

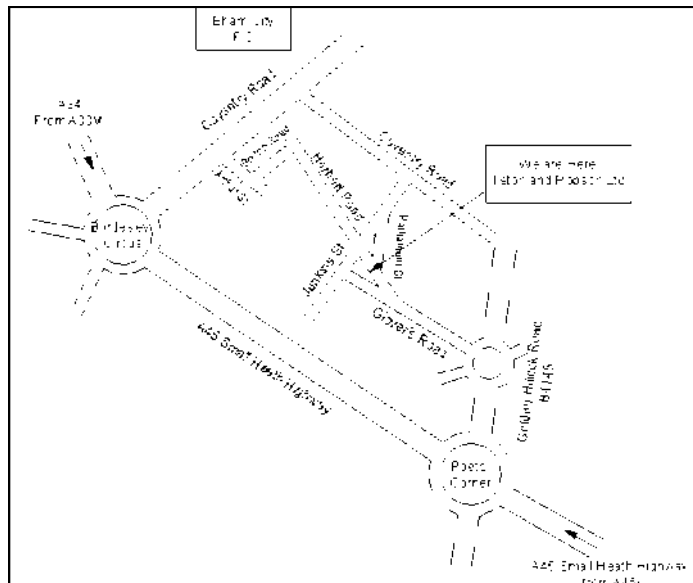
Directions

From M6/A38M

Leave A38M at the middle ring road.
At the 4th roundabout go left up the old
Coventry Road towards the Blues Ground.
Take the 2nd right onto Arthur Street.
Turn left and then right into Herbert Road

From A45

Follow A45 to City Centre
Turn right at Poets corner
Take 2nd exit at the next roundabout onto
Glover's Road
After a few hundred yards turn right into
Herbert Road



