | | | | | 0.28 |
| 125-B34 | 33.7 | 47 | | | | | | | 0.37 |
| 125-C42 | 42.4 | 60 | | | | | | | 0.61 |
| 125-D48 | 48.3 | 67 | | | | | | | 0.72 |
| 125-E60 | 60.3 | 85 | | | | | | | 1.21 |

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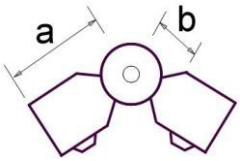


**125H**

This Pipeclamp fitting is a variable elbow for creating angle joints in tubes without the need to bend the tube. This Pipeclamp fitting enables the connection of two tubes of the same size.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 125H-B34 | 33.7 | 62 | 35 | | | | | | 0.62 |
| 125H-C42 | 42.4 | 76 | 38 | | | | | | 0.92 |
| 125H-D48 | 48.3 | 84 | 42 | | | | | | 1.15 |

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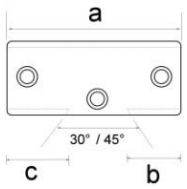


**127**

This Pipeclamp fitting is an adjustable long tee between 30° and 45°. This Pipeclamp fitting is used to connect the vertical to the top rail on a sloping or staircase systems. This Pipeclamp fitting allows two top tubes to be joined inside the fitting, should this not be required then the Pipeclamp fitting 129 can be used. This Pipeclamp fitting is normally used in conjunction with the Pipeclamp fitting 130 on 2 rail systems.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 127-B34 | 33.7 | 120 | 32 | 42 | | | | | 0.62 |
| 127-C42 | 42.4 | 148 | 40 | 48 | | | | | 0.93 |
| 127-D48 | 48.3 | 165 | 43 | 54 | | | | | 1.09 |

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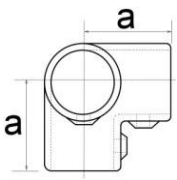
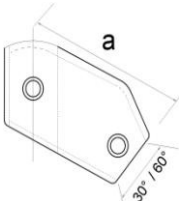



**128**

This Pipeclamp fitting is a 3 way enclosed 90° corner joint. Typical use is on straight and level guardrail for connecting the top rails to the vertical at a 90° corner. This Pipeclamp fitting can also be used to create enclosed corner joints on other rectangular structures. This Pipeclamp fitting is normally used in conjunction with the Pipeclamp fitting 116 on 2 or 3 rail guardrail systems.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 128-A27 | 26.9 | 40 | | | | | | | 0.36 |
| 128-B34 | 33.7 | 48 | | | | | | | 0.50 |
| 128-C42 | 42.4 | 61 | | | | | | | 0.80 |
| 128-D48 | 48.3 | 67 | | | | | | | 1.00 |
| 128-E60 | 60.3 | 86 | | | | | | | 1.67 |

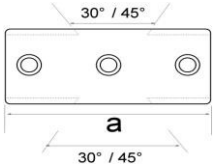
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**129**

This Pipeclamp fitting is an adjustable tee between 30° and 60° and is used to connect the vertical to the top rail on a sloping or staircase systems. This Pipeclamp fitting does not allow tubes to be joined inside the fitting. This Pipeclamp fitting is normally used in conjunction with the Pipeclamp fitting 130 on 2 or 3 rail systems, it can also be used for bracing on structures.

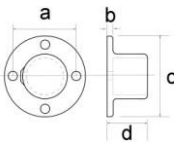
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 129-B34 | 33.7 | 62 | | | | | | | 0.41 |
| 129-C42 | 42.4 | 75 | | | | | | | 0.67 |
| 129-D48 | 48.3 | 80 | | | | | | | 0.78 |




**130**

This Pipeclamp fitting is an adjustable cross between 30° and 45°. This Pipeclamp fitting is used as a cross connection to connect the vertical to the mid/lower rails on a sloping or staircase guardrail systems with the upright remaining vertical. The vertical must remain continuous with the cross rails being cut. This Pipeclamp fitting is normally used in conjunction with the Pipeclamp fitting 129 on 2 or 3 rail systems. This Pipeclamp fitting is not recommended to be used as the top fitting on guardrail systems.

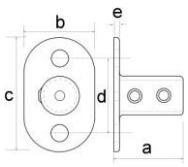
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 130-B34 | 33.7 | 147 | | | | | | | 0.65 |
| 130-C42 | 42.4 | 198 | | | | | | | 1.07 |
| 130-D48 | 48.3 | 216 | | | | | | | 1.17 |




**131**

This Pipeclamp fitting is ideal as a flange for terminating rails to a wall or similar structures. This Pipeclamp fitting can be used as a base flange for non load bearing structure. **THIS PIPECLAMP FITTING IS NOT RECOMMENDED FOR USE AS A BASE PLATE FOR GUARDRAIL SYSTEMS OR IN LOAD BEARING APPLICATIONS.**

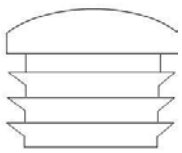
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 131-A27 | 26.9 | 56 | 5 | 83 | 42 | | | 7 | 0.31 |
| 131-B34 | 33.7 | 65 | 7 | 90 | 48 | | | 7 | 0.46 |
| 131-C42 | 42.4 | 76 | 8 | 102 | 51 | | | 7 | 0.65 |
| 131-D48 | 48.3 | 88 | 8 | 115 | 60 | | | 7 | 0.87 |
| 131-E60 | 60.3 | 95 | 8 | 127 | 65 | | | 10 | 1.04 |




**132**

This Pipeclamp fitting is a structural base plate for all aspects of vertical post support. When using this Pipeclamp fitting as the base plate for a guardrail system the fitting should be positioned with holes 90° to the line of the rails to give maximum strength. The holes in the base are large enough to allow mechanical or chemical anchors to be used.

| Pipeclamp Reference N | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 132-A27 | 26.9 | 60 | 52 | 105 | 77 | 8 | | 11 | 0.41 |
| 132-B34 | 33.7 | 72 | 63 | 128 | 90 | 9 | | 14 | 0.65 |
| 132-C42 | 42.4 | 86 | 73 | 140 | 100 | 10 | | 14 | 0.89 |
| 132-D48 | 48.3 | 90 | 90 | 152 | 113 | 12 | | 14 | 1.24 |
| 132-E60 | 60.3 | 105 | 97 | 167 | 128 | 11 | | 17 | 1.59 |

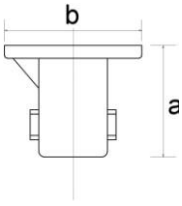


**133**

This Pipeclamp fitting is a plastic stop end cap for sealing the open ends of tubes. This Pipeclamp fitting can be used on medium or heavy weight tube. This Pipeclamp fitting is only a frictional fit, for a more permanent fix a suitable adhesive is recommended.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 133-A27 | 26.9 | | | | | | | | 0.004 |
| 133-B34 | 33.7 | | | | | | | | 0.007 |
| 133-C42 | 42.4 | | | | | | | | 0.016 |
| 133-D48 | 48.3 | | | | | | | | 0.020 |
| 133-E60 | 60.3 | | | | | | | | 0.024 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**134**

This Pipeclamp fitting is a base support cast into concrete which is flush to the finished ground level. The upright is held in place using the grubscrew but can easily be removed without leaving any obstructions. It is recommended that the minimum size casting hole is 300mm x300mm x 300mm.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **134-B34** | 33.7 | **126** | **128** | | | | | | **1.95** |
| **134-C42** | 42.4 | **138** | **140** | | | | | | **2.56** |
| **134-D48** | 48.3 | **138** | **140** | | | | | | **2.45** |

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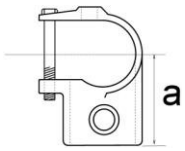


