

INDEX



A	ALLEN KEYS (Imperial & Metric)	131			G	GRAPHITED YARN	135	
	AUTO CENTRE PUNCH	132				GREEN ARROW 3.1/2"G	11	
	ALI - CORED & ROUND	108				GREEN ARROW 5"G	39	
B	BANDSAW BLADES	129				GROUND FLAT STOCK	111	
	BLACK FIVE - 5"G	28				GROUND MILD STEEL	111	
	BLACKGATES TWIN	90				GRUB SCREWS	105	
	BLANKING PLUGS	139				GUNMETAL BAR	109	
	BLOWER VALVES	141			H	HACKSAW BLADES	133	
	BOGIE WHEELS	146-8	D	DAVE LAMMAS TOOLING	96	HACKSAWS	133	
	BOILER BAND	108		DARJEELING HIMALAYAN 3.1/2"G	6	HALF ROUND BEADING	108	
	BOILER BLANKING PLUGS	139		DARJEELING HIMALAYAN 7.1/4"G	68	HAMMERS	132	
	BOILER BUSHES	142		DART 7.1/4"G	67	HANDPUMPS	141	
	BOILER FEED PUMPS	92/93		DEPTH GAUGE	131	HANDRAIL STANCHIONS	138	
	BOILER FITTING DRAWING	98		DIE STOCKS	117	HANDWHEELS	140	
	BOILER FITTINGS	139		DIVIDERS	132	HARDNESS TESTER	96	
	BOILER INSULATION MATERIAL	119		DIVIDING HEAD	96	HEADLAMPS	139	
	BOILER KITS	128		DIVIDING HEAD - TIMMINS	95	HEX SET SCREWS BRASS	105	
	BOILER TREATMENT	136		DORIS - 3.1/2"G	7	HEX SET SCREWS STEEL	104	
	BOOKS	123/125		D HEWSON CASTINGS/FITTINGS	86/88	HEXAGON WRENCHES	131	
	BOSS WHITE	135		DRAIN COCKS	143	HOLMSIDE - 7.1/4"G	71	
	BOX SPANNERS	131		DRILL CHUCKS	130	HOOKS	138	
	BOXHILL - 5"G	29		DRILL GRINDING ATTACHMENT	96			
	BRASS BAR	108		DRILL SETS	115	I	INJECTOR STEAM VALVES	142
	BRASSBLAK	134		DRILLS - HSS	114		INJECTOR WATER VALVES	142
	BRASS NUTS	105		DUCHESS OF HAMILTON	34		INJECTORS	139
	BRASS SCREWS	105		DURHAM & NORTH YORKS	80/81		INVICTA - 3.1/2"G	2
	BRASS SECTIONS	108					IVATT CLASS 2 - 3.1/2"G	12
	BRASS STRAINING GAUZE	135	E	EDGE & CENTRE FINDER	131		IVATT CLASS 4 - 3.1/2"G	13
	BRITANNIA - 3.1/2"G	1		EDWARD THOMAS - 5"G	35	J	JACOBS ABORS	130
	BRITANNIA - 5"G	30		ELBOWS	142		JINTY 5"G	42
	BROKEN SCREW EX	115		EMERY CLOTH	133		JOBBER DRILLS	114
	BRONZE BAR	107		END MILLS	112		JOHN HAINING DRAWINGS	99
	BY-PASS VALVES	141		ENGINEERS SCRAPERS	132		JUBILEE - GALATEA 5"G	40/41
C	CALIPERS	132		ENGINEERS SQUARES	132		JUBILEE - 3.1/2"G	14
	CANNON	90		ENTERPRISE - 5"G	36		JULIET - 3.1/2"G	15
	CANT LAMB - 3.1/2"	2		EUSTON - 3.1/2"G	8		JUNIOR HACKSAW	133
	CAP SCREWS	103		EVENING STAR - 3.1/2"G	9	K	KAOWOOL	119
	CASE HARDENING COMPOUND	134		EVENING STAR - 5"G	37		KING 3.1/2"G	16
	CAST IRON BAR	109	F				KING GWR 5"G	43
	CENTRE DRILLS	115		FASTENERS	102/105	L	LAMMAS CASTINGS	96
	CENTRE FINDER	131		FIGURE PUNCHES	132		LATHE CASTINGS	95
	CENTRE PUNCHES	132		FILE HANDLES	133		LATHE CENTRES	130
	CHARLATAN - 5"G	31		FILES	133		LATHE OIL	136
	CHARLES - 3.1/2"G	3		FIREGRATE	91		LATHE TOOLS - HSS	113
	CHARLES - 7.1/4"G	67		FIRING TOOLS	136		LETTER PUNCHES	132
	CHECK VALVES	141		FITTINGS	143/143		LILLA - 3.1/2"G	17
	CHEQUER PLATE	138		FLUE BRUSHES	136		LILLA - 7.1/4"G	72
	CHUCK BACKPLATES - CAST	131		FLUX POWDER	119		LINING PEN	127
	CLARKSONS OF YORK LIST	89		FLYING SCOTSMAN 3.1/2"G	10		LION - 3.1/2"G	25
	CLAYTON & FITTINGS	79		FLYING SCOTSMAN 5"G	38		LION - 5"G	64
	COCK 'O THE NORTH 5"G	32		FLYING SCOTSMAN 7.1/4"G	70		LOCO BOILER FITTINGS	139
	COLUMBIA	4		FRYOLUX SOLDER PAINT	119		LOCO DRAWINGS	100
	COMSOL	119	G				LOCTITE PRODUCTS	135
	CONWAY - 3.1/2"G	5		GALATEA - JUBILEE 5"G	40/41		LOST WAX CASTINGS	86/88
	COPPER SECTIONS	106		GASKET SHEET	135		LOST WAX HEADLAMPS	139
	COPPER SHEET	106		GAUGE GLASS	141		LOST WAX VACUUM FITTINGS	88
	COPPER SHIM WASHERS	142		GAUGE PLATE	111		LUBRICANTS	134
	COPPER TUBE	106/107		GAUZE	135		LUBRICATORS	143
	COPPER BAR	106		G-CLAMP	132			
	CRAMPTON - 5"G	33		GEAR CUTTER HEAD	96			
				GENERAL PURP TOOLHOLDER	95			
				GLOBE VALVES	140			

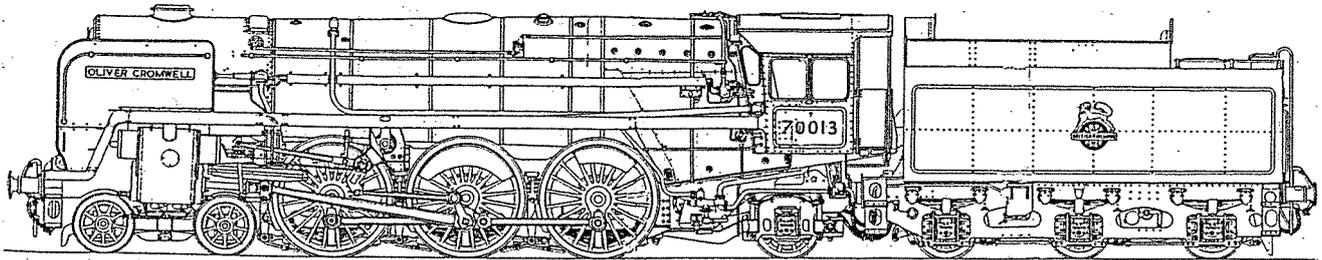
INDEX

M	MAGGIE 7.1/4"G	73	S	SAFETY VALVES	140	S	SWEET VIOLET - 3.1/2"G	23
	MAGNETIC BASE	130		SANDERSON BEAM	94		SWEET WILLIAM - 7.1/4"G	76
	MAID OF KENT - 5"G	44		SANDRINGHAM 5"G	51		SWEET WILLIAM -	
	MAISIE - 3.1/2"G	18		SCALE LOCO CASTINGS	88		TENDER - 7.1/4"G	77
	MALLARD 3.1/2"G	19		SCALE LOCO DRAWINGS	100			
	MARINE BOILERS	128		SCRAPERS	132	T	TAP WRENCHES	117
	MARKING OUT BLUE	134		SCREWLINK COUPLINGS	138		TAPER PIN REAMERS	112
	MASTER LINING PEN	127		SCRIBERS	132		TAPER PINS	134
	METALBLAK	134		SEA EAGLE 5"G	52		TAPS & DIES	116
	METRE MAID - 5"G	45		SAE660 BAR	107		TEE PIECES	142
	METRIC FASTENERS	102/103		SHEET JOINTING	134		TEE SLOTTED SUB TABLE	95
	METRO - 5"G	46		SIEVERT GAS EQUIPMENT	118		TENDER CONNECTION KITS	138
	MICROMETER	132		SILICONE O RINGS	101		TENDER HANDPUMPS	140
	MINNIE 1"	82		SILICONE TUBE	135/141		TENDER WATER VALVES	142
	MINNIE 2"	83		SILVER STEEL	111		THREADED BAR	134
				SIMPLEX - 5"G	54		THREE COCK WATER GAUGES	141
N	NARROW G SLATE WAGON	90		SINE TABLE	96		THREE WAY TOOLPOSTS	96
	NEOPRENE TUBE	135		SIR NIGEL GRESLEY - 5"G	53		TICH - 3.1/2"G	24
	NIGEL GRESLEY - 5"G	47		SLITTING SAW	112		TITFIELD THUND -3.1/2"G	25
				SLOT DRILLS	112		TITFIELD THUND -5"G	64
O	O RINGS	101/102		SLOTTED SCREWS	104		TOOLMAKERS CLAMP	132
	OILITE BUSHES	134		SOCKET SCREWS	103		TOOLSLIDE	96
	OPEN ENDED SPANNERS	131		SOUTHWORTH ENGINES	92/93		TORQUAY MANOR - 5"G	65
	OIL CANS	137		SPANNERS	131		TRACTION ENGINE DRAWINGS	98
				SPEEDY - 5"G	56		TRANSFERS	120
P	PAINT	126/127		SPLIT PINS	134		TRANSFERS	121
	PANSY - 5"G	48		SPRINGS	135		TRANSFERS	122
	PARTING TOOL HOLDER	131		SPRINGBOK - 5"G	57			
	PHOSPHOR BRONZE HEX	107		SPRING CAP OIL CUPS	138	U	UNMACHINED BACKPLATES	131
	PIERCING SAW	133		SPRING STEEL	111			
	PIN CHUCKS	132		SQUARES	132	V	VACUUM GAUGES	140
	PIN VICES	132		STAINLESS STEEL BALLS	134		VIRGINIA - 3.1/2"G	26
	PIPE UNIONS	140		STAINLESS STEEL GRATE	91		VEE BELTS	129
	PISTON RINGS CI	138		STAINLESS STEEL ROUND	109			
	POWER HACKSAW KIT	129		STAINLESS STEEL SECTIONS	109	W	WASHERS - COPPER	142
	PRESSURE GAUGES	140		STAINLES STEEL STUDDING	102		WASHERS - STEEL & BRASS	102
	PRINCESS MARINA 3.1/2"G	20		STAINLESS STEEL FASTENERS	102		WATER BUCKETS	138
	PROPANE EQUIPMENT	118		STAINLESS STEEL NUTS	102		WATER GAUGES	141
				STEAM OIL	136		WATER GLASS SEALS	102
Q	QUICKSILVER 7.1/4"G	74		STEAM RAISING BLOWERS	136		WATERSLIDE TRANSFERS	120
				STEEL BAR	110		WATERSLIDE TRANSFERS	121
R	RANSOMES, SIMMS & JEFF	85		STEEL NUTS	104		WATERSLIDE TRANSFERS	122
	REAMERS	112		STEEL SCREWS (HEX,CSK,CHD)	104		WAVERLEY 5"G	66
	REILANG OILERS	137		STEEL SECTIONS	110		WEIR PUMPS	92
	REVOLVING CENTRES	130		STEMBOK 7.1/4"G	75		WENFORD 7.1/4"G	78
	RIDING CAR WHEELS	91		STENT TOOL CUTTER	97		WHEEL CASTINGS	144
	RIVETS / RIVET SNAPS	105		STUDDING	134		WHEEL CASTINGS	145
	ROB ROY - 3.1/2"G	21		STIRLING SINGLE 5"G	58		WHEEL CASTINGS	146
	ROLL PINS	134		STRATFORD 5"G	59		WHEEL CASTINGS	147
	ROYAL SCOT - 5"G	49		SUPER CLAUD 5"G	58		WHEEL CASTINGS	148
	ROYAL SOVEREIGN - 5"G	50		SUPER SIMPLEX - 5"G	55		WHISTLE VALVES	142
	RUBBER TUBE	135		SUPERBA	85		WHISTLES	142
	RULES	132		SURFACE GAUGE	131		WILLIAM - 3.1/2"G	27
	RUSSELL - 3.1/2"G	22		SWEET PEA - 5"G	60/62		WIRE ROPE	138
				SWEET PEA TENDER - 5"G	62		WORKSHOP CASTINGS	95
				SWEET PEA RALLY DVD'S	62		WORKSHOP DRAWINGS	97

BRITANNIA - 4-6-2 Pacific Locomotive in 3.1/2G

BR Standard Class 7 designed by L.B.S.C. Two outside piston valve cylinders. Walschaerts Valve Gear. Described in Model Engineer Vols 104 - 109.

Length - 52" (Inc Tender), Boiler Dia - Tapered, Cylinder Bore - 1.1/4",
Wheel Dia - 4.5/8"



Drawings(11 shts)LO81.	£ 60.00	Guide Bar Brackets GM	£ 16.60
Laser Cut Main & Trailing Frames (3mm)	£ 93.50	Laser Cut Motion Bkts Set LH & RH tabbed & slotted for fabrication	£ 24.50
Laser Cut Loco Brake Hangers/ Levers (set of 6)	£ 12.75	Cylinder Set GM - (Inc Laser Cut mounting plates)	£ 198.00
Buffer Beam Steel	£ 5.00	Cylinder Set CI (Inc Laser Cut mounting plates)	£ 95.00
King Pin Stay GM	£ 14.85	Piston Blanks GM	£ 15.75
Intermediate Stay GM	£ 8.75	Piston Blanks CI	£ 3.25
Pump Stay GM	£ 9.75	Reverser Gears Machined pair	£ 18.75
Brake Bracket GM	£ 12.00	Saddle GM	£ 16.35
Brake Cylinder GM	£ 4.80	Smokebox Door & Ring GM	£ 29.00
Main Horns Wide Type GM	£ 50.80	Chimney GM	£ 6.40
Main Axleboxes GM	£ 45.00	Dome Bush & Cover GM	£ 17.40
Laser Cut Bogie Frames	£ 8.50	Dome GM	£ 8.40
Bogie Bolster GM	£ 16.75	Stainless Steel Grate	£ 15.50
Bogie Centre GM	£ 20.00	Smokebox Regulator GM	£ 14.70
Bogie Sliding Block GM	£ 9.75	Loco Brake Shoe Ring CI	£ 10.95
Bogie Equalisers GM	£ 18.60	Laser Cut Tender Frames (3mm)	£ 48.50
Bogie Axleboxes GM	£ 29.25	L/ Cut Tender Brake Shoe Ring x 6mm thick (set 6)	£ 5.00
Bogie Wheels CI	£ 32.40	L/ Cut Tender Brake Hangers (6)	£ 12.75
Driving & Coupled Wheels CI	£ 120.00	L/ Cut Tender Brake Beams (3)	£ 8.20
Pony Truck Casting GM	£ 55.00	Tender Horns & Springs GM	£ 38.75
Trailing Dummy Springs GM	£ 5.05	Tender Handpump & Tee GM	£ 17.60
Trail'g & Tender A'Boxes GM	£ 69.85	Tender Brake Gears (Machined) pr	£ 18.75
Trailing & Tender wheels CI	£ 70.80	Timken A/Box covers - (8 off)	£ 8.00
Axle Pump & Eccentric Strap GM	£ 14.25		
Lubricator Ecc Strap GM	£ 3.90		

Laser cut BRI.A Tender Body Kit in Brass (10 parts) All Tabbed & Slotted for Quick Assembly
Tender sides rolled to correct radius.

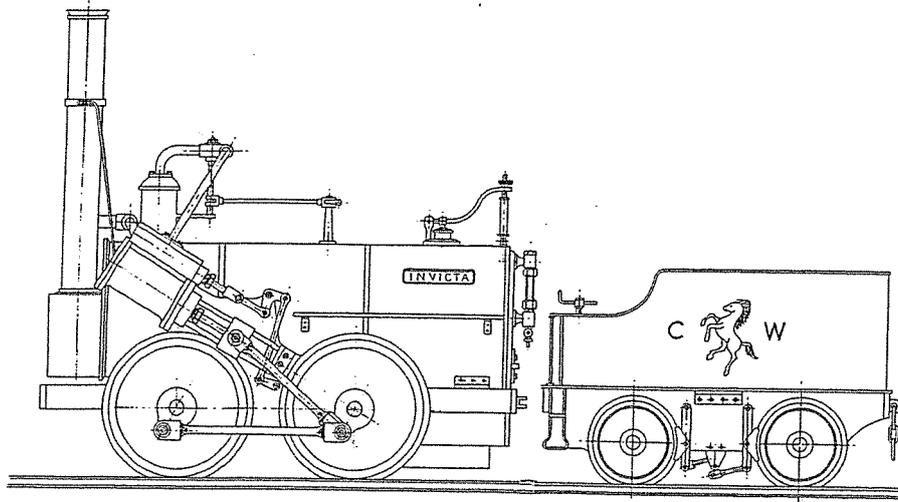
£ 277.50

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 23-3-18

CANTERBURY LAMB 0-4-0 Tender Locomotive in 3.1/2"G

Based on the famous Invicta of the Whitstable & Canterbury Railway. This model was designed by L.B.S.C, Described in Model Engineer Vol 107-108
 Length (Inc Tender) - 18", Boiler Dia - 2.3/4", Cylinder Bore - 11/16",
 Driving Wheel Dia - 3"

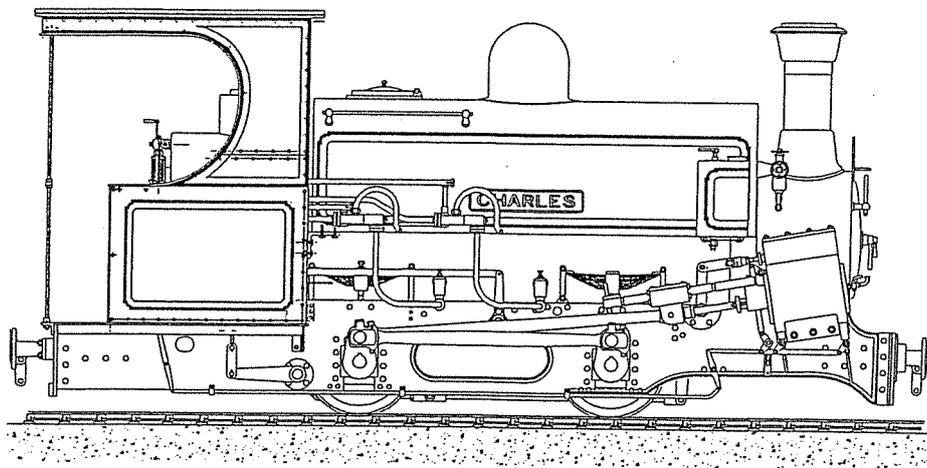


Drawings 8 shts..LO77	£	37.00	Smokebox Front GM	£	25.10
Frame Steel	£	5.25	Dome GM	£	4.60
Main Hornblocks GM	£	10.50	Horse Emblems (Lost Wax) Pr	£	12.00
Main Axleboxes GM	£	15.60	Tender Axleboxes GM	£	8.75
Driving & Coupled Wheels } Correct Period Type CI }	£	47.20	Tender Wheels CI	£	20.40
Cylinder Set GM	£	65.00	Tender Handpump & Tee GM	£	17.60
Piston Blanks GM	£	4.55	Firegrate CI	£	6.25
Eccentric Straps GM	£	5.40			

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 2-8-18

CHARLES - 0-4-0 Narrow Gauge Saddle Tank Locomotive in 3.1/2"G

3.1/2" g 0-4-0 Charles saddle tank. One of the Three Sister Engines built by Hunslet Engine Co. The model is 32" long with 4" dia wheels, outside cylinders 1.1/2" dia x 1.3/4" stroke. Charles, Linda or Blanche can be made from the Castings. Drawings are of the Charles version: Charles 1882 (works No. 283) Linda 1893 (works No. 590) Blanche 1893 (works No. 589) Length - 32", Boiler Dia - 4.1/2", Cylinder Bore - 1.1/2", Driving Wheel Dia - 4"



Drawings (6 sheets)	£	30.00	Eccentric Sheaves (5)CI	£	6.00
Laser Cut Frames (4mm)	£	45.00	Eccentric Straps (5) GM	£	45.00
Frame Steel BMS	£	36.30	Axlepump & Tee GM	£	9.60
Buffer Beam Steel	£	10.00	Slide Bar Brkts/pair GM	£	9.00
Laser Cut Buffer Beams (4mm)	£	12.75	Suspension Shaft Brgs.PR GM	£	11.40
Buffer Beam Angle	£	5.30	Weighshaft Bearing/pair GM	£	7.80
Coupling Stretchers (3) CI	£	44.55	Cross shaft supp.brkt/pr GM	£	4.20
Brake Lever Stretchers(2) CI	£	26.50	Rocking Shaft Bearings pr GM	£	15.95
Main Hornblocks GM	£	55.00	Coupling Support Castings GM	£	18.75
Main Hornblocks CI	£	34.15	Cast Smokebox CI	£	92.50
Main Axleboxes GM	£	35.00	Brake Shoes CI (Ring)	£	17.25
Main Axleboxes CI	£	19.15	Dome Bush GM	£	35.00
Axle Material BMS	£	3.75	Dome (GM)	£	48.20
Driving & Coup Wheels CI	£	144.00	Chimney Top (GM)	£	22.85
Laser Cut Con & Coup Rods (8mm)	£	46.85	Smokebox Door GM	£	33.00
Coupling Rod Bearings GM	£	8.25	Safety Valve Base GM	£	17.80
Cylinder Set CI	£	189.00	Regulator GM	£	29.25
Cylinder Set GM		POA	Superheater Head & Bush GM	£	21.20
Pistons GM	£	16.30	Firebox Cleading Support GM	£	36.25
Pistons CI	£	3.50	Name & Makers Plates(4)	£	40.00
Slide Bar Material BMS	£	1.20	Handpump & Tee GM	£	35.10

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 4-4-18

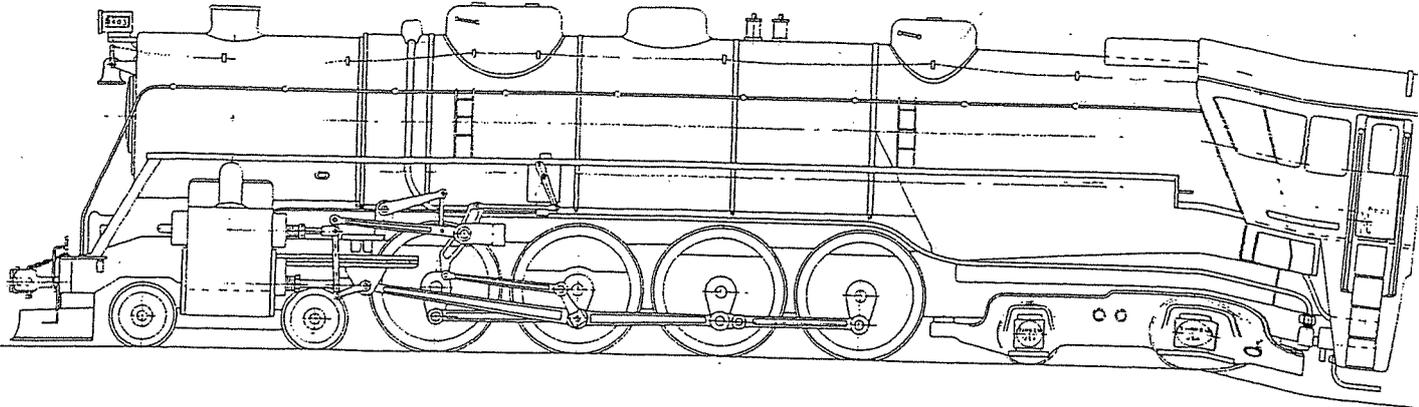
COLUMBIA 3.1/2"G 4-8-4 TENDER LOCO

Based on American Baldwin Prototype in 3.1/2" g. Designed by Martin Evans.

Described in 'Model Engineer' Vols 144-146.

Length 42.3/4" , Driving Wheel dia 4.470" ,

Cylinder Bore 1.5/8" x 2" bore, Boiler dia 5.1/2" od.



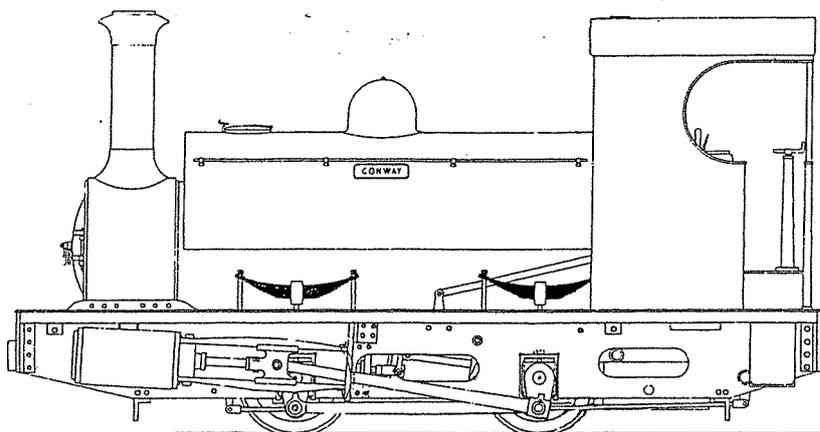
Drawings LO954 (11 sheets)	£ 60.00	Cylinder Set CI	£	
Water Jet Cut Main Frames	£ 210.00	Piston Blanks CI	£	152.50
Buffer Beams Pilot & Drag CI	£ 33.15	Piston Blanks GM	£	4.00
Main Axleboxes GM	£ 62.50	Saddle GM	£	23.65
Driving & Coupled Wheels CI	£ 155.20	Smokebox Front GM	£	28.75
Leading Truck Centre (Non-equalised) GM	£ 18.15	Smoke Stack GM	£	51.25
Leading Truck Sliding Block (Non -equal) GM	POA	Dome GM	£	13.50
Leading Truck Centre	}	Petticoat Pipe GM	£	26.25
(Baldwin Equal Type) GM		Throttle Block GM	£	23.65
Leading Truck Sliding Block	}	Exhaust Manifolds GM	£	24.00
(Baldwin Equalised Type) GM		Tender Truck Sides CI	£	31.25
Leading Truck Axleboxes GM	£ 13.50	Tender Truck Beams CI	£	79.00
Leading Truck Wheels (4) CI	£ 29.80	Tender Truck End Stretchers CI	£	34.50
Trailing Truck Side Frames GM LH & RH	£ 50.60	Tender Truck Axleboxes GM	£	34.00
Trailing Truck Front GM	£ 18.40	Tender Truck Wheels (12) CI	£	88.00
Trailing Truck Axleboxes GM	£ 30.35	Tender Handpump & Tee GM	£	89.40
Trailing Truck Wheels (4) CI	£ 34.60		£	17.60

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 30-5-18

CONWAY - 0-4-0 Narrow Gauge Saddle Tank Locomotive in 3.1/2"G

Designed by Martin Evans. Described in Model Engineer Vol 146 -147.
 Length - 26.1/8", Driving Wheel Dia - 3.5/8",
 Cylinder Bore - 1.3/16", Boiler Dia - 4"



Drawings (8 sheets)LO957	£ 34.00	Exhaust Pipe Tee Block GM	£ 5.90
Laser Cut Main Frames (3mm)	£ 80.00	Brake Shoes Ring CI	£ 10.75
Buffer Beams & Angle	£ 11.50	Blast Nozzle GM	£ 2.75
Main Horns GM	£ 36.00	Smokebox Front GM	£ 18.50
Axleboxes & Keeps GM	£ 67.75	Smokebox Door GM	£ 13.20
Driving & Coupled Wheels CI	£ 92.00	Rear Ring GM	£ 27.25
Eccentric Sheaves CI	£ 4.75	Chimney Base & Top GM	£ 32.50
Eccentric Straps (5) GM	£ 30.00	Dome GM	£ 24.75
Axle pump GM	£ 13.85	Safety Valve Cover GM	£ 11.40
Valve Rod Guides GM	£ 7.70	Regulator Stand GM	£ 14.15
Guide Bar Brkts GM pair	£ 20.05	Regulator Quadrant GM	£ 3.90
Crossheads GM	£ 17.05	Petticoat Pipe GM	£ 13.80
Weighshaft Bearings GM	£ 3.00	Manifold GM	£ 9.25
Cylinder Set GM	£ 270.00	Grate - St. Steel	£ 7.00
Cylinder Set CI	£ 147.50	Cast Grate CI	£ 10.30
Pistons CI	£ 4.00		
Pistons GM	£ 19.00		

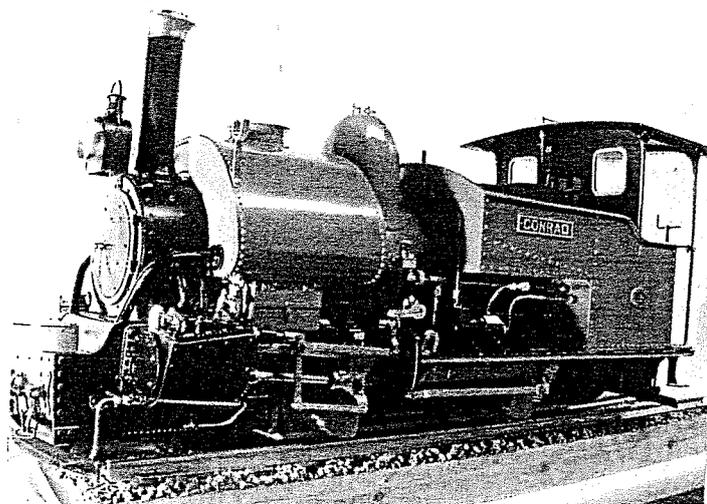
ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 30-5-18

3.1/2" G DARJEELING HIMALAYAN NARROW GAUGE 0-4-0 CLASS B LOCOMOTIVE

Designed by Raymond McMahon

Described in 'Model Engineer' volumes 204 to 210.

Driving Wheel dia 4" dia Cylinder bore 1.1/2" dia x 2" Stroke - Boiler dia 4.3/4" dia
Length 33.3/4 plus Coupling Hook



Drawings (Original Ray McMahon drgs on over 180 shts of A4 paper for easy workshop use & supplied in set of 5 plastic binders)	£ 75.00	Piston Blanks GM	£ 17.95
Main Hornblocks GM	£ 36.00	Piston Blanks CI	£ 3.00
Main axleboxes & Keeps GM	£ 67.75	Smokebox Door GM	£ 17.70
Axle pumps (pair) GM	£ 27.75	Smokebox Ring GM	£ 20.10
Pump Eccentric Straps (pair) GM	£ 12.00	Chimney Cap GM	} £ 25.00
Driving & Coupled Wheels (blanks) CI	£ 30.00	Chimney Base GM	
Cylinder Set CI	£ 166.50	Chimney Lower/Petticoat Pipe GM	£ 11.40
Cylinder Set GM	POA	Dome Bush GM	£ 11.40
		Inner Dome GM	£ 31.80
		Regulator GM	£ 14.40
		Handpump GM	£ 14.15
		Brake Shoe Ring CI	£ 11.00

**TO ENABLE A MUCH FASTER BUILD WE CAN ALSO OFFER THE FOLLOWING WATER JET CUT PARTS.
THIS PROCESS DOES NOT LEAVE A HARD SKIN ON THE CUT EDGES AND REQUIRES MINIMAL FINISHING.**

- (PARTS ARE SUPPLIED WITH DETAIL DRAWINGS)

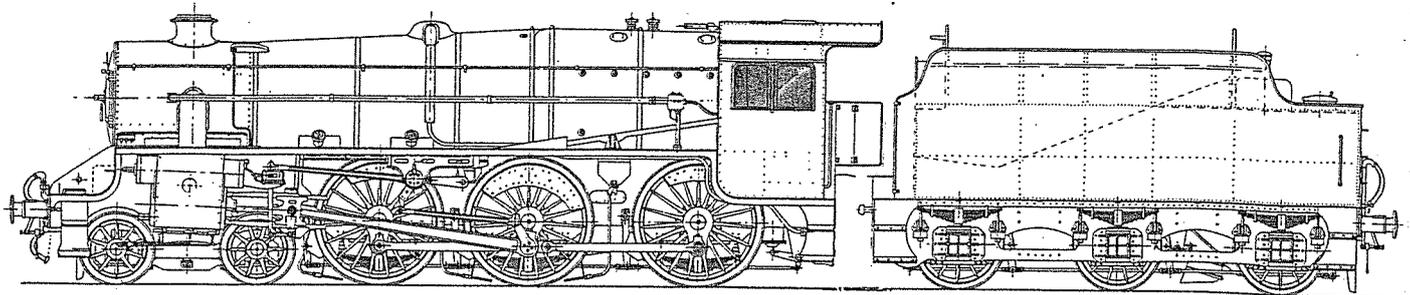
PART NO.	Description	Price	PART NO.	Description	Price
DP3-002	Front Main Frames (2 off) 3mm	£ 66.00	DP6-007	Smokebox Saddle Stretcher Base (1 off) 6mm	
DP3-003B	Rear Main Frames (2 off) 3mm	£ 13.75	DP6-008	Fr & Rear S'box Saddle Support Plates	£ 33.50
DP3-001	Front Buffer Beam Chain Hooks, Coupling Links & Chain Bkt Base Plates (set)	£ 32.90		(2 off) 6mm	
DP3-004	Reversing Stand (1 off) (3mm)	£ 11.00	DP8-003	Union Links (2 off) 8mm	£ 52.00
DP3-009	Quadrant Plate (1 off) (3mm)		DP8-004	Combination Levers (2 off) 8mm	
DP3-005	Suspension Hangers Short (2 off) 3mm	POA	DP8-006	Cylinder Rear Mounting Plates (2 off) 6mm	£ 8.00
DP3-006	Suspension Hangers Long (6 off) 3mm		DP10-001	Radius Rods (2 off) 10mm	£ 42.00
DP8-005	Suspension Guides (4 off) 8mm		DP10-002	Eccentric Rods (2 off) 10mm	£ 53.30
DP3-007	Wheel Balance Plates (4 off) 3mm	£ 7.00	DP10-003	Coupling Rods (2 off) 10mm	£ 73.50
DP5-001	Brake Hangers (4 off) 5mm	£ 34.15		Expansion Links - Tool Steel (2 off)	£ 43.50
DP6-001	Front Re-railing Bar Bkt (2 off) 6mm	£ 40.75	DP6-	Weighshaft Levers (2 off) 6mm	£ 33.00
DP12-004	Rear Re-Railing Bar Bkt (2 off) 12mm		DP12-001	Front Cranks (2 off) 12mm	£ 92.00
DP6-002	Front Buffer Beam (1 off) 6mm	£ 52.75	DP12-002	Rear Cranks (2 off) 12mm	
DP6-003	Rear Buffer Beam (1 off) 6mm		DP12-003	Top Leaf Spring Plate (4 off) 12mm	£ 173.50
DP6-004	Lifting Arms (2 off) 6mm	POA	DP12-005	Spring - Leaf Retaining Cotter (2 off) 12mm	
DP6-005	Return Cranks (2 off) 6mm			DPCZ 1/16	Northern Frontier & Hindi Tank
				Lettering 1 off Brass	

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 30-5-18

DORIS - 4-6-0 Tender Locomotive in 3.1/2"G

Designed around the LMS "BLACK 5" Tender Locomotive by L.B.S.C. Two outside Piston Valve Cylinders. Walschaerts Valve Gear. Described in Model Engineer Vols 98 -101. Length - 48.1/4" (Inc Tender), Boiler Dia - Tapered, Cylinder Bore - 1.5/32" , Driving Wheel Dia - 4.1/2"



Drawings 10 shts.LO72.	£	47.00	Crossheads GM	£	13.10
Laser Cut Main Frames	£	53.20	Brake Cylinder GM	£	4.20
Buffer Beam Steel	£	6.00	Saddle GM	£	17.70
Main Hornblocks GM	£	27.00	Smokebox Door & Ring GM	£	28.80
Main Axleboxes GM	£	33.50	Chimney GM	£	10.20
Axle pump & stay GM	£	18.30	Dome GM	£	14.10
Pump & Lub.Ecc straps GM	£	11.40	Top Feed Cover GM	£	6.75
Laser Cut Bogie Frames	£	10.50	Grate (CI)	£	10.00
Bogie Axleboxes GM	£	21.60	Grate (stainless steel)	£	12.00
Bogie Bolster GM	£	13.75	Laser cut Tender Frames 2.5mm	£	37.50
Bogie Centre GM	£	18.50	Tender Buffer Beam Stl	£	6.00
Bogie Equalisers GM	£	20.00	Tender Horns GM	£	20.50
Bogie Wheels CI	£	38.40	Tender Axleboxes GM	£	42.00
Driving & Coupled Wheels CI	£	126.90	Tender Dummy Springs GM	£	26.00
Loco Brake Shoe Ring (12) CI	£	11.00	Tender Wheels CI	£	71.40
Guide Bar Brackets GM	£	20.15	Tender Brake Shoe Ring (6) CI	£	8.00
Cylinder Set GM	£	150.50	Tender Handpump & Tee GM	£	17.60
Piston Blanks GM	£	5.00			

ALL PRICES ARE PLUS CARRIAGE AND VAT

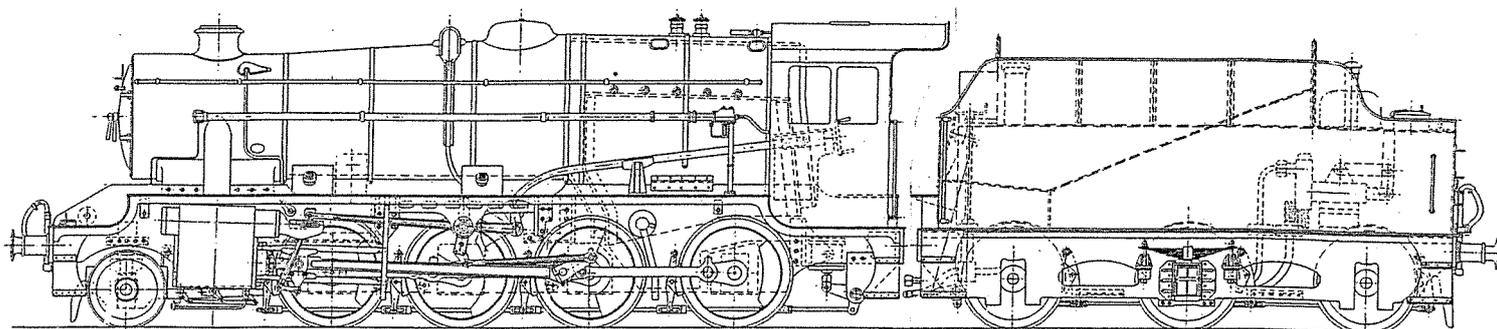
Updated 30-5-18

EUSTON 2-8-0 LMS Tender Locomotive in 3.1/2"G

A Model of an LMS Stanier 8F. Designed by Martin Evans.

Described in Model Engineer Vol 147 - 148. Length 47.1/2" including tender.

Boiler dia - tapered. Cylinder bore 1.3/16" x 1.3/4" stroke. Driving wheel dia 3.1/2" dia



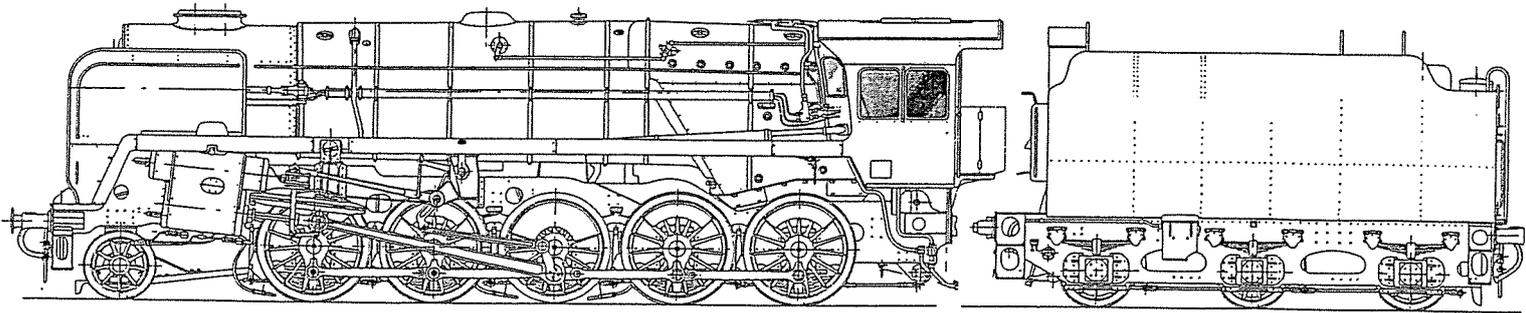
Drawings 13 shts.LO960	£ 60.00	Pistons CI	£ 2.50
Laser Cut Main Frames	£ 68.35	Pistons GM	£ 4.50
Loco Buffer Beam Steel	£ 10.50	Expansion Link Frames -	} £ 12.75
Frame Stretchers (4 off) GM	£ 32.25	Laser Cut - set of 4	
Axlepump Stretcher GM	£ 10.20	Guide Bar Brackets GM	£ 15.75
Brake Cylinder Stay GM	£ 12.00	Loco Brake Shoes (Ring) CI	£ 7.50
Brake Cylinder GM	£ 7.35	Saddle GM	£ 26.40
Brake Hanger Brackets GM	£ 9.00	Smokebox Door & Ring GM	£ 27.55
Main Hornblocks GM	£ 36.00	Chimney GM	£ 10.20
Main Axleboxes GM	£ 47.75	Dome GM	£ 14.10
Driving & Coupled Wheels CI	£ 126.80	Top Feed Cover GM	£ 6.75
Axlepump & Eccentric Strap GM	£ 18.75	Grate - Stainless Steel	£ 11.00
Laser Cut Pony Frames (3mm)	£ 10.50	Laser Cut Tender Frames	£ 46.30
Pony Truck Frame GM	£ 15.25	Tender Stretchers GM	£ 19.35
Pony Horns GM	£ 8.40	Tender Hornblocks GM	£ 20.50
Pony Axleboxes GM	£ 7.75	Tender Axleboxes GM	£ 43.50
Pony Spring Pockets GM	£ 2.10	Tender Dummy Springs GM	£ 26.00
Pony Wheels CI	£ 16.40	Tender Wheels CI	£ 77.70
Cylinder Set CI	£ 75.00	Tender Brake Shoes (Ring) CI	£ 5.50
Cylinder Set GM	£ 150.00	Tender Handpump & Tee GM	£ 17.60

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 4-6-18

EVENING STAR - 2-10-0 Tender Locomotive in 3.1/2" g

Designed by LBSC. Described in Model Engineer.
 Length - 49.1/2" (inc Tender), Boiler Dia - 4.3/4"
 Cylinder Bore - 1.1/4", Driving Wheel Dia - 3.3/4"



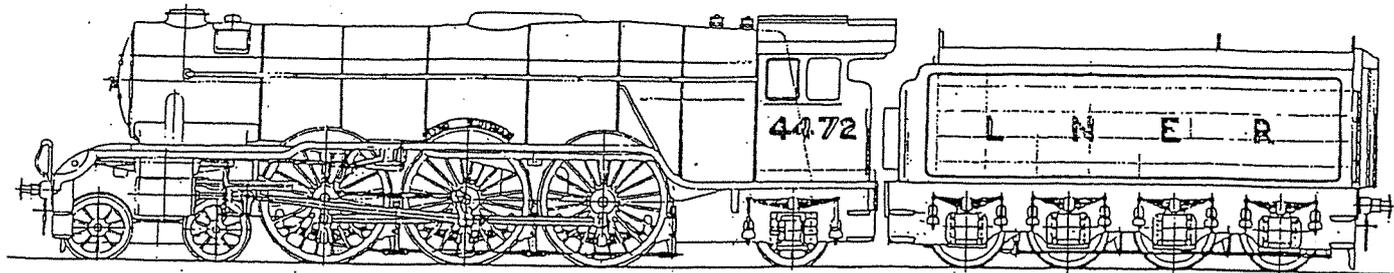
Drawings 10 shts.LO99	£ 47.00	Dome (GM)	£ 9.00
Laser Cut Main Frames (3mm)	£ 108.00	Dome Bush (GM)	£ 8.85
Buffer Beam Steel	£ 5.40	Reg Block (GM)	£ 14.75
Main Hornblocks (GM)	£ 46.50	Grate Stainless Steel	£ 16.00
Main Axleboxes (GM)	£ 58.50	Brake Cylinder (GM)	£ 4.80
Driving & Coupled Wheels (CI)	£ 181.00	Laser Cut Loco Brake Beams (5 off)	£ 13.75
<u>Cylinder Casting Sets</u>		Laser cut Loco Brake Shoe Ring x	
Piston Valve (GM)	£ 192.00	6mm thick (12 in a ring)	} £ 7.50
Piston Valve (CI)	£ 88.50	Laser Cut Loco Brake Hangers/	
Slide Valve (GM only)	£ 195.00	Levers (set of 10)	} £ 21.00
Piston Blanks (GM)	£ 15.00	Laser Cut Tender Frames (2.5mm)	£ 48.50
Piston Blanks (CI)	£ 3.25	Laser Cut Tender Brake Shoe Ring x	
Brake Cylinder Stay (GM)	£ 13.75	6mm thick (set of 6)	} £ 5.00
Main Stretchers 2 OFF (GM)	£ 51.00	Laser Cut Tender Brake Hangers (6)	£ 12.75
Set 3 stays (Pump, rear & pony kingpin) (GM)	£ 27.60	Laser Cut Tender Brake Beams (3)	£ 8.20
Laser Cut Front Pony Frame (3mm)	£ 8.85	Tender Hornblocks & Spgs (GM)	£ 38.75
Pony Bolster (GM)	£ 6.60	Tender Axleboxes (GM)	£ 54.75
Pony Axleboxes (GM)	£ 17.00	Tender 'Timken' axlebox Cover (6 off)	£ 6.00
Pony Wheels (CI)	£ 16.20	Tender Wheels (CI)	£ 53.10
Laser Cut Motion Bkts set LH & RH		Tender Handpump & Tee (GM)	£ 17.60
Tabbed & slotted for fabrication	} £ 24.50	Tender Brk Bevel Gears (pr)	£ 18.75
Guide Bar Brackets (GM)	£ 14.85		
Axle Pump (GM)	£ 9.60	Laser Cut B.R.I.A. Tender Body in	
Eccentric Straps Pump & Lub (GM)	£ 8.00	Brass (10 parts) All Tabbed & Slotted	
Laser Cut Conn & Coupling Rods		For Quick Assembly	} £ 277.50
Set of 10 - 6mm	} £ 50.25		
Reverser Bevel Gears (pr)	£ 18.75		
Saddle (GM)	£ 43.50		
Smokebox Door & Ring (GM)	£ 28.10		
Chimney (GM) (Double)	£ 9.75		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 5-6-18

A3 'FLYING SCOTSMAN' 3.1/2"G

A new design of the worlds most famous locomotive 3.1/2" version of Gresleys Class A3 Pacific. Can be built as a 2 or 3 cylinder engine. Several alternatives are offered in the design and a choice of materials for some items.



Drawings (20 sheets)	£	82.50	Cab' Reverser Stand Base GM	£	8.70
Laser Cut Frames	}	£ 116.50	Outside Cylinder Set P.V. GM	£	178.00
Main & Trailing 3mm			Inside Cylinder Set P.V. GM	£	95.00
Buffer Beam Angles GM	£	27.00	Piston Blanks CI (3 off)	£	3.00
Valve Gear Stretcher GM	£	5.40	Piston Blanks GM (3 off)	£	7.00
Inside Cylinder Stretcher GM	£	6.40	Smokebox Saddle GM	£	31.75
Weighshaft Bearings GM	£	6.60	Smokebox Door & Ring GM	£	37.80
Main Horns GM	£	27.90	Smokebox Patch Plates 2 GM	£	7.80
Main Axleboxes GM	£	34.65	Superheater Header GM	£	26.95
Main Springs - Dummy GM	£	21.75	Banjo Dome GM	£	19.25
Driving & Coupled Wheels CI	£	114.90	Chimney GM	£	10.20
Laser Cut Bogie Frames 3mm	£	23.00	Petticoat Pipe GM	£	19.00
Bogie Bolster GM	£	15.40	Brake Cylinders (2 off) GM	£	15.95
Bogie Centre Stretcher GM	£	26.25	Brake Shoes - Loco CI Ring	£	11.25
Bogie Centre, Swing Link GM	£	11.70	Brake Shoes - Tender CI Ring	£	6.25
Bogie Horns GM	£	16.80	Laser cut Tender Frames 2.5mm	}	£ 31.50
Bogie Axleboxes GM	£	15.45	(Non-corridor)		
Bogie Wheels CI	£	37.60	Laser cut Tender Drag Box Kit 2.0mm	£	14.00
Trailing Horns Radial GM	£	12.60	Laser Cut Tender Draw Box Kit 2 mm	£	14.00
Trailing Axleboxes Radial GM	£	21.85	Tender Buffer Beams MS	£	1.50
Trailing Horns Simple GM	£	14.40	Tender Buffer Beam Angles GM	£	9.00
Trailing Axleboxes Simple GM	£	13.80	Tender Horns GM	£	28.80
Trailing Springs Dummy GM	£	6.75	Tender Axleboxes GM	£	68.20
Trailing Wheels CI	£	22.50	Tender Dummy Springs GM	£	24.00
Axlepumps & Straps (2 off) GM	£	30.00	Tender Wheels - Disc CI	£	105.20
Expansion Link Hangers 4 GM	£	9.00	Tender Wheel Splashes GM	£	55.80
Expansion Link Hanger Brackets	£	7.35	Tender Handpump GM	£	12.60
Cylinder Slidebar Brackets GM	£	9.90	Tender Corridor Connector ALI	£	37.50
Running Board Supports GM	£	16.80	Grate CI	£	16.65
			Grate - Stainless Steel	£	15.00

Alternative Versions Also Available

Outside Cylinder Set P.V. CI	£	101.00
Inside Cylinder Set P.V. CI	£	67.00
Outside Cylinder Set S.V. GM	£	202.00
Outside Cylinder Set S.V. CI	£	116.00
Inside Cylinder Set S.V. GM	£	80.00
Inside Cylinder Set S.V. CI	£	46.00

Smaller wheels for tender eliminates the need for wheel splashes in the tender base. Set of 8 CI £ 120.00

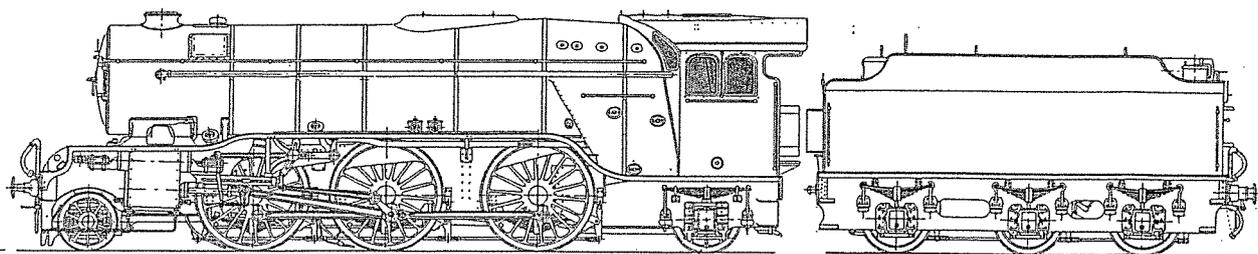
ALL PRICES ARE PLUS CARRIAGE & VAT

Updated 27-7-18

3.1/2"G 'GREEN ARROW' LNER CLASS V2 2-6-2

Designed in 3.1/2" g by Michael Breeze.

3 cylinders 1.13/16" bore x 1.5/8" stroke, with Walschaerts valve gear to o/s cylinders
& Gresleys 2:1 conjugated valve gear to l/s cylinder
Driving wheels 4.5/8" dia over tread



Drawings (16 sheets)	£ 50.00	Outside Cylinder Set CI	£ -
Laser Cut Main Frames	POA	Outside Cylinder Set GM	£ -
Main Hornblocks GM	£ 41.40	Inside Cylinder Set CI	£ -
2:1 Fulcrum Stretcher GM	£ 6.50	Inside Cylinder Set GM	£ -
Main Frame Pin Stretcher GM	£ -	O/s Cylinder Front Steam Chest	} £ -
King Pin Stretcher GM	£ 8.40	Covers GM	
Mainstretcher GM 2 off	£ 19.20	O/s Cylinder Rear Steam Chest	} £ -
Inside Slide Bar Stretcher GM	£ 6.00	Covers GM	
Main Axleboxes (Solid type) GM	£ 41.20	Piston Blanks (set of 3) CI	£ 3.00
Pony Truck Top Stretcher GM	£ 7.50	Piston Blanks (set of 3) GM	£ 14.85
Pony Truck Hornguides GM	£ 6.00	Smokebox Saddle GM	£ -
Pony Truck Axleboxes GM	£ 7.20	Smokebox Front Ring GM	£ -
Pony Truck Arm GM	£ -	Smokebox Door GM	£ 20.35
Pony Truck Wheels CI	£ 21.70	Wet Header - Base & Head GM	£ -
Brake Cylinder Stretcher GM	£ -	Superheater Return Bends GM	£ -
Brake Cylinder GM	£ 7.00	Dome Bush & Cover GM	£ -
Brake Valve Body GM	£ -	Banjo Outer Dome GM	£ 13.35
Loco Brake Shoes CI	£ -	Dummy Superheater Covers GM	£ -
Driving & Coupled Wheels CI	£ 119.10	Single Chimney GM	£ -
Main Wheel Splashers GM	£ -	Regulator Body GM	£ 6.80
Lubricator Eccentric Strap GM	£ -	Steam Turret Block GM	£ -
Expansion Link Brackets GM	£ -	Safety Valve Bodies GM	£ -
Trailing Hornblocks GM	£ 5.35	Firegrate CI	£ -
Trailing Cartazzie Axleboxes GM	£ -	Firegrate Stainless Steel	£ -
Trailing Wheels CI	£ 27.20	Laser Cut Tender Frames (3mm)	£ -
Trailing Dummy Springs GM	£ 8.65	Tender Hornblocks GM	£ 17.00
Trailing Spencer Spring Blocks GM	£ 1.80	Tender Axleboxes GM	£ -
Trailing Spring Hanger Cleats GM	£ 1.65	Tender Wheels (Disc) CI	£ 69.90
Running Board Brackets GM	£ -	Tender Brake Shoes CI	£ -
Loco Buffer Heads & Stocks BMS	£ 1.75	Tender Dummy Springs GM	£ -
		Tender Spencer Spring Blocks GM	£ 3.60
		Tender Handpump GM	£ 13.35
		Tender Buffer Heads & Stocks BMS	£ 1.75
		Tender Water Pick-up Dome GM	£ -

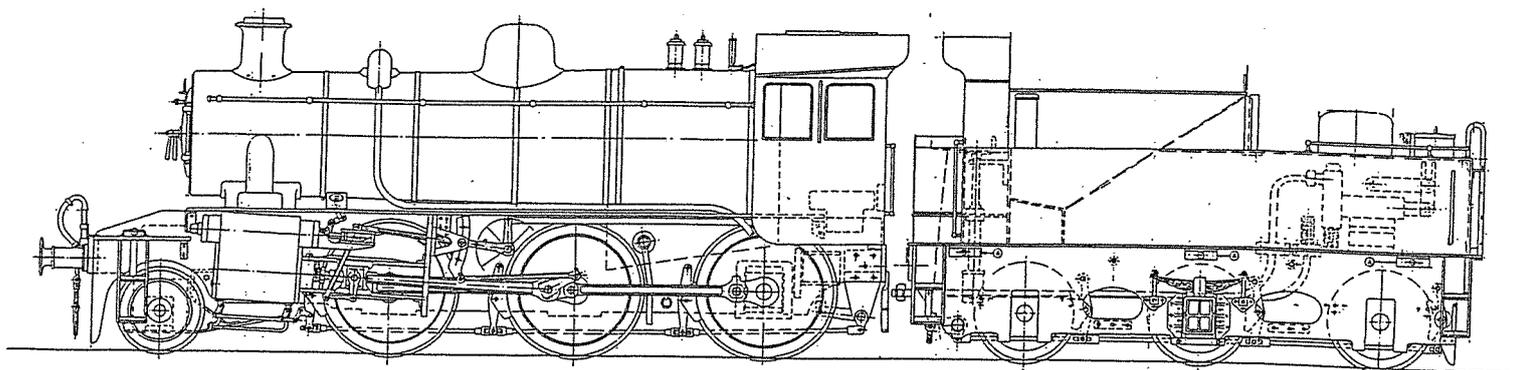
NEW ADDITION - PRICES AVAILABLE IN DUE COURSE

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 20-6-18

IVATT - LMS Class 2. 2-6-0 Tender Locomotive in 3.1/2"G

Designed in 3.1/2" g by Martin Evans. Two outside piston valve cylinders. Walschaerts valve gear described in 'Model Engineer' vols 160/161.



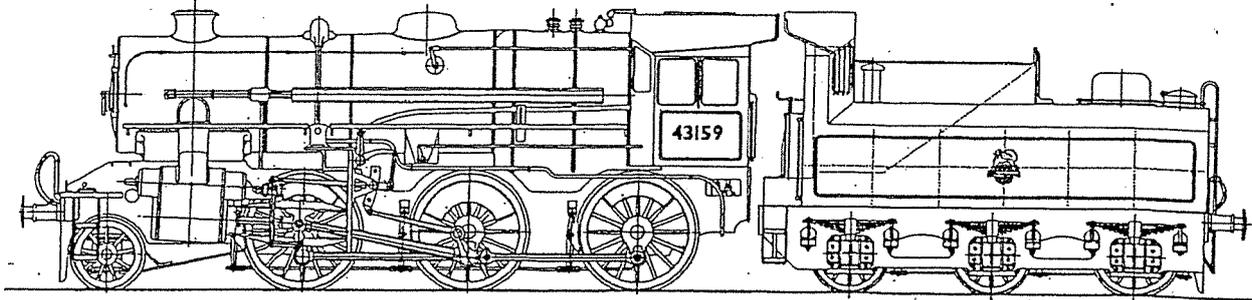
Drawings(8 shts) LO 975	£	37.45	Smokebox Door GM	£	8.40
Laser Cut Main Frames (3mm)	£	67.00	Smokebox Ring GM	£	12.00
Buffer Beam Steel	£	6.00	Blast Pipe (incl cap) GM	£	6.75
Main Frame Stretcher GM	£	14.30	Chimney GM	£	10.80
Main Hornblocks GM	£	27.35	Inner Dome GM	£	11.65
Main Axleboxes GM	£	33.35	Dome GM	£	14.40
Pony Axleboxes GM	£	8.55	Top Feed Cover GM	£	5.45
Pony Wheels CI	£	19.60	Regulator Stand GM	£	9.00
Driving & Coupled Wheels CI	£	96.90	Reg Quad Bush GM	£	5.40
Cylinder set GM	£	146.00	Grate CI	£	6.25
Cylinder set CI	£	72.00	Laser Cut Tender Frames (3mm)	£	33.50
Piston Blanks GM	£	10.50	Tender Buffer Beam Steel	£	2.80
Piston Blanks CI	£	2.50	Tender Hornblocks GM	£	28.80
Guide Bar Brackets GM	£	13.20	Tender Axleboxes GM	£	45.40
Brake Cylinder GM	£	7.80	Tender Dummy Springs GM	£	26.00
Saddle GM	£	15.40	Tender Wheels CI	£	56.40
			Tender Handpump GM	£	12.60

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 25-6-18

IVATT - LMS Class 4. 2-6-0 Tender Locomotive in 3.1/2"G

Designed in 3.1/2" g by Locomotive Design Co.
 Overall length. Loco & Tender 42" Two outside piston valve cylinders.
 Cylinder bore 1.5/32" dia x 1.3/4" stroke. Driving wheel dia 4.5/32"



Drawings(16 shts)	£	54.00	Smokebox Door & Ring GM	£	28.80
Laser Cut Main Frames (3mm)	£	42.00	Chimney GM	£	10.20
Buffer Beam Angles GM	£	18.00	Dome Bush GM	£	11.70
Pony Truck Pivot Plate GM	£	9.00	Inner Dome GM	£	11.80
Pump Stretcher GM	£	9.90	Outer Dome GM	£	14.10
Main Hornblocks GM	£	27.00	Top Feed Cover GM	£	6.75
Main Axleboxes GM	£	33.55	Petticote Pipe GM	£	17.90
Axle pump & Ecc strap GM	£	14.10	Regulator Body GM	£	5.40
Pony Truck Axleboxes GM	£	11.00	Superheater Header GM	£	22.00
Pony Truck Wheels CI	£	16.20	Firegrate CI		POA
Main Dummy Springs GM	£	24.00	Laser Cut Tender Frames (3mm)	£	35.50
Driving & Coupled Wheels CI	£	101.10	Tender Buffer Beam Angles GM (4)	£	18.00
Cylinder set GM	£	164.00	Tender Hornblocks GM	£	20.50
Cylinder Set CI	£	85.75	Tender Axleboxes GM	£	45.40
Piston Blanks GM	£	1.75	Tender Dummy Springs GM	£	26.00
Piston Blanks CI	£	5.00	Tender Wheels CI	£	57.00
Slide Bar Brackets Laser Cut (3mm)	£	5.20	Tender Brake Shoe Ring CI	£	5.00
Loco Brake Shoe Ring CI	£	8.50	Tender Handpump & Tee GM	£	12.60
Saddle GM	£	30.00			

ALL PRICES ARE PLUS CARRIAGE AND VAT

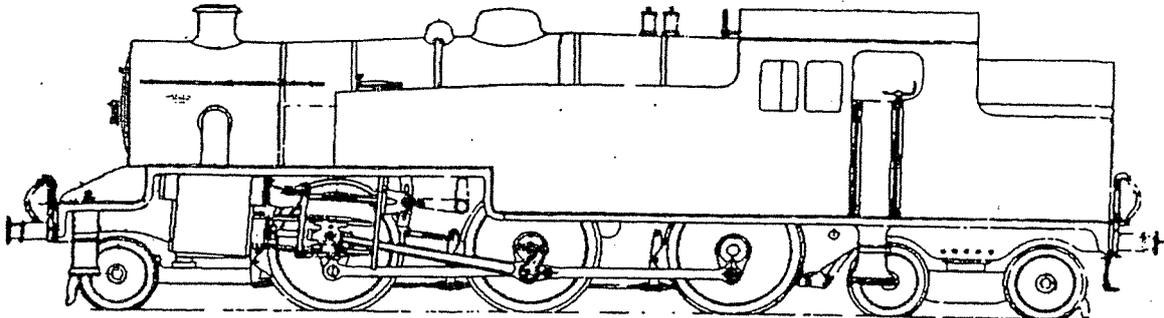
Updated 25-6-18

JUBILEE 2-6-4 Stanier Class 4 Loco in 3.1/2"G

Designed by Martin Evans. Described in Model Engineer Vol 118 - 121.

Length - 35.1/2", Boiler Dia - Taper,

Cylinder Bore - 1.1/8", Driving Wheel Dia - 4.3/16"



Drawings 8 shts..LO23	£	38.00	Cylinder Set GM	£	195.50	
Laser Cut Main & Rear Bogie Frames (3mm)	}	£	82.00	Piston Blanks GM	£	10.50
Buffer Beam Steel BMS		£	11.25	Guide Bar Brackets GM	£	14.40
Main Hornblocks GM	£	28.00	Crossheads (pair) GM	£	13.00	
Main Axleboxes GM	£	34.55	Brake Shoes CI	£	8.50	
Bogie & Pony Horns GM	£	9.45	Buffer Heads & Stocks BMS	£	3.00	
Bogie & Pony Axleboxes GM	£	28.80	Saddle GM	£	26.40	
Bogie & Pony Spg Pockets GM	£	1.04	Smokebox Door & Ring GM	£	27.40	
Bogie & Pony Wheels CI	£	54.00	Chimney GM	£	9.25	
Bogie Bolster GM	£	16.75	Dome GM	£	15.90	
Bogie Centre GM	£	20.25	Top Feed Cover GM	£	6.00	
Twin Axle Pump Block GM	£	22.35	Tank Pump & Tee GM	£	17.35	
Pump Eccentric Straps GM	£	11.65	Stainless Steel Grate	£	12.00	
Driving & Coupled Wheels CI	£	99.00	Cast Grate	£	11.65	

ALL PRICES ARE PLUS CARRIAGE AND VAT

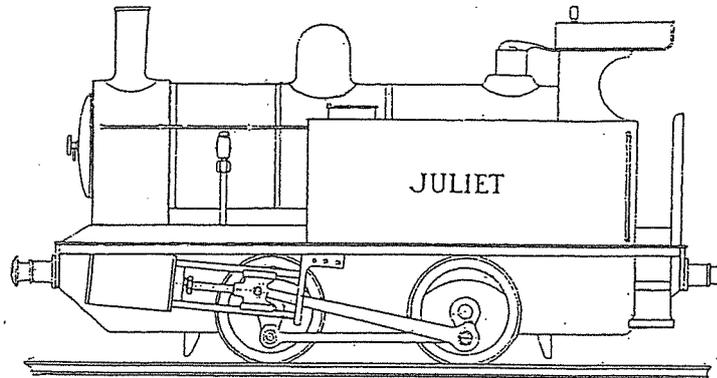
Updated 2-8-18

JULIET 0-4-0 Tank Locomotive in 3.1/2"G

A freelance contractors loco designed by L.B.S.C, available in two versions. No1 with Stephenson Valve Gear & No2 with Baker Valve Gear.

