

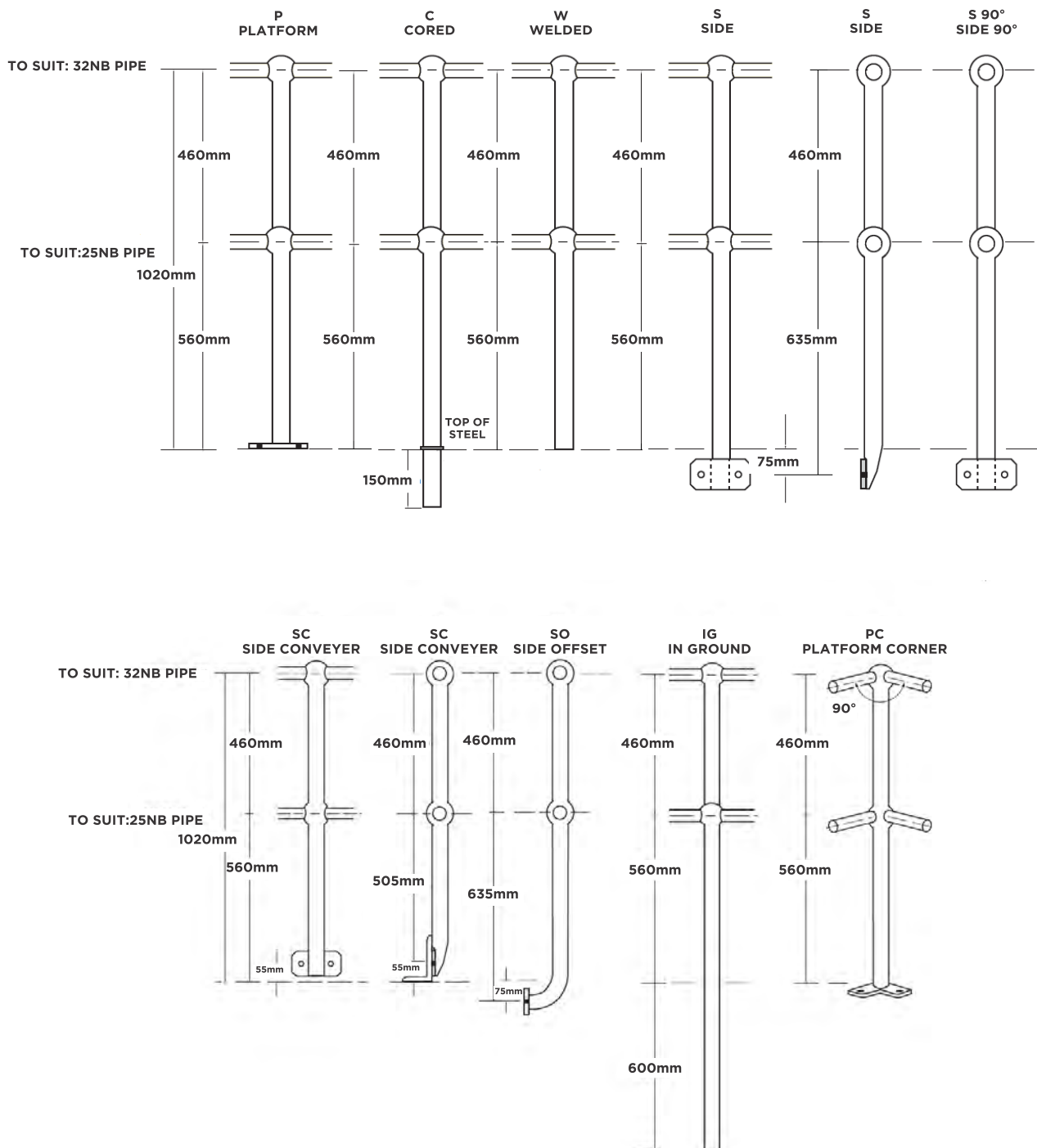


## BALL STANCHIONS

Steel Grating manufactures ball Stanchions that comply with the requirements of AS1657 in both design and for imposed actions (loadings). Our standard stanchions have been theoretically and physically tested for imposed actions in accordance and as required by AS1657:2018 to give you peace of mind for a complete tubular guardrail system. Along with our standard Ball Stanchion posts we can also supply horizontal and angle closure bends, railing, rail bends, kick plate mounting brackets and kick plate where required for fast and easy onsite installation.

