



### YOU'LL NEVER BE BETTER PROTECTED

## Pre-assembled Safety Barrier Systems



## **SAFETY BARRIER SYSTEMS**







Stairs - Flat and level and 30-45 Degrees

Ramps - Flat and level and 3-11 Degrees

Guardrails - Flat and level

Demarcation

- Factory & warehouse barriers
- Walkway handrailing
- Ramps & stairs

variety of angles. Installation is quick and easy and does not require welding or special tools.

solutions which allow continuous guardrail across a

Pedestrian Barriers offer both in-line and offset

Kee Safety Pre-assembled uprights have been specifically designed to simplify and reduce labour time on site, allowing barriers and guardrails to be installed in record time. The uprights are supplied fully assembled, saving you the need to build the upright from individual components. We have an extensive range of pre-assembled uprights available to suit angles from 0 to 45 degrees, and in three different variants - Top Fix, Side Fix & Core Bore.

To speed up installation time even further, we can provide rails cut to your specified length, saving you time cutting on site. Alternatively, we can supply the rails in stock lengths to be trimmed to suit as required.

Kee Safety Pre-assembled uprights can be used for:

- Barriers
- Guardrails
- Handrails

### **Technical Information**

Our Pre-assembled uprights are constructed using our world renowned Kee Klamp components, manufactured to the following standards:

- Cast Iron Fittings or Castings Comply with BS EN 1562 & 1563
- Hot Dip Galvanised finish Comply with BS EN ISO 1461

For added piece of mind Kee Klamp components are approved by TÜV, Europe's leading independent testing house. The maximum load of each fitting type is as stated on the TÜV Certificate, a copy of which is available upon request. For an up-to-date TÜV listing see our website at: **www.keesafety.co.uk.** 

FEATURES	BENEFITS
Utilise world-renowned Kee Klamp fittings	Create a safe environment for workers
Simple installation using the hexagon key provided	No welding, bending or threading required
The posts are supplied fully assembled	Quicker and easier projet completion
Extensive range of pre-assembled uprights	Variety of configurations

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## **PRE-ASSEMBLED KITS**

		ANGLE OF KEE KLAMP SAFETY BARRIER SYSTEM										
		Flat a	nd Level	3-11°		<b>11-30°</b>		30-45°				
	op Fixed	GBS01	62-8 Base End					GBS09	62-8 Base End			
METHOD		GBS02	62-8 Base Intermediate	GBS05	67-8 Base End	GBS07	363-8 Base End	GBS10	62-8 Base Intermediate			
2		GBS03	62-8 Base 90° Corner	GBS06	67-8 Base Intermediate	GBS08	363-8 Base Intermediate	GBS11	62-8 Base 90° LH Corner			
FIXING		GBS04	62-8 Base Variable Corner					GBS12	62-8 Base 90° RH Corner			
								GBS13	62-8 Base 30-45° Incline to flat			
OR								GBS14	62-8 Base 30-45° Flat to incline			
TYPE	& Offset Rail	sil GBS40 62-8 Adjustable Angle Upright - Offset										
т с	Core Bored	GBS15	Core Bored End					GBS23	Core Bored End			
FITTING		GBS16	Core Bored Intermediate	GBS19	Core Bored End	GBS21	Core Bored End	GBS24	Core Bored Intermediate			
E		GBS17	Core Bored 90° Corner	GBS20	Core Bored Intermediate	GBS22	Core Bored Intermediate	GBS25	Core Bored 90° LH Corner			
		GBS18	Core Bored Variable Corner					GBS26	Core Bored 90° RH Corner			
								GBS27	Core Bored 30-45° Incline to flat			
								GBS28	Core Bored 30-45° Flat to incline			
_	& Offset Rail	GBS41 Core Bored Adjustable Angle Upright - Offset										
s	ide Fixed	GBS29	68-8 Base End					GBS36	68-8 Base End			
		GBS30	68-8 Base Intermediate	GBS32	68-8 Base End	GBS34	68-8 Base End	GBS37	68-8 Base Intermediate			
		GBS31	68-8 Base Variable Corner	GBS33	68-8 Base Intermediate	GBS35	68-8 Base Intermediate	GBS38	68-8 30-45° Incline to flat			
								GBS39	68-8 30-45° Flat to incline			
	& Offset Rail			GBS42 68-8 Adjustable Angle Upright - Offset								
		DRET	D-Return	DRET87	D-Return	DRET56	A D-Return	DRET56	D-Return			

