Tel: +44 115 9736700 Fax: +44 115 9727251



Polly Model Engineering Limited Atlas Mills, Birchwood Avenue Long Eaton

**Incorporating BRUCE ENGINEERING** 

# **POLLY MODEL ENGINEERING**

# **Catalogue – Part 1**

# January 2021

# **Model Engineers Supplies:**

# Materials, fittings, tools, accessories, books, etc



# Tel: +44 (0)115 9736700 Fax: +44 (0)115 9727251

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# Introduction:

Building on the strong foundations of Bruce Engineering and Polly Locos, Polly Model Engineering Limited is one of the leading suppliers to the model engineering hobby. Unique amongst suppliers with its in house manufacturing capabilities, Polly is able to address all your model engineering requirements. Combining over forty years of experience in supplying model engineers and a comparable time in the manufacture of renowned Polly kit build locomotives, we can justifiably claim to understand the needs of the model engineer. Furthermore we pride ourselves on the stock held, such that most items are available for immediate despatch.

This new 2018 catalogue is provided in two convenient volumes. The first volume contains the general model engineers supplies, including materials, fittings, accessories, books, tools, etc. The second volume contains drawings and castings for our ranges of stationary engines, fine scale standard gauge locomotives and our narrow gauge locomotive models. A separate catalogue is available for our renowned kit built locomotives.

The range of products listed is vast and whilst we are proud to be appointed agents for major engineering industry suppliers, we are also pleased to be associated with specialist model engineering suppliers including. Having invested heavily in the latest CNC technology we As we constantly strive to extend and update our range of fittings and supplies, please contact us whatever your requirements.

All prices listed include UK VAT (sales tax). Customers for export outside the EU, may deduct the tax from the listed prices. VAT on most items is 20%, although books are not taxed. Prices are current at the time of publication of the catalogue, but are subject to revision in the event of supplier price increases. Postage is additional on all orders, based upon the costs incurred with the Post Office.

This is a metric catalogue, and products are sold by weight in kilogrammes and length in metres. However, for the convenience of our customers generally working to imperial standards, certain dimensions (e.g. thread sizes) are quoted in inches or feet. Note: 1 foot is 304.8 mm and 1 inch is 25.4 mm.

Details of how to order, together with an order form are provided in this catalogue. We have NO MINIMUM ORDER CHARGE and international postage is no problem.



Photo: John .Clarke Legacy - the Polly kit built loco range

# Contents

WHERE TO FIND U	JS	6
POLLY LOCOMOT	IVE KITS – SEE SEPARATE CATALOGUE	7
MODEL ENGINEE	RS SUPPLIES	8
Axle Bearings – Do	ouble Sealed Needle Roller Bearings	8
Axle pumps – com	-	8
BA & Metric box s	-	8
BA Open Ended S	•	9
Bakers Fluid flux		9
Blanking Plugs		9
Blow Down valves	5	9
Blower valves		10
Boiler Banding		10
Boiler Lagging		10
Books		10
Brake Valves – cor	ming soon	12
Brake Vacuum Eje	-	12
Brake Vacuum Lin		12
	ion-return valves, etc.	12
	/le see Practical Scale Catalogue	12
Bypass water valv		13
Ceramic Burners		13
Ceramic Plaque fo	pr Burners	13
Chain for whistle	etc	13
Chequer Plate		13
Comsol high temp	perature soft solder	14
	-return valves or clacks) for oil, water or steam	14
Chime Whistles		14
Connectors (Pipe)		15
Connectors Bulkh	ead	15
Connectors – loco	to tender	15
Couplings		16
Copper washers		15
Cylinder Drain Coo	cks	16
Cylinder Hones an	nd spare stones for finishing bores	17
Die stocks		17
Dies for thread cu	tting – see Taps and Dies	18
Drills		17
Dynamos:		19
Elbows		19
External Hones		19
Fibre washers	(pack of 10)	19
Filler nozzles, valv	ves, jets, etc	20
Firing Shovel & Po	oker Sets	20
Flu brushes		20
Fluxes		21
Gas tanks (refillab	le) in three sizes.	21
Gasket paper		21
-	and Red/blue Line	21
	e also Steam Stop Valves	22
Graphited Packing	3	22
Graphited String		22
Hand pumps		22
Jan 2021	For All your Model Engineering Requirements:	

Jan 2021For All your Model Engineering Requirements:Email:sales@pollymodelengineering.co.ukPolly Model Engineering Ltd (inc Bruce Eng) Fax +44 (0)115 9727251Web:www.pollymodelengineering.co.ukPage 3Telephone: +44 (0)115 9736700

Handrail Stanchions	23
Handwheel castings, in brass.	23
Injectors	24
Injector Filter	24
Locomotive and Traction Engine Nameplates and Numberplates	24
Loco Lamps	24
Lost Wax Castings and Accessories from Doug Hewson	25
Loctite Products	26
Lubricants, Steam Oil and cutting Oils	27
Lubricators	27
Marking out blue	27
Metal – Bar Stock	28
Brass bar	28
Brass Angle	28
Brass 'half-round' Beading	29
Brass sheet	29
Bronze Bar PB102 or Colphos	29
Bronze Bar PB660 - leaded round bar 12" lengths	29
Cast Iron – round bar, cut to length	29
Copper Boiler Tube	30
Copper tubing bending	30
Copper tubing Thin wall 1/16" to ¼"	30
Copper Tubing Thick Wall	30
Silver Steel (round)	30
Stainless steel rod	31
Steel Stock in round, hexagon and square	31
Spring steel	31
Metal Blacking – 'BLACK-IT' for Iron and Steel	32
Miniature Cast Signs	32
Nipples (see also Union Nuts)	33
Nitrile Rubber balls – see also Viton Balls	33
Nuts. Bolts, Caphead Bolts, Grubscrews	34
BA Screws & Nuts	34
Metric Screws and nuts	35
'O' Rings	36
Oil Cups and Oilers	36
Oiler – Drip feed Glass Oiler	36
Pipe Benders	36
Pressure Gauges	37
Pressure Gauge Syphons	37
Reilang Oilers	38
Rivet snaps	38
Rivet Tools	38
Rivets	39
Roll Pins	39
Safety Valve Spring & Ball Details for Gordon Smith designs	40
Safety Valves	41
Silicon Rubber Tubing (Black)	42
Silver Solder	42
Slot drills	42
Soft Solder paste	43
Split pins (cotter pins)	43
Stainless steel balls (grade 316)	43
Stainless Steel mesh	43
Stainless steel springs	44
Steam Raising Blowers	44
Steam Stop Valves – see also Globe Valves	45
Steam Valves for Radio Control	45
Steam Tees	45
Studding brass	45
Studding metric stainless	45
en 2021	

Jan 2021

Jan 2021For All your Model Engineering Requirements:Email: sales@pollymodelengineering.co.ukPolly Model Engineering Ltd (inc Bruce Eng) Fax +44 (0)115 9727251Web: www.pollymodelengineering.co.ukPage 4Telephone: +44 (0)115 9736700

Steel Studding	45
Superheater Elements Stainless Steel	46
Tap wrench	46
Taper pins	46
Taps & Dies	46
Transfers	48
Wash out plugs	58
Union cocks from Stuart Models (see also Draincocks)	58
Union nuts	58
Vacuum gauges	58
Viton Balls – see also Nitrile Balls	58
Water Gauges	59
Water valves for tender or tank fitting	59
Weir Pumps (Steam Operated Feed Pump)	59
Whistles – see also Chime Whistles	60
Whistle valves	
PRACTICAL SCALE INCLUDING LOCO DESIGNS & STATIONARY ENGINES	61
ENGINEERING SERVICES	62
Non-Catalogue Requirements	62
How to Order	63

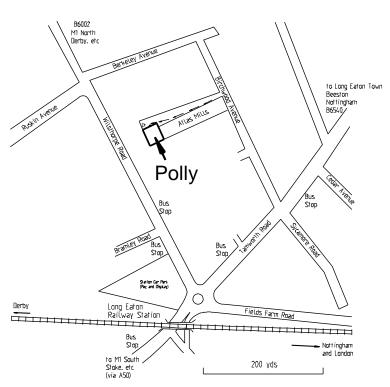
64

Order Form

# Where to Find Us

# Atlas Mills, Birchwood Avenue, Long Eaton, Nottingham, NG10 3ND

Callers are welcome at the workshop, but it can be helpful to telephone beforehand and we can have things ready for you. Please be aware that parking in the yard is limited. For those travelling by train, we are only a few minutes walk from Long Eaton railway station.





Polly at a recent exhibition

In addition to our range of kit-build locos and general model engineers' supplies, you will find:

- Our own manufactured fittings, safety valves, lubricators, special GWR loco parts, etc
- Wide range of stationary engine kits including Stuart Models and designs by Anthony Mount
- Loco drawings, castings and parts from 3 ½" to 7 ¼" gauge including exclusive designs serialised in the magazines – S.R. Q1 by Nick Feast, Fair Rosamund by Neville Evans, Collett Goods by Dave Aitken

Shop hours: Mon - Fri 9:00 to 16:30, closed for lunch 13:00 to 14:00

Address: Atlas Mills, Birchwood Avenue, Long Eaton, Nottingham, NG10 3ND



# Polly Locomotive Kits – see separate catalogue



Polly V £7208.00



Prairie 2-6-2 tank £7828/£8858





O&K 0-4-0T £6535.00 0-6-0T £7006.00

Polly IV £6889.00



Polly III £6137.00



Driving/passenger Truck from £807.00

0-4-0 'Trojan' £6374

- Since 1987 the famous 5" gauge live steam POLLY Loco kits.
- Complete fully machined kit of parts
- Can be assembled with hand tools
- 10 different locos to choose from
- Driving/Passenger truck and accessories available

Polly I £5716.00







Molly Ann 0-6-0ST Latest in the range £7044.00

Polly II £6385.00



Polly VI £8278.00

Renowned the world over for their sound design, ease of build and performance on the track. The range continues to develop. See separate catalogue and contact us for spares and accessories.

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# **Model Engineers Supplies**

In previous catalogues, we separated out accessories, materials, fittings, etc but in response to customer demand, they are presented here alphabetically in one combined section, which we hope will enable you more readily to find your requirements. Some fine scale fittings, particularly GWR loco parts are listed in our Practical Scale catalogue (the second volume of this catalogue)

# Axle Bearings – Double Sealed Needle Roller Bearings

As specified by Neville Evans in his designs, for tender and locomotive axle bearings. Used on axles, these bearings provide low rolling resistance and long life.

12mm ID (shaft size)	£5.15 each
20mm ID (shaft size)	£8.30 each

# Axle pumps

Conventional pumps suitable to be driven by eccentrics on locomotives, etc.

3/16"/5mm ram axle pump double outlet	¼" stroke	£40.00
3/16"/5mm ram axle pump single outlet	1/4" stroke	£40.00
1/4" ram axle pump	1/2" stroke	£45.00
3/8" ram axle pump	¾" stroke	£50.00
<sup>1</sup> / <sub>2</sub> " ram axle pump 3/16" pipe	1" stroke	£55.00
1/2" ram axle pump ¼" pipe	1" stroke	£55.00



# **BA & Metric box spanners**

**Our own in-house manufactured box spanners**. Manufactured from high grade steel, the ends of the these tools are reduced in diameter to allow access to nuts/bolts in awkward locations.

Sizes from 2BA to 12BA & 2mm AF to 8 mm AF available individually

2BA Box Spanner	£3	2 mm AF Box Spanner	£3
3BA Box Spanner	£3	2.5 mm AF Box Spanner	£3
4BA Box Spanner	£3	3 mm AF Box Spanner	£3
5BA Box Spanner	£3	3.5 mm AF Box Spanner	£3
6BA Box Spanner	£3	4 mm AF Box Spanner	£3
7BA Box Spanner	£3	5 mm AF Box Spanner	£3
8BA Box Spanner	£3	5.5 mm AF Box Spanner	£3
9BA Box Spanner	£3	6 mm AF Box Spanner	£3
10BA Box Spanner	£3	7 mm AF Box Spanner	£3
12BA Box Spanner	£3	8 mm AF Box Spanner	£3
11BA special	£3		
Full Set BA sizes	£30	Full Set Metric Sizes	£27



# **BA Open Ended Spanners**

Industrial quality spanners in metric and BA sizes.

Open ended 0-11BA set	£20.00
Open ended Metric set 3.2mm-8mm	£20.00



#### **Bakers Fluid flux**

Liquid flux for soft soldering, supplied in 100ml bottle price £5.00, N.B. Baker's fluid is corrosive and not available by post. After soldering flux residues should be washed off with soapy water.

# **Blanking Plugs**

Suitable for plugging boiler bushes during hydraulic tests.



3/16 x 40	£1.30	3/8 x 40	£2.00
1/4 x 40	£1.60	3/8 x 32	£2.00
1⁄4 x 32	£1.60	7/16 x 26	£2.00
5/16 x 32	£1.80	½ x 26	£2.00
5/16 x 26	£1.80	5/8 x 26	£3.50
3/8 x 26	£2.00		

# **Blow Down valves**

Available with a wide range of standard threads



1/4 x 40	£10.50	3/8 x 32	£11.50
5/16 x 26	£11.50	3/8 x 40	£11.50
5/16 x 32	£11.50	1/2 x 26	£13.50
5/16 x 40	£11.50	1/4 BSP	n/a
3/8" x 26	£11.50	1/4 BSP (P.B. special)	£40.80

# Blow down spanner

Suitable for 5/16 and 3/8 blowdowns- £6.50



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#### **Blower valves**

¼" x 40	5/32" x 40 int	£13.80
5/16" x 40	3/16" x 40 int	£14.10
3/8" x40	1⁄4" x 40 int	£14.10



#### **Boiler Banding**

Brass boiler banding 3/8" wide as used on our locos, Per foot £2.00

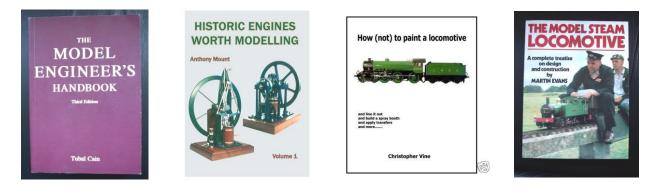
# **Boiler Lagging**

Boiler lagging 2mm	(0.080") thick	£3.50 per ft
Boiler lagging 3mm	(0.120") thick	£4.50 per ft

High temperature (1200 deg C) ceramic matting in 2mm or 3mm thickness 500mm wide, cut length to your requirement.

#### Books

We stock a wide range of model engineering related books, including many classics. 'The Model Engineer's Reference Book' is a must for every model engineer. Martin Evan's Treatise on Miniature Locomotive Construction is a valuable reference book for loco builders and the various books on building Stuart stationary engines are essential to novice builders of those models. George Thomas' work on toolmaking is legendary and even for those who 'want to get on with the job' the books are worth reading. We list here a few of the more popular books normally in stock, but with many others available, we encourage you to peruse our shelves at the exhibitions or contact us to discuss your requirements.



