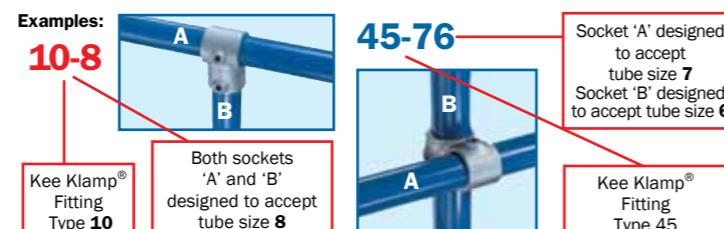


Specifying Kee Klamp® Components

Each fitting has a simple numerical code reference, which defines the type of fitting and the pipe size, or sizes, it is designed to receive. The first number, preceding the dash (-) identifies the type of Kee Klamp® fitting. A single digit, following the dash, defines tube size. Two single digits after the dash indicate that the fitting is designed to receive two sizes of tube.



YOU'LL NEVER BE BETTER PROTECTED

Safety Components Guide



- DESIGNED TO SUIT BS EN 10255 (ISO 65) STEEL TUBES FROM SIZES 17.5MM TO 60.3mm
- GALVANISED TO BS EN ISO 1461 OR AVAILABLE WITH POLYESTER COATING IN ANY RAL COLOUR
- FLEXIBLE SOLUTIONS FOR ALL TYPES OF SAFETY BARRIERS AND STRUCTURES
- WIDEST PRODUCT RANGE AVAILABLE



Kee Systems Limited
Thornsett Works
Thornsett Road
London
SW18 4EW

Tel: 020 8874 6566
Fax: 020 8874 5726

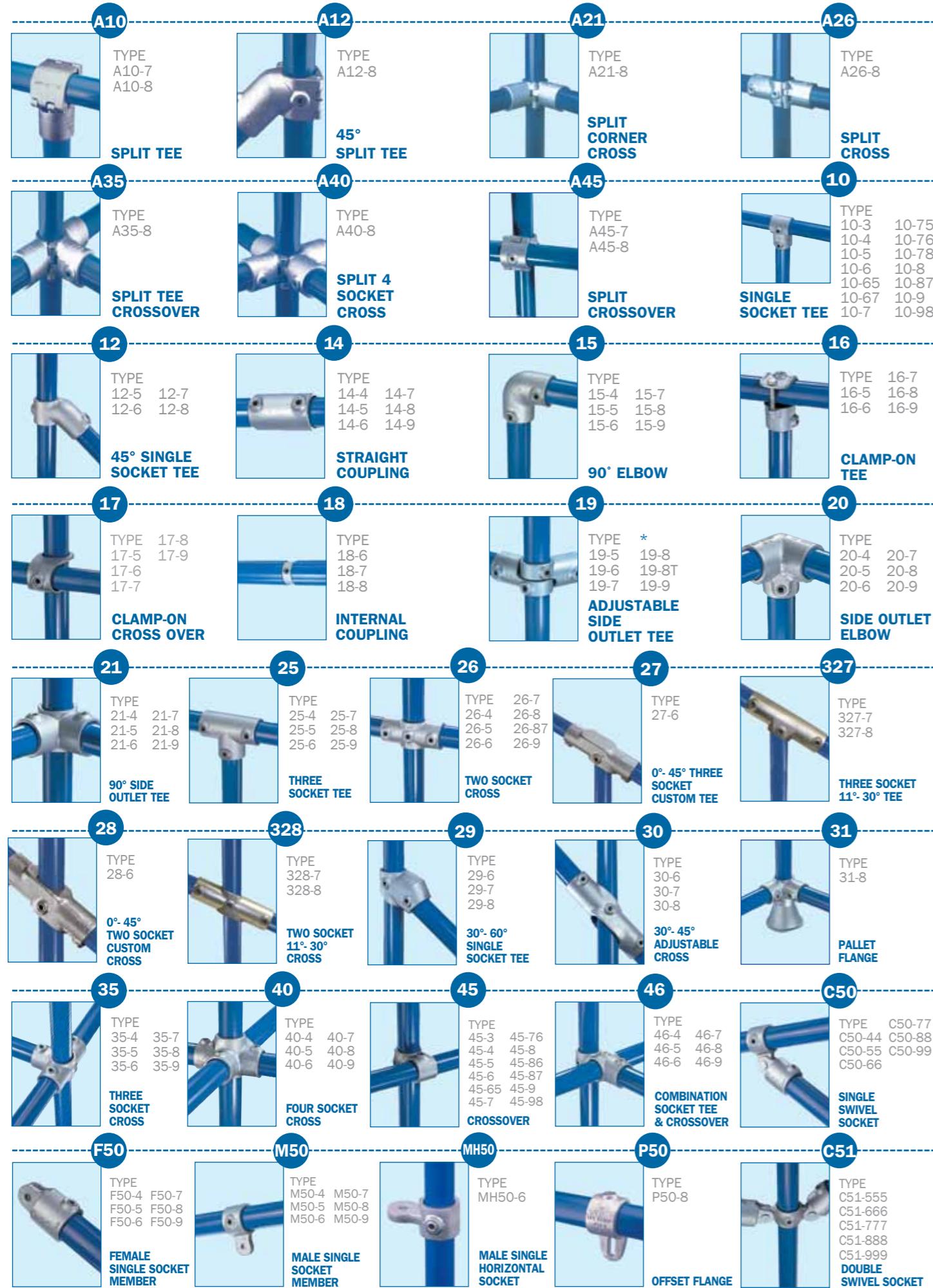
Email: sales@keesystems.com
www.keesystems.com