**135**

This Pipeclamp fitting is an inline add on tee used for making additions to, upgrading or modifying an existing structure without having the need to dismantle part or all of the structure. The Hexagonal headed bolt is for retaining purposes only and should not be over tightened MAX torque 15Nm.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **135-A27** | 26.9 | **53** | | | | | | | **0.29** |
| **135-B34** | 33.7 | **53** | | | | | | | **0.36** |
| **135-C42** | 42.4 | **68** | | | | | | | **0.55** |
| **135-D48** | 48.3 | **79** | | | | | | | **0.63** |
| **135-E60** | 60.2 | **94** | | | | | | | **0.96** |

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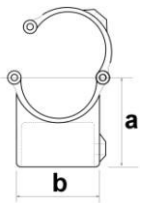


**136**

This Pipeclamp fitting is an add on short tee used for making additions to, upgrading or modifying an existing structure without having the need to dismantle part or all of the structure. This Pipeclamp fitting does not allow tubes to be joined within the fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **136-C42** | 42.4 | 60 | 55 | | | | | | 0.62 |
| **136-D48** | 48.3 | 70 | 63 | | | | | | 0.81 |

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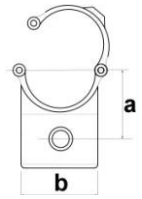


**137**

This Pipeclamp fitting is an add on 90° crossover and is designed to give a 90° crossover joint used for making additions to, upgrading or modifying an existing structure without having the need to dismantle part or all of the structure. This Pipeclamp fitting does not allow tubes to be joined within the fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **137-C42** | 42.4 | 50 | 48 | | | | | | 0.67 |
| **137-D48** | 48.3 | 55 | 52 | | | | | | 0.83 |

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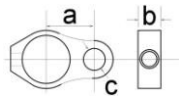
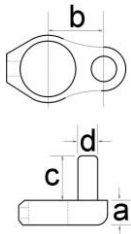



**138**

This Pipeclamp fitting is a female section of a 2 part gate hinge and works in conjunction with the Pipeclamp fitting 140. It is not recommended to be used to support heavy or wide gates, should this be required then it is recommended that the Pipeclamp fittings 101, 147, and 179 are used (see page ?? for details).

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **138-A27** | 26.9 | **30** | **26** | **14** | | | | | **0.19** |
| **138-B34** | 33.7 | **33** | **26** | **14** | | | | | **0.20** |
| **138-C42** | 42.4 | **38** | **26** | **14** | | | | | **0.21** |
| **138-D48** | 48.3 | **41** | **26** | **14** | | | | | **0.24** |

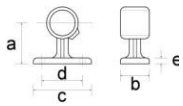
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**140**

This Pipeclamp fitting is a male section of a 2 part gate hinge and works in conjunction with the Pipeclamp fitting 138. It is not recommended to be used to support heavy or wide gates, should this be required then it is recommended that the Pipeclamp fittings 101, 147, and 179 are used (see page ?? for details).

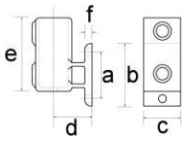
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 140-A27 | 26.9 | 26 | 30 | 38 | 13 | | | | 0.25 |
| 140-B34 | 33.7 | 26 | 33 | 38 | 13 | | | | 0.27 |
| 140-C42 | 42.4 | 26 | 40 | 38 | 13 | | | | 0.30 |
| 140-D48 | 48.3 | 26 | 44 | 38 | 13 | | | | 0.33 |




**143**

This Pipeclamp fitting is a wall mounting bracket for handrails. This Pipeclamp fitting can also be used to tie structures back to walls, mount exhibition panels or fix kicking flats to guardrails. This Pipeclamp fitting is not recommended as a solitary base for guardrail systems or for similar load bearing applications. This Pipeclamp fitting does not allow tubes to be joined inside the fitting.

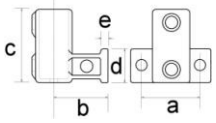
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 143-A27 | 26.9 | 55 | 45 | 79 | 58 | 6 | | 7 | 0.32 |
| 143-B34 | 33.7 | 57 | 45 | 79 | 62 | 7 | | 7 | 0.38 |
| 143-C42 | 42.4 | 63 | 45 | 102 | 81 | 8 | | 8 | 0.49 |
| 143-D48 | 48.3 | 71 | 50 | 109 | 83 | 7 | | 8 | 0.60 |




**144**

This Pipeclamp fitting is an offset side palm base fixing for fixing level or sloping guardrails to walls, steps ramps etc. The tube is unable to pass through this fitting as supplied, should this be required then the base must be reamed out. Access to the top fixing is restricted; it is recommended that a threaded stud is fixed first with a maximum projection of 25mm.

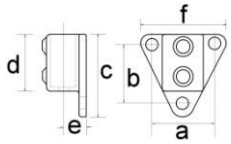
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 144-B34 | 33.7 | 68 | 96 | 47 | 65 | 104 | 7 | 14 | 0.83 |
| 144-C42 | 42.4 | 73 | 110 | 54 | 65 | 114 | 8 | 14 | 1.15 |
| 144-D48 | 48.3 | 90 | 124 | 63 | 65 | 122 | 8 | 14 | 1.37 |




**145**

This Pipeclamp fitting is a non structural offset side palm base fixing for fixing level or sloping guardrails to walls, steps ramps etc. The tube is unable to pass through this fitting as supplied, should this be required then the base must be reamed out.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 145-B34 | 33.7 | 68 | 57 | 103 | 46 | 9 | | 14 | 0.85 |
| 145-C42 | 42.4 | 73 | 64 | 113 | 55 | 9 | | 14 | 1.16 |
| 145-D48 | 48.3 | 88 | 74 | 120 | 69 | 9 | | 14 | 1.54 |

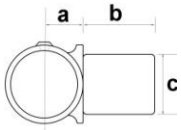



**146**

This Pipeclamp fitting is a flush side palm base fixing for fixing level or sloping guardrails to walls, steps ramps etc. The flush design enables uprights to be tight to the structure. The tube is unable to pass through this fitting as supplied, should this be required then the base must be reamed out. If the base is reamed out the bottom fixing will become redundant.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 146-B34 | 33.7 | 72 | 63 | 102 | 76 | 28 | 88 | 11 | 0.74 |
| 146-C42 | 42.4 | 82 | 70 | 107 | 85 | 36 | 108 | 11 | 1.08 |
| 146-D48 | 48.3 | 86 | 77 | 115 | 90 | 33 | 111 | 10 | 0.89 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**147**

This Pipeclamp fitting is an offset swivel tee and is normally used in conjunction with Pipeclamp fittings 101 or 125 to create a 360° swivel joint on handrail or offset guardrail down variable angled slopes. This Pipeclamp fitting can also be used with a 101 and a 179 to create a heavy duty gate hinge (see page?? For details).

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 147-B34 | 33.7 | 23 | 29 | 34 | | | | | 0.33 |
| 147-C42 | 42.4 | 28 | 36 | 42 | | | | | 0.45 |
| 147-D48 | 48.3 | 31 | 41 | 48 | | | | | 0.55 |

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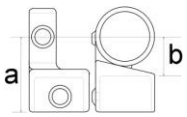


**148**

This Pipeclamp fitting is shown priced and sold as a single fitting but is normally used in Pairs to create angles between 85° and 235°. A centre tube is required to join the fittings together to create the angle. When using this Pipeclamp fitting for the top rail of a guardrail system the upright must be left at full height and the open end capped using a Pipeclamp 133 plastic stop end.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 148-A27 | 26.9 | 53 | 32 | | | | | | 0.19 |
| 148-B34 | 33.7 | 60 | 38 | | | | | | 0.30 |
| 148-C42 | 42.4 | 73 | 48 | | | | | | 0.43 |
| 148-D48 | 48.3 | 95 | 62 | | | | | | 0.63 |

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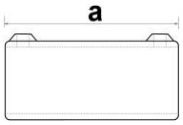


**149**

This Pipeclamp fitting is an external in line connector for joining 2 tubes of the same diameter. This Pipeclamp fitting is not recommended to be used as a structural joint. For a smooth inline joint the Pipeclamp 150 can be used.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 149-A27 | 26.9 | 77 | | | | | | | 0.30 |
| 149-B34 | 33.7 | 89 | | | | | | | 0.40 |
| 149-C42 | 42.4 | 102 | | | | | | | 0.58 |
| 149-D48 | 48.3 | 102 | | | | | | | 0.61 |
| 149-E60 | 60.3 | 120 | | | | | | | 0.94 |

