

# M.B.M MODEL ENGINEERING SUPPLIES

IMPORTERS & SUPPLIERS OF MODEL ENGINEERING EQUIPMENT

Visit Our Web Site : [www.mbmmodelengineering.com](http://www.mbmmodelengineering.com)

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**Currently MBM Model Engineering is undergoing some new changes.**

**All prices are current as of October 01st 2020.**

**Due to the current economic climate there may be delays in shipping from our suppliers and fluctuations to costs of items and shipping charges. Thank you for your support and understanding at this time.**

**TERMS :** All prices are in N.Z. dollars, excluding postage and packaging. Post and packaging will be billed separately when the goods are sent, being a variable due to size and weight. We reserve the right to alter the prices shown in this catalogue in the event of fluctuations in labour and material costs, without notice.

**PAYMENT :** Payment is to be made at the time of placing your order and may be made by cash, internet bank transfer, EFT-POS, Visa, MasterCard - credit card details to be supplied at the time of order. Goods will be ordered, or if in stock dispatched upon receiving payment.

We look forward to your custom and hope we can meet your requirements.

This stock list is being added to constantly, so please enquire if your are wanting a different type of fitting.

## FITTINGS AVAILABLE:

<b>INJECTORS :</b>	11 oz Horizontal 5/32 pipe	\$220.00
	25 oz Horizontal 3/16 pipe	\$235.00
	40 oz Horizontal 1/4 pipe	\$220.00
	60 oz Horizontal 1/4 pipe	\$220.00
	80 oz Horizontal 1/4 pipe	\$240.00
	REFURBISHED INJECTORS – new cones, tested	\$120.00

Note: 20 oz/min = 1 pint/min

## **EJECTORS :**

3/16 steam in, 1/4 vacuum, 1/4 exhaust pipe, check valve	\$150.00
1/8 steam in 5/32 vacuum, 3/16 exhaust pipe, check valve	\$150.00

## **PRESSURE GAUGES :**

Ø3/4" 0-60 P.S.I	\$89.50
Ø3/4" or Ø1" 0 -120 P.S.I.	\$90.75
Ø3/4" or Ø1" 0 - 150 P.S.I	\$90.75
Ø3/4" or Ø1" 0 - 150 P.S.I Flanged back	\$95.50
Ø1 5/8" 0 - 160 or 0 - 300 P.S.I Flanged back	\$98.50
Ø2" 0 -160 or 0 - 300 P.S.I.	\$98.65

Other gauge sizes are available on request

**VACUUM GAUGES:**

Ø3/4" 0-30 Hg	\$110.00
Ø1" 0-30 Hg	\$122.50
Ø1" flanged back 0-30 Hg	\$127.50
Ø1" - 5/8" flanged back 0-30 Hg	\$135.00
30" Hg = 14.7 p.s.i.	
Available in flanged back : 3/4", 1", 1 5/8" standard	

**ANGLE FEED CHECK VALVES : 90°**

Or non-return valves are fitted to boilers so that they may be filled with water whilst in service.

1/8 pipe, 1/4 x 40T	"O" Ring and Shuttle	\$46.00
3/16 pipe, 5/16 x 32T	" " " "	\$48.00
5/32 pipe, 1/4 x 40T	" " " "	\$43.95
1/4 pipe, 7/16 x 26		\$85.50
1/4 pipe 3/8 x 32		\$75.00

**IN LINE CHECK VALVE:**

1/8 Pipe to pipe	\$45.50
5/32 Pipe to pipe	\$46.25
3/16 Pipe to pipe	\$47.85
1/4 Pipe to pipe	\$53.75

**OIL INLINE NON RETURN VALVE WITH SPRING:**

1/8" Pipe to pipe	\$52.00
5/32" Pipe to pipe	\$52.00
3/16" Pipe to pipe	\$52.00

**STEAM VALVES : GLOBE VALVES :**

Suitable for back head fittings, okay for water

3/16 x 40 - 3/32 pipe 90°	\$100.50
1/4 x 40 - 1/8 pipe 90°	\$87.00
1/4 x 40 - 5/32 pipe 90°	\$87.00
5/16 x 32 - 3/16 pipe 90° steam valve	\$60.00
5/16 x 32 - 3/16 pipe 90° globe valve	\$87.00
3/8 x 32 - 1/4 pipe 90° globe valve	\$107.00
3/8 x 32 - 1/4 pipe 90° steam valve	\$60.00
3/32 pipe to pipe 180°	\$42.00
1/8 pipe to pipe 180°	\$84.00
5/32 pipe to pipe 180°	\$87.00
3/16 pipe to pipe 180°	\$80.00
1/4 pipe to 1/4 pipe 180°	\$110.00
5/32 pipe to pipe radio control valve 90° movement	\$100.00

**BLOWDOWN VALVES:**

1/4 x 40	\$42.20
5/16 x 32	\$60.00
1/2 x 26	\$60.00
3/8 x 32	\$70.00
Also available 1/4 x 32, 5/16 x 40, 3/8 x 40, 3/8 x 26 – price TBA	

**LUBRICATORS :**

For connecting to a reciprocating part of an engine motion to pump oil into the steam supply pipe.

Ratchet 7/16 OD 34T	\$110.00
Ratchet type : Includes pump, ratchet and check valve, <b>without tank</b>	\$104.00
Ratchet type – complete with tank 1.25” sq inch tank or 1” sq tank	\$182.00
Clutch type – complete with tanks 1” x 1”	\$212.00
Clutch type - complete with tank 2” x 1 5/8”	\$250.00
Clutch type - complete with tank 2” x 1 5/8” twin rams	\$302.60
Bearing clutch for lubricators 4 mm x 6 mm x 8 mm	\$24.75 each
3” or 4” Scale Foster lubricator Ratchet type	\$435.20

**LUBRICATOR – DISPLACEMENT TYPE :**

With filler cap, drain plug and control valve, are fitted between boiler and engine.

1/4 x 40, 2-5/8” long, Stuart Turner type	\$155.00
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**OIL CUPS:**

Open topped cups for lubrication of bearings, slides etc.

