

# Just The Ticket Engineering Supplies

## Catalogue



**Tools and Materials for the Model Engineer**

**15 Hillside Drive,  
East Gomeldon,  
Salisbury,  
Wilts,  
SP4 6LF.**

**June 2017**

**[www.justtheticketsupplies.co.uk](http://www.justtheticketsupplies.co.uk)**

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# Just The Ticket Engineering Supplies

Just The Ticket Engineering Supplies is run by Roger Melton, a lifelong steam enthusiast and an active model engineer, railway enthusiast, railway operator, model traction engine owner and vintage railway carriage restorer of long standing, who will always do his very best to give you good service.

Just The Ticket is not VAT registered so does not add VAT to its prices or to postage and packing, and will always endeavour to minimise postal charges. I do not have a minimum order value.

Callers are welcome by appointment

## Payment

It is uneconomic for me to accept credit or debit cards at the present time. An invoice will be sent with your order and I ask that you pay by cheque upon receipt of the goods. I can also accept payment by Paypal (send payment to [JustTheTicketEng@gmail.com](mailto:JustTheTicketEng@gmail.com)) or by direct electronic transfer – my account details are listed on the invoice included with the goods. Paypal is expensive for me so I ask that you add 3% to your bill if paying by this method.

All goods remain the property of Just The Ticket until payment has been received and cleared.

If there is a problem with your order, please give me a call and I will endeavour to sort it out as quickly as possible.

## Prices

Prices shown are correct at the time of printing but can vary on an almost daily basis as new stock is delivered, therefore I reserve the right to amend the invoiced price to reflect any such increases. If prices vary significantly I will endeavour to contact you before dispatching the goods. In particular, the decline in the value of sterling versus the dollar has affected some items, notably the brass shapes, which come from the USA. The difference in price between older and newer stock may also explain apparent anomalies in the prices of outwardly similar items.

## Delivery

I always try to deliver as quickly as possible, but sometimes delays are inevitable, particularly when new stock has to be sourced. Imperial sizes of metals, particularly steel are becoming increasingly difficult to obtain so please bear with me if your order takes a little while to compile.

**Changes planned or in hand include a decision to stop stocking most sizes of steel because I have to hold large stocks but have a relatively low turnover – I still have large stocks of many sizes though, so please ask! I still stock a wide range of Phoenix-Precision Paints but haven't listed them in the catalogue. The cost of sending them by courier (Royal Mail will not accept them) is offputting to most people but I'll still have them available at exhibitions. If you want them by post, please call to discuss. Obviously, it makes sense to buy a few tins at a time to offset the cost of carriage, if going down that route.**

## Contact Details:

**E-mail:** [JustTheTicketEng@gmail.com](mailto:JustTheTicketEng@gmail.com) Web site [www.justtheticketsupplies.co.uk](http://www.justtheticketsupplies.co.uk)

**Phone:** 01980 610058

If trying to phone me, please bear in mind that the dog usually takes me for some exercise between 13.00 and 14.00! On the other hand, I'm not averse to receiving calls in the evening, if they're before 9pm.

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## SECTION A – MARKING, MEASURING AND HAND TOOLS

Zeus conversion tables		£ 6.50
Steel rules	-	
	6"/150mm	£ 1.99
	12"/300mm	£ 2.99
	24"/600mm	£ 4.99
Archimedian hand drill (ideal for drills under 1.0mm)		£ 5.00
Scribers – double ended (90deg)		£ 1.95
90 degree Engineers Squares	2"	£ 5.00
	3"	£ 5.75
	4"	£ 5.75
	6"	£ 5.00
	9"	£ 8.00
Engineering protractor	6"	£ 5.50
Dividers, inside/outside callipers	3"	£ 1.85
	4"	£ 2.15
	6"	£ 2.35
Toolmakers clamps	2"	£ 5.15
	2-½"	£ 5.85
	3"	£ 6.25
	4"	£ 8.45
<b>Layout blue</b>	100ml bottle	£ 3.25
<b>Spanners</b>		
BA Spanners -		
6ba combination spanner		£ 8.50
12 ba stainless steel combination spanner		£ 6.00
14ba stainless steel combination spanner		£ 6.00
16ba stainless steel combination spanner		£ 6.00
Budget open ended (forged, not pressed/stamped)		£18.00
Box spanners set, 0-10ba		£24.00
Miniature metric open ended 7pc spanner set, 3-5.5mm		£10.50
Small metric combination 10pc spanner set, 4-11mm		£10.50
<b>Hex Key sets</b>		
Metric- 7 piece 1.5-6.90 mm in folding holder		£11.15
Imperial – 7 piece 5/64" – 3/8" in plastic clip		£ 9.05
Mini locking pliers (make very useful temporary clamps)		£ 5.50
Pack containing 1 ea 100mm round nose & 1 x 125mm long nose		
Four piece pin chuck set		£ 7.80
Fibreglass burnishing pen		£ 4.70
(Ideal for cleaning up soldered joints in etched kits)		
Refill for fibreglass pen		£ 1.20ea
0.2mm oiler pen		£ 4.40ea

## SECTION B - MATERIALS

Priced per foot, except for gauge plate (18" lengths) and silver steel (13" lengths). \*\*sold by the inch, pro-rata \*lead, free cutting. Larger sizes are available but not necessarily list - please inquire.

<b>Round Bar</b>								
<b>Diameter</b>	<b>BMS†</b>	<b>Brass</b>	<b>PGMS</b>	<b>Sil. Steel</b>	<b>St. Steel</b>	<b>N. Silver</b>	<b>PB2*,**</b> <small>*Colphos 90</small>	<b>Copper</b>
1/32"					£0.70			
1/16"	£0.80	£0.70		£0.80	£1.60			
3/32"	£1.00	£1.00		£0.80	£1.35			
1/8"	£1.00	£1.00		£1.40	£1.40		£1.80	£1.80
5/32"	£0.80	£1.20		£1.05	£1.50			
3/16"	£0.80	£1.70		£2.10	£1.80	£2.50	£3.00	£2.50
7/32"	£1.50	£1.30			£5.50			
1/4"	£0.50	£2.00	£2.50	£3.00	£2.00			
5/16"	£0.60	£2.40	£2.50	£3.80	£2.00			
3/8"	£0.70	£2.80	£3.20	£5.05			£8.00*	
3/8" half round		£2.20						
7/16"	£0.50	£3.80	£3.95					
1/2"	£1.00	£4.50	£4.50	£9.60	£4.20	£9.30**	£8.50**	
9/16"	£1.30	£5.20	£5.80		£4.50			
5/8"	£1.50	£6.90	£6.45				£12.40**	
<b>3/4"</b>	<b>£3.60</b>	£9.80	£8.00	£9.20		£22.00**	£16.50**	
7/8"	£2.40	£13.20		£11.85**				
1"	£4.00	£18.00**		£14.60**			£28.00**	
1-1/4"		£25.00**						
1-1/2"	£6.50**	£32.00**						
1-3/4"		£48.00**						
2"		£60.00**						
2-1/4"		£80.00**						

**Sheet metal, priced per square foot – can be sheared/cut to your required sizes. Mm sizes are nearest equivalent**

<b>Thickness</b>	<b>BMS</b>	<b>Copper</b>	<b>N/silver</b>	<b>PB102</b>	<b>Tinplate</b>	<b>Brass</b>
10g (3.25mm)						£40.00
16g (1.5mm)	£18.00	£30.00	£18.00	£35.00		£26.50
18g (1.20mm)	£15.00	£24.00	£16.50			£18.00
20g (0.90mm)	£7.50	£18.50	£22.50	£16.60		£16.50
22g (0.70mm)		£17.50	£21.40			£12.00
24g (0.50mm)			£9.00			£10.70
26g (0.40mm)			£8.00		£4.50	£10.70
28g (0.35mm)			£8.00			£10.70

<b>Angle Size</b>	Per ft * Metric equivalent		**black steel		
	<b>Bright Steel</b>	<b>Brass</b>	<b>Bright Steel</b>	<b>Brass</b>	
1/4" x 1/4" x 1/16"		£2.00	1/2" x 1/2" x 1/8"	£4.50	£4.50
5/16" x 5/16" x 1/16"		£6.30	3/4" x 3/4" x 1/16"		£5.50
3/8" x 3/8" x 1/16"		£2.70	3/4" x 3/4" x 1/8"	£1.50**	£6.50
1/2" x 1/2" x 1/16"		£3.50	1" x 1" x 1/8"	£2.10*	£9.00
5/8" x 5/8" x 1/16"		£6.00	1-1/8" x 1-1/8" x 1/8"		£11.00*

Rectangular Bar	BMS	Brass	Gauge plate	Copper or (S/S)	Rectangular bar	BMS	Brass	Gauge plate	Copper
1/16" x 1/4"	£0.75	£1.35			1/4" x 1"	£1.40	£8.00	£9.70	
1/16" x 3/8"	£0.75	£1.25			5/16" sq	£0.75	£2.40		£5.00
	£1.00								
1/16" x 1/2"		£1.75	£5.30		5/16" x 1/2"	£0.95	£4.50		
1/16" x 3/4"	£0.65	£2.10	£5.55		5/16" x 1"	£1.75	£9.00	£10.35	
1/16" x 1"		£2.80	£5.40		5/16" x 1-1/2"	£2.40		£13.60	
1/16" x 1-1/2"		£3.40							
3/32" x 1/2"	£1.00				3/8" sq	£0.75	£4.20		
3/32" x 3/4"	£1.20				3/8" x 1/2"	£1.05	£6.00		
3/32" x 1"	£1.80				3/8" x 3/4"	£1.65	£8.50		
25mm x 2mm	£1.50								
1/8" sq	£0.60	£1.00			3/8" x 1"	£1.85	£10.20	£13.10	
1/8" x 3/16"		£1.25			3/8" x 1-1/4"	£2.35		£15.05	
1/8 x 1/4"	£0.90	£1.00			3/8" x 1-1/2"	£2.65		£17.10	
1/8" x 3/8"	£0.75	£1.40			7/16" sq	£1.80	£6.00		
1/8" x 1/2"	£1.60	£1.70	£6.40	£2.50(s/s)	1/2" sq	£2.00	£8.50		
					1/2" x 3/4"	£4.00	£11.90		
1/8" x 5/8"	£0.45	£2.20	£6.70		1/2" x 1"	£4.60	14.90	£15.65	
1/8" x 3/4"	£0.65	£2.50	£7.15		5/8" sq	£4.50	£9.85		
					5/8" x 3/4"	£5.40			
1/8" x 1"	£1.15	£3.60	£7.75		3/4" sq	£6.00	£13.30**		
1/8" x 1-1/4"	£1.25	£4.50	£8.20		1" sq	£8.50	£22.50**		
1/8" x 1-1/2"	£1.35		£8.90		1" x 3/4"		£18.00**		
1/8" x 2"	£3.00	£6.00	£13.40		1-1/4" sq		£45.00**		
3/16" sq	£0.45	£1.80		£3.00	1-1/2" sq		£58.00**		
3/16" x 1/4"	£0.65	£2.20							
3/16" x 3/8"	£3.00	£3.10							
3/16" x 1/2"	£0.80	£3.80	£7.20						
3/16" x 5/8"	£0.95	£4.20							
3/16" x 3/4"	£0.85	£4.70	£7.25						
3/16" x 1"	£1.00	£4.80	£8.10						
3/16" x 1-1/4"	£1.45		£9.40						
3/16" x 1-1/2"	£1.55		£10.10						
1/4" sq	£0.40	£1.85		£4.00					
1/4" x 1/2"	£1.25	£4.20	£9.30						
1/4" x 5/8"	£1.25	£4.40	£10.00						
1/4" x 3/4"	£1.25	£6.50	£8.30						
1/4" x 1"	£1.40	£8.00	£9.70						

### Hexagon

AF	Steel	Brass	Bronze/ Colphos
5/32"	£0.60	£1.50	
4mm/5mm		£2.00	
3/16"	£1.80	£2.00	
7/32"	£0.90	£2.40	
1/4"	£0.25	£3.00	£4.00
5/16"	£0.43	£3.50	£5.80
3/8"	£0.45	£4.00	£7.10
7/16"	£0.90	£5.25	£13.50
1/2"	£1.00	£8.30	£15.50
9/16"		£6.30	
3/4"		£15.10	

### Hexagon—BA sizes

	Steel	Brass
2	£1.15	£2.50
3	£0.80	£2.80
4	£0.50	£2.30
5	£1.70	£1.20
6	£0.75	£1.20
7	£2.50	
8	£0.70	£1.20
10	£0.70	£1.00
12	£0.70	£1.80

**BA hexagon sizes are obsolescent and it may be necessary to substitute the nearest metric equivalent in some sizes**

Most 3/32" sizes are obsolete and are no longer listed by the major steel stockists. I still have some oddments, and can still get it sheared from plate for wider requirements, please inquire. Otherwise, the nearest metric equivalent is 2.5mm and can be obtained to order.

#### Cast Phosphor bronze (SAE 660, free machining)

Cut from 3" square x 10ft bars, so any size to order from this!

**But** – please be aware that the price of bronze has shot up in recent times and prepare yourself for a shock!

Square silver steel: 3/32" £3.20 per 13" length

1/8" square silver steel is virtually obtainable but I do have a small stock at £6.00 per 13" length.

