



Illston & Robson Limited

EMAIL: info@illstonandrobson.com

WEBSITE: illstonandrobson.com

Ebay : [illstonandrobson1908](https://www.ebay.com/str/illstonandrobson1908)

Manufacturing in Birmingham since 1908



HERBERT ROAD SMALL HEATH BIRMINGHAM B10 0QQ

TELEPHONE: 0121 772 5674

FAX: 0121 772 5675

Sales Email: neil@illstonandrobson.com

Manufacturers of Airline Couplings and Balljoints

Illston and Robson Ltd

Manufacturing turned parts and assemblies for a variety of industries is our strength. We make high quality products and enjoy developing specialised solutions with our customers.

An ISO9001 company, we pride ourselves on good quality solutions and customer service. The majority of parts in this catalogue are available on short lead times, and we are happy to make a range of quantities from 10's to 10's of thousands.

We are a preferred supplier to many OE manufacturers, inc. Caterpillar and many of the leading truck manufacturers

Balljoints

This catalogue shows the types of product we manufacture but cannot show the range of special sizes we make - the range is too wide. We can produce alternatives to suit your design. Common variations supplied include:

- Special body lengths and body shapes.
- Various ballpin lengths, ballpins supplied separately.
- Alternative plating finishes including Silver, black and anodised colours (aluminium)
- Different materials including 303 Stainless Steel, Aluminium and Brass.
- Various threads including BSF, Whitworth, Metric and UNF in both RH & LH.
- Joints with different threads in the body and the ballpin.
- Link rods straight & bent. Wide range in M5 & M10 available ex stock.
- LH/RH threaded rods with matching balljoints for adjustable linkages.
- Sprung overtravel joints and spherical rod ends.
- Parts supplied as a kit of parts including nuts, washers, rods etc.

Airline couplings

These are made to the British Standards BS AU 138a:1980 and BS AU 138b:2000. We are OE Specified on MAN, DAF, Volvo and several other Truck and Trailer manufacturers, and are the preferred spares supplier for the UK aftermarket.

We also manufacture Stowage couplings, Trailer Locks, dust covers, test tools and a wide range of threaded adaptors



SR

Spring-Retained

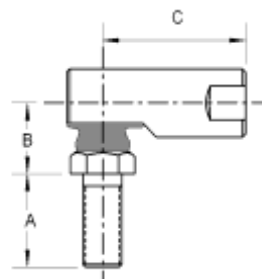


Description

- Ball retained by a hardened & tempered retaining ring.
- Ball stud movement is a full 40° angular movement.
- All parts are case hardened file hard.
- Zinc-plated, de-embrittled and trivalent passivated
- Spanner flats for ease of assembly.
- Fitted with a neoprene grommet.
- Pre-greased.
- LH and other thread types available.

Features

- Construction method eliminates end play and reduces vibration to a minimum.
- Ideally suitable when heavy shock loads and high wear conditions are present.
- These can be supplied with rods assembled
- Some stainless steel versions are available



Type No	Standard Thread	Body dia.	Hex Size	Body length	Stud thread length (A)	Dim. B	Dim. C	Stud pullout force
SR107G	M 5 or 10-32 UNF	11.11	9.53	30.9	11.1	11.88	24.58	545kgf
SR107G	M 6 or 1/4" UNF	11.11	9.53	30.9	14.3	11.88	24.58	545kgf
SR108G	M 8 or 5/16" UNF	12.70	11.11	35.7	17.5	13.48	28.57	715kgf
SR109G	M10 or 3/8" UNF	15.87	12.7	42.9	22.2	17.46	34.92	820kgf
SR111G	M12 or 1/2" UNF	19.05	15.87	60.3	28.6	22.22	49.21	1300kgf



Illston and Robson Ltd, Herbert Road, Small Heath, Birmingham B10 0QQ
Tel: 0121 772 5674 Fax: 0121 772 5675
Website: www.illstonandrobson.com Email: neil@illstonandrobson.com

Nylon Body

P

Description

- Body: Black, Manufactured in Nylon 6
- Ballpin: low carbon steel, zinc plated and trivalent passivated or SS303.
- M5 in three body lengths.
- RH and LH Threads available as standard for P8 x 25 and P8 x 31.