committed to
CSCS



Kee Klamp® Safety Components Guide



Kee Klamp® Safety Components Guide

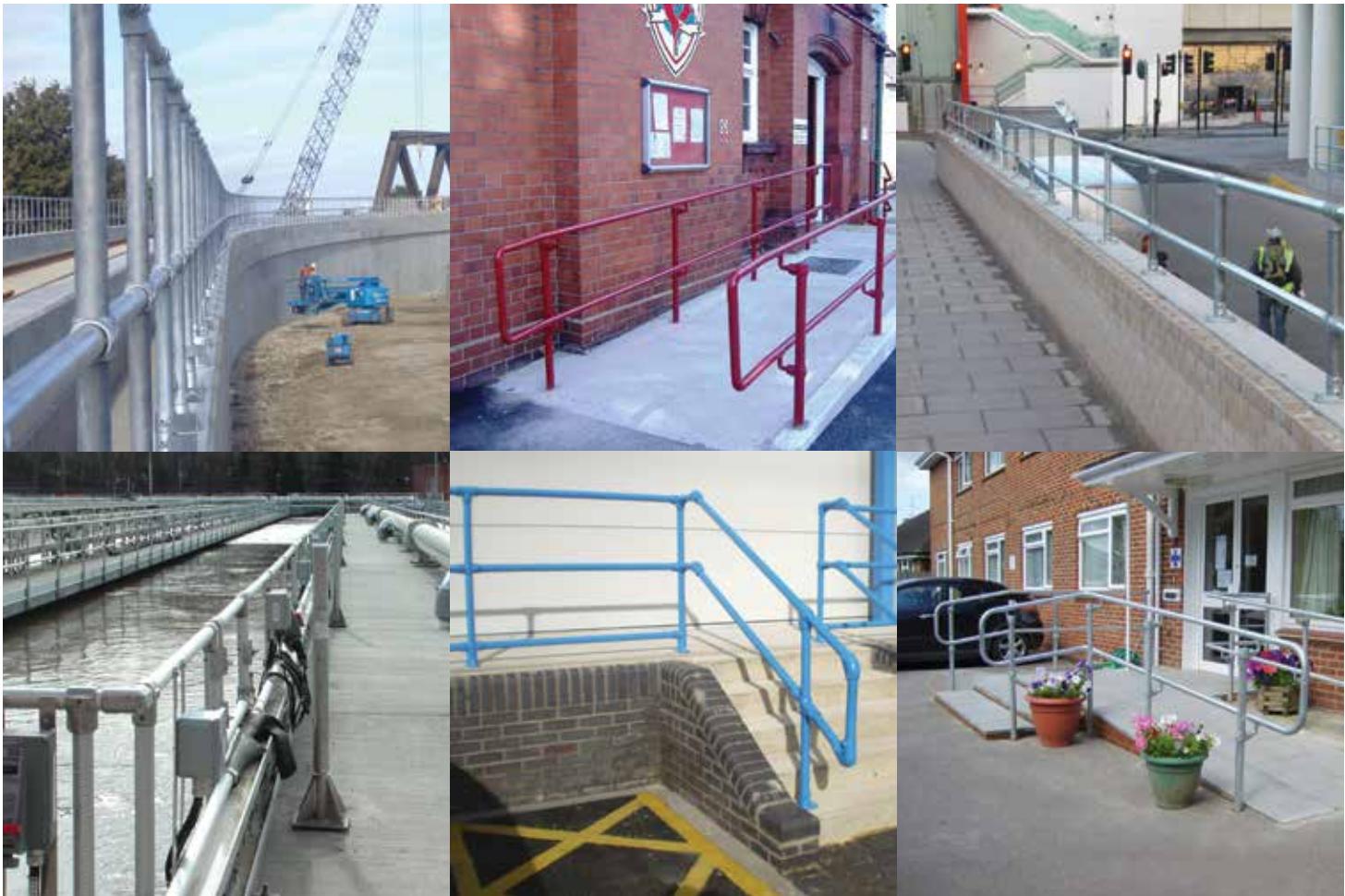


* Normally used in pairs but sold and priced separately.



YOU'LL NEVER BE BETTER PROTECTED

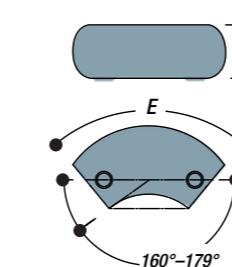
Slope Fittings



- EXTENDED RANGE NOW AVAILABLE FOR STEEPER GRADIENTS
- FITTINGS TOLERANCE ALLOWS FOR ON SITE ANGLE VARIATIONS
- ENHANCED AESTHETICS FOR THE FINISHED HANDRAIL
- QUICK AND EASY INSTALLATION



New Slope Fittings

55A Variable Elbow
(11° to 30°)

TYPE	Tube ref.	D mm	E mm	Kg
55A-7	7	55	115	0.82
55A-8	8	60	150	1.01

56A Acute Angle Elbow
(11° to 30°)

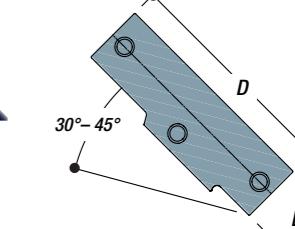
TYPE	Tube ref.	D mm	E mm	F mm	Kg
56A-7	7	120	108	108	0.94
56A-8	8	125	112	112	1.12