## MATERIALS - TUBE

All priced per foot ; \*\* sold by the inch, pro rata

Dia	<u>Gauge</u>	<u>Brass</u>	<u>Gauge</u>	<u>Copper</u>	<u>Dia</u>	<u>Gauge</u>	<u>Brass</u>	<u>Gauge</u>	<u>Copper</u>
1/16"			26	£1.60	7/8"	18	£4.70	20	£4.30
3/32"	24	£1.90 £3.20	24	£1.60	1"			10	£24.00**
1/8"	24		24	£1.60	1-1/2"	18			£10.50**
5/32"			24	£1.60	1-3/4"			20	£18.00**
3/16"	22	£1.10	20	£1.60	1-7/8"		£27.00**	20	£13.00**
1/4"	22	£1.50	20	£1.80	2"	18	£12.00	20	£19.50**
5/16"			20	£2.20				16	£18.00**
3/8"	20	£2.50	20	£2.40	2-1/8"			18	£16.20**
1/2"	20	£1.95	18	£4.00	2-1/4"	16	£40.00**	16	£20.50**
1/2" sq	20	£3.50				20	£20.00		
5/8"			20	£4.70	2-3/8"			16	£26.40**
3/4"	18	£4.50	20	£5.00	2-1/2"	16	£19.50**		
					2-5/8"			16	£30.00**
3/4" sq	18	£6.00			3"	18	£18.40**	16	£25.00**

**Stainless steel tube** - 3/32" OD - 6.00/ft 1/8" OD - £6.00 per ft; 1/2" OD - £6.50 per ft.

1-7/8" copper tube for electric loco boilers (**NOT SUITABLE FOR BOILERMAKING!**) - £4.50/ft; 1" x 1-1/2" x 16g brass tube (for gas tanks) £60.00/ft

## MATERIALS - BRASS STRIP & SECTIONS

Milled, not extruded, brass sections. Priced per nominal yard. The recent fall in the value of sterling following the Brexit vote has pushed some prices up as new stock has come in – don't blame me!

	<u>1/32"</u>	<u>1/16"</u>	<u>3/32"</u>	<u>1/8"</u>	<u>5/32"</u>	<u>3/16"</u>	<u>1/4"</u>	<u>5/16"</u>	<u>3/8"</u>	<u>1/2"</u>
<b>1/64" strip</b>	£2.25	£2.70	£2.90	£3.50		£3.50	£3.25	£4.00 £4.40	£4.35	£5.00
<b>1/32" strip</b>		£2.60	£2.80	£3.80		£3.40	£3.75		£4.75	£5.40
<b>1/16" strip</b>				£7.50		£9.00	£4.05	£4.40	£5.15	
<b>Angle</b>	£5.35	£8.50	£10.80	£13.00	£13.00	£12.50	£11.10	£12.50	£12.90	
<b>T section</b>	£5.70	£7.50	£9.70	£13.00	£11.50	£13.00				
<b>Channel</b>		£7.50	£7.50	£10.80		£8.50	£13.00	£13.00		£13.50
<b>H section</b>	£7.50	£7.50	£7.50	£11.50	£11.50	£11.50				
<b>Square channel</b>	£7.00	£6.60	£7.50	£9.20	£10.00	£10.00	£12.50	£12.50	£14.50	£15.50
<b>I section</b>		£7.50	£7.50	£10.50		£13.80				
<b>Z section</b>	(3/64") £5.50	£5.50	£5.80	£5.80	£7.50	£8.40		£9.70		
<b>Square</b>	£2.50	£2.50	£4.90		£4.25					
<b>Half round</b>		£1.90								
<b>.006" tube</b>	£8.00	£5.30	£6.00	£4.65	£4.65	£6.95				
<b>.014" tube</b>		£3.35	£4.70	£4.65	£6.00	£5.95	£6.00	£7.00	£7.50	(13/32") £12.80
<b>.028" tube</b>				£3.70		£5.95	£6.55	£7.30	£8.55	
<b>.014" square tube</b>		£3.90	£4.40	£5.80	£6.10	£6.30	£7.50			
<b>.028" square tube</b>							12.90	£9.40	£14.20	£19.60
				(1/8 x 1/4)	(5/32 x 3/16)	(3/16 x 3/8)				
<b>.014" Rectangular tube</b>				£9.80	£10.20	£10.50				

## PIANO & BRASS WIRE

Price per yard

<u>Gauge</u>	<u>Diameter</u>	<u>Piano Wire</u>	<u>Brass Wire</u>
36g	.008"	**	£1.00
33g	.010"	**	£1.00
30g	.012"	**	£1.00
28g	.015"	**	£1.90
25g	.020"	£1.00	£1.20
23g	.024"	£1.00	£1.50
1/32"	.032"	£1.0	£1.50
19g	.040"	£1.40	£2.00
18g	.048"	£1.00	£2.00
17g	.056"	£1.00	£2.00
1/16"	.0625"	£1.00	£2.00
5/64"	.078"	£1.50	
3/32"	.094"	£1.50	£3.00
1/8"	.125"	£1.50	£3.00
5/32"	.156"	£2.00	£3.60
3/16"	.1875"	£2.50	£3.60
7/32"	.219"	£3.00	£3.90

## SPRINGS

<u>Cat. No.</u>	<u>Free Length</u>	<u>ID mm</u>	<u>OD mm</u>	<u>Solid length</u>	<u>Load at solid length (g)</u>	<u>Material</u>
F470	14	3	3.5	3.3	280	CS
F471	12	2.2	2.9	4.5	200	CS
F472	13	4.2	5.2	5.1	310	CS
F473	12	2.7	3.4	3.4	290	CS
F474	14	2.5	3.5	5.1	1100	CS
F475	19	4.6	5.4	4.1		CS
F476	8	3.5	4.5	3.3		SS
F477	7	3.5	4.5	3.1		SS
F478	10	2.2	3	4.5	300	SS
F479	8	2.4	3.5	3.8	500	SS
J480	0.375"	0.074"	0.098"	0.12"	300g	PB
J481	11	2.5	2.7	4	500g	SS
J482	10	3.0	3.5	4		CS
J483	15	3.0	3.5	6		CS
J484	35	3.7	5.0	10		SS

CS – Hard drawn carbon steel

SS – Hard drawn austenitic stainless steel

PB- Phosphor bronze.

All stainless steel springs are suitable for safety valves and other steam fittings where there is contact with water.

Carbon steel springs are £0.20 each, stainless steel are £0.80 each (J480/481 = 10p ea)

### **Cast Iron**

Most sizes to order at the moment. I keep a selection of offcuts available —please ask if there is a particular size you require.

## SECTION C - CUTTING TOOLS

### DRILLS

#### **Metric**

HSS set:	1-13mm x 0.5mm, 29 piece in metal case	£22.40
HSS set:	1-10mm x 0.5mm, 19 piece in metal case	£12.50
HSS set	1-10mm x 0.1mm, 91 piece in metal case	£42.00

#### *Individual*

Individual drills are available in 0-05mm increments from 0.8mm to 5.0mm, and in 0.1mm increments from 5.0mm to 13mm

0.8 - 6.45mm :	1.05ea	6.5 – 7.5mm :	£1.50ea	7.5 – 9.5mm :	£2.20ea
9.5 – 10.5mm :	£2.90ea	10.5 – 13.0mm :	£5.20ea		

#### **Imperial**

HSS set:	1/16"-1/4"	13 piece in dial case	£ 8.60
HSS set:	1/16"-1/2" x 1/64"	29 piece in metal case	£23.00

#### *Individual*

Individual drills are available in 1/64" divisions, 1/32"-1/2"

1/32" – 15/64" :	£1.05ea	1/4" – 19/64" :	£1.50ea	5/16" – 23/64" :	£2.30ea
3/8" – 27/64" :	£3.00ea	7/16" – 1/2" :	£4.60ea		

#### **Number/Letter**

HSS set:	1-60, 60 piece in metal case	£36.00
HSS set	61-80, 20 piece in cardboard pack	£ 8.20
HSS set:	A-Z, 26 piece in metal case	£25.85

#### *Individual*

All individual number drills (1-80) £1.20ea. All letter drills (A-Z) £3.00 ea

**All the above prices are for reasonable quality drills. I can get top quality drills for those that want them, but they are typically around 3X the price.**

#### **Centre Drills**

BS1 : £1.75; BS2 : £1.75; BS3 : £2.25; BS4 : £2.60; BS5 : £3.40 Set, BS1-5 : £10.00

#### **Stub Drills** (in ba tapping sizes, ea)

6ba (2.3mm) : £2.20; 8ba (1.8mm) : £2.20; 10ba (1.4mm) : £2.20; 12ba (1mm) : £2.20  
3/32" : £1.00 (useful as small centre drills)

#### **Countersinks**

90deg, 1/4" or 3/8" shank : £4.60ea ; 4.3mm diameter : 4.60 ea.

#### **Hand Reamers**

##### **Imperial**

Set of 8, 1/16" – 1/2" £43.00

*Individual Reamers*, 1/32" increments, straight or taper shank

1/16" – 9/32" : £12.00; 5/16" – 31/64" : £15.00; 1/2" – 39/64" : £18.600  
5/8" – 47/64" : £22.40 3/4" – 1" : £31.80

##### **Metric**

Set of 8, 1.5-12.5 £43.00

*Individual reamers*, 0.5mm increments, straight or taper shank

1-5mm – 7.5mm : £12.90; 8.0mm – 11.5mm : £16.40; 12.0mm – 13.5mm : £21.00

Tapered hand reamer (useful for easing bearing holes in frames etc) 5mm-12mm £5.50

## TAPS & DIES

Tap & die sets in case; 2 taps & 1 die per size, inc. tap wrench & die stock

	<i>Carbon steel</i>	<i>High Speed steel</i>
0-10ba	£63.60	£97.40
0-12ba	£76.90	£107.60
0-9ba, odds or evens	£35.90	N/A
ME: 1/8" -1/4" x40, 9/32-3/8" x 32	£63.60	N/A
Metric coarse & fine to special order		

### Individual Taps & Dies

Priced as carbon steel unless otherwise stated, please inquire for HSS prices. (All other threads available to order in LH or RH, carbon steel or HSS – please call with your requirements.) \*HSS as standard

<i>BA</i>	<i>Taps</i>	<i>Dies</i>	<i>ME x 40</i>	<i>Taps</i>	<i>Dies</i>
0-8*	£6.50*	£4.90 (£13.50*)	1/8" – 1/4"	£4.90	£4.10
9/10	£9.00*	£4.90 (£13.50*)	9/32" – 5/16"	£4.60	£5.15
12	£18.00*	£7.90 (£22.50*)			
14	£27.00*	£30.00 (£30.00*)	3/8" – 1/2"	£4.60	£5.15
16	£36.00*	£18.00 (£54.00*)			

c/s taps available: £2.90ea for 0-8 ba £3.00 for 9/10ba; available in smaller sizes as well but not recommended

<i>ME x 32</i>	<i>Taps</i>	<i>Dies</i>	<i>ME x 26</i>	<i>Taps</i>	<i>Dies</i>
5/32" – 3/16"	£4.90	£4.60	1/8" – 3/16"	£4.50	£6.05
1/4" – 3/8"	£4.50	£5.05	1/4" – 5/16"	£4.50	£5.05
7/16"					
– 1/2"	£5.15	£5.65	3/8" – 1/2"	£5.15	£5.65

### **LH Thread**

7ba - Tap: £4.65, Die: £10.20    8ba - Tap: £4.65, Die: £10.20

**M5 x 0.5 (for Aster boiler fittings)**    hss taps £12.50, hss dies £21.00

**Diestock holders:**    13/16" od - £3.20; 1" od - £4.20

**Tap wrenches:**    0-12ba - £3.00; 1/16" - 1/2" - £4.30

### **Parting Off Tools and Blades**

	5/16"	1/2"	3/4"
Parting off holders	£12.00	£12.00	£12.00
Blades	£7.50	£7.50	£10.00

### **HSS Toolbits (square or round):**

1/8", 3/16" - £2.10ea;    1/4", 5/16" - £2.35ea;    3/8" - £3.10ea

### **D bits HSS**

Set of 7, 1/8" – 1/2"    £35.9

Individual D bits, size as above    £ 6.00ea

**Some sizes of D bits are now difficult to obtain, but a slot drill can be a more versatile alternative for some purposes.**

### **Slot Drills & End Mills**

1/16" – 1/4" - £6.00ea    5/32"-7/16" - £7.90ea    1/2" -9/16" - £9.80ea

### **Slitting Saws & Arbors**

Saws    1-3/4" dia x 1"bore (up to 3/16" wide)    £ 6.00 ea    (please specify width required)

Arbors    1/2" shank    £10.80

## SECTION D - FASTENERS

### Taper Pins

Mild steel, metric : tapered 1/50; imperial tapered 1/48.  
Size is measured from small end. Price per 10.

2mm x 12	£2.50		
2mm x 16	£3.00	1/16" x 1/2"	£3.50
2.5mm x 25	£2.50	3/32" x 1 1/2"	£4.25
3mm x 30	£4.20	1/8" x 1"	£2.90
4mm x 30	£2.90	5/32" x 1 1/4"	£4.25
5mm x 40	£3.00	3/16" x 2"	£4.30
6mm x 40	£3.20		

**Split Pins** Zinc plated carbon steel.

<i>Dia</i>		<i>Length</i>	<i>Per 10</i>	<i>Per 20</i>
1/32"	stainless st.	1/4"	£1.50	£2.90
1/32"		3/4"	£1.20	£2.10
3/64"		3/8"	£1.20	£2.10
3/64"		1"	£1.20	£2.10
1/16"		1"	£0.40	£0.65
5/64"		1-1/4"	£0.50	£0.85
3/32"		1-1/2"	£0.60	£1.00
1/8"		1-3/4"	£0.75	£1.20
5/32"		2"	£1.00	£1.70

### Loctite Adhesive (\*Bondloc)

	Per 10ml bottle
222 Low strength, threadlocking	£8.90
243 Medium strength thread locking and sealant	£8.90
270 High strength thread locking (oil tolerant)	£8.90
290 Medium strength capillary action threadlocker	£8.90
603* High strength, low viscosity bearing retainer (replaces 601)	£7.90
638* High strength bearing fit (for looser fits)	£7.90
641 Medium strength bearing fit (allows dismantling)	£8.90
542 Pipe thread sealer	£8.90
<b>648* High temp, high strength retainer</b>	<b>£7.90</b>

### Miscellaneous Fixings

50g Foliac jointing compound	£5.00	
Medium/high viscosity/gel superglue	£3.75 (20ml bottle)	
6ba 1/2" stainless allen socket cap screw	£0.65 ea	
8ba x 5/16" or 1/4" HT allen socket cap screws	£4.00 per 10	
6ba x 3/8" HT allen socket cap screws:	£2.50 per 10	
6ba x 1/2" HT allen socket c/s screw	£4.00 per 10	
4ba x 3/16" HT allen socket c/s screw	£6.00 per 10	
5/32" x 3/4" steel rivet	£2.00 per 50	£3.50 per 100
Miniature countersunk brass woodscrews:		
No. 0 x 1/4"	Pk 20	£6.00
No. 1 x 1/4" or 1/2" , No. 2 x 1/2"	Pk 20	£5.00
Fine brass chain (15 links per inch):	£3.75 per yard (ideal for model load-securing chains)	
40 mesh brass gauze	£4.50 per 6" square	
1/4" Or 3/8" external circlip	£0.60 ea	