Features

- Light weight and low cost.
- Bodies can be supplied separately for fitting to pre-existing stud.
- Other colours can be produced.
- Stainless Steel Stud available.
- Studs with larger threads (M6, M8, 3/8UNF) available to order.
- Wide variety of LH/RH rods available from stock to make linkages.
- We are the original manufacturer of this part.



Type No	Standard Thread	Body Diameter	Dim A	Hex Size	Body Length	Stud Thread Length (B)	Body Thread Depth	Ball Dia
P8 x 20	M5	12.7	20	8	26.5	10	14	8
P8 x 25	M5 or 10-32 UNF	12.7 [1/2"]	25		31.5		19	
P8 x 31	M5 or 10-32 UNF	12.7 [1/2"]	31		37.5		25	

B

Adjustable Spring

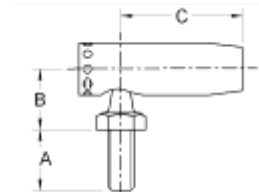
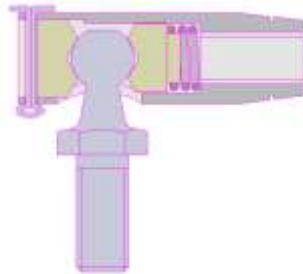


Description

- Ballpin held in place between pads against an internal spring.
- Spring tension is adjustable with grub screw; held in place with split pin.
- Grub screw and ballpins hardened file hard.
- Zinc plated and trivalent passivated.
- Angular movement 30°.

Features

- Adjustable.
- Easily assembled and disassembled.
- Internal spring eliminates backlash.
- Limited stock on some sizes
- Can be made with brass bodies (requires min. order)
- As found on many classic and vintage vehicles



Type No	Standard Thread	Body dia.	Hex Size	Body length	Stud thread (A)	Dim. B	Dim. C	Ball Dia
B107	M6 or 1/4" UNF	11.11 [7/16"]	9.53 [3/8"]	34.93	14.30	11.88	24.58	7.7
B108	M8 or 5/16" UNF	12.70 [1/2"]	11.11 [7/16"]	39.69	17.50	13.48	28.57	8.7
B109	M10 or 3/8" UNF	15.87 [5/8"]	12.7 [1/2"]	49.21	22.22	17.46	34.92	10.6
B111	M12 or 1/2" UNF	19.05 [3/4"]	15.87 [5/8"]	66.68	28.57	22.22	49.21	14.0



Illston and Robson Ltd, Herbert Road, Small Heath, Birmingham B10 0QQ
Tel: 0121 772 5674 Fax: 0121 772 5675
Website: www.illstonandrobson.com Email: neil@illstonandrobson.com

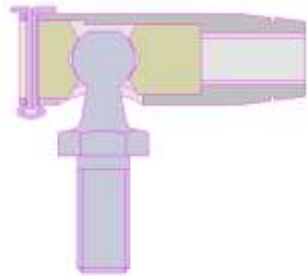
Positive Adjustment

C



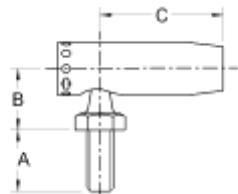
Description

- Ballpin held in place by grub screw.
- Grub screw position adjustable; held in place with split pin.
- Grub screw and ballpins hardened file hard.
- Zinc plated and gold passivated.
- Angular movement 30°.



Features

- Adjustable.
- Easily assembled and disassembled.
- Ballpin can be locked in position by tightening the adjusting screw.
- Limited stock on some sizes
- Can be made with brass bodies (requires min. order)



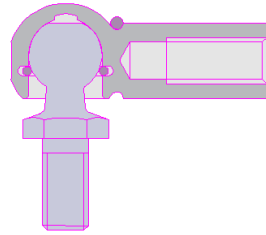
Type No	Standard Thread	Body dia.	Hex Size	Body length	Stud thread (A)	Dim. B	Dim. C	Ball dia
C103	M5 or 10-32 UNF	9.53 [3/8"]	7.94 [5/16"]	31.75	11.11	11.11	22.22	6.3
C107	M6 or 1/4" UNF	11.11 [7/16"]	9.53 [3/8"]	34.93	14.30	11.88	24.58	7.7
C108	M8 or 5/16" UNF	12.70 [1/2"]	11.11 [7/16"]	39.69	17.50	13.48	28.57	8.7
C109	M10 or 3/8" UNF	15.87 [5/8"]	12.7 [1/2"]	49.21	22.22	17.46	34.92	10.6
C111	M12 or 1/2" UNF	19.05 [3/4"]	15.87 [5/8"]	66.68	28.57	22.22	49.21	14.0