Described in Model Engineer Vol 95-97

Length - 20", Boiler Dia - 3.1/2", Cylinder Bore - 1", Driving Wheel Dia - 3.1/4"



Locomotive illustrated Juliet No1

No 1 Version. Stephenson Valve Gear

Drawings 6 shts			Guide Bar Brackets GM	£	8.40
Steph Valve Gear.LO62	}	£ 25.50	Smokebox Door & Ring GM	£	19.40
Laser Cut Frames 3mm		£ 36.75	Eccentric Straps (5) GM	£	22.50
Buffer Beam Steel		£ 10.50	Saddle GM	£	14.75
Hornblocks GM		£ 16.10	Chimney GM	£	11.70
Axleboxes GM		£ 23.85	Dome GM	£	14.30
Axlepump & Stay GM		£ 16.15	Safety Valve Cover GM	£	13.20
Driving Wheels CI		£ 55.60	Tank Pump & Tee GM	£	17.50
Cylinder Set GM (Steph)		£ 167.50	Grate (stainless steel)	£	10.50
Piston Blanks GM		£ 10.50	Grate (CI)	£	6.50
Crossheads GM		£ 9.20			

No 2 Version. Baker Valve Gear

Drawings 7 shts.LO64	£	31.75	Cylinder Set GM-Baker	£	132.50
Laser Cut Frames 3mm	£	36.75	Pump Eccentric Strap GM	£	4.50

Drawing comprises : 5 sheets (1-5) plus sheets 5 & 6 from LO62

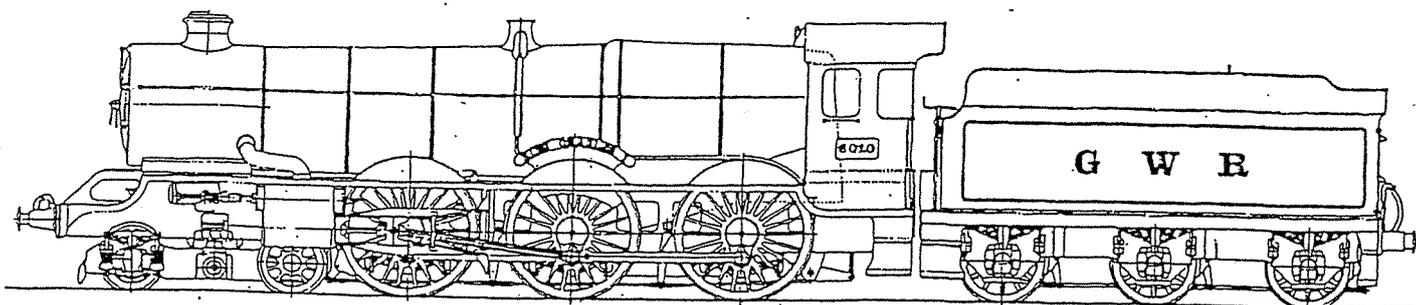
All other Castings as per Juliet No1

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 27-6-18

KING 4-6-0 TENDER LOCO 3.1/2"G

4-6-0 Tender Loco, famous 'KING' class loco designed for GWR by CB Collett.
When introduced in 1927 they were the most powerful express passenger locos in Britain

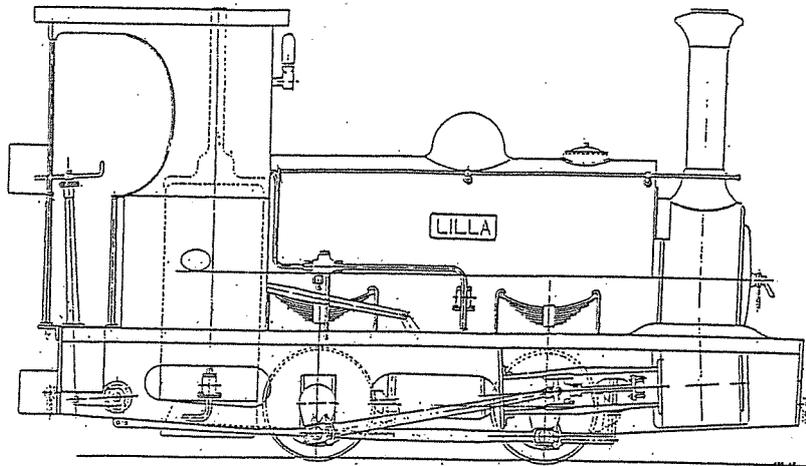


DRAWINGS (Set of 19 sheets)	£ 63.00	KC35 ECC STRAPS (VALVE GEAR) (GM)	£ 7.50
LASER CUT MAIN FRAMES (3mm)	£ 70.00	KC36 REVERSER SCREW BEARING (GM)	£ 2.40
KC4 BOGIE BOLSTER (GM)	£ 9.00	KC37 REVERSER STAND (GM)	£ 17.90
KC5 VALVE GEAR STRETCHER (GM)	£ 31.85	KC38 REVERSER STAND BASE (GM)	£ 8.50
KC6 INSIDE MOTION STRETCHER (GM)	£ 15.00	KC39 AXLEPUMP BODY (GM)	£ 8.70
KC8 MAIN HORNS (GM)	£ 27.80	KC40 AXLEPUMP ECC ROD (GM)	£ 4.80
KC9 MAIN AXLEBOXES (GM)	£ 33.30	KC41 STEAM BRAKE CYL (GM)	£ 9.25
KC10 MAIN DUMMY SPRINGS (GM)	£ 36.00	KC42 BRAKE CYLINDER COVERS (GM)	POA
KC11 MAIN SPRING HANGERS (GM)	£ 36.30	KC43 SMOKEBOX SADDLE (GM)	£ 33.20
KC12 BUFFER BEAM ANGLES (GM)	£ 9.60	KC44 SUPERHEATER HEADER (GM)	£ 23.00
KC13 BOGIE SUPPORT BRACKET (GM)	£ 4.85	KC45 SMOKEBOX DOOR	£ 14.70
KC14 DRIVING & COUPLED WHEELS (W65)(CI)	£ 132.90	KC46 SMOKEBOX FRONT RING (GM)	£ 26.35
KC16 BOGIE CENTRE (GM)	£ 32.55	KC47 CHIMNEY (GM)	£ 17.55
KC17 BOGIE SIDE SPRING POCKETS (GM)	£ 14.30	KC48 PETTICOAT PIPE (GM)	£ 24.15
KC19 BOGIE SPRING PIN GUIDES (GM)	£ 16.80	KC49 SAFETY VALVE COVER (BRASS)	£ 12.00
KC20 BOGIE HORNS (GM)	£ 15.85	KC50 BRAKE SHOES LOCO	POA
KC21 BOGIE AXLEBOXES (PAIRS) (GM)	£ 29.65	KC51 BRAKE SHOES TENDER (CI RING)	£ 6.50
KC22 BOGIE DUMMY SPRINGS (GM)	£ 9.60	LASER CUT TENDER FRAMES (3mm)	£ 41.25
KC23 BOGIE WHEELS (W66) (CI)	£ 37.40	KC53 TENDER BUFFER BEAM ANGLES (GM)	£ 9.60
OUTSIDE CYLINDER SET (GM)	£ 149.00	KC54 TENDER HORNBLOCKS (GM)	£ 21.20
INSIDE CYLINDER SET (GM)	£ 180.00	KC55 TENDER AXLEBOXES (GM)	£ 46.20
PISTON BLANKS (GM) (SET OF 4)	£ 17.50	KC56 TENDER DUMMY SPRINGS (GM)	£ 25.00
KC33 GUIDE BAR BRACKET - LH (GM) }		KC57 TENDER WHEELS (W71) (CI)	£ 71.70
KC34 GUIDE BAR BRACKET - RH (GM) }	SET £ 13.55	KC58 TENDER HANDPUMP (GM)	£ 12.85
		KC59 GRATE (CI)	POA

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 11-7-18

LILLA - 0-4-0 Hunslet Contractors Locomotive in 3.1/2"G

Designed by Ross Harrison. Described in EIM Vol 1 to Vol 2
 Model of Hunslet Loco Works No. 554, built in 1891 for Cilgwyn Quarry
 & later at the Penrhyn Quarry.
 Length - 29.1/4", Boiler Dia - 4", Driving Wheel Dia - 4", Cylinder Bore - 1.1/4"



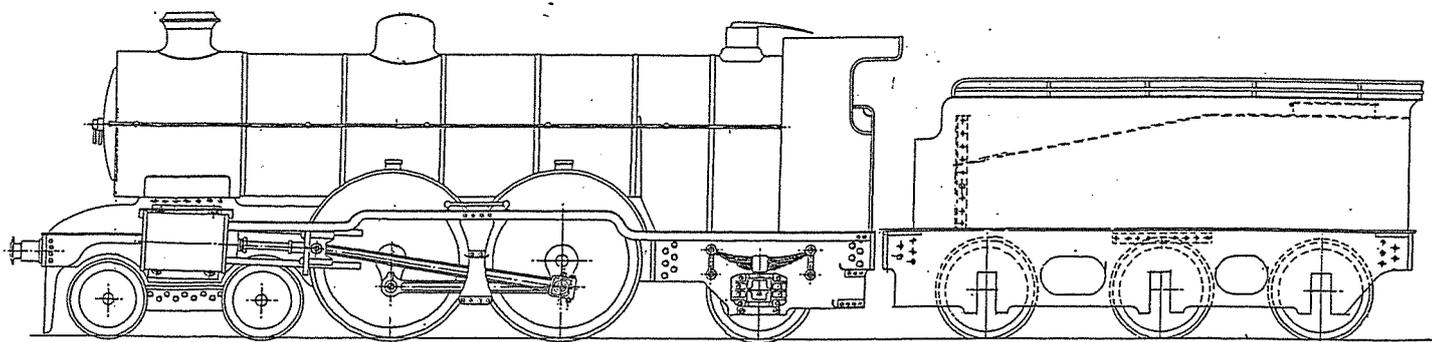
Drawings 6 shts	£	30.00	Brake Shoes Ring CI	£	17.25
Frame Steel	£	22.50	Dome Bush GM	£	22.00
Buffer Beam Steel & Fixing Angle	£	20.00	Inner Dome GM	£	27.00
Main Hornblocks GM	£	27.50	Safety Valve Base GM	£	15.50
Main Axleboxes GM Split & Keeps	£	64.25	Smokebox Door GM	£	15.40
Axle steel BMS	£	2.50	Superheater Header & Bush GM	£	14.15
Eccentric Sheaves (Set of 5) CI	£	4.50	Chimney GM	£	41.70
Eccentric Straps (Set of 5) GM	£	39.00	Handpump & Tee GM	£	33.35
Axlepump & Gland GM	£	21.25	Stainless Steel Grate	£	12.00
Driving & Coupled Wheels CI	£	97.80	Flanged S/Box F & R Plates	£	30.00
Cylinder Set GM	£	328.00			
Cylinder Set CI	£	180.50			
Piston Blanks GM	£	19.80			
Piston Blanks CI	£	3.00			
Crossheads GM	£	12.00			

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 11-7-18

MAISIE 4-4-2 G.N.R Atlantic Locomotive in 3.1/2"G

Based on the famous Ivatt GNR Atlantic, the model was designed by L.B.S.C, Described in Model Engineer Vols 72 - 76. Overall length (including tender) 43.1/4",
 Boiler Dia - 4.3/8" with wide firebox. 2 outside Cylinders 1.1/4" bore with inside valve gear.
 Driving Wheel dia - 4.3/4"



Drawings 7 shts..LO70	£ 30.00	Crossheads GM	£ 9.20	
Construction Manual	}	Motion Brackets GM	£ 10.55	
(Maisie Works & Music) - LBSC		£ 12.95	Eccentric Straps (5) GM	£ 27.20
Laser Cut Main & Trailing Frames (3mm)		£ 78.00	Laser Cut Con & Coupling Rods (6mm) Set	£ 44.10
Buffer Beam Steel	£ 4.00	Saddle GM	£ 26.00	
Main Hornblocks GM	£ 33.35	Smokebox Door & Ring GM	£ 31.50	
Main Axleboxes GM	£ 30.60	Chimney GM	£ 13.00	
Pump Stay GM	£ 6.80	Dome bush GM	£ 9.00	
Pump GM	£ 8.15	Dome GM	£ 14.30	
Laser Cut Bogie Frames (3mm)	£ 18.20	Grate - stainless stl	£ 14.50	
Bogie Bolster GM	£ 17.80	Laser Cut Tender Frames (3mm)	£ 37.50	
Bogie Centre GM	£ 18.15	Tender Buffer Beam Stl	£ 10.00	
Bogie Axleboxes GM	£ 12.20	Tender Horns GM	£ 19.10	
Bogie Wheels CI	£ 42.80	Tender Axleboxes GM	£ 42.00	
Driving & Coupled Wheels CI	£ 67.40	Tender Wheels CI	£ 59.10	
Trailg Horns & Springs GM	£ 18.15	Tender Springs GM	£ 35.50	
Trailg Axleboxes GM	£ 13.55	Tender Pump & Tee GM	£ 17.50	
Trailing Wheels CI	£ 19.70			
Cylinder Set GM	£ 165.30			
Pistons GM	£ 14.85			

ALL PRICES ARE PLUS CARRIAGE AND VAT

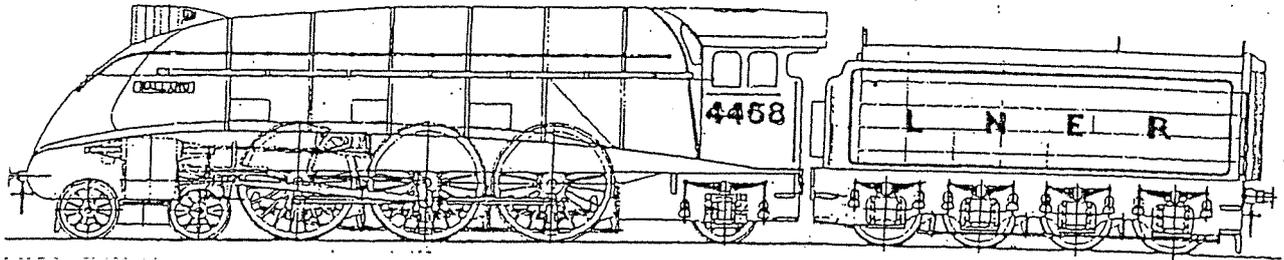
Updated 16-7-18

MALLARD 3.1/2"G

3.1/2"g Version of Gresleys world famous Class A4 4-6-2 Pacific by Loco Design Co.

Length (loco & tender) 53", Boiler dia 4.3/8" + (tapered),

3 Cylinders 1.1/8" bore x 1.5/8" stroke, Driving Wheels 5.7/32" dia



Drawings (2 x sheets 'Mallard' + 20 sheets 'Flying Scotsman')	£	91.50	Cab' Reverser Stand Base GM	£	8.70
Laser Cut Frames, Main & Trailing 3mm	£	116.50	Outside Cylinder Set P.V. GM	£	178.00
Buffer Beam Angles GM	£	27.00	Inside Cylinder Set P.V. GM	£	95.00
Valve Gear Stretcher GM	£	5.40	Pistons Blanks (3 off) CI	£	3.00
Inside Cylinder Stretcher GM	£	6.35	Piston Blanks GM (3 off)	£	7.00
Weighshaft Bearings GM	£	6.60	Smokebox Saddle GM	£	31.75
Main Horns GM	£	27.90	Smokebox Door & Ring GM		POA
Main Axleboxes GM	£	34.65	Superheater Header GM	£	26.95
Main Springs - Dummy GM	£	21.60	Double Chimney		POA
Driving & Coupled Wheels CI	£	114.90	Petticoat Pipe GM		POA
Laser Cut Bogie Frames 3mm	£	23.00	Brake Cylinders 2 GM	£	15.95
Bogie Bolster GM	£	15.40	Brake Shoes - Loco CI Ring	£	11.25
Bogie Centre Stretcher GM	£	26.25	Brake Shoes - Tender CI Ring	£	6.25
Bogie Centre, Swing Link GM	£	11.70	Laser Cut Tender Frames 2.5mm (Non-corridor)	£	31.50
Bogie Horns GM	£	16.80	Laser Cut Tender Drag Box Kit 2mm	£	14.00
Bogie Axleboxes GM	£	15.45	Laser Cut Tender Draw Box Kit 2mm	£	14.00
Bogie Wheels CI	£	37.60	Tender Buffer Beams MS	£	1.50
Trailing Horns Radial GM	£	12.60	Tender Buffer Beam Angles GM	£	9.00
Trailing Axleboxes Radial GM	£	21.85	Tender Horns GM	£	28.80
Trailing Horns Simple GM	£	14.40	Tender Axleboxes GM	£	68.20
Trailing Axleboxes Simple GM	£	13.80	Tender Dummy Springs GM	£	24.00
Trailing Springs Dummy GM	£	6.70	Tender Wheels - Disc CI	£	105.20
Trailing Wheels CI	£	22.50	Tender Wheels Splashers GM	£	55.80
Axlepumps & Straps 2 GM	£	30.00	Tender Handpump GM	£	12.60
Expansion Link Hangers 4 GM	£	9.00	Tender Corridor Connector ALI	£	19.40
Expansion Link Hanger Brackets	£	7.30	Grate CI	£	16.60
Cylinder Slidebar Brackets GM	£	9.90	Grate Stainless Steel	£	15.00
Running Board Supports GM	£	16.80			

Alternative Options

Smaller wheels for tender eliminates the need for wheel splashers in the tender base Set of 8 CI	£	120.00			
Outside Cylinder Set P.V. CI	£	101.00	Outside Cylinder Set S.V. CI	£	116.00
Inside Cylinder Set P.V. CI	£	66.50	Inside Cylinder Set S.V. GM	£	80.00
Outside Cylinder Set S.V. GM	£	201.00	Inside Cylinder Set S.V. CI	£	47.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 16-7-18

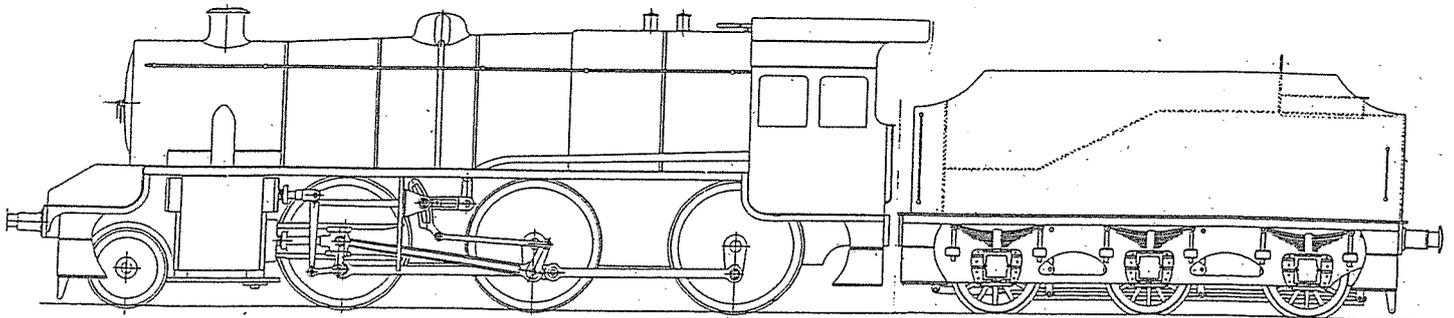
PRINCESS MARINA - 2-6-0 LMS STANIER IN 3.1/2"G

Designed by LBSC - Described in Mechanics magazine 1935.

Length - (inc tender) 45.3/4" - Boiler dia tapered

Cylinders 1.1/8" bore x 1.3/4" stroke

Driving Wheel dia 4.1/8" dia



Drawings (6 sheets)	£ 30.00	Piston Blanks GM	£ 13.60
Construction Book	£ 4.95	Saddle GM	£ 14.85
Laser Cut Frames (3mm)	£ 70.00	Buffer Heads & Stocks (BMS)	£ 2.00
Buffer Beam Steel	£ 4.25	Smokebox Door & Ring GM	£ 32.60
Main Hornblocks (wide type) GM	£ 50.40	Chimney GM	£ 8.10
Main Hornblocks (narrow type) GM	£ 27.90	Outer Dome GM	£ 7.00
Main Axleboxes GM	£ 40.70	Dome Bush GM	POA
Pony Bolster GM	£ 16.20	Top Feed Cover GM	POA
Pony Axleboxes GM	£ 11.15	Laser Cut Tender Frames	£ 56.70
Twin Axlepump Block GM	£ 30.75	Tender Buffer Beam Steel	£ 5.75
Eccentric Straps (2) GM	£ 11.65	Tender Hornblocks GM	£ 27.00
Driving & Coupled Wheels CI	£ 93.60	Tender Dummy Springs	POA
Pony Wheels CI	£ 15.80	Tender Axleboxes GM	£ 43.20
Motion Brackets GM	POA	Tender Wheels CI	£ 56.70
Cylinder Set GM	£ 242.40	Tender Handpump & Tee GM	£ 12.60

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Updated 25-7-18

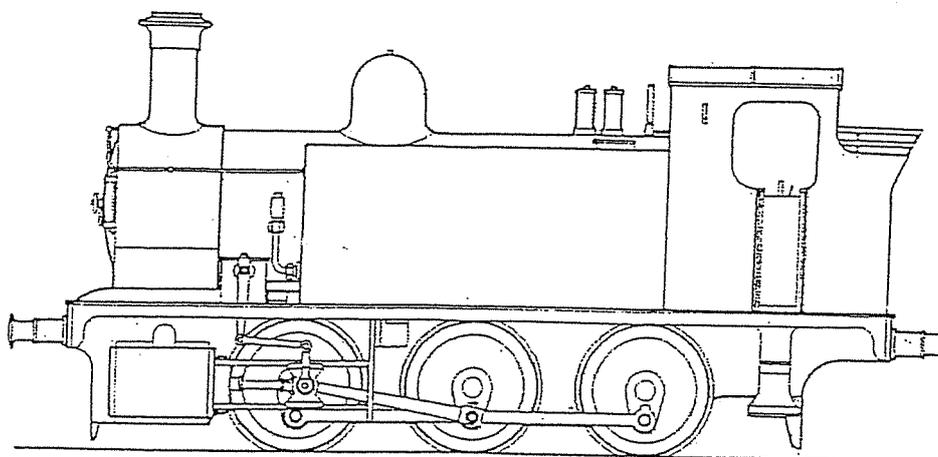
ROB ROY - 0-6-0- Caledonian Railway Locomotive in 3.1/2"G

Considered to be an ideal project for the newcomer to Model Engineering.

Designed by Martin Evans. Described in Model Engineer Vol 124-125.

Length (loco) - 21", Boiler Dia - 3.1/4",

Cylinder Bore - 15/16", Driving Wheel Dia - 3.1/4"



Drawings 6 shts..LO27	£	25.50	Smokebox Door & Ring GM	£	21.90
Construction Book-also describes 3.1/2" g William	}	£	Chimney GM	£	19.00
Laser cut frames 3mm (pr)			£	14.95	Dome GM
Buffer Beam Steel	£	57.50	Inner Dome GM	£	10.80
Hornblocks GM	£	6.25	Safety Valve Cover GM	£	13.80
Axleboxes GM	£	27.90	Tank Pump & Tee Piece GM	£	12.60
Driving Wheels CI	£	34.65	Grate-stainless steel	£	8.50
Cylinder Set GM	£	83.40	Grate CI	£	6.75
Piston Blanks GM	£	161.00	Finished Safety Valves 5/16 x 26T (2 required).....each	}	£
Guide Bar Brackets GM	£	10.50	'Rob Roy' Oil check valve		
Crossheads GM	£	13.80	1/8" pipe - 3/16" x 40T	£	9.35
Eccentric Straps GM	£	13.20			
Buffer Heads & Stocks BMS	£	21.25			
Saddle GM	£	3.00			
	£	17.90			

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 25-6-18

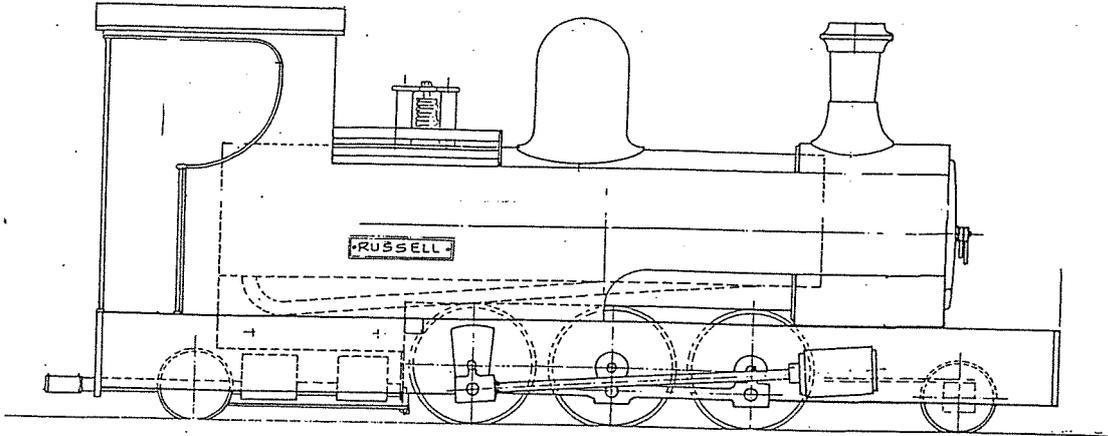
RUSSELL - Narrow Gauge Tank Locomotive in 3.1/2"G

Designed by Ross Harrison.

Model of Hunslet No.901. Built in 1906, Currently running at Portmadoc on the Welsh Highland Railway. With outside cylinders & Walschaerts valve gear.

Length - 34.1/4", Driving Wheel Dia - 4.1/8",

Cylinder Bore - 1.1/2", Boiler Dia - 5.1/2"



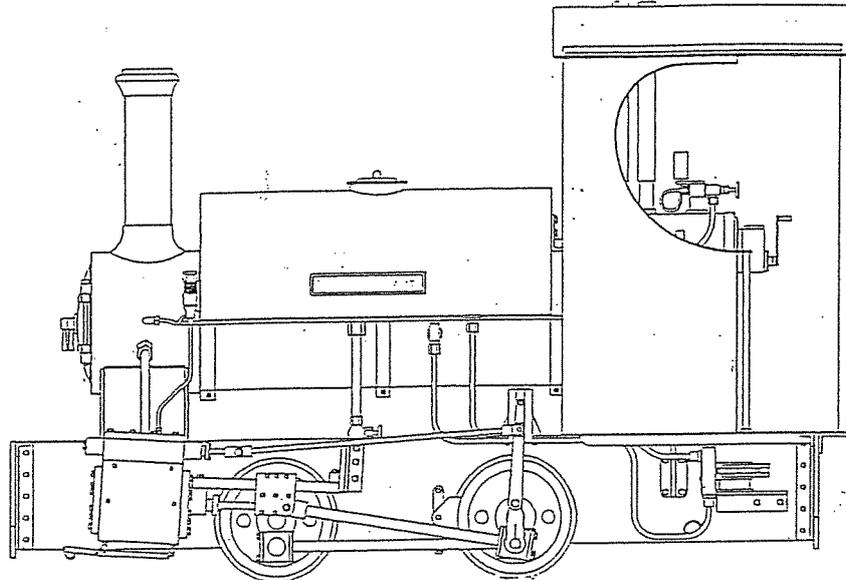
Drawings(11 shts)	£ 55.00	Laser Cut Motion Bracket (5mm)	£ 22.50
Laser Cut Frames (5mm)	£ 99.00	Leading & Trailing Wheels CI	POA
Laser Cut Buffer Beams (6mm)	£ 56.75	Driving & Coupled Wheels CI	£ 190.00
Laser Cut Stays (3mm) 12 off	£ 81.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 25-7-18

SWEET VIOLET - 0-4-0 Narrow Gauge Locomotive in 3.1/2"G

Designed by Jack Buckler, This Saddle tank Loco is the 3.1/2" Version of the Popular "SWEET PEA" with Hackworth Valve Gear & Marine type Boiler.

Length - 22", Boiler Dia - 3.1/2",
Cylinder Bore - 1", Driving Wheel Dia - 3"



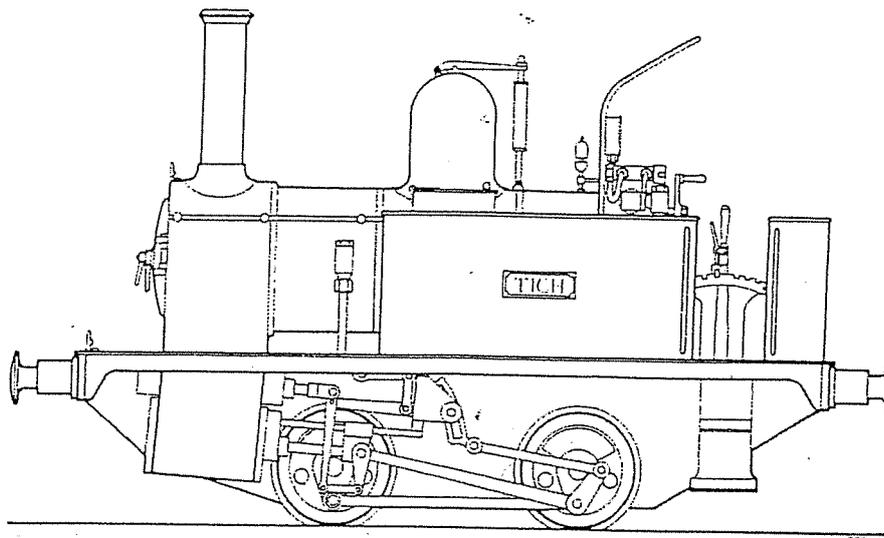
Drawings (4 shts)	£ 20.00	Front Springs (No.31) (4)	£ 2.00
		Rear Springs (No.29) (4)	£ 2.40
Laser Cut Frames, Buffer Beams, Stretchers, Brake Support Bracket, Reverser Brkt & Motion Plates	£ 77.50	Cylinder Set CI	£ 162.00
Buffer Beams Steel	£ 5.40	Piston Blanks GM	£ 10.50
Frame/Buffer Angle	£ 6.20	Piston Blanks CI	£ 2.25
Horns GM	£ 27.50	Conn & Coup Rod Brasses GM	£ 27.60
Axleboxes GM	£ 50.00	Saddle GM	£ 31.25
Axleboxes CI	£ 23.00	Smokebox Door GM	£ 13.50
Driving & Coupled Wheels CI	£ 78.20	Smokebox Ring GM	£ 13.75
Eccentric Sheave (Pump)	£ 1.25	Chimney Base & Cap GM	£ 18.70
Eccentric Strap (Pump) GM	£ 8.70	Header Bush/Flange GM	£ 7.00
Axle pump GM	£ 12.65	Regulator GM	£ 14.40
		Handpump & Tee GM	£ 15.30
		O' Ring Set	£ 2.72
		Stainless Steel Grate	£ 11.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 27-7-18

TICH - 0-4-0 Tank Locomotive in 3.1/2"G

A locomotive based on a design of a Contractors Engine by LBSC. Small or Large Boilered Versions. Described in Model Engineer Volumes 100-105.
 Length - 15.1/2", Cylinder Bore - 11/16", Driving Wheel Dia - 2"



SMALL BOILER VERSION ILLUSTRATED

Drawings(12 shts).LO75.	£ 56.00	Handpump Casting & Tee GM	£ 17.50
Laser Cut Frames (2.5mm)	£ 36.40	Eccentric Straps (slip ecc) GM	£ 5.10
Buffer Beam steel & Angle	£ 4.25	Saddle LB GM	£ 16.90
Main Hornblocks GM	£ 20.40	Chimney LB GM	£ 9.75
Main Axleboxes GM	£ 15.50	Dome LB GM	£ 11.15
Pump,pump stay & ecc strap GM	£ 17.40	Grate CI	£ 6.25
Driving Wheels - 7 spoke CI	£ 27.20	Buffer Heads & Stocks BMS	£ 3.45
Driving Wheels (Disc) CI	£ 35.00	Finish'd S/valve 5/16" x 32T	£ 17.50
Cylinder Set GM	£ 109.80		
Piston Blanks GM per pr	£ 5.30		
Steam Tees (pair) GM	£ 7.00		
Gear Frames GM	£ 9.30		
Smokebox Door & Ring LB GM	£ 14.00		
		<u>ALTERNATIVE VERSION - SMALL BOILER</u>	
		Smokebox Front & Door SB GM	£ 13.45
		Chimney Base SB GM	£ 3.25
		Dome SB GM	£ 14.85
		Grate CI	£ 6.25

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 27-7-18

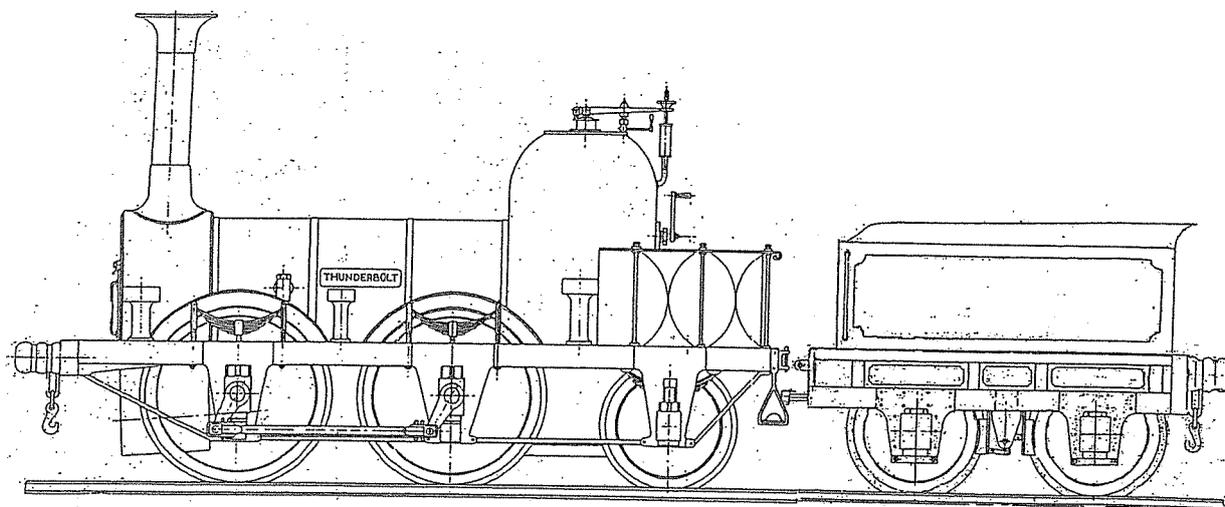
TITFIELD THUNDERBOLT- 0-4-2 Tender Locomotive in 3.1/2"G

Based on the Famous "LION" of the Liverpool & Manchester Railway, by LBSC.

Described in Model Engineer Volumes 108-110.

Length (loco & Tender) - 25", Boiler Dia - 2.7/8",

Cylinder Bore - 7/8", Driving Wheel Dia - 3.3/4"



Drawings(11 shts).LO89.	£	43.00	Piston Blanks GM	£	8.75
Laser Cut Loco Inside Frames	£	6.25	Grate CI	£	6.25
Laser Cut Horns, Main & Trailing	£	14.70	Fire Box Top GM	£	23.65
Main & Trail'g Axleboxes GM	£	16.15	Smokebox Front GM	£	13.50
Laser Cut Motion Plate	£	5.25	Chimney Base & Top GM	£	18.00
Motion Plate GM	£	10.80	Laser Cut Tender Frames (2.5mm)	£	17.50
Axle pump GM	£	3.70	Laser Cut Tender Horns (1.5mm)	£	14.00
Driving & Coupled Wheels CI	£	66.00	Tender Axleboxes GM	£	10.20
Main & Trail'g dummy spg GM	£	9.00	Tender Wheels CI	£	38.80
Trailing Wheels CI	£	19.40	Tender Handpump & Tee GM	£	17.35
Eccentric Straps GM	£	13.10	Photo-etched Nameplates	}	£ 10.00
Rocking Shaft Bearings GM	£	2.40	"Lion" per pair		
Cylinder Set GM	£	102.60			

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 2-8-18

VIRGINIA 4-4-0 Early American Loco in 3.1/2"G

Based on a typical American express engine of the 1870 - 1880 period -

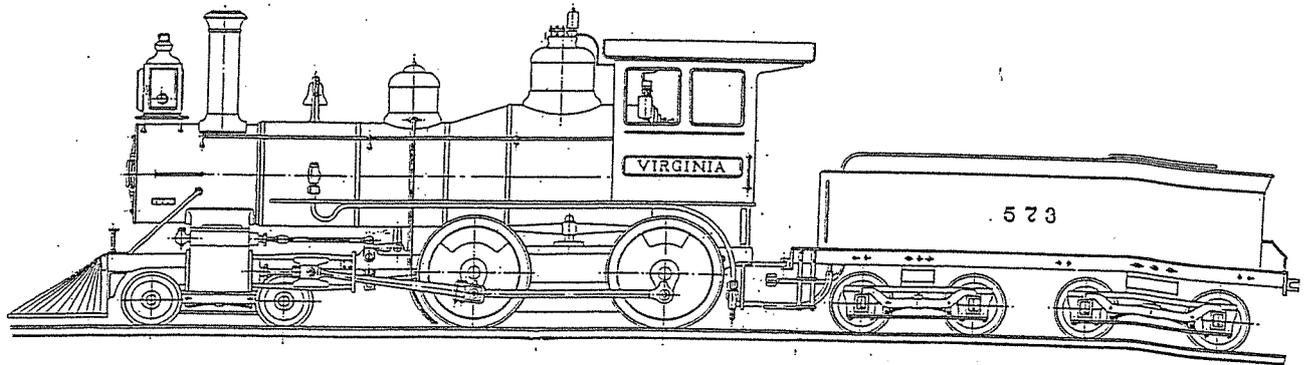
Large or Small Boiler Version available, designed by L.B.S.C.

Described in Model Engineer Vol 115 - 116.

Length including Tender - 44.1/2", Boiler Dia - 4.1/2",

Two outside cylinders 1.1/16" bore with inside Stephenson link valve gear.

Driving Wheel Dia - 3.7/8"



Drawings 7 shts..LO95	£ 30.00	Saddle - SB GM	£ 14.65
Construction Book	£ 12.95	Chimney - SB GM	£ 20.40
Laser Cut Main Frames (6mm)	£ 51.50	Dome - SB GM	£ 33.00
Drag Beam GM	£ 10.70	Sand Dome - SB GM	£ 17.05
Main Axleboxes GM	£ 18.80	Smokebox Front-SB GM	£ 16.50
Driving & Coupled Wheels CI	£ 71.00	Grate CI	£ 7.75
Eccentric Straps (5) GM	£ 26.00	Bell Bracket GM	£ 2.25
Pump Set GM	£ 10.00	Tender Axleboxes GM	£ 26.00
Cylinder Set GM	£ 131.25	Tender Wheels CI (Disc)	£ 56.00
Piston Blanks GM	£ 12.40	Tender Trucks pr GM	£ 57.40
Laser cut Truck Frame (5mm)	£ 5.45	Tender Bolsters pr GM	£ 46.50
Bogie Wheels (Disc) CI	£ 22.80	Tender Handpump & Tee GM	£ 17.40
Bogie Wheels (Spoked) CI	£ 22.20		
Bogie Axleboxes GM	£ 14.50		
Equaliser Beams GM	£ 6.25	<u>ALTERNATIVE VERSION - LARGE BOILER</u>	
Cow Catcher GM	£ 36.00	Saddle (GM)	£ 13.20
Loco & Tender Dummy Spgs GM	£ 21.00	Smokebox Front (GM)	£ 27.00

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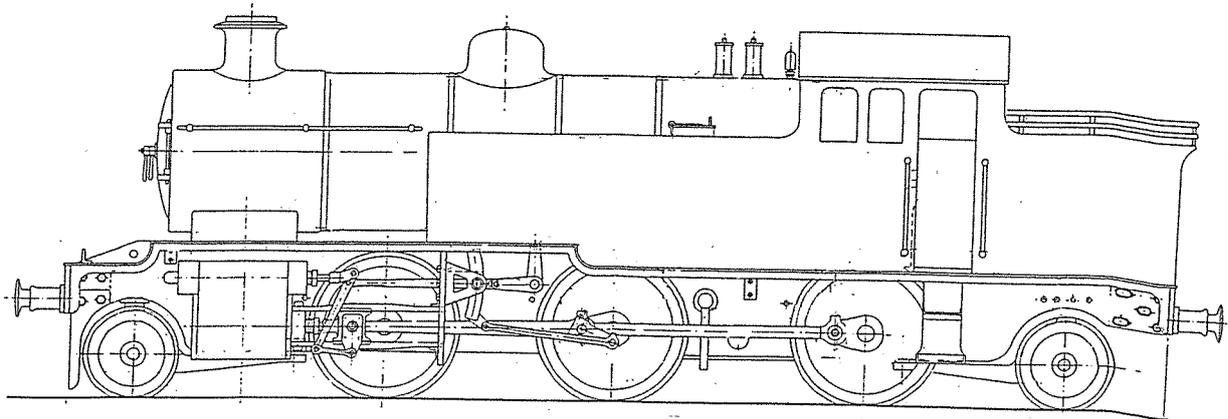
Updated 3-8-18

WILLIAM 2-6-2 Tank Engine in 3.1/2"G

Designed by Martin Evans. Described in Model Engineer Vol 149-152.

Length - 31.1/2", Boiler Dia - 4",

Cylinder Bore - 1.1/8", Driving Wheel Dia - 3.3/4"



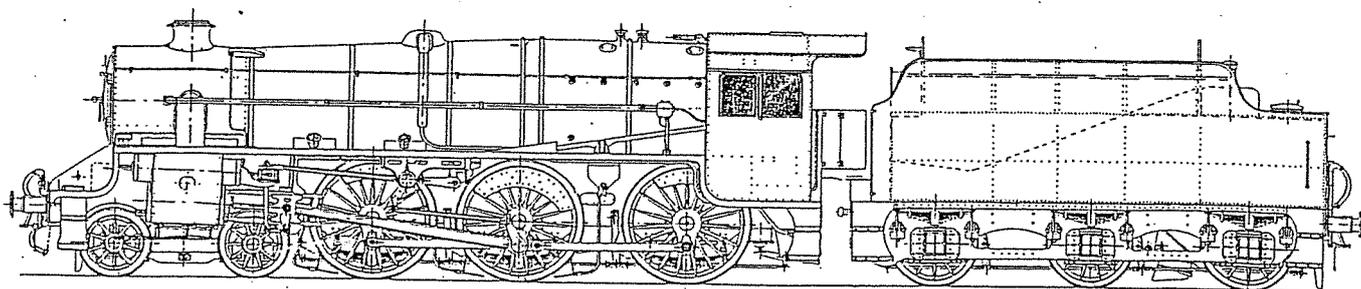
Drawings 7 shts. LO964	£	30.00	Pump, pump stay & ecc. str	GM	£	30.50
Construction Book also describes			Saddle (Evans)	GM	£	25.10
3.1/2" g Rob Roy	£	14.95	Saddle (Goodwin)	GM	£	25.00
Laser Cut Frames (3mm)	£	62.80	Smoke Door & Ring	GM	£	28.85
Buffer Beams & Angles	BMS	£	Chimney	GM	£	18.00
Frame Stretchers - steel 11 off	£	9.50	Dome	GM	£	19.25
Hornblocks	GM	£	Inner Dome	GM	£	11.40
Axleboxes	GM	£	Petticote Pipe	GM	£	14.75
Driving & Cpld wheels (W12/W13)	£	106.50	Boiler Bush 'J'	GM	£	6.55
Pony Trucks (Pair)	GM	£	Stainless steel grate		£	10.50
Pony & trailing wheels (W35)	CI	£	Cast Grate	CI		POA
Cylinder Set	GM	£	Tank Pump & Tee	GM	£	12.90
Piston Blanks (SAE 660)	£	5.00	Finished s/valves			
Guide Bar Brackets (pair)	GM	£	3/8" x 26T (2 req'd)	Each	£	17.50
Crossheads (Pair)	GM	£	Brass Smokebox Rolled & Silver Soldered		£	28.50

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Updated 3-8-18

BLACK FIVE 5"G

5"g Version of the famous LMS Black 5. Patterns for this model are a combination of those formerly available from Dave Goodwin castings, prepared from works drawings and photographs, and those from Tony Allcock's super detail version of the LMS Jubilee loco 'Galatea' previously available from Norman Spink. Drawings for this model are available from other 'ME' suppliers with whom we have no business connections.



Laser Cut Frames (3mm) (hornblock holes not spotted)	} £ 108.85	TENDER	
Main Horns (2 piece) GM	£ 72.00	Set of Tender Drawings only (6) (Tony Allcock)	£ 30.00
Main Horns (2 piece) CI	£ 36.50	Laser Cut Tender Frames (3mm) (inner & outer) 4 off	} £ 96.50
Main Axleboxes - Split GM + keeps	£ 162.75	Axleboxes GM	} £ 109.75
Main Axleboxes - Split CI + Keeps	£ 65.00	Axlebox pressure pads GM	
Main Axleboxes - Solid CI	£ 56.00	Axlebox cover plates ALI	
Bogie Wheels CI	£ 49.00	Horns GM	£ 47.25
Guide Bar Brackets GM	£ 33.00	Spring hanger brackets GM	£ 11.55
Laser Cut Weighshaft Frames Kit	£ 47.30	Spring grippers GM	£ 6.00
Driving and Coupled Wheels CI	£ 192.00	Buffer block GM	£ 7.50
Cylinder set CI	£ 131.00	Brake hangers GM	£ 9.75
Cylinder set GM	£ 280.00	Splashers GM	£ 52.50
Pistons Blanks CI	£ 3.25	Front drag box stretchers ALI (2off)	£ 37.50
Pistons Blanks GM	£ 22.75	Rear drag box stretcher ALI (1 off)	£ 13.00
Smokebox Door GM	£ 21.75	Main lower cross stays ALI (2 off)	£ 8.00
Smokebox Front & Rear Rings GM	£ 65.00	Intermediate stays ALI (4 off)	£ 35.00
Chimney GM	£ 22.50	Inner frame stays ALI (2 off)	£ 8.50
Outer Dome GM	£ 23.50	Front sub-frame unit GM	£ 16.55
Top Feed Cover GM	£ 17.00	Brake blocks (ring) CI	£ 11.00
Rear Chest Steam Covers (Lost Wax) pair	£ 58.08	Water scoop column GM	£ 14.00
		Water scoop pick-up GM	£ 5.75
<u>Laser Cut Tender Chassis Kit</u>		Well tank ALI	£ 18.75
Instead of castings, we can offer a comprehensive kit of Laser Cut steel parts, made with tabs and slots for easy assembly.		Well tank GM	£ 51.75
Comprising Frames, Inner Frames, Front and Rear Buffer Beams, Stretchers, Front Box, Guard Irons and Steps. All small holes spotted, larger holes cut.	£ 312.75	Filler dome ALI	£ 12.50
		Wheels CI	£ 95.10
		Tender gears (2 pairs)	£ 15.00
		Tender springs (dummy) GM	£ 45.00
		Tender Water Filler & Lid (Lost Wax) Complete with hinge & handle	£ 29.92
<u>Laser Cut 4000 Gallon Tender Body kit in Brass -</u>	£ 494.25		
(Tony allcock Galatea/Jubilee design)			

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-5-18

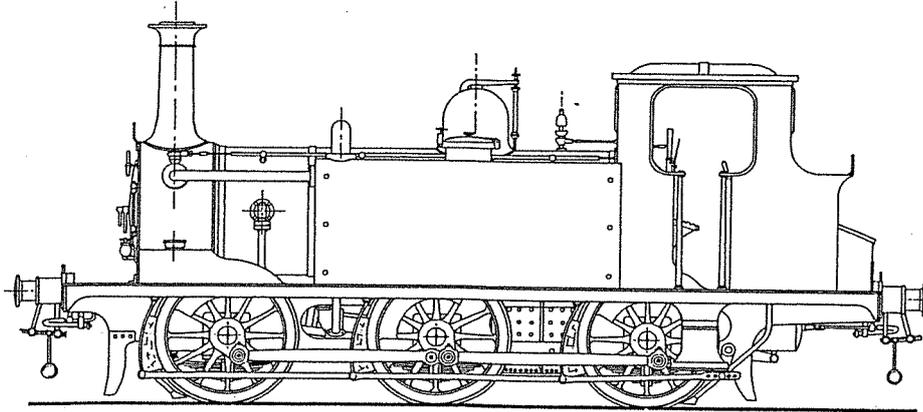
BOXHILL - 0-6-0 Tank Locomotive in 5"G

LBSCR Terrier Tank Loco. Designed in 5"G by Martin Evans.

Inside slide valve cylinders with Stephenson's valve gear.

Length - 28", Boiler dia - 3.3/4",

Cylinder Bore - 1", Driving Wheel dia - 4.3/8"



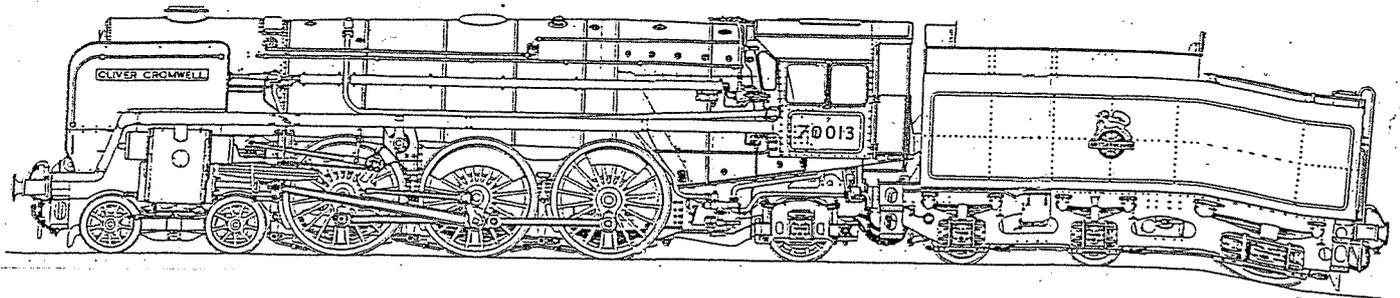
Drawings (8 shts).LO45	£ 34.00	Saddle GM	£ 26.75
Laser Cut Main Frames (3mm)	£ 81.25	Smokebox Ring GM	£ 15.75
Laser Cut Buffer Beams (5mm)	£ 14.65	Smokebox Door GM	£ 11.75
Main Hornblocks GM	£ 52.50	Smokebox Joint Ring GM	£ 15.60
Main Axleboxes GM	£ 42.00	Chimney GM	£ 22.50
Motion Plates & Guides GM	£ 24.90	Dome GM	£ 29.75
Driving & Coupled Wheels	£ 150.90	Regulator Stand GM	£ 11.30
Eccentric Straps GM	£ 21.50	Dome Bush GM	£ 9.00
Crosshead Pump GM	£ 8.30	Cast Grate	£ 9.00
Cylinder Casting Set GM	£ 149.00	Stainless Steel Grate	£ 9.50
Piston Blanks GM	£ 8.35	Handpump & Tee (GM)	£ 27.50

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 23-3-18

5"G 'BRITANNIA' BR CLASS 7 PACIFIC

Some years ago James Perrier of Dorset converted the original B.R. plans of Britannia to 5"g. These are the most comprehensive set of plans ever offered to the model engineer, covering 24 sheets, to give all the information you need, to build the most detailed loco you could wish for. Formerly part of the 'Norman Spink' collection.



Line drawing of 'Oliver Cromwell' to 5"g scale - 6ft long	£ 7.50	28. Tender brake hangers GM	£	
Set of 24 sheets	£ 106.00	29. Pump eccentric strap GM	£	10.30
Single sheets	£ 5.00	30. Coupling blocks GM	£	9.30
Laser Cut Main Frames (3mm)	£ 129.50	31. Main frame stays GM	£	14.90
Laser cut Trailing Frames (5mm)	£ 28.40	32. Stick of bearing metal GM	£	22.10
Laser cut Loco Main Centre Stretcher (1.5mm)	£ 14.50	33. Spring anchor blocks GM	£	28.00
Laser Cut Tender Frames (3mm)	£ 67.50	34. Oil pump bodies GM	£	18.90
Laser Cut Bogie Frames (3mm)	£ 25.40	35. Tender stretchers 4 off ALI	£	12.85
1. Piston valve rear covers GM	£ 34.25	36. Tender hand pump & Tee GM	£	35.00
2. Right & left spring brackets GM	£ 78.00	37. Pony truck front GM	£	27.75
3. Bogie stretchers GM	£ 27.50	38. Regulator bushes GM	£	65.00
4. Main horns GM	£ 126.50	39. Smokebox/boiler ring GM	£	22.70
5. Bogie springs GM	£ 12.40	40. Bogie bolster GM	£	20.35
6. Main springs GM	£ 68.40	41. Pony stay CI	£	22.55
7. Pony truck springs GM	£ 12.60	42. Pump stay GM	£	15.75
8. Bogie horn blocks GM	£ 34.60	Driving & coupled wheels CI	£	16.60
9. Buffer stocks GM	£ 27.50	Bogie wheels CI	£	267.30
10. Main axleboxes GM	£ 87.15	Cylinder set GM	£	69.40
11. Bogie axleboxes GM	£ 52.30	Cylinder set CI	£	362.00
12. Drag frames CI	£ 26.00	Pistons GM	£	217.00
13. Main axlebox covers GM	£ 40.00	Pistons CI	£	40.00
14. Bogie axlebox covers GM	£ 19.80	'O' rings for Pistons set of 2	£	6.00
15. Engine brake hangers GM	£ 13.00	Expansion link brackets - Laser Cut kit for fabrication	£	2.40
16. Axle pump & Gland GM	£ 28.75	Slidebar brackets gm	£	30.45
17. Main horn stays GM	£ 38.90	Gears for reverser, set 4	£	40.00
18. Pressure brkt, left hand GM	£ 9.30	Smokebox door GM	£	32.85
19. Pressure brkt, right hand GM	£ 9.30	Smokebox ring GM	£	35.00
20. Pony truck horns GM	£ 14.40	Chimney GM	£	55.00
21. Pony truck horn stays GM	£ 7.20	Dome GM	£	14.50
22. Bogie pressure pads GM	£ 5.70	Dome bush & cover GM	£	14.25
23. Bogie sliding block GM	£ 13.20	Regulator block & cover GM	£	21.03
24. Pony & tender a/box GM	£ 111.00	Tender horns GM	£	63.25
25. Pony & tender a/box covers GM	£ 39.20	Pony & tender wheels CI	£	48.00
26. Tender springs GM	£ 45.00	'Timken' axlebox covers set of 8	£	127.10
27. Tender spring brackets GM	£ 38.40	Gears for tender, 2 pairs	£	15.00
		Loco brake block ring (CI)	£	16.25

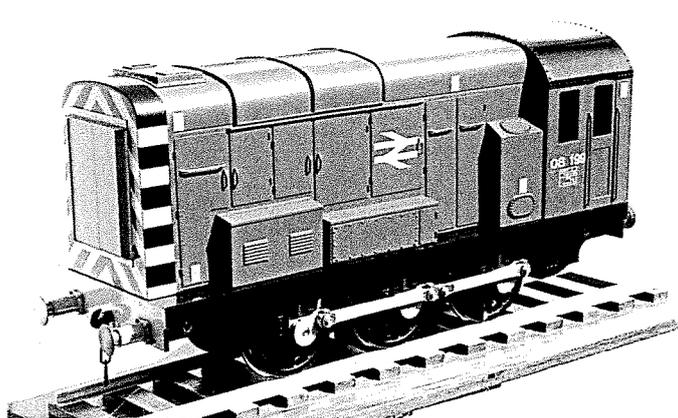
Laser Cut BRLA Tender body kit in brass. All parts tabbed & slotted for quick assembly includes all internal parts, with lifting lugs & support girders, ladder, lamp brackets, firing iron tunnel, all rivet holes cut and tender sides rolled.

<u>Ball races</u>	- Bogie & Pony (6off)	£ 27.00	<u>Lost Wax castings for Super Detail Version</u>	
For axleboxes	- Driving & Coupled (6off)	£ 33.00	Rear Steam Chest Covers (lost Wax) pr	£ 58.08
	- Tender (6off)	£ 27.00	Cast Steel Crossheads pr	£ 26.40
				£382.60

ALL PRICES ARE PLUS CARRIAGE & VAT
Updated 27-6-18

5" CHARLATAN

5" GAUGE B.R. CLASS 08 DIESEL SHUNTER. A 5" gauge, battery powered, electronically controlled, passenger hauling locomotive based on the well known B.R. Class 08 diesel shunter.
 Length: 32" over buffers. Width: 9.1/4" Height: 14.1/4" Batteries: 2 x 12v



Drawings - 9 per set	£	45.00	Gears - Tufnol & Steel (Set of 7)	£	72.00
Laser cut Frames (3mm) pair	£	47.50	Front Engine Casting Bulkhead (radiator) ALI	£	58.50
Buffer Beams	£	5.20	Rear Engine Casting Bulkhead ALI	£	18.50
Buffer Angle	£	2.85	Electronic Controller		POA
Axle Material	£	3.90	Control Panel Kit		POA
Wheels	£	190.80	Double Heading Kit		POA
Cranks - Laser Cut (set of 6) 10mm	£	21.00	Transfers - Waterslide	pair	} £ 11.60
Coupling Rods - Laser Cut (4) 8mm	£	20.50	Each sheet comprises:		
Axleboxes CI	£	34.50	BR Loco : specification details for cab side and		}
Frame Stretchers CI	£	31.50	choice of 2 loco numbers, 08199 & 08288		
Motor Mounting Brackets ALI	£	37.00	Coupling Hooks & Chains (1 pair)	£	60.00
Oilite Bushes (set 6)	£	7.80			
Needle Roller Bearings (6)	£	17.40			
Set of 11 Springs	£	9.42			
(Buffers/ Suspension / Engine case					

STARTER KIT (unmachined)

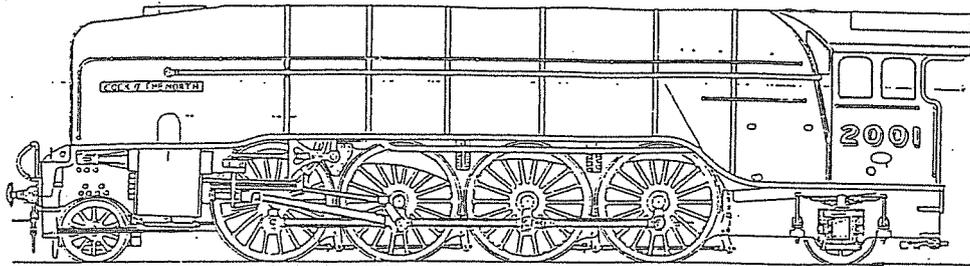
A starter kit is available which includes drawings castings, laser cut frames, cranks and coupling rods, fasteners, bearings & bushes, springs, machined gears and all material sufficient to make the rolling chassis.

£ 519.05

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 27-7-18

COCK O' THE NORTH - LNER CLASS P2 2-8-2 IN 5"G

Designed by 5"g Michael Breeze
 3 cylinders 1.7/8" bore x 2.5/16" stroke with Walschaerts valve gear
 to o/s cylinders & Gresleys 2:1 conjugated valve gear to i/s cylinders.
 Driving wheels 6.9/16" dia over tread.



Note: this design is available in 3 versions:-

Drawings set version 1 - Shielded Front (22 sheets) - £95.00

Drawings set version 2 - Streamline Front (22 sheets) - £95.00

Drawings set version 3 - Round Smokebox Front (22 sheets) - £95.00

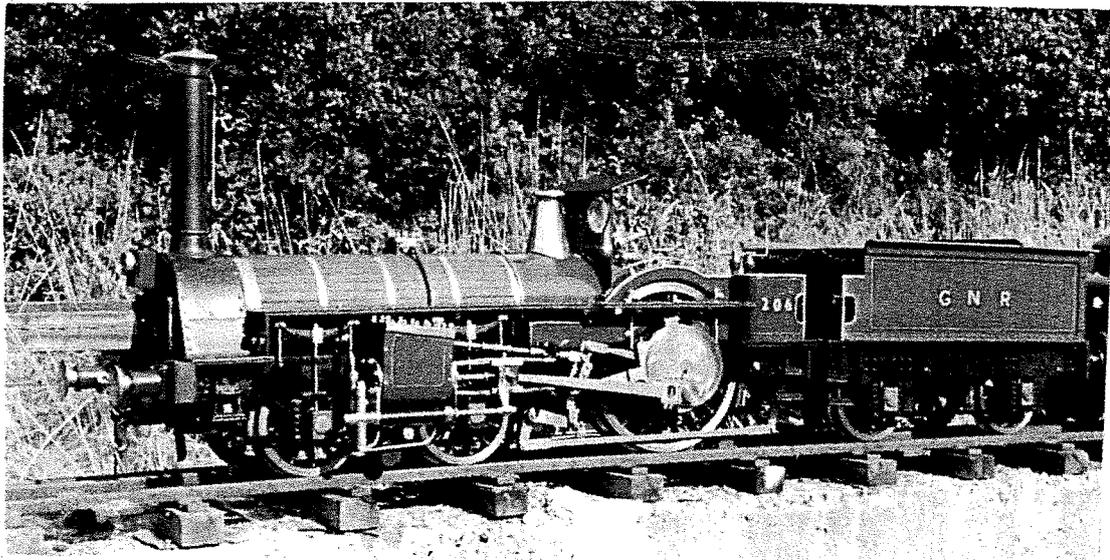
Laser Cut Main Frames (3mm)	POA	Steel Tyres for D & C Wheels Set	£ 45.00
Main Hornblocks GM	£ 198.00	Smokebox Saddle GM	£ 85.00
Main Hornblocks CI	£ 109.50	Boiler Front Saddle GM	£ 16.50
Main Axleboxes - Solid type GM	POA	Boiler Rear Saddle GM	£ 26.25
Main Axleboxes - Solid Type CI	£ 85.00	Loco Buffer Heads & Stocks } (version 2 only) BMS	£ 5.50
Main Axleboxes - Split type GM	£ 202.25		
Main Axleboxes - Split type CI	£ 112.25	Firegrate CI	£ 34.50
2:1 Fulcrum Stretcher CI	£ 9.80	Firegrate Stainless Steel	£ 32.00
Main Frame Rear Stretcher CI	£ 15.10	Smokebox Front Ring (version 1) GM	£ 35.60
Intermediate Stretcher CI	£ 28.75	Smokebox Front Ring (version 2) GM	£ 33.40
Front Pony Frame Pin Stretcher GM	£ 18.35	Smokebox Front ring (version 3) GM	£ 47.25
Front Pony Top Stretcher CI	£ 10.00	Smokebox Door (version 1) GM	£ 34.00
Front Pony Horn Guides GM	£ 10.75	Smokebox Door (version 2) GM	£ 25.30
Front Pony Axleboxes GM	£ 21.00	Smokebox Door (version 3) GM	£ 32.50
Front Pony Truck Arm GM	£ 26.80	Smokebox Tubeplate Reinforcing Plate GM	£ 6.00
Front Pony Truck Wheels CI	£ 30.90	Double Blast Pipe GM	£ 15.25
Trailing Pony Truck Hornguides GM	£ 18.85	Double Chimney (version 3) GM	£ 36.00
Trailing Pony Cartazzie Axleboxes GM	£ 38.50	Dummy Superheater Covers GM (version 3)	£ 29.25
Trailing Pony Dummy Springs GM	£ 14.15	Dome Bush GM	£ 18.00
Trailing Pony Spring Hanger cleats GM	£ 6.90	Dome Bush Cover GM	£ 19.25
Trailing Pony Spencer Spring Blocks GM	£ 6.35	Wet Header - Head GM	£ 18.70
Trailing Pony wheels CI	£ 41.70	Wet Header - Base GM	£ 13.20
Brake Cylinder Stretchers GM	£ 42.50	Superheater Return Bends GM	£ 21.45
Brake Valve Base GM	£ 3.00	Banjo Outer Dome (version 3)	£ 33.10
Loco Brake Shoes CI	£ 15.00	Regulator Body GM	£ 18.70
Running Board Brackets GM	£ 35.50	Steam Turret Block GM	£ 16.25
Lubricator Ecc Strap GM	£ 4.80	Safety Valve & Turret Bushes GM	£ 70.00
Outside Cylinder Set CI	£ 241.50	Laser Cut Tender Frames (3mm)	POA
Inside Cylinder Set CI	£ 122.00	Tender Hornblocks GM	£ 64.80
Outside Cylinder Set GM	POA	Tender Axleboxes GM	£ 124.00
Inside Cylinder Set GM	POA	Tender Disc Wheels CI	£ 217.20
Piston Blanks CI	£ 4.75	Tender Spencer Spring Blocks GM	£ 25.45
Piston Blanks GM	£ 48.60	Tender Spring Hanger Cleats GM	£ 20.00
Piston Rings 6 off 1.7/8" dia x 1/8" wide	£ 54.00	Tender Brake Shoes Ring CI	£ 15.00
Piston Valve Rings 12 off } 13/16" dia x 1/16" wide }	£ 99.60	Tender Handpump Body Head & Gland GM }	£ 45.80
Driving & Coupled Wheels CI	£ 370.40		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 24-5-18

5"G CRAMPTON

4-2-0 Tender engine designed by Brian Arridge - described in EIM. Length including tender: ~~47~~ 1/2",
 Engine length: 29 1/4", Cyls: 1 3/8 bore 2" stroke, Driving wheel: 7" dia,
 Working pressure 100 psi, Weight: engine 70 lbs, tender 25 lbs



Construction Serial Photocopies	£	-	Eccentric Straps GM (4)	£	68.50
Frame Steel BMS	£	22.00	Regulator Block GM	£	7.10
Front & Drag Beam Steel	£	11.90	Tender Frame Steel	£	4.00
Main Horns (BMS Angle)	£	1.95	Tender Buffer Beam Steel	£	15.75
Main Axleboxes CI	£	13.00	Tender Horns (BMS Angle)	£	3.90
Driving & Leading Axle Stl.	£	5.15	Tender Axleboxes CI	£	19.25
Loco Leading Axleboxes CI	£	19.25	Tender Wheels CI	£	80.00
Driving Wheels CI	£	102.60	Tender Axle Steel	£	2.50
Leading Wheels CI	£	80.00	Tender Handpump & Tee GM	£	28.80
Cylinder Set GM	£	322.50	Stainless Steel Grate	£	13.00
Cylinder Set CI	£	175.58	Flanged Boiler Mat. Kit		
Pistons GM	£	21.55			
Pistons CI	£	3.00			

P.O.A

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 30-5-18

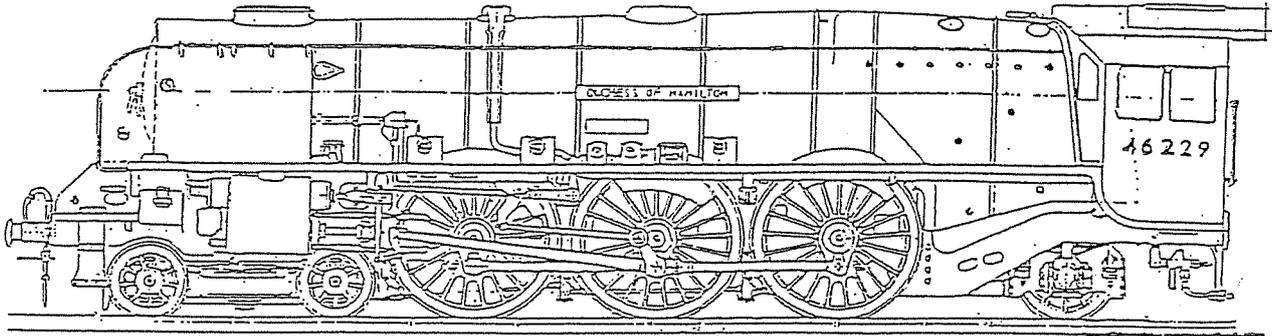
5"G DUCHESS OF HAMILTON

Stanier LMS 'Duchess' Class 4-6-2 Loco & Tender.

Designed by Michael Breeze

4 Cylinders 1.1/2" bore x 2.1/2" stroke.

Driving wheels 7.1/8" dia.



Drawings (28 sheets)	£ 105.00	Reversing Gearbox GM	£ 12.05
Laser Cut Main Frames (3mm)	£ 132.80	Reversing Gears (Pair)	£ 24.50
Laser Cut Rear Frames (3mm)	£ 16.25	Valve Body (Drain Cocks) GM	£ 3.60
Main Hornblocks GM	£ 82.50	Pump Eccentric Straps GM	£ 15.25
Main Hornblocks CI	£ 46.00	Pump Heads GM	£ 15.85
Main Axleboxes (solid) GM	£ 106.50	Brake Valve Base GM	£ 3.30
Main Axleboxes (solid) CI	£ 47.00	Loco Brake Shoes CI (1/2 ring)	£ 11.40
Main Axleboxes (split) GM	£ 149.00	Boiler Rear Saddle GM	£ 26.50
Main Axleboxes (split) CI	£ 88.70	Exhaust Cross Channels GM	£ 45.00
Main Dummy Springs GM	£ 68.40	Smokebox Front Ring GM	£ 55.00
Main Spring Guides Cleat GM	£ 24.35	Smokebox Saddle GM	£ 39.20
Inside Motion Plate GM	£ 26.40	Smokebox Door GM	£ 30.30
Bogie Axleboxes GM	£ 40.75	Double Chimney GM	£ 25.90
Bogie Axleboxes CI	£ 20.30	Double Blast Pipe GM	£ 14.00
Bogie Wheels CI	£ 69.40	Dome GM	£ 19.15
Trailing Axleboxes GM	£ 30.00	Dome Bush GM	£ 15.15
Trailing Axleboxes CI	£ 15.60	Regulator Body GM	£ 15.70
Trailing Hornblocks GM	£ 19.00	Wet Header & Base GM	£ 33.30
Trailing Pony Truck Arm GM	£ 25.30	Superheater Return Bend GM	£ 21.45
Trailing Dummy Springs GM	£ 14.15	Boiler Tubeplate Plate GM	£ 6.05
Trailing Spring Hanger Cleats	£ 6.60	Safety Valve Base Pad GM	£ 17.40
Trailing Axlebox Caps (Lost Wax) Pr	£ 14.30	Steam Turret GM	£ 16.25
Trailing Wheels CI	£ 47.30	RS Gland & Bush GM	£ 15.55
Driving & Coupled Wheels CI	£ 276.00	S/V Bodies	£ 49.10
Boiler Front Saddle GM	£ 16.25	Turret Bush & Bolt GM	
Outside Cylinder Set CI	£ 160.00	Top Feed Bush GM	POA
Outside Cylinder Set GM	POA	Top Feed Check Valve GM	£ 13.75
Inside Cylinder Set CI	£ 145.00	Firegrate CI	£ 37.40
Inside Cylinder Set GM	POA	Firegrate Stainless Steel	£ 36.50
Piston Blanks (set of 4) CI	£ 5.00	Tender Hornblocks GM	£ 54.00
Piston Blanks (set of 4) GM	£ 39.15	Tender Axleboxes GM	£ 101.75
Piston Rings 1.1/2"od x 1/8" wide		Tender Axlebox Covers ALI	£ 10.55
Set of 8	£ 64.00	Tender Dummy Springs GM	£ 51.50
Exp. Link Trunnion Brgs GM	£ 8.65	Tender Spring Hanger Cleats GM	£ 18.35
Outside Motion Plates RH & LH GM	£ 60.70	Tender Wheels CI	£ 124.20
Running Board Brackets GM	£ 17.15	Tender Brake Shoes Ring CI	£ 15.00
Weighshaft Brgs RH & LH GM	£ 34.10	Tender Handpump Body GM	
Lub Eccentric Strap GM	£ 5.70	Gland & Head'	£ 45.80
Girder Frames (2 inner + 2 outer)GM	£ 51.85		

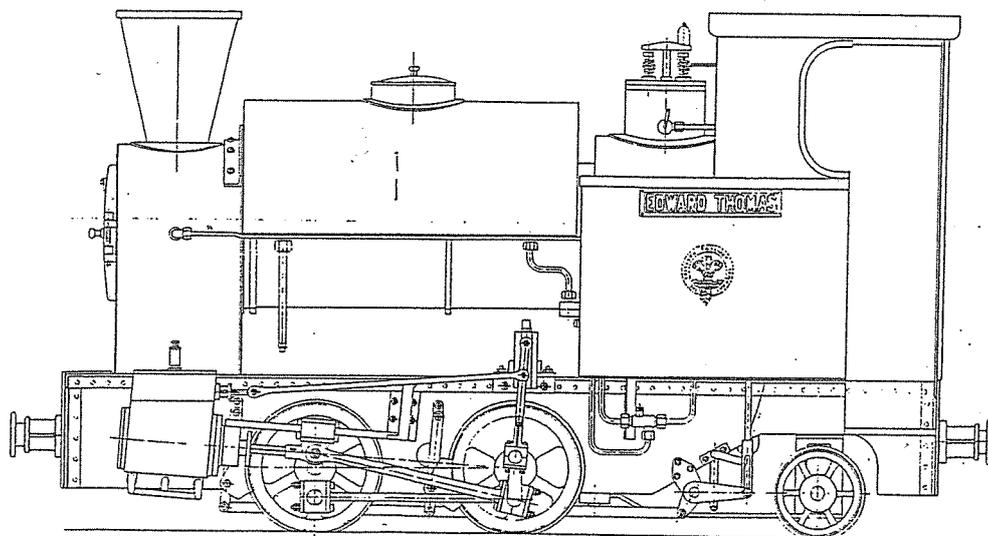
NOTE: FOR MORE DETAILED VERSION OF STANIER 4000 GALLON TENDER. BUILDERS CAN SUBSTITUTE 'GALATEA' TENDER PARTS, LISTED ON PAGE 41

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 25-7-18

5" G EDWARD THOMAS

5" Gauge Kerr Stuart 0-4-2 saddle tank by Ross Harrison.
 Serialised in " E.I.M." from September 1982 to January 1985.
 Length over buffers 29".