329 Single Socket Tee
(11° to 30°)

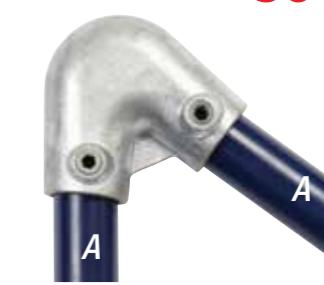
TYPE	Tube ref.	D mm	E mm	Kg
329-7	7	99	54	0.73
329-8	8	109	59	0.86

427 Three Socket Tee
(30° to 45°)

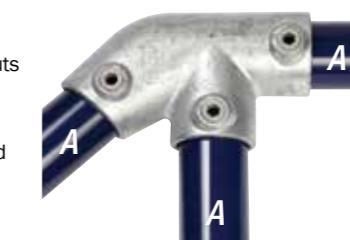
This fitting is used on a safety railing with slopes between 30° and 45° and fixes the top rail to a vertical intermediate upright



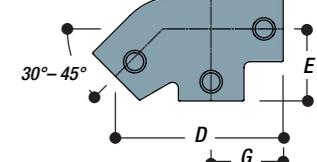
TYPE	Tube ref.	D mm	E mm	Kg
427-7	7	180	55	0.95
427-8	8	216	60	1.22

56-7 Acute Angle Elbow
(30° to 45°)

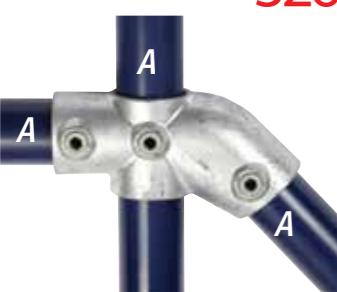
TYPE	Tube ref.	D mm	E mm	F mm	G mm	Kg
56-7	7	105	99	99		0.98
56-8	8	125	112	112		1.12

325 Level to Sloping Down
Tee (30° to 45°)

Tee fitting designed for the top rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping down the stairs