**FIXINGS (smaller quantities pro-rata +20%) (sh = 1 size smaller head)**

<b>Hex head Steel</b>	<b>Per 50</b>	<b>Per 100</b>	-	<b>Per 50</b>	<b>Per 100</b>
2ba x 1/2"	£2.40	£4.40	8ba x 3/8"	£5.40	£10.20
2ba x 3/4"	£2.40	£4.40	8ba x 3/8" (s/h)"	£7.70	£14.60
2ba x 1"	£2.40	£4.40	8ba x 1/2"	£5.40	£10.20
4ba x 1/2"	£4.00	£7.60	8ba x 1/2" (s/h)	£5.25	£9.90
4ba x 3/4"	£2.40	£4.40	8ba x 3/4" (s/h)	£8.80	£16.70
4ba x 1"	£8.00	£15.20	8ba x 1"	£6.30	£11.30
5ba x 1/2" (std or s/h)	£5.80	£11.00	8ba x 1" (s/h)	£7.10	£13.50
5ba x 1"	£6.30	£11.30	9ba x 1/2"	£7.10	£13.50
6ba x 1/4", (std or sh)	£6.50	£11.50	10ba x 3/8"	£5.10	£9.40
6ba x 1/2"	£5.10	£9.40	10ba x 1/4" (std/ sh)	£6.80	£12.40
6ba x 11/16"	£4.80	£8.80	10ba x 1/2" (std/sm)	£6.25	£11.90
6ba x 1"	£5.10	£9.40	10ba x 3/4"	£6.50	£11.50
7ba x 1/2" or 1"	£5.10	£9.40	12ba x 3/16""	£6.00	£11.40
8ba x 3/16"	£3.50	£6.70	12ba 1/4"	£6.50	£11.50
8ba x 1/4"	£5.80	£11.00	12ba x 3/8"	£6.90	£13.00
8ba x 1/4" (sh)	£5.40	£10.20	12ba x 1/2"	£6.50	£11.50
<b>Countersunk Steel</b>			8ba x 1"	£5.40	£10.25
4ba x 1/2"	£2.40	£4.40	10ba x 1/8"	£4.00	£7.50
5ba x 1/2"	£5.80	£11.00	10ba x 1/4"	£3.50	£6.70
5ba x 1"	£4.80	£8.80	10ba x 1/2"	£4.50	£8.10
6ba x 1/4"	£4.00	£7.60	10ba x 3/4"	£6.70	£12.10
6ba x 1/2"	£5.40	£10.00	12ba x 1/4"	£3.50	£6.70
7ba x 1/2"	£4.80	£8.80	12ba x 3/8"	£5.50	£10.10
8ba x 3/16""	£4.00	£7.50	12ba x 7/16"	£4.00	£7.50
8ba x 1/4"	£4.00	£7.50	12ba x 1/2"	£4.50	£8.10
8ba x 5/16"	£4.00	£7.50	14ba x 1/4"	£4.50	£8.10
8ba x 1/2"	£3.80	£7.20	14ba x 1/2"	£6.10	£10.80
<b>Round Head Steel</b>			8ba x 1/4"	£4.00	£7.60
4ba x 1/2"	£2.40	£4.40	8ba x 1/2"	£2.80	£4.80
5ba x 1/2"	£2.40	£4.40	10ba x 1/4"	£4.40	£7.90
6ba x 1/2"	£2.40	£4.40	10ba x 1/2"	£4.80	£8.80
7ba x 3/4"	£6.10	£10.80	12ba x 3/8"	£4.00	£7.60
8ba x 3/8" c/s	£6.00	£11.10	10ba x 1/8"	£3.50	£6.70
<b>Cheese Head Steel</b>			10ba x 1/4"	£3.80	£7.20
2ba x 1/2"	£2.40	£4.40	10ba x 5/16"	£3.50	£6.70
2ba x 1"	£3.20	£5.70	10ba x 3/8"	£3.20	£5.70
4ba x 1/2"	£2.40	£4.40	10ba x 1/2"	£3.50	£5.00
5ba x 1/8"	£3.20	£5.70	10ba x 1-1/2"	£5.50	£10.10
5ba x 1/2"	£2.40	£4.40	12ba x 1/8"	£2.60	£5.00
6ba x 1/2"	£4.80	£9.00	12ba x 3/8"	£4.40	£7.90
6ba x 1/2"	£4.80	£9.00	12ba x 1/4"	£3.20	£5.70
7ba x 1/2"	£4.80	£9.00	12ba x 1/2"	£3.60	£6.80
7ba x 1-1/4"	£6.50	£11.50	12ba x 1-1/4"	£6.70	£12.10
8ba x 1/4"	£3.50	£6.70	14ba x 1/4"	£3.80	£7.20
8ba x 5/16"	£3.50	£6.70	14ba x 1/2"	£6.10	£10.80
8ba x 1/2"	£4.50	£8.50	16ba x 1/4"	£4.40	£7.90
8ba x 1"	£5.50	£9.90			
9ba x 3/8"	£4.80	£9.00			

<b>Hexagon Head</b>				
<b>Brass</b>	Per 50	Per 100		
5ba x 3/4"	£7.00	£12.60	10ba x 1/2"	Per 50 £9.40
6ba x 3/4"	£7.00	£12.60	12ba x 3/16"	Per 100 £17.80
8ba x 1/2"	£7.80	£14.00	12ba x 1/4"	£8.00
10ba x 3/4"	£7.80	£14.10	12ba x 1/4"	£9.40
			14ba x 1/4"	£14.50
				£26.50
<b>Cheese Head</b>				
<b>Brass</b>			10ba x 3/16"	£3.40
4ba x 3/4"	£2.40	£4.40	10ba x 1/4"	£5.70
5ba x 3/4"	£2.00	£4.40	10ba x 5/16"	£4.00
5ba x 7/8"	£6.00	£11.00	10ba x 7/16"	£3.20
6ba x 1/2"	£6.00	£11.00	10ba x 3/4"	£4.40
6ba x 5/8"	£6.00	£12.00	10ba x 1"	£5.50
7ba x 1/2"	£5.50	£10.10	10ba x 1-1/2"	£7.80
8ba x 1/8"	£4.40	£7.90	12ba x 1/8"	£8.50
8ba x 1/4"	£4.40	£7.90	12ba x 1/4"	£4.80
8ba x 5/16"	£6.00	£11.40	12ba x 1/2"	£4.40
8ba x 1/2"	£4.50	£8.50	12ba x 3/4"	£3.20
8ba x 9/16"	£4.50	£8.50	14ba x 3/8"	£6.00
8ba x 1-1/4" or 1-1/8"	£5.50	£10.10	14ba x 1/2"	£10.40
9ba x 1/8"	£5.50	£10.10	16ba x 1/4"	£7.70
10ba x 1/8"	£2.80	£4.90	16ba x 1/4"	£14.70
				£27.00
				£27.00
<b>Round Head</b>				
<b>Brass</b>			10ba x 3/8"	£2.70
4ba x 1"	£3.20	£5.70	10ba x 7/16"	£4.60
6ba x 1/4"	£4.00	£7.50	10ba x 1/2"	£4.40
6ba x 1/2"	£4.50	£9.00	10ba x 3/4"	£3.70
6ba x 3/4"	£2.20	£3.70	10ba x 1-1/4"	£7.00
8ba x 1/8"	£4.40	£7.90	12ba x 1/8"	£6.00
8ba x 1/4"	£4.00	£7.50	12ba x 1/8"	£4.40
8ba x 1/2"	£4.80	£9.00	12ba x 3/16"	£4.40
10ba x 1/8"	£4.00	£7.20	12ba x 3/8"	£4.80
10ba x 1/4"	£4.80	£9.00	12ba x 1/2"	£4.40
			14ba x 1/4"	£4.80
				£9.00
				£6.00
				£11.00
<b>Countersunk</b>				
<b>Brass</b>			10ba x 1/4"	£3.50
4ba x 3/4"	£2.50	£4.50	10ba x 3/8"	£6.70
5ba x 1/2"	£5.40	£10.00	10ba x 7/16"	£3.50
6ba x 1/2"	£4.00	£7.20	10ba x 1/2"	£6.80
7ba x 1/2"	£5.50	£10.10	10ba x 1/2"	£3.80
8ba x 1/8"	£4.00	£7.50	10ba x 5/8"	£5.40
8ba x 3/16"	£3.00	£5.70	10ba x 1-1/8"	£3.50
8ba x 1/4"	£4.00	£7.20	12ba x 1/8"	£6.00
8ba x 1/2"	£4.00	£7.20	12ba x 1/8"	£4.50
8ba x 3/4"	£4.80	£8.60	12ba x 1/4"	£8.00
8ba x 1-1/8"	£6.00	£11.00	12ba x 3/4"	£4.80
9ba x 3/16"	£9.90	£18.5	14ba x 1/4"	£5.40
10ba x 1/8"	£4.00	£7.60	14ba x 1/2"	£5.40
				£6.90
				£13.10

**BA NUTS & WASHERS**

<b>Size</b>	<b>Steel</b>		<b>Steel Washer</b>		<b>Brass Nut</b>		<b>Brass Washer</b>	
	<b>Nut</b>		<b>x50</b>	<b>x100</b>	<b>x50</b>	<b>x100</b>	<b>x50</b>	<b>x100</b>
	<b>x 50</b>	<b>x 100</b>						
2ba	£2.00	£3.80	£1.00	£1.80	£4.75	£9.00	£0.60	£1.10
4ba	£2.70	£5.10	£1.50	£1.60	£2.70	£5.10	£1.50	£2.70
5ba	£2.70	£5.10	£1.00	£1.80	£2.40	£4.35	£2.70	£5.10
6ba	£2.70	£5.10	£1.50	£2.70	£3.80	£7.00	£2.70	£5.10
7ba	£5.00	£9.00	£2.50	£4.30	£10.10	£19.00	£3.50	£6.80
8ba	£3.50	£6.85	£1.50	£2.70	£3.50	£6.85	£2.70	£5.10
9ba	£7.50	£14.20	£2.50	£4.30	£10.10	£19.00	£3.50	£3.60
10ba	£6.50	£12.40	£2.00	£3.60	£4.50	£8.50	£2.70	£5.10
12ba	£6.50	£12.40	£3.50	£6.85	£5.50	£10.50	£3.80	£7.00
14ba	£6.00	£11.40	£2.50	£4.30	£6.50	£12.30	£6.50	£12.40
16ba	N/A	N/A	N/A	N/A	£12.00	£22.00	£3.20	£5.80

**Stainless Steel Nuts and Screws**

<b>size</b>	<b>C/H Screws</b>	<b>C/S Screws</b>	<b>Nuts</b>
10BA X 3/16	£0.16	£0.25	£0.20
10BA X 1/4	£0.25	£0.25	
10ba x 1/2"	£0.25	£0.25	
10ba x 3/4"	£0.25	£0.25	
8BA X 3/8	£0.15		£0.20
8ba x 9/16"	£0.15		
8BA X 3/4	£0.15		
6BA X 1/2	£0.20		£0.15
6BA X 3/4 C/S		£0.25	
6BA X 1" C/S		£0.25	
6ba x 9/16"	£0.20		
6BA X 1 1/4"	£0.20		
6BA X 1 3/8" C/S		£0.20	
4BA 7/16	£0.15		£0.15
4BA X 1"		£0.25	
4BA x 1-1/8"r/h	£0.25		
2BA X 1 1/2"	£0.35		£0.15

**Studding (per ft)**

**Grub screws (each)**

	<b>Steel</b>	<b>Brass</b>			<b>2 screws 1 key</b>
2ba	£1.30	£2.65	2ba x 1/2"	£0.15	£0.50
4ba	£2.50	£3.95	4ba x 5/16"	£0.35	£0.80
5ba	£3.00	£4.50			
6ba	£4.20	£5.10	6ba x 3/16" or 1/4"	£0.40	£1.80
7ba	£6.50	£7.50	Hex keys	£1.20	
8ba	£7.00	£8.90	6ba steel slotted	£0.20	£1.50 per 10
10ba	£12.00	£11.50		£0.20	
			8ba steel slotted	£0.20	
			4ba x 1/4" brass slotted	£0.20	
			10ba x 1/8" brass or steel slotted	£0.20 (£1.50 per 10)	

Grub screws (each)

<b>Rivets (Per 100)</b>				
<u>Snap head</u>	<u>Copper</u>	<u>Brass</u>	<u>Steel</u>	<u>Snaps</u>
1/32" x 1/8"	£7.30	£7.50		£7.30
1/32" x ¼"	£7.50	£5.90		£5.10
1/32" x 3/8"	£7.50	£7.50		
3/64 x 1/4"	£5.90	£7.50		£6.00
1/16" x 1/4"	£7.50	£5.90		
1/16" x 3/8"	£5.90	£10.00	£4.50	
1/16" x 1/2"	£5.90		£4.00	£5.10
3/32" x 3/8"	£3.00		£2.50	£6.20
1/8" x 1/2"	£3.40		£3.20	
1/8" x 3/4"				
1/8" x 1"	£6.60		£4.00	£6.20
5/32" x ¾"			£3.50	£7.00
3/16" x 1/2"			£4.00	
3/16" x 3/4"			£5.00	
3/16" x 1"				
<b>Countersunk</b>				
1/32" x 3/8"		£7.30		
3/64" x 3/8"		£7.30		
1/16" x 1/2"		£7.30		

**Miscellaneous Washers**

<u>Copper</u>	<u>Ea</u>	<u>Red Fibre</u>	<u>Each</u>	<u>Aluminium</u>	<u>Each</u>
3,4,5,6mm id.	£0.30	3/32"-3/8" id.	£0.15	3/16"-1/2" id.	£0.10
8,10mm id.	£0.15				
12mm id	£0.20				

**SECTION E – STEAM FITTINGS**

**Pressure Gauges**

½" pressure gauges 0-80, 0-100, and 0-120 psi, all at £34.00 ea. All have 5ba tail complete with union & nut

¾" pressure gauges 0-80, 0-100, 0-120 and 0-150 psi, all at £29.00 ea. All have 3/16" x 40tpi tail complete with union & nut.