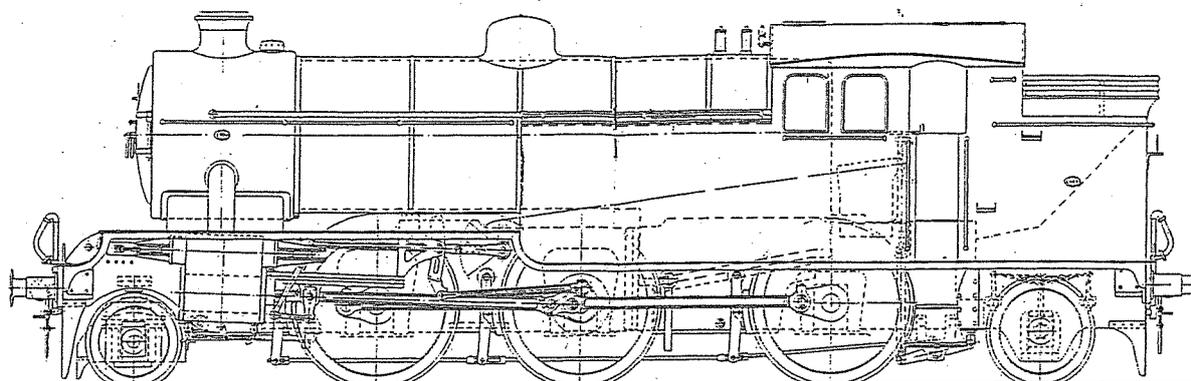
Drawings (12 sheets)	£ 60.00	Pony Axleboxes GM	£ 30.00
Frame Steel	£ 25.00	Driving & coupled Wheels	£ 138.00
Buffer Beam Steel	£ 9.75	Cylinder Set CI	£ 185.00
Buffer Beam Angle	£ 8.40	Axle Mat. Main & Pony	£ 4.75
Stay Fixing Angle	£ 12.25	Trailing Wheels	£ 34.00
Stay Material	£ 5.25	Eccentric Sheave BMS	£ 1.75
Top Frame Angle	£ 14.30	Eccentric Strap GM	£ 18.70
Main Horns GM	£ 65.00	Motion Brackets GM	£ 23.75
Main Horns CI	£ 30.15	Bogie Frame Sides GM	£ 52.50
Main Axleboxes GM Split	£ 74.50	Weighshaft Support Bkts	£ 35.15
Main Axleboxes CI Split	£ 50.50	& Caps GM	
Main Axleboxes GM Solid	£ 70.00	Etched Nameplates (pair)	£ 20.00
Main Axleboxes CI Solid	£ 31.65	Stainless Steel Grate	£ 14.50

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 31-5-18

5"G ENTERPRISE

5" Gauge LNER Class V1 with 2-6-2 wheel arrangement.

Three cylinder tank loco designed by Martin Evans. Described in "M.E." volumes 144 - 146. Walschaerts valve gear for outside cylinders with Gresley two to one valve gear to operate inside cylinder valve.



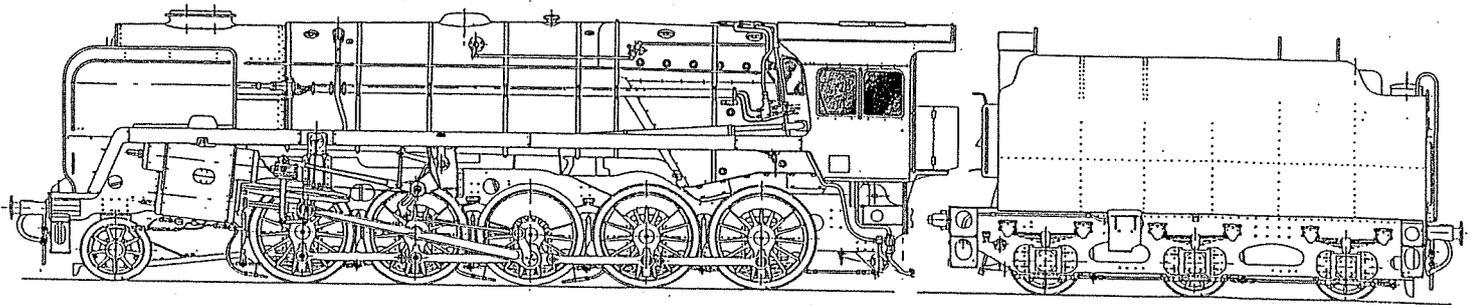
Drawings (12 sheets) LO952	£ 58.00	Valve Spindle Guides (5) GM	£ 57.00
Laser Cut Main & Trailing Frames (3mm)	£ 96.25	Buffer Heads & Stocks Material	£ 9.50
Buffer Beam Steel	£ 3.50	Cylinder Set Inside GM	£ 150.00
Buffer Beam Angles GM	£ 54.25	Cylinder Set Inside CI	£ 60.00
Stretcher "B" (GM)	£ 15.80	Cylinder Set Outside GM	£ 255.50
Stretcher "C" (GM)	£ 21.30	Cylinder Set Outside CI	£ 137.75
Stretcher "D" (GM)	£ 17.30	Piston Blanks GM 3 off	£ 29.50
Stretcher "E" (GM)	£ 27.50	Piston Blanks CI 3 off	£ 4.00
Stretcher "H" (GM)	£ 27.50	Saddle GM	£ 40.00
Stretcher "V" (GM)	£ 14.00	Smokebox Door GM	£ 33.50
Main Horns GM	£ 131.00	Smokebox Ring GM	£ 41.15
Main Horns CI	£ 60.00	Smokebox Rear Ring GM	£ 50.00
Main Axleboxes Split Type GM	£ 146.25	Chimney GM	£ 24.75
Main Axleboxes Split Type CI	£ 92.50	Petticoat Pipe GM	£ 23.65
Main Axleboxes Solid Type GM	£ 111.25	Dome GM	£ 35.25
Main Axleboxes Solid Type CI	POA	Grate - Stainless Steel	£ 13.50
Driving & Coupled Wheels CI	£ 265.80	Grate Cast Iron	£ 15.00
Trailing Horns GM	£ 9.60	Brake Cylinder GM	£ 9.25
Trailing Axleboxes GM	£ 25.80	Brake Block Ring CI	£ 14.50
Trailing Wheels CI	£ 43.10	Steam Turret	£ 13.80
Pony Horns GM	£ 11.00	Double Acting Handpump } and Covers GM	£ 43.15
Pony Axleboxes GM	£ 19.25		
Pony Wheels CI	£ 32.50		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 31-5-18

5" G EVENING STAR

5" g version of BR Class 9F 2-10-0 loco and tender. The last steam loco built for BR at Swindon works in 1960. Serialised in 'Engineering in Miniature' starting January 1983. Drawn by Les Warnett, ex - B.R. draughtsman, to the very highest standards of detail.



Drawings - set of 32 sheets	£ 144.00
Drawings per sheet	£ 5.00
Construction Series (Photocopies)	£ 20.00
Laser Cut Main Frames (3mm)	£ 117.00

Sheet 2

Gussets (GM) 2 off	£ 25.80
--------------------	---------

Sheet 3

Brake hanger brackets (GM) 10 off	£ 32.50
Truck pivot stretcher (GM) 1 off	£ 14.65
Leading vertical stretcher (GM) 1 off	£ 11.85
Front boiler support (GM) 1 off	£ 19.00
Rear boiler support (GM) 1 off	£ 13.65
Vertical stretcher (GM) 2 off	£ 29.35
Leading brake cylinder support stretcher (GM) 1 off	£ 21.45

Sheet 4

Leading horizontal stretcher (GM) 1off	£ 20.35
Second horizontal stretcher (GM) 1off	£ 14.60
Driving horizontal stretcher (GM) 1 off	£ 19.15
Fourth horizontal stretcher (GM) 1off	£ 14.30
Pony truck support (GM) 2 off	£ 20.65
Lower dragbox stretcher (CI) 1 off	£ 14.70
Upper dragbox stretcher (CI) 1 off	£ 18.90
Pivot blocks (GM) 2 off	£ 17.55

Sheet 5

Spring hanger brackets (GM) 10 off	£ 176.00
Hornblocks (CI) 10 off	£ 77.65
D & C wheels (CI) 10 off	£ 328.00
Axlebox bushes (GM) 10 off	£ 72.00
4BA x 1" socket caphead screws 20 off	£ 7.50

Sheet 6

Slide bar supports LH & RH (GM)	£ 57.00
Bushes to make complete set for rods SAE660 Bronze	£ 16.25
Motion Brackets - RH & LH	
Laser Cut kit for fabrication.	£ 31.85

Sheet 7

Cylinder set (CI)(inc. laser cut back plates)	£ 276.00
Piston & Piston Valve rings - set of 12	£ 97.00
8BA studding 2'	£ 15.20
8BA nuts 40 off	£ 5.20

Sheet 8

Boiler cradle (GM) 1 off	£ 16.25
Cylinder drain bracket (GM) 1 off	£ 14.30
Cylinder drain, cylinder & piston (GM)	£ 15.25

Sheet 9

Laser Cut Pony Frame (2.5mm)	£ 10.50
Pony wheels (CI)	£ 34.70
Pony axleboxes (GM)	£ 18.20
Sliding block (GM)	£ 25.70
F & R frame castings (GM) 2off	£ 28.60

Sheets 10 & 11

Brake cylinder (GM) 2 off	£ 20.10
Brake blocks (CI) 10 off	POA

Sheet 21 TENDER

F & R top centre stretchers (ALI) 2 off	£ 17.50
Buffer beam girders (ALI) 2 off	£ 17.50
Horn cheeks (GM) 12 off	£ 49.35
Brake hanger brackets (GM) 6 off	£ 10.35
Axleboxes (GM) 6 off	£ 83.25
Axlebox covers (GM) 6 off	£ 29.40
Timken covers (ALI) 6 off	£ 7.50
Wheels (CI) 6 off	£ 100.50

Sheet 22

Tender springs (GM) 6 off	£ 49.70
Tender Spring hanger brackets (GM) 12 off	£ 42.15
Tender Brake blocks (CI) 6 off	£ 10.20
Smokebox/boiler ring (GM)	£ 41.85
Blast pipe (GM)	£ 14.50
Chimney liner (GM)	£ 58.15
Gears for reverser - set of 4	£ 42.00
Tender gears - 2 pairs	£ 20.00
Eccentric rod races 2 off	£ 4.00
Tender races 6 off	£ 27.00
Laser Cut Frames (3mm) Tender	£ 62.80
Boiler support shoes (GM)	£ 6.50
Boiler head bush (GM)	£ 11.00
Double Chimney (GM)	£ 22.55
Dome (GM)	£ 14.15
Smokebox door (GM)	£ 32.50
Smokebox ring (GM)	£ 69.75
Tank pump & tee (GM)	£ 28.75
Wet header (GM)	£ 16.50
Boiler support rear (GM)	£ 6.40
Pony bolster support (GM)	£ 9.25

Lost Wax Castings for super detail version

Rear Steam Chest Covers pr	£ 58.08
Cast Steel Crossheads pr	£ 26.40

Laser Cut BR1A Tender body kit in brass. All parts tabbed & slotted for quick assembly includes all internal parts, with lifting lugs & support girders, ladder, lamp brackets, firing iron tunnel, all rivet holes cut and tender sides rolled.

£382.60

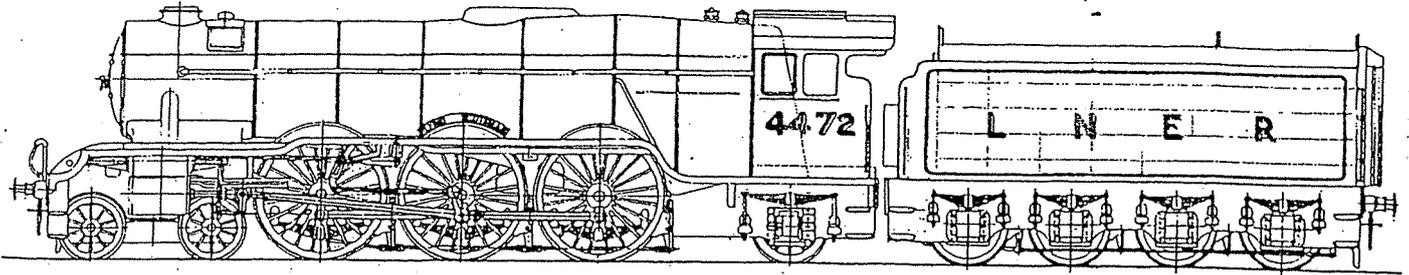
ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 5-6-18

FLYING SCOTSMAN - LNER CLASS A3 PACIFIC IN 5"G

Designed in 5" g by Michael Breeze.

3 Cylinders 1.11/16" bore x 2.5/16" stroke, with walshaerts valve gear to o/s cylinders and Gresleys 2:1 conjugated valve gear to i/s cylinders.

Driving wheels 7.1/16" dia overtead



Drawings Set (23 sheets)	£ 95.00	Inside Cylinder Set CI	£ 69.50
Laser Cut Main & Trailing Frames (3mm)	£ 151.80	Inside Cylinder Set GM	POA
Main Hornblocks GM	£ 148.50	Piston Blanks (set of 3) CI	£ 4.50
Main Hornblocks CI	£ 87.75	Piston Blanks (set of 3) GM	£ 35.50
2:1 Fulcrum Stretcher CI	£ 9.80	Piston Rings 6 off	£ 48.00
Inside Slidebar Stretcher CI	£ 9.00	Piston Valve Rings 12 off	£ 99.60
Rear Stretcher CI	£ 16.40	Smokebox Saddle GM	£ 41.75
Intermediate Stretcher CI	£ 25.90	Smokebox Front Ring GM	£ 47.00
Main Axleboxes (Split Type) & Keeps CI	£ 82.20	Smokebox Door GM	£ 34.60
Main Axleboxes (Split Type) & Keeps GM	£ 147.85	Smokebox Tubeplate Plate GM	£ 6.10
Laser Cut Bogie Frames (3mm)	£ 11.50	Double Blast Pipe GM	£ 14.30
Bogie Pin Stretcher CI	£ 19.00	Wet Header - Base & Head GM	£ 32.45
Bogie Hornblocks GM	£ 19.80	Superheater Return Bends GM	£ 20.90
Bogie Axleboxes GM	£ 39.00	Dome Bush & Cover GM	£ 36.85
Bogie Axleboxes CI	POA	Banjo Outer Dome GM	£ 31.10
Bogie Wheels CI	£ 61.80	Dummy Superheater Covers GM	£ 27.40
Bogie Centre Block (BMS)	£ 1.50	Single Chimney GM	£ 24.20
Trailing Hornblocks GM	£ 17.75	Double Chimney GM	£ 35.30
Trailing Cartazzie Axleboxes GM	£ 46.25	Regulator Body GM	£ 18.70
Trailing Wheels CI	£ 41.70	Steam Turret Block GM	£ 17.60
Trailing Dummy Springs GM	£ 14.40	Safety Valves, S.V Bushes	} £ 35.00
Trailing Axle Spring Hanger Cleats GM	£ 7.20	& Turret Bush GM	
Trailing Axle Spencer Spring Blocks GM	£ 6.00	Firegrate CI	£ 33.00
Brake Cylinder Stretcher GM	£ 22.00	Firegrate Stainless Steel	£ 27.00
Loco Brake Shoes CI (Ring)	£ 15.75	Laser Cut Tender Frames (3mm)	£ 67.90
Brake Valve Base GM	£ 3.00	Tender Hornblocks GM	£ 62.40
Lubricator Eccentric Strap GM	£ 4.20	Tender Axleboxes GM	£ 123.20
Driving & Coupled Wheels CI	£ 305.10	Tender Wheels CI Disc Type	£ 217.20
Slide Bar Brackets GM	£ 25.75	Tender Spring Hanger Cleats GM	£ 21.00
Running Board Brackets GM	£ 17.25	Tender Spencer Spring Blocks GM	£ 25.20
Expansion Link Brackets GM	£ 51.00	Tender Brake Blocks CI Ring	£ 15.00
Outside Cylinder Set CI	£ 133.50	Tender Handpump & Gland GM	£ 45.55
Outside Cylinder Set GM	POA	Tender Buffer Heads & Stocks BMS	£ 4.50
O/S Cyl. Front Steam Chest Covers GM	£ 25.60		
O/S Cyl. Rear Steam Chest Covers GM	£ 35.75		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 20-6-18

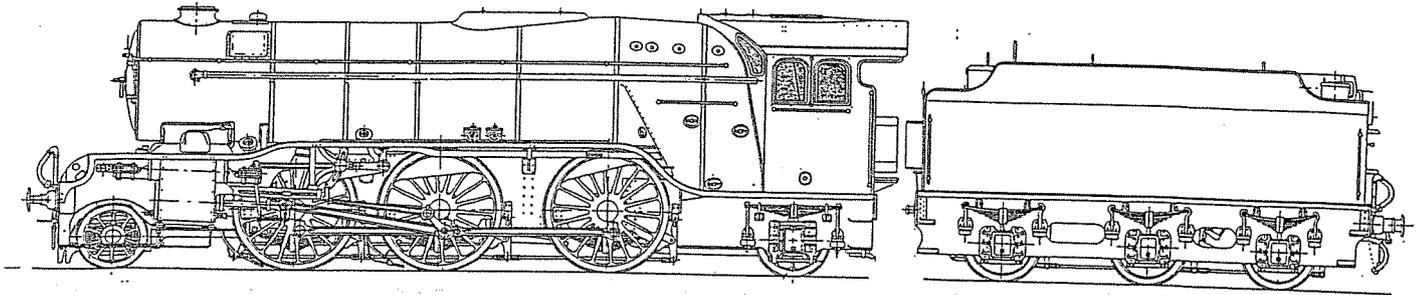
5"G 'GREEN ARROW' LNER CLASS V2 2-6-2

Designed in 5"g by Michael Breeze.

3 cylinders 1.5/8" bore x 2.5/16" stroke, with Walschaerts valve gear to o/s cylinders

& Gresleys 2:1 conjugated valve gear to l/s cylinder

Driving wheels 6.9/16" dia over tread



Drawings (24 sheets)	£	95.00	Piston Blanks (set of 3) CI	£	4.50
Laser Cut Main Frames & Trailing Frames	£	156.00	Piston Blanks (set of 3) GM	£	39.00
Main Hornblocks GM	£	148.50	Piston Rings 6 off	£	48.00
Main Hornblocks CI	£	64.50	Piston Valve Rings 12 off	£	103.20
2:1 Fulcrum Stretcher CI	£	9.60	Smokebox Saddle GM	£	34.50
Main Frame Pin Stretcher CI	£	11.65	Smokebox Front Ring GM	£	47.25
King Pin Stretcher CI	£	10.75	Smokebox Door GM	£	32.50
Intermediate Stretcher CI	£	25.90	Smokebox Tubeplate Reinforcing } Plate GM	£	6.00
Rear Stretcher CI	£	16.40	Double Blast Pipe GM	£	14.00
Inside Slide Bar Stretcher CI	£	9.15	Wet Header - Base & Head GM	£	33.00
Main Axleboxes	£	81.25	Superheater Return Bends GM	£	21.50
(Split type) & Keeps CI			Dome Bush & Cover GM	£	37.25
Main Axleboxes	£	148.75	Banjo Outer Dome GM	£	33.10
(Split type) & Keeps GM			Dummy Superheater Covers GM	£	29.15
Main Axleboxes (Solid type) CI	£	44.00	Single Chimney GM	£	24.20
Main Axleboxes (Solid type) GM	POA		Double Chimney GM	£	36.00
Pony Truck Top Stretcher CI	£	10.00	Regulator Body GM	£	19.90
Pony Truck Hornguides GM	£	10.70	Steam Turret Block GM	£	16.75
Pony Truck Axleboxes GM	£	21.10	Safety Valve Bodies, Bushes & } Turret Bush GM	£	25.10
Pony Truck Arm GM	£	26.30	Firegrate CI	£	25.30
Pony Truck Wheels CI	£	30.90	Firegrate Stainless Steel	£	27.30
Brake Cylinder Stretcher GM	£	22.00	Laser Cut Tender Frames (3mm)	£	37.20
Brake Valve Base GM	£	3.00	Tender Hornblocks GM	£	48.00
Loco Brake Shoes CI (Ring)	£	14.25	Tender Axleboxes GM	£	93.10
Driving & Coupled Wheels CI	£	277.80	Tender Wheels (Disc) CI	£	132.30
Lubricator Eccentric Strap GM	£	4.80	Tender Brake Shoes Ring CI	£	12.50
Expansion Link Brackets GM	£	79.25	Tender Spencer Spring Blocks GM	£	19.10
Trailing Hornblocks GM	£	18.85	Tender Spring Hanger Cleats GM	£	13.35
Trailing Cartazzie Axleboxes GM	£	45.75	Tender Handpump & Gland GM	£	45.80
Trailing Wheels CI	£	41.70	Tender Buffer Heads & Stocks BMS	£	5.00
Trailing Dummy Springs GM	£	14.15	Tender Water Pick-up Dome Ali	£	5.30
Trailing Spencer Spring Blocks GM	£	6.35			
Trailing Spring Hanger Cleats GM	£	6.90			
Running Board Brackets GM	£	14.40			
Loco Buffer Heads & Stocks BMS	£	5.00			
Outside Cylinder Set CI	£	131.00			
Outside Cylinder Set GM	POA				
Inside Cylinder Set CI	£	76.50			
Inside Cylinder Set GM	POA				
O/s Cylinder Front Steam Chest } Covers GM (2)	£	25.55			
O/s Cylinder Rear Steam Chest } Covers GM	£	36.50			

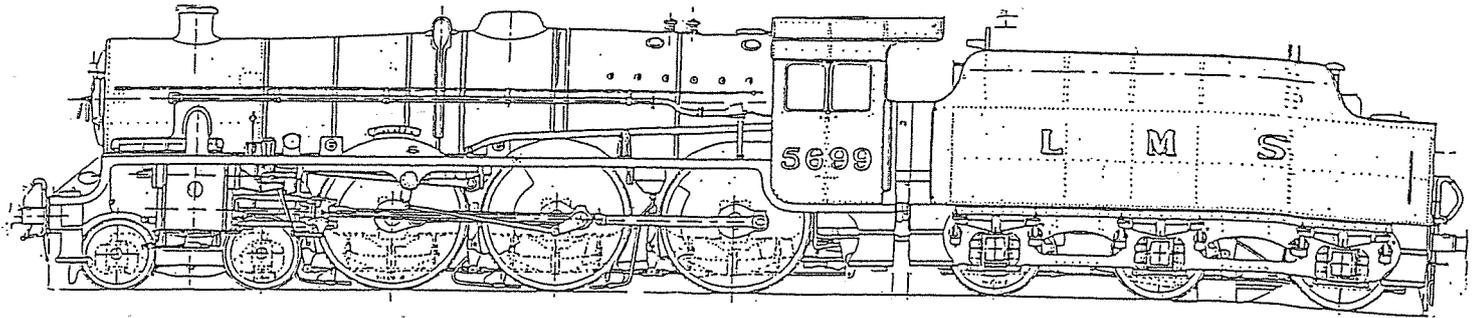
ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 20-6-18

"GALATEA" LMS JUBILEE 5"G 4-6-0 LOCO & TENDER

The most detailed set of drawings ever published.

Designed by Tony Allcock who has built two locomotives (see 'ME' April 6, May 1, June 5, July 3, August 1987) Length - Loco 42.1/2", Driving Wheels 7.1/2" dia, Cylinders 1.1/2" bore x 2.30" Stroke



Set of 24 sheets (including GA)	£ 108.00
G.A.'s Loco & Tender (2 sheets)	£ 10.00
Single sheets each	£ 5.00
Laser Cut Main Frames (3mm) Set	£ 118.50

Pattern

LOCOMOTIVE

X90	Straps-valve gear/oil pump GM	£ 16.70
X64	Reach rod guide GM	£ 2.90
X651	Reverser stand GM	£ 16.50
X652	Reverser stand support GM	£ 6.40
X661	Splashers - front & centre GM	£ 48.40
X662	Splashers rear GM	£ 23.80
X671	RH Splasher & cupboard base GM	£ 23.00
X672	Splasher Support bracket GM	£ 1.50
X6	Spring grippers GM	£ 6.85
X68	Sand box pipe & caps - ALI	£ 4.75
	Rear front frame support brackets GM	£ 8.40
	Nameplate set loco (6 plates)	POA
	Nameplate set tender (6 plates)	POA

Pattern

LOCOMOTIVE

X7	Buffer block GM	£ 8.50
X25	Bogie stretcher GM	£ 36.00
X42	Inside motion bracket GM	£ 26.25
X421	Link trunnion bracket GM	£ 5.40
X43	Weighshaft support stretcher GM	£ 14.20
X431	Weighshaft Trunnion bracket GM	£ 4.60
X432	Weighshaft Trunnion bearing cover GM	£ 7.20
X44	Mid vertical stretcher GM	£ 25.90
X45	Mid horizontal stretcher GM	£ 10.50
X461	Rear drag box upper CI	£ 55.00
X462	Rear drag box lower CI	£ 26.35
X511	Outside motion bracket LH - GM	£ 19.65
X512	Outside motion bracket RH - GM	£ 19.65
X53	Exp. Link suspension girders GM	£ 68.40
X541	Girder rear bracket RH GM (X541)	£ 7.80
X542	Girder rear bracket LH GM (X542)	£ 7.80
X543	Weighshaft trunnion bracket (out) GM	£ 3.50
X561	Main axleboxes GM	£ 108.50
X562	Main axlebox keeps GM	£ 60.20
X563	Cannon boxes (halves) GM	£ 14.90
X471	Main horns - standard - 2 off GM	£ 97.20
X472	Main horns - tied - 4 off GM	
X48	Horn keeps GM	£ 28.65
X52	Spring hanger brackets GM	£ 37.50
X49	Sand boxes - inside 4 off ALI	£ 26.00
X50	Sand boxes - outside 2 off ALI	£ 9.50
X21	Brake hangers GM	£ 12.30
X62	Brake blocks CI (1/2 Ring)	£ 9.70
X63	Brake hanger brackets GM	£ 14.15
X83	Driving & Coupled wheels CI	£ 276.00

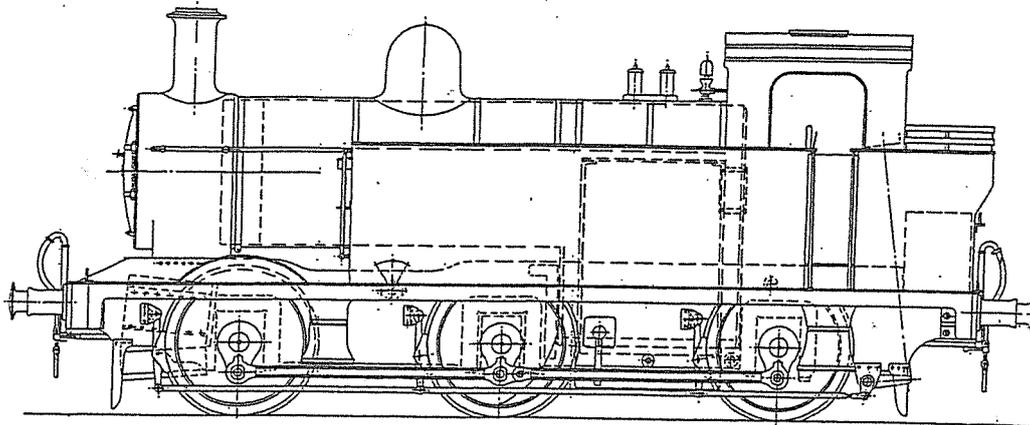
BOGIE

	Laser Cut Bogie Frames (3mm)	£ 19.50
X22	Horns GM	£ 25.20
X23	Axleboxes GM	£ 36.00
X24	Centre slide GM	£ 19.25
X59	Centre halves GM	£ 44.45
X60	Suspension brackets GM	£ 37.85
	Pressed equalising beams (4/set)	£ 20.00
X81	Wheels CI	£ 59.20

ALL PRICES ARE PLUS CARRIAGE AND VAT
UPDATED 27-6-18

JINTY 0-6-0 TANK LOCOMOTIVE IN 5"G

5"g version of LMS Class 3F tank loco, designed by Martin Evans. Described in 'Model Engineer' Vols 157-160. Two inside slide valve cylinders with Stephenson's link valve gear. Cylinder bore 1.3/8" dia x 2" stroke. Driving wheel 4.13/16" dia.



Drawings 8 sheets LO973	£ 34.00	Crosshead Pump GM	£ 7.45
Construction Articles (photocopies)	£ 6.00	Eccentric Straps GM	£ 24.00
Laser Cut Frames (3mm)	£ 80.00	Big End Bearings GM	£ 11.75
Buffer Beam Steel	£ 3.50	Brake Hanger Brackets GM	£ 9.00
Buffer Beam Angles GM	£ 45.40	Brake Shoes CI	£ 11.00
Main Hornblocks GM	£ 81.00	Smokebox Saddle GM	£ 42.50
Main Hornblocks CI	£ 45.90	Smokebox Front GM	£ 45.85
Main Axleboxes Split GM	£ 134.40	Smokebox / Boiler Joint Ring GM	£ 30.25
Main Axleboxes Split CI	£ 78.75	Boiler Barrel/Firebox Joint Ring	£ 14.00
Driving & Coupled Wheels	£ 175.50	Chimney GM	£ 25.60
Motion Plate GM	£ 16.50	Dome GM	£ 35.00
Valve Motion Plate GM	£ 9.15	Regulator Stand GM	£ 15.40
Main Frame Stretcher GM	£ 25.60	Handpump & Covers GM	£ 42.50
Cylinder Set GM	£ 251.00	(Double Acting)	£ -
Cylinder Set CI	£ 124.00	Cast Grate	£ 12.50
Piston Blanks GM	£ 19.60	Stainless Steel Grate	£ 12.00
Piston Blanks CI	£ 3.50		

BOILER FITTINGS

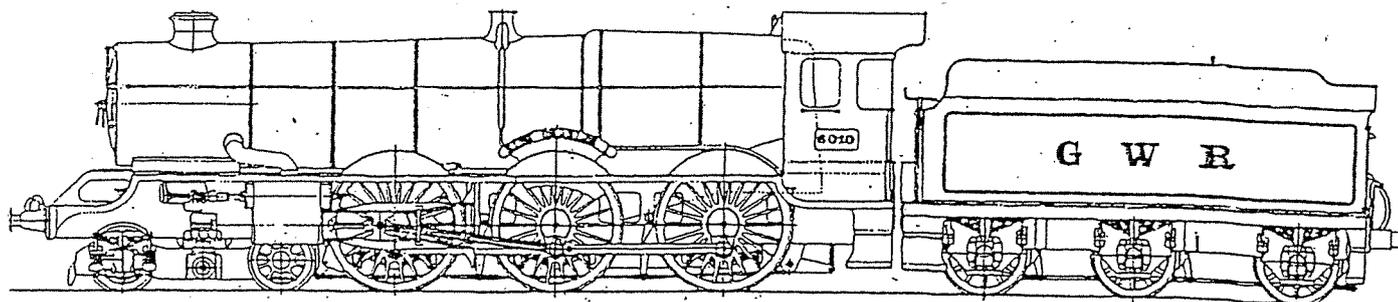
1off Blower Valve 3/8" x 40T (1/4" x 40T stay)	£ 14.45
1off Whistle Valve 1/4" x 40T (1/8" pipe)	£ 18.50
2off Safety Valves 3/8" x 26T Tall Type (@ £17.50 each)	£ 35.00
1off Pressure Gauge 1" dia 0-120 / 0.150psi	£ 21.00
1off Water Gauge 5/16" x 32T with Blowdown	£ 27.40
3off Check Valves 5/16" x 32T - 3/16" pipe (@ £10.65 each)	£ 31.95
1off Steam Chest Drain Cock 1/4" x 40T	£ 6.00
1off Injector Steam Valve 3/8" x 40T (use 5/16" x 32T)	£ 13.90
1off Whistle 3/8" dia - 1/8" pipe	£ 11.10
1off Injector No.3 3/4 pints/min	£ 42.55
1off Injector Water Valve 3/16" pipe x 180 degree - Plug cock type	£ 25.00

ALL PRICES ARE PLUS CARRIAGE & VAT

Updated 27-6-18

G.W.R 5"G 'KING' 4-6-0

4-6-0 Tender Loco. Famous 'King' Class loco designed for GWR by CB Collett. When introduced in 1927 they were the most powerful express passenger locos in Britain. 5" g version designed by James Perrier of Dorset, from works drawings. Every detail is shown. He has built two 'King's' with complete success, thus proving the plans and castings.



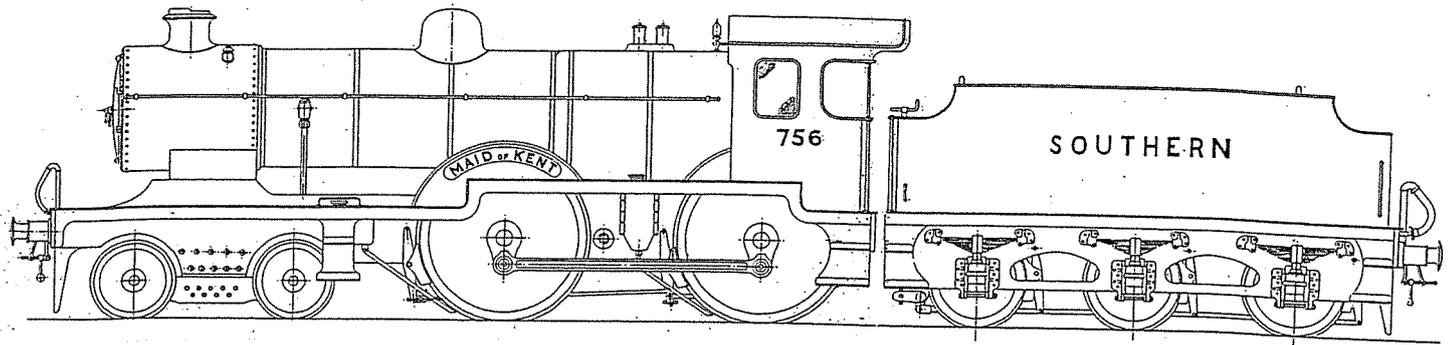
Drawings - set of 16 sheets	£ 88.00	27 Expansion Link Bracket (inside) GM	£ 42.50
Drawings - single sheets	£ 6.00	28 Conn. Rod Bearings GM	£ 12.60
Line Drawing of 'King' to 5" scale, 6ft long	£ 7.50	29 Outside Steam Pipes GM (4 required)	£ 37.20
Laser Cut Main Frames (3mm)	£ 106.65	30 Chimney GM	£ 41.50
1 Pump Stretcher GM	£ 13.75	31 Smokebox Rear Ring GM	£ 23.10
2 Brake Cylinder Stretcher GM	£ 20.90	32 Smokebox Door GM	£ 33.00
3 Inside Motion Bracket GM	£ 18.15	33 Smokebox Front Ring GM	£ 35.00
4 Outside Motion Brackets GM	£ 28.80	34 Petticoat Pipe GM	£ 28.80
5 Bogie Pressure Pads GM	£ 10.20	35 Boiler Bushes GM	£ 15.40
6 Bogie Stretcher GM	£ 24.75	36 Superheater Blocks GM	£ 16.50
7 Driving & Coupled Wheels	£ 286.50	37 S.V. Bush & Base GM	£ 14.40
8 Main Axleboxes GM	£ 77.00	38 Regulator Bush GM	£ 4.80
Main Axleboxes CI	£ 37.40	39 Brake Hanger Brackets Loco GM	£ 10.20
9 Main Dummy Springs GM	£ 68.40	40 Brake Blocks - 12 off - CI	£ 27.60
10 Spring Brackets GM	£ 61.20	41 Brake Cylinder Cover GM	£ 8.15
11 Main Horns GM	£ 150.00	42 Check Valves GM	£ 4.65
Main Horns CI	£ 90.00	43 S.V. casing Brass	£ 21.00
12 Eccentric Straps, Pump & Lub GM	£ 13.20	Laser cut Tender Frames (3mm)	£ 88.00
13 Axlepump & Gland GM	£ 29.00	44 Tender Frame Stays - ALI	£ 17.50
14 Bogie Sliding Block GM	£ 18.15	45 Tender Springs GM	£ 50.40
15 Bogie Front Horns GM	£ 13.20	46 Tender Axleboxes GM	£ 89.10
16 Bogie Rear Horns GM	£ 13.20	47 Tender Horns GM	£ 31.20
17 Bogie Front Boxes GM	£ 14.90	48 Tender Wheels	£ 129.30
18 Bogie Rear Boxes GM	£ 12.75	49 Tender Handpump & Tee GM	£ 24.60
19 Buffer Stocks GM	£ 36.00	50 Tender Water Pick-Up Dome - GM	£ 30.00
20 Bogie Dummy Springs GM	£ 8.40	51 Splashers, 2 rings GM	£ 98.00
21 Bogie Spring Blocks GM	£ 7.80	52 Slide Bars CI	£ 31.45
22 Bogie Centre GM	£ 53.00	Cylinders - Inside - GM	£ 246.00
23 Bogie Wheels	£ 63.20	Cylinders - Inside - CI	£ 139.00
24 Main Eccentric Straps (2) GM	£ 24.00	Cylinders - Outside - GM	£ 327.00
25 Weighshaft Bearings GM	£ 13.75	Cylinders - Outside - CI	£ 160.00
O' rings, set of 4 cylinders (217)	£ 4.80	Pistons GM - 4 off	£ 32.65
26 Saddle GM	£ 31.00	Pistons CI - 4 off	£ 6.50

ALL PRICES ARE PLUS CARRIAGE & VAT

Updated 14-7-18

5"G MAID OF KENT

4-4-0 Tender locomotive in 5"g - based on Southern Railway Maunsell "L1" class, can be built with inside or outside cylinders. Stephenson's of Joy valve gear.
Described in "M.E." by LBSC vols 97 - 99

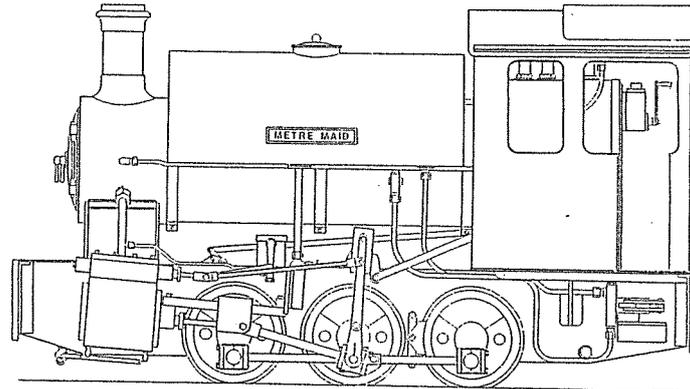


Drawings (18 sheets) LO80	£ 78.00	Motion Plate (O/S Cyls / Stephensons)	} £ 16.50
Laser Cut Main Frame (Inside cyl version) 3mm	£ 54.00	Pump Stay GM	
Laser Cut Main Frame (Outside cyl version) 3mm	£ 60.00	Pump & Stay (I/S Cyls/Joy + Stephensons) GM	} £ 25.65
Buffer Beam Steel	£ 18.25	Axlepump/Stay (outside cyls/Stephensons)	
Main Frame Stay GM	£ 24.25	Cylinder Set / Outside CI	£ 173.00
Main Hornblocks GM	£ 107.80	Cylinder Set / Outside GM	£ 340.00
Main Hornblocks CI	£ 41.25	Cylinder Set / Inside CI	£ 152.50
Main Axleboxes Solid Type GM	£ 67.50	Cylinder Set / Inside GM	£ 316.00
Main Axleboxes Solid Type CI	£ 30.75	Piston Blanks CI	£ 5.00
Main Axleboxes Split Type GM	£ 97.00	Piston Blanks GM	£ 31.50
Main Axleboxes Split Type CI	£ 36.50	Smokebox Saddle GM	£ 25.00
Laser Cut Bogie Frames (3mm)	£ 20.50	Smokebox Door GM	£ 17.35
Bogie Axleboxes GM	£ 25.00	Smokebox Ring GM	£ 26.00
Bogie Horns Mat'l (BMS angle)	£ 3.35	Chimney GM	£ 21.00
Bogie Centre GM	£ 36.25	Dome Bush GM	£ 14.30
Bogie Bolster GM	£ 36.50	Inner Dome	£ 18.15
Bogie Wheels CI	£ 76.00	Outer Dome	£ 31.60
Driving & Coupled Wheels CI	£ 160.00	Regulator GM	£ 11.40
Slide Bar Brackets GM	£ 24.00	Stainless Steel Grate	£ 13.50
Eccentric Straps - Set of 5 GM	£ 69.00	Laser cut Tender Frames (3mm)	£ 36.50
Loco Brake Shoes CI	£ 7.00	Tender Buffer Beam Steel	£ 18.25
Brake Cylinder GM	£ 8.40	Tender Hornblocks GM	£ 48.60
Brake Cylinder Stay GM	£ 14.70	Tender Axleboxes GM	£ 63.50
Cast Sand Boxes GM	£ 25.80	Tender Springs & Hangers GM	£ 55.00
Motion Plate (Stephensons I/S Cyl) GM	£ 22.55	Tender Wheels	£ 124.20
Motion Plate (Joy Valve Gear) GM	£ 18.80	Tender Brake Shoes CI	£ 12.35
		Tender H/pump & Tee GM	£ 23.20

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 16-7-18

5" G METRE MAID

5" gauge 0-6-0 narrow gauge loco. This is a 6 coupled version of Sweet Pea. Can be made with Sweet Pea outline or alternatively as per the Metre Gauge outline. Uses Sweet Pea castings & Sweet Pea's well proven boiler.



Drawings (9 sheets)	£ 45.00	Smokebox Door GM	£ 19.80
GA Drawing only (sheet 1)	£ 5.00	Smokebox Ring GM	£ 25.00
Construction Manual by Jack Buckler	£ 15.95	Rear Ring GM	£ 32.00
Laser Cut Frames (5mm)	£ 78.50	Saddle Aluminium	£ 25.00
Laser Cut Buffer Beams (5mm)	£ 29.00	Saddle GM	£ 75.00
Laser Cut Frame Stretchers (5mm)	£ 26.60	Tank Filler Lid GM	£ 19.25
Laser Cut Stretcher 'C' (5mm)	£ 4.00	Regulator GM	£ 18.70
Laser Cut Pump Connecting Rod Kit	£ 5.00	Manifold GM	£ 12.60
Frame & Stay Angle	£ 18.90	Header Bush & Flange GM	£ 14.30
Hornblocks GM	£ 92.40	Axle Pump GM	£ 12.30
Axleboxes CI	£ 64.95	Hand Pump & Tee GM	£ 18.30
Wheels CI	£ 177.00	Brake Blocks CI	£ 7.90
Axle Material (Ground BMS)	£ 12.75	Brake Support Bracket GM	£ 13.75
Set (12) Suspension Springs	£ 12.00	Reverser Stand Support Bracket GM	£ 26.15
Motion Plates GM	£ 15.15	Firegrate CI	£ 16.00
Conn & Coupling Rod Brasses GM	£ 48.40	Firegrate Stainless Steel	£ 15.00
Eccentric Strap GM	£ 10.80	O' Ring Set:	
Eccentric Sheave BMS	£ 1.50	1 x 007, 3 x 012, 2 x 008 }	£ 3.24
Cylinder Set CI	£ 207.65	1 x 011, 2 x 010 }	
Valves Pair GM	£ 16.80	Finished Handbrake screw & nut with square thread	£ 36.00
Pistons CI	£ 3.75	Brass Boiler Band Material 12' x 1/2'	£ 28.20
Pistons GM	£ 20.70	Saddle Tank Brass Materials (Excluding Ends)	£ 37.25
Piston Rings 1.1/2" od x 1/8" set of 4	£ 32.00	Flanged Saddle Tank Ends (copper)	£ 40.00
Cylinder Steam Chest Studs } 4BA x 1.5/8" (20 off) }	£ 10.80	Pressure Gauge 1" dia 0-120	£ 21.00
Chimney Base & Cap GM	£ 32.50	Finished Safety Valves : 1/2" X 26T (2 req'd) each	£ 25.00
Brass Smokebox Rolled & Silver Soldered }	£ 32.00	Cab & Roof, Laser Cut, Folded & Rolled (1.2mm steel)	£ 161.70
Brass Cleading Sheet for Boiler	£ 22.50		
Boiler Insulation Material Set (= 1/4" thick Kaowool) }	£ 8.75		

Boiler Material Kit (inc. flanged plates) Non-Superheated Type

POA

Boiler Material Kit (inc. flanged plates) Superheated Type

POA

STARTER KIT

To assist the modeller we offer a Starter Kit which comprises drawings, castings, materials & fasteners, laser cut frames, laser cut buffer beams, laser cut stretchers, to make rolling chassis.

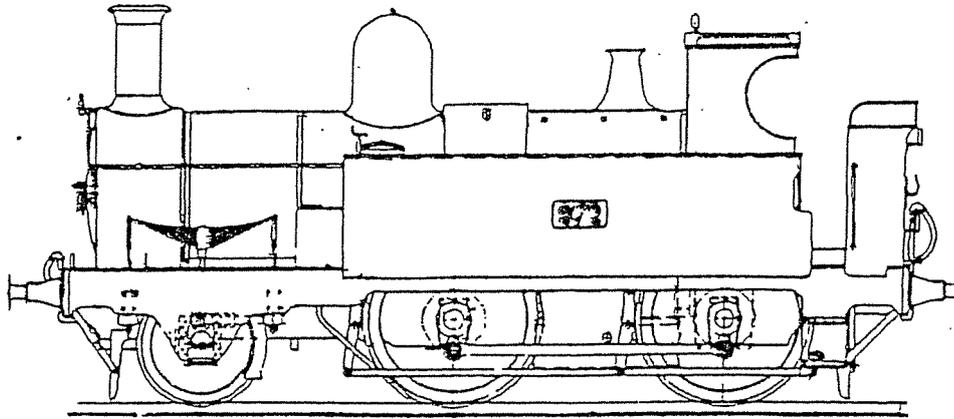
£ 606.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 5-7-18

METRO - 2-4-0 Tank Locomotive in 5"G

Model of a GWR Tank Locomotive. Inside slide valve Cylinders. stephensons valve gear.
 Designed by Martin Evans. Described in Model Engineer Vol 139 - 140
 Length - 31", Boiler Dia - 4.1/2",
 Cylinder Bore - 1", Driving Wheel Dia - 5.1/2"

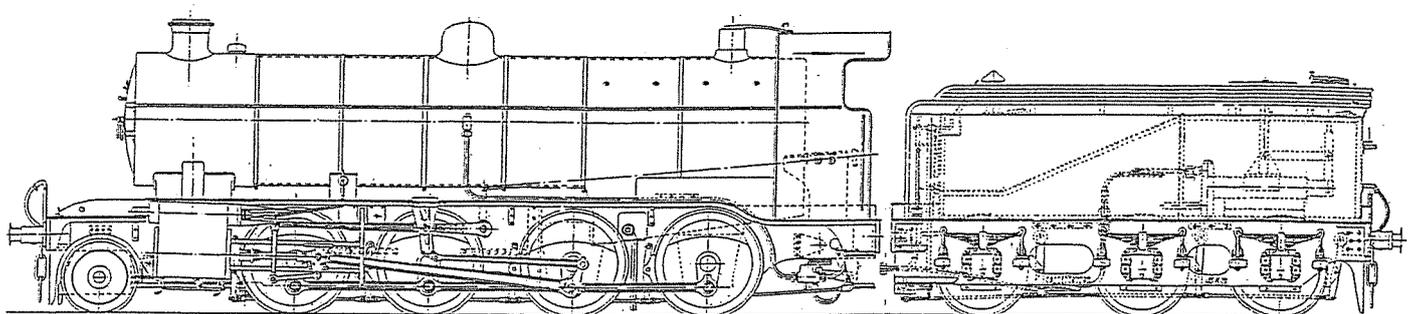


Drawings(6 shts)LO941	£ 28.00	Smokebox Door (GM)	£ 18.15
Laser Cut Frames - inside 3mm and outside 2.5mm	£ 103.70	Smokebox Rear Ring (GM)	£ 29.25
Stretcher "A" (GM)	£ 20.00	Smokebox Front (GM)	£ 25.00
Stretcher "B" (GM)	£ 14.00	Chimney (GM)	£ 34.15
Main Hornblocks (GM)	£ 34.80	Safety Valve Cover (Brass)	£ 22.00
Main Axleboxes (GM)	£ 26.65	Boiler Dome Bush (GM)	£ 7.20
Leading Hornblocks (2) (GM)	£ 6.60	Inner Dome (GM)	£ 22.55
Leading Axleboxes (GM)	£ 11.40	Outer Dome (GM)	£ 46.00
Leading Dummy Springs (GM)	£ 17.40	Regulator (GM)	£ 14.40
Leading Wheels (CI)	£ 31.00	Tubeplate,SV Bush & } Regulator Bushes (GM) } Regulator Quadrant & } Gland Nut (GM) }	£ 14.00
Motion Plates & Guides (GM)	£ 24.90	Tank Pump Casting & Tee (GM)	£ 28.00
Crosshead Pump (GM)	£ 17.00	Grate - Stainless steel	£ 12.00
Eccentric Straps (GM)	£ 21.50		
Driving & Coupled Wheels (CI)	£ 133.20		
Cylinder Set (GM)	£ 158.00		
Piston Blanks (GM) per pr	£ 10.50		

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 16-7-18

NIGEL GRESLEY - 2-8-0 Tender Locomotive in 5"G

Designed in 5"G by Martin Evans. Described in Model Engineer Vol 134 - 136 . Outside slide valve Cylinders & Walschaerts Valve gear. Length (inc Tender) - 64.1/2", Boiler dia - 6", Cylinder Bore - 1.9/16", Driving Wheel dia - 4.7/8"



Drawings(12 shts)LO936	£ 52.00	Pistons (GM)	£ 23.65
Loco Frame Steel	£ 32.50	Pistons (CI)	£ 4.00
Loco Buffer Beam Steel	£ 9.75	Piston Rings 1.9/16"od x 1/8" wide	
Main Hornblocks (GM)	£ 159.50	Set of 4	£ 32.00
Main Hornblocks (CI)	£ 82.50	Smokebox Door (GM)	£ 33.75
Axleboxes Split (GM)	£ 185.25	Smokebox Ring (GM)	£ 26.75
Axleboxes Split (CI)	£ 92.50	Saddle (GM)	£ 72.50
Axleboxes Solid (GM)	£ 133.00	Chimney (GM)	£ 18.30
Axleboxes Solid (CI)	£ 63.25	Dome (GM)	£ 21.00
Driving & Coupled Wheels (CI)	£ 216.00	Tender Wheels (CI)	£ 120.00
Pony Wheels (CI)	£ 35.30	Tender Hornblocks. (GM)	£ 25.20
Pony Hornblocks (GM)	£ 12.85	Tender Axleboxes (GM)	£ 74.25
Loco Brake Shoes (CI)	£ 10.50	Tender Frame Steel	£ 18.50
Brake Cylinder GM	POA	Tender Buffer Beam Steel	£ 20.00
Pony Axleboxes (GM)	£ 15.95	Grate - stainless steel	£ 15.50
Cylinder Set (GM)	POA	Firegrate (CI)	£ 16.55
Cylinder Set (CI)	£ 221.00	Tender Handpump & Tee (GM)	£ 27.60
		Tender Cast Springs (GM)	£ 42.50

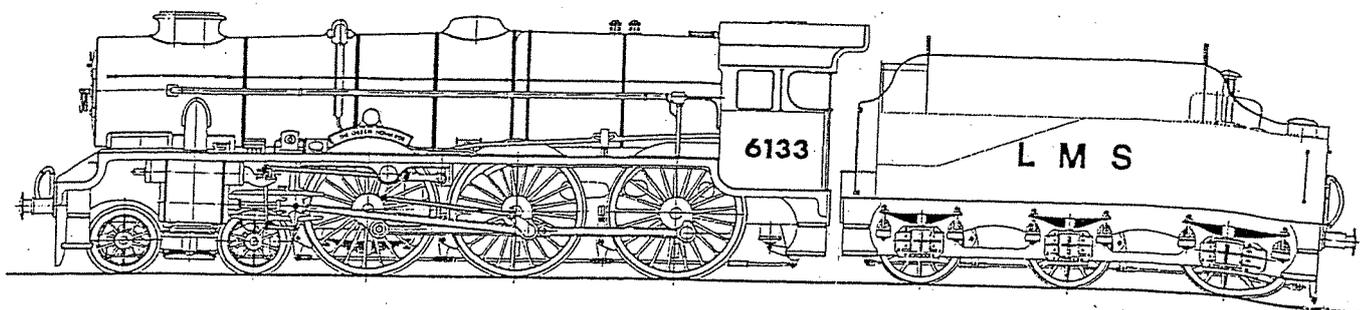
ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-7-18

ROYAL SCOT LMS 4-6-0 LOCO & TENDER 5"G

Two versions designed by Martin Evans. Described in 'Model Engineer' Volumes 140-141 -
 'Royal Engineer' 3 cylinder LMS Royal Scot.

'Kings Own' Stanier Rebuilt Royal Scot with taper boiler & double chimney.
 Length (including tender) 72". Cylinder 1.1/2" bore x 2.1/4" stroke. Driving Wheels 7.1/8" dia.



Drawings LO 943 - Royal Engineer (14 sheets)	£ 68.00	Piston Blanks GM	£ 35.90
Drawings LO 944 - Kings Own (12 sheets)	£ 58.00	Piston Blanks CI	£ 4.75
Stanier Tender Drawing LO 946	£ 8.50	Piston Rings 1.1/2"od x 1/8" wide	Set of 6 £ 48.00
Laser Cut Frames - (3mm) (Royal Engineer)	£ 101.00	Smokebox Door GM	£ 45.00
Laser Cut Frames - (3mm) (Kings Own)	£ 103.75	Smokebox Ring GM	£ 33.50
Main Hornblocks GM	£ 143.25	Chimney (single) GM	£ 9.90
Main Hornblocks CI	£ 61.65	Chimney (double) GM	£ 33.50
Main Axleboxes (solid type) GM	£ 150.00	Dome GM 'Royal Engineer'	£ 17.90
Main Axleboxes (solid type) CI	£ 72.60	Dome GM 'Kings Own'	£ 15.40
Main Axleboxes (split type) GM	£ 137.60	Dome Bush GM	£ 16.00
Main Axleboxes (split type) CI	£ 59.00	Inner Dome GM	£ 11.40
Main Stay CI (2 parts)	£ 36.25	Regulator Bushes GM	£ 35.75
2nd Stay CI (2 parts)	£ 30.50	Regulator Stand GM	£ 14.10
3rd Stay CI	£ 15.25	Loco Brake Hangers & Beams Kit Laser Cut	£ 13.00
4th Stay CI	£ 9.35	Stainless Steel Grate	£ 14.00
Bogie Frames Laser Cut	£ 21.85	FOWLER TENDER	
Bogie Centre GM	£ 46.50	Tender Hornblocks GM	POA
Bogie Centre CI	£ 22.60	Tender Axleboxes GM	£ 57.50
Bogie Hornblocks GM	£ 21.60	Tender Dummy Springs GM	£ 50.40
Bogie Axleboxes GM	£ 28.50	Tender Wheels CI	£ 120.00
Bogie Centre Bearing GM	£ 19.25	Tender Handpump & Tee GM	£ 27.75
Bogie Wheels CI	£ 59.20	Tender Spring Hangers GM	P.O.A
Inside Valve Gear Ecc Strap GM	£ 10.20	Tender Brake Levers Laser Cut	£ 11.25
Driving & Coupled Wheels CI	£ 276.00	STANIER TENDER	
Cylinder Set Inside GM	P.O.A	A basic version of the Stanier 4000 Gallon Tender was produced by Martin Evans.	
Cylinder Set Inside CI	£ 86.00	As a single sheet drawing (Ref LO.946)	
Cylinder Set Outside GM	P.O.A	A much more detailed design was produced by Tony Allcock for the 5"g 'Jubilee' (Galatea) - and all parts listed are suitable for Royal Engineer/ Kings Own - see pages 40 & 41 (Galatea)	
Cylinder Set Outside CI	£ 167.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 26-7-18

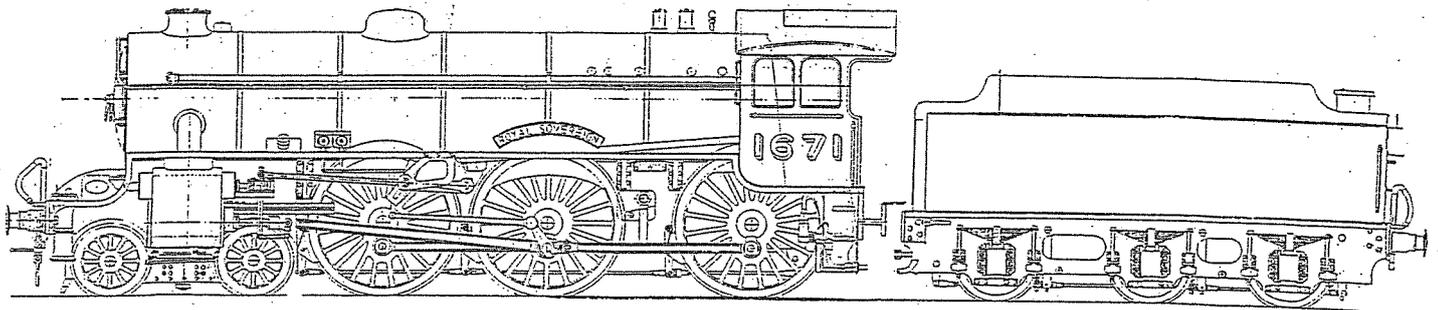
5" G ROYAL SOVEREIGN - LNER CLASS B2 4-6-0 LOCO & TENDER

Designed in 5" g by Michael Breeze

2 piston valve cylinders 1.3/4" bore x 2.5/16" stroke with Walschaerts valve gear

Overall length 66.1/2" (including tread).

Driving wheels 7.1/16" dia over tread.



Drawings (21 sheets)	£ 80.00	Expansion Link Brackets GM	£ 49.50
Laser Cut Main Frames (3mm)	£ 88.50	Slide Bar Brackets GM	£ 28.00
Main Hornblocks GM	£ 151.80	Smokebox Saddle GM	£ 42.50
Main Hornblocks CI	£ 82.15	Running Board Brackets GM (set of 4)	£ 22.80
Main Axleboxes - Solid type GM	POA	Smokebox Door GM	£ 25.00
Main Axleboxes - Solid Type CI	£ 43.75	Smokebox Ring GM	£ 34.00
Main Axleboxes - Split type GM	£ 148.75	Chimney GM	£ 26.40
Main Axleboxes - Split type CI	£ 88.65	Dome Bush GM	£ 19.60
Horizontal Stretcher CI	£ 22.70	Inner Dome Top GM	£ 25.00
Frame Stretchers (2)	£ 30.25	Outer dome GM	£ 18.60
Bogie Pin Stretcher CI	£ 19.70	Regulator Body GM	£ 20.70
Bogie Hornblocks GM	£ 21.40	Steam Turret Block GM	£ 16.25
Bogie Axleboxes GM	£ 38.65	Wet Header (head) GM	£ 18.70
Bogie Centre Block BMS	£ 1.85	Wet Header (base) GM	£ 13.20
Bogie wheels CI	£ 81.60	Superheater Return Bends GM	£ 28.60
Driving & coupled wheels CI	£ 305.10	Safety Valve Bodies GM	£ 10.10
Steel Tyres for D & C Wheels (6)	£ 40.00	Firegrate CI	£ 19.35
Brake Cylinder & Covers GM	£ 14.90	Firegrate (Stainless Steel)	£ 18.75
Brake Valve Base GM	£ 3.00	Loco Buffer Heads & Stocks BMS	£ 5.00
Brake Shoes (loco) CI	£ 14.25	Tender Frames Laser Cut (3mm)	£ 71.15
Lubricator Eccentric Sheave CI	£ 1.00	Tender Buffer Beam Steel	£ 14.00
Lubricator Eccentric Strap CI	£ 3.85	Tender Hornblocks GM	£ 48.60
Lubricator Drive Gears (pair)	POA	Tender Axleboxes GM	£ 93.00
Outside Cylinder Set CI	£ 154.00	Tender Wheels CI	£ 132.30
Outside Cylinder Set GM	POA	Tender dummy Springs GM	£ 42.50
Piston Blanks CI	£ 3.50	Tender Brake Shoes Ring CI	£ 12.50
Piston Blanks GM	£ 23.60	Tender Spring Hanger Cleats GM	£ 13.35
Valve Rod Guides (set of 2) GM	£ 33.00	Tender Spencer Spring Blocks GM	£ 19.10
Piston Rings CI (set of 4)	£ 32.60	Tender Handpump, Head & Gland GM	£ 45.75
Piston Valve Rings CI (set of 8)	POA	Tender Buffer Heads & Stocks BMS	£ 5.00
Return Crank Bearings (pr)	£ 9.50	Tender Water Pick up Dome ALI	£ 5.30

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 22-6-18

5"G SANDRINGHAM

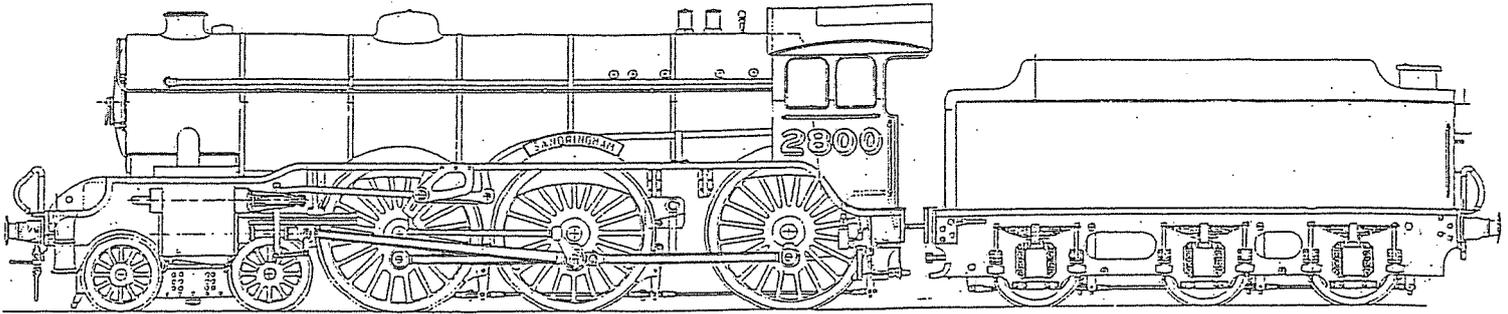
LNER Class B17 4-6-0 Locomotive & Tender

Designed by Michael Breeze

Overall length - Loco & Tender - 64.5/8" over buffers

Boiler dia - 6" 3 Cylinders 1.1/2" Bore x 2.5/16" Stroke

Driving wheels 7.3/8 dia over flange



Drawings (22 sheets) set	£ 85.00	Piston Blanks CI (3off)	£ 3.75
Laser Cut Main Frames (3mm)	£ 86.50	Piston Blanks Bronze (3off)	£ 17.35
Loco Buffer Beam Steel BMS	£ 11.20	Rear Exhaust Channel GM	£ 26.40
Intermediate Stretchers CI (2)	£ 30.15	Rear Exhaust Channel CI	£ 15.00
Bogie Pin Stretcher CI	£ 23.80	Smokebox Saddle GM	£ 38.20
Main Hornblocks GM	£ 104.50	Smokebox Saddle CI	£ 19.40
Main Hornblocks CI	£ 58.00	Smokebox Front Ring GM	£ 34.00
Main Axleboxes Solid GM	POA	Smokebox Front Ring CI	£ 16.40
Main Axleboxes Solid CI	£ 44.00	Smokebox Door GM	£ 25.00
Main Axleboxes & Keeps (split) GM	£ 148.75	Smokebox Door CI	£ 13.60
Main Axleboxes & Keeps (split) CI	£ 81.25	Chimney GM	£ 26.40
Laser Cut Bogie Frames (3mm)	£ 19.75	Chimney CI	£ 15.15
Bogie Hornblocks GM	£ 21.40	Outer dome GM	£ 18.70
Bogie Axleboxes GM	£ 38.65	Outer dome CI	£ 10.30
Bogie Axleboxes CI	£ 18.55	Dome Bush GM	£ 19.60
Bogie Centre Block BMS	£ 1.75	Dome Cover/Inner Dome GM	£ 25.00
Bogie Wheels CI	£ 81.60	Regulator Body GM	£ 20.70
Driving & Coupled Wheels CI	£ 305.10	Turret Block GM	£ 16.25
Lubricator Ecc Strap GM	£ 4.80	Superheater Return Bends GM	£ 14.05
Lubricator Ecc Sheave CI	£ 1.15	Superheater Wet Header Base	} £ 33.30
Loco Brake Shoe Ring CI	£ 22.80	& Head GM	
Expansion Link Brackets GM	£ 49.40	Loco Buffer Heads & Stocks BMS	£ 4.50
Expansion Link Brackets CI	£ 28.55	Firegrate CI	£ 15.00
Slide Bar Brackets GM	£ 25.55	Firegrate Stainless Steel	£ 14.50
Slide Bar Brackets CI	£ 15.75	Laser cut Tender Frames (3mm)	£ 37.50
Running Board Brackets GM	£ 22.80	Tender Buffer Beam Steel	£ 17.50
Brake Cylinder Bracket GM	£ 19.80	Tender Buffer Buffer Heads &	} £ 4.50
Brake Valve Base GM	£ 3.30	Stocks BMS	
Inside Cylinder Set CI	£ 97.60	Tender Hornblocks GM	£ 48.60
Inside Cylinder Set GM	POA	Tender Axleboxes GM	£ 93.00
Outside cylinder Set CI	£ 175.00	Tender Axleboxes CI	£ 61.20
Outside cylinder Set GM	POA	Tender Wheels CI	£ 132.30
Piston Rings 1.1/2"od x 1/8" 6off	£ 48.00	Tender Brake Shoes Ring CI	£ 12.50
Piston Valve Rings	} £ 78.00	Tender dummy Springs GM	£ 42.50
3/4" od X 1/16" 12 off		Tender Spencer Spring Blocks GM	£ 19.10
		Tender Handpump & Gland GM	£ 45.80
		Tender Water Scoop Dome ALI	£ 5.30

ALL PRICES ARE PLUS CARRIAGE AND VAT

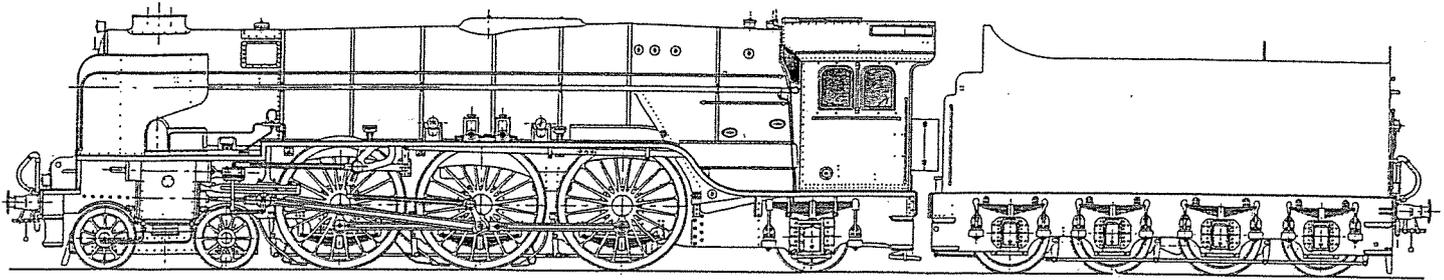
Updated 26-7-18

5"G SEA EAGLE - LNER PEPPERCORN CLASS A1 PACIFIC

Designed by Michael Breeze

3 Piston valve cylinders 1.11/16" bore x x2.5/16" stroke

Length (including tender) Driving wheel dia - 7.3/8" dia



Drawings (24 sheets)	£ 100.00	Expansion Link Brackets GM	£ 63.50
Laser Cut Main Frames (3mm)	£ 130.00	Exp. Link Trunnion Brg Bkts GM	£ 8.15
Laser cut Trailing Outer Frames (3mm)	£ 32.20	Slide Bar Brackets GM	£ 28.60
Main Hornblocks GM		Inside Motion Plate GM	£ 24.50
Main Hornblocks CI	£ 148.50	Eccentric Sheave CI	£ 11.65
Main Axleboxes (Solid) GM	£ 87.75	Eccentric Strap GM	£ 8.40
Main Axleboxes (Solid) CI	P.O.A	Boiler Front Saddle GM	£ 16.50
Main Axleboxes (split type) GM	£ 43.60	Boiler Rear Saddle GM	£ 26.25
Main Axleboxes (split type) CI	£ 148.75	Smokebox Saddle GM	£ 30.50
Mainframe Rear Stretcher CI	£ 81.20	Running Board Brackets GM	£ 17.50
Intermediate Stretcher CI	£ 15.10	Lubricator Ecc. Strap GM	£ 4.80
Laser Cut Bogie Frames (no holes) (3mm)	£ 28.75	Smokebox Door GM	£ 32.50
Bogie Pin Stretcher CI	£ 26.20	Smokebox Ring GM	£ 47.25
Bogie Hornblocks GM		Double Chimney GM	£ 36.00
Bogie Axleboxes GM	£ 19.70	Double Blastpipe GM	£ 14.00
Bogie Centre Block (BMS)	£ 21.35	Dome Bush GM	£ 18.00
Bogie Wheels CI	£ 38.65	Dome Cover GM	£ 19.25
Trailing Horns GM	£ 1.75	Banjo Outer Dome GM	£ 33.10
Trailing Cartazzie Ax'boxes GM	£ 61.80	Regulator Body GM	£ 18.70
Trailing Dummy Springs GM	£ 18.85	Steam Turret Block GM	£ 16.25
Tr. Spencer Spring Blocks GM	£ 45.75	S'Box Tubeplate/Plate GM	£ 6.00
Tr. Spring Hanger Cleats GM	£ 14.15	Safety Valve Body/S.Valve & Turret Bushes GM	£ 26.40
Trailing Wheels CI	£ 6.35	Wet Header - Head GM	
Driving & Coupled Wheels CI	£ 6.90	Wet Header Base GM	£ 13.20
Main Dummy Springs GM	£ 41.70	Superheater Return Bends GM	£ 21.45
Spring Guide Cleats GM	£ 305.10	Dummy S'Heater Covers GM	£ 29.15
Brake Cylinder & Cover GM	£ 68.40	Firegrate CI	£ 35.50
Brake Valve Base GM	£ 12.60	Firegrate Stainless Steel	£ 32.50
Loco Brake Shoes CI	£ 18.70	Tender Frames - Laser Cut (3mm)	£ 68.50
Outside Cylinder Set CI	£ 3.00	Tender Hornblocks GM	£ 64.80
Outside Cylinder Set GM	£ 14.25	Tender Axleboxes GM	£ 124.00
K' Exhaust Channels GM	£ 178.00	Tender Wheels CI Disc Type	£ 217.20
Inside Cylinder Set CI	£ 382.00	Spencer Spring Blocks GM	£ 25.45
Inside Cylinder Set GM	£ 41.50	Tender Spring Hanger Cleats GM	£ 20.00
Inside Cyl Front Exh Channel GM	£ 116.00	Tender Brake Shoes Ring CI	£ 15.00
Piston Blanks (3 off) CI	£ 260.00	Tender Handpump, Head & Gland GM	£ 47.70
Piston Blanks (3 off) GM	£ 9.30		
	£ 4.25		
	£ 48.60		

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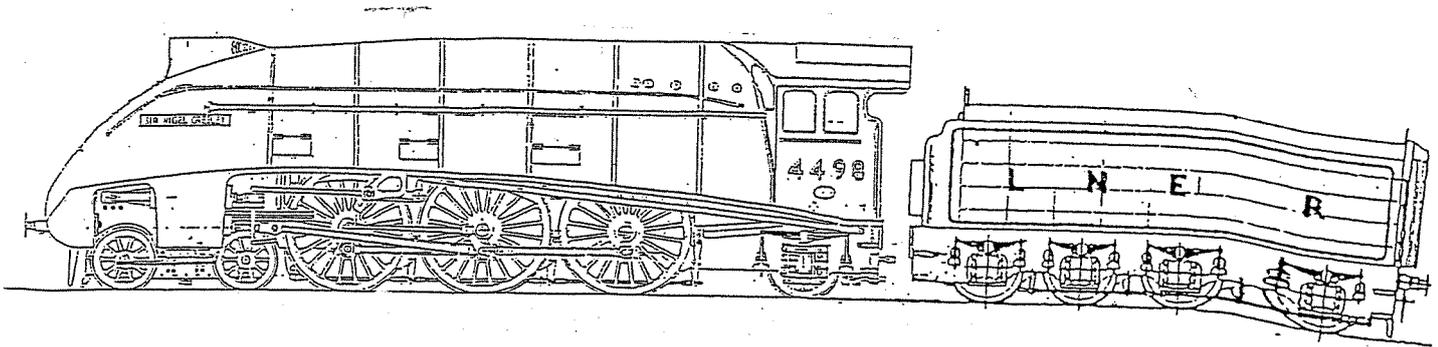
Updated 27-7-18

SIR NIGEL GRESLEY - LNER CLASS A4 PACIFIC IN 5"G

Designed in 5" g by Michael Breeze.