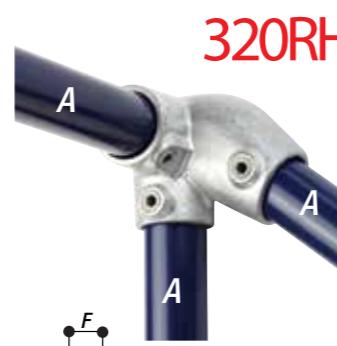


TYPE	Tube ref.	D mm	E mm	F mm	G mm	Kg
325-7	7	142	60	89	60	1.02
325-8	8	154	68	100	68	1.12

**326 Level to Sloping Down or Up Cross (30° to 45°)**

Cross fitting designed for the mid rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from either level to sloping down or level to sloping up the stairs

TYPE	Tube ref.	A	D	E	F	G	mm	Kg
326-7	7	142	68	89	60	60	0.82	
326-8	8	154	74	100	68	68	0.95	

**320RH Right hand level to Sloping Down Side Outlet Elbow (30° to 45°)**

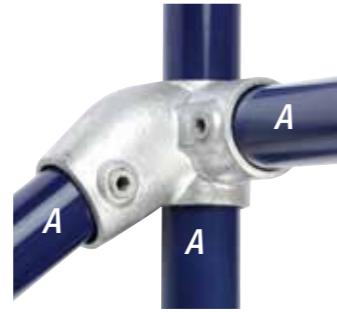
Right Hand Side Outlet Elbow fitting designed for the top rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping down the stairs

TYPE	Tube ref.	A	D	E	F	mm	Kg
320RH-7	7	60	86	29	29	1.08	
320RH-8	8	68	93	32	32	1.28	

**325A Level to Sloping Up Tee (30° to 45°)**

Tee fitting designed for the top rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping up the stairs

TYPE	Tube ref.	A	D	E	F	G	mm	Kg
325A-7	7	142	60	60	89	89	1.02	
325A-8	8	155	68	68	100	100	1.12	

**321LH Left hand level to Sloping Down Side Outlet Tee (30° to 45°)**

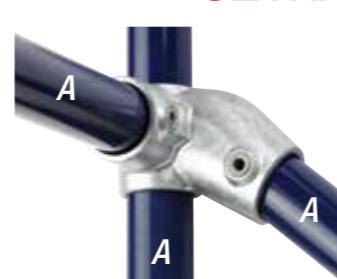
Left Hand Side Outlet Tee fitting designed for the mid rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping down the stairs

TYPE	Tube ref.	A	D	E	F	mm	Kg
321LH-7	7	86	27	29	29	0.96	
321LH-8	8	92	30	32	32	1.12	

**320LH Left hand level to Sloping Down Side Outlet Elbow (30° to 45°)**

Left Hand Side Outlet Elbow fitting designed for the top rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping down the stairs

TYPE	Tube ref.	A	D	E	F	mm	Kg
320LH-7	7	60	86	29	29	1.08	
320LH-8	8	68	93	32	32	1.28	

**321RH Right hand level to Sloping Down Side Outlet Tee (30° to 45°)**

Right Hand Side Outlet Tee fitting designed for the mid rail on guardrail on slopes and staircases between 30° and 45° at the junction where the handrail changes from level to sloping down the stairs

TYPE	Tube ref.	A	D	E	F	mm	Kg
321RH-7	7	86	27	29	29	0.96	
321RH-8	8	92	30	32	32	1.12	

Guardrail Up Slopes 11 to 30

Using Types 55A, 56A, 327, 328, & 329 size 7 & 8

Where the upright remains vertical, i.e. stairways (i) dimension x, x1, x2, x3 to be subtracted from the upright centres; dimension (L) to give the rail length; (ii) dimension y, y1 and y2 for determining the up-right length.

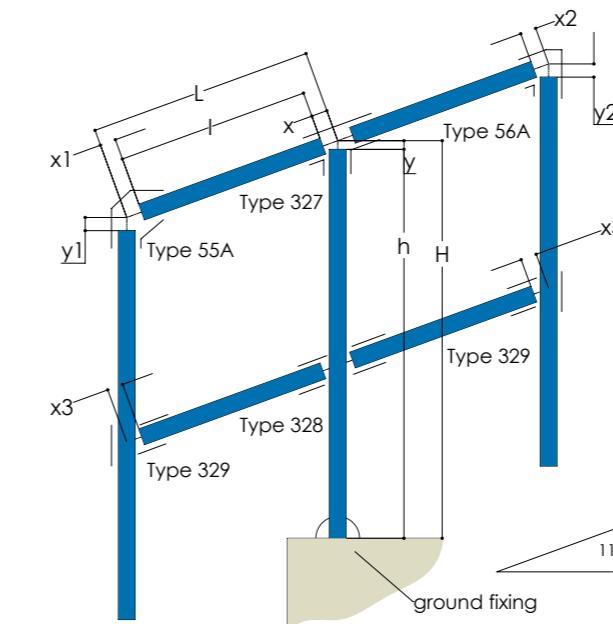


Table 1 gives details of dimensions required for calculating the rail lengths, where angle are between 11° & 30°

