### Endless Possibilities<sup>™</sup>



www.rosscastors.co.uk

TOSS handling





LIVE STORAGE SYSTEMS



RACKING & SHELVING



**WORKSTATIONS** 



BESPOKE DESIGNS



CARTS & TROLLEYS

## The Simple Product with Endless Possibilities.

Design and build bespoke pieces of handling and storage equipment quickly.

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#### Fully Customisable

Standard roller tracks can be added to quickly build conveyors or live storage equipment. Castors can also be fitted to construct mobile equipment. A complete range of standard parts can be used that allows the user to construct exactly what's needed in a quick and very cost effective manner.



#### Flexible and Reuseable

All Connect-A-tube parts are re-usable time and time again meaning that the overall cost of ownership is reduced and new equipment can quickly be reassembled to suit the changing needs of your business.



#### Space Saving

Connect-A-tube is also a space saving product as bespoke equipment can be constructed to fit exactly where you want it to go. It exactly where you want it to go. How many times have you had to settle for something that was either 'too big', 'too small', or 'almost right'. With Connect-A-tube you can build exactly what you need to do exactly the job you want it to do.









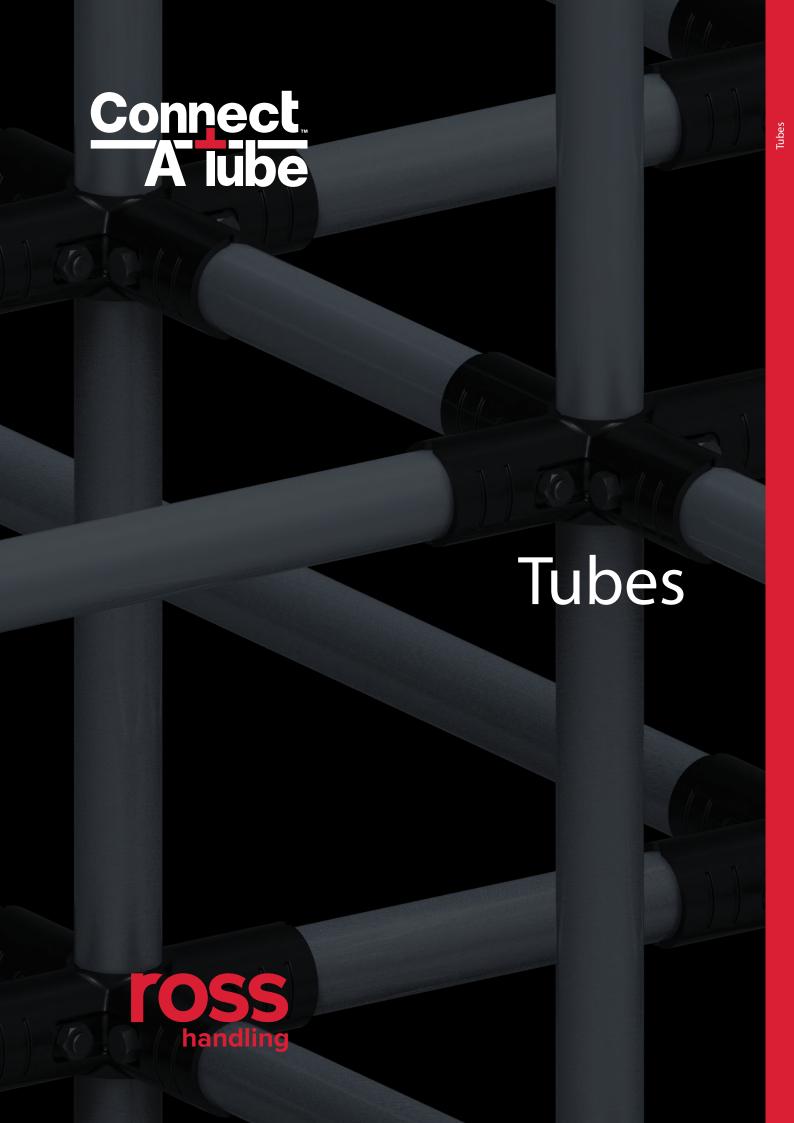


#### **Product Overview**

Should your manufacturing process change for any reason minor modifications can be carried out immediately. If a major process change is required all of the equipment can be deconstructed and reassembled to suit your new process. Ultimately nothing is wasted and new equipment, proto-types etc can be assembled and ready to test in just a few hours.

The graphic illustrations are just a few ideas of what can be made with Connect-A-Tube. Our design teams will be pleased to assist in the design of new equipment and ensure that everything is mechanically strong enough to do the job using some basic principles of proper construction.

www.rosscastors.com/connect-a-tube



### Connect Tubes

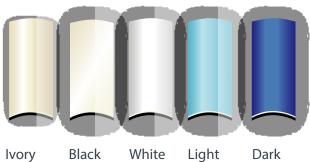


ABS COATED PIPE - COLOUR TABLE							
	LASSIFICATION	STANDARD PIPE		SLIDE PIPE FLAT PIPE		PIPE	
STANDAI COLOUR	KD .	Ø28 x T0.7	Ø28 x T1.0	Ø28 x T2.0	Ø28 x T1.0	Ø28 x T0.7	Ø28 x T1.0
IVORY (IV)						•	
GREEN (GR)						-	-
DARK BLUE (DB)		•				-	-
LIGHT BLUE (LB)						_	_
LIGHT GREY (LG)						-	1
DARK GREY (DG)							
BLACK (BK)							-
RED (RE)							1
YELLOW (YE)							
WHITE (WH)							
ESD BLACK (EB)							
LINE ESD (LI)					-	_	-

#### \*STANDARD LENGTH = 4000MM

STAINLESS STEEL PIPE - COLOUR TABLE							
CLASSIFI	ICATION	STANDARD PIPE		SLIDE PIPE	FLAT	PIPE	
STANDARD	Ø	28 × T0.7	Ø28 x T1.2	Ø28 x T2.0	Ø28 x T1.0	Ø28 x T0.7	Ø28 x T1.0
STAINLESS STEEL (SS)			•	-	-	-	-

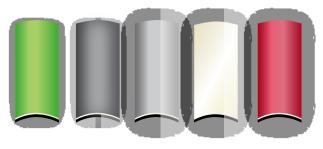
### Tubes



Black

Light Blue

Dark Blue



Green

Dark Grey

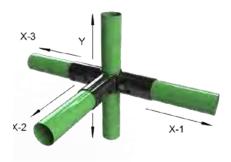
Light Grey

Yellow Red



ESD Line Black ESD

POWDER COATED PIPE - COLOUR TABLE						
	LASSIFICATION	STANDA	ARD PIPE			
STANDAI COLOUR	RD	Ø28 x T0,7	Ø28 x T1.0			
IVORY (IV)						
GREEN (GR)						
DARK BLUE (DB)						
LIGHT BLUE (LB)						
LIGHT GREY (LG)						
DARK GREY (DG)						
BLACK (BK)						
RED (RE)			•			
YELLOW (YE)						
WHITE (WH)						
ESD BLACK (EB)						
LINE ESD (LI)		•	•			