3 Cylinders 1.11/16" bore x 2.5/16" stroke, with walshaerts valve gear to o/s cylinders and Gresleys 2:1 conjugated valve gear to i/s cylinders.

Driving wheels 7.1/16" dia overtread



Drawings Set (24 sheets)	£ 100.00	Outside Cylinder Set CI	
Laser Cut Main Frames (3mm)	£ 121.30	Outside Cylinder Set GM	£ 133.50
Main Hornblocks GM	£ 148.50	O/S Cyl. Front Steam Chest Covers GM (2)	£ 322.50
Main Hornblocks CI	£ 87.75	O/S Cyl. Rear Steam Chest Covers GM	£ 25.50
2:1 Fulcrum Stretcher CI	£ 9.80	Inside Cylinder Set CI	£ 35.75
Inside Slidebar Stretcher CI	£ 9.00	Inside Cylinder Set GM	£ 69.50
Rear Stretcher CI	£ 16.50	Piston Blanks (set of 3) CI	£ 164.00
Intermediate Stretcher CI	£ 25.90	Piston Blanks (set of 3) GM	£ 4.75
Main Axleboxes (Solid Type) CI	£ 44.00	Piston Rings 6 off (1.5/8" od x 1/8" wide)	£ 35.50
Main Axleboxes (Solid Type) GM	POA	Piston Valve Rings 12 off	£ 48.00
Main Axleboxes (Split Type) & Keeps CI	£ 82.25	Smokebox Saddle GM	£ 99.60
Main Axleboxes (Split Type) & Keeps GM	£ 148.00	Smokebox Front Ring GM	£ 39.00
Loco Spring Hanger Bkts (GM)	£ 56.75	Smokebox Door GM	£ 35.50
Laser Cut Bogie Frames	£ 11.50	Smokebox Tubeplate Plate GM	£ 24.75
Bogie Pin Stretcher CI	£ 19.00	Double Blast Pipe GM	£ 6.00
Bogie Hornblocks GM	£ 19.80	Wet Header - Base & Head GM	£ 14.30
Bogie Axleboxes GM	£ 39.00	Superheater Return Bends GM	£ 32.50
Bogie Axleboxes CI	POA	Dome Bush & Cover GM	£ 20.90
Bogie Centre Block BMS	£ 1.65	Regulator Body GM	£ 36.85
Bogie Wheels CI	£ 61.80	Steam Turret Block GM	£ 18.70
Laser Cut Trailing Frames (3mm)	£ 35.00	Safety Valves, S.V Bushes	£ 17.60
Trailing Hornblocks GM	£ 17.70	& Turret Bush GM	
Trailing Cartazzie Axleboxes GM	£ 46.20	Firegrate CI	£ 35.00
Trailing Wheels CI	£ 41.70	Firegrate Stainless Steel	£ 25.50
Trailing Dummy Springs GM	£ 14.40	Laser Cut Tender Frames (3mm)	£ 27.00
Trailing Axle Spring Hanger Cleats GM	£ 7.20	Tender Hornblocks GM	£ 68.00
Trailing Axle Spencer Spring Blocks GM	£ 6.00	Tender Axleboxes GM	£ 62.40
Brake Cylinder Stretcher GM	£ 22.00	Tender Wheels CI Disc Type	£ 123.25
Loco Brake Shoes CI	£ 15.75	Tender Spring Hanger Cleats GM	£ 217.20
Brake Valve Base GM	£ 3.00	Tender Spencer Spring Blocks GM	£ 21.00
Lubricator Eccentric Strap GM	£ 4.20	Tender Brake Blocks Ring CI	£ 25.20
Driving & Coupled Wheels CI	£ 305.10	Tender Handpump & Gland GM	£ 15.00
Slide Bar Brackets GM	£ 29.15	Tender Buffer Heads & Stocks BMS	£ 45.50
Running Board Brackets GM	£ 15.60		£ 4.50
Expansion Link Brackets GM	£ 51.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 1-6-18

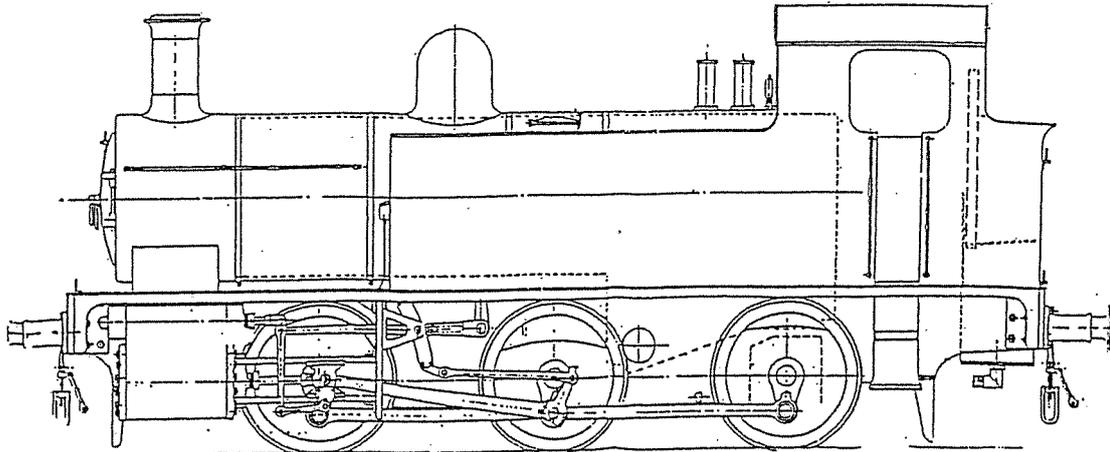
SIMPLEX- 0-6-0 FREELANCE LOCOMOTIVE IN 5"G

Designed by Martin Evans. Described in Model Engineer Vol 133 - 134

Outside slide valve cylinders. Walschaerts valve gear.

Length - 33.1/2", Boiler dia - 4.3/4",

Cylinder Bore - 1.1/2", Driving Wheel dia - 4.3/8"



Drawings (7 sheets) LO935	£ 30.00	Brake Shoes CI	£ 9.50
Photo copies of construction series	£ 6.00	Buffer Heads & Stocks Material (BMS)	£ 9.50
Laser Cut Frames, with all hole positions marked (3mm)	£ 73.00	Laser Cut Con & Coup Rods (6)	£ 71.25
Buffer Beams (inc fixing ang)		£ 12.00	Saddle GM
Hornblocks GM	£ 90.00	Smokebox Door GM	£ 18.70
Hornblocks CI	£ 44.85	Smokebox Ring GM	£ 24.75
Axleboxes GM	£ 120.00	Rear Ring GM	£ 25.60
Axleboxes CI	£ 54.30	Chimney GM	£ 24.75
Frame Stays - set of 4 CI	£ 57.90	Inner Dome GM	£ 18.00
Ecc Sheave & grub scw. Boss CI	£ 9.35	Dome GM	£ 35.00
Eccentric Strap GM	£ 9.85	Dome Bush GM	£ 9.00
Eccentric Strap CI	£ 4.70	Backhead Bush GM	£ 11.70
Axlepump and Covers GM	£ 43.15	Boiler Bushes GM (stick)	£ 25.00
Axlepump (Improved Type) GM	£ 42.50	Tank Pump & Tee GM	£ 28.00
Driving and Coupled Wheels CI	£ 162.00	Handpump (Double Acting) GM	£ 42.50
Motion Brackets GM	£ 35.85	Grate - Stainless Steel	£ 14.50
Cylinder Set CI	£ 230.00	Grate - CI	£ 14.10
Cylinder Set GM	£ 456.00	Smokebox Tube (Brass)	£ 32.00
Pistons CI	£ 3.50	Finished s/valves 1/2"x26T (2 req'd) Each	£ 25.00
Pistons GM	£ 20.70		
Piston rings 1.1/2" x 1/8" wide (4 off)	£ 32.00		

Laser Cut Brass kit for side tanks, bunker tank, cab sides & roof. All parts are slotted & tabbed for easy & accurate assembly. The whole unit can be easily assembled & soft soldered in a single weekend.

£ 365.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

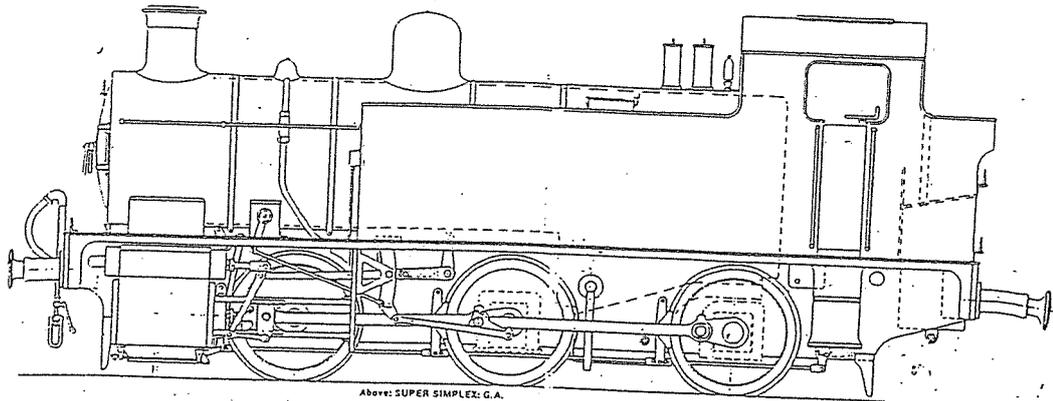
Updated 26-6-18

SUPER SIMPLEX - 0-6-0 FREELANCE LOCOMOTIVE IN 5"G

Designed by Martin Evans.

Redesigned Simplex with Larger Boiler & Longer wheelbase.

Length - , Boiler Dia - 5", Cylinder Bore - 1.9/16", Wheel dia - 4.3/8"



Drawings (7 sheets) LO980	£ 30.00	Brake Shoes CI	
Photo copies of construction series	£ 6.00	Buffer Heads & Stocks Material	£ 7.50
Laser Cut Frames, with all hole positions marked (3mm)	£ 71.15	Laser Cut Con & Coup Rods (6) 10mm	£ 9.75
Buffer Beams (incl. Fixing angle) BMS		Saddle GM	£ 61.00
Hornblocks GM	£ 10.50	Smokebox Door GM	£ 28.50
Hornblocks CI	£ 78.00	Smokebox Ring GM	£ 18.70
Axleboxes GM	£ 34.50	Chimney GM	£ 32.50
Axleboxes CI	£ 104.00	Inner Dome GM	£ 25.00
Frame Stays - set of 4 CI	£ 41.55	Dome GM	£ 15.50
Ecc Sheave & grub scw. Boss CI	£ 56.70	Dome Bush GM	£ 31.00
Eccentric Strap GM	£ 7.25	Backhead Bush GM	£ 8.00
Eccentric Strap CI	£ 8.75	Boiler Bushes GM (stick)	£ 10.25
Axle pump and Covers (single acting) GM	£ 3.65	Tank Pump & Tee GM	£ 21.50
Axle pump (Improved Type) GM	£ 38.60	Handpump (Double Acting) GM	£ 24.10
Driving and Coupled Wheels CI	£ 37.00	Firegrate CI	£ 37.00
Motion Brackets GM	£ 124.50	Grate - Stainless Steel	£ 13.75
Cylinder Set CI	£ 31.00	Brass Smokebox Tube (Rolled & silver soldered)	£ 14.50
Cylinder Set GM	£ 174.50	Superheater Header GM	£ 32.50
Pistons CI	£ 394.00	Finished Safety valves - 1/2" x 26T (2 req) each	£ 15.00
Pistons GM	£ 3.50		
Piston Rings 1.9/16"od x 1/8" (set of 4)	£ 20.70		
	£ 32.00		£ 25.00

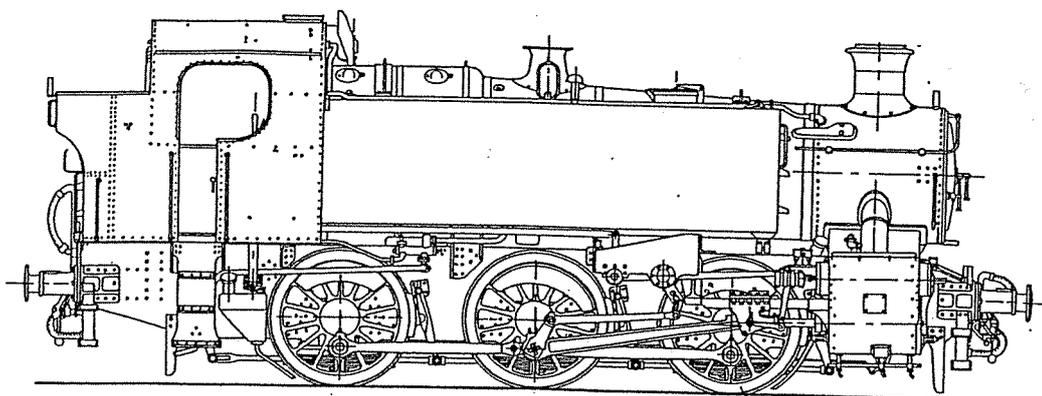
Laser cut Brass kit for Side Tanks, Bunker Tank, Cab Sides, Spectacle Plate, Rear Window Frames & Roof. All Parts are Slotted & Tabbed for quick assembly

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 27-7-18

£ 366.32

SPEEDY - 0-6-0 Tank Locomotive in 5"G

GWR 1500 Class Loco. Designed in 5"G by L.B.S.C.
 Outside Piston Valve Cylinders. Walschaerts Valve gear.
 Length - 35.1/4", Boiler dia - Tapered,
 Cylinder Bore - 1.9/16", Driving Wheel dia - 4.7/8"



Drawings(12 shts)	£ 48.00	Driving & Coupled Wheels CI	£ 186.30
Construction Manual (LBSC)	£ 7.95	Cylinder Set GM	£ 290.00
Laser Cut Frames (3mm)	} £ 72.80	Cylinder Set CI	£ 145.00
(with Don Young alterations)		Pistons GM	£ 31.50
Buffer Beam Bkts(4) GM	£ 30.60	Pistons CI	£ 5.50
Brake Bracket GM	£ 19.00	Piston Rings 1.9/16" od x 1/8" wide	} £ 32.00
Hornblocks GM	£ 140.25	Set of 4	
Hornblocks CI	£ 80.65	Buffer Stocks CI	£ 30.75
Axleboxes Split GM	£ 147.50	Saddle GM	£ 30.00
Axleboxes Split CI	£ 75.00	Smokebox Door GM	£ 17.35
Axleboxes Solid GM	£ 147.00	Smokebox Ring GM	£ 20.90
Axleboxes Solid CI	£ 72.45	Chimney GM	£ 27.50
Pump Stay GM	£ 21.45	Safety Valve Cover (Brass)	£ 13.50
Pump Stay CI	£ 12.00	Grate -stainless steel	£ 13.50
Axlepump & Gland GM	£ 23.40	Cast Grate CI	£ 15.00
Eccentric Sheaves Pump & Lub CI	£ 19.15	Cast Sandboxes - (2) GM	£ 25.80
Pump & Lubricator Ecc straps CI	£ 11.50	Rear Tank Supports RH & LH - GM	£ 10.80
Pump & Lubricator Ecc straps GM	£ 18.90	Handpump GM	£ 24.75
Brake Cylinder GM	£ 9.30		
Brake Shoes Ring CI	£ 12.40		
Brake Hanger Brackets GM	£ 12.00		

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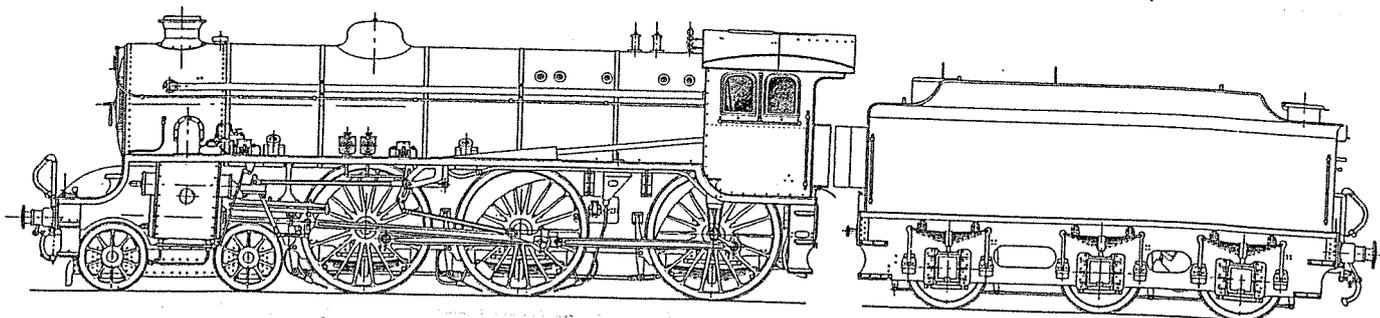
SPRINGBOK - 4-6-0 Tender Locomotive in 5"G

Model of a LNER B1 Locomotive. Designed by Martin Evans.

Described in Model Engineer Vol 121-123.

Length (loco & tender) - 65.1/2". Boiler dia - 6".

Cylinder Bore - 1.11/16". Driving Wheel Dia - 6.1/4"



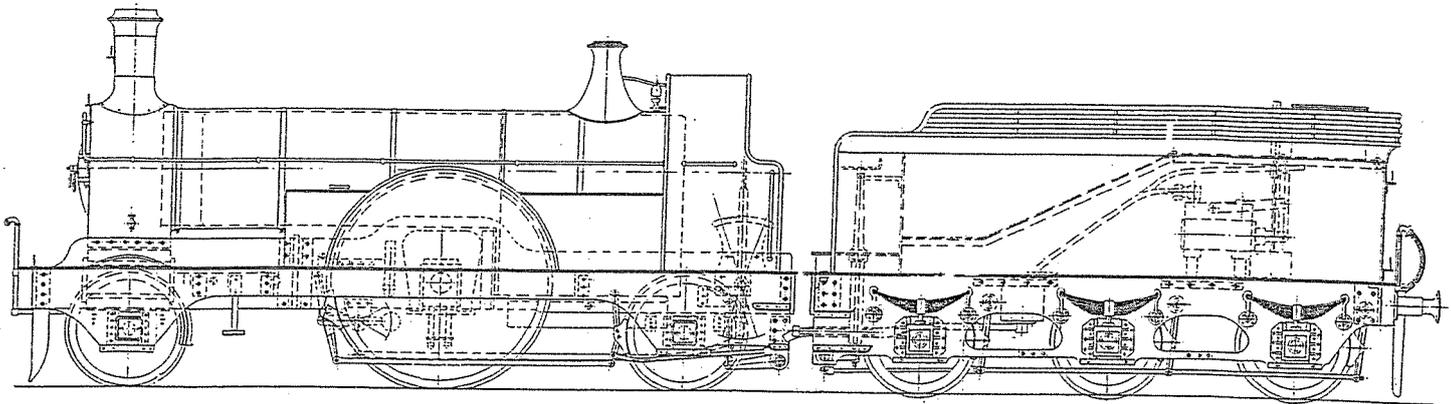
Drawings (12 shts).LO26	£ 56.00	Laser Cut Loco Brake Hangers (6)	£ 9.85
Drawings for alternative slide valve cyl 1 sht LO28	£ 5.25	Brake Cylinder (GM)	£ 9.25
Construction Articles/Copies	£ 10.00	Loco Brake Shoe Ring (CI)	£ 16.25
Laser Cut Main Frames (3mm)	£ 103.50	Saddle (GM)	£ 75.00
Loco Front Buffer Beam Steel & Fixing Angle	£ 18.25	Smokebox Door (GM)	£ 32.50
Laser Cut Rear Buffer Beam	£ 6.65	Smokebox Ring (GM)	£ 40.00
Main Hornblocks (GM)	£ 162.75	Chimney (GM)	£ 22.85
Main Hornblocks (CI)	£ 85.50	Outer Dome (GM)	£ 45.65
Solid Axleboxes (GM)	£ 150.00	Dome Bush (GM)	£ 11.70
Solid Axleboxes (CI)	£ 72.60	Inner Dome (GM)	£ 13.05
Split Axleboxes & Keeps (GM)	£ 163.25	Regulator Cast'g Set (GM)	£ 28.80
Split Axleboxes & Keeps (CI)	£ 79.00	Grate - Stainless Steel	£ 14.50
Vertical Frame Stays (CI) 2 off	£ 31.65	Firegrate	£ 15.00
Horizontal Frame Stay (CI)	£ 24.00	Laser Cut Cab Sides (Zintec)	£ 28.30
Brake Stretcher (GM)	£ 25.35	Laser Cut Cab Sides (Brass)	£ 49.35
Laser Cut Bogie Frames (3mm)	£ 14.00	Laser Cut Tender Frames (3mm)	£ 47.00
Bogie Hornblocks (GM)	£ 25.20	Tender Buffer Beam Steel	£ 20.75
Bogie Axleboxes (GM)	£ 36.25	Tender Hornblocks (GM)	£ 32.40
Bogie Wheels (CI)	£ 76.00	Tender Axleboxes (GM)	£ 57.50
Laser Cut Motion Support Brkts	£ 16.00	Tender Cast Springs (GM)	£ 42.50
Water Cut Expansion Links	£ 47.25	Tender Wheels (CI) Spoked	£ 120.00
Laser Cut Exp.Link Outer Covers	£ 7.50	Tender Wheels (CI) Disc type	£ 132.30
Driving & Coupled Wheels (CI)	£ 260.10	Laser Cut Tender Brake Shoe Ring	£ 15.15
Cylinder Castings (GM) (Piston valve)	POA	Tender Axlebox Covers (GM)	£ 6.35
Cylinder Castings (CI) (Piston valve)	£ 163.00	Laser Cut Tender Body Kit (brass)	£ 325.00
Cylinder Set - Slide Valve Version (CI)	£ 228.50	Laser Cut Tender Brake Beams & Hangers	£ 14.50
Piston Blanks (GM)	£ 35.45	Tender Handpump & Tee (GM)	£ 27.75
Piston Blanks (CI)	£ 5.50	Tender Water Pick Up Dome (ALI)	£ 5.00
		Finished s/valves 1/2"x26T (2 req'd) Each	£ 25.00

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Updated 27-7-18

5"G STIRLING SINGLE

Not as well known as the 8'0" 'Bogie Single', this 2-2-2 engine has inside cylinders and Stephenson's valve gear. A relatively quick engine to build, a bit of old world nostalgia. 5" version designed by Martin Evans. Drawings are dual dimensioned for 5" and 7.1/4" g. Construction described in 'Model Engineer' vols 155-157.



Drawings (11 sheets) LO971	£ 54.50	Big End Bearings GM	£ 8.70
Laser Cut Frames (3mm)		Crosshead Pump GM	£ 9.90
(Inside & outside) Set of 4	£ 120.50	Brake Cylinder GM	£ 8.10
Laser Cut Conn Rods & Straps (Pr)	£ 16.50	Smokebox Door GM	£ 13.00
Main Hornblocks GM	£ 27.85	Smokebox Front Plate GM	£ 27.25
Main Hornblocks CI	£ 18.30	Smokebox Rear Plate GM	£ 9.15
Main Axleboxes GM	£ 27.40	Smokebox Rear Ring GM	£ 26.40
Main Axleboxes CI	£ 16.30	Chimney GM	£ 43.25
Leading/Trailing Horns GM	£ 13.70	Safety Valve Cover Brass	£ 29.25
Leading/Trailing Axleboxes GM	£ 28.60	Grate CI	£ 12.40
Leading/Trailing Wheels CI	£ 80.60	Grate Stainless Steel	£ 12.50
Frame Spacers GM	£ 26.10	Laser Cut Tender Frames (3mm)	£ 43.25
Motion Plate GM	£ 25.85	Tender Horns GM	£ 30.60
Valve Spindle Guides GM	£ 8.00	Tender Axleboxes GM	£ 58.10
Driving Wheels CI	£ 107.00	Tender Stretchers GM	£ 32.00
Cylinder Set GM	£ 183.00	Tender Brake Shoes CI (Ring)	£ 12.55
Cylinder Set CI	£ 105.00	Tender Wheels CI	£ 120.00
Piston Blanks GM	£ 11.55	Tender Handpump & Covers	} £ 42.50
Piston Blanks CI	£ 3.00	(Double Acting)	
Eccentric Straps GM	£ 31.20	Tender Dummy Springs GM	£ 38.15

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Updated 27-7-18

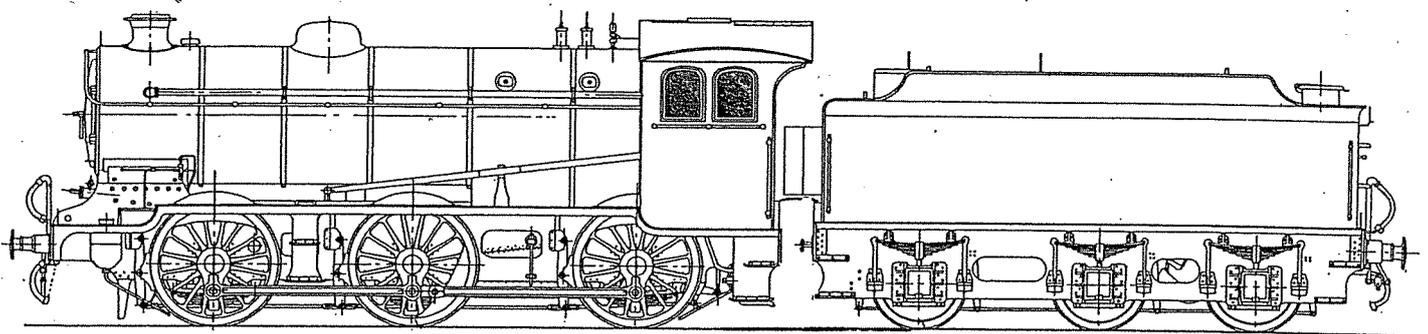
STRATFORD LNER CLASS J39 - 5"G

0-6-0 Loco & Tender 5"g. Designed By Martin Evans.

Described in 'Model Engineer' volumes 150 - 152.

Length (including tender) 58.5/8", Cylinders 1.1/2" bore x 2.1/4" stroke,

Driving Wheels 5.1/2" dia, Boiler 5.1/2" dia.



Drawings LO965 (13 sheets)	£ 60.00	Exhaust Manifold (GM)	£ 8.40
Laser Cut Frames (3mm)	£ 87.50	Crossheads (GM)	£ 19.55
Main Hornblocks - 1 piece type (GM)	£ 80.00	Driving & Coupled Wheels (CI)	£ 249.00
Main Hornblocks - 1 piece type (CI)	£ 50.00	Smokebox Door (GM)	£ 21.75
Main Hornblocks - Scale (GM)	£ 58.00	Smokebox Front & Rear Rings (GM)	£ 57.50
Main Hornblocks - Scale (CI)	£ 35.00	Smokebox Saddle (GM)	£ 37.00
Main Axleboxes & keeps (split type) (GM)	£ 138.00	Dome (GM)	£ 28.75
Main Axleboxes & keeps (split type) (CI)	£ 82.40	Chimney (GM)	£ 23.55
Main Axleboxes (solid type) (GM)	£ 99.30	Loco Brake Shoes (CI) RING	£ 14.40
Main Axleboxes (solid type) (CI)	£ 48.00	Stainless Steel Grate	£ 14.50
Spring Hangers (12) (GM)	£ 32.40	Firegrate (CI)	POA
Buffer Beam Angles (6) (GM)	£ 41.00	Laser Cut Tender Frames (3mm)	£ 42.00
Running Board Supports (large & small) (GM) }	£ 25.80	Tender Hornblocks (GM)	£ 49.75
Motion Plate & Bearing Supports (GM)	£ 34.00	Tender Axleboxes (GM)	£ 99.00
Eccentric Straps (GM)	£ 30.35	Tender Dummy Springs (GM)	£ 35.30
Vacuum Brake Cyl & Cover (GM)	£ 40.70	Tender Spring Stops (GM)	£ 14.15
Cylinder Set (CI)	£ 144.50	Tender Stretchers (GM)	£ 32.30
Cylinder Set (GM)	£ 320.00	Tender Brake Shoes Ring (CI)	£ 12.50
Piston Blanks (CI)	£ 4.00	Tender Handpump & Tee (GM)	£ 28.00
Piston Blanks (GM)	£ 19.60	Tender Wheels (CI)	£ 153.90
Piston Rings 1.1/2"od x 1/8" wide Set of 4	£ 32.00		

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5" G SWEET PEA

Probably the most popular model loco ever designed. 5" Gauge 0-4-0 narrow gauge loco with Hackworth valve gear & marine type boiler. Prototype designed & built by Jack Buckler of Leeds. Illustrated leaflet of Sweet Pea available on request. Please send s.a.e.

Drawings (8 sheets) (Now includes both 0-4-0 & 0-4-2 versions)	£ 40.00	Rear Ring GM	£ 32.00
GA Drawing only (sheet 1)	£ 5.00	Brass Smokebox rolled & Silver soldered	£ 32.00
Construction Manual by Jack Buckler	£ 15.95	Saddle Aluminium	£ 25.00
Laser Cut Frames (5mm)	£ 52.50	Saddle GM	£ 75.00
Laser Cut Buffer Beams (5mm)	£ 27.30	Tank Filler Lid GM	£ 19.25
Laser Cut Frame Stretchers (5mm) (Set of 5)	£ 17.50	Regulator GM	£ 18.70
Frame & Stay Angle	£ 18.90	Manifold GM	£ 12.60
Hornblocks GM	£ 61.60	Header Bush & Flange GM	£ 14.30
Axleboxes CI	£ 43.30	Axle Pump GM	£ 12.30
Wheels CI	£ 118.00	Hand Pump & Tee GM	£ 18.30
Axle Material (Ground BMS)	£ 8.50	Brake Blocks CI	£ 7.90
Set (8) Suspension Springs	£ 8.00	Brake Support Bracket GM	£ 13.75
Motion Plates GM	£ 15.15	Reverser Stand Support Bracket GM	£ 26.15
Conn & Coupling Rod Brasses GM	£ 32.25	Firegrate CI	£ 16.00
Eccentric Strap GM	£ 10.80	Firegrate Stainless Steel	£ 15.00
Eccentric Sheave BMS	£ 1.50	O' Ring Set:	
Cylinder Set CI	£ 207.65	1 x 007, 3 x 012, 2 x 008 }	£ 3.24
Valves Pair GM	£ 16.80	1 x 011, 2 x 010 }	
Pistons CI	£ 3.50	Finished Handbrake screw & nut with square thread	£ 36.00
Pistons GM	£ 20.70	Brass Boiler Band Material 12' x 1/2'	£ 28.20
Piston Rings 1.1/2"od x 1/8" set of 4	£ 32.00	Saddle Tank Brass Materials (Excluding Ends)	£ 37.25
Cylinder Steam Chest Studs 4BA x 1.5/8" (20 off)	£ 10.80	Flanged Saddle Tank Ends (copper)	£ 40.00
Chimney Base & Cap GM	£ 32.50	Pressure Gauge 1" dia 0-120	£ 21.00
Smokebox Door GM	£ 19.80	Cab, Laser cut & folded, with circular spectacle holes, roof laser cut & rolled to correct radius - all in 16g steel	£ 135.50
Smokebox Ring GM	£ 25.00		
Brass Cleading Sheet for Boiler	£ 22.50		
Boiler Insulation Material Set (= 1/4" thick Kaowool)	£ 8.75		

Boiler Material Kit (inc. flanged plates) Non-Superheated Type
 Boiler Material Kit (inc. flanged plates) Superheated Type

P.O.A
 P.O.A

LASER CUT PARTS

Set comprising of:	
2 off Vibrating Levers (5mm)	}
2 off Return Cranks (5mm)	
2 off Brake hangers (5mm)	
1 off Brake Beam (5mm)	
2 off Crosshead Side Plates (3mm)	
	£ 22.50

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 5-7-18

SWEET PEA

In addition to the supply of unmachined castings, we can now offer the following machined or ready made parts.

Laser Cut Frames (Standard 0-4-0 Version) (5mm) with Laser crossed hole locations for drilling	(per pair) }	£	52.50
Laser Cut Frames (0-4-2 Version for Trailing pony truck) (5mm) with Laser crossed hole locations for drilling	(per pair) }	£	53.00
Laser Cut Buffer Beams	(per pair)	£	27.30
Fully Machined Steel Wheels	Set of 4 (EN8)	£	132.00
Stainless Steel Ashpan kit - comprises; laser cut closure plate (4mm) All baffles, doors etc, laser cut outer wrapper rolled & welded to closure plate - excluding firegrate (available separately)	}	£	80.00
By-pass Valve - 3/16 - under floor type		£	31.45
Finished Safety Valve 1/2" x 26T (2 req'd)	Each	£	25.00
Finished Blowdown Valve 5/16" x 32T		£	26.75

STARTER KIT

To assist the modeller we offer a starter kit which comprises of all the drawings, castings, materials & fasteners, laser cut frames, laser cut buffer beams, laser cut stretchers, to make rolling chassis

£ 509.50

TRAILING PONY TRUCK By Jack Buckler

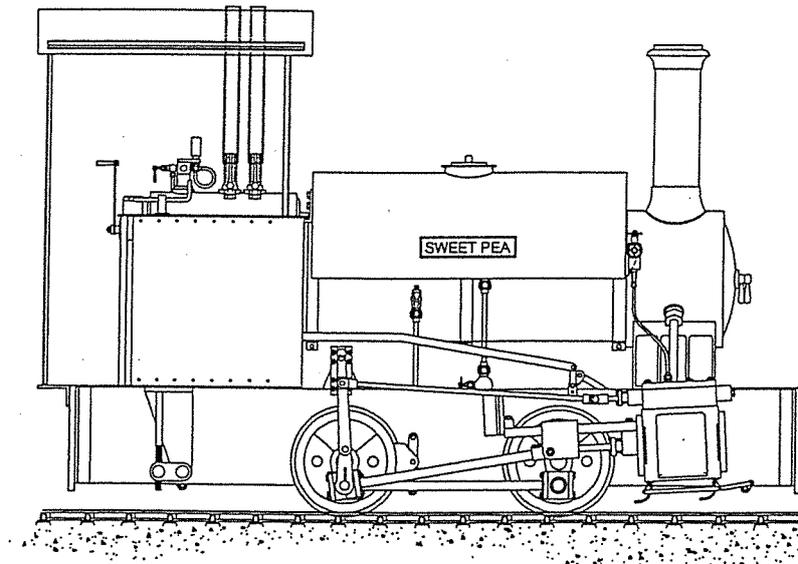
Converts Sweet Pea into a 0-4-2. The overall Loco length and wheel base remain the same as Sweet Pea. The additional wheel and Pony Truck fit easily under the boiler.

Set of Materials including Wheels and Instructions.

£ 65.39

Set of Wheels only C1

£ 37.70

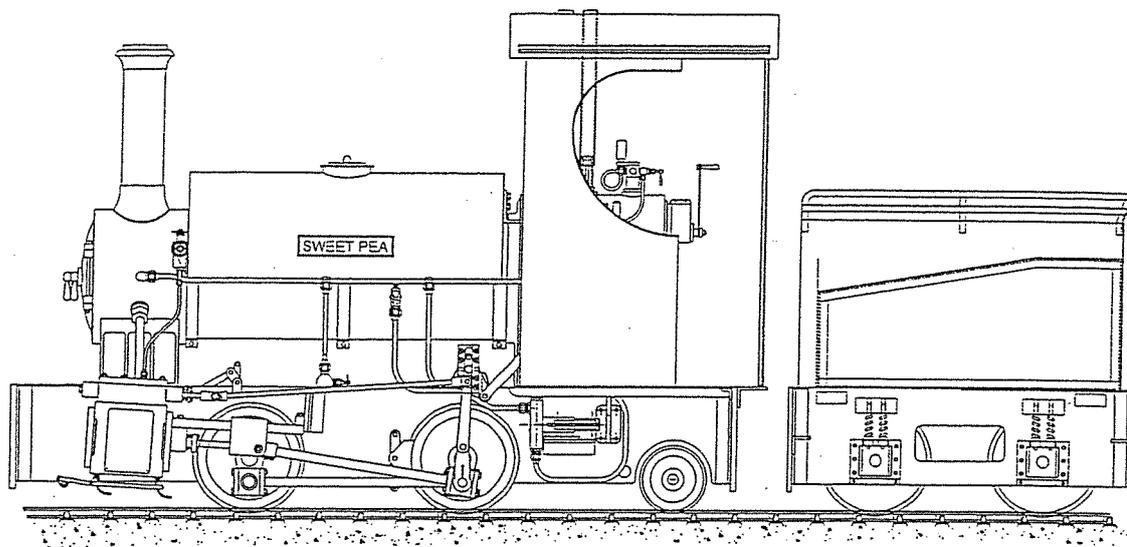


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Updated 7-8-17

SWEET PEA TENDER

14" Long - 4 Wheels, Water Tank and Coal carrying,
ideal if injector fitted



Drawing (1 sheet)	£ 5.00	Axle Material BMS	£ 3.60
Laser Cut Frames (5mm)	£ 33.00	Horn Material BMS	£ 4.00
Laser Cut Buffer Beams (5mm)	£ 29.00	Suspension Springs (8) No. 50	£ 8.00
Buffer Angle	£ 9.45	Wheels - CNC Machined EN8 Steel	£ 80.50
Axleboxes CI	£ 34.80	(set of 4)	
Kit of Material Including drawings, castings, Laser cut Frames & Buffer Beams, materials and fasteners to make chassis			£ 263.80
Tender Tank Brass inc filler tube and fixing angles			£ 157.00

SWEET PEA RALLY DVD'S

10th Sweet Pea Rally - Cambridge MES June 2002	£ 14.25
11th Sweet Pea Rally - Lancaster & Morecambe MES June 2003	£ 14.25
12th Sweet Pea Rally - Fareham MES June 2004	£ 20.75
13th Sweet Pea Rally - Nottingham MES June 2005	£ 14.25
14th Sweet Pea Rally - Guildford June 2006	£ 14.25
15th Sweet Pea Rally - Scunthorpe MES June 2007	£ 12.00
16th Sweet Pea Rally - City of Oxford MES June 2008	£ 14.25
18th Sweet Pea Rally - Fareham & District SME June 2010	£ 14.25
Sweet Pea Day at Derby - 2014	£ 8.35
23rd Sweet Pea Rally - Northampton MES June 2015	£ 11.25
24th Sweet Pea Rally - Farnham MES June 2016	£ 9.15

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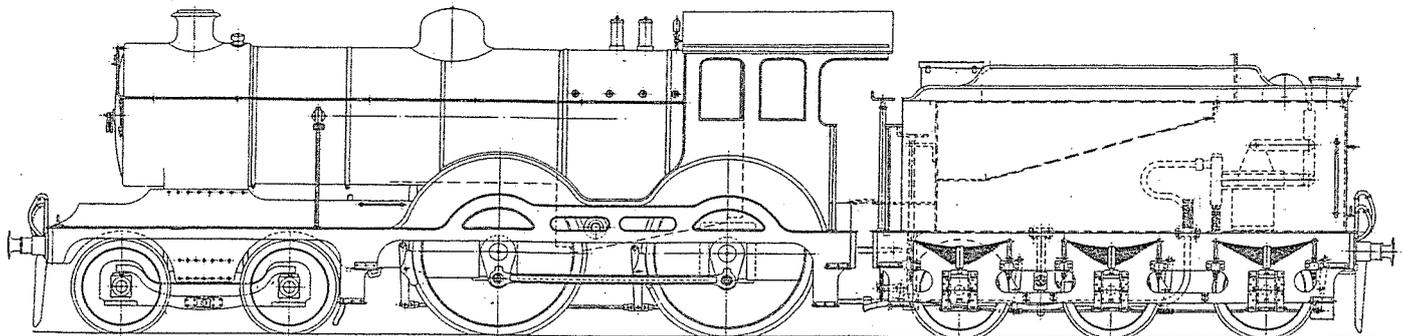
Updated 27-7-18

SUPERCLAUD 5"G - GER 4-4-0 LOCO & TENDER 5"G

Designed by Martin Evans. Described in 'Model Engineer' volume 142.

Length - inc tender 56", Cylinders 1.1/2" bore x 2.1/4" stroke,

Driving Wheels 7" dia, Boiler dia 5.1/2".



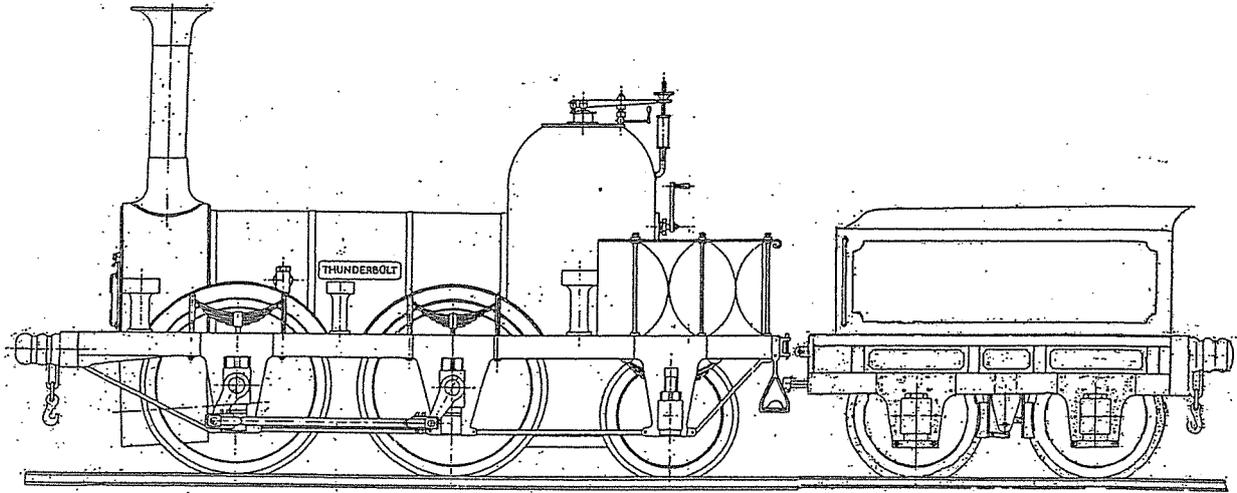
Drawings LO947 (10 sheets)	£	45.00	Steam Chest Exhaust Fitting	}	£	14.40
Laser Cut Frames (3mm)	£	118.90	& Blast Pipe Flange GM		£	21.60
Buffer Beam Steel	£	14.50	Eccentric Straps GM	£	8.70	
Main Hornblocks GM	£	80.30	Big End Brasses GM	£	29.25	
Main Hornblocks CI	£	42.00	Motion Plate with Rocking Brkt GM	£	8.60	
Main Axleboxes (solid) GM	£	66.00	Brake Cylinder GM	£	26.50	
Main Axleboxes (solid) CI	£	31.65	Smokebox Door GM	£	31.75	
Main Axleboxes (split type) GM	£	98.00	Smokebox Ring GM	£	49.50	
Main Axleboxes (split type) CI	£	50.00	Smokebox/Boiler Joint Ring GM	£	40.00	
Bogie Axleboxes GM	£	38.70	Saddle GM	£	23.40	
Bogie Centre GM	£	46.75	Chimney GM	£	31.00	
Bogie Centre CI	£	22.60	Dome GM	£	9.60	
Bogie Wheels CI	£	86.20	Dome Bush GM	£	17.90	
Bogie Hornblocks GM	£	18.00	Inner Dome GM	£	25.20	
Bogie Stay	POA		Tender Hornblocks GM	£	42.10	
Driving & Coupled Wheels CI	£	200.00	Tender Dummy Springs GM	£	58.60	
Cylinder Set CI	£	134.50	Tender Axleboxes GM	£	129.30	
Cylinder Set GM	£	275.00	Tender Wheels CI	£	28.40	
Piston Blanks CI	£	4.00	Hand Pump & Tee GM	£		
Piston Blanks GM	£	30.00				
Piston Rings 1.1/2"od x 1/8" wide						
Set of 4	£	32.00				

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Updated 27-7-18

TITFIELD THUNDERBOLT - 0-4-2 Tender Locomotive in 5"G

Model Designed by L.B.S.C, Based on the Famous Lion of the Liverpool & Manchester Railway. Described in Model Engineer Vol 108 -110.

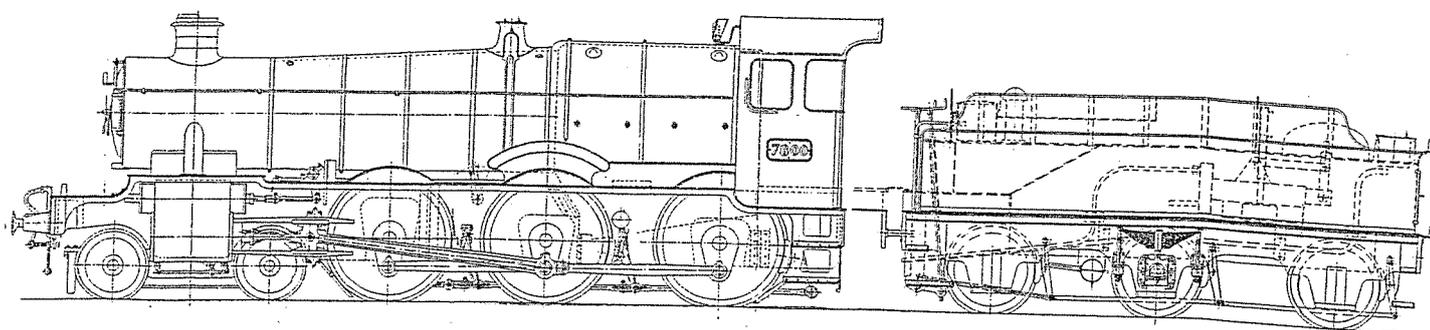


Drawings (13 shts)	£	51.00	Cylinder Set GM		£	200.00
Laser Cut Loco Inside Frames (3mm)	}	£	16.40	Cylinder Set CI	£	100.00
Laser Cut Loco Horns, Main & Trailing (3mm)		£	21.50	Piston Blanks GM	£	14.85
Main & Trailing Axleboxes GM		£	36.50	Piston Blanks CI	£	3.00
Driving & Coupled Wheels CI		£	104.00	Grate CI	£	9.60
Trailing Wheels CI		£	28.90	Smokebox Front GM	£	26.15
Motion Plate GM		£	20.65	Firebox Top GM	£	40.85
Motion Plate CI		£	12.55	Chimney Base & Top GM	£	27.80
Motion Plate (Laser Cut) 5mm		£	11.90	Laser Cut Tender Frames (3mm)	£	24.00
Eccentric Straps GM		£	18.60	Laser Cut Tender Horns 2.5mm	}	£
Pump GM		£	5.70	Set of 4		
Rocking Shaft Bearings GM		£	5.70	Tender Axleboxes GM	£	30.35
Main & Trailing Dummy Spgs GM		£	15.15	Tender Wheels CI	£	74.80
				Tender Handpump & Tee GM	£	12.00

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Updated 2-8-18

5" G TORQUAY MANOR

GWR 4-6-0 Tender locomotive. Two outside cylinders inside Stephenson's valve gear.
Designed in 5" gauge by Martin Evans. Described in "Model Engineer" Vol 138/139



Drawings (15 sheets) LO940	£ 68.00	Cyl. Set - Slide Valve GM	£ 430.00
Laser Cut Main Frames (3mm)	£ 120.00	Cyl. Set - Slide Valve CI	£ 233.00
Buffer Beam Steel	£ 8.00	Cyl. Set - Piston Valve CI	£ 144.00
Stretchers B,D & F GM	£ 71.80	Pistons GM	£ 27.55
Main Horns - 1 Piece GM	£ 121.25	Pistons CI	£ 5.00
Main Horns - 1 Piece CI	£ 71.65	Saddle GM	£ 50.00
Horn Cheeks - 2 Piece GM	£ 51.15	Smokebox Door GM	£ 27.15
Main Axleboxes - Solid GM	£ 97.20	Smokebox Ring GM	£ 33.15
Main Axleboxes - Solid CI	£ 48.00	Chimney GM	£ 30.15
Main Axleboxes - Split GM	£ 148.00	Petticote Pipe GM	£ 32.50
Main Axleboxes - Split CI	£ 76.20	Safety Valve Bush & Base GM	£ 14.85
Laser Cut Bogie Equalisers (4off)	£ 23.00	Stainless Steel Grate	£ 15.50
Laser Cut Bogie Top Bar Frame (1 off)	£ 16.00	Firegrate CI	£ 15.75
Bogie Centre GM	£ 42.00	Laser Cut Tender Frames (3mm)	£ 49.00
Bogie Hornblocks GM	£ 28.10	Tender Buffer Beam Steel	£ 10.00
Bogie Axleboxes GM	£ 32.85	Tender Hornblocks GM	£ 31.30
Bogie Wheels	£ 63.20	Tender Wheels	£ 129.30
Driving & Coupled Wheels	£ 235.80	Tender Axleboxes GM	£ 76.50
Motion Brackets GM	£ 24.20	Tender Springs GM	£ 50.40
Boiler Support GM	£ 25.70	Tender Stretchers (2 off) GM	£ 39.05
Eccentric Straps GM	£ 32.70	Tender Stretcher A GM	£ 17.60
Weighshaft Bearings GM	£ 5.50	Tender Handpump & Tee GM	£ 28.80
Rocking Shaft Support GM	£ 28.55	Safety Valve Cover Brass	£ 14.25
Loco Brake shoe Ring CI	£ 17.50	Brake Shoes Tender CI	£ 10.20
		Tender Water Pick Up Dome GM	£ 29.00

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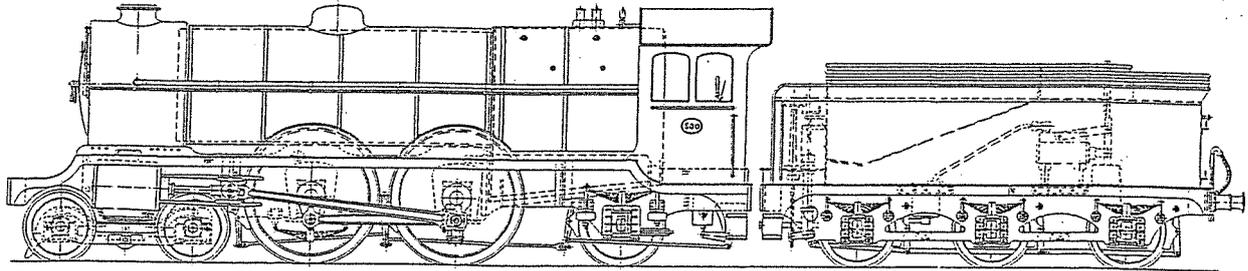
Updated 2-8-18

WAVERLEY NORTH BRITISH 'ATLANTIC' 4-4-2 LOCO & TENDER 5"G

Designed by Martin Evans. Described in 'Model Engineer' volume 155/156.

Length (loco) 38.7/8" lg ,Cylinders 1.5/8" bore x 2.3/8" stroke,

Driving Wheels 7.362" dia.



Drawings LO970 (11 sheets)	£ 51.00	Piston Blanks CI	£ 3.25
Laser Cut Frames Main & Trailing (3mm)	£ 119.20	Piston Blanks GM	£ 21.65
Main Hornblocks CI	£ 41.10	Piston Rings 1.5/8"od x 1/8" wide (4)	£ 32.00
Main Hornblocks GM	£ 95.50	Smokebox Door GM	£ 41.50
Main Axleboxes (solid type) CI	£ 32.25	Smokebox Front Plate/Ring GM	£ 31.50
Main Axleboxes (solid type) GM	£ 65.00	Smokebox / Boiler Ring GM	£ 48.25
Main Axleboxes (split type) CI	£ 43.75	Chimney GM	£ 19.75
Main Axleboxes (split type) GM	£ 106.30	Petticoat Pipe GM	£ 33.50
Bogie Centre GM	£ 46.00	Dome Bush GM	£ 15.95
Bogie Horns GM	£ 33.15	Dome GM	£ 25.50
Bogie Centre Bearing BMS	£ 1.50	Inner Dome GM	£ 17.60
Bogie Axleboxes GM	£ 34.40	Regulator GM	£ 13.80
Bogie Equalisers GM	£ 26.50	Stainless Steel Grate	£ 16.50
Bogie Wheels CI	£ 62.00	Superheater Header Bush	} £ 18.50
Trailing Horns GM	P.O.A	& Backhead Reg Bush GM	
Trailing Axleboxes & Covers GM	£ 42.30	Brake Cylinder GM	£ 7.00
Trailing Wheels CI	£ 36.80	Loco & Tender Brake Shoes CI	P.O.A
Weighshaft Bearings GM	£ 4.10	Tender Hornblocks GM	£ 39.60
Eccentric Straps GM	£ 30.00	Tender Axleboxes GM	£ 67.10
Driving & Coupled Wheels	} £ 184.00	Tender Wheels CI	£ 120.00
(21 spokes) CI			Tender Handpump & Covers
Cylinder Set CI	£ 199.00	(Double Acting) GM	
Cylinder Set GM	£ 395.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 20-6-18

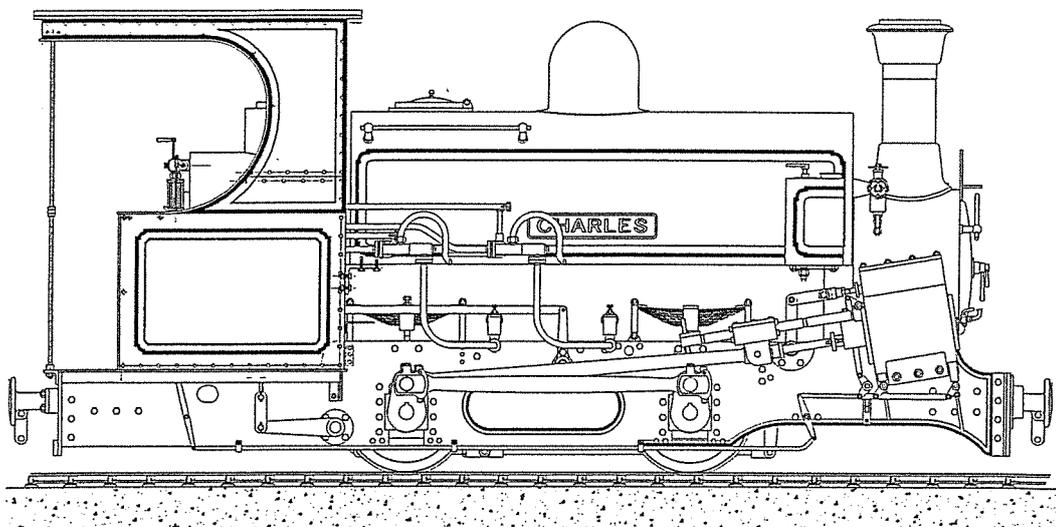
CHARLES - 0-4-0 Narrow Gauge Saddle Tank Locomotive in 7.1/4"G

7.1/4" g 0-4-0 Charles saddle tank loco. One of the Three Sister Engines built by Hunslet Engine Co. Charles, Linda or Blanche can be made from the castings.

Drawings are of the Charles version: Charles 1882 (works No. 283)

Linda 1893 (works No. 590) Blanche 1893 (works No. 589)

Length - 71.3/4", boiler dia - 9.5/8", cylinder bore - 2.3/4" x 3.3/4" stroke, driving wheel dia 8".



Drawings (28 sheets)	£ 150.00	Regulator GM	£ 111.75
Drawings - Individual sheets	£ 6.00	Check Valves GM	£ 30.25
Buffer Beam Coupler support	}	Smokebox Door CI	£ 73.00
Castings Front & Rear CI		£ 33.50	Chimney Base CI
Brake Blocks Ring CI	£ 70.00	Saddle Tank Filler Cap GM	POA
Cylinder Set CI (14 castings)	£ 758.00	Saddle Tank Filler Flange GM	POA
Piston Blanks CI	£ 12.00	Dome Brass	£ 85.50
Crossheads CI (2)	£ 75.50	Dome Ali	POA
Rocking Shaft Brackets CI	£ 37.50	Backhead Cleading Supports Straight GM	} £ 104.00
Weighshaft Brackets GM	£ 15.75	Backhead Cleading Supports Curved GM	
Wheels Centres	£ 317.00	Nameplates 'Charles' Brass or GM	POA
Wheel Rims - BMS Blanks	POA	Tender Axleboxes CI	POA
Axleboxes & Keeps CI	POA	Tender Wheels CI	POA
Cranks CI	£ 165.50	Tender Brake Blocks CI	POA
Eccentric Sheaves CI (4)	£ 27.00		
Eccentric Straps GM (4)	£ 221.75		
Exhaust 'Y' Block GM	£ 40.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 24-5-18

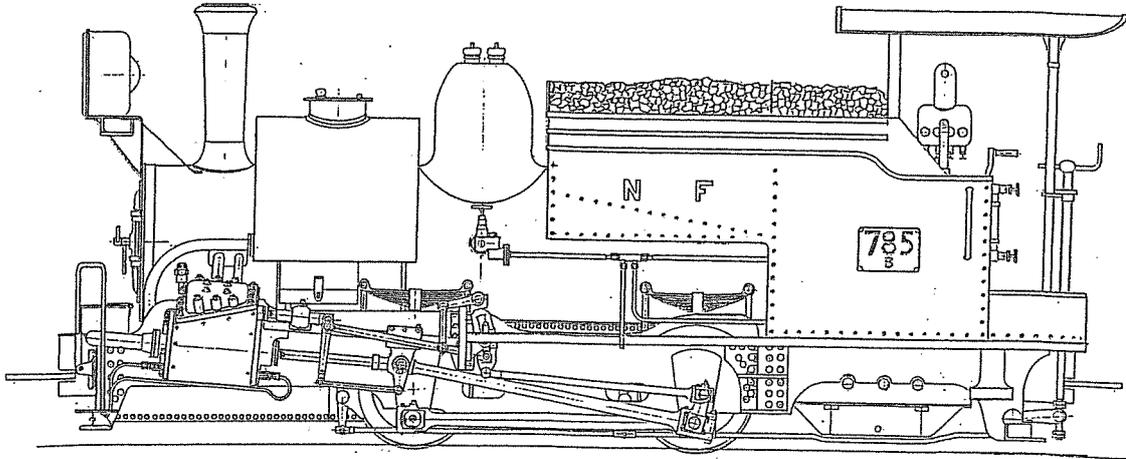
7.1/4" G DARJEELING HIMALAYAN RAILWAY 'B' CLASS 0-4-0 LOCOMOTIVE

Designed & built by Alan Cooper the loco is roughly 1/3 full size (actual size is 1:3.31) and makes a substantial model capable of hard work on tight curves & steep gradients. The prototype model made its first public appearance at the Harrogate 'ME' show in May 2013, and attracted considerable interest.

Overall length 78"

Cylinder bore 3.1/2" Boiler pressure 110psi

Weight approx 650kg



Drawings (35 sheets)	£ 160.00	Exp Link Bkts RH & LH CI	£ 29.00
Individual Sheets each	£ 5.00	Safety Chain Lugs CI (set of 4)	£ 34.00
Laser Cut Frames Main Frames (8mm) & Rear frames (6mm)	£ 165.00	Smokebox Door ring CI	£ 118.00
Front Drag Box ALI	£ 115.00	Smokebox Door CI	£ 66.00
Rear Drag Box ALI	£ 97.50	Chimney CI	£ 114.50
Cannon boxes	POA	Outer Dome ALI	£ 112.00
Axleboxes CI (4)	POA	Firehole Doors CI	£ 41.50
Hornblocks CI (4)	£ 136.00	Dummy Detroit Lubricator ALI	£ 50.75
Frame Joint Brackets RH & LH CI	£ 72.00	Check Valves RH & LH GM (pair)	£ 61.00
Wheels CI (4)	£ 312.00	Saddle Tank End Panels ALI	POA
Wheels (steel discs)	POA	Laser Cut Well Tank Sides BMS (3mm)	£ 60.00
Flycranks CI (4)	£ 160.00	Laser Cut Bunker & Cab Parts BMS	£ -
Motion Brackets RH & LH CI	£ 78.50	Regulator GM	£ 25.00
Weighshaft Brackets RH & LH CI	£ 19.50		
Smokebox Stretcher CI	POA		
Brake Hangers CI	£ 29.00		
Brake Blocks (Ring) CI	£ 45.50		
Cylinder Set CI (8 castings)	£ 460.00		
Piston Blanks CI	£ 23.50		
Valve Spindle Guides RH & LH CI	£ 27.00		
Crossheads RH & LH CI	£ 95.00		
Spring Stetchers	POA		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 30-5-18

DART 7.1/4"G

GWR Class 14XX 0-4-2 tank loco by Martin Evans. Two inside cylinders & Stephenson's link valve gear in 7.1/4" g. Plenty of pulling power but not too big to transport.
Described in 'Model Engineer' vols. 147 - 149

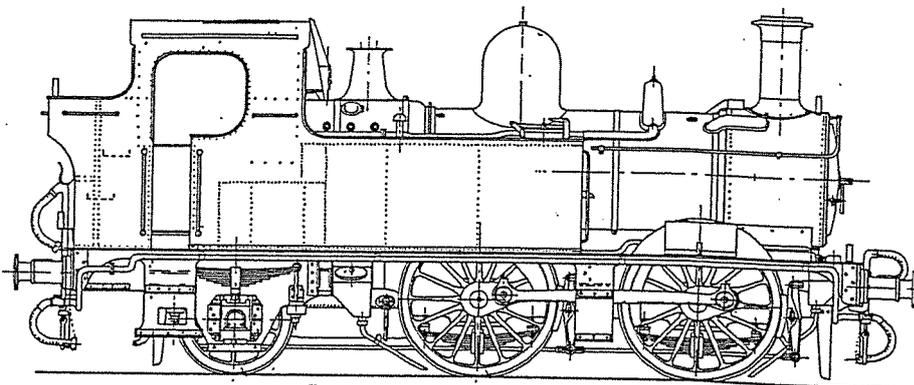
SPECIFICATIONS

LENGTH (loco): 49"

BOILER DIA: 6.1/8"

CYLINDER BORE: 1.9/16"

DRIVING WHEEL DIA: 7.7/8"



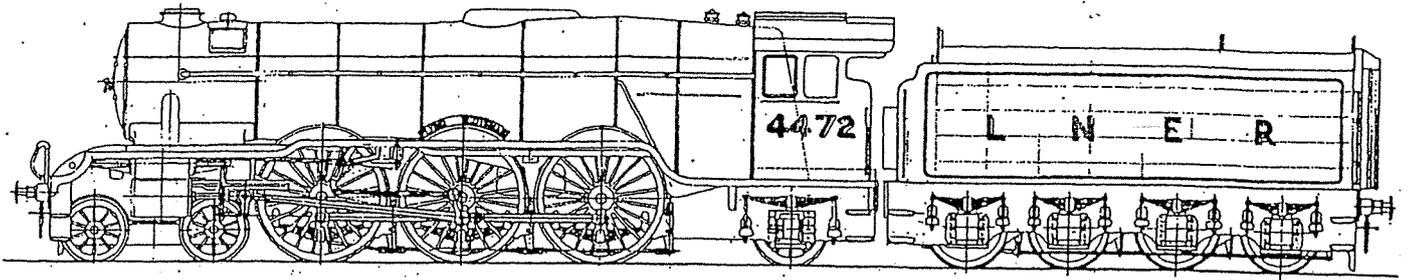
Drawings (15 sheets) LO961	£ 68.00	Brake Cylinder & Covers GM	£ 25.10
Laser Cut Frames (5mm) & Outside Frames (3mm) }	£ 172.00	Brake Hangers GM	£ 19.00
Laser Cut Buffer Beams (5mm)	£ 44.75	Brake Shoes CI	£ 18.40
Laser Cut Stretchers (3mm) }		Buffer Stocks CI	£ 48.75
A 'B' 'C' 'D' 'E' 'F' & 'H' (2 off) }	£ 54.75	Smokebox Saddle GM	£ 80.75
Main Hornblocks GM	£ 120.00	Smokebox Door GM	£ 37.50
Main Hornblocks CI	£ 60.50	Smokebox Front Ring GM	£ 54.75
Main Axleboxes Split GM	£ 114.00	Smokebox Rear Ring GM	£ 45.00
Main Axlebox Keeps GM	£ 40.70	Chimney GM	£ 58.75
Main Axleboxes Split CI	£ 68.00	Chimney CI	£ 28.75
Main Axlebox Keeps CI	£ 37.50	Dome Bush GM	£ 20.35
Motion Plate GM	£ 62.50	Inner Dome GM	£ 38.00
Trailing Hornblocks GM	£ 27.25	Dome GM	£ 100.00
Trailing Axleboxes GM	£ 46.20	Dome ALI	£ 37.50
Driving & Coupled Wheels	£ 287.60	Safety Valve Cover - Brass	£ 38.50
Trailing Wheels (W26)	£ 93.80	Regulator Stand GM	£ 29.15
Cylinder set GM - Set of 11 castings	£ 400.00	Safety Valve Base GM	£ 13.90
Cylinder set CI - Set of 11 castings	£ 206.50	Steam Turret GM	£ 14.10
Piston Blanks GM	£ 23.75	Firegrate CI	£ 21.00
Piston Blanks CI	£ 4.50	Handpump & Covers GM	£ 42.50
Piston Rings 1.9/16" x 1/8" wide 4 off	£ 32.00	(Double Acting)	
Eccentric Straps GM	£ 48.00	Running Board Supports - Large GM - set	£ 16.80
Big End Bearings GM	£ 20.25	Running Board Supports - Small GM - set	£ 12.00
Laser Cut Conn & Coup Rods (10mm & 12mm) }	£ 69.50		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-7-18

7.1/4"G FLYING SCOTSMAN LNER CLASS A3 PACIFIC

3 Cylinders with Walshaerts valve gear to outside cylinders & Gresleys conjugated valve gear to inside cylinder



NOTE: We do not offer drawings for the Sir Nigel Gresleys A3 or A4 in 7.1/4" g. But we do have most castings available for those who wish to build in 7.1/4" g and can source their own drawings - either by scaling up from 5" g or scaling down from full size

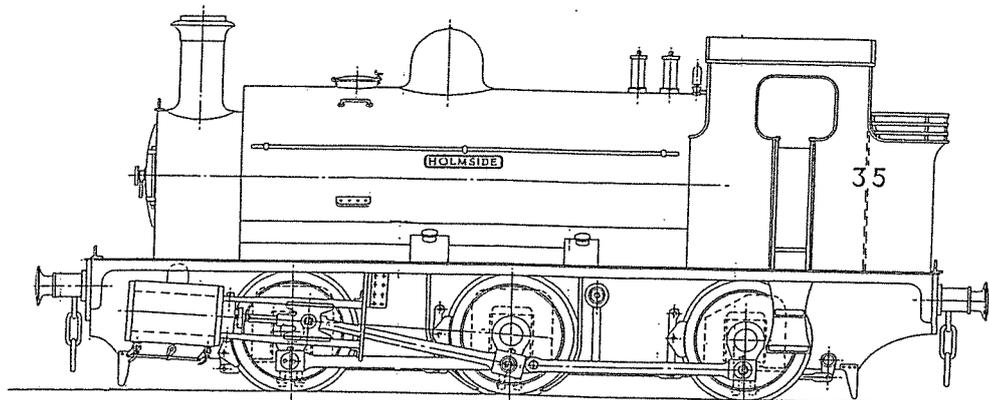
Main Hornblocks CI	£ 205.30	Smokebox Ring GM	POA
Main Axleboxes (Split type) & Keeps CI	POA	Smokebox Door CI	POA
Main Axleboxes (Split type) & Keeps GM	POA	Chimney Single GM	£ 44.00
Bogie Pin Stretcher CI	£ 42.55	Banjo Outer Dome GM	POA
Bogie Hornblocks GM	£ 60.00	Super Heater Covers GM	POA
Bogie Axleboxes GM	£ 106.70	Chimney - Double	POA
Bogie Wheels CI	£ 228.80	Double Blast Pipe	POA
Trailing Hornblocks GM	£ 33.00	Tender Hornblocks GM	£ 139.50
Trailing Cartazzi Axleboxes GM	£ 95.00	Tender Axleboxes GM	£ 318.00
Trailing Spencer Spring Blocks GM	£ 14.35	Tender Axleboxes CI	£ 153.50
Trailing Spring Hanger Cleats GM	£ 9.90	Tender Spencer Spring Blocks GM	£ 57.50
Trailing Wheels CI	£ 95.00	Tender Spring Hangers Cleats GM	£ 39.75
Driving & Coupled Wheels CI	£ 478.50	Tender Wheels (Disc Type) CI	£ 426.00
Steel Tyres for D & C Wheels	£ 90.00	Tender Brake Shoe Ring CI	£ 30.00
D & C Wheels Brake Shoe Ring CI	POA	Tender Dummy Springs GM	POA
Outside Cylinder Blocks & Covers CI	£ 230.00	Tender Spring Hangers GM	POA
Inside Cylinder Block & Covers CI	£ 167.50	Tender Dummy Water Scoop Dome ALI	POA
Piston Blanks GM - Set of 3	POA		
Piston Blanks CI - Set of 3	£ 55.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 20-6-18

7.1/4"G LOCO. HOLMSIDE

7.1/4" g 0-6-0 Saddle tank Locomotive.
 Two outside cylinders with inside Stephenson's link valve gear.
 Described in "Model Engineer" by Martin Evans. Vols 143-144

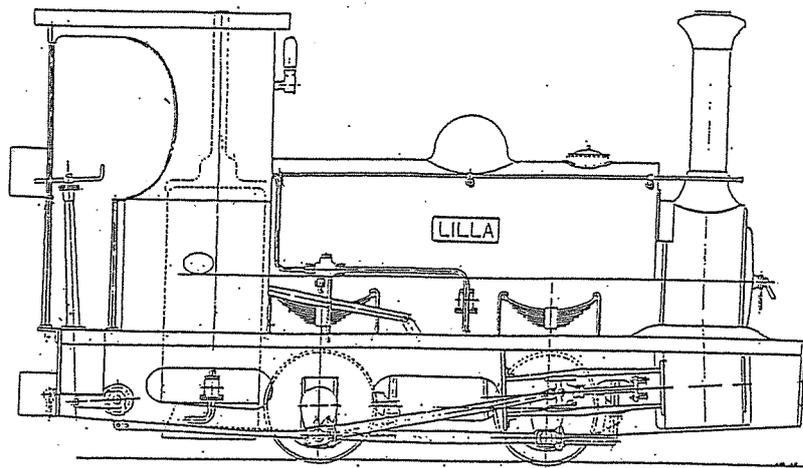


Drawings (10 sheets) LO949	£ 47.00	Cylinder Set (CI)	£ 346.00
Laser Cut Frames (5mm)	£ 120.00	Pistons Rings 2"od x 1/8" wide	
Buffer Beam Steel & Fixing angle	£ 32.30	Set of 4	£ 33.00
Horizontal Main Stay (CI)	£ 25.90	Pistons (CI)	£ 5.50
Vertical Main Stay (CI)	£ 31.65	Buffer Stocks (CI)	£ 37.40
Rear Stay (CI)	£ 23.50	Buffer Heads (CI)	£ 31.65
Brake Cylinder Stay (CI)	£ 13.15	Smokebox Door (CI)	£ 34.00
Hornblocks (CI)	£ 115.60	Smokebox Front Plate (CI)	£ 30.20
Axleboxes (CI)	£ 77.75	Chimney (CI)	£ 44.60
Axlebox Keeps (GM)	£ 75.00	Dome Bush (GM)	£ 14.30
Eccentric Sheaves		Dome (ALI)	£ 21.25
(Cast Meehanite) 4off }	£ 13.00	Regulator (Stroudleys) (GM)	£ 25.65
Eccentric Straps (GM) 4off	£ 48.00	Exhaust Pipe Tee Block (GM)	£ 24.75
Driving & Coupled Wheels (CI)	£ 301.80	Stainless Steel Grate	£ 16.00
Brake Cylinders & Covers (GM)	£ 16.25		
Brake Shoes (CI)	£ 20.00		

ALL PRICES ARE PLUS CARRIAGE AND VAT
 Updated 21-6-18

LILLA 7.1/4"G

7.1/4" gauge Version 0-4-0 contractors loco designed by Ross Harrison.
 Model of Hunslet loco No. 554 built in 1891
 for Cilgwyn Quarry and later at Penrhyn Quarry



Model 58. 1/4" long. 21.1/4" over buffer beams. Cylinders 2.1/2 bore x 4" stroke. 7.1/2" diameter wheels.