Table 1: Rails

Angle Of Slope	Fitting Size							
	7				8			
	x	x1	x2	x3	x	x1	x2	x3
11°	-26	-25	-35	-52	-29	-16	-35	-51
15°	-28	-21	-46	-53	-31	-27	-47	-52
20°	-30	-16	-48	-55	-34	-21	-49	-54
25°	-33	-15	-52	-59	-38	-22	-53	-57
30°	-37	-8	-57	-64	-42	-15	-59	-62

Table 2 Gives details of dimensions required for calculating the upright lengths.

Table 2: Uprights

Angle Of Slope	Fitting Size					
	7			8		
	y	y1	y2	y	y1	y2
11°	+7	-10	-28	+6	-7	-33
15°	+7	-11	-25	+6	-8	-30
20°	+7	-13	-34	+6	-10	-38
25°	+7	-15	-43	+6	-10	-48
30°	+7	-18	-53	+6	-14	-59

Guardrail up Slopes 30 to 45

Using Types 29, 30, 55, 56 & 427 in sizes 7 & 8

Where the upright remains vertical, i.e. stairways (i) dimension x, x1, x3, y & z to be subtracted from the upright centres; dimension (L) to give the rail length; (ii) dimension u, v and w for determining the upright length.

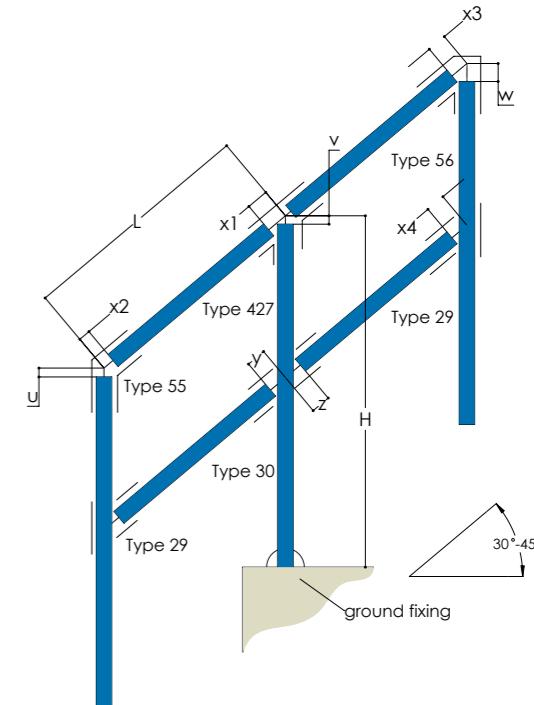


Table 3 gives details of dimensions required for calculating the rail lengths, where angle are between 30° & 45°

Table 3: Rails

Angle Of Slope	Fitting Size											
	7				8							
	x1	x2	x3	x4	y	z	x1	x2	x3	x4	y	z
30°	-39	-20	-55	-37	-49	-55	-45	-22	-49	-43	-60	-74
35°	-44	-16	-61	-40	-50	-54	-50	-18	-55	-47	-60	-74
40°	-47	-20	-71	-45	-51	-53	-55	-21	-66	-52	-61	-74
45°	-50	-26	-85	-51	-91	-53	-55	-26	-81	-59	-68	-66

Table 4 Gives details of dimensions required for calculating the upright lengths..