We can also supply pre fabricated handrail panels to suit your requirements if required.

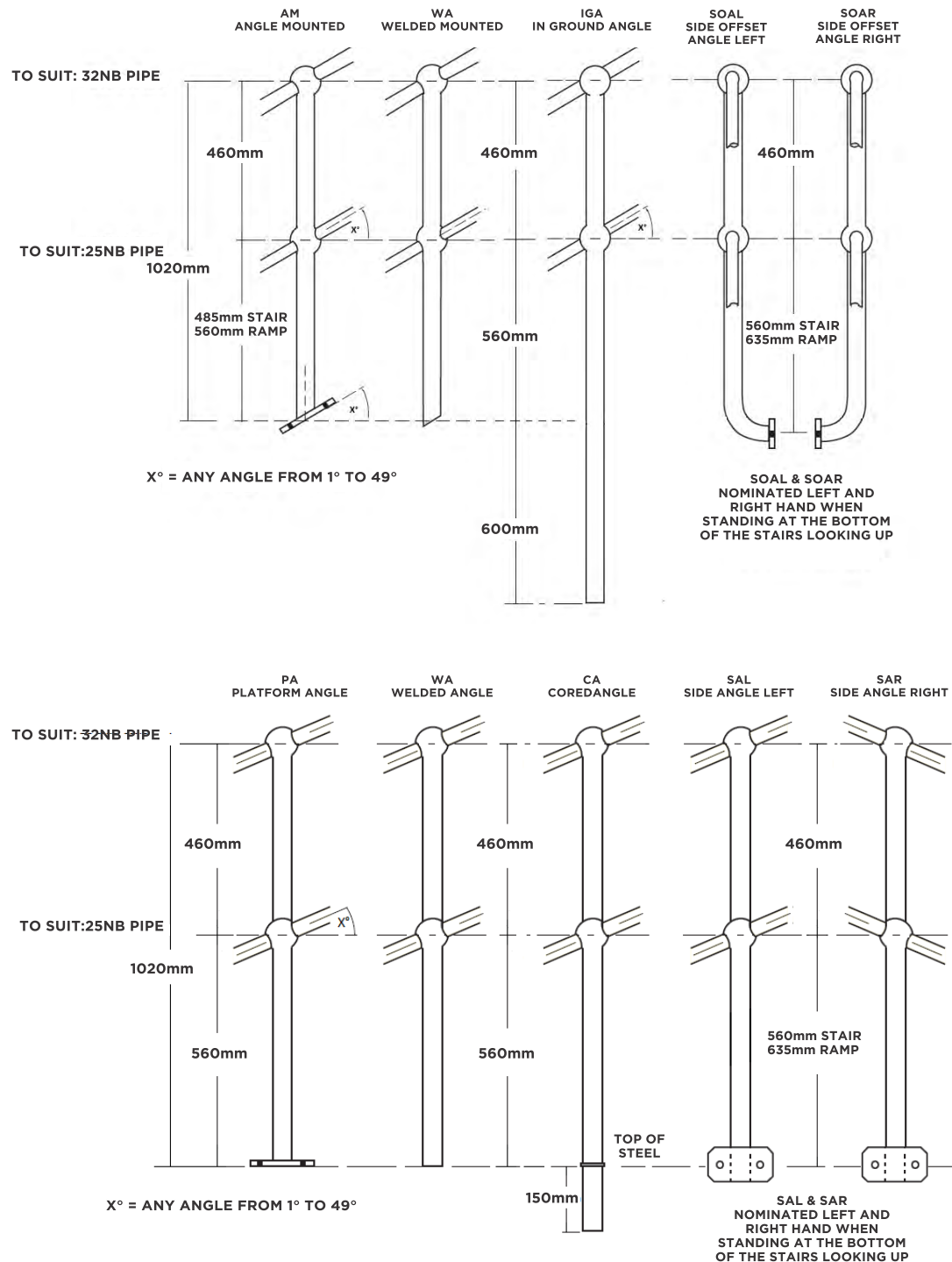
### STANDARD STANCHION DIMENSIONS



\*Footing sizes for IG and IGA stanchions need to be determined by the civil engineer.