Drawings (7 sheets)	£ 35.00	Eccentric Sheaves (CI) (5)	£ 14.00
Laser Cut Main Frames (6mm)	£ 122.50	Eccentric Straps (GM)	£ 150.00
Laser Cut Buffer Beams (6mm)	£ 47.70	Smokebox Door (CI)	£ 55.20
Laser Cut Stretchers, Motion Plates,	} £ 71.50	Chimney Top (GM)	£ 106.20
Reversing Lever all 6mm (set)		Chimney Base (CI)	£ 67.00
Buffer Beam Fixing Angles	£ 25.50	Brake Shoes (CI)	£ 69.00
Wheels (CI)	£ 310.00	Nameplates 'LILLA' (GM) pair	£ 28.80
Cranks (CI)	£ 161.00	Dome Base Top Flange (GM)	£ 55.00
Axleboxes (CI)	£ 112.50	Inner Dome Fixing Flange (GM)	£ 55.00
Horns (CI)	£ 115.00	Inner Dome Top Plate (GM)	£ 35.00
Cylinder Set (CI)	£ 844.00	Smokebox Tubeplate Header Bush (GM)	£ 32.50
Piston Rings - 2.1/2" x 3/16" wide (4)	£ 39.00	Firebox Top Bush 4" dia (GM)	£ 83.75
Piston Blanks (CI)	£ 11.50	Firehole Ring (GM)	£ 57.50

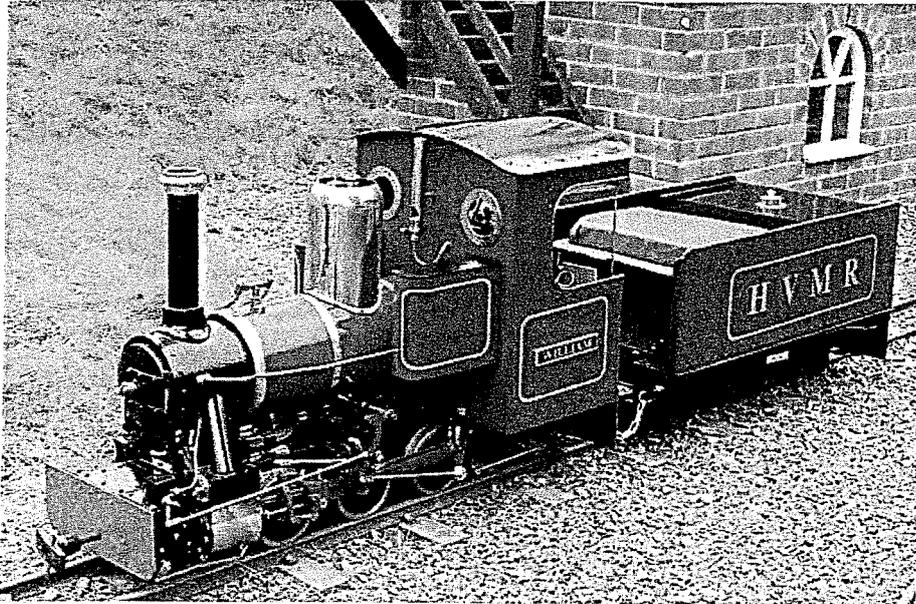
Boiler material (copper) kit flanged if required - available. Please ask for quotation.

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 14-7-18

7.1/4" G MAGGIE - ROMULUS STYLE LOCO & TENDER

Designed by Frank Birchall, developed from building a series of 6 locos. Based on the well known 'Romulus' but with 6 driving and coupled wheels, piston valve cylinders, walschaerts valve gear and locomotive type boiler. A well proven powerful passenger hauler.

Length 49.1/2", Boiler dia 8" dia x 41" long, Cylinders 2.1/4" bore x 3.7/8" stroke,
Driving wheels 6.1/4" dia over tread.



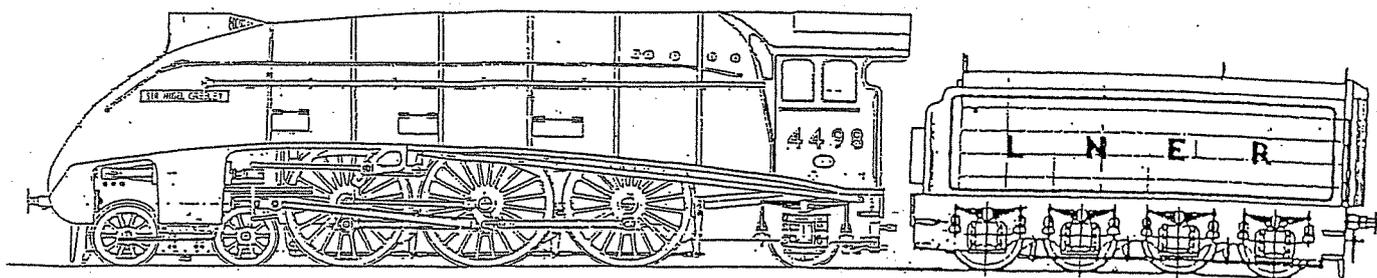
Drawings (25 sheets)	£ 70.00	Steam Pipe - Chamber GM	£ 21.60
Laser Cut Frames (6mm)	POA	Regulator Rod Boss - Bronze	£ 8.25
Hornblock Material (BMS)	£ 16.50	Firehole Door CI	POA
Axleboxes CI	POA	Smokebox Door CI	£ 32.20
Cylinder Set CI	POA	Smokebox Ring CI	POA
Piston Blanks CI	£ 6.25	Chimney Base CI	£ 33.00
Piston Rings	£ 36.00	Chimney Cap GM	POA
(4 off 2.1/4" x 3/16" wide)	}	Buffer Heads, Loco & Tender	£ 90.85
Piston Valve Rings		£ 90.60	
(12 off 1" x 1/16" wide)	}	Tender Wheels - Steel Blanks	POA
Axle Steel		£ 13.60	
Driving & Coupled Wheels (CI)	£ 384.00	Tender Suspension Springs	£ 28.20
Driving & Coupled Wheels	POA	(12 off 3/4" od x 10g x 2"lg)	
(steel blanks)	}		
Brake Shoes CI (2)		POA	
Regulator - Header GM	£ 22.85		
Regulator - Port Face GM	£ 32.40		
Regulator - Valve GM	£ 6.50		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-7-18

7.1/4" G QUICKSILVER LNER CLASS A4 PACIFIC

3 Cylinders with Walshaerts valve gear to outside cylinders & Gresleys conjugated valve gear to inside cylinder



NOTE: We do not offer drawings for the Sir Nigel Gresleys A3 or A4 in 7.1/4" g. But we do have most castings available for those who wish to build in 7.1/4" g and can source their own drawings - either by scaling up from 5" g or scaling down from full size

Main Hornblocks CI	£ 205.00	Chimney - Double	POA
Main Axleboxes (Split type) & Keeps CI	POA	Double Blast Pipe	POA
Main Axleboxes (Split type) & Keeps GM	POA	Tender Hornblocks GM	£ 139.50
Bogie Pin Stretcher CI	£ 42.55	Tender Axleboxes GM	£ 318.00
Bogie Hornblocks GM	£ 60.00	Tender Axleboxes CI	£ 153.50
Bogie Axleboxes GM	£ 106.70	Tender Spencer Spring Blocks GM	£ 57.50
Bogie Wheels CI	£ 228.80	Tender Spring Hangers Cleats GM	£ 39.60
Trailing Hornblocks GM	£ 33.15	Tender Wheels (Disc Type) CI	£ 426.00
Trailing Cartazzi Axleboxes GM	£ 95.00	Tender Brake Shoe Ring CI	£ 29.90
Trailing Spencer Spring Blocks GM	£ 14.35	Tender Dummy Springs GM (8)	£ 160.00
Trailing Spring Hanger Cleats GM	£ 9.90	Tender Spring Hangers GM (16)	£ 67.25
Trailing Wheels CI	£ 95.00	Tender Dummy Water Scoop Dome ALI	POA
Driving & Coupled Wheels CI	£ 478.50		
Steel Tyres for D & C Wheels	£ 90.00		
D & C Wheels Brake Shoe Ring CI	POA		
Outside Cylinder Blocks & Covers CI	£ 246.00		
Inside Cylinder Block & Covers CI	£ 167.50		
Piston Blanks GM - Set of 3	POA		
Piston Blanks CI - Set of 3	£ 71.75		
Smokebox Door CI	£ 22.00		
Smokebox Ring CI	POA		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 24-5-18

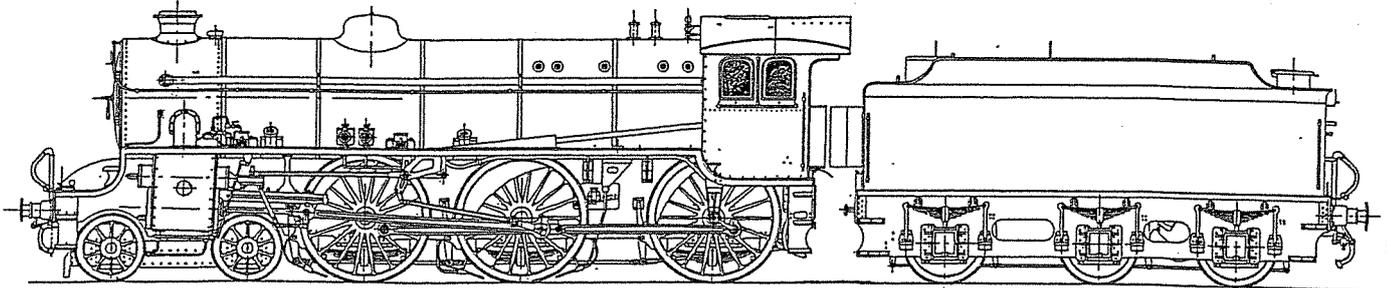
STEMBOK 4-6-0 Tender Loco in 7.1/4"G

7.1/4" g version of LNER Class B1 locomotive.

Designed by M. Breeze

Length (Loco & Tender): 92.1/2" Boiler dia: 8.1/2"

Cylinders: 2.1/2" Bore x 3.1/4 stroke Driving wheel dia: 9.3/4" over flange



Drawings (19 sheets) set	£ 100.00	Loco Buffer Heads & Stocks BMS	£ 11.00
Laser Cut Main Frames (5mm)	£ 131.00	Running Board Brackets GM - set of 4	£ 57.00
Loco Front Buffer Beam Steel & Fixing Angle	} £ 8.75	Smokebox Saddle CI	£ 41.50
Loco Drag Beam Steel & Fixing Angle		£ 20.25	Smokebox Saddle GM
Main Cross Stretcher CI	£ 45.75	Smokebox Door GM	£ 42.00
Intermediate Stretchers (pair) CI	£ 69.00	Smokebox Door CI	£ 20.15
Bogie Pin Stretcher CI	£ 42.55	Smokebox Ring GM	£ 108.40
Main Hornblocks CI	£ 205.00	Smokebox Ring CI	£ 42.00
Main Axleboxes & Keeps CI	£ 169.00	Chimney GM	£ 59.50
Main Axleboxes & Keeps GM	POA	Dome Bush GM	POA
Laser Cut Bogie Frames (5mm) + Keeps	£ 19.75	Inner Dome GM	£ 34.00
Bogie Hornblocks GM	£ 60.00	Outer Dome GM	£ 25.85
Bogie Axleboxes GM	£ 106.70	Regulator Block GM	£ 33.50
Bogie Centre Block BMS	£ 2.50	Superheater Return Bends GM	POA
Bogie Wheels CI	£ 228.80	Boiler Bushes GM bar	£ 35.00
Brake Cylinder & Stretcher GM	POA	Wet Header GM	POA
Loco Brake Shoes - CI ring (makes 12)	£ 44.00	Firegrate CI	£ 32.00
Driving & Coupled Wheels CI (6)	£ 468.00	Laser Cut Tender Frames (5mm)	£ 74.75
Main Axles Steel (set)	£ 13.00	Tender Buffer Beams & Fixing Angle	£ 32.50
Cylinder Set CI	£ 283.00	Tender Stretchers 'A' & 'B' BMS	£ 4.50
Piston Valve Liner Rear Covers GM	£ 39.60	Tender Hornblocks GM - set	£ 104.50
Valve Rod Crosshead Guides GM	£ 20.40	Tender Axleboxes GM - set	£ 238.50
Piston Blanks CI	£ 6.50	Tender Axleboxes CI - set	£ 115.00
Piston Blanks GM	POA	Tender Axles Material BMS set	£ 9.50
Piston Rings 2.1/2" od x 3/16" wide set of 4	} £ 39.00	Tender Wheels CI (Disc)	£ 245.10
Piston Valve Rings - set of 8		POA	Tender Brake Shoes CI Ring
Expansion Link Brackets GM - pair	£ 128.25	Tender Spencer Spring Blocks GM	£ 43.00
Slidebar Brackets GM - pair	£ 54.45	Tender Dummy Water Scoop Dome ALI	POA
Lubricator Ecc. Sheave CI	£ 2.40	Tender Buffer Heads & Stocks BMS	£ 13.00
Lubricator Ecc. Strap GM	£ 12.00	Tender Dummy Springs GM	£ 120.00
		Tender Spring Hangers GM	£ 50.40

ALL PRICES ARE PLUS CARRIAGE AND VAT

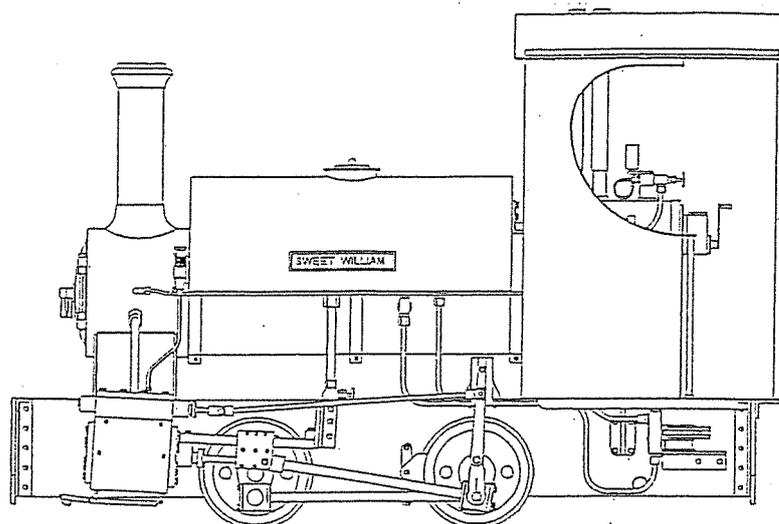
Updated 27-7-18

SWEET WILLIAM 7.1/4"G

0-4-0 Contractors Loco Designed by Jack Buckler

7.1/4" Version of the popular Sweet Pea

Overall Length: 47" Bore: 2.1/4" Stroke: 3" Wheels: 6.5/8" dia



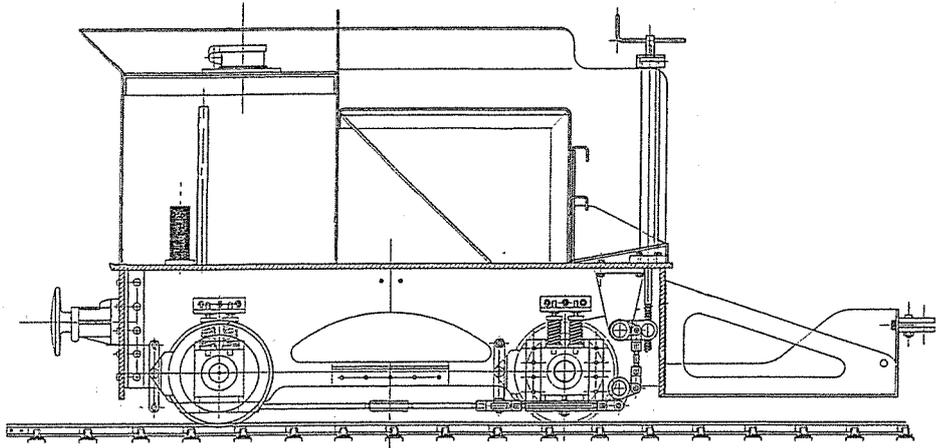
Drawings (6 sheets)	£ 30.00	Laser Cut Pony Truck parts (6mm)	£ 47.50
Drawing of Steel Boiler	£ 5.00	Pony Truck Wheels CI (2)	£ 98.00
Trailing Pony Drawing	£ 5.00	Pony Truck Axlesboxes CI	£ 17.40
Laser Cut Frames 0-4-0 version (6mm)	£ 65.00	Saddle set of 4 Laser Cut Parts	} £ 33.75
Laser Cut Frames 0-4-2 version (6mm)	£ 65.00	With Sides Bent to Suit Smokebox	
Laser Cut Buffer Beams (6mm)	£ 39.00	Steel Smokebox (3mm) rolled &	} £ 38.50
Laser Cut Stretchers, Motion Plates	£ 69.50	welded with laser cut holes for	
Frame & Buffer Angle	£ 24.20	steam pipes & chimney	
Stretchers/Motion Plate Fixing Angle	£ 24.20	Smokebox Door GM	£ 63.50
Hornblocks CI	£ 71.30	Smokebox Ring GM	£ 70.60
Axleboxes CI	£ 98.50	Chimney Base GM	£ 47.50
Eccentrics Sheaves (2 off) BMS	£ 4.50	Chimney Top GM	£ 41.75
Eccentric Straps GM (2 off)	£ 37.40	Rear Ring GM	£ 99.00
Driving Wheels (Disc Type) CI	£ 228.00	Regulator GM	£ 77.50
Driving Wheels (Disc Type) CNC Machined	-	Handpump GM	£ 39.00
EN8 Steel (Set of 4)	£ 301.00	Stainless Steel Grate	£ 28.60
Driving Wheels (Spoked) CI	£ 328.00	Brake Shoes (pair) CI	£ 14.50
F & R Springs (8) set	£ 18.80	O Ring Set - 3 x 010, 2 x 012, 2 x 110,	} £ 6.58
Axle pumps (pair) GM	£ 78.00	2 x 113, 1 x 114, 2 x 214, 1 x 218	
Cylinder Set CI	£ 486.50	Tender Wheels (Disc) 4 off CI	£ 204.00
Piston Rings 2.1/4" od x 3/16" Set of 4	£ 36.00	Handbrake Screw & Nut -	
Piston Blanks CI	£ 36.25	3/8" dia x 17.3/4" BMS Screw with bronze nut	£ 40.75
Piston Blanks GM	£ 75.00	and square thread	
Bearing Brasses GM	£ 81.50	Finished Safety Valves 3/8" BSP x 2.1/2" high	
Buffer Stock With Cast Step (pair) CI	£ 39.00	To Suit Steel Boiler (Set at 90psi) each	£ 107.00
Laser cut vibrating lever, brake cross bar, brake hangers, reversing lever bracket, weighshaft bracket, brake bracket and support gussett brake cells, drilling template for pumps (Doubles for hand pump blanking plate) drain cock protector brackets.			£ 75.00
Laser cut reversing lever 5mm. All components cut and etch marked, notches for reverse and forward positions marked (Lever may be cut back if turned top is required)			£ 32.50
Cab and roof 1.6mm. Laser cut - holes cut, all folded and rolled			£ 170.00
Stainless Steel Ashpan Assembly kit - rolled & welded with stainless grate			£ 180.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 4-8-18

7.1/4"G 'SWEET WILLIAM' TENDER

4 wheel sit in tender - suitable for many 7.1/4"g Narrow Gauge Tank locos. Design includes handbrake, footwell, water tank with filler, coupling blocks, buffers & coal chute and door - heavily built and providing a very stable ride.



Laser Cut Tender Chassis kit of 6 mm thick parts comprising:

Sole plate, set of frames, front & rear buffer beams, stretcher
brake hangers (4), brake cross bars (2), brake linkage cranks

Laser Cut Tender Body kit of 3mm thick parts comprising:

Folded tender body LHS/ RHS, division plate, seat, coal chute & door
drivers footwell (folded), water tank folded, frame & cover
with filler flange. Top body assembled & welded (unpainted).

Both the above kits supplied together as a completely welded assembly (unpainted & unsealed) £ 1,053.00

Drawings (3 sheets)	£	15.00	Suspension Springs (8)		£	18.80
Axleboxes CI	£	98.50	Buffer Stocks with Cast Step CI	pair	£	39.00
Wheels CI	£	204.00				
Wheels - CNC Mchined EN8 Steel	£	175.00				

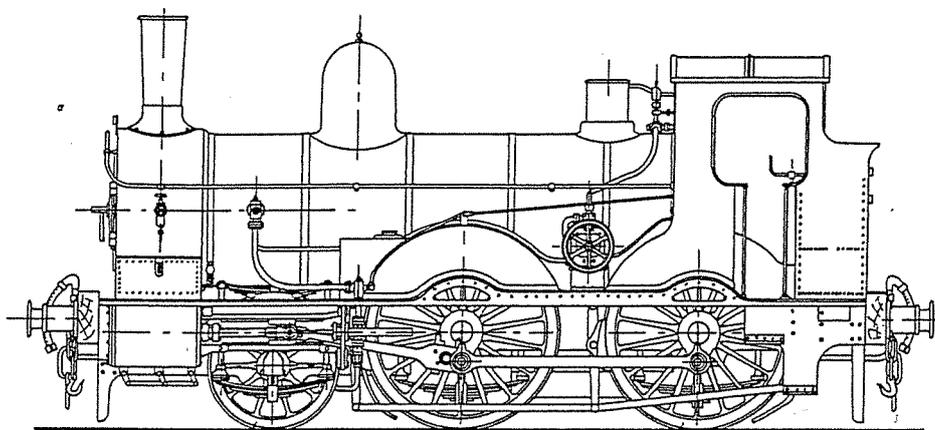
ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 27-7-18

WENFORD LSWR 2-4-0 BEATTIE Well Tank Locomotive 7.1/4"G

Designed by Chris Rayward (Hotspur Designs) & described as
construction serial in 'EIM' magazine. Drawings cover both early
Adams & later Drummond versions

Length: 40.1/2" lg x 19.1/4" high Boiler barrel: 6" dia
Cylinder bore: 1.3/4" dia x 2.1/2" stroke Driving wheel: 8.5/8" dia

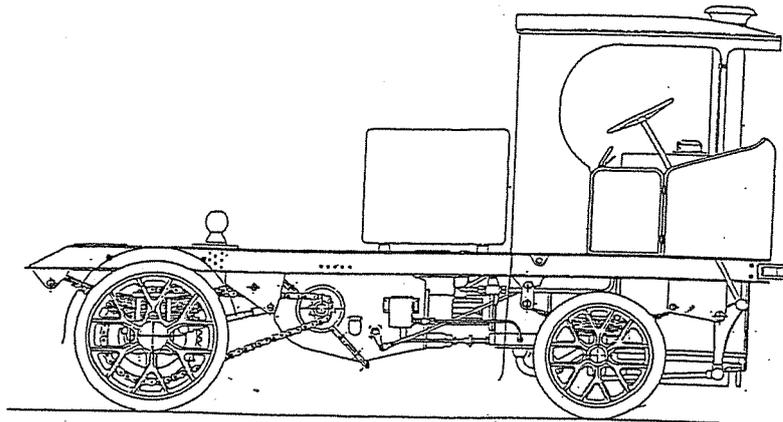


Drawings (63 sheets to date)	£ 150.00	Cylinder Set GM		£ 506.00
Laser Cut Main Frames (5mm)	£ 104.00	Cylinder Set CI		£ 239.00
Laser Cut Front Stretcher (5mm)	£ 9.00	Piston Blanks GM		£ 47.30
Driving Axle Stretcher CI	£ 15.00	Piston Blanks CI		£ 5.50
Rear Buffer Beam Brackets(pair) CI	£ 34.90	Laser Cut Smokebox Parts	}	
Coupled Axle Stretcher GM	£ 20.35	(set of 5 items)		£ 40.00
Brake Shaft Plates (Laser Cut) 5mm pair	£ 9.75	Laser Cut S'box Door Closing Bar		£ 5.00
Leading Axle Horn Cheeks (2 prs) GM	£ 25.80	Dome Bush GM		£ 34.00
Leading Axle o/s Bearing Blocks (pr) GM	£ 28.10	Adams Dome GM		£ 101.70
Leading Wheels CI	£ 82.80	Adams Dome CI		£ 54.00
Driving Wheels CI	£ 286.00	Drummond Dome GM		POA
Laser Cut Coupled Wheel Balance		Drummond Dome CI		POA
Weights (1.5 & 2.0mm) set of 4 each	£ 18.00	Adams Safety Valve Bonnet GM		£ 26.90
Eccentric Sheave Material CI	£ 8.00	Smokebox Door CI		£ 39.70
Eccentric Straps (set of 4) GM	£ 70.40	Smokebox Door GM		£ 81.00
Weighshaft Brackets (pair) GM	£ 13.75	SR/BR Smokebox Door ALI		£ 20.00
Crossheads (Lost wax casting) pair	£ 18.75	Adams Stovepipe Chimney CI		£ 53.20
Brake Blocks (set of 4) CI	£ 34.85	Drummond/BR Chimney CI		£ 40.85
Laser Cut Connecting Rod		Laser Cut Cab Roof Support Bar		£ 5.50
& Strap Material (pair)	£ 22.40			
Laser Cut Coupling Rod Material (pair)	£ 19.25			

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 3-8-18

2" CLAYTON UNDERTYPE STEAM ENGINE

Designed by Robin Dyer Described in "Model Engineer" July 1978 to February 1980.



Drawings (11 sheets) M35	£	48.00	Rear Engine Bearer GM	£	6.90
Brake Gear Drawing (M61)	£	8.50	Valve Spindle Guides GM	£	11.30
Construction series (63 sheets)	£	7.50	Crossheads GM	£	23.15
Steel Chassis Channel (3 lengths)	£	27.50	Trunk Guides GM	£	51.15
Chassis Plate Material	£	19.25	Crankshaft Bearings GM	£	14.20
Axle Jaws CI	£	18.25	Big End Brasses GM	£	10.55
Rear Axleboxes GM	£	52.00	Sump Casing ALI	£	18.75
Rear Axle & Sleeve (BMS)	£	15.10	Front Drawbar GM	£	6.80
Rear Axlebox Collar N.S. GM	£	5.40	Steering Quadrant GM	£	9.00
Rear Axlebox Collar O.S. GM	£	5.10	Feed W/heater assy. Casting GM	£	31.25
Rear Wheels ALI	£	58.50	Water Pump GM	£	16.50
Rear Wheel Rubber Tyres (twin groove) (2)	£	68.50	Smokebox Top CI	£	24.45
Rear Hub Caps GM	£	12.35	Boiler Top Ring CI	£	33.80
Front Wheels ALI	£	42.50	Chimney Base GM	£	11.40
Front Wheel Rubber Tyres (2)	£	45.00	Chimney Cap GM	£	14.10
Front Hub Caps GM	£	5.45	Regulator GM	£	7.80
Differential Centre GM	£	39.25	Circular Cast Grate CI	£	9.75
Roller Drive Chain (& split link)	£	10.00	Boiler Material Kit with Flanged Plates	POA	
Small Chain Sprocket 10T	£	3.50			
Large Chain Sprocket 40T	£	15.25	MACHINED GEARS		
Brake Drum, Shoes & Pivot CI	£	66.00	Differential Gears (set of 5)	£	137.00
Cylinder Set GM	£	129.25	45T Pump Gears (pair) } Set of		
Piston Blanks GM	£	10.50	35T Pump Gear } 3	£	48.00

TRAILER FOR CLAYTON

Drawings (2 sheets) M37	£	8.50	Axle Material	£	6.25
Chassis Channel (3 pieces)	£	27.50	Wheels ALI	£	58.50
Axle Collars GM	£	10.20	Rubber Tyres (twin groove) 2	£	68.50
			Oillite Bushes for wheels (2)	£	8.00

CLAYTON UNDERTYPE BOILER FITTINGS

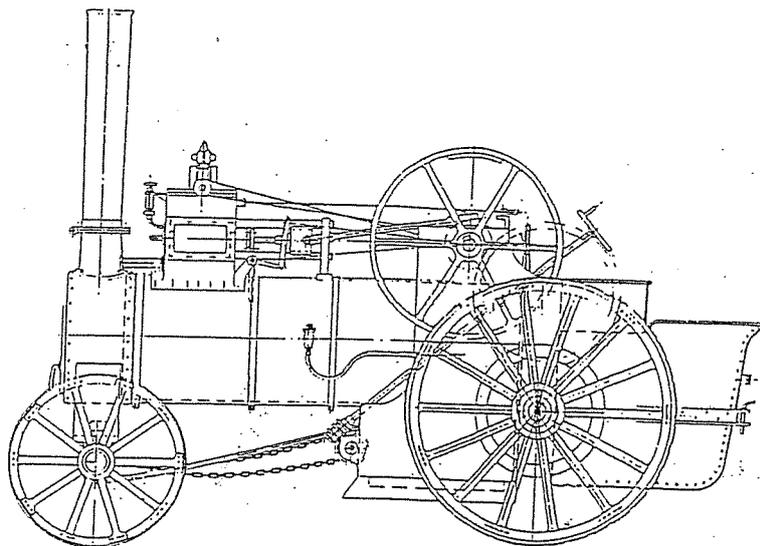
Blowdown Valve (5/16" x 40T)	£	10.65	Check Valves 1/4 x 40		
Water Gauge 1/4" x 40T (with b/down)	£	24.20	5/32" pipe, 2 required - each	£	9.35
Cylinder drain cocks 3/16 x 40T (set of 4)	£	23.00	Whistle Valve 1/8" pipe (1/4" x 40T)	£	18.50
			Pressure Gauge 1" dia 0-150psi	£	21.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 4-8-18

2" DURHAM & NORTH YORKSHIRE TRACTION ENGINE

Designed in 2" scale by John Haining. Model of 6HP traction engine. Principle dimensions: Length o/a 30.3/4", height 22", rear wheels 11" dia. Front wheel 7" dia, single cylinder 1.3/8" bore x 2" stroke. Flywheel 8" dia. Described in 'ME' volumes 144- 145



Drawings - 12 sheets	£	54.00	Smokebox Door (Domed) Gm	£	27.00
Hornplate Steel	£	14.00	Pump Casting(GM)	£	22.00
Laser Cut hornplates (Copper Boiler)	£	37.00	Pump Eccentric Strap (GM)	£	4.20
Laser Cut Hornplates (Steel Boiler)	£	25.00	Pump Eccentric Sheave (BMS)	£	0.70
Front Axle Steel	£	10.50	Winding Drum(ALI)	£	31.25
Front Hubs(set)(CI)	£	5.50	Steering Chain		N/A
Front Rims(set)(ALI)	£	62.50	Steering Wheel LW Cast	£	14.00
Perch Bush(GM)	£	13.75	Stainless Steel Grate	£	14.50
Rear Axle Steel (Ground BMS)	£	9.75	Etched Makers Plate 'D & NY' etc	£	8.00
Rear Axleboxes (GM)	£	43.75	Etched plate "Washout the Boiler" etc	£	6.00
Rear Axle Comb Bracket(GM)	£	83.50	Boiler Material kit with Flanged Plates		POA
Compensating Centre CI	£	66.00			
Rear Hubs (set)(CI)	£	41.75			
Rear Rims(set)(ALI)	£	216.00			
Rear Axle Springs(2)	£	2.20	UNMACHINED GEAR BLANKS		
Laser cut Spokes & Strakes	}	£ 207.50	11 tooth (BMS)	£	2.15
Front & Rear Set			18 tooth (CI)	£	19.15
Cylinder Set (CI) includes	}	£ 126.00	14 tooth (BMS)	£	1.50
Cylinder liner Matl & Piston Mtls			50 tooth (CI)	£	45.30
Piston Rings 2 off 1 3/8"od x 1/8" wide pr	£	15.50	43 tooth (CI)	£	53.50
Crankshaft (SG Iron)	£	37.50	66 tooth (CI) (for diff)	£	59.50
Crankshaft Bearing Brackets (GM)	£	33.50	66 tooth (CI) as disc (no diff)	£	49.00
Crankshaft Bearings(GM)	£	14.00			
Eccentric Straps(GM)	£	14.40	Diff Gear Blanks(CI) 2off	£	90.50
Eccentric Sheaves (BMS)	£	1.50			
Slide Bar Bracket(GM)	£	9.00			
Crosshead(GM)	£	9.00			
Flywheel(CI)	£	50.40			
Chimney Base(GM)	£	24.30			
Smokebox Ring(GM)	£	26.25			

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 27-6-18

2" DURHAM & NORTH YORKSHIRE TRACTION ENGINE

FULLY MACHINED GEARS

Spur Gears(set of 5)	£ 655.00
Diff Gear Set (5)	POA
Pump Drive Gears (pair)	£ 45.00
Governor Gears (pair)	£ 26.25
Steering Worm & Wheel - (2 start steel worm + 14T steel wheel)	} £ 71.50
66T Final Drive(disc) no diff	£ 242.00
66T Final Drive with centre machined out for use with diff centre	£ 253.00

SPUR GEARS: M/c'd set 5 gears

11 tooth low speed
18 tooth high speed bell
14 tooth 2nd shaft low speed
50 tooth 2nd shaft low speed
43 tooth 2nd shaft high speed

Rear Axle final drive gear 66 tooth - This is not included in spur gear set.

It is supplied with 1/2" face width 3/4" bore in steel.

The gear has to be machined to suit either for compensating gear or solid centre

SPOKE SET COMPRISES

20 Front Spokes
26 Plain Rear Spokes
2 Lobe Spokes
50 Rear Strakes

BOILER FITTINGS

Pressure Gauge 1" 0-150 psi	£ 21.00
Water Gauge 1/4 x 40T (with blowdown)	£ 24.20
Injector No. 2 - (1/2 pint/min)	£ 42.55

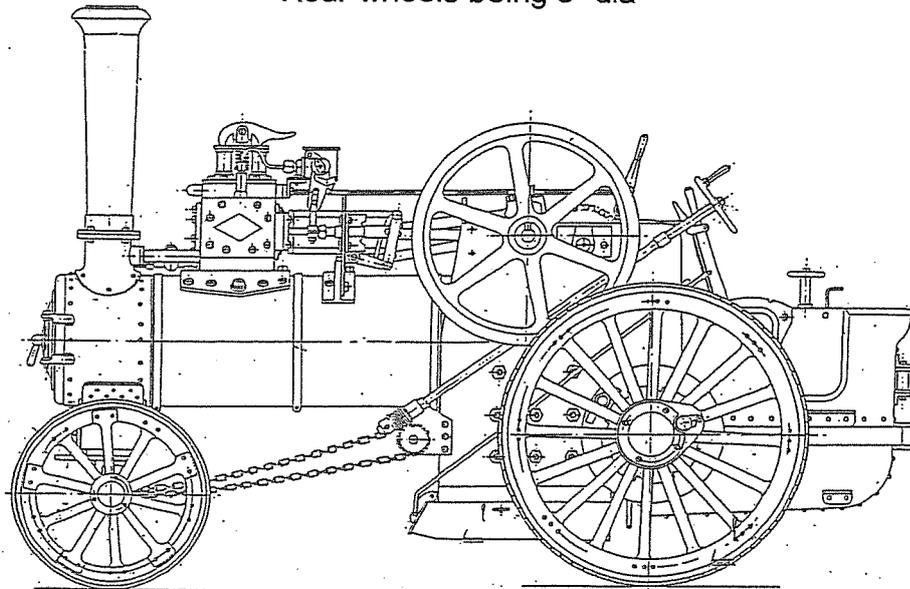
ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 1-6-18

TE1 MINNIE - 1" Scale Freelance Traction Engine

Described in Model Engineer 1969 - 1970.

The Finished Model Stands 11.1/4" High x 8.1/4" Wide x 18" Long
& Weighs Approx 26 Lbs. All parts can be machined on a 3.1/2" lathe.
Rear wheels being 6" dia



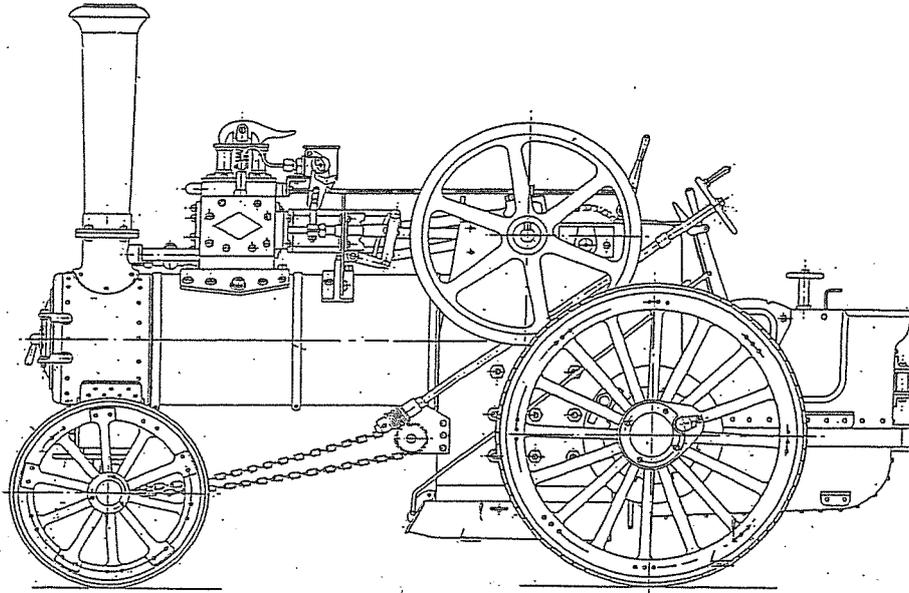
Drawings (9 Shts)	£ 41.00	Smokebox Ring GM	£ 9.15
Laser Cut Homplate & Spec plate	£ 18.20	Smokebox Door GM	£ 7.00
Rear Wheel Rims (Ali)	£ 58.50	Chimney (GM)	£ 24.75
Rear Wheel Hubs (GM)	£ 24.00	Chimney Saddle (GM)	£ 14.60
Rear Wheel Inside Covers (GM)	£ 20.35	Eccentric Straps GM (3)	£ 7.00
Rear Wheel Caps (GM)	£ 6.90	Fully Machined Spur Gears	£ 122.50
Laser Cut Front & Rear Spokes & Strakes Set	£ 34.00	Steering Wheel (Lost Wax)	£ 7.60
Front Wheel Rims (Ali)	£ 18.00	Steering Chain (pkt)	£ 7.75
Front Hubs & Covers Gm	£ 21.80	Steering Gears (2 Start Worm) (Machined)	£ 36.00
Cylinder Block & Covers (GM)	£ 40.00	Stainless Steel Grate	£ 2.50
Cylinder Liner (GM)	£ 3.75	O Ring Set	£ 1.85
Valve Chest (GM)	£ 7.80	<u>Containing</u> - 1 x 111, 1 x 006, 1 x 010	
Regulator Chest (GM)	£ 6.00	1 x Ref B (3/32" id), 1 x 007	
Motion Plate Saddle (GM)	£ 3.70	Tender Brass Material with	
Shaft Bearings (GM)	£ 25.00	Flanged Sides	£ 25.00
Feed Pump Body (GM)	£ 12.85	Brass Sheet Set - Unflanged	£ 15.00
Brake Drum (CI)	£ 16.10	Boiler Material Kit	
Winding Drum (CI)	£ 5.75	Including Smokebox & Ready Flanged	
Wire Rope	£ 5.85	Plates	POA
Flywheel (CI)	£ 18.85		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-7-18

2" MINNIE

2" Scale Version of the ever popular freelance Traction Engine 'Minnie', the finished model stands 22.1/2" high x 16.1/2" wide x 36" long, rear wheels 12" dia.



NOTE: There are no drawings available for 2" Minnie, the builder needing to double up the dimensions shown on the 1" scale drawings

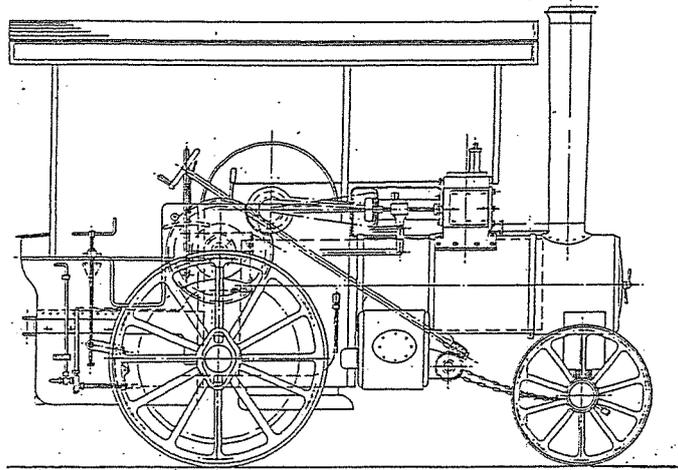
Drawings - 1" Scale only	£ 41.00	Feed Pump Body & Gland GM	£ 83.75
Steel Hornplates - Laser Cut (3mm)	£ 25.50	Shaft Bearings CI (set)	£ 73.30
Rear Wheel Rims ALI	£ 216.00	Brake Drum CI	£ 78.00
Rear Wheel Hubs CI	£ 66.00	Winding Drum (5.1/2 dia x 1.3/8) CI	£ 25.00
Rear Wheel Inside Covers CI	}	Flywheel CI	£ 93.00
Rear Wheel Outside Covers CI		£ 60.00	Chimney Cap GM
Rear Wheel Caps GM	£ 40.70	Chimney Saddle CI	£ 37.40
Front Wheel Rims ALI	£ 90.00	Chimney Base CI	£ 15.00
Front Wheel Hubs & Covers CI	£ 6.50	Motion Plate Saddle CI	£ 10.50
Front Wheel Caps GM	£ 20.40	Smokebox Door CI	£ 24.50
Laser Cut Spokes & Strakes	}	Smokebox Ring CI	£ 22.60
(20 off front spokes, 32 off rear spokes, 70 off rear strakes)		£ 201.50	Steering Wheel (Lost Wax)
Cylinder Set CI	£ 149.50	Steering Gears (Machined) 2 start worm	£ 72.00
Trunk Guide CI	£ 27.30	Steering Chain	P.O.A
Eccentric Sheaves CI (pair)	£ 2.25	Spur Gears (Machined) Set of 8	£ 498.00
Eccentric Straps CI (set of 3)	£ 17.25	Wire Rope	£ 16.80
Crankshaft SG Iron	£ 37.50	O' Ring Set	£ 2.28
		Boiler Kit	P.O.A
		Stainless Steel Grate	£ 14.00

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 18-7-18

RANSOMES SIMS & JEFFERIES

Light steam tractor in 2" scale, designed by John Haining. Model of 4NHP light compound steam tractor (twin cylinder). Construction of model described in "M.E." volumes 143-144.
Principle dimensions: 30" long, O/A Height 20", Flywheel 6" dia. Rear Wheels - 9.5/16" dia, Front Wheels 6" dia.



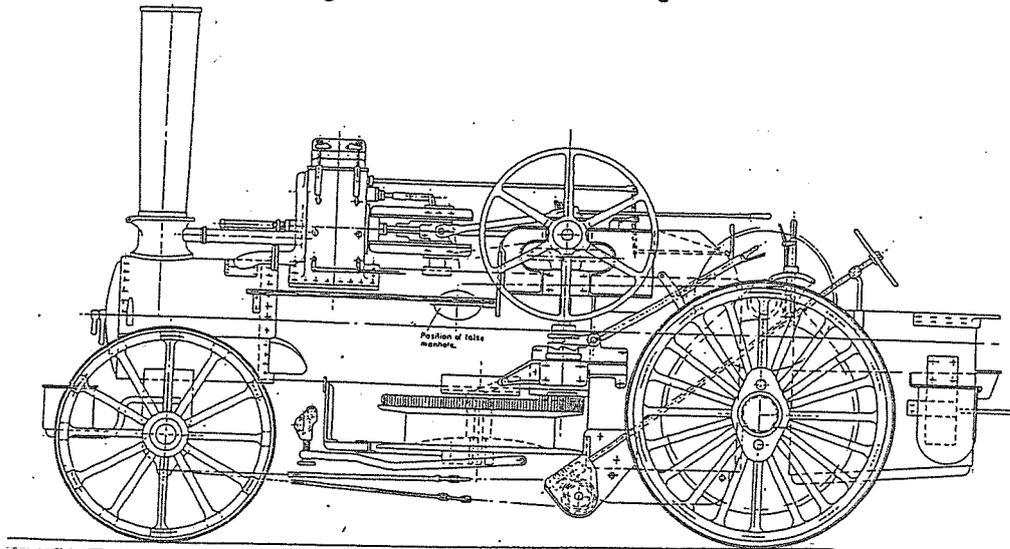
Drawings (10 sheets) TE16	£ 42.50	Stainless Steel Grate	£ 12.00
Constructions series	£ 7.50	Steering wheel 5 spoke GM	£ 3.90
Spring Mounts (rear axleboxes) GM	£ 27.40		
Centre Block - Axle Bearing GM	£ 30.80	GEARS	
Rear Hubs (set) CI	£ 32.50	SPUR GEARS (no splines or keyways)	
Rear Rims (set of 4) ALI	£ 112.50	A & B, C & D, E & F.	N/A
Front Wheel Hubs & Covers (set) GM	£ 31.75	Pump Gears (pair)	N/A
Front Wheel Rims (pair) ALI	£ 37.00	Diff Gears	N/A
Laser Cut Spokes & strakes	£ 228.75	Steering Worm & Wheel	£ 42.00
Perch Housing GM	£ 16.60		
Cylinder Set GM	£ 209.00	BOILER MATERIALS	
Pistons GM	£ 12.40	Boiler Kit with ready Flanged Plates	POA
Crankshaft Bearings (set) GM	£ 16.80		
2nd Shaft Bearings (set) GM	£ 15.00	FITTINGS REQUIRED	
Clutch fork bracket GM	£ 6.30	3/4" diameter pressure gauge } £ 21.00	
Eccentric Straps (set) GM	£ 20.40	0-150psi }	
Trunk Guides RH & LH CI	£ 30.00	Water gauge 5mm Glass }	
Feed pump body & gland GM	£ 14.85	1/4" x 40T Blowdown }	£ 24.20
Compensating Drum CI	£ 56.00	Injector No.2 (1/2 pint/min) 5/32" pipe	£ 42.55
Winding drum CI	£ 51.75	Blowdown Valve 1/4" x 40	£ 10.00
Flywheel (Disc) CI	£ 52.00	Globe Valve 5/32" pipe x 180 }	
Flywheel 6 spoke CI	£ 35.60	4 of required - price each }	£ 17.25
Smokebox Door GM	£ 19.25		
Smokebox Ring GM	£ 25.50		

ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 11-7-18

SUPERBA 2" SCALE PLOUGHING ENGINE

The Fowler ploughing engine "Superba" was based on the class Z7S design. John Hainings drawings are based on the Z7S with Superba variations. Both use Firth radial valve gear & make a large imposing model. General dimensions: Flywheel 9" dia, F/wheels 10.3/4" dia, R/wheels 13.3/4" dia, width is 16.7/8" over F/wheels. Width over hind wheels Superba 21.7/8" and Z7S is 19.7/8" overall length 50", overall height 27.3/4". Patterns are based on Superba with details taken from the original drawings. Described in Model Engineer Vols 161-164.



Set of 17 drawings TE30	£	74.00	Boiler Feed Pump GM	£	34.00
LH Horn Bracket GM	£	112.50	Pump Eccentric Strap GM	£	10.80
RH Horn Bracket GM	£	113.65	Flywheel CI	£	62.50
LH Horn Bracket CI	£	43.25	Winding Drum CI	£	125.00
RH Horn Bracket CI	£	42.60	Winding Drum Plate CI	£	102.00
Hind Axle Brackets GM (pair)	£	176.00	Winding Drum Pawl Bracket GM	£	8.40
Hind Axle Brackets CI (pair)	£	82.00	Perch Pad CI	£	19.55
Rear Hubs (pair) CI	£	86.00	Top Dome & Reg Housing CI	£	41.25
Rear Hub I/Covers (pair) CI	£	59.00	Rubbing Blocks (Smokebox) CI	£	29.35
Rear Hub O/Covers (pair) CI	£	33.00	Dummy Superheater Ends GM	£	30.25
Rear Wheel Rims ALI (8 castings)	£	458.00	Blastpipe GM	£	6.00
Front Wheel Rims ALI	£	180.00	Regulator Cover GM	£	11.10
Front Wheel Hubs CI	£	10.50	Smokebox Door CI	£	44.00
Laser Cut Rear Wheel Spokes (40)	£	72.10	Smokebox Ring CI	£	25.90
Laser Cut Front Wheel Spokes (24)	£	39.50	Chimney Saddle CI	£	25.90
Laser Cut Rear Wheel Strakes (66)	£	120.15	Chimney Base with hinge CI	£	10.30
Crankshaft Centre Bearing GM	£	25.60	Chimney Cap (Brass)	£	30.00
Plough Shft Btm Bracket GM	£	103.50	Water Pocket GM	£	11.50
Plough Clutch Fork GM	£	8.40	Steering Wheel (Lost Wax)		P.O.A.
Coiling Lever Pivot GM	£	25.00	Steering Worm & Wheel (Mch'd)	£	42.00
Cylinder Block CI	£	180.00	Wire Rope		P.O.A.
Cylinder Covers Front & Rear (4) CI	£	79.00			
Piston Blanks (HP & LP) CI	£	6.00	Gear Blanks:-		
Piston Blanks (HP & LP) GM	£	53.00	A 12 Tooth BMS	£	3.75
Slidebar/Rocking Lever Bkt GM	£	55.00	B 53 Tooth CI	£	52.50
Motion Bracket GM	£	37.20	C 20 Tooth BMS	£	6.25
Gear Change Bracket 1st/2nd GM	£	7.80	D 45 Tooth CI	£	46.00
Gear Lever Bracket GM	£	5.25	E 69 Tooth CI	£	48.50
Eccentric Straps (2) GM	£	20.50	F 15 Tooth BMS	£	2.75
			G 78 Tooth CI	£	104.00

Copper Boiler Material Kit flanged if required - now available

P.O.A.

ALL PRICES ARE PLUS CARRIAGE AND VAT
Updated 27-7-18

5"g LOST WAX CASTINGS BY DOUG HEWSON

Much detail can now be added to your model using these superb Lost Wax Castings - many parts can be made fully operational!

5"g REVERSING GEARBOX FOR B.R. STANDARD

Class 9, 8, 6, 5 & tender cl. 4

This gearbox is a faithful reproduction of the reversing gearbox as fitted to most of the B.R. standard classes

Each £ 135.97

BR STANDARD MANIFOLD CASTING

5"g £ 38.83

7 . 1/4"g £ 54.67

GRESHAM & CRAVEN STANDARD HANDWHEELS

5" gauge - 1/2" dia - each £ 2.55

7 . 1/4" gauge - 5/8" dia - each £ 2.70

DUMMY WASHOUT PLUGS (To solder into cleading)

3 . 1/2 g" - per pkt of 10 £ 57.16

5"g - per pkt of 10 £ 63.83

7 . 1/4"g - per pkt of 10 £ 67.08

5"G DUMMY MUD HOLE DOORS

Set of 4 £ 29.93

5"G STEAM SANDERS

These parts are all cast in brass and are made to be assembled as easily as it is possible to make them.

You will have to make the small mounting brackets to suit your own loco.

Per pair £ 58.52

5"G CYLINDER RELIEF VALVES

Straight type for Britannia, 9F, Clans, Duke of Glouc, & most stanier locos. 90* type for LMS/Black 5

Set of 4 £ 41.37

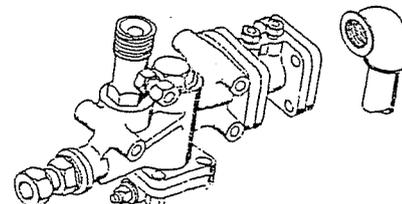
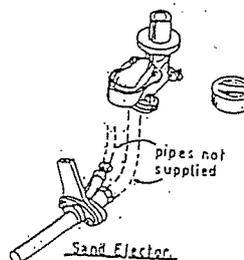
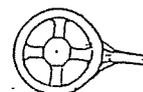
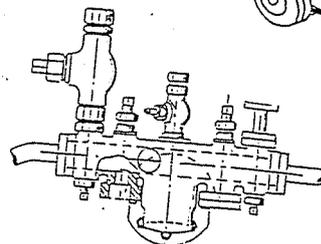
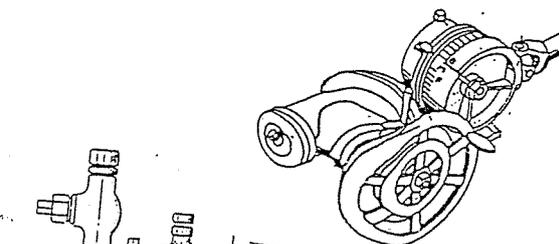
5"G BR STANDARD CARRIAGE WARMING REDUCING VALVE

Detailed casting scaled down from BR drawings. This valve was fitted on all BR std locos apart from 9F, which was not fitted for train heating.

£ 24.67

5"G STEAM HEATING HOSES

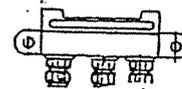
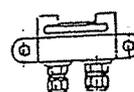
Per pair £ 38.50



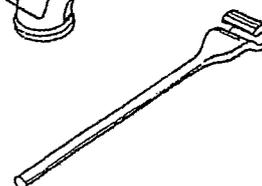
5" G LOST WAX CASTINGS

5" G WICK FEED OIL BOXES

Single Feed - per pair	£ 16.71
Double Feed - per pair	£ 17.60
Triple Feed - per pair	£ 18.48



5" G ENGINE DRIVERS OIL CAN - EACH	£ 4.95
5" G ENGINEMANS TEA CAN - PER PAIR	£ 29.96
7.1/4" G ENGINEMANS TEA CAN (WITH SEPARATE LID & HANDLE) EACH	£ 10.25
5" G FIRING SHOVEL - SCALE	£ 25.80



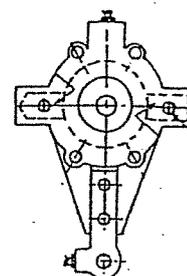
G.N.R / L.N.E.R. TENDER SPRING HANGERS

Forged crook type as on K1, B1, A3, Nigel Gresley etc.	
Per Set of 12	£ 60.70
Per Set of 16	£ 80.93

To suit Springbok Cast - Tender dummy springs per set of 12	£ 60.70
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L.N.E.R TENDER SPRING HANGERS BRACKETS Per set of 12	£ 92.40
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L.N.E.R. Tender Spring shock absorbers per set of 12	£ 63.40
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WAKEFIELD LUBRICATOR

<u>RATCHET BOXES</u>	£ 17.17
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Designed to accommodate the standard - per pair
35T Ratchet Wheel

WAKEFIELD LUBRICATOR 12 FEED

<u>BOX & LIDS</u> - EACH	£ 24.75
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WAKEFIELD LUBRICATOR

<u>HAND WHEELS</u> - PER PAIR	£ 12.10
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BR Standard Blower Valve	£ 7.48
BR Standard Return Crank Caps (pair)	£ 13.63
BR/GWR Standard Snifting Valve (pair)	£ 25.52
BR Standard Injector Steam Valves (pair)	£ 27.94
BR Std Injector Water Elbow (pair)	£ 31.90
(Long Britannia)	
BR Standard Sanding Valve & Handle	£ 13.97

Rear Steam Chest Covers (to suit Britannia/9F/CL5) pair	£ 58.08
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Rear Steam Chest Covers (to suit LMS Class 5 & 8F) pair	£ 58.08
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Cast Steel Crossheads to suit Britannia, Clan, 9F & CL5 pair	£ 26.40
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Top Feed Covers for LMS locomotives pair	£ 26.40
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LMS Tender Water Filler & Lid Complete with Hinge & Handle	£ 29.92
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Duchess Trailing Axlebox Covers (prs)	£ 14.30
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LOST WAX VACUUM FITTINGS

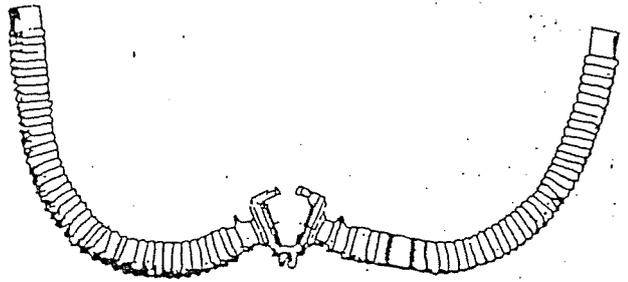
VACUUM HOSE CONNECTIONS

Reinforced moulded rubber hoses (correct scale ribbing)
pipe clips, pins, chains & dollies.

5"g	per pair	£	43.38
7.1/4"g	per pair	£	44.88

VACUUM PIPE SWAN NECK BENDS

5"g	per pair	£	11.88
7.1/4"g	per pair	£	20.02



BR STANDARD VACUUM BRAKE EJECTOR

(G&C SSJ type)

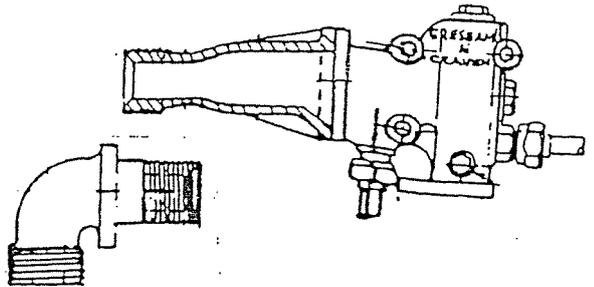
Fitted to all BR Standard locos. Designed to produce a working scale model of the ejector producing the same functions of large & small ejectors, as on the full size engine.

£	32.68
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SMOKEBOX VACUUM EJECTOR ELBOW

£	7.48
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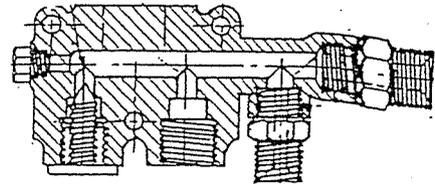


DUPLEX VALVE

£	12.43
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DRIVERS VACUUM BRAKE VALVE

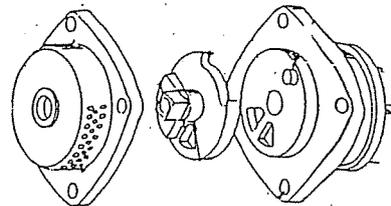
£	23.00
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DRIVERS PEDESTAL SET FOR

BR STD LOCOS (LASER CUT PARTS)
(READY BENT)

£	40.36
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Updated 27-7-16

CLARKSONS OF YORK

**We have now acquired the drawings and patterns for the
Clarkson's of York range.**

SINGLE CYLINDER ENGINE (VERTICAL)
SINGLE CYLINDER ENGINE
COMPOUND ENGINE
SINGLE CYLINDER ENGINE (HORIZONTAL)
SINGLE CYLINDER ENGINE (VERTICAL) WITH REVERSING GEAR
INVERTED ENGINE
VERTICAL TWIN (SIMPLE) ENGINE
VERTICAL COMPOUND ENGINE
BEAM ENGINE
STEEPLE ENGINE

B/1 CLASS SPRINGBOK 3.1/2"G
B/2 CLASS ROYAL SOVEREIGN 3.1/2"G
A/3 CLASS GRESLEY PACIFIC 3.1/2"G
A/4 CLASS GRESLEY PACIFIC 3.1/2"G
GRESLEY V-2 GREEN ARROW CLASS 3.1/2"G
CLASS L/1 3.1/2"G
PATRICK STIRLING 8' SINGLE 3.1/2"G
LOCH CLASS 3.1/2"G
THE JONES GOODS 3.1/2"G
MAUNSELL CLASS V SCHOOLS CLASS 3.1/2"G
KING ARTHUR CLASS 3.1/2"G
PRINCESS CLASS 3.1/2"G
DUCHESS CLASS 3.1/2"G
KING CLASS 3/4" SCALE 3.1/2"G
N.E.R.Y. ATLANTIC CLASS V-09 3.1/2"G
N.E.R.Y. 4-6-0 EXPRESS PASSENGER LOCOMOTIVE - CLASS S/1 3.1/2"G

A/3 CLASS GRESLEY PACIFIC 5"G
D/49 SHIRE CLASS 5"G
AUSTERITY 2-10-0 5"G
IVATT LARGE BOILERED ATLANTIC 5"G
IVATT SMALL BOILERED ATLANTIC 5"G
K/1 CLASS 5"G
CLASS L/1 5"G
DUCHESS CLASS 5"G
CLASS P/8 5"G
PATRICK STIRLING 8' SINGLE 5"G

TENNANT 1463 CLASS 7.1/4"G

**The drawings and castings now available from stock, for more
information contact us on 01924 466000
or email sales@blackgates.co.uk**

Updated 9-10-17

NARROW GAUGE SLATE WAGON

Drawn as a typical Welsh Narrow Gauge Slate Wagon which is suitable to be used as a tender for Narrow Gauge Locos. The drawings are dimensioned in three gauges, 3.1/2", 5" & 7.1/4"G.

3.1/2"G Version

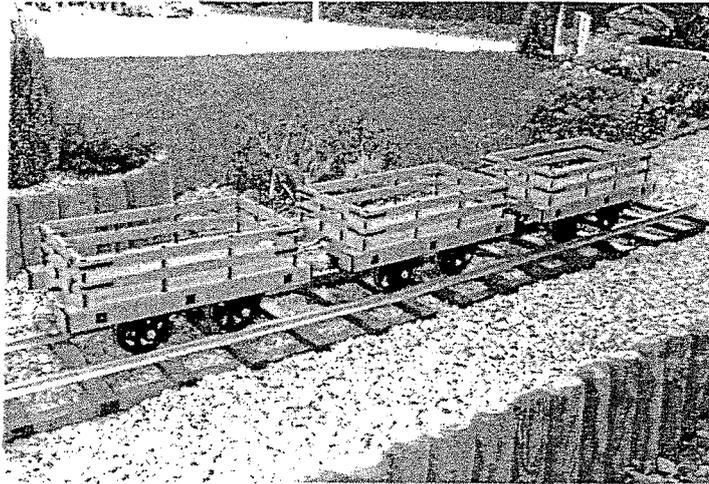
Length - 10.7/8"
Width - 5.3/8"
Wheels - 2.3/8" dia

5"G Version

Length - 15.1/2"
Width - 7.7/16"
Wheels - 3.3/8" dia

7.1/4"G Version

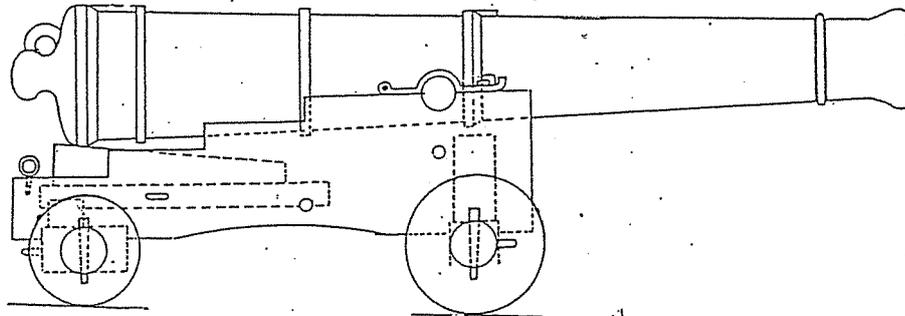
Length - 22.1/2"
Width - 10.3/4"
Wheels - 4.7/8" dia



Drawings (2 sheets)	£	3.00		
3.1/2"G Wheel Castings (4) CI	£	42.00	3.1/2"G Axle Carriers (4) GM	£ 18.60
5"G Wheel Castings (4) CI	£	82.00	5"G Axle Carriers (4) GM	£ 52.10
7.1/4" Wheel Castings (4) CI	£	199.20	7.1/4"G Axle Carriers (4) CI	£ 71.90

18TH CENTURY CANNON - LONG 12 POUNDER

Drawings (1 sheet)	£	3.00	Barrel 9" long CI	£ 48.40
			Barrel 9" long GM	£ 91.00

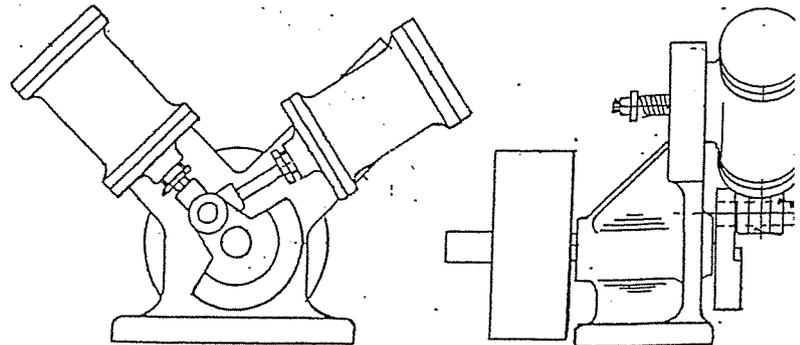


BLACKGATES TWIN

TWIN CYLINDER OSCILLATING ENGINE

Drawings (3 sheets)	£	4.50	Complete Kit of drawings, castings, materials screws etc, includes every item required. (Includes drawing for reversing valve)	£ 52.00
Drawing For Reversing Valve (1 sht)	£	1.50		
Stand Casting	£	16.50		
Cylinder Casting (2 of)	£	14.30		
Kit of fully machined components	£	190.00		

Reversible Double Acting
2 x 9/16" Bore Cylinders
5/8" dia Stroke
1.3/4" dia Flywheel
Stand 3" high x 3.3/4" wide
3.1/8" front to back
Output Shaft 1/4"
Weight - 0.7 kg
Suitable for upto 48" Boat.