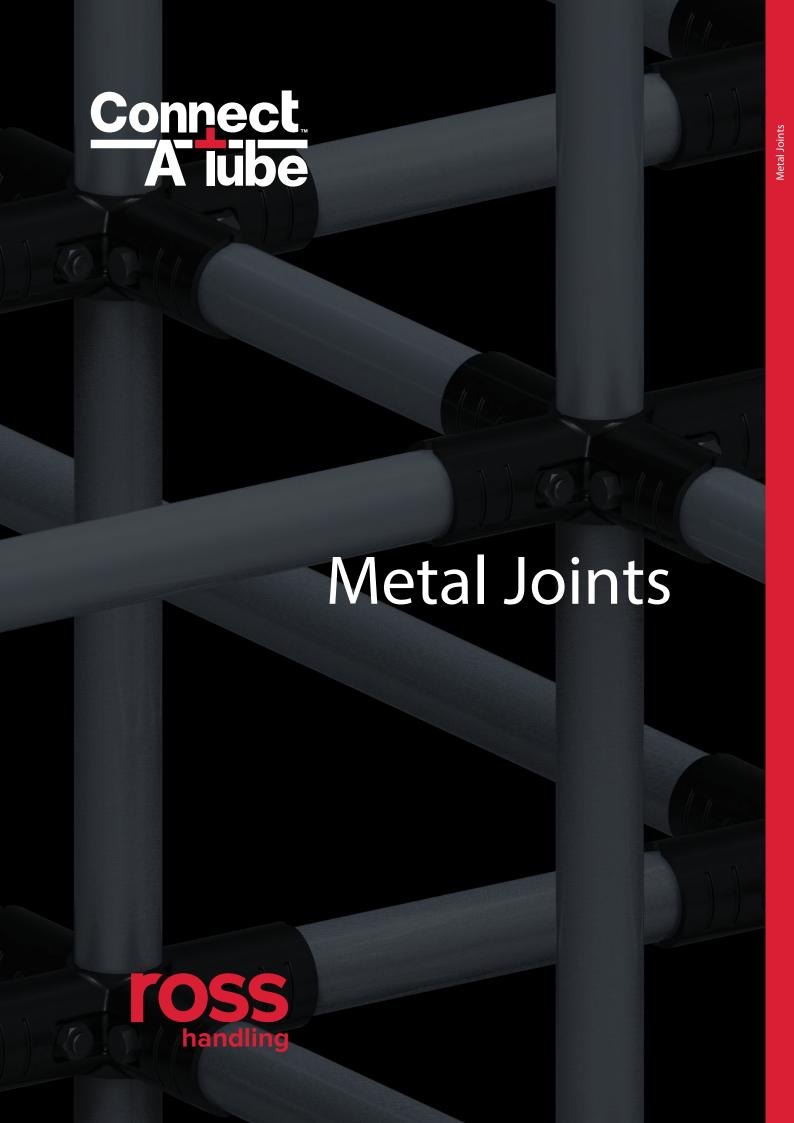
### Connect Tubes



ABS COATED PIPE - COLOUR TABLE							
	ASSIFICATION	STANDARD PIPE			SLIDE PIPE	FLAT PIPE	
STANDAF	RD	Ø28 x T0.7	Ø28 x T1.0	Ø28 x T2.0	Ø28 x T1.0	Ø28 x T0.7	Ø28 x T1.0
IVORY (IV)				•	•		•
GREEN (GR)				•	•	1	-
DARK BLUE (DB)				•		1	-
LIGHT BLUE (LB)				•		-	-
LIGHT GREY (LG)						ļ	
DARK GREY (DG)							
BLACK (BK)						1	-
RED (RE)				•		-	-
YELLOW (YE)				•		-	-
WHITE (WH)					-		
ESD BLACK (EB)						•	•
LINE ESD (LI)			•	-	-	-	-

#### \*STANDARD LENGTH = 4000MM

STAINLESS STEEL PIPE - COLOUR TABLE							
CLASSIFI	ICATION	STANDARD PIPE		SLIDE PIPE	FLAT	PIPE	
STANDARD	Ø	28 × T0.7	Ø28 x T1.2	Ø28 x T2.0	Ø28 x T1.0	Ø28 x T0.7	Ø28 x T1.0
STAINLESS STEEL (SS)			•	-	-	-	-