1" pressure gauges 0-80, 0-100, 0-120 and 0-150 psi, all at £29.00 ea. All have 3/16" x 40tpi tail complete with union & nut.

Spare nut & cone for either size: £2.50

**Stainless Steel and Phosphor Bronze Balls**

Size	1/16"	3/32"	1/8"Ø	5/32"Ø	3/16"Ø	7/32"Ø	¼"	5/16"Ø	3/8"	7/16"	½"
Stainless ea.	£0.20	£0.20	£0.25	£0.20	£0.25	£0.25	£0.40	£0.45	£1.00	£1.90	£1.90
Per 10	£1.65	£1.65	£2.20	£1.65	£2.00	£2.00	£3.40	£4.00			
PB each	N/A	£0.35	£0.35	£0.55	£0.35	£0.65	£0.75	N/A	£0.75	£1.40	£2.50
PB per 10	N/A	£3.00	£3.00	£5.00	£3.00	£6.75	£7.90	N/A			

## Viton Balls

Nitrile balls have been available for some time, but they are somewhat limited in their maximum operating temperature. This is well exceeded by Viton, making them slightly harder but not so hard as PB or stainless. If you are having trouble getting your valves to seal, these could be the answer! Now available in 1/8" at £2.70 each, or 5/32" and 3/16" at £1.50 each. Other sizes will be stocked if there is demand.

## Unions, Union Nuts & Cones

<i>Tube Diameter</i>	<i>Nuts/Cones</i>		<i>Double unions complete</i>		<i>Tees complete</i>	
	<i>Thread/Price ea.</i>		<i>Thread/price ea</i>		<i>Thread/price ea</i>	
1/16"	3/16 x 40	£0.50	3/16 x 40	£4.00	3/16 x 40	£4.70
3/32"	3/16 x 40	£0.50	3/16 x 40	£4.00	3/16 x 40	£4.70
1/8"	¼ x 40	£0.65	¼ x 40	£4.40	¼ x 40	£5.50
5/32"	¼ x 40	£0.65	¼ x 40	£4.40	¼ x 40	£5.50
3/16"	5/16 x 32	£0.70	5/16 x 32	£5.00	5/16 x 32	£7.50

1/16" M5 x 0.5 nuts £0.70 (for either 1/16" or 3/32 cones)

**Banjos:** 3/16" x 40, 1/4" x 40 or ¼" x 32 : £4.00ea

## O Rings

Both silicone and Viton O rings are available, silicone are more expensive but have better temperature resistance and are easier to fit.

<u>Code</u>	<u>ID</u>	<u>OD</u>	<u>Thickness</u>	<u>Viton ea</u>	<u>Silicone ea</u>
BS002	3/64"	9/64"	3/64"	n/a	£0.60
BS003	1/16"	3/16"	1/16"	£0.25	£0.75
BS004	5/64"	13/64"	1/16"		£0.60
BS005	3/32"	7/32"	1/16"	£0.25	£0.75
BS006	1/8"	1/4"	1/16"	£0.25	£0.75
BS007	5/32"	9/32"	1/16"	£0.25	£0.60
BS008	3/16"	5/16"	1/16"	£0.25	£0.75
BS009	7/32"	11/32"	1/16"		£0.45
BS010	1/4"	3/8"	1/16"	£0.25	£0.60
BS011	5/16"	7/16"	1/16"	£0.25	£0.50
BS012	3/8"	1/2"	1/16"	£0.25	£0.75
BS013	7/16"	9/16"	1/16"	£0.55	£0.75
BS014	½"	5/8"	1/16"		£0.75
BS111	7/16"	5/8"	3/32"		£0.75
BS112	1/2"	11/16"	3/32"	£0.25	£0.55
BS016	5/8"	3/4"	1/16"	£0.25	£0.75
BS113	9/16"	3/4"	3/32"	£0.38	£0.50
BS210	3/4"	1"	3/32"	£0.50	£0.65
4x1	4mm	6mm	1mm	£0.60	n/a
5x1	5mm	7mm	1mm	£0.60	n/a

*1mm sizes are suitable for gauge glasses*

Gauge glass: 4,5,6,7, 8mm:	£4.00 per 6"
PTFE sheet gasket : 0.25mm	£5.00 per sq ft
0.5mm	£7.50 per sq ft
Safety valves: "Tall" pattern, ¼" x 40 or 32 tpi	£12.00 ea
"Express" pattern, ¼" x 40 or 32 tpi	£12.00 ea
Clack valves: 3/16" x 40, ¼" x 40 or ¼" x 32tpi	£ 9.00 ea
1/4" Tube brush (brass or nylon bristle)	£3.00 ea
Goodall clack valves:	£ 7.50 ea (£12.00 with 90deg ENOT)

Water gauge (3/16"- or 1/4" x 40 fitting)	£29.50 ea
Bypass valve	£12.00 ea
Tender hand pump (5/16"r 3/8" ram)	£32.00 ea
Carbon Fibre Wick - Gives an excellent blue flame	£2.50 per pack
50 mesh brass gauze for filters etc.	£4.50 per 6" square

### Steam Oil

220 Grade (for Aster, Mamod etc.)	500ml: £5.95
460 Grade, ideal for G1.	500ml: £4.95; 1L: £7.95
680 Grade (higher viscosity)	1L: £7.95

### Clear Plastic Tubing.

Suitable for meths, heatproof in the ranges we need, good pressure resistance. Supplied in the following i.d.s:

3, 4, 5, 6mm; all sizes	£1.00 per yd
4mm silicone tubing	£4.00 per yd

### Live Steam Castings

GL-438	Steam Eccentrics	£5.95	per pair
GL-439	Steam Handwheels	£4.10	per pair
GL-440	Handpump bodies	£8.65	each
GL-500	Valve plate (steam passages cast in)	£4.50	each

## BOILER MAKING

**I am now working with a professional boiler maker whose prices are very competitive, and who is able to issue test certificates and is registered CE mark the boilers he makes. If you need a copper boiler making (in any size up to 5" gauge/2" scale) please get in touch for a quote.**

## SECTION F - MISCELLANEOUS

### Gauge 1 miscellaneous

Gauge 1 Handrail Knobs: plain end for soldering or riveting. (long or short)	£4.00 per 10
Handrails: 19g piano wire	£1.00 per yard
0.8mm stainless steel wire	£2.20/yd
0.9mm nickel silver wire	£2.20/yd
Delrin chain for power bogies	£6.00 per ft

### Carbon Fibre boiler lagging.

Cross weave. Can be moulded, separated around bushes etc. suitable either on its own using air gap or filled with car exhaust paste to form jacket. Per sq ft £6.00

### Reinforced Fibre Cutting Disks

32mm diameter, for Dremel and similar tools, to fit 1/8" arbour. £2.50 per pack of 5  
(These are not the thin, brittle disks that come packed in small drums, they are much more robust!)

### Meths Wash Bottles

Safety non-drip 500ml washbottles appropriately labelled for methylated spirit – don't get your bottles mixed up! Each: £9.90

<b>Hypodermic syringe</b> – 5ml, ideal for emptying lubricators	Each: £0.40
20 ml	Each: £0.60
50ml for meths	Each: £1.60
Needles (Blunt ended) 18g x 1-1/2"	Each: £0.30

## SECTION G – PAINTING SUNDRIES & PAINT

In the light of the increasing cost and difficulty of posting I have reluctantly decided to discontinue these as a catalogue item, though I'll continue to make them available at shows, while stocks last. If there is anything you specifically require please get in touch and I will see what I can do for you.

## SECTION H - MODELS

### *All my locomotive, carriage & wagon kits are to 10mm scale*

#### Live Steam Locomotive kits – 10mm scale

##### Paul Forsythe Designs

I offer basic materials kits for the Paul Forsythe designs , as for the Project. Please phone for details . Nickel silver plate is supplied as standard, but brass can be supplied if preferred – please specify when ordering. Cylinder kits are supplied with bronze blocks and pistons, valve rods, valve material, O rings etc. Cylinder castings can be supplied to order. Completed boilers are available to order with a rapid delivery time, as are ready made parts.

Model	Drawings	Chassis	Cylinder(s)	Boiler	Platework	Tender
Empire Maid	£17.00	£16.00	£17.60	£25.00	£31.50	n/a
GCR 1B	£17.00	£16.00	£17.60	£25.00	£31.50	n/a
Johnson Tank	£18.00	£15.50	£12.00	£25.00	£17.50	n/a
Director	£17.00	£16.00	£17.60	£25.00	£31.50	£31.50
Caley 4-6-0	£17.00	£16.00	£17.60	£25.00	£31.50	£31.50
HR Castle	£21.00	£16.00	£17.60	£25.00	£31.50	£31.50
Jersey Lily	£17.00	£16.00	£22.00	£25.00	£31.50	£31.50
Wainwright C	£18.50	£12.00	£12.00	£25.00	£27.00	£14.00
Peppercorn K1	£21.00	£16.00	£22.00	£25.00	£31.50	£31.50
Tilbury Tank	£18.50	£16.00	£17.60	£25.00	£31.50	n/a
Wordsell R1	£21.00	£16.00	£17.60	£25.00	£31.50	£31.50
LNWR Prince of Wales	£21.00	£16.00	£17.60	£25.00	£31.50	n/a

#### DEE

Another, rather more advanced design from G1MRA.

Material kit now available at	£ 98.00
Boiler at	£240.00
Cylinder block complete	£220.00
Crank axle complete	£115.00
Water pump	£100.00
Scale safety valve (also suitable for ARMIG, Wainwright C)	£ 60.00

I am normally hold a stock of ready made components for this model, e.g. cylinder blocks, water pumps, crank axles, water pumps etc. Please call for availability.

## The Project



The items available for this model range from basic materials to ready-made cylinder, boiler, chassis and other components. An alternative design of boiler, by Paul Forsythe, is also available. As the cost of bronze has increased, I now supply a brass cylinder block as standard, but bronze blocks are available on request. Brass will work perfectly well, particularly if the piston is fitted with an O ring.

Basic set of materials, inc. Brass block, nickel-silver plate, 1/8" angle etc.	£125.00
Complete materials kit - Everything needed, including paint	£230.00
Frames and coupling rods, drilled with bushes	£48.50
Buffer beams, not fitted for axle pump	£26.00
Machined driving wheels and plain axles	£75.00
Crank pins plus bushes	£ 9.00
Brass bearings, crank plus 2 plain	£ 7.50
Crank axle	£26.00
Con rod, plus eccentric and adjustable strap complete	£50.00
Cylinder, brass block complete with O rings, crosshead, tube & drain cocks	£150.00
Valve rocking lever assembly	£18.00
Regulator with lubricator and pressure gauge pipe nipples & nuts	£35.00
Safety valve complete - 1/4" x 40 or 1/4" x 32	£12.00
Boiler feed check valve	£ 9.00
Chimney - lost wax casting, needs minor fettling	£10.00
Dome - lost wax casting, needs minor fettling	£10.50
Buffers, each	£ 4.50
Smokebox, complete with door, ring, petticoat pipe	£35.00
Axle driven water pump	£100.00
Burner, including carbon fibre wick	£12.00
Lubricator & connections to cylinder	£35.00
Tender wheels, turned per 6, plus axles	£85.00
Tender axleguards, cast whitmetal (set of 6)	£13.80
Spirit cock	£12.50
Spirit tank materials, complete with spirit cock	£22.00
Spirit tank, complete, with spirit cock	£48.00
Tender hand pump complete	£32.00
Tender filler cap	£ 4.75
Tender dome casting	£ 1.90
Tender vent castings x 2	£ 3.00
Sump	£ 3.00
Boiler to original design	£160.00
Boiler materials kit	£ 30.00
Boiler with Dee pattern backhead (better appearance, include reg/blower)	£170.00

## ARMIG



ARMIG is the new gas fired 0-4-4T design from Dick Moger and Bob Gamble , based on the SECR H class tank, and is available in either single or two cylinder versions. In both cases the cylinder, crank axles and rods are supplied ready made and the loco can be built as a kit. Use of gas firing makes for a simple boiler and burner. JTT is supplying all

Designed to be easily built by newcomer to the hobby, the major components, in particular the CNC-machined cylinder blocks and crank axle, plus boiler, burner, and fuel tank are all available ready made . In addition, we also stock the chassis, wheels and body components and can supply these either as separate stages or as a complete kit.

The ARMIG mechanical components are available separately and are suitable for a wide variety of other inside cylinder locos, including Peter Korzilius's M7 and N7.

Cylinder set (2-cylinder):	£220.00
Cylinder set (1- cylinder):	£115.00
Crank axle (2-cylinder)*:	£115.00
Crank axle (1 cylinder)*:	£23.00
Connecting rods & eccentric straps (2-cylinder)	£90.00
Connecting rod, eccentric & strap (1-cylinder)	£45.00
Boiler, regulator & gas burner:	£120.00
Burner, complete with jet	£32.00
Boiler & burner materials kit (inc ready made bushes & burner jet)	£25.00
Gas tank materials kit (inc ready made bushes & filler valve)	£12.50
ENOT fitting, Goodall valve & spacer	£14.50
Gas tank, filler valve & regulator valve:	£40.00
Laser cut frames (pre joggled)	£12.50
Laser cut coupling rods	£5.50
Laser cut buffer beams	£5.90
Laser cut frame stretchers	£6.50
Laser cut bogie frames & stretcher	£4.20
Turned wheels & plain axles	£115.00
Axle bushes, crankpins	£10.00
Safety valve	£14.00
Smokebox steam dryer coil	£19.00
Lubricator + double union + banjo + pipe	£34.00
Pressure gauge, banjo + pipe	£35.00
Front and rear boiler supports	£10.50pr
Laser cut body kit	£106.00
Laser cut smokebox kit	£15.00
Set of 4 turned buffers	£24.00
Dome, chimney, safety valve casting	£10.00 ea
Smokebox door set (includes turned door, hinges & dart)	£9.50
Westinghouse pump lost wax casting (not all had these)	£6.00
Boiler clack valve lost wax castings	£5.00
Smokebox lubricator lost wax castings	£5.00
Etched body kit only (JTT or ex-W&CW)	£145.00
Etched frames kit (includes frames, spacers, smokebox,) coupling rods etc)	£66.00

Cast whitemetal steam reverser  
Cast whitemetal tank fillers (Pr)

£3.50  
£3.50

## GWR 56XX 0-6-2T TANK ENGINE



This locomotive has been re-engineered to provide a much more sophisticated but still reasonably priced large tank engine

Features are:

1. ARMIG-pattern cylinders. Supplied as a ready to run cnc machined unit with ready made valve gear and cnc-machined crank axle
2. Project-type boiler for spirit-firing.
3. Enots type boiler filling. No external plumbing or hand pump.
4. Superdetailed etched nickel silver body
5. Working water tanks option if required
6. Gas fired option available

### Prices:

Rolling chassis (Wheels, coupling rods, bushes, cylinders, valve gear)	Twin cylinder:	£550.00
	Single cylinder:	£240.00
Boiler, manifold, burner & fuel tank	Meths fired:	£220.00
	Gas fired:	£155.00
Regulator		£35.00
Etched body kit (3 sheets, including frames)		£275.00
Optional functional water tank etch		£145.00
Belpaire fireboxtop corner castings		£15.00/pr
Chimney, smoke box door, top feed lost wax castings		£10.00 ea.