## STANDARD STANCHION DIMENSIONS CONTINUED



\*Footing sizes for IG and IGA stanchions need to be determined by the civil engineer.





## PROFILE AND SPACINGS

Our standard Stanchion posts are manufactured from the following material types.

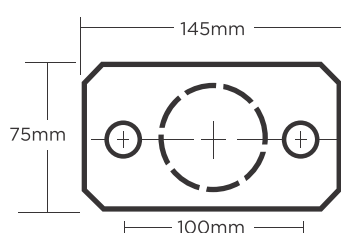
TYPE:	POST	TOP RAIL	INTERMEDIATE RAIL	WALL THICKNESS	SPACING
<b>Standard</b>	40nb (48.3mm ODø)	32nb (42.4mm ODø)	25nb (33.7mm ODø)	3.2mm	2000mm centres
<b>Heavy</b>	40nb (48.3mm ODø)	32nb (42.4mm ODø)	25nb (33.7mm ODø)	4.0mm	2500mm centres

*\*Unless specified otherwise all stanchions are manufactured from standard (medium wall thickness) pipe*

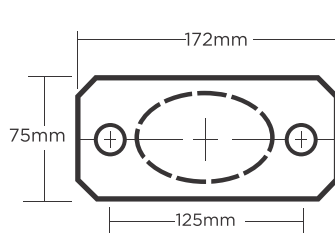
*\*When spaced at maximum 2000mm centres for standard stanchions (medium wall thickness pipe) and at maximum 2500mm centres for heavy stanchions (heavy wall thickness pipe) our standard stanchions will comply with the loading requirements of AS1657: 2018.*

## BASE PLATES

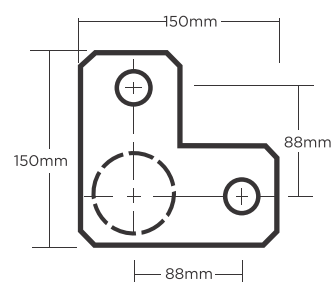
### STANDARD



### ANGLE MOUNT



### CORNER



**Standard base plates** are used on **ALL** stanchions except PC (platform corner) and AM Stanchions from 15° to 49° unless specified otherwise.

**Angle mount base plates** are used on AM stanchions only between 15° and 49° unless specified otherwise.

**Corner base plates** are used on PC (platform corner) stanchions only unless specified otherwise.

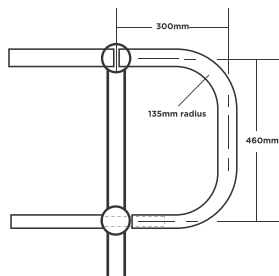
**Custom Base plates** can be manufactured to suit our stanchions, these would need to be requested at the time of quoting / ordering.

Base plates are manufactured from 75 x 10mm flat bar.

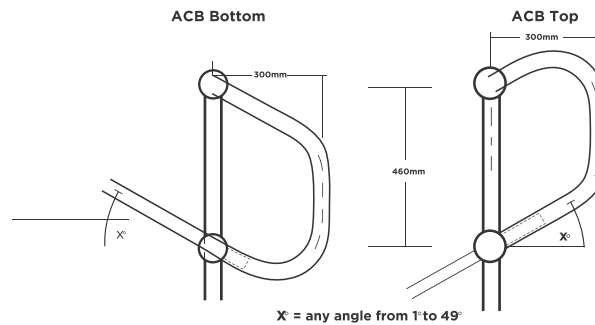
Holes are 18mmø and require 2 x M16 bolts per base plate for installation. Chemical anchors are recommended when fixing to concrete.