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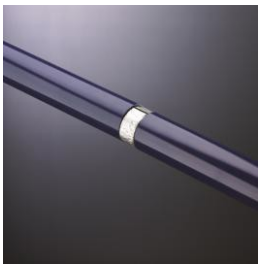

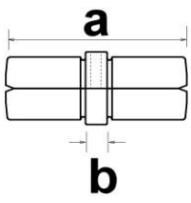


**150**

This Pipeclamp fitting is an internal inline connector for joining 2 tubes of the same diameter. This Pipeclamp fitting is not to be used as a structural or load bearing joint. When used to connect tubes on a guardrail system this Pipeclamp fitting must be used within a 100mm from an upright. This Pipeclamp fitting can only be used on 3.2mm wall thick tube.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 150-A27 | 26.9 | 76 | 22 | | | | | | 0.16 |
| 150-B34 | 33.7 | 79 | 20 | | | | | | 0.25 |
| 150-C42 | 42.4 | 80 | 20 | | | | | | 0.37 |
| 150-D48 | 48.3 | 80 | 20 | | | | | | 0.44 |

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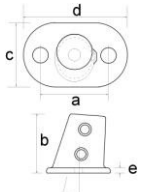
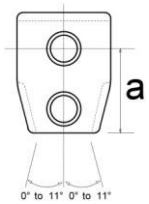



**152**

This Pipeclamp fitting is a structural base flange for use on sloping guardrail systems between 0° and 11° enabling the upright to remain vertical. The design of this Pipeclamp fitting will only allow its installation in the correct plane.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 152-B34 | 33.7 | 88 | 90 | 80 | 127 | 8 | | 14 | 0.88 |
| 152-C42 | 42.4 | 100 | 99 | 90 | 140 | 10 | | 15 | 1.15 |
| 152-D48 | 48.3 | 113 | 101 | 96 | 153 | 11 | | 15 | 1.47 |

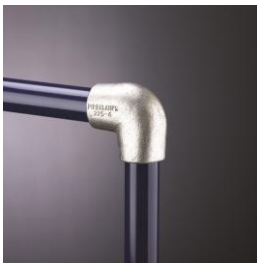
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS

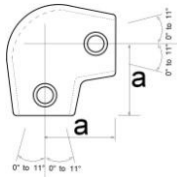



**153**

This Pipeclamp fitting is a short tee for use on sloping guardrail systems between 0° and 11°. Typical use is to connect the vertical post to the top rail or end/mid rail. This Pipeclamp fitting cannot be used to join tubes in the top of the short tee, to join tubes used the 155 Pipeclamp fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 153-B34 | 33.7 | 48 | | | | | | | 0.38 |
| 153-C42 | 42.4 | 60 | | | | | | | 0.54 |
| 153-D48 | 48.3 | 68 | | | | | | | 0.68 |

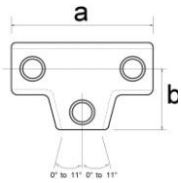





**154**

This Pipeclamp fitting is an elbow for use on sloping guardrail systems between 0° and 11°. Typical use is on guardrail to connect the vertical post to the top rail. This fitting is normally used in conjunction with Pipeclamp fitting 153 when building a 2 or 3 rail guardrail system.

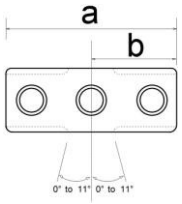
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 154-B34 | 33.7 | 47 | | | | | | | 0.41 |
| 154-C42 | 42.4 | 58 | | | | | | | 0.64 |
| 154-D48 | 48.3 | 68 | | | | | | | 0.84 |




**155**

This Pipeclamp fitting is a long tee for use on sloping guardrail systems between 0° and 11°. Typical use is on guardrail to connect the vertical post to the top rail. This Pipeclamp fitting can be used to join tubes in the top of the long tee. This fitting is used in conjunction with the Pipeclamp fitting 156 when building 2 or 3 rail guardrail systems.

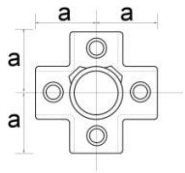
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 155-B34 | 33.7 | 104 | 45 | | | | | | 0.55 |
| 155-C42 | 42.4 | 143 | 61 | | | | | | 0.95 |
| 155-D48 | 48.3 | 169 | 68 | | | | | | 1.15 |




**156**

This Pipeclamp fitting is a long tee for use on sloping guardrail systems between 0° and 11°. Typical use is on guardrail for connecting the mid/lower rail to the vertical. The vertical must remain continuous with the cross rails being cut. This fitting is normally used in conjunction with Pipeclamp fitting 155 when building a 2 or 3 rail guardrail system.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 156-B34 | 33.7 | 110 | 55 | | | | | | 0.47 |
| 156-C42 | 42.4 | 140 | 70 | | | | | | 0.73 |
| 156-D48 | 48.3 | 160 | 80 | | | | | | 0.86 |

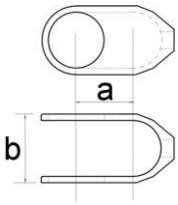



**158**

This Pipeclamp fitting is a 4 way cross connection that enables the vertical to pass through the centre of the fitting with 4 horizontal tubes joining at 90° to each other. This Pipeclamp fitting is ideal for structures with multiple verticals. The vertical must remain continuous with the horizontal rails being cut.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 158-A27 | 26.9 | 41 | | | | | | | 0.53 |
| 158-B34 | 33.7 | 46 | | | | | | | 0.62 |
| 158-C42 | 42.4 | 60 | | | | | | | 1.03 |
| 158-D48 | 48.3 | 67 | | | | | | | 1.18 |

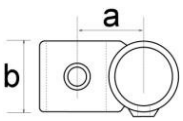
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**160**

This Pipeclamp fitting is an add on 90° crossover and is designed to give a 90° crossover joint used for making additions to, upgrading or modifying an existing structure without having the need to dismantle part or all of the structure. This Pipeclamp fitting does not allow tubes to be joined within the fitting.

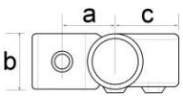
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 160-A27 | 26.9 | 30 | 42 | | | | | | 0.27 |
| 160-B34 | 33.7 | 34 | 46 | | | | | | 0.26 |
| 160-C42 | 42.4 | 43 | 58 | | | | | | 0.39 |
| 160-D48 | 48.3 | 49 | 64 | | | | | | 0.51 |
| 160-E60 | 60.2 | 62 | 84 | | | | | | 0.70 |




**161**

This Pipeclamp fitting is an offset 90° crossover. This Pipeclamp fitting does not allow tubes to be joined within the fitting. Typical use is on offset guardrail systems or for racking systems.

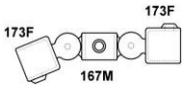
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 161-A27 | 26.9 | 35 | 36 | | | | | | 0.21 |
| 161-B34 | 33.7 | 43 | 40 | | | | | | 0.33 |
| 161-B34/C42 | 33.7/42.4 | 43 | 38 / 47 | | | | | | 0.39 |
| 161-B34/D48 | 33.7/48.3 | 45 | 38 / 56 | | | | | | 0.45 |
| 161-C42 | 42.4 | 50 | 45 | | | | | | 0.48 |
| 161-C42/D48 | 42.4/48.3 | 48 | 45 / 56 | | | | | | 0.52 |
| 161-D48 | 48.3 | 52 | 55 | | | | | | 0.57 |
| 161-D48/E60 | 48.3/60.2 | 59 | 56 / 62 | | | | | | 0.71 |
| 161-E60 | 60.3 | 65 | 63 | | | | | | 0.90 |




**165**

This Pipeclamp fitting is a combination fitting designed for the construction of racking systems. This Pipeclamp fitting enables the connection of a vertical upright at 90° to 2 horizontal rails, 1 being the tie rail and the other being the load rail. On pallet racking the upright normally has the load rail on the inside, whilst for shelved racking the upright normally has the load rail on the outside.