The Stuart Beam Engine	£9.25
The No. 9 Engine	£9.25
Building the Vertical Engine [No.10]	£9.25
The Victoria	£9.25
The Williamson	£9.25

Building the Beam Engine 'Mary'	£6.95
Miniature Car Construction	£5.95
Building the Overcrank 'Georgina'	£6.95
Model Boiler Making [Pearce]	£5.95
Model Boilers and Boiler Making [Ha	rris]
	£14.95
The Quorn Tool and Cutter Grinder	£12.95
Rob Roy and William	£14.95

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#### I.C.ENGINES, HOT AIR ENGINES, & OTHER PRIME

<u>MOVERS</u>	
The Stirling Engine Manual	£27.95
The Atom Minor Mk 111	£5.95
Gas and Oil Engines Simply Explained	£5.95
Model Petrol Engines [Westbury]	£11.95
Small Internal Combustion Engines [Westbu	ry]
	£9.50
Magnetos Simply Explained	£4.95
Model Steam Turbines	£5.95
Diesel Model Engines	£11.95
Ignition Equipment	£12.50
Model Petrol Engines	£11.95
Model Jet Reaction Engines	£5.95
Windmills and Wind Motors	£5.95

#### LATHE & WORKSHOP PRACTICE

Beginners Guide to the Lathe	£5.95
Know Your Lathe	£6.95
Pattern Making [Camm]	£3.95
Grinding, Lapping and Honing	£5.95
Know Your Materials – Metals	£5.50
Gear Wheels and Gear Cutting	£5.95
Bent Iron Work	£5.95
Painting and Lining Models	£5.95
How to Paint a Locomotive [C.Vine]	£19.95
Gear Wheels Simply Explained	£5.95
Screw Cutting for Engineers	£5.95
The Model Engineers Handbook	£9.95
Model Engineers Workshop Manual [	Thomas]
	£25.95
Workshop Techniques [Thomas]	£26.95
The Art of Wood turning	£9.95

#### LOCOMOTIVE & STEAM RELATED

Baker Valve Gear	£5.50
The Live Steam Book LBSC	£15.95
The Locomotive Simply Explained	£5.95
The Model Steam Locomotive [Martin	Evans]
currently out of p	rint
Locomotive Valves and Valve Gears	£13.95
Locomotives Valves Setting	£6.95
Locomotive Handbook	£5.95
Locomotive Injectors	£8.95
Beginners Guide to Model Steam Loc	comotives
	£15.95
Slide Valve Simply Explained	£4.95

<u>CATALOGUES</u> Polly Range of Locomotive Kits Bruce Engineering Model Engineers Supplies (note: can be downloaded from website free of charge)] Stuart Models

#### STATIONARY ENGINES

STATIONART ENGINES					
Historic Engines Worth Modelling Vol.1 [A.I	Mount] £12.95				
Historic Engines Worth Modelling Vol.2 [A.Mount] £12.95					
Care & Management of Stationary Steam E £5.95	ingines				
<u>MISCELANEOUS</u>					
Flash Steam [Westbury]	£6.95				
BOOKS CONTD:					
Steam Wagon Manual	£7.95				
Model Stationary Engine Design & Constru	ction				
	£5.95				
Garden Railways	£6.95				
Meccano No.10 Manual	£11.95				
The Portable Steam Engine	£14.95				
Drills, Taps and Dies [Tubul Cain]	£6.95				
Myford Series 7 Manual	£7.95				
Milling – A Complete Course	£6.95				
Vertical Milling in the Home Workshop	£6.95				
The Motorcyclist's Workshop	£10.50				
Workshop Drawing [Tubul Cain]	£6.95				
How to Read Workshop Drawings	£5.95				
Simple Workshop Devices	£6.95				
Workshop Wrinkles and Recipes	£6.95				
Building 5"Gauge Wagons [BR steel 16 ton [D.Hewson]	£2.95				
Building 5"Gauge Wagons [LMS 20 ton goo	ods brake				

Building 5"Gauge Wagons [LMS 20 ton good	ls brake
van]	£2.95
Making Clocks	£6.95
Evolution of the Steam Engine	£5.95
Meccano and Hornby Trains Catalogue [!933	3/34
reprod]	£2.95
Peter's Railway Vol 1	£11.95
Peter's Railway Vol 2 Moonlight Express	£11.95
Peter's Railway Vol 3 Forgotten Engine	£11.95

£2.00 [£3.00 by post] £2.00 [£2.50 by post

£6.00

## **Brake Valves**

In-house designed and manufactured vacuum or steam brake valve. £83.00



#### **Brake Vacuum Ejectors**

Vacuum ejectors are suitable for continuously braked trains using the vacuum system.

Small ejector 1/8 x 5/32 x 5/32 pipe	£30.50
Large ejector 3/16 x ¼ x ¼	Currently unavailable



# **Brake Vacuum Limiters**



Vacuum limiting valve used at the rear end of the train to limit vacuum. Adjustable 10-22" Hg. £20.00 each.

#### Bronze Balls For non-return valves, etc.

Pkts of ten			3/16"	£2.90	Price per ball	3/8"	£3.10
	1/16"	£2.50	7/32"	£3.20		7/16"	£3.50
	3/32"	£2.20	1/4"	£4.05		1/2"	£3.70
	1/8"	£2.15	9/32"	£6.50			
	5/32"	£2.20	5/16"	£7.00			

# **Buffers – GWR Style see Practical Scale Catalogue**

We manufacture complete sprung buffers in 5" and 7 ¼" gauge sizes for the more popular GWR buffers and offer lost wax castings for other styles. Full details in the Practical Scale catalogue.

#### **Bypass water valves**

for floor or tank fitting, with stud for mounting.

5/32" floor bypass	£15.50
3/16" floor bypass	£15.70
1/4" floor bypass	£17.00



#### **Ceramic Burners**

Models are available to suit a variety of small models, plus standard rectangular and circular types. Ceramic burner material, jets, etc are also available for DIY construction. Please note that in general these small burners are well suited to miniature locos (e.g. G0 and G1) and small stationary engine boilers, but they are unlikely to generate sufficient heat for passenger hauling locos. Supplied without pipework /jet\* unless stated.

2 1/8" round	Х	£44.00
2 5/8" round	Х	£48.00
2.75" x 1"	Х	£36.00
2.75" x 2"	Х	£48.00
5 5/8" x 1"	Х	£50.00
5 5/8" x 2"	Х	£53.00
Ceramic firetube burner for 28 & 35mm tubes	Х	£36.00
Mamod tractor, inc pipework + tank+ valve		£89.00
Mamod loco, inc pipework		£74.00
Wilesco tractor, inc pipework		£74.00
50 x 16mm Wilesco D18, etc	Х	31.00
120 x 18 Wilesco D20, D21, D22, D24, etc	Х	£42.00
Gas tank to burner pipe 135 mm0		£10.50
Gas tank to burner pipe 275 mm		£11.00
Gas tank to burner pipe 450 mm		£11.50



x – Burner only \* - Jets to suit available separately

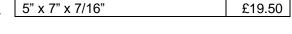
#### **Ceramic Plaque for Burners**

Ceramic material easily cut to shape as used in our burners.

#### Chain for whistle etc

7 link chain £2.50 per m

12 link chain £2.00 per m





#### **Chequer Plate**

Embossed aluminium sheets suitable for step plates etc.

1:16 nominal scale suitable for 3  $\frac{1}{2}$ " gauge models, sheet approx. 10" x 2  $\frac{1}{2}$ " £7.00 each 1:10 nominal scale suitable for 5" gauge models, sheet approx 10" x 2  $\frac{1}{2}$ " £7.00 each 1:8 nominal scale suitable for 7  $\frac{1}{4}$ " gauge models, sheet approx 8" x 16" £15.00 each

# Comsol high temperature soft solder

3mm diameter wire, melts at significantly higher temperature (295 deg C) compared to normal soft solder, facilitating more complex assemblies.

Over 3m less 10%	per metre	0.5kg reel complete
3mm dia wire	£6.50	£56.50

N.B. Due to the lead content, this is a restricted product only available to professional users who provide sufficient documents

#### Check valves (non-return valves or clacks) for oil, water or steam

In line pipe fitting and threaded body boiler fittings (90 degree). Oil check valves are fitted with springs to ensure the seating of the valves with the higher viscosity of the oil. Backhead fitting 'clacks' are 90 degree type.

Oil pump 1/8" pipe	
In line type	£10.00
Oil 90deg for steam pipe 1/8" pipe	
1/8" pipe to ¼" x 40 thread	£10.00
1/8" pipe to 3/16" x 40 thread	£10.00
water feed 90deg clacks	
3/32" pipe 3/16 x 40	£10.50
1/8" pipe 1/4 x 40	£10.50
5/32" pipe 1/4 x 40	£10.50
3/16 pipe 5/16x32	£12.00
1/4 pipe 3/8 x 32	£14.30
1/4 pipe 7/16x26	£14.40
1/4 pipe 1/2 x 26	£14.40
5/16 pipe 1/2 x 26	£20.30
3/8 pipe 1/4 BSP	£22.40
3/8 pipe 1/2 x 26	£22.40
in line check valves	
1/8" pipe	£10.00
5/32" pipe	£10.00
3/16" pipe	£11.50
1/4 pipe	£12.00
5/16" pipe	£15.25





#### Chime Whistles

3 & 4 note chime whistles in polished brass, 2 sizes available. In polished brass, these chime whistles both look and sound very effective. Suitable for narrow gauge locomotives or steam road vehicles.

Small Chime Whistle	£56.00
Large Chime Whistle	£81.00
Whistle valve (large) 3/8"x32	£27.50
Whistle valve small 5/16 x 32	£24.00



# **Connectors (Pipe)**

#### pipe to pipe, bulkhead and pipe to thread connectors.

3/32" pipe to pipe	£3.10
1/8" pipe to pipe	£4.10
5/32" pipe to pipe	£4.10
3/16" pipe to pipe	£4.45
1/4" pipe to pipe	£5.10
1/8" pipe to 3/16" pipe	£4.45
5/32" pipe to 3/16" pipe	£4.45
3/16" pipe to 1/4" pipe	£5.10
3/32" pipe x 3/16" 40 pipe to thread	£2.90
1/8" pipe x 1/4" 40 pipe to thread	£3.10
5/32" pipe x 1/4" 40 pipe to thread	£3.10
5/32" pipe x 1/4" 32 pipe to thread (Stuart)	£11.80
3/16"pipe x 5/16" 32 pipe to thread	£3.50
1/4" pipe x 3/8" 32 pipe to thread	£4.10





#### **Connectors Bulkhead**

Supplied with additional nut to clamp body to bulkhead.

1/8" pipe	£5.10
5/32" pipe	£5.70
3/16" pipe	£5.70
¼" pipe	£6.60



#### Connectors – loco to tender

Quick release pressure connectors for the hand pump and silicone rubber tubes for injector feed, etc. In sizes to suit  $3\frac{1}{2}$  / 5" gauge and 7  $\frac{1}{4}$ " gauge locos.

3 1⁄2" / 5" gauge	£28.00
7 ¼" gauge	£31.00

Supplied with 2 lengths of tube.

Additional small crimps  $\pounds$ 1.50 each, Additional large crimps  $\pounds$ 2.00 each

Small high pressure hose £1.70 per foot (suitable for 3/16" pipe)

Large high pressure hose £2.50 per foot (suitable for ¼" pipe)

# Terrent Burger Barrent Barrent

#### Copper washers

4 thicknesses in each packet			
1/8"	£2.60	5/16"	£3.10
5/32"	£2.70	3/8"	£3.35
3/16"	£2.90	7/16"	£3.60
7/32"	£2.90	1/2"	£3.75
		Assorted.Pkt of 40	
1/4"	£3.00	sizes 3/16 – 1/2"	£10.30

Pkts of assorted thickness, for steam fittings etc, 20 per pkt, 5 of each thickness

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# Couplings

#### Scale forged couplings

Four designs to suit the main railway companies, GWR, LMS & LNER/BR plus hook and chain coupling for freelance, industrial locos and loose coupled wagons. All available in 3 <sup>1</sup>/<sub>2</sub>", 5" and 7 <sup>1</sup>/<sub>4</sub>" gauge versions.

BR&LNER coupling and hook	
3.5" gauge	£43.00
5" gauge	£53.00
7 1/4" gauge	£60.60
GWR Coupling and hook	
3.5" gauge	£43.00
5" gauge	£53.00
7 1/4" gauge	£60.60
LMS coupling and hook	
3.5" gauge	£43.00
5" gauge	£53.00
7 1/4" gauge	£60.60
Hooks and chains	
3.5" gauge	£30.35
5" gauge	£33.00
7 1/4" gauge	£39.70



**Note:** Couplings and hooks are supplied as complete assemblies, we do not supply the couplings separately.

# **Cylinder Drain Cocks**

Locomotive type drain cocks in sets of 4 (2 left hand 2 right hand) in various sizes and threads, Stuart models types also available. See Practical Scale catalogue for fine scale GWR types, 5" & 7 1/4" gauge.

Loco type	Set 4	Stuart Models type	Each
1/8" x 40	£27.00		
5/32" x 40	£27.00	5/32" x 40 (71960)	£15.40
3/16" x 40	£27.00	3/16" x 40 (71961)	£17.55
¼" x 40	£27.00	¼" x 32 (71962)	£19.65
5/16" x 32	£28.00		
5/16" x 40	£28.00		
3/16" x 40 Polly Style	£28.00		



# Cylinder Hones and spare stones for finishing bores

4 sizes to suit a range of bores from  $\frac{1}{2}$ " to 7" diameter. 3 in 1 set also available. See also honing oil.

£15.50
£4.70
£16.50
£5.70
£21.00
£8.50
£33.00
£11.50
£33.50



#### **Die stocks**

to suit 13/16" and 1" diameter dies.

to suit 13/16" OD dies	£4.65
to suit 1" OD dies	£5.90

# Dies for thread cutting – see Taps and Dies

#### Drills

full range of quality high speed steel twist drills in metric sizes plus centre drills (Slocum drills).

centre drills (slocum)			
No.1 1/8"	£2.50	No.4 5/16"	£3.40
No.2 3/16"	£2.80	No.5 7/16"	£6.00
No.3 1/4"	£3.30		

Imperial fractions			
1/32"	£1.30	9/32"	£2.30
3/64"	£1.20	19/64"	£3.10
1/16"	£1.20	5/16"	£2.80
5/64"	£1.20	21/64"	£3.70
3/32"	£1.20	11/32"	£4.80
7/64"	£1.20	23/64"	£5.00
1/8"	£1.20	3/8"	£4.50
9/64"	£1.40	25/64"	£5.80
5/32"	£1.40	13/32"	£5.20
11/64"	£1.20	27/64"	£6.50
3/16"	£1.30	7/16"	£6.50
13/64"	£1.60	29/64"	£7.50
7/32"	£1.40	15/32"	£7.00
15/64"	£2.00	31/64"	£9.00
1/4"	£1.80	1/2"	£8.00
17/64"	£2.40		

Metric Series Drills					
1	£1.10	4.3	£1.50	7.6	£2.30
1.1	£1.20	4.4	£1.70	7.7	£3.00
1.2	£1.20	4.5	£1.30	7.8	£3.10
1.3	£1.20	4.6	£1.50	7.9	£3.20
1.4	£1.20	4.7	£1.50	8	£2.70
1.5	£1.20	4.8	£1.70	8.1	£3.30
1.6	£1.20	4.9	£1.60	8.2	£3.30
1.7	£1.20	5	£1.40	8.3	£3.50
1.8	£1.20	5.1	£1.70	8.4	£3.50
1.9	£1.20	5.2	£1.70	8.5	£3.70
2	£1.20	5.3	£1.80	8.6	£3.70
2.1	£1.20	5.4	£1.80	8.7	£3.80
2.2	£1.20	5.5	£1.80	8.8	£3.80
2.3	£1.20	5.6	£1.90	8.9	£3.90
2.4	£1.20	5.7	£1.90	9	£3.40
2.5	£1.20	5.8	£2.00	9.1	£4.10
2.6	£1.20	5.9	£2.00	9.2	£4.20
2.7	£1.20	6	£1.80	9.3	£4.30 £4.30 £4.50
2.8	£1.20	6.1	£2.10	9.4	
2.9	£1.20	6.2	£2.10	9.5	
3	£1.20	6.3	£2.20	9.6	£4.50
3.1	£1.20	6.4	£2.20	9.7	£4.70
3.2	£1.20	6.5	£2.20	9.8	£4.70
3.3	£1.20	6.6	£2.30	9.9	£4.80
3.4	£1.30	6.7	£2.40	10	£4.10
3.5	£1.30	6.8	£2.10	10.5	£4.50
3.6	£1.20	6.9	£2.50	11	£5.00
3.7	£1.20	7	£2.10	11.5	£5.50
3.8	£1.40	7.1	£2.40	12	£6.10
3.9	£1.30	7.2	£3.20	12.5	£6.70
4	£1.40	7.3	£2.50	13	£7.30
4.1	£1.20	7.4	£2.60		
4.2	£1.20	7.5	£2.60		

#### **Dynamos:**



Ideal for use with miniature traction engines or stationary steam engines

Major Dynamo:- 18 watt output (max) 1-12 volts, speed range 1000 to 12000 rpm; suitable for use with medium sized stationary engines, e.g. Stuart 10V & S50. Also suitable for 1" scale Showman's traction engines. Gives good output at reasonable speeds. £56.50

#### Elbows

Pipe elbows in sizes from 3/32" to 1/4" pipe.