8 Ba x 3/16 diameter	\$11.88 each
6 Ba x 3/8 diameter	\$12.52 each
4 Ba x 7/16 diameter	\$14.52 each
2 Ba x 3/16 diameter hex body	\$9.46 each
2 Ba x 5/16 diameter	\$16.20 each

**DRIP FEED OILERS:**

2 Ba thread 13mm diameter 50mm high	\$67.50 each
2 Ba thread 15mm diameter 45mm high	\$76.00 each

**WICK FEED OILER :**

1/4 x 40 T ½ body	\$48.80 each
5/16 x 32 T 5/8 body	\$48.80 each
5/16 x 32 T 7/8 body	\$55.30 each

**PLUG TYPE DRAIN COCK:**

5/32 x 40	\$25.75 each
3/16 x 40	\$30.50 each
1/4 x 40	\$34.50 each
5/16 x 32	\$38.00 each

**TRACTION ENGINE TYPE DRAIN COCKS :**

1/4 x 40	\$196.50 per pair
5/8 Body 1/8 BSP	\$265.00 per pair

**STEAM OPERATED DRAIN COCKS:**

1/4 x 40	\$25.00 each
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**INJECTOR WATER COCKS :**

Air tight 'O' ring fitted complete with handle

3/16 pipe 90 degree on/off	\$79.00
1/4 pipe 90 degree on/off	\$90.50

**WATER BY-PASS VALVE :**

Floor mounted 5/32 pipe	\$40.00 each
3/16 pipe	\$42.00 each

**WATER GAUGES:**

4mm glass 3/16x40T w/ blowdown	\$97.50
5 mm glass 1/4x40T	“ “ \$97.50
6 mm glass 5/16x32T	“ “ \$112.00
6 mm glass 3/8x32T	“ “ \$112.00
7 mm glass 3/8x32T	“ “ \$126.00

**WATER GAUGE GLASS:**

Plain Glass – 150mm Length (available in 5/6 & 8mm)	\$3.00 each
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Red Line – 150mm Lengths	
Ø4, Ø5, Ø6, Ø7mm	\$10.50 each
Ø8, Ø9, Ø10mm	\$17.45 each
Ø12mm x 200mm	\$24.50 each
Ø14mm x 300mm	\$32.00 each

**OIL SIGHT GLASS:**

3/4 O.D. x 1 inch	\$6.00 each
16mm x 20mm	\$6.00 each

**HAND RAIL STANCHIONS :**

6 Ba Thread 7/16 long 1/8 Rail	\$3.70 each
4 Ba Thread 5/8 long 5/32 Ra	\$4.90 each
4 Ba Thread 7/16 long 5/32 rail	\$4.90 each
5 Ba Thread 5/8 long 1/8 rail	\$5.56 each

**WHISTLES :**

Traction engine type with lever valve.

With lever valve 4” scale, 1/8 BSP Stands 4 1/4” high	\$235.00
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With lever valve 3” scale, 5/16 x 32 Stands 3 1/8” high	\$196.00
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With lever valve 2” scale, 1/4 x 40 Stands 2 3/4” high	\$172.72
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1/2” O.D. whistle x 1/8 pipe Whistle valve, vertical	\$50.00
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1/4 x 40, 1/8 pipe	\$100.00
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3 Tone Chime Whistle 1” dia 6” long	\$235.25
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**HAND WHEELS – Cast, Machined :**

3 spoke Ø1/2” 8Ba thread	\$17.80 each
3 spoke Ø5/8 “ 6 Ba thread	\$18.20 each
Lost wax Ø3/4“	\$18.40 each
Lost wax Ø1“	\$18.40 each
3 spoke Ø9/16” 8Ba	\$30.00 each
3 spoke Ø11/16” 6 Ba	\$30.00 each
3 spoke Ø3/4” 6 Ba	\$30.00 each
3 spoke Ø1” 6 Ba	\$30.00 each

**SINGLE PIPE UNIONS :**

3/16 x 40 - 3/32 pipe	\$11.50
1/4 x 40 - 1/8 pipe	\$12.50
1/4 x 40 - 5/32 pipe	\$16.00
5/16 x 32 - 3/16 pipe	\$16.00
3/8 x 32 – 1/4 pipe	\$20.00

**BULKHEAD CONNECTOR :**

1/4 pipe to pipe	\$30.00
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**PIPE ELBOWS 90 Degree – Olives and nuts included:**

1/8 pipe	\$30.25
3/16 pipe	\$31.50
5/32 pipe	\$25.00
1/4 pipe	\$32.00

Also available in 3/32 pipe

**PIPE TEE CONNECTORS – Olives and nuts included :**

1/8 pipe	\$34.00
3/32 pipe	\$35.00
3/16 pipe	\$36.00
5/32 pipe	\$30.00
1/4 pipe	\$40.00

**MACHINED CAST FITTINGS - Cast bronze model pipe fitting – MTP & UST Thread:**

MTP - Model Taper Pipe Thread

UST - Unified Straight Thread



<b>CROSS:</b>	3/16 or 1/4 x 40 female thread	\$18.50 each
<b>TEE:</b>	3/16 or 1/4 x 40 female thread	\$12.50 each
<b>ELBOWS - 90° BEND :</b>	3/16 or 1/4 x 40 female thread	\$11.60 each
<b>45° BEND :</b>	3/16 or 1/4 x 40 female thread	\$14.50 each
<b>90° STREET ELBOW :</b>	3/16 or 1/4 x 40, male - female thread	\$11.60 each
<b>MACHINED UNION :</b>	3/16 or 1/4 x 40 thread	\$23.75 each

<b>STUART DRAIN COCKS :</b>	5/32 x 40T	\$45.30 each
	3/16 x 40T	\$67.80 each

<b>STUART UNION COCKS :</b>	1/8 pipe	\$57.50 each
	5/32 pipe	\$68.75 each
	3/16 pipe	\$68.75 each

<b>BLOWER STEAM VALVE :</b>	1/4 x 40T	\$49.00 each
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**HAND PUMP :**

Tank mounted	Ø5/8 Ram - 1/4 pipe	\$229.00 each
Outside mounted	Ø5/16 Ram - 1/8 pipe	\$150.00 each
	Ø3/8 Ram - 5/32 pipe	\$173.00 each
	Ø1/2 Ram - 3/16 pipe	\$139.90 each

**SAFETY VALVES :**

For big (7 ¼" G) boilers. Stainless steel ball, spring and stem. Brass housing and other parts.