## CLOSURE BENDS

### HORIZONTAL CLOSURE BEND: HCB



### ANGLE CLOSURE BENDS: ACB

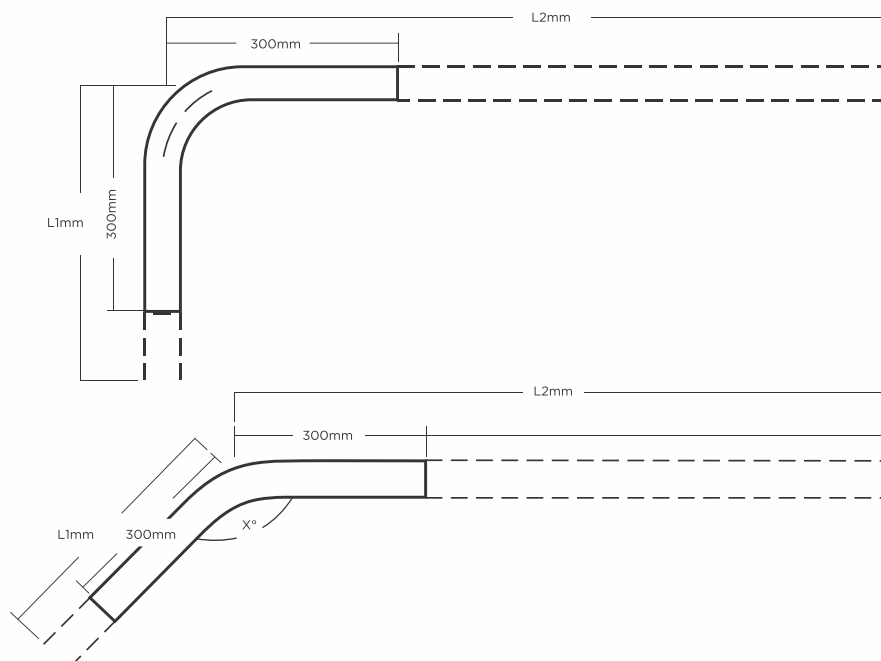


**Standard closure bends** are manufactured from 32nb black or galvanised medium wall thickness (3.20mm) pipe with a 135mm radius at the centre line.

**Heavy closure bends** are manufactured from 32nb black or galvanised heavy wall thickness (4.0mm) pipe with a 135mm radius at the centre line.

**40nb closure bends** When 40nb pipe is used as the top railing closure bends are manufactured from 40nb pipe. All bends manufactured from 40nb pipe have 135mm radius at the centre line.

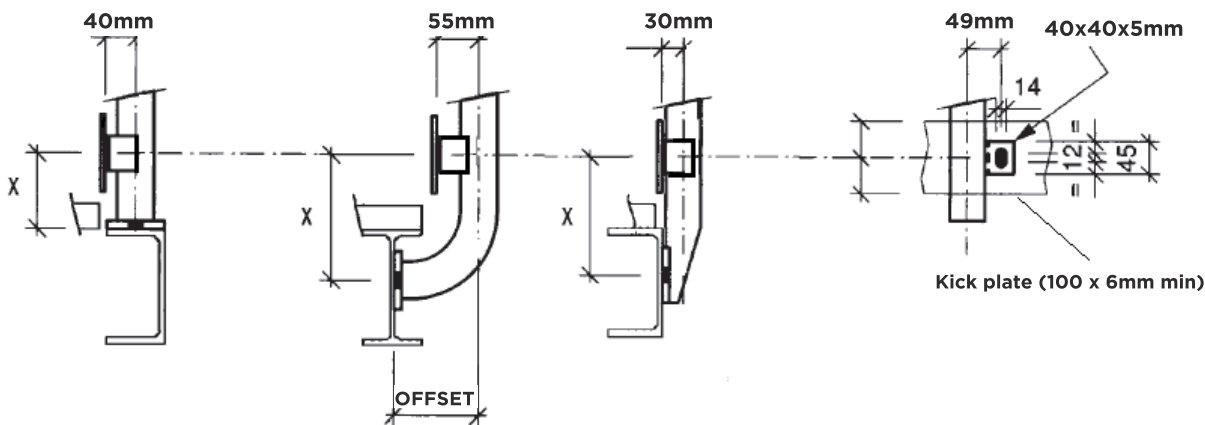
## RAIL BENDS



- Rail bends can be manufactured from 25nb, 32nb and 40nb pipe in medium wall thickness (3.20mm) and heavy wall thickness (4.0mm) black or galvanised pipe.
- Standard rail bends are 300 x 300mm centre to centre. Custom rail bends can be manufactured on request. L1 + L2 must total 6500mm or less.