DN

DIN Type

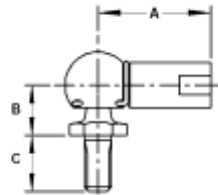
Description

- Based on DIN 71802 Standard.
- Inner retaining clip and external safety clip.
- 36° angular movement (restricted to 15° by safety clip).
- Zinc plated and clear passivated as standard.



Features

- Easily disassembled by removing safety clip giving improved access for maintenance.
- Left hand threads, male threads and different body lengths available.
- Body, clip and ballpin available separately
- Large range of LH/RH M5 & M6 rods available from stock to make linkage assemblies.
- Stainless M5 and aluminium M6 available to order.
- Neoprene dust gaiter is available.



Type No.	Body & Stud Thread	Ball pin Ø.	Overall Body length	Dim A	Body Thread depth	Dim B	Dim C	O/S Ball diam	Body diam	Body Flats size	Hex Size
DN6	M3 or M4	6	28	22	11	8.5	9	10.6	8	7	6
DN8/M5	M5	8	29	22	11	9	10.2	12.8	8	/	8
DN10/M6 Short	M6	10	25	18	8.5	11	12.5	14.8	10	9	10
DN10/M6	M6	10	33	25	11.5	11	12.5	14.8	10	9	10
DN10/M6 Long	M6	10	42	35	25	11	12.5	14.8	10	9	10
DN13/M8	M8	13	40	30	14	13	16.5	19.3	13	11	13



Illston and Robson Ltd, Herbert Road, Small Heath, Birmingham B10 0QQ
Tel: 0121 772 5674 Fax: 0121 772 5675
Website: www.illstonandrobson.com Email: neil@illstonandrobson.com

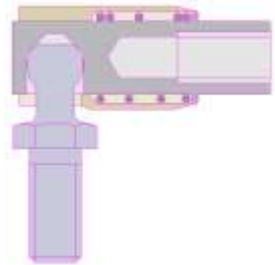
Quick Disconnect

S/IS



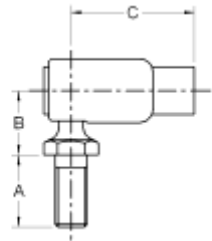
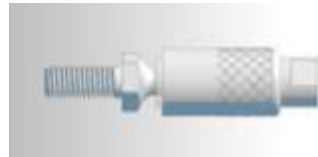
Description

- Ballpin retained by sprung outer shell.
- Ballpin hardened file hard.
- Stainless Steel Spring.
- Zinc plated and trivalent passivated.



Features

- Easily assembled and disassembled.
- Ballpin released by pulling back the outer shell.
- Some sizes are available with a knurled outer shell and in stainless steel. A range of ballpin lengths and thread sizes are available.
- IS In-line versions available with M5/M6 and 10-32 & 1/4 UNF please ask for details.
- *S110 special order only, lead time applies



Type No	Standard Thread	Body dia.	Hex Size	Body length	Stud thread (A)	Dim. B	Dim. C	Ball Ø
S103S	M5 or 10-32 UNF	11.11 [7/16"]	8 [5/16"]	28	11	12	23	6.4
S103	M6 or 1/4" UNF		9.53 [3/8"]		14			
S107	M6 or 1/4" UNF or 10-32 UNF	12.70 [1/2"]	9.53 [3/8"]	30.	14	12	25	7.7
S108	M8 or 5/16" UNF	15.87 [5/8"]	11.11 [7/16"]	40	17.5	14	32	8.7
S109	M10 or 3/8" UNF	19.05 [3/4"]	12.7 [1/2"]	49	22	18	40	10.6
*S110	M10 or M12	24	17	49	28	22	41	12.9
S111	M12 or 1/2" UNF	25.4 [1"]	15.87 [5/8"]	64	29	22	52	14