Certificate Number: 1679

Published: Oct-09



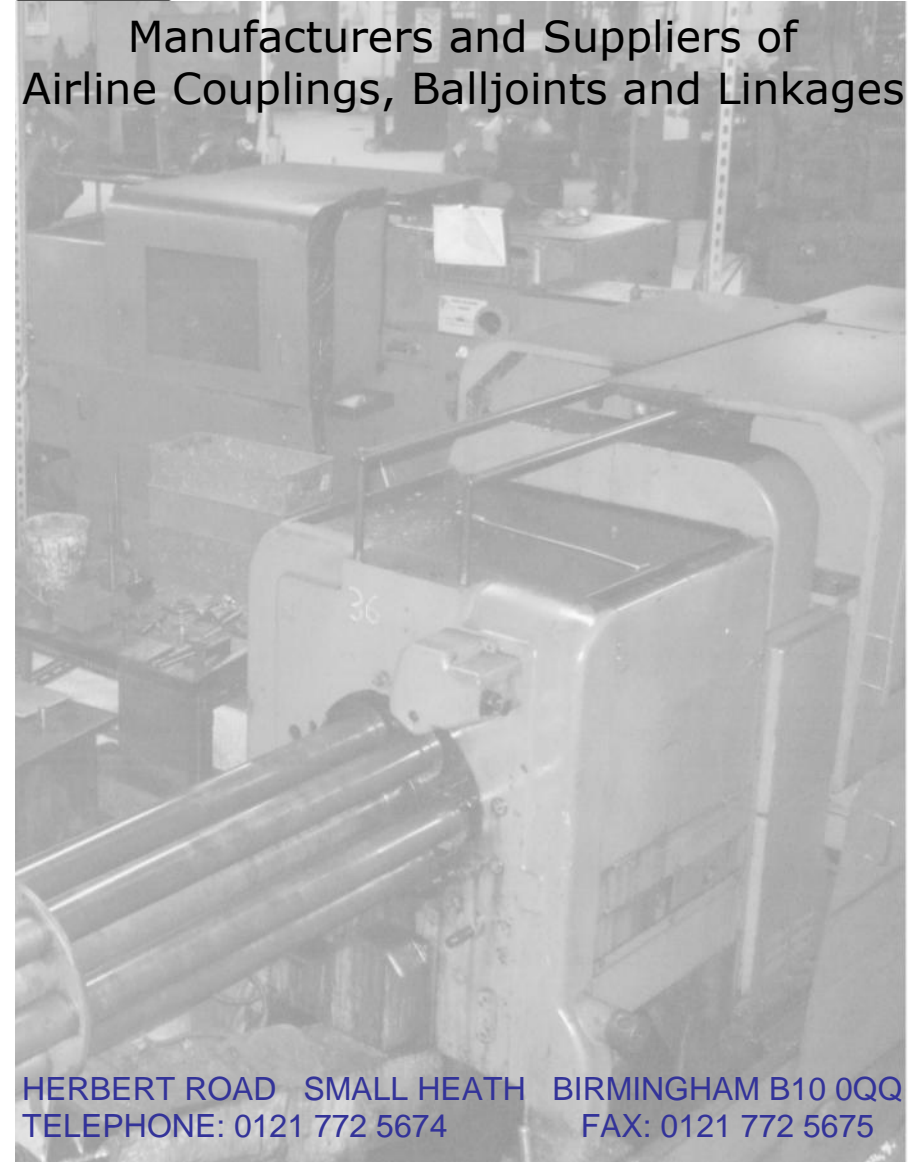
Illston & Robson Limited

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

Manufacturers and Suppliers of
Airline Couplings, Balljoints and Linkages



HERBERT ROAD SMALL HEATH BIRMINGHAM B10 0QQ
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Manufacturers of Airline Couplings and Balljoints

Illston and Robson Ltd

Established in 1908 we are a small firm. 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 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.

Balljoints

This catalogue shows the types of product we manufacture but cannot show the range of specials we make - the range is too wide. We can produce exactly what you want. Common variations supplied include:

- Various threads including BSF, Whitworth, Metric and UNF in both RH & LH.
- Special body lengths and various body shapes.
- Various ballpin lengths, ballpins supplied separately.
- Various plating finishes including Gold passivate, clear passivate, black passivate.
- Different materials including 303 Stainless Steel, Aluminium and Brass.
- Joints with different threads between the body and the ballpin.
- Link rods straight or bent.
- 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 also manufacture Dummy Couplings for storage, Trailer Locks, and Test tools.

Special Turned Components

Offered to complete the functionality of our range and meet specific customer requirements.

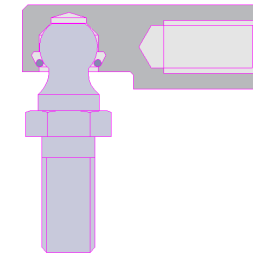
SR

Spring-Retained



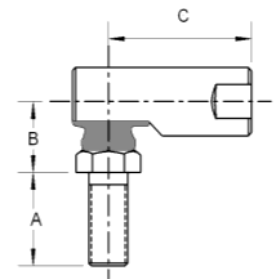
Description

- 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 gold passivated
- spanner flats for ease of assembly.
- Fitted with 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.
- Mixed Thread sizes between body and stud to order.
- Stainless Steel version available to order.



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



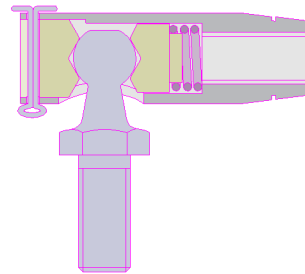
B

Adjustable Spring



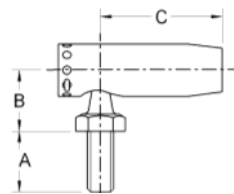
Description

- 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 gold passivated.
- Angular movement 30°.



Features

- Adjustable.
- Easily assembled and disassembled.
- Internal spring eliminates backlash.
- M10, M12 3/8" UNF and 1/2" UNF available to order only.
- Brass Bodies available to order.
- Suitable for vintage and classic vehicle throttle linkages.



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



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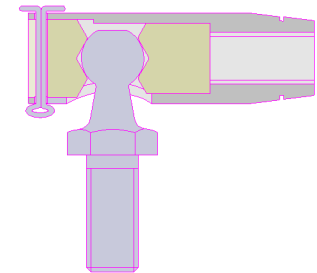
C

Positive Adjustment



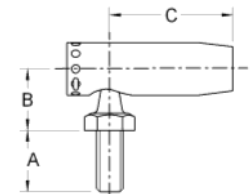
Description

- 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 grub screw.
- M5, M10 and M12 to order only.
- Brass bodies available to 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

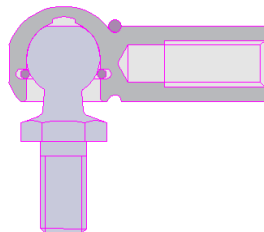
DN

DIN Type



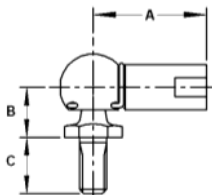
Description

- Based on DIN 71802 Standard.
- All steel.
- Inner retaining clip and external safety clip.
- 36° angular movement (restricted to 15° by safety clip).
- Zinc plated and clear passivated as standard, other finishes available to order.
- Neoprene gaiter is available.