#### Connect Metal Joints







Weight per pc: 0.049kg / Quantity per box: 250pcs

#### Metal Joints A lube







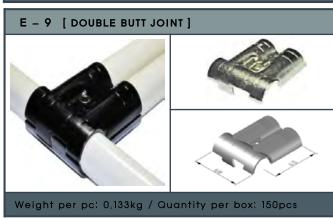


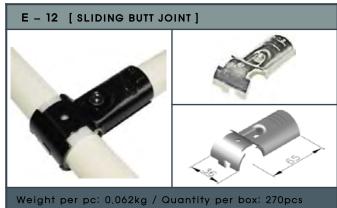




E - 13A [45° DIAGONAL JOINT] Weight per pc: 0.073kg / Quantity per box: 240pcs



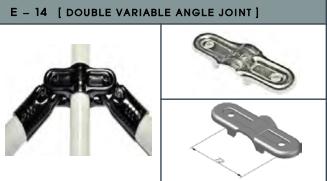






#### **Metal Joints**



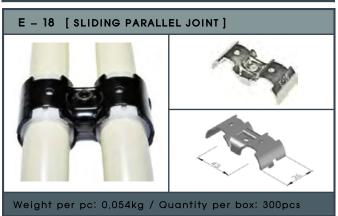






Weight per pc: 0,038kg / Quantity per box: 840pcs



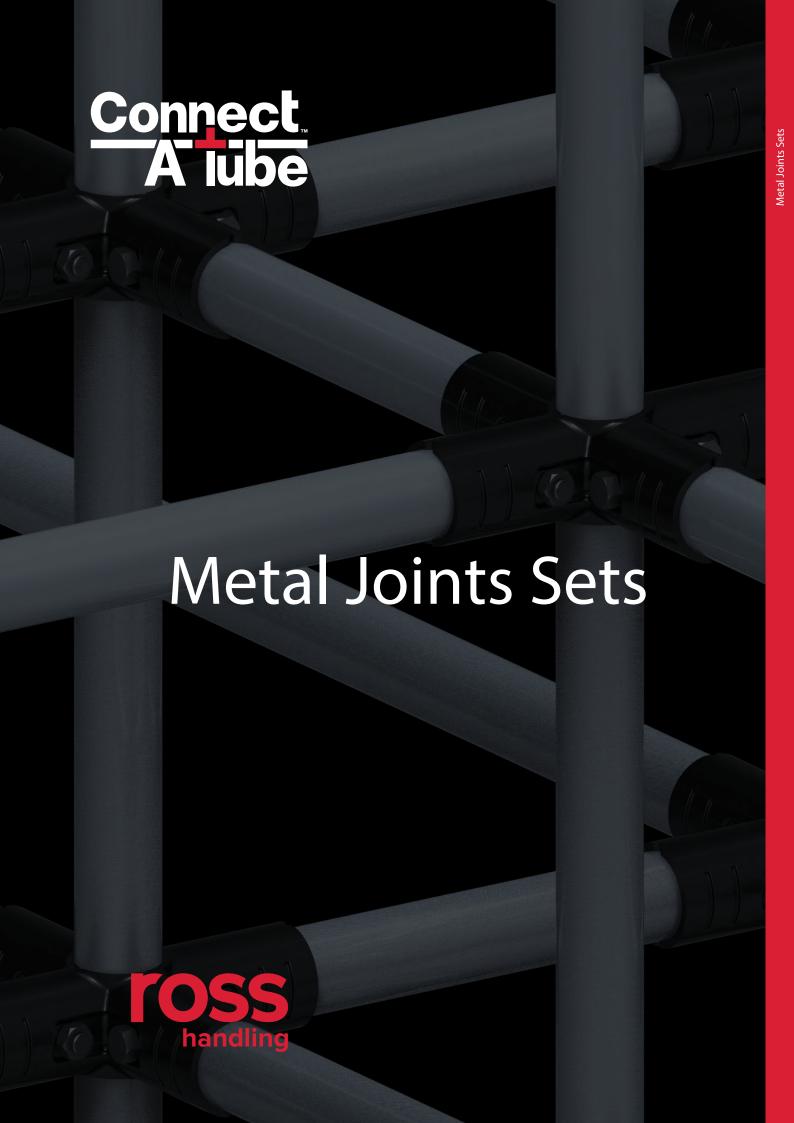












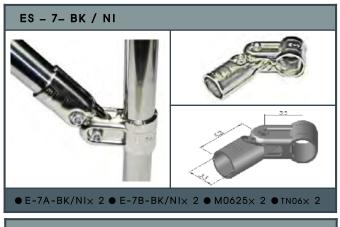
#### **Metal Joints Sets**





#### **Metal Joints Sets**









● E-11-BK/NI× 2 ● M0625× 2 ● TN06× 2

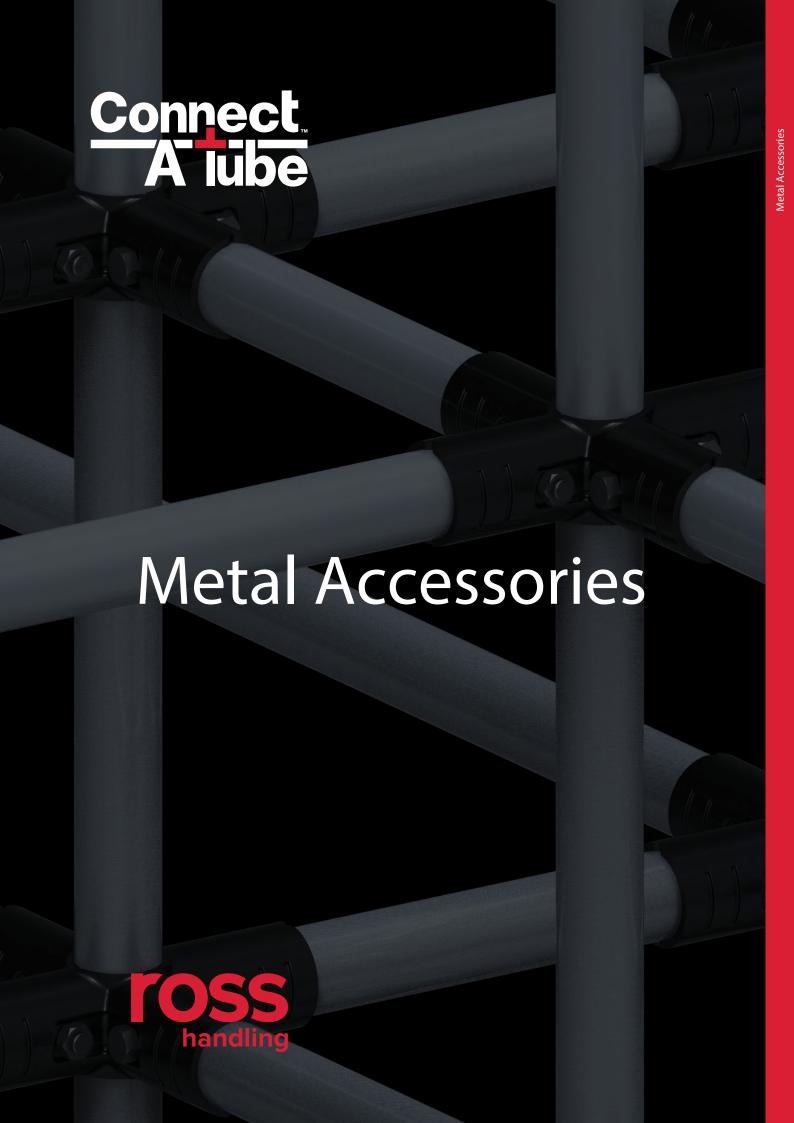




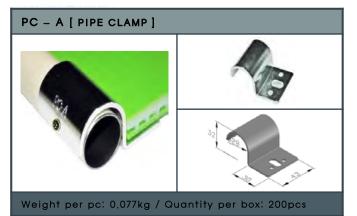
#### Metal Joints Sets













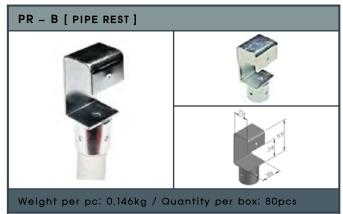




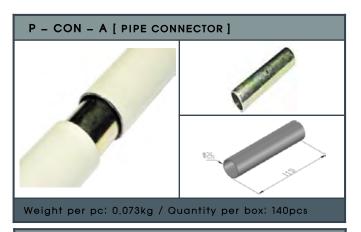










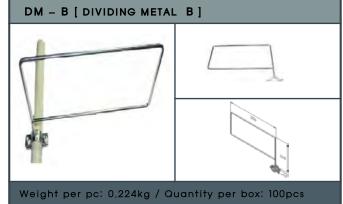








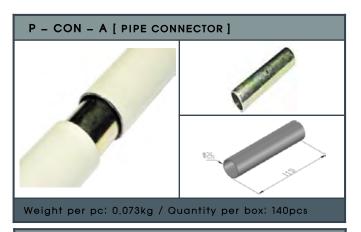










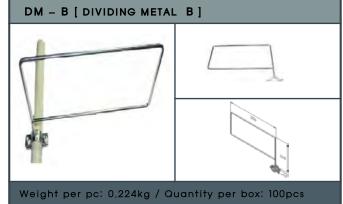








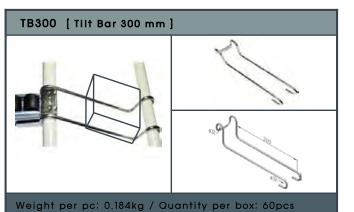