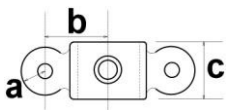
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 165-A27 | 26.9 | 36 | 31 | 39 | | | | | 0.29 |
| 165-B34 | 33.7 | 42 | 38 | 48 | | | | | 0.48 |
| 165-C42 | 42.4 | 50 | 45 | 60 | | | | | 0.67 |
| 165-D48 | 48.3 | 55 | 52 | 68 | | | | | 0.82 |




**167**

This Pipeclamp fitting is a double combination fitting with the swivel connectors at 180° to each other. Each swivel has a travel of approximately 85° from the horizontal in both vertical directions. This Pipeclamp fitting combines 1 x 167M and 2 x 173F. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS. ENTIRE STRUCTURES SHOULD NOT BE BUILT JUST USING SWIVEL FITTINGS AS IT WOULD BE UNSTABLE.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 167-A27 | 26.9 | | | | | | | | 0.70 |
| 167-B34 | 33.7 | | | | | | | | 1.10 |
| 167-C42 | 42.4 | | | | | | | | 1.34 |
| 167-D48 | 48.3 | | | | | | | | 1.55 |
| 167-E60 BOLT | 60.2 | | | | | | | | 2.48 |

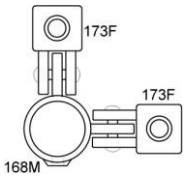



**167M**

This Pipeclamp fitting is a double male inline fitting with the lugs at 180° to each other. This Pipeclamp fitting is the male part of the 167 swivel combination, this Pipeclamp fitting can also be used to secure various types of infill in place. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 167M-A27 | 26.9 | 15 | 35 | 32 | | | | 8 | 0.20 |
| 167M-B34 | 33.7 | 19 | 42 | 41 | | | | 11 | 0.35 |
| 167M-C42 | 42.4 | 19 | 48 | 46 | | | | 11 | 0.41 |
| 167M-D48 | 48.3 | 19 | 52 | 48 | | | | 11 | 0.45 |
| 167M-E60 | 60.3 | 19 | 60 | 53 | | | | 11 | 0.60 |

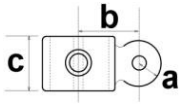
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**168**

This Pipeclamp fitting is a 90° corner combination fitting with the swivel connectors at 90° to each other. Each swivel has a travel of approximately 85° from the horizontal in both vertical directions. This Pipeclamp fitting combines 1 x 168M and 2 x 173F. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS. ENTIRE STRUCTURES SHOULD NOT BE BUILT JUST USING SWIVEL FITTINGS AS IT WOULD BE UNSTABLE.**

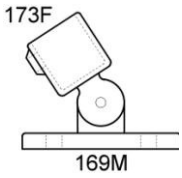
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 168-A27 | 26.9 | | | | | | | | 0.71 |
| 168-B34 | 33.7 | | | | | | | | 1.08 |
| 168-C42 | 42.4 | | | | | | | | 1.24 |
| 168-D48 | 48.3 | | | | | | | | 1.53 |
| 168-E60 BOLT | 60.2 | | | | | | | | 2.42 |




**168M**

This Pipeclamp fitting is a double male inline fitting with the lugs at 90° to each other. This Pipeclamp fitting is the male part of the 168 swivel combination, this Pipeclamp fitting can also be used to secure various types of infill in place at 90° to each other. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS.**

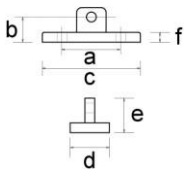
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 168M-A27 | 26.9 | 15 | 38 | 34 | | | | 8 | 0.22 |
| 168M-B34 | 33.7 | 19 | 44 | 40 | | | | 11 | 0.33 |
| 168M-C42 | 42.4 | 19 | 48 | 33 | | | | 11 | 0.29 |
| 168M-D48 | 48.3 | 19 | 54 | 46 | | | | 11 | 0.45 |
| 168M-E60 | 60.2 | 19 | 60 | 46 | | | | 11 | 0.54 |




**169**

This Pipeclamp fitting is a **NON STRUCTURAL** swivel locating flange combination fitting, this Pipeclamp fitting should never be used as an angled base fitting for guardrail systems. The swivel has a travel of approximately 85° from the vertical in each direction. This Pipeclamp fitting combines 1 x 169M and 1 x 173F. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS. ENTIRE STRUCTURES SHOULD NOT BE BUILT JUST USING SWIVEL FITTINGS AS IT WOULD BE UNSTABLE.**

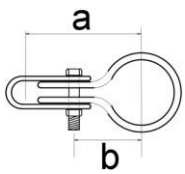
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 169-A27 | 26.9 | | | | | | | | 0.62 |
| 169-B34 | 33.7 | | | | | | | | 0.75 |
| 169-C42 | 42.4 | | | | | | | | 0.84 |
| 169-D48 | 48.3 | | | | | | | | 0.91 |
| 169-E60 BOLT | 60.2 | | | | | | | | 1.26 |




**169M**

This Pipeclamp fitting is the male part of the 169 swivel locating flange combination. This Pipeclamp fitting can also be used to secure various types of infill in place. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 169M | 48.3 | 85 | 34 | 112 | 52 | 52 | 7 | 11 | 0.36 |

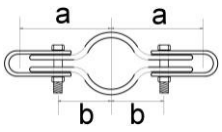



**170**

This Pipeclamp fitting is a single location panel clip. The typical use for this Pipeclamp fitting is for retaining weld mesh panels between tubes on guardrail systems. To enable this Pipeclamp fitting to retain the mesh correctly it is recommended that the mesh panels are framed with an 8mm bar. This panel clip has an 18mm slot in the main body that enables dimensions A & B to be increased by up to 10mm.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 170-A27 | 26.9 | 52 | 26 | | | | | | 0.06 |
| 170-B34 | 33.7 | 56 | 28 | | | | | | 0.07 |
| 170-C42 | 42.4 | 60 | 30 | | | | | | 0.08 |
| 170-D48 | 48.3 | 70 | 35 | | | | | | 0.09 |
| 170-E60 | 60.3 | 72 | 36 | | | | | | 0.10 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**171**

This Pipeclamp fitting is a double location panel clip. The typical use for this Pipeclamp fitting is for retaining weld mesh panels between tubes on guardrail systems. To enable this Pipeclamp fitting to retain the mesh correctly it is recommended that the mesh panels are framed with an 8mm bar. This panel clip has an 18mm slot in the main body that enables dimensions A & B to be increased by up to 10mm.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 171-A27 | 26.9 | 52 | 26 | | | | | | 0.10 |
| 171-B34 | 33.7 | 56 | 28 | | | | | | 0.11 |
| 171-C42 | 42.4 | 60 | 30 | | | | | | 0.12 |
| 171-D48 | 48.3 | 70 | 35 | | | | | | 0.13 |
| 171-E60 | 60.3 | 72 | 36 | | | | | | 0.14 |

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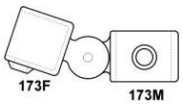


**173**

This Pipeclamp fitting is a single swivel combination fitting. The swivel has a travel of approximately 85° from the horizontal in both vertical directions. This Pipeclamp fitting combines 1 x 173M and 1 x 173F. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS. ENTIRE STRUCTURES SHOULD NOT BE BUILT JUST USING SWIVEL FITTINGS AS IT WOULD BE UNSTABLE.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 173-A27 | 26.9 | | | | | | | | 0.41 |
| 173-B34 | 33.7 | | | | | | | | 0.64 |
| 173-C42 | 42.4 | | | | | | | | 0.82 |
| 173-D48 | 48.3 | | | | | | | | 0.90 |
| 173-E60 | 60.3 | | | | | | | | 1.43 |

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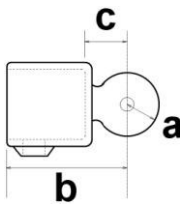