# KICK PLATE MOUNTING BRACKETS

## KICK PLATE MOUNTING BRACKET DETAIL



DIMENSION 'X' FOR KPMB HEIGHT FOR VARIOUS STANCHION TYPES				
Grating Height mm	Nil	20,25,32mm	40,45,50mm	65mm
P,W,C	X = 60mm	X = 85mm	X = 100mm	X = 120mm
S&SO	X = 135mm	X = 160mm	X = 180mm	X = 195mm

- \* Slot on kick plate mounting bracket allows 7mm up/down adjustment.
- \* Kick plate mounting brackets will be positioned on the right hand side of stanchion when viewed from the walking surface unless specified otherwise **or** drilled left side only.
- \*If kick plate mounting brackets are required on stanchions this needs to be clearly specified at the time of ordering / quoting.
- \* Kick plate can be bolted or welded to the kick plate mounting bracket. Slot is designed for an M12 bolt.
- \*To comply with AS1657 you must have a minimum of 100mm of kick plate above the walking surface, and a maximum gap of 10mm between the walking surface and the underside of the kick plate.*



## SO STANCHION OFFSET DETAIL

### Recommended SO stanchion off sets for the following:

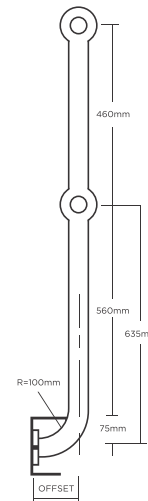
**110mm** offset for 150x75, 180x75, 200x75 and 230x75 Channel

**110mm** offset for 200UB and 250UB Universal beams

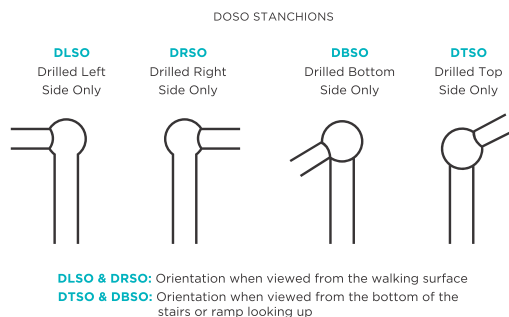
**130mm** offset for 250x90, 300x90 and 380x100 Channel

**130mm** offset for 310UB, 360UB, 410UB and 460UB Universal beams

**140mm** offset for 530UB Universal Beams



## DRILLED ONE SIDE ONLY



When required stanchions can be drilled one side only on both the top and intermediate rails or only on the top or intermediate rail. Drilled one side only stanchions need to be nominated at the time of ordering along with the correct nomination in which you require.

## CUSTOM STANCHIONS

Along with our standard stanchions we can also manufacture one ball or multi ball stanchions to suit your requirements. The heights, ball centres, ball drillings and type of stanchion will need to be specified.

*\*Please note one ball and multi ball stanchions do not meet the requirements of AS1657.*

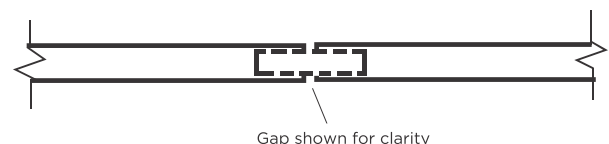
## INSTALLATION

Rails should be fixed to the stanchion ball by welding;

## SLIP JOINTS

Steel Grating Ltd can supply slip joints when required. Slip Joints are used when

- A rail joint cannot be done inside the stanchion ball.
- As an expansion joint for long runs of guard railing.



## INSTALLATION OF A BALL STANCHION GUARDRAIL SYSTEM

Please contact Steel Grating Ltd for installation details and procedures for site installation of our guard rail system.