	LOAD CHART										
		Flat and Level		<b>3-11°</b>		<b>11-30°</b>		30-45°		Off Set Rail	
360 N/m	Top Fix	2660mm	(13.74KN)	2840mm	(13.34KN)	2840mm	(13.34KN)	2840mm	(13.34KN)	2660mm	(13.74K
	Core Bored <sup>1</sup>	2660mm		2840mm		2840mm		2840mm		2660mm	
	Side Palm	2560mm	(10.88KN)	2760mm	(10.78KN)	2760mm	(10.78KN)	2760mm	(10.78KN)	2560mm	(10.88K
-											
740 N/m	Top Fix	1600mm	(16.99KN)	1775mm	(17.13KN)	1775mm	(17.13KN)	1775mm	(17.13KN)	1600mm	(16.99k
	Core Bored <sup>1</sup>	1600mm		1775mm		1775mm		1775mm		1600mm	
	Side Palm	1530mm	(13.37KN)	1650mm	(13.48KN)	1650mm	(13.48KN)	1650mm	(13.48KN)	1530mm	(13.37k
1500 N/m	Top Fix	790mm	(17.00KN)	875mm	(17.12KN)	875mm	(17.12KN)	875mm	(17.12KN)	790mm	(17.00k
	Core Bored <sup>1</sup>	790mm		870mm		870mm		870mm		790mm	
	Side Palm	750mm	(13.28KN)	830mm	(13.50KN)	830mm	(13.50KN)	750mm	(13.28KN)	750mm	(13.28

1 Assumes a minimum concrete grade of C30.

Assumes 48.30mm DIA x 3.20mm horizontal tube and 48.30mm DIA x 4.00mm upright tube to determine the bay size.

Industrial Use-Non Emergency: 360 Newtons per metre run (N/m)

Commercial Use: 740 Newtons per metre run (N/m)

Retail/Public Access: 1500 Newtons per metre run (N/m)

The current regulations give various design requirements to be fulfilled of which the Design Load is the most important. Based upon rail diameter being BS EN 10255 medium wall tubing and the upright being BS EN 39 heavy wall tubing. Design Loads are as stated in BS 6180. The above bay sizes are calculated using the relevant fitting or fixing configuration for the upright type. The figures shown in brackets are the required anchor pull out loads for the bay size indicated after all reduction factors have been applied.

**Notes:** The table is based on the maximum permissible bending moment of the tube. To achieve bigger bay sizes than those stated please contact Kee Safety Ltd for further details.

### GBS01

### End Upright -**Top Fixed**

Long Part GB6281510

Variant Flat

Base/ **Fixing type** 62-8

Handrail height 1100mm



### **GBS015**

### End Upright -**Core Bored**

Long Part GBCB81510

Variant Flat

Base/ **Fixing type** Core Bored

Handrail height 1100mm

and Level Flat

### GBS29

### End Upright -**Side Fixed**

Long Part GB6881510

Variant Flat

Base/ Fixing type 66-8

Handrail height 1150mm

and Level Flat



and

Flat

GBS16

**Core Bored** 

Long Part





### **Corner Upright -Top Fixed** Long Part GB6282010 Variant Flat Base/ **Fixing type** 62-8 Handrail height 1100mm Leve and Flat

**GBS03** 

### **GBS17 Corner Upright -**

**Core Bored** 

Long Part GBCB82010 Variant Flat Base/

**Fixing type** Core Bored Handrail height

1100mm



### **GBS31**

Variable Corner -

GB6881910 Variant Flat Base/ **Fixing type** 66-8



A.