3/32"	£7.50	5/16"	£12.00
1/8"	£7.30	3/8"	£15.00
5/32"	£7.30		
3/16"	£7.70		
1⁄4"	£7.90		



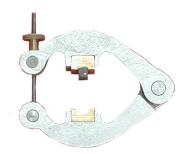
#### **External Hones**

M5

3/16

2 sizes of kit available, for up to 1" diameter or up to 2" diameter. Spare stones also available. These kits contain castings and materials, including stones.

No.1	£19.40
extra stone & carrier	£4.65
No.2	£28.75
extra stone & carrier	£4.65



Fibre washers (pac		(pack of	10)			
				M6	1/4	£0.75
	M3	1/8	£0.75	M8	5/16	£0.75
	M4	5/32	£0.75	M10	3/8	£1.00

M12

1/2

£1.00

£0.75

## Filler nozzles, valves, jets, etc

Nozzles for refillable gas container (fits screw top canisters); gas canister valve, gas filler valves (Ronson type), gas jets,

Filler Nozzle for refillable gas		
container	fits screw top canisters	£16.00
Gas Canister Valve	1/4 x 32 thread	£22.00
Gas filler valves, Ronson type		£6.00
Gas jets (All have 1BA thread)	Sizes 5, 8, 10, 15	£4.00



# **Firing Shovel & Poker Sets**

Firing irons for  $3\frac{1}{2}$  gauge, 5" gauge and 7  $\frac{1}{4}$ " gauge locos, plus the 5" gauge Polly shovel/poker sets. We also stock the miniature 5" gauge shovels from Doug Hewson.

3 1/2"g 7/8" wide x 10" Brass	£26.50
5"g 1 3/16" wide x 10 3/4" Brass	£28.50
7 1/4"g 1 5/8" wide x 15" Brass	£29.50
5"g Doug Hewson in brass	POR
5"g Polly shovel and poker set	£18.00
Polly type extra long	£20.00

# Flu brushes

We stock a wide range of brushes for cleaning tubes in your boiler, available in both bristle and bronze.

Bristle		Bronze	
1/4"	£3.70	1/4"	£4.70
5/16"	£3.70	5/16"	£4.70
3/8"	£4.00	3/8"	£5.00
7/16"	£4.20	7/16"	£5.20
1⁄2"	£4.20	1⁄2"	£5.20
5/8"	£4.50	5/8"	£5.50
3⁄4"	£4.50	3⁄4"	£5.50
1"	£4.70	1"	£5.70





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#### Fluxes

per 250 grammes	
General Purpose Flux	£13.00

#### Gas tanks (refillable) in three sizes.

These tanks are primarily intended for use with small marine, rail or stationary applications such as steam cranes where a large gas tank or piping would be out of place. Made of non-sparking brass and copper construction and silver soldered, the tanks are available in 4 sizes. For use with up to 60/40

Mini	As per Mamod, etc	1.75" high	£38.00
Small	2" diameter	1.75" high	£54.00
Standard	2" diameter	3.5" long	£58.00
Large	2" diameter	5" long	£69.30

Butane/Propane mix. Test pressure 360psi.



Supplied with test certificate.

Gas refill adapter also available, used to fill the above tanks from self sealing disposable gas cartridges, see above.

#### Gasket paper

In various thicknesses for steam, oil and water. Per piece approx 12" square.

Asbestos free, for steam 0.5mm (0.020")	£2.50	oil and water type paper (0.004")	£1.50
	22.00	0 and water type paper (0.004 )	21.50

#### **Gauge Glass Plain and Red Line**

Plain metric per foot				Red Line per 6"				Blue line per 6"	
4mm	£2.80	8mm	£3.25	4mm	£4.00	8mm	£4.00	6.5mm	£4.20
5mm	£3.00	10mm	£3.60	5mm	£4.00	9mm	£4.00		
6mm	£3.25	14mm	£5.00	6mm	£4.00	10mm	£4.00		
7mm	£3.25			7mm	£4.00				

#### Gauge glass cutter £8.00 each

Please visit out Facebook page for a demonstration video



#### Globe Valves – see also Steam Stop Valves

3/32"	£19.50	1/4"	£20.00
1/8"	£18.50	5/16"	£45.80
5/32"	£18.50	3/8"	£48.80
3/16"	£19.00		



Suitable for steam or water, available in straight (180 degree) or right angle (90 degree), please specify which.

# Globe valves – Stuart Style – 180 degree or 90 degree

3/16" x 40 – 5/32" pipe	£35.65
¼" x 32 – 3/16" pipe	£35.65
5/16" x 26 – ¼" pipe	£35.65

# **Graphited Packing**

In small quantities in various thicknesses.

Approx. 600mm per pack	
square 3mm	£3.10
5mm	£3.75
1/4"	£3.75

Also available PTFE square packing suitable for loco pistons, 5mm square section 80p per inch.

#### **Graphited String**

per hank (approx 2') 1/16" dia £1.00

#### Hand pumps

Pipe to pipe versions for footplate use (illustrated) or tank (tender) versions for submerged use.

Ram size	Pipe size	Tank type	Pipe-Pipe type
1/4"	1/8	£33.00	N/A
5/16"	1/8	£32.00	£38.00
3/8"	5/32	£38.00	£44.00
1/2	3/16	£40.00	£49.00
5/8"	1/4	£45.00	£51.00
3/4	3/8	£71.00	£75.00

Hand feed pump castings for 1", inc ram material, O rings and SS balls, enquire for price



Pipe to pipe type



Tank Type

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# **Handrail Stanchions**

for locomotives to suit 3 ½" 5" and 7 ¼" models. Manufactured with threaded shank which may be screwed

Gauge	Rod Size	Thread size	Price per 10
2 ½" gauge	1/16	M2	£4.50
3 1/2" gauge	3/32	8BA	£4.00
5" gauge	1/8	6BA	£4.50
5" gauge extra long	1/8	6BA	£5.00
7 1/4" gauge	5/32	4BA	£8.00

into smokebox or nutted to tank panels, etc. Prices per pack of 10



Fine scale GWR handrail stanchions, based on official works drawings. The short blind type (type 1) are suitable for

tender and footplate handrails where model engineers have always had to compromise and round off the end of the handrail. Type 3 are the special length stanchions used on the front of smokeboxes and are supplied individually as only one per loco is usually required.

GWR 5" (6BA) per 10	1/8" bore	GWR 7 1 <b>/</b> 4" (4BA) pe	r 10 3/16" bore
Type 1 Short Blind	£7.50	Type 1 Short Blind	£9.50
Type 2 Short Thru	£7.50	Type 2 Short Thru	£9.50
Type 3 Smoke box	£1.00 each	Type 3 Smoke box	£1.00 each
Type 4 Standard Thru	£7.50	Type 4 Standard Thru	£9.50

#### Handwheel castings, in brass.

Available in 'standard' or locomotive style to suit models of various sizes. Our range includes some from Doug Hewson and larger wheels as used for hand brake on the Highland Railway tender.

solid boss suitable for drill/tap	
standard (scale fluted)	
7/16" dia	£2.10
1⁄2" dia	£2.30
5/8" dia	£2.60
3⁄4" dia	£2.80
3 spoke type	
1/2" dia tapped 8BA	£3.00
9/16" dia tapped 8BA	£3.00
5/8" dia tapped 6BA	£3.40
11/16" dia tapped 6BA	£3.80
3/4" dia tapped 6BA	£3.80
1" dia tapped 6BA	£4.80
loco type (4 spoke with side ha	ndle)
1⁄2" dia	£3.00
<sup>3</sup> ⁄ <sub>4</sub> " dia	£3.70
Narrow Gauge handle	
(stainless steel)	
5" gauge	£2.50
7 ¼"	£3.50



Highland railway hand brake wheel, 1.08" diameter 5 spoke £4.25 each, also available.



#### Injectors

Our wide range of injectors includes horizontal and vertical types ranging from 11oz per minute to 60 0z per minute. Unfortunately John Cashmore & Gordon Chiverton injectors are no longer available.

				Thread	Pipe
Allchin injector	£58.50			size	size
Injectors		Injectors			
Horizontal		Vertical			
No 2 (11 oz)	£49.00	No 2 Vertical	£54.00	5/16x32	5/32"
No.3 (16 oz)	£49.00	No 3 Vertical	£54.00	5/16x32	3/16"
No.4 (22 oz)	£49.00	No 4 Vertical	£54.00	5/16x32	3/16"
No.5 (2 2/3 pt)	£54.00	No 5 Vertical	£66.00	3/8x32	1⁄4"
No.6 (4 pt)	£54.00	No.6 vertical	£66.00	3/8x32	1⁄4"
No.7 (6 pts)	£72.00	No.7 Vertical	£70.00	1/2x26	5/16"
No.8 (one gallon)	£72.00	No 8 vertical	£85.00	9/16x26	3/8"



#### **Injector Filter**

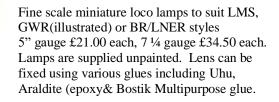
Pictured right, 5/16" x 32 or 3/8" x 32, both £15 each

# Locomotive and Traction Engine Nameplates and Numberplates

We regularly produce machined nameplates for our Polly locomotive customers and these nameplates can be made in sizes to suit other narrow gauge models in 5" and 7 1/4" gauge or to suit traction engines. The thickness of the brass plate used, gives the impression of a substantial cast plate, something which cannot be achieved with an etched plate. We are also able to supply some cast numberplates for GWR locomotives and some other plates. Since plates are made to order, there may be a significant lead time.

Price Guide: 5" gauge  $\pounds 20 + \pounds 10$  per letter/number (minimum 2 letters) 7 <sup>1</sup>/<sub>4</sub>" gauge £30 + £10 per letter/number (minimum 2 letters) Please enquire with your requirements.

#### Loco Lamps



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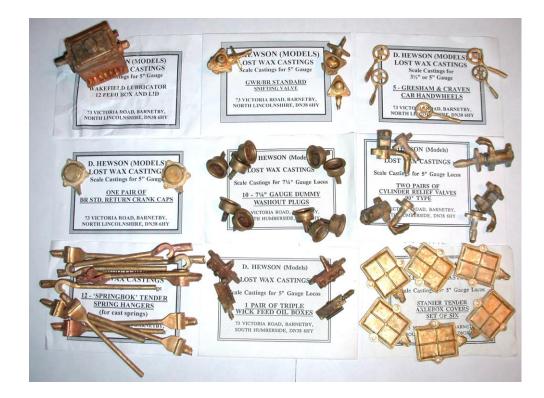




# Lost Wax Castings and Accessories from Doug Hewson



Examples of the popular accessories and lost wax castings by Doug Hewson which are normally available from Polly. Firing shovels, tea cans, oil cans, vacuum brake hoses and steam pipes are particularly popular. Enquire for availability of other items.



# **Loctite Products**

As official Loctite distributors, we stock a range of popular Henkel-Loctite products, for thread sealing, bearing retaining, wheel fixing, etc. see Technical Note on our website and Henkel-Loctite website for detailed application notes. Trade enquiries welcome for these and other Loctite products.



	Sealing and aligning boiler fittings	
Loctite 2400 5ml bottle	Replaces Loc'n'Seal	£5.00
Multi-gasket 574	For most steam and i/c engine joints	£22.00
Superclean 7061	For preparation of surface prior to assembly	£14.00
	Retaining compound, fixing of studs and bearings in	
Loctite 641 10 ml bottle	housings	£9.00
Loctite 542 10 ml bottle	Thread sealant for piping systems oil/water/air.	£9.00
	Retaining compound for high strength assembly, wheels, etc., replaces 601 and is more oil tolerant with higher	
Loctite 603 10 ml bottle	strength	£9.00
Loctite 290 10 ml bottle	Penetrating thread sealant for fixing after assembly.	£9.00
Loctite 243 10 ml bottle	Medium strength for thread locking of nuts	£9.00

# Lubricants, Steam Oil and cutting Oils

steam oil (1000sae and 460sae), slideway lubricant, cutting and tapping fluid, soluble oil and honing oil. The thinner grade steam oil (460) is suitable for smaller (e.g. gauge 1) locos.

Steam Oil 1000 grade 1/2 litre	£5.50	Soluble Oil 1 litre	£8.80
Steam Oil 1000 grade 1 litre	£8.80	Cutting & tapping fluid 1 litre	£8.80
Steam Oil 460 grade 1/2 litre	£5.50	Slideway oil 1/2litre	£5.50
Hone Oil 1/2 litre	£6.50	WD40 Aerosol Can 200 ml	£3.75

#### Lubricators

standard ratchet type lubricators with various tank sizes, including double pump type. Lubricator mechanisms and roller clutches or ratchet components for use in your own tank.

lubricator ratchet type		
lubricator 1"x1"	£58.00	
lubricator 1.25"x1.25"	£56.00	
lubricator 1.25" x 2"	£58.00	
lubricator 2x2 twin	£85.00	
Lubricator mechanism only single	£40.00	
Lubricator mechanism only double	£62.00	
Lubricator Clutchless 1.25" Sq.		
Single ram	£50.00	
Double ram	£54.00	A
		C sh fasal I lin
lubricator roller clutches		
3mm ID x 6.5mm OD per pair	£14.00	
Ratchets/Pawls	£8.00	
lubricator displacement type		
Stuart type 1/4 x 32tpi thread	£53.90	
Hydrostatic lubricators		
Single glass sight feed	N/A	
Double glass sight feed	N/A	u u w
Triple glass sight feed	N/A	•
Spare glass 12mm diameter	£5.00	

#### Marking out blue – £5.50 per 100ml bottle

Blue Layout Fluid used to scribe sharp, clear, precise lines. When applied, our layout fluid provide a uniform deep blue colour that prevents glare and dries in minutes. Layout Fluid creates an extremely thin film which adds practically no thickness to the work piece and remains flexible without cracking and chipping.

Marking out blue is corrosive and not available by post.

#### Metal – Bar Stock

We stock a large range of metals. The materials and sizes listed below are normally held in stock. Other materials and sizes may be available if used in our own manufacture. Metals are heavy and thus expensive to post, especially in longer lengths. Customers wanting longer lengths may be able to collect from the workshop or arrange to collect from an exhibition.

#### Brass bar

In round, square, rectangular and hexagon sections in a wide variety of sizes. Longer lengths on request for collection from workshop or exhibitions. Max length for postage two feet.