## SR Q1 0-6-0 Tender Engine



The second JTT locomotive kit is OVS Bulleid's Q1 0-6-0 tender engine. A wartime introduction, the Q1 was designed to produce a powerful locomotive with maximum route availability. Its unconventional appearance (Sir William Stanier is said to have remarked "Where does the key go?") was quite striking.

As with the 56XX this loco features a fully detailed etched nickel silver body. It is a spirit fired design, in with a gas fired option.

The loco driving wheels have been redesigned and are made of cast iron with an etch nickel-silver overlay to improve their appearance. Getting these right has been a major challenge and the cause of recent delay, but the end is in sight!

The boiler is intended to be refilled via an ENOT's valve, but there is room to fit a tender hand pump if preferred. We also offer an axle-driven water pump and bypass valve as an option.

Reversing valve gear is provided as standard allowing the loco to be radio-controlled, for which we can supply parts if required.

The etches, wheels, turned components and lost wax castings are available to those wishing to build an electric version.

### Price list

Loco and tender kit, complete	£1450.00
Loco and tender etches	£ 450.00
Axle driven water pump and bypass valve	£ 115.00
Tender hand pump	£ 28.00
Radio control fittings	£ POA

# Electric Locomotive Kits

## Steam Locomotives – 10mm scale

<b>BR Britannia Class 7</b>	Introduced in 1951 by British Railways, the 'Britannia' became the best known of the BR standard classes. This kit has an etched brass body with nickel silver chassis, numerous lost wax castings with the balance in white metal, and full brake gear to both engine and tender. Requires wheels, motor & gears to complete.	<b>£790.00</b>
<b>BR 9F 2-10-0 (with BR 1D tender)</b>	This kit has an etched brass body with nickel silver chassis, numerous lost wax castings and the remainder in white metal, and full brake gear to both engine and tender. Requires wheels, motor & gears to complete.	<b>£790.00</b>
<b>SECR "H" Class</b>	Etched brass or nickel silver body with whitemetal castings and brass buffers. Requires wheels, motor and gears to complete.	<b>£285.00</b>
<b>LNER Y6 Tram Engine</b>	Better known as "Toby the Tram"! Etched body with whitemetal castings. Designed to fit a playmobile chassis (not supplied) or requires motor wheels & gears.	<b>£140.00</b>

## Steam Locomotive Tender kits

<b>British Railways Standard BR1 tender</b>	Etched brass, full rivet and brake gear detail with lost wax and whitemetal castings	<b>£200.00</b>
<b>British Railways Standard BR1D tender</b>	Etched brass, full rivet and brake gear detail with lost wax and whitemetal castings	<b>£200.00</b>
<b>LNER A4 Corridor Tender</b>	Etched brass tender superstructure complete with outside chassis frames, no wheels or castings.	<b>£80.00</b>
<b>LNER Non-Corridor Tender</b>	Etched brass tender superstructure complete with outside chassis frames, no wheels or castings.	<b>£80.00</b>
<b>LNER A2 Rivetted Tender</b>	Tender superstructure with outside chassis frames, A2 cab side sheets and smoke deflectors.	<b>£86.00</b>
<b>LMS Stanier 4000 Tender</b>	Tender superstructure complete with outside chassis frames, Makes non rivetted, part rivetted or full rivetted type.	<b>£80.00</b>
<b>LNER group standard Tender (6 wheels)</b>	Tender superstructure complete with outside chassis frames and V2 cab (no roof) and footplate valances	<b>£90.00</b>

## Steam Locomotive Etched Parts

<b>LMS Black 5 Locomotive Parts</b>	Cab sides, front and floor, front buffer beam, footplate (in 2 halves) sundry parts (no roof)	<b>£32.00</b>
<b>LMS "Jubilee" Locomotive Parts</b>	Cab sides, front and floor, front buffer beam, footplate (in 2 halves) and splasher tops (no roof).	<b>£32.00</b>
<b>LMS Stanier 2-6-4T Locomotive Parts</b>	Bunker & cab sides, front and floor, tank sides, front buffer beam, footplate (in 2 halves), sundry parts tender sides.	<b>£32.00</b>
<b>MR Johnson "Spinner" Locomotive Parts</b>	Cab sides, front and floor, front buffer beam, footplate and splasher tops (no cab roof), (tender sides)	<b>£32.00</b>

## Diesel Locomotives – 10mm scale

These kits are now available again , normally to order although I'm gradually increasing stocks so some will be available ex-stock. They are also being up graded with Fosmotor bogies gradually becoming available for most kits. These are priced at £180-00 per set for 6-wheeled bogies, £150-00 for 4-wheeled bogies and £210-00 for 8-wheeled ones.

<b>BR Class 02 0-4-0DH</b>	Etched kit for body with whitemetal castings.This loco is designed to fit onto a Playmobil 0-4-0 chassis. Some additional parts are needed to be made to complete the model.	<b>£120.00</b>
<b>BR Class 08/9 0-6-00DE</b>	This kit makes the earlier locos with wooden doors in the 13000 to 13365 number range. Modification is required to make the air braked version. Comes with Slaters wheels and axles.	<b>£405.00</b>
<b>Br Class 20 Bo-Bo</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" wheels. Standard BR Type 1 mainly used on LMS freight in semi-permanent coupled pairs, and on channel tunnel workings.	<b>£305.00</b>
<b>Br Class 37/1 Co-Co</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" wheels. The split headcode version of the standard BR Type 3 loco, used on all regions. Can be finished as either non-heat 37.0 or steam heat 37.1 versions. Includes all buffer beam fittings and couplings.	<b>£365.00</b>
<b>BR Class 37/4 Co-Co</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" wheels. Makes the converted locos, 37.4 electric train heating fitted type as used on Scotrail and WR secondary passenger trains, or 37.5 Railfreight loco. Both locos have centre marker light panel and fixed beam headlight. Includes all buffer beam fittings etc.	<b>£365.00</b>
<b>BR Class 40 1-C0-Co-1</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'9" & 3'0" pony wheels. Original disc headcode version with later style radiator shutter. Used mainly on LM/ER freight and parcel duties, with all buffer beam detail.	<b>£405.00</b>
<b>BR Class 45/1 1-Co-Co-1</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'9" and 3'0" pony wheels. Electric train heating fitted version with last marker light format. Was last in use on LM/ER duties as Class 40.	<b>£405.00</b>
<b>BR Class 47 Co-Co. (47/3, 47/4 &amp; 47/7)</b>	Builds 47.3, 47.4, and 47.7 versions in current configuration with marker light panel and fixed beam headlight. The standard BR Type 4 used throughout the country. 3'9" dia. wheels.	<b>£405.00</b>
<b>BR Class 50 Co-Co</b>	Builds class in refurbished form with fixed beam headlight etc. Can be finished in large logo/NSE/civil or 3 tone grey.	<b>£405.00</b>
<b>BR Class 52 Co-CoDH Western</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" 4-hole wheels. WR type 4 hydraulic introduced in 1961 for express passengers, but used on freight by withdrawal in 1975.	<b>£320.00</b>
<b>BR Class 55 Co-Co "Deltic"</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" wheels. Covers this premier ECML passenger loco in its final form, with blanked off cab quarterlights and c1.50 style bogies. All detail on buffer beams.	<b>£400.00</b>
<b>BR Class 59 Co-Co</b>	Etched nickel silver body & chassis with white metal castings. Requires 3'7" wheels. Foster Yeoman, ARC and National Power owned Type 5, built at General Motors USA, over 70ft long. A mammoth kit that includes full cab detail, name and number plates, all bits to build one of three types, 59/0, 59/1 Village Class or 59/2 Vale Class.	<b>£450.00</b>

BR Class 33 and LMS 10000/10001 are in the course of preparation

## 1/32" Scale Diesel Kits

I can now also offer the 1/32" scale model of the BR Class 08 "Gronk" by Orion Models.

Complete kit price £500, including motors, gears etc.

## 10mm Scale Parts & Fittings

### Diesel Locomotive Etched Parts

Etched Fold up gearbox for can motor	Each	£2.50
Cab Interior for Classes 37,40,45 & 55	Pair	£35.45
Diesel roof fan with support	Each	£2.50
Diesel Cab Seats - cast supports, no arms	Each	£6.50
Cab Handbrake Wheels	Pair	£1.90
Cab Interior for Class 20 Diesel	Each	£19.00
Cab Handwheels	Pair	£2.95
Diesel Chassis – nickel silver , with bearings	Pair	£47.25
Class 52 Cab Interior	Pair	£23.65

### Cast Locomotive Parts

#### Britannia Whitemetal Castings

GC-058	BR 'Britannia' Smokebox door	Each	£10.00
GC-059	BR 'Britannia' Chimney	Each	£3.60
GC-060	BR 'Britannia' Dome	Each	£3.60
GC-061	BR 'Britannia' Trailing Bogie Axle Boxes	Pair	£10.00
GC-066	BR Britannia Backhead	Each	£21.25
GC035	BR Tender Water Scoop	Each	£5.60
GC063	BR Loco Shoes – handed in pairs	Set of 6	£10.25
GC067	BR Lubricators	Set of 2	£3.60
GC068	BR AWS Battery Box	Each	£3.60
GC069	BR Injector Steam Valves	Pair	£3.60
GC070	BR Mud Hole Doors	Set of 6	£4.35
GC072	BR Standard Loco Buffers (one piece, unsprung)	Set of 4	£6.00
GC216	BR Tender Axleboxes (Brit/9F)	Set of 6	£20.75
GC057	BR loco Springs	Set of 6	£14.20
GC080	BR Top feed clacks	Pair	£5.60

#### LMS Whitemetal Castings

GC-109	LMS 'Black 5/Jubilee' Smokebox Door	Each	£6.50
GC-111	LMS 'Black 5/Jubilee' Dome	Each	£3.85
GC-112	LMS 'Black 5/Jubilee' top feed	each	£4.75
GC-113	LMS 'Black 5/Jubilee' Valve Guides	pair	£3.85
GC-194	LMS 'Black 5/'Jubilee' Chimney	each	£3.85
GC-198	LMS 'Black 5'/8F smokebox door and ring	each	£7.10
GC-214	LMS Black 5/ Jubilee Smokebox Saddle	each	£6.20
GC-131	LMS 'Princess' Chimney	each	£3.60
GC-132	LMS 'Princess' Dome	each	£3.00
GC-133	LMS 'Princess' Dome/top feed	each	£3.00
GC-134	LMS 'Princess' top feed only	each	£3.00

GC-135	LMS 'Princess' Safety Valves	pair	£2.65
GC-136	LMS 'Princess' Cylinder Covers	pair	£4.70
GC-137	LMS 'Princess' Valve Guides	pair	£3.85
GC-138	LMS 'Princess' Steam Pipes	pair	£4.75
GC-139	LMS 'Princess' Lubricators	pair	£1.90
GC-208	LMS 'Princess' pony truck axlebox	pair	£7.70
GC-143	LMS 'Duchess' single chimney	each	£2.95
GC-144	LMS 'Duchess' double chimney	each	£3.85
GC-180	LMS 'Duchess' Backhead	each	£16.55
GC-181	LMS 'Duchess' tender coal pusher	set	£20.00
GC-182	LMS 'Duchess' loco leaf springs	each	£2.10
GC-183	LMS 'Duchess' washout plugs	set of 6	£4.75
GC-184	LMS 'Duchess' mud hole door covers	pair	£2.35
GC-185	LMS 'Duchess' pony truck casting - early style	each	£21.80
GC-186	LMS 'Duchess' pony truck casting - later style	each	£21.80
GC-187	LMS 'Duchess' steam pipe chest covers	pair	£6.65
GC-188	LMS 'Duchess' tender water filter boxes	pair	£3.85
GC-189	LMS 'Duchess' smokebox ejector set	Set of 2pc	£4.60
GC-190	LMS 'Duchess' cab ejector and L/H valve	Set of 2 pc	£4.60
GC-191	LMS 'Duchess' Lubricators	Set of 4	£4.15
GC-202	LMS 'Duchess' smokebox door	each	£8.00
GC-203	LMS 'Duchess' tender rod covers	Pair	£3.60
GC-204	LMS 'Duchess' Snifting Valves	Pair	£2.95
GC-205	LMS 'Duchess' sandbox fillers	Set of 6	£4.75
GC-128	LMS Fowler 3500 gal. tender axleboxes	Set of 6	£16.80
GC-129	LMS Fowler 3500 gal. tender vents	Pair	£3.30
GC-140	LMS 4000 gallon tender axleboxes	Set of 8	£16.80
GC-141	LMS 4000 gallon tender water fillers	Pair	£4.25
GC-142	LMS 4000 gallon tender vents	Pair	£3.30
GC-192	LMS 'Coronation' single chimney	Each	£2.65
GC-193	LMS 'Coronation' double chimney	Each	£2.95
GC-218	LMS tender water scoop cover	Each	£2.35
GC-225	LMS Stanier Safety Valves	Set of 4	£2.95