Connection : 3/8" BSPF. Length above boiler bush approx 55mm.

Pressure set at 7 bar (100 psi). Pressure drop : max 0.5 bar (7 psi)	\$150.00 each
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Other thread options available	\$ POA
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For medium (5" G) boilers. Stainless steel ball, spring and stem. Brass housing and other parts.

Connection : ½ x 26 (other threads optional). Length above boiler bush about 40mm.

Pressure set at 7 bar (100 psi). Pressure drop : max 0.5 bar (7 psi).	\$150.00 each
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<b>Safety valve</b> ½ x 26 pop valve 100 psi	\$120.00 each
3/8 x 32 pop valve 100 psi	\$120.00 each
5/8 x 26 pop valve 100 psi	\$120.00 each
1/4 x 40 GI 0-60 psi	\$90.00 each

<b>LOST WAX PLATES :</b> 4" scale clean out boiler every 14 days	\$50.00 each
3" scale clean out boiler every 14 days	\$50.00 each

**STEEL BOILER TREATMENT :**

Terlyn LSB 8000 Designed for miniature steel boilers	\$63.40 per bottle
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<b>POKER AND SHOVEL SET :</b>	\$87.20
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<b>FUSIBLE PLUGS :</b>	3/8 x 32 TPI	\$31.00
	1/2 x 26 TPI	\$45.40
	5/8 x 26 TPI	\$36.00
	3/8 BSPT	\$78.00
	1/4 BSPT	\$78.00

**AUSTRALIAN MODEL ENGINEER MAGAZINE :**

Bi-monthly	\$73.00 for six issues
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<b>MEANZ BOILER RULES :</b>	Copper or Steel	\$45.00 each
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**MODEL STEAM BOILERS :**

2" & 3" vertical or 2" & 3" horizontal – includes ceramic burner, safety valve, pressure gauge, test certificate	\$POA
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4" horizontal - includes ceramic burner, safety valve, pressure gauge and test certificate	\$POA
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## MACHINE AND HAND TOOLS AVAILABLE:

The quality of our Taps & Dies are  
HQSS. Its' steel composition makes them  
Tougher & provides a better alternative to HSS.  
Our HQSS quality cuts excellent threads –  
Even into stainless.

### **TAPS & DIES – STRAIGHT FROM ENGLISH MANUFACTURER:**

#### **Ba TAPS:**

Ba 1, 3, 2, 4, 5 & 6 in Taper, Second or Bottom	\$25.00 each
Ba 7, 8 & 9 in Taper, Second or Bottom	\$24.50 each
Ba 10           "       "       "	\$36.00 each
Ba 12           "       "       "	\$48.00 each

#### **Ba DIES:**

Ba 0,1,2,3,4,5,6,7,8,9 and 10	\$55.00 each
Ba 12	\$72.00 each

#### **M.E. TAPS :**

5/32 x 32T	Taper, Second or Bottom	\$32.00 each
5/32 x 40T	"       "       "	\$32.00 each
3/16 x 32T	"       "       "	\$32.00 each
3/16 x 40T	"       "       "	\$36.20 each
7/32 x 32T	"       "       "	\$15.60 each
7/32 x 40T	"       "       "	\$31.40 each
1/4 x 32T	"       "       "	\$22.50 each
1/4 x 40T	"       "       "	\$22.50 each
9/32 x 32T	"       "       "	\$26.00 each
9/32 x 40T	"       "       "	\$26.00 each
5/16 x 32T	"       "       "	\$38.80 each
5/16 x 40T	"       "       "	\$30.00 each
3/8 x 32T	"       "       "	\$38.80each
3/8 x 40T	"       "       "	\$38.25 each
7/16 x 32T	"       "       "	\$21.00 each
7/16 x 40T	"       "       "	\$18.65 each
1/2 x 32T"	"       "       "	\$38.50 each
1/2 x 40T	"       "       "	\$38.50 each

#### **M.E. DIES :**

5/32 x 32T	\$36.00 each
5/32 x 40T	\$36.00 each
3/16 x 32T	\$37.75 each
3/16 x 40T	\$37.75each
7/32 x 32T	\$48.00 each
7/32 x 40T	\$36.00 each
1/4 x 32T	\$37.75 each
1/4 x 40T	\$37.75 each
9/32 x 32T	\$48.00 each
9/32 x 40T	\$48.70 each
5/16 x 32T	\$55.00 each
5/16 x 40T	\$48.00 each
3/8 x 32T	\$36.00 each
3/8 x 40T	\$48.00 each
7/16 x 32T	\$48.00 each
7/16 x 40T	\$48.00 each
1/2 x 32T	\$48.00 each
1/2 x 40T	\$48.00 each

**BRASS TAPS :**

1/4 x 26	Taper,	Second,	or Bottom	\$20.00 each
5/16 x 26	"	"	"	\$38.00 each
3/8 x 26	"	"	"	\$38.25 each
7/16 x 26	"	"	"	\$51.00 each
1/2 x 26	"	"	"	\$60.80 each
9/16 x 26	"	"	"	\$68.00 each
5/8 x 26	"	"	"	\$66.00 each
3/4 x 26	"	"	"	\$94.00 each

**BRASS DIES :**

1/4 x 26	\$35.00 each
5/16 x 26	\$38.50 each
3/8 x 26	\$36.50 each
7/16 x 26	\$44.00 each
1/2 x 26	\$48.70 each
9/16 x 26	\$38.92 each
5/8 x 26	\$81.50 each