1ft lengths							
Round		Square		Rectangular		Hexagon	
1/16"	£1.00	1/8"	£1.85	1/16 x 1/4"	£1.00	3mm	£1.75
3/32"	£1.00	5/32"	£1.85	1/8 x 1/4"	£1.80	5/32"	£1.75
1/8"	£1.00	3/16"	£1.85	1/8 x 3/8"	£1.80	3/16"	£1.90
5/32"	£1.05	1/4"	£2.40	1/8 x 1/2"	£2.70	7/32"	£2.10
3/16"	£1.40	5/16"	£2.80	1/8 x 3/4"	£3.70	1/4"	£2.10
7/32"	£1.50	3/8"	£3.80	1/8 x 1"	£4.50	5/16"	£2.80
1/4"	£1.50	1/2"	£6.50	3/16 x 1/2"	£4.60	3/8"	£3.30
9/32"	£2.40	5/8"	£9.50	1/4 x 1/2"	£4.20	7/16"	£3.90
5/16"	£2.40	3/4"	£14.00	1/4 x 3/4"	£5.50	1/2"	£5.20
3/8"	£2.50	1"	£23.00	1/4" x 1"	£7.00	9/16"	£6.50
7/16"	£4.30			3/8 x 5/8"	£6.20	5/8"	£8.00
1/2"	£5.00			1/2 x 3/4"	£7.50	3/4"	£11.50
9/16"	£6.20			1/2 x 1"	£12.40	1"	£19.20
5/8"	£8.00						
3/4"	£10.50						
1"	£16.50						

#### **Brass Angle**

From <sup>1</sup>/<sub>4</sub>" to 1", standard length 2' **Metric Small Sizes** 

(thin section)

2ft lengths	Price	1metre lengths	Price
1/4"x1/4"x1/16"	£4.40	2mm x 2mm x 0.4mm	£6.30
5/16"x5/16"x1/16"	£5.45	3mm x 3mm x 0.45mm	£7.00
3/8"x3/8"x1/16"	£5.80	4mm x 4mm x 0.5mm	£9.80
1/2"x1/2"x1/16"	£6.00	5mm x 5mm x 0.6mm	£12.00
3/4"x3/4"x1/16"	£9.00	6mm x 6mm x 1mm	£13.80
1"x1"x1/16"	£14.00		

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# Brass 'half-round' Beading

Suitable for fitting to tanks and tenders. Note due to the manufacturing process sizes are nominal and measured size of stock is shown in the table. The difference is due to the slight flattening on the sides. When fitted to the model the beading should correspond well to the nominal size.

Nominal Width	Price per ft
1/16"	£1.00
3/32"	£1.00
3mm	£1.50
5/32"	£2.25
3/16"	£2.50

#### **Brass sheet**

Off-cuts normally available – standard thicknesses held in stock 0.5mm, 1.0mm, 1.2mm, 1.5mm, 2.5mm, 3mm. Sizes 1.2mm and below are CZ108 half hard bendable and 1.5mm and above are normally CZ120. Enquire for availability.

#### Bronze Bar PB102 or Colphos

Round hard drawn 12" length		Hexagon 12" length	
1/8"	£2.00	5/32" colphos	£2.10
5/32"	£2.00	1/4" 0.248/4BA colphos	£4.00
3/16"	£3.00	.324" 2BA colphos	£7.50
1/4"	£4.00	10.5mm/0BA colphos	£11.00
5/16"	£5.00	17mm / 11/16" colphos	£26.50
3/8"	£6.50	23mm	£52.00
1/2"	£10.00	1" colphos	£56.00
		½", 3/4", 1" pb102	n/a

#### Bronze Bar PB660 - leaded round bar 12" lengths

Round 12" length			
1/2"	£8.00	20mm	£16.50
5/8"	£11.00	1"	£26.00

#### Cast Iron – round bar, cut to length

Per foot min order 3"		40mm	£16.50
25mm	£11.00	50mm	£24.00
30mm	£12.30	60mm	£30.00

# Copper Boiler Tube

4 <sup>1</sup>/<sub>2</sub>" OD £6 per inch.

# Copper tubing bending

Grade 1/16" to 3/8" diameter (plus some metric sizes)

bending grade per foot			
		3/16"	£1.20
3/32"	£1.50	1/4"	£1.40
1/8"	£1.00	5/16"	£2.60
5/32"	£1.10	3/8"	£2.70

#### Copper tubing Thin wall 1/16" to 1/4"

Thin Wall per foot		5/32"	£1.10
1/16"	£1.00	3/16"	£1.20
3/32"	£1.50	7/32"	£1.30
1/8"	£1.00	1/4"	£1.40

#### **Copper Tubing Thick Wall**

<sup>1</sup>/4" dia 16swg rated for 700 psi £3.65 per foot3/8" dia 16swg £3.50 per foot7/16" dia 20swg £4.00 per foot

# Silver Steel (round)

We stock genuine Stubbs silver steel in a wide range of imperial and metric sizes. This high carbon steel is ideal for making 'D' bits and other tooling and is readily hardened and tempered. Supplied 13" lengths.

	Metric				Imperial		
				1/16"	£1.00	9/32	£3.60
2 mm	£1.00	8 mm	£3.20	3/32"	£1.00	5/16"	£3.40
3 mm	£1.00			1/8"	£1.00	11/32"	£4.00
4 mm	£1.30	10 mm	£5.00	5/32"	£1.35	3/8"	£4.50
5 mm	£2.35			3/16"	£1.40	7/16"	£6.00
6 mm	£2.40	12 mm	£11.50	7/32"	£2.60	1/2"	£7.10
7 mm	£2.90	20mm	£24.20	1/4"	£2.30	3/4"	£20.10

# Stainless steel rod

Free cutting stainless rod, supplied in 1 foot lengths.

round		hexagon	
1/16"	£1.00	5/32"	£1.90
3/32"	£1.00	3/16"	£2.10
1/8"	£1.00	1/4"	£3.10
4mm	£1.10	5/16"	£4.10
3/16"	£1.20	3/8"	£6.70
7/32"	£1.60	7/16"	£8.20
1/4"	£1.40	1/2"	£7.60
5/16"	£2.30	9/16"	£9.40
3/8"	£4.30	5/8"	£10.30
7/16"	£6.00	3/4"	£16.50
1/2"	£6.40		
9/16"	£9.40		
3/4"	£12.10		
1"	£15.60		

#### Steel Stock in round, hexagon and square

We stock a range of common sections. As manufacturers, we have a wider range of steel available than is practical to list. Please contact us if you have any specific requirements.

Mild Steel generally EN1A in 2ft lengths

Sections Bright Mild Steel:2ft lengths

Size (dia	Round	Square	Hexagon	1/16" x ½"	£2.60	3/16" x ¾"	
or a/f)		-	_	3/32" x ½"	n/a	1⁄4" X 1⁄2"	£4.80
1/ 8"	£1.00			1/8" x ¼"	£1.50	<sup>1</sup> ⁄ <sub>4</sub> " X <sup>3</sup> ⁄ <sub>4</sub> "	£5.30
5/32"	£1.00			1/8" x 3/8"	£2.40	1⁄4" x 1"	£6.30
3/16"	£1.50			1/8" x ½"	£1.70	1⁄4" x 1 1⁄2"	£7.20
7/32"				1/8" x ⅔₄"	£3.20	1⁄4" x 2"	
1/4"	£1.20	£3.80	£5.60	1/8"x 1"	£5,50	3/8" x 5/8"	
5/16"	£1.30	£3.80	£4.80	1/8" x 1 ½"	£5,80	3/8" x 1 ¼"	£6.40
3/8"	£1.70	£4.10	£5.50	1/8" x 2"		3/8" x 11/2"	£7.70
7/16"	£2.70	n/a		1/8" x 3"	£5.80	½" x 1"	£7.70
1/2"	£2.70	£4,30		1/8" x 4"	£6.70	1⁄2" x 1 1⁄2"	£9.60
9/16"	£2.70			3/16" x 3/8"	£2.40	½" x 2"	£12.50
5/8"	£3.70	£9.10		3/16" x ½"	£2.60		
3/4"	£6.25	£10.70	£9.20				
7/8"	£6.70			Angle metric			
1"	£7.95	£15.30	£10.60	12 x 12 x 3	£8.60	16 x 16 x 3	10.30

N.B. Some small steel sizes are becoming increasing difficult to obtain, enquire for availability.

#### Spring steel

Price per foot length. Suitable for leaf springs. Supplied in normalised (soft) state, heat treatment information available

3/8 x .040	£1.00
7/16 x .032	£1.00
7/16 x .040	£1.00
1/2 x .040	£1.00
½ x 2mm	£2.00

# Metal Blacking – 'BLACK-IT' for Iron and Steel

The process is easy to apply and does not use heat or any toxic compounds. Typically, the time to BLACK a component is less than 15 minutes. After treatment, the component is ready for use or assembly. The surface finish of the component is unaffected and there are no changes to any dimensions. Once treated with the process the component's black finish is stable for ever! Finally, the BLACK-IT! process leaves the metal surface embedded with oil which resists rusting.

Kit 4 x 500ml bottles £39.95



#### Milling cutters

from 1/8'' dia to  $\frac{1}{2}''$  diameter, see also slot drills.

1/8"	£12.85
5/32"	£12.55
3/16"	£12.55
7/32"	£12.55
1/4"	£11.35
5/16"	£11.35
3/8"	£9.90
1/2"	£12.40

# **Miniature Cast Signs**

Cast aluminium signs of our own manufacture, supplied unpainted.

Crossing no gates 4-6-0	£12.50
Crossing no gates 0-6-0	£12.50
Beware of trains	£10.50



# Nipples (see also Union Nuts)

to suit all ME pipe sizes, including flat ended nipples for injectors. For pressure gauge specials see below.

Standard	Туре	Injector	Туре
Pipe size	Price per 10	Pipe Size	Price each
3/32	£3.80		
1/8	£3.80	1/8	50p
5/32	£3.80	5/32	50p
3/16	£4.00	3/16	50p
1/4	£4.20	1/4	50p
5/16	£6.80	5/16	60p
3/8	£9.00	3/8	70p



# **Conversion nipples**

Pipe size	Union nut size	Price each
1/8"	5/16x32	50p
5/32"	5/16x32	50p
3/16"	3/8x32	50p

#### Nitrile Rubber balls - see also Viton Balls

For check valves, axle and hand water pumps, etc., which are sometimes difficult to get a satisfactory seal on. Under water pumping conditions with the correct lift and seat the balls have a life of several hundred hours. Nitrile balls are sold individually.

1/8"	£1.20	7/16"	£1.75
5/32"	£1.30	1/2"	£2.10
3/16"	£1.30	9/16"	£2.15
7/32"	£1.45	5/8"	£3.35
1/4"	£1.45	3/4"	£3.95
5/16"	£1.65		
3/8"	£1.65		

#### Nuts. Bolts, Caphead Bolts, Grubscrews

We stock a wide range of BA fastenings in popular sizes with hexagon (inc. small head), roundhead and countersunk heads. A limited range of cap head (socket head or allen screws) bolts, BA and metric studding is stocked in brass, steel and stainless steel studding. With the general adoption of metric fasteners for industrial application, it is becoming increasingly difficult and expensive to obtain BA fasteners.

Although it is our intention to stock BA fasteners for as long as they are obtainable and there is customer demand, we have for some time stocked a range of metric fasteners. The drawback of metric fasteners in the small sizes has historically been the large size of the hexagon heads which made them generally unsuitable for model use. We are pleased now to be able to offer a range of metric fasteners, specially manufactured for model engineers. The small size hexagons are most appropriate for our models and a wide range of special screws, including slotless 'rivet head' screws, dome nuts, etc., are available.

See tables on following pages for available sizes.

#### **BA Screws & Nuts**

<b>C</b>		BA Brass or Steel Nuts -per 25	
Screws per 25		Specify brass or steel required	01.01
steel hex head		2BA brass	£1.6
12BA x 3/8"	£4.00	3BA brass	£1.5
12BA x ½"	£4.30	4BA brass	£1.75
10BA x 1/2"	£4.05	5BA brass	£1.55
9BA x 1/2"	£3.85	6BA brass	£1.75
8BA x 1"	£4.40	7BA brass	£2.90
8BA x 1/2"	£3.75	8BA brass	£1.95
7BA x 1/2"	£3.80	9BA brass	£2.25
6BA x 1"	£5.55	10BA brass	£2.45
6BA x 1/2"	£4.20	12BA brass	£2.80
5BA x 1/2"	£4.00	2BA steel	£1.90
4BA x 1"	£3.95	3BA steel	£2.80
4BA x 1/2"	£4.00	4BA steel	£1.80
3BA x 1"	£4.45	5BA steel	£1.80
2BA x 1"	£4.15	6BA steel	£2.00
2BA x 1/2"	£3.70	7BA steel	£2.90
Steel countersunk		8BA steel	£2.3
10BA x 1/2"	£3.45	9BA steel	n/a
8BA x 1/2"	£3.25	10BA steel	£3.40
7BA x ½"	£3.40	12BA steel	£3.75
6BA x 1/2"	£3.30		
4BA x 1/2"	£3.15	BA Washers in Brass or Steel	
Brass Countersunk		Most sizes available	
12BA x 1/2"	£4.05	Pkts of 25	£1.15
12BA x 3/8"	£4.10		
10BA x 1/2"	£3.60	Rivet Head/Slotless Screws -Metric	
8BA x 1/2"	£3.40	M1.2	£3.8
6BA x 1/2"	£3.40	M1.6	£3.90
5BA x 1/2"	£3.90	M2	£3.60
4BA x 1/2"	£3.25	M3	£3.90
Hexagon Brass			
12BA x 1/2"	£6.05		
10BA x 1/2"	£5.90	Cap Head 4BA Bolts	
8BA x 1/2"	£5.25	4BA x 3/8"	£2.60
6BA x 1/2"	£5.30	4BA x <sup>1</sup> / <sub>2</sub> "	£2.60
5BA x 1.2"	£5.30	4BA x <sup>3</sup> / <sub>4</sub> "	£2.60
4BA x 1"	£5.45		~2.00
2BA x 1"	£6.65	Grub Screws pkt 10	
Round Head Brass	20.00	6BA BA sizes not	
10BA x 1/2"	£3.40		-
8BA x 1/2"	£3.60	2BA available M3 pkt 10	£1.50
6BA x 1/2"	£3.35	M4 pkt 10	£1.50
		M5 pkt 10	£1.50

N.B. All our stock 'bolts' are technically screws, as they are threaded right up to the head. Generally small BA and metric bolts are very difficult to source and many model engineers wrongly assume that hexagon headed screws are in fact bolts, expecting screws to have slotted heads!



#### **Metric Screws and nuts**

Especially produced for model engineers. High quality rolled threads, with small size hexagon (choice of standard or high head bolts). These nuts and bolts are precision made fasteners specially made in Germany for model engineers. They should not be confused with lower cost industrial fasteners which do not offer such clean hexagons or inferior machined thread screws of doubtful strength.