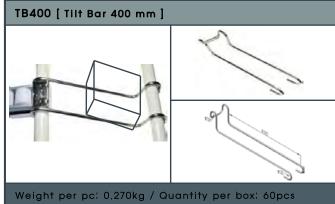




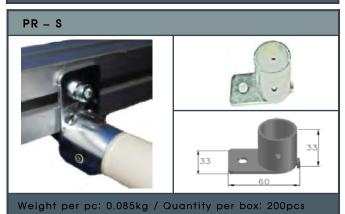




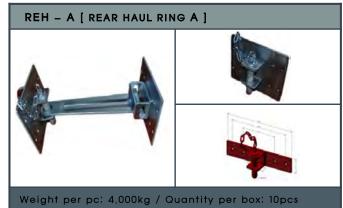












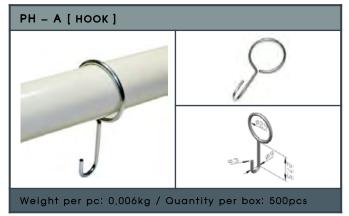




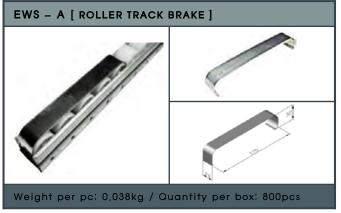




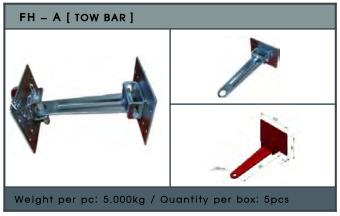




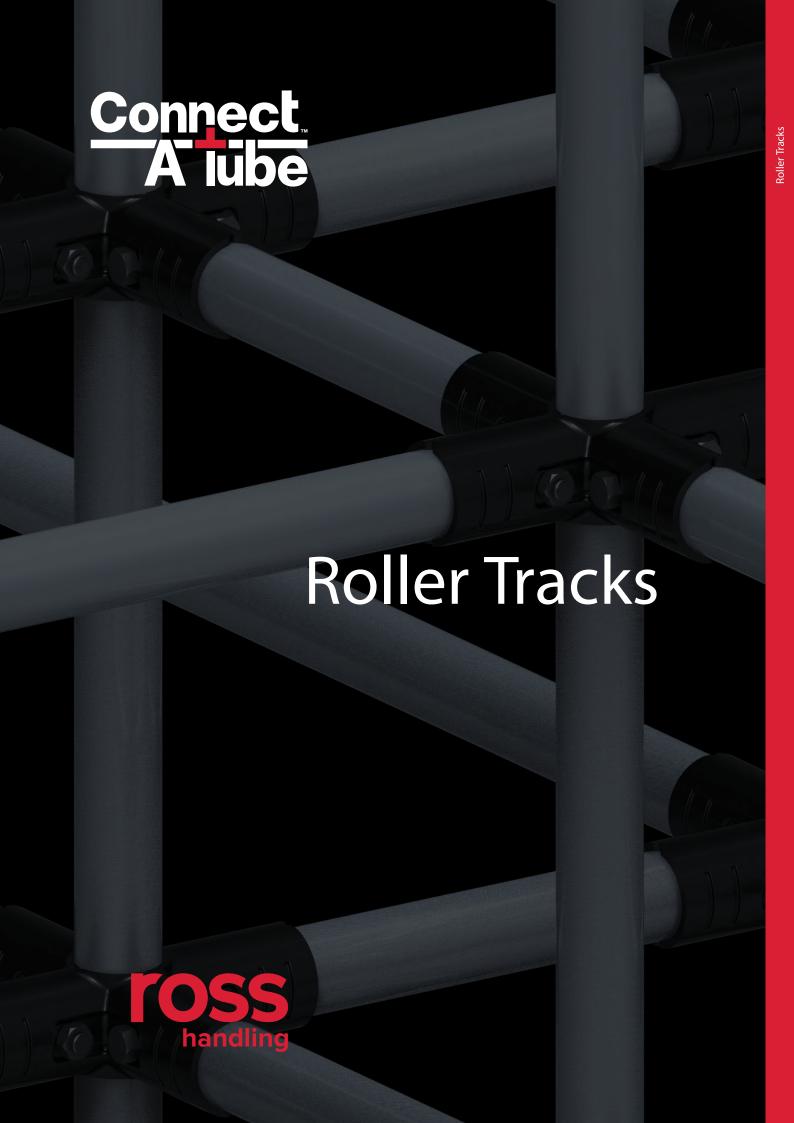






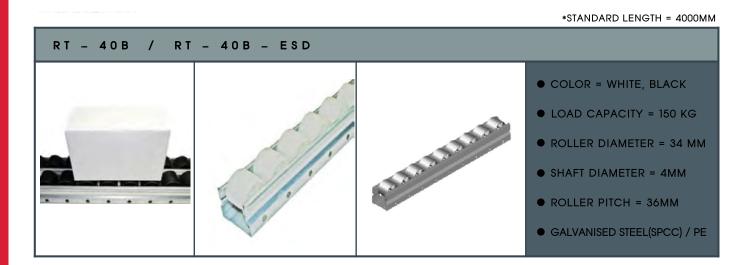


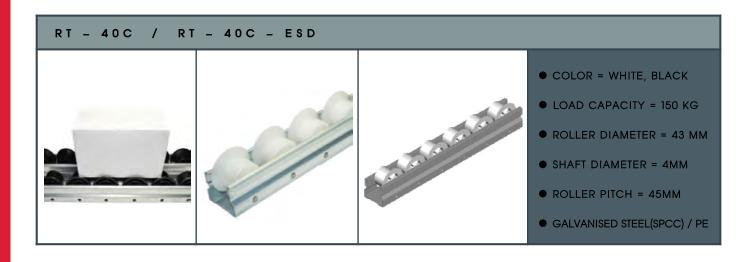


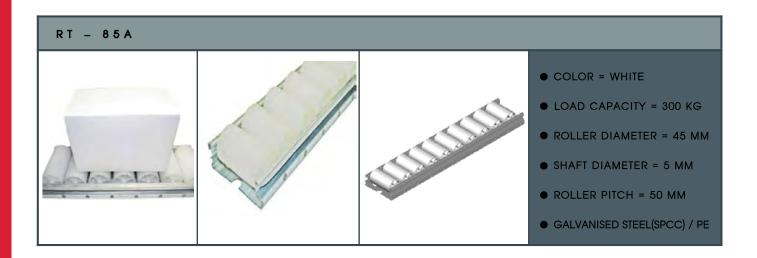


#### Connect Roller Tracks



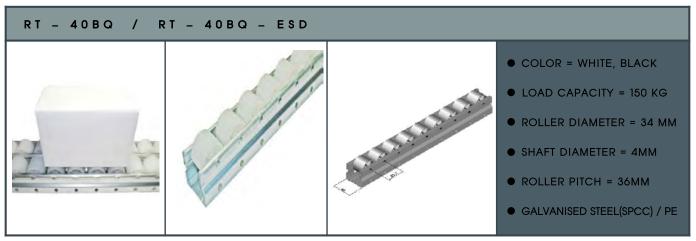


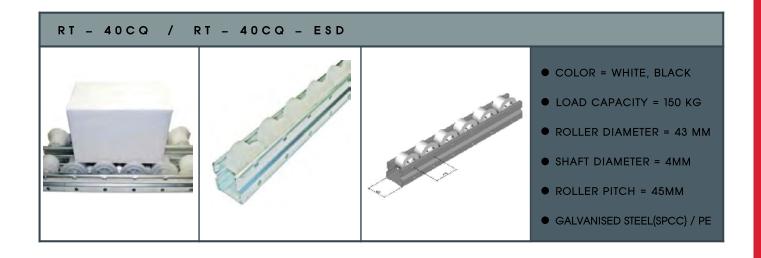


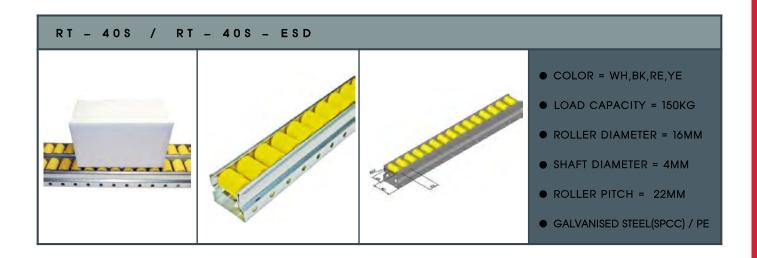




\*STANDARD LENGTH = 4000MM

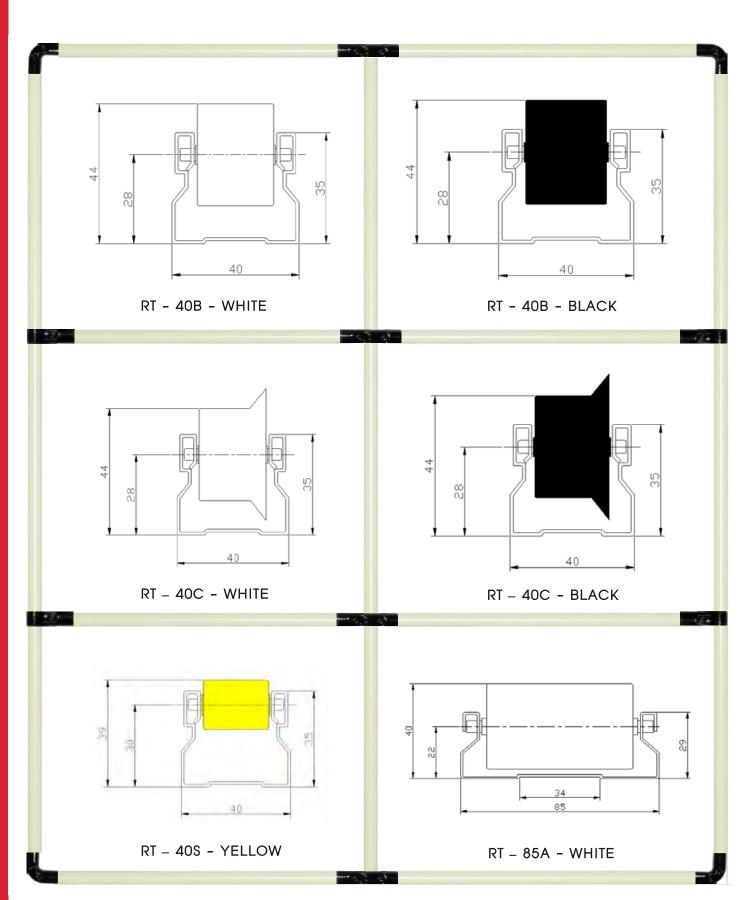


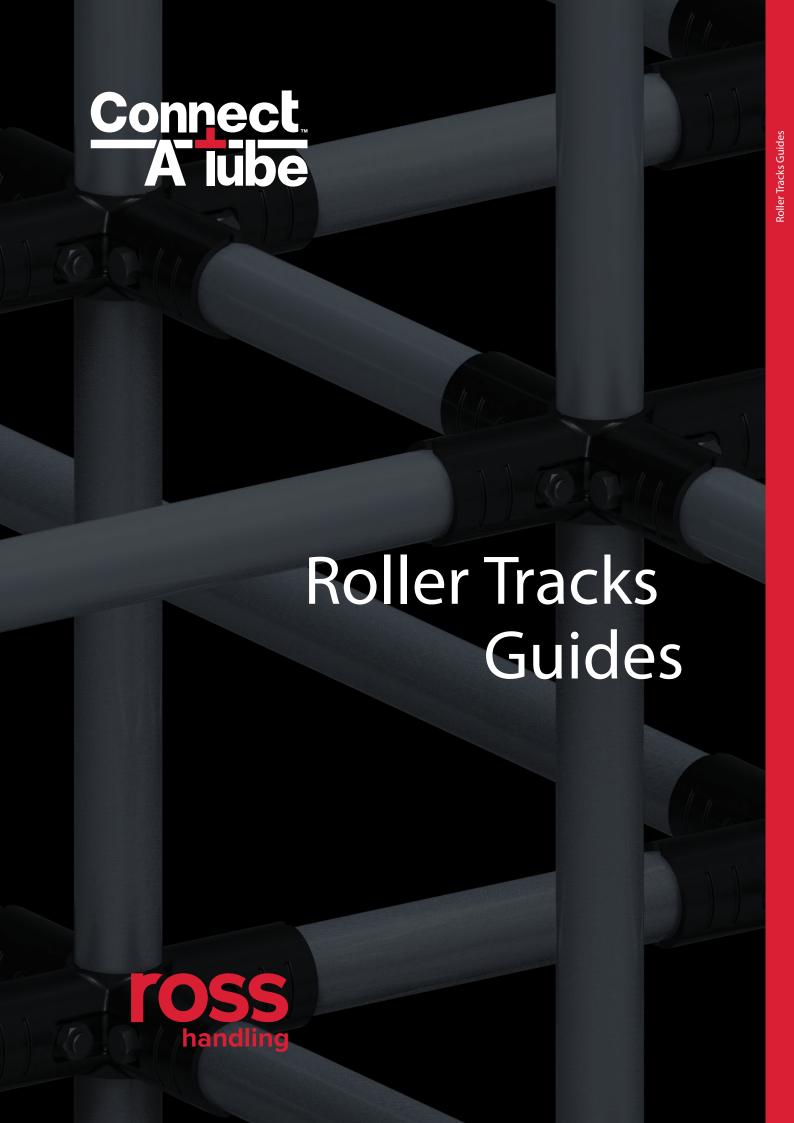




### Connect Roller Tracks Types & Dimensions







#### Connect Roller Tracks Guides



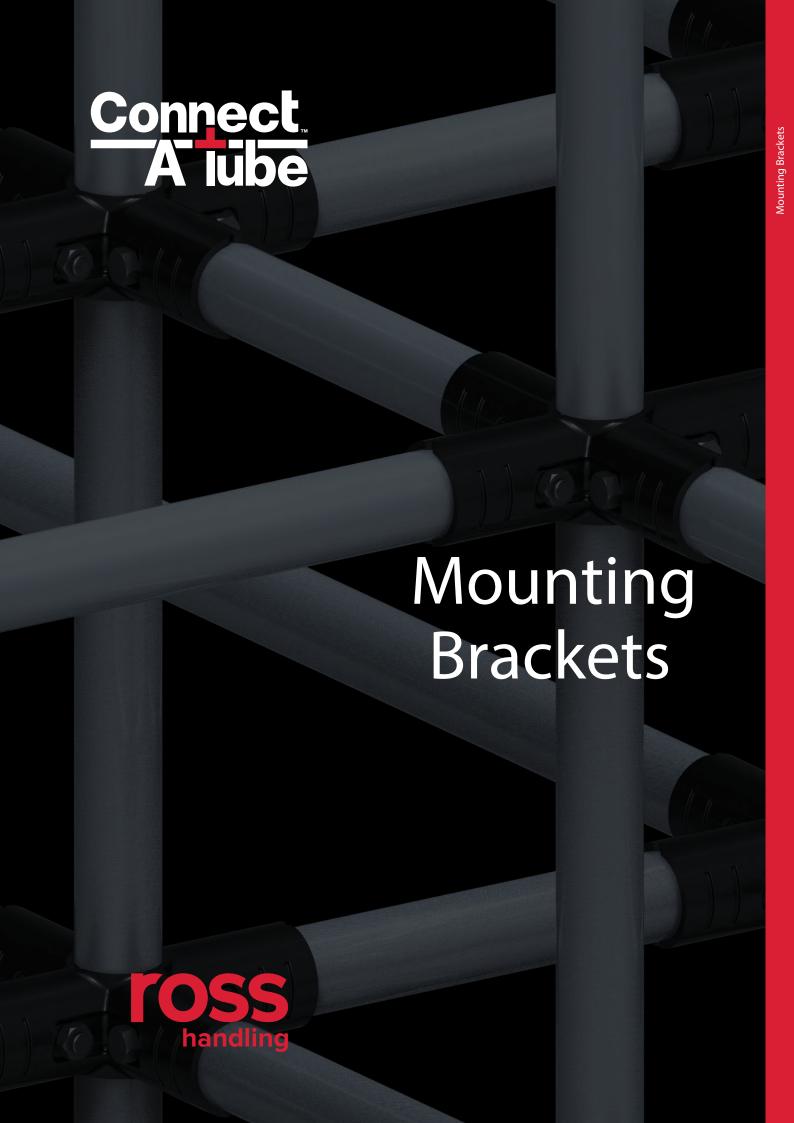








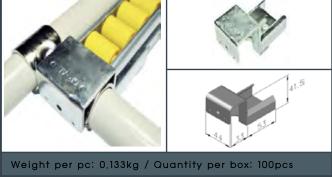






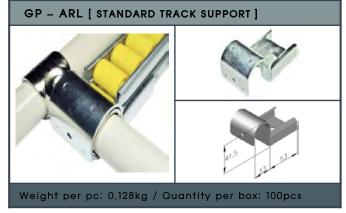


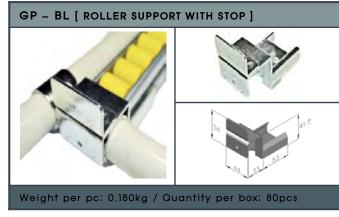


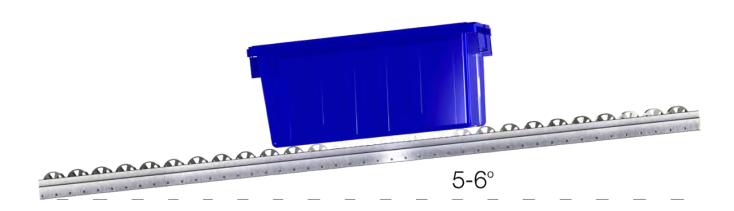