**BA BOXED SET:**

23 piece : 1 Taper + 1 Bottom + 1 Die + Tap wrench + Die Stock  
 2 + 4 + 5 + 6 + 7 + 8 + 10      \$388.00

30 piece : 1 Taper + 1 Sec + 1 Bottom + 1 Die + Tap wrench + Die Stock  
 2 + 4 + 5 + 6 + 7 + 8 + 10      \$465.00

**Other taps and dies also available are on request:  
 BS cycle, BSP, BSPT, BSW, BSF, UNC, UNF and Metric.**

**TUBING CUTTER :**

1/16 - 5/8" O.D. Tube, cuts copper, brass, thin wall tube      \$25.00 each

**TUBING BENDER :**

1/16 - 3/16" Copper/Brass tubing. Bending tube made easy      \$15.00 set

1/8, 3/16, 1/4 lever style action, bends from 40° to 90°  
 Use on copper and aluminium, brass, steel      \$72.00

**SPANNERS – BA :**

Open ended spanners - 0 to 11 BA, in wallet      \$70.00 set  
 Box spanners - 2 to 10 BA and 12 BA      \$13.00 each  
 Box spanner set 0 to 10 BA      \$114.00 set



**DRILL SET HSS METRIC :**

1.0 - 6mm in .1mm steps \$175.00

**NUMBER DRILL SET :**

1# - 60# \$130.00

61# - 80# \$55.00

**IMPERIAL DRILL SET :**

1/16 - 1/2 inch in 1/64 steps \$175.00

**TAPER PIN REAMER:**

3/32 \$40.00

5/64 \$45.00

1/8 \$38.00

**REILANG OIL CAN - RIGID OR FLEXIBLE SPOUT :**

Swiss made Parts available 200 ml, 3 year warranty \$120.00

**STEAM OIL :**

680 Grade 500mls \$25.00

## MATERIALS AVAILABLE :

### **SILVER SOLDER:**

Shim 3/8" x .002" thick		\$15.00 per metre
Cad free, 40% silver + 2% nickel		
Suitable for stainless steel, copper & brass		
Silver solder with cadmium:	45% Ø0.8mm	\$10.65 per metre
	45% Ø1.6mm 750mm long	\$20.00 per stick
	45% Ø2.4mm 750mm long	\$34.00 per stick
Bridget Solder :Ø3.2mm - 10% silver & tin. No Lead		\$14.50/metre
(Working temp 250°C to 305°C)	or	\$92.60 /0.45kg spool
Bridget Flux : 4oz or 114 grams bottle with brush		\$35.80
Silver Solder Flux Paste : Harris Eco High Heat - 250gm		\$43.80

### **CAPALLOY SOLDER :**

40% tin, 60% lead in paste form,		\$34.40 /100 grams
ideal for soldering tanks and accessories.		

### **COPPER ROD :**

Minimum length is 300mm		
Ø1/8		\$6.22 / 300mm
Ø1/4		\$8.80 / 300mm
Ø5/16		\$14.00 / 300mm
Ø3/8		\$15.50 / 300mm

### **COPPER SQUARE :**

Minimum length is 300mm		
10mm x 10mm		\$22.00 / 300mm

### **COPPER TUBE :**

Hard drawn, 0.015" wall thickness x 12" length		
Ø1/16		\$6.90
Ø3/32		\$6.90
Ø1/8		\$4.25
Ø5/32		\$4.80

### **COPPER TUBE :**

Hard drawn, 0.015" wall thickness x 36" length		
Ø5/32		\$13.65
Ø3/16		\$22.50
Ø7/32		\$22.50
Ø1/4		\$22.50

### **COPPER TUBE :**

22 swg or 0.7mm wall thickness / per meter length		
Ø1/8		\$15.50
Ø3/16		\$23.90
Ø1/4		\$19.50
Ø5/16		\$28.75

**BRASS BAR FLAT:**

Minimum length is 300mm

1/2 x 3/16	\$21.70 / 300mm
1 x 1/8	\$26.00 / 300mm
1 x 1/4	\$29.20 / 300mm
1 x 3/8	\$33.00 / 300mm
1 - 1/4 x 1/8	\$22.50 / 300mm
1 - 1/2 x 1/8	\$30.00 / 300mm
2 x 1/8	\$45.00 / 300mm

**BRASS TUBE:**

Thin wall, 12" length

Ø1/8	\$5.10
Ø5/32	\$6.00
Ø3/16	\$6.70
Ø7/32	\$7.80
Ø1/4	\$8.75
Ø9/32	\$8.10
Ø7/16	\$10.00
Ø15/32	\$10.80
Ø1/2	\$11.00
Ø17/32	\$11.30
Ø9/16	\$11.60
Ø19/32	\$12.40

**BRASS SOLID ROUND:**

Minimum length is 300mm

Ø3/64	\$1.15 / 300mm
Ø1/16	\$1.70 / 300mm
Ø3/32	\$4.70 / 300mm
Ø1/8	\$5.00 / 300mm
Ø5/32	\$6.60 / 300mm
Ø3/16	\$7.35 / 300mm
Ø1/4	\$7.80 / 300mm
Ø5/16	\$11.20 / 300mm
Ø3/8	\$12.40 / 300mm
Ø7/16	\$13.60 / 300mm
Ø1/2	\$17.60 / 300mm
Ø5/8	\$28.50 / 300mm
Ø7/8	\$49.75 / 300mm
Ø1	\$52.00 / 300mm

Minimum length is 100mm

Ø1 - 1/8	\$40.00 / 100mm
Ø1 - 1/4	\$45.00 / 100mm
Ø1 - 1/2	\$96.00 / 100mm

**BRASS HEX :**

		Minimum length is 300mm		
3/16	\$6.80		9/16	\$28.20
1/4	\$7.60		5/8	\$32.90
5/16	\$12.50		3/4	\$35.20
3/8	\$15.50		7/8	\$38.50
7/16	\$17.50		1"	\$40.80
1/2	\$25.40			