### GBS04

### Variable Corner Upright -**Top Fixed**





### **GBS18**

Level

and

Flat

### Variable Corner Upright -**Core Bored**

Long Part GBCB81910 Variant Flat Base/ **Fixing type** Core Bored Handrail height 1100mm



## DRET

and Level

Flat

## **D-Return**

Long Part KGA4DRT10

Variant Flat Base/ **Fixing type** 

and Level

Flat

NA Handrail height NA





Long Part GB6882510 Variant Flat Base/ **Fixing type** 66-8 Handrail height 1150mm

and Level

Flat





and Level

Flat

### GBCB82510 Variant Flat Base/ **Fixing type** Core Bored Handrail height 1100mm

Intermediate Upright -



### **Pre-assembled Safety Barrier Systems**

### GBS05

### End Upright -**Top Fixed**

Long Part GB6788710

Variant 3-11°

Base/ **Fixing type** 67-8

Handrail height 1000mm

## **3-11°**

### GBS32

### End Upright -Side Fixed

Long Part GB6888710 Variant

3-11°

Base/ **Fixing type** 68-8

Handrail height 1050mm



### **GBS08**

### Intermediate Upright -**Top Fixed**

Long Part GB3832710

Variant 11-30°

Base/ **Fixing type** 363-8

**11-30°** 

Handrail height 1000mm



GBS06

**Top Fixed** 

Intermediate Upright -

Base/ **Fixing type** 68-8 Handrail height

1050mm

3-11

° -30°



## GBS21

End Upright -**Core Bored** 



Handrail height 1000mm

## GBS19

End Upright -**Core Bored** 

Long Part GBCB88710 Variant

3-11° Base/ Fixing type Core Bored

Handrail height 1000mm



### DRET87

### **D-Return**

Long Part GBDRT8710 Variant 3-11°

Base/ **Fixing type** NA

Handrail height NA



### GBS22

3-11

### Intermediate Upright -**Core Bored**

Long Part GBCB32710 Variant

11-30° Base/ **Fixing type** Core Bored

Handrail height 1000mm

11-30

### GBS20

### Intermediate Upright -**Core Bored**

Long Part GBCB88710

Variant 3-11° Base/ Fixing type Core Bored

Handrail height 1000mm

3-11

### **GBS07**

### End Upright -**Top Fixed**

Long Part GB3855A10 Variant 11-30°

Base/ **Fixing type** 363-8

Handrail height 1000mm



### **GBS34**

### End Upright -Side Fixed

Long Part GB6855A10 Variant 11-30

Base/ **Fixing type** 68-8

Handrail height 1050mm

° m



### GBS35

### Intermediate Upright -Side Fixed

Long Part GB6832710

Variant 11-30°

Base/ **Fixing type** 68-8

Handrail height 1050mm

# **11-30°**

### GBS11

### LH Corner Upright -**Top Fixed**

Long Part GB628LH10

Variant 30-45°

Base/ **Fixing type** 62-8

Handrail height 1100mm

# 30-45°

### GBS23

### End Upright -**Core Bored**

Long Part GBCB85510

Variant 30-45°

Base/ **Fixing type** Core Bored

Handrail height 1000mm

### **DRET56A**

### **D-Return**

Long Part GBDRT5A10

- Variant 11-30
- Base/ **Fixing type** NA

Handrail height NA



### **GBS12**

L1-30°

### **RH Corner Upright -Top Fixed**





### GBS24

1000mm

30-45°

30-45°

### Intermediate Upright -**Core Bored**

Long Part GBCB42710 Variant 30-45° Base/ **Fixing type** Core Bored Handrail height

### **GBS09**

### End Upright -**Top Fixed**

Long Part GB6285510

Variant

30-45° Base/ **Fixing type** 62-8

Handrail height 1000mm



### GBS13

30-45°

### Incline To Flat Upright -**Top Fixed**

Long Part GB628IL10 Variant 30-45°

Base/ **Fixing type** 62-8

Handrail height 1100mm



### **GBS25**

45°

### LH Corner Upright -**Core Bored**

Long Part GBCB8LH10

Variant 30-45°

Base/ **Fixing type** Core Bored

Handrail height 1100mm

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30-4!