Description [packs of 25]	M1.0	M1.2	M1.4	M1.6	M2.0	M2.5	M3.0	M4.0
								10mm
								12mm
		0		10	45	4.5	4.5	15mm
Steel low head hex bolts		8mm £3.85		12mm £3.85	15mm £3.90	15mm £3.90	15mm £3.90	20mm £3.10
Steel low head hex boils		13.00		8mm	13.90	13.90	10mm	23.10
				£3.30			£3.35	
		12mm	12mm	12mm	15mm	15mm	15mm	
Steel std/high hd hex bolts		£3.90	£3.85	£3.85	£3.90	£3.85	£3.85	
¥		10mm		10mm			10mm	
Brass CSK screws		£4.75		£4.50			£4.50	
					10mm			
	8mm				£3.80		. –	
	£3.00	8mm	12mm	10mm	15mm	10mm	15mm	
Brass hex bolts	Per 10	£3.90	£3.90	£3.85	£3.90	£3.85	£3.85	
Broos rivet hand halts		10mm		10mm	10mm		10mm £3.90	
Brass rivet head bolts		£3.85		£3.90	£3.90 8mm		£3.90 10mm	
					£7.40		£7.90	
					10mm	10mm	15mm	
Stainless hex bolts					£7.70	£7.90	£7.90	
Steel hex nuts		£4.00	£3.85	£3.85	£3.85	£3.85	£3.60	£3.60
Brass hex nuts		£4.05	£4.00	£3.85	£3.85	£3.30	£3.85	£3.60
Brass lock nuts		£3.85		£3.85	£3.85		£3.85	
stainless hex nuts					£5.90	£5.90	£5.90	
Dome nuts					£6.50			

Packs are marked with size of the bolts - e.g. M3 x 15, indicating the thread size and the length in mm. Specialist fasteners available, including other sizes of dome nuts, please enquire.

# 'O' Rings

A wide range of sizes, available in Nitrile rubber, Silicon or Viton. For use as piston rings, joint seals, gauge glass seals, etc. Sizes from 1/8" to  $1 \frac{1}{2}$ " in stock.

Nitrile – 0-100°C (saturated steam),	, Viton 15-200°C	(superheated steam)	Silicone 60-200°C
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Pkts of 6			Nitrile	Viton	Silicon	Pkts gty as listed Nitrile Viton
(not larger size	s)	BS				BS
ID x OD	c/s	No.				ID x OD c/s No.
1/8" x 1/4"	1/16	006	£1.20	£1.50	£1.50	1" x 1 1/4" pkt of 4 1/8 214 £1.50 £4.50
5/32" x 9/32"	1/16	007	£1.20	£1.50	£1.50	1 1/8" x 1 3/8" pkt of 4 1/8 216 £1.80 £4.20
3/16" x 5/16"	1/16	008	£1.20	£1.50	£1.50	1 1/4" x 1 1/2" pkt of 2 1/8 218 £2.00 £4.20
7/32" x 11/32"	1/16	009	£1.20	£1.75	£1.75	1 3/8" x 1 5/8" pkt of 2 1/8 220 £2.00 £4.20
1/4" x 3/8"	1/16	010	£1.20	£1.75	£1.75	1 1/2" x 1 3/4" pkt of 2 1/8 222 £2.00 £4.40
5/16" x 7/16"	1/16	011	£1.20	£1.75	£1.75	1 3/4" x 2" pkt of 2 1/8 224 £2.00 £4.40
3/8" x 1/2"	1/16	012	£1.20	£1.75	£1.75	
3/8" x 9/16"	3/32	110	£1.20	£2.20	£2.20	Silicon Gauge Glass O Rings
7/16" x 5/8"	3/32	111	£1.20	£2.40	£2.40	4mm – 10mm glass size (specify) 75p pkt 4
1/2" x 11/16"	3/32	112	£1.20	£2.50	£2.50	
9/16" x 3/4"	3/32	113	£1.25	£3.20	£3.20	Small Section O Rings Nitrile
5/8" x 13/16"	3/32	114	£1.25	£3.80	£3.80	3/32" x 7/32" 20p ea
11/16" x 7/8"	3/32	115	£1.30	£3.80	£3.80	1/16" x 3/16" 20p ea
3/4x15/16pkt of	4 3/32	116	£1.10	£4.00	£4.00	3/32" x 5/32" n/a
3/4" x 1" pkt of	4 1/8	210	£1.40	£4.00	£4.00	1mm x3mm nitrile 20p ea
						4mm x 6mm 20p ea

# **Oil Cups and Oilers**

A range of precision oil cups.

Oil Cups	
8BA oil cups	£2.60
6BA oil cups	£2.80
4BA oil cups	£3.40
2BA oil cups	£3.90

# Oiler – Drip feed Glass Oiler

Drip feed oilers	
3/16 x 40 7mm glass	£15.00
3/16 x 40 10mm glass	£15.00
3/16 x 40 12mm glass	£18.00
3/16 x 40 / ¼ x 40 16mm glass	£18.00
M10 (as used on R&B engine)	£25.00

## Pipe Benders - see our facebook page for a demonstration

Set of pipe benders (1/8" to 1/4") £13.50







# **Pressure Gauges**

Probably the widest range of gauges available from any supplier. Sizes ranging from ½" dia to 4", plain or flange mount graduated in metric (bar) or imperial (psi). Calibrated test gauges available for inspection/certification. Pressure gauge siphons also available.



Standard type	Pressure range	Price
1/2"	0-80, 0-100, 0-120 psig	£35.00
3/4"	0-30, 0-60, 0-80, 0-100, 0-120, 0-	£26.50
	150 psig	
	0-6, 0-10bar	
1"	0-30, 0-60, 0-80, 0-100, 0-120, 0-	£27.00
	150, 0-200psig	
	0-6, 0-10 bar	
1 5/8" ctr mvmnt	0-100, 0-160, 0-300psig, 0-10Bar	£30.00
2" centre mvmnt	0-160, 0-300 psig	£32.00
Flanged type		
3/4"	0-80, 0-100, 0-120, 0-150 psig	£28.70
1"	0-80, 0-100, 0-120, 0-150 pig	£36.15
1 5/8" ctr mvmnt	0-160, 0-300 psig	£38.00
2" ctr mvmnt	0-160, 0-300 psig	£39.00
4" standard test	0-400 psig	£85.00
gauge	5 psi incr. graduations	

Nut + Olive to suit gauge	Price
1/2"	£2.00
<sup>3</sup> ⁄ <sub>4</sub> " & 1"	£2.00
1 5/8" & 2"	£2.00

Spare glass <sup>1</sup>/<sub>2</sub>, <sup>3</sup>/<sub>4</sub>, 1" £2.50 Spare glass 1 5/8, 2" £3.50

4" Standard gauge supplied calibrated with certificate, recalibration can be arranged.

# Pressure Gauge Syphons

Syphon standard for 3/4" and 1" gauges, thread size 3/16" x 40 banjo bolt	£8.70
Syphon standard for 3/4" and 1" gauges, thread size 1/4" x 40 banjo bolt	£8.70



Banjo bolt fixing

# **Reilang Oilers**



Reilang oilers with their unique double pump action are ideal for oiling up your loco or for general workshop use. General purpose pump action oilers available in various sizes, pressure oilers to fit machinery oil nipples and pocket oilers.

Reilang flexible spout oiler 200ml	£28.80
Reilang pocket oiler 75ml	£6.00
Reilang precision oiler 200ml	£33.70
Reilang precision oiler 300ml	£34.80
Reilang precision oiler 500ml	£40.95
Reilang plastic oiler 200ml	£30.60
Reilang plastic oiler 300ml	£32.10

## **Rivet snaps**

Available individually, sizes 1/32" to 1/4" diameter.

1/32"	£6.60
3/64"	£7.50
1/16"	£7.60
5/64"	£7.80
3/32"	£7.90
1/8"	£7.90
5/32"	£8.00
3/16"	£8.00
1/4"	£7.90



# **Rivet Tools**

DIY casting for 75mm lever action crimping tool with drawing £24.00

Rivet tool snaps £21.50 per set, shank sizes:

0.8mm (1/32"), 1.2mm (3/64"), 1.6mm(1/16") 2.0mm (5/64"), 2.4mm

# **Rivets**

**Brass** snap head rivets from 1/32" to 1/16" diameter, in packs of 50 with larger quantities on request **Copper** snap head from 1/16" diameter to 3/16" for boiler making and general use. Standard packs of 50, 3/16" in packs of 25.

Steel general purpose snap head rivets.

Rivet Head Screws (Slotless screws) to match rivets, see nuts and bolts above.

rivets brass snap head		rivets steel snap head	
Per pkt 50		Per pkt 50	
1/32" x 1/4" long	£1.40	1/16" x ¼" long	£1.10
3/64" x 1/4" long	£1.15	1/16" x ½" long	£1.10
1/16" x 1/4" long	£1.40	5/64" x ½" long	n/a
rivets copper snap head		3/32" x ½" long	£1.20
Per pkt 50		1/8" x ½" long	£1.20
1/32" x ¼" long	£1.40	1/8" x 1"long	£1.40
3/64" x1/4" long	£1.15	5/32" x 1" long	£2.50
1/16" x 1/4" long	£1.20	3/16" x 1" per 25	£1.80
1/16" x 1/2" long	£1.50		
3/32" x ½" long	£1.40		
1/8" x ½" long	£2.10		
1/8" x 1"long	£3.75		
5/32"x 1" long	£5.60		
3/16" x 1" long per pack 25	£5.00		

Enquire for quantity prices of rivets.

# **Roll Pins**

Pkt of 10	Price
1/16"	£1.30
3/32"	£1.30
1/16x5/8"	£1.30
1/16x1"	£1.30
3/32x5/16"	£1.30
3/32x3/4"	£1.30
1/8x1/4"	£1.30
1/8x5/8	£1.30

Safety Valve Spring & Ball	<b>Details for Gord</b>	on Smith designs
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Valve	Drawing	Ball	Valve Style	Suitable for Loco Type	Manufacturer	Price per	Price per
Seat Dia	number	size	(short/tall)		Part No.	spring	ball
1/8"	SV#1	5/32"	23/32" tall 90 psi	MOLLY - etc	LC-016A-03-SS	£2.10	25p
1/8"	SV#1B	5/32"	3/8" tall (4 per loco)	3'/2"g LMS Princess	LC-014A-01-SS	£2.10	25p
5/32"	SV#2	3/16"	13/16" tall 100 psi	Large 3 ½"g, Small 5"g	LCM-055B-04-SS	£2.10	30p
5/32″	SV#2A	3/16"	Short (1/2"tall) 100 psi	ditto	LC-021AB-04-SS	£2.10	30p
5/32"	SV#2B	3/16"	Short(7/16" tall) 90 psi	HIELAN LASSIE	LC-018AB-02- SS	£2.00	30p
5/32"	SV#2C	3/16"	Twin GWR style 80psi	DIDCOT & PANSY	LC-026B-11-SS	£2.60	30p
5/32"	SV#2D	3/16"	Tall 80 psi	3'/2"g DERBY 4F	LCM-055B-04-SS	£2.10	30p
* 5/32"	SV#2-3F	3/16"	Tall 90 psi	5"g JINTY TO BE AMENDED	LC-018AB-02- SS	£2.00	30p*
5/32"	SV#2E	3/16"	Sunken Style, ¼" tall	Dummy Salter Large 3 ½"g Small 5"	LCM-055B-04-SS	£2.10	30p
5/32"	SV#2 BR Style	3/16"	3/8" tall with adjuster protruding x 1/16"	3 ½"g BRITANNIA or similar BR Loco	LC-018AB-02-SS	£2.00	30p
3/16"	SV#3A# 2	7/32″	Tall Special design	3 ½"g MOUNTAINEER	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3	7/32″	29/32" Tall	Maid of Kent etc	LC-026C-03-SS	£2.20	30p
3/16"	SV#3A	7/32"	Short (½"tall)	Other 5"g Loco's	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3B	7/32"	Sunken Style 5/16" Tall	Dummy Salter 5"g Talyllyn etc	LC-026C-03-SS	£2.20	30p
3/16"	SV#3C	7/32"	Twin GWR Style 90 psi	Cookham MANOR or similar	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3E#2	7/32″	Twin GWR Style 90 psi	5"g Firefly or similar	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3L	7/32″	Sunken Style 7/16" Tall	7 ¼"g LION	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3- Simplex	7/32"	1-1/2" tall	Simplex	LCM-060B-06-SS	£2.20	30p
3/16"	SV#3-SP	7/32"	Medium Height Special	5"g SWEET PEA	LC-026C-03-SS	£2.20	30p
7/32"	SV#4	1⁄4″	Tall	Large 5"g & Very Small 7¼"g Loco's	LC-029C-03-SS	£2.20	30p
7/32"	SV#4A	1⁄4″	Short (5/8" tall)	5"g MAINLINE BR Style	LC-029C-03-SS	£2.20	30p
7/32"	SV#4B	1⁄4″	Very Short (7/16" Tall)	5"g BRITANNIA	LC-029C-03-SS	£2.20	30p
1/4"	SV#5	5/16"	Tall (1-1/16" tall)	Large 5"g	LCM-080D-05-SS	£2.20	40p
1/4"	SV#5A	5/16"	Short (13/16" Tall)	Large 5"g	LCM-080D-05-SS	£2.20	40p
5/16"	SV#6	3/8"	Tall (1-7/16")	7 ¼"g Standard Gauge	LC-042E-08-SS	£2.40	60p
5/16"	SV#6A	3/8″	American Style	7 ¼"g Standard Gauge	LC-042E-08-SS	£2.40	60p
5/16"	SV#6C2	3/8"	Medium Height Special	5" g SPEEDY (Single Valve)	LC-042E-08-SS	£2.40	60p
5/16"	SV#6C6	3/8″	Medium Height Special	5" g MINX (Single Valve)	LC-042E-08-SS	£2.40	60p
5/16"	SV#6C5	3/8"	BR/Stanier Style	<b>7¼"g</b> BR Class 4MT	LC-042E-08-SS	£2.40	60p
3/8"	SV#7	7/16"	Tall ( 1-13/16")	7¼"g Narrow Gauge l00psi	LC-055G-05-SS	£2.65	95p
1/2"	SV#8	5/8"	Tall (2-9/16")	10 ¼"g Standard Gauge	LC-072G-08-SS	£4.20	£2-55p

\*- Springs: LCM055B04SS 3/16 ball Extra drawing: 7/32 SV#4B1 ¼ Ball 1 1/8" tall, 5" G B1, LC029C03SS

N.B. Grade 316 S/S steel balls now supplied, slight increase from previous prices

Safety Valve Drawings for all designs of these mild pop safety valves are £1.00 each.

## **Safety Valves**

Short Express and Tall styles available. The majority of our safety valves are manufactured in house using high grade bronze. A wide and developing range of precision safety valves to suit the needs of most model engineers. New types being introduced exhibit minimal pressure rise with maximum flow under steam test conditions, in line with latest boiler test recommendations. Note safety valves are not calibrated and should be adjusted and tested to suit the boiler and conform with boiler testing requirements.