**BRASS SQUARE :**

		Minimum length is 300mm	
1/4 square			\$8.70 / 300mm
5/16 square			\$33.00 / 300mm
3/8 square			\$35.00 / 300mm
1/2 square			\$39.00 / 300mm
3/4 square			\$45.75 / 300mm
		Minimum length is 100mm	
1" square			\$34.00 / 100mm

**BRASS TUBE :**

		Thin wall, 36" length	
Ø1/8			\$11.00
Ø3/16			\$14.00

**BRASS SQUARE TUBE :**

		Thin wall, 12" Length	
1/8			\$9.20
5/32			\$9.70
3/16			\$9.85
7/32			\$9.90

**L.G. BRONZE ROUND :**

Ø1/2		\$34.50 / 300mm
Ø3/4		\$28.00 / 100mm
Ø1 - 1/4		\$55.75 / 100mm
Ø1 - 1/2		\$78.00 / 100mm

**STEEL ROD :**

		36" Length	
Ø3/32			\$4.50
Ø1/8			\$7.00
Ø5/32			\$7.00
Ø3/16			\$7.10

**STAINLESS STEEL ROD :**

		12" length		
Ø3/32	\$6.50		Ø5/16	\$15.20
Ø1/8	\$7.00		Ø3/8	\$20.00
Ø3/16	\$9.60		Ø7/16	\$20.70
Ø1/4	\$11.50		Ø1/2	\$21.00

**ALUMINIUM ROD :**

	12" length	
Ø1/8		\$3.70

**PICK AND MIX PACKETS :**

Assorted Sizes and Shapes of - each packets will vary in content, Copper, Aluminium Tube	\$57.30
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**BRASS SHEET :**

0.032" x 4" x 10"	\$28.00 per sheet
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**BRASS UNION PIPE NUTS :**

Ø3/32 pipe - 3/16 x 40	\$20.00 per 10
Ø1/8 pipe - 1/4 x 40	\$20.00 per 10
Ø5/32 pipe - 1/4x 40	\$20.00 per 10
Ø3/16 pipe - 5/16 x 32	\$20.00 per 10
Ø3/16 pipe - 5/16 x 40	\$16.00 per 10
Ø7/32 pipe - 5/16 x 32	\$20.00 per 10
Ø1/4 pipe - 3/8 x 32	\$20.00 per 10
Ø3/8 pipe - 9/16 x 26	\$18.00 per 10

**BRASS PIPE FERRULES :**

Ø3/32 pipe	\$15.40 per 10
Ø1/8 pipe	\$15.40 per 10
Ø5/32 pipe	\$15.40 per 10
Ø3/16 pipe	\$15.45 per 10
Ø7/32 pipe	\$18.00 per 10
Ø1/4 pipe	\$17.00 per 10
Ø5/16 pipe	\$23.00 per 10
Ø3/8 pipe	\$25.90 per 10

**STAINLESS STEEL BALLS 316 GRADE :**

Ø1/16	\$2.25 each	Ø9/32	\$5.60 each
Ø3/32	\$0.55 each	Ø5/16	\$3.65 each
Ø1/8	\$0.55 each	Ø11/32	\$5.60 each
Ø5/32	\$3.55each	Ø3/8	\$4.55 each
Ø3/16	\$0.95 each	Ø7/16	\$8.10 each
Ø7/32	\$0.95 each	Ø1/2	\$5.80 each
Ø1/4	\$1.45 each		

**BRONZE BALLS :**

Ø1/16	\$1.80 each	Ø5/32	\$2.50 each
Ø3/32	\$2.20 each	Ø3/16	\$3.50 each
Ø1/8	\$2.70 each	Ø7/32	\$2.80each

**TORLON BALLS :** Newly developed plastic ball which is designed for use in aggressive environments. Among its uses is as a check valve. These are made from a poly amide-imide material.

Ø5/32	\$1.80 each	Ø3/8	\$4.10 each
Ø5/16	\$1.80 each		

**RIVETS – IRON : Snap Head**

1/16 x 1/4	\$1.20 / 10
1/16 x 3/8	\$0.90 / 10
1/16 x 1/2	\$1.06 / 10
5/64 x 3/8	\$1.12 / 10
5/64 x 1/2	\$1.25 / 10
3/32 x 1/4	\$1.05 / 10
3/32 x 3/8	\$2.24 / 10
3/32 x 1/2	\$1.60 / 10
3/32 x 3/4	\$1.60 / 10
7/64 x 1/2	\$0.95 / 10
1/8 x 1/2	\$1.30 / 10
1/8 x 3/4	\$1.55 / 10
1/8 x 1"	\$1.85 / 10
5/32 x 3/4	\$6.10 / 10
3/16 x 1/2	\$2.50 / 10
3/16 x 3/4	\$3.60 / 10
3/16 x 1"	\$5.55 / 10
1/4 x 3/4	\$3.50 / 10
3/8 x 1"	\$13.72 / 10

**RIVETS – COPPER :**

1/16 x 1/4	\$1.30 / 10
1/16 x 3/8	\$1.30 / 10
3/32 x 3/8	\$1.80 / 10
3/32 x 1/2	\$2.65 / 10
3/32 x 3/4	\$3.75 / 10
1/8 x 1/4	\$3.90 / 10
1/8 x 3/8	\$4.20 / 10
1/8 x 1/2	\$4.30 / 10
1/8 x 3/4	\$4.60 / 10
1/8 x 1"	\$4.70 / 10
5/32 x 1"	\$15.00 / 10
3/16 x 1"	\$15.30 / 10

**RIVETS – COPPER – COUNTERSUNK :**

1/8 x 1 - 1/4	\$3.70 / 10
5/32 x 3/4	\$5.35 / 10
3/16 x 3/4	\$8.80 / 10

**BRASS RIVETS :**

1/32 x 1/4	\$1.40 / 10
3/64 x 1/4	\$1.10 / 10
3/64 x 3/8	\$1.20 / 10
1/16 x 1/4	\$1.10 / 10
1/16 x 1/2	\$1.26 / 10
1/16 x 3/8	\$1.20 / 10