IC & DS

In Line Swivels



IC Description

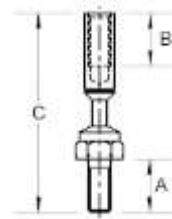
- Ballpin retained by hardened secure cap.
- Minimal end float, a feature of this design
- 40° angular movement.
- Excellent wear resistance
- Dust seal to reduce abrasion wear in harsh environments



Type No	Standard Thread Types	Ball Dia	Body Dia	Body Hex Size	Ballpin Hex Size	Length (A)	Body Thread Depth	Stud Thread Length	Length to CL of ball (B)	Stud Pullout Force
IC107	M5 or 10-32 UNF	6	11	10	10	40	11	11.5	17	350 kgf
IC107 long	M5 or 10-32 UNF	6	11	10	10	52	15	11.5	29	350 kgf
IC109	M6 or 1/4" UNF	10	16	0.5"	0.5"	61	17	13	30	850 kgf
IC109	M8 or 5/16" UNF	10	16	14	13	61	17	13	30	850 kgf

DS Features

- Suitable for light loads
- Neoprene washer used to cushion movement and maintain tension.
- Female ballpin retained by roll over.



Type No	Standard Thread	Body dia.	Ballpin A/F	Pin thread (A)	Female thread Dim. B	Overall length Dim. C
DS-106	M6 or 1/4 UNF	8	11	14.3	14.3	53.2



Illston and Robson Ltd, Herbert Road, Small Heath, Birmingham B10 0QQ
 Tel: 0121 772 5674 Fax: 0121 772 5675
 Website: www.illstonandrobson.com Email: neil@illstonandrobson.com

Clevises **M, I & SY**

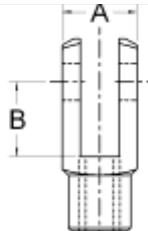


Drilled Pin

Clevis with Spring Pin



Clevis with Grooved Pin & Safety Clip



M & I Description

- Clevis made to the DIN standard pattern (in tables below).
- Many Non Standard Clevises also available.
- Each thread size is available in a short and a long version.
- Imperial threads are indicated by a grooved shank.
- We supply a range of clevis clips and pins to suit.
- M12 and 1/2" UNF available to order (require lead time).
- Some sizes available is stainless steel.

I type	Description Thread x length	A	Pin Dia	B	Overall Length
10-32 UNF	Short	3/8"	3/16"	0.39	1.02
	Long			0.79	1.42
1/4" UNF	Short	1/2"	1/4"	0.47	1.22
	Long			0.95	1.69
5/16" UNF	Short	5/8"	5/16"	0.63	1.65
	Long			1.26	2.28
3/8" UNF	Short	3/4"	3/8"	0.79	2.05
	Long			1.58	2.83
1/2" UNF	Short	1"	1/2"	1.10	2.83
	Long			2.21	3.98

M Type	Description Thread x length	A	Pin Dia	B	Overall Length
M3 x 0.5	Short	8	4	8	21
	Long			20	36
M4 x 0.7	Short	10	5	10	26
	Long			20	36
M5 x 0.8	Short	12	6	12	31
	Long			24	43
M6 x 1.0	Short	16	8	16	42
	Long			32	58
M8 x 1.25	Short	20	10	20	52
	Long			40	72
M10 x 1.5	Short	24	12	24	62
	Long			48	86

SY Description

- The old Standard Yoke pattern with tapered end. Made by us in a variety of sizes over the years.



Specials



We make a range of special balljoints for unique applications

- Many of these balljoints combine unusual physical designs with less common threads eg: Whitworth, BA, UNEF, BSF.
- Various materials can also be used eg 303 Stainless Steel and brass.

Rod Assemblies

- We supply a wide range of assembled rods inc. Linkage rods for Caterpillar backhoe controls.



Kits of parts and balljoint assemblies

- We source a wide range of extras to accompany our balljoints inc laser cut brackets, welded parts etc.
- Kits of parts can be bagged or ready assembled.



Component Kits

Standard Kits

- Currently based round M5 & M6
- Containing various combinations of:
 - LH/RH rods
 - LH and RH ends including balljoints, rod ends and clevises.
 - all thread, pins & clips, nuts and washers.
- Balljoint types include DN, SR, Nylon and Quick release.
- Suitable for development or maintenance use - where the requirement for each part is small
- Used for many applications including motorsport throttle linkages, gear linkages, air suspension & headlamp sensor links.