**173F**

This Pipeclamp fitting is the female section of all the swivel combination fittings. This Pipeclamp fitting is used in conjunction with the "M" part of the swivel combination and is not generally used on its own. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 173F-A27 | 26.9 | 10 | 58 | 27 | | | | 8 | 0.23 |
| 173F-B34 | 33.7 | 19 | 62 | 27 | | | | 11 | 0.35 |
| 173F-C42 | 42.4 | 19 | 69 | 27 | | | | 11 | 0.44 |
| 173F-D48 | 48.3 | 19 | 78 | 27 | | | | 11 | 0.53 |
| 173F-E60 | 60.3 | 19 | 96 | 42 | | | | 11 | 0.89 |

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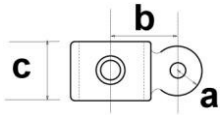


**173M**

This Pipeclamp fitting is a single male inline fitting with one lug. This Pipeclamp fitting is the male part of the 173 swivel combination, this Pipeclamp fitting can also be used to secure various types of infill in place. **THIS FITTING IS NOT DESIGNED TO WITHSTAND LATERAL LOADS.**

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 173M-A27 | 26.9 | 16 | 38 | 34 | | | | 11 | 0.16 |
| 173M-B34 | 33.7 | 19 | 43 | 40 | | | | 11 | 0.26 |
| 173M-C42 | 42.4 | 19 | 48 | 45 | | | | 11 | 0.33 |
| 173M-D48 | 48.3 | 19 | 54 | 45 | | | | 11 | 0.35 |
| 173M-E60 | 60.3 | 24 | 62 | 48 | | | | 11 | 0.49 |

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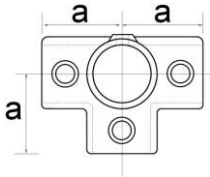
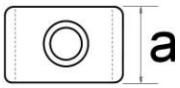



**176**

This Pipeclamp fitting is a 3 way outlet tee allowing 3 tubes to join at 90° to each other with the vertical passing through the fitting. Typical use would be on structures such as market stalls or play frames.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 176-A27 | 26.9 | 40 | | | | | | | 0.35 |
| 176-B34 | 33.7 | 48 | | | | | | | 0.51 |
| 176-C42 | 42.4 | 60 | | | | | | | 0.77 |
| 176-D48 | 48.3 | 67 | | | | | | | 0.98 |
| 176-E60 | 60.3 | 86 | | | | | | | 1.47 |

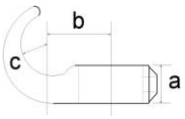
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**179**

This Pipeclamp fitting is a simple locking collar. Typical use is for extra support on structures such as racking systems where the slip load on the set screw may be exceeded. This Pipeclamp fitting can also be used as the pivot point for a Pipeclamp heavy duty gate hinge.

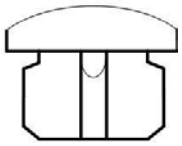
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 179-A27 | 26.9 | 23 | | | | | | | 0.09 |
| 179-B34 | 33.7 | 26 | | | | | | | 0.12 |
| 179-C42 | 42.4 | 26 | | | | | | | 0.14 |
| 179-D48 | 48.3 | 27 | | | | | | | 0.15 |




**182**

This Pipeclamp fitting is a simple hook. Typical use is for locating chains in place across openings. This Pipeclamp fitting not recommended as a permanent chain location, should this be required then it is recommended that the fitting 173M is used with the chain held in place using a nut and bolt.

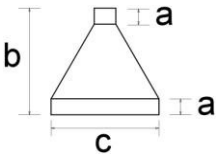
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 182-A27 | 26.9 | 26 | 33 | 12 | | | | | 0.17 |
| 182-B34 | 33.7 | 26 | 35 | 12 | | | | | 0.19 |
| 182-C42 | 42.4 | 26 | 40 | 12 | | | | | 0.21 |
| 182-D48 | 48.3 | 26 | 43 | 12 | | | | | 0.23 |



**184**

This Pipeclamp fitting is a metal stop end cap for sealing the open ends of tubes. This Pipeclamp fitting can be used only be used on medium (3.2) weight tube. This Pipeclamp fitting is a drive in fit that is difficult to remove without the need for adhesive. For a plastic alternative use the Pipeclamp fitting 133.

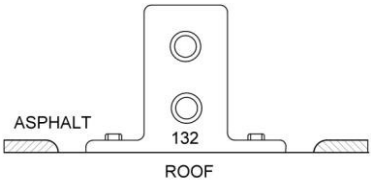
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 184-A27 | 26.9 | | | | | | | | 0.05 |
| 184-B34 | 33.7 | | | | | | | | 0.06 |
| 184-C42 | 42.4 | | | | | | | | 0.11 |
| 184-D48 | 48.3 | | | | | | | | 0.15 |
| 184-E60 | 60.3 | | | | | | | | 0.26 |



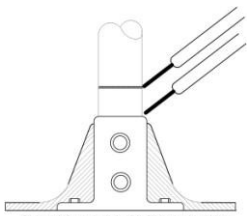

**192**

This Pipeclamp fitting is a weather shield for giving added protection to a vertical post support. Normally used in conjunction with a Pipeclamp 132 base fitting on flat roofs. This fitting needs to be sealed to the Vertical using a suitable sealant. For installation procedure refer to technical details below

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 192-B34 | 33.7 | 25 | 125 | 146 | | | | | 0.35 |
| 192-C42 | 42.4 | 25 | 150 | 157 | | | | | 0.40 |
| 192-D48 | 48.3 | 25 | 155 | 170 | | | | | 0.45 |



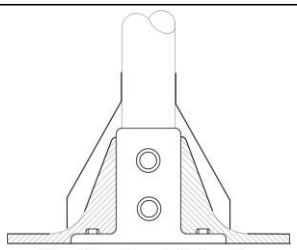

Remove all the asphalt and fix Pipeclamp fitting 132 onto the roof



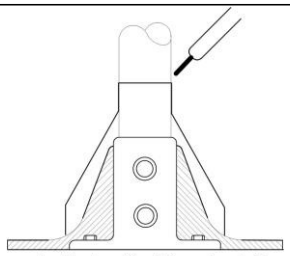
Fix upright into the 132 Pipeclamp fitting and seal fitting to the tube.

Dress asphalt over the 132 fitting.

Put circle sealant arround the tube.

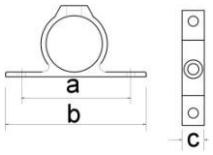


Slide 192 weather sheild down the upright and over the circle of sealant



Seal the top of the 192 weather sheild to the upright and complete fixing the guardrail

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**198**

This Pipeclamp fitting is a double sided fixing bracket. Normally used to fix boards or display panels almost flush to the tube. The tubes cannot be joined inside this fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 198-A27 | 26.9 | 94 | 128 | 36 | | | | 10 | 0.33 |
| 198-B34 | 33.7 | 86 | 120 | 32 | | | | 10 | 0.33 |
| 198-C42 | 42.4 | 95 | 130 | 37 | | | | 10 | 0.40 |
| 198-D48 | 48.3 | 104 | 140 | 37 | | | | 10 | 0.45 |

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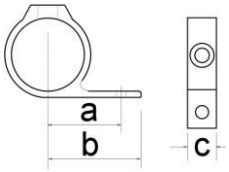


**199**

This Pipeclamp fitting is a single sided fixing bracket. Normally used to fix boards or display panels almost flush to the tube. The tubes cannot be joined inside this fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 199-A27 | 26.9 | 48 | 65 | | | | | 10 | 0.24 |
| 199-B34 | 33.7 | 43 | 62 | | | | | 10 | 0.23 |
| 199-C42 | 42.4 | 48 | 65 | | | | | 10 | 0.31 |
| 199-D48 | 48.3 | 50 | 72 | | | | | 10 | 0.34 |

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**232**

These are case hardened Stainless Steel setscrews. These setscrews are supplied pre fitted into the Pipeclamp fitting but can be purchased as spares. The recommended torque setting for the setscrews is 39Nm

| Pipeclamp Reference No | Size | Kg |
|---|---|---|
| 232 - ABC | 1/4" BSP | 0.01 |
| 232 - DE | 3/8" BSP | 0.015 |