**RIVET SNAPS :**

1/32	\$20.00 each
3/64	\$17.50 each
1/16	\$33.70 each
5/64	\$20.00 each
3/32	\$27.55 each
1/8	\$36.65 each
5/32	\$40.00 each
3/16	\$54.65 each
1/4	\$23.50 each

**Ba SCREWS : All Sold Minimum Amount of 10 - Unless marked otherwise****Steel Hex Head - per 10**

2Ba x 1/2 small head	\$6.34	7Ba x 3/8 small head	\$4.80
2Ba x 1	\$6.60	7Ba x 1/2	\$5.26
2Ba x 1 - 1/4	\$6.60	7Ba x 1/2 small head	\$5.30
3Ba x 3/4 zinc plated	\$3.00	7Ba x 3/4	\$4.85
4Ba x 3/8	\$5.30	7Ba x 1	\$5.50
4Ba x 1/2	\$5.55	8Ba x 1/4	\$4.70
4Ba x 1/2 small head	\$5.80	8Ba x 1/4 small head	\$5.50
4Ba x 3/4	\$5.00	8Ba x 5/16	\$4.70
4Ba x 1	\$5.55	8Ba x 3/8	\$5.00
4Ba x 1 - 1/8	\$5.60	8Ba x 3/8 small head	\$5.08
4Ba x 2	\$5.60	8Ba x 1/2 small head	\$5.44
5Ba x 1/2	\$5.58	8Ba x 1/2	\$4.60
5Ba x 1/2 small head	\$5.80	8Ba x 3/4	\$5.60
5Ba x 1	\$4.65	8Ba x 1	\$6.05
6Ba x 3/16	\$4.00	10Ba x 1/4	\$6.10
6Ba x 1/4	\$4.10	10Ba x 3/8	\$6.14
6Ba x 5/16	\$4.30	10Ba x 1/2	\$5.60
6Ba x 3/8	\$5.50	10Ba x 1/2 small hex	\$5.50
6Ba x 1/2	\$5.80	10Ba x 3/4	\$6.00
6Ba x 5/8	\$4.40	12Ba x 1/4	\$5.30
6Ba x 3/8 small head	\$5.70	12Ba x 3/8	\$3.28
6Ba x 3/4	\$3.00		
6Ba x 1/2 small head	\$6.10		
6Ba x 1	\$7.72		
6Ba x 1 1/2	\$7.20		

**Brass Hex Head - per 10**

2Ba x 1/2	\$4.60	8Ba x 3/8	\$10.50
2Ba x 1	\$4.80	8Ba x 1/2	\$6.95
4Ba x 1/2	\$6.40	8Ba x 5/8	\$8.00
4Ba x 5/8	\$4.60	10Ba x 3/8	\$6.50
4Ba x 1	\$8.25	10Ba x 1/2	\$6.80
6Ba x 3/8	\$7.30	10Ba x 3/4	\$10.00
6Ba x 1/2	\$8.00	12Ba x 1/2	\$9.50

### Steel Slotted Roundhead - per 10

2Ba x 1	\$4.00	7Ba x 3/4	\$3.50
4Ba x 3/4	\$4.60	8Ba x 1/2	\$3.50
4Ba x 1 - 3/4	\$3.70	9Ba x 1	\$4.70
5Ba x 1	\$3.40	10Ba x 1/2	\$5.30
6Ba x 1/2	\$3.25		
6Ba x 3/4	\$3.25		
6 Ba x 1	\$4.35		

### Brass Slotted Roundhead - per 10

2Ba x 1 - 1/2	\$6.65	8Ba x 1/8	\$2.40
4Ba x 1/2	\$4.00	8Ba x 1/4	\$4.20
4Ba x 3/4	\$4.10	8Ba x 1/2	\$4.40
5Ba x 1/4	\$2.75	8Ba x 3/4	\$6.80
6Ba x 3/8	\$5.75	8Ba x 1 - 1/8	\$9.85
6Ba x 1	\$4.00	10Ba x 1/4	\$5.20
7Ba x 2	\$7.30	10Ba x 3/8	\$5.35
		10Ba x 3/4	\$5.80
		10Ba x 1 - 1/4	\$7.50
		12 Ba x 1/4	\$5.30

### Steel Slotted Countersunk - per10

1Ba x 7/8	\$2.65	8Ba x 1/2	\$6.94
2Ba x 3/4	\$3.20	10Ba x 1/4	\$4.30
3Ba x 5/8	\$4.55	10Ba x 1/2	\$4.95
4Ba x 1/2	\$3.00	12Ba x 1/4	\$4.60

### Brass Slotted Countersunk - per 10

2Ba x 3/8	\$5.00	10Ba x 5/16	\$4.10
4Ba x 1/2	\$2.50	10Ba x 1/2	\$4.50
4Ba x 1	\$2.55	10Ba x 5/8	\$4.80
5Ba x 1/2	\$3.60	10Ba x 3/4	\$4.80
5Ba x 5/8	\$3.15	10Ba x 1	\$7.50
5Ba x 3/4	\$3.48	12Ba x 1/2	\$6.85
6Ba x 1/2	\$3.50	12Ba x 3/8	\$7.20
6Ba x 1 - 3/8	\$5.20		
6Ba x 1 - 1/2	\$6.00		
7Ba x 1/4	\$4.20		
8Ba x 1/4	\$4.45		
8Ba x 1/2	\$4.60		
8Ba x 3/4	\$5.15		
8Ba x 1 - 1/4	\$6.30		



**Steel Cheesehead - per 10**

2Ba x 1/4	\$3.00	8Ba x 1/4	\$5.80
2Ba x 1/2	\$3.60	8Ba x 1/2	\$4.75
2Ba x 1	\$4.00	8Ba x 1 - 3/16	\$5.95
4Ba x 1/4	\$3.00	10Ba x 1/4	\$5.30
4Ba x 2	\$4.80	10Ba x 3/8	\$5.75
5Ba x 1/2	\$5.60	10Ba x 1/2	\$5.30
6Ba x 1/2	\$4.20	10Ba x 5/8	\$5.55
6Ba x 1	\$4.50	10Ba x 3/4	\$5.80
6Ba x 1 - 3/4	\$7.00	10Ba x 1	\$6.45
7Ba x 3/8	\$3.85	12Ba x 1/4	\$6.25
7Ba x 5/8	\$3.45	12Ba x 1/2	\$5.85