Table 4: Uprights

Angle Of Slope	Fitting Size					
	7			8		
	u	v	w	u	v	w
30°	-17	+5	-48	-25	+6	-49
3						

Guardrail up slopes 30° to 45°

Using 325, 325A, 326, size 7 & 8

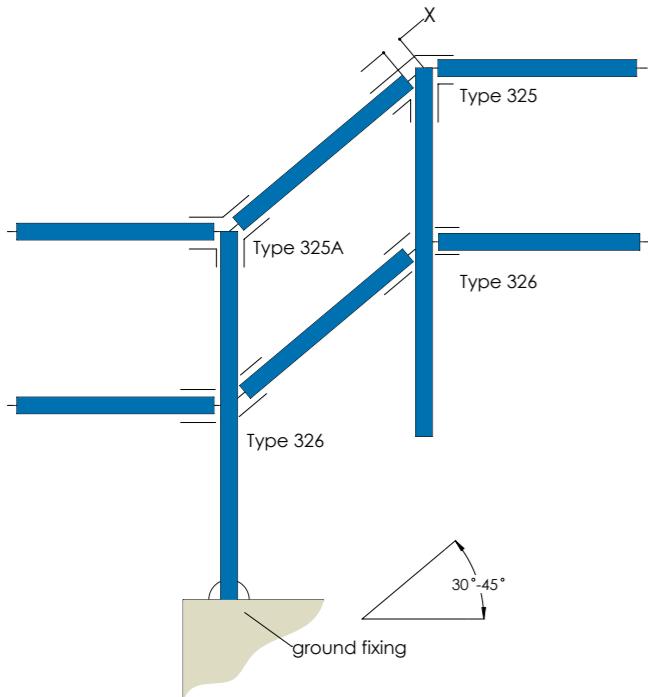


Table 5 gives details of dimensions required for calculating the rail lengths, where angle are between 30° & 45°

Table 5: Rails

Angle Of Slope	Fitting Size	
	7	8
	X	X
30°	-47	-57
35°	-52	-62
40°	-59	-69
45°	-68	-79

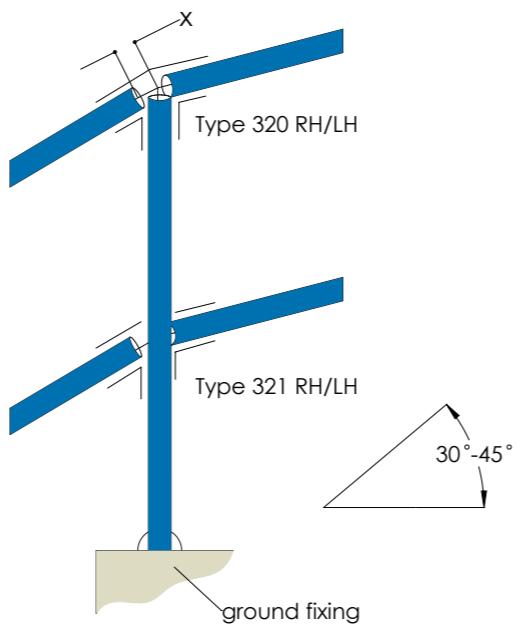
Guardrail up slopes 30° to 45°Using 320RH, 320LH, 321RH & 321LH
size 7 and 8

Table 6 gives details of dimensions required for calculating the rail lengths, where angle are between 30° & 45°

Table 6: Rails

Angle Of Slope	Fitting Size	
	7	8
	X	X
30°	-55	-62
35°	-60	-68
40°	-67	-76
45°	-77	-86

New Slope Fittings

The latest addition to the **KEE KLAMP** portfolio is an extension to the current range of slope fittings designed to enhance the building of guardrail along staircases and ramps particularly when the slope is greater than 30°. The new range introduces single fittings to cater for situations where currently a combination of fittings is required. Not only does this improve the aesthetics of the finished guardrail but it also allows for a quicker and easier install. The new range of slope fittings is available in Size 7 (outer diameter 42.4mm) and Size 8 (outer diameter 48.3mm) designed for use with steel tubing to BS EN 10255.

KEE KLAMP fittings are iron castings manufactured to the requirements of BS EN 1562 & BS EN 1563. They are supplied hot dip galvanised to BS EN ISO 1461.

A **KEE KLAMP** fitting can support an axial load of 900Kg per set screw tightened to a torque of 4Kgm (39 Nm). In common with all **KEE KLAMP** products, the threaded recesses of each fitting are covered with **THREDKOAT** protective coating to provide enhanced corrosion resistance and all grub screws are manufactured in case hardened steel coated with **KEE KOAT** for corrosion protection.

Features & Benefits

- KEE KLAMP is the best known brand of slip-on tube fittings available for over 80 years
- Manufactured to stringent quality standards to ensure consistent performance
- Extended range of slope fittings gives greater design flexibility
- Adjustability in the fittings allows greater on-site tolerances to be met
- Using single fittings rather than pairs speed up installation times





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