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**233**

This ratchet key is for tightening the setscrews. The ratchet key is supplied with 2 removable hexagon heads. Whilst this ratchet key can tighten the setscrews tighter than the hexagonal key a torque wrench is recommended to be used to achieve the correct torque setting.

| Pipeclamp Reference No | Size | Kg |
|---|---|---|
| 233 | ABCDE | 0.39 |

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**234**

These are replacement heads for the Pipeclamp 233 ratchet key.

| Pipeclamp Reference No | Size | Kg |
|---|---|---|
| 234 - ABC | 1/4" A/F | 0.04 |
| 234 - DE | 5/16" A/F | 0.04 |
| A/F = Across Flats | | |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS

**235**

This is a hexagonal key and is the only tool required for tightening up the setscrews in the Pipeclamp fittings. The correct torque cannot be achieved using the Hexagonal key; the ratchet key and a torque wrench are recommended to achieve the correct torque setting.

| Pipeclamp Reference No | Size | Kg |
|---|---|---|
| 235 - ABC | 1/4" A/F | 0.03 |
| 235 - DE | 5/16" A/F | 0.06 |
| A/F = Across Flats | | |

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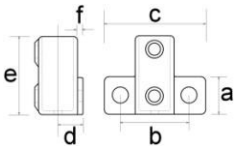


**246**

This Pipeclamp fitting is a heavier duty side palm base fitting for fixing level or sloping guardrails to walls, steps ramps etc. The flush design enables uprights to be tight to the structure. The tube is unable to pass through this fitting as supplied, should this be required then the base must be reamed out.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **246-B34** | 33.7 | 65 | 100 | 150 | 30 | 90 | 8 | 18 | **0.99** |
| **246-C42** | 42.4 | 65 | 100 | 150 | 35 | 90 | 8 | 18 | **1.23** |
| **246-D48** | 48.3 | 65 | 100 | 150 | 40 | 90 | 8 | 18 | **1.39** |

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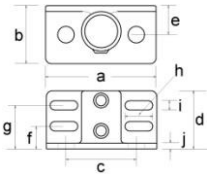


**247**

This Pipeclamp fitting is a base flange with toe board attachment facility. This fitting is ideal as a base for the vertical on guardrails where the addition of a toe board or kicking flat is required.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **247-C42** | 42.4 | 160 | 92 | 100 | 90 | 45 | 30 |
| **247-D48** | 48.3 | 160 | 92 | 100 | 90 | 45 | 30 |
| **Pipeclamp Reference No** | **Tube Size** | **G** | **H** | **I** | **J** | **DIA** | **Kg** |
| **247-C42** | 42.4 | 58 | 31 | 11 | 12 | 18 | **2.14** |
| **247-D48** | 48.3 | 58 | 31 | 11 | 12 | 18 | **2.08** |

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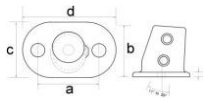


**252**

This Pipeclamp fitting is a structural base flange for use on sloping guardrail systems between 11° and 29° enabling the upright to remain vertical. The design of this Pipeclamp fitting will only allow its installation in the correct plane.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 252-D48 | 48.3 | 127 | 108 | 92 | 166 | 10 | | 17 | 1.52 |

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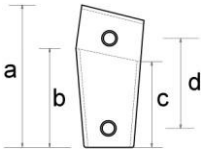
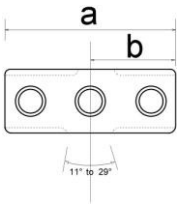



**253**

This Pipeclamp fitting is a short tee for use on sloping guardrail systems between 11° and 29°. Typical use is to connect the vertical post to the top rail or end/mid rail. This Pipeclamp fitting cannot be used to join tubes in the top of the short tee, to join tubes used the 255 Pipeclamp fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 253-D48 | 48.3 | 144 | 88 | 60 | 86 | | | | 0.86 |

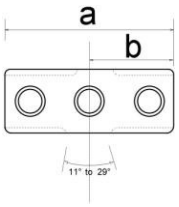
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**255**

This Pipeclamp fitting is a long tee for use on sloping guardrail systems between 11° and 29°. Typical use is on guardrail to connect the vertical post to the top rail. This Pipeclamp fitting can be used to join tubes in the top of the long tee. This fitting is used in conjunction with the Pipeclamp fitting 256 when building 2 rail guardrail systems.

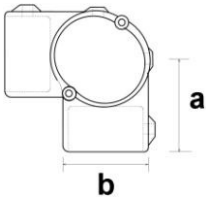
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 255-D48 | 48.3 | 188 | | | | | | | 1.07 |




**256**

This Pipeclamp fitting is a long tee for use on sloping guardrail systems between 11° and 29°. Typical use is on guardrail for connecting the mid/lower rail to the vertical. The vertical must remain continuous with the cross rails being cut. This fitting is normally used in conjunction with Pipeclamp fitting 255 when building a two rail guardrail system.

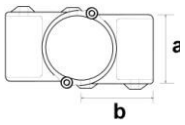
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| 256-D48 | 48.3 | 188 | 94 | | | | | | 1.05 |




**A116**

This Pipeclamp fitting is a 90° retro fit corner joint with the vertical passing through the Pipeclamp fitting. This fitting enables existing structures to be added to without the need to dismantle the structure.

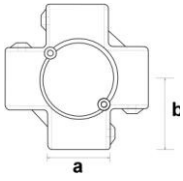
| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **A116-D48** | 48.3 | 61 | 88 | | | | | | 1.17 |




**A119**

This Pipeclamp fitting is a 90° retro fit joint between a vertical and 2 horizontal rails. This fitting enables existing structures to be added to without the need to dismantle the structure.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **A119-D48** | 48.3 | 88 | 61 | | | | | | 1.17 |

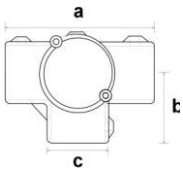



**A158**

This Pipeclamp fitting is a 4 way retro fit cross connection that enables the vertical to pass through the centre of the fitting with 4 horizontal tubes joining at 90° to each other. This fitting enables existing structures to be added to without the need to dismantle the structure.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| **A158-D48** | 48.3 | 61 | 88 | | | | | | 1.85 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




**A176**

This Pipeclamp fitting is a 3 way retro fit outlet tee allowing 3 tubes to join at 90° to each other with the vertical passing through the fitting. This fitting enables existing structures to be added to without the need to dismantle the structure.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| A176-D48 | 48.3 | 178 | 88 | 61 | | | | | 1.51 |

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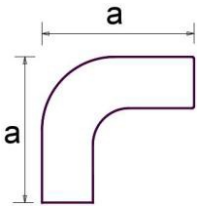


**DDA-1**

This Pipeclamp DDA fitting is a 90° one piece elbow. This fitting is connected to the 42.3mm tube using 2 x 150-C42 Pipeclamp fittings.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-1 | 42.4 | 99 | | | | | | | 0.41 |

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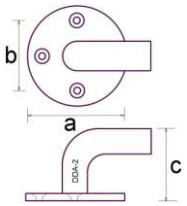


**DDA-2**

This Pipeclamp DDA fitting is a bracket for terminating the 42.3mm tube back to the wall. This fitting is connected to the 42.3mm tube using a 150-C42 Pipeclamp fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-2 | 42.4 | 85 | 65 | 108 | | | | 7 cs | 0.75 |

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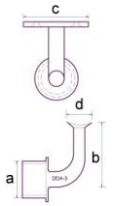


**DDA-3**

This Pipeclamp DDA fitting is a bracket for holding the top or intermediate rail to an upright. This DDA fitting is attached to the upright using standard Pipeclamp D48 fittings. The 42.3 mm tube is fixed to this fitting using either 2 self tapping screws or 2 heavy duty pop rivets.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-3 | 42.4 | 48 | 80 | 88 | 31 | | | 5.5 cs | 0.58 |