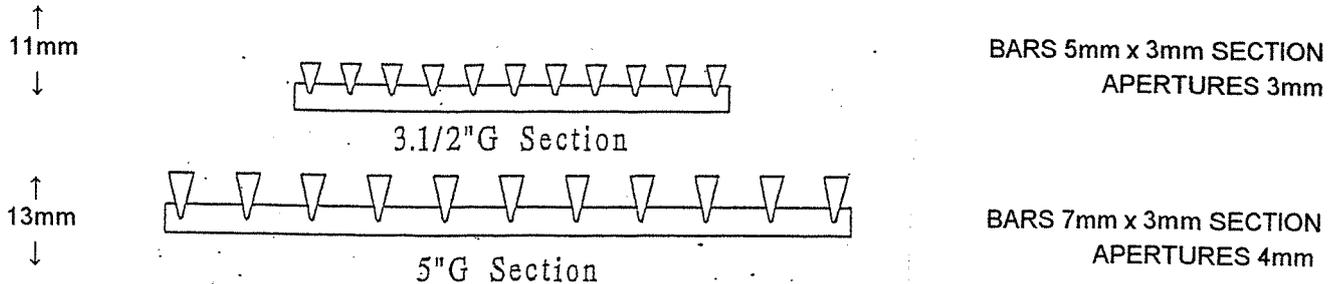
STAINLESS STEEL GRATES

Made from tapered section stainless steel bars welded to stainless steel crossbars @ 2" centres.

There are two sections of grate available. 3.1/2" & 5"G sections.

Please specify length and width of grate required.

PLEASE NOTE: These grates will last a long time if properly cared for, ie if the ash pan is emptied on a regular basis and the ashes are not allowed to accumulate until they touch the grate. If this condition is allowed to occur, all grates regardless of material will rapidly burn out. For this reason there is no warranty on grates after they have been used. It is normal for the grate bars to warp due to heat.



UP TO	8	SQ.IN	(I.E: SMALL	3.1.2"G LOCO)	£	10.50
UP TO	12	SQ.IN	(I.E: LARGE	3.1/2"G LOCO)	£	12.00
UP TO	18	SQ.IN	(I.E: SMALL	5"G LOCO)	£	14.50
UP TO	26	SQ.IN	(I.E: LARGE	5"G LOCO)	£	18.75
OVER 26 SQ. IN - 0.65P / SQ INCH						

RIDING CAR WHEELS (CAST IRON)

Disc Wheels 2.1/2"od x 5/8" thick Set of 4	£	67.50
Disc Wheels 3"od x 5/8" thick Set of 4	£	72.50
<u>5"G Narrow Gauge</u> Disc 2.1/2"od x 7/8" thick	} £	37.70
(Sweet Pea Pony) set of 2		
Disc Wheels 4.1/4"od x 3/4"thick Set of 4	£	115.00
<u>7.1/4"G Narrow Gauge</u> Disc wheel		
5.1/4"od x 1.1/4" thick Set of 4	£	204.00

5"G SHOW TRACK

- We are currently not stocking show track.
- Available from: The Miniature Railway Supply Co. LTD

Updated 26-7-18

BOILER FEED PUMPS

PART OF THE SOUTHWORTH ENGINE RANGE

These days there is a tendency for people to build larger models, with a strong following for models of various narrow gauge prototypes. Although our models spend most of their time in steam actually running on the track, there is inevitably a time both before and after when the loco stands in the steaming bay while still in steam

During these periods the boiler level is maintained either by injectors or by a handpump, but just occasionally you see a Boiler Feed Pump ticking quietly away.

These usually attract the interest of onlookers who are fascinated to watch the motion of the pump. For some time we have been looking for designs of pumps suitable for use on our models, and we are delighted to have been appointed stockists of the excellent "Southworth" Engines range, designed by Peter Southworth.

These pumps are fully working and make an interesting project in their own right. The kits include the drawings, unmachined castings and O-rings.

"WEIR" TYPE BOILER FEED PUMPS

Based on the single cylinder vertical feed pump, most notably made by Weir of Glasgow. This type of pump enjoys an enviable reputation for reliability, with many examples continuing to work despite their poor mechanical condition in the latter days of steam.

The model has the steam cylinder at the top, with the valve chest and slide valve.

The double acting pump is at the bottom. It has proved to be reliable in operation, starting from any position.

Available in 3 sizes:-

3" HIGH

HEIGHT 3" x 1"
PACKED WEIGHT

STEAM CYLINDER

PUMP CYLINDER

SET OF DRAWINGS, CASTINGS (6),
O' RING & SPRINGS SET
(6 castings)
2 DRAWINGS
£35.00

6" HIGH

HEIGHT 6" X 2" WIDE X 2" DEEP
PACKED WEIGHT 2KG

STEAM CYLINDER

5/8" or 3/4" bore x 7/8" stroke

PUMP CYLINDER

3/8" or 1/2" bore x 7/8" stroke

SET COMPRISES

2 DRAWINGS (P1 & P2)
7 GM CASTINGS
6 O-RINGS

SET OF DRAWINGS, CASTINGS
& O-RINGS

£60.00

12" HIGH

HEIGHT 12" X 4" WIDE X 5" DEEP
(Without fittings)
PACKED WEIGHT 8KG

STEAM CYLINDER

1.1/2" Dia x 2" stroke

PUMP CYLINDER

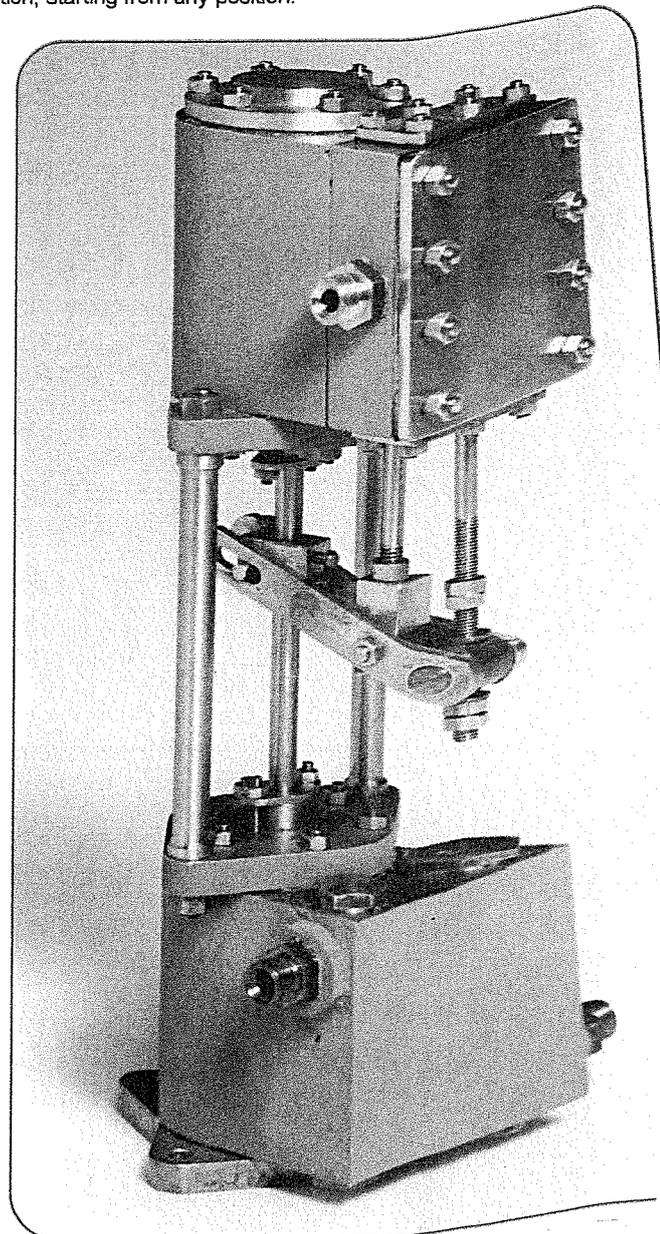
1" Dia x 2" stroke

SET COMPRISES

3 DRAWINGS
13 GM CASTINGS
6 O-RINGS
PLUS GRUBSCREWS

SET OF DRAWINGS, CASTINGS
& O-RINGS

£284.00



"DUPLEX" BOILER FEED PUMPS

Based on a pump once produced by Robey of Lincoln, and available in two sizes, both of which are double acting and self starting from any position. The pumps have been designed for ease of manufacture, and the normal crossover system of passages requiring the drilling of holes at difficult angles has been overcome by means of fitting extra plates between the cylinder block and valve chest. In these plates the passages are milled, enabling them to be in the correct position with the minimum of trouble. Construction of the Large Duplex was described in "M.E." June 1993 - January 1994.

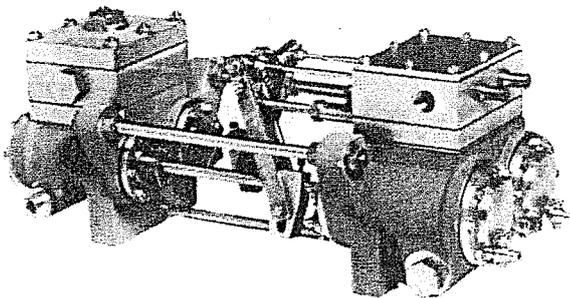
	MINI DUPLEX	SMALL DUPLEX	LARGE DUPLEX	ROTATIVE	
				SMALL BORE PUMP	LARGE BORE PUMP
HEIGHT	2.1/8"	2.1/4"	3.1/4"	2.7/8"	2.7/8"
LENGTH	4.3/8"	6.1/4"	8"	9.3/4"	9.3/4"
WIDTH	2"	2.5/16"	3.5/16"	4"	4"
PACKED WEIGHT		3 KG	5 KG		
BUILT WEIGHT	1.1/2lbs	1.5 KG	2.7 KG	2.30KG	2.30KG
STEAM CYLINDERS	1/2" dia	5/8" bore x 7/8" stroke	15/16" bore x 1.1/2" stroke	3/4" bore x 1.1/4" stroke 1/2" bore x 1.1/4" stroke	1" bore x 1.1/4" stroke 5/8" bore x 1.1/4" stroke
PUMP CYLINDERS		3/8" bore x 7/8" stroke	5/8" bore x 1.1/2" stroke		
SET COMPRISES					
DRAWINGS		W1, W2, W3	R1, R2, R3	3 SHEETS	3 SHEETS
GM CASTINGS		9	16	9 + 2 Iron Flywheels	9 + 2 Iron Flywheels
O-RINGS		10	10	5	5
PRICE	£67.00	£87.00	£179.00	Plus grub screws POA	Plus grub screws POA

ROTATIVE HORIZONTAL STEAM PUMP

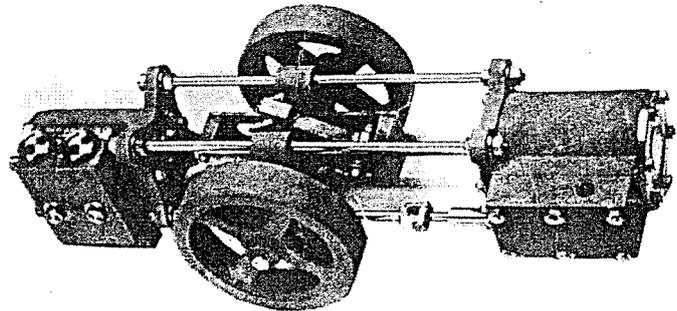
Based on a design by Hathorne Davey & Co Ltd of Leeds. Due to the size and weight of the flywheels (we can't scale nature!) a minimum speed of about 60 rpm will be required to ensure continuous operation, and unlike the other pumps we supply, this will not self start if it comes to rest on a dead centre position. However, a by-pass valve can be fitted to control the flow of the water into the boiler.

The same set of castings can be machined to produce 2 sizes of pump, only the 'O' rings and pistons need to be different. Please specify which is required when ordering.

DUPLEX PUMP



ROTATIVE PUMP



SANDERSON BEAM ENGINE circa 1846

A 1" = 1 FOOT SCALE MODEL OF A SANDERSON 12 H.P. BEAM ENGINE OF 1846, BORE 7/8", STROKE 2.1/2", FLYWHEEL DIA 9.3/4" AND IS A FAITHFUL REPRODUCTION OF THE ORIGINAL.

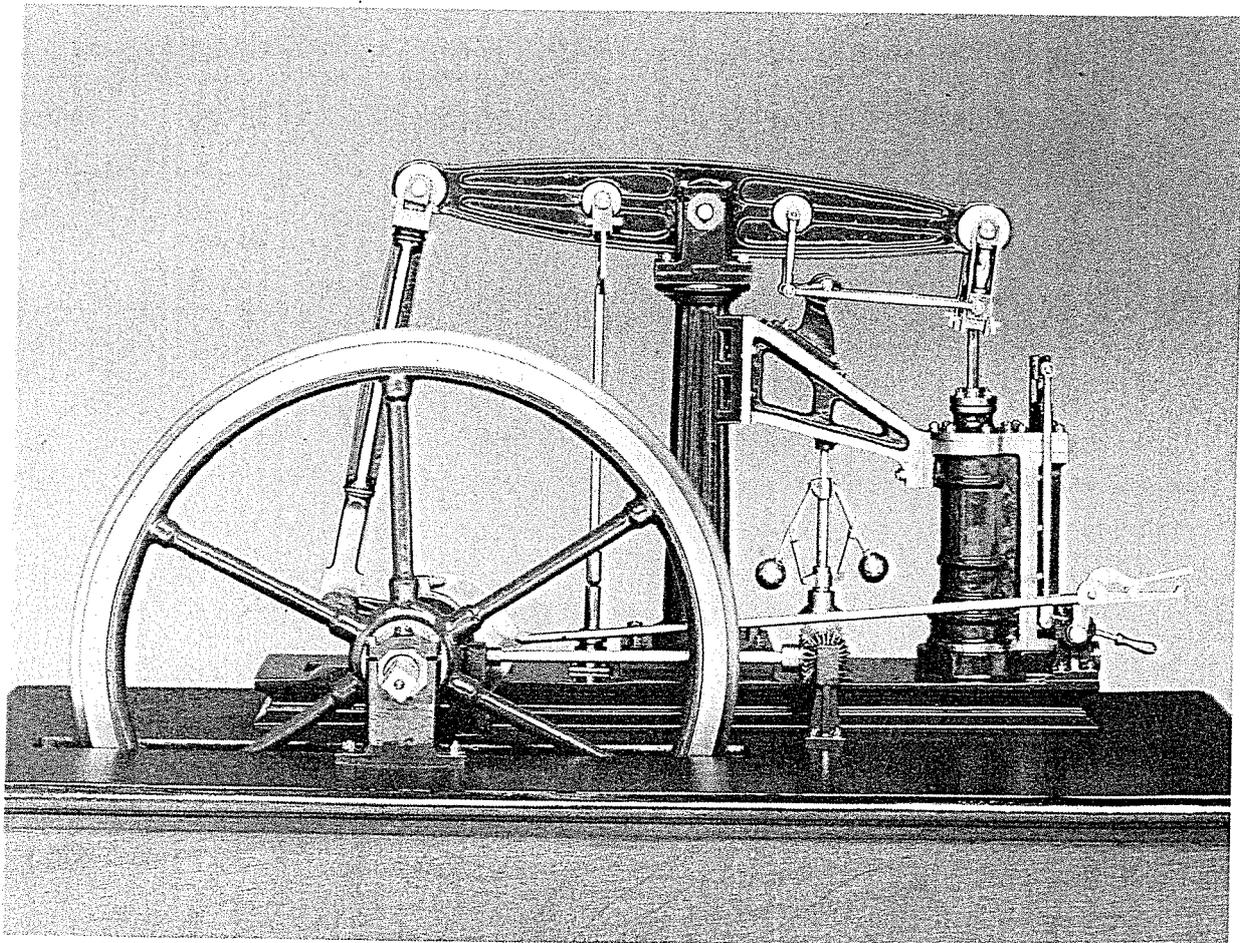
Drawings (4 sheets)

Bedplate	GM	1	Clack Box	GM	1
Cylinder	GM	1	Eccentric Sheave	BMS	1
Steam Chest	GM	1	Eccentric Strap	GM	1
Cylinder Cover	GM	1	Flywheel	GM	1
Column	GM	1	Governor Bracket Inner	Lost Wax	1
Beam	GM	1	Governor Bracket Outer	Lost Wax	2
Main Bearings	GM	2	Valve Gear Brackets	Lost Wax	2
Beam Bearings	GM	2	Column Bracket	GM	1
Cylinder Support Bracket	GM	1	Connecting Rod	GM	1
Parallel Motion Bracket	Lost Wax	1	Piston Rod Yoke - Laser Cut	S.Stl	1
Crank	GM	1	Valve Rod End - Laser Cut	S.Stl	1
Pump Body	GM	1			
Set of drawings	£	20.00	<u>Governor Gears</u> - Set of 6		
Set of 26 castings			Set: 2 pairs 32DP x 22T Bevels		
+ 2 Laser Cut Parts	£	552.00	1 pair 32DP 3:1 Ratio Bevel	£	74.85

CI Set of 26 castings + 2 laser cut parts, as above but with cast iron castings in lieu of gunmetal, (except for lost wax castings, pump body & clack box which are still in gunmetal.

£ 314.50

For builders of the gunmetal option, we have a small number of machined flywheels available at no extra cost - please specify when ordering if you would prefer this item machined.



ALL PRICES ARE PLUS CARRIAGE AND VAT

Updated 26-7-18

WORKSHOP EQUIPMENT CASTINGS

DIVIDING HEAD

DESIGNED BY ALAN TIMMINS. DESCRIBED IN "ENGINEERING IN MINIATURE" JUNE ISSUE 1981 TO APRIL 1982.

THE ALAN TIMMINS DIVIDING HEAD HAS BEEN DESIGNED TO UTILISE MYFORD LATHE ACCESSORIES AND HAS THE SAME MOUNTING THREAD AND REGISTER AS THE ML7/ML10 SERIES WITH A NO. 2MT SPINDLE HOLE. AVAILABLE AS DRAWING & CASTINGS.

Drawings per set	£ 4.80	Spindle Material	£ 7.40
Headstock CI	£ 71.00	Tailstock (free standing) CI	£ 47.00
Wormshaft Bracket CI	£ 16.60		
Wormshaft Bearing CI	£ 15.90		

AS AN ALTERNATIVE TO FREE STANDING TAILSTOCK WE NOW HAVE TAILSTOCK STEADY WHICH IS BAR MOUNTED AND ADJUSTABLE FOR CENTRE DISTANCE.

Drawing	£ 1.50	Steady Arm CI	£ 34.50
		Steady Body CI	£ 40.00

LATHE ATTACHMENT CASTINGS TO SUIT MYFORD SERIES 7 LATHES

3" Angle Plate CI	£ 15.80	Travelling Steady CI	£ 20.85
4" Angle Plate CI	£ 34.00	GM Fingers for Travelling Steady	£ 14.85
6" Angle Plate CI	£ 47.50	Fixed Steady (2 castings) CI	£ 49.00
Vertical Slide (2 castings) CI	£ 137.00	GM Fingers for Fixed Steady	£ 23.10
Small Vee Block CI	£ 15.40		
Machine Vice (2 castings) CI	£ 46.50		
Rear Tool Post CI	£ 40.25		

TEE SLOTTED SUB TABLE

DESCRIBED IN "E.I.M." JULY & AUGUST 1981. THE TEE SLOTTED SUB TABLE ENABLES WORK TO BE BOLTED TO THE LATHE TOP SLIDE WITHOUT DISTORTING THE LATHE TOP SLIDES.

Set of BMS Materials & instructions	£ 13.00	Set of Screws	£ 10.20
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GENERAL PURPOSE TOOLHOLDER

FOR LATHE TOP SLIDE WITH PROVISION FOR TOOL HEIGHT ADJUSTMENT ALSO HAVING THE CAPABILITY TO SWING THE TOOL CLEAR OF THE WORK FOR MEASURING AND INSPECTION WITHOUT DISTURBING THE TOOL POSITION. DESIGNED BY MARTIN CLEEVE "E.I.M" DEC 1982

Kit of Materials and Instructions	£ 10.50	Kit of Screws	£ 5.15
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MOUNTING ADAPTORS FOR MYFORD DIVIDING HEAD

Designed by Phil Bellamy & described in 'EIM' magazine March 2010

Lower Pedestal (CI)	£ 55.50	Higher Pedestal (CI)	£ 77.25
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Updated 3-8-18

DAVID LAMMAS WORKSHOP EQUIPMENT

We now have castings for the following David Lammas range of workshop castings.

3 WAY TOOL POSTS

Described "M.E." 2nd August 1985 - 3 SIZES ARE AVAILABLE, DRAWINGS INCLUDED IN PRICE

TYPE 'A' - (SMALL) FOR ZYTO ML4 LATHES ETC	£	24.50
Sides 2.7/8 Long x 1.1/4 Deep with 3/8" Tool Gap CI		
TYPE 'B' - (MEDIUM) FOR ML7 LATHES	£	32.00
Sides 3.1/4 Long x 1.1/4 Deep with 1/2" Tool Gap CI		
TYPE 'C' - (LARGE) BOXFORD	£	53.00
Sides 3.5/8 Long x 1.5/8 Deep with 5/8" Tool Gap CI		

DRILL GRINDING ATTACHMENT

This 4 facet drill grinding attachment was described in "M.E." 5th December 1986, 2nd January 1987.

DRAWINGS	£	2.50	3 CASTINGS (per set) CI	£	41.80
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GEAR CUTTER HEAD

Dave Lammas Gear Cutter Head designed with alternative heads, one for use with commercial cutters the other slightly smaller to be used with home made gear cutters. Castings are available for either.

GEAR CUTTER HEAD (LARGE VERSION)

DRAWINGS	£	3.00
HEAD CASTING CI	£	36.00
COLUMN FOOT CI	£	30.00
BELT TENSIONER CI	£	20.25

GEAR CUTTER HEAD (SMALL VERSION)

DRAWINGS	£	3.00
HEAD CASTING CI	£	38.00
BASE CASTING CI	£	18.00
COLUMN GROUND MS	£	7.50

DIVIDING HEAD

Designed to compliment the Lammas gear cutting head. The dividing head is approximately 2 1/8" centre height and mounted on a base which enables the whole dividing head to be rotated and then clamped in any position around its vertical centre.

DRAWINGS	£	2.50	HEAD CASTING CI	£	35.00
BASE CASTING CI	£	23.00	SPINDLE MATERIAL BMS	£	3.70

SINE TABLE

Described in "M.E." 20th November, 18th December 1987. Sine table 6 1/2" x 4"

DRAWINGS (3 SHEETS)	£	4.00	CASTINGS FOR TOP AND BASE CI	POA
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RAISING BLOCK FOR MYFORD DIVIDING HEAD

DRAWING AND CASTING CI	£	45.75
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POWER DRIVEN SPRING HAMMER

DRAWINGS (3)	£	3.00
BODY CASTING CI	£	54.00
PULLEY CASTING CI	£	9.80
CRANK/FLYWHEEL CASTING CI	£	10.90
SPRING CROSSHEAD CASTING CI	£	3.85
HAMMER SLIDE CASTING CI	£	6.00
CLUTCH CI	£	8.75

TOOLSLIDE

DRAWING AND CASTING CI	£	35.75
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HARDNESS TESTER

Described by Dave Lammas in Model Engineers Workshop. A useful addition to the workshop, particularly for verifying the results of Heat Treatment. Brinell, Vickers & Rockwell strength tests.

Drawings WE40	£	8.00
1 Set of Instructions	£	1.50
Castings CI (3)	£	101.00



WORKSHOP EQUIPMENT CASTINGS

STENT TOOL & CUTTER GRINDER

Overall dimensions 16 ins x 19 ins x 14 ins high. For grinding taps, reamers, end mills etc.
Please note it is advisable and recommended that guards be made and used even if built for home use.
Always wear safety spectacles when using any grinding machine. Construction series in
ME' Dec 1991 - June 1992

SET OF 4 DRAWINGS £ 20.00

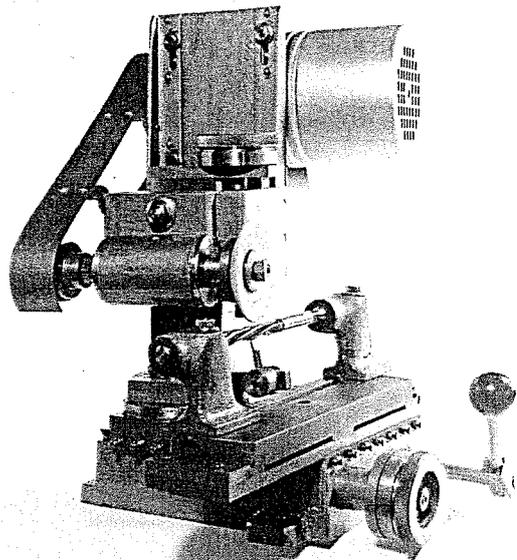
SET OF 12 CASTINGS £ 468.00

CASTING SET COMPRISES :-

C914	Bed (Larger)	1 off	C920	Tailstocks	2 off
C916	Table	1 off	C919	Spindle Housing	1 off
C915	Slide	1 off	C922	Universal Head	1 off
C917	Back & Column Slide	2 off	C921	Universal Head Bracket	1 off
C918	Column	1 off		Wheel Guard ALI	1 off

1 Set Bearings (1 x 6001ZZ)
 (1 x 6002ZZ) £ 9.20

Drive Belt (Z.25) £ 4.75



WORKSHOP DRAWINGS

WE 2	High Speed Sensitive Drilling Machine	£ 5.25
WE 3	Universal Swivelling Bench Vice	£ 6.80
WE 4	Sawing & Filing Attachment for the Lathe	£ 5.25
WE 5	Power Driven Hacksaw Machine	£ 8.50
WE 6	Tailstock Turret with 6 Tool Position	£ 5.25
WE 7	M. E. Spray Gun Mark II	£ 5.25
WE 8	Boring and Facing Head	£ 6.80
WE 9	Bending Rolls	£ 5.25
	Bending Rolls Gears to suit WE9 (Set of 3 Machined)	£ 29.50
WE 11	Light Vertical Milling Machine	£ 8.50
WE 12	Milling Attachment for Valve Gear Links	£ 5.25
WE 19	Twist Drill Grinding Jig	£ 5.25
WE 21	Small Lining Machine	£ 5.25
WE 22	Universal Pillar Tool (2 sheets)	£ 10.00
WE 23	Retracting Top Slide	£ 5.25
WE 38	Quick Change Toolpost	£ 6.80
WE 40	Hardness Testing Instrument	£ 8.00

Updated 27-7-18

TRACTION ENGINE DRAWINGS

Please note TE 3 to TE 10 are General Arrangements Only

<u>TE 3</u>	<u>WILSON'S "FARMERS ENGINE" OF 1849</u> By W.J. Hughes. The design of this model is based on the prototype design by R. Willis.	£	5.00
<u>TE 4</u>	<u>MARSHALL 7 N. H. P. GENERAL PURPOSE ENGINE</u> 1.1/2" scale by W.J. Hughes	£	6.50
<u>TE 5</u>	<u>FOWLER 'BIG LION' B6 Road Locomotive 8 nhp</u> by W.J. Hughes. 1.1/2" = 1'0" scale. GA only	£	5.53
<u>TE 5a</u>	<u>ARRANGEMENT & DETAILS OF SHOWMAN'S FITTINGS</u>	£	5.53
<u>TE 6</u>	<u>AVELING & PORTER TYPE "F" Compound Road Roller.</u> Designed by W.J. Hughes in 1.1/2" scale	£	5.53
<u>TE 7</u>	<u>MARSHALL 5 TON SINGLE CYLINDER STEAM TRACTOR</u> by W.J. Hughes in 1.1/2" scale	£	5.25
<u>TE 8</u>	<u>ENGINE FOR MARSHALL 5 TON COMPOUND STEAM TRACTOR</u> by W.J. Hughes in 2" scale. General Arrangement for tractor details see TE7	£	2.98
<u>TE 9</u>	<u>FOSTER SHOWMAN ROAD LOCOMOTIVE OF 7 N. H. P.</u> By W.J. Hughes in 1.1/2" scale	£	7.50
<u>TE 10</u>	<u>RANSOMES COMPOUND 6 N. H. P.</u> 1.1/2" scale by W.J. Hughes in 1.1/2" scale	£	14.50
<u>TE 12</u>	<u>SUPERHEATER BOILER FOR 3" SCALE TRACTION ENGINE</u> by Martin Evans	£	9.00
<u>TE 14</u>	<u>AVELING & PORTER COMPOUND STEAM ROAD ROLLER</u> 2" scale type AD described by John Haining in "ME" Vols 140-141. Set 11 sheets	£	47.00
<u>TE 15</u>	<u>ACCESSORIES FOR MODEL TRACTION ENGINES IN 1.1/2" SCALE</u> Lamps, Firing shovels & Prickers, Buckets, Bottle Jacks, Oil cans.	£	5.25

BOILER FITTING DRAWINGS

<u>LO 29</u>	<u>STEAM BRAKE</u> Suitable for 5"g locos. By Martin Evans (1 sheet)	£	5.25
<u>LO 30</u>	<u>TWIN RAM MECHANICAL LUBRICATOR</u> for 1" TO 1.1/2" scale locos. Described in "M.E." volume 124 - 1 sheet, by Martin Evans	£	8.50
<u>LO 33</u>	<u>SINGLE RAM LUBRICATOR</u> for 5"g locos & "Firefly".	£	5.25
<u>LO 34</u>	<u>MECHANICAL LUBRICATOR</u> for 2.1/2" & small 3.1/2"g locos including Rob Roy. Described in "M.E." volume 126 - 1 sheet - by Martin Evans	£	5.25
<u>LO 35</u>	<u>TWIN RAM MECHANICAL LUBRICATOR</u> for 1" TO 1.1/2" scale locos. Dsigned by Martin Evans. Alternative design to LO30 - 1 sheet	£	5.25
<u>LO 36</u>	<u>HAND PUMPS</u> for 3.1/2" & 5"g locos. Described by Martin Evans in "M.E." volume 127 - 1 sheet	£	5.25
<u>LO 37</u>	<u>INJECTORS</u> for 3.1/2" & 5"g locomotives	£	5.25
<u>LO 38</u>	<u>BOGIE PASSENGER CAR</u> for 5"g by Martin Evans - 1 sheet	£	5.25
<u>LO 42</u>	<u>STANDARD LOCOMOTIVE BOILER FITTINGS</u> 3/4" scale by Martin Evans. Described in "M.E." volume 129 - 1 sheet	£	8.50
<u>LO 44</u>	<u>MECHANICAL LUBRICATOR</u> with adjustable output for locos 3/4" to 2" scale	£	8.50
<u>LO 48</u>	<u>STANDARD BOILER FITTINGS FOR "G LOCOMOTIVES</u> Regulator, water gauge, manifold, blower valve, snifting valve, blow down valve, check valve - 1 sheet	£	8.50
<u>LO 84</u>	<u>WESTINGHOUSE BRAKE</u> Sheet giving full details of pump reservoir, brake valve, engine & tender brake cylinder	£	5.25
<u>LO 86</u>	<u>VERTICAL TEST BOILER</u> sheet showing vertical cross section of boiler firebox, tubeplate & arrangements of superheater.	£	5.25
<u>M70</u>	<u>VACUUM BRAKES</u> A well proven working brake design by Brian Hughes, shown fitted to 5"g passenger bogie. An essential feature for safe operation of passenger carrying railways. Drawings (3 sheets)	£	12.72

COUNTRYMANS STEAM DESIGNS

BY JOHN HAINING

TRACTION ENGINE & IMPLEMENTS

<u>REF</u>		<u>SHEETS</u>		
TE 18	3" SCALE SUFFOLK STEAM DREDGING TRACTOR. Steel Boiler	8	£	34.00
B.B.	FOWLER CLASS BB COMPOUND PLOUGHING ENGINE Copper boiler. 2" scale	20	£	40.00
J.F.	Supplementary sheets for FOWLER CLASS AA7 COMPOUND PLOUGHING ENGINE	2	£	2.10
TE 24	DAIRY ENGINE. Vertical single cylinder portable. Copper boiler. 2" scale	2	£	8.50
TE 27	RUSTON PROCTOR 3 TON S/C CLASS SD STEAM TRACTOR. 2" scale	11	£	47.00

BOILERS

DG	SENTINEL D.G. Copper. 2" scale	1	£	2.60
V.M.	VERTICAL MULTITUBULAR 5" o/dia copper	1	£	2.20
H.C/1	HORIZONTAL CENTRE FLUE 5.1/2" od copper blow lamp or gas firing	1	£	2.20
H.C/2	HORIZONTAL CENTRE FLUE 5.1/2" od copper coal firing	1	£	2.20

IMPLEMENTS - 2" Scale

TE 21	RANSOMES CLASS A THRASHER 2" SCALE	10	£	42.50
T.2	SELF MOVING ANCHOR	1	£	3.50
T.3	FOWLER MOLE DRAINING PLOUGH	2		N/A
T.4	FOWLER 6 FURROW PLOUGH (3 sheets)	3		N/A
TE 25	ROAD ROLLING CONTRACTORS LIVING VAN	3	£	12.75
TE 26	FOWLER WATER CART	4	£	17.00
TE 29	STEEL BOILER WELDING STANDARDS	1	£	8.50
TE 31	STRAW ELEVATOR	4	£	17.00
TE 32	SCRATTER MILL	1	£	8.50

These implements used with the engines listed, all perform the same work as the full size tackle. Detailed list of drawings for each of the above engines available on request.

LOCOMOTIVE DRAWINGS

<u>PRINCESS OF WALES LO 938</u>	Midland Railway Single 4-2-2 loco & tender. Designed in 5" gauges by Martin Evans. Described in 'ME' Vol 136/137. Drawings (15 sheets)	£ 72.00
<u>CARIBOU LO 40</u>	Canadian National 0-8-0 Switcher for 3.1/2" gauge. Designed by Martin Evans and described in "Model Engineer" volumes 127-128 Drawings (5 sheets)	£ 22.00
<u>BUFFALO LO 41</u>	Canadian type 2-8-0 loco and tender in 3.1/2" gauge. Based on "Caribou". Designed by Martin Evans and described in "Model Engineer" volume 129. One sheet only detailing differences to "Caribou". Drawings (1 sheet)	£ 5.25
<u>FIREFLY LO 32</u>	G.W.R. 2-6-2 Tank Locomotive Class 45. Designed in 5" gauge by Martin Evans. Described in "M.E." vol 124-127. Drawings (12 sheets)	£ 56.00
<u>FIREFLY LO 31</u>	G.W.R. 2-6-2 Tank Locomotive Class 45. Designed in 3.1/2" gauge by Martin Evans. Described in "M.E." vol 124-127. Drawings (9 sheets)	£ 42.50
<u>MABEL LO 97</u>	3.1/2" gauge L.N.W.R. 2-4-0 "Jumbo" tender loco. Drawings (7 sheets)	£ 30.00
<u>HEILAN LASSIE LO66</u>	3.1/2" g LNER 4-6-2 Pacific based on the Thompson rebuild. Designed by LBSC and described in 'Model Engineer' vols 94-97 & reprinted vol 121-126 Drawings (11 sheets)	£ 41.00
<u>RAINHILL LO 67</u>	3.1/2" gauge 0-2-2 Locomotive and tender by LBSC. Based on Stephenson's famous 'Rocket'. Described in ME volume 84	
	Drawings (2 sheets)	£ 8.50
	Driving Wheels CI	£ 31.60
	Trailing Wheels CI (2)	£ 17.60
	Tender Wheels CI (4)	£ 35.20
	Cylinder Blocks GM	£ 31.25
<u>STEPHENSONS ROCKET LO 958</u>	1.1/2"=1'-0" Scale drawings showing excellent external detail but no internal details for construction of working model. Designed by Martin Evans Drawings (2 sheets)	£ 8.50
<u>GREENE KING LO 950</u>	SR 4-6-0 Locomotive & tender. S.15 class in 3.1/2" g. Designed by Martin Evans - Described in ME vols 143-144. Drawings (10 sheets)	£ 47.00

SMALL GAUGE LOCOMOTIVE DRAWINGS

The following designs are for "Live Steam" locomotives for the builder with smaller facilities. They are too small to be considered as serious passenger haulers.

<u>SOUTHERN BELLE LO 948</u>	Gauge 1". L.B.S.C.R. "Atlantic" locomotive and tender by Martin Evans. Drawings (6 sheets)	£ 25.50
<u>ROYAL SCOT LO 937</u>	A gauge "0" high pressure 4-6-0 with butane fired loco type boiler. By Martin Evans. Drawings (4 sheets)	£ 17.00
<u>GREEN ARROW LO 939</u>	Gauge 1" L.N.E.R. 2-6-2 locomotive by Martin Evans. Drawings (6 sheets)	£ 25.50

FULL SIZE LOCOMOTIVE DRAWINGS - PACKED WITH DETAIL

<u>LNER A4 4-6-2 Pacific</u>	Drawn 1" to 1'0" 3 cylinder Express Passenger Engine.	
General Arrangement	Sheet 1 Loco	£ 9.00
General Arrangement	Sheet 2 Tender	£ 9.00
<u>LMS Class 2 2-6-2 Tank</u>	Drawn 1.1/2" to 1'0". Designed by G. Ivatt. 3 sheets	
	Sheet 1 Loco side view	£ 9.00
	Sheet 2 Loco plan view	£ 9.00
	Sheet 3 Loco cross sections	£ 9.00
<u>Britannia BR Class 7</u>	Drawn 1.1/2" to 1'0"	
	Sheet 1 A Loco side elevation	£ 9.00
	Sheet 1 B Loco plan view	£ 9.00
	Sheet 2 Loco end views and cross section	£ 9.00
	Sheet 3 Tender Plan/sections	£ 7.50
	Sheet 4 Tender side elevation	£ 7.50

SILICONE 'O' RINGS

For use with Steam.

These rings are suitable for sealing pistons & piston rods, pump rams, glands, valve spindles etc up to a pressure of 1500 lb/in/sq. Please quote reference number when ordering.

Select the appropriate size "nominal id" for rod and spindle application.

Select the appropriate size "nominal od" for piston and pump ram applications.

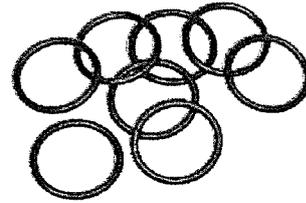
REF NO.	SECTION DIA	NOM. ID	NOM. OD	GROOVE DEPTH	GROOVE WIDTH	EACH	
002 (Red Si)	0.050"	3/64"	0.130"	0.041" 0.042"	0.067" 0.073"	£	0.28
003	0.060"	1/16"	0.160"	0.043" 0.046"	0.090" 0.098"	£	0.28
004	0.070"	5/64"	13/64"	0.057" 0.060"	0.094" 0.102"	£	0.28
B (black viton)	0.064"	3/32"	7/32"	0.046" 0.049"	0.090" 0.098"	£	0.40
005	0.070"	7/64"	15/64"			£	0.32
006	0.070"	1/8"	1/4"	min		£	0.32
007	0.070"	5/32"	9/32"	0.057"	min	£	0.32
008	0.070"	3/16"	5/16"	0.060"	0.094"	£	0.32
009	0.070"	7/32"	11/32"	max	0.102"	£	0.32
010	0.070"	1/4"	3/8"		max	£	0.36
011	0.070"	5/16"	7/16"			£	0.36
012	0.070"	3/8"	1/2"			£	0.36
013	0.070"	7/16"	9/16"			£	0.36
110	0.103"	3/8"	9/16"			£	0.40
111	0.103"	7/16"	5/8"	min		£	0.45
112	0.103"	1/2"	11/16"	0.087"		£	0.40
113	0.103"	9/16"	3/4"	0.090"	min	£	0.52
114	0.103"	5/8"	13/16"	max	0.125"	£	0.50
115	0.103"	11/16"	7/8"		0.133"	£	0.60
116	0.103"	3/4"	15/16"		max	£	0.84
210	0.139"	3/4"	1"			£	0.63
211	0.139"	13/16"	1.1/16"			£	0.66
212	0.139"	7/8"	1.1/8"		min	£	0.66
213	0.139"	15/16"	1.3/16"	min	0.169"	£	0.70
214	0.139"	1"	1.1/4"	0.119"	0.177"	£	0.72
215	0.139"	1.1/16"	1.5/16"		max	£	0.78
216	0.139"	1.1/8"	1.3/8"	0.123"		£	0.84
217	0.139"	1.3/16"	1.7/16"	max		£	1.20
218	0.139"	1.1/4"	1.1/2"			£	1.00
219	0.139"	1.5/16"	1.9/16"			£	1.00
220	0.139"	1.3/8"	1.5/8"			£	1.00
221	0.139"	1.7/16"	1.11/16"			£	1.20
222	0.139"	1.1/2"	1.3/4"			£	1.20
325	0.210"	1.1/2"	1.7/8"	min	min	£	2.10
326	0.210"	1.5/8"	2"	0.183"	0.250"	£	2.00
327	0.210"	1.3/4"	2.1/8"			£	2.10
328	0.210"	1.7/8"	2.1/4"			£	2.20
329	0.210"	2"	2.3/8"	0.188"	0.258"	£	2.40
330	0.210"	2.1/8"	2.1/2"	max	max	£	2.60
334			3"			£	3.00

STAINLESS FASTENERS & WATER GAUGE SEALS

BLACK VITON 'O' RINGS

For use as gauge seals (Water gauge details on page 138)

3mm Bore x 1mm Section	£	0.32
4mm Bore x 1mm Section	£	0.35
5mm Bore x 1mm Section	£	0.36
6mm Bore x 1mm Section	£	0.42
7mm Bore x 1mm Section	£	0.42
8mm Bore x 1mm Section	£	0.45
10mm Bore x 1mm Section	£	0.53



WASHERS

Sold in packets of approximately 50

Prices are per size - no washer assortments available.

STEEL:	2BA	£	2.15
	3BA	£	2.15
	4BA	£	2.15
	5BA	£	2.15
	6BA	£	2.15
	7BA	£	2.50
	8BA	£	2.50
	10BA	£	2.80
	12BA	£	4.50

BRASS:	2BA	£	2.60
	4BA	£	2.60
	5BA	£	2.60
	6BA	£	2.60
	7BA	£	2.60
	8BA	£	2.80
	10BA	£	2.80

STAINLESS STEEL:

M3	£0.50 / 25
M4	£0.60 / 25
M5	£0.65 / 25
M6	£0.70 / 25



BSF/BSW FASTENERS - STEEL

	PER 10
1/4" BSF X 1/4" Sck Grub	£ 2.27
1/4" BSF X 1" Sck Grub	£ 5.85
1/4" BSF X 3/4" Sck Csk	£ 3.55
1/4" BSF X 1" Sck Cap	£ 3.25

	PER 10
1/4" BSW X 1" Sck Cap	£ 2.15
1/4" BSW X 1" Hex Head	£ 2.85
5/16" BSF X 5/8" Cap/H Screw	£ 5.35

STAINLESS STEEL FASTENERS

STAINLESS

SOCKET CAPHEAD SCREWS

	PER 10
M3 x 12mm	£ 1.50
M3 x 20mm	£ 1.70
M3 x 25mm	£ 2.00
M4 x 25mm	£ 2.25
M5 x 25mm	£ 2.50
M6 x 25mm	£ 2.50



STAINLESS

SOCKET GRUB SCREWS

	PER 10
M2 x 4mm	£ 1.50
M2 x 8mm	£ 1.50
M3 x 4mm	£ 1.70
M3 x 10mm	£ 1.70
M4 x 10mm	£ 1.70
M5 x 8mm	£ 1.95
M6 x 12mm	£ 2.00



STAINLESS

PAN HEAD SCREWS

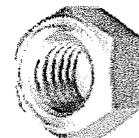
	PER 10
M3 x 25mm	£ 1.70

STAINLESS STEEL STUDDING

M3 x 0.5mm per 13" length	£	1.70
M4 x 0.7mm per 13" length	£	2.00
M5 x 0.8mm per 13" length	£	2.05

STAINLESS STEEL NUTS

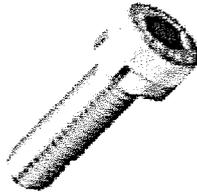
M3	£1.00 / 25
M4	£1.25 / 25
M5	£1.50 / 25
M6	£1.75 / 25



SOCKET SCREWS/FASTENERS

SOCKET CAPHEAD SCREWS

	PER 10
2 BA X 5/16"	£ 1.50
2 BA X 1/2"	£ 2.80
2 BA X 1"	£ 3.55
4 BA X 1/2"	£ 2.30
4 BA X 5/8"	£ 2.30
4 BA X 3/4"	£ 2.40
4 BA X 1"	£ 3.00
6 BA X 3/16"	£ 2.00
6 BA X 1/2"	£ 3.95
6 BA X 1"	£ 3.95



SOCKET CAPHEAD SCREWS

	PER 10
M3 x 6mm	£ 1.10
M3 x 12mm	£ 1.30
M3 x 25mm	£ 1.75
M4 x 14mm	£ 1.45
M4 x 25mm	£ 1.75
M5 x 14mm	£ 2.10
M5 x 25mm	£ 2.35
M6 X 25mm	£ 2.40

SOCKET GRUB SCREWS

	PER 10
2 BA X 3/16"	£ 2.30
2 BA X 1/2"	£ 2.25
2 BA X 5/8"	£ 2.00
2 BA X 3/4"	£ 2.40
4 BA X 1/8"	£ 2.80
4 BA X 3/16"	£ 2.05
4 BA X 1/4"	£ 2.75
4 BA X 1/2"	£ 2.95
4 BA X 3/4"	£ 3.20
4 BA X 1"	£ 2.30
6 BA X 1/8"	£ 3.50
6 BA X 1/4"	£ 1.50
6 BA X 3/8"	£ 1.84
6 BA X 1/2"	£ 2.34
6 BA X 3/4"	£ 2.42



SOCKET GRUB SCREWS

	PER 10
M1.6 x 2mm	£ 1.65
M1.6 x 6mm	£ 3.00
M2 x 5mm	£ 3.00
M2.5 x 3mm	£ 3.00
M2.5 x 5mm	£ 3.10
M3 x 3mm	£ 1.25
M3 x 6mm	£ 1.25
M4 x 4mm	£ 1.25
M4 x 6mm	£ 1.25
M4 x 8mm	£ 1.25
M5 x 6mm	£ 1.25
M6 x 6mm	£ 2.00

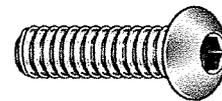
SLOTTED STEEL GRUB SCREWS

	PER 10
5BA x 1/4"	£ 2.40
7BA x 1/4"	£ 2.40
8BA x 3/16"	£ 2.60



SOCKET BUTTON HEAD SCREWS

	PER 10
M3 x 20mm	£ 1.40
M4 x 20mm	£ 1.50
M5 x 25mm	£ 1.60



SOCKET C/SUNK SCREWS

	PER 10
2 BA X 1/2"	£ 4.00
2 BA X 1"	£ 3.00
4 BA X 3/8"	£ 3.00
4 BA X 5/8"	£ 2.20
4 BA X 3/4"	£ 3.05
4 BA X 1"	£ 3.80
6 BA X 1/2"	£ 2.90
6 BA X 3/4"	£ 3.00



SOCKET C/SUNK SCREWS

	PER 10
M3 x 12mm	£ 1.25
M3 x 25mm	£ 1.30
M4 x 12mm	£ 1.25
M4 x 25mm	£ 1.45
M5 x 12mm	£ 1.25
M5 x 20mm	£ 1.30
M6 x 25mm	£ 1.50

STEEL FASTENERS & NUTS

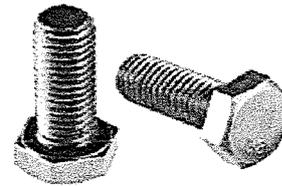
HEXAGON HEADED STEEL SETSCREWS

* Please note Hex screws are one size smaller heads except 10 and 12 BA.

	PER 10	PER 50	PER 100
2 BA X 1/2"	£ 2.10	£ 8.70	£ 14.50
2 BA X 1"	£ 2.25	£ 9.30	£ 15.50
4 BA X 1/2"	£ 2.00	£ 8.40	£ 14.00
4 BA X 1"	£ 2.15	£ 9.05	£ 15.10
5 BA X 1/2"	£ 2.00	£ 8.40	£ 14.00
5 BA X 3/4"	£ 2.05	£ 8.50	£ 14.20
6 BA X 1/2"	£ 2.15	£ 9.05	£ 15.10
6 BA X 3/4"	£ 2.20	£ 9.20	£ 15.30
7 BA X 1/2"	£ 2.00	£ 8.35	£ 13.90
8 BA X 1/2"	£ 2.05	£ 8.50	£ 14.20
*10 BA X 1/2" *	£ 2.10	£ 8.70	£ 14.50
*12 BA X 3/8" *	£ 2.25	£ 9.30	£ 15.50
M5 x 12mm	£ 0.70	£ 2.90	£ 4.80
M5 x 6mm	£ 0.70	£ 2.90	£ 4.80

STEEL STUDDING

SIZE	1'0" Lengths
2 BA	£ 2.40
4 BA	£ 2.80
5 BA	£ 4.10
6 BA	£ 4.10
7 BA	£ 6.10
8 BA	£ 7.60
10 BA	N/A
1/4 BSF	£ 2.80
1/4 BSW	£ 0.60

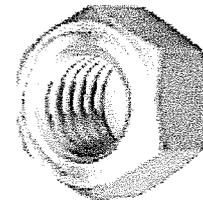


STEEL NUTS (STANDARD HEAD SIZE)

	PER 10	PER 50	PER 100
2 BA	£ 1.05	£ 4.30	£ 7.20
3 BA	£ 1.00	£ 4.10	£ 6.80
4 BA	£ 0.90	£ 3.85	£ 6.40
5 BA	£ 0.90	£ 3.85	£ 6.40
6 BA	£ 0.95	£ 3.95	£ 6.60
7 BA	£ 1.30	£ 5.40	£ 9.00
8 BA	£ 1.30	£ 5.40	£ 9.00
10 BA	£ 1.90	£ 7.90	£ 13.20
12 BA	£ 2.15	£ 9.00	£ 15.00
1/4" BSF FULL	£ 0.75	£ 3.15	£ 5.20
1/4" BSF LOCK NUTS	£ 0.40	£ 1.70	£ 2.80
5/16" BSF	£ 1.15	£ 4.86	£ 8.00

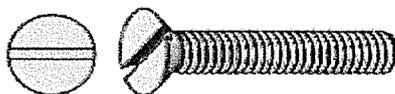
STEEL NUTS (1 size smaller hex)

PER 10	PER 50	PER 100
£ 1.10	£ 4.55	£ 7.60
-	-	-
£ 1.05	£ 4.45	£ 7.40
£ 1.05	£ 4.45	£ 7.40
£ 1.30	£ 5.40	£ 9.00



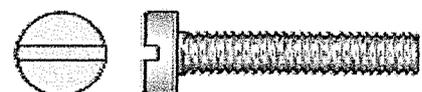
SLOTTED STEEL COUNTERSUNK SCREWS

	PER 10	PER 50	PER 100
2 BA X 3/4"	£ 2.05	£ 8.50	£ 14.20
4 BA X 1/2"	£ 1.80	£ 7.55	£ 12.60
5 BA X 1/2"	£ 1.90	£ 7.90	£ 13.20
6 BA X 1/2"	£ 1.90	£ 7.90	£ 13.20
7 BA X 1/2"	£ 2.10	£ 8.65	£ 14.40
8 BA X 1/2"	£ 1.95	£ 8.15	£ 13.60
10 BA X 1/2"	£ 1.95	£ 8.15	£ 13.60
12 BA X 1/4"	£ 2.25	£ 9.35	£ 15.60



STEEL CHEESEHEAD SCREWS

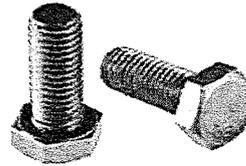
PER 10	PER 50	PER 100
£ 2.10	£ 8.75	£ 14.60
£ 1.75	£ 7.30	£ 12.20
£ 1.90	£ 7.90	£ 13.20
£ 1.80	£ 7.40	£ 12.30
£ 1.95	£ 8.15	£ 13.60
£ 1.90	£ 7.90	£ 13.20
£ 1.90	£ 7.90	£ 13.20
£ 1.90	£ 9.10	£ 15.20



BRASS FASTENERS & RIVETS

HEXAGON HEADED BRASS SETSCREWS

	PER 10		PER 50		PER 100	
4 BA X 1/2"	£	3.05	£	12.70	£	21.20
6 BA X 1/2"	£	3.05	£	12.70	£	21.20
8 BA X 1/2"	£	3.00	£	12.60	£	21.00

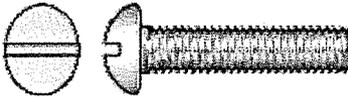


BRASS STUDDING

- 1'0" Lengths

SIZE		
2 BA	£	3.90
4 BA	£	4.80
5 BA	£	4.65
6 BA	£	5.00
7 BA	£	6.10
8 BA	£	7.95
10BA	£	9.10

BRASS R/HEAD	PER 10		PER 50	
6 BA X 1/2"	£	1.95	£	8.05
8 BA X 1/4"	£	1.55	£	6.50
8 BA X 1/2"	£	1.75	£	7.20
10 BA X 1/2"	£	1.75	£	7.20
12 BA X 1/4"	£	1.90	£	8.00

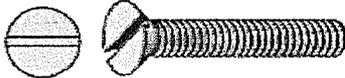


BRASS CH/HEAD	PER 10		PER 50	
2 BA X 1/2"	£	2.75	£	11.40
4 BA X 1/2"	£	2.15	£	9.00
6 BA X 1/2"	£	2.00	£	8.40
8 BA X 1/2"	£	2.10	£	8.65



BRASS COUNTERSUNK

	PER 10		PER 50	
4 BA X 3/4"	£	2.10	£	8.65
5 BA X 1/2"	£	2.10	£	8.65
6 BA X 1/2"	£	1.80	£	7.55
7 BA X 1/2"	£	1.80	£	7.55
8 BA X 1/4"	£	1.80	£	7.45
8 BA X 1/2"	£	1.95	£	8.15
10 BA X 1/2"	£	1.95	£	8.15
12 BA X 1/4"	£	2.25	£	9.35



BRASS NUTS

	PER 10		PER 50		PER 100	
2 BA	£	1.00	£	4.20	£	7.00
4 BA	£	0.95	£	3.95	£	6.60
5 BA	£	0.95	£	3.95	£	6.60
6 BA	£	0.95	£	3.95	£	6.60
8 BA	£	1.05	£	4.45	£	7.40
10 BA	£	1.30	£	5.40	£	9.00
12 BA	£	1.45	£	6.00	£	10.00



RIVETS

SNAP HEAD ONLY AVAILABLE

- Sold in packets of 100

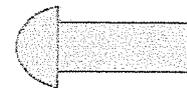
BRASS

1/32" X 1/4"	£	3.20
3/64" X 1/4"	£	2.70
1/16" X 1/4"	£	2.85
1/16" X 3/8"	£	3.00



STEEL

1/16" X 1/4"	£	1.30
1/16" X 1/2"	£	1.80
5/64" X 1/2"	£	2.40
3/32" X 3/8"	£	1.95
3/32" X 3/4"	£	2.00
1/8" X 3/8"	£	1.90
1/8" X 1/2"	£	2.00
1/8" X 3/4"	£	2.25
1/8" X 1"	£	2.40
3/16" X 1"	£	3.60 per 50



COPPER

1/16" X 3/8"	£	2.65
1/16" X 1/2"	£	2.80
3/32" X 1/2"	£	4.75
1/8" X 1/2"	£	5.75
1/8" X 1"	£	8.00
5/32" X 1"	£	12.65 per 50
5/32" X 2.1/2"	£	6.75 per 25
3/16" X 1"	£	15.50 per 50



RIVET SNAPS

1/16" Dia	£	6.00
5/64" Dia	£	6.00
3/32" Dia	£	6.00
1/8" Dia	£	6.15

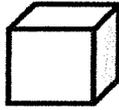
5/32" Dia	£	6.75
3/16" Dia	£	6.75
MINIATURE TYPE - 1/32", 3/64" & 1/16" Each		£ 5.10

MATERIAL - COPPER

ALL PRICES ARE PER FOOT.

COPPER SQUARE

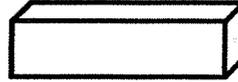
BS 2874	
3/16"	£4.25
6mm	£4.75
3/8"/10mm	£4.90
1/2"	£9.45



COPPER SECTION

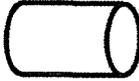
BS 2874

3/16" X 1/2"	£4.50
3/16" X 3/4"	£2.24
1/4" X 3/8"	£6.50
1/4" X 1/2"	£5.00
1/4" X 5/8"	£5.05
1/4" X 3/4"	£8.05
1/4" X 1"	£9.40
3/8" X 1/2"	£7.85
3/8" X 3/4"	£11.75
1/2" X 3/4"	£15.00
5/8" X 3/4"	£15.00



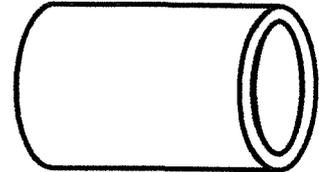
COPPER ROUND

BS 2874	
1/8" DIA	£2.10
4mm DIA	£4.10
3/16" DIA	£2.20
1/4" DIA	£2.45
5/16" DIA	£3.05
10mm DIA	£6.30
7/16" DIA	£6.75
1/2" DIA	£7.65
5/8" DIA	£12.15



THICKWALL COPPER TUBE - Firehole Ring (prices are per inch)

1" od x 10g (3/4" bore)	£1.35
1.1/4" od x 10g (1" bore)	£1.80
35mm od x 3.5mm (Replaces 1.3/8"od)	£2.50
1.1/2" od x 10g (1.1/4" bore)	£2.15
1.5/8" od x 10g (1.3/8" bore)	£2.30
1.3/4" od x 10g (1.1/2" bore)	£2.50
2" od x 10g (1.3/4" bore)	£3.10
2.1/4" od x 10g (2" bore)	£3.50



COPPER & BRASS SHEET - Half Hard BS 899

Copper & brass sheet now available only in metric thicknesses.

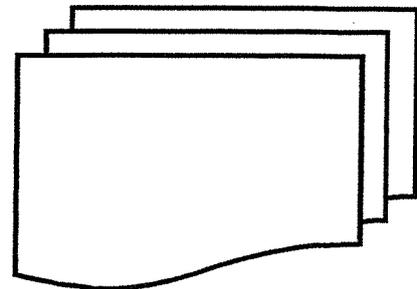
We can supply 300 x 300mm & 300 x 600mm pieces at the price shown in the following table, or we can supply pieces cut to customers exact rectangular sizes (no circles) at slightly higher prices due to a certain amount of wastage.

METRIC THICKNESS	ACTUAL IMPERIAL THICKNESS	APPROX IMPERIAL EQUIV.	COPPER PRICES		BRASS PRICES	
			300 x 300mm (12" X 12")	300 x 600mm (12" X 24")	300 x 300mm (12" X 12")	300 x 600mm (12" X 24")
0.40mm	0.015"	-	£6.35	£12.70	£6.65	£13.30
0.70mm	0.028"	22 SWG	£9.75	£19.50	£9.45	£18.90
0.90mm	0.035"	20 SWG	£14.85	£29.70	£12.25	£24.50
1.20mm	0.047"	18 SWG	£18.00	£36.00	£16.35	£32.70
1.50mm	0.059"	-	£22.40	£44.80	£19.50	£39.00
2.00mm	0.079"	14 SWG	£30.25	£60.50	£25.50	£51.00
2.50mm	0.098"	13 (3/32")	£41.40	£82.80	£32.75	£65.50
3.00mm	0.118"	10 (1/8")	£50.00	£100.00	£38.75	£77.50
4.00mm	0.158"	8 (5/32")	£57.00	£114.00	NOT STOCKED	NOT STOCKED
4.50mm	0.178"	7 (3/16")		P.O.A		
6.00mm			AVAILABLE TO SPECIAL ORDER ONLY - NOT STOCKED			

PRICES FOR SHEET CUT TO CUSTOMERS SIZES

Sold by weight To enable customers to calculate the theoretical weight of their order, the following lists show approx weights per sq ft.

	COPPER WEIGHT PER SQ FT IN KG	PRICE PER KG	BRASS WEIGHT PER SQ FT IN KG	PRICE PER KG
.40mm	0.38	£19.15	0.32	£23.80
.70mm	0.58	£19.00	0.56	£19.40
.90mm	0.75	£22.75	0.72	£19.55
1.20mm	1.00	£20.55	0.96	£19.55
1.50mm	1.25	£20.60	1.28	£17.50
2.00mm	1.66	£21.00	1.60	£18.25
2.50mm	2.07	£23.00	2.00	£18.85
3.00mm	2.49	£23.00	2.40	£18.50
4.00mm	3.32	£19.65	NOT STOCKED	
4.50mm	3.74	P.O.A	NOT STOCKED	
6.00mm	5.00	P.O.A	NOT STOCKED	



COPPER TUBE

Solid Drawn Seamless - all prices are per foot

1/16"od x 26g	£1.45	5/8"od x 20g	£4.80	2.1/2"od x 16g	£25.40
3/32"od x 26g	£1.55	5/8"od x 16g	£6.75	3"od x 16g	£30.50
1/8" od x 22g	£0.80	11/16" od x 20g	£5.55	3.1/4"od x 16g	£32.00
4mm od x 22g	£0.90	3/4"od x 20g	£4.15	3.1/2"od x 16g	£36.00
3/16"od x 22g	£0.90	3/4"od x 16g	£9.00	3.1/2"od x 10g	£55.75
1/4"od x 22g	£1.40	7/8"od x 16g	£7.90	3.3/4"od x 13g	£52.00
3/16"od x 16g	£4.30	1"od x 20g	£7.25	4"od x 16g	£35.75
1/4"od x 16g	£3.05	1"od x 16g	£11.35	4"od x 13g	£51.75
5/16"od x 20g	£3.90	1.1/8"od x 16g	£14.00	4"od x 10g	£65.15
5/16"od x 16g	£4.25	1.1/4"od x 16g	£12.50	4.3/8"od x 13g	£60.00
3/8"od x 20g	£2.30	1.3/8"od x 16g	£14.50	4.1/2"od x 13g	£62.75
3/8"od x 16g	£4.25	1.1/2"od x 20g	£12.25	4.1/2"od x 10g	£71.50
7/16"od x 20g	£2.85	1.1/2"od x 16g	£15.50	4.3/4"od x 10g	£84.00
7/16"od x 16g	£5.40	1.3/4"od x 20g	£16.50	5"od x 13g	£69.00
1/2"od x 20g	£3.00	1.3/4"od x 16g	£16.25	5"od x 10g	£90.00
1/2"od x 16g	£4.50	1.3/4"od x 14g	£22.50	5"od x 10g	£97.00
9/16"od x 20g	£2.35	2"od x 16g	£20.75	6"od x 10g	£102.00
9/16"od x 18g	£4.90	2.1/4"od x 16g	£23.50	8.1/4"od x 10g	£135.00

PLEASE NOTE:

Sizes 1/8" od, 5/32" od, 3/16" od, & 1/4" od x 22g are stocked coiled and can be supplied in any length up to a maximum length of 20m.

Sizes 1/16" od x 28g, 3/32" od x 24g, 3/16"od x 16g and all sizes larger are stocked in straight lengths. 1/16" od x 3/32" od tube can be despatched coiled up to maximum length of 8'.

Larger sizes are supplied in straight lengths only, cut to customer's requirements.

For larger sizes of tube for boiler barrels, etc, please state finished length required and we will cut an adequate length to allow a small machining allowance.



PHOSPHOR BRONZE - prices are per foot

ROUND (BS2874 : PB102)

1/8" DIA	£2.40
5/32" DIA	£2.10
3/16" DIA	£3.20
1/4" DIA	£4.00
5/16" DIA	£5.85
3/8" DIA	£7.25
7/16" DIA	£13.00
1/2" DIA	£12.75



SQUARE (BS2874 : PB102)

1/2"	£17.00
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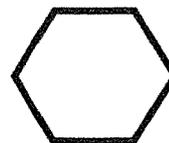
PHOSPHOR BRONZE WIRE

Supplied in 10' coils - suitable for safety springs
24g £0.80 / coil

PHOSPHOR BRONZE HEXAGON (COLPHOS 90)

Free machining - 2% Zinc, 4% Lead (Phosphor) Bronze

5/32" A/F	£2.00	7/16" (0.437") A/F	£12.75
4 BA (0.248") A/F	£4.05	17mm (0.669") A/F	£25.25
2 BA (0.324") A/F	£8.10	3/4" (0.750") A/F	£30.00
10.5mm (0.413") A/F	£12.15	15/16" (0.937") A/F	£56.00

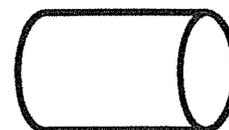


SAE 660 / LG2 / RG7 LEADED BRONZE

Suitable for bearings, cylinder liners, bushes etc. Good machinability. Prices are per foot.

Larger sizes are available in shorter lengths @ inch rate

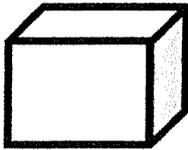
13mm dia (1/2")	£8.70	33 mm dia (1.1/4")	£32.00	per inch	£2.95
16 mm dia (5/8")	£11.50	36 mm dia	£45.50	per inch	£4.20
21 mm dia (3/4")	£17.00	41mm dia (1.1/2")	£50.00	per inch	£4.60
23 mm dia (7/8")	£20.50	45mm dia (1.3/4")	£67.00	per inch	£6.15
26 mm dia (1")	£27.50	2.1/2" dia	£110.00	per inch	£10.00
31 mm dia (1.1/8")	£34.50				



MATERIALS - BRASS

BRASS SQUARE (BS 249)

1/8"	£	1.40
5mm (3/16)	£	1.85
1/4"	£	2.70
5/16"	£	3.20
3/8"	£	4.10
7/16"	£	4.85
1/2"	£	7.20
5/8"	£	11.00
3/4"	£	16.75
7/8"	£	17.50
1"	£	25.80



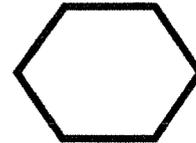
BRASS ROUND (BS 249)

1/16" DIA	£	0.90
1/8" DIA	£	1.00
4mm (5/32)	£	0.85
3/16" DIA	£	1.05
1/4" DIA	£	1.70
5/16" DIA	£	2.95
3/8" DIA	£	3.85
7/16" DIA	£	4.60
1/2" DIA	£	5.25
9/16" DIA	£	6.40
5/8" DIA	£	8.15
3/4" DIA	£	10.75
7/8" DIA	£	16.00
1" DIA	£	17.00
1.1/4" DIA	£	29.00



BRASS HEXAGON (BS 2874)

SIZE	A/F	£
3mm		1.15
4mm (5/32)	.152 (8BA)	1.25
3/16"	.193 (6BA)	2.15
1/4"	.248 (4BA)	1.85
5/16"	.312	3.15
3/8"	.375	3.60
7/16"	.437	4.00
1/2"	.500	5.85
9/16"		7.75
5/8"	.625	8.50
3/4"		13.00
7/8"		19.00
1"		20.00



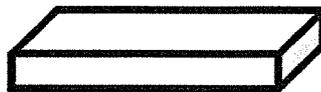
BRASS TUBE (BS 2871)

1/8" od x 22g	£	3.55
3/8" od x 20g	£	3.15
3/8" od x 26g	£	2.30
7/16" od x 22g	£	3.55
1/2" dia x 20g	£	3.90
9/16" od x 20g	£	5.05
5/8" od x 16g	£	6.15
3/4" od x 20g	£	5.50
1" od x 16g	£	9.40
1.1/4" od x 16g	£	10.50
2" od x 16g	£	17.75
3" od x 16g	£	27.50
6mm x 1mm	£	3.35



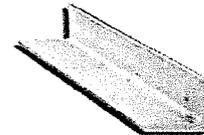
BRASS FLAT (BS 2870)

1/16" X 1/4"	£	0.70
1/8" X 1/4"	£	2.15
1/8" X 1/2"	£	3.00
1/8" X 1"	£	3.75
1/8" X 1.1/2	£	5.50
1/8" X 2"	£	7.20
1/4" X 1/2"	£	4.10
1/4" X 3/4"	£	6.00
1/4" X 1"	£	7.45
3/8" X 3/16"	£	3.05
3/8" X 1.1/2"	£	15.00



BRASS ANGLE (BS 2874)

1/4" X 1/4" X 1/16"	£	2.00
5/16" X 5/16" X 1/16"	£	2.50
3/8" X 3/8" X 1/16"	£	2.70
1/2" X 1/2" X 1/16"	£	3.00
1/2" X 1/2" X 1/8"	£	4.35
5/8" X 5/8" X 1/16"	£	4.25
3/4" X 3/4" X 1/16"	£	4.80
1" X 1" X 1/8"	£	9.60



HALF ROUND BRASS BEADING

Supplied in continuous coil any length.

Price per foot

3/32" wide	£	1.30
1/8" wide	£	1.75
3/16" wide	£	2.50
1/4" wide	£	3.00

BRASS SHEET (BS 2870)

Details as per copper sheet - Sold by weight - see page 98

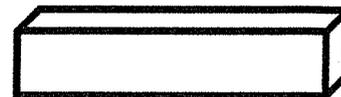


SQUARE BRASS TUBE

(For Lubricator Tanks)

Price per 6" length

1" sq x 16g	£	6.60
1.1/4" sq x 16g	£	8.35
2"sq x 16g	£	8.00



ALUMINIUM CORED BAR

Price per foot

1.1/4" od x 3/4" id	£	10.50
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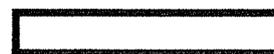
ALUMINIUM ROUND (CZ108)

2.3/4" dia -		
per ft	£	27.90
per inch	£	2.75

BRASS BOILER BAND - per foot

Supplied in any length - as coil

5/32" x 24g	£	0.45
3/16" x 22g	£	0.75
1/4" x 22g	£	1.20
1/2" x 20g	£	2.35



MATERIAL - STAINLESS STEEL

STAINLESS ROUNDS FREE CUTTING

Prices per foot

1/16" dia	£ 1.15	3/8" dia	£ 3.85
3/32" dia	£ 1.05	7/16" dia	£ 6.00
1/8" dia	£ 0.75	1/2" dia	£ 6.50
4mm dia	£ 0.75	9/16" dia	£ 7.75
3/16" dia	£ 1.65	5/8" dia	£ 8.00
7/32" dia	£ 1.35	3/4" dia	£ 10.00
1/4" dia	£ 1.55	7/8" dia	£ 11.50
5/16" dia	£ 2.65	1" dia	£ 13.00
		1.3/8" dia	£ 20.00



STAINLESS TUBE - per ft.