Features

- Easily disassembled by removing safety clip giving improved access for maintenance.
- LH Thread available.
- Body, clip and ballpin available separately
- Range of LH/RH M5 & M6 rods available from stock to make linkage assemblies.
- LH thread indicated by groove on body.
- M6 now available in different body lengths.
- We are the UK manufacturer of this balljoint.



Type No.	Body & Stud Thread	Ball pin Ø.	Overall Body length	Dim A	Body Thread depth	Dim B	Dim C	O/S Ball Dia.	Body Dia.	Body Flats size	Hex Size
DN8/M5	M5	8	29	22	10.2	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

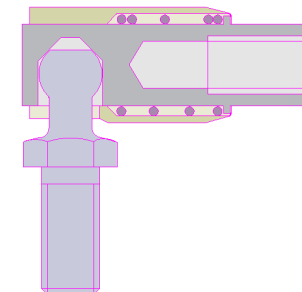
Quick Disconnect

S



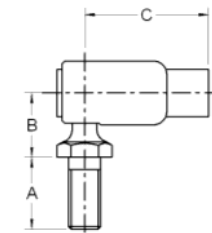
Description

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



Features

- Easily assembled and disassembled.
- Ballpin released by pulling back outer shell.
- Outer shell can be knurled if required.
- Stainless Steel Version available.
- For control cable assemblies S107 & 10-32 can be ordered with a variety of different ballpins to suit any application.



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"]	27.76	11.11	11.88	23.01	6.4
S103	M6 or 1/4" UNF		9.53 [3/8"]		14.28			
S107	M6 or 1/4" UNF or 10-32 UNF	12.70 [1/2"]	9.53 [3/8"]	30.16	14.28	11.88	24.58	7.7
S108	M8 or 5/16" UNF	15.87 [5/8"]	11.11 [7/16"]	39.68	17.50	13.48	31.75	8.7
S109	M10 or 3/8" UNF	19.05 [3/4"]	12.7 [1/2"]	49.21	22.22	17.46	39.68	10.6
S111	M12 or 1/2" UNF	25.4 [1"]	15.87 [5/8"]	64.28	28.57	22.22	51.59	14



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IL & DS

In Line and Swivels



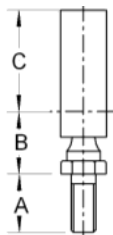
IL Description

- Ballpin retained by hardened and tempered retaining ring.
- Constructed in the same way as SR Range with case hardened body and ballpin.
- 40° angular movement.
- LH threads available.
- M5 Body is turned down to reduce weight.

IL Features

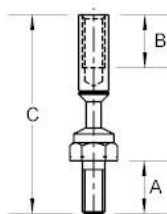
- Minimum end float.
- Good wear resistance.

Type No	Standard Thread	Body dia.	Ballpin A/F	Stud thread (A)	Dim. B	Dim. C
IL107GS	M5 or 10-32 UNF	11	9.5	11.1	11.88	18.5
IL107G	M6 or 1/4" UNF	11	9.5	14.3	11.88	24.58
IL108G	M8 or 5/16" UNF	12.7	11	17.5	13.48	28.57
IL109G	M10 or 3/8" UNF	15.9	12.7	22.2	17.46	34.92



DS Features

- Suitable for lighter 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



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Nylon Body

P

Description

- Body: Grey, Nylon 6 with MOS2 trace to ensure permanent lubrication.
- Ballpin: low carbon steel, zinc plated and trivalent gold passivated or SS303.
- M5 in three body lengths.
- RH and LH Threads available as standard for P8 x 25 and P8 x 31.