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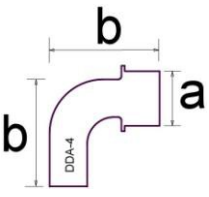
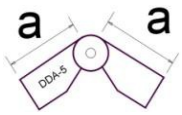



**DDA-4**

This Pipeclamp DDA fitting is an elbow for attaching the top or intermediate rail to an upright. This DDA fitting is attached to the upright using standard Pipeclamp D48 fittings and connected to the 42.3 mm tube using a 150-C42 fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-4 | 42.4 | 48 | 100 | | | | | | 0.53 |

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS




This Pipeclamp DDA fitting is a variable elbow for creating a bend in the 42.3mm handrail tube. This fitting connected to the 42.3 mm tube using 2 x 150-C42 fitting.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-5 | 42.4 | 88 | | | | | | | 0.60 |

**DDA-5**

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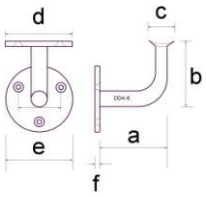


This Pipeclamp DDA fitting is a bracket for holding the top or intermediate rail to a wall. The 42.3 mm tube is fixed to this fitting using either 2 self tapping screws or 2 heavy duty pop rivets.

| Pipeclamp Reference No | Tube Size | A | B | C | D | E | F | DIA | Kg |
|---|---|---|---|---|---|---|---|---|---|
| DDA-6 | 42.4 | 95 | 80 | 28 | 76 | 85 | 10 | 5.5 cs | 0.81 |

**DDA-6**

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## PREBUILT POSTS

**501-D48**

**502-D48**

**503-D48**

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS



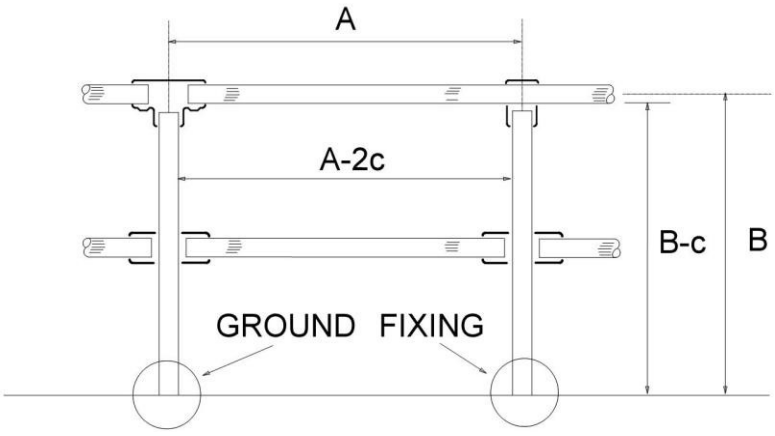
## GUIDE TO GUARDRAIL BAY SIZES USING PIPECLAMP FITTINGS

| FITTING SIZE | B34 | C42 | C42 | D48 | D48 | D48 | E60 | E60 |
|---|---|---|---|---|---|---|---|---|
| TUBE O/D mm | 33.7 | 42.4 | 42.4 | 48.3 | 48.3 | 48.3 | 60.2 | 60.2 |
| WALL THICKNESS mm | 3.2 | 3.2 | 4.0 | 3.2 | 4.0 | 5.0 | 3.7 | 4.5 |
| DESGIN LOAD IN N/m | GUARDRAIL HEIGHT 900mm | | | | | | | |
| 360 | 814mm | 1369mm | 1595mm | 1828mm | 2584mm | 3052mm | 3265mm | 3858mm |
| 740 | 396mm | 666mm | 776mm | 889mm | 1257mm | 2229mm | 1588mm | 1876mm |
| DESGIN LOAD IN N/m | GUARDRAIL HEIGHT 1100mm | | | | | | | |
| 360 | 666mm | 1120mm | 1305mm | 1496mm | 2114mm | 2778mm | 2671mm | 3155mm |
| 740 | 324mm | 545mm | 635mm | 728mm | 1028mm | 1824mm | 1300mm | 1535mm |

THE ABOVE DIMENSIONS ARE A GUIDE ONLY

A STRUCTURAL ENGINEER SHOULD BE USED FOR SPECIFIC REQUIREMENTS

## HOW TO CALCULATE THE CORRECT TUBE LENGTH




| Size | c |
|---|---|
| A27 | -14 |
| B34 | -17 |
| C42 | -22 |
| D48 | -25 |
| E60 | -30 |

When calculating the length of the upright and crossrails to avoid interference, use the following calculation:
Upright height = B-c
Crossrail = A-2c

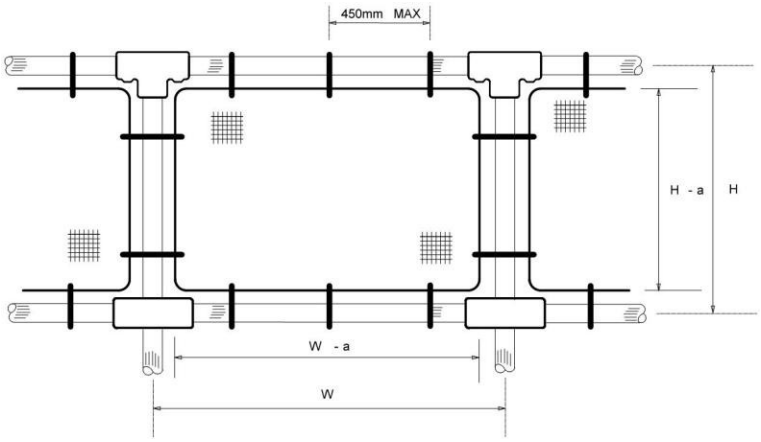
A = Distance between uprights centre to centre.

B = Height of upright ground level to centre line top rail

# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS



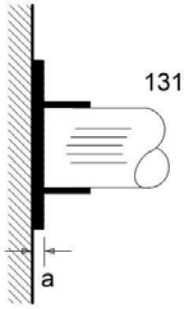
## UPRIGHT CONSTRUCTION

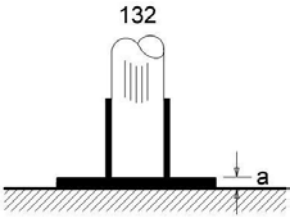


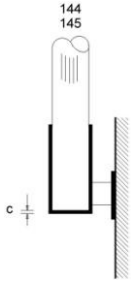

| Size | a |
|---|---|
| A27 | 60 |
| B34 | 76 |
| C42 | 86 |
| D48 | 90 |
| E60 | 99 |

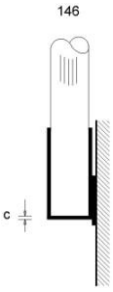
When calculating the height and width of a weld mesh infill panel, use the following calculation:
Panel height = H-a
Panel width =W-a
It is recommended that the mesh panel is framed with an 8mm rod.
Panel clip centres should be no greater than 450mm.
Mesh size that is under 35mm square will require cut outs in the mesh to accommodate the panel clip

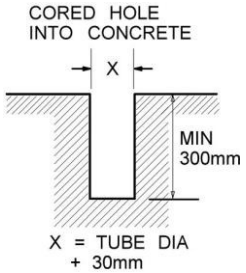
## BASES AND WALL PLATES



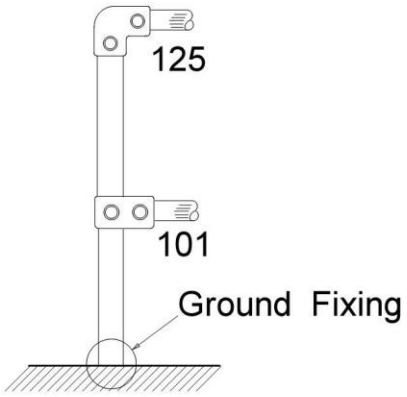

| TUBE SIZE | a | c |
|---|---|---|
| **A27 (26.9)** | 6 | 5 |
| **B34 (33.7)** | 6 | 5 |
| **C42 (42.4)** | 6 | 6 |
| **D48 (48.3)** | 6 | 6 |
| **E60 (60.3)** | 6 | 6 |