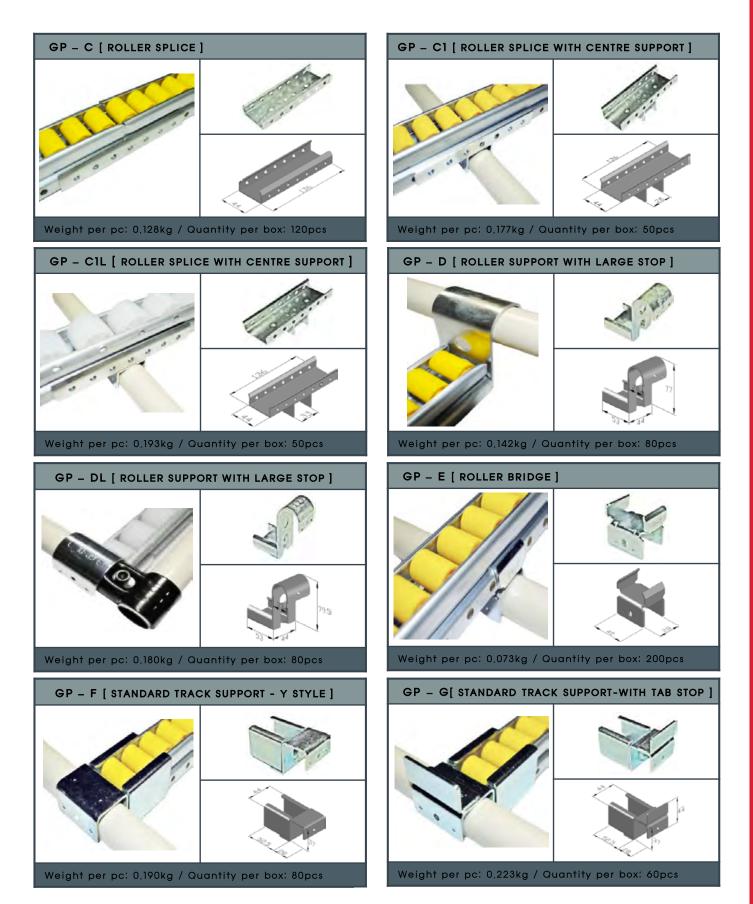






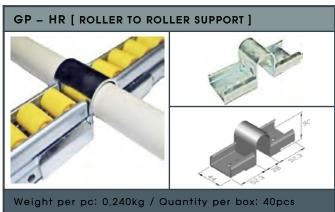


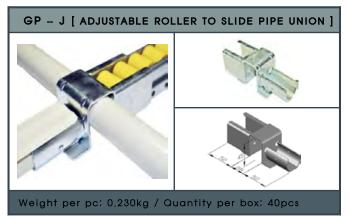




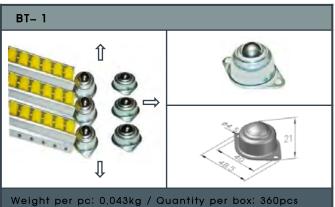


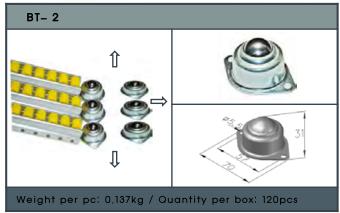


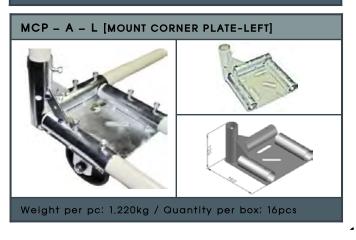


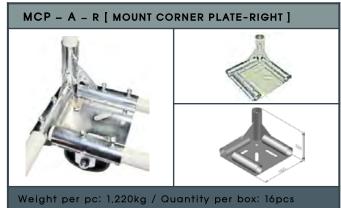


















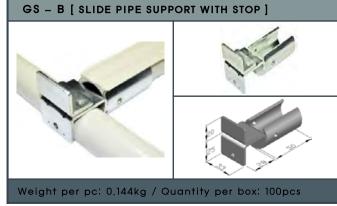




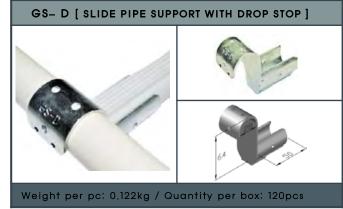
#### Connect Mounting Brackets

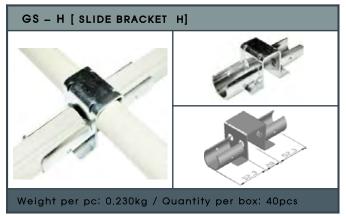




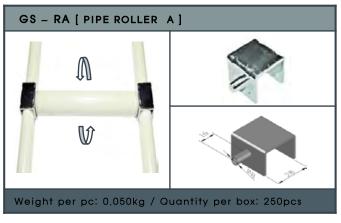


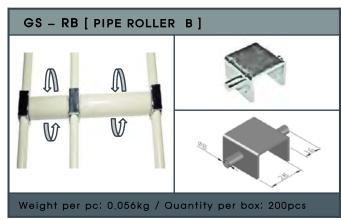


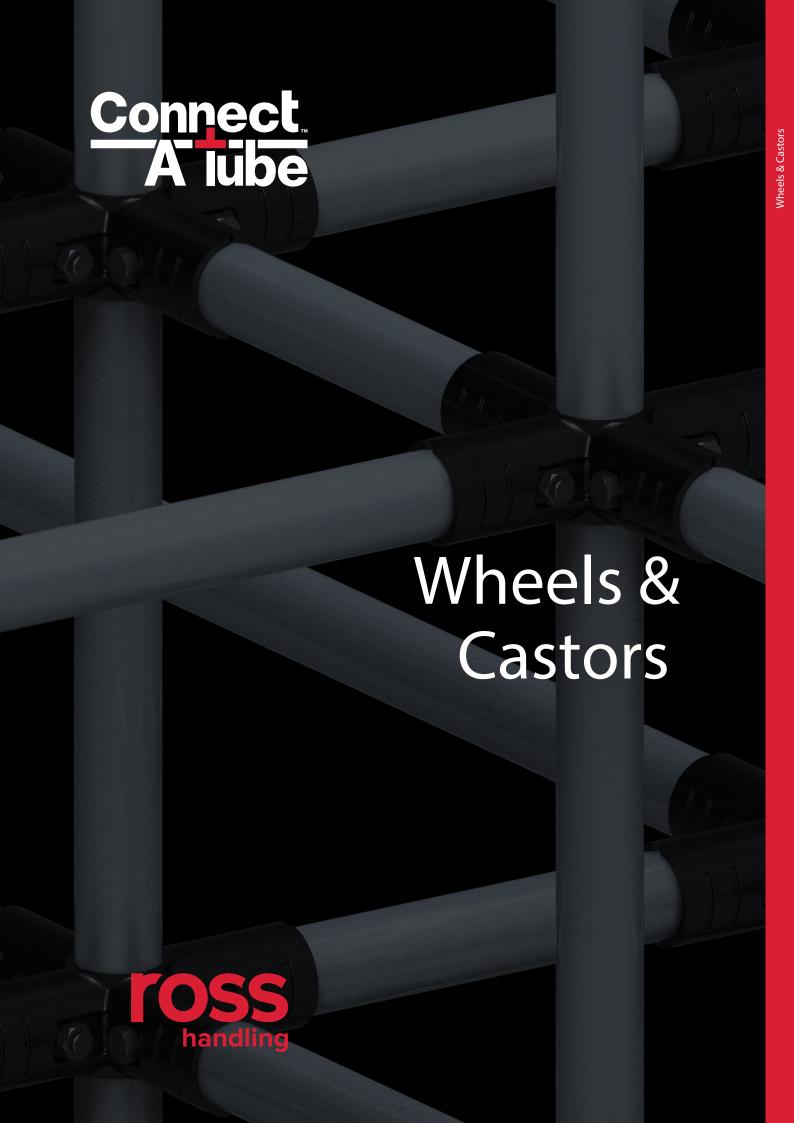












#### Wheels & Castors







THREAD TYPE						
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX			
TT – 50B – M	wheel $\phi$ 50mm, hole $\phi$ 11mm,100kg static load capacity, swivel, brake	0,159 kg	50			
TT – 50B – E – M	wheel $\phi$ 50mm, hole $\phi$ 11mm,100kg static load capacity, swivel, brake, ESD	0,159 kg	50			
TT – 75B – M	wheel $\phi$ 75mm, hole $\phi$ 12,3mm,150kg static load capacity, swivel, brake	0,267 kg	50			