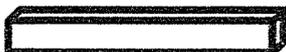
1/8" od x 24g	£ 5.00
1/4" od x 20g	£ 6.35
5/16" od x 20g	£ 6.00
3/8" od x 20g	£ 5.50
7/16" od x 20g	£ 6.25
1/2" od x 20g	£ 5.50



STAINLESS FLATS EN 58J

Softened and descaled

3mm x 12mm	£ 3.30
10mm x 20mm x 6" long	£ 4.85
12mm x 25mm (1/2" x 1") x 6"lg	£ 5.00
15mm thick x 25mm wide x 6"	£ 5.50

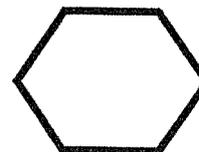


STAINLESS STEEL SHEET

1.5mm (16g) 12" x 12"	£ 11.75
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STAINLESS HEXAGON - per ft.

.152 A/F 8BA	£ 1.40
.193 A/F 6BA	£ 2.20
.218 A/F 5BA	£ 1.80
.248 A/F 4BA	£ 1.90
.324 A/F 2BA	£ 3.70



STAINLESS STEEL STUDDING

M3 x 0.5mm per 13" length	£ 1.70
M4 x 0.7mm per 13" length	£ 2.00
M5 x 0.8mm per 13" length	£ 2.05

CAST BAR

Other sizes of Cast Iron Round, Square & rectangular are available as cut pieces to order.

CAST IRON ROUND - Continuously cast meehanite - Prices per inch

25 mm dia (1")	£ 0.80	60 mm dia (2.1/4")	£ 2.50
30 mm dia (1.1/8")	£ 0.85	65 mm dia (2.1/2")	£ 2.90
35 mm dia (1.1/4")	£ 1.00	70 mm dia	£ 3.10
40 mm dia (1.1/2")	£ 1.30	80 mm dia (3.1/8")	£ 4.15
45 mm dia (1.3/4")	£ 1.50	90 mm dia (3.1/2")	£ 7.00
50 mm dia (1.7/8")	£ 1.85	100mm dia (4")	£ 8.50
55 mm dia (2.1/8")	£ 2.15		

CAST IRON RECTANGLE

Continuously cast meehanite - prices per inch

45mm x 50 mm	£ 2.50
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CAST IRON SQUARE - Continuously cast meehanite - Prices per inch

1/8 radius on corners - prices per inch

40 mm sq (1.1/2")	£ 2.10	55 mm	£ 3.15
45 mm sq (1.3/4")	£ 2.20	60mm	£ 3.90
50 mm sq (1.7/8")	£ 2.75	65mm (2.1/2")	£ 4.45
		100mm	£ 6.00



CAST GUNMETAL ROUND

Suitable for bushes, brgs & pistons.

Price per inch

1/2" dia	£ 1.80
5/8" dia	£ 2.75
3/4" dia	£ 3.85
1.1/8" dia	£ 7.00
1.3/8" dia	£ 9.90
1.5/8" dia	£ 13.05
1.3/4" dia	£ 15.75
1.7/8" dia	POA
2" dia	£ 21.60
2.1/2" dia	POA
2.5/8" dia	POA
2.3/4" dia	£ 37.35
3" dia	£ 49.05

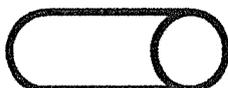
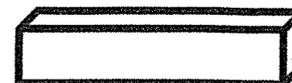
CAST GUNMETAL SQUARE - per inch

1/2" sq (Nominal)	£ 2.30
5/8" sq (Nominal)	£ 2.95
3/4" sq (Nominal)	£ 4.75
1.1/16" sq (Nominal)	£ 8.60
1.3/8" sq (Nominal)	£ 13.05



CAST GUNMETAL SECTION - per inch

1/2" x 3/4"	£ 3.30
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MATERIAL

BRIGHT DRAWN MILD STEEL FLAT - All prices are per foot



THICKNESS	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
Width										
1/4"	£1.00	£0.60	-	-	-	-	-	-	-	-
3/8"	£0.40	£1.00	£1.10	£1.30	-	-	-	-	-	-
1/2"	£1.10	£0.70	£1.00	£1.00	£1.20	£1.25	-	£2.00	£2.40	-
5/8"	£0.40	£0.70	£1.20	£1.45	-	£1.50	£2.00	-	-	-
3/4"	£0.40	£0.90	£1.15	£1.55	£1.45	£1.75	£2.40	-	-	-
1"	£0.55	£1.00	£1.50	£1.70	£1.95	£2.55	£2.90	£5.25	£4.50	-
1.1/4"	£0.65	£1.00	£1.60	£2.10	£3.75	£3.45	£3.80	£5.35	£6.30	-
1.1/2"	£0.80	£1.50	£2.20	£2.60	£4.40	£4.10	£5.25	£6.50	£8.00	£8.95
1.3/4"	£0.90	£1.95	£2.60	£3.10	-	£4.25	£7.05	£6.75	-	-
2"	£1.00	£1.70	£2.50	£3.40	£5.00	£4.80	£6.05	£7.50	-	-
2.1/4"	£1.15	-	£7.35	£3.30	-	£9.25	£8.75	-	-	-
2.1/2"	£1.30	-	£4.55	£3.55	£7.75	£6.20	£6.00	£8.50	£9.55	-
3"	£1.50	£3.70	£5.15	£4.65	£7.55	£7.00	£9.55	-	£12.00	-
4"	£2.05	£5.00	£7.70	£7.85	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-

*Please note that 1/16" thickness is now guillotined steel sheet

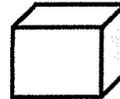
BRIGHT DRAWN MILD STEEL HEXAGON

A/F	A/F	A/F
5.00 MM 0.195"	£1.00	10.0 MM £1.00
5.5 MM 0.219"	£1.35	13.0 MM £1.70
4BA 0.248"	£1.45	15.5 MM £3.00
7.00 MM 0.275"	£0.80	5/8" £3.25
8.00 MM 0.312" (5/16)	£1.00	1" £4.50



BRIGHT MILD STEEL SQUARE - Prices per foot

3/16"	£ 0.60	5/8"	£ 2.90
1/4"	£ 0.75	3/4"	£ 3.30
5/16"	£ 1.00	7/8"	£ 4.45
3/8"	£ 1.25	1"	£ 5.50
7/16"	£ 1.35	1.1/4"	£ 8.50
1/2"	£ 1.70	1.1/2"	£ 11.00
		1.3/4"	£ 19.50



BRIGHT MILD STEEL SHEET

Supplied in 12" x 12" and 12" x 24" sheets. Prices per sq foot.

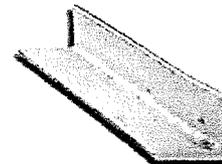
1.0mm (20g)	£2.75	2.0mm (14g)	£5.50
1.25mm (18g)	£3.25	2.5mm (13g or 3/32")	£6.55
1.5mm (16g)	£4.15	3.0mm (10g or 1/8")	£8.50



BRIGHT MILD STEEL ANGLE

Only available in metric sizes. Imperial equivalent shown in brackets.

12 x 12 x 3mm (1/2" x 1/2" x 1/8")	£3.35	32 x 32 x 5mm (1.1/4" x 3/16")	£8.50
16 x 16 x 3mm (5/8" x 5/8" x 1/8")	£4.40	32 x 32 x 6mm (1.1/4" x 1/4")	£9.00
20 x 20 x 3mm (3/4" x 1/8")	£3.15	40 x 40 x 4mm (1.1/2" x 5/32")	£9.25
25 x 25 x 3mm (1" x 1/8")	£4.00	40 x 40 x 5mm (1.1/2" x 3/16")	£10.60
25 x 25 x 5mm (1" x 3/16")	£6.05	40 x 40 x 6mm (1.1/2" x 1/4")	£11.25
32 x 32 x 4mm (1.1/4" x 5/32")	£7.60	50 x 50 x 6mm (2" x 1/4")	£14.50



Updated 27-7-18

MATERIAL

BRIGHT MILD STEEL ROUND - prices per foot

3/32" dia	£	0.75	3/4" dia	£	2.50	2.3/4" dia	£	25.00
1/8" dia	£	0.15	7/8" dia	£	3.00			
4mm dia	£	0.20	1" dia	£	4.00			
3/16" dia	£	0.22	1.1/8" dia	£	5.50			
7/32" dia	£	0.55	1.1/4" dia	£	6.85			
1/4" dia	£	0.40	1.3/8" dia	£	7.85			
5/16" dia	£	0.55	1.1/2" dia	£	8.75			
3/8" dia	£	0.70	1.5/8" dia	£	10.00			
7/16" dia	£	1.10	1.3/4" dia	£	10.50			
1/2" dia	£	1.15	2" dia	£	12.50			
9/16" dia	£	1.90	2.1/8" dia	£	15.00			
5/8" dia	£	2.00	2.1/2" dia	£	23.50			



PRECISION GROUND MILD STEEL

1/4" dia	£	3.20	3/4" dia	£	7.75
3/8" dia	£	4.25	7/8" dia	£	11.75
1/2" dia	£	6.75	1" dia	£	12.75
5/8" dia	£	8.15			



SILVER STEEL - 13" lengths only. Prices per 13"

ROUNDS

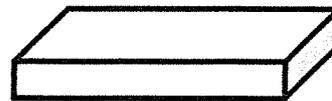
1/16" dia	£	0.60	7/16" dia	£	5.42
3/32" dia	£	0.64	1/2" dia	£	6.19
1/8" dia	£	0.82	9/16" dia	£	8.23
5/32" dia	£	1.32	5/8" dia	£	8.78
3/16" dia	£	1.30	11/16" dia	£	13.12
7/32" dia	£	2.40	3/4" dia	£	12.57
1/4" dia	£	1.97	7/8" dia	£	16.91
9/32" dia	£	3.09	1" dia	£	18.87
5/16" dia	£	2.99	1.1/4" dia	£	31.74
3/8" dia	£	3.92			



GROUND GAUGE PLATE - OIL HARDENING CARBON STEEL

Each piece supplied with hardening and tempering instructions

9" long x 2" wide x 1/16" thick	£	9.05
9" long x 2" wide x 3/32" thick	£	10.35
9" long x 2" wide x 1/8" thick	£	10.80
9" long x 2" wide x 3/16" thick	£	10.75
9" long x 2" wide x 1/4" thick	£	12.90
9" long x 2" wide x 5/16" thick	£	16.95
9" long x 2" wide x 3/8" thick	£	18.40



SPRING STEEL - Strip material for Leaf springs/governors etc.

Price per 24" length.

1/8" x 38g (0.006")	£	1.00	1/4" x 22g	£	1.00
1/8" x 28g (0.015")	£	1.00			
1/4" x 26g (0.018")	£	1.00			
1/4" x 24g (0.022")	£	1.00			

REAMERS - HSS

NOTE: HAND REAMERS ARE STRAIGHT SHANK WITH SQUARE ENDS
MACHINE REAMERS ARE NO. 1 MORSE TAPER SHANK.

SIZE		HAND	MACHINE	SIZE		HAND	MACHINE
1/16"	dia	£29.66	-	5/16"	dia	£17.44	£24.72
3/32"	dia	£21.76	-	11/32"	dia	£26.70	£27.68
1/8"	dia	£12.64	£21.76	3/8"	dia	£22.22	£24.72
5/32"	dia	£16.82	£24.72	13/32"	dia	£29.66	£29.66
3/16"	dia	£13.12	£23.74	7/16"	dia	£22.00	£26.70
7/32"	dia	£17.80	£26.70	15/32"	dia	£32.62	£30.64
1/4"	dia	£15.24	£22.74	1/2"	dia	£26.64	£26.70
9/32"	dia	£20.76	£27.68				

Larger imperial sizes & metric sizes available. Price on request.

TAPER PIN REAMERS - HSS

Straight flute with squared end for hand use. Taper 1 in 48.

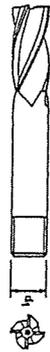
SIZE		PRICE EACH	SIZE		PRICE EACH
1/16"	dia	£33.62	9/64"	dia	£32.00
5/64"	dia	£32.62	5/32"	dia	£25.64
3/32"	dia	£23.74	3/16"	dia	£25.64
7/64"	dia	£29.66	7/32"	dia	£32.00
1/8"	dia	£19.78	1/4"	dia	£25.64

NOTE: Nominal sizes shown above are diameters at large end of taper.

END MILLS & TWO FLUTE SLOT DRILLS

HSS PARALLEL SCREWED SHANK

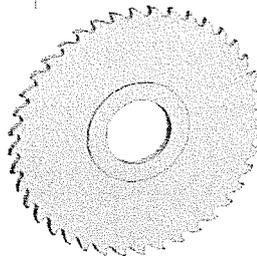
SIZE		END MILL	SLOT DRILL	SIZE		END MILL	SLOT DRILL
1/16"	dia	-	£11.90	9/32"	dia	£14.86	£15.98
3/32"	dia	£12.20	£11.90	5/16"	dia	£11.90	£12.88
1/8"	dia	£10.20	£10.60	3/8"	dia	£11.90	£13.16
5/32"	dia	£12.08	£11.16	7/16"	dia	£15.88	£15.98
3/16"	dia	£9.30	£10.60	1/2"	dia	£14.74	£14.46
7/32"	dia	£15.76	£11.16	5/8"	dia	£20.58	£19.56
1/4"	dia	£9.30	£10.60	3/4"	dia	£26.82	£25.80



SLITTING SAWS

HSS FINE PITCH 1" HOLE

3" dia x 1/32" thick x 76T	£14.91
3" dia x 1/16" thick x 76T	£19.11
3" dia x 3/32" thick x 76T	£23.31
3" dia x 1/8" thick x 76T	£32.03
3" dia x 3/16" thick x 76T	£39.69

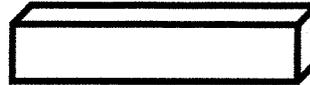


Updated 11-3-17

LATHE TOOLS

SQUARE HSS TOOL BITS

1/8"	x 3" long	£ 2.15	5/16"	x 3" long	£ 3.00
3/16"	x 3" long	£ 2.15	3/8"	x 3" long	£ 3.50
1/4"	x 3" long	£ 2.50			



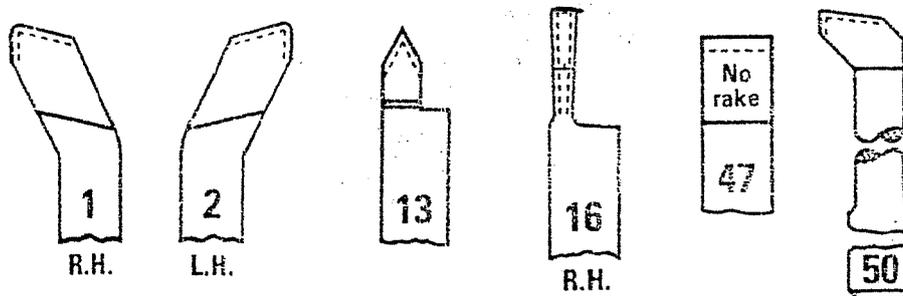
ROUND HSS TOOL BITS

3/16"	x 2" long	£ 3.31
1/4"	x 3" long	£ 3.00
5/16"	x 3" long	£ 3.25



HSS BUTT WELDED LATHE TOOLS

NOTE: RH TOOL CUTS TOWARDS LEFT (HEADSTOCK) END OF LATHE



NO. 1	Turning and Facing tool 12mm sq x 100mm long RH	£ 20.25
NO. 2	Turning and Facing tool 12mm sq x 100mm long LH	£ 20.25
NO. 13	External screw cutting tool 12mm sq x 100mm long	£ 20.25
NO. 16	Parting off tool 12mm sq x 100mm long	£ 20.25
NO. 47	Hardened blank 12mm sq x 100mm (grind to own shape)	£ 20.25
NO. 50	Boring tool (for sharp corners) 12mm sq x 160mm long	£ 32.30
NO. 50A	Internal screw cutting tool 12mm sq x 160mm long	£ 35.30

Updated 26-5-15

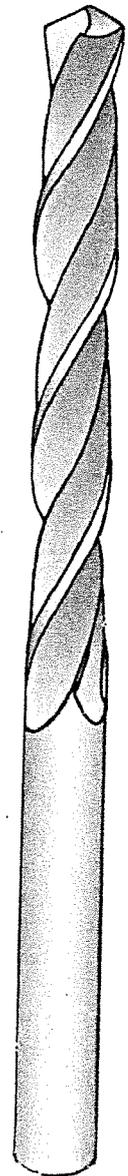
DRILLS - HSS

FRACTIONAL

<u>DIA</u>	<u>PRICE EACH</u>	<u>DIA</u>	<u>PRICE EACH</u>	<u>DIA</u>	<u>PRICE EACH</u>
1/32"	£1.91	3/16"	£1.58	11/32"	£4.41
3/64"	£1.71	13/64"	£2.12	23/64"	£6.10
1/16"	£1.14	7/32"	£1.95	3/8"	£5.29
5/64"	£1.32	15/64"	£2.29	25/64"	£7.31
3/32"	£1.02	1/4"	£2.43	13/32"	£6.35
7/64"	£1.27	17/64"	£3.21	27/64"	£8.66
1/8"	£1.06	9/32"	£2.99	7/16"	£7.86
9/64"	£1.43	19/64"	£4.13	29/64"	£10.27
5/32"	£1.29	5/16"	£3.62	15/32"	£8.80
11/64"	£1.71	21/64"	£5.04	31/64"	£12.02
				1/2"	£10.98

NUMBER

NO.1	£3.96	NO.28	£2.25	NO.55	£2.43
2	£3.77	29	£2.22	56	£2.60
3	£3.59	30	£1.92	57	£2.74
4	£3.49	31	£2.08	58	£2.78
5	£3.40	32	£2.03	59	£2.85
6	£3.37	33	£2.02	60	£2.89
7	£3.29	34	£2.00	61	£2.95
8	£3.26	35	£2.00	62	£3.01
9	£3.18	36	£1.97	63	£3.05
10	£2.84	37	£1.97	64	£3.09
11	£2.90	38	£1.95	65	£3.17
12	£3.02	39	£1.95	66	£3.32
13	£2.96	40	£1.95	67	£3.38
14	£2.89	41	£1.97	68	£3.43
15	£2.85	42	£1.94	69	£3.57
16	£2.78	43	£1.95	70	£3.66
17	£2.72	44	£1.95	71	£3.80
18	£2.67	45	£1.97	72	£3.85
19	£2.60	46	£1.97	73	£3.95
20	£2.53	47	£2.00	74	£4.06
21	£2.52	48	£2.02	75	£4.16
22	£2.46	49	£2.03	76	£4.26
23	£2.43	50	£2.08	77	£4.41
24	£2.42	51	£2.11	78	£4.65
25	£2.38	52	£2.15	79	£4.87
26	£2.34	53	£2.24	80	£5.00
27	£2.29	54	£2.35		



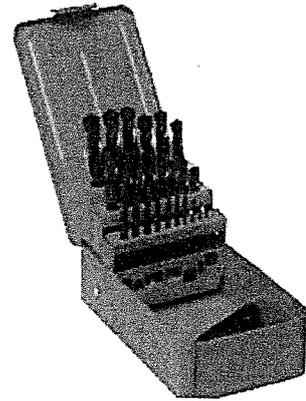
METRIC- TO ASSIST CUSTOMERS THE METRIC DRILLS LISTED ARE THOSE NEAREST EQUIVALENT TO IMPERIAL TAPPING AND CLEARANCE SIZES.

0.7mm	£2.45	2.50mm	£1.04	5.4mm	£2.24
1.00mm	£1.55	2.55mm	£1.95	5.5mm	£2.31
1.05mm	£2.82	2.60mm	£1.26	6.0mm	£2.19
1.25mm	£2.51	2.65mm	£1.96	6.1mm	£2.72
1.30mm	£1.55	2.70mm	£1.26	6.5mm	£2.51
1.40mm	£1.46	2.80mm	£1.27	6.9mm	£3.34
1.50mm	£1.17	2.90mm	£1.06	7.0mm	£2.85
1.55mm	£2.19	3.00mm	£1.06	7.1mm	£3.51
1.60mm	£1.14	3.1mm	£1.74	7.5mm	£3.28
1.65mm	£2.14	3.2mm	£1.32	8.0mm	£3.71
1.70mm	£1.32	3.25mm	£2.13	8.3mm	£4.75
1.75mm	£2.10	3.30mm	£1.13	8.4mm	£4.89
1.80mm	£1.29	3.40mm	£1.39	8.7mm	£5.25
1.85mm	£2.02	3.5mm	£1.17	9.0mm	£4.68
1.95mm	£1.98	3.70mm	£1.24	9.9mm	£6.91
2.00mm	£1.05	4.0mm	£1.29	10mm	£5.90
2.05mm	£1.56	4.2mm	£1.37	10.3mm	£9.09
2.10mm	£1.26	4.5mm	£1.46	11.0mm	£7.32
2.20mm	£1.24	4.8mm	£1.91	11.5mm	£8.07
2.25mm	£1.94	5.0mm	£1.68	11.9mm	£12.78
2.30mm	£1.31	5.1mm	£2.08	12mm	£9.09
2.40mm	£1.24	5.3mm	£2.19	14.5mm	£27.32

DRILLS

HSS DRILL SETS - IN METAL INDEX CASES

SET NO. 60 - Nos 1 to 60 (60 drills)	£ 124.00
SET NO. 29 - 1/16" to 1/2" x 1/64" steps (29 drills)	£ 108.00
SET NO. 15 - 1/16" to 1/2" x 1/32" steps (15 drills)	£ 66.00
SET NO. 50M - 1.00mm to 6.0mm x 0.1mm steps (50 drills)	£ 75.00



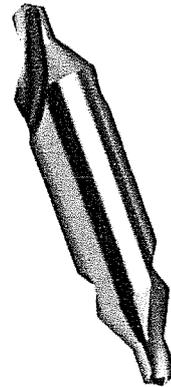
HSS DRILL SETS - IN POLYSTYRENE CASE

SET NO. 61/80 - Nos 61 to 80 (20 drills)	£ 7.50
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DRILL ACCESSORIES

HSS COMBINATION CENTRE DRILLS

BS 1 - Size 1/8" dia body	£ 3.15
BS 2 - Size 3/16" dia body	£ 3.75
BS 3 - Size 1/4" dia body	£ 4.50
BS 4 - Size 5/16" dia body	£ 5.90
BS 5 - Size 7/16" dia body	£ 10.50



HSS 90 DEGREE COUNTERSUNK BIT

Roebuck 6.3mm dia Head x 5mm shank	£ 17.35
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BROKEN SCREW EXTRACTOR SET

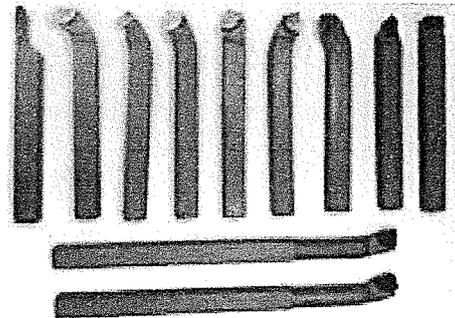
SET A - Contains 5 extractors for range 1/8" dia to 9/16" dia in polystyrene case	£ 18.00
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CARBIDE TIPPED LATHE TOOL SETS

Set of 11 tools supplied in a wooden case

Comprising: 2 Boring Bars, 1 Parting Tool, 5 Left Hand Turning Tools,
1 Right Hand Tool, 2 Facing Tools.

6 mm SQ Shank	£ 21.00
8 mm SQ shank	£ 21.00
10 mm SQ Shank	£ 21.50
12 mm SQ Shank	£ 23.50



TAPS & DIES

MODEL ENGINEER SERIES

ALL TAPS ARE AVAILABLE IN TAPER, SECOND AND PLUG FORM. PLEASE SPECIFY WHICH IS REQUIRED WHEN ORDERING.

SIZE	CARBON TAPS	CARBON DIES			
		13/16"OD	1"OD	1.5/16"OD	1.1/2"OD
1/8" X 40	£1.52	£4.45	-	-	-
5/32" X 40	£2.35	£5.00	-	-	-
3/16" X 40	£2.35	£5.00	-	-	-
7/32" X 40	£2.35	£5.00	-	-	-
1/4" X 32	£3.60	£6.15	-	-	-
1/4" X 40	£2.35	£5.00	-	-	-
9/32" X 32	£3.60	-	£6.45	-	-
9/32" X 40	£4.45	-	£8.10	-	-
5/16" X 32	£3.60	-	£6.45	-	-
5/16" X 40	£3.65	-	£8.10	-	-
3/8" X 32	£3.60	-	£6.45	-	-
3/8" X 40	£4.45	-	£8.10	-	-
7/16" X 32	£5.10	-	£9.55	-	-
7/16" X 40	£5.10	-	£9.55	-	-
1/2" X 32	£5.80	-	£9.55	-	-
1/2" X 40	£5.80	-	£9.55	-	-
1/4" X 26	£1.71	£4.45	-	-	-
5/16" X 26	£3.00	-	£6.85	-	-
3/8" X 26	£3.60	-	£6.85	-	-
7/16" X 26	£4.45	-	-	£10.75	-
1/2" X 26	£5.02	-	-	£10.75	-
9/16" X 26	£6.21	-	-	£10.75	-
5/8" X 26	£6.85	-	-	-	£16.05
3/4" X 26	£9.60	-	-	-	£16.05
1/4" BSW	£1.75	£4.45	-	-	-
5/16" BSF	£1.75	-	£6.10	-	-

LEFT HAND THREAD - (Suitable for Reverser Screws)

1/4" BSW	£3.50	-	£8.95
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METRIC

M2 x 0.4 mm	£2.30	£6.70	-	-	-
M2.5 x 0.45 mm	£2.30	£6.00	-	-	-
M3 x 0.5 mm	£1.75	£4.45	-	-	-
M4 x 0.7 mm	£1.55	£4.45	-	-	-
M5 x 0.8 mm	£1.70	£4.45	-	-	-
M6 x 1.0 mm	£1.70	£4.45	-	-	-

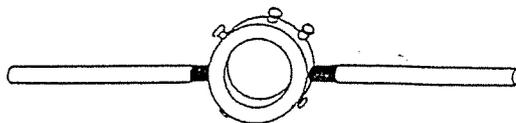
BA SERIES

		HSS DIES				
		HSS TAPS	13/16"OD			
0 BA	£1.92	£4.45	-	-	£5.05	£19.85
1 BA	£1.92	£4.45	-	-	£7.80	£24.80
2 BA	£1.60	£4.45	-	-	£4.80	£19.85
3 BA	£1.66	£4.45	-	-	£7.80	£24.80
4 BA	£1.60	£4.45	-	-	£4.80	£19.85
5 BA	£1.60	£4.45	-	-	£7.65	£19.85
6 BA	£1.90	£4.45	-	-	£5.05	£19.85
7 BA	£2.30	£7.60	-	-	£11.35	£24.80
8 BA	£2.25	£7.60	-	-	£7.25	£24.80
9 BA	£3.30	£9.55	-	-	£21.60	£34.00
10 BA	£3.30	£9.55	-	-	£16.30	£34.00
12 BA	£9.00	£11.75	-	-	-	-

TAP WRENCHES & DIES

DIE STOCKS

13/16"	od Dies	£	3.60
1"	od Dies	£	4.00
1.5/16"	od Dies	£	5.85
1.1/2"	od Dies	£	7.10



TAP WRENCHES

No. 0	1/16" - 1/4"	£	4.75
No. 1"	1/16" - 3/8"	£	5.80
No. 1.1/2"	1/16" - 1/2"	£	6.45
No. 2	5/32" - 1/2"	£	9.25

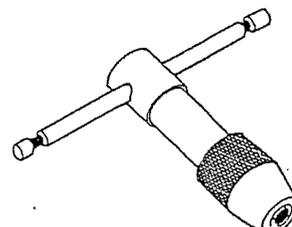


CHUCK TYPE TAP WRENCHES

No.1A	1/16" - 1/4" Capacity	£	7.75
No.3A	1/4" - 1/2" Capacity	£	10.00

ECLIPSE No E.141 4BA - 14BA
2" long takes upto 1/8" dia taps £ 15.61

ECLIPSE No E.142 0BA - 4BA
2.11/16" long takes upto 1/4" sized taps £ 11.20



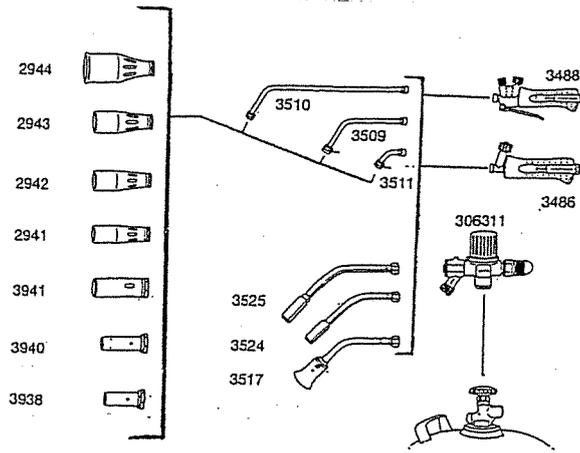
RATCHET - CHUCK TYPE TAP WRENCHES

No.1	1/8" - 1/4" Capacity	£	10.30
No.2	1/4" - 1/2" Capacity	£	12.85

Updated 3-10-17

COMBINATIONS OF SIEVERT

L.P. GAS APPLIANCES GUIDE TO BURNER SELECTION



All gas consumption figures in oz/hour at 28 psi

BURNERS

No. 3938 5/8" dia	(1 oz gas/hr)	(0.25 kw)	Fine Needle Flame	£	17.59
3939 5/8" dia	(2 oz gas/hr)	(0.90 kw)	Long Needle Flame	£	18.15
3940 5/8" dia	(3 oz gas/hr)	(1.20 kw)	Powerful Needle Flame	£	19.74
3941 3/4" dia	(9 oz gas/hr)	(3.10 kw)	Broad Blow Lamp Flame	£	16.77
2941 1" dia	(20 oz gas/hr)	(7.70 kw)	Powerful Compact Flame	£	18.07
2942 1.1/8" dia	(42 oz gas/hr)	(26.00 kw)	Broad Powerful Flame	£	19.74
2943 1.1/4" dia	(70 oz gas/hr)	(43.50 kw)	Powerful Long Flame	£	21.81
2944 1.5/8" dia	(145 oz gas/hr)	(86 kw)	Heavy Duty Burner	£	27.57

CYCLONE BURNERS

No. 3524 8.1/2" 1g	(9.1/2 oz gas/hr)	(3.1 kw)	£	38.87
3525 11" 1g	(28 oz gas/hr)	(10.3 kw)	£	47.79

NECK TUBE BURNERS

No. 3517 8.1/2 oz gas/hr	(2.7 kw)	Paint Burner	£	52.80
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NECK TUBES For connecting burners to handles

No. 3509 7" long bent neck	£	20.53
3510 14" long bent neck	£	26.80
3511 3" long bent neck	£	14.58

HANDLES

No. 3486 (Single valve)	£	33.78
No. 3488 (with economiser)	£	66.51

REGULATOR

No. 3063 -11	Adjustable regulator 1 - 4 bar with incorporated hose failure valve suitable for propane gas.	£	118.70
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HOSE NUTS & NIPPLES

To suit Regulator	No. 709621	3/8" BSP LH Nut with nipple to suit 5mm bore hose	£	5.30
To suit handle	No. 717331	Swivel type 3/8" BSP	£	8.98

HIGH PRESSURE HOSE

No. BGC 1 - Normally supplied in 2m lengths (5mm)	£	6.14
No. 900766 - Clips for above hose - each	£	0.52
No. 71732 - 2m Hose with fitted 3/8" BSP LH Nuts & Nipples	£	25.74

BURNER WASHERS

7147 - 71	£	1.83
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SILVER SOLDER (BY THESSCO)

THESSCO M25T

Cadmium Free. Identical composition to Silverflo 55 (55%ag : 21%w : 22%zn : 2%sn)
Suitable for silver soldering boilers etc., **Melting range 630° - 666°c**

THESSCO M25T Melting range 630° - 666°c

0.5mm dia x 3'0" coil	£	1.75
0.75mm dia x 3'0" coil	£	3.50
1.0mm dia x 3'0" coil	£	5.75
1.5mm dia x 500mm long (1 - 9 rods)	each	£ 5.50
1.5mm dia x 500mm long (10 or more rods)	each	£ 4.95

SILVERFLO 24 (COLOUR CODE BLACK) 24% Ag : Cu : Zn Melting Range 740 - 780°C (Formerly C4)

1.5mm dia x 600mm long (1 to 9 rods)	each	£ 3.95
1.5mm dia x 600mm long (10 or more rods)	each	£ 3.55

FLUX (BY THESSCO)

'Y' FLUX (Easyflo equivalent) A general purpose flux with good fluxing activity and long life at temperature. Perfect for applications where non-ferrous metals are being used. (Working temperature 550 - 700°C) 250g Tub £ 14.00
POWDER 50g Tub £ 4.70

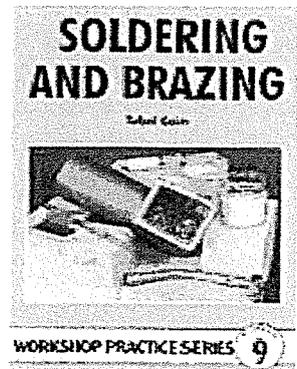
'U' FLUX (Tenacity No.5 equivalent). Recommended for steels and heavy assemblies, where flux exhaustion is likely to occur due to prolonged heating. 250g Tub £ 13.00
POWDER (Working temp 600° - 800° C) 50g Tub £ 4.30

BAKERS SOFT SOLDERING FLUID 125ml tin £ 8.90



HIGH MELTING POINT LEAD SOLDER

COMSOL 2.5mm dia x 500mm long Melting point 296° £3.65
COMSOL FLUX 50ml bottle £4.80



(book on page 123)

SOLDER PAINT

SOFT SOLDER - FRYOLUX 125g £ 22.25

BOILER INSULATION MATERIAL

Blackgates recommend the use of the following lagging materials for keeping surface temperatures down to a level which will not cause deterioration or fading of painted finishes.

S10	"KAOWOOL" BLANKET: 1/4" thick Per 12" x 12" approx. Compresses readily to 1/8" thick	£2.25
S11	"KAOWOOL" PAPER: 2mm thick Per 250mm x 250mm approx.	£2.45
S12	"KAOWOOL" PAPER: 1mm thick Per 250mm x 250mm approx.	£1.10
S13	"KAOWOOL" PAPER: 3mm thick Per 250mm x 250mm approx.	£2.80

PLEASE NOTE ALL THE ABOVE ARE NOT ASBESTOS BASED.

"KAOWOOL" is a ceramic fibre, is easy to handle and can be cut with household scissors.

WATERSLIDE TRANSFERS

The perfect finishing touch for your model. Note that all transfers are supplied in pairs unless indicated.

<u>NEW</u>	<u>OLD</u>			
<u>REF NO.</u>	<u>REF NO.</u>	<u>DESCRIPTION</u>		
LNE 02/1		Gauge One GNR & LNER Lettering - 3/8" - high - Gold/Red/Black		£4.25 /pr
LNE 02/2	(WS 6A)	2.1/2"g LNER Letters - Gold/Red/Black - 1/2" high		£4.25 /pr
LNE 02/3	(WS 6)	3.1/2"g LNER Letters - Gold/Red/Black - 3/4" high		£4.45 /pr
LNE 02/5	(WS 7)	5"g LNER Letters - Gold/Red/Black - 1" high		£5.35 /pr
LNE 02/7		7.1/4"g GNR / LNER Lettering - Gold/Red/Black - 1.5/8" high		£6.00 /pr
LNE 03/1	(WS 3)	Gauge One GNR & LNER Numbers - 7/16" - Gold/Red/Black contains No's 0 - 9 inclusive		£4.25 /pr
LNE 03/2	(WS 3A)	2.1/2"g GNR & LNER Numbers - 1/2" high - Gold/Red/Black contains No's 0 - 9 inclusive		£4.25 /pr
LNE 03/3	(WS 4)	3.1/2"g GNR & LNER Numbers - 3/4" high - Gold/Red/Black contains No's 0 - 9 inclusive		£4.40 /pr
LNE 03/5	(WS 5)	5" GNR & LNER Numbers - 1.1/8" high - Gold/Red/Black contains No's 0 - 9 inclusive		£5.35 /pr
LNE 03/7		7.1/4"g GNR / LNER Numbers - Gold/Red/Black		£6.00 /pr

PLEASE NOTE: LMS GOLD/BLACK TRANSFERS ARE FOR RED LIVERIED LOCOS &
LMS RED/GOLD TRANSFERS ARE FOR BLACK LIVERIED LOCOS.

LMS 03/3	(WS 8A)	3.1/2"g LMS Letters - 3/4" high - Red/Gold		£4.25 /pr
LMS 03/5	(WS 9A)	5"g LMS Letters - 1.3/16" high - Red/Gold		£5.25 /pr
LMS 03/7		7.1/4"g LMS letters - 1.7/8" high - Red/Gold		£6.00 /pr
LMS 04/3	(WS 8)	3.1/2"g LMS Letters - 3/4" high - Gold/Black		£4.25 /pr
LMS 04/5	(WS 9)	5" LMS Letters - 1.3/16" high - Gold/Black		£5.25 /pr
LMS 04/7		7.1/4"g LMS letters - 1.7/8" high - Black/Gold		£6.00 /pr
LMS 05/3	(WS 11A)	5" LMS Numbers - 3/4" high - Red/Gold contains No's 0 - 9 inclusive		£4.25 /pr
LMS 05/3A	(WS 10A)	3.1/2"g LMS Numbers - 5/8" high - Red/Gold contains No's 0 - 9 inclusive		£4.25 /pr
LMS 05/5		5" LMS Numbers (1927-35 & 1937-41 x 12" high, Serif style - Red/Gold		£6.00 /pr
LMS 06/3	(WS 11)	3.1/2"g LMS Numbers - 3/4" high - Black/Gold contains No's 0 - 9 inclusive		£4.25 /pr
LMS 06/3A	(WS 10)	3.1/2"g LMS Numbers (Tank) - 5/8" high - Black/Gold contains No's 0 - 9 inclusive		£4.25 /pr
LMS 06/5		5" LMS Numbers (1927-35 & 1937-41 x 12" high, Serif style - Black/Gold		£6.00 /pr
LMS 06/7	(WS 12)	Gold/Black Numbers - 1.1/2" high. Contains No's 0 - 9 inc. for early style tenders and 7.1/4"g cab sides		£4.25 /pr
SRY 01/3	(WS 13)	3.1/2"g Southern Railway Letters & numbers in Daffodil yellow. Serif style 7/16" high letters/ 1.1/8" high numbers		£7.20 /pr
SRY 01/5	(WS 14)	5" Southern Railway Letters & numbers in Daffodil yellow. Serif style 1/2" high letters / 1.1/2" high numbers		£7.20 /pr
GWR 03/3		3.1/2"g GWR Lettering for Tank & Tender Engines 1941 - 48 Red / Gold / Black 11/16" high		£4.25 /pr
GWR 03/5		5" GWR letters Red/Gold/Black 1" high		£4.45 /pr
GWR 03/7		7.1/4"g GWR Letters Red / Gold / Black 1.7/15" high		£6.00 /pr
GWR 04/3		3.1/2"g 'Great Western' Crests (Twin city)		£6.00 /pr
GWR 04/5		5" 'Great Western' Crests (Twin City)		£6.00 /pr
GWR 04/7		7.1/4"g 'Great Western' Crests (Twin City)		£7.10 /pr
GWR 07/3		3.1/2"g 'Great Western' Letters Red / Gold / Black - 3/8" high		£4.25 /pr
GWR 07/5		5" 'Great Western' Lettering Red / Gold / Black - per pair		£6.00 /pr
GWR 07/7		7.1/4"g 'Great Western' Letters Red / Gold / Black - 7/8" high		£7.10 /pr
HRY 01/3		3.1/2"g 'Highland Railway' 1 pair HR letters + choice of 8 names		£16.00/pr

WATERSLIDE TRANSFERS

All transfers are priced per pair unless stated.

<u>NEW</u> <u>REF NO.</u>	<u>OLD</u> <u>REF NO.</u>		
LNE 08/3	(3/4"high)	3.1/2"g GNR/LNER lettering. Yellow shaded red & brown for black liveried Freight locos	£4.45 /pr
LNE 08/5	(1.1/8" high)	5"g GNR/LNER lettering. Yellow shaded red & brown for black liveried Freight locos	£5.35 /pr
LNE 08/7	(1.5/8" high)	7.1/4"G GNR/LNER Lettering. Yellow shaded red & brown for black liveried Freight locos	£6.00 /pr
LNE 09/3	(3/4" high)	3.1/2"g GNR/LNER Numbers 0-9 Yellow shaded red & brown for black liveried Freight locos	£4.45 /pr
LNE 09/5	(1.1/8" high)	5"g GNR/LNER Numbers 0-9 Yellow shaded red & brown for black liveried Freight locos	£5.35 /pr
LNE 09/7	(1.5/8" high)	7.1/4"g GNR/LNER Numbers 0-9 Yellow shaded red & brown for black liveried Freight locos	£6.00 /pr
GWR 09/5		5"g GWR Codes & RA Codes	£3.25 /set

GWR BUFFER BEAM NUMBERS

GWR 06/2 (WS 30A)	2.1/2" GWR Plain numbers 1/4" high - No's 1 - 9 inclusive - yellow	£3.25 /pr
GWR 06/3 (WS 30B)	3.1/2" GWR Plain numbers 3/8" high - No's 1 - 9 inclusive - yellow	£3.25 /pr
GWR 06/5 (WS 30C)	5" GWR Plain numbers 1/2" high - No's 1 - 9 inclusive - yellow	£4.25 /pr
GWR 06/7	7.1/4"g GWR Plain numbers 3/4" high No's 0-9 inclusive - yellow	£4.25/pr
GWR 05/3	GWR Monograms - Mixed traffic loco's 3.1/2"g - 1" dia	£4.25/pr
GWR 05/5 (WS 38)	GWR Monograms - Mixed traffic loco's 5"G - 1.3/8" dia	£4.25 /pr
BRY 01/3 (WS 27)	3.1/2"G British Railways loco numbers 1/2" high off white, 1 each numbers 0-9	£4.25 /pr
BRY 01/5 (WS 28)	5"G British Railways loco numbers 3/4" high off white, 1 of each numbers 0-9	£5.25 /pr
BRY 01/7 (WS 29)	7.1/4"G British Railway loco numbers 1.1/16" high off white, 1 of each numbers 0-9	£6.00 /pr

REF NO.

DESCRIPTION

OVERHEAD WIRE WARNING (WATER SLIDE)

BRY 02/3 (WS 39A)	3.1/2"G	packet of 4	£3.25
BRY 02/5 (WS 39B)	5"G	packet of 4	£3.25
BRY 02/7 (WS 39C)	7.1/4"G	packet of 4	£3.25

BR ARROWS (2 arrows per sheet)

BRY 03/3 (WS40A)	3.1/2"g - 1" high	per sheet	£2.20
BRY 03/5 (WS40B)	5"g - 1.3/8" high	per sheet	£3.25

BGC

To suit Class 08 Shunter - each sheet comprises BR Logo
sec details for cab side and choice of 2 loco numbers
08199 and 08288 - per pair

£11.60

TRACTION ENGINES & ROAD VEHICLES

<u>TEW 07</u>	Signwriter sheet 1A. Contains alphabet A-Z 3/4" high letters. Gold shaded red - Per sheet	£7.10
<u>TEW 07A</u>	Signwriter sheet 1. Contains alphabet A-Z 1/2" high letters. Gold shaded red - Per sheet	£7.10
<u>TEW 07B</u>	Signwriter sheet 2. Contains alphabet A-Z Captions & decorations 5/16" high letters. Gold shaded red. Plain gold alphabet A-Z & numerals 0-9 5/16" high	} £7.10/pr
<u>TEW 08A</u>	Signwriter sheet Cream alphabet A-Z & numerals 0-9 Plus Captions & decorations 1/2" high - Per sheet	
<u>TEW 09</u>	Lining set for 3" scale 'Burrell' (Red/Yellow) Includes lining for front spokes, rear spokes, cylinder, gear case, tender sides (R & L) Plus Straight lining for boiler bands , tender rear etc.	} £31.75 /set
<u>TEW 10</u>	Lining set for 1.1/2" scale 'Allchin' Includes lining for front spokes, rear spokes, cylinder, gear case, tender sides (R & L), rear hubs - Plus Straight lining for boiler bands & tender rear. Plus Makers crests	

WATERSLIDE TRANSFERS

All transfers are priced per pair unless stated.

LINING SHEETS

<u>NEW</u>	<u>OLD</u>			
<u>REF NO.</u>	<u>REF NO.</u>			
LIN GWR/7		7.1/4"G GWR/BR for Green Livery Loco's - ORANGE/BLACK/ORANGE straights plus panel corners	sheet	£7.85
LIN GWR/5	(WS 19)	5"G GWR/BR for Green Livery Loco's - ORANGE/BLACK/ORANGE 3/16" wide 14 x 11" straights plus panel corners	sheet	£7.85
LIN GWR/3	(WS 19A)	3.1/2"G GWR/BR for Green Livery Loco's - ORANGE/BLACK/ORANGE 5/32" wide 18 x 7" straights plus panel corners	sheet	£6.00
LIN LNE/5	(WS 20)	5"G LNER for Apple Green Loco's - WHITE/BLACK/WHITE 3/16" wide 6 x 12" straights plus panel corners & curves	each	£7.85
LIN LNE/3	(WS 20A)	3.1/2"G LNER for Apple Green Loco's - WHITE/BLACK/WHITE 1/8" wide 12 x 7.1/2" straights & curves	each	£6.00
LIN LNW/3	(WS 22)	3.1/2"G BR/LNWR for Black Livery Loco's - Broad Grey/Thin Red 5/32" wide 10 x 7.1/2" straights plus panel corners		OUT OF PRINT
LIN LNW/5	(WS 22A)	5"G BR/LNWR for Black Livery Loco's - Broad Grey/Thin Red 1/4" wide 10 x 10.1/2" straights plus panel corners	each	£7.85

SINGLE COLOUR LINING SHEETS

LIN-YELLOW	(LM2 / B)	PLAIN YELLOW LINING SHEETS 1/32" line width - details as LM2 / A	pair	£5.25
LIN-GOLD	(LM2 / C)	PLAIN GOLD LINING SHEETS 1/32" line width - details as LM2 / A	per sheet	£5.25
LIN-WHITE	(LM2 / D)	PLAIN WHITE LINING SHEETS 1/32" line width - contains 26 x straight lines, plus squares, circles & panel corners.	per sheet	£5.25
LIN BLACK		PLAIN BLACK LINING SHEET 1/32" line width. Each sheet contains 26 x 10.1/2" straight lines plus squares, circles & panel corners	per sheet	£5.25

BRITISH RAILWAY CRESTS 2 types available. "LION OVER WHEEL"
and "CIRCLE & BAR".

48 LION/25		Lion Over Wheel - Suitable for G1 (large) & 2.1/2"g (med) L & R		£3.25/sht
48 LION/35		Lion Over Wheel - Suitable for 2.1/2"g (large), 3.1/2"g (med) & 7.1/4"g L & R		£3.25/sht
48 LION/51	(WS 32)	Lion Over Wheel - 5"g single sheet incl. Left & right		out of print
48 LION/72		Lion Over Wheel - Suitable for 5"g (large) & 7.1/4"g (small) L & R		£5.25/sht
48 LION/91	(WS 34)	Lion Over wheel - Suitable for 7.1/4"g		£5.25/sht
48 LION/101		Lion Over Wheel - Suitable for 7.1/4"g (large) & 10.1/4"g (med) L & R		£6.00/sht
57 LION/23		Lion Holding Wheel - Suitable for 2.1/2"g (large) & 3.1/2"g (small) L & R		£4.25/sht
57 LION/32	(WS 33)	CIRCLE & BAR - 3.1/2"g single sheet as above - (Lion Holding Wheel)		£4.45/sht
57 LION/47	(WS 35)	CIRCLE & BAR - 5"g single sheet incl. Left & right - (Lion Holding Wheel)		£5.35/sht
57 LION/68		Lion Holding Wheel - Suitable for 7.1/4"g (large)		£6.00/sht

UPDATED 6-12-16

BOOKS

WORKSHOP PRACTICE SERIES

NO.1	HARDENING TEMPERING & HEAT TREATMENT	(TUBAL CAIN)	£	7.95
NO.2	VERTICAL MILLING IN THE HOME WORKSHOP	(THROP)	£	7.95
NO.3	SCREWCUTTING IN THE LATHE	(MARTIN CLEEVE)	£	7.95
NO.4	FOUNDRY WORK FOR THE AMATEUR	(B.T.ASPIN)	£	7.95
NO.5	MILLING OPERATIONS IN THE LATHE	(TUBAL CAIN)	£	7.95
NO.6	MEASURING & MARKING METALS	(IVAN LAW)	£	7.95
NO.7	ART OF WELDING	(W.A.VAUSE)	£	7.95
NO.8	SHEET METAL WORK	(R.E.WAKEFORD)	£	7.95
NO.9	SOLDERING & BRAZING	(TUBAL CAIN)	£	7.95
NO.10	SAWS & SAWING	(IAN BRADLEY)	£	7.95
NO.11	ELECTROPLATING	(J.POYNER)	£	7.95
NO.12	DRILL, TAPS & DIES	(TUBAL CAIN)	£	7.95
NO.13	WORKSHOP DRAWING	(TUBAL CAIN)	£	7.95
NO.14	MAKING SMALL WORKSHOP TOOLS	(STAN BRAY)	£	7.95
NO.15	WORKHOLDING IN THE LATHE	(TUBAL CAIN)	£	7.95
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STUART TURNER BOOKS

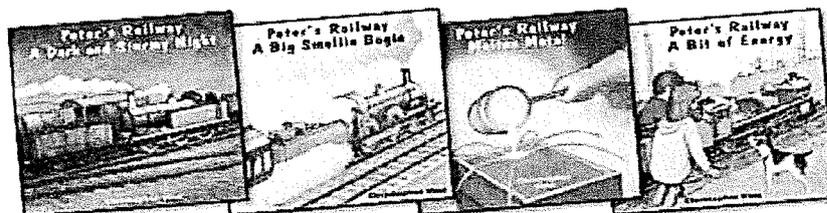
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Authentic Railway Colour Enamels by Phoenix Precision Paints

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Also, an extensive Range of other Colours available to order.

50ml Tins	£7.17	125ml Tins	£11.67	250ml Tins	£17.67
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(Suits all metals) - NOT SUITABLE FOR PLASTIC MODELS

250ml	£5.83
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(12mm wide x 60m Roll)	£4.50
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£1.46

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Spare glass jars suitable for 175, 200 & 250 series Airbrushes

3/4 oz (22cc)	£0.80
2 oz (60cc)	£1.96

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PAINT - THINNERS & PRIMERS

<u>PQ.8</u>	General purpose thinners suitable for the above range of colours						
		125ml Tins	£6.67	250ml Tins		£7.08	
<u>PQ.9</u>	Quick air drying thinners for spraying (DO NOT USE WITH VARNISH)						
		125ml Tins	£6.75	250ml Tins		£7.50	
<u>PQ.10</u>	Varnish Thinners (For spraying varnish)						
		125ml Tins	£7.29	250ml Tins		£7.79	
<u>PQ.1 SINGLE PACK ETCH PRIMER</u>	For non-ferrous metals (brass, copper, nickel silver, aluminium & white metal). The model must be thoroughly cleaned & de-greased with PQ17 pre paint metal cleaner, then left to dry before application.						
		50ml Tins	£ 7.17	125ml Tins	£11.67	150ml Aerosol	£8.33
						250ml Tins	£17.67
<u>PQ.2 ETCH PRIMER THINNERS</u>	(FOR USE WITH PQ1 & PQ3)						
		125ml Tins	£6.67	250ml Tins		£7.08	
<u>PQ.3 RUST STABILISING PRIMER FOR FERROUS METALS</u>	(THIN WITH PQ2)						
		50ml Tins	£ 7.17	125ml Tins	£11.67	250ml Tins	£17.67
						150ml Aerosol	£8.33
<u>PQ.23 2-PACK ETCH PRIMER</u>	(FOR ALL METALS EXCEPT STAINLESS STEEL & GALVANISED)						
				250ml pack (125ml primer + 125ml activator)		£21.25	

MASTER LINING PEN

A Super lining tool as demonstrated by Bob Moore at many Exhibitions Draws straight lines or any shape around templates without "Blobbing". Uses neat "Humbrol" enamel, no thinning required.

Comes complete with detailed instructions.

Lining pen with standard head (line width 0-012") (0.34mm)	£ 52.55
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Spare standard head (line width 0-012") (0.34mm)	£ 27.60
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Cleaning syringe (suitable for all heads)	£ 6.56
Spare edge guide	£ 6.00
Spare plain guide	£ 5.10

BOILER KITS

We will be pleased to quote for boiler material kits with or without flanged plates for any model.

KITS INCLUDE:

Barrel, all flues & tubes, plates either cut to sufficient size for flanging by customer, or ready flanged, firehole ring, foundation ring, stay material and bush material.

PLEASE NOTE:

Barrels will be supplied as tube if it is a current standard diameter. Tapered barrels and non standard diameters will be supplied as flat sheet.

KITS DO NOT INCLUDE:

Solders, fluxes or rivets - but these items are available if required.

FLANGED BOILER PLATES

Listed below are some of the flanging formers we have available to produce flanged kits.

5" DIA BLACKGATES MARINE BOILER

12" long, 5" dia barrel, 9" long. Drawings £ 5.00
Boiler material kit with flanged plates POA

2.1/2" DIA BLACKGATES MARINE BOILER

8.1/2" long, 2.1/2" dia barrel. Drawing £ 3.00
Boiler material kit with flanged plates POA

BOILER KITS

2.1/2" GAUGE

BLACK 5 EAGLE NIGEL MINOR

3.1/2" GAUGE

BANTAM COCK	DORIS	HUNSLETTE	MOLLY	ROB ROY	TICH LB
BRITANNIA	EUSTON	JUBILEE	MOUNTAINEER	STIRLING	TICH SB
CHARLES	EVENING STAR	JULIET	NETTA	SINGLE	VIRGINIA SB
CONWAY	FIREFLY	LILLA	PRINCESS	SPENCER	WILLIAM
DERBY 2P	GREENE KING	LION	MARINA	SWEET	
DERBY 4F	HEILAN LASSIE	MAISIE		VIOLET	

5" GAUGE

AJAX	CRAMPTON	GERT	MOGUL	SPEEDY
ARIEL	DHOLPUR	HUNSLET	NIGEL GRESLEY	SPRINGBOK
ASPINAL	DONCASTER	JINTY	PANSY	STIRLING SINGLE
BLACK 5	(A3/A4)	KING	PRINCESS OF	SUPER CLAUD
BOXHILL	EDWARD THOMAS	KING'S OWN	WALES	SWEET PEA
BRITANNIA	ENTERPRISE	LION	RAILMOTOR 1	TICH
BUTCH	EVENING STAR	MAID OF KENT	ROYAL ENGINEER	TORQUAY MANOR
CASTLE	FIREFLY	METRE MAID	SIMPLEX	WAVERLEY
	GALATEA (LMS JUBILEE)	METRO	SUPER SIMPLEX	

7.1/4" GAUGE

BRIDGET	HIGHLANDER	PADDINGTON	SWEET WILLIAM	LILLA
DART	HOLMSIDE	ROMULUS	TUG (D YOUNG)	

TRACTION ENGINES

ALLCHIN 1.1/2"	DURHAM & N YORKS 2"	RANSOME TRACTOR 2"
ATKINSON STEAM LORRY	FOWLER PRINCESS 2"	RUSTON PROCTOR 2"
BURRELL 3"	MINNIE 1" & 2"	SUPERBA 2"
CLAYTON UNDERTYPE 2"		THETFORD TOWN 2"

STATIONARY BOILERS

BG CENTRE FLUE - 2.1/2", 4" & 5" od dia
VERTICAL TEST BOILER LO86

MACHINE TOOLS

SERIES 7 LATHE ACCESSORIES

70000	Vee Belt - Headstock ML7R - SUPER 7 (A. 780)	£ 5.28
70001	Vee Belt - Motor Drive ML7R - SUPER 7 (Z. 870)	£ 5.65
70032	Vee Belt - Headstock ML10/Speed 10 (A660) A670	£ 4.75
70011	Vee Belt - Motor Drive ML10 (Z 795)	£ 5.28
70004	Vee Belt - Motor Drive Speed 10 (Z 690)	£ 5.28
70020	Vee Belt - Headstock ML7 (A23 or A620)	£ 5.33
70025	Vee Belt - Motor Drive ML7 (Z 900)	£ 5.90

BANDSAW BLADES - RECORD POWER

To suit Burgess Bandsaw models BK1, BK3 & BBS.20 (packed in pairs)

6 tpi	3/8" wide Wood cutting blade	(BB56123806)	Pair	£ 20.25
10 tpi	1/4" wide Wood cutting blade	(BB56121410)	Pair	£ 20.25
14 tpi	1/4" wide General purpose blade	(BB56121414)	Pair	£ 20.25
24 tpi	1/4" Medium tooth metal cutting blade	(BB56121424)	Pair	£ 20.25
32 tpi	1/4" Fine tooth metal cutting blade	(BB56121432)	Pair	£ 20.25

UNIVERSAL BANDSAW BLADES - to suit Imported Machines

64.1/2" x 1/2" available 14 ,18 , 24 tpi - each £ 11.02

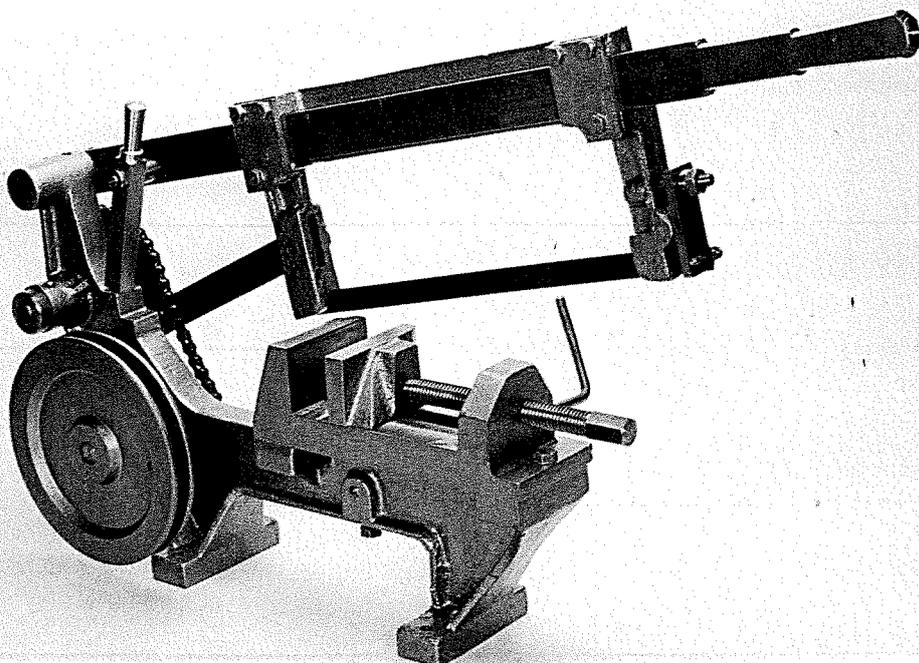
3" POWER HACKSAW MACHINE

Drawings (3 sheets) £ 15.00

Complete kit of castings, materials, fasteners, machined pulleys,
machined sprockets & drive chain (excluding drawings) £ 242.65

8mm Drive chain. Per ft.	£ 3.35	8mm 36T sprocket	£ 11.25
8mm Split links each	£ 0.95	2" dia Motor pulley (Z Sec)	£ 18.25
8mm 12T sprocket	£ 5.00	5" dia Motor pulley (Z Sec)	£ 30.15

Updated 27-7-18

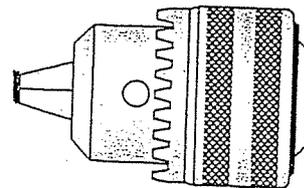


MACHINE TOOL ACCESSORIES

DRILL CHUCKS - JACOBS

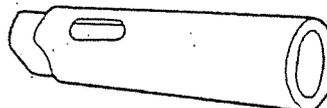
3 JAW WITH CHUCK KEY. TO SUIT MT ARBORS LISTED BELOW.

0 - 1/4" (6.5mm)	Takes No. 1 Jacobs Taper Arbor (Model 1A)	£ 28.95
0 - 3/8" (9.5mm)	Takes No. 2 Jacobs Taper Arbor (Model 31-02)	£ 29.48
0 - 1/2" (12.5mm)	Takes No. 6 Jacobs Taper Arbor (Model 34-06)	£ 45.50



SLEEVES & DRIFTS (HARDENED & GROUND)

Morse Taper 0 - 1 sleeve	£ 13.80
Morse Taper 1 - 2 sleeve	£ 13.08
Morse Taper 2 - 3 sleeve	£ 5.00
Drill Drift (for ejecting MT No. 0)	£ 2.16
Drill Drift (for ejecting MT No's 1 - 2)	£ 3.85



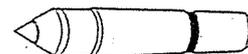
JACOBS CHUCK ARBORS

1MT X 1 Jacobs Taper	£ 12.15
1MT X 2 Jacobs Taper	£ 8.00
1MT X 6 Jacobs Taper	£ 8.00
1MT X 33 Jacobs Taper	£ 8.00
2MT X 1 Jacobs Taper	£ 8.95
2MT X 2 Jacobs Taper	£ 8.95
2MT X 6 Jacobs Taper	£ 12.05
2MT X 33 Jacobs Taper	£ 9.44
3MT X 6 Jacobs Taper	£ 13.50



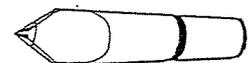
CARBIDE TIPPED LATHE FULL CENTRES

No. 1 MT	£ 15.75
No. 2 MT	£ 16.75



CARBIDE TIPPED HALF CENTRES

No. 1 MT	£ 20.00
No. 2 MT	£ 14.00



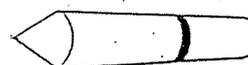
LATHE HALF CENTRES TOOL STEEL

No. 1 MT	£ 4.50
No. 2 MT	£ 7.40



LATHE FULL CENTRES TOOL STEEL

No. 1 MT	£ 7.75
No. 2 MT	£ 7.85

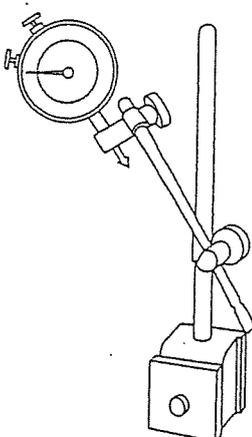


MAGNETIC BASE - with ON/OFF push button. High quality magnets operating on base and two sides. Fine setting. Base 48 x 48 x 41mm Column 240mm high £ 20.50

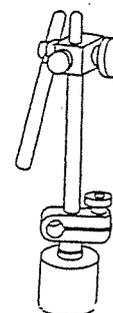
MINI MAGNETIC BASE - Fine setting. Base size: 1" dia x 1" high 125mm high column £ 10.20

REVOLVING LATHE CENTRES

NO. 1 MT	£ 25.00
NO. 2 MT	£ 21.00



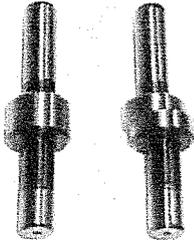
MAGNETIC BASE



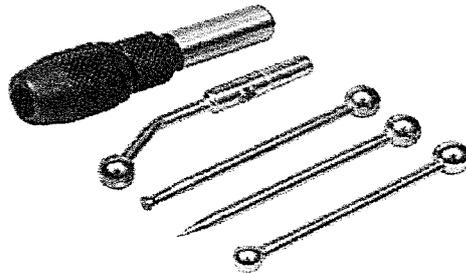
MINI MAGNETIC BASE

MACHINE TOOL ACCESSORIES

EDGE FINDER - £9.58



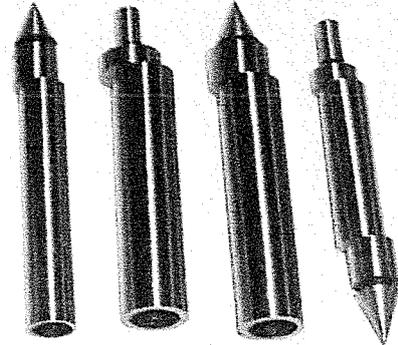
WIGGLER & CENTRE FINDER SET - £9.95



PARTING TOOL HOLDER

CT/OS for blades -		
5/16" x 1/16"	£	13.58
5/16" x 1/16" Economy blade	£	5.00
5/16" x 1/16" Eclipse blade	£	18.24

4 PCE CENTRE FINDER & WIGGLER SET - £12.75



UNMACHINED BACKPLATES - Cast Iron

110mm	£	30.80
145mm	£	46.60
170mm	£	89.00

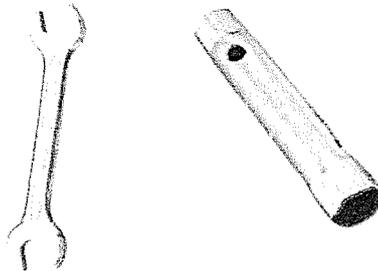
HAND TOOLS

BA OPEN-ENDED SPANNER SETS IN PLASTIC WALLET by Kennedy

(6 spanners) (0 x 2, 1 x 3, 4 x 6, 5 x 7, 8 x 10, 9 x 11BA) £ 18.00

OPEN ENDED SPANNERS - BA

0 x 2BA	£	5.00
1 X 3BA	£	5.00
2 X 4BA	£	4.54
4 X 6BA	£	5.00
5 X 7BA	£	5.00
8 X 10BA	£	5.00
9 X 11BA	£	5.00



BA BOX SPANNERS

Individual Box Spanners 2-12BA
Each £ 2.50

BOX SPANNER SETS - by Kennedy

0-10BA (6 spanners) £ 21.50

DEPTH GAUGE/ PROTRACTOR

Dual inch & metric graduations
x 6" long £ 8.15

SURFACE GAUGE

2.1/2" X 3.1/4" Base (spindle height 9"/12") £ 21.00

HEXAGON WRENCHES (ALLEN KEYS)

0.035 A/F Fits 8BA	£	0.40
0.050 A/F Fits 6BA	£	0.40
5/64" A/F	£	0.30
1/16" A/F Fits 4 & 5BA	£	0.31
3/32" A/F Fits 2BA	£	0.31
1/8" A/F	£	0.32
5/32" A/F	£	0.40
3/16" A/F	£	0.48



HEXAGON WRENCHES (ALLEN KEYS)

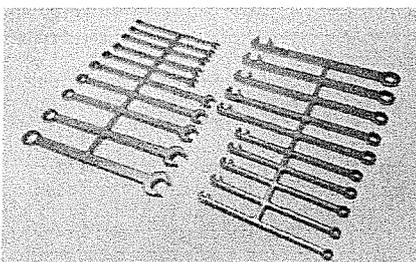
1.5 mm	A/F	£	0.25
2.0 mm	A/F	£	0.27
2.5 mm	A/F	£	0.28
3.0 mm	A/F	£	0.30
4.0 mm	A/F	£	0.40
5.0 mm	A/F	£	0.65

SET OF HEX WRENCHES (ALLEN KEYS)

10 Piece Set -
1/16" - 3/8" Hex Wrenches £ 12.74

NEW - Laser Cut Spanner Set BA/Metric

Each £ 5.83



HAND TOOLS

CALIPERS

3" OUTSIDE Spring calipers with solid nut No. 52/3	£	14.70
4" OUTSIDE Spring calipers with solid nut No. 52/4	£	14.65
3" INSIDE No. 51/3	£	14.10
4" INSIDE spring type with quick acting nut No. 51/4	£	17.74
6" ODD LEG spring type M & W 56/6"	£	21.65

DIVIDERS (SPRING) With quick acting nut.

3" (M & W No. 50/3)	£	15.50
4" (M & W No. 50/4)	£	15.60
6" (M & W No. 50/6)	£	15.85

SCRIBERS

No. 225 Tung. Carb. Tipped	£	15.40
Spare points (Ref 225/02) each	£	10.62
Machinist 1 piece single ended No. E.227	£	4.10
7.1/2" Engineers double ended No. 222	£	5.92

3.1/2" long pocket scriber

With pocket clip for reversible point ref. No. E220	£	10.27
Spare point for above (220/05)	£	3.90

HAMMERS

1/4 lb Ball Pein	£	7.52
1/2 lb Ball Pein	£	7.26
3/4 lb Ball Pein	£	9.00
1 lb Ball Pein	£	10.65

STANLEY TRIMMING KNIVES PKT OF 3

(throw away type)	£	2.25
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JEWELLERS SNIPS

7" Gilbow G.56	£	20.37
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SHEARS

8" (GILBOW No. 245)	£	17.25
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ENGINEERS SCRAPERS (THREE SQ)

No. 96A 4" long	£	16.43
No. 97A 5.1/2" long	£	15.89

TOOLMAKERS CLAMPS

1" capacity Ref 410	£	22.55
1.1/2" capacity Ref 411	£	24.95

G CLAMP (Record)

0 - 4" capacity	£	10.75
0 - 2" capacity	£	5.38

RULES - By Rabone Chesterman.