### LMS Constituent Company Whitemetal Castings

GC-090	M.R. Johnson Tender Axleguards	Set of 6	£15.25
GC-092	M.R. Johnson Chimney	Each	£5.15
GC-093	M.R. Johnson Dome	Each	£5.15
GC-095	M.R. Johnson Smokebox Door	Each	£5.15
GC-096	M.R. Johnson Cab Reverser with handle	Each	£4.40
GC-117	'CR 123' 4-2-2 Chimney	Each	£4.20
GC-118	'CR 123' 4-2-2 Dome	Each	£3.70
GC-130	MR Bogie Tender Axleboxes	Set of 8	£20.50
GC-234	LNWR 'Coal Tank' chimney and base	Each	£4.60

### LNER Whitemetal Castings

GC-158	LNER A3 Single Chimney	Each	£4.15
GC-159	LNER A3 Smokebox door	Each	£6.50
GC-160	LNER A3 Washout plugs	Set of 6	£4.15
GC-161	LNER A3 Snifting Valve	Each	£2.15

GC-162	LNER A3/V2 Superheater Covers	pair	£2.95
GC-164	LNER A3 Cartazzi Axleboxes	Pair	£8.20
GC-165	LNER A3 Smokebox Saddle	Each	£6.00
GC-166	LNER A3 Steam Pipes	Pair	£3.30
GC-167	LNER A4 Double Chimney	Each	£6.50
GC-168	LNER A3 Dome, early banjo type	Each	£3.55
GC-169	LNER A3 Dome, later banjo type	Each	£3.85
GC-170	LNER A3 Dome BR Type	Each	£3.60
GC-171	LNER A3/A4 Backhead	Each	£16.55
GC-175	LNER A4 Single Chimney	Each	£4.75
GC-177	LNER A3/A4 Early valve guide	Pair	£4.35
GC-178	LNER A3/A4 Late valve guide	Pair	£4.35
GC-179	LNER A3/A4 Cab Brake Standard	each	£3.15
GC213	LNER tender Large Toolbox	Pair	£4.75
GC-008	Buffers - LNER stepped parallel (one piece,unsprung)	Set of 4	£5.90
GC-010	Buffers - LNER parallel, round base (one piece, unsprung)	Set of 4	£5.90
GC-108	LNER Loco Lamps (round)	Set of 3	£4.35
GC-126	LNER P2 2-8-2 Chimney	Each	£4.75
GC-127	LNER P2 2-8-2 Smokebox Door	Each	£6.25
GC-172	LNER Tender water scoop cover	Each	£3.10
GC-173	LNER Tender water filler	Each	£2.65
GC-174	LNER Tender axleboxes	Set of 8	£21.85

### LNER Constituent Company Whitemetal Castings

GC-114	LNER D16/3 Chimney	Each	£4.20
GC-115	LNER D16/3 Dome	Each	£4.20
GC-116	LNER D16/3 Smokebox Door	Each	£6.00
GC-120	NER 'M' class 4-4-0 Chimney	Each	£4.75
GC-121	NER 'M' class 4-4-0 Dome	Each	£6.25
GC-122	NER 'M' class 4-4-0 Safety Valve & LNER D16	Each	£5.00
GC-199	LNER D16 tender water fillers	Pair	£3.25
GC-201	LNER D16 tender tool boxes	Pair	£4.15
GC-213	LNER/GE Tender Toolbox	Pair	£4.75

### GWR Whitemetal Castings

GC-119	GWR 4-2-2 'Dean Single' Chimney	Each	£4.50
GC-123	GWR 'Castle' Chimney	Each	£4.35
GC-124	GWR 'Castle' Safety Valve	Each	£4.35
GC-125	GWR 'Castle' Steam Pipes	Pair	£5.25
GC-215	GWR Tender Axleboxes	Set of 6	£16.80
GC-233	GWR Railcar roof ends	Pair	£9.75

### Miscellaneous Steam Locomotive Whitemetal Parts

GC-004	Ross pop valves	Pair	£2.35
GC-006	Vacuum pipes	Pair	£2.95
GC-007	Steam pipes	Pair	£2.95
GC-008	Buffers - LNER stepped parallel (one piece, unsprung)	Set of 4	£5.90
GC-010	Buffers - LNER parallel, round base (one piece, unsprung)	Set of 4	£5.90
GC-012	Smoke box door dart	Pair	£1.70
GC-013	Westinghouse pump - with valves	Each	£3.60

GC-014	Westinghouse pump - with governor	Each	£3.60
GC-016	Tank fillers	Pair	£3.15
GC-019	Westinghouse pipes	Pair	£3.00
GC-020	Snifting valves	Pair	£2.25
GC-021	Lubricator with wheel	Each	£3.05
GC-027	Cab Reverser & Wheel	Each	£3.15
GC-030	Tender Brake Standard	Each	£3.25
GC-062	Loco Brake Pulls	Each	£6.50
GC-209	Backhead water gauges(2) and dials (2)	Set	£4.60
GC-217	WD 2-8-0/2-10-0 Tender Axleboxes with torsion bars	Set of 8	£20.75

### Diesel Locomotive Whitemetal Parts

GC-048	Class 20 Diesel Bogie sideframes with end pieces only	Pair bogies	£39.50
GC-049	Class 37 Diesel Bogie sideframes with end pieces only	Pair bogies	£47.25
GC-050	Class 40 Diesel Bogie sideframes with end pieces only	Pair bogies	£47.25
GC-051	Class 45 Diesel Bogie sideframes with end pieces only	Pair bogies	£47.25
GC-052	Class 47 Diesel Bogie sideframes with end pieces only	Pair bogies	£59.00
GC-053	Class 55 Diesel Bogie sideframes with end pieces only	Pair bogies	£47.25
GC-054	Class 59 Diesel Bogie sideframes with end pieces only	Pair bogies	£63.00
GC-055	Diesel Brake Shoes	Set of 12	£13.15
GC-056	Diesel Bogie Air Cylinders	Set of 4	£6.00

### Lost Wax Locomotive Parts – Black 5/Jubilee

GL-322	LMS Black 5 Chimney	Each	£4.45
GL-324	LMS Black 5 Valve Guides	Pair	£5.15
GL-325	LMS Black 5/Jubilee Motion Bracket	Pair	£10.65
GL-326	LMS Black 5/Jubilee Smokebox Saddle	Each	£6.20
GL-327	LMS Jubilee/ pre-war Black 5 Chimney	Each	£4.75
GL-404	LMS Black 5/ Jubilee/Princess slidebars	Pair	£14.20
GL-405	LMS Black 5/ Jubilee Smokebox Door	Each	£6.85
GL-408	LMS Black 5/Jubilee Reverser	Each	£6.00
GL-430	LMS Black 5 dome and top feed	Each	£5.30
GL-437	Smokebox door ring	Each	£5.00
GL-459	Jubilee Valve Guides	Pair	£6.25

### Lost Wax Locomotive Parts – LMS Princess/Duchess (\*nickel silver)

GL-323	LMS 'Princess' Dome	Each	£4.25
GL-326	LMS Dchess LHS injector	Each	£8.85
GL-327	LMS Duchess RHS injector	Each	£8.85
GL-328	LMS 'Princess' Motion Brackets - also suit 2-6-4 tanks	Pair	£10.65
GL-385	LMS 'Princess' slidebars	Pair	£12.10
GL-386	LMS 'Princess' Crossheads	Pair	£10.35
GL-427	Rear Pony Truck Axleboxes (use GL-418 pony truck frame) also suit Duchess	Pair	£10.35
GL-330	LMS 'Duchess' Motion Brackets	Pair	£8.85
GL-331	LMS 'Duchess' Oil Boxes	Pair	£3.60
GL-332	LMS 'Duchess' Snifting Valves	Pair	£4.75
GL-333	LMS 'Duchess' Smokebox door dart	Each	£3.80
GL-334	LMS 'Duchess' tender rod cover handles	Pair	£5.30
GL-384	LMS 'Duchess' loco and tender buffers	Set of 4	£27.35
GL-402	LMS 'Duchess/Coronation' washout plugs	Set of 6	£5.35
GL-409	LMS 'Duchess' whistle	Each	2.95
GL-417	Double Chimney (also suit LNER A2)	Each	£5.95
GL-418	Rear Pony Truck Frame (also suit Princess)	Each	£5.95
GL-434	LMS Duchess Mud Hole Doors	Set 4	£4.45
GL-465*	Tender Water Sieves, handed, suitable for Aster Locos complete with bolt and fixing plate	Pair	£24.15

GS500*	LMS "Duchess" crossheads	Pair	£5.90
GS501*	LMS 'Duchess' slide bars	Pair	£9.15
GS502*	LMS Black 5/Jubilee slide bars	Pair	£11.55
GS503*	LMS Black 5/Jubilee/Stainer 2-6-4T crossheads	Pair	£8.65
GS512 *	LMS Duchess radius links	Pair	£5.90
GS513 *	LMS Princess & Stanier 2-6-4T slidebars	Pair	£11.25
GS514*	LMS Duchess/ Princess/2-6-4T return cranks	Pair	£5.85
GL467	LMS Duchess cylinder snifting valves	Pair	£4.30

### Lost Wax Locomotive Parts

GL-360	A3/V2 Smokebox superheater covers	Pair	£6.45
GL-361	A3 Single Chimney	Each	£4.75
GL-367	A3/A4 Motion Brackets	Pair	£10.35
GL-368	A3 Smokebox Door	Each	£7.10
GL-369	A3 Smokebox Door Ring	Each	£5.15
GL-372	A3/A4 Cab Reverser Stand	Each	£3.60
GL-373	A3 Saddle Front	Each	£4.45
GL-374	A3 Cylinder Rear Cover	Pair	£7.70
GL-375	A3 Dome, early type	Each	£7.20
GL-376	A3 Dome, later banjo type	Each	£7.10
GL-377	A3 Dome, BR Type	Each	£7.70
GL-428	A4 Single Chimney	Each	£6.50
GL-429	A3 Lubricators - 4 small (also suit A2)	Set of 4	£5.30
GL-431	A3/A4 Slide Bar Brackets	Pair	£5.95
GL-432	A3 Cylinder Drain Cocks	Pair	£4.75
GL-433	A3 Safety Valves	Pair	£4.15
GL-441	A3/A4 Cartazzi Axleboxes handed	Pair	£11.60
GL-442	A4 Double Chimney	Each	£10.05
GS506*	LNER A3/A4 return cranks	Pair	£5.85
GS507*	LNER A3/A4 Radius links	Pair	£6.20
GS508*	LNER A3/A4 ccrossheads	Pair	£8.60
GS509*	WD 2-8-0/2-10-0 Slidebars	Pair	£10.05
GS510*	WD 2-8-0/2-10-0 Crossheads	Pair	£7.55
BR13	BR 'Britannia' Combination Injector	Each	£16.00
BR21	B. R. Britannia/9F Cab Reverser	Each	£5.95
BR20	B. R. Britannia/9F Cab Regulator	Each	£4.60
BR19	B. R. Britannia/9F Manifold	Each	£5.00
BR18	B. R. Britannia/9F Large Vacuum Ejector	Each	£7.10
BR17	B. R. Britannia/9F Valve Gear Lifting Arm and Ring	Pair	£7.40
BR14	B. R. Britannia/9F Steam Sanders	Pair	£6.15
BR5	B.R. Britannia/9f safety valve	Pair	£5.40
BR7	B.R. Britannia/9f cylinder drain cocks	Pair	£7.20
BR16	B.R. Britannia/9f cab fittings	Each	£4.00
BR12	B. R. Britannia/9F Boiler Feed Clacks	Pair	£8.90
BR11	B. R. Britannia/9F Injector Water Valve	Each	£4.75
BR10	B. R. Britannia/9F Ejector Shut off Valve	Each	£4.75
BR9	B. R. Britannia/9F Live Steam Injector	Each	£5.15
BR6	B. R. Britannia/9F Valve spindles	Pair	£7.35
BR4	B. R. Britannia/9F Slide Bar Brackets	Pair	£13.00
BR3	B. R. Britannia/9F Valve Guides	Pair	£14.20
BR2	B. R. Britannia/9F Crossheads	Pair	£13.90
BR1A/B	B. R. Britannia/9F Slide Bars	Pair	£19.95
BR24	B.R. Britannia/9F single chimney	Each	£6.90
BR25	B.R. Britannia/9F double chimney	Each	£7.90
BR22/23	B.R. Britannia/buffers -pair	Pair	£15.50