TT – 75B – E – M	wheel $\phi$ 75mm, hole $\phi$ 12,3mm,150kg static load capacity, swivel, brake, ESD	0,249 kg	50			
TT – 100B – M	wheel $\phi$ 100mm, hole $\phi$ 13mm,160kg static load capacity, swivel, brake	0,711 kg	24			
TT – 100B – E – M	wheel $\phi$ 100mm, hole $\phi$ 13mm,160kg static load capacity, swivel, brake, ESD	0,711 kg	24			





THREAD TYPE						
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX			
TT - 50\$ - M	wheel $\phi$ 50mm, hole $\phi$ 11mm, 100kg static load capacity, swivel	0,142 kg	50			
TT - 50S - E - M	wheel $\phi$ 50mm, hole $\phi$ 11mm, 100kg static load capacity, swivel, ESD	0,142 kg	50			
TT – 75S – M	wheel $\phi$ 75mm, hole $\phi$ 12,3mm, 150kg static load capacity, swivel	0,213 kg	50			
TT – 75S – E – M	wheel $\phi$ 75mm, hole $\phi$ 12,3mm, 150kg static load capacity, swivel, ESD	0,213 kg	50			
TT - 100S - M	wheel $\phi$ 100mm, hole $\phi$ 13mm, 160kg static load capacity, swivel	0,552 kg	24			
TT - 100S - E - M	wheel $\phi$ 100mm, hole $\phi$ 13mm, 160kg static load capacity, swivel, ESD	0,552 kg	24			