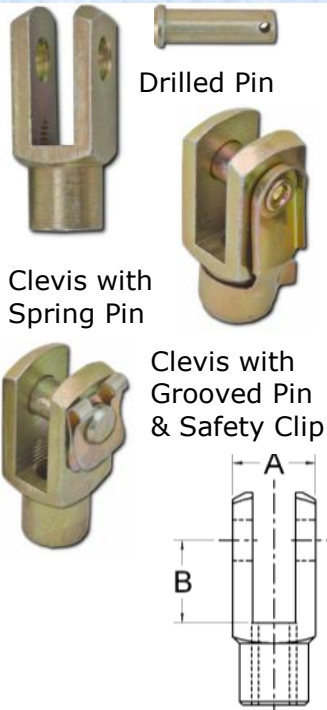
Features

- Light weight and low cost.
- Bodies can be supplied separately for fitting to pre-existing stud.
- Black and White bodies available to order (no MoS2).
- Stainless Steel Stud available.
- Studs with larger threads (M6, M8, 3/8 UNF) 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	

Clevis M, I & SY



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.
- We supply a range of clevis clips and pins to suit.
- M10, M12, and 1/2" UNF available to order.
- Stainless Steel Clevis available to order.

I type	Description	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/UNC	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	A	Pin Dia	B	Overall Length
M3 x 0.5	Short	8	4	8	21
	Long			8	21
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.

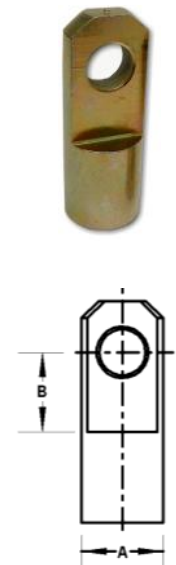


Rod Ends



Description

- Pictured right is our standard style of rod end (dimensions as in table).
- We make a variety of types in a range of materials including Nylon, Aluminium and Stainless steel. Please call for details.



Standard Thread	A dia.	Pin Hole Dia	B	Overall Length
M5 or 10-32 UNF	9.5	5.00 [3/16"]	8	25
M6 or 1/4" UNF	11.1	6.00 [1/4"]	9.5	31
M8 or 5/16" UNF	14.3	8.00 [5/16"]	13	38
M10 or 3/8" UNF	15.9	10.00 [3/8"]	15	45



Description

- We can also supply 'rose joint' rodends.
- We stock a range of metric sizes as standard and can source most sizes with a short lead time.
- Budget M10 Female available



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.

Assemblies LH/RH or RH/RH to a variety of patterns

- Assembled to customers requirements.



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 or spot lamp steadies.
- The content of a kit can be tailored to meet customer requirements.



Airline Couplings to BS AU 138b:2000

Tractor Couplings



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



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

Trailer Couplings



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



4003 (M22)
4031 (M16)
4015 (1/2")

The newer 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 iron plated to give at least 320hrs salt spray resistance.
- Sleeves are anodised aluminium as standard but Steel sleeves are also available.
- 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.
- Available in M22, M16 and 1/2" BSP.

Airline Couplings BS AU 138a:1980

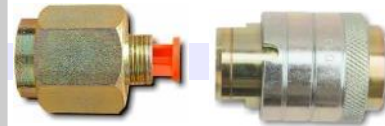
Tractor Couplings



3400 (1/2")
3771 (M22)

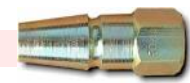


3501 (1/2")
3770 (M22)



3400 (1/2")
3771 (M22)

Trailer Couplings



3074 (1/2")
3733 (M22)



3397 (1/2")
3772 (M22)



3135 (1/2")
3774 (M22)

Auxiliary Line

Steel Sleeved Couplings

A robust alternative for shunting yards.



4004B (M16)



3397S (1/2")
3772S (M22)



Trailer C-Lock

Trailer C-Lock Ref: 4040

When in place this prevents the trailer from being coupled up. The lock sleeve is long enough to cover the male coupling preventing it from being unscrewed from the trailer. Each lock is supplied with two keys, which are tucked inside a plastic cap for transit.



- Compact, rugged and simple to operate.
- To fit remove key and push lock onto male.
- Matched sets of individually keyed units.
- 10,000 key combinations.
- Manufactured by us to our own design.
- Locks benefit from an occasional application of mineral oil to the inside.
- VOR red reflective label available.
- Other labels available in various colours and lettering to suit customer requirements.



Security Trailer C-Lock

As Standard lock with the addition of:

- Outer Sleeve is hardened for extra protection.
- High visibility red reflective label.

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.



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Airline Coupling Accessories

Dummy Couplings

- Secure stowage locations for couplings.
- Reduce damage to Suzi coils.
- Compact size.
- Male also available with chain attachment.



Female
Ref 4008



Male
Ref 4007
With chain
Ref 4035



Protective Cover

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



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 OEM.

Close up of indicator showing double band