Rod Ends

Description

- We can also supply rose joint (heim) rodends.
- We stock a range of metric sizes as standard and can source most sizes with a short lead time.
- Manufactured to ISO12240/DIN648
- Maintenance free design with moulded race



Features

- Zinc plated steel body
- Burnished nickel plated balls
- Glass reinforced nylon bearing race
- Available to order with different body lengths , male threads and male studs inserted into the ball.
- Rigorously tested for strength and durability.



Airline Coupling Accessories

Dummy Couplings

- Secure stowage locations for couplings.
- Male thread versions also available
- Compact size.
- Reduces damage to coil & coupling



Female
Ref 4034
Male with
chain



Protective Cover

- Reduces water and dirt ingress when coupling is not in use
- Convenient chain for attachment
- Ideal for agricultural use



Test Tool Kit Ref: 4022

- Boxed complete with gauge.
- Double band in indicator section.
- Start of yellow band indicates minimum requirement of 3mm lift.
- Start of green band indicates preferred level of lift for correct operation 4mm.
- Used to verify correct manufacture and installation of female service line coupling. Gauges level of lift female coupling will cause when coupled to male self sealing valve.
- As supplied to VOSA and all major factors & fleets

Close up of
indicator
showing
double band



Airline Couplings to BS AU 138b:2000

Tractor Couplings



Female 'C' with Self Sealing valve

4000 (M22)
4004 (M16)
4009 (1/2")



Male 'C' with Self Sealing valve

4072 (M22)
4071 (M16)
4073 (1/2")

Trailer Couplings



Male 'C'

4001 (M22)
4029 (M16)
4014 (1/2")



Female 'C' with Valve lifter

4625 (M22)
4642 (M16)
4626 (1/2")

Emergency Line

Service Line

The 2000 standard combines the components of the older standard, reducing the need for assembly and eliminating potential assembly errors or leakage.

Details

- Black couplings are zinc nickel plated to give at least 320hrs salt spray resistance.
- Tractor couplings and female trailer couplings tested at over 10bar before despatch to guarantee integrity.
- Metric thread indicated by groove on hexagon. M16 has two grooves, M22 has one groove & 1/2" no grooves
- Sleeves are anodised aluminium & can be supplied in alternative colours (min. order applies).
- Trailer female C machined with valve lifter in place.
- Male coupling available with radius front edge (small bore)



Airline Couplings

BS AU 138a:1980

Tractor Couplings



3400 (1/2")
3771 (M22)



3397 (1/2")
3772 (M22)



3501 (1/2")
3770 (M22)



3074 (1/2")
3733 (M22)



3400 (1/2")
3771 (M22)



3398 (1/2" BSP)
3763 (M22)

Emergency Line



3074 (1/2")
3733 (M22)



3397 (1/2")
3772 (M22)



3135 (1/2")
3774 (M22)

Service Line

Auxiliary Line(CA)



3075 (1/2")
3734 (M22)

Details

- Silver couplings are zinc plated to give at least 96hrs salt spray resistance.
- Tractor couplings and female trailer couplings tested at over 10bar before despatch to guarantee integrity.
- Metric thread indicated by groove on hexagon. M22 has one groove & 1/2" no grooves.

Trailer Locks

Trailer Coupling Lock

When in place this prevents the trailer from being coupled up. Each lock is supplied with two keys as standard.

- Compact, rugged and simple to operate.
- To fit remove key and push lock onto coupling.
- Available with fleet keys or different keys for each lock
- 10,000 key combinations.
- Manufactured by us to our own design.
- Brass lock bolt used for maintenance free long term use
- 4040 standard coupling lock
- 4045 VOR red reflective label.
- 4624 VOR yellow disc.



Palm coupling Lock

- As above but fits onto the European standard couplings.
- 4682 standard palm lock
- 4701 VOR yellow disc version



Trailer C-Lock Storage Ref: 4032

- M16 Male supplied with a bolt which allows the male to be fixed in a convenient place for storage. (eg. on the trailer or on a storage board)
- Requires a 17mm clearance hole.





MADE IN

THE MIDLANDS



Published: Sep-19