## Wheels & Castors

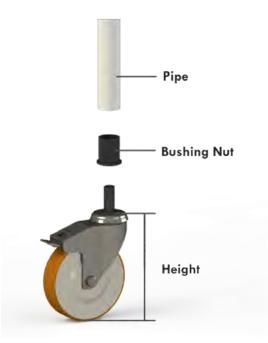




PLATE TYP	E		
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
PT - 100S	wheel $\phi$ 100 mm, 160kg static load capacity, swivel	0,583 KG	24
PT - 100S - E	wheel $\phi$ 100 mm, 160kg static load capacity, swivel , ESD	0,583 KG	24
PT - 125S	wheel $\phi$ 125 mm, 200kg static load capacity, swivel	0,723 KG	15
PT - 125S - E	wheel $\phi$ 125 mm, 200kg static load capacity, swivel , ESD	0,723 KG	15
PT - 150S	wheel $\phi$ 150mm, 200kg static load capacity, swivel	0,915 KG	15
PT – 150S – E	wheel $\phi$ 150mm, 200kg static load capacity, swivel, ESD	0,915 KG	15
PT – 75B – E	wheel ø75mm, 150kg static load capacity, swivel, brake, ESD	0,299 KG	40
PT – 100B	wheel ø 100mm, 160kg static load capacity, swivel, brake	0,766 KG	24
PT – 100B – E	wheel $\phi$ 100mm, 160kg static load capacity, swivel, brake, ESD	0,766 KG	24
PT – 125B	wheel $\phi$ 125mm, 200kg static load capacity, swivel, brake	0,903 KG	15
PT – 125B – E	wheel $\phi$ 125mm, 200kg static load capacity, swivel, brake, ESD	0,903 KG	15
PT – 150B	wheel $\phi$ 150mm, 200kg static load capacity, swivel, brake	1,087 KG	15
PT – 150B – E	wheel $\phi$ 150mm, 200kg static load capacity, swivel, brake, ESD	1,087 KG	15
PT – 75R	wheel $\phi$ 75mm, 150kg static load capacity, rigid	0,160 KG	40
PT – 75R – E	wheel ø75mm, 150kg static load capacity, rigid, ESD	0,160 KG	40
PT - 100R	wheel ø 100mm, 160kg static load capacity, rigid	0,483 KG	24
PT – 100R – E	wheel ø 100mm, 160kg static load capacity, rigid, ESD	0,483 KG	24
PT – 125R	wheel ø 125mm, 200kg static load capacity, rigid	0,626 KG	15
PT – 125R – E	wheel $\phi$ 125mm, 200kg static load capacity, rigid, ESD	0,626 KG	15
PT – 150R	wheel $\phi$ 150mm, 200kg static load capacity, rigid	0,830 KG	15
PT – 150R – E	wheel $\phi$ 150mm, 200kg static load capacity, rigid, ESD	0,830 KG	15

## Connect Wheels & Castors









## Connect Feet







- AD SM [ MOUNT, SQUARE ]
- WEIGHT PER PC= 0.219KG
- QUANTITY PER BOX= 20 PCS





AD - SMR [ MOUNT, SQUARE ]

- WEIGHT PER PC = 0.243KG
- QUANTITY PER BOX = 15 PCS





AD - SMS [ STANCHION MOUNT, SQUARE ]

- WEIGHT PER PC= 0.297KG
- QUANTITY PER BOX = 15PCS

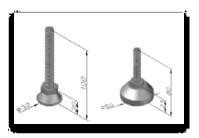


FLOOR LO	СК		
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
FL - 4040	floor lock, for use with 100mm dia, wheel	1,520 kg	8
FL - 4050	floor lock, for use with 125mm dia, wheel	1,540 kg	8
FL - 4060	floor lock, for use with 150mm dia, wheel	1,580 kg	8
FL - 4080	floor lock, for use with 200mm dia, wheel (on request)	1,620 kg	8



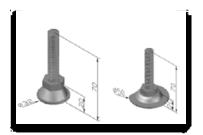






½ " THREA	)		
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
AD - 32 - WB	Adjustable foot, $\frac{1}{2}$ " thread, 32mm, metal base 70mm screw, 50mm thread	0.095 kg	300
AD - 32 - WC	Adjustable foot, $\frac{1}{2}$ " thread, 32mm, 100mm threaded length	0,110 kg	250
AD - 50 - WA	Adjustable foot, $\frac{1}{2}$ " thread, 50mm, metal base 70mm screw, 50mm thread	0,093 kg	200
AD - 50 - WB	Adjustable foot, $\frac{1}{2}$ " thread, 50mm, 100mm threaded length	0,130 kg	150
AD - 45	Adjustable foot, $\frac{1}{2}$ " thread, 45mm, metal base 50mm screw	0,100 kg	200
AD - 50 - RA	Adjustable foot, $\frac{1}{2}$ " thread, 50mm, 50mm threaded length, rubber pad	0,160 kg	120
AD - 50 - RB	Adjustable foot, $\frac{1}{2}$ " thread, 50mm, 100mm threaded length, rubber pad	0,175 kg	100





M12 THREA	D		
ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
AD-32-WB -M	Adjustable foot, m12 thread, 32mm, metal base 70mm screw, 50mm thread	0.095 kg	300
AD-50-WA-M	Adjustable foot, m12 thread, 50mm, metal base 70mm screw, 50mm thread	0.115 kg	200
AD-45-M	Adjustable foot, m12 thread, 45mm, metal base 50mm screw	0,100 kg	200
AD-50-RA-M	Adjustable foot, m12 thread, 50mm, 50mm threaded length, rubber pad	0,150 kg	150
AD-50-RB-M	Adjustable foot, m12 thread, 50mm, 100mm threaded length, rubber pad	0.180 kg	100
AD-32-WC-M	Adjustable foot, m12 thread, 32mm, 100mm threaded length	0,157 kg	200
AD-50-WB-M	Adjustable foot, m12 thread, 50mm, 100mm threaded length	0,115 kg	200







# Caps & Bushings



CAPS				
925 <sup>25</sup> 27	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
876 658	CAP-01-BK	Black plastic end cap, fits all pipes	0,003 KG	2500
199	CAP-01-EB	ESD Black plastic end cap, fits all pipes	0.003 KG	2500
	CAP-03-IV	ivory plastic outer cap	0.007 KG	2500
4	CAP-03-EB	Black plastic outer cap ESD	0,007 KG	2500
	CAP-07-SA	Steel end cap for 0,7mm plastic coated pipe	0,007 KG	1000
	CAP-07-SB	Steel end cap for 0,7mm stainless steel or powder coated pipe	0,007 KG	1000
2 20mm	CAP-08-S	Steel end cap for 0,8 mm powder coated pipe	0,070 KG	1000
	CAP-10-S	Steel end cap for 1,0mm plastic coated pipe	0,007 KG	1000
	CAP-11-S	Steel end cap for 1,1mm stainless steel or powder coated pipe	0.007 KG	1000
	CAP-12-S	Steel end cap for 1,2mm stainless steel or powder coated pipe	0,007 KG	1000
	CAP-20-S	Steel end cap for 2,0mm plastic coated pipe	0,070 KG	1000

BUSHINGS				
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
	BS – 2807 – A	Bushing nut, M12-1/2" thread, for 0.7mm plastic coated	0,080 KG	300
	BS – 2807 – B	Bushing nut, M12 thread, for 0,7mm plastic coated pipe	0,080 KG	300
	BS – 2807 – D	Bushing nut, M12 thread, for 0.7mm stainless steel or powder coated pipe	0,095 KG	300
	BS – 2808 – A	Bushing nut, M12-1/2" thread, for 0,8mm powder coated pipe	0,083 KG	300
	BS – 2808 – B	Bushing nut, M12 thread, for 0,8mm powder coated pipe	0,083 KG	300
	BS – 2810 – A	Bushing nut, M12-1/2" thread, for 1.0mm plastic coated pipe	0,073 KG	300
28 027.7	BS – 2810 – B	Bushing nut, M12 thread, for 1,0mm plastic coated pipe	0,073 KG	300
	BS – 2810 – F	Bushing nut, M12 thread, for 1.0mm pipe	0,083 KG	300
	BS - 2812 - A	Bushing nut, M12-1/2" thread, for 1.2mm stainless steel or powder coated pipe	0,077 KG	300
	BS – 2812 – B	Bushing nut, M12 thread, for 1,2mm stainless steel or powder coated pipe	0,077 KG	300
	BS – 2820 – A	Bushing nut, M12-1/2" thread, for 2,0mm pipe	0,065 KG	300
	BS – 2820 – B	Bushing nut, M12 thread, for 2,0mm pipe	0,065 KG	300