<u>Rustless Steel</u>		
64FR 12" imp / met narrow flex	£	12.75
64R 12" imp / metric	£	12.75
64R 6" imp / metric	£	8.52
64FR 6" imp / met narrow flex	£	8.52

ENGINEERS SQUARES

3" (M & W No. 400/3)	£	23.00
4" (M & W No. 400/4)	£	23.00
6" (M & W No. 400/6)	£	28.50

MICROMETER M&W No. 965

0 - 1"	£	38.22
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LETTER PUNCHES (By Pryor)

1/16 high (1.5mm) A - Z set	£	37.40
3/32 high (2.4mm) A - Z set	£	29.00
1/8" high (3.0mm) A - Z set	£	29.00

NUMBER PUNCHES (Pryor)

1/16 high (1.5mm) 0 - 9	£	15.25
3/32 high (2.4mm) 0 - 9	£	11.50
1/8" high (3.0mm) 0 - 9	£	11.50

CENTRE PUNCHES

1/16" dia point x 4.1/2" 1g	£	2.70
3/32" dia point x 4.1/2" 1g	£	2.70
1/8" dia point x 4.1/2" 1g	£	2.70

AUTOMATIC CENTRE PUNCH

Eclipse No. 65 - 171R	£	24.15
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PARALLEL PIN PUNCH

3/16" dia pin x 4" 1g No. 161C	£	1.83
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SAFETY SPECTACLES (VITREX)

	£	3.65
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SCREW CUTTING GAUGE

M & W 200	£	8.25
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PIN CHUCKS

Ref E. 160	£	32.71
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PIN VICES (CHUCK TYPE)

Eclipse No. 121 0-040" cap	£	12.11
Eclipse No. 122 0-030" - 060" cap	£	12.20

HAND TOOLS

FILES (BASTARD CUT)

8" Hand	£ 3.65
8" Flat	£ 4.00
8" Half Round	£ 5.70
10" Round	£ 4.60

FILES (SECOND CUT)

8" Flat	£ 4.25
8" Hand	£ 3.75
8" Half Round	£ 5.85
8" Square	£ 4.55
8" Round	£ 4.00
6" Hand	£ 3.40

FILES (SMOOTH CUT)

8" Flat	£ 4.45
8" Hand	£ 4.25
8" Half Round	£ 6.00
8" Square	£ 4.95
8" Round	£ 4.50
6" Hand	£ 3.45
6" Flat	£ 3.40

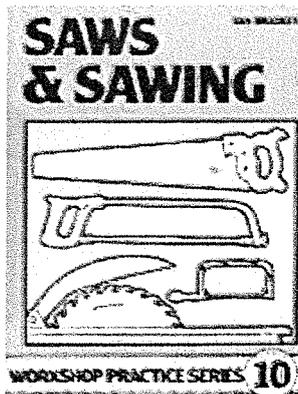
PRECISION NEEDLE FILES - 2nd CUT BY VALLORBE (ALL 160mm LONG)

	Pillar	£ 8.69
	Square	£ 10.84
	3 Square	£ 9.95
	Round	£ 8.59
	Warding	£ 9.95
	Knife	£ 9.91
	Half Round	£ 11.71

Wooden handle with brass collet
accepts all above files £ 4.13

FILE HANDLES

3"	£ 1.15
4.1/4"	£ 1.35
5"	£ 1.40



EMERY CLOTH - Best quality

Sheet sizes 11" x 9" (280 x 230mm)

Ref.	Grit				
0	220	Fine	per sht	£	1.50
FF	150		per sht	£	1.50
F	120		per sht	£	1.50
1	100		per sht	£	1.50
1.1/2	80		per sht	£	1.60
2	60	Coarse	per sht	£	1.70

SAWS

HACKSAWS

No. 675	Junior frame	£ 6.47
No. 70	20TR Adjustable to take 10" or 12" blades	£ 19.68
No. 14J	Junior frame takes 6" blades	£ 3.96

HACKSAW BLADES

HSS All Hard	10" long	£ 2.52
HSS All Hard	12" long	£ 1.75

Available in 18, 24 or 32 tpi. Please state which is required.

HACKSAW BLADES TO SUIT JUNIOR

HACKSAW FRAME

JuniorBlades - Fine teeth - pkt 10	
Eclipse No. MBIT	£ 2.46

PIERCING SAW FRAME

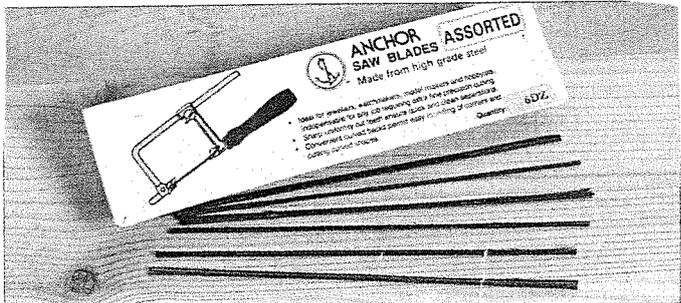
No. PS51 - o/a length 11.1/2" x 3.3/8" depth to bow	£ 19.91
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BLADES TO SUIT PIERCING SAW FRAME

Pkt 6 dozen assorted	£ 4.50
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DEBURRING TOOL

Spare blades for above - each	£ 2.20
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SUNDRIES

STAINLESS STEEL &

PHOSPHOR BRONZE BALLS

Stainless/non-corrodible/non magnetic grade 316.GD.100 & P.Bronze balls suitable fo check valves, safety valves etc.

		Stainless pkt of 10	P.Bronze pkt of 10
1/16"	dia	£ 1.20	£ -
3/32"	dia	£ 1.20	£ -
1/8"	dia	£ 1.20	£ 1.70
5/32"	dia	£ 1.20	£ 2.25
3/16"	dia	£ 1.40	£ 2.60
7/32"	dia	£ 1.85	£ -
1/4"	dia	£ 1.90	£ 5.75
5/16"	dia	£ 2.70	£ -
3/8"	dia	£ 4.30	£ -
7/16"	dia (pkt 5)	£ 3.60	£ -
1/2"	dia (pkt 5)	£ 5.30	£ -

STUDDING - 1'0" Lengths

SIZE	STEEL	BRASS
2 BA	£ 2.20	£ 3.70
4 BA	£ 2.60	£ 4.80
5 BA	£ 3.90	£ 4.45
6 BA	£ 3.90	£ 4.80
7 BA	£ 6.00	£ 6.00
8 BA	£ 7.80	£ 8.20
10 BA	N/A	£ 8.90
1/4 BSF	£ 2.80	-
1/4 BSW	£ 0.60	-

STAINLESS STEEL STUDDING

M3 x 0.5mm per 13" length	£ 1.70
M4 x 0.7mm per 13" length	£ 2.00
M5 x 0.8mm per 13" length	£ 2.05

TREFOLEX - Ideal for tapping, reaming, drilling, cutting etc.
500 gram tin £ 16.25



Case Hardening Compound 400g Tin £ 13.60

BALL BEARINGS - each

35mm x 15mm x 11mm	£ 5.50
6001ZZ - 28mm OD x 12mm ID	£ 4.35
6002ZZ - 32mm OD x 15mm ID	£ 4.85

SPLIT PINS - per pkt 50

1/32" dia x 5/8" long	£ 3.10
3/64" dia x 7/8" long	£ 2.80
1/16" dia x 1/2" long	£ 2.40
1/16" dia x 1" long	£ 2.40
5/64" dia x 1" long	£ 2.55
3/32" dia x 1" long	£ 2.30

TAPER PINS - per pkt 10

1/16" dia x 3/4" long	£ 3.75
5/64" dia x 1.1/4" long	£ 5.25
3/32" dia x 1.1/4" long	£ 4.95
7/64" dia x 7/8" long	£ 5.90
1/8" dia x 1" long	£ 4.30
5/32" dia x 2" long per 5	£ 5.70
3/16" dia x 1.1/2" long	£ 5.25

NEEDLE ROLLER BEARINGS

B78 - 5/8"od x 7/16" id x 1/2" long	each	£ 2.90
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OILITE BUSHES

5/8" od x 1/2" id x 5/8" long	
CT 529 x 5/8"	£ 1.30
1.1/8" od x 1" bore x 1.1/4" long	£ 4.00

ROLL PINS - PER PKT 10

1/16" X 3/4"	£ 0.75
1/16" X 1"	£ 0.75
1/16" X 1.1/4"	£ 0.80
3/32" X 1"	£ 1.00
1/8" X 1.1/4"	£ 1.25

MARKING OUT BLUE (50ml Bottle) £ 3.15

BRASSBLAK

As above for use on copper, brass & zinc.

Kit contains 4 x 100ml containers	£ 13.85
Also available Kit of 4 x 200ml containers	£ 21.50

METALBLAK

Room temperature Blackening for iron, steel & cast iron.

Kit contains 4 x 100ml containers of Degreaser, Conditioner, Blacking & Oil sealer with full instructions	£ 13.85
Also available Kit of 4 x 200ml containers	£ 22.00

100ml Blacking Solution	£ 6.00
200ml Blacking Solution	£ 10.35

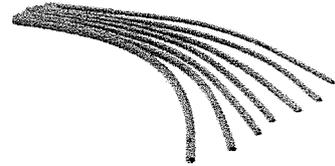
METALBLAK - ALUMINIUM KIT

Kit contains: 100ml conditioner etch, 200ml degreaser, 200ml de-watering oil, 200ml conditioner & 200ml blacking solution
£ 24.30

SUNDRIES

RUBBER TUBE - Suitable for loco/tender injector water connections etc. Neoprene will stand heat/steam.

3mm	bore x 4.5mm OD Neoprene Tube	per ft.	£ 2.10
5mm	bore x 8.0mm OD Neoprene Tube	per ft.	£ 3.50
6.5mm	bore x 9.5mm OD Grey Neoprene Tube	per ft.	£ 3.75
4.0mm	bore x 5.5mm OD Translucent PVC Tube	per ft.	£ 1.35
3mm	bore x 4.5mm OD Red Rubber	per ft.	£ 1.50
5mm	bore x 8.0mm OD Red Rubber	per ft.	£ 2.55
6.5mm	bore x 9.5mm OD Red Rubber	per ft.	£ 2.15
8mm	bore x 12.0mm OD Red Rubber	per ft.	£ 2.90



SILICONE TUBE - Ideal for gauge glass seals - cut sealing rings with razor blade

3mm	bore x 5mm OD (will fit 4mm dia gauge glass)	per ft.	£ 2.10
4mm	bore x 6mm OD (will fit 5mm dia gauge glass)	per ft.	£ 3.25
5mm	bore x 7mm OD (will fit 6mm dia gauge glass)	per ft.	£ 3.75

GRAPHITED YARN - FOR PISTONS & GLANDS (Max operating conditions temp 480°C pressure 140 bar)

1/16" dia	(approx 6ft long)	£ 1.90
3mm (1/8")	sq. (approx. 18")	£ 2.40
5mm (3/16")	sq. (approx. 18")	£ 2.50
6mm (1/4")	sq. (approx. 18")	£ 6.25

SHEET JOINTING - (GASKET MATERIAL) - (upto 400°C)

0.5mm	thick packing (Hallite/Dixal or similar)	300 x 300mm.sq.	£ 3.15
0.80mm	thick packing (Hallite/Dixal or similar)	300 x 300mm.sq.	£ 4.75
1.5mm	thick packing (Hallite/Dixal or similar)	300 x 300mm sq.	£ 6.00

PIPE JOINTING COMPOUND

BOSS WHITE - 400gr. Tin	£ 4.00
PTFE TAPE - 40ft roll	£ 0.90

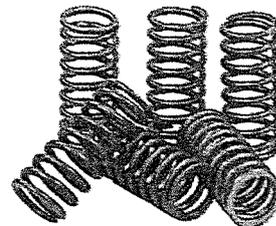
LOCTITE PRODUCTS

603	Retainer (Supercedes 601)	per 10ml bottle	£ 9.09
222	SCREWLOCK	per 10ml bottle	£ 8.41
270	STUDLOCK	per 10ml bottle	£ 8.53
243	NUT LOCK	per 10ml bottle	£ 9.09
542	HYDRAULIC SEALANT	per 10ml bottle	£ 8.55
638	HIGH STRENGTH RETAINER	per 10ml bottle	£ 9.18
ACTIVATOR "T"	- 150 ml aerosol		£ 8.86
SUPERCLEAN - FOR PREPARING SURFACES FOR ABOVE ADHESIVES - 400ML AEROSOL			£ 14.20



COMPRESSION SPRINGS

3.1/2" gauge LOCO SPRINGS			
7/32" od x 21g 1 x 1" long (1/8" bore)	per 10	£ 4.75	
5"G AXLEBOX LOCO SPRINGS			
5/16" od x 18g x 1.1/4" lg (slides on 3/16" pin)	(No.35) per 10	£ 5.75	
5/16" od x 3/4" long x .048" wire (SV)	(No. 29) each	£ 0.60	
5/16" od x 1" long x .036" wire (SV)	(No. 31) each	£ 0.50	
3/8" od x 1" long x 0.064" wire (SP Tender)	(No. 50) each	£ 1.00	
3/8" od x 1.1/2" long x 16g wire (SP)	(No. 56) each	£ 1.00	
1/2" od x 1.1/4" long x 0.080" wire	(No. 92) each	£ 1.25	
1/2" od x 1" long x 0.062" wire (DNY)	(No. 88) each	£ 1.10	
3/4" od x 2" long x 10 gauge (SW)	(244016) each	£ 2.35	
5/16" od x 1" long x 18g (CH.1)	each	£ 0.60	
1/2" od x 1.1/8" long x 16g (CH.2)	each	£ 1.12	
11/32" od x 1.1/4" long x 20g (CH.3)	each	£ 1.34	



BRASS STRAINING GAUZE - (WATER FILTERS)

40 mesh wire gauze 6" x 6" approx	£ 4.00
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STAINLESS STEEL SPRINGS

0.188"od x 22g x 1" long	each	£ 0.75
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WIRE ROPE (GALVANISED)

1/16" dia (max working load 40kg)	per foot	£ 0.30
3/32" dia (max working load 80kg)	per foot	£ 0.40

STAINLESS STEEL MESH

For chimney spark arrestor 12" x 6"	£ 5.10
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PINNACLE' 12/18 VOLT D/C STEAM RAISING BLOWER

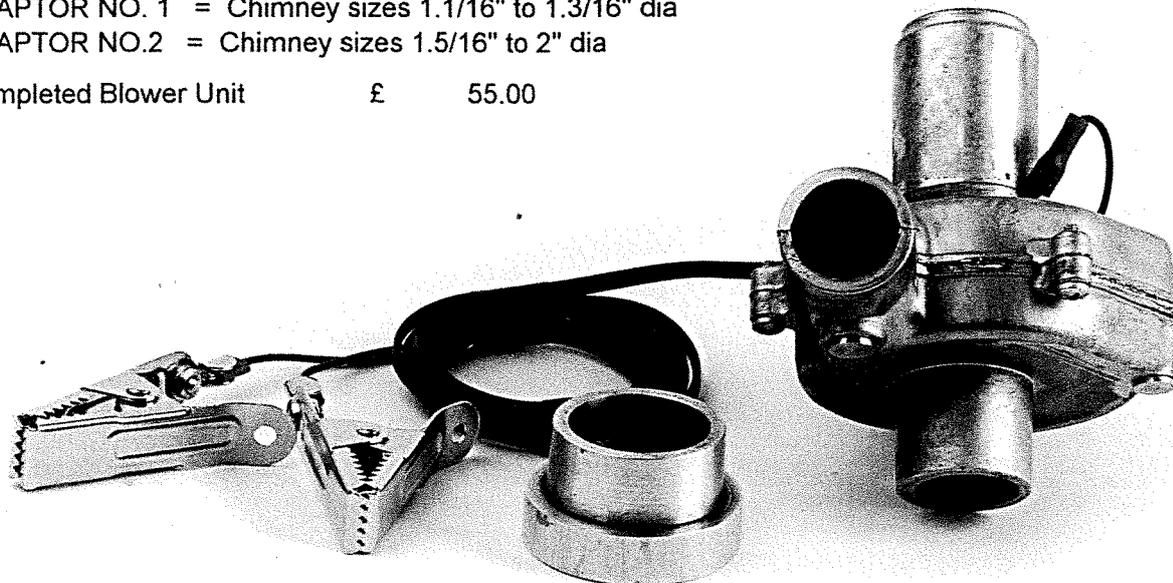
All metal construction fitted with a metal impeller. Complete with 2 metres of cable and 32mm crocodile clips. Suitable for 3.1/2"g & 5"g locos.

Set includes alloy adaptor to be machined to suit your individual chimney size. Two adaptors are available to suit the following chimney bores. When ordering please state which adaptor is required.

ADAPTOR NO. 1 = Chimney sizes 1.1/16" to 1.3/16" dia

ADAPTOR NO.2 = Chimney sizes 1.5/16" to 2" dia

Completed Blower Unit £ 55.00



BOILER WATER TREATMENT

Tannin based treatment for controlling scale & corrosion in steel boiler of steam locomotives & traction engines.

Dosing instructions supplied with container. 500ml £ 8.00

STEAM OIL 90w Steam cylinder oil 1 litre £ 10.25

LATHE OIL Lubricating 1 litre £ 6.70

FIRING TOOLS - Each set comprises of shovel & poker

3.1/2"g shovel (7/8" wide x 2.1/2" long) Handle 7.1/2" long £ 22.25

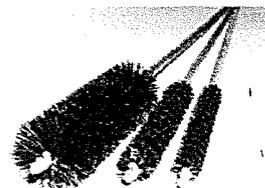
5"g shovel (1.3/16" wide x 2.3/4" long) Handle 8" long £ 22.25

7.1/4"g shovel (1.5/8" wide x 4" long) Handle 10.1/2" long £ 25.00

FLUE BRUSHES

USE INSIDE DIA OF TUBE TO SELECT SIZE OF BRUSH REQUIRED

	<u>BRISTLE</u>	<u>BRONZE</u>
5/16" dia	£ 4.70	N/A
3/8" dia	£ 4.70	£ 6.80
7/16" dia	£ 4.70	£ 6.80
1/2" dia	£ 4.85	£ 6.80
3/4" dia	£ 4.50	£ 6.50



Updated 8-8-18

REILANG OILERS

We are UK Agents for this Swiss range of high quality oilers as used in Automotive Industry, AA Patrol vans etc. Ideal for use in the workshop or at trackside etc.

PRECISION OILER WITH DOUBLE PUMP

This all metal construction oiler contains a main pump and a top pump. A swivel mechanism for the inlet valve ensures the oil is used right to the last drop.

It will reach the most difficult-of-access spots and will even work upside down.

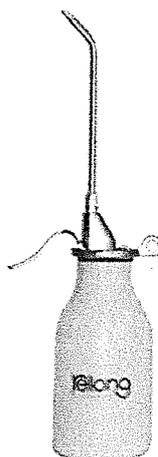
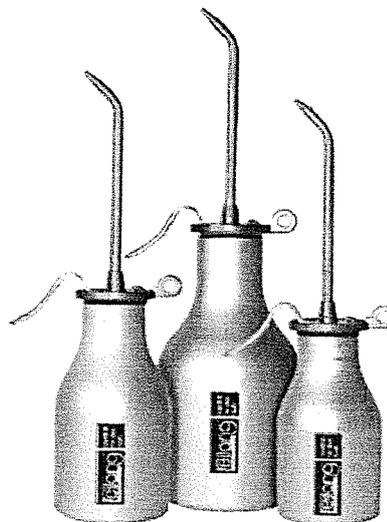
The environment friendly oiler gives you immediate flow - where you need it - when you need it.

Many steam enthusiasts keep two oilers in their toolbox - one for bearing lubrication etc, and one for steam oil

200ml Precision Oiler (003-253) ALI	£	28.10
300ml Precision Oiler (003-252) ALI	£	29.00
500ml Precision Oiler (003-251) ALI	£	34.15
200ml Service pack	£	8.50
300ml Service pack	£	8.95
500ml Service pack	£	10.50

NEW

200ml Precision Oiler (004-313) PE	£	21.25
300ml Precision Oiler (004-312) PE	£	22.30



POCKET OILER

As its name indicates, this oiler's small dimensions and small volume make it particularly suitable for tool boxes.

75ml Pocket Oiler (024-152 D) PE	£	5.05
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PRECISION OILER WITH FLEXIBLE METAL HOSE

The Precision oiler with flexible metal hose is as robust as any other Reilang Precision oiler.

With the flexible hose oil can be supplied to any difficult to reach area. The hose can be adjusted to any new requirements. Its angled suction enables the container to be emptied completely.

200ml Oiler with Flexi hose (007-123)	£	24.40
500ml Oiler with Flexi hose (007-121)	£	31.00



Updated 4-8-18

LOCOMOTIVE SUNDRIES

SPRING CAP OIL CUPS

5/16" A/F BODY 3/16" X 32T £ 5.40



5/16" A/F BODY 2BA £ 5.45

SCREW LINK COUPLINGS (WITHOUT HOOK)

Available in GWR, LMS or LNER

3.1/2" g each £ 28.70
5" g each £ 33.10
7.1/4" each £ 37.10



COUPLING HOOKS - PLAIN UNFINISHED

3.1/2" g each £ 12.15
5" g each £ 12.85
7.1/4" each £ 14.00

COUPLING HOOKS & CHAINS

with spring & 3 link chain.

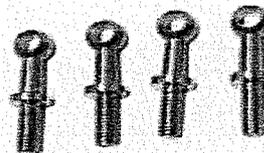
3.1/2" g each £ 27.15
5" g each £ 30.00
7.1/4" each £ 33.75

COUPLING HOOKS - FINISHED WITH SPRING

3.1/2" g each £ 15.50
5" g each £ 17.70
7.1/4" each £ 23.35

HANDRAIL STANCHIONS - PLATED BRASS - Price per 10

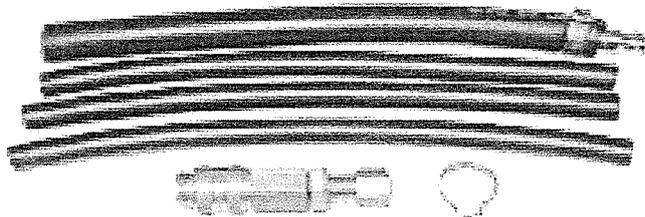
3.1/2" g Drilled 3/32" dia - threaded 8BA £ 4.70
5" g Drilled 1/8" dia - threaded 6BA £ 5.40
7.1/4" g Drilled 5/32" dia - threaded 4BA £ 9.15
7.1/4" g Drilled 3/16" dia - threaded 4BA £ 9.15
7.1/4" g With 3/16" dia BLIND hole. Threaded 4BA pkt of 2 £ 2.00



LOCO TO TENDER WATER PIPE CONNECTOR KIT

Contains one high pressure flexible connection for handpump with easy action connection/disconnection and 3 pieces of silicone rubber tube for gravity water feeds.

3.1/2" / 5g £ 29.25
7.1/4" g £ 35.30



LOCO TO TENDER CONNECTORS

A quick release high pressure connector for the hand pump and silicone rubber tubes for injector feeds etc. Two sizes are available: 3.1/2" / 5" g & 7.1/4" g

WATER BUCKETS - Galvanised steel with wire handle

5/8" high x 3/4" dia	£2.20	3" high x 3.1/2" dia	£3.15
1" high x 1.1/8" dia	£2.50	4" high x 4.1/2" dia	£3.95
1.1/2" high x 1.3/4" dia	£3.65	5" high x 5.1/2" dia	£4.45
2" high x 2.3/8" dia	£2.50	6" high x 6.1/2" dia	£4.50



CHEQUER PLATE Correct pattern, Raised Rib

Aluminium Sheet 1/16" Scale (3.1/2" g) 10" x 2.3/8" x 18g £ 6.00
1/10" Scale (Approx 5" g) 10" x 2.3/8" x 18g £ 6.00

PISTON RINGS CI - Butt Jointed

3/4" od x 1/16" wide each £ 6.50
13/16" od x 0.054" wide each £ 8.30
1" od x 1/16" wide each £ 7.55
1.3/8" od x 1/8" wide each £ 7.75
1.1/2" od x 1/8" wide each £ 8.00
1.9/16" od x 1/8" wide each £ 8.00
1.5/8" od x 1/8" wide each £ 8.00
1.3/4" od x 1/8" wide each £ 8.15
2" od x 1/8" wide each £ 8.25
2.1/4" od x 3/16" wide each £ 9.00
2.1/2" od x 3/16" wide each £ 9.75

WIRE ROPE - Galvanised

1/16" dia (max work load 40kg) per ft £0.30
3/32" dia (max work load 40kg) per ft £0.40

BR 'TIMKEN AXLEBOX COVERS

3.1/2" g (18mm dia) each £1.00
5" g (22mm dia) each £1.25
7.1/4" g (30mm dia) each £3.00

LOCOMOTIVE SUNDRIES

LOCOMOTIVE HEADLAMPS

Excellent quality Lost Wax Brass casting, supplied with separate lenses.

GWR Pattern

3.1/2" Gauge	£	6.50
5" Gauge	£	13.55
7.1/4" Gauge	£	20.75



LMS Pattern

5" Gauge	£	13.55
7.1/4" Gauge	£	22.00



BR Pattern

3.1/2" Gauge	£	6.50
5" Gauge	£	13.55
7.1/4" Gauge	£	20.75



LOST WAX CASTING

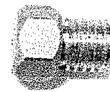
7.1/4"G ENGINEMAN'S TEA CAN (WITH SEPARATE LID & HANDLE)

EACH £9.75

BOILER BLANKING PLUGS

Brass Hex. Head threaded plugs - Useful for plugging tapped holes in boiler, in preparation for boiler testing.

3/16" x 40T each	£	1.10	3/8" x 26T each	£	1.75
1/4" x 40T each	£	1.35	3/8" x 32T each	£	1.75
5/16" x 26T each	£	1.55	3/8" x 40T each	£	1.75
5/16" x 32T each	£	1.55	1/2" x 26T each	£	2.15
5/16" x 40T each	£	1.55	5/8" x 26T each	£	2.95



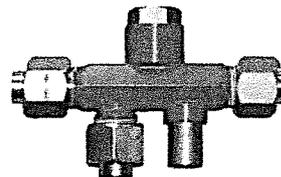
Sets of plugs to suit "Winson" models

Set of 13 Plugs to suit 5"G GWR Class 14xx	£	26.15
Set of 14 Plugs to suit 5"G BR STD Class 7 "Britannia"	£	27.70
Set of 15 Plugs to suit 5"G BR STD Class 9f "Evening Star"	£	29.85
Set of 14 Plugs to suit 5"G 'Jubilee' (GALATEA)	£	29.10
Set of 7 Plugs to suit 5"G 'Pug'	£	14.85

FITTINGS

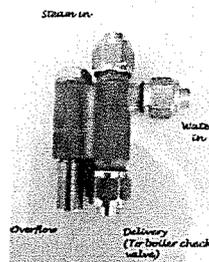
HORIZONTAL INJECTORS

NO. 2	1/2 pint (11oz) per min	for 5/32" pipe	£	42.55
NO. 3	3/4 pint (14 oz) per min	for 3/16" pipe	£	42.55
NO. 4	1.1/4 pints (24 oz) per min	for 3/16" pipe	£	42.55
NO. 5	2.2/3 pints (53 oz) per min	for 1/4" pipe	£	46.25
NO. 6	4 pints/min	for 1/4" pipe	£	53.65
NO. 7	6 pints/min (120 oz) 3.4L/min	for 5/16" pipe	£	57.75
NO. 8	8 pints/min	for 3/8" pipe	£	75.25
NO. 16	16 pints/min	for 7/16" pipe	£	96.25



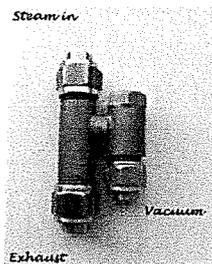
VERTICAL INJECTORS

No. 3	3/4 pints/min	3/16" pipe	£	55.50
No. 4	1.1/4 pints/min	3/16" pipe	£	55.50
No. 5	2.2/3 pints/min (53oz)	1/4" pipe	£	59.20
No. 6	4 pints/min	1/4" pipe	£	68.45
No. 8	8 pints/min	3/8" pipe	£	84.00



VACUUM EJECTOR

3/16" Steam pipe	
1/4" Exhaust pipe	
3/16" Vacuum pipe	£ 51.80



<u>SNIFTER VALVE</u>	5/16" X 32T	£	21.00
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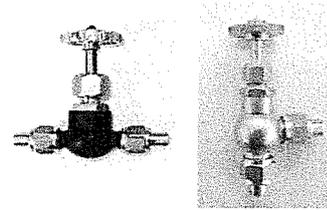
(with dummy flange)

FITTINGS

GLOBE VALVES

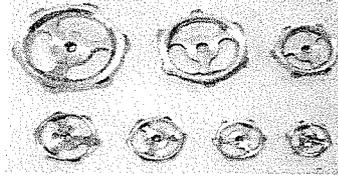
INLINE TYPE 180*		
3/32"	pipe	£ 18.65
1/8"	pipe	£ 18.25
5/32"	pipe	£ 17.25
3/16"	pipe	£ 17.70
1/4"	pipe	£ 19.55
3/8"	pipe	£ 42.00

RIGHT ANGLE TYPE 90*		
3/32"	pipe	£ 18.65
1/8"	pipe	£ 18.25
5/32"	pipe	£ 17.70
3/16"	pipe	£ 18.65
1/4"	pipe	£ 20.00
3/8"	pipe	£ 42.00



HANDWHEELS - 3 SPOKE TYPE

1/2"	o/dia	Boss Tapped 8 BA	£3.25
9/16"	o/dia	Boss Tapped 8 BA	£3.30
5/8"	o/dia	Boss Tapped 6 BA	£3.60
11/16"	o/dia	Boss Tapped 6 BA	£3.95
3/4"	o/dia	Boss Tapped 6 BA	£4.20
1"	o/dia	Boss Tapped 4 BA	£5.00
1.3/16"	o/dia	Boss Tapped 4 BA	£7.00



PIPE CONNECTORS

SINGLE PIPE UNIONS (MALE CONNECTORS)

3/32"	pipe	3/16" x 40	£2.10
1/8"	pipe	1/4" x 40	£2.35
5/32"	pipe	1/4" x 40	£2.35
3/16"	pipe	5/16" x 32	£2.40
1/4"	pipe	3/8" x 32	£2.90
3/8"	pipe	9/16" x 26	£9.80

DOUBLE PIPE UNIONS

£2.20
£2.60
£2.60
£2.90
£3.40
£11.20



UNION NUTS

	PER 10
3/16" x 40 (3/32" pipe)	£ 4.20
1/4" x 40 (1/8" pipe)	£ 4.10
7/32" x 40 (1/8" pipe)	£ 4.10
1/4" x 40 (5/32" pipe)	£ 4.10
5/16" x 32 (3/16" pipe)	£ 4.20
3/8" x 32 (1/4" pipe)	£ 5.20
1/2" x 26 (5/16" pipe)	Per 5 £ 4.80
9/16" x 26 (3/8" pipe)	each £ 3.10



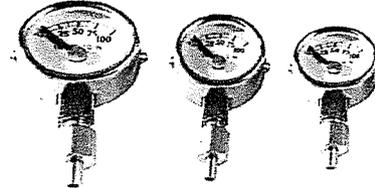
UNION NIPPLES

	PER 10
3/32" pipe	£ 3.80
1/8" pipe	£ 3.80
1/8" pipe (7/32 x 40T)	£ 3.80
5/32" pipe	£ 3.80
3/16" pipe	£ 3.90
1/4" pipe	£ 4.10
5/16" pipe	Per 5 £ 3.25
3/8" pipe	each £ 1.20



PRESSURE GAUGES

1/2"	dia	(available 0-80 psi, 0-100psi, 0-120 psi)	£ 29.30
3/4"	dia	with back flange (0-120 psi) only	£ 30.00
3/4"	dia	(available 0-80, 0-100, 0-120 or 0-150 psi)	£ 21.00
1"	dia	(available 0-100, 0-120, 0-150 or 0-200 psi)	£ 21.00
1.5/8"	dia	(available 0-100psi, 0-160 psi, 0-300 psi)	£ 23.75
2"	dia	(available 0-160 psi, 0-300 psi)	£ 23.75
1/8"	BSP nut & nipple to suit 1.5/8" & 2" dia gauges	pair	£ 1.75
3"	dia	(available 0-150 psi)	£ 45.00



VACUUM GAUGES

3/4"	dia 0-30 HG	£ 27.00
1"	dia 0-30 HG	£ 27.00
1.5/8"	dia 0-30 HG	£ 27.00

PRESSURE GAUGE SHUT-OFF VALVES

5/16" x 32T Male Thread (for 3/16" pipe)	£ 18.00
3/8" x 32T Male Thread (for 3/16" pipe)	£ 18.00

SYPHON to suit 3/4" & 1" dia pressure gauges with 1/4" x 40T Banjo type water connection

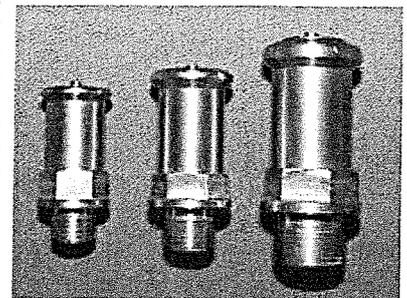
£ 9.75

SAFETY VALVES - ALL SAFETY VALVES ARE ADJUSTABLE, BUT ARE FITTED WITH A

LOCKING RING & SUPPLIED SET AT 80psi.

NOTE: The customer is advised to ensure the safety valve is adequate for the steaming capacity of the boiler.

1/4"	x 40T	(GAUGE 1) set at 60psi	£ 15.75
1/4"	x 40T	(G.I. EXPRESS TYPE)	£ 17.50
5/16"	x 26T	(ROB ROY)	£ 17.50
5/16"	x 32T	(TICH)	£ 17.50
5/16"	x 32T	(EXPRESS TYPE)	£ 23.00
5/16"	x 32T	(TALL TYPE)	£ 17.50
3/8"	x 26T	TALL TYPE (WILLIAM)	£ 17.50
3/8"	x 26T	(EXPRESS TYPE)	£ 23.00
3/8"	x 32T	(TALL TYPE)	£ 17.50
3/8"	x 32T	(EXPRESS TYPE)	£ 23.00
1/2"	x 26T	(TALL TYPE) Suitable for Simplex, B1, Sweet Pea etc.	£ 25.00
1/2"	x 26T	(EXPRESS TYPE)	£ 25.00
5/8"	x 26T	(EXPRESS TYPE)	£ 25.00
5/8"	x 26T	(TALL TYPE)	£ 25.00
3/4"	x 26T	(EXPRESS TYPE) Set at 80psi	£ 46.00
3/8" BSP	x 2.1/2"	High to suit 7.1/4" 'Sweet William' (+ Narrow Gauge locos) set at 90psi	£ 107.00



Updated 12-1-18

FITTINGS

CHECK VALVES 90°

3/32" pipe 3/16" x 40	£ 9.15	1/4" pipe 3/8" x 32T	£ 10.80
1/8" pipe 1/4" x 40	£ 9.15	1/4" pipe 1/2" x 26T	£ 12.10
5/32" pipe 1/4" x 40	£ 9.15	5/16" pipe 1/2" x 26T	£ 18.40
3/16" pipe 5/16" x 32T	£ 10.65	3/8" pipe 1/4" BSP	£ 20.80



INLINE CHECK VALVES (WATER)

1/8" PIPE TO 1/8" PIPE	£ 9.00	1/4" PIPE TO 1/4" PIPE	£ 10.80
5/32" PIPE TO 5/32" PIPE	£ 9.00	5/16" PIPE TO 5/16" PIPE	£ 15.40
3/16" PIPE TO 3/16" PIPE	£ 9.40	3/8" PIPE TO 3/8" PIPE	£ 19.80



OIL CHECK VALVES

1/8" pipe to 1/8" pipe (90 degree)	£ 9.35	1/8" pipe 3/16" x 40T (Lub Check)(90 degree)	£ 9.35
1/8" pipe to 1/4" x 40T (90 degree)	£ 9.35	1/8" pipe to 1/8" pipe inline oil check valve	£ 9.30
5/32" pipe to 1/4" x 40T (90 degree)	£ 9.35	5/32" pipe to 5/32" pipe inline oil check valve	£ 9.30
1/8" pipe 3/16" x 40T pillar (Rob Roy) (90 degree)	£ 9.35	3/16" pipe inline oil check valve	£ 11.10



BLOWDOWN VALVES - SCREW DOWN TYPE (Captive Spindle)

1/4" x 40T	£ 10.00	3/8" x 26T	£ 10.65
5/16" x 32T	£ 10.65	3/8" x 40T	£ 10.65
5/16" x 40T	£ 10.65	1/2" x 26T	£ 12.60
3/8" x 32T	£ 10.65	1/4" BSP (BRONZE)	£ 31.45
		3/8" BSP (BRONZE)	£ 35.15



BLOWER VALVES - BOILER STAY TYPE

1/4" X 40T	5/32" stay	£ 13.70
5/16" X 40T	3/16" stay	£ 14.25
3/8" X 40T	1/4" stay	£ 14.45

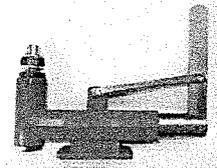
FEED PUMP BY-PASS VALVES

FLOOR FITTING

1/8" pipe	£ 15.40
5/32" pipe	£ 15.40
3/16" pipe	£ 15.60
1/4" pipe	£ 16.80
3/16" pipe under floor (S.Pea)	£ 31.45

TENDER HANDPUMP - NICKEL SILVER RAM

5/16 ram (1/8 pipe)	£ 31.55
3/8 ram (5/32 pipe)	£ 32.65
1/2 ram (3/16 pipe)	£ 33.30
5/8 ram (1/4 pipe)	£ 43.50
3/4 ram (3/8 pipe)	£ 68.45
3/8 ram (5/32 pipe)	
with front pipe fitting	£ 36.80



TENDER HANDPUMP - pipe to pipe

3/8" ram (5/32" pipe)	£ 37.20
1/2" ram (3/16" pipe)	£ 37.65



WATER GAUGES

BLACKGATES PINNACLE 3 COCK WATER GAUGES - please state whether RH or LH shut off is required

5mm glass	1/4" x 40T, 5/16" x 32T, 3/8" x 32T (Available threaded)	£ 74.00
8mm glass	5/16" x 32T	£ 85.00
8mm glass	3/8" x 32T	£ 85.00
8mm glass	1/8" BSP	£ 166.50
10mm glass	1/2" x 26T	£ 170.50
10mm glass	1/4" BSP	£ 135.00

3 Cock Water Gauge



WATER GAUGE - WITH PLAIN BLOW DOWN

3/16 x 40 (4mm glass)	£ 24.20	5/16 x 32 (6mm glass)	£ 27.40
1/4 x 40 (5mm glass)	£ 24.20	3/8 x 32 (7mm glass)	£ 29.25
1/4 x 32 (5mm glass)	£ 24.20		

Plain Water Gauge



GAUGE GLASS (PYREX) per 6" length

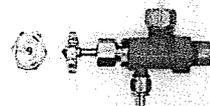
4mm od	£ 0.70	7mm od (.275)	£ 1.30
5mm od (.195)	£ 1.00	8mm od (.315)	£ 1.75
6mm od (.236)	£ 1.15	10mm od	£ 2.80



O-rings for Gauge Glass seals are listed on page 98

SILICONE TUBE - Ideal for gauge glass seals - cut sealing rings with razor blade

3mm bore x 5mm OD (will fit 4mm dia gauge glass)	per 6" lg	£ 1.10
4mm bore x 6mm OD (will fit 5mm dia gauge glass)	per 6" lg	£ 1.65
5mm bore x 7mm OD (will fit 6mm dia gauge glass)	per 6" lg	£ 1.90

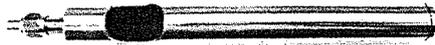


Updated 20-2-18

FITTINGS

WHISTLES

Small	(3/8" tube)	£	11.10
Medium	(1/2" tube)	£	12.50
Large	(5/8" tube)	£	13.40



TRACTION ENGINE WHISTLES

Complete with Steam valve. Tapped hole for mounting and steam supply.

<u>3" Scale</u>	3/4" diameter	3.3/4" high	Tapped - 1/8" BSP	£	57.00
<u>4" Scale</u>	1" diameter	4.1/4" high	Tapped - 1/8" BSP	£	86.00
<u>6" Scale</u>	1.1/2" dia	x 7.1/4" tall	Tapped - 3/8" BSP	£	211.50

STEAM SIREN

This steam siren developed for 3" and 4" scale traction engines, stand 4.3/4" high and 1.1/2" dia. Made in brass with 'O' Ring fitted on valve stem for leak free operation, polished to a high sheen. Threaded 1/4" BSP male

£ 211.50

BELL WHISTLE

1" dia x 3" high with integral whistle valve
3/8" x 32T (male) mounting

£ 67.50

TEE PIECES - COMPLETE WITH NUTS & NIPPLES

3/32"	pipe (3/16" x 40)	£	7.60
1/8"	pipe (1/4" x 40)	£	7.40
5/32"	pipe (1/4" x 40)	£	7.40
3/16"	pipe (5/16" x 32)	£	7.80
1/4"	pipe (3/8" x 32)	£	8.05
3/8"	pipe (9/16" x 26)	£	12.95



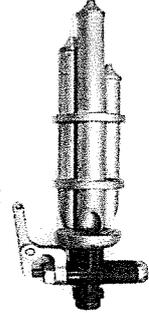
BOILER BUSHES - BRONZE

7/32" x 40	£	1.90	3/8" x 40	£	2.20
1/4" x 40	£	1.90	3/8" x 32	£	2.20
1/4" x 32	£	1.90	3/8" x 26	£	2.20
5/16" x 32	£	2.20	1/2" x 26	£	3.00
5/16" x 26	£	2.20	7/16" x 26	£	2.50
			1/2" x 26	£	2.50

STEEPLE TYPE CHIME WHISTLE

3 Note chime - 4.1/2" high 3/16" pipe
4 Note Chime - 6.1/2" high 1/4" pipe

£ 51.80
£ 75.00



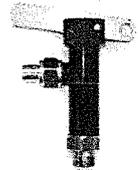
WHISTLE VALVES FOR CHIME WHISTLE

5/16" X 32T to suit 3 Note Whistle 3/16" pipe
3/8" x 32T to suit 4 Note Whistle 1/4" pipe

£ 24.05
£ 27.75

WHISTLE VALVES

1/4" x 40, 1/8" pipe single take off £ 18.50
5/16" x 32, 1/8" pipe, pipe single take off £ 18.50
3/8" x 32T (1/4" Pipe) Single take off £ 25.35



INJECTOR WATER VALVE - PLUG COCK TYPE

(90 degree movement from open to closed)

5/32"	pipe	90 degree type	£	21.30
3/16"	pipe	90 degree type	£	25.00
1/4"	pipe	90 degree type	£	27.00
5/32"	pipe	inline 180 degree type	£	21.30
3/16"	pipe	inline 180 degree type	£	25.00
1/4"	pipe	inline 180 degree type	£	27.00

INJECTOR STEAM VALVES - SCREWED

3/32" pipe	3/16" x 40T	£	13.70
5/32" pipe	1/4" x 40T	£	13.80
3/16" pipe	5/16" x 32T	£	13.90
1/4" pipe	5/16" x 32T	£	14.25
1/4" pipe	3/8" x 32T	£	14.45
1/4" pipe	7/16" x 26T	£	15.95
5/16" pipe	9/16" x 26T	£	25.55
3/8" pipe	9/16" x 26T	£	27.40



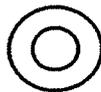
SCREWED ELBOWS - COMPLETE WITH NUTS & NIPPLES

3/16" x 40 (3/32" pipe)	£	7.15	5/16" x 32 (3/16" pipe)	£	7.40
1/4" x 40 (1/8" pipe)	£	6.95	3/8" x 32 (1/4" pipe)	£	7.70
1/4" x 40 (5/32" pipe)	£	6.95	9/16" x 26 (3/8" pipe)	£	11.95



COPPER SHIM WASHERS

Use with boiler fittings to ensure a good steam tight seal. Also, will overcome problems of correct orientation of fittings by using washers of different thickness. Each packet contains 20 washers (5 of each thickness 0.005", 0.010", 0.015" & 0.020")



3/16" id x 5/16" od	£	3.85	3/8" id x 9/16" od	£	4.55
1/4" id x 3/8" od	£	4.00	7/16" id x 5/8" od	£	5.70
5/16" id x 7/16" od	£	4.20	1/2" id x 11/16" od	£	5.65

FITTINGS

MECHANICAL LUBRICATORS Suitable for Traction Engines or Narrow Gauge

A substantial high quality lubricator suitable for traction engines / large scale Narrow Gauge Steam Locomotive
 1.1/2" sq tank x 2" tall, available with ratchet operating arm and priming handle on LH or RH.
 Oil pump can be altered to give 3 rates of delivery £ 122.75

Lubricator pump assembly for above to suit 1.1/2" square tank,
 complete with ratchet operating arm, pawls & springs & priming handle. £ 88.50

MECHANICAL LUBRICATORS (LBSC Type)

1" square tank £ 47.50
 1.1/4" square tank £ 47.50
 2" x 1.1/4" tank £ 47.50
 2" x 2" twin ram £ 81.00

Lubricator Pump Assembly with check valve, pawls & ratchet etc. £ 27.25

RATCHET WHEEL to suit above - 7/16" od x 30 tooth

RATCHET PACKS

3/4" dia Ratchet Wheel (3/16" dia hole) x 40T plus 4 pawls & 2 springs
 1" dia Ratchet Wheel (1/4" dia hole) x 50T plus 4 pawls & 2 springs

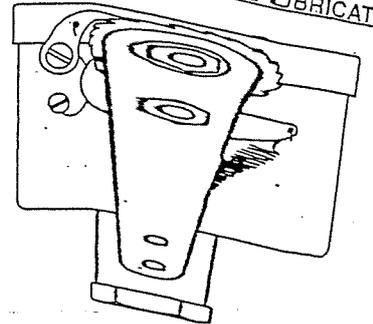
RATCHET WHEELS

3/4" dia x 24T x 3/16" Wide (3/8" bore)

Spare Hardened Lubricator Pawls (pair)

PLEASE RING FOR AVAILABILITY

MECHANICAL LUBRICATORS



CYLINDER DRAIN COCKS

Complete with levers - in sets of 4 (2 x LH, 2 x RH)

5/32" x 40T set 4	£ 23.00	1/4" x 40T set 4	£ 23.00
3/16" x 40T set 4	£ 23.00	5/16" x 32T set 4	£ 23.00

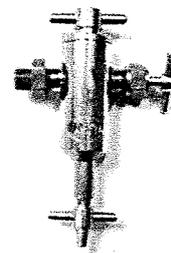


Suitable for traction engines & larger narrow gauge locos

1/4" x 40T (7/16" dia body) etc	each £	25.20
5/16" x 32T (7/16" dia body) for 5/32" pipe	each £	32.75
1/8" BSP (5/8" dia body) for 3/16" pipe	each £	34.75

DISPLACEMENT LUBRICATORS

1/4" x 40T (male) 2.1/2" overall height x 9/16" dia body £ 58.75
 polished brass & stainless steel complete with
 filler cap, needle valve & drain valve. High Quality Swiss made product
 suitable for most Stuart / stationary engines.



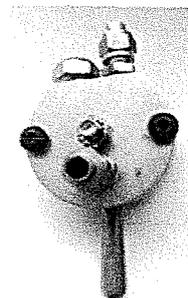
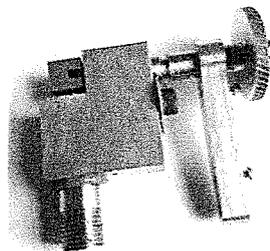
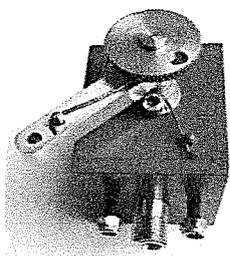
NEW TO BLACKGATES ENGINEERING

Designed by ACE

Spring Clutch Type Lubricators with bottom outlet (brass tank)

1"sq	£	52.25	Lubricator assembly	
1.1/4"sq	£	53.25		£ 42.25

Vacuum Brake Control Valve
 £ 95.00



WHEEL CASTINGS SIZES AS CAST - INCHES

We have a very Large number of wheel patterns, many of which would be suitable for a variety of models.
Our wheels are cast for us by an excellent Foundry who produce superb results for us.

Pattern No.	Flange		Tread		Inside Rim	Thickness	Crank		Spoke	Balance weight cast on	Type	Gauge	Engine	Price Each
	Dia.		Dia.				Throw							
W3	2.11/16		2.3/8		1.7/8		7/16		10	NO	PONY	3 1/2	EUSTON	£ 8.20
W6	2.3/4		2.3/8		1.7/8		9/16		10	NO	BOGIE	3 1/2	DORIS	£ 9.60
W7	2.7/8		2.3/8		1.7/8		1/2		9	NO	BOGIE	3 1/2	IVATT/BRITANNIA	£ 9.80
W8	3.1/4		3		2.5/16		9/16		12	NO	TENDER	3 1/2	DORIS	£ 11.90
W9	3.7/16		3.3/16		2.5/8		9/16	11/16	14	YES	D & C	3 1/2	ROB ROY	£ 13.90
W11	3.3/4		3.1/2		2.5/8		11/16		10	NO	PONY	5	ENTERPRISE	£ 16.25
W12	4.3/16		3.7/8		3.3/16		1/2	7/8	14	YES	DRIVER	3 1/2	WILLIAM	£ 17.75
W13	4.3/16		3.7/8		3.3/16		1/2	7/8	14	YES	COUPLED	3 1/2	WILLIAM	£ 17.75
W14	4.3/16		3.13/16		2.7/8		5/8		DISC	YES	D&C	3 1/2	CONWAY	£ 23.00
W17	3.15/16		3.11/16		3		1/2	7/8	15	YES	D&C	3 1/2	EUSTON	£ 15.85
W18	5.1/16		4.3/4		4		5/8	7/8	19	YES	COUPLED	3 1/2	DORIS	£ 21.15
W19	5.1/16		4.3/4		4		5/8	7/8	19	YES	DRIVER	3 1/2	DORIS	£ 21.15
W20	5.1/2		5		4		3/4	7/8	14	YES	DRIVER	5	PANSY	£ 33.95
W21	5.1/2		5		4		3/4	7/8	14	YES	COUPLED	5	PANSY	£ 33.95
W22	6		5.3/4		4.1/2		3/4	1.1/8	16	YES	DRIVER	5	STRATFORD	£ 41.50
W23	6		5.3/4		4.1/2		3/4	1.1/8	16	YES	COUPLED	5	STRATFORD	£ 41.50
W24	6.7/16		6.1/4		5.1/4		11/16	1.1/8	18	YES	DRIVER	5	ENTERPRISE	£ 44.30
W25	6.7/16		6.1/4		5.1/4		11/16	1.1/8	18	YES	COUPLED	5	ENTERPRISE	£ 44.30
W26	6.3/16		5.3/4		4.11/16		7/8		12	NO	TRAILING	7.1/4	DART	£ 46.90
W27	8.1/2		8		7		7/8	1.1/4	16	NO	D&C	7.1/4	DART	£ 71.90
W28	2.1/2		2.1/4		1.5/8		5/8		12	NO	TRAILING & TENDER	3 1/2	RAINHILL	£ 8.80
W29	4		3.3/8		2.7/8		9/16	1/2	12	NO	DRIVING	3.1/2	RAINHILL	£ 13.90
W31	3.9/16		3.1/4		2.1/2		1/2		DISC	NO	TENDER	3 1/2	FLYING SCOTSMAN	£ 13.15
W32	4.7/16		4.1/8		3.1/4		2.1/32		DISC	NO	TENDER	5	STRATFORD	£ 25.65
W33	4.15/16		4.1/2		3.11/16		3/4	1.1/16	14	YES	DRIVER	5	SIMPLEX	£ 27.00
W34	4.15/16		4.1/2		3.11/16		3/4	1.1/16	14	YES	COUPLED	5	SIMPLEX	£ 27.00
W35	2. 3/4		2.1/2		1. 7/8		1/2		10	NO	BOGIE	3 1/2	WILLIAM/JUBILEE	£ 10.70
W36	5. 5/8		5.3/8		4.11/16		5/8	1.1/8	16	YES	D&C	5	MARQUIS/K4	POA
W37	4.3/8		4.1/4		3.1/4		11/16		10	NO	TRAILING	5	ENTERPRISE	£ 21.55
W41	5.7/16		5.1/16		4.1/16		5/8	1.1/16	14	YES	DRIVER	5	SPEEDY	£ 31.05
W42	5.7/16		5.1/16		4.1/16		5/8	1.1/16	14	YES	COUPLED	5	SPEEDY	£ 31.05
W43	3.7/8		3.5/8		3		11/16		10	NO	BOGIE	5	BLACK 5	£ 15.95
W44	4.9/16		4.5/16		3.3/4		1/2	7/8	18	YES	DRIVER	3 1/2	JUBILEE	£ 16.50

ALL PRICES ARE PLUS CARRIAGE AND VAT
UPDATED 6-8-18

WHEEL CASTINGS SIZES AS CAST - INCHES

Pattern No.	Flange Dia.	Tread Dia.	Inside Rim	Thickness	Crank Throw	Spoke	Balance weight cast on	Type	Gauge	Engine	Price Each
W45	4.9/16	4.5/16	3.3/4	1/2	7/8	18	YES	COUPLED DRIVER	3 1/2	JUBILEE	£ 16.50
W46	8.5/16	8.1/16	7.1/8	11/16		22		LEAD/TRAIL/TEND	5	STIRLING	£ 53.50
W47	4.5/8	4.3/8	3.5/8	11/16		12	NO	D&C	5	STIRLING	£ 20.15
W48	6.13/16	6.1/2	5.3/4	11/16	1.1/4	19	NO	D&C	5	BLACK 5	£ 41.80
W49	4.1/2	4.1/8	3.1/8	3/4	1.1/8	12	NO	TENDER	5	ANNE OF HOLLAND	POA
W50	4.7/8	4.9/16	3.7/8	5/8		12	NO	TRAILING	5	BLACK 5	£ 20.85
W54	3.13/16	3.9/16	2.13/16	9/16		14	NO	BOGIE	3 1/2	STIRLING SINGLE	£ 15.55
W55	3.3/8	3.1/16	2.3/8	1/2		12	NO	DRIVER	3 1/2	STIRLING SINGLE	£ 10.30
W56	6.5/8	6.1/16	5.3/8	9/16	7/8	24		DRIVER	3 1/2	STIRLING SINGLE	£ 27.75
W57	5.1/4	5.1/16	4.3/16	11/16	1	15	YES	COUPLED DRIVER	5	JINTY	£ 29.25
W58	5.1/4	5.1/16	4.3/16	11/16	1	15	YES	COUPLED DRIVER	5	JINTY	£ 29.25
W59	2.3/4	2.1/2	1.3/4	9/16		10	NO	BOGIE	3 1/2	FLYING SCOTSMAN	£ 9.40
W60	5.3/8	5.1/8	4.3/8	1/2	3/4	20	YES	DRIVER	3 1/2	FLYING SCOTSMAN	£ 19.15
W61	5.3/8	5.1/8	4.3/8	1/2	3/4	20	YES	COUPLED DRIVER	3 1/2	FLYING SCOTSMAN	£ 19.15
W63	3.1/4	2.7/8	2.1/4	9/16		12	NO	TRAILING	3 1/2	FLYING SCOTSMAN	£ 11.25
W65	5.1/4	5.1/8	4.3/8	9/16	7/8	22	NO	D&C	3 1/2	KING CHARLES	£ 22.15
W66	2.3/4	2.7/16	1.3/4	1/2		10	NO	BOGIE	3 1/2	KING CHARLES	£ 9.35
W67	4	3.3/4	3.1/16	1/2	3/4	15	YES	DRIVER	3 1/2	IVATT	£ 16.85
W68	4	3.3/4	3.1/16	1/2	3/4	15	YES	COUPLED DRIVER	3 1/2	IVATT	£ 16.85
W69	3.1/8	2.3/4	2.1/4	1/2		12	NO	TENDER	3 1/2	IVATT	£ 9.40
W70	3.3/8	3	2.1/4	9/16		DISC	NO	SMALL TENDER	3 1/2	FLYING SCOTSMAN	£ 15.00
W71	3.5/8	3.3/8	2.1/2	9/16		12	NO	TENDER	3 1/2	KING CHARLES	£ 11.95
W72	2.5/8	2.5/16	1.7/8	1/2		9	NO	BOGIE	3.1/2	BRITANNIA	£ 8.10
W73	5	4.13/16	4.1/8	1/2	1	20	YES	DRIVER	3.1/2	BRITANNIA	£ 20.00
W74	5	4.13/16	4.1/8	1/2	1	20	YES	COUPLED DRIVER	3.1/2	BRITANNIA	£ 20.00
W75	2.3/4	2.1/2	2.1/16	1/2		10	NO	TRAILING & TENDER	3.1/2	BRITANNIA	£ 8.85
W76	3.5/16	3	2.1/2	1/2	5/8	12	NO	DRIVER	3.1/2	C.LAMB (plain)	£ 11.80
W77	3.5/16	3	2.1/2	1/2	5/8	12	NO	COUPLED DRIVER	3.1/2	C.LAMB (fancy)	£ 11.80
W78	2.1/8	1.13/16	1.3/8	7/16		8	NO	TENDER	3.1/2	C.LAMB (fancy)	£ 5.10
W79	4.1/2	4.1/4	3.3/8	7/8		DISC	YES	D & C	3.1/2	CHARLES	£ 36.00
W80	4.5/8	4.5/16	3.9/16	7/16	1.1/16	DISC	NO	D & C	3.1/2	COLUMBIA	£ 19.40
W81	2.5/8	2.7/16	1.3/4	7/16		DISC	NO	TRAILING	3.1/2	COLUMBIA	£ 9.85
W82	2.1/4	2	1.1/2	7/16		DISC	NO	LEADING & TENDER	3.1/2	COLUMBIA	£ 7.45
ALL PRICES ARE PLUS CARRIAGE AND VAT											
UPDATED 6-8-18											

WHEEL CASTINGS SIZES AS CAST - INCHES

Pattern No.	Flange		Tread		Inside Rim	Thickness	Crank Throw	Spoke	Balance weight cast on	Type	Gauge	Engine	Price Each
	Dia.	Dia.	Dia.	Dia.									
W83			3.13/16		3.3/16	7/16	7/8	13	YES	DRIVER	3.1/2"	EVENING STAR	£ 18.10
W84	4.1/16		3.13/16		3.3/16	1/2	7/8	13	YES	COUPLED	3.1/2	EVENING STAR	£ 18.10
W85	4.1/8"		3.13/16		2.7/8	3/4		DISC	YES	D & C	3.1/2	LILLA	£ 24.45
W86	5.1/16		4.13/16		4.1/8	7/16	3/4	21	YES	DRIVING	3.1/2	MAISIE	£ 16.85
W87	5.1/16		4.13/16		4.1/8	7/16	3/4	21	YES	COUPLED	3.1/2	MAISIE	£ 16.85
W88	3.9/16		3.3/16		2.1/2	13/16	3/4	DISC	YES	D & C	3.1/2	SWEET VIOLET	£ 19.55
W89	2.5/16		2.1/8		1.1/2	1/2	7/16	DISC	YES	D & C	3.1/2	TICH	£ 8.75
W90	2.1/4		2.1/8		1.5/8	7/16	1/2	6	YES	D & C	3.1/2	TICH	£ 6.80
W91	4.1/16		3.13/16		3.1/16	7/16		18	NO	D & C	3.1/2	TITFIELD T/BOLT	£ 16.50
W92	2.15/16		2.11/16		2.1/8	7/16		11	NO	TRAILING & TENDER	3.1/2	TITFIELD T/BOLT	£ 9.70
W93	2.5/16		1.15/16		1.7/16	7/16		DISC	NO	BOGIE	3.1/2	VIRGINIA	£ 5.70
W94	2.3/8		2.1/16		1.9/16	7/16		DISC	NO	TENDER	3.1/2	VIRGINIA	£ 7.00
W95	4.5/8		4.5/16		3.7/16	11/16	3/4	12	YES	DRIVING	5	BOXHILL	£ 25.15
W96	4.5/8		4.5/16		3.7/16	11/16	3/4	12	YES	COUPLED	5	BOXHILL	£ 25.15
W97	3.5/8		3.5/16		2.5/8	5/8		9	NO	BOGIE	5	BRITANNIA	£ 17.35
W98	7.1/16		6.5/8		5.7/8	5/8	1.1/4	20	YES	DRIVING	5	BRITANNIA	£ 44.55
W99	7.1/16		6.5/8		5.7/8	5/8	1.1/4	20	YES	COUPLED	5	BRITANNIA	£ 44.55
W100	3.7/8		3.1/2		2.3/4	9/16		10	NO	TRAILING	5	BRITANNIA	£ 14.80
W101	3.3/4		3.1/2		2.3/4	5/8		10	NO	TENDER	5	BRITANNIA	£ 16.75
W102	5.1/4		4.13/16		4	11/16		16	YES	DRIVING	5	CHARLATAN	£ 31.80
W103	5.1/4		4.13/16		4	11/16		16	YES	COUPLED	5	CHARLATAN	£ 31.80
W104	7.9/16		7.1/4		6.5/16	13/16		20	NO	DRIVING	5	CRAMPTON	£ 51.30
W105	4.7/16		4.3/16		3.1/4	3/4		11	NO	TRAILING (5130)	5	DUCHESS	£ 23.65
W106	4.3/4		4.3/8		3.7/16	7/8	1.1/8	4	YES	D & C	5	EDWARD THOMAS	£ 34.50
W107			5.3/8		4.1/2	5/8	1.1/4	15	NO	DRIVING	5	EVENING STAR	£ 32.80
W108	5.3/4		5.3/8		4.1/2	5/8	1.1/4	15	NO	COUPLED	5	EVENING STAR	£ 32.80
W109	7.5/8		7.1/4		6.3/8	5/8	1.3/16	21	NO	D & C	5	GALATEA	£ 46.00
W110	4.3/4		4.1/2		3.5/8	9/16		12	NO	TENDER	5	GALATEA	£ 20.70
W111	3.7/8		3.1/2		2.9/16	5/8		10	NO	BOGIE (500705)	5	FLYING S'MAN	£ 15.45
W112	4.3/8		4		3.1/16	5/8		10	NO	TRAILING (506601)	5	FLYING S'MAN	£ 20.85
W113	7.3/4		7.3/8		6.3/8	5/8	1.3/16	20	YES	DRIVING (507702)	5	FLYING S'MAN	£ 50.85
W114	7.11/16		7.3/8		6.3/8	5/8	1.3/16	20	YES	COUPLED(500805)	5	FLYING S'MAN	£ 50.85
W115	5.1/8		4.11/16		3.7/8	5/8		DISC	NO	TENDER (508201)	5	FLYING S'MAN	£ 27.15

ALL PRICES ARE PLUS CARRIAGE AND VAT
UPDATED 6-8-18

WHEEL CASTINGS

SIZES AS CAST - INCHES											
Pattern	Flange	Tread	Crank			Balance					
No.	Dia.	Dia.	Inside Rim	Thickness	Throw	Spoke	weight	Type	Gauge	Engine	Price
							cast on				Each
W150	8.3/8	8	5.11/16	1		DISC	YES	D & C	7.1/4	LILLA	£ 77.50
W151	7.1/16	6.11/16	5.5/8	1.1/8	1.1/2	DISC	YES	D & C	7.1/4	SWEET WILLIAM	£ 57.00
W152	7.5/16	6.3/4	5.5/8	1.1/4	1.1/2	6	YES	D & C (Spoked)	7.1/4	SWEET WILLIAM	£ 82.00
W153	4.3/4	4.5/16	3.1/8	1.1/8		8	NO	TRAILING	7.1/4	SWEET WILLIAM	£ 49.00
W154	5.3/4	5.3/16	4.1/16	1.1/4		DISC	NO	TENDER	7.1/4	SWEET WILLIAM	£ 51.00
W155	5.1/2	5	3.3/4	1.1/16		10	NO	BOGIE (700401)	7.1/4	STEMBOK	£ 57.20
W156	10	9.9/16	8.1/4	1	1.5/8	18	YES	DRIVING (700902)	7.1/4	STEMBOK	£ 78.00
W157	10	9.9/16	8.1/4	1	1.5/8	18	YES	COUPLED(700904)	7.1/4	STEMBOK	£ 78.00
W158	6.1/8	5.13/16	4.9/16	1		DISC	NO	TENDER (700403)	7.1/4	STEMBOK	£ 40.85
W159	5.15/16	5.9/16	4.5/8	7/8		10	NO	LEADING (HW2)	7.1/4	WENFORD	£ 41.40
W160	9	8.1/2	7.5/16	1	1.3/8	18	NO	D & C (HW1)	7.1/4	WENFORD	£ 71.50
W161	2.1/4	1.15/16	1.7/16	7/16		8	NO	BOGIE	3.1/2	VIRGINIA	£ 5.55
W162	6.1/2	6.3/16	5.3/16	3/4	1.3/16	18	YES	COUPLED(530502)	5	K5	POA
W163	6.1/2	6.3/16	5.3/16	3/4	1.3/16	18	YES	DRIVING (530501)	5	K5	POA
W164	7.1/8	6.13/16	5.13/16	3/4	1.3/16	18	YES	DRIVING (559501)	5		POA
W165	7.1/8	6.13/16	5.13/16	3/4	1.3/16	18	YES	COUPLED (659502A)	5		POA
W166	3.1/4	3.1/16	2.3/8	7/16		12	NO	TENDER	3.1/2	MAISIE	£ 9.85
W167	10.3/4	10.1/8	8.7/8	1	1.11/16	20	YES	COUPLED(700204)	7.1/4	A3	£ 79.75
W168	10.3/4	10.1/8	8.7/8	1	1.11/16	20	YES	DRIVING (700203)	7.1/4	A3	£ 79.75
W169	2.7/8	2.9/16	2.1/16	5/8		6	NO	CURVED SPOKES	3.1/2	SLATE WAGON	£ 10.50
W170	3.3/4	3.1/2	2.3/4	7/8		6	NO	CURVED SPOKES	5	SLATE WAGON	£ 20.50
W171	5.9/16	5.1/16	4.1/8	1		6	NO	CURVED SPOKES	7.1/4	SLATE WAGON	£ 49.80
W172	3.7/8	3.5/8	2.7/8	3/4	3/4	DISC	YES	D & C	5	PUG	POA
W173	3.1/2	3.1/4	2.11/16	1/2		12	NO	TENDER	3.1/2	EUSTON	£ 12.95
W174	3.1/16	2.3/4	2.1/8	7/16		12	NO	TENDER	3.1/2	PRINCESS MARINA	£ 9.45
W175	2.11/16	2.3/8	1.15/16	7/16		10	NO	PONY	3.1/2	PRINCESS MARINA	£ 7.90
W176	4.3/8	4.1/8	3.1/2	7/16	13/16	17	YES	DRIVING	3.1/2	PRINCESS MARINA	£ 15.60
W177	4.3/8	4.1/8	3.1/2	7/16	13/16	17	YES	COUPLED	3.1/2	PRINCESS MARINA	£ 15.60
W178	5.1/8	4.13/16	4.1/8	9/16	7/8	18	YES	DRIVING	3.1/2	GREEN ARROW	£ 19.85
W179	5.1/8	4.13/16	4.1/8	9/16	7/8	18	YES	COUPLED	3.1/2	GREEN ARROW	£ 19.85
W180	2.7/8	2.1/2	1.3/4	9/16	-	10	NO	PONY	3.1/2	GREEN ARROW	£ 10.85
W181	3.1/4	2.7/8	2.1/8	9/16	-	10	NO	TRAILING	3.1/2	GREEN ARROW	£ 13.60
W182	3.5/16	2	2.3/8	1/2	-	DISC	NO	TENDER	3.1/2	GREEN ARROW	£ 11.65
W183	4.3/8	4.3/16	3.5/16	9/16	7/8	16	NO	DRIVING	3.1/2	IVATT CLASS 4	£ 16.85
W184	3.1/2	3	2.7/16	1	-	6	NO	PONY	5	EDWARD THOMAS	£ 17.00
W185	6.1/4	5.13/16	4.1/2	1.1/8	-	10	NO	TRAILING (700402)	7.1/4	A3/A4	£ 47.50
W186	6.15/16	6.1/2	5.3/16	1.1/16	-	DISC	NO	TENDER (700404)	7.1/4	A3/A4	£ 53.20
ALL PRICES ARE PLUS CARRIAGE AND VAT											
UPDATED 7-8-18											

USEFUL DATA

BA THREADS RECOMMENDED TAPPING AND CLEARANCE DRILLS

BA Size	Tapping		Clearance	
	No.	mm	No.	mm
0	8	5.1	D	6.1
1	16	4.5	2	5.4
2	22	4.0	10	4.80
3	29	3.40	18	4.20
4	31	3.00	24	3.70
5	37	2.65	29	3.30
6	43	2.30	32	2.90
7	46	2.05	36	2.60
8	50	1.80	41	2.25
9	53	1.55	45	1.95
10	54	1.40	49	1.75
12	59	1.05	54	1.40

MODEL ENGINEER THREADS TAPPING DRILL SIZES

Size	Drill Size	
	No.	mm
$\frac{1}{8} \times 40$	38	2.55
$\frac{5}{32} \times 40$	30	3.25
$\frac{3}{16} \times 40$	21	4.00
$\frac{7}{32} \times 40$	11	4.80
$\frac{1}{4} \times 26$	4	5.30
$\frac{1}{4} \times 32$	} $\frac{7}{32}$	5.50
$\frac{1}{4} \times 40$		
$\frac{5}{16} \times 32$	J	7.00
$\frac{5}{16} \times 40$	$\frac{9}{32}$	7.10
$\frac{3}{8} \times 32$	} $\frac{11}{32}$	8.70
$\frac{3}{8} \times 40$		
$\frac{7}{16} \times 40$	$\frac{13}{32}$	10.30
$\frac{1}{2} \times 40$	$\frac{15}{32}$	11.90

BA HEXAGON SCREW SIZES

	Standard Head A/F	Size Smaller Head A/F	Overall Thread Dia.
0BA	0.413	-	0.236
2BA	0.324	7.0mm	0.185
3BA	0.282	-	0.161
4BA	0.248	5.5mm	0.141
5BA	0.218	5.0mm	0.126
6BA	0.193	4.5mm	0.110
7BA	0.172	4.0mm	0.098
8BA	0.152	3.5mm	0.086
9BA	0.131	-	0.074
10BA	0.117	-	0.066

B.S.B. THREADS - TAPPING DRILL SIZES

Size	Drill Size	
	No.	mm
$\frac{5}{16} \times 26$	I	6.9
$\frac{3}{8} \times 26$	Q	8.4
$\frac{7}{16} \times 26$	$\frac{25}{64}$	9.92
$\frac{1}{2} \times 26$	$\frac{29}{64}$	11.50
$\frac{5}{8} \times 26$	$\frac{37}{64}$	14.50

ALLEN KEY SIZES

Size	Cap Head	CSK	Grub
2BA	$\frac{5}{32}$	$\frac{3}{32}$	$\frac{3}{32}$
4BA	$\frac{3}{32}$	$\frac{1}{16}$	$\frac{1}{16}$
5BA	$\frac{3}{32}$		
6BA	$\frac{5}{64}$	0.050	0.050
8BA	$\frac{1}{16}$	0.035	0.035



PHIL OWEN
OWNER



JACQUIE OWEN
OWNER



MAT HEATON
BUYING/
SALES
MANAGER



HEATHER JONES
OFFICE MANAGER

BLACKGATES ENGINEERING
STAFF