## Lost Wax Locomotive Components -General;

GL-364	LNER Loco Brake Shoes		£11.80
GL-365	LNER Tender Brake Shoes	Set of 6	£16.55
GL-366	LNER Smokebox Elbow	Each	£2.55
GL-370	LNER Loco Driver Leaf Springs	Each	£4.15
GL-371	LNER Tender Brake Standards	Set of 4	£5.20
GL-378	LNER Tender Axlebox, spring and guide set	Set of 8	£63.00
GL-379	LNER Valve Guides, early type	Pair	£5.95
GL-380	LNER Valve Guides, later Stanier type	Pair	£5.25
GL-381	LNER Loco Buffers	Pair	£11.00
GL-382	LNER Tender Buffers	Pair	£11.00
GL-398	LNER 'P2' motion bracket	Pair	£6.65
GS-506	LNER A3/A4 Return cranks	£5.85	per pair
GS-507	LNER A3/A4 Radius links	£6.20	per pair
GS-508	LNER A3/A4 Crossheads	£8.60	per pair
GS-509	W.D. 2-8-0/ 2-10-0 Slidebars	£10.05	per pair
GS-510	W.D. 2-8-0/ 2-10-0 Crossheads	£7.55	per pair
GL-399	Loco cab handwheels	Pair	£3.60
GL-401	Long Oval Diesel Buffers	Set of 4	£21.85
GL-406	MR Safety valve lever only	Each	£2.95
GL-407	GWR 'King' Bell & Bracket	Set	£5.30
GL-412	Round Headed Diesel Buffers	Set of 4	£22.05
GL-415	LNER loco lamp - round	Pair	£3.85
GL-416	GWR Castle Chimney	Each	£7.30
GL-419	GWR 'Castle' safety valve	Each	£5.65
GL-420	Standard long horn guide	Pair	£7.10
GL-422	Short Horn Block Guides	Pair	£7.10
GL-423	MR 4F Tender Axleboxes	Set of 6	£28.35
GL-424	LMS Streamlined Coronation Single Chimney	Each	£3.35
GL-425	MR Boiler Clacks	Pair	£3.90
GL-435	M. R. Whistle	Each	£3.15
GL-436	M. R. Salter Safety Valve set	Each	£3.75
GL-444	M.R. Safety Valve Cover	Each	£5.50
GL-448	LNWR Loco Lamps (suit Aster Jumbo)	Set of 3	£5.65
GL-449	NYC 'Hudson' Loco Brake Shoes	Pair	£3.35
GL-455	Control air pipe diesel locomotive multiple working (paint white)	Pair	£7.10
GL995	Oiler boxes & feed pipes	Set of 4	5.90
GL-456	Air Pipe - locomotives and stock. (Paint red- brake pipe, paint yellow - main reservoir pipe)	3 Pairs	£9.00
GL-457	Older style steam stock steam pipe	Pair	£7.10
GL-458	Universal Vacuum Pipe - under buffer beam type	Pair	£6.50
GL-462	LNER D16 Safety Valve Levers	Pair	£2.95
GL-463	General Brake Standard	Each	£3.25
GL-466	Southern Region Tender Axleboxes	Set of 6	£28.35
GL-467	Diesel Air Pipes - handed	Pair	£4.15
GL-996	Loco injector	Each	£4.95
GL998	Diesel air horn	Pair	£3.50
GL997	Steam loco whistle	Each	£1.00
GL996	Smokebox door dart	Each	£1.25
GL999	LMS Smokebox ejector	Each	£5.95
GL1001	Diesel speedometer boxes (bogie & body)	2 Pairs	£7.00
GL1002	Smokebox lubricators	Pr	4.50

## Detail Packs for 9F/Britannia

Builders of the Model Engineers Laser live steam Britannia or 9F may be interested in the various superdetailed lost wax components that we supply for our electric kits. A detailing pack is available for £125.00 and includes sidebars and crossheads, or individual items may be purchased from the list of BR1-BR23 above

## Coach Kits

I am in the process of introducing a range of etched nickel silver carriage kits, designed to complement the etched nickel silver locomotive kits. The first of these are the SECR birdcage brake stock to go with the ARMIG; these are almost ready but are being redesigned to add etch bogies, as there are no suitable cast ones available. These should be available soon. Further down the line it is hoped to add LMS Period 1 suburban coaches to accompany the forthcoming Jinty, and LNER Quad Arts for the N2, with other types to follow.

The following range of ex-W&CW Kits is also available:

### Pre-BR Coaching Stock

<b>LNWR 50ft Full Brake</b>	Etched brass with whitemetal castings and brass roof.	<b>£195.00</b>
<b>LNWR Thompson BG Deal Planked</b>	Etched brass with whitemetal and lost wax brass castings and aluminium roof	<b>£195.00</b>

### BR Mk 1 Coaches & Vans

These etched nickel silver kits come with full chassis buffer beam and roof detail, with a choice of whitemetal B1 or Commonwealth bogies, and wheels. Types available are:

Open First (FO)	Corridor First (FK)	Brake Second (BSK)
Open second (SO)	Corridor Second (SK)	Tourist Open second (TSO)
Corridor Composite (CK)	Restaurant Buffer (RBR)	Miniature Buffet (RMB)
Restaurant open (RSO)	Sleeper Third (SLT)	Full Brake (BG)
General Utility Van (GUV)	Covered Carriage Truck (CCT)	

All are £235.00 each, apart from the CCT which is £135

## Carriage Components

### COACH BOGIE KITS.

Coach bogie kits are available to suit the following cast whitemetal sides and have been redesigned to incorporate a sprung bolster plank.

#### Castings available:

BR Mk 1	BR Commonwealth	
GWR 9'	GWR 7'	GWR 9' Dreadnought
Fox pressed steel 4 wheeled	Fox pressed steel 6-wheeled	GCR
LMS	Pullman	SR Maunsell
LNWR Gresley light type	LNWR Gresley Heavy type	LNWR Gresley 10ft artic type
Kit complete with wheels and nylon bushes		£45.00 per pair
Kit complete as above for 6 wheeled bogies		£60.00 per pair
Bogie side castings:		£ 20.00 per pair.

**All prices are per pair of bogies, i.e. one coach-worth**

**Brass axle bearings:** Pk of 8 £2.00

**Wheels: Coach disc, wagon disk or spoked wagon (with brass bearings):** £4.40 per axle

## Roofs

Suitable for most designs of carriage with elliptic roofs without domed ends, these are machined from lime wood and are dimensionally stable and straight and true, requiring only light sanding to finish them - £14.00 each. Currently available : GWR corridor stock, LMS suburban, LNER Thompson, SECR birdcage.

## Wooden seating strip

Approx 3ft: £5.00

## Seated Figures

Ready painted, pack of 8 assorted seated figures £7.00/pack, three packs for £20.00

## Standing Figures

Ready painted, pack of 8 assorted standing figures £7.00/pack, three packs for £20.00

## Whitemetal Carriage Parts

GC-023	Buckeye Couplings	£5.15	per pair
GC-043	BR Mk. 1 bogie - no wheels	£29.50	per pair
GC-047	BR Commonwealth Bogies - no wheels	£29.50	per pair
GC-073	Coach Dynamo - BR Type	£3.60	each
GC-074	Coach Shell Roof Vents	£5.25	per 12
GC-075	BR Coach Vents	£5.75	per 12
GC-079	Coach Torpedo Vents	£6.00	per 10
GC-097	Coach Table and Legs	£4.40	per set
GC-098	Coach Double Seat Ends	£6.00	per 4
GC-102	BR Coach Vacuum Cylinder	£3.60	each
GC-103	BR Coach Voltage Regulator + Fuse Box	£3.60	pair
GC-145	Long Battery Box	£4.15	each
GC-148	LNER Coach Air Tanks with Brackets	£5.25	per pair
GC-212	Coach end jumper leads	£4.75	per 4
GC-219	LNER Coach Dynamo	£2.95	each
GC-221	BR MK I Coach Periscope	£1.95	each
GC-223	LNER Bow Ended coach end	£12.35	per pair
GC-226	LMS 'Palethorpes' Sausage van ends	£11.85	per pair

## Lost Wax Coach Parts

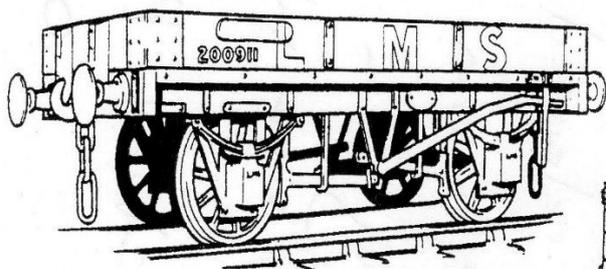
GL-335	Table Lamps	Each	£2.10
GL-336	Pullman square toilet window	Pair	£9.00
GL-337	Pullman oval toilet window	Pair	£9.00
GL338	Saloon window lights	Set of 8	£12.50
GL-343	LNER 'Gresley' Underframe Turnbuckle	Set of 4	£8.00
GL-344	LNER 'Gresley' Corridor Coach Buffers	Set of 4	£18.00
GL-445	LNER type Long Grab Handles	Pair	£3.25
GL446	LNER Gresley "Suburban" Coach Buffers	Set 4	£18.00
GL-446	LNER Guards Door Handles	Pair	£3.25
GL-447	BR Thompson P.B.V. Buffers	Set of 4	£21.85
GL-468	BR MK 1 coach door grab handles	Pair	£2.35
GL991	Large torpedo vent	Pk 8	£6.40

## Resin Wagon Kits

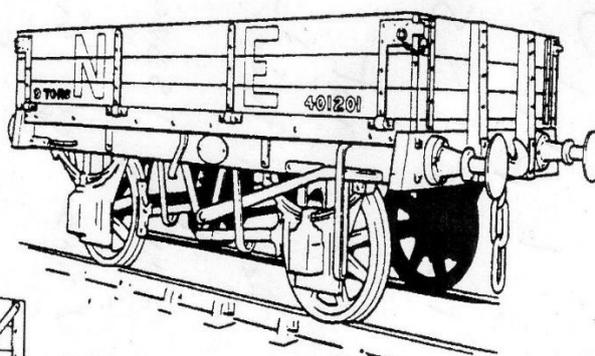
I have acquired the range of resin cast wagon kits formerly marketed by Stuart Models which come complete with sprung wheels, buffers, brake gear, couplings and a sheet of transfers .

Prices are:	open wagons (all four types)	£60.00 each
	Box vans (2 types)	£70.00 each
	Long wheelbase open wagon	£65.00 each
	LSWR fish van	£90.00 each

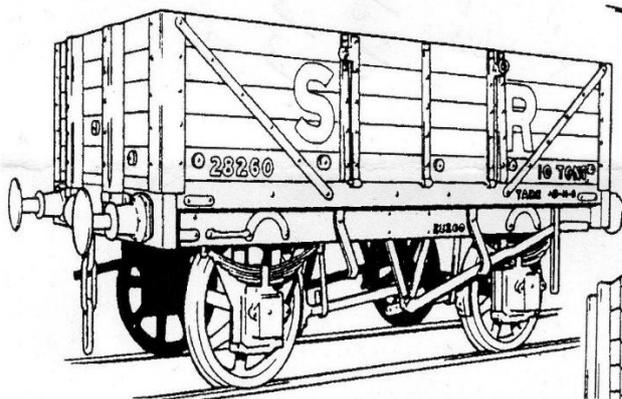
**These detailed Bodies are complete and do not need assembly.**



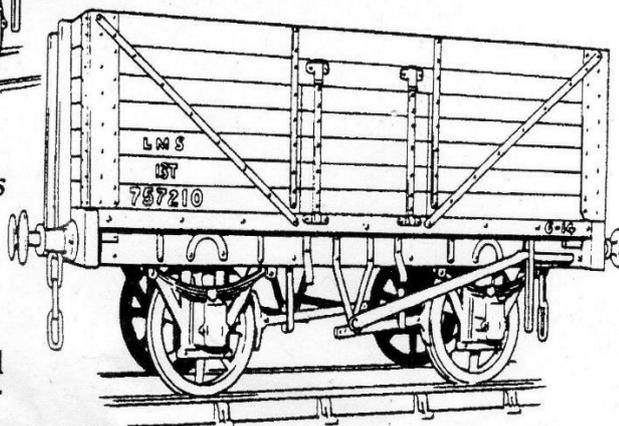
- 1 Plank Open - Fixed Side  
Suitable for LSWR, LMS Versions



- 3 Plank Open - Drop Side  
Suitable for LSWR, LMS, LNER/GN Versions



- 5 Plank Open - Side Doors  
Suitable for SR, LMS, LNER, BR Versions



- 7 Plank Open - Mineral Wagon  
Suitable for SR, LMS, LNER/GN Versions

**G**auge One Wagon Bodies are detailed cold cast resin models. Each is supplied with a floor ready to be fitted and with holes for the fittings marked ready to be drilled.

The Bodies need painting in the authentic regional colours. A Transfer sheet is included with markings for a selection of regions. Each body comes with a specifications sheet giving details of history, running numbers and colour schemes.



## Etched Brass Wagon Kits

### Steam Era

<b>GWR/BR Macaw 'B' Bogie Bolster</b>	Etchings only for body and underframe - use Tenmille bogies, stanchions and 3'1" 3-hole or spoked wheels to complete.	£105.00
<b>GNR/LNER 8T Dropline 'Colwich' open wagon</b>	These wagons were built by the GNR and passed into LNER hands. They were unusual in that the single wheel brakes were both to the left hand wheel as you viewed from the side although the brake levers were both at the same end.	£68.25
<b>GN/LNER 9T 4 Plank Open Wagon</b>	These wagons were built by the GNR and passed into LNER hands. They were unusual in that the single wheel brakes were both to the left hand wheel as you viewed from the side although the brake levers were both at the same end.	£68.25
<b>GN/LNER 8T 4 Plank Bow Ended Open Wagon</b>	These wagons were built by the GNR and passed into LNER hands. They used a timber pole placed from end to end to support a wagon sheet over the load.	£68.25
<b>Metropolitan 12T Small Brake Van</b>		£99.75
<b>LMS/ BR 25T Ballast Hopper Wagon - Diag 1800</b>	Leeds Forge built 20 of these hoppers to lot 371 in 1928. Lasted to BR days.	£89.25
<b>LNER/BR 25T Ballast Hopper Wagon</b>	Again built by Leeds Forge between 1926 and 1937, these engineering hoppers lasted well and some were still at work in Scotland in the early 1970's.	£89.25

### Diesel Era Wagons

<b>Independent Snow Plough</b>	This kit is based on unit no. ADB 965307 of Bescot Depot, West Midlands and is typical of the type allocated to several systems.	£80.00
<b>Diesel Brake Tender</b>	Etched brass body with white metal castings. Standard round bodied design with LNER bogies, introduced in 1964 for use with vac fitted freights on classes 25,37,40 & 45. Kit requires paint and transfers to complete.	£100.00
<b>SR/BR Sealion bogie ballast hopper</b>	Etched brass body with whitemetal bogies and castings, comes with etched brass wheel inserts to represent modern wheels	£120.00
<b>Grampus Type ZBV Spoil and sleeper wagon</b>	Most numerous Departmental type - seen everywhere and now appearing in grey and yellow livery.	£92.40

Unless otherwise stated, all etched wagon kits are complete with all cast components and the appropriate wheels, buffers and couplings.