**Brass Cheesehead - per 10**

2Ba x 3/8	\$4.40	9Ba x 1/2	\$6.85
4Ba x 1/2	\$5.90	9Ba x 3/4	\$8.90
4Ba x 5/8	\$4.40	10Ba x 1/4	\$5.30
4Ba x 3/4	\$4.50	10Ba x 1/2	\$5.70
6Ba x 3/8	\$5.50	10Ba x 1	\$10.30
6Ba x 1/2	\$5.80	12Ba x 3/8	\$7.10
8Ba x 3/8	\$3.00	14Ba x 1/4	\$11.10
8Ba x 1/2	\$5.55	16Ba x 1/2	\$12.65
8Ba x 1	\$4.30		

**Steel Socket Cap - per 10**

2Ba x 7/16	\$10.75	6Ba x 1/4	\$9.25
2Ba x 1/2	\$8.25	8Ba x 3/8	\$8.50
2Ba x 5/8	\$9.75	8Ba x 1/2	\$8.60
2Ba x 1	\$13.80		
4Ba x 1/2	\$9.50		
4Ba x 3/4	\$9.50		

**Steel Grub Screws - per 10**

4Ba x 1/4	\$16.40	6Ba x 1/4	\$10.00
4Ba x 3/8	\$14.00	6Ba x 3/8	\$13.00
		6Ba x 1/2	\$13.50

**Steel Socket Countersunk - per EACH**

4Ba x 5/16	1/16 Key	\$1.47	4Ba x 1/2	1/16 Key	\$1.47
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**Stainless Steel Caphead - per EACH**

2Ba x 1 1/4	\$2.15	4Ba x 5/8	\$2.80
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**Stainless Countersunk - per EACH**

2Ba x 1/2	\$2.00	4Ba x 3/8	\$1.70
		4Ba x 1/2	\$1.80

### Stainless Steel Roundhead - Per EACH

8Ba x 1 \$3.00

### Stainless Steel CheeseHead - Per EACH

4Ba x 1/2	\$1.70	8Ba x 5/8	\$1.80
6Ba x 3/8	\$1.80	10Ba x 19/32	\$1.80

### Brass Roundhead No Slot - per 10

6Ba x 1/2	\$4.40	8Ba x 1/2	\$4.40
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### Steel Hex Nuts - per 10

0Ba	\$2.85	6Ba	\$2.30
1Ba	\$2.65	7Ba	\$3.05
2Ba	\$3.00	8Ba	\$3.25
3Ba	\$1.65	9Ba	\$5.00
4Ba	\$2.45	10Ba	\$4.25
5Ba	\$2.50	12Ba	\$3.15

### Brass Hex Nuts - per 10

2Ba	\$3.60	8Ba	\$1.70
3Ba	\$3.00	9Ba	\$2.50
4Ba	\$2.85	10Ba	\$2.50
5Ba	\$1.80	12Ba	\$3.50
6Ba	\$1.55	14Ba	\$5.80
7Ba	\$2.10	16Ba	\$8.95

### Steel Small Hex Nuts

#### One Size Smaller A/F - Per 10

2Ba	\$5.20	6Ba	\$5.50
4Ba	\$5.30	7Ba	\$6.50
5Ba	\$5.40		

### Hex Head Nuts

#### A2 Stainless Steel - Per EACH

3Ba	\$1.60	6Ba	\$0.55
4Ba	\$1.00	8Ba	\$1.40

### Hex Head Screws

#### A2 Stainless Steel - Per EACH

2Ba x 5/16	\$3.30	5Ba x 1/2	\$2.70
2Ba x 1	\$4.40	6Ba x 1/2	\$2.70
2Ba x 1 1/4	\$4.85	6Ba x 3/4	\$2.85
4Ba x 3/8	\$2.20	8Ba x 1/2	\$1.80
4Ba x 5/8	\$2.50		
4Ba x 3/4	\$2.65		
4Ba x 1"	\$1.70		

### Stainless Steel Washers - per 10

2Ba	\$1.85	5Ba	\$0.85
3Ba	\$0.80	6Ba	\$2.00
4Ba	\$2.85	8Ba	\$2.55
		10Ba	\$2.60

### Steel Washers - per 10

0Ba	\$0.65	6Ba	\$0.90
1Ba	\$0.65	7Ba	\$1.10
2BA	\$1.75	8Ba	\$1.25
3Ba	\$0.50	9Ba	\$1.20
4Ba	\$1.20	10Ba	\$1.00
5Ba	\$0.45	12Ba	\$2.30

### Copper Washers -per 10

1/8	\$3.00	5/32	\$3.80
7/16	\$5.80		

### Brass Washers -per 10

4Ba	\$1.50	8Ba	\$1.60
5Ba	\$1.50	9Ba	\$1.65
6Ba	\$1.50	10Ba	\$1.80
7Ba	\$1.50	12Ba	\$2.85

### Studding - Threaded Rod 12" Lengths

2Ba Steel	\$14.50
2Ba Brass	\$11.00
3Ba Steel	\$12.55
3Ba Brass	\$16.00
4Ba Steel	\$11.20
4Ba Brass	\$15.20
5Ba Steel	\$14.50
5Ba Brass	\$11.50
6Ba Steel	\$15.20
6Ba Brass	\$19.00
7Ba Steel	\$28.60
7Ba Brass	\$20.80
8Ba Steel	\$26.40
8Ba Brass	\$19.64