Dimensions a & c are subtracted from upright length

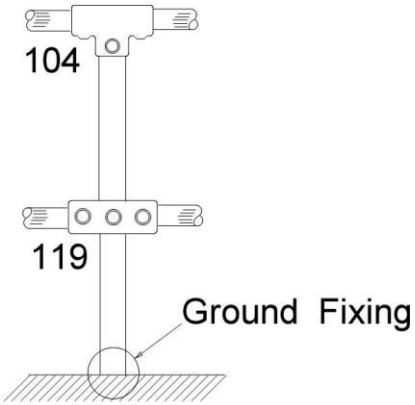
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS



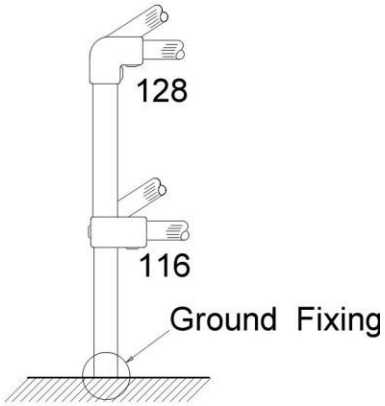
## UPRIGHT CONSTRUCTION



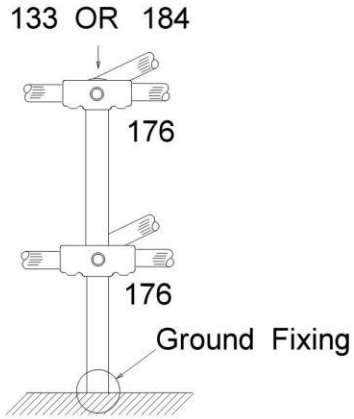

END POST



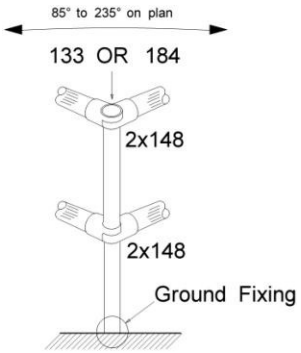

MID POST



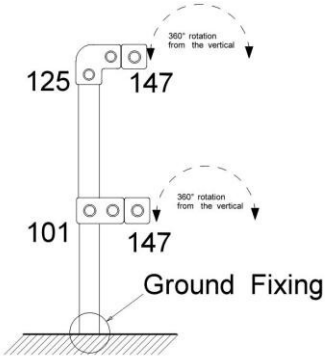

CORNER POST




DIVIDER POST

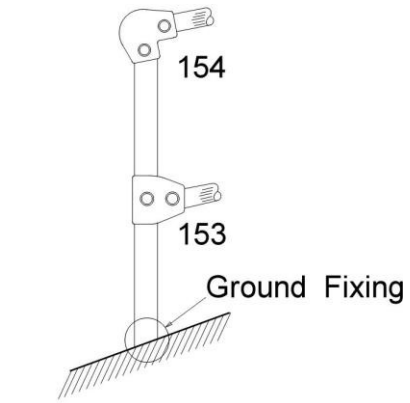



ADJUSTABLE POST

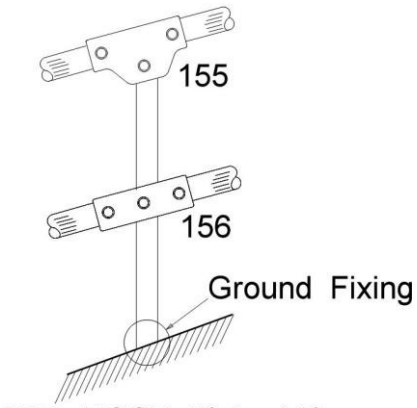



360° ROTATION

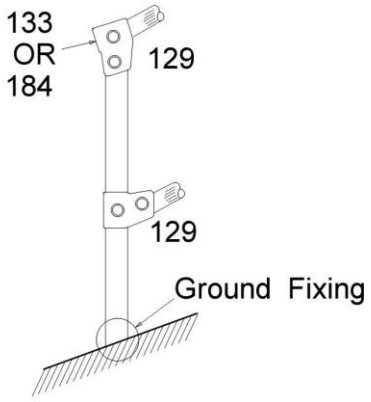
## UPRIGHT CONSTRUCTION



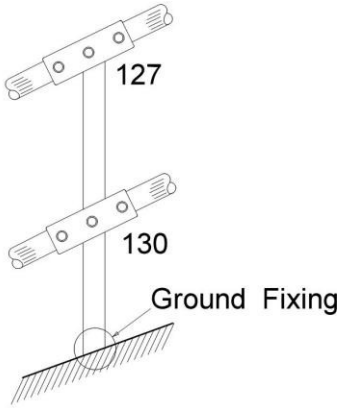

END POST 0° to 11°



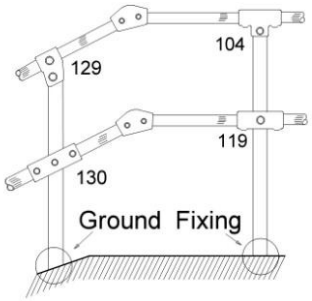

MID POST 0° to 11°



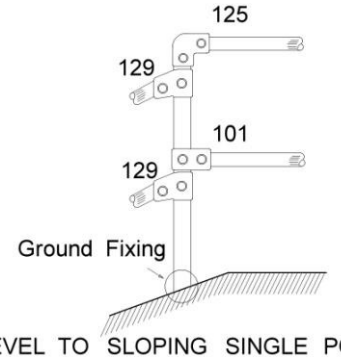

ADJUSTABLE 30° to 60°




ADJUSTABLE 30° to 45°




LEVEL TO SLOPING USING 124




LEVEL TO SLOPING SINGLE POST

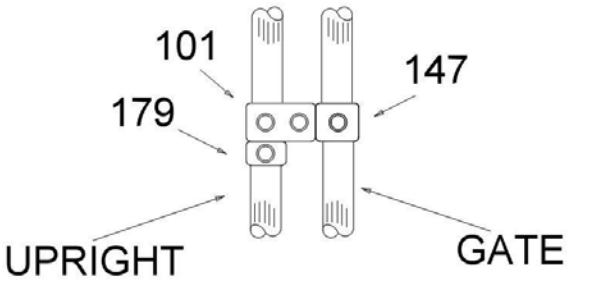
# TECHNICAL INFORMATION
# PIPECLAMP FITTINGS

## HEAVY DUTY GATE HINGE

For wide or heavy gates the 138 and the 140 Pipeclamp fittings are not strong enough.

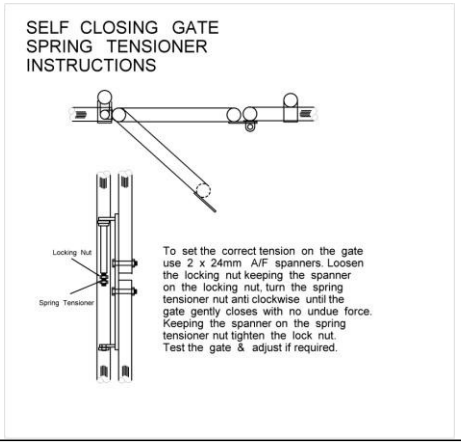
This design should be used.

The set Screw on the 101 fitting on the upright is left undone to enable it to pivot on the 179




HEAVY DUTY GATE HINGE

## SELF CLOSING GATE




The gate is supplied with U bolts that will suit B34 / C42 / D48 tube.

## TYPICAL USES

Using standard tube and Pipeclamp fittings imagination is your only limitation to what can be built. From Industrial to Retail, from Safety to play.

Safety Railings / Racking / Shopping Trolley Bays / Exhibition Stands / Play Areas / Lighting Grid Systems / Market Stalls / Cycle Rack Frameworks / Handrails / Awnings and Car Ports / Benches / Hanging Rails / Support Framework PLUS MANY MORE.....