## Lost wax castings for Locomotives & Carriages

### Prices

Item	No. Pk	Price
Boiler clack valves	2	£3.50
Lamp iron (for horizontal surfaces)	8	£4.50
Lamp iron (for vertical surfaces)	8	£4.500
Lamp iron for brake vans	4	£4.00
Westinghouse pump	1	£6.00
Set of 3-link couplings	1pr	£4.00
Set of Instanter couplings	1pr	£4.50
Set of screw couplings	1pr	£12.00
Brass door handles (3 different types)	8	£4.50
Brass commode handles (7 types)	8	£9.00
Coach end steps	8	£6.50
Locomotive brake shoes & hangers set	4	£6.00
Wagon brake set	1	£12.00
LMS loco Sprung buffers	4	£16..00
Short brake handle	2	£3.50
Wagon axleguards & sprung axleboxes	4	£16.00
4/6wheel carriage/van axleguards and sprung axleboxes	4	£16.00
Van spring damper/shock absorbers	8	£5.50
Loco lamps (round or square body)	2	£4.50
Sprung wagon buffer three rib with step	4	£18.00
Sprung wagon buffer round base short	4	£18.00
Sprung wagon buffer round base long	4	£18.00
Sprung buffer round base long	4	£18.00
Sprung buffer SR brake van square base	4	£18.00
Open wagon door stop	2	£1.00
Smokebox door set (dart handles, hinges and hinge blocks)	1	£4.50
Loco or tender hand brake column	1	£2.50
SR route Indicator discs	4	£4.50
Communication cord roof boxes	1set	£2.50
Coach vacuum cylinders	2	£6.00
Goods van door handle	2	£1.50
1/8" brass bearings	8	£3.50
Pointwork bellcranks	4	£3.00
Loco whistle	1	£1.00
Wagon/Van spring end shock absorbers	8	£3.00
Steam heat pipes	2	£3.50
Loco/Wagon vacuum pipes	2	£4.00
<b>New Items</b>		
LMS Smokebox Ejector	1	£10.00
LMS 3F (Jinty) Chimney	1	£10.00
LMS 3F (Jinty) Dome	1	£10.00
Asymmetric wagon brake V hangers	3	£6.00
Smokebox handles	1	£1.50

# Locomotive Carriage & Wagon Detailing

## Lost Wax Castings

**Lost Wax Castings - in Brass -**

**GRAB HANDLES**

- LSWR
- GWR
- S&D
- LMS
- SR 10mm
- SR 12mm
- LNWR

**DOOR HANDLES**

- Coach
- S&D Coach
- LSWR

**COACH FITTINGS**

- Com. Indicators
- Vacuum Cyl.
- Coach Step

**BRACKETS**

- Loco
- Brake Van
- Loco Tender

**LAMPS**

- Loco
- Loco / Van
- Running Disk

**BRAKES**

- Hanger & Shoe
- Standard
- Wagon Set

**BUFFERS**

- SR Coach
- SR Van
- SR Brake Van
- SR Wagon
- LMS Loco
- SR Utility Van

**COUPLINGS**

- Working Screw
- Three Link

**CONNECTING PIPES**

- Vacuum
- Steam

**AXLE BOXES**

- LSW / SR Wagon
- LSW / SR Van
- SR

**BOILER FITTINGS**

- Westinghouse
- Smoke Box set
- Clacks

**MISC.**

- 1/2" Crank
- Bush

## Miscellaneous Lost Wax Wagon Parts

GL-300	3 link Couplings with lost wax hook	£4.75	per pair
GL-304	Oleo Wagon Buffers	£21.85	per 4
GL-315	Instanter couplings	£5.30	per pair
GL-383	NER Wagon Buffer	£21.25	per 4
GL-410	LMS Brake Van Buffers	£21.25	per 4
GL-411	BR/GWR Webbed Buffers	£21.25	per 4
GL-414	Bardic Lamp - drilled to receive LED (not supplied)	£2.35	each
GL-450	G.C.R. Wagon Buffers	£21.25	per 4
GL-451	Met Railway Brake Van Buffers	£21.25	per 4
GL-452	G.N.R. Wagon Buffers	£21.25	per 4
GL-453	LNER Wagon Buffers (4 fins)	£21.25	per 4
GL-454	LMS Wagon Buffers (2 fins)	£21.25	per 4
GL-335	Table Lamps	£2.10	each
GL-336	Pullman square toilet window	£5.30	per pair
GL-343	LNER 'Gresley' Underframe Turnbuckle	£8.00	per 4
GL-344	LNER 'Gresley' Coach Buffers	£21.85	per 4
GL-445	LNER type Long Grab Handles	£3.25	pair
GL-446	LNER Guards Door Handles	£3.25	pair
GL-447	BR Thompson P.B.V. Buffers	£21.85	per 4
GL-468	BR MK 1 coach door grab handles	£2.65	pair
GE-209	Cranked Lamp Irons	£2.35	Per 8
GE-210	Lamp Irons	£3.40	Per 30
GE-211	Hooks (Assorted)	£2.65	Per 16
GE-212	Presflo Valve Wheels	£1.50	Per pair

## SECTION I - GAS & ENOTS

### Gas Fittings

The introduction of the ARMIG loco seems likely to bring about a resurgence in interest in gas firing, and I am now able to offer standard 1ba threaded AMAL gas jets in a range of sizes. These nominally range from flow rates of 6-1000 cc/minute of petrol. **However, these jets are large by comparison with the size 20 quoted for Roundhouse jets and are not directly comparable.**

The jets are available on increments of 2 in sizes 6 to 22, then in increments of 5 between sizes 25 to 100, and increments of 10 between sizes 100 to 500. All are threaded 1ba to fit a standard holder.

All jets: £ 6.00 each

The poker-type burners for the ARMIG are made to be a push fit in the ¾" burner flue and come with a size 20 burner jet as standard, but other jets can be supplied on request.

£32.00 each.

ARMIG –type 1-3/4" diameter x 2" gas tanks are available, these are tested to 300 psi and are for butane fuel only. They are supplied with an outlet regulator and Ronson filling valve.

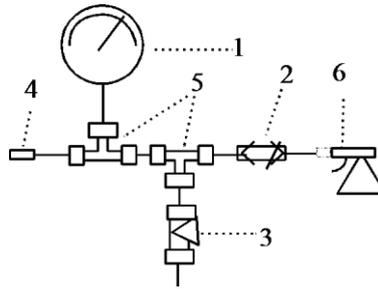
£40.00 each

### Miscellaneous gas (£each):

Ceramic honeycomb plates; approx 4" x 4": approx	£12.50
Ronson filler valves:	£5.00
Tap (4.5 x 0.5mm hss) for Ronson filler valve	£17.00
Right angled gas jet holder	£3.75
1ba tap(taper or plug) (carbon steel) for gas jets	£3.90
Gas can filler adaptor:	£10.00

### Enots style pressure fittings.

These enable boilers to be filled using a normal hand garden spray. These are reputed to pump up to 600psi and can also be used to form the basis of a boiler testing assembly, although a properly calibrated and certificated pressure gauge will be needed. The fittings are threaded M5 x 0.8.



#### 4mm tube fittings *Each*)

1. Gauges: glycerine filled: 63mm od. FSD choice 30 - 500psi +	£16.50
2. One way non return valves:	£12.50
3. Globe ball valves:	£11.95
4. Straight 4mm tube fittings.	£ 4.60
5. Elbow 4mm tube fittings	£ 6.00
7. 4mm tube Tees.	£ 7.75
9. In line connectors.	£ 5.30
10. Nylon or PTFE pipe	£ 1.00 per ft

I also stock M5 x 0.5mm c/s taps and dies for making boiler blanking plugs for Aster locos of recent design.

## SECTION K - FLUXES & SOLDER

### SILVER SOLDER & FLUX

The sale of cadmium-containing alloys such as "Easy Flo No. 2 was banned in the EC740-800, with effect from 9<sup>th</sup> December 2011.

The best replacement material for general modelling engineering purposes would seem to be Silverflow 55, which has a similar melting point range (610-630°C) to Easyflo No.2. I've tried it for myself and it does flow freely and forms nice fillets. The catch is that it has a higher silver content (55%) and is therefore more expensive. There's no change in the flux needed, Easyflo powder or paste are both fine. For step brazing use Silverflo 24 (740-800°C) as the first step.

**Please note: prices as for guidance only as the price of silver fluctuates on a daily basis and the price I have to charged is governed by the day on which I get my supplies!**

Silverflow 55	610-630°C	1.5mm dia x 500mm	£7.70/stick
		1.0mm dia x 500mm	£5.00/stick
		0.5mm wire x 1000mm	£4.50/pack
		0.5mm wire x 2000mm	£8.50/pack
Silverflo 24	740-800°C	1.5mm dia x 500mm	£5.70/stick

## Silver Solder Flux

Flux, Easy Flo powder	100g pot	£ 9.50
Working range 550-800°C	50g pot	£ 5.50
	20g pot	£ 3.50
Flux Easy Flo paste:	50g pot	£ 5.00
	100g pot	£ 7.50

## Soft Solder

Silver-bearing solder paste	7g syringe	£13.50
(ideal for pipework, not silver solder as such, more like Comsol, flows freely at 430F, remelts at 630F)		
Comsol High temp. Soft solder (1.5% silver content)	12" length, 3mm dia.	£6.00
60/40 resin-cored solder	100g coil	£4.50
Soft Solder paste	10g pot	£4.50

## Section L : Waterslide Transfers

### Miscellaneous

WS26	Pullman letters : (Gold shaded red & black)	£3.50
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### Pre grouping railway companies

HRY01/1	Highland Railway locomotive sheet1	£24.50
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### Lining

LINBRX/1	BR Experimental Blue lining & corners : (White/black/white) (Also suitable	£4.60
LINGWR/	GWR/BR lining & corners : (Orange/black/orange)	£4.60
LINLNE/1	LNWR/BR Lining & corners : (White/black/white)	£4.60
LINLNW/	LNWR/BR Lining & corners : (Grey/red.)	NYA
LINMET/1	Yellow/black/yellow lining for Metropolitan, Barry etc. : (Yellow/black/yellow)	£4.60
LINMXD/1	Boiler bands for LNWR & BR mixed traffic livery : (Red)	£4.60

### 1923-48 Big 4 livery wagons

9609	GWR Large initials : (White)	£4.60
9611	GWR Large initials. For use with white vehicles : (Red)	£4.60
9792	GWR Micas : (Red)	£5.70
JTT/T1	Big 4 Sheet of white letters, sufficient for up to 4 wagons, all four companies on one sheet	£2.40
JTT/T2	SR Red wagon lettering	£2.40

### 1948-65 livery Wagons

9701	BR std. 12t. ventilated van. Enough markings for six vans. :	£5.70
9702	BR std. 16t. Mineral Wagon m,,Q Diagram 1/108.	£5.70
9709	BR 20ton Brake VN 1948-65 (will letter 6 vans including areas & allocations)	£5.70
9753	BR. 20 ton Brake Van. 1965-1990 (will letter 6 vans, including areas & allocations).	£5.70
9716	BR 12T. fish Van 'BLUE SPOT'. Complete with blue spots and Route Markings.	NYA

### 1965-90 livery Wagons

9753 BR.	20 ton Brake Van. (will letter 6 vans, including areas & allocations)	£5.70
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### British Railways

48Lion/15	BR Lion over wheel (LH & RH) : (Red, Yellow, black & white)	£2.40
48Lion/25	BR Lion over wheel (LH & RH) : (Red, Yellow, black & white)	£3.50
BRY01/01	BR Cabside numbers 0-9 : (Cream outlined in black))	£2.40
BRY01a/1	BR Cabside numbers 0-9 (White, Scottish Region) : (White outlined in black)	£2.40
57Lion/15	BR Lion Holding Wheel : (	£3.50
BRY15/01	BR diesel numbers (1957-65) (square serif) 8 sets 0-9 & 'D's : (White)	£3.50
BRY02/1	Electrification flashes (Overhead live wire warning sign)	£2.40

## **British Railways (Diesel Models)**

BRY03/1 BR Arrows : (White) NYA

## **Great Western Railway (GWR)**

GWR04/1 Great Western 'Twin city' crest : (Finely detailed in 7 colours) £4.60  
GWR06/1 GWR buffer numbers : (Yellow shadowed black) £3.50  
GWR07/1 Great Western' lettering. : (Gold shaded red & black) £3.50  
GWR09/1 GWR cabside route restriction discs & power codes : £2.40

## **London & North Eastern Railway (LNER)**

LNE02/1 LNER lettering : (Gold shaded red & black, with white highlights) £4.60  
LNE03/1 LNER Cabside numbers : (Gold shaded red & black, with white highlights) £5.70  
LNE08/1 LNER Lettering (Yellow shaded red & black with white highlights) £5.70  
LNE09/1 LNER Cabside numbers : (Gold shaded red & black, with white highlights) £5.70

## **London, Midland & Scottish Railway (LMS)**

LMS04/1 LMS serif 14" letters : (Gold shaded black) £3.50  
LMS06/1 LMS serif 12" numbers : (Gold shaded black) £3.50  
LMS13/1 LMS letters (later yellow style) : (Yellow shaded red) NYA  
LMS14/1 LMS numbers (later yellow style) : (Yellow shaded red) £3.50

## **Southern Railway (SR)**

SRY01/1 Southern Maunsell lettering (Old Stock) : (Yellow) £3.50

## **Caledonian Railway (CR)**

CR02/1 "C R lettering"

## **Narrow Gauge**

NG01/3 Welsh Highland & NWNCR Wagons  
NG02/3 Festiniog slate wagons  
NG03/3  
NG04/3 /SM32  
NG05/3

# **Watch This Space!**

Well, time to start filling this page with some new lines!

For a start, I'm now stocking a limited range of no-slot screws, both round head and countersunk (cheat's rivets!). Sizes currently available are:

2ba x 1" r/h steel	@	£6.40/50
4ba x 5/8" r/h brass	@	£6.35/50
5ba x 1/2" r/h brass	@	£8.50/ 50
5ba x 1/2" c/s brass	@	£5.75/50
6ba x 1/2" r/h brass	@	£8.50/50
8ba x 1/4" r/h brass	@	£5.60/50
8ba x 1/2" r/h brass	@	£8.50/50
10ba x 1/2" r/h brass	@	£8.50/50

## **Metric ss cross head screws for Aster, Accucraft etc.**

**M1.2 x 3 or 6mm, £1.50 per pack of 10; M1.4 x 6mm, M1.6 x6mm, M2 x 10mm £2.00 per pack of 10**

1/2" or 3/8" external circlips £0.6 0p each

I've started stocking ENOTs fittings for 6mm tube as people are finding them to be ideal for engine-tender connections in the larger scales.

New addition: Mamod safety valves. £12.50 ea;