#### All bronze bodied except where indicated

	Working	Approx body	Approx body	
	pressure	height	diameter	
3/16" x 40 for G1 Express style	40-75psi	5/16"/8mm	5/16"/8mm	£19.50
7/32" x 40 for G1 Express style	40-75psi	5/16"/8mm	5/16"/8mm	£19.50
1/4" x 40 for G1 Express style	40-75psi	5/16"/8mm	5/16"/8mm	£19.50
3/16" x 40 for G1 Tall style	40-75psi	13.7mm	5/16"/8mm	£19.50
7/32" x 40 for G1 Tall style	40-75psi	13.7mm	5/16"/8mm	£19.50
1/4" x 40 for G1 Tall style	40-75psi	13.7mm	5/16"/8mm	£19.50
5/16" x 26 Express style	80-90psi	3/8"/9.52mm	1⁄2"/12.6mm	£19.50
5/16" x 26 Tall style	80-90psi	7/8"/22.22mm	1⁄2"/12.6mm	£19.50
5/16" x 32 Express style	80-90psi	3/8"/9.52mm	1⁄2"/12.6mm	£19.50
5/16" x 32 Tall style	80-90psi	7/8"/22.22mm	1⁄2"/12.6mm	£19.50
5/16" x 32 Suitable for roundho	use boilers 40psi			£24.50
3/8" x 26 Express style	80-90psi	13/32"/10.3mm	.575"/14.6mm	£22.00
3/8" x 26 Tall style	80-90psi	1"/25.4mm	.597"/15.2mm	£22.00
3/8" x 32 Express style	80-90psi	13/32"/10.3mm	.575"/14.6mm	£22.00
3/8" x 32 Tall style	80-90psi	1"/25.4mm	.597"/15.2mm	£22.00
7/16"x 26 Express style	80-100psi	9/16"/14.28mm	³⁄₄"/19.1mm	£27.00
7/16" x 26 Tall style	80-100psi	1 ¼"/31.75mm	.69"/17.5mm	£27.00
7/16" x 32 Express style	80-100psi	9/16"/14.28mm	³⁄₄"/19.1mm	£27.00
7/16" x 32 Tall style	80-100psi	1 ¼"/31.75mm	.69"/17.5mm	£27.00
1/2" x 26 Express style	80-100psi	9/16"/14.28mm	³⁄₄"/19.1mm	£27.00
1/2" x 26 Tall style	80-100psi	1 ¼"/31.75mm	.69"/17.5mm	£27.00
5/8" x 26 Short use as spec. by boi	ler designer 80-110psi	1 1/16"/27mm	1.142"/29.mm	£31.00
5/8" x 26 Tall use as spec. by boil		1 ½"/38.1mm	1"/25.4mm	£31.00
5/8 x 26 Polly type	80-110psi	1 ¼"/32mm	1.02"/25.9mm	£31.00
LMS/BR style 5" gauge M12x1 / 1/2".		.698"/17mm	.78"/20mm	£47.00
LMS/BR style 7 1/4" gauge 5/8"x26 / 3/4	x26 80-100psi	1.02"/26mm	1.18"/30mm	£99.00
LMS/BR style 7 1/4" gauge Setting tool				£8.00

# Silicon Rubber Tubing (Black)

Ideal for tender to loco water connections, brake pipes, etc. Available in 5' lengths from 1/8" to 3/8" int. dia.

Per 5ft	Price
1/8"	£4.00
5/32"	£4.00
1/4"	£4.50
3/8"	£6.00

## Silver Solder

We have always sought to supply the highest quality silver solders available, including the most popular Easyflo 2 from Johnson Matthey. During 2010, EF2 was discontinued. AG303 also a cadmium bearing alloy having a similar temperature range to EF2 is also discontinued. Silverflo 24, Silverflo 40 and Silverflo 55 rods are stocked, with SF55 being the closest substitute for EF2. Argobraze 56 is a special silver solder particularly suited for stainless steel in arduous environments such as superheater headers, where EF2 or similar may fail after a time.

AG303	610-620 C	1.5mm x 500mm stick for general purpose lowest temperature, highly
contains		fluid for fine work. Also available in 2.0mm sticks.
Cadmium		NO LONGER AVAILABLE – USE CADMIUM FREE ALTERNATIVES
55% silver	630-660 C	1.5mm x 500mm stick for Cad.free low temp. larger fillets for
Cadmium free		fabricated work, step brazing of brass.
Silver Flo 24	740-800 C	1.5mm x 500mm stick for Cad free high temp. Replaces C4, ideal for
		fireboxes and start of step brazing.
Silver Flo 67E		Hallmark quality for jewellery
Silver Flo 40	650-710 C	For firebox tubeplates, step brazing. Useful working range.
Argobraze 56	600-711 C	Specialist silver solder for stainless steel.

Prices	1 stick	5 sticks	10 sticks
55% silver 1.5mm dia	£7.25	£35.00	£67.50
55% silver 2.5mm dia	£19.80		
SF24 1.2mm dia	£4.00	£19.20	£38.00
SF40 1.5mm dia	£5.60	£27.50	£54.00
Argobraze 56	£9.00		
SF55 0.5mm wire 10feet	£5 pkt		

See also 'Fluxes'. Enquire for larger quantity discounts for professional boiler makers, etc.

# Slot drills

from 1/16'' to  $\frac{1}{2}''$  diameter.

1/16"	£14.40
3/32"	£14.40
1/8"	£14.40
5/32"	£12.85
3/16"	£13.70
1/4"	£12.85
5/16"	£12.85
3/8"	£12.85
1/2"	£11.65

## Soft Solder paste

'Nealtin', a convenient ready to use, low temperature flux solder mix. Ideal for soldering small parts where it is necessary to avoid excessive amounts of solder. Flux residues wash off easily with water.

250 gramme tins

N.B. The health risks associated with lead based solders mean this is now a restricted product only available for sale to our professional customers who provide sufficient documents. A lead free alternative is being sourced and should be available in the near future.

£12.80

# Split pins (cotter pins)

from 1/32" to 5/32" diameter in various lengths.

steel zinc plated per pkt 10	
1/32" x ½"	£1.00
3/64" x 1"	£1.00
1/16" x 1"	£1.00
5/64" x 1.252"	£1.00
3/32" x 1.5"	£1.00
1/8" x 1.75"	£1.00
5/32" x 2"	£1.55

# Stainless steel balls (grade 316)

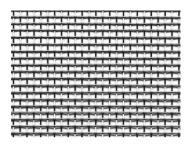
for safety valves, clacks, pumps, etc.

Packs of 10			
		1/4"	£2.30
1/16"	£1.45	9/32"	£3.60
3/32"	£1.45	5/16"	£2.65
1/8"	£1.90	11/32"	£3.40
5/32"	£1.90	3/8"	£3.60
3/16"	£1.90	7/16" per 5	£3.70
7/32"	£2.40	1/2" per 5	£5.30

# **Stainless Steel mesh**

nominal 12" square sheets for making spark arrestors.

nominal 12" square, 14 holes per inch £15.00



# Stainless steel springs

in a variety of diameters and wire gauges, to give spring rates suitable for safety valves, axlebox springs etc. Table below gives sizes and spring rate (lbs per inch of deflection). Use the table below to determine the spring required. The first four columns give the physical size of the spring and enable you to determine whether the spring will fit in its intended place. The fifth column gives the force in pounds per inch deflection. It is thus easy to assess what the force exerted by the spring will be and what the effect of further deflections will be. Clearly when considering compressed springs care has to be taken that the spring does not become 'coil bound'. *Available in 1 ft lengths (305mm).* 



	Wire	I/D	Coils	lbs per	
12" lengths	Dia		per inch	inch	
1/8" x 30swg	.012	.101	28	.64	£2.20
1/8" x 27 swg	.016	.088			£2.20
1/8" x 25swg	.020	.097			£2.20
5/32" x 23 swg	.024	.106	20		£2.00
3/16" x 26swg	.018	.150	20	1.34	£2.40
3/16" x 23swg	.024	.139	16	5.88	£2.40
1/4" x 23swg	.024	.202	12	2.99	£2.40
1/4" x 21swg	.032	.186	14	9.04	£2.80
1/4" x 19swg	.040	.170	16	21.6	£2.80
5/16" x 21swg	.032	.248	11	5.37	£3.10
5/16" x 19swg	.040	.232	12	13.11	£3.10
5/16" x 18swg	.048	.216	13	27.43	£3.10
3/8" x 18swg	.048	.279	10	18.98	£3.20
3/8" x 17swg	.056	.263	10	37.87	£3.20
7/16" x 16swg	.064	.310	9	44.54	£3.20
7/16" x 15swg	.072	.294	9	76.33	£3.20
1/2" x 16swg	.064	.372	8	31.63	£3.40
1/2" x 14swg	.080	.340	7	98.7	£3.40

# **Steam Raising Blowers**

Available to suit a wide range of models.

Supplied with adaptor for either 3  $\frac{1}{2}$ " gauge or 5 - 7  $\frac{1}{4}$ " gauge. The small adaptor is suitable for chimney sizes 7/8" to 1  $\frac{1}{2}$ " and the larger one, 1 1/8" to 2" diameter.

12v dc blower incl. one adaptor	£65.00
Adaptor sold separately	£10.00



# Jan 2021For All your Model Engineering Requirements:Email: <a href="mailto:sales@pollymodelengineering.co.uk">sales@pollymodelengineering.co.uk</a> Polly Model Engineering Ltd (inc Bruce Eng) Fax +44 (0)115 9727251Web: <a href="www.pollymodelengineering.co.uk">www.pollymodelengineering.co.uk</a> Page 45Telephone: +44 (0)115 9736700

# Steam Stop Valves - see also Globe Valves

Flanged backhead fitting steam stop valves with pipe sizes from 3/32" to  $\frac{1}{4}$ ". See also Globe Valves (180 degree) for pipe sizes up to 3/8". Radio control servo valves are also available. Steam stop valves can also be used for water. Scale GWR injector steam valves for 5" and 7  $\frac{1}{4}$ " gauge are also available.

90 deg pipe to thread	
3/16" x 40tpi 3/32" pipe	£14.30
1/4" x 40tpi 1/8" pipe	£14.30
1/4" x 40tpi 5/32" pipe	£14.30
5/16" x 32tpi 1/8" pipe	£14.40
5/16" x 32tpi 3/16" pipe	£14.40
5/16" x 32tpi ¼" pipe	£14.70
3/8" x 32tpi ¼" pipe	£14.80
7/16" x 26tpi ¼" pipe	£15.50

# **Steam Valves for Radio Control**

90 degree lever movement steam valves for servo operation (radio control) 5/32" pipe, 1/4" x 40 threads: £24.00 each.

# **Steam Tees**

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in various sizes supplied with nuts and nipples.

3/32" pipe	£8.00	5/16"	£15.60
1/8" pipe	£7.80	3/8"	£15.20
5/32" pipe	£7.80		
3/16" pipe	£8.20		
1/4" pipe	£8.50		





# **Studding brass**

2BA	£3.50
4BA	£4.50
6BA	£4.50
8BA	£7.00

1 ft (305mm) lengths

# **Studding metric stainless**

M2 stainless	£2.80	
M3 stainless	£2.80	
M4 stainless £2.80		
1 ft (305mm) lengths		

1 ft (305mm) lengths

# Steel Studding

2BA steel	£2.50
4BA steel	£3.00
6BA steel	£4.00
8BA steel	£8.00

1 ft (305mm) lengths

# **Superheater Elements Stainless Steel**

We supply welded superheater elements in a range of standard sizes. Please enquire for prices and availability.

		Minimum tube ID for spear
Simplex (far left of picture)	£71.00	1"
<sup>1</sup> ⁄4" x 24"	£37.50	5/8"
5/16" x 27"	£46.00	3/4"
3/8" x 30"	£56.50	21mm
Grange (per pair) (2 <sup>nd</sup> left of picture)	£149.50	3/4"

# Tap wrench

Straight type 1/16" to 1/4"	£5.70
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# **Taper pins**

packs of 10 from 1/16" to 1/8" nominal diameter.

per pkt 10			
1/16 x 5/8"	£3.80	3/32 x 5/8"	£4.00
1/16"x1"	£3.85	3/32 x 1 ¼"	£4.50
5/64 / 1/2"	£3.95	1/8 x 1"	£4.60

# Taps & Dies



British made taper, second & plug taps individually or sets of all three, wide range of BA, ME, BSB, etc and some metric sizes.

Sets of small size taps and dies in metric sizes also available.

#### BA (taper, second or bottom taps)

	Тар	Die
0BA	£3.15	£6.20
1BA	£3.15	£6.20
2BA	£1.90	£3.15
3BA	£3.15	£6.20
4BA	£1.80	£4.20
5BA	£1.90	£6.20
6BA	£1.90	£4.20
7BA	£2.45	£7.45
8BA	£2.45	£6.20
9BA	£3.15	£9.55
10BA	£3.15	£9.55
12BA	£8.40	n/a

British Standard Brass 26tpi

	Тар	Die
1/4x26	£2.75	£6.50
5/16x26	£3.05	£6.50
3/8x26	£3.35	£6.50
7/16x26	£4.30	£7.65
1/2x26	£4.75	£7.65
9/16x26	£5.90	£10.80
5/8x26	£6.85	£15.10

#### **British Standard Pipe BSP**

	Тар	Die
1/8BSP	£4.30	£7.90
1/4BSP	£4.65	£8.30
3/8BSP	£5.30	£11.90

#### Metric

	Тар	Die
M2	£3.10	£6.20
M2.5	£3.10	£6.20
M3	£2.55	£6.20
M4	£2.55	£4.30
M5	£2.75	£4.30
M6	£2.75	£4.30
M7	£3.40	£5.80
M8	£3.40	£5.80
M10	£3.75	£6.50
M12	£4.30	£9.20

#### Model Engineer 'ME' 40tpi

	Тар	Die
1/8x40	£1.90	£4.20
5/32X40	£2.30	£4.65
3/16X40	£2.30	£4.65
7/32X40	£2.30	£4.65
1/4X40	£2.30	£4.65
9/32X40	£4.20	£8.10
5/16X40	£3.45	£8.10
3/8X40	£4.20	£8.10
1/2X40	£5.45	£9.55
7/16 x40	£5.45	£9.55

#### Model Engineer 'ME' 32tpi

	Тар	Die
5/32X32	£2.30	£4.85
3/16X32	£2.30	£4.95
1/4X32	£3.25	£6.95
5/16x32	£3.25	£6.60
3/8x32	£3.25	£6.50
7/16x32	£4.65	£9.45
1/2x32	£5.45	£9.45
9/32x32	£3.35	£7.00

#### Whitworth BSW

	Тар	Die
1/16x60	£3.35	£6.50
3/32x48	£3.15	£6.50
1/4x20	£2.45	£4.95

#### **Metric Special**

	Тар	Die
M4.5 x 0.5 sec	£5.45	£8.70

# Transfers

High quality British made water slide transfers produced specially for model engineers. Whilst we attempt to keep in stock the majority of popular transfers, it is inevitable that sometimes we will be out of stock and for some of the slower moving items, stocks are held by our supplier and can be delivered to customers in a few days. Items marked n/a are currently out of stock with our supplier at the time of printing (May 2018) and are either in the process of being reprinted or likely to be printed in the near future.