### **GBS10**

### Intermediate Upright -**Top Fixed**



### GBS14

**30-45°** 

### Flat To Incline Upright -**Top Fixed**

Long Part GB628IC10 Variant 30-45°

Base/ **Fixing type** 62-8

Handrail height 1100mm



### GBS26

**30-45°** 

### **RH Corner Upright -Core Bored**

Long Part GBCB8RH10 Variant

30-45 Base/

**Fixing type** Core Bored Handrail height

1100mm

**30-45°** 



6





### **GBS27**

### Incline To Flat Upright -**Core Bored**

Long Part GBCB8IL10 Variant

30-45° Base/ **Fixing type** Core Bored

Handrail height 1100mm

### ຸິທ 30-4

### **GBS38**

### Incline To Flat Upright -Side Fixed

Long Part GB688IL10

Variant 30-45°

Base/ **Fixing type** 68-8

Handrail height 1050mm

**30-45°** 

### GBS41

### **Offset Intermediate Upright -Core Bored**

Long Part GBCB11410

Variant Variable

Base/ **Fixing type** Core Bored

Handrail height 1100mm

Variable



### Flat To Incline Upright -**Core Bored**





### GBS39

**30-45°** 

Flat To Incline Upright -Side Fixed





### **GBS42**

30-45°

**/ariable** 

### **Offset Intermediate Upright -**Side Fixed

Long Part GB6811410 Variant Variable Base/ **Fixing type** 68-8 Handrail height 1050mm

### End Upright -**Side Fixed** Long Part GB6885510 Variant 30-45° Base/ **Fixing type**

GBS36





### DRET56

### **D-Return**

30-45°

Long Part GBDRT5610 Variant

30-45° Base/ **Fixing type** NA

30-45°

Handrail height NA



### **GBS37**

### Intermediate Upright -**Side Fixed**



### GBS40

**30-45°** 

### **Offset Intermediate Upright -Top Fixed**

Long Part GB6211410 Variant Variable

Base/ **Fixing type** 62-8

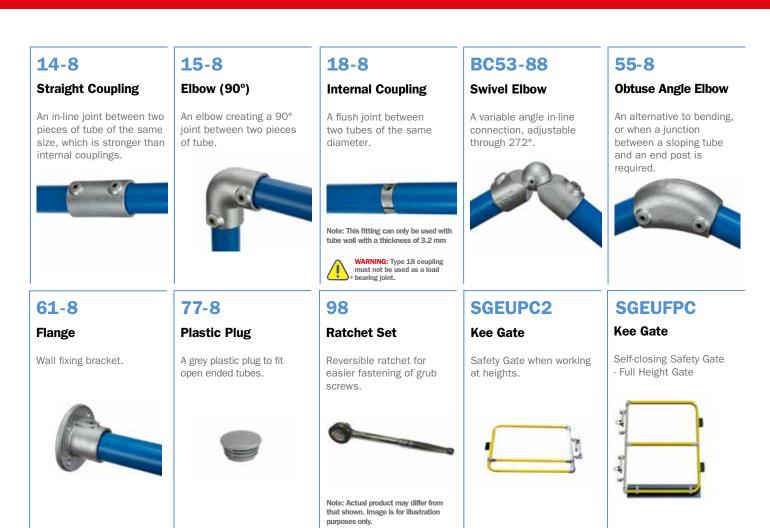
'ariable

Handrail height 1100mm









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