## **Fasteners**



#### BOLTS WEIGHT QUANTITY ITEM **DESCRIPTION** PER PC PER BOX M0625 M6 bolt, 25mm long 0,007 KG 4000 M0625L M6 bolt, 25mm long, self locking 0.007 KG 4000 M0610 0,004 KG M6 bolt, 10mm 5000

YE = YELLOW

BOLTS				
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
	M835 – Y	M8 bolt, 35mm long, yellow steel	0,017 KG	1000
	M840 – Y	M8 bolt, 40mm long, yellow steel	0,018 KG	1000
	M850 – Y	M8 bolt, 50mm long, yellow steel	0,021 KG	1000

SCREWS				
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
E Diller	SC - 1	self cutting screw, $3.5\mathrm{x}$ 13mm, x–head, for use with metal	0,002 KG	5000
	SC – 2	self cutting screw, $4.0\mathrm{x}$ 20mm, x-head, for use with metal	0,002 KG	5000

# Connect Fasteners



NUTS						
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX		
	TN06	M6 T - nut	0,002 KG	10000		
	TN06L	M6 T – nut, self locking	0,002 KG	10000		

YE = YELLOW

NUTS				
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
	NN08 – Y	Nut, m8, yellow steel with nylon insert	0,005 KG	3000



WASHERS				
	ITEM	DESCRIPTION	WEIGHT PER PC	QUANTITY PER BOX
0	PW10 – Y	M10 Flat washer	0,002 KG	5000
	PW12 – Y	M12 Flat washer	0,002 KG	5000
0	SW10 – Y	M10 Spring washer	0,002 KG	5000
2	SW12 – Y	M12 Spring washer	0,002 KG	5000



# Connect Construction Guide



## **Using Connect-A-Tube**

Good manufacturing ideas often evolve in to better ideas and so a process of continual improvement is required. Continual improvement requires using a product that is economic to use, quick to assemble, and easy to change. Connect-A-tube is an ideal product that allows manufacturers to do all of these things. If radical changes are required all equipment assembled using Connect-A-tube can be totally dismantled and reconfigured using the same parts time and time again.

Connect-A-tube is an ideal aid to manufacturing processes requiring workstations, carts and trolleys, packing stations, simple conveyor systems, flow racks etc. Although the product is very strong we recommend that the product is only used in manual loading and unloading operations. The system is not designed for the construction of heavy pallet type racking or anything that would be loaded with a fork lift truck.

Connect-A-tube is primarily designed to facilitate manual type operations where product handling can be reduced or made more ergonomically friendly.

www.rosscastors.co.uk/connect-a-tube

#### **Key Advantages**

Simplicity

The product is simple to use and requires no special tools or technical design ability. In many cases operators themselves can use Connect-A-tube to solve their own materials handling issues and improve their working practices.

**T** Economical

Connect-A-tube is very economical to use. All of the pipes and joints can be deconstructed and reassembled to create new products time and time again. Designing new products is simple and only basic tools are required to assemble it. Connect-A-tube is also a very competitive product to use when compared to using aluminium profiles.

Space Saving and Ergonomics

Connect-A-tube is designed to provide users with the ability to construct products that maximise the use of space and are ergonomically designed to keep workers comfortable and safe.

Flexibility

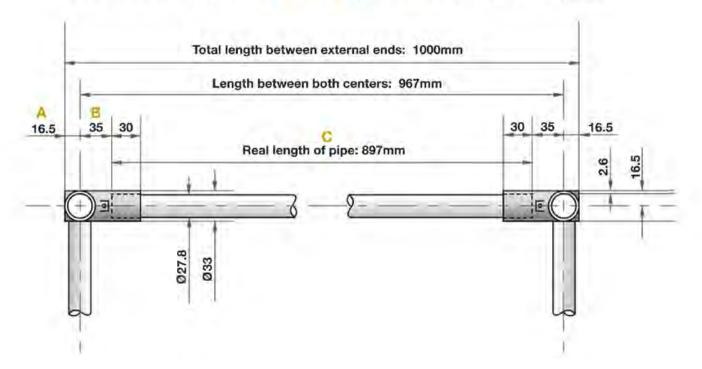
Connect-A-tube allows its users to create products that are totally flexible. It's easy to add new sections, integrate other options or simply disassemble and reassemble in to something completely different.

### **Construction Guide**



#### How do I calculate pipe sizes and lengths?

Desired overall length (1000mm) - (A(16.5mm) + B(35mm))2 = C Pipe length needed (897mm)



There are 2 basic methods that can be used to calculate the cut length of a required pipe:

#### Option 1

Calculating the required length of a pipe where the design is using the pipe centres as the required measurement.

Take the overall centre distance and subtract 70mm. In the example shown above the cut pipe length would be 897mm.

#### Option 2

Calculating the required length of a pipe where the design is using the overall width of the structure including any brackets as the required measurement.

Take the overall length or width of the structure to be assembled and subtract 103mm. In the example shown above the cut pipe length would again be 897mm.

## Connect A lube

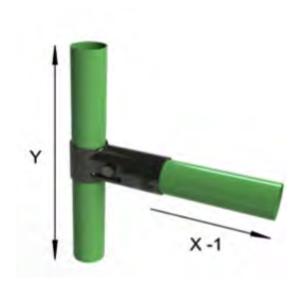
#### **Construction Guide**



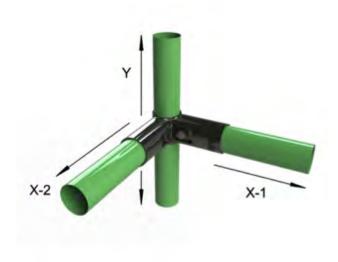
## Pipe Strength

Just like any other fabricated structure the overall strength and stability of any assembled piece of equipment depends on the design, components used and the build quality. Incorrectly assembled joints will not perform correctly and a lack of structural support will lead to poor stability. It is important to consider the weight that any assembled piece of equipment will need to support and whether or not the equipment will be permanently static or mobile.

The information below will help you to determine how many brackets and what supports will be necessary to construct a safe piece of working equipment based on the maximum loading that the pipes and joints will support.



X1 = 75Kgs Y = 85Kgs Using Plastic Coated Pipes X1 = 60Kgs Y = 70Kgs Using Stainless Steel Pipes



X1 = 75Kgs X2 = 60Kgs Y = 85Kgs Using Plastic Coated Pipes X1 = 30Kgs X2 = 30Kgs Y = 70Kgs Using Stainless Steel Pipes

Maximum Pipe Loadings					
Distance Between Pipe Centres	Tube Wall Thickness 1.0mm	Tube Wall Thickness 2.0mm	Stainless Steel Tube 1.2mm		
1.0m	68kgs	150kgs	68kgs		
1.25m	55kgs	123kgs	55kgs		
1.50m	46kgs	100kgs	46kgs		
1.75m	39kgs	88kgs	39kgs		
2.0m	34kgs	75kgs	34kgs		

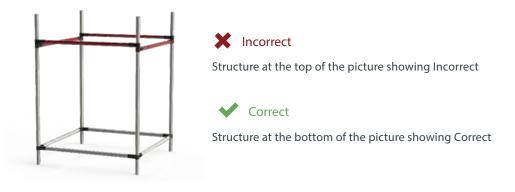
# Construction Guide



#### Some Do's & Don't's









# Connect A lube

## Endless Possibilities<sup>™</sup>



Ross Handling Ltd 1 Tuxford Road Leicester LE4 9TZ Call us: 0116 276 4987 Fax us: 0116 274 1751 Email: sales@rosscastors.co.uk

www.rosscastors.co.uk/connect-a-tube

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