CatRef	Gauge	Description	Size	
WAG01/7	<i>Price</i> 7 £6.40	Standard wagon running numbers & tares		
Pre grouping	railway co	mpanies		
CatRef	Gauge Price	Description	Size	
CAL02/1	1 £5.20	Caledonian Railway initials		
CAL02/3	3 £6.40	Caledonian Railway initials		
CAL02/5	5 £6.40	Caledonian Railway initials		
HRY01/1	1 £33.80	Highland Railway locomotive sheet1		
HRY01/3	3 £17.50	Contains all Loch names & selection for Castles & Highland Railway locomotive sheet	Bens	
HRY01/5	5 £74.00	Highland Railway locomotive sheet		
MRY01/3	3 £6.40	Contains all Loch names & numbers for Jones Goo Midland Railway 'M R' for bufferbeams	ods	
O&K	5 £33.80	O&K Worksplates set		
Lining				
CatRef	Gauge Price	Description	Size	
BlankA4	99 £5.20	Blank transfer sheet (163 x 280mm)		
BlankA5	£3.20 99 £4.10	Blank transfer sheet (160 x 140mm)		
BlankNEW	99 £5.20	Blank transfer sheet (163x280mm)		
LIN-Black	23.20 99 £11.60	1/32" wide black lining		
LIN-Gold	99 £11.60	1/32" wide gold lining & corners		
LIN-Red	99 £11.60	1/16" wide red lining & corners		
LIN-White	99 £11.60	1/32" wide white lining & corners		
LIN-Yellow	99 £11.60	1/32" wide yellow lining & corners		
LINBRX/1	1 £6.40	BR Experimental Blue lining & corners		

LINBRX/3	3	BR Experimental Blue lining & corners	
LINBRX/5	£8.50 5	BR Experimental Blue lining & corners	
LINBRX/7	£11.60 7	BR Experimental Blue lining & corners	
LINGWR/1	£11.60 1	GWR/BR lining & corners	
LINGWR/3	£6.40 3	GWR/BR lining & corners	
LINGWR/5	£8.50 5	GWR/BR lining & corners	
LINGWR/7	£11.60 7	GWR/BR lining & corners	
LINLNE/1	£11.60 1	LNER/BR Lining & corners	
LINLNE/3	£6.40 3	LNER/BR Lining & corners	
LINLNE/5	£8.50 5	LNER/BR Lining & corners	
LINLNE/7	£11.60 7	LNER/BR Lining & corners	
LINLNW/1	£11.60 1	LNWR/BR Lining & corners	
LINLNW/2	£6.40 2 £6.40	Use with LINMXD/1 LNWR/BR Lining & corners	
LINLNW/3	3 £8.50	LNWR/BR Lining & corners	
LINLNW/5	5 £11.60	Use with LINMXD/3 LNWR/BR Lining & corners	
LINLNW/7	7 £11.60	Use with LINMXD/5 LNWR/BR Lining & corners	
LINMET/1	1 £6.40	Use with LINMXD/7 Yellow/black/yellow lining for Metropolitan, Barry etc.	
LINMET/3	20.40 3 £8.50	Yellow/black/yellow lining for Metropolitan, Barry etc.	
LINMET/5	5 £11.60	Yellow/black/yellow lining for Metropolitan, Barry etc.	
LINMET/7	£11.60 7 £11.60	Yellow/black/yellow lining for Metropolitan, Barry etc.	
LINMXD/1	1 £6.40	Red boiler bands for LNW & BR mixed traffic livery	
LINMXD/3	3 £8.50	Use with LINLNW/1 Red boiler bands for LNW & BR mixed traffic livery	
LINMXD/5	5 £11.60	Use with LINLNW/3 Red boiler bands for LNW & BR mixed traffic livery	
LINMXD/7	7 £11.60	Use with LINLNW/5 Red boiler bands for LNW & BR mixed traffic livery	
British Railwo	ays	Use with LINLNW/7	
CatRef	Gauge Price	Description	Size
48Lion/10	£4.10	BR Lion over wheel (LH & RH)	
Jan 2021		For All your Model Engineering Requirements:	<b>Eng.</b> ) Eq. $(44.0)(115.0707051)$

48Lion/101	7 £11.60	BR Lion over wheel (LH & RH)	
48Lion/15	1 £5.20	Large 7 1/4 & medium 10 1/2" gauges BR Lion over wheel (LH & RH)	
48Lion/21	5	Medium G1 & small 3 1/2 gauge BR Lion over wheel (LH & RH)	21mm high
48Lion/25	£5.20 2	Small 5" gauge BR Lion over wheel (LH & RH)	25mm high
48Lion/35	£5.20 3	Large G1 & medium 2 1/2" gauge BR Lion over wheel (LH & RH) Large 2 1/2" guage, medium 3 1/2" & small 7 1/4"	35mm high
48Lion/51	£6.40 5	(Replaces 48Lion/44) BR Lion over wheel (LH & RH)	51mm high
48Lion/72	£8.50 7 £11.60	Large 3 1/2" & medium 5" gauges BR Lion over wheel (LH & RH)	72mm high
48Lion/91	7 £11.60	Large 5" & medium 7 1/4" gauges OBSOLETE: BR Lion over wheel (LH & RH)	91mm high
BRY01/01	1	-Non standard size BR Cabside numbers 0-9	
BRY01/02	£5.20 2	BR Cabside numbers 0-9	
BRY01/03	£5.20 3	BR Cabside numbers 0-9 1/2" high.	
BRY01/05	£6.40 5	BR Cabside numbers 0-9 11/16" high.	
BRY01/07	£8.50 7	BR Cabside numbers 0-9 1 1/16" high.	
BRY01/10	£11.60 10	BR Cabside numbers 0-9	
BRY01a/1	£17.50 1	BR Cabside numbers 0-9 (White, Scottish Region)	
BRY01a/2	£5.20 2	BR Cabside numbers 0-9 (White, Scottish Region)	
BRY01a/3	£5.20 3	BR Cabside numbers 0-9 (White, Scottish Region)	
BRY01a/5	£6.40 5	BR Cabside numbers 0-9 (White, Scottish Region)	
BRY01a/7	£8.50 7 £11.60	BR Cabside numbers 0-9 (White, Scottish Region)	
BRY04/3	3	Additional cabside '0' digits, for BR Stds etc.	As BRY01/3
BRY04/5	£4.10 5	Additional cabside '0' digits, for BR Stds etc.	As BRY01/5
BRY04/7	£4.10 7	Additional cabside '0' digits, for BR Stds etc.	As BRY01/7
BRY05/3	£4.10 3	BR Powercodes	
BRY05/5	£4.10 5	BR Powercodes	
BRY05/7	£4.10 7 65.20	NYA: BR Powercodes	
BRY05a/3	£5.20 3 £5.20	NYA: BR Powercodes (white)	
1 2021	~0.20		

BRY05a/5	5 £5.20	BR Powercodes (white)	
BRY05a/7	23.20 7 £5.20	BR Powercodes (white)	
BRY20/3 BRY20/5 BRY20/7 BRY21/3 BRY21/5 57Lion/15	23.20 3 5 7 3 5 2 £5.20	NYA: 1948 'BRITISH RAILWAYS' lettering NYA: 1948 'BRITISH RAILWAYS' lettering NYA: 1948 'BRITISH RAILWAYS' lettering NYA: 1948 'BRITISH RAILWAYS' lettering NYA: 1948 'BRITISH RAILWAYS' lettering BR Lion Holding Wheel	Cream Cream Cream White White 15mm high
57Lion/23	2 £6.40	Large G1 & small 2 1/2" gauge Set of 3, to make forward facing pair or both left facing. BR Lion Holding Wheel	23mm high
57Lion/32	3 £6.40	Small 2 1/2" & large 3 1/2" gauges Set of 3, to make forward facing pair or both left facing. BR Lion Holding Wheel	32mm high
57Lion/47	5 £8.50	Large 3 1/2" & small 5" Set of 3, to make forward facing pair or both left facing. BR Lion Holding Wheel	47mm high
57Lion/68	7 £11.60	Small 5" & large 7 1/4" gauges Set of 3, to make forward facing pair or both left facing. BR Lion Holding Wheel (LH & RH)	68mm high
	211.00	Large 7 1/4" & small 10 1/2" gauges Pair, facing left & right.	



BRY02/1	1	BR Overhead warning
BRY02/2	£4.10 2 £4.10	BR Overhead warning
BRY02/3	3	BR Overhead warning 9/16" high
BRY02/5	£4.10 5	BR Overhead warning 3/4" high
BRY02/7	£5.20 7 £6.40	BR Overhead warning 1 1/8" high

#### British Railways (Diesel Models)

CatRef	Gauge Price	Description	Size
BRY03/1	1 £6.40	BR Arrows	
		6 pairs in 2 sizes	

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BRY03/2	2	NYA: BR Arrows
BRY03/3	£4.10 3 £5.20	BR Arrows
BRY03/5	£5.20 5 £6.40	BR Arrows
BRY03/7	20.40 7 £8.50	BR Arrows
BRY15/01	1 £5.20	BR diesel numbers (1957-65) (square serif)
	20.20	8 sets 0-9 & 'D's
BRY15/02	2 £6.40	BR diesel numbers (1957-65) (square serif)
BRY15/03	3 £6.40	BR diesel numbers (1957-65) (square serif)
BRY15/05	5 £8.50	BR diesel numbers (1957-65) (square serif)
BRY15/07	7 £8.50	BR diesel numbers (1957-65) (square serif)
BRY16/1	1 £5.20	BR diesel numbers (1965 onwards)
BRY16/3	3	BR diesel numbers (1965 onwards)
BRY16/5	£6.40 5	BR diesel numbers (1965 onwards)
BRY16/7	£8.50 7	BR diesel numbers (1965 onwards)
BRY17/1	£11.60 1	NYA: BR diesel numbers (1965 onwards)
BRY17/3	£5.20 3	NYA: BR diesel numbers (1965 onwards)
BRY17/5	£6.40 5	NYA: BR diesel numbers (1965 onwards)
BRY17/7	£8.50 7	NYA: BR diesel numbers (1965 onwards)
BRY18/3 BRY18/5 BRY18/7 BRY19/5 BRY10/7	£8.50 3 5 7 5 7	NYA: BR diesel locomotive TOPS panels NYA: BR diesel locomotive TOPS panels NYA: BR diesel locomotive TOPS panels NYA: BR diesel locomotive TOPS panels
BRY19/7	1	NYA: BR diesel locomotive TOPS panels

#### Great Western Railway (GWR)

CatRef	Gauge Price	Description	Size
GWR03/2	2 £6.40	'GWR' lettering	
GWR03/3	3 £6.40	'GWR' lettering	
GWR03/5	5 £8.50	'GWR' lettering	
GWR03/7	7 £11.60	'GWR' lettering	



GWR04/1	1	Great Western 'Twin city' crest	
GWR04/2	£6.40 2	Great Western 'Twin city' crest	
GWR04/3	£8.50 3	Great Western 'Twin city' crest	
GWR04/5	£8.50 5	Great Western 'Twin city' crest	
GWR04/7	£8.50 7	Great Western 'Twin city' crest	
GWR05/3	11.60 3 £6.40	GWR monogram	1 1/16" (27mm) dia
GWR05/5	£6.40 5 £6.40	GWR monogram	1.3/8" dia.
GWR06/1	1 £5.20	GWR buffer numbers	
GWR06/10	10 £17.50	GWR buffer numbers	
GWR06/2	2 £6.40	GWR buffer numbers	1/4" high.
GWR06/3	3 £6.40	GWR buffer numbers	3/8" high.
GWR06/5	5 £8.50	GWR buffer numbers	1/2" high.
GWR06/7	7 £11.60	GWR buffer numbers	
GWR07/1	1 £5.20	'Great Western' lettering.	
GWR07/3	3 £6.40	'Great Western' lettering.	
GWR07/5	5 £8.50	'Great Western' lettering.	1/2" high.
GWR07/7	7 £11.60	'Great Western' lettering.	
GWR08/7 GWR09/1	7 1 £4.10	NYA: 'Great Western' lettering. (Cream lettering) GWR cabside route restriction discs & power codes	
GWR09/2	2 £5.20	GWR cabside route restriction discs & power codes	
GWR09/3	3 £5.20	GWR cabside route restriction discs & power codes	
GWR09/5	5 £6.40	GWR cabside route restriction discs & power codes	
GWR09/7	7 £6.40	GWR cabside route restriction discs & power codes	
GWR10/1	1 £6.40	NYA: GWR cauliflower crest	
GWR10/3	3 £6.40	NYA: GWR cauliflower crest	
GWR10/5	5 £8.50	NYA: GWR cauliflower crest	
GWR10/7	7 £11.60	NYA: GWR cauliflower crest	
GWR11/7	7 £4.10	Shed allocation lettering for valances	
GWR20/7	7 £14.50	'CAUTION' internal cab warning sign	
GWR21/7	7 £6.40	NYA: Replacement guage dials	
GWRWagR/1	1 £6.40	GWR Wagon lettering (red)	
Ion 2021		Ean All your Model Engineering Dequirementer	

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GWRWagR/3	3	GWR Wagon lettering (red)
GWRWagR/7	£8.50 7	GWR Wagon lettering (red)
GWRWagW/7	£11.60 7	GWR Wagon lettering (white)
GWRWagY/7	£11.60 7	GWR Wagon lettering (yellow)
Scaleplate5	£11.60 5	Lost wax cast GWR cabside numberplate
ScalePlate7	£74.00 7 £96.00	Lost wax cast GWR cabside numberplate

## London & North Eastern Railway (LNER)

CatRef	Gauge Price	Description	Size
LNE02/1	1 £5.20	LNER lettering (Passenger)	
LNE02/2	2 £6.40	LNER lettering (Passenger)	1/2" high
LNE02/3	3 £6.40	LNER lettering (Passenger)	3/4" high
LNE02/5	5 £8.50	LNER lettering (Passenger)	1.0" high
LNE02/7	7 £11.60	LNER lettering (Passenger)	
LNE03/1	1 £5.20	LNER Cabside numerals (Passenger)	7/16" high
LNE03/2	2 £6.40	LNER Cabside numerals (Passenger)	1/2" high
LNE03/3	3 £6.40	LNER Cabside numerals (Passenger)	3/4" high
LNE03/5	5 £8.50	LNER Cabside numerals (Passenger)	1 1/8" high
LNE03/7	7 £11.60	LNER Cabside numerals (Passenger)	
LNE08/1	1 £5.20	LNER lettering (Freight)	
LNE08/2	2 £6.40	LNER lettering (Freight)	
LNE08/3	3 £6.40	LNER lettering (Freight)	
LNE08/5	5 £8.50	LNER lettering (Freight)	
LNE08/7	7 £11.60	LNER lettering (Freight)	
LNE09/1	1 £5.20	LNER numerals (Freight)	
LNE09/2	2 £6.40	LNER numerals (Freight)	
LNE09/3	3 £6.40	LNER numerals (Freight)	
LNE09/5	5 £8.50	LNER numerals (Freight)	
LNE09/7	7 £11.60	LNER numerals (Freight)	

London, Midland & Scottish Railway (LMS)

CatRef	Gauge Price	Description	Size
LMS03/2	2	LMS serif 14" letters	
LMS03/3	£6.40 3 £6.40	OUT OF STOCK: LMS serif 14" letters	3/4" high.
LMS03/5	5 £8.50	LMS serif 14" letters	1.3/16" high.
LMS03/7	7 £11.60	LMS serif 14" letters	
LMS04/1	1 £5.20	LMS serif 14" letters	9.5mm High
LMS04/2	2 £6.40	LMS serif 14" letters	
LMS04/3	£0.40 3 £6.40	LMS serif 14" letters	3/4" high.
LMS04/5	£0.40 5 £8.50	OUT OF STOCK: LMS serif 14" letters	1 3/16" high.
LMS04/7	£0.50 7 £11.60	LMS serif 14" letters	
LMS05/3	3 £6.40	LMS serif 12" numbers	3/4" high.
LMS05/3a	£0.40 3 £6.40	OUT OF STOCK: LMS serif 10" numbers	5/8" high.
LMS05/5	5	LMS serif 12" numbers	1 1/16" high
LMS05/7	£8.50 7 £11.60	NYA: :LMS serif 12" numbers	
LMS06/1	1	LMS serif 12" numbers	9.5mm high
LMS06/2	£5.20 2	LMS serif 12" numbers	
LMS06/3	£6.40 3	LMS serif 12" numbers	3/4" high
LMS06/3a	£6.40 3 £6.40	LMS serif 10" numbers	5/8" high
LMS06/5	5 £8.50	LMS serif 12" numbers	1 1/16" high
LMS06/7	£0.50 7 £11.60	LMS serif 12" numbers	1 1/2" high.
		Also suitable for 5"G 1923-27 livery.	
LMS15/3	3 £5.20	NYA: LMS cabside powercodes (red)	
LMS15/5	5 £5.20	NYA: LMS cabside powercodes (red)	
LMS15/7	7 £5.20	NYA: LMS cabside powercodes (red)	
LMS16/3	3 £5.20	NYA: LMS cabside powercodes (black)	
LMS16/5	5 £5.20	NYA: LMS cabside powercodes (black)	
LMS16/7	7 £5.20	NYA: LMS cabside powercodes (black)	
LMS07/2	£5.20 2 £6.40	LMS 1936 style sans-serif letters	
LMS07/3	3	LMS 1936 style sans-serif letters	
LMS07/5	£6.40 5	LMS 1936 style sans-serif letters	
LMS07/7	£8.50 7	LMS 1936 style sans-serif letters	
Jan 2021	£11.60	For All your Model Engineering Requirements:	