### Engineer's Studs - Threaded both ends

4Ba x 1"	\$2.00 each
5Ba x 1"	\$2.00 each
6Ba x 1"	\$2.00 each

**Split Pins - Steel - per 10**

1/32 x 3/8	\$1.50	1/16 x 3/4	\$1.70
1/32 x 1/2	\$2.00	1/16 x 1"	\$2.80
1/32 x 3/4	\$1.80	1/16 x 1"1/4	\$3.10
3/64 x 1"	\$1.50		

**Split Pins - Stainless Steel - per 10**

1/32 x 3/8	\$3.80	1/16 x 3/4	\$5.60
1/32 x 1/2	\$3.70	1/16 x 5/8	\$4.70
3/64 x 1/2	\$4.40	5/64 x 1/2	\$4.50
3/64 x 1"	\$6.15		
3/32 x 3/8	\$2.90		

**Solid Taper Pins - Steel -Each**

1/16 x 1/2	\$0.60	1/8 x 1/2	\$0.90
1/16 x 3/4	\$0.80	1/8 x 3/4	\$1.20
1/16 x 1"	\$0.80	1/8 x 1"	\$1.60
5/64 x 1/2	\$0.60	1/8 x 1"1/2	\$1.80
5/64 x 1"	\$1.00		
3/32 x 3/4	\$1.05		
3/32 x 7/8	\$1.50		
3/32 x 1"	\$1.35		



**STEAM VALVE**



**EJECTOR**



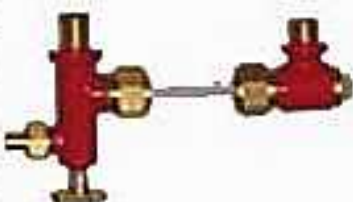
**WATER BYPASS**



**DISPLACEMENT  
LUBRICATOR**



**INJECTORS**



**WATER GAUGE**



**PRESSURE GAUGE**



**VACUUM GAUGE**



**WHISTLE**



**INJECTOR  
WATER VALVE**

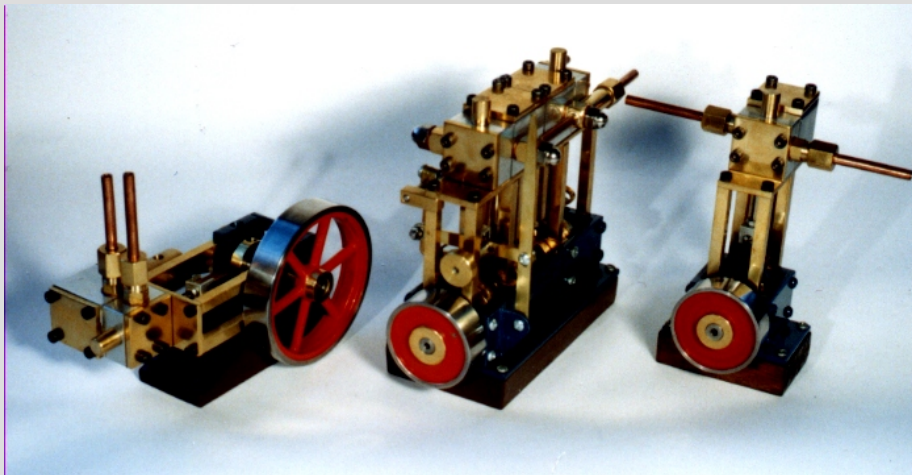
# Quayle **MODEL STEAM ENGINE KITS**

**Easy to build model steam engines**

## **16/16 Series**

These simple steam engines are especially aimed towards the modeller who wishes to tackle a project that is not too difficult. They work like the real ones, as they are double acting with slide valve to control steam admission. These are available in vertical, horizontal and reversing twin-cylinder models.

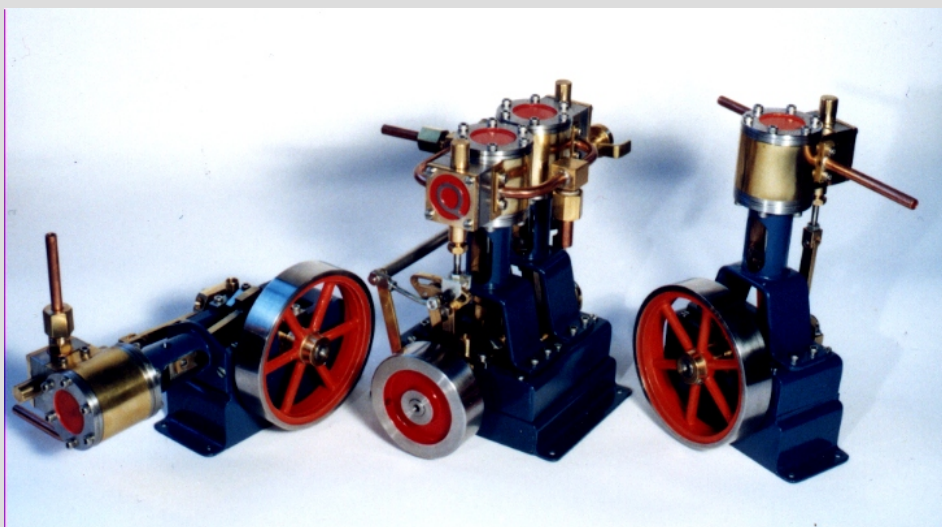
Bore 16mm Stroke 16mm Price : 16/16 V \$124.00, 16/16 H \$137.00,  
16/16 Twin \$234.00



## **20/20 series**

These are traditionally styled models of slide valve steam engines with cylindrical trunk guides. They can be made on a small metal lathe with a vertical slide for milling. These are available in vertical, horizontal and reversing twin cylinder models.

**Bore 20 mm Stroke 20 mm**



These kits contain all the materials required to complete the model. Including screws, nuts drawings and comprehensive building instructions.

The twin cylinder engines are ideal for radio controlled model boats.

Price : 20/20 V & H \$194.00, 20/20 Twin \$335.00

## **20-36 Beam Engine**

This kits contain all the materials required to complete the model. Including screws, nuts, drawings and comprehensive building instructions.

\$305.00