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LMS08/2	2 £6.40	LMS 1936 style sans-serif letters
LMS08/3	3 £6.40	LMS 1936 style sans-serif letters
LMS08/5	5 £8.50	LMS 1936 style sans-serif letters
LMS08/7	7 £11.60	LMS 1936 style sans-serif letters
LMS09/2	2 £6.40	LMS 1936 style sans-serif numbers
LMS09/3	20.40 3 £6.40	LMS 1936 style sans-serif numbers
LMS09/5	5 £8.50	LMS 1936 style sans-serif numbers
LMS09/7	7 £11.60	LMS 1936 style sans-serif numbers
LMS10/2	2 £6.40	LMS 1936 style sans-serif numbers
LMS10/3	20.40 3 £6.40	LMS 1936 style sans-serif numbers
LMS10/5	5 £8.50	LMS 1936 style sans-serif numbers
LMS10/7	20.30 7 £11.60	LMS 1936 style sans-serif numbers
LMS11/3 LMS11/5 LMS12/3 LMS12/5	211.00 3 5 3 5 5	NYA: LMS 1946 syle letters NYA: LMS 1946 syle letters NYA: LMS 1946 syle numbers NYA: LMS 1946 syle numbers

Southern Railway (SR)

CatRef	Gauge Price	Description	Size
SRY01/1	1 £5.20	Southern Maunsell lettering (Old Stock)	Letters 3/16",
			numbers 9/16"
SRY01/2	2 £6.40	Southern Maunsell lettering	Letters 1/4",
			numbers 3/4"
SRY01/3	3 £8.50	Southern Maunsell lettering	Letters 7/16",
			numbers 1 1/8"
SRY01/5	5 £11.60	Southern Maunsell lettering	Letters 1/2",
	211100		numbers 1 1/2"
SRY02/1	1 £5.20	NYA: SR Maunsell 'SOUTHERN'	
SRY02/2	2 £5.20	NYA: SR Maunsell 'SOUTHERN'	
SRY02/3	3 £6.40	NYA: SR Maunsell 'SOUTHERN'	
SRY02/5	5	NYA: SR Maunsell 'SOUTHERN'	
SRY02/7	£8.50 7	NYA: SR Maunsell 'SOUTHERN'	
	, £11.60		
SRY03/1	1 £5.20	NYA: SR Maunsell numerals	
SRY03/2	2	NYA: SR Maunsell numerals	
SRY03/3	£5.20 3	NYA: SR Maunsell numerals	
	£6.40		
SRY03/5	5 £8.50	NYA: SR Maunsell numerals	
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SRY03/7	7 £11.60	NYA: SR Maunsell numerals	
SRY04/3	3 £11.60	Southern "Sunshine" lettering	5/8" high
SRY04/5	5 £11.60	Southern "Sunshine" lettering	7/8" high
SRY04/7	7 £11.60	Southern "Sunshine" lettering	1 1/4" high

Traction engines & road vehicles

CatRef	Gauge Price	Description	Size
TEW01	99 £11.60	Wheel spoke 1	1/2" wide, 9" long
TEW02	99 £8.50	Wheel spoke 2	3/8" wide, 7" long
TEW03	99 £6.40	Wheel spoke 3	5/16" wide, 5" long
TEW04	99 £6.40	Wheel spoke 4	1/4" wide, 4" long
TEW05	99 £5.20	Wheel spoke 5	3/16" wide, 3 1/2" long
TEW06	99 £4.10	OUT OF STOCK: Wheel spoke 6	1/8" wide, 2" long
TEW07	99 £11.60	Signwriter Sheet 1a (A-Z) 3/4"	3/4" high
TEW07a	99 £11.60	Signwriter Sheet 1 (A-Z) 1/2"	1/2" high
TEW07b	99 £11.60	Signwriter Sheet 1 (A-Z) 5/16"	5/16" high
TEW08a	99 £11.60	Signwriter Sheet 2 (A-Z & captions)	1/2" high
TEW08b	99 £11.60	OUT OF STOCK: Signwriter Sheet 2 (A-Z & captions)	5/16" high
TEW09	99 £45.00	OUT OF STOCK: Burrell 3" scale transfer set	
TEW10 pan)£33.80	99	OUT OF STOCK: Allchin 1 1/2" scale. Transfer set (les	ss tender rear & spud

These are high quality waterslide transfers for railway and road steam models in all popular model engineers' gauges. They are faithful reproductions of prototype livery elements with accurate colour reproduction. Application is very straightforward and full instructions are supplied with each item. When correctly applied, they should enhance your model for many years. Due to the wide variety of formulations available, the combination of underlying paint finish, transfer and varnish should be tested before being applied to your model. Unless otherwise specified, all numerals are supplied in pairs of 0–9 and company lettering and crests are supplied in pairs.

# Union cocks from Stuart Models (see also Draincocks)

1/8" pipe (72001)	3/16 x 40 tpi	£22.65
5/32" pipe (72002)	1/4 x 32 tpi	£24.80
3/16" pipe (72003)	5/16 x 26 tpi	£27.00

Also suitable for use as draincocks on stationary and marine engines.

# **Union nuts**

to suit various ME pipe sizes in packs of 10

Pipe		Thread	Pipe	
3/32"	£4.20	3/8" x 26	1/4	£5.50
Inside sp 1/8"	£4.00	3/8" x 32	1/4	£5.50
1/8" 5/32"	£4.00	3/8" x 40	1/4	£5.50
1/8" 5/32"	£4.00	7/16" x 26		£10.00
3/16"	£4.20	7/16" x 32		£10.00
3/16"	£4.20	½" x 26	5/16	£10.00
3/16"	£4.20	9/16" x 26	3/8	£25.40
	3/32" Inside sp 1/8" 1/8" 5/32" 1/8" 5/32" 3/16" 3/16"	3/32"£4.20Inside sp 1/8"£4.001/8" 5/32"£4.001/8" 5/32"£4.003/16"£4.203/16"£4.203/16"£4.20	3/32"         £4.20         3/8" x 26           Inside sp 1/8"         £4.00         3/8" x 32           1/8" 5/32"         £4.00         3/8" x 40           1/8" 5/32"         £4.00         3/8" x 40           1/8" 5/32"         £4.00         7/16" x 26           3/16"         £4.20         7/16" x 32           3/16"         £4.20         ½" x 26           3/16"         £4.20         9/16" x 26	3/32"         £4.20         3/8" x 26         1/4           Inside sp 1/8"         £4.00         3/8" x 32         1/4           1/8" 5/32"         £4.00         3/8" x 40         1/4           1/8" 5/32"         £4.00         7/16" x 26         3/16"           3/16"         £4.20         7/16" x 32         5/16

9/16 x 26 available individually £2.75 each

# Vacuum gauges

In various sizes, plain or flanged, style can be matched to pressure gauge. Gauges are calibrated 0-30" Hg = 14.7 psig.

Standard type	Range	Price
³∕₄" dia	0-30" Hg	£32.00
1" dia	0-30" Hg	£32.00
1 5/8" dia	0-30" Hg	£30.00
2" dia	0-30" Hg	£39.00
Flanged type		
³⁄₄" dia	0-30" Hg	£35.00
1" dia	0-30" Hg	£35.00
1 5/8" dia	0-30" Hg	£40.00
2" dia	0-30" Hg	£40.00

# Viton Balls - see also Nitrile Balls

	Per ball
1/8"	£2.15
5/32"	£2.25
3/16"	£2.30
1/4"	£2.50

# Wash out plugs

Dummy wash out plugs

5" gauge	£2.70	
7 ¼" gauge	£3.00	







## Water Gauges

A wide range of gauges ranging from the simple plain type to the precision three cock bronze and gunmetal types by specialist suppliers such as Rob Barker and Dave Noble. Left and right handed available. Linked cocks available in smaller sizes.

Plain with blowdown valve	Price
3/16 x 40 4mm glass	£26.00
1/4 x 32 5mm glass	£26.00
1/4 x 40 5mm glass	£26.00
5/16 x 32 6mm glass	£30.00
3/8 x 32 7mm glass	£32.00

1/4 x 32 also available without blowdown £24.30

3 cock type	Price
¼ x 40 (Noble)	£105.00
5/16 x 32 5mm (Noble)	£105.00
3/8 x 32, 5mm glass (for Winson)	£105.00
3/8 x 32 7mm glass (Barker)	£148.70
1/8 BSP 8mm glass	£148.70
1/4 BSP 10 mm glass	£156.00
3/8 BSP	£254.40
1⁄2 x 26 10mm glass	£156.00
5/16 x 32 7mm glass	£148.70
3/8 x 32 8mm glass (Noble)	£148.70



# Water valves for tender or tank fitting

90 degree on-off valves in a variety of sizes with extended operating arms available separately. Used for water supply to injectors, etc where they provide good flow and handle indicates the position of the valve.

T shaped handle for 5/32" valve.

5/32 pipe	£17.00
3/16 pipe	£19.00
¼ pipe	£20.00
5/32 pipe	£21.00
3 way	
3/16 pipe	£23.00
3 way	
1⁄4 pipe	£25.00
3 way	
Handle	£5.00



# Weir Pumps (Steam Operated Feed Pump)

These ready to run Weir pumps are a useful alternative to axle pumps and injectors for boiler feed. Easily mounted on the footplate of your loco, they add operational interest to the model. Simply by controlling the steam input. (On average, feeds 1 1/4 pints per minute)

Weir pump rtr with lubricator	£370.00
Approx. size 3.5" x 3.25"	

N.B Drawings available for other weir pumps.



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# Whistles - see also Chime Whistles

in various sizes of plain type and recently introduced chime whistles. Illustration (right) shows 3 and 4" scale combined whistle & valves for traction engines, etc.

Loco type (below)	Length	Use separate valve
3/8" dia	2 <sup>3</sup> ⁄4"	£12.00
1⁄2" dia	3 1⁄2"	£14.00
5/8" dia	4 3/8"	£15.00





Traction engine type (above)	With lever valve
3" scale 5/16 x 32	£67.50
4" scale 1/8 BSP	£93.00

# Whistle valves

Lever type reversible handle 1/4" x 40 pictured right	
Lever type reversible handle 5/16 x 32 (used on Polly's)	£20.00
Lever type ¼" x 40	£19.00
Lever type 5/16" x 32	£19.00

Standard backhead fittings available. Large valve to suit chime whistle – see chime whistles.



# Fine scale LMS dummy whistle

Stanier LMS fine scale dummy whistle

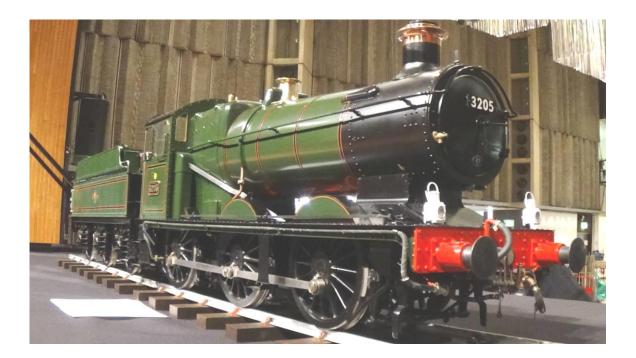
3 <sup>1</sup> / <sub>2</sub> " gauge	£23.00
5" gauge	£25.00
7 ¼" gauge	£28.00



(please see Catalogue Volume 2 for other fine scale dummy whistles)

# Practical Scale including loco designs & stationary engines

See part 2 of our catalogue for drawing, castings and parts for our fine scale loco models and stationary engines. This part of the catalogue includes the stationary engine models designed by Anthony Mount in the Heritage Steam Southwest series, our own stationary engines, the models by Stuart Turner and of course our growing range of fine scale model locomotive designs based on both narrow gauge and standard gauge prototypes. Designers include Neville Evans, Peter Rich, David Aitken, Nick Feast, Ken Swan and Derek Brown.



# **Engineering Services**

Polly Model Engineering Limited has a comprehensively equipped manufacturing workshop, primarily engaged in the manufacture of the renowned Polly range of 5" gauge locomotive kits. We also manufacture a significant proportion of the items listed in this catalogue. With a good understanding of the requirements of the model engineering hobby, we are well placed to undertake production machining for fellow traders.

# Equipment:

CNC Turning up to 10" diameter using Colchester Tornado Lathe 3 and 4 axis CNC Milling using Bridgeport Machining Centres CNC Sliding Head turning up to 20mm using 7 axis Star Delapena Cylinder honing machine, J&S Surface grinder, vertical and horizontal milling, etc.

and other specialised machines.

# Practical Scale:

For builders of our Practical Scale models, such as Penrhos Grange, we offer the



facility to supply some major castings (e.g. wheels and cylinders) machined to drawing.

# **Trade Supplies:**

We are also able to manufacture wheels, axles and other turned or milled components. We currently supply a number of specialist manufacturers in the hobby and have undertaken work for numerous clubs. So whether you are a supplier to the model engineering hobby or a club building a rake of riding cars, ask us to give you a quote for your machining requirements. With our understanding of the requirements of model engineers, you can be assured of a job well done at a fair price.

# **Non-Catalogue Requirements**

In addition to the items listed in this catalogue, we may well be able to supply any of your other model engineering requirements. Whatever your requirement, give us a call and see how we can help.

# How to Order

Orders may be placed in writing, by email, telephone or fax.

All UK orders are subject to VAT (included in prices of all VAT eligible goods) and overseas customers may deduct the UK VAT.

All orders are plus postage (also subject to VAT), please add sufficient, any overpayment will be credited. For the convenience of our customers, where it may save postage costs or assist with the shipment of fragile goods, we are happy to take pre-ordered goods to exhibitions/rallies but we must insist that such orders are paid for in advance.

There is no minimum order value and no surcharge for payment by credit card.



## Order Form

You may find it helpful to use our order form. The form is also available for download from our website: <u>www.pollymodelengineering.co.uk</u> Completed forms may be posted, faxed, or emailed to us, telephone orders are also welcomed. Customers ordering for payment by credit/debit card should remember that in order to process your payment we need the 3 digit security code from the reverse of your card, in addition to the usual card information. In the interests of security, card details should not be sent by email.

## **Personal Callers**

Personal callers are welcome at the workshop in Long Eaton (close to junction 25 on M1 motorway). Here you will have the opportunity to peruse our stock and see where the Polly locos are made. Please telephone before calling, to ensure that we are available (exhibition commitments, etc). Staff are normally available between 9:00 am and 4.30pm weekdays (lunch 1:00 till 2:00pm).

Contact Us:

# **Polly Model Engineering Limited**

## Atlas Mills, Birchwood Avenue

## Long Eaton

Nottingham

# NG10 3ND

# Telephone: +44 (0)115 9736700 Fax: +44 (0)115 9727251Email:

## sales@pollymodelengineering.co.uk

## web: www.pollymodelengineering.co.uk

Order Form: Bruce Engineering Model Supplies

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We accept payment by Mastercard, Visa, Switch, UK bank cheques and UK postal orders.

Note: Orders outside the EU do not pay VAT and postage will be as charged by the Post Office, see How to Order page of website.

Please post, fax or email this form to us. Orders by telephone also welcomed.

We do not keep customer details beyond that which is required for processing of your order. In accordance with PCI-DSS card details are not stored or processed on our computers. We do not routinely circulate marketing information to customers, but should you wish, with your permission we will get in touch. Please indicate if you would like to receive further information about availability of products, etc. - email: yes/no phone: yes/no mail: yes/no